



Swiss Society for Biomaterials + Regenerative Medicine
Société Suisse des Biomatériaux + Médecine Régénérative
Schweizerische Gesellschaft für Biomaterialien + Regenerative Medizin
Società Svizzera di Biomateriali + Medicina Rigenerativa

2024 February Newsletter

Dear All,

your society is pleased to share this February 2024 Newsletter, with a recap on the SSB+RM involvement in ESB 2023, several Young Scientist events, and key information about upcoming events and much more. Outline (click on links to jump to sections):

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A recap of the of the SSB+RM 2023

SSB+RM meets ESB2023 (27th Annual Meeting)

In 2023, the SSB+RM Annual Meeting was integrated into the 33rd annual conference of the European Society for Biomaterials ESB2023, which was held in Davos, Switzerland. With such landmark event taking place in our country, this has been a unique opportunity to increase the SSB+RM visibility at the European and global levels. With Matteo D'Este being both the ESB2023 main organizer and part of the SSB+RM executive committee, the connection has been very straightforward, and the SSB+RM organized a symposium with 3 scientific sessions, supported in abstract reviewing, keynote speaker invitations, the young scientist events (supported by YS), general promotion of the event as well as evaluation of talks and posters to be considered for awards.

The ESB meeting was previously held in Switzerland in 1993 and in 2009, and especially now, with the exclusion of CH from the Horizon Europe program, this event has been essential to keep international collaborations active and confirm the importance of

Switzerland in this research area. Thanks to this conference, over 1200 experts from the fields of chemistry, biology, medicine, materials technology, and engineering met in Davos from September 4 to 8, 2023, to exchange their ideas and findings on the latest advances in the development of biomaterials.

This broad participation was reflected in a very strong program of ESB2023, consisting of 1054 abstracts being presented in 75 sessions. The program showcased the most recent trends and advances of the field with a series of sessions covering a very wide range of topics including biomaterial design, clinical translation, additive manufacturing and biofabrication, sustainable biomaterials, nanomaterials and in vitro models, among others.

Coordinated by Matteo Moretti, SSB+RM worked with Matteo D'Este to organize a series of special sessions within ESB2023, presenting Swiss biomaterials research to the international community on September 7. The outstanding keynote speakers Prof. Dr. Roger Kamm (MIT), Prof. Dr. Maartje Bastings (EPFL; EC member) and Prof. Dr. Florian Thieringer (Unibas) attracted many conference attendees and were each followed by four short talks selected from abstracts. After the last session, the general assembly was held, but the evening was far from over as the gala dinner took place the same night.

The ESB Young Scientists Forum was supported by SSB+RM YS and gave an important contribution to the conference with a very well attended workshop on day one and with the YSF night out, which took place in a mountain hut above 2000 meters. Both events were generously supported by Exabone, to which we would like to express our sincere gratitude.

As the organizing institution, the AO Research Institute Davos recognizes the significant role that the SSB+RM plays in advancing research, promoting collaboration, and fostering innovation in the field of biomaterials in our country. We are incredibly thankful to announce that for the efforts in supporting the conference, the AO Research Institute has made an immensely generous donation of 20'000 CHF to our society. In particular, this donation shall be used to support YS activities.



A recap of the Young Scientists of SSB+RM

Swiss-French Biomaterials Young Researchers' Summer School (based on YS report)

On June 15th and 16th 2023, young researchers from France (46 participants) and Switzerland (40 participants) came to Zurich for the first Swiss-French Biomaterials Summer School. This event was co-hosted by the YS organizations of both the Swiss SSB+RM as well as the French BIOMAT. The event offered a big variety of sessions from conventional "conference-style" keynote presentations and poster sessions to more soft-skill-oriented workshops and panel discussions.

The keynote presentations were given by Dr. Yassine Maazouz (RMS Foundation) and Dr. Carla Palomino Durand (University of Lille). Other highlights included the career path roundtable discussion with Dr. Daniela Gunz (Career services of University of Zurich), Dr. Tanja Fauti (Roche Innovation Center) and Prof. Dr. Martin Ehrbar (University and University Hospital Zurich; previous SSB+RM president). In an extremely "hands-on" session led by Prof. Dr. Mark Tibbitt (ETH Zurich; EC member) attendees were encouraged to "storyboard" one of their future papers/presentations and to present their ideas to other people from the audience. It was great to see so many colorful post-it storyboards at the end of the session! The second workshop was taught by Dr. Michio Painter (Therapy Development Accelerator of the University of Zurich) on how to "turn ideas into companies". He encouraged the attendees not to be afraid of becoming entrepreneurs themselves and gave first-hand examples from his own entrepreneurial past/present on how to master this transition from academia successfully.



