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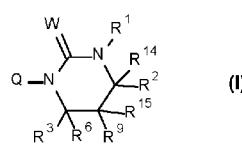
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(54) Title: SUBSTITUTED N-HETEROCYCLYL- AND N-HETEROARYL-TETRAHYDROPYRIMIDINONES AND THE SALTS
THEREOF, AND THE USE OF SAME AS HERBICIDAL ACTIVE SUBSTANCES

(54) Bezeichnung: SUBSTITUIERTE N-HETEROCYCLYL- UND N-HETEROARYL-TETRAHYDROPYRIMIDINONE SOWIE
DEREN SALZE UND IHRE VERWENDUNG ALS HERBIZIDE WIRKSTOFFE



(57) Abstract: The invention relates to substituted N-heterocyclyl- and N-heteroaryl-tetrahydropyrimidinones of general formula (I) or the salts (I) thereof, wherein the groups in general formula (I) are as defined in the description, and to the use of same as herbicides, in particular for controlling weeds and/or weed grasses in crops of cultivated plants and/or as plant growth regulators for influencing the growth of crops of cultivated plants.

(57) Zusammenfassung: Die vorliegende Erfindung betrifft substituierte N-Heterocyclyl- und N-Heteroaryl-tetrahydropyrimidinone der allgemeinen Formel (I) oder deren Salze (I) wobei die Reste in der allgemeinen Formel (I) den in der Beschreibung gegebenen Definitionen entsprechen, sowie deren Verwendung als Herbizide, insbesondere zur Bekämpfung von Unkräutern und/oder Ungräsern in Nutzpflanzenkulturen und/oder als Pflanzenwachstumsregulatoren zur Beeinflussung Wachstums von Nutzpflanzenkulturen.



Erklärungen gemäß Regel 4.17:

- *hinsichtlich der Berechtigung des Anmelders, ein Patent zu beantragen und zu erhalten (Regel 4.17 Ziffer ii)*

Veröffentlicht:

- *mit internationalem Recherchenbericht (Artikel 21 Absatz 3)*

Bayer CropScience AG/Bayer AG

Substituted N-heterocyclyl- and N-heteroaryl-tetrahydropyrimidinones and the salts thereof, and the use of same as herbicidal active substances

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Description

The invention relates to the technical field of crop protection agents, in particular that of herbicides for the selective control of broad-leaved weeds and weed grasses in crops of useful plants.

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Specifically, the present invention relates to substituted N-heterocyclyl- and N-heteroaryl-tetrahydropyrimidinones and salts thereof, to processes for their preparation and to their use as herbicides.

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In their application, crop protection agents known to date for the selective control of harmful plants in crops of useful plants or active compounds for controlling unwanted vegetation sometimes have disadvantages, be it (a) that they have no or else insufficient herbicidal activity against particular harmful plants, (b) that the spectrum of harmful plants which can be controlled with an active compound is not wide enough, (c) that their selectivity in crops of useful plants is too low and/or (d) that they have 20 a toxicologically unfavorable profile. Furthermore, some active compounds which can be used as plant growth regulators for a number of useful plants cause unwanted reduced harvest yields in other useful plants or are not compatible with the crop plant, or only within a narrow application rate range. Some of the known active compounds cannot be produced economically on an industrial scale owing to precursors and reagents which are difficult to obtain, or they have only insufficient chemical stabilities. 25 In the case of other active compounds, the activity is too highly dependent on environmental conditions, such as weather and soil conditions. The herbicidal activity of these known compounds, in particular at low application rates, and/or their compatibility with crop plants remain in need of improvement.

Various documents describe substituted pyrrolones and hydantoins having herbicidal properties.

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WO2016/071359 and WO2016/071360 disclose pyrrolones carrying heterocyclic substituents at the nitrogen including, for example, isoxazolines which are optionally substituted further. Furthermore, substituted pyrrolones and their herbicidal or pesticidal properties are described in CH633678, DE 2735841, DE, EP0297378, EP0334133, EP0339390 and EP0286816. Substituted pyrazolylpyrrolones and their use as herbicidally active compounds are described, for example, in WO2015/018434.

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Furthermore, it is known that certain substituted carbamoyloxypryrolones can be employed as growth regulators or germination stimulators (cf. WO2014/131843). The structural motif of the hydroxypyrrrolones is also found in substances isolated from *Lilium candidum*, for example 1,5-dihydro-

5-hydroxy-3,4'-dimethyl-[1,2'-bi-2H-pyrrolo]-2,5'(1'H)-dione (cf. Ceska a Slovenska Farmacie, 2007, 56, 27; Neoplasma, 2000, 47, 313).

In addition, WO2016/071361, WO2016/071362, WO2016/071363 and WO2016/071364 describe

5 substituted hydantoins which also carry heterocyclic substituents at the nitrogen, for example isoxazolines which are optionally substituted further.

Selected specifically substituted 1,3,4-thiadiazolyl- and 1,2,4-thiadiazolyl-2,5-dioxoimidazolines and their herbicidal action are described in DE2247266. Particular substituted 1,3,4-thiadiazolyltetrahydropyrimidinones and their alkoxy, acyloxy, carbamoyloxy derivatives are described

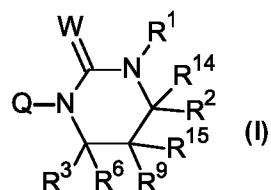
10 in US4006009, US3988143, US3951976, DE2540366 and US3932410, while the corresponding carbonates and thiocarbonates of particular substituted 1,3,4-thiadiazolyltetrahydropyrimidinones and their synthesis are described in US4040812. It is additionally known that tetrahydropyrimidinones substituted by tetrahydrobenzothiazolyl groups can be used as herbicidally active compounds (cf.

15 EP122761). Certain N-aryl-substituted tetrahydropyrimidinones have been described as substructures of histone methyltransferase modulators (cf. WO2012/082436).

By contrast, the use of N-heterocyclyl- and N-heteroaryl tetrahydropyrimidinones, in particular of N-pyridyl-, N-pyrimidinyl-, N-pyrazolyl- and N-isoxazolyl tetrahydropyrimidinones optionally having further substitution or salts thereof as herbicidally active compounds is yet to be described. Surprisingly, 20 it has now been found that selected N-heterocyclyl- and N-heteroaryl tetrahydropyrimidinones or salts thereof are particularly suitable as herbicides.

The present invention accordingly provides substituted N-heterocycl- and N-heteroaryl tetrahydropyrimidinones of the general formula (I) or salts thereof

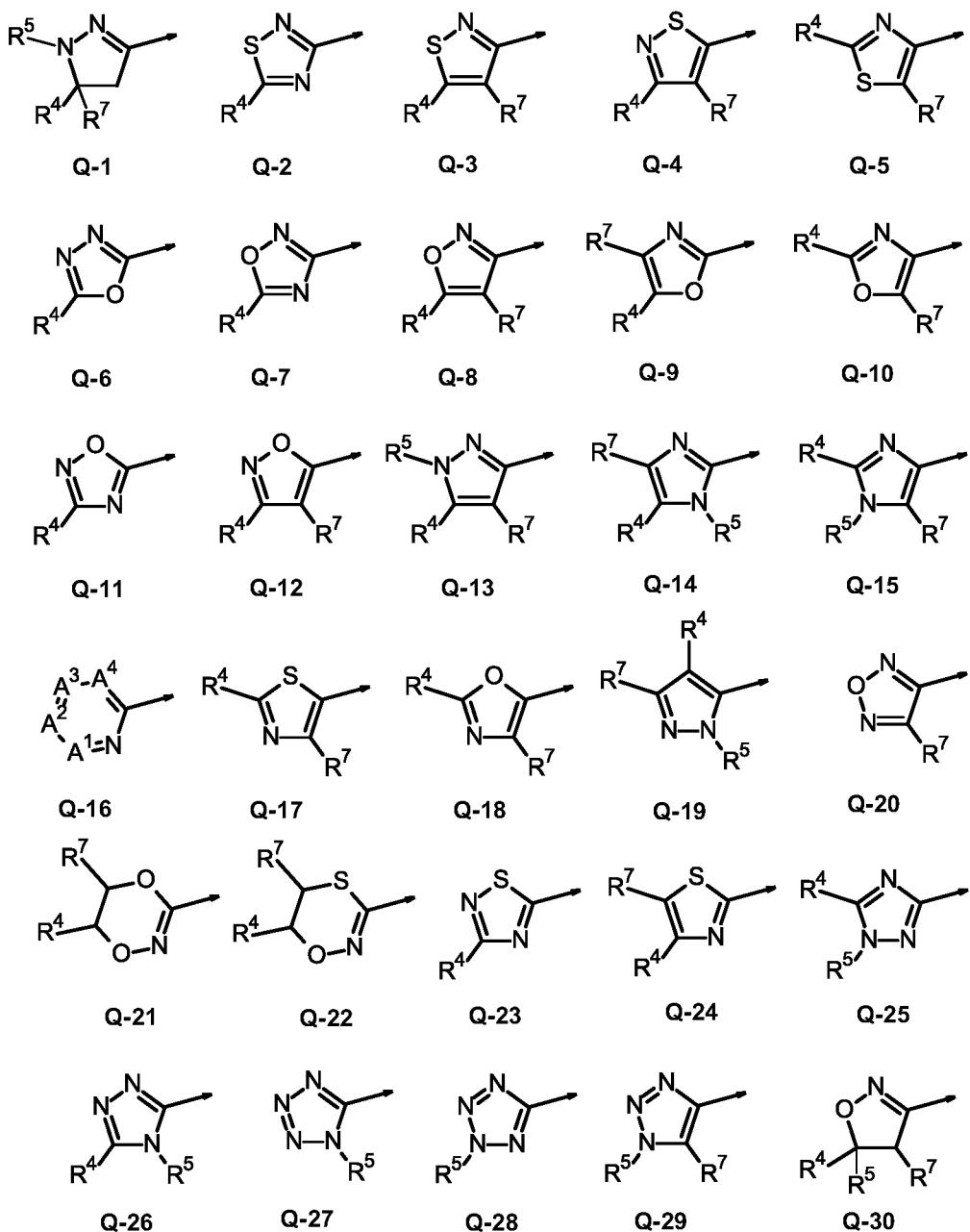
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in which

Q represents the groups Q-1 to Q-30

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where the arrow represents a bond of the respective Q group to the nitrogen of the tetrahydropyrimidinone in the general formula (I),

A¹, A², A³, A⁴ are identical or different and independently of one another represent N (nitrogen) or the moiety C-R⁸, but there are never more than two adjacent nitrogen atoms, and where R⁸ in the moiety C-R⁸ in each case has identical or different meanings according to the definition below,

A¹ and A², when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is

optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

5 A² and A³, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

10 A³ and A⁴, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution,

15 R¹ represents hydrogen, hydroxy, (C₁-C₈)-alkyl, (C₁-C₈)-haloalkyl, (C₁-C₈)-hydroxyalkyl, hydroxycarbonyl-(C₁-C₈)-alkylene, (C₁-C₈)-alkoxy, (C₁-C₈)-alkoxy-(C₁-C₈)-alkylene, (C₁-C₈)-alkoxyalkyloxy, (C₁-C₈)-haloalkoxy, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-halocycloalkyl, aryl, heteroaryl, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkylene, heterocyclyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkenyloxy, (C₂-C₈)-alkynyl, (C₂-C₈)-alkynyoxy, amino, bis[(C₁-C₈)-alkyl]amino, aryl-(C₁-C₈)-alkylene, heteroaryl-(C₁-C₈)-alkylene, heterocyclyl-(C₁-C₈)-alkylene, (C₁-C₈)-cyanoalkyl, 20 C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, SO₂R¹³, R¹²O(O)C-(C₁-C₈)-alkylene, arylcarbonyl-(C₁-C₈)-alkylene, (C₁-C₈)-alkylcarbonyl-(C₁-C₈)-alkylene, heteroarylcarbonyl-(C₁-C₈)-alkylene, heterocyclylcarbonyl-(C₁-C₈)-alkylene, (C₁-C₇)-alkylcarbonyloxy-(C₁-C₈)-alkylene,

25 R² and R⁹ independently of one another represent hydrogen, hydroxy, halogen, (C₁-C₈)-alkyl, (C₁-C₈)-haloalkyl, (C₃-C₁₀)-cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-(C₁-C₈)-alkyl, heteroaryl-(C₁-C₈)-alkyl, heterocyclyl-(C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, arylcarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkylcarbonyl-(C₁-C₈)-alkyl, heteroarylcarbonyl-(C₁-C₈)-alkyl, (C₃-C₁₀)-cycloalkylcarbonyl-(C₁-C₈)-alkyl, aryl-(C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, arylcarbonyloxy-(C₁-C₈)-alkyl, 30 heteroarylcarbonyloxy-(C₁-C₈)-alkyl, heterocyclylcarbonyloxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkylcarbonyloxy-(C₁-C₈)-alkyl, (C₃-C₈)-cycloalkylcarbonyloxy-(C₁-C₈)-alkyl, (C₁-C₈)-haloalkoxy-(C₁-C₈)-alkyl, aryl-(C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, heteroaryl-(C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C₁-C₈)-alkyl, cyano-(C₁-C₈)-alkyl, hydroxycarbonyl-(C₁-C₈)-alkyl, hydroxycarbonyl, 35 aminocarbonyl, aminocarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkylaminocarbonyl-(C₁-C₈)-alkyl, (C₃-C₈)-cycloalkylaminocarbonyl-(C₁-C₈)-alkyl, (C₂-C₈)-alkenyloxy carbonyl-(C₁-C₈)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, cyano, hydroxy-(C₁-C₈)-alkyl, or

R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which 5 optionally has further substitution, or

R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which 10 optionally has further substitution,

R³ represents hydroxy, hydrothio, halogen, NR¹⁰R¹¹, (C₁-C₈)-alkoxy, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkoxy, aryl-(C₁-C₈)-alkoxy, (C₁-C₈)-alkoxy-(C₁-C₈)-alkoxy, arylcarbonyloxy, (C₁-C₈)-alkylcarbonyloxy, (C₁-C₈)-alkoxy-(C₁-C₈)-alkylcarbonyloxy, aryl-(C₁-C₈)-alkylcarbonyloxy, 15 heteroarylcarbonyloxy, (C₃-C₁₀)-cycloalkylcarbonyloxy, heterocyclcarbonyloxy, (C₁-C₈)-haloalkylcarbonyloxy, (C₂-C₈)-alkenylcarbonyloxy, OC(O)OR¹², OC(O)SR¹³, OC(S)OR¹², OC(S)SR¹³, OSO₂R¹³, OSO₂OR¹², OCHO,

R⁴ and R⁷ independently of one another represent hydrogen, hydrothio, hydroxy, halogen, (C₁-C₈)-alkyl, 20 (C₁-C₈)-haloalkyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkyl, aryl, heteroaryl, heterocycl, aryl-(C₁-C₈)-alkyl, heteroaryl-(C₁-C₈)-alkyl, heterocycl-(C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₂-C₈)-haloalkenyl, (C₂-C₈)-haloalkynyl, (C₃-C₁₀)-halocycloalkyl, 25 (C₄-C₁₀)-cycloalkenyl, (C₄-C₁₀)-halocycloalkenyl, aryl-(C₂-C₈)-alkenyl, heteroaryl-(C₂-C₈)-alkenyl, heterocycl-(C₂-C₈)-alkenyl, aryl-(C₂-C₈)-alkynyl, heteroaryl-(C₂-C₈)-alkynyl, heterocycl-(C₂-C₈)-alkynyl, (C₃-C₁₀)-cycloalkyl-(C₂-C₈)-alkynyl, arylcarbonyl-(C₁-C₈)-alkyl, 30 (C₁-C₈)-alkylcarbonyl-(C₁-C₈)-alkyl, heteroarylcarbonyl-(C₁-C₈)-alkyl, (C₃-C₁₀)-cycloalkylcarbonyl-(C₁-C₈)-alkyl, aryl-(C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, arylcarbonyloxy-(C₁-C₈)-alkyl, heteroarylcarbonyloxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkylcarbonyloxy-(C₁-C₈)-alkyl, (C₃-C₈)-cycloalkylcarbonyloxy-(C₁-C₈)-alkyl, (C₁-C₈)-haloalkoxy-(C₁-C₈)-alkyl, aryl-(C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, heteroaryl-(C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, CHO, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C₁-C₈)-alkyl, cyano-(C₁-C₈)-alkyl, hydroxycarbonyl-(C₁-C₈)-alkyl, hydroxycarbonyl, (C₁-C₈)-haloalkoxy-(C₁-C₈)-alkylthio, (C₁-C₈)-alkylthio-(C₁-C₈)-alkylene, (C₁-C₈)-haloalkylthio-(C₁-C₈)-alkylthio, 35 (C₁-C₈)-alkylthio-(C₁-C₈)-alkylthio, aminocarbonyl, aminocarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkylaminocarbonyl-(C₁-C₈)-alkyl, (C₃-C₈)-cycloalkylaminocarbonyl-(C₁-C₈)-alkyl, (C₂-

C_8)-alkenyloxycarbonyl-(C_1 - C_8)-alkyl, (C_3 - C_8)-cycloalkyl-(C_1 - C_8)-alkoxycarbonyl-(C_1 - C_8)-alkyl, cyano, hydroxy-(C_1 - C_8)-alkyl, (C_2 - C_8)-alkenyloxy-(C_1 - C_8)-alkyl, or

R^4 and R^7 together with the carbon atom to which they are each attached form a fully saturated or
5 partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-3, Q-4, Q-8, Q-9, Q-12 and Q-19,

R^5 represents hydrogen, formyl, (C_1 - C_8)-alkyl, (C_1 - C_8)-haloalkyl, hydroxy-(C_1 - C_8)-alkyl,
10 hydroxycarbonyl-(C_1 - C_8)-alkyl, (C_1 - C_8)-alkoxy-(C_1 - C_8)-alkyl, (C_3 - C_{10})-cycloalkyl, (C_3 - C_{10})-halocycloalkyl, aryl, heteroaryl, (C_3 - C_{10})-cycloalkyl-(C_1 - C_8)-alkyl, heterocyclyl, (C_2 - C_8)-alkenyl, (C_2 - C_8)-alkynyl, $NR^{10}R^{11}$, aryl-(C_1 - C_8)-alkyl, heteroaryl-(C_1 - C_8)-alkyl, heterocyclyl-(C_1 - C_8)-alkyl, (C_1 - C_8)-cyanoalkyl, $C(O)R^{12}$, $C(O)OR^{12}$, $C(O)NR^{10}R^{11}$, SO_2R^{13} , (C_1 - C_8)-alkoxycarbonyl-(C_1 - C_8)-alkyl, (C_2 - C_8)-alkenyloxycarbonyl-(C_1 - C_8)-alkyl, aryl-(C_1 - C_8)-alkoxycarbonyl-(C_1 - C_8)-alkyl, heteroaryl-(C_1 - C_8)-alkoxycarbonyl-(C_1 - C_8)-alkyl, 15 aryloxycarbonyl-(C_1 - C_8)-alkyl, arylcarbonyl-(C_1 - C_8)-alkyl, (C_1 - C_8)-alkylcarbonyl-(C_1 - C_8)-alkyl, heteroarylcarbonyl-(C_1 - C_8)-alkyl, heterocyclylcarbonyl-(C_1 - C_8)-alkyl, or

R^4 and R^5 together with the nitrogen atom or carbon atom to which they are each attached form a fully
20 saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-13, Q-14, Q-15, Q-25 and Q-26,

R^6 represents hydrogen or (C_1 - C_8)-alkyl,

R^8 represents hydrogen, halogen, cyano, nitro, hydrothio, hydroxy, $NR^{10}R^{11}$, OR^{12} , SR^{13} , SOR^{13} ,
25 SO_2R^{13} , thiocyanato, isothiocyanato, formyl, (C_1 - C_8)-alkyl, (C_2 - C_8)-alkenyl, (C_2 - C_8)-alkynyl, (C_1 - C_{10})-haloalkyl, (C_2 - C_8)-haloalkenyl, (C_2 - C_8)-haloalkynyl, (C_3 - C_{10})-cycloalkyl, (C_3 - C_{10})-halocycloalkyl, (C_4 - C_{10})-cycloalkenyl, (C_4 - C_{10})-halocycloalkenyl, pentafluorothio, (C_1 - C_8)-alkoxy-(C_1 - C_8)-haloalkyl, (C_1 - C_8)-haloalkoxy-(C_1 - C_8)-haloalkyl, (C_1 - C_8)-haloalkoxy-(C_1 - C_8)-alkyl, aryl, aryl-(C_1 - C_8)-alkyl, heteroaryl, heteroaryl-(C_1 - C_8)-alkyl, (C_3 - C_8)-cycloalkyl-(C_1 - C_8)-alkyl, (C_4 - C_{10})-cycloalkenyl-(C_1 - C_8)-alkyl, heterocyclyl, heterocyclyl-(C_1 - C_8)-alkyl, (C_1 - C_8)-alkoxy-(C_1 - C_8)-alkyl, (C_1 - C_8)-alkylthio-(C_1 - C_8)-alkyl, (C_1 - C_8)-haloalkylthio-(C_1 - C_8)-alkyl, (C_1 - C_8)-alkylcarbonyl-(C_1 - C_8)-alkyl, $C(O)OR^{12}$, $C(O)NR^{10}R^{11}$, $C(O)R^{12}$, $-C=NOR^{12}$, $-C=NOH$,
30 $R^{10}R^{11}N-(C_1-C_8)-alkyl$, $R^{12}O(O)C-(C_1-C_8)-alkyl$, hydroxycarbonyl, hydroxycarbonyl-(C_1 - C_8)-alkyl, aryl-(C_1 - C_8)-alkynyl, heteroaryl-(C_1 - C_8)-alkynyl, heterocyclyl-(C_1 - C_8)-alkynyl, tris[(C_1 - C_8)-alkyl]silyl-(C_2 - C_8)-alkynyl, bis[(C_1 - C_8)-alkyl](aryl)silyl-(C_2 - C_8)-alkynyl, bisaryl[(C_1 - C_8)-

alkyl]silyl-(C₂-C₈)-alkynyl, (C₃-C₈)-cycloalkyl-(C₂-C₈)-alkynyl, aryl-(C₂-C₈)-alkenyl, heteroaryl-(C₂-C₈)-alkenyl, heterocycl-(C₂-C₈)-alkenyl, (C₃-C₈)-cycloalkyl-(C₂-C₈)-alkenyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkylaminosulfonylamino, (C₃-C₈)-cycloalkylaminosulfonylamino, diazo, aryldiazo, tris[(C₁-C₈)-alkyl]silyl, bis[(C₁-C₈)-alkyl](aryl)silyl, bisaryl[(C₁-C₈)-alkyl]silyl,

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R¹⁰ and R¹¹ are the same or different and independently of one another represent hydrogen, (C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₁-C₈)-cyanoalkyl, (C₁-C₁₀)-haloalkyl, (C₂-C₈)-haloalkenyl, (C₂-C₈)-haloalkynyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-halocycloalkyl, (C₄-C₁₀)-cycloalkenyl, (C₄-C₁₀)-halocycloalkenyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, (C₁-C₈)-haloalkoxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkylthio-(C₁-C₈)-alkyl, (C₁-C₈)-haloalkylthio-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy-(C₁-C₈)-haloalkyl, aryl, aryl-(C₁-C₈)-alkyl, heteroaryl, heteroaryl-(C₁-C₈)-alkyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkyl, (C₄-C₁₀)-cycloalkenyl-(C₁-C₈)-alkyl, COR¹², SO₂R¹³, (C₁-C₈)-alkyl-HNO₂S-, (C₃-C₁₀)-cycloalkyl-HNO₂S-, heterocycl, (C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxycarbonyl, aryl-(C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, aryl-(C₁-C₈)-alkoxycarbonyl, heteroaryl-(C₁-C₈)-alkoxycarbonyl, (C₂-C₈)-alkenyloxycarbonyl, (C₂-C₈)-alkynyoxyoxycarbonyl, heterocycl-(C₁-C₈)-alkyl,

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R¹² represents (C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₁-C₈)-cyanoalkyl, (C₁-C₁₀)-haloalkyl, (C₂-C₈)-haloalkenyl, (C₂-C₈)-haloalkynyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-halocycloalkyl, (C₄-C₁₀)-cycloalkenyl, (C₄-C₁₀)-halocycloalkenyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy-(C₁-C₈)-haloalkyl, aryl, aryl-(C₁-C₈)-alkyl, heteroaryl, heteroaryl-(C₁-C₈)-alkyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkyl, (C₄-C₁₀)-cycloalkenyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, (C₂-C₈)-alkenyloxycarbonyl-(C₁-C₈)-alkyl, aryl-(C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, hydroxycarbonyl-(C₁-C₈)-alkyl, heterocycl-(C₁-C₈)-alkyl,

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35

R¹³ represents (C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₁-C₈)-cyanoalkyl, (C₁-C₁₀)-haloalkyl, (C₂-C₈)-haloalkenyl, (C₂-C₈)-haloalkynyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-halocycloalkyl, (C₄-C₁₀)-cycloalkenyl, (C₄-C₁₀)-halocycloalkenyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy-(C₁-C₈)-haloalkyl, aryl, aryl-(C₁-C₈)-alkyl, heteroaryl, heteroaryl-(C₁-C₈)-alkyl, heterocycl-(C₁-C₈)-alkyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkyl, (C₄-C₁₀)-cycloalkenyl-(C₁-C₈)-alkyl, NR¹⁰R¹¹,

35

R¹⁴ and R¹⁵ independently of one another represent hydrogen, (C₁-C₈)-alkyl, halogen, or R⁹ and R¹⁵ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one

to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

and

5

W represents oxygen.

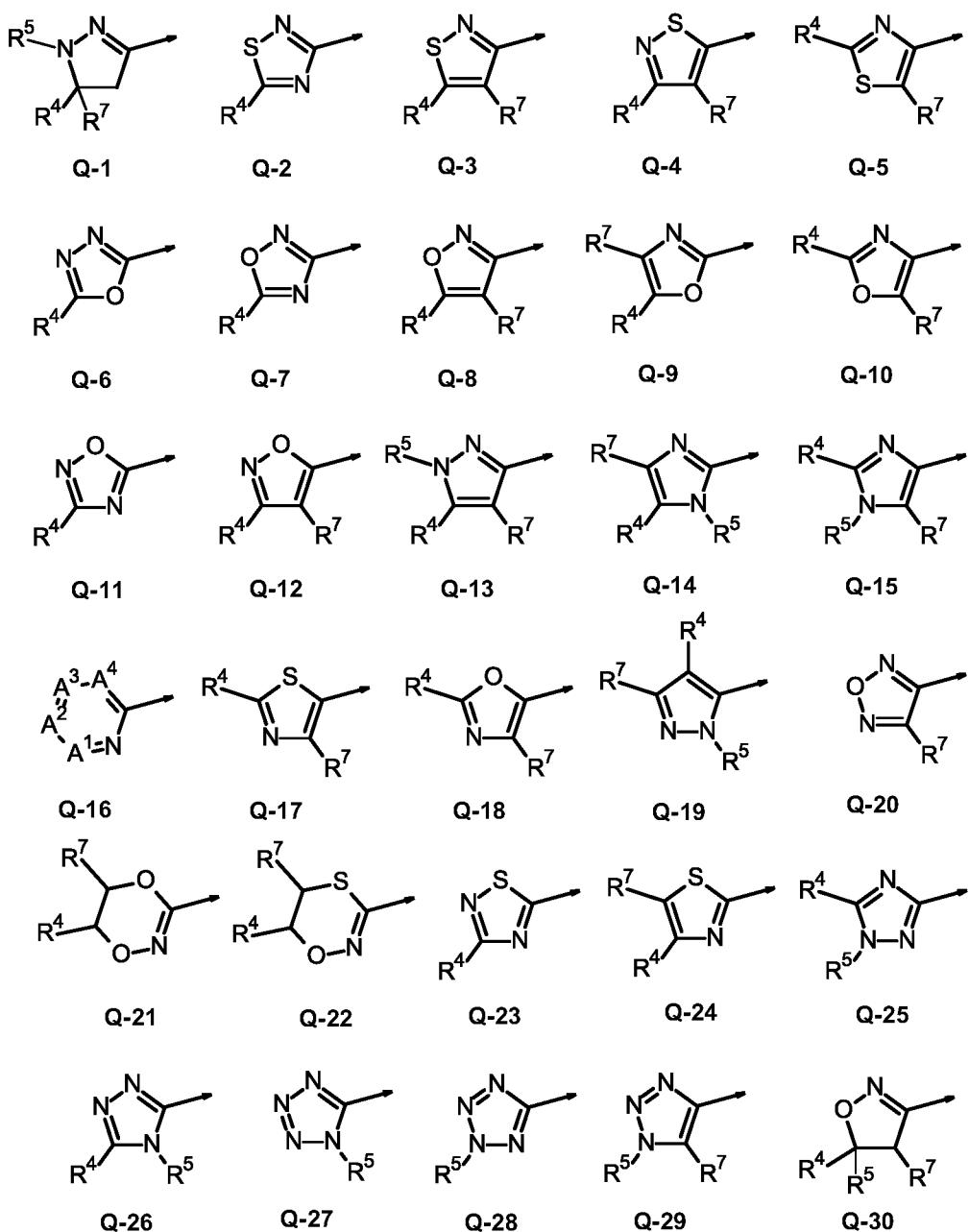
The compounds of the general formula (I) can form salts by addition of a suitable inorganic or organic acid, for example mineral acids, for example HCl, HBr, H₂SO₄, H₃PO₄ or HNO₃, or organic acids, for 10 example carboxylic acids such as formic acid, acetic acid, propionic acid, oxalic acid, lactic acid or salicylic acid or sulfonic acids, for example p-toluenesulfonic acid, onto a basic group, for example amino, alkylamino, dialkylamino, piperidino, morpholino or pyridino. In such a case, these salts comprise the conjugated base of the acid as the anion. Suitable substituents in deprotonated form, for example sulfonic acids, particular sulfonamides or carboxylic acids, are capable of forming internal salts 15 with groups, such as amino groups, which are themselves protonatable. Salts may also be formed by action of a base on compounds of the general formula (I). Suitable bases are, for example, organic amines such as trialkylamines, morpholine, piperidine and pyridine, and the hydroxides, carbonates and bicarbonates of ammonium, alkali metals or alkaline earth metals, especially sodium hydroxide, potassium hydroxide, sodium carbonate, potassium carbonate, sodium bicarbonate and potassium 20 bicarbonate. These salts are compounds in which the acidic hydrogen is replaced by an agriculturally suitable cation, for example metal salts, especially alkali metal salts or alkaline earth metal salts, in particular sodium and potassium salts, or else ammonium salts, salts with organic amines or quaternary ammonium salts, for example with cations of the formula [NR^aR^bR^cR^d]⁺ in which R^a to R^d are each 25 independently an organic radical, especially alkyl, aryl, arylalkyl or alkylaryl. Also suitable are alkylsulfonium and alkylsulfoxonium salts, such as (C₁-C₄)-trialkylsulfonium and (C₁-C₄)-trialkylsulfoxonium salts.

The inventive substituted N-heterocycl- and N-heteroaryltetrahydropyrimidinones of the formula (I), depending on external conditions such as pH, solvent and temperature, may be in various tautomeric 30 structures, all of which are embraced by the general formula (I).

The compounds of the formula (I) used in accordance with the invention and salts thereof are referred to hereinafter as "compounds of the general formula (I)".

35 The invention preferably provides compounds of the general formula (I) in which

Q represents the groups Q-1 to Q-30



where the arrow represents a bond of the respective Q group to the nitrogen of the tetrahydropyrimidinone in the general formula (I),

A¹, A², A³, A⁴ are identical or different and independently of one another represent N (nitrogen) or the moiety C-R⁸, but there are never more than two adjacent nitrogen atoms, and where R⁸ in the moiety C-R⁸ in each case has identical or different meanings according to the definition below,

A¹ and A², when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally

interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

5 A² and A³, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

10 A³ and A⁴, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution,

15 R¹ represents hydrogen, hydroxy, (C₁-C₇)-alkyl, (C₁-C₇)-haloalkyl, (C₁-C₇)-hydroxyalkyl, hydroxycarbonyl-(C₁-C₇)-alkylene, (C₁-C₇)-alkoxy, (C₁-C₇)-alkoxy-(C₁-C₇)-alkylene, (C₁-C₇)-alkoxyalkyloxy, (C₁-C₇)-haloalkoxy, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, aryl, heteroaryl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkylene, heterocyclyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkenyloxy, (C₂-C₇)-alkynyl, (C₂-C₇)-alkynyoxy, amino, bis[(C₁-C₇)-alkyl]amino, aryl-(C₁-C₇)-alkylene, heteroaryl-(C₁-C₇)-alkylene, heterocyclyl-(C₁-C₇)-alkylene, (C₁-C₇)-cyanoalkyl, 20 C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, SO₂R¹³, R¹²O(O)C-(C₁-C₇)-alkylene, arylcarbonyl-(C₁-C₇)-alkylene, (C₁-C₇)-alkylcarbonyl-(C₁-C₇)-alkylene, heteroarylcarbonyl-(C₁-C₇)-alkylene, heterocyclylcarbonyl-(C₁-C₇)-alkylene, (C₁-C₇)-alkylcarbonyloxy-(C₁-C₇)-alkylene,

25 R² and R⁹ independently of one another represent hydrogen, hydroxy, halogen, (C₁-C₇)-alkyl, (C₁-C₇)-haloalkyl, (C₃-C₈)-cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkyl, heterocyclyl-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C₁-C₇)-alkyl, cyano-(C₁-C₇)-alkyl, cyano, hydroxy-(C₁-C₇)-alkyl, or

30 R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, or

35 R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one

to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

R³ represents hydroxy, hydrothio, halogen, NR¹⁰R¹¹, (C₁-C₇)-alkoxy, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkoxy, aryl-(C₁-C₇)-alkoxy, (C₁-C₇)-alkoxy-(C₁-C₇)-alkoxy, arylcarbonyloxy, (C₁-C₇)-alkylcarbonyloxy, (C₁-C₇)-alkoxy-(C₁-C₇)-alkylcarbonyloxy, aryl-(C₁-C₇)-alkylcarbonyloxy, heteroarylcarbonyloxy, (C₃-C₈)-cycloalkylcarbonyloxy, heterocyclcarbonyloxy, (C₁-C₇)-haloalkylcarbonyloxy, (C₂-C₇)-alkenylcarbonyloxy, OC(O)OR¹², OC(O)SR¹³, OC(S)OR¹², OC(S)SR¹³, OSO₂R¹³, OSO₂OR¹², OCHO,

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R⁴ and R⁷ independently of one another represent hydrogen, hydrothio, hydroxy, halogen, (C₁-C₇)-alkyl, (C₁-C₇)-haloalkyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkyl, aryl, heteroaryl, heterocycl, aryl-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkyl, heterocycl-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₂-C₇)-haloalkenyl, (C₂-C₇)-haloalkynyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, aryl-(C₂-C₇)-alkenyl, heteroaryl-(C₂-C₇)-alkenyl, heterocycl-(C₂-C₇)-alkenyl, aryl-(C₂-C₇)-alkynyl, heteroaryl-(C₂-C₇)-alkynyl, heterocycl-(C₂-C₇)-alkynyl, (C₃-C₈)-cycloalkyl-(C₂-C₇)-alkynyl, arylcarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkylcarbonyl-(C₁-C₇)-alkyl, heteroarylcarbonyl-(C₁-C₇)-alkyl, (C₃-C₈)-cycloalkylcarbonyl-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, arylcarbonyloxy-(C₁-C₇)-alkyl, heteroarylcarbonyloxy-(C₁-C₇)-alkyl, heterocyclcarbonyloxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkylcarbonyloxy-(C₁-C₇)-alkyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, CHO, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C₁-C₇)-alkyl, cyano-(C₁-C₇)-alkyl, hydroxycarbonyl-(C₁-C₇)-alkyl, hydroxycarbonyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-alkylthio, (C₁-C₇)-alkylthio-(C₁-C₇)-alkylene, (C₁-C₇)-haloalkylthio-(C₁-C₇)-alkylthio, (C₁-C₇)-alkylthio-(C₁-C₇)-alkylthio, aminocarbonyl, aminocarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkylaminocarbonyl-(C₁-C₇)-alkyl, (C₃-C₇)-cycloalkylaminocarbonyl-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyloxycarbonyl-(C₁-C₇)-alkyl, (C₃-C₇)-cycloalkyl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, cyano, hydroxy-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyloxy-(C₁-C₇)-alkyl, or

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R⁴ and R⁷ together with the carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-3, Q-4, Q-8, Q-9, Q-12, Q-13, Q-19 and Q-30,

35

5 R⁵ represents hydrogen, formyl, (C₁-C₇)-alkyl, (C₁-C₇)-haloalkyl, hydroxy-(C₁-C₇)-alkyl, hydroxycarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, aryl, heteroaryl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkyl, heterocyclyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, NR¹⁰R¹¹, aryl-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkyl, heterocyclyl-(C₁-C₇)-alkyl, (C₁-C₇)-cyanoalkyl, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, SO₂R¹³, (C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyloxycarbonyl-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, aryloxycarbonyl-(C₁-C₇)-alkyl, arylcarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkylcarbonyl-(C₁-C₇)-alkyl, heteroarylcarbonyl-(C₁-C₇)-alkyl, heterocyclylcarbonyl-(C₁-C₇)-alkyl, or

10

R⁴ and R⁵ together with the nitrogen atom or carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-13, Q-14, Q-15, Q-25 and Q-26,

15

R⁶ represents hydrogen or (C₁-C₇)-alkyl,

R⁸ represents hydrogen, halogen, cyano, nitro, hydrothio, hydroxy, NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, thiocyanato, isothiocyanato, formyl, (C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₁-C₈)-haloalkyl, (C₂-C₇)-haloalkenyl, (C₂-C₇)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, pentafluorothio, (C₁-C₇)-alkoxy-(C₁-C₇)-haloalkyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-haloalkyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-alkyl, aryl, aryl-(C₁-C₇)-alkyl, heteroaryl, heteroaryl-(C₁-C₇)-alkyl, (C₃-C₇)-cycloalkyl-(C₁-C₇)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₇)-alkyl, heterocyclyl, heterocyclyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkylthio-(C₁-C₇)-alkyl, (C₁-C₇)-haloalkylthio-(C₁-C₇)-alkyl, (C₁-C₇)-alkylcarbonyl-(C₁-C₇)-alkyl, C(O)OR¹², C(O)NR¹⁰R¹¹, C(O)R¹², -C=NOR¹², -C=NOH, R¹⁰R¹¹N-(C₁-C₇)-alkyl, R¹²O(O)C-(C₁-C₇)-alkyl, hydroxycarbonyl, hydroxycarbonyl-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkynyl, heteroaryl-(C₁-C₇)-alkynyl, heterocyclyl-(C₁-C₇)-alkynyl, tris[(C₁-C₇)-alkyl]silyl-(C₂-C₇)-alkynyl, bis[(C₁-C₇)-alkyl](aryl)silyl-(C₂-C₇)-alkynyl, bisaryl[(C₁-C₇)-alkyl]silyl-(C₂-C₇)-alkynyl, (C₃-C₇)-cycloalkyl-(C₂-C₇)-alkynyl, aryl-(C₂-C₇)-alkenyl, heteroaryl-(C₂-C₇)-alkenyl, heterocyclyl-(C₂-C₇)-alkenyl, (C₃-C₇)-cycloalkyl-(C₂-C₇)-alkenyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkylaminosulfonylamino, (C₃-C₇)-cycloalkylaminosulfonylamino, diazo, aryldiazo, tris[(C₁-C₇)-alkyl]silyl, bis[(C₁-C₇)-alkyl](aryl)silyl, bisaryl[(C₁-C₇)-alkyl]silyl,

35

R¹⁰ and R¹¹ are the same or different and independently of one another represent hydrogen, (C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₁-C₇)-cyanoalkyl, (C₁-C₈)-haloalkyl, (C₂-C₇)-

haloalkenyl, (C₂-C₇)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkylthio-(C₁-C₇)-alkyl, (C₁-C₇)-haloalkylthio-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-haloalkyl, aryl, aryl-(C₁-C₇)-alkyl, heteroaryl, heteroaryl-(C₁-C₇)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₇)-alkyl, COR¹², SO₂R¹³, (C₁-C₇)-alkyl-HNO₂S-, (C₃-C₈)-cycloalkyl-HNO₂S-, heterocyclyl, (C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxycarbonyl, aryl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxycarbonyl, heteroaryl-(C₁-C₇)-alkoxycarbonyl, (C₂-C₇)-alkenyloxy carbonyl, (C₂-C₇)-alkynyoxy carbonyl, heterocyclyl-(C₁-C₇)-alkyl,

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R¹² represents (C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₁-C₇)-cyanoalkyl, (C₁-C₈)-haloalkyl, (C₂-C₇)-haloalkenyl, (C₂-C₇)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-haloalkyl, aryl, aryl-(C₁-C₇)-alkyl, heteroaryl, heteroaryl-(C₁-C₇)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyloxy carbonyl-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, hydroxycarbonyl-(C₁-C₇)-alkyl, heterocyclyl, heterocyclyl-(C₁-C₇)-alkyl,

15

R¹³ represents (C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₁-C₇)-cyanoalkyl, (C₁-C₈)-haloalkyl, (C₂-C₇)-haloalkenyl, (C₂-C₇)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-haloalkyl, aryl, aryl-(C₁-C₇)-alkyl, heteroaryl, heteroaryl-(C₁-C₇)-alkyl, heterocyclyl-(C₁-C₇)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₇)-alkyl, NR¹⁰R¹¹,

25

R¹⁴ and R¹⁵ independently of one another represent hydrogen, (C₁-C₇)-alkyl, halogen, or

R⁹ and R¹⁵ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

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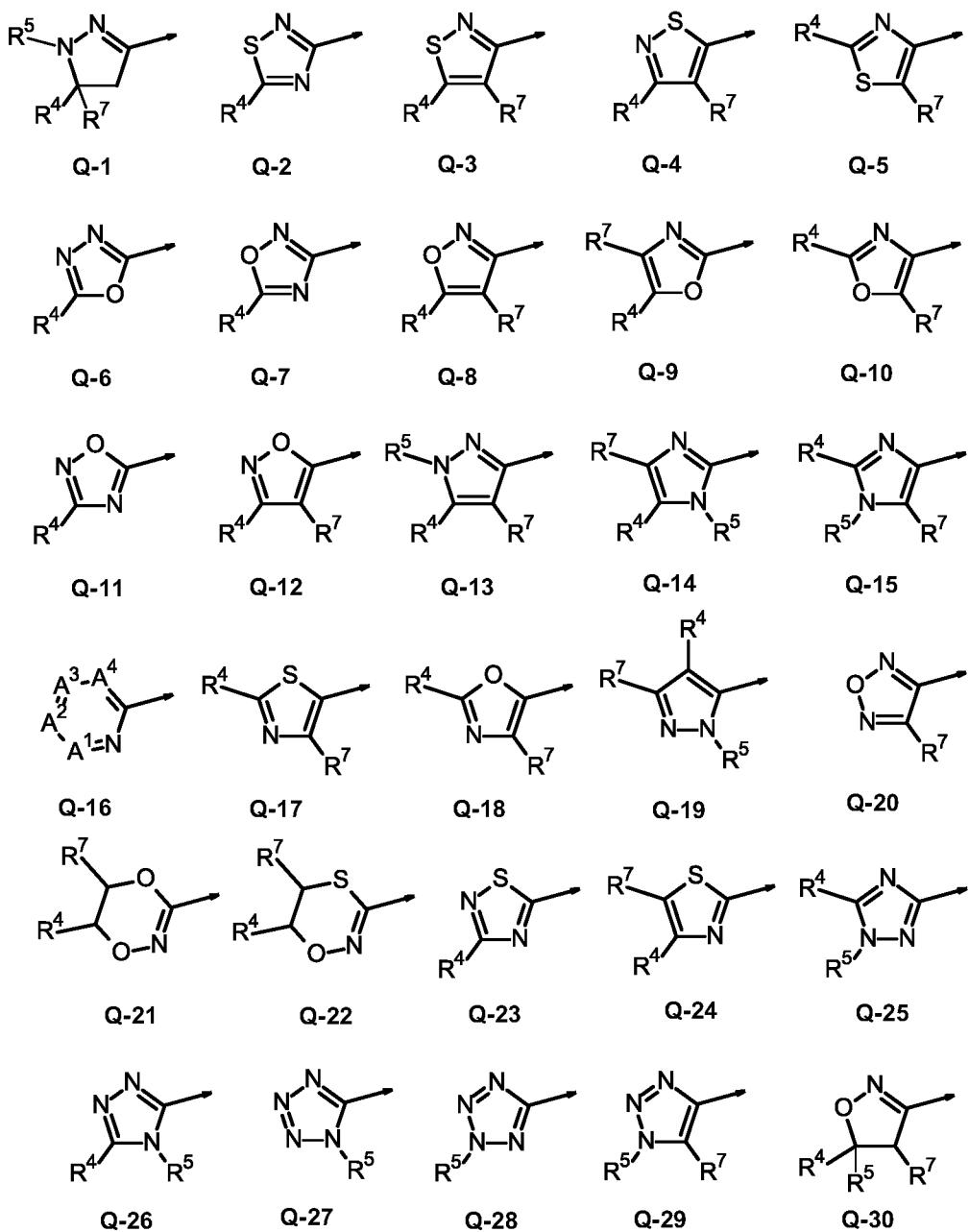
and

W represents oxygen.

35

The invention more preferably provides compounds of the general formula (I) in which

Q represents the groups Q-1 to Q-30



5

where the arrow represents a bond of the respective Q group to the nitrogen of the tetrahydropyrimidinone in the general formula (I),

10 A¹, A², A³, A⁴ are identical or different and independently of one another represent N (nitrogen) or the moiety C-R⁸, but there are never more than two adjacent nitrogen atoms, and where R⁸ in the moiety C-R⁸ in each case has identical or different meanings according to the definition below, or

A¹ and A², when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

5

A² and A³, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

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A³ and A⁴, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution,

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R¹ represents hydrogen, hydroxy, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₁-C₆)-hydroxyalkyl, hydroxycarbonyl-(C₁-C₆)-alkylene, (C₁-C₆)-alkoxy, (C₁-C₆)-alkoxy-(C₁-C₆)-alkylene, (C₁-C₆)-alkoxyalkyloxy, (C₁-C₆)-haloalkoxy, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, aryl, heteroaryl, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkylene, heterocyclyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkenyloxy, (C₂-C₆)-alkynyl, (C₂-C₆)-alkynyoxy, amino, bis[(C₁-C₆)-alkyl]amino, aryl-(C₁-C₆)-alkylene, heteroaryl-(C₁-C₆)-alkylene, heterocyclyl-(C₁-C₆)-alkylene, (C₁-C₆)-cyanoalkyl, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, SO₂R¹³, R¹²O(O)C-(C₁-C₆)-alkylene, arylcarbonyl-(C₁-C₆)-alkylene, (C₁-C₆)-alkylcarbonyl-(C₁-C₆)-alkylene, heteroarylcarbonyl-(C₁-C₆)-alkylene, heterocyclylcarbonyl-(C₁-C₆)-alkylene, (C₁-C₆)-alkylcarbonyloxy-(C₁-C₆)-alkylene,

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R² and R⁹ independently of one another represent hydrogen, hydroxy, fluorine, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₃-C₈)-cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-(C₁-C₆)-alkyl, heteroaryl-(C₁-C₆)-alkyl, heterocyclyl-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, heteroaryl-(C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C₁-C₆)-alkyl, cyano-(C₁-C₆)-alkyl, cyano, hydroxy-(C₁-C₆)-alkyl, or

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R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, or

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R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

5

R³ represents hydroxy, hydrothio, halogen, NR¹⁰R¹¹, (C₁-C₆)-alkoxy, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkoxy, aryl-(C₁-C₆)-alkoxy, (C₁-C₆)-alkoxy-(C₁-C₆)-alkoxy, arylcarbonyloxy, (C₁-C₆)-alkylcarbonyloxy, (C₁-C₆)-alkoxy-(C₁-C₆)-alkylcarbonyloxy, aryl-(C₁-C₆)-alkylcarbonyloxy, heteroarylcarbonyloxy, (C₃-C₈)-cycloalkylcarbonyloxy, heterocyclcarbonyloxy, (C₁-C₆)-haloalkylcarbonyloxy, (C₂-C₆)-alkenylcarbonyloxy, OC(O)OR¹², OC(O)SR¹³, OC(S)OR¹², OC(S)SR¹³, OSO₂R¹³, OCHO,

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R⁴ and R⁷ independently of one another represent hydrogen, hydrothio, hydroxy, halogen, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkyl, aryl, heteroaryl, heterocycl, aryl-(C₁-C₆)-alkyl, heteroaryl-(C₁-C₆)-alkyl, heterocycl-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₂-C₆)-haloalkenyl, (C₂-C₆)-haloalkynyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, aryl-(C₂-C₆)-alkenyl, heteroaryl-(C₂-C₆)-alkenyl, heterocycl-(C₂-C₆)-alkenyl, aryl-(C₂-C₆)-alkynyl, heteroaryl-(C₂-C₆)-alkynyl, heterocycl-(C₂-C₆)-alkynyl, (C₃-C₈)-cycloalkyl-(C₂-C₆)-alkynyl, arylcarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyl-(C₁-C₆)-alkyl, heteroarylcarbonyl-(C₁-C₆)-alkyl, (C₃-C₈)-cycloalkylcarbonyl-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, arylcarbonyloxy-(C₁-C₆)-alkyl, heteroarylcarbonyloxy-(C₁-C₆)-alkyl, heterocyclcarbonyloxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyloxy-(C₁-C₆)-alkyl, (C₃-C₆)-cycloalkylcarbonyloxy-(C₁-C₆)-alkyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, heteroaryl-(C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, CHO, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C₁-C₆)-alkyl, cyano-(C₁-C₆)-alkyl, hydroxycarbonyl-(C₁-C₆)-alkyl, hydroxycarbonyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-alkylthio, (C₁-C₆)-alkylthio-(C₁-C₆)-alkylene, (C₁-C₆)-haloalkylthio-(C₁-C₆)-alkylthio, (C₁-C₆)-alkylthio-(C₁-C₆)-alkylthio, aminocarbonyl, aminocarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkylaminocarbonyl-(C₁-C₆)-alkyl, (C₃-C₆)-cycloalkylaminocarbonyl-(C₁-C₆)-alkyl, (C₂-C₆)-alkenylloxycarbonyl-(C₁-C₆)-alkyl, (C₃-C₆)-cycloalkyl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, cyano, hydroxy-(C₁-C₆)-alkyl, (C₂-C₆)-alkenylloxy-(C₁-C₆)-alkyl, or

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R⁴ and R⁷ together with the carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-3, Q-4, Q-8, Q-9, Q-12, Q-13, Q-19 and Q-30,

R⁵ represents hydrogen, formyl, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, hydroxy-(C₁-C₆)-alkyl, hydroxycarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, aryl, heteroaryl, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkyl, heterocyclyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, NR¹⁰R¹¹, aryl-(C₁-C₆)-alkyl, heteroaryl-(C₁-C₆)-alkyl, heterocyclyl-(C₁-C₆)-alkyl, (C₁-C₆)-cyanoalkyl, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, SO₂R¹³, (C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyloxycarbonyl-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, heteroaryl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, aryloxycarbonyl-(C₁-C₆)-alkyl, arylcarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyl-(C₁-C₆)-alkyl, heteroarylcarbonyl-(C₁-C₆)-alkyl, heterocyclylcarbonyl-(C₁-C₆)-alkyl, or

R⁴ and R⁵ together with the nitrogen atom or carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which 15 optionally has further substitution, when Q represents Q-13, Q-14, Q-15, Q-25 and Q-26,

R⁶ represents hydrogen or (C₁-C₆)-alkyl,

R⁸ represents hydrogen, halogen, cyano, nitro, hydrothio, hydroxy, NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, 20 SO₂R¹³, thiocyanato, isothiocyanato, formyl, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₈)-haloalkyl, (C₂-C₆)-haloalkenyl, (C₂-C₆)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, pentafluorothio, (C₁-C₆)-alkoxy-(C₁-C₆)-haloalkyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-haloalkyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-alkyl, aryl, aryl-(C₁-C₆)-alkyl, heteroaryl, heteroaryl-(C₁-C₆)-alkyl, (C₃-C₆)-cycloalkyl-(C₁-C₆)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₆)-alkyl, heterocyclyl, heterocyclyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkylthio-(C₁-C₆)-alkyl, (C₁-C₆)-haloalkylthio-(C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyl-(C₁-C₆)-alkyl, C(O)OR¹², C(O)NR¹⁰R¹¹, C(O)R¹², -C=NOR¹², -C=NOH, 25 R¹⁰R¹¹N-(C₁-C₆)-alkyl, R¹²O(O)C-(C₁-C₆)-alkyl, hydroxycarbonyl, hydroxycarbonyl-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkynyl, heteroaryl-(C₁-C₆)-alkynyl, heterocyclyl-(C₁-C₆)-alkynyl, tris[(C₁-C₆)-alkyl]silyl-(C₂-C₆)-alkynyl, bis[(C₁-C₆)-alkyl](aryl)silyl-(C₂-C₆)-alkynyl, bisaryl[(C₁-C₆)-alkyl]silyl-(C₂-C₆)-alkynyl, (C₃-C₆)-cycloalkyl-(C₂-C₆)-alkynyl, aryl-(C₂-C₆)-alkenyl, heteroaryl-(C₂-C₆)-alkenyl, heterocyclyl-(C₂-C₆)-alkenyl, (C₃-C₆)-cycloalkyl-(C₂-C₆)-alkenyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkylaminosulfonylamino, (C₃-C₆)-cycloalkylaminosulfonylamino, diazo, aryldiazo, tris[(C₁-C₆)-alkyl]silyl, bis[(C₁-C₆)-alkyl](aryl)silyl, bisaryl[(C₁-C₆)-alkyl]silyl,

R¹⁰ and R¹¹ are the same or different and independently of one another represent hydrogen, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-cyanoalkyl, (C₁-C₈)-haloalkyl, (C₂-C₆)-haloalkenyl, (C₂-C₆)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkylthio-(C₁-C₆)-alkyl, (C₁-C₆)-haloalkylthio-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₁-C₆)-haloalkyl, aryl, aryl-(C₁-C₆)-alkyl, heteroaryl, heteroaryl-(C₁-C₆)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₆)-alkyl, COR¹², SO₂R¹³, (C₁-C₆)-alkyl-HNO₂S-, (C₃-C₈)-cycloalkyl-HNO₂S-, heterocyclyl, (C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxycarbonyl, aryl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxycarbonyl, heteroaryl-(C₁-C₆)-alkoxycarbonyl, (C₂-C₆)-alkenyloxycarbonyl, (C₂-C₆)-alkynyloxycarbonyl, heterocyclyl-(C₁-C₆)-alkyl,

5 R¹² represents (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-cyanoalkyl, (C₁-C₈)-haloalkyl, (C₂-C₆)-haloalkenyl, (C₂-C₆)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₁-C₆)-haloalkyl, aryl, aryl-(C₁-C₆)-alkyl, heteroaryl, heteroaryl-(C₁-C₆)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyloxycarbonyl-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, hydroxycarbonyl-(C₁-C₆)-alkyl, heterocyclyl, heterocyclyl-(C₁-C₆)-alkyl,

10 20 R¹³ represents (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-cyanoalkyl, (C₁-C₈)-haloalkyl, (C₂-C₆)-haloalkenyl, (C₂-C₆)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₁-C₆)-haloalkyl, aryl, aryl-(C₁-C₆)-alkyl, heteroaryl, heteroaryl-(C₁-C₆)-alkyl, heterocyclyl-(C₁-C₆)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₆)-alkyl, NR¹⁰R¹¹,

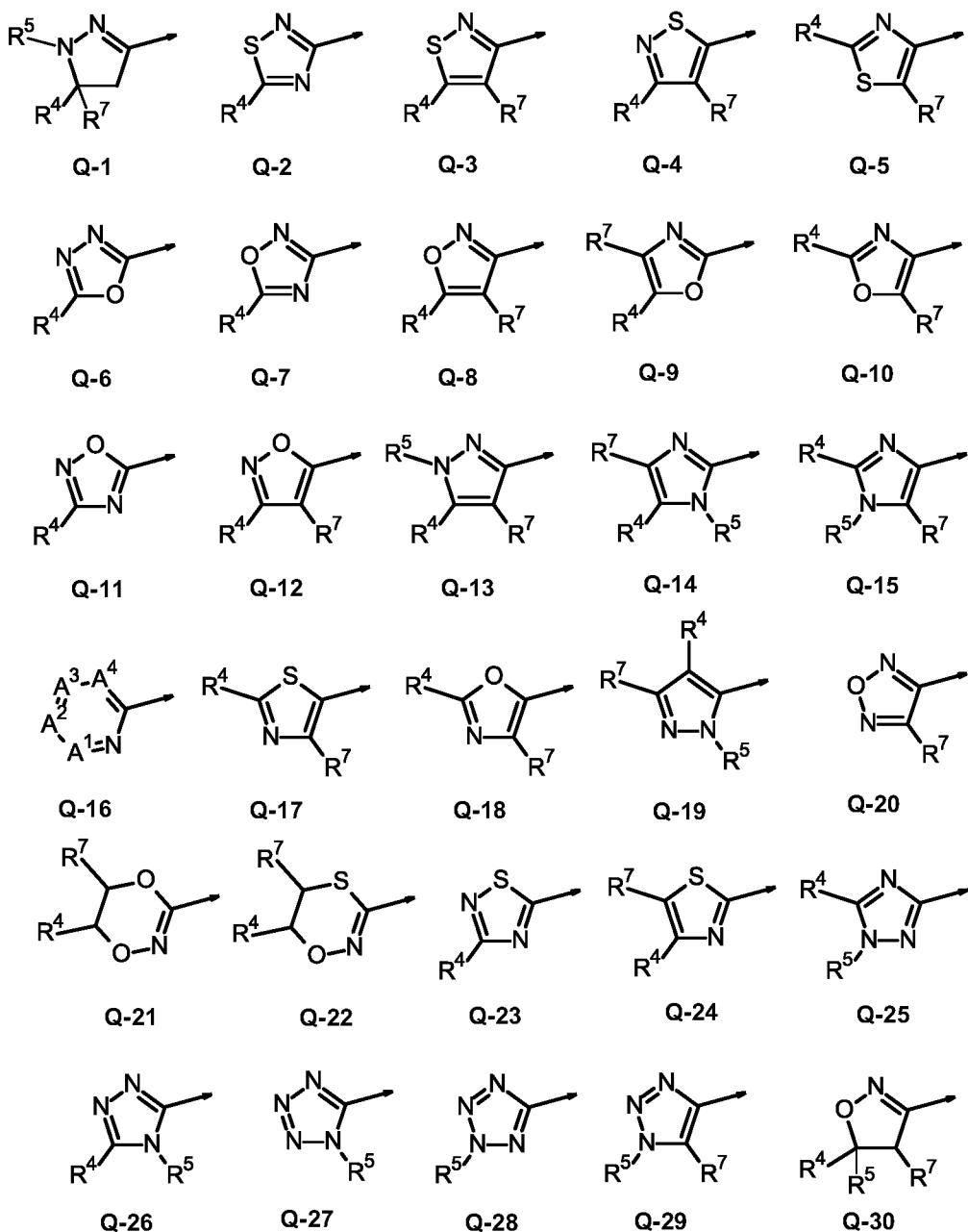
R¹⁴ and R¹⁵ independently of one another represent hydrogen, (C₁-C₆)-alkyl, fluorine, or

30 R⁹ and R¹⁵ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, and

35 W represents oxygen.

The invention very particularly preferably provides compounds of the general formula (I) in which

Q represents the groups Q-1 to Q-30



5 where the arrow represents a bond of the respective Q group to the nitrogen of the tetrahydropyrimidinone in the general formula (I),

10 A¹, A², A³, A⁴ are identical or different and independently of one another represent N (nitrogen) or the moiety C-R⁸, but there are never more than two adjacent nitrogen atoms, and where R⁸ in the moiety C-R⁸ in each case has identical or different meanings according to the definition above, or

A¹ and A², when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

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A² and A³, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

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A³ and A⁴, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution,

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R¹ represents hydrogen, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyleth-1-yl, n-pentyl, 1-methylbut-1-yl, 2-methylbut-1-yl, 3-methylbut-1-yl, 1,1-dimethylprop-1-yl, 1,2-dimethylprop-1-yl, 2,2-dimethylprop-1-yl, 1-ethylprop-1-yl, n-hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl, 1-ethyl-2-methylpropyl, trifluoromethyl, pentafluoroethyl, 1,1,2,2-tetrafluoroethyl, heptafluoro-n-propyl, heptafluoroisopropyl, nonafluorobutyl, chlorodifluoromethyl, bromodifluoromethyl, dichlorofluoromethyl, iododifluoromethyl, bromofluoromethyl, 1-fluoroethyl, 2-fluoroethyl, fluoromethyl, difluoromethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 3,3,3-trifluoroprop-1-yl, 3,3,3-trifluoroprop-2-yl, difluoro-tert-butyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, spiro[2.2]pent-1-yl, spiro[2.3]hex-1-yl, spiro[2.3]hex-4-yl, 3-spiro[2.3]hex-5-yl, spiro[3.3]hept-1-yl, spiro[3.3]hept-2-yl, bicyclo[1.1.0]butan-1-yl, bicyclo[1.1.0]butan-2-yl, bicyclo[2.1.0]pentan-1-yl, bicyclo[1.1.1]pentan-1-yl, bicyclo[2.1.0]pentan-2-yl, bicyclo[2.1.0]pentan-5-yl, bicyclo[2.1.1]hexyl, bicyclo[2.2.1]hept-2-yl, bicyclo[2.2.2]octan-2-yl, adamantan-1-yl, adamantan-2-yl, 1-methylcyclopropyl, 2-methylcyclopropyl, 2,2-dimethylcyclopropyl, 2,3-dimethylcyclopropyl, 1,1'-bi(cyclopropyl)-1-yl, 1,1'-bi(cyclopropyl)-2-yl, 2'-methyl-1,1'-bi(cyclopropyl)-2-yl, 1-cyanocyclopropyl, 2-cyanocyclopropyl, 1-methylcyclobutyl, 2-methylcyclobutyl, 3-methylcyclobutyl, 1-cyanocyclobutyl, 2-cyanocyclobutyl, 3-cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl, 1-vinylcyclopropyl, 1-ethylcyclopropyl, 1-methylcyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 1-methoxycyclohexyl, 2-

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methoxycyclohexyl, 3-methoxycyclohexyl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, phenyl, p-F-phenyl, m-F-phenyl, o-F-phenyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-phenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyrimidin-2-yl, pyrimidin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl, furan-3-yl, tetrahydrofuran-2-yl, tetrahydrofuran-3-yl, benzyl, p-Cl-benzyl, p-F-benzyl, p-methoxybenzyl, p-methylbenzyl, p-trifluoromethylbenzyl, p-nitrobenzyl, m-Cl-benzyl, m-F-benzyl, m-methoxybenzyl, m-methylbenzyl, o-Cl-benzyl, o-F-benzyl, o-methoxybenzyl, o-methylbenzyl, 1-phenyleth-1-yl, 2-phenyleth-1-yl, 1-(o-chlorophenyl)eth-1-yl, 1-(o-fluorophenyl)eth-1-yl, 1-(o-methylphenyl)eth-1-yl, 1-(o-bromophenyl)eth-1-yl, 1-(o-iodophenyl)eth-1-yl, pyridin-2-ylmethyl, pyridin-3-ylmethyl, pyridin-4-ylmethyl, pyrimidin-2-ylmethyl, pyrimidin-4-ylmethyl, tetrahydrofuran-2-ylmethyl, o-cyanophenylmethyl, m-cyanophenylmethyl, p-cyanophenylmethyl, cyanomethyl, cyanoethyl, methoxycarbonyl, ethoxycarbonyl, n-propyloxycarbonyl, isopropyloxycarbonyl, tert-butyloxycarbonyl, benzyloxycarbonyl, allyloxycarbonyl, methylcarbonyl, ethylcarbonyl, n-propylcarbonyl, isopropylcarbonyl, n-butylcarbonyl, 1-methylprop-1-ylcarbonyl, 2-methylprop-1-ylcarbonyl, 1,1-dimethyleth-1-ylcarbonyl, phenylcarbonyl, methylaminocarbonyl, dimethylaminocarbonyl, ethylaminocarbonyl, n-propylaminocarbonyl, isopropylaminocarbonyl, n-butylaminocarbonyl, tert-butylaminocarbonyl, benzylaminocarbonyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, tert-butyloxycarbonylmethyl, benzyloxycarbonylmethyl, methoxycarbonylethyl, ethoxycarbonylethyl, tert-butyloxycarbonylmethyl, benzyloxycarbonylmethyl, methylcarbonyloxymethyl, ethylcarbonyloxymethyl, n-propylcarbonyloxymethyl, 1-methylethylcarbonyloxymethyl, 1,1-dimethylethylcarbonyloxymethyl, hydroxycarbonylmethyl, hydroxycarbonylethyl, hydroxycarbonyl-n-propyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, methoxymethyl, ethoxymethyl, n-propyloxymethyl, isopropyloxymethyl, n-butyloxymethyl, methoxyethyl, ethoxyethyl, n-propyloxyethyl, isopropyloxyethyl, methoxy-n-propyl, ethoxy-n-propyl, methoxy-n-butyl, amino, dimethylamino, methyl(ethyl)amino, diethylamino, cyanomethyl, cyanoethyl, prop-2-yn-1-yl,

R² and R⁹ independently of one another represent hydrogen, hydroxy, fluorine, methyl, ethyl, n-propyl, isopropyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyleth-1-yl, trifluoromethyl, difluoromethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, p-F-phenyl, m-F-phenyl, o-F-phenyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-phenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyrimidin-2-yl, pyrimidin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl, furan-3-yl, methoxymethyl, ethoxymethyl, methoxyethyl, ethoxyethyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, trifluoromethoxy, difluoromethoxy, methylthio, ethylthio, trifluoromethylthio, dimethylamino, methylamino, diethylamino, methyl(ethyl)amino, cyano, or

R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, or

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R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

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R³ represents hydroxy, hydrothio, fluorine, chlorine, bromine, iodine, methoxy, ethoxy, n-propyloxy, 1-methylethoxy, n-butyloxy, 1-methylpropyloxy, 2-methylpropyloxy, 1,1-dimethylethoxy, n-pentyloxy, 1-methylbutyloxy, 2-methylbutyloxy, 3-methylbutyloxy, 1,1-dimethylpropyloxy, 1,2-dimethylpropyloxy, 2,2-dimethylpropyloxy, 1-ethylpropyloxy, n-hexyloxy, 1-methylpentyloxy, 2-methylpentyloxy, 3-methylpentyloxy, 4-methylpentyloxy, 1,1-dimethylbutyloxy, 1,2-dimethylbutyloxy, 1,3-dimethylbutyloxy, 2,2-dimethylbutyloxy, 2,3-dimethylbutyloxy, 3,3-dimethylbutyloxy, 1-ethylbutyloxy, 2-ethylbutyloxy, 1,1,2-trimethylpropyloxy, 1,2,2-trimethylpropyloxy, 1-ethyl-1-methylpropyloxy, 1-ethyl-2-methylpropyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy, cyclohexylmethoxy, benzyloxy, p-chlorophenylmethoxy, m-chlorophenylmethoxy, o-chlorophenylmethoxy, p-methoxyphenylmethoxy, p-nitrophenylmethoxy, methoxymethoxy, methoxyethoxy, methoxy-n-propyloxy, methoxy-n-butyloxy, ethoxymethoxy, ethoxyethoxy, ethoxy-n-propyloxy, ethoxy-n-butyloxy, n-propyloxymethoxy, isopropyloxymethoxy, methylcarbonyloxy, ethylcarbonyloxy, n-propylcarbonyloxy, 1-methylethylcarbonyloxy, n-butylcarbonyloxy, 1-methylpropylcarbonyloxy, 2-methylpropylcarbonyloxy, 1,1-dimethylethylcarbonyloxy, n-pentylcarbonyloxy, 1-methylbutylcarbonyloxy, 2-methylbutylcarbonyloxy, 3-methylbutylcarbonyloxy, 1,1-dimethylpropylcarbonyloxy, 1,2-dimethylpropylcarbonyloxy, 2,2-dimethylpropylcarbonyloxy, 1-ethylpropylcarbonyloxy, n-hexylcarbonyloxy, 1-methylpentylcarbonyloxy, 2-methylpentylcarbonyloxy, 3-methylpentylcarbonyloxy, 4-methylpentylcarbonyloxy, 1,1-dimethylbutylcarbonyloxy, 1,2-dimethylbutylcarbonyloxy, 1,3-dimethylbutylcarbonyloxy, 2,2-dimethylbutylcarbonyloxy, 2,3-dimethylbutylcarbonyloxy, 3,3-dimethylbutylcarbonyloxy, 1-ethylbutylcarbonyloxy, 2-ethylbutylcarbonyloxy, 1,1,2-trimethylpropylcarbonyloxy, 1,2,2-trimethylpropylcarbonyloxy, 1-ethyl-1-methylpropylcarbonyloxy, 1-ethyl-2-methylpropylcarbonyloxy, phenylcarbonyloxy, p-chlorophenylcarbonyloxy, m-chlorophenylcarbonyloxy, o-chlorophenylcarbonyloxy, p-fluorophenylcarbonyloxy, m-fluorophenylcarbonyloxy, o-fluorophenylcarbonyloxy, benzylcarbonyloxy, thiophen-2-ylcarbonyloxy, furan-2-ylcarbonyloxy, cyclopropylcarbonyloxy,

cyclobutylcarbonyloxy, cyclopentylcarbonyloxy, cyclohexylcarbonyloxy, 1-fluorocycloprop-1-ylcarbonyloxy, 1-chlorocycloprop-1-ylcarbonyloxy, 1-cyanocycloprop-1-ylcarbonyloxy, 1-methylcycloprop-1-ylcarbonyloxy, 1-trifluoromethylcycloprop-1-ylcarbonyloxy, adamantlycarbonyloxy, trifluoromethylcarbonyloxy, difluoromethylcarbonyloxy, methoxycarbonyloxy, ethoxycarbonyloxy, n-propyloxycarbonyloxy, isopropyloxycarbonyloxy, n-butyloxycarbonyloxy, 1,1-dimethylethoxy carbonyloxy, 2,2-dimethylpropyloxycarbonyloxy, benzyloxycarbonyloxy, allyloxycarbonyloxy, cyclopropyloxycarbonyloxy, cyclobutyloxycarbonyloxy, cyclopentyloxycarbonyloxy, cyclohexyloxycarbonyloxy, cyclopropylmethyloxycarbonyloxy, cyclobutylmethyloxycarbonyloxy, cyclopentylmethyloxycarbonyloxy, cyclohexylmethyloxycarbonyloxy, 3,3,3-trifluoroethyloxycarbonyloxy, 2,2-difluoroethyloxycarbonyloxy, pyridin-2-ylcarbonyloxy, pyridin-3-ylcarbonyloxy, pyridin-4-ylcarbonyloxy, 4-trifluoromethylpyridin-3-ylcarbonyloxy, allylcarbonyloxy, methylsulfonyloxy, ethylsulfonyloxy, n-propylsulfonyloxy, 1-methylethylsulfonyloxy, cyclopropylsulfonyloxy, cyclobutylsulfonyloxy, cyclopentylsulfonyloxy, cyclohexylsulfonyloxy, phenylsulfonyloxy, p-chlorophenylsulfonyloxy, m-chlorophenylsulfonyloxy, o-chlorophenylsulfonyloxy, p-fluorophenylsulfonyloxy, m-fluorophenylsulfonyloxy, o-fluorophenylsulfonyloxy, p-methoxyphenylsulfonyloxy, m-methoxyphenylsulfonyloxy, o-methoxyphenylsulfonyloxy, p-methylphenylsulfonyloxy, m-methylphenylsulfonyloxy, o-methylphenylsulfonyloxy,

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R⁴ and R⁷ independently of one another represent hydrogen, fluorine, chlorine, bromine, iodine, hydroxy, hydrothio, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylpropyl, 2-methylpropyl, 1,1-dimethylethyl, n-pentyl, 1-methylbutyl, 2-methylbutyl, 3-methylbutyl, 1,1-dimethylpropyl, 1,2-dimethylpropyl, 2,2-dimethylpropyl, 1-ethylpropyl, n-hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl, 1-ethyl-2-methylpropyl, trifluoromethyl, pentafluoroethyl, 1,1,2,2-tetrafluoroethyl, heptafluoro-n-propyl, heptafluoroisopropyl, nonafluorobutyl, chlorodifluoromethyl, bromodifluoromethyl, dichlorofluoromethyl, iododifluoromethyl, bromofluoromethyl, 1-fluoroethyl, 2-fluoroethyl, fluoromethyl, difluoromethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, difluoro-tert-butyl, chloromethyl, bromomethyl, fluoromethyl, 3,3,3-trifluoro-n-propyl, 1-fluoroprop-1-yl, 1-trifluoromethylprop-1-yl, 2-trifluoromethylprop-2-yl, 1-fluoroprop-1-yl, 2-fluoroprop-2-yl, 2-chloroprop-2-yl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, 1-methylcycloprop-1-yl, 2-methylcycloprop-1-yl, 2,2-dimethylcycloprop-1-yl, 2,3-dimethylcyclopropyl, 1-cyanocycloprop-1-yl, 2-cyanocycloprop-1-yl, 1-methylcyclobutyl, 2-methylcyclobutyl, 3-methylcyclobutyl, 3,3-dimethylcyclobutyl, 1-cyanocyclobutyl, 2-cyanocyclobutyl, 3-

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cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl, 1-vinylcyclopropyl, 1-ethylcyclopropyl,
1-methylcyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 1-methoxycyclohexyl, 2-
methoxycyclohexyl, 3-methoxycyclohexyl, spiro[2.2]pent-1-yl, spiro[2.3]hex-1-yl,
spiro[2.3]hex-4-yl, 3-spiro[2.3]hex-5-yl, spiro[3.3]hept-1-yl, spiro[3.3]hept-2-yl,
5 bicyclo[1.1.0]butan-1-yl, bicyclo[1.1.0]butan-2-yl, bicyclo[2.1.0]pentan-1-yl,
bicyclo[1.1.1]pentan-1-yl, bicyclo[2.1.0]pentan-2-yl, bicyclo[2.1.0]pentan-5-yl,
bicyclo[2.1.1]hexyl, bicyclo[2.2.1]hept-2-yl, bicyclo[2.2.2]octan-2-yl, bicyclo[3.2.1]octan-2-yl,
bicyclo[3.2.2]nonan-2-yl, adamantan-1-yl, adamantan-2-yl, cyclopropylmethyl,
cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, phenyl, 2-fluorophenyl, 3-
10 fluorophenyl, 4-fluorophenyl, 2,4-difluorophenyl, 2,5-difluorophenyl, 2,6-difluorophenyl, 2,3-
difluorophenyl, 3,4-difluorophenyl, 3,5-difluorophenyl, 2,4,5-trifluorophenyl, 3,4,5-
trifluorophenyl, 2-chlorophenyl, 3-chlorophenyl, 4-chlorophenyl, 2,4-dichlorophenyl, 2,5-
dichlorophenyl, 2,6-dichlorophenyl, 2,3-dichlorophenyl, 3,4-dichlorophenyl, 3,5-
15 dichlorophenyl, 2,4,5-trichlorophenyl, 3,4,5-trichlorophenyl, 2,4,6-trichlorophenyl, 2-
bromophenyl, 3-bromophenyl, 4-bromophenyl, 2-iodophenyl, 3-iodophenyl, 4-iodophenyl, 2-
bromo-4-fluorophenyl, 2-bromo-4-chlorophenyl, 3-bromo-4-fluorophenyl, 3-bromo-4-
chlorophenyl, 3-bromo-5-fluorophenyl, 3-bromo-5-chlorophenyl, 2-fluoro-4-bromophenyl, 2-
20 chloro-4-bromophenyl, 3-fluoro-4-bromophenyl, 3-chloro-4-bromophenyl, 2-chloro-4-
fluorophenyl, 3-chloro-4-fluorophenyl, 2-fluoro-3-chlorophenyl, 2-fluoro-4-chlorophenyl, 2-
fluoro-5-chlorophenyl, 3-fluoro-4-chlorophenyl, 3-fluoro-5-chlorophenyl, 2-fluoro-6-
chlorophenyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl, 2,4-dimethylphenyl, 2,5-
25 dimethylphenyl, 2,6-dimethylphenyl, 2,3-dimethylphenyl, 3,4-dimethylphenyl, 3,5-
dimethylphenyl, 2,4,5-trimethylphenyl, 3,4,5-trimethylphenyl, 2,4,6-trimethylphenyl, 2-
methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 2,4-dimethoxyphenyl, 2,5-
dimethoxyphenyl, 2,6-dimethoxyphenyl, 2,3-dimethoxyphenyl, 3,4-dimethoxyphenyl, 3,5-
30 dimethoxyphenyl, 2,4,5-trimethoxyphenyl, 3,4,5-trimethoxyphenyl, 2,4,6-trimethoxyphenyl, 2-
trifluoromethoxyphenyl, 3-trifluoromethoxyphenyl, 4-trifluoromethoxyphenyl, 2-
difluoromethoxyphenyl, 3-difluoromethoxyphenyl, 4-difluoromethoxyphenyl, 2-
trifluoromethylphenyl, 3-trifluoromethylphenyl, 4-trifluoromethylphenyl, 2-
35 difluoromethylphenyl, 3-difluoromethylphenyl, 4-difluoromethylphenyl, 3,5-
bis(trifluoromethyl)phenyl, 3-trifluoromethyl-5-fluorophenyl, 3-trifluoromethyl-5-chlorophenyl,
3-methyl-5-fluorophenyl, 3-methyl-5-chlorophenyl, 3-methoxy-5-fluorophenyl, 3-methoxy-5-
chlorophenyl, 3-trifluoromethoxy-5-chlorophenyl, 2-ethoxyphenyl, 3-ethoxyphenyl, 4-
ethoxyphenyl, 2-methylthiophenyl, 3-methylthiophenyl, 4-methylthiophenyl, 2-
trifluoromethylthiophenyl, 3-trifluoromethylthiophenyl, 4-trifluoromethylthiophenyl, 2-
ethylphenyl, 3-ethylphenyl, 4-ethylphenyl, 2-methoxycarbonylphenyl, 3-
methoxycarbonylphenyl, 4-methoxycarbonylphenyl, 2-ethoxycarbonylphenyl, 3-

ethoxycarbonylphenyl, 4-ethoxycarbonylphenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyrazin-2-yl, pyridazin-3-yl, pyridazin-4-yl, pyrimidin-2-yl, pyrimidin-5-yl, pyrimidin-4-yl, pyridazin-3-ylmethyl, pyridazin-4-ylmethyl, pyrimidin-2-ylmethyl, pyrimidin-5-ylmethyl, pyrimidin-4-ylmethyl, pyrazin-2-ylmethyl, 3-chloropyrazin-2-yl, 3-bromopyrazin-2-yl, 3-methoxypyrazin-2-yl, 3-ethoxypyrazin-2-yl, 3-trifluoromethylpyrazin-2-yl, 3-cyanopyrazin-2-yl, naphth-2-yl, naphth-1-yl, quinolin-4-yl, quinolin-6-yl, quinolin-8-yl, quinolin-2-yl, quinoxalin-2-yl, 2-naphthylmethyl, 1-naphthylmethyl, quinolin-4-ylmethyl, quinolin-6-ylmethyl, quinolin-8-ylmethyl, quinolin-2-ylmethyl, quinoxalin-2-ylmethyl, pyrazin-2-ylmethyl, 4-chloropyridin-2-yl, 3-chloropyridin-4-yl, 2-chloropyridin-3-yl, 2-chloropyridin-4-yl, 2-chloropyridin-5-yl, 2,6-dichloropyridin-4-yl, 3-chloropyridin-5-yl, 3,5-dichloropyridin-2-yl, 3-chloro-5-trifluoromethylpyridin-2-yl, (4-chloropyridin-2-yl)methyl, (3-chloropyridin-4-yl)methyl, (2-chloropyridin-3-yl)methyl, (2-chloropyridin-4-yl)methyl, (2-chloropyridin-5-yl)methyl, (2,6-dichloropyridin-4-yl)methyl, (3-chloropyridin-5-yl)methyl, (3,5-dichloropyridin-2-yl)methyl, thiophen-2-yl, thiophen-3-yl, 5-methylthiophen-2-yl, 5-ethylthiophen-2-yl, 5-chlorothiophen-2-yl, 5-bromothiophen-2-yl, 4-methylthiophen-2-yl, 3-methylthiophen-2-yl, 5-fluorothiophen-3-yl, 3,5-dimethylthiophen-2-yl, 3-ethylthiophen-2-yl, 4,5-dimethylthiophen-2-yl, 3,4-dimethylthiophen-2-yl, 4-chlorothiophen-2-yl, furan-2-yl, 5-methylfuran-2-yl, 5-ethylfuran-2-yl, 5-methoxycarbonylfuran-2-yl, 5-chlorofuran-2-yl, 5-bromofuran-2-yl, thiophan-2-yl, thiophan-3-yl, sulfolan-2-yl, sulfolan-3-yl, tetrahydrothiopyran-4-yl, tetrahydropyran-4-yl, tetrahydrofuran-2-yl, tetrahydrofuran-3-yl, 1-(4-methylphenyl)ethyl, 1-(3-methylphenyl)ethyl, 1-(2-methylphenyl)ethyl, 1-(4-chlorophenyl)ethyl, 1-(3-chlorophenyl)ethyl, 1-(2-chlorophenyl)ethyl, benzyl, (4-fluorophenyl)methyl, (3-fluorophenyl)methyl, (2-fluorophenyl)methyl, (2,4-difluorophenyl)methyl, (3,5-difluorophenyl)methyl, (2,5-difluorophenyl)methyl, (2,6-difluorophenyl)methyl, (2,4,5-trifluorophenyl)methyl, (2,4,6-trifluorophenyl)methyl, (4-chlorophenyl)methyl, (3-chlorophenyl)methyl, (2-chlorophenyl)methyl, (2,4-dichlorophenyl)methyl, (3,5-dichlorophenyl)methyl, (2,5-dichlorophenyl)methyl, (2,6-dichlorophenyl)methyl, (2,4,5-trichlorophenyl)methyl, (2,4,6-trichlorophenyl)methyl, (4-bromophenyl)methyl, (3-bromophenyl)methyl, (2-bromophenyl)methyl, (4-iodophenyl)methyl, (3-iodophenyl)methyl, (2-iodophenyl)methyl, (3-chloro-5-trifluoromethylpyridin-2-yl)methyl, (2-bromo-4-fluorophenyl)methyl, (2-bromo-4-chlorophenyl)methyl, (3-bromo-4-fluorophenyl)methyl, (3-bromo-4-chlorophenyl)methyl, (3-bromo-5-fluorophenyl)methyl, (3-bromo-5-chlorophenyl)methyl, (2-fluoro-4-bromophenyl)methyl, (3-fluoro-4-bromophenyl)methyl, (3-chloro-4-bromophenyl)methyl, (2-chloro-4-fluorophenyl)methyl, (3-chloro-4-fluorophenyl)methyl, (2-fluoro-3-chlorophenyl)methyl, (2-fluoro-4-chlorophenyl)methyl, (2-fluoro-5-chlorophenyl)methyl, (3-fluoro-4-chlorophenyl)methyl, (3-fluoro-5-chlorophenyl)methyl, (2-fluoro-6-chlorophenyl)methyl, 2-phenyleth-1-yl, 3-trifluoromethyl-4-

chlorophenyl, 3-chloro-4-trifluoromethylphenyl, 2-chloro-4-trifluoromethylphenyl, 3,5-difluoropyridin-2-yl, (3,6-dichloropyridin-2-yl)methyl, (4-trifluoromethylphenyl)methyl, (3-trifluoromethylphenyl)methyl, (2-trifluoromethylphenyl)methyl, (4-trifluoromethoxyphenyl)methyl, (3-trifluoromethoxyphenyl)methyl, (2-trifluoromethoxyphenyl)methyl, (4-methoxyphenyl)methyl, (3-methoxyphenyl)methyl, (2-methoxyphenyl)methyl, (4-methylphenyl)methyl, (3-methylphenyl)methyl, (2-methylphenyl)methyl, (4-cyanophenyl)methyl, (3-cyanophenyl)methyl, (2-cyanophenyl)methyl, (2,4-diethylphenyl)methyl, (3,5-diethylphenyl)methyl, (3,4-dimethylphenyl)methyl, (3,5-dimethoxyphenyl)methyl, 1-phenyleth-1-yl, 1-(o-chlorophenyl)eth-1-yl, 1,3-thiazol-2-yl, 4-methyl-1,3-thiazol-2-yl, 1,3-thiazol-2-yl, ethenyl, 1-propenyl, 2-propenyl, 1-methylethenyl, 1-butenyl, 2-butenyl, 3-butenyl, 1-methyl-1-propenyl, 2-methyl-1-propenyl, 1-methyl-2-propenyl, 2-methyl-2-propenyl, 1-pentenyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 1-methyl-1-butenyl, 2-methyl-1-butenyl, 3-methyl-1-butenyl, 1-methyl-2-butenyl, 2-methyl-2-butenyl, 3-methyl-2-butenyl, 1-methyl-3-butenyl, 2-methyl-3-butenyl, 3-methyl-3-butenyl, 1,1-dimethyl-2-propenyl, 1,2-dimethyl-1-propenyl, 1,2-dimethyl-2-propenyl, 1-ethyl-1-propenyl, 1-ethyl-2-propenyl, 1-hexenyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 5-hexenyl, 1-methyl-1-pentenyl, 2-methyl-1-pentenyl, 3-methyl-1-pentenyl, 4-methyl-1-pentenyl, 1-methyl-2-pentenyl, 2-methyl-2-pentenyl, 3-methyl-2-pentenyl, 4-methyl-2-pentenyl, 1-methyl-3-pentenyl, 2-methyl-3-pentenyl, 3-methyl-3-pentenyl, 4-methyl-3-pentenyl, 1-methyl-4-pentenyl, 2-methyl-4-pentenyl, 3-methyl-4-pentenyl, 4-methyl-4-pentenyl, 1,1-dimethyl-2-butenyl, 1,1-dimethyl-3-butenyl, 1,2-dimethyl-1-butenyl, 1,2-dimethyl-2-butenyl, 1,2-dimethyl-3-butenyl, 1,3-dimethyl-1-butenyl, 1,3-dimethyl-2-butenyl, 1,3-dimethyl-3-butenyl, 2,2-dimethyl-3-butenyl, 2,3-dimethyl-1-but enyl, 2,3-dimethyl-2-but enyl, 2,3-dimethyl-3-but enyl, 3,3-dimethyl-1-but enyl, 3,3-dimethyl-2-but enyl, 1-ethyl-1-but enyl, 1-ethyl-2-but enyl, 1-ethyl-3-but enyl, 2-ethyl-1-but enyl, 2-ethyl-2-but enyl, 2-ethyl-3-but enyl, 1,1,2-trimethyl-2-propenyl, 1-ethyl-1-methyl-2-propenyl, 1-ethyl-2-methyl-1-propenyl and 1-ethyl-2-methyl-2-propenyl, ethynyl, 1-propynyl, 2-propynyl, 1-butynyl, 2-butynyl, 3-butynyl, 1-methyl-2-propynyl, 1-pentynyl, 2-pentynyl, 3-pentynyl, 4-pentynyl, 1-methyl-2-butynyl, 1-methyl-3-butynyl, 2-methyl-3-butynyl, 3-methyl-1-butynyl, 1,1-dimethyl-2-propynyl, 1-ethyl-2-propynyl, 1-hexynyl, 2-hexynyl, 3-hexynyl, 3,3-difluorocyclobut-1-yl, 3-fluorocyclobut-1-yl, 1-fluorocyclobut-1-yl, 2,2-difluorocycloprop-1-yl, 1-fluorocycloprop-1-yl, 2-fluorocycloprop-1-yl, 4-fluorocyclohexyl, 4,4-difluorocyclohexyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, n-propyloxycarbonylmethyl, isopropyloxycarbonylmethyl, isopropyloxycarbonylmethyl, n-butyloxycarbonylmethyl, tert-butyloxycarbonylmethyl, methoxymethyl, ethoxymethyl, n-propyloxymethyl, isopropyloxymethyl, n-butyloxymethyl, methoxyethyl, ethoxyethyl, n-propyloxyethyl, isopropyloxyethyl, methoxy-n-propyl, methoxy-n-butyl, trifluoromethoxymethyl, difluoromethoxymethyl, 2,2-difluoroethoxymethyl, 2,2,2-trifluoroethoxymethyl, trifluoromethoxyethyl, difluoromethoxyethyl, 2,2-difluoroethoxyethyl,

2,2,2-trifluoroethoxyethyl, methoxycarbonyl, ethoxycarbonyl, n-propyloxycarbonyl, isopropyloxycarbonyl, n-butyloxycarbonyl, tert-butyloxycarbonyl, allyloxycarbonyl, benzyloxycarbonyl, methylcarbonyl, ethylcarbonyl, n-propylcarbonyl, isopropylcarbonyl, n-butylcarbonyl, tert-butylcarbonyl, phenylcarbonyl, p-chlorophenylcarbonyl, m-chlorophenylcarbonyl, o-chlorophenylcarbonyl, p-fluorophenylcarbonyl, m-fluorophenylcarbonyl, o-fluorophenylcarbonyl, p-methoxyphenylcarbonyl, m-methoxyphenylcarbonyl, o-methoxyphenylcarbonyl, p-trifluoromethylphenylcarbonyl, m-trifluoromethylphenylcarbonyl, o-trifluoromethylphenylcarbonyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, benzyloxy, p-chlorophenylmethoxy, phenyloxy, p-chlorophenoxy, m-chlorophenoxy, o-chlorophenoxy, p-fluorophenoxy, m-fluorophenoxy, o-fluorophenoxy, p-methoxyphenoxy, m-methoxyphenoxy, o-methoxyphenoxy, p-trifluoromethylphenoxy, m-trifluoromethylphenoxy, o-trifluoromethylphenoxy, methylaminocarbonyl, ethylaminocarbonyl, n-propylaminocarbonyl, isopropylaminocarbonyl, cyclopropylaminocarbonyl, cyclobutylaminocarbonyl, cyclopentylaminocarbonyl, cyclohexylaminocarbonyl, cyclopropylmethylaminocarbonyl, cyclobutylmethylaminocarbonyl, cyclopentylmethylaminocarbonyl, cyclohexylmethylaminocarbonyl, dimethylaminocarbonyl, diethylaminocarbonyl, benzylmethylaminocarbonyl, methylamino, dimethylamino, ethylamino, diethylamino, n-propylamino, isopropylamino, cyclopropylamino, cyclobutylamino, cyclopentylamino, cyclohexylamino, benzylamino, cyanomethyl, cyanoethyl, 3-cyanoprop-1-yl, 2-cyanoprop-1-yl, 1-cyanoprop-1-yl, 2-cyanoprop-2-yl, 2-cyano-1,1-dimethyleth-1-yl, 1-(cyanomethyl)-1-methylprop-1-yl, hydroxycarbonyl, hydroxycarbonylmethyl, hydroxycarbonylethyl, CHO, methoxyethylthio, ethoxyethylthio, trifluoromethoxyethylthio, pentafluoroethoxyethylthio, methylthioethylthio, ethylthioethylthio, trifluoromethylthioethylthio, pentafluorothioethylthio, benzylthio, p-chlorophenylmethylthio, m-chlorophenylmethylthio, o-chlorophenylmethylthio, p-fluorophenylmethylthio, m-fluorophenylmethylthio, o-fluorophenylmethylthio, methylthio, ethylthio, n-propylthio, isopropylthio, n-butylthio, tert-butylthio, cyclobutylthio, cyclopentylthio, cyclohexylthio, phenylthio, pyrid-2-ylthio, pyrid-3-ylthio, pyrid-4-ylthio, p-chlorophenylthio, m-chlorophenylthio, o-chlorophenylthio, p-fluorophenylthio, m-fluorophenylthio, o-fluorophenylthio, p-methoxyphenylthio, m-methoxyphenylthio, o-methoxyphenylthio, p-methylphenylthio, m-methylphenylthio, o-methylphenylthio, methylsulfonyl, ethylsulfonyl, n-propylsulfonyl, 1-methylethylsulfonyl, cyclopropylsulfonyl, cyclobutylsulfonyl, cyclopentylsulfonyl, cyclohexylsulfonyl, phenylsulfonyloxy, p-chlorophenylsulfonyl, m-chlorophenylsulfonyl, o-chlorophenylsulfonyl, p-fluorophenylsulfonyl, m-fluorophenylsulfonyl, o-fluorophenylsulfonyl, p-methoxyphenylsulfonyl, m-methoxyphenylsulfonyl, o-methoxyphenylsulfonyl, p-methylphenylsulfonyl, m-methylphenylsulfonyl, o-methylphenylsulfonyl, 2-methoxyprop-2-yl, 2-ethoxyprop-2-yl, 2-n-propyloxyprop-2-yl, 2-n-

5 butyloxyprop-2-yl, 2-benzyloxyprop-2-yl, 2-phenylethoxyprop-2-yl, 2-trifluoromethoxyprop-2-yl, 2-difluoromethoxyprop-2-yl, 2,2,2-trifluoroethoxyprop-2-yl, 2,2-difluoroethoxyprop-2-yl, 2-(4-chlorophenylmethoxy)prop-2-yl, 2-(4-fluorophenylmethoxy)prop-2-yl, 2-(4-bromophenylmethoxy)prop-2-yl, 2-(4-trifluoromethylphenylmethoxy)prop-2-yl, 2-(4-methylphenylmethoxy)prop-2-yl, 2-(3-chlorophenylmethoxy)prop-2-yl, 2-(3-fluorophenylmethoxy)prop-2-yl, 2-(3-bromophenylmethoxy)prop-2-yl, 2-(3-trifluoromethylphenylmethoxy)prop-2-yl, 2-(3-methylphenylmethoxy)prop-2-yl, 2-(2-chlorophenylmethoxy)prop-2-yl, 2-(2-fluorophenylmethoxy)prop-2-yl, 2-(2-bromophenylmethoxy)prop-2-yl, 2-(2-trifluoromethylphenylmethoxy)prop-2-yl, 2-(2-methylphenylmethoxy)prop-2-yl, 2-(methoxymethyl)prop-2-yl, 2-(ethoxymethyl)prop-2-yl, 2-methoxycarbonylprop-2-yl, 2-ethoxycarbonylprop-2-yl, 2-hydroxycarbonylprop-2-yl, 2-aminocarbonylprop-2-yl, 20 aminocarbonyl, aminocarbonylmethyl, aminocarbonylethyl, cyano, hydroxymethyl, hydroxyethyl, 2-hydroxyprop-2-yl, allyloxymethyl, 2-allyloxyethyl, 2-allyloxyprop-2-yl, or 15

R⁴ and R⁷ together with the carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-3, Q-4, Q-8, Q-9, Q-12, Q-13, Q-19 and Q-30,

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R⁵ represents hydrogen, formyl, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylpropyl, 2-methylpropyl, 1,1-dimethylethyl, n-pentyl, 1-methylbutyl, 2-methylbutyl, 3-methylbutyl, 1,1-dimethylpropyl, 1,2-dimethylpropyl, 2,2-dimethylpropyl, 1-ethylpropyl, n-hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl, 1-ethyl-2-methylpropyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 3,3,3-trifluoro-n-propyl, methoxymethyl, ethoxymethyl, methoxyethyl, ethoxyethyl, methoxy-n-propyl, methoxy-n-butyl, ethoxy-n-propyl, ethoxy-n-butyl, hydroxyethyl, hydroxy-n-propyl, hydroxycarbonylmethyl, hydroxycarbonylethyl, hydroxycarbonyl-n-propyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, n-propyloxycarbonylmethyl, isopropyloxycarbonylmethyl, tert-butyloxycarbonylmethyl, methoxycarbonylethyl, ethoxycarbonylethyl, n-propyloxycarbonylethyl, isopropyloxycarbonylethyl, tert-butyloxycarbonylethyl, methoxycarbonyl-n-propyl, ethoxycarbonyl-n-propyl, benzyloxycarbonylmethyl, benzyloxycarbonylethyl, allyloxycarbonylmethyl, allyloxycarbonylethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, 1-methylcycloprop-1-yl, 2-methylcycloprop-1-yl, 2,2-dimethylcycloprop-1-yl, 2,3-dimethylcyclopropyl, 1-cyanopropyl, 2-cyanopropyl, 1-

35

methylcyclobutyl, 2-methylcyclobutyl, 3-methylcyclobutyl, 3,3-dimethylcyclobutyl, 1-cyanocyclobutyl, 2-cyanocyclobutyl, 3-cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl, 1-vinylcyclopropyl, 1-ethylecyclopropyl, 1-methylcyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 1-methoxycyclohexyl, 2-methoxycyclohexyl, 3-methoxycyclohexyl, 5 cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, cyanomethyl, 2-cyanoeth-1-yl, 1-cyanoeth-1-yl, cyano-n-propyl, methoxycarbonyl, ethoxycarbonyl, tert-butyloxycarbonyl, benzyloxycarbonyl, n-butyloxycarbonyl, allyloxycarbonyl, methylcarbonyl, ethylcarbonyl, n-propylcarbonyl, isopropylcarbonyl, n-butylcarbonyl, tert-butylcarbonyl, phenylcarbonyl, p-chlorophenylcarbonyl, m-chlorophenylcarbonyl, o-chlorophenylcarbonyl, p-fluorophenylcarbonyl, m-fluorophenylcarbonyl, o-fluorophenylcarbonyl, p-methoxyphenylcarbonyl, m-methoxyphenylcarbonyl, o-methoxyphenylcarbonyl, p-trifluoromethylphenylcarbonyl, m-trifluoromethylphenylcarbonyl, o-trifluoromethylphenylcarbonyl, methylaminocarbonyl, ethylaminocarbonyl, isopropylaminocarbonyl, n-propylaminocarbonyl, phenylaminocarbonyl, p-Cl-phenylaminocarbonyl, m-Cl-phenylaminocarbonyl, o-Cl-phenylaminocarbonyl, cyclopropylaminocarbonyl, cyclobutylaminocarbonyl, cyclopentylaminocarbonyl, cyclohexylaminocarbonyl, cyclopropylmethylaminocarbonyl, cyclobutylmethylaminocarbonyl, cyclopentylmethylaminocarbonyl, cyclohexylmethylaminocarbonyl, dimethylaminocarbonyl, diethylaminocarbonyl, benzyl(methyl)aminocarbonyl, prop-2-en-1-yl, prop-2-yn-1-yl, 1-fluorocycloprop-1-yl, 2-fluorocycloprop-1-yl, 2,2-difluorocycloprop-1-yl, 3,3-difluorocyclobut-10 1-yl, phenyl, 2-fluorophenyl, 3-fluorophenyl, 4-fluorophenyl, 2,4-difluorophenyl, 2,5-difluorophenyl, 2,6-difluorophenyl, 2,3-difluorophenyl, 3,4-difluorophenyl, 3,5-difluorophenyl, 2,4,5-trifluorophenyl, 3,4,5-trifluorophenyl, 2-chlorophenyl, 3-chlorophenyl, 4-chlorophenyl, 2,4-dichlorophenyl, 2,5-dichlorophenyl, 2,6-dichlorophenyl, 2,3-dichlorophenyl, 3,4-dichlorophenyl, 3,5-dichlorophenyl, 2,4,5-trichlorophenyl, 3,4,5-trichlorophenyl, 2,4,6-trichlorophenyl, 2-bromophenyl, 3-bromophenyl, 4-bromophenyl, 2-iodophenyl, 3-iodophenyl, 4-iodophenyl, 2-bromo-4-fluorophenyl, 2-bromo-4-chlorophenyl, 3-bromo-4-fluorophenyl, 3-bromo-4-chlorophenyl, 3-bromo-5-fluorophenyl, 3-bromo-5-chlorophenyl, 2-fluoro-4-bromophenyl, 2-chloro-4-bromophenyl, 3-fluoro-4-bromophenyl, 3-chloro-4-bromophenyl, 2-chloro-4-fluorophenyl, 3-chloro-4-fluorophenyl, 2-fluoro-3-chlorophenyl, 2-fluoro-4-chlorophenyl, 2-fluoro-5-chlorophenyl, 3-fluoro-4-chlorophenyl, 3-fluoro-5-chlorophenyl, 2-fluoro-6-chlorophenyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl, 2,4-dimethylphenyl, 2,5-dimethylphenyl, 2,6-dimethylphenyl, 2,3-dimethylphenyl, 3,4-dimethylphenyl, 3,5-dimethylphenyl, 2,4,5-trimethylphenyl, 3,4,5-trimethylphenyl, 2,4,6-trimethylphenyl, 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 2,4-dimethoxyphenyl, 2,5-dimethoxyphenyl, 2,6-dimethoxyphenyl, 2,3-dimethoxyphenyl, 3,4-dimethoxyphenyl, 3,5-dimethoxyphenyl, 2,4,5-trimethoxyphenyl, 3,4,5-trimethoxyphenyl, 2,4,6-trimethoxyphenyl, 2-35

trifluoromethoxyphenyl, 3-trifluoromethoxyphenyl, 4-trifluoromethoxyphenyl, 2-difluoromethoxyphenyl, 3-difluoromethoxyphenyl, 4-difluoromethoxyphenyl, 2-trifluoromethylphenyl, 3-trifluoromethylphenyl, 4-trifluoromethylphenyl, 2-difluoromethylphenyl, 3-difluoromethylphenyl, 4-difluoromethylphenyl, 3,5-bis(trifluoromethyl)phenyl, 3-trifluoromethyl-5-fluorophenyl, 3-trifluoromethyl-5-chlorophenyl, 3-methyl-5-fluorophenyl, 3-methyl-5-chlorophenyl, 3-methoxy-5-fluorophenyl, 3-methoxy-5-chlorophenyl, 3-trifluoromethoxy-5-chlorophenyl, 2-ethoxyphenyl, 3-ethoxyphenyl, 4-ethoxyphenyl, 2-methylthiophenyl, 3-methylthiophenyl, 4-methylthiophenyl, 2-trifluoromethylthiophenyl, 3-trifluoromethylthiophenyl, 4-trifluoromethylthiophenyl, methoxymethyl, 2-ethylphenyl, 3-ethylphenyl, 4-ethylphenyl, 2-methoxycarbonylphenyl, 3-methoxycarbonylphenyl, 4-methoxycarbonylphenyl, 2-ethoxycarbonylphenyl, 3-ethoxycarbonylphenyl, 4-ethoxycarbonylphenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyrazin-2-yl, pyridazin-3-yl, pyridazin-4-yl, pyrimidin-2-yl, pyrimidin-5-yl, pyrimidin-4-yl, pyridazin-3-ylmethyl, pyridazin-4-ylmethyl, pyrimidin-2-ylmethyl, pyrimidin-5-ylmethyl, pyrimidin-4-ylmethyl, pyrazin-2-ylmethyl, 3-chloropyrazin-2-yl, 3-bromopyrazin-2-yl, 3-methoxypyrazin-2-yl, 3-ethoxypyrazin-2-yl, 3-trifluoromethylpyrazin-2-yl, 3-cyanopyrazin-2-yl, naphth-2-yl, naphth-1-yl, quinolin-4-yl, quinolin-6-yl, quinolin-8-yl, quinolin-2-yl, quinoxalin-2-yl, 2-naphthylmethyl, 1-naphthylmethyl, quinolin-4-ylmethyl, quinolin-6-ylmethyl, quinolin-8-ylmethyl, quinolin-2-ylmethyl, quinoxalin-2-ylmethyl, pyrazin-2-ylmethyl, 4-chloropyridin-2-yl, 3-chloropyridin-4-yl, 2-chloropyridin-3-yl, 2-chloropyridin-4-yl, 2-chloropyridin-5-yl, 2,6-dichloropyridin-4-yl, 3-chloropyridin-5-yl, 3,5-dichloropyridin-2-yl, 3-chloro-5-trifluoromethylpyridin-2-yl, (4-chloropyridin-2-yl)methyl, (3-chloropyridin-4-yl)methyl, (2-chloropyridin-3-yl)methyl, (2-chloropyridin-4-yl)methyl, (2-chloropyridin-5-yl)methyl, (2,6-dichloropyridin-4-yl)methyl, (3-chloropyridin-5-yl)methyl, (3,5-dichloropyridin-2-yl)methyl, thiophen-2-yl, thiophen-3-yl, 5-methylthiophen-2-yl, 5-ethylthiophen-2-yl, 5-chlorothiophen-2-yl, 5-bromothiophen-2-yl, 4-methylthiophen-2-yl, 3-methylthiophen-2-yl, 5-fluorothiophen-3-yl, 3,5-dimethylthiophen-2-yl, 3-ethylthiophen-2-yl, 4,5-dimethylthiophen-2-yl, 3,4-dimethylthiophen-2-yl, 4-chlorothiophen-2-yl, furan-2-yl, 5-methylfuran-2-yl, 5-ethylfuran-2-yl, 5-methoxycarbonylfuran-2-yl, 5-chlorofuran-2-yl, 5-bromofuran-2-yl, thiophan-2-yl, thiophan-3-yl, sulfolan-2-yl, sulfolan-3-yl, benzyl, (4-fluorophenyl)methyl, (3-fluorophenyl)methyl, (2-fluorophenyl)methyl, (2,4-difluorophenyl)methyl, (3,5-difluorophenyl)methyl, (2,5-difluorophenyl)methyl, (2,6-difluorophenyl)methyl, (2,4,5-trifluorophenyl)methyl, (2,4,6-trifluorophenyl)methyl, (4-chlorophenyl)methyl, (3-chlorophenyl)methyl, (2-chlorophenyl)methyl, (2,4-dichlorophenyl)methyl, (3,5-dichlorophenyl)methyl, (2,5-dichlorophenyl)methyl, (2,6-dichlorophenyl)methyl, (2,4,5-trichlorophenyl)methyl, (2,4,6-trichlorophenyl)methyl, (4-bromophenyl)methyl, (3-bromophenyl)methyl, (2-bromophenyl)methyl, (4-iodophenyl)methyl, (3-iodophenyl)methyl, (2-iodophenyl)methyl, (3-

chloro-5-trifluoromethylpyridin-2-yl)methyl, (2-bromo-4-fluorophenyl)methyl, (2-bromo-4-chlorophenyl)methyl, (3-bromo-4-fluorophenyl)methyl, (3-bromo-4-chlorophenyl)methyl, (3-bromo-5-fluorophenyl)methyl, (3-bromo-5-chlorophenyl)methyl, (2-fluoro-4-bromophenyl)methyl, (2-chloro-4-bromophenyl)methyl, (3-fluoro-4-bromophenyl)methyl, (3-chloro-4-bromophenyl)methyl, (2-chloro-4-fluorophenyl)methyl, (3-chloro-4-fluorophenyl)methyl, (2-fluoro-3-chlorophenyl)methyl, (2-fluoro-4-chlorophenyl)methyl, (2-fluoro-5-chlorophenyl)methyl, (3-fluoro-4-chlorophenyl)methyl, (3-fluoro-5-chlorophenyl)methyl, (2-fluoro-6-chlorophenyl)methyl, phenylethyl, 3-trifluoromethyl-4-chlorophenyl, 3-chloro-4-trifluoromethylphenyl, 2-chloro-4-trifluoromethylphenyl, 3,5-difluoropyridin-2-yl, (3,6-dichloropyridin-2-yl)methyl, (4-trifluoromethylphenyl)methyl, (3-trifluoromethylphenyl)methyl, (2-trifluoromethylphenyl)methyl, (4-trifluoromethoxyphenyl)methyl, (3-trifluoromethoxyphenyl)methyl, (2-trifluoromethoxyphenyl)methyl, (4-methoxyphenyl)methyl, (3-methoxyphenyl)methyl, (2-methoxyphenyl)methyl, (4-methylphenyl)methyl, (3-methylphenyl)methyl, (2-methylphenyl)methyl, (4-cyanophenyl)methyl, (3-cyanophenyl)methyl, (2-cyanophenyl)methyl, (2,4-diethylphenyl)methyl, (3,5-diethylphenyl)methyl, (3,4-dimethylphenyl)methyl, (3,5-dimethoxyphenyl)methyl, 1-phenylethyl-1-yl, methylsulfonyl, ethylsulfonyl, n-propylsulfonyl, 1-methylethylsulfonyl, cyclopropylsulfonyl, cyclobutylsulfonyl, cyclopentylsulfonyl, cyclohexylsulfonyl, phenylsulfonyloxy, p-chlorophenylsulfonyl, m-chlorophenylsulfonyl, o-chlorophenylsulfonyl, p-fluorophenylsulfonyl, m-fluorophenylsulfonyl, o-fluorophenylsulfonyl, p-methoxyphenylsulfonyl, m-methoxyphenylsulfonyl, o-methoxyphenylsulfonyl, p-methylphenylsulfonyl, m-methylphenylsulfonyl, o-methylphenylsulfonyl, phenylcarbonylmethyl, p-chlorophenylcarbonylmethyl, m-chlorophenylcarbonylmethyl, o-chlorophenylcarbonylmethyl, p-fluorophenylcarbonylmethyl, m-fluorophenylcarbonylmethyl, o-fluorophenylcarbonylmethyl, methylcarbonylmethyl, ethylcarbonylmethyl, n-propylcarbonylmethyl, isopropylcarbonylmethyl, n-butylcarbonylmethyl, tert-butylcarbonylmethyl, or

R⁴ and R⁵ together with the nitrogen atom or carbon atom to which they are each attached form a fully

30 saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-13, Q-14, Q-15, Q-25 and Q-26,

35 R⁶ represents hydrogen, methyl, ethyl,

R⁸ represents hydrogen, halogen, cyano, nitro, hydrothio, hydroxy, methylamino, ethylamino, isopropylamino, n-propylamino, dimethylamino, diethylamino, cyclopropylamino,

cyclobutylamino, cyclopentylamino, cyclohexylamino, methoxycarbonylmethylamino,
methoxycarbonylethylamino, ethoxycarbonylmethylamino, ethoxycarbonylethylamino,
methoxycarbonylamino, ethoxycarbonylamino, tert-butyloxycarbonylamino, phenylamino, N-
piperidinyl, N-pyrrolidinyl, N-morpholinyl, methylaminocarbonylamino,
5 ethylaminocarbonylamino, n-propylaminocarbonylamino, isopropylaminocarbonylamino,
benzylaminocarbonylamino, phenylaminocarbonylamino, p-Cl-phenylaminocarbonylamino, m-
Cl-phenylaminocarbonylamino, o-Cl-phenylaminocarbonylamino,
cyclopropylaminocarbonylamino, cyclobutylaminocarbonylamino,
cyclopentylaminocarbonylamino, cyclohexylaminocarbonylamino,
10 dimethylaminocarbonylamino, methoxy, ethoxy, n-propoxy, isopropoxy, n-butoxy, tert-
butyloxy, methoxycarbonyloxy, ethoxycarbonyloxy, tert-butyloxycarbonyloxy,
methylaminocarbonyloxy, ethylaminocarbonyloxy, n-propylaminocarbonyloxy,
isopropylaminocarbonyloxy, benzylaminocarbonyloxy, phenylaminocarbonyloxy,
cyclopropylaminocarbonyloxy, cyclobutylaminocarbonyloxy, cyclopentylaminocarbonyloxy,
15 cyclohexylaminocarbonyloxy, dimethylaminocarbonyloxy, phenyloxy, p-Cl-phenyloxy, o-Cl-
phenyloxy, m-Cl-phenyloxy, m-trifluoromethylphenyloxy, p-trifluoromethylphenyloxy,
trifluoromethyloxy, difluoromethyloxy, 2,2-difluoroethyloxy, 2,2,2-trifluoroethyloxy,
methylthio, ethylthio, n-propylthio, isopropylthio, phenylthio, p-Cl-phenylthio, m-Cl-
phenylthio, o-Cl-phenylthio, pyridin-2-ylthio, pyridin-3-ylthio, benzylthio, trifluoromethylthio,
20 pentafluoroethylthio, cyclopropylthio, cyclobutylthio, cyclopentylthio, cyclohexylthio,
methylsulfinyl, ethylsulfinyl, n-propylsulfinyl, isopropylsulfinyl, n-butylsulfinyl, tert-
butylsulfinyl, phenylsulfinyl, benzylsulfinyl, pyridin-2-ylsulfinyl, methylsulfonyl, ethylsulfonyl,
n-propylsulfonyl, isopropylsulfonyl, n-butylsulfonyl, tert-butylsulfonyl, phenylsulfonyl,
benzylsulfonyl, pyridin-2-ylsulfonyl, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-
25 methylpropyl, 2-methylpropyl, 1,1-dimethylethyl, n-pentyl, 1-methylbutyl, 2-methylbutyl, 3-
methylbutyl, 1,1-dimethylpropyl, 1,2-dimethylpropyl, 2,2-dimethylpropyl, 1-ethylpropyl, n-
hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-
dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-
ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl,
30 1-ethyl-2-methylpropyl, thiocyanato, isothiocyanato, formyl, ethenyl, 1-propenyl, 2-propenyl, 1-
methylethenyl, 1-butenyl, 2-butenyl, 3-butenyl, 1-methyl-1-propenyl, 2-methyl-1-propenyl, 1-
methyl-2-propenyl, 2-methyl-2-propenyl, 1-pentenyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 1-
methyl-1-butenyl, 2-methyl-1-butenyl, 3-methyl-1-butenyl, 1-methyl-2-butenyl, 2-methyl-2-
butenyl, 3-methyl-2-butenyl, 1-methyl-3-butenyl, 2-methyl-3-butenyl, 3-methyl-3-butenyl, 1,1-
35 dimethyl-2-propenyl, 1,2-dimethyl-1-propenyl, 1,2-dimethyl-2-propenyl, 1-ethyl-1-propenyl, 1-
ethyl-2-propenyl, ethynyl, 1-propynyl, 2-propynyl, 1-butynyl, 2-butynyl, 3-butynyl, 1-methyl-2-
propynyl, 1-pentynyl, 2-pentynyl, 3-pentynyl, 4-pentynyl, 1-methyl-2-butynyl, 1-methyl-3-

butynyl, 2-methyl-3-butynyl, 3-methyl-1-butynyl, 1,1-dimethyl-2-propynyl, 1-ethyl-2-propynyl, 1-hexynyl, 2-hexynyl, 3-hexynyl, 3,3-difluorocyclobut-1-yl, 3-fluorocyclobut-1-yl, 1-fluorocyclobut-1-yl, 2,2-difluorocycloprop-1-yl, 1-fluorocycloprop-1-yl, 2-fluorocycloprop-1-yl, 4-fluorocyclohexyl, 4,4-difluorocyclohexyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, 1-methylcycloprop-1-yl, 2-methylcycloprop-1-yl, 2,2-dimethylcycloprop-1-yl, 2,3-dimethylcyclopropyl, 1-cyanopropyl, 2-cyanopropyl, 1-methylcyclobutyl, 2-methylcyclobutyl, 3-methylcyclobutyl, 3,3-dimethylcyclobutyl, 1-cyanocyclobutyl, 2-cyanocyclobutyl, 3-cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl, 1-vinylcyclopropyl, 1-ethylcyclopropyl, 1-methylcyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 1-methoxycyclohexyl, 2-methoxycyclohexyl, 3-methoxycyclohexyl, spiro[2.2]pent-1-yl, spiro[2.3]hex-1-yl, spiro[2.3]hex-4-yl, 3-spiro[2.3]hex-5-yl, spiro[3.3]hept-1-yl, spiro[3.3]hept-2-yl, bicyclo[1.1.0]butan-1-yl, bicyclo[1.1.0]butan-2-yl, bicyclo[2.1.0]pentan-1-yl, bicyclo[1.1.1]pentan-1-yl, bicyclo[2.1.0]pentan-2-yl, bicyclo[2.1.0]pentan-5-yl, bicyclo[2.1.1]hexyl, bicyclo[2.2.1]hept-2-yl, bicyclo[2.2.2]octan-2-yl, bicyclo[3.2.1]octan-2-yl, bicyclo[3.2.2]nonan-2-yl, adamantan-1-yl, adamantan-2-yl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, trifluoromethyl, pentafluoroethyl, 1,1,2,2-tetrafluoroethyl, heptafluoro-n-propyl, heptafluoroisopropyl, nonafluorobutyl, chlorodifluoromethyl, bromodifluoromethyl, dichlorofluoromethyl, iododifluoromethyl, bromofluoromethyl, 1-fluoroethyl, 2-fluoroethyl, fluoromethyl, difluoromethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, difluoro-tert-butyl, chloromethyl, bromomethyl, fluoromethyl, 3,3,3-trifluoro-n-propyl, methoxycarbonyl, ethoxycarbonyl, isopropyloxycarbonyl, n-propyloxycarbonyl, n-butyloxycarbonyl, tert-butyloxycarbonyl, benzyloxycarbonyl, allyloxycarbonyl, methylaminocarbonyl, ethylaminocarbonyl, n-propylaminocarbonyl, isopropylaminocarbonyl, benzylaminocarbonyl, phenylaminocarbonyl, cyclopropylaminocarbonyl, cyclobutylaminocarbonyl, cyclopentylaminocarbonyl, cyclohexylaminocarbonyl, dimethylaminocarbonyl, diethylaminocarbonyl, allylaminocarbonyl, pentafluorothio, methoxydifluoromethyl, ethoxydifluoromethyl, n-propyloxidifluoromethyl, trifluoromethoxymethyl, trifluoromethoxyethyl, trifluoromethoxy-n-propyl, methoxymethyl, ethoxymethyl, n-propyloxymethyl, ethoxyethyl, methoxyethyl, n-propyloxyethyl, methoxy-n-propyl, ethoxy-n-propyl, 1-methoxyeth-1-yl, 1-methoxyprop-1-yl, 1-ethoxyeth-1-yl, 2-methoxyprop-2-yl, 2-ethoxyprop-2-yl, methylthiomethyl, methylthioethyl, methylthio-n-propyl, ethylthiomethyl, trifluoromethylthiomethyl, pentafluoroethylthiomethyl, trifluoromethylthioethyl, trifluoromethylthio-n-propyl, methylcarbonyl, ethylcarbonyl, isopropylcarbonyl, n-butylcarbonyl, tert-butylcarbonyl, phenylcarbonyl, o-Cl-phenylcarbonyl, m-Cl-phenylcarbonyl, p-Cl-phenylcarbonyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, methoxycarbonylethyl, ethoxycarbonylethyl, n-propyloxycarbonylmethyl, tert-butyloxycarbonylmethyl, tert-butyloxycarbonylethyl, hydroxycarbonylmethyl,

hydroxycarbonylethyl, hydroxycarbonyl, methylaminocarbonylmethyl, ethylaminocarbonylmethyl, n-propylaminocarbonylmethyl, isopropylaminocarbonylmethyl, benzylaminocarbonylmethyl, phenylaminocarbonylmethyl, cyclopropylaminocarbonylmethyl, cyclobutylaminocarbonylmethyl, cyclopentylaminocarbonylmethyl, cyclohexylaminocarbonylmethyl, dimethylaminocarbonylmethyl, diethylaminocarbonylmethyl, allylaminocarbonylmethyl, methylaminomethyl, dimethylaminomethyl, diethylaminomethyl, ethylaminomethyl, isopropylaminomethyl, n-propylaminomethyl, n-butylaminomethyl, methylaminoethyl, dimethylaminoethyl, diethylaminoethyl, N-pyrrolidinylmethyl, N-piperidinylmethyl, hydroxyimino, methoxyimino, ethoxyimino, n-propyloxyimino, n-butyloxyimino, isopropyloxyimino, tert-butyloxyimino, cyclopropylmethoxyimino, cyclobutylmethoxyimino, cyclopentylmethoxyimino, cyclohexylmethoxyimino, benzyloxyimino, phenoxyimino, allyloxyimino, p-Cl-phenylmethoxyimino, phenylethynyl, p-Cl-phenylethynyl, m-Cl-phenylethynyl, o-Cl-phenylethynyl, p-F-phenylethynyl, m-F-phenylethynyl, o-F-phenylethynyl, pyridin-2-ylethynyl, pyridin-3-ylethynyl, thiophen-2-ylethynyl, trimethylsilylethynyl, triethylsilylethynyl, tri(isopropyl)silylethynyl, cyclopropylethynyl, cyclobutylethynyl, cyclopentylethynyl, cyclohexylethynyl, phenyl, benzyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-phenyl, p-F-phenyl, m-F-phenyl, o-F-phenyl, p-trifluoromethylphenyl, m-trifluoromethylphenyl, o-trifluoromethylphenyl, p-methylphenyl, m-methylphenyl, o-methylphenyl, p-methoxyphenyl, m-methoxyphenyl, o-methoxyphenyl, p-Cl-phenylmethyl, m-Cl-phenylmethyl, o-Cl-phenylmethyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl, furan-3-yl, pyrimidin-2-yl, pyrazin-2-yl, methoxymethoxymethyl, ethoxyethoxymethyl, methoxyethoxymethyl, methylaminosulfonylamino, dimethylaminosulfonylamino, ethylaminosulfonylamino, diethylaminosulfonylamino, isopropylaminosulfonylamino, cyclopropylaminosulfonylamino, cyclobutylaminosulfonylamino, cyclopentylaminosulfonylamino, cyclohexylaminosulfonylamino, diazo, phenyldiazo, trimethylsilyl, tri(isopropyl)silyl, triethylsilyl, dimethyl(phenyl)silyl, diphenyl(methyl)silyl,

R¹⁴ and R¹⁵ independently of one another represent hydrogen, methyl, ethyl, n-propyl, isopropyl, n-butyl, fluorine, or

R⁹ and R¹⁵ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

and

W represents oxygen.

