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10. Stodt

File Number: W 38/91 - 3.3.2

Application No.: PCT/US91/01786

Publication No.: W09114778

Title of invention: Bacillus Thuringiensis cryIIIc gene and protein toxic to coleopteran insects

Classification: C12N 15/32

DECISION
of 19 November 1992

Applicant: Ecogen Inc.

Headword: CryIIIc gene/ECOGEN

PCT Article 17(3)(a) and Rules 13 and 40

Keyword: "Non-unity a priori - yes"
"Admitted by Applicants"
"Reallocation of certain claims requested"



Case Number : W 38/91 - 3.3.2
International Application No. PCT/US91/01786

D E C I S I O N
of the Technical Board of Appeal 3.3.2
of 19 November 1992

Applicant : Ecogen Inc., a Delaware corporation
2025 Cabot Boulevard West
Langhorne, Pennsylvania 19047-1810 (US)

Representative : A.S. Nadel
Pamitch, Schwarze, Jacobs & Nadel
1601 Market Street - 36th Floor
Philadelphia, Pennsylvania 19103 (US)

Subject of the Decision : Protest according to Rule 40.2(c) of the Patent
Cooperation Treaty made by the applicants against
the invitation (payment of additional fee) of the
European Patent Office (branch at The Hague)
dated 24 July 1991.

Composition of the Board :

Chairman : P.A.M. Lançon
Members : U. Kinkeldey
S. Perryman

Summary of Facts and Submissions

I. The Applicants filed international patent application PCT/US91/01786 with 31 claims. Claims 1, 22 and 28 read as follows:

"1. A purified and isolated cryIIIC gene having a nucleotide base sequence coding for the amino acid sequence illustrated in Figure 1.

22. A method of enhancing the insecticidal activity of an insecticidal composition containing a coleopteran-toxic protein comprising incorporating into an insecticidal composition containing CryIII protein an amount of CryI protein effective to enhance the insecticidal activity of the composition against coleopteran insects.

28. An insecticide composition useful against coleopteran insects comprising the coleopteran-toxic protein of Claim 13 and a CryI protein, the CryI protein being present in an amount effective to enhance the insecticidal activity of the composition against coleopteran insects."

Claims 2 to 11 and 16 to 18 are directly or indirectly dependent on Claim 1 and relate to certain embodiments of the gene of Claim 1, a recombinant plasmid containing the respective gene, the protein produced by the gene, a culture of a bacterium transformed with the recombinant plasmid, an insecticide composition comprising the respective bacterium, a plant transformed with the gene and the gene labelled for use as a hybridisation probe.

Claim 12 relates to a certain culture of a deposited bacterium, carrying the gene as defined in Claim 1.

Claims 13 to 15 are directly or indirectly dependent on

Claim 12 and relate to a coleopteran-toxic protein produced by the bacterium of Claim 12 and a composition comprising the coleopteran-toxic protein contained in the bacterium of Claim 12.

Claims 19 to 21 relate to a method of controlling coleopteran insects which comprises applying a protein of Claim 13.

Claims 23 is dependent on the above-cited Claim 22, but requires the CryIII protein to be CryIIIC protein.

Claims 24 and 25 are dependent on Claim 23 and relate to further embodiments of CryI proteins.

Claim 26 relates to a method according to Claim 22 wherein the CryIII protein and the CryI protein are present in approximately equal amounts.

Claim 27 is dependent on any of Claims 22 to 26 and relates to a composition having enhanced insecticidal activity against insects of the genus Diabrotica.

Claims 29 to 31, finally, are dependent on Claim 28 cited above and thus indirectly incorporate Claim 13, and relate to certain embodiments of an insecticide composition.

II. The EPO acting as an International Search Authority (ISA) sent to the Applicants an invitation to pay an additional search fee in accordance with Article 17(3)(a) and Rule 40.1 PCT. In this invitation the ISA indicated that the application related to the following two groups of inventions and, therefore, did not comply with the requirements of unity of invention:

"1. Claims 1-21, 23-25, 27 partially: are drawn to a novel coleopteran-specific crystal protein, cryIIIC, the DNA encoding it, bacteria or plants transformed therewith, its use as a labelled probe as well as in the formulation of insecticidal compositions for controlling coleopteran, and in special Diabrotica, pests.

