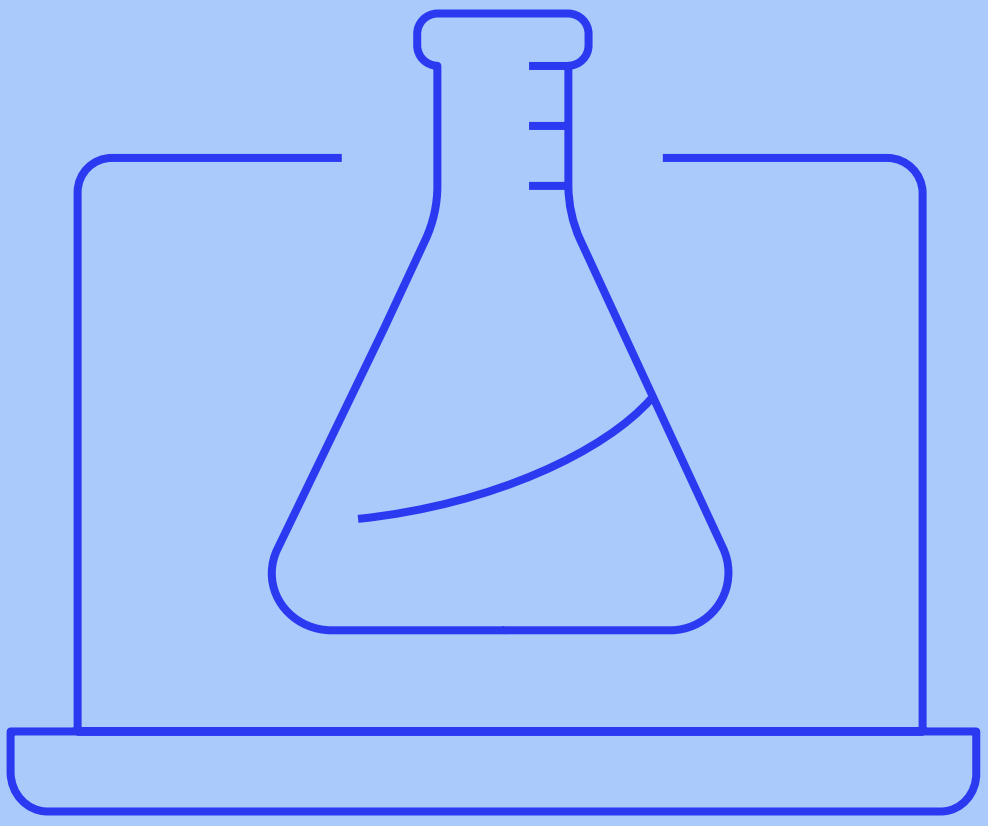
A Better Way to LIMS: Biology's Modern Solution

White Paper



Benchling

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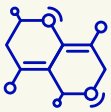
Introduction

> **"We selected Benchling as a partner because it's built for biology. By capturing structured data in Benchling, our scientists are empowered to ask challenging questions and uncover new insights."**
>
> **Peter Huang**
> Executive Director, Pharmaceutical Development & Manufacturing Information Systems, Gilead Sciences

What you need to know



Legacy LIMS are overly rigid, costly, onerous to maintain, and built for chemistry, not modern biology. So, we built a modern LIMS specifically for biology.

Benchling's LIMS significantly improves handoffs, delivers shared traceability, reduces process and workflow management headaches, and provides an intuitive framework for rapid decision making.

Benchling's modern LIMS is adaptable to most R&D contexts and connected across teams to unlock valuable lost time and accelerate the path from IP to IND.

Workflows, inventory management, and improved compliance and control features ensure teams spend more time on scientific outcomes and less time on administrative tasks.

A modern LIMS built for biology

For over a decade, Benchling has been working toward a vision of biotech that connects data, people, and processes so that R&D teams can spend more time on science. Today, scientists are too often asked to manage data, navigate fragmented technologies, and administer logistical tasks that leave them less time to focus on the work that really matters. Legacy LIMS can exacerbate these challenges.

Overly rigid, costly, onerous to maintain, and built for chemistry, not modern biology– these outdated LIMS solutions cannot efficiently support the complexity of managing R&D for cell and gene therapies, antibody-drug conjugates, and RNA therapeutics. These modalities require advanced, built-for-biology software to process, analyze, and scale novel biomolecules into marketable products.

In response, companies have developed workarounds by cobbling together makeshift solutions that combine siloed on-premise systems, unwieldy spreadsheets, and email to enhance their legacy LIMS. The result is over-investment in multiple product suites and lots of custom code to connect all the dots.

No longer. Benchling heard scientists' frustrations and has designed a modern LIMS built for the increasing complexity of biology. **Our modern LIMS empowers teams to get more science done more effectively with adaptable, connected capabilities that unlock valuable lost time and supercharge the R&D lifecycle.**

As a unified solution, Benchling can help you, your teams, and your organization streamline the R&D lifecycle across structured and unstructured contexts. So, whether you're transitioning from research into development or you're a well-established enterprise with an inadequate legacy platform, Benchling's modern LIMS is designed around your needs.

