From the President’s Desk:

The scope of this bi-annual newsletter is twofold; to keep our members updated about the latest research news and upcoming scientific events relevant to the ECM field, and to remind them of our society’s dependence on their financial support and proactive advocacy. During 2015, the ISMB has awarded nearly €10,000 in travel grants for young investigators and to co-sponsor several international conferences. However, the fact that the numbers of members in good standing has held steady to about 180 for the last three years continues to limit ISMB’s ability to do more. Additionally, our total membership is relatively small (~300 members) and aging. The ISMB is therefore faced with the multiple challenges of improving its bottom line and expanding and rejuvenating its membership. While the ISMB Council has considered several strategies to increase the visibility of the society and the number of its members, it is ultimately up to each and every one of us to help achieve these goals. I believe that through our concerted efforts ISMB could have 400 paying members by the time the World Matrix Biology meeting is held in Manchester in 2018. If you think that I am dreaming, just look at what Renato Iozzo has been able to achieve for Matrix Biology in just a 2 year period by corralling the support and interest of all of us. The impact factor of the journal has increased from 3.6 to 5.074, the number of manuscripts submitted has doubled to ~200/year, and several thematic mini-reviews and special issues have been published and more are being prepared for the next years. I close by asking once again for your help to build a bigger and richer ISMB that promotes matrix biology research on a global scale and supports the development of our future leaders.

Checco Ramirez
President ISMB (francesco.ramirez@mssm.edu)

REMEMBRANCES

In Remembrance of those in our extracellular matrix community who have died recently, remembering and celebrating the lives and contributions of Ruth Chiquet-Ehrißmann and Endre Alexander Balazs

Ruth Chiquet-Ehrißmann

We write in remembrance of our dear friend and colleague, Ruth Chiquet-Ehrißmann, who passed away suddenly at her home in Pratteln, just outside Basel, on September 4, 2015. She was 60 years old. She is survived by her husband Matthias Chiquet, her children Daniel, Patrice and Fabian, and three grandchildren.

Ruth earned her Ph.D. from the ETH Zurich in 1981. In her dissertation, which was completed in the laboratory of David C. Turner, she was amongst the first to map cell-interaction sites of fibronectin. After postdoctoral studies at The Johns Hopkins University in Baltimore she returned to Switzerland where, in 1985, she became a junior group leader at the Friedrich Miescher Institute in Basel. She remained at the FMI until her death. During her first decade at the FMI, Ruth’s group produced what are now considered to be the seminal works on tenascins, a family of glycoproteins that she first characterized and named as such in 1986. Her research with tenascins expanded as new members of the gene family were discovered and emphasized the roles of tenascins in tumor progression. Whilst searching for tenasin homologs in Drosophila her group also discovered a novel family of transmembrane proteins that she named teneurins. Subsequent work from her laboratory and others showed that teneurins are important for guiding normal synaptogenesis in a variety of animal models.

(MAR:) The first time I “met” Ruth Chiquet dates way back to 1991 when I worked as a postdoctoral fellow in the USA. I sat in the audience of a keynote lecture of the Society for Neuroscience Meeting in New Orleans where Ruth presented her exciting data on the function of tenascin. She showed that tenascin, although being adhesive for cells, prevented their spreading and migration. At that time, the idea that molecules not only promote but can also prevent growth and migration was rather new. This concept has ever since been influential for the understanding of several developmental processes and the growth-inhibitory function of myelin for axons. I not only remember the content of Ruth’s lecture but also how she presented the data with seemingly little nervousness. I then first met Ruth in person when I returned to Switzerland. Ruth was part of a small group of scientists, which also included Matthias Chiquet (who at the time was an independent junior group leader at the Biozentrum) and Prof. Jürgen Engel, who all shared enthusiasm for molecules of the extracellular matrix. These colleagues made my start as an independent group leader smooth and I got to know all of them as outstanding scientists who always helped when I had questions or required a reagent. Ruth, together with Matthias and myself, also helped teach a lecture series that was initiated at the Biozentrum by Jürgen entitled “Extracellular Matrix and Cell Adhesion”. The series intended to help graduate students and postdocs to grasp the concepts important for the understanding of extracellular matrix. The lecture had a peculiar, yet highly attractive and successful format. The speaker would give the background and explain his/her research in one hour, which then was followed by up to one hour of questions and discussions. Importantly, all the organizers attended all the lectures, not only those taught by themselves, and they were actively involved in the discussions. This format allowed to ask provocative questions and certainly helped the students to get more deeply involved in the topics. After the retirement of Jürgen, Ruth volunteered to take over the responsibility for this lecture. She decided to leave the format but add some aspects of disease to the lecture series. Ruth was very meticulous in preparing those lectures, always starting the preparation of the series way ahead of time. In fact, Ruth, Matthias and I met on the evening of September 2nd, only two days before Ruth passed away, to discuss the lecture for the spring semester 2016. In those seminars, Ruth also clearly showed her dedication to teach students to become thorough and careful scientists. She was always open for questions and always found time to discuss with the students. I very much enjoyed this series and learnt about many new, exciting
topics. With Ruth’s death, the field of the extracellular matrix has lost an outstanding scientist and students have lost a great teacher and advocate for their needs. I regret not having spent more time with Ruth while she was still with us. I truly miss her.

