

Charles River Laboratories Demonstrates Expertise in CRISPR/Cas9 Genome Engineering Technology

December 1, 2016

WILMINGTON, Mass.--(BUSINESS WIRE)--Dec. 1, 2016-- <u>Charles River Laboratories International, Inc.</u> (NYSE: CRL) today launched a full, end-to-end service offering of CRISPR/Cas9 genome engineering technology. Through a licensing arrangement with the <u>Broad Institute of MIT and</u> <u>Harvard</u>, Charles River can now offer custom *in vivo* and *in vitro* genome editing. With this technology, Charles River will be able to develop more translational research models that will ultimately improve the efficiency and effectiveness of the drug discovery process.

"Utilizing the CRISPR/Cas9 platform, Charles River clients can work with a single provider for both the *in vivo* and *in vitro* phases of their research," said Dr. Iva Morse, Corporate Vice President, Chief Scientific Officer, Global Research Models and Services. "Working with us, clients can generate custom cell lines for early, exploratory discovery research, as well as generate *in vivo* pharmacology models, produce those models, and then use our Discovery Services offering to place those models in *in vivo* studies."

Charles River has developed partnerships with three key groups globally for *in vivo* model creation services. In North America, the Company is partnering with Mirimus, a leader in RNA interference technology specializing in the creation of customized genetically engineered mouse models. In Japan, Charles River is partnering with the Laboratory Animal Resource Center, University of Tsukuba, one of the country's largest production institutes for genetically modified mice. In Europe, the Company is aligned with Phenomin ICS, formerly the Institut Clinique de la Souris, a leader in mouse and rat creation and phenotyping and a key player in different strategic phenogenomics efforts, like the International Mouse Phenotyping Consortium.

In addition to building a network of partners, Charles River has also prepared a number of academic presentations that showcase their CRISPR/Cas9 expertise, including:

- A poster entitled Comparative Analysis of NHEJ and HDR Repair Pathways for Genomic Editing Using CRISPR/Cas9 Technology in ES Cells was presented at the CRISPR Genome Editing: From High-throughput Screening to Disease Models Conference in Copenhagen.
- A second poster, C57BL/6NCrl mouse models generated by CRISPR/Cas9-mediated gene-editing, was presented at the CRISPR Precision Genome Editing Congress Europe 2016.
- David Fischer, Executive Director of Biology and DMPK spoke at the World Preclinical Congress Europe meeting. Dr. Fischer's presentation on *Vertical Integration of CRISPR/Cas9 Genome Engineering in Drug Discovery* detailed the numerous applications of CRISPR/Cas9 throughout the drug discovery process by exploring examples from Charles River case studies.
- Don Liu, Senior Scientist in Charles River's Genetically Engineered Models and Services group, will speak at CRISPR Summit USA. Dr. Liu's presentation, *Efficient Screening of Mutations Generated by CRISPR/Cas9 Genome Editing*, will touch on the limitations of current post-CRISPR screening methods and present a sensitive platform for screening CRISPR-generated mutations for *in vitro* and *in vivo* models.

To learn more about Charles River's strategic CRISPR/Cas9 initiatives, please visit our website.

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 <u>www.criver.com</u>.

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Source: Charles River Laboratories International, Inc.

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