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ASIA EDITION

GSK, Google to establish bioelectronic medicines firm

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GSK announced an agreement with Verily Life Sciences LLC (formerly Google Life Sciences), an Alphabet company, to form Galvani Bioelectronics to enable the research, development and commercialisation of bioelectronic medicines. GSK will hold a 55% equity interest in the new jointly owned company and Verily will hold 45%.

Galvani Bioelectronics will be headquartered in the UK, with the parent companies contributing existing intellectual property rights[1] and an investment of up to Ã?Â£540 million over seven years, subject to successful completion of various discovery and development milestones.

Bioelectronic medicine is a relatively new scientific field that aims to tackle a wide range of chronic diseases using miniaturised, implantable devices that can modify electrical signals that pass along nerves in the body, including irregular or altered impulses that occur in many illnesses. GSK has been active in this field since 2012 and believes certain chronic conditions such as arthritis, diabetes and asthma could potentially be treated using these devices.

The agreement to establish Galvani Bioelectronics represents an important next step in GSK's bioelectronics research. The new company will bring together GSK's world class drug discovery and development expertise and deep understanding of disease biology with Verily's world leading technical expertise in the miniaturisation of low power electronics, device development, data analytics and software development for clinical applications. Initial work will centre on establishing clinical proofs of principle in inflammatory, metabolic and endocrine disorders, including type 2 diabetes, where substantial evidence

already exists in animal models; and developing associated miniaturised, precision devices.

Moncef Slaoui, GSK's Chairman of Global Vaccines, who was instrumental in establishing GSK's investments in the field of bioelectronics, will chair the board of the new company. He said:

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"Many of the processes of the human body are controlled by electrical signals firing between the nervous system and the body's organs, which may become distorted in many chronic diseases. Bioelectronic medicine's vision is to employ the latest advances in biology and technology to interpret this electrical conversation and to correct the irregular patterns found in disease states, using miniaturised devices attached to individual nerves. If successful, this approach offers the potential for a new therapeutic modality alongside traditional medicines and vaccines.

"This agreement with Verily to establish Galvani Bioelectronics signals a crucial step forward in GSK's bioelectronics journey, bringing together health and tech to realise a shared vision of miniaturised, precision electrical therapies. Together, we can rapidly accelerate the pace of progress in this exciting field, to develop innovative medicines that truly speak the electrical language of the body."

Brian Otis, Verily's Chief Technology Officer, said: "This is an ambitious collaboration allowing GSK and Verily to combine forces and have a huge impact on an emerging field. Bioelectronic medicine is a new area of therapeutic exploration, and we know that success will require the confluence of deep disease biology expertise and new highly miniaturised technologies.

"This partnership provides an opportunity to further Verily's mission by deploying our focused expertise in low power, miniaturised therapeutics and our data analytics engine to potentially address many disease areas with greater precision with the goal of improving outcomes."

Galvani Bioelectronics will be headquartered within GSK's global R&D centre at Stevenage in the UK, with a second research hub at Verily's facilities in South San Francisco. It will initially employ around 30 expert scientists, engineers and clinicians, and will fund and integrate a broad range of collaborations with both parent companies, academia and other R&D companies. GSK and Verily believe this collaborative way of working will rapidly accelerate the development of bioelectronic medicines.

Kris Famm, GSK's Vice President of Bioelectronics R&D, has been appointed President of the new company. Famm has pioneered work in both large and small molecule drug discovery and worked for a decade developing and delivering R&D strategy with a recurring focus on emerging technologies. He has co-designed and led GSK's exploration of bioelectronics. A seven-member board, chaired by Moncef Slaoui, will also be appointed and will include Andrew Conrad, CEO of Verily. The new company will be fully consolidated in GSK's financial statements.

This agreement is subject to customary closing conditions (including requisite antitrust approvals) and is expected to close before the end of 2016.

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