

New Targets, Robust Assays, and Bold Discoveries

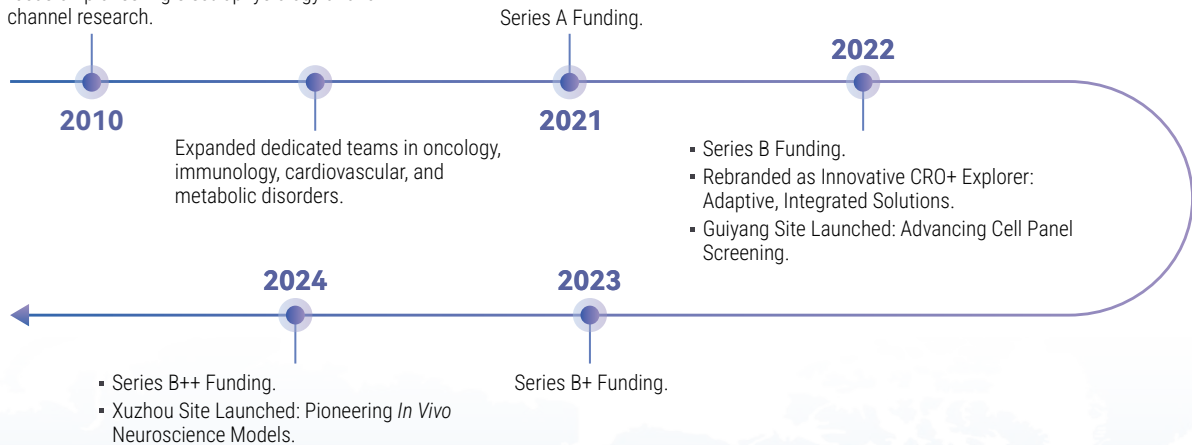
WHO WE ARE

- » **Founded in 2010, Beijing** – A leading integrated drug discovery CRO driven by innovation and expertise.
- » **Pioneering Target-Driven Biology Platform** – Seamlessly addressing challenges from target identification to pre-clinical candidate selection.
- » **Interdisciplinary Expertise & Integrated Solutions** – Combining deep knowledge in biology, DMPK, and translational medicine to deliver tailored, comprehensive solutions for global pharma, biotechs, and research institutions.
- » **Trusted Global Partner** – Committed to delivering high-quality, end-to-end services that empower clients worldwide, with over 10,000 drug discovery studies completed annually.

The Evolution of ICE Bioscience



Founded as Ion Channel Explorer (ICE), with a focus on pioneering electrophysiology and ion channel research.



— Research Site

— Business Development Hub



WHY PARTNER WITH US?

Ready-To-Go Targets & Assays

We build specialized capabilities around novel drug targets, advancing your projects with innovative, high-impact solutions.

Flexible & Customized Solutions

We prioritize flexibility, offering tailored services without the high costs and rigid frameworks of many CROs.

Proactive Project Management

We think ahead, actively managing projects to ensure seamless execution and on-time delivery.

Expertise Across Disciplines

Our team of molecular and cell biologists, biochemists, electrophysiologists, and pharmacologists offers integrated expertise to tackle complex drug discovery challenges

IMPACT IN NUMBERS



400+ Employees



15 Years of Excellence



1000+ Global Partnerships



10000+ Studies Annually

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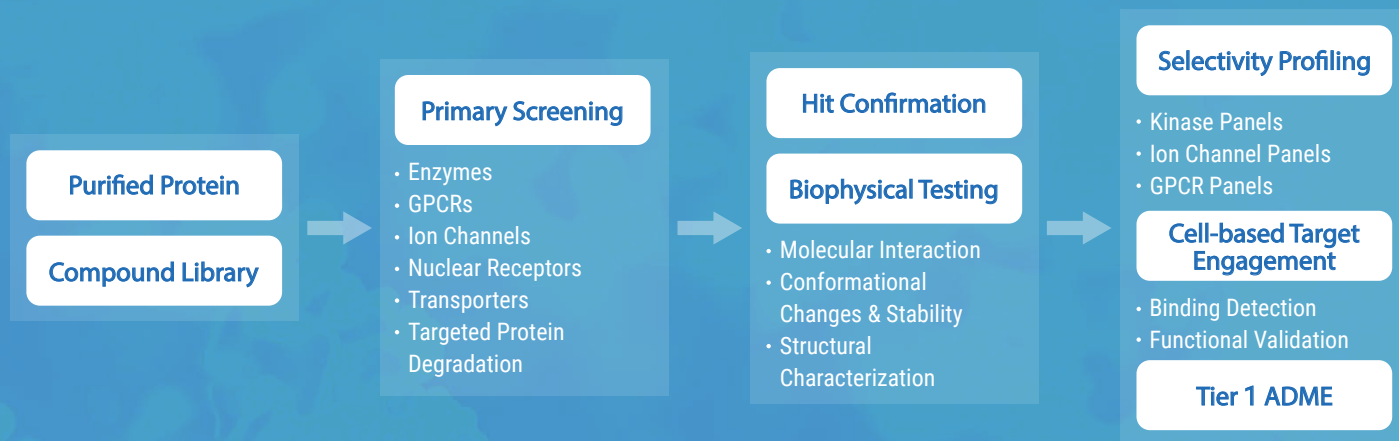
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Integrated Drug Discovery