5 The invention especially provides compounds of the general formula (I) in which

R¹ represents hydrogen, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyleth-1-yl, n-pentyl, 1-methylbut-1-yl, 2-methylbut-1-yl, 3-methylbut-1-yl, 1,1-dimethylprop-1-yl, 1,2-dimethylprop-1-yl, 2,2-dimethylprop-1-yl, 1-ethylprop-1-yl, n-hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl, 1-ethyl-2-methylpropyl, trifluoromethyl, pentafluoroethyl, 1,1,2,2-tetrafluoroethyl, heptafluoro-n-propyl, heptafluoroisopropyl, nonafluorobutyl, chlorodifluoromethyl, bromodifluoromethyl, dichlorofluoromethyl, iododifluoromethyl, bromofluoromethyl, 1-fluoroethyl, 2-fluoroethyl, fluoromethyl, difluoromethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 3,3,3-trifluoroprop-1-yl, 3,3,3-trifluoroprop-2-yl, difluoro-tert-butyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, adamantan-1-yl, adamantan-2-yl, 1-methylcyclopropyl, 2-methylcyclopropyl, 2,2-dimethylcyclopropyl, 2,3-dimethylcyclopropyl, 1,1'-bi(cyclopropyl)-1-yl, 1,1'-bi(cyclopropyl)-2-yl, 2'-methyl-1,1'-bi(cyclopropyl)-2-yl, 1-cyanocyclopropyl, 2-cyanocyclopropyl, 1-methylcyclobutyl, 2-methylcyclobutyl, 3-methylcyclobutyl, 1-cyanocyclobutyl, 2-cyanocyclobutyl, 3-cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl, 1-vinylcyclopropyl, 1-ethylcyclopropyl, 1-methylcyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 1-methoxycyclohexyl, 2-methoxycyclohexyl, 3-methoxycyclohexyl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, phenyl, p-F-phenyl, m-F-phenyl, o-F-phenyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-phenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyrimidin-2-yl, pyrimidin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl, furan-3-yl, tetrahydrofuran-2-yl, tetrahydrofuran-3-yl, benzyl, p-Cl-benzyl, p-F-benzyl, p-methoxybenzyl, p-methylbenzyl, p-trifluoromethylbenzyl, p-nitrobenzyl, m-Cl-benzyl, m-F-benzyl, m-methoxybenzyl, m-methylbenzyl, o-Cl-benzyl, o-F-benzyl, o-methoxybenzyl, o-methylbenzyl, 1-phenyleth-1-yl, 2-phenyleth-1-yl, 1-(o-chlorophenyl)eth-1-yl, 1-(o-fluorophenyl)eth-1-yl, 1-(o-methylphenyl)eth-1-yl, 1-(o-bromophenyl)eth-1-yl, 1-(o-iodophenyl)eth-1-yl, pyridin-2-ylmethyl, pyridin-3-ylmethyl, pyridin-4-ylmethyl, pyrimidin-2-ylmethyl, pyrimidin-4-ylmethyl, tetrahydrofuran-2-ylmethyl, o-cyanophenylmethyl, m-cyanophenylmethyl, p-cyanophenylmethyl, cyanomethyl, cyanoethyl, methoxycarbonyl, ethoxycarbonyl, n-propyloxycarbonyl, isopropyloxycarbonyl, tert-butyloxycarbonyl, benzyloxycarbonyl, allyloxycarbonyl, methylcarbonyl, ethylcarbonyl, n-propylcarbonyl, isopropylcarbonyl, n-butylcarbonyl, 1-methylprop-1-ylcarbonyl, 2-methylprop-

1-ylcarbonyl, 1,1-dimethyleth-1-ylcarbonyl, phenylcarbonyl, methylaminocarbonyl, dimethylaminocarbonyl, ethylaminocarbonyl, n-propylaminocarbonyl, isopropylaminocarbonyl, n-butylaminocarbonyl, tert-butyloxycarbonyl, benzylaminocarbonyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, tert-butyloxycarbonylmethyl, 5 benzyloxycarbonylmethyl, methoxycarbonylethyl, ethoxycarbonylethyl, tert-butyloxycarbonylmethyl, benzyloxycarbonylmethyl, methylcarbonyloxymethyl, ethylcarbonyloxymethyl, n-propylcarbonyloxymethyl, 1-methylethylcarbonyloxymethyl, 1,1-dimethylethylcarbonyloxymethyl, hydroxycarbonylmethyl, hydroxycarbonylethyl, hydroxycarbonyl-n-propyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, methoxymethyl, ethoxymethyl, n-propyloxymethyl, isopropyloxymethyl, n-butyloxymethyl, methoxyethyl, ethoxyethyl, n-propyloxyethyl, isopropyloxyethyl, methoxy-n-propyl, ethoxy-n-propyl, methoxy-n-butyl, amino, dimethylamino, methyl(ethyl)amino, diethylamino, cyanomethyl, cyanoethyl, prop-2-yn-1-yl,

15 R² and R⁹ independently of one another represent hydrogen, hydroxy, fluorine, methyl, ethyl, n-propyl, isopropyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyleth-1-yl, trifluoromethyl, difluoromethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, p-F-phenyl, m-F-phenyl, o-F-phenyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-phenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyrimidin-2-yl, pyrimidin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl, furan-3-yl, 20 methoxymethyl, ethoxymethyl, methoxyethyl, ethoxyethyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, trifluoromethoxy, difluoromethoxy, methylthio, ethylthio, trifluoromethylthio, dimethylamino, methylamino, diethylamino, methyl(ethyl)amino, cyano, or

25 R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, or

30 R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

35 R³ represents hydroxy, hydrothio, fluorine, chlorine, bromine, iodine, methoxy, ethoxy, n-propyloxy, 1-methylethoxy, n-butyloxy, 1-methylpropyloxy, 2-methylpropyloxy, 1,1-dimethylethoxy, n-pentyloxy, 1-methylbutyloxy, 2-methylbutyloxy, 3-methylbutyloxy, 1,1-dimethylpropyloxy, 1,2-dimethylpropyloxy, 2,2-dimethylpropyloxy, 1-ethylpropyloxy, n-

hexyloxy, 1-methylpentyloxy, 2-methylpentyloxy, 3-methylpentyloxy, 4-methylpentyloxy, 1,1-dimethylbutyloxy, 1,2-dimethylbutyloxy, 1,3-dimethylbutyloxy, 2,2-dimethylbutyloxy, 2,3-dimethylbutyloxy, 3,3-dimethylbutyloxy, 1-ethylbutyloxy, 2-ethylbutyloxy, 1,1,2-trimethylpropyloxy, 1,2,2-trimethylpropyloxy, 1-ethyl-1-methylpropyloxy, 1-ethyl-2-methylpropyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy, cyclohexylmethoxy, benzyloxy, p-chlorophenylmethoxy, m-chlorophenylmethoxy, o-chlorophenylmethoxy, p-methoxyphenylmethoxy, p-nitrophenylmethoxy, methoxymethoxy, methoxyethoxy, methoxy-n-propyloxy, methoxy-n-butyloxy, ethoxymethoxy, ethoxyethoxy, ethoxy-n-propyloxy, ethoxy-n-butyloxy, n-propyloxymethoxy, isopropyloxymethoxy, methylcarbonyloxy, ethylcarbonyloxy, n-propylcarbonyloxy, 1-methylethylcarbonyloxy, n-butylcarbonyloxy, 1-methylpropylcarbonyloxy, 2-methylpropylcarbonyloxy, 1,1-dimethylethylcarbonyloxy, n-pentylcarbonyloxy, 1-methylbutylcarbonyloxy, 2-methylbutylcarbonyloxy, 3-methylbutylcarbonyloxy, 1,1-dimethylpropylcarbonyloxy, 1,2-dimethylpropylcarbonyloxy, 2,2-dimethylpropylcarbonyloxy, 1-ethylpropylcarbonyloxy, n-hexylcarbonyloxy, 1-methylpentylcarbonyloxy, 2-methylpentylcarbonyloxy, 3-methylpentylcarbonyloxy, 4-methylpentylcarbonyloxy, 1,1-dimethylbutylcarbonyloxy, 1,2-dimethylbutylcarbonyloxy, 1,3-dimethylbutylcarbonyloxy, 2,2-dimethylbutylcarbonyloxy, 2,3-dimethylbutylcarbonyloxy, 3,3-dimethylbutylcarbonyloxy, 1-ethylbutylcarbonyloxy, 2-ethylbutylcarbonyloxy, 1,1,2-trimethylpropylcarbonyloxy, 1,2,2-trimethylpropylcarbonyloxy, 1-ethyl-1-methylpropylcarbonyloxy, 1-ethyl-2-methylpropylcarbonyloxy, phenylcarbonyloxy, p-chlorophenylcarbonyloxy, m-chlorophenylcarbonyloxy, o-chlorophenylcarbonyloxy, p-fluorophenylcarbonyloxy, m-fluorophenylcarbonyloxy, o-fluorophenylcarbonyloxy, benzylcarbonyloxy, thiophen-2-ylcarbonyloxy, furan-2-ylcarbonyloxy, cyclopropylcarbonyloxy, cyclobutylcarbonyloxy, cyclopentylcarbonyloxy, cyclohexylcarbonyloxy, 1-fluorocycloprop-1-ylcarbonyloxy, 1-chlorocycloprop-1-ylcarbonyloxy, 1-cyanocycloprop-1-ylcarbonyloxy, 1-methylcycloprop-1-ylcarbonyloxy, 1-trifluoromethylcycloprop-1-ylcarbonyloxy, adamantylcarbonyloxy, trifluoromethylcarbonyloxy, difluoromethylcarbonyloxy, methoxycarbonyloxy, ethoxycarbonyloxy, n-propyloxycarbonyloxy, isopropyloxycarbonyloxy, n-butyloxycarbonyloxy, 1,1-dimethylethoxy carbonyloxy, 2,2-dimethylpropyloxycarbonyloxy, benzyloxycarbonyloxy, allyloxycarbonyloxy, cyclopropyloxycarbonyloxy, cyclobutyloxycarbonyloxy, cyclopentyloxycarbonyloxy, cyclohexyloxycarbonyloxy, cyclopropylmethyloxycarbonyloxy, cyclobutylmethyloxycarbonyloxy, cyclopentylmethyloxycarbonyloxy, cyclohexylmethyloxycarbonyloxy, 3,3,3-trifluoroethyloxycarbonyloxy, 2,2-difluoroethyloxycarbonyloxy, pyridin-2-ylcarbonyloxy, pyridin-3-ylcarbonyloxy, pyridin-4-ylcarbonyloxy, 4-trifluoromethylpyridin-3-ylcarbonyloxy, allylcarbonyloxy, methylsulfonyloxy, ethylsulfonyloxy, n-propylsulfonyloxy, 1-methylethylsulfonyloxy, cyclopropylsulfonyloxy, cyclobutylsulfonyloxy,

cyclopentylsulfonyloxy, cyclohexylsulfonyloxy, phenylsulfonyloxy, p-chlorophenylsulfonyloxy, m-chlorophenylsulfonyloxy, o-chlorophenylsulfonyloxy, p-fluorophenylsulfonyloxy, m-fluorophenylsulfonyloxy, o-fluorophenylsulfonyloxy, p-methoxyphenylsulfonyloxy, m-methoxyphenylsulfonyloxy, o-methoxyphenylsulfonyloxy, p-methylphenylsulfonyloxy, m-methylphenylsulfonyloxy, o-methylphenylsulfonyloxy,

5

R⁶ represents hydrogen,

R¹⁴ and R¹⁵ independently of one another represent hydrogen, methyl, ethyl, n-propyl, isopropyl, n-

10 butyl, fluorine, or

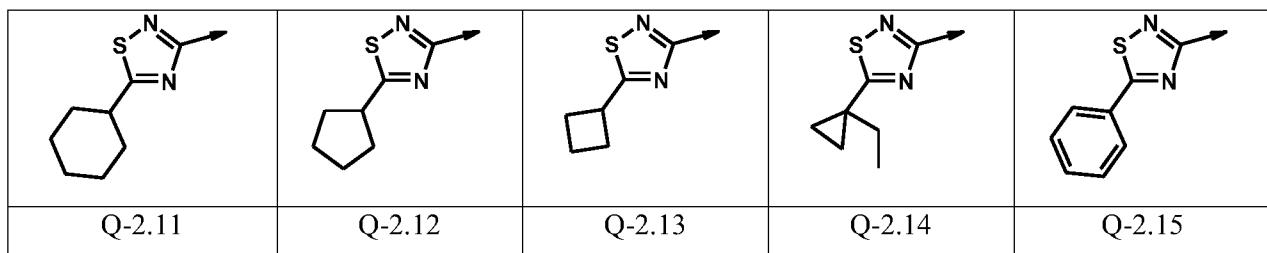
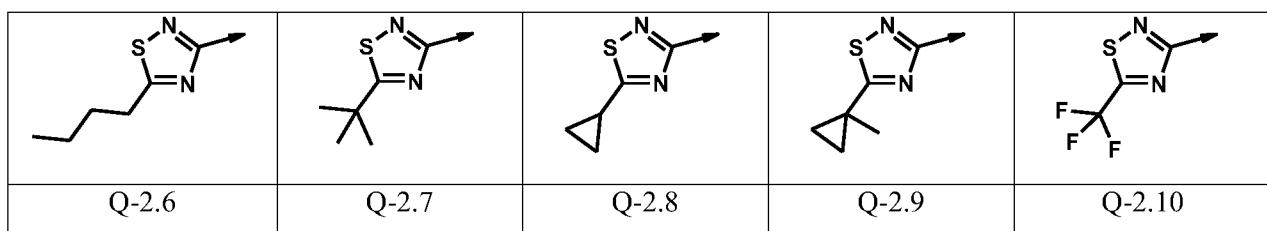
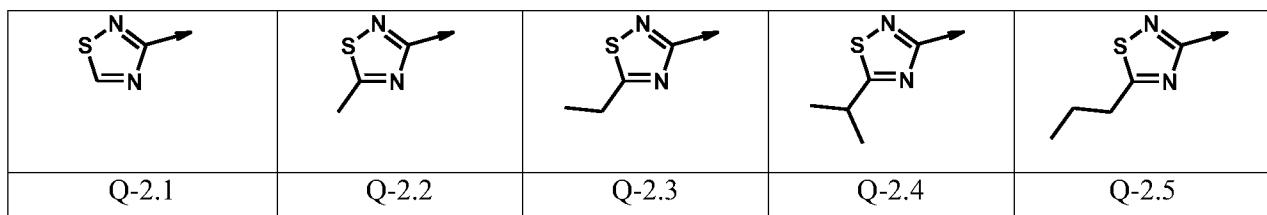
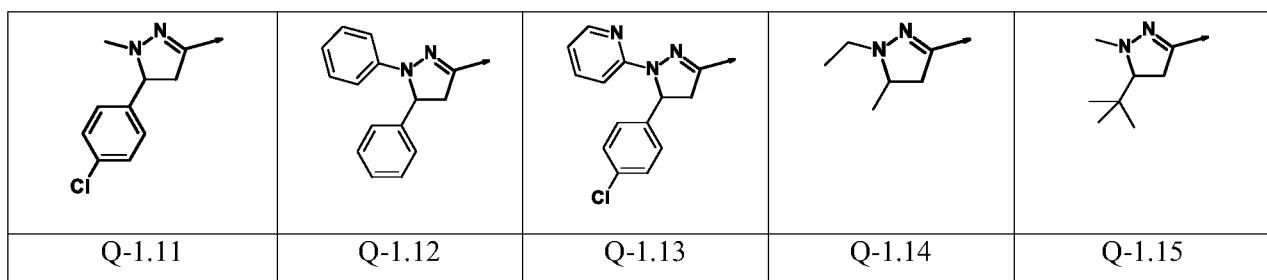
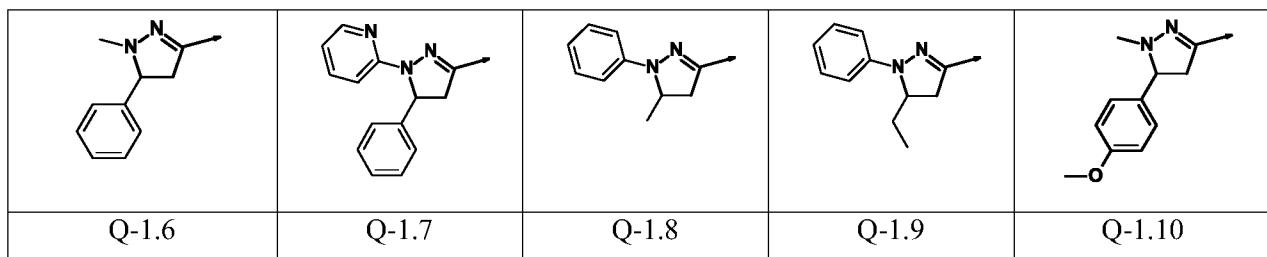
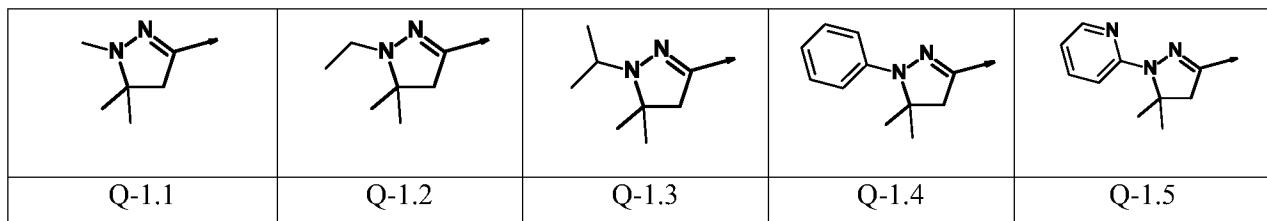
R⁹ and R¹⁵ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further 15 substitution,

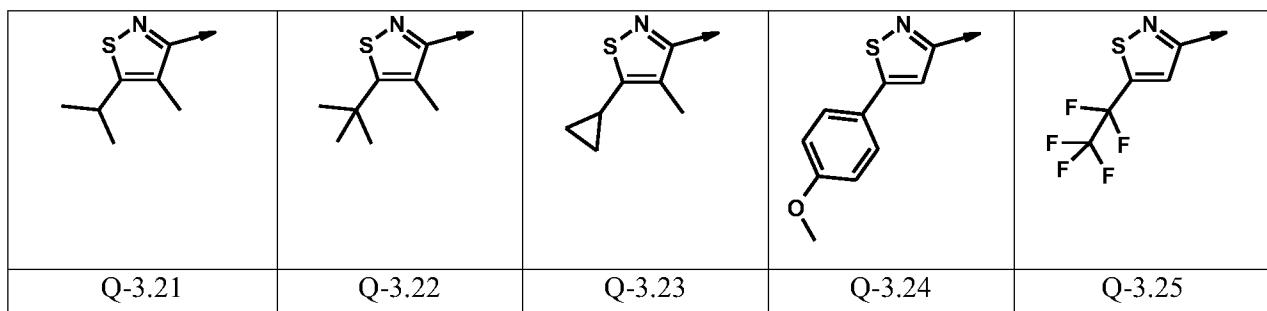
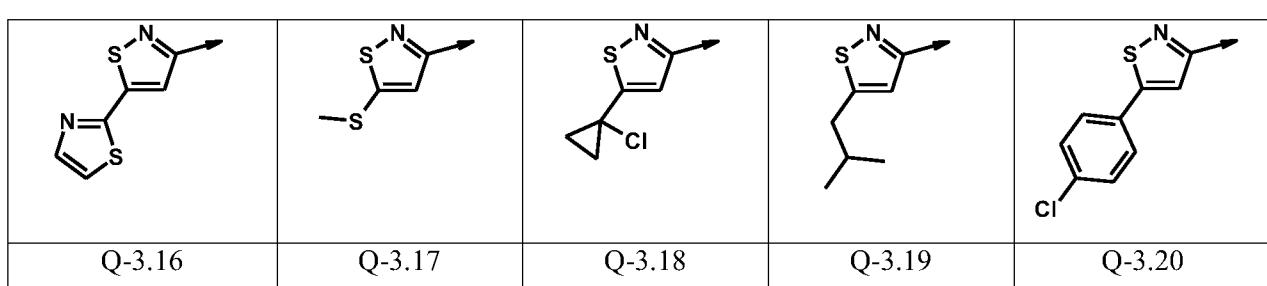
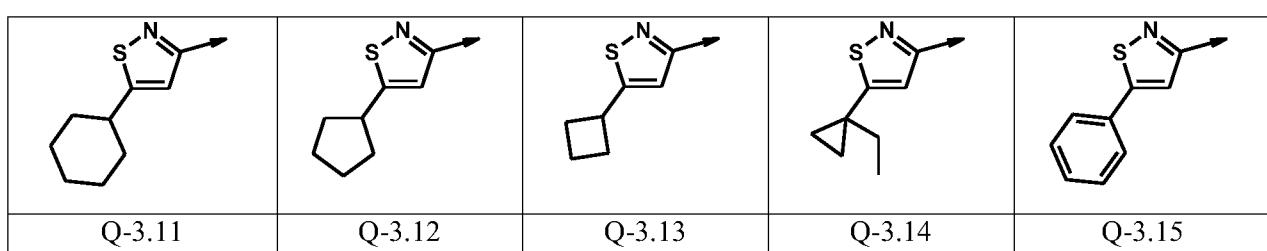
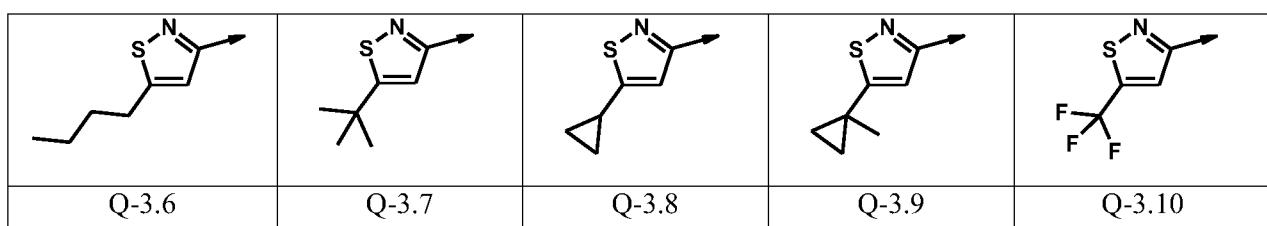
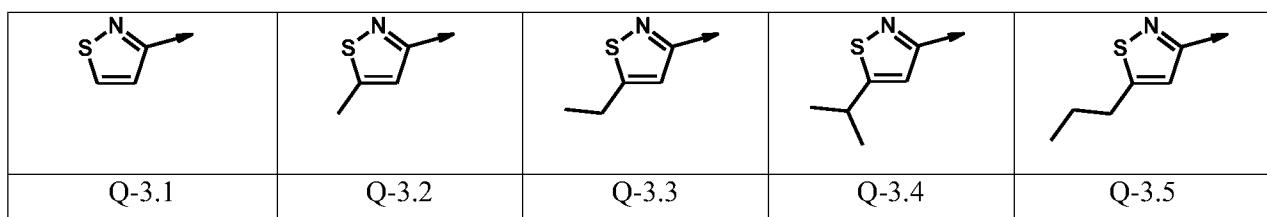
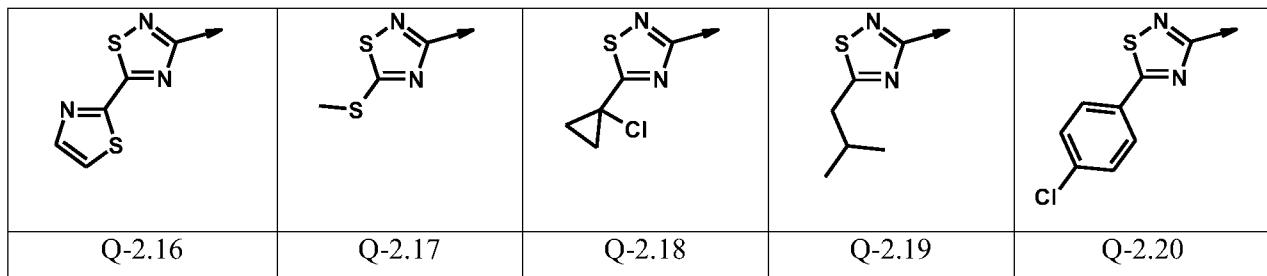
W represents oxygen

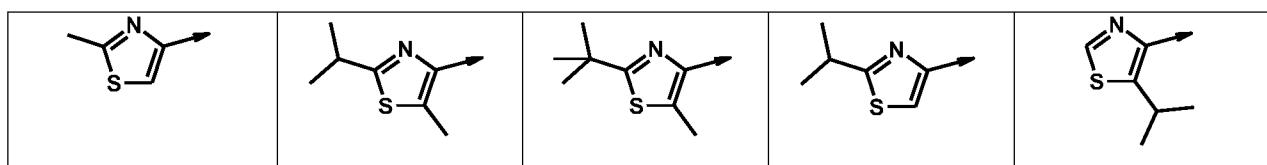
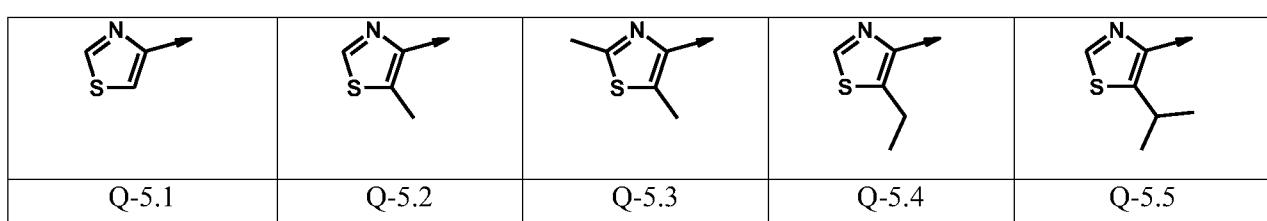
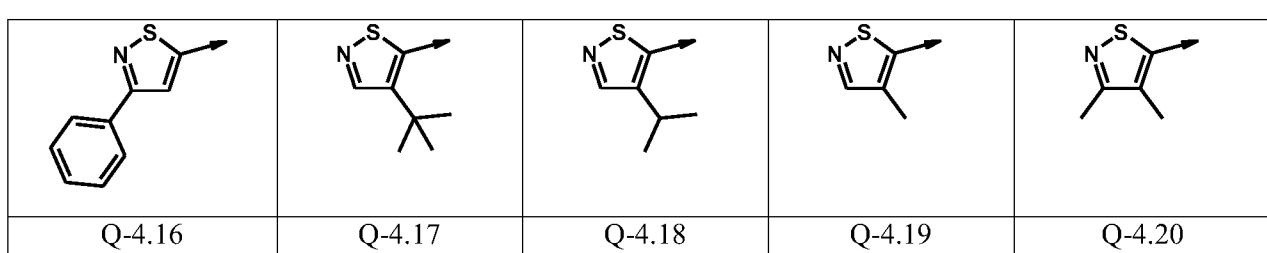
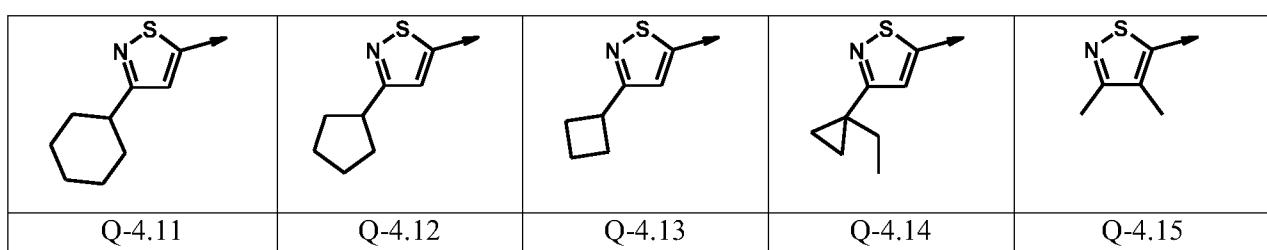
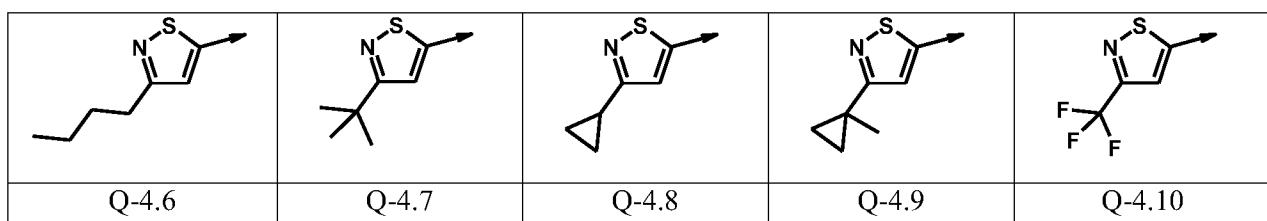
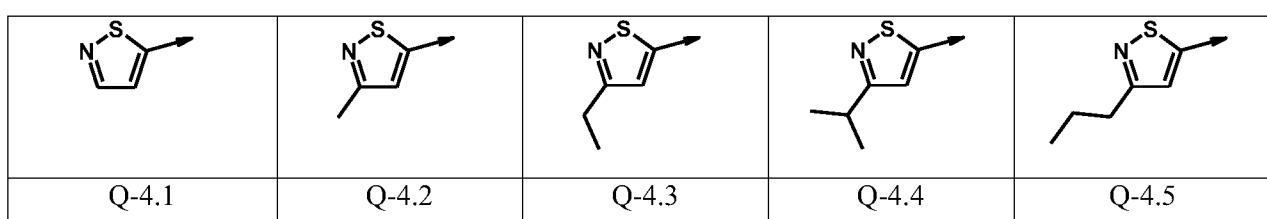
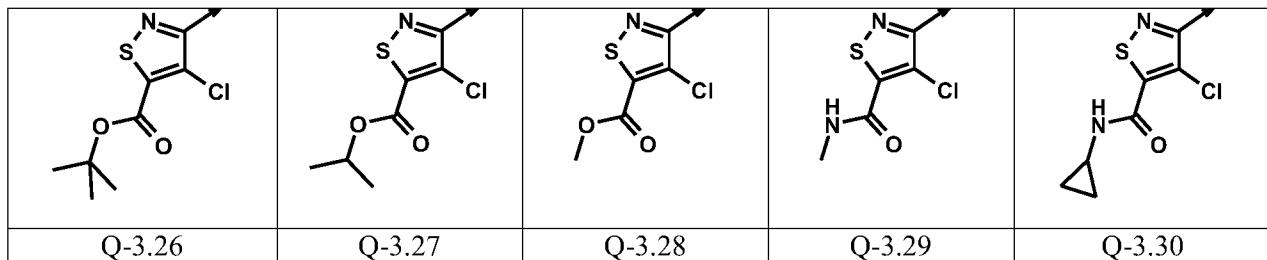
and

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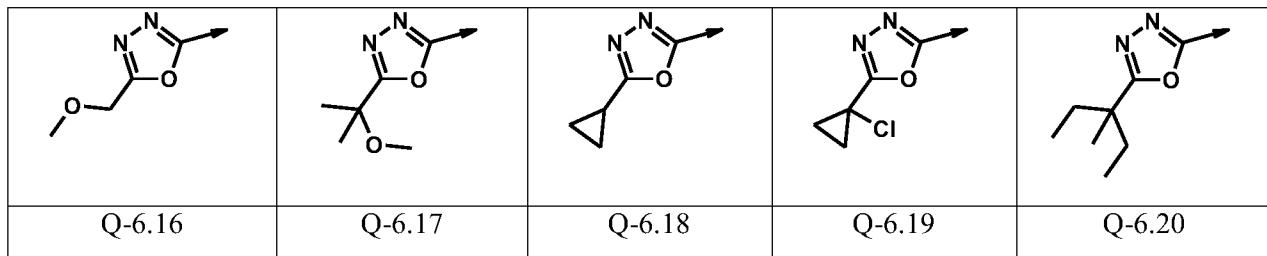
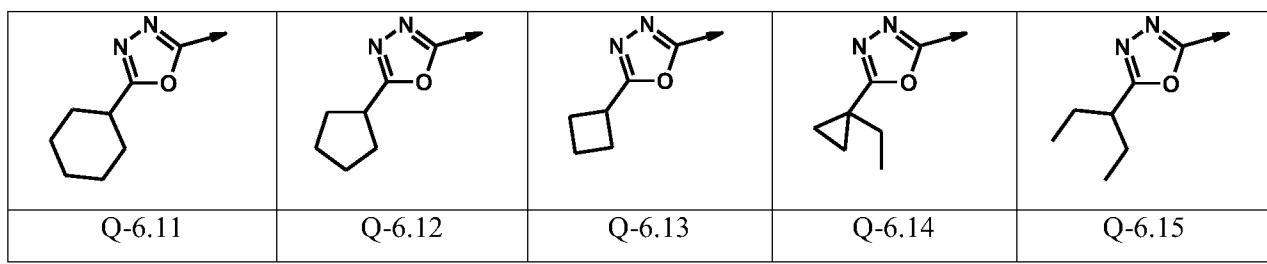
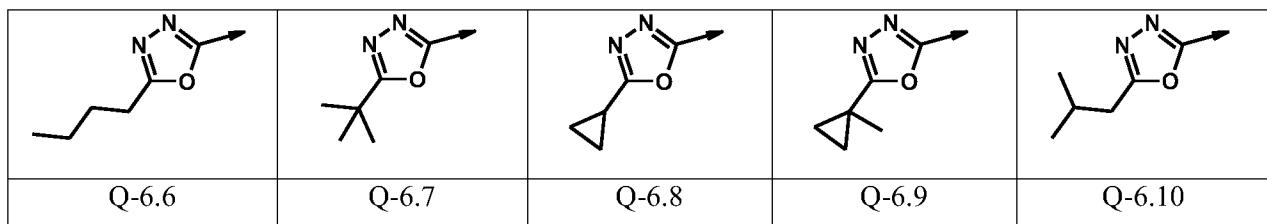
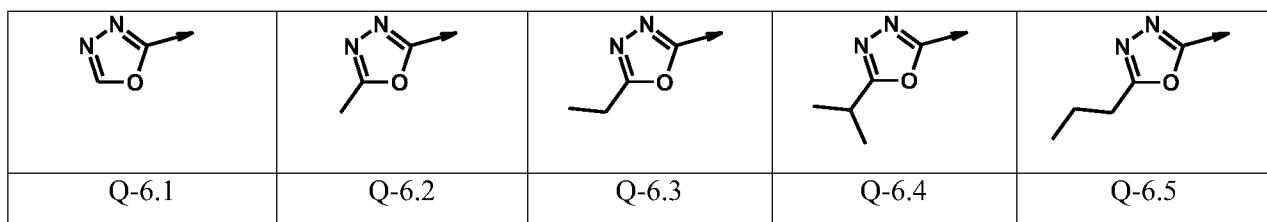
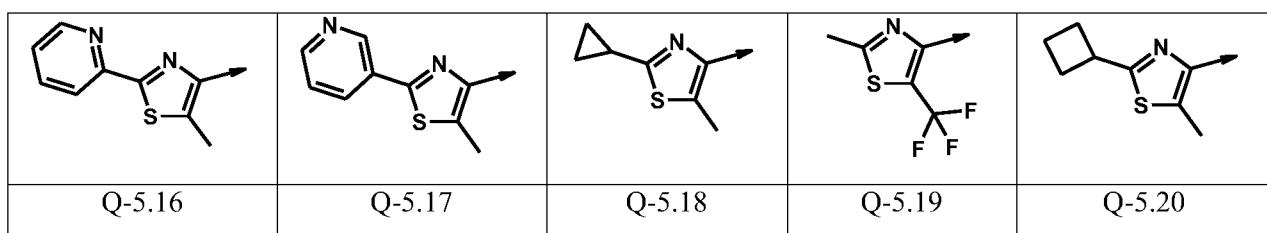
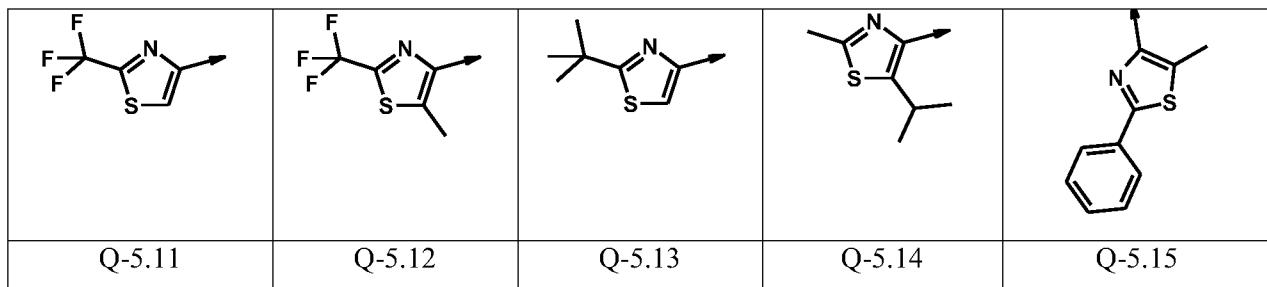
Q represents one of the moieties Q-1.1 to Q-30.5 specified below, where the arrow represents a bond of the respective Q group to the nitrogen of the tetrahydropyrimidinone in the general formula (I),

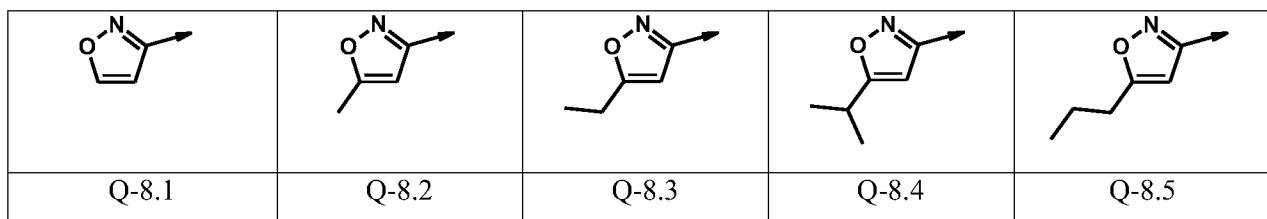
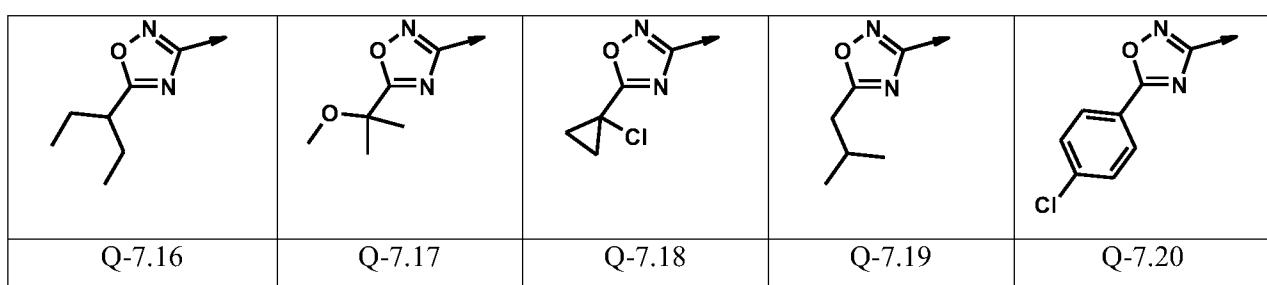
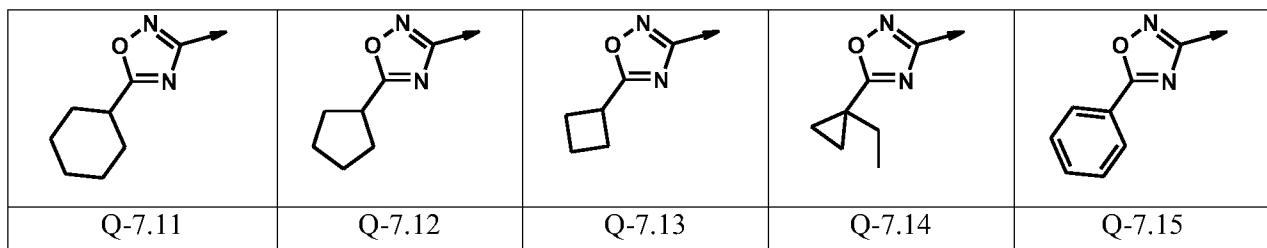
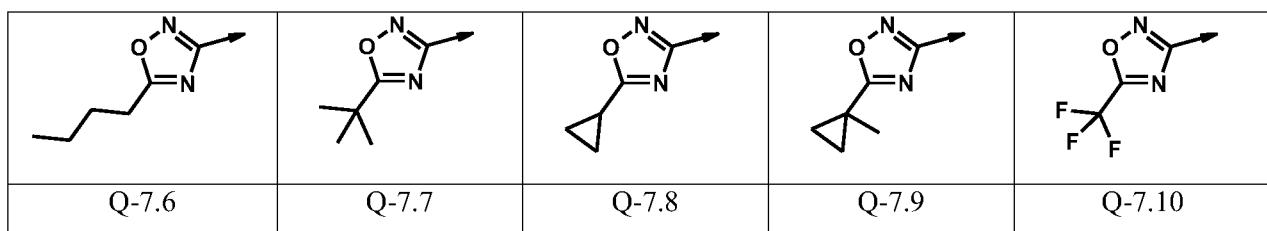
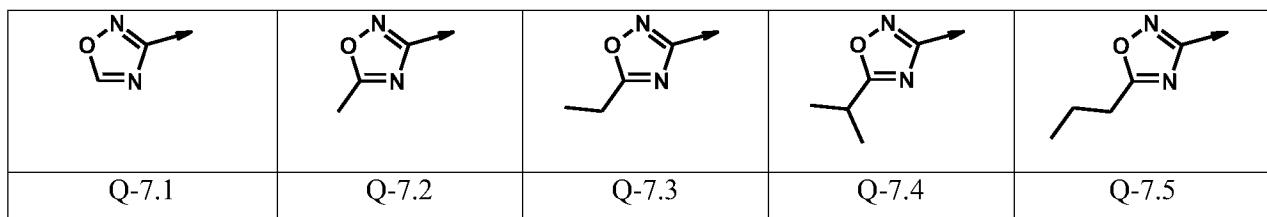
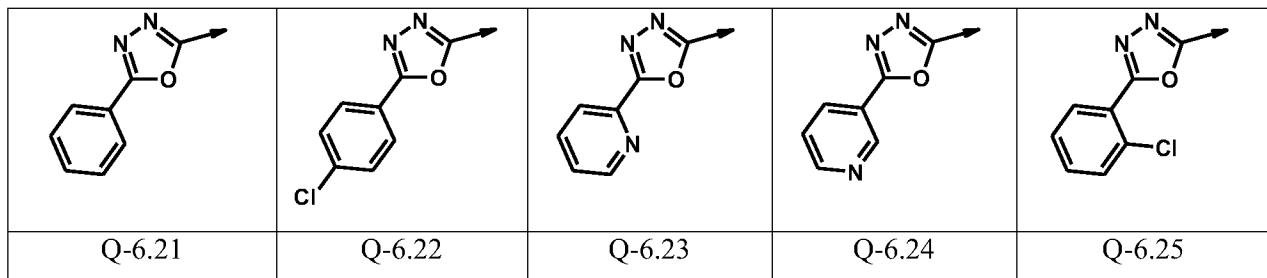


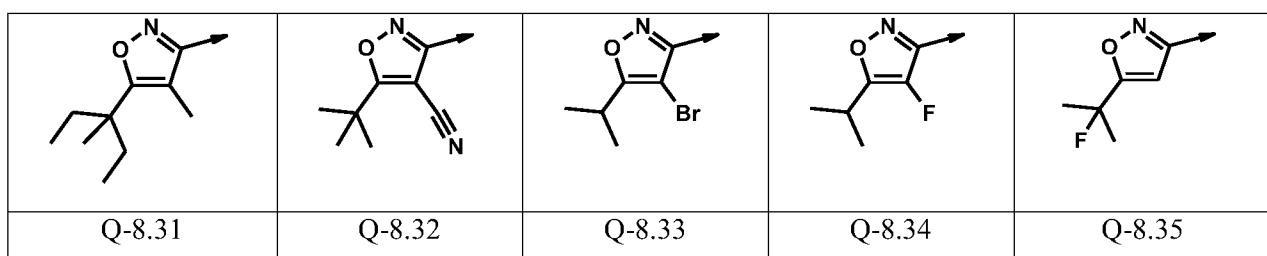
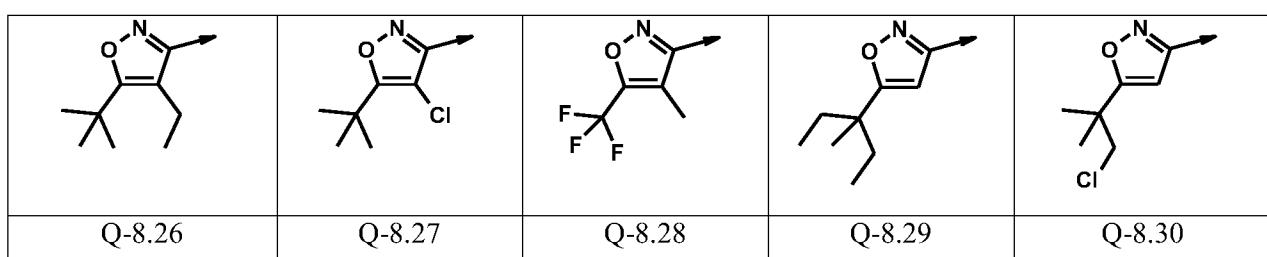
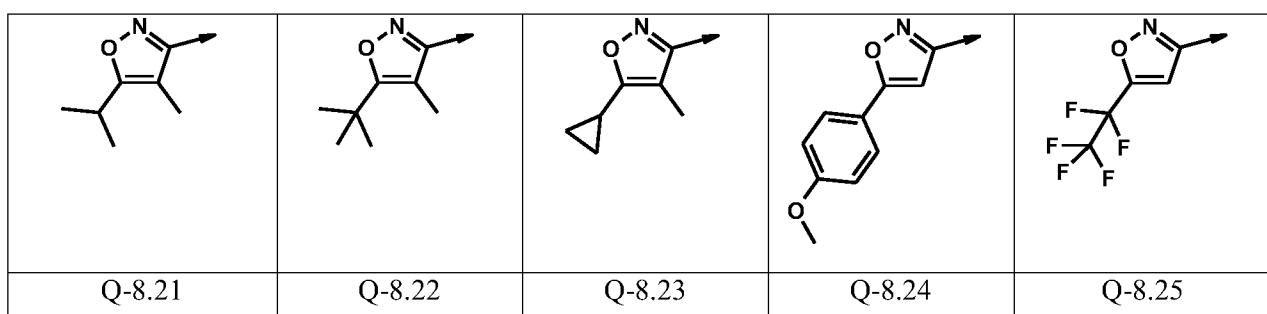
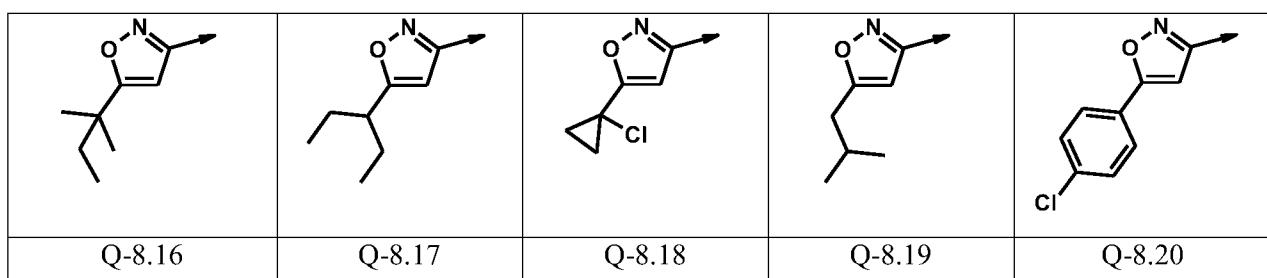
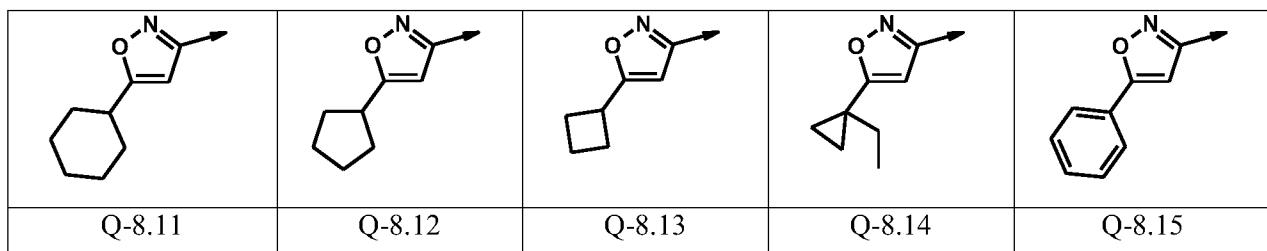
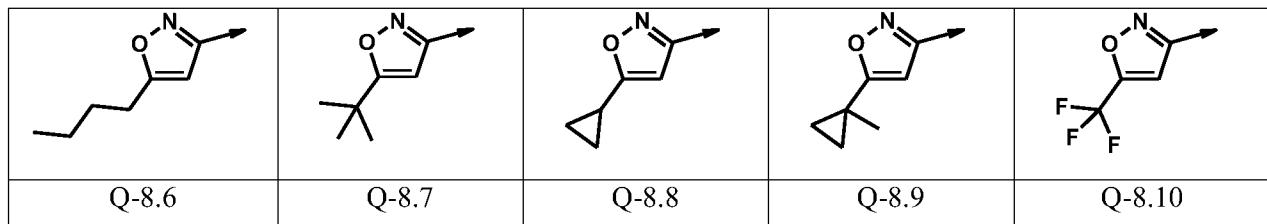


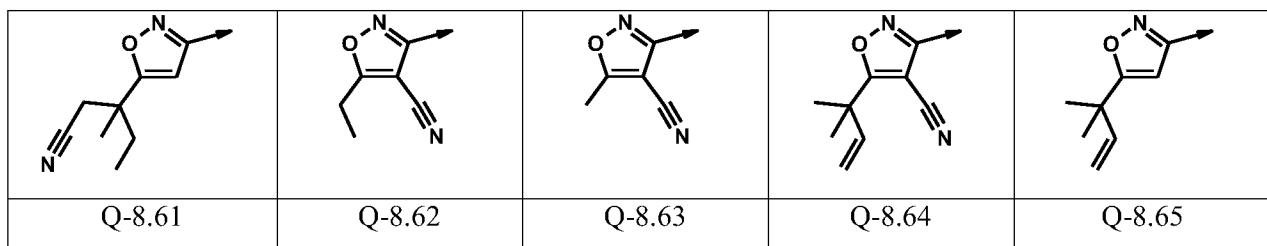
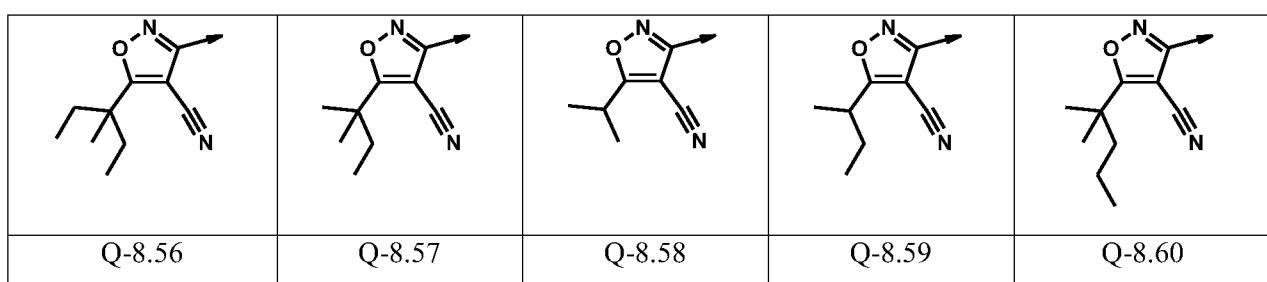
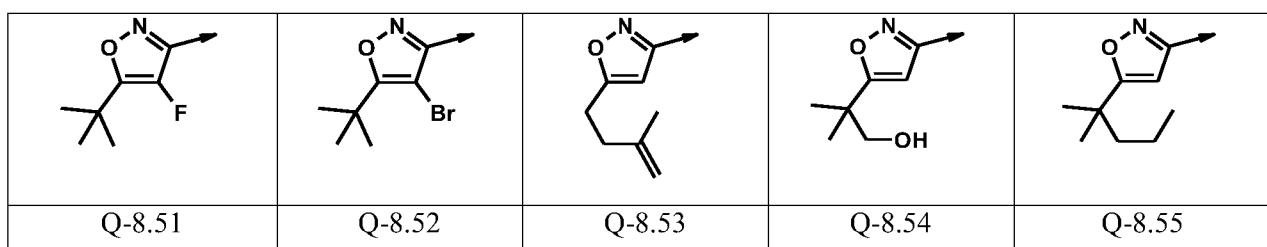
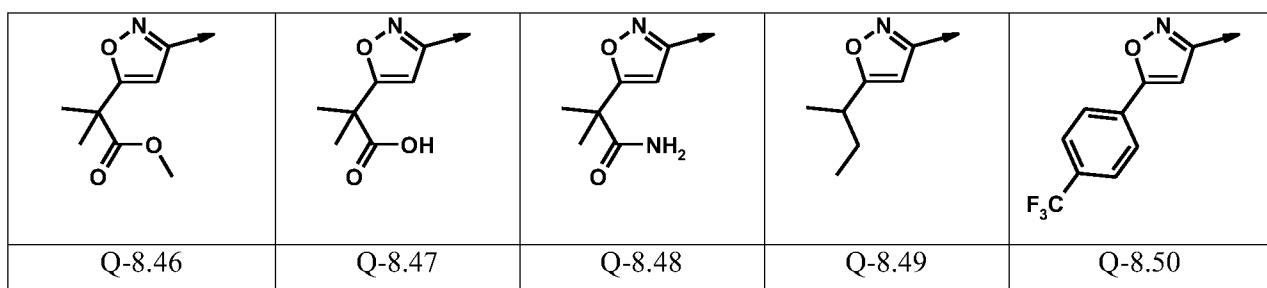
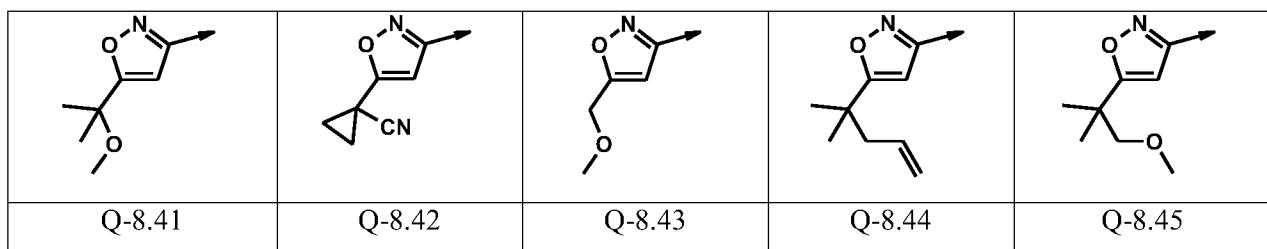
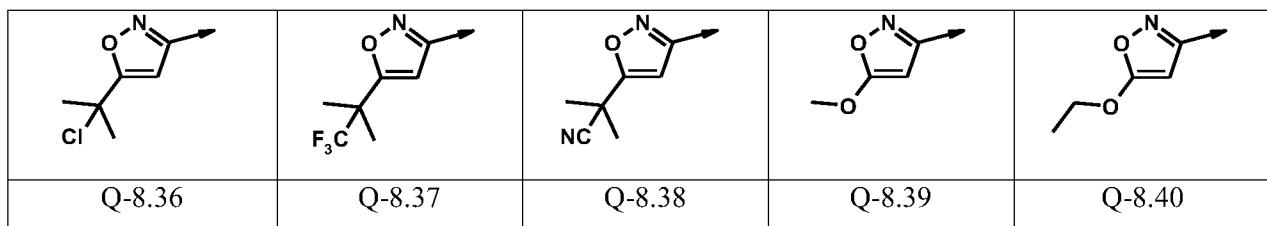


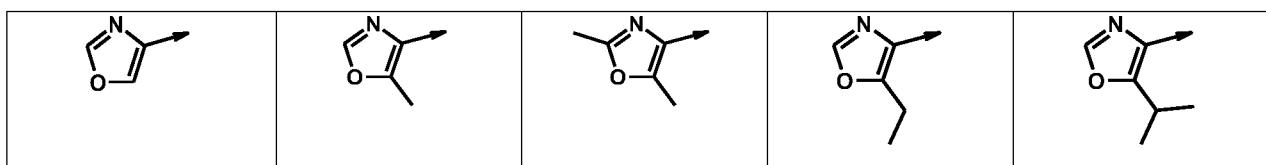
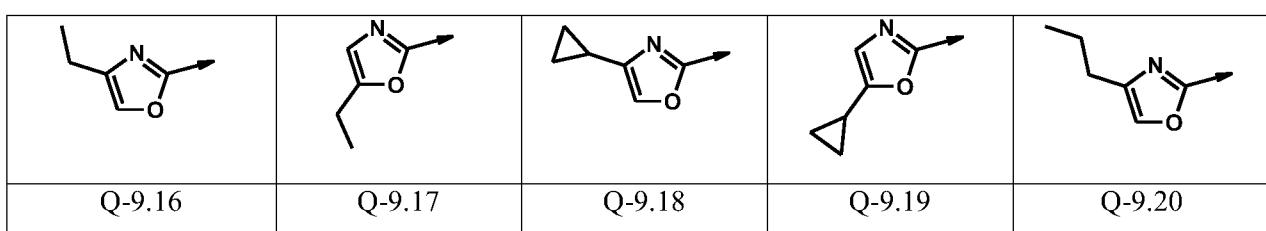
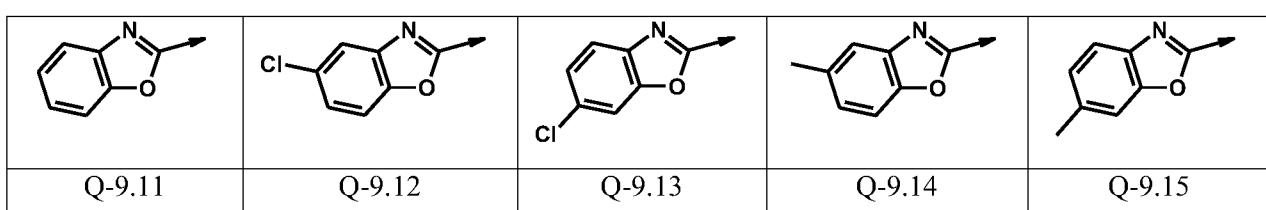
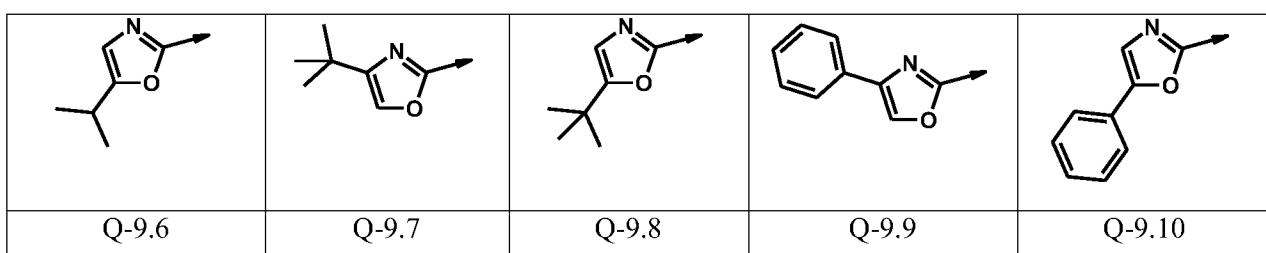
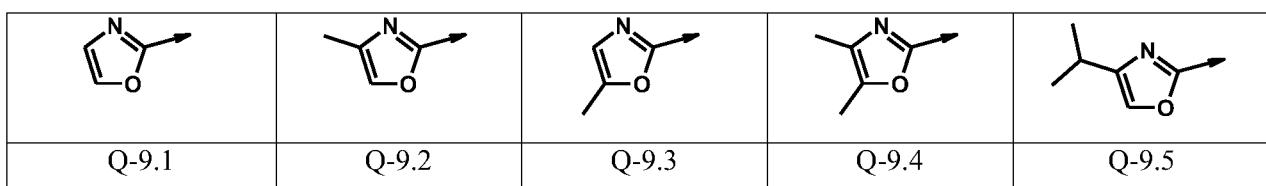
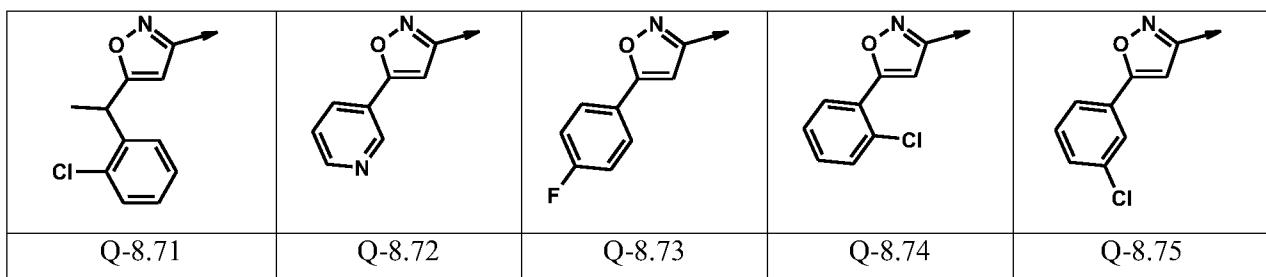
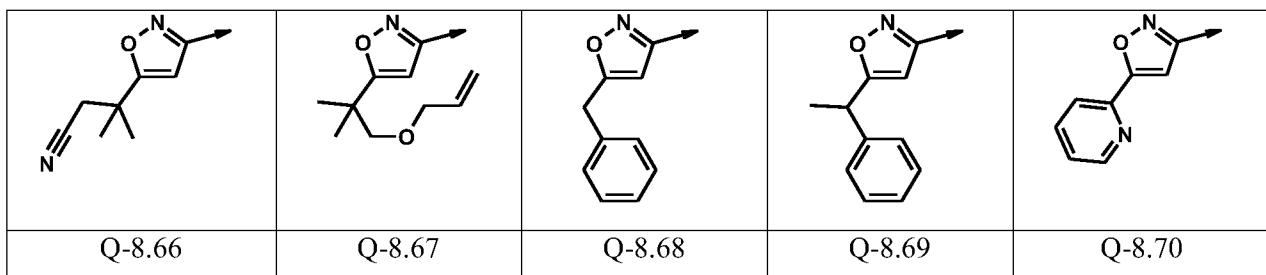
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|-------|-------|-------|-------|--------|



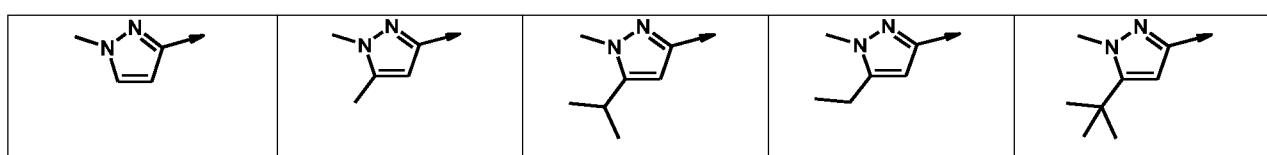
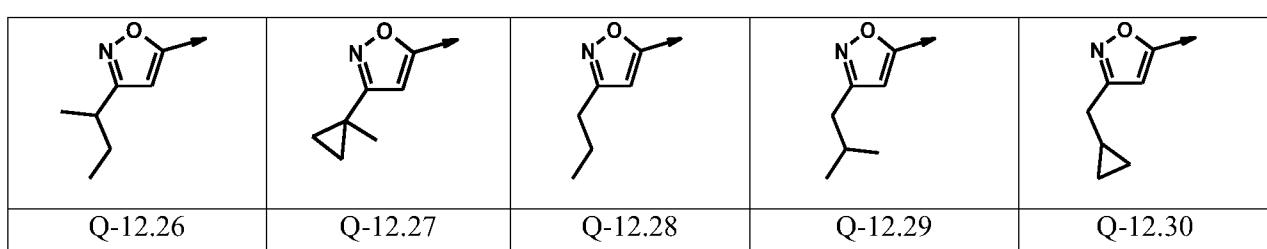
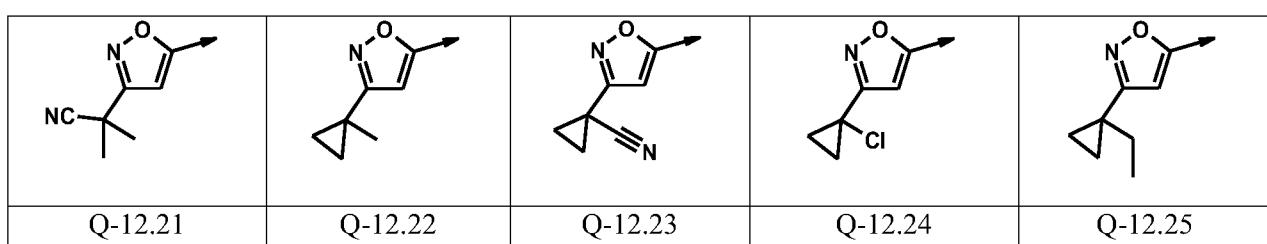
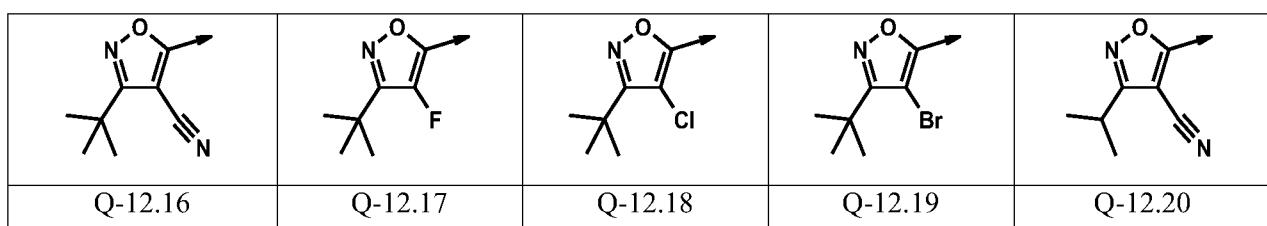
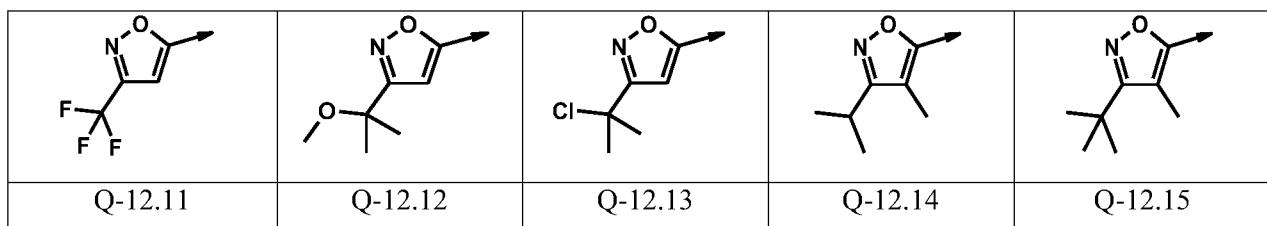
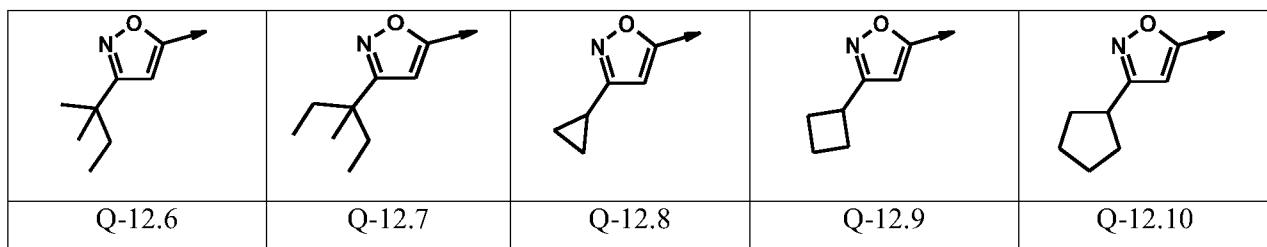
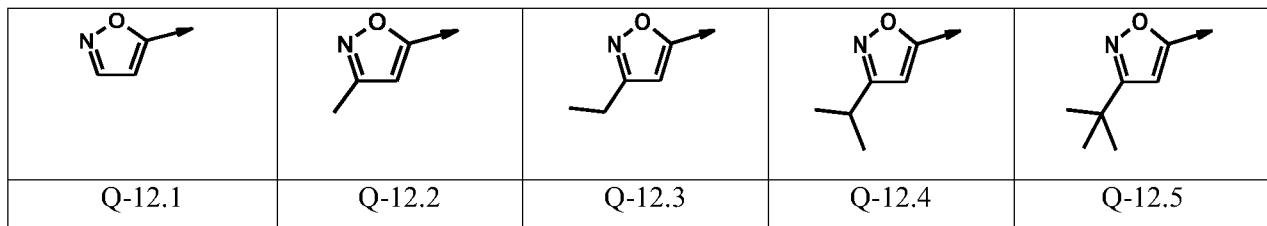








| Q-10.1 | Q-10.2 | Q-10.3 | Q-10.4 | Q-10.5 |
|---------|---------|---------|---------|---------|
| | | | | |
| Q-10.6 | Q-10.7 | Q-10.8 | Q-10.9 | Q-10.10 |
| | | | | |
| Q-10.16 | Q-10.17 | Q-10.18 | Q-10.19 | Q-10.20 |
| | | | | |
| Q-11.1 | Q-11.2 | Q-11.3 | Q-11.4 | Q-11.5 |
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| Q-11.6 | Q-11.7 | Q-11.8 | Q-11.9 | Q-11.10 |
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| Q-11.11 | Q-11.12 | Q-11.13 | Q-11.14 | Q-11.15 |
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| Q-13.1 | Q-13.2 | Q-13.3 | Q-13.4 | Q-13.5 |
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| Q-13.6 | Q-13.7 | Q-13.8 | Q-13.9 | Q-13.10 |

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| Q-13.11 | Q-13.12 | Q-13.13 | Q-13.14 | Q-13.15 |

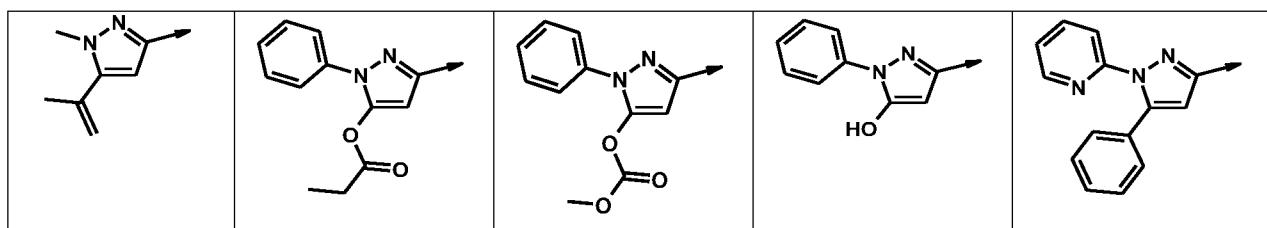
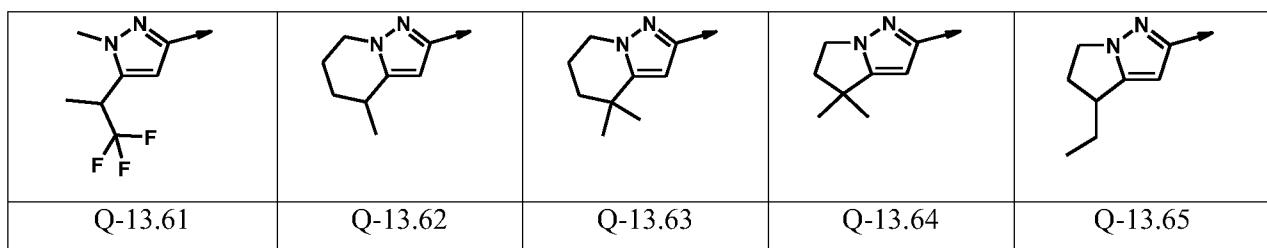
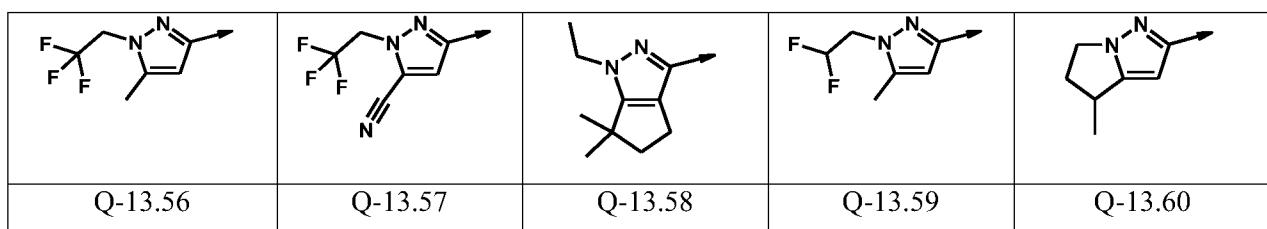
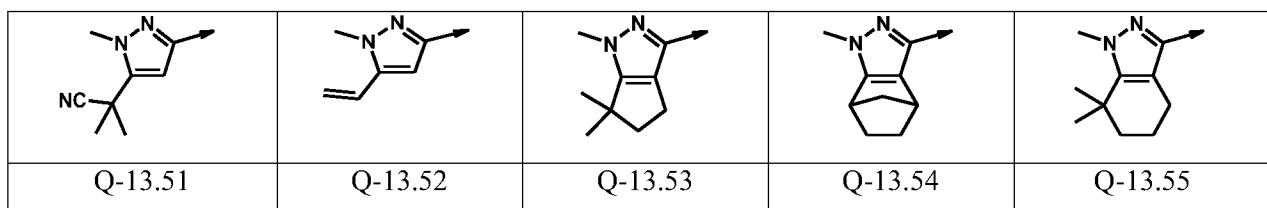
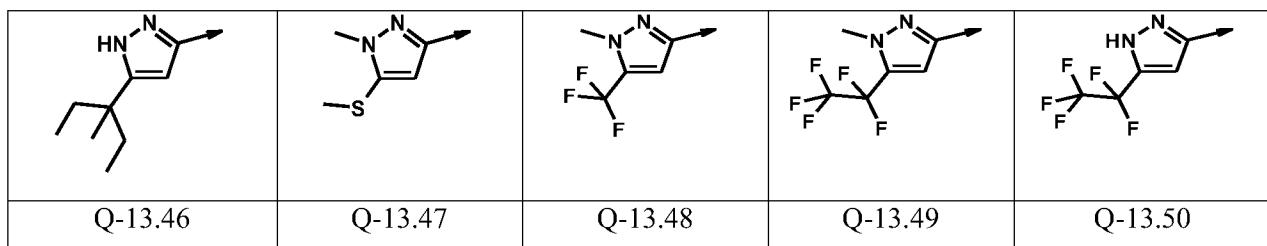
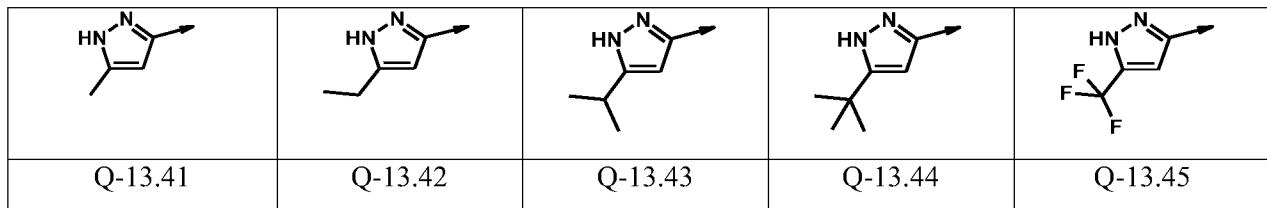
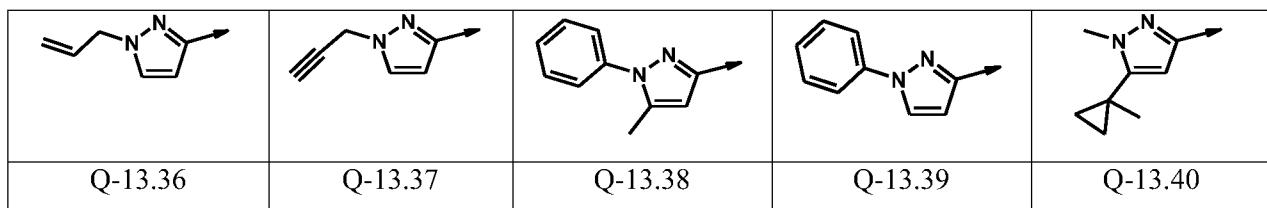
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| Q-13.16 | Q-13.17 | Q-13.18 | Q-13.19 | Q-13.20 |

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| Q-13.21 | Q-13.22 | Q-13.23 | Q-13.24 | Q-13.25 |

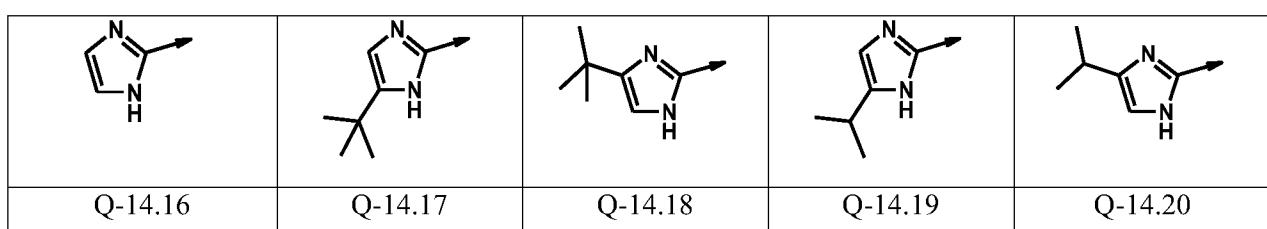
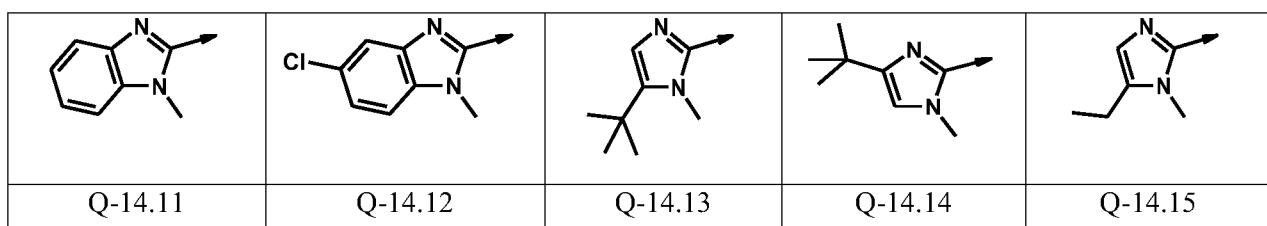
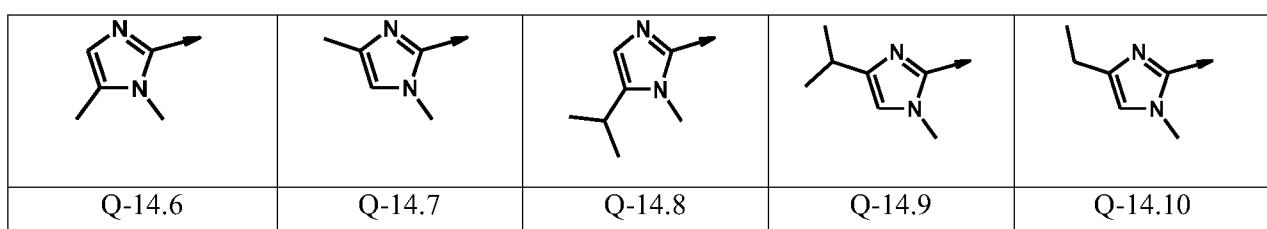
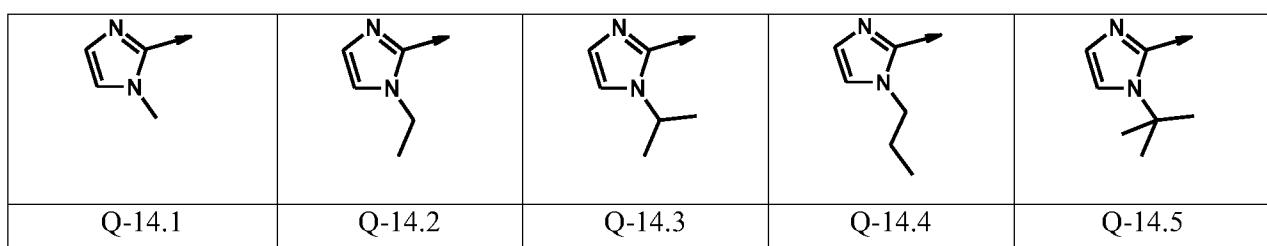
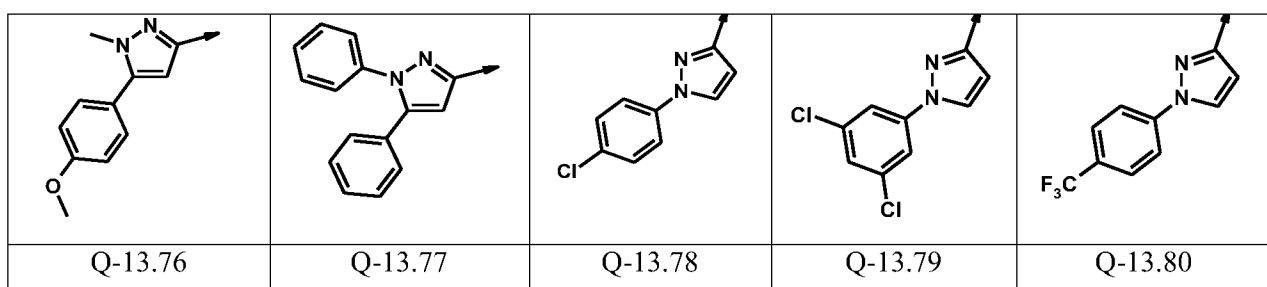
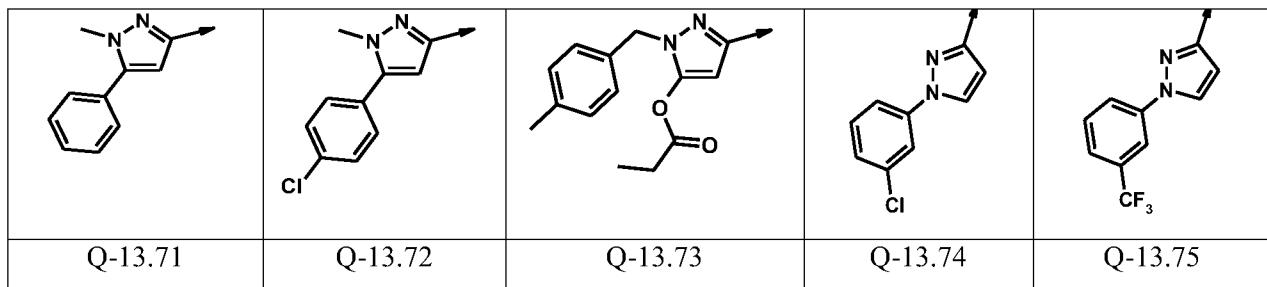
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| Q-13.26 | Q-13.27 | Q-13.28 | Q-13.29 | Q-13.30 |

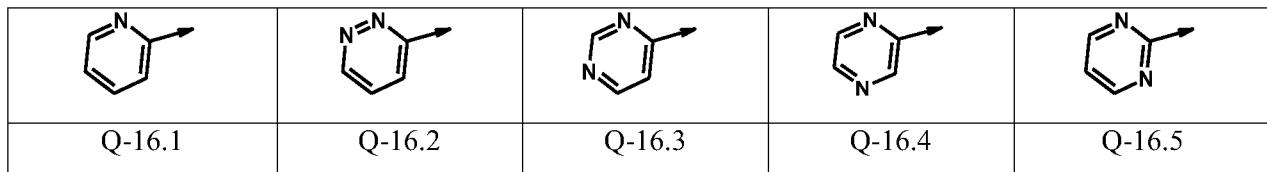
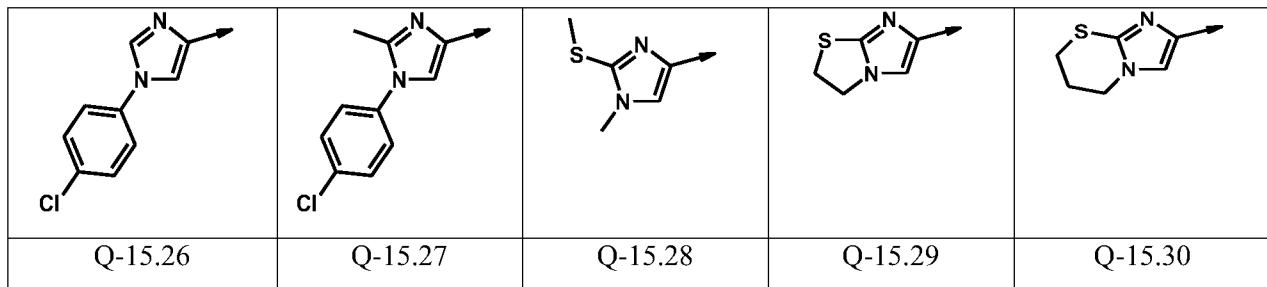
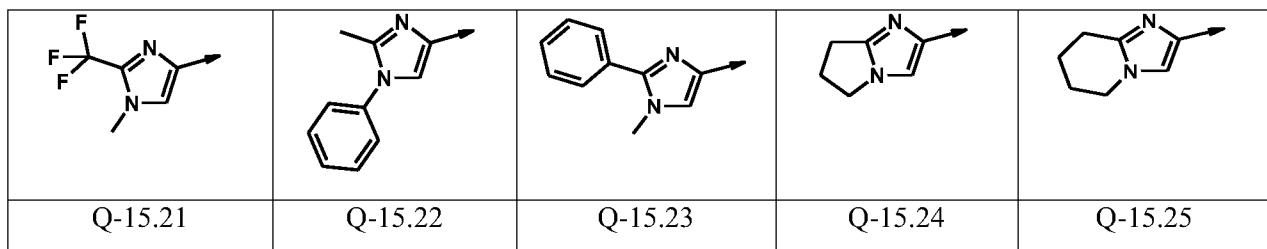
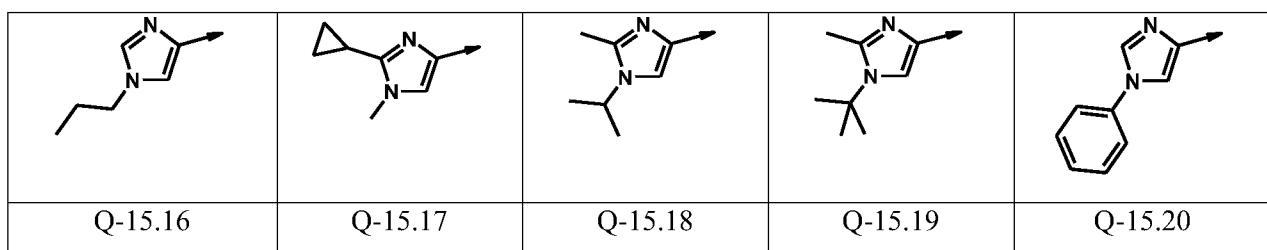
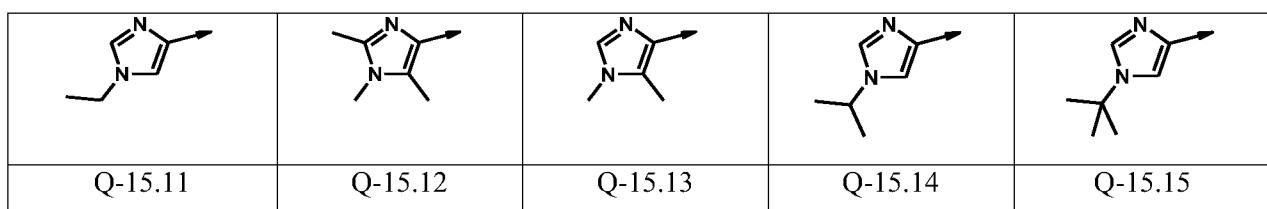
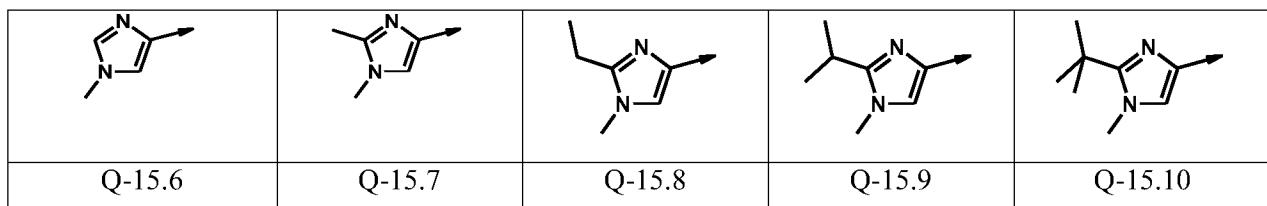
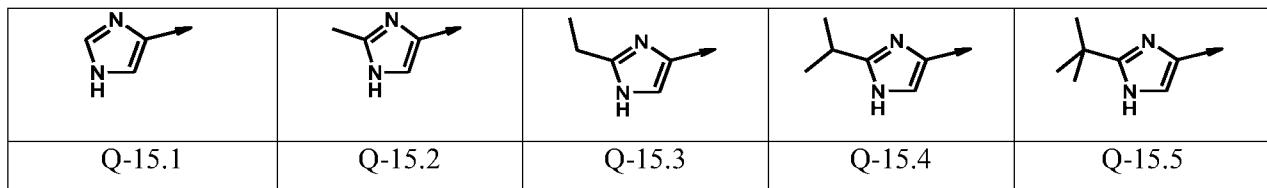
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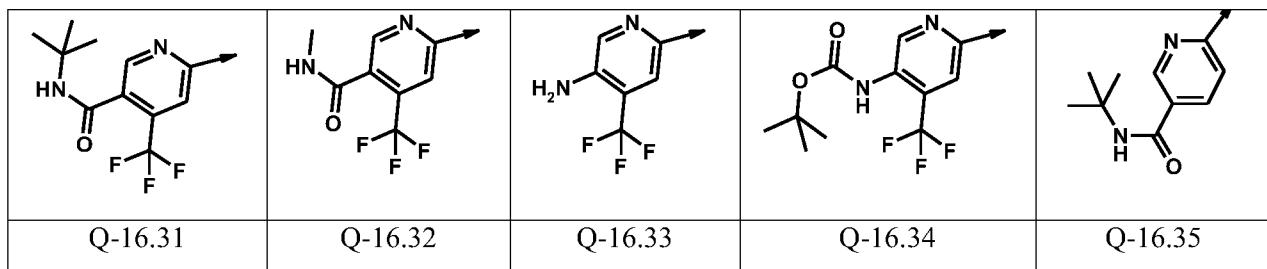
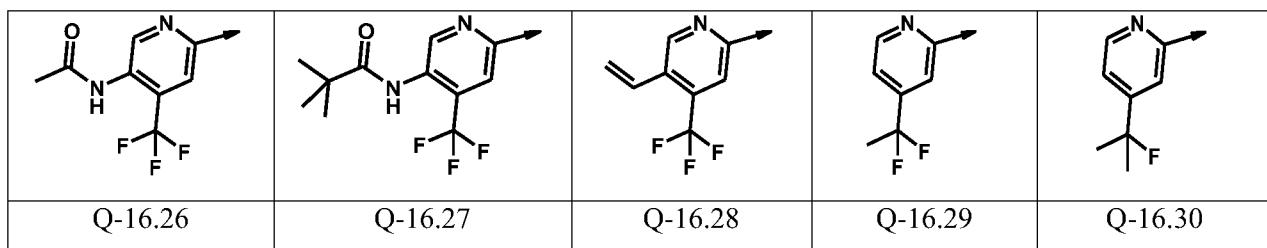
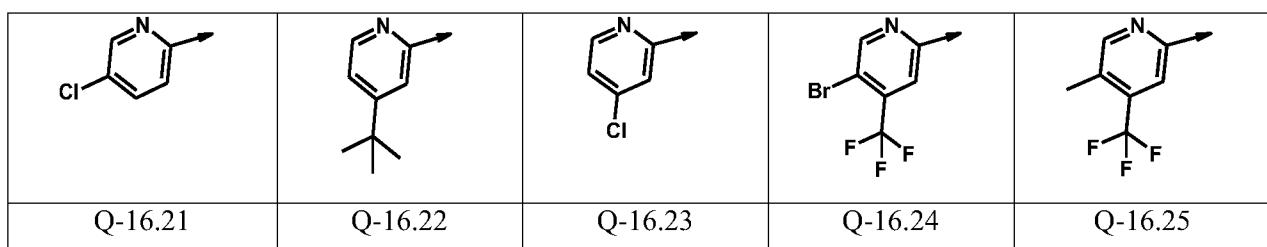
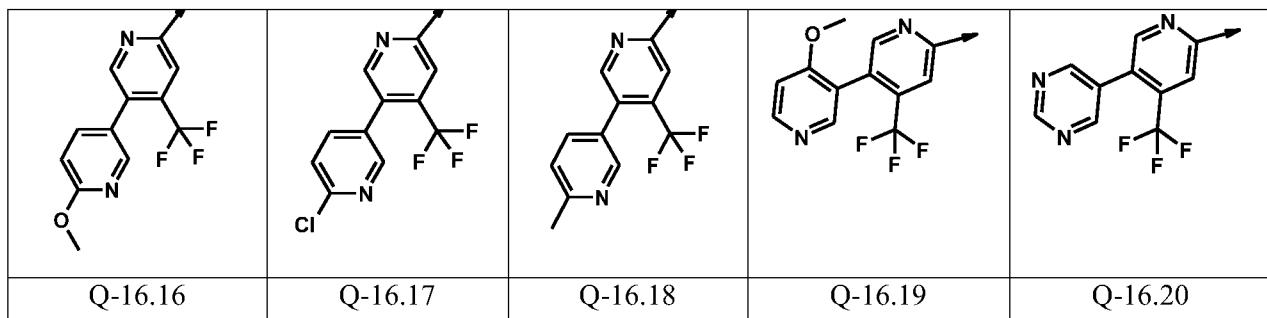
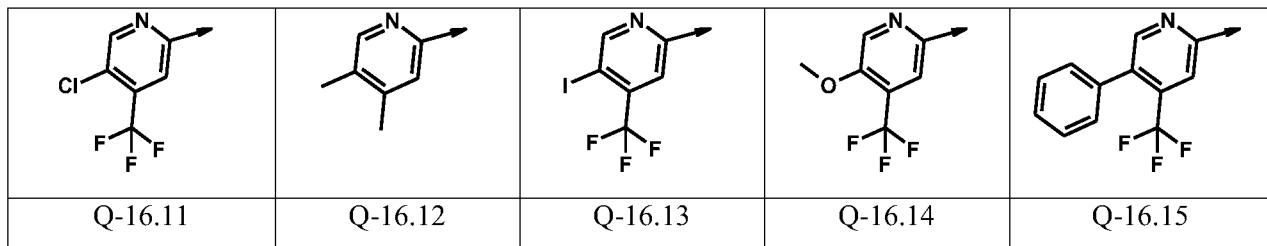
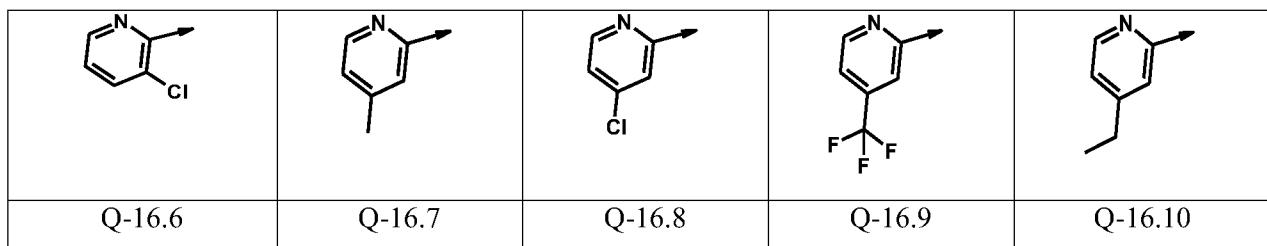
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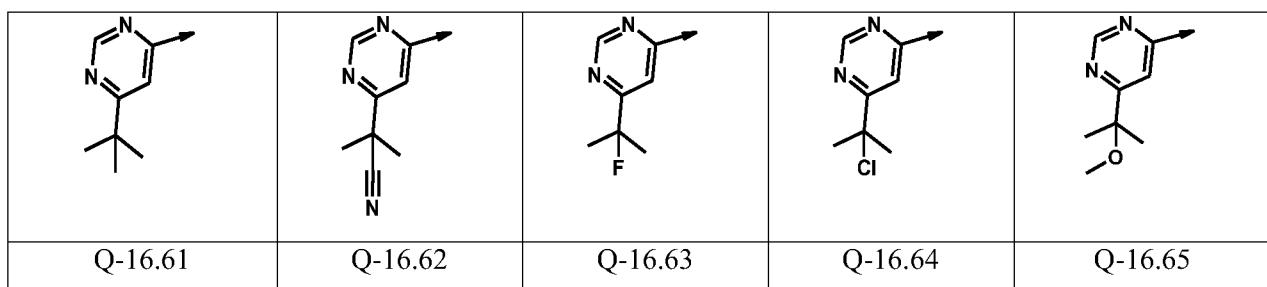
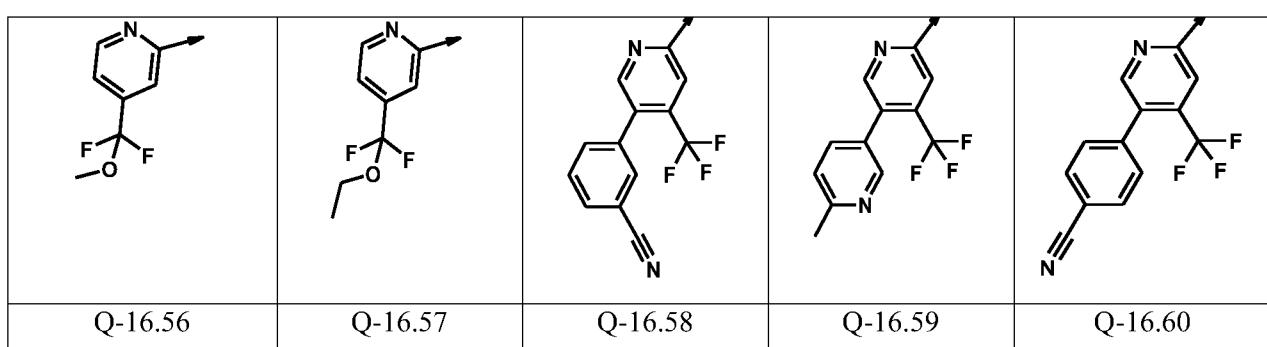
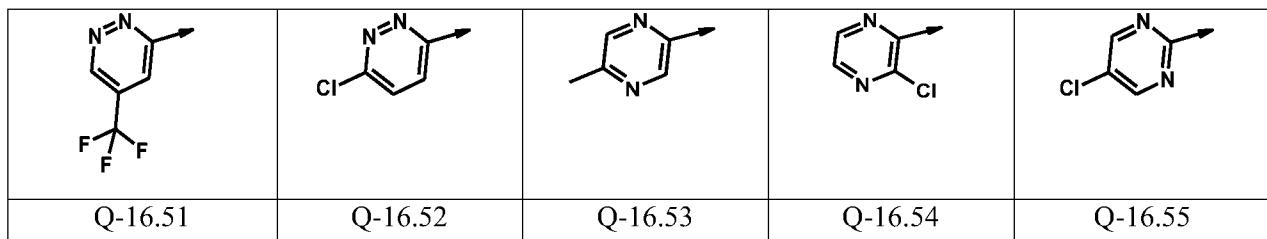
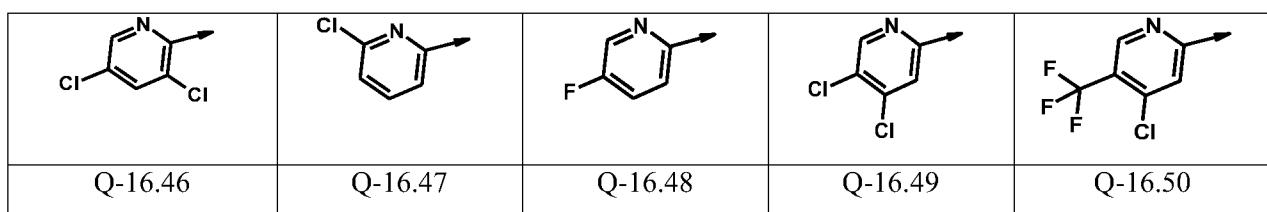
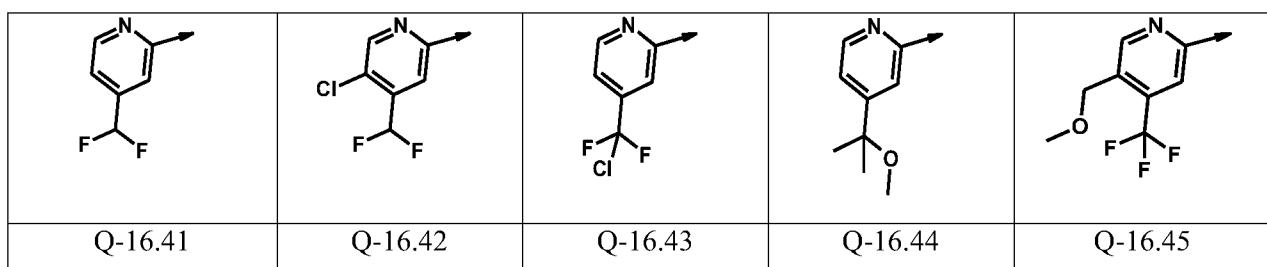
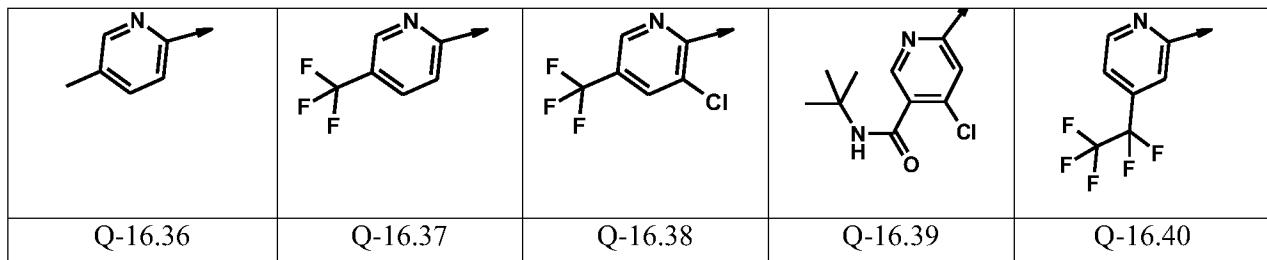


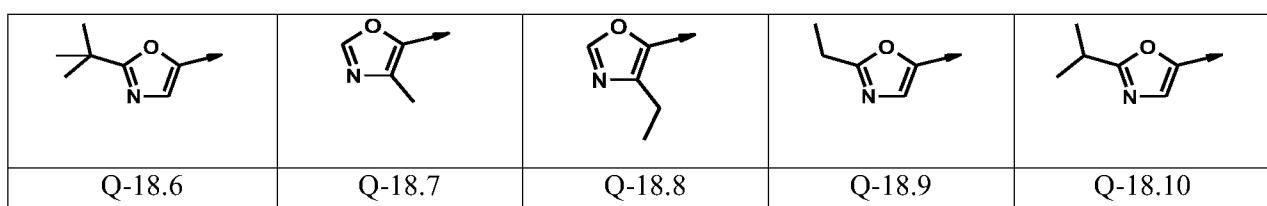
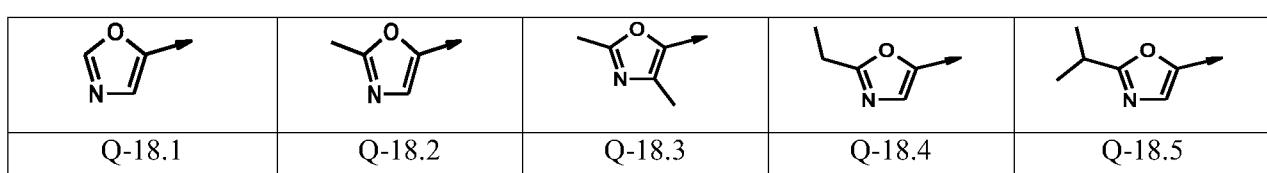
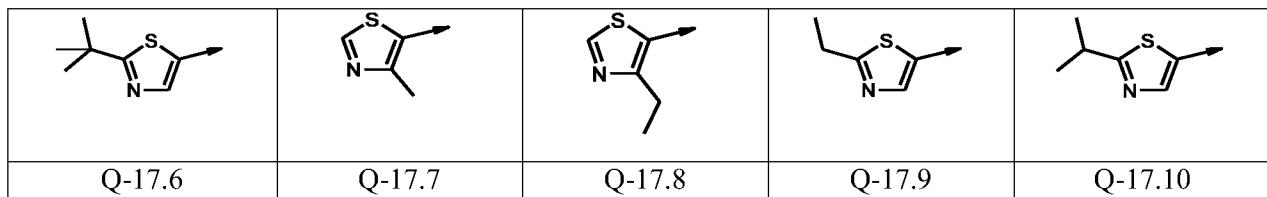
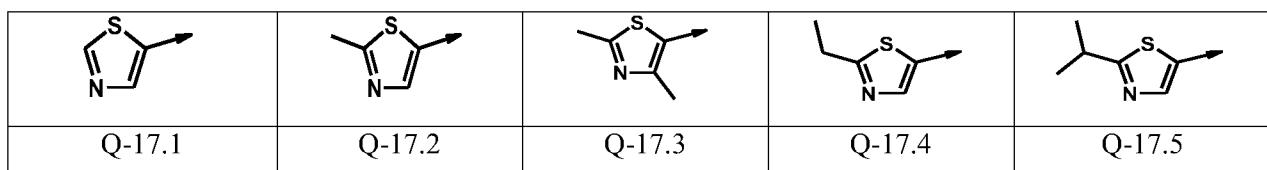
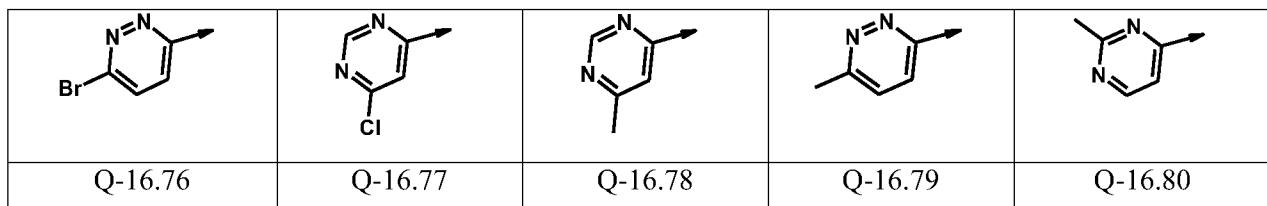
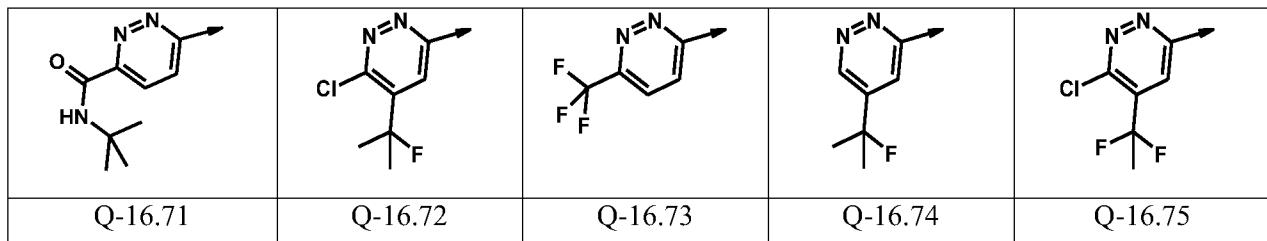
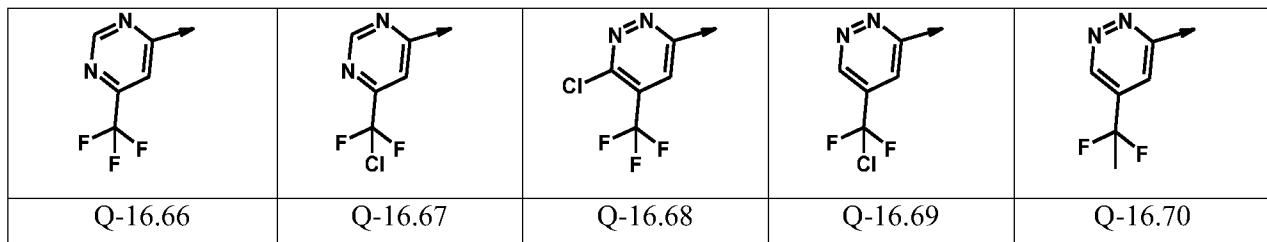
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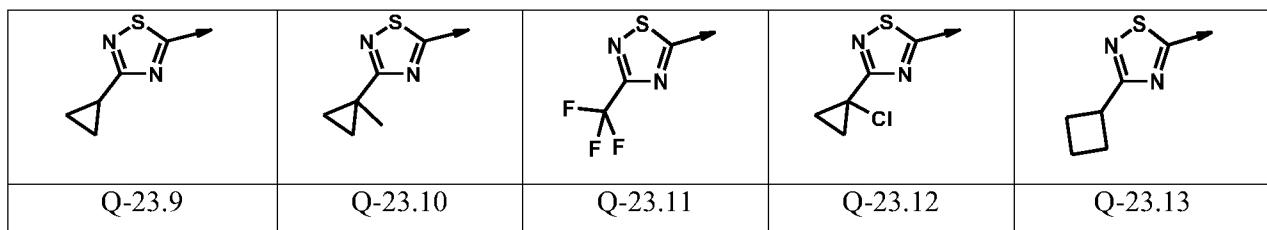
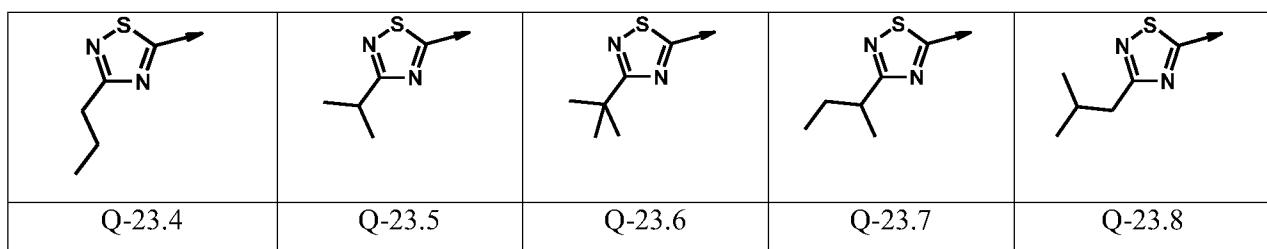
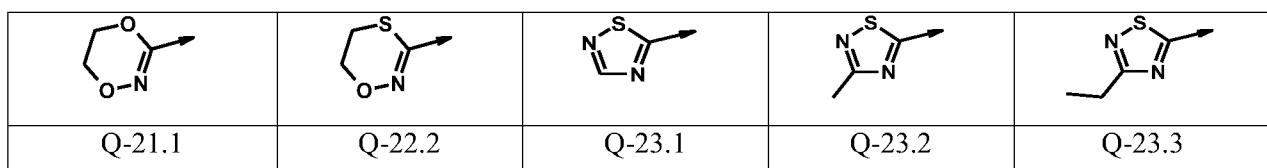
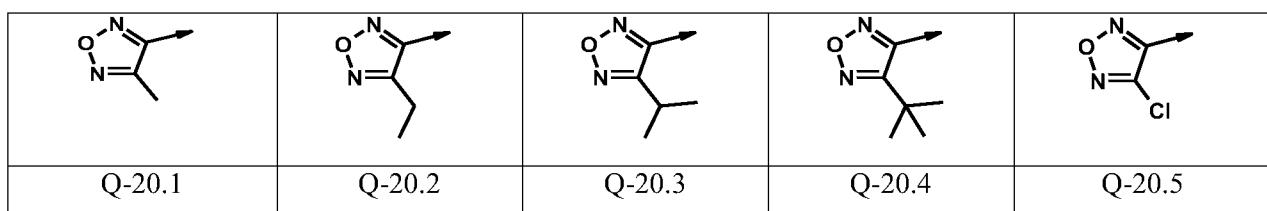
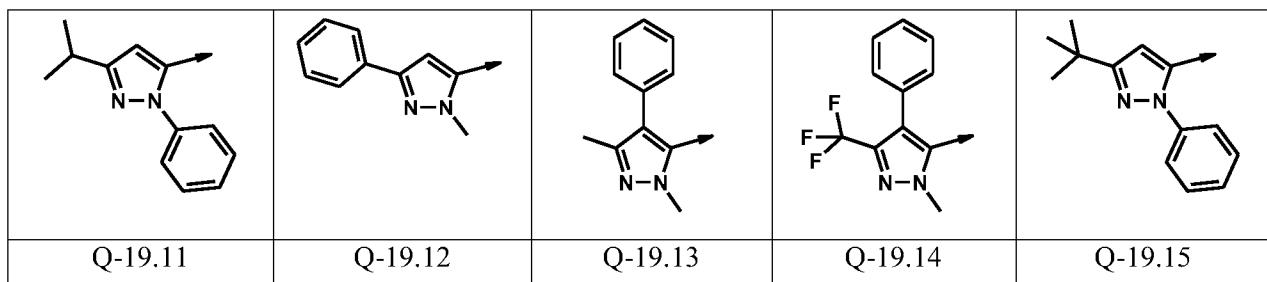
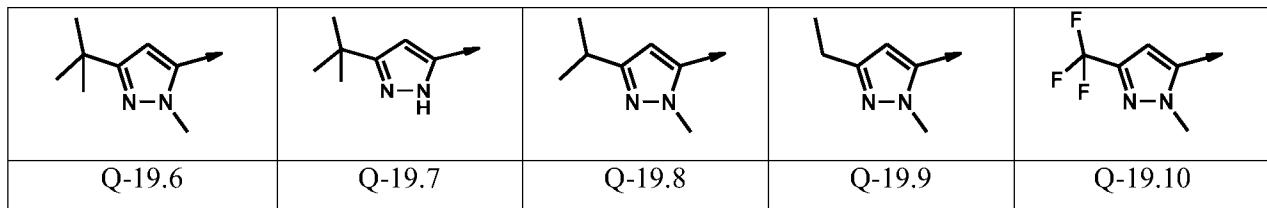
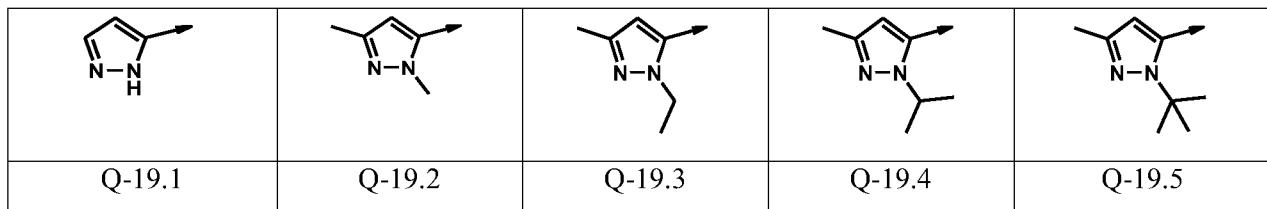


