



# Artificial Intelligence for Drug Discovery

Landscape Overview  
Q1 2022



[www.deep-pharma.tech](http://www.deep-pharma.tech)



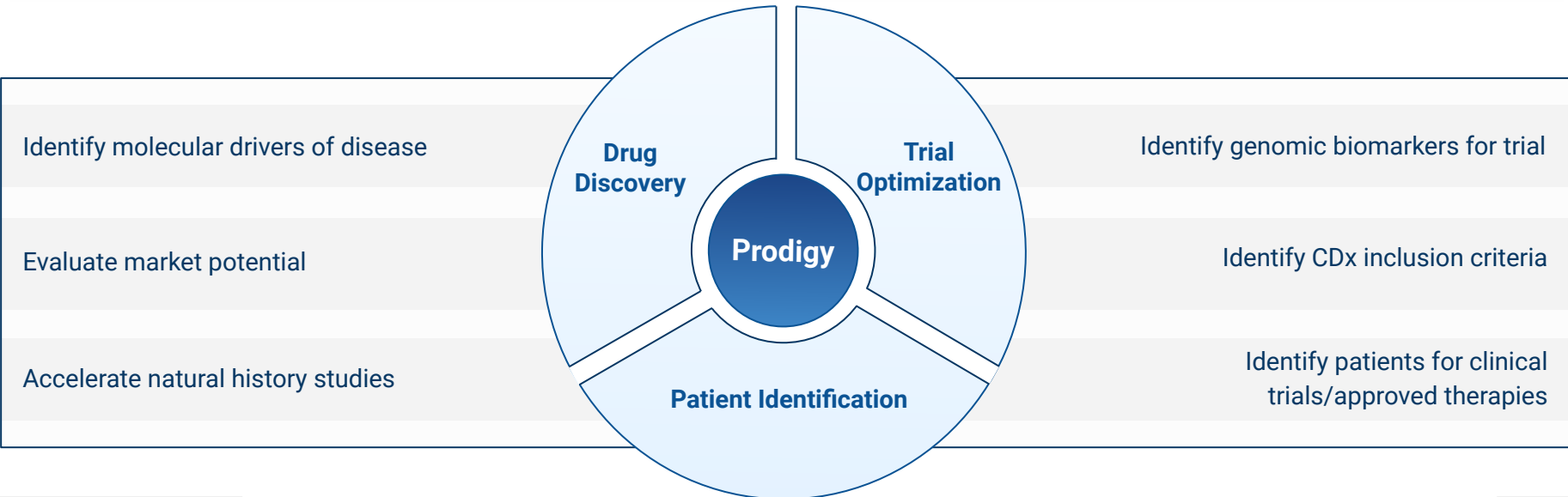
# Most Innovative R&D Approaches of AI in Biopharma. Genomenon



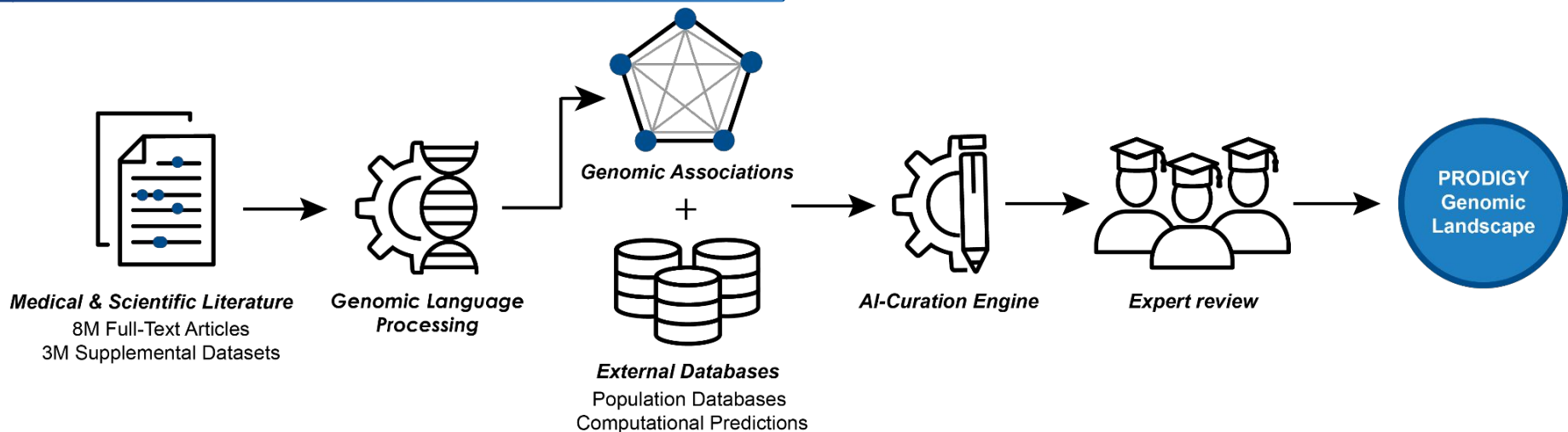
**Genomenon** is an AI-driven genomics company that organizes the world’s genomic knowledge to accelerate the diagnosis and development of treatments for genetic disease.

