

Healthcare industry BW

Micro-biolytics GmbH - Top spectroscopy technology for the pharmaceutical industry

Micro-biolytics GmbH, now based in the Esslingen-based Life Science Centre, develops and produces microsystems solutions for bioanalytical issues.

Spectroscopy in the mid infrared range (MIR spectroscopy) is a sensitive and specific spectroscopic method for measuring fluid and organic samples. Micro-biolytics GmbH has developed this method further for industrial applications. Headquartered in the Esslingen-based Life Science Centre since 2007, the company offers fully automated analyzers and analysis systems for use in the pharmaceutical drug discovery process, process control and medical diagnostics. The systems are based on the company's patented AquaSpec technology. With the support of networks, micro-biolytics is hoping to considerably expand its activities at the new location, an expansion that will include the creation of new jobs. The company also has plans to recruit student assistants from Esslingen University of Applied Sciences.



Business priority: services for the pharmaceutical industry

Pharmaceutical substance screening is of great importance in the search for better active drug ingredients, and involves the testing of many compounds for their biological effects. Therapeutic proteins look set to gain in importance in the future for their use as medications, which will entail new demands on analytical characterization methods. A key method is the Fourier Transform Infrared Spectroscopy in the mid infrared range, MID-FTIR spectroscopy for short, a method in which micro-biolytics GmbH has specialized. The company's founders, Andreas Wolf, Ralf Masuch and Dr. Robert Seidel, have developed a highly precise biocompatible spectroscopic cell on the basis of microsystems technology, which for the first time ever enables the automated and reproducible measurement of fluid biological samples such as blood serum or protein-containing

fluids in their native state. “We can analyse up to 60 samples per hour and obtain results that are similar to those from samples with more complex preparation,” explains Andreas Wolf, adding that, “This enables AquaSpec technology to be used on an industrial scale.”



The founders of micro-biolytics GmbH, Dr. Robert Seidel, Andreas Wolf and Ralf Masuch (from l. to r.)
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While they were looking for new facilities, the former Freiburg/Breisgau company's choice fell on the Life Science Centre in Esslingen – not least thanks to the dedication of the Centre's CEO, Gottwald Schäfer. “The new location provided the perfect environment for micro-biolytics; that is why we decided to relocate to Esslingen,” said Robert Seidel. In the Life Science Centre, the company found perfect conditions for its operations in terms of laboratory equipment, scientific environment and financing possibilities. The company receives financial support through a silent partnership with the Life Science Fund Esslingen, which provides financing to the tune of €250,000. Contacts with regional institutions, including the Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB, the Institute for Biochemistry at the University of Stuttgart or the Stuttgart-based Robert Bosch Hospital were already in place prior to the company's relocation.


Since its foundation in 2001, micro-biolytics GmbH has further developed the patented AquaSpec technology and changed its business priority to services for the pharmaceutical industry. The AquaSpec technology is sold worldwide through the company's distribution partner Bruker Optics GmbH. The company's service portfolio ranges from the development of individual applications, to service measurements in combination with statistical and mathematical data analysis up to the integration of the AquaSpec technology into the pharma/industrial production process. Major focus is put on the analysis of medications. “We provide the pharmaceutical industry with important data on the properties of drug compounds such as their stability, but also with information that helps accelerate the drug development process and eventually also contributes to making drugs safer,” said Ralf Masuch.

At the new location, the company's main plan is to establish its existing service portfolio as well as developing medical diagnostics as a new field of business. Numerous small studies on Alzheimer's or scrapie (a fatal brain disease in sheep) have already commenced and the company has become involved in a BMBF-funded project in the pharmaceutical area, said Andreas Wolf.

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