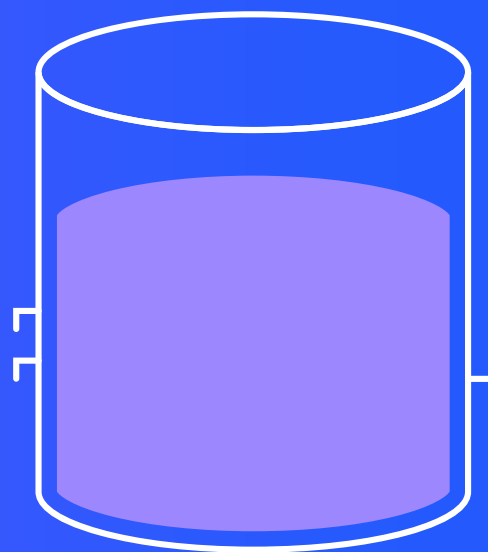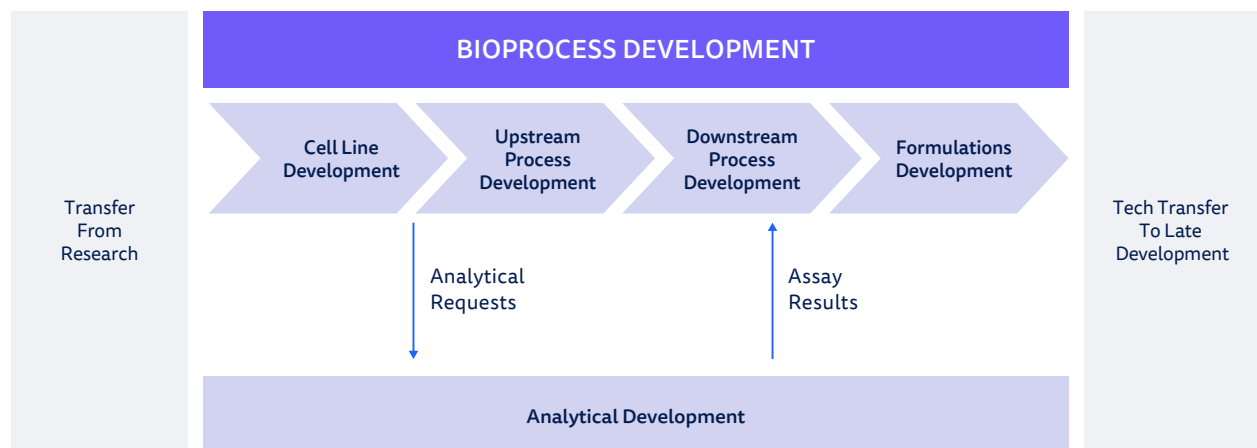# Connect Bioprocess Development Teams on a Unified Solution

Benchling for
Bioprocess Development

A Digital Foundation for Modern Bioprocess Development

Bioprocess development is critical to the successful production of biopharmaceuticals, foods and beverages, biofuels, and industrial chemicals. Though bioprocessing is a mature practice, new innovations in the field are bringing additional data management complexity and process specialization. Modern bioprocess development teams require a strong digital foundation to drive productivity, facilitate collaboration, and accelerate milestone attainment.

Transfer From Research	BIOPROCESS DEVELOPMENT				Tech Transfer To Late Development
	Cell Line Development	Upstream Process Development	Downstream Process Development	Formulations Development	
		Analytical Requests	Assay Results		
	Analytical Development				

Bioprocess Development Teams Require Software That Drives Efficiency and Collaboration

Bioprocess development teams need a modern, powerful informatics platform that balances experimental flexibility with structured process control to efficiently advance their programs through development. An optimal solution provides the following tangible benefits to development teams.

Improve Team Productivity

To increase productivity, the software should make it easy to set up experiments, help find relevant samples or data, and automate data capture from multiple sources.

Facilitate Team Collaboration

To promote collaboration between specialized teams, the software needs to support work requests across multi-step parallel processes, while providing full process traceability at every step.

Generate Process Insights

To support critical decision making, the software should provide ready access to experimental, process, and operational insights.