(RPT:) I first met Ruth when she was a newly-minted group leader at the FMI. She and her close colleague Eleanor Mackie, now at the University of Melbourne, gave a colloquium presentation of the work that went into their 1986 Cell paper describing tenascin-C expression in development and tumors as well as its anti-adhesive properties. I knew from that moment that I was going to dedicate my research career to the study of tenascins. No matter that I was a postdoc in someone else’s lab: I worked with Ruth, Eleanor and our colleagues Henning Epperlein and Willy Halfter after dinner and on weekends characterizing the expression of tenascin-C during embryonic development and its potential roles in the morphogenesis of the neural crest. When I started my first lab. back in the USA, Ruth’s priceless gifts of DNA probes and antibodies got my career off on the right foot, and, after I moved to California in the mid-1990s, Ruth’s invitations to me to return to the FMI every other Spring Quarter to work as a visiting scientist were critical to my professional career and the success of my students. I will always remember Ruth for her integrity, humility and generosity, and the joyous times we spent hiking and dining together in Europe and the Bay Area. She was a fantastic role model and friend.

(JCA:) I first met Ruth in the early 90s. Our initial conversations focused on integrin signaling and I was drawn in by her openness and focus on fundamental questions. After starting my laboratory at University College London, we began a real collaboration. At that time, little had been done to compare properties of thrombospondin and tenasin as cell adhesion molecules. Ruth’s quick interest in new ideas, her energy, and her generosity in assigning her student, Doris Fischer, to this project of an early career investigator made a deep impression on me. We made rapid progress and the timing of these studies coincided with the start of a conference on the adhesion-modulating or matri-cellular proteins (organized by Paul Bornstein; this meeting continues to the present as a FASEB SRC). These amiable meetings afforded opportunities to continue to ponder the curious similarities and differences of these protein families. One vivid memory is the Tucson meeting of 2007, at which the European contingent kept to the practice of holding scientific discussions during hikes, even in the 104°F midday heat. In the post-genomic era of the 2000s, Ruth, Richard and I collaborated anew to analyze the evolution of tenascins and their context within the evolution of the metazoan extracellular matrix. My visits to Ruth also brought new friendships and collaboration within the highly active extracellular matrix research community in Basel. The importance of Ruth’s leadership in the tenasin field to the present-day understanding of the complex roles of tenascins cannot be over-estimated. I will miss Ruth greatly as a friend and an insightful and generous collaborator.

Contributed by  Markus Rüegg (Biozentrum, University of Basel)
Richard Tucker (University of California-Davis) and Josephine Adams (University of Bristol)

Ruth and Matthias in their garden at Pratteln.
Endre Alexander Balazs, 1920 - 2015

Endre Alexander Balazs, M.D., scientist, innovator, and entrepreneur, whose 70 years of pioneering research on the structure and biological activity of hyaluronan died August 29, 2015 in France, aged 95 years old.