CiPA Cardiac Safety

- hERG at Physiologic Temp
- CiPA Ion Channel Panel

In Vitro Safety Panel

- ICESTP SAFETY PANEL™ 44 Dose Response
- ICESTP SAFETYPANEL™ 77 Dose Response
- ICESTP SAFETY PANEL™ PLUS Dose Response
- ICESTP SAFETYPANEL™ Drug Abuse
- ICESTP SAFETYPANEL™ CNS Core

Tier 2 ADME

Rapid PK

Cell Line Generation

- Gene Editing
- Screening & Cloning
- Functional Validation

Phenotypic Assay

- Cell Viability & Proliferation
- Cell Death & Apoptosis
- Cell Migration & Invasion
- Cellular Signaling Pathway

Cancer Cell Panel

- ICECP 170 Cell Panel™
- Drug-Resistant Cell Lines
- Gene-Edited Cell Lines

Biomarker Discovery

Full PK

In Vivo Pharmacology

Lead
Optimization

Preclinical
Candidate
Selection

IND Enabling

Target-based Solutions

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Recombinant Target Proteins

- **350+** high-quality active kinase products.
- DNA Repair-related proteins, including WRN, PARP, POLQ and p53.
- Validated RAS proteins (wild-type and mutants), epigenetic targets, phosphatases, ubiquitin-related proteins, motor proteins, proteases, and metabolic and immune-related proteins.

Key Features:

- ◆ Comprehensive custom protein services, including cloning, expression, purification, quality control, and activity assessment.
- ◆ Utilizing E. coli, insect, and mammalian expression systems, we offer diverse protein tags, tag removal, fluorescent labeling, and biotinylation to meet various research needs.
- ◆ Specific activity and lot-to-lot consistency.



Kinases

Target-based Solutions

600+ Biochemical & Biophysical Assays

- Luminescence-based Activity Assay (ADP-Glo)
- HTRF-based Activity Assays
- Spectral Shift, SPR, and MS-based Assays
- Kinase Panel Profiling

Kinase Panels	Panel Size	Features
ICEKP KINOME PANEL™ 80	80	Economical, rapid screening, essential core WT kinases
ICEKP KINOME PANEL™ 217	217	Intermediate panel offering a wider range of WT kinases
ICEKP KINOME PANEL™ 330	330	Broad spectrum panel for extensive kinase profiling
ICEKP KINOME PANEL™ 416	416	Comprehensive coverage of the entire human kinome
ICEKP KINOME PANEL™ TK	76	Targeted selection of the tyrosine kinase family
ICEKP KINOME PANEL™ CDK	24	Specialized for the cyclin-dependent kinase family
ICEKP KINOME PANEL™ LIPID	25	Focused on phosphatidylinositol kinases
ICEKP KINOME PANEL™ Customized	Custom	Tailored to specific research needs, highly flexible

Cell-based Assays

- NanoBRET Target Engagement Assay
- BaF3 Cell Proliferation Assay
- Phosphorylation Assay
- Reporter Gene Assay
- HiBiT-based Protein Degradation Assay

Ba/F3 Xenograft Models

Kinase Service Highlights:

- ♦ As one of the most comprehensive kinase panel providers, we support ATP concentrations up to 1 mM, with TAT for our panels starting at 1 week.
- ♦ Activity-based, affinity-based and covalent binding-based assays available.
- ♦ Extensive cell-based assays and phenotypic screening for functional validation.



GPCRs

170+ Ready-to-Use Targets: Fully validated and ready for immediate screening.

GPCR Binding Assays:

- Biophysical Binding Assay
- Radioligand Binding Assay
- Flow Cytometry-based Binding Assay
- Tag-Lite Binding Assay

GPCR Functional Assays:

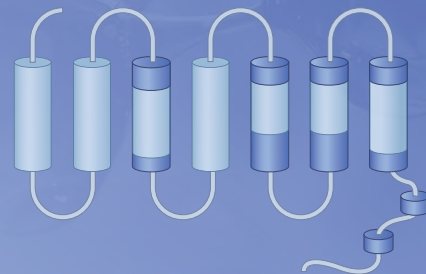
- cAMP Assay
- IP1 Assay
- FLIPR Calcium Flux Assay
- Reporter Assay
- β -Arrestin Recruitment Assay
- 35S-GTP γ S Binding Assay
- Internalization Assay
- pERK/pAKT In-Cell Western Assay
- Chemotaxis Assay

40+ GPCR Families: Including key therapeutic targets like serotonin, adrenoceptors, dopamine, and opioid receptors.

