

Laudatory speeches for Henning Grüll, Daniel Utzschneider and Anna Müller

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The results of scientific research and technological development have an impact on our daily lives. Without the spectacular gains in knowledge through research and development, providing millions of people with adequate medical care would have been unthinkable. Here, the innovative power of the universities and research institutes is driven in particular by the quality and potential for development of their young scientists.

That's why one of the main goals of the Robert Koch Foundation is to promote outstanding young researchers. In collaboration with the German Societies for Hygiene and Microbiology, Immunology and Virology, we award three prizes to excellent postdoctoral students every year.

Ladies and Gentlemen,

This year's Postdoctoral Award for **Virology** goes to **Dr Henning Grüll** from the Institute of Virology at the University Hospital Cologne.

Mr Grüll is an outstanding doctor and young scientist in the field of virology, who specialises in studying basic immunological principles for the effective prevention and treatment of viral infections. He studies the immune response to infectious pathogens and has discovered new principles for HIV-1 vaccines and therapies.

Since joining the University of Cologne, Mr Grüll has successfully completed a series of basic and transnational research projects. These include the production of CART-T cells, which are able to effectively combat HIV-1, and which are currently being tested *in vivo* for the control of HIV-1 infections. He has also characterised new, broadly neutralising antibodies that limit the spread of HIV-1.

Mr Grüll has already successfully published his research results, as reflected in his contributions to *Nature* and *Nature Medicine* as the lead author.

Mr Grüll studied medicine at the Wilhelms University of Münster, where he also gained his doctorate. He then joined the Internal Medicine department at the University Hospital Cologne, and since 2016

has been an assistant doctor at the Institute for Virology in Cologne and a postdoctoral student in the laboratory for Experimental Immunology. A research project took him to the Laboratory for Molecular Immunology at the Rockefeller University in New York.

Mr Grüll has already received several grants, including funds from the “Studienstiftung des deutschen Volkes”, the German Academic Scholarship Foundation, and the German Center for Infection Research.

Dear Mr Grüll, please accept my sincere congratulations on winning the Robert Koch Postdoctoral Award.

Ladies and Gentlemen,

This year's winner of the Postdoctoral Award for **Immunology** is **Dr Daniel Utzschneider** from the University of Melbourne.

Mr Utzschneider has conducted highly successful research into the T cell immune response, in particular the development and exhaustion of memory T cells with acute and chronic viral infections, and the lymphocytic choriomeningitis virus (LCMV). His research results are highly regarded in the field of T cell-based immune therapy and tumours.

Mr Utzschneider has introduced a paradigm change in the field of T cell immunology. He described and proved a new model, in which T cells undergo differentiation and function specialisation processes with chronic infections. He demonstrated that T cells lose certain functional aspects in cases of chronic infection, although at the same time, critical functional aspects remain intact.

Mr Utzschneider already has an impressive list of publications under his belt, with 17 publications and a large number of lead authorships in highly respected journals such as *Immunity*, *Journal of Experimental Medicine* and *Nature Immunology*.

Mr Utzschneider studied biology at the Technical University of Kaiserslautern and gained his doctorate at the University of Lausanne. He spent his postdoctoral period in Lausanne, at the University of California in San Diego and, since 2018, at the Doherty Institute for Infection and Immunity at the University of Melbourne.

He has already received several awards, and was presented, among other accolades, with the “Prix d’excellence de jeune chercheur” from the University of Lausanne for his doctoral thesis, and the Special Fellow Award from the Leukemia & Lymphoma Society.

Dear Mr Utzschneider, I am very pleased to congratulate you on your Robert Koch Postdoctoral Award.

Ladies and Gentlemen,

This year, the Robert Koch Postdoctoral Award for **Microbiology** goes to **Dr Anna Müller** from the University of Bonn.

Ms Müller is an outstanding scientist in the field of anti-infective research. Among other things, she discovered that daptomycin alters membrane fluidity, and that teichoic acid epimerases are very good target structures for antibiotics.

Daptomycin is one of the most effective antibacterial substances on the market, and is used mainly for treating gram positive problem germs such as MRSA. However, for a long time, the precise way in which the antibiotic worked remained unclear. The research conducted by Ms Müller has now helped provide answers to this question. She has demonstrated that daptomycin interferes with the lipid organisation of the membrane, for example. It modifies the fluid membrane areas in such a way that some proteins can no longer bond on the membrane and become detached from it.

Ms Müller has an impressive list of publications with lead authorships in the *PNAS* or the *Journal of Biological Chemistry*.

Ms Müller studied molecular biomedicine at the University of Bonn and also gained her doctorate there. Currently, she is working as a postdoctoral student in the research group under Professor Tanja Schneider at the Institute for Pharmaceutical Microbiology at the University of Bonn. She visited the University of Newcastle several times to conduct research there.

Her outstanding achievements have won her the dissertation prize from the German Center for Infection Research at the German Society for Hygiene and Microbiology, among others.

Today you are receiving another award – the Robert Koch Postdoctoral Award – for which I would like to congratulate you sincerely.

Ladies and Gentlemen,

I would like to ask the three Robert Koch Postdoctoral Award winners to join me on stage to accept their certificates. I hope that these awards will motivate you to successfully continue your science career paths.