

June 2020

IN THIS CORENEWS

- A great vote of confidence 2
- From impulse to career 3
- The new normal 3
- TWINCORE in social media 4



△ High safety measures are necessary to work with SARS-CoV-2. Lisa Lasswitz and Antonia Gunesch from the Institute for Experimental Virology in the BSL-3 lab.

TWINCORE against COVID-19

by Jan Grabowski

TWINCORE researchers already launched an impressive number of new corona virus research projects. In accordance with the translational approach of the centre, lab work is tightly connected with clinical questions. Here we present some of the projects that are already funded by third parties.

One approach towards the identification of therapeutic substances against SARS-CoV-2 is the so-called repurposing: "Repurposing is the usage of already identified therapeutic substances, which are usually already licensed for use in humans, for the treatment of entirely different diseases," says Thomas Pietschmann, director of the Institute for Experimental Virology. He takes part in an international consortium, which is currently screening the ReFrame collection of more than 14,000 substances for potential therapeutic candidates against SARS-CoV-2. As part of the excellence cluster RESIST, his team closely cooperates with Thomas Schulz, Institute for Virology, MHH and Mark Brönstrup, Chemical Biology, HZI amongst others. The project is funded by the Lower Saxony Ministry for Science and Culture (MWK) and the German Centre for Infection Research (DZIF).

Researchers belonging to Ulrich Kalinke's group at the Institute for Experimental

Infection Research are aiming to generate a mouse model for COVID-19. Such an animal model would not only allow characterization of the pathogenesis of the lung disease, but also analysis of antiviral activity of new compounds. In addition, Kalinke initiated a project together with Axel Schambach from MHH to identify monoclonal antibodies against SARS-CoV-2 for therapeutic purposes. Therefore, the team is analyzing memory B-cells from blood samples of convalescent COVID-19 patients. "Both projects are funded by the corona-specific MWK call," says Kalinke.

Also Gisa Gerold, leader of the junior research group Virus Interaction Proteomics at the Institute for Experimental Virology, already obtained funding for one of her corona virus related projects. "DZIF supports SARS-CoV-2 testing of kids included in the Löwenkids cohort," says the virologist. This epidemiological study was initiated in 2013 at the HZI in Braunschweig and aims to collect infection related data and bio samples from toddlers. Gerold's project partner is the microbiologist Till Strowig from the HZI.

Please refer to our website for a complete list of all research projects regarding SARS-CoV-2 and COVID-19 using the following link <https://www.twincore.de/forschung/corona-forschung/>.



Dear colleagues,

The novel corona virus has the stranglehold over the whole world. The pandemic raises questions and TWINCORE helps to find answers. We have initiated more than 20 SARS-CoV-2 projects, some of them are already receiving third party funding. We thank the Federal State of Lower Saxony and the BMBF for the tremendously quick realisation of the support! Corona changes the world and also our research. Processes are accelerated, research consortia form within hours, meetings are held via video conference and new publications appear on servers first, long before they are peer reviewed and officially published. Nevertheless, we have to keep cool and give the highest priority to the quality of our science.

From this issue on, our CoreNews are published bilingually. Thanks to all colleagues who helped to make this possible!

All the best,

Yours, Ulrich Kalinke

A great vote of confidence



Thomas Pietschmann has been elected into the Review Board "Microbiology, Virology and Immunology" of the German Research Foundation DFG. In this CoreNews, he speaks about his upcoming tasks and what this function means to him.

Prof. Pietschmann, what is the DFG Review Board?

The review board is a panel that is established by the DFG, but whose members are elected by German scientists. Scientific societies and universities nominate representatives from their specialist areas for election. Experts are selected and appointed for four years to advise the DFG in its funding decisions.

How did you become a candidate?

I was nominated by the German Society for Virology (GfV). Beforehand, they asked me if I would be willing to run for this function, and if I would be available for the mandate. The MHH, for instance, also nominates candidates, and some colleagues can be

nominated by more than one institution. That's how the list of candidates is constituted.

How does the election work?

All professors and PhD scientists are allowed to vote. The election takes place online with every eligible voter being given several votes within their respective field. Life scientists do not get to vote for humanities scholars and vice versa.

How is the review board constituted?

