

Joint Press Release

Computomics and Hudson River Biotechnology Collaborate in Optimizing Plant Breeding with CRISPR

Tübingen, Germany and Wageningen, Netherlands, December 2, 2021 – Computomics, a Tübingen-based bioinformatics company and Hudson River Biotechnology (HRB), a Wageningen-based agricultural biotechnology company will start offering an end-to-end solution using CRISPR-based gene editing for novel plant trait development.

This partnership combines Computomics' expertise in accurate and precise machine learning-based identification of novel gene editing targets without off-target effects, and Hudson River Biotechnology's CRISPR gene editing workflow, which is foreign-DNA-free. The collaboration between Computomics and Hudson River Biotechnology allows for a smooth handover from identification of disruptive gene editing targets to a precision gene editing workflow to deliver new plants to market rapidly.

The joint solution, AccelATrait™, uses tailor-made machine learning and CRISPR gene editing technologies to deliver new crop varieties with desired traits. AccelATrait™ covers the entire workflow from experimental design to plant regeneration. It helps plant breeders develop new business based on novel traits and decreases time to market by 3-4 times. In this partnership, Computomics is responsible for detecting, locating, and identifying novel causal targets using the latest machine learning technology. Hudson River Biotechnology performs the targeted editing using their rapid and validated CRISPR workflow. This workflow allows HRB to address recalcitrant species and offers benefits through transgene-free editing and single cell regeneration.

“Computomics and Hudson River Biotechnology complement each other perfectly in this partnership. We are working together to help plant breeders develop new varieties with improved characteristics in a shorter time and with less costs”, says Dr. Sebastian J Schultheiss, Managing Director of Computomics.

Rudi Ariaans, CEO of Hudson River Biotechnology, adds: *“We see a clear benefit to this partnership, as many of our clients would like to access both the best in class bioinformatics capabilities and the best in transgene free CRISPR protocols to decrease the time to market for new crop varieties. AccelATrait brings these two together, allowing us to really accelerate molecular breeding for our clients. We look forward to being challenged to apply AccelATrait to previously unfeasible breeding projects, such as targeting polyploids and disruptive traits that can make a real difference.”*

About Computomics

Computomics offers a proprietary machine learning technology platform that applies AI to genetics, phenotype, microbiome, and environmental datasets. Computomics is a team of world-leading experts in machine learning, plant research and bioinformatics, who use data to unlock the diversity of biological life.

In over 180 projects, Computomics enabled customers to make data-driven decisions and thereby accelerate sustainable agricultural development that can feed the world. Computomics' interpretable machine learning technology enables rapid understanding of genomic data for plant breeding, agricultural biotech, and microbiome researchers. Computomics is headquartered in Tübingen, Germany. You can learn more about Computomics at computomics.com and by following Computomics on Twitter at twitter.com/computomics.

About Hudson River Biotechnology

Hudson River Biotechnology is an independent technology provider, specialized in plant breeding, crop production, genetics, and biotechnology. Since HRB's founding in 2015, we have established a name in the market as a go-to player for disruptive innovations and cutting-edge technological developments. As our first portfolio technology, we have worked with a variety of companies to develop new traits and solve technological barriers in gene editing with CRISPR. In 2021 we have expanded our portfolio to offer delivery of biologicals and small molecules in field applications through nanotechnology.

Our customers range from large multinationals to family-owned businesses in, for example, the food, pharmaceuticals, plant breeding and biotech industries. Our goal is to make plant-focused technologies accessible, tailor-made to each customer and create mutual success.

To learn more about Hudson River Biotechnology visit www.hrb.bio

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