

Dear CRC 1149 members,

The CRC looks back at an exciting and productive year and a newsletter is obviously overdue. First of all we want to thank the Executive Board for offering us the opportunity to configure the present issue of the news ticker - from now on, junior scientists supported by CRC grants will be responsible for keeping you up-to-date on current topics regarding the CRC 1149.

We would like to welcome our latest members of the CRC: **Dr. Katharina Ernst** (Institute for Pharmacology and Toxicology), **Dr. Martina Gatzka** (Department of Dermatology and Allergology) and **Prof. Meinrad Beer** (Department of Diagnostic and Interventional Radiology) who joined in 2016 and will from now on contribute to the CRC.

We wish all of you the best for the upcoming winter semester,

Clair Hartmann and Lucas Bettac

Renewal of the CRC Homepage

As you might have noticed, the homepage of the CRC 1149 was completely rebuilt, according to the new design of the homepage of Ulm University. The CRC 1149 would like to thank Lutz Dürselen for investing lots of time and work to update our website.

<http://www.uni-ulm.de/einrichtungen/sfb-1149>



GEROK Positions and Gender Equality Funding

The CRC is currently funding two GEROK positions for clinical scientists, which are financed by both the CRC and the Medical Faculty. Current recipients are:



Lucas Bettac studied medicine in Tübingen, with stays in Stuttgart, Melbourne and Shanghai. As a physician in the Department of Internal Medicine I (Gastroenterology, Nephrology and Endocrinology), he has been holding a GEROK position since March 2016, sharing his time between the labs of Markus Huber-Lang and Thomas Seufferlein. His work focuses on the role of the non-receptor tyrosine kinase TNK1 in post-traumatic intestinal barrier dysfunction and intestinal inflammation, characterizing its role in epithelial integrity and regeneration as well as connections to toll-

like-receptor and STAT signalling.



Hannes Christow holds a GEROK position in Hartmut Geiger's group at the Institute of Molecular Medicine and Stem Cell Aging. The aim of the project "Identification of human hematopoietic and mesenchymal stem and progenitor cells in peripheral blood of traumatized patients" is to get a better understanding of the mobilization-mechanisms of different stem and progenitor cells into the peripheral blood of severely traumatized patients in the course of time. Therefore he first established a very sensitive method to identify low numbers of the cells of interest and examined a normal population to find reference-values for those cell-types in the peripheral blood.

The GEROK funding periods for Christine Brand, Martina Gatzka and Clair Hartmann ended this summer.

Additionally, the CRC supports the career of female young scientist via the Gender Equality Funding:

Miriam Kalbitz (Department of Orthopaedic Trauma, Hand, Plastic and Reconstructive Surgery, Florian Gebhard)

Sabine Vettorazzi (Institute for Comparative Molecular Endocrinology, Jan Tuckermann)

Ivonne Sehring (Institute of Biochemistry and Molecular Biology, Gilbert Weidinger)

Clair Hartmann (Institute of Anesthesiological Pathophysiology and Process Engineering, Peter Radermacher)

A call for new applications for 2017 will be published soon!

3rd CRC Retreat



The last CRC retreat took place on April 11-12th in Ofterschwang. After an introduction by Florian Gebhard, the current status of the projects was presented in a series of interesting talks. It was especially inspiring to listen to junior scientists pursuing their goals and presenting the progress they have achieved. The fruitful discussions again showed that the individual projects of the CRC have grown together more and

more to form a scientific network of mutual support. Like in the last retreats, discussions carried on late into the night, again exhibiting the lively spirit of a common corporate identity.



The 4th retreat is appointed on **November 11th** at Kloster Neresheim. Please fix the date!

9th Student Symposium on Molecular Medicine – Perspectives in Trauma Research



On April 16th, the annual Student Symposium on Molecular Medicine took place at Ulm University. The symposium, organized independently by students of the bachelor and masters programs of Molecular Medicine, focuses on a different main topic each year, with this year's focus being on trauma research. As representatives of the CRC, Markus Huber-Lang and Rebecca Wiegner held talks on molecular danger management after polytrauma, alongside a lineup of high-profile international speakers.

