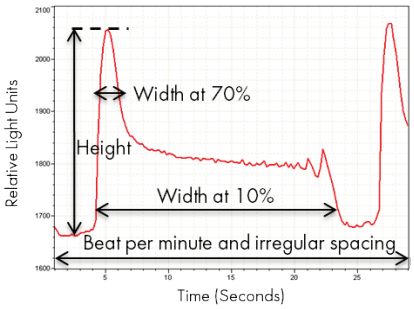
Fluofarma
A Porsolt Company

CARDIOTOXICITY ON HUMAN IPSC-DERIVED CARDIOMYOCYTES

SCIENTIFIC BACKGROUND

Cardiotoxicity is, in large part, responsible for the failure of compounds at the clinical trial level.

IPSC-derived cardiomyocytes have the advantage of expressing all relevant cardiac ion channels (K+, Ca2+, Na+) and have the ability to generate spontaneous, regular and synchronous beating, providing useful indication of cardiotoxicity.



LEARN MORE ONLINE

- Click for more data on our *in vitro* and *in vivo* cardiology services here:
  www.fluofarma.com
  www.porsolt.com

  contact@fluofarma.com

ASSAY INFORMATION

Cell type	Human iPSC-derived cardiomyocytes, icell® cardiomyocytes² (CDI)
Method	Calcium flux
Endpoint	Beat frequency: Beat Per Minute (BPM)
Standard reference	Dofetilide, Verapamil

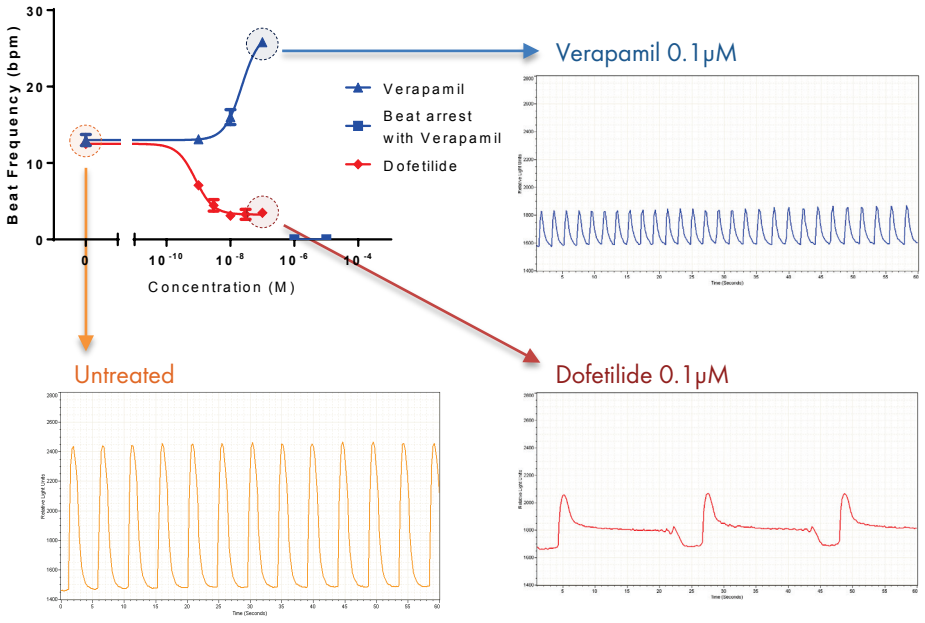
ASSAY PRINCIPLE

Human iPSC-derived cardiomyocytes are plated in a 384-well plate and cultured for 7 days. Cells are then loaded with a calcium indicator before being placed in the FLIPR Tetra® reader. Changes of beating pattern upon treatment are assessed immediately or up to 4h after compound addition.

Beat frequency is quantified (i.e. parameters such as peak height, width at 10 or 70%... to discriminate different beating profiles) with in-house software.

REPRESENTATIVE RESULTS

Examples of the effect of Dofetilide (hERG channel blocker) and Verapamil (L type calcium channel + hERG channel blocker) on beat frequency of calcium transients after 1h treatment.



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