For the lab tours, the participants could choose one of four campuses to visit: Balgrist, Zurich center, ETH Hönggerberg and the Biotechnopark in Schlieren. Across the different sites, 13 different labs opened their doors to the participants.

In the evening of the first day, participants and speakers gathered at Amboss Rampe for a social evening and to learn more about each other's countries in a fun pub quiz. Of course, this event would not have been possible without the support of numerous institutions/individuals. First and foremost, the YS would like to thank the sponsors of this event for their generous contributions, without which this summer school would have never been possible: Straumann, ETH Zurich, European Society for Biomaterials

YSF, Rheolution, Readily3D, PBC Biomed and University Cergy Paris. Secondly, the YS thank ETH Zurich for providing the necessary infrastructure to host this event as well as the financial contribution through the "Doctoral project funding" program. Thirdly, the YS' thanks go to the AO Research Institute Davos for sponsoring the nametags for the summer school. Last but not least, the YS would like to thank all keynote presenters, round table panelists, workshop presenters and lab tour hosts for being part of this event!

Lab Networking Event at Straumann and DBM Basel (based on YS report)

On November 17th 2023, 37 young researchers from labs all around Switzerland gathered in Basel for an enriching Lab Networking Event. The day started with the visit to Straumann (home of Dr. Benjamin Pippenger, EC Member), where participants delved into the Technology and Testing Group. During the visit, demonstrations of exclusive testing machines developed by Straumann offered a glimpse into their pioneering advancements.

Afterwards, an interactive Q&A session between the young researchers and employees of Straumann of different departments took place. Different topics were touched, from career path, daily work life in the company to the importance of having a network when looking for a job in a company.

Next, the group travelled to the Department of Biomedicine at the University of Basel for a joint lunch and the second part of the day. After the lunch break, the head of the Department of Biomedicine, Prof. Dr. Ivan Martin, held the welcome presentation and showcased the many different fields the Department of Biomedicine is involved in, with projects ranging from sustainability to translational research. Following his presentation, the group leaders Prof. Dr. Arnaud Scherberich (EC Member), Prof. Dr. Anna Marsano (EC Member) and Prof. Dr. Andrea Banfi presented their Bone Regeneration, Cardiac Surgery and Engineering, and Regenerative Angiogenesis labs, respectively.



The afternoon continued with the Department of Biomedicine that offered more insights to their research in a lab tour, where the Bone Regeneration, Cartilage Engineering, Tissue Engineering and the Cardiac Surgery and Engineering lab showcased their bioreactors and biomaterials. The 3D print lab of the University Hospital of Basel also opened their doors to our young researchers. In particular, they showed us the process from the acquisition of patients' images with skull defects to the printing of the substitute parts. Finally the researchers had the possibility to have a tour inside the Department of Biomedicine in order to have an idea on how the daily work there looks like. The researchers actively engaged and interacted with the labs, fostering a vibrant atmosphere throughout the tour. As tradition requires, we closed our lab networking event with an apéro, where the discussions continued in a more informal setting.

The YS would like to thank Straumann, the Department of Biomedicine at the University of Basel and the 3D Print Lab of the University Hospital of Basel for the hospitality and the time that they dedicated to us. Additionally, the YS thanks all the group leaders who generously shared their expertise and facilitated the laboratory visits.

6th YS Symposium (based on YS report)

On January 12th 2024, researchers from labs all around Switzerland gathered in the main building at ETH Zurich for the 6th SSB+RM YS Symposium. The symposium aimed to create a platform for young scientists to connect and engage with peers in their research field, potentially sparking new inter-institutional collaborations across

Switzerland. The primary attendees of our symposium were master and PhD students, many of whom may not have had extensive opportunities to present their work in such a conference environment. Therefore, the symposium also served as a valuable experience for these participants to gain confidence in presenting their research and to enhance their overall communication skills.

We were pleased to welcome 89 participants to our auditorium for the event, continuing the success of last year's significant attendance. While a substantial portion of the participants (56%) is affiliated with Zurich-based research institutions such as ETH Zurich, the University of Zurich, and the University Hospital Zurich, the event successfully broadened its target audience, attracting numerous attendees from various institutions across Switzerland and even Germany. The presence of attendees from the AO Research Institute Davos, Empa, University of Basel, RMS Foundation, FHNW, University of Tübingen, and EPFL, was a particularly gratifying aspect of the event.

