



CRC1451 – Key mechanisms of Motor Control in Health and Disease

Newsletter

December 2021

Welcome to this first issue of the CRC1451 Newsletter

Dear readers,

welcome to the first edition of the newsletter from the cCRC1451! After our launch in January, we now look back on a successful year with pride: Our team is now completed, almost all positions have been filled, the set-up is finished and all projects have started, including A07, which joined us in august; congratulations to all starting the projects despite from the hurdles due to the pandemic situation. We have established the Central Office of the Department of Neurology with the Scientific Coordinator Dr. Christina Stark, assisted by the Central Office Assistants Marion Annas and our newly arrived student assistant Jacqueline Riffel (we will introduce her later on in this newsletter). The Central Office is available to help with any concerns.

Additionally, the central projects, like the Animal Motor Circuit (Z02), the Human Assessment Motor Center (Z03), the integrated Research Training Group (IRTG) with Dr. Claudia Wegscheid as coordinator and Data Management for Computational Modelling (INF) are established. Please also have a look on our website www.crc1451.uni-koeln.de. Thanks again to everybody involved setting up these important structures!

In this regular newsletter series we will cover the categories news & events, new employees, a special "career path interview", selected project reports, and special tips regarding gender and equality.

We hope you enjoy browsing through our newsletter and wish you Happy Holidays.

Gereon Fink
Spokesperson

Silvia Daun
Vice-Spokesperson

Christian Grefkes
Vice-Spokesperson

Introduction of new employees



Jacqueline Riffel
Project Area Z01
Central Office Assistant

Since mid-November, we welcome our new student assistant Jacqueline Riffel to the CRC1451, central office.

Jacky's way to us started of the motivation to achieve deeper insights into the clinical research field of motor control. Thus, we say congratulations! Thematically, you are exactly right with us.

And the story behind this? From early childhood, Jacky started doing Tae-

Kwon-Do together with her older brother and quite quickly continued ambitiously. The sports became more diverse, but the passion remained. In the field of sports, one is quickly confronted with injuries, so the concept of rehabilitation is a familiar one to many athletes. Although the field of physiology was initially of particular interest to her, through her choice to study biology in Aachen, she acquired insights into the field of neuroscience. From that moment on, neurobiological aspects of motor control, especially concerning clinical aspects, became the main focus of

her interests. It all manifested for the first time during her bachelor thesis. As a member of her chosen research group (Rothermel lab), she researched on mouse models of Huntington's Disease using optogenetic methods. A small first detour into the following master studies took Jacky to Stuttgart. Here she first started with biomechanics. Neurobiological aspects were of course intended to form individually set priorities. However, the desire for less technical training and more clinical neuroscience finally prevailed and with this remaining goals, she started her master's program "Clinical and Experimental Neurosciences" at in the University of Cologne last year.

Is this already the finish line? One may already guess it by the little life path touched upon: The overall goal, which finally emerged for Jacky, is activities in the field of neurorehabilitation. However, this broad idea still keeps the exact tasks of the future unspecified for her. Jacky will help us establish the website, Twitter, Mailinglists and all relevant digital structures, since besides her interest in Neurorehabilitation, she is a scientific writer and excellent Central Office Assistant! Welcome Jacky!

Career path interview

As part of our first newsletter, we are privileged to speak with Prof'in Dr. Brunhilde Wirth. Thank you very much for the interview!

1. What did you study and where?

Biology at the Faculty of Natural Sciences of the University Bucharest, Romania.

2. Why?

I was fascinated by the secrets of nature since I was a schoolgirl, and in particular by genetics, the encoded genetic material and the creation of a living being from a single fused cell. My biology teacher was instrumental in this.

3. Why there?

There were only four places in Romania, where one could study biology and Bucharest was the best. In total, only 125 students per year were able to study biology in all of Romania. You got the place to study after a highly competitive entrance exam.

