

The Neurotox Laboratory

Wlodkowic Lab

Behavioural Ecotoxicology – Neurotoxicology – Risk Assessment

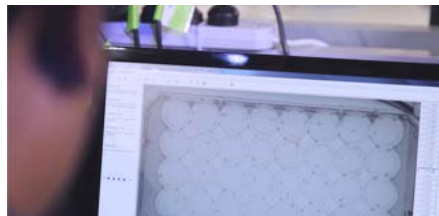
The Neurotox Laboratory at RMIT School of Science is an interdisciplinary facility with portfolio of innovative R&D in neurotoxicity, developmental and behavioural biotests aimed at environmental toxicology, risk assessment and drug discovery.

We have significant know-how in development and implementation of rapid phenotypic biotests as well as cellular and molecular bioassays in:

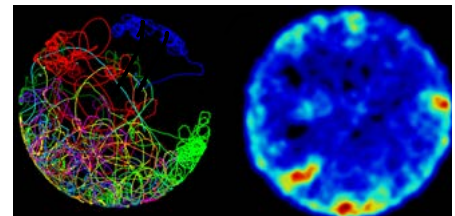
- environmental risk assessment,
- characterization of new chemicals,
- water quality sensing.



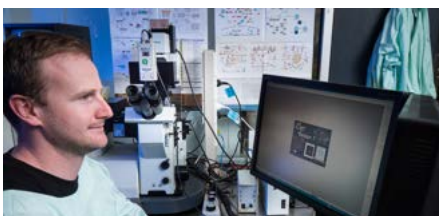
Small model organisms



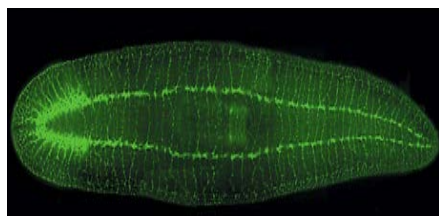
Video imaging



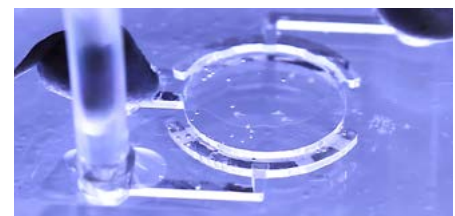
Behavioural analysis



Microscopy & Cytometry



Cell & molecular assays



Microfluidics

Interdisciplinary R&D: Leveraging latest fluidic, video imaging and computing technologies for development of high-throughput neuro-behavioural biotests in aquatic ecotoxicology and drug discovery.



Facilities

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

- Small aquatic animal husbandry
- Standard ecotoxicology biotests
- Cell and molecular bioassays
- Fluorescence microscopy
- Flow & laser scanning cytometry
- Video-based behavioural analysis
- Biomicrofluidics
- Rapid prototyping

Research & Development

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

- Water industry
- Environmental risk assessment
- Pharmaceutical & drug discovery
- Defense & Space

Contact

Head of Laboratory

A/Prof Donald Wlodkowic

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Donald Wlodkowic is an Associate Professor in Cell Biology and Toxicology. He has extensive international expertise in establishing and growing strategic research capacity, innovative infrastructures as well as leading diverse, multidisciplinary research teams.

His current research activities encompass aquatic ecotoxicology, behavioural ecotoxicology, econeurotoxicology, water quality assessment and development of innovative biotests enabled by next-generation biomicrofluidics and high-throughput video-based animal tracking systems.

