



INTERNATIONAL CONFERENCE ON CELL SCIENCE AND REGENERATIVE MEDICINE



Chongbei Zhao

Stowers Institute for Medical Research,
Kansas City, USA

Novel Advanced Cellular Models from Fish and Bat

Abstract: Cell culture is a fundamental technique in biology and biotechnology that involves the growth and maintenance of cells outside their natural environment, typically in a laboratory setting. Cells can be cultured from various sources, including animal tissues, plants, fungi, and bacteria. Cell culture techniques are widely used in various fields, including basic research, drug discovery, regenerative medicine, and biotechnology. They allow researchers to study cell behavior, function, and interactions in controlled conditions, providing insights into biological processes and disease mechanisms. This presentation will focus on the optimization of primary cell derivation from a range of species, including cavefish and bats, to establish robust cell lines for research. Additionally, we will discuss recent advancements in transfection methods across various cell lines, achieving greater efficiency in gene delivery. Lastly, we will explore the application of 3D organoid models, which have emerged as powerful tools for in vitro studies, offering new insights into cell behavior, disease mechanisms, and therapeutic development. Together, these innovations push the boundaries of what can be achieved in cell culture, paving the way for future breakthroughs in biomedical research and biotechnology.

Keywords: Cell culture, organoid, primary cells, 3D

Biography: Chongbei Zhao, originally from Henan Province, China, graduated from Zhengzhou University with an M.D. She earned her Ph.D. in veterinary pathobiology from the University of Missouri-Columbia and followed that with a two-year Science Manager Certification from the University of Kansas. Zhao joined the Stowers Institute in 2012 as a Researcher Coordinator. In 2019, she became Head of Cells, Tissues, and Organoids Center and the next year took over management of Media Preparation. In 2024, Zhao is appointed as Director of Cellular, Tissue and Molecular Biology at the Institute. With years' experience in cell biology and management, Zhao collaborates with Stowers researchers to develop new technologies by building cross-functional teams and fostering cross-functional projects.