5. What were decisive steps in your career?

Not to make long-term compromises when you realize that you may have made a wrong step or a wrong choice; to have completed the doctoral thesis in a very good human genetics institute with an excellent mentor; to have a mentor who believes in you and who has offered me a position as a research group leader right after the PhD. In addition, he respected my request to go abroad as a postdoc for at least one year; a short and effective postdoctoral period abroad with a DFG fellowship; to establish one's own research group very early on; immediate funding support of scientific projects by the DFG; differentiation of my research work from that of my earlier PIs; to conduct research

almost exclusively with highly motivated PhD students; unreserved support from my family; only very short break in working period after the birth of my child.

6. What would you do differently?

If I had a second life, I would do it all over again; I don't regret a step.

7. What would you do exactly the same again?

See answer to point 6

8. What allows you to relax from work?

Walks, sports, travel.

For me, "work" is not a job but a hobby, so I thrive on it, it keeps me "young and fit".

9. Do you have any tips for young colleagues on how to deal with frustrations?

Research has to be seen as a calling and fun. It is an extraordinary privilege to come up with something new again and again, to always work with young and enthusiastic people, to be able to go to work every day with joy. When you have the right attitude towards work, there is little frustration. Nonsensical work can be frustrating, but I avoid it. Everything else is a challenge.



Retreat review 2021

We are especially thankful that we were able to realize a great retreat on the campus despite the many pandemic-related restrictions!

On September 9th and 10th we met at the MTI and were guided through a full program: On the first day with the theme "who are we?" we got to know each other, had fun with creative ice break-

ers and heard how, for example, the tuner for the Fiat Panda's tuning can become part of the motor control CRC. The second day ran under the motto "getting started". We discussed various possible challenges related to our projects and approaches to solving them. For example, we talked about possible impacts of Corona on research and challenges a young PI potentially could be confronted with in our new CRC.

Congratulations to our elected student representatives:



Speaker Postdocs: Azamat Yeldesbay, (B03)



Deputy: Hannah Jahn, (A03)



Speaker PhDs: Nora Rautenberg, (Interdisciplinary PhD)



Deputy: Lisa Wolff, (A01)

Since pictures speak louder than words, here are a few captured moments:



Team Organisation: v.l.n.r.: Vincent Küppers (PhD A05), Prof. Dr. Christian Grefkes (Vice-Spokesperson), Julia Schmidtgen (PhD B02), Theresa Heinen (PhD B02), Eleonora Zilio (PhD, A01), Laura Wehmeyer (PhD C07), Nora Rautenberg (Interdisciplinary PhD), Dr. Christina Stark (Scientific Coordinator), missing in the picture but not at heart: Dr. Claudia Wegscheid (IRTG Coordinator) and Marion Annas.



CRC1451: Team 2021

Thank you to all who were part of the retreat and fostered some great moments and experiences. We moved closer together despite the pandemic restrictions and had the rare opportunity in this year to strengthen collaboration, networks and interac-

tions in person. We are looking forward to the next retreat in 2022. We are currently envisioning a retreat in person, however we must follow the regulations at that time and perhaps reduce our program again; we will keep you posted!

Gender Tip 2022: Career Mentoring can take you anywhere!

The CRC1451 supports female scientists to participate in the various courses, workshops and mentoring programs, in order to foster their career! Several courses are conveniently available through the University of Cologne (https://verwaltung.uni-koeln.de/abteilung43/content/mentoring/index_eng.html).

The CRC1451 covers the costs for female students, postdocs and early career principal investigators.

Please contact the CRC1451 Equality Board for further information on the process and how to apply for reimbursement:
sfb1451-equality@uni-koeln.de



Family Tip 2022: KidsBox



The day care center is closed and there is nobody who could take care of your child?

Many parents know the situation. As an exception, one solution could be to take your child to work. The KidsBox is a mobile parent-child room.

