

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

|                                                                                                                                                            |                                                          |                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------|
| To:<br>SAGAR, PRAMOD<br>604-605, 349 BUSINESS POINT,<br>ANDHERI EAST, MUMBAI-400069 India                                                                  |                                                          | Date of mailing<br>(day/month/year) 08-01-2025 |
| Applicant's or agent's file reference<br>PCT-2023-004                                                                                                      |                                                          | FOR FURTHER ACTION<br>See paragraph 2 below    |
| International application No.<br>PCT/IN2024/051670                                                                                                         | International filing date (day/month/year)<br>06-09-2024 | Priority date (day/month/year)<br>06-09-2023   |
| International Patent Classification (IPC) or both national classification and IPC<br>A01N47/12, A01N43/40, A01N47/14, A01N25/12, A01N25/14 Version=2025.01 |                                                          |                                                |
| Applicant<br>RATHOD, RAJIV, PUTHENVEETIL KUNJUKRISHNA MENON, RAMDAS, and others.                                                                           |                                                          |                                                |

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

- |                                     |              |                                                                                                                                                                       |
|-------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the opinion                                                                                                                                                  |
| <input type="checkbox"/>            | Box No. II   | Priority                                                                                                                                                              |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability                                                                      |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention                                                                                                                                            |
| <input checked="" type="checkbox"/> | 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 |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited                                                                                                                                               |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application                                                                                                                      |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application                                                                                                                 |

## 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will 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/<br>Indian Patent Office<br>Plot No. 32, Sector 14,<br>Dwarka, New Delhi-110075<br>Facsimile No. | Date of completion of this opinion<br>08-01-2025 | Authorized officer<br>Ashok Kumar<br>Telephone No. +91-1125300200 |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------------------------------------------|

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/IN2024/051670

Box No. I      Basis of this 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 43*bis*.1(b)).
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.
  - b. ☐ furnished subsequent to the international filing date for the purposes of international search (Rule 13*ter*.1(a)),  
☐ accompanied by a statement to the effect that the sequence listing does not go beyond the disclosure in the international application as filed.
4. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, this opinion has been established to the extent that a meaningful opinion could be formed without a WIPO Standard ST.26 compliant sequence listing.
5. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
**PCT/IN2024/051670**

**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**

**1. Statement**

|                               |        |             |     |
|-------------------------------|--------|-------------|-----|
| Novelty (N)                   | Claims | <u>1-18</u> | YES |
|                               | Claims | <u>NONE</u> | NO  |
| Inventive step (IS)           | Claims | <u>NONE</u> | YES |
|                               | Claims | <u>1-18</u> | NO  |
| Industrial applicability (IA) | Claims | <u>1-18</u> | YES |
|                               | Claims | <u>NONE</u> | NO  |

**2. Citations and explanations:**

Reference is made to the following documents:

D1: WO 2019186359 A1 (UPL LTD) & 03 OCT 2019 (03-10-2019)

D2: WO 2020261030 A1 (UPL LTD) & 30 DEC 2020 (30-12-2020)

The present application relates to fungicidal composition comprising: a) valifenalate or agriculturally acceptable salts thereof in the range of 0.1% w/w to 50% w/w of the total composition; b) a dithiocarbamate compound selected from propineb and metiram or their agriculturally acceptable salts, wherein the dithiocarbamate compound is present in the range 0.1% w/w to 70% w/w of the total composition; and, c) at least one agrochemically acceptable excipient.

Novelty under Article 33(2) of PCT:

The subject matter of claims 1-18 of present application does meet the criteria of Article 33(3) PCT over the cited documents D1-D2. Document D1 discloses fungicidal composition comprising: a) at least one azole fungicide, the azole fungicide being an imidazole fungicide or a triazole fungicide, wherein the triazole fungicide selected from valifenalate b) at least one multisite contact fungicide; and c) at least a third systemic fungicide. D1 further discloses that the multisite contact fungicide is selected from group consisting of dithiocarbamates; wherein the dithiocarbamate compound selected from propineb and metiram or their agriculturally acceptable salts.(see claims-1-21, examples) Document D1 further discloses use of at least one agrochemically acceptable excipient and multi site fungicide and the third fungicide are present in the ratio of (1-80): (1- 80): (1-80). D1 also discloses the composition with an inert carrier, and adding surfactants and other adjuvants and carriers as needed and formulated into solid, or liquid formulations, including but not

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Continuation of Citation and Explanation(Box5)

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limited to wettable powders, granules, dusts, Soluble (liquid) concentrates, suspension concentrates, oil in water emulsion, water in oil emulsion, emulsifiable concentrates, capsule suspensions, ZC formulations, oil dispersions or other known formulation. (see para-0050)

Document D1 further discloses the composition further comprises an agriculturally acceptable carrier and, optionally, a surfactant and/or formulation adjuvants and method for composition formation. Document D1 differs in terms of similar composition percentage of valifenalate in the range of 0.1% w/w to 50% w/w of the total composition and dithiocarbamate compound selected from propineb and metiram in the range 0.1% w/w to 70% w/w.

Hence, claims 1-18 of the present application does meet the criteria set forth in PCT Article 33(2) for novelty in view of D1.

