

Connective Issues:



BSMB Newsletter

Committee:

Prof John Couchman (Chair), Prof Kim Midwood (Secretary),
Dr Tom van Agtmael (Treasurer), Ms. Laura Collins (Student rep),
Dr Michal Dudek (Post doc rep), Dr Giovanna Nalesso,
Dr Stephen Robinson, Prof Steph Dakin, Prof Jerry Turnbull,
Dr Kasia Pirog and Dr Blandine Poulet

Registered Charity no. 281399

No. 95, June 2019

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Register and submit your abstract before August 16th 2019!

Editorial

Welcome to the 95th Connective Issues. Following a fantastic Spring BSMB meeting in Liverpool we are looking forward to reconvening in Norwich in September for the Autumn meeting for more excellent science, socializing and sunshine. We can guarantee the first two of these at least! Plans are also in place for two cutting edge BSMB meetings in 2020, thanks to the hard work of our committee members and local organizing teams. Details about all of these meetings can be found below. We are also fortunate at the BSMB to have two dedicated reps on the committee, Laura Collins (student rep) and Michal Dudek (post doc rep). Laura and Michal have been a strong driving force behind the social media face of the BSMB, but they are also a mechanism through which you can communicate with us. The BSMB has long been a great supporter of early career scientists and our reps would love to hear more from you. Please let them know how we can improve the student and post doc experience of BSMB membership, or if there are things that work particularly well for you, by e mailing: bsmbreps@gmail.com. Please do also consider:

- **Registering for Norwich 2019!** Early bird registration and abstract submission will **open on July 1st**. Visit <https://bsmb.ac.uk> for more details about the meeting, including the programme, registration site, abstract submission site, as well as travel information. There are a large number of spots open for oral presentation of selected abstracts at this meeting, and there are also 3 poster prizes available!
- **Encouraging your fellow lab members and colleagues to join the BSMB:** membership for the BSMB is amongst the cheapest of all scientific societies around and brings a whole host of benefits including: reduced rate meeting

registration, eligibility to apply for bursaries up to a value of £600 to present your work on matrix biology at ANY meeting, opportunities to apply for Presenter, Reporter and Young Investigator Awards, and strong involvement of members in the running of the Society, with opportunities to get involved in leadership....why not join us!

Kim Midwood, Honorary Secretary

Chair's Letter

A few weeks have passed since our highly successful meeting in Liverpool. It was the first time we have held a joint meeting with Matrix Biology Ireland and we are grateful to the Chair, Dimitrios Zeugolis and the members who travelled across to Liverpool and hosted a session at the conference. Many thanks must also go to George Bou-Gharios who worked tirelessly to organise outstanding science that in turn led to a large attendance. We now turn our thoughts to a return visit to UEA in Norwich for our September meeting. Details are included in this newsletter.

George, Qing-jun Meng and James Whiteford have now rotated off the Committee, and I would like to thank them all for their many contributions. Qing-jun has kindly agreed to retain his role in overseeing our bursary process, while we are also very pleased that James will remain in an ad hoc basis as our webmaster, having successfully overseen the revamping of our website. He is also Chair of our Young Investigator Award Committee.

As I meet colleagues across Europe and wider afield, one topic is raised frequently, and that is the continuing success of the BSMB. We have for many years organised two meetings per year and we also have a large membership base. Fortunately we can host relatively low cost meetings across the UK

and use the income from our membership to support our activities. These are great assets and the source of admiration from some of our sister societies. Our meetings are known for high quality science, strong participation from younger members and conviviality. However, we should not rest on our laurels. Our membership is declining a little and we would like to stop this attrition and indeed reverse it. A large supportive membership is vital to our future and in comparison to many other societies, our membership fees are low. I would, therefore, ask our members to help us by urging students, fellows and faculty in our field to join the BSMB and become part of this great Society. As is well known, we emphasise support of our more junior members and, for example, the BSMB has a number of bursaries to enable travel to BSMB and other related conferences. This is, in our view, an essential part of our mandate, but cannot be achieved without the participation of a thriving membership. Thank you.

Best wishes for an enjoyable and successful summer, I look forward to meeting our members in Norwich in September.