Species Diversity: Including human, rat, mouse, monkey, dog, rabbit, and pig.

GPCR Service Highlights:

- ◆ Advanced Spectral Shift technology to overcome challenges in traditional biophysical assays.
- ◆ Custom GPCR cell line development, including assays for emerging orphan GPCR targets.
- ◆ Fast, flexible, and HTS-compatible solutions for drug discovery.



Ion Channels & Electrophysiology

Target-based Solutions

| Manual Patch Clamp (MPC) Assays

- 120+ validated ion channels
- 15+ years serving 800+ global clients
- 35+ scientists with 5+ years of experience
- 17 rigs of manual patch clamp
- High Flexibility in MoA exploration: Tailoring specific protocols for agonists, antagonists, PAMs, NAMs, use-dependent drugs, etc.

| Automated Patch Clamp (APC) Assays

| Calcium & Potassium Flux Assays (FLIPR)

| Electrophysiology in Brain Slices

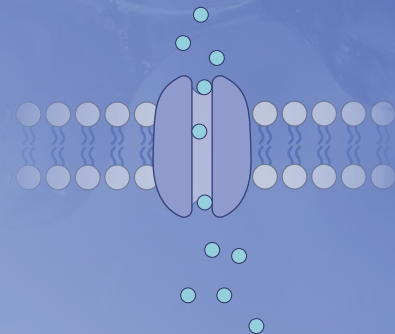
- Action Potentials
- Excitatory and Inhibitory Postsynaptic Currents (EPSC/IPSC & EPSP/IPSP)
- Long-Term Potentiation (LTP) and Long-Term Depression (LTD)

| Electrophysiology in Retina

- Action Potential
- Sodium Current
- Potassium Current

Electrophysiology Services offer:

- ♦ Comprehensive neuronal studies using primary neurons—retinal, cortical, hippocampal, and DRG—from multiple species (mouse, rat, dog, cynomolgus).
- ♦ Patch clamp electrophysiology of lysosomal channels, enabling intracellular ion channel studies.
- ♦ Cardiac electrophysiology with ventricular and atrial myocytes from mouse, rat, rabbit, and dog.



Targeted Protein Degradation

Target-based Solutions

| Target Validation Assays

| E3 Ligase Discovery

- TurboID Assays
- Ubiquitination Assays

| Binary and Ternary Complex Formation Assays

- Biochemical Assays: TR-FRET, AlphaLISA, FI, FP, and luminescence
- Biophysical Assays: SPR, Spectral Shift, TRIC, and LC-MS
- Cell-based Assays: NanoBRET and NanoBiT assays

| Protein Degradation Assays

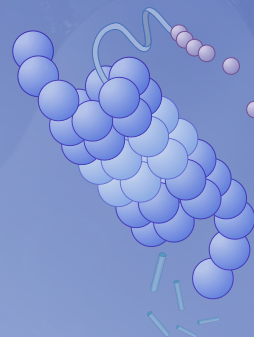
- HiBiT-Based Lytic Assays
- Proteomics-Based Off-Target Profiling
- Validation with WB or Jess

| Phenotypic Profiling

- Cell Viability and Apoptosis
- Immune and Inflammatory Response

TPD Service Highlights:

- ♦ Seamless workflow: From in-house protein expression to complex assays, ensuring seamless integration.
- ♦ Mass spectrometry-based proteomics for TurboID labeling and protein degradation profiling.
- ♦ Comprehensive degradation analysis: High-throughput HiBiT assays and validation with Jess, ICW, and other classic methods.
- ♦ Diverse phenotypic screening tools for functional evaluation.



DNA Repair & Synthetic Lethality

Target-based Solutions

| Extensive Protein Products

- Over 60 validated recombinant proteins related to DDR and synthetic lethality.

| Advanced Biochemical and Biophysical Platforms

- More than 10 assay formats, including ADP-Glo, Spectral Shift and SPR, ready-to-use assays targeting DDR-related proteins, including WRN, PARP, CDK, POLQ, PARG, PKMYT1, PRMT5, and p53.

| Specialized Cell Lines and Cell-based Assays

- A diverse collection of cell lines, including KO and drug-resistant variants, supporting viability, biomarker, and reporter assays.

| Custom In Vivo Models

- Tailored CDX models specifically developed for DDR research.

