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Fostering Outreach  
within European Regions,  
Transnational Higher Education  
and Mobility

## ***FORTHem Winterschool 2022 Mainz***

### **Cellular Signaling – Dynamic processes within living cells**

**Location of the event:** *Online via Microsoft Teams and in person: Johannes Gutenberg-University Mainz, Germany*

**Organizers:**

Helen May-Simera: Johannes Gutenberg-University Mainz, Faculty of Biology, **Germany** (may-simera@uni-mainz.de)

Stefan Jacob: Institute of Biotechnology and Drug Research (IBWF), Mainz, **Germany** (jacob@ibwf.de)

**Project description:**

This Winter School targets advanced Bachelor, Master and PhD students. The event consists of two days of lectures, discussions and a poster session involving speakers (PIs and Students) from all the FORTHem Universities. This will be a hybrid event with speakers and local students attending in presence on site, whereas international participants can attend online via Microsoft Teams, thus students from all FORTHem universities will be able to join. In four sessions, diverse topics related to cellular signaling will be presented and discussed. The sessions will cover the topics “**Signaling across Membranes**”, “**Cell signaling in development and disease**”, “**Signaling concepts in microorganisms**” and “**Stress-related signaling/Toxicity**” across various organisms. Each researcher will give a broad introduction of his/her topic, but will then let a student highlight a current research project. At the end of each day, 20 minutes will be provided for a short quiz, in which the students can use an app to answer questions as to the session talks, furthermore they will thus get inspired for the discussion breaks. Students attending on site have the opportunity to present their work in a poster session. This will encourage more fruitful discussions about science.

With this event we hope to foster increased interaction between the different FORTHem Universities in the life sciences and to establish possible long-term teaching synergies and exchanges.

To register for this event please use the following link or QR-code:

<https://forms.office.com/r/cgvSsvxw20>





**Programme:**

Time	Wed 7 Dec	Thur 8 Dec	Fri 9 Dec
9:00-9:15		Welcome and Introduction	
Morning Sessions		<b>Session 1</b> <i>Signaling across membranes</i>	<b>Session 3</b> <i>Signaling concepts in microorganisms</i>
Lunch Break		<i>Lunch, collaborative exchange and poster session</i>	<i>Lunch and collaborative exchange</i>
Afternoon Sessions	<i>Arrival</i>	<b>Session 2</b> <i>Cell signaling in development and disease</i>	<b>Session 4</b> <i>Stress-related signaling/toxicity</i>
Evening Events	<i>Meeting at the Christmas market and Discussion: Current topics in scientific education</i>	<i>Dinner and Discussion: Current topics in scientific education</i>	<i>Depart</i>

**Session 1: Signaling across membranes**

Name: Ismael Mingarro + Gerard Duart

Title: Transmembrane interactions, a matter of life and death.

Affiliation: Valencia

Name: Dirk Schneider + Lucas Gewehr

Title: Dynamics of bacterial inner membrane systems.

Affiliation: Mainz

Name: Varpu Marjomaki + Sailee Shroff

Title: enterovirus group B viruses

Affiliation: Jyväskylä

**Session 2: Cell signaling in development and disease**

Name: Vivianne Barra + Simona Titoli

Title: RNA editing: a star of RNA epigenetics and a promising new therapeutic strategy for Cystic Fibrosis

Affiliation: Palermo



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Name: Lotta-Riina Sundberg + Kati Mäkelä

Title: The role of CRISPR-Cas in nature: bacterial adaptive immune system

Affiliation: Jyväskylä

Name: Stephan Collins

Title: Signalling in the developing mouse brain

Affiliation: Dijon

### **Session 3: Signaling concepts in microorganisms**

Name: Valeria Alduina + Fanny Claire Capri

Title: DNA cytosine methylation as a mechanism of control on differentiation of the Gram-positive soil bacterium *Streptomyces coelicolor* A3(2)

Affiliation: Palermo

Name: Eckhard Thines + Student

Title: Signaling in filamentous fungi with special emphasis to secondary metabolite production

Affiliation: Mainz

Name: Alessandro Presentato + Fanny Claire Capri

Title: Metalloids' processing by Actinobacteria: cell resistance/toxicity mechanisms and synthesis of biogenic metal(loid)-based nanostructures

Affiliation: Palermo

### **Session 4: Stress-related signaling/toxicity**

Name: Lara Manyes + Nuria Dasí Navarro

Title: Transcriptomic study about the role of pumpkin and fermented whey against AFB1 and OTA toxicity using Jurkat cell line

Affiliation: Valencia

Name: Benoit Poinssot + Mathieu Gayral + Tania Marzari

Title: Investigating Endoplasmic Reticulum stress-related signaling in grapevine immunity associated with LysM Receptor Kinases (VvLYKs)

Affiliation: Dijon