StartUp PreciPoint part of the QUANTIFISENS research alliance

## Leaping into the future with quantum-inspired fiber sensor technology

**Freising / Wildenspring** – What do an operating room and a construction site have in common? In the future, they may have a lot in common, because the partners in the QUANTIFISENS research alliance are working to ensure that both will soon be using highly efficient fiber- and quantum-based sensors. On the operating table, for example, they will be able to detect cancer on the spot without having to wait for long pathological detours. On construction sites, on the other hand, self-learning fiber sensor systems integrated into the building fabric can, among other things, monitor heat development and thus warn of fire hazards. Vibrations can also be detected to prevent the threat of collapse.

The German Federal Ministry of Education and Research is funding the regional research alliance in Thuringia with around twelve million euros: QUANTIFISENS. The aim is to develop an innovative sensor platform based on fiber-optic and quantum technology processes. The alliance wants to initiate a turning point in the evolutionary development of classical sensors and revolutionize them using quantum technologies. The alliance's target markets are medical imaging and infrastructure monitoring. The young startup PreciPoint Innovation GmbH is one of the 11 companies that, together with two research institutions, aims to make this technological leap by 2025.

PreciPoint is developing an omnifunctional and multimodal microscopy platform with the appropriate control electronics and software as part of the project. For this purpose, the appropriate data formats as well as the hardware and software infrastructure are being created. The startup is specifically dedicated to the development of LFD technology. With the help of label-free diagnostics, the processes in the pathology laboratory are to be revolutionized. Usually, pathological samples are cut for viewing and stained using various methods to make structures visible under the microscope. This process is vulnerable in many places, for example, when the stain is not properly accepted by the tissue. In addition, these preparations also take a long time. The Label-Free Diagnostics approach saves time and is less prone to error. Here, the tissue is bombarded with a laser. The different wavelengths of the light excite the different tissue components, which send the signal back. These components are then visible on the screen in a few minutes. So a diagnosis is possible within a few hours instead of several days. "This technology is groundbreaking for the work of patholog:in," says Dominik Gerber, CEO of PreciPoint Innovation. "It is a great honor for us to be part of QUANTIFISENS. This project is groundbreaking for Germany. I am particularly pleased that it is already becoming apparent that this approach works.”

A total of eleven companies and two research institutions are members of the regional alliance. The combination of partners, the majority of which are located in the high-tech optics region of Jena in Thuringia, results in efficient linkages.

## Partner of QUANTIFISENS

FBGS Technologies GmbH
www.fbgs.com

Fraunhofer-Institut für Angewandte Optik und Feinmechanik IOF
www.iof.fraunhofer.de

Active Fiber Systems GmbH
www.afs-jena.de

ADVA Optical Networking SE
www.adva.com

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Leibniz-Institut für Photonische Technologien e.V.
www.ipht-jena.de

Luna Innovations Germany GmbH
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NKT Photonics GmbH
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## About PreciPoint Innovation

PreciPoint Innovation is a company of the PreciPoint Group. PreciPoint is a young, forward-looking, certified medical device company (ISO 13485) that provides customized solutions for pathologies. The company develops and distributes fully motorized light microscopes and scanners worldwide with the goal of making the digitization of microscopy useful in pathology. PreciPoint's products include the iO:M8 live digital microscope, the M8 microscope and scanner, the O8 oil microscope and scanner, and the FRITZ scanner. These products produce high-resolution digital images of samples for review and interpretation by professionals. In addition to hardware products, the company also offers multi-purpose software applications and services, including MicroPoint, ViewPoint, PreciCloud, ScanPoint, and ConvertPoint, as well as other customized solutions for pathologists and medical professionals. The company has received numerous awards and recognitions, including Top Employer 2023 and Top100 Innovator 2022, and PreciPoint has also been named a Top Employer for Healthcare Startups.