

The Neurotox Laboratory

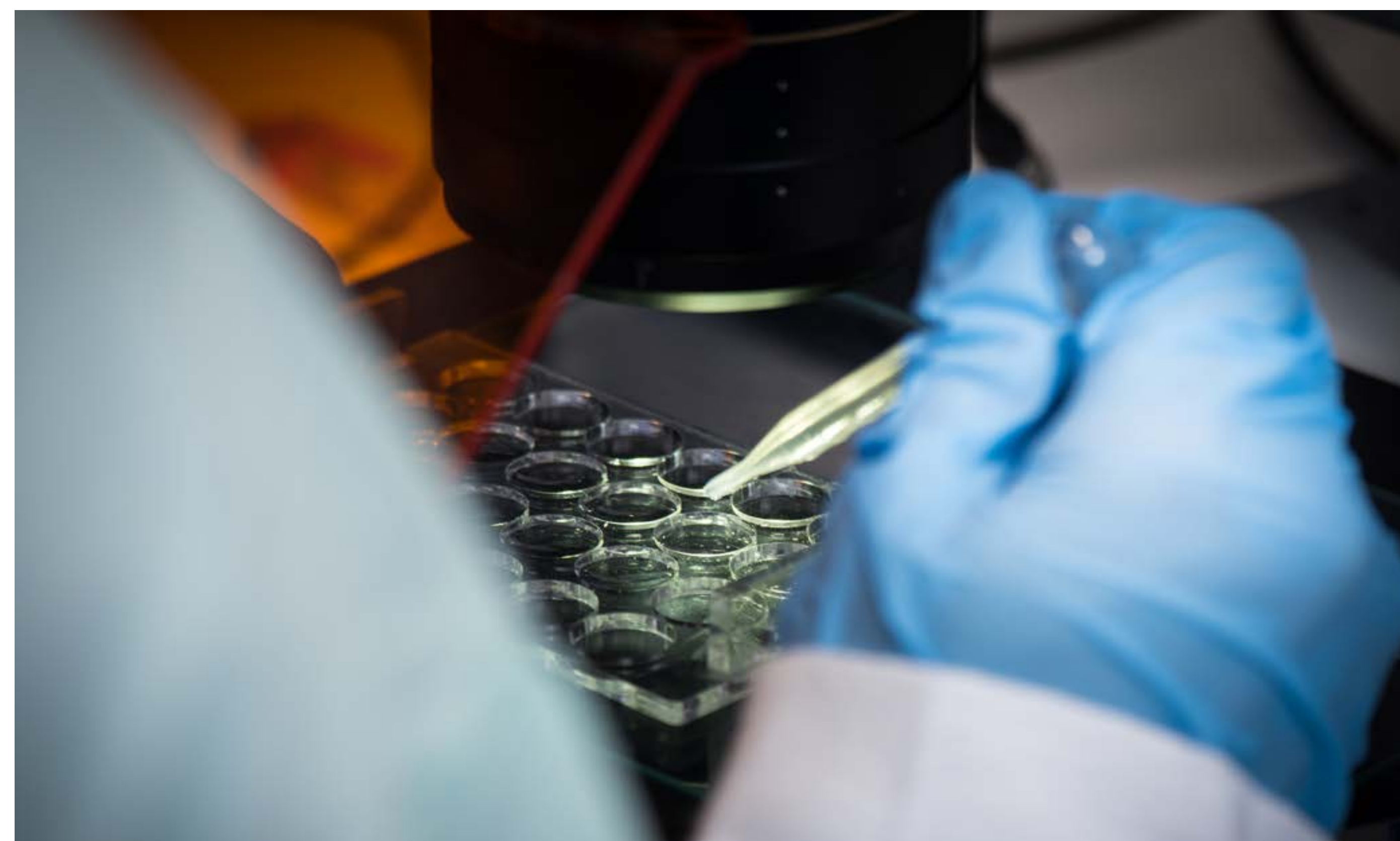
Wlodkowic Lab

Research Focus

Uniquely specializing in eco- & neurotoxicity testing and neuroactive drug discovery using high-throughput chemobehavioural phenotyping

Eco-Neurotoxicology | Neurotoxicity Testing | Behavioural Biotests | Aquatic Animal Models

The Neurotox Laboratory at RMIT School of Science is an interdisciplinary facility with portfolio of innovative research in eco- & neurotoxicity testing and behavioural biotests with small aquatic model organisms.



