

CASE STUDY

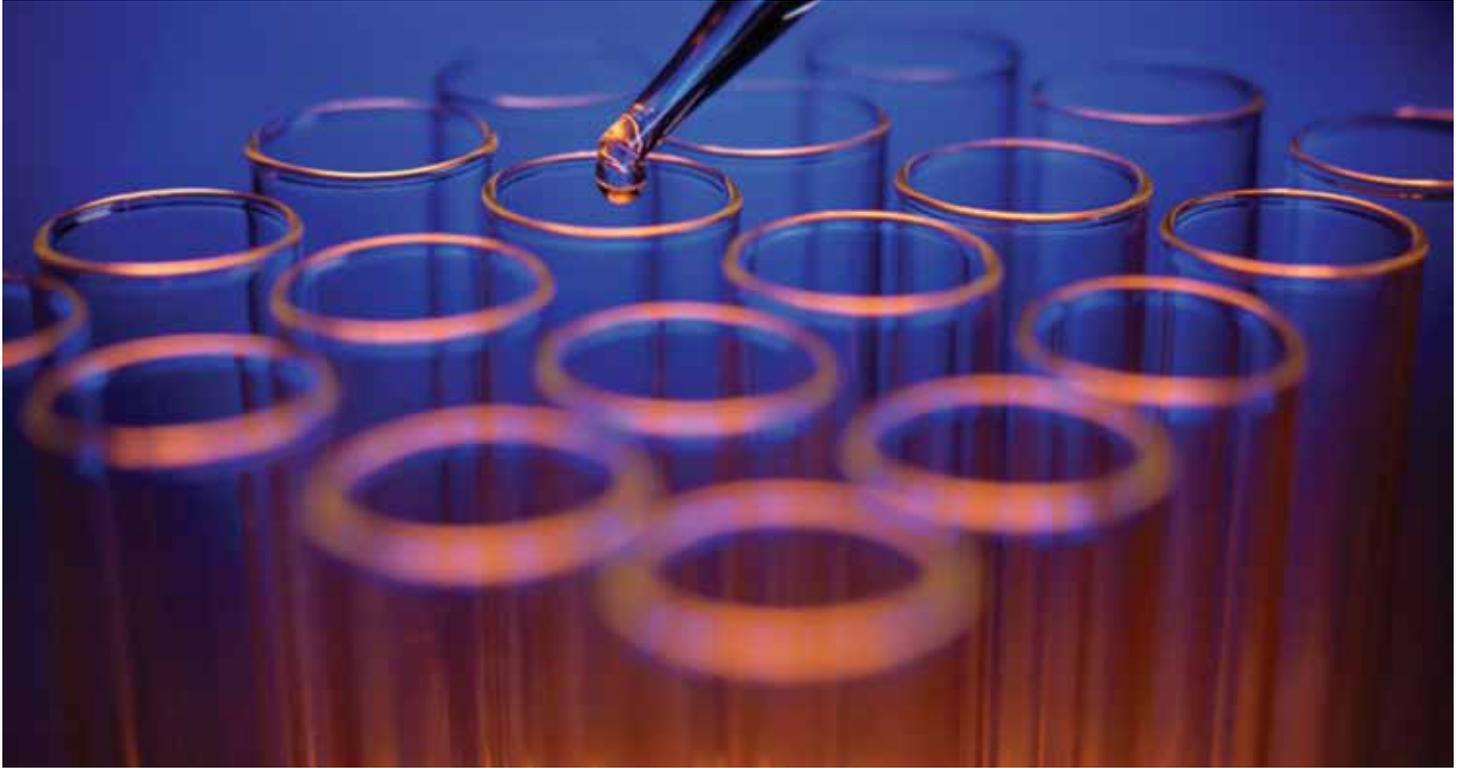
Scopus



HOW SCOPUS SUPPORTS RAPID INNOVATION IN DIAGNOSTIC TESTING



ELSEVIER



A biologist by training, Chris* is an experienced research scientist in parasitology and virology. In his current role as a regional head of R&D, Chris is leading several Research & Development groups in test development and product support for a global veterinary diagnostics company.

Flexibility and a firm handle on the latest advancements are essential to successfully operating in a changing environment

Chris' groups focus on existing product support as well as ongoing evolution of tests that must detect antibodies and antigens as well as parasitic, bacterial or viral disease in livestock animals. This presents his teams with a wide variety of conditions and diseases to research. Successful new test development requires building a solid knowledge of these various subjects and awareness of the latest scientific developments in all relevant areas.

*For confidentiality purposes, names have been changed.

