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Datasheet for the decision of 10 November 2020

Case Number: T 2200/15 - 3.2.02

Application Number: 10184282.1

Publication Number: 2305832

IPC: C12Q1/68, A61D19/00, G01N15/14, C12N5/00

Language of the proceedings: EN

Title of invention:
Method for providing sex-sorted animal sperm

Applicant:
Inguran, LLC

Headword:

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - (yes)

Decisions cited:

Catchword:

Europäisches Patentamt
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Beschwerdekammern

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Case Number: T 2200/15 - 3.2.02

D E C I S I O N
of Technical Board of Appeal 3.2.02
of 10 November 2020

Appellant: (Applicant)	Inguran, LLC 22575 State Highway 6 South Navasota, TX 77868 (US)
Representative:	Jacob, Reuben Ellis Maucher Jenkins 26 Caxton Street London SW1H 0RJ (GB)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 11 May 2015 refusing European patent application No. 10184282.1 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	M. Alvazzi Delfrate
Members:	S. Böttcher
	L. Bühler

Summary of Facts and Submissions

I. The applicant lodged an appeal against the decision of the Examining Division to refuse European patent application No. 10184282.1 because the subject-matter of claim 1 of the main request then on file infringed the requirements of Articles 123(2), 76(1) and 56 EPC and the subject-matter of claim 1 of auxiliary request 1 lacked an inventive step.

II. The present case is related to the cases underlying decisions T 2265/15 and T 2266/15. The application in suit has been filed as a divisional application of the earlier applications EP 09014407.2 and EP 04749513.0.

III. The appellant requested that the decision under appeal be set aside and that a patent be granted on the basis of the main request or the auxiliary request both filed with the statement of grounds of appeal dated 21 September 2015 (corresponding to the main request and the auxiliary request on which the impugned decision was based).

IV. With a communication under Rule 100(2) EPC dated 2 April 2020, the appellant was informed that the Board intended to order the grant of a patent on the basis of the auxiliary request.

V. By letter of 20 May 2020, the appellant announced that they conditionally withdrew their main request and their request for oral proceedings (which had been submitted with the statement of grounds of appeal) subject to the grant of a patent on the basis of the auxiliary request.

VI. With a further communication under Rule 100(2) EPC dated 25 September 2020, the appellant was informed that the Board intended to remit the case to the Examining Division for examination of the compliance with Article 53(a) EPC.

VII. With the submission dated 5 October 2020 the appellant filed a revised auxiliary request and requested grant of a patent on the basis of the revised auxiliary request.

VIII. Claim 1 of the revised auxiliary request reads as follows:

"A method of concentrating stained non-human animal sperm cells comprising the steps of:
providing an aliquot of non-human animal sperm cells;
sorting the sperm cells into one of multiple populations of sperm cells on the basis of one or more specified DNA characteristics;
obtaining a quantity of sperm cells having a desired DNA characteristic from one of said multiple populations of sperm cells, said quantity of sperm cells being contained in a volume of collection fluid;
subjecting the stained sperm cells to a first centrifugation process at a g-force in the range of 550g to 800g for a period of about 6 - 10 minutes to form a first pellet of sperm cells and a first supernatant overlying the first pellet;
removing the first supernatant from the first pellet to separate the first supernatant from the pellet/ supernatant interphase;
subjecting the first supernatant to a second centrifugation form a second pellet of sperm cells;
resuspending each of the first and second pellets in a volume of resuspension fluid that when combined has a

volume less than the volume of the starting aliquot of animal sperm cells; and
combining the first and second resuspension samples to obtain a desired concentration of stained sperm cells in the resuspended sample of stained sperm cells."

IX. The following document is referred to in this decision:

D1: US 6 149 867

X. The appellant's arguments relevant for the present decision are essentially those on which the following reasons for the decision are based.

Reasons for the Decision

1. Subject-matter of the invention

The application relates to apparatus, methods and processes for providing sex-sorted non-human animal sperm.

Claim 1 of the auxiliary request relates to a method of concentrating non-human animal sperm cells comprising the steps of providing an aliquot of sperm cells, sorting the cells on the basis of specified DNA characteristics and collecting a quantity of sperm cells having a desired DNA characteristic. The collected sperm cells are then put in a centrifuge tube and subjected to a first centrifugation process to form a first pellet of (heavier) sperm cells at the bottom of the centrifuge tube and a first supernatant. The supernatant contains the majority of (lighter) fluids

and any sperm cells that have escaped the pellet. The supernatant is then removed from the pellet and subjected to a second centrifugation process to form a second pellet containing the sperm cells that remained in the supernatant after the first centrifugation process. Both pellets are then resuspended in a volume of resuspension fluid and combined afterwards.

2. Articles 123(2) and 76(1) EPC

In the appealed decision, point 2.1, the Examining Division found that claim 1 of the main request did not comply with the requirements of Articles 123(2) and 76(1) EPC since neither the application as originally filed nor the parent application as originally filed (EP 09014407.2) disclosed the specific centrifugation conditions for the second centrifugation step (a g-force in the range of 550g to 800g for a period of about 6 - 10 minutes). Since claim 1 of the auxiliary request does not recite any more said conditions for the second centrifugation step, this objection is now moot.

The Board sees the other features of claim 1 of the auxiliary request as originally disclosed (see in particular paragraphs [0428], [0286] and [0300] of the application as originally filed and the corresponding passages of the earlier applications EP 09014407.2 and EP 04749513.0). The introduction of the disclaimer "non-human" is allowable in view of G1/03 (Reasons, 2.4.1).

Therefore, claim 1 of the auxiliary request satisfies the requirements of Articles 123(2) and 76(1) EPC.

3. Inventive step - Article 56 EPC

The subject-matter of claim 1 of the auxiliary request involves an inventive step for the following reasons:

D1, which can be considered the closest prior art, discloses to subject sperm cells (after they have been sorted by sex) to a first centrifugation process at 600g for 10 minutes and to resuspend the first pellet (example 1).

The subject-matter of claim 1 differs from the method described in D1 in that the supernatant is subjected to a second centrifugation process to form a second pellet, that the second pellet is also resuspended and that the first and second resuspension samples are combined.

This provides for the technical effect of obtaining sperm that might otherwise be lost in the supernatant (paragraph [0300]). Thus, the problem to be solved may be regarded as to enhance the recovery of sperm cells.

Neither this problem nor its solution as defined in claim 1 has been addressed in the available prior art. Hence, it would not be obvious for the person skilled in the art to provide a second centrifugation process for the supernatant.

The Examining Division considered that the subject-matter of claim 1 lacked an inventive step because performing the second centrifugation process at the same or a lower g-force than the first centrifugation process would not provide the technical effect of increasing the recovery of sperm cells. In addition, performing the second centrifugation process at a

higher g-force would obviously lead to an enhanced recovery.

The Board cannot agree with this position. Since only the supernatant formed in the first centrifugation process is subjected to the second centrifugation process, it is possible to collect those sperm cells that would have remained in the supernatant after the first centrifugation process. This evidently leads to an increased recovery of sperm cells. In this regard, it is irrelevant whether the g-force at which the second centrifugation process is performed is higher, lower or the same as the g-force of the first centrifugation process.

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 10 according to the auxiliary request filed with the submission dated 5 October 2020 and a description to be adapted thereto.

The Registrar: The Chairman:

D. Hampe M. Alvazzi Delfrate

Decision electronically authenticated