

Department of Medical Biochemistry and Biophysics

MBB Newsletter 4:2022

A word from the Chairman



Photo: Ulf Sirborn

Dear colleagues.

It's been busy few months, with some great in-person conferences, an inspiring Nobel Prize and of course our retreat, which I truly enjoyed. So much great science happening, and so many nice people to work with.

But what excites me the most right now are the MBB Frontier Grants. We are looking for candidates who "dream big, aim high and want to solve important and fundamental biomedical problems", to start their new labs at MBB. We offer an excellent and competitive startup package, and a great environment to do science. If you know any such dreamers, please encourage them to apply:

"MBB Frontier Grant"

Sincerely, Sten

Department information

Information for doctoral students and post docs

On the third day of the MBB Retreat we had discussions dedicated on doctoral student training and post doc careers. In conjunction with that several topics were raised regarding the new policies in Sweden for residence permits, the required thesis contents, carreer paths, salaries, and general questions around health and wellbeing.

As a follow-up of that day we are aiming to organise another general meeting on these topics together with the other departments at Biomedicum, to be held within a few months.

In the meantime, we would wish to refer anyone interested to the many good information sites that are available through the KI website, especially as follows:

- Revised residence permit regulations
- · Thesis contents criteria
- · Careers, salaries and health support

As was also said during the retreat, you can always take contact with us at MBB for further support and discussions. Please also let us know if you are interested in joining MBB's doctoral student selection committee.

Best regards, Elias Arnér

Director of doctoral education at MBB

News from undergraduate teaching

The new medical programme is growing and the first students are at their third term now, in a course spanning throughout the whole term: Basic Science 5. This course is coordinated by FyFa, but MBB contributes in certain areas, such as the metabolism of heme, alcohol, ROS, osmosis-tonicity, and acid-base balance, as well as project supervision towards the end.

MBB will have minor roles in a few later courses, but our involvement in the new medical programme (with main roles in term 1) is slowly finding its form. As for the biomedical programme, a few cases where teachers have been late, unprepared or absent have surprised us this fall, which prompts a reminder that once you have accepted to teach at a certain time, it has

On another note, the teaching unit wishes to provide short-time funding and good support for well-founded initiatives and ideas to further develop our teaching. Please take the time and discuss within and between divisions if there are ideas on pedagogical development projects, investments, new courses, or other ideas - big or small - in this context, and report this promptly to your teaching division representative or directly to me or Bernhard Lohkamp. E.g. we are looking for someone to help us translate (Swe -> Eng) and adapt the chemistry "pre-course" site for the bachelor programme in biomedicine, so if anyone has an interest in this, which amounts to 2-3 weeks of work, please let us know.

Best regards,

Håkan Andersson

Director of undergraduate education (GUA) at MBB

priority over other tasks.

Save the date - Department Council on 2 December

The next Department Council will take place on 2 December at 15-17, followed by a Chrismas mingle in the Faculty club.

Save the calendar event to your Outlook: "MBB Department Council"

KI's salary review 2022

During October and November, KI will conduct a salary review. The salary review is governed by three central collective agreements between the Employers' Confederation and the trade unions of Saco-S, OFR/S, P, O and Seko.

All our employees will have a performance management dialogue 2 with their closest PI.

Learn more about how the salary revision works: "Information regarding salary revision"



Photo: HR at KI

No centrally organized Christmas party

This year there will be no centrally organized Christmas party, which leaves each division free to book their own Christmas dinners.

The same agreement for Christmas dinners is in place this year as last year. For booking restaurant meals we must use one of the following agents:

Meetly AB Book here: www.meetly.se/ki

Memento event AB (Julbordsmäklarna)
 Book here: www.julbordsmaklarna.se

Or for catering we need to use:
Nanna Svartz: restaurang-ns@eurest.se

The amount we have for Christmas dinners per person is 800 SEK, VAT included.



