

VBC UBIQUITIN CLUB PROUDLY PRESENTS

# UBIQUITIN & FRIENDS

## SYMPOSIUM 2020



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Seeing beyond



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## WELCOME TO THE UBIQUITIN & FRIENDS SYMPOSIUM 2020

The Ubiquitin club emerged 2010 when a group of scientists at the Vienna BioCenter (VBC), fascinated by ubiquitin and ubiquitin-like modifiers, decided to launch a joint interest group. Research at the VBC Ubiquitin Club encompasses the biology and mechanism of signaling proteins that are controlled by ubiquitin-like modifiers. As reflected by the “Ubiquitin & Friends” title, we are not only interested in ubiquitin marks, but also study other ubiquitin-like modifiers such as SUMO and its various roles in stress responses, Atg8 and autophagy, and other non-canonical ubiquitin-like protein modifications. To discuss the latest findings obtained in our groups as well as to talk about exciting findings from outside Vienna, we have joint group meetings on a bi-weekly basis. Currently, the Ubiquitin community comprises seven research groups, corresponding to about 35 scientists. Without a doubt, the “Ubiquitin & Friends Symposium” is the annual highlight of the VBC Ubiquitin Club.

This year we put together an exciting program that covers various areas in the ubiquitin field, ranging from the structural insight of the molecular machines involved in proteostasis to various biological pathways such as autophagy, immune signaling and protein quality control.

Due to the pandemic, Ubiquitin symposium will be held virtually via Zoom. Nevertheless, similar to the previous meetings, we will maintain a personal, family-like atmosphere, giving each participant ample opportunities to discuss her/his research with colleagues, friends, and senior scientists; all fascinated by ubiquitin and friends. We think this virtual meeting will also offer unique opportunities. We will have a chance to share our exciting discoveries with up to 500 participants from all over the world. We will have discussion sessions with the invited speakers to facilitate networking and scientific exchange. Finally, there will be an exciting Podium Discussion on “Publishing in 2020”, where experts including the ASAPBio Executive Director Jessica Polka, will discuss the latest developments and initiatives in Scientific Publishing.

We look forward to welcoming you,  
*The Organizing Committee*

# PROGRAM

## THURSDAY, 14 MAY 2020

**09.45-10.00 Opening Remarks**

### Session 1 Protein Quality Control

10.00-10.30 **ALEX STEIN**, University of Göttingen  
*Retrotranslocation by E3 ligases in ER associated protein degradation*

10.30-10.40 **LAURA GALLEGÓ**, Max Perutz Labs  
*Phase separation directs ubiquitination of gene body nucleosomes*

10.40-10.50 **MICHAEL SHARON**, Weizmann Institute of Science  
*20S proteasomes exported by the malaria parasite promote its growth*

10.50-11.00 **ADAN PINTO-FERNANDEZ**, University of Oxford  
*Deletion of the deISGylating enzyme USP18 enhances tumour cell antigenicity and radiosensitivity*

11.00-11.30 **PEDRO CARVALHO**, University of Oxford  
*Mechanisms of membrane protein quality control*

**11.30-12.00 Break**

12.00-12.10 **VALENTINA FAJNER**, IFOM  
*The ubiquitin ligase Hecw controls oogenesis and neuronal homeostasis by modulating phase transition of ribonucleoprotein parti*

12.10-12.20 **GWENAËL RABUT**, Institute of Genetics and Development of Rennes  
*Sensitive detection of protein ubiquitylation using a protein-fragment complementation assay*

12.20-12.30 **DAVID TEIS**, Institute of Cell Biology, Biocenter, Medical University Innsbruck  
*Endosome and Golgi-associated degradation (EGAD) of membrane proteins regulates sphingolipid metabolism*

12.30-13.00 **CLAUDIO JOAZEIRO**, ZMBH, University of Heidelberg  
*RQC: 10 years of research and 4 billion years of evolution*

**13.00 Voting for the best Short Talk in Session 1**

**13.00-13.30 Meeting the Speakers (pre-sign-up required)**

→ **ALEX STEIN**, Host: Elif Karagoz

→ **PEDRO CARVALHO**, Host: Harald Hornegger

→ **CLAUDIO JOAZEIRO**, Host: Aleksandra Anisimova

## Session 2 – De/Ubiquitination Mechanisms

- 16.00-16.30 **TITIA SIXMA**, Netherlands Cancer Institute  
*Allosteric regulation of DUBs*
- 16.30-16.40 **RASHMI AGRATA**, National Centre for Biological Sciences, TIFR  
*UBC13 deamidation by *Shigella flexneri* disrupts its native and transient interactions with TRAF6 to impair ubiquitination*
- 16.40-16.50 **MICHAEL GLICKMAN**, Technion-IIT  
*The curious case of a protein that targets Ubiquitin for degradation*
- 16.50-17.00 **JIALE DU**, UMass-Amherst  
*Interrogating the Selectivity of Proteasome Associated Deubiquitinase UCH37*
- 17.00-17.30 **SONJA LORENZ**, University of Wuerzburg  
*Structural mechanisms regulating ubiquitin-conjugating enzymes*
- 17.30-18.00 Break**
- 18.00-18.10 **ANNE CLANCY**, Institute of Translational Medicine, University of Liverpool  
*The deubiquitylase USP9X controls ribosomal stalling*
- 18.10-18.20 **JONATHAN PRUNEDA**, Oregon Health & Science University  
*Identification and characterization of diverse OTU deubiquitinases in bacteria*
- 18.20-18.30 **SEBASTIAN GLATT**, Max Planck Research Group, MCB/Jagiellonian University  
*Molecular basis for the bifunctional Uba4-Urm1 sulfur relay system in tRNA thiolation and ubiquitin-like conjugation*
- 18.30-19.00 **CYNTHIA WOLBERGER**, The John Hopkins University  
*Cross-talk between histone ubiquitination and methylation*
- 19.00 Voting for the best Short Talk in Session 2**
- 19.00-19.30 Meeting the Speakers (pre-sign-up required)**
- **TITIA SIXMA**, Host: Nikolett Pahor
- **SONJA LORENZ**, Host: Antonia Vogel
- **CYNTHIA WOLBERGER**, Host: Anna Liess

