



Case Study - Holobiome

eLabNext Amplifies Holobiome's Overall Productivity and Research Quality

“eLabNext has significantly improved our approach to lab management. Its streamlined inventory system and integration of external technologies and platforms have reduced our administrative workload, enabling us to dedicate more time to critical research activities. The ability to quickly access and share experiment data and results has fostered a more collaborative and efficient research environment. This software has been a tool and a catalyst for enhancing our lab’s overall productivity and research quality.”



Bridget O'Connor
Senior Research Associate
Holobiome

Holobiome

The human microbiome is a promising source of cures for human ailments, but humanity lacks the knowledge and tools to unlock its potential. Holobiome, a Boston-based biotechnology company, is building the platform to solve that problem with three core initiatives – international fecal samples, a world-class strain bank, and a means to make the microbiome screenable for target activity. They use this knowledge to generate consumer-facing probiotics, optimized food, and drugs, which they commercialize with large business-to-business (B2B) partners. Their initial focus is mapping the gut-brain axis, and their lead program is a single strain of human gut bacteria that may be used for combating depression.

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Goals

Short-term: In the short term, Holobiome is concentrated on building an international biobank of human fecal samples and a comprehensive strain collection of all known human gut bacteria, complete with an in-depth ‘omics profile of each. The company will screen its strain collection for activity against important pathways involved in human health and develop the best of these strains or food that supports them (e.g., prebiotics) as consumer or drug products in collaboration with partners.

Long-term: Holobiome will develop a complete map of how our microbes impact human biology and a tool kit to enable anyone to change their microbiome to improve their lives.

Challenges

| To improve laboratory information management and operations

Holobiome faced significant challenges in efficiently managing sample inventories as they progressed with their research, including tracking the physical location of tubes, quantifying sample amounts, and linking them with relevant experiments. Additionally, the company needed help maintaining a centralized system for experimental records and outputs, particularly for high-priority experiments requiring [electronic signatures in GLP compliance](#), impacting report generation efficiency. Furthermore, they needed an integrated file storage system that directly links questionnaires containing sample metadata and externally generated protocols with experiments.

If Holobiome had not identified an efficient solution for these challenges, the company would have had to rely on cumbersome spreadsheets for sample tracking, leading to a potential decrease in experimental planning efficiency due to frequent inaccuracies. Generating and signing experimental reports would have been manual and time-consuming, reducing report processing efficiency. Additionally, the absence of a clear file storage system would have likely increased data retrieval times, causing confusion and significant delays in the company's research progress.

Solution

| eLabNext offers a flexible GLP-compliant platform for early R&D operations

To avoid these pitfalls, Holobiome began using the eLabNext platform, which was recommended to them by others in the biotechnology industry. When they started using the software in 2019, finding a solution that could adapt to the evolving priorities of early research was critical. Accessible customer support for technical issues and training was vital to ensure smooth implementation and ongoing operations. GLP compliance was also essential for maintaining experimental integrity and regulatory adherence. Holobiome appreciated that eLabNext valued (and continues to value) user feedback, indicating its commitment to adapt and improve. Finally, the ability to organize experiments at a higher, project-based level was vital to managing the growing complexity of the company's research efficiently.



Results

Holobiome has gradually adopted the eLabNext platform into its operations since 2019, with a significant increase in activity in 2021. As of the end of 2023, most of Holobiome's lab team actively uses the software for everyday research activities.

| eLabNext enables more efficient inventory management

Upon implementing eLabNext software, Holobiome's labs experienced marked improvements in operational efficiency, particularly with inventory tracking and management. eLabNext's [inventory management system](#) has become a centerpiece of Holobiome's operations as the company has focused on increasing sample output. The platform provides a streamlined and efficient method to track a growing number of samples across various experiments. Without such a system, managing this increased volume would have been significantly more challenging for Holobiome's research team.

| eLabNext enhances overall operational productivity, collaboration, and compliance

Additionally, the software's custom protocol repository, which can calculate the reagents needed for an experiment or media formulation, has saved Holobiome substantial time otherwise spent on manual calculations and protocol design. Digital attachment of files directly to experiments eliminated redundant data entry, further boosting productivity. The software's integration with scanning technology and the easy accessibility of experiment results significantly improved the company's research output. The software also fostered better team collaboration by centralizing experiment data, and its integration with Google Drive seamlessly merged Holobiome's digital workflows. Moreover, generating GLP-compliant, electronically signed PDF reports of experiments ensured regulatory compliance and improved the accuracy and accessibility of its experiment documentation.





About eLabJournal

eLabJournal offers an intuitive and flexible solution to manage information in your lab. The all-in-one Electronic Lab Notebook also includes sample tracking and protocol management modules. eLabJournal improves efficiency when documenting, organising, searching, and archiving data, samples and protocols. The software is suitable for any lab ranging from small academic laboratories and start-up companies to large academic institutes and globally operating companies.



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