2. Claims 22, 26, 27 partially, 28-31: are concerning a method for enhancing the insecticidal activity of an insecticide containing a cryIII protein, by incorporating thereto a cryI protein."

The invitation to pay an additional search fee sets out as reasons for requiring the additional fee that the first invention concerned a new member (cryIIIC) of a known family of molecules (cryIII crystal proteins), whereas the second invention related to a mixture of a cryIII protein (in general) and a cryI protein (another well-known family of crystal proteins).

Thus the claims could be split into those related to a novel product, namely cryIIIC, and those disclosing a mixture of two known products.

III. The Applicants paid the additional search fee under protest in accordance with Rule 40.2(c) PCT.

The arguments submitted by the Applicants can be summarised as follows:

The determination that the international application did not comply with the requirement of unity of invention was believed to be incorrect. It was asserted that the rationale of the ISA in its invitation considering Claims 22, 26, the remainder of Claim 27 and Claims 28

to 31 to be a second invention appropriately applied only to Claims 22, 26 and 27 (incorporating Claims 22 and 26), since these referred solely to the CryIII protein and not the CryIIIC protein.

However, the ISA was mistaken in applying this rationale to Claims 28 to 31 since all of these claims depended from Claim 13, which in turn depended from Claim 12.

Accordingly it was requested that Claims 28 to 31 be determined to possess unity of invention with Claims 1 to 21, 23 to 25 and part of 27. Refund of the additional search fee was also requested.

Reasons for the Decision

1. The protest is admissible.
2. The invitation mentions two groups of claims and their corresponding subject-matter as stated above (see paragraph II). The ISA did not make reference to any prior art document in its invitation and therefore the Board concludes that an objection to lack of unity a priori is raised according to Rule 13.1 PCT.
3. Rule 40 PCT
 - 3.1 Rule 40(c) PCT provides that any applicant may pay the additional fees under protest, that is, accompanied by a reasoned statement to the effect that
 - (a) the international application complies with the requirement of unity of inventionor that

(b) the amount of the required fees is excessive.

These two grounds relate to the situations where in any case the Applicant wants a further search carried out but either (a) the Applicant believes that no additional fees should be charged because there is only one invention, or (b) the Applicant believes the amount of additional fees should be less than that specified in the invitation, for example, because the Applicant considers that there are fewer additional inventions than stated in the determination by the ISA.

3.2 No provision is made under Rule 40 PCT for a protest in a situation where the Applicant does not want any further search carried out, but for some other reason considers the provisional determination of the ISA on unity of invention incorrect. In a situation where this does not affect the fees to be paid, it would be a futile exercise for any authority to which a protest is to be made under Rule 40 PCT, in this case the EPO Board of Appeal, to express its non-binding opinion as to whether or not the non-binding determination of the ISA as to the unity of invention is correct.

4. The Applicants admit (see paragraph III of Facts and Submissions) that the ISA's determination that Claims 22, 26 and 27 (partially) lack unity of invention with the main invention of Claims 1 to 21, 23 to 25 and 27 (partially), and the Board's provisional opinion is the same. No submissions are made as to why the additional fees required should be regarded as excessive, and the Board sees no reasons for considering this to be so. The protest must accordingly be dismissed.

5. The fact that the Applicants paid the additional fees requested in the Invitation, prima facie must be taken as indicating that they wanted the second invention listed in the Invitation searched. The Applicants admit that there are two inventions, and both inventions have been searched. In these circumstances the additional fees were due irrespective of whether, as requested by the Applicants Claims 28 to 31 be determined to possess unity of invention with Claims 1 to 21, 23 to 25 and part of 27, or whether as determined by the ISA they form part of the second invention of Claims 22, 26 and part of 27.

Therefore, the invitation of the ISA to pay one additional fee is valid and thus there is no reason for a refund of the fee paid by the Applicants.

Order

For these reasons, it is decided that:

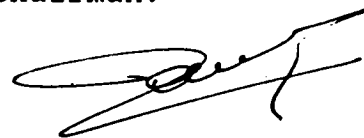
The protest is dismissed.

The Registrar:



P. Martorana

The Chairman:



P. Lançon

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