

Internationally renowned plant virus researcher Dr Stephan Winter retires

After almost 30 years of service, the head of the Department of Plant Viruses at the Leibniz Institute DSMZ in Braunschweig is retiring

BRAUNSCHWEIG, LOWER SAXONY AREA, GERMANY, August 13, 2024 /EINPresswire.com/ -- The Leibniz Institute **DSMZ**-German Collection of Microorganisms and Cell Cultures GmbH hosts the world's most comprehensive collection of plant viruses. The head of the Department of Plant Viruses, Dr Stephan Winter, is now going into well-deserved retirement. Dr Winter studied agriculture in Giessen and Bonn, specialising first in plant production and later in plant diseases. After his doctorate in plant virology, he completed a postdoctoral stay in Vancouver. Following his time in Canada, he focussed on tropical plants. He therefore continued his research in Nigeria for two years for the World Bank before moving to the DSMZ as head of department in 1995. Stephan Winter has now retired after almost 30 years of service. In an interview with the DSMZ Press and Communications Office, the scientist talks about his work.



Dr Stephan Winter, DSMZ, Braunschweig, Germany

International importance of the Department of Plant Viruses at the DSMZ The proximity to the Julius Kühn Institute, where the research greenhouses and some of the laboratories of the DSMZ' Department of Plant Viruses are located, as well as the opportunity to further expand the department and set new research priorities, were decisive factors for Dr Stephan Winter in accepting the role as head of department. It was a major goal of his to steer the department and its staff in a new, international direction. "Together with my team, I succeeded in developing the Plant Viruses Department at the DSMZ into a major research centre and building up the world's largest collection of plant viruses," says Dr Winter. Structuring the department required a great deal of conceptual commitment, but the effort was well worth it for Dr Winter and his team. "Many things are still my very own activities today," he explains. These include the creation of databases, research into novel viruses, the development of innovative virus diagnostics and the expansion of the plant virus collection. Dr Winter was the driving force behind these projects but emphasises that this would not have been possible without the active support of the scientific and technical staff. Everyone contributes their individual skills, creating an interesting, family-like structure. Bringing the department into international focus was one of the highlights of his career. The training of almost 50 people, from master's students to doctoral candidates from various countries, has brought many international impressions to the department, which have contributed to the internationalisation of the field at the DSMZ.

Globally recognised: Cassava research at the DSMZ

Not only his work as head of department, but also the research itself has played a central role in Dr Stephan Winter's career. Particularly dear to his heart is the examination of viral diseases of tropical plants, as these viruses are gradually spreading to native cultivation areas. One of the most important projects of his career is concerned with cassava, an important food plant that thrives in tropical and subtropical regions, particularly in sub-Saharan Africa. Cassava is a vital food crop for many hundreds of millions of people. Virus epidemics in African cassava-growing regions, particularly in East and Central Africa in the 1980s and 1990s, became a central research task, as little was initially known about the viruses and there were no resistant plants for breeding. Stephan Winter quickly realised that he had to dedicate himself to this topic and contribute his experience. This began with the characterisation of the viruses and the corresponding diagnostics. In 2004 and 2005, he succeeded in identifying cassava plants that were resistant to the virus. These were then selected for further breeding. At around the same time, however, novel cassava viruses, which Dr Winter had already noticed in earlier research, broke out. Initially hesitant, he began researching these new viruses with the support of the DSMZ. Following an American NSF grant in 2009, the Bill & Melinda Gates Foundation became aware of this project and supported it financially. Thanks to this support, the researchers were able to study the virus more intensively. As no natural resistance to the virus could be found in Africa, the DSMZ researchers continued their search in South America and found what they were looking for there. In Germany, the plant virus researchers carried out further resistance tests with the South American cassava plants, supported by the then doctoral student Dr Samar Sheat and a team of technical assistants who had a lot of experience in dealing with the cassava plant. In a relatively short time, they were able to identify a resistant cassava variety and plant it in the field. Doctor Winter emphasises: "My great luck is that I started something, discovered something and am now in the process of making it a success." Dr Sheat, now a postdoc at the DSMZ, will continue Dr Winter's cassava research. Dr Winter would also like to continue in a supporting role after his retirement. His extensive international experience can continue to be of great importance. Whether he proceeds his research in the Congo or takes on new challenges elsewhere, the plant virologist is determined to continue contributing his expertise and will not disappear from the plant virus research landscape.

Plant health is food security

At the end of the interview, Dr Stephan Winter emphasises the immense importance of plant health. For him, this topic extends far beyond the fight against viruses and encompasses a broad spectrum of aspects. The role of plant health for the food security of the world's population and the effects of plant health on the environment are particularly worth emphasising. From his point of view, the current renaissance in plant research is a valuable opportunity to tackle future challenges. These include the adaptation of plants to new climatic conditions, increasing crop yields, reducing the use of pesticides and optimising the use of nutrients. These topics are not only current but also crucial for the future of agriculture and environmental protection. Plant viruses are essential components of natural ecosystems.

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