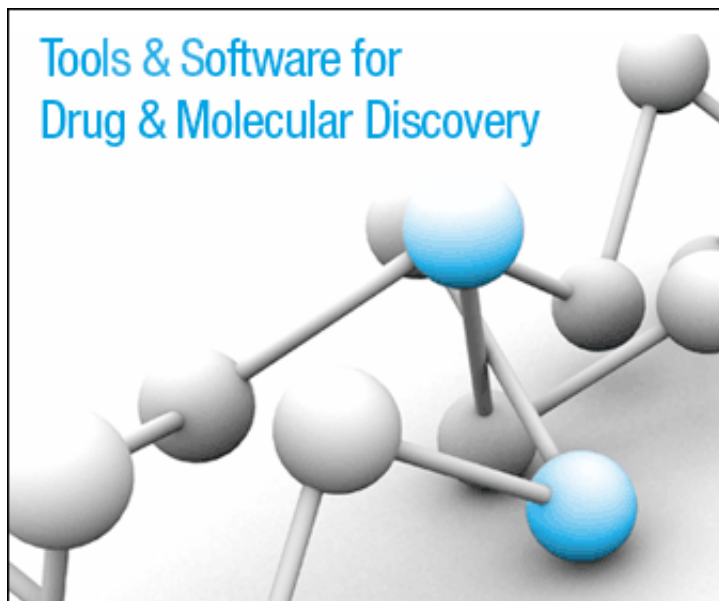


E-Lab Notebook Flying High



By Kevin Davies

May 15, 2007 | Electronic lab notebooks (ELNs) play an important role in capturing and documenting troves of R&D information generated at scientists' bench tops and desktops. But many ELNs, originally designed for chemistry applications, may not be suited for a biological workplace.

Columbus, Ohio-based Rescentris believes that its emphasis on biology first could pay dividends. It points to a flagship deployment at the Wright-Patterson Air Force Base in nearby Dayton, Ohio, where U.S. Air Force biologists and engineers have been early users of Rescentris' CERF (Collaborative Electronic Research Framework) ELN. Last year, the collaboration won the award for best knowledge management platform for R&D from CENSA, the Collaborative Electronic Laboratory Notebook Systems Association. This year, CERF won a coveted "[Best of Show](#)" award at the Bio-IT World Expo.

Up in the Air

Adel Mikhail, Rescentris CEO, says the U.S. Air Force does a "huge amount of biological research, issues from basic biology to toxicology to other things. They have many thousands of investigators in R&D." The Wright-Patterson base is expected to gain some 2,000 additional researchers over the next few years as a result of base closing consolidation.

In order to improve its data capture, documentation, and distribution of research, Wright-Patterson entrusted selection of its ELN to Christopher Geib, project engineer for Science Applications International Corporation (SAIC), a major government contractor. "There were redundancies in research," says Geib. "There were sophisticated instruments generating copious quantities of information, producing only paper printouts or proprietary reports. Most importantly, there were lots and lots of paper notebooks. Anyone at any time might have books in their possession."

Geib's mission was to "take all those different silos of information, integrate them, and then bring them into the digital world."

Andrea Stapleton, the molecular biologist/genomics laboratory manager at the Wright-Patterson laboratory, says there was a need for "one central repository where researchers could go — our collaborators, research assistants, PI's — where they could put their data and organize it."

Geib chose CERF over offerings from Waters and CambridgeSoft largely because of its potential extensibility and flexibility. "It was doing out of the box virtually everything we needed," says Geib. "You've never seen anyone more excited about software than these guys, they were completely enamored," says Mikhail.

CERF offers easy customization for a diverse range of activities and protocols, facilitated by its ontology-

based design. “We could have a logistics CERF, an operations CERF — any number of different formats or designs,” says Geib. “It didn’t have to be just a biology CERF. When the ontology changes, CERF has the flexibility to function well in different environments.”

Future Proof

CERF is “future proof,” says Mikhail. “It can be extended by the client. It’s built by biologists from the ground up, not a chemistry product trying to do biology.” He adds that it is “the only product of its kind built on ontologies. It’s completely compelling; they allow extensibility and modification of the software without writing a line of code.”

This has resulted in significant time-savings: results can be recorded directly into the ELN from the lab, and PI’s can review projects quickly. CERF also provides a means for scientists to share experimental data internally and with external partners.

CERF also helps keep track of work when a scientist leaves. Says Stapleton: “Typically when [a] person left a project, the paper data was archived and sometimes lost. With CERF we can easily access that data as we need it.”

“CERF has saved the government and U.S. taxpayers a lot of money,” says Geib. “Because we’re doing this electronically, the data integrity is better. Information doesn’t get lost.” CERF’s archiving feature allows Air Force staff to generate a single notebook that satisfies both military and federal government standards for archived records.

Rescentris hopes that its success with the U.S. Air Force and other government agencies including the CDC will bode well as it pushes into industry. “Pharma is a difficult industry,” Mikhail admits. “They have particular nuances that are difficult to penetrate; it’s a cumbersome sales cycle. But because we’ve won acclaim, they’ve come to us.” Several big pharmas are currently reviewing CERF, he says.

“The ELN market is about to explode,” says Mikhail. “This is the first time where the industry recognizes that to be competitive, they have to have an ELN. We are clearly the only product intended entirely for the biologist.”

Editor’s Note: This article is not an endorsement by the U.S. Air Force.

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Page 1 of 1