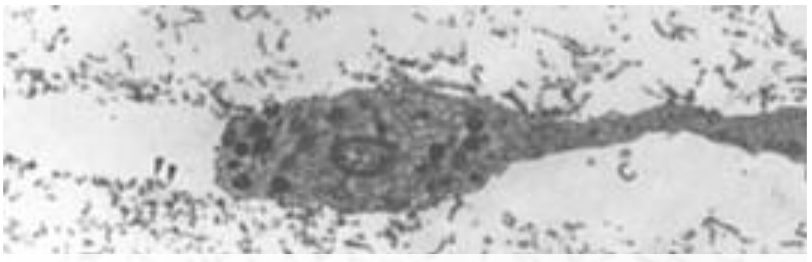

A fibroblast within a tethered lattice, after 13 days, with a cavity surrounding the cell and areas of packed collagen fibrils *(Porter et al. 1998 Wound Rep. Reg. 6: 157-166)*

ISMB NEWSLETTER 31 January 2019
Editor: Sylvie Ricard-Blum

FROM THE PRESIDENT'S DESK

Dear ISMB members:

With the first issue of the ISMB Newsletter in 2019 I would like to wish you a joyful, prosperous, and successful New Year.
After four years of serving the ISMB as President and President-Elect of the Society, and an additional four years as a Councilor of the ISMB, it is my great pleasure to pass the baton to the capable hands of Sylvie Ricard-Blum. Two years ago, we celebrated the 25th Anniversary of the ISMB. And in 2018, ISMB membership reached an all-time high. I would like to thank all present and past Councilors of the ISMB that I had a great pleasure to work with and who contributed to these achievements. In particular, I would like to thank David Hulmes, the past ISMB secretary/treasurer, and Sylvie Ricard-Blum, the ISMB Newsletter Editor and a current ISMB President. I was also fortunate to collaborate closely with the Matrix Biology journal and its publisher Elsevier. My greatest motivation for serving the ISMB was always to promote young scientists to participate in matrix-related meetings. Their enthusiasm and gratefulness invigorates the ISMB community.
I am optimistic that the ISMB will continue to grow. I am sure that a new generation of matrix biologists will be able to celebrate the golden anniversary of the ISMB and many World Matrix Biology meetings.

Liliana Schaefer, ISMB Past-President

Greece, June 2018, Courtesy A. Naba (IUC, Chicago, USA)

Dear ISMB members,

It is a great honor to serve as President of the ISMB, and I am pleased to do it with Jo Adams the new Secretary, Ruud Bank, the new Treasurer, and the new Vice-President, who should be elected soon. There will also be a call for nominations for new Council members.
I would like to thank Liliana Schaefer for her relentless efforts to gather the extracellular matrix community worldwide. As Past-President she remains a member of the Council, which will undoubtedly benefit from her experience. I also thank David Hulmes for the work he did as Secretary/Treasurer, and for ensuring a smooth transition with his successors.

The ISMB welcomes two new research groups, the Chemokine and Endothelial Glycocalyx Group, headed by Doug Dyer at the University of Manchester (UK), and the DFG research group (FOR2722) working on novel molecular determinants for musculoskeletal extracellular matrix homeostasis, which is coordinated by Bent Brachvogel and Anja Niehoff at the University of Cologne (Germany).

Last, I thank all the ISMB members, who contributed to this issue of the newsletter and more specifically Chloé Yeung for the "In Focus" section (spotlights on methods that other ISMB members may find useful), and Wei Kong for providing an extensive report on the 11th Asian and Pan-pacific Connective Tissue Societies Symposium & 3rd National Conference of Chinese Society for Matrix Biology held in Hangzhou last November.

The ISMB will do its very best to continue to support young scientists in the Matrix Biology field and to sponsor Matrix Biology meetings around the world beyond the ASMB, MBE, and Pan-Pacific meetings.

I wish you a very successful new year.

Sylvie Ricard-Blum, ISMB President

ISMB officers

President	Sylvie Ricard-Blum
Vice-President	To be elected
Secretary	Jo Adams
Treasurer	Ruud Bank
Council Members	
Suneel Apte	Danny Chan
Anthony Day	Julia Etich
Jamie Fitzgerald	Wei Kong
Taina Pihlajaniemi	Liliana Schaefer (Past-President)
Gehrard Sengle	Barbara Smith
Hide Watanabe	Chloé Yeung
Ex officio	
Renato Iozzo	Bjorn Olsen

COMPOSITION OF ISMB COUNCIL SUBCOMMITTEES

Communication
Jo Adams (UK)
Danny Chan (Hong-Kong)
Julia Etich (Germany)
Wei Kong (China)
Sylvie Ricard-Blum (France, chair)

Membership
Jamie Fitzgerald (Australia, chair)
Hide Watanabe (Japan)
Suneel Apte (USA)

Meetings and travel grants
Anthony Day (UK)
Ruud Bank (The Netherlands, chair)
Barbara Smith (USA)
Gerhard Sengle (Germany)
Hide Watanabe (Japan)
Chloé Yeung (Denmark)

Like ISMB on Facebook
https://www.facebook.com/IntSocMatBio/

and follow the ISMB on Twitter
ISMB@IntSocMatBio https://twitter.com/intsocmatbio

ISMB correspondents of National Societies for Matrix Biology for Facebook & Twitter

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The Finnish Connective Tissue Society
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Matrix Biology Society of Australia and New Zealand (MBSANZ)
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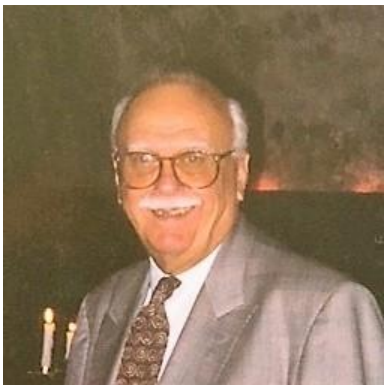
louise.kung@mcri.edu.au

The Swiss Society for Matrix Biology (SSMB)
Collin Ewald, ETH Zurich (Switzerland)
collin-ewald@ethz.ch
Twitter of SSMB: @SwissMatrixBio

OBITUARY



Professor Jacques P. Borel passed away in Paris on January 9, 2019, at the age of 87.
Jacques Borel, M.D., Dr Sci., was born on April 27, 1931. His father was a psychiatrist and was in charge of the direction of several psychiatric hospitals. At that time, the directors were housed within the hospital, so that Jacques Borel spent a good part of his childhood in psychiatric hospitals. It is undoubtedly this very early immersion that decided his vocation as a medical doctor. He began his medical studies in Montpellier but quickly joined Paris. Very early, he was appealed and attracted to biology and, in parallel with his medical studies, he turned to scientific studies, particularly towards Biochemistry, a scientific discipline that was booming at that time. At the end of his studies, he entered the prestigious laboratory of Professor Max-Fernand Jayle, a pioneer of hormonology and the discoverer of haptoglobin, at the Faculty of Medicine of Paris. There, Jacques Borel developed his talents as a researcher and published his first works, mainly devoted to haptoglobin, in the Bulletin of the French Society of Biological Chemistry and in the Proceedings of the Sessions of the Paris Academy of Sciences.

In 1960, he sat for the competition of aggregation which he passed brilliantly. After a brief stay in Nantes, he was appointed Professor at Reims, France, in 1963, in one of the newly created « Hospital and University Centers » (CHU). His conditions of installation in Reims were very bad. His hospital laboratory consisted of a single room in the basement of the administrative building and it took several years of struggles to obtain acceptable hospital premises! For the university part, there was not yet a Faculty of full exercise in Reims but only a "School of Medicine" which was limited to a few teaching rooms and an Anatomy laboratory located in the deserted buildings of the old abbey of Saint Remi, all dirty and obsolete! His research work therefore continued in Paris during these first years, with frequent trips back and forth by train to Professor Jayle's laboratory.

