

Forskning inom två universitet, tre fakulteter och fem institutioner under samma tak

Fem institutioner och två forskningsenheter förenas idag inom KBC: institutionen för ekologi, miljö och geovetenskap (EMG) står för en bred profil inom ekologisk, evolutionär, miljö- och naturvårdsforskning. Vid kemiska institutionen bedrivs forskning i biologisk kemi, biogeokemi och teknisk kemi. Inom institutionen för medicinsk kemi och biofysik vid medicinska fakulteten bedrivs molekylärt inriktad forskning på geners och proteiners funktioner. Institutionen för fysiologisk botanik, Umeå universitet, och institutionen för skoglig genetik och växtfysiologi, Sveriges Lantbruksuniversitet (SLU), bildar tillsammans Umeå Plant Science Centre (UPSC) vars forskning är fokuserad på växt- och skogsbioteknik. SLUs enhet för biomassateknologi och kemi (BTK) forskar om optimeringen av förnyelsebar biomassa från växter och står som värd för det nationella forskningsprogrammet för bränslepellets. Enheten för energiteknik och termisk process-kemi (ETPC) är en del av institutionen för tillämpad fysik och elektronik. ETPC:s forskning är fokuserad på att främja en effektiv och miljövänlig användning av biomassa i olika termokemiska processer.

Research within two universities, three faculties and five departments in one KBC building

Five departments and two research units are joined at KBC: The Department of Ecology and Environmental Science (EMG) has a broad research profile in ecology, evolution, environmental science and conservation. The Department of Chemistry conducts research in biological chemistry, biogeochemistry and technical chemistry. Within the Department of Medical Biochemistry and Biophysics, part of the Faculty of Medicine, research is conducted at the molecular level focused on gene and protein functions. The Department of Plant Physiology, Umeå University, and the Department of Forest Genetics and Plant Physiology, Swedish University of Agricultural Sciences (SLU), form Umeå Plant Science Center (UPSC) with a research focus on plant and forest biotechnology. The SLU research unit Biomass Technology and Chemistry (BTC) focuses on the optimization of renewable plant biomass and hosts the national research programme for fuel pellets. The unit Energy Technology and Thermal Process Chemistry (ETPC) is part of the Department of Applied Physics and Electronics. ETPC's research is focused on promoting an efficient and environmentally friendly use of biomass in different thermochemical processes.

Besök BTKs försöksanläggning - buss transfer kommer att organiseras i samband med besöket av laboratorier. Anmälan behövs. Visit the BTC pilot plant in Röbbäcksdalen during the KBC days - bus transfer will be organised. Registration needed.

Om KBC / About KBC

Fem institutioner och 2 forskningsenheter med 650 anställda, varav 300 forskare/lärare och 220 doktorander. Five departments and two research units with 650 employees, including 300 scientists /lecturers and 220 PhD students.

KBC Research School

The KBC Research School provides PhD education of the high international standard with a focus on both scientific and personal development. The PhD students will be prepared for a career in science or society and for leading positions in both business and public administration.

Around 30 courses and workshops are offered per term and give the graduate students the unique opportunity to get insight into state-of-the-art techniques and the latest developments in our main research areas.

Kontakt / Contact

Kemiskt Biologiskt Centrum/KBC
Umeå universitet, 90187 Umeå
www.kbc.umu.se

Per Gardeström, professor
vetenskaplig samordnare/scientific coordinator
per.gardestrom@plantphys.umu.se
+46 90 786 54 22

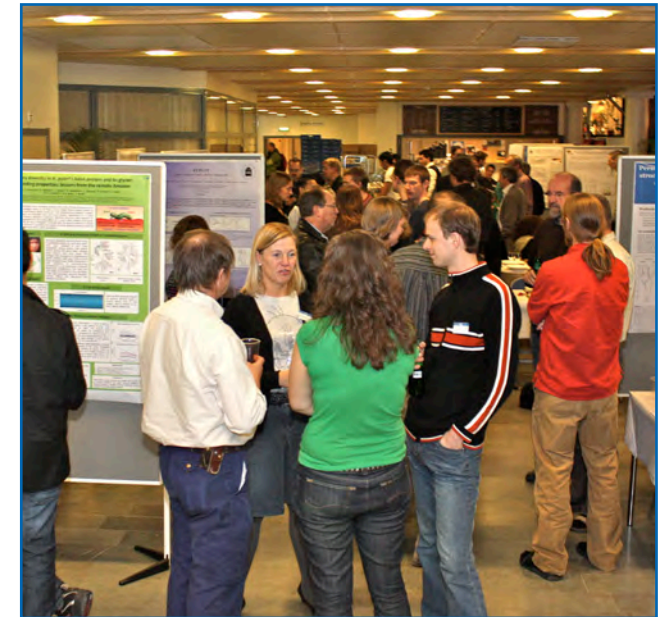
Marianne Sommarin, professor
föreståndare/director KBC Research School
marianne.sommarin@plantphys.umu.se

Eva-Maria Diehl, informatör/information officer
eva-maria.diehl@plantphys.umu.se
+46 073-0885731



Tack till Kempestiftelserna - Stiftelserna J.C. Kempe och Seth M. Kempes Minne - för omfattande stöd till vårt postdoktor-program.

We thank the Kempe foundations - Stiftelserna J.C. Kempe och Seth M. Kempes Minne - for kindly supporting our KBC post doc programme.



