

FLEXcyte 96



Cardiac Safety and Toxicity Service

Preclinical cardiac contractility assessment in a physiological environment for hiPSC-derived cardiomyocytes



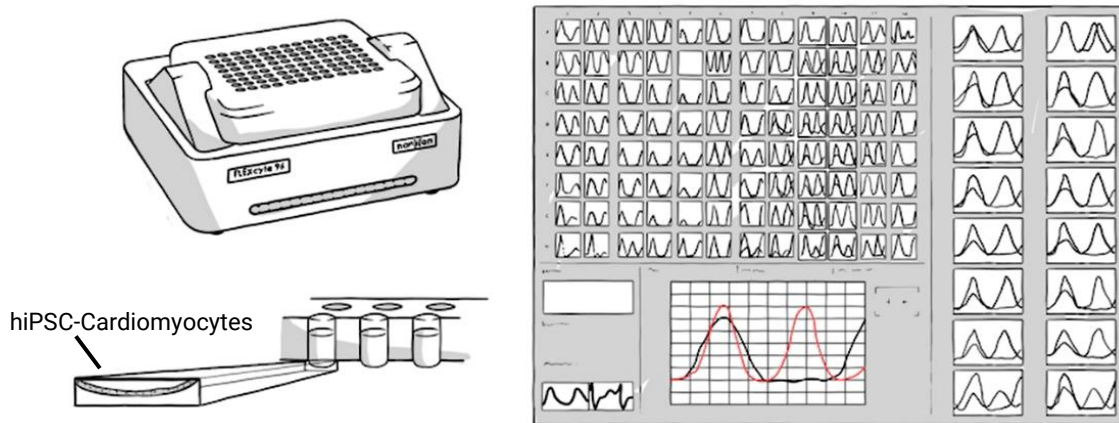
“We were very pleased with our choice to engage innoVITRO’s contractility service. The studies using human iPSC-derived cardiomyocytes were tailored to our needs to provide results comparable to already existing (in house) data and the fast execution followed by a comprehensive study report completed the service perfectly”

Nina Glaser
Head of Early Safety Electrophysiology
Merck Healthcare KGaA



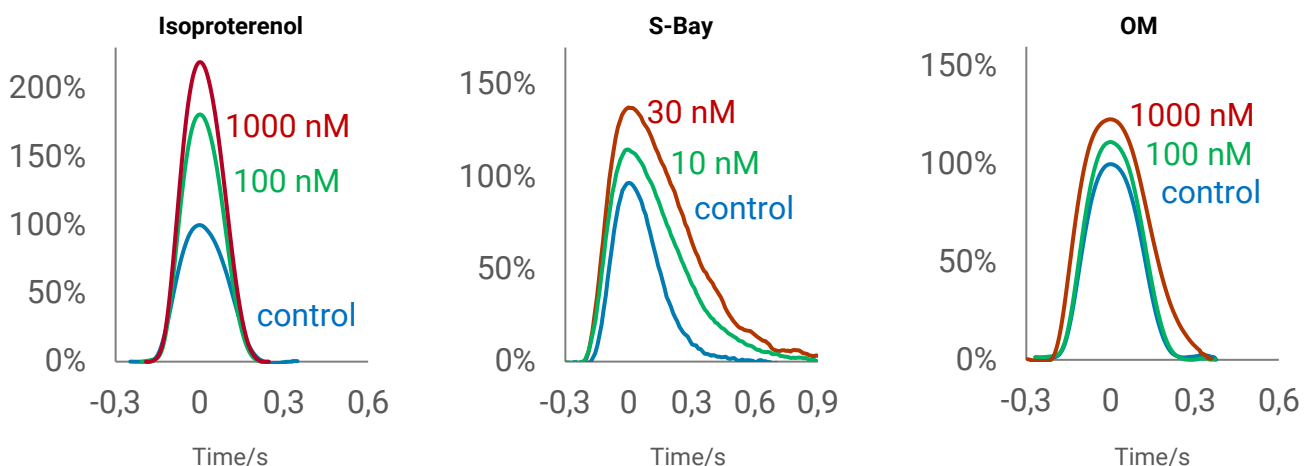
Predictive Cell Model On A High-Throughput System

Human induced pluripotent stem cell-derived (iPSC) cardiomyocytes are currently used in a variety of assays to improve cardiotoxicity guidelines in a CiPA (Comprehensive *in vitro* Proarrhythmia Assay) conform manner. We have validated a broad range of commercially available and CiPA-accepted human iPSC-derived cardiomyocytes as the most predictive cell model for the FLEXcyte 96 Service – a contractility assay on a higher throughput 96 well plate. We also welcome your in-house cardiomyocytes to test and characterize.