Fortunately, in 1964, the French Ministry of Higher Education decided to build a real Faculty of Medicine at Reims. It opened in 1966 and Jacques Borel could finally have a real laboratory and create a small hospital and university team. At the beginning, his team mainly performed clinical biochemistry (i. e. Borel *et al.*, Clin Chim Acta, 1967). However, Jacques Borel rapidly decided to opt for the study of a family of proteins still poorly characterized at that time: the collagens. In a few years, the team expanded and the first international publications started to emerge, first in the field of analytics, with the development of

several original and efficient methods for the study of collagen metabolism (*i.e.* Szymanowicz AG *et al.*, Biochimie, 1979) but also with the first characterizations of extracellular factors regulating its synthesis (*i. e.* Borel JP *et al.*, Agents & Actions, 1976).

In 1975, Jacques Borel left to Philadelphia with his family to spend a sabbatical year in the laboratory of Professor Nicholas A. Kefalides, who had just discovered type IV collagen. This trip to the US was the starting point for a fruitful collaboration that continued until the death of Professor Kefalides in 2013. It allowed Borel's laboratory to acquire a new national and international dimension. That was officially recognized in 1984 by obtaining the label « CNRS Unit », a research unit entitled "structure and metabolism of collagen" which Jacques Borel led until 1994. Among the main discoveries of this period, one notes the discovery of sequences of type I collagen capable of causing degranulation of neutrophils (Monboisse *et al.*, Biochem. J., 1990), and of type IV collagen sequences which inhibited this activation (Monboisse *et al.*, J. Biol. Chem., 1994). His team also demonstrated the anti-tumor activity of the NC1 domain of type IV collagen (Monboisse *et al.*, FEBS Lett., 1991), which later allowed the characterization of specific inhibitory sequences in the α3(IV) chain (Pasco *et al.*, 2000), later called Tumstatin. In total, 153 scientific publications by Jacques P. Borel are indexed in the Web of Science, to which 7 books of Biochemistry must be added, many of which have been reissued with total revision and completion, and translated into several languages.

Parallel to the development of his research and hospital laboratories, Jacques Borel was entrusted with heavy administrative responsibilities. He succeeded Ladislas Robert as the General Secretary, then the President of the French Connective Tissue Society, now French Society of Extracellular Matrix Biology. He was a member of the Council of the Faculty of Medicine until 1989, when he was elected Research Vice-President of the University of Reims.

Jacques Borel was a leader, able to coach a team behind him. Demanding with his collaborators, but also knowing how to encourage and guide them towards excellence, he was able to create an internationally recognized research unit that survived his departure and progressed further after him in national and international recognition. He was a hard worker, a high-level scientist, but he was also a prominent literary scholar, a great connoisseur of French poetry, his favourite readings. He was also the author of an essay on the difficulties of French research, a collection of stories, and 3 books of memoirs that can still be easily found on the Internet.

Jacques Borel now rests in peace in the small cemetery of his village in the south of France, which he loved so much. To his wife, his children and grandchildren and all his family, we extend our deepest condolences. His memory will remain in our minds.

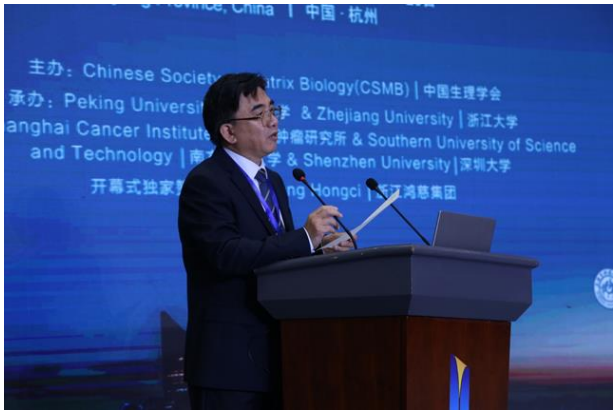
François Xavier Maquart, M. D., Dr Sci.
Member of the National Academy of Medicine
Emeritus Professor of Biochemistry and Molecular Biology,
University of Reims, France

MEETING REPORT

11th Asian and Pan-pacific Connective Tissue Societies Symposium, 3rd National Conference of CSMB, and Peking University Medical Forum for Matrix Biology, (Hangzhou) November 16–20, 2018

The conference was commissioned by the International Society for Matrix Biology, hosted by the Chinese Association for Physiological Societies, jointly organized by Peking University and Zhejiang University. The honorary conference chairman was Professor Qimin Zhan, the executive vice president of Peking University and president of Peking University Health Science Center (PUHSC). The chairman of the conference was Professor Hongquan Zhang from PUHSC. Co-chairs of the conference included Professor Wei Kong from PUHSC, Professor Zhigang Zhang from Shanghai Jiao Tong University School of Medicine(SHSMU), and Professor Luyang Yu from Zhejiang University. The topic of the conference was "Connective tissues: Environment for cellular life activities-basic and clinical applications."

More than 300 participants from 16 countries and regions attended the conference. The opening ceremony was chaired by Professor Hongquan Zhang.



During the opening speech, Professor Zhang recounted the history of CSMB for the participants. He mentioned that this conference provides an inclusive platform for the outstanding scientists and opportunities for young researchers in the field. The president of the International Society for Matrix Biology, Professor Liliana Schaefer made a final speech. She praised the organizing work and academic quality of the conference and assessed the development prospects in the field of matrix biology.

This three-and-a-half-day conference was presented in English, including a plenary lecture, keynote session, youth forum, and poster session. The content of the sessions involved different aspects of matrix biology, from basic mechanistic research related to the matrix to major clinical diseases, and from new technologies to new concepts and ideas. 63 presenters from 50 internationally renowned colleges and institutes presented fascinating lectures during the conference. Professor Reinhard Fässler from the Max Planck Institute of Biochemistry, who is an academician of European Molecular Biology Organization (EMBO), was the keynote speaker. Other presentations were also delivered by outstanding scientists with international influence, including Professor Hongkui Deng (stem cell research) and Professor Francesco Ramirez, a leading expert in cardiovascular diseases.

It is worth noting that the high-quality presentations in the youth forum and poster presentation sessions left a deep impression on the conference participants, enabling them to witness the vibrant development and strong prospects of this field. After an intense competition, six “Outstanding Youth Thesis” and six “Outstanding Poster” prizes were awarded. Professor Zhigang Zhang from the Shanghai Jiao Tong University School of Medicine officiated the awards ceremony on the closing day of the conference.

During this conference, experts, academics, and young people with talent in matrix biology from around the world congregated and fully examined the hotspots, key points, and cutting-edge problems in this field. They also shared relevant research results, new technologies, and innovative ideas. The results of this conference were fruitful, and the atmosphere was warm and vibrant, achieving the aims of mutual learning and promoting collaboration and exchanges. At the same time, the conference also deepened an understanding and awareness of matrix biology in China and the Peking University Health Science Center for peers from different countries. Attendees mentioned that the organization and content of the conference met first-class, international standards. Further, they commented that they truly benefited from their attendance. Hence, this conference was a resounding success.

POSITIONS AVAILABLE on ISMB website (http://ismb.org/career/)

Post-doctoral position available at the University of Illinois at Chicago (USA)

The Naba Lab in the Department of Physiology and Biophysics in the College of Medicine at the University of Illinois at Chicago is looking for an outstanding postdoctoral fellow. The successful candidate will join a young, dynamic and collaborative research team to study the role of the extracellular matrix in cancer metastasis and developmental biology. Our laboratory employs a wide range of techniques and approaches, including mouse genetics, cell biology, proteomics, and bioinformatics to study how the extracellular matrix governs normal developmental processes (craniofacial morphogenesis and bone development) and disease progression (cancer and fibrosis). Our current research particularly focuses on a novel ECM protein SNED1, identified by Dr. Naba as a breast cancer metastasis promoter (eLife, 2014). More information on the Naba lab can be found here: http://nabalab.uic.edu.