We have significant know-how in development and implementation of rapid and sensitive behavioural biotests as well as functional *in situ* bioassays in:

- environmental risk assessment,
- characterization of new chemicals,
- water quality sensing,
- neuroactive drug discovery.

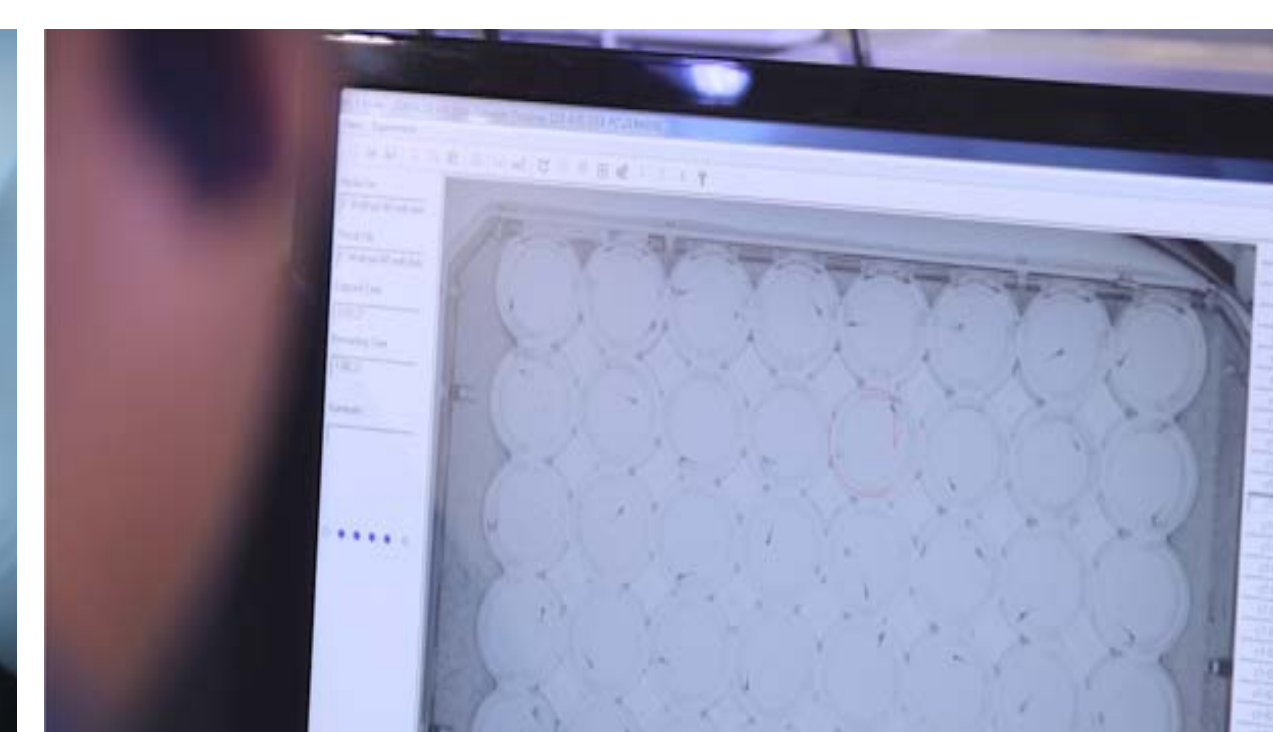
Capabilities

The laboratory has in-house state-of-the-art facilities dedicated to:

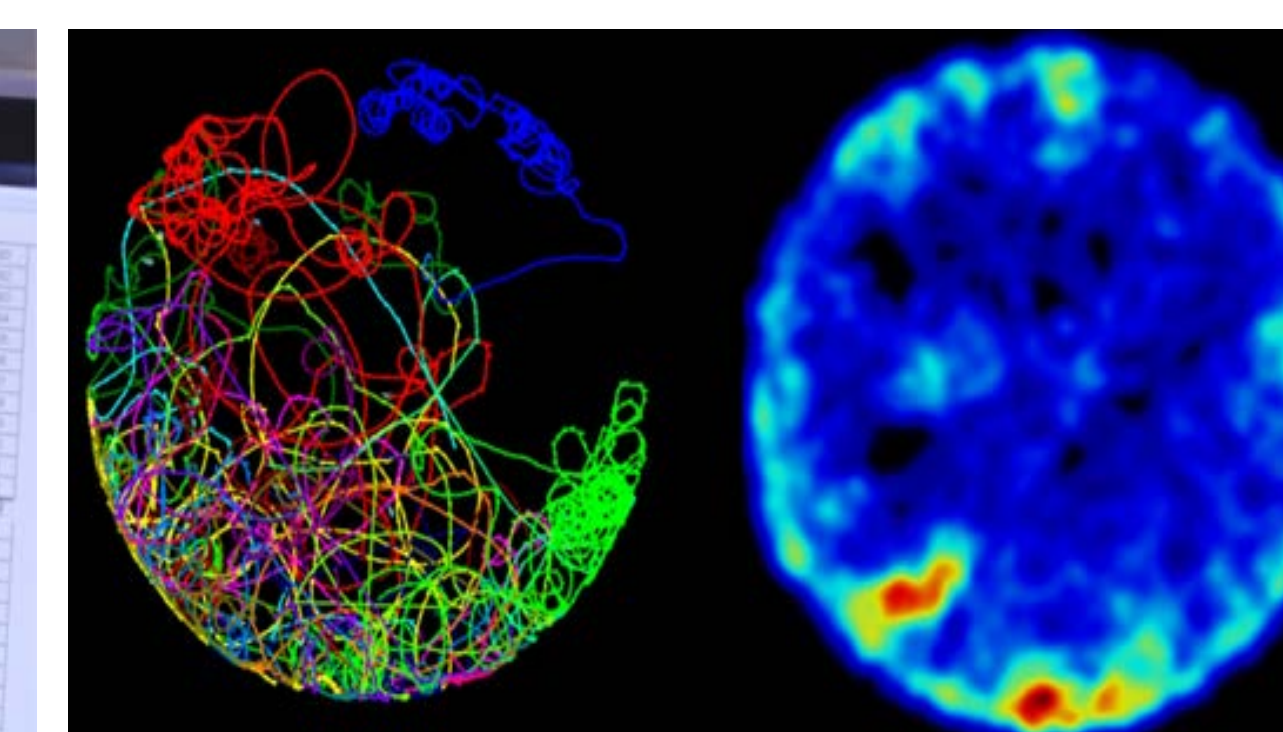
- Small aquatic animal husbandry
- Standard ecotoxicology biotests
- Behavioural biotests
- Infrared digital video imaging
- Video microscopy
- Behavioural bioinformatic analysis
- Cell and molecular bioassays
- Design of new bioanalytical systems



