Multi-Omics GenAI Platform

Blackthorn.ai played a crucial role in addressing a software development challenge that HTG could not overcome. The team surpassed our timeline projections and remained within budget constraints, all while operating with a high degree of autonomy.

The challenge
Utilizing transcriptomics data to generate novel small molecules with potency against a target by utilizing machine learning algorithms and AI.

The solution
The team developed a multi-omics AI platform for generating drug candidates with specific physicochemical (logP, logS, pKa, BBBP) and biological (binding affinity, metabolic stability, toxicity) properties. It included a web portal, data processing, a multi-omics data lakehouse, as well as a knowledge graph with Gen AI. Blackthorn.ai refined the vision and built the product with minimal oversight.

The result
1. Designed and built a platform for drug and target discovery. 2. Generated drug candidates with desired physicochemical and biological properties. The generated molecules have been synthetized and now under wet lab studies for confirmation of biological activity.

> " Blackthorn.ai played a crucial role in addressing a software development challenge that HTG could not overcome. The team surpassed expectations on timelines, provided much needed guidance and overall input on design, all while operating with a high degree of autonomy. "
>
> Carl Kaub, Vice President of Chemistry at HTG Molecular Diagnostic

About HTG Molecular Diagnostics
HTG team developed a multi-omics AI platform to generate drug candidates with specific physicochemical (logP, logS, pKa, BBBP) and biological (binding affinity, metabolic stability, toxicity) properties. It includes a web portal, data processing, a multi-omics data lakehouse, and a knowledge graph with Generative AI.
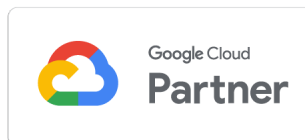
Vertical/horizontal solution: Healthcare & Life Sciences

Primary project location: United States

About BLACKTHORN AI LTD
Blackthorn.ai is a leading AI software company offering full-cycle product development services in Healthcare and Life Sciences.

Products
Google Cloud Platform