THE UNIVERSITY OF ILLINOIS AT CHICAGO

Applicants are required to hold a Ph.D. in biology or a related field and have a solid background in cell biology and at least one of the following fields: cancer biology, developmental biology, cell adhesion, signal

transduction, live-cell imaging. Previous experience working with mouse models of cancer or to study development is preferable. Applicants must be highly motivated and able to work independently in a very collaborative environment. Applicants are expected to have demonstrated excellence in research through publications and presentations, have a strong work ethic, and have excellent writing and oral communication skills.
By joining our team, the successful candidate will experience working with a broad range of techniques on an exciting and challenging research project. He/she will get opportunity to be involved in mentoring and benefit from interactions with a network of collaborators in the U.S.A and Europe.
Interested applicants should submit 1) a cover letter outlining research interests, relevant work experience and career goals, 2) a CV including complete bibliography, and 3) the contact information for 3 references. Applications and inquiries should be sent to Dr. Naba anaba@uic.edu.
The University of Illinois at Chicago is an Equal Opportunity, Affirmative Action employer. Minorities, women, veterans and individuals with disabilities are encouraged to apply. The University of Illinois may conduct background checks on all job candidates upon acceptance of a contingent offer. Background checks will be performed in compliance with the Fair Credit Reporting Act.

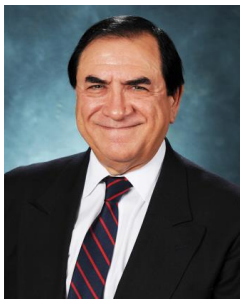
Postdoc position(m/f) Extracellular matrix in autophagy, ubiquitination, and innate immunity, Goethe University, Frankfurt, Germany

The Institute of General Pharmacology and Toxicology at the Pharmazentrum Frankfurt, offers in the group of Prof. Dr. Liliana Schaefer a Post-doc position (m/f) (E13)
The position will be funded by the German Research Council according to the German public service pay scale (TVöD Bund E13).
The highly motivated applicant will join an exciting and energetic team of researchers using state-of-the-art techniques in an innovative environment. We are scientifically anchored in the Collaborative Research Centre CRC815, CRC1039, CRC1177, and Cluster of excellence. Our scientific work is focused on the extracellular matrix, innate immune receptors and their signaling pathways. Innate immune responses are involved in a broad spectrum of acute and chronic inflammatory processes, e.g. sepsis, malignant, fibrotic and auto-inflammatory diseases, whereby so far, no curative therapeutic approaches have been discovered for these various disease entities (unmet medical need). For this highly competitive field we search for a talented, integrative and cooperative scientist.
Requirements
- Ph.D. in biochemistry or biology
- Strong academic track record of publications
- Presenting work at national and international conferences and writing of research grants and papers
- Driving independently experimental and project designs
- Very good communication and excellent writing skills (English), German not mandatory

Starting date: February 1, 2019 or later
If you are interested, please submit your complete application in English which should include a CV with photo, certificates, a brief statement of research experiences and interests and the contact details of two possible referees to: Schaefer@med.uni-frankfurt.de

NEWS FROM MATRIX BIOLOGY

January 28, 2019



Dear fellow matrix biologists,

Happy new year to all of you!

I would like to give you an update on our journal *Matrix Biology* and the new just-launched, sister journal*, Matrix Biology Plus.*

Matrix Biology is now the number one journal in our field with an impressive impact factor of 8.136 and a Cite Score of 6.47 for 2017! We are in the top quartile, #31 out of 366 journals in Biochemistry, Genetics and Molecular Biology. The current Cite Score is 8.09 with still a few months to go before the final Cite Score for 2018 is calculated. More importantly, we have received 435 new submissions in 2018.

In 2018, we have published two Special Issues, one on “Fibrosis” edited by Liliana Schaefer and one on “Extracellular Matrix-Driven Diseases” edited by myself. In addition, we had a thematic minireview series on “Lung Health and Disease” edited by Pyong Park.

We have several items in the pipeline for 2019. We have two forthcoming special issues, one on “Matrix Modeling and Remodeling” edited by Nikos Karamanos, and one on “Hyaluronan Biology” edited by Rashmin Savani and Stavros Garantziotis, and more to come……..
In *Matrix Biology*, we triage about 90% of the new submissions. The main reason is not the quality of the research, which is very high, but rather the descriptive nature of it. To obviate this problem and accommodate many good papers that are not truly mechanistic, we have launched a new sister journal, called *Matrix Biology Plus*. This is an open access only journal with the same editorial board as *Matrix Biology*. We accept translational studies, methods, proteomics and genomic studies and correlative research papers that would not fit the scope of *Matrix Biology*.

I sincerely hope you consider submitting your best work to our journals.

All the best,

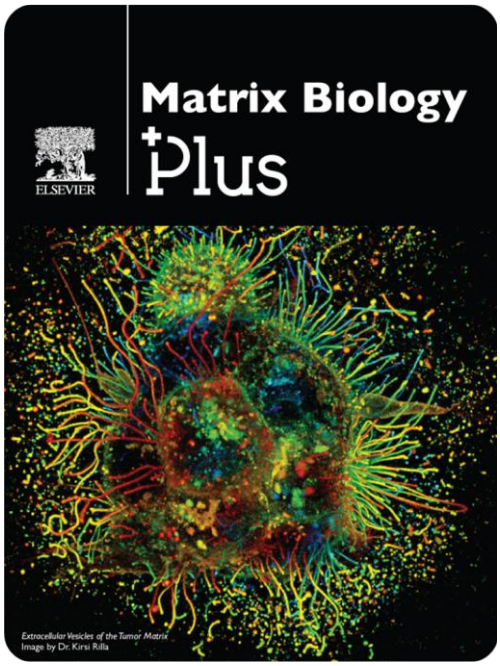
Renato Iozzo, Editor-In-Chief

https://www.journals.elsevier.com/matrix-biology

AND FROM MATRIX BIOLOGY PLUS

The winning image of the Matrix Biology Plus cover competition: **Extracellular Vesicles of the Tumor Matrix**

The Matrix Biology Plus cover image shows extracellular vesicles of the tumor matrix. It was captured by Dr. Kirsi Rilla (University of Eastern Finland, Kuopio, Finland) with a laser scanning confocal microscope (LSM800, Zeiss), using 63x immersion oil objective.



Matrix Biology Plus
https://www.journals.elsevier.com/matrix-biology-plus?utm_campaign=STMJ_1548753783_ALERT&utm_medium=BAN&utm_source=WEB&dgcid=STMJ_1548753783_ALERT

NEW RESEARCH GROUPS

Doug Dyer's Chemokine and Endothelial Glycocalyx Group at the University of Manchester (UK)

MANCHESTER 1824
The University of Manchester

I moved to the University of Manchester (UK) to establish my group looking at the interface of immunology, chemokine biology and glycobiology as part of the Wellcome Centre for Cell-Matrix research and Lydia Becker Institute of Immunology and Inflammation.

Despite recent advances, inflammatory disease remains a significant global health problem causing extensive pain and comorbidity in patients. Recruitment of inflammatory leukocytes to tissues is key in establishing and propagating inflammatory disease by causing local damage, leading to an inflammatory loop. Chemokines provide the key signals enabling circulating leukocytes to leave blood vessels and enter tissues. Despite extensive research chemokines (and their receptors) have not been successfully therapeutically targeted, in this context, and new approaches are needed.

The glycocalyx is a thick, hydrated and adhesion resistant cell-matrix barrier that lines blood vessels and is largely composed of proteoglycans. This structure is a critical, but understudied, regulator of leukocyte:endothelial interaction events and thus mediates leukocyte recruitment during inflammation and disease. Currently we lack understanding of how emigration of leukocytes is molecularly orchestrated in the presence of the thick glycocalyx layer and I hypothesise a key role for chemokines in this process.