## FRIDAY, 15 MAY 2020

### Session 3 – Ubiquitin Signaling

- 10.00-10.30 **PETRA BELI**, Institute of Molecular Biology, Germany  
*Ubiquitin signaling in protein quality control*
- 10.30-10.40 **PABLO ALCON**, MRC Laboratory of Molecular Biology  
*FANCD2–FANCI is a clamp stabilized on DNA by monoubiquitination of FANCD2 during DNA repair*
- 10.40-10.50 **ESMEE VRINGER**, CRUK Beatson Institute  
*Mitochondrial ubiquitination as an inflammatory signalling platform during cell death*
- 10.50-11.00 **FRANCISCO BUSTOS**, University of Dundee  
*Disruption of phosphorylation and ubiquitylation signaling in human neurodevelopmental disorders*
- 11.00-11.15 **VLADIMIR MAZUROV**, GenScript Biotech, NL  
*Synthetic Biology Tools and Approaches: from Artificial Genes to Protein Engineering*
- 11.15-11.30 **SASCHA MARTENS**, Max Perutz Lab  
*Keystone Meeting 2021 in Vienna “Targeted Protein Degradation”*
- 11.30-12.00 Break**
- 12.00-12.30 **ANNE BERTOLOTTI**, MRC-LMB, Cambridge  
*Harnessing protein quality control for therapeutic benefit*
- 12.30-12.40 **MATIAS CAPELLA**, Biomedical Center, LMU  
*SUMO regulates the nucleolar organization upon ribosomal DNA damage to maintain genome stability*
- 12.40-12.50 **REBEKKA SCHAIRER**, Department of Biochemistry, University of Lausanne  
*Allosteric activation of MALT1 by its ubiquitin-binding Ig3 domain*
- 12.50-13.00 **ANNA STIER**, ETH Zürich  
*Phosphorylation of the E3 ubiquitin ligase CUL4B regulates actin cytoskeletal dynamics during mitosis*
- 13.00 Voting for the best Short Talk in Session 3**
- 13.00-13.30 Meeting the Speakers (pre-sign-up required)**
- **PETRA BELI**, Host: Michaela Reissland
- **ANNE BERTOLOTTI**, Host: Jonas Duerig

#### Session 4 – Autophagy & Endomembrane Trafficking in Quality Control

- 15.00-15.30 **FELIX RANDOW**, MRC-LMB, Cambridge  
*When bacteria invade the host cytosol: The role of ubiquitin and autophagy*
- 15.30-15.40 **DOROTEA FRACCHIOLLA**, Max Perutz Labs  
*A PI3K-WIP1 positive feedback loop activates LC3 lipidation in autophagy*
- 15.40-15.50 **MANUEL S RODRIGUEZ**, ITAV-CNRS  
*Proteophagy regulates UPS-ALS crosstalk under proteasome inhibition conditions in Mantle Cell Lymphoma cells*
- 15.50-16.00 **LORENZO PICCHIANTI**, IMP - GMI  
*A cross-kingdom conserved ER-phagy receptor maintains endoplasmic reticulum homeostasis during stress*
- 16.00-16.30 **RICHARD MARSHALL**, University of Washington  
*Autophagic degradation of the 26S proteasome is mediated by multiple Ubiquitylation and aggregation events*
- 16.30-17.00 Break**
- 17.00-17.10 **DAVID SHAPIRA**, Newcastle University, Biosciences institute  
*The INO80 ATP-dependent chromatin remodeller promotes selective autophagy under metabolic stress condition*
- 17.10-17.20 **RICHA SARDANA**, Cornell University  
*Rsp5 Ubiquitin ligase-mediated quality control checkpoints protect yeast from proteotoxic stress*
- 17.20-17.30 **AVITAL EISENBERG-LERNER**, Weizmann Institute of Science  
*Golgi Apparatus Related Degradation (GARD) Regulates the Golgi-stress response*
- 17.30 Voting for the best Short Talk in Session 4**
- 17.30-18.00 Meeting the Speakers (pre-sign-up required)**  
→ **FELIX RANDOW**, Host: Marion Clavel  
→ **RICHARD MARSHALL**, Host: Marta Garcia Leon

#### 18.00-18.30 Podium Discussion – Publishing in 2020

chaired by **JESSICA POLKA** (ASAPBio) and **CYNTHIA WOLBERGER**

#### 18.30 Award Ceremony

