APCONIX
a better decision

Our Ion Channel Laboratory

Rapid High Quality Ion Channel Profiling Matched to Your Design-Make-Test Cycle

Whether you need to explore cardiac ion channel activity for safety, or are interested in ion channels as drug targets, ApconiX can help with our dedicated electrophysiology expertise, customer-focused flexibility and rapid turnaround times.

Our nonclinical safety experts are uniquely positioned to work with your project team to interpret your data in the context of your drug discovery programme.

Our Services Include:

- Ion channel screening for hERG, cardiac and neuro liabilities, and all elements of the CiPA paradigm including the ion channel panel (hERG, hNav1.5 peak and late current, hKvLQT1, hKv4.3, hCaV1.2, hKir2.1), in silico action potential modelling, and investigation in hiPSC-cardiomyocytes
- Testing by manual patch-clamp, or on the latest generation automated electrophysiology platforms (QPatch II and Patchliner), with the capacity for large numbers of compounds
- Bespoke assay and cell line development
- Expertly performed direct functional electrophysiology measurements with fewer artefacts than ligand-binding or fluorescence assays
- Access to ApconiX scientists who will tailor our service specifically to your needs and better advise you on your next steps
- Rapid turnaround of data with our average turnaround time for hERG data less than 4 days following receipt of customer's compound(s)

"Your data turnaround time is incredibly good, and it really helps us to track SAR and progress our compounds in a rapid and efficient manner. Thanks ApconiX for your wonderful supports to Bugworks."

V Balasubramanian, Ph.D.,
Bugworks Research India Pvt. Ltd.

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Ion channels play a central role in normal and disease biology.

ApconiX develop and optimise novel ion channel assays for hit identification, selectivity profiling or mechanism of action studies.

Examples of Bespoke Assay Development

Hit Identification/HTS

We have developed a dual addition protocol in 384-well format for the high-throughput screening (HTS) of ~10,000 compounds against an epithelial sodium channel isoform by automated electrophysiology.

Selectivity Profiling

We are often asked to define the selectivity profile of compounds against a bespoke panel of ion channel targets. Each panel is specific to the client's needs and the selectivity they are trying to demonstrate.

Bespoke Investigations

Whether we are testing pharmaceuticals or agrochemicals, we are happy to carry out bespoke investigations to help you optimise your discovery programme. For example, we have investigated the effect of impurities, compound solubility and new modalities such as antibodies, peptides and aptamers.

ApconiX is a team of nonclinical safety experts providing drug discovery and development support in toxicology and electrophysiology

Meet Some of the Team

Dr Michael Morton

A co-founder of ApconiX, Dr Michael Morton is an expert electrophysiologist and ion channel biologist. Mike has a serious passion for ion channels and works with collaborators and clients alike to ensure the highest quality data are used to support better decision-making.

Dr Kimberly Rockley

Dr Kimberly Rockley carried out her post graduate research at Durham University in anthracycline-induced cardiotoxicity and its mitigation by angiotensin blockade in vitro. Kim studied for a BSc in Biomedical Science and Master's degree in Cancer Pharmacology at the University of Bradford. Currently, Kim is investigating the ion channels implicated in seizure.

Dr Karen Jones

Dr Karen Jones has over 10 years experience in the pharmaceutical industry within the early drug discovery setting. Karen's area of expertise is in the development of ion channel and GPCR assays which are used for compound screening in various formats from small scale bespoke experiments up to large scale fully automated screens.

Contact the ApconiX team for more details

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Meet Some More of the Team

Dr Emily Johnson

After her neuroscience BSc, Dr Emily Johnson completed a PhD studying the role of T-type Ca2+ channels in proliferative cardiovascular disease. A passion for electrophysiology led to five years as a post-doctoral research fellow where she addressed novel neuroscience research questions with her expertise in patch-clamp electrophysiology, optogenetics and 2-photon Ca2+ imaging. Emily is a natural problem solver and collaborative researcher who prides herself on acquiring high-quality reproducible data.

Hannah Jennings

Hannah Jennings is a biochemistry graduate with an MSc in advanced biological sciences. While at the University of Liverpool she carried out two research projects in tissue culture and cell signalling at the Institute of Ageing and Chronic Disease. Hannah joined the ApconiX ion channel laboratory after a year-long internship where she is using her creativity as a research scientist to look at initiatives to improve sustainability and reduce environmental impact in the research labs.

Magali-Anne Maizieres

Magali-Anne Maizieres is an electrophysiologist who gained 3 years' laboratory experience in both manual and automated patch-clamp at Sanofi. Following her life sciences BSc from the University Pierre and Marie Curie in Paris and a BSc in biotechnologies from the University Paris Descartes, Magali gained a Master's degree in health technologies from the University of Bordeaux. She developed her experience in engineering cell lines during her time at Horizon Discovery before working as a neuroscience RA at Cambridge University. Magali joined ApconiX to indulge her love of patch-clamp and pursue her passion for ion channels and electrophysiology.

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