

December 2022

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„From Harvard to Hannover“

Dr. rer. nat. Yannic Bartsch, born 1987, will head the junior research group „Anti-viral Antibody-omics“ at TWINCORE from January 2023. Here he will investigate the effector functions of antibodies in various viral infections. After his studies in Molecular Life Sciences and subsequent dissertation at the University of Lübeck, he was a postdoctoral research fellow at the Ragon Institute of Harvard Medical School in Boston, USA. He spoke to CoreNews about his research focus and his plans in Hannover.

Mr. Bartsch, what are the research topics you want to work on at TWINCORE?

As a postdoc in Boston, I focused on the effector functions of antibodies in viral diseases, like the respiratory syncytial virus RSV, HIV, EBV and SARS-CoV-2. At the TWINCORE, I would like to use this expertise and start to investigate whether there are specific antibody profiles or effector functions that correlate with mild or severe disease of RSV infection in infants and very young children - an especially vulnerable group. We want to learn from natural infection which antibodies and antibody profiles are protective. Can these profiles be provoked in order to intervene therapeutically? In the future, one could modify monoclonal antibodies or adapt vaccinations to create the optimal antibody response. In Hannover, I would like to work on how this can be implemented and later apply it to different diseases.

How did you find out about TWINCORE?

That was part of a funding opportunity posted by the HZI. My research focus matches both Thomas Pietschmann's expertise on RSV and Ulrich Kalinke's work with monoclonal antibodies, it was immediately clear that TWINCORE would be the optimal environment for me.

What expectations do you have of the existing structures and networks?

The TWINCORE is exactly the right location for me for several reasons: The focus on infection research and vaccine or antibody development that the HZI brings, coupled with the translational connection to the MHH. There is a very strong interest in infectious diseases and immunology, as well as a very good clinical infrastructure and access to cohorts. I want to go beyond classical antibody assays like neutralization, and characterize antibody responses at a much greater detail. Antibodies can mediate a broad spectrum of different effector functions. I hope to be part of a supportive environment and it will be easy to integrate into the existing structures and start new research collaborations.

To be continued on page 2



Dear colleagues,

A few years ago, the reviewers recommended that we should increasingly think about B-cell responses and consider producing therapeutic monoclonal antibodies. We did that and in the meantime antibody projects are running in several research groups. Additionally, we have established the technology platform „Monoclonal Antibodies“ at TWINCORE, where protocols, reagents and expertise are exchanged. Lately we were able to recruit Yannic Bartsch as a junior research group leader. His research group is called "Antiviral Antibody-omics", in the sense that he will be investigating antiviral antibody responses from a variety of angles. Welcome Yannic! We look forward to covering more aspects in the technology platform with your support!

With best wishes,

Yours, Ulrich Kalinke

THIS AND THAT

Move-out of the AG Ott

Prof. Michael Ott's guest research group „Cell and Gene Therapy“ moved to the Hans-Borst Centre on the MHH campus in the summer. The research group had been housed at TWINCORE since 2008.

Doctoral prize for Birthe Reinecke

Dr. Birthe Reinecke from the Institute for Experimental Virology has been awarded this year's PhD Prize of the Friends of the HZI for her dissertation „Determinants of Hepacivirus Species Tropism“.



Doctoral Award for Fangfang Chen

Dr Fangfang Chen, former PhD student in the Biomarkers for Infectious Diseases research group, has received one of the Friends of the MHH PhD prizes for her dissertation.

Congratulations to both award winners!

Continued from Page 1.

How do you feel about moving from Harvard to Hannover?

Of course, Hannover is not Boston. But Harvard Medical School and Hannover Medical School at least have the same first letters. I have a very good feeling. I learned a lot in Boston. It was a great opportunity for my personal development, but now it is time to go back. I grew up in Lower Saxony, Hannover is not unknown to me, and I still have family around here.

From the last three years I take a lot of experience with me. Now I want to use this experience in an environment where I can develop my own ideas.

