May 09, 2016

The Editor,

Journal Of Visualized Experiments

To the Editor,

We would like to submit the manuscript " ***Triggering cell stress and death using conventional UV laser confocal microscopy***”, and hope you will consider it for publication in *Journal of Visualized Experiments*.

We introduce a novel technical innovation to induce selective injury to an individual neuron within the spinal cord of zebrafish. Our UV ablation approach allows researcher to induce very selectively stress or death to a single cell and to compare the nature of immediate or short-term cell responses directly and *in vivo*.

Our manuscript provides the detailed protocol to perform these ablations with representative and characteristic examples. We highlight the dynamic nature of microglia in the spinal cord, where they constantly migrate and survey the environment for signs of disturbance, and clear neuronal remnants after injury.

The ablation and visualization techniques presented in this study provide the foundation for future studies, e.g. to understand the complex molecular and cellular mechanisms responsible for glial activation, and their essential role in maintaining cellular homeostasis in the nervous system, both throughout life and during disease.

We hope the manuscript will be of interest and thank you in advance for considering it.



Sincerely

Marco Morsch, Postdoctoral Researcher, Faculty of Medicine & Health Sciences, Macquarie University, on behalf of:

Rowan Radford, Postgraduate Researcher, Faculty of Medicine & Health Sciences, Macquarie University, Australia

Albert Lee, Postdoctoral Researcher, Faculty of Medicine & Health Sciences, Macquarie University, Australia

Emily Don, Postdoctoral Researcher, Faculty of Medicine & Health Sciences, Macquarie University, Australia

Elinor Hortle, Postdoctoral Researcher, Faculty of Medicine & Health Sciences, Macquarie University, Australia

Nicholas J. Cole, Senior Research Officer, Faculty of Medicine & Health Sciences, Macquarie University, Australia

Roger Chung, Professor, Faculty of Medicine & Health Sciences, Macquarie University, Australia