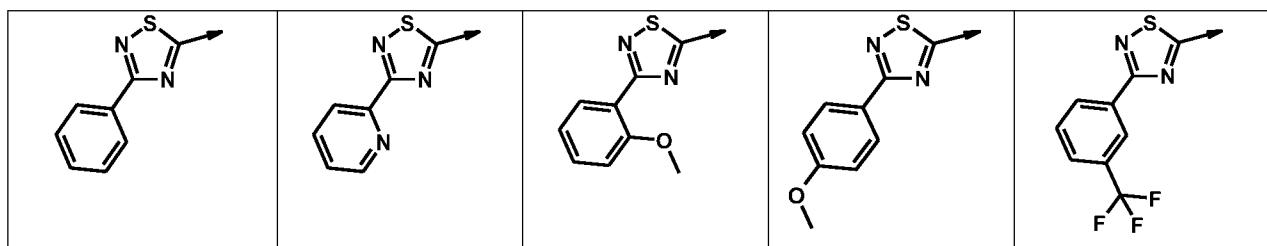
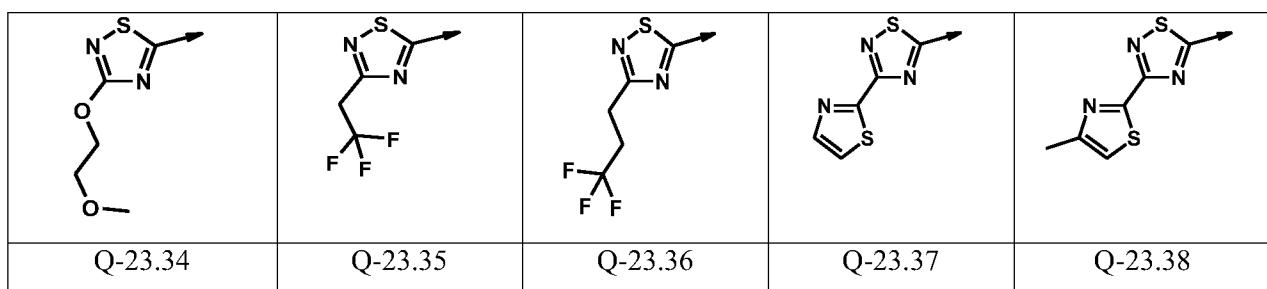
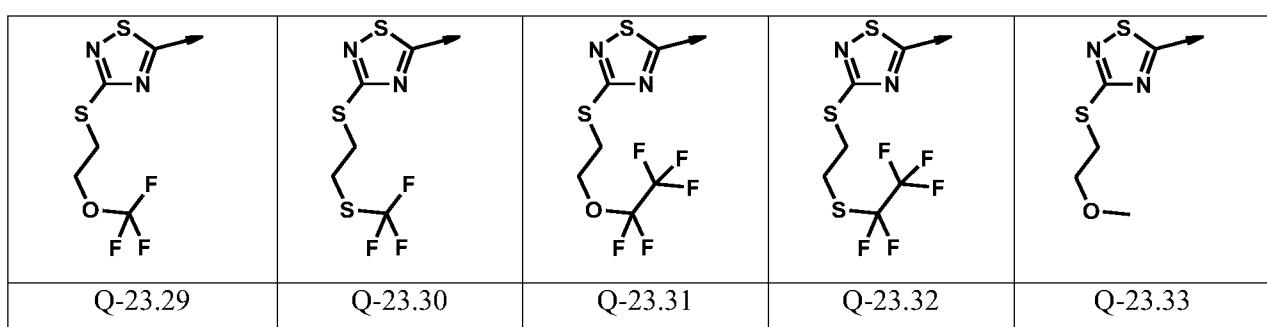
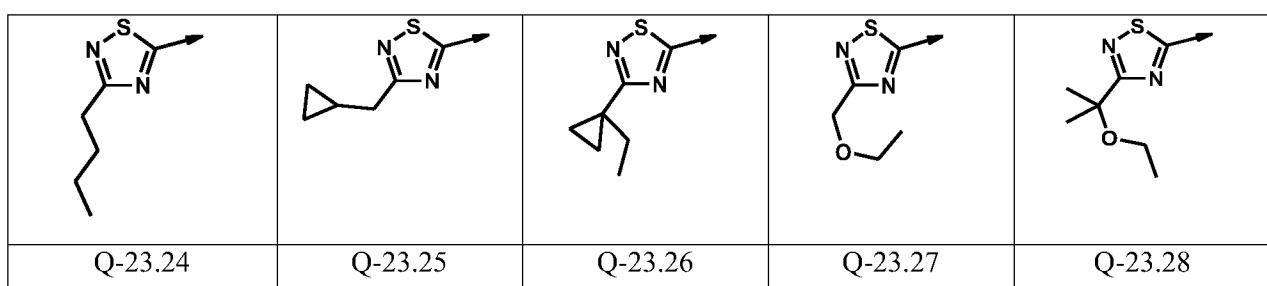
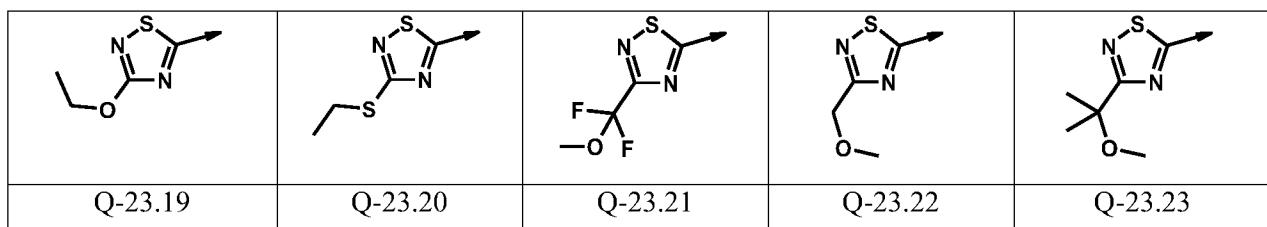
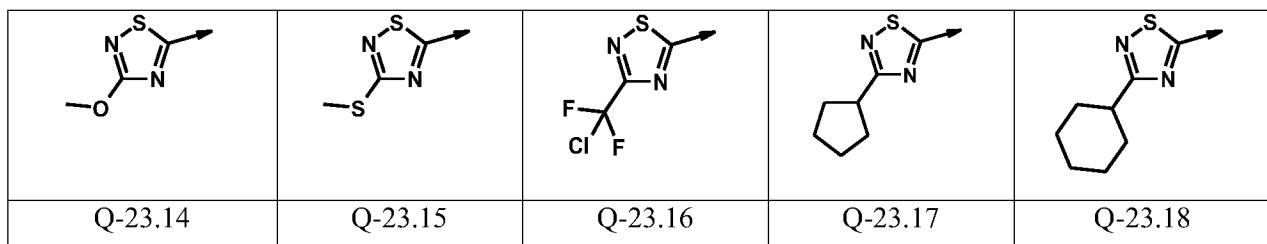




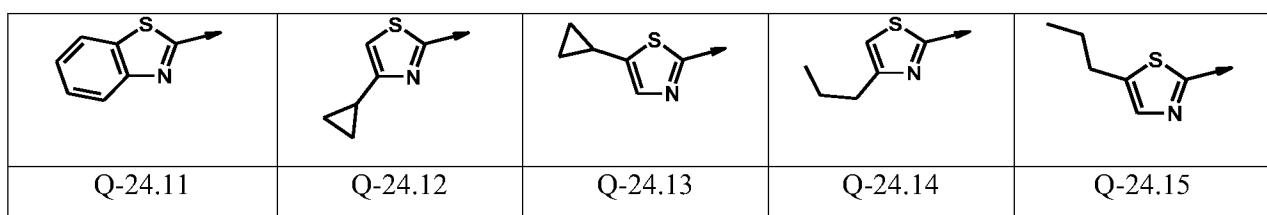
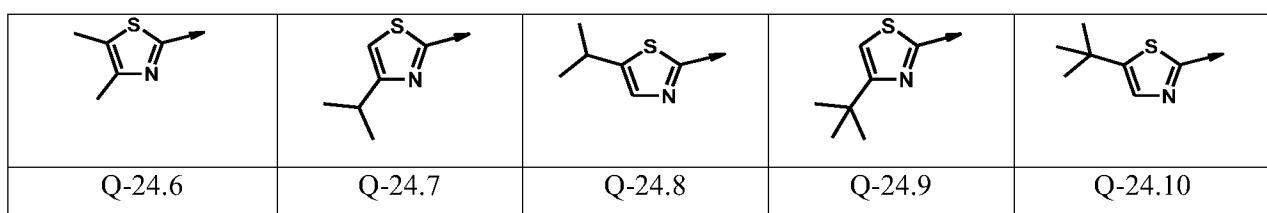
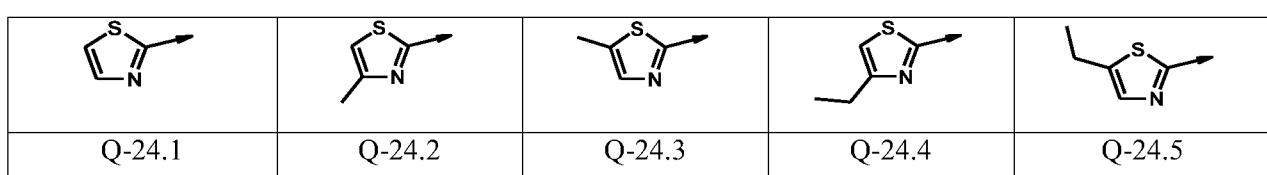
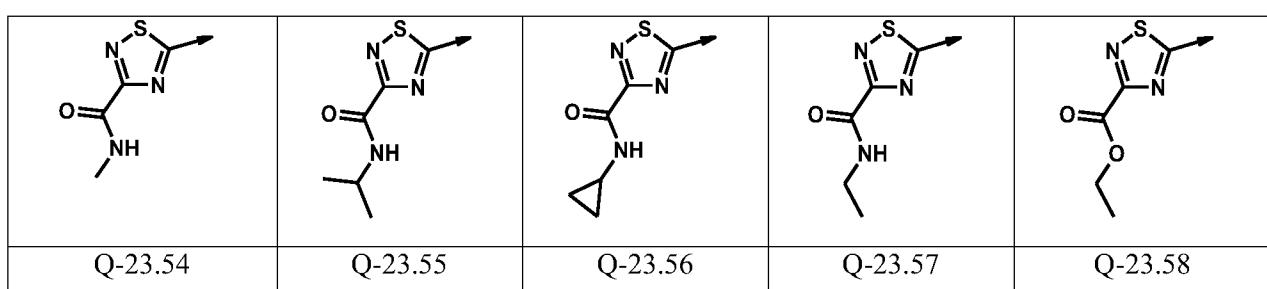
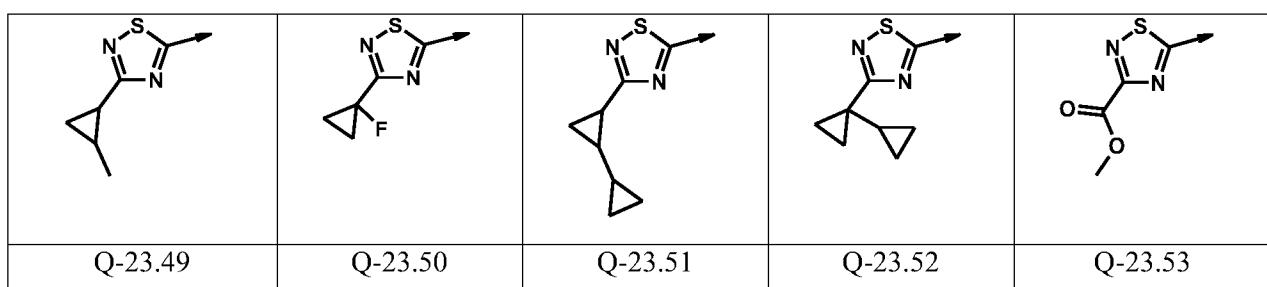
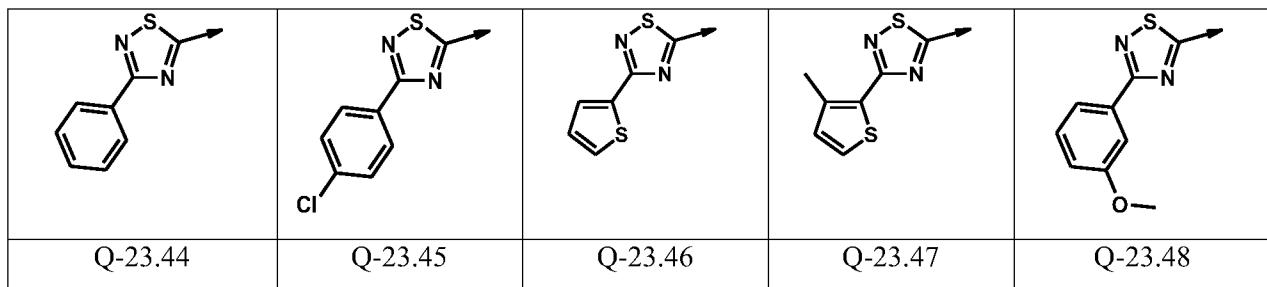


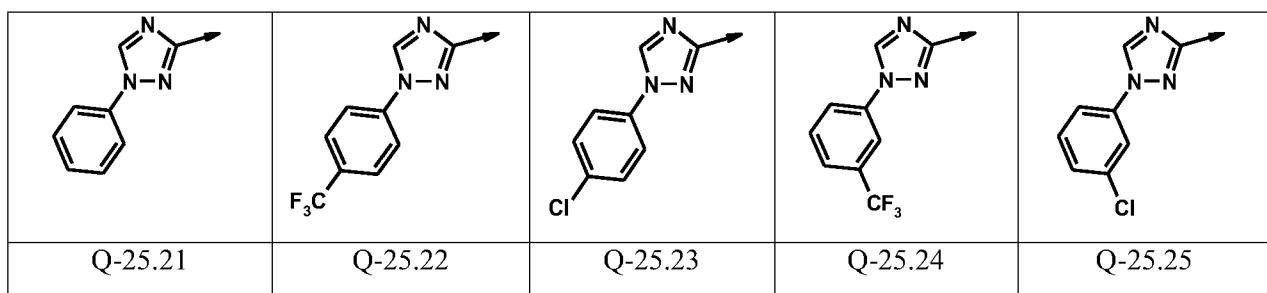
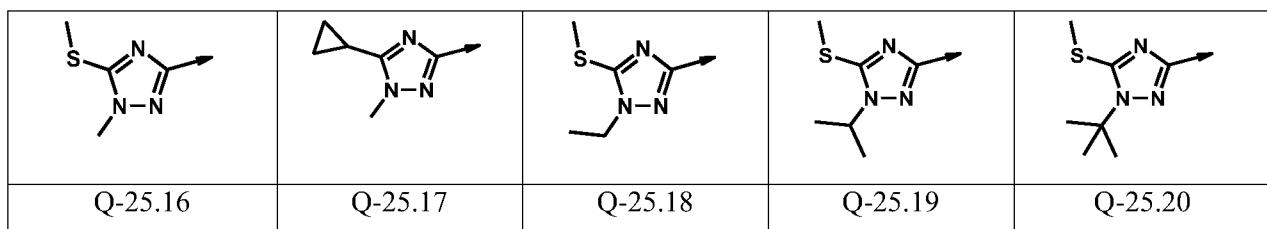
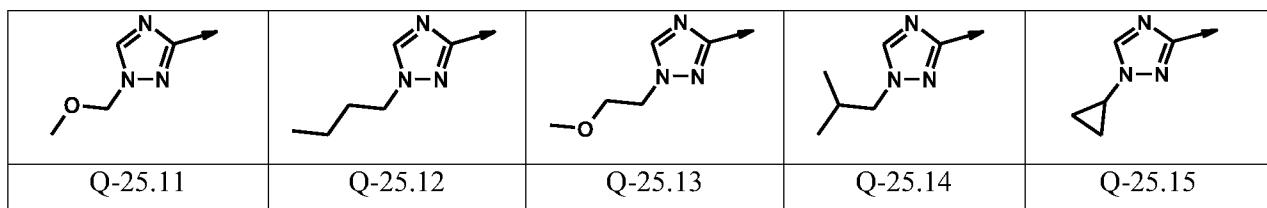
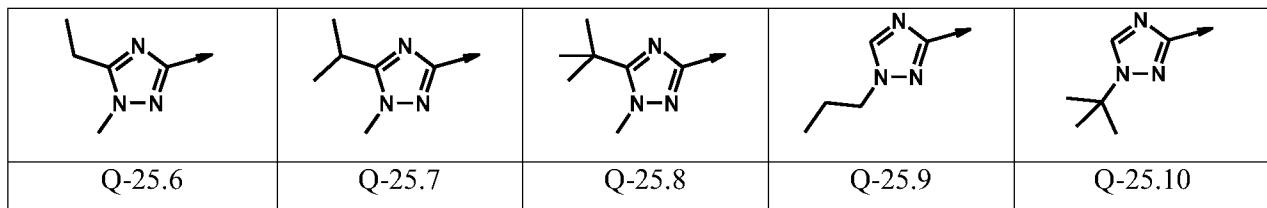
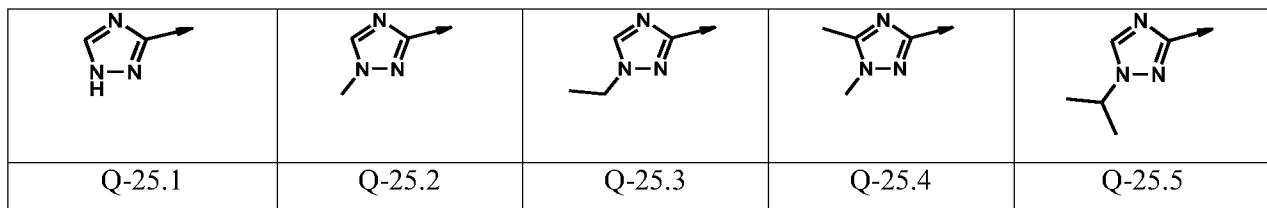
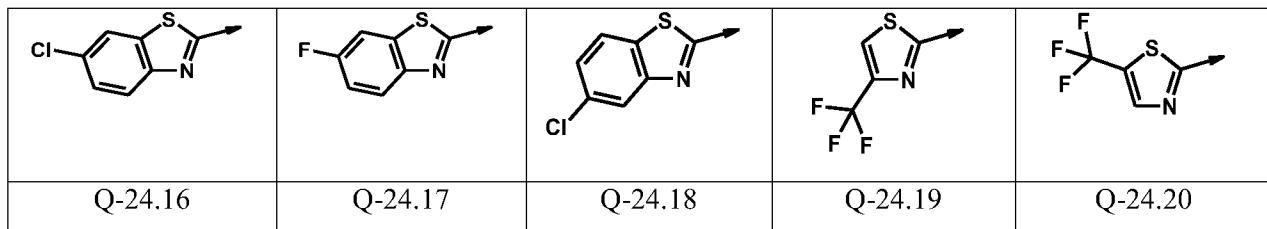


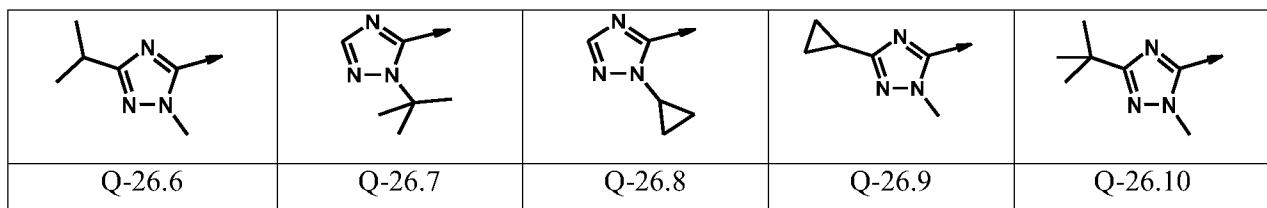
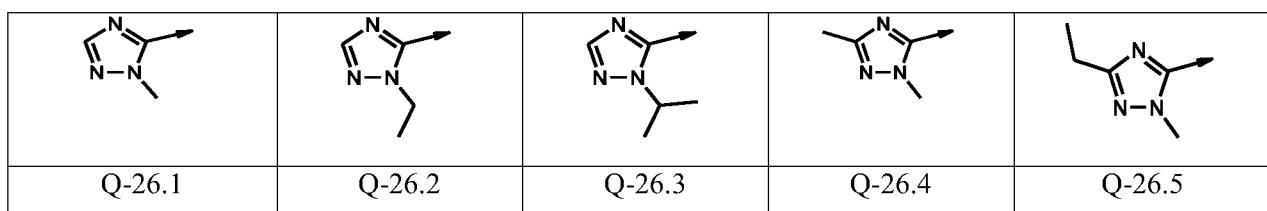
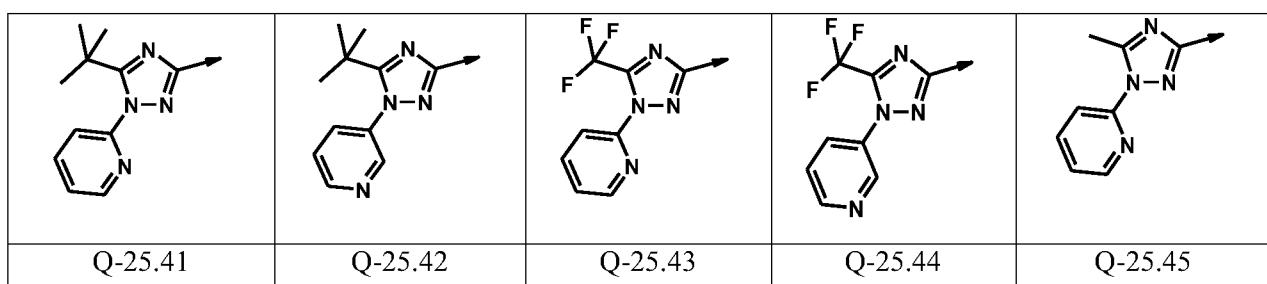
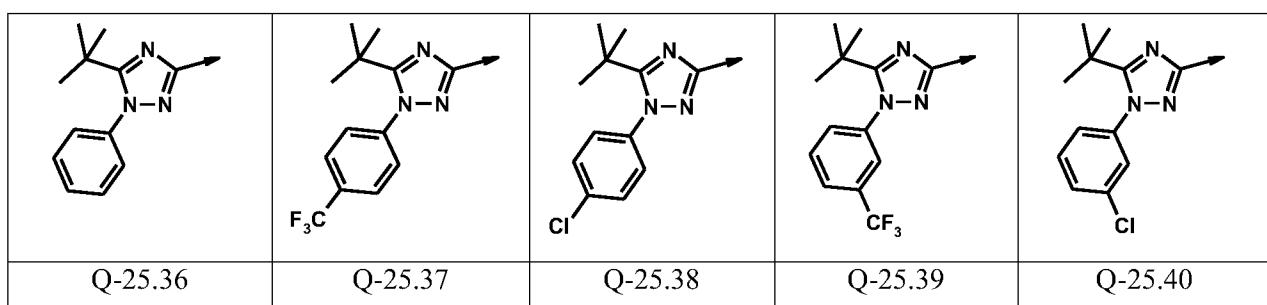
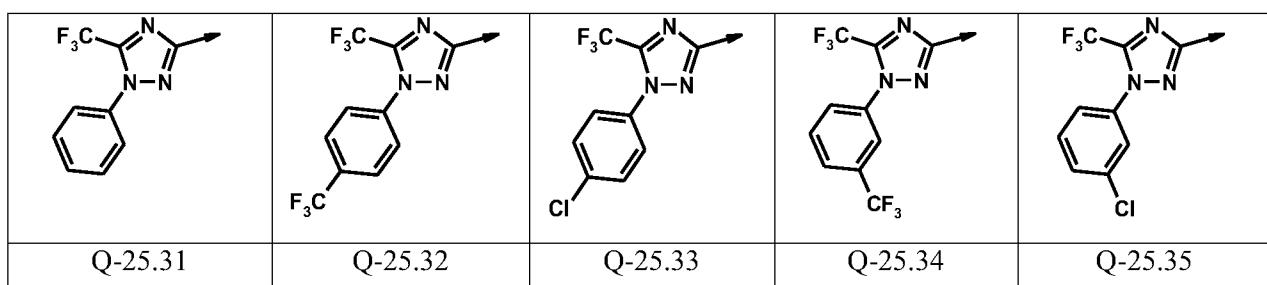
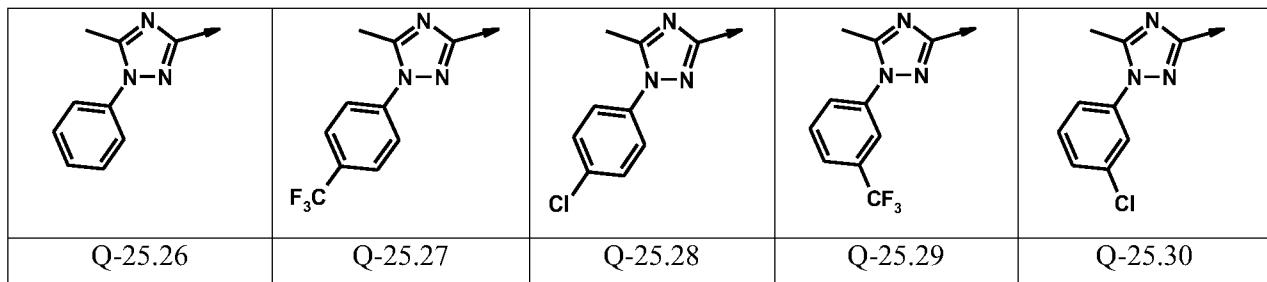


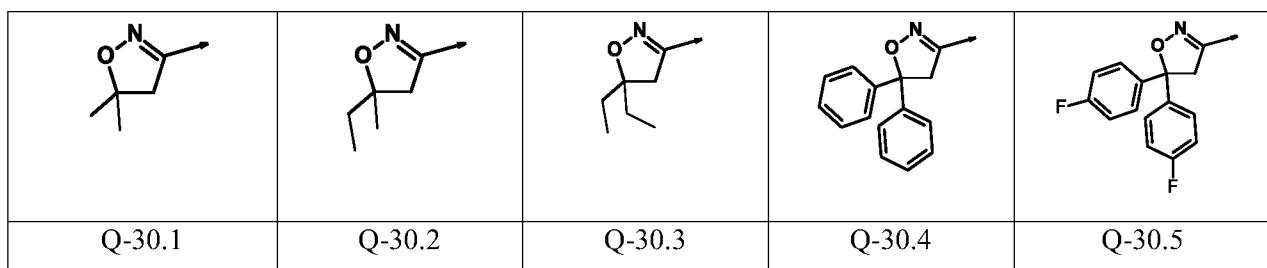
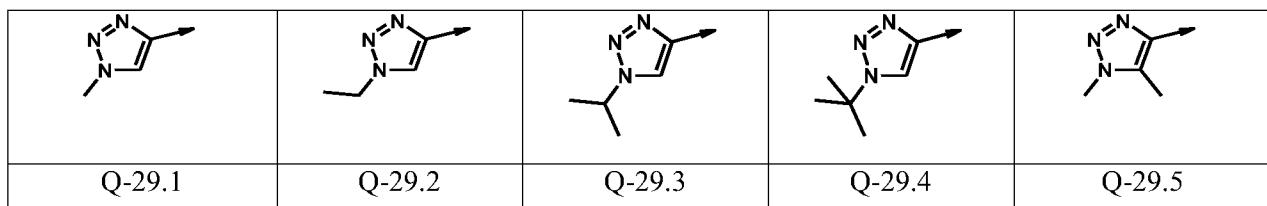
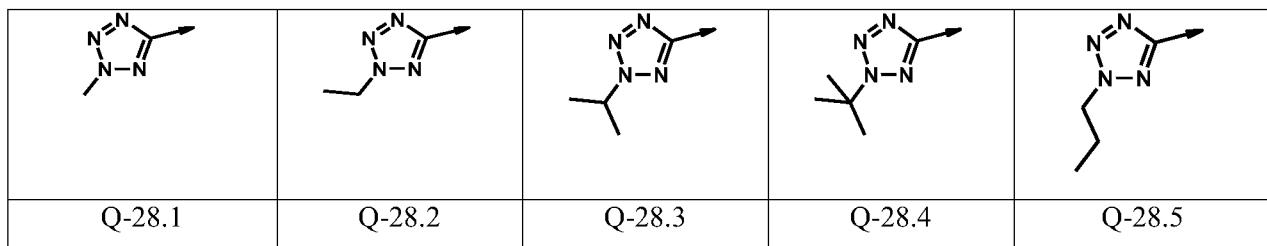
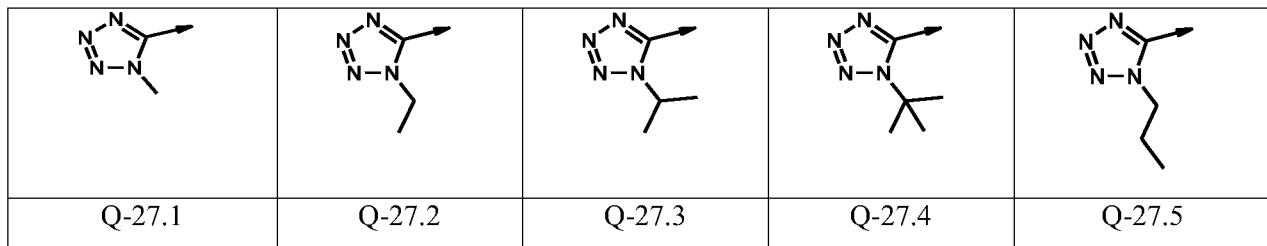
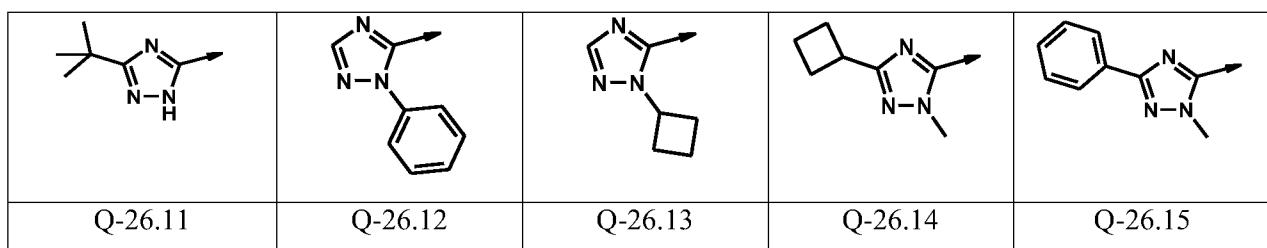


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| Q-23.39 | Q-23.40 | Q-23.41 | Q-23.42 | Q-23.43 |
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The invention particularly especially provides compounds of the general formula (I) in which

R¹ represents hydrogen, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyleth-1-yl, n-pentyl, 1-methylbut-1-yl, 2-methylbut-1-yl, 3-methylbut-1-yl, 1,1-dimethylprop-1-yl, 1,2-dimethylprop-1-yl, 2,2-dimethylprop-1-yl, 1-ethylprop-1-yl, n-hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-

1-methylpropyl, 1-ethyl-2-methylpropyl, trifluoromethyl, difluoromethyl, 2,2-difluoroethyl,
2,2,2-trifluoroethyl, 3,3,3-trifluoroprop-1-yl, 3,3,3-trifluoroprop-2-yl, cyclopropyl, cyclobutyl,
cyclopentyl, cyclohexyl, adamantan-1-yl, adamantan-2-yl, 1-methylcyclopropyl, 2-
5 methylcyclopropyl, 2,2-dimethylcyclopropyl, 2,3-dimethylcyclopropyl, 1-cyanocyclopropyl, 2-
cyanocyclopropyl, 1-methylcyclobutyl, 2-methylcyclobutyl, 3-methylcyclobutyl, 1-
cyanocyclobutyl, 2-cyanocyclobutyl, 3-cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl,
1-vinylcyclopropyl, 1-ethylcyclopropyl, 1-methylcyclohexyl, 2-methylcyclohexyl, 3-
methylcyclohexyl, 1-methoxycyclohexyl, 2-methoxycyclohexyl, 3-methoxycyclohexyl,
cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, phenyl, p-F-
10 phenyl, m-F-phenyl, o-F-phenyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-phenyl, pyridin-2-yl, pyridin-
3-yl, pyridin-4-yl, pyrimidin-2-yl, pyrimidin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl,
furan-3-yl, tetrahydrofuran-2-yl, tetrahydrofuran-3-yl, benzyl, p-Cl-benzyl, p-F-benzyl, p-
methoxybenzyl, p-methylbenzyl, p-trifluoromethylbenzyl, p-nitrobenzyl, m-Cl-benzyl, m-F-
15 benzyl, m-methoxybenzyl, m-methylbenzyl, o-Cl-benzyl, o-F-benzyl, o-methoxybenzyl, o-
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fluorophenyl)eth-1-yl, 1-(o-methylphenyl)eth-1-yl, 1-(o-bromophenyl)eth-1-yl, 1-(o-
iodophenyl)eth-1-yl, pyridin-2-ylmethyl, pyridin-3-ylmethyl, pyridin-4-ylmethyl, pyrimidin-2-
20 ylmethyl, pyrimidin-4-ylmethyl, tetrahydrofuran-2-ylmethyl, o-cyanophenylmethyl, m-
cyanophenylmethyl, p-cyanophenylmethyl, cyanomethyl, cyanoethyl, methoxycarbonyl,
ethoxycarbonyl, n-propyloxycarbonyl, isopropyloxycarbonyl, tert-butyloxycarbonyl,
benzyloxycarbonyl, allyloxycarbonyl, methylcarbonyl, ethylcarbonyl, n-propylcarbonyl,
isopropylcarbonyl, n-butylcarbonyl, 1-methylprop-1-ylcarbonyl, 2-methylprop-1-ylcarbonyl,
1,1-dimethyleth-1-ylcarbonyl, phenylcarbonyl, methylaminocarbonyl, dimethylaminocarbonyl,
ethylaminocarbonyl, n-propylaminocarbonyl, isopropylaminocarbonyl, n-butylaminocarbonyl,
25 tert-butyloxycarbonyl, benzylaminocarbonyl, methoxycarbonylmethyl,
ethoxycarbonylmethyl, tert-butyloxycarbonylmethyl, benzyloxycarbonylmethyl,
methoxycarbonylethyl, ethoxycarbonylethyl, tert-butyloxycarbonylmethyl,
benzyloxycarbonylmethyl, methylcarbonyloxymethyl, ethylcarbonyloxymethyl, n-
propylcarbonyloxymethyl, 1-methylethylcarbonyloxymethyl, 1,1-
30 dimethylethylcarbonyloxymethyl, hydroxycarbonylmethyl, hydroxycarbonylethyl,
hydroxycarbonyl-n-propyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, methoxymethyl,
ethoxymethyl, n-propyloxymethyl, isopropyloxymethyl, n-butyloxymethyl, methoxyethyl,
ethoxyethyl, n-propyloxyethyl, isopropyloxyethyl, methoxy-n-propyl, ethoxy-n-propyl,
methoxy-n-butyl, amino, dimethylamino, methyl(ethyl)amino, diethylamino, cyanomethyl,
35 prop-2-yn-1-yl,

R² and R⁹ independently of one another represent hydrogen, fluorine, methyl, ethyl, n-propyl, isopropyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyleth-1-yl, trifluoromethyl, difluoromethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, methoxymethyl, ethoxymethyl, methoxyethyl, ethoxyethyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, trifluoromethoxy, difluoromethoxy, methylthio, ethylthio, trifluoromethylthio, dimethylamino, methylamino, diethylamino, methyl(ethyl)amino, or

5 R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which 10 optionally has further substitution, or

15 R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which 20 optionally has further substitution,

R³ represents hydroxy, hydrothio, fluorine, chlorine, bromine, iodine, methoxy, ethoxy, n-propyloxy, 1-methylethoxy, n-butyloxy, 1-methylpropyloxy, 2-methylpropyloxy, 1,1-dimethylethoxy, n-pentyloxy, 1-methylbutyloxy, 2-methylbutyloxy, 3-methylbutyloxy, 1,1-dimethylpropyloxy, 1,2-dimethylpropyloxy, 2,2-dimethylpropyloxy, 1-ethylpropyloxy, n-hexyloxy, 1-methylpentyloxy, 2-methylpentyloxy, 3-methylpentyloxy, 4-methylpentyloxy, 1,1-dimethylbutyloxy, 1,2-dimethylbutyloxy, 1,3-dimethylbutyloxy, 2,2-dimethylbutyloxy, 2,3-dimethylbutyloxy, 3,3-dimethylbutyloxy, 1-ethylbutyloxy, 2-ethylbutyloxy, 1,1,2-trimethylpropyloxy, 1,2,2-trimethylpropyloxy, 1-ethyl-1-methylpropyloxy, 1-ethyl-2-methylpropyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy, cyclohexylmethoxy, benzyloxy, p-chlorophenylmethoxy, m-chlorophenylmethoxy, o-chlorophenylmethoxy, p-methoxyphenylmethoxy, p-nitrophenylmethoxy, methoxymethoxy, methoxyethoxy, methoxy-n-propyloxy, methoxy-n-butyloxy, ethoxymethoxy, ethoxyethoxy, ethoxy-n-propyloxy, ethoxy-n-butyloxy, n-propyloxymethoxy, isopropyloxymethoxy, methylcarbonyloxy, ethylcarbonyloxy, n-propylcarbonyloxy, 1-methylethylcarbonyloxy, n-butylcarbonyloxy, 1-methylprop-1-ylcarbonyloxy, 2-methylprop-1-ylcarbonyloxy, 1,1-dimethyleth-1-ylcarbonyloxy, n-pentylcarbonyloxy, 1-methylbutylcarbonyloxy, 2-methylbutylcarbonyloxy, 3-methylbutylcarbonyloxy, 1,1-dimethylpropylcarbonyloxy, 1,2-dimethylpropylcarbonyloxy, 2,2-dimethylpropylcarbonyloxy, 1-ethylpropylcarbonyloxy, n-hexylcarbonyloxy, 1-methylpentylcarbonyloxy, 2-methylpentylcarbonyloxy, 3-methylpentylcarbonyloxy, 4-methylpentylcarbonyloxy, 1,1-dimethylbutylcarbonyloxy, 1,2-

dimethylbutylcarbonyloxy, 1,3-dimethylbutylcarbonyloxy, 2,2-dimethylbutylcarbonyloxy, 2,3-dimethylbutylcarbonyloxy, 3,3-dimethylbutylcarbonyloxy, 1-ethylbutylcarbonyloxy, 2-ethylbutylcarbonyloxy, 1,1,2-trimethylpropylcarbonyloxy, 1,2,2-trimethylpropylcarbonyloxy, 1-ethyl-1-methylpropylcarbonyloxy, 1-ethyl-2-methylpropylcarbonyloxy, phenylcarbonyloxy, p-5 chlorophenylcarbonyloxy, m-chlorophenylcarbonyloxy, o-chlorophenylcarbonyloxy, p-fluorophenylcarbonyloxy, m-fluorophenylcarbonyloxy, o-fluorophenylcarbonyloxy, benzylcarbonyloxy, thiophen-2-ylcarbonyloxy, furan-2-ylcarbonyloxy, cyclopropylcarbonyloxy, cyclobutylcarbonyloxy, cyclopentylcarbonyloxy, cyclohexylcarbonyloxy, 1-fluorocycloprop-1-ylcarbonyloxy, 1-chlorocycloprop-1-ylcarbonyloxy, 1-cyanocycloprop-1-ylcarbonyloxy, 1-methylcycloprop-1-ylcarbonyloxy, 1-trifluoromethylcycloprop-1-ylcarbonyloxy, adamantlycarbonyloxy, trifluoromethylcarbonyloxy, difluoromethylcarbonyloxy, methoxycarbonyloxy, ethoxycarbonyloxy, n-propyloxycarbonyloxy, isopropyloxycarbonyloxy, n-butyloxycarbonyloxy, 1,1-dimethylethylloxycarbonyloxy, 2,2-dimethylpropyloxycarbonyloxy, benzyloxycarbonyloxy, allyloxycarbonyloxy, cyclopropyloxycarbonyloxy, cyclobutyloxycarbonyloxy, cyclopentyloxycarbonyloxy, cyclohexyloxycarbonyloxy, cyclopropylmethyloxycarbonyloxy, cyclobutylmethyloxycarbonyloxy, cyclopentylmethyloxycarbonyloxy, cyclohexylmethyloxycarbonyloxy, 3,3,3-trifluoroethyloxycarbonyloxy, 2,2-difluoroethyloxycarbonyloxy, pyridin-2-ylcarbonyloxy, pyridin-3-ylcarbonyloxy, pyridin-4-ylcarbonyloxy, 4-trifluoromethylpyridin-3-ylcarbonyloxy, 15 allylcarbonyloxy, methylsulfonyloxy, ethylsulfonyloxy, n-propylsulfonyloxy, 1-methylethylsulfonyloxy, cyclopropylsulfonyloxy, cyclobutylsulfonyloxy, cyclopentylsulfonyloxy, cyclohexylsulfonyloxy, phenylsulfonyloxy, p-chlorophenylsulfonyloxy, m-chlorophenylsulfonyloxy, o-chlorophenylsulfonyloxy, p-fluorophenylsulfonyloxy, m-fluorophenylsulfonyloxy, o-fluorophenylsulfonyloxy, p-methoxyphenylsulfonyloxy, m-methoxyphenylsulfonyloxy, o-methoxyphenylsulfonyloxy, p-methylphenylsulfonyloxy, m-methylphenylsulfonyloxy, o-methylphenylsulfonyloxy, 20 25

R⁶ represents hydrogen,

30 R¹⁴ and R¹⁵ independently of one another represent hydrogen, methyl, ethyl, n-propyl, isopropyl, n-butyl, fluorine, or

R⁹ and R¹⁵ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

W represents oxygen

and

5 Q represents one of the specific moieties Q-1.1 to Q-30.5 above, particular preference being given to the radicals Q-8.4, Q-8.7, Q-8.8, Q-8.9, Q-8.16, Q-8.22, Q-12.5, Q-13.5, Q-16.9, Q-16.11, Q-16.22, Q-16.24, Q-16.61, Q-16.66 and Q-30.1 shown in the table above.

10 The definitions of radicals listed above in general terms or within areas of preference apply both to the end products of the formula (I) and correspondingly to the starting materials or intermediates required for preparation in each case. These radical definitions can be combined with one another as desired, i.e. including combinations between the given preferred ranges.

15 Primarily for reasons of higher herbicidal activity, better selectivity and/or better producibility, compounds of the abovementioned formula (I) according to the invention or their salts or their use according to the invention are of particular interest in which individual radicals have one of the preferred meanings already specified or specified below, or in particular those in which one or more of the preferred meanings already specified or specified below occur in combination.

20 With regard to the compounds according to the invention, the terms used above and further below will be elucidated. These are familiar to the person skilled in the art and especially have the definitions elucidated hereinafter:

25 Unless defined differently, names of chemical groups are generally to be understood such that attachment to the skeleton or the remainder of the molecule is via the structural element of the relevant chemical group mentioned last, i.e. for example in the case of (C₂-C₈)-alkenyloxy via the oxygen atom and in the case of heterocyclyl-(C₁-C₈)-alkyl or R¹²O(O)C-(C₁-C₈)-alkyl in each case via the carbon atom of the alkyl group. In a composite chemical group, for example heterocyclyl-(C₁-C₈)-alkyl or

30 R¹²O(O)C-(C₁-C₈)-alkyl, the term "alkyl" therefore also represents an alkylene group.

According to the invention, "alkylsulfonyl" - alone or as part of a chemical group - refers to straight-chain or branched alkylsulfonyl, preferably having 1 to 8 or 1 to 6 carbon atoms, for example (but not limited to) (C₁-C₆)-alkylsulfonyl such as methylsulfonyl, ethylsulfonyl, propylsulfonyl, 1-

35 1-methylethylsulfonyl, butylsulfonyl, 1-methylpropylsulfonyl, 2-methylpropylsulfonyl, 1,1-dimethylethylsulfonyl, pentylsulfonyl, 1-methylbutylsulfonyl, 2-methylbutylsulfonyl, 3-methylbutylsulfonyl, 1,1-dimethylpropylsulfonyl, 1,2-dimethylpropylsulfonyl, 2,2-

dimethylpropylsulfonyl, 1-ethylpropylsulfonyl, hexylsulfonyl, 1-methylpentylsulfonyl, 2-methylpentylsulfonyl, 3-methylpentylsulfonyl, 4-methylpentylsulfonyl, 1,1-dimethylbutylsulfonyl, 1,2-dimethylbutylsulfonyl, 1,3-dimethylbutylsulfonyl, 2,2-dimethylbutylsulfonyl, 2,3-dimethylbutylsulfonyl, 3,3-dimethylbutylsulfonyl, 1-ethylbutylsulfonyl, 2-ethylbutylsulfonyl, 1,1,2-trimethylpropylsulfonyl, 1,2,2-trimethylpropylsulfonyl, 1-ethyl-1-methylpropylsulfonyl and 1-ethyl-2-methylpropylsulfonyl.

According to the invention, "heteroarylsulfonyl" denotes optionally substituted pyridylsulfonyl, pyrimidinylsulfonyl, pyrazinylsulfonyl or optionally substituted polycyclic heteroarylsulfonyl, here in particular optionally substituted quinolinylsulfonyl, for example substituted by fluorine, chlorine, bromine, iodine, cyano, nitro, alkyl, haloalkyl, haloalkoxy, amino, alkylamino, alkylcarbonylamino, dialkylamino or alkoxy groups.

According to the invention, "alkylthio" - alone or as part of a chemical group - denotes straight-chain or branched S-alkyl, preferably having 1 to 8 or 1 to 6 carbon atoms, such as (C₁-C₁₀)-, (C₁-C₆)- or (C₁-C₄)-alkylthio, for example (but not limited to) (C₁-C₆)-alkylthio such as methylthio, ethylthio, propylthio, 1-methylethylthio, butylthio, 1-methylpropylthio, 2-methylpropylthio, 1,1-dimethylethylthio, pentylthio, 1-methylbutylthio, 2-methylbutylthio, 3-methylbutylthio, 1,1-dimethylpropylthio, 1,2-dimethylpropylthio, 2,2-dimethylpropylthio, 1-ethylpropylthio, hexylthio, 1-methylpentylthio, 2-methylpentylthio, 3-methylpentylthio, 4-methylpentylthio, 1,1-dimethylbutylthio, 1,2-dimethylbutylthio, 1,3-dimethylbutylthio, 2,2-dimethylbutylthio, 2,3-dimethylbutylthio, 3,3-dimethylbutylthio, 1-ethylbutylthio, 2-ethylbutylthio, 1,1,2-trimethylpropylthio, 1,2,2-trimethylpropylthio, 1-ethyl-1-methylpropylthio and 1-ethyl-2-methylpropylthio.

According to the invention, "alkenylthio" denotes an alkenyl radical bonded via a sulfur atom, alkynylthio denotes an alkynyl radical bonded via a sulfur atom, cycloalkylthio denotes a cycloalkyl radical bonded via a sulfur atom, and cycloalkenylthio denotes a cycloalkenyl radical bonded via a sulfur atom.

According to the invention, "alkylsulfinyl (alkyl-S(=O)-)", unless defined differently elsewhere, denotes alkyl radicals which are attached to the skeleton via -S(=O)-, such as (C₁-C₁₀)-, (C₁-C₆)- or (C₁-C₄)-alkylsulfinyl, for example (but not limited to) (C₁-C₆)-alkylsulfinyl such as methylsulfinyl, ethylsulfinyl, propylsulfinyl, 1-methylethylsulfinyl, butylsulfinyl, 1-methylpropylsulfinyl, 2-methylpropylsulfinyl, 1,1-dimethylethylsulfinyl, pentylsulfinyl, 1-methylbutylsulfinyl, 2-methylbutylsulfinyl, 3-methylbutylsulfinyl, 1,1-dimethylpropylsulfinyl, 1,2-dimethylpropylsulfinyl, 2,2-dimethylpropylsulfinyl, 1-ethylpropylsulfinyl, hexylsulfinyl, 1-methylpentylsulfinyl, 2-methylpentylsulfinyl, 3-methylpentylsulfinyl, 4-methylpentylsulfinyl, 1,1-dimethylbutylsulfinyl, 1,2-dimethylbutylsulfinyl, 1,3-dimethylbutylsulfinyl, 2,2-dimethylbutylsulfinyl, 2,3-dimethylbutylsulfinyl, 3,3-dimethylbutylsulfinyl, 1-ethylbutylsulfinyl, 2-ethylbutylsulfinyl, 1,1,2-trimethylpropylsulfinyl, 1,2,2-trimethylpropylsulfinyl, 1-ethyl-1-methylpropylsulfinyl and 1-ethyl-2-methylpropylsulfinyl.

dimethylbutylsulfinyl, 1,3-dimethylbutylsulfinyl, 2,2-dimethylbutylsulfinyl, 2,3-dimethylbutylsulfinyl, 3,3-dimethylbutylsulfinyl, 1-ethylbutylsulfinyl, 2-ethylbutylsulfinyl, 1,1,2-trimethylpropylsulfinyl, 1,2,2-trimethylpropylsulfinyl, 1-ethyl-1-methylpropylsulfinyl and 1-ethyl-2-methylpropylsulfinyl.

5 Analogously, “alkenylsulfinyl” and “alkynylsulfinyl” are defined in accordance with the invention as alkenyl and alkynyl radicals, respectively, which are attached to the skeleton via -S(=O)-, such as (C₂-C₁₀)-, (C₂-C₆)- or (C₂-C₄)-alkenylsulfinyl or (C₃-C₁₀)-, (C₃-C₆)- or (C₃-C₄)-alkynylsulfinyl.

Analogously, “alkenylsulfonyl” and “alkynylsulfonyl” are defined in accordance with the invention as 10 alkenyl and alkynyl radicals, respectively, which are attached to the skeleton via -S(=O)₂-, such as (C₂-C₁₀)-, (C₂-C₆)- or (C₂-C₄)-alkenylsulfonyl or (C₃-C₁₀)-, (C₃-C₆)- or (C₃-C₄)-alkynylsulfonyl.

“Alkoxy” denotes an alkyl radical bonded via an oxygen atom, for example (but not limited to) (C₁-C₆)-alkoxy such as methoxy, ethoxy, propoxy, 1-methylethoxy, butoxy, 1-methylpropoxy, 2-methylpropoxy, 15 1,1-dimethylethoxy, pentoxy, 1-methylbutoxy, 2-methylbutoxy, 3-methylbutoxy, 1,1-dimethylpropoxy, 1,2-dimethylpropoxy, 2,2-dimethylpropoxy, 1-ethylpropoxy, hexoxy, 1-methylpentoxy, 2-methylpentoxy, 3-methylpentoxy, 4-methylpentoxy, 1,1-dimethylbutoxy, 1,2-dimethylbutoxy, 1,3-dimethylbutoxy, 2,2-dimethylbutoxy, 2,3-dimethylbutoxy, 3,3-dimethylbutoxy, 1-ethylbutoxy, 2-ethylbutoxy, 1,1,2-trimethylpropoxy, 1,2,2-trimethylpropoxy, 1-ethyl-1-methylpropoxy and 1-ethyl-2-methylpropoxy. Alkenyloxy denotes an alkenyl radical bonded via an oxygen atom, and alkynyloxy denotes 20 an alkynyl radical bonded via an oxygen atom, such as (C₂-C₁₀)-, (C₂-C₆)- or (C₂-C₄)-alkenoxy and (C₃-C₁₀)-, (C₃-C₆)- or (C₃-C₄)-alkynoxy.

“Cycloalkyloxy” denotes a cycloalkyl radical bonded via an oxygen atom and cycloalkenyloxy denotes 25 a cycloalkenyl radical bonded via an oxygen atom.

According to the invention, “alkylcarbonyl” (alkyl-C(=O)-), unless defined differently elsewhere, represents alkyl radicals attached to the skeleton via -C(=O)-, such as (C₁-C₁₀)-, (C₁-C₆)- or (C₁-C₄)-alkylcarbonyl. Here, the number of the carbon atoms refers to the alkyl radical in the alkylcarbonyl 30 group.

Analogously, “alkenylcarbonyl” and “alkynylcarbonyl”, unless defined differently elsewhere, in accordance with the invention, respectively represent alkenyl and alkynyl radicals attached to the skeleton via -C(=O)-, such as (C₂-C₁₀)-, (C₂-C₆)- or (C₂-C₄)-alkenylcarbonyl and (C₂-C₁₀)-, (C₂-C₆)- or 35 (C₂-C₄)-alkynylcarbonyl. Here, the number of the carbon atoms refers to the alkenyl or alkynyl radical in the alkenylcarbonyl or alkynylcarbonyl group.

“Alkoxy carbonyl (alkyl-O-C(=O)-)”, unless defined differently elsewhere: alkyl radicals attached to the skeleton via -O-C(=O)-, such as (C₁-C₁₀)-, (C₁-C₆)- or (C₁-C₄)-alkoxy carbonyl. Here, the number of the carbon atoms refers to the alkyl radical in the alkoxy carbonyl group. Analogously,

“alkenyl oxy carbonyl” and “alkynyl oxy carbonyl”, unless defined differently elsewhere, in accordance

5 with the invention, respectively represent alkenyl and alkynyl radicals attached to the skeleton via -O-C(=O)-, such as (C₂-C₁₀)-, (C₂-C₆)- or (C₂-C₄)-alkenyl oxy carbonyl and (C₃-C₁₀)-, (C₃-C₆)- or (C₃-C₄)-alkynyl oxy carbonyl. Here, the number of the carbon atoms refers to the alkenyl or alkynyl radical in the alkenyl oxy carbonyl or alkynyl oxy carbonyl group.

10 According to the invention, the term “alkyl carbonyl oxy” (alkyl-C(=O)-O-), unless defined differently elsewhere, represents alkyl radicals attached to the skeleton via the oxygen of a carbonyl oxy group (-C(=O)-O-), such as (C₁-C₁₀)-, (C₁-C₆)- or (C₁-C₄)-alkyl carbonyl oxy. Here, the number of the carbon atoms refers to the alkyl radical in the alkyl carbonyl oxy group.

15 Analogously, “alkenyl carbonyl oxy” and “alkynyl carbonyl oxy” are defined in accordance with the invention as alkenyl and alkynyl radicals, respectively, attached to the skeleton via the oxygen of (-C(=O)-O-), such as (C₂-C₁₀)-, (C₂-C₆)- or (C₂-C₄)-alkenyl carbonyl oxy or (C₂-C₁₀)-, (C₂-C₆)- or (C₂-C₄)-alkynyl carbonyl oxy. Here, the number of the carbon atoms refers to the alkenyl or alkynyl radical in the alkenyl- or alkynyl carbonyl oxy group respectively.

20 In short forms such as C(O)R¹², C(O)OR¹², OC(O)NR¹⁰R¹¹ or C(O)NR¹⁰R¹¹, the short form O shown in brackets represents an oxygen atom attached to the adjacent carbon atom via a double bond.

25 In short forms such as OC(S)OR¹², OC(S)SR¹³, OC(S)NR¹⁰R¹¹, the short form S shown in brackets represents a sulfur atom attached to the adjacent carbon atom via a double bond.

The term "aryl" denotes an optionally substituted mono-, bi- or polycyclic aromatic system having preferably 6 to 14, especially 6 to 10, ring carbon atoms, for example phenyl, naphthyl, anthryl, phenanthrenyl and the like, preferably phenyl.

30 The term "optionally substituted aryl" also includes polycyclic systems, such as tetrahydronaphthyl, indenyl, indanyl, fluorenyl, biphenylyl, where the bonding site is on the aromatic system. In systematic terms, "aryl" is generally also encompassed by the term "optionally substituted phenyl". Preferred aryl substituents here are, for example, hydrogen, halogen, alkyl, cycloalkyl, cycloalkylalkyl, cycloalkenyl, 35 halocycloalkyl, alkenyl, alkynyl, aryl, arylalkyl, arylalkenyl, heteroaryl, heteroarylalkyl, heterocyclyl, heterocyclylalkyl, alkoxyalkyl, alkylthio, haloalkylthio, haloalkyl, alkoxy, haloalkoxy, cycloalkoxy, cycloalkylalkoxy, aryloxy, heteroaryloxy, alkoxyalkoxy, alkynylalkoxy, alkenyloxy,

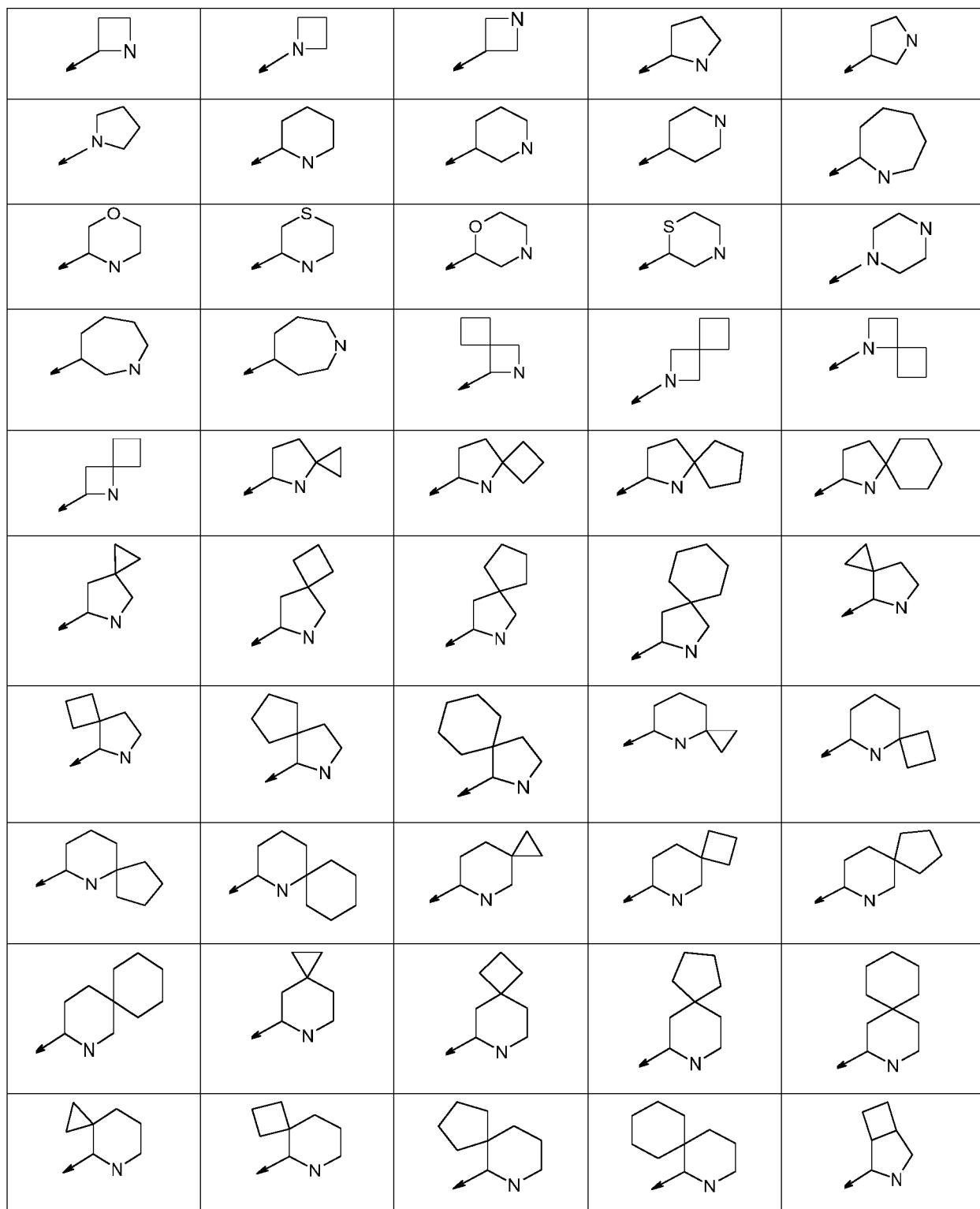
bisalkylaminoalkoxy, tris[alkyl]silyl, bis[alkyl]arylsilyl, bis[alkyl]alkylsilyl, tris[alkyl]silylalkynyl, arylalkynyl, heteroarylalkynyl, alkylalkynyl, cycloalkylalkynyl, haloalkylalkynyl, heterocyclyl-N-alkoxy, nitro, cyano, amino, alkylamino, bisalkylamino, alkylcarbonylamino, cycloalkylcarbonylamino, arylcarbonylamino, alkoxy carbonylamino, alkoxy carbonylalkylamino, arylalkoxy carbonylalkylamino, 5 hydroxycarbonyl, alkoxy carbonyl, aminocarbonyl, alkylaminocarbonyl, cycloalkylaminocarbonyl, bisalkylaminocarbonyl, heteroarylalkoxy, arylalkoxy.

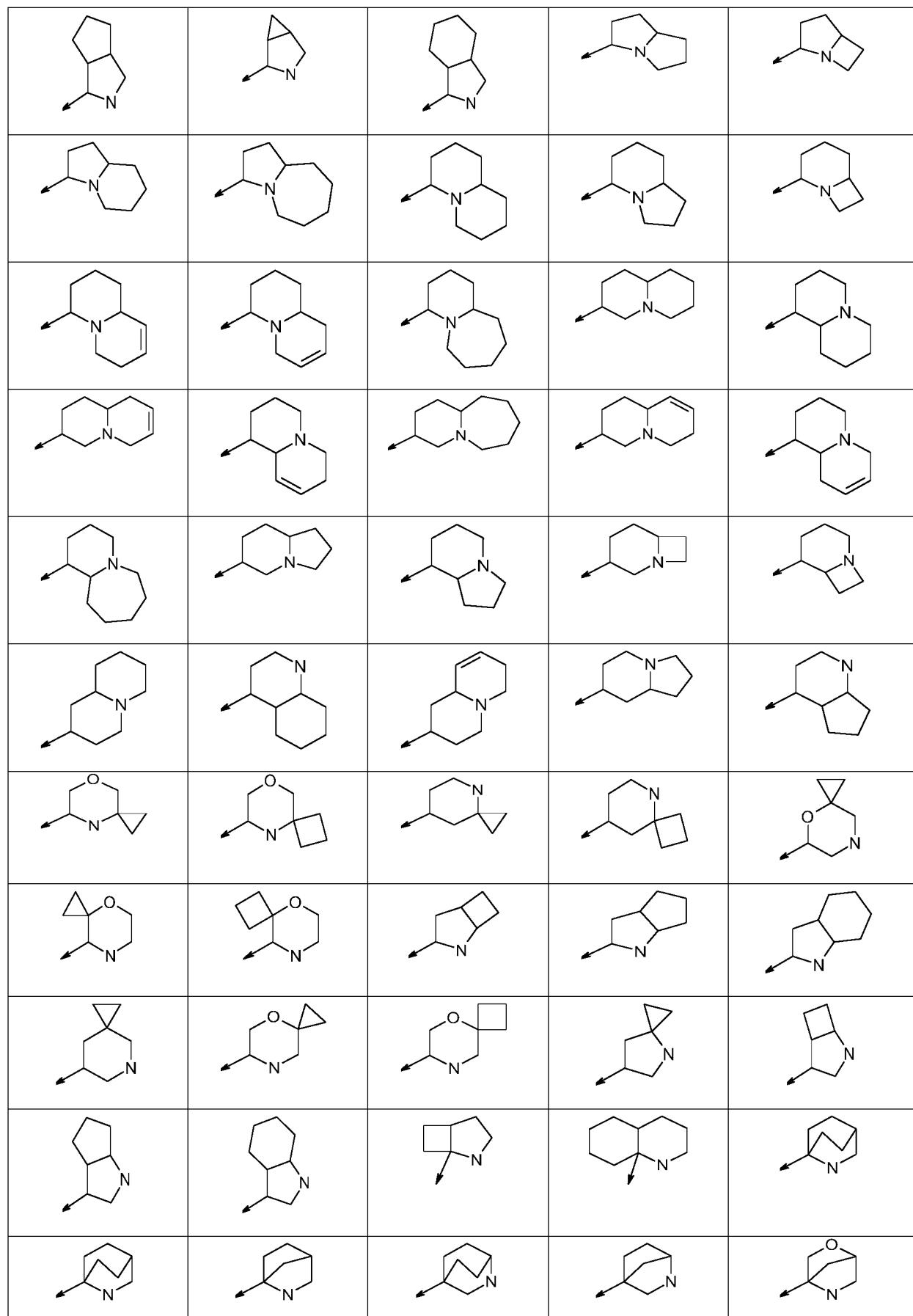
A heterocyclic radical (heterocyclyl) contains at least one heterocyclic ring (=carbocyclic ring in which at least one carbon atom has been replaced by a heteroatom, preferably by a heteroatom from the group 10 of N, O, S, P) which is saturated, unsaturated, partially saturated or heteroaromatic and may be unsubstituted or substituted, in which case the bonding site is localized on a ring atom. If the heterocyclyl radical or the heterocyclic ring is optionally substituted, it may be fused to other carbocyclic or heterocyclic rings. In the case of optionally substituted heterocyclyl, polycyclic systems are also included, for example 8-azabicyclo[3.2.1]octanyl, 8-azabicyclo[2.2.2]octanyl or 1-azabicyclo[2.2.1]heptyl. Optionally substituted heterocyclyl also includes spirocyclic systems, such as, for example, 1-oxa-5-azaspiro[2.3]hexyl. Unless defined differently, the heterocyclic ring preferably contains 3 to 9 ring atoms, especially 3 to 6 ring atoms, and one or more, preferably 1 to 4, especially 1, 2 or 3, heteroatoms in the heterocyclic ring, preferably from the group of N, O and S, but no two oxygen atoms should be directly adjacent, for example with one heteroatom from the group of N, O and S: 1- or 15 2- or 3-pyrrolidinyl, 3,4-dihydro-2H-pyrrol-2- or 3-yl, 2,3-dihydro-1H-pyrrol-1- or 2- or 3- or 4- or 5-yl; 2,5-dihydro-1H-pyrrol-1- or 2- or 3-yl, 1- or 2- or 3- or 4-piperidinyl; 2,3,4,5-tetrahydropyridin-2- or 3- or 4- or 5-yl or 6-yl; 1,2,3,6-tetrahydropyridin-1- or 2- or 3- or 4- or 5- or 6-yl; 1,2,3,4-tetrahydropyridin-1- or 2- or 3- or 4- or 5- or 6-yl; 1,4-dihydropyridin-1- or 2- or 3- or 4-yl; 2,3-dihydropyridin-2- or 3- or 4- or 5- or 6-yl; 2,5-dihydropyridin-2- or 3- or 4- or 5- or 6-yl, 1- or 2- or 3- 20 or 4-azepanyl; 2,3,4,5-tetrahydro-1H-azepin-1- or 2- or 3- or 4- or 5- or 6- or 7-yl; 2,3,4,7-tetrahydro-1H-azepin-1- or 2- or 3- or 4- or 5- or 6- or 7-yl; 2,3,6,7-tetrahydro-1H-azepin-1- or 2- or 3- or 4-yl; 3,4,5,6-tetrahydro-2H-azepin-2- or 3- or 4- or 5- or 6- or 7-yl; 4,5-dihydro-1H-azepin-1- or 2- or 3- or 4-yl; 2,5-dihydro-1H-azepin-1- or -2- or 3- or 4- or 5- or 6- or 7-yl; 2,7-dihydro-1H-azepin-1- or -2- or 3- or 4-yl; 2,3-dihydro-1H-azepin-1- or -2- or 3- or 4- or 5- or 6- or 7-yl; 3,4-dihydro-2H-azepin-2- or 3- or 30 4- or 5- or 6- or 7-yl; 3,6-dihydro-2H-azepin-2- or 3- or 4- or 5- or 6- or 7-yl; 5,6-dihydro-2H-azepin-2- or 3- or 4- or 5- or 6- or 7-yl; 4,5-dihydro-3H-azepin-2- or 3- or 4- or 5- or 6- or 7-yl; 1H-azepin-1- or -2- or 3- or 4- or 5- or 6- or 7-yl; 2H-azepin-2- or 3- or 4- or 5- or 6- or 7-yl; 3H-azepin-2- or 3- or 4- or 5- or 6- or 7-yl; 4H-azepin-2- or 3- or 4- or 5- or 6- or 7-yl, 2- or 3-oxolanyl (= 2- or 3- or 4-yl); 2,3-dihydrofuran-2- or 3- or 4- or 5-yl; 2,5-dihydrofuran-2- or 3-yl, 2- or 3- or 4- 35 oxanyl (= 2- or 3- or 4-tetrahydropyranyl); 3,4-dihydro-2H-pyran-2- or 3- or 4- or 5- or 6-yl; 3,6-dihydro-2H-pyran-2- or 3- or 4- or 5- or 6-yl; 2H-pyran-2- or 3- or 4- or 5- or 6-yl; 4H-pyran-2- or 3- or 4-yl, 2- or 3- or 4-oxepanyl; 2,3,4,5-tetrahydrooxepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2,3,4,7-

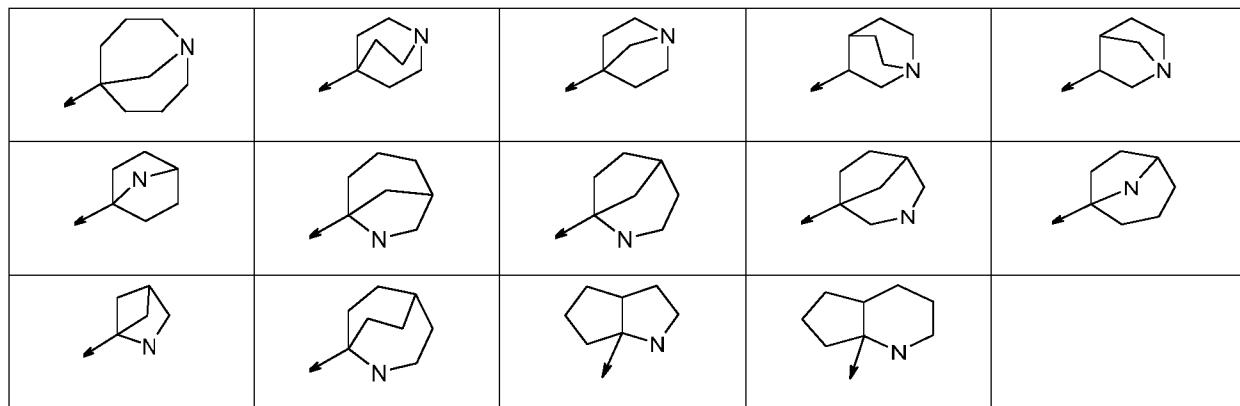
tetrahydrooxepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2,3,6,7-tetrahydrooxepin-2- or 3- or 4-yl; 2,3-dihydrooxepin-2- or 3- or 4- or 5- or 6- or 7-yl; 4,5-dihydrooxepin-2- or 3- or 4-yl; 2,5-dihydrooxepin-2- or 3- or 4- or 5- or 6- or 7-yl; oxepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2- or 3-tetrahydrothiophenyl; 2,3-dihydrothiophen-2- or 3- or 4- or 5-yl; 2,5-dihydrothiophen-2- or 3-yl; tetrahydro-2H-thiopyran-2- or 3- or 4-yl; 3,4-dihydro-2H-thiopyran-2- or 3- or 4- or 5- or 6-yl; 3,6-dihydro-2H-thiopyran-2- or 3- or 4- or 5- or 6-yl; 2H-thiopyran-2- or 3- or 4- or 5- or 6-yl; 4H-thiopyran-2- or 3- or 4-yl. Preferred 3-membered and 4-membered heterocycles are, for example, 1- or 2-aziridinyl, oxiranyl, thiiranyl, 1- or 2- or 3-azetidinyl, 2- or 3-oxetanyl, 2- or 3-thietanyl, 1,3-dioxetan-2-yl. Further examples of "heterocyclyl" are a partly or fully hydrogenated heterocyclic radical having two heteroatoms from the group of N, O and S, for example 1- or 2- or 3- or 4-pyrazolidinyl; 4,5-dihydro-3H-pyrazol-3- or 4- or 5-yl; 4,5-dihydro-1H-pyrazol-1- or 3- or 4- or 5-yl; 2,3-dihydro-1H-pyrazol-1- or 2- or 3- or 4- or 5-yl; 1- or 2- or 3- or 4-imidazolidinyl; 2,3-dihydro-1H-imidazol-1- or 2- or 3- or 4-yl; 2,5-dihydro-1H-imidazol-1- or 2- or 4- or 5-yl; 4,5-dihydro-1H-imidazol-1- or 2- or 4- or 5-yl; hexahydropyridazin-1- or 2- or 3- or 4-yl; 1,2,3,4-tetrahydropyridazin-1- or 2- or 3- or 4- or 5- or 6-yl; 1,2,3,6-tetrahydropyridazin-1- or 2- or 3- or 4- or 5- or 6-yl; 1,4,5,6-tetrahydropyridazin-1- or 3- or 4- or 5- or 6-yl; 3,4,5,6-tetrahydropyridazin-3- or 4- or 5-yl; 4,5-dihydropyridazin-3- or 4-yl; 3,4-dihydropyridazin-3- or 4- or 5- or 6-yl; 3,6-dihydropyridazin-3- or 4-yl; 1,6-dihydropyridazin-1- or 3- or 4- or 5- or 6-yl; hexahydropyrimidin-1- or 2- or 3- or 4-yl; 1,4,5,6-tetrahydropyrimidin-1- or 2- or 4- or 5- or 6-yl; 1,2,5,6-tetrahydropyrimidin-1- or 2- or 4- or 5- or 6-yl; 1,2,3,4-tetrahydropyrimidin-1- or 2- or 3- or 4- or 5- or 6-yl; 1,6-dihydropyrimidin-1- or 2- or 4- or 5- or 6-yl; 1,2-dihydropyrimidin-1- or 2- or 4- or 5- or 6-yl; 2,5-dihydropyrimidin-2- or 4- or 5-yl; 4,5-dihydropyrimidin-4- or 5- or 6-yl; 1,4-dihydropyrimidin-1- or 2- or 4- or 5- or 6-yl; 1- or 2- or 3-piperazinyl; 1,2,3,6-tetrahydropyrazin-1- or 2- or 3- or 5- or 6-yl; 1,2,3,4-tetrahydropyrazin-1- or 2- or 3- or 4- or 5- or 6-yl; 1,2-dihydropyrazin-1- or 2- or 3- or 5- or 6-yl; 1,4-dihydropyrazin-1- or 2- or 3-yl; 2,3-dihydropyrazin-2- or 3- or 5- or 6-yl; 2,5-dihydropyrazin-2- or 3-yl; 1,3-dioxolan-2- or 4- or 5-yl; 1,3-dioxol-2- or 4-yl; 1,3-dioxan-2- or 4- or 5-yl; 4H-1,3-dioxin-2- or 4- or 5- or 6-yl; 1,4-dioxan-2- or 3- or 5- or 6-yl; 2,3-dihydro-1,4-dioxin-2- or 3- or 5- or 6-yl; 1,4-dioxin-2- or 3-yl; 1,2-dithiolan-3- or 4-yl; 3H-1,2-dithiol-3- or 4- or 5-yl; 1,3-dithiolan-2- or 4-yl; 1,3-dithiol-2- or 4-yl; 1,2-dithian-3- or 4-yl; 3,4-dihydro-1,2-dithiin-3- or 4- or 5- or 6-yl; 3,6-dihydro-1,2-dithiin-3- or 4-yl; 1,2-dithiin-3- or 4-yl; 1,3-dithian-2- or 4- or 5-yl; 4H-1,3-dithiin-2- or 4- or 5- or 6-yl; 30 isoxazolidin-2- or 3- or 4- or 5-yl; 2,3-dihydroisoxazol-2- or 3- or 4- or 5-yl; 2,5-dihydroisoxazol-2- or 3- or 4- or 5-yl; 4,5-dihydroisoxazol-3- or 4- or 5-yl; 1,3-oxazolidin-2- or 3- or 4- or 5-yl; 2,3-dihydro-1,3-oxazol-2- or 3- or 4- or 5-yl; 2,5-dihydro-1,3-oxazol-2- or 4- or 5-yl; 1,2-oxazinan-2- or 3- or 4- or 5- or 6-yl; 3,4-dihydro-2H-1,2-oxazin-2- or 3- or 4- or 5- or 6-yl; 3,6-dihydro-2H-1,2-oxazin-2- or 3- or 4- or 5- or 6-yl; 5,6-dihydro-2H-1,2-oxazin-2- or 3- or 4- or 5- or 6-yl; 6H-1,2-oxazin-3- or 4- or 5- or 6-yl; 4H-1,2-oxazin-3- or 4- or 5- or 6-yl; 1,3-oxazinan-2- or 3- or 4- or 5- or 6-yl; 3,4-dihydro-2H-1,3-oxazin-2- or 3- or 4- or 5- or 6-yl; 3,6-dihydro-2H-1,3-oxazin-2- or 3- or 4- or

5- or 6-yl; 5,6-dihydro-2H-1,3-oxazin-2- or 4- or 5- or 6-yl; 5,6-dihydro-4H-1,3-oxazin-2- or 4- or 5- or 6-yl; 2H-1,3-oxazin-2- or 4- or 5- or 6-yl; 6H-1,3-oxazin-2- or 4- or 5- or 6-yl; 4H-1,3-oxazin-2- or 4- or 5- or 6-yl; morpholin-2- or 3- or 4-yl; 3,4-dihydro-2H-1,4-oxazin-2- or 3- or 4- or 5- or 6-yl; 3,6-dihydro-2H-1,4-oxazin-2- or 3- or 5- or 6-yl; 2H-1,4-oxazin-2- or 3- or 5- or 6-yl; 4H-1,4-oxazin-2- or 5-yl; 1,2-oxazepan-2- or 3- or 4- or 5- or 6- or 7-yl; 2,3,4,5-tetrahydro-1,2-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2,3,6,7-tetrahydro-1,2-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2,3,4,7-tetrahydro-1,2-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2,5,6,7-tetrahydro-1,2-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 4,5,6,7-tetrahydro-1,2-oxazepin-3- or 4- or 5- or 6- or 7-yl; 2,3-dihydro-1,2-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2,5-dihydro-1,2-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2,7-dihydro-1,2-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 4,5-dihydro-1,2-oxazepin-3- or 4- or 5- or 6- or 7-yl; 4,7-dihydro-1,2-oxazepin-3- or 4- or 5- or 6- or 7-yl; 1,2-oxazepin-3- or 4- or 5- or 6- or 7-yl; 1,3-oxazepan-2- or 3- or 4- or 5- or 6- or 7-yl; 2,3,4,5-tetrahydro-1,3-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2,3,6,7-tetrahydro-1,3-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2,3,4,7-tetrahydro-1,3-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 4,5,6,7-tetrahydro-1,3-oxazepin-2- or 4- or 5- or 6- or 7-yl; 2,3-dihydro-1,3-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2,5-dihydro-1,3-oxazepin-2- or 4- or 5- or 6- or 7-yl; 2,7-dihydro-1,3-oxazepin-2- or 4- or 5- or 6- or 7-yl; 4,5-dihydro-1,3-oxazepin-2- or 4- or 5- or 6- or 7-yl; 6,7-dihydro-1,3-oxazepin-2- or 4- or 5- or 6- or 7-yl; 1,3-oxazepin-2- or 4- or 5- or 6- or 7-yl; 1,4-oxazepan-2- or 3- or 5- or 6- or 7-yl; 2,3,4,5-tetrahydro-1,4-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 2,3,6,7-tetrahydro-1,4-oxazepin-2- or 3- or 5- or 6- or 7-yl; 2,5,6,7-tetrahydro-1,4-oxazepin-2- or 3- or 5- or 6- or 7-yl; 2,3-dihydro-1,4-oxazepin-2- or 3- or 5- or 6- or 7-yl; 2,5-dihydro-1,4-oxazepin-2- or 3- or 5- or 6- or 7-yl; 2,7-dihydro-1,4-oxazepin-2- or 3- or 5- or 6- or 7-yl; 4,5-dihydro-1,4-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 4,7-dihydro-1,4-oxazepin-2- or 3- or 4- or 5- or 6- or 7-yl; 6,7-dihydro-1,4-oxazepin-2- or 3- or 5- or 6- or 7-yl; 1,4-oxazepin-2- or 3- or 5- or 6- or 7-yl; isothiazolidin-2- or 3- or 4- or 5-yl; 2,3-dihydroisothiazol-2- or 3- or 4- or 5-yl; 2,5-dihydroisothiazol-2- or 3- or 4- or 5-yl; 4,5-dihydroisothiazol-3- or 4- or 5-yl; 1,3-thiazolidin-2- or 3- or 4- or 5-yl; 2,3-dihydro-1,3-thiazol-2- or 3- or 4- or 5-yl; 2,5-dihydro-1,3-thiazol-2- or 4- or 5-yl; 4,5-dihydro-1,3-thiazol-2- or 4- or 5-yl; 1,3-thiazinan-2- or 3- or 4- or 5- or 6-yl; 3,4-dihydro-2H-1,3-thiazin-2- or 3- or 4- or 5- or 6-yl; 3,6-dihydro-2H-1,3-thiazin-2- or 3- or 4- or 5- or 6-yl; 5,6-dihydro-2H-1,3-thiazin-2- or 4- or 5- or 6-yl; 5,6-dihydro-4H-1,3-thiazin-2- or 4- or 5- or 6-yl; 2H-1,3-thiazin-2- or 4- or 5- or 6-yl; 6H-1,3-thiazin-2- or 4- or 5- or 6-yl; 4H-1,3-thiazin-2- or 4- or 5- or 6-yl. Further examples of "heterocyclyl" are a partially or fully hydrogenated heterocyclic radical having 3 heteroatoms from the group of N, O and S, for example 1,4,2-dioxazolidin-2- or -3- or -5-yl; 1,4,2-dioxazol-3- or -5-yl; 1,4,2-dioxazinan-2- or -3- or -5- or -6-yl; 5,6-dihydro-1,4,2-dioxazin-3- or -5- or -6-yl; 1,4,2-dioxazin-3- or -5- or -6-yl; 1,4,2-dioxazepan-2- or -3- or -5- or -6- or -7-yl; 6,7-dihydro-5H-1,4,2-dioxazepin-3- or -5- or -6- or -7-yl; 2,3-dihydro-7H-1,4,2-

dioxazepin-2- or -3- or -5- or -6- or -7-yl; 2,3-dihydro-5H-1,4,2-dioxazepin-2- or -3- or -5- or -6- or -7-yl; 5H-1,4,2-dioxazepin-3- or -5- or -6- or -7-yl; 7H-1,4,2-dioxazepin-3- or -5- or -6- or -7-yl. Structural examples of heterocycles which are optionally substituted further are also listed below:







The heterocycles listed above are preferably substituted, for example, by hydrogen, halogen, alkyl, haloalkyl, hydroxyl, alkoxy, cycloalkoxy, aryloxy, alkoxyalkyl, alkoxyalkoxy, cycloalkyl, halocycloalkyl, aryl, arylalkyl, heteroaryl, heterocyclyl, alkenyl, alkylcarbonyl, cycloalkylcarbonyl,

5 arylcarbonyl, heteroarylcarbonyl, alkoxy carbonyl, hydroxycarbonyl, cycloalkoxycarbonyl, cycloalkylalkoxycarbonyl, alkoxy carbonylalkyl, arylalkoxycarbonyl, arylalkoxycarbonylalkyl, alkynyl, alkynylalkyl, alkylalkynyl, trisalkylsilylalkynyl, nitro, amino, cyano, haloalkoxy, haloalkylthio, alkylthio, hydrothio, hydroxyalkyl, oxo, heteroarylalkoxy, arylalkoxy, heterocyclalkoxy, heterocyclalkylthio, heterocycloxy, heterocyclthio, heteroaryloxy, bisalkylamino, alkylamino, 10 cycloalkylamino, hydroxycarbonylalkylamino, alkoxy carbonylalkylamino, arylalkoxycarbonylalkylamino, alkoxy carbonylalkyl(alkyl)amino, aminocarbonyl, alkylaminocarbonyl, bisalkylaminocarbonyl, cycloalkylaminocarbonyl, hydroxycarbonylalkylaminocarbonyl, alkoxy carbonylalkylaminocarbonyl, arylalkoxycarbonylalkylaminocarbonyl.

15 The cyclic structural elements (in particular the structural elements aryl, cycloalkyl, cycloalkenyl, heteroaryl and heterocycl) of the radicals mentioned in R¹, R³, R⁴, R⁵, R⁶, R⁷, R⁸, R⁹, R¹⁰, R¹¹, R¹² and R¹³, respectively, are therefore unsubstituted or substituted by one or more radicals, preferably selected from the group consisting of halogen, nitro, hydroxy, cyano, NR¹⁰R¹¹, (C₁-C₄)-alkyl, (C₁-C₄)-haloalkyl, (C₁-C₄)-alkoxy, (C₁-C₄)-haloalkoxy, (C₁-C₄)-alkylthio, (C₁-C₄)-alkylsulfoxyl, (C₁-C₄)-alkylsulfone, (C₁-C₄)-haloalkylthio, (C₁-C₄)-haloalkylsulfoxyl, (C₁-C₄)-haloalkylsulfone, (C₁-C₄)-alkoxycarbonyl, (C₁-C₄)-haloalkoxycarbonyl, (C₁-C₄)-alkylcarboxyl, (C₃-C₆)-cycloalkyl, (C₃-C₆)-cycloalkyl-(C₁-C₆)-alkyl, (C₁-C₄)-alkoxycarbonyl-(C₁-C₄)-alkyl, hydroxycarbonyl, hydroxycarbonyl-(C₁-C₄)-alkyl, R¹⁰R¹¹N-carbonyl, 20 and where the structural elements cycloalkyl and heterocycl have n oxo groups, where n = 0, 1 or 2.

25 When a base structure is substituted "by one or more radicals" from a list of radicals (= group) or a generically defined group of radicals, this in each case includes simultaneous substitution by a plurality of identical and/or structurally different radicals.

In the case of a partially or fully saturated nitrogen heterocycle, this may be joined to the remainder of

the molecule either via carbon or via the nitrogen.

Suitable substituents for a substituted heterocyclic radical are the substituents specified further down, and additionally also oxo and thioxo. The oxo group as a substituent on a ring carbon atom is then, for 5 example, a carbonyl group in the heterocyclic ring. As a result, lactones and lactams are preferably also included. The oxo group may also occur on the ring heteroatoms, which may exist in different oxidation states, for example in the case of N and S, and in that case form, for example, the divalent -N(O)-, -S(O)- (also SO for short) and -S(O)₂- (also SO₂ for short) groups in the heterocyclic ring. In the case of -N(O)- and -S(O)- groups, both enantiomers in each case are included.

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According to the invention, the expression "heteroaryl" refers to heteroaromatic compounds, i.e. fully unsaturated aromatic heterocyclic compounds, preferably 5- to 7-membered rings having 1 to 4, preferably 1 or 2, identical or different heteroatoms, preferably O, S or N. Inventive heteroaryls are, for example, 1H-pyrrol-1-yl; 1H-pyrrol-2-yl; 1H-pyrrol-3-yl; furan-2-yl; furan-3-yl; thien-2-yl; thien-3-yl, 15 1H-imidazol-1-yl; 1H-imidazol-2-yl; 1H-imidazol-4-yl; 1H-imidazol-5-yl; 1H-pyrazol-1-yl; 1H-pyrazol-3-yl; 1H-pyrazol-4-yl; 1H-pyrazol-5-yl, 1H-1,2,3-triazol-1-yl, 1H-1,2,3-triazol-4-yl, 1H-1,2,3-triazol-5-yl, 2H-1,2,3-triazol-2-yl, 2H-1,2,3-triazol-4-yl, 1H-1,2,4-triazol-1-yl, 1H-1,2,4-triazol-3-yl, 4H-1,2,4-triazol-4-yl, 1,2,4-oxadiazol-3-yl, 1,2,4-oxadiazol-5-yl, 1,3,4-oxadiazol-2-yl, 1,2,3-oxadiazol-4-yl, 1,2,3-oxadiazol-5-yl, 1,2,5-oxadiazol-3-yl, azepinyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, 20 pyrazin-2-yl, pyrazin-3-yl, pyrimidin-2-yl, pyrimidin-4-yl, pyrimidin-5-yl, pyridazin-3-yl, pyridazin-4-yl, 1,3,5-triazin-2-yl, 1,2,4-triazin-3-yl, 1,2,4-triazin-5-yl, 1,2,4-triazin-6-yl, 1,2,3-triazin-4-yl, 1,2,3-triazin-5-yl, 1,2,4-, 1,3,2-, 1,3,6- and 1,2,6-oxazinyl, isoxazol-3-yl, isoxazol-4-yl, isoxazol-5-yl, 1,3-oxazol-2-yl, 1,3-oxazol-4-yl, 1,3-oxazol-5-yl, isothiazol-3-yl, isothiazol-4-yl, isothiazol-5-yl, 1,3-thiazol-2-yl, 1,3-thiazol-4-yl, 1,3-thiazol-5-yl, oxepinyl, thiepinyl, 1,2,4-triazolonyl and 1,2,4- 25 diazepinyl, 2H-1,2,3,4-tetrazol-5-yl, 1H-1,2,3,4-tetrazol-5-yl, 1,2,3,4-oxatriazol-5-yl, 1,2,3,4-thiatriazol-5-yl, 1,2,3,5-oxatriazol-4-yl, 1,2,3,5-thiatriazol-4-yl. The heteroaryl groups according to the invention may also be substituted by one or more identical or different radicals. If two adjacent carbon atoms are part of a further aromatic ring, the systems are fused heteroaromatic systems, such as benzofused or polyannelated heteroaromatics. Preferred examples are quinolines (e.g. quinolin-2-yl, quinolin-3-yl, 30 quinolin-4-yl, quinolin-5-yl, quinolin-6-yl, quinolin-7-yl, quinolin-8-yl); isoquinolines (e.g. isoquinolin-1-yl, isoquinolin-3-yl, isoquinolin-4-yl, isoquinolin-5-yl, isoquinolin-6-yl, isoquinolin-7-yl, isoquinolin-8-yl); quinoxaline; quinazoline; cinnoline; 1,5-naphthyridine; 1,6-naphthyridine; 1,7-naphthyridine; 1,8-naphthyridine; 2,6-naphthyridine; 2,7-naphthyridine; phthalazine; pyridopyrazines; pyridopyrimidines; pyridopyridazines; pteridines; pyrimidopyrimidines. Examples of heteroaryl are also 5- or 6-membered 35 benzofused rings from the group of 1H-indol-1-yl, 1H-indol-2-yl, 1H-indol-3-yl, 1H-indol-4-yl, 1H-indol-5-yl, 1H-indol-6-yl, 1H-indol-7-yl, 1-benzofuran-2-yl, 1-benzofuran-3-yl, 1-benzofuran-4-yl, 1-benzofuran-5-yl, 1-benzofuran-6-yl, 1-benzofuran-7-yl, 1-benzothiophen-2-yl, 1-benzothiophen-3-yl, 1-

benzothiophen-4-yl, 1-benzothiophen-5-yl, 1-benzothiophen-6-yl, 1-benzothiophen-7-yl, 1H-indazol-1-yl, 1H-indazol-3-yl, 1H-indazol-4-yl, 1H-indazol-5-yl, 1H-indazol-6-yl, 1H-indazol-7-yl, 2H-indazol-2-yl, 2H-indazol-3-yl, 2H-indazol-4-yl, 2H-indazol-5-yl, 2H-indazol-6-yl, 2H-indazol-7-yl, 2H-isoindol-2-yl, 2H-isoindol-1-yl, 2H-isoindol-3-yl, 2H-isoindol-4-yl, 2H-isoindol-5-yl, 2H-isoindol-6-yl; 2H-isoindol-7-yl, 1H-benzimidazol-1-yl, 1H-benzimidazol-2-yl, 1H-benzimidazol-4-yl, 1H-benzimidazol-5-yl, 1H-benzimidazol-6-yl, 1H-benzimidazol-7-yl, 1,3-benzoxazol-2-yl, 1,3-benzoxazol-4-yl, 1,3-benzoxazol-5-yl, 1,3-benzoxazol-6-yl, 1,3-benzoxazol-7-yl, 1,3-benzothiazol-2-yl, 1,3-benzothiazol-4-yl, 1,3-benzothiazol-5-yl, 1,3-benzothiazol-6-yl, 1,3-benzothiazol-7-yl, 1,2-benzisoxazol-3-yl, 1,2-benzisoxazol-4-yl, 1,2-benzisoxazol-5-yl, 1,2-benzisoxazol-6-yl, 1,2-benzisoxazol-7-yl, 1,2-benzisothiazol-3-yl, 1,2-benzisothiazol-4-yl, 1,2-benzisothiazol-5-yl, 1,2-benzisothiazol-6-yl, 1,2-benzisothiazol-7-yl.

The term "halogen" denotes, for example, fluorine, chlorine, bromine or iodine. If the term is used for a radical, "halogen" denotes, for example, a fluorine, chlorine, bromine or iodine atom.

15 According to the invention, "alkyl" means a straight-chain or branched open-chain, saturated hydrocarbon radical which is optionally mono- or polysubstituted, and in the latter case is referred to as "substituted alkyl". Preferred substituents are halogen atoms, alkoxy, haloalkoxy, cyano, alkylthio, haloalkylthio, amino or nitro groups, particular preference being given to methoxy, methyl, fluoroalkyl, 20 cyano, nitro, fluorine, chlorine, bromine or iodine. The prefix "bis" also includes the combination of different alkyl radicals, e.g. methyl(ethyl) or ethyl(methyl).

"Haloalkyl", "-alkenyl" and "-alkynyl" respectively denote alkyl, alkenyl and alkynyl partially or fully substituted by identical or different halogen atoms, for example monohaloalkyl such as CH₂CH₂Cl, 25 CH₂CH₂Br, CHClCH₃, CH₂Cl, CH₂F; perhaloalkyl such as CCl₃, CCl₂F, CFCl₂, CF₂CClF₂, CF₂CClFCF₃; polyhaloalkyl such as CH₂CHFCl, CF₂CClFH, CF₂CBrFH, CH₂CF₃; the term perhaloalkyl also encompasses the term perfluoroalkyl.

30 "Partially fluorinated alkyl" denotes a straight-chain or branched, saturated hydrocarbon which is mono- or polysubstituted by fluorine, where the fluorine atoms in question may be present as substituents on one or more different carbon atoms of the straight-chain or branched hydrocarbon chain, for example CHFCH₃, CH₂CH₂F, CH₂CH₂CF₃, CHF₂, CH₂F, CHFCF₂CF₃.

35 "Partially fluorinated haloalkyl" denotes a straight-chain or branched, saturated hydrocarbon which is substituted by different halogen atoms with at least one fluorine atom, where any other halogen atoms optionally present are selected from the group consisting of fluorine, chlorine or bromine, iodine. The corresponding halogen atoms may be present as substituents on one or more different carbon atoms of

the straight-chain or branched hydrocarbon chain. Partially fluorinated haloalkyl also includes full substitution of the straight or branched chain by halogen including at least one fluorine atom.

“Haloalkoxy” is, for example, OCF_3 , OCHF_2 , OCH_2F , OCF_2CF_3 , OCH_2CF_3 and $\text{OCH}_2\text{CH}_2\text{Cl}$; this 5 applies correspondingly to haloalkenyl and other halogen-substituted radicals.

The expression "($\text{C}_1\text{-C}_4$)-alkyl" mentioned here by way of example is a brief notation for straight-chain or branched alkyl having one to 4 carbon atoms according to the range stated for carbon atoms, i.e. encompasses the methyl, ethyl, 1-propyl, 2-propyl, 1-butyl, 2-butyl, 2-methylpropyl or tert-butyl 10 radicals. General alkyl radicals with a larger specified range of carbon atoms, e.g. "($\text{C}_1\text{-C}_6$)-alkyl", correspondingly also encompass straight-chain or branched alkyl radicals with a greater number of carbon atoms, i.e. according to the example also the alkyl radicals having 5 and 6 carbon atoms.

Unless stated specifically, preference is given to the lower carbon skeletons, for example having from 1 15 to 6 carbon atoms, or having from 2 to 6 carbon atoms in the case of unsaturated groups, in the case of the hydrocarbyl radicals such as alkyl, alkenyl and alkynyl radicals, including in composite radicals. Alkyl radicals, including in composite radicals such as alkoxy, haloalkyl, etc., are, for example, methyl, ethyl, n-propyl or i-propyl, n-, i-, t- or 2-butyl, pentyls, hexyls such as n-hexyl, i-hexyl and 1,3-dimethylbutyl, heptyls such as n-heptyl, 1-methylhexyl and 1,4-dimethylpentyl; alkenyl and alkynyl 20 radicals are defined as the possible unsaturated radicals corresponding to the alkyl radicals, where at least one double bond or triple bond is present. Preference is given to radicals having one double bond or triple bond.

The term "alkenyl" also includes, in particular, straight-chain or branched open-chain hydrocarbon 25 radicals having more than one double bond, such as 1,3-butadienyl and 1,4-pentadienyl, but also allenyl or cumulenyl radicals having one or more cumulated double bonds, for example allenyl (1,2-propadienyl), 1,2-butadienyl and 1,2,3-pentatrienyl. Alkenyl denotes, for example, vinyl which may optionally be substituted by further alkyl radicals, for example (but not limited thereto) ($\text{C}_2\text{-C}_6$)-alkenyl such as ethenyl, 1-propenyl, 2-propenyl, 1-methylethenyl, 1-butenyl, 2-butenyl, 3-butenyl, 1-methyl-1-propenyl, 2-methyl-1-propenyl, 1-methyl-2-propenyl, 2-methyl-2-propenyl, 1-pentenyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 1-methyl-1-butenyl, 2-methyl-1-butenyl, 3-methyl-1-butenyl, 1-methyl-2-butenyl, 2-methyl-2-butenyl, 3-methyl-2-butenyl, 1-methyl-3-butenyl, 2-methyl-3-butenyl, 3-methyl-3-butenyl, 1,1-dimethyl-2-propenyl, 1,2-dimethyl-1-propenyl, 1,2-dimethyl-2-propenyl, 1-ethyl-1-propenyl, 1-ethyl-2-propenyl, 1-hexenyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 5-hexenyl, 1-methyl-1-pentenyl, 2-methenyl-1-pentenyl, 3-methenyl-1-pentenyl, 4-methenyl-1-pentenyl, 1-methenyl-2-pentenyl, 2-methenyl-2-pentenyl, 3-methenyl-2-pentenyl, 4-methenyl-2-pentenyl, 1-methenyl-3-pentenyl, 2-methenyl-3-pentenyl, 3-methenyl-3-pentenyl, 4-methenyl-3-pentenyl, 1-methenyl-4-pentenyl, 2-methenyl-4-pentenyl, 3-methenyl-4-

pentenyl, 4-methyl-4-pentenyl, 1,1-dimethyl-2-butenyl, 1,1-dimethyl-3-butenyl, 1,2-dimethyl-1-butenyl, 1,2-dimethyl-2-butenyl, 1,2-dimethyl-3-butenyl, 1,3-dimethyl-1-butenyl, 1,3-dimethyl-2-butenyl, 1,3-dimethyl-3-butenyl, 2,2-dimethyl-3-butenyl, 2,3-dimethyl-1-butenyl, 2,3-dimethyl-2-butenyl, 2,3-dimethyl-3-butenyl, 3,3-dimethyl-1-butenyl, 3,3-dimethyl-2-butenyl, 1-ethyl-1-butenyl, 1-ethyl-2-butenyl, 1-ethyl-3-butenyl, 2-ethyl-1-butenyl, 2-ethyl-2-butenyl, 2-ethyl-3-butenyl, 1,1,2-trimethyl-2-propenyl, 1-ethyl-1-methyl-2-propenyl, 1-ethyl-2-methyl-1-propenyl and 1-ethyl-2-methyl-2-propenyl.

The term "alkynyl" also includes, in particular, straight-chain or branched open-chain hydrocarbon radicals having more than one triple bond, or else having one or more triple bonds and one or more double bonds, for example 1,3-butatrienyl or 3-penten-1-yn-1-yl. (C₂-C₆)-Alkynyl denotes, for example, ethynyl, 1-propynyl, 2-propynyl, 1-butynyl, 2-butynyl, 3-butynyl, 1-methyl-2-propynyl, 1-pentynyl, 2-pentynyl, 3-pentynyl, 4-pentynyl, 1-methyl-2-butynyl, 1-methyl-3-butynyl, 2-methyl-3-butynyl, 3-methyl-1-butynyl, 1,1-dimethyl-2-propynyl, 1-ethyl-2-propynyl, 1-hexynyl, 2-hexynyl, 3-hexynyl, 4-hexynyl, 5-hexynyl, 1-methyl-2-pentynyl, 1-methyl-3-pentynyl, 1-methyl-4-pentynyl, 2-methyl-3-pentynyl, 2-methyl-4-pentynyl, 3-methyl-1-pentynyl, 3-methyl-4-pentynyl, 4-methyl-1-pentynyl, 4-methyl-2-pentynyl, 1,1-dimethyl-2-butynyl, 1,1-dimethyl-3-butynyl, 1,2-dimethyl-3-butynyl, 2,2-dimethyl-3-butynyl, 3,3-dimethyl-1-butynyl, 1-ethyl-2-butynyl, 1-ethyl-3-butynyl, 2-ethyl-3-butynyl and 1-ethyl-1-methyl-2-propynyl.

The term "cycloalkyl" refers to a carbocyclic saturated ring system having preferably 3-8 ring carbon atoms, for example cyclopropyl, cyclobutyl, cyclopentyl or cyclohexyl, which optionally has further substitution, preferably by hydrogen, alkyl, alkoxy, cyano, nitro, alkylthio, haloalkylthio, halogen, alkenyl, alkynyl, haloalkyl, amino, alkylamino, bisalkylamino, alkoxy carbonyl, hydroxycarbonyl, arylalkoxycarbonyl, aminocarbonyl, alkylaminocarbonyl, cycloalkylaminocarbonyl. In the case of optionally substituted cycloalkyl, cyclic systems with substituents are included, also including substituents with a double bond on the cycloalkyl radical, for example an alkylidene group such as methylidene. In the case of optionally substituted cycloalkyl, polycyclic aliphatic systems are also included, for example bicyclo[1.1.0]butan-1-yl, bicyclo[1.1.0]butan-2-yl, bicyclo[2.1.0]pentan-1-yl, bicyclo[1.1.1]pentan-1-yl, bicyclo[2.1.0]pentan-2-yl, bicyclo[2.1.0]pentan-5-yl, bicyclo[2.1.1]hexyl, bicyclo[2.2.1]hept-2-yl, bicyclo[2.2.2]octan-2-yl, bicyclo[3.2.1]octan-2-yl, bicyclo[3.2.2]nonan-2-yl, adamantan-1-yl and adamantan-2-yl, but also systems such as 1,1'-bi(cyclopropyl)-1-yl, 1,1'-bi(cyclopropyl)-2-yl, for example. The term "(C₃-C₇)-cycloalkyl" is a brief notation for cycloalkyl having three to 7 carbon atoms, corresponding to the range specified for carbon atoms.

In the case of substituted cycloalkyl, spirocyclic aliphatic systems are also included, for example spiro[2.2]pent-1-yl, spiro[2.3]hex-1-yl, spiro[2.3]hex-4-yl, 3-spiro[2.3]hex-5-yl, spiro[3.3]hept-1-yl, spiro[3.3]hept-2-yl.

“Cycloalkenyl” denotes a carbocyclic, nonaromatic, partially unsaturated ring system having preferably 4-8 carbon atoms, e.g. 1-cyclobutenyl, 2-cyclobutenyl, 1-cyclopentenyl, 2-cyclopentenyl, 3-cyclopentenyl, or 1-cyclohexenyl, 2-cyclohexenyl, 3-cyclohexenyl, 1,3-cyclohexadienyl or 1,4-cyclohexadienyl, also including substituents with a double bond on the cycloalkenyl radical, for example an alkylidene group such as methylidene. In the case of optionally substituted cycloalkenyl, the elucidations for substituted cycloalkyl apply correspondingly.

The term "alkylidene", also, for example, in the form (C₁-C₁₀)-alkylidene, means the radical of a straight-chain or branched open-chain hydrocarbon radical which is bonded via a double bond. Possible bonding sites for alkylidene are naturally only positions on the base structure where two hydrogen atoms can be replaced by the double bond; radicals are, for example, =CH₂, =CH-CH₃, =C(CH₃)-CH₃, =C(CH₃)-C₂H₅ or =C(C₂H₅)-C₂H₅. Cycloalkylidene denotes a carbocyclic radical bonded via a double bond.

“Cycloalkylalkyloxy” denotes a cycloalkylalkyl radical bonded via an oxygen atom and “arylalkyloxy” denotes an arylalkyl radical bonded via an oxygen atom.

“Alkoxyalkyl” represents an alkoxy radical bonded via an alkyl group and “alkoxyalkoxy” denotes an alkoxyalkyl radical bonded via an oxygen atom, for example (but not limited thereto) methoxymethoxy, methoxyethoxy, ethoxyethoxy, methoxy-n-propyloxy.

“Alkylthioalkyl” represents an alkylthio radical bonded via an alkyl group and “alkylthioalkylthio” denotes an alkylthioalkyl radical bonded via an oxygen atom.

“Arylalkoxyalkyl” represents an aryloxy radical bonded via an alkyl group and “heteroaryloxyalkyl” denotes a heteroaryloxy radical bonded via an alkyl group.

“Haloalkoxyalkyl” represents a haloalkoxy radical and “haloalkylthioalkyl” denotes a haloalkylthio radical, bonded via an alkyl group.

“Arylalkyl” represents an aryl radical bonded via an alkyl group, “heteroarylalkyl” denotes a heteroaryl radical bonded via an alkyl group, and “heterocyclalkyl” denotes a heterocyclyl radical bonded via an alkyl group.

“Cycloalkylalkyl” represents a cycloalkyl radical bonded via an alkyl group, for example (but not limited thereto) cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, 1-cyclopropyleth-1-yl, 2-cyclopropyleth-1-yl, 1-cyclopropylprop-1-yl, 3-cyclopropylprop-1-yl.

5 “Arylalkenyl” represents an aryl radical bonded via an alkenyl group, “heteroarylalkenyl” denotes a heteroaryl radical bonded via an alkenyl group, and “heterocyclalkenyl” denotes a heterocycl radical bonded via an alkenyl group.

10 “Arylalkynyl” represents an aryl radical bonded via an alkynyl group, “heteroarylalkynyl” denotes a heteroaryl radical bonded via an alkynyl group, and “heterocyclalkynyl” denotes a heterocycl radical bonded via an alkynyl group.

15 According to the invention, “haloalkylthio” - on its own or as constituent part of a chemical group - represents straight-chain or branched S-haloalkyl, preferably having 1 to 8, or having 1 to 6 carbon atoms, such as (C₁-C₈)-, (C₁-C₆)- or (C₁-C₄)-haloalkylthio, for example (but not limited thereto) trifluoromethylthio, pentafluoroethylthio, difluoromethyl, 2,2-difluoroeth-1-ylthio, 2,2,2-difluoroeth-1-ylthio, 3,3,3-prop-1-ylthio.

20 “Halocycloalkyl” and “halocycloalkenyl” denote cycloalkyl and cycloalkenyl, respectively, which are partially or fully substituted by identical or different halogen atoms, such as F, Cl and Br, or by haloalkyl, such as trifluoromethyl or difluoromethyl, for example 1-fluorocycloprop-1-yl, 2-fluorocycloprop-1-yl, 2,2-difluorocycloprop-1-yl, 1-fluorocyclobut-1-yl, 1-trifluoromethylcycloprop-1-yl, 2-trifluoromethylcycloprop-1-yl, 1-chlorocycloprop-1-yl, 2-chlorocycloprop-1-yl, 2,2-dichlorocycloprop-1-yl, 3,3-difluorocyclobutyl.

25 According to the invention, “trialkylsilyl” - on its own or as constituent part of a chemical group - represents straight-chain or branched Si-alkyl, preferably having 1 to 8, or having 1 to 6 carbon atoms, such as tri[(C₁-C₈)-, (C₁-C₆)- or (C₁-C₄)-alkyl]silyl, for example (but not limited thereto) trimethylsilyl, triethylsilyl, tri(n-propyl)silyl, tri(isopropyl)silyl, tri(n-butyl)silyl, tri(1-methylprop-1-yl)silyl, tri(2-methylprop-1-yl)silyl, tri(1,1-dimethyleth-1-yl)silyl, tri(2,2-dimethyleth-1-yl)silyl.

“Trialkylsilylalkynyl” represents a trialkylsilyl radical bonded via an alkynyl group.

35 If the compounds can form, through a hydrogen shift, tautomers whose structure is not formally covered by the formula (I), these tautomers are nevertheless covered by the definition of the inventive compounds of the formula (I), unless a particular tautomer is under consideration. For example, many

carbonyl compounds may be present both in the keto form and in the enol form, both forms being encompassed by the definition of the compound of the formula (I).

Depending on the nature of the substituents and the manner in which they are attached, the compounds 5 of the general formula (I) may be present as stereoisomers. The formula (I) embraces all possible stereoisomers defined by the specific three-dimensional form thereof, such as enantiomers, diastereomers, Z and E isomers. If, for example, one or more alkenyl groups are present, diastereomers (Z and E isomers) may occur. If, for example, one or more asymmetric carbon atoms are present, enantiomers and diastereomers may occur. Stereoisomers can be obtained from the mixtures obtained in 10 the preparation by customary separation methods. The chromatographic separation can be effected either on the analytical scale to find the enantiomeric excess or the diastereomeric excess, or else on the preparative scale to produce test specimens for biological testing. It is likewise possible to selectively prepare stereoisomers by using stereoselective reactions with use of optically active starting materials and/or auxiliaries. The invention thus also relates to all stereoisomers which are embraced by the general 15 formula (I) but are not shown in their specific stereomeric form, and to mixtures thereof.

If the compounds are obtained as solids, the purification can also be carried out by recrystallization or digestion. If individual compounds (I) cannot be obtained in a satisfactory manner by the routes described below, they can be prepared by derivatization of other compounds (I).

