TWINCORE

CORE NEWS

June 2021

△ *Theresa Graalmann heads junior research group "Translational Immunology".*

Back to the scientific roots

by Jan Grabowski

"I am very happy to be back," says Theresa Graalmann. And that's despite the fact that she never actually left TWINCORE. In May 2021, her next career step at the centre began, her own research group.

Graalmann has been a postdoctoral researcher at the Institute for Experimental Infection Research since 2010. "The scientific proximity to the clinic fascinated me from the very beginning," says the biologist. So much that she made a decision in 2012: "I'm going to study again. This time medicine."

While studying at the neighbouring MHH, she works as a part-time PostDoc and can thus combine the scientific questions from the laboratory and the newly acquired knowledge from the clinic. "A great connection," she says. Thematically, she feels at home in rheumatology and infectious diseases from the start. "Since graduating in 2019, I have now been an assistant doctor in the Department of Rheumatology and Immunology at MHH under the direction of Prof. Witte."

For Graalmann, the last two years are all about clinical training: Getting into patient care in the clinical routine, learning the basics of rheumatology and, of course, in the last year: COVID-19. "During the first wave I was in the emergency room, the second and third waves I experienced on the ward," says Graalmann. "Of course, I would have imagined the infectious diseases training differently."

But now Theresa Graalmann is returning to her scientific roots and has been head of the junior research group "Translational Immunology" since 1 May. So far, Kira Baumann is in the team, and another technician is currently being recruited. Graalmann defines the goal of her research work as follows: "We want to identify the clinical needs of our patients and use our scientific expertise to do so." The main focus is on immunomonitoring studies that analyse inflammation at the site of action, i.e. in different organs or tissues. Furthermore, the influence of different therapeutically used immunomodulatory substances on infections and vaccination responses will be investigated.Graalmann also wants to investigate new treatment options in her group: „We are working on our own innovative formulations of drugs that should improve their directed transport to and in target cells and consequently also their tolerability."

IN THIS CORENEWS

Dear colleagues,

For more than a year now, the corona crisis has a tight grip on us. Nevertheless, we have been investing into corona research since then and in the meantime, important data were obtained. It has also been more than a year that our colleague Mr. Fiebag passed away and we are still missing him. We are glad that his successor Dr. Albrecht Goez took over the office at the beginning of this year and that he manages to cover the manifold work aspects very well. Also, we are welcoming our new clinician scientist Theresa Graalmann who is co-affiliated with the Department of Rheumatology and Immunology. Finally, our "Science Communication" working group started the new project "Social Media in Science".

Despite the challenging times during the pandemic, we succeeded in making the best out of it. Please remain patient and stick to the TWINCORE "New Normal" until the corona crisis has finally been overcome.

Yours, Ulrich Kalinke

„Creating optimal framework conditions for research“

Dr Albrecht Goez has been Head of Administration at TWINCORE since January 2021. For CoreNews, he reports on his first impression of the centre, initial projects and plans for the future. Interview by Jan Grabowski.

Dr Goez, what particularly attracted you to the position at TWINCORE?

What appealed to me most about this position was the great variety of tasks. My responsibilities here really range from major strategic issues to business management, legal and human re-sources issues to facility mana-gement and service areas. The scientific profile of the centre was also important to me. I applied in the middle of the covid pandemic and so it was particularly clear to me that research is being done here on an extremely socially relevant topic. I have a scientific background myself and I think that the Centre can be very proud of its performance, especially during the pandemic.

What was your first impression of the Centre‘s administration?

My range of tasks is even broader than I had hoped. The sub-areas of the administration are very closely linked and the communication channels are short. So I was able to get a very good overview of the Centre pretty quickly.

What are the first and most important topics you have already worked on?

For me, the first thing on the agenda was to get to know the administrative processes of the Centre and the interfaces to the shareholders HZI and MHH. I was also very keen to sit down with all the group leaders who work at the Centre and have them explain to me what scientific issues they work on.

In addition to many business management and organisational issues, one of my special tasks is to structure the area of transfer and commercialisation. How can research results be applied, economically exploited and made useful for society as a whole? This is a major challenge for all life science research centres, and thus also an important topic for TWINCORE.

And what other priorities do you have for the future?

In the area of administrative organisation, there are many processes that I would like to structure, improve and also digitalise in order to create optimal framework conditions for research. Examples would be the introduction of a project management system and an electronic signature to replace the paper signature.

The long-term cooperation with the CiiM, which is being built in the immediate neighbourhood, is a very important topic. We want to set the course for cooperation at an early stage and possibly also develop joint structures.

In addition, the topic of sustainability is very close to my heart. There are already good starting points here at TWINCORE, for example in facility management or in the landscaping of the campus. I would like to push this process forward as quickly as possible in order to position the Centre for the future.

