

TECHNOLOGIES

Ca²⁺ assays



- Single cell and population analysis
- Large panel of measured Ca²⁺ signals

Patch-Clamp



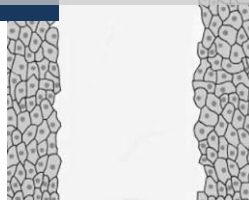
- Conventional and automated patch clamp systems
- Whole cell analysis

Chemistry



- References synthesis
- Hit to lead optimization
- Probe conception
- Library for screening

In vitro / vivo tests



- Mobility
- Proliferation
- Toxicity
- Enzymatic activities

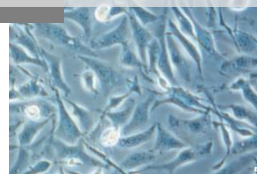
Modulators



- Synthetic compounds
- Natural products *
- Biological molecules

* pure or semi-purified extracts

Cellular models



- Large diversity of cell lines
- Primary cells

ABOUT US

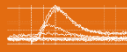
a multicenter facility

CalciScreen is a R&D and Services core facility dedicated to the identification of Ca²⁺ signaling modulators for therapeutic applications.

CalciScreen is the first core facility in Europe to offer services from *in vitro* to *in vivo* preclinical phases in the field of Ca²⁺ related diseases.

CalciScreen brings together the means and expertise, at the interface between chemistry and biology, of 3 laboratories:

University of BREST
Screening of Ca²⁺ flux modulators



University of TOURS

Ca²⁺ sensitive channels activities

University of ORLEANS

Custom chemical synthesis services

+
associated labs and facilities

CONTACT US

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VALIDATION OF DRUGS MODULATING CA²⁺ SIGNALING

Ca²⁺ a key factor of cell physiology

Inserm



UBO
université de Bretagne
occidentale

UNIVERSITÉ
FRANÇOIS-RABELAIS
TOURS



CalciScreen OFFER

FOR: CANCER RESEARCH – IMMUNOMODULATION – NEUROLOGY – DERMATO-COSMETICS – ANTIOXYDANT RESEARCH

WHO

- Compound providers
- Laboratories in search of new active compounds

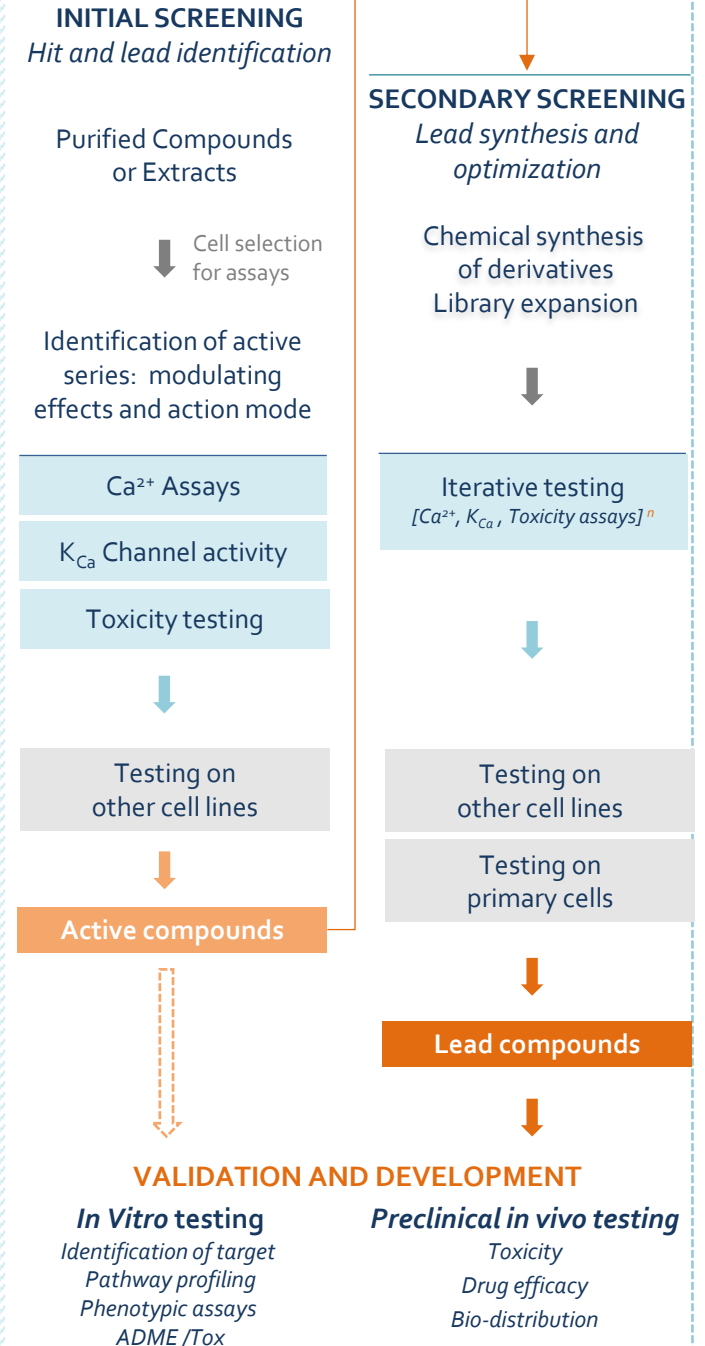
WHY

- Biological effect identification**
of original compounds modulating Ca^{2+} signaling (pure or semi-purified extracts)
- Repositioning drugs**
New applications for drugs in the field of Ca^{2+} related diseases
- Identification of new drugs modulating Ca^{2+} signaling**
acting on a specific molecular target, cellular function or correcting a pathological phenotype

HOW

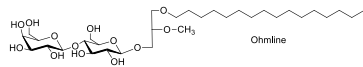
- Ca^{2+} signaling assessment**
 - Quantification of modulators' effects
 - Identification of drug's targets
 - Pathway profiling
- Ca^{2+} dependent ion channel activity measurement**
 Ca^{2+} imaging, Patch-clamp systems
- Compounds design and synthesis**
 - New drugs and references
 - Derivatives' synthesis (lead optimization)
 - In silico screening
- In vitro analysis of drugs' effect**
Access to numerous cell lines and primary cultures
- Preclinical in vivo testing**
Access to numerous murine models of Ca^{2+} related diseases

SCREENING WORKFLOW

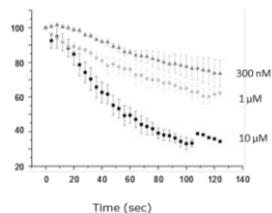


CASE STUDY: DISCOVERY OF A NEW ANTI-METASTATIC DRUG

OHMLINE SYNTHESIS

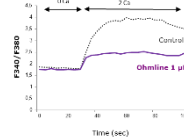


SK3 CHANNEL ACTIVITY MEASUREMENT



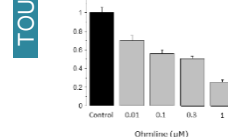
Ohmline reduces SK3 currents

Ca²⁺ ASSAYS



Ohmline inhibits SK3 dependent Ca^{2+} entry

CELL MIGRATION ASSAY



Ohmline inhibits cancer cell migration

IN VIVO TESTING



Ohmline prevents bone metastasis development