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D E C I S I O N
of 8 September 2005

Case Number: T 0168/04 - 3.3.8

Application Number: 95114460.9

Publication Number: 0707068

IPC: C12N 15/81

Language of the proceedings: EN

Title of invention:
Yeast Vector

Patentee:
ROBERT ROGERS YOCUM

Opponent:
DSM N.V.

Headword:
Yeast vector/YOCUM

Relevant legal provisions:
EPC Art. 123(2), 104, 76(1)
EPC R. 67

Keyword:
"Added subject-matter (no) "

Decisions cited:
G 0009/92, T 0789/89, T 0315/03

Catchword:
-



Case Number: T 0168/04 - 3.3.8

D E C I S I O N
of the Technical Board of Appeal 3.3.8
of 8 September 2005

Appellant: Yocum, Robert, R.
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office posted
28 November 2003 concerning maintenance of
European patent No. 0707068 in amended form.

Composition of the Board:

Chairman: L. Galligani
Members: F. Davison-Brunel
C. Rennie-Smith

Summary of Facts and Submissions

I. European patent No. 0 707 068 with the title "Yeast vector" is based on European patent application No. 95 114 460.9 which is a divisional application in accordance with Article 76 EPC of the earlier application 85 303 625.9 (European patent No. 0 163 491). It was granted with ten claims.

Claims 1, 6, 7, 9 and 10 read as follows:

"1. A DNA sequence capable of integration into a yeast chromosome comprising a promoter sequence functionally coupled to a gene coding for resistance to antibiotic G418, such that the DNA sequence is capable of being directly selected for in the integrated state in a yeast cell transformed with said DNA.

6. A vector containing a DNA sequence according to any preceding claims.

7. A vector according to Claim 6, further comprising a gene encoding a desired heterologous protein.

9. A method of transforming yeast cells comprising exposing a population of said yeast cells to a DNA sequence according to any of Claims 1 to 5 or a vector according to any of Claim 6 or 7 under transforming conditions, exposing the cells to a dose of antibiotic G418 sufficient to prevent growth of untransformed cells of the population, and selecting cells that are capable of growing in the presence of said antibiotic.

10. A method for producing a desired heterologous protein comprising using a yeast cell according to Claim 9 to produce said protein."

Claims 2 to 5 were directed to further features of the DNA sequence of claim 1. Claim 8 was directed to a yeast cell transformed with a DNA sequence according to any of the preceding claims or a descendant thereof.

II. An opposition was filed under Article 100(a) to (c) EPC. A main request and six auxiliary requests were considered by the opposition division. Claims 1 to 9 of the main request were identical to granted claims 1 to 9 except for the addition in claim 1 of the expression "on the basis of antibiotic G418 resistance" after "integrated state" and claim 10 read as follows:

"10. A method for producing a heterologous protein comprising using a yeast cell prepared by a method according to claim 9 when dependent upon claim 7 to produce said protein."

While acknowledging that the application as filed (and the parental application) provided the information that the vectors of the invention were to be used in a method for the production of a heterologous protein, the opposition division found no basis therein for the feature that this method was to be carried out in yeast cells. The main request was, thus, refused, for failing to fulfil the requirements of Articles 123(2) and 76(1) EPC, *inter alia*, because claim 10 contained subject-matter which extended beyond the content of the application as filed/parental application.

The patent was maintained on the basis of the sixth auxiliary request comprising seven claims. Claims 1, 5 and 7 read as follows.

"1. A vector containing a DNA sequence capable of integration into a yeast chromosome comprising a yeast promoter sequence functionally coupled to a gene coding for resistance to antibiotic G418, such that the DNA sequence is capable of being directly selected for in the integrated state in a yeast cell transformed with said DNA.

5. A vector according to any of the preceding claims, further comprising a gene encoding a desired heterologous protein.

7. A method of transforming yeast cells comprising exposing a population of said yeast cells to a DNA sequence according to any of the preceding claims under transforming conditions, exposing the cells to a dose of antibiotic G418 sufficient to prevent growth of untransformed cells of the population, and selecting cells that are capable of growing in the presence of said antibiotic."

Claims 2 to 4 related to further features of the vector of claim 1 and claim 6 related to a yeast cell transformed with such vectors or a descendant thereof.

III. The opponent filed an appeal on 27 January 2004, paid the appeal fee and submitted a statement of grounds of appeal.

IV. On 6 February 2004, the appellant (patent proprietor) also filed an appeal. The appeal fee was paid. A new main request and nine auxiliary requests were submitted together with the statement of grounds of appeal on 8 April 2004. The new main request comprised eight claims. Claims 1 to 7 were those of the sixth auxiliary request accepted by the opposition division (see point II, supra). Claim 8 corresponded to granted claim 10 and read as follows:

"8. A method for producing a desired heterologous protein comprising using a yeast cell prepared by a method according to claim 7 when dependent on claim 5 to produce said protein."

