



**PLATELET
BIOGENESIS**

NEWS

PLATELET BIOGENESIS ACQUIRES EXCLUSIVE WORLDWIDE LICENSES TO PRODUCE PLATELETS FROM STEM CELLS

**IP from Boston, MA, and Cambridge, UK, combine to advance commercial development of safe,
plentiful, non-donor-dependent platelets**

CAMBRIDGE, Mass. (December 13, 2016) – [Platelet BioGenesis](#), a biotech startup developing a method for producing life-saving platelets without the need for human donations, is excited to announce that it has acquired exclusive worldwide licenses to intellectual property governing the entire differentiation process from stem cell to platelet. The two licenses, one signed with Cambridge Enterprise, the commercialization arm of the University of Cambridge, and the other with Partners Healthcare, strengthen Platelet BioGenesis' intellectual property portfolio. Together they will provide a scalable process to produce human platelets from pluripotent stem cells using a serum-free and feeder-cell-free process.

Platelets, the cells in the blood that stop bleeding, are a critical first-line treatment for cancer and surgery, comprising a \$20B global industry. Growing demand is severely limited by viable platelet shelf-life (<2 days), platelet unit availability, and bacterial/viral contamination, because they are sourced entirely from human volunteer donors. The licenses in question cover nearly a decade of work making human platelets from pluripotent stem cells ex vivo by Dr. Ghevaert of the Department of Haematology and the Stem Cell Institute, University of Cambridge, and Drs. Italiano and Thon at Brigham and Women's Hospital and Harvard Medical School. Proof-of-concept studies describing this work are published in top international peer-reviewed journals and appear on the [Platelet BioGenesis website](#).

"Translating basic scientific discoveries into tangible medical progress is always a real challenge. Joining forces with Platelet Biogenesis gives us a real and exciting opportunity to one day provide hospitals with platelets for transfusion without having to rely entirely on blood donations" says Cedric Ghevaert.

"What we are trying to do is very hard. No lab is an island, and it will take all of us working together to see this through. I'm very excited by how much progress we're making." says Dr. Joseph Italiano.

"This represents the culmination of a tremendous amount of effort by the team at Platelet BioGenesis and our partnering institutions to consolidate licenses to multiple patents that together create a very strong IP portfolio. In the end, what has shone through most brightly is the enthusiasm by all parties to see their contributions to this space advanced in a way that will provide relief for patients as quickly as possible." says Dr. Jonathan Thon.

The license agreements constitute a growing effort by Platelet BioGenesis to combine leading advances in platelet production under a commercial cell culture process, and bring together top platelet scientists under a shared aim to revolutionize the platelet therapeutic space.

By supplanting the volunteer donor, Platelet BioGenesis intends to make platelets that are cheaper, safer, and available on demand. Our goals are to replace donor-derived platelets, expand platelet transfusions beyond first-world countries, and support new/restricted growth markets.

About Platelet BioGenesis (www.plateletbiogenesis.com; twitter @plateletbiogen)

Platelet BioGenesis is a pre-clinical stage biotech company that was spun out of Harvard in 2014 to produce donor-independent human platelets from pluripotent stem cells. Platelet BioGenesis has developed and patented a microfluidic bioreactor, and shown that functional platelets can be generated from human stem cell cultures at scale. The company was selected to participate in [MassCONNECT](#) (run by [MassBio](#)), was a 2014 [MassChallenge](#) Finalist, a [2016 BioSciKin](#) business competition winner, and has received support from the [Massachusetts Life Sciences Center](#), and the [NIH](#).

About Cambridge Enterprise

A wholly owned subsidiary of the University of Cambridge, Cambridge Enterprise Limited is responsible for the commercialisation of University intellectual property. Activities include management and licensing of intellectual property and patents, proof of concept funding and support for University staff and research groups wishing to provide expert advice or facilities to public and private sector organisations. Cambridge Enterprise provides access to angel and early stage capital through the Cambridge Enterprise Seed Funds, University of Cambridge Enterprise Funds, Cambridge Innovation Capital and Cambridge Enterprise Venture Partners, and offers business planning, mentoring, and other related programmes.

**About Dr. Cedric Ghevaert, University of Cambridge
(<http://www.haem.cam.ac.uk/staff/senior-staff/cedric-ghevaert/>)**

Dr. Ghevaert's programme of research is based on the production of blood cells in vitro from haematopoietic stem cells (HSCs) or pluripotent stem cells (PSCs) with a particular interest in platelet and megakaryocyte biology. The group has a keen interest in translating biological discoveries into applications for transfusion medicine and uses a multidisciplinary approach that encompasses cell biology, engineering, and computational biology. His work has been supported by NHS Blood and Transplant and the British Heart Foundation. Dr. Ghevaert has joined Platelet BioGenesis as a consultant.

**About Dr. Joseph Italiano Jr., Brigham and Women's Hospital and Harvard Medical School
(<http://italianolab.bwh.harvard.edu/>)**

Dr. Italiano's research focuses on how blood platelets, which function as the band-aids of the bloodstream, are produced from megakaryocyte precursor cells. Megakaryocytes are terminally differentiated cells that in their final hours convert into long, branched proplatelets. Dr. Italiano has demonstrated that platelet formation follows a defined set of morphogenetic shape changes driven by forces derived from both microtubules and actin filaments. The overall goal of Dr. Italiano's research is to elucidate the cytoskeletal mechanics and signaling pathways that culminate in the formation of platelets. Dr. Italiano has joined Platelet BioGenesis as a consultant.

**About Dr. Jonathan N. Thon, Brigham and Women's Hospital and Harvard Medical School
(<http://www.drthon.com>)**

Dr. Thon's research is focused on developing bio-mimetic microfluidic platforms to generate functional platelets and new targeted therapies for thrombocytopenia. By combining novel concepts in bone marrow with cutting-edge technical advances in tissue engineering Dr. Thon's lab is developing safer and scalable alternatives to donor-dependent human platelet transfusions for hematological diseases and trauma. Dr. Thon has joined Platelet BioGenesis as a consultant. Dr. Thon acknowledges the [Boston Biomedical Innovation Center](#) and the [Biomedical Research Institute](#) at Brigham and Women's Hospital for providing translational research funding and resources which helped move his research from the academic lab onto a successful commercialization path.

Contact:

Platelet BioGenesis
Whitney Berry | (720) 509.9448
wberry@plateletbiogenesis.com