Dr Balazs was born in Budapest, Hungary. He received his medical degree from the University of Budapest in 1942 and launched his research career there in the Department of Histology and Embryology. Subsequently, in 1947 he continued his research at the Department of Experimental Histology of the Karolinska Institute in Stockholm, before moving to Boston in 1951 at the invitation of Harvard Medical School, to organize the Retina Foundation and set up research laboratories there; he later became President of the foundation. He was co-founder of the Boston Biomedical Research Institute where he worked from 1968-1975. Dr Balazs moved to New York and continued his research and teaching at Columbia Presbyterian Medical Center as the Malcolm P. Aldrich Research Professor and Director of Research in the Department of Ophthalmology at the Harkness Eye Institute. Upon his retirement in 1987, he became the Malcolm P. Aldrich Research Professor Emeritus.

At his initiative in 1962 the first international eye research journal, Experimental Eye Research, was founded with him serving as Editor-in-Chief until 1991. He also initiated and co-founded the International Society for Eye Research (ISER; 1974) and was its General Secretary and later its President. In 1986, the International Society for Eye Research established the Endre A. Balazs Prize and named him Honorary President of the Society. More recently (2004), he founded the International Society for Hyaluronan Sciences (ISHAS).

As the world's leading expert on hyaluronan, a viscoelastic glycosaminoglycan present in all tissues of the human body, it was his vision of how it could be used and his specific contributions that led to medical products that have benefitted millions of patients worldwide. In the 1970s he patented the "Non-Inflammatory Fraction of Hyaluronan" to be used therapeutically. The first of the therapeutic products, Healon®, made intraocular surgeries for cataracts and subsequent intraocular lens replacement almost routine, and was also the first viscosupplementation product for the alleviation of pain and improvement of mobility in arthritis. To this day Healon and other products he developed, such as Synvisc® for viscosupplementation in osteoarthritis, remain the most utilized products in their fields. Worldwide, these products have facilitated eye surgeries in more than 250 million patients, and more than 50 million patients crippled by osteoarthritis of the knee are now able to walk and live more comfortably and productively.

Hence, to bring these beneficial products to the market place, in 1968, Dr Balazs founded Biorics, Inc., to develop methods to produce and apply hyaluronan for medical purposes. In 1981, he co-founded Biomatrix, Inc. with his wife, Dr Janet L. Denlinger, and established a strong research and development program that focused on modifying hyaluronan. This work led to important therapeutic applications, including a new viscosupplement for arthritic joints (Synvisc®); Hylaform® and the concept of viscoaugmentation of dermal tissue for the treatment of facial wrinkles and depressed scars; and Hylashield® to be used on the surface of the eye to alleviate pain and irritation.

Dr Balazs was an author of over 300 publications particularly including those on the subjects of hyaluronan and sulfated glycosaminoglycans, and the medical applications of hyaluronan and hyalans. He had received 19 US and corresponding International patents in these fields. He had also received many honours for his research/development and business accomplishments including a Guggenhein Fellowship (1968) and most recently he received the Helen Keller Prize for Vision Research (2011) and in 2012, was elected to the New Jersey Inventors Hall of Fame. Over almost 50 years he was also awarded several honorary degrees.

This text was taken from the ISHAS web page – for more information please read more at: https://www.ishas.org/community/endre-alexander-balazs
MEETING REPORTS

REPORTS FROM STUDENTS FUNDED BY ISMB TRAVEL GRANTS

One of the most important activities of ISMB is providing international travel grants for young investigators to attend and participate in matrix biology meetings. Below are reports provided by the ISMB travel awardees to two different Grodon Conference meetings earlier this year. Reading their reports below, you can see the value of the ISMB travel awards for these young researchers.

A wonderful journey and good experience in my career

I was fortunately appointed as the associated chairman of the very first Gordon Research Seminar (GRS) on Cartilage Biology and Pathology 2015, held in Galveston, USA. GRS is a satellite meeting of Gordon Research Conference (GRC) for junior scientists and trainees to share new ideas and serve as a platform for networking among young scientists. Preparation works have been started 18 months ago with another chairman, Dr Pallavi Bhattaram. I have learnt a lot through the process of fundraising proposal writing, mentors invitation, abstract selection and budgeting. We had Prof. Bjorn Olsen as our keynote speaker and Prof. Philippe Soriano as our career-development mentor. We also had high-quality scientific talks presented by the trainees during GRS. We received positive feedback from the participants and they enjoyed the discussion in a highly-stimulating and non-intimidating environment. We also had chance to build networks with the peers that may lead to a lifetime-collaboration in our scientific career. The “discussion mode” was still active in the continuous days of GRC. I enjoyed the high impact talks in GRC and met new and old friends during the meeting. Most importantly, I discussed my recent work with the peers in the cartilage research area and got valuable feedbacks from them. Lastly I would like to thank my chairing partner Pallavi, Chairmen of the GRC, Prof. Danny Chan and Prof. Veronique Lefebvre, and also the speakers and mentors for their support and contribution to the event.