Key Features:

- ♦ Pioneer in the field, among the first CROs globally to specialize in DDR, with extensive project experience.
- ♦ Tailored DDR solutions, backed by a strong molecular and cell biology team.
- ♦ Leading expertise in drug-resistant and gene-edited cancer cell line & CDX model development.



More Targets

- Protein-protein Interaction
- Helicases
- RAS
- Epigenetic Enzymes
- Nuclear Hormone Receptors
- Transcription Factors
- Phosphodiesterases (PDEs)
- Proteases
- Phosphatases
- Deubiquitinating Enzymes (DUBs)
- Integrins
- ATPases
- Transporters
- Apoptosis Pathway Targets
- Metabolic Pathway Targets

...

Assay Formats Available for Assay Development:

◆ Biochemical

- ✓ ADP-Glo ✓ TR-FRET ✓ Fluorescence Polarization
- ✓ ELISA ✓ Fluorescence Intensity ✓ AlphaLISA

◆ Biophysical

- ✓ Spectral Shift ✓ TRIC ✓ SPR ✓ ITC
- ✓ Thermal Shift Assay ✓ NanoDSF ✓ Mass Spectrometry

◆ Cell-based & Others

- ✓ Flow Cytometry
- ✓ Patch Clamp ✓ FLIPR ✓ IncuCyte (Live-Cell Analysis)
- ✓ Reporter Gene
- ✓ In-Cell Western ✓ Immunofluorescence
- ✓ NanoBRET ✓ NanoBiT ✓ HiBiT ✓ MSD
- ✓ Automated Digital Western Blot

Cell-based Oncology Solutions

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2D & 3D Cell Viability & Proliferation

| Cell Viability Assays

- CellTiter-Glo Assay
- CellTiter-Blue Assay
- MTT Assay
- CCK-8 Assay
- Nuclear Stain Assay

| Cell Proliferation Assays

- CyQUANT Assay
- BrdU Incorporation Assay

| Colony Formation Assay

- Crystal Violet Staining

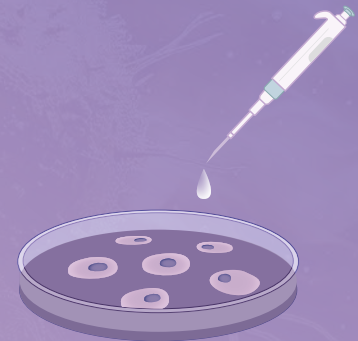
| 3D Tumor Spheroid Assay

| 3D Matrigel Assay

| Soft Agar Assay

Key Features:

- ◆ Extensive Cell Line Collection: 550+ cancer cell lines, along with a diverse selection of clonogenic, Ba/F3, gene-edited, resistant, and normal cell lines.
- ◆ High-Throughput & Scalable: 96- & 384-well formats for screening both small and large compound libraries.
- ◆ Customizable & Cost-Effective: Tailored single-agent and combination studies with fast turnaround times (TAT).

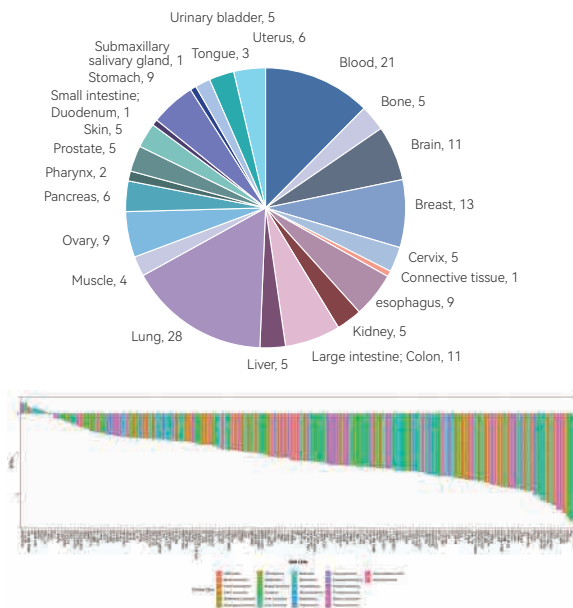


ICECP™ Cancer Cell Panel Screening

Cell-based Oncology Solutions

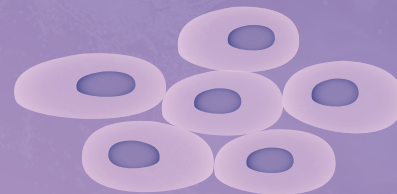
ICECP 170 Cell Panel™

- A predefined cell panel comprising 170 tumor cell lines, covering 21 cancer types.
- Bioinformatics analysis of ICECP™ 170 data.



