



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

2022 SPRING NEWSLETTER

Dear All,

Your Society is pleased to share this Spring 2022 Newsletter, with key information about the Annual Meeting, other can't miss upcoming events, student awards and much more. Outline:

UPCOMING EVENTS YOU CAN'T MISS

- 26th Annual Meeting of the SSB+RM2022
- YS events: Lab&Networking event
- Other Biomaterials & Regenerative Medicine Related Events

APPLY FOR THE YOUNG SCIENTISTS SSB+RM AWARDS

FEATURED EC MEMBER

WHAT HAS THE SSB+RM BEEN UP TO?

WHAT HAS THE SSB+RM BEEN COOKING?



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

UPCOMING EVENTS YOU CAN'T MISS

1. 26th Annual Meeting of the SSB+RM2022 <https://ssbrm.ch/ssbrm2022/>



26th Annual Meeting

EARLY BIRD REGISTRATION DEADLINE: MAY 13th

Biomaterials: from innovation to translation



University of
Zurich ^{UZH}

June 7 - 9, 2022

June 7, 2022 YS Seminar

ETH

Eidgenössische Technische Hochschule Zürich
Swiss Federal Institute of Technology Zurich



USZ Universitäts
Spital Zürich

CONFIRMED SPEAKERS

Kristi S. ANSETH
University of Colorado

Janine ERLER
University of Copenhagen

Giuliana ROSSI
EPF Lausanne

Wilfried WEBER
University of Freiburg

Christopher CHEN
Boston University

Bart DEPLANCKE
EPF Lausanne

Timm SCHROEDER
ETH Zürich

Rolf ZELLER
University of Basel

Jess SNEDEKER
ETH Zürich

Benjamin GANTENBEIN
University of Bern

Dominique PIOLETTI
EPF Lausanne

Nicole OCHSENBEIN
University Hospital Zürich

Adrian RANGA
KU Leuven

Matteo MORETTI
EOC Lugano

Paolo CINELLI
University of Zürich

Priscilla BRIQUEZ
University of Freiburg

Fabienne HARTMANN
CUTISS AG

Shokoufeh KHODABANDEH
Institut Straumann AG

The 26th Annual Meeting of the *Swiss Society for Biomaterials and Regenerative Medicine* takes place on **7th – 9th June 2022** at the **ETH Zürich**, Switzerland. Besides invited lectures on selected topics, oral and poster sessions with cutting-edge research on innovative biomaterials in translation as well as on regenerative medicine and biomaterials will take place. We strongly encourage you to submit an abstract and attend this unique scientific and networking event for the Swiss biomaterials community.

On **June 7th**, a dedicated workshop organized for the **Young Scientists** of the SSB+RM will be held as a pre-meeting event (included in the registration fee). On **June 8th**, the day will conclude with a unique guided tour and **conference dinner** held at the Zürich Zoo (included in the registration fee).

REGISTRATION: <https://ssbrm.ch/ssbrm2022/registration/>

2. YS events: Lab&Networking event

We are finally able to visit labs again! So, our next Lab&Networking event will take place at **Empa** (St. Gallen) on **May 20th, 2022**. Refer to the following flyer and register by clicking [here](#).



3. Other Biomaterials & Regenerative Medicine Related Events

- 16.06 – 18.06.2022: [eCM20: Cartilage and Disc Repair and Regeneration](#) in Davos, Switzerland
- 28.06 – 01.07.2022: [TERMIS EU-Chapter](#) in Kraków, Poland
- 04.09 – 08.09.2022: [32nd Annual Conference of the European Society of Biomaterials](#) in Bordeaux, France
- 8.09.2022: 12th [\[MEET THE EXPERT\] Implants](#) event: *Materials and Surface Technology for Implants*. FHNW Campus Muttensz, Switzerland. [Submit your abstract](#) until May 1st, 2022.
- 13.09. – 15.09.2022: [Biointerfaces International Conference \(BIC\) 2022](#) in Zürich, Switzerland

We would like to inform you that the Biointerfaces International Conference (BIC) 2022 will take place in September at ETH Zurich, Switzerland.



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

This year Empa and TEDD are joining forces to offer a program with a special focus on microphysiological systems, de novo tissues and organoids.

Such next-generation cell cultures are designed to replicate the physiological complexity of human tissues and organs. "Organ-on-a-chip" technologies combine different human tissues representing organs under physiological conditions such as flow, mechanical or electrical stimuli.

These advanced in vitro systems help understanding human physiology and will pave the way for research and development of novel pharmaceuticals or biomedical materials and devices and at the same time surpass the limited predictivity of animal models. This will lead in the long term to a reduction of animal use in research fulfilling a sociopolitical need.

Hear about exciting science and technologies across different fields and disciplines in the Biointerfaces community, from Swiss and international research teams in academia, hospitals and industry. Meet old friends and to make new ones. Share ideas and initiate scientific and industrial collaborations.

