

## PDMS microfluidic for in vivo whole-brain imaging of zebrafish larvae

### Description

Microfluidics has a potential for neuroscience research on zebrafish larvae, regarding brain-wide activity mapping. Microfluidic devices offer an ideal approach by allowing high resolution light sheet imaging acquisition in response to fast changes of chemical stimuli application. Most research groups have been working on microfluidic devices made from Polydimethylsiloxane (PDMS), in which zebrafish larvae can be trapped in and released from a microchannel with a defined orientation. Such a device needs to accomplish several goals, including integration with the chip with LSM. Technical challenges in fabricating with high precision out of PDMS exhibiting a sufficient optical quality and sidewalls that can accommodate the incoming excitation laser is required.

### Fields of activity

- Reviewing literature
- Working in PDMS lab
- Mold producing
- Working with 3D printer

### Requirements

- Fluent English
- Being familiar with PDMS microfabrication
- Motivation!

**Start:** ASAP  
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