Another topic for the future is diversity, not only in terms of gender, but also in terms of origin, age and nationality. Here I have already initiated that we sign the diversity charter. We are thus committing ourselves to diversity and will rethink internal processes from this point of view. There is a lot to do here, which we will tackle in the coming months.

Thank you very much for the interview!

Dr. Albrecht Goez, born in 1987, is married and father of 3 children. After studying chemistry at the TU Braunschweig, he completed a doctorate in theoretical chemistry at the University of Münster. He then decided to pursue a career in science management. He worked at the Max Delbrück Center for Molecular Medicine in Berlin for four years, first as a Science Manager to the Scientific Director and most recently as Head of the Technology Transfer Department. He has been Head of Administration at TWINCORE since January 2021.

Save the date

13th TWINCORE Symposium

9th September 2021
(Webinar)

“COVID-19 vaccination and vaccine responses”

Diversity at TWINCORE

TWINCORE has signed the "Diversity Charta“. We are obligating ourselves to respect the diversity of our staff e.g. in regards of origin, nationality and gender. Particularly in our scientific institution, where people of various backgrounds are working together successfully, we consider variety an advantage. We aim to optimize internal processes, for instance in human resources, according to the “Diversity Charta” and work actively to reduce any kind of discrimination. (jg)

charta der vielfalt UNTERZEICHNET

Corona research at TWINCORE

In spring 2020, numerous research projects on SARS-CoV-2 were initiated at TWINCORE. For some of them, third-party funding was obtained from the Lower Saxony Ministry of Science and Culture (MWK) or the German Centre for Infection Research. One year later, we present the first results from two of the projects.

At the Institute for Experimental Infection Research, monoclonal antibodies are being developed for the therapy of the COVID-19 disease. Administered in time, i.e. directly after a positive test or even after contact with an infected person, these can protect against the outbreak of COVID-19 or at least alleviate the symptoms. In particular, this could protect high-risk patients with previous illnesses who are at risk of severe courses. "Similar antibodies are already on the market in the USA; for example, Donald Trump was treated with such a preparation, which was still in the test phase at the time," says Prof. Ulrich Kalinke, Director of the Institute for Experimental Infection Research. "Together with Prof. Axel Schambach from MHH, we designed our own pipeline to isolate new antibody specificities with interesting properties, to develop innovative antibody formats and, of course, to be able to react quickly to new viruses with new monoclonal antibodies." This could be relevant for hard-to-treat variants of SARS-CoV-2 or also for new infectious outbreaks in the future. The scientists have already had initial scientific advice from the Paul Ehrlich Institute and now want to develop their monoclonal antibodies further until they are ready for the market.

The virologists in Prof. Thomas Pietschmann's Institute for Experimental Virology are also looking for active substances against SARS-CoV-2. "We are currently screening various substance collections for antiviral substances," says Pietschmann. "Among them are collections of barely characterised natural substances, but also drugs already approved for other applications." This so-called repurposing is considered a promising approach to quickly find new agents against the coronavirus. Since the substances have already undergone all the studies for approval as drugs, the necessary steps for the new field of application are shorter. "We have summarised our results in a publication that is currently being peer-reviewed," says Pietschmann.

The work was made possible by the swift and uncomplicated start-up funding from the MWK. In the meantime, the state of Lower Saxony has launched the new consortium "COFONI" for the promotion and networking of corona research. (jg)

THIS AND THAT

Memorial bench
In remembrance of our deceased head of administration Matthias Fiebag, who passed away unexpectedly last year, TWINCORE staff has endowed a bench for the outdoor area. It was designed and crafted by Uwe Herzig, former head of facility management.

Digital Future Day
The future day for boys and girls took place as an online event on 22 April. Twelve children used the opportunity to learn about the various career choices in infection research. One highlight that would not have been possible on site was a tour of the BSL3 laboratory via video link.

The 101 of science communication in modern social media

by Antonia Gunesch

How would you communicate science in a serious and interesting way and reach a wide audience? And why is the process different today than it was a few years ago? This was explained by Rebecca Winkels, Head of Strategic Communication at Wissenschaft im Dialog, Berlin, in her lecture in the TWINCORE Seminar series, which over 70 guests followed online on 17 March.

"There is no longer a general public and the type of communication between scientists and society has become much more direct," says Rebecca Winkels. In the last two decades there has been a major change in science communication, which has developed from a pure source of information, via dialogue, to active participation by the community.

Since the beginning of the pandemic at the latest, its importance has become obvious to everyone, especially outside the conventional media such as TV and print. The public's interest in the findings, but also in methods, theoretical backgrounds and, last but not least, in the people in research is greater than ever. This has many advantages for researchers, as they can convey their topics quickly, directly, in an unusually visible manner and on their own terms. In order to be able to use this potential in the best possible way, one should proceed strategically. Are you communicating as a private person or on behalf of your institution? What key messages do you want to convey? A clear, fact-based discussion also creates lasting trust.