20 Suitable isolation methods, purification methods and methods for separating stereoisomers of compounds of the formula (I) are methods generally known to the person skilled in the art from analogous cases, for example by physical processes such as crystallization, chromatographic methods, in particular column chromatography and HPLC (high pressure liquid chromatography), distillation, 25 optionally under reduced pressure, extraction and other methods, any mixtures that remain can generally be separated by chromatographic separation, for example on chiral solid phases. Suitable for preparative amounts or on an industrial scale are processes such as crystallization, for example of diastereomeric salts which can be obtained from the diastereomer mixtures using optically active acids and, if appropriate, provided that acidic groups are present, using optically active bases.

30

Synthesis of N-heterocycl- and N-heteroaryltetrahydropyrimidinones of the general formula (I).

The monosubstituted N-heterocycl- and N-heteroaryltetrahydropyrimidinones of the general formula 35 (I) according to the invention can be prepared using known processes. The synthesis routes used and examined proceed from commercially available or easily preparable heteroaromatic amines Q-NH₂ and from appropriately substituted aminoalkyl acetals, amino alcohols or amino acids. In the schemes which

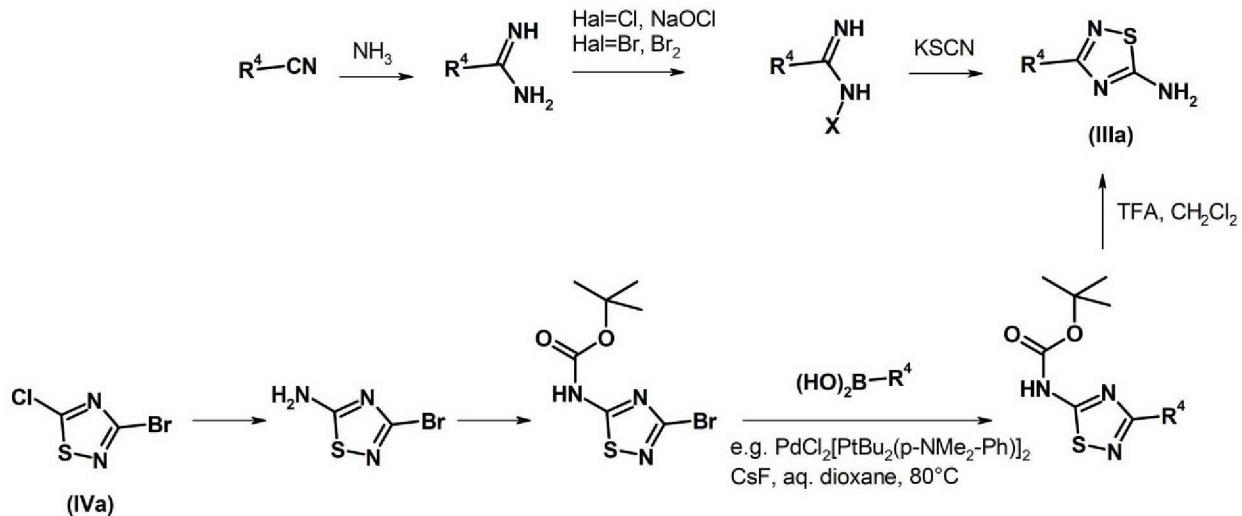
follow, the moieties Q, W, R¹, R², R³, R⁶ and R⁹ of the general formula (I) have the meanings defined above, unless illustrative but non-limiting definitions are given.

The first key intermediate prepared for the synthesis of the inventive compounds of the general formula (I) is an optionally further-substituted heteroaromatic amine Q-NH₂. By way of example, but without

5 limitation, this is illustrated by the synthesis of an optionally further-substituted 5-amino-1,2,4-isothiazole (III). To this end, a substituted nitrile is converted into the corresponding amidine (for example with ammonia) and, after halogenation with a suitable halogenating agent (for example sodium hypochlorite or bromine), converted into the desired 5-amino-1,2,4-isothiazole (IIIa) by reaction with potassium thiocyanate. Alternatively, bromochlorothiadiazole (IVa) can be prepared by amination,

10 protection of the amino group (for example with (Boc)₂O, where Boc represents tert-butyloxycarbonyl), subsequent transition metal-mediated coupling reaction (with a suitable transition metal catalyst such as PdCl₂[P^tBu₂(p-NMe-Ph)]₂) and finally acid-mediated deprotection (for example with trifluoroacetic acid = TFA) in a suitable polar-aprotic solvent (for example dichloromethane) (cf. WO2013/091539; Bioorg. Chem. 2014, 57, 90; Org. Lett. 2009, 11, 5666; WO2009/127546). In Scheme 1 below, R⁴ has the

15 meaning defined above.



Scheme 1

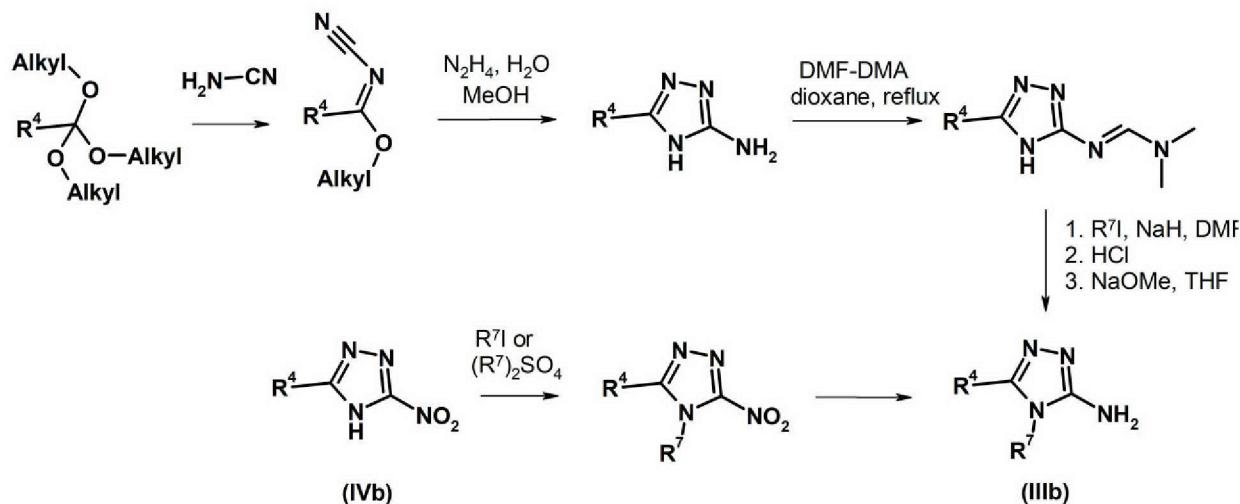
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The synthesis of a heteroaromatic amine Q-NH₂ is furthermore described using the example of the preparation of optionally further-substituted amino-1,2,4-triazoles (cf. Scheme 2). To this end, by way of example, but without limitation, a substituted orthoester is reacted with cyanamine, then cyclized with hydrazine and converted with N,N-dimethylformamide dimethyl acetal = DMF-DMA) into a protected amino-1,2,4-triazole which can then be converted at the ring nitrogen, using a suitable reagent (e.g. an alkyl iodide) in a suitable polar-aprotic solvent (e.g. N,N-dimethylformamide), into the corresponding N-substituted amino-1,2,4-triazole (IIIb). Alternatively, a suitable nitrotriazole (IVb) can be converted

25

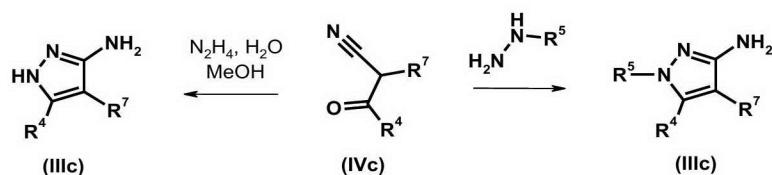
by substitution of the ring nitrogen and subsequent hydrogenation using a suitable transition metal catalyst (e.g. palladium or platinum on carbon) in a suitable solvent (e.g. acetic acid or dilute hydrochloric acid) into the desired N-substituted aminotriazole (IIIb) (cf. *Synthesis* 2003, 2001; *Tetrahedron Lett.* 2005, 46, 2469). In Scheme 2 below, R⁴ and R⁷ have the meanings defined above.

5



Scheme 2

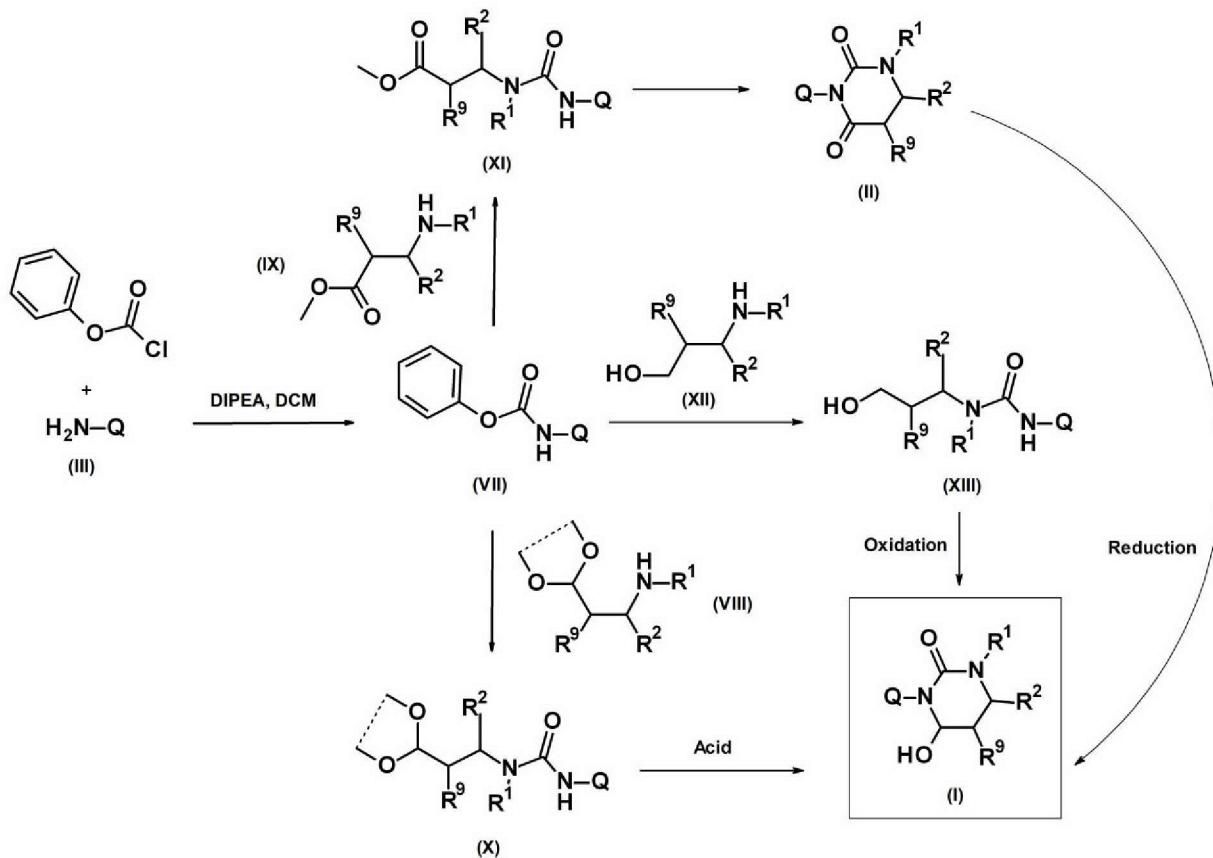
The synthesis of a heteroaromatic amine Q-NH₂ can furthermore be described using the example of the preparation of optionally further-substituted aminopyrazoles (cf. Scheme 3). By reaction of an optionally substituted hydrazine or a corresponding hydrazine salt with a suitable, optionally further-substituted beta-keto nitrile (IVc) in a suitable solvent (e.g. ethanol) using a suitable base (e.g. potassium carbonate), it is possible to obtain optionally further-substituted aminopyrazoles (IIIc) (cf. *J. Med. Chem.* 2008, 51, 4672; *J. Heterocyclic Chem.* 1982, 19, 1267; WO2015/018434). In Scheme 3 below, R⁴, R⁵ and R⁷ have the meanings defined above.



Scheme 3

Substituted N-heterocyclyl- and N-heteroaryltetrahydropyrimidinones of the general formula (I) can be prepared by reacting an optionally substituted heterocyclamine Q-NH₂ (III) with a suitable, optionally further-substituted phenyl chloroformate or diphenyl carbonate using a suitable base (e.g. diisopropylethylamine = DIPEA) in a suitable polar-aprotic solvent (e.g. dichloromethane or tetrahydrofuran), followed by conversion of the carbamate (VII) thus formed with a suitable amine (VIII or IX) to a substituted urea (X or XI) and subsequent cyclization (cf. WO2015/097043). The amine in

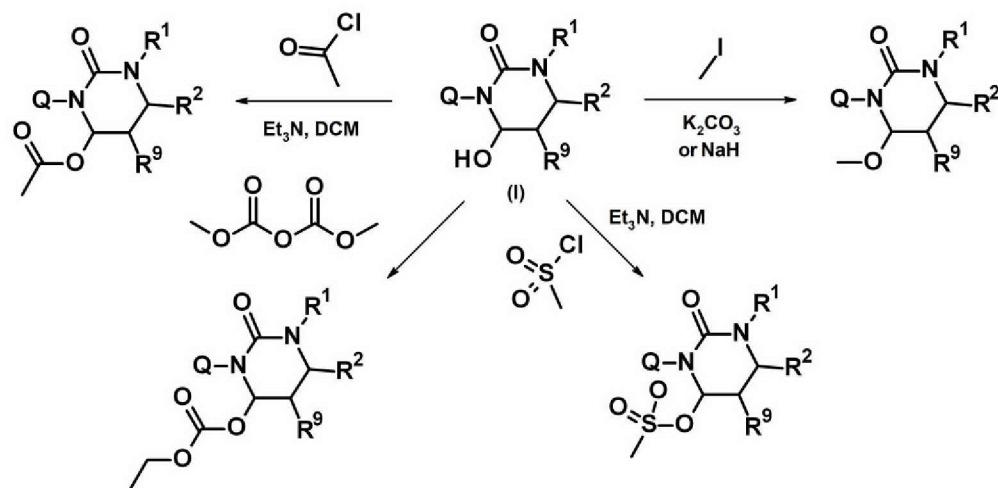
question may carry an acetal group or an ester group, thus allowing cyclization to the desired N-heterocyclyl- and N-heteroaryltetrahydropyrimidinone (cf. EP122761). When a corresponding amino acid is used, a reduction of the intermediate (II) is also required to obtain the desired substituted N-heterocyclyl- and N-heteroaryltetrahydropyrimidinone of the general formula (I). Alternatively, a 5 hydroxyalkylamine (XII) can be reacted with the carbamate (VII) to give the intermediate (XIII) and converted by oxidation of the alcohol group with a suitable oxidizing agent (e.g. 2-iodoxybenzoic acid, tetrapropylammonium perruthenate, sodium chlorite, 1,1,1-triacetoxy-1,1-dihydro-1,2-benziodoxol-3(1H)-one) to the desired substituted N-heterocyclyl- and N-heteroaryltetrahydropyrimidinone of the general formula (I) (cf. WO2012/082436). Further syntheses for preparation of N-substituted 10 tetrahydropyrimidinones are described in Heterocycles 1985, 23, 2907; J. Am. Chem. Soc. 2016, 138, 14848, US6096891. In Scheme 4 below, Q, R¹, R² and R⁹ have the meanings defined above, R³ of the general formula (I), by way of example, but without limitation, represents OH, and R⁶, R¹⁴ and R¹⁵ of the formula (I), by way of example, but without limitation, represents hydrogen.



15 Scheme 4.

If N-heterocyclyl- and N-heteroaryltetrahydropyrimidinones of the general formula (I) have a free 20 hydroxyl function, this can be acylated with suitable reagents (for example using a suitable carbonyl chloride and with the aid of a suitable base such as triethylamine in a suitable polar-aprotic solvent), sulfonated (for example using a suitable sulfonyl chloride and with the aid of a suitable base such as triethylamine in a suitable polar-aprotic solvent), alkylated (for example using a suitable alkyl halide and

with the aid of a suitable base such as potassium carbonate, cesium carbonate or sodium hydride in a suitable polar-aprotic solvent) or else converted to a carbonate or thiocarbonate (cf. WO2015/018434, EP122761, US4040812, US4006009, US3951976). In Scheme 5 below, Q, R¹, R² and R⁹ have the meanings defined above, R³ of the general formula (I), by way of example, but without limitation, 5 represents OH, OCH₃, OSO₂CH₃, OC(O)CH₃ and OC(O)OCH₃ and R⁶, R¹⁴ and R¹⁵ of the formula (I), by way of example, but without limitation, represents hydrogen.



Scheme 5.

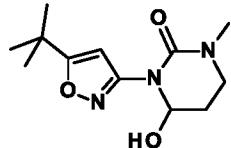
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Selected detailed synthesis examples for the compounds of the general formula (I) according to the invention are given below. The example numbers mentioned correspond to the numbering scheme in Tables I.1 to I.150 below. The ¹H NMR, ¹³C-NMR and ¹⁹F-NMR spectroscopy data reported for the chemical examples described in the sections which follow (400 MHz for ¹H NMR and 150 MHz for ¹³C-NMR and 375 MHz for ¹⁹F-NMR, solvent CDCl₃, CD₃OD or d₆-DMSO, internal standard: tetramethylsilane δ = 0.00 ppm) were obtained on a Bruker instrument, and the signals listed have the meanings given below: br = broad; s = singlet, d = doublet, t = triplet, dd = doublet of doublets,ddd = doublet of a doublet of doublets, m = multiplet, q = quartet, quint = quintet, sext = sextet, sept = septet, dq = doublet of quartets, dt = doublet of triplets. In the case of diastereomer mixtures, either the 15 significant signals for each of the two diastereomers are reported or the characteristic signal of the main diastereomer is reported. The abbreviations used for chemical groups have, for example, the following meanings: Me = CH₃, Et = CH₂CH₃, t-Hex = C(CH₃)₂CH(CH₃)₂, t-Bu = C(CH₃)₃, n-Bu = unbranched butyl, n-Pr = unbranched propyl, i-Pr = branched propyl, c-Pr = cyclopropyl, c-Hex = cyclohexyl.

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Synthesis examples:

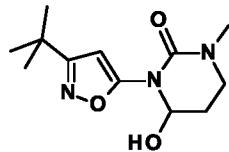
No. I.1-162: 3-(5-tert-Butyl-1,2-oxazol-3-yl)-4-hydroxy-1-methyltetrahydropyrimidin-2(1H)-one



5

3-Amino-5-tert-butylisoxazole (2.00 g, 14.27 mmol) was dissolved in tetrahydrofuran (70 ml), and pyridine (2.31 ml, 28.53 mmol) was added. The reaction mixture was cooled to 0°C, and a solution of phenyl chloroformate (1.88 ml, 14.98 mmol) in tetrahydrofuran (30 ml) was slowly added dropwise over 10 15 min. The reaction mixture was stirred at 0°C for 15 min, warmed to room temperature and stirred for a further 2 h. Water and dichloromethane were added to the reaction solution, which was extracted. The combined organic phases were dried over sodium sulfate and concentrated under reduced pressure. Phenyl *N*-(5-tert-butylisoxazol-3-yl)carbamate (3.50 g, 94% of theory) was obtained as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.05 (s, 1H, NH), 7.49-7.44 (m, 2H), 7.34-7.27 (m, 3H), 6.56 (s, 15 1H), 1.32 (s, 9H). Phenyl *N*-(5-tert-butylisoxazol-3-yl)carbamate (3.50 g, 13.45 mmol) was then dissolved, without further purification, in dichloromethane (50 ml), and 2-(1,3-dioxolan-2-yl)-N-methylethanamine (2.12 g, 16.14 mmol) and triethylamine (3.75 ml, 26.89 mmol) were added. The reaction mixture was stirred at room temperature for 7 h. On completion of conversion, dichloromethane and water were added to the reaction mixture, which was extracted thoroughly. The organic phase was 20 washed with water, dried over sodium sulfate, filtered and concentrated. The crude product was subsequently purified by column chromatography (ethyl acetate/heptane gradient), and 1-[(1,3-dioxolan-2-yl)eth-2-yl]-1-methyl-3-[5-tert-butylisoxazol-3-yl]urea (3.40 g, 83% of theory) was obtained as a colorless oil. ¹H-NMR (CDCl₃ δ, ppm) 8.09 (br. S, 1H, NH), 6.58 (s, 1H), 4.94 (t, 1H), 4.07-4.04 (m, 2H), 3.95-3.91 (m, 2H), 3.50-3.46 (m, 2H), 3.00 (s, 3H), 2.02-1.97 (m, 2H), 1.32 (s, 9H). 1-[(1,3-25 Dioxolan-2-yl)eth-2-yl]-1-methyl-3-[5-tert-butylisoxazol-3-yl]urea (2.00 g, 6.73 mmol) was dissolved in water (80 ml) and conc. hydrochloric acid (11.45 ml) and stirred at room temperature for 6 h. The solid formed was filtered off with suction, dried thoroughly and finally purified by column chromatography (ethyl acetate/heptane gradient), and 3-(5-tert-butyl-1,2-oxazol-3-yl)-4-hydroxy-1-methyltetrahydropyrimidin-2(1H)-one (1.25 g, 72% of theory) was obtained as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.63 (s, 1H), 5.71 (m, 1H), 4.32 (m, 1H), 3.83-3.75 (m, 1H), 3.18-3.13 (m, 1H), 3.04 (s, 3H), 2.17-2.10 (m, 2H), 1.32 (s, 9H).

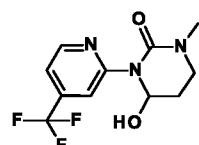
No. I.1-290: 3-(3-tert-Butyl-1,2-oxazol-5-yl)-4-hydroxy-1-methyltetrahydropyrimidin-2(1H)-one



5 3-tert-Butyl-1,2-oxazol-5-amine (2.00 g, 14.27 mmol) was dissolved in tetrahydrofuran (70 ml), and pyridine (2.31 ml, 28.53 mmol) was added. The reaction mixture was cooled to 0°C, and a solution of phenyl chloroformate (1.88 ml, 14.98 mmol) in tetrahydrofuran (30 ml) was slowly added dropwise over 15 min. The reaction mixture was stirred at 0°C for 15 min, warmed to room temperature and stirred for a further 2 h. Water and dichloromethane were added to the reaction solution, which was extracted. The
10 combined organic phases were dried over sodium sulfate and concentrated under reduced pressure. Phenyl (3-tert-butyl-1,2-oxazol-5-yl)carbamate (3.59 g, 95% of theory) was obtained as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.07 (s, 1H, NH), 7.51-7.43 (m, 2H), 7.34-7.25 (m, 3H), 6.09 (s, 1H), 1.31 (s, 9H). Phenyl (3-tert-butyl-1,2-oxazol-5-yl)carbamate (3.50 g, 13.45 mmol) was then dissolved, without further purification, in dichloromethane (50 ml), and 2-(1,3-dioxolan-2-yl)-N-
15 methylethanamine (1.76 g, 13.45 mmol) and triethylamine (3.75 ml, 26.89 mmol) were added. The reaction mixture was stirred at room temperature for 12 h. On completion of conversion, dichloromethane and water were added to the reaction mixture, which was extracted thoroughly. The organic phase was washed with water, dried over sodium sulfate, filtered and concentrated. The crude product was subsequently purified by column chromatography (ethyl acetate/heptane gradient), and 3-
20 (3-tert-butyl-1,2-oxazol-5-yl)-1-[2-(1,3-dioxolan-2-yl)ethyl]-1-methylurea (2.30 g, 56% of theory) was obtained as a colorless oil. ¹H-NMR (CDCl₃ δ, ppm) 8.62 (br. s, 1H, NH), 6.09 (s, 1H), 4.94 (t, 1H), 4.13-4.08 (m, 2H), 3.99-3.93 (m, 2H), 3.49-3.46 (m, 2H), 3.00 (s, 3H), 2.08-2.02 (m, 2H), 1.31 (s, 9H). 3-(3-tert-Butyl-1,2-oxazol-5-yl)-1-[2-(1,3-dioxolan-2-yl)ethyl]-1-methylurea (2.30 g, 7.74 mmol) was dissolved in water (50 ml) and conc. hydrochloric acid (6.58 ml) and stirred at room temperature for 2 h.
25 The solid formed was filtered off with suction, dried thoroughly and finally purified by column chromatography (ethyl acetate/heptane gradient), and 3-(5-tert-butyl-1,2-oxazol-3-yl)-4-hydroxy-1-methyltetrahydropyrimidin-2(1H)-one (0.70 g, 35% of theory) was obtained as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.24 (s, 1H), 5.90 (m, 1H), 4.49 (m, 1H), 3.88-3.80 (m, 1H), 3.23-3.17 (m, 1H), 3.06 (s, 3H), 2.15-2.10 (m, 2H), 1.29 (s, 9H).

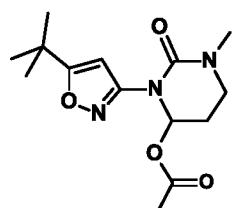
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No. I.1-449: 4-Hydroxy-1-methyl-3-[4-(trifluoromethyl)pyridin-2-yl]tetrahydropyrimidin-2(1H)-one



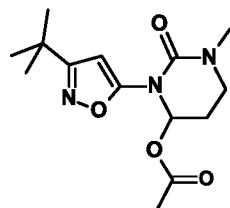
4-(Trifluoromethyl)pyridin-2-amine (9.70 g, 59.84 mmol) was dissolved in tetrahydrofuran (120 ml), and pyridine (9.68 ml, 119.67 mmol) was added. The reaction mixture was cooled to 0°C, and a solution of phenyl chloroformate (7.88 ml, 62.83 mmol) in tetrahydrofuran (30 ml) was slowly added dropwise over 15 min. The reaction mixture was stirred at 0°C for 15 min, warmed to room temperature and stirred at room temperature for one hour. Water and dichloromethane were added to the reaction solution, which was extracted. The combined organic phases were dried over sodium sulfate and concentrated under reduced pressure. Phenyl *N*-[4-(trifluoromethyl)pyridin-2-yl]carbamate (14.00 g, 81% of theory) was obtained as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 9.54 (s, 1H, NH), 8.56 (d, 1H), 8.37 (s, 1H), 7.48-7.42 (m, 2H), 7.33-7.21 (m, 4H). Phenyl *N*-[4-(trifluoromethyl)pyridin-2-yl]carbamate (2.10 g, 7.44 mmol) was then dissolved, without further purification, in dichloromethane (100 ml), and 3-(methylamino)-propan-1-ol (0.99 g, 11.16 mmol) and triethylamine (2.07 ml, 14.88 mmol) were added. The reaction mixture was stirred at room temperature for 12 h. On completion of conversion, dichloromethane and water were added to the reaction mixture, which was extracted thoroughly. The organic phase was washed with water, dried over sodium sulfate, filtered and concentrated. The crude product was subsequently purified by column chromatography (ethyl acetate/heptane gradient), and 1-(3-hydroxypropyl)-1-methyl-3-[4-(trifluoromethyl)pyridin-2-yl]urea (2.00 g, 67% of theory) was obtained as a colorless oil. ¹H-NMR (CDCl₃ δ, ppm) 8.34 (s, 1H), 8.33 (d, 1H), 8.18 (br. s, 1H, NH), 7.13 (s, 1H), 3.74-3.69 (m, 2H), 3.59-3.54 (m, 2H), 3.03 (s, 3H), 1.84-1.78 (m, 2H). 1-(3-Hydroxypropyl)-1-methyl-3-[4-(trifluoromethyl)pyridin-2-yl]urea (1.50 g, 5.41 mmol) was dissolved in dimethyl sulfoxide (50 ml), 1-hydroxy-1,2-benziodoxol-3-one 1-oxide (6.73 g, 10.82 mmol) was added, and the mixture was stirred at room temperature for 8 h. Water and dichloromethane were added to the reaction mixture, which was extracted thoroughly. The combined organic phases were dried over sodium sulfate, filtered and concentrated under reduced pressure. Final purification by column chromatography of the resulting crude product (ethyl acetate/heptane gradient) gave 4-hydroxy-1-methyl-3-[4-(trifluoromethyl)pyridin-2-yl]tetrahydropyrimidin-2(1H)-one (1.00 g, 64% of theory) as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.44 (d, 1H), 8.14 (s, 1H), 7.23 (d, 1H), 5.68 (m, 1H), 5.15 (br. m, 1H), 3.89-3.83 (m, 1H), 3.28-3.22 (m, 1H), 3.07 (s, 3H), 2.23-2.15 (m, 2H).

30 No. I.2-162: 3-(5-tert-Butyl-1,2-oxazol-3-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl acetate



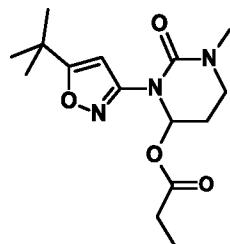
3-(5-tert-Butyl-1,2-oxazol-3-yl)-4-hydroxy-1-methyltetrahydropyrimidin-2(1H)-one (520 mg, 2.05 mmol, 1.0 equiv) was dissolved in pyridine (18.18 ml), 4-dimethylaminopyridine (13 mg, 0.10 mmol) and acetic anhydride (0.23 ml, 2.46 mmol) were added, and the mixture was stirred at room temperature for 6 h. Thereafter, the reaction mixture was concentrated under reduced pressure and, by purification by 5 column chromatography (ethyl acetate/heptane gradient) of the resulting residue, 3-(5-tert-butyl-1,2-oxazol-3-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl acetate was isolated in the form of a colorless oil (420 mg, 68% of theory). ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.83 (m, 1H), 6.60 (s, 1H), 3.78-3.62 (m, 1H), 3.27-3.21 (m, 1H), 3.06 (s, 3H), 2.26-2.21 (m, 2H), 2.09 (s, 3H), 1.32 (s, 9H).

10 No. I.2-290: 3-(3-tert-Butyl-1,2-oxazol-5-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl acetate



3-(3-tert-Butyl-1,2-oxazol-5-yl)-4-hydroxy-1-methyltetrahydropyrimidin-2(1H)-one (200 mg, 0.79 mmol, 1.0 equiv) was dissolved in pyridine (50.00 ml), 4-dimethylaminopyridine (5 mg, 0.04 mmol) and acetic anhydride (97 mg, 0.95 mmol) were added, and the mixture was stirred at room temperature for 6 h. Thereafter, the reaction mixture was concentrated under reduced pressure and, by purification by 15 column chromatography (ethyl acetate/heptane gradient) of the resulting residue, 3-(3-tert-butyl-1,2-oxazol-5-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl acetate was isolated in the form of a colorless oil (200 mg, 86% of theory). ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.79 (m, 1H), 6.25 (s, 1H), 3.69-3.61 (m, 1H), 3.29-3.23 (m, 1H), 3.08 (s, 3H), 2.30-2.24 (m, 2H), 2.09 (s, 3H), 1.31 (s, 9H).

No. I.3-162: 3-(5-tert-Butyl-1,2-oxazol-3-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl propionate



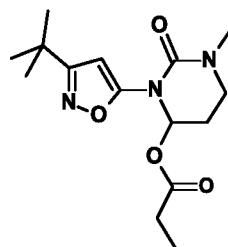
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3-(5-tert-Butyl-1,2-oxazol-3-yl)-4-hydroxy-1-methyltetrahydropyrimidin-2(1H)-one (200 mg, 0.79 mmol, 1.0 equiv) was dissolved in dichloromethane (20 ml), triethylamine (0.12 ml, 0.87 mmol) and propionyl chloride (80 mg, 0.87 mmol) were added, and the mixture was stirred at room temperature for

16 h and at a temperature of 40°C for 1 h. After cooling to room temperature, water and dichloromethane were added to the reaction mixture and the mixture was extracted thoroughly. The combined organic phases were washed with water, dried over sodium sulfate, filtered and concentrated under reduced pressure. By purification by column chromatography (ethyl acetate/heptane gradient) of 5 the resulting residue, 3-(5-tert-butyl-1,2-oxazol-3-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl propionate was isolated in the form of a colorless oil (130 mg, 52% of theory). ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.83 (m, 1H), 6.59 (s, 1H), 3.69-3.60 (m, 1H), 3.26-3.19 (m, 1H), 3.06 (s, 3H), 2.38 (m, 1H), 2.36 (m, 1H), 2.27-2.21 (m, 2H), 1.31 (s, 9H), 1.15 (t, 3H). ¹³C-NMR (150 MHz, CDCl₃ δ, ppm) 180.7; 173.1; 160.3; 151.8; 95.3; 78.8; 42.9; 36.0; 28.6; 27.6; 26.1; 8.9.

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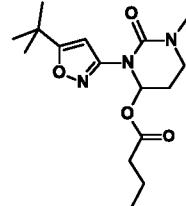
No. I.3-290: 3-(3-tert-Butyl-1,2-oxazol-5-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl propionate



15 3-(3-tert-Butyl-1,2-oxazol-5-yl)-4-hydroxy-1-methyltetrahydropyrimidin-2(1H)-one (200 mg, 0.79 mmol, 1.0 equiv) was dissolved in dichloromethane (20 ml), triethylamine (0.12 ml, 0.87 mmol) and propionyl chloride (80 mg, 0.87 mmol) were added, and the mixture was stirred at room temperature for 16 h and at a temperature of 40°C for 1 h. After cooling to room temperature, water and dichloromethane were added to the reaction mixture and the mixture was extracted thoroughly. The 20 combined organic phases were washed with water, dried over sodium sulfate, filtered and concentrated under reduced pressure. By purification by column chromatography (ethyl acetate/heptane gradient) of the resulting residue, 3-(3-tert-butyl-1,2-oxazol-5-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl propionate was isolated in the form of a colorless oil (190 mg, 78% of theory). ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.78 (m, 1H), 6.24 (s, 1H), 3.68-3.60 (m, 1H), 3.27-3.22 (m, 1H), 3.08 (s, 3H), 2.43-2.31 (m, 2H), 2.28-2.22 (m, 2H), 1.31 (s, 9H), 1.13 (t, 3H).

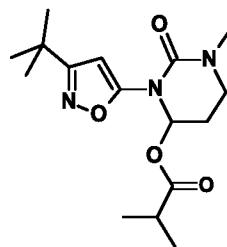
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No. I.4-162: 3-(5-tert-Butyl-1,2-oxazol-3-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl butyrate



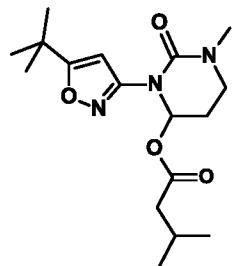
3-(5-tert-Butyl-1,2-oxazol-3-yl)-4-hydroxy-1-methyltetrahydropyrimidin-2(1H)-one (200 mg, 0.79 mmol, 1.0 equiv) was dissolved in dichloromethane (20 ml), triethylamine (0.12 ml, 0.87 mmol) and butyryl chloride (0.09 ml, 0.87 mmol) were added, and the mixture was stirred at room temperature for 5 16 h and at a temperature of 40°C for 1 h. After cooling to room temperature, water and dichloromethane were added to the reaction mixture and the mixture was extracted thoroughly. The combined organic phases were washed with water, dried over sodium sulfate, filtered and concentrated under reduced pressure. By purification by column chromatography (ethyl acetate/heptane gradient) of the resulting residue, 3-(5-tert-butyl-1,2-oxazol-3-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl butyrate 10 was isolated in the form of a colorless oil (220 mg, 86% of theory). ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.85 (m, 1H), 6.58 (s, 1H), 3.67-3.59 (m, 1H), 3.30-3.19 (m, 1H), 3.06 (s, 3H), 2.38-2-30 (m, 2H), 2.28-2.21 (m, 2H), 1.69-1.63 (m, 2H), 1.31 (s, 9H), 0.93 (t, 3H).

No. I.5-290: 3-(3-tert-Butyl-1,2-oxazol-5-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl 2-methylpropanoate



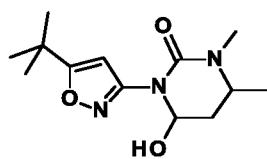
3-(3-tert-Butyl-1,2-oxazol-5-yl)-4-hydroxy-1-methyltetrahydropyrimidin-2(1H)-one (200 mg, 0.79 mmol, 1.0 equiv) was dissolved in dichloromethane (50 ml), triethylamine (0.12 ml, 0.87 mmol) and butyryl chloride (93 mg, 0.87 mmol) were added, and the mixture was stirred at room temperature for 20 16 h and at a temperature of 40°C for 1 h. After cooling to room temperature, water and dichloromethane were added to the reaction mixture and the mixture was extracted thoroughly. The combined organic phases were washed with water, dried over sodium sulfate, filtered and concentrated under reduced pressure. By purification by column chromatography (ethyl acetate/heptane gradient) of the resulting residue, 3-(3-tert-butyl-1,2-oxazol-5-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl 2-methylpropanoate was isolated in the form of a colorless oil (200 mg, 86% of theory). ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.74 (m, 1H), 6.23 (s, 1H), 3.67-3.58 (m, 1H), 3.28-3.22 (m, 1H), 3.08 (s, 3H), 2.61-2.53 (sept, 1H), 2.28-2.23 (m, 2H), 1.30 (s, 9H), 1.17 (d, 3H), 1.15 (d, 3H).

No. I.7-162: 3-(5-tert-Butyl-1,2-oxazol-3-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl 3-methylbutanoate



5 3-(5-tert-Butyl-1,2-oxazol-3-yl)-4-hydroxy-1-methyltetrahydropyrimidin-2(1H)-one (200 mg, 0.79 mmol, 1.0 equiv) was dissolved in dichloromethane (20 ml), triethylamine (0.12 ml, 0.87 mmol) and 3-methylbutanoyl chloride (0.11 ml, 0.87 mmol) were added, and the mixture was stirred at room temperature for 16 h and at a temperature of 40°C for 1 h. After cooling to room temperature, water and dichloromethane were added to the reaction mixture and the mixture was extracted thoroughly. The 10 combined organic phases were washed with water, dried over sodium sulfate, filtered and concentrated under reduced pressure. By purification by column chromatography (ethyl acetate/heptane gradient) of the resulting residue, 3-(5-tert-butyl-1,2-oxazol-3-yl)-1-methyl-2-oxohexahydropyrimidin-4-yl 3-methylbutanoate was isolated in the form of a colorless oil (260 mg, 93% of theory). ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.88 (m, 1H), 6.57 (s, 1H), 3.68-3.59 (m, 1H), 3.30-3.21 (m, 1H), 3.06 (s, 3H), 15 2.32-2.22 (m, 2H), 2.21-2.07 (m, 2H), 1.60 (m, 1H), 1.31 (s, 9H), 0.94 (t, 3H).

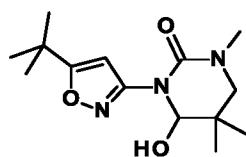
No. I.41-162: 1-(5-tert-Butyl-1,2-oxazol-3-yl)-6-hydroxy-3,4-dimethyltetrahydropyrimidin-2(1H)-one



20 3-Amino-5-tert-butylisoxazole (2.00 g, 14.27 mmol) was dissolved in tetrahydrofuran (70 ml), and pyridine (2.31 ml, 28.53 mmol) was added. The reaction mixture was cooled to 0°C, and a solution of phenyl chloroformate (1.88 ml, 14.98 mmol) in tetrahydrofuran (30 ml) was slowly added dropwise over 15 min. The reaction mixture was stirred at 0°C for 15 min, warmed to room temperature and stirred for 25 a further 2 h. Water and dichloromethane were added to the reaction solution, which was extracted. The combined organic phases were dried over sodium sulfate and concentrated under reduced pressure. Phenyl *N*-(5-tert-butylisoxazol-3-yl)carbamate (2.50 g, 67% of theory) was obtained as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.05 (s, 1H, NH), 7.49-7.44 (m, 2H), 7.34-7.27 (m, 3H), 6.56 (s, 1H), 1.32 (s, 9H). Phenyl *N*-(5-tert-butylisoxazol-3-yl)carbamate (2.50 g, 9.61 mmol) was then

dissolved, without further purification, in dichloromethane (100 ml), and 3-(methylamino)-1-butanol (1.00 g, 9.61 mmol) and triethylamine (2.68 ml, 19.21 mmol) were added. The reaction mixture was stirred at room temperature for 7 h. On completion of conversion, dichloromethane and water were added to the reaction mixture, which was extracted thoroughly. The organic phase was washed with 5 water, dried over sodium sulfate, filtered and concentrated. The crude product was subsequently purified by column chromatography (ethyl acetate/heptane gradient), and 3-(5-tert-butyl-1,2-oxazol-3-yl)-1-(4-hydroxybutan-2-yl)-1-methylurea (2.20 g, 83% of theory) was obtained as a colorless, highly viscous oil. ¹H-NMR (CDCl₃ δ, ppm) 8.25 (br. s, 1H, NH), 6.58 (s, 1H), 4.55 (m, 1H), 3.71-3.64 (m, 1H), 3.53-3.46 (m, 1H), 2.84 (s, 3H), 1.83-1.72 (m, 1H), 1.64-1.55 (m, 1H), 1.32 (s, 9H), 1.25 (d, 3H). 3-(5-tert-10 Butyl-1,2-oxazol-3-yl)-1-(4-hydroxybutan-2-yl)-1-methylurea (2.00 g, 7.43 mmol) was dissolved in dimethyl sulfoxide (100 ml), 1-hydroxy-1,2-benziodoxol-3-one 1-oxide (3.12 g, 11.14 mmol) was added, and the mixture was stirred at room temperature for 8 h. Water and dichloromethane were added to the reaction mixture, which was extracted thoroughly. The combined organic phases were dried over sodium sulfate, filtered and concentrated under reduced pressure. Final purification of the resulting 15 crude product by column chromatography (ethyl acetate/heptane gradient) gave 1-(5-tert-butyl-1,2-oxazol-3-yl)-6-hydroxy-3,4-dimethyltetrahydropyrimidin-2(1H)-one (1.05 g, 53% of theory) in the form of a separable stereoisomer mixture (stereoisomer 1: 1.05 g, 53% of theory; stereoisomer 2: 700 mg, 35% of theory). Stereoisomer 1: ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.72 (s, 1H), 5.73 (m, 1H), 4.56 (m, 1H), 3.58-3.52 (m, 1H), 3.03 (s, 3H), 2.53-2.27 (m, 2H), 2.14-2.09 (m, 1H), 1.32 (s, 9H). 20 Stereoisomer 2: ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.60 (s, 1H), 5.68 (m, 1H), 4.38 (m, 1H), 3.83-3.77 (m, 1H), 3.02 (s, 3H), 2.23-2.18 (m, 2H), 2.02-1.93 (m, 1H), 1.32 (s, 9H).

No. I.61-162: 1-(5-tert-Butyl-1,2-oxazol-3-yl)-6-hydroxy-3,5,5-trimethyltetrahydropyrimidin-2(1H)-one

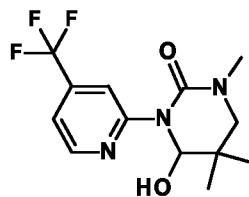


25

3-Amino-5-tert-butylisoxazole (2.00 g, 14.27 mmol) was dissolved in tetrahydrofuran (70 ml), and pyridine (2.31 ml, 28.53 mmol) was added. The reaction mixture was cooled to 0°C, and a solution of phenyl chloroformate (1.88 ml, 14.98 mmol) in tetrahydrofuran (30 ml) was slowly added dropwise over 15 min. The reaction mixture was stirred at 0°C for 15 min, warmed to room temperature and stirred for 30 a further 2 h. Water and dichloromethane were added to the reaction solution, which was extracted. The combined organic phases were dried over sodium sulfate and concentrated under reduced pressure. Phenyl *N*-(5-tert-butylisoxazol-3-yl)carbamate (2.50 g, 67% of theory) was obtained as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.05 (s, 1H, NH), 7.49-7.44 (m, 2H), 7.34-7.27 (m, 3H), 6.56 (s, 1H), 1.32 (s, 9H). Phenyl *N*-(5-tert-butylisoxazol-3-yl)carbamate (2.30 g, 8.84 mmol) was then

dissolved, without further purification, in dichloromethane (100 ml), and 2,2-dimethyl-3-(methylamino)propan-1-ol (1.04 g, 8.84 mmol) and triethylamine (2.46 ml, 17.67 mmol) were added. The reaction mixture was stirred at room temperature for 7 h. On completion of conversion, dichloromethane and water were added to the reaction mixture, which was extracted thoroughly. The 5 organic phase was washed with water, dried over sodium sulfate, filtered and concentrated. The crude product was subsequently purified by column chromatography (ethyl acetate/heptane gradient), and 3-(5-tert-butyl-1,2-oxazol-3-yl)-1-(3-hydroxy-2,2-dimethylpropyl)-1-methylurea (2.20 g, 86% of theory) was obtained as a colorless, highly viscous oil. ¹H-NMR (CDCl₃ δ, ppm) 8.05 (br. s, 1H, NH), 6.61 (s, 1H), 3.50-3.28 (br. s, 1H, OH), 3.25-3.19 (m, 2H), 3.12-3.08 (m, 2H), 3.05 (s, 3H), 1.32 (s, 9H), 0.95 (s, 10 6H). 3-(5-tert-Butyl-1,2-oxazol-3-yl)-1-(3-hydroxy-2,2-dimethylpropyl)-1-methylurea (2.00 g, 7.06 mmol) was dissolved in dimethyl sulfoxide (100 ml), 1-hydroxy-1,2-benziodoxol-3-one 1-oxide (2.96 g, 10.59 mmol) was added, and the mixture was stirred at room temperature for 16 h. Water and dichloromethane were added to the reaction mixture, which was extracted thoroughly. The combined 15 organic phases were dried over sodium sulfate, filtered and concentrated under reduced pressure. Final purification by column chromatography of the resulting crude product (ethyl acetate/heptane gradient) gave 1-(5-tert-butyl-1,2-oxazol-3-yl)-6-hydroxy-3,5,5-trimethyltetrahydropyrimidin-2(1H)-one (1.70 g, 77% of theory) as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.63 (s, 1H), 5.18 (m, 1H), 4.12 (br. m, 1H), 3.63 (d, 1H), 3.02 (s, 3H), 2.72 (d, 1H), 1.33 (s, 9H), 1.13 (s, 3H), 1.12 (s, 3H).

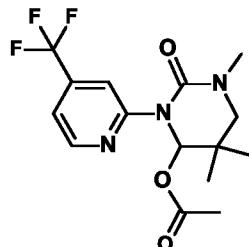
20 No. I.61-449: 1-[4-(trifluoromethyl)pyridin-2-yl]-6-hydroxy-3,5,5-trimethyltetrahydropyrimidin-2(1H)-one



25 4-(Trifluoromethyl)pyridin-2-amine (9.70 g, 59.84 mmol) was dissolved in tetrahydrofuran (120 ml), and pyridine (9.68 ml, 119.67 mmol) was added. The reaction mixture was cooled to 0°C, and a solution of phenyl chloroformate (7.88 ml, 62.83 mmol) in tetrahydrofuran (30 ml) was slowly added dropwise over 15 min. The reaction mixture was stirred at 0°C for 15 min, warmed to room temperature and stirred at room temperature for one hour. Water and dichloromethane were added to the reaction 30 solution, which was extracted. The combined organic phases were dried over sodium sulfate and concentrated under reduced pressure. Phenyl N-[4-(trifluoromethyl)pyridin-2-yl]carbamate (14.00 g, 81% of theory) was obtained as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 9.59 (s, 1H, NH), 8.56 (d, 1H), 8.38 (s, 1H), 7.48-7.42 (m, 2H), 7.33-7.21 (m, 4H). Phenyl N-[4-(trifluoromethyl)pyridin-2-yl]carbamate (2.00 g, 7.09 mmol) was then dissolved, without further purification, in dichloromethane

(40 ml), and 2,2-dimethyl-3-(methylamino)propan-1-ol (0.91 g, 7.79 mmol) and triethylamine (2.47 ml, 17.72 mmol) were added. The reaction mixture was stirred at room temperature for 14 h. On completion of conversion, dichloromethane and water were added to the reaction mixture, which was extracted thoroughly. The organic phase was washed with water, dried over sodium sulfate, filtered and concentrated. The crude product was subsequently purified by column chromatography (ethyl acetate/heptane gradient), and 3-[4-(Trifluoromethyl)pyridin-2-yl]-1-(3-hydroxy-2,2-dimethylpropyl)-1-methylurea (2.10 g, 95% of theory) was obtained as a colorless solid. ¹H-NMR (CDCl₃ δ, ppm) 8.38 (m, 1H), 8.34 (m, 1H), 7.13 (m, 1H), 4.40-3.50 (br. s, 1H), 3.38-3.24 (m, 4H), 3.12 (s, 3H), 0.96 (s, 6H). 3-[4-(Trifluoromethyl)pyridin-2-yl]-1-(3-hydroxy-2,2-dimethylpropyl)-1-methylurea (300 mg, 0.98 mmol) was dissolved in dimethyl sulfoxide (10 ml), 1-hydroxy-1,2-benziodoxol-3-one 1-oxide (917 mg, 1.47 mmol, 1.5 equiv., 45% pure) was added, and the mixture was stirred at room temperature for 2 h. Water and dichloromethane were added to the reaction mixture, which was extracted thoroughly. The combined organic phases were dried over sodium sulfate, filtered and concentrated under reduced pressure. Final purification by column chromatography of the resulting crude product (ethyl acetate/heptane gradient) gave 1-[4-(trifluoromethyl)pyridin-2-yl]-6-hydroxy-3,5,5-trimethyltetrahydropyrimidin-2(1H)-one (200 mg, 60% of theory) as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.43 (m, 1H), 8.11 (m, 1H), 7.23 (m, 1H), 5.10 (m, 1H), 4.90 (br. s, 1H), 3.71 (d, 1H), 3.05 (s, 3H), 2.81 (d, 1H), 1.16 (s, 3H), 1.14 (s, 3H).

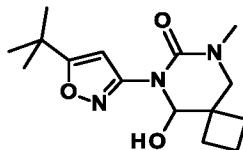
No. I.62-449: 1-[4-(trifluoromethyl)pyridin-2-yl]-6-acetyloxy-3,5,5-trimethyltetrahydropyrimidin-2(1H)-one



3-[4-(Trifluoromethyl)pyridin-2-yl]-1-(3-hydroxy-2,2-dimethylpropyl)-1-methylurea (150 mg, 0.49 mmol) was dissolved in dichloromethane (10 ml), 1,1,1-tris(acetoxy)-1,1-dihydro-1,2-benziodoxol-3-(1H)-one (312 mg, 0.74 mmol) was added, and the mixture was stirred at room temperature for 2 h. Water and dichloromethane were added to the reaction mixture, which was extracted thoroughly. The combined organic phases were dried over sodium sulfate, filtered and concentrated under reduced pressure. Final purification by column chromatography of the resulting crude product (ethyl acetate/heptane gradient) gave 1-[4-(trifluoromethyl)pyridin-2-yl]-6-acetyloxy-3,5,5-trimethyltetrahydropyrimidin-2(1H)-one (63 mg, 36% of theory) as a colorless solid. ¹H-NMR (400

MHz, CDCl_3 δ , ppm) 8.49 (m, 1H), 8.05 (m, 1H), 7.21 (m, 1H), 6.78 (m, 1H), 3.56 (d, 1H), 3.08 (s, 3H), 2.87 (d, 1H), 2.05 (s, 3H), 1.25 (s, 3H), 1.06 (s, 3H). ^{13}C -NMR (150 MHz, CDCl_3 δ , ppm) 169.7, 154.5; 152.5; 148.4; 139.1; 125.5-120.1; 116.2; 115.4; 84.1; 55.7; 36.2; 32.8; 23.3; 22.8; 21.0.

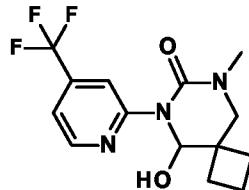
5 No. I.81-162: 6-(5-tert-Butyl-1,2-oxazol-3-yl)-5-hydroxy-8-methyl-6,8-diazaspiro[3.5]nonan-7-one



3-Amino-5-tert-butylisoxazole (2.00 g, 14.27 mmol) was dissolved in tetrahydrofuran (70 ml), and 10 pyridine (2.31 ml, 28.53 mmol) was added. The reaction mixture was cooled to 0°C, and a solution of phenyl chloroformate (1.88 ml, 14.98 mmol) in tetrahydrofuran (30 ml) was slowly added dropwise over 15 min. The reaction mixture was stirred at 0°C for 15 min, warmed to room temperature and stirred for a further 2 h. Water and dichloromethane were added to the reaction solution, which was extracted. The combined organic phases were dried over sodium sulfate and concentrated under reduced pressure. 15 Phenyl *N*-(5-tert-butylisoxazol-3-yl)carbamate (2.50 g, 67% of theory) was obtained as a colorless solid. ^1H -NMR (400 MHz, CDCl_3 δ , ppm) 8.05 (s, 1H, NH), 7.49-7.44 (m, 2H), 7.34-7.27 (m, 3H), 6.56 (s, 1H), 1.32 (s, 9H). Phenyl *N*-(5-tert-butylisoxazol-3-yl)carbamate (2.20 g, 8.45 mmol) was then dissolved, without further purification, in dichloromethane (100 ml), and {1-[methylamino)methyl]cyclobutyl}methanol (1.04 g, 8.84 mmol) and triethylamine (2.36 ml, 16.90 mmol) were added. The reaction mixture was stirred at room temperature for 14 h. On completion of 20 conversion, dichloromethane and water were added to the reaction mixture, which was extracted thoroughly. The organic phase was washed with water, dried over sodium sulfate, filtered and concentrated. The crude product was subsequently purified by column chromatography (ethyl acetate/heptane gradient), and 3-(5-tert-butyl-1,2-oxazol-3-yl)-1-{{1-[hydroxymethyl]cyclobutyl}methyl}-1-methylurea (2.30 g, 90% of theory) was obtained as a colorless, 25 highly viscous oil. ^1H -NMR (CDCl_3 δ , ppm) 8.60-8.05 (br. s, 1H, NH), 6.58 (s, 1H), 4.60-4.40 (br. s, 1H, OH), 3.71-3.64 (m, 2H), 3.44 (m, 2H), 3.05 (s, 3H), 2.08-1.98 (m, 1H), 1.95-1.71 (m, 5 H), 1.31 (s, 9H). 3-(5-tert-Butyl-1,2-oxazol-3-yl)-1-{{1-(hydroxymethyl)cyclobutyl}methyl}-1-methylurea (2.00 g, 6.77 mmol) was dissolved in dimethyl sulfoxide (100 ml), 1-hydroxy-1,2-benziodoxol-3-one 1-oxide 30 (2.84 g, 10.16 mmol) was added, and the mixture was stirred at room temperature for 16 h. Water and dichloromethane were added to the reaction mixture, which was extracted thoroughly. The combined organic phases were dried over sodium sulfate, filtered and concentrated under reduced pressure. Final purification by column chromatography of the resulting crude product (ethyl acetate/heptane gradient) gave 6-(5-tert-butyl-1,2-oxazol-3-yl)-5-hydroxy-8-methyl-6,8-diazaspiro[3.5]nonan-7-one (0.80 g, 39%

of theory) as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.63 (s, 1H), 5.56 (m, 1H), 4.04 (br. m, 1H), 3.77 (d, 1H), 3.12 (d, 1H), 3.04 (s, 3H), 2.25-2.19 (m, 1H), 2.05-1.92 (m, 4H), 1.85-1.80 (m, 1H), 1.33 (s, 9H).

5 No. I.81-449: 6-[4-(Trifluoromethyl)pyridin-2-yl]-5-hydroxy-8-methyl-6,8-diazaspiro[3.5]nonan-7-one

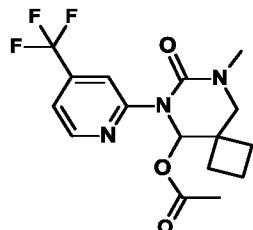


4-(Trifluoromethyl)pyridin-2-amine (9.70 g, 59.84 mmol) was dissolved in tetrahydrofuran (120 ml),
 10 and pyridine (9.68 ml, 119.67 mmol) was added. The reaction mixture was cooled to 0°C, and a solution of phenyl chloroformate (7.88 ml, 62.83 mmol) in tetrahydrofuran (30 ml) was slowly added dropwise over 15 min. The reaction mixture was stirred at 0°C for 15 min, warmed to room temperature and stirred at room temperature for one hour. Water and dichloromethane were added to the reaction solution, which was extracted. The combined organic phases were dried over sodium sulfate and
 15 concentrated under reduced pressure. Phenyl *N*-[4-(trifluoromethyl)pyridin-2-yl]carbamate (14.00 g, 81% of theory) was obtained as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 9.59 (s, 1H, NH), 8.56 (d, 1H), 8.38 (s, 1H), 7.48-7.42 (m, 2H), 7.33-7.21 (m, 4H). Phenyl *N*-[4-(trifluoromethyl)pyridin-2-yl]carbamate (2.00 g, 7.09 mmol) was then dissolved, without further purification, in dichloromethane (40 ml), and {1-[(methylamino)methyl]cyclobutyl}methanol (1.01 g, 7.79 mmol) and triethylamine
 20 (2.47 ml, 17.72 mmol) were added. The reaction mixture was stirred at room temperature for 14 h. On completion of conversion, dichloromethane and water were added to the reaction mixture, which was extracted thoroughly. The organic phase was washed with water, dried over sodium sulfate, filtered and concentrated. The crude product was subsequently purified by column chromatography (ethyl acetate/heptane gradient), and 3-[4-(Trifluoromethyl)pyridin-2-yl]-1-{[1-
 25 (hydroxymethyl)cyclobutyl]methyl}-1-methylurea (2.50 g, 95% of theory) was obtained as a colorless solid. ¹H-NMR (CDCl₃ δ, ppm) 8.35-8.30 (m, 3H), 7.13 (m, 1H), 4.02-3.73 (br. s, 1H, OH), 3.68-3.62 (m, 2H), 3.49 (s, 2H), 3.07 (s, 3H), 2.05-1.79 (m, 6H). 3-[4-(Trifluoromethyl)pyridin-2-yl]-1-{[1-
 (hydroxymethyl)cyclobutyl]methyl}-1-methylurea (150 mg, 0.47 mmol) was dissolved in dimethyl
 sulfoxide (10 ml), 1-hydroxy-1,2-benziodoxol-3-one 1-oxide (0.94 mmol, 2.0 equiv.) was added, and the
 30 mixture was stirred at room temperature for 8 h. Water and dichloromethane were added to the reaction mixture, which was extracted thoroughly. The combined organic phases were dried over sodium sulfate, filtered and concentrated under reduced pressure. Final purification by column chromatography of the resulting crude product (ethyl acetate/heptane gradient) gave 6-[4-(trifluoromethyl)pyridin-2-yl]-5-
 hydroxy-8-methyl-6,8-diazaspiro[3.5]nonan-7-one (140 mg, 74% of theory) as a colorless solid. ¹H-

NMR (400 MHz, CDCl₃ δ, ppm) 8.45 (m, 1H), 8.14 (m, 1H), 7.23 (m, 1H), 5.51 (m, 1H), 4.82 (m, 1H), 3.81 (d, 1H), 3.20 (d, 1H), 3.05 (s, 3H), 2.25-2.20 (m, 1H), 2.05-1.85 (m, 5H).

No. I.82-449: 8-Methyl-7-oxo-6-[4-(trifluoromethyl)pyridin-2-yl]-6,8-diazaspiro[3.5]nonan-5-yl acetate

5



4-(Trifluoromethyl)pyridin-2-amine (9.70 g, 59.84 mmol) was dissolved in tetrahydrofuran (120 ml), and pyridine (9.68 ml, 119.67 mmol) was added. The reaction mixture was cooled to 0°C, and a solution 10 of phenyl chloroformate (7.88 ml, 62.83 mmol) in tetrahydrofuran (30 ml) was slowly added dropwise over 15 min. The reaction mixture was stirred at 0°C for 15 min, warmed to room temperature and stirred at room temperature for one hour. Water and dichloromethane were added to the reaction solution, which was extracted. The combined organic phases were dried over sodium sulfate and concentrated under reduced pressure. Phenyl *N*-(4-(trifluoromethyl)pyridin-2-yl)carbamate (14.00 g, 15 81% of theory) was obtained as a colorless solid. ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 9.59 (s, 1H, NH), 8.56 (d, 1H), 8.38 (s, 1H), 7.48-7.42 (m, 2H), 7.33-7.21 (m, 4H). Phenyl *N*-(4-(trifluoromethyl)pyridin-2-yl)carbamate (2.00 g, 7.09 mmol) was then dissolved, without further purification, in dichloromethane (40 ml), and {1-[(methylamino)methyl]cyclobutyl}methanol (1.01 g, 7.79 mmol) and triethylamine (2.47 ml, 17.72 mmol) were added. The reaction mixture was stirred at room temperature for 14 h. On 20 completion of conversion, dichloromethane and water were added to the reaction mixture, which was extracted thoroughly. The organic phase was washed with water, dried over sodium sulfate, filtered and concentrated. The crude product was subsequently purified by column chromatography (ethyl acetate/heptane gradient), and 3-[4-(trifluoromethyl)pyridin-2-yl]-1-{[1-(hydroxymethyl)cyclobutyl]methyl}-1-methylurea (2.50 g, 95% of theory) was obtained as a colorless solid. ¹H-NMR (CDCl₃ δ, ppm) 8.35-8.30 (m, 3H), 7.13 (m, 1H), 4.02-3.73 (br. s, 1H, OH), 3.68-3.62 (m, 2H), 3.49 (s, 2H), 3.07 (s, 3H), 2.05-1.79 (m, 6H). 3-[4-(Trifluoromethyl)pyridin-2-yl]-1-{[1-(hydroxy-methyl)cyclobutyl]methyl}-1-methylurea (150 mg, 0.47 mmol) was dissolved in dichloromethane (10 ml), 1,1,1-tris(acetoxy)-1,1-dihydro-1,2-benziodoxol-3-(1H)-one (301 mg, 0.71 mmol) and sodium hydrogencarbonate (1.5 equiv.) were added, and the mixture was stirred at room 25 temperature for 2 h. Water and dichloromethane were added to the reaction mixture, which was extracted thoroughly. The combined organic phases were dried over sodium sulfate, filtered and concentrated under reduced pressure. Final purification by column chromatography of the resulting crude product (ethyl acetate/heptane gradient) gave 8-methyl-7-oxo-6-[4-(trifluoromethyl)pyridin-2-yl]- 30

6,8-diazaspiro[3.5]nonan-5-yl acetate (70 mg, 37% of theory) as a colorless solid. $^1\text{H-NMR}$ (400 MHz, CDCl_3 δ , ppm) 8.51 (m, 1H), 8.06 (m, 1H), 7.22 (m, 1H), 7.14 (m, 1H), 3.67 (m, 1H), 3.27 (m, 1H), 3.09 (s, 3H), 2.30-2.18 (m, 1H), 2.15-1.90 (m, 7H), 1.82-1.71 (m, 1H).

5 In analogy to the preparation examples cited above and recited at the appropriate point, and taking account of the general details relating to the preparation of substituted N-heterocyclyl- and N-heteroaryl tetrahydropyrimidinones, the compounds cited below are obtained. If in Table 1 a structural element is defined by a structural formula containing a broken line, this broken line means that at this position the group in question is attached to the remainder of the molecule.

10

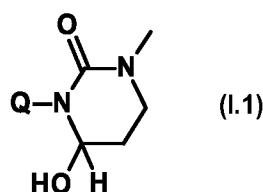


Table I.1: Preferred compounds of the formula (I.1) are the compounds I.1-1 to I.1-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.1-1 to I.1-718 of Table 15 I.1 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

Table 1:

| No. | Q |
|-----|--------|
| 1 | Q-1.1 |
| 2 | Q-1.2 |
| 3 | Q-1.3 |
| 4 | Q-1.4 |
| 5 | Q-1.5 |
| 6 | Q-1.6 |
| 7 | Q-1.7 |
| 8 | Q-1.8 |
| 9 | Q-1.9 |
| 10 | Q-1.10 |
| 11 | Q-1.11 |
| 12 | Q-1.12 |
| 13 | Q-1.13 |
| 14 | Q-1.14 |

| No. | Q |
|-----|--------|
| 15 | Q-1.15 |
| 16 | Q-1.16 |
| 17 | Q-1.17 |
| 18 | Q-1.18 |
| 19 | Q-1.19 |
| 20 | Q-1.20 |
| 21 | Q-2.1 |
| 22 | Q-2.2 |
| 23 | Q-2.3 |
| 24 | Q-2.4 |
| 25 | Q-2.5 |
| 26 | Q-2.6 |
| 27 | Q-2.7 |
| 28 | Q-2.8 |
| 29 | Q-2.9 |
| 30 | Q-2.10 |
| 31 | Q-2.11 |
| 32 | Q-2.12 |
| 33 | Q-2.13 |
| 34 | Q-2.14 |
| 35 | Q-2.15 |
| 36 | Q-2.16 |
| 37 | Q-2.17 |
| 38 | Q-2.18 |
| 39 | Q-2.19 |
| 40 | Q-2.20 |
| 41 | Q-3.1 |
| 42 | Q-3.2 |
| 43 | Q-3.3 |
| 44 | Q-3.4 |
| 45 | Q-3.5 |
| 46 | Q-3.6 |
| 47 | Q-3.7 |
| 48 | Q-3.8 |

| No. | Q |
|-----|--------|
| 49 | Q-3.9 |
| 50 | Q-3.10 |
| 51 | Q-3.11 |
| 52 | Q-3.12 |
| 53 | Q-3.13 |
| 54 | Q-3.14 |
| 55 | Q-3.15 |
| 56 | Q-3.16 |
| 57 | Q-3.17 |
| 58 | Q-3.18 |
| 59 | Q-3.19 |
| 60 | Q-3.20 |
| 61 | Q-3.21 |
| 62 | Q-3.22 |
| 63 | Q-3.23 |
| 64 | Q-3.24 |
| 65 | Q-3.25 |
| 66 | Q-3.26 |
| 67 | Q-3.27 |
| 68 | Q-3.28 |
| 69 | Q-3.29 |
| 70 | Q-3.30 |
| 71 | Q-4.1 |
| 72 | Q-4.2 |
| 73 | Q-4.3 |
| 74 | Q-4.4 |
| 75 | Q-4.5 |
| 76 | Q-4.6 |
| 77 | Q-4.7 |
| 78 | Q-4.8 |
| 79 | Q-4.9 |
| 80 | Q-4.10 |
| 81 | Q-4.11 |
| 82 | Q-4.12 |

| No. | Q |
|-----|--------|
| 83 | Q-4.13 |
| 84 | Q-4.14 |
| 85 | Q-4.15 |
| 86 | Q-4.16 |
| 87 | Q-4.17 |
| 88 | Q-4.18 |
| 89 | Q-4.19 |
| 90 | Q-4.20 |
| 91 | Q-5.1 |
| 92 | Q-5.2 |
| 93 | Q-5.3 |
| 94 | Q-5.4 |
| 95 | Q-5.5 |
| 96 | Q-5.6 |
| 97 | Q-5.7 |
| 98 | Q-5.8 |
| 99 | Q-5.9 |
| 100 | Q-5.10 |
| 101 | Q-5.11 |
| 102 | Q-5.12 |
| 103 | Q-5.13 |
| 104 | Q-5.14 |
| 105 | Q-5.15 |
| 106 | Q-5.16 |
| 107 | Q-5.17 |
| 108 | Q-5.18 |
| 109 | Q-5.19 |
| 110 | Q-5.20 |
| 111 | Q-6.1 |
| 112 | Q-6.2 |
| 113 | Q-6.3 |
| 114 | Q-6.4 |
| 115 | Q-6.5 |
| 116 | Q-6.6 |

| No. | Q |
|-----|--------|
| 117 | Q-6.7 |
| 118 | Q-6.8 |
| 119 | Q-6.9 |
| 120 | Q-6.10 |
| 121 | Q-6.11 |
| 122 | Q-6.12 |
| 123 | Q-6.13 |
| 124 | Q-6.14 |
| 125 | Q-6.15 |
| 126 | Q-6.16 |
| 127 | Q-6.17 |
| 128 | Q-6.18 |
| 129 | Q-6.19 |
| 130 | Q-6.20 |
| 131 | Q-6.21 |
| 132 | Q-6.22 |
| 133 | Q-6.23 |
| 134 | Q-6.24 |
| 135 | Q-6.25 |
| 136 | Q-7.1 |
| 137 | Q-7.2 |
| 138 | Q-7.3 |
| 139 | Q-7.4 |
| 140 | Q-7.5 |
| 141 | Q-7.6 |
| 142 | Q-7.7 |
| 143 | Q-7.8 |
| 144 | Q-7.9 |
| 145 | Q-7.10 |
| 146 | Q-7.11 |
| 147 | Q-7.12 |
| 148 | Q-7.13 |
| 149 | Q-7.14 |
| 150 | Q-7.15 |

| No. | Q |
|-----|--------|
| 151 | Q-7.16 |
| 152 | Q-7.17 |
| 153 | Q-7.18 |
| 154 | Q-7.19 |
| 155 | Q-7.20 |
| 156 | Q-8.1 |
| 157 | Q-8.2 |
| 158 | Q-8.3 |
| 159 | Q-8.4 |
| 160 | Q-8.5 |
| 161 | Q-8.6 |
| 162 | Q-8.7 |
| 163 | Q-8.8 |
| 164 | Q-8.9 |
| 165 | Q-8.10 |
| 166 | Q-8.11 |
| 167 | Q-8.12 |
| 168 | Q-8.13 |
| 169 | Q-8.14 |
| 170 | Q-8.15 |
| 171 | Q-8.16 |
| 172 | Q-8.17 |
| 173 | Q-8.18 |
| 174 | Q-8.19 |
| 175 | Q-8.20 |
| 176 | Q-8.21 |
| 177 | Q-8.22 |
| 178 | Q-8.23 |
| 179 | Q-8.24 |
| 180 | Q-8.25 |
| 181 | Q-8.26 |
| 182 | Q-8.27 |
| 183 | Q-8.28 |
| 184 | Q-8.29 |

| No. | Q |
|-----|--------|
| 185 | Q-8.30 |
| 186 | Q-8.31 |
| 187 | Q-8.32 |
| 188 | Q-8.33 |
| 189 | Q-8.34 |
| 190 | Q-8.35 |
| 191 | Q-8.36 |
| 192 | Q-8.37 |
| 193 | Q-8.38 |
| 194 | Q-8.39 |
| 195 | Q-8.40 |
| 196 | Q-8.41 |
| 197 | Q-8.42 |
| 198 | Q-8.43 |
| 199 | Q-8.44 |
| 200 | Q-8.45 |
| 201 | Q-8.46 |
| 202 | Q-8.47 |
| 203 | Q-8.48 |
| 204 | Q-8.49 |
| 205 | Q-8.50 |
| 206 | Q-8.51 |
| 207 | Q-8.52 |
| 208 | Q-8.53 |
| 209 | Q-8.54 |
| 210 | Q-8.55 |
| 211 | Q-8.56 |
| 212 | Q-8.57 |
| 213 | Q-8.58 |
| 214 | Q-8.59 |
| 215 | Q-8.60 |
| 216 | Q-8.61 |
| 217 | Q-8.62 |
| 218 | Q-8.63 |

| No. | Q |
|-----|--------|
| 219 | Q-8.64 |
| 220 | Q-8.65 |
| 221 | Q-8.66 |
| 222 | Q-8.67 |
| 223 | Q-8.68 |
| 224 | Q-8.69 |
| 225 | Q-8.70 |
| 226 | Q-8.71 |
| 227 | Q-8.72 |
| 228 | Q-8.73 |
| 229 | Q-8.74 |
| 230 | Q-8.75 |
| 231 | Q-9.1 |
| 232 | Q-9.2 |
| 233 | Q-9.3 |
| 234 | Q-9.4 |
| 235 | Q-9.5 |
| 236 | Q-9.6 |
| 237 | Q-9.7 |
| 238 | Q-9.8 |
| 239 | Q-9.9 |
| 240 | Q-9.10 |
| 241 | Q-9.11 |
| 242 | Q-9.12 |
| 243 | Q-9.13 |
| 244 | Q-9.14 |
| 245 | Q-9.15 |
| 246 | Q-9.16 |
| 247 | Q-9.17 |
| 248 | Q-9.18 |
| 249 | Q-9.19 |
| 250 | Q-9.20 |
| 251 | Q-10.1 |
| 252 | Q-10.2 |

| No. | Q |
|-----|---------|
| 253 | Q-10.3 |
| 254 | Q-10.4 |
| 255 | Q-10.5 |
| 256 | Q-10.6 |
| 257 | Q-10.7 |
| 258 | Q-10.8 |
| 259 | Q-10.9 |
| 260 | Q-10.10 |
| 261 | Q-10.11 |
| 262 | Q-10.12 |
| 263 | Q-10.13 |
| 264 | Q-10.14 |
| 265 | Q-10.15 |
| 266 | Q-10.16 |
| 267 | Q-10.17 |
| 268 | Q-10.18 |
| 269 | Q-10.19 |
| 270 | Q-10.20 |
| 271 | Q-11.1 |
| 272 | Q-11.2 |
| 273 | Q-11.3 |
| 274 | Q-11.4 |
| 275 | Q-11.5 |
| 276 | Q-11.6 |
| 277 | Q-11.7 |
| 278 | Q-11.8 |
| 279 | Q-11.9 |
| 280 | Q-11.10 |
| 281 | Q-11.11 |
| 282 | Q-11.12 |
| 283 | Q-11.13 |
| 284 | Q-11.14 |
| 285 | Q-11.15 |
| 286 | Q-12.1 |

| No. | Q |
|-----|---------|
| 287 | Q-12.2 |
| 288 | Q-12.3 |
| 289 | Q-12.4 |
| 290 | Q-12.5 |
| 291 | Q-12.6 |
| 292 | Q-12.7 |
| 293 | Q-12.8 |
| 294 | Q-12.9 |
| 295 | Q-12.10 |
| 296 | Q-12.11 |
| 297 | Q-12.12 |
| 298 | Q-12.13 |
| 299 | Q-12.14 |
| 300 | Q-12.15 |
| 301 | Q-12.16 |
| 302 | Q-12.17 |
| 303 | Q-12.18 |
| 304 | Q-12.19 |
| 305 | Q-12.20 |
| 306 | Q-12.21 |
| 307 | Q-12.22 |
| 308 | Q-12.23 |
| 309 | Q-12.24 |
| 310 | Q-12.25 |
| 311 | Q-13.1 |
| 312 | Q-13.2 |
| 313 | Q-13.3 |
| 314 | Q-13.4 |
| 315 | Q-13.5 |
| 316 | Q-13.6 |
| 317 | Q-13.7 |
| 318 | Q-13.8 |
| 319 | Q-13.9 |
| 320 | Q-13.10 |

| No. | Q |
|-----|---------|
| 321 | Q-13.11 |
| 322 | Q-13.12 |
| 323 | Q-13.13 |
| 324 | Q-13.14 |
| 325 | Q-13.15 |
| 326 | Q-13.16 |
| 327 | Q-13.17 |
| 328 | Q-13.18 |
| 329 | Q-13.19 |
| 330 | Q-13.20 |
| 331 | Q-13.21 |
| 332 | Q-13.22 |
| 333 | Q-13.23 |
| 334 | Q-13.24 |
| 335 | Q-13.25 |
| 336 | Q-13.26 |
| 337 | Q-13.27 |
| 338 | Q-13.28 |
| 339 | Q-13.29 |
| 340 | Q-13.30 |
| 341 | Q-13.31 |
| 342 | Q-13.32 |
| 343 | Q-13.33 |
| 344 | Q-13.34 |
| 345 | Q-13.35 |
| 346 | Q-13.36 |
| 347 | Q-13.37 |
| 348 | Q-13.38 |
| 349 | Q-13.39 |
| 350 | Q-13.40 |
| 351 | Q-13.41 |
| 352 | Q-13.42 |
| 353 | Q-13.43 |
| 354 | Q-13.44 |

| No. | Q |
|-----|---------|
| 355 | Q-13.45 |
| 356 | Q-13.46 |
| 357 | Q-13.47 |
| 358 | Q-13.48 |
| 359 | Q-13.49 |
| 360 | Q-13.50 |
| 361 | Q-13.51 |
| 362 | Q-13.52 |
| 363 | Q-13.53 |
| 364 | Q-13.54 |
| 365 | Q-13.55 |
| 366 | Q-13.56 |
| 367 | Q-13.57 |
| 368 | Q-13.58 |
| 369 | Q-13.59 |
| 370 | Q-13.60 |
| 371 | Q-13.61 |
| 372 | Q-13.62 |
| 373 | Q-13.63 |
| 374 | Q-13.64 |
| 375 | Q-13.65 |
| 376 | Q-13.66 |
| 377 | Q-13.67 |
| 378 | Q-13.68 |
| 379 | Q-13.69 |
| 380 | Q-13.70 |
| 381 | Q-13.71 |
| 382 | Q-13.72 |
| 383 | Q-13.73 |
| 384 | Q-13.74 |
| 385 | Q-13.75 |
| 386 | Q-13.76 |
| 387 | Q-13.77 |
| 388 | Q-13.78 |

| No. | Q |
|-----|---------|
| 389 | Q-13.79 |
| 390 | Q-13.80 |
| 391 | Q-14.1 |
| 392 | Q-14.2 |
| 393 | Q-14.3 |
| 394 | Q-14.4 |
| 395 | Q-14.5 |
| 396 | Q-14.6 |
| 397 | Q-14.7 |
| 398 | Q-14.8 |
| 399 | Q-14.9 |
| 400 | Q-14.10 |
| 401 | Q-14.11 |
| 402 | Q-14.12 |
| 403 | Q-14.13 |
| 404 | Q-14.14 |
| 405 | Q-14.15 |
| 406 | Q-14.16 |
| 407 | Q-14.17 |
| 408 | Q-14.18 |
| 409 | Q-14.19 |
| 410 | Q-14.20 |
| 411 | Q-15.1 |
| 412 | Q-15.2 |
| 413 | Q-15.3 |
| 414 | Q-15.4 |
| 415 | Q-15.5 |
| 416 | Q-15.6 |
| 417 | Q-15.7 |
| 418 | Q-15.8 |
| 419 | Q-15.9 |
| 420 | Q-15.10 |
| 421 | Q-15.11 |
| 422 | Q-15.12 |

| No. | Q |
|-----|---------|
| 423 | Q-15.13 |
| 424 | Q-15.14 |
| 425 | Q-15.15 |
| 426 | Q-15.16 |
| 427 | Q-15.17 |
| 428 | Q-15.18 |
| 429 | Q-15.19 |
| 430 | Q-15.20 |
| 431 | Q-15.21 |
| 432 | Q-15.22 |
| 433 | Q-15.23 |
| 434 | Q-15.24 |
| 435 | Q-15.25 |
| 436 | Q-15.26 |
| 437 | Q-15.27 |
| 438 | Q-15.28 |
| 439 | Q-15.29 |
| 440 | Q-15.30 |
| 441 | Q-16.1 |
| 442 | Q-16.2 |
| 443 | Q-16.3 |
| 444 | Q-16.4 |
| 445 | Q-16.5 |
| 446 | Q-16.6 |
| 447 | Q-16.7 |
| 448 | Q-16.8 |
| 449 | Q-16.9 |
| 450 | Q-16.10 |
| 451 | Q-16.11 |
| 452 | Q-16.12 |
| 453 | Q-16.13 |
| 454 | Q-16.14 |
| 455 | Q-16.15 |
| 456 | Q-16.16 |

| No. | Q |
|-----|---------|
| 457 | Q-16.17 |
| 458 | Q-16.18 |
| 459 | Q-16.19 |
| 460 | Q-16.20 |
| 461 | Q-16.21 |
| 462 | Q-16.22 |
| 463 | Q-16.23 |
| 464 | Q-16.24 |
| 465 | Q-16.25 |
| 466 | Q-16.26 |
| 467 | Q-16.27 |
| 468 | Q-16.28 |
| 469 | Q-16.29 |
| 470 | Q-16.30 |
| 471 | Q-16.31 |
| 472 | Q-16.32 |
| 473 | Q-16.33 |
| 474 | Q-16.34 |
| 475 | Q-16.35 |
| 476 | Q-16.36 |
| 477 | Q-16.37 |
| 478 | Q-16.38 |
| 479 | Q-16.39 |
| 480 | Q-16.40 |
| 481 | Q-16.41 |
| 482 | Q-16.42 |
| 483 | Q-16.43 |
| 484 | Q-16.44 |
| 485 | Q-16.45 |
| 486 | Q-16.46 |
| 487 | Q-16.47 |
| 488 | Q-16.48 |
| 489 | Q-16.49 |
| 490 | Q-16.50 |

| No. | Q |
|-----|---------|
| 491 | Q-16.51 |
| 492 | Q-16.52 |
| 493 | Q-16.53 |
| 494 | Q-16.54 |
| 495 | Q-16.55 |
| 496 | Q-16.56 |
| 497 | Q-16.57 |
| 498 | Q-16.58 |
| 499 | Q-16.59 |
| 500 | Q-16.60 |
| 501 | Q-16.61 |
| 502 | Q-16.62 |
| 503 | Q-16.63 |
| 504 | Q-16.64 |
| 505 | Q-16.65 |
| 506 | Q-16.66 |
| 507 | Q-16.67 |
| 508 | Q-16.68 |
| 509 | Q-16.69 |
| 510 | Q-16.70 |
| 511 | Q-16.71 |
| 512 | Q-16.72 |
| 513 | Q-16.73 |
| 514 | Q-16.74 |
| 515 | Q-16.75 |
| 516 | Q-16.76 |
| 517 | Q-16.77 |
| 518 | Q-16.78 |
| 519 | Q-16.79 |
| 520 | Q-16.80 |
| 521 | Q-17.1 |
| 522 | Q-17.2 |
| 523 | Q-17.3 |
| 524 | Q-17.4 |

| No. | Q |
|-----|---------|
| 525 | Q-17.5 |
| 526 | Q-17.6 |
| 527 | Q-17.7 |
| 528 | Q-17.8 |
| 529 | Q-17.9 |
| 530 | Q-17.10 |
| 531 | Q-18.1 |
| 532 | Q-18.2 |
| 533 | Q-18.3 |
| 534 | Q-18.4 |
| 535 | Q-18.5 |
| 536 | Q-18.6 |
| 537 | Q-18.7 |
| 538 | Q-18.8 |
| 539 | Q-18.9 |
| 540 | Q-18.10 |
| 541 | Q-19.1 |
| 542 | Q-19.2 |
| 543 | Q-19.3 |
| 544 | Q-19.4 |
| 545 | Q-19.5 |
| 546 | Q-19.6 |
| 547 | Q-19.7 |
| 548 | Q-19.8 |
| 549 | Q-19.9 |
| 550 | Q-19.10 |
| 551 | Q-19.11 |
| 552 | Q-19.12 |
| 553 | Q-19.13 |
| 554 | Q-19.14 |
| 555 | Q-19.15 |
| 556 | Q-23.1 |
| 557 | Q-23.2 |
| 558 | Q-23.3 |

| No. | Q |
|-----|---------|
| 559 | Q-23.4 |
| 560 | Q-23.5 |
| 561 | Q-23.6 |
| 562 | Q-23.7 |
| 563 | Q-23.8 |
| 564 | Q-23.9 |
| 565 | Q-23.10 |
| 566 | Q-23.11 |
| 567 | Q-23.12 |
| 568 | Q-23.13 |
| 569 | Q-23.14 |
| 570 | Q-23.15 |
| 571 | Q-23.16 |
| 572 | Q-23.17 |
| 573 | Q-23.18 |
| 574 | Q-23.19 |
| 575 | Q-23.20 |
| 576 | Q-23.21 |
| 577 | Q-23.22 |
| 578 | Q-23.23 |
| 579 | Q-23.24 |
| 580 | Q-23.25 |
| 581 | Q-23.26 |
| 582 | Q-23.27 |
| 583 | Q-23.28 |
| 584 | Q-23.29 |
| 585 | Q-23.30 |
| 586 | Q-23.31 |
| 587 | Q-23.32 |
| 588 | Q-23.33 |
| 589 | Q-23.34 |
| 590 | Q-23.35 |
| 591 | Q-23.36 |
| 592 | Q-23.37 |

| No. | Q |
|-----|---------|
| 593 | Q-23.38 |
| 594 | Q-23.39 |
| 595 | Q-23.40 |
| 596 | Q-23.41 |
| 597 | Q-23.42 |
| 598 | Q-23.43 |
| 599 | Q-23.44 |
| 600 | Q-23.45 |
| 601 | Q-23.46 |
| 602 | Q-23.47 |
| 603 | Q-23.48 |
| 604 | Q-23.49 |
| 605 | Q-23.50 |
| 606 | Q-23.51 |
| 607 | Q-23.52 |
| 608 | Q-23.53 |
| 609 | Q-23.54 |
| 610 | Q-23.55 |
| 611 | Q-23.56 |
| 612 | Q-23.57 |
| 613 | Q-23.58 |
| 614 | Q-24.1 |
| 615 | Q-24.2 |
| 616 | Q-24.3 |
| 617 | Q-24.4 |
| 618 | Q-24.5 |
| 619 | Q-24.6 |
| 620 | Q-24.7 |
| 621 | Q-24.8 |
| 622 | Q-24.9 |
| 623 | Q-24.10 |
| 624 | Q-24.11 |
| 625 | Q-24.12 |
| 626 | Q-24.13 |

| No. | Q |
|-----|---------|
| 627 | Q-24.14 |
| 628 | Q-24.15 |
| 629 | Q-24.16 |
| 630 | Q-24.17 |
| 631 | Q-24.18 |
| 632 | Q-24.19 |
| 633 | Q-24.20 |
| 634 | Q-25.1 |
| 635 | Q-25.2 |
| 636 | Q-25.3 |
| 637 | Q-25.4 |
| 638 | Q-25.5 |
| 639 | Q-25.6 |
| 640 | Q-25.7 |
| 641 | Q-25.8 |
| 642 | Q-25.9 |
| 643 | Q-25.10 |
| 644 | Q-25.11 |
| 645 | Q-25.12 |
| 646 | Q-25.13 |
| 647 | Q-25.14 |
| 648 | Q-25.15 |
| 649 | Q-25.16 |
| 650 | Q-25.17 |
| 651 | Q-25.18 |
| 652 | Q-25.19 |
| 653 | Q-25.20 |
| 654 | Q-25.21 |
| 655 | Q-25.22 |
| 656 | Q-25.23 |
| 657 | Q-25.24 |
| 658 | Q-25.25 |
| 659 | Q-25.26 |
| 660 | Q-25.27 |

| No. | Q |
|-----|---------|
| 661 | Q-25.28 |
| 662 | Q-25.29 |
| 663 | Q-25.30 |
| 664 | Q-25.31 |
| 665 | Q-25.32 |
| 666 | Q-25.33 |
| 667 | Q-25.34 |
| 668 | Q-25.35 |
| 669 | Q-25.36 |
| 670 | Q-25.37 |
| 671 | Q-25.38 |
| 672 | Q-25.39 |
| 673 | Q-25.40 |
| 674 | Q-25.41 |
| 675 | Q-25.42 |
| 676 | Q-25.43 |
| 677 | Q-25.44 |
| 678 | Q-25.45 |
| 679 | Q-26.1 |
| 680 | Q-26.2 |
| 681 | Q-26.3 |
| 682 | Q-26.4 |
| 683 | Q-26.5 |
| 684 | Q-26.6 |
| 685 | Q-26.7 |
| 686 | Q-26.8 |
| 687 | Q-26.9 |
| 688 | Q-26.10 |
| 689 | Q-26.11 |
| 690 | Q-26.12 |
| 691 | Q-26.13 |
| 692 | Q-26.14 |
| 693 | Q-26.15 |
| 694 | Q-12.26 |

| No. | Q |
|-----|---------|
| 695 | Q-12.27 |
| 696 | Q-12.28 |
| 697 | Q-12.29 |
| 698 | Q-12.30 |
| 699 | Q-27.1 |
| 700 | Q-27.2 |
| 701 | Q-27.3 |
| 702 | Q-27.4 |
| 703 | Q-27.5 |
| 704 | Q-28.1 |
| 705 | Q-28.2 |
| 706 | Q-28.3 |
| 707 | Q-28.4 |
| 708 | Q-28.5 |
| 709 | Q-30.1 |
| 710 | Q-30.2 |
| 711 | Q-30.3 |
| 712 | Q-30.4 |
| 713 | Q-30.5 |
| 714 | Q-20.1 |
| 715 | Q-20.2 |
| 716 | Q-20.3 |
| 717 | Q-20.4 |
| 718 | Q-20.5 |

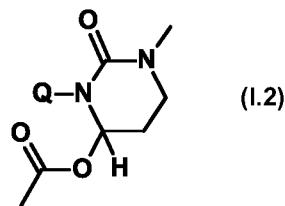


Table I.2: Preferred compounds of the formula (I.2) are the compounds I.2-1 to I.2-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.2-1 to I.2-718 of Table I.2 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

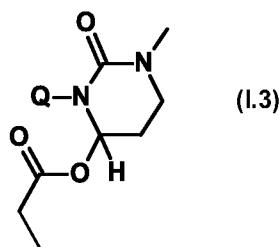


Table I.3: Preferred compounds of the formula (I.3) are the compounds I.3-1 to I.3-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.3-1 to I.3-718 of Table I.3 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

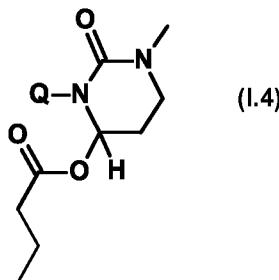


Table I.4: Preferred compounds of the formula (I.4) are the compounds I.4-1 to I.4-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.4-1 to I.4-718 of Table I.4 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

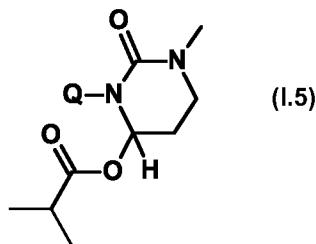


Table I.5: Preferred compounds of the formula (I.5) are the compounds I.5-1 to I.5-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.5-1 to I.5-718 of Table I.5 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

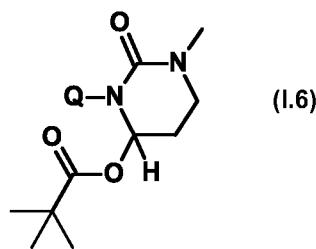


Table I.6: Preferred compounds of the formula (I.6) are the compounds I.6-1 to I.6-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.6-1 to I.6-718 of Table 5 I.6 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

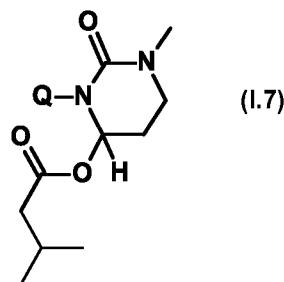
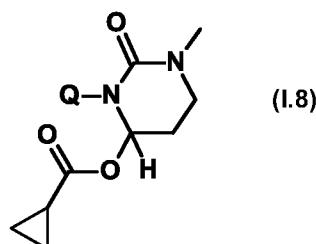
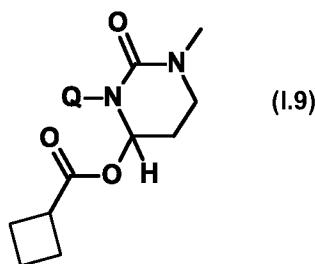


Table I.7: Preferred compounds of the formula (I.7) are the compounds I.7-1 to I.7-718 in which Q has 10 the meanings of Table 1 indicated in the respective row. Thus, the compounds I.7-1 to I.7-718 of Table I.7 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

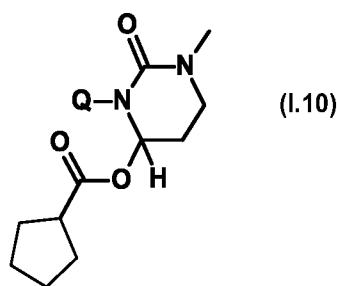


15 Table I.8: Preferred compounds of the formula (I.8) are the compounds I.8-1 to I.8-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.8-1 to I.8-718 of Table I.8 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



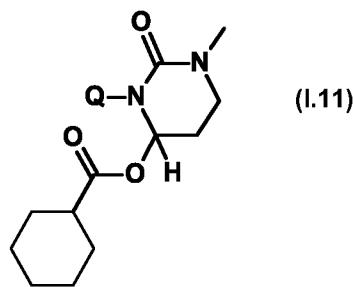
(I.9)

Table I.9: Preferred compounds of the formula (I.9) are the compounds I.9-1 to I.9-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.9-1 to I.9-718 of Table 5 I.9 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



(I.10)

Table I.10: Preferred compounds of the formula (I.10) are the compounds I.10-1 to I.10-718 in which Q 10 has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.10-1 to I.10-718 of Table I.10 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



(I.11)

15 Table I.11: Preferred compounds of the formula (I.11) are the compounds I.11-1 to I.11-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.11-1 to I.11-718 of Table I.11 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

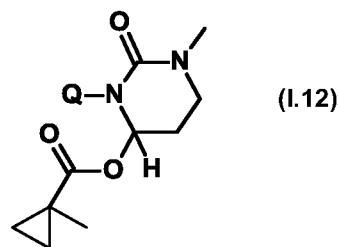


Table I.12: Preferred compounds of the formula (I.12) are the compounds I.12-1 to I.12-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.12-1 to I.12-718 of 5 Table I.12 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

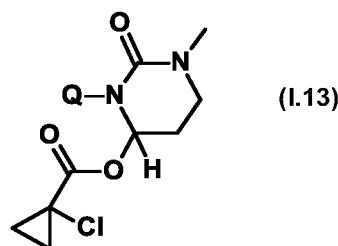
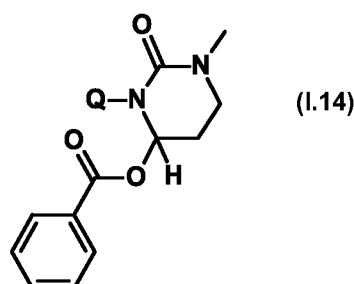


Table I.13: Preferred compounds of the formula (I.13) are the compounds I.13-1 to I.13-718 in which Q 10 has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.13-1 to I.13-718 of Table I.13 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



15 Table I.14: Preferred compounds of the formula (I.14) are the compounds I.14-1 to I.14-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.14-1 to I.14-718 of Table I.14 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

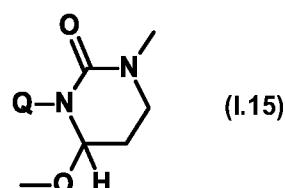


Table I.15: Preferred compounds of the formula (I.15) are the compounds I.15-1 to I.15-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.15-1 to I.15-718 of Table I.15 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

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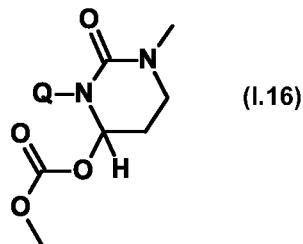


Table I.16: Preferred compounds of the formula (I.16) are the compounds I.16-1 to I.16-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.16-1 to I.16-718 of Table I.16 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

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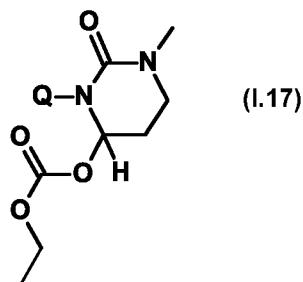


Table I.17: Preferred compounds of the formula (I.17) are the compounds I.17-1 to I.17-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.17-1 to I.17-718 of Table I.17 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

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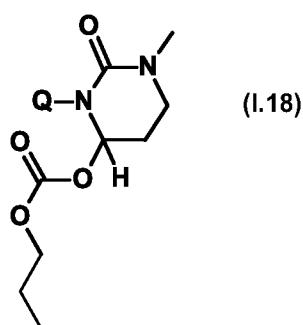
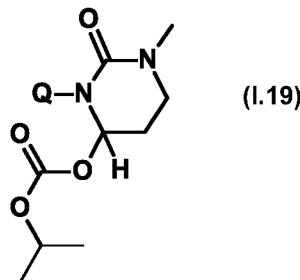
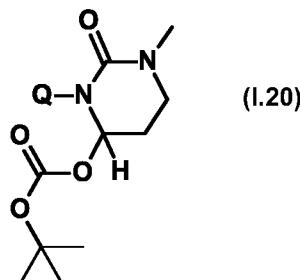


Table I.18: Preferred compounds of the formula (I.18) are the compounds I.18-1 to I.18-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.18-1 to I.18-718 of Table I.18 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

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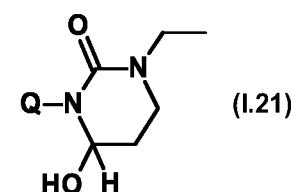


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Table I.20: Preferred compounds of the formula (I.20) are the compounds I.20-1 to I.20-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.20-1 to I.20-718 of Table I.20 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



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Table I.21: Preferred compounds of the formula (I.21) are the compounds I.21-1 to I.21-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.21-1 to I.21-718 of Table I.1 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

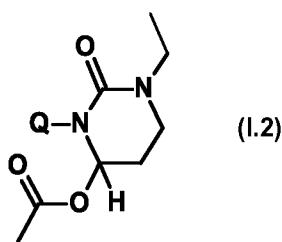


Table I.22: Preferred compounds of the formula (I.22) are the compounds I.22-1 to I.22-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.22-1 to I.22-718 of 5 Table I.22 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

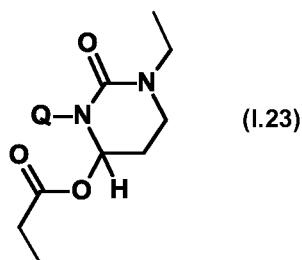


Table I.23: Preferred compounds of the formula (I.23) are the compounds I.23-1 to I.23-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.23-1 to I.23-718 of 10 Table I.23 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

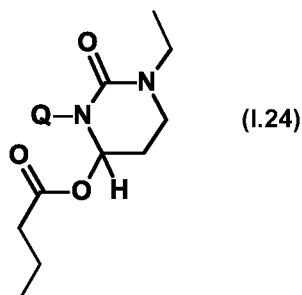


Table I.24: Preferred compounds of the formula (I.24) are the compounds I.24-1 to I.24-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.24-1 to I.24-718 of 15 Table I.24 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

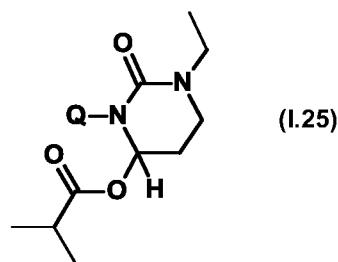


Table I.25: Preferred compounds of the formula (I.25) are the compounds I.25-1 to I.25-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.25-1 to I.25-718 of Table I.25 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

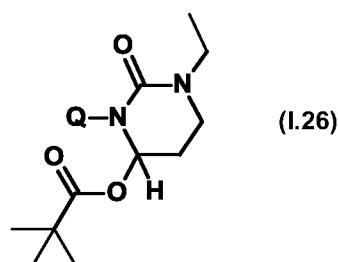


Table I.26: Preferred compounds of the formula (I.26) are the compounds I.26-1 to I.26-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.26-1 to I.26-718 of Table I.26 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

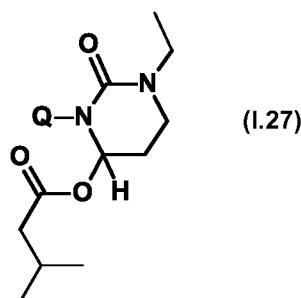


Table I.27: Preferred compounds of the formula (I.27) are the compounds I.27-1 to I.27-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.27-1 to I.27-718 of Table I.27 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

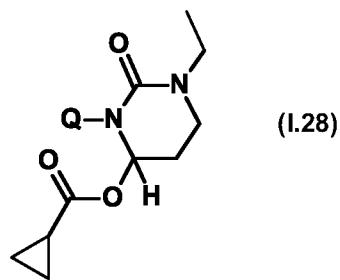


Table I.28: Preferred compounds of the formula (I.28) are the compounds I.28-1 to I.28-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.28-1 to I.28-718 of Table I.28 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

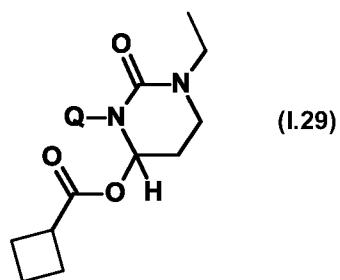
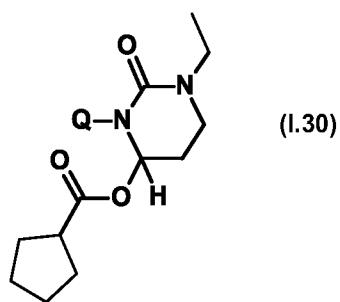


Table I.29: Preferred compounds of the formula (I.29) are the compounds I.29-1 to I.29-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.29-1 to I.29-718 of Table I.29 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



15 Table I.30: Preferred compounds of the formula (I.30) are the compounds I.30-1 to I.30-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.30-1 to I.30-718 of Table I.30 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

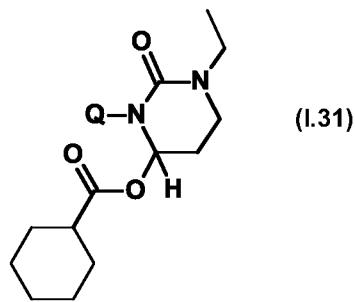


Table I.31: Preferred compounds of the formula (I.31) are the compounds I.31-1 to I.31-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.31-1 to I.31-718 of Table I.31 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

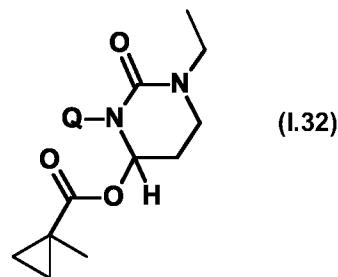
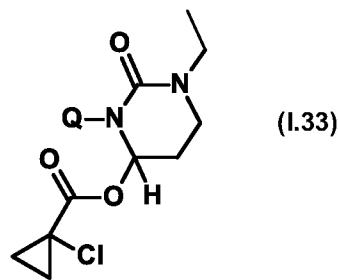


Table I.32: Preferred compounds of the formula (I.32) are the compounds I.32-1 to I.32-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.32-1 to I.32-718 of Table I.32 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



15 Table I.33: Preferred compounds of the formula (I.33) are the compounds I.33-1 to I.33-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.33-1 to I.33-718 of Table I.33 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

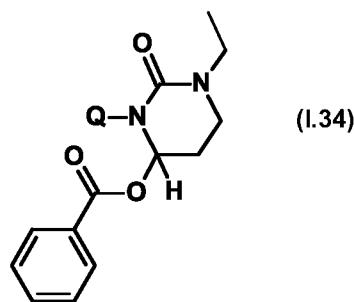


Table I.34: Preferred compounds of the formula (I.34) are the compounds I.34-1 to I.34-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.34-1 to I.34-718 of Table I.34 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

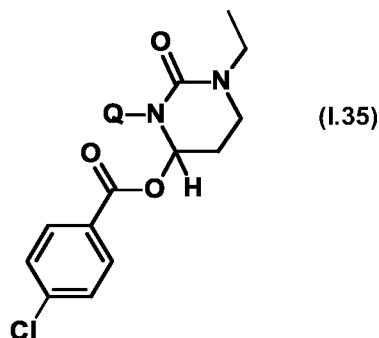


Table I.35: Preferred compounds of the formula (I.35) are the compounds I.35-1 to I.35-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.35-1 to I.35-718 of Table I.35 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

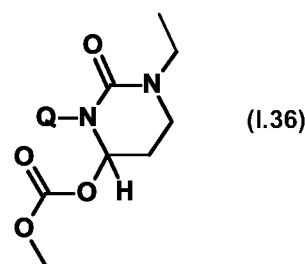
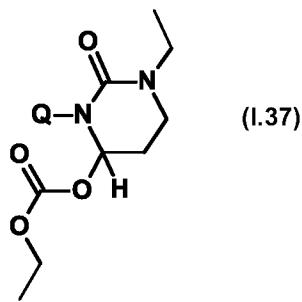
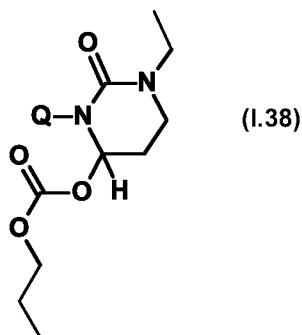


Table I.36: Preferred compounds of the formula (I.36) are the compounds I.36-1 to I.36-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.36-1 to I.36-718 of Table I.36 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



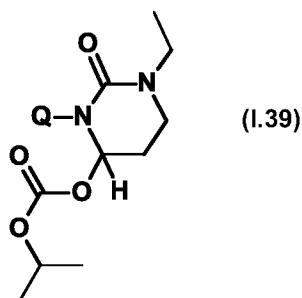
(I.37)

Table I.37: Preferred compounds of the formula (I.37) are the compounds I.37-1 to I.37-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.37-1 to I.37-718 of Table I.37 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



(I.38)

Table I.38: Preferred compounds of the formula (I.38) are the compounds I.38-1 to I.38-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.38-1 to I.38-718 of Table I.38 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



(I.39)

Table I.39: Preferred compounds of the formula (I.39) are the compounds I.39-1 to I.39-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.39-1 to I.39-718 of Table I.39 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

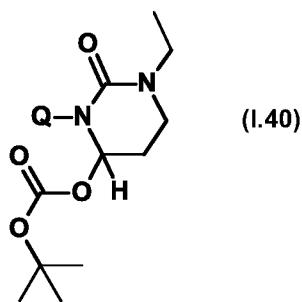


Table I.40: Preferred compounds of the formula (I.40) are the compounds I.40-1 to I.40-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.40-1 to I.40-718 of 5 Table I.40 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

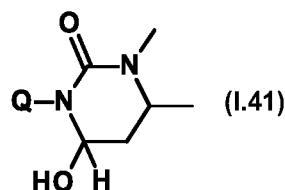
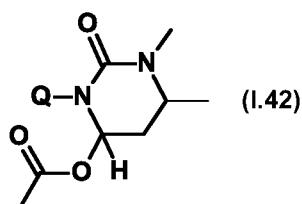


Table I.41: Preferred compounds of the formula (I.41) are the compounds I.41-1 to I.41-718 in which Q 10 has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.41-1 to I.41-718 of Table I.1 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



15 Table I.42: Preferred compounds of the formula (I.42) are the compounds I.42-1 to I.42-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.42-1 to I.42-718 of Table I.42 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

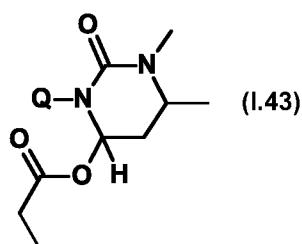
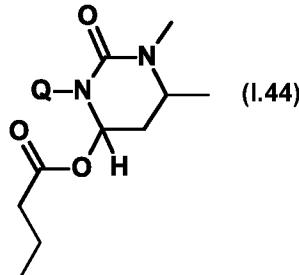


Table I.43: Preferred compounds of the formula (I.43) are the compounds I.43-1 to I.43-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.43-1 to I.43-718 of Table I.43 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



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Table I.44: Preferred compounds of the formula (I.44) are the compounds I.44-1 to I.44-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.44-1 to I.44-718 of Table I.44 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

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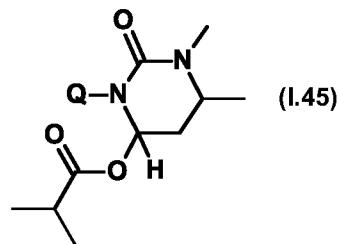


Table I.45: Preferred compounds of the formula (I.45) are the compounds I.45-1 to I.45-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.45-1 to I.45-718 of Table I.45 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

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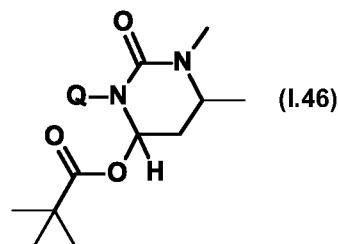


Table I.46: Preferred compounds of the formula (I.46) are the compounds I.46-1 to I.46-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.46-1 to I.46-718 of Table I.46 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

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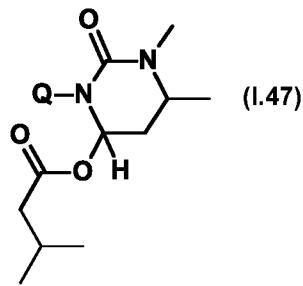


Table I.47: Preferred compounds of the formula (I.47) are the compounds I.47-1 to I.47-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.47-1 to I.47-718 of 5 Table I.47 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

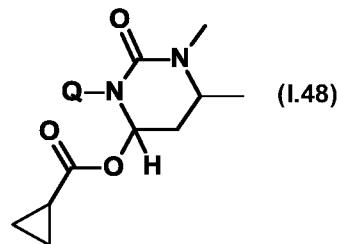
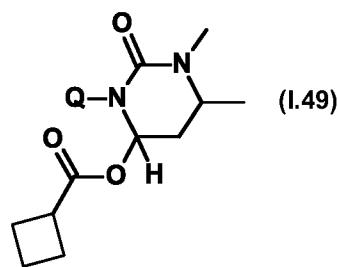


Table I.48: Preferred compounds of the formula (I.48) are the compounds I.48-1 to I.48-718 in which Q 10 has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.48-1 to I.48-718 of Table I.48 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



15 Table I.49: Preferred compounds of the formula (I.49) are the compounds I.49-1 to I.49-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.49-1 to I.49-718 of Table I.49 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

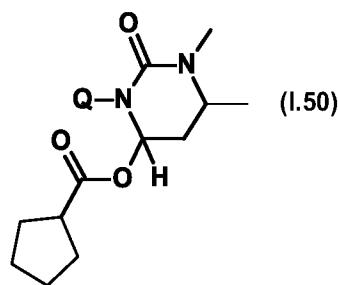


Table I.50: Preferred compounds of the formula (I.50) are the compounds I.50-1 to I.50-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.50-1 to I.50-718 of 5 Table I.50 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

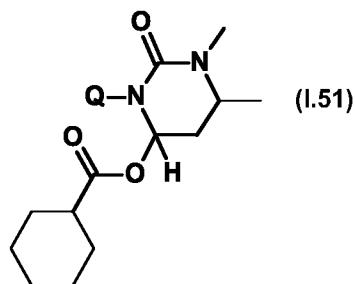
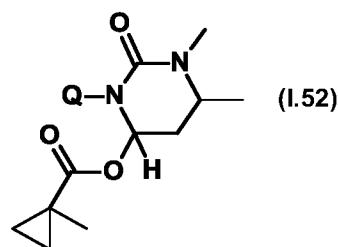


Table I.51: Preferred compounds of the formula (I.51) are the compounds I.51-1 to I.51-718 in which Q 10 has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.51-1 to I.51-718 of Table I.51 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



15 Table I.52: Preferred compounds of the formula (I.52) are the compounds I.52-1 to I.52-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.52-1 to I.52-718 of Table I.52 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

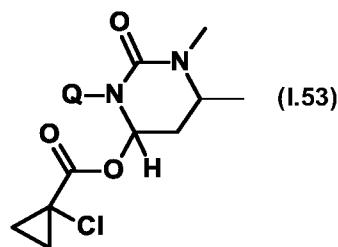


Table I.53: Preferred compounds of the formula (I.53) are the compounds I.53-1 to I.53-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.53-1 to I.53-718 of Table I.53 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

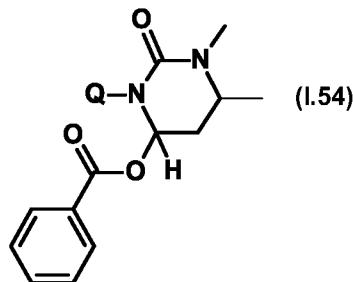


Table I.54: Preferred compounds of the formula (I.54) are the compounds I.54-1 to I.54-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.54-1 to I.54-718 of Table I.54 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

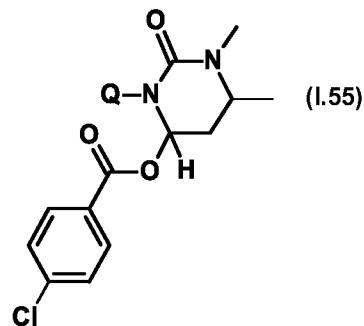


Table I.55: Preferred compounds of the formula (I.55) are the compounds I.55-1 to I.55-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.55-1 to I.55-718 of Table I.55 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

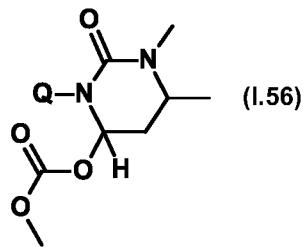


Table I.56: Preferred compounds of the formula (I.56) are the compounds I.56-1 to I.56-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.56-1 to I.56-718 of 5 Table I.56 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

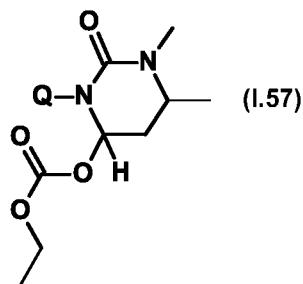
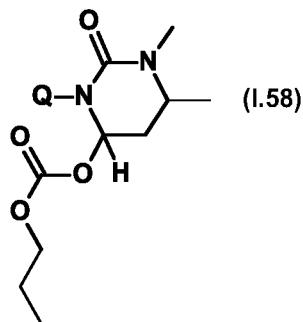


Table I.57: Preferred compounds of the formula (I.57) are the compounds I.57-1 to I.57-718 in which Q 10 has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.57-1 to I.57-718 of Table I.57 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



15 Table I.58: Preferred compounds of the formula (I.58) are the compounds I.58-1 to I.58-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.58-1 to I.58-718 of Table I.58 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

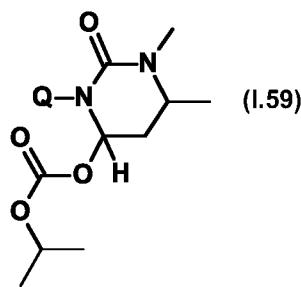


Table I.59: Preferred compounds of the formula (I.59) are the compounds I.59-1 to I.59-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.59-1 to I.59-718 of 5 Table I.59 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

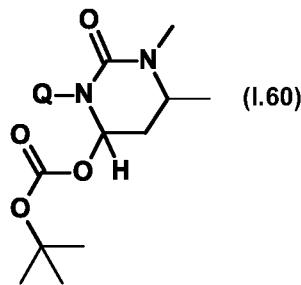
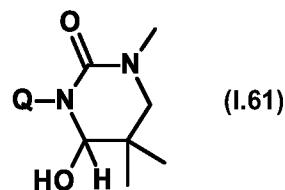


Table I.60: Preferred compounds of the formula (I.60) are the compounds I.60-1 to I.60-718 in which Q 10 has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.60-1 to I.60-718 of Table I.60 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



15 Table I.61: Preferred compounds of the formula (I.61) are the compounds I.61-1 to I.61-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.61-1 to I.61-718 of Table I.1 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

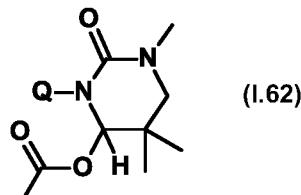


Table I.62: Preferred compounds of the formula (I.62) are the compounds I.62-1 to I.62-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.62-1 to I.62-718 of Table I.62 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

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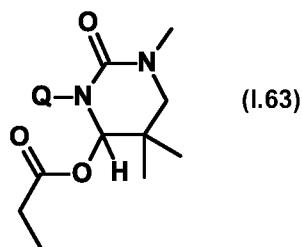


Table I.63: Preferred compounds of the formula (I.63) are the compounds I.63-1 to I.63-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.63-1 to I.63-718 of Table I.63 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

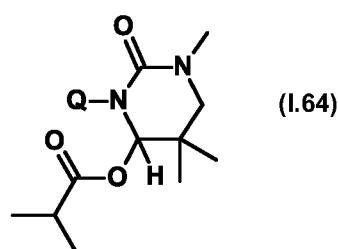


Table I.64: Preferred compounds of the formula (I.64) are the compounds I.64-1 to I.64-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.64-1 to I.64-718 of Table I.64 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

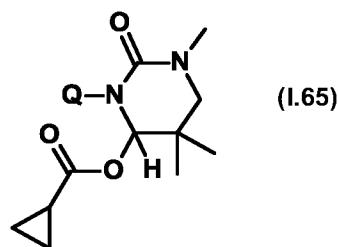


Table I.65: Preferred compounds of the formula (I.65) are the compounds I.65-1 to I.65-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.65-1 to I.65-718 of Table I.65 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

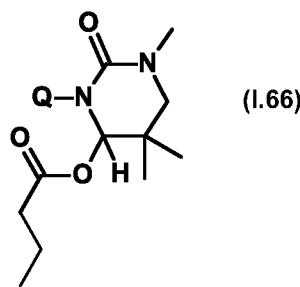


Table I.66: Preferred compounds of the formula (I.66) are the compounds I.66-1 to I.66-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.66-1 to I.66-718 of 5 Table I.66 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

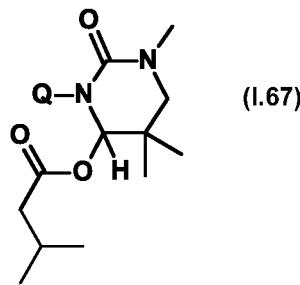


Table I.67: Preferred compounds of the formula (I.67) are the compounds I.67-1 to I.67-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.67-1 to I.67-718 of 10 Table I.67 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

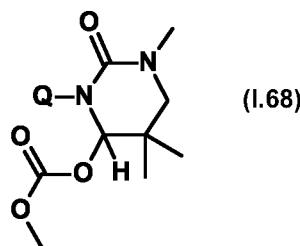
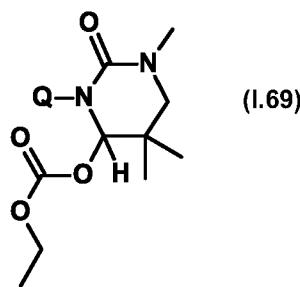
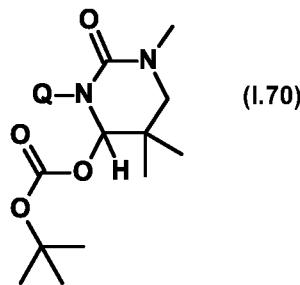


Table I.68: Preferred compounds of the formula (I.68) are the compounds I.68-1 to I.68-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.68-1 to I.68-718 of 15 Table I.68 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



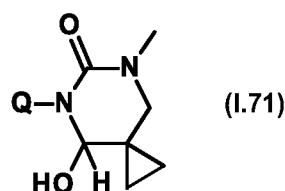
(I.69)

Table I.69: Preferred compounds of the formula (I.69) are the compounds I.69-1 to I.69-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.69-1 to I.69-718 of 5 Table I.69 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



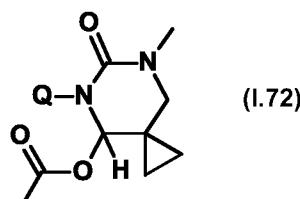
(I.70)

Table I.70: Preferred compounds of the formula (I.70) are the compounds I.70-1 to I.70-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.70-1 to I.70-718 of 10 Table I.70 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



(I.71)

15 Table I.71: Preferred compounds of the formula (I.71) are the compounds I.71-1 to I.71-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.71-1 to I.71-718 of Table I.1 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



(I.72)

Table I.72: Preferred compounds of the formula (I.72) are the compounds I.72-1 to I.72-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.72-1 to I.72-718 of Table I.72 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

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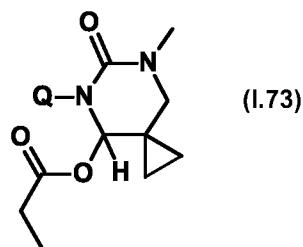


Table I.73: Preferred compounds of the formula (I.73) are the compounds I.73-1 to I.73-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.73-1 to I.73-718 of Table I.73 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

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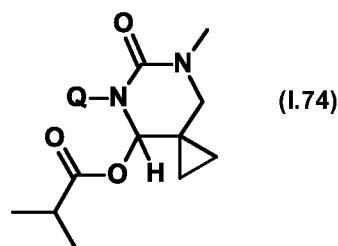


Table I.74: Preferred compounds of the formula (I.74) are the compounds I.74-1 to I.74-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.74-1 to I.74-718 of Table I.74 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

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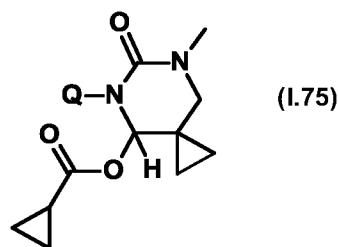


Table I.75: Preferred compounds of the formula (I.75) are the compounds I.75-1 to I.75-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.75-1 to I.75-718 of Table I.75 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

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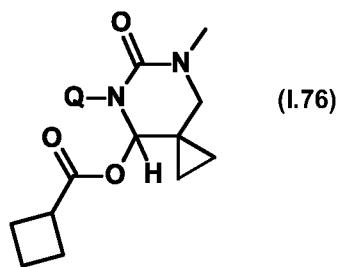


Table I.76: Preferred compounds of the formula (I.76) are the compounds I.76-1 to I.76-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.76-1 to I.76-718 of 5 Table I.76 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

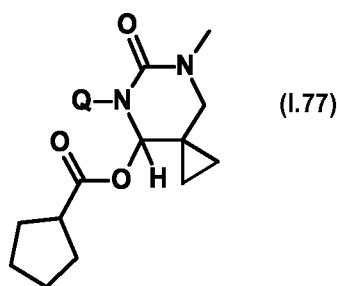
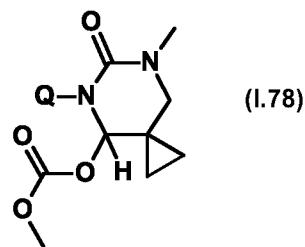


Table I.77: Preferred compounds of the formula (I.77) are the compounds I.77-1 to I.77-718 in which Q 10 has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.77-1 to I.77-718 of Table I.77 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



15 Table I.78: Preferred compounds of the formula (I.78) are the compounds I.78-1 to I.78-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.78-1 to I.78-718 of Table I.78 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

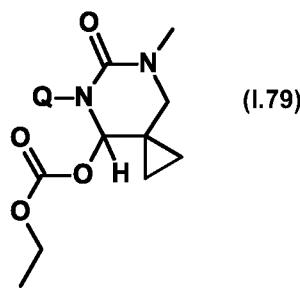


Table I.79: Preferred compounds of the formula (I.79) are the compounds I.79-1 to I.79-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.79-1 to I.79-718 of 5 Table I.79 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

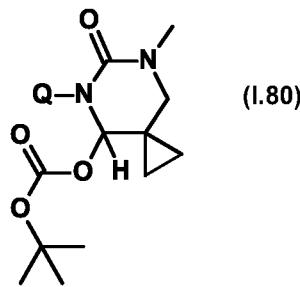
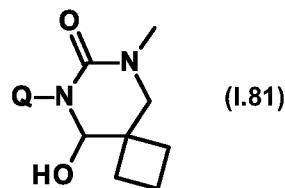


Table I.80: Preferred compounds of the formula (I.80) are the compounds I.80-1 to I.80-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.80-1 to I.80-718 of 10 Table I.80 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



15 Table I.81: Preferred compounds of the formula (I.81) are the compounds I.81-1 to I.81-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.81-1 to I.81-718 of Table I.1 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

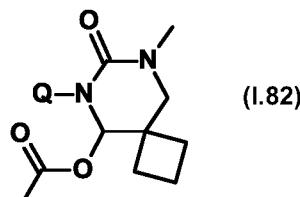


Table I.82: Preferred compounds of the formula (I.82) are the compounds I.82-1 to I.82-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.82-1 to I.82-718 of Table I.82 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

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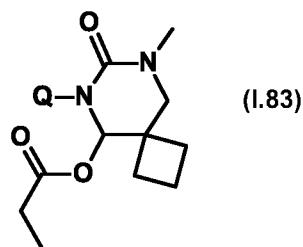


Table I.83: Preferred compounds of the formula (I.83) are the compounds I.83-1 to I.83-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.83-1 to I.83-718 of Table I.83 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

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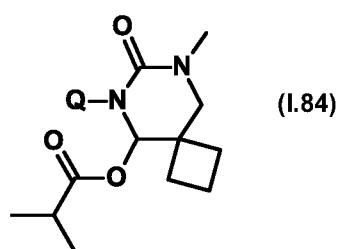


Table I.84: Preferred compounds of the formula (I.84) are the compounds I.84-1 to I.84-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.84-1 to I.84-718 of Table I.84 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

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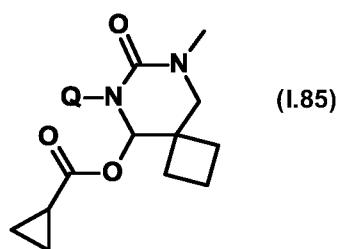


Table I.85: Preferred compounds of the formula (I.85) are the compounds I.85-1 to I.85-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.85-1 to I.85-718 of Table I.85 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

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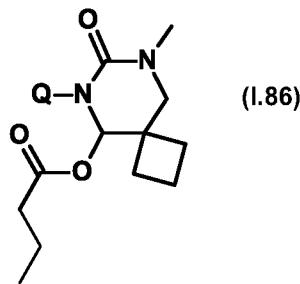


Table I.86: Preferred compounds of the formula (I.86) are the compounds I.86-1 to I.86-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.86-1 to I.86-718 of 5 Table I.86 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

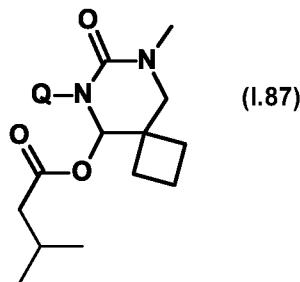
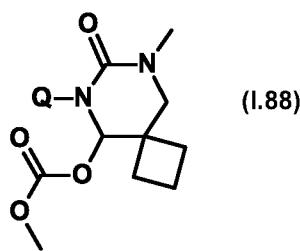


Table I.87: Preferred compounds of the formula (I.87) are the compounds I.87-1 to I.87-718 in which Q 10 has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.87-1 to I.87-718 of Table I.87 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



15 Table I.88: Preferred compounds of the formula (I.88) are the compounds I.88-1 to I.88-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.88-1 to I.88-718 of Table I.88 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

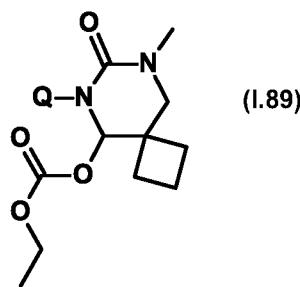


Table I.89: Preferred compounds of the formula (I.89) are the compounds I.89-1 to I.89-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.89-1 to I.89-718 of Table I.89 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

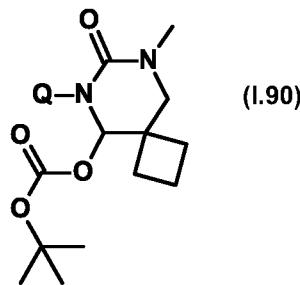


Table I.90: Preferred compounds of the formula (I.90) are the compounds I.90-1 to I.90-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.90-1 to I.90-718 of Table I.90 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

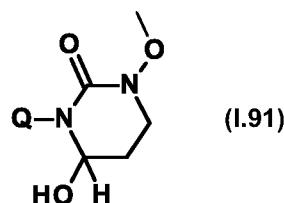


Table I.91: Preferred compounds of the formula (I.91) are the compounds I.91-1 to I.91-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.91-1 to I.91-718 of Table I.1 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

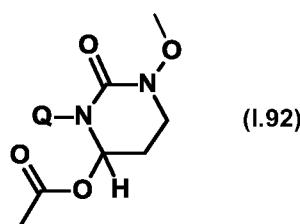


Table I.92: Preferred compounds of the formula (I.92) are the compounds I.92-1 to I.92-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.92-1 to I.92-718 of Table I.92 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

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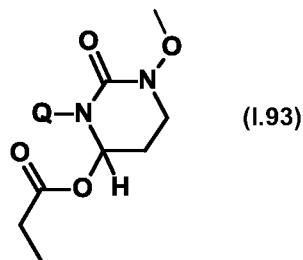


Table I.93: Preferred compounds of the formula (I.93) are the compounds I.93-1 to I.93-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.93-1 to I.93-718 of Table I.93 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

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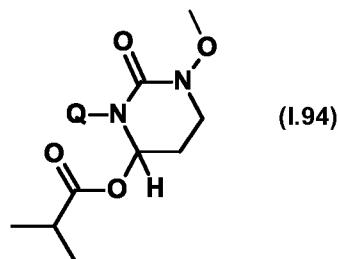


Table I.94: Preferred compounds of the formula (I.94) are the compounds I.94-1 to I.94-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.94-1 to I.94-718 of Table I.94 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

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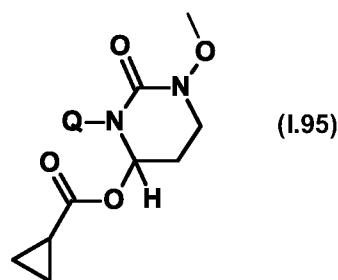
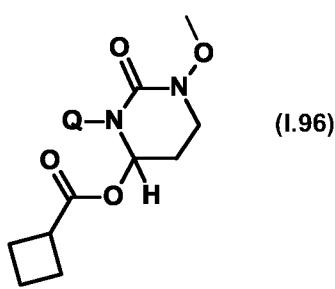


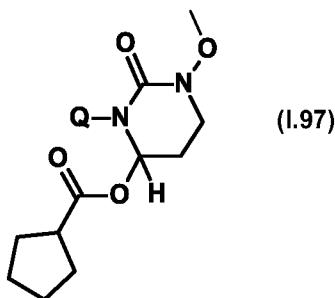
Table I.95: Preferred compounds of the formula (I.95) are the compounds I.95-1 to I.95-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.95-1 to I.95-718 of Table I.95 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

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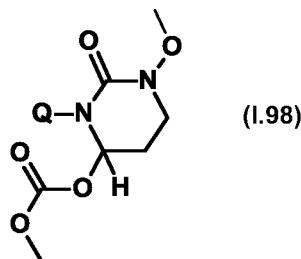
(I.96)

Table I.96: Preferred compounds of the formula (I.96) are the compounds I.96-1 to I.96-718 in which *Q* has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.96-1 to I.96-718 of Table I.96 are defined by the meaning of the respective entries Nos. 1 to 718 for *Q* of Table 1.



