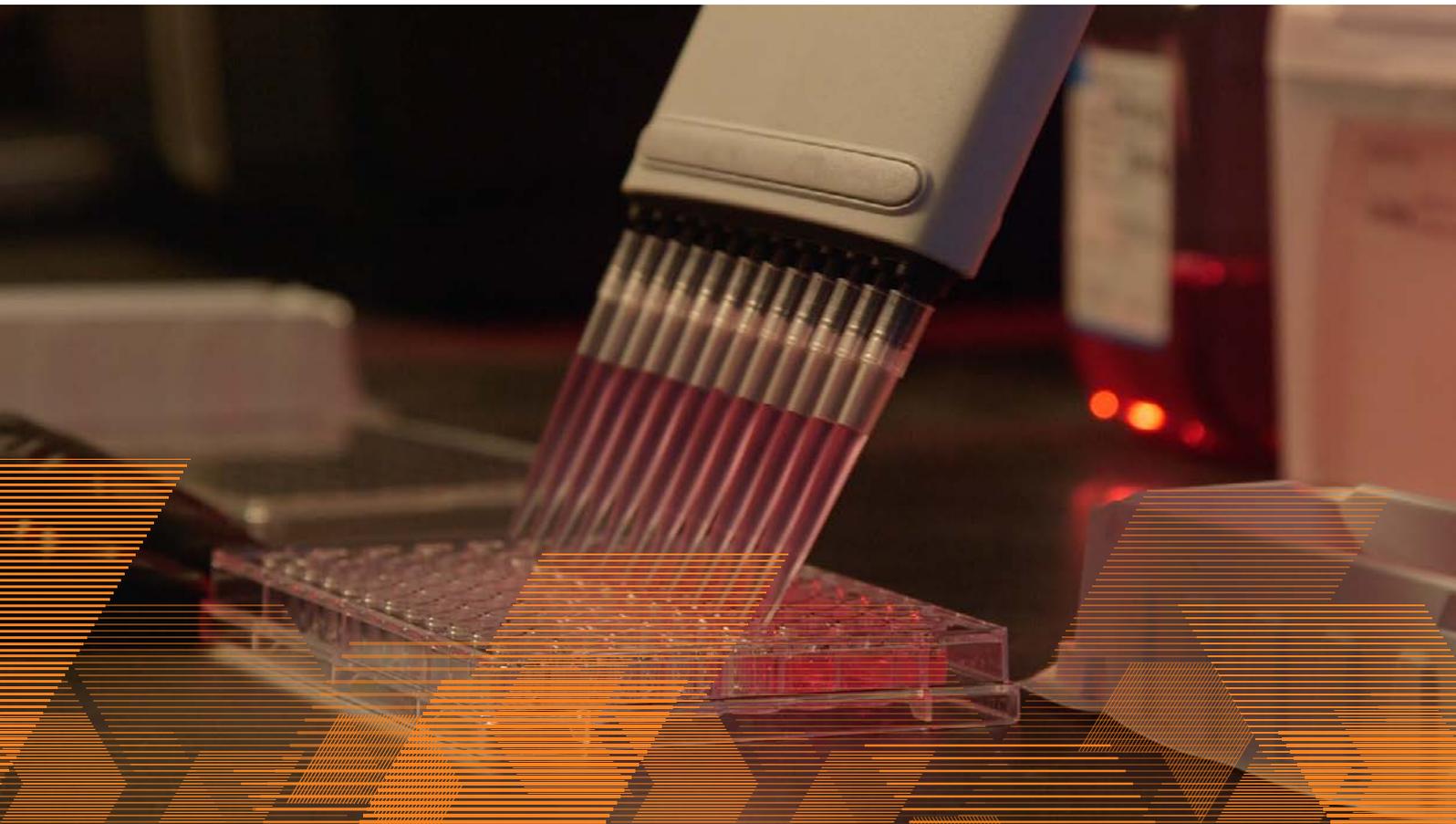


Elsevier's R&D Solutions  
DRUG DISCOVERY & DEVELOPMENT

## Solution Story: Beating the competition to market in drug development

Reset Therapeutics leverages the interoperability of Elsevier's R&D Solutions to quickly overcome drug development challenges and reach the market faster



### Summary

Scientists at Reset Therapeutics, a Bay Area biopharmaceutical start-up, discuss how access to Elsevier's R&D Solutions is helping them to overcome the challenges of discovering and developing first-in-class compounds for treatment of sleep-related disorders and other metabolic conditions.

