

From invention to innovation

PHENOSFISH PLATFORM

The platform offers a high-throughput screening service for small psychoactive molecules in zebrafish embryos.

SCIENTIFIC EXPERTISE

- Psychoactive molecules
- Drugs screening and profiling (classification, toxicity, molecular targets, etc.)
- Recognized know-how with zebrafish Simple protocol with unambiguous output

APPLICATIONS

Pathophysiology and neuroprotection in brain damage

Cellular and molecular mechanisms of Central Nervous System (CNS) differentiation

Neurodegenerative diseases and therapeutic approaches

Zebrafish models of human neurodegenerative diseases (eg. Friedreich's ataxia, Parkinson's disease)

TRACK RECORD

- Validation of known psychoactive molecules
- Discovery of new drug candidates – mid-size pharma

PUBLICATIONS

[Ghomid J. et al., Hum Mol Genet. 2013](#)

[Yanicostas C. et al., PLoS One 2012](#)

[Martin E. et al., Neurobiol Dis. 2012](#)

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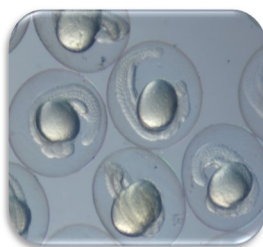
Eco-toxicology ■ Fetal development ■ Genetic disorder ■ Human pathology ■ Animal model ■ Zebra fish

SERVICE DESCRIPTION

Psychoactive molecules are essential tools for treating CNS disorders and exploring nervous system function. However, the lack of accurate in vivo tests has limited the discovery of novel psychoactive drugs over the last decades.

The platform, an automated motility recording system adapted for zebrafish embryos, allows the identification of in vivo novel psychoactive molecules.

It is based on high-intensity light stimulus which elicits a stereotypical series of motor behaviours in zebrafish embryos, the photomotor response (PMR). Interestingly, diverse classes of psychoactive molecules induce distinct, quantifiable and highly reproducible modifications of the PMR. PMR analysis can therefore be used to classify psychoactive drugs according to their activity.



OFFER

- High-throughput screening of psychoactive molecules. The high capacity is >100 embryos. They can be monitored simultaneously in 96-well plates
- Classification of drugs according to their activity
- Custom collaborations : identification of leads and study of their activity on zebrafish models of human neurodegenerative diseases