



Day 1 - Thursday, October 3rd

Time	Event	Room
7:30 - 9:00	Breakfast	Pacific Lounge
	Registration	2nd Floor Foyer
9:00 - 9:15	Welcome to LKUC 2019! - Michael Gersch, CEO	Lakefront
9:15 - 9:45	A Wayfarer's Guide to the Galaxy of LabKey inside the NIHR Oxford Biomedical Research Center - Oliver Freeman, Oxford	Lakefront
9:45 - 10:15	Mapping Cell Line Development Workflows with LabKey Biologics - Bo Zhai, Janssen	Lakefront
Discussion Groups	Multi-Attribute Method Analysis with MAM Consortium Co-chair Rich Rogers	Gateway
	Genomics, Clinical Data, and Precision Medicine with LabKey	Terry
10:30 - 11:30	Incorporating LabKey into your Organization	Cascade A
Please sign-up at registration desk.	Applying DevOps Principles for Deployment and Upgrade	Cascade B
	Integrating Tools with LabKey	Cascade C
	Mechanisms for Data Transfer between LabKey Instances	Westlake
11:45 - 12:15	LabKey for Multicenter R&D on Biofuels and Bio-based Products - James Collett, Pacific Northwest National Laboratory	Lakefront
12:15 - 1:15	Lunch	Pacific Lounge
1:30 - 2:00	LabKey and ORIEN Informatics at City of Hope - Vincent La, City of Hope	Lakefront
2:00 - 2:30	Molding and Maximizing the LabKey Platform for Clinical Translational Research - Anthony Corbett, University of Rochester Medical Center	Lakefront
Discussion Groups	Genomics, Clinical Data, and Precision Medicine with LabKey	Terry
	Regulatory Compliance	Cascade A
2:45 - 3:45	Change Management	Cascade B
Please sign-up at registration desk.	Test Automation	Cascade C
	Panorama Partners	Westlake
4:00 - 4:45	LabKey Product Update & Introduction to Sample Manager - Adam Rauch, Bernard Lee & Hannah Brakke	Lakefront
4:45 - 5:00	Summary & Closing - Michael Gersch, CEO	Lakefront
5:30 - 6:30	Happy Hour Reception	Brave Horse
6:30 - 9:00	Dinner	Brave Horse



Day 2 - Friday, October 4th

Time	Event	Room
7:30 - 9:00	Breakfast	Pacific Lounge
	Registration	2nd Floor Foyer
9:00 - 9:45	Product Showcase - Sample Manager	Westlake
	Tech Talk - ReactJS Development: Getting Started	Lakefront
9:00 - 10:15	LabKey Fundamentals - Server Basics and Data Structures	Gateway
	Open Work with Developers	Cascade
9:45 - 10:15	Hands-on with Sample Manager <i>(Please sign-up at registration desk)</i>	Westlake
10:30 - 11:15	Tech Talk - Sample Lineage	Lakefront
	LabKey Fundamentals - Assay Data	Gateway
10:30 - 12:00	Open Work with Developers	Cascade
	Hands-on with Sample Manager <i>(Please sign-up at registration desk)</i>	Westlake
12:00 - 1:00	Lunch	Pacific Lounge
1:00 - 1:45	Tech Talk - Visualizing LabKey Data	Lakefront
1:00 - 2:45	LabKey Fundamentals - Study Data & Sample Sets	Gateway
	Open Work with Developers	Cascade
2:00 - 2:45	Product Showcase - Sample Manager	Westlake
	Tech Talk - The LabKey Development Process	Lakefront
3:00 - 3:45	Tech Talk - Quality Control with LabKey Server	Lakefront
3:00 - 4:00	LabKey Fundamentals - Reports	Gateway
	Hands-on with Sample Manager <i>(Please sign-up at registration desk)</i>	Westlake
	Open Work with Developers	Cascade



Presentations

A Wayfarer's Guide to the Galaxy of LabKey inside the NIHR Oxford Biomedical Research Center

