Customer Success Snapshots

**Benchling** 



# Benchling is a modern informatics platform built for growing biologics R&D companies that...



Increases scientist productivity **2-4**x



Reduces emails to manage research collaboration by **66**%



Cuts IND filing time in half



Rolls out in as few as **6 weeks** 





# **Empowering Flexible Informatics for Rapidly Evolving Workflows**

Warp Drive Bio is exploiting the molecules and mechanisms of nature to create transformative medicines.



#### PRIOR CHALLENGES

- 1 / Warp Drive's workflows are complex and evolving, but their legacy LIMS struggled to keep pace with their changing R&D needs.
- 2 / Difficulty aligning workflows and LIMS configuration meant that a lot of data wasn't captured, or ended up in various spreadsheets.
- **3** / Using spreadsheets and endless lookup fields to summarize assay results made reporting difficult and sometimes unreliable.

#### **KEY BENEFITS**

#### 1 / Codeless Configuration

With Benchling's point-and-click configuration, Warp Drive spins up their own workflows and schemas and alters them ad hoc.

#### 2 / Eliminated Data Loss

Because their informatics system always lines up with their R&D needs, Warp Drive has minimized data loss and repeated work.

#### 3 / Reliable, Fast Reporting

Benchling's summary tables collate data and results from across assays and experiments, vastly streamlining the reporting process.

#### 4 / Streamlined Sequence Design

Bulk molecular biology assembly tools have significantly reduced scientist busywork and improved data integrity.



# **UBSIDIAN**

# Unlocking Pivotal R&D Answers While Ensuring Data Integrity

Obsidian Therapeutics is developing a suite of technologies that allow for control of protein activity within cells to power therapeutics.



#### PRIOR CHALLENGES

- 1 / Previous ELN was clunky and didn't allow for linkages to registered samples, hindering adoption and experimental detail.
- **2** / Without a formal registration system, Obsidian scientists couldn't draw connections between results data and upstream entities.
- **3** / Legacy sample tracking system was unintuitive and saw low scientist usage, leading to data loss and compliance concerns.

#### **KEY BENEFITS**

#### 1 / Unified Informatics

Integrated sample tracking and notetaking generated strong user adoption and improved the quality and reliability of experimental records.

#### 2 / Centralized Registration

Obsidian can trace from downstream results to identify effective upstream entities. "Why does this lentivirus work well? Is it related to a specific batch of constructs?"

#### 3 / Secure Data

With Benchling's robust Bioregistry that rewards scientist usage, Obsidian can be confident that the constructs, parts, and other entities they're tracking will hold up in a court of law.





# **Empowering Internal Informatics Innovation**

Editas Medicine develops therapeutics based on CRISPR-Cas9 gene editing technology.



#### PRIOR CHALLENGES

- 1 / Low scientist usage of previous ELN resulted in poor retention of institutional knowledge.
- 2 / Delayed LIMS rollout drained IT teams resources and stalled data capture.
- **3** / Previous LIMS's APIs were challenging to use and didn't function at the necessary scale.

#### **KEY BENEFITS**

#### 1 / Unprecedented Software Adoption

With over 90% user compliance, Editas has seen dramatic improvements in throughput, knowledge capture, and data retention.

#### 2 / Tracking Experimental Progress

Editas leverages Benchling's APIs and data warehouse to create live reporting dashboards to track progress across various initiatives.

#### 3 / Informatics Innovation

Since Editas's molecular biology tools, lab notebook, and LIMS functions are all handled in the same place, informatics teams can focus on innovative development projects.





### Streamlining Registration and Requests for Gene Editing

Intellia is developing CRISPR/Cas9-based gene editing therapeutics with *in vivo* and *ex vivo* delivery models.



#### PRIOR CHALLENGES

- 1 / Previous registration took place across SharePoint spreadsheets, emails, and paper, leading to unreliable data and outsize time spent piecing together lineages.
- 2 / Plasmid repositories couldn't be tracked and kept up to date.
- 3 / Lack of a formal request system led to lost requests and insufficient detail in requests. Without a reliable plasmid inventory, certain requests were difficult to complete.

#### **KEY BENEFITS**

#### 1 / Centralized Registration

Standardized lists of plasmids and other entities make data reliable and easily shared.

#### 2 / Streamlined Request Triaging

With Request Management, teams generate greater throughput and higher quality products because they can easily access the information they need.

#### 3 / Generating R&D Insights

Workflow Management empowers Intellia to identify the upstream entities that lead to successful batches. For example, Intellia can answer, "Which bio-vector led to this particularly effective protein batch?"



# agenus

**Building a Global Informatics Infrastructure** 

Agenus is a global biopharmaceutical company with multiple immunotherapy and vaccine pipeline programs.



#### PRIOR CHALLENGES

- 1/ Without unified systems, it was difficult for Agenus to get a comprehensive view of research.
- **2** / Growing R&D team spread across multiple sites in the US and Europe impeded team collaboration.
- **3** / Complexity of R&D workflows, time-zones, and ongoing M&A integration exacerbated difficulties tracing sample lineages and tracking experiments.

