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**Datasheet for the decision
of 22 May 2014**

Case Number: T 1293/11 - 3.3.08

Application Number: 06023947.2

Publication Number: 1760145

IPC: C12N15/82, C12N9/10, C12N9/20,
C12N9/12

Language of the proceedings: EN

Title of invention:
Signal transduction stress-related proteins and methods of use
in plants

Applicant:
BASF Plant Science GmbH

Headword:
Transgenic plant - Signal transduction stress-related protein/
BASF

Relevant legal provisions:
EPC Art. 84, 83, 56

Keyword:
Main request - requirements of the EPC met (yes)

Decisions cited:

Catchword:



Beschwerdekammern
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Chambres de recours

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Case Number: T 1293/11 - 3.3.08

D E C I S I O N
of Technical Board of Appeal 3.3.08
of 22 May 2014

Appellant: BASF Plant Science GmbH
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Decision under appeal: **Decision of the Examining Division of the European Patent Office posted on 7 January 2011 refusing European patent application No. 06023947.2 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman M. Wieser
Members: B. Stolz
J. Geschwind

Summary of Facts and Submissions

- I. The appeal lies against the decision of the examining division dated 7 January 2011 whereby European patent application No. 06023947.2, which was filed as a divisional application of European patent application No. EP01926730.1, was refused.
- II. At oral proceedings, held on 10 March 2010 before the examining division, a main request and auxiliary request 1, both filed on 9 February 2010, and auxiliary request 2 filed on the day of the oral proceedings, were considered.

At the end of the oral proceedings, the examining division informed the applicant that it intended to grant a patent on the basis of auxiliary request 2.

The applicant received a communication under Rule 71(3) EPC which comprised the text proposed for grant on the basis of auxiliary request 2.

With letter of 14.10.2010, the applicant disapproved the text for grant on the basis of auxiliary request 2 and informed the examining division that it maintained the main request.

The examining division refused the application because claim 1 of the main request did not meet the requirements of Article 84 EPC, and the subject matter of claim 15 of the main request did not meet the requirements of Articles 84, 83 and 56 EPC.

- III. Claims 1 and 15 of the main request read as follows:

"1. A transgenic plant cell transformed by a Signal Transduction Stress-Related Protein (STSRP) coding nucleic acid, wherein the STSRP is a 14-3-3 Protein 1 (14-3-3P-1) as defined in SEQ ID NO:13 or a polypeptide having at least 90% sequence identity with SEQ ID NO:13 over its entire length, and wherein expression of the STSRP coding nucleic acid in the plant cell results in the plant cell's increased tolerance to drought stress as compared to a wild type variety of the plant cell."

"15. A method of increasing the drought stress tolerance of a plant comprising, increasing the expression of a Signal Transduction Stress-Related Frolem (STSRP) in the plant, wherein the plant is transgenic and transformed with a vector containing any of the STSRP coding nucleic acids of claim 10 or 11, or with a promoter that directs expression of native STSRP in the plant and the STSRP is a 14-3-3 Protein 1 (14-3-3P-1) as defined in SEQ ID NO:13 or a polypeptide having at least 90% sequence identity with SEQ ID NO:13 over its entire length, and wherein expression of the STSRP in the plant results in the plant's Increased tolerance to drought stress as compared to a wild type variety of the plant."

The remaining claims referred to preferred embodiments of the plant cell according to claim 1 (claims 2 to 5) and claim 15 (claims 16 to 19), transgenic plants (claim 6), seeds (claim 7), the STSRP protein, the DNA encoding it and expression vectors (claims 12 and 13), and to methods of producing and using the plants (claims 14 and 20), seeds (claim 21) and the nucleic acid encoding the STSRP (claim 22).

IV. With its grounds of appeal, the applicant (appellant) filed a new main request and an auxiliary request.

- V. Claim 1 of the main request is identical to claim 1 of the main request before the examining division.

Claim 15 of the main request is identical to claim 15 of auxiliary request 2 before the examining division and reads:

"15. A method of increasing the drought stress tolerance of a plant comprising, increasing the expression of a Signal Transduction Stress-Related Protein (STSRP) in the plant, wherein the plant is transgenic and transformed with a vector containing any of the STSRP coding nucleic acids of claim 10 or 11 and the STSRP is a 14-3-3 Protein 1 (14-3-3P-1) as defined in SEQ ID NO: 13 or a polypeptide having at least 90% sequence identity with SEQ ID NO: 13 over its entire length, and wherein expression of the STSRP in the plant results in the plant's increased tolerance to drought stress as compared to a wild type variety of the plant."