Photo: Sofia Lindberg

Increase in communications services from 30 to 40% starting 1 January 2023

MBB increases the communications services from 30 to 40% from 1 January 2023. Communications support you can receive are for example in the following areas:

- · Web updates of research group and core facility pages
- · Calendar posts for dissertations, half-time controls, and other events and seminars
- Communication planning and guide you on KI's overall rules and regulations regarding communication
- News articles

Receive updates about the work on the new metro station

If you are interested in how the work on the new metro station is progressing, please visit: "New metro station" (in Swedish)

To receive an email the day before blastings, please email Vicky Söderling or Amanda Borgström to register:

- vicky.soderling@regionstockholm.se
- amanda.borgstrom@regionstockholm.se



Photo: Region Stockholm

Travel profiles for new travel agent

This e-mail concerns those who have **a travel profile** to book travels through BCD Travel.

From 1 December KI will have a new travel agent, and you have received an e-mail from the KI Travel Manager regarding updating your profile. There is not much time to fill those



out, so double check your spam filters if not having updated your information.

More information regarding the agreement will arrive later.

Photo: Pixabay

KI Work Environment Day December 2th (#KIWED22)

Arranged by KI Work Environment Committee (Arbetsmiljönämnden vid KI /AMN)

Where: Join by Zoom or IRL at Scheelesalen Campus Solna

When: Dec 2th 13:00-15:00 Who: Students and Staff at KI

How: Register and/or nominate to KIWE Award and SEK 30 000 (use your KI-log in)

KI's Solna campus goes smoke-free

Starting this autumn term, the KI campus at Solna will be smoke-free, meaning that smoking will be prohibited both indoors and outside.

More information: "KI's Solna campus goes smoke-free"

Workshop on 24 November: Find the news potential in your research and write for The Conversation

The international news platform The Conversation arranges, in collaboration with the Communications Office at KI, a digital training session for researchers on finding the news potential in your own research and writing for the public.

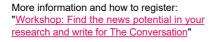




Photo: Pixabay

KI's visual identity is being updated

Work is underway to develop KI's visual identity, with the aim of clarifying and better meeting the legal requirements for accessibility and to work better in a digital context. KI's logo will be adapted for digital channels, the colour palette will be altered and expanded, and a new single typeface will replace the current ones.

Read more: "KI's visual identity is being updated"



Graphics: Essen

Recent publications, prizes and grants

Horizon Europe grants over SEK 100 million to researchers at Karolinska Institutet

Through the Horizon Europe programme, researchers at Karolinska Institutet have been granted large financial grants for approximately 20 different projects aimed at solving various societal challenges in health. One of the projects will explore the possibility of creating a common system for the reuse of already approved medicines to treat various diseases.

Read the full article "<u>Horizon Europe grants</u> over SEK 100 million to researchers at Karolinska Institutet"



Photo: Getty Images

Simon Elsässer on the Nobel Prize in Chemistry: "Wonderful and not at all unexpected"



K. Barry Sharpless, Morten Meldal and Carolyn R. Bertozzi have been awarded the 2022 Nobel Prize in Chemistry for the development of click chemistry, a quick and efficient way to build molecules. Several KI researchers use the technology in their daily research, one of which has co-authored a study with one of this year's prize winners. Here, they comment on the prize.

Read the full article "KI researchers on the Nobel Prize in Chemistry: "Wonderful and not at all unexpected""



Simon Elsässer. Photo: Johannes Frandsén

Björn Reinius awarded the SSMF Consolidator Grant 2022

The Swedish Society for Medical Research (SSMF) has awarded grants to five KI researchers. The grants give both prominent researchers the opportunity to strengthen their position and provide establishment support for younger researchers.

Read the full article "Five KI researchers receive grants from the Swedish Society for Medical Research"



Björn Reinius. Photo: Ulf Sirborn

Positive effects of omega-3 on the immune system in cases of severe COVID-19

Intravenous treatment with omega-3 fatty acids in elderly hospitalised patients in intensive care due to COVID-19 seems to have positive effects on the ability of the immune system to cope with the virus, according to a study from Karolinska Institutet. In the future, the study, published in the journal Clinical and Translational Medicine, could lead to a complementary, cost-effective treatment for COVID-19.

Read the full article "Positive effects of omega-3 on the immune system in cases of severe COVID-19"



Photo: Getty Images

REMEDIAALL, an ambitious EUfunded research initiative, launches to drive forward the repurposing of medicines in Europe

The core facilities at the Department of Medical Biochemistry and Biophysics and the SciLifeLab infrastructure contribute to the REMEDi4ALL project that kicks off with the ambition of establishing a European research and innovation eco-system facilitating fast and cost-effective patient-centric development and access to repurposed medicines..