My lab is focused on using biochemistry, biophysics and in vivo biology to study chemokines, the glycocalyx and inflammatory disease. Specifically, how chemokines enable leukocyte crossing of the adhesion-resistant endothelial glycocalyx barrier and how the glycocalyx barrier regulates leukocyte migration/endothelial permeability; processes that are critical to a wide range of diseases from inflammatory pathologies to cancer.

Key publications:

• Dyer, D.P and Ruiz. L.M., *et al.* (2018). Chemokine receptor redundancy and specificity are context dependent. *Immunity.* (in press).

• Dyer, D.P., *et al.* (2017). Differential Structural Remodeling of Heparan Sulfate by Chemokines; the Role of Chemokine Oligomerization. *Open Biol.* 7:160286. http://dx.doi.org/10.1098/rsob.160286

• Dyer, D.P., *et al.* (2016). The anti-inflammatory protein TSG-6 regulates chemokine function by inhibiting chemokine:glycosaminoglycan interactions. *J. Biol. Chem.*, 291(24):12627-40. http://doi.org/10.1074/jbc.M116.720953

• Dyer, D.P. and Salanga, C. L., *et al.* (2016). The dependence of chemokine-glycosaminoglycan interactions on chemokine oligomerization. *Glycobiology*, *26*(3), 312–326. http://doi.org/10.1093/glycob/cwv100

Contact: douglas.dyer@manchester.ac.uk

For more details visit:
https://www.wellcome-matrix.org/people/doug-dyer/
https://www.research.manchester.ac.uk/portal/en/researchers/douglas-dyer(556fc70c-17d0-45a0-ac02-6aff92ca9760)/projects.html?period=running

wellcome centre cell-matrix research

New DFG research group (FOR2722) examines fundamentals for ECM-related musculoskeletal disorders

The German Research Foundation (DFG) is funding a new research group (FOR 2722) in the field of musculoskeletal disorders at the University of Cologne for an initial three-year period. In the consortium, experts from the fields of biochemistry, biomechanics, developmental biology, human

FOR 2722 MUSCULOSKELETAL EXTRACELLULAR MATRIX

genetics, matrix biology and medicine work as an interdisciplinary team to get mechanistic insights into musculoskeletal extracellular matrix (ECM) biology from metabolism to structure and function and to develop novel molecular strategies to target connective tissue disorders. This unique network strengthened and significantly intensified a range of cooperative projects, established over several years, to set up a research cluster in Germany with a unique focus on musculoskeletal ECM biology and diseases.

Coordinator
Prof. Dr. Bent Brachvogel, Faculty of Medicine, University Cologne
bent.brachvogel@uni-koeln.de

Deputy coordinator
PD Dr. Anja Niehoff, Cologne Center for Musculoskeletal Biomechanics, German Sport University Cologne

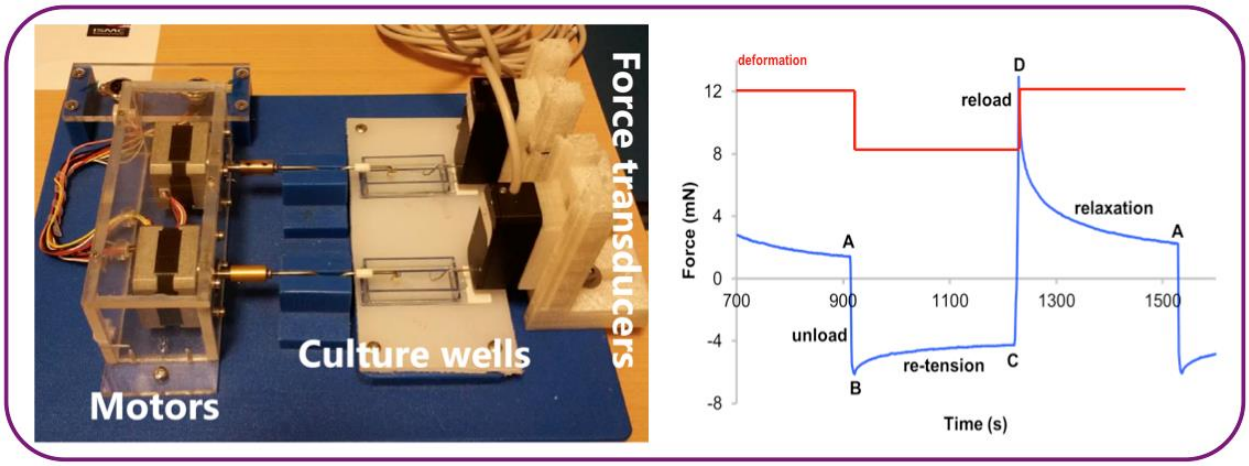
For more information, visit http://for2722.uni-koeln.de

In Focus

Spotlights on methods that other ISMB members may find useful

If you would like to feature in the next newsletter, please email chloe.yeung@gmail.com

Tension-stepper - a strain-tension measurement device



Description: A sensitive piece of equipment that allows direct detection of cell-generated forces applied to the matrix of engineered tissues in real-time. *In vitro*-engineered tissues are subjected to strain and relaxation that is regulated precisely a motor. Mechanical forces are then recorded in real-time and collected via force transducers. Force/time graphs (example above) are

generated from the collected data and can be used for determining the different characteristic phases and distinguishing the matrix and cell contributions.
Useful for: Quantifying the contribution of cell and matrix forces; detection and quantification of cell oscillation responses.
Challenges/Tips: Not commercially available. Potential to use as a bioreactor where the engineered tissues can be developed upon constant application of mechanical force
References: PMID: 30100218
Contact: Antonios Giannopoulos, postdoc at School of Engineering and Materials Science, Queen Mary, University of London
Email: a.giannopoulous@qmul.ac.uk

Gibson assembly for cloning fluorescent tags to proteins of interest

Description: Traditional cloning for expression of tagged versions of proteins can be complicated, pricey, and time-consuming. Using Gibson assembly and existing vectors, one can design primers for PCR amplification of any fragments of interest. Ensure you have sequences for your backbone vector, GFP/BFP/RFP/mCherry vectors, protein-of-interest vectors. Select "Gibson assembly Master Mix" in the NEBuilder. Input the backbone vector sequence and select the desired cut site for linearization of your vector. Proceed with adding the sequence of the desired fluorescent tag, and then your protein of interest (for N-term tagging. C-term tagging start with your protein of interest, followed by the tag). This will provide you with PCR primers that is required for amplifying the appropriate fragments with correct overhangs. Order the primers, and perform respective PCR reactions using high fidelity DNA polymerases (e.g. KAPA HiFi). Confirm that PCR is successful by running some of the products on a gel, and perform PCR cleanup before Gibson Assembly. If performing 2-3 fragment assembly, use a vector:insert ratio of 1:2 (4-6 fragments assembly use 1:1), together with ultrapure water and assembly master mix (e.g. HiFi 2x DNA Assembly Master Mix), and incubate at 50 degrees C for at least 15 minutes (maximum 4 hours – do not perform overnight incubation), before storing either on ice or at -20 prior to bacterial transformation.
Useful for: relatively simple cloning for tagged versions of your protein-of-interest into expression vectors.
Challenges/Tips: Remember to remove appropriate ATG sites of either your tag or your protein (dependent on which terminal the tag is directed at). Also, include relevant site-directing sequences (e.g. KDEL) in your vector for correct localisation of your protein of interest.
References: https://nebuilder.neb.com
Contact: Adam Pickard/Joan Chang, postdocs, Wellcome Centre for Cell-Matrix Research, University of Manchester, UK
Emails: adam.pickard@manchester.ac.uk, joan.chang@manchester.ac.uk, richa.garva@manchester.ac.uk

RECENT PAPERS

Gebauer JM, Köhler A, Dietmar H, Gompert M3 Neundorf I, Zaucke F, Koch M, Baumann U. COMP and TSP-4 interact specifically with the novel GXKGHR motif only found in fibrillar collagens. Sci Rep. (2018) 8:17187.

