



**IPAB Intellectual Property Appellate Board**  
balancing ip-protection

Guna Complex Annexe-I, 2nd Floor, 443 Anna Salai, Teynampet, Chennai-600 018.  
Tele: 24328902/03 Fax: 24328905 email id: ipab.tn@nic.in Website: http://www.ipab.gov.in

**OA/53/2020/PT/CHN**

**TUESDAY, THIS THE 29<sup>TH</sup> DAY OF DECEMBER, 2020**

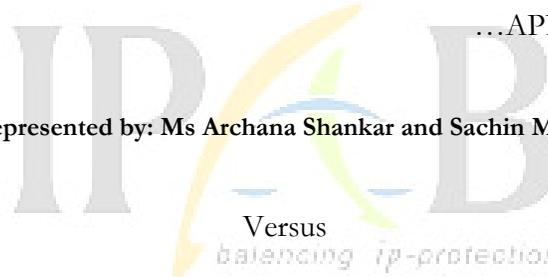
**HON'BLE SHRI JUSTICE MANMOHAN SINGH  
HON'BLE DR. B.P. SINGH**

**CHAIRMAN  
TECHNICAL MEMBER (PATENTS)**

- MR. TONY MON GEORGE**  
CONSTITUTED ATTORNEY OF  
**SYNGENTA PARTICIPATIONS AG,**  
SCHWARZWALDALLEE 215, CH-4058  
BASEL, SWITZERLAND

...APPLICANT/APELLANT

(Represented by: Ms Archana Shankar and Sachin Malik)



- ASSISTANT CONTROLLER OF PATENTS AND  
DESIGNS**  
PATENT OFFICE INTELLECTUAL PROPERTY  
BUILDING G.S.T. ROAD, GUINDY,  
CHENNAI – 600 032

...RESPONDENT

(Represented by - None)

**ORDER**

**Hon'ble Shri Justice Manmohan Singh, Chairman**

**Hon'ble Dr. B.P. Singh, Technical Member (Patents)**

- The present appeal is filed under Section 117A of the Indian Patents Act, 1970, against the order dated 05/02/2020, passed by the Respondent, being the Assistant Controller of Patents & Designs,

under Section 15 of the Indian Patents Act, refusing to grant the Appellants' Indian patent application no. 5647/CHENP/2015.

2. The learned counsel of the appellant submits as under:

### 2.1 PRINCIPLE OF NATURAL JUSTICE

2.1.1 The impugned order is based on Compound 6-1140 of D4 which was not cited in the First examination Report (FER) and Hearing Notice or at Hearing. Therefore, no opportunity was given to address the objections in view of new compound 6-1140.

2.1.2 That the impugned order is vitiated and against the principle of natural justice. The various compounds of D4 that are cited in FER and hearing notice (**Page no 59 and 60 of Appeal**) are mentioned below:

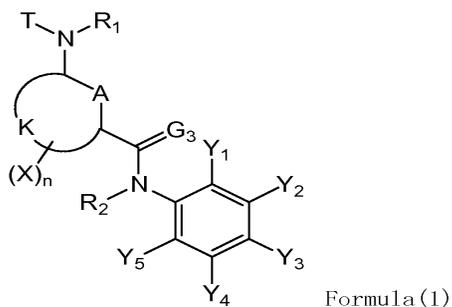
Compounds cited in First Examination Report (D4) Page no 174 of Appeal; Annexure P-4	Compounds cited in Hearing Notice (D4) Page no 222 of Appeal; Annexure P-7
No compound cited of D4	D4 discloses certain compounds derived from the general structure mentioned in paragraph <u>[0445], 7- 1608, 7-1638, 7-1764 and 7-1794 (see pages 132, 135)</u> , these compounds seem to be closest to claimed compounds of formula-I.

### 2.2 RESPONDENT ERRED IN ADJUDICATING INVENTIVE STEP

#### IN '5647 vis-à-vis D4 and D2

#### D4:

2.2.1 D4 discloses amide derivative represented by the following Formula (1) for controlling pests -**NOT SPECIFICALLY INSECTICIDAL:**



2.2.2 D4 further disclose various compounds represented by Markush formula (60a) -(72a), page no -18-56, para no. [0068]- [0271]. The various substituents groups for markush formulas are defined starting from page no 03 [0006] – page no 56[0271].

2.2.3 Further the best mode of invention is defined from para [0273] wherein formula (1)-(8) are disclosed along with a large list of substituents para [271]- [0341].

2.2.4 The Appellant submits that D4 discloses a huge plethora of compounds with enormous number of substituents with unlimited number of possibilities.

2.2.5 D4 does not provide any motivation to person skilled in art to specifically select a particular formula (Markush) and then select the specific substituent at specific position to arrive at compounds of present invention- let alone any specific compound.

2.2.6 D4 discloses **more than 10000 individual compounds (exemplified compounds)** from the Markush formulas as described above starting from table 1-51(page no. 78-303), para [0394] [0622].