Wilson CW Chan, PhD. The University of Hong Kong
I was extremely pleased to have been able to attend for the first time the **GRC on Cartilage Biology and Pathology 2015** and I am thankful to the organisers for inviting me to present my unpublished work. It was an excellent conference both in terms of the quality of posters and presentations and also in terms of its organisational aspects and setting. The research that was presented in posters and talks was multidisciplinary, cutting edge and of high standard. The duration of the talks was perfect giving plenty of time for questions and discussion. The focus on presenting unpublished results was very beneficial both for the presenters and the audience as it provided the right timing to give and receive valuable constructive feedback and suggestions. The size and the setting of the conference was ideal and it greatly facilitated engagement in scientific discussion and networking in an informal atmosphere. I found that everyone was very friendly and eager to interact with each other and I was able to initiate discussions that may lead to new and exciting collaborations.

I will strongly recommend GRC to my colleagues!

*Kalliopi Panoutsopoulou, Post-doctoral Fellow, Wellcome Trust Sanger Institute, UK*

The **Gordon Research Conference (GRC) “The Collagen Superfamily: From Genes to Organism Physiology”** was held together with the Gordon Research Seminar (GRS) “The Collagen Superfamily: Lessons from Biochemistry, Development and Inflammation” in July 2015 in New London, NH. As it was the first participation in GRS/GRC for me, I want to summarize my impressions and experiences here briefly.

I think for PhD candidates and young post docs, there is no better way to start in a GRC than participating in the GRS as well. These two days before the GRC are an excellent chance for young scientists to present their work to other researchers of the same age and to senior scientists, who participate at each GRS as discussion leaders and keynote speakers. Due to the small number of 30-40 students/post docs, the GRS offers a great chance, especially for young scientists, who attend for the first time, to get in contact with other participants easily and to be welcomed as a new member of this research “family”. I really liked the friendly and open-minded atmosphere during the oral presentations and the poster session, because it helped to ask own questions and to participate in discussions even if the scientific content was not directly linked to the own research field.

A special experience for me has been the short talk session on Sunday afternoon, which was held by chance due to a cancellation of an oral presentation. To fill the gap in the schedule five poster presentations were selected for a 5 min oral presentation. It turned out that not only the speakers appreciated this possibility to present their work, but also the feedback from the audience to this form of presentation was very positive. I can strongly recommend this 5 min presentations as an inherent part for future meetings as it really helped to increase comprehension for other topics. Collectively, I can say that I appreciated these two days of GRS a lot and that the GRS helped me to exploit the whole value of the subsequent GRC. Therefore I wanted to thank Jessica Trombeta-Esilva and Pauline Nauroy one more time for organizing this weekend.

The GRC, which followed the GRS, was coined by state-of-the-art research, excellent talks and an impressively broad spectrum of collagen-linked scientific questions during the poster sessions. This year, the conference was chaired by Sergey Leikin and Florence Ruggiero, who did an excellent job. Although it is beyond doubt that the scientific presentations are the most important part of the conference, the small things in between are the reason for the unique character, which separates the GRC from other research conferences. The location at Colby-Sawyer College allows a constant exchange during breakfast, lunch and dinner and during every meal you will meet new people. If there are still people left, you have not met before, there is a good chance that you get in contact with them during one of the well-organized exciting afternoon events. Be it hiking, canoeing, swimming or participating in the legendary soccer match USA-Rest of the world, there are numerous possibilities to establish new contacts. For me, it was nice to see that over the whole week there were no hierarchical structures at all making it possible to discuss your own ideas with leaders on the research field and getting inspiring feedback immediately. In summary I can recommend the participation in GRS/GRC every student in the research field. Once you have been there for the first time, you do not want to miss any other meeting.

