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Szellemi Tulajdon Nemzeti Hivatala**EURÓPAI SZABADALOM**
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- (54) **N-(1,2,5-oxadiazol-3-il)-, N-(tetrazol-5-il)- és N-(triazol-5-il)-bicikloarilkarboxamidok és herbicidként való alkalmazásuk**

Az európai szabadalom ellen, megadásának az Európai Szabadalmi Közlönyben való meghirdetésétől számított kilenc hónapon belül, felszólalást lehet benyújtani az Európai Szabadalmi Hivatalnál. (Európai Szabadalmi Egyezmény 99. cikk(1))

A fordítást a szabadalmas az 1995. évi XXXIII. törvény 84/H. §-a szerint nyújtotta be. A fordítás tartalmi helyességét a Szellemi Tulajdon Nemzeti Hivatala nem vizsgálta.

N-(1,2,5-Oxadiazol-3-yl)-, N-(tetrazol-5-yl)- and N-(triazol-5-yl)bicycloarylcarboxamides and their use as herbicides

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

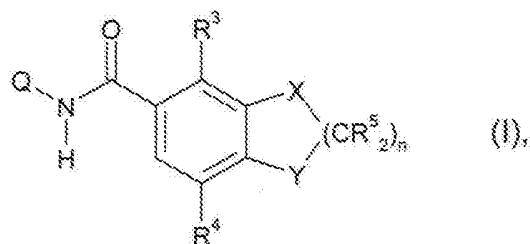
WO2003/010143 and WO2003/010153 disclose particular N-(tetrazol-5-yl)- and N-(triazol-5-yl)benzamides and the pharmacological action thereof. Under CAS No. 639048-78-5, the compound N-(1-propyltetrazol-5-yl)-2,5-dichlorobenzamide is known. No herbicidal action of these compounds is disclosed in these documents. European patent applications No. 0912169.0 and No. 10174893.7, which have earlier priority dates but were yet to be published at the priority date of the present application, disclose N-(1,2,5-oxadiazol-3-yl)-, N-(tetrazol-5-yl)- and N-(triazol-5-yl)arylcarboxamides and the use thereof as herbicides.

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It has now been found that N-(1,2,5-oxadiazol-3-yl)-, N-(tetrazol-5-yl)- and N-(triazol-5-yl)bicycloarylcarboxamides are of good suitability as herbicides.

The present invention thus provides N-(1,2,5-oxadiazol-3-yl)-, N-(tetrazol-5-yl)- and N-(triazol-5-yl)bicycloarylcarboxamides of the formula (I) or salts thereof

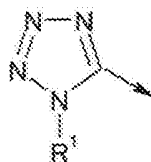
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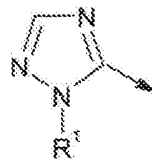
in which

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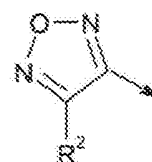
Q is a Q1, Q2 or Q3 radical,



(Q1)



(Q2)



(Q3)

R^1 is (C₁-C₆)-alkyl, (C₃-C₇)-cycloalkyl, halo-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, halo-(C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, halo-(C₂-C₆)-alkynyl, (C₁-C₆)-alkoxy-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy-(C₂-C₆)-alkenyl, (C₁-C₆)-alkoxy-(C₂-C₆)-alkynyl, CH₂R⁶, heteroaryl, heterocyclyl or phenyl, where the three latter radicals are each substituted by u radicals from the group consisting of halogen, nitro, cyano, (C₁-C₆)-alkyl, halo-(C₁-C₆)-alkyl, (C₃-C₆)-cycloalkyl, (C₁-C₆)-alkylthio, (C₁-C₆)-alkylsulfinyl, (C₁-C₆)-alkylsulfonyl, (C₁-C₆)-alkoxy, halo-(C₁-C₆)-alkoxy and (C₁-C₆)-alkoxy-(C₁-C₄)-alkyl;

5

R^2 is hydrogen, (C₁-C₆)-alkyl, (C₃-C₇)-cycloalkyl, halo-(C₁-C₆)-alkyl, (C₁-C₆)-alkoxy, halo-(C₁-C₆)-alkoxy, (C₂-C₆)-alkenyl, (C₂-C₆)-alkenyloxy, halo-(C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, (C₂-C₆)-alkynyloxy, halo-(C₂-C₆)-alkynyl, cyano, nitro, methylsulphenyl, methylsulfinyl, methylsulfonyl, acetylamino, benzoylamino, methoxycarbonyl, ethoxycarbonyl, methoxycarbonylmethyl, ethoxycarbonylmethyl, benzoyl, methylcarbonyl, piperidinylcarbonyl, trifluoromethylcarbonyl, halogen, amino, aminocarbonyl, methylaminocarbonyl, dimethylaminocarbonyl, methoxymethyl, or heteroaryl, heterocyclyl or phenyl each substituted by u radicals from the group consisting of methyl, ethyl, methoxy, trifluoromethyl and halogen;

10

R^3 and R^4 are each independently hydrogen, (C₁-C₆)-alkyl, halo-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, halo-(C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, halo-(C₂-C₆)-alkynyl, (C₃-C₇)-cycloalkyl, (C₃-C₇)-halocycloalkyl, (C₁-C₆)-alkoxy, (C₁-C₆)-haloalkoxy, (C₁-C₆)-alkylthio, (C₁-C₆)-haloalkylthio, (C₁-C₆)-alkylsulfinyl, (C₁-C₆)-haloalkylsulfinyl, (C₁-C₆)-alkylsulfonyl, (C₁-C₆)-haloalkylsulfonyl, (C₁-C₆)-alkoxy-(C₁-C₄)-alkyl, halogen, nitro or cyano;

R^5 is hydrogen or fluorine;

15

20

25

5 R^6 is acetoxy, acetamido, N-methylacetamido, benzoyloxy, benzamido, N-methylbenzamido, methoxycarbonyl, ethoxycarbonyl, benzoyl, methylcarbonyl, piperidinylcarbonyl, morpholinylcarbonyl, trifluoromethylcarbonyl, aminocarbonyl, methylaminocarbonyl, dimethylaminocarbonyl, (C₃-C₆)-cycloalkyl, or heteroaryl, heterocyclyl or phenyl each substituted by u radicals from the group consisting of methyl, ethyl, methoxy, trifluoromethyl and halogen;

10 R^7 and R^8 are each independently hydrogen, (C₁-C₆)-alkyl, halo-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, halo-(C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, halo-(C₂-C₆)-alkynyl, (C₃-C₇)-cycloalkyl, halo-(C₃-C₇)-cycloalkyl, -OR⁹, S(O)_mR⁹, (C₁-C₆)-alkylthio, halo-(C₁-C₆)-alkylthio, (C₁-C₆)-alkylsulfinyl, halo-(C₁-C₆)-alkylsulfinyl, (C₁-C₆)-alkylsulfonyl, halo-(C₁-C₆)-alkylsulfonyl, (C₁-C₆)-alkoxy-(C₁-C₄)-alkyl, halogen, nitro, cyano, heteroaryl, heterocyclyl or phenyl, where the three latter radicals are each substituted by u radicals from the group consisting of halogen, nitro, cyano, (C₁-C₆)-alkyl, halo-(C₁-C₆)-alkyl, (C₃-C₆)-cycloalkyl, (C₁-C₆)-alkylthio, (C₁-C₆)-alkylsulfinyl, (C₁-C₆)-alkylsulfonyl, (C₁-C₆)-alkoxy, halo-(C₁-C₆)-alkoxy and (C₁-C₆)-alkoxy-(C₁-C₄)-alkyl,

or

20 R^7 and R^8 together with the carbon atom to which they are bonded form the -X¹-(CH₂)_r-X²-, -(CH₂)_s-X³-, -(CH₂)_r-X³-CH₂-, -(CH₂)_v-X³-CH₂CH₂- or -(CH₂)_w- unit in which each of the (CH₂) groups is substituted by m radicals from the group consisting of halogen, methyl and (C₁-C₃)-alkoxy,

or

25 R^7 and R^8 together with the carbon atom to which they are bonded form the -O-N((C₁-C₃)-alkyl)-CHR¹⁰-CH₂- or -O-N=CR¹⁰-CH₂- unit in which each of the (CH₂) groups is substituted by m radicals from the group consisting of halogen and methyl;

30 R^9 is hydrogen, (C₁-C₆)-alkyl, halo-(C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, halo-(C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, halo-(C₂-C₆)-alkynyl, (C₃-C₇)-cycloalkyl, (C₃-C₇)-halocycloalkyl, (C₃-C₇)-cycloalkyl-(C₁-C₃)-alkyl, halo-(C₃-C₇)-cycloalkyl-(C₁-C₃)-alkyl, heteroaryl, heterocyclyl or phenyl, where the three latter radicals are each substituted by s radicals from the group consisting of halogen, nitro, cyano, (C₁-C₆)-alkyl, halo-(C₁-C₆)-alkyl, (C₃-C₆)-cycloalkyl, (C₁-C₆)-alkylthio, (C₁-C₆)-alkylsulfinyl,

(C₁-C₆)-alkylsulfonyl, (C₁-C₆)-alkoxy, halo-(C₁-C₆)-alkoxy and (C₁-C₆)-alkoxy-(C₁-C₄)-alkyl;

5 R¹⁰ is hydrogen, (C₁-C₃)-alkyl, or phenyl substituted by u radicals from the group consisting of (C₁-C₃)-alkyl, halogen, cyano and nitro;

R¹¹ is hydrogen, (C₁-C₆)-alkyl, (C₂-C₆)-alkenyl, (C₂-C₆)-alkynyl, formyl, (C₂-C₆)-alkylcarbonyl, (C₂-C₆)-alkoxycarbonyl or (C₁-C₂)-alkylsulfonyl;

10 X and Y are each independently O, S, SO, SO₂, C=O, C=S, NR¹⁰, CR⁷R⁸, C=NOR¹⁰ or C=NN(R¹¹)₂;

X¹ and X² are each independently O, S or N((C₁-C₃)-alkyl);

15 X³ is O or S;

m is 0, 1 or 2;

n is 1, 2 or 3;

20

r is 2, 3 or 4;

s is 2, 3, 4 or 5;

25 t is 1, 2, 3 or 4;

u is 0, 1, 2 or 3;

v is 2 or 3;

30

w is 2, 3, 4, 5 or 6.

In the formula (I) and all the formulae which follow, alkyl radicals having more than two carbon atoms may be straight-chain or branched. Alkyl radicals are, for example, methyl, ethyl, n- or isopropyl, n-, iso-, tert- or 2-butyl, pentyls, hexyls such as n-hexyl, isohexyl and 1,3-dimethylbutyl. Halogen is fluorine, chlorine, bromine or iodine.

5

Heterocyclyl is a saturated, semisaturated or fully unsaturated cyclic radical containing 3 to 6 ring atoms, of which 1 to 4 are from the group of oxygen, nitrogen and sulfur, and which may additionally be fused by a benzo ring. For example, heterocyclyl is piperidinyl, pyrrolidinyl, tetrahydrofuranyl, dihydrofuranyl and oxetanyl,

10

Heteroaryl is an aromatic cyclic radical containing 3 to 6 ring atoms, of which 1 to 4 are from the group of oxygen, nitrogen and sulfur, and which may additionally be fused by a benzo ring. For example, heteroaryl is benzimidazol-2-yl, furanyl, imidazolyl, isoxazolyl, isothiazolyl, oxazolyl, pyrazinyl, pyrimidinyl, pyridazinyl, pyridinyl, benzisoxazolyl, thiazolyl, pyrrolyl, pyrazolyl, thiophenyl, 1,2,3-oxadiazolyl, 1,2,4-oxadiazolyl, 1,2,5-oxadiazolyl, 1,3,4-oxadiazolyl, 1,2,4-triazolyl, 1,2,3-triazolyl, 1,2,5-triazolyl, 1,3,4-triazolyl, 1,2,4-triazolyl, 1,2,4-thiadiazolyl, 1,3,4-thiadiazolyl, 1,2,3-thiadiazolyl, 1,2,5-thiadiazolyl, 2H-1,2,3,4-tetrazolyl, 1H-1,2,3,4-tetrazolyl, 1,2,3,4-oxatriazolyl, 1,2,3,5-oxatriazolyl, 1,2,3,4-thiatriazolyl and 1,2,3,5-thiatriazolyl.

20

When a group is polysubstituted by radicals, this means that this group is substituted by one or more identical or different radicals from those mentioned.

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According to the nature and the bonding of the substituents, the compounds of the general formula (I) may be present as stereoisomers. When, for example, one or more asymmetric carbon atoms are present, enantiomers and diastereomers may occur. Stereoisomers likewise occur when n is 1 (sulfoxides). Stereoisomers can be obtained from the mixtures obtained in the preparation by customary separation methods, for example by chromatographic separation processes. It is equally possible to selectively prepare stereoisomers by using stereoselective reactions using optically active starting materials and/or auxiliaries. The invention also relates to all stereoisomers and mixtures thereof which are encompassed by the general formula (I) but not defined specifically.

30

Preference is given to compounds of the general formula (I) in which

R^1 is (C_1-C_3) -alkyl, (C_3-C_5) -cycloalkyl, halo- (C_1-C_3) -alkyl or (C_1-C_3) -alkoxy- (C_1-C_3) -alkyl;

5

R^2 is hydrogen, (C_1-C_3) -alkyl, (C_3-C_5) -cycloalkyl, halo- (C_1-C_3) -alkyl, (C_1-C_3) -alkoxy, halo- (C_1-C_3) -alkoxy, cyano, nitro, methylsulfinyl, methylsulfinyl, methylsulfonyl, acetylamino, methoxycarbonyl, ethoxycarbonyl, halogen, amino, aminocarbonyl, methylaminocarbonyl, dimethylaminocarbonyl or methoxymethyl;

10

R^3 and R^4 are each independently hydrogen, (C_1-C_3) -alkyl, halo- (C_1-C_3) -alkyl, (C_3-C_5) -cycloalkyl, (C_1-C_3) -alkoxy, (C_1-C_3) -haloalkoxy, (C_1-C_6) -alkylthio, (C_1-C_6) -alkylsulfinyl, (C_1-C_6) -alkylsulfonyl, (C_1-C_6) -alkoxy- (C_1-C_4) -alkyl, halogen, nitro or cyano;

15

R^5 is hydrogen;

R^7 and R^8 are each independently hydrogen, (C_1-C_3) -alkyl, halo- (C_1-C_3) -alkyl, (C_3-C_5) -cycloalkyl, $-OR^9$, $-S(O)_mR^9$, (C_1-C_3) -alkylthio, (C_1-C_3) -alkylsulfinyl, (C_1-C_3) -alkylsulfonyl, (C_1-C_3) -alkoxy- (C_1-C_3) -alkyl, halogen, nitro, cyano, heteroaryl, heterocyclyl or phenyl, where the three latter radicals are each substituted by u radicals from the group consisting of halogen, nitro, cyano, (C_1-C_3) -alkyl, halo- (C_1-C_3) -alkyl, (C_3-C_5) -cycloalkyl, (C_1-C_3) -alkylthio, (C_1-C_3) -alkylsulfinyl, (C_1-C_3) -alkylsulfonyl, (C_1-C_3) -alkoxy, halo- (C_1-C_3) -alkoxy and (C_1-C_3) -alkoxy- (C_1-C_3) -alkyl,

20

or

R^7 and R^8 together with the carbon atom to which they are bonded form the $-X^1-(CH_2)_r-X^2-$, $-(CH_2)_r-X^3-$, $-(CH_2)_r-X^3-CH_2-$, $-(CH_2)_r-X^3-CH_2CH_2-$ or $-(CH_2)_w-$ unit in which each of the (CH_2) groups is substituted by m radicals from the group consisting of halogen, methyl and (C_1-C_3) -alkoxy,

25

or

R^7 and R^8 together with the carbon atom to which they are bonded form the $-O-N((C_1-C_3)$ -alkyl)- $CHR^{10}-CH_2-$ or $-O-N=CR^{10}-CH_2-$ unit in which each of the (CH_2) groups is substituted by m radicals from the group consisting of halogen and methyl;

30

R^9 is hydrogen, (C₁-C₃)-alkyl, halo-(C₁-C₃)-alkyl, (C₂-C₃)-alkenyl, (C₂-C₄)-alkynyl, (C₃-C₅)-cycloalkyl, (C₃-C₅)-cycloalkyl-(C₁-C₃)-alkyl, heteroaryl, heterocyclyl or phenyl, where the three latter radicals are each substituted by s radicals from the group consisting of halogen, nitro, cyano, (C₁-C₃)-alkyl, halo-(C₁-C₃)-alkyl, (C₃-C₆)-cycloalkyl, (C₁-C₃)-alkylthio, (C₁-C₃)-alkylsulfinyl, (C₁-C₃)-alkylsulfonyl, (C₁-C₃)-alkoxy, halo-(C₁-C₃)-alkoxy and (C₁-C₃)-alkoxy-(C₁-C₃)-alkyl;

R^{10} is hydrogen or (C₁-C₃)-alkyl;

X and Y are each independently O, SO₂, C=O, C=S, CR⁷R⁸, C=NOR¹⁰;

X¹ and X² are each independently O, S, N(CH₃);

X^3 is O or S;

m is 0, 1 or 2;

n is 1 or 2;

r is 2 or 3;

s is 2, 3 or 4;

t is 1, 2 or 3;

u is 0, 1 or 2;

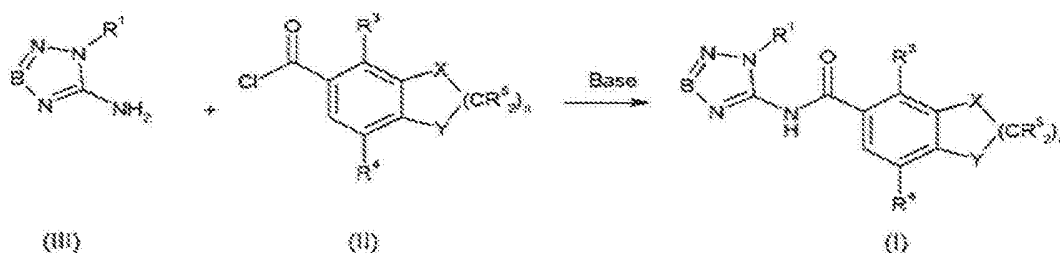
v is 2 or 3;

w is 2, 3, 4 or 5.

In all the formulae specified hereinafter, the substituents and symbols have the same definition as in formula (I), unless defined differently.

Inventive compounds in which Q is Q1 or Q2 can be prepared, for example, by the method shown in scheme 1, by base-catalyzed reaction of a bicyclic benzoyl chloride (II) with a 5-amino-1H-1,2,4-triazole or 5-amino-1H-tetrazole (III):

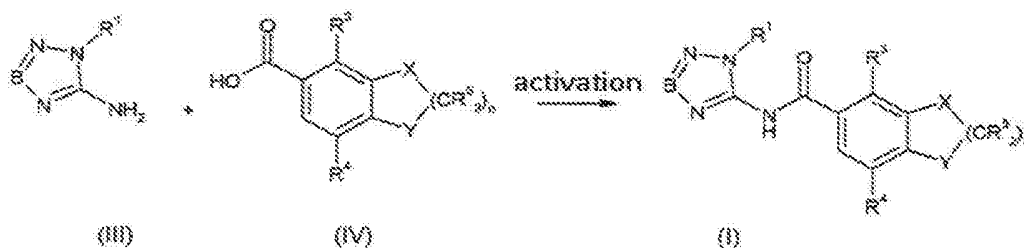
Scheme 1



B therein is CH or N. The bicyclic benzoyl chlorides of the formula (II) or their parent bicyclic benzoic acids are known in principle and can be prepared, for example, by the methods known in WO 96/25413, WO 97/09324, WO 97/30993, WO 97/08164, WO 98/49159, WO 98/35954, WO 98/12192, WO 0014087 and EP 0636622.

Inventive compounds in which Q is Q1 or Q2 can also be prepared by the method shown in scheme 2, by reaction of a benzoic acid of the formula (IV) with a 5-amino-1H-1,2,4-triazole or 5-amino-1H-tetrazole (III):

Scheme 2

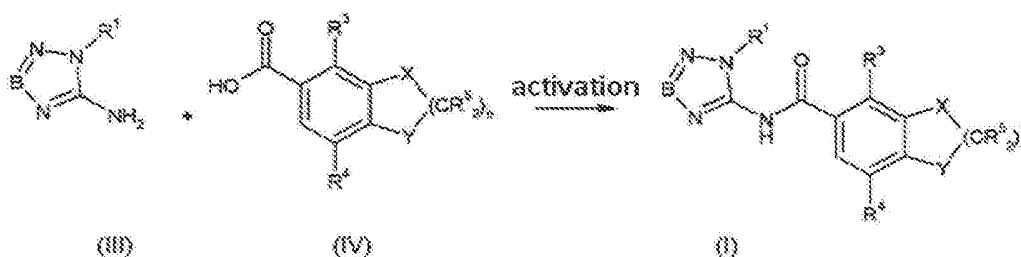


For the activation, it is possible to use dehydrating reagents which are typically used for amidation reactions, for example 1,1'-carbonyldiimidazole (CDI), dicyclohexylcarbodiimide (DCC), 2,4,6-tripropyl-1,3,5,2,4,6-trioxatriphosphinane 2,4,6-trioxide (T3P) etc.

Inventive compounds in which Q is Q1 or Q2 can also be prepared by the method shown in scheme 3, by reaction of an N-(1H-1,2,4-triazol-5-yl)benzamide, N-(1H-tetrazol-5-yl)benzamide, N-(1H-1,2,4-triazol-5-yl)nicotinamide or N-(1H-tetrazol-5-yl)nicotinamide:

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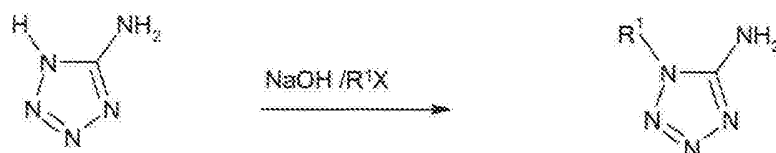
Scheme 2



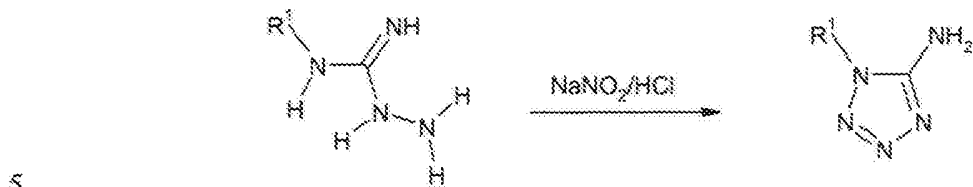
For this reaction shown in scheme 3, it is possible, for example, to use alkylating agents, for example alkyl halides or sulfonates or dialkyl sulfates, in the presence of a base.

It may be appropriate to alter the sequence of reaction steps. For instance, benzoic acids bearing a sulfoxide cannot be converted directly to their acid chlorides. One option here is first to prepare the amide to the thioether stage and then to oxidize the thioether to the sulfoxide.

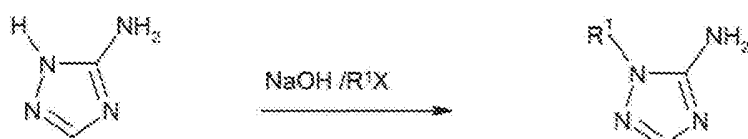
The 5-amino-1H-tetrazoles of the formula (III) are either commercially available or can be prepared analogously to methods known from the literature. For example, substituted 5-aminotetrazoles can be prepared from aminotetrazole by the method described in Journal of the American Chemical Society (1954), 76, 923-924:



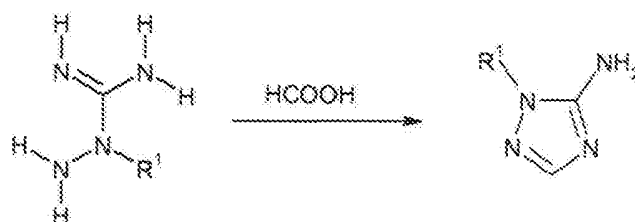
In the above reaction, X is a leaving group such as iodine. Substituted 5-aminotetrazoles can also be synthesized, for example, as described in *Journal of the American Chemical Society* (1954) 76, 88-89:



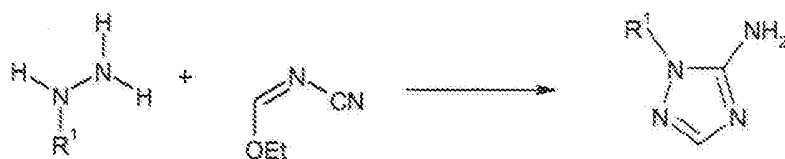
The 5-amino-1H-triazoles of the formula (III) are either commercially available or can be prepared analogously to methods known from the literature. For example, substituted 5-aminotriazoles can be prepared from aminotriazole by the method described in *Zeitschrift für Chemie* (1990), 30(12), 436 - 437:



15 Substituted 5-aminotriazoles can also be synthesized, for example, as described in *Chemische Berichte* (1964), 97(2), 396-404:

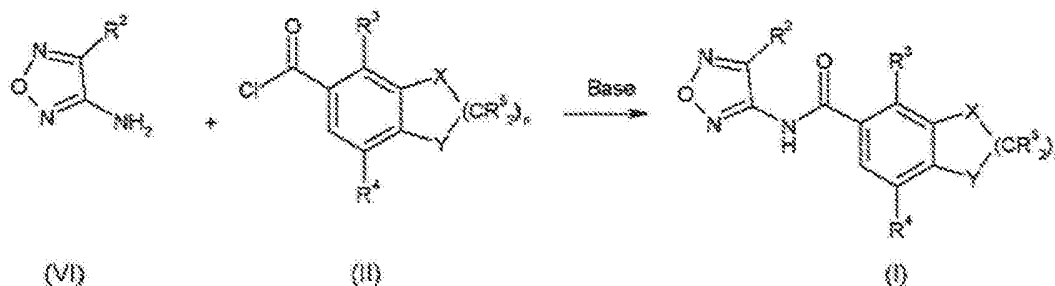


20 Substituted 5-aminotriazoles can also be synthesized, for example, as described in *Angewandte Chemie* (1963), 75, 918:



Inventive compounds in which Q is Q3 can be prepared, for example, by the method shown in scheme 4, by base-catalyzed reaction of a bicyclic benzoyl chloride (II) with a 4-amino-1,2,5-oxadiazole (VI):

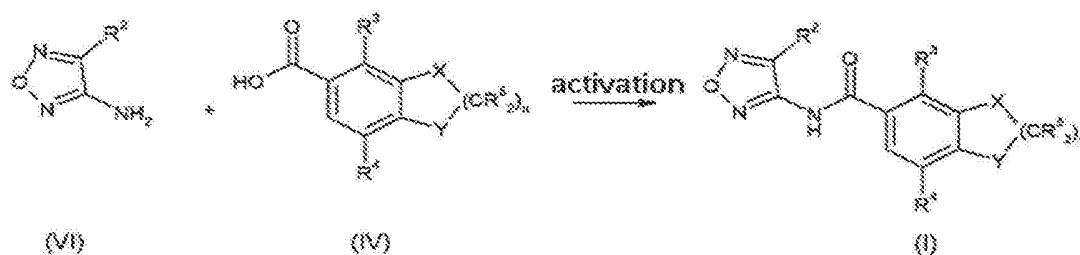
Scheme 4



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Inventive compounds can also be prepared by the method described in scheme 5, by reacting a bicyclic benzoic acid of the formula (IV) with a 4-amino-1,2,5-oxadiazole (VI):

Scheme 5



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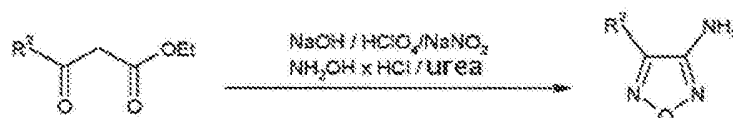
For the activation, it is possible to use dehydrating reagents which are typically used for amidation reactions, for example 1,1'-carbonyldiimidazole (CDI), dicyclohexylcarbodiimide (DCC), 2,4,6-tripropyl-1,3,5,2,4,6-trioxatriphosphinane 2,4,6-trioxide (T3P) etc.

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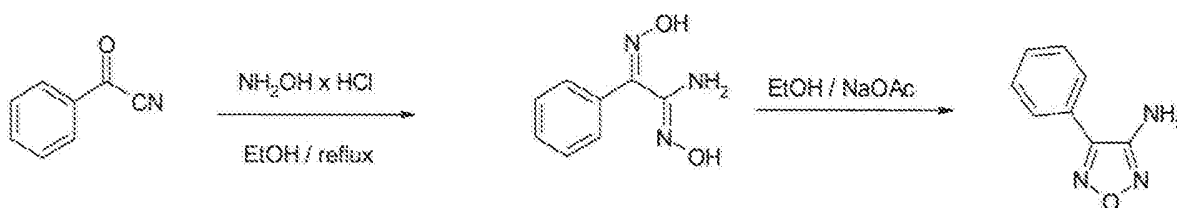
The 4-amino-1,2,5-oxadiazoles of the formula (VI) are either commercially available or known, or can be prepared analogously to methods known from the literature.

For example, 3-alkyl-4-amino-1,2,5-oxadiazoles can be prepared from β -keto esters by the method described in Russian Chemical Bulletin, Int. Ed., vol. 54, 4, p. 1032-1037

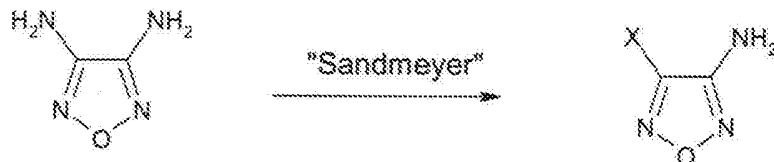
20 (2005):



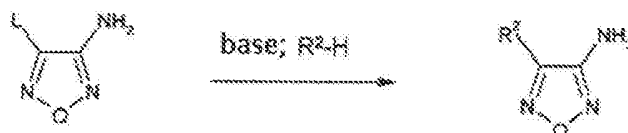
- 3-Aryl-4-amino-1,2,5-oxadiazoles can be synthesized, for example, as described in Russian Chemical Bulletin, 54(4), 1057-1059, (2005) or Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry, 26B(7), 690-2, (1987):



- 3-Amino-4-halo-1,2,5-oxadiazoles can be prepared, for example, by a Sandmeyer reaction from the commercially available 3,4-diamino-1,2,5-oxadiazole by the method described in Heteroatom Chemistry 15(3), 199-207 (2004):



- Nucleophilic R^2 radicals can be introduced into 3-amino-1,2,5-oxadiazoles by substitution of the leaving group L as described in Journal of Chemical Research, Synopses, (6), 190, 1985 or in Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya, (9), 2086-8, 1986 or in Russian Chemical Bulletin (Translation of Izvestiya Akademii Nauk, Seriya Khimicheskaya), 53(3), 596-614, 2004:



- Collections of compounds of the formula (I) and/or salts thereof which can be synthesized by the abovementioned reactions can also be prepared in a parallelized manner, in which case this may be accomplished in a manual, partly automated or fully automated manner. It is possible, for example, to automate the conduct of the reaction, the workup or the purification of the products and/or intermediates. Overall, this is understood to mean a procedure as described, for example, by D. Tiebes in *Combinatorial Chemistry – Synthesis, Analysis, Screening* (editor: Günther Jung), Wiley, 1999, on pages 1 to 34.
- 5
- 10 For the parallelized conduct of the reaction and workup, it is possible to use a number of commercially available instruments, for example Calypso reaction blocks from Barnstead International, Dubuque, Iowa 52004-0797, USA or reaction stations from Radleys, Shirehill, Saffron Walden, Essex, CB11 3AZ, England, or MultiPROBE Automated Workstations from PerkinElmer, Waltham, Massachusetts 02451, USA.
- 15 For the parallelized purification of compounds of the general formula (I) and salts thereof or of intermediates which occur in the course of preparation, available apparatuses include chromatography apparatuses, for example from ISCO, Inc., 4700 Superior Street, Lincoln, NE 68504, USA.
- 20 The apparatuses detailed lead to a modular procedure in which the individual working steps are automated, but manual operations have to be carried out between the working steps. This can be circumvented by using partly or fully integrated automation systems in which the respective automation modules are operated, for example, by robots. Automation systems of this type can be purchased, for example, from Caliper, Hopkinton, MA 01748, USA.
- 25

The implementation of single or multiple synthesis steps can be supported by the use of polymer-supported reagents/scavenger resins. The technical literature describes a number of experimental protocols, for example *ChemFiles*, Vol. 4, No. 1, *Polymer-Supported Scavengers and Reagents for Solution-Phase Synthesis* (Sigma-Aldrich).

30

Aside from the methods described here, the compounds of the general formula (I) and salts thereof can be prepared completely or partially by solid-phase supported methods.

For this purpose, individual intermediates or all intermediates in the synthesis or a synthesis adapted for the corresponding procedure are bound to a synthesis resin. Solid-phase supported synthesis methods are described adequately in the technical literature, for example Barry A. Bunin in "The Combinatorial Index", Academic Press, 1998 and Combinatorial Chemistry -- Synthesis, Analysis, Screening (editor: Günther Jung), Wiley, 1999. The use of solid-phase-supported synthesis methods permits a number of protocols known from the literature, and these may again be executed manually or in an automated manner. The reactions can be performed, for example, by means of IRORI technology in microreactors from Nexus Biosystems, 12140 Community Road, Poway, CA92064, USA.

Either on a solid phase or in the liquid phase, the performance of single or multiple synthesis steps can be supported by the use of microwave technology. The technical literature describes a number of experimental protocols, for example Microwaves in Organic and Medicinal Chemistry (editors: C. O. Kappe and A. Stadler), Wiley, 2005.

The preparation by the process described here gives compounds of the formula (I) and salts thereof in the form of substance collections, which are called libraries. The present invention also provides libraries comprising at least two compounds of the formula (I) and salts thereof.

The inventive compounds of the formula (I) (and/or salts thereof), collectively referred to hereinafter as "inventive compounds", have excellent herbicidal efficacy against a broad spectrum of economically important monocotyledonous and dicotyledonous annual harmful plants. The active ingredients also have good control over perennial weed plants which are difficult to control and produce shoots from rhizomes, root stocks or other perennial organs.

The present invention therefore also provides a method for controlling unwanted plants or for regulating the growth of plants, preferably in plant crops, in which one or more inventive compound(s) is/are applied to the plants (for example weed plants such as monocotyledonous or dicotyledonous weeds or unwanted crop plants), to the seeds (for example grains, seeds or vegetative propagules such as tubers or shoot parts with buds)

or to the area on which the plants grow (for example the area under cultivation). The inventive compounds can be deployed, for example, prior to sowing (if appropriate also by incorporation into the soil), prior to emergence or after emergence. Specific examples of some representatives of the monocotyledonous and dicotyledonous weed flora which can be controlled by the inventive compounds are as follows, though the enumeration is not intended to impose a restriction to particular species:

5 Monocotyledonous harmful plants of the genera: Aegilops, Agropyron, Agrostis, Alopecurus, Apera, Avena, Brachiaria, Bromus, Cenchrus, Commelina, Cynodon, 10 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.

15 Dicotyledonous weeds 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, 20 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.

25 If the inventive compounds are applied to the soil surface before germination, either the weed seedlings are prevented completely from emerging or the weeds grow until they have reached the cotyledon stage, but then stop growing and, eventually, after three to four weeks have passed, die completely.

