



**iMEAN**  
Life engineering using digital organisms



## New collaboration between European bioinformatics startup and Bayer allows faster discovery of new crop protection solutions

- iMEAN combines data, modelling and advanced algorithms to accelerate the discovery of new environmentally friendly products within Bayer's R&D program.
- New partnership allows Bayer to bring advanced crop protection tools to farmers faster, and it is Bayer's latest move demonstrating its dedication to open innovation in agriculture.

**Toulouse, France, July 27<sup>th</sup>, 2021** - Arming Bayer researchers with tools to accelerate discovery of innovative crop protection products is the focus of a new collaboration announced today between technology platform company iMEAN and the agriculture leader.

The partnership comes at a time when farmers worldwide are losing as much as 50 percent of their crops when fields are left unprotected against weeds, insects and diseases. The French based iMEAN company uses a technology based on the reconstruction of digital organisms: mathematical representations of the complex molecular networks of living organisms at the genome-scale to accelerate the discovery of new crop protection products. Researchers in Bayer's Crop Science R&D program then use those discoveries to advance new solutions.

*"Our in-house modelling platform combines our database of digital organisms with our innovative algorithms and our expert manual curation. That allows us to generate a high-quality digital organism of plants and plant pathogens in a short timeframe from DNA sequences and other omics datasets," said **Remi Peyraud, CEO of iMEAN.** "We use these models in our simulation platform with a creative analysis toolbox based on systems biology and biostatistics."*

Bayer scientists consistently challenge themselves to discover new generations of crop protection substances that meet the expectations of farmers and society. iMEAN's platform allows researchers to extract the most from Bayer's experimental data on these substances and provide valuable biological insights.

*"Early phase projects often have unexplored chemistry which requires a lot of time to find its best or most effective use," said **Kerstin Groene, a researcher from Bayer Crop Science**. "Using digital organisms supports us in the design of innovative chemistry at an early discovery stage, allowing us to discover novel crop protection solutions for sustainable agriculture."*

## ABOUT iMEAN

iMEAN is a European bioinformatics startup company based in France. Expert in developing in silico models of complex living organisms, iMEAN is the right digital partner to join the massive transition that the industry is currently undergoing.

By combining complex mathematical models, disruptive algorithms and expertise in biology, iMEAN designs advanced digital organisms with high predictive power enabling superior understanding of complex living organisms. iMEAN's modeling platform is not only a powerful tool for accelerating R&D programs of biotech companies but is also a key asset for making ground-breaking discoveries in academic research.

iMEAN services can help speeding up any R&D program by designing & optimizing industrial organisms, finding patentable novel biobased products or simply tackling the systems biology revolution.

At iMEAN, we thrive on being part of this new bio-economy society accelerating the transition to a more sustainable world.

### **For more information**

[www.imean-biotech.com](http://www.imean-biotech.com)

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