10 Fastest Growing Life Sciences Companies to Watch
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10 FASTEST GROWING LIFE SCIENCE COMPANIES TO WATCH IN 2022

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Telehealth: A Temporary Necessity or the New Normal?

The **Rise** of **Data Science** and Artificial Intelligence in Health Care Industry: How It Saves Lives

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CEO

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There are over 5,000 human diseases that do not have a cure. This presents multiple opportunities and challenges for researchers all over the world who are developing new medicines to combat these diseases.

One such obstacle is throughput, as researchers try to screen and characterize large libraries of antibody candidates as quickly as possible during the early screening process for an efficacious therapeutic. A second challenge is being able to spot failed candidates earlier so as not to spend development dollars on candidates that will not prove to be suitable therapeutics. Time-to-market and the cost of life-saving medicines matter not only to biopharmaceutical companies but to the many millions of people who will use them. Carterra's LSA platform addresses all these challenges enabling large and small companies to bring therapeutics to the market at a rapid pace.

Carterra is a leading supplier of cutting-edge technology that helps researchers unearth novel therapeutic candidates faster. The LSA uses real-time High-Throughput Surface Plasmon Resonance (HT-SPR) technology, along with its industry-leading Kinetic and Epitope analysis and visualization software tools to create a system that allows throughput that is truly revolutionary. When compared to conventional platforms, this system offers up to 100 times the

Josh Eckman
CEO

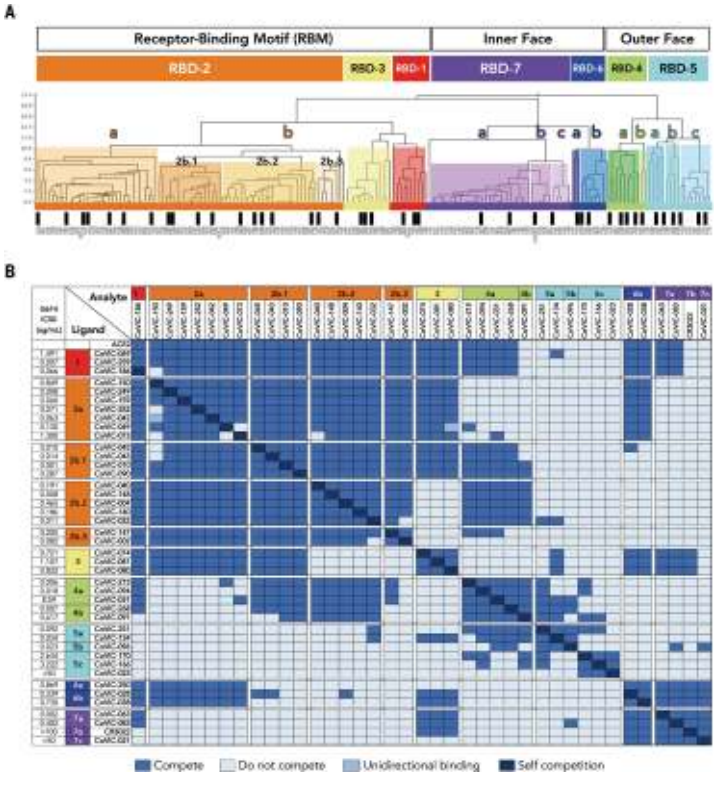

carterra | LSA

throughput in 10% of the time for results, while consuming just 1% of the sample.

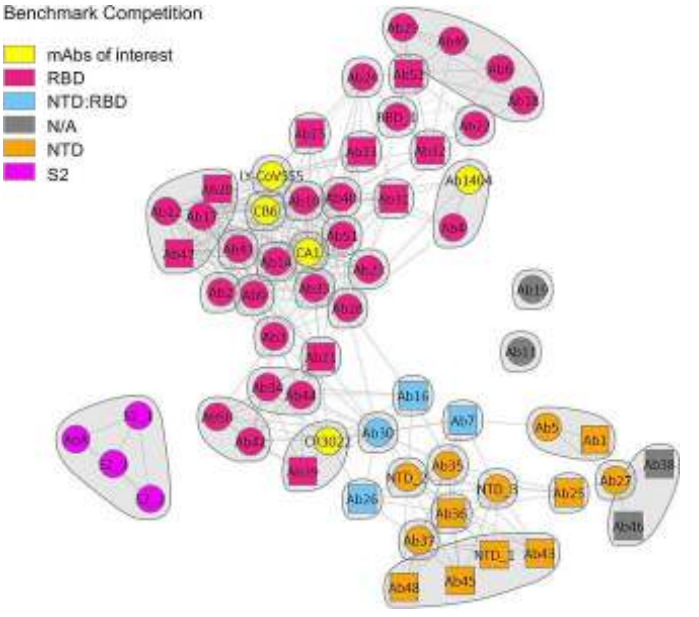
By giving researchers the ability to test more drug candidates faster and find failed candidates sooner, drug development timeframes are shortened, and development costs are reduced. This makes the cost of producing drugs lower and allows many more people access to these new medicines, which would not have been affordable otherwise.