#### **KEY BENEFITS**

#### 1 / Unified Informatics

Replaced Agenus's multiple informatics systems with a single, end-to-end platform where they track all of their data, plasmids, and samples.

#### 2 / Collaboration Across International Sites

Made all institutional knowledge accessible to scientists across the globe, dramatically streamlining collaboration.

#### 3 / Tracking Productivity

Agenus can now track productivity by reporting on, for example, the number of biologics created each week.

#### 4 / Agenus Knowledge Project

Enabled Agenus to build a search engine on top of the Benchling platform and their other software systems.





# Centralizing Biologics Data for a Growing Company

Inhibrx develops multivalent costimulatory agonists, checkpoint inhibitors, and therapeutics to invert the tumor microenvironment toward local immune activation.



#### PRIOR CHALLENGES

- 1 / Without a formal tracking system, plasmid maps were distributed across multiple scientists' computers. Finding the right plasmid map would involve walking through the lab to find the right scientist.
- **2** / Spreadsheets were used to track requests and information about plasmids, requiring extensive manual search and limiting user compliance.
- **3** / Experimental notes were taken using a shared paper lab notebook, making it difficult to find experimental details and extract insights.

#### **KEY BENEFITS**

#### 1 / Reliable Registration

The Benchling Bioregistry is a central source of truth for plasmids and enforces uniqueness constraints to ensure data integrity.

#### 2 / Interlinked Experimental Details

Scientists can link batches to relevant experiments, so their notes directly reflect all of the products and data they've generated.

#### 3 / Setting up New Teams for Success

Inhibrx built out a new process development team and onboarded them onto Benchling, where they can access the data of upstream teams.

#### 4 / Streamlined IND Filing

Inhibrx uses Benchling Lab Notebook entries and unique Lab Notebook IDs to file for IND, saving months of time and effort.





# Structuring World-Class Informatics for a New Team

Incyte develops a wide range of therapeutics, primarily for oncology. Benchling supports their antibody discovery group.



#### PRIOR CHALLENGES

- 1 / Incyte's antibody discovery group was starting from the ground-up and knew it would be pivotal to deploy a world-class informatics system as soon as possible.
- 2 / With a growing team and fluid processes, the antibody discovery group needed a flexible system, or else their data would be unreliable and difficult to track.
- 3 / Being able to work with external collaborators (including international collaborators) was a must.

#### **KEY BENEFITS**

#### 1 / Data Clarity from the Start

Since the start of their operations, the antibody discovery group has gotten visibility into their key processes.

#### 2 / Tracking Constructs and Components

Benchling's ability to automatically identify and register scFvs' components makes it easy to track constructs.

#### 3 / Secure Data for Collaborations

With Benchling's rich data permissions, Incyte can extend the system to its external collaborators, streamlining secure data transfer.

#### 4 / Long-Term Success

By gathering the right data in the right way from the start, the antibody discovery group is set up for long-term informatics success.





# Integrating the Custom Solutions of a Technology Powerhouse

Zymergen is an industrial biotechnology company that engineers microbes to produce high-value commercial molecules.



#### PRIOR CHALLENGES

- **1** / As the company scaled rapidly, scientists faced difficulty collaborating and sharing information.
- **2** / Growing R&D teams needed an informatics solution that could quickly adapt to organizational changes.
- **3** / Zymergen has extensive custom software and instrumentation, so they needed a platform that could integrate easily with their internal tools.

#### **KEY BENEFITS**

#### 1 / Continuous Software Adoption

Since starting with 10 Benchling users, Zymergen's deployment has grown to over 140 Benchling users, with continuous onboarding.

#### 2 / Scalable Informatics

Flexible team structures, entry templates, and shared sequence inventories ensure that Benchling continues to empower Zymergen's expansion.

#### 3 / Integrating with Custom Technology

Benchling worked with Zymergen to integrate the Benchling platform with Zymergen's proprietary high-throughput microbial engineering system.





# **Accelerating Synthetic Biology with Fully Unified Informatics**

Synlogic is developing microbe-based therapeutics to treat an array of diseases ranging from cancer to genetic inborn errors of metabolism.



#### PRIOR CHALLENGES

- 1 / Complex workflows were being sketched out step-by-step on paper, hindering collaboration and reproducibility.
- **2** / Without a workflow system linked to a registration system, it was difficult for Synlogic to trace the lineages of their candidates.
- **3** / Placing requests, uploading results from instruments, and collating data across experiments were cumbersome and unreliable without unified, intelligent systems.

#### **KEY BENEFITS**

#### 1 / Innovative Data Model

Developed a custom data model that maps to Synlogic's unique workflows, powering real-time experiment tracking and automating lineage tracking.

#### 2 / Integrated Instruments with Informatics

Requests system and integrated bioreactors streamline fulfillment and automatically associate results data with samples.

#### 3 / Streamlined IND Filing

Synlogic uses Benchling links in IND filings to provide full experimental history.