(I.97)

Table I.97: Preferred compounds of the formula (I.97) are the compounds I.97-1 to I.97-718 in which *Q* has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.97-1 to I.97-718 of Table I.97 are defined by the meaning of the respective entries Nos. 1 to 718 for *Q* of Table 1 above.



(I.98)

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Table I.98: Preferred compounds of the formula (I.98) are the compounds I.98-1 to I.98-718 in which *Q* has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.98-1 to I.98-718 of Table I.98 are defined by the meaning of the respective entries Nos. 1 to 718 for *Q* of Table 1 above.

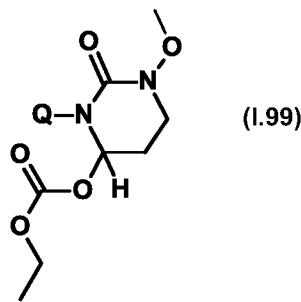


Table I.99: Preferred compounds of the formula (I.99) are the compounds I.99-1 to I.99-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.99-1 to I.99-718 of Table I.99 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

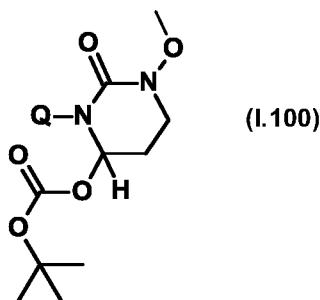
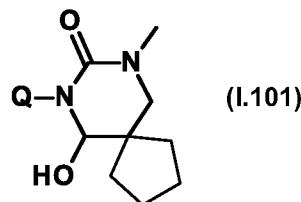


Table I.100: Preferred compounds of the formula (I.100) are the compounds I.100-1 to I.100-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.100-1 to I.100-718 of Table I.100 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



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Table I.101: Preferred compounds of the formula (I.101) are the compounds I.101-1 to I.101-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.101-1 to I.101-718 of Table I.101 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

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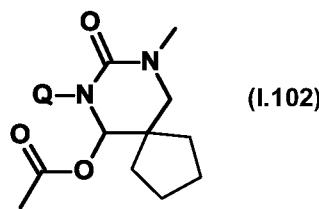
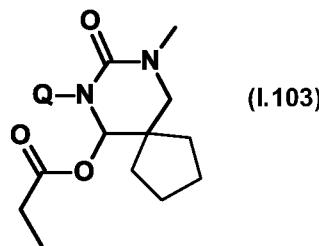
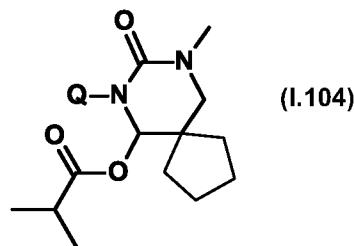


Table I.102: Preferred compounds of the formula (I.102) are the compounds I.102-1 to I.102-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.102-1 to 5 I.102-718 of Table I.102 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



10 Table I.103: Preferred compounds of the formula (I.103) are the compounds I.103-1 to I.103-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.103-1 to I.103-718 of Table I.103 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



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Table I.104: Preferred compounds of the formula (I.104) are the compounds I.104-1 to I.104-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.104-1 to 20 I.104-718 of Table I.104 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

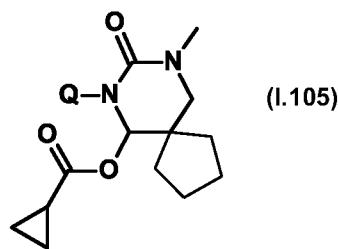
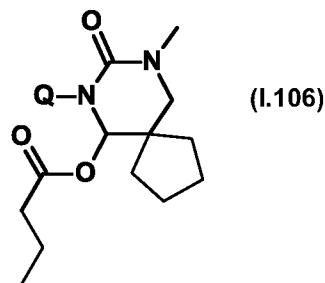
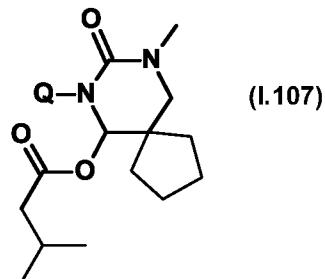


Table I.105: Preferred compounds of the formula (I.105) are the compounds I.105-1 to I.105-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.105-1 to 5 I.105-718 of Table I.105 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



10 Table I.106: Preferred compounds of the formula (I.106) are the compounds I.106-1 to I.106-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.106-1 to I.106-718 of Table I.106 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



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Table I.107: Preferred compounds of the formula (I.107) are the compounds I.107-1 to I.107-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.107-1 to I.107-718 of Table I.107 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of 20 Table 1 above.

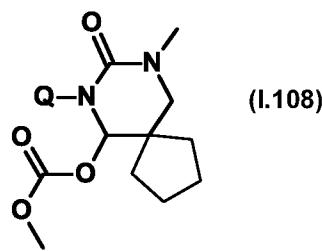
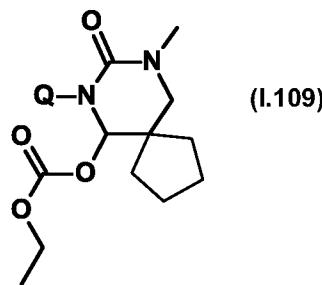
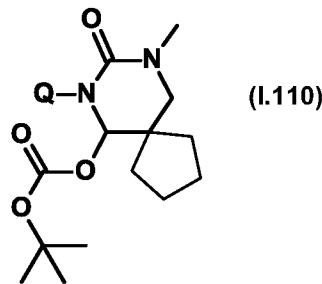


Table I.108: Preferred compounds of the formula (I.108) are the compounds I.108-1 to I.108-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.108-1 to 5 I.108-718 of Table I.108 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



10 Table I.109: Preferred compounds of the formula (I.109) are the compounds I.109-1 to I.109-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.109-1 to I.109-718 of Table I.109 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



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Table I.110: Preferred compounds of the formula (I.110) are the compounds I.110-1 to I.110-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.110-1 to I.110-718 of Table I.110 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of 20 Table 1 above.

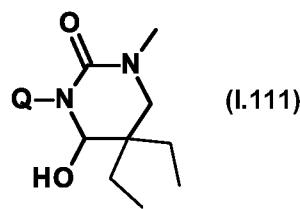
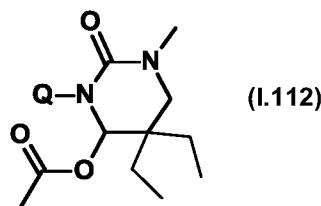
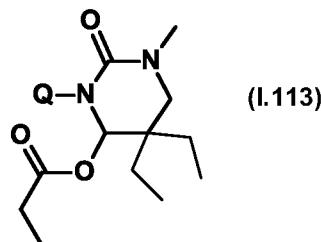


Table I.111: Preferred compounds of the formula (I.111) are the compounds I.111-1 to I.111-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.111-1 to 5 I.111-718 of Table I.111 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



10 Table I.112: Preferred compounds of the formula (I.112) are the compounds I.112-1 to I.112-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.112-1 to I.112-718 of Table I.112 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



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Table I.113: Preferred compounds of the formula (I.113) are the compounds I.113-1 to I.113-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.113-1 to 20 I.113-718 of Table I.113 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

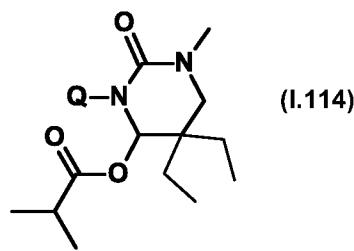
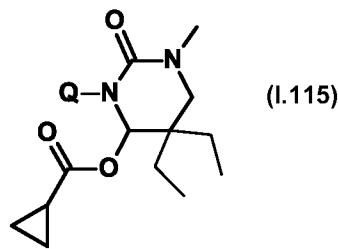
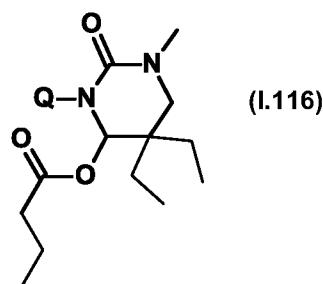


Table I.114: Preferred compounds of the formula (I.114) are the compounds I.114-1 to I.114-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.114-1 to 5 I.114-718 of Table I.114 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



10 Table I.115: Preferred compounds of the formula (I.115) are the compounds I.115-1 to I.115-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.115-1 to I.115-718 of Table I.115 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



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Table I.116: Preferred compounds of the formula (I.116) are the compounds I.116-1 to I.116-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.116-1 to I.116-718 of Table I.116 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of 20 Table 1.

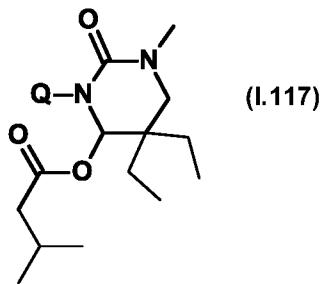
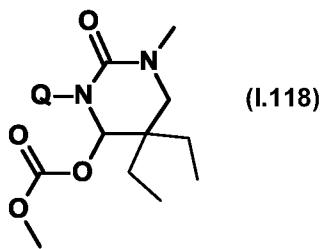
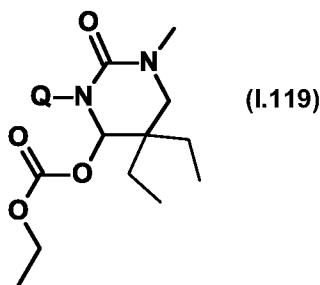


Table I.117: Preferred compounds of the formula (I.117) are the compounds I.117-1 to I.117-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.117-1 to 5 I.117-718 of Table I.117 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



10 Table I.118: Preferred compounds of the formula (I.118) are the compounds I.118-1 to I.118-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.118-1 to I.118-718 of Table I.118 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



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Table I.119: Preferred compounds of the formula (I.119) are the compounds I.119-1 to I.119-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.119-1 to I.119-718 of Table I.119 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of 20 Table 1.

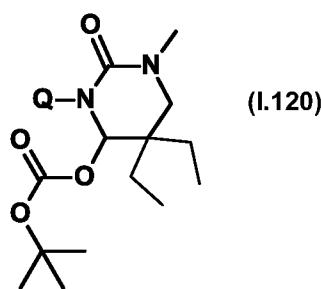
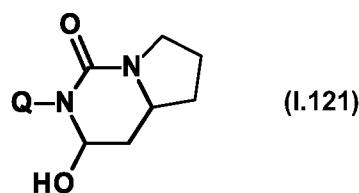
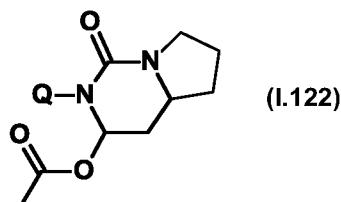


Table I.120: Preferred compounds of the formula (I.120) are the compounds I.120-1 to I.120-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.120-1 to 5 I.120-718 of Table I.120 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



10 Table I.121: Preferred compounds of the formula (I.121) are the compounds I.121-1 to I.121-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.121-1 to I.121-718 of Table I.121 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



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Table I.122: Preferred compounds of the formula (I.122) are the compounds I.122-1 to I.122-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.122-1 to I.122-718 of Table I.122 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of 20 Table 1 above.

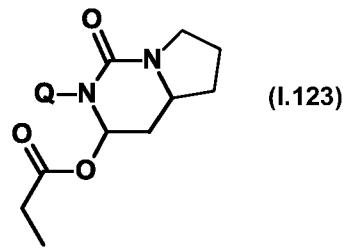
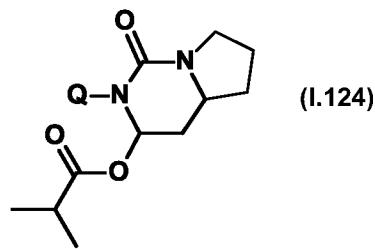
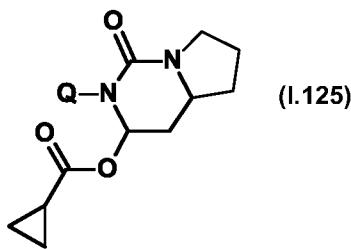


Table I.123: Preferred compounds of the formula (I.123) are the compounds I.123-1 to I.123-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.123-1 to 5 I.123-718 of Table I.123 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



10 Table I.124: Preferred compounds of the formula (I.124) are the compounds I.124-1 to I.124-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.124-1 to I.124-718 of Table I.124 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



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Table I.125: Preferred compounds of the formula (I.125) are the compounds I.125-1 to I.125-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.125-1 to I.125-718 of Table I.125 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of 20 Table 1 above.

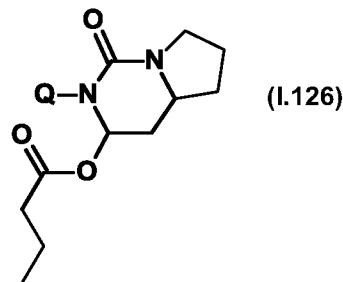
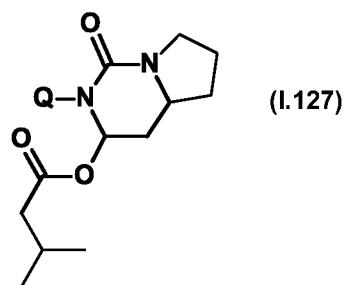
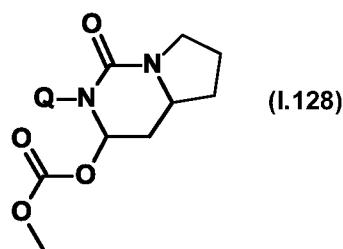


Table I.126: Preferred compounds of the formula (I.126) are the compounds I.126-1 to I.126-718 in which *Q* has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.126-1 to 5 I.126-718 of Table I.126 are defined by the meaning of the respective entries Nos. 1 to 718 for *Q* of Table 1.



10 Table I.127: Preferred compounds of the formula (I.127) are the compounds I.127-1 to I.127-718 in which *Q* has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.127-1 to I.127-718 of Table I.127 are defined by the meaning of the respective entries Nos. 1 to 718 for *Q* of Table 1 above.



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Table I.128: Preferred compounds of the formula (I.128) are the compounds I.128-1 to I.128-718 in which *Q* has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.128-1 to I.128-718 of Table I.128 are defined by the meaning of the respective entries Nos. 1 to 718 for *Q* of 20 Table 1 above.

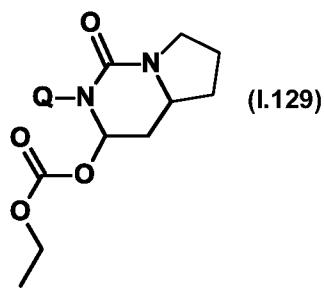
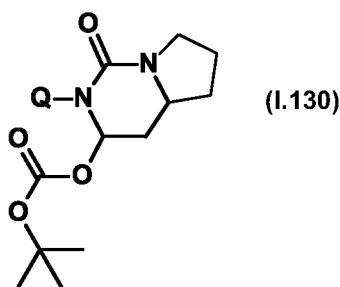
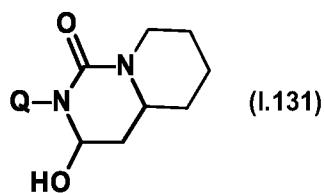


Table I.129: Preferred compounds of the formula (I.129) are the compounds I.129-1 to I.129-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.129-1 to 5 I.129-718 of Table I.129 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



10 Table I.130: Preferred compounds of the formula (I.130) are the compounds I.130-1 to I.130-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.130-1 to I.130-718 of Table I.130 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



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Table I.131: Preferred compounds of the formula (I.131) are the compounds I.131-1 to I.131-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.131-1 to 20 I.131-718 of Table I.131 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

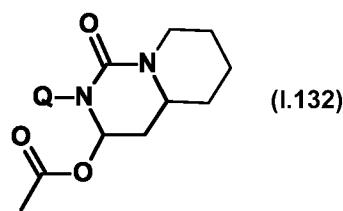
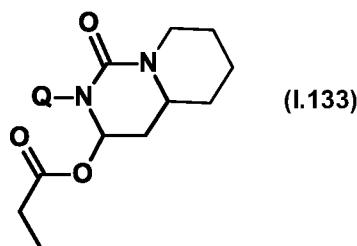
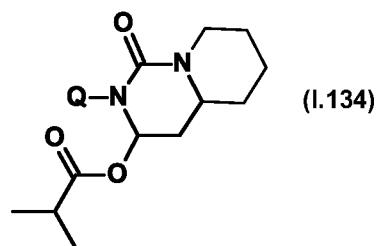


Table I.132: Preferred compounds of the formula (I.132) are the compounds I.132-1 to I.132-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.132-1 to 5 I.132-718 of Table I.132 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



10 Table I.133: Preferred compounds of the formula (I.133) are the compounds I.133-1 to I.133-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.133-1 to I.133-718 of Table I.133 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



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Table I.134: Preferred compounds of the formula (I.134) are the compounds I.134-1 to I.134-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.134-1 to I.134-718 of Table I.134 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of 20 Table 1.

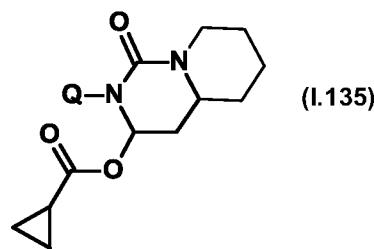
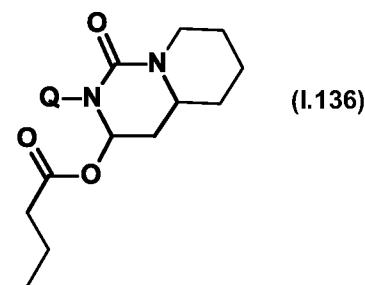
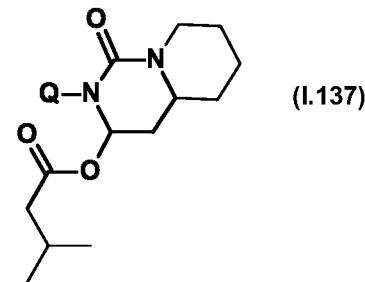


Table I.135: Preferred compounds of the formula (I.135) are the compounds I.135-1 to I.135-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.135-1 to 5 I.135-718 of Table I.135 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

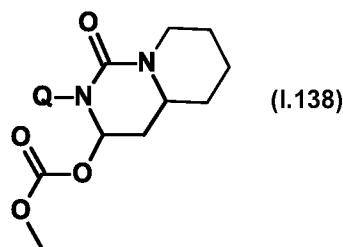


10 Table I.136: Preferred compounds of the formula (I.136) are the compounds I.136-1 to I.136-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.136-1 to I.136-718 of Table I.136 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



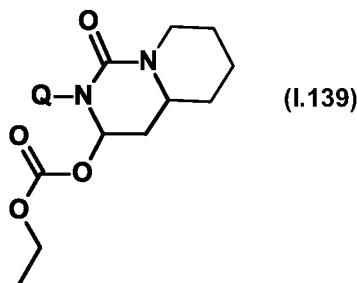
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Table I.137: Preferred compounds of the formula (I.137) are the compounds I.137-1 to I.137-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.137-1 to I.137-718 of Table I.137 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of 20 Table 1 above.



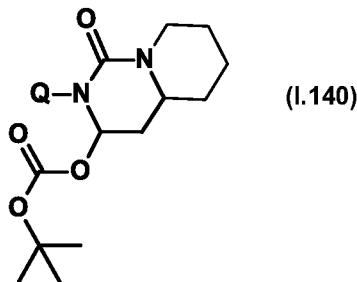
(I.138)

Table I.138: Preferred compounds of the formula (I.138) are the compounds I.138-1 to I.138-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.138-1 to 5 I.138-718 of Table I.138 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



(I.139)

10 Table I.139: Preferred compounds of the formula (I.139) are the compounds I.139-1 to I.139-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.139-1 to I.139-718 of Table I.139 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



(I.140)

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Table I.140: Preferred compounds of the formula (I.140) are the compounds I.140-1 to I.140-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.140-1 to 20 I.140-718 of Table I.140 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

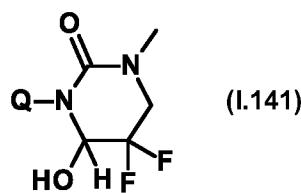


Table I.141: Preferred compounds of the formula (I.141) are the compounds I.141-1 to I.141-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.141-1 to I.141-718 of Table I.1 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

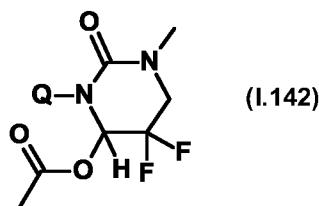
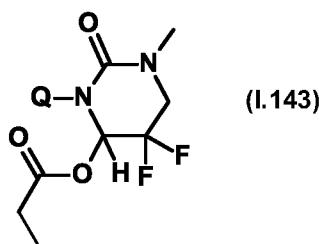


Table I.142: Preferred compounds of the formula (I.142) are the compounds I.142-1 to I.142-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.142-1 to I.142-718 of Table I.142 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



15

Table I.143: Preferred compounds of the formula (I.143) are the compounds I.143-1 to I.143-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.143-1 to I.143-718 of Table I.143 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.

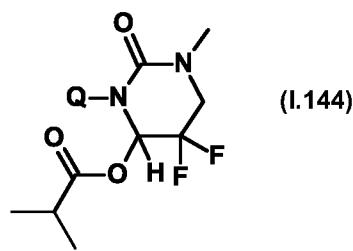
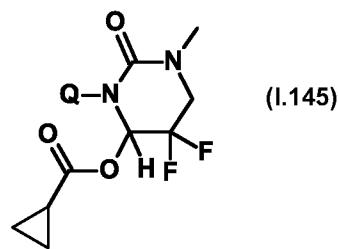
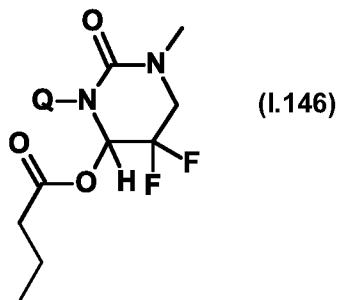


Table I.144: Preferred compounds of the formula (I.144) are the compounds I.144-1 to I.144-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.144-1 to 5 I.144-718 of Table I.144 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1.



10 Table I.145: Preferred compounds of the formula (I.145) are the compounds I.145-1 to I.145-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.145-1 to I.145-718 of Table I.145 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



15

Table I.146: Preferred compounds of the formula (I.146) are the compounds I.146-1 to I.146-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.146-1 to I.146-718 of Table I.146 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of 20 Table 1.

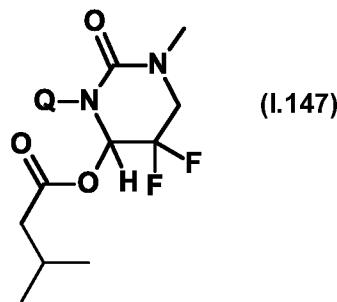
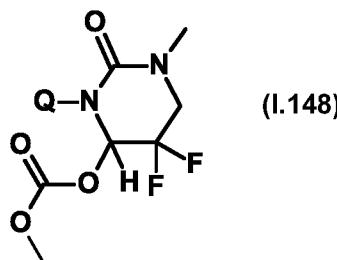
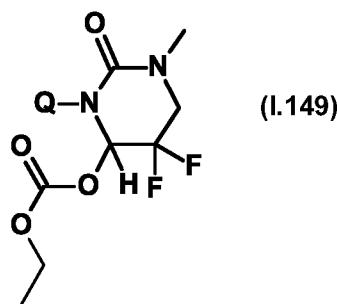


Table I.147: Preferred compounds of the formula (I.147) are the compounds I.147-1 to I.147-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.147-1 to 5 I.147-718 of Table I.147 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



10 Table I.148: Preferred compounds of the formula (I.148) are the compounds I.148-1 to I.148-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.148-1 to I.148-718 of Table I.148 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.



15

Table I.149: Preferred compounds of the formula (I.149) are the compounds I.149-1 to I.149-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.149-1 to I.149-718 of Table I.149 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 20 1.

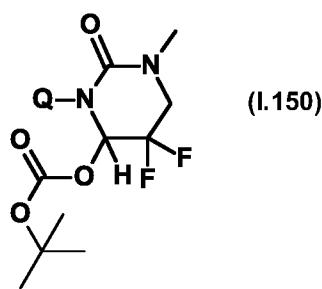


Table I.150: Preferred compounds of the formula (I.150) are the compounds I.150-1 to I.150-718 in which Q has the meanings of Table 1 indicated in the respective row. Thus, the compounds I.150-1 to 5 I.150-718 of Table I.150 are defined by the meaning of the respective entries Nos. 1 to 718 for Q of Table 1 above.

Spectroscopic data of selected table examples:

10 The spectroscopic data listed hereinafter for selected table examples were evaluated via conventional ^1H NMR interpretation or via NMR peak list methods.

A. Conventional ^1H NMR interpretation

15 Example No. I.1-72

$^1\text{H-NMR}$ (400 MHz, CDCl_3 δ , ppm) 6.51 (s, 1H), 5.69 (m, 1H), 3.83 (m, 1H), 3.21 (m, 1H), 3.06 (s, 3H), 2.33 (s, 3H), 2.19-2.16 (m, 2H).

Example No. I.1-77

20 $^1\text{H-NMR}$ (400 MHz, CDCl_3 δ , ppm) 6.68 (s, 1H), 5.72 (m, 1H), 5.79 (m, 1H), 3.39 (m, 1H), 3.18 (m, 1H), 3.00 (s, 3H), 2.21-2.17 (m, 2H), 1.32 (s, 9H).

Example No. I.1-137

25 $^1\text{H-NMR}$ (400 MHz, CDCl_3 δ , ppm) 5.58 (m, 1H), 4.37 (bs, 1H), 3.77 (dt, 1H), 3.21 (m, 1H), 3.06 (s, 3H), 2.57 (s, 3H), 2.21-2.19 (m, 2H).

Example No. I.1-139

30 $^1\text{H-NMR}$ (400 MHz, CDCl_3 δ , ppm) 5.58 (m, 1H), 4.15 (bs, 1H), 3.78 (dt, 1H), 3.23-3.18 (m, 2H), 3.06 (s, 3H), 2.21-2.13 (m, 2H), 1.40 (d, 6H).

30

Example No. I.1-142

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 5.59 (m, 1H), 4.20 (m, 1H), 3.79 (m, 1H), 3.23 (m, 1H), 3.06 (s, 3H), 3.02 (m, 1H), 2.14 (m, 1H), 1.43 (s, 9H).

Example No. I.1-143

5 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 5.55 (m, 1H), 4.12 (m, 1H), 3.76 (dt, 1H), 3.19 (m, 1H), 3.05 (s, 3H), 2.19-2.11 (m, 3H), 1.26-1.21 (m, 4H).

Example No. I.1-157

10 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.63 (s, 1H), 5.70 (m, 1H), 4.31 (m, 1H), 3.79 (dt, 1H), 3.18 (m, 1H), 3.04 (s, 3H), 2.37 (s, 3H), 2.14-2.12 (m, 2H).

Example No. I.1-177:

15 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 5.24 (m, 1H), 4.13 (br. s, 1H, OH), 3.83-3.76 (m, 1H), 3.26-3.19 (m, 1H), 3.01 (s, 3H), 2.25-2.07 (m, 2H), 1.97 (s, 3H), 1.37 (s, 9H).

15

Example No. I.1-193

20 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.97 (s, 1H), 5.73 (m, 1H), 4.20 (m, 1H), 3.81 (m, 1H), 3.18 (m, 1H), 3.05 (s, 3H), 2.20-2.14 (m, 2H), 1.77 (s, 6 H).

20 Example No. I.1-199

25 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.65 (s, 1H), 7.72-7.62 (m, 2H), 5.05-5.01 (m, 2H), 4.33 (m, 1H), 3.80 (m, 1H), 3.18 (m, 1H), 3.04 (s, 3H), 2.38 (d, 2H), 2.14-2.11 (m, 2H), 1.30 (s, 6H).

Example No. I.1-200

25 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.70 (s, 1H), 5.70 (m, 1H), 4.32 (m, 1H), 3.78 (m, 1H), 4.42 (m, 2H), 3.32 (s, 3H), 3.15 (m, 1H), 3.04 (s, 3H), 2.19-2.09 (m, 2H), 1.32 (s, 6H).

Example No. I.1-206

30 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 5.37 (m, 1H), 4.13 (m, 1H), 3.79 (dt, 1H), 3.21 (m, 1H), 3.04 (s, 3H), 2.21 (m, 1H), 2.10 (m, 1H), 1.38 (9H).

Example No. I.1-207

35 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 5.30 (m, 1H), 3.82-3.72 (m, 2H), 3.24 (m, 1H), 3.03 (s, 3H), 2.23 (m, 1H), 2.10 (m, 1H), 1.45 (s, 9H).

35

Example No. I.1-315:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.35 (s, 1H), 5.55 (m, 1H), 4.91 (br. s, 1H, OH), 3.84 (s, 3H), 3.81-3.73 (m, 1H), 3.15-3.11 (m, 1H), 3.02 (s, 3H), 2.18-2.04 (m, 2H), 1.36 (s, 9H).

Example No. I.1-348

5 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.18 (s, 1H), 5.56 (m, 1H), 5.00 (br. s, 1H, OH), 3.73-3.79 (m, 1H), 3.12-3.16 (m, 1H), 3.02 (s, 3H), 2.05-2.12 (m, 2H), 1.78-1.80 (m, 1H), 0.91-0.94 (m, 2H), 0.70-0.74 (m, 2H).

Example No. I.1-354

10 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 9.50 (br. s, 1H, NH), 6.40 (s, 1H), 5.60 (m, 1H), 4.90 (br. s, 1H, OH), 3.70-3.85 (m, 1H), 3.10-3.20 (m, 1H), 3.03 (s, 3H), 2.00-2.20 (m, 2H), 1.30 (s, 9H).

Example No. I.1-357

15 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.54 (s, 1H), 5.56 (d, 1H), 4.70 (br. s, 1H, OH), 3.74 (s, 3H), 3.80-3.74 (m, 1H), 3.10-3.20 (m, 1H), 3.03 (s, 3H), 2.42 (s, 3H), 2.00-2.20 (m, 2H).

Example No. I.1-358

19 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.96 (s, 1H), 5.60 (d, 1H), 4.44 (br. s, 1H, OH), 3.87 (s, 3H), 3.80-3.70 (m, 1H), 3.10-3.20 (m, 1H), 3.03 (s, 3H), 2.05-2.20 (m, 2H).

20

Example No. I.1-441

25 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.27 (m, 1H), 7.74 (d, 1H), 7.63 (dd, 1H), 7.03 (dd, 1H), 5.61 (m, 1H), 5.58 (m, 1H), 3.85 (dt, 1H), 3.20 (m, 1H), 3.05 (s, 3H), 2.21-2.12 (m, 2H).

Example No. I.1-442

29 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.89 (d, 1H), 8.06 (d, 1H), 7.41 (dd, 1H), 5.82 (m, 1H), 5.23 (bs, 1H), 3.89 (m, 1H), 3.23 (m, 1H), 3.07 (s, 3H), 2.24-2.19 (m, 2H).

30

Example No. I.1-443

34 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.89 (s, 1H), 8.53 (d, 1H), 8.01 (d, 1H), 5.84 (m, 1H), 4.91 (m, 1H), 3.82 (m, 1H), 3.22 (m, 1H), 3.07 (s, 3H), 2.20-2.17 (m, 2H).

35 Example No. I.1-445

39 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.65 (d, 2H), 7.07 (t, 1H), 5.65 (m, 1H), 4.91 (m, 1H), 3.72 (dt, 1H), 3.30 (m, 1H), 3.06 (s, 3H), 2.15 (m, 1H), 2.14 (m, 1H).

Example No. I.1-447

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.12 (d, 1H), 7.58 (d, 1H), 5.69 (bs, 1H), 5.57 (m, 1H), 3.83 (dt, 1H), 3.19 (m, 1H), 3.04 (s, 3H), 2.21-2.09 (m, 2H).

5

Example No. I.1-450

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.15 (d, 1H), 7.58 (s, 1H), 6.88 (d, 1H), 5.70 (bs, 1H), 5.58 (m, 1H), 3.83 (dt, 1H), 3.19 (m, 1H), 3.05 (s, 3H), 2.64 (q, 2H), 2.21-2.08 (m, 2H), 1.25 (t, 3H).

10 Example No. I.1-453

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.75 (s, 1H), 8.24 (s, 1H), 5.67 (m, 1H), 4.82 (m, 1H), 3.84 (m, 1H), 3.22 (m, 1H), 3.06 (s, 3H), 2.18-2.15 (m, 2H).

Example No. I.1-462

15 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.17-8.18 (s, 1H), 7.74-7.75 (s, 1H), 7.05 (m, 1H), 5.70 (m, 1H), 5.60 (m, 1H), 3.80-3.90 (m, 1H), 3.20 (m, 1H), 3.05 (s, 3H), 2.10-2.20 (m, 2H), 1.32 s, 9H.

Example No. I.1-464

20 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.52 (s, 1H), 8.24 (s, 1H), 5.67-5.68 (m, 1H), 4.79-4.80 (m, 1H), 3.84-3.85 (m, 1H), 3.25 (m, 1H), 3.06 (s, 3H), 2.15-2.19 (m, 2H).

Example No. I.1-476

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.09 (m, 1H), 7.60 (d, 1H), 7.46 (dd, 1H), 5.65 (m, 1H), 5.56 (m, 1H), 3.82 (m, 1H), 3.20 (m, 1H), 3.03 (s, 3H), 3.28 (s, 3H), 2.21-2.09 (m, 2H).

25

Example No. I.1-486

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.24 (s, 1H), 7.78 (s, 1H), 5.32 (m, 1H), 4.85 (m, 1H), 3.78 (m, 1H), 3.27 (m, 1H), 3.03 (s, 3H), 2.27 (m, 1H), 2.13 (m, 1H).

30 Example No. I.1-488

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.12 (d, 1H), 7.73 (dd, 1H), 7.39 (dt, 1H), 5.57 (m, 1H), 5.24 (m, 1H), 3.84 (dt, 1H), 3.20 (m, 1H), 3.04 (s, 3H), 2.22-2.10 (m, 2H).

Example No. I.1-489

35 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.28 (s, 1H), 8.03 (s, 1H), 5.62 (m, 1H), 4.96 (m, 1H), 3.83 (m, 1H), 2.23 (m, 1H), 3.05 (s, 3H), 2.19-2.13 (m, 2H).

Example No. I.1-495

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.59 (s, 2H), 5.61 (m, 1H), 4.59 (m, 1H), 3.72 (dt, 1H), 3.28 (m, 1H), 3.08 (s, 3H), 2.28 (m, 1H), 2.15 (m, 1H).

5 Example No. I.1-501:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.83 (s, 1H), 8.00 (s, 1H), 5.79 (m, 1H), 5.09 (br. s, 1H, OH), 3.88-3.79 (m, 1H), 3.26-3.19 (m, 1H), 3.07 (s, 3H), 2.20-2.15 (m, 2H), 1.35 (s, 9H).

Example No. I.1-503

10 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.82 (s, 1H), 8.18 (s, 1H), 5.81 (m, 1H), 4.93 (m, 1H), 3.84 (m, 1H), 3.25 (m, 1H), 3.07 (s, 3H), 2.20-2.16 (m, 2H), 1.71 (d, 3H), 1.66 (d, 3H).

Example No. I.1-506

15 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 9.00 (s, 1H), 8.48 (s, 1H), 5.93 (d, 1H), 4.67 (m, 1H), 3.84 (dt, 1H), 3.25 (m, 1H), 3.09 (s, 3H), 2.23-2.19 (m, 2H).

Example No. I.1-517

20 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.67 (s, 1H), 8.15 (s, 1H), 5.89 (m, 1H), 4.72 (m, 1H), 3.83 (m, 1H), 3.22 (m, 1H), 3.07 (s, 3H), 2.21-2.16 (m, 2H).

25

Example No. I.1-518

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.77 (s, 1H), 7.88 (s, 1H), 5.79 (m, 1H), 5.01 (bs, 1H), 3.80 (m, 1H), 3.21 (m, 1H), 3.06 (s, 3H), 2.49 (s, 3H), 2.18-2.15 (m, 2H).

30

Example No. I.1-546:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.35 (s, 1H), 5.54 (m, 1H), 4.39 (m, 1H), 3.84 (s, 3H), 3.80-3.74 (m, 1H), 3.14-3.10 (m, 1H), 3.02 (s, 3H), 2.15-2.05 (m, 2H), 1.36 (s, 9H).

35 Example No. I.1-614

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 7.38 (d, 1H), 6.91 (d, 1H), 6.02 (m, 1H), 5.15 (m, 1H), 3.79 (m, 1H), 3.18 (m, 1H), 3.09 (s, 3H), 2.22-2.17 (m, 2H).

Example No. I.1-616

35 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 7.01 (s, 1H), 5.95 (m, 1H), 5.14 (m, 1H), 3.78 (m, 1H), 3.17 (m, 1H), 3.08 (s, 3H), 2.35 (s, 3H), 2.18-2.14 (m, 2H).

Example No. I.1-617

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.45 (s, 1H), 5.98 (m, 1H), 5.32 (m, 1H), 3.78 (m, 1H), 3.18 (m, 1H), 3.08 (s, 3H), 2.66 (q, 2H), 2.20-2.17 (m, 2H), 1.25 (t, 3H).

5 Example No. I.1-619

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 5.92 (m, 1H), 5.30 (m, 1H), 7.74 (m, 1H), 3.15 (m, 1H), 3.07 (s, 3H), 2.23 (s, 3H), 2.19 (s, 3H), 2.16-2.15 (m, 2H).

Example No. I.1-620

10 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.45 (s, 1H), 5.97 (m, 1H), 5.38 (m, 1H), 3.76 (m, 1H), 3.17 (m, 1H), 3.08 (s, 3H), 2.92 (m, 1H), 2.21-2.17 (m, 2H), 1.25 (d, 6H).

Example No. I.1-621

15 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 7.03 (s, 1H), 5.96 (m, 1H), 5.21 (m, 1H), 3.77 (m, 1H), 3.18 (m, 1H), 3.09 (m, 1H), 3.08 (s, 3H), 2.18-2.15 (m, 2H), 1.31 (d, 6H).

Example No. I.1-622

20 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.47 (s, 1H), 5.97 (m, 1H), 5.41 (m, 1H), 3.75 (m, 1H), 3.17 (m, 1H), 3.08 (s, 3H), 2.21-2.17 (m, 2H), 1.29 (s, 9H).

20

Example No. I.1-623

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 7.04 (s, 1H), 5.96 (m, 1H), 5.18 (m, 1H), 3.78 (m, 1H), 3.16 (m, 1H), 3.08 (s, 3H), 2.19-2.14 (m, 2H), 1.36 (s, 9H).

25 Example No. I.1-624

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 7.78-7.72 (m, 2H), 7.39 (m, 1H), 7.25 (m, 1H), 6.18 (m, 1H), 5.25 (m, 1H), 3.84 (m, 1H), 3.22 (m, 1H), 3.12 (s, 3H), 2.26-2.23 (m, 2H).

Example No. I.1-625

30 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.44 (s, 1H), 5.94 (m, 1H), 5.10 (m, 1H), 3.75 (m, 1H), 3.17 (m, 1H), 3.07 (s, 3H), 2.20-2.15 (m, 2H), 1.93 (m, 1H), 0.90-0.75 (m, 4H).

Example No. I.1-626

35 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 7.04 (s, 1H), 5.95 (m, 1H), 5.17 (bs, 1H), 3.75 (m, 1H), 3.16 (m, 1H), 3.07 (s, 3H), 2.18-2.14 (m, 2H), 1.93 (m, 1H), 0.95-0.93 (m, 2H), 0.70-0.67 (m, 2H).

Example No. I.1-629

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 7.74 (s, 1H), 7.63 (d, 1H), 7.34 (d, 1H), 6.17 (m, 1H), 5.10 (bs, 1H), 3.84 (m, 1H), 3.21 (m, 1H), 3.12 (s, 3H), 2.28-2.23 (m, 2H).

Example No. I.1-630

5 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 7.65 (dd, 1H), 7.45 (dd, 1H), 7.10 (dt, 1H), 6.15 (m, 1H), 5.12 (m, 1H), 3.84 (m, 1H), 3.21 (m, 1H), 3.12 (s, 3H), 2.25-2.22 (m, 2H).

Example No. I.1-632

10 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 7.32 (s, 1H), 6.10 (m, 1H), 4.72 (m, 1H), 3.82 (m, 1H), 3.21 (m, 1H), 3.10 (s, 3H), 2.22-2.20 (m, 2H).

Example No. I.1-633

15 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 7.69 (m, 1H), 6.07 (m, 1H), 4.81 (m, 1H), 3.82 (m, 1H), 3.21 (m, 1H), 3.10 (s, 3H), 2.23-2.20 (m, 2H).

15

Example No. I.1-709:

1H-NMR (400 MHz, CDCl₃ δ, ppm) 5.59 (m, 1H), 4.36 (m, 1H), 3.74-3.69 (m, 1H), 3.62 (d, 1H), 3.17-3.11 (m, 1H), 3.11 (d, 1H), 3.00 (s, 3H), 2.15-2.05 (m, 2H), 1.44 (s, 3H), 1.37 (s, 3H).

20 Example No. I.2-449:

1H-NMR (400 MHz, CDCl₃ δ, ppm) 8.48 (d, 1H), 8.12 (s, 1H), 7.21 (d, 1H), 7.18 (t, 1H), 3.71-3.64 (m, 1H), 3.35-3.28 (m, 1H), 3.10 (s, 3H), 2.32-2.25 (m, 2H), 2.05 (s, 3H).

Example No. I.3-449:

25 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.47 (d, 1H), 8.11 (s, 1H), 7.22 (d, 1H), 7.17 (t, 1H), 3.72-3.64 (m, 1H), 3.33-3.28 (m, 1H), 3.10 (s, 3H), 2.34-2.30 (m, 2H), 2.29-2.25 (m, 2H), 1.13 (t, 3H).

Example No. I.3-464:

30 ¹H-NMR (400 MHz, DMSO δ, ppm) 8.76 (s, 1H), 8.15 (s, 1H), 6.94-6.95 (m, 1H), 3.50-3.60 (m, 1H), 3.33-3.40 (m, 1H), 2.97 (s, 3H), 2.10-2.35 (m, 4H), 0.98-1.02 (t, 3H).

Example No. I.4-290:

35 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.79 (m, 1H), 6.24 (s, 1H), 3.68-3.59 (m, 1H), 3.28-3.22 (m, 1H), 3.08 (s, 3H), 2.38-2.30 (m, 2H), 2.29-2.23 (m, 2H), 1.70-1.62 (m, 2H), 1.30 (s, 9H), 0.93 (t, 3H).

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Example No. I.4-449:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.47 (d, 1H), 8.11 (s, 1H), 7.23 (d, 1H), 7.17 (t, 1H), 3.72-3.65 (m, 1H), 3.33-3.28 (m, 1H), 3.10 (s, 3H), 2.31-2.24 (m, 2H), 1.64-1.58 (m, 2H), 0.93 (t, 3H).

Example No. I.5-162:

5 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.82 (m, 1H), 6.57 (s, 1H), 3.68-3.59 (m, 1H), 3.27-3.21 (m, 1H), 3.07 (s, 3H), 2.60-2.53 (m, 1H), 2.28-2.20 (m, 2H), 1.31 (s, 9H), 1.16 (t, 3H).

Example No. I.5-449:

10 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.46 (d, 1H), 8.11 (s, 1H), 7.21 (d, 1H), 7.14 (t, 1H), 3.72-3.64 (m, 1H), 3.34-3.29 (m, 1H), 3.10 (s, 3H), 2.57-2.49 (sept, 1H), 2.34-2.24 (m, 2H), 1.14 (d, 3H), 1.11 (d, 3H).

Example No. I.6-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.79 (m, 1H), 6.55 (s, 1H), 3.65-3.56 (m, 1H), 3.27-3.21 (m, 1H), 3.07 (s, 3H), 2.30-2.17 (m, 2H), 1.31 (s, 9H), 1.16 (s, 9H).

Example No. I.7-290:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.80 (m, 1H), 6.23 (s, 1H), 3.68-3.59 (m, 1H), 3.29-3.22 (m, 1H), 3.08 (s, 3H), 2.29-2.23 (m, 2H), 2.24-2.19 (m, 2H), 2.13-2.05 (m, 1H), 1.30 (s, 9H), 0.94 (d, 6H).

5 Example No. I.7-449:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.46 (d, 1H), 8.11 (s, 1H), 7.21 (d, 1H), 7.18 (t, 1H), 3.72-3.64 (m, 1H), 3.35-3.28 (m, 1H), 3.10 (s, 3H), 2.35-2.28 (m, 2H), 2.19-2.15 (m, 2H), 2.10-2.00 (sept, 1H), 0.92 (d, 3H), 0.90 (d, 3H).

10 Example No. I.20-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.70 (m, 1H), 6.58 (s, 1H), 5.30 (m, 1H), 3.70-3.80 (m, 1H), 3.20-3.30 (m, 1H), 3.03 (s, 3H), 2.20-2.30 (m, 2H), 1.50 (s, 9H), 1.31 (s, 9H).

Example No. I.41-86

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 7.91-7.89 (m, 2H), 7.44-7.36 (m, 3H), 7.07 (s, 1H), 5.81 (m, 1H), 3.82 (m, 1H), 3.30-3.21 (m, 2H), 3.08 (s, 3H), 2.23-2.20 (m, 2H).

Example No. I.41-441

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.27 (m, 1H), 7.67-7.64 (m, 2H), 7.03 (m, 1H), 5.57 (m, 1H), 5.42 (m, 1H), 3.88 (m, 1H), 3.03 (s, 3H), 2.22 (m, 1H), 1.93 (m, 1H), 1.34 (d, 3H).

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Example No. I.41-442

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.89 (m, 1H), 7.99 (d, 1H), 7.41 (m, 1H), 5.78 (m, 1H), 5.11 (m, 1H), 3.93 (m, 1H), 3.04 (s, 3H), 2.28 (m, 1H), 1.98 (m, 1H), 1.36 (d, 3H).

25 Example No. I.41-449:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.44 (d, 1H), 8.05 (m, 1H), 7.21 (m, 1H), 5.63 (m, 1H), 4.99 (br. s, 1H, OH), 3.93-3.84 (m, 1H), 3.04 (s, 3H), 2.27-2.22 (m, 1H), 1.98-1.89 (m, 1H), 1.36 (d, 3H).

Example No. I.41-476

30 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.08 (d, 1H), 7.54 (d, 1H), 7.46 (dd, 1H), 5.51 (m, 2H), 3.86 (m, 1H), 3.02 (s, 3H), 2.28 (s, 3H), 2.20 (m, 1H), 1.92 (m, 1H), 1.32 (d, 3H).

Example No. I.41-495

35 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.58 (s, 2H), 5.57 (m, 1H), 4.52 (m, 1H), 3.78 (m, 1H), 3.05 (s, 3H), 2.27 (m, 1H), 2.06 (m, 1H), 1.32 (d, 3H).

Example No. I.41-506

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.99 (s, 1H), 8.37 (s, 1H), 5.89 (m, 1H), 4.58 (m, 1H), 3.86 (m, 1H), 3.06 (s, 3H), 2.30 (m, 1H), 1.98 (m, 1H), 1.35 (d, 3H).

Example No. I.41-517

5 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.67 (s, 1H), 8.04 (s, 1H), 5.81 (m, 1H), 4.63 (m, 1H), 3.84 (m, 1H), 3.05 (s, 3H), 2.30-2.24 (m, 1H), 1.95 (m, 1H), 1.64 d, 3H).

Example No. I.42-162:

Diastereomer 1 - ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.76 (m, 1H), 6.57 (s, 1H), 3.73-3.66 (m, 1H),
10 3.03 (s, 3H), 2.35-2.29 (d, 1H), 2.08 (s, 3H), 2.02-1.94 (m, 1H), 1.34 (d, 3H), 1.32 (s, 9H). Diastereomer
2 - ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.82 (m, 1H), 6.65 (s, 1H), 3.63-3.57 (m, 1H), 3.05 (s, 3H),
2.46-2.37 (d, 1H), 2.24-2.18 (m, 1H), 2.07 (s, 3H), 1.45 (d, 3H), 1.32 (s, 9H).

Example No. I.62-162:

15 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.55 (s, 1H), 6.53 (m, 1H), 3.52 (d, 1H), 3.05 (s, 3H), 2.71 (d, 1H),
2.10 (s, 3H), 1.31 (s, 9H), 1.20 (s, 3H), 1.02 (s, 3H).

Example No. I.63-162:

1 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.54 (s, 1H), 6.53 (m, 1H), 3.51 (d, 1H), 3.05 (s, 3H), 2.71 (d, 1H),
20 2.41-2.32 (m, 2H), 1.31 (s, 9H), 1.21 (s, 3H), 1.18 (t, 3H), 1.01 (s, 3H).

Example No. I.66-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.55 (s, 1H), 6.54 (m, 1H), 3.51 (d, 1H), 3.05 (s, 3H), 2.71 (d, 1H),
2.39-2.25 (m, 2H), 1.71-1.63 (m, 2H), 1.31 (s, 9H), 1.21 (s, 3H), 1.01 (s, 3H), 0.93 (t, 3H).

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Example No. I.82-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.88 (m, 1H), 6.55 (s, 1H), 3.62 (d, 1H), 3.22 (d, 1H), 3.06 (s, 3H),
2.26-2.18 (m, 1H), 2.08 (s, 3H), 2.08-1.92 (m, 4H), 1.72-1.64 (m, 1H), 1.31 (s, 9H). Example No. I.83-
162:

30 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.90 (m, 1H), 6.54 (s, 1H), 3.62 (d, 1H), 3.20 (d, 1H), 3.06 (s, 3H),
2.41-2.30 (m, 2H), 2.26-2.18 (m, 1H), 2.13-1.92 (m, 4H), 1.70-1.63 (m, 1H), 1.31 (s, 9H), 1.14 (t, 3H).

Example No. I.86-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.91 (m, 1H), 6.54 (s, 1H), 3.61 (d, 1H), 3.20 (d, 1H), 3.06 (s, 3H),
35 2.36-2.28 (m, 2H), 2.27-2.18 (m, 1H), 2.15-1.92 (m, 4H), 1.70-1.58 (m, 1H), 1.31 (s, 9H), 0.92 (t, 3H).

Example No. I.91-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.60 (s, 1H), 5.70 (m, 1H), 4.25 (br. s, 1H, OH), 3.95-4.05 (m, 1H), 3.82 (s, 3H), 3.50-3.60 (m, 1H), 2.20-2.30 (m, 2H), 1.34 (s, 9H).

Example No. I.101-162:

5 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.63 (s, 1H), 5.23 (m, 1H), 4.12-4.07 (br. s, 1H, OH), 3.73 (d, 1H), 3.03 (s, 3H), 2.78 (d, 1H), 1.97-1.89 (m, 1H), 1.72-1.53 (6H), 1.47-1.39 (m, 1H), 1.33 (s, 9H).

Example No. I.102-162:

10 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.58 (s, 1H), 6.54 (m, 1H), 3.59 (d, 1H), 3.05 (s, 3H), 2.87 (d, 1H), 2.09 (s, 3H), 1.82-1.64 (6H), 1.31 (s, 9H), 1.28-1.22 (m, 2H).

Example No. I.111-449:

15 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.44 (m, 1H), 8.09 (m, 1H), 7.22 (m, 1H), 5.20 (d, 1H), 4.90-4.84 (br. s, 1H, OH), 3.52 (d, 1H), 3.04 (s, 3H), 2.92 (d, 1H), 1.69-1.53 (m, 2H), 1.51-1.41 (m, 2H), 0.91 (t, 3H), 0.86 (t, 3H)..

Example No. I.112-449:

20 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 8.52 (m, 1H), 8.01 (m, 1H), 7.22 (m, 1H), 6.95 (m, 1H), 3.41-3.37 (m, 1H), 3.09 (s, 3H), 3.02-2.97 (m, 1H), 2.05 (s, 3H), 1.72-1.57 (m, 2H), 1.54-1.43 (m, 1H), 1.38-1.26 (m, 1H), 0.995-0.87 (m, 6H).

Example No. I.121-162:

25 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.75 (s, 1H), 5.73 (m, 1H), 4.42 (m, 1H), 4.01-3.91 (m, 1H), 3.60-3.53 (m, 2H), 2.39-2.36 (m, 1H), 2.26-2.20 (m, 1H), 2.08-2.01 (m, 1H), 1.94-1.86 (m, 1H), 1.69-1.51 (m, 2H), 1.11.33 (s, 9H).

Example No. I.122-162:

30 ¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.87 (m, 1H), 6.70 (s, 1H), 3.83-3.74 (m, 1H), 3.63-3.58 (m, 2H), 2.50-2.46 (m, 1H), 2.26-2.19 (m, 1H), 2.11-2.03 (m, 4H), 1.94-1.83 (m, 1H), 1.79-1.73 (m, 1H), 1.59-1.53 (m, 1H), 1.11.33 (s, 9H).

Example No. I.123-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.87 (m, 1H), 6.69 (s, 1H), 3.82-3.73 (m, 1H), 3.62-3.56 (m, 2H), 2.50-2.46 (m, 1H), 2.42-2.28 (m, 2H), 2.25-2.19 (m, 1H), 2.11-2.03 (m, 1H), 1.94-1.83 (m, 1H), 1.79-1.73 (m, 1H), 1.59-1.53 (m, 1H), 111.33 (s, 9H), 1.14 (t, 3H).

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Example No. I.126-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.89 (m, 1H), 6.68 (s, 1H), 3.81-3.73 (m, 1H), 3.62-3.56 (m, 2H), 2.49-2.43 (m, 1H), 2.39-2.26 (m, 2H), 2.25-2.18 (m, 1H), 2.11-2.03 (m, 1H), 1.95-1.83 (m, 1H), 1.80-1.73 (m, 1H), 1.68-1.63 (m, 2H), 1.60-1.54 (m, 1H), 111.31 (s, 9H), 0.92 (t, 3H).

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Example No. I.131-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.60 / 6.55 (s, 1H), 5.68 / 5.65 (m, 1H), 4.58-4.51 (m, 1H), 4.43 / 4.16 (m, 1H), 3.64-3.57 / 3.42-3.37 (m, 1H), 2.72-2.61 (m, 1H), 2.42-2.35 / 2.20-2.16 (m, 1H), 2.07-2.01 (m, 1H), 1.93-1.77 (m, 2H), 1.72-1.67 (m, 1H), 1.54-1.40 (m, 2H), 111.33 (s, 9H).

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Example No. I.132-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.75 (m, 1H), 6.55 (m, 1H), 4.62 (m, 1H), 3.49-3.41 (m, 1H), 2.71-2.62 (m, 1H), 2.36-2.30 (m, 1H), 2.30 (s, 3H), 2.03-1.93 (m, 1H), 1.90-1.79 (m, 3H), 1.60-1.41 (m, 2H), 1.32-1.16 (m, 1H), 111.31 (s, 9H).

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Example No. I.133-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.76 (m, 1H), 6.53 (m, 1H), 4.61 (m, 1H), 3.47-3.39 (m, 1H), 2.70-2.62 (m, 1H), 2.42-2.28 (m, 3H), 2.02-1.94 (m, 1H), 1.90-1.78 (m, 3H), 1.59-1.40 (m, 2H), 1.33-1.22 (m, 1H), 111.31 (s, 9H), 1.14 (t, 3H).

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Example No. I.136-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.76 (m, 1H), 6.53 (m, 1H), 4.61 (m, 1H), 3.47-3.38 (m, 1H), 2.70-2.62 (m, 1H), 2.39-2.26 (m, 3H), 2.02-1.94 (m, 1H), 1.90-1.78 (m, 3H), 1.70-1.63 (sext, 2H), 1.53-1.38 (m, 2H), 1.33-1.22 (m, 1H), 111.31 (s, 9H), 0.93 (t, 3H).

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Example No. I.141-162:

¹H-NMR (400 MHz, CDCl₃ δ, ppm) 6.56 (s, 1H), 5.70 (m, 1H), 4.30 (m, 1H), 3.95-4.10 (m, 1H), 3.40-3.50 (m, 1H), 3.07 (s, 3H), 111.34 (s, 9H).

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B. NMR peak list method

In the NMR peak list method, the NMR data of selected examples are recorded in the form of NMR peak lists, where for each signal peak first the δ value in ppm and then, separated by a space, the signal intensity are listed. The δ value/signal intensity number pairs for different signal peaks are listed with separation from one another by semicolons.

5 The peak list for one example therefore takes the form of:

δ_1 (intensity₁); δ_2 (intensity₂);.....; δ_i (intensity_i);.....; δ_n (intensity_n)

The intensity of sharp signals correlates with the height of the signals in a printed example of an NMR spectrum in cm and shows the true ratios of the signal intensities. In the case of broad signals, several peaks or the middle of the signal and the relative intensity thereof may be shown in comparison to the

10 most intense signal in the spectrum.

Calibration of the chemical shift of ¹H NMR spectra is accomplished using tetramethylsilane and/or the chemical shift of the solvent, particularly in the case of spectra which are measured in DMSO.

Therefore, the tetramethylsilane peak may but need not occur in NMR peak lists.

The lists of the ¹H NMR peaks are similar to the conventional ¹H NMR printouts and thus usually

15 contain all peaks listed in a conventional NMR interpretation.

In addition, like conventional ¹H NMR printouts, they may show solvent signals, signals of stereoisomers of the target compounds which are likewise provided by the invention, and/or peaks of impurities.

In the reporting of compound signals within the delta range of solvents and/or water, our lists of ¹H

20 NMR peaks show the standard solvent peaks, for example peaks of DMSO in DMSO-D₆ and the peak of water, which usually have a high intensity on average.

Such stereoisomers and/or impurities may be typical of the particular preparation process. Their peaks can thus help in identifying reproduction of our preparation process with reference to "by-product fingerprints".

25 An expert calculating the peaks of the target compounds by known methods (MestreC, ACD simulation, but also with empirically evaluated expected values) can, if required, isolate the peaks of the target compounds, optionally using additional intensity filters. This isolation would be similar to the relevant peak picking in conventional ¹H NMR interpretation.

Further details of ¹H NMR peak lists can be found in the Research disclosure Database Number 564025.

The examples which follow illustrate the invention in detail.

Analytical data

| No. | NMR |
|----------|--|
| I.2-177 | 1H-NMR(400.0 MHz, CDCl3): δ= 6.2 (1); 3.6-3.7 (1); 3.2-3.3 (1); 3.0 (3); 2.3-2.4 (1); 2.1-2.2 (1) 2.0 (3); 1.9 (3); 1.3 (9) |
| I.3-177 | 1H-NMR(400.0 MHz, CDCl3): δ= 6.3 (1); 3.6-3.7 (1); 3.2-3.3 (1); 3.0409 (3); 2.3787- 2.3459 (3); 2.4-2.3 (1); 1.9220 (3); 1.3628 (9); 1.1504 -1.1126 (3) |
| I.4-177 | 1H-NMR(400.0 MHz, CDCl3): δ= 6.3 (1); 3.6-3.7 (1); 3.2-3.3 (1), 3.0409 (3); 2.3-2.4 (3); 2.1-2.2 (1), 1.9226 (3); 1.6-1.7 (2); 1.3607 (9); 0.9-1.0 (3) |
| I.5-177 | 1H-NMR(400.0 MHz, CDCl3): δ= 6.3 (1); 3.6-3.7 (1); 3.2-3.3 (1); 3.0458 (3); 2.5-2.6 (1); 2.3-2.4 (1), 2.1-2.2 (1); 1.9264 (3); 1.3596 (9); 1.17 (3); 1.15 (3) |
| I.7-177 | 1H-NMR(400.0 MHz, CDCl3): δ= 6.3 (1); 3.6-3.7 (1); 3.2-3.3 (1); 3.0410 (3); 2.3-2.4 (1); 2.0-2.2149 (4); 1.9239 (3); 1.3580 (9); 0.9355 (3); 0.9189 (3) |
| I.1-451 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.39 (1); 8.23 (1); 5.67 (1); 4.80 (1); 3.8-3.9 (1); 3.2-3.3 (1); 3.06 (3); 2.1-2.2 (2); |
| I.2-451 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.4 (1); 8.2 (1); 7.1 (1); 3.6-3.7 (1); 3.2-3.3 (1); 3.06 (3); 2.2-2.2 (2); 2.0-2.1 (3); |
| I.3-451 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.41 (1); 8.21 (1); 7.1 (1); 3.6-3.7 (1); 3.2-3.3 (1); 3.0932 (3); 2.2-2.3 (4); 1.10-1.14 (3) |
| I.4-451 | NMR(400.0 MHz, CDCl3): δ= 8.4035 (1); 8.2017 (1); 7.1 (1); 3.6-3.7 (1); 3.2-3.3 (1); 3.0934 (3); 2.2-2.30 (4); 1.5-1.6 (2); 0.7-0.8 (3) |
| I.2-501 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.84 (1); 8.08 (1); 7.3 (1); 3.6-3.7 (1); 3.2-3.3 (1); 3.10 (3); 2.1-2.3 (2); 2.06 (3); 1.3452 (9); |
| I.3-501 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.83 (1); 8.08 (1); 7.2 (1); 3.6-3.7 (1); 3.2-3.3 (1); 3.10 (3); 2.1-2.4 (4); 1.3436 (9); 1.1-1.2 (3) |
| I.4-501 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.82 (1); 8.07 (1); 7.3 (1); 3.6-3.7 (1); 3.2-3.3 (1); 3.10 (3); 2.1-2.3 (4); 1.6-1.7 (2); 1.34 (9); 0.9-1.0 (3) |
| I.2-709 | 1H-NMR(400.0 MHz, CDCl3): δ= 6.67 (1); 3.5-3.6 (1); 3.4-3.5 (1); 3.1-3.2 (2); 3.01 (3); 2.1-2.2 (2); 2.07 (3); 1.42 (3); 1.37 (3) |
| I.3-709 | 1H-NMR(400.0 MHz, CDCl3): δ= 6.68-6.67 (1); 3.5-3.6 (1); 3.42-3.38 (1); 3.20-3.16 (2); 3.01 (3); 2.2-2.4 (2); 2.18-2.22 (2); 1.41 (3); 1.37 (3); 1.11-1.13 (3) |
| I.4-709 | 1H-NMR(400.0 MHz, CDCl3): δ= 6.68-6.69 (1); 3.54-3.60 (1); 3.37-3.40 (1); 3.17-3.20 (2); 3.01 (3); 2.25-2.35 (2); 2.18-2.21 (2); 1.6-1.7 (2); 1.41 (3); 1.37 (3); 0.94-0.96 (3) |
| I.42-449 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.45- 8.47 (1); 8.10-8.11 (1); 7.20-7.21 (1); 7.06-7.0700 (1); 3.6-3.7 (1); 3.06 (3); 2.35-2.45 (1); 2.06 (3); 1.95-2.05 (1); 1.35-1.37 (3) |
| I.43-449 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.45-8.46 (1); 8.10 (1); 7.19-7.26 (1); 7.06-7.07 (1); 3.6-3.7 (1); 3.06 (3); 2.28-2.42 (3); 1.95-2.05 (1); 1.35-1.37 (3); 1.10-1.14 (3) |
| I.44-449 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.44-8.45 (1); 8.09-8.10 (1); 7.19-7.21 (1); 7.06-7.07 (1); 3.65-3.75 (1); 3.06 (3); 2.34-2.45 (1); 2.26-2.30 (2); 1.95-2.05 (1); 1.56-1.66 (2); 1.35-1.37 (3); 0.90-0.94 (3) |
| I.63-449 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.47-8.48 (1); 8.04 (1); 7.21-7.22 (1); 6.78 (1); 3.53-3.56 (1); 3.08 (3); 2.84-2.87 (1); 2.29-2.34 (2); 1.23 (3). 1.09-1.23 (3); 1.05 (3) |
| I.66-449 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.47-8.48 (1); 8.03 (1); 7.21-7.22 (1); 6.78 (1); 3.53-3.56 (1); 3.08 (3); 2.84-2.87 (1); 2.25-2.29 (2); 1.56-1.63 (2); 1.23 (3); 1.05 (3); 0.87-0.91 (3) |
| I.83-449 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.49-8.50 (1); 8.03-8.04 (1); 7.22-7.23 (1); 7.13-7.14 (1); 3.64-3.67 (1); 3.24-3.27 (1); 3.09 (3); 2.25-2.35 (2); 2.15-2.25 (2); 1.9-2.1 (3); 1.68-1.79 (1); 1.07-1.11 (3) |
| I.86-449 | 1H-NMR(400.0 MHz, CDCl3): δ= 8.49-8.50 (1); 8.03 (1); 7.21-7.23 (1); 7.14 (1); 3.64-3.66 (1); 3.24-3.27 (1); 3.09 (3); 2.1-2.3 (4); 1.9-2.1 (3); 1.65-1.79 (1); 1.55-1.65 (2); 0.87-0.90 (3) |

| | |
|-----------|--|
| I.113-449 | 1H-NMR(400.0 MHz, CDCl ₃): δ= 8.49-8.51 (1); 7.99 (1); 7.21-7.23 (1); 6.94 (1); 3.37-3.40 (1); 3.07 (3); 2.96-3.00 (1); 2.27-2.33 (2); 1.55-1.73 (2); 1.4-1.5 (1); 1.25-1.40 (1); 1.07-1.11 (3); 0.87-0.93 (6) |
| I.116-449 | 1H-NMR(400.0 MHz, CDCl ₃): δ= 8.50-8.51 (1); 7.97 (1); 7.21-7.23 (1); 6.94 (1); 3.37-3.40 (1); 3.07 (3); 2.96-3.00 (1); 2.24-2.28 (2); 1.5-1.7 (4); 1.40-1.53 (1); 1.25-1.38 (1); 0.85-1.0 (9) |
| I.103-162 | 1H-NMR(400.0 MHz, CDCl ₃): δ= 6.60 (1); 6.53 (1); 3.55-3.62 (1); 3.05 (3); 2.82-2.90 (1); 2.30-2.45 (2); 1.6-1.8 (8); 1.31 (9); 1.13-1.17 (3) |
| I.106-162 | 1H-NMR(400.0 MHz, CDCl ₃): δ= 6.60-6.61 (1); 6.53 (1); 3.55-3.62 (1); 3.05 (3); 2.82-2.90 (1); 2.25-2.39 (2); 1.6-1.8 (10); 1.31 (9); 0.91-0.95 (3) |

The present invention further provides for the use of one or more inventive compounds of the general formula (I) and/or salts thereof, as defined above, preferably in one of the embodiments identified as preferred or particularly preferred, in particular one or more compounds of the formulae (I.1) to (I.150)

5 and/or salts thereof, in each case as defined above, as herbicide and/or plant growth regulator, preferably in crops of useful plants and/or ornamentals.

The present invention further provides a method for controlling harmful plants and/or for regulating the growth of plants, characterized in that an effective amount

- of one or more compounds of the formula (I) and/or salts thereof, as defined above, preferably in
10 one of the embodiments identified as preferred or particularly preferred, in particular one or more compounds of the formulae (I.1) to (I.150) and/or salts thereof, in each case as defined above, or

- of a composition according to the invention, as defined below,

is applied to the (harmful) plants, seeds of (harmful) plants, the soil in which or on which the (harmful)

15 plants grow or the area under cultivation.

The present invention also provides a method for controlling unwanted plants, preferably in crops of useful plants, characterized in that an effective amount

20 - of one or more compounds of the formula (I) and/or salts thereof, as defined above, preferably in one of the embodiments identified as preferred or particularly preferred, in particular one or more compounds of the formulae (I.1) to (I.150) and/or salts thereof, in each case as defined above, or

- of a composition according to the invention, as defined below,

25

is applied to unwanted plants (for example harmful plants such as mono- or dicotyledonous weeds or unwanted crop plants), the seed of the unwanted plants (i.e. plant seeds, for example grains, seeds or vegetative propagation organs such as tubers or shoot parts with buds), the soil in which or on which the unwanted plants grow (for example the soil of crop land or non-crop land) or the area under cultivation
30 (i.e. the area on which the unwanted plants will grow).

The present invention also further provides methods for controlling for regulating the growth of plants, preferably of useful plants, characterized in that an effective amount

5 - of one or more compounds of the formula (I) and/or salts thereof, as defined above, preferably in one of the embodiments identified as preferred or particularly preferred, in particular one or more compounds of the formulae (I.1) to (I.150) and/or salts thereof, in each case as defined above, or

- of a composition according to the invention, as defined below,

10

is applied to the plant, the seed of the plant (i.e. plant seed, for example grains, seeds or vegetative propagation organs such as tubers or shoot parts with buds), the soil in which or on which the plants grow (for example the soil of crop land or non-crop land) or the area under cultivation (i.e. the area on which the plants will grow).

15

In this context, the compounds according to the invention or the compositions according to the invention can be applied for example by pre-sowing (if appropriate also by incorporation into the soil), pre-emergence and/or post-emergence processes. Specific examples of some representatives of the monocotyledonous and dicotyledonous weed flora which can be controlled by the compounds according 20 to the invention are as follows, though there is no intention to restrict the enumeration to particular species.

25

In a method according to the invention for controlling harmful plants or for regulating the growth of plants, one or more compounds of the formula (I) and/or salts thereof are preferably employed for controlling harmful plants or for regulating growth in crops of useful plants or ornamental plants, where in a preferred embodiment the useful plants or ornamental plants are transgenic plants.

The compounds of the formula (I) according to the invention and/or their salts are suitable for controlling the following genera of monocotyledonous and dicotyledonous harmful plants:

30

Monocotyledonous harmful plants of the genera: Aegilops, Agropyron, Agrostis, Alopecurus, Apera, Avena, Brachiaria, Bromus, Cenchrus, Commelina, Cynodon, Cyperus, Dactyloctenium, Digitaria, Echinochloa, Eleocharis, Eleusine, Eragrostis, Eriochloa, Festuca, Fimbristylis, Heteranthera, Imperata, Ischaemum, Leptochloa, Lolium, Monochoria, Panicum, Paspalum, Phalaris, Phleum, Poa, Rottboellia, Sagittaria, Scirpus, Setaria, Sorghum.

35

Dicotyledonous harmful plants of the genera: Abutilon, Amaranthus, Ambrosia, Anoda, Anthemis, Aphanes, Artemisia, Atriplex, Bellis, Bidens, Capsella, Carduus, Cassia, Centaurea, Chenopodium, Cirsium, Convolvulus, Datura, Desmodium, Emex, Erysimum, Euphorbia, Galeopsis, Galinsoga,

Galium, Hibiscus, Ipomoea, Kochia, Lamium, Lepidium, Lindernia, Matricaria, Mentha, Mercurialis, Mullugo, Myosotis, Papaver, Pharbitis, Plantago, Polygonum, Portulaca, Ranunculus, Raphanus, Rorippa, Rotala, Rumex, Salsola, Senecio, Sesbania, Sida, Sinapis, Solanum, Sonchus, Sphenoclea, Stellaria, Taraxacum, Thlaspi, Trifolium, Urtica, Veronica, Viola, Xanthium.

5

When the compounds according to the invention are applied to the soil surface before germination of the harmful plants (weed grasses and/or broad-leaved weeds) (pre-emergence method), either the seedlings of the weed grasses or broad-leaved weeds are prevented completely from emerging or they grow until they have reached the cotyledon stage, but then stop growing and eventually, after three to four weeks 10 have elapsed, die completely.

If the active compounds are applied post-emergence to the green parts of the plants, growth stops after the treatment, and the harmful plants remain at the growth stage at the time of application, or they die completely after a certain time, so that in this manner competition by the weeds, which is harmful to the 15 crop plants, is eliminated very early and in a sustained manner.

Although the compounds according to the invention display an outstanding herbicidal activity against monocotyledonous and dicotyledonous weeds, crop plants of economically important crops, for example dicotyledonous crops of the genera Arachis, Beta, Brassica, Cucumis, Cucurbita, Helianthus, Daucus, 20 Glycine, Gossypium, Ipomoea, Lactuca, Linum, Lycopersicon, Miscanthus, Nicotiana, Phaseolus, Pisum, Solanum, Vicia, or monocotyledonous crops of the genera Allium, Ananas, Asparagus, Avena, Hordeum, Oryza, Panicum, Saccharum, Secale, Sorghum, Triticale, Triticum, Zea, are damaged only to an insignificant extent, or not at all, depending on the structure of the respective compound according to the invention and its application rate. For these reasons, the present compounds are very suitable for 25 selective control of unwanted plant growth in plant crops such as agriculturally useful plants or ornamental plants.

In addition, the compounds of the invention (depending on their particular structure and the application rate deployed) have outstanding growth-regulating properties in crop plants. They intervene in the 30 plants' own metabolism with regulatory effect, and can thus be used for the controlled influencing of plant constituents and to facilitate harvesting, for example by triggering desiccation and stunted growth. Furthermore, they are also suitable for the general control and inhibition of unwanted vegetative growth without killing the plants in the process. Inhibition of vegetative growth plays a major role for many mono- and dicotyledonous crops since, for example, this can reduce or completely prevent lodging.

35

By virtue of their herbicidal and plant growth regulatory properties, the active compounds can also be used to control harmful plants in crops of genetically modified plants or plants modified by conventional

mutagenesis. In general, the transgenic plants are characterized by particular advantageous properties, for example by resistances to certain pesticides, in particular certain herbicides, resistances to plant diseases or pathogens of plant diseases, such as certain insects or microorganisms such as fungi, bacteria or viruses. Other specific characteristics relate, for example, to the harvested material with regard to 5 quantity, quality, storability, composition and specific constituents. For instance, there are known transgenic plants with an elevated starch content or altered starch quality, or those with a different fatty acid composition in the harvested material.

It is preferred with a view to transgenic crops to use the compounds according to the invention and/or 10 their salts in economically important transgenic crops of useful plants and ornamentals, for example of cereals such as wheat, barley, rye, oats, millet, rice and corn or else crops of sugar beet, cotton, soybean, oilseed rape, potato, tomato, peas and other vegetables.

It is preferred to employ the compounds according to the invention as herbicides in crops of useful 15 plants which are resistant, or have been made resistant by recombinant means, to the phytotoxic effects of the herbicides.

By virtue of their herbicidal and plant growth regulatory properties, the active compounds can also be used to control harmful plants in crops of genetically modified plants which are known or are yet to be developed. In general, the transgenic plants are characterized by particular advantageous properties, for 20 example by resistances to certain pesticides, in particular certain herbicides, resistances to plant diseases or pathogens of plant diseases, such as certain insects or microorganisms such as fungi, bacteria or viruses. Other specific characteristics relate, for example, to the harvested material with regard to quantity, quality, storability, composition and specific constituents. For instance, there are known transgenic plants with an elevated starch content or altered starch quality, or those with a different fatty 25 acid composition in the harvested material. Further special properties may be tolerance or resistance to abiotic stressors, for example heat, cold, drought, salinity and ultraviolet radiation.

Preference is given to the use of the compounds of the formula (I) according to the invention or salts thereof in economically important transgenic crops of useful plants and ornamental plants, for example 30 of cereals such as wheat, barley, rye, oats, triticale, millet, rice, cassava and corn, or else crops of sugar beet, cotton, soybean, oilseed rape, potatoes, tomatoes, peas and other vegetables.

The compounds of the formula (I) can preferably be used as herbicides in crops of useful plants which are resistant, or have been made resistant by recombinant means, to the phytotoxic effects of the 35 herbicides.

Conventional ways of producing novel plants which have modified properties in comparison to existing plants consist, for example, in traditional cultivation methods and the generation of mutants.

Alternatively, novel plants with altered properties can be generated with the aid of recombinant methods.

5

A large number of molecular-biological techniques by means of which novel transgenic plants with modified properties can be generated are known to the person skilled in the art. For such genetic manipulations, nucleic acid molecules which allow mutagenesis or sequence alteration by recombination of DNA sequences can be introduced into plasmids. With the aid of standard methods, it is possible, for 10 example, to undertake base exchanges, remove part sequences or add natural or synthetic sequences. To connect the DNA fragments to each other, adapters or linkers may be added to the fragments.

For example, the generation of plant cells with a reduced activity of a gene product can be achieved by expressing at least one corresponding antisense RNA, a sense RNA for achieving a cosuppression effect, 15 or by expressing at least one suitably constructed ribozyme which specifically cleaves transcripts of the abovementioned gene product.

To this end, it is firstly possible to use DNA molecules which encompass the entire coding sequence of a gene product inclusive of any flanking sequences which may be present, and also DNA molecules which 20 only encompass portions of the coding sequence, in which case it is necessary for these portions to be long enough to have an antisense effect in the cells. It is also possible to use DNA sequences which have a high degree of homology to the coding sequences of a gene product, but are not completely identical to them.

25 When expressing nucleic acid molecules in plants, the protein synthesized may be localized in any desired compartment of the plant cell. However, to achieve localization in a particular compartment, it is possible, for example, to join the coding region to DNA sequences which ensure localization in a particular compartment. Such sequences are known to those skilled in the art (see, for example, Braun et al., EMBO J. 11 (1992), 3219-3227). The nucleic acid molecules can also be expressed in the organelles 30 of the plant cells.

The transgenic plant cells can be regenerated by known techniques to give rise to entire plants. In principle, the transgenic plants may be plants of any desired plant species, i.e. not only monocotyledonous but also dicotyledonous plants.

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Thus, transgenic plants can be obtained whose properties are altered by overexpression, suppression or inhibition of homologous (= natural) genes or gene sequences or expression of heterologous (= foreign) genes or gene sequences.

5 It is preferred to employ the compounds (I) according to the invention in transgenic crops which are resistant to growth regulators such as, for example, dicamba, or to herbicides which inhibit essential plant enzymes, for example acetolactate synthases (ALS), EPSP synthases, glutamine synthases (GS) or hydroxyphenylpyruvate dioxygenases (HPPD), or to herbicides from the group of the sulfonylureas, glyphosates, glufosinates or benzoylisoxazoles and analogous active compounds.

10

When the active compounds of the invention are employed in transgenic crops, not only do the effects towards harmful plants observed in other crops occur, but frequently also effects which are specific to the application in the particular transgenic crop, for example an altered or specifically widened spectrum of weeds which can be controlled, altered application rates which can be used for the application,

15 preferably good combinability with the herbicides to which the transgenic crop is resistant, and influencing of growth and yield of the transgenic crop plants.

The invention therefore also relates to the use of the compounds of the formula (I) according to the invention and/or their salts as herbicides for controlling harmful plants in crops of useful plants or
20 ornamentals, optionally in transgenic crop plants.

Preference is given to the use in cereals, here preferably corn, wheat, barley, rye, oats, millet or rice, by the pre- or post-emergence method.

25 Preference is also given to the use in soybeans by the pre- or post-emergence method.

The use according to the invention for the control of harmful plants or for growth regulation of plants also includes the case in which the active compound of the formula (I) or its salt is not formed from a precursor substance ("prodrug") until after application on the plant, in the plant or in the soil.

30 The invention also provides for the use of one or more compounds of the formula (I) or salts thereof or of a composition according to the invention (as defined below) (in a method) for controlling harmful plants or for regulating the growth of plants which comprises applying an effective amount of one or more compounds of the formula (I) or salts thereof onto the plants (harmful plants, if appropriate together with the useful plants), plant seeds, the soil in which or on which the plants grow or the area
35 under cultivation.

The invention also provides a herbicidal and/or plant growth-regulating composition, characterized in that the composition comprises

(a) one or more compounds of the formula (I) and/or salts thereof, as defined above, preferably in one of
5 the embodiments identified as preferred or particularly preferred, in particular one or more compounds of the formulae (I.1) to (I.150) and/or salts thereof, in each case as defined above, and

(b) one or more further substances selected from groups (i) and/or (ii):

10

(i) one or more further agrochemically active substances, preferably selected from the group consisting of insecticides, acaricides, nematicides, further herbicides (i.e. those not corresponding to the formula (I) defined above), fungicides, safeners, fertilizers and/or further growth regulators,

15

(ii) one or more formulation auxiliaries customary in crop protection.

Here, the further agrochemically active substances of component (i) of a composition according to the invention are preferably selected from the group of substances mentioned in "The Pesticide Manual",

20 16th edition, The British Crop Protection Council and the Royal Soc. of Chemistry, 2012.

A herbicidal or plant growth-regulating composition according to the invention comprises preferably one, two, three or more formulation auxiliaries (ii) customary in crop protection selected from the group consisting of surfactants, emulsifiers, dispersants, film-formers, thickeners, inorganic salts, dusting
25 agents, carriers solid at 25°C and 1013 mbar, preferably adsorptive granulated inert materials, wetting agents, antioxidants, stabilizers, buffer substances, antifoam agents, water, organic solvents, preferably organic solvents miscible with water in any ratio at 25°C and 1013 mbar.

The compounds (I) according to the invention can be used in the form of wettable powders, emulsifiable
30 concentrates, sprayable solutions, dusting products or granules in the customary formulations. The invention therefore also provides herbicidal and plant growth-regulating compositions which comprise compounds of the formula (I) and/or salts thereof.

The compounds of the formula (I) and/or salts thereof can be formulated in various ways according to
35 which biological and/or physicochemical parameters are required. Possible formulations include, for example: wettable powders (WP), water-soluble powders (SP), water-soluble concentrates, emulsifiable concentrates (EC), emulsions (EW), such as oil-in-water and water-in-oil emulsions, sprayable

solutions, suspension concentrates (SC), dispersions based on oil or water, oil-miscible solutions, capsule suspensions (CS), dusting products (DP), dressings, granules for scattering and soil application, granules (GR) in the form of microgranules, spray granules, absorption and adsorption granules, water-dispersible granules (WG), water-soluble granules (SG), ULV formulations, microcapsules and waxes.

5

These individual formulation types and the formulation assistants, such as inert materials, surfactants, solvents and further additives, are known to the person skilled in the art and are described, for example, in: Watkins, "Handbook of Insecticide Dust Diluents and Carriers", 2nd ed., Darland Books, Caldwell N.J., H.v. Olphen, "Introduction to Clay Colloid Chemistry"; 2nd ed., J. Wiley & Sons, N.Y., C.

10 Marsden, "Solvents Guide", 2nd ed., Interscience, N.Y. 1963; McCutcheon's "Detergents and Emulsifiers Annual", MC Publ. Corp., Ridgewood N.J.; Sisley and Wood, "Encyclopedia of Surface Active Agents", Chem. Publ. Co. Inc., N.Y. 1964, Schönfeldt, "Grenzflächenaktive Äthylenoxidaddukte" [Interface-active Ethylene Oxide Adducts], Wiss. Verlagsgesellschaft, Stuttgart 1976, Winnacker-Küchler, "Chemische Technologie" [Chemical Technology], volume 7, C. Hanser 15 Verlag Munich, 4th ed. 1986.

Wettable powders are preparations which can be dispersed uniformly in water and, in addition to the active compound, apart from a diluent or inert substance, also comprise surfactants of the ionic and/or nonionic type (wetting agents, dispersants), for example polyoxyethylated alkylphenols,

20 polyoxyethylated fatty alcohols, polyoxyethylated fatty amines, fatty alcohol polyglycol ether sulfates, alkanesulfonates, alkylbenzenesulfonates, sodium lignosulfonate, sodium 2,2'-dinaphthylmethane-6,6'-disulfonate, sodium dibutylphthalenesulfonate or else sodium oleoylmethyltaurate. To produce the wettable powders, the herbicidally active compounds are finely ground, for example in customary apparatuses such as hammer mills, blower mills and air-jet mills, and simultaneously or subsequently 25 mixed with the formulation auxiliaries.

Emulsifiable concentrates are produced by dissolving the active compound in an organic solvent, for example butanol, cyclohexanone, dimethylformamide, xylene, or else relatively high-boiling aromatics or hydrocarbons or mixtures of the organic solvents, with addition of one or more ionic and/or nonionic 30 surfactants (emulsifiers). Examples of emulsifiers which may be used are: calcium alkylarylsulfonate salts, for example calcium dodecylbenzenesulfonate, or nonionic emulsifiers such as fatty acid polyglycol esters, alkylaryl polyglycol ethers, fatty alcohol polyglycol ethers, propylene oxide-ethylene oxide condensation products, alkyl polyethers, sorbitan esters, for example sorbitan fatty acid esters, or polyoxyethylene sorbitan esters, for example polyoxyethylene sorbitan fatty acid esters.

35

Dusting products are obtained by grinding the active compound with finely distributed solids, for example talc, natural clays, such as kaolin, bentonite and pyrophyllite, or diatomaceous earth.

Suspension concentrates may be water- or oil-based. They may be prepared, for example, by wet-grinding by means of commercial bead mills and optional addition of surfactants as have, for example, already been listed above for the other formulation types.

5

Emulsions, for example oil-in-water emulsions (EW), can be produced, for example, by means of stirrers, colloid mills and/or static mixers using aqueous organic solvents and optionally surfactants as already listed above, for example, for the other formulation types.

10 Granules can be prepared either by spraying the active compound onto granular inert material capable of adsorption or by applying active compound concentrates to the surface of carrier substances, such as sand, kaolinates or granular inert material, by means of adhesives, for example polyvinyl alcohol, sodium polyacrylate or mineral oils. Suitable active compounds can also be granulated in the manner customary for the production of fertilizer granules - if desired as a mixture with fertilizers.

15

Water-dispersible granules are produced generally by the customary processes such as spray-drying, fluidized-bed granulation, pan granulation, mixing with high-speed mixers and extrusion without solid inert material.

20 For the production of pan granules, fluidized bed granules, extruder granules and spray granules, see, for example, processes in "Spray-Drying Handbook" 3rd ed. 1979, G. Goodwin Ltd., London; J.E. Browning, "Agglomeration", Chemical and Engineering 1967, pages 147 ff.; "Perry's Chemical Engineer's Handbook", 5th Ed., McGraw-Hill, New York 1973, pp. 8-57.

25 For further details regarding the formulation of crop protection compositions, see, for example, G.C. Klingman, "Weed Control as a Science", John Wiley and Sons, Inc., New York, 1961, pages 81-96 and J.D. Freyer, S.A. Evans, "Weed Control Handbook", 5th Ed., Blackwell Scientific Publications, Oxford, 1968, pages 101-103.

30 The agrochemical preparations, preferably herbicidal or plant growth-regulating compositions, of the present invention preferably comprise a total amount of from 0.1 to 99% by weight, preferably 0.5 to 95% by weight, particularly preferably 1 to 90% by weight, especially preferably 2 to 80% by weight, of active compounds of the formula (I) and their salts.

35 In wettable powders, the active compound concentration is, for example, about 10 to 90% by weight, the remainder to 100% by weight consisting of customary formulation constituents. In emulsifiable concentrates, the active compound concentration may be about 1% to 90% and preferably 5% to 80% by

weight. Formulations in the form of dusts comprise 1% to 30% by weight of active compound, preferably usually 5% to 20% by weight of active compound; sprayable solutions contain about 0.05% to 80% by weight, preferably 2% to 50% by weight of active compound. In the case of water-dispersible granules, the active compound content depends partially on whether the active compound is in liquid or 5 solid form and on which granulation auxiliaries, fillers, etc., are used. In the water-dispersible granules, the content of active compound is, for example, between 1 and 95% by weight, preferably between 10 and 80% by weight.

In addition, the active compound formulations mentioned optionally comprise the respective customary 10 stickers, wetters, dispersants, emulsifiers, penetrants, preservatives, antifreeze agents and solvents, fillers, carriers and dyes, defoamers, evaporation inhibitors and agents which influence the pH and the viscosity. Examples of formulation auxiliaries are described *inter alia* in "Chemistry and Technology of Agrochemical Formulations", ed. D.A. Knowles, Kluwer Academic Publishers (1998).

15 The compounds of the formula (I) or salts thereof can be used as such or in the form of their preparations (formulations) in a combination with other pesticidally active substances, for example insecticides, acaricides, nematicides, herbicides, fungicides, safeners, fertilizers and/or growth regulators, for example in the form of a finished formulation or of a tank mix. The combination formulations can be prepared on the basis of the abovementioned formulations, while taking account of 20 the physical properties and stabilities of the active compounds to be combined.

Active compounds which can be employed in combination with the compounds of the formula (I) according to the invention in mixture formulations or in a tank mix are, for example, known active compounds based on inhibition of, for example, acetolactate synthase, acetyl-CoA carboxylase, 25 cellulose synthase, enolpyruvylshikimate-3-phosphate synthase, glutamine synthetase, p-hydroxyphenylpyruvate dioxygenase, phytoene, desaturase, photosystem I, photosystem II, protoporphyrinogen oxidase, as described, for example, in Weed Research 26 (1986) 441-445 or "The Pesticide Manual", 16th edition, The British Crop Protection Council and the Royal Soc. of Chemistry, 30 2012 and literature cited therein.

30 Of particular interest is the selective control of harmful plants in crops of useful plants and ornamentals. Although the compounds (I) according to the invention have already demonstrated very good to adequate selectivity in a large number of crops, in principle, in some crops and in particular also in the case of mixtures with other, less selective herbicides, phytotoxicities on the crop plants may occur. In 35 this connection, combinations of compounds (I) according to the invention are of particular interest which comprise the compounds (I) or their combinations with other herbicides or pesticides and safeners. The safeners, which are used in an antidotically effective amount, reduce the phytotoxic side

effects of the herbicides/pesticides employed, for example in economically important crops, such as cereals (wheat, barley, rye, corn, rice, millet), sugarbeet, sugarcane, oilseed rape, cotton and soybeans, preferably cereals.

5 The weight ratios of herbicide (mixture) to safener depend generally on the herbicide application rate and the efficacy of the safener in question and may vary within wide limits, for example in the range from 200:1 to 1:200, preferably 100:1 to 1:100, in particular 20:1 to 1:20. Analogously to the compounds (I) or mixtures thereof, the safeners can be formulated with further herbicides/pesticides and be provided and employed as a finished formulation or tank mix with the herbicides.

10 For application, the herbicide or herbicide/safener formulations present in commercial form are, if appropriate, diluted in a customary manner, for example in the case of wettable powders, emulsifiable concentrates, dispersions and water-dispersible granules with water. Dust-type preparations, granules for soil application or granules for scattering and sprayable solutions are not normally diluted further with 15 other inert substances prior to application.

The application rate of the compounds of the formula (I) and/or their salts is affected to a certain extent by external conditions such as temperature, humidity, etc. Here, the application rate may vary within wide limits. For the application as a herbicide for controlling harmful plants, the total amount of 20 compounds of the formula (I) and their salts is preferably in the range from 0.001 to 10.0 kg/ha, with preference in the range from 0.005 to 5 kg/ha, more preferably in the range from 0.01 to 1.5 kg/ha, in particular preferably in the range from 0.05 to 1 kg/ha. This applies both to the pre-emergence and the post-emergence application.

25 When compounds of the formula (I) and/or their salts are used as plant growth regulator, for example as culm stabilizer for crop plants like those mentioned above, preferably cereal plants, such as wheat, barley, rye, triticale, millet, rice or corn, the total application rate is preferably in the range of from 0.001 to 2 kg/ha, preferably in the range of from 0.005 to 1 kg/ha, in particular in the range of from 10 to 500 g/ha, very particularly in the range from 20 to 250 g/ha. This applies both to the pre-emergence and the 30 post-emergence application.

The application as culm stabilizer may take place at various stages of the growth of the plants. Preferred is, for example, the application after the tillering phase, at the beginning of the longitudinal growth.

35 As an alternative, application as plant growth regulator is also possible by treating the seed, which includes various techniques for dressing and coating seed. Here, the application rate depends on the particular techniques and can be determined in preliminary tests.

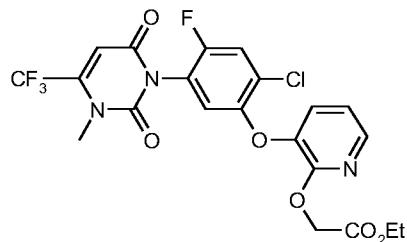
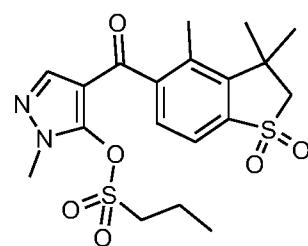
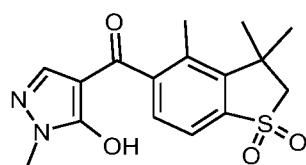
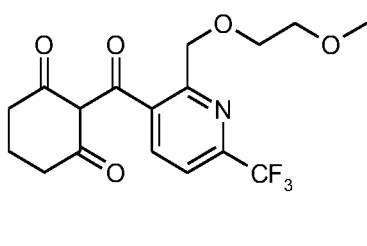
Active compounds which can be employed in combination with the compounds of the formula (I) according to the invention in compositions according to the invention (for example in mixed formulations or in the tank mix) are, for example, known active compounds which are based on the 5 inhibition of, for example, acetolactate synthase, acetyl-CoA carboxylase, cellulose synthase, enolpyruvylshikimate-3-phosphate synthase, glutamine synthetase, p-hydroxyphenylpyruvate dioxygenase, phytoene desaturase, photosystem I, photosystem II or protoporphyrinogen oxidase, as are described in, for example, Weed Research 26 (1986) 441-445 or "The Pesticide Manual", 16th edition, The British Crop Protection Council and the Royal Soc. of Chemistry, 2012 and the literature cited 10 therein. Known herbicides or plant growth regulators which can be combined with the compounds according to the invention are, for example, the following active compounds, where said compounds are designated either with their "common name" in accordance with the International Organization for Standardization (ISO) or with the chemical name or with the code number. They always encompass all of the application forms such as, for example, acids, salts, esters and also all isomeric forms such as 15 stereoisomers and optical isomers, even if they are not explicitly mentioned.

Examples of such herbicidal mixing partners are:

acetochlor, acifluorfen, acifluorfen-sodium, aclonifen, alachlor, allidochlor, aloxydim, aloxydim-sodium, ametryn, amicarbazone, amidochlor, amidosulfuron, 4-amino-3-chloro-6-(4-chloro-2-fluoro-3-20 methylphenyl)-5-fluoropyridine-2-carboxylic acid, aminocyclopyrachlor, aminocyclopyrachlor-potassium, aminocyclopyrachlor-methyl, aminopyralid, amitrole, ammoniumsulfamate, anilofos, asulam, atrazine, azafenidin, azimsulfuron, beflubutamid, benazolin, benazolin-ethyl, benfluralin, benfuresate, bensulfuron, bensulfuron-methyl, bensulide, bentazone, benzobicyclon, benzofenap, bicyclopuron, bifenox, bilanafos, bilanafos-sodium, bispyribac, bispyribac-sodium, bromacil, 25 bromobutide, bromofenoxim, bromoxynil, bromoxynil-butyrate, -potassium, -heptanoate and -octanoate, busoxinone, butachlor, butafenacil, butamifos, butenachlor, butralin, butroxydim, butylate, cafenstrole, carbetamide, carfentrazone, carfentrazone-ethyl, chloramben, chlorbromuron, chlorfenac, chlorfenac-sodium, chlorfenprop, chlorflurenol, chlorflurenol-methyl, chloridazon, chlorimuron, chlorimuron-ethyl, chlorophthalim, chlorotoluron, chlorthal-dimethyl, chlorsulfuron, cinidon, cinidon-ethyl, cinmethylin, 30 cinosulfuron, clacyfos, clethodim, clodinafop, clodinafop-propargyl, clomazone, clomeprop, clopyralid, cloransulam, cloransulam-methyl, cumyluron, cyanamide, cyanazine, cycloate, cyclopyrimorate, cyclosulfamuron, cycloxydim, cyhalofop, cyhalofop-buty1, cyprazine, 2,4-D, 2,4-D-buty1, -butyl, -dimethylammonium, -diolamin, -ethyl, 2-ethylhexyl, -isobutyl, -isoctyl, -isopropylammonium, -potassium, -triisopropanolammonium and -trolamine, 2,4-DB, 2,4-DB-buty1, -dimethylammonium, 35 isoctyl, -potassium and -sodium, daimuron (dymron), dalapon, dazomet, n-decanol, desmedipham, detosyl-pyrazolate (DTP), dicamba, dichlobenil, 2-(2,4-dichlorobenzyl)-4,4-dimethyl-1,2-oxazolidin-3-one, 2-(2,5-dichlorobenzyl)-4,4-dimethyl-1,2-oxazolidin-3-one, dichlorprop, dichlorprop-P, diclofop,

diclofop-methyl, diclofop-P-methyl, diclosulam, difenoquat, diflufenican, diflufenzopyr, diflufenzopyr-sodium, dimefuron, dimepiperate, dimethachlor, dimethametryn, dimethenamid, dimethenamid-P, dimetasulfuron, dinitramine, dinoterb, diphenamid, diquat, diquat-dibromide, dithiopyr, diuron, DNOC, endothal, EPTC, esprocarb, ethalfluralin, ethametsulfuron, ethametsulfuron-methyl, ethiozin,
5 ethofumesate, ethoxyfen, ethoxyfen-ethyl, ethoxysulfuron, etobenzanid, F-9600, F-5231, i.e. N-[2-chloro-4-fluoro-5-[4-(3-fluoropropyl)-4,5-dihydro-5-oxo-1H-tetrazol-1-yl]phenyl]ethanesulfonamide, F-7967, i.e. 3-[7-chloro-5-fluoro-2-(trifluoromethyl)-1H-benzimidazol-4-yl]-1-methyl-6-(trifluoromethyl)pyrimidine-2,4(1H,3H)-dione, fenoxaprop, fenoxaprop-P, fenoxaprop-ethyl, fenoxaprop-P-ethyl, fenoxasulfone, fenquinotrione, fentrazamide, flamprop, flamprop-M-isopropyl,
10 flamprop-M-methyl, flazasulfuron, florasulam, fluazifop, fluazifop-P, fluazifop-butyl, fluazifop-P-butyl, flucarbazone, flucarbazone-sodium, flucetosulfuron, fluchloralin, flufenacet, flufenpyr, flufenpyr-ethyl, flumetsulam, flumiclorac, flumiclorac-pentyl, flumioxazin, fluometuron, flurenol, flurenol-butyl, -dimethylammonium and -methyl, fluoroglycofen, fluoroglycofen-ethyl, flupropanate, fluprysulfuron, fluprysulfuron-methyl-sodium, fluridone, flurochloridone, fluroxypyr, fluroxypyr-meptyl, flurtamone,
15 fluthiacet, fluthiacet-methyl, fomesafen, fomesafen-sodium, foramsulfuron, fosamine, glufosinate, glufosinate-ammonium, glufosinate-P-sodium, glufosinate-P-ammonium, glufosinate-P-sodium, glyphosate, glyphosate-ammonium, -isopropylammonium, -diammonium, -dimethylammonium, -potassium, -sodium and -trimesium, H-9201, i.e. O-2,4-dimethyl-6-nitrophenyl O-ethyl isopropylphosphoramidothioate, halauxifen, halauxifen-methyl, halosafen, halosulfuron, halosulfuron-
20 methyl, haloxyfop, haloxyfop-P, haloxyfop-ethoxyethyl, haloxyfop-P-ethoxyethyl, haloxyfop-methyl, haloxyfop-P-methyl, hexazinone, HW-02, i.e. 1-dimethoxyphosphorylethyl 2,4-dichlorophenoxyacetate, imazamethabenz, imazamethabenz-methyl, imazamox, imazamox-ammonium, imazapic, imazapic-ammonium, imazapyr, imazapyr-isopropylammonium, imazaquin, imazaquin-ammonium, imazethapyr, imazethapyr-immonium, imazosulfuron, indanofan, indaziflam, iodosulfuron, iodosulfuron-methyl-
25 sodium, ioxynil, ioxynil-octanoate, -potassium and -sodium, ipfencarbazone, isoproturon, isouron, isoxaben, isoxaflutole, karbutilate, KUH-043, i.e. 3-({[5-(difluoromethyl)-1-methyl-3-(trifluoromethyl)-1H-pyrazol-4-yl]methyl}sulfonyl)-5,5-dimethyl-4,5-dihydro-1,2-oxazole, ketospiradox, lactofen, lenacil, linuron, MCPA, MCPA-butotyl, -dimethylammonium, -2-ethylhexyl, -isopropylammonium, -potassium and -sodium, MCPB, MCPB-methyl, -ethyl and -sodium, mecoprop, mecoprop-sodium, and -
30 butotyl, mecoprop-P, mecoprop-P-butotyl, -dimethylammonium, -2-ethylhexyl and -potassium, mefenacet, mefluidide, mesosulfuron, mesosulfuron-methyl, mesotrione, methabenzthiazuron, metam, metamifop, metamitron, metazachlor, metazosulfuron, methabenzthiazuron, methiopyrsulfuron, methiozolin, methyl isothiocyanate, metobromuron, metolachlor, S-metolachlor, metosulam, metoxuron, metribuzin, metsulfuron, metsulfuron-methyl, molinate, monolinuron, monosulfuron, monosulfuron-
35 ester, MT-5950, i.e. N-[3-chloro-4-(1-methylethyl)-phenyl]-2-methylpentanamide, NGGC-011, napropamide, NC-310, i.e. 4-(2,4-dichlorobenzoyl)-1-methyl-5-benzyloxypyrazole, neburon, nicosulfuron, nonanoic acid (pelargonic acid), norflurazon, oleic acid (fatty acids), orbencarb,

orthosulfamuron, oryzalin, oxadiargyl, oxadiazon, oxasulfuron, oxaziclomefon, oxyfluorfen, paraquat, paraquat dichloride, pebulate, pendimethalin, penoxsulam, pentachlorphenol, pentozazone, pethoxamid, petroleum oils, phenmedipham, picloram, picolinafen, pinoxaden, piperophos, pretilachlor, primisulfuron, primisulfuron-methyl, prodiamine, profoxydim, prometon, prometryn, propachlor, 5 propanil, propaquizaop, propazine, propham, propisochlor, propoxycarbazone, propoxycarbazone-sodium, propyrisulfuron, propyzamide, prosulfocarb, prosulfuron, pyraclonil, pyraflufen, pyraflufen-ethyl, pyrasulfotole, pyrazolynate (pyrazolate), pyrazosulfuron, pyrazosulfuron-ethyl, pyrazoxyfen, pyribambenz, pyribambenz-isopropyl, pyribambenz-propyl, pyribenzoxim, pyributicarb, pyridafol, pyridate, pyriftalid, pyriminobac, pyriminobac-methyl, pyrimisulfan, pyrithiobac, pyrithiobac-sodium, 10 pyroxasulfone, pyroxsulam, quinclorac, quinmerac, quinoclamine, quizalofop, quizalofop-ethyl, quizalofop-P, quizalofop-P-ethyl, quizalofop-P-tefuryl, rimsulfuron, saflufenacil, sethoxydim, siduron, simazine, simetryn, SL-261, sulcotrion, sulfentrazone, sulfometuron, sulfometuron-methyl, sulfosulfuron, SYN-523, SYP-249, i.e. 1-ethoxy-3-methyl-1-oxobut-3-en-2-yl 5-[2-chloro-4-(trifluoromethyl)phenoxy]-2-nitrobenzoate, SYP-300, i.e. 1-[7-fluoro-3-oxo-4-(prop-2-yn-1-yl)-3,4- 15 dihydro-2H-1,4-benzoxazin-6-yl]-3-propyl-2-thioxoimidazolidine-4,5-dione, 2,3,6-TBA, TCA (trifluoroacetic acid), TCA-sodium, tebuthiuron, tefuryltrione, tembotrione, tepraloxydim, terbacil, terbucarb, terbumeton, terbutylazin, terbutryn, thenylchlor, thiazopyr, thiencarbazone, thiencarbazone-methyl, thifensulfuron, thifensulfuron-methyl, thiobencarb, tiafenacil, tolpyralate, topramezone, tralkoxydim, triafamone, tri-allate, triasulfuron, triaziflam, tribenuron, tribenuron-methyl, triclopyr, 20 trietazine, trifloxysulfuron, trifloxysulfuron-sodium, trifludimoxazin, trifluralin, triflusulfuron, triflusulfuron-methyl, tritosulfuron, urea sulfate, vernolate, XDE-848, ZJ-0862, i.e. 3,4-dichloro-N-{{2-[(4,6-dimethoxypyrimidin-2-yl)oxy]benzyl} aniline, and also the following compounds:



Examples of plant growth regulators as possible mixing partners are:

acibenzolar, acibenzolar-S-methyl, 5-aminolevulinic acid, ancymidol, 6-benzylaminopurine, brassinolide, catechol, chlormequat chloride, cloprop, cyclanilide, 3-(cycloprop-1-enyl)propionic acid, daminozide, dazomet, n-decanol, dikegulac, dikegulac-sodium, endothal, endothal-dipotassium, -

5 disodium, and mono(N,N-dimethylalkylammonium), ethephon, flumetralin, flurenol, flurenol-butyl, flurprimidol, forchlorfenuron, gibberellic acid, inabenfide, indole-3-acetic acid (IAA), 4-indol-3-ylbutyric acid, isoprothiolane, probenazole, jasmonic acid, jasmonic acid methyl ester, maleic hydrazide, mepiquat chloride, 1-methylcyclopropene, 2-(1-naphthyl)acetamide, 1-naphthylacetic acid, 2-naphthoxyacetic acid, nitrophenoxide mixture, 4-oxo-4[(2-phenylethyl)amino]butyric acid,

10 paclobutrazole, N-phenylphthalamic acid, prohexadione, prohexadione-calcium, prohydrojasnone, salicylic acid, strigolactone, tecnazene, thidiazuron, triacontanol, trinexapac, trinexapac-ethyl, tsitodef, uniconazole, uniconazole-P.