There is more than one review board, 49 right now, with each distributed about the various fields. They are composed so that suitable experts can give advice on funding decisions in a certain scientific area. The members recommend if a grant proposal should be supported, but the final decision is made by the DFG.

What are the tasks of the review board and how can we imagine its work?

The main task of the review board is to discuss grant application and to judge them. This is done in a larger group with members from various backgrounds such as virology, microbiology and immunology. This is done to ensure decisions are balanced, measured with the same scale and not with a bias for a respective field. Applications are assessed to determine high quality grant proposals which are subsequently recommended for funding. Initially, the proposals are reviewed and all of them are discussed in a meeting. The review board selects a rapporteur to present the grant applications that were appointed to him. This allows the other

members to have a grasp of each proposal and how the reviewers have pre-rated it. Members of the review board are not necessarily the primary reviewers of the DFG. Although some of them may also review the initial applications, there are plenty of reviewers which are not part of the board. The ratings will be discussed in the meetings held by the review board.

What was your motivation to be nominated for the review board and to do the additional work?

I accepted this voluntary task because I consider it to be important. The DFG sets a high value on the self-governance of science and relies on the honest, balanced and unbiased opinions of experts in their respective fields. This is how the scientific system in Germany can be successful and can continuously achieve good results.

Additionally, this is a very special appointment. I can contribute to the fair distribution of research funds in Germany and help to invest this money well. I like this special task, because I consider it a great vote of confidence to do this for our discipline.

Thank you for this conversation!

Interview by Jan Grabowski



In memory of Matthias Fiebag

On 17 April 2020, our longtime head of administration, Matthias Fiebag passed away suddenly and unexpectedly at the age of 54.

In 2006 Mr. Fiebag started working as an assistant of the Administrative Director of the HZI where he was involved in coordinating the establishment of the new TWINCORE research centre in Hannover. In 2008 he changed to TWINCORE to work as the Head of Administration. He constantly managed to connect the administrative processes of HZI and MHH, which helped TWINCORE to function smoothly. He significantly contributed to the success of TWINCORE by establishing the administration as a service for research activities of the centre. We have lost a valued colleague and are deeply saddened by his death. (JG)

From impulse to career

by Antonia Gunesch

Three young scientist at TWINCORE speak about their development

▷
Felix
Mulenge,
PhD-
Student
in the
Kalinke
team



A career encompasses a large part of life, and is shaped by unique influences and encounters. Long before an extraordinary career, there is an impulse to take a certain path. Felix Mulenge, a PhD student in Ulrich Kalinke's group, directly experienced diseases in his home country, Kenya, of which many people in Germany only have theoretical knowledge. "A cold usually heals quickly. But malaria can be much worse." Felix' experiences made him ambitious to help people by focusing on personalised medicine. Dr. Svenja Grobe, a postdoc in Susanne Häußler's institute, was interested in biotechnological-industrial applications throughout her bachelor's and master's programmes. During her PhD, she worked in collaboration with the CoreUnit Metabolomics. She noted, "I felt

excited to learn a complex technique like mass spectrometry. It was very application-oriented - that was a great motivation for me." Dr. Volker Winstel has been a junior group leader at TWINCORE since September 2019. After his pre-diploma, he transferred to the University of Tübingen in order to specialize in medical microbiology.

By talking to guest speakers after their talks, Felix Mulenge learned a lot about what was possible following a master's degree. Later, a former collaboration partner provided advice to him about projects in Germany. Volker Winstel met one of the leading Staphylococcus researchers during one of his lectures, and later joined his lab to obtain a PhD degree. Following a postdoc in Chicago, he now investigates the relationship between *S. aureus* and the human host in his own group. "Most importantly, I've always been passionate about what I'm doing. And I was lucky that this position fitted perfectly."

▷
Dr. Svenja
Grobe,
Postdoc
in the
Häußler
team



TWINCORE Symposium 2020

Due to the current corona pandemic, our annual TWINCORE symposium will be modified from its typical format this year. In times like these, we are unable to host a meeting with guests and speakers from Germany and abroad at our institute. To supplant our annual symposium, we will have a webinar via video conference. Our virtual symposium will focus on exciting research projects dealing with the novel Corona virus.