V. On 13 September 2004, the appellant submitted nineteen further auxiliary requests with its answer to the opponent's grounds of appeal. Only auxiliary requests 10 to 17 were filed in hard copy. The appellant also submitted experimental data.

VI. On 9 December 2004, the opponent withdrew its opposition.

VII. With its letter dated 7 February 2005, the only appellant withdrew its request for oral proceedings and requested that the proceedings be continued in writing.

VIII. The appellant's arguments insofar as relevant for the present decision may be summarised as follows:

Articles 123(2) and 76 EPC; claim 8

The opposition division was wrong when concluding that the application as filed provided no basis for claiming a method for producing a desired heterologous protein **in yeast cells** using the claimed vectors. Their reasoning was based on the passage on page 14, lines 20 to 21 of this application where reference was made to producing a heterologous protein using "the vectors of the invention" without mentioning "in yeast cells". Yet, it was not allowable to take this passage in isolation, on the contrary, it had to be read in its context. In particular, it was mentioned on the same page, some ten lines thereafter, when discussing the promoter sequence to be used to initiate transcription of the G418 selection marker in the vectors: "... the only crucial factor being that the sequence provides that a sufficient level of expression in yeast cells is maintained." It would, thus, be evident to the skilled person that the heterologous protein was going to be produced when the vector was in a yeast cell. Further basis for the combination of features yeast cells/vectors of the invention was to be found on page 9, lines 14 to 16 of the application as filed. The same information was available from the parental application.

For these reasons, the main claim request fulfilled the requirements of Articles 123(2) and 76(1) EPC.

Reimbursement of the appeal fee and/or costs for filing the notice and grounds of appeal

At the start of the oral proceedings before the opposition division, the appellant had requested to be allowed to file further auxiliary requests, if appropriate and this request had been granted. Yet, when it became necessary, the appellant was not allowed to file further auxiliary requests. This amounted to a substantial procedural violation. Reimbursement of the appeal fee and/or the costs of filing the notice and grounds of appeal was, thus, requested.

- IX. The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the main request filed on 8 April 2004, this being the claims corresponding to auxiliary request 6 accepted by the opposition division with an additional claim corresponding to claim 10 of the main request refused by the opposition division. In the alternative, the appellant requested that the patent be maintained with claims as set out in the auxiliary requests 1 to 9 filed on 8 April 2004 or 10 to 28 filed on 13 September 2004. In addition, the appellant requested reimbursement of the appeal fee and/or his costs in the appeal proceedings.

Reasons for the Decision

Procedural matter

1. The opponent withdrew its opposition in the course of appeal proceedings by a letter dated 9 December 2004. In accordance with the case law (e.g. T 789/89, OJ EPO

1994, 482), this withdrawal means that it ceased to be a party to the proceedings in respect of the substantive issues. The proceedings, nonetheless, continued on the basis of the patent proprietor's appeal. In accordance with the Enlarged Board of appeal decision G 9/92 (OJ EPO 1994, 875), if the patentee is the sole appellant against an interlocutory decision maintaining his patent in amended form, the maintenance of the patent as thus amended cannot be challenged.

2. The main request now on file is the request which was allowed by the opposition division (claims 1 to 7, see Section II, supra) with an additional claim (claim 8, see section IV, supra). In accordance with the above mentioned case law, the only substantive issue to be decided is whether the subject-matter of claim 8 fulfils the requirements of the EPC.

*Main request filed on 8 April 2004; claim 8
Articles 123(2) and 76 EPC*

3. The patent in suit was granted on the basis of a divisional application (No. 95 114 460.9, hereafter identified as "the application as filed") of the earlier patent application No. 85 303 625.9 (hereafter identified as "the parental application"). In accordance with Article 123(2) and 76(1) EPC, its subject-matter may not extend beyond the content of either of these applications. As these contents are, in fact, identical, it suffices to compare the subject-matter of claim 8 to that of, for example, the application as filed to assess whether or not the requirements of both these articles of the European Patent Convention are satisfied.

4. On page 2, lines 17 to 28 of the application as filed, the invention is described as follows:

"..., the invention features a vector including a gene for resistance to an antibiotic ... being transcribed from a yeast promoter sequence..., the vector being capable of being integrated into a chromosome of the host yeast cell... A gene heterologous to the host yeast cell ... can be inserted into the vector..."