2.2.7 The Appellant submit that D4 also discloses pesticidal activities of compounds against various species starting from para [0985]-[1004] against various species such as :

- Test Example 1>- Pesticidal Test against *Spodoptera litura*
- Test Example 2>Pesticidal Test against *Piute/la xylostella*
- Test Example 3> Pesticidal Test against *Adoxophyes honmai*
- Test Example 4>Pesticidal Test against *Choristoneura magnanima*
- Test Example 5>Pesticidal Test against *Helicoverpa armigera*
- Test Example 6>Pesticidal Test against *Laodelphax striatellus*
- Test Example 7>Pesticidal Test against *Musca domestica*
- <Test Example 8>Pesticidal Test against *Blattel/a germanica*
- <Test Example 9> Pesticidal Test against *Cu/expipiens molestus*
- <Test Example 10> Pesticidal Test against *Coptotermesformosanus*.

#### 2.2.8 TEACHINGS OF D4

The Appellant submits that a person skilled in art will pick compounds **7-157 4, 7-1577, 7-1730, 7-1732, and 7-1733** that shows pesticidal activity in all the experimental example s 1-10 **NOT 6-1140(Cited by respondent in order )** that is active only against 03 species as shown in below table 2:

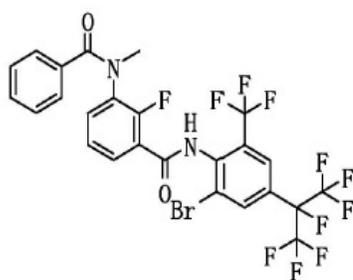
Table 2

Experimental example	7-1574	7-1577	7-1730	7-1732	7-1733	6-1140
1.	YES	YES	YES	YES	YES	YES
2.	YES	YES	YES	YES	YES	YES
3.	YES	YES	YES	YES	YES	NO
4.	YES	YES	YES	YES	YES	NO
5.	YES	YES	YES	YES	YES	NO
6.	YES	YES	YES	YES	YES	YES
7.	YES	YES	YES	YES	YES	NO
8.	YES	YES	NO	YES	YES	NO
9.	YES	YES	YES	YES	YES	NO
10.	YES	YES	YES	YES	YES	NO

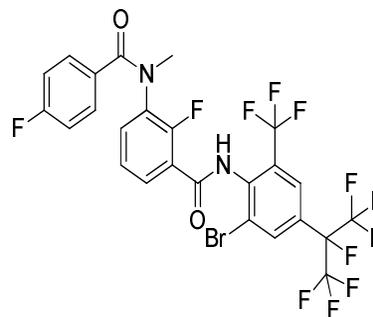
2.2.9 The Appellant submits that a person skilled in art will pick compounds 7-1574, 7-1577, 7-1732 and 7-1733 or may select compounds of table 7 but NOT 6-1140 as alleged by the respondent.

2.2.10 The structure of most active compounds is depicted below:

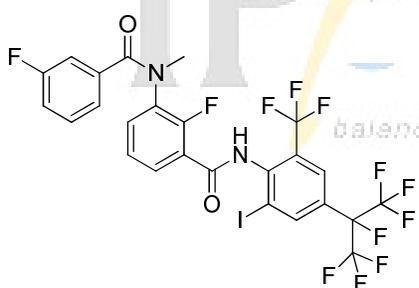
Compound No. 7-1574



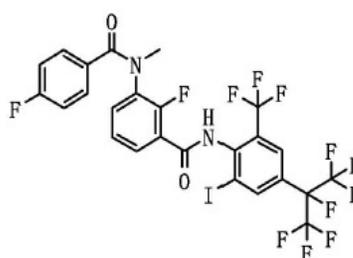
Compound No. 7-1577



Compound No. 7-1732



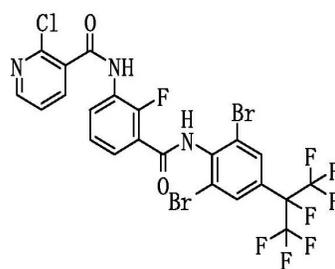
Compound No. 7-1733



2.2.11 From the structure, above, it is clear that the compounds of D4 do not provides nay teaching with respect to compounds of present invention.

#### 2.2.12 SELECTION OF COMPOUND 6-1140

It is the submission of the appellant that the respondent had selected compound 6-1140 (Page no 116, 332) based on hindsight and further acknowledged the differences with respect to compounds of present invention:



Compound 6-1140 (D4)

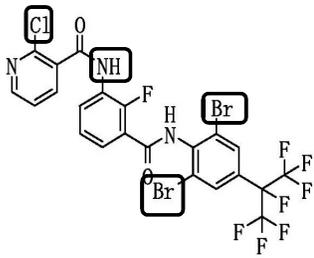
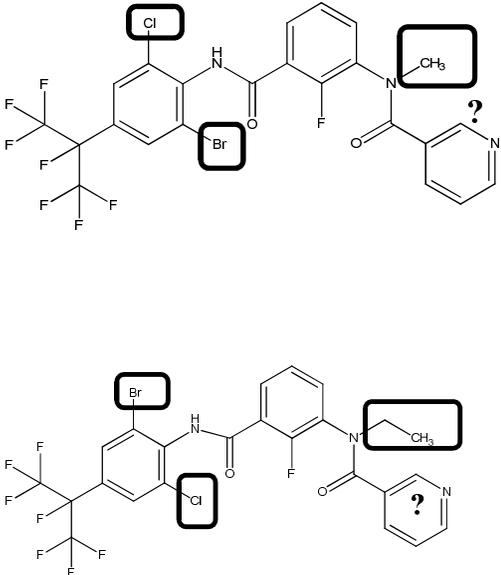
2.2.13 The differences in structure are acknowledged by respondent in the order and provided the following reasoning in order