> **"Benchling is the all-in-one solution. All of the other solutions that we explored would have required us to have something else to close the gap. With Benchling, we get the LIMS, the notebook, the database, and the insights, all in one."**
>
> **Laura Huskin**
> Dr. of Data Quality & Analytics, Joywell

A single solution for all of R&D

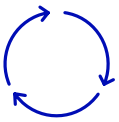
R&D teams' needs differ, but what if there was a LIMS solution that could not only meet those needs but adapt to them as your science scales?

Benchling is unique because it supports the different types of work traditionally done in both ELN and LIMS solutions. It is built as a central source of truth for biotech R&D across data management and scientist collaboration, empowering seamless handoffs across teams, sites, and the product lifecycle.

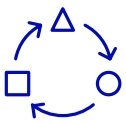
Benchling's LIMS simplifies complexity and unlocks more time for you and your teams to focus on results. That's because:

We're built for biology
Today's biomolecules are much more complex than yesterday's. Our LIMS is purpose built for the complexity and nuance of today's large molecules.

We're a modern technology platform
Our LIMS harmonizes power and simplicity in a unified and user-friendly cloud-native workspace. Regular release updates mean scientists can stay focused on the science while we take care of the software.



We enable connectivity
Collaboration is too often an afterthought in legacy LIMS. Our LIMS reduces team friction by connecting everything rather than creating more siloes. We developed our LIMS with collaboration in its DNA.



We're adaptable
Science isn't static, nor is our LIMS. As process changes happen, our LIMS allows R&D teams to unlock value throughout the lifecycle and across use cases.

Benchling marries ELN, LIMS, and analytic functionality into a unified cloud platform. The result is the only cloud-based LIMS that delivers through-the-lifecycle functionality and benefits, including:

Seamless connections

Laborious handoffs are the bane of any R&D team. The more time scientists spend shepherding data between groups, the less time they have to spend on the work of scientific progress. Benchling creates a central and fully traceable hub that connects every sequence, sample, experiment, and process.

Better insights

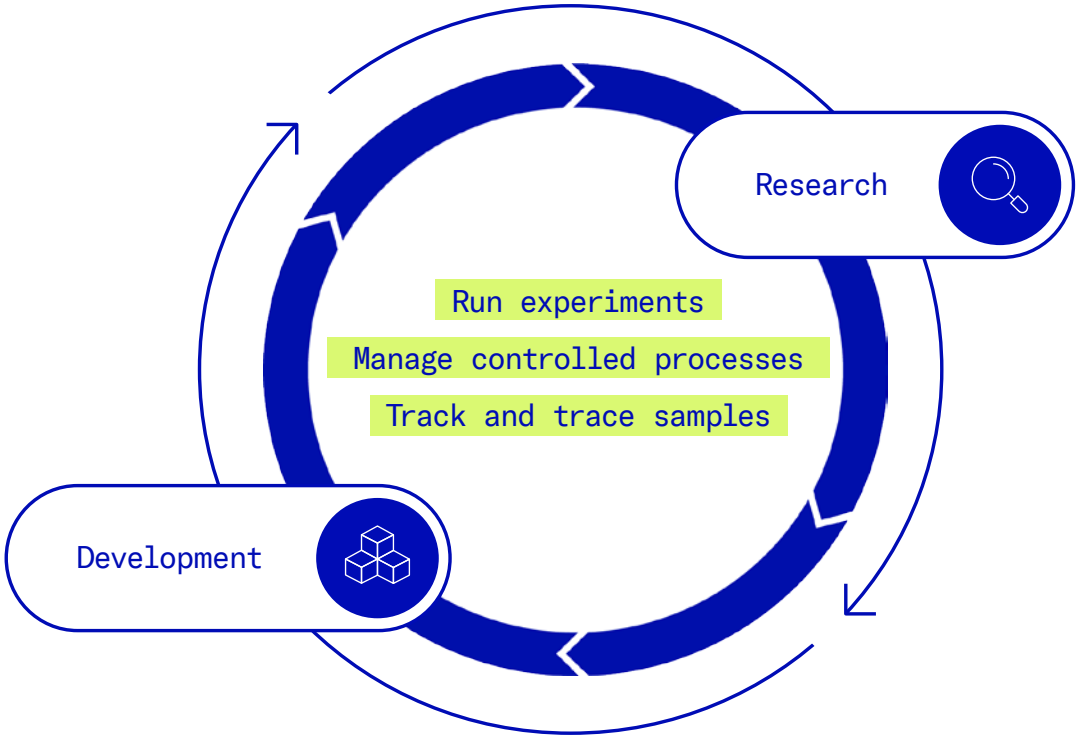
Natively integrated within the Benchling R&D Cloud, Benchling Insights uses codeless configuration dashboards to give teams a bird's-eye view of work streams. Benchling makes generating new hypotheses, troubleshooting process failures, and tracking real-time organizational performance streamlined and straightforward.

