



Phosphoenix raises pre-seed financing to restore vision in blind people

- Financing provided by the TTT Medtech Fund, FIRST Fund and Innovatiefonds Noord-Holland
- Funds will support the development of a brain prosthesis to restore vision in blind people by stimulating nerve cells in parts of the brain involved in visual perception
- Ground-breaking pre-clinical work demonstrating the efficacy of this approach has been published in one of the world's top academic journals *Science*

22 September 2022, Amsterdam, The Netherlands. Phosphoenix, a medical technology spin-off from the Netherlands Institute for Neuroscience, a research institute of the Royal Netherlands Academy of Arts and Sciences, today announces it has raised pre-seed financing from the Thematic Technology Transfer Medtech Fund (TTT Medtech) managed by Innovation Industries, FIRST Fund managed by BioGeneration Ventures, and Innovatiefonds Noord-Holland. Phosphoenix was founded by Prof. Pieter Roelfsema, Prof. Xing Chen and Dr. Bert Monna to restore the vision of blind people.

Phosphoenix is developing a prosthesis to stimulate nerve cells in parts of the brain that are involved in visual perception. The prosthesis uses electrodes placed in the brain via a proprietary probe to artificially stimulate nerve cells. Stimulating one electrode produces the perception of a dot of light and stimulating multiple electrodes can generate recognizable patterns. In the final product, the patient will wear a pair of glasses with an incorporated camera, enabling them to see a simplified image of the outside world via the electrical stimulation of patterns in the brain. Ground-breaking pre-clinical work demonstrating the efficacy of this approach has been published in one of the world's top peer-reviewed academic journals, *Science* (Chen et al., 2020).

Bert Monna, Chief Executive Officer of Phosphoenix noted: "With this support from our investors, we can continue developing and testing the prosthesis. The extensive network and expertise of our investors will enable us to speed up our growth, and take steps towards the development of a product that could serve many blind people in the long term."

Prof. Xing Chen, inventor and co-founder of Phosphoenix further explained: "My dream is to allow blind people to regain functional vision using a safe durable device. We previously established proof-of-concept for this technology by developing a novel prosthesis and generating higher-resolution artificial images as never seen before. With this financing round, we have harnessed our unique scientific expertise to translate these cutting-edge advances in the lab into a clinical application, using novel materials and probe fabrication techniques."

Margherita Marchetti, Investment Manager at Innovation Industries said: “Phosphoenix addresses a clear unmet need by developing a unique brain-computer-interface to restore vision for blind people. Backed by leading science, the company is solving complex engineering challenges in the field of healthcare. This is exactly the type of company we gladly contribute to via our TTT Medtech fund.”

Rianne Ellenbroek, Investment Manager of FIRST Fund commented: “The FIRST Fund focuses on promising innovations at the pre-seed stage and with Phosphoenix developing this innovative technology to restore vision, it exemplifies the type of company we support. This pioneering work from Prof. Roelfsema and Prof. Chen is at the core of FIRST Fund: support leading scientists to transform their discoveries into products that improve patient’s lives.”

Wouter Keij, Fund Manager of Innovatiefonds Noord-Holland added: “Phosphoenix is developing a unique technology which aims to restore (partial) vision of blind people. This innovation makes blind people more independent and increases their ability to participate in society. Innovatiefonds Noord-Holland is pleased to support Phosphoenix together with TTT Medtech and FIRST to accelerate making this innovation available to the end user.”

About 40 million people globally suffer from blindness, which can seriously affect a person's autonomy and quality of life. Existing treatment options remain ineffective and unsuitable for blind people who have lost the connection between the eye and the brain, who represent a major portion of the affected population.

Phosphoenix will use the new funds to translate its extensive scientific knowledge into the development of the product. A new probe will be developed that can be implanted with relatively minor surgery and that produces the perception of dots of light in larger regions of the visual field. The goal is to obtain preclinical data with the new probe in preparation for a first-in-human trial. Phosphoenix will be recruiting engineers to support this product development.

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About Phosphoenix

Phosphoenix B.V. is a medical technology spin-off from The Netherlands Institute for Neuroscience, a research institute of the Royal Netherlands Academy of Arts and Sciences, and was founded by Prof. Pieter Roelfsema, dr. Bert Monna and Prof. Xing Chen. Phosphoenix is developing a prosthesis to restore a simple form of vision to the blind by connecting a camera directly to the parts of the brain involved in visual perception. Further information can be found online at: www.phosphoenix.nl

About TTT Medtech Fund

The Thematic Technology Transfer Medtech consortium is a cooperative alliance between Technology Transfer Offices of the four Dutch Technical Universities, three academic medical centers and Innovation Industries. It was founded to help promising early-stage tech spin-offs in taking the first step to grow towards the commercialization of disruptive medical technologies. The TTT Medtech Fund is managed by Innovation Industries. For more information, please visit: <https://tech-transfer.nl/en/>.

About FIRST Fund

Fonds InvesteringsRijpe STarters (FIRST) is a pre-seed fund that finances pioneering scientists in the Netherlands active in the emerging fields of regenerative medicine and cardiovascular diseases. FIRST is founded by the Dutch CardioVascular Alliance (DCVA) and Regenerative Medicine Crossing Borders (RegMed XB) with support of the Netherlands Enterprise Agency. BioGeneration Ventures (BGV) supports FIRST Fund as registered fund manager, making available its network, expertise, and facilities. Visit www.biogenerationventures.com for more information.

About Innovatiefonds Noord-Holland

Innovatiefonds Noord-Holland (“INH”) is an initiative of the Province of North Holland, the University of Amsterdam, the Amsterdam University of Applied Sciences, Amsterdam UMC and Sanquin, with support from the European Union through the European Regional Development Fund. In response to the Corona pandemic, EU government leaders have decided to set up an “*EU Next Generation*” recovery program. Part of this is the REACT EU program, through which the EU is driving a green, digital and resilient recovery of the regional economy. INH has also received support from the REACT EU Fund. INH supports entrepreneurs in the Province of North Holland by financing innovation in the Proof-of-Concept phase, by providing convertible loans. The term of the first funding tranche is 2018-2023. www.innovatiefondsnoordholland.nl