Genomenon’s **Prodigy™** Genomic Landscapes deliver a profound understanding of the genetic drivers and clinical attributes of any genetic disease and support the entire drug development process, from discovery to commercialization.

**Genomenon’s** main focus therapeutic areas are **rare diseases**, **genetic diseases**, and **hereditary** and **somatic cancers**.



## How Genomenon Uses AI in R&D



Genomenon's **Prodigy™ Genomic Landscapes** use a unique combination of proprietary **Genomic Language Processing (GLP)** and **expert, scientific review** to provide an evidence-based foundation for all stages of the drug development process. These landscapes can be completed at the disease, gene, variant, or patient level, and are maximally comprehensive as a result of GLP. Genomic Landscapes are also rapidly produced using an **AI-assisted curation engine** that expedites manual review of the data indexed by GLP.

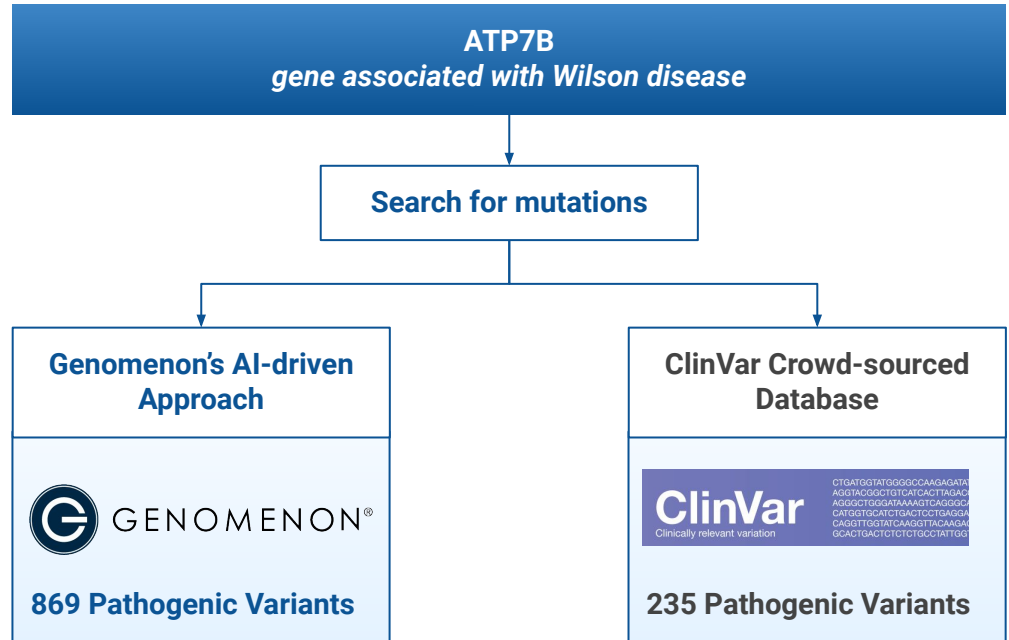
**Genomic Language Processing (GLP)** is a novel technology that systematically extracts and standardizes **genomic and clinical information** from the medical and scientific literature. Designed specifically to recognize this complex genomic information, GLP provides superior sensitivity compared to traditional methods, finding more variants and subsequently, more patients. **Genomenon's database**, built using GLP, currently contains over **14.8 million variants, 8.8 million full-text articles, and 3 million supplemental datasets**.

# How Genomenon Uses AI in R&D

In collaboration with **Alexion**, AstraZeneca's Rare Disease group, **Genomenon applied its AI technology to help accelerate the genetic diagnosis for rare disease patients**. Genomenon's novel combination of AI-powered Genomic Language Processing and expert review **identified significantly more pathogenic variants associated with Wilson disease**.

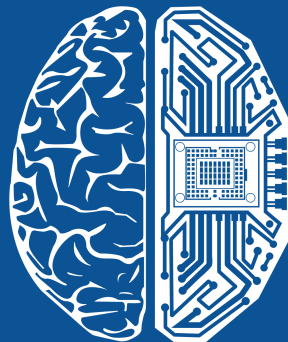
Genomenon's AI-driven approach **identified 3.7x more evidence-supported, pathogenic/likely pathogenic variants for ATP7B** – a gene associated with Wilson disease – **compared to the crowd-sourced database, ClinVar**. This significantly expands the resources available to healthcare providers to make more informed diagnostic decisions.

With greater adoption of Mastermind, we predict that the substantial increase in the number of known, disease-causing variants **will improve the diagnosis of people living with Wilson disease by improving the ability to interpret genetic testing results**.



**Genomenon's AI-driven approach identified 3.7x more evidence-supported, pathogenic/likely pathogenic variants for ATP7B than ClinVar.**

We predict that this **will improve the diagnosis of people living with Wilson disease** by improving the ability to interpret genetic testing results.



**Link to the Report: [deep-pharma.tech/ai-for-drug-discovery-q1-2022](http://deep-pharma.tech/ai-for-drug-discovery-q1-2022)**

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