The TWINCORE has an excellent clinical connection to the large university hospital MHH and at the same time the HZI in Braunschweig is nearby. This is the perfect setting to start a new group and I have the feeling that there is still room for me to grow.

Thank you very much for the interview!

The interview was conducted by Jan Grabowski

Data protection at TWINCORE *by Jana Henkel*

Data protection laws have become much stricter in recent years - especially with the introduction of the General Data Protection Regulation (GDPR). As a result, all institutions have had to adapt their own data protection regulations. Therefore, data protection management at TWINCORE has also been comprehensively updated and professionalised.



Data Protection Coordinator Jana Henkel
is the first point of contact for all topics relating to data protection

All important information about data protection is centrally stored in the digital security manual. Among other things, it contains documents on the regulations that are binding for everyone working at TWINCORE.

Furthermore, mandatory data protection training courses have been introduced for all TWINCORE employees and are now part of the structured onboarding process. The training can be completed online and is available in both English and German. Every two years, this training must be repeated.

TWINCORE GmbH is advised by its external data protection officer Thomas Werning from werning.com GmbH. The first stop for questions is to contact the data protection coordinator Jana Henkel or our head of administration Albrecht Goetz.

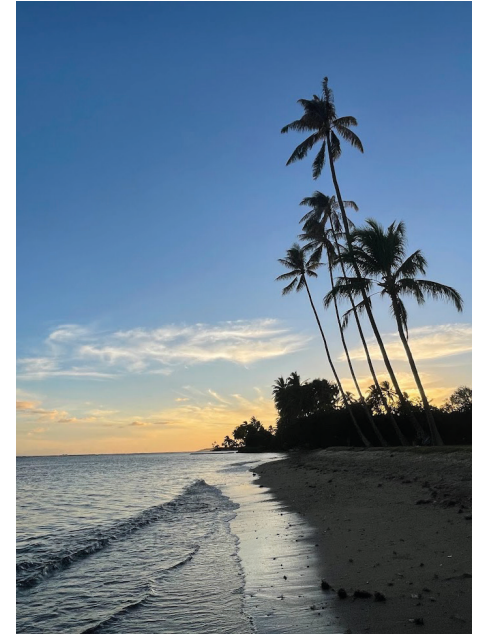
Events at TWINCORE

An eventful summer lies behind us. As the COVID situation was quite relaxed during the last months, some events could take place in presence for the first time this year. On 29 June, the staff celebrated the traditional summer party (top left), from 28 August to September

16 September, international students were guests at the Lower Saxony International Summer Academy in Immunology (LISA) (bottom) and on 15 and 16 September the TWINCORE Symposium took place together with the International VPM Days (top right). (jg)



Planning experiments under palm trees *by Olivia Luise Gern*



The time of absolute standstill during the Corona pandemic, when dolphins swam in Venice's canals, is over and also many conferences took place again this year on site and in presence.

We didn't find wild dolphins when we visited this year's Cytokines conference in Hawai'i, but we did find turtles in a lagoon just outside the conference rooms during coffee breaks. After hardly interactive online meetings, I was really looking forward to exchange with other international researchers. My poster was indeed visited by many participants and we later compared experiments on the terrace under palm trees. New ideas for collaborations also came up which we plan to implement in the coming weeks.

However, a few participants had also joined online or had even recorded their talks, which were then played back for everyone in the meeting room. The difference between lectures from a present person or a video is of course noticeable. After 30 hours of travel, it was a bit disappointing to watch pre-recorded videos, sometimes even without the opportunity for questions or discussion.

Zoom and Co. allow us flexibility, time and CO₂ savings as well as meetings without jetlag. Everyone can regulate the temperature in their own home office individually and doesn't have to freeze in a meeting room air-conditioned to 18°C like we did on Hawai'i. However, the active exchange online is significantly weakened, unpublished data is hardly shown and the engagement is sometimes quite limited.



In summary, I am very grateful that meetings can be held in person again. However, I think that in the future the added value for events with smaller groups will be that they take place either exclusively in presence or purely virtual.

