Mini Profile Tobias

H₂YDROCO₂W

Tell us about your career steps in science so far. What have you done so far to get here?
I have been studying Process Engineering (B.Sc., University of Kaiserslautern-Landau) followed by Applied and Molecular Biotechnology (M.Sc., RWTH Aachen University) and discovered the field of systems biology for myself during an internship at the Australian Institute for Biotechnology and Nanotechnology (AIBN) at the University of Queensland. During my doctoral studies at the Institute of Applied Microbiology I deepened my knowledge in constraint-based metabolic modeling, metabolic engineering, and microbial strain design. After my Postdoc at the Center for Biosustainability (CFB) at the Technical University of Denmark (DTU), during which I was participating in multiple strain design projects, I returned to the iAMB to build a research group focusing on applied computational biotechnology.

What do you hope to learn and achieve during project HYDROCOW?
I'm looking forward to get a systems understanding of the metabolism of hydrogen oxidizing bacteria and use these insights to engineer a microbial cell factory towards an effective production of milk proteins from "thin air". I'm also confident that we as a consortium will be able to create a productive bioprocess for our engineered bacteria with the help of computational methods.

The EIC funds transformative technologies, what excites you about a career in Applied Sciences?
I love the idea and possibility to produce and directly use findings from fundamental research to create real-life solutions for urgent, global challenges, such as climate change or plastic pollution. As I'm mostly concerned with computational biotechnology, I have to add that I'm intrigued by the fact that I only need a computer, some math, data, and code to be able to contribute to such real-life solutions 😊.

What do you like to do outside Science.
I like to make, discover, and listen to music, as well as going on hiking trips with my family. Relating to the previous questions (i.e., I mostly do stuff on the computer) I need to move outside science 😊.