KBC - DAYS 2010

Kemiskt Biologiskt Centrum

10th - 11th November
Stora hörsalen

pictures: Eva-Maria Diehl



www.kbc.umu.se

KBC-Days 2010

Wednesday, 10 November 2010

08.30–09.00 Registration

09.00–09.15 Welcome and Introduction

Per Gardeström, scientific coordinator of KBC

09.15–10.15 Evolution of olfaction

Bill S Hansson
Department of Evolutionary Neuroethology
MPI for Chemical Ecology Jena, Germany

10.15–10.45 *Coffee break*

10.45–12.15 The strong research environments at UmU connected to KBC

Chairperson: Stefan Björklund

10.45–11.00 **Biological Chemistry**

Pernilla Wittung Stafshede

11.00–11.15 **Ecosystem Changes**

Lennart Persson

11.15–11.30 **IceLab– Integrated Science: Mathematics and Computational Modelling**

Martin Rosvall

11.30–11.45 **Solar Fuels**

Johannes Messinger

11.45–12.00 **Umeå Environmental and Biogeochemistry Initiative**

Mats Tysklind

12.00–12.15 **UCMR Infection Biology**

Bernt Eric Uhlin

12.15–12.30 **Umeå Plant Science Centre**

Åsa Strand

12.30–13.30 *Lunch*

13.30–15.00 Session I: KBC-Kempe-Postdocs

Chairperson: Mats Tysklind

13.30–13.45 **Introduction - Kempestiftelserna**

Carl Kempe

13.45–14.00 **Interfacial chemistry of hematite in water: Cryogenic XPS and electrochemical studies**

Kenichi Shimizu, Department of Chemistry

14.00–14.15 **Water binding to the Mn₄CaO₅ cluster in the Photosystem II**

Guangye Han, Department of Chemistry

KBC-Days 2010

Wednesday, 10 November 2010

14.15–14.30 **Enzyme production by filamentous fungi: comparative analysis of the secretome of *Trichoderma reesei***

Jun He, Department of Chemistry

14.30–14.45 **In vitro interactions between model proteins and amyloid inhibitors**

Istvan Horvath, Department of Chemistry

14.45–15.00 **Speciation and dynamics of organic phosphorus in terrestrial and aquatic ecosystems**

Andrea Vincent, Department of Ecology and Environmental Science

15.00–15.15 **Are plants cultivated in growth chamber actually the same as plants grown outdoor?**

Yogesh Mishra, Umeå Plant Science Centre

15.15–15.45 *Coffee break*

15.45–17.00 Session II: KBC-Kempe-Postdocs

Chairperson: Pär Ingvarsson

15.45–16.00 **The Mediator Complex in plant: Role in stress response**

Céline Davoine, Department of Medical Biochemistry and Biophysics

A novel substrate for human DNA polymerase theta

Matthew Hogg, Department of Medical Biochemistry and Biophysics

16.15–16.30 **Non-essential but important – significance of DNA polymerase ϵ small subunits for replication fidelity in yeast**

Jaroslav Maceluch, Department of Medical Biochemistry and Biophysics

16.30–16.45 **A new method for creating monoclonal antibodies specific for toxic oligomeric proteins**

Kristoffer Brännström, Department of Medical Biochemistry and Biophysics

16.45–17.00 **Oxalate decarboxylase from *Trametes versicolor* - properties and applications**

Madhavi Latha, Department of Chemistry

17.00–18.15 Poster Session: The PhD students with midterm exam 2010 present their projects

*Chairperson: Marianne Sommarin
Deputy Vice-Chancellor UmU, and director of KBC Research School*

18.30 – *Dinner, presentation: winner of the poster award*

KBC-Days 2010

Thursday, 11 November 2010

09.00– 09.30 Session III: The new members at KBC

Chairperson: Gunnar Wingsle

09.00–09.15 **BTC – Biomass Technology and Chemistry**

Torbjörn Lestander

09.15–09.30 **ETPC – Energy Technology and Thermal Process Chemistry**

Christoffer Boman

09.30–10.00 *Coffee break*

10.00–11.45 Session IV: The Technical Platforms connected to KBC

Chairperson: Göran Samuelsson

10.00–10.15 **CLiC – Computational Life Science Cluster**

Johan Trygg

10.15–10.30 **Electron Microscopy Platform**

Markus Grebe

10.30–10.45 **Proteomics Platform**

Gunnar Wingsle

10.45–11.00 **Metabolomics Platform**

Thomas Moritz

11.00–11.15 **NMR Platform**

Gerhard Gröbner

11.15–11.30 **LCBU – Laboratories for Chemical Biology Umeå**

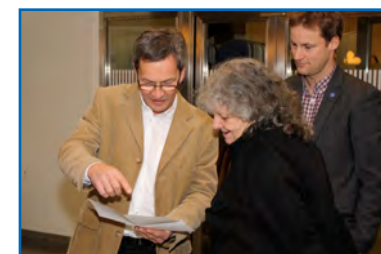
Mikael Elofsson

11.30–11.45 **The new Vibrational Microspectroscopy Lab**

András Gorzás

11.45–12.45 *Lunch*

13.00–15.00 *Lab visits technical platforms, inauguration of the vibrational microspectroscopy lab and visit at the BTC pilot facilities at Röbbäcksdalen*



Per Gardeström and Fredrik Almqvist informed Nobel laureate Ada Yonath about KBC in December 2009