The LSA platform is also being used by researchers to evaluate antibody libraries developed with the help of artificial intelligence (AI) and machine learning (ML). In the coming years, the incorporation of AI/ML with HT-SPR will be a game-changer. Carterra customers have already used AI/ML to boost the parallelization of drug discovery, increasing the speed and efficiency of binding analysis and characterization. As more high-resolution data is fed back into the algorithms, AI/ML models will become more powerful, allowing medicines to be developed even faster.

Josh Eckman, the founder and CEO of Carterra, always envisioned improving human health. He was the first to develop an instrument for screening and characterizing antibodies in high throughput, enabling high-definition data and faster decision making. This instrument became what is now known as the LSA.



Epitope competition heat map and resulting hierarchical clustering structural relationships for COVID-19 mAbs



Antibody Binning; Science Jan. 7, 2022

"Carterra's LSA has leveled the playing field between small start-ups and large pharmaceutical companies. Our hope is that increased efficiency and competition will continue to bring down the costs of biotherapeutics, making these life-savings drugs more broadly available to underdeveloped nations."

– Josh Eckman, CEO

The LSA platform provides researchers with throughput and functionality for screening and characterization compared to those of state-of-the-art antibody expression systems. This allows all antibodies to be tested quickly and thoroughly early in the discovery phase, allowing for the identification of unique epitopes and possible innovative therapeutic candidates while also increasing and improving IP coverage.

The instrument combines high-throughput microfluidics for array printing with gold standard, label-free SPR detection. Through high-resolution and high-throughput binding analysis, detailed interrogation of protein binding and epitope becomes a reality at speeds never before imaginable. Essentially, months of work can be compressed to just a couple of weeks, enabling better science and improved health outcomes.

The impact Carterra's LSA has had in healthcare is truly remarkable. There is no other product like the LSA on the market. Various commercial and university laboratories employed the LSA platform throughout the pandemic. In fact, AbCellera and Eli Lilly found the world's first COVID-19 treatment in only 90 days using Carterra's technology.

Today, Carterra has acquired a worldwide customer base while setting the stage for its future success. The company has partnered with PerkinElmer, a leader in life sciences and diagnostic tools, to market, sell, and service the LSA in the Asia and Oceania regions. Leveraging PerkinElmer's long-standing channel infrastructure puts Carterra in a more advantageous position, assisting it in meeting any growing customer demands in Asia.

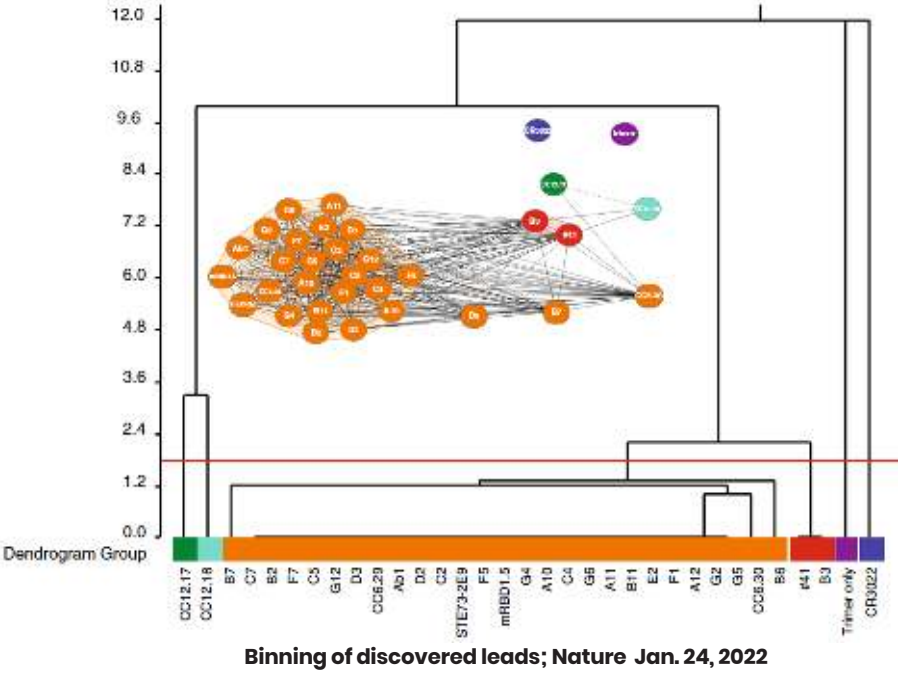
Carterra's progress has been spectacular in recent years. Since the instrument platform's inception in 2018, both major and small companies have purchased the platform. The technology is already in use by 16 of the top 20 biopharma customers. And 2022 has been a milestone year -- the 100th LSA platform was delivered in the first quarter.

Carterra plans to continuously expand its global footprint by supporting its customers locally and internationally. It plans to develop new application workflows, increasing the applicability of the HT-SPR technology in downstream applications. The company is branching out its applications to develop assays for Targeted Protein Degradation (TPD), a novel area of drug development. It is working on DEL

(DNA Encoded Library) assays separately, which will broaden the platform's potential in small molecule drug development.

"Our technology has enabled biotherapeutics to be developed at a breakneck pace, including recent customers who brought COVID-19 therapies to the clinic in only 90 days—something unheard of until now."

–Josh Eckman, CEO



Binning of discovered leads; Nature Jan. 24, 2022