THE DANISH SOCIETY FOR MATRIX BIOLOGY

Newsletter

No. 7, December, 2018

From the Chairman

Welcome to the Christmas edition of our 7th Newsletter!

In November, we once again had a successful Matrix Biology PhD course at Institute of Sports Medicine Copenhagen (ISMC), Bispebjerg Hospital led by Chloé Yeung (please see more about this exciting course in this newsletter). Also, board members, A/Prof. Marie Kveiborg and A/Prof. Niels Behrent have been busy arranging the upcoming Matrix Biology PhD course in conjunction with the Joint Nordic Extracellular Matrix Biology Meeting 14-15th March 2019 at BRIC/Panum Institute, University of Copenhagen. We are proud to confirm the speakers for this Nordic meeting: Keynote speaker: Prof. Michael Kjaer, Prof. Clair Baldock, Prof. Taina Pihlajainmi and Prof. John Couchman and many more. The board is working hard for the final details for this high-level meeting facilitating collaborations and scientific discussions together with a conference dinner in the city. The board will select abstracts for oral and poster presentations where company sponsors will support awards for the best oral and poster presentations.

So please save the date: Joint Nordic Extracellular Matrix Biology meeting 14-15th March, 2019! Deadline for registration and abstract submission is 31st January, 2019.

Merry Christmas and Happy New Year and we look forward to another year of exciting seminars and new matrix research in 2019.

Sincerely,
Christian Couppé

Matrix Biology PhD course report
7th-9th November, Bispebjerg Hospital, Copenhagen

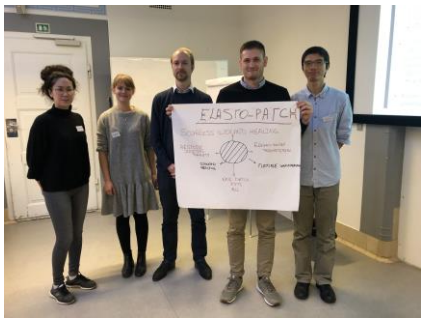
We run the PhD Course in Matrix Biology every year. This year the course took place at the Institute of Sports Medicine Copenhagen (ISMC), Bispebjerg Hospital. The lecturers invited to teach the course were Karl Kadler (Wellcome Trust Centre for Cell-Matrix Biology, UK), Graham Riley (U. East Anglia, UK), Mike Davies (KU), René Svensson (ISMC), Janine Erler (BRIC/KU), Niklas Jørgensen (SDU), Marie Kveiborg (KU), Magnus Ågren (Copenhagen Wound Healing Center, Bispebjerg Hospital), Katja Heinemeier (medical writer), Peter Schjerling (ISMC), Clara Prats (KU), Niels Behrendt (Finsen Lab/KU), and Chloé Yeung (ISMC).

The course aims to provide a comprehensive background on ECM molecules, how they are synthesised, the complexity in its assembly and organisation, ECM genetic diseases and how it influences cells. Students also learn about post-translational modifications of the ECM, including oxidation, crosslinking and proteolysis by metalloproteinases. The talks cover many model tissues and diseases for ECM research including tendon, cartilage, bone, skin, cancer and cardiovascular diseases, and the students get to learn how different technologies are applied in current research, including but definitely not limited to serial block face-scanning electron microscopy, tissue decellularisation techniques, live cell imaging, a variety of microscopy techniques, different levels of mechanical measures and hear about *in vivo* models.

Students measuring the mechanical properties of different elastic bands in René Svensson's interactive lecture.

We promote active participation in the course and all students get the opportunity to present their projects and are encouraged to ask questions throughout the course and interact with one another. In addition to the interactive lectures by René Svenssion and Clara Prats, we introduced a group work session, in which groups of students had to design ECM replacement products based on what they had learnt so far in the course and present it in a "*Løvens Hule*" style.

All the participants rated the course Excellent/Good and all would recommend the course to someone they know if they needed to learn about matrix biology. When asked what they most enjoyed about the course, the majority of the comments were about the talks, followed by the group work session. *"Talks by the invited speakers. I got an overview about matrix biology and what's actively investigated in this area." "There were really nice talks, very relevant for my own project and covering current research topics."*

"The group work (30 min + 5 min presentation) because this is how exactly we apply the knowledge learned at the course to business/career."

When asked what they found most useful to their studies, almost all participants said the lectures were most useful, but also the opportunity to present their own work and get feedback. *"Basic matrix biology and technologies or techniques that's been developed to study matrix biology. I got inspired by all the talks with interesting aspects I can look into in my project." "When researchers talked about their own research and showed their own methods and results it was very inspiring." "Getting feedback from the people who specialise in the field."*

If you would like to learn more about the course or have any suggestions for next year's program, please contact the course co-ordinator, Chloé Yeung (chloe.yeung@gmail.com).

Chloé Yeung
Postdoc, Institute of Sports Medicine Copenhagen, Bispebjerg Hospital

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My name is Alexander Reese, and I'm doing an industrial PhD in collaboration between University of Copenhagen and Nordic Bioscience. I'm doing research within fibrosis with emphasis on cardiovascular diseases. My specific project entails developing novel biomarkers and measuring these and existing biomarkers in clinical trials, as well as doing cell experiments portraying fibrotic processes.