S.No	D4	Present Application
1	2-Choloro Pyridyl	Pyridyl
2	N-H	N-CH <sub>2</sub> CH <sub>3</sub> /N-CH <sub>3</sub>

“D4 clearly teaches that T group can be a **pyridine** or a heterocyclic group which may have a substituent represents one or more substituent selected from a group consisting of a halogen atom. It also discloses **R1** and R2 each independently represent a hydrogen atom, an oxygen atom, a halogen atom, a hydroxy group, a nitro group, a nitroso group, a trimethylsilyl group, a t-butyl dimethylsilyl group, a cyano group, an amino group, a **C1-C6 alkyl group** which may have a substituent . It further discloses Y1 and Y5 each independently represent a **halogen atom.**”

2.2.14 However, all structural difference between compounds of present invention and 6-1140 cited by respondent are depicted below in Table 3 shown below:

Table 3

D4 compound 6-1140	Compounds of present invention
	

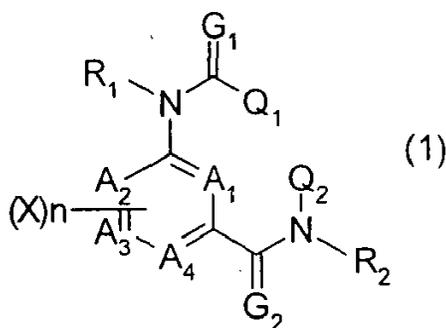
2.2.15 The Appellant submits that D4 does not provide any teaching to particularly to select any compound from the exemplified compounds- let alone 6-1140 as cited by respondent.

2.2.16 The compounds 6-1140 does not provides any teaching with respect to compounds of present invention. The selection is merely based on hindsight analysis i.e. prior knowledge of compounds of present invention.

2.2.17 The respondent is relying on random picking of substituent from D4 such as **pyridine ring, halogen atom, and C1-C6 alkyl group** without any reasoning to arrive at compounds of present invention. Further, the respondent had cherry picking the various groups based on hindsight that is impermissible in obviousness analysis.

## 2.3 D2:

2.3.1 D2 discloses amide derivatives represented by Formula (1):



2.3.2 D2 discloses various Markush formula starting from formula 1(a) -13 para [3]-para [20]. The various substituent groups are Markush formula are defined in D2 from page no: 5-15.

2.3.3 The selective portion of D2 with respect to various groups cited by respondent in order are as:

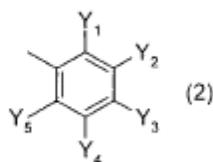
*“D2 giving hint/ teachings that R1 can be a **C1-C4 alkyl group**, **Xs**, which may be identical or different each other, are a hydrogen atom, **a halogen atom** or a trifluoromethyl group and **Y1 and Y5 of Q2 can be halogens** along with some of the other groups.”*

2.3.4 However, the complete disclosure of various groups in D2 read as follows:

*X<sub>n</sub>, which may be identical or different each other, represent a hydrogen atom, a halogen atom, a C1-C3 alkyl group or a trifluoromethyl group;*

*R1 and R2 are each a hydrogen atom or a C1-C4 alkyl group;*

*Q2 is represented by Formula (2):*



*(wherein Y1 and Y5, which may be identical or different, each represent a halogen atom, a C1-C4 alkyl group, a C1-*

*C4 haloalkyl group, a C1-C3 alkylthio group, a C1-C3 haloalkylthio group, a C1-C3 alkylsulfinyl group, a C1-C3*

*haloalkylsulfinyl group, a C1-C3 alkylsulfonyl group, a C1-C3 haloalkylsulfonyl group or a cyano group;*

2.3.5 The respondent had ignored all the other possibilities for various groups and specifically selected the groups that are identical to compounds of present invention.

2.3.6 The respondent after having knowledge of compounds of present invention had specifically selected the substituent to arrive at compounds of present invention.

2.3.7 However, there is no hint or suggestion in D2 to specifically select the specific groups.

2.3.8 D2 discloses more than 4000 exemplified compounds starting from page no. 34- 134 (Table 1-Table 10).

2.3.9 D2 discloses diverse compounds with variation in majority of substituent and does not provides any teaching to person skilled in art to particularly select the groups as alleged by the respondent.

2.3.10 D2 further discloses insecticidal activity of various compounds in experimental example 1-3- page no.: 173-174.

- *[Experimental Example 1]*  
*Insecticidal testing against common cutworm (Spodoptera litura)*
- *[Experimental Example 2]*  
*Insecticidal testing against diamondback moth (Plutella xylostella)*
- *[Experimental Example 3]*  
*Insecticidal testing against small brown planthopper (Laodelphax striatellus)*

2.3.11 The respondent has ignored the actual teaching of the documents and has read the document in isolation. In the regard, the respondent interpretations are misconceived and even against the teaching of the documents.

2.3.12 As stated above, person skilled in art would read the document as a whole and would not selectively read the portion of the documents.

**D2 does not add anything to D4**

2.3.13 D2 does not add anything to teachings of document D4, the respondent have only relied on the specific substituents group to arrive at compounds of present invention.

