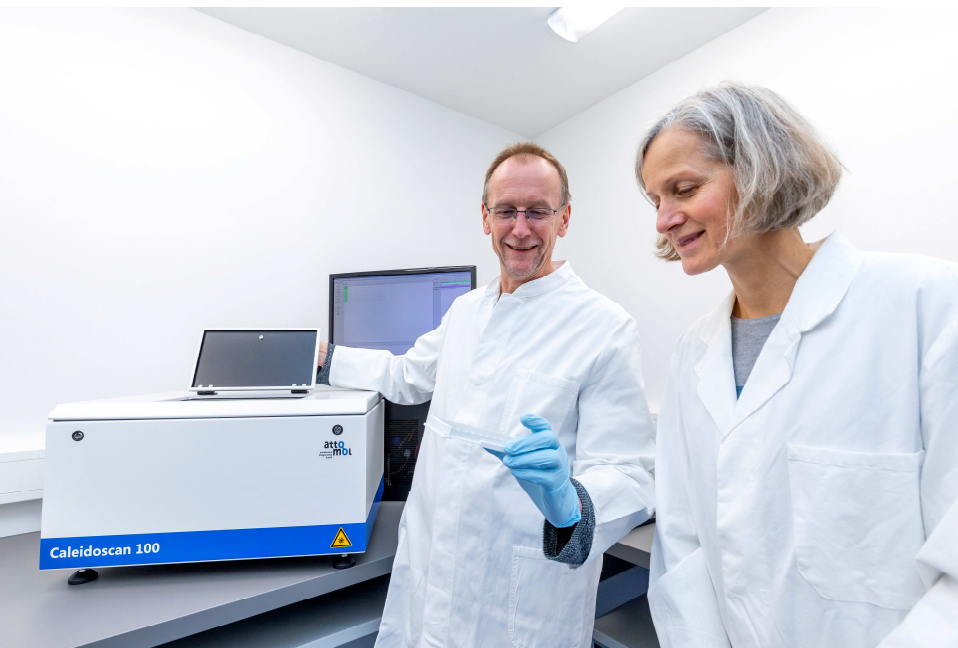


## Mechanical engineers in lab coats

The biotechnology company Attomol has gone among the equipment manufacturers. The result offers laboratories more precision and comfort in antibody diagnostics.



*Research & Development in Bronkow: Bettina and Werner Lehmann have been granted another patent for the new technology in the Caleidoscan 100.*

At first sight the world novelty seems quite unimpressive: The Caleidoscan 100 presents itself as an approximately 50 centimetre large cuboid. But this one has what it takes. It enables laboratories to carry out antibody diagnostics that are unique in the world and extremely precise. The development took almost 15 years and turned a biotechnology company specialized in test kits into an equipment and software manufacturer. Originally Bettina and Werner Lehmann, the managing directors of Attomol GmbH from Bronkow, wanted to outsource the production of the instrument to an external company. "Nobody could be found to build such a complex product. So our team dared to take on the tricky challenge itself", reports Dr. Werner Lehmann. Supported by BTU, Attomol ordered the necessary components, developed the appropriate software and then assembled everything. The team now includes not only biotechnologists and biochemists, but also computer scientists and technicians.

The technology of the Caleidoscan is based on the established Beadassay diagnostics. In this

process, tiny beads are provided with different biomolecules on their surface. Only one specific antibody can dock to each molecule, similar to the key-lock principle, where there is also only one matching key. Using a fluorescence microscope, from the coloration it is possible to see precisely which antibodies have docked. The multi-parameter approach determines up to 18 measured values from the sample in only one test. The appropriate software makes the results visible on screen and evaluates the images. This enables for the first time a very precise differential diagnosis, which is extremely reliable due to a control measurement.

"The all-round carefree package consisting of Caleidoscan, test kits and software with automated evaluation means high convenience and fast results for the laboratories," says Bettina Lehmann. Especially for autoimmune diseases such as rheumatism or Lyme disease diagnostics, this offers more safety for patients and doctors.

The further developed Beadassay technology could become exciting for even more areas: in 2021, the company plans to launch a SARS-CoV-2 antibody test in the market, which will enable clear differentiation from other corona viruses and cold viruses through multi-parameter diagnostics. In a few years, the tiny beads will also be used in tumor diagnostics. Initial tests by the research association with the BTU Cottbus-Senftenberg, the University Hospital Dresden and the German Cancer Research Centre are promising.

The Federal Ministry of Education and Research is funding the project through the "Innovative Regional Growth Cores" program. Two research networks of the 62 promoted growth cores, BioResponse and Praemd.Bio, are significantly accompanied by Attomol. A considerable result, since with each of these projects jobs, patents and perhaps another world novelty are created.

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*Thanks to Beadassay technology, up to 18 parameters can be determined from one sample.*

