



cardiac cells. These cells are derived from pluripotent stem cells (PSCs) and can be differentiated into various cell types, including cardiomyocytes. The use of iPSC-derived cardiomyocytes as acellular models for cardiac toxicity testing offers several advantages. First, these cells can be generated from a single donor, ensuring genetic consistency and reducing variability. Second, they can be cultured in high-throughput formats, allowing for the simultaneous testing of multiple compounds. Third, iPSC-derived cardiomyocytes can be differentiated into various subtypes of cardiomyocytes, providing a more comprehensive model of cardiac tissue. Finally, these cells can be used to study the mechanisms of drug-induced cardiac toxicity and to identify potential therapeutic targets. For example, the use of iPSC-derived cardiomyocytes has been shown to be effective in identifying novel cardiac toxicity biomarkers and in studying the effects of various drugs on cardiac function [7]. Furthermore, the use of iPSC-derived cardiomyocytes as acellular models for cardiac toxicity testing can help to reduce the reliance on animal models, which is a more ethical and cost-effective approach.