Corresponding author: jan.gebauer@uni-koeln.de

Abstract *COMP (cartilage oligomeric matrix protein) is a member of the thrombospondin family and forms homopentamers as well as mixed heterooligomers with its closely related family member TSP-4. COMP is long known to bind to collagens and to influence collagen fibril formation. Recent work indicates that already intracellular interaction with collagen is important for collagen secretion. However, the exact binding site of COMP on the collagen triple helix has not been described up to now. In this study we have identified a GXKGHR motif on the collagen II helix to bind to COMP, using a recombinantly expressed collagen II peptide library. This binding sequence is conserved throughout evolution and we demonstrate that TSP-4 binds to the same sequence. The identified binding motif overlaps with the recognition sites of many other collagen-binding partners (e.g. PEDF, Heparin) and also spans the lysine residues, which form collagen cross-links. COMP might thereby protect collagen helices from premature modification and cross-linking. Interestingly, this motif is only found in classical fibrillar collagens, although COMP is known to also bind other types. This might indicate that COMP has a unique interface for fibrillar collagens, thus making it an interesting target for the development of antifibrotic drugs.*

Bernasconi R, Nyström A. Balance and circumstance: The renin angiotensin system in wound healing and fibrosis. Cell Signal. 2018 51:34-46.

Corresponding author: alexander.nystroem@uniklinik-freiburg.de

Abstract: *The tissue renin angiotensin system (tRAS) is a locally-acting master-modulator of tissue homeostasis and regeneration. Through these abilities, it is emerging as an attractive target for therapies aiming to restore tissue homeostasis in conditions associated with disturbed wound healing. The tRAS can be divided into two axes - one being pro-inflammatory and pro-fibrotic and one being anti-inflammatory and anti-fibrotic. However, the division of the axes is fuzzy and imperfect as the axes are codependent and the outcome of tRAS activation is determined by the context. Although the tRAS is a local system it shares its key enzymes, ligands and receptors with the systemic RAS and is consequently also targeted by repurposing of drugs developed against the systemic RAS to manage hypertension. With a focus on the skin we will here discuss the tRAS, its involvement in physiological and pathological wound healing, and the therapeutic aptitude of its targeting to treat chronic wounds and fibrosis.*

Cavaco ACM, Rezaei M, Caliandro MF, Lima AM, Stehling M, Dhayat SA, Haier J, Brakebusch C, Eble JA. The Interaction between Laminin-332 and α3β1 Integrin Determines Differentiation and Maintenance of CAFs, and Supports Invasion of Pancreatic Duct Adenocarcinoma Cells. Cancers (Basel) 2018 11(1) pii: E14. doi: 10.3390/cancers11010014.

Corresponding author: johannes.eble@uni-muenster.de

Abstract: *Ranking among the most lethal tumour entities, pancreatic duct adenocarcinoma cells invade neighbouring tissue resulting in high incidence of metastasis. They are supported by tumour stroma fibroblasts which have undergone differentiation into cancer-associated fibroblasts (CAFs). Stiffness of cell*

substratum, cytokines, such as transforming growth factor-β (TGF-β), and stromal matrix proteins, such as laminin-332, are factors which promote CAF differentiation. In a spheroid culture system, differentiation of CAFs was analysed for laminin-332 production, laminin-binding integrin repertoire, adhesion and migration behaviour, and, in heterospheroids, for their interplay with the pancreatic duct adenocarcinoma AsPC-I cells. Our data reveal that CAFs produce laminin-332 thus contributing to its ectopic deposition within the tumour stroma. Moreover, CAF differentiation correlates with an increased expression of α3β1 integrin, the principal laminin-332-receptor. Beyond its role as novel CAF marker protein, integrin α3β1 crucially determines differentiation and maintenance of the CAF phenotype, as knock-out of the integrin α3 subunit reversed the CAF differentiated state. AsPC-I cells co-cultured in heterospheroids with integrin α3-deficient CAFs invaded less than from heterospheroids with wild-type CAFs. This study highlights the role of integrin α3β1 integrin-laminin-332 interaction of CAFs which promotes and sustains differentiation of CAFs and promotes carcinoma invasion.

Didiasova M, Wujak L, Schaefer L, Wygrecka M. Factor XII in coagulation, inflammation and beyond. Cell Signal. 2018 51:257-265.

Corresponding authors: miroslava.didiasova@biochemie.med.uni-giessen.de, lukasz.wujak@innere.med.uni-giessen.de, schaefer@med.uni-frankfurt.de and malgorzata.wygrecka@innere.med.uni-giessen.de

Abstract: *Factor XII (FXII) is a protease that is mainly produced in the liver and circulates in plasma as a single chain zymogen. Following contact with negatively charged surfaces, FXII is converted into the two-chain active form, FXIIa. FXIIa initiates the intrinsic blood coagulation pathway via activation of factor XI. Furthermore, it converts plasma prekallikrein to kallikrein (PK), which reciprocally activates FXII and liberates bradykinin from high molecular weight kininogen. In addition, FXIIa initiates fibrinolysis via PK-mediated urokinase activation and activates the classical complement pathway. Even though the main function of FXII seems to relate to the activation of the intrinsic coagulation pathway and the kallikrein-kinin system, a growing body of evidence suggests that FXII may also directly regulate cellular responses. In this regard, it has been found that FXII/FXIIa induces the expression of inflammatory mediators, promotes cell proliferation, and enhances the migration of neutrophils and lung fibroblasts. In addition, it has been reported that genetic ablation of FXII protects against neuroinflammation, reduces the formation of atherosclerotic lesions in Apoe$^{-/-}$ mice, improves wound healing, and inhibits postnatal angiogenesis. Although the aforementioned effects can be partially explained by the downstream products of FXII activation, the ability of FXII/FXIIa to directly regulate cellular responses has recently emerged as an alternative hypothesis. These direct cellular reactions to FXII/FXIIa will be discussed in the revie*w.

Eisemann T, Costa B, Harter PN, Wick W, Mittelbronn M, Angel P, Peterziel H. Podoplanin expression is a prognostic biomarker but may be dispensable for the malignancy of glioblastoma. Neuro Oncol. 2018 Nov 10. doi: 10.1093/neuonc/noy184. [Epub ahead of print]

Corresponding author: p.angel@dkfz.de

Abstract*: Background:* *Treatment options of glioblastoma, the most aggressive primary brain tumor with frequent relapses and high mortality, are still very limited urgently calling for novel therapeutic targets. Expression of the glycoprotein podoplanin correlates with poor prognosis in various cancer entities including glioblastoma. Furthermore, podoplanin has been associated with tumor cell migration and proliferation in vitro; however, experimental data on its function in gliomagenesis in vivo is still missing. Hence, we have functionally investigated the impact of podoplanin on glioblastoma in a preclinical mouse*

model to evaluate its potential as a therapeutic target. ***Methods:*** *FACS, genome-wide expression analysis and CRIPSR/Cas9-mediated deletion of podoplanin in patient-derived human glioblastoma cells were combined with organotypic brain slice cultures and intracranial injections into mice.* ***Results:*** *We defined a malignant gene signature in tumor cells with high podoplanin expression. The increase and/or maintenance of high podoplanin expression in serial transplantations and in podoplanin low-sorted glioblastoma cells during outgrowth indicated the association of high podoplanin expression and poor outcome. Unexpectedly, similar rates of proliferation, apoptosis, angiogenesis, and invasion were observed in control and podoplanin-deleted tumors. Accordingly, neither tumor growth nor survival was affected upon podoplanin loss.* ***Conclusion:*** *We report that tumor progression occurs independently of podoplanin. Thus, in contrast to previous suggestions, blocking of podoplanin does not represent a promising therapeutic approach. However, as podoplanin is associated with tumor aggressiveness and progression, we propose the cell surface protein as a biomarker for poor prognosis.*