Suitable combination partners for the compounds of the formula (I) according to the invention also

15 include, for example, the following safeners:

S1) Compounds from the group of heterocyclic carboxylic acid derivatives:

S1^a) Compounds of the dichlorophenylpyrazoline-3-carboxylic acid type (S1^a), preferably compounds such as

20 1-(2,4-dichlorophenyl)-5-(ethoxycarbonyl)-5-methyl-2-pyrazoline-3-carboxylic acid, ethyl 1-(2,4-dichlorophenyl)-5-(ethoxycarbonyl)-5-methyl-2-pyrazoline-3-carboxylate (S1-1) ("mefenpyr-diethyl"), and related compounds as described in WO-A-91/07874;

S1^b) Derivatives of dichlorophenylpyrazolecarboxylic acid (S1^b), preferably compounds such as ethyl 1-(2,4-dichlorophenyl)-5-methylpyrazole-3-carboxylate (S1-2), ethyl 1-(2,4-dichlorophenyl)-5-isopropylpyrazole-3-carboxylate (S1-3), ethyl 1-(2,4-dichlorophenyl)-5-(1,1-dimethylethyl)pyrazole-3-carboxylate (S1-4) and related compounds as described in EP-A-333131 and EP-A-269806;

25 S1^c) Derivatives of 1,5-diphenylpyrazole-3-carboxylic acid (S1^c), preferably compounds such as ethyl 1-(2,4-dichlorophenyl)-5-phenylpyrazole-3-carboxylate (S1-5), methyl 1-(2-chlorophenyl)-5-phenylpyrazole-3-carboxylate (S1-6) and related compounds as described, for example, in EP-A-268554;

30 S1^d) Compounds of the triazolecarboxylic acid type (S1^d), preferably compounds such as fenchlorazole(-ethyl ester), i.e. ethyl 1-(2,4-dichlorophenyl)-5-trichloromethyl-1H-1,2,4-triazole-3-carboxylate (S1-7), and related compounds, as described in EP-A-174562 and EP-A-346620;

S1^e) Compounds of the 5-benzyl- or 5-phenyl-2-isoxazoline-3-carboxylic acid or of the 5,5-diphenyl-2-isoxazoline-3-carboxylic acid type (S1^e), preferably compounds such as ethyl 5-(2,4-dichlorobenzyl)-2-isoxazoline-3-carboxylate (S1-8) or ethyl 5-phenyl-2-isoxazoline-3-carboxylate (S1-9) and related compounds as described in WO-A-91/08202, or 5,5-diphenyl-2-isoxazolinecarboxylic acid (S1-10) or ethyl 5,5-diphenyl-2-isoxazoline-3-carboxylate (S1-11) ("isoxadifen-ethyl") or n-propyl 5,5-diphenyl-2-isoxazoline-3-carboxylate (S1-12) or ethyl 5-(4-fluorophenyl)-5-phenyl-2-isoxazoline-3-carboxylate (S1-13), as described in patent application WO-A-95/07897.

S2) Compounds from the group of the 8-quinolinoxy derivatives (S2):

10 S2^a) Compounds of the 8-quinolinoxyacetic acid type (S2^a), preferably 1-methylhexyl (5-chloro-8-quinolinoxy)acetate ("cloquintocet-mexyl") (S2-1), 1,3-dimethylbut-1-yl (5-chloro-8-quinolinoxy)acetate (S2-2), 4-allyloxybutyl (5-chloro-8-quinolinoxy)acetate (S2-3), 1-allyloxyprop-2-yl (5-chloro-8-quinolinoxy)acetate (S2-4), ethyl (5-chloro-8-quinolinoxy)acetate (S2-5), methyl (5-chloro-8-quinolinoxy)acetate (S2-6), allyl (5-chloro-8-quinolinoxy)acetate (S2-7), 2-(2-propylideneiminoxy)-1-ethyl (5-chloro-8-quinolinoxy)acetate (S2-8), 2-oxoprop-1-yl (5-chloro-8-quinolinoxy)acetate (S2-9) and related compounds, as described in EP-A-86750, EP-A-94349 and EP-A-191736 or EP-A-0 492 366, and also (5-chloro-8-quinolinoxy)acetic acid (S2-10), hydrates and salts thereof, for example the lithium, sodium, potassium, calcium, magnesium, aluminum, iron, ammonium, quaternary ammonium, sulfonium or phosphonium salts thereof, as described in WO-A-2002/34048;

15 S2^b) Compounds of the (5-chloro-8-quinolinoxy)malonic acid type (S2^b), preferably compounds such as diethyl (5-chloro-8-quinolinoxy)malonate, diallyl (5-chloro-8-quinolinoxy)malonate, methyl ethyl (5-chloro-8-quinolinoxy)malonate and related compounds, as described in EP-A-0 582 198.

20 S3) Active compounds of the dichloroacetamide type (S3), which are frequently used as pre-emergence safeners (soil-acting safeners), for example

"dichlormid" (N,N-diallyl-2,2-dichloroacetamide) (S3-1),

"R-29148" (3-dichloroacetyl-2,2,5-trimethyl-1,3-oxazolidine) from Stauffer (S3-2),

"R-28725" (3-dichloroacetyl-2,2-dimethyl-1,3-oxazolidine) from Stauffer (S3-3),

30 "benoxacor" (4-dichloroacetyl-3,4-dihydro-3-methyl-2H-1,4-benzoxazine) (S3-4),

"PPG-1292" (N-allyl-N-[(1,3-dioxolan-2-yl)methyl]dichloroacetamide) from PPG Industries (S3-5),

"DKA-24" (N-allyl-N-[(allylaminocarbonyl)methyl]dichloroacetamide) from Sagro-Chem (S3-6),

"AD-67" or "MON 4660" (3-dichloroacetyl-1-oxa-3-azaspiro[4.5]decane) from Nitrokemia or Monsanto (S3-7),

"TI-35" (1-dichloroacetylazepane) from TRI-Chemical RT (S3-8),

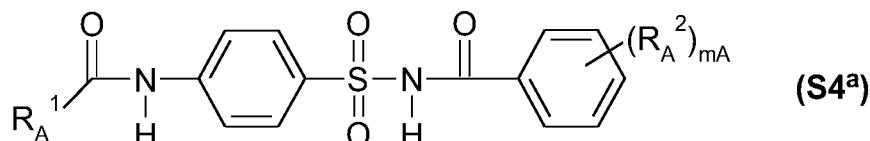
5 "diclonon" (dicyclonon) or "BAS145138" or "LAB145138" (S3-9)

((RS)-1-dichloroacetyl-3,3,8a-trimethylperhydropyrrolo[1,2-a]pyrimidin-6-one) from BASF,

"furilazole" or "MON 13900" ((RS)-3-dichloroacetyl-5-(2-furyl)-2,2-dimethyloxazolidine) (S3-10), and the (R) isomer thereof (S3-11).

S4) Compounds from the class of the acylsulfonamides (S4):

10 S4^a) N-Acylsulfonamides of the formula (S4^a) and salts thereof, as described in WO-A-97/45016,



in which

R_A¹ represents (C₁-C₆)-alkyl, (C₃-C₆)-cycloalkyl, where the 2 latter radicals are substituted by v_A substituents from the group of halogen, (C₁-C₄)-alkoxy, (C₁-C₆)-haloalkoxy and (C₁-C₄)-alkylthio and, in the case of cyclic radicals, also by (C₁-C₄)-alkyl and (C₁-C₄)-haloalkyl;

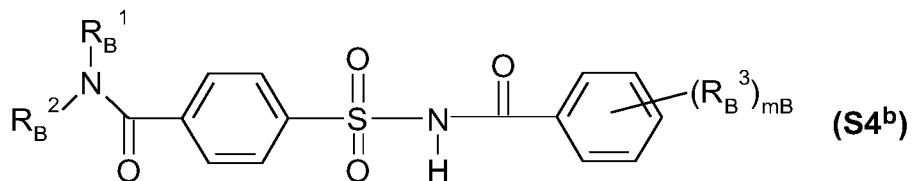
R_A² represents halogen, (C₁-C₄)-alkyl, (C₁-C₄)-alkoxy, CF₃;

m_A represents 1 or 2;

v_A represents 0, 1, 2 or 3;

20

S4^b) Compounds of the 4-(benzoylsulfamoyl)benzamide type of the formula (S4^b) and salts thereof, as described in WO-A-99/16744,



in which

R_B^1, R_B^2 independently of one another represent hydrogen, (C₁-C₆)-alkyl, (C₃-C₆)-cycloalkyl, (C₃-C₆)-alkenyl, (C₃-C₆)-alkynyl,

5 R_B^3 represents halogen, (C₁-C₄)-alkyl, (C₁-C₄)-haloalkyl or (C₁-C₄)-alkoxy and
 m_B represents 1 or 2,

e.g. those in which

R_B^1 = cyclopropyl, R_B^2 = hydrogen and (R_B^3) = 2-OMe ("cyprosulfamide", S4-1),

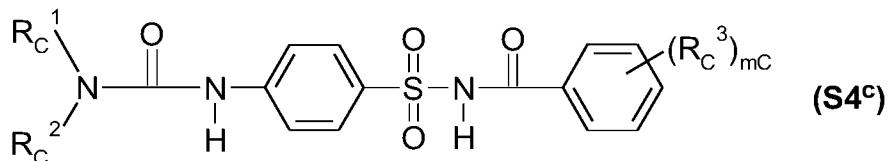
R_B^1 = cyclopropyl, R_B^2 = hydrogen and (R_B^3) = 5-Cl-2-OMe (S4-2),

10 R_B^1 = ethyl, R_B^2 = hydrogen and (R_B^3) = 2-OMe (S4-3),

R_B^1 = isopropyl, R_B^2 = hydrogen and (R_B^3) = 5-Cl-2-OMe (S4-4) and

R_B^1 = isopropyl, R_B^2 = hydrogen and (R_B^3) = 2-OMe (S4-5);

S4^c) Compounds from the class of the benzoylsulfamoylphenylureas of the formula (S4^c), as described in EP-A-365484,



15

in which

R_C^1, R_C^2 independently of one another represent hydrogen, (C₁-C₈)-alkyl, (C₃-C₈)-cycloalkyl, (C₃-C₆)-alkenyl, (C₃-C₆)-alkynyl,

R_C^3 represents halogen, (C₁-C₄)-alkyl, (C₁-C₄)-alkoxy, CF₃ and

20 m_C represents 1 or 2;

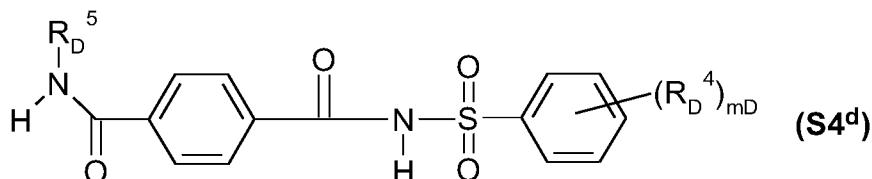
for example

1-[4-(N-2-methoxybenzoylsulfamoyl)phenyl]-3-methylurea,

1-[4-(N-2-methoxybenzoylsulfamoyl)phenyl]-3,3-dimethylurea,

1-[4-(N-4,5-dimethylbenzoylsulfamoyl)phenyl]-3-methylurea;

5 S4^d) Compounds of the N-phenylsulfonylterephthalamide type of the formula (S4^d) and salts thereof, which are known, for example, from CN 101838227,



in which

R_D⁴ represents halogen, (C₁-C₄)-alkyl, (C₁-C₄)-alkoxy, CF₃;

m_D represents 1 or 2;

10 R_D⁵ represents hydrogen, (C₁-C₆)-alkyl, (C₃-C₆)-cycloalkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₅-C₆)-cycloalkenyl.

S5) Active compounds from the class of the hydroxyaromatics and the aromatic-aliphatic carboxylic acid derivatives (S5), for example

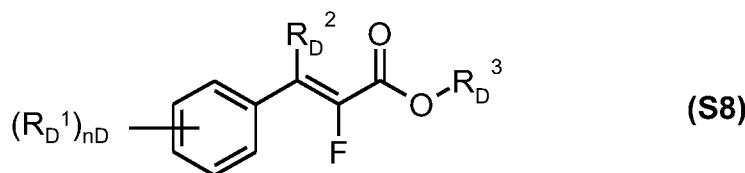
15 ethyl 3,4,5-triacetoxybenzoate, 3,5-dimethoxy-4-hydroxybenzoic acid, 3,5-dihydroxybenzoic acid, 4-hydroxysalicylic acid, 4-fluorosalicylic acid, 2-hydroxycinnamic acid, 2,4-dichlorocinnamic acid, as described in WO-A-2004/084631, WO-A-2005/015994, WO-A-2005/016001.

20 S6) Active compounds from the class of the 1,2-dihydroquinoxalin-2-ones (S6), for example

1-methyl-3-(2-thienyl)-1,2-dihydroquinoxalin-2-one, 1-methyl-3-(2-thienyl)-1,2-dihydroquinoxaline-2-thione, 1-(2-aminoethyl)-3-(2-thienyl)-1,2-dihydroquinoxalin-2-one hydrochloride, 1-(2-methylsulfonylaminoethyl)-3-(2-thienyl)-1,2-dihydroquinoxalin-2-one, as described in WO-A-2005/112630.

S7) Compounds from the class of the diphenylmethoxyacetic acid derivatives (S7), e.g. methyl diphenylmethoxyacetate (CAS Reg. No. 41858-19-9) (S7-1), ethyl diphenylmethoxyacetate or diphenylmethoxyacetic acid, as described in WO-A-98/38856.

25 S8) Compounds of the formula (S8), as described in WO-A-98/27049,



in which the symbols and indices are defined as follows:

R_D^1 represents halogen, (C₁-C₄)-alkyl, (C₁-C₄)-haloalkyl, (C₁-C₄)-alkoxy, (C₁-C₄)-haloalkoxy,

R_D^2 represents hydrogen or (C₁-C₄)-alkyl,

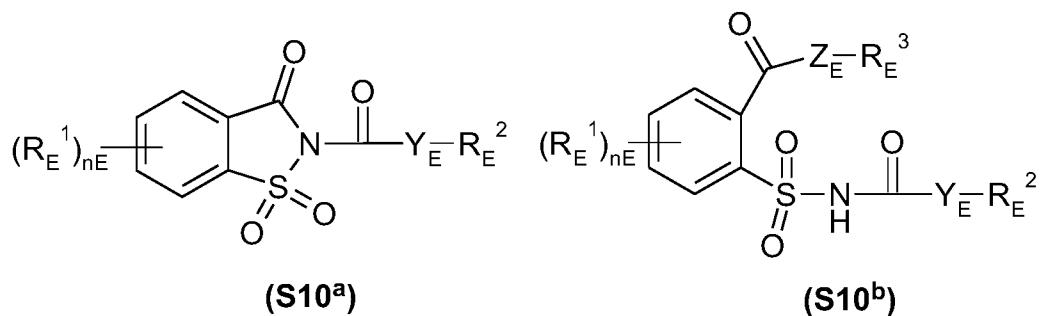
5 R_D^3 represents hydrogen, (C₁-C₈)-alkyl, (C₂-C₄)-alkenyl, (C₂-C₄)-alkynyl or aryl, where each of the aforementioned carbon-containing radicals is unsubstituted or substituted by one or more, preferably up to three, identical or different radicals from the group consisting of halogen and alkoxy; or salts thereof,

n_D represents an integer from 0 to 2.

10 S9) Active compounds from the class of the 3-(5-tetrazolylcarbonyl)-2-quinolones (S9), for example
1,2-dihydro-4-hydroxy-1-ethyl-3-(5-tetrazolylcarbonyl)-2-quinolone (CAS Reg. No.: 219479-18-2), 1,2-
dihydro-4-hydroxy-1-methyl-3-(5-tetrazolylcarbonyl)-2-quinolone (CAS Reg. No. 95855-00-8),
as described in WO-A-1999/000020.

S10) Compounds of the formula (S10^a) or (S10^b)

15 as described in WO-A-2007/023719 and WO-A-2007/023764



in which

R_E^1 represents halogen, (C₁-C₄)-alkyl, methoxy, nitro, cyano, CF₃, OCF₃,

Y_E, Z_E independently of one another represent O or S,

20 n_E represents an integer from 0 to 4,

R_E^2 represents (C₁-C₁₆)-alkyl, (C₂-C₆)-alkenyl, (C₃-C₆)-cycloalkyl, aryl; benzyl, halobenzyl,

R_E^3 represents hydrogen or (C₁-C₆)-alkyl.

S11) Active compounds of the oxyimino compound type (S11), which are known as seed-dressing agents, for example

5 "oxabetrinil" ((Z)-1,3-dioxolan-2-ylmethoxyimino(phenyl)acetonitrile) (S11-1), which is known as a seed-dressing safener for millet/sorghum against metolachlor damage,

"fluxofenim" (1-(4-chlorophenyl)-2,2,2-trifluoro-1-ethanone O-(1,3-dioxolan-2-ylmethyl)oxime) (S11-2), which is known as a seed-dressing safener for millet/sorghum against metolachlor damage, and

10 "cyometrinil" or "CGA-43089" ((Z)-cyanomethoxyimino(phenyl)acetonitrile) (S11-3), which is known as a seed-dressing safener for millet/sorghum against metolachlor damage.

S12) Active compounds from the class of the isothiocromanones (S12), for example methyl [(3-oxo-1H-2-benzothiopyran-4(3H)-ylidene)methoxy]acetate (CAS Reg. No. 205121-04-6) (S12-1) and related compounds from WO-A-1998/13361.

15 S13) One or more compounds from group (S13):

"naphthalic anhydride" (1,8-naphthalenedicarboxylic anhydride) (S13-1), which is known as a seed-dressing safener for corn against thiocarbamate herbicide damage,

"fenclorim" (4,6-dichloro-2-phenylpyrimidine) (S13-2), which is known as a safener for pretilachlor in sown rice,

20 "flurazole" (benzyl 2-chloro-4-trifluoromethyl-1,3-thiazole-5-carboxylate) (S13-3), which is known as a seed-dressing safener for millet/sorghum against alachlor and metolachlor damage,

"CL 304415" (CAS Reg. No. 31541-57-8)

(4-carboxy-3,4-dihydro-2H-1-benzopyran-4-acetic acid) (S13-4) from American Cyanamid, which is known as a safener for corn against damage by imidazolinones,

25 "MG 191" (CAS Reg. No. 96420-72-3) (2-dichloromethyl-2-methyl-1,3-dioxolane) (S13-5) from Nitrokemia, which is known as a safener for corn,

"MG 838" (CAS Reg. No. 133993-74-5)

(2-propenyl 1-oxa-4-azaspiro[4.5]decane-4-carbodithioate) (S13-6) from Nitrokemia

"disulfoton" (O,O-diethyl S-2-ethylthioethyl phosphorodithioate) (S13-7),

"dietholate" (O,O-diethyl O-phenyl phosphorothioate) (S13-8),

"mephenate" (4-chlorophenyl methylcarbamate) (S13-9).

S14) Active compounds which, in addition to herbicidal action against harmful plants, also have
5 safener action on crop plants such as rice, for example

"dimepiperate" or "MY-93" (S-1-methyl 1-phenylethylpiperidine-1-carbothioate), which is known as a
safener for rice against damage by the herbicide molinate,

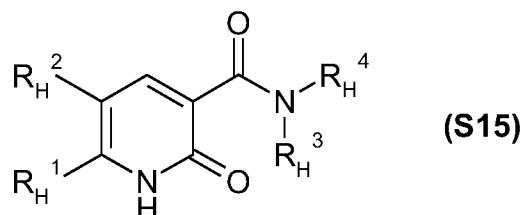
"daimuron" or "SK 23" (1-(1-methyl-1-phenylethyl)-3-p-tolylurea), which is known as a safener
for rice against imazosulfuron herbicide damage,

10 "cumyluron" = "JC-940" (3-(2-chlorophenylmethyl)-1-(1-methyl-1-phenylethyl)urea, see JP-A-
60087254), which is known as a safener for rice against damage by some herbicides,

"methoxyphenone" or "NK 049" (3,3'-dimethyl-4-methoxybenzophenone), which is known as a
safener for rice against damage by some herbicides,

15 "CSB" (1-bromo-4-(chloromethylsulfonyl)benzene) from Kumiai, (CAS Reg. No. 54091-06-4),
which is known as a safener against damage by some herbicides in rice.

S15) Compounds of the formula (S15) or tautomers thereof



as described in WO-A-2008/131861 and WO-A-2008/131860

in which

20 R_H^1 represents a (C₁-C₆)-haloalkyl radical and

R_H^2 represents hydrogen or halogen and

R_H^3, R_H^4 independently of one another represent hydrogen, (C₁-C₁₆)-alkyl, (C₂-C₁₆)-alkenyl or
(C₂-C₁₆)-alkynyl,

where each of the 3 last-mentioned radicals is unsubstituted or substituted by one or more radicals from the group of halogen, hydroxyl, cyano, (C₁-C₄)-alkoxy, (C₁-C₄)-haloalkoxy, (C₁-C₄)-alkylthio, (C₁-C₄)-alkylamino, di[(C₁-C₄)-alkyl]amino, [(C₁-C₄)-alkoxy]carbonyl, [(C₁-C₄)-haloalkoxy]carbonyl, (C₃-C₆)-cycloalkyl which is unsubstituted or substituted, phenyl which is unsubstituted or substituted, and heterocyclyl which is unsubstituted or substituted,

or (C₃-C₆)-cycloalkyl, (C₄-C₆)-cycloalkenyl, (C₃-C₆)-cycloalkyl fused on one side of the ring to a 4 to 6-membered saturated or unsaturated carbocyclic ring, or (C₄-C₆)-cycloalkenyl fused on one side of the ring to a 4 to 6-membered saturated or unsaturated carbocyclic ring,

where each of the 4 latter radicals is unsubstituted or substituted by one or more radicals from the group of halogen, hydroxyl, cyano, (C₁-C₄)-alkyl, (C₁-C₄)-haloalkyl, (C₁-C₄)-alkoxy, (C₁-C₄)-haloalkoxy, (C₁-C₄)-alkylthio, (C₁-C₄)-alkylamino, di[(C₁-C₄)-alkyl]amino, [(C₁-C₄)-alkoxy]carbonyl, [(C₁-C₄)-haloalkoxy]carbonyl, (C₃-C₆)-cycloalkyl which is unsubstituted or substituted, phenyl which is unsubstituted or substituted, and heterocyclyl which is unsubstituted or substituted,

or

R_H³ represents (C₁-C₄)-alkoxy, (C₂-C₄)-alkenyloxy, (C₂-C₆)-alkynyoxy or (C₂-C₄)-haloalkoxy and

R_H⁴ represents hydrogen or (C₁-C₄)-alkyl or

R_H³ and R_H⁴ together with the directly attached nitrogen atom represent a four- to eight-membered

heterocyclic ring which, as well as the nitrogen atom, may also contain further ring heteroatoms, preferably up to two further ring heteroatoms from the group of N, O and S, and which is unsubstituted or substituted by one or more radicals from the group of halogen, cyano, nitro, (C₁-C₄)-alkyl, (C₁-C₄)-haloalkyl, (C₁-C₄)-alkoxy, (C₁-C₄)-haloalkoxy and (C₁-C₄)-alkylthio.

S16) Active compounds which are used primarily as herbicides but also have safener action on crop plants, for example

(2,4-dichlorophenoxy)acetic acid (2,4-D),

(4-chlorophenoxy)acetic acid,

(R,S)-2-(4-chloro-o-tolyloxy)propionic acid (mecoprop),

4-(2,4-dichlorophenoxy)butyric acid (2,4-DB),

30 (4-chloro-o-tolyloxy)acetic acid (MCPA),

4-(4-chloro-o-tolyloxy)butyric acid,

4-(4-chlorophenoxy)butyric acid,

3,6-dichloro-2-methoxybenzoic acid (dicamba),

1-(ethoxycarbonyl)ethyl 3,6-dichloro-2-methoxybenzoate (lactidichlor-ethyl).

5 Preferred safeners in combination with the compounds of the formula (I) according to the invention and/or salts thereof, in particular with the compounds of the formulae (I.1) to (I.150) and/or salts thereof, are: cloquintocet-mexyl, cyprosulfamide, fenchlorazole-ethyl ester, isoxadifen-ethyl, mefenpyr-diethyl, fenclorim, cumyluron, S4-1 and S4-5, and particularly preferred safeners are: cloquintocet-mexyl, cyprosulfamide, isoxadifen-ethyl and mefenpyr-diethyl.

10

Biological examples:

Part 1

A. Post-emergence herbicidal action and crop plant compatibility

15 Seeds of monocotyledonous and dicotyledonous weeds and crop plants were placed in sandy loam in plastic or wood-fiber pots, covered with soil and cultivated in a greenhouse under controlled growth conditions. 2 to 3 weeks after sowing, the test plants were treated at the one-leaf stage. The compounds of the invention, formulated in the form of wettable powders (WP) or as emulsion concentrates (EC), were then sprayed onto the green parts of the plants as aqueous suspension or emulsion with addition of 20 0.5% additive at a water application rate of 600 l/ha (converted). After the test plants had been kept in the greenhouse under optimum growth conditions for about 3 weeks, the activity of the preparations was rated visually in comparison to untreated controls. For example, 100% activity = the plants have died, 0% activity = like control plants.

25 Tables A1 to A14 below show the effects of selected compounds of the general formula (I) according to Tables I.1 to I.150 on various harmful plants and at an application rate corresponding to 320 g/ha, which were obtained by the experimental procedure mentioned above.

Table A1

| Compound Example No. | Alopecurus myosuroides (efficacy in %) | Application rate [g/ha] |
|-------------------------|---|----------------------------|
| I.2-162 | 80 | 320 |
| I.7-162 | 90 | 320 |
| I.20-162 | 80 | 320 |

Table A2

| Compound Example No. | Echinochloa crus-galli (efficacy in %) | Application rate [g/ha] |
|-------------------------|---|----------------------------|
| I.2-162 | 80 | 320 |
| I.20-162 | 80 | 320 |

Table A3

| Compound Example No. | Setaria viridis (efficacy in %) | Application rate [g/ha] |
|-------------------------|------------------------------------|----------------------------|
| I.1-451 | 80 | 320 |
| I.1-506 | 100 | 320 |
| I.1-623 | 100 | 320 |
| I.2-162 | 100 | 320 |
| I.3-162 | 90 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 100 | 320 |
| I.20-162 | 100 | 320 |
| I.42-162_a | 80 | 320 |
| I.122-162 | 80 | 320 |
| I.141-162 | 100 | 320 |

Table A4

| Compound Example No. | Abutilon theophrasti (efficacy in %) | Application rate [g/ha] |
|----------------------|--------------------------------------|-------------------------|
| I.1-358 | 100 | 320 |
| I.1-622 | 90 | 320 |
| I.1-623 | 100 | 320 |
| I.2-162 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 100 | 320 |
| I.20-162 | 100 | 320 |
| I.42-162_a | 100 | 320 |
| I.121-162 | 80 | 320 |
| I.123-162 | 100 | 320 |
| I.122-162 | 100 | 320 |
| I.141-162 | 100 | 320 |

Table A5

| Compound Example No. | Amaranthus retroflexus (efficacy in %) | Application rate [g/ha] |
|----------------------|--|-------------------------|
| I.1-354 | 100 | 320 |
| I.1-358 | 100 | 320 |
| I.1-451 | 100 | 320 |
| I.1-464 | 100 | 320 |
| I.1-506 | 100 | 320 |
| I.1-619 | 100 | 320 |
| I.1-622 | 80 | 320 |
| I.1-623 | 100 | 320 |
| I.1-625 | 100 | 320 |
| I.2-162 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.4-162 | 100 | 320 |

| Compound Example No. | Amaranthus retroflexus (efficacy in %) | Application rate [g/ha] |
|----------------------|--|-------------------------|
| I.6-162 | 80 | 320 |
| I.7-162 | 100 | 320 |
| I.20-162 | 100 | 320 |
| I.42-162_a | 100 | 320 |
| I.121-162 | 100 | 320 |
| I.122-162 | 90 | 320 |
| I.123-162 | 100 | 320 |
| I.141-162 | 90 | 320 |

Table A6

| Compound Example No. | Matricaria inodora (efficacy in %) | Application rate [g/ha] |
|----------------------|------------------------------------|-------------------------|
| I.1-358 | 90 | 320 |
| I.1-623 | 80 | 320 |
| I.3-162 | 100 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 100 | 320 |
| I.20-162 | 90 | 320 |
| I.42-162_a | 100 | 320 |
| I.122-162 | 90 | 320 |
| I.123-162 | 80 | 320 |
| I.141-162 | 80 | 320 |

Table A7

| Compound Example No. | Polygonum convolvulus (efficacy in %) | Application rate [g/ha] |
|----------------------|---------------------------------------|-------------------------|
| I.1-358 | 100 | 320 |
| I.1-625 | 100 | 320 |

| Compound Example No. | Polygonum convolvulus (efficacy in %) | Application rate [g/ha] |
|----------------------|---------------------------------------|-------------------------|
| I.2-162 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 90 | 320 |
| I.20-162 | 100 | 320 |
| I.122-162 | 90 | 320 |
| I.123-162 | 100 | 320 |

Table A8

| Compound Example No. | Stellaria media (efficacy in %) | Application rate [g/ha] |
|----------------------|---------------------------------|-------------------------|
| I.1-358 | 100 | 320 |
| I.1-451 | 100 | 320 |
| I.1-464 | 90 | 320 |
| I.1-619 | 100 | 320 |
| I.1-622 | 90 | 320 |
| I.2-162 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 100 | 320 |
| I.20-162 | 100 | 320 |
| I.42-162_a | 100 | 320 |
| I.122-162 | 80 | 320 |
| I.123-162 | 100 | 320 |
| I.141-162 | 100 | 320 |

Table A9

| Compound Example No. | Viola tricolor (efficacy in %) | Application rate [g/ha] |
|-------------------------|-----------------------------------|----------------------------|
| I.1-354 | 100 | 320 |
| I.1-358 | 100 | 320 |
| I.1-451 | 100 | 320 |
| I.1-464 | 100 | 320 |
| I.1-623 | 100 | 320 |
| I.2-162 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.4-162 | 90 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 100 | 320 |
| I.20-162 | 100 | 320 |
| I.42-162_a | 100 | 320 |
| I.123-162 | 100 | 320 |

Table A10

| Compound Example No. | Veronica persica (efficacy in %) | Application rate [g/ha] |
|-------------------------|-------------------------------------|----------------------------|
| I.1-354 | 100 | 320 |
| I.1-623 | 100 | 320 |
| I.3-162 | 90 | 320 |
| I.4-162 | 100 | 320 |
| I.7-162 | 90 | 320 |
| I.20-162 | 90 | 320 |

Table A11

| Compound Example No. | Pharbitis purpurea (efficacy in %) | Application rate [g/ha] |
|-------------------------|---------------------------------------|----------------------------|
| I.1-354 | 100 | 320 |
| I.2-162 | 100 | 320 |

| Compound Example No. | Pharbitis purpurea (efficacy in %) | Application rate [g/ha] |
|-------------------------|---------------------------------------|----------------------------|
| I.3-162 | 100 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 90 | 320 |
| I.7-162 | 100 | 320 |
| I.20-162 | 100 | 320 |
| I.42-162 | 100 | 320 |
| I.121-162 | 80 | 320 |
| I.122-162 | 80 | 320 |

Table A12

| Compound Example No. | Digitaria sanguinalis (efficacy in %) | Application rate [g/ha] |
|-------------------------|--|----------------------------|
| I.1-622 | 100 | 320 |
| I.1-623 | 80 | 320 |
| I.4-162 | 80 | 320 |
| I.7-162 | 80 | 320 |
| I.141-162 | 100 | 320 |
| I.42-162 | 100 | 320 |
| I.123-162 | 100 | 320 |

Table A13

| Compound Example No. | Lolium rigidum (efficacy in %) | Application rate [g/ha] |
|-------------------------|-----------------------------------|----------------------------|
| I.3-162 | 80 | 320 |

Table A14

| Compound Example No. | Hordeum murinum (efficacy in %) | Application rate [g/ha] |
|-------------------------|------------------------------------|----------------------------|
| I.3-162 | 90 | 320 |
| I.6-162 | 90 | 320 |
| I.7-162 | 80 | 320 |
| I.42-162 | 90 | 320 |

As the results show, inventive compounds of the general formula (I) in post-emergence treatment show good herbicidal action against harmful plants, for example *Abutilon theophrasti*, *Alopecurus myosuroides*, *Amaranthus retroflexus*, *Digitaria sanguinalis*, *Echinochloa crus-galli*, *Hordeum*

5 *murinum*, *Lolium rigidum*, *Matricaria inodora*, *Pharbitis purpurea*, *Polygonum convolvulus*, *Setaria viridis*, *Stellaria media*, *Veronica persica* and *Viola tricolor* at an application rate of 320 g of active substance per hectare.

B. Pre-emergence herbicidal action and crop plant compatibility

10

Seeds of monocotyledonous and dicotyledonous weed plants and crop plants were placed in plastic or organic planting pots and covered with soil. The compounds of the invention, formulated in the form of wettable powders (WP) or as emulsion concentrates (EC), were then applied to the surface of the covering soil as aqueous suspension or emulsion with addition of 0.5% additive at a water application rate equivalent to 600 l/ha. After the treatment, the pots were placed in a greenhouse and kept under good growth conditions for the test plants. After about 3 weeks, the effect of the preparations is scored visually in comparison with untreated controls as percentages. For example, 100% activity = the plants have died, 0% activity = like control plants.

15 20 Tables B1 to B14 below show the effects of selected compounds of the general formula (I) according to Tables I.1 to I.150 on various harmful plants and at an application rate corresponding to 320 g/ha, which were obtained by the experimental procedure mentioned above.

Table B1

| Compound Example No. | Alopecurus myosuroides (efficacy in %) | Application rate [g/ha] |
|-------------------------|---|----------------------------|
| I.1-162 | 90 | 320 |

| Compound Example No. | Alopecurus myosuroides (efficacy in %) | Application rate [g/ha] |
|----------------------|--|-------------------------|
| I.1-199 | 90 | 320 |
| I.1-206 | 80 | 320 |
| I.1-358 | 90 | 320 |
| I.1-449 | 100 | 320 |
| I.1-464 | 80 | 320 |
| I.1-506 | 90 | 320 |
| I.1-623 | 90 | 320 |
| I.1-709 | 100 | 320 |
| I.2-162 | 90 | 320 |
| I.2-709 | 90 | 320 |
| I.3-162 | 80 | 320 |
| I.4-162 | 90 | 320 |
| I.6-162 | 90 | 320 |
| I.7-162 | 90 | 320 |
| I.20-162 | 90 | 320 |
| I.41-449 | 90 | 320 |
| I.42-162 | 90 | 320 |
| I.91-162 | 80 | 320 |
| I.122-162 | 90 | 320 |

Table B2

| Compound Example No. | Avena fatua (efficacy in %) | Application rate [g/ha] |
|----------------------|-----------------------------|-------------------------|
| I.1-162 | 90 | 320 |
| I.1-206 | 80 | 320 |
| I.1-207 | 90 | 320 |
| I.1-358 | 80 | 320 |
| I.1-464 | 80 | 320 |
| I.1-503 | 100 | 320 |

| Compound Example No. | Avena fatua (efficacy in %) | Application rate [g/ha] |
|----------------------|-----------------------------|-------------------------|
| I.1-506 | 80 | 320 |
| I.1-622 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.4-162 | 90 | 320 |
| I.6-162 | 90 | 320 |
| I.7-162 | 100 | 320 |
| I.20-162 | 100 | 320 |
| I.42-162 | 80 | 320 |
| I.122-162 | 80 | 320 |
| I.141-162 | 80 | 320 |

Table B3

| Compound Example No. | Abutilon theophrasti (efficacy in %) | Application rate [g/ha] |
|----------------------|--------------------------------------|-------------------------|
| I.1-162 | 100 | 320 |
| I.1-199 | 100 | 320 |
| I.1-206 | 90 | 320 |
| I.1-275 | 100 | 320 |
| I.1-354 | 100 | 320 |
| I.1-358 | 100 | 320 |
| I.1-464 | 100 | 320 |
| I.1-506 | 80 | 320 |
| I.1-622 | 100 | 320 |
| I.1-623 | 100 | 320 |
| I.2-162 | 100 | 320 |
| I.2-709 | 80 | 320 |
| I.3-162 | 100 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 100 | 320 |

| Compound Example No. | Abutilon theophrasti (efficacy in %) | Application rate [g/ha] |
|----------------------|--------------------------------------|-------------------------|
| I.20-162 | 100 | 320 |
| I.42-162 | 100 | 320 |
| I.122-162 | 100 | 320 |
| I.141-162 | 90 | 320 |

Table B4

| Compound Example No. | Amaranthus retroflexus (efficacy in %) | Application rate [g/ha] |
|----------------------|--|-------------------------|
| I.1-162 | 100 | 320 |
| I.1-177 | 90 | 320 |
| I.1-199 | 100 | 320 |
| I.1-206 | 90 | 320 |
| I.1-207 | 90 | 320 |
| I.1-354 | 100 | 320 |
| I.1-358 | 100 | 320 |
| I.1-449 | 100 | 320 |
| I.1-451 | 90 | 320 |
| I.1-464 | 100 | 320 |
| I.1-506 | 90 | 320 |
| I.1-622 | 80 | 320 |
| I.1-623 | 100 | 320 |
| I.2-162 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.3-464 | 90 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 100 | 320 |
| I.20-162 | 100 | 320 |
| I.41-449 | 100 | 320 |
| I.42-162 | 100 | 320 |

| Compound Example No. | Amaranthus retroflexus (efficacy in %) | Application rate [g/ha] |
|----------------------|--|-------------------------|
| I.91-162 | 90 | 320 |
| I.122-162 | 90 | 320 |
| I.141-162 | 100 | 320 |

Table B5

| Compound Example No. | Matricaria inodora (efficacy in %) | Application rate [g/ha] |
|----------------------|------------------------------------|-------------------------|
| I.1-162 | 100 | 320 |
| I.1-199 | 100 | 320 |
| I.1-200 | 90 | 320 |
| I.1-206 | 100 | 320 |
| I.1-275 | 100 | 320 |
| I.1-348 | 90 | 320 |
| I.1-354 | 100 | 320 |
| I.1-358 | 90 | 320 |
| I.1-449 | 80 | 320 |
| I.1-451 | 100 | 320 |
| I.1-464 | 100 | 320 |
| I.1-503 | 100 | 320 |
| I.1-506 | 100 | 320 |
| I.1-621 | 100 | 320 |
| I.1-622 | 100 | 320 |
| I.1-623 | 100 | 320 |
| I.1-626 | 80 | 320 |
| I.2-162 | 100 | 320 |
| I.2-709 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 100 | 320 |

| Compound Example No. | Matricaria inodora (efficacy in %) | Application rate [g/ha] |
|----------------------|------------------------------------|-------------------------|
| I.20-162 | 100 | 320 |
| I.41-449 | 100 | 320 |
| I.42-162 | 100 | 320 |
| I.122-162 | 100 | 320 |

Table B6

| Compound Example No. | Polygonum convolvulus (efficacy in %) | Application rate [g/ha] |
|----------------------|---------------------------------------|-------------------------|
| I.1-162 | 90 | 320 |
| I.1-177 | 100 | 320 |
| I.1-199 | 90 | 320 |
| I.1-206 | 90 | 320 |
| I.1-207 | 100 | 320 |
| I.1-354 | 100 | 320 |
| I.1-357 | 100 | 320 |
| I.1-358 | 90 | 320 |
| I.1-449 | 100 | 320 |
| I.1-451 | 90 | 320 |
| I.1-464 | 100 | 320 |
| I.1-506 | 100 | 320 |
| I.1-622 | 100 | 320 |
| I.1-623 | 90 | 320 |
| I.1-709 | 100 | 320 |
| I.2-162 | 100 | 320 |
| I.2-709 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.3-464 | 90 | 320 |
| I.4-162 | 90 | 320 |
| I.6-162 | 90 | 320 |
| I.7-162 | 90 | 320 |

| Compound Example No. | Polygonum convolvulus (efficacy in %) | Application rate [g/ha] |
|----------------------|---------------------------------------|-------------------------|
| I.20-162 | 90 | 320 |
| I.41-162 | 100 | 320 |
| I.42-162 | 90 | 320 |
| I.91-162 | 100 | 320 |
| I.122-162 | 100 | 320 |
| I.141-162 | 90 | 320 |

Table B7

| Compound Example No. | Stellaria media (efficacy in %) | Application rate [g/ha] |
|----------------------|---------------------------------|-------------------------|
| I.1-162 | 90 | 320 |
| I.1-199 | 100 | 320 |
| I.1-200 | 80 | 320 |
| I.1-206 | 100 | 320 |
| I.1-207 | 100 | 320 |
| I.1-275 | 100 | 320 |
| I.1-348 | 100 | 320 |
| I.1-354 | 100 | 320 |
| I.1-357 | 100 | 320 |
| I.1-358 | 100 | 320 |
| I.1-449 | 100 | 320 |
| I.1-451 | 100 | 320 |
| I.1-464 | 100 | 320 |
| I.1-506 | 100 | 320 |
| I.1-622 | 100 | 320 |
| I.1-623 | 100 | 320 |
| I.1-626 | 90 | 320 |
| I.1-709 | 100 | 320 |
| I.2-162 | 100 | 320 |
| I.2-709 | 100 | 320 |

| Compound Example No. | Stellaria media (efficacy in %) | Application rate [g/ha] |
|----------------------|---------------------------------|-------------------------|
| I.3-162 | 90 | 320 |
| I.3-464 | 100 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 100 | 320 |
| I.20-162 | 90 | 320 |
| I.41-449 | 100 | 320 |
| I.42-162 | 100 | 320 |
| I.122-162 | 100 | 320 |
| I.141-162 | 100 | 320 |

Table B8

| Compound Example No. | Viola tricolor (efficacy in %) | Application rate [g/ha] |
|----------------------|--------------------------------|-------------------------|
| I.1-162 | 90 | 320 |
| I.1-177 | 90 | 320 |
| I.1-199 | 100 | 320 |
| I.1-200 | 80 | 320 |
| I.1-206 | 100 | 320 |
| I.1-207 | 100 | 320 |
| I.1-275 | 100 | 320 |
| I.1-348 | 100 | 320 |
| I.1-354 | 100 | 320 |
| I.1-357 | 100 | 320 |
| I.1-358 | 80 | 320 |
| I.1-449 | 100 | 320 |
| I.1-451 | 100 | 320 |
| I.1-464 | 100 | 320 |
| I.1-503 | 100 | 320 |
| I.1-506 | 100 | 320 |

| Compound Example No. | Viola tricolor (efficacy in %) | Application rate [g/ha] |
|-------------------------|-----------------------------------|----------------------------|
| I.1-623 | 100 | 320 |
| I.1-626 | 100 | 320 |
| I.2-162 | 100 | 320 |
| I.2-709 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.3-464 | 100 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 100 | 320 |
| I.20-162 | 90 | 320 |
| I.41-449 | 100 | 320 |
| I.42-162 | 90 | 320 |
| I.122-162 | 100 | 320 |
| I.141-162 | 90 | 320 |

Table B9

| Compound Example No. | Digitaria sanguinalis (efficacy in %) | Application rate [g/ha] |
|-------------------------|--|----------------------------|
| I.1-177 | 100 | 320 |
| I.1-206 | 100 | 320 |
| I.1-207 | 100 | 320 |
| I.1-348 | 80 | 320 |
| I.1-354 | 100 | 320 |
| I.1-357 | 100 | 320 |
| I.1-358 | 80 | 320 |
| I.1-449 | 100 | 320 |
| I.1-451 | 90 | 320 |
| I.1-464 | 100 | 320 |
| I.1-506 | 100 | 320 |
| I.1-622 | 100 | 320 |

| Compound Example No. | Digitaria sanguinalis (efficacy in %) | Application rate [g/ha] |
|-------------------------|--|----------------------------|
| I.1-623 | 90 | 320 |
| I.1-709 | 100 | 320 |
| I.2-709 | 90 | 320 |
| I.41-162 | 100 | 320 |
| I.42-162 | 80 | 320 |
| I.91-162 | 100 | 320 |
| I.122-162 | 100 | 320 |

Table B10

| Compound Example No. | Echinochloa crus-galli (efficacy in %) | Application rate [g/ha] |
|-------------------------|---|----------------------------|
| I.1-162 | 80 | 320 |
| I.3-162 | 80 | 320 |
| I.4-162 | 90 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 80 | 320 |
| I.42-162 | 80 | 320 |

5 Table B11

| Compound Example No. | Setaria viridis (efficacy in %) | Application rate [g/ha] |
|-------------------------|------------------------------------|----------------------------|
| I.1-162 | 90 | 320 |
| I.1-177 | 90 | 320 |
| I.1-206 | 90 | 320 |
| I.1-207 | 100 | 320 |
| I.1-354 | 80 | 320 |
| I.1-358 | 80 | 320 |
| I.1-451 | 90 | 320 |

| Compound Example No. | Setaria viridis (efficacy in %) | Application rate [g/ha] |
|----------------------|---------------------------------|-------------------------|
| I.1-464 | 100 | 320 |
| I.1-506 | 100 | 320 |
| I.1-621 | 100 | 320 |
| I.2-162 | 90 | 320 |
| I.3-162 | 100 | 320 |
| I.3-464 | 90 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 100 | 320 |
| I.42-162 | 100 | 320 |
| I.122-162 | 100 | 320 |

Table B12

| Compound Example No. | Pharbitis purpurea (efficacy in %) | Application rate [g/ha] |
|----------------------|------------------------------------|-------------------------|
| I.1-162 | 80 | 320 |
| I.1-200 | 100 | 320 |
| I.1-206 | 80 | 320 |
| I.1-207 | 100 | 320 |
| I.1-354 | 90 | 320 |
| I.1-354 | 80 | 320 |
| I.1-358 | 90 | 320 |
| I.1-449 | 100 | 320 |
| I.1-464 | 100 | 320 |
| I.1-506 | 100 | 320 |
| I.6-162 | 90 | 320 |
| I.7-162 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.2-162 | 100 | 320 |
| I.2-709 | 100 | 320 |

| Compound Example No. | Pharbitis purpurea (efficacy in %) | Application rate [g/ha] |
|-------------------------|---------------------------------------|----------------------------|
| I.122-162 | 100 | 320 |

Table B13

| Compound Example No. | Veronica persica (efficacy in %) | Application rate [g/ha] |
|-------------------------|-------------------------------------|----------------------------|
| I.1-275 | 100 | 320 |
| I.1-449 | 80 | 320 |
| I.1-464 | 100 | 320 |
| I.1-506 | 80 | 320 |
| I.2-162 | 90 | 320 |
| I.2-709 | 100 | 320 |
| I.3-162 | 100 | 320 |
| I.4-162 | 100 | 320 |
| I.6-162 | 100 | 320 |
| I.7-162 | 80 | 320 |

Table B14

| Compound Example No. | Hordeum murinum (efficacy in %) | Application rate [g/ha] |
|-------------------------|------------------------------------|----------------------------|
| I.1-162 | 90 | 320 |
| I.1-199 | 80 | 320 |
| I.1-206 | 80 | 320 |
| I.2-162 | 80 | 320 |
| I.3-162 | 90 | 320 |
| I.4-162 | 90 | 320 |
| I.6-162 | 90 | 320 |
| I.7-162 | 90 | 320 |
| I.42-162 | 90 | 320 |
| I.122-162 | 100 | 320 |

As the results show, inventive compounds of the general formula (I) in post-emergence treatment show good herbicidal action against harmful plants, for example against harmful plants such as *Abutilon theophrasti*, *Alopecurus myosuroides*, *Avena fatua*, *Amaranthus retroflexus*, *Digitaria sanguinalis*, *Echinochloa crus-galli*, *Hordeum murinum*, *Matricaria inodora*, *Polygonum convolvulus*, *Pharbitis* 5 *purpurea*, *Setaria viridis*, *Stellaria media*, *Veronica persica* and *Viola tricolor*, at an application rate of 320 g of active substance per hectare.

Part 2

C. Herbicidal post-emergence action

10

Seeds of mono- and dicotyledonous weed plants were placed in plastic pots in sandy loam soil (doubly sown with in each case one species of mono- or dicotyledonous weed plants per pot), covered with soil and cultivated in a greenhouse under controlled growth conditions. 2 to 3 weeks after sowing, the test plants were treated at the one-leaf stage. The compounds of the invention, formulated in the form of 15 wettable powders (WP) or as emulsion concentrates (EC), were applied onto the green parts of the plants as aqueous suspension or emulsion with addition of 0.5% additive at a water application rate of 600 liters per hectare (converted). After the test plants had been kept in the greenhouse under optimum growth conditions for about 3 weeks, the activity of the preparations was rated visually in comparison to untreated controls. For example, 100% activity = the plants have died, 0% activity = like control plants.

20

Tables C1 to C7 below show the effects of selected compounds of the general formula (I) according to Tables I.1 to I.150 on various harmful plants and at an application rate corresponding to 1280 g/ha, which were obtained by the experimental procedure mentioned above.

25 Table C1

| Compound Example No. | Echinochloa crus-galli | Application rate [g/ha] |
|----------------------|------------------------|-------------------------|
| I.41-162 | 100 | 1280 |
| I.1-315 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.42-162 | 100 | 1280 |
| I.126-162 | 90 | 1280 |
| I.7-290 | 100 | 1280 |

Table C2

| Compound Example No. | Poa Annua | Application rate [g/ha] |
|-------------------------|-----------|----------------------------|
| I.41-162 | 100 | 1280 |
| I.1-315 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.2-290 | 90 | 1280 |
| I.1-546 | 100 | 1280 |
| I.62-162 | 100 | 1280 |
| I.61-162 | 90 | 1280 |
| I.82-162 | 90 | 1280 |
| I.66-162 | 90 | 1280 |

Table C3

| Compound Example No. | Setaria viridis | Application rate [g/ha] |
|-------------------------|-----------------|----------------------------|
| I.41-162 | 100 | 1280 |
| I.1-315 | 100 | 1280 |
| I.5-162 | 100 | 1280 |

Table C4

| Compound Example No. | Abutilon theophrasti | Application rate [g/ha] |
|-------------------------|----------------------|----------------------------|
| I.41-162 | 100 | 1280 |
| I.1-315 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.1-546 | 100 | 1280 |
| I.5-290 | 100 | 1280 |
| I.62-162 | 100 | 1280 |

| Compound Example No. | Abutilon theophrasti | Application rate [g/ha] |
|----------------------|----------------------|-------------------------|
| I.7-290 | 100 | 1280 |

Table C5

| Compound Example No. | Amaranthus retroflexus | Application rate [g/ha] |
|----------------------|------------------------|-------------------------|
| I.41-162 | 100 | 1280 |
| I.1-315 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.42-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.2-290 | 100 | 1280 |
| I.1-546 | 100 | 1280 |
| I.5-290 | 100 | 1280 |
| I.62-162 | 100 | 1280 |
| I.7-290 | 100 | 1280 |
| I.3-290 | 100 | 1280 |
| I.63-162 | 100 | 1280 |
| I.2-451 | 100 | 1280 |
| I.3-451 | 100 | 1280 |
| I.4-451 | 100 | 1280 |
| I.7-449 | 100 | 1280 |
| I.61-162 | 100 | 1280 |
| I.82-162 | 100 | 1280 |
| I.66-162 | 100 | 1280 |
| I.2-449 | 100 | 1280 |
| I.4-449 | 100 | 1280 |

Table C6

| Compound Example No. | Matricaria inodora | Application rate [g/ha] |
|-------------------------|--------------------|----------------------------|
| I.41-162 | 100 | 1280 |
| I.1-315 | 90 | 1280 |
| I.5-162 | 100 | 1280 |
| I.42-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.2-290 | 90 | 1280 |
| I.1-546 | 100 | 1280 |
| I.5-290 | 100 | 1280 |
| I.62-162 | 100 | 1280 |
| I.3-290 | 90 | 1280 |
| I.63-162 | 100 | 1280 |
| I.7-449 | 90 | 1280 |

Table C7

| Compound Example No. | Stellaria media | Application rate [g/ha] |
|-------------------------|-----------------|----------------------------|
| I.41-162 | 100 | 1280 |
| I.1-315 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.42-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.2-290 | 100 | 1280 |
| I.5-290 | 100 | 1280 |
| I.3-290 | 100 | 1280 |
| I.63-162 | 100 | 1280 |
| I.2-451 | 100 | 1280 |
| I.3-451 | 100 | 1280 |
| I.4-451 | 100 | 1280 |

| Compound Example No. | Stellaria media | Application rate [g/ha] |
|-------------------------|-----------------|----------------------------|
| I.2-449 | 100 | 1280 |
| I.4-449 | 90 | 1280 |
| I.44-449 | 90 | 1280 |

As the results show, compounds of the general formula (I) according to the invention, in post-emergence treatment, have good herbicidal activity against harmful plants. For example, compounds of the general formula (I), applied post-emergence, have very good herbicidal action (80% to 100% herbicidal action) 5 against harmful plants such as *Abutilon theophrasti*, *Amaranthus retroflexus*, *Echinochloa crus-galli*, *Matricaria inodora*, *Poa annua*, *Setaria viridis* and *Stellaria media* at an application rate of 1280 g of active substance per hectare.

D. Herbicidal pre-emergence action

10

Seeds of mono- and dicotyledonous weed plants were placed in plastic pots in sandy loam soil (doubly sown with in each case one species of mono- or dicotyledonous weed plants per pot) and covered with soil. The compounds of the invention, formulated in the form of wettable powders (WP) or as emulsion concentrates (EC), were then applied onto the surface of the covering soil as aqueous suspension or 15 emulsion with addition of 0.5% additive at a water application rate of 600 liters per hectare (converted). After the treatment, the pots were placed in a greenhouse and kept under good growth conditions for the test plants. After about 3 weeks, the effect of the preparations was scored visually in comparison with untreated controls as percentages. For example, 100% activity = the plants have died, 0% activity = like control plants.

20

Tables D1 to D8 below show the effects of selected compounds of the general formula (I) according to Tables I.1 to I.150 on various harmful plants and at an application rate corresponding to 1280 g/ha, which were obtained by the experimental procedure mentioned above.

25 Table D1

| Compound Example No. | Echinochloa crus-galli | Application rate [g/ha] |
|-------------------------|------------------------|----------------------------|
| I.123-162 | 100 | 1280 |
| I.41-162 | 100 | 1280 |

| | | |
|-----------|-----|------|
| I.126-162 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.121-162 | 100 | 1280 |
| I.2-290 | 90 | 1280 |
| I.42-162 | 100 | 1280 |
| I.5-290 | 90 | 1280 |
| I.62-162 | 90 | 1280 |
| I.3-451 | 100 | 1280 |
| I.66-162 | 90 | 1280 |
| I.44-449 | 100 | 1280 |
| I.1-290 | 90 | 1280 |

Table D2

| Compound Example No. | Lolium rigidum | Application rate [g/ha] |
|----------------------|----------------|-------------------------|
| I.123-162 | 100 | 1280 |
| I.41-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.5-162 | 90 | 1280 |
| I.121-162 | 90 | 1280 |
| I.2-449 | 90 | 1280 |

Table D3

| Compound Example No. | Poa Annua | Application rate [g/ha] |
|----------------------|-----------|-------------------------|
| I.123-162 | 100 | 1280 |
| I.41-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.121-162 | 100 | 1280 |
| I.2-290 | 100 | 1280 |

| Compound Example No. | Poa Annua | Application rate [g/ha] |
|-------------------------|-----------|----------------------------|
| I.42-162 | 100 | 1280 |
| I.5-290 | 90 | 1280 |
| I.62-162 | 100 | 1280 |
| I.1-315 | 90 | 1280 |
| I.3-451 | 90 | 1280 |
| I.63-162 | 100 | 1280 |
| I.66-162 | 100 | 1280 |
| I.1-546 | 100 | 1280 |
| I.2-449 | 100 | 1280 |
| I.4-290 | 90 | 1280 |
| I.7-290 | 90 | 1280 |
| I.82-162 | 100 | 1280 |
| I.3-290 | 100 | 1280 |
| I.61-162 | 100 | 1280 |
| I.4-449 | 90 | 1280 |
| I.7-449 | 90 | 1280 |

Table D4

| Compound Example No. | Setaria viridis | Application rate [g/ha] |
|-------------------------|-----------------|----------------------------|
| I.123-162 | 100 | 1280 |
| I.41-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.121-162 | 100 | 1280 |
| I.2-290 | 90 | 1280 |
| I.5-290 | 90 | 1280 |
| I.62-162 | 100 | 1280 |
| I.1-315 | 100 | 1280 |

| Compound Example No. | Setaria viridis | Application rate [g/ha] |
|----------------------|-----------------|-------------------------|
| I.3-451 | 90 | 1280 |
| I.63-162 | 100 | 1280 |
| I.66-162 | 90 | 1280 |
| I.1-546 | 100 | 1280 |
| I.82-162 | 90 | 1280 |
| I.61-162 | 90 | 1280 |

Table D5

| Compound Example No. | Abutilon theophrasti | Application rate [g/ha] |
|----------------------|----------------------|-------------------------|
| I.123-162 | 100 | 1280 |
| I.41-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.121-162 | 100 | 1280 |
| I.2-290 | 100 | 1280 |
| I.5-290 | 100 | 1280 |
| I.62-162 | 100 | 1280 |
| I.1-315 | 100 | 1280 |
| I.63-162 | 100 | 1280 |
| I.66-162 | 100 | 1280 |
| I.1-546 | 100 | 1280 |
| I.4-290 | 100 | 1280 |
| I.7-290 | 100 | 1280 |
| I.3-290 | 100 | 1280 |
| I.61-162 | 100 | 1280 |

Table D6

| Compound Example No. | Amaranthus retroflexus | Application rate [g/ha] |
|----------------------|------------------------|-------------------------|
| I.123-162 | 100 | 1280 |
| I.41-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.121-162 | 100 | 1280 |
| I.2-290 | 100 | 1280 |
| I.42-162 | 100 | 1280 |
| I.5-290 | 100 | 1280 |
| I.62-162 | 100 | 1280 |
| I.1-315 | 100 | 1280 |
| I.3-451 | 100 | 1280 |
| I.63-162 | 100 | 1280 |
| I.66-162 | 90 | 1280 |
| I.1-546 | 100 | 1280 |
| I.2-449 | 100 | 1280 |
| I.4-290 | 100 | 1280 |
| I.7-290 | 100 | 1280 |
| I.82-162 | 100 | 1280 |
| I.3-290 | 100 | 1280 |
| I.4-449 | 100 | 1280 |
| I.44-449 | 100 | 1280 |
| I.7-449 | 100 | 1280 |
| I.2-451 | 100 | 1280 |
| I.4-451 | 100 | 1280 |

Table D7

| Compound Example No. | Matricaria inodora | Application rate [g/ha] |
|----------------------|--------------------|-------------------------|
| I.123-162 | 100 | 1280 |
| I.41-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.121-162 | 100 | 1280 |
| I.2-290 | 100 | 1280 |
| I.42-162 | 100 | 1280 |
| I.5-290 | 90 | 1280 |
| I.62-162 | 100 | 1280 |
| I.1-315 | 100 | 1280 |
| I.3-451 | 90 | 1280 |
| I.63-162 | 90 | 1280 |
| I.66-162 | 100 | 1280 |
| I.1-546 | 90 | 1280 |
| I.2-449 | 100 | 1280 |
| I.4-290 | 90 | 1280 |
| I.7-290 | 100 | 1280 |
| I.82-162 | 100 | 1280 |
| I.3-290 | 100 | 1280 |
| I.61-162 | 90 | 1280 |
| I.4-449 | 100 | 1280 |
| I.44-449 | 90 | 1280 |
| I.7-449 | 100 | 1280 |
| I.2-451 | 90 | 1280 |

Table D8

| Compound Example No. | Stellaria media | Application rate [g/ha] |
|----------------------|-----------------|-------------------------|
| I.123-162 | 100 | 1280 |
| I.41-162 | 100 | 1280 |
| I.126-162 | 100 | 1280 |
| I.5-162 | 100 | 1280 |
| I.121-162 | 100 | 1280 |
| I.2-290 | 100 | 1280 |
| I.42-162 | 100 | 1280 |
| I.5-290 | 100 | 1280 |
| I.62-162 | 100 | 1280 |
| I.1-315 | 100 | 1280 |
| I.3-451 | 100 | 1280 |
| I.63-162 | 100 | 1280 |
| I.1-546 | 100 | 1280 |
| I.2-449 | 100 | 1280 |
| I.4-290 | 100 | 1280 |
| I.7-290 | 100 | 1280 |
| I.82-162 | 90 | 1280 |
| I.3-290 | 100 | 1280 |
| I.4-449 | 100 | 1280 |
| I.44-449 | 100 | 1280 |
| I.7-449 | 100 | 1280 |
| I.2-451 | 100 | 1280 |
| I.4-451 | 100 | 1280 |

As the results show, compounds of the general formula (I) according to the invention, in pre-emergence treatment, have good herbicidal activity against harmful plants. For example, compounds of the general formula (I), applied pre-emergence, have very good action (80% to 100% herbicidal action) against harmful plants such as *Abutilon theophrasti*, *Amaranthus retroflexus*, *Echinochloa crus-galli*, *Lolium rigidum*, *Matricaria inodora*, *Poa annua*, *Setaria viridis* and *Stellaria media* at an application rate of 1280 g of active substance per hectare.

Part 3

E. Measurement of PS II activity in thylakoid membranes

5 Cooled fresh spinach leaves were comminuted and homogenized in 50 mM phosphate buffer, pH 6.8, 10 mM KCl, 0.34 M sucrose (sucrose buffer) (blender, 1 g of plant material/ml). The homogenate was subsequently filtered through 4 layers of Miracloth and the chloroplasts were isolated by centrifugation, i.e. 10 min of centrifugation at 4400 x g (4°C). The sediment was suspended in 25 ml of sucrose buffer and re-centrifuged for 10 min at 4400 x g (4°C). The sediment was then suspended in 40 ml of 50 mM phosphate buffer, pH 6.8, 10 mM KCl, without sucrose. In this step, the chloroplasts were osmotically ruptured and the thylakoid membranes were then obtained by centrifugation (10 min, 4400 x g, 4°C). The membrane sediment was finally suspended in about 20 ml of 50 mM phosphate buffer, pH 6.8, 10 mM KCl. Following protein determination and activity determination, the membrane suspension was divided into aliquots and frozen in liquid nitrogen. The aliquots were stored at -80°C. Under these 10 conditions, the photosystem II preparation was storage stable for at least three months. The activity determination of photosystem II (PS II) was then carried out using the following test principle: The electron transfer from PS II to an artificial electron acceptor, 2,6-dichlorophenolindophenol (DCPIP), was measured with exposure to light. The concentration of the blue oxidized form of DCPIP was determined spectrophotometrically at wavelength $\lambda = 595$ nm. The enzyme-catalyzed reduction of 15 DCPIP resulted in a colorless leuco form and thus in a decrease of the absorption at 595 nm in the reaction batch, which decrease was measured as a function of time. The activity determination is carried out in microtiter plates (96 cavities) in a reaction volume of 200 μ l. Here, 155 μ l of dilute membrane suspension were initially charged in 50 mM of phosphate buffer, pH 6.8, 10 mM KCl. Depending on the activity of the PS II preparation, the dilution was adjusted such that the measurement of the decrease in 20 absorption ($\lambda = 595$ nm) was linear for at least 10 min. In each case 5 μ l solutions of the test compounds of a concentration of 100 μ M in DMSO were added to the enzyme suspension; controls contained 5 μ l of DMSO; the final concentration of DMSO in the reaction batch was thus 2.5% (v/v); this 25 concentration had no adverse effect on the enzymatic activity. On each microtiter plate, a known PS II inhibitor, for example metribuzin, was used as standard, which allowed the quality of the PS II test to be assessed. The reaction was started by addition of 40 μ l DCPIP solution (600 μ M in distilled water); the 30 final concentration of DCPIP was 120 μ M. Measurement of absorption is carried out over a period of 10 min at 22°C and with exposure to light. Using metribuzin as comparative substance, the results for the efficacy of the compounds of the general formula (I) at 100 μ M are stated in the table below using the following classification: ++++ (inhibition $\geq 90\%$), +++ (90% $>$ inhibition $\geq 70\%$), ++ (70% $>$ inhibition $\geq 50\%$), + (50% $>$ inhibition $\geq 30\%$).

Effects of selected compounds of the general formula (I) according to the following table E1:

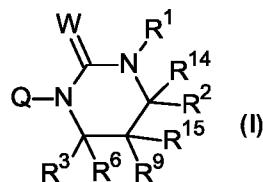
Table E1

| No. | Substance | Effect |
|-----|------------|--------|
| 1 | Metribuzin | ++++ |
| 2 | I.1-162 | ++++ |
| 3 | I.1-290 | ++++ |
| 4 | I.1-449 | ++ |
| 5 | I.2-162 | +++ |
| 6 | I.3-162 | ++ |
| 7 | I.4-162 | ++ |
| 8 | I.41-162 | +++ |
| 9 | I.61-162 | +++ |

Similar results were also achievable with further compounds of the general formula (I), even on application of these compounds to different plant species.

Claims:

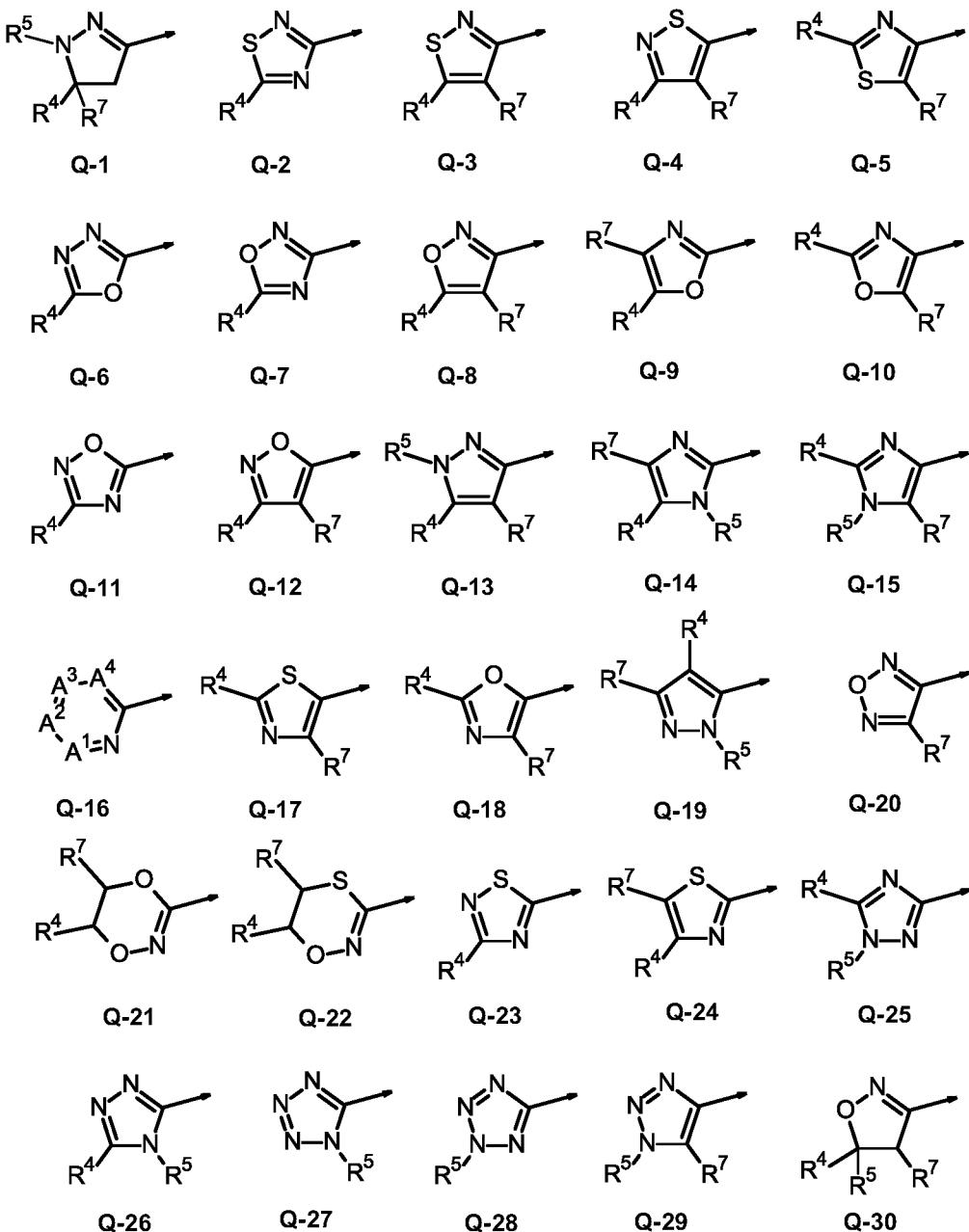
1. A substituted N-heterocyclyl- or N-heteroaryltetrahydropyrimidinone of the general formula (I) of the general formula (I) and/or salts thereof



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in which

Q represents the groups Q-1 to Q-30



where the arrow represents a bond of the respective Q group to the nitrogen of the tetrahydropyrimidinone in the general formula (I),

5 A¹, A², A³, A⁴ are identical or different and independently of one another represent N (nitrogen) or the moiety C-R⁸, but there are never more than two adjacent nitrogen atoms, and where R⁸ in the moiety C-R⁸ in each case has identical or different meanings according to the definition below, or

10 A¹ and A², when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

15 A² and A³, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

20 A³ and A⁴, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution,

25 R¹ represents hydrogen, hydroxy, (C₁-C₈)-alkyl, (C₁-C₈)-haloalkyl, (C₁-C₈)-hydroxyalkyl, hydroxycarbonyl-(C₁-C₈)-alkylene, (C₁-C₈)-alkoxy, (C₁-C₈)-alkoxy-(C₁-C₈)-alkylene, (C₁-C₈)-alkoxyalkyloxy, (C₁-C₈)-haloalkoxy, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-halocycloalkyl, aryl, heteroaryl, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkylene, heterocyclyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkenyloxy, (C₂-C₈)-alkynyl, (C₂-C₈)-alkynyoxy, amino, bis[(C₁-C₈)-alkyl]amino, aryl-(C₁-C₈)-alkylene, heteroaryl-(C₁-C₈)-alkylene, heterocyclyl-(C₁-C₈)-alkylene, (C₁-C₈)-cyanoalkyl, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, SO₂R¹³, R¹²O(O)C-(C₁-C₈)-alkylene, arylcarbonyl-(C₁-C₈)-alkylene, (C₁-C₈)-alkylcarbonyl-(C₁-C₈)-alkylene, heteroarylcarbonyl-(C₁-C₈)-alkylene, heterocyclylcarbonyl-(C₁-C₈)-alkylene, (C₁-C₇)-alkylcarbonyloxy-(C₁-C₈)-alkylene,

30 (C₁-C₈)-alkyl, (C₃-C₁₀)-cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-(C₁-C₈)-alkyl, (C₁-C₈)-haloalkyl, (C₃-C₁₀)-cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-(C₁-C₈)-alkyl,

35 R² and R⁹ independently of one another represent hydrogen, hydroxy, halogen, (C₁-C₈)-alkyl, (C₁-C₈)-haloalkyl, (C₃-C₁₀)-cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-(C₁-C₈)-alkyl,

heteroaryl-(C₁-C₈)-alkyl, heterocyclyl-(C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, arylcarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkylcarbonyl-(C₁-C₈)-alkyl, heteroarylcarbonyl-(C₁-C₈)-alkyl, (C₃-C₁₀)-cycloalkylcarbonyl-(C₁-C₈)-alkyl, aryl-(C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, 5 arylcarbonyloxy-(C₁-C₈)-alkyl, heteroarylcarbonyloxy-(C₁-C₈)-alkyl, heterocyclylcarbonyloxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkylcarbonyloxy-(C₁-C₈)-alkyl, (C₃-C₈)-cycloalkylcarbonyloxy-(C₁-C₈)-alkyl, (C₁-C₈)-haloalkoxy-(C₁-C₈)-alkyl, aryl-(C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, heteroaryl-(C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, C(O)R¹², C(O)OR¹², 10 C(O)NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C₁-C₈)-alkyl, cyano-(C₁-C₈)-alkyl, hydroxycarbonyl-(C₁-C₈)-alkyl, hydroxycarbonyl, aminocarbonyl, aminocarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkylaminocarbonyl-(C₁-C₈)-alkyl, (C₃-C₈)-cycloalkylaminocarbonyl-(C₁-C₈)-alkyl, (C₂-C₈)-alkenyloxycarbonyl-(C₁-C₈)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, cyano, hydroxy-(C₁-C₈)-alkyl, or

15 R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, or

20 R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

25 R³ represents hydroxy, hydrothio, halogen, NR¹⁰R¹¹, (C₁-C₈)-alkoxy, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkoxy, aryl-(C₁-C₈)-alkoxy, (C₁-C₈)-alkoxy-(C₁-C₈)-alkoxy, arylcarbonyloxy, (C₁-C₈)-alkylcarbonyloxy, (C₁-C₈)-alkoxy-(C₁-C₈)-alkylcarbonyloxy, aryl-(C₁-C₈)-alkylcarbonyloxy, heteroarylcarbonyloxy, (C₃-C₁₀)-cycloalkylcarbonyloxy, 30 heterocyclylcarbonyloxy, (C₁-C₈)-haloalkylcarbonyloxy, (C₂-C₈)-alkenylcarbonyloxy, OC(O)OR¹², OC(O)SR¹³, OC(S)OR¹², OC(S)SR¹³, OSO₂R¹³, OSO₂OR¹², OCHO,

35 R⁴ and R⁷ independently of one another represent hydrogen, hydrothio, hydroxy, halogen, (C₁-C₈)-alkyl, (C₁-C₈)-haloalkyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkyl, aryl, heteroaryl, heterocyclyl, aryl-(C₁-C₈)-alkyl, heteroaryl-(C₁-C₈)-alkyl, heterocyclyl-(C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₂-C₈)-haloalkenyl, (C₂-C₈)-haloalkynyl, (C₃-C₁₀)-halocycloalkyl, (C₄-C₁₀)-cycloalkenyl, (C₄-C₁₀)-halocycloalkenyl, aryl-(C₂-C₈)-alkenyl, heteroaryl-(C₂-C₈)-alkenyl, heterocyclyl-(C₂-C₈)-alkenyl, aryl-(C₂-

5 C8)-alkynyl, heteroaryl-(C2-C8)-alkynyl, heterocycl-(C2-C8)-alkynyl, (C3-C10)-cycloalkyl-(C2-C8)-alkynyl, arylcarbonyl-(C1-C8)-alkyl, (C1-C8)-alkylcarbonyl-(C1-C8)-alkyl, heteroarylcarbonyl-(C1-C8)-alkyl, (C3-C10)-cycloalkylcarbonyl-(C1-C8)-alkyl, aryl-(C1-C8)-alkoxycarbonyl-(C1-C8)-alkyl, (C1-C8)-alkoxycarbonyl-(C1-C8)-alkyl, (C1-C8)-alkoxy-(C1-C8)-alkyl, arylcarbonyloxy-(C1-C8)-alkyl, heteroarylcarbonyloxy-(C1-C8)-alkyl, heterocyclcarbonyloxy-(C1-C8)-alkyl, (C1-C8)-alkylcarbonyloxy-(C1-C8)-alkyl, (C3-C8)-cycloalkylcarbonyloxy-(C1-C8)-alkyl, (C1-C8)-haloalkoxy-(C1-C8)-alkyl, aryl-(C1-C8)-alkoxy-(C1-C8)-alkyl, heteroaryl-(C1-C8)-alkoxy-(C1-C8)-alkyl, CHO, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C1-C8)-alkyl, cyano-(C1-C8)-alkyl, hydroxycarbonyl-(C1-C8)-alkyl, hydroxycarbonyl, (C1-C8)-haloalkoxy-(C1-C8)-alkylthio, (C1-C8)-alkylthio-(C1-C8)-alkylene, (C1-C8)-haloalkylthio-(C1-C8)-alkylthio, (C1-C8)-alkylthio-(C1-C8)-alkylthio, aminocarbonyl, aminocarbonyl-(C1-C8)-alkyl, (C1-C8)-alkylaminocarbonyl-(C1-C8)-alkyl, (C3-C8)-cycloalkylaminocarbonyl-(C1-C8)-alkyl, (C2-C8)-alkenyloxy carbonyl-(C1-C8)-alkyl, (C3-C8)-cycloalkyl-(C1-C8)-alkoxycarbonyl-(C1-C8)-alkyl, cyano, hydroxy-(C1-C8)-alkyl, (C2-C8)-alkenyloxy-(C1-C8)-alkyl, or

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20 R^4 and R^7 together with the carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-3, Q-4, Q-8, Q-9, Q-12 and Q-19,

35 R⁴ and R⁵ together with the nitrogen atom or carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O

and S and which optionally has further substitution, when Q represents Q-13, Q-14, Q-15, Q-25 and Q-26,

5 R⁶ represents hydrogen or (C₁-C₈)-alkyl,

10 R⁸ represents hydrogen, halogen, cyano, nitro, hydrothio, hydroxy, NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, thiocyanato, isothiocyanato, formyl, (C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₁-C₁₀)-haloalkyl, (C₂-C₈)-haloalkenyl, (C₂-C₈)-haloalkynyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-halocycloalkyl, (C₄-C₁₀)-cycloalkenyl, (C₄-C₁₀)-halocycloalkenyl, pentafluorothio, (C₁-C₈)-alkoxy-(C₁-C₈)-haloalkyl, (C₁-C₈)-haloalkoxy-(C₁-C₈)-haloalkyl, (C₁-C₈)-haloalkoxy-(C₁-C₈)-alkyl, aryl, aryl-(C₁-C₈)-alkyl, heteroaryl, heteroaryl-(C₁-C₈)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₈)-alkyl, (C₄-C₁₀)-cycloalkenyl-(C₁-C₈)-alkyl, heterocyclyl, heterocyclyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkylthio-(C₁-C₈)-alkyl, (C₁-C₈)-haloalkylthio-(C₁-C₈)-alkyl, (C₁-C₈)-alkylcarbonyl-(C₁-C₈)-alkyl, C(O)OR¹², C(O)NR¹⁰R¹¹, C(O)R¹², -C=NOR¹², -C=NOH, R¹⁰R¹¹N-(C₁-C₈)-alkyl, R¹²O(O)C-(C₁-C₈)-alkyl, hydroxycarbonyl, hydroxycarbonyl-(C₁-C₈)-alkyl, aryl-(C₁-C₈)-alkynyl, heteroaryl-(C₁-C₈)-alkynyl, heterocyclyl-(C₁-C₈)-alkynyl, tris[(C₁-C₈)-alkyl]silyl-(C₂-C₈)-alkynyl, bis[(C₁-C₈)-alkyl](aryl)silyl-(C₂-C₈)-alkynyl, bisaryl[(C₁-C₈)-alkyl]silyl-(C₂-C₈)-alkynyl, (C₃-C₈)-cycloalkyl-(C₂-C₈)-alkynyl, aryl-(C₂-C₈)-alkenyl, heteroaryl-(C₂-C₈)-alkenyl, heterocyclyl-(C₂-C₈)-alkenyl, (C₃-C₈)-cycloalkyl-(C₂-C₈)-alkenyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkylaminosulfonylamino, (C₃-C₈)-cycloalkylaminosulfonylamino, diazo, aryldiazo, tris[(C₁-C₈)-alkyl]silyl, bis[(C₁-C₈)-alkyl](aryl)silyl, bisaryl[(C₁-C₈)-alkyl]silyl,

25 R¹⁰ and R¹¹ are the same or different and independently of one another represent hydrogen, (C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₁-C₈)-cyanoalkyl, (C₁-C₁₀)-haloalkyl, (C₂-C₈)-haloalkenyl, (C₂-C₈)-haloalkynyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-halocycloalkyl, (C₄-C₁₀)-cycloalkenyl, (C₄-C₁₀)-halocycloalkenyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, (C₁-C₈)-haloalkoxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkylthio-(C₁-C₈)-alkyl, (C₁-C₈)-haloalkylthio-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy-(C₁-C₈)-haloalkyl, aryl, aryl-(C₁-C₈)-alkyl, heteroaryl, heteroaryl-(C₁-C₈)-alkyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkyl, (C₄-C₁₀)-cycloalkenyl-(C₁-C₈)-alkyl, COR¹², SO₂R¹³, (C₁-C₈)-alkyl-HNO₂S-, (C₃-C₁₀)-cycloalkyl-HNO₂S-, heterocyclyl, (C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxycarbonyl, aryl-(C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, aryl-(C₁-C₈)-alkoxycarbonyl, heteroaryl-(C₁-C₈)-alkoxycarbonyl, (C₂-C₈)-alkenyloxycarbonyl, (C₂-C₈)-alkynyloxycarbonyl, heterocyclyl-(C₁-C₈)-alkyl,

5 R¹² represents (C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₁-C₈)-cyanoalkyl, (C₁-C₁₀)-haloalkyl, (C₂-C₈)-haloalkenyl, (C₂-C₈)-haloalkynyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-halocycloalkyl, (C₄-C₁₀)-cycloalkenyl, (C₄-C₁₀)-halocycloalkenyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy-(C₁-C₈)-haloalkyl, aryl, aryl-(C₁-C₈)-alkyl, heteroaryl,

10 heteroaryl-(C₁-C₈)-alkyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkyl, (C₄-C₁₀)-cycloalkenyl-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, (C₂-C₈)-alkenyloxycarbonyl-(C₁-C₈)-alkyl, aryl-(C₁-C₈)-alkoxycarbonyl-(C₁-C₈)-alkyl, hydroxycarbonyl-(C₁-C₈)-alkyl, heterocyclyl, heterocyclyl-(C₁-C₈)-alkyl,

15 R¹³ represents (C₁-C₈)-alkyl, (C₂-C₈)-alkenyl, (C₂-C₈)-alkynyl, (C₁-C₈)-cyanoalkyl, (C₁-C₁₀)-haloalkyl, (C₂-C₈)-haloalkenyl, (C₂-C₈)-haloalkynyl, (C₃-C₁₀)-cycloalkyl, (C₃-C₁₀)-halocycloalkyl, (C₄-C₁₀)-cycloalkenyl, (C₄-C₁₀)-halocycloalkenyl, (C₁-C₈)-alkoxy-(C₁-C₈)-alkyl, (C₁-C₈)-alkoxy-(C₁-C₈)-haloalkyl, aryl, aryl-(C₁-C₈)-alkyl, heteroaryl, heteroaryl-(C₁-C₈)-alkyl, heterocyclyl-(C₁-C₈)-alkyl, (C₃-C₁₀)-cycloalkyl-(C₁-C₈)-alkyl, (C₄-C₁₀)-cycloalkenyl-(C₁-C₈)-alkyl, NR¹⁰R¹¹,

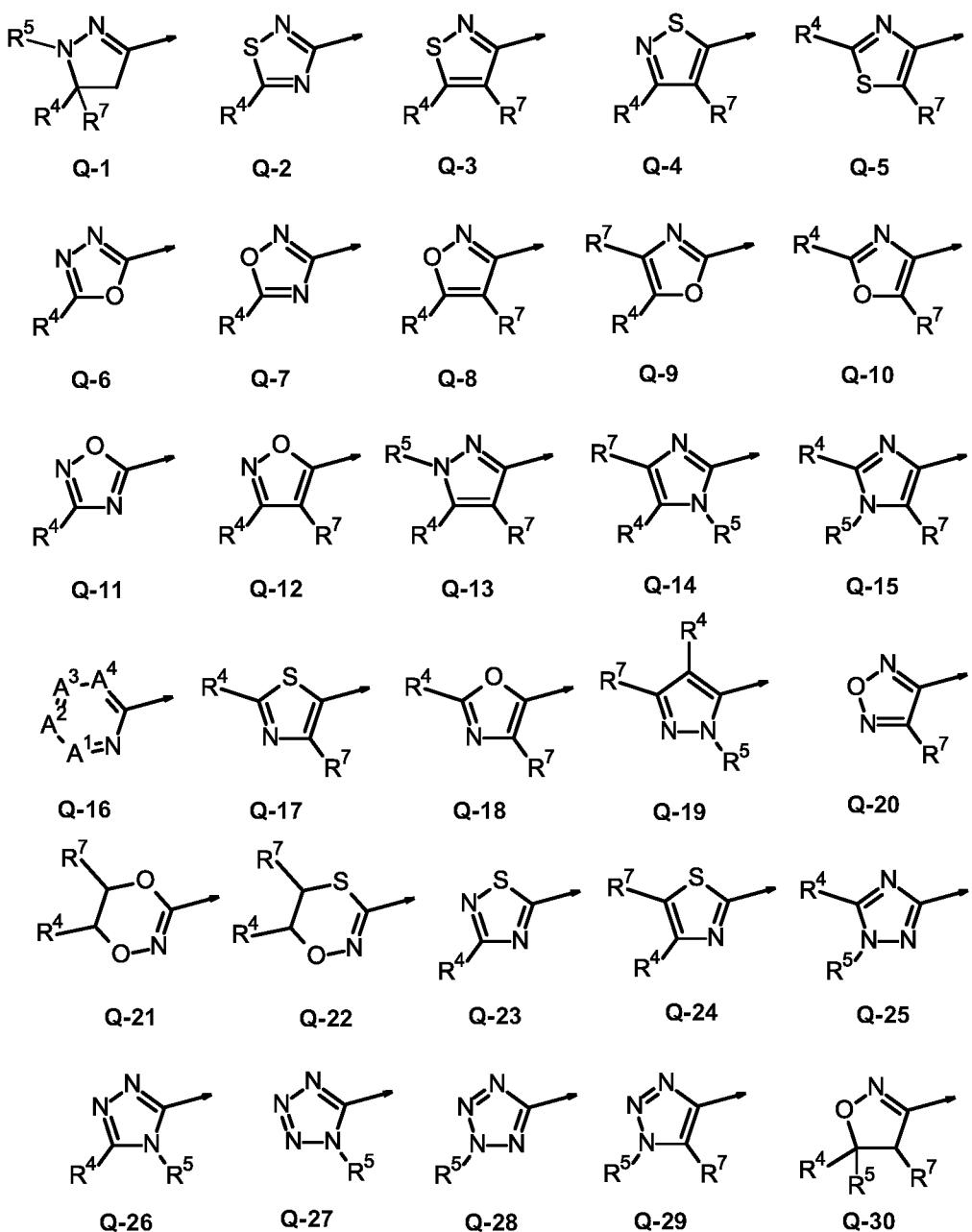
20 R¹⁴ and R¹⁵ independently of one another represent hydrogen, (C₁-C₈)-alkyl, halogen, or

25 R⁹ and R¹⁵ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

30 and

2. The compound of the general formula (I) as claimed in claim 1 and/or the salts thereof, characterized in that

30 Q represents the groups Q-1 to Q-30



where the arrow represents a bond of the respective Q group to the nitrogen of the tetrahydropyrimidinone in the general formula (I),

5

A^1, A^2, A^3, A^4 are identical or different and independently of one another represent N (nitrogen) or the moiety $C-R^8$, but there are never more than two adjacent nitrogen atoms, and where R^8 in the moiety $C-R^8$ in each case has identical or different meanings according to the definition below, or

10

A^1 and A^2 , when each is a group $C-R^8$, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is

optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

5 A² and A³, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

10 A³ and A⁴, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution,

15 R¹ represents hydrogen, hydroxy, (C₁-C₇)-alkyl, (C₁-C₇)-haloalkyl, (C₁-C₇)-hydroxyalkyl, hydroxycarbonyl-(C₁-C₇)-alkylene, (C₁-C₇)-alkoxy, (C₁-C₇)-alkoxy-(C₁-C₇)-alkylene, (C₁-C₇)-alkoxyalkyloxy, (C₁-C₇)-haloalkoxy, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, aryl, heteroaryl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkylene, heterocyclyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkenyloxy, (C₂-C₇)-alkynyl, (C₂-C₇)-alkynyoxy, amino, bis[(C₁-C₇)-alkyl]amino, aryl-(C₁-C₇)-alkylene, heteroaryl-(C₁-C₇)-alkylene, heterocyclyl-(C₁-C₇)-alkylene, (C₁-C₇)-cyanoalkyl, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, SO₂R¹³, R¹²O(O)C-(C₁-C₇)-alkylene, arylcarbonyl-(C₁-C₇)-alkylene, (C₁-C₇)-alkylcarbonyl-(C₁-C₇)-alkylene, heteroarylcarbonyl-(C₁-C₇)-alkylene, heterocyclylcarbonyl-(C₁-C₇)-alkylene, (C₁-C₇)-alkylcarbonyloxy-(C₁-C₇)-alkylene,

25 R² and R⁹ independently of one another represent hydrogen, hydroxy, halogen, (C₁-C₇)-alkyl, (C₁-C₇)-haloalkyl, (C₃-C₈)-cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkyl, heterocyclyl-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C₁-C₇)-alkyl, cyano-(C₁-C₇)-alkyl, cyano, hydroxy-(C₁-C₇)-alkyl, or

30 R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, or

R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

5

R³ represents hydroxy, hydrothio, halogen, NR¹⁰R¹¹, (C₁-C₇)-alkoxy, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkoxy, aryl-(C₁-C₇)-alkoxy, (C₁-C₇)-alkoxy-(C₁-C₇)-alkoxy, arylcarbonyloxy, (C₁-C₇)-alkylcarbonyloxy, (C₁-C₇)-alkoxy-(C₁-C₇)-alkylcarbonyloxy, aryl-(C₁-C₇)-alkylcarbonyloxy, heteroarylcarbonyloxy, (C₃-C₈)-cycloalkylcarbonyloxy, heterocyclcarbonyloxy, (C₁-C₇)-haloalkylcarbonyloxy, (C₂-C₇)-alkenylcarbonyloxy, 10 OC(O)OR¹², OC(O)SR¹³, OC(S)OR¹², OC(S)SR¹³, OSO₂R¹³, OSO₂OR¹², OCHO,

10

R⁴ and R⁷ independently of one another represent hydrogen, hydrothio, hydroxy, halogen, (C₁-C₇)-alkyl, (C₁-C₇)-haloalkyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkyl, aryl, heteroaryl, heterocycl, aryl-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkyl, heterocycl-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₂-C₇)-haloalkenyl, (C₂-C₇)-haloalkynyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, aryl-(C₂-C₇)-alkenyl, heteroaryl-(C₂-C₇)-alkenyl, heterocycl-(C₂-C₇)-alkenyl, aryl-(C₂-C₇)-alkynyl, heteroaryl-(C₂-C₇)-alkynyl, heterocycl-(C₂-C₇)-alkynyl, (C₃-C₈)-cycloalkyl-(C₂-C₇)-alkynyl, arylcarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkylcarbonyl-(C₁-C₇)-alkyl, 15 heteroarylcarbonyl-(C₁-C₇)-alkyl, (C₃-C₈)-cycloalkylcarbonyl-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, arylcarbonyloxy-(C₁-C₇)-alkyl, heteroarylcarbonyloxy-(C₁-C₇)-alkyl, heterocyclcarbonyloxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkylcarbonyloxy-(C₁-C₇)-alkyl, 20 (C₃-C₇)-cycloalkylcarbonyloxy-(C₁-C₇)-alkyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, CHO, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C₁-C₇)-alkyl, cyano-(C₁-C₇)-alkyl, hydroxycarbonyl-(C₁-C₇)-alkyl, hydroxycarbonyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-alkylthio, (C₁-C₇)-alkylthio-(C₁-C₇)-alkylene, (C₁-C₇)-haloalkylthio-(C₁-C₇)-alkylthio, (C₁-C₇)-alkylthio-(C₁-C₇)-alkylthio, 25 aminocarbonyl, aminocarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkylaminocarbonyl-(C₁-C₇)-alkyl, (C₃-C₇)-cycloalkylaminocarbonyl-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyloxy carbonyl-(C₁-C₇)-alkyl, (C₃-C₇)-cycloalkyl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, cyano, hydroxy-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyloxy-(C₁-C₇)-alkyl, or 30 35

R⁴ and R⁷ together with the carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally

interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-3, Q-4, Q-8, Q-9, Q-12, Q-13, Q-19 and Q-30,

5 R⁵ represents hydrogen, formyl, (C₁-C₇)-alkyl, (C₁-C₇)-haloalkyl, hydroxy-(C₁-C₇)-alkyl, hydroxycarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, aryl, heteroaryl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkyl, heterocyclyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, NR¹⁰R¹¹, aryl-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkyl, heterocyclyl-(C₁-C₇)-alkyl, (C₁-C₇)-cyanoalkyl, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, SO₂R¹³, (C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyloxycarbonyl-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, heteroaryl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, aryloxycarbonyl-(C₁-C₇)-alkyl, arylcarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkylcarbonyl-(C₁-C₇)-alkyl, heteroarylcarbonyl-(C₁-C₇)-alkyl, heterocyclylcarbonyl-(C₁-C₇)-alkyl, or

10 15 R⁴ and R⁵ together with the nitrogen atom or carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-13, Q-14, Q-15, Q-25 and Q-26,

20 R⁶ represents hydrogen or (C₁-C₇)-alkyl,

25 R⁸ represents hydrogen, halogen, cyano, nitro, hydrothio, hydroxy, NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, thiocyanato, isothiocyanato, formyl, (C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₁-C₈)-haloalkyl, (C₂-C₇)-haloalkenyl, (C₂-C₇)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, pentafluorothio, (C₁-C₇)-alkoxy-(C₁-C₇)-haloalkyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-haloalkyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-alkyl, aryl, aryl-(C₁-C₇)-alkyl, heteroaryl, heteroaryl-(C₁-C₇)-alkyl, (C₃-C₇)-cycloalkyl-(C₁-C₇)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₇)-alkyl, heterocyclyl, heterocyclyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkylthio-(C₁-C₇)-alkyl, (C₁-C₇)-haloalkylthio-(C₁-C₇)-alkyl, (C₁-C₇)-alkylcarbonyl-(C₁-C₇)-alkyl, C(O)OR¹², C(O)NR¹⁰R¹¹, C(O)R¹², -C=NOR¹², -C=NOH, R¹⁰R¹¹N-(C₁-C₇)-alkyl, R¹²O(O)C-(C₁-C₇)-alkyl, hydroxycarbonyl, hydroxycarbonyl-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkynyl, heteroaryl-(C₁-C₇)-alkynyl, heterocyclyl-(C₁-C₇)-alkynyl, tris[(C₁-C₇)-alkyl]silyl-(C₂-C₇)-alkynyl, bis[(C₁-C₇)-alkyl](aryl)silyl-(C₂-C₇)-alkynyl, bisaryl[(C₁-C₇)-alkyl]silyl-(C₂-C₇)-alkynyl, (C₃-C₇)-cycloalkyl-(C₂-C₇)-alkynyl, aryl-

(C₂-C₇)-alkenyl, heteroaryl-(C₂-C₇)-alkenyl, heterocyclyl-(C₂-C₇)-alkenyl, (C₃-C₇)-cycloalkyl-(C₂-C₇)-alkenyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkylaminosulfonylamino, (C₃-C₇)-cycloalkylaminosulfonylamino, diazo, aryldiazo, tris[(C₁-C₇)-alkyl]silyl, bis[(C₁-C₇)-alkyl](aryl)silyl, bisaryl[(C₁-C₇)-alkyl]silyl,

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R¹⁰ and R¹¹ are the same or different and independently of one another represent hydrogen, (C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₁-C₇)-cyanoalkyl, (C₁-C₈)-haloalkyl, (C₂-C₇)-haloalkenyl, (C₂-C₇)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-haloalkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkylthio-(C₁-C₇)-alkyl, (C₁-C₇)-haloalkylthio-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-haloalkyl, aryl, aryl-(C₁-C₇)-alkyl, heteroaryl, heteroaryl-(C₁-C₇)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₇)-alkyl, COR¹², SO₂R¹³, (C₁-C₇)-alkyl-HNO₂S-, (C₃-C₈)-cycloalkyl-HNO₂S-, heterocyclyl, (C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxycarbonyl, aryl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxycarbonyl, heteroaryl-(C₁-C₇)-alkoxycarbonyl, (C₂-C₇)-alkenyloxycarbonyl, (C₂-C₇)-alkynyloxycarbonyl, heterocyclyl-(C₁-C₇)-alkyl,

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R¹² represents (C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₁-C₇)-cyanoalkyl, (C₁-C₈)-haloalkyl, (C₂-C₇)-haloalkenyl, (C₂-C₇)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-haloalkyl, aryl, aryl-(C₁-C₇)-alkyl, heteroaryl, heteroaryl-(C₁-C₇)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, (C₂-C₇)-alkenyloxycarbonyl-(C₁-C₇)-alkyl, aryl-(C₁-C₇)-alkoxycarbonyl-(C₁-C₇)-alkyl, hydroxycarbonyl-(C₁-C₇)-alkyl, heterocyclyl, heterocyclyl-(C₁-C₇)-alkyl,

R¹³ represents (C₁-C₇)-alkyl, (C₂-C₇)-alkenyl, (C₂-C₇)-alkynyl, (C₁-C₇)-cyanoalkyl, (C₁-C₈)-haloalkyl, (C₂-C₇)-haloalkenyl, (C₂-C₇)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, (C₁-C₇)-alkoxy-(C₁-C₇)-alkyl, (C₁-C₇)-alkoxy-(C₁-C₇)-haloalkyl, aryl, aryl-(C₁-C₇)-alkyl, heteroaryl, heteroaryl-(C₁-C₇)-alkyl, heterocyclyl-(C₁-C₇)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₇)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₇)-alkyl, NR¹⁰R¹¹,

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R¹⁴ and R¹⁵ independently of one another represent hydrogen, (C₁-C₇)-alkyl, halogen, or

R^9 and R^{15} together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

5

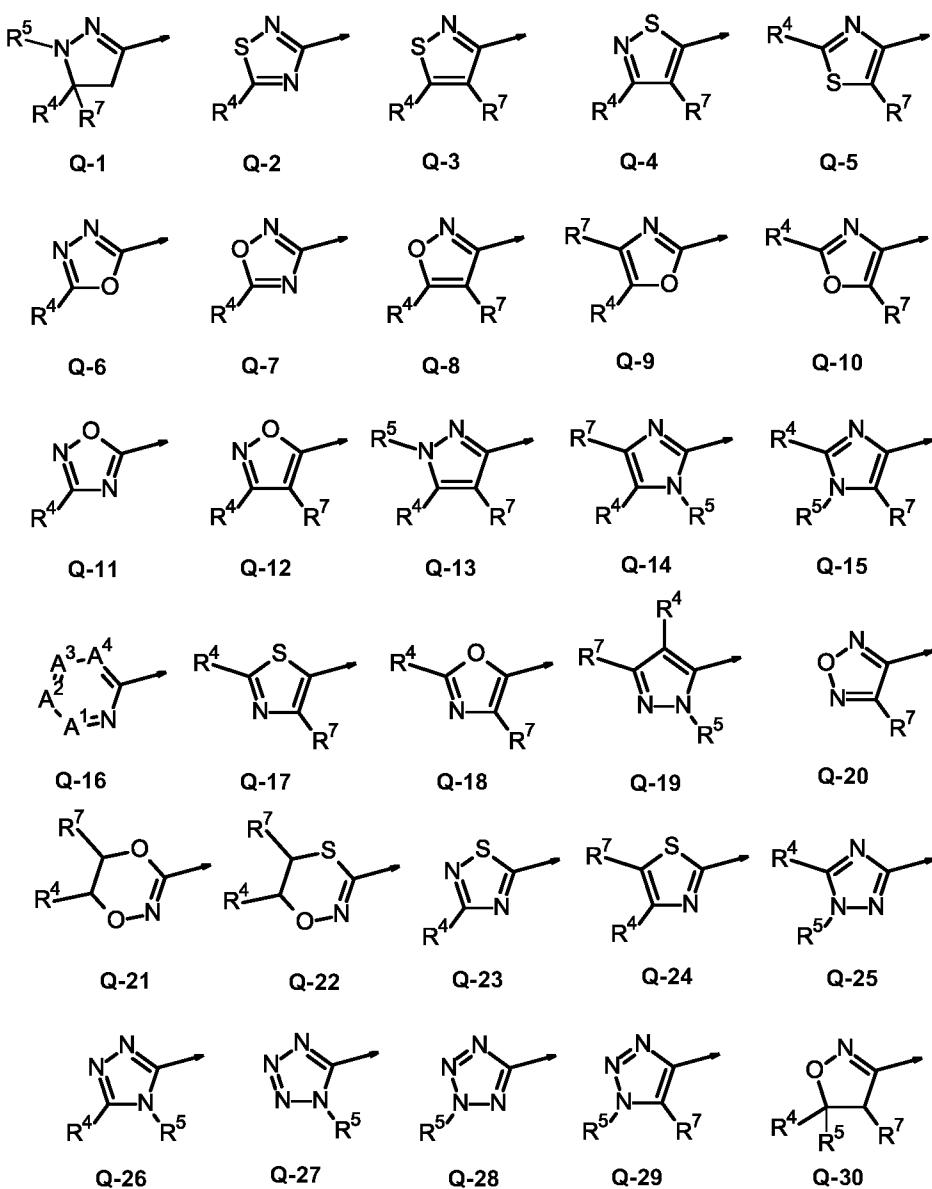
and

W represents oxygen.