30 If the active ingredients are applied post-emergence to the green parts of the plants, there is likewise stoppage of growth after the treatment, and the harmful plants remain at the growth stage of the time of application, or they die completely after a certain time, such that competition by the weeds, which is harmful to the crop plants, is thus eliminated very early and in a lasting manner.

Although the inventive compounds have excellent herbicidal activity against monocotyledonous and dicotyledonous weeds, crop plants of economically important crops, for example dicotyledonous crops of the genera *Arachis*, *Beta*, *Brassica*,
5 *Cucumis*, *Cucurbita*, *Helianthus*, *Daucus*, *Glycine*, *Gossypium*, *Ipomoea*, *Lactuca*,
Linum, *Lycopersicon*, *Nicotiana*, *Phaseolus*, *Pisum*, *Solanum*, *Vicia*, or
monocotyledonous crops of the genera *Allium*, *Ananas*, *Asparagus*, *Avena*, *Hordeum*,
Oryza, *Panicum*, *Saccharum*, *Secale*, *Sorghum*, *Triticale*, *Triticum*, *Zea*, especially *Zea*
and *Triticum*, are damaged only to an insignificant extent, if at all, depending on the
10 structure of the respective inventive compound and the application rate thereof. For
these reasons, the present compounds are very suitable for selective control of
unwanted plant growth in plant crops such as agriculturally useful plants or
ornamentals.

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

25 By virtue of their herbicidal and plant growth-regulating properties, the active
ingredients can also be used for control of harmful plants in crops of genetically
modified plants or plants modified by conventional mutagenesis. In general, the
transgenic plants are notable for special advantageous properties, for example for
resistances to certain pesticides, in particular certain herbicides, resistances to plant
30 diseases or organisms that cause plant diseases, such as certain insects or
microorganisms such as fungi, bacteria or viruses. Other particular properties 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 with a different fatty acid composition in the harvested material.

5 With regard to transgenic crops, preference is given to the use of the inventive compounds in economically important transgenic crops of useful plants and
ornamentals, for example of cereals such as wheat, barley, rye, oats, millet/sorghum, rice and corn, or else crops of sugar beet, cotton, soybean, oilseed rape, potato, tomato, peas and other vegetables. Preferably, the inventive compounds can be used as herbicides in crops of useful plants which are resistant, or have been made resistant by
10 recombinant means, to the phytotoxic effects of the herbicides.

Preference is given to the use of the inventive compounds or salts thereof in economically important transgenic crops of useful plants and ornamentals, for example of cereals such as wheat, barley, rye, oats, millet/sorghum, rice, cassava and corn, or
15 else crops of sugar beet, cotton, soybean, oilseed rape, potato, tomato, peas and other vegetables. Preferably, the inventive compounds can 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 herbicides.

20 Conventional ways of producing novel plants which have modified properties in comparison to existing plants consist, for example, in traditional breeding methods and the generation of mutants. Alternatively, novel plants with modified properties can be generated with the aid of recombinant methods (see, for example, EP-A-0221044, EP-A-0131624). For example, there have been many descriptions of:

- 25 - recombinant modifications of crop plants for the purpose of modifying the starch synthesized in the plants (e.g. WO 92/11376, WO 92/14827, WO 91/19806),
- transgenic crop plants which are resistant to particular herbicides of the glufosinate type (cf., for example, EP-A-0242236, EP-A-242246) or glyphosate
30 type (WO 92/00377) or the sulfonylureas (EP-A-0257993, US-A-5013659),
- transgenic crop plants, for example cotton, with the ability to produce *Bacillus thuringiensis* toxins (Bt toxins) which make the plants resistant to particular pests (EP-A-0142924,

- EP-A-0193259),
- transgenic crop plants with a modified fatty acid composition (WO 91/13972),
 - genetically modified crop plants with novel constituents or secondary metabolites, for example novel phytoalexins, which cause an increased disease resistance (EPA 309862, EPA0464461),
 - 5 - genetically modified plants with reduced photorespiration, which have higher yields and higher stress tolerance (EPA 0305398),
 - transgenic crop plants which produce pharmaceutically or diagnostically important proteins ("molecular pharming"),
 - 10 - transgenic crop plants which are notable for higher yields or better quality,
 - transgenic crop plants which are notable for a combination, for example, of the abovementioned novel properties ("gene stacking").

Numerous molecular biology techniques which can be used to produce novel
15 transgenic plants with modified properties are known in principle; see, for example, I. Potrykus and G. Spangenberg (eds.), *Gene Transfer to Plants*, Springer Lab Manual (1995), Springer Verlag Berlin, Heidelberg or Christou, "Trends in Plant Science" 1 (1996) 423-431).

20 For such recombinant manipulations, nucleic acid molecules which allow mutagenesis or a sequence change by recombination of DNA sequences can be introduced into plasmids. With the aid of standard methods, it is possible, for example, to undertake base exchanges, remove parts of sequences or add natural or synthetic sequences. For the connection of the DNA fragments to one another, it is possible to add adapters or
25 linkers to the fragments; see, for example, Sambrook et al., 1989, *Molecular Cloning, A Laboratory Manual*, 2nd ed., Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY; or Winnacker "Gene und Klone", VCH Weinheim, 2nd edition, 1996.

The production of plant cells with a reduced activity of a gene product can be
30 achieved, for example, by the expression of at least one appropriate antisense RNA, or of a sense RNA for achievement of a cosuppression effect, or the expression of at least one appropriately constructed ribozyme which specifically cleaves transcripts of the abovementioned gene product. For this purpose, it is firstly possible to use DNA

molecules which comprise the entire coding sequence of a gene product including any flanking sequences present, or else DNA molecules which comprise only parts of the coding sequence, in which case these parts must be long enough to bring about 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.

When expressing nucleic acid molecules in plants, the protein synthesized may be localized in any desired compartment of the plant cell. However, in order 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; Wolter et al., *Proc. Natl. Acad. Sci. USA* 85 (1988), 846-850; Sonnewald et al., *Plant J.* 1 (1991), 95-106). The nucleic acid molecules can also be expressed in the organelles of the plant cells.

The transgenic plant cells can be regenerated by known techniques to give whole plants. In principle, the transgenic plants may be plants of any desired plant species, i.e. both monocotyledonous and dicotyledonous plants.

Thus, it is possible to obtain transgenic plants 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.

Preferably, the inventive compounds can be used in transgenic crops which are resistant to growth regulators, 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, the glyphosates, glufosinates or benzoylisoxazoles and analogous active ingredients.

On employment of the inventive active ingredients in transgenic crops, not only do the effects toward weed plants observed in other crops occur, but often also effects which

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

The invention therefore also provides for the use of the inventive compounds as herbicides for control of harmful plants in transgenic crop plants.

10 The inventive compounds can be applied in the form of wettable powders, emulsifiable concentrates, sprayable solutions, dusting products or granules in the customary formulations. The invention therefore also provides herbicidal and plant growth-regulating compositions which comprise the inventive compounds.

15 The inventive compounds can be formulated in various ways, according to the biological and/or physicochemical parameters required. Examples of possible formulations include: 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),
20 oil- or water-based dispersions, oil-miscible solutions, capsule suspensions (CS), dusting products (DP), seed-dressing products, granules for broadcasting and soil application, granules (GR) in the form of microgranules, sprayable granules, coated granules and adsorption granules, water-dispersible granules (WG), water-soluble granules (SG), ULV formulations, microcapsules and waxes.

25 These individual types of formulation are known in principle and are described, for example, in: Winnacker-Küchler, "Chemische Technologie" [Chemical Technology], volume 7, C. Hanser Verlag Munich, 4th edition 1986, Wade van Valkenburg, "Pesticide Formulations", Marcel Dekker, N.Y., 1973; K. Martens, "Spray Drying" Handbook, 3rd ed. 1979, G. Goodwin Ltd. London.

30

The necessary formulation assistants, such as inert materials, surfactants, solvents and further additives are likewise known 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. 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, 5 "Grenzflächenaktive Äthylenoxidaddukte" [Interface-active ethylene oxide adducts], Wiss. Verlagsgesell., Stuttgart 1976; Winnacker-Küchler, "Chemische Technologie", Volume 7, C. Hanser Verlag Munich, 4th Ed. 1986.

10 On the basis of these formulations, it is also possible to produce combinations with other pesticidally active substances, for example insecticides, acaricides, herbicides, fungicides, and with safeners, fertilizers and/or growth regulators, for example in the form of a finished formulation or as a tankmix. Suitable safeners are, for example, mefenpyr-diethyl, cyprosulfamide, isoxadifen-ethyl, cloquintocet-mexyl and dichlormid.

15

Wettable powders are preparations which can be dispersed uniformly in water and, in addition to the active ingredient, apart from a diluent or inert substance, also comprise surfactants of the ionic and/or nonionic type (wetting agents, dispersants), for example polyoxyethylated alkylphenols, polyoxyethylated fatty alcohols, polyoxyethylated fatty amines, fatty alcohol polyglycol ether sulfates, alkanesulfonates, 20 alkylbenzenesulfonates, sodium lignosulfonate, sodium 2,2' dinaphthylmethane-6,6'-disulfonate, sodium dibutyl-naphthalenesulfonate or else sodium oleoylmethyltaurinate. To produce the wettable powders, the herbicidal active ingredients are ground finely, for example in customary apparatus such as hammer mills, blower mills and air-jet 25 mills, and simultaneously or subsequently mixed with the formulation assistants.

Emulsifiable concentrates are produced by dissolving the active ingredient in an organic solvent, for example butanol, cyclohexanone, dimethylformamide, xylene, or else relatively high-boiling aromatics or hydrocarbons or mixtures of the organic 30 solvents, with addition of one or more ionic and/or nonionic surfactants (emulsifiers). The emulsifiers used may, for example, be: calcium alkylarylsulfonates such as 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.

- 5 Dusting products are obtained by grinding the active ingredient with finely distributed solid substances, for example talc, natural clays, such as kaolin, bentonite and pyrophyllite, or diatomaceous earth.

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

15 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.

20 Granules can be produced either by spraying the active ingredient onto adsorptive granulated inert material or by applying active ingredient concentrates by means of adhesives, for example polyvinyl alcohol, sodium polyacrylate or mineral oils, to the surface of carrier substances, such as sand, kaolinites or granulated inert material. Suitable active ingredients can also be granulated in the manner customary for the production of fertilizer granules - if desired as a mixture with fertilizers.

25 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.

30 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, p. 8-57.

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.

The agrochemical formulations contain generally 0.1 to 99% by weight, especially 0.1 to 95% by weight, of inventive compounds.

In wettable powders, the active ingredient concentration is, for example, about 10 to 90% by weight; the remainder to 100% by weight consists of the customary formulation constituents. In emulsifiable concentrates, the active ingredient 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 ingredient, preferably usually 5 to 20% by weight of active ingredient; sprayable solutions contain about 0.05 to 80% and preferably 2 to 50% by weight of active ingredient. In the case of water-dispersible granules, the active ingredient content depends partly on whether the active compound is present in liquid or solid form and on which granulation assistants, fillers, etc., are used. In the water-dispersible granules, the content of active ingredient is, for example, between 1 and 95% by weight, preferably between 10 and 80% by weight.

In addition, the active ingredient formulations mentioned optionally comprise the respective customary tackifiers, wetting agents, dispersants, emulsifiers, penetrants, preservatives, antifreeze agents and solvents, fillers, carriers and dyes, defoamers, evaporation inhibitors and agents which influence the pH and the viscosity.

On the basis of these formulations, it is also possible to produce combinations with other pesticidally active substances, for example insecticides, acaricides, herbicides, fungicides, and with safeners, fertilizers and/or growth regulators, for example in the form of a finished formulation or as a tankmix.

Usable combination partners for the inventive compounds in mixture formulations or in a tankmix are, for example, known active ingredients based on inhibition of, for example, acetolactate synthase, acetyl-CoA carboxylase, cellulose synthase,

enolpyruvylshikimate-3-phosphate synthase, glutamine synthetase, p-hydroxyphenylpyruvate dioxygenase, phytoendesaturase, photosystem I, photosystem II, protoporphyrinogen oxidase, as described, for example, in Weed Research 26 (1986) 441-445 or "The Pesticide Manual", 15th edition, The British Crop Protection Council and the Royal Soc. of Chemistry, 2009 and literature cited therein. Examples of known herbicides or plant growth regulators which can be combined with the inventive compounds include the active ingredients which follow (the compounds are designated by the "common name" according to the International Organization for Standardization (ISO) or by the chemical name or by the code number) and always encompass all use forms, such as acids, salts, esters and isomers, such as stereoisomers and optical isomers. In this list, one or else, in some cases, more than one application form is mentioned by way of example:

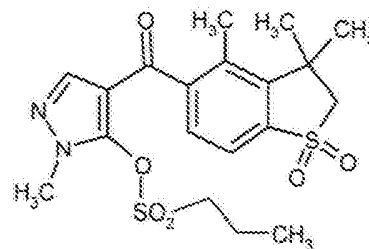
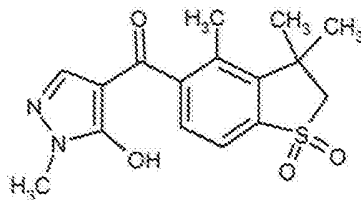
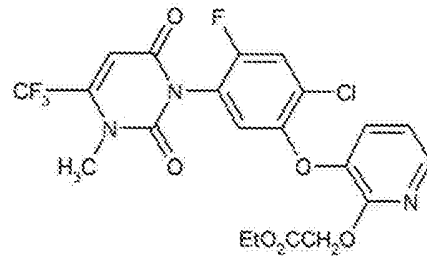
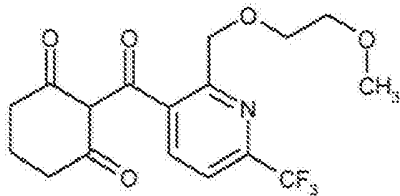
acetochlor, acibenzolar, acibenzolar-S-methyl, acifluorfen, acifluorfen-sodium, aclonifen, alachlor, allidochlor, alloxydim, alloxydim-sodium, ametryne, amicarbazone, amidochlor, amidosulfuron, aminocyclopyrachlor, aminopyralid, amitrole, ammonium sulfamate, ancymidol, anilofos, asulam, atrazine, azafenidin, azimsulfuron, aziprotryne, beflubutamid, benazolin, benazolin-ethyl, bencarbazon, benfluralin, benfuresate, bensulide, bensulfuron, bensulfuron-methyl, bentazone, benzfendizone, benzobicyclon, benzofenap, benzofluor, benzoylprop, bicyclopyrone, bifenox, bilanafos, bilanafos-sodium, bispyribac, bispyribac-sodium, bromacil, bromobutide, bromofenoxim, bromoxynil, bromuron, buminafos, busoxinone, butachlor, butafenacil, butamifos, butenachlor, butralin, butroxydim, butylate, cafenstrole, carbetamide, carfentrazone, carfentrazone-ethyl, chlomethoxyfen, chloramben, chlorazifop, chlorazifop-butyl, chlorbromuron, chlorbufam, chlorfenac, chlorfenac-sodium, chlorfenprop, chlorflurenol, chlorflurenol-methyl, chloridazon, chlorimuron, chlorimuron-ethyl, chlormequat-chloride, chlormitrofen, chlorophthalim, chlorthal-dimethyl, chlortoluron, chlorsulfuron, cinidon, cinidon-ethyl, cinmethylin, cinosulfuron, clethodim, clodinafop, clodinafop-propargyl, clofencet, clomazone, clomeprop, cloprop, clopyralid, cloransulam, cloransulam-methyl, cumyluron, cyanamide, cyanazine, cyclanilide, cycloate, cyclosulfamuron, cycloxydim, cycluron, cyhalofop, cyhalofop-butyl, cyperquat, cyprazine, cyprazole, 2,4-D, 2,4-DB, daimuron/dymron, dalapon, daminozide, dazomet, n-decanol, desmedipham,

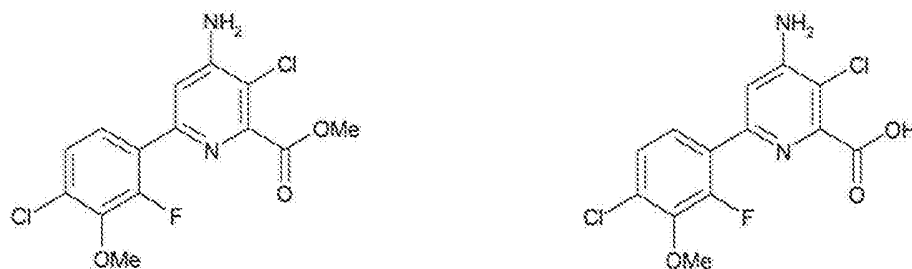
desmetryn, detosyl-pyrazolate (DTP), diallate, dicamba, dichlobenil, dichlorprop, dichlorprop-P, diclofop, diclofop-methyl, diclofop-P-methyl, diclosulam, diethatyl, diethatyl-ethyl, difenoxuron, difenzoquat, diflufenican, diflufenzopyr, diflufenzopyr-sodium, dimefuron, dikegulac-sodium, dimepiperate, dimethachlor, dimethametryn, 5 dimethenamid, dimethenamid-P, dimethipin, dimetrasulfuron, dinitramine, dinoseb, dinoterb, diphenamid, dipropetryn, diquat, diquat-dibromide, dithiopyr, diuron, DNOC, eglinazine-ethyl, endothal, EPTC, esprocarb, ethalfluralin, ethametsulfuron, ethametsulfuron-methyl, ethephon, ethidimuron, ethiozin, ethofumesate, ethoxyfen, ethoxyfen-ethyl, ethoxysulfuron, etobenzanid, F-5331, i.e. N-[2-chloro-4-fluoro-5-[4-10 (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, fenoprop, fenoxaprop, fenoxaprop-P, fenoxaprop-ethyl, fenoxaprop-P-ethyl, fenoxasulfone, fentrazamide, fenuron, flamprop, flamprop-M-isopropyl, flamprop-M-methyl, flazasulfuron, florasulam, 15 fluazifop, fluazifop-P, fluazifop-butyl, fluazifop-P-butyl, fluazolate, flucarbazone, flucarbazone-sodium, flucetosulfuron, fluchloralin, flufenacet (thiafluamide), flufenpyr, flufenpyr-ethyl, flumetralin, flumetsulam, flumiclorac, flumiclorac-pentyl, flumioxazin, flumipropyn, fluometuron, fluorodifen, fluoroglycofen, fluoroglycofen-ethyl, flupoxam, fluproacil, flupropanate, flupyr-sulfuron, flupyr-sulfuron-methyl-20 sodium, flurenol, flurenol-butyl, fluridone, flurochloridone, fluroxypyr, fluroxypyr-meptyl, flurprimidol, flurtamone, fluthiacet, fluthiacet-methyl, fluthiamide, fomesafen, foramsulfuron, forchlorfenuron, fosamine, furyloxyfen, gibberellic acid, glufosinate, glufosinate-ammonium, glufosinate-P, glufosinate-P-ammonium, glufosinate-P-sodium, glyphosate, glyphosate-isopropylammonium, H-9201, i.e. O-(2,4-dimethyl-6-25 nitrophenyl) O-ethyl isopropylphosphoramidothioate, halosafen, halosulfuron, halosulfuron-methyl, haloxyfop, haloxyfop-P, haloxyfop-ethoxyethyl, haloxyfop-P-ethoxyethyl, haloxyfop-methyl, haloxyfop-P-methyl, hexazinone, HW-02, i.e. 1-(dimethoxyphosphoryl)ethyl (2,4-dichlorophenoxy)acetate, imazamethabenz, imazamethabenz-methyl, imazamox, imazamox-ammonium, imazapic, imazapyr, 30 imazapyr-isopropylammonium, imazaquin, imazaquin-ammonium, imazethapyr, imazethapyr-ammonium, imazosulfuron, inabenzide, indanofan, indaziflam, indoleacetic acid (IAA), 4-indol-3-ylbutyric acid (IBA), iodosulfuron, iodosulfuron-methyl-sodium, ioxynil, ipfencarbazone, isocarbamid, isopropalin, isoproturon,

isouron, isoxaben, isoxachlortole, isoxaflutole, isoxapyrifop, 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, karbutilate, ketospiradox, lactofen, lenacil, linuron, maleic hydrazide, MCPA, MCPB, MCPB-methyl, -ethyl and -sodium, mecoprop, 5 mecoprop-sodium, mecoprop-butotyl, mecoprop-P-butotyl, mecoprop-P-dimethylammonium, mecoprop-P-2-ethylhexyl, mecoprop-P-potassium, mefenacet, mefluidide, mepiquat-chloride, mesosulfuron, mesosulfuron-methyl, mesotrione, methabenzthiazuron, metam, metamifop, metamitron, metazachlor, metazasulfuron, methazole, methiopyrsulfuron, methiozolin, methoxyphenone, methylodymron, 1-10 methylecyclopropene, methyl isothiocyanate, metobenzuron, metobromuron, metolachlor, S-metolachlor, metosulam, metoxuron, metribuzin, metsulfuron, metsulfuron-methyl, molinate, monalide, monocarbamide, monocarbamide dihydrogensulfate, monolinuron, monosulfuron, monosulfuron ester, monuron, MT-128, i.e. 6-chloro-N-[(2E)-3-chloroprop-2-en-1-yl]-5-methyl-N-phenylpyridazine-3-15 amine, MT-5950, i.e. N-[3-chloro-4-(1-methylethyl)phenyl]-2-methylpentanamide, NGGC-011, naproanilide, napropanide, naptalam, NC-310, i.e. 4-(2,4-dichlorobenzoyl)-1-methyl-5-benzyloxy-pyrazole, neburon, nicosulfuron, nipyraclufen, nitralin, nitrofen, nitrophenolate-sodium (isomer mixture), nitrofluorfen, nonanoic acid, norflurazon, orbencarb, orthosulfamuron, oryzalin, oxadiargyl, oxadiazon, 20 oxasulfuron, oxaziclomefone, oxyfluorfen, paclobutrazole, paraquat, paraquat dichloride, pelargonic acid (nonanoic acid), pendimethalin, pendralin, penoxsulam, pentanochlor, pentoxazone, perfluidone, pethoxamid, phenisopham, phenmedipham, phenmedipham-ethyl, picloram, picolinafen, pinoxaden, piperophos, pirifenop, pirifenop-butyl, pretilachlor, primisulfuron, primisulfuron-methyl, probenazole, 25 profluzazole, procyazine, prodiamine, prifluraline, profoxydim, prohexadione, prohexadione-calcium, prohydrojasmone, prometon, prometryn, propachlor, propanil, propaquizafof, propazine, propham, propisochlor, propoxycarbazone, propoxycarbazone-sodium, propyrisulfuron, propyzamide, prosulfalin, prosulfocarb, prosulfuron, prynachlor, pyraclonil, pyraflufen, pyraflufen-ethyl, pyrasulfotole, 30 pyrazolynate (pyrazolate), pyrazosulfuron, pyrazosulfuron-ethyl, pyrazoxyfen, pyribambenz, pyribambenz-isopropyl, pyribambenz-propyl, pyribenzoxim, pyributicarb, pyridafol, pyridate, pyritfalid, pyriminobac, pyriminobac-methyl, pyrimisulfan, pyriithiobac, pyriithiobac-sodium, pyroxasulfone, pyroxulam, quinclorac,

quinmerac, quinoclamine, quizalofop, quizalofop-ethyl, quizalofop-P, quizalofop-P-ethyl, quizalofop-P-tefuryl, rimsulfuron, saflufenacil, secbumeton, sethoxydim, siduron, simazine, simetryn, SN-106279, i.e. methyl (2R)-2-({7-[2-chloro-4-(trifluoromethyl)phenoxy]-2-naphthyl}oxy)propanoate, sulcotrione, sulfallate (CDEC),
5 sulfentrazone, sulfometuron, sulfometuron-methyl, sulfosate (glyphosate-trimesium), 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-dihydro-2H-1,4-benzoxazin-6-yl]-3-propyl-2-thioxoimidazolidine-4,5-dione, tebutam, tebuthiuron, tecnazene, tefuryltrione,
10 tembotrione, tepraloxymid, terbacil, terbucarb, terbuchlor, terbumeton, terbuthylazine, terbutryne, thenylchlor, thiaflumide, thiazafuror, thiazopyr, thidiazimin, thidiazuron, thien carbazole, thien carbazole-methyl, thifensulfuron, thifensulfuron-methyl, thiobencarb, tiocarbazil, topramezone, tralkoxydim, triafamone, triallate, triasulfuron, triaziflam, triazofenamide, tribenuron, tribenuron-methyl, trichloroacetic acid (TCA),
15 triclopyr, tridiphane, trietazine, trifloxysulfuron, trifloxysulfuron-sodium, trifluralin, triflusulfuron, triflusulfuron-methyl, trimeturon, trinexapac, trinexapac-ethyl, tritosulfuron, tsitodef, uniconazole, uniconazole-P, vernolate, ZJ-0862, i.e. 3,4-dichloro-N-[2-[(4,6-dimethoxypyrimidin-2-yl)oxy]benzyl]aniline, and the following compounds:

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For application, the formulations 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 formulations, granules for soil application or granules for broadcasting and sprayable solutions are not normally diluted further with other inert substances prior to application.

The required application rate of the compounds of the formula (I) varies with the external conditions, including temperature, humidity and the type of herbicide used. It can vary within wide limits, for example between 0.001 and 1.0 kg/ha or more active substance, but it is preferably between 0.005 and 750 g/ha.

The examples which follow illustrate the invention.

15

A. Chemical examples

1. Synthesis of 4-chloro-3-methoxy-N-(4-methyl-1,2,5-oxadiazol-3-yl)-2,3-dihydro-1-benzothioephene-5-carboxamide 1,1-dioxide (table example No. 1928)

1.00 g (3.14 mmol) of 4-chloro-3-methoxy-2,3-dihydro-1-benzothioephene-5-carboxylic acid 1,1-dioxide and 0.33 g (3.15 mmol) of 4-methyl-1,2,5-oxadiazol-3-yl-amine were dissolved at room temperature (RT) in 35 ml of CH_2Cl_2 , 3.02 g (4.74 mmol) of 2,4,6-tripropyl-1,3,5,2,4,6-trioxatriphosphinane 2,4,6-trioxide (50% solution in THF) were added and the mixture was stirred at RT for 1 h. Subsequently, 2.18 ml (15.64 mmol) of triethylamine and 75 mg (0.61 mmol) of 4-dimethylaminopyridine (DMAP) were added and the whole mixture was stirred at RT for 16 h. This was followed by washing with water and twice with 6N hydrochloric acid, drying of the organic phase over Na_2SO_4 and filtration with suction through silica gel, washing through with 1:2 heptane/ethyl acetate and concentration. Yield 708 mg (63%).

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^1H NMR (CDCl_3): $\delta = 2.44$ (s,3H), 3.53 (s,3H), 3.57 (dd,1H), 3.71 (d,1H), 5.15 (d,1H), 7.55 (d,1H), 7.74 (d,1H), 9.40 (s,1H)

2. Synthesis of 4-chloro-N-(1-methyl-1H-1,2,4-triazol-5-yl)-2,3-dihydro-1-benzothiophen-5-carboxamide 1,1-dioxide (table example No. 1545)

0.80 g (3.24 mmol) of 4-chloro-2,3-dihydro-1-benzothiophene-5-carboxylic acid 1,1-dioxide, 0.72 g (2.43 mmol) of di(1-methyl-1H-1,2,4-triazol-5-amine) sulfate and 20 mg (0.164 mmol) of DMAP were initially charged in 5 ml of pyridine, 0.65 g (5.35 mmol) of thionyl chloride were added and the mixture was stirred at 70°C for 1 h. Subsequently, 0.5 ml of water was added, and the mixture was stirred for a further 30 min, acidified with saturated KHSO_4 solution and extracted three times with 100 ml each time of ethyl acetate. The combined organic phases were washed with saturated NaHCO_3 solution, dried over Na_2SO_4 and concentrated. The residue was purified by column chromatography (silica gel, heptane/ethyl acetate). Yield 642 mg (61%).

^1H NMR (DMSO-d_6): $\delta = 3.40$ (t,2H), 3.74 (t,2H), 3.79 (s,3H), 7.89 (br,3H), 11.39 (s,1H)

3. Synthesis of N-(1-ethyl-1H-tetrazol-5-yl)-4,4,5,8-tetramethyl-3,4-dihydro-2H-thiochromene-6-carboxamide 1,1-dioxide (table example No. 189)

1.00 g (3.54 mmol) of 4,4,5,8-tetramethyl-3,4-dihydro-2H-thiochromene-6-carboxylic acid 1,1-dioxide, 0.63 g (5.32 mmol) of 1-ethyl-5-aminotetrazole and 23 mg (0.188 mmol) of DMAP were initially charged in 7 ml of pyridine, 0.71 g (5.86 mmol) of thionyl chloride were added and the mixture was stirred at 70°C for 1 h. Subsequently, 0.5 ml of water was added, and the mixture was stirred for a further 30 min, acidified with saturated KHSO_4 solution and extracted three times with 100 ml each time of ethyl acetate. The combined organic phases were washed with saturated NaHCO_3 solution, dried over Na_2SO_4 and concentrated. The residue was purified by column chromatography (silica gel, heptane/ethyl acetate). Yield 492 mg (37 %).

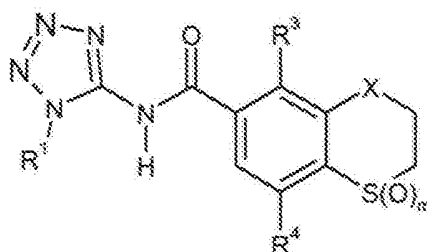
^1H NMR (CDCl_3): $\delta = 1.56$ (s,6H), 1.64 (t,3H), 2.36 (dd,2H), 2.65 (s,3H), 2.77 (s,3H), 3.43 (dd,2H), 4.46 (q,2H), 7.37 (s,3H), 10.16 (s,1H)

The examples listed in the tables below were prepared analogously to the abovementioned methods or are obtainable analogously to the abovementioned methods. The compounds listed in the tables below are very particularly preferred.

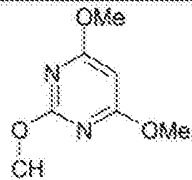
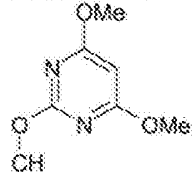
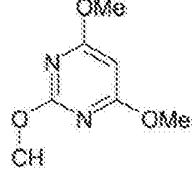
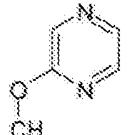
5 The abbreviations used mean:

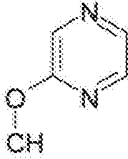
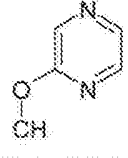




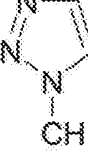


Et = ethyl Me = methyl n-Pr = n-propyl i-Pr = isopropyl
 c-Pr = cyclopropyl Ph = phenyl

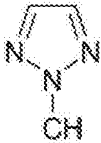
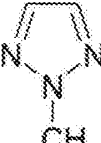
Table 1: Inventive compounds of the general formula (I) in which Q is Q1, Y is S(O)_m, R⁵ is hydrogen and n is 2



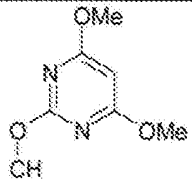
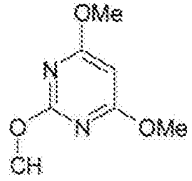
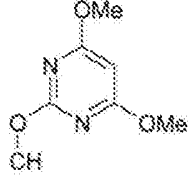
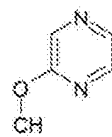
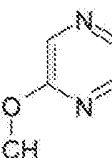
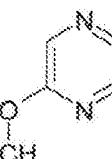


No.	R ¹	R ³	R ⁴	m	X	¹ H NMR
1.	Me	Me	Me	0	CH ₂	
2.	Me	Me	Me	1	CH ₂	
3.	Me	Me	Me	2	CH ₂	
4.	Me	Me	Me	0	CHMe	
5.	Me	Me	Me	1	CHMe	
6.	Me	Me	Me	2	CHMe	
7.	Me	Me	Me	0	C(CH ₃) ₂	CDCl ₃ , 400 MHz: 1.49 (s,6H), 2.04 (dd,2H), 2.28 (s,3H), 2.62 (s,3H), 2.98 (dd,2H), 4.10 (s,3H), 7.22 (s,1H), 8.81 (s,1H)
8.	Me	Me	Me	1	C(CH ₃) ₂	
9.	Me	Me	Me	2	C(CH ₃) ₂	CDCl ₃ , 400 MHz: 1.55 (s,6H), 2.38 (dd,2H), 2.64 (s,3H), 2.81 (s,3H), 3.43 (dd,2H), 4.10 (s,3H), 7.33 (s,1H), 8.87 (s,1H)
10.	Me	Me	Me	0	C(OC ₂ H ₄ O)	
11.	Me	Me	Me	1	C(OC ₂ H ₄ O)	
12.	Me	Me	Me	2	C(OC ₂ H ₄ O)	
13.	Me	Me	Me	0	C(SC ₂ H ₄ S)	
14.	Me	Me	Me	1	C(SC ₂ H ₄ S)	
15.	Me	Me	Me	2	C(SC ₂ H ₄ S)	
16.	Me	Me	Me	0	CHOMe	
17.	Me	Me	Me	1	CHOMe	





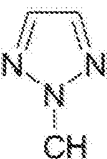
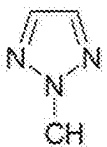

No.	R ¹	R ²	R ⁴	m	X	¹ H NMR
18.	Me	Me	Me	2	CHOMe	
19.	Me	Me	Me	0	CHOEt	
20.	Me	Me	Me	1	CHOEt	
21.	Me	Me	Me	2	CHOEt	
22.	Me	Me	Me	0	CHOiPr	
23.	Me	Me	Me	1	CHOiPr	
24.	Me	Me	Me	2	CHOiPr	
25.	Me	Me	Me	0	CHOCH ₂ cPr	
26.	Me	Me	Me	1	CHOCH ₂ cPr	
27.	Me	Me	Me	2	CHOCH ₂ cPr	
28.	Me	Me	Me	0	CHOC ₂ H ₄ OMe	
29.	Me	Me	Me	1	CHOC ₂ H ₄ OMe	
30.	Me	Me	Me	2	CHOC ₂ H ₄ OMe	
31.	Me	Me	Me	0	CHOCH ₂ CCH	
32.	Me	Me	Me	1	CHOCH ₂ CCH	
33.	Me	Me	Me	2	CHOCH ₂ CCH	
34.	Me	Me	Me	0	CHOCH ₂ CH=CH ₂	
35.	Me	Me	Me	1	CHOCH ₂ CH=CH ₂	
36.	Me	Me	Me	2	CHOCH ₂ CH=CH ₂	
37.	Me	Me	Me	0		
38.	Me	Me	Me	1		
39.	Me	Me	Me	2		
40.	Me	Me	Me	0		CDCl ₃ , 400 MHz: 8.28-8.25 (m,2H), 8.19 (m,1H), 7.62 (s,1H), 6.52 (m, 1H), 4.13 (s,3H), 3.81 (m,1H), 3.30 (m,1H), 2.92-2.74 (m,2H), 2.80 (s, 3H), 2.32 (s,3H)

No.	R ¹	R ²	R ³	m	X	¹ H NMR
41.	Me	Me	Me	1		
42.	Me	Me	Me	2		
43.	Me	Me	Me	0		
44.	Me	Me	Me	1		
45.	Me	Me	Me	2		
46.	Me	Me	Me	0		
47.	Me	Me	Me	1		
48.	Me	Me	Me	2		
49.	Me	Me	Me	0		