2.3.14 In summary, there is no motivation for a person skilled in the art to first select the compound 6-1140 of D4 from more than 10,000 exemplified compounds and ignored the most active compounds then modify the compound 6-1140 with various specific substituent disclosed in

D4/D2 and ignore the other options to arrive at compounds of present invention.

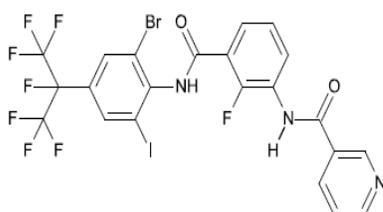
2.3.15 For reasons of these submissions, it is asserted that that rejection of the claims of the instant application due to non-compliance of requirements of Section 2(1)(ja) of the Indian Patents Act is incorrect.

2.3.16 Thus, a person skilled in the art would not be able to arrive at the claimed invention from the teaching of the document D4 alone or in combination with D2 with a reasonable expectation of success.

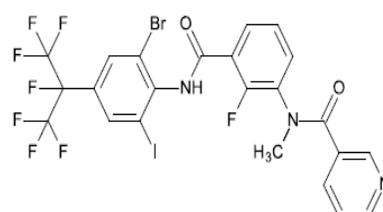
2.3.17 Therefore, at least for the reasons mentioned above, the impugned order should be set aside.

## 2.4 APPELLANT IDENTIFIED CLOSEST COMPOUNDS AND SUBMIT ADDITIONAL DATA

2.4.1 The Appellant have proactively identified compounds 6-982 and 8-982 (during hearing submission) of document D4 represent the closest prior art compounds for the purpose of assessing inventive step as they require the minimum of structural and functional modifications to arrive at the claimed invention:



6-982



8-982

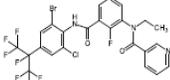
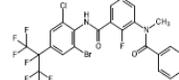
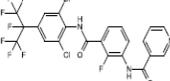
2.4.2 The compound 6-982 and 8-982 of document D4 both differ from the claimed compounds of formula (I) with amended claims at least because R<sup>1</sup> is hydrogen and Y<sup>1</sup> or Y<sup>5</sup> is iodine.

2.4.3 Document D4 does not disclose any data confirming the insecticidal activity of these compounds or providing the person skilled in the art with a clear teaching of such activity.

2.4.4 The Appellant have provided comparative data show that the compound 2.1(not a prior art compound), which differs from the compounds of formula (I) of the invention because R<sup>1</sup> is hydrogen, has no insecticidal activity.

2.4.5 In contrast, the compounds according to the invention such as, for instance, the compounds 1.1 and 1.2, which correspond to the compounds of Table A, entries 4 and 6, respectively, show an unexpected increase in insecticidal activity (e.g., against *Thrips Tabaci* and *Tetranychus urticae*).

Table 1

<p>Compound 1.1</p> 	<p>Compound 1.2</p> 
<p>Compound 2.1</p> 	

Rate (ppm)	Mortality (%)		
	Compound 1.1 CSCW624203	Compound 1.2 CSCW624201	Compound 2.1 CSCW630489
200	100	100 / 100	0
50	100	100 / 100	0
12.5	100	80 / 100	0
3.1	0	0 / 0	0
0.8	0	0 / 0	0
0.2	0	0 / 0	0

Compound 1.2 was tested twice.

Rate (ppm)	Mortality (%)		
	Compound 1.1 CSCW624203	Compound 1.2 CSCW624201	Compound 2.1 CSCW630489
200	100	80 / 100	0
50	100	80 / 50	0
12.5	0	0 / 0	0

Compound 1.2 was tested twice.

### 3. GRANT IN OTHER JURISDICTIONS

3.1 The Appellant submits that corresponding application have been granted in major countries with similar documents such as US, EP, JP and China {Form -03 with Section 8.2 details (submitted on 06/08/2016 and 20/11/2019 with US, EP, China and JP granted claims).

### 4. SECTION 3(d)

4.1 The Respondent has erred in adjudicating that claims of IN '5647 are not patentable under section 3(d) for the reason that:

the claimed compounds are mere derivative of known compounds of D4 and the applicant failed to enhanced efficacy w.r.t to closest compounds.

#### 4.2 LEGAL PRINCIPLES – SECTION 3(d)

4.2.1 Section 3(d) – What are not inventions within the meaning of the Act:

- *the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or*

- *the mere discovery of any new property or new use for a known substance or*
- *of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant.*

*Explanation. -For the purposes of this clause, salts, esters, ethers, polymorphs, metabolites, pure form, particle size, isomers, mixtures of isomers, complexes, combinations and other derivatives of known substance shall be considered to be the same substance, unless they differ significantly in properties with regard to efficacy;*

4.2.2 Section 3(d) bars the patentability of a new form of a known substance provided enhanced efficacy is shown. The law, for section 3(d) to apply in the first place, two criteria have to be satisfied

4.2.3 That the claimed invention is a new form of a known substance or a derivative of a known substance; **AND**

4.2.4 That the said **KNOWN SUBSTANCE** should have **KNOWN EFFICACY**.

4.2.5 In other words, the law in relation to section 3(d) is very clear. If there is a known substance that known substance should have known efficacy.

