**Supporting Information 6*: Ex vivo/In vitro* Electrophysiology Case Report Form**

Date that this CRF was filled out:

Name of Laboratory/PI:

Name of person filling out CRF:

Project name/Identifier:

Animal ID or Study ID (as applicable):

**Type of model system:**

* Mammalian systems (e.g., rodents, other mammals): \_\_\_\_\_\_
* Non-mammalian systems (e.g., *Drosophila*, zebrafish): \_\_\_\_\_\_
* Organoids or tissue-based: \_\_\_\_\_\_
* Cell-based (e.g., iPSCs): \_\_\_\_\_\_

**Type of study:**

* Anesthetized: \_\_\_\_\_\_
* Non-anesthetized: \_\_\_\_\_\_

**Endpoint of study:**

* Pre-defined time point: \_\_\_\_\_\_
* Seizure-induced sudden death: \_\_\_\_\_\_
* Other \_\_\_\_\_\_

|  |  |
| --- | --- |
| **CDE** | **DATA COLLECTED** |
| **Method used**  |
| Type of electrophysiology | ☐ Patch clamp☐ Intracellular☐ Extracellular☐ Individual recording☐ Oxygen sensing |
| Were human-derived iPSCs used?  | ☐ Yes ☐ Details\_\_\_\_ ☐ No☐ Unknown |
| Were human brain organoids used?  | ☐ Yes ☐ Details\_\_\_\_ ☐ No☐ Unknown |
| Were other tissue/cell systems used?  | ☐ Yes ☐ Details\_\_\_\_ ☐ No☐ Unknown |
| **Comments:** |
| **Whole Cell Electrophysiology** |
| **Tissue Preparation:** |  |
| Was the animal anesthetized? | ☐ Yes☐ No☐ Unknown |
| Sectioning equipment |  |
| Cutting solution |  |
| Temperature during sectioning (oC) |  |
| Region of interest |  |
| Slice orientation | ☐ Horizontal☐ Vertical☐ Coronal☐ Sagittal |
| Slice thickness |  |
| Method of determining tissue health |  |
| Slice incubation time |  |
| Recording temperature |  |
| Intracellular solution |  |
| Extracellular solution |  |
| Recording hardware type |  |
| Recording software type |  |
| Voltage protocols |  |
| Electrode size |  |
| Resistance |  |
| How is recording location confirmed? | ☐ Visual identification of cells☐ Via Probe☐ Other \_\_\_\_\_\_ |
| Software used for analysis/statistics |  |
| **Comments:** |  |
| **Imaging** |
| **Tissue preparation:** |  |
| Probe used for imaging |  |
| Equipment information-camera type |  |
| Equipment information-frame rate |  |
| Was optogenetics conducted in tandem with electrophysiology? | ☐ Yes☐ No☐ Unknown |
| Method of stimulation | ☐ Optogenetic☐ Electrical stimulation☐ Other \_\_\_\_\_\_ |
| Stimulation protocol |  |
| Brain region of interest |  |
| Type of neuron imaged |  |
| Method of confirmation | ☐ Input stimulation☐ Other \_\_\_\_\_\_ |
| **Comments:** |
| **Ex Vivo Biosensing** |
| **Tissue preparation:** |  |
| Probe used for imaging |  |
| Equipment information-camera type |  |
| Equipment information-frame rate |  |
| Was optogenetics conducted in tandem with electrophysiology? | ☐ Yes☐ No☐ Unknown |
| Method of stimulation | ☐ Optogenetic☐ Electrical stimulation☐ Other \_\_\_\_\_\_ |
| Stimulation protocol |  |
| Brain region of interest |  |
| Type of neuron imaged |  |
| Method of confirmation | ☐ Input stimulation☐ Other \_\_\_\_\_\_ |
| **Comments:** |
| **Analysis** |
| Software used for analysis |  |
| Animal disease/history:Were there spontaneous seizures? |  |
| How were seizures confirmed? |  |
| Were animals treated? |  |
| **Comments:** |

Abbreviations: CRF: Case Report Form; iPSCs: Induced pluripotent stem cells; PI: Principal Investigator

Instructions: Please check boxes where applicable. If none of the predetermined options is appropriate, use the default space to specify your answer. This form is to be filled in for one individual animal, unless otherwise specified.

Please refer to more extensive CRF where suitable, as developed by the ILAE/AES Joint Translational Task Force:

Report on preclinical Core CDEs

<https://onlinelibrary.wiley.com/doi/10.1002/epi4.12234>

Report on preclinical neurobehavioral CDEs

<https://onlinelibrary.wiley.com/doi/10.1002/epi4.12236>

Report on preclinical physiology CDEs

<https://onlinelibrary.wiley.com/doi/10.1002/epi4.12261>

Report on preclinical pharmacology model CDEs

 <https://onlinelibrary.wiley.com/doi/10.1002/epi4.12254>

Report on preclinical EEG CDEs

<https://onlinelibrary.wiley.com/doi/10.1002/epi4.12260>