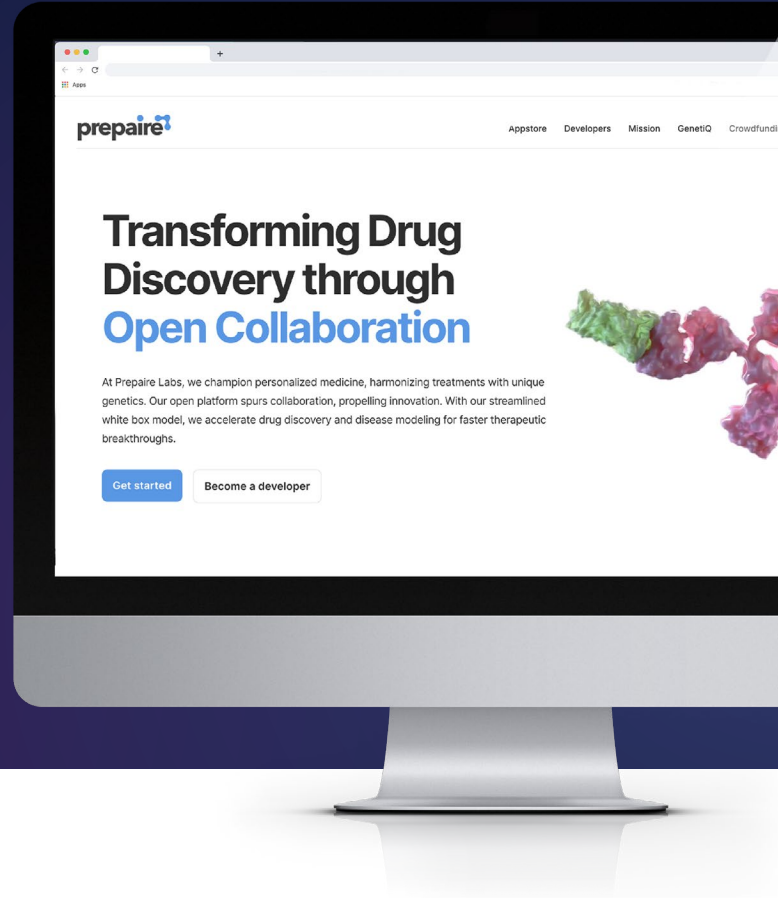


CUSTOMER STORY



From discovery to patent in 6 months with AI & DrugBank



ABOUT PREPAIRE LABS

Prepaire Labs is a pioneering healthcare technology company focused on revolutionizing drug discovery and precision medicine.

Based in Abu Dhabi, UAE, they've integrated deep learning and biology to build predictive models that form a view to the underlying architecture and biology of diseases.



100 modules¹ built in under 2 years



75% reduction in predictive model training time



40% acceleration in processes

WEBSITE

prepare.com

SOLUTION

Dataset Downloads

USE CASE

Drug Discovery & Precision Medicine

1. Also known as software endpoints, modules run AI models and python codes designed for drug development, efficacy assessments, drug-protein interactions, and more



THE CHALLENGE

When Prepaire Labs launched in 2022 they set out to expedite the process of drug discovery by creating a platform for drug repurposing, treatment personalization, and information validation. Their goal was to become the one-stop shop for treatment discovery and development.

In order to realize their goal, Prepaire Labs focused their efforts on creating *in vitro* disease models that optimize genetics, cell-type, environment, and multidimensional data collection to improve the predictability of human clinical outcomes.

Their success, however, hinged on having immense amounts of reliable and highly usable drug data that could be readily integrated into their online modules.

Having worked in the industry for years, their team knew how challenging it would be for them to collect, build, and maintain datasets from across multiple sources while simultaneously building their own platform.

Recognizing the limitations of their startup team's time and resources they sought out a data solution that would allow them to focus their efforts on building and iterating their platform. [Q](#)

“Knowledge is primary to everything we do and having DrugBank, and a database we can rely on, is absolutely essential to our business.”