The CRC1451 now has two KidsBoxes for you to use in that situation. One is located in the Biocenter and one in the Neurology building. The KidsBox can be moved to your workplace and transforms your office into a parent-child room.

The KidsBox is equipped for babies and children up to 8-9 years. The KidsBox can also be opened for a protected area for breastfeeding and changing.

The KidsBox contains (amongst others)

- › a travel bed (also be used as a playpen)
- › a folding mattress and sleeping mat for crawling and playing on the floor
- › a child seat for docking to your own desk
- › Stool and table for small children
- › various toys and painting items
- › a changing mat
- › disinfection and first aid equipment
- › books and much more (for small children)
- › equipment for school children in grades 1/2

For more information, visit the website at <https://my-kidsbox.de>

If you no longer need the KidsBox, please return it to the pick-up location.

To borrow the KidsBox, please contact the coordination office of the CRC1451! E-Mail: sfb1451-sekretariat@uni-koeln.de

Stay up to date

Save the date Retreats 2022:

- › May 31st 2022, Early Career Researcher Retreat
- › June 1st 2022, Early Career Researcher Retreat including Social at the evening for full CRC1451 team
- › June 2nd 2022, Annual CRC1451 Retreat full CRC1451 team
- › June 3rd 2022, Annual CRC1451 Retreat full CRC1451 team (Special Guest Mark Hallett, NIH distinguished investigator)

The upcoming dates for online lectures and presentations are listed below:

- › The next **General Assembly** (members only) takes place on January 21st 2022
- › Don't miss our **Scientific Lecture Series** in 2022. The upcoming events are:



- › January 7th 2022, „Human Brain Network Organization At Different Timescales“, Prof Dr. Thomas Yeo, Department of Electrical & Computer Engineering, National University of Singapore



- › February 18th 2022, „Synaptic Lipid Signaling In The Cortex: Human Studies“, Prof. Dr. Robert Nitsch, Institute for Translational Neuroscience, University of Münster



- › March 4th 2022, „Neuro-Engineering Brain Circuits With Transcranial Stimulation: Are We Closing Knowledge Gaps Or Running Circles?“, Prof. Dr. Hartwig R. Siebner, Centre for Diagnostic Imaging and Research, University of Copenhagen

- › The upcoming **Journal Club** sessions takes place on:
 - › January 17th 2022, Nora Rautenberg (Interdisciplinary PhD) and Laura Wehmeyer (PhD C07)
 - › February 14th 2022, Theresa Heinen (PhD B02) and Jaqueline Kasemir (PhD B01)
 - › March 14th 2022, Mathias Grusha (assoc. PhD B01) and Massimo Thiel (PhD A05)
- › The upcoming **IRTG lectures** takes place on:
 - › January 10th 2022, “Thalamocortical mechanisms in the control of voluntary movements”, Prof. Dr. Yifat Prut
 - › January 24th 2022, „Spinal muscular atrophy: from gene and modifiers to therapy – connecting basic research with clinical application“, Prof. Dr. Brunhilde Wirth
 - › February 7th 2022, “Synaptic dysfunctions in neurodegenerative disorders characterised by dysfunctional motor control“, Prof. Dr. Natalia Kononenko
- › The upcoming workshop **Research data management with DataLad** takes place on:
 - › January 12th and 13th 2022
- › The upcoming **Cologne Theoretical Neuroscience Forum (CTNF)** takes place on:
 - › January 13th 2022, “Theory of recurrent neural networks – from parameter inference to intrinsic timescales in spiking networks“, PhD Alexander van Meegen, Institute of neuroscience and Medicine (INM-6), Forschungszentrum Jülich, Germany
 - › March 10th 2022, Title of the talk: t.b.a., Prof. Dr. Hanneke den Ouden, Donders Institute for Brain, Cognition and Behavior, Netherlands

Feel free to join and for more information, do not hesitate to visit our website.

Collaborative Research Center 1451

Key Mechanisms of Motor Control in Health and Disease
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