**“To give ourselves the best competitive position and the best level of equivalence with potential collaborators, we have to know what everybody else knows. The only way to do that is to have access to a good suite of research tools.”**

— Ross Bersot, CEO, Reset Therapeutics



**Ross Bersot, CEO of Reset Therapeutics**

Ross founded Reset Therapeutics in 2008 with Dr. Ronald Evans of the Salk Institute and Dr. Joseph Takahashi and Dr. Masashi Yanagisawa from the University of Texas Southwestern Medical Center. Prior to co-founding Reset, Mr. Bersot served as a Managing Director of Bay City Capital, where he focused on investment opportunities in visionary biopharmaceutical and technology companies

The goal of Reset Therapeutics, a young discovery-stage biopharmaceutical company, is to develop first-in-class approaches to treat sleep-related disorders by restoring natural circadian rhythms to patients suffering such dysregulation. They are also working on therapeutics for other metabolic conditions, such as diabetes and Cushing’s syndrome.

The focus of the chemistry program at Reset Therapeutics has recently broadened from a single compound to the development of a suite of compounds that will hopefully make it into clinical trials. To facilitate this expansion and ease the transition from discovery through preclinical evaluation into the clinical phase, the company has integrated new teams, which has more than doubled the company size.

We recently met with the CEO and representatives of research teams from Reset Therapeutics to get a better understanding of the role of information in their daily work and to see how Elsevier’s R&D Solutions help them make decisions with confidence and get to market faster.

#### **Challenge**

To carry out the company’s mission, Reset Therapeutics researchers must design and synthesize molecules that can modify the processes involved in circadian rhythms in the brain and peripheral tissue. Mr. Bersot explains how important data from peer-reviewed literature is in that process: “For our teams to do their job in the best way, we need information resources that support in-depth data retrieval. We have to complement our own experimental results and the data from our interactions with our founders and other experts in the field with information from the literature.”

Like all pharma and biotech companies — start-ups and established companies alike — Reset Therapeutics faces a serious challenge due to the ever-increasing amount of peer-reviewed scientific literature. Circadian rhythm research has been a very active field in recent years. The company also needs to stay on top of the patent literature to maintain awareness of existing substances and processes, determine if their compounds are patentable, and see what potential competitors are working on.

#### **Solution**

Elsevier’s R&D Solutions enable the various teams at Reset Therapeutics to overcome the drug discovery and development challenges they face in business development, medicinal chemistry and translational medicine research, and preparations for clinical trials.

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### Developing a healthy business

CEO Ross Bersot depends on ScienceDirect® and PharmaPendium® to ensure that Reset Therapeutics continues to push forward. “I use ScienceDirect to look for authors and disease areas that are of interest to us. With it, I can quickly create a query that gives me the right set of papers to understand where work in the industry has been going, who’s been advancing it, and whether I need to get in touch with that person.”

PharmaPendium helps Mr. Bersot identify approved drugs relevant to his company’s research. “PharmaPendium is an objective source for looking at what’s actually been approved and what’s known to be useful for a certain disease area or against a certain disease target. The breadth of the knowledge and the important historical context, which goes back to the 19th century, is remarkable. The answers from PharmaPendium help us to make confident decisions.”