ICECP 170 Cell Panel™ Highlights:

- ◆ Extensive Coverage: One of the largest cancer cell panels, spanning diverse cancer types.
- ◆ Fast & Flexible: Studies initiated weekly, eliminating long scheduling delays.
- ◆ Seamless Transition: Easily integrates with CDX models for further in vivo validation.
- ◆ Competitive pricing with fast turnaround times, as quick as 6 weeks.



Specialized Cell Panel Screening

Gene-edited cancer cell lines and drug-resistant cancer cell lines available.

2D & 3D RAS-targeted Panels

- 20+ RAS-related panels (constantly updated).
- 20 or 40 cell lines, fixed, covering 5–15 cancer types.
- Mutations: Focus on KRAS G12C, G12V, G12D, and NRAS mutations.

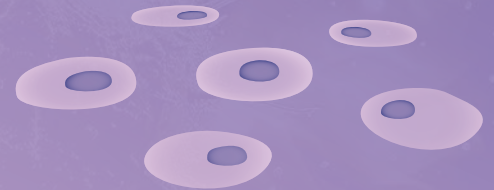
DNA Damage Response Panels

- 30 or 65 cell lines for DDR-related targets.
- Validating monotherapy and combination therapy using engineered and drug-resistant cells.
- Mutation Information: DDR-related genes such as BRCA, TP53.

PARP1/2 and WRN cell panels available, featuring various mutation information, MSI status, and resistance profiles.

Highlights:

- ◆ Target-Focused Design: Unique cancer cell panels tailored to specific targets.
- ◆ Diverse Mutant & Resistant Models: Covering a wide range of mutations and drug-resistant cell lines.
- ◆ Flexible Panel Sizes: Available in large and small formats to meet varying research needs.



Cell Function & Signaling Analysis

Cell-based Oncology Solutions

Highlights:

- ◆ Crucial for understanding tumor progression and drug response.
- ◆ Diverse techniques, ensuring precise functional and signaling pathway evaluation.
- ◆ Quantitative & high-sensitivity for accurate, data-driven insights.

| Cell Migration and Invasion Assays

- Transwell Migration Assay
- Chemotaxis Assay
- Invasion Assay

| Cell Adhesion Assays

- Integrin-Ligand Binding Assay
- Integrin-mediated Adhesion via CellTiter-Glo

| Wound Healing (Scratch) Assays

| Cell Cycle Assays

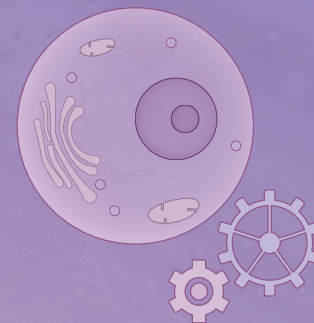
| Cell Apoptosis Assays

- Annexin V Staining Assay
- Caspase 3/7 Activity Assay

| Reporter Gene Assays

- Target-specific Signaling Pathway
- Cytokine and Immune Response Profiling

| Signaling Protein Detection



In Vitro Immunology Profiling

Cell-based Oncology Solutions

Key Features:

Immune Cell Preparation & Isolation

- Healthy & diseased donors
- Fresh Whole Blood & Leukopak: Sourced for PBMCs and specific immune cell populations, including T cells, B cells, NK cells, and monocytes.

Immune Activation & Differentiation

- Flow cytometry, cytokine profiling, T cell/PBMC activation, co-culture models

Cell Killing & Cytotoxicity

- T cell/NK cell killing, ADCC, ADCP, CDC assays

Immunosuppression & Modulation

- Immunosuppression assays, MLR, checkpoint inhibitor screening

Molecular & Pathway Analysis

- WB, Jess (Simple Western), reporter gene assay, Mass Spectrometry & Proteomics

Biomarker Discovery and Detection

- qPCR, LC-MS/MS, ELISA, WB, MSD, Flow Cytometry, High-Content Analysis, *in vivo* imaging

- ◆ End-to-End Immune Assays – From activation and cytotoxicity to immunosuppression and migration, covering key immune functions.
- ◆ Physiologically Relevant Models – Utilizing PBMCs, primary cells, and tumor-immune co-cultures for translational insights.
- ◆ High-Throughput & Data-Driven – Advanced flow cytometry, cytokine profiling, and imaging for scalable and precise results.



