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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,

(54) Title: DOSING SCHEDULE OF A HER2 INHIBITOR

(57) Abstract: The present invention relates to a dosing schedule of a HER2 inhibitor useful in the prevention and/or treatment of cancer, in particular to its doses and second or further line administration.

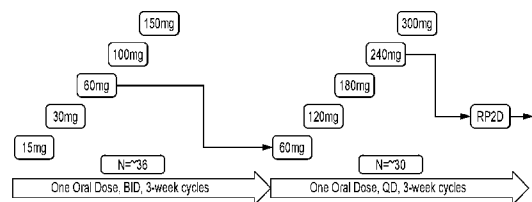


FIG. 1A

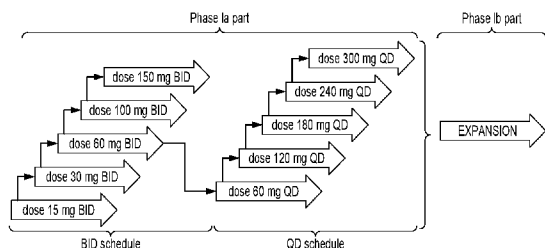


FIG. 1B



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CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

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Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

Published:

— *with international search report (Art. 21(3))*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:

05 December 2024 (05.12.2024)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2024/058464

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims;; it is covered by claims Nos.:
1-19, 33-35 (completely); 24-29 (partially)

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No PCT/EP2024/058464

A. CLASSIFICATION OF SUBJECT MATTER
 INV. A61K31/519 A61P35/00 A61P31/00 A61K45/06
 ADD.

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED
 Minimum documentation searched (classification system followed by classification symbols)
A61K A61P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, BIOSIS, EMBASE, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2021/213800 A1 (BOEHRINGER INGELHEIM INT [DE]) 28 October 2021 (2021-10-28) cited in the application claims 11, 14, 15 page 10; examples I-01 page 19, lines 16-29 page 23, lines 15-17 page 24, line 12 - page 26, line 9 page 26, line 29 - page 27, line 10 ----- -/--	1-19, 24-29, 33-35

Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family
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Date of the actual completion of the international search 3 September 2024	Date of mailing of the international search report 07/11/2024
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Schüle, Stefanie
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INTERNATIONAL SEARCH REPORT

International application No

PCT/EP2024/058464

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>OPDAM F ET AL: "A Phase I trial of BI 1810631, a HER2 tyrosine kinase inhibitor (TKI), as monotherapy in patients (pts) with advanced/metastatic solid tumors with HER2 aberrations", EUROPEAN JOURNAL OF CANCER, ELSEVIER, AMSTERDAM NL, vol. 174, 1 October 2022 (2022-10-01), XP087220539, ISSN: 0959-8049, DOI: 10.1016/S0959-8049(22)00811-5 [retrieved on 2022-10-28] the whole document</p> <p>-----</p>	<p>1-19, 24-29, 33-35</p>
Y	<p>DATABASE EMBASE [Online] ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, NL; 1 June 2022 (2022-06-01), HEYMACH J ET AL: "A phase I, open-label, dose escalation, confirmation, and expansion trial of BI 1810631 as monotherapy in patients with advanced/metastatic solid tumors with HER2 aberrations", XP002811752, Database accession no. EMB-638843082 abstract</p> <p>-----</p>	<p>1-19, 24-29, 33-35</p>
A	<p>HUANG SIYUAN ET AL: "Effects of the Preparation Process on the Properties of Amorphous Solid Dispersions", AAPS PHARMSCITECH, SPRINGER INTERNATIONAL PUBLISHING, CHAM, vol. 19, no. 5, 18 September 2017 (2017-09-18), pages 1971-1984, XP036541906, DOI: 10.1208/S12249-017-0861-7 the whole document</p> <p>-----</p>	<p>1-19, 24-29, 33-35</p>

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2024/058464

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2021213800	A1	28-10-2021	
		AR 121779	A1 06-07-2022
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		US 2023374021	A1 23-11-2023
		WO 2021213800	A1 28-10-2021

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-19, 33-35 (completely); 24-29 (partially)

Compound (1) or pharmaceutical composition comprising compound (1) for use in the treatment of cancer, wherein compound (1) or the pharmaceutical composition is administered in a daily dose of at least 30 mg.

2. claims: 20-23 (completely); 24-29 (partially)

Invention 2: Claims 20-23, Claims 24-29 (partially)
Compound (1) for use in the treatment of cancer, wherein compound (1) is administered following administration of a systemic anti-cancer therapy agent.

3. claims: 30-32

Compound (1) for use in the treatment and/or prevention of cancer, wherein the cancer is resistant to treatment with an anti-HER2 antibody and/or an anti-HER2 antibody-drug conjugate.