Additional info: <http://www.molmed-symposium.de>

Symposium: Ulm Trauma Research meets Hadassah/ Hebrew University

On July 25th, Ulm University hosted a meeting with representatives of the Hebrew University/Hadassah Hospital Jerusalem. The overall aim was to exchange information about research activities and to build up collaboration between the two sites which have both a strong focus on trauma research. Dean Shlomo Sasson gave an overview about the general research and education activities at Hebrew University and highlighted the importance of connecting academic research with patient care, in particular in trauma research. With respect to the current security situation in Israel, with a rise in terrorist attacks and mass casualties, Rami Mosheiff, the head of the Orthopaedic Trauma Center, explained necessary adjustments in medical and organizational structures. Current basic and translational trauma research topics of Hebrew University were presented by Iri Liebergall, Director of the Orthopaedic Surgery Department, and Shaul Beyth, head of the research lab at the same department. Ulm University presented talks by President Michael Weber, Dean Thomas Wirth, Florian Gebhard, Peter Gierschik, Holger Barth, Tobias Böckers and Anita Ignatius. Many CRC members joined the meeting and contributed to a lively and interesting discussion. A further meeting will take place during the upcoming Conference of Orthopaedics and Traumatology (DKOU) in Berlin (October 25-28), where Israel is one of the guest nations.



Announcements

German Congress of Orthopaedics and Traumatology

We would like to inform you about the "Deutscher Kongress für Orthopädie und Unfallchirurgie" in Berlin, 25-28th October, which is chaired by Florian Gebhard and Heiko Reichel as congress presidents. It is the largest congress in the field in Europe with more than 12.000 participants and a very exciting program. Many of the scientific presentations are trauma-related and may be of interest for you as CRC member. Find more information on the website (<http://dkou.org>).

Extreme Innovation Symposium

October 14th 2016, 13:00

Location: University of Ulm, H4/5 025

The Roselli group (Department of Neurology and Institute of Anatomy and Cell Biology) is organizing the first "Extreme innovation Symposium" at the University of Ulm. The

symposium hosts faculty from computer science, chemistry, engineering, physics, neurology and medical departments. As representatives of the CRC, Prof. Francesco Roselli, Prof. Tobias Boeckers, Prof. Peter Radermacher and Prof. Florian Gebhard will hold talks on cutting-edge topics in their respective fields. The symposium is open to all students and scientists.

<https://www.uni-ulm.de/nawi/nawi-home/nawi-detailseiten/event-detail/article/extreme-innovation-symposium/>

TRIM: Trauma – Regeneration – Immune-Modulation



International Graduate School
in Molecular Medicine Ulm

The next round of TRIM seminars will start on October 25th. The seminars of TRIM Group VI are held every second Tuesday for PhD students of the International Graduate School of Molecular Medicine Ulm (IGradU), addressing specific research topics of the CRC. For additional information and a detailed schedule see our website.

4. CRC Retreat and 9. General Meeting

One-day status meeting

November 11th 2016

Location: Kloster Neresheim (<http://www.klosterhospiz-neresheim.de>)

We would especially like to announce the following guest speakers for the upcoming retreat: Prof. Christiane Waller and Prof. Stefan Reber, Clinic for Psychosomatic Medicine and Psychotherapy, and Prof. Paul Plener, Clinic for Child and Adolescent Psychiatry and Psychotherapy.

Save the date:

10. CRC General Meeting

Thursday, December 15th 2016

16:00 Seminar (P. Radermacher – “Gaseous Mediators”)

16:45 Meeting

As usual, after the meeting we would like to invite you to a casual Christmas get-together.

