



HUMAN & BIOTECHNOLOGY

Fields of Expertise TU Graz

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Human & Biotechnology

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Source: Lunghammer – TU Graz



A number of innovations will continue to characterise human and biotechnology in 2025.

Current developments include advances in personalised medicine, AI-supported diagnostics and therapy as well as bio-printing and tissue engineering for regenerative medicine. At the same time, biotechnological innovations are promoting sustainable solutions in various industrial sectors, for example through the microbial upcycling of plastic, cultivated food, biological pesticides or bio-based process technologies in the environmental, food and process industries. These results will contribute to the development of resource-saving and future-oriented applications in medicine, industry, agriculture and environmental protection.

We must also face up to the fact that the recognition of scientific achievement is no longer a given for our society: under the

motto “Stand up for science”, there are declarations to this effect worldwide. Science communication, in which groundbreaking research results are communicated to the public, is becoming increasingly important.

The members of the FoE are making a significant contribution to these developments with their research. Our young researchers in particular are active on the front line. For this reason we are planning an internal exchange among FoE members in 2025 with exciting presentations by our young scientists and visits to institutes.

We wish you every success with your projects and research plans this year, look forward to working with you in our FoE and cordially invite you once again to help shape our work.

We hope you enjoy reading the new issue of TU Graz research.

□ □ Aron Wanz, Tommaso Ancilli, Christine Kaiserer, Mykolas Malevičius

DigiBioTech

Artificial intelligence (AI) is revolutionising all aspects of science by recognising patterns in high-dimensional data and making targeted predictions.

Utilising this potential is the declared aim of the new lead project DigiBioTech, which is being funded by TU Graz to the tune of 1.96 million euros. DigiBioTech focuses on the integration of biotechnology and AI in order to improve enzymes in a targeted manner and even generate new ones. These are then

used in sustainable production processes, for example to fix carbon dioxide or to break down so-called forever chemicals. Computer-aided methods, and AI in particular, are in the process of bringing about major changes in the field of biotechnology. DigiBioTech aims to utilise this enormous innovation potential.