Oliver Freeman, Oxford Biomedical Research Centre Clinical Informatics Group, University of Oxford

Abstract: Use cases and key challenges of using LabKey inside the NIHR Oxford BRC will be discussed starting with one of our first LabKey projects as a data collection tool for our Hepatology Research Project. This is a LabKey study with a custom-built UI on top of the LabKey UI and utilizes LabKey ETLs for extracting information to be fed to the CDW for circular population. The NIHR HIC Hepatitis Project will be highlighted and the way LabKey is used to allow submission of files into the collation system, followed by the viewing and querying of the collated data through LabKey's external schemas. From here we will look at the deployment of LabKey inside the NIHR Oxford BRC and how we maintain multiple live copies with relatively little effort. Finally, the future use of LabKey will be discussed as a portal for clinical research data products; designed using the Metadata Catalogue, produced from the Clinical Data Warehouse and then rendered into LabKey's datasets using project and folder level security combined with LDAP authentication to control who has access to the data product, in theory involving little, to no, development time from the Clinical Informatics Group.

Speaker Bio: Oliver Freeman has an MSc w/ Distinction in Computer Science from the University of Birmingham and has worked as a Software Engineer within the Clinical Informatics Group for five years. When Oliver started with the group, he redesigned and built the Genomics England Ltd Data Acquisition and Management System (DAMS), during which time he worked closely with LabKey, to engineer and optimize the interaction of DAMS with the LabKey Clinical Review Portals. Whilst doing this he repurposed the same data collection system to help collate data for the NIHR Health Informatics Collaborative (NIHR HIC) Hepatitis theme. Since then he has rebuilt the CIG's Metadata Catalogue backend in Grails and augmented it to make future development faster and easier. He recently took over as the Technical Lead and Architect on the OUH NHS Foundation Trust's Clinical Data Warehouse.

Mapping Cell Line Development Workflows with LabKey Biologics

Presented by: Bo Zhai, Cell & Developability Science, Janssen Research & Development

Abstract: As biopharmaceuticals have been at the center stage of the pipeline of almost every pharmaceutical company, high-yield, stably expressing cell lines are of critical importance for economically viable biopharmaceutical production processes. Tracking CLD process have been proven challenging given the number of clones generated, as well as tests performed to identify producer cell lines suitable for industrial, large-scale manufacturing processes. Using LabKey Biologics, we mapped the whole cell line development process with proper lineage tracking. Associating the molecule entity as well as analytical testing information with samples at different CLD stages effectively reduced clone selection timeline.

Speaker Bio: Bo Zhai is a Senior Scientist at the Cell & Developability Sciences (CDS) group of Janssen Research & Development. He provides mass spectrometry characterization to support programs in the large molecule value stream in both discovery and early development. He also leads efforts in building automated workflows for high throughput data analysis. Bo was a Mass Spec Analytical Scientist at St Jude Children's Research Hospital developing multiple mass spectrometry based analytical assays for the characterization of biopharmaceuticals under GMP setting. Bo holds a PhD in Biochemistry and Molecular Biology from the Institute of Biochemistry and Molecular Biology, Chinese Academy of Sciences and had his postdoctoral training at Harvard Medical School.



LabKey for Multicenter R&D on Biofuels and Bio-based Products

James R Collett, Chemical and Biological Process Development Group, Pacific Northwest National Laboratory (PNNL)

Abstract: The Feedstock-Conversion Interface Consortium seeks to understand and mitigate the effects of feedstock variability on system performance in the production of biofuels and bioproducts from biomass. We are using LabKey running on AWS as a common platform for data integration, analysis, and dissemination among task teams distributed across eight Department of Energy national laboratories. Information being handled in LabKey includes bioreactor and other time series process data, process feedstock and intermediate sample tracking and metadata, laboratory assay results, and dataset integration within studies focused within and across unit operations. Opportunities and challenges in adapting LabKey to support industrial biomanufacturing workflows will be discussed.

