

# 16TH ER & REDOX CLUB MEETING

NAMUR  
BELGIUM

## ER Redox: Cells as Protein Factories

17-20 March 2025

University of Namur, Belgium

### Organizers



Alison FORRESTER  
University of Namur,  
Namur Research Institute for  
Life Sciences (NARILIS)



Emma FENECH  
University of Cologne,  
Center for Biochemistry

# Programme

## Monday March 17, 2025

- 13:30 – 14:00      *Welcome coffee & Registration*
- 14:00 – 14:15      Opening address by Emma Fenech and Alison Forrester

### Session 1 | Translation, targeting and translocation

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*Chair: Emma Fenech*

- 14:15 – 14:45      **Structural insights into ER membrane protein biogenesis by the SND pathway**  
**Melanie McDowell**, Max Planck Institute of Biophysics, Frankfurt am Main, Germany
- 14:45 – 15:15      **The Sec61 inhibitor mycolactone targets Vacuolar ATPase assembly and disrupts lysosomal function, compromising cellular stress recovery responses**  
**Belinda Hall**, University of Surrey, UK
- 15:15 – 15:45      **TRNseq reveals a major role for 5'UTR structure in mediating translational control in response to ER stress**  
**Naseeb Saïda**, Technion-Israel Institute of Technology, Haifa, Israel
- 15:45-16:15      *Coffee break – Auditorium lobby*

### Session 2 | ER as a protein factory I

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*Chair: Emma Fenech*

- 16:15 – 16:45      **The EMC acts as a chaperone for labile transmembrane domains**  
**Kevin Michael Meighen-Berger**, Technical University of Munich, Germany
- 16:45 – 17:15      **Class I alpha-1,2 Mannosidases IB and IC: Subcellular Localization and Role in Mammalian Secretory Protein Quality Control**  
**Haddas Saad**, Tel Aviv University, Israel
- 17:15 – 17:45      **Somatic escape variants of SERPINA1 in a1-antitrypsin deficiency**  
**Joe Chambers**, University of Cambridge, UK

*Chair: John Christianson*

- 17:45 – 18:00      **Memorial to Neil Bulleid**  
**Ineke Braakman**, Utrecht University, The Netherlands  
**Roberto Sitia**, Vita-Salute San Raffaele University, Milan, Italy
- 18:00 – 18:30      **Inaugural Neil Bulleid Memorial Lecture**  
**ERp18 Regulates the activation of Activating Transcription Factor 6 (ATF6), a UPR transducer, through modulation of its REDOX status**  
**Arvin Pierre**, University of Rennes, France
- 18:30 – 20:00      *Dinner – Auditorium lobby*

## **Tuesday March 18, 2025**

### **Session 3 | ER as a protein factory II**

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*Chair: Ishier Raote*

- 09:00 – 09:30      **Novel Zn<sup>2+</sup>-dependent antioxidation mechanism in the ER**  
**Chika Tsutsumi**, Kyoto Sangyo University, Japan
- 09:30 – 10:00      **Understanding the reductive unfolding mechanism by which extracellular PDI inactivates viral spike proteins**  
**Shingo Kanemura**, Tohoku University, Sendai, Japan
- 10:00 – 10:30      **Discovery of an epigenetically controlled lipid oxygen radical response pathway**  
**Laurence Abrami**, EPFL, Lausanne, Switzerland
- 10:30 – 11:00      *Coffee break – Auditorium lobby*

### **Session 4 | ER as a protein factory III**

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*Chair: Ineke Braakman*

- 11:00 – 11:30      **Real time monitoring of cytosol/ER NADP(H) redox balance**  
**Marcel van Lith**, University of Glasgow, UK
- 11:30 – 12:00      **A newly developed calcium imaging system reveals the true calcium atlas in the early secretory pathway**  
**Shohei Fujii**, Kyushu University, Fukuoka, Japan
- 12:00 – 13:30      *Lunch – Auditorium lobby*

*Chair: Emma Fenech*

13:30 – 14:10      **The ER-EC connection: a model for intercellular redox communication**

**Francisco Laurindo**, University of Sao Paulo, Brazil

15:00 – 17:00      *Guided tour of Namur*

18:30 – 20:00      *Dinner – Auditorium lobby*

*Chair: Alison Forrester*

20:00-21:00      **Regulation of IRE1b function by the mucin chaperone AGR2 in goblet cells**

**Sophie Janssens**, VIB-UGent Center for Inflammation Research, Belgium

## **Wednesday March 19, 2025**

### **Session 5 | Disulphide-UPR Crossovers/interactions**

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*Chair: Joe Chambers*

09:30 – 10:00      **Ca<sup>2+</sup>-driven P5 condensate formation to ensure proinsulin folding fidelity**

**Masaki Okumura**, Tohoku University, Sendai, Japan

10:00 – 10:30      **Higher-order Oligomerization of IRE1 Luminal Domain Modulates Unfolded Protein Response**

**Motonori Matsusaki**, Tohoku University, Sendai, Japan

10:30 – 11:00      *Coffee break – Auditorium lobby*

### **Session 6 | UPR classic**

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*Chair: Marius Lemberg*

11:00 – 11:30      **A structural basis for chaperone repression of stress signalling from the endoplasmic reticulum**