*Tobias Kühl, University of Freiburg, Freiburg, Germany*
This past July I had the great fortune of being able to attend the 2015 Collagen Gordon Research Seminar and Conference where I gave presentations of my PhD work at both events. Being my first GRC, I was somewhat nervous of all the big names in the field that would be present. The seminar and conference however far exceeded my expectations on all levels. Most importantly, the science showcased was outstanding with personal highlights being the latest developments on collagen VI research as presented by Dr Bönnemann, Dr Lamandé and Prof. Bonaldo. I also highly enjoyed Professor Bruckner-Tuderman's talk about her group's elegant and translational work on the treatment of dystrophic epidermolysis bullosa. In addition the atmosphere during the talks, poster sessions and social events was surprisingly relaxed and everyone was more than happy to chat about their work, offer valuable insight and discuss potential collaborations. The great set of activities planned by the organisers sure helped a lot with team bonding! And special mention to the food and the ice cream stand in particular! All in all this was an amazing experience that helped me communicate my work and interact with prominent scientists from around the world that allowed me to advance my own research with their ideas and suggestions, as well as providing future networking and employment options. I am really grateful to ISMB for the travel grant award and will be most definitely looking into attending the next GRC in 2017!

Georgios Theocharidis, PhD Candidate, Blizard Institute, Barts and the London School of Medicine and Dentistry
g.theocharidis@qmul.ac.uk
COLLAGEN GORDON CONFERENCE 2015
(Photographs courtesy of Emmy Gordon and Karl Kadler)

GRC Chair: Sergey Leikin; GRS Assoc. Chair: Pauline Nauroy;
GRS Chair: Jessica Trombeta-Esilva; GRC Co-Chair: Florence Ruggiero

Young investigator participants

Young investigator participants

Art Veis & Young investigator participants

Posters and food

Food and Posters
Karl Kadler, Sergey Leikin & Rocky Tuan: consider the situation then eat the last crustaceans

Billy Hudson & Emmy Gordon – GRC is a hard life, but someone has to do it!

Shireen Lamandé & John Bateman – antipodean adventurers

Leena Bruckner-Tuderman & Joan Marini

Jean Baum & Barbara Brodsky

Doug Gould & Sergey Leikin
**MATRIX BIOLOGY RESOURCES**

**Protein Data Bank and the Structure of Collagen**

The Protein Data Bank (PDB, http://www.rcsb.org/pdb/home/home.do) is the repository of high resolution protein structures solved by x-ray crystallography or NMR. It provides “information about the 3D shapes of proteins, nucleic acids, and complex assemblies that helps students and researchers understand all aspects of biomedicine and agriculture, from protein synthesis to health and disease.” This database has been designed to be accessible to researchers in all fields and can be easily searched to obtain available structures, summary tables, 3-D views, and original references.

Although the determination of extracellular matrix protein structures was very challenging for many years compared with small soluble proteins, there are now an increasing number of structures of matrix proteins which have been solved and are available. Here, we focus on the structure of collagen. No structure of any natural collagen molecule or fragment of collagen has ever been solved by x-ray crystallography or NMR, but synthetic peptides which adopt the collagen triple-helix structure have been crystallized and have yielded molecular detail. Below is a list compiled by Jordi Bella (University of Manchester, UK) of the current peptides containing triple-helical structures which are available in the PDB, including their sequence, PDB accession number, year of entry, and reference. Some peptides have tripeptide repeating sequences, while other contain short natural sequences from human collagen surrounded by stabilizing Gly-Pro-Hyp or Gly-Pro-Pro triplets. One 42-residue collagen peptide contains the C-terminal sequence of human type III collagen (Boudko et al. JBC 283:32580 (2008)). There are also peptides with non-natural sequences (e.g. Gly-Hyp-Hyp) or non-natural residues (e.g. 3S-Hyp) used to investigate the principles of triple-helix stabilization and structure.

