

Objectives

The project FORZA (RESEARCH AND TECHNOLOGY TRANSFER FOR LIFE IN THE DIGITAL AGE) is promoted by the funding initiative "Innovative University" of the Federal Ministry of Education and Research (BMBF). The aim is to develop strategies for a professional transfer of ideas, knowledge, and technology, coincided with strengthening the economy in the region by promoting the Anhalt University of Applied Sciences as an state-of-the-art engineering center in Germany. For this purposes, the project is subdivided into nine parts. The main focus of is on the development of transfer strategies by a cooperative research and development, to achieve the vision of a "Transfer-University 2022" as the final objective.

Using advanced methods of digitalization, like Big Data Management, Cloud Technologies and Internet of Things in Life Sciences will lead the research activities to an economical and social benefit. As part of the TV3 ("Transfer via partner outposts"), a "natural-based therapeutics" research laboratory at the Anhalt University and the Fraunhofer IZI-MWT will be concurrent established. Pooling and internetworking of resources will finally guide to a Fraunhofer branch office located in Köthen. Furthermore, the enlargement of this laboratory to a inter-regional center for algae-based drug discovery is scheduled.

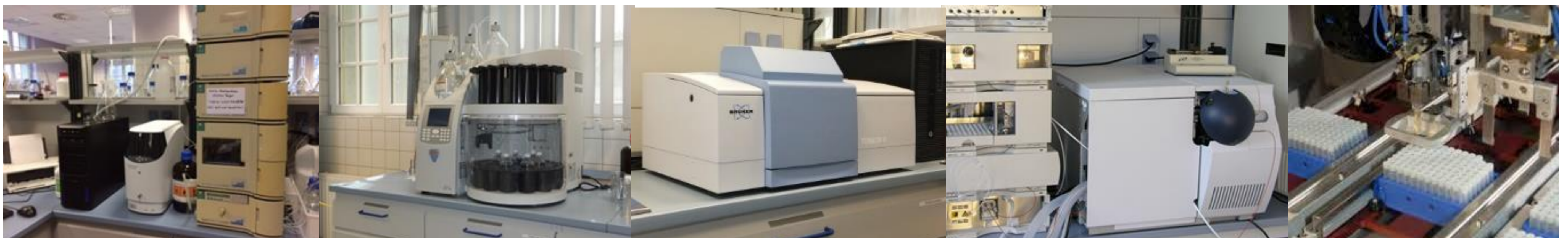


Figure 1: Selected equipment of the Screening laboratory. From left to right: HPLC, accelerated solvent extraction device, FTIR, LC-MS and automatic picking robot.



Background

The Department of Algae Biotechnology at the Anhalt University is already known as an excellent institution for algal-based research. The necessary infrastructure and equipment for universal screening approaches of natural products is well-established. This includes isolation, mass spectrometric characterization, and different screening methods. In addition to enzyme assays for neurodegenerative and inflammatory diseases, methods for antimicrobial activity are developed. The further establishment of screening approaches for new unknown active components in algae, can perform the approaches to a state-of-the-art institute. The results can additional easily be released to scientific institutions and companies placed in the southern region of Saxony-Anhalt. The combination of extraction and purification processes of active compounds from algae coupled with identification via LC-MS / MS will lead to an innovative and unique laboratory facility. The advanced functional screening laboratory, will afterwards hived off to an Fraunhofer branch office.



Figure 2: Selected equipment for extraction and purification processes.

Project Partners:



Funding:



Federal Ministry
of Education
and Research

