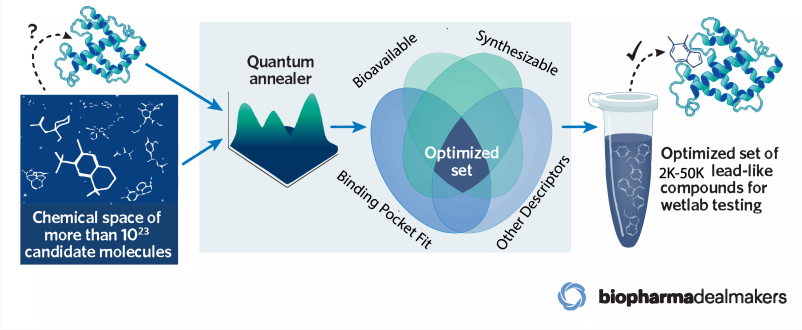
POLARISqb Announces the Release of Quantum Aided Drug Design (QuADD): A Quantum Powered SaaS for Drug Discovery

POLARISqb, who built the first drug discovery engine for a quantum computer is releasing a SaaS that will allow customers to utilize quantum in their pipelines.



POLARISqb shows how they use quantum computing to optimize the drug discovery process.

DURHAM, NORTH CAROLINA, UNITED STATES, May 31, 2023 /EINPresswire.com/ -- POLARISqb, an industry leader in accelerating drug discovery using quantum computing, is excited to announce Quantum-Aided Drug Design (QuADD). QuADD is a subscription-based SaaS platform that quickly identifies a library of top candidate molecules for drug targets. In order to find a new preclinical lead, the first step is to build a library of small molecules that may interact with the target protein binding pocket. Traditionally, library design involves wet lab testing that takes years, costs millions, and is limited to a narrow chemical space. With the power of quantum computing, QuADD is able to build highly diverse and customized libraries of optimized molecules in days.

QuADD's new approach translates the library building problem into an optimization problem that can be solved with a quantum annealing computer. Quantum annealing computers can complete optimization calculations orders of magnitude faster than conventional computers, and this technology allows us to answer the following question: Of all of the 10^30 molecules in a theoretical chemical space of drug-like molecules, which are most optimal for this specific protein pocket and molecular properties such as BBB permeability, solubility, toxicity and more? This question is addressed much more broadly than what can be asked in a wet lab, which is limited to drugs on hand, or what can be asked by CADD, which is limited to slow conventional computing. Polarisqb is the first company to offer a quantum computing based SaaS for drug discovery and their technology has been featured in Nature Biopharma Dealmakers, Ars Technica, and Inside Quantum Technology.

QuADD targets a specific binding pocket to find novel, bioavailable, and synthesizable lead-like hits from a library of 10^30 structures in 1-3 days. The input for the QuADD pipeline is a

customer-defined structure of the protein binding pocket and ligand. The result is a diverse, enriched library of candidate molecules that accelerate the start of the drug discovery pipeline. Depending on the size of the protein binding pocket, QuADD identifies an optimized library of 1k-10k molecules tailored to the customers specific protein pocket. This library is then ready for additional in-house CADD or wet lab testing. QuADD libraries contain molecules that have become commercially available, favorable binding energy, drug-like functional groups, and correct binding orientations.

POLARISqb's QuADD platform is currently available for drug discovery teams in biotech and pharma companies. Interested groups should contact POLARISqb for demonstrations and to get more information about how the technology could be employed in their own drug discovery pipelines. The QuADD platform is built to maintain strict confidentiality, and it is deployed in a secure isolated environment tailored to specific security and organizational requirements.

Polaris Quantum Biotech, a leader in Quantum Computing for drug discovery, has created the first drug discovery platform built for quantum computing. Founded in 2020 by Shahar Keinan, CEO, and Bill Shipman, CTO, POLARISqb uses the latest quantum and cloud computing, artificial intelligence, and machine learning to process, evaluate and identify drug lead molecules many times faster than alternative solutions. QuADD is available today and ready for biotech and pharmaceutical companies to utilize in order to revolutionize their own drug discovery processes with the speed of quantum computing.

Will Simpson
POLARISqb
email us here
Visit us on social media:
Twitter
LinkedIn
