A Collaborative Drug Discovery Case Study: Via Nova Therapeutics

Situation

Via Nova Therapeutics deploys state-of-the-art drug discovery modalities to identify novel, first-in-class antivirals for the individual infections it studies. These modalities include phenotypic screening in infected cultured cells, biochemical screening in vitro on virus-encoded enzymatic targets and structure-based drug design, as well as combinations of the above approaches. Where appropriate, the company also targets host factors essential for viral infection.

The application of these approaches has generated specific antiviral programs targeting influenza, rhinovirus, BK virus, and adenovirus.

As a recently launched startup with funding from Aditum Bio, Via Nova prides itself in its tightly focused lean operations and making efficient use of a dispersed workforce including contract research organizations.

Initially the company uploaded spreadsheets into a shared repository, but soon outgrew this solution and required a secure and robust central repository to support collaboration across the globe.

Solution

Via Nova Therapeutics deployed Collaborative Drug Discovery’s CDD Vault, the hosted drug discovery informatics platform that securely manages both internal and external biological and chemical data.

“Prior to CDD Vault, if someone would want to dive into the data, we would waste time trying to find the exact data sets we needed, recalls Benjamin R. Taft, PhD, Executive Director, Chemistry, at Via Nova Therapeutics. “CDD Vault really helps us get organized and have all of our data in one place where we consider it published and final, searchable, and sortable.”

“*We’re able to achieve our centralized data repository needs with CDD Vault—without having to invest in infrastructure. ... We see CDD Vault as a huge value.*”

Benjamin R. Taft, PhD, Executive Director, Chemistry, Via Nova Therapeutics
A Collaborative Drug Discovery Case Study: Via Nova Therapeutics

**CDD Vault: Highly Recommended**

Via Nova Therapeutics immediately gravitated to CDD Vault—especially after checking in with colleagues at other companies that were using it.

“When we talked to others about CDD Vault they all had the same thing to say: It’s safe, secure, supports collaboration, and has great visualization tools,” Taft says. “People we spoke with said they liked the flexibility, and the ability to provide securely controlled granular access to CROs and other parties. Everyone also said CDD Vault represented a tremendous value. So it seemed like a no brainer for us to give it a shot and evaluate it—and once we tried it we knew it was the solution we needed.”

**Used by Biologists and Chemists**

Via Nova biologists and chemists use CDD Vault to store data on small molecules of interest, along with related data.

“Both groups are equally using the Vault,” Taft says. “The chemists are registering all small molecule structures, and making sure they’re all updated and annotated, and that the new batches coming in are updated and annotated. Our biologists are uploading their data, and both the chemists and biologists are using the CDD Vault visualization tools.”

**Benefits**

Via Nova Therapeutics has found a number of benefits since adopting CDD Vault, including:

- Gaining “one true secure data repository”
- Supporting a globally dispersed workforce
- Facilitating collaboration

**Visualization.** Via Nova Therapeutics uses CDD Vault’s Visualization tool in its drug discovery efforts.
• Flexibility to upload rich data
• Integrated visualization tool
• Pricing that represents a “huge value”
• CDD is a great company to work with and “feels like a partnership”

**Gaining “One True Secure Data Repository”**

After trying to store and track data within its previous shared repository, Via Nova Therapeutics has deep appreciation for the ease of use and precision of CDD Vault.

“We’ve gained something mission critical from a business standpoint—having one true secure data repository,” Taft says. “All the new data we generate as a company gets uploaded into our CDD Vault. From there we can sort it, query the most important data really effectively and efficiently to find and then visualize it—if needed, with plots and graphics. And we can do this from wherever we have connectivity. I even look at data from my phone at times.”

Taft says the value of one true, secure, data repository extends to enhancing productivity.

“Some organizations might underestimate the value of one true source of data, but scientists are much more productive when they don’t have to constantly look for the final version of a file. The same goes for preparing for leadership meetings. With CDD Vault we always have our most current data immediately accessible, including when someone needs to take a deep dive into a particular data set.”

