Press release

Leibniz-Institut DSMZ-Deutsche Sammlung von Mikroorganismen un[illegible]bH
Dr. Manuela Schüngel

11/14/2023
http://idw-online.de/en/news823920

Miscellaneous scientific news/publications, Research results
Biology, Economics / business administration, Environment / ecology, Nutrition / healthcare / nursing
transregional, national

Grapevine Red Blotch Disease Impacts Global Wine Production

What research knows about Grapevine Red Blotch Disease of grapevines

In the current issue of the renowned scientific journal PLOS Pathogens Pearls, an international team led by Dr Björn Krenz from the Department of Plant Viruses at the Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures GmbH summarizes the latest research findings and unanswered questions surrounding the globally spreading disease of grapevines.

Understanding Grapevine Red Blotch Disease (GRBD)
GRBD, first identified in California in the 2000s, is a viral infection affecting both wild and commercial grapevines. The disease, caused by the Grapevine Red Blotch Virus (GRBV), leads to poor grape quality due to disrupted ripening processes. Dr. Krenz notes, "The lower quality of wine produced from infected grapes is causing considerable economic losses to winegrowers." The study suggests that GRBV likely originated in North America and is spreading globally, mainly through the transport of infected cuttings. In addition, the three-cornered alfalfa hopper (Spissistilus festinus) is identified as a potential carrier. To combat this spread, researchers recommend the use of GRBV-free plant material and, in heavily affected areas, the complete removal of infected vines.

Future Directions in Viticulture Research
Although significant progress has been made in understanding GRBD, many questions remain unanswered, including the full extent of its spread, the exact mechanisms of grape damage and possible other vectors or viruses involved. Further research is crucial for the protection and sustainable development of the global wine industry.

Original publication
Krenz B, Fuchs M, Thompson JR (2023) Grapevine red blotch disease: A comprehensive Q&A; guide. PLoS Pathog 19(10): e1011671. https://doi.org/10.1371/journal.ppat.1011671

Press contact:
PhDr. Sven-David Müller, Head of Public Relations, Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures GmbH
Phone: ++49 (0)531/2616-300
Mail: press@dsmz.de

About the Leibniz Institute DSMZ
The Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures is the world's most diverse collection of biological resources (bacteria, archaea, protists, yeasts, fungi, bacteriophages, plant viruses, genomic

bacterial DNA as well as human and animal cell lines). Microorganisms and cell cultures are collected, investigated and archived at the DSMZ. As an institution of the Leibniz Association, the DSMZ with its extensive scientific services and biological resources has been a global partner for research, science and industry since 1969. The DSMZ was the first registered collection in Europe (Regulation (EU) No. 511/2014) and is certified according to the quality standard ISO 9001:2015. As a patent depository, it offers the only possibility in Germany to deposit biological material in accordance with the requirements of the Budapest Treaty. In addition to scientific services, research is the second pillar of the DSMZ. The institute, located on the Science Campus Braunschweig-Süd, accommodates more than 85,000 cultures and biomaterials and has around 220 employees. www.dsmz.de

The Leibniz Association
The Leibniz Association connects 97 independent research institutions that range in focus from the natural, engineering and environmental sciences via economics, spatial and social sciences to the humanities. Leibniz Institutes address issues of social, economic and ecological relevance. They conduct basic and applied research, including in the interdisciplinary Leibniz Research Alliances, maintain scientific infrastructure, and provide research-based services. The Leibniz Association identifies focus areas for knowledge transfer, particularly with the Leibniz research museums. It advises and informs policymakers, science, industry and the general public. Leibniz institutions collaborate intensively with universities – including in the form of Leibniz ScienceCampi – as well as with industry and other partners at home and abroad. They are subject to a transparent, independent evaluation procedure. Because of their importance for the country as a whole, the Leibniz Association Institutes are funded jointly by Germany's central and regional governments. The Leibniz Institutes employ around 20,500 people, including 11,500 researchers. The financial volume amounts to 2 billion euros. www.leibniz-gemeinschaft.de

Original publication:
https://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1011671

A healthy vine (left) next to plant showing symptoms of Grapevine Red Blotch Disease (right).
Cornell University/Marc Fuchs

Dr. Björn Krenz
DSMZ