

CALL FOR PROJECT PROPOSALS

We are inviting proposals for new or follow-up projects that have an innovative component and strengthen the topic of our Cluster. Microverse faculty (group leaders) are eligible to apply until 10th August 2022. Joint, interdisciplinary project proposals submitted by two or more co-applicants are also welcome. For more information on the call and the application template contact [Angela Köhler](#).

MICROVERSE GUEST SCIENTIST PROGRAM

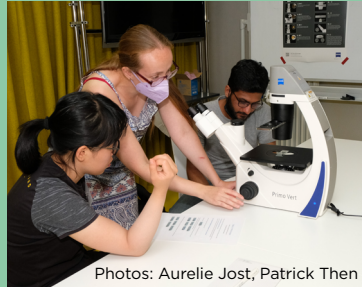
Dust off your travel pipettes! The Microverse Cluster is introducing Scientist Exchange Funds, part of the Guest Scientist Program. With our exchange funds Microverse researchers may travel to labs outside of Jena for a research stay, or you may invite an outside researcher to visit us in Jena. Microverse doctoral researchers, post-docs, and group leaders of all levels are eligible for funding. Exchange scientists will give a special Microverse seminar on their experience. Application form and more information can be found on the Intranet.

DIVERSITY LUNCH JULY 14th CITY CENTER

Interested in issues of equality and equity, within the Cluster and in our research community in Jena? Would you like to help plan workshops, networking opportunities or cultural events, or do you have ideas to share? All Microverse members and researchers in Microverse-associated groups are invited to our second Diversity Lunch on July 14th at 12:15 at Neugasse 23. Please bring your lunch, fruit and cake is provided.

MICROSCOPY COURSE

In the 2nd edition of the microscopy course of the Microverse Imaging Center on June 27th-29th, more than 30 participants learned about the basic principles of light microscopy through lectures and hands-on sessions. This year, the MIC teamed up with the core imaging facility of FLI Jena. The MIC would like to thank the Carl Zeiss AG for generously providing the training microscopes for the course.



Photos: Aurelie Jost, Patrick Then



WORKSHOP OFFER: INTRODUCTION TO IMAGE PROCESSING WITH FIJI

The Microverse Imaging Center announces the online seminar "Introduction to Image Processing with Fiji" on August 5th from 9:00 to 12:00. Dr. Jan Brocher from BioVoxxel will provide an overview over the basic use of this versatile open-source software ImageJ/Fiji in image processing tasks. If you are interested to join, please send an e-mail to [Patrick Then](#).

NEW PUBLICATIONS

(1,3)- β -d-Glucan-guided antifungal therapy in adults with sepsis: the CandiSep randomized clinical trial

Michael Bauer and colleagues | Intensive Care Medicine | June 16, 2022

Serum biomarkers that reveal early stage infections can reduce the time to life saving treatments. Prediction of invasive *Candida* infections in sepsis patients was tested *via* (1,3)- β -d-Glucan serum levels. [Read more](#)

A metagenomic portrait of the microbial community responsible for two decades of bioremediation of poly-contaminated groundwater

Bas Dutilh and colleagues | Water Research | June 16, 2022

Multiple points along a remediation pipeline from a contaminated park to a bioreactor plant were sampled and subjected to metagenomic analysis to reveal distribution of known aromatic compound biodegradation pathways. [Read more](#)

Ultrasound-induced mechanoluminescence and optical thermometry toward stimulus-responsive materials with simultaneous trigger response and read-out functions

Lothar Wondraczek and colleagues | Advanced Science | June 16, 2022

Correlations between the level of applied stress and the intensity of luminescence enable a variety of applications, for example, in stress sensors, crack detectors, or smart displays. [Read more](#)

Metabolic adaptation of diatoms to hypersalinity

Georg Pohnert and colleagues | Phytochemistry | June 11, 2022

Algal adaptation to salinity changes, an increasingly common phenomenon due to our changing climate, occurs in a complex up-regulation of metabolites. [Read more](#)

Lactobacillus rhamnosus colonisation antagonizes *Candida albicans* by forcing metabolic adaptations that compromise pathogenicity

Raquel Alonso-Roman, Gianni Panagiotou, Bernhard Hube and colleagues | Nature Communications | June 9, 2022

The presence of probiotics such as lactic acid bacteria changes the environment in the intestine and forces *C. albicans* to change its metabolism, reducing fungal pathogenicity. [Read more](#)

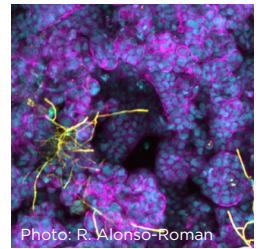


Photo: R. Alonso-Roman

Risk assessment with gut microbiome and metabolite markers in NAFLD development

Gianni Panagiotou and colleagues | Science Translational Medicine | June 8, 2022

A model that can predict the possible course of non-alcoholic fatty liver disease based on the microbial composition in the intestine was developed. [Read more](#)

Extent of intrinsic disorder and NMR chemical shift assignments of the distal N-termini from human TRPV1, TRPV2 and TRPV3 ion channels

Christoph Wiedemann, Ute Hellmich and colleagues | Biomolecular NMR Assignments | June 6, 2022

Mammalian Transient Receptor Potential Vanilloid channels are involved in the transmission and modulation of sensation including pain and temperature. NMR was used to structurally define these channels to better understand ligand binding and channel position. [Read more](#)

sam2lca: Lowest Common Ancestor for SAM/BAM/CRAM alignment files

Alexander Hübner, Christina Warinner and colleague | Journal of Open Source Software | June 1, 2022

Improving shotgun metagenomics, a technique that allows the genetic characterization of entire ecological communities. [Read more](#)

Phenotypic differentiation of autotrophic and heterotrophic bacterial cells using Raman-D₂O labeling

Martin Taubert, Kirsten Küsel, Jürgen Popp and colleagues | Analytical Chemistry | May 24, 2022

Identification of single cells based on their carbon acquisition strategies, i.e. autotrophic vs. mixotrophic bacteria, was achieved via Raman-D₂O labeling in combination with chemometrics. [Read more](#)