John Couchman, BSMB Chair

Mark your diary

BSMB Autumn 2019 Meeting
University of East Anglia
September 9-10 2019

BSMB Spring 2020 Meeting
University of Surrey
April 6-7 2020

BSMB Autumn 2020 Meeting
University of Glasgow
August 31- 1 September 2020

BSMB News

BSMB Autumn 2019 meeting: *University of East Anglia, September 9-10th 2019*

It is our great pleasure to invite you to attend this meeting in Norwich. The meeting is organised by the British Society for Matrix Biology and will be hosted at the University of East Anglia. The conference will be held over one and a half days and includes 5 sessions covering diverse topics in Cell Adhesion Networks plus the BSMB Young Investigator Award Lecture.

Selected abstracts from posters will be given 15 minute presentation slots in each session to encourage younger investigators to participate. There will even be one entire session dedicated to Early Career Researchers.

Organiser:

Stephen Robinson

Key dates:

- Registration open 1st July 2019
- Bursary application deadline 1st August
- Early Bird registration closes on 16th August 2019
- Late registration closes 30th August 2019
- Abstract submission will close 16th August 2019
- Oral presentation notification: 23rd August 2019

For further information and to register, please visit: <https://bsmb.ac.uk>.

You can also follow us on...

Instagram: [@matrixbiologyuk](#)

Twitter: [@BSMB1](#)

Facebook: [@BritishSocietyForMatrixBiology](#)

WELCOME TO NEW BSMB MEMBERS!

New Student Members:

Kate Dowding (Nottingham)
Silvia Lecci (Newcastle)
Ben Calverley (Manchester)

New Full members:

Dionysia Valkani (RVC)
Joan Chang (Manchester)
Rob van 't Hof (Liverpool)
Phaedra Winstanley-Zarach (Liverpool)
Katarzyna Wolanska (Liverpool)
Aikta Sharma (Southampton)
Tahera Alnassfan (Liverpool)
Linyi Zhu (Oxford)
Stuart Keppie (Oxford)
Amir Abdo (Galway)
Claire McQuitty (Liver Research Foundation)
Mattia Vitale (Manchester)
Nai-Hao Yin (UCL)
Danae Zamboulis (Liverpool)
Michele di Mase (Liverpool)
Martina Meschis (Liverpool)
Steven Woods (Manchester)
Jennifer Bara
Maria Fragiadaki (Sheffield)
Yalda Ashraf-Kharaz (Liverpool)
Trish Sewell (Newcastle)
Rebecca Norman (RVC)
Viesturs Eglitis (UCL)
Lee Troughton (Liverpool)

Website news:

We are happy that the BSMB website is back online and thank you for your patience. For the most part everything worked very well for the Liverpool meeting although there were a couple of glitches that affected certain individuals. We apologise for these and hope that we have solved these problems now.

If you have any further difficulties please email bsmbadmin@bsmb.ac.uk and we will try to resolve them. Please also note that there is a posts page where we can highlight announcements etc. relating to the BSMB.

We would also welcome any images that you might wish to display on the website (E mail: j.whiteford@qmul.ac.uk)

Good news

In Print: Abstracts from the Matrix Biology Europe 2018 held in Manchester last year are now in print in the International Journal of Experimental Pathology.

In Print: “Gene cloning to clinical trials—the trials and tribulations of a life with collagen” by Raymond P. Boot-Handford, winner of the 2018 Fell-Muir Award.

To share good news contact *Kim Midwood*.

BSMB Committee

Welcome our new committee members:



Blandine Poulet (left) is a Lecturer at the Institute of Ageing and Chronic Disease at the University of Liverpool. She undertook her PhD at The Royal Veterinary College in London in Professor Andrew Pitsillides group, describing a trauma model of the mouse knee joint to study the interactions between mechanical loading and genetics in vivo. After her PhD she was awarded a Foundation fellowship from Arthritis Research UK (initially based at Queen Mary University of London, under the sponsorship of Dr Francesco Dell'Accio), and was quickly accepted as a Group Leader at University College London. She was then awarded a second fellowship from Arthritis Research UK (Career Development) that she is finishing now in Liverpool. Her main research interests focus on defining the factors involved in the pathogenesis of osteoarthritis, in order to find new targets to slow or prevent disease development and progression.

