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PHOREMOST

Unlocking the Next Generation of Drug Targets: How PhoreMost Powers Discovery with CDD Vault

Founded in 2014 as a spin-out from the University of Cambridge, PhoreMost is a biotechnology company developing a pipeline of small molecule drugs targeting key cancer indications. Its lead program, PMC-001, is an orally bioavailable, CNS-penetrant microtubule disruptor to treat primary brain cancers and other advanced solid tumors with brain metastases, with regulatory filings for Phase 1/2a trials currently being prepared. The discovery-stage pipeline behind it includes PMC-002, targeting human Papillomavirus (HPV)-positive cancers, small molecule program PMC-003, and multiple ligase binders for targeted protein degradation (TPD) applications.

Having relocated in late spring 2026 to state-of-the-art laboratories at the Babraham Research Campus in Cambridge, PhoreMost conducts

core biochemistry, biophysics, and cell biology work in-house. The company relies on external trusted partners for chemistry, ADME, and *in vivo* studies.

The company established CDD Vault in 2022 as a unifying data management, visualization, and analysis platform for its in-house, and externally derived chemistry and biology data. According to PhoreMost principal medicinal chemist, Mat Calder, the Vault has dramatically cut workflow time, automated calculations and data collation – reducing some tasks from hours to mere minutes - and removed most instances of error-prone manual data entry.

A data management crunch point

Before adopting the cloud-based platform, PhoreMost relied on a fragmented mix of open-source tools, commercial software, and manual spreadsheets. Calder described this legacy infrastructure as “cumbersome, time-consuming and prone to errors.” As Calder noted, “Data was compartmentalized and required time and effort to ensure all data was distributed, aggregated and stored correctly – a process that ultimately hampered efficiency.”

Kathleen Santos, a cellular biologist at the front end of data generation, agreed that working with disjointed tracking systems represented a constant hurdle. Without centralized automation, scientists were stuck moving data manually, creating challenges in consistency and traceability. “For example, scientists were having to run all their calculations manually before importing into GraphPad for analysis,” Santos explained. “There was a lot of copying and pasting data taking a lot of time which could have been spent generating more data.”

As the company expanded its screening programs, it inevitably hit a data management crunch point. “We needed a more centralized, consistent and reliable system – something that would speed up our data processing,” Calder acknowledged. “And we needed to be easily able to search, analyze and interpret the data when we wanted to.”

The complete package

When exploring the market for a data management replacement, PhoreMost found that most available software was heavily siloed. Certain platforms focused strictly on chemical

tracking, while others offered data manipulation but lacked fully functional chemical registration features. CDD Vault stood out by offering a secure, comprehensive platform that tightly integrated chemistry registration, biological data analysis, and advanced visualization as part of a single infrastructure. “As soon as we did the testing and evaluation with CDD Vault, we realized that it offered the complete package of everything we needed,” Calder said.

CDD migrated PhoreMost’s legacy data into the Vault, and once the platform was configured and running, workflow efficiencies became apparent immediately. Routine data handling that once took hours was reduced to minutes.



Picture courtesy of PhoreMost

A 10-fold increase in screening capacity

“Historically it might take 2-2.5 hours to analyze ten 96-well plates and create the graphs and spreadsheets, even when the files are set up to copy and paste,” Santos noted. “Using the Vault, this process now takes 5-10 minutes.” This operational velocity has fundamentally changed how PhoreMost scales its discovery operations. “When we first got set up, CDD assisted in migrating all our historic data and compounds into the vault,” Calder recalled. “Four and a half years on, and CDD has enabled us to build on our foundation and rapidly expand the number of compounds and data we have produced.”

The bottleneck of data handling has been removed so completely that the team is now purchasing new laboratory instrumentation to match its expanded capacity. As Santos pointed out: “Because we have all this free time – thanks to the Vault – we can focus on the science of generating results rather than spending unnecessary time on the analyses that the Vault now automates. Realistically we can do 10 times more testing than before, if not more.”

Unlocking cross-disciplinary context

Beyond acting as a time-saver, CDD Vault serves as the central repository for PhoreMost's highly diverse datasets, organizing compound registrations, biological assays, structure-activity relationships (SAR), protein constructs, and peptide sequences into a singular environment.