![Image for 1BKV](Image)

**Protein chains are colored from the N-terminal to the C-terminal using a rainbow (spectral) color gradient. Kramer et al. (1999) Nat Struct Biol 6, 454-457**

**Structures of collagen-like peptides deposited in the Protein Data Bank, collated by Jordi Bella.**

<table>
<thead>
<tr>
<th>Amino acid sequences</th>
<th>Year</th>
<th>PDB</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>(POG)₄ POA (POG)₅</td>
<td>1994</td>
<td>1CAG</td>
<td>Bella et al. (1994) Science 266, 75-81</td>
</tr>
<tr>
<td></td>
<td>2001</td>
<td>1G9W</td>
<td>Vitagliano et al. (2001) Biopolymers 58, 459-464</td>
</tr>
<tr>
<td>(PPG)₉ average structure</td>
<td>2001</td>
<td>1ITT</td>
<td>Hongo et al. (2005) J Biochem 138, 135-144</td>
</tr>
<tr>
<td>(PPG)₁₀ full length structure</td>
<td>2002</td>
<td>1K6F</td>
<td>Berisio et al. (2002). Protein Sci 11, 262-270</td>
</tr>
<tr>
<td>(PPG)₉ full length structure</td>
<td>2010</td>
<td>3AH9</td>
<td>Unpublished</td>
</tr>
</tbody>
</table>

Kramer et al. (2001) J Mol Biol 311, 131-147
(POG)₄ EKG (POG)₄ 2000 1OSU Kramer et al. (2000) J Mol Biol 301, 1191-1205
(POG)₁₀ foldon structure 2003 1NAY Stetefeld et al. (2003) Structure 11, 339-346
(POG)₃ GFOGER (POG)₃ 2004 1Q7D Emsley et al. (2004) J Mol Biol 335, 1019-1028
(POG)₁₀ average structure 2004 1V7H Okuyama et al. (2004) Biopolymers 76, 367-377
(POG)₁₁ average structure 2005 4OYS Unpublished
(POG)₉ full length structure 2012 3B0S Okuyama et al. (2012) Biopolymers 97, 607-616
(OOG)₁₀ 2005 1WZB Kawahara et al. (2005) Biochemistry 44, 15812-22
(GOO)₁₀ 2005 1VM8 Schumacher et al. (2005) J Biol Chem 280, 20397-403
(PPG)₄ PaOG (PPG)₄ 2005 1X1K Jiravanichanun et al. (2005) ChemBioChem 6, 1184-87
(POG)₄ PG (POG)₄ 2006 1E1B Bella et al. (2006) J Mol Biol 362, 298-311
(POG)₄ (G²OO) (POG)₄ 2006 2G66 Schumacher et al. (2006) J Biol Chem 281, 27566-74
(POG)₂ LOG (POG)₅ 2007 2DRT Okuyama et al. (2007) Biopolymers 86, 212-221
(POG)₄ (LOG); (POG)₄ 2007 2DRX Okuyama et al. (2007) Biopolymers 86, 212-221
(PPG)₂ POG (PPG)₄ 2009 2D3F Okuyama et al. (2009) Biopolymers 91, 361-372
(PPG)₄ OOG (PPG)₃ 2009 2D3H Okuyama et al. (2009) Biopolymers 91, 361-372
(PPG)₄ OPG (PPG)₂ 2009 3A0A Okuyama et al. (2009) Biopolymers 91, 361-372
(PKG)₁₀ / (DOG)₁₀ / (POG)₁₀, NMR study 2009 2KLW Fallas et al. (2009) J Biol Chem 284, 26851-26859
(mPfPG)₇ 2010 3IPN Shoulders et al. (2010) Proc Natl Acad Sci 107, 559-64
(PPG)₄ OSG (PPG)₄ 2011 3ADM Okuyama et al. (2011) Biopolymers 95, 628-640
(PPG)₄ OTG (PPG)₄ 2011 3A1H Okuyama et al. (2011) Biopolymers 95, 628-640
(PPG)₄ OVG (PPG)₄ 2011 3A0M Okuyama et al. (2011) Biopolymers 95, 628-640
(POG)₃ GKL (GPO)₄ 2011 3POD Gingras et al. (2011) Structure 19, 1635-1643
(POG)₄ GKL (GPO)₄ 2011 3PON Gingras et al. (2011) Structure 19, 1635-1643
(POG)₂ GLO GEA (GPO)₂ 2011 3P46 Byrne et al. (2011) Chem Commun 47, 2589-2591
(PKG)₃ PKG EOG (POG)₃ 2012 3T4F Fallas et al. (2012) J Biol Chem 287, 8039-8047
(PKG)₄ PKG DOG (POG)₄ 2012 3U29 Fallas et al. (2012) J Biol Chem 287, 8039-8047
(PKG)₂ (αOPG)₂ (POG)₄ 2012 3B2C Motooka et al. (2012) Biopolymers 98, 111-121
(PPG)₂ PTGPRG (PPG)₂ 2012 4AXY Widmer et al. (2012) Proc Natl Acad Sci 109, 13243-47
(POG)₃ GPROQGVMGFO (GPO)₃ 2012 4DMT Brondijk et al. (2012) Proc Natl Acad Sci 109, 5253-58
(PPG)₄ ODG (PPG)₄ 2013 3ABN Okuyama et al. (2013) Biopolymers 99, 436-447
(POG)₃ PRG (POG)₄ 2014 3WN8 Okuyama et al. (2014) Biopolymers 101, 1000-09