10

3. The compound of the general formula (I) as claimed in claim 1 and/or the salts thereof, characterized in that

Q represents the groups Q-1 to Q-30



where the arrow represents a bond of the respective Q group to the nitrogen of the tetrahydropyrimidinone in the general formula (I),

5 A¹, A², A³, A⁴ are identical or different and independently of one another represent N (nitrogen) or the moiety C-R⁸, but there are never more than two adjacent nitrogen atoms, and where R⁸ in the moiety C-R⁸ in each case has identical or different meanings according to the definition below, or

10 A¹ and A², when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

15 A² and A³, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

20 A³ and A⁴, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution,

25 R¹ represents hydrogen, hydroxy, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₁-C₆)-hydroxyalkyl, hydroxycarbonyl-(C₁-C₆)-alkylene, (C₁-C₆)-alkoxy, (C₁-C₆)-alkoxy-(C₁-C₆)-alkylene, (C₁-C₆)-alkoxyalkyloxy, (C₁-C₆)-haloalkoxy, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, aryl, heteroaryl, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkylene, heterocyclyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkenyloxy, (C₂-C₆)-alkynyl, (C₂-C₆)-alkynyoxy, amino, bis[(C₁-C₆)-alkyl]amino, aryl-(C₁-C₆)-alkylene, heteroaryl-(C₁-C₆)-alkylene, heterocyclyl-(C₁-C₆)-alkylene, (C₁-C₆)-cyanoalkyl, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, SO₂R¹³, R¹²O(O)C-(C₁-C₆)-alkylene, arylcarbonyl-(C₁-C₆)-alkylene, (C₁-C₆)-alkylcarbonyl-(C₁-C₆)-alkylene, heteroarylcarbonyl-(C₁-C₆)-alkylene, heterocyclcarbonyl-(C₁-C₆)-alkylene, (C₁-C₆)-alkylcarbonyloxy-(C₁-C₆)-alkylene,

30 R² and R⁹ independently of one another represent hydrogen, hydroxy, fluorine, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₃-C₈)-cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-(C₁-C₆)-alkyl,

35 R² and R⁹ independently of one another represent hydrogen, hydroxy, fluorine, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₃-C₈)-cycloalkyl, aryl, heteroaryl, heterocyclyl, aryl-(C₁-C₆)-alkyl,

heteroaryl-(C₁-C₆)-alkyl, heterocyclyl-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, heteroaryl-(C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C₁-C₆)-alkyl, cyano-(C₁-C₆)-alkyl, cyano, hydroxy-(C₁-C₆)-alkyl, or

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R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, or

10

R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

15

R³ represents hydroxy, hydrothio, halogen, NR¹⁰R¹¹, (C₁-C₆)-alkoxy, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkoxy, aryl-(C₁-C₆)-alkoxy, (C₁-C₆)-alkoxy-(C₁-C₆)-alkoxy, arylcarbonyloxy, (C₁-C₆)-alkylcarbonyloxy, (C₁-C₆)-alkoxy-(C₁-C₆)-alkylcarbonyloxy, aryl-(C₁-C₆)-alkylcarbonyloxy, heteroarylcarbonyloxy, (C₃-C₈)-cycloalkylcarbonyloxy, heterocyclylcarbonyloxy, (C₁-C₆)-haloalkylcarbonyloxy, (C₂-C₆)-alkenylcarbonyloxy, OC(O)OR¹², OC(O)SR¹³, OC(S)OR¹², OC(S)SR¹³, OSO₂R¹³, OCHO,

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R⁴ and R⁷ independently of one another represent hydrogen, hydrothio, hydroxy, halogen, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkyl, aryl, heteroaryl, heterocyclyl, aryl-(C₁-C₆)-alkyl, heteroaryl-(C₁-C₆)-alkyl, heterocyclyl-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₂-C₆)-haloalkenyl, (C₂-C₆)-haloalkynyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, aryl-(C₂-C₆)-alkenyl, heteroaryl-(C₂-C₆)-alkenyl, heterocyclyl-(C₂-C₆)-alkenyl, aryl-(C₂-C₆)-alkynyl, heteroaryl-(C₂-C₆)-alkynyl, heterocyclyl-(C₂-C₆)-alkynyl, (C₃-C₈)-cycloalkyl-(C₂-C₆)-alkynyl, arylcarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyl-(C₁-C₆)-alkyl, heteroarylcarbonyl-(C₁-C₆)-alkyl, (C₃-C₈)-cycloalkylcarbonyl-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, arylcarbonyloxy-(C₁-C₆)-alkyl, heteroarylcarbonyloxy-(C₁-C₆)-alkyl, heterocyclylcarbonyloxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyloxy-(C₁-C₆)-alkyl, (C₃-C₆)-cycloalkylcarbonyloxy-(C₁-C₆)-alkyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, heteroaryl-(C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, CHO, C(O)R¹², C(O)NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, NR¹⁰R¹¹, R¹⁰R¹¹N-(C₁-C₆)-alkyl,

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5 cyano-(C₁-C₆)-alkyl, hydroxycarbonyl-(C₁-C₆)-alkyl, hydroxycarbonyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-alkylthio, (C₁-C₆)-alkylthio-(C₁-C₆)-alkylene, (C₁-C₆)-haloalkylthio-(C₁-C₆)-alkylthio, (C₁-C₆)-alkylthio-(C₁-C₆)-alkylthio, aminocarbonyl, aminocarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkylaminocarbonyl-(C₁-C₆)-alkyl, (C₃-C₆)-cycloalkylaminocarbonyl-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyloxy carbonyl-(C₁-C₆)-alkyl, (C₃-C₆)-cycloalkyl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, cyano, hydroxy-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyloxy-(C₁-C₆)-alkyl, or

10 R⁴ and R⁷ together with the carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-3, Q-4, Q-8, Q-9, Q-12, Q-13, Q-19 and Q-30,

15 R⁵ represents hydrogen, formyl, (C₁-C₆)-alkyl, (C₁-C₆)-haloalkyl, hydroxy-(C₁-C₆)-alkyl, hydroxycarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, aryl, heteroaryl, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkyl, heterocyclyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, NR¹⁰R¹¹, aryl-(C₁-C₆)-alkyl, heteroaryl-(C₁-C₆)-alkyl, heterocyclyl-(C₁-C₆)-alkyl, (C₁-C₆)-cyanoalkyl, C(O)R¹², C(O)OR¹², C(O)NR¹⁰R¹¹, 20 SO₂R¹³, (C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyloxy carbonyl-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, heteroaryl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, aryloxycarbonyl-(C₁-C₆)-alkyl, arylcarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyl-(C₁-C₆)-alkyl, heteroarylcarbonyl-(C₁-C₆)-alkyl, heterocyclylcarbonyl-(C₁-C₆)-alkyl, or

25 R⁴ and R⁵ together with the nitrogen atom or carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-13, Q-14, Q-30, Q-15, Q-25 and Q-26,

30 R⁶ represents hydrogen or (C₁-C₆)-alkyl,

35 R⁸ represents hydrogen, halogen, cyano, nitro, hydrothio, hydroxy, NR¹⁰R¹¹, OR¹², SR¹³, SOR¹³, SO₂R¹³, thiocyanato, isothiocyanato, formyl, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₈)-haloalkyl, (C₂-C₆)-haloalkenyl, (C₂-C₆)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl,

5 pentafluorothio, (C₁-C₆)-alkoxy-(C₁-C₆)-haloalkyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-haloalkyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-alkyl, aryl, aryl-(C₁-C₆)-alkyl, heteroaryl, heteroaryl-(C₁-C₆)-alkyl, (C₃-C₆)-cycloalkyl-(C₁-C₆)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₆)-alkyl, heterocyclyl, heterocyclyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkylthio-(C₁-C₆)-alkyl, (C₁-C₆)-haloalkylthio-(C₁-C₆)-alkyl, (C₁-C₆)-alkylcarbonyl-(C₁-C₆)-alkyl, C(O)OR¹², C(O)NR¹⁰R¹¹, C(O)R¹², -C=NOR¹², -C=NOH, R¹⁰R¹¹N-(C₁-C₆)-alkyl, R¹²O(O)C-(C₁-C₆)-alkyl, hydroxycarbonyl, hydroxycarbonyl-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkynyl, heteroaryl-(C₁-C₆)-alkynyl, heterocyclyl-(C₁-C₆)-alkynyl, tris[(C₁-C₆)-alkyl]silyl-(C₂-C₆)-alkynyl, bis[(C₁-C₆)-alkyl](aryl)silyl-(C₂-C₆)-alkynyl,

10 bisaryl[(C₁-C₆)-alkyl]silyl-(C₂-C₆)-alkynyl, (C₃-C₆)-cycloalkyl-(C₂-C₆)-alkynyl, aryl-(C₂-C₆)-alkenyl, heteroaryl-(C₂-C₆)-alkenyl, heterocyclyl-(C₂-C₆)-alkenyl, (C₃-C₆)-cycloalkyl-(C₂-C₆)-alkenyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkylaminosulfonylamino, (C₃-C₆)-cycloalkylaminosulfonylamino, diazo, aryldiazo, tris[(C₁-C₆)-alkyl]silyl, bis[(C₁-C₆)-alkyl](aryl)silyl, bisaryl[(C₁-C₆)-alkyl]silyl,

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R¹⁰ and R¹¹ are the same or different and independently of one another represent hydrogen, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-cyanoalkyl, (C₁-C₈)-haloalkyl, (C₂-C₆)-haloalkenyl, (C₂-C₆)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-haloalkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkylthio-(C₁-C₆)-alkyl, (C₁-C₆)-haloalkylthio-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₁-C₆)-haloalkyl, aryl, aryl-(C₁-C₆)-alkyl, heteroaryl, heteroaryl-(C₁-C₆)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₆)-alkyl, COR¹², SO₂R¹³, (C₁-C₆)-alkyl-HNO₂S-, (C₃-C₈)-cycloalkyl-HNO₂S-, heterocyclyl, (C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxycarbonyl, aryl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxycarbonyl, heteroaryl-(C₁-C₆)-alkoxycarbonyl, (C₂-C₆)-alkenyloxycarbonyl, (C₂-C₆)-alkynyloxycarbonyl, heterocyclyl-(C₁-C₆)-alkyl,

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R¹² represents (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₁-C₆)-cyanoalkyl, (C₁-C₈)-haloalkyl, (C₂-C₆)-haloalkenyl, (C₂-C₆)-haloalkynyl, (C₃-C₈)-cycloalkyl, (C₃-C₈)-halocycloalkyl, (C₄-C₈)-cycloalkenyl, (C₄-C₈)-halocycloalkenyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₁-C₆)-haloalkyl, aryl, aryl-(C₁-C₆)-alkyl, heteroaryl, heteroaryl-(C₁-C₆)-alkyl, (C₃-C₈)-cycloalkyl-(C₁-C₆)-alkyl, (C₄-C₈)-cycloalkenyl-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyloxycarbonyl-(C₁-C₆)-alkyl, aryl-(C₁-C₆)-alkoxycarbonyl-(C₁-C₆)-alkyl, hydroxycarbonyl-(C₁-C₆)-alkyl, heterocyclyl, heterocyclyl-(C₁-C₆)-alkyl,

5 R^{13} represents $(C_1\text{-}C_6)$ -alkyl, $(C_2\text{-}C_6)$ -alkenyl, $(C_2\text{-}C_6)$ -alkynyl, $(C_1\text{-}C_6)$ -cyanoalkyl, $(C_1\text{-}C_8)$ -haloalkyl, $(C_2\text{-}C_6)$ -haloalkenyl, $(C_2\text{-}C_6)$ -haloalkynyl, $(C_3\text{-}C_8)$ -cycloalkyl, $(C_3\text{-}C_8)$ -halocycloalkyl, $(C_4\text{-}C_8)$ -cycloalkenyl, $(C_4\text{-}C_8)$ -halocycloalkenyl, $(C_1\text{-}C_6)$ -alkoxy- $(C_1\text{-}C_6)$ -alkyl, $(C_1\text{-}C_6)$ -alkoxy- $(C_1\text{-}C_6)$ -haloalkyl, aryl, aryl- $(C_1\text{-}C_6)$ -alkyl, heteroaryl, heteroaryl- $(C_1\text{-}C_6)$ -alkyl, heterocyclyl- $(C_1\text{-}C_6)$ -alkyl, $(C_3\text{-}C_8)$ -cycloalkyl- $(C_1\text{-}C_6)$ -alkyl, $(C_4\text{-}C_8)$ -cycloalkenyl- $(C_1\text{-}C_6)$ -alkyl, $NR^{10}R^{11}$,

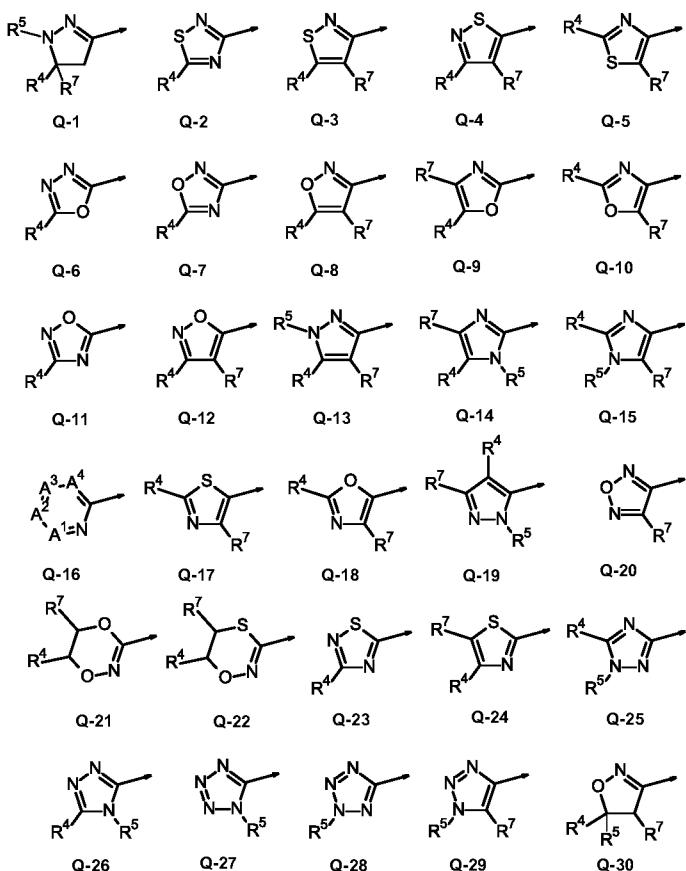
10 R^{14} and R^{15} independently of one another represent hydrogen, $(C_1\text{-}C_6)$ -alkyl, fluorine, or

15 R^9 and R^{15} together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, and

20 W represents oxygen.

4. The compound of the general formula (I) as claimed in claim 1 and/or the salts thereof, characterized in that

20 Q represents the groups Q-1 to Q-30



where the arrow represents a bond of the respective Q group to the nitrogen of the tetrahydropyrimidinone in the general formula (I),

5 A¹, A², A³, A⁴ are identical or different and independently of one another represent N (nitrogen) or the moiety C-R⁸, but there are never more than two adjacent nitrogen atoms, and

where R⁸ in the moiety C-R⁸ in each case has identical or different meanings according to the definition above, or

10 A¹ and A², when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

15 A² and A³, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution, or

20 A³ and A⁴, when each is a group C-R⁸, together with the atoms to which they are attached form a fully saturated, partially saturated or fully unsaturated 5- to 7-membered ring which is optionally interrupted by heteroatoms from the group consisting of N, O and S and optionally has further substitution,

25 R¹ represents hydrogen, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyleth-1-yl, n-pentyl, 1-methylbut-1-yl, 2-methylbut-1-yl, 3-methylbut-1-yl, 1,1-dimethylprop-1-yl, 1,2-dimethylprop-1-yl, 2,2-dimethylprop-1-yl, 1-ethylprop-1-yl, n-hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl, 1-ethyl-2-methylpropyl, trifluoromethyl, pentafluoroethyl, 1,1,2,2-tetrafluoroethyl, heptafluoro-n-propyl, heptafluoroisopropyl, nonafluorobutyl, chlorodifluoromethyl, bromodifluoromethyl, dichlorofluoromethyl, iododifluoromethyl, bromofluoromethyl, 1-fluoroethyl, 2-fluoroethyl, fluoromethyl, difluoromethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 3,3,3-trifluoroprop-1-yl, 3,3,3-trifluoroprop-2-yl, difluoro-tert-butyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, spiro[2.2]pent-1-yl, spiro[2.3]hex-1-yl, spiro[2.3]hex-4-yl, 3-spiro[2.3]hex-5-yl, spiro[3.3]hept-1-yl, spiro[3.3]hept-2-yl, bicyclo[1.1.0]butan-1-yl,

bicyclo[1.1.0]butan-2-yl, bicyclo[2.1.0]pentan-1-yl, bicyclo[1.1.1]pentan-1-yl,
bicyclo[2.1.0]pentan-2-yl, bicyclo[2.1.0]pentan-5-yl, bicyclo[2.1.1]hexyl,
bicyclo[2.2.1]hept-2-yl, bicyclo[2.2.2]octan-2-yl, adamantan-1-yl, adamantan-2-yl, 1-
methylcyclopropyl, 2-methylcyclopropyl, 2,2-dimethylcyclopropyl, 2,3-
5 dimethylcyclopropyl, 1,1'-bi(cyclopropyl)-1-yl, 1,1'-bi(cyclopropyl)-2-yl, 2'-methyl-1,1'-
bi(cyclopropyl)-2-yl, 1-cyanocyclopropyl, 2-cyanocyclopropyl, 1-methylcyclobutyl, 2-
methylcyclobutyl, 3-methylcyclobutyl, 1-cyanocyclobutyl, 2-cyanocyclobutyl, 3-
cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl, 1-vinylcyclopropyl, 1-
10 ethylcyclopropyl, 1-methylcyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 1-
methoxycyclohexyl, 2-methoxycyclohexyl, 3-methoxycyclohexyl, cyclopropylmethyl,
cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, phenyl, p-F-phenyl, m-F-
phenyl, o-F-phenyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-phenyl, pyridin-2-yl, pyridin-3-yl,
15 pyridin-4-yl, pyrimidin-2-yl, pyrimidin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl,
furan-3-yl, tetrahydrofuran-2-yl, tetrahydrofuran-3-yl, benzyl, p-Cl-benzyl, p-F-benzyl,
p-methoxybenzyl, p-methylbenzyl, p-trifluoromethylbenzyl, p-nitrobenzyl, m-Cl-benzyl,
m-F-benzyl, m-methoxybenzyl, m-methylbenzyl, o-Cl-benzyl, o-F-benzyl, o-
20 methoxybenzyl, o-methylbenzyl, 1-phenyleth-1-yl, 2-phenyleth-1-yl, 1-(o-
chlorophenyl)eth-1-yl, 1-(o-fluorophenyl)eth-1-yl, 1-(o-methylphenyl)eth-1-yl, 1-(o-
bromophenyl)eth-1-yl, 1-(o-iodophenyl)eth-1-yl, pyridin-2-ylmethyl, pyridin-3-
ylmethyl, pyridin-4-ylmethyl, pyrimidin-2-ylmethyl, pyrimidin-4-ylmethyl,
25 tetrahydrofuran-2-ylmethyl, o-cyanophenylmethyl, m-cyanophenylmethyl, p-
cyanophenylmethyl, cyanomethyl, cyanoethyl, methoxycarbonyl, ethoxycarbonyl, n-
propyloxycarbonyl, isopropyloxycarbonyl, tert-butyloxycarbonyl, benzyloxycarbonyl,
allyloxycarbonyl, methylcarbonyl, ethylcarbonyl, n-propylcarbonyl, isopropylcarbonyl,
n-butylcarbonyl, 1-methylprop-1-ylcarbonyl, 2-methylprop-1-ylcarbonyl, 1,1-
dimethyleth-1-ylcarbonyl, phenylcarbonyl, methylaminocarbonyl,
30 dimethylaminocarbonyl, ethylaminocarbonyl, n-propylaminocarbonyl,
isopropylaminocarbonyl, n-butylaminocarbonyl, tert-butylaminocarbonyl,
benzylaminocarbonyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, tert-
butyloxycarbonylmethyl, benzyloxycarbonylmethyl, methoxycarbonylethyl,
ethoxycarbonylethyl, tert-butyloxycarbonylmethyl, benzyloxycarbonylmethyl,
methylcarbonyloxymethyl, ethylcarbonyloxymethyl, n-propylcarbonyloxymethyl, 1-
methylethylcarbonyloxymethyl, 1,1-dimethylethylcarbonyloxymethyl,
hydroxycarbonylmethyl, hydroxycarbonylethyl, hydroxycarbonyl-n-propyl, methoxy,
35 ethoxy, n-propyloxy, isopropyloxy, methoxymethyl, ethoxymethyl, n-propyloxymethyl,
isopropyloxymethyl, n-butyloxymethyl, methoxyethyl, ethoxyethyl, n-propyloxyethyl,
isopropyloxyethyl, methoxy-n-propyl, ethoxy-n-propyl, methoxy-n-butyl, amino,

dimethylamino, methyl(ethyl)amino, diethylamino, cyanomethyl, cyanoethyl, prop-2-yn-1-yl,

R² and R⁹ independently of one another represent hydrogen, hydroxy, fluorine, methyl, ethyl, n-propyl, isopropyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyleth-1-yl, trifluoromethyl, difluoromethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, p-F-phenyl, m-F-phenyl, o-F-phenyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-phenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyrimidin-2-yl, pyrimidin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl, furan-3-yl, methoxymethyl, ethoxymethyl, methoxyethyl, ethoxyethyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, trifluoromethoxy, difluoromethoxy, methylthio, ethylthio, trifluoromethylthio, dimethylamino, methylamino, diethylamino, methyl(ethyl)amino, cyano, or

R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, or

R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

R³ represents hydroxy, hydrothio, fluorine, chlorine, bromine, iodine, methoxy, ethoxy, n-propyloxy, 1-methylethoxy, n-butyloxy, 1-methylpropyloxy, 2-methylpropyloxy, 1,1-dimethylethoxy, n-pentyloxy, 1-methylbutyloxy, 2-methylbutyloxy, 3-methylbutyloxy, 1,1-dimethylpropyloxy, 1,2-dimethylpropyloxy, 2,2-dimethylpropyloxy, 1-ethylpropyloxy, n-hexyloxy, 1-methylpentyloxy, 2-methylpentyloxy, 3-methylpentyloxy, 4-methylpentyloxy, 1,1-dimethylbutyloxy, 1,2-dimethylbutyloxy, 1,3-dimethylbutyloxy, 2,2-dimethylbutyloxy, 2,3-dimethylbutyloxy, 3,3-dimethylbutyloxy, 1-ethylbutyloxy, 2-ethylbutyloxy, 1,1,2-trimethylpropyloxy, 1,2,2-trimethylpropyloxy, 1-ethyl-1-methylpropyloxy, 1-ethyl-2-methylpropyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy, cyclohexylmethoxy, benzyloxy, p-chlorophenylmethoxy, m-chlorophenylmethoxy, o-chlorophenylmethoxy, p-methoxyphenylmethoxy, p-nitrophenylmethoxy, methoxymethoxy, methoxyethoxy, methoxy-n-propyloxy, methoxy-n-butyloxy, ethoxymethoxy, ethoxyethoxy, ethoxy-n-propyloxy, ethoxy-n-butyloxy, n-propyloxymethoxy, isopropyloxymethoxy,

methylcarbonyloxy, ethylcarbonyloxy, n-propylcarbonyloxy, 1-methylethylcarbonyloxy, n-butylcarbonyloxy, 1-methylpropylcarbonyloxy, 2-methylpropylcarbonyloxy, 1,1-dimethylethylcarbonyloxy, n-pentylcarbonyloxy, 1-methylbutylcarbonyloxy, 2-methylbutylcarbonyloxy, 3-methylbutylcarbonyloxy, 1,1-dimethylpropylcarbonyloxy, 1,2-dimethylpropylcarbonyloxy, 2,2-dimethylpropylcarbonyloxy, 1-ethylpropylcarbonyloxy, n-hexylcarbonyloxy, 1-methylpentylcarbonyloxy, 2-methylpentylcarbonyloxy, 3-methylpentylcarbonyloxy, 4-methylpentylcarbonyloxy, 1,1-dimethylbutylcarbonyloxy, 1,2-dimethylbutylcarbonyloxy, 1,3-dimethylbutylcarbonyloxy, 2,2-dimethylbutylcarbonyloxy, 2,3-dimethylbutylcarbonyloxy, 3,3-dimethylbutylcarbonyloxy, 1-ethylbutylcarbonyloxy, 2-ethylbutylcarbonyloxy, 1,1,2-trimethylpropylcarbonyloxy, 1,2,2-trimethylpropylcarbonyloxy, 1-ethyl-1-methylpropylcarbonyloxy, 1-ethyl-2-methylpropylcarbonyloxy, phenylcarbonyloxy, p-chlorophenylcarbonyloxy, m-chlorophenylcarbonyloxy, o-chlorophenylcarbonyloxy, p-fluorophenylcarbonyloxy, m-fluorophenylcarbonyloxy, o-fluorophenylcarbonyloxy, benzylcarbonyloxy, thiophen-2-ylcarbonyloxy, furan-2-ylcarbonyloxy, cyclopropylcarbonyloxy, cyclobutylcarbonyloxy, cyclopentylcarbonyloxy, cyclohexylcarbonyloxy, 1-fluorocycloprop-1-ylcarbonyloxy, 1-chlorocycloprop-1-ylcarbonyloxy, 1-cyanocycloprop-1-ylcarbonyloxy, 1-methylcycloprop-1-ylcarbonyloxy, 1-trifluoromethylcycloprop-1-ylcarbonyloxy, adamantlycarbonyloxy, trifluoromethylcarbonyloxy, difluoromethylcarbonyloxy, methoxycarbonyloxy, ethoxycarbonyloxy, n-propyloxycarbonyloxy, isopropyloxycarbonyloxy, n-butyloxycarbonyloxy, 1,1-dimethylethylloxycarbonyloxy, 2,2-dimethylpropyloxycarbonyloxy, benzyloxycarbonyloxy, allyloxycarbonyloxy, cyclopropyloxycarbonyloxy, cyclobutyloxycarbonyloxy, cyclopentyloxycarbonyloxy, cyclohexyloxycarbonyloxy, cyclopropylmethyloxycarbonyloxy, cyclobutylmethyloxycarbonyloxy, cyclopentylmethyloxycarbonyloxy, cyclohexylmethyloxycarbonyloxy, 3,3,3-trifluoroethyloxycarbonyloxy, 2,2-difluoroethyloxycarbonyloxy, pyridin-2-ylcarbonyloxy, pyridin-3-ylcarbonyloxy, pyridin-4-ylcarbonyloxy, 4-trifluoromethylpyridin-3-ylcarbonyloxy, allylcarbonyloxy, methylsulfonyloxy, ethylsulfonyloxy, n-propylsulfonyloxy, 1-methylethylsulfonyloxy, cyclopropylsulfonyloxy, cyclobutylsulfonyloxy, cyclopentylsulfonyloxy, cyclohexylsulfonyloxy, phenylsulfonyloxy, p-chlorophenylsulfonyloxy, m-chlorophenylsulfonyloxy, o-chlorophenylsulfonyloxy, p-fluorophenylsulfonyloxy, m-fluorophenylsulfonyloxy, o-fluorophenylsulfonyloxy, p-methoxyphenylsulfonyloxy, m-methoxyphenylsulfonyloxy, o-methoxyphenylsulfonyloxy, p-methylphenylsulfonyloxy, m-methylphenylsulfonyloxy, o-methylphenylsulfonyloxy,

R⁴ and R⁷ independently of one another represent hydrogen, fluorine, chlorine, bromine, iodine, hydroxy, hydrothio, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylpropyl, 2-methylpropyl, 1,1-dimethylethyl, n-pentyl, 1-methylbutyl, 2-methylbutyl, 3-methylbutyl, 1,1-dimethylpropyl, 1,2-dimethylpropyl, 2,2-dimethylpropyl, 1-ethylpropyl, n-hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl, 1-ethyl-2-methylpropyl, trifluoromethyl, pentafluoroethyl, 1,1,2,2-tetrafluoroethyl, heptafluoro-n-propyl, heptafluoroisopropyl, nonafluorobutyl, chlorodifluoromethyl, bromodifluoromethyl, dichlorofluoromethyl, iododifluoromethyl, bromofluoromethyl, 1-fluoroethyl, 2-fluoroethyl, fluoromethyl, difluoromethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, difluoro-tert-butyl, chloromethyl, bromomethyl, fluoromethyl, 3,3,3-trifluoro-n-propyl, 1-fluoroprop-1-yl, 1-trifluoromethylprop-1-yl, 2-trifluoromethylprop-2-yl, 1-fluoroprop-1-yl, 2-fluoroprop-2-yl, 2-chloroprop-2-yl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, 1-methylcycloprop-1-yl, 2-methylcycloprop-1-yl, 2,2-dimethylcycloprop-1-yl, 2,3-dimethylcyclopropyl, 1-cyanocycloprop-1-yl, 2-cyanocycloprop-1-yl, 1-methylcyclobutyl, 2-methylcyclobutyl, 3-methylcyclobutyl, 3,3-dimethylcyclobutyl, 1-cyanocyclobutyl, 2-cyanocyclobutyl, 3-cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl, 1-vinylcyclopropyl, 1-ethylcyclopropyl, 1-methylcyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 1-methoxycyclohexyl, 2-methoxycyclohexyl, 3-methoxycyclohexyl, spiro[2.2]pent-1-yl, spiro[2.3]hex-1-yl, spiro[2.3]hex-4-yl, 3-spiro[2.3]hex-5-yl, spiro[3.3]hept-1-yl, spiro[3.3]hept-2-yl, bicyclo[1.1.0]butan-1-yl, bicyclo[1.1.0]butan-2-yl, bicyclo[2.1.0]pentan-1-yl, bicyclo[1.1.1]pentan-1-yl, bicyclo[2.1.0]pentan-2-yl, bicyclo[2.1.0]pentan-5-yl, bicyclo[2.1.1]hexyl, bicyclo[2.2.1]hept-2-yl, bicyclo[2.2.2]octan-2-yl, bicyclo[3.2.1]octan-2-yl, bicyclo[3.2.2]nonan-2-yl, adamantan-1-yl, adamantan-2-yl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, phenyl, 2-fluorophenyl, 3-fluorophenyl, 4-fluorophenyl, 2,4-difluorophenyl, 2,5-difluorophenyl, 2,6-difluorophenyl, 2,3-difluorophenyl, 3,4-difluorophenyl, 3,5-difluorophenyl, 2,4,5-trifluorophenyl, 3,4,5-trifluorophenyl, 2-chlorophenyl, 3-chlorophenyl, 4-chlorophenyl, 2,4-dichlorophenyl, 2,5-dichlorophenyl, 2,6-dichlorophenyl, 2,3-dichlorophenyl, 3,4-dichlorophenyl, 3,5-dichlorophenyl, 2,4,5-trichlorophenyl, 3,4,5-trichlorophenyl, 2,4,6-trichlorophenyl, 2-bromophenyl, 3-bromophenyl, 4-bromophenyl, 2-iodophenyl, 3-iodophenyl, 4-iodophenyl, 2-bromo-4-fluorophenyl, 2-bromo-4-chlorophenyl, 3-bromo-4-fluorophenyl, 3-bromo-4-chlorophenyl, 3-bromo-5-fluorophenyl, 3-bromo-5-chlorophenyl, 2-fluoro-4-bromophenyl, 2-chloro-4-bromophenyl, 3-fluoro-4-

bromophenyl, 3-chloro-4-bromophenyl, 2-chloro-4-fluorophenyl, 3-chloro-4-fluorophenyl, 2-fluoro-3-chlorophenyl, 2-fluoro-4-chlorophenyl, 2-fluoro-5-chlorophenyl, 3-fluoro-4-chlorophenyl, 3-fluoro-5-chlorophenyl, 2-fluoro-6-chlorophenyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl, 2,4-dimethylphenyl, 2,5-dimethylphenyl, 2,6-dimethylphenyl, 2,3-dimethylphenyl, 3,4-dimethylphenyl, 3,5-dimethylphenyl, 2,4,5-trimethylphenyl, 3,4,5-trimethylphenyl, 2,4,6-trimethylphenyl, 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 2,4-dimethoxyphenyl, 2,5-dimethoxyphenyl, 2,6-dimethoxyphenyl, 2,3-dimethoxyphenyl, 3,4-dimethoxyphenyl, 3,5-dimethoxyphenyl, 2,4,5-trimethoxyphenyl, 3,4,5-trimethoxyphenyl, 2,4,6-trimethoxyphenyl, 2-trifluoromethoxyphenyl, 3-trifluoromethoxyphenyl, 4-trifluoromethoxyphenyl, 2-difluoromethoxyphenyl, 3-difluoromethoxyphenyl, 4-difluoromethoxyphenyl, 2-trifluoromethylphenyl, 3-trifluoromethylphenyl, 4-trifluoromethylphenyl, 2-difluoromethylphenyl, 3-difluoromethylphenyl, 4-difluoromethylphenyl, 3,5-bis(trifluoromethyl)phenyl, 3-trifluoromethyl-5-fluorophenyl, 3-trifluoromethyl-5-chlorophenyl, 3-methyl-5-fluorophenyl, 3-methyl-5-chlorophenyl, 3-methoxy-5-fluorophenyl, 3-methoxy-5-chlorophenyl, 3-trifluoromethoxy-5-chlorophenyl, 2-ethoxyphenyl, 3-ethoxyphenyl, 4-ethoxyphenyl, 2-methylthiophenyl, 3-methylthiophenyl, 4-methylthiophenyl, 2-trifluoromethylthiophenyl, 3-trifluoromethylthiophenyl, 4-trifluoromethylthiophenyl, 2-ethylphenyl, 3-ethylphenyl, 4-ethylphenyl, 2-methoxycarbonylphenyl, 3-methoxycarbonylphenyl, 4-methoxycarbonylphenyl, 2-ethoxycarbonylphenyl, 3-ethoxycarbonylphenyl, 4-ethoxycarbonylphenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyrazin-2-yl, pyridazin-3-yl, pyridazin-4-yl, pyrimidin-2-yl, pyrimidin-5-yl, pyrimidin-4-yl, pyridazin-3-ylmethyl, pyridazin-4-ylmethyl, pyrimidin-2-ylmethyl, pyrimidin-5-ylmethyl, pyrimidin-4-ylmethyl, pyrazin-2-ylmethyl, 3-chloropyrazin-2-yl, 3-bromopyrazin-2-yl, 3-methoxypyrazin-2-yl, 3-ethoxypyrazin-2-yl, 3-trifluoromethylpyrazin-2-yl, 3-cyanopyrazin-2-yl, naphth-2-yl, naphth-1-yl, quinolin-4-yl, quinolin-6-yl, quinolin-8-yl, quinolin-2-yl, quinoxalin-2-yl, 2-naphthylmethyl, 1-naphthylmethyl, quinolin-4-ylmethyl, quinolin-6-ylmethyl, quinolin-8-ylmethyl, quinolin-2-ylmethyl, quinoxalin-2-ylmethyl, pyrazin-2-ylmethyl, 4-chloropyridin-2-yl, 3-chloropyridin-4-yl, 2-chloropyridin-3-yl, 2-chloropyridin-4-yl, 2-chloropyridin-5-yl, 2,6-dichloropyridin-4-yl, 3-chloropyridin-5-yl, 3,5-dichloropyridin-2-yl, 3-chloro-5-trifluoromethylpyridin-2-yl, (4-chloropyridin-2-yl)methyl, (3-chloropyridin-4-yl)methyl, (2-chloropyridin-3-yl)methyl, (2-chloropyridin-4-yl)methyl, (2-chloropyridin-5-yl)methyl, (2,6-dichloropyridin-4-yl)methyl, (3-chloropyridin-5-yl)methyl, (3,5-dichloropyridin-2-yl)methyl, thiophen-2-yl, thiophen-3-yl, 5-methylthiophen-2-yl, 5-ethylthiophen-2-yl, 5-chlorothiophen-2-yl, 5-bromothiophen-2-yl, 4-methylthiophen-2-yl, 3-methylthiophen-

2-yl, 5-fluorothiophen-3-yl, 3,5-dimethylthiophen-2-yl, 3-ethylthiophen-2-yl, 4,5-dimethylthiophen-2-yl, 3,4-dimethylthiophen-2-yl, 4-chlorothiophen-2-yl, furan-2-yl, 5-methylfuran-2-yl, 5-ethylfuran-2-yl, 5-methoxycarbonylfuran-2-yl, 5-chlorofuran-2-yl, 5-bromofuran-2-yl, thiophan-2-yl, thiophan-3-yl, sulfolan-2-yl, sulfolan-3-yl,
5 tetrahydrothiopyran-4-yl, tetrahydropyran-4-yl, tetrahydrofuran-2-yl, tetrahydrofuran-3-yl, 1-(4-methylphenyl)ethyl, 1-(3-methylphenyl)ethyl, 1-(2-methylphenyl)ethyl, 1-(4-chlorophenyl)ethyl, 1-(3-chlorophenyl)ethyl, 1-(2-chlorophenyl)ethyl, benzyl, (4-fluorophenyl)methyl, (3-fluorophenyl)methyl, (2-fluorophenyl)methyl, (2,4-difluorophenyl)methyl, (3,5-difluorophenyl)methyl, (2,5-difluorophenyl)methyl, (2,6-difluorophenyl)methyl, (2,4,5-trifluorophenyl)methyl, (2,4,6-trifluorophenyl)methyl, (4-chlorophenyl)methyl, (3-chlorophenyl)methyl, (2-chlorophenyl)methyl, (2,4-dichlorophenyl)methyl, (3,5-dichlorophenyl)methyl, (2,5-dichlorophenyl)methyl, (2,6-dichlorophenyl)methyl, (2,4,5-trichlorophenyl)methyl, (2,4,6-trichlorophenyl)methyl, (4-bromophenyl)methyl, (3-bromophenyl)methyl, (2-bromophenyl)methyl, (4-iodophenyl)methyl, (3-iodophenyl)methyl, (2-iodophenyl)methyl, (3-chloro-5-trifluoromethylpyridin-2-yl)methyl, (2-bromo-4-fluorophenyl)methyl, (2-bromo-4-chlorophenyl)methyl, (3-bromo-4-fluorophenyl)methyl, (3-bromo-4-chlorophenyl)methyl, (3-bromo-5-fluorophenyl)methyl, (3-bromo-5-chlorophenyl)methyl, (2-fluoro-4-bromophenyl)methyl, (2-chloro-4-bromophenyl)methyl, (3-fluoro-4-bromophenyl)methyl, (3-chloro-4-bromophenyl)methyl, (2-chloro-4-fluorophenyl)methyl, (3-chloro-4-fluorophenyl)methyl, (2-fluoro-3-chlorophenyl)methyl, (2-fluoro-4-chlorophenyl)methyl, (2-fluoro-5-chlorophenyl)methyl, (3-fluoro-4-chlorophenyl)methyl, (3-fluoro-5-chlorophenyl)methyl, (2-fluoro-6-chlorophenyl)methyl, 2-phenyleth-1-yl, 3-trifluoromethyl-4-chlorophenyl, 3-chloro-4-trifluoromethylphenyl, 2-chloro-4-trifluoromethylphenyl, 3,5-difluoropyridin-2-yl, (3,6-dichloropyridin-2-yl)methyl, (4-trifluoromethylphenyl)methyl, (3-trifluoromethylphenyl)methyl, (2-trifluoromethoxyphenyl)methyl, (3-trifluoromethoxyphenyl)methyl, (2-trifluoromethoxyphenyl)methyl, (4-methoxyphenyl)methyl, (3-methoxyphenyl)methyl, (2-methoxyphenyl)methyl, (4-methylphenyl)methyl, (3-methylphenyl)methyl, (2-methylphenyl)methyl, (4-cyanophenyl)methyl, (3-cyanophenyl)methyl, (2-cyanophenyl)methyl, (2,4-diethylphenyl)methyl, (3,5-diethylphenyl)methyl, (3,4-dimethylphenyl)methyl, (3,5-dimethoxyphenyl)methyl, 1-phenyleth-1-yl, 1-(o-chlorophenyl)eth-1-yl, 1,3-thiazol-2-yl, 4-methyl-1,3-thiazol-2-yl, 1,3-thiazol-2-yl, ethenyl, 1-propenyl, 2-propenyl, 1-methylethenyl, 1-butenyl, 2-butenyl, 3-butenyl, 1-methyl-1-propenyl, 2-methyl-1-propenyl, 1-methyl-2-propenyl, 2-methyl-2-propenyl, 1-

pentenyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 1-methyl-1-butenyl, 2-methyl-1-butenyl, 3-methyl-1-butenyl, 1-methyl-2-butenyl, 2-methyl-2-butenyl, 3-methyl-2-butenyl, 1-methyl-3-butenyl, 2-methyl-3-butenyl, 3-methyl-3-butenyl, 1,1-dimethyl-2-propenyl, 1,2-dimethyl-1-propenyl, 1,2-dimethyl-2-propenyl, 1-ethyl-1-propenyl, 1-ethyl-2-propenyl, 1-hexenyl, 2-hexenyl, 3-hexenyl, 4-hexenyl, 5-hexenyl, 1-methyl-1-pentenyl, 2-methyl-1-pentenyl, 3-methyl-1-pentenyl, 4-methyl-1-pentenyl, 1-methyl-2-pentenyl, 2-methyl-2-pentenyl, 3-methyl-2-pentenyl, 4-methyl-2-pentenyl, 1-methyl-3-pentenyl, 2-methyl-3-pentenyl, 3-methyl-3-pentenyl, 4-methyl-3-pentenyl, 1-methyl-4-pentenyl, 2-methyl-4-pentenyl, 3-methyl-4-pentenyl, 4-methyl-4-pentenyl, 1,1-dimethyl-2-but enyl, 1,1-dimethyl-3-but enyl, 1,2-dimethyl-1-but enyl, 1,2-dimethyl-2-but enyl, 1,2-dimethyl-3-but enyl, 1,3-dimethyl-1-but enyl, 1,3-dimethyl-2-but enyl, 1,3-dimethyl-3-but enyl, 2,2-dimethyl-3-but enyl, 2,3-dimethyl-1-but enyl, 2,3-dimethyl-2-but enyl, 2,3-dimethyl-3-but enyl, 3,3-dimethyl-1-but enyl, 3,3-dimethyl-2-but enyl, 1-ethyl-1-but enyl, 1-ethyl-2-but enyl, 1-ethyl-3-but enyl, 2-ethyl-1-but enyl, 2-ethyl-2-but enyl, 2-ethyl-3-but enyl, 1,1,2-trimethyl-2-propenyl, 1-ethyl-1-methyl-2-propenyl, 1-ethyl-2-methyl-1-propenyl and 1-ethyl-2-methyl-2-propenyl, ethynyl, 1-propynyl, 2-propynyl, 1-butynyl, 2-butynyl, 3-butynyl, 1-methyl-2-propynyl, 1-pentynyl, 2-pentynyl, 3-pentynyl, 4-pentynyl, 1-methyl-2-butynyl, 1-methyl-3-butynyl, 2-methyl-3-butynyl, 3-methyl-1-butynyl, 1,1-dimethyl-2-propynyl, 1-ethyl-2-propynyl, 1-hexynyl, 2-hexynyl, 3-hexynyl, 3,3-difluorocyclobut-1-yl, 3-fluorocyclobut-1-yl, 1-fluorocyclobut-1-yl, 2,2-difluorocycloprop-1-yl, 1-fluorocycloprop-1-yl, 2-fluorocycloprop-1-yl, 4-fluorocyclohexyl, 4,4-difluorocyclohexyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, n-propyloxycarbonylmethyl, isopropyloxycarbonylmethyl, n-butyloxycarbonylmethyl, tert-butyloxycarbonylmethyl, methoxymethyl, ethoxymethyl, n-propyloxymethyl, isopropyloxymethyl, n-butyloxymethyl, methoxyethyl, ethoxyethyl, n-propyloxyethyl, isopropyloxyethyl, methoxy-n-propyl, methoxy-n-butyl, trifluoromethoxymethyl, difluoromethoxymethyl, 2,2-difluoroethoxymethyl, 2,2,2-trifluoroethoxymethyl, trifluoromethoxyethyl, difluoromethoxyethyl, 2,2-difluoroethoxyethyl, 2,2,2-trifluoroethoxyethyl, methoxycarbonyl, ethoxycarbonyl, n-propyloxycarbonyl, isopropyloxycarbonyl, n-butyloxycarbonyl, tert-butyloxycarbonyl, allyloxycarbonyl, benzyloxycarbonyl, methylcarbonyl, ethylcarbonyl, n-propylcarbonyl, isopropylcarbonyl, n-butylcarbonyl, tert-butylcarbonyl, phenylcarbonyl, p-chlorophenylcarbonyl, m-chlorophenylcarbonyl, o-chlorophenylcarbonyl, p-fluorophenylcarbonyl, m-fluorophenylcarbonyl, o-fluorophenylcarbonyl, p-methoxyphenylcarbonyl, m-methoxyphenylcarbonyl, o-methoxyphenylcarbonyl, p-trifluoromethylphenylcarbonyl, m-trifluoromethylphenylcarbonyl, o-trifluoromethylphenylcarbonyl, methoxy, ethoxy, n-propyloxy, isopropyloxy,

benzyloxy, p-chlorophenylmethoxy, phenyloxy, p-chlorophenoxy, m-chlorophenoxy, o-chlorophenoxy, p-fluorophenoxy, m-fluorophenoxy, o-fluorophenoxy, p-methoxyphenoxy, m-methoxyphenoxy, o-methoxyphenoxy, p-trifluoromethylphenoxy, m-trifluoromethylphenoxy, o-trifluoromethylphenoxy, methylaminocarbonyl, ethylaminocarbonyl, n-propylaminocarbonyl, isopropylaminocarbonyl, cyclopropylaminocarbonyl, cyclobutylaminocarbonyl, cyclopentylaminocarbonyl, cyclohexylaminocarbonyl, cyclopropylmethylaminocarbonyl, cyclobutylmethylaminocarbonyl, cyclopentylmethylaminocarbonyl, cyclohexylmethylaminocarbonyl, dimethylaminocarbonyl, diethylaminocarbonyl, benzylmethylaminocarbonyl, methylamino, dimethylamino, ethylamino, diethylamino, n-propylamino, isopropylamino, cyclopropylamino, cyclobutylamino, cyclopentylamino, cyclohexylamino, benzylamino, cyanomethyl, cyanoethyl, 3-cyanoprop-1-yl, 2-cyanoprop-1-yl, 1-cyanoprop-1-yl, 2-cyanoprop-2-yl, 2-cyano-1,1-dimethyleth-1-yl, 1-(cyanomethyl)-1-methylprop-1-yl, hydroxycarbonyl, hydroxycarbonylmethyl, hydroxycarbonylethyl, CHO, methoxyethylthio, ethoxyethylthio, trifluoromethoxyethylthio, pentafluoroethoxyethylthio, methylthioethylthio, ethylthioethylthio, trifluoromethylthioethylthio, pentafluorothioethylthio, benzylthio, p-chlorophenylmethylthio, m-chlorophenylmethylthio, o-chlorophenylmethylthio, p-fluorophenylmethylthio, m-fluorophenylmethylthio, o-fluorophenylmethylthio, methylthio, ethylthio, n-propylthio, isopropylthio, n-butylthio, tert-butylthio, cyclobutylthio, cyclopentylthio, cyclohexylthio, phenylthio, pyrid-2-ylthio, pyrid-3-ylthio, pyrid-4-ylthio, p-chlorophenylthio, m-chlorophenylthio, o-chlorophenylthio, p-fluorophenylthio, m-fluorophenylthio, o-fluorophenylthio, p-methoxyphenylthio, m-methoxyphenylthio, o-methoxyphenylthio, p-methylphenylthio, m-methylphenylthio, o-methylphenylthio, methylsulfonyl, ethylsulfonyl, n-propylsulfonyl, 1-methylethylsulfonyl, cyclopropylsulfonyl, cyclobutylsulfonyl, cyclopentylsulfonyl, cyclohexylsulfonyl, phenylsulfonyloxy, p-chlorophenylsulfonyl, m-chlorophenylsulfonyl, o-chlorophenylsulfonyl, p-fluorophenylsulfonyl, m-fluorophenylsulfonyl, o-fluorophenylsulfonyl, p-methoxyphenylsulfonyl, m-methoxyphenylsulfonyl, o-methoxyphenylsulfonyl, p-methylphenylsulfonyl, m-methylphenylsulfonyl, o-methylphenylsulfonyl, 2-methoxyprop-2-yl, 2-ethoxyprop-2-yl, 2-n-propyloxyprop-2-yl, 2-n-butyloxyprop-2-yl, 2-benzyloxyprop-2-yl, 2-phenylethoxyprop-2-yl, 2-trifluoromethoxyprop-2-yl, 2-difluoromethoxyprop-2-yl, 2,2,2-trifluoroethoxyprop-2-yl, 2,2-difluoroethoxyprop-2-yl, 2-(4-chlorophenylmethoxy)prop-2-yl, 2-(4-fluorophenylmethoxy)prop-2-yl, 2-(4-bromophenylmethoxy)prop-2-yl, 2-(4-trifluoromethylphenylmethoxy)prop-2-yl, 2-(4-

methylphenylmethoxy)prop-2-yl, 2-(3-chlorophenylmethoxy)prop-2-yl, 2-(3-fluorophenylmethoxy)prop-2-yl, 2-(3-bromophenylmethoxy)prop-2-yl, 2-(3-trifluoromethylphenylmethoxy)prop-2-yl, 2-(3-methylphenylmethoxy)prop-2-yl, 2-(2-chlorophenylmethoxy)prop-2-yl, 2-(2-fluorophenylmethoxy)prop-2-yl, 2-(2-bromophenylmethoxy)prop-2-yl, 2-(2-trifluoromethylphenylmethoxy)prop-2-yl, 2-(2-methylphenylmethoxy)prop-2-yl, 2-(methoxymethyl)prop-2-yl, 2-(ethoxymethyl)prop-2-yl, 2-methoxycarbonylprop-2-yl, 2-ethoxycarbonylprop-2-yl, 2-hydroxycarbonylprop-2-yl, 2-aminocarbonylprop-2-yl, aminocarbonyl, aminocarbonylmethyl, aminocarbonylethyl, cyano, hydroxymethyl, hydroxyethyl, 2-hydroxyprop-2-yl, allyloxymethyl, 2-allyloxyethyl, 2-allyloxyprop-2-yl, or

R^4 and R^7 together with the carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-3, Q-4, Q-8, Q-9, Q-12, Q-13, Q-19 and Q-30,

^{R⁵} represents hydrogen, formyl, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylpropyl, 2-methylpropyl, 1,1-dimethylethyl, n-pentyl, 1-methylbutyl, 2-methylbutyl, 3-methylbutyl, 1,1-dimethylpropyl, 1,2-dimethylpropyl, 2,2-dimethylpropyl, 1-ethylpropyl, n-hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl, 1-ethyl-2-methylpropyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 3,3,3-trifluoro-n-propyl, methoxymethyl, ethoxymethyl, methoxyethyl, ethoxyethyl, methoxy-n-propyl, methoxy-n-butyl, ethoxy-n-propyl, ethoxy-n-butyl, hydroxyethyl, hydroxy-n-propyl, hydroxycarbonylmethyl, hydroxycarbonylethyl, hydroxycarbonyl-n-propyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, n-propyloxycarbonylmethyl, isopropyloxycarbonylmethyl, tert-butyloxycarbonylmethyl, methoxycarbonylethyl, ethoxycarbonylethyl, n-propyloxycarbonylethyl, isopropyloxycarbonylethyl, tert-butyloxycarbonylethyl, methoxycarbonyl-n-propyl, ethoxycarbonyl-n-propyl, benzyloxycarbonylmethyl, benzyloxycarbonylethyl, allyloxycarbonylmethyl, allyloxycarbonylethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, 1-methylcycloprop-1-yl, 2-methylcycloprop-1-yl, 2,2-dimethylcycloprop-1-yl, 2,3-dimethylcyclopropyl, 1-cyanopropyl, 2-cyanopropyl, 1-methylcyclobutyl, 2-methylcyclobutyl, 3-methylcyclobutyl, 3,3-dimethylcyclobutyl, 1-cyanocyclobutyl, 2-

5 cyanocyclobutyl, 3-cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl, 1-vinylcyclopropyl, 1-ethylcyclopropyl, 1-methylcyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 1-methoxycyclohexyl, 2-methoxycyclohexyl, 3-methoxycyclohexyl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, cyanomethyl, 2-cyanoeth-1-yl, 1-cyanoeth-1-yl, cyano-n-propyl, methoxycarbonyl, ethoxycarbonyl, tert-butyloxycarbonyl, benzyloxycarbonyl, n-butyloxycarbonyl, allyloxycarbonyl, methylcarbonyl, ethylcarbonyl, n-propylcarbonyl, isopropylcarbonyl, n-butylcarbonyl, tert-butylcarbonyl, phenylcarbonyl, p-chlorophenylcarbonyl, m-chlorophenylcarbonyl, o-chlorophenylcarbonyl, p-fluorophenylcarbonyl, m-fluorophenylcarbonyl, o-fluorophenylcarbonyl, p-methoxyphenylcarbonyl, m-methoxyphenylcarbonyl, o-methoxyphenylcarbonyl, p-trifluoromethylphenylcarbonyl, m-trifluoromethylphenylcarbonyl, o-trifluoromethylphenylcarbonyl, methylaminocarbonyl, ethylaminocarbonyl, isopropylaminocarbonyl, n-propylaminocarbonyl, phenylaminocarbonyl, p-Cl-phenylaminocarbonyl, m-Cl-phenylaminocarbonyl, o-Cl-phenylaminocarbonyl, cyclopropylaminocarbonyl, cyclobutylaminocarbonyl, cyclopentylaminocarbonyl, cyclohexylaminocarbonyl, cyclopropylmethylaminocarbonyl, cyclobutylmethylaminocarbonyl, cyclopentylmethylaminocarbonyl, cyclohexylmethylaminocarbonyl, dimethylaminocarbonyl, diethylaminocarbonyl, benzyl(methyl)aminocarbonyl, prop-2-en-1-yl, prop-2-yn-1-yl, 1-fluorocycloprop-1-yl, 2-fluorocycloprop-1-yl, 2,2-difluorocycloprop-1-yl, 3,3-difluorocyclobut-1-yl, phenyl, 2-fluorophenyl, 3-fluorophenyl, 4-fluorophenyl, 2,4-difluorophenyl, 2,5-difluorophenyl, 2,6-difluorophenyl, 2,3-difluorophenyl, 3,4-difluorophenyl, 3,5-difluorophenyl, 2,4,5-trifluorophenyl, 3,4,5-trifluorophenyl, 2-chlorophenyl, 3-chlorophenyl, 4-chlorophenyl, 2,4-dichlorophenyl, 2,5-dichlorophenyl, 2,6-dichlorophenyl, 2,3-dichlorophenyl, 3,4-dichlorophenyl, 3,5-dichlorophenyl, 2,4,5-trichlorophenyl, 3,4,5-trichlorophenyl, 2,4,6-trichlorophenyl, 2-bromophenyl, 3-bromophenyl, 4-bromophenyl, 2-iodophenyl, 3-iodophenyl, 4-iodophenyl, 2-bromo-4-fluorophenyl, 2-bromo-4-chlorophenyl, 3-bromo-4-fluorophenyl, 3-bromo-4-chlorophenyl, 3-bromo-5-fluorophenyl, 3-bromo-5-chlorophenyl, 2-fluoro-4-bromophenyl, 2-chloro-4-bromophenyl, 3-fluoro-4-bromophenyl, 3-chloro-4-bromophenyl, 2-chloro-4-fluorophenyl, 3-chloro-4-fluorophenyl, 2-fluoro-3-chlorophenyl, 2-fluoro-4-chlorophenyl, 2-fluoro-5-chlorophenyl, 3-fluoro-4-chlorophenyl, 3-fluoro-5-chlorophenyl, 2-fluoro-6-chlorophenyl, 2-methylphenyl, 3-methylphenyl, 4-methylphenyl, 2,4-dimethylphenyl, 2,5-dimethylphenyl, 2,6-dimethylphenyl, 2,3-dimethylphenyl, 3,4-dimethylphenyl, 3,5-dimethylphenyl, 2,4,5-trimethylphenyl, 3,4,5-trimethylphenyl, 2,4,6-trimethylphenyl, 2-methoxyphenyl, 3-methoxyphenyl, 4-methoxyphenyl, 2,4-dimethoxyphenyl, 2,5-

dimethoxyphenyl, 2,6-dimethoxyphenyl, 2,3-dimethoxyphenyl, 3,4-dimethoxyphenyl, 3,5-dimethoxyphenyl, 2,4,5-trimethoxyphenyl, 3,4,5-trimethoxyphenyl, 2,4,6-
5 trimethoxyphenyl, 2-trifluoromethoxyphenyl, 3-trifluoromethoxyphenyl, 4-trifluoromethoxyphenyl, 2-difluoromethoxyphenyl, 3-difluoromethoxyphenyl, 4-difluoromethoxyphenyl, 2-trifluoromethylphenyl, 3-trifluoromethylphenyl, 4-trifluoromethylphenyl, 2-difluoromethylphenyl, 3-difluoromethylphenyl, 4-difluoromethylphenyl, 3,5-bis(trifluoromethyl)phenyl, 3-trifluoromethyl-5-fluorophenyl, 3-trifluoromethyl-5-chlorophenyl, 3-methyl-5-fluorophenyl, 3-methyl-5-chlorophenyl, 3-methoxy-5-fluorophenyl, 3-methoxy-5-chlorophenyl, 3-trifluoromethoxy-5-chlorophenyl, 2-ethoxyphenyl, 3-ethoxyphenyl, 4-ethoxyphenyl, 2-methylthiophenyl, 3-methylthiophenyl, 4-methylthiophenyl, 2-trifluoromethylthiophenyl, 3-trifluoromethylthiophenyl, 4-trifluoromethylthiophenyl, methoxymethyl, 2-ethylphenyl, 3-ethylphenyl, 4-ethylphenyl, 2-methoxycarbonylphenyl, 3-methoxycarbonylphenyl, 4-methoxycarbonylphenyl, 2-ethoxycarbonylphenyl, 3-ethoxycarbonylphenyl, 4-ethoxycarbonylphenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyrazin-2-yl, pyridazin-3-yl, pyridazin-4-yl, pyrimidin-2-yl, pyrimidin-5-yl, pyrimidin-4-yl, pyridazin-3-ylmethyl, pyridazin-4-ylmethyl, pyrimidin-2-ylmethyl, pyrimidin-5-ylmethyl, pyrimidin-4-ylmethyl, pyrazin-2-ylmethyl, 3-chloropyrazin-2-yl, 3-bromopyrazin-2-yl, 3-methoxypyrazin-2-yl, 3-ethoxypyrazin-2-yl, 3-trifluoromethylpyrazin-2-yl, 3-
10 cyanopyrazin-2-yl, naphth-2-yl, naphth-1-yl, quinolin-4-yl, quinolin-6-yl, quinolin-8-yl, quinolin-2-yl, quinoxalin-2-yl, 2-naphthylmethyl, 1-naphthylmethyl, quinolin-4-ylmethyl, quinolin-6-ylmethyl, quinolin-8-ylmethyl, quinolin-2-ylmethyl, quinoxalin-2-ylmethyl, pyrazin-2-ylmethyl, 4-chloropyridin-2-yl, 3-chloropyridin-4-yl, 2-chloropyridin-3-yl, 2-chloropyridin-4-yl, 2-chloropyridin-5-yl, 2,6-dichloropyridin-4-yl, 3-chloropyridin-5-yl, 3,5-dichloropyridin-2-yl, 3-chloro-5-trifluoromethylpyridin-2-yl, (4-chloropyridin-2-yl)methyl, (3-chloropyridin-4-yl)methyl, (2-chloropyridin-3-yl)methyl, (2-chloropyridin-4-yl)methyl, (2-chloropyridin-5-yl)methyl, (2,6-
15 dichloropyridin-4-yl)methyl, (3-chloropyridin-5-yl)methyl, (3,5-dichloropyridin-2-yl)methyl, thiophen-2-yl, thiophen-3-yl, 5-methylthiophen-2-yl, 5-ethylthiophen-2-yl, 5-chlorothiophen-2-yl, 5-bromothiophen-2-yl, 4-methylthiophen-2-yl, 3-methylthiophen-2-yl, 5-fluorothiophen-3-yl, 3,5-dimethylthiophen-2-yl, 3-ethylthiophen-2-yl, 4,5-dimethylthiophen-2-yl, 3,4-dimethylthiophen-2-yl, 4-chlorothiophen-2-yl, furan-2-yl, 5-methylfuran-2-yl, 5-ethylfuran-2-yl, 5-methoxycarbonylfuran-2-yl, 5-chlorofuran-2-yl, 5-bromofuran-2-yl, thiophan-2-yl, thiophan-3-yl, sulfolan-2-yl, sulfolan-3-yl, benzyl, (4-fluorophenyl)methyl, (3-fluorophenyl)methyl, (2-fluorophenyl)methyl, (2,4-difluorophenyl)methyl, (3,5-difluorophenyl)methyl, (2,5-difluorophenyl)methyl, (2,6-difluorophenyl)methyl, (2,4,5-trifluorophenyl)methyl, (2,4,6-trifluorophenyl)methyl, (4-
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chlorophenyl)methyl, (3-chlorophenyl)methyl, (2-chlorophenyl)methyl, (2,4-dichlorophenyl)methyl, (3,5-dichlorophenyl)methyl, (2,5-dichlorophenyl)methyl, (2,6-dichlorophenyl)methyl, (2,4,5-trichlorophenyl)methyl, (2,4,6-trichlorophenyl)methyl, (4-bromophenyl)methyl, (3-bromophenyl)methyl, (2-bromophenyl)methyl, (4-iodophenyl)methyl, (3-iodophenyl)methyl, (2-iodophenyl)methyl, (3-chloro-5-trifluoromethylpyridin-2-yl)methyl, (2-bromo-4-fluorophenyl)methyl, (2-bromo-4-chlorophenyl)methyl, (3-bromo-4-fluorophenyl)methyl, (3-bromo-5-chlorophenyl)methyl, (2-fluoro-4-bromophenyl)methyl, (2-chloro-4-bromophenyl)methyl, (3-fluoro-4-bromophenyl)methyl, (3-chloro-4-bromophenyl)methyl, (2-chloro-4-fluorophenyl)methyl, (3-chloro-4-fluorophenyl)methyl, (2-fluoro-3-chlorophenyl)methyl, (2-fluoro-4-chlorophenyl)methyl, (2-fluoro-5-chlorophenyl)methyl, (3-fluoro-4-chlorophenyl)methyl, (3-fluoro-5-chlorophenyl)methyl, (2-fluoro-6-chlorophenyl)methyl, phenylethyl, 3-trifluoromethyl-4-chlorophenyl, 3-chloro-4-trifluoromethylphenyl, 2-chloro-4-trifluoromethylphenyl, 3,5-difluoropyridin-2-yl, (3,6-dichloropyridin-2-yl)methyl, (4-trifluoromethylphenyl)methyl, (3-trifluoromethylphenyl)methyl, (2-trifluoromethylphenyl)methyl, (4-trifluoromethoxyphenyl)methyl, (3-trifluoromethoxyphenyl)methyl, (2-trifluoromethoxyphenyl)methyl, (4-methoxyphenyl)methyl, (3-methoxyphenyl)methyl, (2-methoxyphenyl)methyl, (4-methylphenyl)methyl, (3-methylphenyl)methyl, (2-methylphenyl)methyl, (4-cyanophenyl)methyl, (3-cyanophenyl)methyl, (2-cyanophenyl)methyl, (2,4-diethylphenyl)methyl, (3,5-diethylphenyl)methyl, (3,4-dimethylphenyl)methyl, (3,5-dimethoxyphenyl)methyl, 1-phenyleth-1-yl, methylsulfonyl, ethylsulfonyl, n-propylsulfonyl, 1-methylethylsulfonyl, cyclopropylsulfonyl, cyclobutylsulfonyl, cyclopentylsulfonyl, cyclohexylsulfonyl, phenylsulfonyloxy, p-chlorophenylsulfonyl, m-chlorophenylsulfonyl, o-chlorophenylsulfonyl, p-fluorophenylsulfonyl, m-fluorophenylsulfonyl, o-fluorophenylsulfonyl, p-methoxyphenylsulfonyl, m-methoxyphenylsulfonyl, o-methoxyphenylsulfonyl, p-methylphenylsulfonyl, m-methylphenylsulfonyl, o-methylphenylsulfonyl, phenylcarbonylmethyl, p-chlorophenylcarbonylmethyl, m-chlorophenylcarbonylmethyl, o-chlorophenylcarbonylmethyl, p-fluorophenylcarbonylmethyl, m-fluorophenylcarbonylmethyl, o-fluorophenylcarbonylmethyl, methylcarbonylmethyl, ethylcarbonylmethyl, n-propylcarbonylmethyl, isopropylcarbonylmethyl, n-butylcarbonylmethyl, tert-butylcarbonylmethyl, or

R⁴ and R⁵ together with the nitrogen atom or carbon atom to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, when Q represents Q-13, Q-14, Q-15, Q-25 and Q-26,

5 R⁶ represents hydrogen, methyl, ethyl,

10 R⁸ represents hydrogen, halogen, cyano, nitro, hydrothio, hydroxy, methylamino, ethylamino, isopropylamino, n-propylamino, dimethylamino, diethylamino, cyclopropylamino, cyclobutylamino, cyclopentylamino, cyclohexylamino, methoxycarbonylmethylamino, methoxycarbonylethylamino, ethoxycarbonylmethylamino, ethoxycarbonylethylamino, methoxycarbonylamino, ethoxycarbonylamino, tert-butyloxycarbonylamino, phenylamino, N-piperidinyl, N-pyrrolidinyl, N-morpholinyl, methylaminocarbonylamino, ethylaminocarbonylamino, n-propylaminocarbonylamino, isopropylaminocarbonylamino, benzylaminocarbonylamino, phenylaminocarbonylamino, p-Cl-phenylaminocarbonylamino, m-Cl-phenylaminocarbonylamino, o-Cl-phenylaminocarbonylamino, cyclopropylaminocarbonylamino, cyclobutylaminocarbonylamino, cyclopentylaminocarbonylamino, cyclohexylaminocarbonylamino, dimethylaminocarbonylamino, methoxy, ethoxy, n-propyloxy, isopropyloxy, n-butyloxy, tert-butyloxy, methoxycarbonyloxy, ethoxycarbonyloxy, tert-butyloxycarbonyloxy, methylaminocarbonyloxy, ethylaminocarbonyloxy, n-propylaminocarbonyloxy, isopropylaminocarbonyloxy, benzylaminocarbonyloxy, phenylaminocarbonyloxy, cyclopropylaminocarbonyloxy, cyclobutylaminocarbonyloxy, cyclopentylaminocarbonyloxy, cyclohexylaminocarbonyloxy, dimethylaminocarbonyloxy, phenoxy, p-Cl-phenyloxy, o-Cl-phenyloxy, m-Cl-phenyloxy, m-trifluoromethylphenyloxy, p-trifluoromethylphenyloxy, trifluoromethyloxy, difluoromethyloxy, 2,2-difluoroethyloxy, 2,2,2-trifluoroethyloxy, methylthio, ethylthio, n-propylthio, isopropylthio, phenylthio, p-Cl-phenylthio, m-Cl-phenylthio, o-Cl-phenylthio, pyridin-2-ylthio, pyridin-3-ylthio, benzylthio, trifluoromethylthio, pentafluoroethylthio, cyclopropylthio, cyclobutylthio, cyclopentylthio, cyclohexylthio, methylsulfinyl, ethylsulfinyl, n-propylsulfinyl, isopropylsulfinyl, n-butylsulfinyl, tert-butylsulfinyl, phenylsulfinyl, benzylsulfinyl, pyridin-2-ylsulfinyl, methylsulfonyl, ethylsulfonyl, n-propylsulfonyl, isopropylsulfonyl, n-butylsulfonyl, tert-butylsulfonyl, phenylsulfonyl, benzylsulfonyl, pyridin-2-ylsulfonyl, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylpropyl, 2-methylpropyl, 1,1-

dimethylethyl, n-pentyl, 1-methylbutyl, 2-methylbutyl, 3-methylbutyl, 1,1-dimethylpropyl, 1,2-dimethylpropyl, 2,2-dimethylpropyl, 1-ethylpropyl, n-hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl, 1-ethyl-2-methylpropyl, thiocyanato, isothiocyanato, formyl, ethenyl, 1-propenyl, 2-propenyl, 1-methylethenyl, 1-butenyl, 2-butenyl, 3-butenyl, 1-methyl-1-propenyl, 2-methyl-1-propenyl, 1-methyl-2-propenyl, 2-methyl-2-propenyl, 1-pentenyl, 2-pentenyl, 3-pentenyl, 4-pentenyl, 1-methyl-1-butenyl, 2-methyl-1-butenyl, 3-methyl-1-butenyl, 1-methyl-2-butenyl, 2-methyl-2-butenyl, 3-methyl-2-butenyl, 1-methyl-3-butenyl, 2-methyl-3-butenyl, 3-methyl-3-butenyl, 1,1-dimethyl-2-propenyl, 1,2-dimethyl-1-propenyl, 1,2-dimethyl-2-propenyl, 1-ethyl-1-propenyl, 1-ethyl-2-propenyl, ethynyl, 1-propynyl, 2-propynyl, 1-butynyl, 2-butynyl, 3-butynyl, 1-methyl-2-propynyl, 1-pentynyl, 2-pentynyl, 3-pentynyl, 4-pentynyl, 1-methyl-2-butynyl, 1-methyl-3-butynyl, 2-methyl-3-butynyl, 3-methyl-1-butynyl, 1,1-dimethyl-2-propynyl, 1-ethyl-2-propynyl, 1-hexynyl, 2-hexynyl, 3-hexynyl, 3,3-difluorocyclobut-1-yl, 3-fluorocyclobut-1-yl, 1-fluorocyclobut-1-yl, 2,2-difluorocycloprop-1-yl, 1-fluorocycloprop-1-yl, 2-fluorocycloprop-1-yl, 4-fluorocyclohexyl, 4,4-difluorocyclohexyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, 1-methylcycloprop-1-yl, 2-methylcycloprop-1-yl, 2,2-dimethylcycloprop-1-yl, 2,3-dimethylcyclopropyl, 1-cyanopropyl, 2-cyanopropyl, 1-methylcyclobutyl, 2-methylcyclobutyl, 3-methylcyclobutyl, 3,3-dimethylcyclobutyl, 1-cyanocyclobutyl, 2-cyanocyclobutyl, 3-cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl, 1-vinylcyclopropyl, 1-ethylcyclopropyl, 1-methylcyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 1-methoxycyclohexyl, 2-methoxycyclohexyl, 3-methoxycyclohexyl, spiro[2.2]pent-1-yl, spiro[2.3]hex-1-yl, spiro[2.3]hex-4-yl, 3-spiro[2.3]hex-5-yl, spiro[3.3]hept-1-yl, spiro[3.3]hept-2-yl, bicyclo[1.1.0]butan-1-yl, bicyclo[1.1.0]butan-2-yl, bicyclo[2.1.0]pentan-1-yl, bicyclo[1.1.1]pentan-1-yl, bicyclo[2.1.0]pentan-2-yl, bicyclo[2.1.0]pentan-5-yl, bicyclo[2.1.1]hexyl, bicyclo[2.2.1]hept-2-yl, bicyclo[2.2.2]octan-2-yl, bicyclo[3.2.1]octan-2-yl, bicyclo[3.2.2]nonan-2-yl, adamantan-1-yl, adamantan-2-yl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, trifluoromethyl, pentafluoroethyl, 1,1,2,2-tetrafluoroethyl, heptafluoro-n-propyl, heptafluoroisopropyl, nonafluorobutyl, chlorodifluoromethyl, bromodifluoromethyl, dichlorofluoromethyl, iododifluoromethyl, bromofluoromethyl, 1-fluoroethyl, 2-fluoroethyl, fluoromethyl, difluoromethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, difluoro-tert-butyl, chloromethyl, bromomethyl, fluoromethyl, 3,3,3-trifluoro-n-propyl, methoxycarbonyl, ethoxycarbonyl,

isopropyloxycarbonyl, n-propyloxycarbonyl, n-butyloxycarbonyl, tert-butyloxycarbonyl,
benzyloxycarbonyl, allyloxycarbonyl, methylaminocarbonyl, ethylaminocarbonyl, n-
propylaminocarbonyl, isopropylaminocarbonyl, benzylaminocarbonyl,
phenylaminocarbonyl, cyclopropylaminocarbonyl, cyclobutylaminocarbonyl,
5 cyclopentylaminocarbonyl, cyclohexylaminocarbonyl, dimethylaminocarbonyl,
diethylaminocarbonyl, allylaminocarbonyl, pentafluorothio, methoxydifluoromethyl,
ethoxydifluoromethyl, n-propyloxydifluoromethyl, trifluoromethoxymethyl,
trifluoromethoxyethyl, trifluoromethoxy-n-propyl, methoxymethyl, ethoxymethyl, n-
propyloxymethyl, ethoxyethyl, methoxyethyl, n-propyloxyethyl, methoxy-n-propyl,
10 ethoxy-n-propyl, 1-methoxyeth-1-yl, 1-methoxyprop-1-yl, 1-ethoxyeth-1-yl, 2-
methoxyprop-2-yl, 2-ethoxyprop-2-yl, methylthiomethyl, methylthioethyl, methylthio-n-
propyl, ethylthiomethyl, trifluoromethylthiomethyl, pentafluoroethylthiomethyl,
trifluoromethylthioethyl, trifluoromethylthio-n-propyl, methylcarbonyl, ethylcarbonyl,
isopropylcarbonyl, n-butylcarbonyl, tert-butylcarbonyl, phenylcarbonyl, o-Cl-
15 phenylcarbonyl, m-Cl-phenylcarbonyl, p-Cl-phenylcarbonyl, methoxycarbonylmethyl,
ethoxycarbonylmethyl, methoxycarbonylethyl, ethoxycarbonylethyl, n-
propyloxycarbonylmethyl, tert-butyloxycarbonylmethyl, tert-butyloxycarbonylethyl,
hydroxycarbonylmethyl, hydroxycarbonylethyl, hydroxycarbonyl,
20 methylaminocarbonylmethyl, ethylaminocarbonylmethyl, n-
propylaminocarbonylmethyl, isopropylaminocarbonylmethyl,
benzylaminocarbonylmethyl, phenylaminocarbonylmethyl,
cyclopropylaminocarbonylmethyl, cyclobutylaminocarbonylmethyl,
cyclopentylaminocarbonylmethyl, cyclohexylaminocarbonylmethyl,
25 dimethylaminocarbonylmethyl, diethylaminocarbonylmethyl,
allylaminocarbonylmethyl, methylaminomethyl, dimethylaminomethyl,
diethylaminomethyl, ethylaminomethyl, isopropylaminomethyl, n-propylaminomethyl,
n-butylaminomethyl, methylaminoethyl, dimethylaminoethyl, diethylaminoethyl, N-
30 pyrrolidinylmethyl, N-piperidinylmethyl, hydroxyimino, methoxyimino, ethoxyimino,
n-propyloxyimino, n-butyloxyimino, isopropyloxyimino, tert-butyloxyimino,
cyclopropylmethoxyimino, cyclobutylmethoxyimino, cyclopentylmethoxyimino,
cyclohexylmethoxyimino, benzyloxyimino, phenoxyimino, allyloxyimino, p-Cl-
phenylmethoxyimino, phenylethynyl, p-Cl-phenylethynyl, m-Cl-phenylethynyl, o-Cl-
phenylethynyl, p-F-phenylethynyl, m-F-phenylethynyl, o-F-phenylethynyl, pyridin-2-
ylethynyl, pyridin-3-ylethynyl, thiophen-2-ylethynyl, trimethylsilylethynyl,
35 triethylsilylethynyl, tri(isopropyl)silylethynyl, cyclopropylethynyl, cyclobutylethynyl,
cyclopentylethynyl, cyclohexylethynyl, phenyl, benzyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-
phenyl, p-F-phenyl, m-F-phenyl, o-F-phenyl, p-trifluoromethylphenyl, m-

trifluoromethylphenyl, o-trifluoromethylphenyl, p-methylphenyl, m-methylphenyl, o-methylphenyl, p-methoxyphenyl, m-methoxyphenyl, o-methoxyphenyl, p-Cl-phenylmethyl, m-Cl-phenylmethyl, o-Cl-phenylmethyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl, furan-3-yl, pyrimidin-2-yl, pyrazin-2-yl, methoxymethoxymethyl, ethoxyethoxymethyl, methoxyethoxymethyl, methylaminosulfonylamino, dimethylaminosulfonylamino, ethylaminosulfonylamino, diethylaminosulfonylamino, isopropylaminosulfonylamino, cyclopropylaminosulfonylamino, cyclobutylaminosulfonylamino, cyclopentylaminosulfonylamino, cyclohexylaminosulfonylamino, diazo, phenyldiazo, trimethylsilyl, tri(isopropyl)silyl, triethylsilyl, dimethyl(phenyl)silyl, diphenyl(methyl)silyl,

10 R¹⁴ and R¹⁵ independently of one another represent hydrogen, methyl, ethyl, n-propyl, isopropyl, n-butyl, fluorine, or

15 R⁹ and R¹⁵ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

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and

25 W represents oxygen.

5. The compound of the general formula (I) as claimed in claim 1 and/or the salts thereof, characterized in that

30 R¹ represents hydrogen, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyleth-1-yl, n-pentyl, 1-methylbut-1-yl, 2-methylbut-1-yl, 3-methylbut-1-yl, 1,1-dimethylprop-1-yl, 1,2-dimethylprop-1-yl, 2,2-dimethylprop-1-yl, 1-ethylprop-1-yl, n-hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl, 1-ethyl-2-methylpropyl, trifluoromethyl, pentafluoroethyl, 1,1,2,2-tetrafluoroethyl, heptafluoro-n-propyl, heptafluoroisopropyl, nonafluorobutyl, chlorodifluoromethyl, bromodifluoromethyl,

dichlorofluoromethyl, iododifluoromethyl, bromofluoromethyl, 1-fluoroethyl, 2-fluoroethyl, fluoromethyl, difluoromethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 3,3,3-trifluoroprop-1-yl, 3,3,3-trifluoroprop-2-yl, difluoro-tert-butyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, adamantan-1-yl, adamantan-2-yl, 1-methylcyclopropyl, 2-methylcyclopropyl, 2,2-dimethylcyclopropyl, 2,3-dimethylcyclopropyl, 1,1'-bi(cyclopropyl)-1-yl, 1,1'-bi(cyclopropyl)-2-yl, 2'-methyl-1,1'-bi(cyclopropyl)-2-yl, 1-cyanocyclopropyl, 2-cyanocyclopropyl, 1-methylcyclobutyl, 2-methylcyclobutyl, 3-methylcyclobutyl, 1-cyanocyclobutyl, 2-cyanocyclobutyl, 3-cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl, 1-vinylcyclopropyl, 1-ethylcyclopropyl, 1-methylcyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 1-methoxycyclohexyl, 2-methoxycyclohexyl, 3-methoxycyclohexyl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, phenyl, p-F-phenyl, m-F-phenyl, o-F-phenyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-phenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, 15 pyrimidin-2-yl, pyrimidin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl, furan-3-yl, tetrahydrofuran-2-yl, tetrahydrofuran-3-yl, benzyl, p-Cl-benzyl, p-F-benzyl, p-methoxybenzyl, p-methylbenzyl, p-trifluoromethylbenzyl, p-nitrobenzyl, m-Cl-benzyl, m-F-benzyl, m-methoxybenzyl, m-methylbenzyl, o-Cl-benzyl, o-F-benzyl, o-methoxybenzyl, o-methylbenzyl, 1-phenyleth-1-yl, 2-phenyleth-1-yl, 1-(o-chlorophenyl)eth-1-yl, 1-(o-fluorophenyl)eth-1-yl, 1-(o-methylphenyl)eth-1-yl, 1-(o-bromophenyl)eth-1-yl, 1-(o-iodophenyl)eth-1-yl, pyridin-2-ylmethyl, pyridin-3-ylmethyl, pyridin-4-ylmethyl, pyrimidin-2-ylmethyl, pyrimidin-4-ylmethyl, tetrahydrofuran-2-ylmethyl, o-cyanophenylmethyl, m-cyanophenylmethyl, p-cyanophenylmethyl, cyanomethyl, cyanoethyl, methoxycarbonyl, ethoxycarbonyl, n-propyloxycarbonyl, isopropyloxycarbonyl, tert-butyloxycarbonyl, benzyloxycarbonyl, allyloxycarbonyl, methylcarbonyl, ethylcarbonyl, n-propylcarbonyl, isopropylcarbonyl, n-butylcarbonyl, 1-methylprop-1-ylcarbonyl, 2-methylprop-1-ylcarbonyl, 1,1-dimethyleth-1-ylcarbonyl, phenylcarbonyl, methylaminocarbonyl, dimethylaminocarbonyl, ethylaminocarbonyl, n-propylaminocarbonyl, isopropylaminocarbonyl, n-butylaminocarbonyl, tert-butylaminocarbonyl, 25 benzylaminocarbonyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, tert-butyloxycarbonylmethyl, benzyloxycarbonylmethyl, methoxycarbonylethyl, ethoxycarbonylethyl, tert-butyloxycarbonylmethyl, benzyloxycarbonylmethyl, methylcarbonyloxymethyl, ethylcarbonyloxymethyl, n-propylcarbonyloxymethyl, 1-methylethylcarbonyloxymethyl, 1,1-dimethylethylcarbonyloxymethyl, hydroxycarbonylmethyl, hydroxycarbonylethyl, hydroxycarbonyl-n-propyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, methoxymethyl, ethoxymethyl, n-propyloxymethyl, isopropyloxymethyl, n-butyloxymethyl, methoxyethyl, ethoxyethyl, n-propyloxyethyl, 30 35

isopropoxyethyl, methoxy-n-propyl, ethoxy-n-propyl, methoxy-n-butyl, amino, dimethylamino, methyl(ethyl)amino, diethylamino, cyanomethyl, cyanoethyl, prop-2-yn-1-yl,

5 R² and R⁹ independently of one another represent hydrogen, hydroxy, fluorine, methyl, ethyl, n-propyl, isopropyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyleth-1-yl, trifluoromethyl, difluoromethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, phenyl, p-F-phenyl, m-F-phenyl, o-F-phenyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-phenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyrimidin-2-yl, pyrimidin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl, furan-3-yl, methoxymethyl, ethoxymethyl, methoxyethyl, ethoxyethyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, trifluoromethoxy, difluoromethoxy, methylthio, ethylthio, trifluoromethylthio, dimethylamino, methylamino, diethylamino, methyl(ethyl)amino, cyano, or

10 R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, or

15 R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

20 R³ represents hydroxy, hydrothio, fluorine, chlorine, bromine, iodine, methoxy, ethoxy, n-propyloxy, 1-methylethoxy, n-butyloxy, 1-methylpropyloxy, 2-methylpropyloxy, 1,1-dimethylethoxy, n-pentyloxy, 1-methylbutyloxy, 2-methylbutyloxy, 3-methylbutyloxy, 1,1-dimethylpropyloxy, 1,2-dimethylpropyloxy, 2,2-dimethylpropyloxy, 1-ethylpropyloxy, n-hexyloxy, 1-methylpentyloxy, 2-methylpentyloxy, 3-methylpentyloxy, 4-methylpentyloxy, 1,1-dimethylbutyloxy, 1,2-dimethylbutyloxy, 1,3-dimethylbutyloxy, 2,2-dimethylbutyloxy, 2,3-dimethylbutyloxy, 3,3-dimethylbutyloxy, 1-ethylbutyloxy, 2-ethylbutyloxy, 1,1,2-trimethylpropyloxy, 1,2,2-trimethylpropyloxy, 1-ethyl-1-methylpropyloxy, 1-ethyl-2-methylpropyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy, cyclohexylmethoxy, benzyloxy, p-chlorophenylmethoxy, m-chlorophenylmethoxy, o-chlorophenylmethoxy, p-methoxyphenylmethoxy, p-nitrophenylmethoxy, methoxymethoxy, methoxyethoxy, methoxy-n-propyloxy, methoxy-n-butyloxy, ethoxymethoxy, ethoxyethoxy, ethoxy-n-

25 R³ represents hydroxy, hydrothio, fluorine, chlorine, bromine, iodine, methoxy, ethoxy, n-propyloxy, 1-methylethoxy, n-butyloxy, 1-methylpropyloxy, 2-methylpropyloxy, 1,1-dimethylethoxy, n-pentyloxy, 1-methylbutyloxy, 2-methylbutyloxy, 3-methylbutyloxy, 1,1-dimethylpropyloxy, 1,2-dimethylpropyloxy, 2,2-dimethylpropyloxy, 1-ethylpropyloxy, n-hexyloxy, 1-methylpentyloxy, 2-methylpentyloxy, 3-methylpentyloxy, 4-methylpentyloxy, 1,1-dimethylbutyloxy, 1,2-dimethylbutyloxy, 1,3-dimethylbutyloxy, 2,2-dimethylbutyloxy, 2,3-dimethylbutyloxy, 3,3-dimethylbutyloxy, 1-ethylbutyloxy, 2-ethylbutyloxy, 1,1,2-trimethylpropyloxy, 1,2,2-trimethylpropyloxy, 1-ethyl-1-methylpropyloxy, 1-ethyl-2-methylpropyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy, cyclohexylmethoxy, benzyloxy, p-chlorophenylmethoxy, m-chlorophenylmethoxy, o-chlorophenylmethoxy, p-methoxyphenylmethoxy, p-nitrophenylmethoxy, methoxymethoxy, methoxyethoxy, methoxy-n-propyloxy, methoxy-n-butyloxy, ethoxymethoxy, ethoxyethoxy, ethoxy-n-

30 R³ represents hydroxy, hydrothio, fluorine, chlorine, bromine, iodine, methoxy, ethoxy, n-propyloxy, 1-methylethoxy, n-butyloxy, 1-methylpropyloxy, 2-methylpropyloxy, 1,1-dimethylethoxy, n-pentyloxy, 1-methylbutyloxy, 2-methylbutyloxy, 3-methylbutyloxy, 1,1-dimethylpropyloxy, 1,2-dimethylpropyloxy, 2,2-dimethylpropyloxy, 1-ethylpropyloxy, n-hexyloxy, 1-methylpentyloxy, 2-methylpentyloxy, 3-methylpentyloxy, 4-methylpentyloxy, 1,1-dimethylbutyloxy, 1,2-dimethylbutyloxy, 1,3-dimethylbutyloxy, 2,2-dimethylbutyloxy, 2,3-dimethylbutyloxy, 3,3-dimethylbutyloxy, 1-ethylbutyloxy, 2-ethylbutyloxy, 1,1,2-trimethylpropyloxy, 1,2,2-trimethylpropyloxy, 1-ethyl-1-methylpropyloxy, 1-ethyl-2-methylpropyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy, cyclohexylmethoxy, benzyloxy, p-chlorophenylmethoxy, m-chlorophenylmethoxy, o-chlorophenylmethoxy, p-methoxyphenylmethoxy, p-nitrophenylmethoxy, methoxymethoxy, methoxyethoxy, methoxy-n-propyloxy, methoxy-n-butyloxy, ethoxymethoxy, ethoxyethoxy, ethoxy-n-

35 R³ represents hydroxy, hydrothio, fluorine, chlorine, bromine, iodine, methoxy, ethoxy, n-propyloxy, 1-methylethoxy, n-butyloxy, 1-methylpropyloxy, 2-methylpropyloxy, 1,1-dimethylethoxy, n-pentyloxy, 1-methylbutyloxy, 2-methylbutyloxy, 3-methylbutyloxy, 1,1-dimethylpropyloxy, 1,2-dimethylpropyloxy, 2,2-dimethylpropyloxy, 1-ethylpropyloxy, n-hexyloxy, 1-methylpentyloxy, 2-methylpentyloxy, 3-methylpentyloxy, 4-methylpentyloxy, 1,1-dimethylbutyloxy, 1,2-dimethylbutyloxy, 1,3-dimethylbutyloxy, 2,2-dimethylbutyloxy, 2,3-dimethylbutyloxy, 3,3-dimethylbutyloxy, 1-ethylbutyloxy, 2-ethylbutyloxy, 1,1,2-trimethylpropyloxy, 1,2,2-trimethylpropyloxy, 1-ethyl-1-methylpropyloxy, 1-ethyl-2-methylpropyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy, cyclohexylmethoxy, benzyloxy, p-chlorophenylmethoxy, m-chlorophenylmethoxy, o-chlorophenylmethoxy, p-methoxyphenylmethoxy, p-nitrophenylmethoxy, methoxymethoxy, methoxyethoxy, methoxy-n-propyloxy, methoxy-n-butyloxy, ethoxymethoxy, ethoxyethoxy, ethoxy-n-

propyloxy, ethoxy-n-butyloxy, n-propyloxymethoxy, isopropyloxymethoxy, methylcarbonyloxy, ethylcarbonyloxy, n-propylcarbonyloxy, 1-methylethylcarbonyloxy, n-butylcarbonyloxy, 1-methylpropylcarbonyloxy, 2-methylpropylcarbonyloxy, 1,1-dimethylethylcarbonyloxy, n-pentylcarbonyloxy, 1-methylbutylcarbonyloxy, 2-methylbutylcarbonyloxy, 3-methylbutylcarbonyloxy, 1,1-dimethylpropylcarbonyloxy, 1,2-dimethylpropylcarbonyloxy, 2,2-dimethylpropylcarbonyloxy, 1-ethylpropylcarbonyloxy, n-hexylcarbonyloxy, 1-methylpentylcarbonyloxy, 2-methylpentylcarbonyloxy, 3-methylpentylcarbonyloxy, 4-methylpentylcarbonyloxy, 1,1-dimethylbutylcarbonyloxy, 1,2-dimethylbutylcarbonyloxy, 1,3-dimethylbutylcarbonyloxy, 2,2-dimethylbutylcarbonyloxy, 2,3-dimethylbutylcarbonyloxy, 3,3-dimethylbutylcarbonyloxy, 1-ethylbutylcarbonyloxy, 2-ethylbutylcarbonyloxy, 1,1,2-trimethylpropylcarbonyloxy, 1,2,2-trimethylpropylcarbonyloxy, 1-ethyl-1-methylpropylcarbonyloxy, 1-ethyl-2-methylpropylcarbonyloxy, phenylcarbonyloxy, p-chlorophenylcarbonyloxy, m-chlorophenylcarbonyloxy, o-chlorophenylcarbonyloxy, p-fluorophenylcarbonyloxy, m-fluorophenylcarbonyloxy, o-fluorophenylcarbonyloxy, benzylcarbonyloxy, thiophen-2-ylcarbonyloxy, furan-2-ylcarbonyloxy, cyclopropylcarbonyloxy, cyclobutylcarbonyloxy, cyclopentylcarbonyloxy, cyclohexylcarbonyloxy, 1-fluorocycloprop-1-ylcarbonyloxy, 1-chlorocycloprop-1-ylcarbonyloxy, 1-cyanocycloprop-1-ylcarbonyloxy, 1-methylcycloprop-1-ylcarbonyloxy, 1-trifluoromethylcycloprop-1-ylcarbonyloxy, adamantlycarbonyloxy, trifluoromethylcarbonyloxy, difluoromethylcarbonyloxy, methoxycarbonyloxy, ethoxycarbonyloxy, n-propyloxycarbonyloxy, isopropyloxycarbonyloxy, n-butyloxycarbonyloxy, 1,1-dimethylethylloxycarbonyloxy, 2,2-dimethylpropyloxycarbonyloxy, benzyloxycarbonyloxy, allyloxycarbonyloxy, cyclopropyloxycarbonyloxy, cyclobutyloxycarbonyloxy, cyclopentyloxycarbonyloxy, cyclohexyloxycarbonyloxy, cyclopropylmethyloxycarbonyloxy, cyclobutylmethyloxycarbonyloxy, cyclopentylmethyloxycarbonyloxy, cyclohexylmethyloxycarbonyloxy, 3,3,3-trifluoroethyloxycarbonyloxy, 2,2-difluoroethyloxycarbonyloxy, pyridin-2-ylcarbonyloxy, pyridin-3-ylcarbonyloxy, pyridin-4-ylcarbonyloxy, 4-trifluoromethylpyridin-3-ylcarbonyloxy, allylcarbonyloxy, methylsulfonyloxy, ethylsulfonyloxy, n-propylsulfonyloxy, 1-methylethylsulfonyloxy, cyclopropylsulfonyloxy, cyclobutylsulfonyloxy, cyclopentylsulfonyloxy, cyclohexylsulfonyloxy, phenylsulfonyloxy, p-chlorophenylsulfonyloxy, m-chlorophenylsulfonyloxy, o-chlorophenylsulfonyloxy, p-fluorophenylsulfonyloxy, m-fluorophenylsulfonyloxy, o-fluorophenylsulfonyloxy, p-methoxyphenylsulfonyloxy, m-methoxyphenylsulfonyloxy, o-methoxyphenylsulfonyloxy, p-methylphenylsulfonyloxy, m-methylphenylsulfonyloxy, o-methylphenylsulfonyloxy,

R^6 represents hydrogen,

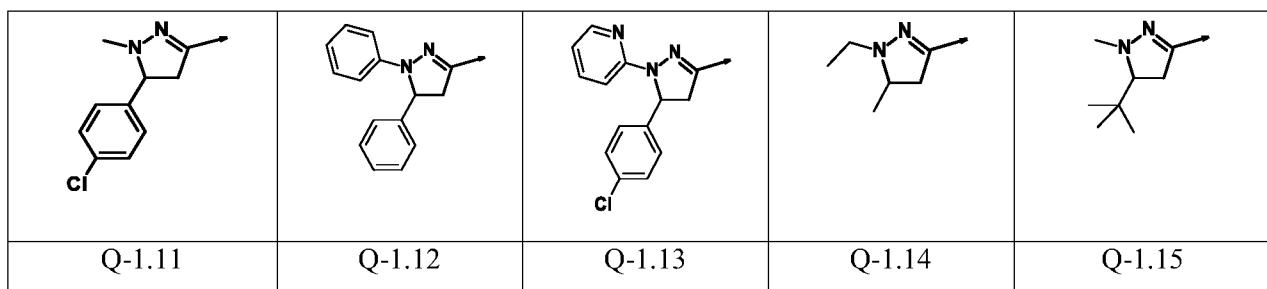
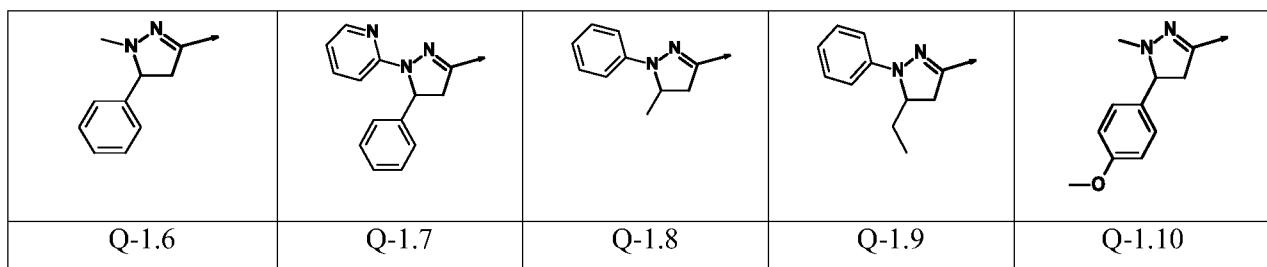
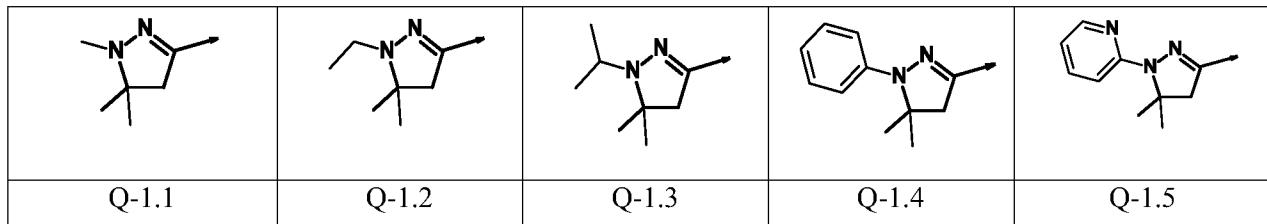
5 R^{14} and R^{15} independently of one another represent hydrogen, methyl, ethyl, n-propyl, isopropyl, n-butyl, fluorine, or

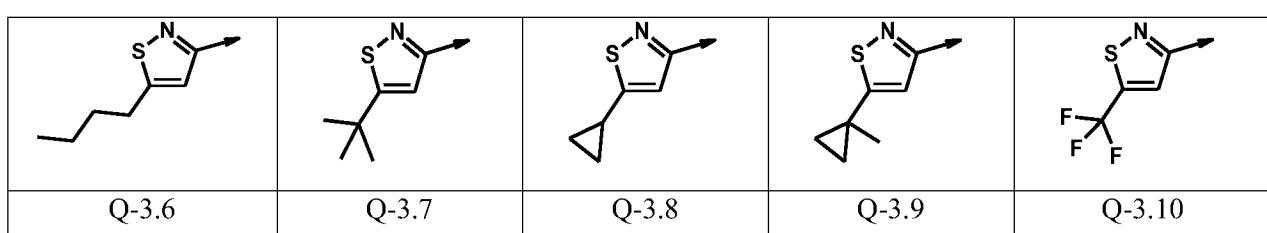
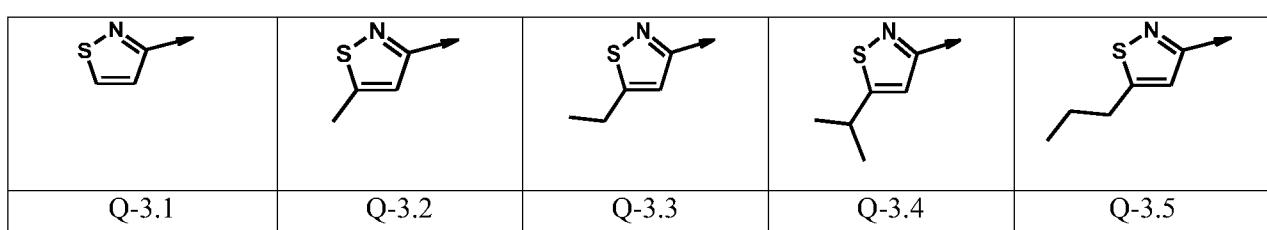
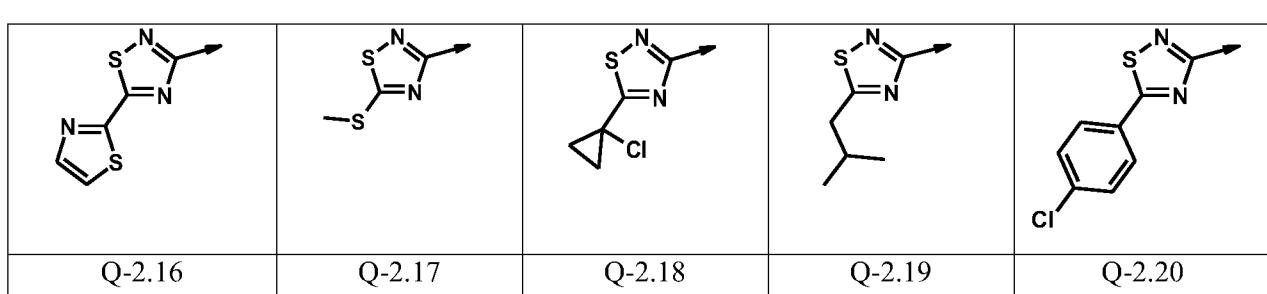
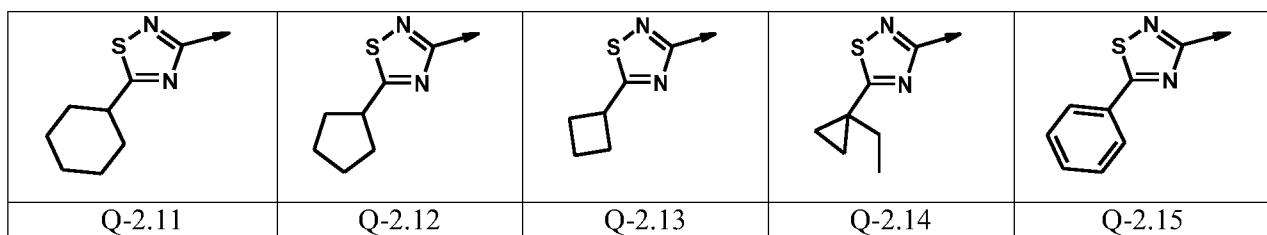
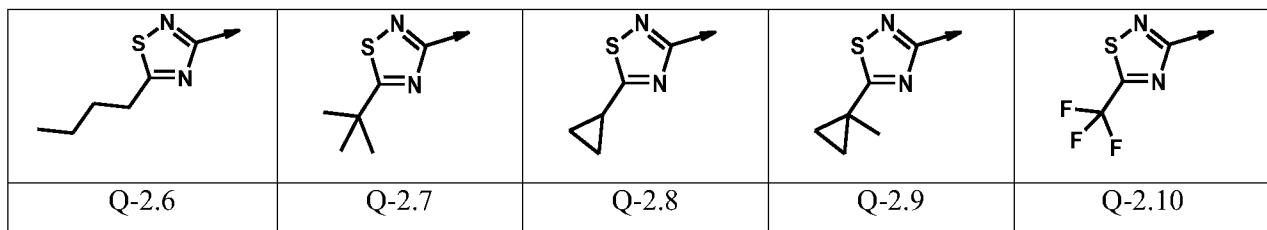
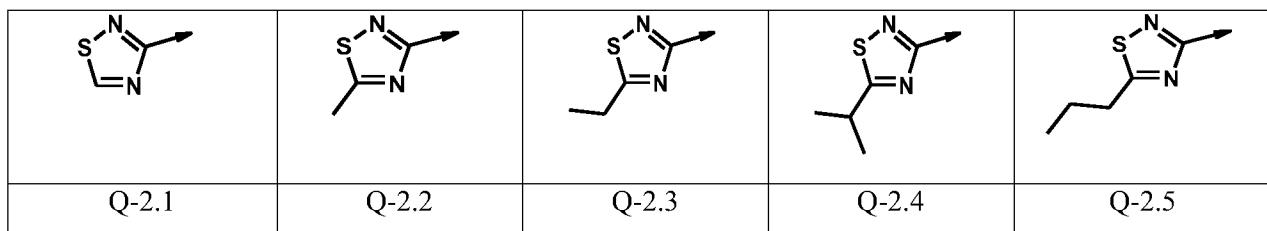
10 R^9 and R^{15} together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

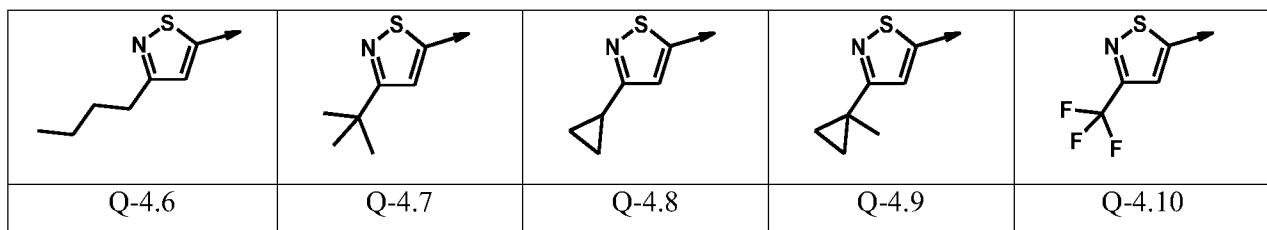
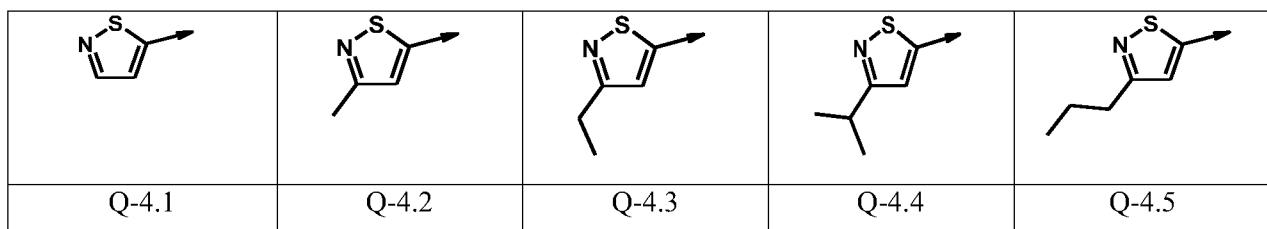
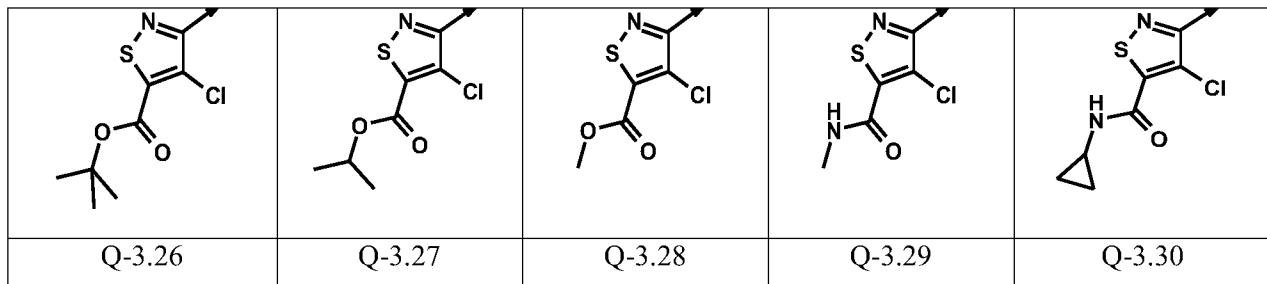
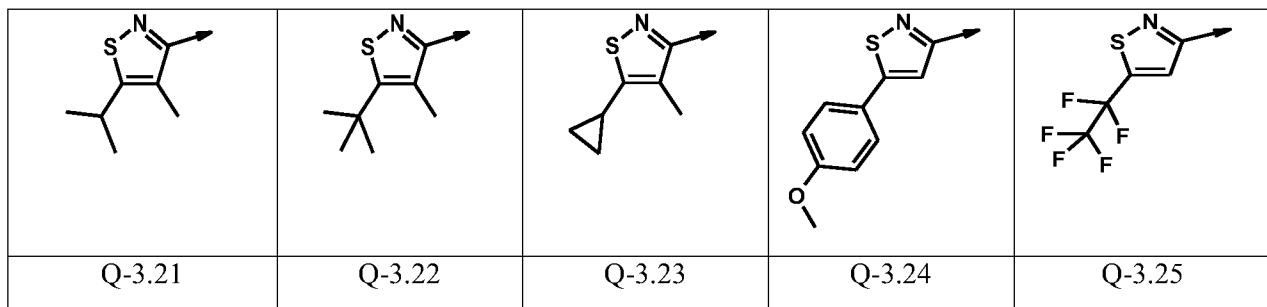
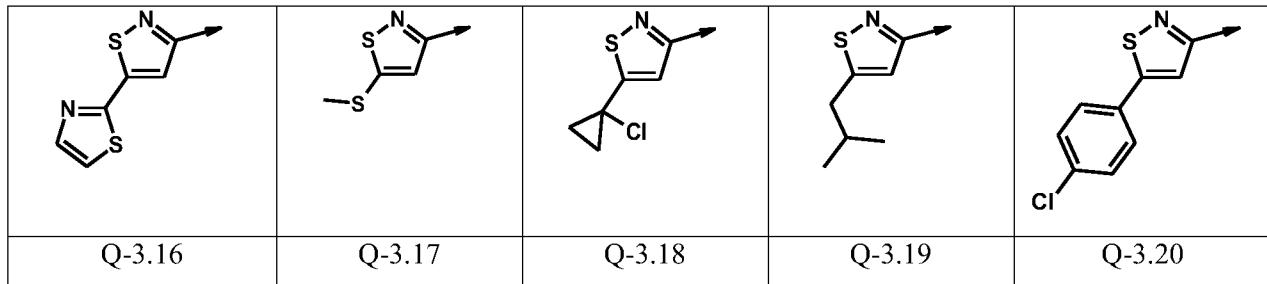
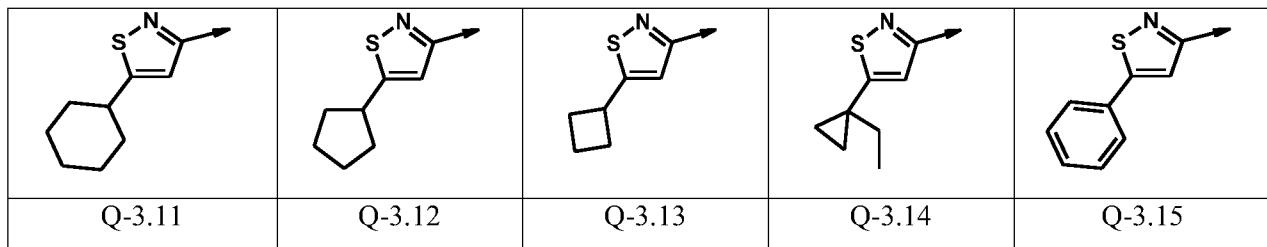
W represents oxygen

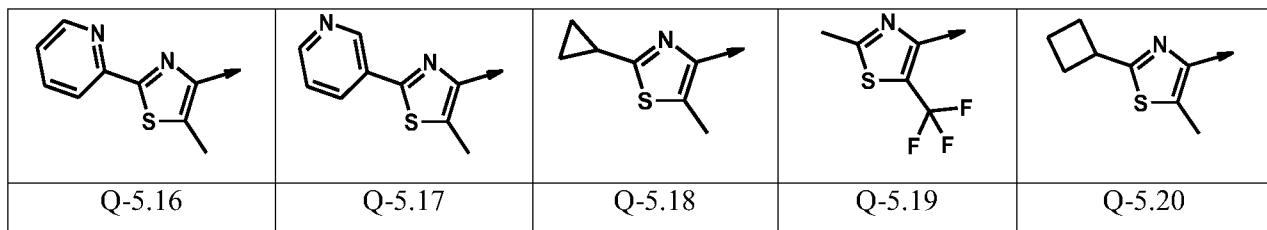
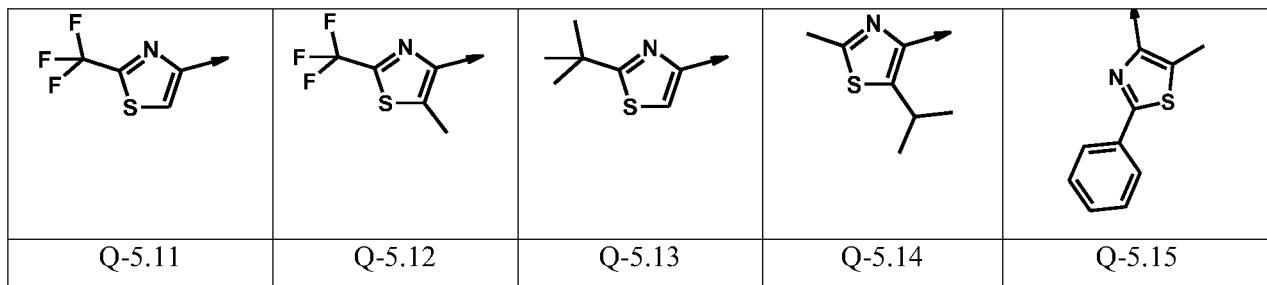
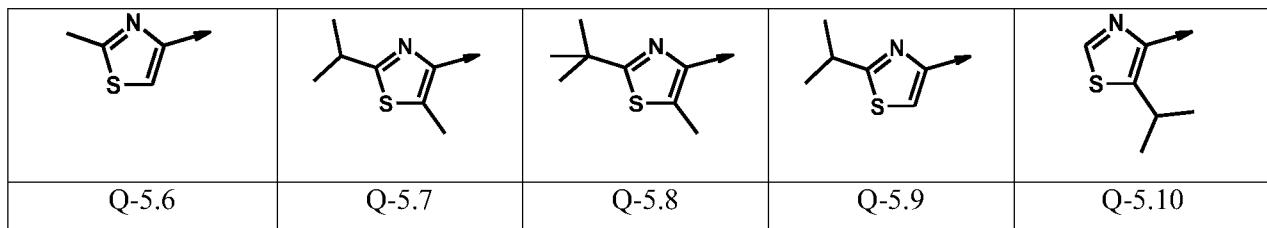
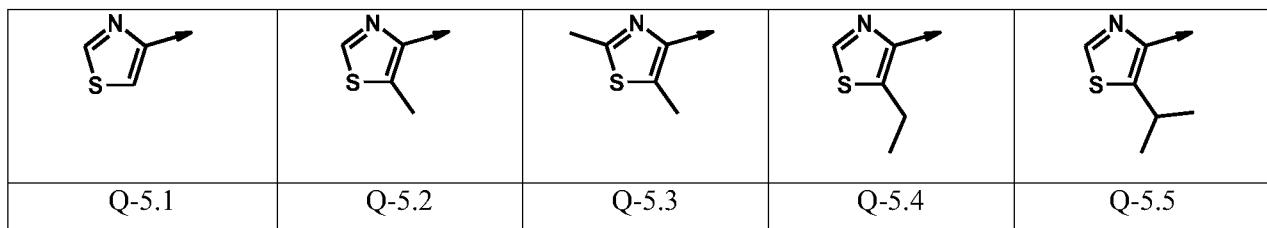
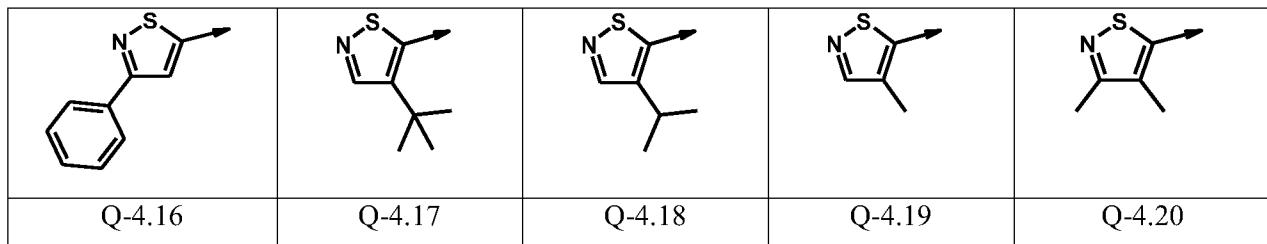
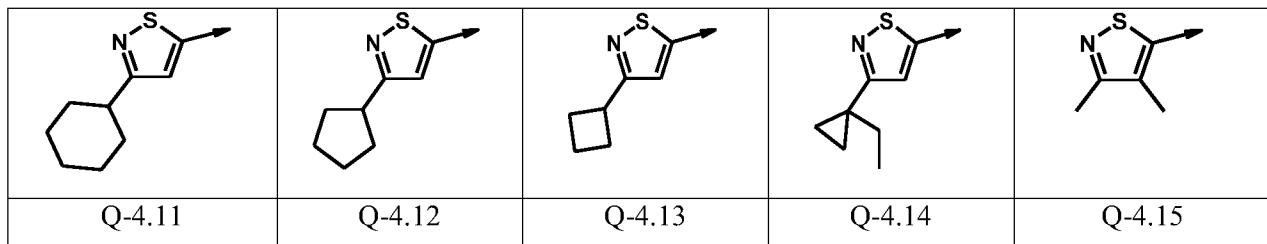
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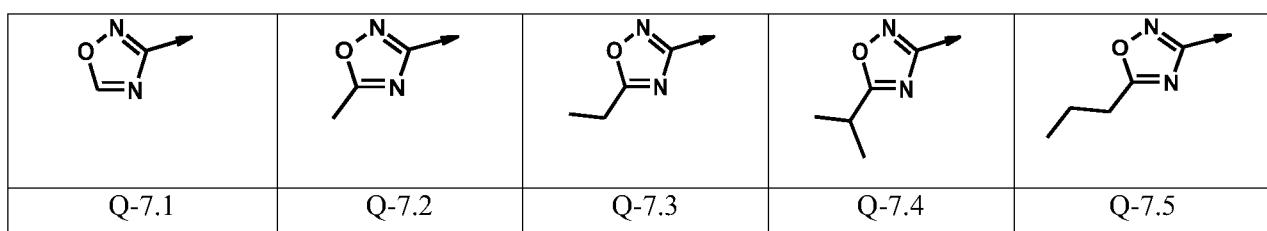
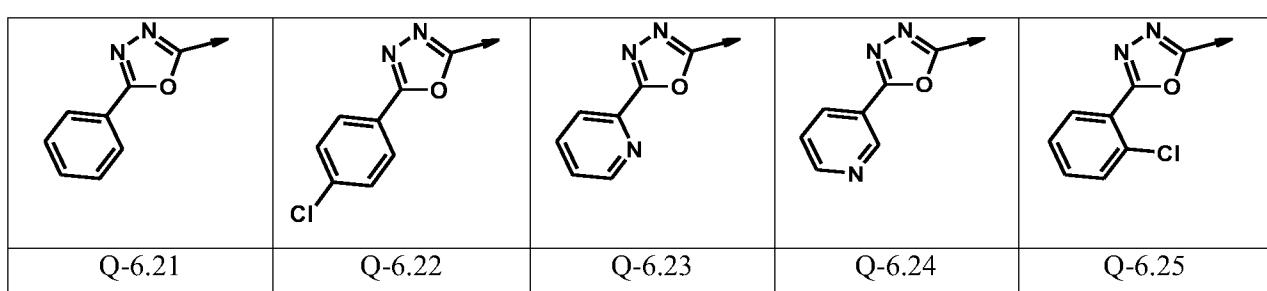
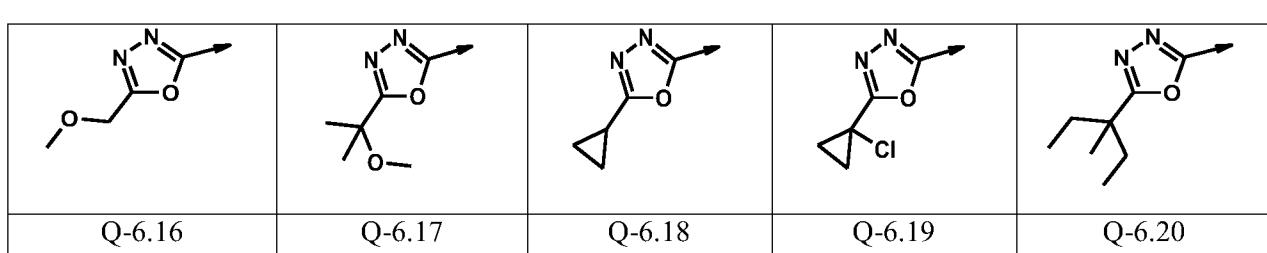
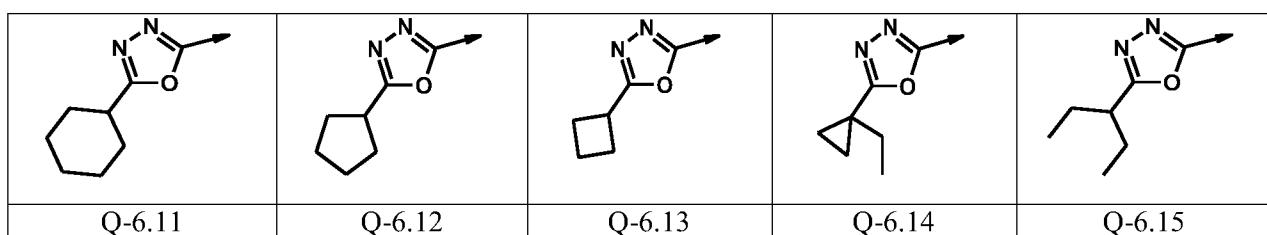
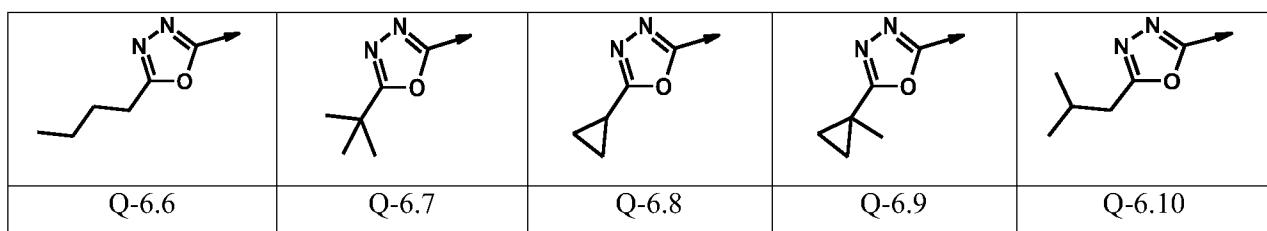
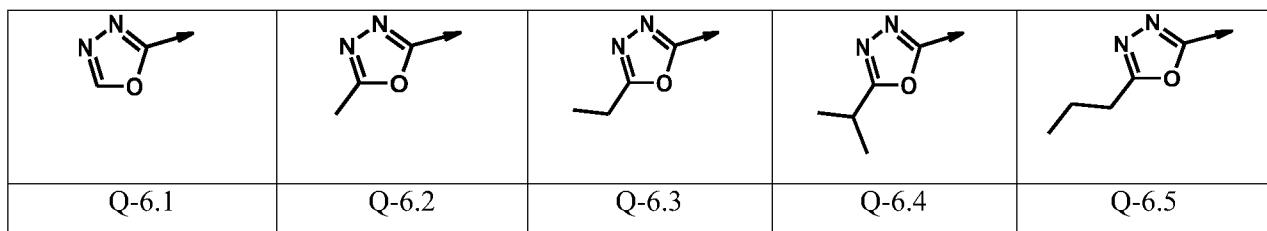
15 Q represents one of the moieties Q-1.1 to Q-30.5 specified below, where the arrow represents a bond of the respective Q group to the nitrogen of the tetrahydropyrimidinone in the general formula (I),

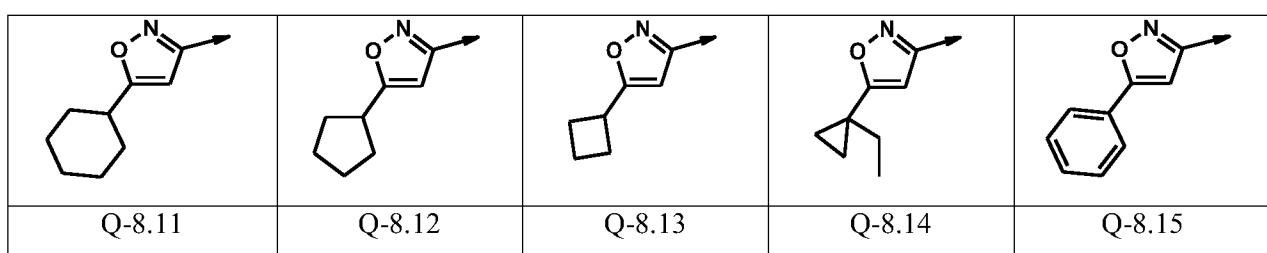
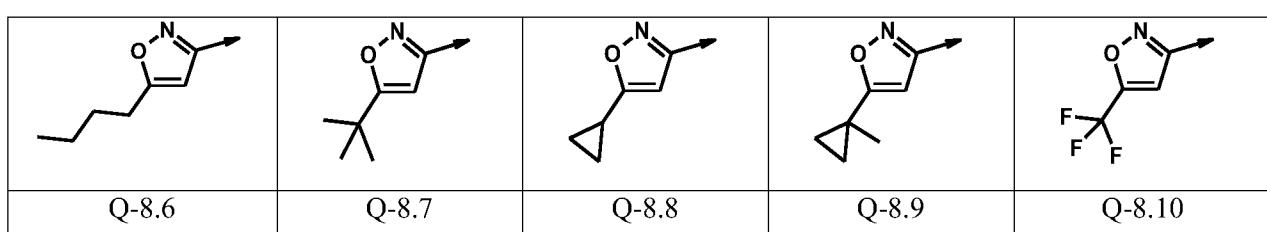
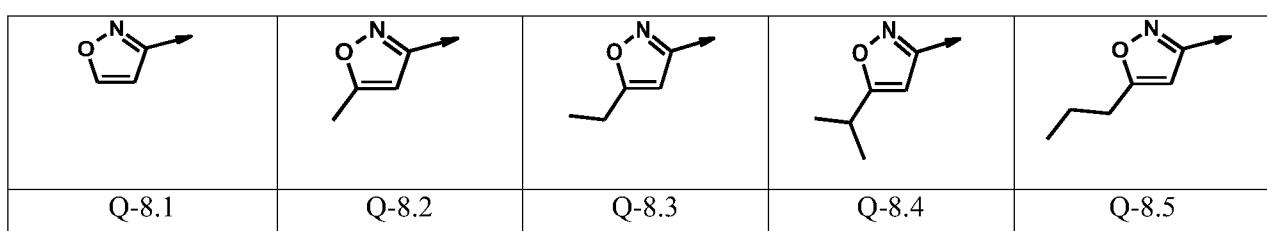
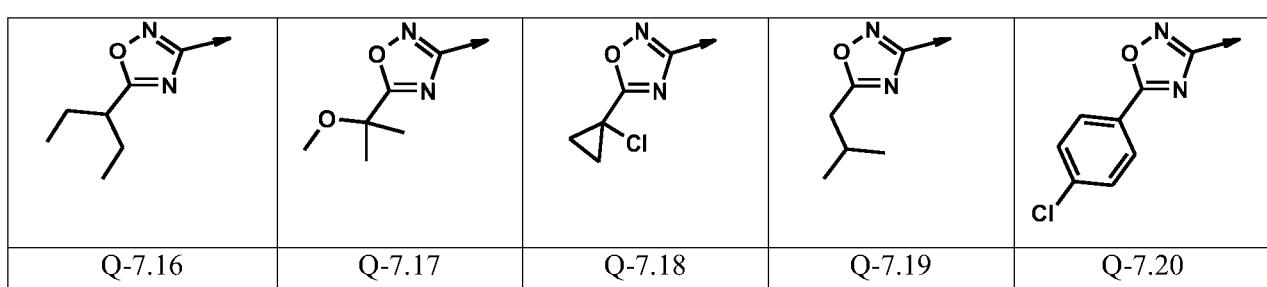
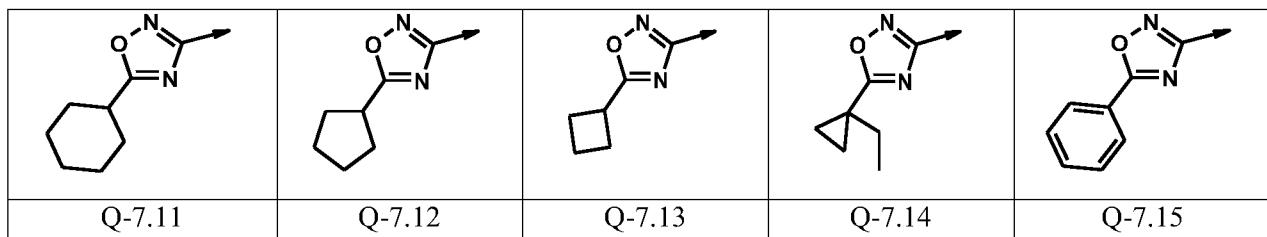
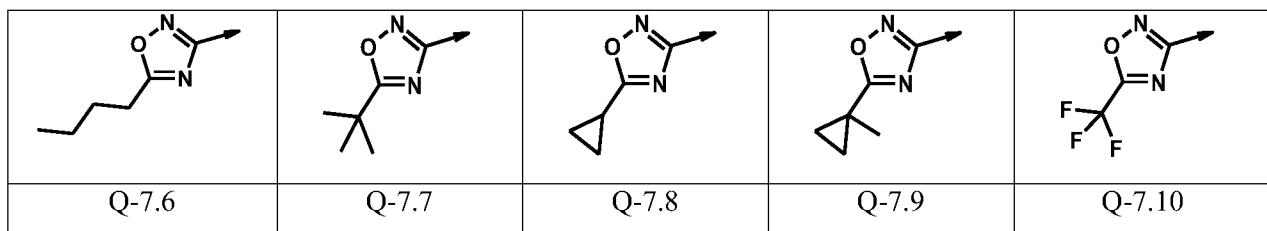