Katarzyna (Kasia) Piróg (right) completed her MSc degree in Molecular Biology at the Jagiellonian University in Krakow, Poland, in 2002. She then trained as a biochemist and molecular biologist at the Wellcome Trust Centre for Cell Matrix Research at the University of Manchester (PhD 2006), where she also worked as a PostDoctoral scientist. Kasia joined Newcastle University as a Lecturer in Musculoskeletal Genetics and an independent group leader in 2012. Her research interests comprise the intracellular stress pathways leading to skeletal dysplasias (such as ER stress, oxidative stress, autophagy and inflammation) and the abnormalities in the extracellular matrix ultrastructure associated with chondrodysplasias and ageing. Using animal models and tissue engineered constructs, she is investigating how the cells sense and react to the intra- and extracellular challenges, and how these changes impact on the

biomechanical properties and homeostasis of musculoskeletal tissues.

News from the International Society for Matrix Biology

We are pleased to announce that Suneel Apte (Cleveland Clinic, USA) has been elected as the new Vice-President of ISMB. Suneel will serve for two years as Vice-President and then for two years as President. We also welcome new Council members elected for their first three year terms: Nikos Karamanos, Megan Lord, Alexandra Naba, Alexander Nyström, Katja Schenke-Layland, Jean Schwarzbauer and Antony Weiss.

We would like to remind any ISMB members that the next deadlines for ISMB international conference travel awards will be July 1, 2019 and then October 1, 2019. Please apply several months before your conference of interest. Full details on eligibility and how to apply can be found at the ISMB website (<https://ismb.org>).

We welcome suggestions of ideas to promote the extracellular matrix field at the international level and these may be sent to sylvie.ricard-blum@univ-lyon1.fr

Sylvie Ricard-Blum, Jo Adams and Ruud Bank

BSMB MEETINGS IN 2019

BSMB Autumn 2019 Meeting

University of East Anglia
September 9-10th 2019

Cell Adhesion Networks in Health and Disease

Organised by Stephen Robinson
Quadram Institute/ University of East Anglia



The conference will run over one and a half days and include 5 sessions covering diverse topics in Cell Adhesion Networks plus the BSMB Young Investigator Award Lecture.

Selected abstracts from posters will be given 15 minute presentation slots in each session to encourage younger investigators to participate. There will even be one entire session dedicated to postdocs and Early Career Researchers.

Registration opens 1st July 2019 (visit www.BSMB.ac.uk for details).

Early Bird (member) registration deadline will close 16th August 2019

- £190 student member
- £210 full member
- £210 student non-member
- £240 non-member

Late registration closes 30th August 2019

- £230 student
- £260 non-student

Abstract submission will close 16th August 2019

Oral presentation notification: 23rd August 2019

Bursary application deadline 1st August

Registration includes 1 night (single) en-suite accommodation; additional nights bookable on-line at time of registration.

Registration also includes the conference dinner: a 3-course meal that will be held at 7:30pm on 9th September at the Sainsbury Centre for the Visual Arts.

Social events: Wine Reception & Poster Viewing: Wine, beer and nibbles with posters on Monday evening (9th September, 6.10 -7 pm).



Programme

Monday September 9th

11.30-12.45	REGISTRATION	Conference Office
12.45-1.00	OPENING remarks	
	Welcome and Introduction	Stephen Robinson (QIB/UEA)

1.00-2.30	SESSION 1: Adhesion signalling networks	
Chairs	TBC	
1.00-1.30	Invited Talk	Christiana Rhurberg (UCL)
1.30 -2.00	Invited Talk	James Whiteford (QMUL)
2.00-2.15	Short Presentation from abstracts	TBC
2.15-2.30	Short Presentation from abstracts	TBC

2.30-4.00	Networking, posters, trade stands	
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4.00-4.30	SESSION 2 : Novel approaches to studying adhesion networks	
Chairs	TBC	
4.00-4.30	Invited Talk	Mark Morgan (U. Liverpool)
4.30-5.00	Invited Talk	Maddy Parsons (KCL)
5.00-5.15	Short Presentation from abstracts	TBC
5.15-5.30	Short Presentation from abstracts	TBC

Young Investigator Award: The John Scott Lecture		
Chair: John Couchman		
5.30-6.10	Young Investigator Award: The John Scott Lecture	TBC
6.10-7.00	Networking, posters, trade stands	
7.30-11.30	Conference Dinner Venue: Sainsbury Centre for the Visual Arts	

Tuesday September 10th

9.00-10.30	SESSION 3 Early career scientists session (chosen from abstracts)	
Chairs	TBC	
9.00-9.15	Short Presentation from abstracts	TBC
9.15-9.30	Short Presentation from abstracts	TBC
9.30-9.45	Short Presentation from abstracts	TBC
9.45-10.00	Short Presentation from abstracts	TBC
10.00-10.15	Short Presentation from abstracts	TBC
10.15-10.30	Short Presentation from abstracts	TBC

