

TARC<sub>force</sub>3R MONTHLY SEMINAR SERIES

Annemarie Lang

University of Michigan

*Active Implementation of the 3R  
Principle in Musculoskeletal  
Research*

The 3R principle not only advocates for the humane treatment of laboratory animals, but also enhances scientific rigor and supports translational success. Yet, the biggest challenge remains its consistent implementation into daily lab routines to truly advance animal welfare and research quality. This talk will showcase our active implementation of refinement strategies in mouse bone fracture models, covering handling, enrichment, and pain management and highlight in vitro alternatives implemented in our laboratory that have successfully replaced in vivo experiments. The goal is to share practical, scientist-driven solutions that drive real change.

Annemarie earned her veterinary and doctoral degrees (Dr. med. vet.) at Freie Universität Berlin and completed a PhD in Regenerative Therapies and Biomedical Sciences, followed by postdoctoral research at Charité-Universitätsmedizin Berlin, the University of Pennsylvania, and TU Dresden. In January 2025, she joined the Department of Orthopedic Surgery at the University of Michigan as a tenure-track Assistant Professor. Annemarie is Vice-President of EUSAAT, co-founder of AniMatch and ReThink 3R, and a dedicated advocate for advancing the 3R principles in research.

Friday, July 18, 2025, 2:00—4:00 p.m. CEST

Meeting link: <https://bbb.rlp.net/b/gon-6fc-ssd-h1b>

The modality is handled on a first-come, first-served basis.

For more information about the program, visit our website <https://www.unimedizin-mainz.de/tarc-force-3r/veranstaltungen.html> or contact our team at [las-education@uni-mainz.de](mailto:las-education@uni-mainz.de)

Certificates of attendance for the general audience are sent on request via e-mail ([las-education@uni-mainz.de](mailto:las-education@uni-mainz.de)). For ATF certificates, please write to us at [ATF-TARC@uni-mainz.de](mailto:ATF-TARC@uni-mainz.de)