

Teddy Lab Partners with STARLIMS to Better Serve Clinical Research and Medical Testing Globally

"During the supplier research phase, the STARLIMS team fully demonstrated their understanding of our business dilemma and their expertise, not only of the functional requirements of the system but also of the regulations and laws related to clinical research. After communicating with them, the company management felt that we had found a supplier that could truly help us with lab digitalization and intelligence."

Zhi Yan,
Deputy General Manager, Teddy Lab

ABOUT TEDDY LAB

Teddy Clinical Research Laboratory (Shanghai) Co., Ltd. was established in 2016 by a joint venture between Dian Diagnostics and Tigermed, two top listed medical service companies in China. With the rapid growth of the company's business, Wuxi Teddy Medical Laboratory Co., Ltd. was established in 2020.

Teddy Lab strictly complies with international and regional regulations and provides all-inclusive services in the spaces of CRO services, central laboratory testing and bioanalysis. It is a CAP-certified and NGSP-certified Level I Laboratory with rich project experiences in various fields including tumor biomarkers, immunohistochemistry and molecular testing, cell immunotherapy, diabetes, hepatitis B and C, and cardiovascular diseases.

Teddy Lab is committed to providing pharmaceutical companies, CROs and scientific research institutions with a variety of services including material management, project management, central laboratory testing, bioanalysis, logistics management, biorepository, clinical data management and companion diagnostics. In addition to routine lab services, Teddy Lab also provides molecular, pathological, NGS and bioanalysis related testing services. The company has established strategic partnerships with companies in several countries including the US, Belgium, the Netherlands and Taiwan.

BUSINESS BOTTLENECK: THE LEGACY LIMS RESTRICTED BUSINESS GROWTH

In recent years, Teddy Lab has developed rapidly as the scale of the laboratory continues to expand.

After the establishment of Wuxi Teddy Medical Laboratory Co., Ltd. in 2020, their business scope expanded from clinical research to medical testing, and the business requirements became more complex.

At that time, Teddy Lab had been using a customized Laboratory Information Management System (LIMS) for many years. It wasn't capable of fully meeting the ever-changing requirements, including functionality, operating speed and customer experience. Over time, the update and maintenance of the system also became a challenge to the operation and maintenance team.

Significant challenges came along with the establishment of the new laboratory. With a clear view of the obstacles, the management was determined to address this by switching to a modern, sophisticated LIMS solution

SYSTEM SELECTION: WHAT SET STARLIMS APART?

Teddy Lab conducted in-depth market research during the system selection stage. They consulted with clinical research companies and a few industry leaders to understand the LIMS they were using and the way they use LIMS to manage laboratory data. The STARLIMS brand stood out at this time as a potential solution that could best meet their needs.

The LIMS system is critical to clinical research and medical testing. The laboratory needs to ensure that the data is accurate, safe and valid to generate reports and submit them to customers. The key is accurate and secure data management. For Teddy Lab, how to set up a database and transfer data, including report transfer, data transfer between enterprise systems, and external data transfer in various formats, was the major consideration in purchasing a LIMS.

The full lifecycle of sample management is also critical. After samples are collected at the research center, how should they be sent to the laboratory?

When will the laboratory receive them? When to conduct corresponding tests and destruct the samples? Everything should be fully tracked and managed within the LIMS.

To Teddy Lab, LIMS is a core business system. In particular, for some medical tests, a report needs to be generated on the same day to determine the subject's subsequent medication. As a result, safe and timely delivery of test reports to customers is a key metric of the stability of the LIMS system.

In regards to system validation and compliance, Teddy Lab aimed to select a mature and standardized LIMS platform and a team with extensive experience in the compliant application of information systems and computerized system validation. They expected to establish a comprehensive computerized system validation management system while controlling the cost of validation in the implementation phase. In addition, support from a professional team after the project go-live is also an important consideration.

STARLIMS SYSTEM GO-LIVE: SIGNIFICANT RESULTS

Challenges of Teddy Lab	STARLIMS Solution	Results of Teddy Lab
Data Management: The legacy LIMS system had limited data storage capacity. Therefore it was a big challenge to handle the large amount of data generated as the business rapidly grew. The hybrid mode of manual and digital data management resulted in a huge waste of resources.	STARLIMS is designed to support the ALCOA+ principles which can help customers manage data integrity following these principles.	Teddy Lab has centralized data management. All the data is recoverable, searchable, and traceable (to the origin), with data connectivity.
Full Lifecycle Sample Management: With the rapid business growth, the old LIMS could neither support the complex business needs nor maintain the full lifecycle of sample management.	STARLIMS Biorepository module fully supports automated sample lifecycle management, facilitating comprehensive audit trail and process management.	Biological sample management starts from sample pre-login, to internal circulation, receipt, testing, derivatization, consumption, shipping, return, etc. Various sample types, such as clinical trials and medical testing can be managed at the same time to guarantee full traceability.
Quality and Compliance: As a clinical research and medical testing laboratory, Teddy Lab needs to comply with stringent regulatory requirements. In addition, an effective GCP/CLP compliant quality management system is required.	STARLIMS provides full audit trail with electronic signature that covers every step of each workflow. The system supports compliance with various legal and regulatory requirements, including 21 CFR Part 11, ICH, GDRP, HIPAA, CAP, CLIA, and ISO15189	STARLIMS automates the collection of raw and standardized data. It generates necessary reports and searchable audit trail records, allowing Teddy Lab to fully demonstrate its quality control measures, and quickly respond to audit queries, thus greatly easing the regulatory burden on the company.

Challenges of Teddy Lab	STARLIMS Solution	Results of Teddy Lab
<p>Laboratory Automation: It required manual tracking of the status of clinical trials and sample testing. Certain test steps needed to be performed manually.</p>	<p>STARLIMS fully supports a paperless laboratory. The system uses advanced technology that allows customers to generate specific rules and automate processes such as triggering retests and Double-blind Data Entry (DBDE), auto-approval, auto-calculation, etc.</p>	<p>Teddy Lab fully leverages the benefits provided by the laboratory automation to optimize existing processes, reduce turnaround time, increase productivity, and minimize errors.</p>
<p>Flexibility: Teddy Lab has a broad variety of businesses, including routine testing, cell flow cytometry testing, bioanalysis, macromolecules, small molecules, NGS, molecular pathology research, etc. The platforms from across the departments have different functional requirements. In addition, customer needs may also differ. Even after system upgrades, the old LIMS still failed to meet the complex requirements.</p>	<p>STARLIMS is a multi-tier solution with independent technology, data and business layers. Users can design business workflows at the business layer and make configurations with out-of-the-box tools. STARLIMS offers a variety of off-the-shelf workflow tools and wizards designed specifically for the life sciences field.</p>	<p>The inherent flexibility of the STARLIMS system allows Teddy Lab to quickly adapt to the scale-up of the business and the associated operational changes. STARLIMS fully supports the design and configuration of clinical research and medical testing projects, including clinical project management, test protocol design, test panel, visit schedule, resource management, workflow management, etc.</p>
<p>User Experience: The legacy LIMS was running slow with poor user experience and high maintenance cost.</p>	<p>STARLIMS is a fully web-based solution. The system has a rich graphical user interface with intuitive visualization.</p>	<p>STARLIMS is browser-agnostic. It allows online sample submission and result requesting, as well as sample location tracking, therefore improving the external collaboration for Teddy Lab. The graphical user interface provides intuitive drag-and-drop functionality, making it easy and convenient to fine-tune the system.</p>



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