Fire protection course at TWINCORE *by Arnaud Carpentier*



On 7 October TWINCORE hosted a new fire protection course open to all employees.

Given by Matthias Winkelmann from the MHH occupational safety department, it showed how prevention of fire hazards is critical to assure safety at our workplace at TWINCORE but also at home. Illustrated with pictures of recent incidents on and around the MHH campus, it convinced us that it does not "only happen to others". The class was followed by a practical exercise, to familiarize the participants with handling of different types of fire extinguishers.

The class is offered at TWINCORE every two years and can also be taken at MHH instead. In the meantime, you can help to improve fire protection already by memorizing the location of fire extinguishers at work and invest in one for home.

New employees at TWINCORE

Institute for Experimental Infection Research

Tabea Gehnen, *FWJ*

Nicara Parr, *Student assistant*

Katharina Rahmel, *Master's student*

Artem Schönknecht, *StrucMed student*

Ina Zwilling, *StrucMed student*

Institute for Experimental Virology

Abraham Ayanwale, *PhD student*

Maxwell Brann, *StrucMed student*

Regina Deisting, *Master's student*

Sonja Jesse, *Medical writer*

Fabian Röpken, *Master's student*

Junior Research Group Translational Virology

Lukas Fehlau, *PhD student*

Fenja Laue, *PhD student*

Research Group Pathogenesis of Bacterial Infections

Yiyang Cai, *PhD student*

Angelina Hübner, *Master's student*

Institute for Molecular Bacteriology

Julia Dreger, *Student assistant*

Tim Kirk, *Student assistant*

CiiM Group Computational Bioloy for Individualised Medicine

Dr. Xun Jiang, *Postdoc*

Dr. Nhan Nguyen, *Postdoc*

CiiM Group Clinical Bioinformatics

Qiuyao Zhan, *PhD student*

CiiM- Group Immunology of Viral Hepatitis

Dr. Julia Micklinghoff, *Project manager*

Roni Souleiman, *StrucMed student*

Moana Witte, *PhD student*

Energy demand put to the test

by Ingo Wiesenberg

The reasons for using energy sparingly are manifold and more present than ever before:

For one thing, climate change is becoming increasingly apparent. October 2022 was the warmest October since weather records began, with peak temperatures of just under 29°C. The 40°C in summer are also still well in our memories.

On the other hand, we are all familiar with the virtually exploding energy prices, which are endangering the existence of many companies and also putting one or the other private holiday in question.

At TWINCORE, we already carried out our first energy audit in 2020. The aim was to identify the energy flows. Where is how much and what kind of energy consumed? In the process, we were able to identify the three largest consumers. These are the ventilation systems (electricity), the heating (district heating) and the steam generation (gas).

Not only since the current energy crisis have we been working continuously to reduce our consumption. In the case of the ventilation system in the scullery, we were able to reduce the working day operation by 3 hours through optimisation with all those involved. In the laboratory area, it is not so easy to switch off the system because, due to the construction, the cabinets for hazardous substances are also connected to the respective systems per floor.

The conversion of the lighting to LED technology is in full swing. Several double laboratories have already been converted or are currently being converted. We invest about 50,000 € per year for this. One of the last measures was the conversion of the pathway and car park lighting.

Participation is welcome!

The Sustainability Working Group also looks at the topic of energy saving from many angles.

Further participants are explicitly welcome.

A first result of the working group are the motion detectors in the toilets, which now automatically switch on the lights when people enter.

Energy-saving tips for everyone:

Electrical appliances that are not in use should be switched off as much as possible. In order to determine the standby consumption of electrical appliances, power sockets with consumption measurement can be borrowed from the administration. When leaving the offices at closing time, the heating should always be turned down to „1“ (12°C). To avoid excessive cooling at night, please do not set radiators to „0“ or „frost protection“.

And of course, at the TWINCORE it is also true: The last one turns off the light.



The lighting on the campus has been upgraded to LED technology

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