PRESS RELEASE

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New laser technology changes wavelength in milliseconds

12.12.2019 - PROvendis supports patenting and successful foundation of start-up.

Inventors of the Westfälische Wilhelms-Universität (WWU) Münster have developed a new type of short pulsed fiber-laser for microscopy applications, which for the first time allows wavelength changes within milliseconds - thus even complex biological samples can be spectroscopically examined in a very short time. The patented technology is now being developed to market maturity in a spin-off company: Since this year, the Münster-based start-up *Refined Laser Systems* led by Dr. Maximilian Brinkmann, Dr. Tim Hellwig, Dr. Eva Doepker and Christoph Seidenstücker has focused on the further development and market launch of the laser technology.

Time savings through electrical wavelength tuning

The advantage of the innovative laser technology lies above all in the high speed with which the laser can be tuned and the robustness of the fiber laser against environmental influences. With conventional laser systems it has been necessary to convert the lasers mechanically or thermally to different wavelengths, which means that they have to be mounted vibration-free and intensively maintained. With *Refined Laser Systems* patented technology, the wavelength is electronically tuned - independent of external influences and without any time delay. The founders see possible applications of the laser technology initially in biomedical research, in particular in coherent Raman microscopy (CRS microscopy). In the long term, however, the invention should find its way into applied medicine and enable the examination of samples, e.g. for cancer diagnostics, outside specialized laboratories and in real time in clinical everyday life - initial tests with cooperation partners in the USA have been successful.

Patent purchases as a basis for founding the high-tech start-up company

It was particularly important to the inventors to clearly locate and delimit the new technology in an innovation environment. PROvendis therefore supported the entire IP process - from novelty research to competition analysis and evaluation of the invention. In order to comprehensively secure the rights on the invention, the Westfälische Wilhelms-Universität Münster, with the support of PROvendis, protected it with two patent families. These patent applications formed the basis for the foundation of Refined Laser Systems GmbH in 2019, now a multi-award-winning start-up from the Münsterland region. At the beginning of the year, the company won the Gründer-Geist @münsterland for the best business plan - great market potential as well as customer benefits convinced the jury. The now concluded patent purchase agreement between WWU and Refined Laser Systems is an important prerequisite for the further commercial success of the young company, as clear legal relationships and the ownership of the intellectual property rights by the start-up company are decisive for investors.

PROvendis successfully accompanied the negotiations up to the signing.

Contact person for questions regarding content:
Dr. Thomas Vogel
E-mail: tv@provendis.info

Press contact PROvendis:
Vera Spitz
E-mail: presse@provendis.info

Press contact Refined Laser Systems:
Christoph Seidenstücker
E-mail: seidenstuecker.christoph@refined-lasers.com

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PROvendis acts as a professional service provider in the entire field of IP management for more than 30 universities and extra-university research institutions as well as for companies and start-ups.