

Germany's most experienced phage researcher retires

Germany's most experienced phage researcher retires: Dr Christine Rohde, Leibniz Institute DSMZ, Braunschweig, Germany, talks about 38 years of phage research

BRAUNSCHWEIG, LOWER SAXONY AREA, GERMANY, July 18, 2024 /EINPresswire.com/ -- After 38 years as curator and, since 2016, head of the working group 'Clinical Phages and Legal Regulation' at the Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures, Dr <u>Christine Rohde</u> is entereing her welldeserved retirement. The microbiologist is the most experienced <u>phage</u> researcher in Germany. The DSMZ hosts the world's most diverse collection of bacteriophages and makes them available for international research projects that will fundamentally change an area of our medicine: the fight against bacterial infections. The collection of phages at the DSMZ and the research based on them began 38 years ago as an almost incidental idea of Christine Rohde.

Christine Rohde studied microbiology in Göttingen, Germany. After a postdoc stay in Australia, she joined the DSM - Deutsche Sammlung von Mikroorganismen in



Phage Researcher Dr. Christine Rohde, Leibniz Institute DSMZ, Braunschweig, Germany

Göttingen in June 1986, where she was the curator responsible for plasmids and bacterial strains. "There was no discussion of phages. But I had already thought that they were somehow missing in the collection", Dr Rohde says in an interview with the institute's Press and Communications Department. When she suggested to the DSM director, Dr Dieter Claus, that phages should be included in the collection, he supported this idea. From this very moment, Christine Rohde began collecting phages, starting with phages for academic teachings. It would be another 20 years before the medical benefits of phages were generally recognised by the scientific community in the western world.

Bacteriophages - or phages for short - are viruses that can specifically kill bacteria. The word phages originates from the Greek language and means 'bacteria eater'. Treatment with phages

can be an alternative or valuable adjunct to antibiotic therapy to target infectious diseases, especially in the case of multi-resistant bacteria. Phages can be found wherever their host bacteria live, i.e. all over the planet. There are about ten times as many phages as bacteria - making phages the most common form of existence on earth. In addition to phage therapy in humans and animals, phages can be used against pathogens in food processing. They can also be used for targeted decontamination, probiotics, diagnostics, water purification and biotechnology.

When DSM moved to Braunschweig at the end of the 1980s, to the present Science Campus Braunschweig-Süd, Christine Rohde decided to follow. Together with a handful of colleagues, she was involved in planning the new DSM building. Her colleague Bettina Henze (biology laboratory assistant) also relocated to Braunschweig. The two have worked as a team to this day. Until a few years ago, Christine Rohde was not only a phage collector and researcher, but also the dangerous goods safety advisor at the DSMZ,



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which is why she spoke to the World Health Organization in 2002 about packaging and shipping microorganisms. "I think I was more excited than I'd ever been in my life - to speak in front of the WHO is something special. The aim was to package microorganisms in the same way that medical doctors package their 'diagnostic samples'. And we succeeded." In 2005, the change came into force, making it easier and cheaper to ship microorganisms, to the benefit of global research. "To be able to sit in the WHO in Geneva and say 'we can't go on like this' and be listened to was really something." But it was also a tough political battle. And it was not Dr Rohde's last.

In 2006, Dr Hans-Peter Klenk became head of the Department of Microorganisms and, according to Christine Rohde, he was a great supporter of phages. He always wanted to promote phage research. At the same time, the importance of phages was recognised in the Western European

scientific community. Since then, Christine Rohde has focused on the medical use of phages. In 2009, she began her international political work for phages.

In 2012, Dr Johannes Wittmann joined the DSMZ as a postdoc specialised on phages. "I am very pleased about the teamwork with Johannes Wittmann" says Rohde. "With Johannes, we were able to expand phage research" Four years later, Dr Wittmann became head of the new Phage Genomics and Application group. Christine Rohde is indebted to the Senate of the German Leibniz Association for this dual curatorium in the field of phages. "The scientific director of the DSMZ, Prof. Dr. Jörg Overmann, has always been supportive and has promoted the collection and research in the field of phages. He also recognised early on that one of many unique selling points of the DSMZ is in the field of phage collection and research", summarises microbiologist Christine Rohde. Today, the DSMZ has one of the largest phage collections in the world and is also internationally recognised in the field of phage research.

Over the past 10 years, Dr Rohde has been able to continuously raise third-party funding for phage research. The Phage4Cure project, for example, is funded by the German Federal Ministry of Education and Research and includes to a clinical trial at the Charité - Universitätsmedizin Berlin in Germany. The PhagoFlow project is funded by the Innovation Committee of the German Federal Joint Committee, and the EVREA phage project was launched in collaboration with the German Centre for Infection Research (DZIF). The collaboration with the DZIF's TransPhage network made a dream come true for Christine Rohde: The progress in phage research is bringing us closer to an urgently needed amendment of the German Medicines Law, i.e. legally approving phage therapy in the future. Rohde is optimistic that the pharmaceutical industry will quickly adapt to this innovative form of therapy.

"From now on I will retire step by step since I would like stay in contact with the colleagues at the DSMZ and the whole world for a while. My working group at the DSMZ has somehow become my second family." At the end of the interview, Christine Rohde wants to tell young researchers to be passionate about their ideas and don't give up too soon - it's worth it.

full press release/interview: <u>https://www.dsmz.de/press/press-releases/singleview/germanys-most-experienced-phage-researcher-retires</u>

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