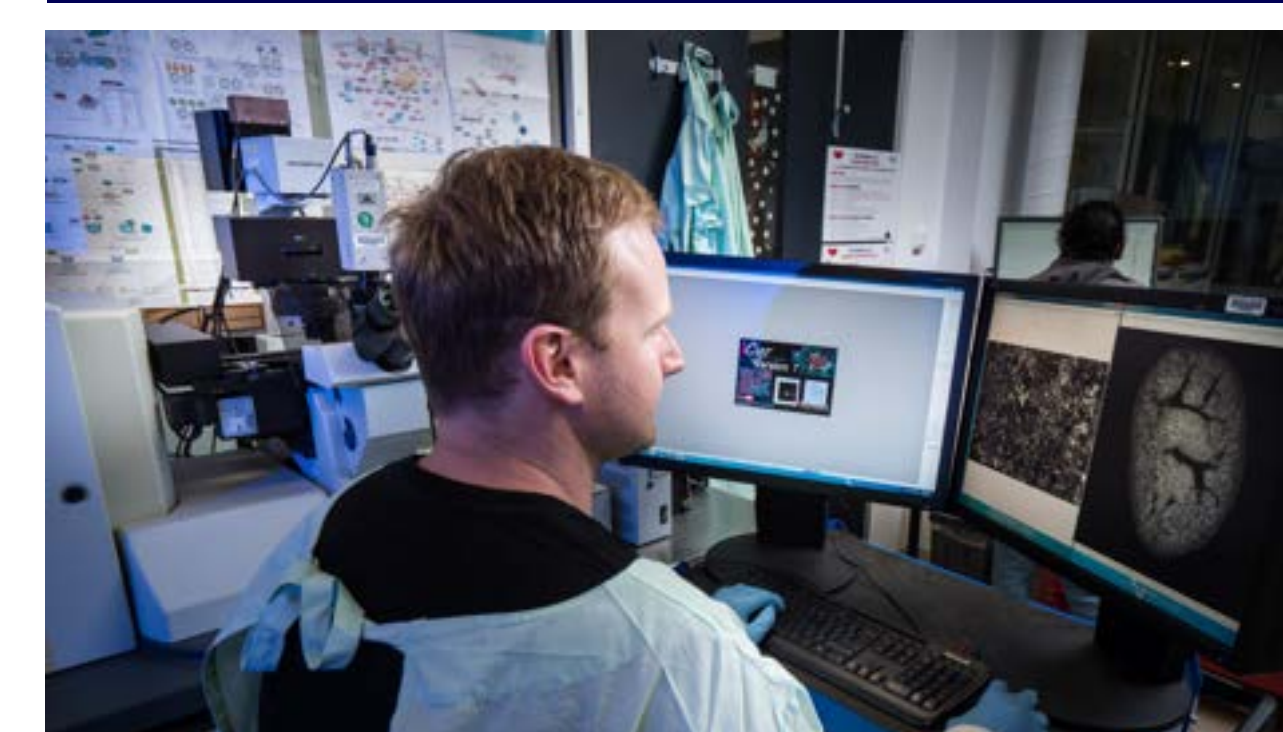
Small model organisms



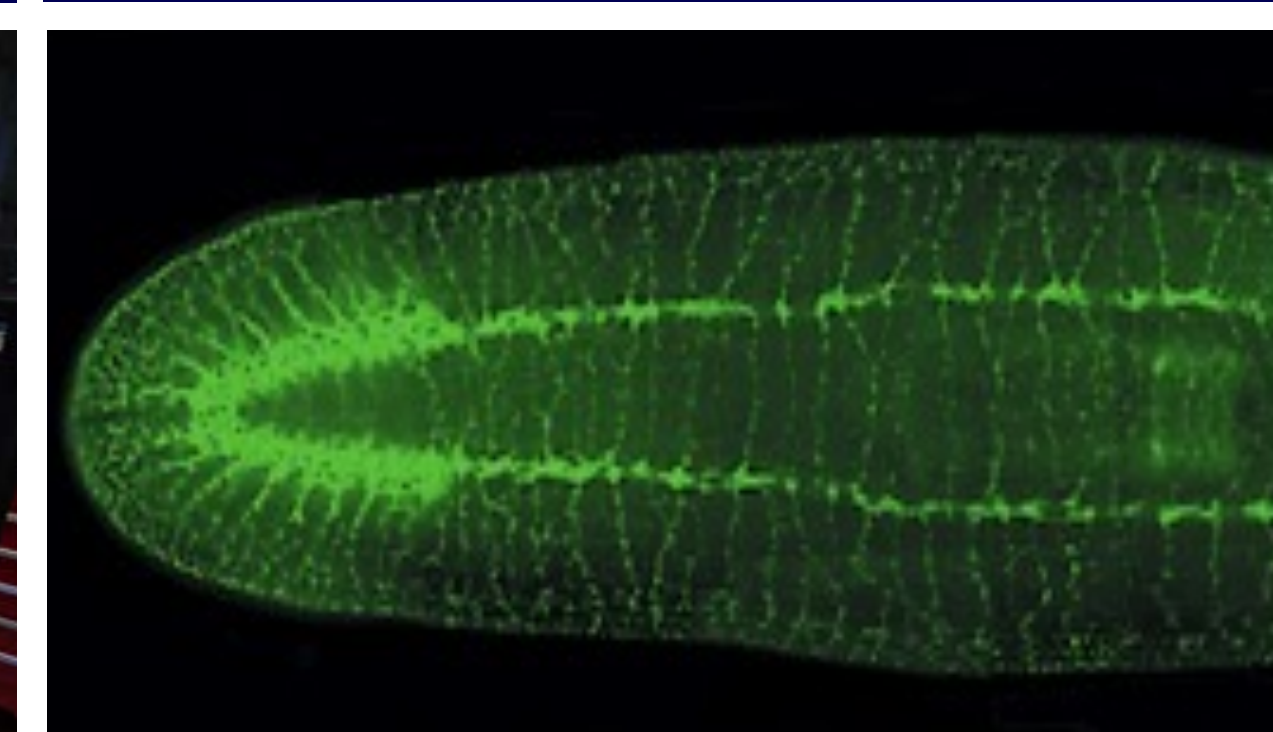
Behavioural biotests



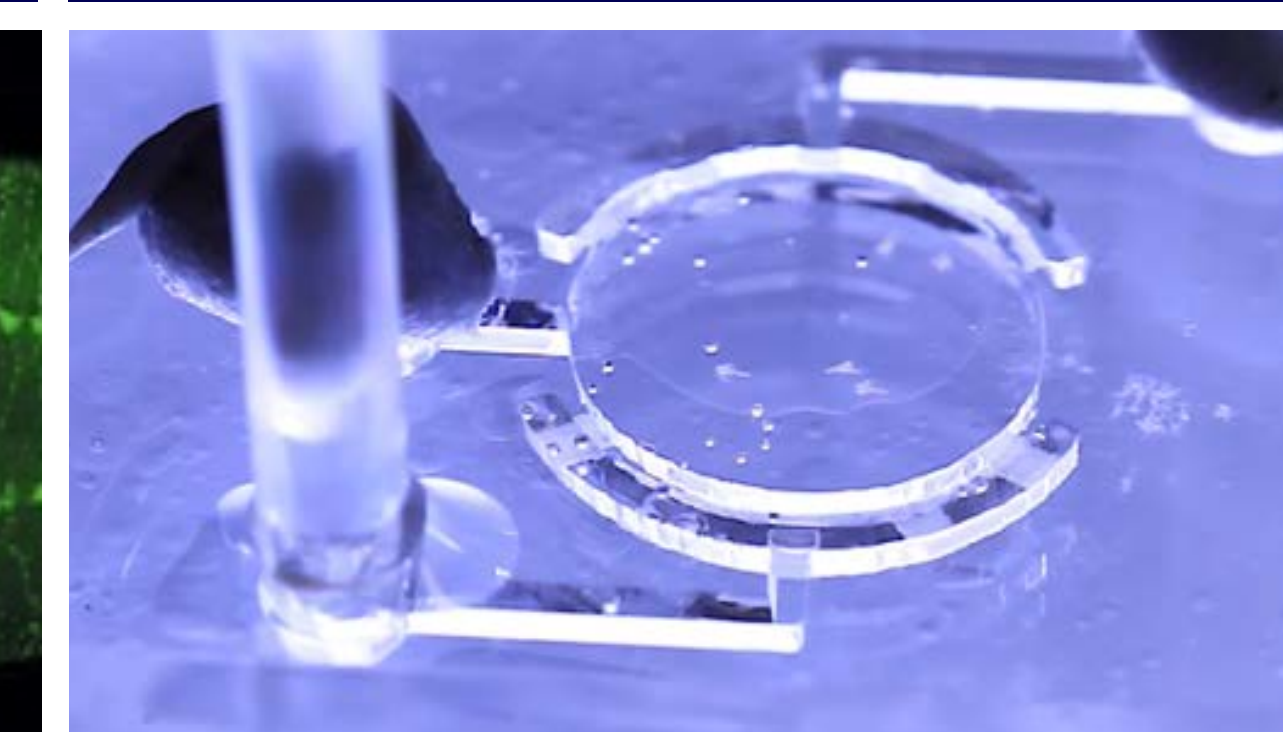
Behavioural analytics



Advanced bioimaging



In situ bioassays

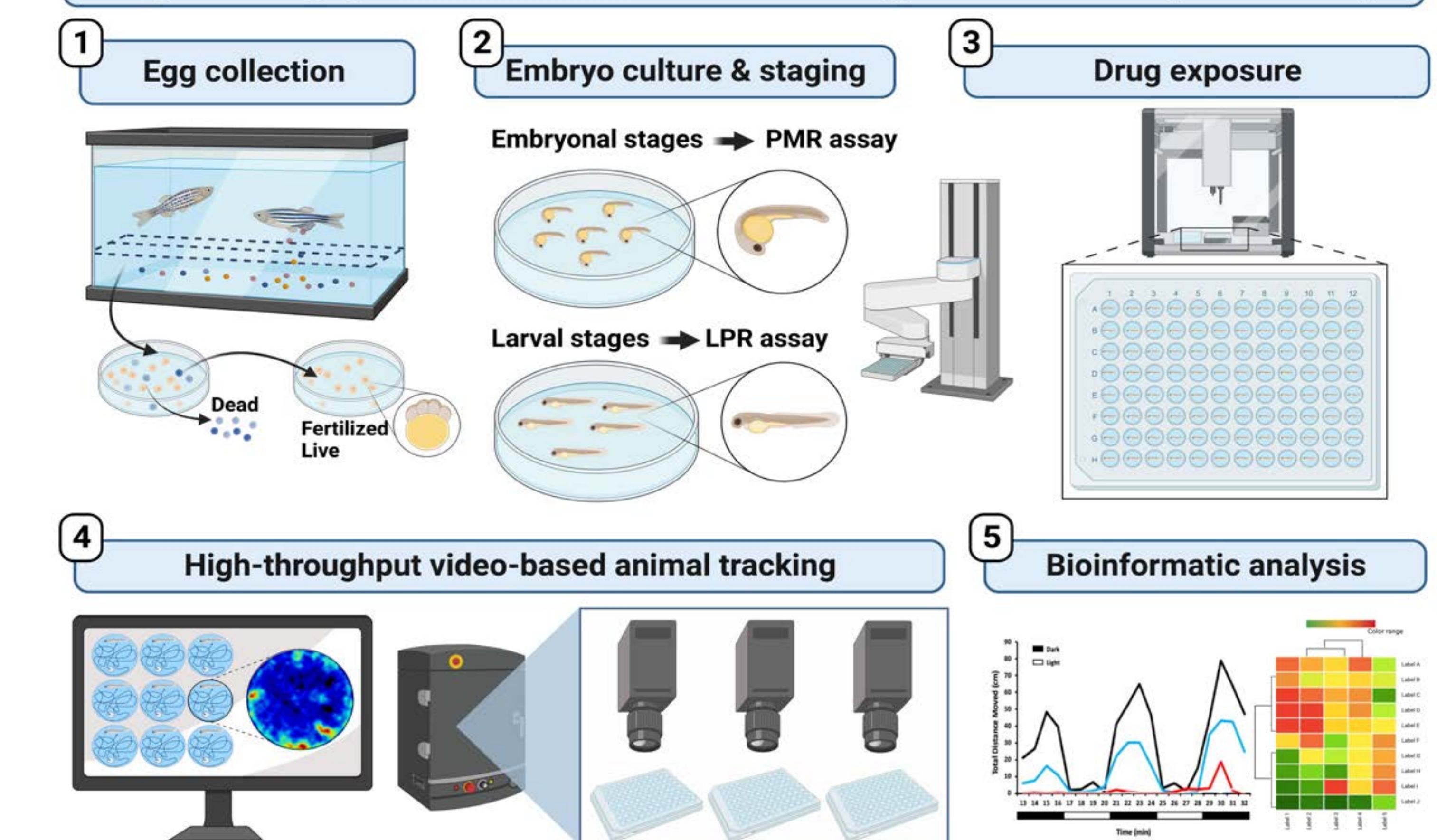


Biomicrofluidics

Recent Research Projects

- Perturbations in aquatic animal behaviours upon exposure to emerging pollutants
- Phototactic behaviours of aquatic animals: new toolkit in aquatic eco-neurotoxicology
- Thermal preference behavioural tests: perspectives in ecotoxicology research
- Living fish embryo arrays in accelerated neurotoxicity testing
- Neurotoxicity of industrial pollutants

High-Throughput Chemobehavioural Screening with Zebrafish (*Danio rerio*)



Collaborative Partnerships

The laboratory is involved in a range of projects spanning diverse industry sectors such as:

- Drinking water & wastewater
- Environmental risk assessment
- Pharmaceutical & drug discovery

Contact

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Research