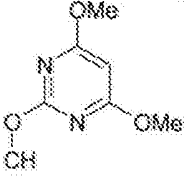
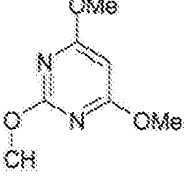
No.	R ¹	R ³	R ⁴	m	X	¹ H NMR
50.	Me	Me	Me	1		
51.	Me	Me	Me	2		
52.	Me	Me	Me	0	CHOC ₂ H ₄ F	
53.	Me	Me	Me	1	CHOC ₂ H ₄ F	
54.	Me	Me	Me	2	CHOC ₂ H ₄ F	
55.	Me	Me	Me	0	C=NOMe	
56.	Me	Me	Me	1	C=NOMe	
57.	Me	Me	Me	2	C=NOMe	
58.	Me	Me	Me	0	C=NOCH ₂ CCH	
59.	Me	Me	Me	1	C=NOCH ₂ CCH	
60.	Me	Me	Me	2	C=NOCH ₂ CCH	
61.	Me	Me	Me	0	C=NOCH ₂ CH=CH ₂	
62.	Me	Me	Me	1	C=NOCH ₂ CH=CH ₂	
63.	Me	Me	Me	2	C=NOCH ₂ CH=CH ₂	
64.	Me	Me	Me	0	C=O	
65.	Me	Me	Me	1	C=O	
66.	Me	Me	Me	2	C=O	
67.	Me	Me	Me	0	C=S	
68.	Me	Me	Me	1	C=S	
69.	Me	Me	Me	2	C=S	
70.	Me	Me	Me	0	C=S	
71.	Me	Me	Me	1	C=S	
72.	Me	Me	Me	2	C=S	
73.	Me	Me	Me	0	C=N-N(CH ₃) ₂	
74.	Me	Me	Me	1	C=N-N(CH ₃) ₂	
75.	Me	Me	Me	2	C=N-N(CH ₃) ₂	
76.	Me	Me	Me	0	O	
77.	Me	Me	Me	1	O	
78.	Me	Me	Me	2	O	
79.	Me	Me	Me	0	S	
80.	Me	Me	Me	1	S	
81.	Me	Me	Me	2	S	
82.	Me	Me	Me	0	SO	

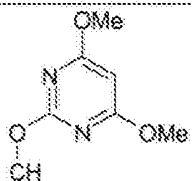
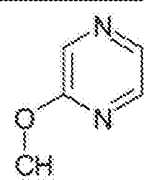
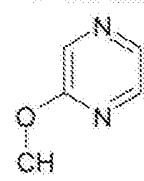
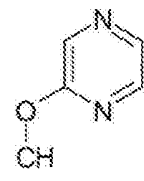
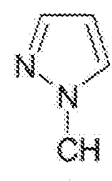

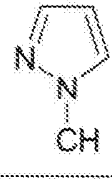
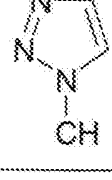
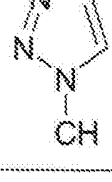
No.	R ¹	R ²	R ⁴	m	X	¹ H NMR
83.	Me	Me	Me	1	SO	
84.	Me	Me	Me	2	SO	
85.	Me	Me	Me	0	SO ₂	
86.	Me	Me	Me	1	SO ₂	
87.	Me	Me	Me	2	SO ₂	
88.	Me	Me	Me	0	NMe	
89.	Me	Me	Me	1	NMe	
90.	Me	Me	Me	2	NMe	
91.	Me	Me	H	0	CH ₂	
92.	Me	Me	H	1	CH ₂	
93.	Me	Me	H	2	CH ₂	
94.	Me	Me	H	0	CHMe	
95.	Me	Me	H	1	CHMe	
96.	Me	Me	H	2	CHMe	
97.	Me	Me	H	0	C(CH ₃) ₂	
98.	Me	Me	H	1	C(CH ₃) ₂	
99.	Me	Me	H	2	C(CH ₃) ₂	
100.	Me	Me	H	0	C(OC ₂ H ₄ O)	
101.	Me	Me	H	1	C(OC ₂ H ₄ O)	
102.	Me	Me	H	2	C(OC ₂ H ₄ O)	
103.	Me	Me	H	0	C(SC ₂ H ₄ S)	
104.	Me	Me	H	1	C(SC ₂ H ₄ S)	
105.	Me	Me	H	2	C(SC ₂ H ₄ S)	
106.	Me	Me	H	0	CHOMe	
107.	Me	Me	H	1	CHOMe	
108.	Me	Me	H	2	CHOMe	
109.	Me	Me	H	0	CHOEt	
110.	Me	Me	H	1	CHOEt	
111.	Me	Me	H	2	CHOEt	
112.	Me	Me	H	0	CHOiPr	
113.	Me	Me	H	1	CHOiPr	
114.	Me	Me	H	2	CHOiPr	
115.	Me	Me	H	0	CHOCH ₂ cPr	
116.	Me	Me	H	1	CHOCH ₂ cPr	
117.	Me	Me	H	2	CHOCH ₂ cPr	
118.	Me	Me	H	0	CHOC ₂ H ₄ OMe	
119.	Me	Me	H	1	CHOC ₂ H ₄ OMe	
120.	Me	Me	H	2	CHOC ₂ H ₄ OMe	
121.	Me	Me	H	0	CHOCH ₂ CCH	
122.	Me	Me	H	1	CHOCH ₂ CCH	



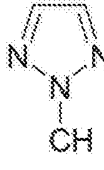
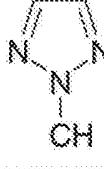
No.	R ¹	R ²	R ⁴	m	X	¹ H NMR
123.	Me	Me	H	2	CHOCH ₂ CCH	
124.	Me	Me	H	0	CHOCH ₂ CH=CH ₂	
125.	Me	Me	H	1	CHOCH ₂ CH=CH ₂	
126.	Me	Me	H	2	CHOCH ₂ CH=CH ₂	
127.	Me	Me	H	0		
128.	Me	Me	H	1		
129.	Me	Me	H	2		
130.	Me	Me	H	0		
131.	Me	Me	H	1		
132.	Me	Me	H	2		
133.	Me	Me	H	0		
134.	Me	Me	H	1		

No.	R ¹	R ²	R ⁴	m	X	¹ H NMR
135.	Me	Me	H	2		
136.	Me	Me	H	0		
137.	Me	Me	H	1		
138.	Me	Me	H	2		
139.	Me	Me	H	0		
140.	Me	Me	H	1		
141.	Me	Me	H	2		
142.	Me	Me	H	0	CHOC ₂ H ₄ F	
143.	Me	Me	H	1	CHOC ₂ H ₄ F	
144.	Me	Me	H	2	CHOC ₂ H ₄ F	
145.	Me	Me	H	0	C=NOMe	
146.	Me	Me	H	1	C=NOMe	
147.	Me	Me	H	2	C=NOMe	
148.	Me	Me	H	0	C=NOCH ₂ CCH	
149.	Me	Me	H	1	C=NOCH ₂ CCH	
150.	Me	Me	H	2	C=NOCH ₂ CCH	

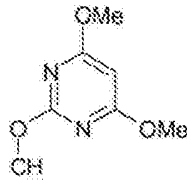
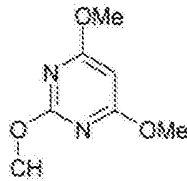
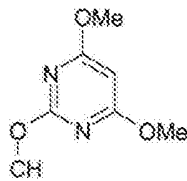
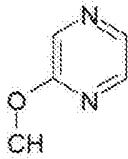
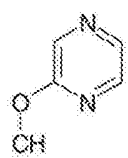
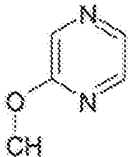
No.	R ¹	R ²	R ³	m	X	¹ H NMR
151.	Me	Me	H	0	C=NOCH ₂ CH=CH ₂	
152.	Me	Me	H	1	C=NOCH ₂ CH=CH ₂	
153.	Me	Me	H	2	C=NOCH ₂ CH=CH ₂	
154.	Me	Me	H	0	C=O	
155.	Me	Me	H	1	C=O	
156.	Me	Me	H	2	C=O	
157.	Me	Me	H	0	C=S	
158.	Me	Me	H	1	C=S	
159.	Me	Me	H	2	C=S	
160.	Me	Me	H	0	C=S	
161.	Me	Me	H	1	C=S	
162.	Me	Me	H	2	C=S	
163.	Me	Me	H	0	C=N-N(CH ₃) ₂	
164.	Me	Me	H	1	C=N-N(CH ₃) ₂	
165.	Me	Me	H	2	C=N-N(CH ₃) ₂	
166.	Me	Me	H	0	O	
167.	Me	Me	H	1	O	
168.	Me	Me	H	2	O	
169.	Me	Me	H	0	S	
170.	Me	Me	H	1	S	
171.	Me	Me	H	2	S	
172.	Me	Me	H	0	SO	
173.	Me	Me	H	1	SO	
174.	Me	Me	H	2	SO	
175.	Me	Me	H	0	SO ₂	
176.	Me	Me	H	1	SO ₂	
177.	Me	Me	H	2	SO ₂	
178.	Me	Me	H	0	NMe	
179.	Me	Me	H	1	NMe	
180.	Me	Me	H	2	NMe	
181.	Et	Me	Me	0	CH ₂	
182.	Et	Me	Me	1	CH ₂	
183.	Et	Me	Me	2	CH ₂	
184.	Et	Me	Me	0	CHMe	
185.	Et	Me	Me	1	CHMe	
186.	Et	Me	Me	2	CHMe	
187.	Et	Me	Me	0	C(CH ₃) ₂	CDCl ₃ , 400 MHz: 1.49 (s, 6H), 1.61 (t, 3H), 2.04 (dd, 2H), 2.29 (s, 3H), 2.62 (s, 3H), 2.99 (dd, 2H), 4.46 (q, 2H), 7.23 (s, 1H), 9.12 (s, 1H)
188.	Et	Me	Me	1	C(CH ₃) ₂	

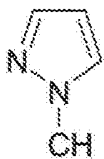
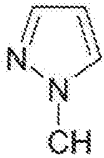

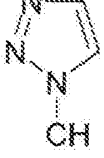
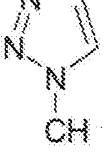
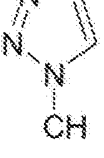
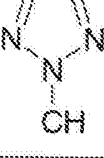
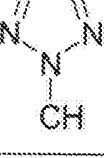
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189.	Et	Me	Me	2	C(CH ₃) ₂	CDCl ₃ , 400 MHz: 1.56 (s, 6H), 1.64 (t, 3H), 2.36 (dd, 2H), 2.65 (s, 3H), 2.77 (s, 3H), 3.43 (dd, 2H), 4.46 (q, 2H), 7.37 (s, 1H), 10.16 (s, 1H)
190.	Et	Me	Me	0	C(OC ₂ H ₄ O)	
191.	Et	Me	Me	1	C(OC ₂ H ₄ O)	
192.	Et	Me	Me	2	C(OC ₂ H ₄ O)	
193.	Et	Me	Me	0	C(SC ₂ H ₄ S)	
194.	Et	Me	Me	1	C(SC ₂ H ₄ S)	
195.	Et	Me	Me	2	C(SC ₂ H ₄ S)	
196.	Et	Me	Me	0	CHOMe	
197.	Et	Me	Me	1	CHOMe	
198.	Et	Me	Me	2	CHOMe	
199.	Et	Me	Me	0	CHOEt	
200.	Et	Me	Me	1	CHOEt	
201.	Et	Me	Me	2	CHOEt	
202.	Et	Me	Me	0	CHOiPr	
203.	Et	Me	Me	1	CHOiPr	
204.	Et	Me	Me	2	CHOiPr	
205.	Et	Me	Me	0	CHOCH ₂ cPr	
206.	Et	Me	Me	1	CHOCH ₂ cPr	
207.	Et	Me	Me	2	CHOCH ₂ cPr	
208.	Et	Me	Me	0	CHOC ₂ H ₄ OMe	
209.	Et	Me	Me	1	CHOC ₂ H ₄ OMe	
210.	Et	Me	Me	2	CHOC ₂ H ₄ OMe	
211.	Et	Me	Me	0	CHOCH ₂ CCH	
212.	Et	Me	Me	1	CHOCH ₂ CCH	
213.	Et	Me	Me	2	CHOCH ₂ CCH	
214.	Et	Me	Me	0	CHOCH ₂ CH=CH ₂	
215.	Et	Me	Me	1	CHOCH ₂ CH=CH ₂	
216.	Et	Me	Me	2	CHOCH ₂ CH=CH ₂	
217.	Et	Me	Me	0		
218.	Et	Me	Me	1		


No.	R ¹	R ²	R ⁴	m	X	¹ H NMR
219.	Et	Me	Me	2		
220.	Et	Me	Me	0		
221.	Et	Me	Me	1		
222.	Et	Me	Me	2		
223.	Et	Me	Me	0		
224.	Et	Me	Me	1		
225.	Et	Me	Me	2		
226.	Et	Me	Me	0		
227.	Et	Me	Me	1		

No.	R ¹	R ³	R ⁴	m	X	¹ H NMR
228.	Et	Me	Me	2		
229.	Et	Me	Me	0		
230.	Et	Me	Me	1		
231.	Et	Me	Me	2		
232.	Et	Me	Me	0	CHOC ₂ H ₄ F	
233.	Et	Me	Me	1	CHOC ₂ H ₄ F	
234.	Et	Me	Me	2	CHOC ₂ H ₄ F	
235.	Et	Me	Me	0	C=NOMe	
236.	Et	Me	Me	1	C=NOMe	
237.	Et	Me	Me	2	C=NOMe	
238.	Et	Me	Me	0	C=NOCH ₂ CCH	
239.	Et	Me	Me	1	C=NOCH ₂ CCH	
240.	Et	Me	Me	2	C=NOCH ₂ CCH	
241.	Et	Me	Me	0	C=NOCH ₂ CH=CH ₂	
242.	Et	Me	Me	1	C=NOCH ₂ CH=CH ₂	
243.	Et	Me	Me	2	C=NOCH ₂ CH=CH ₂	
244.	Et	Me	Me	0	C=O	
245.	Et	Me	Me	1	C=O	
246.	Et	Me	Me	2	C=O	
247.	Et	Me	Me	0	C=S	
248.	Et	Me	Me	1	C=S	
249.	Et	Me	Me	2	C=S	
250.	Et	Me	Me	0	C=S	
251.	Et	Me	Me	1	C=S	
252.	Et	Me	Me	2	C=S	
253.	Et	Me	Me	0	C=N-N(CH ₃) ₂	

No.	R ¹	R ²	R ³	m	X	¹ H NMR
254.	Et	Me	Me	1	C=N-N(CH ₃) ₂	
255.	Et	Me	Me	2	C=N-N(CH ₃) ₂	
256.	Et	Me	Me	0	O	
257.	Et	Me	Me	1	O	
258.	Et	Me	Me	2	O	
259.	Et	Me	Me	0	S	
260.	Et	Me	Me	1	S	
261.	Et	Me	Me	2	S	
262.	Et	Me	Me	0	SO	
263.	Et	Me	Me	1	SO	
264.	Et	Me	Me	2	SO	
265.	Et	Me	Me	0	SO ₂	
266.	Et	Me	Me	1	SO ₂	
267.	Et	Me	Me	2	SO ₂	
268.	Et	Me	Me	0	NMe	
269.	Et	Me	Me	1	NMe	
270.	Et	Me	Me	2	NMe	
271.	Et	Me	H	0	CH ₂	
272.	Et	Me	H	1	CH ₂	
273.	Et	Me	H	2	CH ₂	
274.	Et	Me	H	0	CHMe	
275.	Et	Me	H	1	CHMe	
276.	Et	Me	H	2	CHMe	
277.	Et	Me	H	0	C(CH ₃) ₂	
278.	Et	Me	H	1	C(CH ₃) ₂	
279.	Et	Me	H	2	C(CH ₃) ₂	
280.	Et	Me	H	0	C(OC ₂ H ₄ O)	
281.	Et	Me	H	1	C(OC ₂ H ₄ O)	
282.	Et	Me	H	2	C(OC ₂ H ₄ O)	
283.	Et	Me	H	0	C(SC ₂ H ₄ S)	
284.	Et	Me	H	1	C(SC ₂ H ₄ S)	
285.	Et	Me	H	2	C(SC ₂ H ₄ S)	
286.	Et	Me	H	0	CHOMe	
287.	Et	Me	H	1	CHOMe	
288.	Et	Me	H	2	CHOMe	
289.	Et	Me	H	0	CHOEt	
290.	Et	Me	H	1	CHOEt	
291.	Et	Me	H	2	CHOEt	
292.	Et	Me	H	0	CHOiPr	
293.	Et	Me	H	1	CHOiPr	

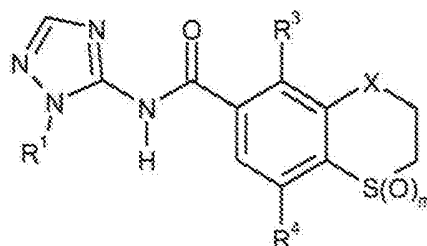
No.	R ¹	R ³	R ⁴	m	X	¹ H NMR
294.	Et	Me	H	2	CHOiPr	
295.	Et	Me	H	0	CHOCH ₂ cPr	
296.	Et	Me	H	1	CHOCH ₂ cPr	
297.	Et	Me	H	2	CHOCH ₂ cPr	
298.	Et	Me	H	0	CHOC ₂ H ₄ OMe	
299.	Et	Me	H	1	CHOC ₂ H ₄ OMe	
300.	Et	Me	H	2	CHOC ₂ H ₄ OMe	
301.	Et	Me	H	0	CHOCH ₂ CCH	
302.	Et	Me	H	1	CHOCH ₂ CCH	
303.	Et	Me	H	2	CHOCH ₂ CCH	
304.	Et	Me	H	0	CHOCH ₂ CH=CH ₂	
305.	Et	Me	H	1	CHOCH ₂ CH=CH ₂	
306.	Et	Me	H	2	CHOCH ₂ CH=CH ₂	
307.	Et	Me	H	0		
308.	Et	Me	H	1		
309.	Et	Me	H	2		
310.	Et	Me	H	0		
311.	Et	Me	H	1		
312.	Et	Me	H	2		

No.	R ¹	R ²	R ⁴	m	X	¹ H NMR
313.	Et	Me	H	0		
314.	Et	Me	H	1		
315.	Et	Me	H	2		
316.	Et	Me	H	0		
317.	Et	Me	H	1		
318.	Et	Me	H	2		
319.	Et	Me	H	0		
320.	Et	Me	H	1		

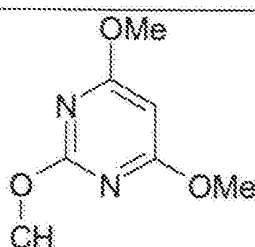
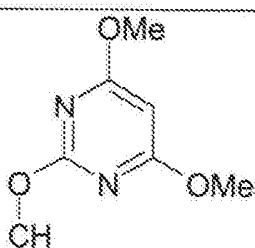
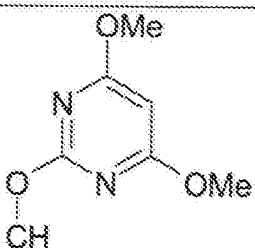
No.	R ¹	R ³	R ⁴	m	X	¹ H NMR
321.	Et	Me	H	2		
322.	Et	Me	H	0	CHOC ₂ H ₅ F	
323.	Et	Me	H	1	CHOC ₂ H ₅ F	
324.	Et	Me	H	2	CHOC ₂ H ₅ F	
325.	Et	Me	H	0	C=NOMe	
326.	Et	Me	H	1	C=NOMe	
327.	Et	Me	H	2	C=NOMe	
328.	Et	Me	H	0	C=NOCH ₂ CCH	
329.	Et	Me	H	1	C=NOCH ₂ CCH	
330.	Et	Me	H	2	C=NOCH ₂ CCH	
331.	Et	Me	H	0	C=NOCH ₂ CH=CH ₂	
332.	Et	Me	H	1	C=NOCH ₂ CH=CH ₂	
333.	Et	Me	H	2	C=NOCH ₂ CH=CH ₂	
334.	Et	Me	H	0	C=O	
335.	Et	Me	H	1	C=O	
336.	Et	Me	H	2	C=O	
337.	Et	Me	H	0	C=S	
338.	Et	Me	H	1	C=S	
339.	Et	Me	H	2	C=S	
340.	Et	Me	H	0	C=S	
341.	Et	Me	H	1	C=S	
342.	Et	Me	H	2	C=S	
343.	Et	Me	H	0	C=N-N(CH ₃) ₂	
344.	Et	Me	H	1	C=N-N(CH ₃) ₂	
345.	Et	Me	H	2	C=N-N(CH ₃) ₂	
346.	Et	Me	H	0	O	
347.	Et	Me	H	1	O	
348.	Et	Me	H	2	O	
349.	Et	Me	H	0	S	
350.	Et	Me	H	1	S	
351.	Et	Me	H	2	S	
352.	Et	Me	H	0	SO	
353.	Et	Me	H	1	SO	
354.	Et	Me	H	2	SO	
355.	Et	Me	H	0	SO ₂	
356.	Et	Me	H	1	SO ₂	
357.	Et	Me	H	2	SO ₂	

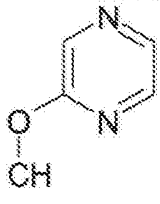
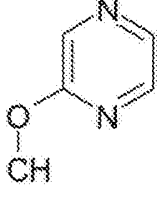
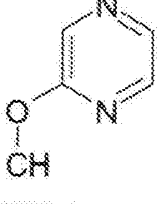

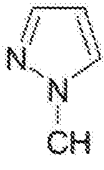
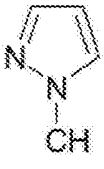
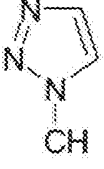
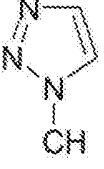
No.	R ¹	R ³	R ⁴	m	X	¹ H NMR
358.	Et	Me	H	0	NMe	
359.	Et	Me	H	1	NMe	
360.	Et	Me	H	2	NMe	


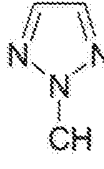
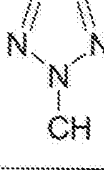
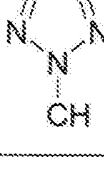
Table 2: Inventive compounds of the general formula (I) in which Q is Q2, Y is S(O)_m, R⁵ is hydrogen and n is 2



Number	R ¹	R ³	R ⁴	m	X	¹ H NMR
361.	Me	Me	Me	0	CH ₂	
362.	Me	Me	Me	1	CH ₂	
363.	Me	Me	Me	2	CH ₂	
364.	Me	Me	Me	0	CHMe	
365.	Me	Me	Me	1	CHMe	
366.	Me	Me	Me	2	CHMe	
367.	Me	Me	Me	0	C(CH ₃) ₂	
368.	Me	Me	Me	1	C(CH ₃) ₂	
369.	Me	Me	Me	2	C(CH ₃) ₂	
370.	Me	Me	Me	0	C(OC ₂ H ₄ O)	
371.	Me	Me	Me	1	C(OC ₂ H ₄ O)	
372.	Me	Me	Me	2	C(OC ₂ H ₄ O)	
373.	Me	Me	Me	0	C(SC ₂ H ₄ S)	
374.	Me	Me	Me	1	C(SC ₂ H ₄ S)	
375.	Me	Me	Me	2	C(SC ₂ H ₄ S)	
376.	Me	Me	Me	0	CHOMe	
377.	Me	Me	Me	1	CHOMe	
378.	Me	Me	Me	2	CHOMe	
379.	Me	Me	Me	0	CHOEt	
380.	Me	Me	Me	1	CHOEt	

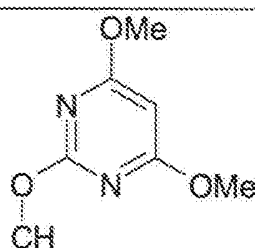
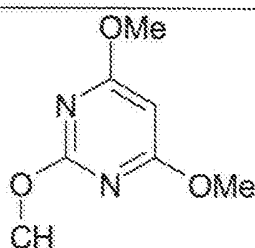
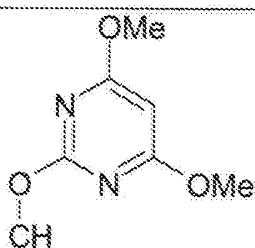
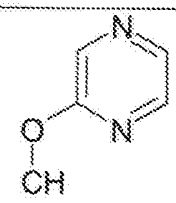
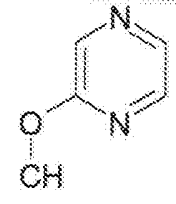
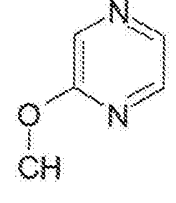
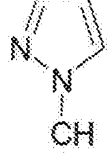
Number	R ¹	R ³	R ⁴	m	X	¹ H NMR
381.	Me	Me	Me	2	CHOEt	
382.	Me	Me	Me	0	CHOiPr	
383.	Me	Me	Me	1	CHOiPr	
384.	Me	Me	Me	2	CHOiPr	
385.	Me	Me	Me	0	CHOCH ₂ cPr	
386.	Me	Me	Me	1	CHOCH ₂ cPr	
387.	Me	Me	Me	2	CHOCH ₂ cPr	
388.	Me	Me	Me	0	CHOC ₂ H ₄ OMe	
389.	Me	Me	Me	1	CHOC ₂ H ₄ OMe	
390.	Me	Me	Me	2	CHOC ₂ H ₄ OMe	
391.	Me	Me	Me	0	CHOCH ₂ CCH	
392.	Me	Me	Me	1	CHOCH ₂ CCH	
393.	Me	Me	Me	2	CHOCH ₂ CCH	
394.	Me	Me	Me	0	CHOCH ₂ CH=CH ₂	
395.	Me	Me	Me	1	CHOCH ₂ CH=CH ₂	
396.	Me	Me	Me	2	CHOCH ₂ CH=CH ₂	
397.	Me	Me	Me	0		
398.	Me	Me	Me	1		
399.	Me	Me	Me	2		


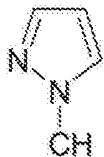



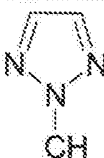
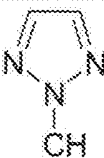
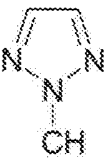
Number	R ¹	R ³	R ⁴	m	X	¹ H NMR
400.	Me	Me	Me	0		
401.	Me	Me	Me	1		
402.	Me	Me	Me	2		
403.	Me	Me	Me	0		
404.	Me	Me	Me	1		
405.	Me	Me	Me	2		
406.	Me	Me	Me	0		
407.	Me	Me	Me	1		

Number	R ¹	R ³	R ⁴	m	X	¹ H NMR
408.	Me	Me	Me	2		
409.	Me	Me	Me	0		
410.	Me	Me	Me	1		
411.	Me	Me	Me	2		
412.	Me	Me	Me	0	CHOC ₂ H ₄ F	
413.	Me	Me	Me	1	CHOC ₂ H ₄ F	
414.	Me	Me	Me	2	CHOC ₂ H ₄ F	
415.	Me	Me	Me	0	C=NOMe	
416.	Me	Me	Me	1	C=NOMe	
417.	Me	Me	Me	2	C=NOMe	
418.	Me	Me	Me	0	C=NOCH ₂ CCH	
419.	Me	Me	Me	1	C=NOCH ₂ CCH	
420.	Me	Me	Me	2	C=NOCH ₂ CCH	
421.	Me	Me	Me	0	C=NOCH ₂ CH=CH ₂	
422.	Me	Me	Me	1	C=NOCH ₂ CH=CH ₂	
423.	Me	Me	Me	2	C=NOCH ₂ CH=CH ₂	
424.	Me	Me	Me	0	C=O	
425.	Me	Me	Me	1	C=O	
426.	Me	Me	Me	2	C=O	
427.	Me	Me	Me	0	C=S	
428.	Me	Me	Me	1	C=S	

Number	R ¹	R ²	R ³	m	X	¹ H NMR
429.	Me	Me	Me	2	C=S	
430.	Me	Me	Me	0	C=S	
431.	Me	Me	Me	1	C=S	
432.	Me	Me	Me	2	C=S	
433.	Me	Me	Me	0	C=N-N(CH ₃) ₂	
434.	Me	Me	Me	1	C=N-N(CH ₃) ₂	
435.	Me	Me	Me	2	C=N-N(CH ₃) ₂	
436.	Me	Me	Me	0	O	
437.	Me	Me	Me	1	O	
438.	Me	Me	Me	2	O	
439.	Me	Me	Me	0	S	
440.	Me	Me	Me	1	S	
441.	Me	Me	Me	2	S	
442.	Me	Me	Me	0	SO	
443.	Me	Me	Me	1	SO	
444.	Me	Me	Me	2	SO	
445.	Me	Me	Me	0	SO ₂	
446.	Me	Me	Me	1	SO ₂	
447.	Me	Me	Me	2	SO ₂	
448.	Me	Me	Me	0	NMe	
449.	Me	Me	Me	1	NMe	
450.	Me	Me	Me	2	NMe	
451.	Me	Me	H	0	CH ₂	
452.	Me	Me	H	1	CH ₂	
453.	Me	Me	H	2	CH ₂	
454.	Me	Me	H	0	CHMe	
455.	Me	Me	H	1	CHMe	
456.	Me	Me	H	2	CHMe	
457.	Me	Me	H	0	C(CH ₃) ₂	
458.	Me	Me	H	1	C(CH ₃) ₂	

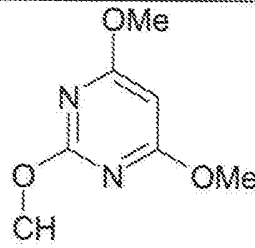
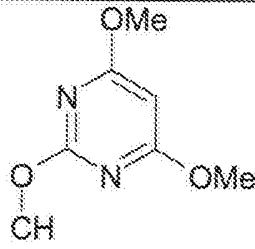
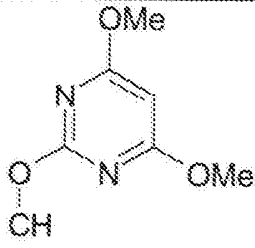
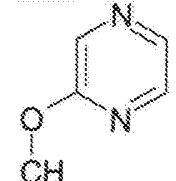
Number	R ¹	R ³	R ⁴	m	X	¹ H NMR
459.	Me	Me	H	2	C(CH ₃) ₂	
460.	Me	Me	H	0	C(OC ₂ H ₄ O)	
461.	Me	Me	H	1	C(OC ₂ H ₄ O)	
462.	Me	Me	H	2	C(OC ₂ H ₄ O)	
463.	Me	Me	H	0	C(SC ₂ H ₄ S)	
464.	Me	Me	H	1	C(SC ₂ H ₄ S)	
465.	Me	Me	H	2	C(SC ₂ H ₄ S)	
466.	Me	Me	H	0	CHOMe	
467.	Me	Me	H	1	CHOMe	
468.	Me	Me	H	2	CHOMe	
469.	Me	Me	H	0	CHOEt	
470.	Me	Me	H	1	CHOEt	
471.	Me	Me	H	2	CHOEt	
472.	Me	Me	H	0	CHOiPr	
473.	Me	Me	H	1	CHOiPr	
474.	Me	Me	H	2	CHOiPr	
475.	Me	Me	H	0	CHOCH ₂ cPr	
476.	Me	Me	H	1	CHOCH ₂ cPr	
477.	Me	Me	H	2	CHOCH ₂ cPr	
478.	Me	Me	H	0	CHOC ₂ H ₄ OMe	
479.	Me	Me	H	1	CHOC ₂ H ₄ OMe	
480.	Me	Me	H	2	CHOC ₂ H ₄ OMe	
481.	Me	Me	H	0	CHOCH ₂ CCH	
482.	Me	Me	H	1	CHOCH ₂ CCH	
483.	Me	Me	H	2	CHOCH ₂ CCH	
484.	Me	Me	H	0	CHOCH ₂ CH=CH ₂	
485.	Me	Me	H	1	CHOCH ₂ CH=CH ₂	
486.	Me	Me	H	2	CHOCH ₂ CH=CH ₂	

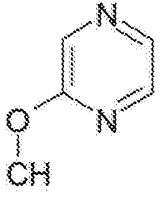
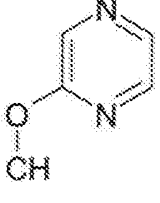
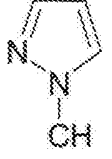
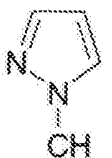


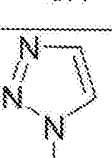

Number	R ¹	R ³	R ⁴	m	X	¹ H NMR
487.	Me	Me	H	0	 <p>Chemical structure of 1,3-dimethyl-5-(hydroxymethyl)pyrimidin-2(1H)-one. The pyrimidine ring has methyl groups at positions 1 and 3, and a hydroxymethyl group at position 5.</p>	
488.	Me	Me	H	1	 <p>Chemical structure of 1,3-dimethyl-5-(hydroxymethyl)pyrimidin-2(1H)-one. The pyrimidine ring has methyl groups at positions 1 and 3, and a hydroxymethyl group at position 5.</p>	
489.	Me	Me	H	2	 <p>Chemical structure of 1,3-dimethyl-5-(hydroxymethyl)pyrimidin-2(1H)-one. The pyrimidine ring has methyl groups at positions 1 and 3, and a hydroxymethyl group at position 5.</p>	
490.	Me	Me	H	0	 <p>Chemical structure of 4-(hydroxymethyl)pyrimidine. The pyrimidine ring has a hydroxymethyl group at position 4.</p>	
491.	Me	Me	H	1	 <p>Chemical structure of 4-(hydroxymethyl)pyrimidine. The pyrimidine ring has a hydroxymethyl group at position 4.</p>	
492.	Me	Me	H	2	 <p>Chemical structure of 4-(hydroxymethyl)pyrimidine. The pyrimidine ring has a hydroxymethyl group at position 4.</p>	
493.	Me	Me	H	0	 <p>Chemical structure of 1-(hydroxymethyl)imidazole. The imidazole ring has a hydroxymethyl group at position 1.</p>	

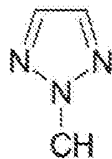
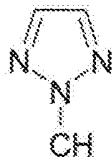
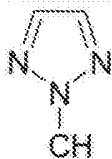
Number	R ¹	R ²	R ⁴	m	X	¹ H NMR
494.	Me	Me	H	1		
495.	Me	Me	H	2		
496.	Me	Me	H	0		
497.	Me	Me	H	1		
498.	Me	Me	H	2		
499.	Me	Me	H	0		
500.	Me	Me	H	1		
501.	Me	Me	H	2		
502.	Me	Me	H	0	CHOC ₂ H ₄ F	
503.	Me	Me	H	1	CHOC ₂ H ₄ F	
504.	Me	Me	H	2	CHOC ₂ H ₄ F	
505.	Me	Me	H	0	C=NOMe	