4.2.6 **SECTION 3(d) DOES NOT APPLY TO NEW CHEMICAL ENTITY**

Section 3(d) bars the patentability of a new form of a known substance except in a case where the applicant shows enhanced efficacy. The Appellant asserts that at the outset the claimed compounds are novel compounds not known at the priority date of IN '5647 as also acknowledged by the Respondent as no objection was raised in hearing notice.

4.3 **COMPOUNDS OF IN '5647 ARE NOT NEW FORM OF A KNOWN SUBSTANCE:**

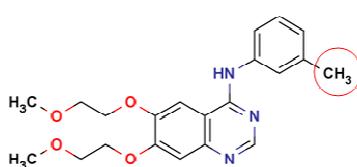
4.3.1 The Respondent has held that the compounds of IN '5647 fall under section 3(d) as the same are mere derivative of known substance.

4.3.2 The Appellant asserts that the Respondent has erred in interpreting the term 'derivative' commonly used in organic chemistry and chemical patents and have equated the same with the term 'derivative' used in the explanation part of Section 3(d).

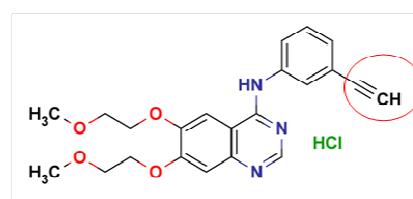
4.3.3 The term 'derivate' used in Section 3(d) has to be read in accordance with the legal principle of '***ejusdem generis***', the literal translation of which is "of the same kind". '*ejusdem generis*' is a latin expression and commonly used while interpreting statutes. We are enclosing herewith an extract from the book entitled 'Principles of Statutory Interpretation' by Justice G.P. Singh (14<sup>th</sup> Edition) at page 560 and 561 [**Annexure P18 : Page No.**

**1633-1635 of Appeal ]**Under the law of interpretation of statutes, this expression means that where there is a lists specific classes of persons or things followed by a general term, then the general term will be given a meaning so as to extend it to apply to the same kind of persons or things specifically listed. The expression ‘derivative’ used in Section 3(d) of the Indian Patents Act has to be read in the context of the specific expression used prior to the word ‘derivative’.

4.3.4 Even the Division Bench of the Hon’ble Delhi High Court in Roche vs Cipla did not hold Erlotinib, the claimed invention as being a derivative of a prior art compound even when there was a high structural similarity. The court dealt with this issue under “INVENTIVE STEP” and NOT Section 3(d) and treated Erlotinib as a New Chemical entity.



Example 51 of EP'226



Erlotinib Hydrochloride

4.3.5 **KNOWN SUBSTANCE DOES NOT EXIST NOR IDENTIFIED BY THE RESPONDENT**

4.3.6 At the outset, the Respondent has failed to identify the known compound / substance against which enhance efficacy data is to be submitted. The

respondent had made a bald statement that claimed compounds are derivative of D4 i.e. more than 10, 000 exemplified compounds.

4.3.7 The claimed compounds of the IN '5647 are not known at the priority date, i.e., there is no known substance exist against which enhance efficacy data is to be submitted. Therefore, there is no obligation on the Appellant to provide enhance efficacy data.

4.3.8 Further, the Appellant submits that it is not enough for Section 3(d) to be attracted to show that there is some known compound in the prior art which allegedly bears some structural resemblance to the claimed compound. The compounds of the IN '5647 application are structurally different from the compounds disclosed in the cited prior art documents D4. Further, the compounds as claimed in the present invention are not a salt, ester, ether or polymorph of a known compound.

4.3.9 In light of our above submissions, it is asserted that that rejection of the claims of the instant application as being non patentable under section 3(d) is incorrect.

5. We have reviewed the prosecution history on the assertion of the appellant. The First Examination Report issued on 19/02/2019 contained the following objections:

5.1 Claim(s) (1,2,8) lack(s) novelty, being anticipated in view of disclosure in the document cited above under reference D1 or D2 or D3 for the following reasons: Claims 1-2, 6 and 8 of the alleged invention do not meet the requirements of section 2(1)(j) of The Patents Act, 1970 as the subject matter of which is anticipated by the disclosure of document D1, D2, and D3 (Lack of unity). Reference is made with the following documents: D1: EP 1916236 A1, 30/04/2008; D2: EP 1714958 A1, 25/10/2006; D3: ENDT et al, "Synthesis and SAR of 2-aryl pyrido[2,3-d]pyrimidines as potent mGlu5 receptor antagonists", *BIOORGANIC & MEDICINAL CHEMISTRY LETTERS* (2007), vol. 17, no. 19, pages 5396 – 5399; The compound of general formula-A (specifically, 2-268) disclosed by document D1 fall under the scope of claimed compounds of general formula-I. Hence, novelty cannot be acknowledged whole claimed compounds in claims 1 and 2. The compound of formula-4 (on page 9) disclosed by document D2 fall under the scope of claimed compounds of general formula-V. Hence, novelty cannot be acknowledged whole claimed compounds in claim 6. Compounds 3 and 10 (scheme 1, table 1) disclosed by document D3 fall under the scope of claimed compounds of general formula-IV. Hence, novelty cannot be acknowledged whole claimed compounds in claim 8.