10.30-11.30	Networking, posters, trade stands	
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11.30-1.00	SESSION 4: Adhesion network trafficking	
Chairs	TBC	
11.30-12.00	Invited Speaker	Mark Bass (U Sheffiled)
12.00-12.30	Invited Speaker	Jim Norman (Beatson)
12.30-12.45	Short Presentation from abstracts	TBC
12.45-1.00	Short Presentation from abstracts	TBC

1.00 – 2.00	Lunch (Buffet)	
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2.00-3.30	SESSION 5: studying adhesion networks <i>in vivo</i>	
Chairs	TBC	
2:00-2.15	Short Presentation from abstracts	TBC
2.15-2.30	Short Presentation from abstracts	TBC
2.30-3.00	Invited Speaker	Vasso Kostourou (Fleming, Greece)
3.00-3.30	Invited Speaker	Kairbaan Hodivala-Dilke (BCI)

3.30-4.00	Presentation of Prizes and Close of Meeting	
4.00-7.00	BSMB Committee Meeting	

BSMB Meetings in 2020

Spring 2020 Meeting

University of Surrey

April 6-7 2020

**The 'fatty' matrix:
biochemistry and clinical
relevance of the lipid/matrix
interaction**

*Organised by Giovanna Nalesso
with the British Atherosclerosis Society*

Autumn 2020 Meeting

University of Glasgow

August 31- 1 September 2020

**Basement membranes
in health and disease**

*Organised by Tom Van Agtmael
and Rachel Lennon*

The BSMB Young Investigators Award

Applications are invited for the BSMB Young Investigator award.

The prize will be £1000 and a certificate. The winner will give the 'John Scott Lecture' (30 minute duration) at the BSMB Autumn Meeting in Norwich. Nominees should therefore ensure their availability for this meeting. The winner will also be expected to provide a review of their work and/or subject area for publication in the International Journal for Experimental Pathology.

The deadline for submissions is the 31st of July 2019.

For more information, eligibility criteria and to apply click [here](https://bsmb.ac.uk/page/young-investigator-award/) (<https://bsmb.ac.uk/page/young-investigator-award/>)

Meeting Reports

BSMB Spring 2019 Meeting Liverpool University April 8-9th 2019 “Stroma, Niche, Repair”

***Reports by Valentina Gifford, Silvia Lecci,
James Ozanne and Doug Sammon***

BSMB reporter bursary awardees



The 2019 BSMB Spring meeting on “Stroma, Niche and Repair” was organised by George Bou-Gharios (Liverpool) and Dimitrios Zeugolis (Galway) and took place across two uncharacteristically sunny days at the University of Liverpool. The meeting was held at the Central Teaching Hub of the University of Liverpool and jointly hosted by the British Society for Matrix Biology (BSMB) and Matrix Biology Ireland (MBI). The conference took place over one and a half days, covering the theme of “Stroma, Niche and Repair”. The theme was extensively discussed over 5 sessions, each including outstanding presentations by DPhil students, postdocs and principal investigators. The breadth and quality of this meeting was evident from the list of invited speakers, who met and exceeded all expectations. The meeting had over 120 attendees and offered more than 70 poster presentations.

Session 1. Stroma in Health and Disease. Chair: Tim Johnson

The conference was officially opened by the organiser Professor George Bou-Gharios from Liverpool, representing BSMB. The first session, chaired by Professor Tim Johnson from the University of Sheffield focused on stroma in health and disease. Here, Peter Friedl (Radboud University, The Netherlands) gave a lecture on cell jamming transition in collective cancer progression. He presented how the matrix density of a 3D tissue can substitute cadherin-dependent junctional stability and dictate cell jamming and unjamming. Peter showed data from intravital microscopy and in-silico modelling to study collective cancer progression. He demonstrated that tissue density, and the steric hindrance implicit in this density, dictates the transition between fluid (unjammed) and solid states (jammed), which in turn facilitate single-cell escape or collective invasion, respectively. This was followed by three talks covering different aspects of cell-ECM interactions and how this crosstalk can influence cell behaviour. Remaining with 3D organisation and cell-ECM interactions, Eileen Gentleman gave new insights on how HA-Hydrogel encapsulated hMSCs are able to modify the mechanical properties of their local environment and hence cell-fate. Douglas Sammon described his PhD project on understanding the role of the intracellular juxtamembrane region of DDR1 and how its phosphorylation is critical for DDR1 activation and as therapeutic target. Next, Mark Morgan explored the potential values of $\alpha V\beta 6$ integrin as a biomarker and target in breast cancer invasion thanks to its ability to crosstalk with EGFR, affecting the nucleus and therefore transcription reprogramming, to regulate ECM mechanical properties. The session was closed by Michael Schmid (UoL, Liverpool), who talked about liver metastasis in

pancreatic ductal adenocarcinoma. He showed that the recruitment of progranulin expressing macrophages in the liver, sustains the formation of an immunoprotected and growth promoting metastatic microenvironment.