Number	R ¹	R ²	R ⁴	m	X	1H NMR
506.	Me	Me	H	1	C=NOMe	
507.	Me	Me	H	2	C=NOMe	
508.	Me	Me	H	0	C=NOCH ₂ CCH	
509.	Me	Me	H	1	C=NOCH ₂ CCH	
510.	Me	Me	H	2	C=NOCH ₂ CCH	
511.	Me	Me	H	0	C=NOCH ₂ CH=CH ₂	
512.	Me	Me	H	1	C=NOCH ₂ CH=CH ₂	
513.	Me	Me	H	2	C=NOCH ₂ CH=CH ₂	
514.	Me	Me	H	0	C=O	
515.	Me	Me	H	1	C=O	
516.	Me	Me	H	2	C=O	
517.	Me	Me	H	0	C=S	
518.	Me	Me	H	1	C=S	
519.	Me	Me	H	2	C=S	
520.	Me	Me	H	0	C=S	
521.	Me	Me	H	1	C=S	
522.	Me	Me	H	2	C=S	
523.	Me	Me	H	0	C=N-N(CH ₃) ₂	
524.	Me	Me	H	1	C=N-N(CH ₃) ₂	
525.	Me	Me	H	2	C=N-N(CH ₃) ₂	
526.	Me	Me	H	0	O	
527.	Me	Me	H	1	O	
528.	Me	Me	H	2	O	
529.	Me	Me	H	0	S	
530.	Me	Me	H	1	S	
531.	Me	Me	H	2	S	
532.	Me	Me	H	0	SO	
533.	Me	Me	H	1	SO	
534.	Me	Me	H	2	SO	
535.	Me	Me	H	0	SO ₂	

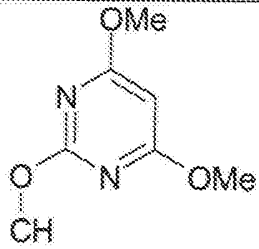
Number	R ¹	R ³	R ⁴	m	X	¹ H NMR
536.	Me	Me	H	1	SO ₂	
537.	Me	Me	H	2	SO ₂	
538.	Me	Me	H	0	NMe	
539.	Me	Me	H	1	NMe	
540.	Me	Me	H	2	NMe	
541.	Et	Me	Me	0	CH ₂	
542.	Et	Me	Me	1	CH ₂	
543.	Et	Me	Me	2	CH ₂	
544.	Et	Me	Me	0	CHMe	
545.	Et	Me	Me	1	CHMe	
546.	Et	Me	Me	2	CHMe	
547.	Et	Me	Me	0	C(CH ₃) ₂	
548.	Et	Me	Me	1	C(CH ₃) ₂	
549.	Et	Me	Me	2	C(CH ₃) ₂	
550.	Et	Me	Me	0	C(OC ₂ H ₄ O)	
551.	Et	Me	Me	1	C(OC ₂ H ₄ O)	
552.	Et	Me	Me	2	C(OC ₂ H ₄ O)	
553.	Et	Me	Me	0	C(SC ₂ H ₄ S)	
554.	Et	Me	Me	1	C(SC ₂ H ₄ S)	
555.	Et	Me	Me	2	C(SC ₂ H ₄ S)	
556.	Et	Me	Me	0	CHOMe	
557.	Et	Me	Me	1	CHOMe	
558.	Et	Me	Me	2	CHOMe	
559.	Et	Me	Me	0	CHOEt	
560.	Et	Me	Me	1	CHOEt	
561.	Et	Me	Me	2	CHOEt	
562.	Et	Me	Me	0	CHOiPr	
563.	Et	Me	Me	1	CHOiPr	
564.	Et	Me	Me	2	CHOiPr	
565.	Et	Me	Me	0	CHOCH ₂ cPr	

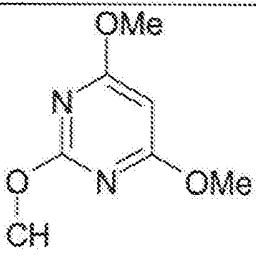
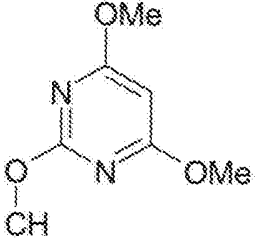
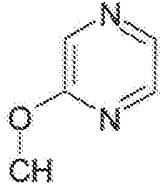
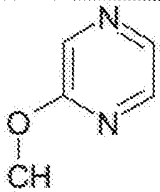
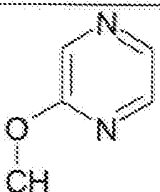


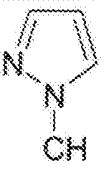
Number	R ¹	R ²	R ³	m	X	¹ H NMR
566.	Et	Me	Me	1	CHOCH ₂ cPr	
567.	Et	Me	Me	2	CHOCH ₂ cPr	
568.	Et	Me	Me	0	CHOC ₂ H ₄ OMe	
569.	Et	Me	Me	1	CHOC ₂ H ₄ OMe	
570.	Et	Me	Me	2	CHOC ₂ H ₄ OMe	
571.	Et	Me	Me	0	CHOCH ₂ CCH	
572.	Et	Me	Me	1	CHOCH ₂ CCH	
573.	Et	Me	Me	2	CHOCH ₂ CCH	
574.	Et	Me	Me	0	CHOCH ₂ CH=CH ₂	
575.	Et	Me	Me	1	CHOCH ₂ CH=CH ₂	
576.	Et	Me	Me	2	CHOCH ₂ CH=CH ₂	
577.	Et	Me	Me	0	 <chem>COC1=CC(=C(C=C1)OC)C(O)N</chem>	
578.	Et	Me	Me	1	 <chem>COC1=CC(=C(C=C1)OC)C(O)N</chem>	
579.	Et	Me	Me	2	 <chem>COC1=CC(=C(C=C1)OC)C(O)N</chem>	
580.	Et	Me	Me	0	 <chem>C1=CC=CN(C=C1)CO</chem>	

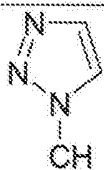


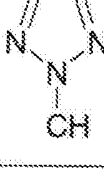
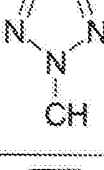
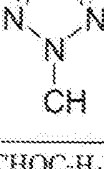
Number	R ¹	R ²	R ⁴	m	X	¹ H NMR
581.	Et	Me	Me	1		
582.	Et	Me	Me	2		
583.	Et	Me	Me	0		
584.	Et	Me	Me	1		
585.	Et	Me	Me	2		
586.	Et	Me	Me	0		
587.	Et	Me	Me	1		
588.	Et	Me	Me	2		

Number	R ¹	R ³	R ⁴	m	X	¹ H NMR
589.	Et	Me	Me	0		
590.	Et	Me	Me	1		
591.	Et	Me	Me	2		
592.	Et	Me	Me	0	CHOC ₂ H ₄ F	
593.	Et	Me	Me	1	CHOC ₂ H ₄ F	
594.	Et	Me	Me	2	CHOC ₂ H ₄ F	
595.	Et	Me	Me	0	C=NOMe	
596.	Et	Me	Me	1	C=NOMe	
597.	Et	Me	Me	2	C=NOMe	
598.	Et	Me	Me	0	C=NOCH ₂ CCH	
599.	Et	Me	Me	1	C=NOCH ₂ CCH	
600.	Et	Me	Me	2	C=NOCH ₂ CCH	
601.	Et	Me	Me	0	C=NOCH ₂ CH=CH ₂	
602.	Et	Me	Me	1	C=NOCH ₂ CH=CH ₂	
603.	Et	Me	Me	2	C=NOCH ₂ CH=CH ₂	
604.	Et	Me	Me	0	C=O	
605.	Et	Me	Me	1	C=O	
606.	Et	Me	Me	2	C=O	
607.	Et	Me	Me	0	C=S	
608.	Et	Me	Me	1	C=S	
609.	Et	Me	Me	2	C=S	
610.	Et	Me	Me	0	C=S	
611.	Et	Me	Me	1	C=S	

Number	R ¹	R ²	R ⁴	m	X	¹ H NMR
612.	Et	Me	Me	2	C=S	
613.	Et	Me	Me	0	C=N-N(CH ₃) ₂	
614.	Et	Me	Me	1	C=N-N(CH ₃) ₂	
615.	Et	Me	Me	2	C=N-N(CH ₃) ₂	
616.	Et	Me	Me	0	O	
617.	Et	Me	Me	1	O	
618.	Et	Me	Me	2	O	
619.	Et	Me	Me	0	S	
620.	Et	Me	Me	1	S	
621.	Et	Me	Me	2	S	
622.	Et	Me	Me	0	SO	
623.	Et	Me	Me	1	SO	
624.	Et	Me	Me	2	SO	
625.	Et	Me	Me	0	SO ₂	
626.	Et	Me	Me	1	SO ₂	
627.	Et	Me	Me	2	SO ₂	
628.	Et	Me	Me	0	NMe	
629.	Et	Me	Me	1	NMe	
630.	Et	Me	Me	2	NMe	
631.	Et	Me	H	0	CH ₂	
632.	Et	Me	H	1	CH ₂	
633.	Et	Me	H	2	CH ₂	
634.	Et	Me	H	0	CHMe	
635.	Et	Me	H	1	CHMe	
636.	Et	Me	H	2	CHMe	
637.	Et	Me	H	0	C(CH ₃) ₂	
638.	Et	Me	H	1	C(CH ₃) ₂	
639.	Et	Me	H	2	C(CH ₃) ₂	
640.	Et	Me	H	0	C(OC ₂ H ₅ O)	
641.	Et	Me	H	1	C(OC ₂ H ₅ O)	

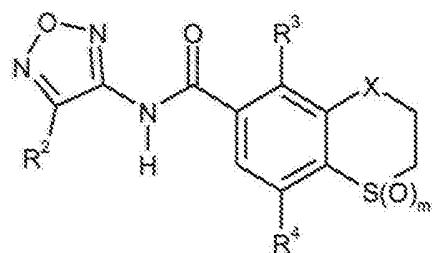
Number	R ¹	R ²	R ⁴	m	X	¹ H NMR
642.	Et	Me	H	2	C(OC ₂ H ₅ O)	
643.	Et	Me	H	0	C(SC ₂ H ₅ S)	
644.	Et	Me	H	1	C(SC ₂ H ₅ S)	
645.	Et	Me	H	2	C(SC ₂ H ₅ S)	
646.	Et	Me	H	0	CHOMe	
647.	Et	Me	H	1	CHOMe	
648.	Et	Me	H	2	CHOMe	
649.	Et	Me	H	0	CHOEt	
650.	Et	Me	H	1	CHOEt	
651.	Et	Me	H	2	CHOEt	
652.	Et	Me	H	0	CHOiPr	
653.	Et	Me	H	1	CHOiPr	
654.	Et	Me	H	2	CHOiPr	
655.	Et	Me	H	0	CHOCH ₂ cPr	
656.	Et	Me	H	1	CHOCH ₂ cPr	
657.	Et	Me	H	2	CHOCH ₂ cPr	
658.	Et	Me	H	0	CHOC ₂ H ₅ OMe	
659.	Et	Me	H	1	CHOC ₂ H ₅ OMe	
660.	Et	Me	H	2	CHOC ₂ H ₅ OMe	
661.	Et	Me	H	0	CHOCH ₂ CCH	
662.	Et	Me	H	1	CHOCH ₂ CCH	
663.	Et	Me	H	2	CHOCH ₂ CCH	
664.	Et	Me	H	0	CHOCH ₂ CH=CH ₂	
665.	Et	Me	H	1	CHOCH ₂ CH=CH ₂	
666.	Et	Me	H	2	CHOCH ₂ CH=CH ₂	
667.	Et	Me	H	0	 <p>The structure shows a pyrimidine ring with a nitrogen atom at the top and bottom. The top nitrogen is bonded to a methyl group (OMe). The bottom nitrogen is bonded to a methyl group (OMe) and a hydroxymethyl group (CH₂OH). The ring is shown in a perspective view with a double bond to the right.</p>	

Number	R ¹	R ³	R ²	m	X	¹ H NMR
668.	Et	Me	H	1	 <p>Chemical structure of 2,4,6-trimethoxyphenyl group: A benzene ring with methoxy (OMe) groups at positions 2, 4, and 6, and a hydroxymethyl (-CH₂OH) group at position 1.</p>	
669.	Et	Me	H	2	 <p>Chemical structure of 2,4,6-trimethoxyphenyl group: A benzene ring with methoxy (OMe) groups at positions 2, 4, and 6, and a hydroxymethyl (-CH₂OH) group at position 1.</p>	
670.	Et	Me	H	0	 <p>Chemical structure of 2-pyridyl group: A pyridine ring with a hydroxymethyl (-CH₂OH) group at position 2.</p>	
671.	Et	Me	H	1	 <p>Chemical structure of 2-pyridyl group: A pyridine ring with a hydroxymethyl (-CH₂OH) group at position 2.</p>	
672.	Et	Me	H	2	 <p>Chemical structure of 2-pyridyl group: A pyridine ring with a hydroxymethyl (-CH₂OH) group at position 2.</p>	
673.	Et	Me	H	0	 <p>Chemical structure of 1H-imidazol-2-yl group: An imidazole ring with a hydroxymethyl (-CH₂OH) group at position 2.</p>	
674.	Et	Me	H	1	 <p>Chemical structure of 1H-imidazol-2-yl group: An imidazole ring with a hydroxymethyl (-CH₂OH) group at position 2.</p>	
675.	Et	Me	H	2	 <p>Chemical structure of 1H-imidazol-2-yl group: An imidazole ring with a hydroxymethyl (-CH₂OH) group at position 2.</p>	

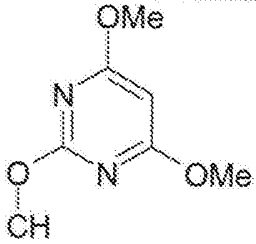
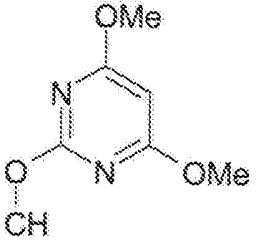
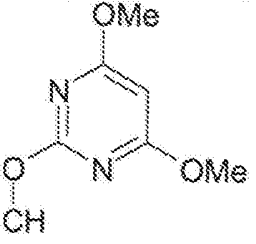
Number	R ¹	R ²	R ⁴	m	X	¹ H NMR
676.	Et	Me	H	0		
677.	Et	Me	H	1		
678.	Et	Me	H	2		
679.	Et	Me	H	0		
680.	Et	Me	H	1		
681.	Et	Me	H	2		
682.	Et	Me	H	0	CHOC ₂ H ₄ F	
683.	Et	Me	H	1	CHOC ₂ H ₄ F	
684.	Et	Me	H	2	CHOC ₂ H ₄ F	
685.	Et	Me	H	0	C=NOMe	
686.	Et	Me	H	1	C=NOMe	
687.	Et	Me	H	2	C=NOMe	
688.	Et	Me	H	0	C=NOCH ₂ CCH	
689.	Et	Me	H	1	C=NOCH ₂ CCH	
690.	Et	Me	H	2	C=NOCH ₂ CCH	
691.	Et	Me	H	0	C=NOCH ₂ CH=CH ₂	
692.	Et	Me	H	1	C=NOCH ₂ CH=CH ₂	

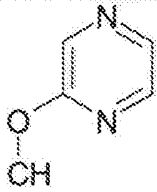
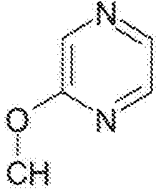
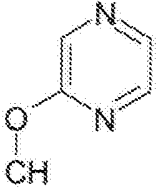


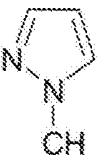


Number	R ¹	R ³	R ⁴	m	X	¹ H NMR
693.	Et	Me	H	2	C=NOCH ₂ CH=CH ₂	
694.	Et	Me	H	0	C=O	
695.	Et	Me	H	1	C=O	
696.	Et	Me	H	2	C=O	
697.	Et	Me	H	0	C=S	
698.	Et	Me	H	1	C=S	
699.	Et	Me	H	2	C=S	
700.	Et	Me	H	0	C=S	
701.	Et	Me	H	1	C=S	
702.	Et	Me	H	2	C=S	
703.	Et	Me	H	0	C=N-N(CH ₃) ₂	
704.	Et	Me	H	1	C=N-N(CH ₃) ₂	
705.	Et	Me	H	2	C=N-N(CH ₃) ₂	
706.	Et	Me	H	0	O	
707.	Et	Me	H	1	O	
708.	Et	Me	H	2	O	
709.	Et	Me	H	0	S	
710.	Et	Me	H	1	S	
711.	Et	Me	H	2	S	
712.	Et	Me	H	0	SO	
713.	Et	Me	H	1	SO	
714.	Et	Me	H	2	SO	
715.	Et	Me	H	0	SO ₂	
716.	Et	Me	H	1	SO ₂	
717.	Et	Me	H	2	SO ₂	
718.	Et	Me	H	0	NMe	
719.	Et	Me	H	1	NMe	
720.	Et	Me	H	2	NMe	


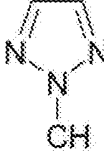
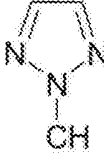
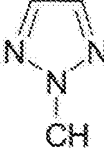
Table 3: Inventive compounds of the general formula (I) in which Q is Q3, Y is $S(O)_m$, R^5 is hydrogen and n is 2



No.	R^2	R^3	R^4	m	X	1H NMR
721.	Me	Me	Me	0	CH_2	
722.	Me	Me	Me	1	CH_2	
723.	Me	Me	Me	2	CH_2	
724.	Me	Me	Me	0	CHMe	
725.	Me	Me	Me	1	CHMe	
726.	Me	Me	Me	2	CHMe	
727.	Me	Me	Me	0	$C(CH_3)_2$	
728.	Me	Me	Me	1	$C(CH_3)_2$	
729.	Me	Me	Me	2	$C(CH_3)_2$	
730.	Me	Me	Me	0	$C(OC_2H_4O)$	
731.	Me	Me	Me	1	$C(OC_2H_4O)$	
732.	Me	Me	Me	2	$C(OC_2H_4O)$	
733.	Me	Me	Me	0	$C(SC_2H_4S)$	
734.	Me	Me	Me	1	$C(SC_2H_4S)$	
735.	Me	Me	Me	2	$C(SC_2H_4S)$	
736.	Me	Me	Me	0	CHOMe	
737.	Me	Me	Me	1	CHOMe	
738.	Me	Me	Me	2	CHOMe	
739.	Me	Me	Me	0	CHOEt	
740.	Me	Me	Me	1	CHOEt	
741.	Me	Me	Me	2	CHOEt	
742.	Me	Me	Me	0	CHOiPr	
743.	Me	Me	Me	1	CHOiPr	

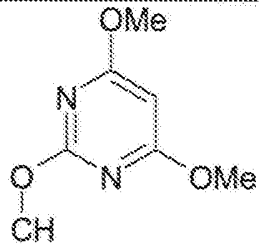
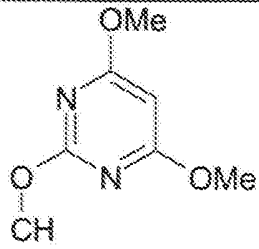
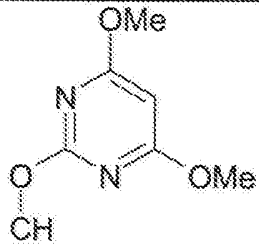
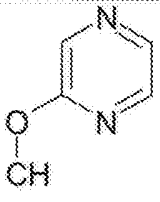
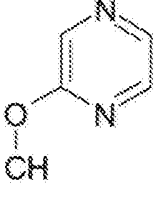
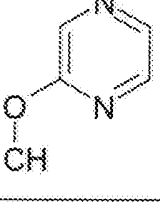

No.	R ²	R ³	R ⁴	m	X	¹ H NMR
744.	Me	Me	Me	2	CHOiPr	
745.	Me	Me	Me	0	CHOCH ₂ cPr	
746.	Me	Me	Me	1	CHOCH ₂ cPr	
747.	Me	Me	Me	2	CHOCH ₂ cPr	
748.	Me	Me	Me	0	CHOC ₂ H ₄ OMe	
749.	Me	Me	Me	1	CHOC ₂ H ₄ OMe	
750.	Me	Me	Me	2	CHOC ₂ H ₄ OMe	
751.	Me	Me	Me	0	CHOCH ₂ CCH	
752.	Me	Me	Me	1	CHOCH ₂ CCH	
753.	Me	Me	Me	2	CHOCH ₂ CCH	
754.	Me	Me	Me	0	CHOCH ₂ CH=CH ₂	
755.	Me	Me	Me	1	CHOCH ₂ CH=CH ₂	
756.	Me	Me	Me	2	CHOCH ₂ CH=CH ₂	
757.	Me	Me	Me	0		
758.	Me	Me	Me	1		
759.	Me	Me	Me	2		

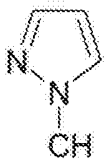
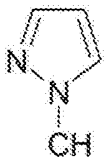




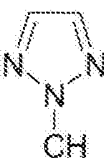
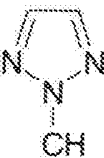
No.	R ²	R ³	R ⁴	m	X	¹ H NMR
760.	Me	Me	Me	0		
761.	Me	Me	Me	1		
762.	Me	Me	Me	2		DMSO-d ₆ , 400 MHz: 11.42 (s, 1H), 8.39 (s, 1H), 8.35-8.30 (m, 2H), 7.70 (s, 1H), 6.52 (dd, 1H), 3.79-3.69 (m, 1H), 3.61-3.52 (m, 1H), 2.80-2.60 (m, 5H), 2.38 (s, 3H), 2.21 (s, 3H)
763.	Me	Me	Me	0		
764.	Me	Me	Me	1		
765.	Me	Me	Me	2		
766.	Me	Me	Me	0		
767.	Me	Me	Me	1		

No.	R ²	R ³	R ⁴	m	X	¹ H NMR
768.	Me	Me	Me	2		
769.	Me	Me	Me	0		
770.	Me	Me	Me	1		
771.	Me	Me	Me	2		
772.	Me	Me	Me	0	CHOC ₂ H ₅ F	
773.	Me	Me	Me	1	CHOC ₂ H ₄ F	
774.	Me	Me	Me	2	CHOC ₂ H ₄ F	
775.	Me	Me	Me	0	C=NOMe	
776.	Me	Me	Me	1	C=NOMe	
777.	Me	Me	Me	2	C=NOMe	
778.	Me	Me	Me	0	C=NOCH ₂ CCH	
779.	Me	Me	Me	1	C=NOCH ₂ CCH	
780.	Me	Me	Me	2	C=NOCH ₂ CCH	
781.	Me	Me	Me	0	C=NOCH ₂ CH=CH ₂	
782.	Me	Me	Me	1	C=NOCH ₂ CH=CH ₂	
783.	Me	Me	Me	2	C=NOCH ₂ CH=CH ₂	
784.	Me	Me	Me	0	C=O	
785.	Me	Me	Me	1	C=O	
786.	Me	Me	Me	2	C=O	
787.	Me	Me	Me	0	C=S	
788.	Me	Me	Me	1	C=S	

No.	R ²	R ³	R ⁴	m	X	¹ H NMR
789.	Me	Me	Me	2	C=S	
790.	Me	Me	Me	0	C=S	
791.	Me	Me	Me	1	C=S	
792.	Me	Me	Me	2	C=S	
793.	Me	Me	Me	0	C=N-N(CH ₃) ₂	
794.	Me	Me	Me	1	C=N-N(CH ₃) ₂	
795.	Me	Me	Me	2	C=N-N(CH ₃) ₂	
796.	Me	Me	Me	0	O	
797.	Me	Me	Me	1	O	
798.	Me	Me	Me	2	O	
799.	Me	Me	Me	0	S	
800.	Me	Me	Me	1	S	
801.	Me	Me	Me	2	S	
802.	Me	Me	Me	0	SO	
803.	Me	Me	Me	1	SO	
804.	Me	Me	Me	2	SO	
805.	Me	Me	Me	0	SO ₂	
806.	Me	Me	Me	1	SO ₂	
807.	Me	Me	Me	2	SO ₂	
808.	Me	Me	Me	0	NMe	
809.	Me	Me	Me	1	NMe	
810.	Me	Me	Me	2	NMe	
811.	Me	Me	H	0	CH ₂	
812.	Me	Me	H	1	CH ₂	
813.	Me	Me	H	2	CH ₂	
814.	Me	Me	H	0	CHMe	
815.	Me	Me	H	1	CHMe	
816.	Me	Me	H	2	CHMe	
817.	Me	Me	H	0	C(CH ₃) ₂	
818.	Me	Me	H	1	C(CH ₃) ₂	

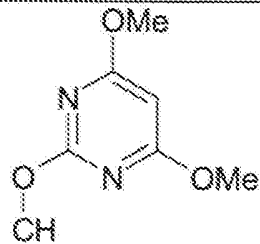
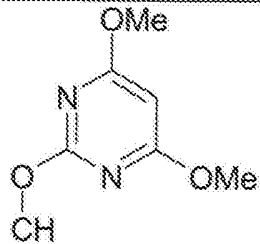
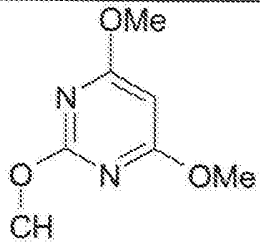
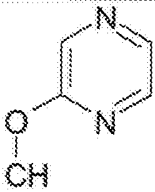
No.	R ²	R ³	R ⁴	m	X	¹ H NMR
819.	Me	Me	H	2	C(CH ₃) ₂	
820.	Me	Me	H	0	C(OC ₂ H ₄ O)	
821.	Me	Me	H	1	C(OC ₂ H ₄ O)	
822.	Me	Me	H	2	C(OC ₂ H ₄ O)	
823.	Me	Me	H	0	C(SC ₂ H ₄ S)	
824.	Me	Me	H	1	C(SC ₂ H ₄ S)	
825.	Me	Me	H	2	C(SC ₂ H ₄ S)	
826.	Me	Me	H	0	CHOMe	
827.	Me	Me	H	1	CHOMe	
828.	Me	Me	H	2	CHOMe	
829.	Me	Me	H	0	CHOEt	
830.	Me	Me	H	1	CHOEt	
831.	Me	Me	H	2	CHOEt	
832.	Me	Me	H	0	CHOiPr	
833.	Me	Me	H	1	CHOiPr	
834.	Me	Me	H	2	CHOiPr	
835.	Me	Me	H	0	CHOCH ₂ cPr	
836.	Me	Me	H	1	CHOCH ₂ cPr	
837.	Me	Me	H	2	CHOCH ₂ cPr	
838.	Me	Me	H	0	CHOC ₂ H ₄ OMe	
839.	Me	Me	H	1	CHOC ₂ H ₄ OMe	
840.	Me	Me	H	2	CHOC ₂ H ₄ OMe	
841.	Me	Me	H	0	CHOCH ₂ CCH	
842.	Me	Me	H	1	CHOCH ₂ CCH	
843.	Me	Me	H	2	CHOCH ₂ CCH	
844.	Me	Me	H	0	CHOCH ₂ CH=CH ₂	
845.	Me	Me	H	1	CHOCH ₂ CH=CH ₂	
846.	Me	Me	H	2	CHOCH ₂ CH=CH ₂	

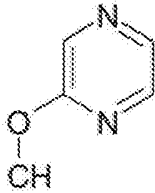
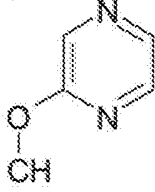
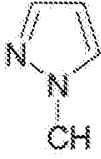
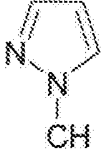
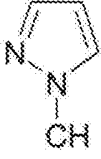
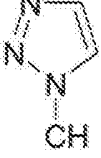
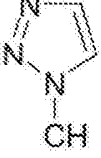
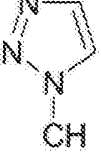
No.	R ²	R ³	R ⁴	m	X	¹ H NMR
847.	Me	Me	H	0	 <p>Chemical structure: A benzene ring with methoxy (OMe) groups at positions 2, 4, and 6, and a hydroxymethyl (-CH₂OH) group at position 1.</p>	
848.	Me	Me	H	1	 <p>Chemical structure: A benzene ring with methoxy (OMe) groups at positions 2, 4, and 6, and a hydroxymethyl (-CH₂OH) group at position 1.</p>	
849.	Me	Me	H	2	 <p>Chemical structure: A benzene ring with methoxy (OMe) groups at positions 2, 4, and 6, and a hydroxymethyl (-CH₂OH) group at position 1.</p>	
850.	Me	Me	H	0	 <p>Chemical structure: A pyridine ring with a hydroxymethyl (-CH₂OH) group at position 2.</p>	
851.	Me	Me	H	1	 <p>Chemical structure: A pyridine ring with a hydroxymethyl (-CH₂OH) group at position 2.</p>	
852.	Me	Me	H	2	 <p>Chemical structure: A pyridine ring with a hydroxymethyl (-CH₂OH) group at position 2.</p>	
853.	Me	Me	H	0	 <p>Chemical structure: An imidazole ring with a hydroxymethyl (-CH₂OH) group at position 1.</p>	


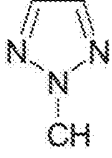
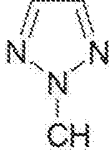
No.	R ²	R ³	R ⁴	m	X	¹ H NMR
854.	Me	Me	H	1		
855.	Me	Me	H	2		
856.	Me	Me	H	0		
857.	Me	Me	H	1		
858.	Me	Me	H	2		
859.	Me	Me	H	0		
860.	Me	Me	H	1		
861.	Me	Me	H	2		
862.	Me	Me	H	0	CHOC ₂ H ₄ F	
863.	Me	Me	H	1	CHOC ₂ H ₄ F	
864.	Me	Me	H	2	CHOC ₂ H ₄ F	
865.	Me	Me	H	0	C=NOMe	

No.	R ²	R ³	R ⁴	m	X	¹ H NMR
866.	Me	Me	H	1	C=NOMe	
867.	Me	Me	H	2	C=NOMe	
868.	Me	Me	H	0	C=NOCH ₂ CCH	
869.	Me	Me	H	1	C=NOCH ₂ CCH	
870.	Me	Me	H	2	C=NOCH ₂ CCH	
871.	Me	Me	H	0	C=NOCH ₂ CH=CH ₂	
872.	Me	Me	H	1	C=NOCH ₂ CH=CH ₂	
873.	Me	Me	H	2	C=NOCH ₂ CH=CH ₂	
874.	Me	Me	H	0	C=O	
875.	Me	Me	H	1	C=O	
876.	Me	Me	H	2	C=O	
877.	Me	Me	H	0	C=S	
878.	Me	Me	H	1	C=S	
879.	Me	Me	H	2	C=S	
880.	Me	Me	H	0	C=S	
881.	Me	Me	H	1	C=S	
882.	Me	Me	H	2	C=S	
883.	Me	Me	H	0	C=N-N(CH ₃) ₂	
884.	Me	Me	H	1	C=N-N(CH ₃) ₂	
885.	Me	Me	H	2	C=N-N(CH ₃) ₂	
886.	Me	Me	H	0	O	
887.	Me	Me	H	1	O	
888.	Me	Me	H	2	O	
889.	Me	Me	H	0	S	
890.	Me	Me	H	1	S	
891.	Me	Me	H	2	S	
892.	Me	Me	H	0	SO	
893.	Me	Me	H	1	SO	
894.	Me	Me	H	2	SO	
895.	Me	Me	H	0	SO ₂	

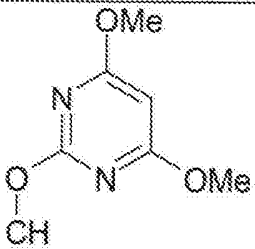
No.	R ²	R ³	R ⁴	m	X	¹ H NMR
896.	Me	Me	H	1	SO ₂	
897.	Me	Me	H	2	SO ₂	
898.	Me	Me	H	0	NMe	
899.	Me	Me	H	1	NMe	
900.	Me	Me	H	2	NMe	
901.	Et	Me	Me	0	CH ₂	
902.	Et	Me	Me	1	CH ₂	
903.	Et	Me	Me	2	CH ₂	
904.	Et	Me	Me	0	CHMe	
905.	Et	Me	Me	1	CHMe	
906.	Et	Me	Me	2	CHMe	
907.	Et	Me	Me	0	C(CH ₃) ₂	
908.	Et	Me	Me	1	C(CH ₃) ₂	
909.	Et	Me	Me	2	C(CH ₃) ₂	
910.	Et	Me	Me	0	C(OC ₂ H ₅ O)	
911.	Et	Me	Me	1	C(OC ₂ H ₄ O)	
912.	Et	Me	Me	2	C(OC ₂ H ₄ O)	
913.	Et	Me	Me	0	C(SC ₂ H ₅ S)	
914.	Et	Me	Me	1	C(SC ₂ H ₄ S)	
915.	Et	Me	Me	2	C(SC ₂ H ₄ S)	
916.	Et	Me	Me	0	CHOMe	
917.	Et	Me	Me	1	CHOMe	
918.	Et	Me	Me	2	CHOMe	
919.	Et	Me	Me	0	CHOEt	
920.	Et	Me	Me	1	CHOEt	
921.	Et	Me	Me	2	CHOEt	
922.	Et	Me	Me	0	CHOiPr	
923.	Et	Me	Me	1	CHOiPr	
924.	Et	Me	Me	2	CHOiPr	
925.	Et	Me	Me	0	CHOCH ₂ cPr	

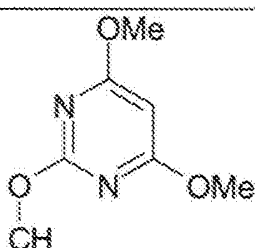
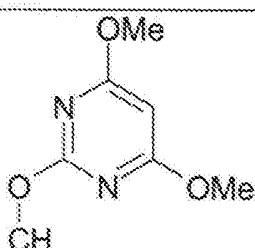
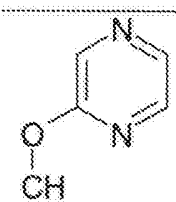
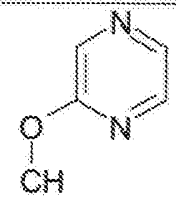
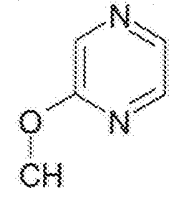



No.	R ²	R ³	R ⁴	m	X	¹ H NMR
926.	Et	Me	Me	1	CHOCH ₂ cPr	
927.	Et	Me	Me	2	CHOCH ₂ cPr	
928.	Et	Me	Me	0	CHOC ₂ H ₅ OMe	
929.	Et	Me	Me	1	CHOC ₂ H ₅ OMe	
930.	Et	Me	Me	2	CHOC ₂ H ₅ OMe	
931.	Et	Me	Me	0	CHOCH ₂ CCH	
932.	Et	Me	Me	1	CHOCH ₂ CCH	
933.	Et	Me	Me	2	CHOCH ₂ CCH	
934.	Et	Me	Me	0	CHOCH ₂ CH=CH ₂	
935.	Et	Me	Me	1	CHOCH ₂ CH=CH ₂	
936.	Et	Me	Me	2	CHOCH ₂ CH=CH ₂	
937.	Et	Me	Me	0		
938.	Et	Me	Me	1		
939.	Et	Me	Me	2		
940.	Et	Me	Me	0		


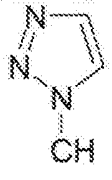
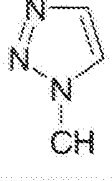
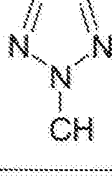
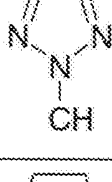
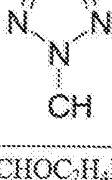
No.	R ²	R ³	R ⁴	m	X	¹ H NMR
941.	Et	Me	Me	1		
942.	Et	Me	Me	2		DMSO-d ₆ , 400 MHz: 11.35 (s, 1H), 8.39 (s, 1H), 8.34-8.30 (m, 2H), 7.67 (s, 1H), 6.52 (dd, 1H), 3.80-3.71 (m, 1H), 3.60-3.53 (m, 1H), 2.82-2.60 (m, 7H), 2.20 (s, 3H), 1.26 (t, 3H)
943.	Et	Me	Me	0		
944.	Et	Me	Me	1		
945.	Et	Me	Me	2		
946.	Et	Me	Me	0		
947.	Et	Me	Me	1		
948.	Et	Me	Me	2		

