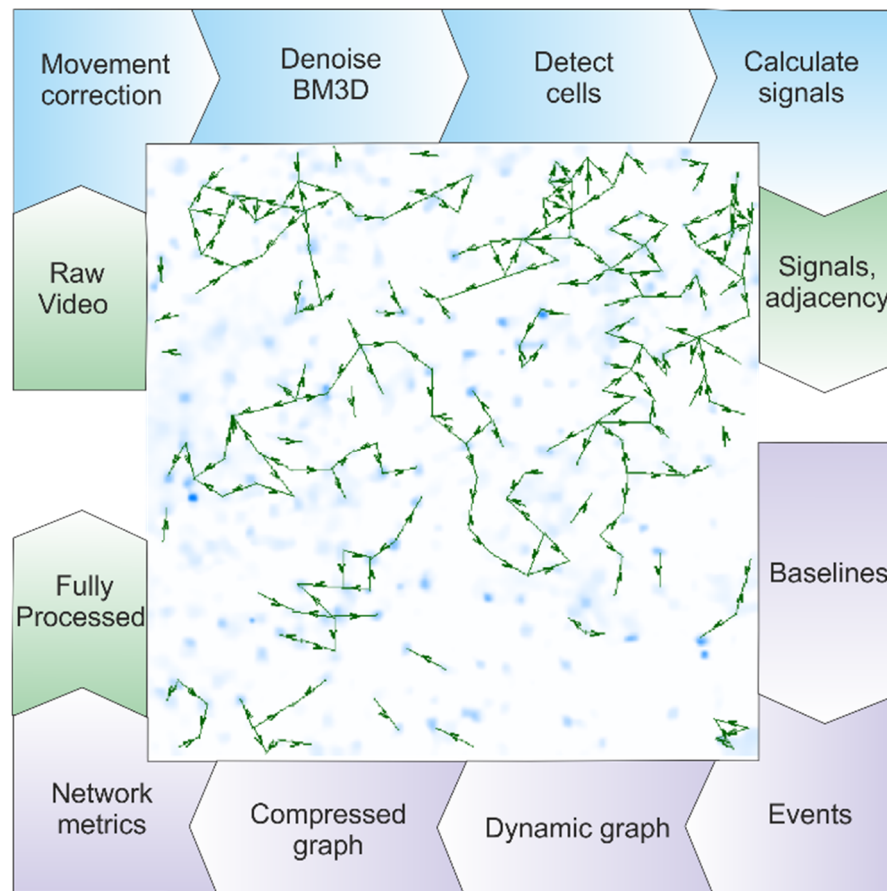
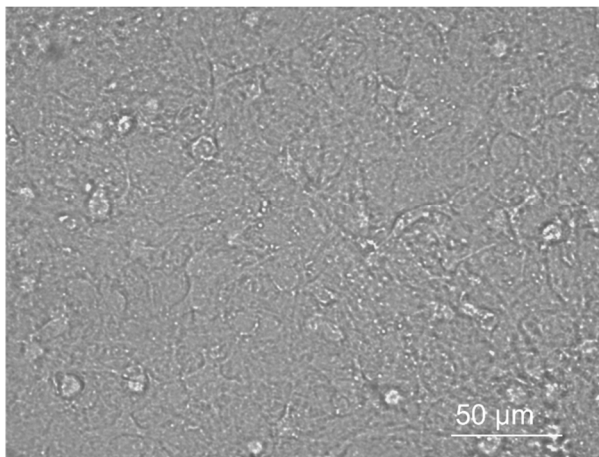


Supplementary 1

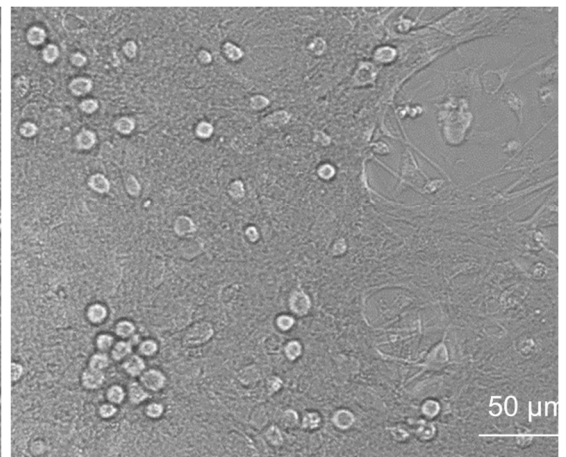


Supplementary Figure S1. The developed algorithm pipeline: the signal preprocessing (upper blue blocks) and event based network reconstruction (bottom purple block).

A



B



Supplementary figure S2. A - Morphology of primary astrocyte cultures on 35 DIV, representative wide-field light microscopy image. **B -** Morphology of co-cultivated hippocampal neurons and cortical astrocyte on 35 DIV (14 day of cocultivation), representative wide-field light microscopy image. Scale bars – 50 μm .