On page 4, lines 30 to 35 : *"Introduction of genes encoding heterologous enzymes into industrial yeast strains using the vectors of the invention will facilitate the production of such products as alcohol, which ordinarily relies on sugars to feed the yeast. An enzyme such as glucoamylase will enable the yeast to break down starch from inexpensive sources..."*

On page 9, lines 14 to 16: *"The vectors of the invention can be used in any useful process in which host yeast cells express a desired heterologous gene"*

Finally, on page 14, lines 21 to 24, concerning the desired heterologous gene: *"...the vectors of the invention can be used in processes in which the desired end product is the protein , e.g., therapeutic proteins such as interferon, encoded by the inserted heterologous gene."*, and lines 30 to 34, concerning the promoter of the selective marker gene: *"The promoter sequence ... can also vary widely, the only crucial factor being that the sequence provides a sufficient level of expression in yeasts cells is maintained."*

5. In the board's judgment, the skilled person would have absolutely no doubt on the basis of this information that the vectors of the invention are to be used for the expression in yeast cells of heterologous proteins which will either contribute to the yeast cells' metabolism (e.g. glucoamylase) or be retrieved from the yeast cells for further purposes (e.g. interferon). The disclosure in the application as filed (and, accordingly in the parental application, see point 3, supra), thus, provides a sufficient basis for the subject-matter of claim 8.

6. A last remark may be made that the application as filed does not at any point suggest that the vectors should be used for protein production in any other hosts than yeast cells. Thus, no confusion can arise.

7. For these reasons, it is concluded that the requirements of Articles 123(2) and 76(1) EPC are fulfilled.

Other requirements of the EPC; claim 8

8. Whether the scope of a claim corresponding to pending claim 8 was commensurate to that of granted claim 10 was not decided by the opposition division, nor whether the requirements of novelty, inventive step and sufficiency of disclosure would be fulfilled by such a claim. Taking into account the age of the case, the board decides to exercise its power pursuant to Article 111(1) EPC to examine these issues in relation to claim 8.

9. The subject-matter of claim 8 has the same scope as that of granted claim 10, the reference to "a method according to claim 7 when dependent on claim 5" in said claim being equivalent to the reference to "a yeast cell according to Claim 9" in granted claim 10, - granted claim 9 being itself dependent on granted claim 7 which is identical to pending claim 5. The requirements of Article 123(3) EPC are fulfilled.

10. The method of claim 8 makes use of the transformed yeast cells of claim 5 obtained by using the method of claim 7, which claims were found novel and inventive, a finding which cannot be challenged. It follows that the claimed method also fulfils the requirements of Articles 54 and 56 EPC.

11. The opposition division also acknowledged sufficiency of disclosure in relation to the subject-matter of claims 1 to 7. The question which remains is, thus, whether an heterologous gene could have been cloned in the yeast vector and expressed in the yeast cells without undue burden. There is no evidence on file to the contrary. Furthermore, the patent in suit (page 5, Table 1, [0044]) provides the example of the heterologous E.coli lacZ gene being expressed in yeast cells transformed by the plasmid vector pRY255 and selected for resistance to G418. Sufficiency of disclosure is, thus, acknowledged in relation to the subject-matter of claim 8.

12. For these reasons, it is concluded that the main request filed on 8 April 2004 fulfils the requirements of the EPC.

Requests for reimbursement of the appeal fee and/or costs

13. The appellant's request for reimbursement of its appeal fee and/or its costs of filing the notice and grounds of appeal is based on an alleged substantial procedural violation - see paragraph VIII above. The board notes from the minutes of the oral proceedings before the opposition division that the facts alleged by the appellant are correct. That was beyond doubt a procedural irregularity: it was quite improper to tell a party he could take a certain step at a later stage in the proceedings and then, when that stage was reached, refuse to allow him to do so. In some circumstances, such fickle behaviour could very seriously prejudice a party and make a significant difference to the outcome of proceedings; in such cases, there would be little doubt that a substantial procedural violation had occurred.

14. In the present case however the board is satisfied that the outcome would **not** have been different. Any further request the appellant might have wanted to file but was not allowed to file would have contained a claim such as claim 8 of the request now allowed by the board and it is quite clear that the opposition division was firmly of the view that such a claim was not allowable. As is clear from paragraphs 3 to 7 above, that view was erroneous but such errors are not in themselves procedural violations - on the contrary, appeal proceedings exist to allow the correction of erroneous decisions. The appellant would, whether or not there had been any procedural violation, have been obliged to appeal in order to secure a claim such as claim 8.

Therefore it would not be equitable to order reimbursement of the appeal fee under Rule 67 EPC.

15. The appellant makes an alternative request for costs. There can of course be no basis for ordering an apportionment of costs against the opponent under Article 104 EPC. Although despite withdrawing its opposition it remains a party for the purposes of costs (see T 789/89, *supra*, paragraph 1), the opponent bears no responsibility whatsoever for the matters of which the appellant complains. The board has no power to order any department of the EPO to pay all or part of the appellant's costs regardless of how deserving or otherwise a request for such costs might be (see T 315/03 of 6 July 2004, to be published in OJ EPO, Reasons, section 15).
16. The appellant's request, whether for reimbursement of its appeal fee or costs, must be refused.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to maintain the patent on the basis of:
 - description: pages 4 and 5 as granted,
pages 2, 3 and 6 as filed on
12 November 2003;

 - claims 1 to 8 filed as main request filed on
8 April 2004;

 - figures as granted.

The Registrar:

The Chairman:

A. Wolinski

L. Galligani