The first session was followed by poster presentations over tea and coffee. Delegates could browse for over one hour having the possibility to approach several presenters. The space reserved for the poster presentations was big enough to accommodate everyone, maximising the networking possibilities.



Session 2. NICHE - Microenvironmental regulator of cell behaviour. Chair: Kim Midwood

Erik Sahai kicked off the second session giving an interesting talk on cancer-associated fibroblasts and their collective behaviour on different ECM patterns. Through functional RNAseq screening, they were able to define the pathways for these differing fibroblast alignments. Valentina Gifford described the key role of four KIFs in regulating MT1-MMP cell-surface localization; crucial for its role in promoting cellular invasion during different diseases. James Whiteford showed results highlighting a novel role of Syndecan-4 in endothelial cells, by regulating angiogenesis in response to VEGF. Lee Troughton described the

influence of LaNt $\alpha 31$ on cell adhesion and invasion by affecting laminin organisation. The last talk of the session, given by Fiona Watt, focused on a single cell transcriptomic approach to identify distinct cell populations in adult human skin.

Finally, Professor John Couchman, chair of the BSMB, introduced Professor Kenneth Yamada (NIH, USA) who gave the inaugural BSMB medal lecture entitled “Extracellular Matrix Dynamics in Cell Migration, Invasion, and Tissue Morphogenesis” The award was in recognition for his outstanding ECM research achievements. John introduced Ken as the scientist that tremendously contributed to the field of matrix biology. John cited Ken’s papers as a ‘must read’ when he was a young scientist and that nowadays they still remain fundamental reading for whoever wants to research in the field of matrix biology. Ken then gave an expansive lecture on cell-ECM dynamics in 2D, as well as more recently, 3D culture. The range of work and quality of live imaging presented by Prof Yamada provided excellent talking points in the drinks reception which followed.



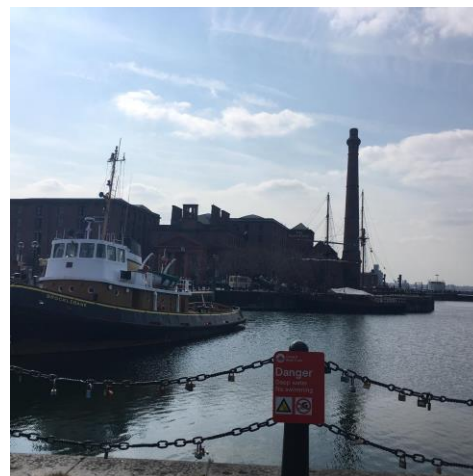
Ken Yamada receives the inaugural BSMB Medal award from John Couchman and Kim Midwood.

The first day was closed by a drinks reception at the teaching hub, before gathering for a conference dinner at the Pullman Hotel in Liverpool, a very nice venue with an outstanding view of Liverpool harbour and its surroundings. The coach to the conference dinner on the King's dock was beautifully narrated by the stand-in tour guide Prof George Bou-Gharios. The Mayor of Liverpool welcomed us to the hotel for the evening that set the stage for good scientific discussion over dinner. The dinner provided an excellent opportunity to network with attendees, although eating the pudding would have been better tackled with a chisel than a spoon.

Session 3. MBI Sponsored Session-Innovative material science to regenerate, reconstruct and interface with tissues. Chair: Dimitrios Zeugolis.

