

FORUM EXPERIMENT! 2023

XPLANATORIUM HERRENHAUSEN, HANOVER, GERMANY

PROGRAM

TUESDAY, MAY 23, 2023

9:30 a.m. Registration

10:15 a.m. **SCIENTIFIC SPEED-DATING**

11:00 a.m. Welcome

PAVEL DUTOW
Volkswagen Foundation

SESSION 1: LIFE SCIENCES

11:10 a.m. Learning to move your eardrum:
Perceptual plasticity beyond the brain

PATRICK BRUNS
University of Hamburg

11:30 a.m. One and the same data, different results
– how much do the results of
epidemiological studies depend on who
does the analysis?

BERND KOWALL
University Duisburg-Essen

11:50 a.m. Lamarck deserves a second chance: A
new path of molecular (r)evolution?

VALENTIN J. WEBER
University Hospital Zürich

12:10 p.m. Building the synthetic drosophila
embryo – exploratory phase

JAYAN NAIR
EMBL Heidelberg

12:30 p.m. Lunch &
Walk in the Garden

SESSION 2: DISEASE & THERAPY

2:00 p.m. Male/Female pairs of "identical twin"
stem cell lines for sex-specific disease
modelling

INA GRUH
MHH Hospital Hanover

2:20 p.m. Implantable fluorescence detector for
early detection of tumor recurrence

ANNA SCHAUFLE, ULF KAHLERT
University of Magdeburg

2:40 p.m. Biological impact of social relationships
on modern cancer therapies

JULIUS FISCHER
Technical University of Munich

3:00 p.m. Lightning Talks

BY POSTER PRESENTERS (ALUMNI)

3:30 p.m. **POSTER SESSION & Networking
Coffee Break**

SESSION 3: BIOMATERIALS

4:30 p.m. Parallel World: Can polymerases go
against the grain?

LARS RADKE
Technical University of Applied
Sciences Wildau

4:50 p.m. Directed Evolution of Materials

WILFRIED WEBER
INM & University of Saarbrücken

5:10 p.m. Quorum sensing artificial materials
(QUOSAM)

MARTIN HAGER
University of Jena

5:30 p.m. Coffee Break

SESSION 4: MODELING

6:00 p.m. Reverse network science

MARC-THORSTEN HÜTT
Constructor University Bremen

6:20 p.m. **Reconstitution of synthetic cilia**

ISABELLA GUIDO
MPI for Dynamics and Self-Organization, Göttingen

6:40 p.m. **Aperitif & Dinner**

WEDNESDAY, MAY 24, 2023

SESSION 5: BIOLOGY

9:30 a.m. **Sugar diversity on viral proteins – a so far overlooked defense mechanism of viruses?**

CHRISTINA KARSTEN
University Hospital Essen

9:50 a.m. **Off-target effects of glyphosate on bacteriophages: mechanisms and implications for environmental health**

OLGA MAKAROVA
University of Veterinary Medicine Vienna

10:10 a.m. **Learning from past generations – Adaptive trans-generational memory in clonal plants**

MERET HUBER
University of Mainz

10:30 a.m. **Coffee Break**

SESSION 6: MATERIALS SCIENCE

11:00 a.m. **Friction under molecular control**

HERMANN A. WEGNER
University of Giessen

11:20 a.m. **Switchable iron complexes as active species for redox-flow batteries: Spin Batt**

BIRGIT WEBER
University of Bayreuth

11:40 a.m. **Electrochemical preparation of metastable semiconductor allotropes**

BODO BÖHME
MPI for Chemical Physics of Solids, Dresden

12:00 p.m. **An atomic-scale approach to discover high entropy alloys from highly poly-elemental precursors using nano-reactor-metallurgy on top of tips for atom probe tomography**

YUJIAO LI
University of Bochum

12:20 p.m. **Lunch**

SESSION 7: ENGINEERING

1:30 p.m. **Fluid-mineral interaction during instantaneous de-/compression in rupture processes (FIND RUPTURE)**

SEBASTIAN CIONOIU
University of Heidelberg

1:50 p.m. **Evaluation of electrical impedance spectra by long short-term memory to estimate nitrate concentrations in soil**

GERHARD FISCHERAUER
University of Bayreuth

2:10 p.m. **Beyond mechanical stiffness - Improving the electron microscope's motion control and reducing site demands by introducing mechatronics**

JOHANNES MÜLLER
Humboldt University of Berlin

2:30 p.m. **Beyond 3D printing – A novel spatial printing technology for lightweight spaceframe concrete structures**

DIRK LOWKE
Technical University of Braunschweig

2:50 p.m. **Closing**

ULRIKE BISCHLER
Volkswagen Foundation

3:00 p.m. **DEPARTURE**