Abbreviations of unusual amino acids
⁺O: 3S-hydroxyproline; αO: allo-hydroxyproline; αO: 4S-hydroxyproline; fp: 4-fluoroprolino; mP: 4-methylproline; αM: selenomethionine

ISMB Newsletter Number 22 October 2015 - page 11 -
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 twice yearly 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 last 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
We welcome the following new members who have joined ISMB this year:

Manuela Viola (Assistant Professor, University of Insubria, Varese, Italy)
Maria Martina Sfriso (Postdoc, University of Padova, Italy)
Tony Day (Professor, University of Manchester, UK)
Nathalie Theret (Research Director, INSERM - University of Rennes, France)
Eok-Soo Oh (Professor, Ewha Womans University, Seoul, Korea)
Kazuyuki Sugahara (Emeritus Professor, Meijo University, Nagoya, Japan)
Yanusz Wegrowski (Professor, University of Reims, France)
Megan Lord (Senior Lecturer, University of New South Wales, Sydney, Australia)
Kalliopi Panoutsopoulou (Career Development Fellow, Sanger Institute, Hinxton, UK)
Wilson Chan (Postdoc, University of Hong Kong, China)
Xanthi Stachtea (Postdoc, Lund University, Sweden)
Mariana Soares (Graduate student, Federal University of Rio de Janeiro, Brazil)
Felipe Teixeira (Graduate student, Federal University of Rio de Janeiro, Brazil)
Hyun Jung Park (Postdoc, Baylor College of Medicine, Houston, Texas, USA)
Adam Pudelko (Graduate student, Medical University of Silesia, Katowice, Poland)

APPOINTMENTS
Fabio Quondomatteo, FAS, will take up an Anatomy Professorship with the Post of Head of Anatomy at the University of Glasgow in Scotland, January, 2016. Fabio’s research interests include histological work and in particular electron microscopy, mainly on skin structure in different in vivo models (KO mice and disease models ), with particular focus on skin ECM and Basement membrane.

GREAT EMERGING OPPORTUNITY
Wanted: New Editor(s) for the ISMB Newsletter, beginning Fall 2016.
Do you enjoy networking and being in touch with your matrix colleagues? You can make a contribution to ISMB and the matrix field by putting together the twice yearly newsletters. Perhaps ask a friend who would like to share this position with you, and take the opportunity to have your creative input into our Society newsletter. Please contact Barbara Brodsky (Barbara.Brodsky@tufts.edu) for further information.
MATRIX MEETING ANNOUNCEMENTS

Matrix Biology Society of Australia and New Zealand - Joint meeting with Australia and New Zealand Bone & Mineral Society and Molecular and Experimental Pathology Society of Australasia
November 1-4, 2015
Hobart, Tasmania, Australia.
Website: http://www.anzbmsconference.com

1st RSC/SCI symposium on Fibrosis Disease: medicinal chemistry progress from biological target to the clinic.
November 10, 2015
Slough, United Kingdom
http://www.maggichurchouseevents.co.uk/bmcs

The 2nd Annual Matrix Biology Ireland meeting
December 2-4, 2015.
University College Dublin
http://www.mbi.ie/meeting-2015/home1

International Conference on Progress in Bone and Mineral Research 2015
December 3-5, 2015
Vienna, Austria
http://www.ausbmr.at/ausbmr.htm

