

How Karo Bio took advantage of their existing cheminformatics platform when introducing electronic lab notebooks

Karo Bio is one of the leading drug discovery and development companies in Sweden. By introducing the out-of-the-box solution ConturELN they secure their knowledge base while making sure that experiments are closed, signed, and witnessed. What's more, Karo Bio could benefit from investments already made thanks to the seamless fit between ConturELN and their existing cheminformatics platform from Accelrys.

During the last years, Swedish Karo Bio has taken the step from being a small biotech company with early research to becoming a downright pharmaceutical company with in-house preclinical development resources and expertise for clinical development.

– What we discover here, the chemical substance, that's where we make our money. Therefore, having a lab notebook that guarantees security in IP rights is extremely important, says Henrik Jernstedt, Research Scientist (M.Sc.) at Karo Bio's Medicinal Chemistry department.

When Karo Bio started looking into the ELN market in 2004, most of the existing electronic lab notebook systems didn't have the functionalities that Karo Bio wanted and they were not compatible with their existing infrastructure. In addition, the available ELNs were extremely expensive.

During the fall 2005 Karo Bio began discussions with Contur. Impressed by the adaptability, flexibility and capacity of ConturELN, Karo Bio decided to carry out a pilot installation in their chemistry department.

– We were floored by ConturELN which was up-and-running after only a few hours of set-up. With our ad hoc solution for our databases it can be difficult to add third party software that works straight off, but ConturELN required no re-configurations at all, it was simply just plug-and-play, says Christer Enkvist, System Administrator at Karo Bio and Project Manager for the ConturELN implementation.

Karo Bio's cheminformatics infrastructure is primarily based around the Accord Enterprise Informatics database from Accelrys using DS Accord for Excel Enterprise as the main desktop application. Through Oracle they can also connect towards other databases such as the IDBS ActivityBase used by their biology department as well as to several inhouse chemistry-related databases, i.e. safety and inventory. As ConturELN provides seamless connectivity with several cheminformatics packages from market leaders such as MDL, Accelrys and ChemAxon, Karo Bio could leverage existing investments not having to migrate their chemistry database.

Karo Bio wanted an ELN system that could create business benefits from day 1, and they selected ConturELN based on three important requirements.

First of all, the system had to be **uncomplicated and flexible**. The ConturELN is just as easy to use as a regular paper lab notebook. People with minimum

computer knowledge can use the system after only 1 hour of training. Creating experiment templates does not require any programming efforts and can be done by individuals with minimum computer experience.

Secondly, Karo Bio needed to have good **search ability**. ConturELN provides good search ability with the possibility to perform free-text search, date & time search, structure & reaction search and more. This makes it easy to see what experiments have been done before and to acquire already existing knowledge. With time this will be even more obvious as the knowledge base grows.

Lastly and most importantly, Karo Bio wanted an ELN system that could provide strong **IP security**. For a company like Karo Bio time is money. It is extremely important that experiments are completed, signed and witnessed correctly and on time. With the paper notebooks Karo Bio encountered having many experiments un-signed for long periods of time, weakening the whole Intellectual Property rights situation, but thanks to ConturELN they have been able to enforce their IP protection.

E-signatures, which is an integrated part of ConturELN and contributes to high IP security, was also an important feature demanded by Karo Bio's IP department.

– By using e-signatures we will have enormous efficiency gains, making sure that experiments are closed, signed and witnessed. I think that the reminders/alerts in ConturELN will be a driving force for our staff to send in their experiments on time and in a correct format. It will also implicate a much stronger IP security, says Christer Enkvist.

The pilot installation of ConturELN has been a great success and more than 90 % of the users are very positive. Karo Bio's management is also satisfied as ConturELN makes it easy for them to supervise results and history in a much more efficient way.

ConturELN has now been rolled-out to Karo Bio's entire chemistry department with the objective to include the biology department within the nearest future. With the minimum training that is needed it will be very easy to get new users up-and-running.

– There is a great value in having the chemists leading the way initially, to show that an electronic lab notebook system really works, and that it works for everyone. ConturELN is so easy to work with and we are very happy with it. I believe that ultimately we will implement ConturELN corporate-wide, there is no way we're going back to paper books, Henrik Jernstedt concludes.