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GSK launches \$50 million venture capital fund to invest in pioneering bioelectronic medicines and technologies

- **“Action Potential Venture Capital” makes first investment in SetPoint Medical, developer of implantable device for treating inflammatory diseases**
 - **GSK to stimulate R&D collaboration and integrate science underpinning emerging field**
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GlaxoSmithKline today announced the launch of Action Potential Venture Capital (APVC) Limited, a new \$50 million strategic venture capital fund that will invest in companies that pioneer bioelectronic medicines and technologies. The fund's first investment will be in SetPoint Medical, a California company considered a trailblazer in creating implantable devices to treat inflammatory diseases.

The fund complements the work of GSK's Bioelectronics R&D unit, which was established in 2012 after a two-year effort to seek out and engage the most promising researchers in this emerging area of science. The name of the fund comes from electrical signals called action potentials that pass along the nerves in the body. Irregular or altered patterns of these impulses may occur in association with a broad range of diseases.

GSK believes that miniaturised devices, or bioelectronic medicines, can be designed to read these patterns. The devices could be designed to interface between the peripheral nervous system and specific organs to read, change or generate electronic impulses that help treat disorders as diverse as inflammatory bowel disease or rheumatoid arthritis; respiratory diseases such as asthma and COPD and metabolic diseases including Type 2 diabetes.

The field of bioelectronic medicines is in its very early stages. GSK's ambition, through collaboration with scientists globally, is to have the first medicine that speaks the electrical language of our body ready for approval by the end of this decade.

“We want to help create the medicines of the future and be the catalyst for this work,” said Moncef Slaoui, chairman of R&D and architect of GSK's early stage investment strategy. “GSK can play the integrating role that is needed to drive this new type of medical treatment all the way from the bench to the patient and this fund is a key part of our efforts.”

Action Potential Venture Capital intends to build a portfolio of five to seven companies over the next five years. The fund will focus investments in three areas:

- New start-up companies that aim to pursue the vision of bioelectronic medicines
- Existing companies with technologies that are interacting with the peripheral nervous system through first-generation devices that can stimulate or block electrical impulses
- Companies advancing technology platforms that will underpin these treatment modalities

[Action Potential Venture Capital](#) will be based in Cambridge, Massachusetts and managed by a small, dedicated team. The fund has named Imran Eba as its first partner. Imran will move from GSK's Worldwide Business Development organisation and work closely with the Bioelectronics R&D unit.

Taking a three-pronged approach to bioelectronics research

GSK's [Bioelectronics R&D unit](#) will be supporting the development of a new bioelectronics research community in three ways over the coming months.

In addition to working with the new venture fund, the unit is in the process of offering up to 20 new exploratory research grants and creating a network of investigators. Discovery work has begun on the relationship between the nerves in the body and a range of diseases; the particular pattern of impulses along these nerves; and new technologies that can interface with individual nerve fibres. The unit is also seeking to integrate a broader research community and is engaging with other major funding and research organisations interested in the field. This broader community will be invited to meet at customised summits, including the first global summit to be announced shortly, where Bioelectronics R&D is committed to launching a million dollar innovation prize.

“The Action Potential Venture Capital fund is the third strand in our approach to galvanising a new research community,” Imran said. “Together, these three mechanisms will contribute to bolster an ecosystem in which exploratory research as well as product translation is supported, and from which we expect a major wave of new medicines to emerge and benefit patients in future decades.”

First APVC investment in SetPoint Medical

GSK's first investment will be in SetPoint Medical, based in Valencia, CA. SetPoint is developing a highly novel and potentially transformative approach to treat inflammatory diseases, such as rheumatoid arthritis and inflammatory bowel disease, by using implantable devices that stimulate the body's vagus nerve. The treatments have been developed based on new understanding that the immune system can be influenced by the nervous system; inflammatory diseases were previously thought to be accessible only by molecular medicines.

In addition to the novel treatment approach, GSK believes SetPoint's new proprietary miniaturised device has important hallmarks of future bioelectronic medicines. Together, SetPoint's treatment approaches and technology promise to provide alternate, and possibly more precise, ways of treating some major diseases.

GlaxoSmithKline – one of the world's leading research-based pharmaceutical and healthcare companies – is committed to improving the quality of human life by enabling people to do more, feel better and live longer. For further information please visit www.gsk.com

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Cautionary statement regarding forward-looking statements

GSK cautions investors that any forward-looking statements or projections made by GSK, including those made in this announcement, are subject to risks and uncertainties that may cause actual results to differ materially from those projected. Factors that may affect GSK's operations are described under Item 3.D 'Risk factors' in the company's Annual Report on Form 20-F for 2012.

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