Speaker Bio: Jim Collett is a bioprocess scientist who combines computational and experimental approaches in industrial biotechnology R&D for the production of biofuels and bioproducts. His work at the Pacific Northwest National Laboratory (PNNL) ranges from genomes to biorefineries, and has included metabolic network modeling, strain development, bioreactor scale-up, online spectroscopy for process analysis and control, and data integration for techno-economic analysis of biochemical manufacturing.

LabKey and ORIEN Informatics at City of Hope

Vincent La, City of Hope

Abstract: The Oncology Research Information Exchange Network (ORIEN) is a consortium of 18 institutions that bring together clinical and genomic data to further precision-based therapies. All patients are under a common protocol known as Total Cancer Care. Patients enrolled in this protocol are followed throughout their life allowing respective member sites to collect both clinical and genomic data. Specimens obtained from patients undergo whole exome sequencing and whole transcriptome sequencing. City of Hope has recently moved forward with ORIEN and has begun sending specimens for sequencing with corresponding clinical data. As such, the institution has developed an ORIEN Informatics roadmap to support the data acquisition, governance, access, and downstream analytics. The roadmap supports Laboratory Information Management System (LIMS) data for specimen collection, clinical data stored in City of Hope's enterprise data warehouse (EDW), and genomic data that will be accessible through the cloud as well as within City of Hope's HPCC environment. Since the data of interest exists in disparate sources, LabKey Server was chosen in our roadmap for integration across systems. LabKey provides a graphical user interface, querying capabilities, and report building tools. The platform seamlessly integrates with the EDW, provides analytics of meta-data, supports API development, allows for collaboration, coordinates workflows, maintains an audit trail in a compliant environment, and acts as a user-friendly front door to many systems. LabKey will support the overarching goal of the ORIEN informatics roadmap to provide clinicians and researchers with data and tools to progress precision medicine.

Speaker Bio: Vincent La leads the informatics component of ORIEN (Oncological Research Information Exchange Network), a Precision Medicine research initiative at City of Hope Cancer Research Hospital. He is the team's project and data lead, bringing his experience in product management and data expertise from health startups and other health enterprises like Kaiser Permanente to the role. With the genomics from the ORIEN study, he works in the space of Radiogenomics where he collaborates with radiologists, data scientists, and the Precision Imaging Lab in discovering biomarkers for brain cancers and success or failures of CAR-T cell immunotherapies. Vincent has considerable experience in R programming and SQL, which he has used for quality control, data processing, and reporting for research at City of Hope. He received his Bachelor's in Public Health: Infectious Diseases from UC Berkeley. Vincent has a desire to make an impact in Precision Medicine.



Presentations (continued)

Molding and Maximizing the LabKey Platform for Clinical Translational Research

Anthony Corbett, Research Data Integration and Analytics Group, University of Rochester Medical Center

Abstract: This talk will review how the Research Data Integration and Analytics Group uses the LabKey platform to manage the research data life cycle and improve data management workflows and communication among clinical and lab study teams. From data capture, querying and reporting, examples of integrating external operational systems like electronic data capture systems (REDCap) and biospecimen and inventory management systems (BSI) will be discussed, as well as managing data from laboratory assays and instrument generated output. Finally, examples of reporting and visualization in study dashboards will be shown.

Speaker Bio: Anthony Corbett has a MS in Bioinformatics from Rochester Institute of Technology and has 10 years of experience as both a Software Engineer and Informatics Analyst. He is Technical Lead for the Research Data Integration and Analytics Group within the Clinical Translational Science Institute. The group has been using the LabKey platform to provide basic science and clinical translation informatic solutions since 2010 to a broad variety of departments and projects at the University of Rochester Medical Center.