**Supporting a Globally Dispersed Workforce**

With its globally dispersed workforce, Via Nova Therapeutics values the unifying force of its CDD Vault.

“We’re rarely in the same building, let alone the same room, but we’re all working together using CDD Vault as our one true source of data,” Taft says. “Our people can access data from anywhere in the world—which is critical for our work.”

The company also appreciates that it can provide granular access to data to CROs and contractors.

“We have contractors and part-time employees that are supporting some of our projects,” Taft says. “We can give them access to the Vault, with layers of security so that they can only access the data required for their work, allowing them to register structures, upload data, as well as download their allowed data into other tools as needed. This helps them work more efficiently, and it frees us from having to always be doing things for them.”

**Facilitating Collaboration**

Via Nova Therapeutics values the ways in which CDD Vault facilitates collaboration across its operations.

“We have files come in almost every morning from our contract labs in Asia,” Taft says. “I can review the data from my home, send over a note to a colleague in a different county, who will QC the data and upload it into the Vault. I
can then pull the data into a query and visualize it and create some slides and take it to our executive leadership team meeting and show visualizations of the data to our executive team. And it's all pretty seamless, because we can do that workflow, whether we're at home or in an office space somewhere or traveling it really just allows us to get our work done super efficiently wherever we are. The collaboration that CDD Vault enables is awesome.”

**Flexibility to Upload Rich Data**

Via Nova Therapeutics is impressed with the wealth of supplementary information they can store within CDD Vault.

“We’re doing exclusively small molecules, but for some of our more advanced programs, we have lots of additional data associated with each molecule,” Taft explains. “One of our favorite features is how flexible CDD Vault is. You can pretty much upload any data you want.”

Taft was impressed by the ease with which the extra data was uploaded into CD Vault.

“We recently got some really complex PK data, analyzing three different tissue types across different time points,” Taft says. “It was a huge web of complicated data. My colleague, who does most of the uploading was able to do it within half an hour. This included plots of the PK timecourse curves, dose response curves, in vitro, in vivo, and DMPK. It's all in there. CDD Vault allows us to put everything we want in there very easily.”

**Integrated Visualization Tool**

The Visualization tool built into CDD Vault has proven popular with scientists at Via Nova Therapeutics.

“We really like that visualization is built into CDD Vault,” Taft says. “It’s already there, so if I’m querying some data, visualization is just one click away. Something as simple as a scatter plot can sometimes really help you look at the data in a way you need to. The Visualization tool is convenient, fast, and it allows you to do a lot of the visualization that you need to do on a day-to-day basis, in a very convenient, streamlined way.”

The company also likes that CDD Vault integrates seamlessly with third-party visualization tools.

“**We really like that visualization is built into CDD Vault. It’s already there, so if I’m querying some data, visualization is just one click away.**”

- Benjamin R. Taft, PhD, Senior Director, Chemistry, Via Nova Therapeutics

“If I need to do something that's a little more complex, I can easily export the data into our StarDrop™ software. And it's pretty seamless. It's really nice it has that function to interface with other software because you can't expect one piece of software to do everything. There's always going to be other things you want to do.”

**CDD Pricing Represents a “Huge Value”**

Via Nova Therapeutics wants to dedicate its resources toward research—not infrastructure.
“We want to stay lean as we move toward our next value inflection point in our company,” Taft says. “Coming from a large pharmaceutical background, you have a good idea of the kind of immense infrastructure they have for data storage. We’re able to achieve our centralized data repository needs with CDD Vault—without having to invest in infrastructure. And we are getting this at a great price point. We see CDD Vault as a huge value.”

**CDD is a Great Company to Work With “Feels Like a Partnership”**

Via Nova Therapeutics enjoys working with CDD, including the company’s excellent Customer Support.

“The CDD support team was extremely helpful in getting us up and running,” Taft says. “They helped us standardize formats for our first few hundred Vault entries, getting them stored the way we needed them to be. They have great knowledge and are dedicated to helping us in our drug discovery efforts. Working with CDD feels like a partnership.”

**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.collaboratedrug.com](http://www.collaboratedrug.com).