

How **deCypher** turns plain-language questions into accurate insights

Your next breakthrough is buried in data
no one can question.

brillio



Search, extract, and analyze your data by simply asking

- Pharmaceutical data is highly interconnected yet trapped in silos, leaving traditional databases ill-suited to extracting the relationships and insights that matter most.
- Built on GPT models, deCypher combines semantic understanding, data integration across sources, and an adaptive interface that any user can navigate intuitively.
- Four capabilities work together: semantic querying, data integration, query optimization, and adaptive learning that improves its understanding of results with every interaction.
- Teams surface hidden relationships and patterns across drug discovery, clinical trials, and patient outcomes, supporting faster and better-informed decisions across the business.
- The solution adheres to strict data privacy standards while supporting collaboration among researchers, clinicians, and data analysts working from one source.

deCypher turns natural-language questions into accurate, relevant insights across your complex life sciences data.

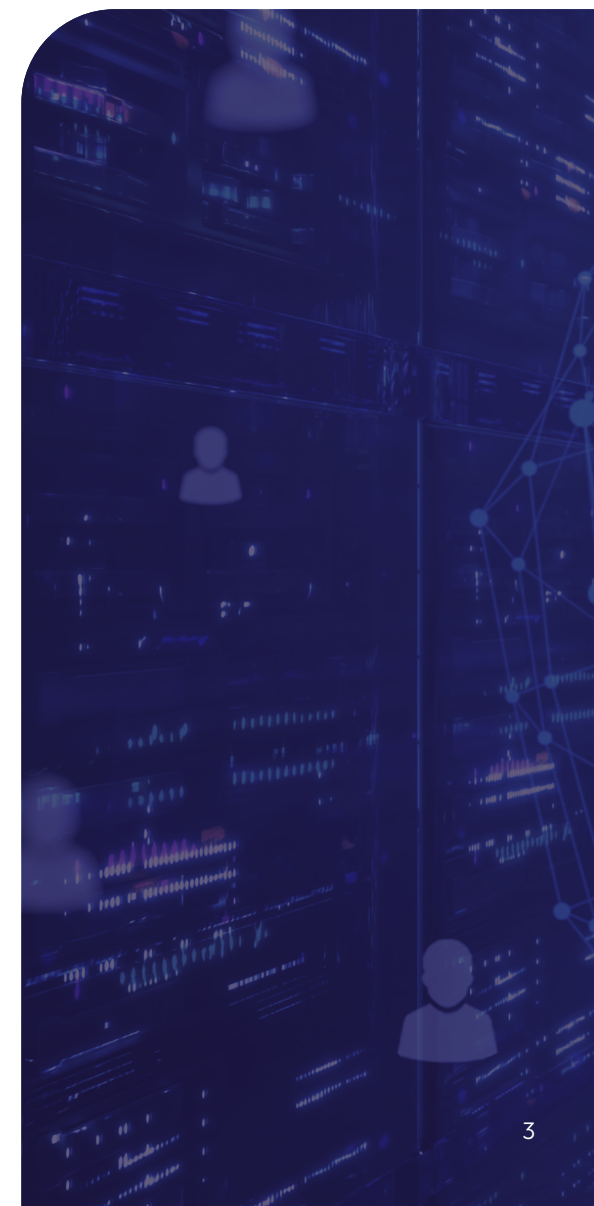
The data is rich.

The answers are hard to reach.

Life sciences organizations hold some of the most valuable and most complicated data in any industry. Drug interactions, clinical trials, molecular relationships, genomic data, and patient information are deeply interconnected, but traditional databases were never built to extract the relationships hidden inside them.

Conventional systems cannot intuitively query intricate pharmaceutical data, and much of that data sits in disparate silos that block holistic analysis and pattern recognition across research, development, and patient care.

The harder problem is meaning. When a user asks a question in natural language, traditional databases struggle to interpret what is actually being asked, and the result is often inaccurate or incomplete. That gap is especially costly in life sciences, where understanding the relationships between genes, diseases, compounds, and clinical data is the foundation of personalized medicine and precision healthcare. On top of this, users come with very different levels of technical expertise, and most systems lack the adaptable, intuitive interface needed to serve all of them.