“We have that data in the Vault in consistent, usable formats, rather than spread across easily lost Excel spreadsheets, and we can interpret our biological data in context with associated chemical data,” Calder explained. This contextual depth dramatically improves candidate selection, giving scientists the ability to structure and view data dynamically based on project needs.

Even at the most basic use level, the Vault allows users to find and access all the data in one place, and that shouldn't be underestimated, Calder stressed. “We can unlock more assay and ADME data on which to base project decisions. We can structure our datasets the way we want for the most appropriate analysis and visualization. This all makes candidate selection better-informed.”

Bridging the communication gap

The Vault also helps to bridge the natural communication gap between distinct teams. “I'm a cell biologist, primarily, but the Vault helps me to find, understand, and relate to the chemistry,” Santos noted. “The search capabilities of Vault are fantastic. We can instantly find compounds associated with different datasets, and then review what the next stages will be. It's super easy and intuitive.”

This structured data packaging has proven equally vital for corporate development, intellectual property documentation, and clinical readiness. Instead of relying on unwieldy, confusing legacy files, PhoreMost can securely share clear, digestible Vault visualizations internally, as well as with patent agents and strategic partners.

Calder commented, “We can create datasets and visualizations in the Vault on molecules and relevant assays, and share relevant data more effectively and securely with individuals or organizations. Prior to CDD Vault, we might have had to send huge Excel files that weren’t very user-friendly.”

Ian Hutchison, PhoreMost associate director of business development, relies on this capability to construct secure data rooms for prospective investors or strategic partners. “I can draw up my questions for Mat, Kathleen, and the team, who can then extract the information and send it over to me,” Hutchison said.



Picture courtesy of PhoreMost

Custom automation

While CDD Vault works seamlessly out of the box, it also provides the deep flexibility needed for bespoke laboratory environments.

PhoreMost had previously developed its own in-house inventory system, which Calder describes as a KNIME workflow with a PostgreSQL server. “We use the API to populate the SQL server, which has all the up-to-date information on the compounds. I can then run another KNIME workflow, through which I can pass all the information from the CRO that makes our compounds. That data then populates CDD Vault automatically and moves compounds into the active project so that they are ready to test.”

A dynamic roadmap

While the team still relies on specialized standalone tools such as GraphPad Prism for specific low-throughput assays or Western blots, most of the work happens within the Vault. “There are just a few bits and pieces that we continue to handle outside of the Vault simply because the workflows that we’ve built for those are already so user-friendly,” Calder noted. Beyond that, PhoreMost scientists can trust the Vault to process virtually any routine workflow smoothly. The team has made the most of the Vault’s flexibility when creating more bespoke workflows and assays for its drug discovery programs, Calder added. “We can pretty much throw anything at the Vault, and it deals with it and presents it in a way that’s easy to use.”

PhoreMost is particularly grateful for CDD’s commitment to continuing platform evolution. Proprietary workarounds that the scientists may create are quickly eclipsed by updates rolled out by the CDD development team. “It seems that whenever we’ve had to create our own workarounds, within a few months CDD has implemented a relevant Vault module or facility that does the same job, but is a lot prettier,”

Calder noted. “A number of workflows that we’ve built are now completely redundant because they are handled completely by the Vault. It’s a really dynamic and exciting roadmap and we’re always encouraged to see what’s coming out next.”

Accelerating towards clinical development

According to Calder, clean, automated, and centralized data infrastructure is central to what makes PhoreMost “superefficient and where we want to be with our molecules.” Backed by an expanded \$50M Series B financing round led by Parkwalk Advisors, the company is rapidly accelerating its lead assets toward clinical development. Having CDD Vault as its enterprise-grade data engine ensures that PhoreMost can confidently scale its drug discovery operations without facing the operational bottlenecks that commonly plague the industry.

Calder has simple advice for early-stage startups seeking to avoid the messy data infrastructure that frequently delays progress, even at the largest multinational corporations: “Start as soon as you can to get your data in order.” As Santos concluded, “Every penny of our subscription is worth it, because the amount of time it saves our scientists is huge.”

About Collaborative Drug Discovery

Collaborative Drug Discovery provides a modern approach to drug discovery informatics 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.