Cell-Based Assays for ADCs

Cell-based Oncology Solutions

Target Expression & Binding Assays

- Flow cytometry to quantify antigen expression on target cells
- Flow-based antibody binding assays

ADC Internalization & Trafficking

- IncuCyte live-cell imaging
- Temperature shift-based & pH-indicator based
- High-content analysis

Cytotoxicity & Cell Viability

- IncuCyte-based cytotoxicity assay
- Dual Payload Cancer Cell Panel Profiling
- ADC HER2 Cell Panel Screening: 65 cell lines, including HER2-positive and HER2-negative, assessed via CellTiter-Glo
- Expanding ADC-resistant cell line screening: DLD-1/Exat R & SKOV3/Dxd R, with ongoing developments

Bystander Effect Evaluation

- Co-culture Assays
- IncuCyte & Flow cytometry based
- Tag-expression reporter tumor cell lines for **in vitro** and **in vivo** CDX models

Key Features:

- ◆ Comprehensive Assay Portfolio – Covering all key ADC evaluations.
- ◆ Physiologically Relevant Models – Utilizing engineered cell lines, co-culture systems, and resistant models for accurate translational insights.
- ◆ Fast & Data-Rich Readouts – Flow cytometry, imaging, and functional assays to deliver reliable, actionable results with rapid turnaround.



Safety & DMPK

Safety Panel Screening

Safety & DMPK

ICESTP SAFETYPANEL™ 44 Dose Response

- A comprehensive set of 44 clinically relevant targets, including GPCRs and ion channels.

ICESTP SAFETYPANEL™ 77 Dose Response

- Expanding with an additional 33 important targets, focusing on critical physiological systems.

ICESTP SAFETY PANEL™ PLUS Dose Response

- Expanding coverage with 108 targets and 162 assays, providing more comprehensive off-target effect data for precise drug safety assessment.

Targets	ICESTP 44	ICESTP 77	ICESTP PLUS
GPCR	24	30	41
Ion Channel	8	8	14
Enzyme	7	30	43
Nuclear Receptor	2	5	6
Transporter	3	4	4
Total Functional Assays	74	116	162

ICESTP SAFETYPANEL™ Drug Abuse

- Thorough assessment of new drug candidates that are CNS-active, a comprehensive battery of studies to determine the abuse liability.

ICESTP SAFETYPANEL™ CNS Core

- Evaluating key neurological targets to assess potential CNS liabilities

Safety Panel Highlights:

- ♦ Largest Human Functional Dose Response Panel – 108 key targets, duplicate testing at the highest concentration and single-point dose response for a total of 10 data points per assay.
- ♦ No delays despite dose response; directly obtain IC_{50}/EC_{50} in one step, eliminating the need for sequential off-target risk validation.
- ♦ Expanded insights with cost-efficient pricing.

Cardiac Safety Assessment

Safety & DMPK

| hERG channel assays following ICH S7B in vitro best practices using patch clamp

| CiPA Ion Channel Panel Screening

- Seven critical cardiac ion channels: hERG, Cav1.2, Nav1.5, Nav1.5-Late, IKs, IK1, and Kv4.3

| Action Potential Assessment

- Human iPSC derived cardiomyocytes
- Rabbit Purkinje fibers

| Langendorff Perfused Heart Model

- Simulated body surface electrocardiogram: ECG
- Left ventricular pressure: LVDP
- Coronary artery pressure or flow velocity
- Heart rate

| Guinea Pig Models

- Highly predictive cardiac safety assessment, offering reliable QT/QTc evaluation and TdP risk detection

Cardiac Safety Service Highlights:

- ◆ Proven Expertise – Backed by 15 years of experience with over 4,000 studies delivered, including 200+ IND submissions, of which 100+ have been successfully approved.
- ◆ Comprehensive Testing Across Models – Covering in vitro (hERG, CiPA panel), ex vivo (Langendorff hearts, Purkinje fibers), and in vivo (ECG, guinea pig models) for fully integrated cardiac safety evaluation.
- ◆ Fast & Efficient – Streamlined workflows ensure rapid turnaround and actionable insights.



In Vitro ADME

Safety & DMPK

| Physicochemical Property

- Solubility & Lipophilicity

| Permeability and Transporter

- PAMPA-BBB
- Caco-2 and MDCK Assays
- Transporters: SLCs and ABCs

| Protein Binding

- Plasma Protein Binding
- Brain and LM Protein Binding
- Red Blood Cell Partition Ratio

| Metabolic Stability and DDI

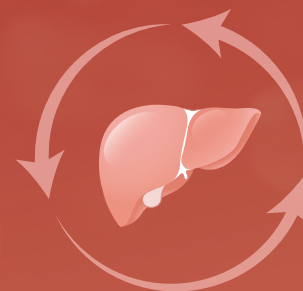
- Liver microsomes, S9 fractions, hepatocytes, plasma, and whole blood
- Enzyme Stability, GSH Trapping, CYP and UGT Inhibition/TDI, CYP Induction & Phenotyping
- Specialized Enzyme Inhibition Studies

| Metabolite Identification

| Drug-Induced Liver Injury (DILI)

ADME Highlights:

- ◆ Customized and optimized in vitro permeability models overcome limitations of traditional assays for beyond Ro5 molecules.
- ◆ In vitro BBB models range from standard systems to brain microvascular endothelial models that mimic physiological BBB characteristics.
- ◆ Early-stage hepatotoxicity testing along with mitochondrial toxicity assays, enabling early identification of potential liver toxicity in drug development.