From query languages to plain conversation.

deCypher closes the gap between the question and the answer. Built on GPT models, it brings together accurate semantic understanding, data integration across sources, and an adaptive interface that lets people interact intuitively.

Instead of learning a query language or routing every request through a technical team, users simply ask – and the solution searches, extracts, and analyzes the relevant information for them. Complex queries become a conversation, and that conversation stays inside strict data privacy standards.

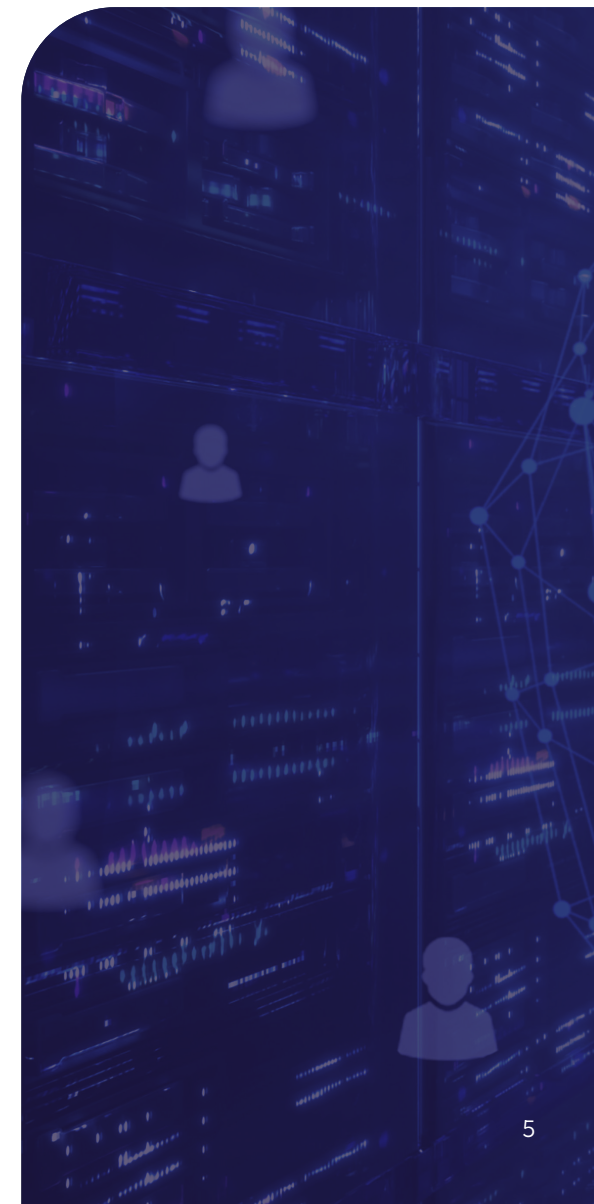
Four capabilities, one experience.

Semantic querying uses GPT-based models to interpret the meaning behind a question, with the context awareness to handle specialized medical terminology and complex life sciences queries. This lets users pose complex queries in natural language and streamline the way they retrieve information.

Data integration brings together diverse data types – genomic data, clinical records, and literature – through a single interface, and supports the multiple data structures common to life sciences databases. The result is greater relevance and accuracy in every search.

Query optimization applies algorithms that refine queries so users receive precise, meaningful results efficiently, and recommends improvements based on how people have queried before. This makes it easier for researchers, clinicians, and data analysts to collaborate around the same information.

Adaptive learning integrates machine learning that adapts to evolving language and user preferences, and continuously improves the system's understanding of queries and the relevance of results. The more the solution is used, the quicker and more insightful the access it provides.