Location: Helmholtzstr. 14

5. CRC Retreat

May 21st -23rd 2017

Location: Hotel Oberstdorf (www.hotel-oberstdorf.de)

Recent publications related to trauma research

Crisan D, Schneider LA, Kastler S, Psotta-Schachtner C, Gethöffer K, Sindrilaru A, Scharffetter-Kochanek K. Giant cell arteritis with extensive scalp necrosis: A diagnostic and therapeutic challenge. *Indian J Dermatol Venereol Leprol*. September-October 2016; 82(5):539-42

Kalbitz M, Fattahi F, Herron TJ, Grailer JJ, Jajou L, Lu H, Huber-Lang M, Zetoune FS, Sarma JV, Day SM, Russell MW, Jalife J, Ward PA. Complement destabilizes cardiomyocyte function In vivo after polymicrobial sepsis and In vitro. *J Immunol*. September 2016; 197(6):2353-61

Jiang D, Muschhammer J, Qi Y, Kügler A, de Vries JC, Saffarzadeh M, Sindrilaru A, Beken SV, Wlaschek M, Kluth MA, Ganss C, Frank NY, Frank MH, Preissner KT, Scharffetter-Kochanek K. Suppression of neutrophil-mediated tissue damage-A novel skill of mesenchymal stem cells. *Stem Cells*. September 2016; 34(9):2393-406

Hartmann C, Hafner S, Scheuerle A, Möller P, Huber-Lang M, Jung B, Nußbaum B, McCook O, Gröger M, Wagner F, Weber S, Stahl B, Calzia E, Georgieff M, Szabó C, Wang R, Radermacher P, Wagner K. The role of cystathionine- γ -lyase in blunt chest trauma in cigarette smoke exposed mice. *Shock*. Accepted August 2016; DOI: 10.1097/SHK.0000000000000726

Nußbaum B, Radermacher P, Asfar P, Hartmann C. Does hyperoxia enhance susceptibility to secondary pulmonary infection in the ICU? *Crit Care*. August 2016; 16;20(1):239

Hafner S, Wagner K, Weber S, Gröger M, Wepler M, McCook O, Scheuerle A, Stahl B, Huber-Lang M, Jung B, Calzia E, Georgieff M, Möller P, Frick M, Radermacher P, Wagner F. Role of the purinergic receptor P2XR4 after blunt chest trauma in cigarette smoke-exposed mice. *Shock*. August 2016; Epub ahead of print

Liu P, Baumgart M, Groth M, Wittmann J, Jack HM, Platzer M, Tuckermann, JP, Baschant U. Dicer ablation in osteoblasts by Runx2 driven cre-loxP recombination affects bone integrity, but not glucocorticoid-induced suppression of bone formation. *Sci Rep*. August 2016; 6:32112

Kroll T, Schmidt D, Schwanitz G, Ahmad M, Hamann J, Schlosser C, Lin YC, Bohm, KJ, Tuckermann, JP, Ploubidou A. High-content microscopy analysis of subcellular structures: Assay development and application to focal adhesion quantification. *Curr Protoc Cytom*. July 2016; 77:1-12

Kovtun A, Bergdolt S, Wiegner R, Radermacher P, Huber-Lang M, Ignatius A. The crucial role of neutrophil granulocytes in bone fracture healing. *Eur Cell Mater*. 2016 Jul 25;32:152-62.

Haffner-Luntzer M, Kemmler J, Heidler V, Prystaz K, Schinke T, Amling M, Kovtun A, Rapp AE, Ignatius A, Liedert A. Inhibition of Midkine Augments Osteoporotic Fracture Healing. *PLoS One*. 2016 Jul 13;11(7):e0159278.

Boisramé-Helms J, Radermacher P, Asfar P. Cardiac surgery, a right target for hyperoxia? *Crit Care*. June 2016; 16;20(1):162

Sehring IM, Jahn C, Weidinger G. Zebrafish fin and heart: what's special about regeneration? *Curr Opin Genet Dev*. June 2016; 40:48-56