Grosche J, Meißner J, Eble JA. More than a syllable in fib-ROS-is: The role of ROS on the fibrotic extracellular matrix and on cellular contacts. Mol Aspects Med. 2018 63:30-46.
Corresponding author: johannes.eble@uni-muenster.de
Abstract: *Fibrosis is characterized by excess deposition of extracellular matrix (ECM). However, the ECM changes during fibrosis not only quantitatively but also qualitatively. Thus, the composition is altered as the expression of various ECM proteins changes. Moreover, also posttranslational modifications, secretion, deposition and crosslinkage as well as the proteolytic degradation of ECM components run differently during fibrosis. As several of these processes involve redox reactions and some of them are even redox-regulated, reactive oxygen species (ROS) influence fibrotic diseases. Redox regulation of the ECM has not been studied intensively, although evidences exist that the alteration of the ECM, including the redox-relevant processes of its formation and degradation, may be of key importance not only as a cause but also as a consequence of fibrotic diseases. Myofibroblasts, which have differentiated from fibroblasts during fibrosis, produce most of the ECM components and in return obtain important environmental cues of the ECM, including their redox-dependent fibrotic alterations. Thus, myofibroblast differentiation and fibrotic changes of the ECM are interdependent processes and linked with each other via cell-matrix contacts, which are mediated by integrins and other cell adhesion molecules. These cell-matrix contacts are also regulated by redox processes and by ROS. However, most of the redox-catalyzing enzymes are localized within cells. Little is known about redox-regulating enzymes, especially the ones that control the formation and cleavage of redox-sensitive disulfide bridges within the extracellular space. They are also important players in the redox-regulative crosstalk between ECM and cells during fibrosis*.

Jenei-Lanzl Z, Meurer A, Zaucke F. Interleukin-1β signaling in osteoarthritis - chondrocytes in focus. Cell Signal. 2019 53: 212-223.
Corresponding author: frank.zaucke@friedrichsheim.de
Abstract: *Osteoarthritis (OA) can be regarded as a chronic, painful and degenerative disease that affects all tissues of a joint and one of the major endpoints being loss of articular cartilage. In most cases, OA is associated with a variable degree of synovial inflammation. A variety of different cell types including chondrocytes, synovial fibroblasts, adipocytes, osteoblasts and osteoclasts as well as stem and immune cells are involved in catabolic and inflammatory processes but also in attempts to counteract the cartilage loss. At the molecular level, these changes are regulated by a complex network of proteolytic enzymes, chemokines and cytokines (for review: [1]). Here, interleukin-1 signaling (IL-1) plays a central role and its*

effects on the different cell types involved in OA are discussed in this review with a special focus on the chondrocyte.

Marzi J, Biermann AC, Brauchle EM, Brockbank KG, Stock UA, Schenke-Layland K., Marker-Independent In situ Quantitative Assessment of Residual Cry-oprotectants in Cardiac Tissues. Anal Chem. 2019 Jan 2. doi: 10.1021/acs.analchem.8b04861. [Epub ahead of print]
Corresponding author: katja.schenke-layland@med.uni-tuebingen.de
Abstract: *Cryomedium toxicity is a major safety concern when transplanting cryopreserved organs. Therefore, thorough removal of potentially toxic cryoprotective agents (CPAs) is required before transplantation. CPAs such as dimethyl-sulfoxide (DMSO), propylene glycol (PG) and formamide (FMD), routinely employed in ice-free cryopreservation (IFC), have advantages in long-term preservation of tissue structures compared with conventional cryopreservation employing lower CPA concentrations. This study evaluated the impact of potential residual CPAs on human cardiac valves. Raman microspectroscopy and imaging were established as non-destructive marker-independent techniques for in situ quantitative assessment of CPA residues in IFC valve tissues. In detail, IFC valve leaflets and supernatants of the washing solutions were analyzed to determine the washing efficiency. A calibration model was developed according to the CPA's characteristic Raman signals to quantify DMSO, PG and FMD concentrations in the supernatants. Single point Raman measurements were performed on the intact tissues to analyze penetration properties. In addition, Raman imaging was utilized to visualize potential CPA residues. Our data showed that washing decreased the CPA concentration in the final washing solution by 99 %, and no residues could be detected in the washed tissues, validating the multistep CPA removal protocol routinely used for IFC valves. Raman analysis of unwashed tissues showed different permeation characteristics depending on each CPA and their concentration. Our re-sults demonstrate the great potential of Raman microspectroscopy and Raman imaging as marker-independent in situ tissue quality control tools with the ability to assess the presence and concentration of different chemical agents or drugs in pre-implantation tissues.*

Sun Z, Costell M, Fässler R. Integrin activation by talin, kindlin and mechanical forces. Nat Cell Biol. 2019 21:25-31.
Corresponding authors: zsun@biochem.mpg.de, mercedes.costell@uv.es and faessler@biochem.mpg.de
Abstract: *Integrins are the major family of adhesion molecules that mediate cell adhesion to the extracellular matrix. They are essential for embryonic development and influence numerous diseases, including inflammation, cancer cell invasion and metastasis. In this Perspective, we discuss the current understanding of how talin, kindlin and mechanical forces regulate integrin affinity and avidity, and how integrin inactivators function in this framework.*

Dufour, A., Bellac, C.L, Eckhard, U., Solis, N., Klein, T., Kappelhoff, R., Fortelny, N., Jobin, P., Rozmus, J., Mark, J., Pavlidis, P., Dive, V., Barbour, S.J., and Overall, C.M. 2018. C-Terminal Truncation of IFN-γ Inhibits Proinflammatory Macrophage Responses and is Deficient in Autoimmune Disease. Nature Communications 9: 2416, 1–18.
Corresponding author: chris.overall@ubc.ca
Abstract: *Controlled macrophage differentiation and activation in the initiation and resolution of inflammation is crucial for averting progression to chronic inflammatory and autoimmune diseases. Here we show a negative feedback mechanism for proinflammatory IFN-γ activation of macrophages driven by macrophage-associated matrix metalloproteinase 12 (MMP12). Through C-terminal truncation of IFN-γ at*

135Glu↓Leu136 the IFN-γ receptor-binding site was efficiently removed thereby reducing JAK-STAT1 signaling and IFN-γ activation of proinflammatory macrophages. In acute peritonitis this signature was absent in Mmp12 -/- mice and recapitulated in Mmp12 +/+ mice treated with a MMP12-specific inhibitor. Similarly, loss-of-MMP12 increases IFN-γ-dependent proinflammatory markers and iNOS+/MHC class II+ macrophage accumulation with worse lymphadenopathy, arthritic synovitis and lupus glomerulonephritis. In active human systemic lupus erythematosus, MMP12 levels were lower and IFN-γ higher compared to treated patients or healthy individuals. Hence, macrophage proteolytic truncation of IFN-γ attenuates classical activation of macrophages as a prelude for resolving inflammation.

Zeyer KA, Zhang RM, Kumra H, Hassan A, Reinhardt DP. The Fibrillin-1 RGD Integrin Binding Site Regulates Gene Expression and Cell Function through microRNAs. J Mol Biol. 2019 431:401-421.
Corresponding author: dieter.reinhardt@mcgill.ca
Abstract: *Fibrillins are the major components of microfibrils in the extracellular matrix of elastic and non-elastic tissues. Fibrillin-1 contains one evolutionarily conserved RGD sequence that mediates cell-matrix interactions through cell-surface integrins. Here, we present a novel paradigm how extracellular fibrillin-1 controls cellular function through integrin-mediated microRNA regulation. Comparative mRNA studies by global microarray analysis identified growth factor activity, actin binding and integrin binding as the most important functional groups that are regulated upon fibrillin-1 binding to dermal fibroblasts. Many of these mRNAs are targets of miRNAs that were identified when RNA from the fibrillin-1-ligated fibroblasts was analyzed by a miRNA microarray. The expression profile was specific to fibrillin-1 since interaction with fibronectin displayed a partially distinct profile. The importance of selected miRNAs for the regulation of the identified mRNAs was suggested by bioinformatics prediction and the interactions between miRNAs and mRNAs were experimentally validated. Functionally, we show that miR-503 controls p-Smad2-dependent TGF-β signaling, and that miR-612 and miR-3185 are involved in the focal adhesion formation regulated by fibrillin-1. In conclusion, we demonstrate that fibrillin-1 interaction with fibroblasts regulates miRNA expression profiles which in turn control critical cell functions.*

ISMB MEMBERSHIP: BECOME A MEMBER OF ISMB!

