

Joint press release IPK Leibniz Institute and Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures

## New genetic data must share benefits equitably and promote biodiversity conservation

Gatersleben/ Braunschweig, 23.02.2022 Forty-one researchers from 17 countries have come together offering compromise on a controversial topic under the UN Convention on Biological Diversity in a new paper in the journal *Nature Communications*. The researchers explain why a policy solution on digital sequence information (DSI) is pressingly needed, and propose a mechanism that would support biodiversity conservation while also better sharing the benefits from DSI research.

The authors envision a policy mechanism that creates a positive feedback loop that incentivizes countries to generate and share DSI on their biodiversity, while distributing benefits equitably. The authors argue that such a policy mechanism must be “multilateral” to be successful, which means that nations around the world must cooperate and agree on common rules. The authors of this work also call on policymakers to engage with researchers in their countries who depend on DSI, so that any policy solution will not hinder crucial biodiversity research. According to Prof. Jörg Overmann, scientific director of the Leibniz Institute DSMZ-German Collection of Microorganisms and Cell Cultures in Germany, “When based on these scientific facts, a policy solution can foster biodiversity conservation, international collaboration and development, and at the same time ensure equitable benefit-sharing.”

“Biodiversity is a natural reservoir on which our food and health security and a framework of well-being depends. Yet, it is threatened. To conserve it and stop losing it, open access to data for life scientists, coupled to fair and equitable benefit sharing of the advantages of its utilisation, should be the essence of a global policy solution”, states Prof. Halima Benbouza, Director at the National Council of Scientific Research and Technologies in Algeria.

There is widespread agreement that urgent international action is needed to stem the ongoing destruction of our planet’s biodiversity. Parties to the United Nations Convention on Biological Diversity (CBD, <https://www.cbd.int/>) are currently negotiating the Post-2020 Global Biodiversity Framework, which will shape efforts to protect our planet for the coming decades. Disagreements, however, have arisen regarding how to treat data derived from genetic resources, known as digital sequence information, in the new framework.

Scientists have a long and successful history of sharing DSI openly on the web. This culture of sharing is central to biodiversity research, and has driven technological advances in fields as diverse as medicine, food security, and green energy production. Online databases contain DSI for many hundreds of thousands of organisms, and grow each day. These widely-used resources support scientific reproducibility, transparency,

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and advancement. DSI sharing, for example, was crucial to the rapid development of SARS-CoV-2 tests and vaccines. "Progress and science today are possible thanks to researchers standing on the shoulders of predecessor giants ... and data! The Open DSI revolution, with its free flow of data across nations, has brought a democratization of scientific practice, allowing free access to genetic sequence information for biomedical research and biodiversity monitoring and protection", stresses Prof. Ibon Cancio from the Plentzia Marine Station (PiE-UPV/EHU), EMBRC-Spain.

The authors of this paper are members of the DSI Scientific Network (<https://www.dsiscientificnetwork.org/>), a group of scientists from different countries and economic settings that share convergent points of view in the DSI debate, and who have come together to argue for sensible policy solutions on this crucial issue.

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Prof. Jörg Overmann Photo: DSMZ