Starting with a Pre-Conference Seminar, particularly for young scientists, PhDs and PostDocs on 12 September 2022. The program continues with the Biointerfaces International Conference Zurich, 13-15 September 2022, combined with the TEDD Annual Meeting on 14 September.

Info on speakers, registration, program: <http://www.biointerfaces.ch/international/2022/>

APPLY FOR THE YOUNG SCIENTISTS SSB+RM AWARDS

RMS Research Award



To honor excellent scientific work in the area of Biomaterials and Regenerative Medicine, the SSB+RM will present **one Research Award** a year, for either an **outstanding PhD thesis** or an **outstanding MD/DDS thesis**. The awards will be given based on originality and impact of the work. The research award consists of CHF 1000.- and a **certificate**. Deadline for submission: **May 10th, 2022**.

Student Mobility Grants

The SSB+RM Student **Mobility Grant** intends to support students from Swiss research institutions to visit other centers of research to **learn specific techniques, methods, experiments, setups, protocols, etc.** as part of their bachelor, master or PhD studies. The award will be given based on originality and perceived value to be gained for the applicant's work. The **Mobility Grant** consists of CHF 1500.-, a **certificate**, and **free registration at the SSB+RM Annual Conference**. Next application deadline is **July 1st, 2022**.

Annual Meeting Student Awards



During the SSB+RM Annual Meeting, **Biomaterials Science Best Poster Award** and **Biomaterials Best Oral Award** are presented, each for the amount of CHF 500.–. Additionally, the **Wiley Poster Award** will offer a book voucher worth € 200.–.

For more information go to: <https://ssbrm.ch/young-scientists/awards/>

FEATURED EC MEMBER

In this month's newsletter we feature our SSB+RM president: **Prof. Martin Ehrbar**. Martin joined the SSB+RM in 2015, and since then he has contributed to the society in many different roles. Last summer 2021, Martin became the SSB+RM president. We would like to know him better in and out the SSB+RM.



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

To meet people within Switzerland who are passionate about biomaterials and regenerative medicine is extremely inspiring. Meanwhile, this is meeting good friends for interesting conversations. I really enjoy seeing these fields evolving and reaching fantastic levels in this country.

• What is your main goal as SSB+RM president?

I think it is of great importance to use most innovative concepts to advance our field research, which is certainly available to a very high degree in Switzerland. My biggest aim is to bring scientists working in this field, in related fields and in fields with new technologies together. An important part of the SSB+RM are the young scientists. I want to include them in our activities and support their activities as well as possible.

• Tell us a little about your work & background.

My lab is dedicated to develop regenerative strategies for various tissues, such as bone, hematopoietic niches, and fetal membranes. As a trained biologist, I am fascinated by the complexity of stem cell compartments, the diversity cellular subsets making up these compartments, and their relation to tissue regeneration. I hope that with our (meanwhile long time ago developed) enzymatically formed synthetic PEG hydrogels, we can better understand such stem cell compartments and develop strategies to make use of these findings. Ideally, we could develop such biomaterials for the healing of fetal membranes and by this prevent the preterm birth of babies or the improved regeneration of bone defects.

• What career advice can you offer YS who are in the early stage of their career journey?

That's a good but at the same time very difficult question for me to answer. I think, I was always driven by curiosity and being fascinated of what I was doing. With this mindset my career was not

so much in the center of my thoughts, which certainly is wrong, but kept me going on and working hard. Well, I still keep telling people to simply enjoy science and try to be as good as possible with what they do!

- **When you manage to escape the lab, what do you love most to do?**

I spend most of my time when out of the lab with taking care of my garden, renovating or enjoying my boat, or being with my family. It really doesn't matter so much what activity it is, most important is to be somewhere outside in the green, on the water or also work with nice tools and forgetting everything else around me for a while.

- **What is your favorite book?**

I don't have one favorite book. I think it depends on my mood. I like "easy" to read books, such as for example "The shadow of the wind" by Carlos Ruiz Zafón.

- **And your favorite travel spot?**

My first love when it comes to travelling has always been and still is Northern Canada. I love the (still) untouched nature, the being part of it, or working on the farm of friends (my way of actively enjoying vacations). Going up north in the middle of winter is something I really enjoy (Unfortunately, I haven't had a chance to go for a couple of years now).

- **Mountain or sea?**

While I am more familiar with the mountains (what a surprise!) I also love the sea.

- **Running or sailing?**

It depends,... when there is a good wind, sailing is fantastic. On the other hand, running in the very early mornings, in the snow or even in the dark can be so relaxing.

- **What is something you dislike/hate that most people love?**

I dislike big cities and even more shopping.

- **What is your favorite meal to cook for guests?**

I have not been well trained in cooking, so I am not really good at it. But I can do a very delicious "Tom kha gai", a thai chicken soup with Basmati rice.