Claims 2 to 14 and 16 to 20 of the main request are identical to claims 2 to 14, 16, 17 and 19 to 21, respectively, of auxiliary request 2 before the examining division.

- VI. Auxiliary request 1 corresponds to auxiliary request 2 before the examining division.
- VII. Appellant's arguments regarding the main request, as far as relevant for the present decision can be summarized as follows:

The wording of claim 1 was clear. The skilled person knew that transformation led to the production of

transgenic plants. Therefore, it was clear that the transgenic plant cell of claim 1 was transgenic due to the transformation with and hence the presence of a gene coding for the 14-3-3 protein-1. The presence of further transgenes was not excluded by the wording of claim 1.

Further, the term "plant cell transformed by" was not a "product by process" type of definition. The claim did not comprise any reference to process steps and the definition of the plant cell included characteristic structural and functional features.

The functional feature specifying that "expression of the STSRP in the plant results in the plant's increased tolerance to drought stress as compared to a wild type variety of the plant" excluded embodiments in which the transgenic plant cell did not comprise a 14-3-3 transgene due e.g. to unsuccessful transformation or due to only transient transformation.

VIII. The appellant requested that the decision under appeal be set aside and the case be remitted to the first instance with the order to grant a patent on the basis of the main request or on the basis of the auxiliary request.

Reasons for the Decision

Main request

1. The claims of the main request differ from the claims of auxiliary request 2, which was held allowable by the examining division, only in claim 1 (see section V

above). Claim 1 of the main request is identical to claim 1 of the main request before the examining division, which was found not to be clear and to contravene the requirements of Article 84 EPC.

2. The claim refers to a transgenic plant cell transformed by a Signal Transduction Stress-Related Protein (STSRP) coding nucleic acid wherein expression of the STSRP coding nucleic acid in the plant cell results in increased tolerance to drought stress of the plant cell.
3. The examining division has not disputed that transgenic plants can be obtained by the process of transformation.

The examining division was however of the opinion that claim 1, as presently worded, was not limited to plant cells comprising a nucleic acid encoding an STSRP protein. It interpreted the term "transformed by a STSRP encoding nucleic acid" as a feature merely requiring that a plant cell had (at some point in time) been transformed with the nucleic acid, which was not necessarily meaning that the nucleic acid was still present in the claimed plant cell. According to the examining division the STSRP encoding nucleic acid could be lost after transformation (transient transformation) or the transformation procedure could result in plant cells with a non-functional STSRP gene. Such a plant cell could still be a "transgenic plant cell" according to claim 1 as the result of transformation procedures unrelated to the transformation with the nucleic acid encoding the STSRP protein. The examining division was of the opinion that the functional feature "wherein expression of the STSRP coding nucleic acid in the plant cell results in

increased tolerance to drought stress of the plant cell" did not exclude these possibilities. It concluded therefore that claim 1 did not meet the requirements of Article 84 EPC.

4. The board does not agree with the examining division's interpretation of the claim because the functional feature at the end of claim 1 excludes plant cells which were unsuccessfully transformed or which have lost the transgene after the transformation event from the scope of protection. This functional feature specifies that expression of **the** (definite article) STSRP coding nucleic acid in the plant cell results in the plant cell's increased tolerance to drought stress. Therefore, "the STSRP coding sequence" can only refer to the STSRP coding sequence that was used for transformation. Moreover, expression of this sequence only **results** (present tense) in the claimed property if it is present and functional in the plant cell. If the sequence is, for whatever reason, no longer present in the transgenic plant cell and only **resulted** (past tense) in the claimed property, it cannot do this. The functional limitation, therefore, rules out the ambiguities which the examining division considered to result from the use of the term "transformed".

Claim 1 therefore meets the requirements of Article 84 EPC.

5. The subject matter of claim 1 of the main request is thus a plant cell comprising a nucleic acid encoding the STSRP protein. The subject matter of claims 2 to 20 of the main request is literally identical to claims 2 to 17 and 19 to 21 of auxiliary request 2 before the examining division.

The board shares the positive findings of the examining division with regard to auxiliary request 2 before it concerning the requirements of Articles 123(2), 83, 54 and 56 EPC (see communication according to Rule 71(3) EPC).

Since the nucleic acid encoding the STSRP according to claim 10 of the main request (and of auxiliary request 2 before the examining division) meets the requirements of the EPC, the same is true for claim 1 of the main request directed to transgenic plant cells comprising the nucleic acid.

6. The main request therefore meets the requirements of the EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the examining division with the order to grant a patent on the basis of claims 1 to 20 of the main request filed on 17 May 2011 and a description to be adapted thereto.

The Registrar:

The Chairman:



A. Wolinski

M. Wieser

Decision electronically authenticated