— Steve Carrol, CTO



THE SOLUTION

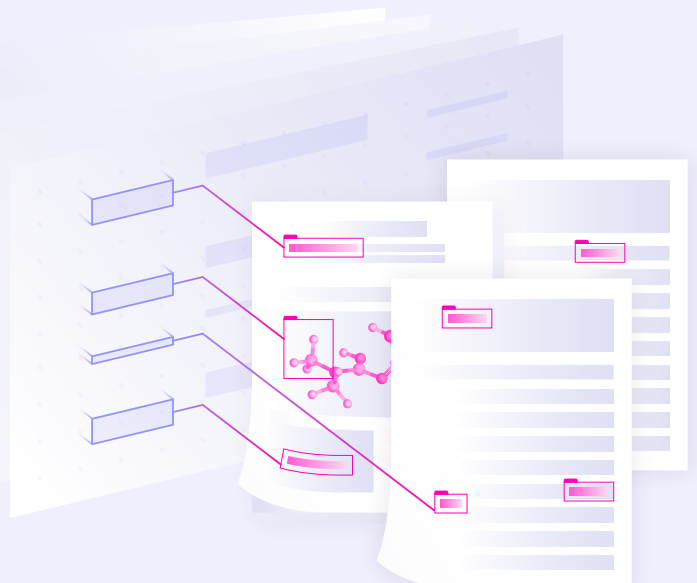
Prepaire Labs turned to DrugBank and began to explore the selection of free-of-charge data, but quickly realized that they would benefit from access to the full suite of DrugBank data.

“We looked through the free version and said to ourselves, ‘we’re serious, we should be getting the real deal,’” Dr. Vicent Ribas-Ripoll, Chief Science Officer, reflected, noting that when dealing with artificial intelligence (AI) and machine learning (ML) it is vital to have access to main source knowledge, and to understand the mechanism of action behind it.

Without this level of knowledge they feared they would end up with correlations as opposed to trustworthy results.

With that decision, Prepaire Labs began to integrate the full range of DrugBank knowledge, including all approved, experimental, and investigational drugs, into their systems.

When ingesting DrugBank’s data, the computational team at Prepaire Labs quickly discovered that they didn’t have to censor a *single* variable, saving them further time and money.



With the knowledge that all DrugBank data is comprehensive and complete, with less noise to filter through, Prepaire Labs was able to move forward confidently.

Since integration, Prepaire Labs has continued to rely on DrugBank's Knowledgebase, support team, and regularly updated data to ensure they're maximizing its fullest potential. [Q](#)

"DrugBank is at the center of our research, they are our go-to dataset for validation and knowledge extraction."

— Dr. Vicent Ribas-Ripoll, *Chief Science Officer*



THE RESULTS

As a result, in the two years since they launched, Prepaire Labs was able to grow from **one module to more than 100**.

These modules, or software endpoints, run AI models and python codes designed for drug development, efficacy assessments, drug-protein interactions, drug-drug interactions, protein-protein interactions, and so much more. The modules are distributed through seven different vertical applications, which include drug repurposing, drug synthesis, peptide design, click-chemistry, grants, vaccine development, and CRISPR editing.

The high level of organization and completeness of DrugBank's knowledgebase has also enabled Prepaire Labs to move from discovery to patent in *under six months* for two of their drugs.

Powering their AI engine with thoroughly-referenced, well-structured, and easily integrate-able drug data also contributed to **reducing their predictive model training time by 75%**; a process that would typically take three to four days can now be done in less than one.

Overall, Prepaire Labs attributes a **30-40% acceleration** in their processes as a direct result of using DrugBank. [Q](#)

"DrugBank has the *best-in-market* datasets."

— Dr. Vicent Ribas-Ripoll, *Chief Science Officer*

Explore our Data Library today!

go.drugbank.com/data_packages