The second day started with a session on innovative material science to regenerate, reconstruct and interface with tissues, chaired by the co-organiser Dimitrios Zeugolis, representing MBI. Catalina Vallejo opened the second day of the meeting describing the effects of heparan sulphate mimetics on neuroelectrode stability and biofunctionality, suggesting a neurotrophic effect on VM cells. Deirdre Brennan talked about the development of a new 3D *in vitro* model to study the lamina cribrosa (LC) region changes in glaucoma, using 3D biomimetic scaffolds where human LC cells are able to grow successfully. Remaining in the field of tissue engineering, Cian O'Leary presented a CHyA-B scaffold that functions as an analogue of the tracheobronchial region. This represents a 3D-model for drug development or tissue regenerative purposes. Stefanie Korntner showed a different example of tissue engineering, through the generation of tissue-like constructs for tendon enthesis repair, using electrospun fibres able to support matrix deposition of seeded hADSCs whose cell

sheets shows increased expression of chondrogenic genes. The final presenter of the session, Olga Piskareva, described the establishment and validation of a collagen based 3D model of neuroblastoma and its use to validate potential treatments such as miRNA-mediated treatment as seen for miR-324-5p.



Session 4. Repair, regeneration, and the cytoskeleton organization. Chair: Kevin Hamill

Session four 'Repair, regeneration, and cytoskeleton organisation' started with Colin Jahoda presenting his work on hair follicle regeneration by dermal papilla cells. Colin explained how human hair follicle neogenesis can be achieved using 3D culture techniques exploiting hair follicles cyclic regenerative activity and their ability to induce new hair follicles growth. Next, Marta Radwan provided insights on the role of WWP2 in chondrogenesis and pointed out the still ongoing controversial question whether WWP2 or miR140 are responsible for craniofacial development since both null mice have similar phenotypes. Stephanie Dakin described some pro-resolving mediators, such as 15-epi-LXA₄ and MaR1, are able to reduce the inflammatory response in tendon-derived stromal cells from Achilles tendinopathy or rupture patients. Yoanna Ariosia-Morejon followed with an interesting study involving metabolic

labelling in combination with quantitative proteomics to discover protein turnover in different tissues during an animals lifespan. Michelle Peckham closed the session before lunch, presenting the comprehensive work by her team to unravel the still unknown function of MEGF10 in skeletal muscle satellite cell, and its suggested role in myoblast adhesion.

Session 5. Tissue development, homeostasis, remodelling and fibrosis. Chair: David Abraham

Rama Khokha kicked off the last session of the meeting, talking about the establishment of quadruple knockouts mice for TIMP genes to study their role in mammalian biology. These mutant mice, presenting with several skeletal defects, helped reveal new associations between TIMPs, bone development and cartilage homeostasis. Tobias Zech proposed a new front-rear cell polarity mechanism able to mediate 3D cell migration of invading cancer cells. Aikta Sharma described a study where by using Raman spectroscopy and second harmonic generation imaging they have been able to explore how VEGF regulates mineral and matrix components according to sex differences. Next, Mandy Peffers displayed the presence of tRNA fragments in ageing cartilage and their potential involvement in reduced protein homeostasis in OA. The talks were closed by the last invited speaker, Tim Johnson who discussed different transglutaminases in tissue scarring and fibrosis. Tim told a fascinating story which began with the identification of transglutaminase type 2 (TG2) as a pro-fibrotic protein, and culminated in the development of phase 1 approved antibodies which successfully targeted TG2. This talk provided an inspirational narrative of how basic science can lead to positive clinical outcomes.

At the end of the meeting poster prizes were awarded and awards were handed out to: Silvia Lecci (Institute of Genetic Medicine, Newcastle University), Noman Chaudhry (Kennedy Institute, University of Oxford) and Jeremy Herrera (Wellcome Centre for Cell-Matrix Research, University of Manchester).



Silvia Lecci, Noman Chaudhry, and Jeremy Herrera, receive their poster prizes sponsored by the International Journal of Experimental Pathology.

As closing remarks huge thanks and applause were received by the organizers for the wonderful job done in putting together such a good science event. Overall this conference was brilliantly organised with a broad spectrum of matrix biology lectures. The poster sessions, and drinks reception, provided an excellent opportunity to network with and gain inspiration from some of the leading scientists within the field, as well as some of the younger researchers. The meeting was a very enriching and successful experience. All the participants were extremely open to discussion and willing to share their knowledge with others. It was remarkable to have the possibility to see the work of senior outstanding investigators as well as having glimpses of the research carried out by early career scientists in the field of matrix biology. I would recommend any matrix researcher to attend the next BSMB conference.