Gordon Research Conferences
Bones & Teeth (GRS): Building on Solid Foundations: From Mechanisms to Bone Tissue Repair
February 13-14, 2016
Bones & Teeth: Translating Local Tissue Interactions and Systemic Interplays into New Therapies for Bones and Teeth
February 14-19, 2016
Hotel Galvez
Extracellular Matrix: New Perspectives for Translational Medicine
(A joint meeting of the German and French Societies for Matrix Biology)
March 3 – 5, 2016
Freiburg
http://www.matrixbiologie.de/JahrestagungFreiburg/VenueFreiburg.html

British Society for Matrix Biology

British Society for Matrix Biology Spring Meeting
April 4-5, 2016
Chester University City Campus, Chester, CH1 4AR
http://www.bsmb.ac.uk/meetings/spring-meeting/

Combined Congress – 13th Meeting of the Combined Orthopaedic Associations
April 11 – 15, 2016
Cape Town, South Africa
http://www.saoa.org.za/

World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal Diseases (WCO-IOF-ESCEO)
April 14-17, 2016
Malaga, Spain

43rd Annual Calcified Tissue Society Congress
May 14-17, 2016
Rome, Italy
http://2016.ectscongress.org/
10th World Biomaterials Congress
May 17-22, 2016
Montreal, Canada
http://www.wbc2016.org

ICR 2016 : 18th International Conference on Rheumatology
May 23-24, 2016
London, United Kingdom
https://www.waset.org/conference/2016/05/london/ICR/call-for-papers

22nd Canadian Connective Tissue Conference 2016
May 28-30, 2016
Hamilton, Ontario
http://connective-tissue-canada.com/

Ehlers-Danlos International Symposium 2016
May 2016
New York NY
http://ednf.org/eds-international-symposium-2016

The European League Against Rheumatism (EULAR)
June 8 – 11, 2016
London, UK
http://www.congress.eular.org/
Matrix Biology Europe
June 11-14, 2016
Athens, Greece
http://www.mbe2016.upatras.gr

9th European Elastin Meeting
June 17-19, 2016
Stuttgart, Germany
http://www.elastin2016.com/

American Orthopaedic Association 2016 Annual Scientific Meeting
Jun 22 – 25, 2016
Seattle, Washington

TERMIS-EU Conference 2016
June 28 - July 1, 2016
Uppsala, Sweden
http://www.termis.org/meetings_europe.php

Bone Research Society, BRS Annual Meeting 2016
June 29 - July 1, 2016
Liverpool, UK
http://boneresearchsociety.org/meetings/#7
Gordon Research Conferences

Proteoglycans (GRS) - Proteoglycans as Functional Regulators of Development and Disease
July 9-10, 2016

Proteoglycans - The Proteoglycan Arc - From Molecular Mechanisms to Therapeutic Exploitation
July 10-15, 2016
Proctor Academy

2016 TERMIS-AP Conference
September 3-7, 2016
Tamsui Town of New Taipei City
http://www.termis.org/ap2016/

BMPs IN DEVELOPMENT, DISEASE, & REGENERATION - 11th International BMP Meeting
October 26 - 30, 2016
Boston, MA
See http://asmb.net/calendar_display.php?id=7205

American Society for Matrix Biology Biennial Meeting
November 13-16, 2016
St. Petersburg, Florida
http://www.asmb.net/files/asmb2016--save_the_date.pdf

2016 TERMIS-AM Conference
December 11-16, 2016
San Diego, CA
http://www.termis.org/chapters_am.php
Plenary Lectures / Workshops

› Proteoglycans in health and disease
› Matrix proteolysis in health and disease
› Role of collagen modifications in matrix quality/quantity and disease
› Cell adhesion, signaling and the tumour environment
› Cell/matrix interactions and signaling in matrix biology and pathology
› Matrix in immune regulation
› Matrix disease mechanisms
› Pharmacological targeting of matrix in disease

› Tissue engineering from a matrix perspective and FCM-based nanobiotechnology
› Matrix regulation in health and disease. Genetics and Epigenetics
› Systems Biology
› … and others to be announced

Venue: Conference Hotel “Royal Olympic”

Chair: Prof. Nikos K. Karamanos

Deadline Early Bird Registration:
mid April 2016

Website: www.mbe2016.upatras.gr
E-mail: mbe2016@chemistry.upatras.gr