Enable Process Controls

To support process controls and quality requirements, the software should have built-in features for 21 CFR Part 11 compliance, enable role-based access, and provide full validation support.
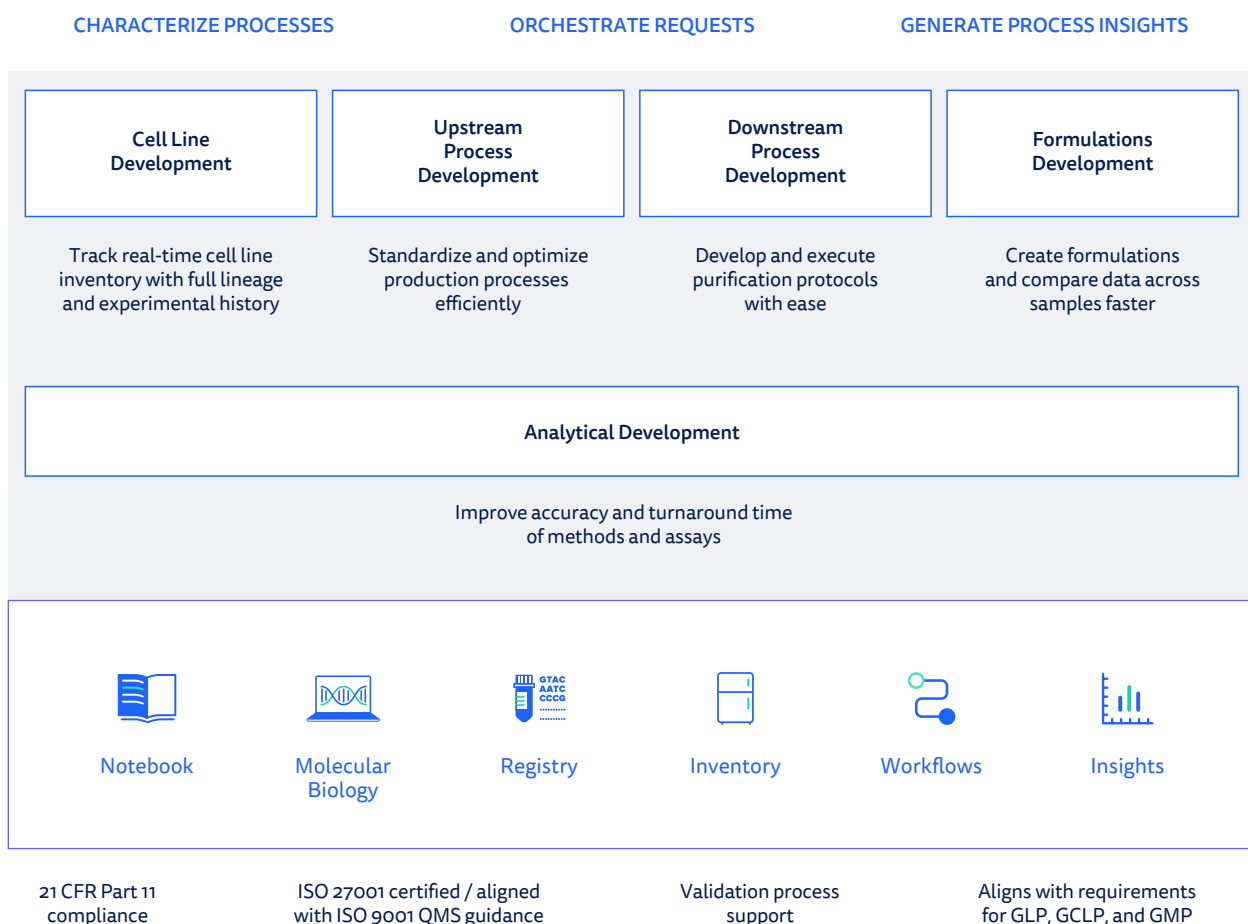
"Benchling, as a combined ELN and LIMS ecosystem, is more than just a backup of your data; it helps bring your science forward."