From my attendance at the Matrix Biology Course, I hoped to broaden my knowledge of the extracellular matrix, gain insight in specific processes and be able to discuss different aspects relating to ECM research with researchers in the field. Furthermore, to get feedback on and discuss topics relating to my own research. In general, the course was very well structured and planned with great talks from skilled researchers of the ECM.

All the invited speakers gave very interesting talks, and I got insight in ECM mechanics I did not expect to. I would like to highlight both Janine Erler's and Michael Davies's talks. Their data and perspectives were extremely well presented with a solid scientific rationale. Especially Michael's talk was interesting to me, as I work within cardiovascular fibrosis and damage.

I will recommend this course to all PhDs involved in ECM research or topics relating hereto. The course gives a broad introduction to many different ECM tissues and mechanics.

Alexander Reese, PhD student at Nordic Bioscience, Denmark

Membership

Our membership (100 dkr) includes free registration to our annual meeting, 3-4 newsletters a year, updates on position openings and conferences as well as eligibility for travel grants to local and international matrix meetings. We also appreciate any extra donations and will acknowledge your contribution in our next newsletter. **Please remember to EMAIL your name and receipt of your payment to our treasurer Abbas Jafari (ajafari@sund.ku.dk).** You can pay by:

1) Transferring via MobilePay to **46151** (Danish Society for Matrix Biology) *OR*

2) Transferring to the DSMB bank account: Reg: 1551 Account: 1227130 (Danske bank). Please indicate "DSMB membership" on your bank transfer *OR*

3) Email our treasurer Abbas Jafar (ajafari@sund.ku.dk) if you need to transfer from an international account

Courses for PhD students (local and overseas) at University of Copenhagen

Extracellular Matrix and Proteolysis in Disease

https://momed.ku.dk/courses/2019-courses/11marts2019

11th-15th March, 2019 at BRIC, Copenhagen Biocenter and Panum Instititue, University of Copenhagen

ECTS credits 4.00

Enrolment deadline: 24th Jan, 2019

Enrolment for the PhD course includes registration for the Joint Nordic Extracellular Matrix Biology Meeting 14-15th March, 2019

Course coordinators: A/Prof. Marie Kveiborg (marie.kveiborg@bric.ku.dk) and Niels Behrendt

Aim

The extracellular matrix and its dynamic remodeling are decisive factors in several cellular functions and, when dysregulated, give rise to several types of disease. In addition to the essential scaffolding function of extracellular matrix molecules, these structures also harbor secreted or shed proteins, such as growth factors, chemokines and cytokines, and interact with membrane-anchored proteins, including adhesion and growth factor receptors. The consequences of extracellular matrix remodeling are wide-ranging, resulting in activation or inactivation of substrate proteins, or modulation of the substrate's functional properties. Thus, it is not surprising that the implicated proteases play key roles in normal tissue development and repair, as well as in the pathogenesis of a plethora of diseases.

Content

The course will address a number of structural, biochemical, and cell biological properties of extracellular matrix proteins and the associated proteases, including cutting-edge methodological development in this field of research. Furthermore, it will provide important examples of the contribution of extracellular proteolysis to development and disease - with particular focus on cancer and inflammatory disorders.

The course concludes with the participants attending and presenting their individual research projects at a *joint scientific conference of the Nordic Societies of Matrix Biology* (refer to the flyer attached and below in the upcoming meetings).

Upcoming meetings

2019 Joint Nordic Extracellular Matrix Biology Meeting

14th-15th March, 2019, Panum Institute, University of Copenhagen, Denmark

https://www.dsmb.dk/ and click on "Calling for Abstract" link

Registration and Abstract deadline: 31st January, 2019

Registration include DSMB annual membership

Email: dsmb.dk@gmail.com

2019 GRS and GRC on Cartilage and Biology
Cartilage Development and Regeneration and Their Implications in Disease Therapies 16th-22nd March 2019, Galveston, TX, US
https://www.grc.org/cartilage-biology-and-pathology-grs-conference/2019/
https://www.grc.org/cartilage-biology-and-pathology-conference/2019/

2019 BSMB Spring meeting & Matrix Biology Ireland Meeting
Stroma, Niche, and Repair
8-9th April 2019, Liverpool, UK
http://www.bsmb.ac.uk/

2019 GRS and GRC on Metalloproteases
Structure, Function and New Methods in Metalloproteases
11th-17th May 2019, Lucca (Barga), Italy
https://www.grc.org/metalloproteases-grs-conference/2019/
https://www.grc.org/metalloproteases-conference/2019/

2019 French Society for Extracellular Matrix Biology annual meeting
ECM: From Diseases to Welfare 15th-17th May, Reims, France
http://meeting-sfbmec.fr/?utm_source=altemail&utm_medium=email&utm_campaign=2018-10-30+SFBMEC+1

2019 GRS and GRC on Collagens
Collagens and Associated Molecules Supporting Organ Structure and Function
14th-19th July 2019, New London, NH, USA
https://www.grc.org/collagen-grs-conference/2019/
https://www.grc.org/collagen-conference/2019/

FASEB Science Research conference on
The Multicellular Proteins on Tissue Remodelling and Inflammation Conference
14th-19th July, 2019, Lisbon, Portugal
https://src.faseb.org/matricellular-proteins