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**Datasheet for the decision
of 12 November 2021**

Case Number: T 0104/19 - 3.5.05

Application Number: 10759696.7

Publication Number: 2480998

IPC: G06F19/00

Language of the proceedings: EN

Title of invention:

APPARATUS AND METHOD FOR PROCESSING CELL CULTURE DATA

Applicant:

Plasticell Limited

Headword:

Protocol similarity/PLASTICELL

Relevant legal provisions:

EPC Art. 84, 56

Keyword:

Claims - clarity - main request (yes)

Inventive step - main request (no)

Decisions cited:

T 2488/11



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Case Number: T 0104/19 - 3.5.05

D E C I S I O N
of Technical Board of Appeal 3.5.05
of 12 November 2021

Appellant: Plasticell Limited
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Representative: D Young & Co LLP
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Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 19 July 2018
refusing European patent application No.
10759696.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chair A. Ritzka
Members: E. Konak
D. Prietzel-Funk

Summary of Facts and Submissions

I. The appeal is against the examining division's decision to refuse the application. The examining division decided that the main request and the first to third auxiliary requests then on file did not meet the requirements of Article 84 EPC. The first and second auxiliary requests were also found not to meet the requirements of Article 123(2) EPC. As *obiter dictum*, in the contested decision it was also noted that the requirements of Article 56 EPC were not met with regard to the following document:

D1: US 2006/035211 A1

II. With its statement setting out the grounds of appeal, the appellant filed a new main request and re-filed the main request on which the contested decision was based as its new first auxiliary request. It requested that the decision be set aside and a patent be granted on the basis of one of the requests.

III. In its preliminary opinion issued in preparation for oral proceedings, the board communicated that it was minded not to admit the main request and that the auxiliary request did not meet the requirements of Article 56 EPC.

IV. Oral proceedings were held before the board. At the oral proceedings, the appellant withdrew its main request.

V. Claim 1 of the sole request reads as follows:

"A method of processing cell culture data for identifying effective protocols, said data comprising results from a large number of samples, the results being obtained by performing multiple stages of cell culture in succession on each sample, where each stage represents a cell culture treatment having a particular set of conditions, such that each sample follows a protocol specified by the identity and order of the treatments applied to the cell culture, said method comprising:

specifying a subset of the samples that yielded a desired cell culture outcome, and providing cell culture data specifying, for each of the samples in the subset, the protocol followed by that sample, including the identity and order of the treatments applied to the sample; and

performing a computer-implemented analysis of the cell culture data from the samples in the subset to produce an ordering or grouping of the samples in the subset based on: (i) the number of samples from the subset that followed each respective protocol, and (ii) similarities between the protocols for respective samples, wherein the similarity between protocols is based on the identity and order of the treatments applied to the cell culture for the respective protocols, and wherein said analysis is performed on a data set comprising a record for each sample in the subset, each record comprising an identifier of the sample and information on the protocol applied to the sample;

wherein said ordering or grouping may be used to help to identify one or more protocols that are effective for obtaining the desired cell culture outcome, .[sic]"

Reasons for the Decision

1. Clarity (Article 84 EPC)

The sole request on file is the same as the main request on which the contested decision is based. In the contested decision, various expressions in claim 1 were objected to as being unclear, in particular "samples that yielded a desired cell culture outcome", "effective protocol" and "may be used to identify one or more protocols". The step of performing a computer-implemented analysis of the cell culture data was also objected to as being unduly broad.

However, the board agrees with the appellant that these expressions, when read with a mind willing to understand, are sufficiently clear in the context of cell culture experiments. The fact that different experiments are performed to achieve different results does not render these terms subjective or relative. Nor is it subjective or relative whether a certain protocol produces a certain result or not.

Therefore, claim 1 is clear (Article 84 EPC).

2. Inventive step (Article 56 EPC)

2.1 In an *obiter dictum*, in the contested decision claim 1 was also found to lack an inventive step over the disclosure of D1. However, as the appellant convincingly argued, in D1, samples are clustered based on their respective results, not based on protocols used to achieve these results as in the case at hand. Therefore, the well-known prior-art method described by the appellant in the statement setting out the grounds of appeal is a more appropriate starting point than D1

for assessing inventive step. The appellant confirmed at the oral proceedings that this method was prior art at the date of priority of the application.

2.2 According to this method, tens of thousands of cell samples are subjected to large automated screening experiments in a first stage. Each experiment consists of a series of different treatments, such as adding a particular chemical or heating, with a view to obtaining a desired outcome, e.g. growth of a particular cell type. A particular sequence of applied treatments is termed a protocol or pathway. The purpose of this first-stage screening is to identify a relatively small selection of effective protocols for further - more detailed and more expensive - second-stage experiments. For this purpose, the experimental data obtained in the first stage is analysed and the protocol(s) with the largest number(s) of positive samples is/are selected for second-stage experiments, e.g. the top 10% of protocols in the ranking (see the statement setting out the grounds of appeal, point 2, "Technology Background").

2.3 Claim 1 differs from this prior-art method in that it takes into account the similarity between different protocols when identifying protocols for second-stage experiments, whereby the similarity is based on the identity and order of the treatments applied to the cell cultures. As illustrated by two different examples given by the appellant in its statement setting out the grounds of appeal and at the oral proceedings, taking the similarity of protocols into account may result in groups of similar protocols which are not very effective individually being able to obtain a better ranking together as a group, or in a high similarity to

other effective protocols increasing the end score of an individual effective protocol.

- 2.4 The board does not doubt that the distinguishing feature may lead to a different ranking of protocols than that which would result from following the prior art. However, the question to be answered is whether this different ranking produces any technical effect.
- 2.5 The appellant argued that the technical effect produced by the different ranking lay in extracting greater technical information and insight from the experimental data set, indicating which of the thousands of different treatment combinations may be most effective, and improving the identification of "false positives". However, as the board indicated in its preliminary opinion, a better appreciation of relationships in a data set is an intellectual effect, which is not technical. Regarding "false positives", the appellant referred in particular to page 3, lines 16-19 and page 11, lines 13-16 of the description. However, as the appellant also acknowledged at the oral proceedings, the use of the term "false positive" is merely metaphorical in the case at hand. It is not the case that a protocol which cannot lead to the desired outcome is erroneously labelled as a protocol which can lead to the desired outcome. Instead, some of the most promising of the protocols that lead to the desired outcome are selected for further study in second-stage experiments (see also page 11, line 15: "protocols that are most likely to be worth pursuing"). An arguably better ranking of effective protocols might assist scientists in prioritising their experiments and in allocating resources (time and money) for further study of certain protocols, but these are not technical matters. Resource allocation is primarily an

organisational business problem and not a technical one. The fact that it is carried out in the context of cell culture experiments does not change this finding (see also T 2488/11, point 1.4(ii) of the Reasons).

2.6 Since the distinguishing features of claim 1 do not produce any technical effect, claim 1 cannot solve any objective technical problem. Therefore, the subject-matter of claim 1 does not involve any inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chair:



H. Jenney

A. Ritzka

Decision electronically authenticated