### Understanding the molecules that work

The medicinal chemistry team relies on Reaxys®, Reaxys Medicinal Chemistry and ScienceDirect to find information relevant to their work. Bruce Clapham, Director of Medicinal Chemistry, explains their process: “We go into Reaxys to find molecules that fit our needs and reactions that we might need to investigate. It also allows us to investigate the patents for those molecules and processes. Reaxys Medicinal Chemistry helps to contextualize that molecule in terms of biological interactions, and it’s great that it’s available through the same interface as Reaxys. We can get insight into experimental and synthesis pathways from Reaxys and then go directly from within the interface to ScienceDirect, to read the full text of the relevant peer-reviewed article.”

One of his team members, Michelle Fleury, adds: “Reaxys is very simple and easy to use. You can look at the reagent and catalyst, and it has a lot of intuitive sub-tabs, so you can decide what’s important for you in your reaction. Reaxys also helps us identify iterations that have not worked in the past and eliminate those molecules from consideration. That saves a lot of time.”

### From translational medicine to clinical preparation

ScienceDirect and Embase® help Jamie Cope, Reset’s Director of Translational Medicine, stay current with the literature. “ScienceDirect is wonderful because the powerful search interface makes it easy to find the right articles and I can just click through to get a PDF. I have RSS feeds and email alerts for new literature relevant to my searches in both ScienceDirect and Embase.”

PharmaPendium has also become essential to Cope’s work, providing insights for clinical trials and a greater understanding of therapeutic indications and protocols. “I look at competitor drugs for indications on the best path to approval and at publically available comments from the FDA. That’s a unique resource that’s not available in other research solutions and having it in PharmaPendium saves me from spending hours digging through records on the FDA website.”



### Business Impact

Reset Therapeutics scientists say that access to scientific information from a single trusted source through inter-connected research solutions helps to advance its drug discovery and development programs. Mr. Bersot explains: “To give ourselves the best competitive position and the best level of equivalence with potential collaborators for later-stage clinical trials, we have to know what everybody else knows. The only way to do that is to have access to a good suite of research tools like the Elsevier solutions.”

### The value of quick access to chemistry answers

Thanks to Reaxys, Reaxys Medicinal Chemistry and ScienceDirect, the medicinal chemistry team can move faster in the race against other drug developers, all of whom want to be first to market. Chemist Avi Stricker states: “Every time we can shave a minute, an hour or a day off any process, it allows us to test more iterations. If I didn’t have Reaxys, reactions would probably take me an extra month because I would have to search through journals and patents to find precise data that Reaxys retrieves for me.”

Mr. Clapham adds: “We can use Reaxys to look for reaction conditions and can go from there directly to ScienceDirect articles. That means that if we have an idea in our 10 o’clock meeting, we may have the chemistry working by that same afternoon — or see that our idea won’t work and avoid wasting time and resources.”

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### The power of knowledge from patents, clinical trials and the literature

