Building Powerful Tools on an Organized Data Infrastructure to Enable Automation and Large-Scale Data Capture

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Overview

The purpose is to build software applications to enable lab automation and efficient data capture

Interfaces with existing database to store and retrieve large-scale data for high throughput methods

Focuses on integration with daily scientific workflow to increase usability and efficiency

Results in reduced labor, and higher capacity, speed and data integrity

Ultimately, our goal is to decrease project timelines in delivering quality biologics

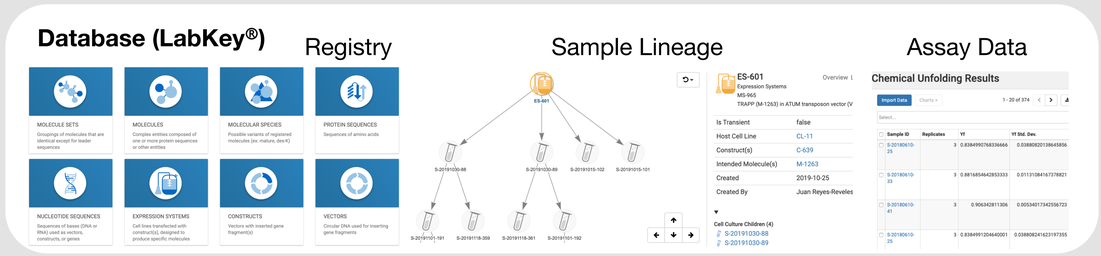
Introduction

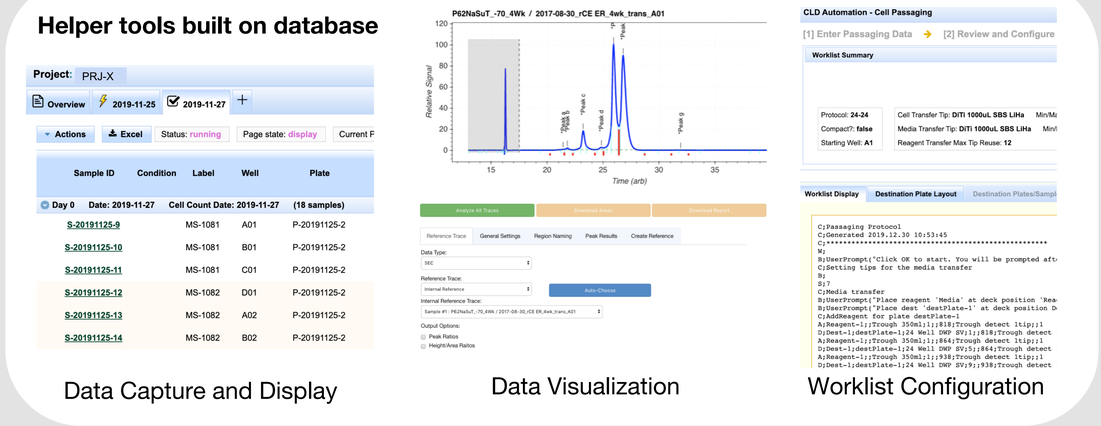
Mission at Just: Design and apply innovative technologies to dramatically expand global access to biotherapeutics

- Delivers higher **quality** biologics
- Optimized molecules have better platform fit, more **rapid** development timelines
- Requires fewer manufacturing runs to increase **capacity**
- Translates into improved **cost** of goods from productivity gains

Methods

We develop tools that interface with the database to store, retrieve, manipulate, visualize, and manage scientific data. The tools support the daily work of scientists in an efficient, automated, and workflow-centric fashion.





Results

Increased capacity

- Assisted interrogation of 24 molecule sets in quadruplicate simultaneously (anticipating larger data set in the future)

Reduced labor

- Automated bulk sample registration
- Automatic assay data capture from instruments to database

Enhanced accuracy and precision

- Creates worklists for robotic liquid handling
- Barcoded samples

Encouraged transparency across org units

- Capturing and displaying experimental workflow and data

Conclusions

Developing software tools that support scientists in their daily work not only reduces human error, but also increases their efficiency and propensity to capture large-scale data which informs predictive models for screening systems.

By moving away from Excel-driven solutions, we promote democratization of experimental data, designs, and progress within Just - Evotec Biologics.

Increasing scientists' efficiency ultimately expands our speed and capacity in discovering and producing high quality biologics.

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