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**Datasheet for the decision
of 7 May 2013**

Case Number: T 1398/09 - 3.3.08

Application Number: 99943134.9

Publication Number: 1109934

IPC: C12Q 1/68

Language of the proceedings: EN

Title of invention:

Amplification of DNA with a control sequence differing in GC content

Applicant:

THE SECRETARY OF STATE FOR DEFENCE

Headword:

Amplification of DNA/THE SECRETARY OF STATE FOR DEFENCE

Relevant legal provisions:

EPC Art. 84

Keyword:

"All requests - Article 84 EPC (no) "

Decisions cited:

-

Catchword:

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Case Number: T 1398/09 - 3.3.08

D E C I S I O N
of the Technical Board of Appeal 3.3.08
of 7 May 2013

Appellant:
(Applicant)

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Decision under appeal:

**Decision of the Examining Division of the
European Patent Office posted 23 January 2009
refusing European patent application
No. 99943134.9 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 to refuse European patent application No. 99 943 134. The examining division held that the main request before it lacked novelty (Article 54 EPC), auxiliary request I lacked an inventive step (Article 56 EPC), and auxiliary requests II and III lacked an inventive step and contravened Article 84 EPC.
- II. With its grounds of appeal, the appellant (applicant) submitted a main request and an auxiliary request.
- III. In a further submission, dated 22 September 2010, the appellant submitted a new main request, withdrew the previous auxiliary request, submitted a new auxiliary request I, and renumbered the previous main request as auxiliary request II.
- IV. The appellant was summoned to oral proceedings. A communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal (RPBA) annexed to the summons, informed it of the preliminary non-binding opinion of the board on some of the issues of the appeal proceedings.
- V. In a letter dated 30 April 2013, the appellant informed the board that it would not attend the oral proceedings.
- VI. Oral proceedings were held on 7 May 2013 in the absence of the appellant.

VII. Claim 1 of the main request and of auxiliary request II reads:

"1. A method for determining whether or not an amplification reaction of a target DNA sequence has progressed, said method comprising the steps of:

(1) amplifying said sequence in the presence of (a) a nucleic acid polymerase (b) at least one primer capable of hybridising to said target polynucleotide, (c) a control sequence to which said primer is capable of hybridising and which is of similar length to the target DNA sequence but with a different percentage GC content, and (d) label means for detecting the hybridisation of nucleic acids in the reaction;

(2) detecting the hybridisation of the target and control sequences at different temperatures; and

(3) correlating the detection of hybridisation of the control sequence with progression of the amplification reaction."

Claim 1 of auxiliary request I reads:

"1. A method for determining whether or not an amplification reaction of a target DNA sequence has progressed, said method comprising the steps of:

(1) amplifying said sequence in the presence of (a) a nucleic acid polymerase (b) at least one primer capable of hybridising to said target polynucleotide, (c) a control sequence to which said primer is capable of hybridising and which is of similar length to the target DNA sequence but with a different percentage GC content,

and (d) label means for detecting the hybridisation of nucleic acids in the reaction; wherein the conditions used in the amplification are such that amplification of one of either the target sequence or the internal control sequence is favoured, said one being the sequence which is present in smaller amounts, and wherein amplification of the sequence which is present in higher amounts is limited by reducing the denaturation temperature during the amplification reaction so amplification of both sequences can be detected, and further wherein the denaturation temperature of the sequence which is present in smaller amounts is lower than the denaturation temperature of the other sequence;

(2) detecting the hybridisation of the target and control sequences at different temperatures; and

(3) correlating the detection of hybridisation of the control sequence with progression of the amplification reaction."

VIII. In the letter accompanying the claim requests underlying the present decision, the appellant exclusively and only argued with regard to novelty and inventive step.

IX. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the main request or, in the alternative, on the basis of auxiliary requests I or II, all filed with letter of 22 September 2010.

Reasons for the decision:

1. In an appeal from a decision of an examining division in which a European patent application was refused the board of appeal has the power to examine whether the application or the invention to which it relates meets the requirements of the EPC. The same is true for requirements the examining division did not take into consideration in the examination proceedings or which it regarded as having been met. If there is reason to believe that such a requirement has not been met, the board shall include this ground into the proceedings (Headnote, decision G 10/93 (OJ EPO 1995, 172)).
2. In its annex attached to the summons to oral proceedings, the board informed the appellant that it was going to examine issues under Articles 83, 84 and 123(2) EPC at the oral proceedings, although these had not been mentioned in the decision under appeal.
3. With regard to Article 84 EPC, it informed the appellant of its preliminary opinion that feature (3) of claim 1 of all requests was open to interpretation and therefore unclear.
4. Despite this explicit indication, the appellant neither replied to the communication in writing nor did it attend the oral proceedings.
5. Feature (3) of claim 1 of all claim requests refers to "correlating the detection of hybridisation of the control sequence with progression of the amplification reaction".

6. This feature, together with a modification of the preamble, has been added to claim 1 as originally filed to delimit the claimed subject matter from the cited prior art. When assessing whether the amendments to claim 1 offended against Article 123(2) EPC, the board noted that there was no explicit disclosure of step (3) in the application as originally filed and in particular that the term "correlating" was not used therein. In order to establish whether a method with the features of claim 1, including step (3) is implicitly disclosed in the application as originally filed, the board first has to establish the exact meaning of step (3).

7. In the discussion of novelty, the appellant submitted that the claimed method yielded a qualitative answer to the question whether an amplification reaction of a target sequence has progressed, and that at least feature (3) of claim 1 distinguished the claimed subject matter from the prior art by providing a means for answering the question whether amplification of a target sequence progressed even if amplification of the control sequence would not take place because of unfavourable conditions, i.e. even if outcompeted (cf. page 5 of the grounds of appeal). Thus, the appellant interprets the term "correlating the detection of hybridisation of the control sequence with progression of the amplification reaction" as defining measures for avoiding out-competition.

Contrary to this, and as expressly stated in point 8 of the board's communication, this is however only one possible interpretation. Feature (3) can also be understood to simply mean "if hybridisation of the

control sequence can be detected, amplification has progressed" (as in the prior art).

8. Since these different interpretations of feature (3), which itself has no explicit basis in the application as filed, give rise to unclarity and ambiguity as regards the definition of the subject matter of claim 1 of all requests, the requirements of Article 84 EPC are not met.
9. In the absence of an allowable request, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

A. Wolinski

M. Wieser