**Orthopaedic Research Society
Annual Meeting 2019
Austin, Texas**

***By Neil Marr
BSMB reporter bursary awardee***

The 64th Orthopaedic Research Society annual meeting was held in Austin, Texas; the live music capital of the world! This flagship meeting boasted over 3,000 attendees representing a diverse community associated with virtually all aspects of orthopaedics. This four-day conference provided an extensive program consisting of 2,259 posters, and five podium sessions running concurrently throughout each day. As a PhD student researching tendon biology, this report will mostly provide a tendon-rich snapshot of the conference.

Tendon research has grown astronomically in recent years and had its greatest representation so far at this year's meeting. Opening the main program was a cell-mediated tendon regeneration session, featuring developments in tendon healing processes mediated by TGF β signalling, exosomes, and resident progenitor cells. After a short break, I attended my first ORS spotlight talk delivered by University of Liverpool's James Gallagher on how alkaptonuria can inform osteoarthritis research. The afternoon session was focused on zebrafish as an emerging orthopaedic model featuring Harvard's Mathew Harris's review of using forward genetics to study skeletal phenotypes. Other talks I attended included topics such as implant wear and bone therapeutics before a lively poster session.

The second day kicked off with a poster session in the morning, where I presented my poster titled *Identification and Characterisation of a Novel Interfascicular Tendon Progenitor Population*. This was

followed by the tendon biology session, with most talks showcasing previously unidentified tendon populations from various stages of development as well as their use as therapeutic agents. For the afternoon session, I attended an *ex vivo* explant model session featuring Jess Snedeker's (ETH Zurich) showcase of tendon physiology and disease research. Following this, I attended my most anticipated session which was focused on ageing and fatigue of tendon responses. This session consisted of talks on new differential roles for proteoglycans and enthesis fatigue failure mechanisms. Nelly Andarawis-Puri (Cornell University) provided the audience with a spotlight oral discussing the ways in which effective tendon repair could be achieved.

On the third day, the morning session highlight was Viola Vogel's (ETH Zurich) spotlight presentation where she emphasised the importance of protein conformations as mechano-chemical switches in molecular processes. Next, I attended the lunchtime Tendon Section meeting, where sandwich-laden audience members were treated to excellent talks from UCL's Niamh Nowlan and Rochester's Catherine K. Kuo on mechanobiology of skeletal development. The session also included a very fruitful open-panel discussion and networking break, ending with an oral session for young investigators to showcase their research. As for the fourth day, bone ageing research featured heavily with talks on how mechanical loading responses affect mineralisation in osteoporosis and spatially-distinct tibiae transcription.

To close my report, I would like to thank the BSMB for providing me with opportunity to attend this meeting – it was certainly one of my highlights of my PhD. To all the young investigators reading this please take advantage of the support that this amazing society provides!

Current BSMB Committee

Chairman, Prof. John Couchman
University of Copenhagen;
john.couchman@bric.ku.dk

Honorary Secretary, Prof. Kim Midwood
University of Oxford;
kim.midwood@kennedy.ox.ac.uk

Honorary Treasurer, Dr. Tom Van Agtmael
University of Glasgow;
tom.vanagtmael@glasgow.ac.uk

Elected Members:

Dr. Stephen Robinson
University of East Anglia;
Stephen.Robinson@uea.ac.uk

Dr. Giovanna Nalesso
University of Surrey;
g.nalesso@surrey.ac.uk

Prof. Stephanie Dakin
University of Oxford;
stephanie.dakin@ndorms.ox.ac.uk

Prof. Jerry Turnbull
University of Liverpool;
J.Turnbull@liverpool.ac.uk

Dr. Kasia Pirog
University of Newcastle;
Katarzyna.Pirog@newcastle.ac.uk

Dr. Blandine Poulet
University of Liverpool
B.Poulet@liverpool.ac.uk

Co-opted Members:

