

CASE STUDY

ScienceDirect®

Medical Device Industry

How ScienceDirect boosts competitiveness in the medical device industry



SUMMARY

Discover how a global healthcare solutions company in the U.S. keeps abreast of new market innovations and product developments in the field of medical devices and therapeutics with the help of ScienceDirect.

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– Linnus, Chemist, Medical device R&D, ScienceDirect user

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An experienced chemist at a global healthcare solutions company in the U.S., Linnus’ current role is two-fold; day-to-day, he is responsible for the quality control of medical devices, however, he is also frequently involved with project teams, working on new innovations and product developments that both feed and build on the company’s pipeline of new medical devices in therapeutic areas.

Working as part of a team, whether during quality control testing, or project work, it’s important for Linnus that the team works collaboratively towards a common goal, and that everyone is kept informed of market developments, new techniques and innovations on an ongoing basis. Up-to-date and reliable information is a must for Linnus, as is the ability to quickly share relevant insights around the team: “We always share new information to ensure that we’re all on the same page and heading in the same direction in terms of where we want a project to lead us.”

R&D focus: enhancing project efficiency

Keeping up-to-date with new trends and developments in the fields of medical devices and therapeutics via ScienceDirect is a key priority for Linnus and his team. “We’re always looking for new developments and innovations in both science and technology; new information comes in every day so you have to be on top of things,” he says.

As well as helping ignite ideas for novel therapeutics or new development projects, Linnus and his team use ScienceDirect to deepen their understanding of the specific fields they’re working in at any one time, and particularly to help direct or enhance their project work. For Linnus, as with most scientists, the first step in any project is desk research; understanding what’s gone before is a must, either to ensure product ideas are novel, or to expand the project scope beyond its original intention. By using ScienceDirect, Linnus benefits from its breadth and depth of content, as well as its advanced search capabilities for initial prior art searches.

He explains, “While looking at microbial compounds that could have either protective or therapeutic advantages for new medical devices, for example, we investigated a broad range of promising lines of leaving groups via ScienceDirect. In the process, we found a number of microbial groups that were possible candidates to be used in, or bonded to, the surface of the devices.”

Whatever his task, Linnus knows that he can rely on ScienceDirect to provide the right information for him and his team, as well as quick answers to any queries that they may have: “It’s very current; it gives us confidence that whatever information we find is what’s out there, and crucially, it’s the latest available.”

In a competitive environment, getting to market first is paramount

Linnus acknowledges that without ScienceDirect his role would be much more challenging. From a commercial perspective, by streamlining the research process, ScienceDirect has significantly increased the efficiency of the research and development process for Linnus. As it has helped to reduce the time that projects take to complete to “within a year”, by truncating the desk research phase of new proposals and his daily quality control work, this ultimately means that the company’s products get to market faster.

Linnus explains, “It’s made life very easy for researchers; there was a time when you’d have to sit in a library and skim through thousands of abstracts, but now, it makes the turnaround for any research so short – it’s exciting and opens up new opportunities.”

The sheer breadth of content on ScienceDirect enables Linnus to quickly pinpoint new ideas across multiple disciplines. Combined with its innate alert functions and the ability to immediately re-run prior searches, ScienceDirect allows Linnus and his team of researchers to stay up-to-date with industry developments within a matter of minutes.

Rather than being restricted to just one area of research, ScienceDirect also facilitates interdisciplinary working, ensuring that Linnus and his team have access to all relevant information, irrespective of its source publication or scientific specialism.

As with most industries, innovation is critical to ongoing market success, business growth, and profitability. In the case of the medical device and therapeutics industries, a key challenge for Linnus and his team is making sure that new ideas for products and compounds are genuinely novel.

“As scientists we always want to deal with novel ideas, and that’s always a challenge,” he says. ScienceDirect enables Linnus to stay informed about technologies and product releases, so he and his team can be sure that their work will ultimately generate commercial value for the organisation.

He says, “We live in a competitive world, and in a competitive world we have to be first to market. In our company, releasing a new medical device is very critical for the future. If a competitor releases that device earlier than us, that’s an issue. We have to be first.”

The more efficiently and effectively Linnus and his team hand their validated findings over to the next stage of development, the faster those ideas can be commercialised.

Explaining further, Linnus says: “ScienceDirect has helped me a lot in my work with medical devices; it’s a window into the global world of research, showing what has been achieved already, by whom and how they did it. It’s a one-stop invaluable reference point for information, so it’s really useful.

He continues: “[Before starting a project] you’ve got to ensure that you know what other people in your field are doing, where they are doing it, and how, etc. You have to gather all available resources before you can really say: ‘this seems to be new and current, and this is the avenue that we want to pursue.’ ScienceDirect really supports us in this process, particularly because of the depth and breadth of its scientific content.”

Working in a highly regulated environment, ScienceDirect also provides a reliable and current knowledge base to help Linnus and his team further understand the wider context and potential implications on their work from a regulatory perspective.

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Using research to augment problem solving: the role of ScienceDirect

During his regular day-to-day work on quality control, Linnus often has to look at novel ways to prevent contamination of medical devices, for example from ionic contamination during manufacturing. Here, he says ScienceDirect helps him investigate such challenges further, finding a solution to the problem much quicker than was previously possible: “Sometimes you’re in a fix as to what could have caused something, so it’s always good to check out the real concerns in the field, including issues or challenges that other people are dealing with, and how.”

An advocate of using ScienceDirect to generate new project ideas, as well as to validate new discoveries and ongoing work, Linnus has encouraged his wider team to access the comprehensive scientific database, not only to enhance and advance their own work, but to promote the sharing of ideas and discussion of key insights. Distributing knowledge amongst the team can sometimes help others to overcome technical challenges or inspire creative new ideas for medical devices, their components, or therapeutics.

Linnus plans to further expand his use of ScienceDirect in the future by employing some of the system’s distinctive functions to enhance research efficiencies. Using the personalised alerts tool, for example, will help Linnus enhance his content searches, providing an easy and quick way for him to stay informed with current research trends and developments.

Linnus concludes: “ScienceDirect gives us a real competitive advantage. In my early career as a researcher, it could take months to achieve the level of research insights that I can now gain in a day from ScienceDirect. This opens up new opportunities and potential which were previously not possible.”