In Vivo Pharmacokinetics

Safety & DMPK

| Formulation Screening

| Plasma PK Design

- Full PK
- Rapid PK
- Snapshot PK
- Cassette PK
- CNS PK

| Tissue Distribution

- Brain, lung, and other target tissues

| Metabolism & Excretion

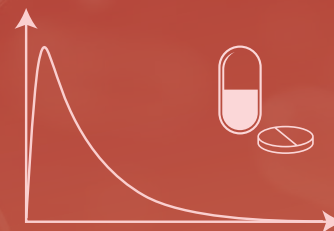
- Metabolite Analysis & Identification
- Excretion Studies: Urine, Feces, Bile.

| General Toxicology Services

- Acute Toxicity Tests
- Subacute Toxicity Tests
- Long-term Toxicity Tests

In Vivo PK Highlights:

- ♦ Diverse drug administration methods, including systemic delivery (IV, oral, SC, IM) and localized approaches (pulmonary, intrathecal, lateral ventricle).
- ♦ Precise sample collection including comprehensive tissue and blood sampling with specific subsampling options.
- ♦ Extensive expertise and experience particularly for advanced modalities like PROTACs and ADCs.



Bioanalysis

Small Molecule Bioanalysis

- Quantitative LC-MS/MS Assays
- Method Development and Validation
- Matrix Compatibility
- Covalent Binding

Large Molecule Bioanalysis

- Ligand Binding Assays (LBA)
- Hybrid LC-MS/MS

Metabolite Profiling & Identification

- Metabolite Quantification
- Metabolite Identification (MetID)
- Reactive Metabolite Analysis

ADC Bioanalysis

- Plasma Stability & DAR
- Released Payload and Total Antibody

Biomarker Analysis

Bioanalysis Highlights:

- ◆ Equipped with the Q Exactive™ Plus Mass Spectrometer, enabling high-resolution, high-sensitivity analysis for complex molecules.
- ◆ Extensive experience in bioanalysis for diverse modalities, especially ADC and PROTAC.
- ◆ Personalized assay development and validation to meet specific client needs.



In Vivo Pharmacology

Oncology Models

| Specific CDX Models for DNA Damage Response (DDR)

- BRCA2 KO Cell Lines
- MTAP KO Cell Lines
- MSI Cell Lines

| Living Image CDX Models

- Orthotopic CDX Models
- Metastasis Research
- Tumor Microenvironment Research

| Drug Resistant CDX Models

- Drug Resistance Data
- In Vitro & In Vivo QC
- ADC & DDR Drug Resistance

| BaF3 CDX Models

- Target-Specific BaF3 Models
- Site-Specific Validation

CDX Models Services Highlights:

- ◆ GMP-like cell quality with a well-established QC system to ensure the reliability of CDX models, both in vitro and in vivo.
- ◆ Client-driven response with fast and flexible study arrangements.
- ◆ Over 600 tumor cell lines in stock, with a subset utilizing state-of-the-art gene editing techniques to support the development of anti-tumor drugs.



Neuroscience Models

| Neurodegenerative Disease Models

- Parkinson's Disease
- Alzheimer's Disease
- Multiple System Atrophy
- Optic Neuritis and Spinal Cord Inflammation
- Amyotrophic Lateral Sclerosis (ALS)

| Mental Disorders Models

- Depression
- Schizophrenia
- Anxiety
- Addiction

| Pain and Nociception Models

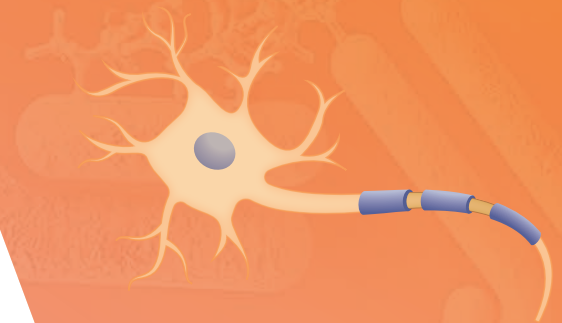
- Neuropathic Pain
- Inflammatory Pain
- Visceral Pain
- Post-Surgical Pain
- Chemotherapy-induced Peripheral Neuropathy (CIPN)
- Metastatic Pain of Bone Cancer

| Neurotrauma Models

- Stroke
- Spinal Cord Injury

Highlights:

- ♦ A wide range of CNS disease and pain models for in-depth research.
- ♦ Tailored models to meet specific research needs, offering precise and reliable results.
- ♦ Utilizing cutting-edge methods like behavioral assays, EEG, sleep monitoring and biomarker analysis for accurate and reproducible results.



