Workshop on Digital Bioeconomy: Convergence towards a bio-based society



Contribution ID: 7

Type: Talk

## Getting value out of digitalization in biotech R&D

Tuesday 20 February 2024 14:45 (30 minutes)

The ability to use data and predictive computational technologies holds a large promise for developing the next generation of solutions in industrial and pharma-based biotech. Large language model technology applied to protein sequences combined with application-directed AI oracles have made spectacular progress in some cases, and there is a growing awareness that data-based design could indeed revolutionize the discovery process for many protein-based solutions.

In the present talk I will outline the view of these technologies from an industrial biotech view, and discuss the dilemmas that we have encountered over the years in Novozymes and now Novonesis in harnessing the power of computational biology and machine learning. I will discuss technical, practical and organizational aspects of how one can formulate the setup of a data-driven R&D organization and discuss successes and failures of our endeavors.

Finally, I will speculate on the future, whether it will resemble the past, and muse on how the computational biology community could chose to invest its resources for maximum impact in the 2020s and beyond.

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