No.	R ²	R ³	R ⁴	m	X	¹ H NMR
949.	Et	Me	Me	0		
950.	Et	Me	Me	1		
951.	Et	Me	Me	2		
952.	Et	Me	Me	0	CHOC ₂ H ₄ F	
953.	Et	Me	Me	1	CHOC ₂ H ₄ F	
954.	Et	Me	Me	2	CHOC ₂ H ₄ F	
955.	Et	Me	Me	0	C=NOMe	
956.	Et	Me	Me	1	C=NOMe	
957.	Et	Me	Me	2	C=NOMe	
958.	Et	Me	Me	0	C=NOCH ₂ CCH	
959.	Et	Me	Me	1	C=NOCH ₂ CCH	
960.	Et	Me	Me	2	C=NOCH ₂ CCH	
961.	Et	Me	Me	0	C=NOCH ₂ CH=CH ₂	
962.	Et	Me	Me	1	C=NOCH ₂ CH=CH ₂	
963.	Et	Me	Me	2	C=NOCH ₂ CH=CH ₂	
964.	Et	Me	Me	0	C=O	
965.	Et	Me	Me	1	C=O	
966.	Et	Me	Me	2	C=O	
967.	Et	Me	Me	0	C=S	
968.	Et	Me	Me	1	C=S	
969.	Et	Me	Me	2	C=S	
970.	Et	Me	Me	0	C=S	
971.	Et	Me	Me	1	C=S	

No.	R ²	R ³	R ⁴	m	X	¹ H NMR
972.	Et	Me	Me	2	C=S	
973.	Et	Me	Me	0	C=N-N(CH ₃) ₂	
974.	Et	Me	Me	1	C=N-N(CH ₃) ₂	
975.	Et	Me	Me	2	C=N-N(CH ₃) ₂	
976.	Et	Me	Me	0	O	
977.	Et	Me	Me	1	O	
978.	Et	Me	Me	2	O	
979.	Et	Me	Me	0	S	
980.	Et	Me	Me	1	S	
981.	Et	Me	Me	2	S	
982.	Et	Me	Me	0	SO	
983.	Et	Me	Me	1	SO	
984.	Et	Me	Me	2	SO	
985.	Et	Me	Me	0	SO ₂	
986.	Et	Me	Me	1	SO ₂	
987.	Et	Me	Me	2	SO ₂	
988.	Et	Me	Me	0	NMe	
989.	Et	Me	Me	1	NMe	
990.	Et	Me	Me	2	NMe	
991.	Et	Me	H	0	CH ₂	
992.	Et	Me	H	1	CH ₂	
993.	Et	Me	H	2	CH ₂	
994.	Et	Me	H	0	CHMe	
995.	Et	Me	H	1	CHMe	
996.	Et	Me	H	2	CHMe	
997.	Et	Me	H	0	C(CH ₃) ₂	
998.	Et	Me	H	1	C(CH ₃) ₂	
999.	Et	Me	H	2	C(CH ₃) ₂	
1000	Et	Me	H	0	C(OC ₂ H ₅ O)	
1001	Et	Me	H	1	C(OC ₂ H ₅ O)	

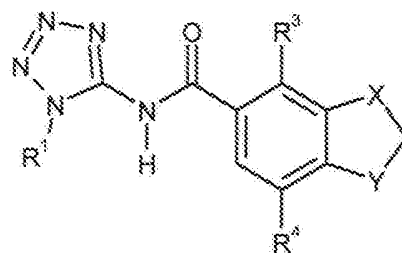
No.	R ²	R ³	R ⁴	m	X	¹ H NMR
1002	Et	Me	H	2	C(OC ₂ H ₅ O)	
1003	Et	Me	H	0	C(SC ₂ H ₅ S)	
1004	Et	Me	H	1	C(SC ₂ H ₅ S)	
1005	Et	Me	H	2	C(SC ₂ H ₅ S)	
1006	Et	Me	H	0	CHOMe	
1007	Et	Me	H	1	CHOMe	
1008	Et	Me	H	2	CHOMe	
1009	Et	Me	H	0	CHOEt	
1010	Et	Me	H	1	CHOEt	
1011	Et	Me	H	2	CHOEt	
1012	Et	Me	H	0	CHOiPr	
1013	Et	Me	H	1	CHOiPr	
1014	Et	Me	H	2	CHOiPr	
1015	Et	Me	H	0	CHOCH ₂ cPr	
1016	Et	Me	H	1	CHOCH ₂ cPr	
1017	Et	Me	H	2	CHOCH ₂ cPr	
1018	Et	Me	H	0	CHOC ₂ H ₄ OMe	
1019	Et	Me	H	1	CHOC ₂ H ₄ OMe	
1020	Et	Me	H	2	CHOC ₂ H ₄ OMe	
1021	Et	Me	H	0	CHOCH ₂ CCH	
1022	Et	Me	H	1	CHOCH ₂ CCH	
1023	Et	Me	H	2	CHOCH ₂ CCH	
1024	Et	Me	H	0	CHOCH ₂ CH=CH ₂	
1025	Et	Me	H	1	CHOCH ₂ CH=CH ₂	
1026	Et	Me	H	2	CHOCH ₂ CH=CH ₂	
1027	Et	Me	H	0		

No.	R ²	R ³	R ⁴	m	X	¹ H NMR
1028	Et	Me	H	1		
1029	Et	Me	H	2		
1030	Et	Me	H	0		
1031	Et	Me	H	1		
1032	Et	Me	H	2		
1033	Et	Me	H	0		
1034	Et	Me	H	1		
1035	Et	Me	H	2		

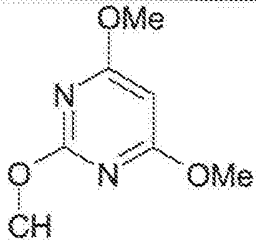
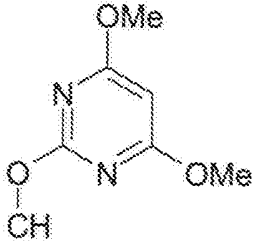
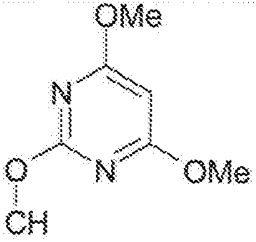
No.	R ²	R ³	R ⁴	m	X	¹ H NMR
1036	Et	Me	H	0		
1037	Et	Me	H	1		
1038	Et	Me	H	2		
1039	Et	Me	H	0		
1040	Et	Me	H	1		
1041	Et	Me	H	2		
1042	Et	Me	H	0	CHOC ₂ H ₅ F	
1043	Et	Me	H	1	CHOC ₂ H ₄ F	
1044	Et	Me	H	2	CHOC ₂ H ₄ F	
1045	Et	Me	H	0	C=NOMe	
1046	Et	Me	H	1	C=NOMe	
1047	Et	Me	H	2	C=NOMe	
1048	Et	Me	H	0	C=NOCH ₂ CCH	
1049	Et	Me	H	1	C=NOCH ₂ CCH	
1050	Et	Me	H	2	C=NOCH ₂ CCH	
1051	Et	Me	H	0	C=NOCH ₂ CH=CH ₂	

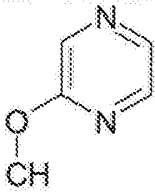
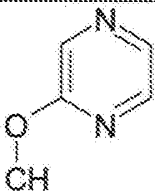
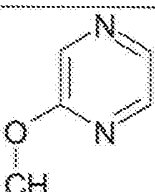
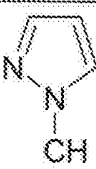




No.	R ²	R ³	R ⁴	m	X	¹ H NMR
1052	Et	Me	H	1	C=NOCH ₂ CH=CH ₂	
1053	Et	Me	H	2	C=NOCH ₂ CH=CH ₂	
1054	Et	Me	H	0	C=O	
1055	Et	Me	H	1	C=O	
1056	Et	Me	H	2	C=O	
1057	Et	Me	H	0	C=S	
1058	Et	Me	H	1	C=S	
1059	Et	Me	H	2	C=S	
1060	Et	Me	H	0	C=S	
1061	Et	Me	H	1	C=S	
1062	Et	Me	H	2	C=S	
1063	Et	Me	H	0	C=N-N(CH ₃) ₂	
1064	Et	Me	H	1	C=N-N(CH ₃) ₂	
1065	Et	Me	H	2	C=N-N(CH ₃) ₂	
1066	Et	Me	H	0	O	
1067	Et	Me	H	1	O	
1068	Et	Me	H	2	O	
1069	Et	Me	H	0	S	
1070	Et	Me	H	1	S	
1071	Et	Me	H	2	S	
1072	Et	Me	H	0	SO	
1073	Et	Me	H	1	SO	
1074	Et	Me	H	2	SO	
1075	Et	Me	H	0	SO ₂	
1076	Et	Me	H	1	SO ₂	
1077	Et	Me	H	2	SO ₂	
1078	Et	Me	H	0	NMe	
1079	Et	Me	H	1	NMe	
1080	Et	Me	H	2	NMe	

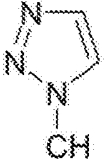
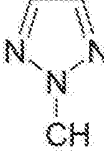
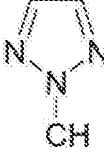
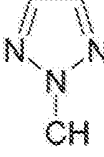
Table 4: Inventive compounds of the general formula (I) in which Q is Q1, R⁵ is hydrogen and n is 1



No.	R ¹	R ²	R ³	Y	X	¹ H NMR
1081.	Me	Me	Me	S	CH ₂	
1082.	Me	Me	Me	SO	CH ₂	
1083.	Me	Me	Me	SO ₂	CH ₂	
1084.	Me	Me	Me	S	CHMe	
1085.	Me	Me	Me	SO	CHMe	
1086.	Me	Me	Me	SO ₂	CHMe	
1087.	Me	Me	Me	S	C(CH ₃) ₂	
1088.	Me	Me	Me	SO	C(CH ₃) ₂	
1089.	Me	Me	Me	SO ₂	C(CH ₃) ₂	
1090.	Me	Me	Me	S	C(OC ₂ H ₄ O)	
1091.	Me	Me	Me	SO	C(OC ₂ H ₄ O)	
1092.	Me	Me	Me	SO ₂	C(OC ₂ H ₄ O)	
1093.	Me	Me	Me	S	C(SC ₂ H ₄ S)	
1094.	Me	Me	Me	SO	C(SC ₂ H ₄ S)	
1095.	Me	Me	Me	SO ₂	C(SC ₂ H ₄ S)	
1096.	Me	Me	Me	S	CHOMe	
1097.	Me	Me	Me	SO	CHOMe	
1098.	Me	Me	Me	SO ₂	CHOMe	
1099.	Me	Me	Me	S	CHOEt	
1100.	Me	Me	Me	SO	CHOEt	
1101.	Me	Me	Me	SO ₂	CHOEt	
1102.	Me	Me	Me	S	CHOiPr	
1103.	Me	Me	Me	SO	CHOiPr	

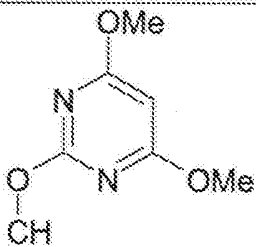
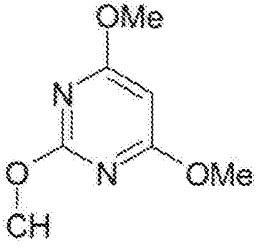
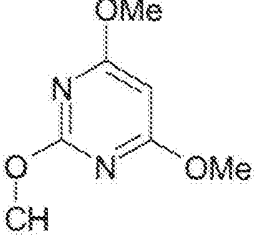
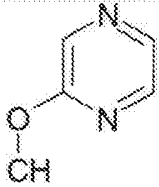
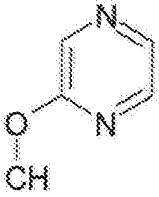
No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1104.	Me	Me	Me	SO ₂	CHOiPr	
1105.	Me	Me	Me	S	CHOCH ₂ cPr	
1106.	Me	Me	Me	SO	CHOCH ₂ cPr	
1107.	Me	Me	Me	SO ₂	CHOCH ₂ cPr	
1108.	Me	Me	Me	S	CHOC ₂ H ₄ OMe	
1109.	Me	Me	Me	SO	CHOC ₂ H ₄ OMe	
1110.	Me	Me	Me	SO ₂	CHOC ₂ H ₄ OMe	
1111.	Me	Me	Me	S	CHOCH ₂ CCH	
1112.	Me	Me	Me	SO	CHOCH ₂ CCH	
1113.	Me	Me	Me	SO ₂	CHOCH ₂ CCH	
1114.	Me	Me	Me	S	CHOCH ₂ CH=CH ₂	
1115.	Me	Me	Me	SO	CHOCH ₂ CH=CH ₂	
1116.	Me	Me	Me	SO ₂	CHOCH ₂ CH=CH ₂	
1117.	Me	Me	Me	S		
1118.	Me	Me	Me	SO		
1119.	Me	Me	Me	SO ₂		

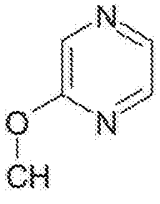
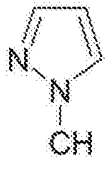
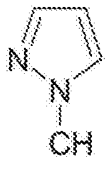
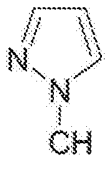

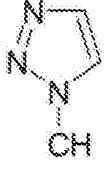

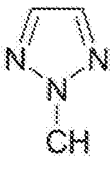
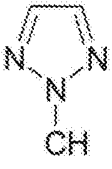
No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1120.	Me	Me	Me	S		
1121.	Me	Me	Me	SO		
1122.	Me	Me	Me	SO ₂		
1123.	Me	Me	Me	S		
1124.	Me	Me	Me	SO		
1125.	Me	Me	Me	SO ₂		
1126.	Me	Me	Me	S		
1127.	Me	Me	Me	SO		

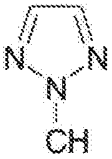
No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1128.	Me	Me	Me	SO ₂		
1129.	Me	Me	Me	S		
1130.	Me	Me	Me	SO		
1131.	Me	Me	Me	SO ₂		
1132.	Me	Me	Me	S	CHOC ₂ H ₄ F	
1133.	Me	Me	Me	SO	CHOC ₂ H ₄ F	
1134.	Me	Me	Me	SO ₂	CHOC ₂ H ₄ F	
1135.	Me	Me	Me	S	C=NOMe	
1136.	Me	Me	Me	SO	C=NOMe	
1137.	Me	Me	Me	SO ₂	C=NOMe	
1138.	Me	Me	Me	S	C=NOCH ₂ CCH	
1139.	Me	Me	Me	SO	C=NOCH ₂ CCH	
1140.	Me	Me	Me	SO ₂	C=NOCH ₂ CCH	
1141.	Me	Me	Me	S	C=NOCH ₂ CH=CH ₂	
1142.	Me	Me	Me	SO	C=NOCH ₂ CH=CH ₂	
1143.	Me	Me	Me	SO ₂	C=NOCH ₂ CH=CH ₂	
1144.	Me	Me	Me	S	C=O	
1145.	Me	Me	Me	SO	C=O	
1146.	Me	Me	Me	SO ₂	C=O	
1147.	Me	Me	Me	S	C=S	
1148.	Me	Me	Me	SO	C=S	

No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1149.	Me	Me	Me	SO ₂	C=S	
1150.	Me	Me	Me	S	C=S	
1151.	Me	Me	Me	SO	C=S	
1152.	Me	Me	Me	SO ₂	C=S	
1153.	Me	Me	Me	S	C=N-N(CH ₃) ₂	
1154.	Me	Me	Me	SO	C=N-N(CH ₃) ₂	
1155.	Me	Me	Me	SO ₂	C=N-N(CH ₃) ₂	
1156.	Me	Me	Me	S	O	
1157.	Me	Me	Me	SO	O	
1158.	Me	Me	Me	SO ₂	O	
1159.	Me	Me	Me	S	S	
1160.	Me	Me	Me	SO	S	
1161.	Me	Me	Me	SO ₂	S	
1162.	Me	Me	Me	S	SO	
1163.	Me	Me	Me	SO	SO	
1164.	Me	Me	Me	SO ₂	SO	
1165.	Me	Me	Me	S	SO ₂	
1166.	Me	Me	Me	SO	SO ₂	
1167.	Me	Me	Me	SO ₂	SO ₂	
1168.	Me	Me	Me	S	NMe	
1169.	Me	Me	Me	SO	NMe	
1170.	Me	Me	Me	SO ₂	NMe	
1171.	Me	Me	Me	O	O	
1172.	Me	Me	H	O	O	DMSO-d ₆ , 400 MHz: 11.33 (s,1H), 7.34 (d,1H), 6.92 (d,1H), 6.12 (s,2H), 3.93 (s,3H), 2.30 (s,3H)
1173.	Me	SMe	H	O	O	DMSO-d ₆ , 400 MHz: 11.30 (bs,1H), 7.21 (d,1H), 6.99 (d,1H), 6.38 (s,2H), 3.96 (s,3H), 2.44 (s,3H)
1174.	Me	Cl	H	O	O	
1175.	Me	Cl	H	S	CH ₂	

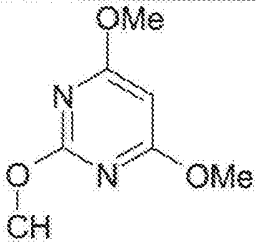
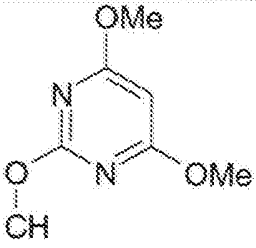
No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1176.	Me	Cl	H	SO	CH ₂	
1177.	Me	Cl	H	SO ₂	CH ₂	DMSO, 400 MHz: 3.41 (t,2H), 3.76 (t,2H), 4.02 (s,3H), 7.94 (s,2H), 11.95 (s,1H)
1178.	Me	Cl	H	S	CHMe	
1179.	Me	Cl	H	SO	CHMe	
1180.	Me	Cl	H	SO ₂	CHMe	
1181.	Me	Cl	H	S	C(CH ₃) ₂	
1182.	Me	Cl	H	SO	C(CH ₃) ₂	
1183.	Me	Cl	H	SO ₂	C(CH ₃) ₂	
1184.	Me	Cl	H	S	C(OC ₂ H ₄ O)	
1185.	Me	Cl	H	SO	C(OC ₂ H ₄ O)	
1186.	Me	Cl	H	SO ₂	C(OC ₂ H ₄ O)	
1187.	Me	Cl	H	S	C(SC ₂ H ₄ S)	
1188.	Me	Cl	H	SO	C(SC ₂ H ₄ S)	
1189.	Me	Cl	H	SO ₂	C(SC ₂ H ₄ S)	
1190.	Me	Cl	H	S	CHOMe	
1191.	Me	Cl	H	SO	CHOMe	
1192.	Me	Cl	H	SO ₂	CHOMe	CDCl ₃ , 400 MHz: 3.57 (s,3H), 3.68 (dd,1H), 3.81 (d,1H), 4.13 (s,3H), 5.25 (d,1H), 7.80 (d,1H), 7.98 (d,1H), 9.85 (s,1H)
1193.	Me	Cl	H	S	CHOEt	
1194.	Me	Cl	H	SO	CHOEt	
1195.	Me	Cl	H	SO ₂	CHOEt	
1196.	Me	Cl	H	S	CHOiPr	
1197.	Me	Cl	H	SO	CHOiPr	
1198.	Me	Cl	H	SO ₂	CHOiPr	
1199.	Me	Cl	H	S	CHOCH ₂ cPr	
1200.	Me	Cl	H	SO	CHOCH ₂ cPr	
1201.	Me	Cl	H	SO ₂	CHOCH ₂ cPr	

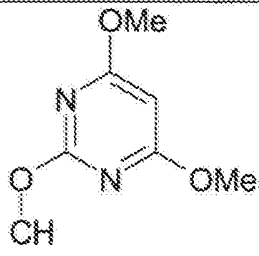
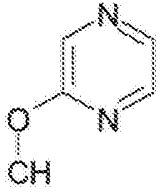
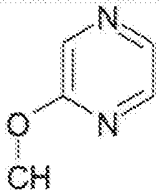
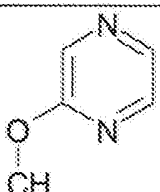
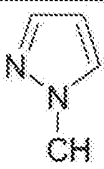
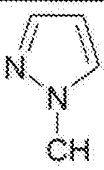


No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1202.	Me	Cl	H	S	CHOC ₂ H ₄ OMe	
1203.	Me	Cl	H	SO	CHOC ₂ H ₄ OMe	
1204.	Me	Cl	H	SO ₂	CHOC ₂ H ₄ OMe	
1205.	Me	Cl	H	S	CHOCH ₂ CCH	
1206.	Me	Cl	H	SO	CHOCH ₂ CCH	
1207.	Me	Cl	H	SO ₂	CHOCH ₂ CCH	
1208.	Me	Cl	H	S	CHOCH ₂ CH=CH ₂	
1209.	Me	Cl	H	SO	CHOCH ₂ CH=CH ₂	
1210.	Me	Cl	H	SO ₂	CHOCH ₂ CH=CH ₂	
1211.	Me	Cl	H	S		
1212.	Me	Cl	H	SO		
1213.	Me	Cl	H	SO ₂		
1214.	Me	Cl	H	S		
1215.	Me	Cl	H	SO		




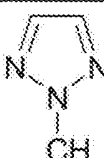
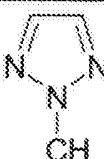
No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1216.	Me	Cl	H	SO ₂		
1217.	Me	Cl	H	S		
1218.	Me	Cl	H	SO		
1219.	Me	Cl	H	SO ₂		
1220.	Me	Cl	H	S		
1221.	Me	Cl	H	SO		
1222.	Me	Cl	H	SO ₂		
1223.	Me	Cl	H	S		
1224.	Me	Cl	H	SO		

No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1225.	Me	Cl	H	SO ₂		
1226.	Me	Cl	H	S	CHOC ₂ H ₄ F	
1227.	Me	Cl	H	SO	CHOC ₂ H ₄ F	
1228.	Me	Cl	H	SO ₂	CHOC ₂ H ₄ F	
1229.	Me	Cl	H	S	C=NOMe	
1230.	Me	Cl	H	SO	C=NOMe	
1231.	Me	Cl	H	SO ₂	C=NOMe	
1232.	Me	Cl	H	S	C=NOCH ₂ CCH	
1233.	Me	Cl	H	SO	C=NOCH ₂ CCH	
1234.	Me	Cl	H	SO ₂	C=NOCH ₂ CCH	
1235.	Me	Cl	H	S	C=NOCH ₂ CH=CH ₂	
1236.	Me	Cl	H	SO	C=NOCH ₂ CH=CH ₂	
1237.	Me	Cl	H	SO ₂	C=NOCH ₂ CH=CH ₂	
1238.	Me	Cl	H	S	C=O	
1239.	Me	Cl	H	SO	C=O	
1240.	Me	Cl	H	SO ₂	C=O	
1241.	Me	Cl	H	S	C=S	
1242.	Me	Cl	H	SO	C=S	
1243.	Me	Cl	H	SO ₂	C=S	
1244.	Me	Cl	H	S	C=S	
1245.	Me	Cl	H	SO	C=S	
1246.	Me	Cl	H	SO ₂	C=S	
1247.	Me	Cl	H	S	C=N-N(CH ₃) ₂	
1248.	Me	Cl	H	SO	C=N-N(CH ₃) ₂	
1249.	Me	Cl	H	SO ₂	C=N-N(CH ₃) ₂	
1250.	Me	Cl	H	S	O	
1251.	Me	Cl	H	SO	O	
1252.	Me	Cl	H	SO ₂	O	

No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1253.	Me	Cl	H	S	S	
1254.	Me	Cl	H	SO	S	
1255.	Me	Cl	H	SO ₂	S	
1256.	Me	Cl	H	S	SO	
1257.	Me	Cl	H	SO	SO	
1258.	Me	Cl	H	SO ₂	SO	
1259.	Me	Cl	H	S	SO ₂	
1260.	Me	Cl	H	SO	SO ₂	
1261.	Me	Cl	H	SO ₂	SO ₂	
1262.	Me	Cl	H	S	NMe	
1263.	Me	Cl	H	SO	NMe	
1264.	Me	Cl	H	SO ₂	NMe	
1265.	Et	Me	Me	S	CH ₂	
1266.	Et	Me	Me	SO	CH ₂	
1267.	Et	Me	Me	SO ₂	CH ₂	
1268.	Et	Me	Me	S	CHMe	
1269.	Et	Me	Me	SO	CHMe	
1270.	Et	Me	Me	SO ₂	CHMe	
1271.	Et	Me	Me	S	C(CH ₃) ₂	
1272.	Et	Me	Me	SO	C(CH ₃) ₂	
1273.	Et	Me	Me	SO ₂	C(CH ₃) ₂	
1274.	Et	Me	Me	S	C(OC ₂ H ₄ O)	
1275.	Et	Me	Me	SO	C(OC ₂ H ₄ O)	
1276.	Et	Me	Me	SO ₂	C(OC ₂ H ₄ O)	
1277.	Et	Me	Me	S	C(SC ₂ H ₄ S)	
1278.	Et	Me	Me	SO	C(SC ₂ H ₄ S)	
1279.	Et	Me	Me	SO ₂	C(SC ₂ H ₄ S)	
1280.	Et	Me	Me	S	CHOMe	
1281.	Et	Me	Me	SO	CHOMe	
1282.	Et	Me	Me	SO ₂	CHOMe	

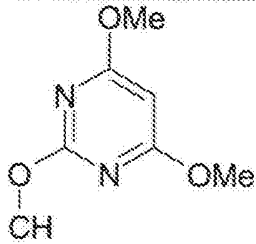
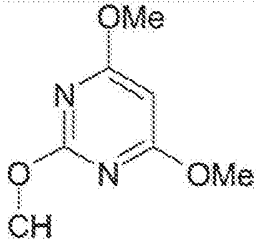
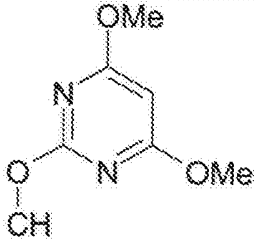
No.	R ¹	R ²	R ³	Y	X	¹ H NMR
1283.	Et	Me	Me	S	CHOEt	
1284.	Et	Me	Me	SO	CHOEt	
1285.	Et	Me	Me	SO ₂	CHOEt	
1286.	Et	Me	Me	S	CHOiPr	
1287.	Et	Me	Me	SO	CHOiPr	
1288.	Et	Me	Me	SO ₂	CHOiPr	
1289.	Et	Me	Me	S	CHOCH ₂ cPr	
1290.	Et	Me	Me	SO	CHOCH ₂ cPr	
1291.	Et	Me	Me	SO ₂	CHOCH ₂ cPr	
1292.	Et	Me	Me	S	CHOC ₂ H ₄ OMe	
1293.	Et	Me	Me	SO	CHOC ₂ H ₄ OMe	
1294.	Et	Me	Me	SO ₂	CHOC ₂ H ₄ OMe	
1295.	Et	Me	Me	S	CHOCH ₂ CCH	
1296.	Et	Me	Me	SO	CHOCH ₂ CCH	
1297.	Et	Me	Me	SO ₂	CHOCH ₂ CCH	
1298.	Et	Me	Me	S	CHOCH ₂ CH=CH ₂	
1299.	Et	Me	Me	SO	CHOCH ₂ CH=CH ₂	
1300.	Et	Me	Me	SO ₂	CHOCH ₂ CH=CH ₂	
1301.	Et	Me	Me	S	 <chem>COC1=CC(OC)=C(OC)N1C(O)C</chem>	
1302.	Et	Me	Me	SO	 <chem>COC1=CC(OC)=C(OC)N1C(O)C</chem>	

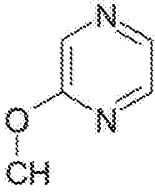
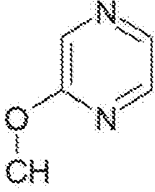
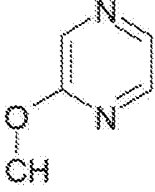





No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1303.	Et	Me	Me	SO ₂		
1304.	Et	Me	Me	S		
1305.	Et	Me	Me	SO		
1306.	Et	Me	Me	SO ₂		
1307.	Et	Me	Me	S		
1308.	Et	Me	Me	SO		
1309.	Et	Me	Me	SO ₂		
1310.	Et	Me	Me	S		


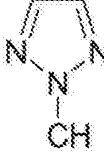
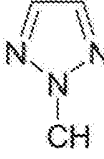
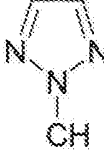
No.	R ¹	R ²	R ³	Y	X	¹ H NMR
1311.	Et	Me	Me	SO		
1312.	Et	Me	Me	SO ₂		
1313.	Et	Me	Me	S		
1314.	Et	Me	Me	SO		
1315.	Et	Me	Me	SO ₂		
1316.	Et	Me	Me	S	CHOC ₂ H ₄ F	
1317.	Et	Me	Me	SO	CHOC ₂ H ₄ F	
1318.	Et	Me	Me	SO ₂	CHOC ₂ H ₄ F	
1319.	Et	Me	Me	S	C=NOMe	
1320.	Et	Me	Me	SO	C=NOMe	
1321.	Et	Me	Me	SO ₂	C=NOMe	
1322.	Et	Me	Me	S	C=NOCH ₂ CCH	
1323.	Et	Me	Me	SO	C=NOCH ₂ CCH	
1324.	Et	Me	Me	SO ₂	C=NOCH ₂ CCH	
1325.	Et	Me	Me	S	C=NOCH ₂ CH=CH ₂	
1326.	Et	Me	Me	SO	C=NOCH ₂ CH=CH ₂	
1327.	Et	Me	Me	SO ₂	C=NOCH ₂ CH=CH ₂	
1328.	Et	Me	Me	S	C=O	

No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1329.	Et	Me	Me	SO	C=O	
1330.	Et	Me	Me	SO ₂	C=O	
1331.	Et	Me	Me	S	C=S	
1332.	Et	Me	Me	SO	C=S	
1333.	Et	Me	Me	SO ₂	C=S	
1334.	Et	Me	Me	S	C=S	
1335.	Et	Me	Me	SO	C=S	
1336.	Et	Me	Me	SO ₂	C=S	
1337.	Et	Me	Me	S	C=N-N(CH ₃) ₂	
1338.	Et	Me	Me	SO	C=N-N(CH ₃) ₂	
1339.	Et	Me	Me	SO ₂	C=N-N(CH ₃) ₂	
1340.	Et	Me	Me	S	O	
1341.	Et	Me	Me	SO	O	
1342.	Et	Me	Me	SO ₂	O	
1343.	Et	Me	Me	S	S	
1344.	Et	Me	Me	SO	S	
1345.	Et	Me	Me	SO ₂	S	
1346.	Et	Me	Me	S	SO	
1347.	Et	Me	Me	SO	SO	
1348.	Et	Me	Me	SO ₂	SO	
1349.	Et	Me	Me	S	SO ₂	
1350.	Et	Me	Me	SO	SO ₂	
1351.	Et	Me	Me	SO ₂	SO ₂	
1352.	Et	Me	Me	S	NMe	
1353.	Et	Me	Me	SO	NMe	
1354.	Et	Me	Me	SO ₂	NMe	
1355.	Et	Me	Me	O	O	
1356.	Et	Me	H	O	O	CDCl ₃ , 400 MHz: 9.65 (s, 1H), 7.42 (d, 1H), 6.79 (d, 1H), 6.06 (s, 2H), 4.43 (q, 2H), 2.41 (s, 3H), 1.60 (t, 3H)

No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1357.	Et	SMe	H	O	O	
1358.	Et	Cl	H	O	O	
1359.	Et	Cl	H	S	CH ₂	
1360.	Et	Cl	H	SO	CH ₂	
1361.	Et	Cl	H	SO ₂	CH ₂	DMSO, 400 MHz: 1.48 (t,3H), 3.42 (t,2H), 3.75 (t,2H), 4.38 (q,2H), 7.93 (s,2H), 11.86 (s,1H)
1362.	Et	Cl	H	S	CHMe	
1363.	Et	Cl	H	SO	CHMe	
1364.	Et	Cl	H	SO ₂	CHMe	
1365.	Et	Cl	H	S	C(CH ₃) ₂	
1366.	Et	Cl	H	SO	C(CH ₃) ₂	
1367.	Et	Cl	H	SO ₂	C(CH ₃) ₂	
1368.	Et	Cl	H	S	C(OC ₂ H ₅ O)	
1369.	Et	Cl	H	SO	C(OC ₂ H ₅ O)	
1370.	Et	Cl	H	SO ₂	C(OC ₂ H ₅ O)	
1371.	Et	Cl	H	S	C(SC ₂ H ₅ S)	
1372.	Et	Cl	H	SO	C(SC ₂ H ₅ S)	
1373.	Et	Cl	H	SO ₂	C(SC ₂ H ₅ S)	
1374.	Et	Cl	H	S	CHOMe	
1375.	Et	Cl	H	SO	CHOMe	
1376.	Et	Cl	H	SO ₂	CHOMe	CDCl ₃ , 400 MHz: 1.62 (t,3H), 3.55 (s,3H), 3.66 (dd,1H), 3.81 (d,1H), 4.47 (q,2H), 5.23 (d,1H), 7.75 (d,1H), 7.94 (d,1H), 10.6 (s,1H)
1377.	Et	Cl	H	S	CHOEt	
1378.	Et	Cl	H	SO	CHOEt	
1379.	Et	Cl	H	SO ₂	CHOEt	
1380.	Et	Cl	H	S	CHOiPr	
1381.	Et	Cl	H	SO	CHOiPr	

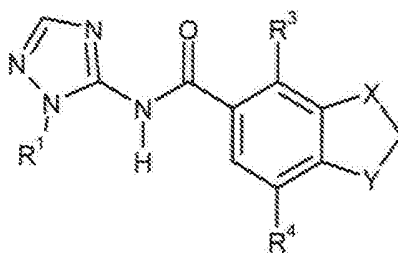
No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1382.	Et	Cl	H	SO ₂	CHOiPr	
1383.	Et	Cl	H	S	CHOCH ₂ cPr	
1384.	Et	Cl	H	SO	CHOCH ₂ cPr	
1385.	Et	Cl	H	SO ₂	CHOCH ₂ cPr	
1386.	Et	Cl	H	S	CHOC ₂ H ₄ OMe	
1387.	Et	Cl	H	SO	CHOC ₂ H ₄ OMe	
1388.	Et	Cl	H	SO ₂	CHOC ₂ H ₄ OMe	
1389.	Et	Cl	H	S	CHOCH ₂ CCH	
1390.	Et	Cl	H	SO	CHOCH ₂ CCH	
1391.	Et	Cl	H	SO ₂	CHOCH ₂ CCH	
1392.	Et	Cl	H	S	CHOCH ₂ CH=CH ₂	
1393.	Et	Cl	H	SO	CHOCH ₂ CH=CH ₂	
1394.	Et	Cl	H	SO ₂	CHOCH ₂ CH=CH ₂	
1395.	Et	Cl	H	S		
1396.	Et	Cl	H	SO		
1397.	Et	Cl	H	SO ₂		

No.	R ³	R ³	R ⁴	Y	X	¹ H NMR
1398.	Et	Cl	H	S		
1399.	Et	Cl	H	SO		
1400.	Et	Cl	H	SO ₂		
1401.	Et	Cl	H	S		
1402.	Et	Cl	H	SO		
1403.	Et	Cl	H	SO ₂		
1404.	Et	Cl	H	S		
1405.	Et	Cl	H	SO		

