



# KBC DAYS 2017

7<sup>th</sup> – 8<sup>th</sup> November 2017

Programme and Abstracts



UMEÅ  
UNIVERSITY



KBC

Chemical Biological Centre  
Umeå University/SLU  
[www.kbc.umu.se/english](http://www.kbc.umu.se/english)

**8.30 Registration, poster mounting**

**9.00 Welcome introduction and update**

Per Gardeström  
*Scientific coordinator of KBC*

**9.15 Critical thinking and myth debunking**

Martin Rosvall  
*Department of Physics, Director of IceLab*

9.45 *Coffee break*

**New Faculty Members and Awardees at KBC**

(Chairperson: Lars Lövgren)

**10.15 Catalyst Design: Searching for perfectly defective nanomaterials**

Eduardo Gracia Espino  
*Department of Physics*

**10.35 How HIV-1 wraps its genome into new virus particles - and a bit about how other viruses make theirs**

Lars-Anders Carlsson  
*Wallenberg Centre for Molecular Medicine and Department of Medical Biochemistry and Biophysics*

**10.55 Possibilities and challenges with small molecules targeting G-quadruplex DNA structures**

Erik Chorell  
*Gunnar Öquist Fellow 2016  
Department of Chemistry*

**The KBC Interactive Focus Environment**

**11.15 The KBC Focus Environment – Presentation of the possibilities**

Hardy Hall  
*Facilitator KBC Focus environment*

11.30 *Lunch with Live Music from PJs Funk*

**12.30 Inauguration of the KBC Focus Environment**

Ribbon cutting with Katrine Riklund, Pro-Vice Chancellor, Umeå University, and Per Gardeström, Scientific Coordinator for KBC

*Mingle at the KBC Focus Environment with Live Music and dessert*

**New Faculty Members and Awardees at KBC (cont.)**

(Chairperson: Andrei Chabes)

**13.15 Carbon cycling in Arctic lakes at decadal to millennial timescales**

John Anderson

*Loughborough University, UK,  
HM King Carl XVI Gustaf Professorship of Environmental Science 2017-2018 at  
Umeå University, Department of Ecology and Environmental Science*

**13.35 Unearthing the overarching principles governing bacterial cell wall homeostasis**

Felipe Cava

*The Laboratory for Molecular Infection Medicine Sweden (MIMS), Department  
of Molecular Biology  
Jaime Ferran Award, Spanish Society for Microbiology (Sociedad Española de  
Microbiología), SEM, Best Microbiologist in Spain 2017*

**13.55 Crystalline cellulose affinity; a link between prokaryotic and eukaryotic intermediate filaments**

Linda Sandblad and Niklas Söderholm

*Group Linda Sandblad  
Department of Molecular Biology and Umeå Core Facility for Electron  
Microscopy (UCEM)*

**KBC Postdoctoral Fellows**

(Chairperson: Stefan Björklund)

**14.15 Household energy and air pollution worldwide: transitions from traditional to cleaner biomass-fired stoves**

Ricardo Carvalho

*Kempe Postdoctoral Fellow at UPSC  
Thermochemical Energy Conversion Laboratory (TEC-Lab), Department of  
Applied Physics*

**14.30 Live and let die – Understanding the regulation of plant leaf senescence in darkness**

Daniela Liebsch

*Kempe Postdoctoral Fellow at UPSC*

**14.45 Genome contact map explorer: a platform for the comparison, interactive visualization and analysis of genome contact maps**

Rajendra Kumar

*Kempe Postdoctoral Fellow at Department of Physics/IceLab*

Tuesday, 7<sup>th</sup> November

**The KBC Midterm PhD students**

(Chairperson: Magnus Wolf-Watz)

**15.00 Midterm PhD students present their Research Projects in "elevator talks" (2 minutes each)**

Dan Adolfsson

*Department of Chemistry*

Mohammad Jani Basha

*Department of Medical Biochemistry and Biophysics*

Irena Fundova

*UPSC, Department of Forest Genetics and Plant Physiology*

Jessica Gard Timmerfors

*Department of Chemistry*

Nasibeh Mohammadi

*MIMS and Department of Chemistry*

Majid Mustafa

*Department of Chemistry*

Mirva Niinipuu

*Department of Chemistry*

Aleksandra Skrobonja

*Department of Chemistry*

Anders Rebbeling

*Department for Applied Physics and Electronics (TEC -lab)*

Bernard Wessels

*UPSC, Department of Plant Physiology*

Adelijiang Xiamuxiding

*Department of Chemistry*

**15.20 Coffee break and Poster presentation**

The midterm PhD students present their posters in the KBC Focus Environment (printed and digital presentations)

