

## **Extending the viability of acute brain slices**

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### Supplementary Figure 1

Mass spectrometry analysis depicts the negative (a) and positive (b) charged molecules in the aCSF at time 0 and 24 hours after incubation in the Braincubator, showing similar molecular signature over time.

### Supplementary Video 1

Brain slice viability after 30 hrs in control recovery chamber. IR-DIC imaging of a slice following 30 hours in control bath chamber (x60) along the Z-axis, from the slice surface to -100  $\mu\text{m}$ , depicting the morphology of dead cells (large vacuole) and absence of viable neurons. Note the bacterial movements on the surface of the slice.

### Supplementary Video 2

Brain slice viability after 30 hrs in the Braincubator. IR-DIC imaging of a slice following 30 hours in the Braincubator (x60) along the Z-axis, from the slice surface to -100  $\mu\text{m}$ , depicting the morphology of viable neurons (smooth membrane).

# Supplementary Figure 1 - Mass spectrometry analysis