We were especially pleased to welcome our two distinguished keynote speakers to the event: Prof. Dr. Géraldine Guex, assistant professor at the Oral Implantology Lab, University Center of Dental Medicine Basel, University of Basel, and Prof. Dr. Francesco Stellacci, professor at the Supramolecular NanoMaterials and Interfaces Laboratory, Institute of Bioengineering, EPFL in Lausanne. The audience gained a summary of their fascinating career paths and their research. Prof. Dr. Géraldine Guex spoke about her previous work on cell-material interactions and how she is combining that knowledge for her new research group, and Prof. Dr. Francesco Stellacci explained his research path to fighting infections and viruses. Both talks showcased highly innovative and groundbreaking research, sparking numerous questions and stimulating discussions during the subsequent Q&A session and coffee and lunch breaks.

In addition to our two keynotes, there were eight oral contributions and 10 rapid-fire presentations, and 35 posters. The award for the best oral presentation of this year's symposium went to two participants, Joyce Kimenai (ETHZ) and Annalena Maier (ETHZ), with equal points. The rapid-fire presentations were won by Jaimie Mayner (ETH Zürich), followed by Elian Kuhn (ARI) in second place. The first place in the poster presentation category was won by two participants as well: Celine Labouesse (ETHZ) and Marcia Mürner (ARI).

In keeping with tradition, we concluded our symposium with an apéro at the bQm bar on the Polyterrasse at ETH Zurich, accompanied by great music and a casual ambiance to network and end the day.

We were very satisfied and proud of how the symposium unfolded and are grateful for the positive feedback we received. We would like to thank the SSB+RM parent organization for their unwavering support in all our endeavors. Our profound appreciation goes to the AO Research Institute Davos and Exabone for their support in sponsoring the event. Also, our sincere thanks are extended to ETH Zurich for supplying the essential infrastructure to host this event. We want to express our deep gratitude to our outstanding jury members: Dr. Elena Della Bella (ARI), Dr. Giulia Milan (Unibas), Dr. Kongchang Wei (Empa), Dr. Parth Chansoria and Dr. Costanza Giampietro

(both ETHZ) and Dr. Katharina Gegenschatz-Schmid (USZ). Last but not least, we would like to thank our two keynote presenters, Prof. Dr. Géraldine Guex and Prof. Dr. Francesco Stellacci, for taking the time to travel to Zurich to share their enthusiasm for research with our audience.



Upcoming Events you shouldn't miss
28th Annual Meeting in St. Gallen, 04.-05.09.2024

SSB+RM annual meeting 2024
4th/5th of September 2024
Empa in St.Gallen



*Swiss Society for Biomaterials + Regenerative Medicine
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Schweizerische Gesellschaft für Biomaterialien + Regenerative Medizin
Società Svizzera di Biomateriali + Medicina Rigenerativa*

STAY TUNED!

Organizers:
Markus Rottmar
Maartje Bastings
Anna Marsano



Highlights:

3 Keynote speakers
3 Invited talks
18 contributed talks (with award)
12 rapid fire presentations (with award)
2 Poster sessions (with award)



Wednesday, 4th September 2024

10:30 -13:00 YS event

13:30 - 18:15 Annual meeting & GA

Session 1: Latest technologies/breakthrough on classic biomaterials (e.g. ceramics, metals)

18:45 - 22:00 Dinner

Thursday, 5th September 2024

8:30 – 4:45 Annual meeting

Session 2: Regenerative medicine approaches

Session 3: Advanced in vitro tissue models

Young Scientist Lab Networking Event (TBA)

Also this year, the Young Scientists will organize a Lab Networking Event, as these events seem to be quite popular with the attendees. The location and date are not known yet but will be communicated separately, so stay tuned!

Other Biomaterials & Regenerative Medicine-Related Events

Biointerface Science Conference (GRC) is taking place on 16.-21.06.2024 in Lucca, Italy. The topic is "Molecular Engineering, Measurement and Manipulation at the Boundary Between Living Systems and Synthetic Materials" and it is chaired by Prof. Dr. Katharina Maniura (Empa). In addition to renowned international speakers, this conference highlights a considerable amount Switzerland- (and SSB+RM-) based research.

Bioinspired Materials Conference (GRC) is also taking place on 16.-21.06.2024 but at Les Diablerets Conference Center in Les Diablerets, Switzerland. The topic is "Using Nature's Design Principles to Create Functional Artificial Materials".

Biointerfaces International Conference 2024 is taking place on 20.-23.08.2024 at the FHNW School of Life Sciences in MuttENZ revolving around experimental and computational disciplines in the Biointerfaces community. The conference features a pre-conference seminar, keynotes, invited and contributed talks, poster sessions, panel discussions, speaker debates and a conference dinner.

[MEET-THE-EXPERT] Implants is taking place on 05.11.2024 at the Concert Hall in Solothurn and will bring together professionals from all fields of Materials and Surface Technology for Implants. The conference features a full-day conference program with scientific and technical presentations and keynotes, exhibitions and poster presentations during the breaks and many networking opportunities.



