



Elpis BioMed closes funding round to commercialise novel technology platform for generating human cell types

- *New Cambridge spin-out company commercialises disruptive technology that enables rapid generation of pure and consistent batches of human cell types*
- *Exclusive IP licensed from the University of Cambridge*
- *Geographically diversified, top-tier investor team includes key industry leaders to support early company development*

Cambridge, UK, 16 November 2017: Elpis BioMed Ltd (Elpis), a University of Cambridge spin-out, applying its disruptive and proprietary “direct cell reprogramming” platform to produce pure, mature and highly consistent batches of human cell types for research, toxicology and drug development, has announced today that it has raised funds to bring its human cell products and services to market. Backed by a world-class investor team, led by industry expert Jonathan Milner, with co-investments from Darrin Disley, Weslie Janeway and Nikolaus Starzacher. The funds will be used to grow the Company’s catalogue of off-the-shelf human cell type products and expand its service offerings, marking its first step towards more complex products, including human organ-on-chip models, and cell-based therapies.

The use of human cells is becoming increasingly important in the context of research, toxicology, and drug discovery. Differences between commonly used cell and animal models and human biology contribute to high attrition rates at late stages of drug development. However, primary human cells remain restricted with respect to availability and lack consistency. Advances in human stem cell technology promised to increase the options available. However, the elaborate culture protocols required for traditional “directed differentiation” of stem cells into desired target cells result in limited scalability and considerable batch-to-batch variation, often yielding immature, foetal-like cells with a fundamentally different phenotype to that of mature cells in the human body.

Elpis’ proprietary cell reprogramming platform ‘OPTi-OX’ (optimised, inducible over-expression), overcomes the hurdles of availability, consistency, and maturity. It enables highly controlled, efficient, and scalable “direct reprogramming” of human stem cells into homogeneous target cell populations with minimal batch-to-batch variation. Elpis’ manufacturing approach reduces the time required to generate desired cell types from months to days and offers a reliable source of somatic human cell types that is amenable to high-throughput applications.

Elpis’ technology is already generating skeletal muscle cells, blood precursors, neuronal (cortical neurons) and glial cells. The Company plans to expand its product offerings to human cells with distinct genetic backgrounds, e.g. from healthy and patient donors, as well as provide bespoke cells with synthetic mutations or gene insertions that meet specific research requirements. It also offers strategic consulting services for tailored implementation of human cell assays in target validation, drug discovery, and screening processes. Elpis is interested in partnerships and joint ventures for generating novel cell types, complex *in vitro* models,

such as 3D or organ-on-chip systems, and developing its cells for future therapeutic and personalised medicine approaches.

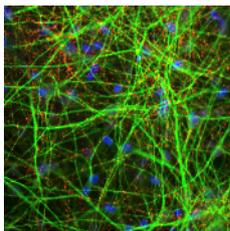
Elpis' proprietary OPTi-OX platform was developed at the University of Cambridge and the Wellcome Trust Sanger Institute and published in [Stem Cell Reports](#). The Company was founded by Dr Mark Kotter, a clinician scientist at the University of Cambridge leading a translational research group with a focus on stem cells, human disease modelling, and regenerative medicine trials for cervical myelopathy, and Dr Gordana Apic, a serial entrepreneur in life science businesses.

Mark Kotter MD MPhil PhD, scientific founder and CEO of Elpis said: *"Elpis' near-term goal is to allow every scientist to base their work on human cells, without the need of having particular expertise in stem cell biology. In the long term, we would like to develop our technology for clinical application."*

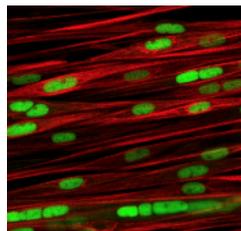
Jonathan Milner PhD, co-founder and Deputy Chairman of Abcam said: *"I'm thrilled to be backing Mark Kotter and his team at Elpis BioMed. Elpis' approach to making human cells is truly disruptive - it reduces manufacturing time and at the same time increases purity by an order of magnitude. But what is most important: it allows for unprecedented levels of consistency and minimal batch-to-batch variability."*

Pawlowski, Matthias *et al.*, *Stem Cell Reports*, 2017. Available online:
<http://dx.doi.org/10.1016/j.stemcr.2017.02.016>

Notes to editors



*Human neurons stained for
MAP2 and synaptophysin*



*Human myocytes stained
for MYOG and troponin T*

For high-resolution images please contact Zyme Communications.

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About Elpis BioMed www.elpisbiomed.com

Elpis was formed in 2017 as a spin-out from the University of Cambridge. The Company provides consistent and scalable stem cell-derived cell types as an alternative to primary cells to enable scientists to carry out human cell-based research, without the need for expertise in stem cell biology. Elpis is led by founder and CEO, Dr Mark Kotter, a clinician scientist leading a translational research group with a focus on stem cells, human disease modelling, and regenerative medicine trials for cervical myelopathy at the University of Cambridge, and Dr Gordana Apic, a serial entrepreneur in life science businesses.

Elpis provides differentiated human cells and tissue models for science, drug discovery, and toxicology. Elpis' "direct cell reprogramming" technology utilises a unique optimised, inducible overexpression (OPTi-OX) approach, which reduces the manufacturing time taken to generate pure mature human cell populations from stem cells, while allowing for unprecedented levels of consistency and minimal batch-to-batch variability. The technology has already been successfully applied to the generation of several human cell types including neuronal, glial, skeletal muscle and blood precursor cells. The Company also offers

sponsored development partnerships for specific human cell types that are not readily available and strategic consulting for the tailored implementation of human cell assays in target validation, drug discovery, and screening processes.