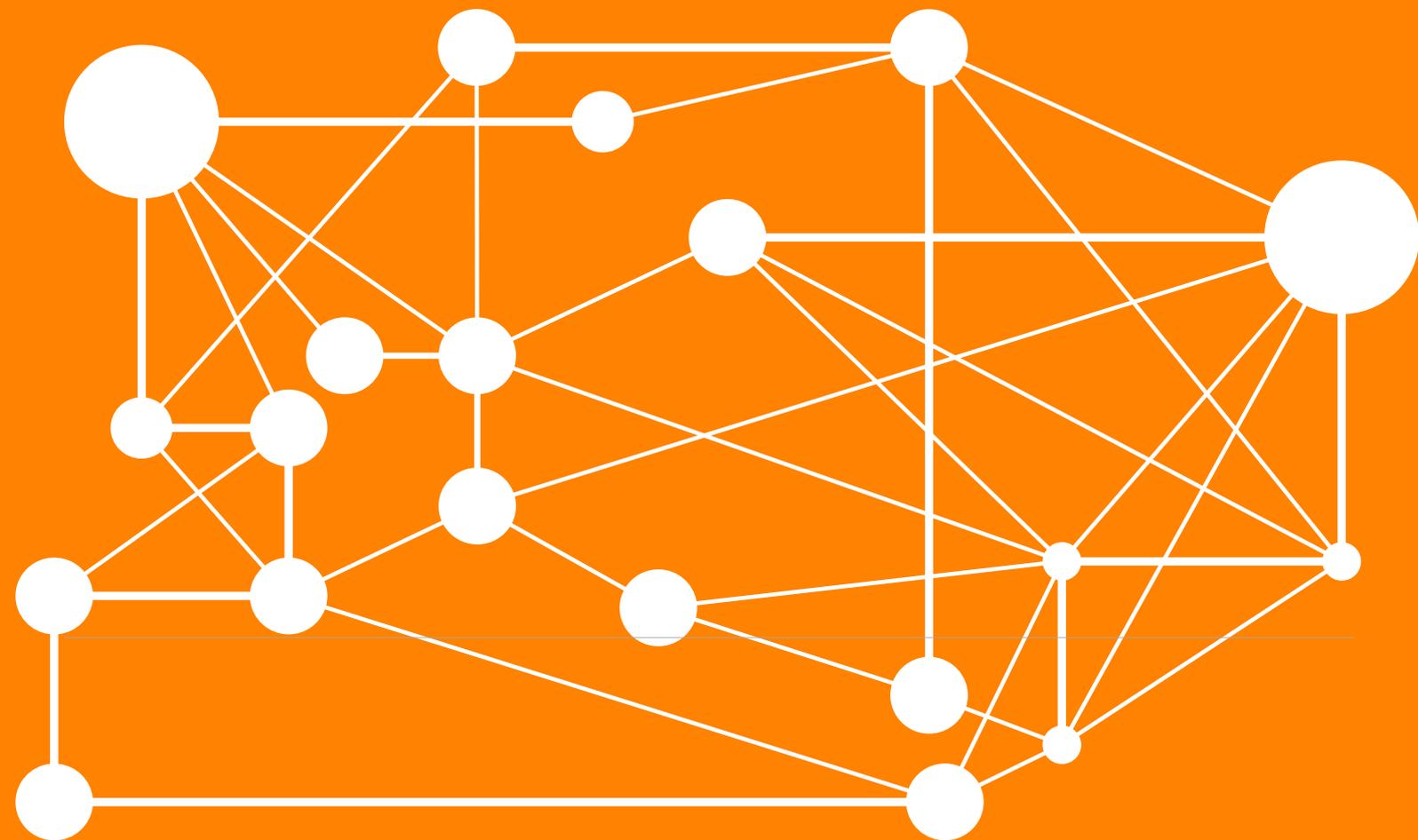
When it comes to patents, Mr. Cope is very clear that Reaxys is an essential solution: “Knowing the prior art before you write a patent and knowing whether potential competitors are trying to go after your ideas means everything to a small company like Reset Therapeutics. Reaxys helps us to establish prior art.”

He is also convinced of the importance of the FDA documents in PharmaPendium. “By using PharmaPendium, we’re better able to plan and design clinical trials, which has the potential to reduce our drug development costs.”

By enabling him to identify the right consultants and industry key opinion leaders, ScienceDirect helps Mr. Bersot discover new compounds and develop them efficiently. “It would have taken me a lot of time finding contacts personally and probably wouldn’t have even come close to reaching the pool of names that ScienceDirect opened up to us.”

Above all, Reset must remain nimble as it grows and keep pushing toward its ultimate goal to innovate, the key to any small start-up’s survival. “Depending on the therapeutic area you’re in, the odds of a compound making it from preclinical to the market is less than two percent,” observes Bersot. “Access to high-quality information helps increase the odds of success.”





# R&D Solutions for Pharma & Life Sciences

Elsevier's R&D Solutions is a portfolio of tools that integrate data, analytics and technology capabilities to help pharmaceutical and life sciences customers realize the potential of data-driven drug discovery and development.

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