APCONIX
a better decision

Seizure Liability

Innovative Ion Channel and MEA Seizure Liability Assays

An integrated in vitro screening approach for seizure liability to support hazard identification and decision making in early drug discovery

- A panel of 15 human ion channels related to seizure screened by automated electrophysiology
- A microelectrode array (MEA) assay that measures the electrical activity of human derived neuronal stem cells

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We were delighted to be cited in a recent FDA/CDER paper (Avila et al 2023) where the authors provide a perspective on the opportunities and challenges of using NAMs in drug development

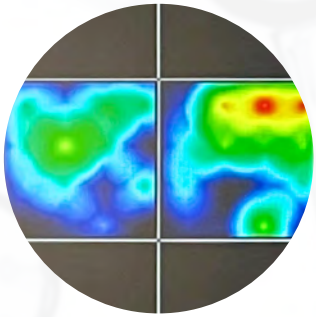
Reduce reliance on animal studies with a lower cost translatable in vitro assay

Ion channel screening of our comprehensive panel of seizure-associated ion channels performed by automated patch-clamp.

Nav1.1, Nav1.2, Nav1.6, Kv1.1, Kv2.1, Kv3.1, Kv4.2, $K_{Ca}1.1$, $K_{Ca}4.1$, Kv7.2/7.3, Kv7.3/7.5, GABA $\alpha_1\beta_2\gamma_2$, NMDA 1/2A, nicotinic AChR $\alpha_4\beta_2$, Cav2.1.

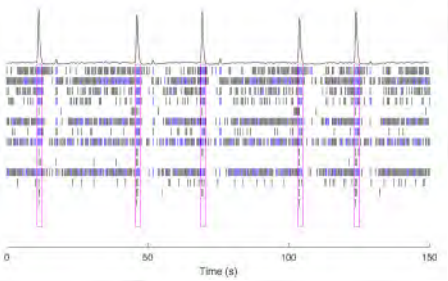
Our electrophysiology experts will generate high-quality seizure panel data rapidly, aiming to return the full report within 2 weeks.

Tailored specifically to your needs

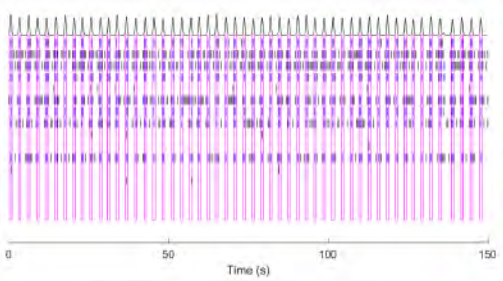


Investigation of potential seizurogenicity in hiPSC-neuronal co-cultures using the Axion MEA system.

Baseline



After Seizurogenic Compound Addition



Our combined expertise in ion channel electrophysiology, hiPSC-neuronal cell models and project toxicology will help you identify risks, gain mechanistic insight and prioritise candidate compounds moving forward.

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Inhibition of neuronal ion channels can adversely affect the balance of excitation and inhibition in the brain and negatively impact on a drug's probable success, value and competitiveness.

Assessing how a compound effects electrical signalling can reveal perturbations to ion channel activity and other important regulators of neuronal function.

Find out more:

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