“For a new virus, we don’t know anything about it. We go to Scopus and type it in, see what we get. It’s like a snowball; you start with something, you get more information, you look at the references, build up your knowledge base and also learn the names of which groups are working on it.”

Chris
Head of R&D, diagnostic testing
Scopus User

“You’re not an expert in everything, so you have to read a lot, and then identify key opinion leaders in this area and talk to them. Depending on our customer’s requirements or the type of test, there are questions about what kind of reagents may be needed,” Chris explains. “So you need a lot of background information first before you can start a project.”

Other challenges facing Chris and his teams are keeping up with changes in the progress or state of the disease and the variations of testing requirements across different countries or regions.

“There can be shifts in the control or eradication of the disease; there also are changes globally to the requirements for the test,” he says. “We must constantly try to improve our system so we can increase activity specifically to adjust the key components of the test or its depth to the new situation.”

Scopus quickly connects researchers to the information that facilitates next steps

Given the variety of pathogens and diseases for which Chris and his R&D teams must develop diagnostic tests, having an easily accessible means of finding the latest research on bacteria, viruses, antibodies and antigens is a critical first step in a new project. The connection to ScienceDirect means they have full-text journal access so they can move forward quickly once they find what they need.

“Scopus and ScienceDirect provide the right information and give us the tools to find or get that information, to analyze it correctly and contact the right people to talk to. This helps to keep the knowledge level high,” Chris says.

In particular, the breadth and functionality of Scopus searching allows the team to build on their initial search and follow references until they have a complete picture of the topic at hand.

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The opportunity to identify and establish relationships with other scientists working on similar problems is a powerful benefit of searching with Scopus. Chris explains that his teams regularly reach out to other researchers with questions or to augment their learning.

“We have a very global business, so it’s important to know the people who have an impact on what’s going on in different countries, and we try to identify them... Sometimes, you can keep this relationship and when there is another question in the same area, since you already know the people now, you can simply call them to potentially collaborate on another project.”

“Scopus was very, very helpful because we were able to easily get this information... we used the sequence information to make a decision on which protein to target. Scopus had a big impact, because without it, our decisions would have been delayed.”

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Rapid innovation in testing helps contain outbreaks in an environment of developing events or diseases

Chris and his teams often take on rapid innovation projects in addition to their work on existing products. They are tasked with addressing new outbreaks of disease or pathogens that can evolve from animals to humans either by contaminating the food chain or direct infection. They are also responsible for fast-tracked product development in response to the migration of diseases that were previously contained in one region to parts of the world in which livestock had never been exposed and are particularly vulnerable.

When the team needed to rapidly develop a test for a virus that had jumped continents and threatened one such vulnerable livestock population, Scopus searches quickly identified both relevant literature to get up to speed and a fellow researcher with whom to partner in calibrating data.

“Scopus was important in learning where else in the world people have similar issues with similar viruses. From literature we learned that similar viruses are important in Australia and China. We looked at which viruses are involved and what these countries are doing with them. Then we contacted the key opinion leaders in these areas to understand what’s needed and what they have already,” he says. “And most of this information comes from the first wave of literature review.”

Getting this information fast was crucial, as the team ran up against a tight development timeline. “We had to develop a new test in a nine-month period. For a new product, that is a very short time, but there was an urgent need from customers to address the situation,” Chris says. “The typical development time needed for such a product is 1.5 years, so this project represented a 50% decrease in the development cycle time.”

Without the ability to quickly identify relevant research and key scientists with whom to partner, the team would have been delayed in their work. Scopus was vital to speeding up the research process in order to meet the abbreviated development time. Chris explains:

“Scopus was very, very helpful because we were able to easily get this information – in this case which viruses are very close to the ones we were researching and which scientists are working on that. That picture was the way we found our data calibration partner, and we used the sequence information to make a decision on which protein to target. Scopus had a big impact, because without it, our decisions would have been delayed.”

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Speed and ease of access drive increased project volume over that of past teams

In the past, Chris might have de-prioritized certain projects due to the time and effort required to get the necessary information and literature. With instant, easy access to literature via Scopus and ScienceDirect, teams can much more efficiently get up to speed and stay on track with R&D projects. On average, Chris uses Scopus once a week, typically spending a half-day per week reading papers he identifies by using it.

“Now we do things you wouldn’t have done before just because it’s so easy to get the information. We are more flexible and open to doing something different from standard,” he says. “Scopus is very customer-friendly; you sit in front of your computer and look for the literature... You get more information, from all different fields. Before, you may have looked at your five journals; maybe now you have 5,000 journals you can search. It saves a lot of time.”