



Distributed Bio Launches Cosmic Antibody Library, Provides Charles River Clients Exclusive Access

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Expanded antibody library expedites the drug discovery process

WILMINGTON, Mass. & SAN FRANCISCO--(BUSINESS WIRE)--Dec. 9, 2019-- Charles River Laboratories International, Inc. (NYSE: CRL) today announced the Company will provide clients exclusive access to the new Cosmic antibody library launched by [Distributed Bio](#), Inc., a global leader in computational optimization of fully human monoclonal antibody libraries.

This press release features multimedia. View the full release here: <https://www.businesswire.com/news/home/20191209005749/en/>

Previous Distributed Bio discovery platforms have delivered sequence-unique binders to every target panned, including ion channels, ultra-specific pMHC complex binders, G-protein-coupled receptors (GPCRs), immune-oncology targets, human-mouse cross-reactive epitopes, therapeutic anti-idiotypes, antiviral bnAbs, and more. Distributed Bio's new Cosmic antibody library encompasses over one-hundred billion fully human antibodies, computationally optimized for therapeutic developability and complementarity-determining regions (CDRs) sourced and incorporated at specific frequencies for maximum library diversity. Its increased diversity will eclipse Distributed Bio's unprecedented antibody discovery achievements, and now is offered with guaranteed molecular exclusivity of every hit delivered to every client.

Cosmic antibodies are entirely human by design with therapeutically favorable, unmutated frameworks. This phage-display antibody library was designed with immunogenicity in mind—using only scaffolds with dominant alleles found in all human populations, CDR diversity that contains only the variations produced in healthy human subjects, and aggregation resistant variable regions. The result is a library of leads with highly attractive profiles including nano- to picomolar potency, high expression levels, thermostability, non-immunogenicity, and soluble, aggregation-resistant features.

Partnering for Enhanced Drug Discovery

In 2018, Distributed Bio entered into [an exclusive partnership](#) with Charles River. This partnership grants Charles River's clients access to Distributed Bio's antibody libraries and integrated antibody optimization technologies. Distributed Bio's libraries are computationally optimized for both sequence diversity and engineering fitness through the analysis of thousands of human antibody repertoires and all known monoclonal therapeutics in clinical trials.

A combination of Distributed Bio's antibody libraries and Charles River's extensive drug development expertise creates a unique [end-to-end platform](#) for therapeutic antibody discovery and development. With a focus on speed and design, this partnership continues to increase the probability of success for delivering high-quality antibody candidates.

Approved Quotes

- “The new Cosmic antibody library will provide our clients with access to a truly differentiated library, with delivery of exclusive antibody leads in just three months—substantially reducing the risk of first to file.” -Birgit Girshick, Corporate Executive Vice President, Discovery & Safety Assessment, Biologics Testing Solutions, and Avian Vaccine Services at Charles River.
- “By providing Charles River's clients exclusive access to the Cosmic antibody library, we are excited to help increase success in early drug discovery by delivering qualified leads. Leveraging our revolutionary antibody discovery and engineering platforms and Charles River's downstream capabilities, our partnership delivers a comprehensive research experience from idea to clinic.” - Jacob Glanville, Ph.D., Founding Partner, CEO, and President at Distributed Bio

About Charles River

Charles River provides essential products and services to help pharmaceutical and biotechnology companies, government agencies and leading academic institutions around the globe accelerate their research and drug development efforts. Our dedicated employees are focused on providing clients with exactly what they need to improve and expedite the discovery, early-stage development and safe manufacture of new therapies for the patients who need them. To learn more about our unique portfolio and breadth of services, visit www.criver.com.

About Distributed Bio

Distributed Bio is a computational immunoengineering biotechnology group, self-funded by the success of the stack of antibody discovery, optimization and analysis technologies to partners across the pharmaceutical industry. Our mission is to disrupt biologic engineering with big data, machine learning, and computational immunology-driven design.

From a team that includes inventors of antibody repertoire sequencing technologies, their AbGenesis antibody and TCR repertoire analysis and engineering platform enables partners to analyze antibody repertoires by high-throughput sequence, sanger sequence, and functional assay without requiring large datacenter investments or local bioinformatics specialists. By using AbGenesis to analyze thousands of antibody repertoires and antibody libraries, they developed the computationally optimized SuperHuman 2.0 antibody library, the SLiC single light chain library, the Tungsten humanized VHH library, CAR-T discovery, and the Cosmic antibody library. The libraries overcome many of the limitations of other monoclonal generation technologies with diversity and developability fitness that has resulted in a unique engineering opportunity: a library that can generate thousands of unique and developable hits against every antigen tested, enabling routine success against targets that used to be nearly insurmountable – GPCRs, Ion Channels, pMHC complexes, broadly-neutralizing antibodies against HIV, therapeutic anti-idiotypic antibodies,

bi-epitopic antibodies, and mouse/NHP/human cross-reactive antibodies.

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Source: Charles River Laboratories International, Inc.

Investor Contact:

Charles River

Todd Spencer

Corporate Vice President, Investor Relations

781-222-6455

todd.spencer@crl.com

Media Contacts:

Charles River

Amy Cianciaruso

Corporate Vice President, Public Relations

781-222-6168

amy.cianciaruso@crl.com

Distributed Bio

Jacob Glanville, Ph.D.

Founding Partner, CEO, and President

bd@distributedbio.com