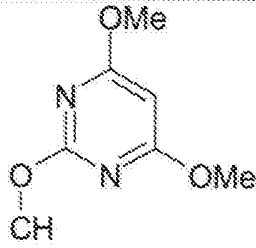
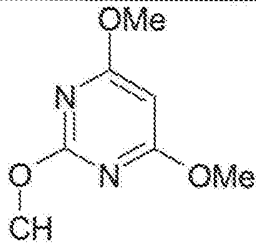
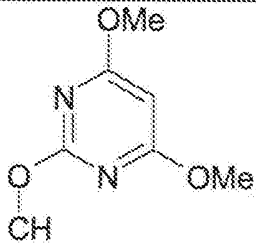
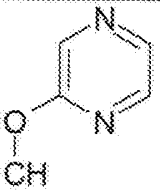
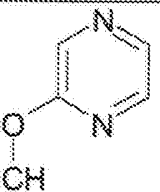
No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1406.	Et	Cl	H	SO ₂		
1407.	Et	Cl	H	S		
1408.	Et	Cl	H	SO		
1409.	Et	Cl	H	SO ₂		
1410.	Et	Cl	H	S	CHOC ₂ H ₅ F	
1411.	Et	Cl	H	SO	CHOC ₂ H ₅ F	
1412.	Et	Cl	H	SO ₂	CHOC ₂ H ₅ F	
1413.	Et	Cl	H	S	C=NOMe	
1414.	Et	Cl	H	SO	C=NOMe	
1415.	Et	Cl	H	SO ₂	C=NOMe	
1416.	Et	Cl	H	S	C=NOCH ₂ CCH	
1417.	Et	Cl	H	SO	C=NOCH ₂ CCH	
1418.	Et	Cl	H	SO ₂	C=NOCH ₂ CCH	
1419.	Et	Cl	H	S	C=NOCH ₂ CH=CH ₂	
1420.	Et	Cl	H	SO	C=NOCH ₂ CH=CH ₂	
1421.	Et	Cl	H	SO ₂	C=NOCH ₂ CH=CH ₂	
1422.	Et	Cl	H	S	C=O	
1423.	Et	Cl	H	SO	C=O	
1424.	Et	Cl	H	SO ₂	C=O	
1425.	Et	Cl	H	S	C=S	
1426.	Et	Cl	H	SO	C=S	

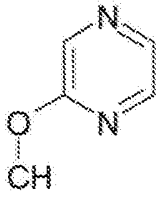







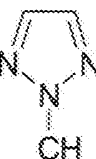
No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR.
1427.	Et	Cl	H	SO ₂	C=S	
1428.	Et	Cl	H	S	C=S	
1429.	Et	Cl	H	SO	C=S	
1430.	Et	Cl	H	SO ₂	C=S	
1431.	Et	Cl	H	S	C=N-N(CH ₃) ₂	
1432.	Et	Cl	H	SO	C=N-N(CH ₃) ₂	
1433.	Et	Cl	H	SO ₂	C=N-N(CH ₃) ₂	
1434.	Et	Cl	H	S	O	
1435.	Et	Cl	H	SO	O	
1436.	Et	Cl	H	SO ₂	O	
1437.	Et	Cl	H	S	S	
1438.	Et	Cl	H	SO	S	
1439.	Et	Cl	H	SO ₂	S	
1440.	Et	Cl	H	S	SO	
1441.	Et	Cl	H	SO	SO	
1442.	Et	Cl	H	SO ₂	SO	
1443.	Et	Cl	H	S	SO ₂	
1444.	Et	Cl	H	SO	SO ₂	
1445.	Et	Cl	H	SO ₂	SO ₂	
1446.	Et	Cl	H	S	NMe	
1447.	Et	Cl	H	SO	NMe	
1448.	Et	Cl	H	SO ₂	NMe	

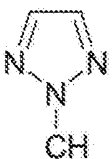
Table 5: Inventive compounds of the general formula (I) in which Q is Q2, R⁵ is hydrogen and n is 1



No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1449.	Me	Me	Me	S	CH ₂	
1450.	Me	Me	Me	SO	CH ₂	
1451.	Me	Me	Me	SO ₂	CH ₂	
1452.	Me	Me	Me	S	CHMe	
1453.	Me	Me	Me	SO	CHMe	
1454.	Me	Me	Me	SO ₂	CHMe	
1455.	Me	Me	Me	S	C(CH ₃) ₂	
1456.	Me	Me	Me	SO	C(CH ₃) ₂	
1457.	Me	Me	Me	SO ₂	C(CH ₃) ₂	
1458.	Me	Me	Me	S	C(OC ₂ H ₅ O)	
1459.	Me	Me	Me	SO	C(OC ₂ H ₅ O)	
1460.	Me	Me	Me	SO ₂	C(OC ₂ H ₅ O)	
1461.	Me	Me	Me	S	C(SC ₂ H ₅ S)	
1462.	Me	Me	Me	SO	C(SC ₂ H ₅ S)	
1463.	Me	Me	Me	SO ₂	C(SC ₂ H ₅ S)	
1464.	Me	Me	Me	S	CHOMe	
1465.	Me	Me	Me	SO	CHOMe	
1466.	Me	Me	Me	SO ₂	CHOMe	
1467.	Me	Me	Me	S	CHOEt	
1468.	Me	Me	Me	SO	CHOEt	
1469.	Me	Me	Me	SO ₂	CHOEt	
1470.	Me	Me	Me	S	CHOiPr	
1471.	Me	Me	Me	SO	CHOiPr	
1472.	Me	Me	Me	SO ₂	CHOiPr	
1473.	Me	Me	Me	S	CHOCH ₂ cPr	
1474.	Me	Me	Me	SO	CHOCH ₂ cPr	
1475.	Me	Me	Me	SO ₂	CHOCH ₂ cPr	
1476.	Me	Me	Me	S	CHOC ₂ H ₅ OMe	
1477.	Me	Me	Me	SO	CHOC ₂ H ₅ OMe	
1478.	Me	Me	Me	SO ₂	CHOC ₂ H ₅ OMe	

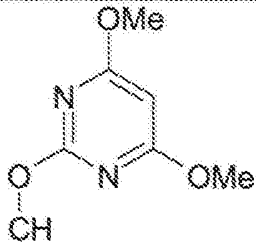
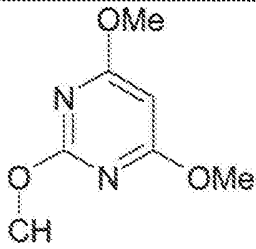
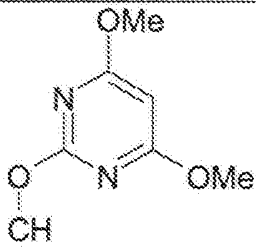
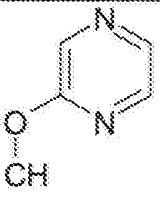
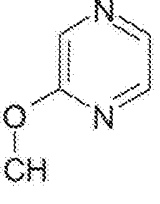
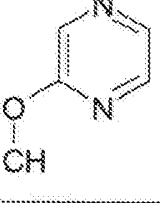
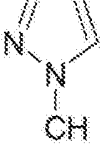
No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1479.	Me	Me	Me	S	CHOCH ₂ CCH	
1480.	Me	Me	Me	SO	CHOCH ₂ CCH	
1481.	Me	Me	Me	SO ₂	CHOCH ₂ CCH	
1482.	Me	Me	Me	S	CHOCH ₂ CH=CH ₂	
1483.	Me	Me	Me	SO	CHOCH ₂ CH=CH ₂	
1484.	Me	Me	Me	SO ₂	CHOCH ₂ CH=CH ₂	
1485.	Me	Me	Me	S		
1486.	Me	Me	Me	SO		
1487.	Me	Me	Me	SO ₂		
1488.	Me	Me	Me	S		
1489.	Me	Me	Me	SO		


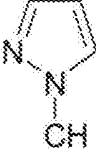




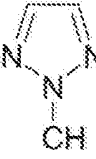
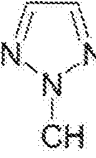
No.	R ¹	R ³	R ²	Y	X	¹ H NMR
1490.	Me	Me	Me	SO ₂		
1491.	Me	Me	Me	S		
1492.	Me	Me	Me	SO		
1493.	Me	Me	Me	SO ₂		
1494.	Me	Me	Me	S		
1495.	Me	Me	Me	SO		
1496.	Me	Me	Me	SO ₂		
1497.	Me	Me	Me	S		
1498.	Me	Me	Me	SO		

No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1499.	Me	Me	Me	SO ₂		
1500.	Me	Me	Me	S	CHOC ₂ H ₄ F	
1501.	Me	Me	Me	SO	CHOC ₂ H ₄ F	
1502.	Me	Me	Me	SO ₂	CHOC ₂ H ₄ F	
1503.	Me	Me	Me	S	C=NOMe	
1504.	Me	Me	Me	SO	C=NOMe	
1505.	Me	Me	Me	SO ₂	C=NOMe	
1506.	Me	Me	Me	S	C=NOCH ₂ CCH	
1507.	Me	Me	Me	SO	C=NOCH ₂ CCH	
1508.	Me	Me	Me	SO ₂	C=NOCH ₂ CCH	
1509.	Me	Me	Me	S	C=NOCH ₂ CH=CH ₂	
1510.	Me	Me	Me	SO	C=NOCH ₂ CH=CH ₂	
1511.	Me	Me	Me	SO ₂	C=NOCH ₂ CH=CH ₂	
1512.	Me	Me	Me	S	C=O	
1513.	Me	Me	Me	SO	C=O	
1514.	Me	Me	Me	SO ₂	C=O	
1515.	Me	Me	Me	S	C=S	
1516.	Me	Me	Me	SO	C=S	
1517.	Me	Me	Me	SO ₂	C=S	
1518.	Me	Me	Me	S	C=S	
1519.	Me	Me	Me	SO	C=S	
1520.	Me	Me	Me	SO ₂	C=S	
1521.	Me	Me	Me	S	C=N-N(CH ₃) ₂	
1522.	Me	Me	Me	SO	C=N-N(CH ₃) ₂	
1523.	Me	Me	Me	SO ₂	C=N-N(CH ₃) ₂	
1524.	Me	Me	Me	S	O	
1525.	Me	Me	Me	SO	O	
1526.	Me	Me	Me	SO ₂	O	

No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1527.	Me	Me	Me	S	S	
1528.	Me	Me	Me	SO	S	
1529.	Me	Me	Me	SO ₂	S	
1530.	Me	Me	Me	S	SO	
1531.	Me	Me	Me	SO	SO	
1532.	Me	Me	Me	SO ₂	SO	
1533.	Me	Me	Me	S	SO ₂	
1534.	Me	Me	Me	SO	SO ₂	
1535.	Me	Me	Me	SO ₂	SO ₂	
1536.	Me	Me	Me	S	NMe	
1537.	Me	Me	Me	SO	NMe	
1538.	Me	Me	Me	SO ₂	NMe	
1539.	Me	Me	Me	O	O	
1540.	Me	Me	H	O	O	
1541.	Me	SMe	H	O	O	
1542.	Me	Cl	H	O	O	
1543.	Me	Cl	H	S	CH ₂	
1544.	Me	Cl	H	SO	CH ₂	
1545.	Me	Cl	H	SO ₂	CH ₂	DMSO, 400 MHz: 3.40 (t,2H), 3.74 (t,2H), 3.79 (s,3H), 7.89 (br,3H), 11.39 (s,1H)
1546.	Me	Cl	H	S	CHMe	
1547.	Me	Cl	H	SO	CHMe	
1548.	Me	Cl	H	SO ₂	CHMe	
1549.	Me	Cl	H	S	C(CH ₃) ₂	
1550.	Me	Cl	H	SO	C(CH ₃) ₂	
1551.	Me	Cl	H	SO ₂	C(CH ₃) ₂	
1552.	Me	Cl	H	S	C(OC ₂ H ₄ O)	
1553.	Me	Cl	H	SO	C(OC ₂ H ₄ O)	
1554.	Me	Cl	H	SO ₂	C(OC ₂ H ₄ O)	

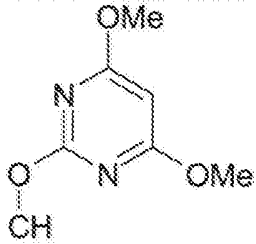
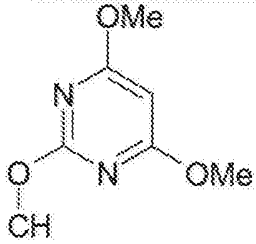
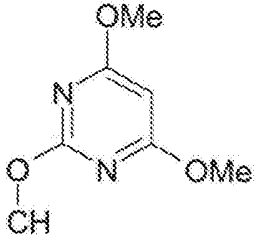
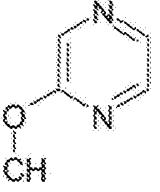
No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1555.	Me	Cl	H	S	C(SC ₂ H ₅ S)	
1556.	Me	Cl	H	SO	C(SC ₂ H ₅ S)	
1557.	Me	Cl	H	SO ₂	C(SC ₂ H ₅ S)	
1558.	Me	Cl	H	S	CHOMe	
1559.	Me	Cl	H	SO	CHOMe	
1560.	Me	Cl	H	SO ₂	CHOMe	CDCl ₃ , 400 MHz: 3.56 (s,3H), 3.68 (dd,1H), 3.71 (d,1H), 3.87 (s,3H), 5.21 (d,1H), 7.64 (s,1H), 7.73 (d,1H), 7.91 (d,1H), 9.85 (s,1H)
1561.	Me	Cl	H	S	CHOEt	
1562.	Me	Cl	H	SO	CHOEt	
1563.	Me	Cl	H	SO ₂	CHOEt	
1564.	Me	Cl	H	S	CHOiPr	
1565.	Me	Cl	H	SO	CHOiPr	
1566.	Me	Cl	H	SO ₂	CHOiPr	
1567.	Me	Cl	H	S	CHOCH ₂ cPr	
1568.	Me	Cl	H	SO	CHOCH ₂ cPr	
1569.	Me	Cl	H	SO ₂	CHOCH ₂ cPr	
1570.	Me	Cl	H	S	CHOC ₂ H ₄ OMe	
1571.	Me	Cl	H	SO	CHOC ₂ H ₄ OMe	
1572.	Me	Cl	H	SO ₂	CHOC ₂ H ₄ OMe	
1573.	Me	Cl	H	S	CHOCH ₂ CCH	
1574.	Me	Cl	H	SO	CHOCH ₂ CCH	
1575.	Me	Cl	H	SO ₂	CHOCH ₂ CCH	
1576.	Me	Cl	H	S	CHOCH ₂ CH=CH ₂	
1577.	Me	Cl	H	SO	CHOCH ₂ CH=CH ₂	
1578.	Me	Cl	H	SO ₂	CHOCH ₂ CH=CH ₂	

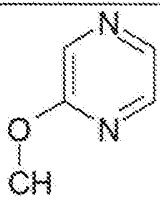
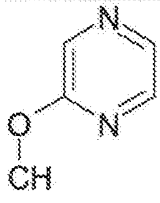
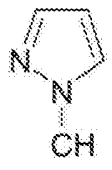
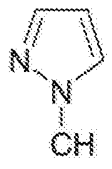
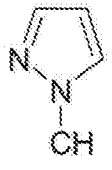
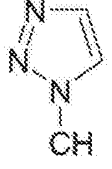


No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1579.	Me	Cl	H	S	 <p>Chemical structure: 1-methyl-3,5-dimethoxy-2-imidazolecarboxamide. The imidazole ring has a methyl group on N1, methoxy groups at C3 and C5, and a carboxamide group at C2.</p>	
1580.	Me	Cl	H	SO	 <p>Chemical structure: 1-methyl-3,5-dimethoxy-2-imidazolecarboxamide. The imidazole ring has a methyl group on N1, methoxy groups at C3 and C5, and a carboxamide group at C2.</p>	
1581.	Me	Cl	H	SO ₂	 <p>Chemical structure: 1-methyl-3,5-dimethoxy-2-imidazolecarboxamide. The imidazole ring has a methyl group on N1, methoxy groups at C3 and C5, and a carboxamide group at C2.</p>	
1582.	Me	Cl	H	S	 <p>Chemical structure: 1-methyl-2-imidazolecarboxamide. The imidazole ring has a methyl group on N1 and a carboxamide group at C2.</p>	
1583.	Me	Cl	H	SO	 <p>Chemical structure: 1-methyl-2-imidazolecarboxamide. The imidazole ring has a methyl group on N1 and a carboxamide group at C2.</p>	
1584.	Me	Cl	H	SO ₂	 <p>Chemical structure: 1-methyl-2-imidazolecarboxamide. The imidazole ring has a methyl group on N1 and a carboxamide group at C2.</p>	
1585.	Me	Cl	H	S	 <p>Chemical structure: 1-methyl-1H-imidazole. The imidazole ring has a methyl group on N1.</p>	

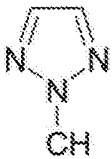
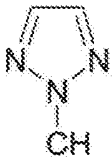
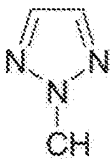
No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1586.	Me	Cl	H	SO		
1587.	Me	Cl	H	SO ₂		
1588.	Me	Cl	H	S		
1589.	Me	Cl	H	SO		
1590.	Me	Cl	H	SO ₂		
1591.	Me	Cl	H	S		
1592.	Me	Cl	H	SO		
1593.	Me	Cl	H	SO ₂		
1594.	Me	Cl	H	S	CHOC ₂ H ₄ F	
1595.	Me	Cl	H	SO	CHOC ₂ H ₄ F	
1596.	Me	Cl	H	SO ₂	CHOC ₂ H ₄ F	
1597.	Me	Cl	H	S	C=NOMe	

No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1598.	Me	Cl	H	SO	C=NOMe	
1599.	Me	Cl	H	SO ₂	C=NOMe	
1600.	Me	Cl	H	S	C=NOCH ₂ CCH	
1601.	Me	Cl	H	SO	C=NOCH ₂ CCH	
1602.	Me	Cl	H	SO ₂	C=NOCH ₂ CCH	
1603.	Me	Cl	H	S	C=NOCH ₂ CH=CH ₂	
1604.	Me	Cl	H	SO	C=NOCH ₂ CH=CH ₂	
1605.	Me	Cl	H	SO ₂	C=NOCH ₂ CH=CH ₂	
1606.	Me	Cl	H	S	C=O	
1607.	Me	Cl	H	SO	C=O	
1608.	Me	Cl	H	SO ₂	C=O	
1609.	Me	Cl	H	S	C=S	
1610.	Me	Cl	H	SO	C=S	
1611.	Me	Cl	H	SO ₂	C=S	
1612.	Me	Cl	H	S	C=S	
1613.	Me	Cl	H	SO	C=S	
1614.	Me	Cl	H	SO ₂	C=S	
1615.	Me	Cl	H	S	C=N-N(CH ₃) ₂	
1616.	Me	Cl	H	SO	C=N-N(CH ₃) ₂	
1617.	Me	Cl	H	SO ₂	C=N-N(CH ₃) ₂	
1618.	Me	Cl	H	S	O	
1619.	Me	Cl	H	SO	O	
1620.	Me	Cl	H	SO ₂	O	
1621.	Me	Cl	H	S	S	
1622.	Me	Cl	H	SO	S	
1623.	Me	Cl	H	SO ₂	S	
1624.	Me	Cl	H	S	SO	
1625.	Me	Cl	H	SO	SO	
1626.	Me	Cl	H	SO ₂	SO	
1627.	Me	Cl	H	S	SO ₂	

No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1628.	Me	Cl	H	SO	SO ₂	
1629.	Me	Cl	H	SO ₂	SO ₂	
1630.	Me	Cl	H	S	NMe	
1631.	Me	Cl	H	SO	NMe	
1632.	Me	Cl	H	SO ₂	NMe	
1633.	Et	Me	Me	S	CH ₂	
1634.	Et	Me	Me	SO	CH ₂	
1635.	Et	Me	Me	SO ₂	CH ₂	
1636.	Et	Me	Me	S	CHMe	
1637.	Et	Me	Me	SO	CHMe	
1638.	Et	Me	Me	SO ₂	CHMe	
1639.	Et	Me	Me	S	C(CH ₃) ₂	
1640.	Et	Me	Me	SO	C(CH ₃) ₂	
1641.	Et	Me	Me	SO ₂	C(CH ₃) ₂	
1642.	Et	Me	Me	S	C(OC ₂ H ₄ O)	
1643.	Et	Me	Me	SO	C(OC ₂ H ₄ O)	
1644.	Et	Me	Me	SO ₂	C(OC ₂ H ₄ O)	
1645.	Et	Me	Me	S	C(SC ₂ H ₄ S)	
1646.	Et	Me	Me	SO	C(SC ₂ H ₄ S)	
1647.	Et	Me	Me	SO ₂	C(SC ₂ H ₄ S)	
1648.	Et	Me	Me	S	CHOMe	
1649.	Et	Me	Me	SO	CHOMe	
1650.	Et	Me	Me	SO ₂	CHOMe	
1651.	Et	Me	Me	S	CHOEt	
1652.	Et	Me	Me	SO	CHOEt	
1653.	Et	Me	Me	SO ₂	CHOEt	
1654.	Et	Me	Me	S	CHOiPr	
1655.	Et	Me	Me	SO	CHOiPr	
1656.	Et	Me	Me	SO ₂	CHOiPr	
1657.	Et	Me	Me	S	CHOCH ₂ cPr	

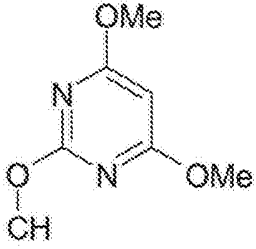
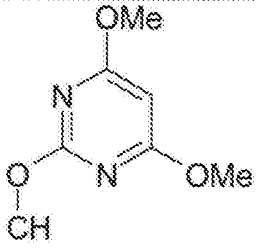
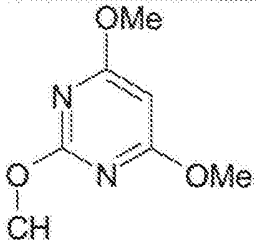
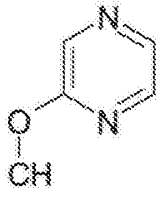
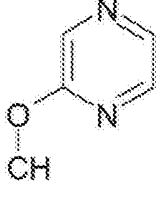
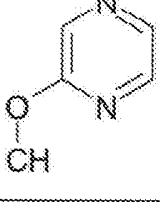

No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1658.	Et	Me	Me	SO	CHOCH ₂ cPr	
1659.	Et	Me	Me	SO ₂	CHOCH ₂ cPr	
1660.	Et	Me	Me	S	CHOC ₂ H ₄ OMe	
1661.	Et	Me	Me	SO	CHOC ₂ H ₄ OMe	
1662.	Et	Me	Me	SO ₂	CHOC ₂ H ₄ OMe	
1663.	Et	Me	Me	S	CHOCH ₂ CCH	
1664.	Et	Me	Me	SO	CHOCH ₂ CCH	
1665.	Et	Me	Me	SO ₂	CHOCH ₂ CCH	
1666.	Et	Me	Me	S	CHOCH ₂ CH=CH ₂	
1667.	Et	Me	Me	SO	CHOCH ₂ CH=CH ₂	
1668.	Et	Me	Me	SO ₂	CHOCH ₂ CH=CH ₂	
1669.	Et	Me	Me	S		
1670.	Et	Me	Me	SO		
1671.	Et	Me	Me	SO ₂		
1672.	Et	Me	Me	S		


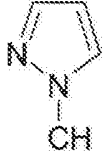



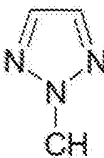

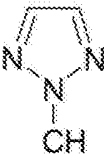
No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1673.	Et	Me	Me	SO		
1674.	Et	Me	Me	SO ₂		
1675.	Et	Me	Me	S		
1676.	Et	Me	Me	SO		
1677.	Et	Me	Me	SO ₂		
1678.	Et	Me	Me	S		
1679.	Et	Me	Me	SO		
1680.	Et	Me	Me	SO ₂		

No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1681.	Et	Me	Me	S		
1682.	Et	Me	Me	SO		
1683.	Et	Me	Me	SO ₂		
1684.	Et	Me	Me	S	CHOC ₂ H ₄ F	
1685.	Et	Me	Me	SO	CHOC ₂ H ₄ F	
1686.	Et	Me	Me	SO ₂	CHOC ₂ H ₄ F	
1687.	Et	Me	Me	S	C=NOMe	
1688.	Et	Me	Me	SO	C=NOMe	
1689.	Et	Me	Me	SO ₂	C=NOMe	
1690.	Et	Me	Me	S	C=NOCH ₂ CCH	
1691.	Et	Me	Me	SO	C=NOCH ₂ CCH	
1692.	Et	Me	Me	SO ₂	C=NOCH ₂ CCH	
1693.	Et	Me	Me	S	C=NOCH ₂ CH=CH ₂	
1694.	Et	Me	Me	SO	C=NOCH ₂ CH=CH ₂	
1695.	Et	Me	Me	SO ₂	C=NOCH ₂ CH=CH ₂	
1696.	Et	Me	Me	S	C=O	
1697.	Et	Me	Me	SO	C=O	
1698.	Et	Me	Me	SO ₂	C=O	
1699.	Et	Me	Me	S	C=S	
1700.	Et	Me	Me	SO	C=S	
1701.	Et	Me	Me	SO ₂	C=S	
1702.	Et	Me	Me	S	C=S	
1703.	Et	Me	Me	SO	C=S	

No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1704.	Et	Me	Me	SO ₂	C=S	
1705.	Et	Me	Me	S	C=N-N(CH ₃) ₂	
1706.	Et	Me	Me	SO	C=N-N(CH ₃) ₂	
1707.	Et	Me	Me	SO ₂	C=N-N(CH ₃) ₂	
1708.	Et	Me	Me	S	O	
1709.	Et	Me	Me	SO	O	
1710.	Et	Me	Me	SO ₂	O	
1711.	Et	Me	Me	S	S	
1712.	Et	Me	Me	SO	S	
1713.	Et	Me	Me	SO ₂	S	
1714.	Et	Me	Me	S	SO	
1715.	Et	Me	Me	SO	SO	
1716.	Et	Me	Me	SO ₂	SO	
1717.	Et	Me	Me	S	SO ₂	
1718.	Et	Me	Me	SO	SO ₂	
1719.	Et	Me	Me	SO ₂	SO ₂	
1720.	Et	Me	Me	S	NMe	
1721.	Et	Me	Me	SO	NMe	
1722.	Et	Me	Me	SO ₂	NMe	
1723.	Et	Me	Me	O	O	
1724.	Et	Me	H	O	O	
1725.	Et	SMe	H	O	O	
1726.	Et	Cl	H	O	O	
1727.	Et	Cl	H	S	CH ₂	
1728.	Et	Cl	H	SO	CH ₂	
1729.	Et	Cl	H	SO ₂	CH ₂	
1730.	Et	Cl	H	S	CHMe	
1731.	Et	Cl	H	SO	CHMe	
1732.	Et	Cl	H	SO ₂	CHMe	
1733.	Et	Cl	H	S	C(CH ₃) ₂	

No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1734.	Et	Cl	H	SO	C(CH ₃) ₂	
1735.	Et	Cl	H	SO ₂	C(CH ₃) ₂	
1736.	Et	Cl	H	S	C(OC ₂ H ₅ O)	
1737.	Et	Cl	H	SO	C(OC ₂ H ₅ O)	
1738.	Et	Cl	H	SO ₂	C(OC ₂ H ₅ O)	
1739.	Et	Cl	H	S	C(SC ₂ H ₅ S)	
1740.	Et	Cl	H	SO	C(SC ₂ H ₅ S)	
1741.	Et	Cl	H	SO ₂	C(SC ₂ H ₅ S)	
1742.	Et	Cl	H	S	CHOMe	
1743.	Et	Cl	H	SO	CHOMe	
1744.	Et	Cl	H	SO ₂	CHOMe	
1745.	Et	Cl	H	S	CHOEt	
1746.	Et	Cl	H	SO	CHOEt	
1747.	Et	Cl	H	SO ₂	CHOEt	
1748.	Et	Cl	H	S	CHOiPr	
1749.	Et	Cl	H	SO	CHOiPr	
1750.	Et	Cl	H	SO ₂	CHOiPr	
1751.	Et	Cl	H	S	CHOCH ₂ cPr	
1752.	Et	Cl	H	SO	CHOCH ₂ cPr	
1753.	Et	Cl	H	SO ₂	CHOCH ₂ cPr	
1754.	Et	Cl	H	S	CHOC ₂ H ₄ OMe	
1755.	Et	Cl	H	SO	CHOC ₂ H ₄ OMe	
1756.	Et	Cl	H	SO ₂	CHOC ₂ H ₄ OMe	
1757.	Et	Cl	H	S	CHOCH ₂ CCH	
1758.	Et	Cl	H	SO	CHOCH ₂ CCH	
1759.	Et	Cl	H	SO ₂	CHOCH ₂ CCH	
1760.	Et	Cl	H	S	CHOCH ₂ CH=CH ₂	
1761.	Et	Cl	H	SO	CHOCH ₂ CH=CH ₂	
1762.	Et	Cl	H	SO ₂	CHOCH ₂ CH=CH ₂	

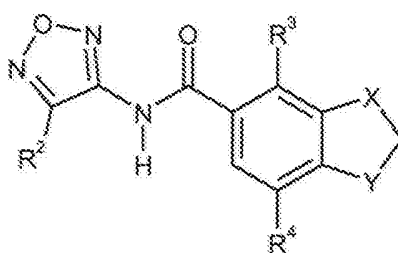
No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1763.	Et	Cl	H	S		
1764.	Et	Cl	H	SO		
1765.	Et	Cl	H	SO ₂		
1766.	Et	Cl	H	S		
1767.	Et	Cl	H	SO		
1768.	Et	Cl	H	SO ₂		
1769.	Et	Cl	H	S		

No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1770.	Et	Cl	H	SO		
1771.	Et	Cl	H	SO ₂		
1772.	Et	Cl	H	S		
1773.	Et	Cl	H	SO		
1774.	Et	Cl	H	SO ₂		
1775.	Et	Cl	H	S		
1776.	Et	Cl	H	SO		
1777.	Et	Cl	H	SO ₂		
1778.	Et	Cl	H	S	CHOC ₂ H ₄ F	
1779.	Et	Cl	H	SO	CHOC ₂ H ₄ F	
1780.	Et	Cl	H	SO ₂	CHOC ₂ H ₄ F	
1781.	Et	Cl	H	S	C=NOMe	

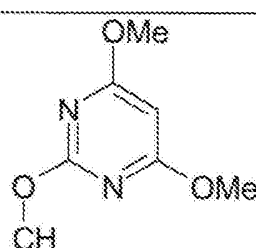
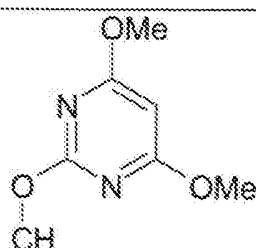
No.	R ¹	R ²	R ⁴	Y	X	¹ H NMR
1782.	Et	Cl	H	SO	C=NOMe	
1783.	Et	Cl	H	SO ₂	C=NOMe	
1784.	Et	Cl	H	S	C=NOCH ₂ CCH	
1785.	Et	Cl	H	SO	C=NOCH ₂ CCH	
1786.	Et	Cl	H	SO ₂	C=NOCH ₂ CCH	
1787.	Et	Cl	H	S	C=NOCH ₂ CH=CH ₂	
1788.	Et	Cl	H	SO	C=NOCH ₂ CH=CH ₂	
1789.	Et	Cl	H	SO ₂	C=NOCH ₂ CH=CH ₂	
1790.	Et	Cl	H	S	C=O	
1791.	Et	Cl	H	SO	C=O	
1792.	Et	Cl	H	SO ₂	C=O	
1793.	Et	Cl	H	S	C=S	
1794.	Et	Cl	H	SO	C=S	
1795.	Et	Cl	H	SO ₂	C=S	
1796.	Et	Cl	H	S	C=S	
1797.	Et	Cl	H	SO	C=S	
1798.	Et	Cl	H	SO ₂	C=S	
1799.	Et	Cl	H	S	C=N-N(CH ₃) ₂	
1800.	Et	Cl	H	SO	C=N-N(CH ₃) ₂	
1801.	Et	Cl	H	SO ₂	C=N-N(CH ₃) ₂	
1802.	Et	Cl	H	S	O	
1803.	Et	Cl	H	SO	O	
1804.	Et	Cl	H	SO ₂	O	
1805.	Et	Cl	H	S	S	
1806.	Et	Cl	H	SO	S	
1807.	Et	Cl	H	SO ₂	S	
1808.	Et	Cl	H	S	SO	
1809.	Et	Cl	H	SO	SO	
1810.	Et	Cl	H	SO ₂	SO	
1811.	Et	Cl	H	S	SO ₂	

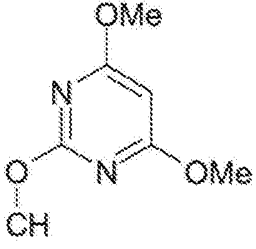
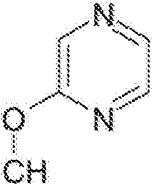
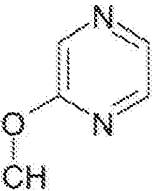
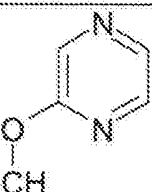



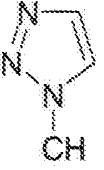
No.	R ¹	R ³	R ⁴	Y	X	¹ H NMR
1812.	Et	Cl	H	SO	SO ₂	
1813.	Et	Cl	H	SO ₂	SO ₂	
1814.	Et	Cl	H	S	NMe	
1815.	Et	Cl	H	SO	NMe	
1816.	Et	Cl	H	SO ₂	NMe	



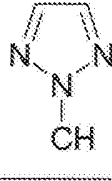
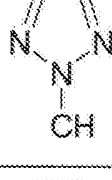
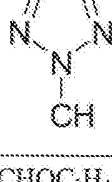
Table 6: Inventive compounds of the general formula (I) in which Q is Q3, R⁵ is hydrogen and n is 1



No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
1817.	Me	Me	Me	S	CH ₂	
1818.	Me	Me	Me	SO	CH ₂	
1819.	Me	Me	Me	SO ₂	CH ₂	
1820.	Me	Me	Me	S	CHMe	
1821.	Me	Me	Me	SO	CHMe	
1822.	Me	Me	Me	SO ₂	CHMe	
1823.	Me	Me	Me	S	C(CH ₃) ₂	
1824.	Me	Me	Me	SO	C(CH ₃) ₂	
1825.	Me	Me	Me	SO ₂	C(CH ₃) ₂	
1826.	Me	Me	Me	S	C(OC ₂ H ₄ O)	
1827.	Me	Me	Me	SO	C(OC ₂ H ₄ O)	
1828.	Me	Me	Me	SO ₂	C(OC ₂ H ₄ O)	
1829.	Me	Me	Me	S	C(SC ₂ H ₄ S)	
1830.	Me	Me	Me	SO	C(SC ₂ H ₄ S)	
1831.	Me	Me	Me	SO ₂	C(SC ₂ H ₄ S)	
1832.	Me	Me	Me	S	CHOMe	