5.2 Claim(s) (1-13) lack(s) inventive step, being obvious in view of teaching (s) of cited document(s) above under reference D1-D4 for the following reasons: As the subject matter of claims 1-2, 6 and 8 is not novel in view of the above cited prior art, inventive step cannot be acknowledged. Document D1 discloses 3-pyridyl substituted amides (close to part of present claims when Q1 is 3-pyridyl) as pesticides and Document D4

*discloses 1-oxidopyridin-1-ium-3-yl substituted amides (close to part of present claims when Q1 is 1-oxidopyridin-1-ium-3-yl) as pesticides. The problem to be solved in the light of D1 or D4 is the provision of further compounds as pesticides. The presently claimed group of compounds differs from the disclosure of the above-cited documents appears to be a specific selection from the formula- A of D1 or formula (I) of D4 (differs w.r.t substituent Y5). Prima facie such a small structural modification(s) appears to be merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to solve the problem posed. Further, there is no evidence in the specification that claimed compounds/compositions are showing unexpected effects or properties over the compounds of the prior art. In view of the above inventive step cannot be acknowledged for claims 1-13 under section 2(1)(ja) of The Patents Act, 1970. NOTE: documents D5(JOSEPH E S et al, "PABA/NO as an Anticancer Lead: Analogue Synthesis, Structure Revision, Solution Chemistry, Reactivity toward Glutathione, and in Vitro Activity", JOURNAL OF MEDICINAL CHEMISTRY(2006), vol. 49, no. 3, pages 1157 - 1164) and D6(AZUMAYA I et al, "Simple and convenient synthesis of tertiary benzanilides using dichlorotriphenylphosphorane", TETRAHEDRON(2003), vol. 59, no. 13, pages 2325 - 2331) retrieved from the database are also appearing to conflict with the claimed subject matter, hence applicant is requested to consider D5 and D6 while preparing a reply to this report.*

5.3 Claim(s) '10,13' lack(s) industrial applicability for the following reasons: The method according to claims 10 and 13 cannot be

*made or used in industry. Hence, not allowable according to 2 (1)(ac) of the Act.*

5.4 *Claim(s) (1-6,8,11,12) are statutorily non-patentable under the provision of clause ( d, e ) of Section 3 for the following reasons:*

*(a) The subject matter of claims 1-6, 8 falls under section 3(d) of the Patent Act, 1970 as the claimed compounds are similar/mere derivatives of a known compound of prior art D1-D4. Further, claimed his-amide analogs are already known for their pesticide activity. In the absence of comparative study or data or analysis described in the complete specification efficacy of claimed compounds cannot be acknowledged. Therefore the claims 1-6 and 8 are not allowable. (b) Claims 11 and 12 attracts the provision of section 3(e) of The Patents Act, 1970 as it seems to be mere admixture and no synergistic effect has been shown in specification through comparative study.*

5.5 *Claim(s) 1-13 lack(s) unity of invention as the claims do not relate to a single invention or to a group of inventions linked so as to form a single inventive concept: The specification of the instant application does not comply with section 10(5) of the Act, because the claims of the alleged invention define a plurality of distinct inventions. Group-I: Claims 1-13(part) related to compounds of formula (I) wherein variable Q1 is 3-pyridyl, processes for their preparation and their use, Group-II: Claims 1-13(part) related to compounds of formula (I) wherein variable Q1 is 1-oxidopyridin-1-ium-3-yl, processes for their preparation and their use, Multiple inventions listed above do not come under single inventive concept because common technical feature/special feature that connecting above described groups of inventions is “core compound having a bisamide group”, which is not a technical feature/special*

*feature because the core compound having a bis-amide group is known from the prior art D1-D4. Therefore there is no special technical feature connecting above listed group of inventions.*

5.6 *Claim(s)'1,11,13' are not fairly based on the matter disclosed in the specification or not supported by the disclosure in the specification for the following reasons: (a) Claim 1 of the alleged invention appears to be broad and vague w.r.t definitions to the substituents Q1, Q2, Y1, R1, R2, and R in the compound of formula I, which encompasses a plethora of compounds. Therefore, claim 1 should be restricted to specific compounds as described and exemplified in the specification. (b) Composition claims 11-13 of the alleged invention do not sufficiently define the invention in absence of the explicit statement of the constituents and their ratio's in the claimed composition. The said claims are also not supported by the description in terms of the embodiments. Further, the usage of the words "or" in the said claims make them also vague without any proper clarification.*

5.7 *Claim(s) 9 does/do not define the scope of invention for which the protection is claimed for the following reasons: Claim 9 appears to attempt to define the subject matter in terms of the result to be achieved because of the following reason(s): The defined statement "use of compounds according to the formula (IV) for the production of compounds according to formula (V)", is merely amounts to the underlying problem, without providing the technical inventive features (i.e. technical parameters like reaction condition, solvents used in that process) necessary for achieve this result. Therefore, the said claims should be clearly defined that the matter for which protection is sought.*

5.8 *Claim(s) 1,10-13 do not sufficiently define the invention for the reasons as follows: Claims 1, 10-13 are not definitive with*

respect to the use of terms “insecticidally, acaricidally, nematocidally or molluscicidally effective amount”, “agrochemically acceptable diluents or carrier”, “one or more additional insecticidal, acaricidal, nematocidal or molluscicidal compounds” etc., and thereby said claims do not meet the requirements of section 10(4) of The Patents Act, 1970.

