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DRUG DISCOVERY & DEVELOPMENT

Case Study: How a Mid-Market Biopharma Company Avoids the Risks of Being Wrong

A pre-clinical research leader discusses how access to ScienceDirect in early drug discovery & development can minimize risks of late-stage costs and failure



Summary

Limiting early-stage research to only abstracts and excerpted data introduces the risk of missing essential information, which can result in substantial costs in later stages. Comprehensive full-text access to scientific information from all relevant research disciplines is critical to business success in drug discovery and development. Learn how a pre-clinical research leader avoids the risks of being wrong by using ScienceDirect, Elsevier's online database of scientific publications, to access full-text articles relevant to his projects.



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—Roger Parker, Pre-Clinical Research Leader



Avoid the risks in late stage R&D

Roger Parker*, a leading pre-clinical research leader recently shared his advice on how to avoid costly mistakes when working in pharmaceutical and biotech companies in early-stage drug discovery. Investigating potential new molecules and validating methods of action are two of his primary tasks.

To overcome the challenges of validation in early stage research, Roger needs access to reliable, up-to-date and comprehensive scientific information. He recognizes the dangers involved in not consulting full-text articles in his work: “You can be wrong in academia, but it’s a huge risk to be wrong in drug discovery.”

Parker has witnessed how the failure to conduct thorough literature research in early-stage R&D can create significant problems in later phases. A pharmaceutical company he worked for earlier in his career bought a compound in Phase III but discovered in trials that patients did not tolerate it well. Parker’s team was able to develop a coated formulation for the compound, but its successful development required substantial additional investment.

His experience illustrates the importance of consulting the literature from the outset. “Without thoroughly looking at the details, you can end up wasting a lot of money,” Parker notes. Relying only on abstracts and excerpted data in the early stage introduces the possibility of not recognizing a serious issue until later stages. “There’s a huge risk in not reading the full text and not having access to the graphs and the actual data to ensure you have the context and understanding as to why something was done and not just how.”

Improving early-stage viability time and costs

ScienceDirect helps Parker improve R&D productivity and make validation processes more efficient, resulting in time and cost savings. “Being able to review full-text articles online prevents you from moving into the next phase without being sure of what’s been done before and how well previous compounds or formulations worked,” Parker says. “The more vetted you are on the scientific front, the more viability you have in getting to later stages in the development process.”

Another benefit of being well-vetted on the scientific front is that it can improve the rate of success in qualifying for government grants, compared to the competition. Non-dilutive funding from these sources can provide millions of dollars to support a start-up’s R&D efforts, without requiring the sale of company shares or the loss of control over the company.

*For confidentiality purposes, names have been changed.

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– **Roger Parker**
Pre-Clinical Research Leader

