

Special Issue

Novel Platforms for Studying Mechanisms and Therapies for Cardiotoxicity

Message from the Guest Editor

Heart failure is the number one killer, and drug-induced cardiotoxicity is a major cause of market withdrawal. Currently, cardiac cells (human induced pluripotent stem cell-derived cardiomyocytes (hiPSC-CMs)) are used to test therapeutic efficiency and drug toxicity, as they are the only human cardiac cells that can be cultured for prolonged periods required to test drug efficacy and toxicity. However, a single cell type cannot replicate the phenotype of complicated 3D heart tissue which is formed by multiple cell types. Importantly, the effect of drugs needs to be tested on adult cardiomyocytes, which have different characteristics and toxicity responses compared to immature hiPSC-CMs. In this Special Issue, we aim to cover some of the recent developments in various human-based platforms that allow cardiac toxicity and pharmacological efficacy testing.

Guest Editor

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