Read the full article "REMEDi4ALL, an ambitious EU-funded research initiative, launches to drive forward the repurposing of medicines in Europe"



Photo: Mikael Wallerstedt

Gonçalo Castelo-Branco receives the Hans Wigzell Research Foundation's science prize

The Hans Wigzell Research Foundation (Hans Wigzells Forskningsstiftelse) awards its annual scientific prize to Professor Gonçalo Castelo-Branco. He receives the



prize of SEK 925,000 for his important research around oligodendrocytes – a cell type which plays important roles in relation to how the human brain develops and functions..

Read the full article "Gonçalo Castelo-Branco receives the Hans Wigzell Research Foundation's science prize"



Professor Gonçalo Castelo-Branco receiving a scientific prize. Here togehter with Hans Wigzell and Magnus Carlsson. Photo: Karin Hjertén

Synthetic mucus-inspired lubricating gel proves highly effective against HIV and herpes

A synthetic prophylactic gel derived from cow mucins was in cellular lab tests 70 percent effective in preventing infection with HIV, and 80 percent effective against herpes, researchers from Karolinska Institutet and KTH Royal Institute of Technology show in a new a study in *Advanced Science*.

Read the full article "Synthetic mucusinspired lubricating gel proves highly effective against HIV and herpes"



Graphic by: Cosmin Butnarasu

KI selected as platform for chemical biology in EU research infrastructure

EU-OPENSCREEN is a European network that provides infrastructure for high-capacity screening in chemical biology and early identification of drug candidates. As of July 2022, Sweden is represented in the network, through the Chemical Biology Consortium Sweden (CBCS) at Karolinska Institutet, one of two selected Swedish nodes.

Read the full article "KI selected as platform for chemical biology in EU research infrastructure"

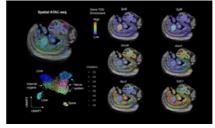


Francesco Massai and Kun Qian are responsible for the newly installed and automated screening equipment. Photo: Anna-Lena Gustavsson

New technology to understand cell types and how diseases develop

An ongoing effort to create detailed molecular atlases of individual cells in different tissues aims to better understand how diseases develop. Now, a team of researchers from Yale and Karolinska Institutet, has developed a technology that brings that goal one step closer. The findings were published in *Nature*.

Read the full article "New technology to understand cell types and how diseases develop"



Left: clustering of genome-wide accessible chromatin profiles revealed distinct tissue types (lower left) and mapping them to the mouse embryo tissue section (upper left). Right: directly "seeing" chromatin accessibility of individual genes. Photo: Rong Fan.

Single clinical test provides more answers about COVID-19

Researchers at Karolinska Institutet present the results of a refined clinical COVID-19 test, which has been used to track the spread of the Omicron variant in real time in the Swedish population. The study, published in the journal *Med*, provides new insights into the dominance transition of Omicron sublineages that occurred consistently across the world.

Read the full article "Single clinical test provides more answers about COVID-19"



Photo: Getty Images

Novel way to diagnose Alzheimer's disease by blood analysis



Using proteomics and other advanced tools of molecular biology, an international team of researchers led by a group from Karolinska Institutet have found a novel way to diagnose Alzheimer's disease by blood analysis, with a potential to uncover the underlying cause of the disease and prevent its development.

Read the full article "<u>Novel way to diagnose</u> <u>Alzheimer's disease by blood analysis</u>"



Roman Zubarev. Photo: Johannes Frandsén

Roberta Filograna awarded grant from the Loo and Hans Osterman Foundation

Roberta Filograna, a researcher with Prof. Nils-Göran Larsson at the division of molecular metabolism has received a grant to study the role of mitochondrial dysfunction in Parkinson's disease.

Read the full article "Roberta Filograna awarded grant from the Loo and Hans Osterman Foundation"



Roberta Filograna. Photo: Shreelatha Bhat

Three KI researchers among the "Future research leaders"

The Swedish Foundation for Strategic Research, SSF, has appointed the eight generation of "Future research leader", three researchers from Karolinska Institutet. The researchers receive 15 million SEK each during a five year period and will join a leadership training program.