Neuroscience Models (continued)

In Vivo Pharmacology

| Epilepsy Models

- Maximum electroshock (MES) model
- 6-Hz model
- PTZ model (i.p./i.v./s.c.)
- Pilocarpine model (acute and chronic)
- KA model (acute and chronic)
- Amygdala kindling model

| Sleep Monitoring

- Sleep monitoring in normal animals
- Sleep monitoring in PICC-induced insomnia model

| Electrophysiology in Brain Slices

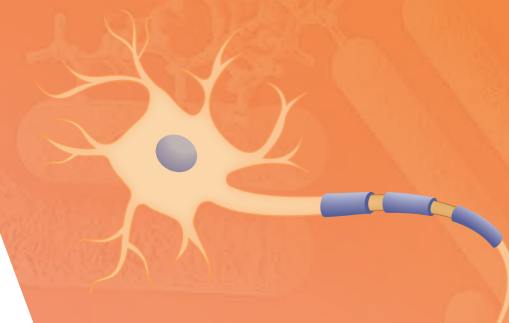
- Action potential
- Excitatory/Inhibitory postsynaptic currents (EPSP/IPSP and EPSC/IPSC)
- Long-term potentiation and long-term depression (LTP and LTD)

| Neuromuscular Models

- Diaphragm with phrenic nerves **in vitro**
- Extensor digitorum longus with sciatic nerve **in vitro**
- Anterior tibial muscle with sciatic nerve **in vivo**

Highlights:

- ◆ Integrated service **in vitro** and **in vivo**.
- ◆ Integrated service from pharmacodynamics to mechanism.
- ◆ Monitoring in the behaviors and EEG simultaneously.



Autoimmune & Inflammatory Disease Models

| Arthritis Models

- Collagen-Induced Arthritis (CIA)
- Adjuvant-Induced Arthritis (AIA)
- MSD Cytokines Analysis
- Behavior and Pathology Examination

| Atopic Dermatitis/Psoriasis Models

- MC903 AD
- Oxazolone AD
- IMQ Psoriasis

| Peritonitis-Induced Sepsis Models

| Idiopathic Pulmonary Fibrosis (IPF) Models

| Dry Eye Disease Models

Highlights:

- ♦ A wide range of models covering arthritis, dermatitis, psoriasis, sepsis, pulmonary fibrosis, and dry eye disease for diverse research needs.
- ♦ Clinically relevant and precise models, such as CIA, AIA, and IMQ Psoriasis, ensure accurate and targeted preclinical outcomes.
- ♦ Integrated services, including cytokine analysis and behavioral/pathological examinations, provide a complete solution.



Metabolic and CVD Models

In Vivo Pharmacology

| Obesity

- DIO mouse/rat , Congenic obese models
- Non-invasive body composition
- Muscle function evaluation

| MASH

- HFD/CCl4 MASH models
- Biochemical evaluation
- Huma MASH organoid

| Pulmonary Arterial Hypertension (PAH)

- Hypoxia-induced PAH
- Monocrotaline-induced PAH

| Hypertension

- SHR/WKY
- Renal hypertension

| Blood coagulation and platelet aggregation

- In Vivo/In Vitro Blood coagulation
- Rodent/non-rodent platelet aggregation

Metabolic and CVD Models Highlights:

- ♦ Integrated services and solutions for metabolic disease models.
- ♦ Skilled and experienced team ensuring study details and progress.
- ♦ Comprehensive methodologies for cardiovascular disease models.



Other Models & Services

| Postoperative Delirium Models

| Peritonitis-Induced Sepsis Models

| Liver Resection and Regeneration Models

| Erectile Dysfunction Models

| Premature Ejaculation Models

| Vomiting Models

| Abolition Degeneration Model

- Disuse osteoporosis
- Disuse muscular atrophy

| Myocardial Infarction & Heart Failure

- Left anterior descending coronary artery ligation model
- Doxorubicin-induced heart failure
- Isoprenaline-induced heart failure
- Post-myocardial infarction heart failure

| Electromyography (EMG)

- EMG in free animals
- EMG in anesthetized animals

Highlights:

- ◆ Integrated in vitro and in vivo service.
- ◆ Utilize non-invasive methods and behavior monitoring along with advanced biochemical evaluations and human organoid models.
- ◆ Develop and offer highly customizable models that can closely mimic human disease states.



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