6. The hearing notice issued dated 06/11/2019 contained the following objections:

6.1 *Objections Invention u/s 2(1)(ja)*

*The applicant’s arguments in favor of the inventive step did not convince the office, because the claimed matter merely a novel selection of prior art D1, D2, and D4. Reference is made with the following documents:*

*D1: EP 1916236 A1,*

*D2: EP 1714958 A1,*

*D4: US 2011/0201687 A1 (also published as EP 2319830 A1 is considered)*

*The closest compound 2-268 of document D1 (EP 1916236, page 62, Table 2-7) differs from the claimed compounds of formula (I) at due to group Y1. D1 specifies said group as methoxy group whereas as presently claimed formula (I) can be Cl, Br, I, methyl and ethyl.*

*Document D2 in the same technical field specifies the same group in the formula (2) as a halogen atom, a C1-C4 alkyl group (specifically Br, Me), it would have been obvious to a skilled person to modify the group Y1 of D1 form the suggestions of D2, without exercising any inventive ingenuity.*

*Furthermore, D4 (also published as EP 2319830 A1), page128, compound mentioned in paragraph [0445] also regarded as the closest prior art.*

*D4 discloses certain compounds derived from the general structure mentioned in paragraph [0445], 7- 1608, 7-1638, 7-1764 and 7-1794 (see pages 132, 135), these compounds seem to be closest to claimed compounds of formula-I.*

*Said closest compounds of document D4 differs from the claimed compounds of formula (I) at due to group Y5. D4 specifies said group as CF3 whereas as presently claimed formula (I) can be selected Cl, Br, I, and ethyl.*

*However, documents D1/D2 are in the same technical field specifies the same group in the formula (2) as a halogen atom, a C1-C4 alkyl group, therefore it would have been obvious to a skilled person to modify the group Y5 of D4 form the suggestions of D1/D2, without exercising any inventive ingenuity.*

*In reply to FER, the applicant filed comparative data in which two compounds of the current application wherein R1 is methyl or ethyl are compared with a compound in which R1 is hydrogen according to D4. The data shows that when R1 is hydrogen the compound is inactive against Thrips tabaci. The applicant has argued that the distinguishing feature of the present compounds lies in the definition of R1 which is not hydrogen. However this argument is not convincing as the structurally closest compounds in D1 or D4 in which R1 is methyl (e.g. D1: 2-268; D4:7-1608, 7-1638, 7-1764 and 7-1794). There is no evidence on file that the claimed compounds anything other than an alternative to prior art compounds. In the continued absence of such technical data, no inventive step can be acknowledged under 2(1)(ja) for all the claims.*

## **6.2 Unity of Invention u/ s 10 (5)**

*Claims still lack unity (U/S 10(5))for the following reasons:*

*Group-I: Claims 1-6, 12-13(all partially) related to compounds of formula (I) wherein variable Q1 is 3- pyridyl, processes for their preparation and their use,*

*Group-II: Claims 1-6, 12-13 (all partially) related to compounds of formula (I) wherein variable Q1 is 1- oxidopyridin-1-ium-3-yl, processes for their preparation and their use,*

*Group-III: claim 7 related to a process for the preparation of formula (I) from formula (V),*

*Group-IV: claims 8-10 related a compound of formula (IV),*

*Group-V: claim 11 related to a process for the preparation of formula (V) from formula (IV),*

*In reply to FER, applicant stated that claimed compounds all share a specific substitution pattern in Q2, however, these selections are obvious in view of D1 and D2 (as D1 only differs w.r.t group Y1 and D2 recommends the said group can be a halo (particularly Br), a C1-C4 alkyl group (particularly Me)). Further, the linking feature between groups III and V i.e. a compound of formula (V) is known from D2 (see compound 29 on page 25). Therefore, multiple inventions listed above do not come under a single inventive concept because there is no common technical feature/special feature that connecting the above-specified groups.*

### **6.3 Non-Patentability u/s 3**

*In the absence of “enhancement of the known efficacy” with respect to prior art compounds (i.e. D1: 2- 268; D2: compound 27, 29; D4:7-1608, 7-1638, 7-1764 and 7-1794), the subject matter of claims 1-6, 8, 9 and 10 falls under section 3(d) of the Patent Act, 1970 as the claimed compounds are similar/mere derivatives of a known compounds of prior art D1, D2, and D4.*

*Claims 12 and 13 attracts the provision of section 3(e) of The Patents Act, 1970 as it seems to be a mere admixture of known substances (obvious modifications of compounds of prior art D1, D2, and D4) and no synergistic effect has been shown in the specification through comparative study.*

#### 6.4 *Definitiveness*

*Claims 1, 12-13 are not definitive with respect to the use of terms “insecticidally, acaricidally, nematocidally or molluscicidally effective amount”, “agrochemically acceptable diluents or carrier”, “one or more additional insecticidal, acaricidal, nematocidal or molluscicidal compounds” etc.*

#### 6.5 *Clarity and Conciseness*

*Claim 11 is not clear as it relates to simultaneously a method and use of a compound having the formula (IV).*

*Claim 11 also appears as result (i.e. production of compounds according to formula-V from formula-IV) to be achieved without disclosing the necessary steps/technical features to arrive at the result.*

*Claims 12 and 13 are not clearly drafted in the absence of an explicit statement of the constituents (i.e. particular claimed compound(s), agrochemically acceptable diluent or carrier, etc.) and their ratio's in the claimed composition to achieve the expected result.*

#### 6.6 *Other Requirement(s)*

*No support from the as filed claims could be found for substituent R1 and R2 with respect to “aminocarbonyl-ethylene” in claim 1.*

7. The operating portion of the order of the respondent is as under:

7.1 D3 discloses the compound of formula 6-1140 or 0583 (Page number 66) and it has good insecticidal activity. The basic difference/s between the claimed compounds of the present application w.r.to the compound of the prior art D3 are

S.No	D4	Present Application
1	2-Choloro Pyridyl	Pyridyl
2	N-H	N-CH <sub>2</sub> CH <sub>3</sub> /N-CH <sub>3</sub>

and replacement of the halogen atoms by different halogen at Y1/Y5.

