UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INGURAN, LLC d/b/a SEXING TECHNOLOGIES,
Petitioner,

v.

PREMIUM GENETICS (UK) LTD.,
Patent Owner.

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Case PGR2015-00017
Patent 8,933,395 B2

Before KEN B. BARRETT, KRISTEN L. DROESCH,
TRENTON A. WARD, *Administrative Patent Judges.*

DROESCH, *Administrative Patent Judge.*

DECISION

Institution of Post-Grant Review
35 U.S.C. § 324, 37 C.F.R. § 42.208

I. INTRODUCTION

Inguran, LLC d/b/a/ SEXING Technologies ("Petitioner") filed a Petition for post-grant review of claims 1–14 ("the challenged claims") of U.S. Patent No. 8,933,395 B2 ("the '395 Patent"). Paper 1 ("Petition" or "Pet."). *See* 35 U.S.C. §§ 321–322. Premium Genetics Ltd. ("Patent Owner") filed a Preliminary Response. Paper 6 ("Prelim. Resp."). *See* 35 U.S.C § 323. We have statutory authority under 35 U.S.C. § 324, which provides that post-grant review shall not be instituted unless it is determined that "the information presented in the petition filed under section 321, if such information is not rebutted, would demonstrate that it is more likely than not that at least 1 of the challenged claims in the petition is unpatentable." 35 U.S.C. § 324(a).

For the reasons provided below, and for purposes of this decision, we are persuaded by Petitioner that it is more likely than not that the challenged claims are unpatentable.

The '395 Patent (Ex. 1001)

The '395 Patent issued from Application No. 14/169,927 filed on January 31, 2014. Ex. 1001, 1. The '395 Patent claims benefit under 35 U.S.C. §§ 119(e), 120, 121 to filing dates of several provisional and non-provisional applications filed before March 16, 2013, including Application No. 13/412,969, filed March 6, 2012 ("the '969 Application"). Ex. 1001, 1–2, Ex. 1013, 849–850,[1] *see* Pet. 11.

The '395 Patent discloses "a method and apparatus to identify at least one component from a plurality of components in a fluid mixture," including

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[1] Exhibit 1013 does not include page numbers. The page numbers listed correspond to the pagination in Patent Review Processing System (PRPS).

"a detector apparatus which detects and identifies selected components" and "a laser which emits a laser beam which damages or kills selected components of the plurality of components." Ex. 1001, Abs.
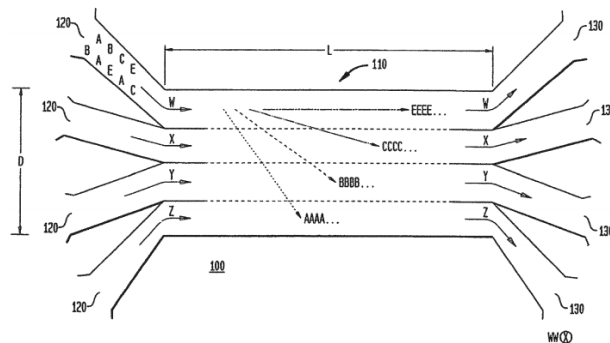
Figure 1 of the '395 Patent is reproduced below:

Figure 1 depicts apparatus 100 including sorting channel 110, plurality of inlets 120, plurality of outlets 130, and corresponding fluid flows W, X, Y, and Z. Ex. 1001, 13:20–28. Flow W can be a sample fluid, and flows X, Y, and Z can be buffer solutions. *Id.* at 16: 11–13. Apparatus 100 may be incorporated into a system to allow cell identification, and cell killing by high intensity laser exposure. *Id.* at Fig. 26, 23:26–24:42; *see id.* 33:58–64, 40:10–23. Apparatus 100 "may contain regions which align cells or materials in a certain way . . . sometimes done through shear flows." *Id.* at 21:21–25; *see id.* at 14:6–23, 41:32–36.

Illustrative Claims

Claims 1 and 2 are independent. Claims 3–14 depend from claim 2. Claims 1 and 2 are illustrative:

> 1. An apparatus to identify at least one component from a plurality of components in a fluid mixture, the apparatus comprising:
> > a first input channel into which a first flow is introduced, said first flow which contains the fluid mixture of the plurality of components;

a plurality of buffer input channels, into which additional flows of buffer solution are introduced, said plurality of buffer channels which are disposed on either side of said first input channel;

wherein said first flow and said additional flows have a flow direction along a length of the apparatus from one end of the apparatus to another end of the apparatus;

a detector apparatus which detects and identifies selected components of the plurality of components;

a laser which emits a laser beam which damages or kills selected components of the plurality of components; and

at least one channel disposed at said another end of the apparatus, said at least one channel which is adapted to receive said first flow and said additional flows after operation of said laser on said selected components.

2. A method for examining and selectively operating on cells, comprising:

inputting a stream of sample fluid into an inlet adapted to received said sample fluid, into an input region of a flow chamber, said sample fluid containing cells to be processed;

inputting a plurality of streams of sheath fluids into a plurality of inlets adapted to receive said plurality of streams of sheath fluids, into said input region of said flow chamber;

wherein said sample fluid is in a contiguous relationship on all available sides with said sheath fluids, from said input region through to a selective operation region of said flow chamber;

wherein at least one of flow rates or pressures of said sheath fluids are chosen such that said sample fluid is constricted in two orthogonal directions, thereby allowing said sample fluid to form a relatively narrow stream in at least a detector region of said flow chamber, thereby causing the cells to be flattened and aligned such that flat sides of the cells are oriented parallel to confronting walls of the flow chamber;

distinguishing target cells from non-target cells in said detector region using a detector apparatus; and

damaging or destroying said target cells in said sample fluid
using a laser beam, in said selective operation region of
said flow chamber which is disposed downstream from
said detector region.

Asserted Grounds of Unpatentability

Claim(s)	Statutory Basis	Reference(s)
1–14	§ 112(a) Enablement	
1–14	§ 112(b) Indefiniteness	
1–13	§ 102(a)(1)	Mueth[2]
14	§ 103	Mueth alone, or Mueth and Durack[3]
1	§ 102(a)(1)	Frontin-Rollet[4]
1	§ 102(a)(1)	Durack
2–14	§ 103	Wada[5], Durack, and Kachel[6]

II. ANALYSIS

A. Claim Construction

Claims of an unexpired patent are interpreted using the broadest
reasonable interpretation in light of the specification. 37 C.F.R. § 42.200(b);
see In re Cuozzo Speed Techs., LLC, 793 F.3d 1268, 1275–79 (Fed. Cir.
2015). Claim terms also are given their ordinary and customary meaning, as
would be understood by one of ordinary skill in the art in the context of the
entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed.
Cir. 2007). Petitioner and Patent Owner do not provide explicit claim

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[2] Ex. 1008, U.S. Patent No. 7,355,696 B2, issued Apr. 8, 2008, filed Feb. 1, 2005 ("Mueth").
[3] Ex. 1005, WO 2004/088283 A2, published Oct. 14, 2004 ("Durack").
[4] Ex. 1007, WO 2005/075629 A1, published Aug. 18, 2005 ("Frontin-Rollet").
[5] Ex. 1009, U.S. Patent No. 6,506,609 B1, issued Jan. 14, 2003 ("Wada").
[6] Ex. 1012, Kachel, UNIFORM LATERAL ORIENTATION, CAUSED BY FLOW FORCES, OF FLAT PARTICLES IN FLOW-THROUGH SYSTEMS, J. Histochemistry and Cytochemistry, vol. 25, no. 7, 1977, 774–780 ("Kachel").

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