

Dear participants of the RIGeL Summer School Kostenz,

It is our great pleasure to welcome you to this year's second joint Summer School of the four RIGeL sections *Biomedicine, Cellular Biochemistry and Biophysics, Molecular Ecology and Evolution* and *Neurobiology* from September 19 to 21, 2019 in the monastery of Kostenz.

This event gives you the opportunity to present your PhD project and to get new insights into the different fascinating fields of cell biology, biochemistry, zoology, botany, biomedicine etc. presented by other PhD students. Moreover, you will be able to share your know-how, discuss your ideas and methods and establish worthwhile collaborations. Furthermore, do not hesitate to ask questions and take part in lively discussions after the talks, as the most active ones will be honored with five Questioner prizes, in addition to our talk and poster awards!

In order to improve our capacity of teamwork and to get to know each other better, we will have a team-building event on the first day of our Summer School, where we will face the BergwerksChallenge inside the Silberberg Bodenmais.

We wish you lots of fun for these three days!

Your Summer Academy Organizing Team



1

Unspecific blockade of cardiac Ca²⁺/calmodulin-dependent protein kinase II is detrimental in acute pressure overload, but cardiac function is preserved by isolated CaMKII δ inhibition

Maria Baier

2

Uncovering the roles of tenomodulin in tendon healing

Manuel Delgado

3

Characterization of a biofilm-forming microbial consortium from a petrol well in Costa Rica

Linda Dengler

4

Transcriptomics of slave-making ants and their hosts

Claudia Gstöttl

5

Longitudinal tracking of breast cancer patients over systemic disease progression

Markus Busch

18:30-19:30 Dinner

from 19:30 Free time / Get-together in the Stüberl

Friday, 20th of September 2019

7:30-8:30 Breakfast

09:00-10:00 **TALK SESSION 2** Chair: Marouane Kdadra

6 **Computational Identification of Putative Ancestral Protein Fragments**
Leonhard Heizinger

7 **Gene expression imputation identifies candidate genes and novel susceptibility loci for age-related macular degeneration (AMD)**
Tobias Strunz

8 **Structure and Dynamics of Exoribonucleases**
Jan Overbeck

9 **How do ecological optima within European forest tree species differ between small and big trees?**
Lukas Heiland

10:00-10:30 Coffee break

10:30-11:00 **COMPANY PRESENTATION: Sarstedt**

11:00-12:00 **POSTER SESSION 2** Chair: Laura Trigueros

5 **LDHB overexpression alters mitochondrial metabolism in human CD4⁺ T cells**
Sonja Decking

6 **The Fuss transcriptional repression complex is acting during neuronal development**
Svenja Oestreich

7

Analysis of RNA Polymerase II elongation factors in *A. thaliana* on a genome wide scale

Simon Obermeyer

8

Restoration by clear-cutting – First conclusions after 25 years of continuous monitoring

Patricia Krickl

12:00-13:00 Lunch

13:00-14:00 **TALK SESSION 3**

Chair: Tobias Strunz

10

Creating a Novel Protein Interface by means of Rosetta MSF Anchored Design

Julian Nazet

11

The role of citrate homeostasis in melanoma pathogenesis

Konstantin Drexler

12

Nutritional tolerance in ants: a comparative approach

Lina Pedraza

13

Assessment of Prostate Cancer Aggressiveness using metabolomics evaluation of urine by NMR Spectroscopy

Marouane Kdadra

14:00-15:30 Free time for having a walk

15:30-16:00 Coffee break

16:00-17:00 **GUEST LECTURE**

The Green Fluorescent Protein Toolbox and Its Applications in Neuroscience

Dr. Oliver Griesbeck, Forschungsgruppenleiter für zelluläre Dynamik, MPI für Neurobiologie (Planegg)

17:00-18:15 **POSTER SESSION 3**

Chair: Florian Gürtler

9 **Zero-sum regression in action: A prognostic miRNA signature in DLBCL**

Gunter Glehr

10 **The effect of nitric oxide on Schlemm Canal endothelial cells**

Ramona Pawlak

11 **Studies of the BCCT-transporter BetT2**

Caroline Overa

12 **CRISPR/Cas9-based genome editing of the FoxP locus in Drosophila**

Ottavia Palazzo

13 **Royal matchmaking: ant workers promote outbreeding by their sexual sisters by transporting them to alien nests**

Mathilde Vidal

18:30-19:30 Dinner

from 19:30 Free time / Get-together in the Stüberl

SATURDAY, 21st of September 2019

7:30-9:00 Breakfast & check-out

9:00-10:00 **POSTER SESSION 4** Chair: Sonja Decking

14 **The role of Ca²⁺ signaling in pH-dependent effects on AngII and K⁺ stimulated aldosterone production**
Florian Gürtler

15 **Astrocytes prime an early synaptic pruning and remodelling in the prefrontal cortex upon antidepressant treatment**
Celia Román

16 **How to protect an endangered plant species? – A multifarious approach**
Lina Begemann

17 **Dimethyl fumarate (DMF) inhibits migration and proliferation in hepatocellular carcinoma (HCC)**
Marlen Michalski

10:00-10:30 Coffee break

10:30-11:30 **TALK SESSION 4** Chair: Linda Dengler

14 **Structural insights into the bacterial stressosome**
Algirdas Miksys

15 **Machine learning algorithms to infer trait matching and predict species interactions in ecological networks**
Maximilian Pichler

16 **In Search of RNA-Binding Metabolic Enzymes in *E. coli***
Thomas Klein

17 **Modification of synaptic inputs to vasopressin cells in the rat olfactory bulb by centrifugal neuromodulators**

Hajime Suyama

12:00-13:00 Lunch

13:00-14:15 **POSTER SESSION 5**

Chair: Marlen Michalski

18 **AI Diagnosis of Lymphoma**

Michael Hüttner

19 **A versatile approach for the analysis of relative protein stability in proliferating cells**

Jan Polz

20 **Impact of macrophage/microglia IL4R-activation on CNS-colonization**

Laura Trigueros

21 **Highly accessible nucleosomes allow precise spatiotemporal expression of inducible genes in *Drosophila Melanogaster***

Sara Wernig Zorc

22 **Design and characterization of vaccine candidates for therapeutic vaccination against papillomaviruses**

Patrick Neckermann

14:15-14:45 Concluding remarks & awards

15:00 Departure to Regensburg