



# Custom GenAI-powered Search Engine for Chemical Property Extraction

## Client

A leading global pharmaceutical company at the forefront of medical innovation, focused on accelerating drug discovery and development to improve global health outcomes. With a strong emphasis on R&D, the company strives to enhance speed, accuracy, and efficiency across its scientific processes.

## Business Need

To remain competitive in a rapidly evolving pharmaceutical landscape, the client requires a solution to swiftly and accurately access chemical property data—an essential component of their research and development efforts. Traditional methods were:

- Manual and error-prone
- Time-consuming
- Inefficient for scaling

These limitations created bottlenecks in the development cycle, affecting responsiveness and delayed time-to-market for new therapies.



## Solution

Innominds developed a custom GenAI-powered search engine using Azure OpenAI and Bing Search APIs, revolutionizing how chemical information is accessed and utilized by R&D teams. Key capabilities of this solution include:

- Dedicated search engine for chemical names or formulas
- Prompt-engineered queries for precise data extraction
- Integration with OpenAI's language models to derive insights from trusted sources
- Automated PDF generation for structured, professional reporting

## Value Delivered

- Automate chemical data retrieval
- Improve accuracy and reduce manual errors
- Enhance scalability and efficiency in R&D workflows
- Drive innovation and improve product development timelines

## Tools & Technologies

- Azure OpenAI
- Bing Search API
- Prompt Engineering
- AI-Driven Data Extraction
- Automated PDF Generation

## Business Impact

- **Accelerated Research:** Automated queries significantly reduced data retrieval time
- **Improved Accuracy:** Minimized manual input errors
- **Streamlined R&D:** Reliable data flow enhanced research outcomes
- **Faster Innovation:** Enabled quicker product development and market readiness



Reimagine R&D with GenAI.  
Partner with Innominds today!

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