Machine learning for Life Sciences

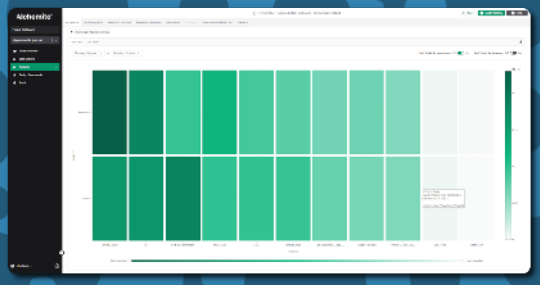
Accelerate discovery, development, and manufacturing

> We are **enhancing productivity and yields** for oligonucleotide therapeutic manufacture
>
> **CPI / Intellegens** collaboration

Deliver vital insights to accelerate drug discovery and translational medicine

Save time in experimental programs or clinical studies through adaptive DOE

Find optimal formulations and manufacturing processes, faster



Analysing property data in Alchemite™ - the plot identifies the most important factors in determining target outcomes

Life science researchers face an exponential expansion in data volumes, while wrestling with objectives including: minimising time-to-market, maximising efficacy at the same time as ensuring safety, and creating better targeted therapies. Machine learning (ML) can turn this data from a time-sink into a resource that accelerates innovation. It can generate new ideas and provide insights that focus experimental programs and improve processes.

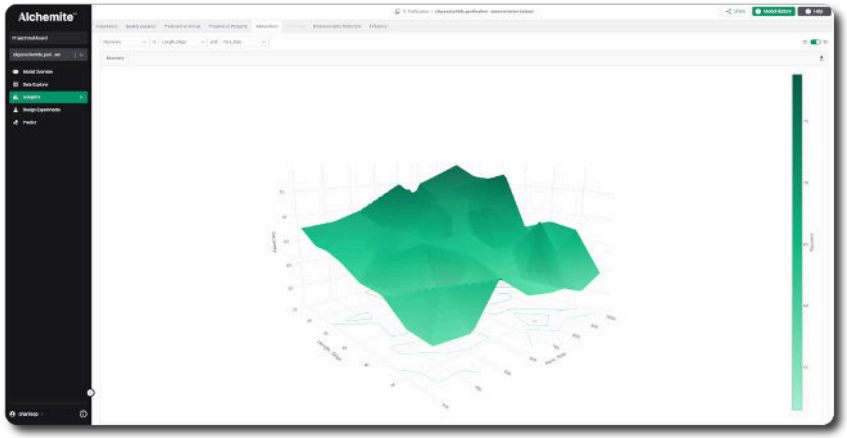
But the adoption of ML can be constrained by its usability, and by the need to handle difficult datasets, both large and small, that often have missing, noisy data. Many ML methods cannot be trained using such data, or are cumbersome to set up and slow to run in real pharmaceutical R&D scenarios.

Alchemite™ Suite makes machine learning easy to learn and apply. It harnesses the power of the Alchemite™ algorithm, which can handle difficult experimental and process data, through a series of task-focused apps. You can:

- Mine data, e.g., in **drug discovery**, to identify therapeutic entities, drug targets, or drugs that could be repurposed
- Predict properties, e.g., to screen pharmacokinetic and ADME properties in **translational medicine**
- Design **experimental programs** or **clinical studies**, saving time and cost, and ensuring targeted results
- Improve yields and respond to changing regulatory requirements in **manufacturing**.

Find our more: Read our white paper, *Five ways machine learning can power life science data analytics.*
intellegens.com/whitepapers

intellegens



Alchemite™ provides scientists with quick, easy access to advanced machine methods and powerful graphical analytics via a series of easy-to-use apps.

Case studies

CPI and other industry partners are engaged with Intellegens in a major project to apply machine learning in optimising oligonucleotide manufacturing. More at **intellegens.com/oligos**.

AstraZeneca applied Alchemite™ to predict PK parameters, gaining insights that can reduce time, cost, and testing requirements in late-stage drug discovery.

Takeda analysed a large pharma dataset, predicting complex biological properties.

Genentech built a model for kinase assay imputation to guide drug discovery.

Clinical studies and patient data have been the focus for projects that extracted value from study data and target studies, driving time and cost savings in studies of pharmacokinetic response.

Alchemite™ Suite

Alchemite™ offers a suite of easy-to-use apps, each focused on a key R&D challenge. Give the right app to the right team member, speeding and informing their work. Then share results and collaborate across your team, creating an integrated machine learning solution for materials R&D.

Alchemite™ Viewer	Share and view results, enabling collaboration and decision-making.
Alchemite™ Explorer	Quickly generate models, test hypotheses, explore key relationships.
Alchemite™ Designer	Set up and run Design of Experiments projects in a few button clicks.
Alchemite™ Innovator	The complete ML toolkit to support materials design and development.
Alchemite™ Architect	API access to integrate and automate powerful ML.

intellegens

intellegens.com | info@intellegens.com | The Studio, Chesterton Mill, Cambridge, CB4 3NP, UK