



- FOR IMMEDIATE RELEASE -

New investment in light-powered biosensor accelerates the availability of high quality – low cost tests for early detection of cancer, Covid-19 and other diseases

Surfix announces an investment of € 8,5 million by a Dutch consortium consisting of companies Quirin Diagnostics and LioniX International, industry accelerator PhotonDelta and the East Netherlands Development Agency Oost NL for further development of Surfix's plug-and-play diagnostics platform.

Surfix will use the investment to accelerate the development of its fast, reliable and attractive plug-and-play diagnostics platform for all sorts of point-of-care tests. The initial target applications are early cancer diagnosis, Covid-19 detection and tracing of pathogens in water for aquaculture.

Wageningen, The Netherlands, May 25th, 2021

Low cost tests available for the masses

The global Covid-19 pandemic underlines the need for fast and reliable point-of-care diagnostics anytime and anywhere. Also in areas where there is no hospital, clinic or trained medical staff available. A sample taken from the patient is tested on the spot, next to the hospital bed, in the doctor's office or even at home. Within minutes the result is visible and appropriate action can be taken. It is convenient, in some cases lifesaving, and there is no time-consuming and expensive laboratory work or equipment involved. The availability of a quick and reliable test would mean a huge step forward in the fight against the current and future pandemics. The ultimate goal for Surfix is to make a test that is available for the masses and at the cost of only a few euros.

Unique diagnostics platform

The biosensor of Surfix consists of two significant elements: the most crucial part is the chip in which the actual sensing occurs. The other part is the microfluidics part, in which the biological assay takes place in a small sample volume.

In the sensing part light passes through the chip (comparable to a minuscule glass-fiber spiral) instead of electricity. Biomolecules attached to the surface of the chip can catch other biomolecules out of a sample (for instance blood or urine), based on biorecognition. This causes a change in the properties of the light that is

traveling through the chip, which can be detected and read by the sensor system. This change is a measure of the presence of the biomolecule in the sample one is looking for.

Before entering the sensing part of the sensor, any sample needs to be processed (comparable to a very small laboratory). This takes place in microfluidic channels which feed the sample into the sensing part.

For the sensing part Surfix has developed unique nano-coatings which enable the binding of biomolecules and enhance the sensitivity of the sensor, while the microfluidic part is covered with a different nano-coating that repels biomolecules and enhances the flow of the sample through the microfluidic channels.

The plug-and-play diagnostics platform can be used to detect viruses, DNA and RNA, proteins like antibodies and antigens, and other biomolecules.

Combination of Dutch technology

The plug-and-play diagnostics platform combines LioniX's integrated photonics chip with Surfix's nanocoatings for the proper functioning of both the sensing part and the microfluidics part. Integrated photonics is a revolutionary technology that allows the development of chips that can sense, capture and process huge amounts of data with light instead of electricity. Using light means that new types of devices and systems such as biosensors can be created that are radically cheaper, faster, smaller, more robust and reliable while using less energy. Qurin will be the launching customer for the platform in the field of cancer diagnostics in a screening setting on a regular basis for the entire adult population. This way Surfix hopes to contribute to the early detection and cure of the cancer patient. Qurin's novel biomarker technology aims to detect most if not all cancer types in urine, including lung cancer and cancer of the large bowel.

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Maarten Buijs, CEO of Surfix, is excited about the investment: *"With this development, we have deepened our relationship with parent companies LioniX and Qurin, both University of Twente spin-offs. With OostNL and PhotonDelta on board our drive is to bring point-of-care diagnostics to the next level. In combination with the network and experience of the two Dutch public-private organizations, the leading-edge integrated photonics technology of LioniX and the medical knowledge of Qurin, the investment will allow us to take on the industrialization of our solution and clinically validate the exciting results in biomarker detection obtained to date".*

Senior Investment Manager Tech Pieter Klinkert of Oost NL shares the excitement: *"The solution of Surfix supports the important ecosystem of photonic biochips and microfluidics which Oost NL acknowledges as key enabling technologies. Surfix can realize a breakthrough in the field of diagnostics based on photonics. Surfix is a spin-off company*

of Wageningen University & Research and is actively collaborating with WUR and the photonics cluster in Twente. This makes it a perfect fit for the network around photonics and MedTech in the east of the Netherlands”.

Arne Leinse, CEO of LioniX International explains the further involvement in Surfix: *“We recognized the potential of PIC (photonic integrated circuit) based biosensing already for a long time due to the high sensitivity and low-cost potential of these TriPleX™ based devices. The current round of investment from shareholders with complementary capabilities accelerates the market introduction of sensing systems, enabled by these PIC modules, in a broad range of applications”.*

CEO Ewit Roos of PhotonDelta says: *“An important strategic goal is to support companies that develop promising and important applications, such as rapid and cost-effective diagnostics devices close to the patient bed. We are excited that Surfix has leveraged the capabilities of our ecosystem with their unique expertise and successfully developed a biosensor that could change the way we diagnose diseases like cancer and infections. By investing in Surfix, we help to accelerate the industrialization of these affordable biosensors and bring accurate, early-stage diagnostics closer to the patient.”*

Roderik Kraaijenhagen, CEO of Qurin Diagnostics complements: *“The future of healthcare lays in patient-centered care with a focus on early diagnostics, prevention and patient empowerment. The Surfix lab-on-a-chip technology enables easy access point-of-care testing and real-time digital communication of the results. It’s exhilarating to contribute to that and it boosts our goal to detect cancer in an earlier stage which enhances treatment opportunities and patient survival”.*

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About Surfix

Surfix was founded as a spin-off from the department of Organic Chemistry of Wageningen University & Research and has been very successful as a provider of R&D services in the field of nano-coatings for biosensors and microfluidic devices. The company now focuses on the development and marketing of its plug-and-play diagnostics platform.

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