A competitive edge using ScienceDirect

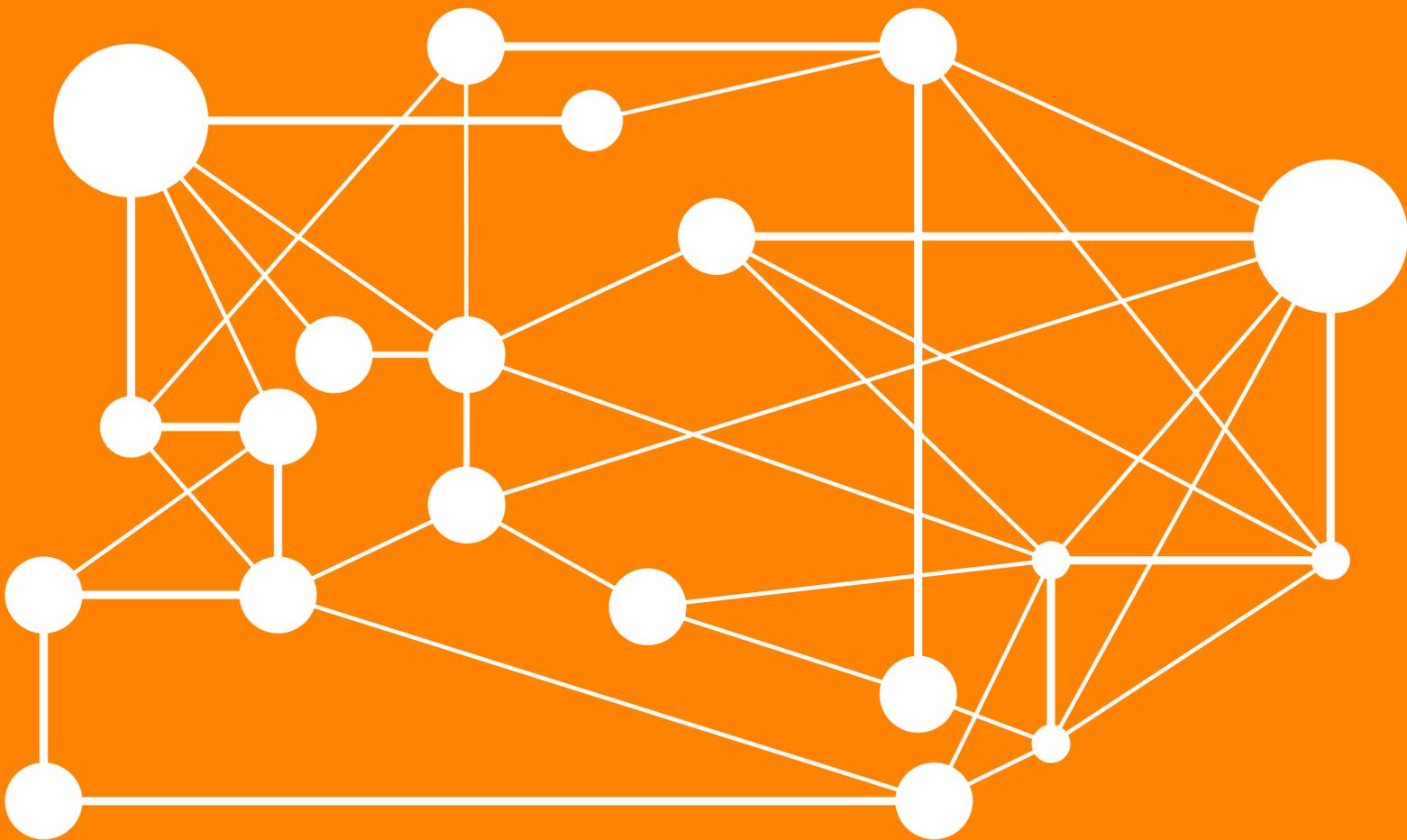
Using a broad set of data gives pharma researchers a competitive edge in today’s data-driven drug discovery and development process. Parker relies on ScienceDirect to retrieve full-text articles: “Having an article’s full text is essential to my work, so I’ve used ScienceDirect in the past while working for mid-size to large pharmaceutical companies.”

The cross-discipline literature sets available in ScienceDirect provide additional value to Parker: “Chemistry and formulations literature is a whole different story than translational biology and pharmacology, so it’s useful to have access to that realm all in one place.”

Having easy access to full-text articles enables him to evaluate citations in the context of newer literature. “Something I learned in grad school is to never cite something you haven’t read,” Parker adds. “And you can’t just rely on citations alone because sometimes even a paper in a high-profile science journal that is cited widely can be wrong.”

“ScienceDirect also allows me go directly to the bibliography,” he continues. “For example, if I’m researching pharmacokinetics, I can input the search terms to find related papers and also look at a paper’s bibliography to find older literature.”

Parker concludes: “Having access to full-text articles from all relevant disciplines in one place is very valuable and very efficient and ensures you are well aware of what your competition is doing. Compared to some of the other search methodologies and search engines, in ScienceDirect you can move through the literature easily and connect the dots quickly. I would recommend—and have recommended—ScienceDirect to all my colleagues.”



ScienceDirect

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