Mature Cardiac Phenotype For Reliable Adult-Like Drug Responses

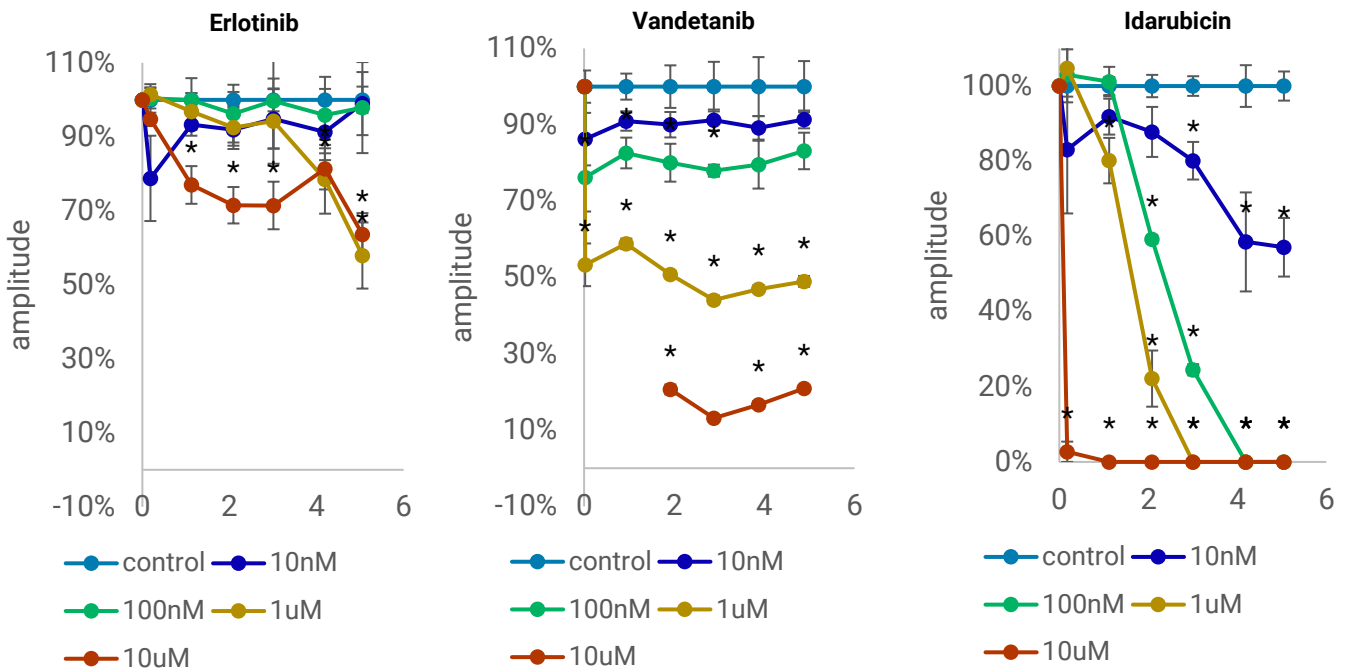
Drug-induced adult-like responses of human iPSC-derived cardiomyocytes usually fail due to the juvenile phenotype of the cells. The flexible membranes of the FLEXcyte 96 plates form a natural biohybrid layer with the cells and provide a unique and necessary auxotonic environment *in vitro* to promote cell maturation. Mature cardiomyocyte responses on FLEXcyte 96 plates with commercially available human iPSC-derived cardiomyocytes can be detected upon treatment with positive inotropic compounds like isoproterenol, S-Bay K8644 and omecamtiv mercabil.





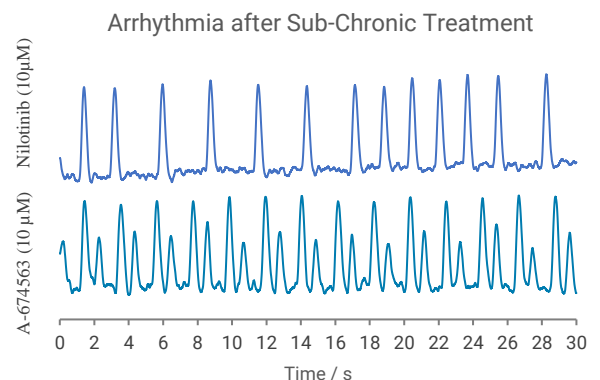
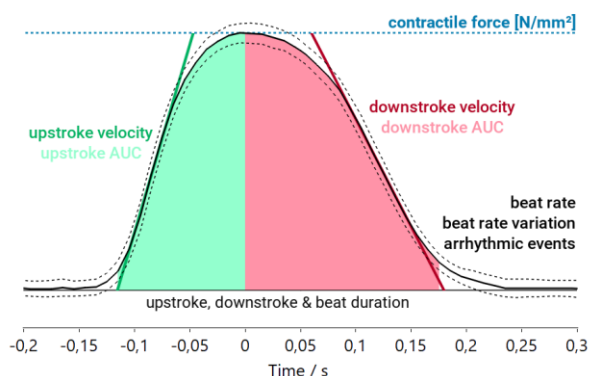
Acute & Chronic Testing Of Your Drug Candidates

Depending on the biological mechanism of your drug candidates, acute and / or chronic assessment of cardiac contractility may be necessary. The FLEXcyte 96 service provides acute and chronic measurements, conducted from minutes up to one week after compound administration. Personalized settings can be tailored to your needs.



Tailored Study Report Covering All Parameters

The FLEXcyte technology delivers a comprehensive set of parameters measured on the contractile behaviour of cardiomyocytes. Parameters measured are Beat Rate, Beat Duration, Upstroke and Downstroke Velocity, Upstroke and Downstroke AUC, Arrhythmic Events as well as contractile force (mN/mm²). Our experts will deliver a full study report containing all study parameters and results for your drug candidates.





Contact us under info@innovitro.de