**Joanne Tung**, University of Cambridge, UK

11:30 – 12:00	<b>Uncover adaptive genes that mitigate serpin polymerization toxicity and its link to the Unfolded Protein Response</b> <b>Adriana Ordoñez</b> , UCAM, Murcia, Spain
12:00 – 12:00	<b>The Unfolded Protein Response governs an Alternative Splicing program conserved from healthy to malignant cells</b> <b>Céline Philippe</b> , University of Rennes, France
12:30 – 14:00	<i>Lunch – Auditorium lobby</i>
14:00 – 15:00	<b>Round Table: Sustainability in the lab</b> <b>Alison Forrester</b> , University of Namur, Belgium
15:00 – 15:10	<b>Group picture</b>
15:10 – 18:00	<b>Poster session</b>
19:00	<i>Gala dinner – Brasserie François</i>

## Thursday March 20, 2025

### Session 7 | UPR and degradation

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*Chair: Alison Forrester*

09:00 – 09:30	<b>The Integrated Stress Response at the crossroads of pathogenicity of renin mutations</b> <b>Céline Schaeffer</b> , Vita-Salute San Raffaele University, Milan, Italy
09:30 – 10:00	<b>Development of ratiometric fluorescence-based reporters to screen for small molecule inhibitors of Hrd1-mediated ERAD</b> <b>Chian Yang</b> , University of Oxford, UK
10:00 – 10:30	<b>Fam134c and Fam134b shape axonal endoplasmic reticulum architecture <i>in vivo</i></b> <b>Francescopaolo Iavarone</b> , TIGEM, Pozzuoli, Italy
10:30 – 11:00	<i>Coffee break – Auditorium lobby</i>

## Session 8 | ER subdomains - trafficking/secretion and contact sites

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*Chair: Ishier Raote*

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| 11:00 – 11:30 | <b>The role of the intramembrane protease RHBDL4 in protein trafficking regulation</b><br><b>Susanne Steigleder</b> , University of Cologne, Germany  |
| 11:30 – 12:00 | <b>How to organize a secretory cell: lessons from endometrial stromal cell decidualization</b><br><b>Marco Dalla Torre</b> , Vita-Salute San Raffaele University, Milan, Italy                            |
| 12:00– 12:30  | <b>Receptor-mediated Golgi retention of Fam20A-Fam20C kinase complex tunes secretome phosphorylation during lactation</b><br><b>Jueyin He</b> / <b>Lei Wang</b> , Institute of Biophysics, Beijing, China |
| 12:30 – 12:45 | <b>Closing remarks and poster prize</b><br>Emma Fenech and Alison Forrester   |

# Posters

- Poster 1**      **Understanding the cotranslational role of the N-terminus in CFTR folding**  
**Rana Baygin**, University of Utrecht, The Netherlands
- Poster 2**      **Drugging the Endoplasmic Reticulum Exit Sites**  
**Lucie Caramelle**, University of Namur, Belgium
- Poster 3**      **Syntaxin 5 in trafficking: Does conformation regulate trafficking, and does trafficking regulate conformation?**  
**Inès de Fays**, University of Namur, Belgium
- Poster 4**      **Synthesis and biological evaluation of modulators of cholesterol transport protein STARD1**  
**Nienke Julia Dekker**, Technical University of Denmark, Kongens Lyngby, Denmark
- Poster 5**      **Monitoring the activation of the endogenously HALO-tagged ER-phagy receptors SEC62 and TEX2641**  
**Marco Fabbro**, Università della Svizzera italiana, Bellinzona, Switzerland
- Poster 6**      **AGR2 and IRE1 $\beta$ : a dream team in intestinal goblet cell quality control**  
**Phaedra Guilbert**, VIB-UGent Center for Inflammation Research, Belgium
- Poster 7**      **Investigating the Lysosomal Clearance of Misfolded Proteins from the Endoplasmic Reticulum**  
**Carolin Hoefner**, Università della Svizzera italiana, Bellinzona, Switzerland
- Poster 8**      **Regulation of CFTR Degradation by Ubiquitin-Proteasomal System**  
**Mykyta Malkov**, University of Utrecht, The Netherlands



- Poster 9**                      **DNAJB12 and DNAJB14 decreased levels in the brain may connect aging-associated redox and proteostasis derangements**  
**Percillia Oliveira**, University of Sao Paulo, Brazil
- Poster 10**                     **Unveiling novel signaling roles for human KDELR3 and KDELR1**  
**Federica Cecilia Palazzo**, Technical University of Munich, Germany
- Poster 11**                     **Cnpy5 action and interacting proteins**  
**Danny Schildknecht**, University of Utrecht, The Netherlands
- Poster 12**                     **Oligosaccharyltransferase is involved in targeting to ER-associated degradation**  
**Marina Shenkman**, Tel Aviv University, Israel
- Poster 13**                     **Non-genetic Inactivation of Caspase-3 and P53 Increases Cancer Cell Fitness by PDIA4 Redistribution**  
**Gal Twito**, Ben-Gurion University of the Negev, Beer Sheva, Israel
- Poster 14**                     **Manipulating disulfide bond formation of the Spike protein to inhibit SARS-CoV-2 infection**  
**Xi Wang**, Institute of Biophysics, Beijing, China
- Poster 15**                     **Newly identified compartmentalization in the ER; from protein quality control granule to stress granule**  
**Mai Watabe**, Tohoku University, Sendai, Japan

*With the support of*