However D4 clearly teaches that T group can be a pyridine or a heterocyclic group which may have a substituent represents one or more substituent selected from a group consisting of a halogen atom. It also discloses R1 and R2 each independently represent a hydrogen atom, an oxygen atom, a halogen atom, a hydroxy group, a nitro group, a nitroso group, a trimethylsilyl group, a t-butyl dimethylsilyl group, a cyano group, an amino group, a C1-C6 alkyl group which may have a substituent. It further discloses Y1 and Y5 each independently represent a halogen atom.

D2 giving hint/ teachings that R1 can be a C1-C4 alkyl group, Xs, which may be identical or different each other, are a hydrogen atom, a halogen atom or a trifluoromethyl group and Y1 and Y5 of Q2 can be halogens along with some of the other groups.

From the above it can be concluded that in view of the teachings mentioned in D4 alone or with the combination of D4 along with D2 it would be obvious to a person skilled in the art to arrive at the present claimed compounds.

*In view of the above the amended claims 1-4 lacks inventive step as per section 2(1)(ja) of Patents Act, 1970.*

7.2 *Non-Patentability u/s 3:-*

*The applicant for the agent replied that the claimed compounds do not fall under section 3(d) of Patents Act, 1970. However I am in the opinion that the claimed compounds are mere derivatives of a known compounds of prior art D4 (As explained above) and the applicant failed to show enhanced efficacy w.r.to the closest compounds of the prior art. Therefore, the claims 1-4 are not patentable under section 3(d) of the Patents Act, 1970.*

7.3 *Order:-*

*In view of the above facts and on the circumstances of the case, the undersigned is of the opinion that the application filed in pursuance thereof, does not comply with the requirements of section 2(1)(ja), Section 3(d) of the Patents Act, 1970. Hence, the application no. 5647/CHENP/2015 is refused u/s 15 of the Patents Act, 1970.*

8. It is thus evident that the respondents have just retained two objections i.e. lack of inventive step and the non-patentability under section 3(d) of the Patents Act, 1970.
9. For determination of inventive step too, he just narrates the features of D1 to D4 and holds that *From the above it can be concluded that in view of the teachings mentioned in D4 alone or with the combination of D4 along with D2 it would be obvious to a person skilled in the art to arrive at the present claimed compounds.*
10. We have reviewed the citations and found that while D1 & D4 have been cited in International search Report at International stage of this application as category "A" documents. D2 was cited in US

while examination of the corresponding applications. The submission of the appellant reveals that corresponding US and EP applications have been granted, an indication that the inventions were found to have passed the tests of inventive step in those jurisdictions.

11. The determination of inventive step is void of the teachings of the law and practices followed in the Indian Patent Office. The Manual of Patent Office Practice and Procedure -2019<sup>1</sup> clearly explains the procedure of determination of inventive step which has not been adhered to by the respondent.
12. Whether an alleged invention involves novelty and an 'inventive step' is a mixed question of law and fact, depending largely on the circumstances of the case.<sup>2</sup> No methodology for determination of inventive step has been adopted. His subjective statement does not suffice the well-settled legal principles. The determination is void of facts and no law seems to have been applied by him. In a very recent order in PHARMACYCLICS, LLC<sup>3</sup>, this Board has explained the detailed procedure for determination of inventive step and for the sake of brevity we are not inclined to repeat it here.
13. The respondent's findings on applicability of section 3(d) in this case is totally negated as the claimed compound is found to be novel by him. His argument that '*I am in the opinion that the claimed compounds are mere derivatives of a known compounds of prior art D4 (As explained above) and the applicant failed to show enhanced efficacy w.r.to the closest compounds of the prior art*' does not hold water as the claimed compound is novel as per the own assessment

---

<sup>1</sup> Available at <http://www.ipindia.nic.in/manual-patents.htm>

<sup>2</sup> A Biswanath Prasad Radhey Shyam vs Hindustan Metal Industries

<sup>3</sup> OA/46/2020/PT/DEL

of the respondent. Further, we are not inclined to accept his subjective statement of inventive step either.

14. We, therefore, set aside the impugned order dated 05/02/2020 issued by the respondent, and direct the respondents to grant patent to the appellant on the existing claims 1-4 within 3 weeks from the issuance of this order.

15. Keeping in view the above facts and circumstances, the instant appeal is allowed. No cost.

-Sd/-

**(Dr. B.P. Singh)**  
**Technical Member (Patents)**

Disclaimer: This order is being published for present information and should not be taken as a certified copy issued by the Board

-Sd/-

**(Justice Manmohan Singh)**  
**Chairman**

