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# pharma

**TECH OUTLOOK**

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## CL Laboratory



*The annual listing of 10 companies that are at the forefront of providing  
Contract Research Organization solutions and transforming businesses*

# CL Laboratory

## Innovator in Animal Models and Preclinical Research

**C**ardiovascular disease is the leading cause of death and morbidity globally, taking approximately 17.9 million lives each year. With new drugs and therapies required to enhance the diagnostic and treatment of these diseases, animal models in drug development are essential for pharmaceutical companies to increase their knowledge and verify the effectiveness of new approaches for therapeutics. It also helps in meeting strict FDA regulatory expectations and completing clinical trials on time. However, a single animal model cannot represent a particular disease. The right animal model is selected depending on a number of factors such as the genetic impact on disease and available budget. Many pharma companies admit they feel poorly prepared to perform surgery in small animals as they lack cardiovascular surgical training and other necessary skills. To address these challenges, pharma companies look for reliable CROs in Animal Models and Preclinical Research.

### Enter CL Laboratory.

The Gaithersburg-based company is on a mission to help pharma companies in providing animal models that serve as experimental platforms for investigating novel therapeutics. Founded by veteran cardiothoracic surgeon and NIH-funded principal investigator Dr. Zheqing Cai, CL Laboratory specializes in in-vivo cardiovascular models utilized for advanced research at the preclinical stage.

CL Laboratory provides surgical-induced animal models for various conditions such as heart failure (post-myocardial infarction (MI) remodeling, transverse aortic constriction, pulmonary artery banding, cell, and gene therapy), Ischemia-reperfusion injury, hypertension, and hindlimb ischemia. The company's innovative services further include efficacy studies, investigating the molecular and cellular mechanisms underlying cardiovascular disease. The company also leverages state-of-the-art technology, including echocardiograms and pressure-volume catheterization, to assess cardiac functions and structural changes at desired time periods after surgery. The relevant research data from these tools can then be used by the clients to support their drug and its effectiveness. "In other words, clients publish our findings in animal models as evidence for therapeutics to advance through the FDA approval stage," says Dr. Zheqing Cai, CEO and founder of CL Laboratory. Through advanced technologies and innovative approach, the company helps clients develop new drugs and therapies to improve treatments for diseases.



What makes CL Laboratory unique is its ability to provide surgical models with a very low mortality rate of less than five percent. Therefore, the company's models are effective, helping clients lower the cost of preclinical research while maintaining an ethical approach by reducing the number of animals used in the process. CL Laboratory ensures a minimal amount of surgical models are used to test drugs and minimize the surgical variation from model to model. "We guarantee our clients' a consistent model to eliminate extra erroneous variables in our study," remarks Dr. Cai.

The real cornerstone for CL Laboratory remains the expertise its founder brings to the table. Dr. Cai has conducted 12 years of cardiovascular research, focusing on myocardial infarction and cardioprotection. He has developed a mouse MI model with a large infarct size and high survival rate. Having published various journals throughout his career, Dr. Cai possesses rich and immense knowledge in demonstrating research ideas for therapeutics. This is highly significant as few manual curations are approved for open access publication of novel research findings benefitting the entire scientific community. Dr. Cai's research work with Gregg L Semenza, the Nobel Prize winner for physiology medicine in 2019, is yet another achievement among many. His unique experience and capabilities drive CL Laboratory to excel in fulfilling client requirements and improve healthcare through new drug development.

Moving ahead, CL Laboratory plans to continue focusing on surgical animal models and expand its portfolio to several other cardiovascular models along with current ones. The company also looks forward to including large animal models and extending its services. With the core principle of ensuring excellence, efficiency, and ethics, CL Laboratory's research services lay a solid foundation for drug development success. "We strive to safeguard quality for our clients and help them find the drugs for cardiovascular patients around the world," concludes Dr. Cai. 