Prof. Jo C. Adams
University of Bristol;
jo.adams@bristol.ac.uk

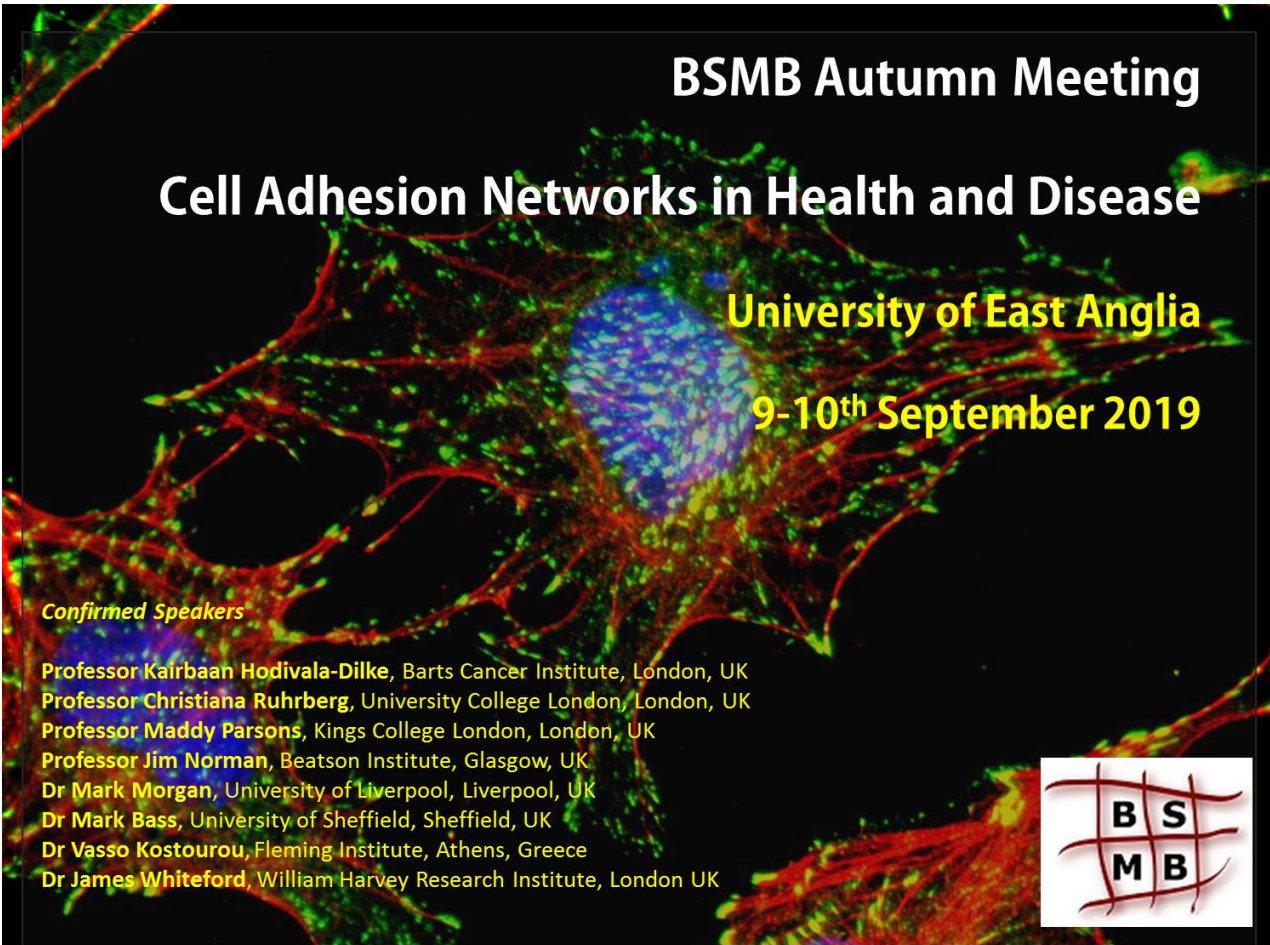
Prof. Qing-Jun Meng
University of Manchester;
Qing-Jun.Meng@manchester.ac.uk

Dr. James Whiteford
QMUL, London;
j.whiteford@qmul.ac.uk

Laura Collins
Student rep, University of Oxford;
laura.collins@lincoln.ox.ac.uk

Dr. Michal Dudek
Post Doc Rep, University of Manchester;
michal.dudek@manchester.ac.uk

SEE YOU IN NORWICH IN SEPTEMBER!



BSMB Autumn Meeting


Cell Adhesion Networks in Health and Disease

University of East Anglia

9-10th September 2019

Confirmed Speakers

Professor Kairbaan Hodivala-Dilke, Barts Cancer Institute, London, UK
Professor Christiana Ruhrberg, University College London, London, UK
Professor Maddy Parsons, Kings College London, London, UK
Professor Jim Norman, Beatson Institute, Glasgow, UK
Dr Mark Morgan, University of Liverpool, Liverpool, UK
Dr Mark Bass, University of Sheffield, Sheffield, UK
Dr Vasso Kostourou, Fleming Institute, Athens, Greece
Dr James Whiteford, William Harvey Research Institute, London UK



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