



## Customer Case Study

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# Liverpool School of Tropical Medicine Uses CDD Vault to Enhance Collaboration & Speed Drug Discovery to Fight Tuberculosis

## Situation

Tanya Parish, PhD, Professor of Global Health Therapeutics at the Liverpool School of Tropical Medicine, is a microbiologist dedicated to improving global health, with a special focus on *Mycobacterium tuberculosis*.

When it was established in 1898, Liverpool School of Tropical Medicine was the first institution in the world dedicated to research and teaching in tropical medicine. It was initially funded by a prominent Liverpool ship owner seeking to combat diseases seafarers encountered in overseas regions including West and Southern Africa.

The Parish Lab at the Liverpool School of Tropical Medicine is part of the [TB Drug Accelerator](#), a consortium comprised of pharmaceutical companies, universities,

research institutes and coordinated by the Gates Foundation. The Parish Lab’s goal is to work collaboratively to identify and develop new drugs for tuberculosis. Prior to her 2026 appointment to the Liverpool School of Tropical Medicine, Dr. Parish was Professor in the Department of Pediatrics, University of Washington School of Medicine and Principal Investigator, Center for Global Infectious Disease Research, Seattle Children’s Research Institute.

The Parish Lab concentrates on discovering and developing novel drugs for tuberculosis that are effective at curing drug-sensitive and drug-resistant tuberculosis. Its applied work encompasses a range of early-stage drug discovery including assay development and high throughput screening, drug target identification and validation, and medicinal and synthetic chemistry.



**Dr. Parish's Lab at the Liverpool School of Tropical Medicine is part of the global TB Drug Accelerator program.**

The Parish Lab at the Liverpool School of Tropical Medicine required a central repository for its more than 100,000 registered compounds, that would facilitate secure collaboration with TB-focused scientists from around the globe.

## Solution

Dr. Parish, who has used CDD Vault in her work for nearly 20 years, introduced CDD Vault to her new lab at the Liverpool School of Tropical Medicine, which lacked an electronic central repository to support lab work with molecular and chemical data. Parish Lab deployed Collaborative Drug Discovery's CDD Vault, the hosted drug discovery informatics platform that securely manages both internal and external biological and chemical data.

Parish Lab uses a single CDD Vault to support the work of more than a dozen scientists,

including biologists, microbiologists, and medicinal chemists. Their CDD Vault also provides secure access to data for dozens of collaborators around the world.

Parish Lab makes use of the Electronic Lab Notebook (ELN), the Inventory module, and the Curves modules of CDD Vault. The lab uses CDD Vault as its secure central repository to support collaboration with its global partners, including the TB Drug Accelerator.

## Benefits

Parish Lab enjoys a number of benefits from using CDD Vault, including:

- A central repository for secure collaboration
- Using the CDD Vault ELN
- Using the CDD Vault Inventory module to enhance tracking "We can see the exact vial we used for a TB strain"

- Robust searchability of CDD Vault, including across ELNs and Inventory
- Curves module helps biologists and chemists
- Ease of use and flexibility
- Finding CDD to be a responsive company to work with

## CDD Vault Provides a Central Repository for Secure Collaboration

The Parish Lab uses CDD Vault as a central repository to share data with scientists collaborating in TB research across more than a dozen countries. In addition to using CDD Vault to store data on more than 100,000 molecules, the lab also uses the Vault as a repository for data on the lab's more than 3,000 TB strains, and some 10,000 samples within the lab and with collaborators.

"CDD Vault is very important to our work as a member of the TB Drug Accelerator, as it enables us to share data across our collaborations with the more than 20 TBDA members," Dr. Parish says. "We can share data by just pushing it out directly into a Shared Vault with the other TBDA members."

The lab also finds value in an automated sharing process they use with the Vault for weekly updates.

"The weekly sharing process means we don't have to manually track what data was generated over the week, or what assays were run, or whose molecules are these? We have it set up so that everything is tagged automatically."

This automation with the Vault makes life easier across the Parish lab, as well as for collaborators.

"If we're running 100 molecules from two or three different people, it's automatically going into the right project internally as well as for collaborators," Dr. Parish says. "This saves us from having to distribute data manually, or having to generate reports by cutting and pasting into an Excel. All of this saves us a lot of time as well."

Dr. Parish values the granular security built into CDD Vault, which is essential for protecting intellectual property, and a requirement when working with pharmaceutical companies.

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**- Dr. Tanya Parish, Professor of Global Health Therapeutics, Liverpool School of Tropical Medicine**

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## Using the CDD Vault Electronic Lab Notebook “For Everything”

A longtime user of the CDD Vault Electronic Lab Notebook, Dr. Parish introduced it to her lab at the Liverpool School of Tropical Medicine because of the efficiency it provides.

“We use the ELN for everything,” Dr. Parish says. “It’s very useful. For example, our chemists can put their synthesis into the ELNs. This means we can register a molecule and give it our own internal ID, and link that to the data from the next experiment.”

The ELN also supports collaboration.

“With the ELN, we can have multiple people putting information into the same ELN,” Dr. Parish says. “When making media, we can link to where and when the media was made and to who made it.”

The searchability of the ELN enables in-depth tracking.

