

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2015/065827

International filing date (day/month/year)
10.07.2015

Priority date (day/month/year)
17.07.2014

International Patent Classification (IPC) or both national classification and IPC
INV. C07D237/16 A01N43/58

Applicant
SYNGENTA PARTICIPATIONS AG

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement
- ☒ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA:



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Date of completion of
this opinion

see form
PCT/ISA/210

Authorized Officer

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:
 - ☒ the international application in the language in which it was filed.
 - ☐ a translation of the international application into , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1 (b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
 - a. ☐ forming part of the international application as filed:
 - ☐ in the form of an Annex C/ST.25 text file.
 - ☐ on paper or in the form of an image file.
 - b. ☐ furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
 - c. ☐ furnished subsequent to the international filing date for the purposes of international search only:
 - ☐ in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
 - ☐ on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	<u>1-18</u>
	No: Claims	
Inventive step (IS)	Yes: Claims	<u>1-18</u>
	No: Claims	
Industrial applicability (IA)	Yes: Claims	<u>1-18</u>
	No: Claims	

2. Citations and explanations

see separate sheet

Box No. VI Certain documents cited

1. Certain published documents (Rules 43bis.1 and 70.10)

and / or

2. Non-written disclosures (Rules 43bis.1 and 70.9)

see form 210

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1 Reference is made to the following documents:

- D1 WO 2009/035150 A2 (SUMITOMO CHEMICAL CO [JP]; FUSAKA TAKAFUMI [JP]) 19 March 2009
- D2 WO 2010/104217 A1 (SUMITOMO CHEMICAL CO [JP]; FUSAKA TAKAFUMI [JP]) 16 September 2010
- D3 WO 2014/119770 A1 (SUMITOMO CHEMICAL CO [JP]) 7 August 2014

1.1 D3 indicated in the search report with the P,A category refers to 2-phenyl-pyridazinone herbicides having also a benzyloxy group on the phenyl group. The distinguishing feature should be seen in the position of the benzyloxy group, namely para in stead of ortho position. D3 has not been taken into consideration for the evaluation of novelty and an inventive step, because the claimed priority has been assumed to be valid (see Official Journal EPO, 11/2001, p. 539-542, item 13).

2 Novelty

The present application meets the criteria of Article 33(1) PCT, because the subject-matter of claims 1 to 18 is considered to be new over the prior art D1 and D2 in the sense of Article 33(2) PCT for the following reasons:

D1 and D2 refer to structurally very close 2-substituted phenyl pyridazinone herbicides. The distinguishing feature should be seen in the nature of substituent Z¹ at position 2 of the phenyl. Z¹ of D1 and D2 represents an alkyl or alkoxy group. There is no indication in D1 nor in D2 that Z¹ could be a benzyloxy group as presently claimed.

3 Inventive step

The present application addresses the problem of providing herbicidal compounds.

D1 is considered to represent the closest prior art, since it refers to substituted 2-phenyl pyridazinone herbicides having an C₁-C₆-alkoxy group in ortho position of the phenyl group.

The structural distinguishing feature of the compounds of present claim 1 is to be seen in the benzyloxy group attached in ortho position of the phenyl group.

There is no comparative data in the present application showing that this distinguishing feature is responsible for an unexpected effect, thus the objective technical problem solved by the subject-matter of claim 1 should be seen in the provision of an alternative substitution at the ortho position of the phenyl group in order to provide alternative pyridazinone herbicides.

In view of the examples and the biological datae given in pages 29 and 30 it is credible that this distinguishing feature solves the above-mentioned problem.

There is no technical link in D2 which would have incited the skilled worker to replace substituent Z1 of D1 (alkyl or alkoxy) with an benzyloxy group if he was looking for alternative pyridazinone herbicides.

The subject-matter of claims 1 to 18 involves thus an inventive step in the sense of Art. 33(3) PCT. The scope of protection conferred by claims 1 to 18 is considered to represent a legitimated (fair) scope of protection.

Re Item VI

Certain documents cited

WO 2014/119770 published on 7 august 2014 with the priority date of 30.01.2013 describes structurally different pyridazinone herbicides and thus remains out consideration.