

Safety Pharmacology Services

Safety Pharmacology at WuXi AppTec helps to deliver high-quality drug candidates faster and at lower cost, by profiling compounds for potential adverse drug reactions at various R&D stages.

Electrophysiology

Provides integrated risk assessment on cardiotoxicity for compounds at various discovery and development stages on hERG and other cardiac ion channels

The state-of-the-art automated electrophysiology systems (QPatch-HT, IonWorks Quattro) enable higher throughput, lower cost, and better consistency for hERG channel recordings

Conventional patch clamp assay and tissue level recording (e.g., on Purkinje fiber or isolated heart) provide detailed mechanistic information for compounds identified with QPatch.

➤ Automated patch clamp

- QPatch, IonWorks assays for hERG as a safety target
- QPatch, IonWorks assays for other cardiotoxicity channels

➤ Conventional patch clamp

- MOA studies for lead compounds
- Tissue level recording
- GLP hERG assay provides quality data for registration purposes



The state-of-the-art automated QPatch-HT system (48 channels) enables higher throughput, lower cost, and better consistency for hERG channel recordings

In Vitro Pharmacology

Addresses off-target based adverse drug reactions (ADR) and promiscuity of compounds. Such information may help guide compounds of interest through downstream in vivo tests for potential liabilities.

➤ Biochemical Assay

- Receptor ligand binding assays
- Kinase and protease assays

➤ Cell-based Assay

- FLIPR and FDSS7000 (Ca or Membrane Potential) based assays for ion channels or transporters
- FLIPR or GTPyS assay for functional GPCRs

Early Toxicology

Provides an early warning on potential genotoxicity for compound or compound series during lead prioritization and/or lead optimization. These assays are predictive of the GLP development full-panel Ames test as well as in vivo Micronucleus test, but with lower compound consumption and faster turnaround.

➤ Genotoxicity Assay

- Mini-Ames
- High-content Micronucleus

WuXi AppTec is a global leader in providing discovery, testing and manufacturing services for the pharmaceutical, biotechnology and medical device industries. Research-driven and customer-focused, with operations in China and the U.S., WuXi AppTec offers a broad and integrated portfolio of services designed to assist our customers with cost-effective and efficient outsourcing solutions.

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