“Because everything is stored electronically, you can link together different elements very easily, and quickly answer questions,” Dr. Parish says. “You can track everything back to its source. For example, if we ran an MIC, we might want to see: ‘Who synthesized it? What was the purity? What did the NMR look like?’ The ability to track everything back through the system with the ELN means you never want to go back to paper.”

## CDD Vault Inventory Module Enhances Tracking: “We Can See the Exact Vial We Used for a TB strain”

The CDD Vault Inventory module enables scientists to track, manage, and locate chemical



Dr. Tanya Parish

and biological samples across multiple laboratory locations in real-time. Sample details are linked to structural and experimental data, eliminating information silos and facilitating collaboration.

Dr. Parish likes that the Inventory module supports comprehensive sample lifecycle management without requiring external inventory systems or manual reconciliation, and that it goes beyond batch levels to track actual samples.

“We like that we have sample tracking rather than just batch tracking,” Dr. Parish says. “This is useful because we used to have all of our inventory tracked in an external system, so we’d have to export that information and move it into our ELNs.”

The Inventory module enhances visibility and tracking, all from within CDD Vault, which saves time and provides a smoother laboratory workflow.

“I uploaded our thousands of samples into the Inventory module, and it's not just molecules,” Dr. Parish says. “I just uploaded all of our TB strains as well.”

Dr. Parish values the precision tracking the Inventory module provides.

“We can now see the exact vial we used for a TB strain and the exact vial from which a molecule came, for any given assay,” Dr. Parish says. “This gives us very precise tracking, which is essential, as we work along the pharma lines, where we want to track everything. Having this integrated with the Vault is much easier than having to use an outside system.”

### **Robust Searchability of CDD Vault, Including across ELNs and Inventory**

The robust searchability of CDD Vault extends throughout its ELNs and Inventory, providing researchers with time-saving visibility and tracking.

“We have the ability to search on anything,” Dr. Parish says. Every project has a project number, so we can search the molecules and pull out every molecule for a certain project by its number, which is a real time saver.”

“I like the fact we can search by pretty much anything that you put in,” Dr. Parish says. “We have quite a lot of information in our molecule and batch fields, so we often use that for searching. If we need to know when a collaborator sent us something, we can even search by the shipment date, because we have that in the batch. We find the flexibility of being

able to use different search terms based on how you've set up your own vault is really useful across all of our activities.”

### **CDD Vault Curves Module: “We Like the Chemists to Look at the Curves Also, It’s Not Just for the Biologists”**

As a longtime user of CDD Vault, Dr. Parish says she has enjoyed watching it evolve over time, becoming ever more important as a tool in the lab.

“Over the years we’ve seen a continual evolution of Curves, making it easy to handle the data,” Dr. Parish says. “We use it to analyze our MIC data, our dose responses. We’re constantly uploading data and generating curves for IC<sub>50</sub>s and IC<sub>90</sub>s and other measurements.”

“We like that we can analyse dose response curves from within our Vault,” Dr. Parish says. “We don't have to move data out to another program.”

Just examining the shape of a curve can add value beyond the numbers.

“We like the chemist to look at the curves also, it's not just for the biologists,” Dr. Parish says. “Beyond the generated numbers, the curve itself has value—the shape of the curve, the behavior. We like to look at those as well.”

### **Ease of Use: “Lots of Flexibility”**

The Parish Lab benefits from the ease of use and flexibility of CDD Vault.

“The ease of use means that we don’t require IT staff to manage the Vault,” Parish says. “The Vault is hosted in the cloud, so we don’t have to download applications. Another benefit is that

for those who travel, we have a way of securely accessing data when we're on the road. We can log into our system using a VPN and access our data from wherever we might be."

The Vault also provides much appreciated flexibility in how it is used by scientists.

"We can create our own protocols and upload all sorts of different data into the system," Dr. Parish says. "We can put whatever we want into the protocols, you can add whatever fields you want, and you can tag things. It's not like you have to work within the confines of a set of predefined terms. You can put in anything you want for different types of protocols. This flexibility is extremely helpful to us."

### **CDD Is a Responsive Company to Work With: "We've Seen Some of Our Suggestions Put Into the Product"**

Over the many years Dr. Parish has worked with CDD Vault she has seen suggestions from herself and from colleagues in her labs implemented into the product.

"I feel like we've grown together," Dr. Parish says. "In my labs we've had many users of the Vault, and we've forwarded many suggestions as to how tweaks or additions could make our work easier. CDD's attitude is always one of 'How can we make that happen.' They are always very receptive to suggestions."

Dr. Parish also values the in-depth customer service she has experienced and the speed with which issues are resolved.

"Whenever we have a question or a technical issue, CDD is always quick at getting back to you, and getting the right person to fix things,"

Dr. Parish says. "It's never a situation where you have to put in a ticket and wait for a week. They get right back to you, with whatever expertise you might need."

## **About Collaborative Drug Discovery**

Collaborative Drug Discovery provides a modern approach to drug discovery informatics that is trusted globally by thousands of leading researchers. Our CDD Vault is a hosted informatics platform that securely manages both private and external biological and chemical data. It provides core functionality including chemical registration, structure activity relationship, inventory, visualization, and electronic lab notebook capabilities. For more information, visit us at [www.collaborativedrug.com](http://www.collaborativedrug.com).