Accelerated time to milestone

Every hour spent manually capturing, organizing, analyzing, and sharing data puts you another hour further from your goal. Benchling automates the grunt work of collaboration and data-driven decision making by establishing a central source of truth for your organization. You can move more nimbly from IP to IND with our unified view.

Design, test, and produce complex biomolecules in the Benchling R&D Cloud

For non- and GxP-compliant use cases



Optimize handoffs across teams

Track samples throughout lifecycle

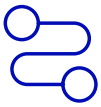
Ensure compliance & data integrity

Share scientific & operational insights

Manage a powerful tech ecosystem

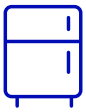
A power trio of features

Packaged within our LIMS is a suite of invaluable tools designed for modern biotech R&D. These features work together to ensure organizations of all sizes and R&D of all scopes can better unlock the promise of biotech.



Unlock a more efficient lifecycle with powerful workflows

With Benchling **Workflows**, planning and executing complex, interdependent activities is more manageable. Workflows improve efficiency, traceability, and collaboration among teams. With Linear Workflows, teams can manage processes that span multiple steps and users within a single flowchart. This feature is handy for R&D scientists responsible for managing studies, processes, samples, inventory, compliance, and quality controls.



Unlock a fuller picture of your lab's efficiency with better inventory management

Benchling **Inventory Management** is fully integrated into our Notebook to help you track all your samples and reagents in one place. Thanks to end-to-end sample traceability across workflows, you will never forget another sample or reagent, lab location, or use.

Unlock more intuitive compliance and control capabilities

Benchling's **Improved Compliance and Control** features include data modification tracking, human-readable audit logs, granular permissions controls, and more. These capabilities enable GxP-compliant teams to control and track changes at scale and across phases of research.

Customer snapshot

Gilead makes better connections for more time on science

Within the Biologic Development division at Gilead Sciences, process development teams needed to collaborate to support the clinical manufacturing of Gilead's cutting-edge therapies. Still, they spent far too much time capturing, aggregating, and managing data in siloed spreadsheets and sharing them over email. They also wanted to extract more value and insights from their hard work.

Benchling centralized Gilead's process development data, giving the individual teams that previously managed their samples and data real-time access to the entire lineage of every biologic in the Gilead pipeline.

More insights rise to the surface with everything in one place, enabling more data-driven decision making. Benchling makes it easier to aggregate data, spot outliers or batch deviations, and understand how individual biologics progress through workflows. These insights help inform decisions such as how to optimize parameters or adjust protocols.

Moreover, Gilead can better enforce consistency and compliance across teams thanks to Benchling's audit trails and built-in review processes. Reviewing studies and forecasting approval have improved twofold.

Success snapshot

63%
Reduction in time spent on data capture, search, and collection

2x
Improvement in ease of data sharing within and across teams

75%
Improvement in ability to track sample and experimental data

Customer snapshot

Sana builds adaptability for accelerated R&D

Modern LIMS has value far beyond large-scale organizations. Startup biotech companies often want an adaptable foundation that smooths the path to regulatory filings.

Such a foundation is critical for companies like Sana Biotechnology that develop cell and gene therapies. Designing and developing a novel therapeutic generates a tremendous volume of data. Organizations harnessing these data can accelerate program timelines and expand their pipeline more quickly.

A few years ago, the then-nascent Sana was looking to rapidly expand their R&D capabilities, aiming to open three facilities across the U.S. and hire over 70 scientists in a matter of months. The leadership realized that if they were going to be successful, they had to lubricate the wheels of collaboration. Their teams would need a flexible structure for their R&D data, seamless handoffs, and a solution that works straight out of the box.

Sorting through data between siloed systems wouldn't cut it — not with over a dozen teams split between three geographically separated locations.

Benchling's schema-based architecture proved essential to Sana's lightning growth. By structuring data in a scalable and adaptable way, Benchling could evolve as quickly as Sana's expanding teams. Natively integrated Benchling Insights served as a force multiplier, automating data sharing and tracking across groups and R&D sites, and enabling rapid decision making at every juncture.

Three short years after its founding, Sana launched a successful initial public offering (IPO). The company now has 11 therapeutic candidates (and counting) in the pipeline.

Choose a better way to LIMS

While change is hard, its promise is easy to understand. For example, even though your current LIMS may be an outdated, on-prem system, you've grown accustomed to it. You've learned to make it serviceable, despite deep frustrations and onerous upkeep. It's daunting to think about a new investment.

But, imagine the upside of working with powerful new tools. Or, imagine the upside of choosing your first LIMS because it does everything you need it to do. Imagine unlocking real value from the innumerable hours you and your teams currently spend corralling sample and data information weekly.

Imagine making faster decisions because everyone is on the same page all the time—being more confident in the viability of your IP at every step in the process.

Now, imagine accomplishing all of this within a unified platform that delivers a superior LIMS and a through-the-line central source of truth for all of R&D.

Look no further.

Learn more about how Benchling is helping R&D organizations unlock the power of biotechnology at www.benchling.com.

Learn More