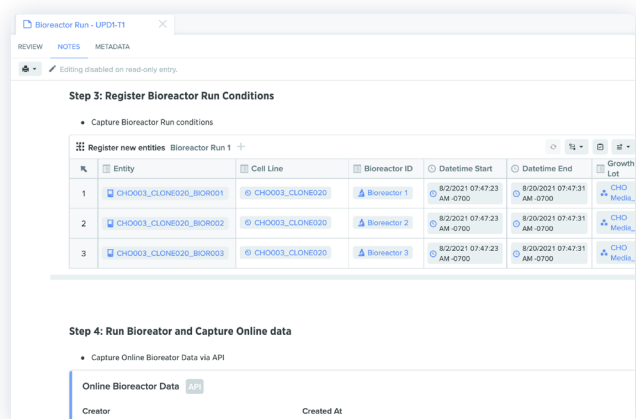**Zohra Merazga-Vivien**
Scientist

CUE
BIOPHARMA

Benchling's Solution for Bioprocess Development

Benchling is a modern, unified, and easy-to-use R&D cloud software that allows scientists to seamlessly move from research through development within a single system. The R&D Cloud is designed to accommodate both the flexibility and speed needed for early bioprocess development, as well as the control and compliance required for regulated processes. This digital solution builds on the capabilities typically found in traditional ELN, LIMS, and LES, while providing a unified and intuitive solution that adapts to meet the evolving needs of bioprocess development teams.
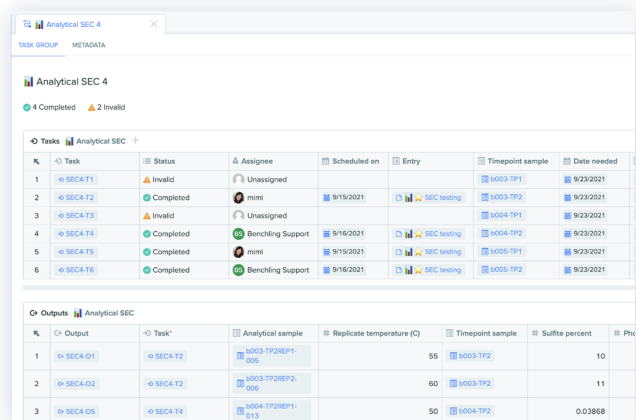
A Complete Solution for Bioprocess Development

CHARACTERIZE PROCESSES   **ORCHESTRATE REQUESTS**   **GENERATE PROCESS INSIGHTS**

Cell Line Development	**Upstream Process Development**	**Downstream Process Development**	**Formulations Development**
Track real-time cell line inventory with full lineage and experimental history	Standardize and optimize production processes efficiently	Develop and execute purification protocols with ease	Create formulations and compare data across samples faster

Analytical Development

Improve accuracy and turnaround time of methods and assays

Notebook	Molecular Biology	Registry	Inventory	Workflows	Insights

21 CFR Part 11 compliance   ISO 27001 certified / aligned with ISO 9001 QMS guidance   Validation process support   Aligns with requirements for GLP, GCLP, and GMP

Characterize Processes

Build a holistic view of end-to-end bioprocess development.

- Define and characterize processes with structured templates and results tables

- Set up process runs faster with complete visibility to previous experimental context

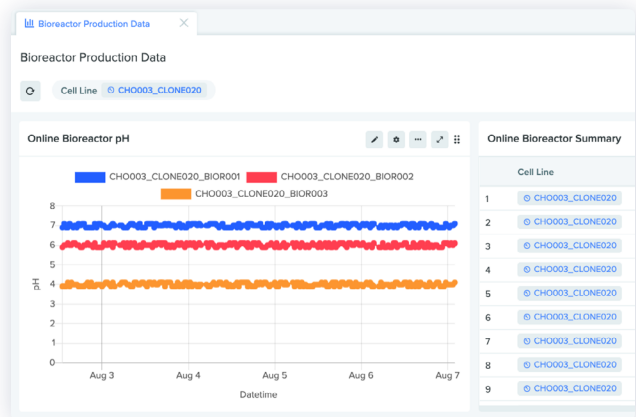- Boost throughput of process characterization with bulk actions and automation

Orchestrate Requests

Improve collaboration across specialized bioprocess development teams.

- Streamline sample and data handoffs with accurate and complete experimental context

- Collaborate on key studies with role-based permissions and other data management tools

- View assay requests in real time and instantly access related results

Generate Process Insights

Create actionable process intelligence.

- Improve accuracy of results capture and decrease the time needed for data aggregation and analysis

- Capture institutional knowledge in a central location for use across programs and teams

- Take advantage of real-time visibility of project status to identify resource bottlenecks faster

Benchling's R&D Cloud is Trusted by Leading Life Science Companies

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REGENERON

SANOFI

Beam
THERAPEUTICS

CUE
BIOPHARMA

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