Discussion Groups - Morning Sessions

Multi-Attribute Method Analysis with Richard Rogers

Characterization of complex biotherapeutics using highly resolving mass spectrometry has resulted in a better understanding of the post-translational modifications (critical quality attributes (CQAs)) that are crucial for safety and efficacy. These CQAs are used to guide the manufacturing process and the release strategy for biotherapeutics. A mass spectrometry-based multi-attribute method (MAM) has been developed and implemented at many Biopharma Companies. MAM monitors known CQAs but also can identify new CQAs on the biotherapeutics. This group discussion will explore how Panorama (LabKey Server's targeted mass spec module) and its companion tool, Skyline, can provide tools to enable MAM analysis. Leveraging Panorama and Skyline, for MAM, has the potential to reduce the cost and increase efficiencies for MAM compared to traditional non-mass spec assays.

Genomics, Clinical Data, and Precision Medicine

What are the workflow and data management pain points when working in the realm of genomics and precision medicine? The data is large and diverse as are the regulations. LabKey wants to learn.

Mechanisms for Data Transfer between LabKey Instances

Does your organization transfer data between LabKey Servers? What has gone well, and what challenges are you facing that others may have solved?

Incorporating LabKey into Your Organization

Share lessons learned and hear from others about driving in house adoption of LabKey and training your users for success. What strategies were helpful? Did you build custom UI such as dashboards or other utilities to smooth the transition?



Discussion Groups - Morning Sessions (continued)

Applying DevOps Principles for Deployments and Upgrade

What procedures is your organization using for deployment and upgrade? Any automation or “Dev Ops” style implementations? Share what works and learn from others.

Integrating Tools with LabKey

Discuss what tools you are currently integrating with LabKey Server. What benefits have you experienced? Any lessons learned? What tools would you like to integrate?

Discussion Groups - Afternoon Sessions

Panorama Partners 2019

Members of the Panorama Partners Program (and others interested) will connect and discuss what’s new in managing targeted mass spectrometry data with Panorama and Skyline.

Genomics, Clinical Data, and Precision Medicine

What are the workflow and data management pain points when working in the realm of genomics and precision medicine? The data is large and diverse as are the regulations. LabKey wants to learn.

Regulatory Compliance

Discuss your approach to maintaining regulatory compliance. What regulations apply to your research? What tools do you use to manage compliance? What are the biggest challenges you face in maintaining compliance?

Change Management

How does your team react to changes in the tools, workflows, and software that they use? Share your best practices and learn how others have managed change at their organizations.

Test Automation

How do you incorporate test automation into your development process? What works well? Share your best practices and lessons learned with others.



Tech Talks

ReactJS Development: Getting Started

Learn about best practices for building ReactJS based applications with LabKey. Development tips and tricks, practical examples, and advice for developers.

Sample Lineage

Learn how Sample Derivation works in LabKey Server. Explore underlying data structures and use of APIs. See how to access lineage in LabKey.

Visualizing LabKey Data

An overview of how external integrations expand your options for creating reports and visualizations. See how to present LabKey data using Tableau, Spotfire, Matlab, Shiny and more!

LabKey Development Process

Find out about the internal LabKey development process. Covers feature branch workflow, pull requests, test automation, formal and patch releases, and other things external developers need to know.

Quality Control with LabKey Server

Explore strategies for quality control and reporting within LabKey Server and Biologics. Learn to incorporate QC trend reporting, automatic QC options during import, and setting of QC states into your workflows

Open Work Sessions

The Open Work sessions center around project work that you bring to the session. It is helpful if you bring your laptop with the current version of LabKey Server already installed and a project you are currently working on. LabKey developers will circulate to answer your questions, provide design advice, and connect you with others working on similar challenges.

LabKey Fundamentals Training

These classroom-based sessions will cover the fundamentals of LabKey Server and introduce the core LabKey Server capabilities around collaboration, security, file management, and visualization. It is helpful to bring your own laptop for training sessions, either with LabKey Server running locally, or to use for accessing your own LabKey Server Trial instance.

Product Showcase - Sample Manager

In January of 2020 LabKey will be launching Sample Manager - a feature-rich sample management application designed to bring greater efficiency to your sample processing while providing a unified view of your samples and related data. In these sessions you will get an up close view of Sample Manager, learn about product features, and assist in future product development with your valuable input in one of our "Hands-on" sessions.