- **If there was one scientist, dead or alive, you could have dinner with who would it be?**

I think it is fascinating to imagine how Linus Pauling, Rosalind Franklin, Maurice Wilkins James Watson and Francis Crick found ways to understand protein and DNA structures.

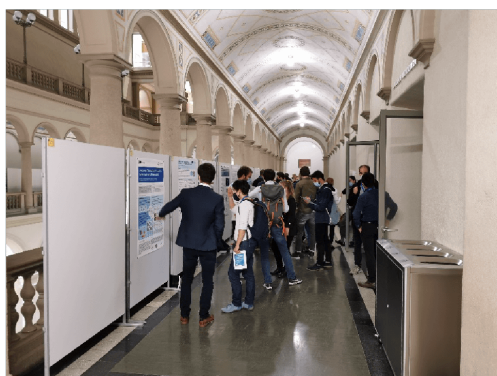
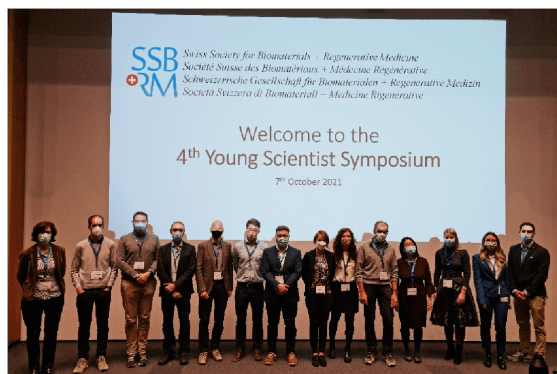
WHAT HAS THE SSB+RM BEEN UP TO?

On October 7th, 2021, the 4th Young Scientist Symposium took place at ETH Zürich, finally back in person! A total of 99 attendants, including master students, PhD students, postdocs, senior scientists and professors joined this event. 34 young scientists presented their work as oral and poster

presentation, and additionally there were the talks of two featured keynotes, Prof. Inge Hermann (ETH Zürich) and Prof. Olivier Guenat (University of Bern).

A comprehensive report of the event can be found on <https://ssbrm.ch/young-scientists/activities/>.

Below, you will find a few impressions:



WHAT HAS THE SSB+RM BEEN COOKING?

Highlighted publications

G. Bovone[#], E.A. Guzzi[#], S. Bernhard[#], T. Weber, D. Dranseikiene, and M.W. Tibbitt "Supramolecular reinforcement of polymer–nanoparticle hydrogels for modular materials design." *Advanced Materials* **34**, 2106941 (2022). [#]equal contribution

O. Dudaryeva, A. Bucciarelli, G. Bovone, F. Huwyler, S. Jaydev, N. Broguiere, M. al-Bayati, M. Lütolf, and M.W. Tibbitt "3D confinement regulates cell life and death." *Advanced Functional Materials* **31**, 2104098 (2021).

E.A. Guzzi, R. Bischof, D. Dranseikiene, D.V. Deshmukh, A. Wahlsten, G. Bovone, S. Bernhard, and M.W. Tibbitt "Hierarchical biomaterials via photopatterning-enhanced direct ink writing." *Biofabrication* **13**, 044105 (2021).

M. Cihova, E. Müller, Y. Chandorkar, K. Thorwarth, G. Fortunato, K. Maniura-Weber, J.F. Löffler, M. Rottmar "Palladium-Based Metallic Glass with High Thrombogenic Resistance for Blood-Contacting Medical Devices." *Advanced Functional Materials*, **32**(4):2108256 (2022).



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

K. Gegenschatz-Schmid, S. Buzzi, J. Grossmann, B. Roschitzki, R. Urbanet, R. Heuberger, D. Glück, A. Zucker, M. Ehrbar "Reduced thrombogenicity of surface-treated Nitinol implants steered by altered protein adsorption." *Acta Biomaterialia*, **137** (2022).

M. V. Colombo, S. Bersini, C. Arrigoni, M. Moretti "3D Biofabricated In Vitro Models of Vascularized and Mineralized Bone Tissues." *Organ-on-a-Chip*, pp 283-296 (2021).

J. Guerrero , B. Dasen, A. Frismantiene, S. Pigeot, T. Ismail, Schaefer DJ, Philippova M, TJ. Resink, I. Martin, A. Scherberich "T-cadherin Expressing Cells in the Stromal Vascular Fraction of Human Adipose Tissue: Role in Osteogenesis and Angiogenesis." *Stem Cells Transl Med.* **11**(2):213-229 (2022).

C. Cheng, M. Chaaban, G. Born, I. Martin, Q. Li, DJ. Schaefer, C. Jaquiere, A. Scherberich. "Repair of a Rat Mandibular Bone Defect by Hypertrophic Cartilage Grafts Engineered From Human Fractionated Adipose Tissue." *Front Bioeng Biotechnol.* **8**;10:841690 (2022).

We wish you all the best and hope to see many of you in Zürich in June for an exceptional annual meeting.

With kind regards,

Your SSB+RM Executive Committee