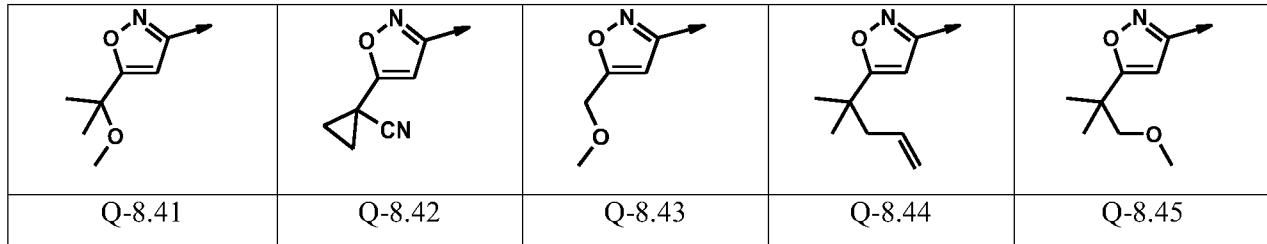
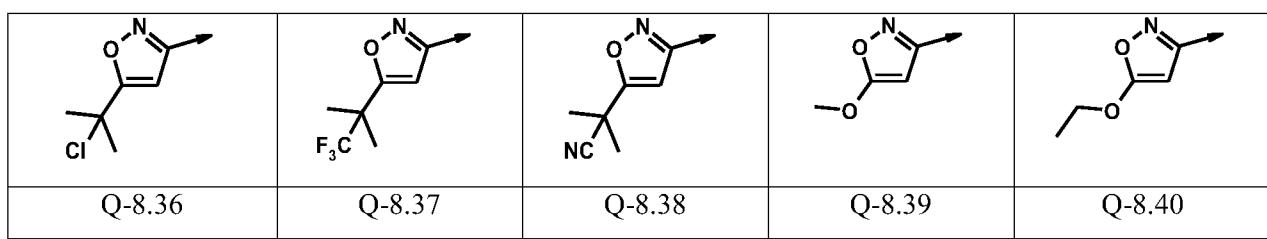
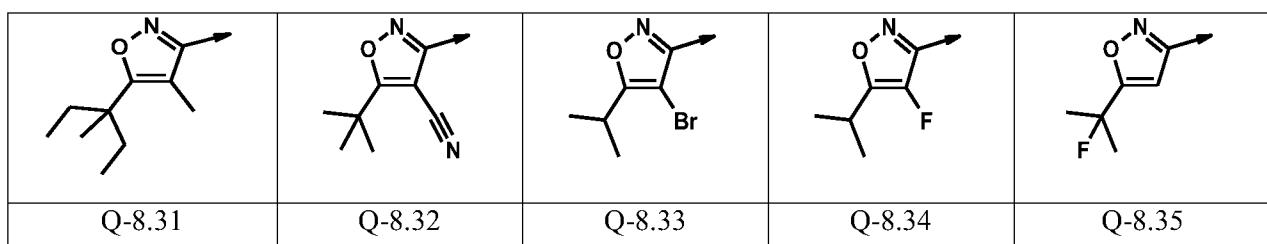
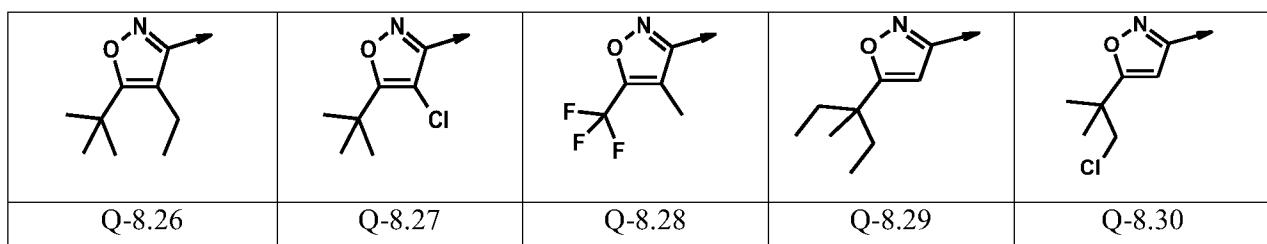
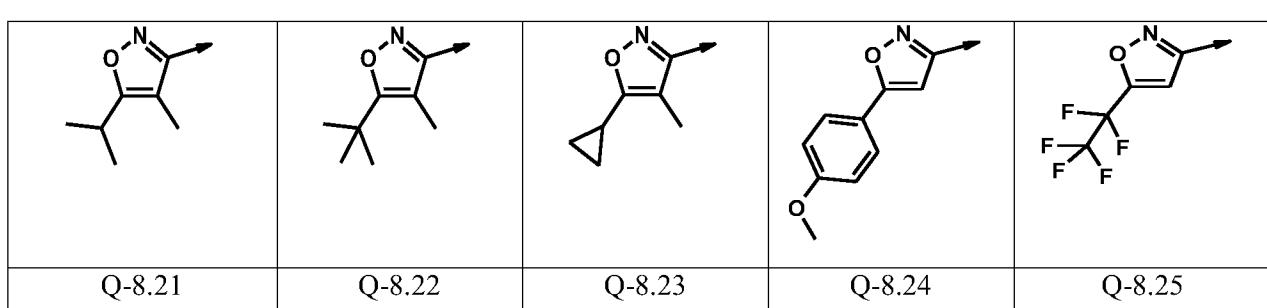
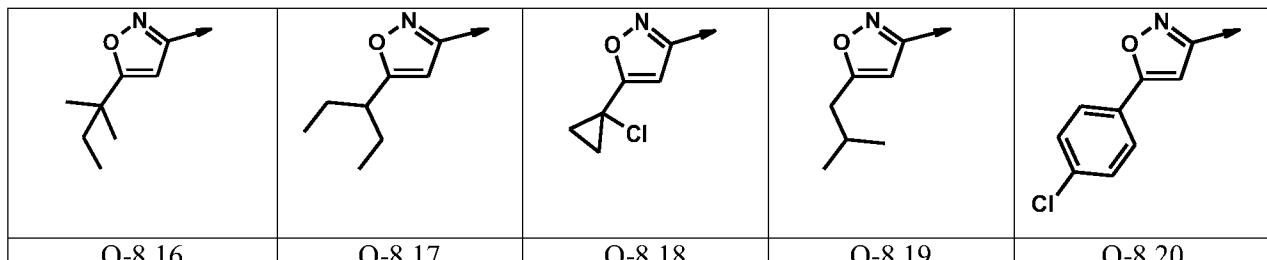


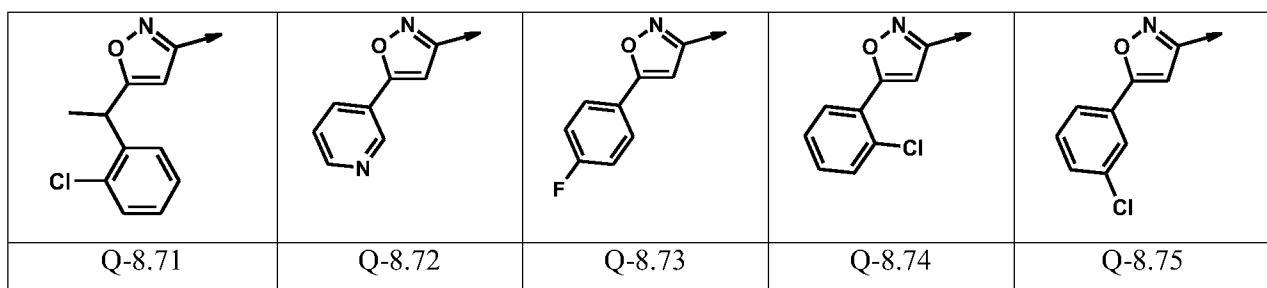
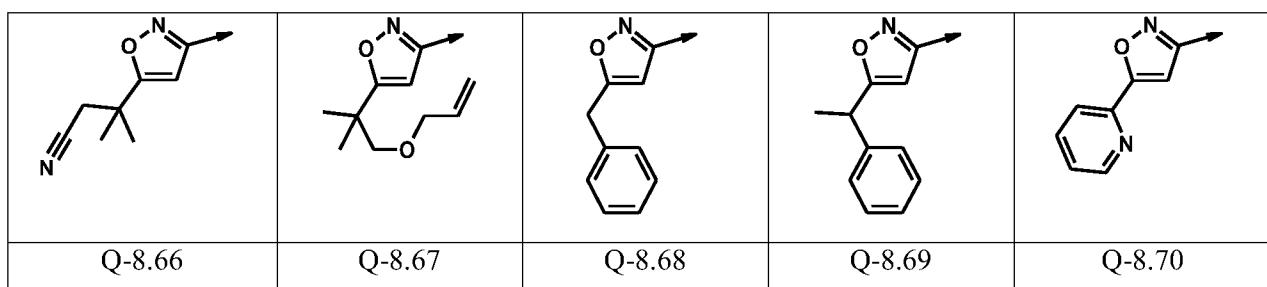
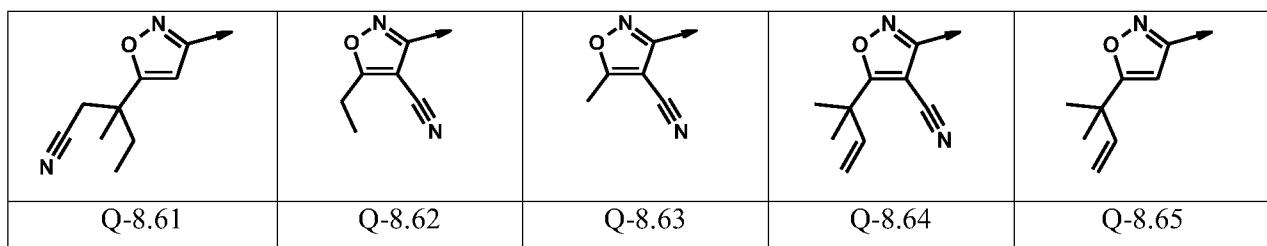
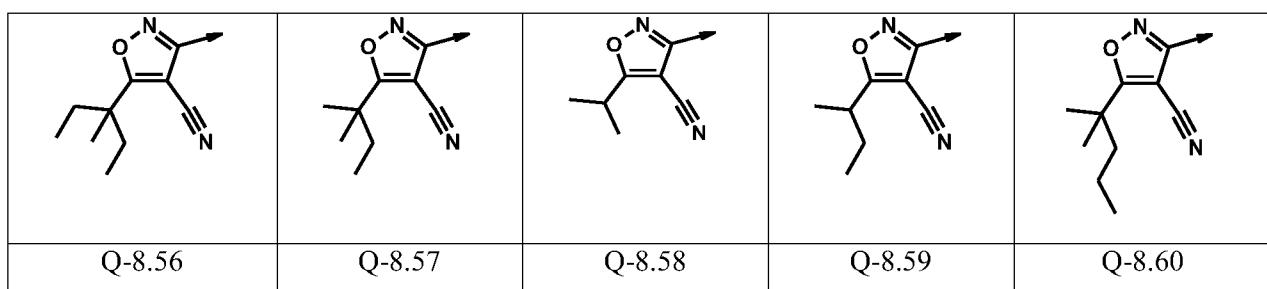
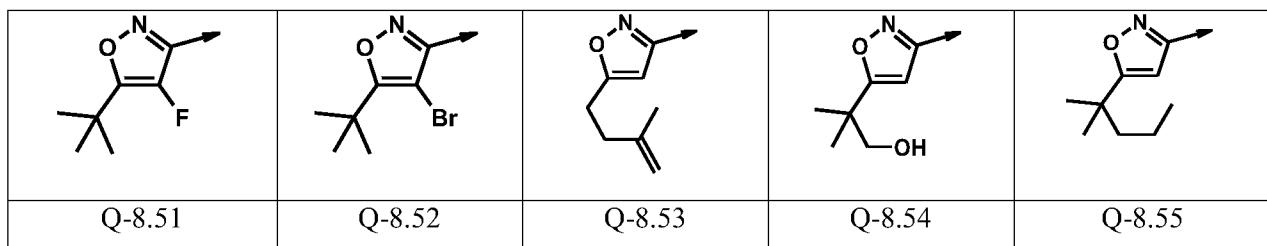
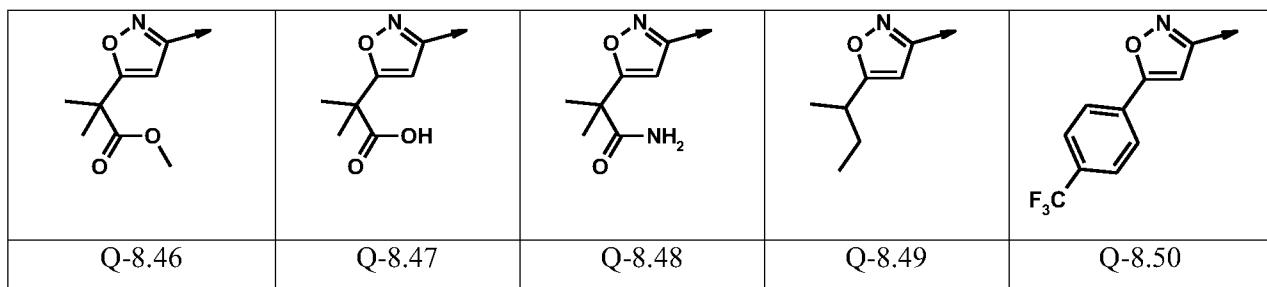


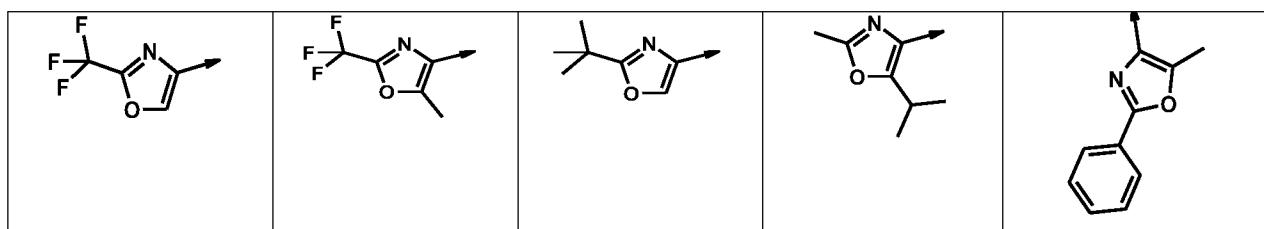
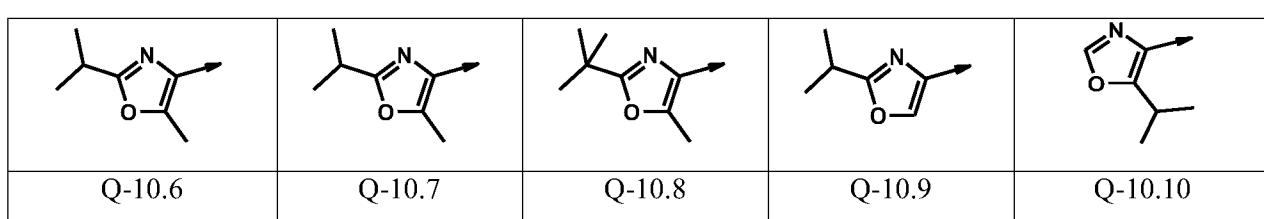
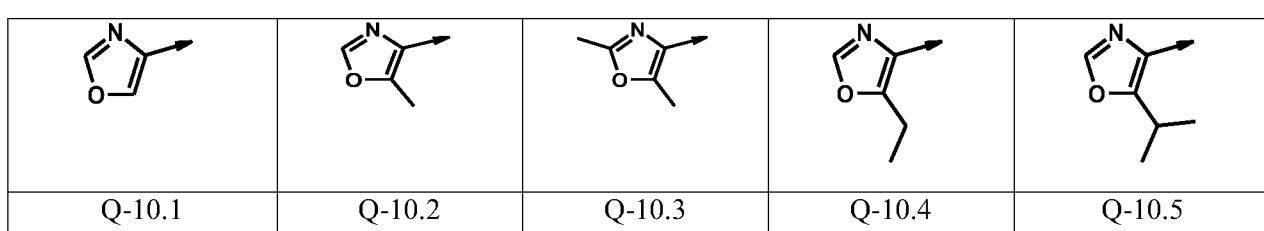
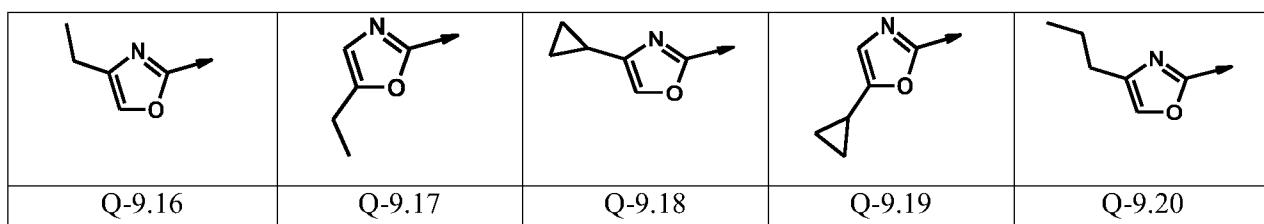
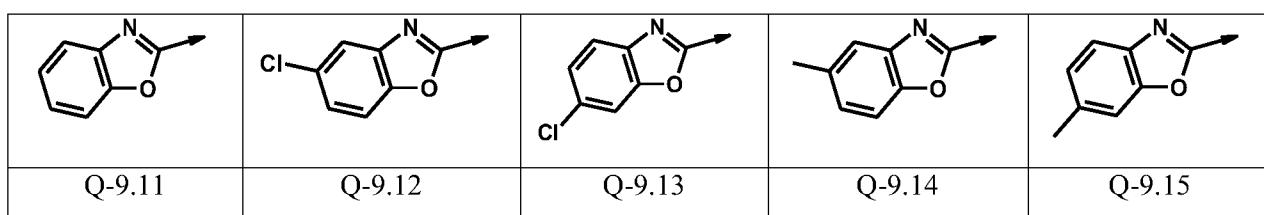
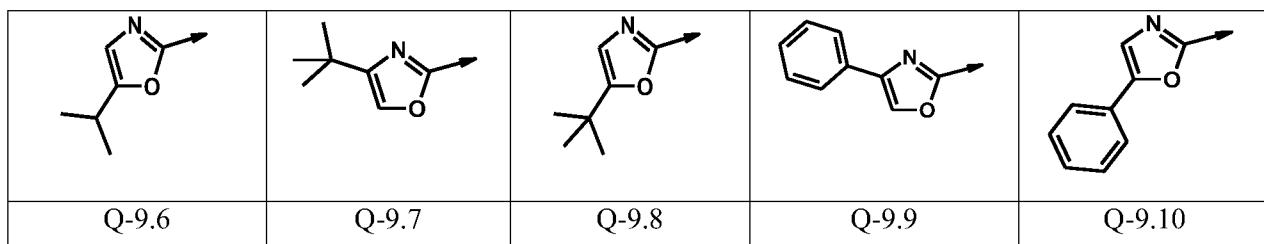
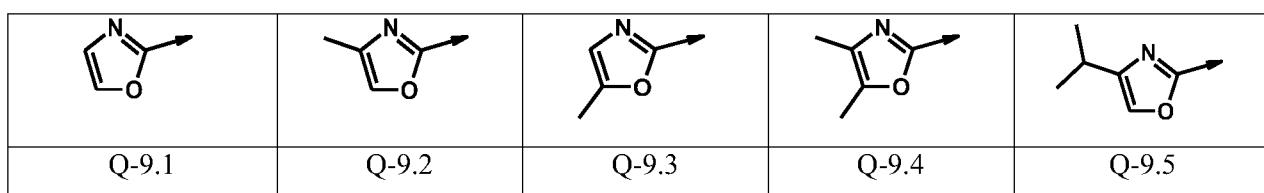




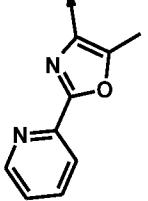
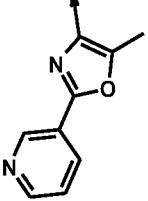
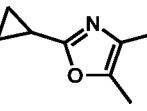
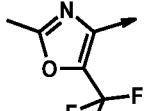
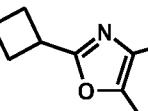


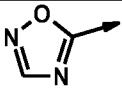
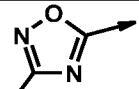
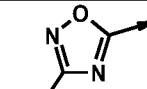
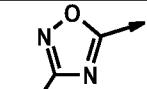
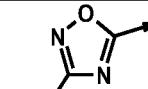


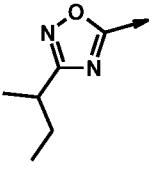
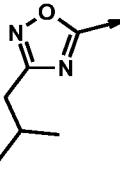
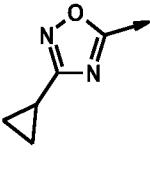
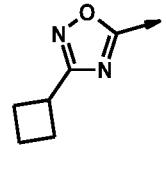
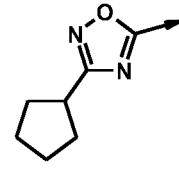


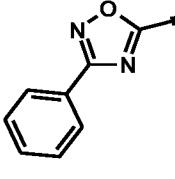
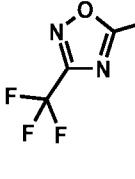
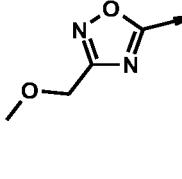
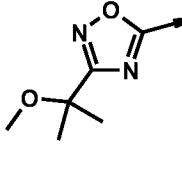
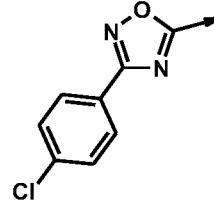


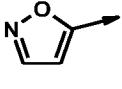
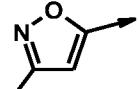
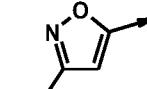
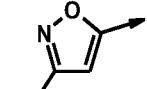
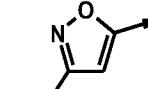
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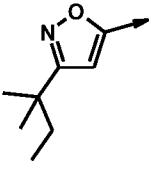
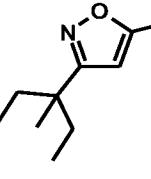
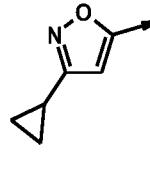
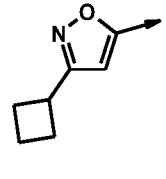
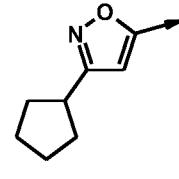
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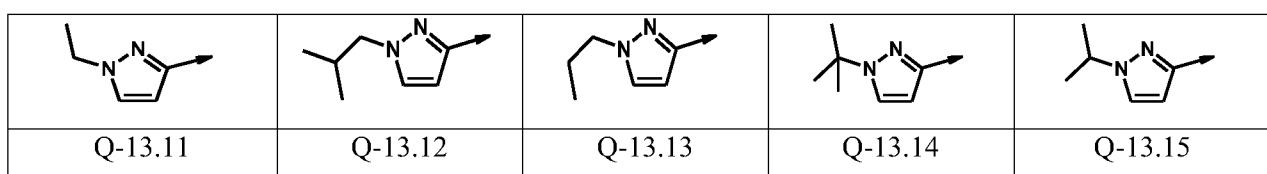
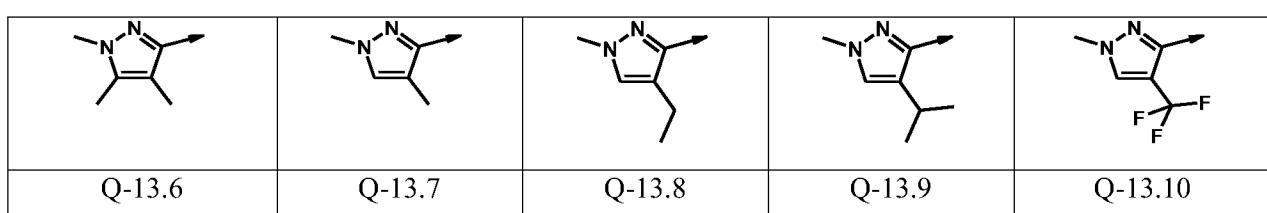
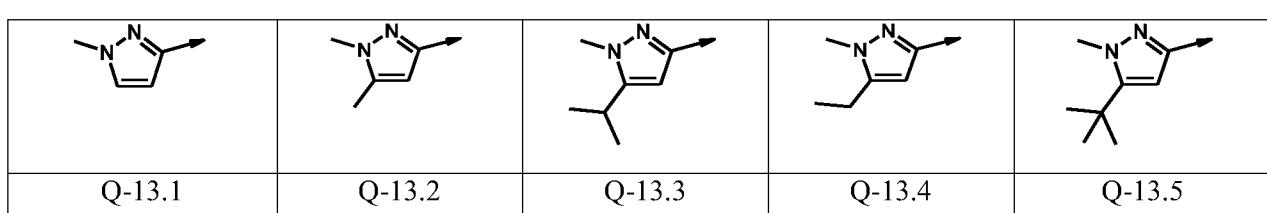
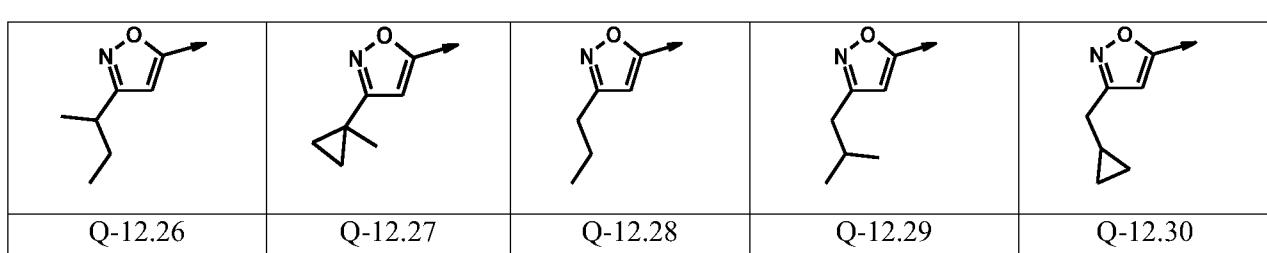
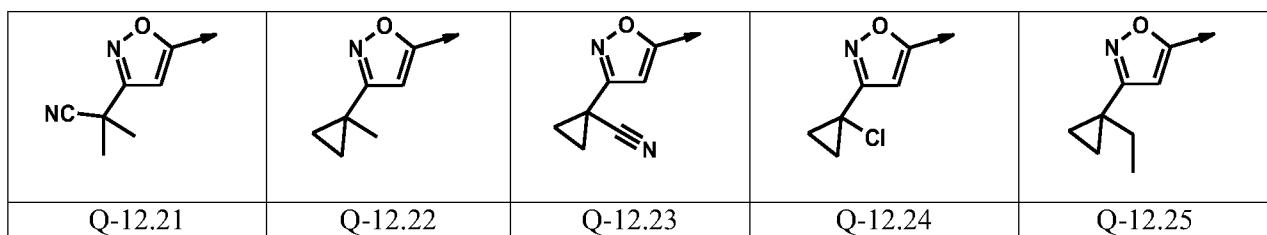
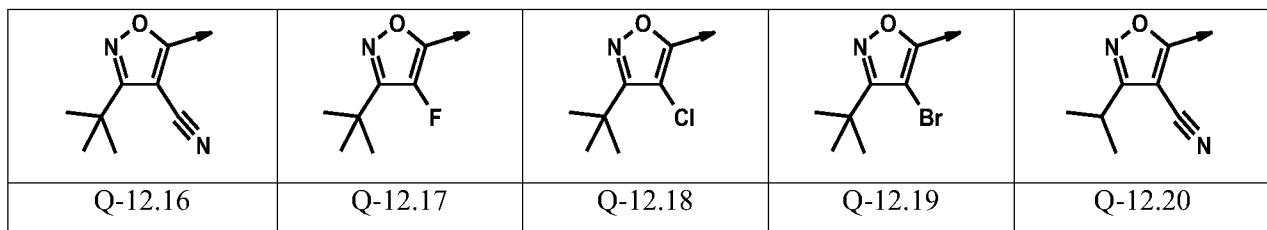
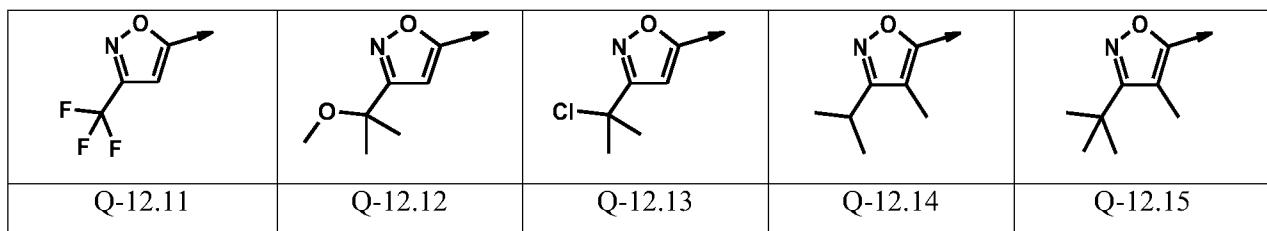
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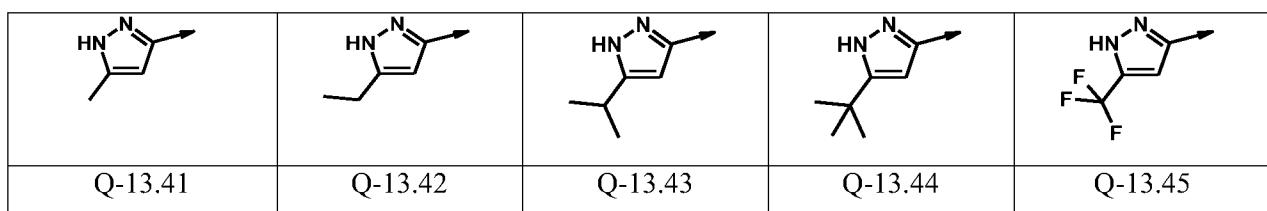
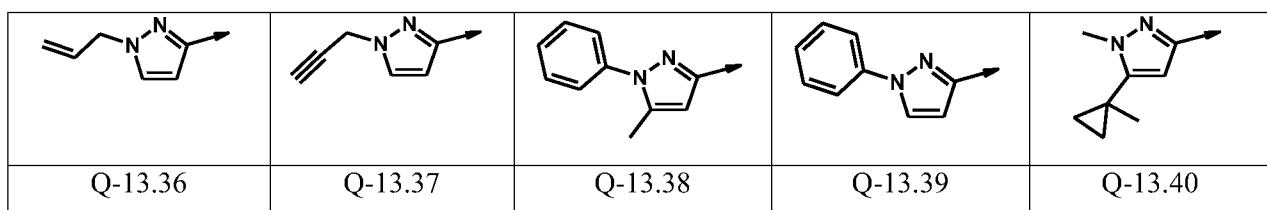
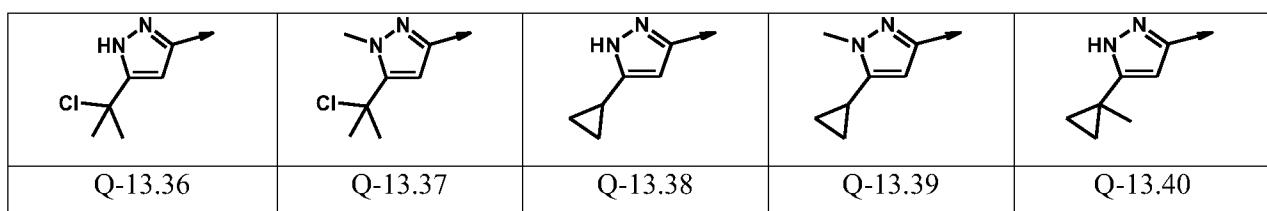
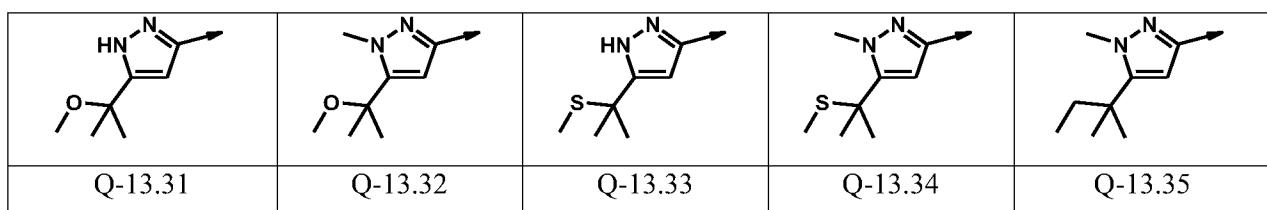
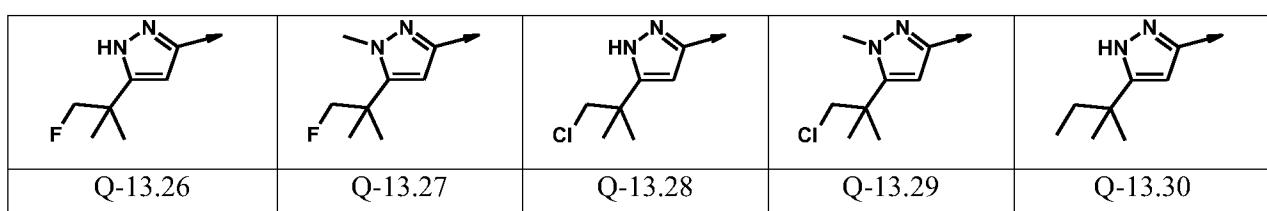
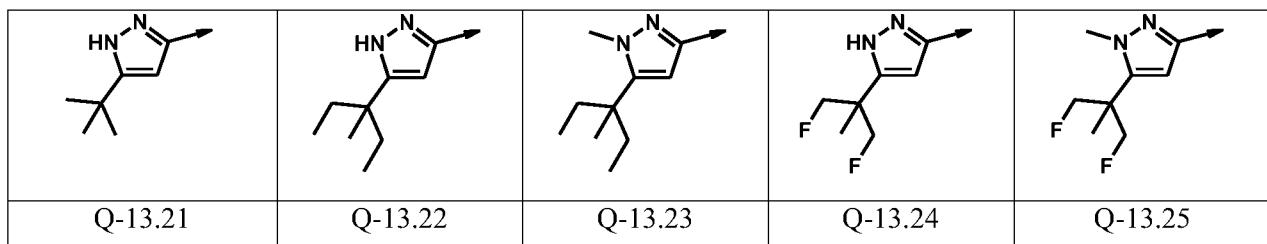
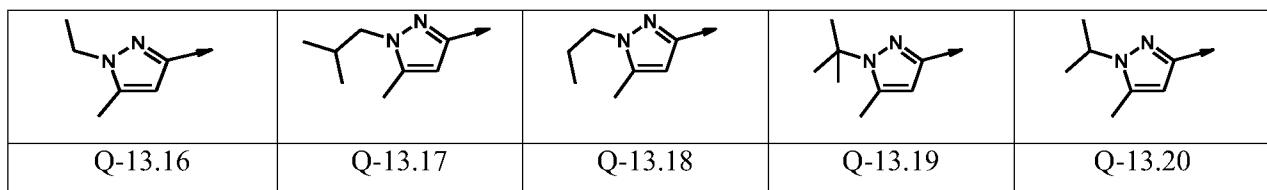
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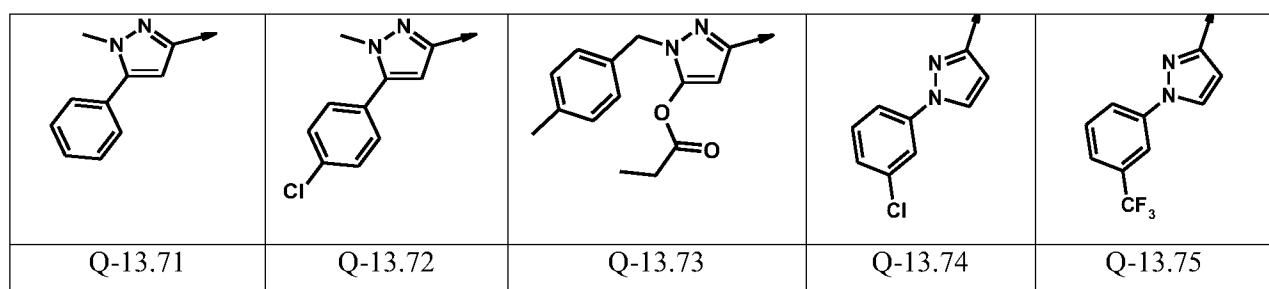
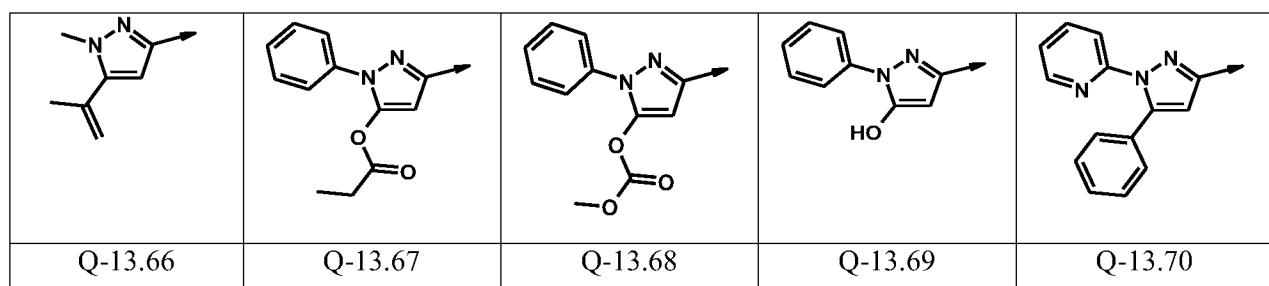
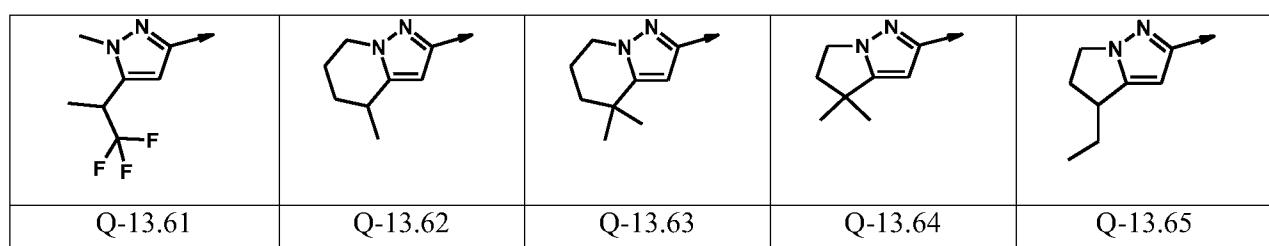
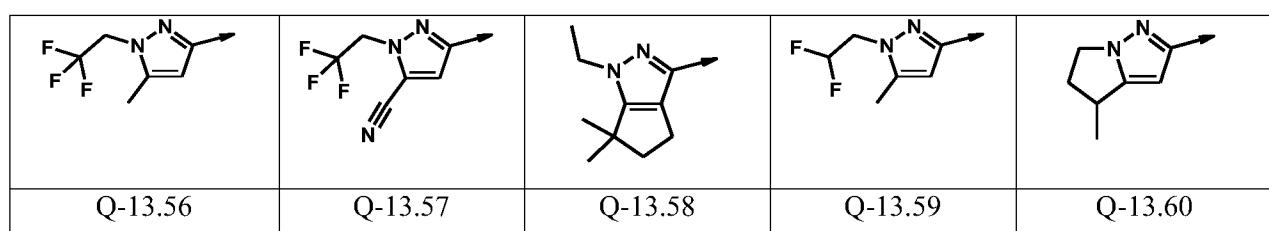
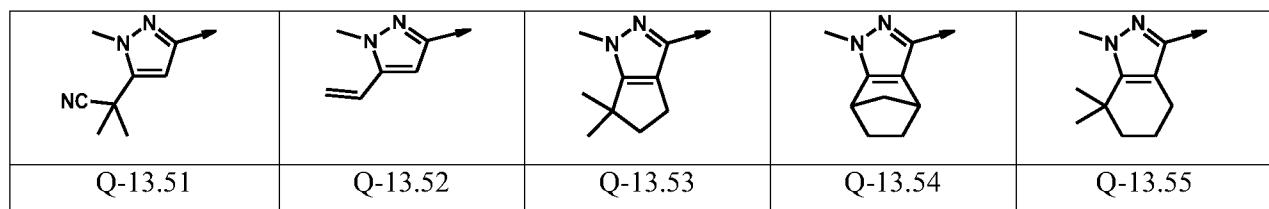
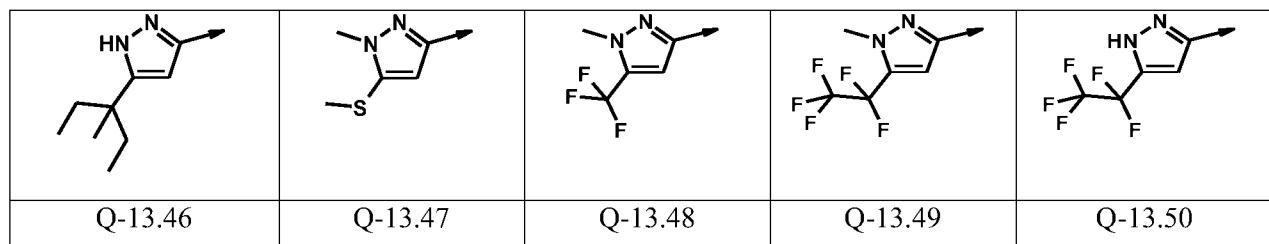
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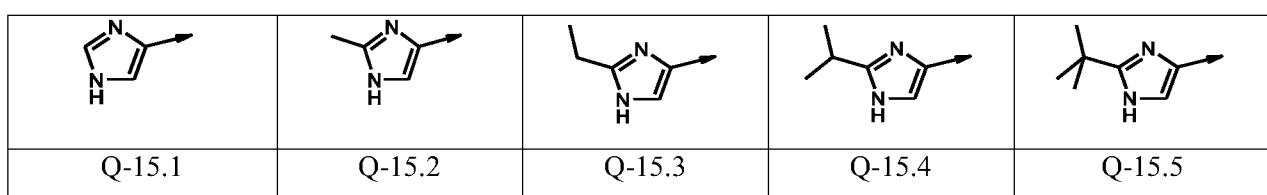
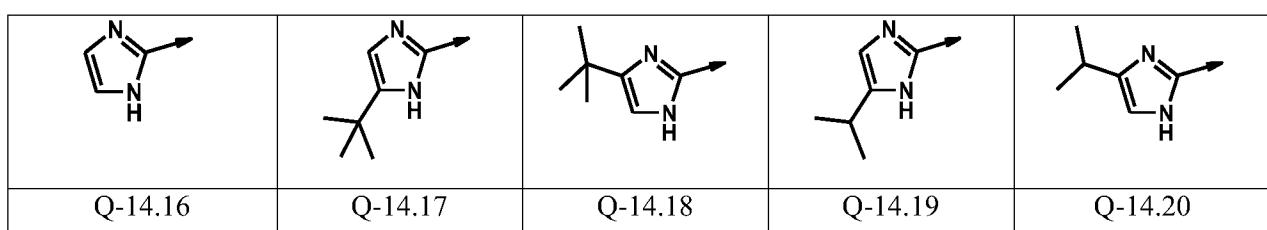
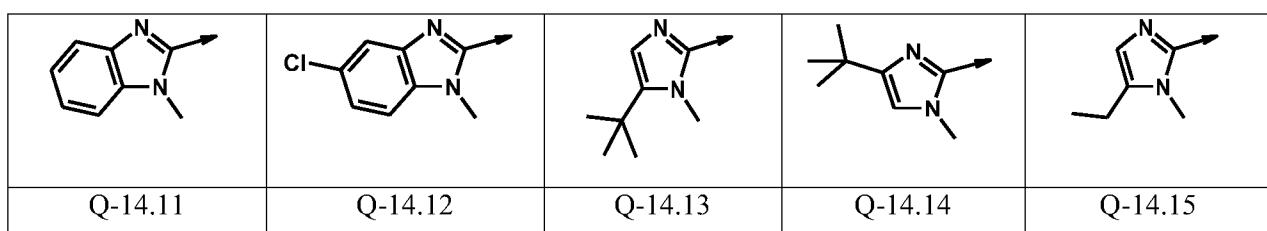
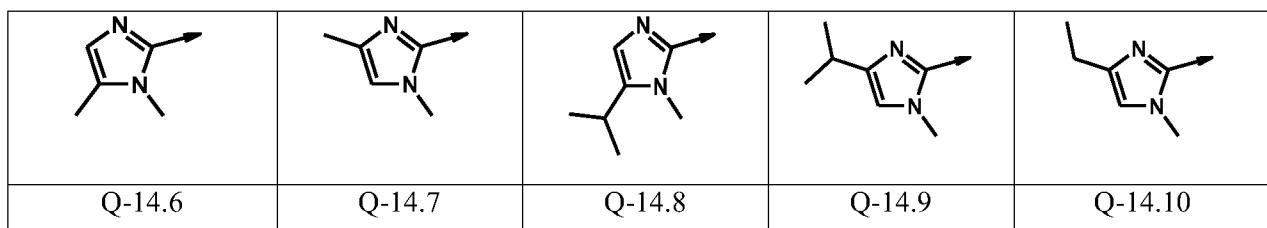
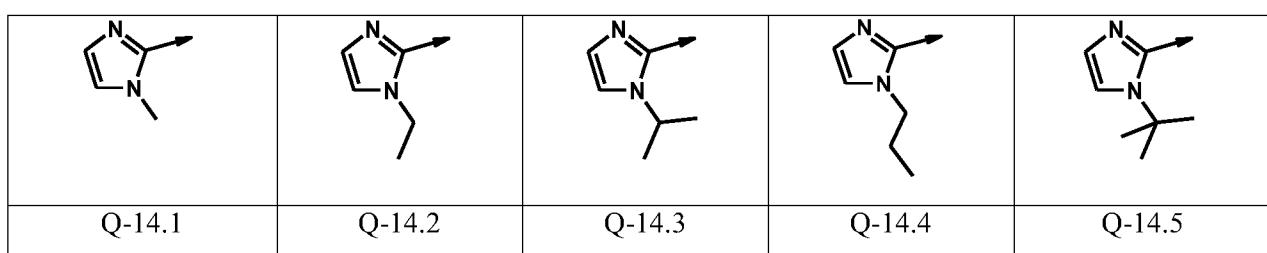
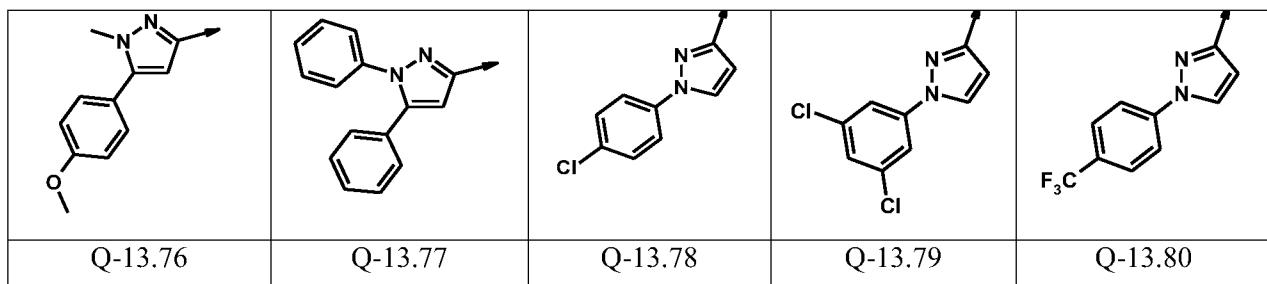
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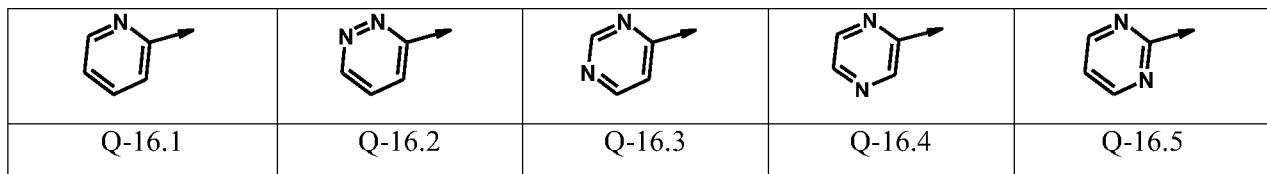
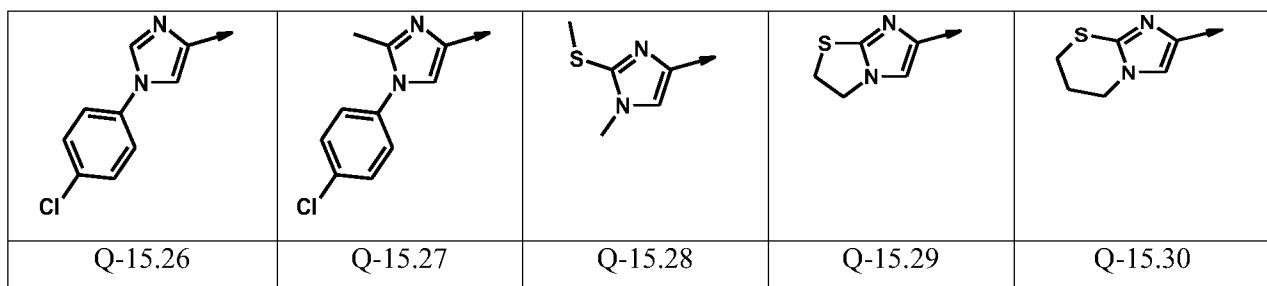
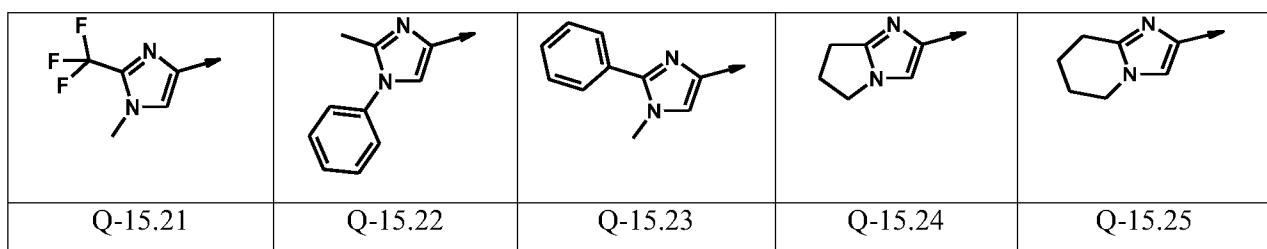
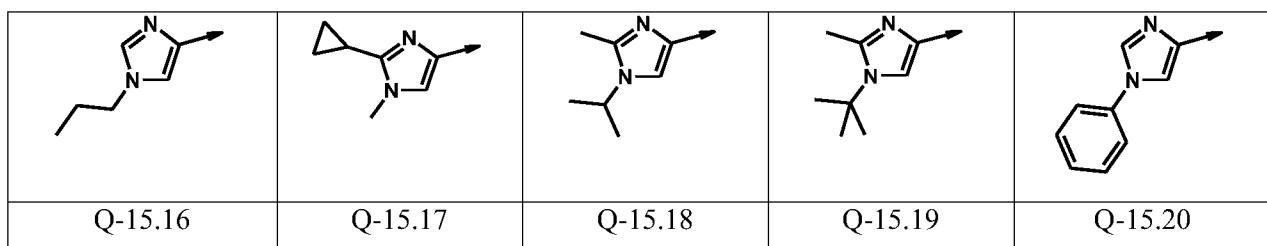
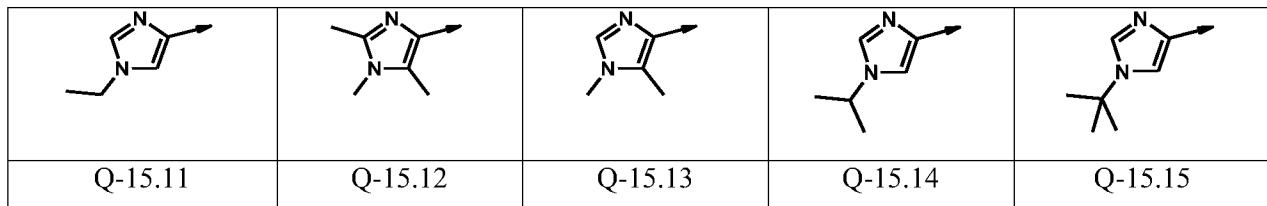
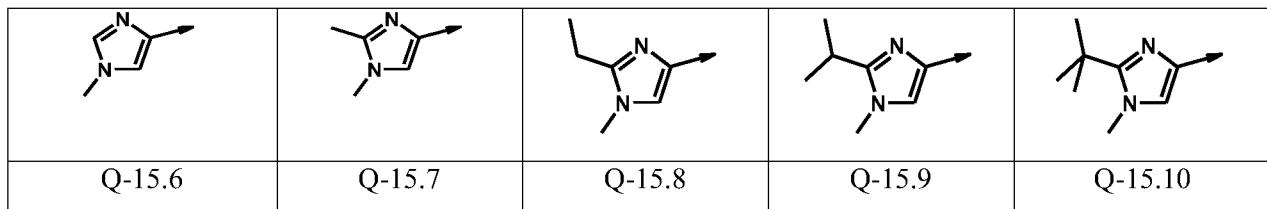
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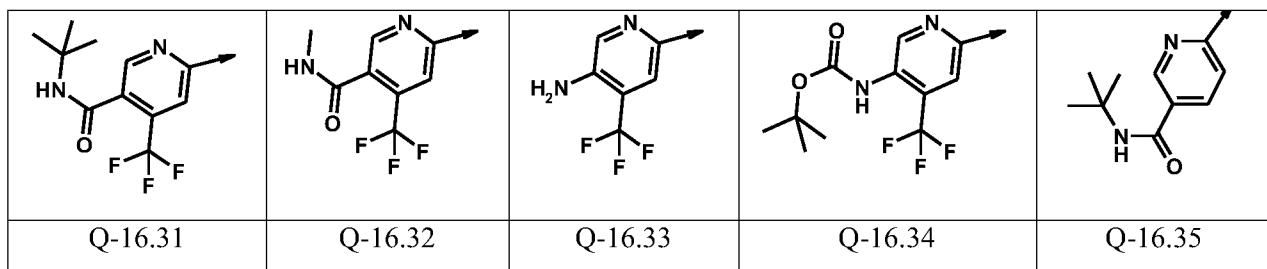
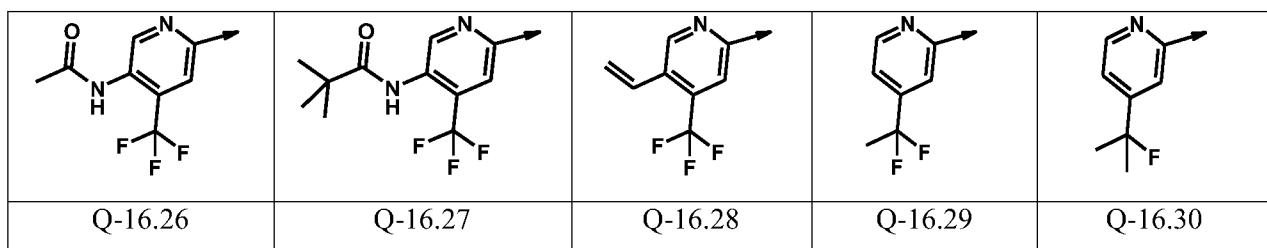
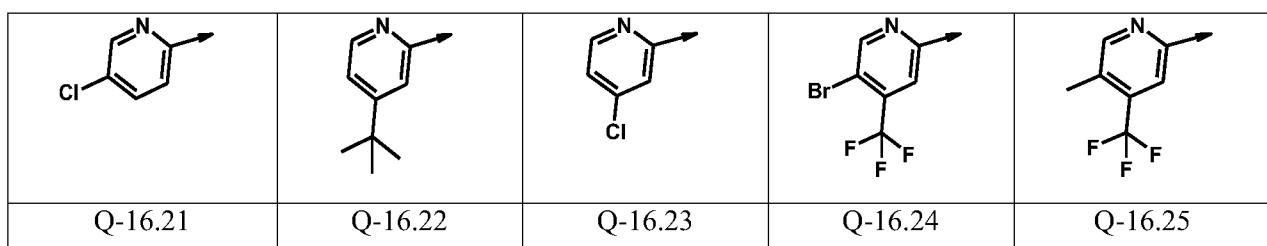
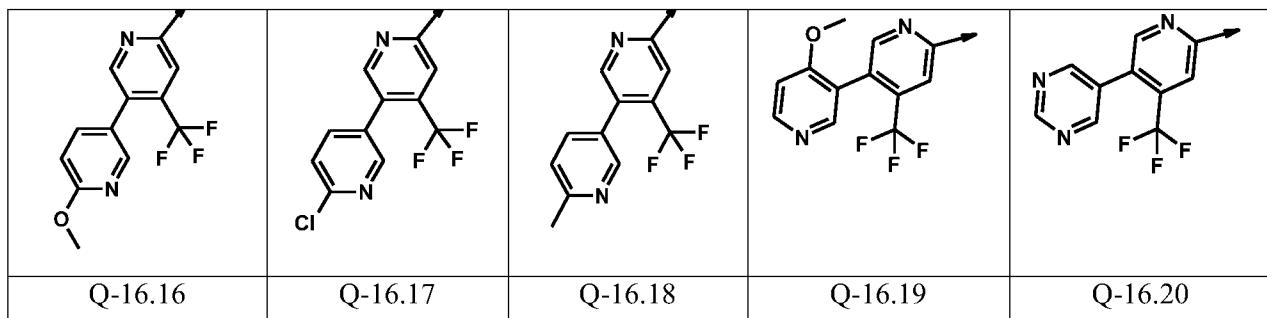
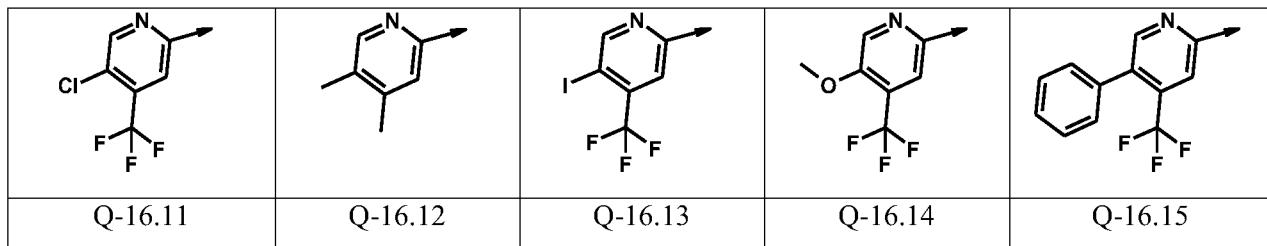
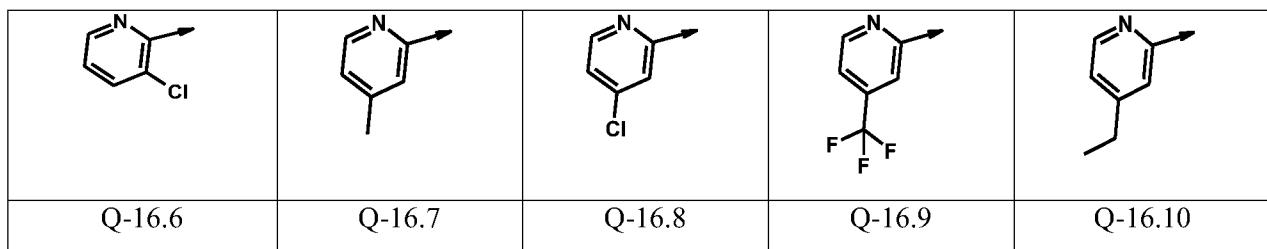


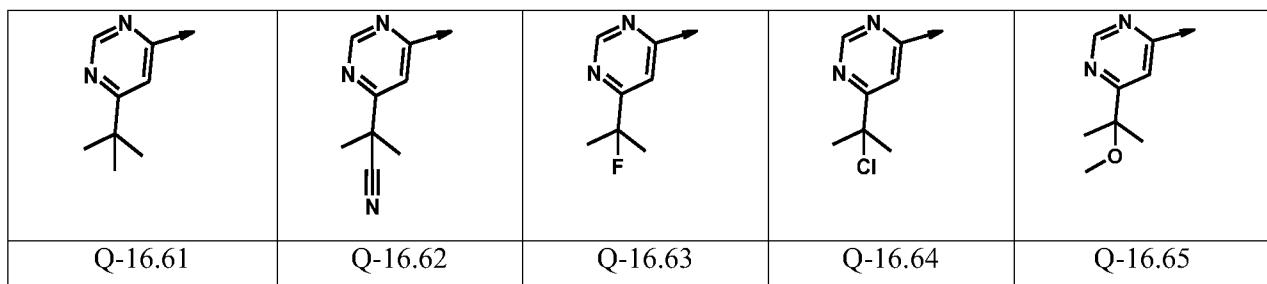
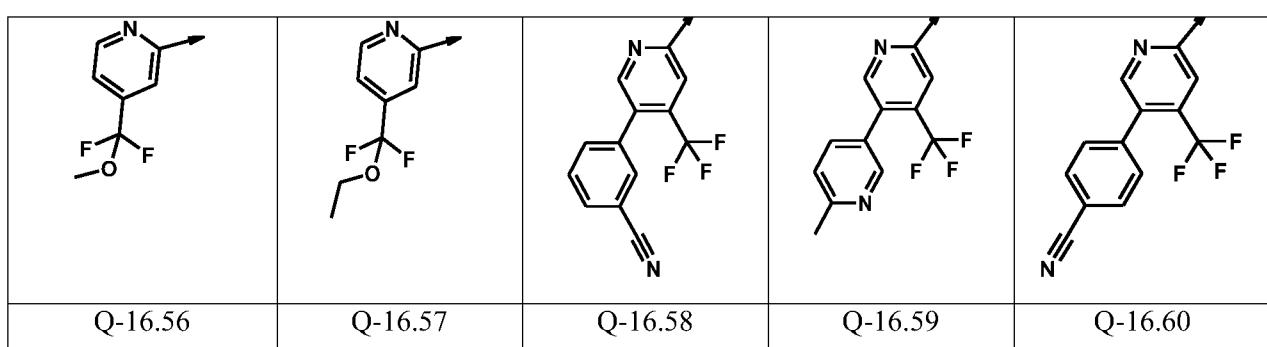
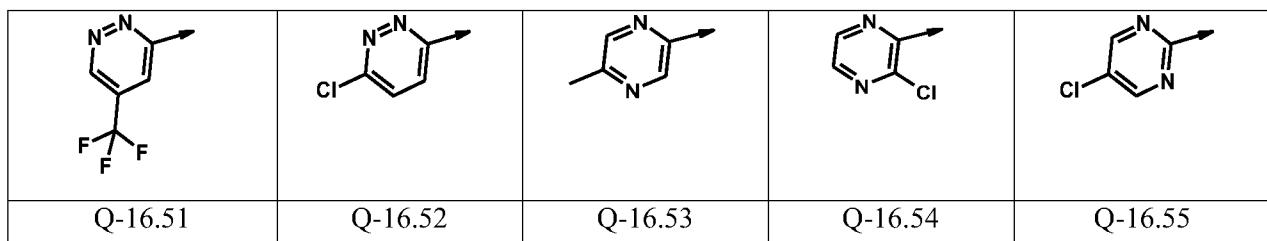
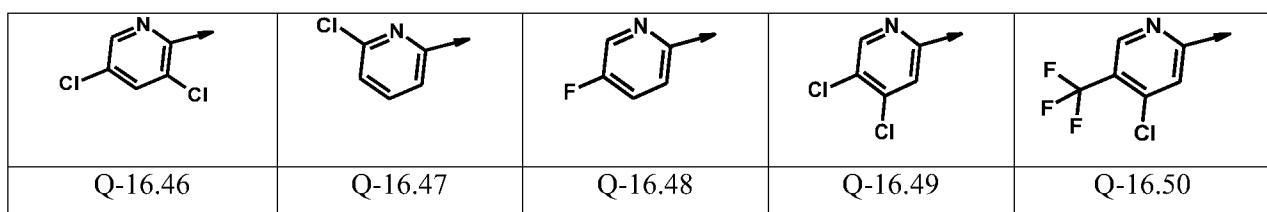
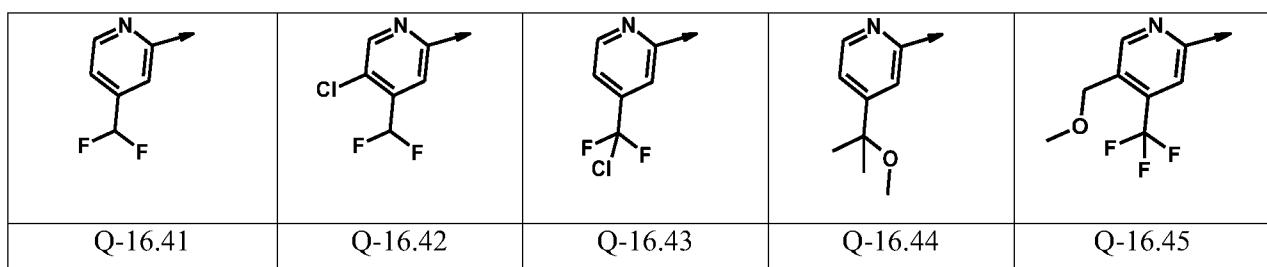
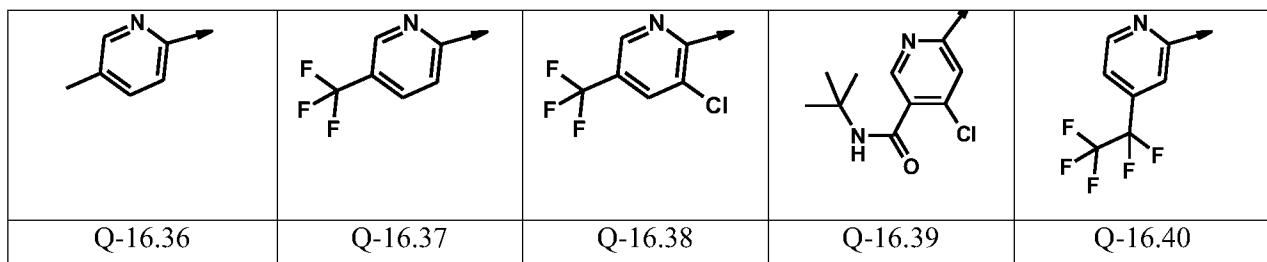


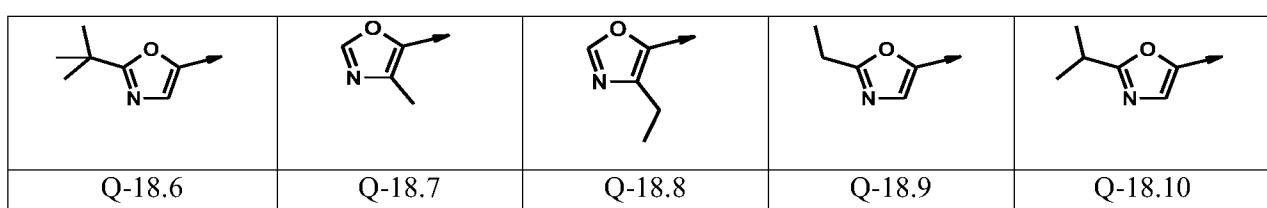
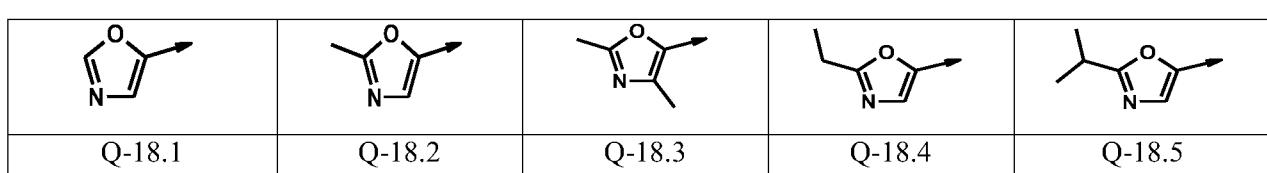
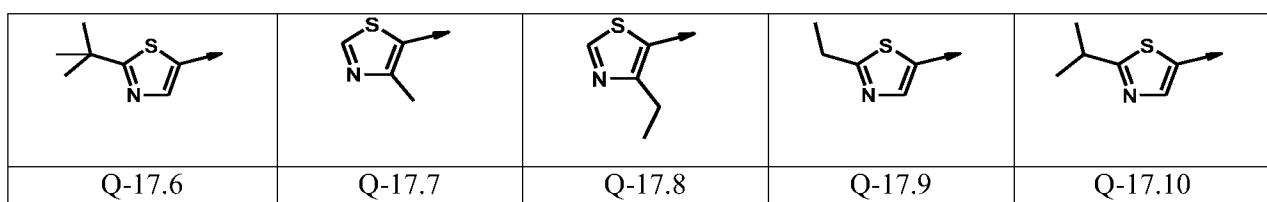
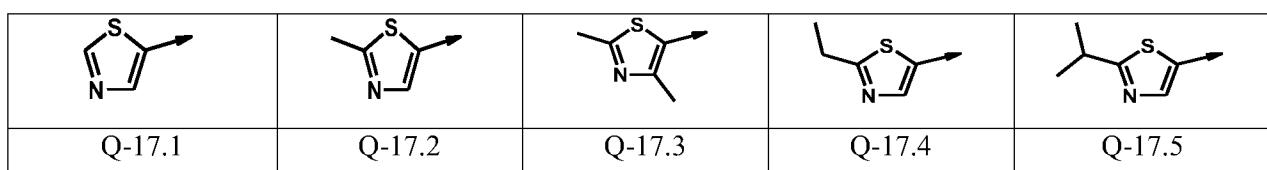
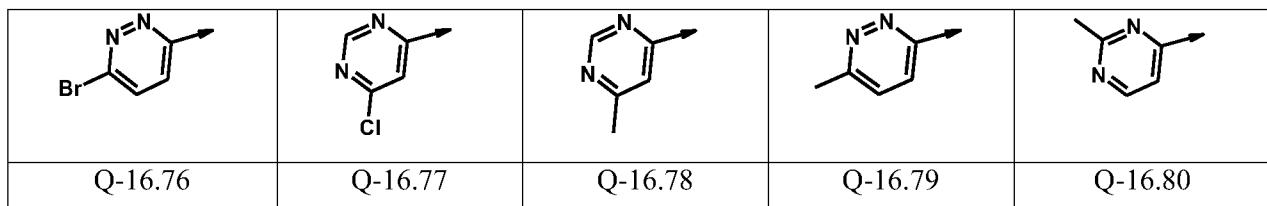
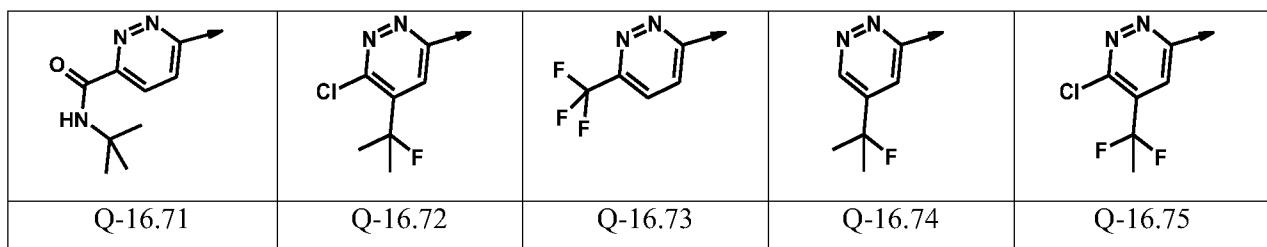
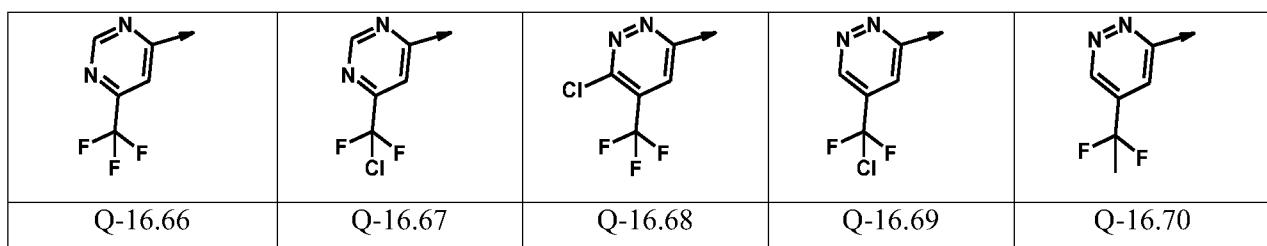


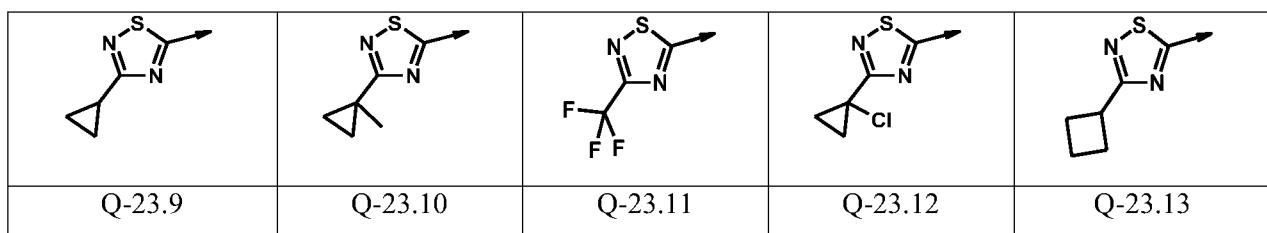
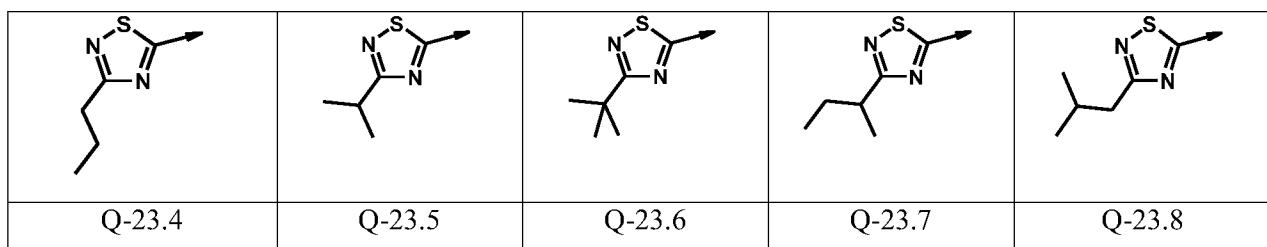
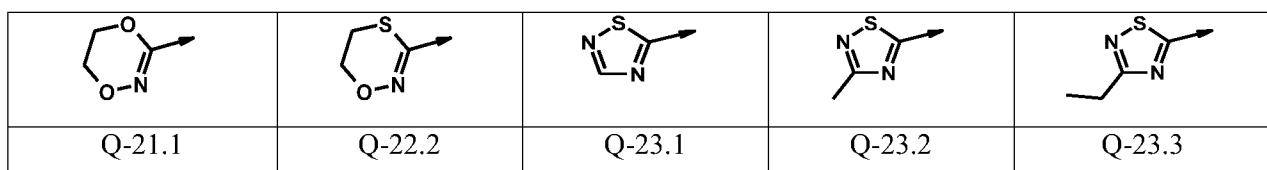
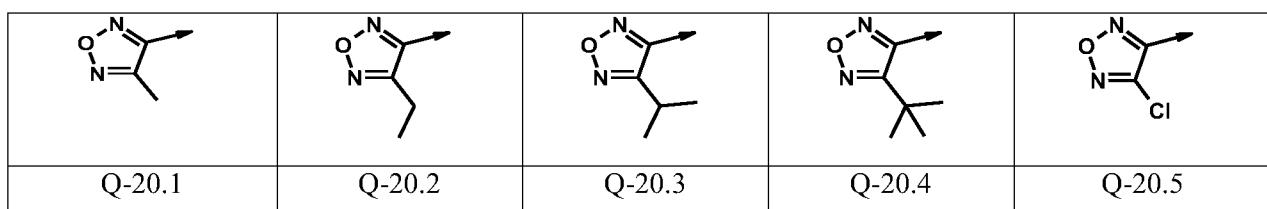
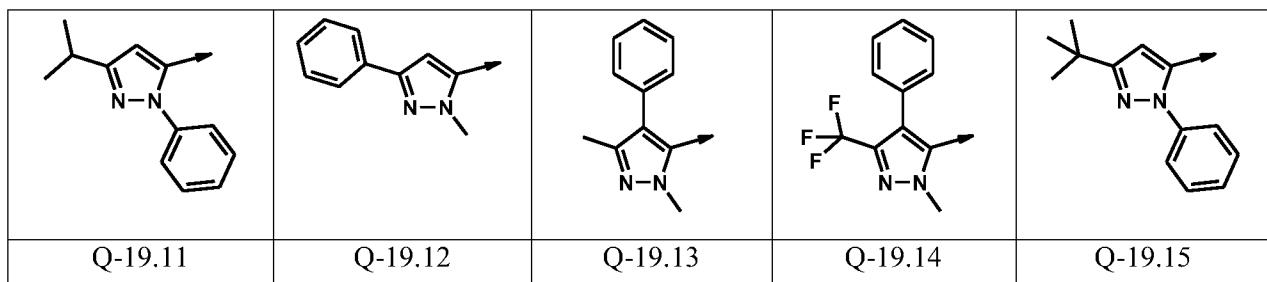
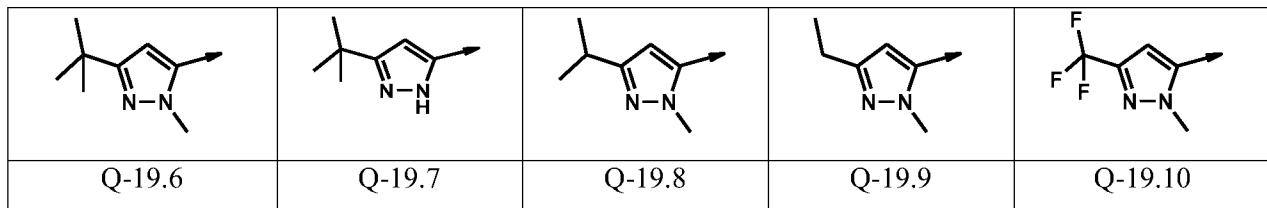
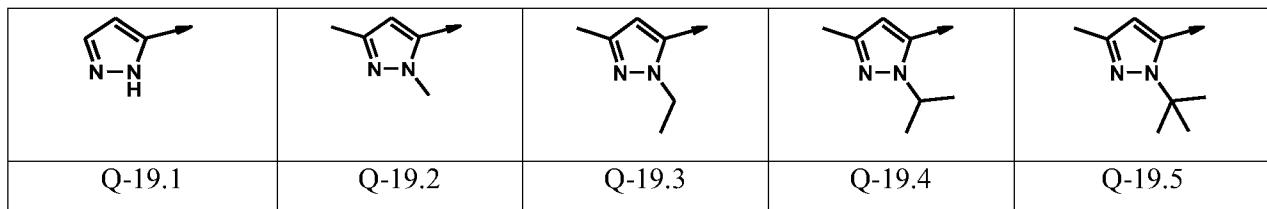


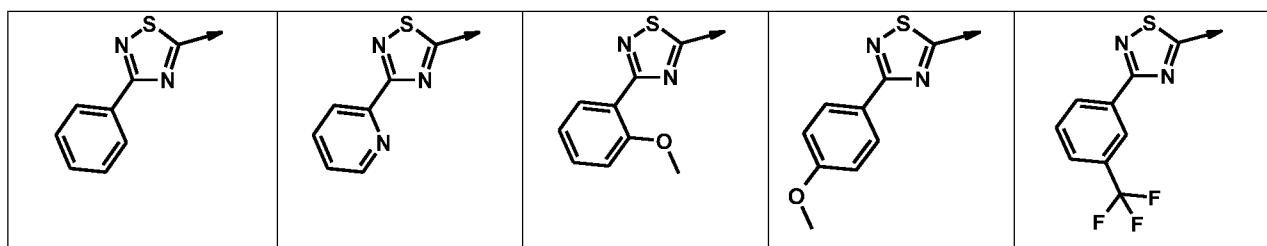
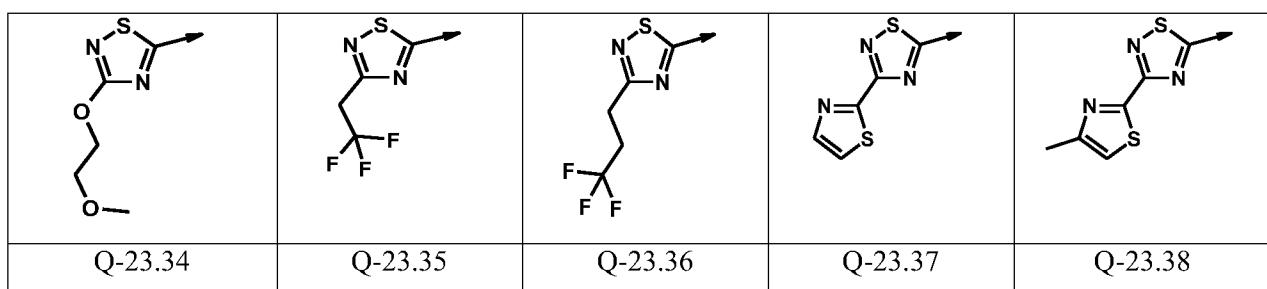
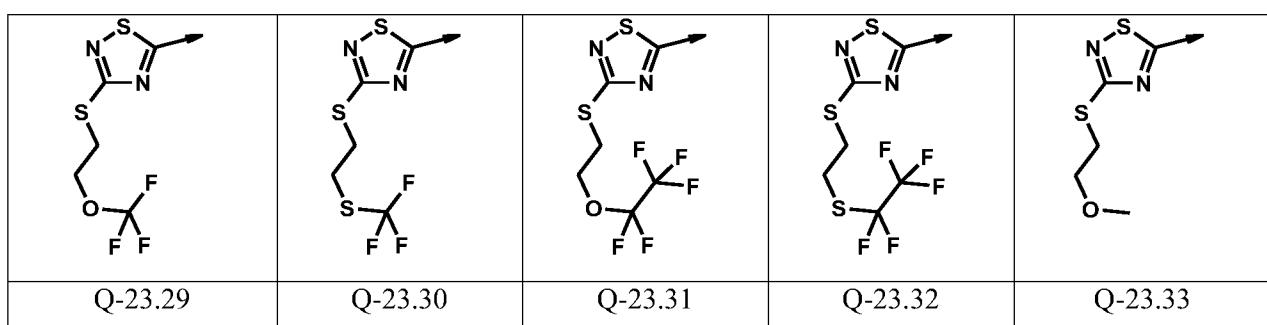
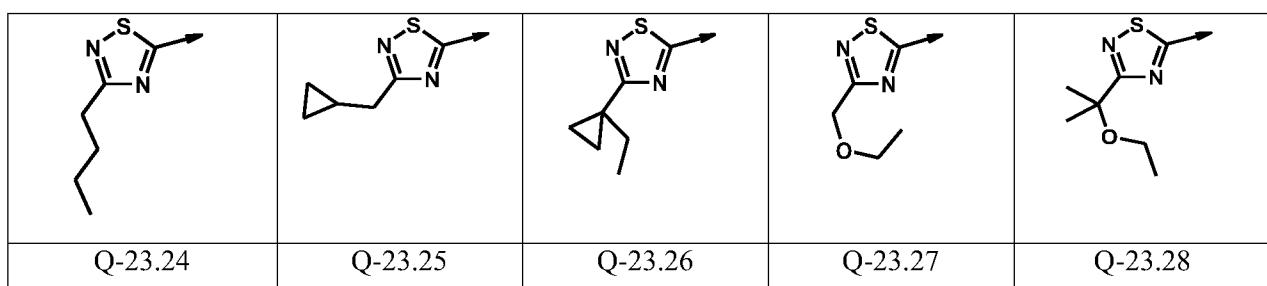
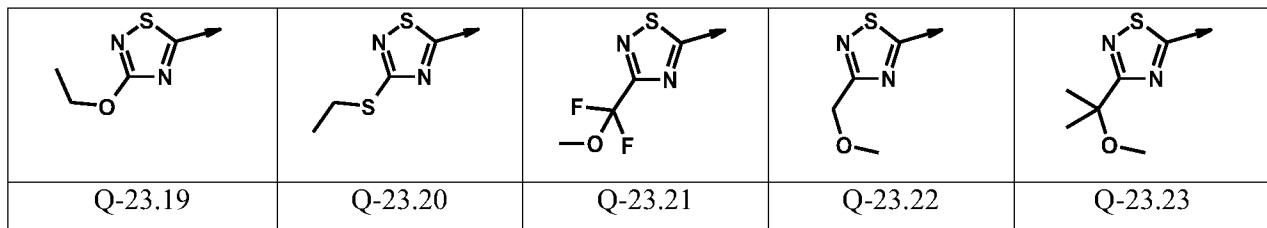
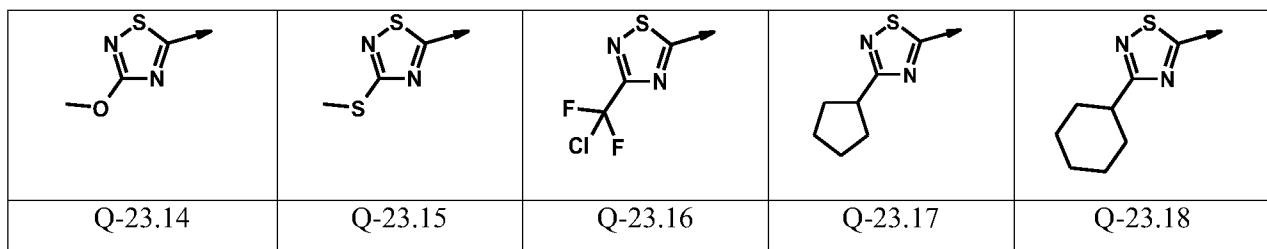




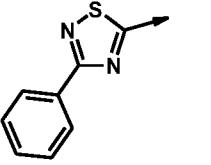
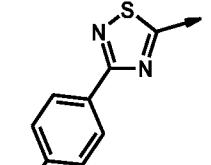
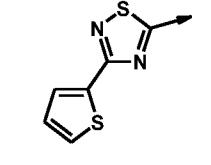
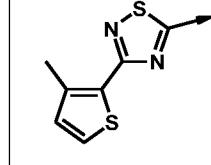
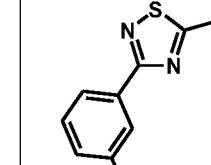


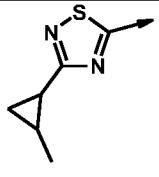
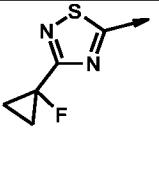
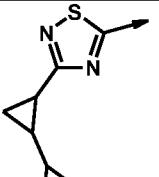
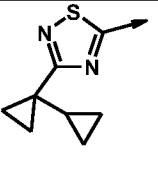
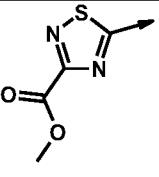


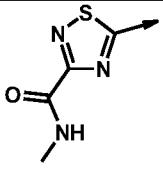
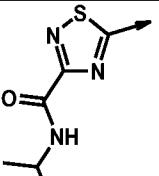
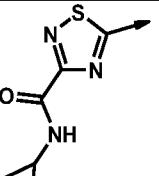
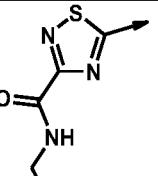
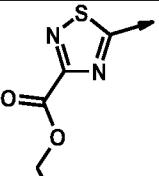


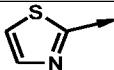
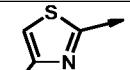
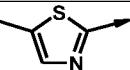
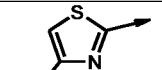
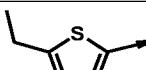


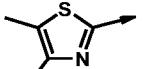
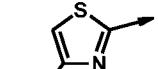
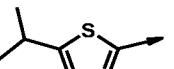
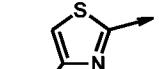
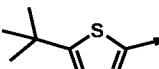
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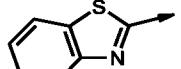
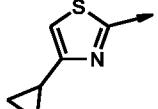
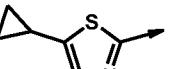
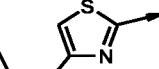
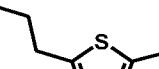
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| Q-23.44 | Q-23.45 | Q-23.46 | Q-23.47 | Q-23.48 |

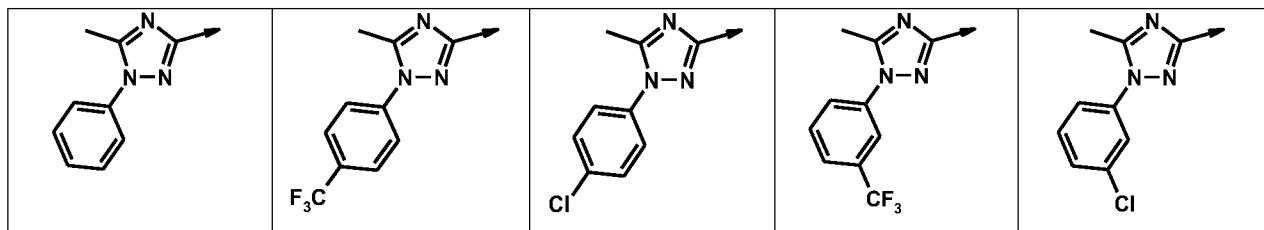
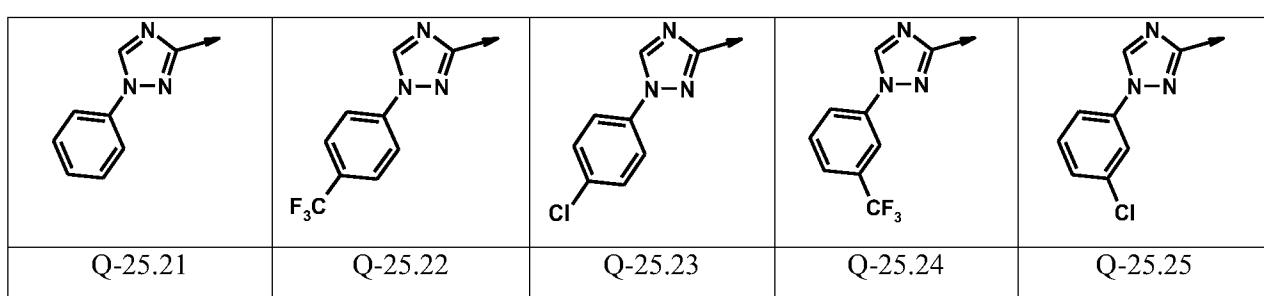
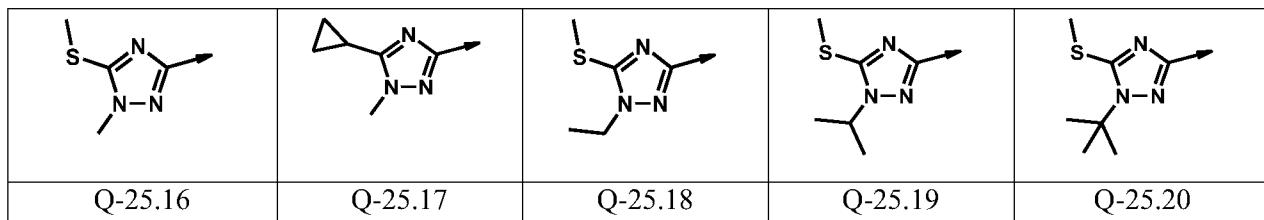
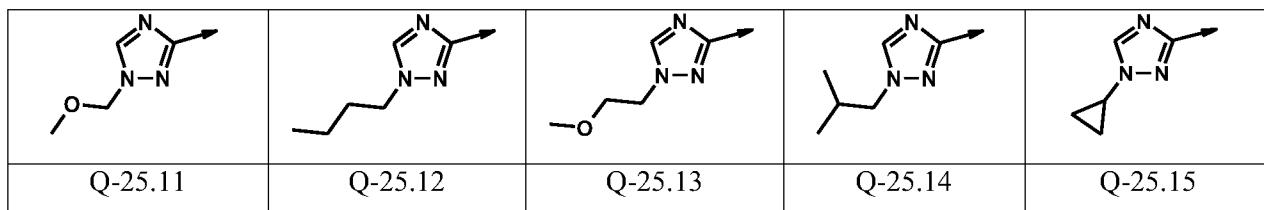
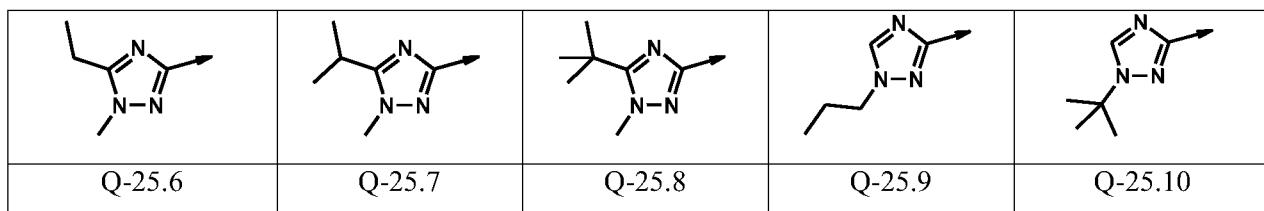
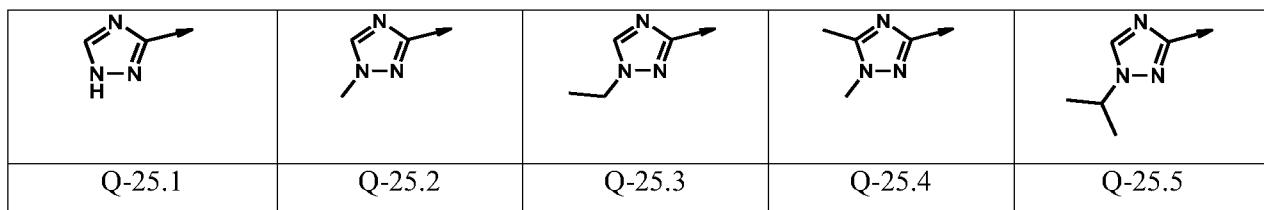
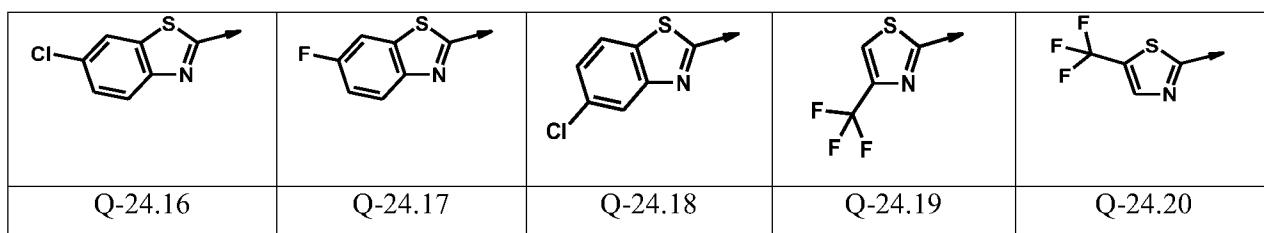
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|  |  |  |  |  |
| Q-23.49 | Q-23.50 | Q-23.51 | Q-23.52 | Q-23.53 |

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|  |  |  |  |  |
| Q-23.54 | Q-23.55 | Q-23.56 | Q-23.57 | Q-23.58 |

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|---|---|---|--|---|
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| Q-24.1 | Q-24.2 | Q-24.3 | Q-24.4 | Q-24.5 |

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|---|---|---|--|---|
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| Q-24.6 | Q-24.7 | Q-24.8 | Q-24.9 | Q-24.10 |

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|---|---|---|--|---|
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| Q-24.11 | Q-24.12 | Q-24.13 | Q-24.14 | Q-24.15 |



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|---------|---------|---------|---------|---------|
| Q-25.26 | Q-25.27 | Q-25.28 | Q-25.29 | Q-25.30 |
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| Q-25.31 | Q-25.32 | Q-25.33 | Q-25.34 | Q-25.35 |

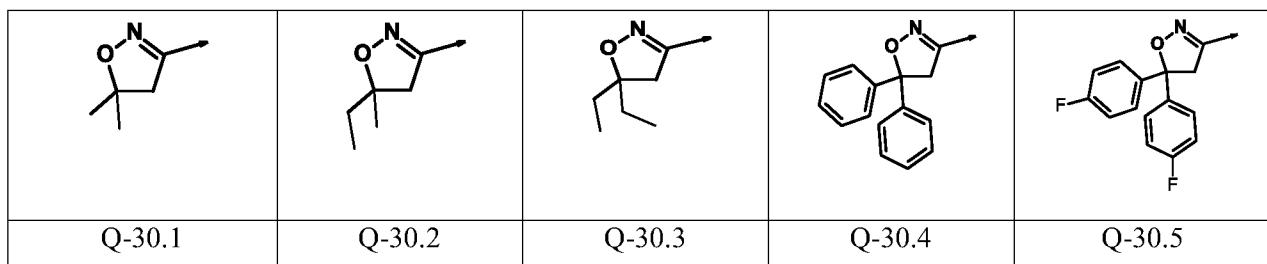
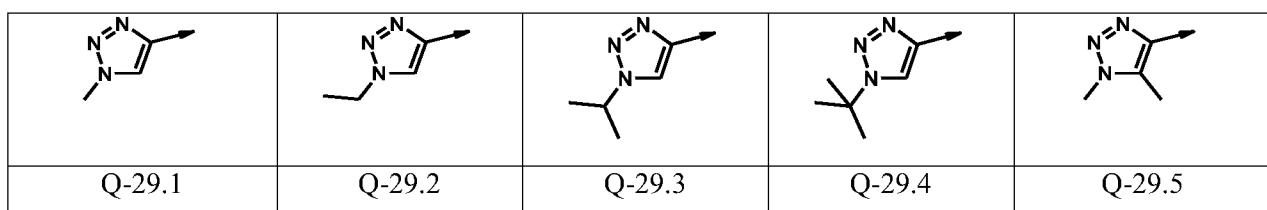
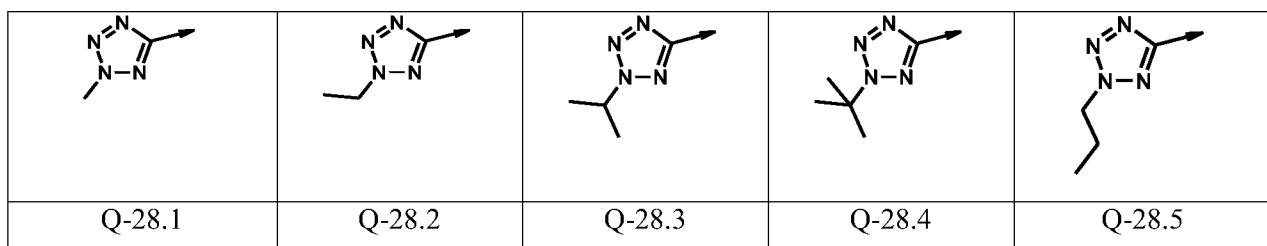
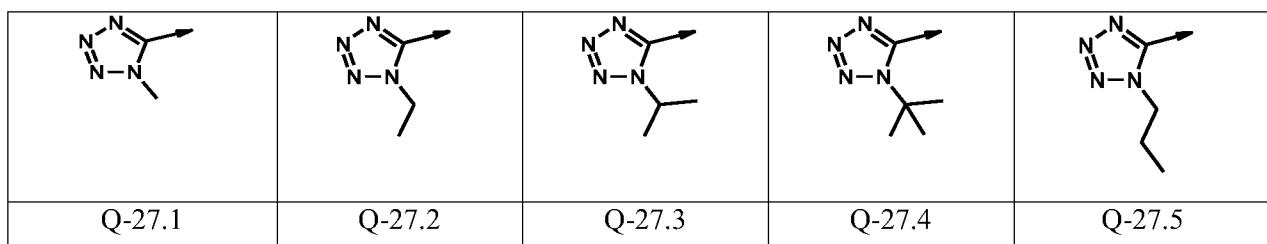
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| Q-25.36 | Q-25.37 | Q-25.38 | Q-25.39 | Q-25.40 |

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| Q-25.41 | Q-25.42 | Q-25.43 | Q-25.44 | Q-25.45 |

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| | | | | |
| Q-26.1 | Q-26.2 | Q-26.3 | Q-26.4 | Q-26.5 |

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| Q-26.6 | Q-26.7 | Q-26.8 | Q-26.9 | Q-26.10 |

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| | | | | |
| Q-26.11 | Q-26.12 | Q-26.13 | Q-26.14 | Q-26.15 |



6. The compound of the general formula (I) as claimed in claim 1 and/or the salts thereof, characterized in that

5 R¹ represents hydrogen, methyl, ethyl, n-propyl, 1-methylethyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyleth-1-yl, n-pentyl, 1-methylbut-1-yl, 2-methylbut-1-yl, 3-methylbut-1-yl, 1,1-dimethylprop-1-yl, 1,2-dimethylprop-1-yl, 2,2-dimethylprop-1-yl, 1-ethylprop-1-yl, n-hexyl, 1-methylpentyl, 2-methylpentyl, 3-methylpentyl, 4-methylpentyl, 1,1-dimethylbutyl, 1,2-dimethylbutyl, 1,3-dimethylbutyl, 2,2-dimethylbutyl, 2,3-dimethylbutyl, 3,3-dimethylbutyl, 1-ethylbutyl, 2-ethylbutyl, 1,1,2-trimethylpropyl, 1,2,2-trimethylpropyl, 1-ethyl-1-methylpropyl, 1-ethyl-2-methylpropyl, trifluoromethyl, difluoromethyl, 2,2-difluoroethyl, 2,2,2-trifluoroethyl, 3,3,3-trifluoroprop-1-yl, 3,3,3-trifluoroprop-2-yl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, adamantan-1-yl, adamantan-2-yl, 1-methylcyclopropyl, 2-

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5 methylcyclopropyl, 2,2-dimethylcyclopropyl, 2,3-dimethylcyclopropyl, 1-cyanocyclopropyl, 2-cyanocyclopropyl, 1-methylcyclobutyl, 2-methylcyclobutyl, 3-methylcyclobutyl, 1-cyanocyclobutyl, 2-cyanocyclobutyl, 3-cyanocyclobutyl, 1-allylcyclopropyl, 1-vinylcyclobutyl, 1-vinylcyclopropyl, 1-ethylcyclopropyl, 1-methylcyclohexyl, 2-methylcyclohexyl, 3-methylcyclohexyl, 1-methoxycyclohexyl, 2-methoxycyclohexyl, 3-methoxycyclohexyl, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl, cyclohexylmethyl, phenyl, p-F-phenyl, m-F-phenyl, o-F-phenyl, p-Cl-phenyl, m-Cl-phenyl, o-Cl-phenyl, pyridin-2-yl, pyridin-3-yl, pyridin-4-yl, pyrimidin-2-yl, pyrimidin-4-yl, thiophen-2-yl, thiophen-3-yl, furan-2-yl, furan-3-yl, tetrahydrofuran-2-yl, tetrahydrofuran-3-yl, benzyl, p-Cl-benzyl, p-F-benzyl, p-methoxybenzyl, p-methylbenzyl, p-trifluoromethylbenzyl, p-nitrobenzyl, m-Cl-benzyl, m-F-benzyl, m-methoxybenzyl, m-methylbenzyl, o-Cl-benzyl, o-F-benzyl, o-methoxybenzyl, o-methylbenzyl, 1-phenyleth-1-yl, 2-phenyleth-1-yl, 1-(o-chlorophenyl)eth-1-yl, 1-(o-fluorophenyl)eth-1-yl, 1-(o-methylphenyl)eth-1-yl, 1-(o-bromophenyl)eth-1-yl, 1-(o-iodophenyl)eth-1-yl, pyridin-2-ylmethyl, pyridin-3-ylmethyl, pyridin-4-ylmethyl, pyrimidin-2-ylmethyl, pyrimidin-4-ylmethyl, tetrahydrofuran-2-ylmethyl, o-cyanophenylmethyl, m-cyanophenylmethyl, p-cyanophenylmethyl, cyanomethyl, cyanoethyl, methoxycarbonyl, ethoxycarbonyl, n-propyloxycarbonyl, isopropyloxycarbonyl, tert-butyloxycarbonyl, benzyloxycarbonyl, allyloxycarbonyl, methylcarbonyl, ethylcarbonyl, n-propylcarbonyl, isopropylcarbonyl, n-butylcarbonyl, 1-methylprop-1-ylcarbonyl, 2-methylprop-1-ylcarbonyl, 1,1-dimethyleth-1-ylcarbonyl, phenylcarbonyl, methylaminocarbonyl, dimethylaminocarbonyl, ethylaminocarbonyl, n-propylaminocarbonyl, isopropylaminocarbonyl, n-butylaminocarbonyl, tert-butylaminocarbonyl, 25 benzylaminocarbonyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, tert-butyloxycarbonylmethyl, benzyloxycarbonylmethyl, methoxycarbonylethyl, ethoxycarbonylethyl, tert-butyloxycarbonylmethyl, benzyloxycarbonylmethyl, methylcarbonyloxymethyl, ethylcarbonyloxymethyl, n-propylcarbonyloxymethyl, 1-methylethylcarbonyloxymethyl, 1,1-dimethylethylcarbonyloxymethyl, hydroxycarbonylmethyl, hydroxycarbonylethyl, hydroxycarbonyl-n-propyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, methoxymethyl, ethoxymethyl, n-propyloxymethyl, isopropyloxymethyl, n-butyloxymethyl, methoxyethyl, ethoxyethyl, n-propyloxyethyl, isopropyloxyethyl, methoxy-n-propyl, ethoxy-n-propyl, methoxy-n-butyl, amino, dimethylamino, methyl(ethyl)amino, diethylamino, cyanomethyl, prop-2-yn-1-yl,

R^2 and R^9 independently of one another represent hydrogen, fluorine, methyl, ethyl, n-propyl, isopropyl, n-butyl, 1-methylprop-1-yl, 2-methylprop-1-yl, 1,1-dimethyl eth-1-yl,

trifluoromethyl, difluoromethyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, methoxymethyl, ethoxymethyl, methoxyethyl, ethoxyethyl, methoxy, ethoxy, n-propyloxy, isopropyloxy, trifluoromethoxy, difluoromethoxy, methylthio, ethylthio, trifluoromethylthio, dimethylamino, methylamino, diethylamino, methyl(ethyl)amino, or

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R¹ and R² together with the nitrogen atom or carbon atom to which they are respectively attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution, or

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R² and R⁹ together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

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R³ represents hydroxy, hydrothio, fluorine, chlorine, bromine, iodine, methoxy, ethoxy, n-propyloxy, 1-methylethoxy, n-butyloxy, 1-methylpropyloxy, 2-methylpropyloxy, 1,1-dimethylethoxy, n-pentyloxy, 1-methylbutyloxy, 2-methylbutyloxy, 3-methylbutyloxy, 1,1-dimethylpropyloxy, 1,2-dimethylpropyloxy, 2,2-dimethylpropyloxy, 1-ethylpropyloxy, n-hexyloxy, 1-methylpentyloxy, 2-methylpentyloxy, 3-methylpentyloxy, 4-methylpentyloxy, 1,1-dimethylbutyloxy, 1,2-dimethylbutyloxy, 1,3-dimethylbutyloxy, 2,2-dimethylbutyloxy, 2,3-dimethylbutyloxy, 3,3-dimethylbutyloxy, 1-ethylbutyloxy, 2-ethylbutyloxy, 1,1,2-trimethylpropyloxy, 1,2,2-trimethylpropyloxy, 1-ethyl-1-methylpropyloxy, 1-ethyl-2-methylpropyloxy, cyclopropylmethoxy, cyclobutylmethoxy, cyclopentylmethoxy, cyclohexylmethoxy, benzyloxy, p-chlorophenylmethoxy, m-chlorophenylmethoxy, o-chlorophenylmethoxy, p-methoxyphenylmethoxy, p-nitrophenylmethoxy, methoxymethoxy, methoxyethoxy, methoxy-n-propyloxy, methoxy-n-butyloxy, ethoxymethoxy, ethoxyethoxy, ethoxy-n-propyloxy, ethoxy-n-butyloxy, n-propyloxymethoxy, isopropyloxymethoxy,

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methylcarbonyloxy, ethylcarbonyloxy, n-propylcarbonyloxy, 1-methylethylcarbonyloxy, n-butylcarbonyloxy, 1-methylprop-1-ylcarbonyloxy, 2-methylprop-1-ylcarbonyloxy, 1,1-dimethyleth-1-ylcarbonyloxy, n-pentylcarbonyloxy, 1-methylbutylcarbonyloxy, 2-methylbutylcarbonyloxy, 3-methylbutylcarbonyloxy, 1,1-dimethylpropylcarbonyloxy, 1,2-dimethylpropylcarbonyloxy, 2,2-dimethylpropylcarbonyloxy, 1-ethylpropylcarbonyloxy, n-hexylcarbonyloxy, 1-methylpentylcarbonyloxy, 2-methylpentylcarbonyloxy, 3-methylpentylcarbonyloxy, 4-methylpentylcarbonyloxy, 1,1-dimethylbutylcarbonyloxy, 1,2-dimethylbutylcarbonyloxy, 1,3-

dimethylbutylcarbonyloxy, 2,2-dimethylbutylcarbonyloxy, 2,3-dimethylbutylcarbonyloxy, 3,3-dimethylbutylcarbonyloxy, 1-ethylbutylcarbonyloxy, 2-ethylbutylcarbonyloxy, 1,1,2-trimethylpropylcarbonyloxy, 1,2,2-trimethylpropylcarbonyloxy, 1-ethyl-1-methylpropylcarbonyloxy, 1-ethyl-2-methylpropylcarbonyloxy, phenylcarbonyloxy, p-chlorophenylcarbonyloxy, m-chlorophenylcarbonyloxy, o-chlorophenylcarbonyloxy, p-fluorophenylcarbonyloxy, m-fluorophenylcarbonyloxy, o-fluorophenylcarbonyloxy, benzylcarbonyloxy, thiophen-2-ylcarbonyloxy, furan-2-ylcarbonyloxy, cyclopropylcarbonyloxy, cyclobutylcarbonyloxy, cyclopentylcarbonyloxy, cyclohexylcarbonyloxy, 1-fluorocycloprop-1-ylcarbonyloxy, 1-chlorocycloprop-1-ylcarbonyloxy, 1-cyanocycloprop-1-ylcarbonyloxy, 1-methylcycloprop-1-ylcarbonyloxy, 1-trifluoromethylcycloprop-1-ylcarbonyloxy, adamantylcarbonyloxy, trifluoromethylcarbonyloxy, difluoromethylcarbonyloxy, methoxycarbonyloxy, ethoxycarbonyloxy, n-propyloxycarbonyloxy, isopropyloxycarbonyloxy, n-butyloxycarbonyloxy, 1,1-dimethylethoxyloxycarbonyloxy, 2,2-dimethylpropyloxycarbonyloxy, benzyloxycarbonyloxy, allyloxycarbonyloxy, cyclopropyloxycarbonyloxy, cyclobutyloxycarbonyloxy, cyclopentyloxycarbonyloxy, cyclohexyloxycarbonyloxy, cyclopropylmethyloxycarbonyloxy, cyclobutylmethyloxycarbonyloxy, cyclopentylmethyloxycarbonyloxy, cyclohexylmethyloxycarbonyloxy, 3,3,3-trifluoroethyloxycarbonyloxy, 2,2-difluoroethyloxycarbonyloxy, pyridin-2-ylcarbonyloxy, pyridin-3-ylcarbonyloxy, pyridin-4-ylcarbonyloxy, 4-trifluoromethylpyridin-3-ylcarbonyloxy, allylcarbonyloxy, methylsulfonyloxy, ethylsulfonyloxy, n-propylsulfonyloxy, 1-methylethylsulfonyloxy, cyclopropylsulfonyloxy, cyclobutylsulfonyloxy, cyclopentylsulfonyloxy, cyclohexylsulfonyloxy, phenylsulfonyloxy, p-chlorophenylsulfonyloxy, m-chlorophenylsulfonyloxy, o-chlorophenylsulfonyloxy, p-fluorophenylsulfonyloxy, m-fluorophenylsulfonyloxy, o-fluorophenylsulfonyloxy, p-methoxyphenylsulfonyloxy, m-methoxyphenylsulfonyloxy, o-methoxyphenylsulfonyloxy, p-methylphenylsulfonyloxy, m-methylphenylsulfonyloxy, o-methylphenylsulfonyloxy,

30 R^6 represents hydrogen,

R^{14} and R^{15} independently of one another represent hydrogen, methyl, ethyl, n-propyl, isopropyl, n-butyl, fluorine, or

35 R^9 and R^{15} together with the carbon atoms to which they are each attached form a fully saturated or partially saturated ring which has 3 to 7 members in total, which is optionally

interrupted by one to three heteroatoms from the group consisting of N, O and S and which optionally has further substitution,

W represents oxygen

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and

Q represents one of the moieties Q-1.1 to Q-30.5 specified in claim 5.

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7. The use of one or more compounds of the general formula (I) and/or salts thereof, as defined in any of claims 1 to 6, as herbicide and/or plant growth regulator, preferably in crops of useful plants and/or ornamentals.

15 8.

A herbicidal and/or plant growth-regulating composition, characterized in that the composition comprises one or more compounds of the formula (I) and/or salts thereof as defined in any of claims 1 to 6, and one or more further substances selected from groups (i) and/or (ii), with

- (i) one or more further agrochemically active substances, preferably selected from the group consisting of insecticides, acaricides, nematicides, further herbicides, fungicides, safeners, fertilizers and/or further growth regulators,
- (ii) one or more formulation auxiliaries customary in crop protection.

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9. A method for controlling harmful plants or for regulating the growth of plants, characterized in that an effective amount

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- of one or more compounds of the formula (I) and/or salts thereof, as defined in any of claims 1 to 6, or
- of a composition as claimed in claim 8,

is applied to the plants, seeds of plants, the soil in which or on which the plants grow or the area under cultivation.