Document D2 discloses the fungicidal composition comprising a dithiocarbamate fungicide and at least one another fungicide wherein said dithiocarbamate fungicide is selected from group comprising amobam, asomate, azithiram, carbamorph, cufraneb, cuprobam, disulfiram, ferbam, metam, nabam, tecoram, thiram, urbacide, ziram, dazomet etem, milneb, zineb, propineb, maneb, mancopper, mancozeb, metiram or polycarbamate or combinations and another fungicide is selected from the group comprising a triazole sterol biosynthesis inhibitors may be selected from triazoles such as azaconazole, bitertanol, bromuconazole, cyproconazole, difenoconazole, diniconazole, epoxiconazole, etaconazole, fenbuconazole, fluquinconazole, flusilazole, provalicarb, valifenalate (see claims-1-63, para-0122).

Document D2 further discloses the process for preparation of granular formulation and solid composition comprising a dithiocarbamate fungicide and a second fungicide wherein said dithiocarbamate fungicide is present in an amount of 40-60% by weight of the composition and second fungicide is present in an amount of 10-30% by weight of the composition.

Document D2 differs in terms of similar composition percentage of valifenalate in the range of 0.1% w/w to 50% w/w of the total composition and dithiocarbamate compound selected from propineb and metiram in the range 0.1% w/w to 70% w/w.

Hence, claims 1-18 of the present application does meet the criteria set forth in PCT Article 33(2) for novelty in view of D2.

Inventive step under article 33(3) PCT:

The subject matter of claims 1-18 of present application does not meet the criteria of Article 33(3) PCT over the cited documents D1-D2.

D1 is considered the closest prior art to the subject matter of claims of the present application.

Document D1 discloses fungicidal composition comprising: a) at

least one azole fungicide, the azole fungicide being an imidazole fungicide or a triazole fungicide, wherein the triazole fungicide selected from valifenalate b) at least one multisite contact fungicide;

and c) at least a third systemic fungicide. D1 further discloses that the multisite contact fungicide is selected from group consisting of dithiocarbamates; wherein the dithiocarbamate compound selected from propineb and metiram or their agriculturally acceptable salts. (see claims-1-21, examples)

Document D1 further discloses use of at least one agrochemically acceptable excipient and multi site fungicide and the third fungicide are present in the ratio of (1-80): (1- 80): (1-80).

D1 also discloses the composition with an inert carrier, and adding surfactants and other adjuvants and carriers as needed and formulated into solid, or liquid formulations, including but not limited to wettable powders, granules, dusts, Soluble (liquid) concentrates, suspension concentrates, oil in water emulsion, water in oil emulsion, emulsifiable concentrates, capsule suspensions, ZC formulations, oil dispersions or other known formulation. (see para-0050)

Document D1 further discloses the composition further comprises an agriculturally acceptable carrier and, optionally, a surfactant and/or formulation adjuvants and method for composition formation.

Document D1 differs in terms of similar composition percentage of valifenalate in the range of 0.1% w/w to 50% w/w of the total composition and dithiocarbamate compound selected from propineb and metiram in the range 0.1% w/w to 70% w/w.

Document D2 discloses the fungicidal composition comprising a dithiocarbamate fungicide and at least one another fungicide wherein said dithiocarbamate fungicide is selected from group comprising amobam, asomate, azithiram, carbamorph, cufraneb, cuprobam, disulfiram, ferbam, metam, nabam, tecoram, thiram, urbacide, ziram, dazomet etem, milneb, zineb, propineb, maneb, mancopper, mancozeb, metiram or polycarbamate or combinations and another fungicide is selected from the group comprising a triazole sterol biosynthesis inhibitors may be selected from triazoles such as azaconazole, bitertanol, bromuconazole, cyproconazole, difenoconazole, diniconazole, epoxiconazole, etaconazole, fenbuconazole, fluquinconazole, flusilazole, provalicarb, valifenalate (see claims-1-63, para-0122).

Document D2 further discloses the process for preparation of granular formulation and solid composition comprising a dithiocarbamate fungicide and a second fungicide wherein said dithiocarbamate fungicide is present in an amount of 40-60% by weight of the composition and second fungicide is present in an amount of 10-30% by weight of the composition.

Document D2 differs in terms of similar composition percentage of valifenalate in the range of 0.1% w/w to 50% w/w of the total composition and dithiocarbamate compound selected from propineb and metiram in the range 0.1% w/w to 70% w/w.

It is evident from D1 that the composition percentage of valifenalate in the range of 0.1% w/w to 50% w/w of the total

composition and dithiocarbamate compound selected from propineb and metiram in the range 0.1% w/w to 70% w/w. are different from present application but by combining the document D1-D2, it is trivial for the person skilled in the art to use different composition of valifenalate in the range of 0.1% w/w to 50% w/w of the total composition and dithiocarbamate compound selected from propineb and metiram in the range 0.1% w/w to 70% w/w. without having technical advancement. Therefore, the present application does not meet the criteria of Article 33(3) PCT, because the subject matter of claims 1-18 do not involves an inventive step.

Industrial applicability under article 33(4) PCT:

The subject matter of claims 1-18 appears to comply with the requirements of PCT Article 33(4) with regard to the industrial applicability of the present invention.