Not to be underestimated is the awareness of which target group you want to address. "Knowing our target audience is key for successful communication." In order to reach a broad audience, the video platform YouTube is particularly suitable, which is also increasingly used as a knowledge portal by all age groups. Finally, Rebecca Winkels emphasized the importance of actively helping to shape the type, content and development of communication within the scientific community. "We need a discussion about our culture of discourse!"

Employee of the month

Since Mid-March we have a drinking fountain in the lobby. All employees can draft filtered water here, with or without fizz, as preferred. Already after 3 weeks, the first 1000 litres have been dispensed. This is the equivalent of more than 80 crates of bottled water, which are no longer transported by lorry. This is saving carbon dioxide and is thus protecting our environment. At the same time, all colleagues stay hydrated. The water dispenser is truly the "Employee of the month". (jg)

New employees at TWINCORE

Administration
Dr. Albrecht Goez, *Head of administration*
Institute for Experimental Virology
Mascha Schmidt, *Technician*
Junior Research Group Translational Virology
Katja Dinkelborg, *Scientific assistant*
RESIST Research Group Systems Biology of Microbial Communities
Dilfuza Djamalova, *PhD Student*
Institute for Molekular Bacteriology
Yannick Frommeyer, *PhD Student*
CiiM Group Computational Biology for Individualised Medicine
Beate Junk, *Technician*
Dr. Manoj Gupta, *Post Doc*
Martijn Zoodsma, *PhD Student*
Research Group Biomarkers in Infection Research
Tarequal Nishad, *Master Student*

Imprint

Publisher
TWINCORE, Zentrum für Experimentelle und Klinische Infektionsforschung GmbH, Feodor-Lynen-Str. 7, 30625 Hannover
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Layout and Design
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Photo Sources Jan Grabowski/TWINCORE; Jana Henkel/TWINCORE; Tracy LeBlanc/Pexels
Issue June 2021

Making a virtue of necessity

by Jan Grabowski

15 months of corona pandemic in Germany, for many employees that also means 15 months of home office.

At TWINCORE, this applies not only to pure office work in administration, mana-gement and the institutes' secretariats, but also to all desk work in science. The evaluation of experimental results, the writing of manuscripts or applications, or bioinformatics programming are all done from home as far as possible. On the one hand, this reduces the occupancy rate in the offices, which are usually already at maximum capacity, thus reducing the overall number of people at TWINCORE and therefore also the number of possible personal contacts. On the other hand, employees who would be exposed to an increased risk of infection on their way to work by public transport are protected.

At TWINCORE, the technical possibilities for remote access to files and programmes in our network were available at an early stage. With the help of a survey, the management determined the needs of the users and is now optimising the IT infrastructure with further measures. For example, when new computers are purchased, laptops are now preferred. In order to stay in better contact with colleagues, the working group Innovative Workplace provides each group with a contingent of webcams and headsets. Several Zoom video conference rooms are available for meetings and discussions. In addition, many working groups already use MS Teams, which is available at MHH, for efficient communication and joint editing of documents. Although the chat function is certainly not a full-fledged substitute for direct conversations with colleagues, it does help to stay connected.

Positive aspects of the new communication channels will remain with us even after the pandemic. For example, many short business trips will certainly then be replaced by a video conference to save travel time. In the end, we will even benefit from the stressful situation and learn from it how to further develop our way of working.

TWINCORE blossoms

The spacious, park-like grounds around our centre are certainly special and have grown historically in the truest sense of the word. The grounds are to be made more natural in the future, piece by piece. To this end, TWINCORE has entered into a partnership with the Umweltzentrum Hannover e.V..

The Umweltzentrum advises us within the framework of the „Außenstelle Natur" project, which is funded by the Federal Agency for Nature Conservation, and has drawn up a catalogue of possible measures. The list of suggestions includes a flowering meadow, nesting boxes for birds and bats or a hedge of native trees. "We already received advise on what to look for in outdoor lighting so that it disturbs nocturnal insects less," says Ingo Wiesenberg, head of operations technology at TWINCORE, who is overseeing the implementation of the proposals.

As a first measure, we already had our horticultural company lay out a flowering area next to the footpath to the main entrance, which will literally blossom over the next few weeks. "Another area at the back of the building will no longer be mown, so the wild herbs that are already there can grow unhindered," says Wiesenberg.

"We want to run the centre as sustainably and environmentally friendly as possible," says head of administration Albrecht Goez. "TWINCORE has an ecological responsibility just like any other company." TWINCORE employees will also benefit from the redesign, for example during breaks on the terrace.

In addition to the tables and chairs there, there are now also benches in the "Gedankengang" area. Where birds chirp and butterflies flutter, people can also feel good. Moreover, the "ruin" is now equipped with outdoor furniture and, thanks to the wireless network connection, invites people to work outdoors, as an outpost in nature, so to speak. (jg)