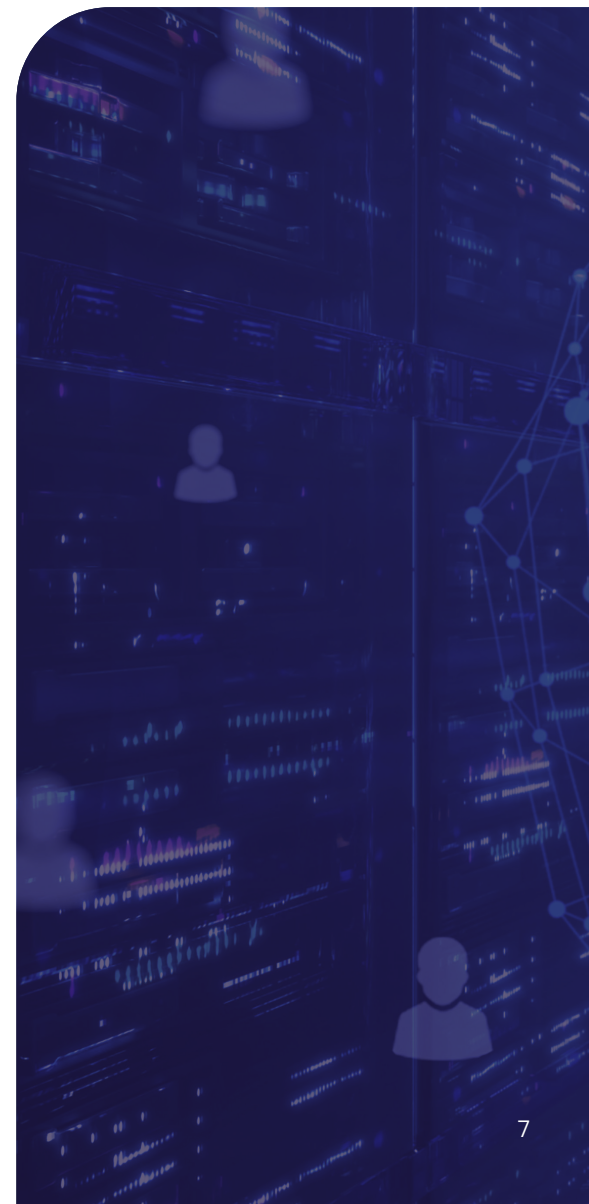
Engineered for life sciences.

Behind the conversation is a cloud-native architecture designed for the complexity of this data. Requests are handled by a set of purpose-built agents - a helper agent, a general info agent, a code interpreter agent, and an intelli-data agent - orchestrated with LangChain and Python and drawing on OpenAI models. Structured storage and fast, relevant retrieval are provided through Azure Cosmos, PostgreSQL, and Azure AI Search, with a responsive React and Next.js front end. The architecture keeps interactions fast and intuitive while doing the heavy lifting out of sight.

Bolting a chatbot onto an existing database is not the same as understanding the question. Without real semantic understanding and integration across silos, these tools return confident answers that are inaccurate, incomplete, or quietly misleading.

EXECUTIVE TAKEAWAYS

- The shift deCypher makes is simple but significant: the people closest to the science get to interrogate their own data directly. Answers that once required specialized skills or a technical intermediary are now a question away, which changes who can contribute and how quickly decisions get made.
- That access compounds over time. Because the solution keeps learning from how it is used, its understanding of queries and the relevance of its results improve with every interaction – so the value grows rather than plateaus. And because researchers, clinicians, and data analysts all work from the same accessible source of insight, collaboration becomes the default rather than the exception.
- For pharmaceutical and life sciences organizations, the payoff lands where it matters most – in drug discovery, clinical trials, and patient outcomes – turning data that was once difficult to reach into a foundation for confident, well-informed decisions.



ABOUT BRILLIO

Brillio is The Enterprise AI Accelerator helping Fortune 1000 companies move from AI ambition to scaled impact, faster. Powered by our AI accelerator platform – Agentic Data and Application Management (ADAM), Brillio is one of the fastest-growing digital technology service providers, delivering transformation across five core workstreams: business-led transformation, customer experience transformation, AI and data engineering, digital engineering, and infrastructure engineering.

With 14 delivery locations across North America, Europe, and Asia and a team of over 6,000 customer-obsessed professionals, Brillio combines deep industry expertise, modern engineering, and accelerators to deliver measurable outcomes. Headquartered in Dallas, Texas, Brillio serves clients globally with a commitment to speed, scale, and measurable impact.



<https://www.brillio.com/>

Contact Us: info@brillio.com

