



## **DESCRIPTION OF THE SUBJECT OF THE ORDER**

Supply of Single-unit recording analysis software is part of a project No. 2022/47/P/NZ4/03358 within the POLONEZ BIS programme co-funded by the National Science Centre and the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 945339

Research project entitled *Electrical stimulation of Anterior Thalamic Nuclei for memory modulation*.

### **Single-unit recording analysis software**

Requirements:

- tetrode-based cluster-cutting software designed for the analysis of place cell activity
- provides manual and automatic clustering based on spike parameters including peak-to-peak amplitude, onset latency and amplitude at a user-specified time
- manual clustering by a hand-drawn polygon in projections of the parameter space
- automatic clustering by k-means or KlustaKwik
- accepts positional information from a tracking system, such that cut spikes are able to be superimposed on the animal's track and the result smoothed and contour-plotted to allow calculation of the location and rate of the field's peak
- software is able to be controlled via a command line interface for automated data analysis - must be proven to be successfully used in multiple scientific publications in top-tier neuroscience journals that describe spatial memory studies with single-unit recordings in freely moving rats