



Matthias Hess, University of California, Davis

Assistant Professor
Department of Animal Science
Head, Systems Microbiology & Natural Products Laboratory
2251 Meyer Hall
Davis, CA 95616
www.HessLab.com
(W) 530-752-8809

Matthias Hess is an Assistant Professor in the College of Agricultural and Environmental Sciences and heads the Systems Microbiology & Natural Products Laboratory at the University of California in Davis. His research interests concern the multi-scale (from molecule to cell to population to ecosystem) understanding of microbial systems through cultivation-independent as well as cultivation-based techniques. Hess and his group apply these approaches in complementary and high-throughput fashions to i) understand how microbial systems respond to environmental changes and how they affect their habitats, ii) identify microbes and proteins of industrial relevance from complex biological systems, and iii) contribute to the development of sustainable practices for agriculture, medicine and other industries.

His current research focus areas include:

- Microbe-Host Interaction
- Identification and characterization of novel biocatalysts/antimicrobial peptides from microbial communities
- Biological strategies to reduce greenhouse gas emission from agriculture
- Tools for Omics Data Analysis

With his expertise in microbiology, single cell genomics, (meta)genomics, metatranscriptomics and biotechnology and a general research interest in microbial systems and their contribution to geochemical cycles, Hess is well suited to represent other scientists working in EMSL's Biosystem Dynamics and Design, as well as Terrestrial and Subsurface Ecosystems, science themes.

Hess received his MSc (Microbiology, Microbial Ecology & Limnology) and PhD (Microbiology & Biotechnology) from the University of Konstanz, Germany and Hamburg University of Technology, Germany, respectively. He worked as postdoctoral fellow at the DOE's Lawrence Berkeley National Laboratory and its Joint Genome Institute (JGI) from 2007-20010, before accepting a faculty position at Washington State University. In 2014 he moved back to California to join the Department of Animal Science at the University of California Davis as Assistant Professor. Throughout his career Hess worked closely with EMSL and other federally funded user facilities. He has close ties to staff and users of these user facilities and is very excited to serve the EMSL user community by being an elected member of EMSL's UEC. He believes in the importance of communicating the needs of the user community to Dr. Liang, EMSL's Director, to continuously improve EMSL's impact to the scientific community through unique resources and outstanding user support and enable scientific discoveries that align with the mission of the Department of Energy.