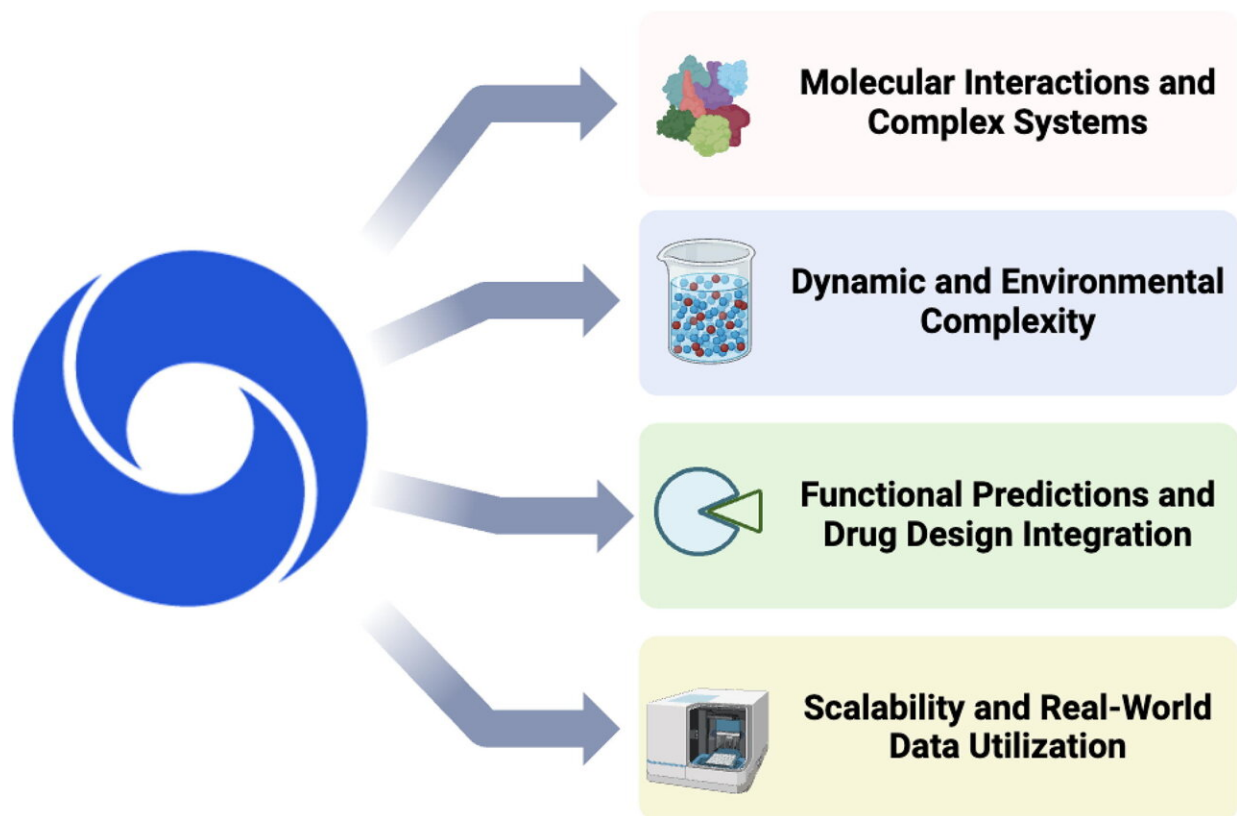


An AI tool's potential impact on predictive medicine

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Future Areas of Development for AlphaFold. We propose four areas of improvement for AlphaFold to create better protein folding predictions. Credit: *AI in Precision Oncology* (2024). DOI: 10.1089/aipo.2024.0010

AlphaFold is an outstanding example of artificial intelligence's computational capabilities in accurately predicting intricate protein

structures. A new Review article explores AlphaFold's recent advancements and its potential impact on predictive medicine. The article is [published](#) in *AI in Precision Oncology*.

Vivek Subbiah, MD, from the Sarah Cannon Research Institute, and co-authors describe a shift toward predictive medicine, in which AI, integrated with [genomic data](#), revolutionizes our understanding of diseases, facilitates drug design, and enables personalized therapies. This evolution comes with challenges, however, and the review emphasizes the importance of predicting protein functions, binding kinetics, and [thermodynamic properties](#) for effective drug development.

As AI merges with clinical data, the authors stress that "ethical considerations surrounding patient privacy and responsible AI use become paramount." The review presents a hypothetical patient journey in [colorectal cancer](#), highlighting how AI-driven predictions could accelerate the development of personalized vaccines and facilitate adaptive clinical trials.

"AlphaFold's groundbreaking ability to predict protein structures is set to revolutionize predictive medicine, driving forward drug design and personalized therapies. Dr. Vivek Subbiah and co-authors, in a recent *AI in Precision Oncology* review, illuminate this transformative shift while addressing the crucial challenges and ethical considerations of integrating AI with [clinical data](#)," says Douglas Flora, MD, Editor-in-Chief of *AI in Precision Oncology*.

More information: Xiyu Zhao et al, AlphaFold's Predictive Revolution in Precision Oncology, *AI in Precision Oncology* (2024). [DOI: 10.1089/aipo.2024.0010](#)

Provided by Mary Ann Liebert, Inc

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