Featured EC Member – Markus Rottmar

In this newsletter, we feature our new president: Dr. Markus Rottmar. Markus has joined the society in 2017 as sponsoring coordinator, before taking on the role of secretary from 2019 to 2021 and vice president from 2021 to 2023. He has been a highly active EC member and we are thrilled to have him as our president since the election at the general assembly during ESB 2023 in Davos. His daytime job is group leader of the Cell-/Tissue Materials Interactions group at Empa.

Can you tell us more about your daytime job and how you got there?

I am group leader (Cell-/Tissue Material Interactions) in the Biointerfaces Lab at Empa in St.Gallen. After studying molecular biology at the University of Innsbruck (AT), I did my PhD at Empa and ETH, which was followed by a PostDoc on an industrial project (as I was still not sure at that time whether I should pursue an academic career or move to industry). This was followed by a PostDoc on an in vivo tissue engineering project at the University Hospital Zurich. Checking out what my previous lab at Empa was doing and not actually looking for a new job, I saw that they were offering a group leader position that perfectly matched my interests. Luckily, my profile was a good fit as well and so I was really happy when the position was offered to me.

Can you describe your typical working day for us?

I guess it's pretty typical for a scientist in my position – many meetings. Most of them are actually fun, discussing progress and challenges in ongoing projects, making plans for new projects, discussing paper drafts as well as many other activities. Being a trained biologist, I very much enjoy meetings with people from different disciplines, as every discussion also means that I can learn from them. The rest of the day goes to actually doing what was discussed in meetings, reading and writing papers/proposals, going through literature, answering mails and completing administrative things (my least favorite task).

What do you like to do for non-work-related fun?

I like to spend time with my family (wife and two teenage daughters), even though their definition of fun (going shopping) is often fairly different from mine. Besides that, I meet up with my extended family and friends and do sports (cycling in summer, hiking, cross-country skiing, ski-mountaineering in winter).

Have you seen any good movies/series lately?

I have to admit that I've become a bit of a fan of Apple TV originals – I like them, whether it's TV series like "Shrinking" or "The Morning Show", movies like "CODA" or "Tetris", or documentaries like "Underrated" and "STILL", there were only few things that I did not like. But I do have a bit of a strange habit of watching movies or shows (sometimes a single movie over the course of a few days, whenever I find a bit of time, like when brushing my teeth or when cooking something), so my definition of quality might be a bit off.

What would be your dream travel destination (where you might or might not yet have gone to)?

Not sure if this would qualify as "destination", but standing on top of Mount Everest would be that one place. I watched many documentaries about the Himalayan mountains and expeditions there and it must be such a unique feeling to stand on the top of the world. But since over the past years, climbing Mount Everest has become almost "mass tourism", where people have to wait in line within the death zone, just because there are too few possible time-windows for an ascent for too many people trying to do so, I wouldn't actually want to embark on this adventure.

What do you enjoy most about being part of the SSB+RM?

Meeting and discussing with my fellow EC members during in person meetings (meeting virtually is just not the same). While we have an agenda for those meetings,

there is always time before, after and in between to discuss with other EC members. Through this, it feels more like a group of friends working on a common goal rather than anything else and additionally, it's a great network of amazing scientists with very diverse backgrounds spanning all over Switzerland.

Which aspect of working on the SSB+RM is most rewarding to you?

We have our annual meeting of the society, where a lot of effort goes into making it a great event. Of course the major load is carried by the organizing team, but the whole EC is always very supportive. I very much enjoy the moment when we realize that the event is running well. The same goes for our young scientists (YS) – over the past years, they have grown so much and the energy that they put into organizing different events is just amazing.

What is your favorite (bio)material and why?

I actually don't have a favorite (bio)material. In my group, we have been working with all kinds of materials (from metals to ceramic to polymers to hydrogels) and every material has its own set of unique properties. So my favorite material very much depends on the intended application. However, I do have to admit that the advantages of degradable materials are generally very compelling.

What's your online rating and review of SSB+RM activities? (example: 4 out of 5 stars, would recommend to a friend / would join again...)

Definitely 5 out of 5 stars. Our annual meetings have always been a great event to meet people from the biomaterials and regenerative medicine community in Switzerland. I also very much like that there are many spots for contributed talks (especially for young scientists) and the familial environment during the meeting. But also the events organized by our YS have been fantastic. I can only recommend attending those events and therefore also support that people from my group go there.

What has the SSB+RM been cooking?

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We wish you all the best and a wonderful rest of the week!

With kind regards,

Your SSB+RM Executive Committee