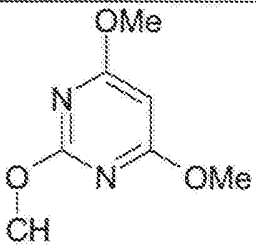
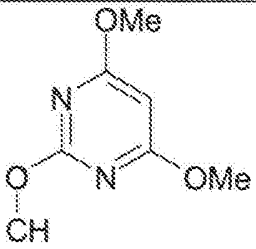
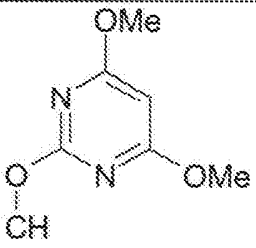
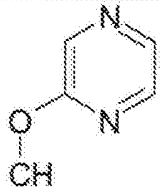
No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
1833.	Me	Me	Me	SO	CHOMe	
1834.	Me	Me	Me	SO ₂	CHOMe	
1835.	Me	Me	Me	S	CHOEt	
1836.	Me	Me	Me	SO	CHOEt	
1837.	Me	Me	Me	SO ₂	CHOEt	
1838.	Me	Me	Me	S	CHOiPr	
1839.	Me	Me	Me	SO	CHOiPr	
1840.	Me	Me	Me	SO ₂	CHOiPr	
1841.	Me	Me	Me	S	CHOCH ₂ cPr	
1842.	Me	Me	Me	SO	CHOCH ₂ cPr	
1843.	Me	Me	Me	SO ₂	CHOCH ₂ cPr	
1844.	Me	Me	Me	S	CHOC ₂ H ₄ OMe	
1845.	Me	Me	Me	SO	CHOC ₂ H ₄ OMe	
1846.	Me	Me	Me	SO ₂	CHOC ₂ H ₄ OMe	
1847.	Me	Me	Me	S	CHOCH ₂ CCH	
1848.	Me	Me	Me	SO	CHOCH ₂ CCH	
1849.	Me	Me	Me	SO ₂	CHOCH ₂ CCH	
1850.	Me	Me	Me	S	CHOCH ₂ CH=CH ₂	
1851.	Me	Me	Me	SO	CHOCH ₂ CH=CH ₂	
1852.	Me	Me	Me	SO ₂	CHOCH ₂ CH=CH ₂	
1853.	Me	Me	Me	S		
1854.	Me	Me	Me	SO		

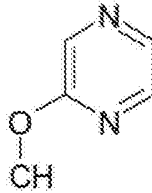
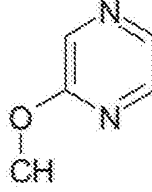
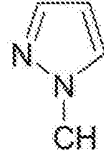
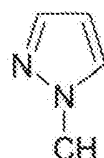

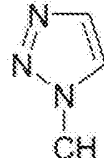
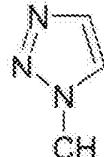

No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
1855.	Me	Me	Me	SO ₂		
1856.	Me	Me	Me	S		
1857.	Me	Me	Me	SO		
1858.	Me	Me	Me	SO ₂		
1859.	Me	Me	Me	S		
1860.	Me	Me	Me	SO		
1861.	Me	Me	Me	SO ₂		
1862.	Me	Me	Me	S		

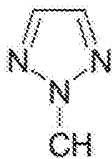

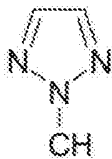
No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
1863.	Me	Me	Me	SO		
1864.	Me	Me	Me	SO ₂		
1865.	Me	Me	Me	S		
1866.	Me	Me	Me	SO		
1867.	Me	Me	Me	SO ₂		
1868.	Me	Me	Me	S	CHOC ₂ H ₄ F	
1869.	Me	Me	Me	SO	CHOC ₂ H ₄ F	
1870.	Me	Me	Me	SO ₂	CHOC ₂ H ₄ F	
1871.	Me	Me	Me	S	C=NOMe	
1872.	Me	Me	Me	SO	C=NOMe	
1873.	Me	Me	Me	SO ₂	C=NOMe	
1874.	Me	Me	Me	S	C=NOCH ₂ CCH	
1875.	Me	Me	Me	SO	C=NOCH ₂ CCH	
1876.	Me	Me	Me	SO ₂	C=NOCH ₂ CCH	
1877.	Me	Me	Me	S	C=NOCH ₂ CH=CH ₂	
1878.	Me	Me	Me	SO	C=NOCH ₂ CH=CH ₂	
1879.	Me	Me	Me	SO ₂	C=NOCH ₂ CH=CH ₂	
1880.	Me	Me	Me	S	C=O	

No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
1881.	Me	Me	Me	SO	C=O	
1882.	Me	Me	Me	SO ₂	C=O	
1883.	Me	Me	Me	S	C=S	
1884.	Me	Me	Me	SO	C=S	
1885.	Me	Me	Me	SO ₂	C=S	
1886.	Me	Me	Me	S	C=S	
1887.	Me	Me	Me	SO	C=S	
1888.	Me	Me	Me	SO ₂	C=S	
1889.	Me	Me	Me	S	C=N-N(CH ₃) ₂	
1890.	Me	Me	Me	SO	C=N-N(CH ₃) ₂	
1891.	Me	Me	Me	SO ₂	C=N-N(CH ₃) ₂	
1892.	Me	Me	Me	S	O	
1893.	Me	Me	Me	SO	O	
1894.	Me	Me	Me	SO ₂	O	
1895.	Me	Me	Me	S	S	
1896.	Me	Me	Me	SO	S	
1897.	Me	Me	Me	SO ₂	S	
1898.	Me	Me	Me	S	SO	
1899.	Me	Me	Me	SO	SO	
1900.	Me	Me	Me	SO ₂	SO	
1901.	Me	Me	Me	S	SO ₂	
1902.	Me	Me	Me	SO	SO ₂	
1903.	Me	Me	Me	SO ₂	SO ₂	
1904.	Me	Me	Me	S	NMe	
1905.	Me	Me	Me	SO	NMe	
1906.	Me	Me	Me	SO ₂	NMe	
1907.	Me	Me	Me	O	O	
1908.	Me	Me	H	O	O	
1909.	Me	SMe	H	O	O	
1910.	Me	Cl	H	O	O	

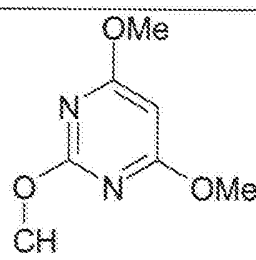
No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
1911.	Me	Cl	H	S	CH ₂	
1912.	Me	Cl	H	SO	CH ₂	
1913.	Me	Cl	H	SO ₂	CH ₂	CDCl ₃ , 400 MHz: 2.52 (s,3H), 3.47 (t,2H), 3.62 (t,2H), 3.79 (s,3H), 7.80 (d,1H), 7.88 (d,1H), 8.14 (s,1H)
1914.	Me	Cl	H	S	CHMe	
1915.	Me	Cl	H	SO	CHMe	
1916.	Me	Cl	H	SO ₂	CHMe	
1917.	Me	Cl	H	S	C(CH ₃) ₂	
1918.	Me	Cl	H	SO	C(CH ₃) ₂	
1919.	Me	Cl	H	SO ₂	C(CH ₃) ₂	
1920.	Me	Cl	H	S	C(OC ₂ H ₄ O)	
1921.	Me	Cl	H	SO	C(OC ₂ H ₄ O)	
1922.	Me	Cl	H	SO ₂	C(OC ₂ H ₄ O)	
1923.	Me	Cl	H	S	C(SC ₂ H ₄ S)	
1924.	Me	Cl	H	SO	C(SC ₂ H ₄ S)	
1925.	Me	Cl	H	SO ₂	C(SC ₂ H ₄ S)	
1926.	Me	Cl	H	S	CHOMe	
1927.	Me	Cl	H	SO	CHOMe	
1928.	Me	Cl	H	SO ₂	CHOMe	CDCl ₃ , 400 MHz: 2.44 (s,3H), 3.53 (s,3H), 3.57 (dd,1H), 3.71 (d,1H), 5.15 (d,1H), 7.55 (d,1H), 7.74 (d,1H), 9.40 (s,1H)
1929.	Me	Cl	H	S	CHOEt	
1930.	Me	Cl	H	SO	CHOEt	
1931.	Me	Cl	H	SO ₂	CHOEt	
1932.	Me	Cl	H	S	CHOiPr	
1933.	Me	Cl	H	SO	CHOiPr	
1934.	Me	Cl	H	SO ₂	CHOiPr	
1935.	Me	Cl	H	S	CHOCH ₂ cPr	

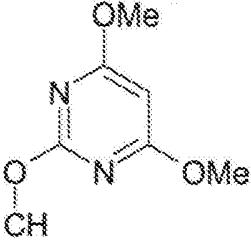
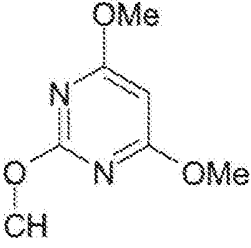
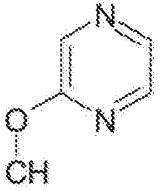
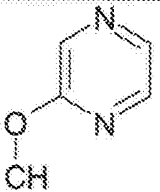
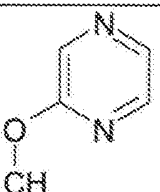



No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
1936.	Me	Cl	H	SO	CHOCH ₂ cPr	
1937.	Me	Cl	H	SO ₂	CHOCH ₂ cPr	
1938.	Me	Cl	H	S	CHOC ₂ H ₄ OMe	
1939.	Me	Cl	H	SO	CHOC ₂ H ₄ OMe	
1940.	Me	Cl	H	SO ₂	CHOC ₂ H ₄ OMe	
1941.	Me	Cl	H	S	CHOCH ₂ CCH	
1942.	Me	Cl	H	SO	CHOCH ₂ CCH	
1943.	Me	Cl	H	SO ₂	CHOCH ₂ CCH	
1944.	Me	Cl	H	S	CHOCH ₂ CH=CH ₂	
1945.	Me	Cl	H	SO	CHOCH ₂ CH=CH ₂	
1946.	Me	Cl	H	SO ₂	CHOCH ₂ CH=CH ₂	
1947.	Me	Cl	H	S		
1948.	Me	Cl	H	SO		
1949.	Me	Cl	H	SO ₂		
1950.	Me	Cl	H	S		



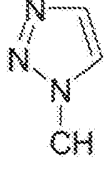
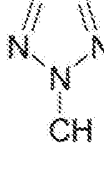
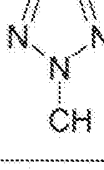
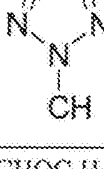
No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
1951.	Me	Cl	H	SO		
1952.	Me	Cl	H	SO ₂		
1953.	Me	Cl	H	S		
1954.	Me	Cl	H	SO		
1955.	Me	Cl	H	SO ₂		
1956.	Me	Cl	H	S		
1957.	Me	Cl	H	SO		
1958.	Me	Cl	H	SO ₂		

No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
1959.	Me	Cl	H	S		
1960.	Me	Cl	H	SO		
1961.	Me	Cl	H	SO ₂		
1962.	Me	Cl	H	S	CHOC ₂ H ₄ F	
1963.	Me	Cl	H	SO	CHOC ₂ H ₄ F	
1964.	Me	Cl	H	SO ₂	CHOC ₂ H ₄ F	
1965.	Me	Cl	H	S	C=NOMe	
1966.	Me	Cl	H	SO	C=NOMe	
1967.	Me	Cl	H	SO ₂	C=NOMe	
1968.	Me	Cl	H	S	C=NOCH ₂ CCH	
1969.	Me	Cl	H	SO	C=NOCH ₂ CCH	
1970.	Me	Cl	H	SO ₂	C=NOCH ₂ CCH	
1971.	Me	Cl	H	S	C=NOCH ₂ CH=CH ₂	
1972.	Me	Cl	H	SO	C=NOCH ₂ CH=CH ₂	
1973.	Me	Cl	H	SO ₂	C=NOCH ₂ CH=CH ₂	
1974.	Me	Cl	H	S	C=O	
1975.	Me	Cl	H	SO	C=O	
1976.	Me	Cl	H	SO ₂	C=O	
1977.	Me	Cl	H	S	C=S	
1978.	Me	Cl	H	SO	C=S	
1979.	Me	Cl	H	SO ₂	C=S	
1980.	Me	Cl	H	S	C=S	
1981.	Me	Cl	H	SO	C=S	

No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
1982.	Me	Cl	H	SO ₂	C=S	
1983.	Me	Cl	H	S	C=N-N(CH ₃) ₂	
1984.	Me	Cl	H	SO	C=N-N(CH ₃) ₂	
1985.	Me	Cl	H	SO ₂	C=N-N(CH ₃) ₂	
1986.	Me	Cl	H	S	O	
1987.	Me	Cl	H	SO	O	
1988.	Me	Cl	H	SO ₂	O	
1989.	Me	Cl	H	S	S	
1990.	Me	Cl	H	SO	S	
1991.	Me	Cl	H	SO ₂	S	
1992.	Me	Cl	H	S	SO	
1993.	Me	Cl	H	SO	SO	
1994.	Me	Cl	H	SO ₂	SO	
1995.	Me	Cl	H	S	SO ₂	
1996.	Me	Cl	H	SO	SO ₂	
1997.	Me	Cl	H	SO ₂	SO ₂	
1998.	Me	Cl	H	S	NMe	
1999.	Me	Cl	H	SO	NMe	
2000.	Me	Cl	H	SO ₂	NMe	
2001.	Et	Me	Me	S	CH ₂	
2002.	Et	Me	Me	SO	CH ₂	
2003.	Et	Me	Me	SO ₂	CH ₂	
2004.	Et	Me	Me	S	CHMe	
2005.	Et	Me	Me	SO	CHMe	
2006.	Et	Me	Me	SO ₂	CHMe	
2007.	Et	Me	Me	S	C(CH ₃) ₂	
2008.	Et	Me	Me	SO	C(CH ₃) ₂	
2009.	Et	Me	Me	SO ₂	C(CH ₃) ₂	
2010.	Et	Me	Me	S	C(OC ₂ H ₄ O)	
2011.	Et	Me	Me	SO	C(OC ₂ H ₄ O)	

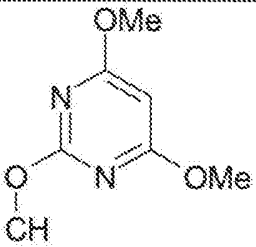
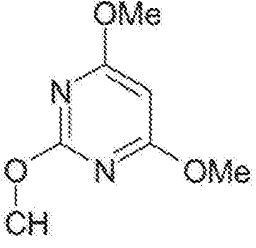
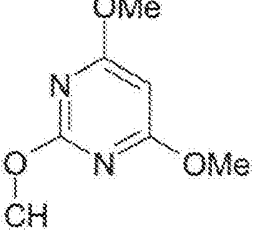
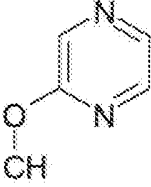
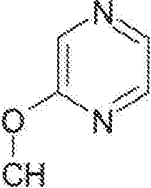
No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
2012.	Et	Me	Me	SO ₂	C(OC ₂ H ₄ O)	
2013.	Et	Me	Me	S	C(SC ₂ H ₄ S)	
2014.	Et	Me	Me	SO	C(SC ₂ H ₄ S)	
2015.	Et	Me	Me	SO ₂	C(SC ₂ H ₄ S)	
2016.	Et	Me	Me	S	CHOMe	
2017.	Et	Me	Me	SO	CHOMe	
2018.	Et	Me	Me	SO ₂	CHOMe	
2019.	Et	Me	Me	S	CHOEt	
2020.	Et	Me	Me	SO	CHOEt	
2021.	Et	Me	Me	SO ₂	CHOEt	
2022.	Et	Me	Me	S	CHOiPr	
2023.	Et	Me	Me	SO	CHOiPr	
2024.	Et	Me	Me	SO ₂	CHOiPr	
2025.	Et	Me	Me	S	CHOCH ₂ cPr	
2026.	Et	Me	Me	SO	CHOCH ₂ cPr	
2027.	Et	Me	Me	SO ₂	CHOCH ₂ cPr	
2028.	Et	Me	Me	S	CHOC ₂ H ₄ OMe	
2029.	Et	Me	Me	SO	CHOC ₂ H ₄ OMe	
2030.	Et	Me	Me	SO ₂	CHOC ₂ H ₄ OMe	
2031.	Et	Me	Me	S	CHOCH ₂ CCH	
2032.	Et	Me	Me	SO	CHOCH ₂ CCH	
2033.	Et	Me	Me	SO ₂	CHOCH ₂ CCH	
2034.	Et	Me	Me	S	CHOCH ₂ CH=CH ₂	
2035.	Et	Me	Me	SO	CHOCH ₂ CH=CH ₂	
2036.	Et	Me	Me	SO ₂	CHOCH ₂ CH=CH ₂	
2037.	Et	Me	Me	S		

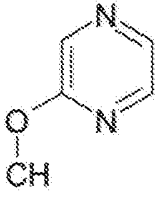
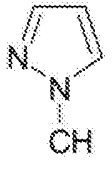

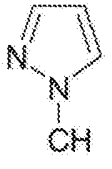


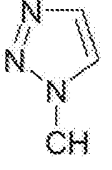
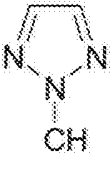
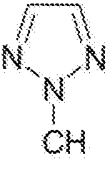
No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
2038.	Et	Me	Me	SO		
2039.	Et	Me	Me	SO ₂		
2040.	Et	Me	Me	S		
2041.	Et	Me	Me	SO		
2042.	Et	Me	Me	SO ₂		
2043.	Et	Me	Me	S		
2044.	Et	Me	Me	SO		
2045.	Et	Me	Me	SO ₂		

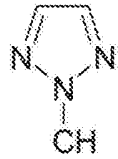
No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
2046.	Et	Me	Me	S		
2047.	Et	Me	Me	SO		
2048.	Et	Me	Me	SO ₂		
2049.	Et	Me	Me	S		
2050.	Et	Me	Me	SO		
2051.	Et	Me	Me	SO ₂		
2052.	Et	Me	Me	S	CHOC ₂ H ₄ F	
2053.	Et	Me	Me	SO	CHOC ₂ H ₄ F	
2054.	Et	Me	Me	SO ₂	CHOC ₂ H ₄ F	
2055.	Et	Me	Me	S	C=NOMe	
2056.	Et	Me	Me	SO	C=NOMe	
2057.	Et	Me	Me	SO ₂	C=NOMe	
2058.	Et	Me	Me	S	C=NOCH ₂ CCH	
2059.	Et	Me	Me	SO	C=NOCH ₂ CCH	
2060.	Et	Me	Me	SO ₂	C=NOCH ₂ CCH	
2061.	Et	Me	Me	S	C=NOCH ₂ CH=CH ₂	

No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
2062.	Et	Me	Me	SO	C=NOCH ₂ CH=CH ₂	
2063.	Et	Me	Me	SO ₂	C=NOCH ₂ CH=CH ₂	
2064.	Et	Me	Me	S	C=O	
2065.	Et	Me	Me	SO	C=O	
2066.	Et	Me	Me	SO ₂	C=O	
2067.	Et	Me	Me	S	C=S	
2068.	Et	Me	Me	SO	C=S	
2069.	Et	Me	Me	SO ₂	C=S	
2070.	Et	Me	Me	S	C=S	
2071.	Et	Me	Me	SO	C=S	
2072.	Et	Me	Me	SO ₂	C=S	
2073.	Et	Me	Me	S	C=N-N(CH ₃) ₂	
2074.	Et	Me	Me	SO	C=N-N(CH ₃) ₂	
2075.	Et	Me	Me	SO ₂	C=N-N(CH ₃) ₂	
2076.	Et	Me	Me	S	O	
2077.	Et	Me	Me	SO	O	
2078.	Et	Me	Me	SO ₂	O	
2079.	Et	Me	Me	S	S	
2080.	Et	Me	Me	SO	S	
2081.	Et	Me	Me	SO ₂	S	
2082.	Et	Me	Me	S	SO	
2083.	Et	Me	Me	SO	SO	
2084.	Et	Me	Me	SO ₂	SO	
2085.	Et	Me	Me	S	SO ₂	
2086.	Et	Me	Me	SO	SO ₂	
2087.	Et	Me	Me	SO ₂	SO ₂	
2088.	Et	Me	Me	S	NMe	
2089.	Et	Me	Me	SO	NMe	
2090.	Et	Me	Me	SO ₂	NMe	
2091.	Et	Me	Me	O	O	

No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
2092.	Et	Me	H	O	O	
2093.	Et	SMe	H	O	O	
2094.	Et	Cl	H	O	O	
2095.	Et	Cl	H	S	CH ₂	
2096.	Et	Cl	H	SO	CH ₂	
2097.	Et	Cl	H	SO ₂	CH ₂	
2098.	Et	Cl	H	S	CHMe	
2099.	Et	Cl	H	SO	CHMe	
2100.	Et	Cl	H	SO ₂	CHMe	
2101.	Et	Cl	H	S	C(CH ₃) ₂	
2102.	Et	Cl	H	SO	C(CH ₃) ₂	
2103.	Et	Cl	H	SO ₂	C(CH ₃) ₂	
2104.	Et	Cl	H	S	C(OC ₂ H ₄ O)	
2105.	Et	Cl	H	SO	C(OC ₂ H ₄ O)	
2106.	Et	Cl	H	SO ₂	C(OC ₂ H ₄ O)	
2107.	Et	Cl	H	S	C(SC ₂ H ₄ S)	
2108.	Et	Cl	H	SO	C(SC ₂ H ₄ S)	
2109.	Et	Cl	H	SO ₂	C(SC ₂ H ₄ S)	
2110.	Et	Cl	H	S	CHOMe	
2111.	Et	Cl	H	SO	CHOMe	
2112.	Et	Cl	H	SO ₂	CHOMe	
2113.	Et	Cl	H	S	CHOEt	
2114.	Et	Cl	H	SO	CHOEt	
2115.	Et	Cl	H	SO ₂	CHOEt	
2116.	Et	Cl	H	S	CHOiPr	
2117.	Et	Cl	H	SO	CHOiPr	
2118.	Et	Cl	H	SO ₂	CHOiPr	
2119.	Et	Cl	H	S	CHOCH ₂ cPr	
2120.	Et	Cl	H	SO	CHOCH ₂ cPr	
2121.	Et	Cl	H	SO ₂	CHOCH ₂ cPr	

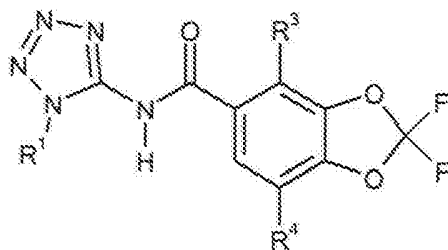
No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
2122.	Et	Cl	H	S	CHOC ₂ H ₄ OMe	
2123.	Et	Cl	H	SO	CHOC ₂ H ₄ OMe	
2124.	Et	Cl	H	SO ₂	CHOC ₂ H ₄ OMe	
2125.	Et	Cl	H	S	CHOCH ₂ CCH	
2126.	Et	Cl	H	SO	CHOCH ₂ CCH	
2127.	Et	Cl	H	SO ₂	CHOCH ₂ CCH	
2128.	Et	Cl	H	S	CHOCH ₂ CH=CH ₂	
2129.	Et	Cl	H	SO	CHOCH ₂ CH=CH ₂	
2130.	Et	Cl	H	SO ₂	CHOCH ₂ CH=CH ₂	
2131.	Et	Cl	H	S		
2132.	Et	Cl	H	SO		
2133.	Et	Cl	H	SO ₂		
2134.	Et	Cl	H	S		
2135.	Et	Cl	H	SO		

No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
2136.	Et	Cl	H	SO ₂		
2137.	Et	Cl	H	S		
2138.	Et	Cl	H	SO		
2139.	Et	Cl	H	SO ₂		
2140.	Et	Cl	H	S		
2141.	Et	Cl	H	SO		
2142.	Et	Cl	H	SO ₂		
2143.	Et	Cl	H	S		
2144.	Et	Cl	H	SO		

No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
2145.	Et	Cl	H	SO ₂		
2146.	Et	Cl	H	S	CHOC ₂ H ₄ F	
2147.	Et	Cl	H	SO	CHOC ₂ H ₄ F	
2148.	Et	Cl	H	SO ₂	CHOC ₂ H ₄ F	
2149.	Et	Cl	H	S	C=NOMe	
2150.	Et	Cl	H	SO	C=NOMe	
2151.	Et	Cl	H	SO ₂	C=NOMe	
2152.	Et	Cl	H	S	C=NOCH ₂ CCH	
2153.	Et	Cl	H	SO	C=NOCH ₂ CCH	
2154.	Et	Cl	H	SO ₂	C=NOCH ₂ CCH	
2155.	Et	Cl	H	S	C=NOCH ₂ CH=CH ₂	
2156.	Et	Cl	H	SO	C=NOCH ₂ CH=CH ₂	
2157.	Et	Cl	H	SO ₂	C=NOCH ₂ CH=CH ₂	
2158.	Et	Cl	H	S	C=O	
2159.	Et	Cl	H	SO	C=O	
2160.	Et	Cl	H	SO ₂	C=O	
2161.	Et	Cl	H	S	C=S	
2162.	Et	Cl	H	SO	C=S	
2163.	Et	Cl	H	SO ₂	C=S	
2164.	Et	Cl	H	S	C=S	
2165.	Et	Cl	H	SO	C=S	
2166.	Et	Cl	H	SO ₂	C=S	
2167.	Et	Cl	H	S	C=N-N(CH ₃) ₂	
2168.	Et	Cl	H	SO	C=N-N(CH ₃) ₂	
2169.	Et	Cl	H	SO ₂	C=N-N(CH ₃) ₂	
2170.	Et	Cl	H	S	O	
2171.	Et	Cl	H	SO	O	
2172.	Et	Cl	H	SO ₂	O	

No.	R ²	R ³	R ⁴	Y	X	¹ H NMR
2173.	Et	Cl	H	S	S	
2174.	Et	Cl	H	SO	S	
2175.	Et	Cl	H	SO ₂	S	
2176.	Et	Cl	H	S	SO	
2177.	Et	Cl	H	SO	SO	
2178.	Et	Cl	H	SO ₂	SO	
2179.	Et	Cl	H	S	SO ₂	
2180.	Et	Cl	H	SO	SO ₂	
2181.	Et	Cl	H	SO ₂	SO ₂	
2182.	Et	Cl	H	S	NMe	
2183.	Et	Cl	H	SO	NMe	
2184.	Et	Cl	H	SO ₂	NMe	

Table 7: Inventive compounds of the general formula (I) in which Q is Q1, X and Y are each oxygen, R⁵ is fluorine and n is 1

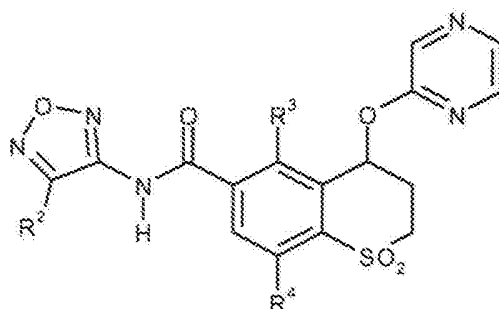


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No.	R ¹	R ³	R ⁴	¹ H NMR
2185.	Me	Me	Me	
2186.	Me	Me	H	DMSO-d ₆ , 400 MHz: 7.62 (d, 1H), 7.40 (d, 1H), 3.90 (s, 3H), 2.39 (s, 3H)
2187.	Me	Cl	H	
2188.	Me	SMe	H	
2189.	Me	Me	Me	
2190.	Me	Me	H	
2191.	Me	Cl	H	

No.	R ¹	R ³	R ⁴	¹ H NMR
2192.	Me	SMe	H	
2193.	Et	Me	Me	
2194.	Et	Me	H	
2195.	Et	Cl	H	
2196.	Et	SMe	H	
2197.	Et	Me	Me	
2198.	Et	Me	H	
2199.	Et	Cl	H	
2200.	Et	SMe	H	

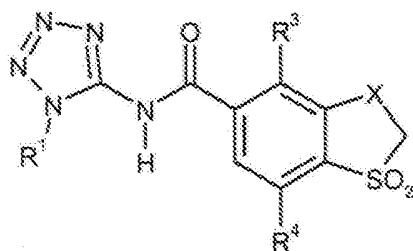
Table 8: Inventive compounds of the general formula (I) in which Q is Q3, X is 2-(1,4-pyrazinyl)oxymethyl, Y is SO₂, R⁵ is hydrogen and n is 2



No.	R ²	R ³	R ⁴	¹ H NMR
2201.	Cl	Me	Me	
2202.	Cl	Me	H	
2203.	Cl	Cl	H	
2204.	OMe	Me	Me	DMSO-d ₆ , 400 MHz: 11.36 (s,1H), 8.28 (s,1H), 8.33-8.31 (m,2H), 7.60 (s,1H), 6.51 (dd,1H), 4.07 (s,3H), 3.77-3.70 (m,1H), 3.58-3.53 (m,1H), 2.76-2.60 (m,5H), 2.18 (s,3H)
2205.	OMe	Me	H	
2206.	OMe	Cl	H	
2207.	NHAc	Me	Me	
2208.	NHAc	Me	H	
2209.	NHAc	Cl	H	

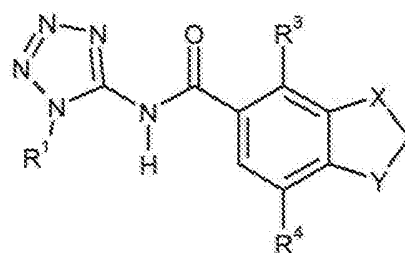
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Table 9: Inventive compounds of the general formula (I) in which Q is Q1, Y is SO₂, R⁵ is hydrogen and n is 1



No.	R ¹	R ³	R ⁴	X	¹ H NMR
2210.	nPr	Me	Me	CH ₂	
2211.	nPr	Me	H	CH ₂	
2212.	nPr	Cl	H	CH ₂	DMSO-d ₆ , 400 MHz: 0.89 (t,3H), 1.89 (m,2H), 3.42 (t,2H), 3.76 (s,2H), 4.33 (t,2H), 7.90 (d,1H), 7.94 (d,1H), 11.84 (s,1H)
2213.	C ₂ H ₄ OMe	Me	Me	CH ₂	
2214.	C ₂ H ₄ OMe	Me	H	CH ₂	
2215.	C ₂ H ₄ OMe	Cl	H	CH ₂	
2216.	CH ₂ CF ₃	Me	Me	CH ₂	
2217.	CH ₂ CF ₃	Me	H	CH ₂	
2218.	CH ₂ CF ₃	Cl	H	CH ₂	
2219.	nPr	Me	Me	CHOMe	
2220.	nPr	Me	H	CHOMe	
2221.	nPr	Cl	H	CHOMe	DMSO-d ₆ , 400 MHz: 0.99 (t,3H), 2.01 (m,2H), 3.53 (s,3H), 3.63 (dd,1H), 3.80 (d,1H), 4.40 (t,2H), 5.22 (d,1H), 7.72 (d,1H), 7.92 (d,1H), 10.80 (s,1H)
2222.	C ₂ H ₄ OMe	Me	Me	CHOMe	
2223.	C ₂ H ₄ OMe	Me	H	CHOMe	
2224.	C ₂ H ₄ OMe	Cl	H	CHOMe	
2225.	CH ₂ CF ₃	Me	Me	CHOMe	
2226.	CH ₂ CF ₃	Me	H	CHOMe	
2227.	CH ₂ CF ₃	Cl	H	CHOMe	

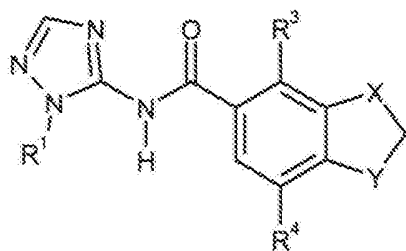
Table 10: Inventive compounds of the general formula (I) in which Q is Q1 and R⁵ is hydrogen and n is 1



No.	R ¹	R ³	R ⁴	X	Y	¹ H NMR
2228.	Me	Me	Me	S	C=O	
2229.	Me	Me	Me	SO	C=O	
2230.	Me	Me	Me	SO ₂	C=O	
2231.	Me	Me	Me	S	CHOMe	
2232.	Me	Me	Me	SO	CHOMe	
2233.	Me	Me	Me	SO ₂	CHOMe	
2234.	Me	Me	Me	S	CHOEt	
2235.	Me	Me	Me	SO	CHOEt	
2236.	Me	Me	Me	SO ₂	CHOEt	
2237.	Me	Me	Me	S	C=NOMe	
2238.	Me	Me	Me	SO	C=NOMe	
2239.	Me	Me	Me	SO ₂	C=NOMe	
2240.	Me	Me	Me	S	C=NOEt	
2241.	Me	Me	Me	SO	C=NOEt	
2242.	Me	Me	Me	SO ₂	C=NOEt	
2243.	Me	Me	Me	S	O	
2244.	Me	Me	Me	SO	O	
2245.	Me	Me	Me	SO ₂	O	
2246.	Me	Me	Me	S	S	
2247.	Me	Me	Me	SO	S	
2248.	Me	Me	Me	SO ₂	S	
2249.	Me	Me	Me	S	SO ₂	
2250.	Me	Me	Me	SO	SO ₂	
2251.	Me	Me	Me	SO ₂	SO ₂	
2252.	Me	Me	H	S	C=O	

No.	R ¹	R ³	R ⁴	X	Y	¹ H NMR
2253.	Me	Me	H	SO	C=O	
2254.	Me	Me	H	SO ₂	C=O	
2255.	Me	Me	H	S	CHOMe	
2256.	Me	Me	H	SO	CHOMe	
2257.	Me	Me	H	SO ₂	CHOMe	
2258.	Me	Me	H	S	CHOEt	
2259.	Me	Me	H	SO	CHOEt	
2260.	Me	Me	H	SO ₂	CHOEt	
2261.	Me	Me	H	S	C=NOMe	
2262.	Me	Me	H	SO	C=NOMe	
2263.	Me	Me	H	SO ₂	C=NOMe	
2264.	Me	Me	H	S	C=NOEt	
2265.	Me	Me	H	SO	C=NOEt	
2266.	Me	Me	H	SO ₂	C=NOEt	
2267.	Me	Me	H	S	O	
2268.	Me	Me	H	SO	O	
2269.	Me	Me	H	SO ₂	O	
2270.	Me	Me	H	S	S	
2271.	Me	Me	H	SO	S	
2272.	Me	Me	H	SO ₂	S	
2273.	Me	Me	H	S	SO ₂	
2274.	Me	Me	H	SO	SO ₂	
2275.	Me	Me	H	SO ₂	SO ₂	

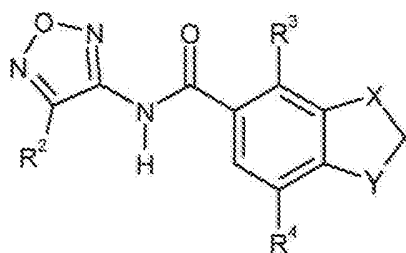
Table 11: Inventive compounds of the general formula (I) in which Q is Q2, R⁵ is hydrogen and n is 1