ISMB is dedicated to promoting matrix biology research on a global scale and to facilitating communication among matrix-related organizations and researchers from different countries. Members are eligible for discounted registration fees at matrix meetings supported by ISMB. The Society sends out newsletters highlighting recent research advances, descriptions of matrix biology resources, new appointments and awards, together with announcements of relevant meetings.

Every two years, the Society presents the Rupert Timpl Award to a young scientist (<40 years old) for the best paper related to matrix biology published in the previous two years and gives the Distinguished Investigator Award for lifetime achievement in the field of matrix biology. ISMB sponsors travel grants for young scientists to attend international matrix meetings. If you work in the matrix biology area, consider becoming a member of ISMB to support the international matrix community and give your input on ways to improve interactions and communication. See the website www.ismb.org to join, and for recent job postings and newsletters.

Welcome to new members of ISMB since October 2018

PhD students
Patrick Seifer, Center for Biochemistry, Cologne, Germany

Senior Scientists
Olga Stenina-Adognravi, Professor, Cleveland Clinic Foundation, Cleveland, USA

MATRIX MEETING ANNOUNCEMENTS

The Joint Nordic Extracellular Matrix Biology Meeting 14-15th March in conjunction with the **PhD course "Extracellular Matrix and Proteolysis in Disease" 11-13th March, Copenhagen (Denmark)**

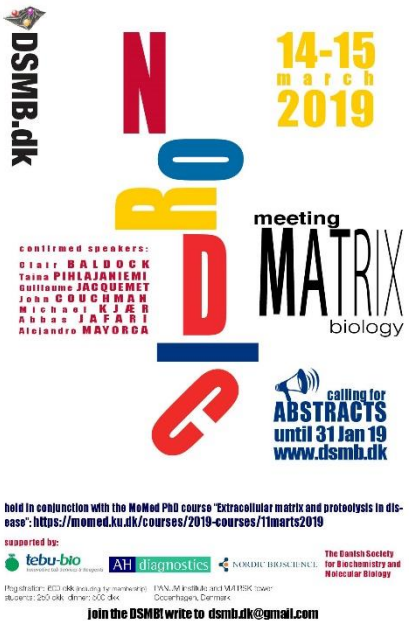
- **Registration and abstract submission deadline for the Joint Nordic ECM Biology meeting has been extended to Friday 8th Febuary**.

Click on the "Calling for Abstracts" link on our homepage https://www.dsmb.dk/ or directly follow this link https://momed.ku.dk/courses/2019-courses/11marts2019/extracellular-matrix_sign-up/ to register and submit your abstract (please follow the abstract template on the website). All submitted abstracts will be in the running for oral and poster presentation awards kindly sponsored by Tebu-bio and AH Diagnostics.

Location of the meeting will be at the *Panum Institute at the University of Copenhagen, Blegdamsvej 3B, 2200 Copenhagen*

We will be sending out the final program updated with titles from the invited speakers.

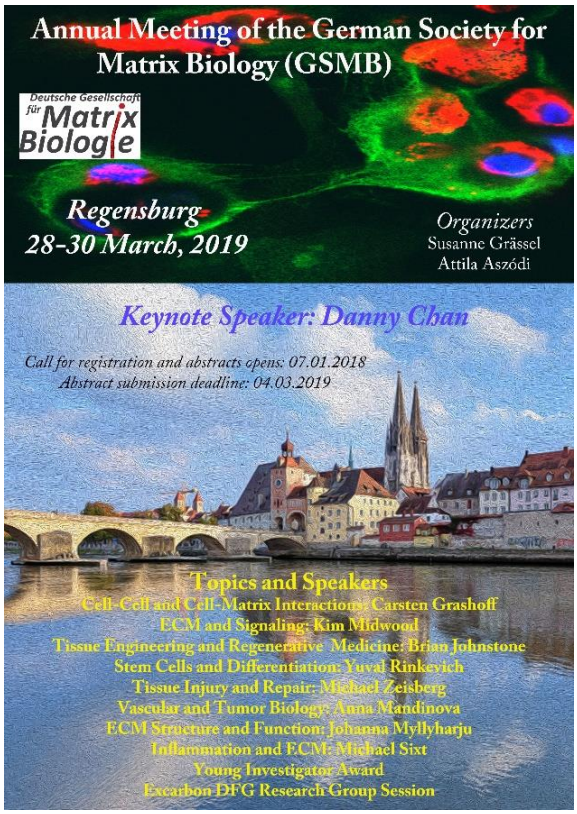
Please encourage your students and colleagues to join us for a week of exciting ECM research and presentations. Please also forward this to those that you think may be of interest and would like to participate.



Feel free to email us at dsmb.dk@gmail.com if you have any questions or need more details.

Annual meeting of the German Society for Matrix Biology (GSMB)
28-30 March, 2019, Regensburg (Germany)

The link to the society homepage where details of the conference can be found: http://www.matrixbiologie.de/JahrestagungRegensburg_2019/RegensburgDGMB-Index.html



Gordon Research Conference Cartilage Development and Regeneration and Their Implications in Disease Therapies

Chairs: Yingzi Yang and John Bateman

March 17-22, 2019, Galveston, TX (USA)

The GRC will be the ninth in a series of highly successful biennial conferences, and it will be preceded by a GRS, a pre-meeting exclusively dedicated to and organized by trainees. We expect approximately 200 attendees from North America, Europe, Asia, and Australia.

Applications must be submitted by **February 17, 2019**.

https://www.grc.org/cartilage-biology-and-pathology-conference/2019/

Gordon Research Seminar (GRS) Unifying Cartilage Biology Research: Bone Development, Cartilage Physiology and Pathology

March 16 - 17, 2019

Chairs Michael A. Pest and Mateusz Aleksander Kudelko

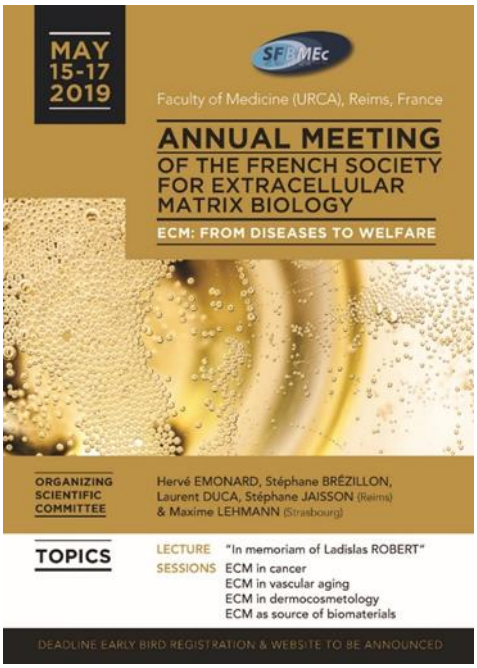
Applications must be submitted by **February 16, 2019**.

https://www.grc.org/cartilage-biology-and-pathology-grs-conference/2019/

The British Society of Matrix Biology and Matrix Biology Ireland, April 8th to 9th 2019 at the University of Liverpool, England.
Registration and abstract submission are now open.
https://bsmb.ac.uk/meetings/bsmb-spring-meeting-stoma-niche-and-repair/

The meeting is organised by the British Society for Matrix Biology together with the Matrix Biology Ireland and will be hosted at The University of Liverpool. We are grateful for support from all our sponsors.
The conference will be over one and a half day and include 5 sessions covering the theme of "**Stroma, Niche, and Repair**" plus the BSMB Gold Medal Award Lecture, awarded this year to Professor Kenneth Yamada (NIH). Selected abstracts from posters will be given 10 min presentation to encourage younger investigators to participate in the meeting.
The **abstract submission** system is now open. Please submit your abstracts by **Friday, the 22nd of March 2019** (https://bsmb.ac.uk/abstracts/).

