



innovosens

## **Sensor technology developed for the treatment of diabetes may help in the early detection of COVID-19 infections**

### **Innovosens building partnerships to accelerate development, testing and market launch**

**Malmö, Sweden - 4 May 2020 - Innovosens AB, the innovative developer of a next generation wearable monitoring device for diabetics, is working on preliminary investigations which indicate that its proprietary technology could be applied in the fight against the COVID-19 virus and other viral infections.**

**Innovosens has developed a wearable device (SMASH – Sweat Metabolite Analysis for Sports & Health) that integrates a sensor to measure the body's blood sugar & lactate levels from the skin without piercing the skin. The company is now building partnerships and seeking additional financing to accelerate the production of the first batch of sensors, to offer its products to healthcare professionals for early infection detection.**

Certain studies<sup>(1)</sup> have previously detected elevated levels of lactate in the body in patients suffering from lung infections, one of the most serious consequences of coronavirus infections. The sensor developed by Innovosens can be used to monitor lactate levels continuously, so that deviations in the values could provide an indication of infection at an early stage. When combined with other vital parameters, such as temperature, blood oxygen levels and heart rate / ECG metrics, the ability to indicate possible infections using a sensor linked to wearable device and app becomes a real possibility. With additional funding, Innovosens would seek to explore further the correlation between real time vital data and infection markers, and work with wearable device manufacturers to expand the range of wellness parameters into one device, linked to an app for ease of monitoring.

Innovosens is collaborating with **Dr. Bruce D. Johnson**, Professor of Medicine and Physiology, who leads his own research laboratory at the prestigious Mayo Clinic in the USA. According to Dr. Johnson, extensive research data suggests that elevated lactate levels in patients reflect more severe inflammatory conditions and hypoxic conditions.

“Lactate levels are usually assessed in the arterial or venous blood and can change rapidly. Having a potential sensor that assesses lactate in the sweat – in a predictable relationship with blood values – and that measures values in real time may not only help determine when infected patients are deteriorating, but also help guide treatment approaches and prognosis. We are looking forward to building our collaboration with Innovosens, the designers of the wearable sensor that measures lactate levels in high fidelity, in order to study this important technology in the intensive care setting,” Dr. Johnson says.

#### **Aiming for free test use for healthcare professionals**

Healthcare professionals in hospitals and home nursing are at particular risk of both becoming ill themselves and spreading a virus in the asymptomatic early stages of the disease. Identifying their infections as early as possible is one of the key factors in maintaining the sustainability of healthcare and saving lives.

Innovosens would like to offer a prototype product to hospital, elderly care and home nursing staff for testing so that viral infections could be detected among them in a timely manner and thereby prevent the disease from spreading to the most vulnerable people.

“We believe strongly that continuous monitoring of lactate levels could help detect infections at an early stage. However, practical evidence is still limited, and that is why we are now seeking a development and funding partner for this important trial. Additional funding would enable us to accelerate the production of around 500 devices for use by healthcare staff. The trial would also provide valuable information on the functionality of the device for this type of purpose,” says **Sirisha Adimatyam**, CEO & Founder of Innovosens.

#### **“Win-win” for makers of wearable health sensors**

According to Adimatyam, the ideal partner would be a company or investor whose business is already related to wearable health sensors or a company that is developing solutions for accelerating the diagnosis of the pandemic.

“A partnership with Innovosens represents an excellent opportunity to deliver a truly valuable proposition to those potentially infected with COVID-19 type viruses. Additional funding would allow us to accelerate the commercialisation of our product whilst driving forward a business with strong growth potential. The original applications for Innovosens’s product in monitoring the recovery of athletes and treating diabetics both represent very significant market opportunities worldwide,” Adimatyam says.

#### **For further information please contact:**

##### **Innovosens AB, Malmö, Sweden**

Sirisha Adimatyam

CEO & Founder

sirisha.adimatyam@innovosens.com

[www.innovosens.com](http://www.innovosens.com)

##### **Contact person in Finland:**

Vesa Lehtinen, Coreinvest Oy

vesa.lehtinen@coreinvest.fi

#### **About Innovosens AB**

Innovosens envisions better a world where health care professionals and patients can easily sense and access health data more easily with wearable biosensors and connected health IOT platforms.

The company aspires to be a pioneer in development of integrated end-to-end solution of flexible and ultrasensitive biosensing platforms for rapid detection of different human metabolites primarily for health care while connecting the bio sensors with cloud and big data to ensure better quality of life for patients.

Innovosens’s first product, SMASH (Sweat Metabolite Analysis for Sports & Health) is a non-invasive, continuous monitoring, multiparametric sweat sensor, capable of sensing glucose, lactate and other electrolytes. SMASH is reinforced by a proprietary algorithm to study multiple parameters in different permutations and combinations understand the pathophysiology of a patient and to make meaningful

conclusions and recommendations. SMASH, which targets for type 1, type 2, gestational and prediabetes, sufferers, will help diabetic patients and care givers understand the multi-parameters that contribute to high or low levels of glucose while making meaningful collective analysis of multiple parameters and help predict early signs of hyper- and hypo- glycemia. The team behind Innovosens brings together a unique combination of scientists and software engineers.

Innovosens has identified an immense market opportunity for glucose sensing devices or bio sensors, its initial target market. Innovosens has been working on the development its sensing product for several years, and now has validated prototypes, ahead of many competitors' similar products. The technology is proprietary to Innovosens, and has been developed in conjunction with the University of California San Diego (UCSD). The company has been funded to date through angel investors and grant funding from the EU 2020 programme and has been the winner of a number of venture funding competitions in Sweden.

For further information, visit the company's website at <http://www.innovosens.com>.

### **(1) Research Studies:**

ATS Journals <https://www.atsjournals.org/doi/full/10.1164/ajrccm.156.4.9701048>  
Medical News Today <https://www.medicalnewstoday.com/articles/313110>  
Science Direct <https://www.sciencedirect.com/science/article/abs/pii/S001236921546965X>  
NCBI <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC137459/>

### **About Dr. Bruce D. Johnson, Ph.D.**

Bruce D. Johnson, Ph.D. is a professor of medicine and physiology and a consultant in the Department of Cardiovascular Medicine at the Mayo Clinic in the US. He has joint appointments in the Division of Preventive, Occupational and Aerospace Medicine and in the Department of Physiology and Biomedical Engineering. He is the director of the Mayo Clinical Research Unit's Energy Balance Core Laboratory and directs his own research laboratory in human integrative and environmental physiology. The majority of his research has focused on factors limiting human performance in various clinical syndromes, in athletes and under extreme environmental conditions. He has led field studies in Antarctica, funded through the National Science Foundation, and on Mount Aconcagua in Argentina, Mount Everest and Mount Kilimanjaro and studied unique populations such as breath-hold divers in Croatia and F-22 pilots from the U.S. Air Force. His clinical research focuses on novel methods for detection and tracking of chronic disease as well as environmental factors that may be involved in disease risk. His laboratory also works closely with consumer and medical device companies that track health status through wearable or passive sensing as well as with early-phase supplement and pharmaceutical company products. His work has been funded by the NIH, DOD, NSF, state of Minnesota and industry.

Further information about research at the Mayo Clinic is available at [https://www.mayo.edu/research?\\_ga=2.110876165.1835347735.1587451709-582191738.1587451709](https://www.mayo.edu/research?_ga=2.110876165.1835347735.1587451709-582191738.1587451709)