No.	R ¹	R ³	R ⁴	X	Y	¹ H NMR
2276.	Me	Me	Me	S	C=O	
2277.	Me	Me	Me	SO	C=O	
2278.	Me	Me	Me	SO ₂	C=O	
2279.	Me	Me	Me	S	CHOMe	
2280.	Me	Me	Me	SO	CHOMe	
2281.	Me	Me	Me	SO ₂	CHOMe	
2282.	Me	Me	Me	S	CHOEt	
2283.	Me	Me	Me	SO	CHOEt	
2284.	Me	Me	Me	SO ₂	CHOEt	
2285.	Me	Me	Me	S	C=NOMe	
2286.	Me	Me	Me	SO	C=NOMe	
2287.	Me	Me	Me	SO ₂	C=NOMe	
2288.	Me	Me	Me	S	C=NOEt	
2289.	Me	Me	Me	SO	C=NOEt	
2290.	Me	Me	Me	SO ₂	C=NOEt	
2291.	Me	Me	Me	S	O	
2292.	Me	Me	Me	SO	O	
2293.	Me	Me	Me	SO ₂	O	
2294.	Me	Me	Me	S	S	
2295.	Me	Me	Me	SO	S	
2296.	Me	Me	Me	SO ₂	S	
2297.	Me	Me	Me	S	SO ₂	
2298.	Me	Me	Me	SO	SO ₂	
2299.	Me	Me	Me	SO ₂	SO ₂	
2300.	Me	Me	H	S	C=O	

No.	R ¹	R ³	R ⁴	X	Y	¹ H NMR
2301.	Me	Me	H	SO	C=O	
2302.	Me	Me	H	SO ₂	C=O	
2303.	Me	Me	H	S	CHOMe	
2304.	Me	Me	H	SO	CHOMe	
2305.	Me	Me	H	SO ₂	CHOMe	
2306.	Me	Me	H	S	CHOEt	
2307.	Me	Me	H	SO	CHOEt	
2308.	Me	Me	H	SO ₂	CHOEt	
2309.	Me	Me	H	S	C=NOMe	
2310.	Me	Me	H	SO	C=NOMe	
2311.	Me	Me	H	SO ₂	C=NOMe	
2312.	Me	Me	H	S	C=NOEt	
2313.	Me	Me	H	SO	C=NOEt	
2314.	Me	Me	H	SO ₂	C=NOEt	
2315.	Me	Me	H	S	O	
2316.	Me	Me	H	SO	O	
2317.	Me	Me	H	SO ₂	O	
2318.	Me	Me	H	S	S	
2319.	Me	Me	H	SO	S	
2320.	Me	Me	H	SO ₂	S	
2321.	Me	Me	H	S	SO ₂	
2322.	Me	Me	H	SO	SO ₂	
2323.	Me	Me	H	SO ₂	SO ₂	

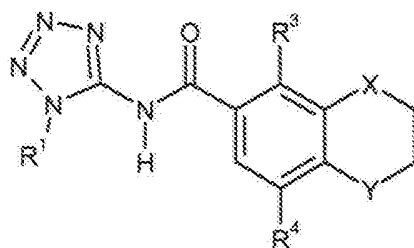
Table 12: Inventive compounds of the general formula (I) in which Q is Q3, R⁵ is hydrogen and n is 1



No.	R ²	R ³	R ⁴	X	Y	¹ H NMR
2324.	Me	Me	Me	S	C=O	
2325.	Me	Me	Me	SO	C=O	
2326.	Me	Me	Me	SO ₂	C=O	
2327.	Me	Me	Me	S	CHOMe	
2328.	Me	Me	Me	SO	CHOMe	
2329.	Me	Me	Me	SO ₂	CHOMe	
2330.	Me	Me	Me	S	CHOEt	
2331.	Me	Me	Me	SO	CHOEt	
2332.	Me	Me	Me	SO ₂	CHOEt	
2333.	Me	Me	Me	S	C=NOMe	
2334.	Me	Me	Me	SO	C=NOMe	
2335.	Me	Me	Me	SO ₂	C=NOMe	
2336.	Me	Me	Me	S	C=NOEt	
2337.	Me	Me	Me	SO	C=NOEt	
2338.	Me	Me	Me	SO ₂	C=NOEt	
2339.	Me	Me	Me	S	O	
2340.	Me	Me	Me	SO	O	
2341.	Me	Me	Me	SO ₂	O	
2342.	Me	Me	Me	S	S	
2343.	Me	Me	Me	SO	S	
2344.	Me	Me	Me	SO ₂	S	
2345.	Me	Me	Me	S	SO ₂	
2346.	Me	Me	Me	SO	SO ₂	
2347.	Me	Me	Me	SO ₂	SO ₂	
2348.	Me	Me	H	S	C=O	

No.	R ²	R ³	R ⁴	X	Y	¹ H NMR
2349.	Me	Me	H	SO	C=O	
2350.	Me	Me	H	SO ₂	C=O	
2351.	Me	Me	H	S	CHOMe	
2352.	Me	Me	H	SO	CHOMe	
2353.	Me	Me	H	SO ₂	CHOMe	
2354.	Me	Me	H	S	CHOEt	
2355.	Me	Me	H	SO	CHOEt	
2356.	Me	Me	H	SO ₂	CHOEt	
2357.	Me	Me	H	S	C=NOMe	
2358.	Me	Me	H	SO	C=NOMe	
2359.	Me	Me	H	SO ₂	C=NOMe	
2360.	Me	Me	H	S	C=NOEt	
2361.	Me	Me	H	SO	C=NOEt	
2362.	Me	Me	H	SO ₂	C=NOEt	
2363.	Me	Me	H	S	O	
2364.	Me	Me	H	SO	O	
2365.	Me	Me	H	SO ₂	O	
2366.	Me	Me	H	S	S	
2367.	Me	Me	H	SO	S	
2368.	Me	Me	H	SO ₂	S	
2369.	Me	Me	H	S	SO ₂	
2370.	Me	Me	H	SO	SO ₂	
2371.	Me	Me	H	SO ₂	SO ₂	

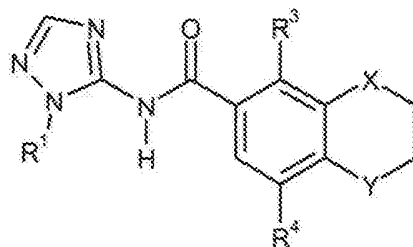
Table 13: Inventive compounds of the general formula (I) in which Q is Q1, R⁵ is hydrogen and n is 2



No.	R ¹	R ²	R ⁴	X	Y	¹ H NMR
2372.	Me	Me	Me	S	C=O	
2373.	Me	Me	Me	SO	C=O	
2374.	Me	Me	Me	SO ₂	C=O	
2375.	Me	Me	Me	S	CHOMe	
2376.	Me	Me	Me	SO	CHOMe	
2377.	Me	Me	Me	SO ₂	CHOMe	
2378.	Me	Me	Me	S	CHOEt	
2379.	Me	Me	Me	SO	CHOEt	
2380.	Me	Me	Me	SO ₂	CHOEt	
2381.	Me	Me	Me	S	C=NOMe	
2382.	Me	Me	Me	SO	C=NOMe	
2383.	Me	Me	Me	SO ₂	C=NOMe	
2384.	Me	Me	Me	S	C=NOEt	
2385.	Me	Me	Me	SO	C=NOEt	
2386.	Me	Me	Me	SO ₂	C=NOEt	
2387.	Me	Me	Me	S	O	
2388.	Me	Me	Me	SO	O	
2389.	Me	Me	Me	SO ₂	O	
2390.	Me	Me	Me	S	S	
2391.	Me	Me	Me	SO	S	
2392.	Me	Me	Me	SO ₂	S	
2393.	Me	Me	Me	S	SO ₂	
2394.	Me	Me	Me	SO	SO ₂	
2395.	Me	Me	Me	SO ₂	SO ₂	
2396.	Me	Me	H	S	C=O	

No.	R ¹	R ³	R ⁴	X	Y	¹ H NMR
2397.	Me	Me	H	SO	C=O	
2398.	Me	Me	H	SO ₂	C=O	
2399.	Me	Me	H	S	CHOMe	
2400.	Me	Me	H	SO	CHOMe	
2401.	Me	Me	H	SO ₂	CHOMe	
2402.	Me	Me	H	S	CHOEt	
2403.	Me	Me	H	SO	CHOEt	
2404.	Me	Me	H	SO ₂	CHOEt	
2405.	Me	Me	H	S	C=NOMe	
2406.	Me	Me	H	SO	C=NOMe	
2407.	Me	Me	H	SO ₂	C=NOMe	
2408.	Me	Me	H	S	C=NOEt	
2409.	Me	Me	H	SO	C=NOEt	
2410.	Me	Me	H	SO ₂	C=NOEt	
2411.	Me	Me	H	S	O	
2412.	Me	Me	H	SO	O	
2413.	Me	Me	H	SO ₂	O	
2414.	Me	Me	H	S	S	
2415.	Me	Me	H	SO	S	
2416.	Me	Me	H	SO ₂	S	
2417.	Me	Me	H	S	SO ₂	
2418.	Me	Me	H	SO	SO ₂	
2419.	Me	Me	H	SO ₂	SO ₂	

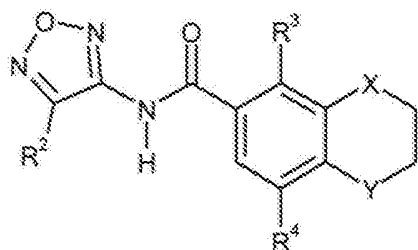
Table 14: Inventive compounds of the general formula (I) in which Q is Q2, R⁵ is hydrogen and n is 2



No.	R ¹	R ³	R ⁴	X	Y	¹ H NMR
2420.	Me	Me	Me	S	C=O	
2421.	Me	Me	Me	SO	C=O	
2422.	Me	Me	Me	SO ₂	C=O	
2423.	Me	Me	Me	S	CHOMe	
2424.	Me	Me	Me	SO	CHOMe	
2425.	Me	Me	Me	SO ₂	CHOMe	
2426.	Me	Me	Me	S	CHOEt	
2427.	Me	Me	Me	SO	CHOEt	
2428.	Me	Me	Me	SO ₂	CHOEt	
2429.	Me	Me	Me	S	C=NOMe	
2430.	Me	Me	Me	SO	C=NOMe	
2431.	Me	Me	Me	SO ₂	C=NOMe	
2432.	Me	Me	Me	S	C=NOEt	
2433.	Me	Me	Me	SO	C=NOEt	
2434.	Me	Me	Me	SO ₂	C=NOEt	
2435.	Me	Me	Me	S	O	
2436.	Me	Me	Me	SO	O	
2437.	Me	Me	Me	SO ₂	O	
2438.	Me	Me	Me	S	S	
2439.	Me	Me	Me	SO	S	
2440.	Me	Me	Me	SO ₂	S	
2441.	Me	Me	Me	S	SO ₂	
2442.	Me	Me	Me	SO	SO ₂	
2443.	Me	Me	Me	SO ₂	SO ₂	
2444.	Me	Me	H	S	C=O	

No.	R ¹	R ³	R ⁴	X	Y	¹ H NMR
2445.	Me	Me	H	SO	C=O	
2446.	Me	Me	H	SO ₂	C=O	
2447.	Me	Me	H	S	CHOMe	
2448.	Me	Me	H	SO	CHOMe	
2449.	Me	Me	H	SO ₂	CHOMe	
2450.	Me	Me	H	S	CHOEt	
2451.	Me	Me	H	SO	CHOEt	
2452.	Me	Me	H	SO ₂	CHOEt	
2453.	Me	Me	H	S	C=NOMe	
2454.	Me	Me	H	SO	C=NOMe	
2455.	Me	Me	H	SO ₂	C=NOMe	
2456.	Me	Me	H	S	C=NOEt	
2457.	Me	Me	H	SO	C=NOEt	
2458.	Me	Me	H	SO ₂	C=NOEt	
2459.	Me	Me	H	S	O	
2460.	Me	Me	H	SO	O	
2461.	Me	Me	H	SO ₂	O	
2462.	Me	Me	H	S	S	
2463.	Me	Me	H	SO	S	
2464.	Me	Me	H	SO ₂	S	
2465.	Me	Me	H	S	SO ₂	
2466.	Me	Me	H	SO	SO ₂	
2467.	Me	Me	H	SO ₂	SO ₂	

Table 15: Inventive compounds of the general formula (I) in which Q is Q3, R⁵ is hydrogen and n is 2



No.	R ²	R ³	R ⁴	X	Y	¹ H NMR
2468.	Me	Me	Me	S	C=O	
2469.	Me	Me	Me	SO	C=O	
2470.	Me	Me	Me	SO ₂	C=O	
2471.	Me	Me	Me	S	CHOMe	
2472.	Me	Me	Me	SO	CHOMe	
2473.	Me	Me	Me	SO ₂	CHOMe	
2474.	Me	Me	Me	S	CHOEt	
2475.	Me	Me	Me	SO	CHOEt	
2476.	Me	Me	Me	SO ₂	CHOEt	
2477.	Me	Me	Me	S	C=NOMe	
2478.	Me	Me	Me	SO	C=NOMe	
2479.	Me	Me	Me	SO ₂	C=NOMe	
2480.	Me	Me	Me	S	C=NOEt	
2481.	Me	Me	Me	SO	C=NOEt	
2482.	Me	Me	Me	SO ₂	C=NOEt	
2483.	Me	Me	Me	S	O	
2484.	Me	Me	Me	SO	O	
2485.	Me	Me	Me	SO ₂	O	
2486.	Me	Me	Me	S	S	
2487.	Me	Me	Me	SO	S	
2488.	Me	Me	Me	SO ₂	S	
2489.	Me	Me	Me	S	SO ₂	
2490.	Me	Me	Me	SO	SO ₂	
2491.	Me	Me	Me	SO ₂	SO ₂	
2492.	Me	Me	H	S	C=O	

No.	R ¹	R ³	R ⁴	X	Y	¹ H NMR
2493.	Me	Me	H	SO	C=O	
2494.	Me	Me	H	SO ₂	C=O	
2495.	Me	Me	H	S	CHOMe	
2496.	Me	Me	H	SO	CHOMe	
2497.	Me	Me	H	SO ₂	CHOMe	
2498.	Me	Me	H	S	CHOEt	
2499.	Me	Me	H	SO	CHOEt	
2500.	Me	Me	H	SO ₂	CHOEt	
2501.	Me	Me	H	S	C=NOMe	
2502.	Me	Me	H	SO	C=NOMe	
2503.	Me	Me	H	SO ₂	C=NOMe	
2504.	Me	Me	H	S	C=NOEt	
2505.	Me	Me	H	SO	C=NOEt	
2506.	Me	Me	H	SO ₂	C=NOEt	
2507.	Me	Me	H	S	O	
2508.	Me	Me	H	SO	O	
2509.	Me	Me	H	SO ₂	O	
2510.	Me	Me	H	S	S	
2511.	Me	Me	H	SO	S	
2512.	Me	Me	H	SO ₂	S	
2513.	Me	Me	H	S	SO ₂	
2514.	Me	Me	H	SO	SO ₂	
2515.	Me	Me	H	SO ₂	SO ₂	

B. Formulation examples

- 5 a) A dusting product is obtained by mixing 10 parts by weight of a compound of the formula (I) and/or a salt thereof and 90 parts by weight of talc as an inert substance, and comminuting the mixture in a hammer mill.

- 5 b) A readily water-dispersible wettable powder is obtained by mixing 25 parts by weight of a compound of the formula (I) and/or salts thereof, 64 parts by weight of kaolin-containing quartz as an inert substance, 10 parts by weight of potassium lignosulfonate and 1 part by weight of sodium oleylmethyltaurate as a wetting agent and dispersant, and grinding the mixture in a pinned-disk mill.
- 10 c) A readily water-dispersible dispersion concentrate is obtained by mixing 20 parts by weight of a compound of the formula (I) and/or salts thereof with 6 parts by weight of alkylphenol polyglycol ether (®Triton X 207), 3 parts by weight of isotridecanol polyglycol ether (8 EO) and 71 parts by weight of paraffinic mineral oil (boiling range for example about 255 to above 277°C), and grinding the mixture in a ball mill to a fineness of below 5 microns.
- 15 d) An emulsifiable concentrate is obtained from 15 parts by weight of a compound of the formula (I) and/or salts thereof, 75 parts by weight of cyclohexanone as a solvent and 10 parts by weight of ethoxylated nonylphenol as an emulsifier.
- 20 e) Water-dispersible granules are obtained by mixing 75 parts by weight of a compound of the formula (I) and/or salts thereof, 10 parts by weight of calcium lignosulfonate, 5 parts by weight of sodium laurylsulfate, 3 parts by weight of polyvinyl alcohol and 7 parts by weight of kaolin, 25 grinding the mixture in a pinned-disk mill and granulating the powder in a fluidized bed by spraying on water as a granulating liquid.
- 30 f) Water-dispersible granules are also obtained by homogenizing and precomminuting 25 parts by weight of a compound of the formula (I) and/or salts thereof, 5 parts by weight of sodium 2,2'-dinaphthylmethane-6,6'-disulfonate, 2 parts by weight of sodium oleylmethyltaurate, 1 part by weight of polyvinyl alcohol,

17 parts by weight of calcium carbonate and
50 parts by weight of water
in a colloid mill, then grinding the mixture in a bead mill and atomizing and
drying the resulting suspension in a spray tower by means of a one-substance
5 nozzle.

C. Biological examples

1. Pre-emergence herbicidal action against harmful plants

Seeds of monocotyledonous and dicotyledonous weed plants and crop plants are
10 placed in wood-fiber pots in sandy loam and covered with soil. The inventive
compounds formulated in the form of wettable powders (WP) or as emulsion
concentrates (EC) are then applied to the surface of the covering soil as an aqueous
suspension or emulsion at a water application rate of 600 to 800 l/ha (converted) with
addition of 0.2% wetting agent. After the treatment, the pots are placed in a greenhouse
15 and kept under good growth conditions for the test plants. The damage to the test
plants is assessed visually after a test period of 3 weeks by comparison with untreated
controls (herbicidal activity in percent (%): 100% action = the plants have died, 0%
action = like control plants). For example, compounds No. 7, 9, 40, 187 and 189 at an
application rate of 320 g/ha each show at least 80% efficacy against *Abutilon*
20 *theophrasti* and *Amaranthus retroflexus*. Compounds No. 9, 40, 187, 189 and 2204 at
an application rate of 320 g/ha each show at least 80% efficacy against *Matricaria*
inodora, *Stellaria media* and *Veronica persica*.

2. Post-emergence herbicidal action against harmful plants

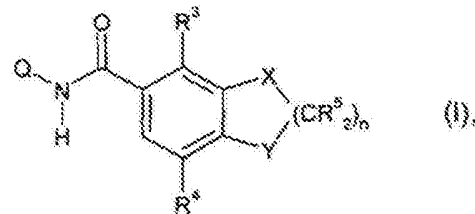
25 Seeds of monocotyledonous and dicotyledonous weed and crop plants are placed in
sandy loam in wood-fiber pots, covered with soil and cultivated in a greenhouse under
good growth conditions. 2 to 3 weeks after sowing, the test plants are treated at the
one-leaf stage. The inventive compounds formulated in the form of wettable powders
(WP) or as emulsion concentrates (EC) are then sprayed onto the green parts of the
30 plants as an aqueous suspension or emulsion at a water application rate of 600 to 800
l/ha (converted) with addition of 0.2% wetting agent. After the test plants have been
left to stand in the greenhouse under optimal growth conditions for about 3 weeks, the
action of the formulations is scored visually in comparison to untreated controls

(herbicidal action in percent (%): 100% action = the plants have died, 0% action = like control plants).

5 Examples of good post-emergence efficacy (PO). For example, compounds No. 7 and 2204 at an application rate of 80 g/ha each show at least 80% efficacy against *Abutilon theophrasti* and *Viola tricolor*. Compounds No. 9, 187 and 189 at an application rate of 80 g/ha each show at least 80% efficacy against *Abutilon theophrasti* and *Amaranthus retroflexus*. Compounds No. 40, 187 and 189 at an application rate of 80 g/ha each show at least 80% efficacy against *Matricaria inodora*, *Stellaria media* and *Veronica persica*.

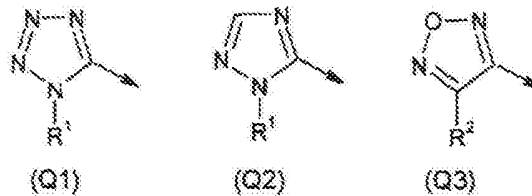
Szabadalmi igénypontok

1. (I) képletű N-(1,2,5-oxadiazol-3-il)-, N-(tetrazol-5-il)- és N-(triazol-5-il)-bicykloaril-karbonsavamid-származékok



- a képletben

Q jelentése Q1, Q2 vagy Q3 képletű csoport,



- R^1 jelentése (C_1-C_6) -alkil, (C_3-C_7) -cikloalkil, halogén- (C_1-C_6) -alkil, (C_2-C_6) -alkenil, halogén- (C_2-C_6) -alkenil, (C_2-C_6) -alkinil, halogén- (C_2-C_6) -alkinil, (C_1-C_6) -alkoxi- (C_1-C_6) -alkil, (C_1-C_6) -alkoxi- (C_2-C_6) -alkenil, (C_1-C_6) -alkoxi- (C_2-C_6) -alkinil, CH_2R^6 , heteroaril, heterociklusos vagy fenil csoport, ahol a három utóbbi csoport mindegyike helyettesítve van halogénnal, továbbá nitro, ciano, (C_1-C_6) -alkil, halogén- (C_1-C_6) -alkil, (C_3-C_7) -cikloalkil, (C_1-C_6) -alkiltio, (C_1-C_6) -alkilszulfonil, (C_1-C_6) -alkilszulfonil, (C_1-C_6) -alkoxi, halogén- (C_1-C_6) -alkoxi és (C_1-C_6) -alkoxi- (C_1-C_4) -alkil csoportok alkotta csoportból megválasztott u csoportokkal;
- R^2 jelentése hidrogén, halogén, (C_1-C_6) -alkil, (C_3-C_7) -cikloalkil, halogén- (C_1-C_6) -alkil, (C_1-C_6) -alkoxi, halogén- (C_1-C_6) -alkoxi, (C_2-C_6) -alkenil, (C_2-C_6) -alkeniloxi, halogén- (C_2-C_6) -alkenil, (C_2-C_6) -alkinil, (C_2-C_6) -alkiniloxi, halogén- (C_2-C_6) -alkinil, ciano, nitro, metilszulfenil, metilszulfonil, metilszulfonil, acetilamino, benzilamino, metoxikarbonil, etoxikarbonil, metoxikarbonilmetil, etoxikarbonilmetil, benzil, metilkarbonil, piperidinilkarbonil, trifluormetilkarbonil, amino, aminokarbonil, metilaminokarbonil, dimetilaminokarbonil, metoximetil csoport, vagy pedig metil, etil, metoxi, trifluormetil és halogén helyettesítők alkotta csoportból megválasztott u csoportokkal helyettesített heteroaril, heterociklusos vagy fenil csoport;
- R^3 és R^4 jelentése egymástól függetlenül hidrogén, (C_1-C_6) -alkil, halogén- (C_1-C_6) -alkil, (C_2-C_6) -alkenil, halogén- (C_2-C_6) -alkenil, (C_2-C_6) -alkinil, halogén- (C_2-C_6) -alkinil, (C_3-C_7) -cikloalkil, (C_3-C_7) -halogén-cikloalkil, (C_1-C_6) -alkoxi, (C_1-C_6) -halogénalkoxi, (C_1-C_6) -alkiltio, (C_1-C_6) -halogénalkiltio, (C_1-C_6) -alkilszulfonil, (C_1-C_6) -halogénalkilszulfonil, (C_1-C_6) -alkilszulfonil, (C_1-C_6) -halogénalkilszulfonil, (C_1-C_6) -alkoxi- (C_1-C_4) -alkil, halogén, nitro vagy ciano;
- R^5 jelentése hidrogén vagy fluor;

R⁶ jelentése acetoxi, acetamido, N-metilacetamido, benzoiloxi, benzamido, N-metilbenzamido, metoxikarbonil, etoxikarbonil, benzoil, metilkarbonil, piperidinilkarbonil, morfolinilkarbonil, trifluormetilkarbonil, aminokarbonil, metilaminokarbonil, dimetilaminokarbonil, (C₃-C₆)-cikloalkil, vagy pedig metil, etil, metoxi, trifluormetil és halogén helyettesítők alkotta csoportból megválasztott u csoportokkal helyettesített heteroaril, heterociklusos vagy fenil csoport;

R⁷ és R⁸ jelentése egymástól függetlenül hidrogén, (C₁-C₆)-alkil, halogén-(C₁-C₆)-alkil, (C₂-C₆)-alkenil, halogén-(C₂-C₆)-alkenil, (C₂-C₆)-alkinil, halogén-(C₂-C₆)-alkinil, (C₃-C₇)-cikloalkil, halogén-(C₃-C₇)-cikloalkil, -OR⁹, S(O)_mR⁹, (C₁-C₆)-alkiltio, halogén-(C₁-C₆)-alkiltio, (C₁-C₆)-alkilszulfonil, halogén-(C₁-C₆)-alkilszulfonil, (C₁-C₆)-alkilszulfonil, halogén-(C₁-C₆)-alkilszulfonil, (C₁-C₆)-alkoxi-(C₁-C₄)-alkil, halogén, nitro, ciano, heteroaril, heterociklusos vagy fenil csoport, ahol a három utóbbi csoport mindegyike helyettesítve van halogénatom, továbbá nitro, ciano, (C₁-C₆)-alkil, halogén-(C₁-C₆)-alkil, (C₃-C₆)-cikloalkil, (C₁-C₆)-alkiltio, (C₁-C₆)-alkilszulfonil, (C₁-C₆)-alkilszulfonil, (C₁-C₆)-alkoxi, halogén-(C₁-C₆)-alkoxi és (C₁-C₆)-alkoxi-(C₁-C₄)-alkil csoportok alkotta csoportból megválasztott u csoportokkal;

vagy

R⁷ és R⁸ együtt azzal a szénatommal, amelyhez kapcsolódnak, -X¹-(CH₂)_r-X²-, -(CH₂)_s-X³-, -(CH₂)_t-X³-CH₂-, -(CH₂)_v-X³-CH₂CH₂- vagy -(CH₂)_w- egységet képeznek, amelyekben mindegyik (CH₂) csoport helyettesítve van halogén, metil és (C₁-C₃)-alkoxi alkotta csoportból megválasztott m csoportokkal,

vagy

R⁷ és R⁸ együtt azzal a szénatommal, amelyhez kapcsolódnak, -O-N((C₁-C₃)-alkil)-CHR¹⁰-CH₂- vagy -O-N=CR¹⁰-CH₂- egységet képeznek, amelyekben mindegyik (CH₂) csoport helyettesítve van halogén és metil alkotta csoportból megválasztott m csoportokkal;

R⁹ jelentése hidrogén, (C₁-C₆)-alkil, halogén-(C₁-C₆)-alkil, (C₂-C₆)-alkenil, halogén-(C₂-C₆)-alkenil, (C₂-C₆)-alkinil, halogén-(C₂-C₆)-alkinil, (C₃-C₇)-cikloalkil, (C₃-C₇)-halogén-cikloalkil, (C₃-C₇)-cikloalkil-(C₁-C₃)-alkil, halogén-(C₃-C₇)-cikloalkil-(C₁-C₃)-alkil, heteroaril, heterociklusos vagy fenil csoport, ahol a három utóbbi csoport mindegyike helyettesítve van halogénatom, továbbá nitro, ciano, (C₁-C₆)-alkil, halogén-(C₁-C₆)-alkil, (C₃-C₆)-cikloalkil, (C₁-C₆)-alkiltio, (C₁-C₆)-alkilszulfonil, (C₁-C₆)-alkilszulfonil, (C₁-C₆)-alkoxi, halogén-(C₁-C₆)-alkoxi és (C₁-C₆)-alkoxi-(C₁-C₄)-alkil csoportok alkotta csoportból megválasztott s csoportokkal;

R¹⁰ jelentése hidrogén, (C₁-C₃)-alkil vagy fenil, amely utóbbi helyettesítve van (C₁-C₃)-alkil, halogén, ciano és nitro alkotta csoportból megválasztott u csoportokkal;

R¹¹ jelentése hidrogén, (C₁-C₆)-alkil, (C₂-C₆)-alkenil, (C₂-C₆)-alkinil, formil, (C₂-C₆)-alkilkarbonil, (C₂-C₆)-alkoxikarbonil vagy (C₁-C₂)-alkilszulfonil;

X és Y jelentése egymástól függetlenül O, S, SO, SO₂, C=O, C=S, NR¹⁰, CR⁷R⁸, C=NOR¹⁰ vagy C=NN(R¹¹)₂;

X¹ és X² jelentése egymástól függetlenül O, S vagy N ((C₁-C₃)-alkil);

X³ jelentése O vagy S;

m értéke 0, 1 vagy 2;

- n értéke 1, 2 vagy 3;
r értéke 2, 3 vagy 4;
s értéke 2, 3, 4 vagy 5;
t értéke 1, 2, 3 vagy 4;
u értéke 0, 1, 2 vagy 3;
v értéke 2 vagy 3;
w értéke 2, 3, 4, 5 vagy 6 --
vagy sók.

2. Az 1. igénypont szerinti N-(1,2,5-oxadiazol-3-il)-, N-(tetrazol-5-il)- és N-(triazol-5-il)bicikloaril-karbonsavamid-származékok, ahol

- R¹ jelentése (C₁-C₃)-alkil, (C₃-C₅)-cikloalkil, halogén-(C₁-C₃)-alkil vagy (C₁-C₃)-alkoxi-(C₁-C₃)-alkil;
R² jelentése hidrogén, halogén, (C₁-C₃)-alkil, (C₃-C₅)-cikloalkil, halogén-(C₁-C₃)-alkil, (C₁-C₃)-alkoxi, halogén-(C₁-C₃)-alkoxi, ciano, nitro, metilszulfenil, metilszulfenil, metilszulfonil, acetilamino, metoxikarbonil, etoxikarbonil, amino, aminokarbonil, metilaminokarbonil, dimetilaminokarbonil vagy metoximetil;
R³ és R⁴ jelentése egymástól függetlenül hidrogén, (C₁-C₃)-alkil, halogén-(C₁-C₃)-alkil, (C₃-C₅)-cikloalkil, (C₁-C₃)-alkoxi, (C₁-C₃)-halogénalkoxi, (C₁-C₆)-alkiltio, (C₁-C₆)-alkilszulfenil, (C₁-C₆)-alkilszulfonil, (C₁-C₆)-alkoxi-(C₁-C₄)-alkil, halogén, nitro vagy ciano;
R⁵ jelentése hidrogén;
R⁷ és R⁸ jelentése egymástól függetlenül hidrogén, (C₁-C₃)-alkil, halogén-(C₁-C₃)-alkil, (C₃-C₅)-cikloalkil, -OR⁹, S(O)_mR⁹, (C₁-C₃)-alkiltio, (C₁-C₃)-alkilszulfenil, (C₁-C₃)-alkilszulfonil, (C₁-C₃)-alkoxi-(C₁-C₃)-alkil, halogén, nitro, ciano, heteroaril, heterociklusos vagy fenil csoport, ahol a három utóbbi csoport mindegyike helyettesítve van halogénatom, továbbá nitro, ciano, (C₁-C₃)-alkil, halogén-(C₁-C₃)-alkil, (C₃-C₅)-cikloalkil, (C₁-C₃)-alkiltio, (C₁-C₃)-alkilszulfenil, (C₁-C₃)-alkilszulfonil, (C₁-C₃)-alkoxi, halogén-(C₁-C₃)-alkoxi és (C₁-C₃)-alkoxi-(C₁-C₃)-alkil csoportok alkotta csoportból megválasztott u csoportokkal;
vagy
R⁷ és R⁸ együtt azzal a szénatommal, amelyhez kapcsolódnak, -X¹-(CH₂)_r-X²-, -(CH₂)_s-X³-, -(CH₂)_t-X³-CH₂-, -(CH₂)_v-X³-CH₂CH₂- vagy -(CH₂)_w- egységet képeznek, amelyekben mindegyik (CH₂) csoport helyettesítve van halogén, metil és (C₁-C₃)-alkoxi alkotta csoportból megválasztott m csoportokkal;
vagy
R⁷ és R⁸ együtt azzal a szénatommal, amelyhez kapcsolódnak, -O-N((C₁-C₃)-alkil)-CHR¹⁰-CH₂- vagy -O-N=CR¹⁰-CH₂- egységet képeznek, amelyekben mindegyik (CH₂) csoport helyettesítve van halogén és metil alkotta csoportból megválasztott m csoportokkal;
R⁹ jelentése hidrogén, (C₁-C₃)-alkil, halogén-(C₁-C₃)-alkil, (C₂-C₃)-alkenil, (C₂-C₄)-alkinil, (C₃-C₅)-cikloalkil, (C₃-C₅)-cikloalkil-(C₁-C₃)-alkil, heteroaril, heterociklusos vagy fenil csoport, ahol a három

utóbbi csoport mindegyike helyettesítve van halogénatom, továbbá nitro, ciano, (C₁-C₃)-alkil, halogén-(C₁-C₃)-alkil, (C₃-C₆)-cikloalkil, (C₁-C₃)-alkiltio, (C₁-C₃)-alkilszulfonil, (C₁-C₃)-alkilszulfonil, (C₁-C₃)-alkoxi, halogén-(C₁-C₃)-alkoxi és (C₁-C₃)-alkoxi-(C₁-C₃)-alkil csoportok alkotta csoportból megválasztott s csoportokkal;

R¹⁰ jelentése hidrogén vagy (C₁-C₃)-alkil;

X és Y jelentése egymástól függetlenül O, SO₂, C=O, C=S, CR⁷R⁸ vagy C=NOR¹⁰;

X¹ és X² jelentése egymástól függetlenül O, S vagy N(CH₃);

X³ jelentése O vagy S;

m értéke 0, 1 vagy 2;

n értéke 1 vagy 2;

r értéke 2 vagy 3;

s értéke 2, 3 vagy 4;

t értéke 1, 2 vagy 3;

u értéke 0, 1 vagy 2;

v értéke 2 vagy 3;

w értéke 2, 3, 4 vagy 5.

3. Herbicid készítmények, amelyekre jellemző, hogy herbicidszerűen hatásos mennyiségben az 1. vagy 2. igénypont szerinti (I) képletű vegyületekből legalább egyet tartalmaznak.

4. A 3. igénypont szerinti herbicid készítmények kikészítési segédanyagokkal keverékben.

5. A 3. vagy 4. igénypont szerinti herbicid készítmények, amelyek inszekticidok, akaricidok, herbicidok, fungicidok, széfenerek és növekedésszabályozók alkotta csoportból legalább egy további peszticidszerűen hatásos anyagot tartalmaznak.

6. Az 5. igénypont szerinti herbicid készítmények, amelyek egy széfenert tartalmaznak.

7. A 6. igénypont szerinti herbicid készítmények, amelyek ciprozulfamidot, klokvintocet-mexilt, mefenpir-dietilt vagy izoxadifén-etilt tartalmaznak.

8. Az 5 - 7. igénypontok bármelyike szerinti herbicid készítmények, amelyek egy további herbicidet tartalmaznak.

9. Eljárás nemkívánatos növények irtására, **azzal jellemezve, hogy** a növényekre vagy a nemkívánatos növényzet növekedési helyére hatásos mennyiségben az 1. vagy 2. igénypont szerinti (I) képletű vegyületek közül legalább egyet vagy a 3 - 8. igénypontok bármelyike szerinti herbicid készítmények valamelyikét juttatjuk ki.

10. Az 1. vagy 2. igénypont szerinti (I) képletű vegyületek vagy a 3 - 8. igénypontok bármelyike szerinti herbicid készítmények alkalmazása nemkívánatos növények irtására.

11. A 10. igénypont szerinti alkalmazás, **azzal jellemezve, hogy az (I) képletű vegyületek** nemkívánatos növények irtására haszonnövények termesztésénél kerülnek alkalmazásra.

12. A 11. igénypont szerinti alkalmazás, **azzal jellemezve, hogy a haszonnövények transzgen** haszonnövények.