Annual meeting of the French Society for Matrix Biology
May 15-17, 2019, Reims (France)
www.meeting-sfbmec.fr



Matrix Pathobiology, Signaling and Molecular Targets
2-7 May 2019, Porto Heli, Greece

Chairman of the organizing committee: Nikos Karamanos

https:// mpst2019.febsevents.org/

Bergen Fibrosis Conference, 2019 "Novel tools to study the fibrotic stroma"
As part of a Norwegian-North American collaboration network, we are organizing our **Third fibrosis conference** that will take place, **May 23-24 2019** in Bergen, Norway.

The meeting is organised by Donald Gullberg (donald.gullberg@uib.no)

Please see homepage for updated program and registration
https://www.uib.no/en/motif/120152/bergen-fibrosis-conference-2019

We are pleased to announce the **Tissue Engineering & Regenerative Medicine International Society (TERMIS) EU Chapter 2019 Meeting, 27th to 31st of May 2019, Rhodes (Greece)**.

The TERMIS EU 2019 meeting will be held at Rhodes, Greece. Rhodes, the Island of Knights, is a place with spectacular natural beauty and abundant history and culture. Rhodes hosts the mythical Colossus of Rhodes, one of the Seven Wonders of the Ancient World. The Medieval Old Town of the City of Rhodes is listed as a UNESCO World Heritage site.
TERMIS EU 2019 invites symposia proposals in all areas of tissue engineering and regenerative medicine research, development and clinical translation. Symposia proposals with educational, career development and societal impact are welcomed. If you are interested in submitting a symposium proposal, please complete the attached form and submit it to termis@nuigalway.ie by the **28th of September 2018**. TERMIS EU 2019 also offers various sponsoring and exhibiting opportunities. For further information, please contact us at termis@nuigalway.ie.
We are honoured to host the TERMIS EU 2019 meeting and we are looking forward to welcoming you at Rhodes.

Sincerely,
Dimitrios I. Zeugolis, PhD and Maria Chatzinikolaidou, PhD

The next ISHAS (International Society for Hyaluronan Sciences) conference will be held in Cardiff (Wales, UK) on June 9-13, 2019

The 12th International Conference of the International Society for Hyaluronan Sciences will bring together clinicians and scientists from academia and industry from all over the world to meet and discuss recent advances in the basic science, clinical application and biotechnology of Hyaluronan.

There will be 10 sessions covering the role of HA in Cardiovascular and Pulmonary disease, Stem cells, Growth and Differentiation, the Physics, Chemistry and Structure of HA, the Metabolism and Assembly of HA, HA in Renal, Diabetic and Joint disease, HA signaling pathways, Novel Mechanisms of HA involvement, HA in Immunity and Inflammation, Cancer Biology and in Development and Ageing.
The meeting will honour Professor Thomas Wight and his work on the role of Hyaluronan and Proteoglycans in Vascular Disease.

The Meeting Banquet will be held in the medieval splendor of Caldicot Castle.

Abstract submissions and early registration now open: https://www.ishas.org

ASMB 2019 Summer Workshop

Co-organized by

Tom Barker (University of Virginia, USA, (thomas.barker@virginia.edu)

and

Merry Lindsey (University of Nebraska Medical Center, USA, mllindsey@umc.edu)

ASMB/Vanderbilt 2019 Workshop on Basement Membranes
July 10-12, 2019, Vanderbilt University Medical Center, Nashville, TN (USA)

Organizers: Roy Zent, Vanderbilt (University Medical Center) and **Jeffrey Miner** (Washington University St. Louis)

https://www.asmb.net/basement-membrane-workshop

Gordon Research Seminar on Collagen, July 13-14, 2019
Colby-Sawyer College, New London, NH (USA)
Chairs: Wing Ying Chow and Charlotte A Gistelinck
Decoding Collagen: From Molecular Ensembles to Tissue Scaffolds in Physiology and Disease
https://www.grc.org/collagen-grs-conference/2019/

The 2019 Collagen GRS is for the next generation of collagen researchers, including graduate students, postdocs, and other scientists of comparable experience. We look forward to selecting 10 talks from the abstracts received, as well as a keynote lecture from Antonella Forlino, and a discussion panel on how to navigate a career in science. Taking place the weekend prior to the main GRC, it provides opportunities for relaxed networking and nurturing multidisciplinary collaborations. Early career researchers who would like to be discussion leaders are especially welcome. Those interested to give an oral presentation can apply until 13 April 2019. There are several funding schemes of particular interest to underrepresented minorities, attendees from certain countries, and predominantly undergraduate institutions, to enable attendance at both the GRC and the GRS. Please see https://www.grc.org/about/grc-diversity-initiatives/ for more information.

Gordon Research Conference on Collagen, July 14-19, 2019
Colby-Sawyer College, New London, NH (USA)
https://www.grc.org/collagen-conference/2019/
Collagens and Associated Molecules Supporting Organ Structure and Function
Chairs: Marion K. Gordon, Vice Chair: Taina Pihlajaniemi
Keynote speaker: Elaine Fuchs
The 2019 Collagen GRC aims to draw attendants from diverse fields interested in the characteristics of all types of collagens, their molecular interactions, as well as their roles in supporting the structure of tissues and organs. We expect to select about half of the talks from abstracts.

Abstracts submitted to the GRC that are requesting the author be selected for a talk will be reviewed up until Monday, June 10, 2019.
All abstracts submitted later than June 10 will be programmed as posters.

FASEB Science Research Conference
The Matricellular Proteins in Tissue Remodeling and Inflammation

July 14 - 19, 2019, Lisbon (Portugal)

Conference organizers: Olga Stenina-Adognravi, Cleveland Clinic (USA) andJoanne Murphy-Ullrich, University of Alabama at Birmingham (USA)

Dear Colleague,

Join a community of science professionals to explore emerging research and expand your expertise at The Matricellular Proteins in Tissue Remodeling and Inflammation Conference, taking place July 14-19, 2019, in Lisbon, Portugal.

Organized by Chairs Olga Stenina-Adognravi, PhD, Cleveland Clinic, and Joanne Murphy-Ullrich, PhD, University of Alabama at Birmingham, with support from the Federation of American Societies for Experimental Biology (FASEB), this conference is highly interactive and brings together an interdisciplinary group of scientists from academic, clinical, and industry backgrounds, who study and conduct research on matricellular proteins.

As a part of FASEB's Science Research Conference Series, it is designed as a multi-day learning experience to foster engagement between biomedical researchers at every level of their career. Featured conference events include networking opportunities, a career development workshop, selected abstract presentations, and more.

Learn more and register early to save $150 by visiting https://src.faseb.org/matricellular-proteins

Advance registration ends May 30, 2019. Questions about conference programming, possible travel awards, and other logistical details can be directed to src@faseb.org

11th International Conference on Proteoglycans, September 29 - October 3, 2019, Kanazawa (Japan)

Dear ISMB members,

On behalf of the Organizing Committee, we would like to invite you to the 11th International Conference on Proteoglycans, scheduled on September 29 (Sun) - October 3 (Thurs) 2019 in Kanazawa (Japan). The Conference is a biennial world meeting held in different continents, which gives the opportunity to share new results. It is an informal meeting where experienced and young researchers can interact with each other. We believe your participation will develop the research field of proteoglycans.

For further information, please visit www.proteoglycans2019.com

Hideto Watanabe and Shuhei Yamada
Chairs of the 11th International Conference on Proteoglycans