***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 (^{o}C)	
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