**18.00 Dinner with PJs Funk (Live music)**

**New Research Projects, Outreach, Doctoral Programmes**  
(Chairperson: Fredrik Almqvist)

**9.00 Decoding Signalling Networks Controlling Plant Stress Responses - SSF Framework Grants for Research on Systems Biology**

Åsa Strand  
*Umeå Plant Science Centre (UPSC), Department of Plant Physiology*

**9.15 Abisko Citizen Science: documenting a century of climate change**

Keith Larson  
*Climate Impact Research Centre, CIRC, EMG*

**9.30 Can we break out of the bubbles? Communication by Future Forests**

Annika Mossing  
*Communication officer, SLU Umeå*

**9.45 The MIMS affiliated National Doctoral Programme in Infection and Antibiotics NDPIA** (National PhD activity)

Anna Holmström  
*Department of Molecular Biology, MIMS, NDPIA, National Director of Studies*

**10.00 Coffee break and Poster session**

**Research Highlights at KBC**  
(Chairperson: Torbjörn Lestander)

**10.30 Why to become the asteroid 11807 Wannberg?**

Asta Pellinen Wannberg  
*Department of Physics*

**10.50 10,000 year-old DNA proves when fish colonized our lakes**

Göran Englund  
*Department of Ecology and Environmental Science, EMG*

**11.10 Atomic-level mechanism of enzymatic ATP versus GTP selectivity**

Magnus Wolf Watz  
*Department of Chemistry*

**11.30 Mediator binds chromosomal interacting domain boundaries**

Stefan Björklund  
*Department of Medical Biochemistry and Biophysics*

**11.50 Somatic embryogenesis in Norway spruce - promises & challenges**

Henrik Svennerstam  
*Umeå Plant Science Centre (UPSC), Department of Plant Physiology*

12.10 Lunch

## Updates from the KBC Infrastructures

(Chairperson: Thomas Moritz)

### 13.10 The Electronic Laboratory Notebook

Madeleine Ramstedt, Department of Chemistry

#### The KBC infrastructures present themselves

#### 13.20 1. Short presentations (max 5 minutes)

- Chemical and Biological Analysis at UMF (Siv Huseby, UMF)
- Mesocosm Facilities (Henrik Larsson, UMF)
- The Laboratories for Chemical Biology Umeå, LCBU (Stina Berglund, Chemistry)
- Computational Life Science Cluster, CLiC (Jeanette Tångrot)
- NMR Core Facility (Jürgen Schleucher, Medical Biochemistry and Biophysics)
- Protein Expertise Platform, PEP (Uwe Sauer, Chemistry)
- X-Ray Crystallisation (Uwe Sauer, Chemistry)
- UPSC Plant Cell Wall and Carbohydrate Analytical Facility (Junko Takahashi Schmidt, UPSC)
- Umeå Core Facility for Electron Microscopy, UCEM (Linda Sandblad, Molecular Biology)
- XPS Platform (Madeleine Ramstedt, Chemistry)

#### 14.10 2. Presentations and discussion at the SurfaceHubs

(See separate schedules at the registration desk)

- Biochemical Imaging Centre Umeå (Irene Martinez Carrasco)
- Umeå Core Facility for Electron Microscopy, UCEM (Linda Sandblad)
- The Electronic Laboratory Notebook (Charlotta Sundin)
- The Vibrational Spectroscopy Core Facility (András Gorzsás)

#### 14.30 3. Guided tour through the facility

(See separate schedules at the registration desk)

- LCBU (Stina Berglund)
- PEP (Uwe Sauer)
- Swedish Metabolomics Centre, SMC (Jonas Gullberg)
- UCEM (Linda Sandblad)
- X-Ray Crystallisation (Uwe Sauer)

*Please take a note of the presentation outside of the Carl Kempe salen, which gives an overview over all available scientific infrastructures and other coordinated services at KBC.*

### 15.00 Presentation of the KBC Poster Award and Conclusion Closing of the KBC DAYS 2017

Per Gardeström

Scientific coordinator of KBC