▷
Dr. Volker
Winstel,
Junior
Research
Group
Leader
"Pathogenesis
of Bacterial
Infections"



With all the different competencies and characters, TWINCORE harbours a trove of experience for young scientists. "You learn from exchange of ideas!" says Felix. Svenja advises to take time for preparation and self-evaluation. "Think about your goals and take the time to plan calmly." Volker Winstel concludes: "Keep an eye on the deadlines of support programmes. And if it doesn't work out once, there will be a new chance."

The new normal

Restrictions due to corona pandemic also at TWINCORE

Since mid-March the pandemic action plan of TWINCORE is in effect. This multi-stage catalogue of measures defines how the centre can continue to operate during the corona pandemic. Initially, in warning level orange, all new experiments were prohibited with the exception of projects on the new corona virus. Office work should be done from home as much as possible and lab seminars are held as video conferences. Furthermore, the occupation of offices, think cabins as well as laboratories was reduced. All events are called off until further notice.

This consequent course of action prevented an uncontrolled spread of the virus in the centre, which would have resulted in a total shut-down. So far only two persons have been tested positive for SARS-CoV-2 independently and nobody else was infected at TWINCORE.

The safety measures have now been slightly reduced so that all experimental work is possible again. However, face masks are now mandatory for all employees and visitors in the whole building. Regular and intense hand hygiene as well as a distance of more than 1.5 m to other persons are crucial at TWINCORE, just like in public.

By respecting these rules all employees from all areas help to make sure we can continue to fulfil our scientific mission



without risking our colleagues' or our own health. This situation may still be rather unusual, but we have to accept it as the new normality, which will remain with us for a while.

TWINCORE in social media

by Jan Grabowski and Carolina Skowronek

Social media channels such as Facebook, Twitter and Instagram have become part of our daily lives.

For many, this 'new media' has become an important source of information besides radio, TV, and print media. The increased usage of social media has created an exciting opportunity for science communication to report research or give insights into the daily scientific business.

Interested people can instantly discover how TWINCORE is working and participate in open discussions with our scientists. See and be seen! Users of social media include politicians, journalists, other research institutions and organizations. They are able to observe our work, which helps increasing the visibility of our research center.

Furthermore, social media platforms enable us to put the focus on our employees and to highlight how diverse our staff are.

Our series "Did you know?" on Instagram, is a wonderful example of how we have utilized social media to showcase this.

TWINCORE has an apprentice? Who is the technician at the Institute for Experimental Infection Research? How can you acquire your MD degree through the "StrucMed" program? What is the connection between the VIPER class at the University for Veterinary Medicine and TWINCORE?

In May 2020, 169 people are employees at TWINCORE. But who is doing what?

Where did they come from and how did their path lead to TWINCORE?

Since the beginning of this year, we are answering all these questions in our series "Did you know?" on Instagram.

-> [instagram.com/twincore.hannover](https://www.instagram.com/twincore.hannover)



New employees at TWINCORE:

Institute for Experimental Infection Research

Shehneela Baseer, *PhD student*

Institute for Experimental Virology

Anne Kühnel, *Technician*

Dr. Xiaoyu Zhang, *PostDoc*

Junior Research Group Translational Virology

Lucas Hüffner, *Technician*

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We thank all colleagues that contributed to the English translation of this issue!

Study trip of the HOWEST University of Applied Sciences, Bruges/Belgium

by Andrea von Craushaar

On the morning of February 12, 2020, 51 Belgian Bachelor students and their lecturers got off a coach to get to know TWINCORE and its research activities.

The Bruges HOWEST University of Applied Sciences wanted to provide its senior students of biomedical laboratory science and bioinformatics an insight into international and intercultural diversity in the context of laboratory science. Together with several PhD students and PostDocs from various working groups, we created an extensive visiting program comprising lectures by Jan Grabowski (Communication), Yunus Kuijpers (Bioinformatics) and Patrick Behrendt (Translational Virology) as well as group activities. After the coffee break, the visitors were divided into three groups and a rotation system made it possible for everybody to take a tour of the building and the labs, hear talks



△ Guided tour of TWINCORE with Verónica Durán and Guilhermina Carriche

on various research projects and various poster presentations. The smaller groups and the open nature of our international young researchers encouraged the students to ask questions and get involved in discussions and by this a very lively exchange developed. With Belgian chocolate specialties and a bottle of traditional Belgian beer, the group thanked TWINCORE for the informative morning, where they felt very welcome and well looked after.