



Connections

5. DNA rules & fair play

The European Reference Genome Atlas (ERGA) and the European node of the International Barcode of Life (iBOL Europe), two international communities of scientists brought together under the Biodiversity Genomics Europe Project, are joining forces for a series of blog posts that explore the fascinating world of Biodiversity Genomics and the intersection of their communities.



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DNA rules & fair play

BY CHIARA BORTOLUZZI, KASIA FANTONI, CHRISTIAN DE GUTTRY AND LUISA MARINS

We've talked about using DNA barcodes to spot which "book" we're holding and reference genomes to read every page. But who owns those books, and who gets to read them for free? Two big ideas help us play fair when working with biodiversity genomics:



ARNICA MONTANA. PHOTO BY MANTONATURE.

1 Nagoya protocol, sharing the treasure

Back in 2010, many countries agreed on a rule called the Nagoya Protocol. It says: "If you take plants, animals, or microbes for research, ask first, say what you'll do with them, and share anything good that comes out of your research." Think of it like borrowing a rare comic from a friend: you need permission and, if you make money off a reprint, you split the profits. This keeps scientists from acting like treasure hunters and makes sure local communities and indigenous people benefit too.



2

DSI, the online puzzle pieces

Today most DNA is saved as digital files, called Digital Sequence Information (DSI), that anyone can download. Countries are now discussing how to share benefits from those free files, just like they do with real-world samples. A new plan should be ready in the next couple of years. Whatever they choose, the goal is simple: keep science open and keep it fair for everyone.



Digital Sequence Information

Any digital information that comes from genetic resources.

Why it matters to barcodes and genomes

Barcodes tell which species we are studying, reference genomes allow us to dig deeper into their past, present and future. Both approaches rely on samples from nature, and both create DSI that travels the globe. If we follow the rules, we protect species and respect the people who live close to those species.

The takeaway for young (and grown-up) scientists

Filling out permits might seem dull compared to hiking up mountains or analysing exciting data. But those forms are like a secret handshake that says, “***We promise to share.***” And sharing is what makes science stronger, kinder, and ready for the future.