ELSP Biofunct. Mater.

Article | Received 12 May 2025; Accepted 28 July 2025; Published 31 July 2025 https://doi.org/10.55092/bm20250011

Supplementary data

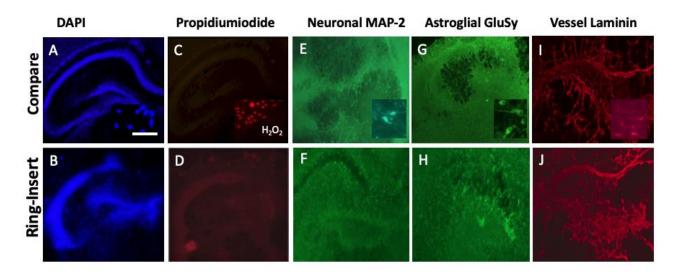
Organotypic mouse brain slices: low-cost "ring-inserts" to study cholinergic and dopaminergic neurons with live cell imaging with an emphasis on calcium imaging

Alessa Gern, Patricia Lehmann, Judith Schäfer and Christian Humpel*

Laboratory of Psychiatry and Experimental Alzheimer's Research, Department of Psychiatry and Psychotherapy, Medical University of Innsbruck, Austria

* Correspondence author; E-mail: christian.humpel@i-med.ac.at.

Supplementary figure



Supplementary Figure 1. Comparison of "ring-inserts" with standard Merck membrane inserts. The viability of the slices was visualized with blue-fluorescent DAPI (**A** and **B**), red-fluorescent propidiumiodide, PI (**C** and **D**), neuronal microtubuli-associated protein-2, MAP-2 (**E** and **F**), astroglial glutamine synthetase, GluSy (**G** and **H**), and the vessel marker laminin (**I** and **J**). Brain slices were cultured on the new Millipore insert HTP02500 (row comparison: **A**, **C**, **E**, **G**, and **I**) or on the new "ring-insert" (**B**, **D**, **F**, **H**, and **J**) and were cultured for two weeks, fixed, and stained. The inlays in sections **E**, **G**, and **I** show a higher magnification of a neurons, astrocytes, or vessel. As a positive control, some slices were incubated with peroxide (inlay in **C**). Scale bar in **A** = 380 (**A**–**D**), 220 (**E**–**J**), and 60 μm (inlays in **C**, **E**, **G**, and **I**).



Copyright©2025 by the authors. Published by ELSP. This work is licensed under Creative Commons Attribution 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium provided the original work is properly cited.