

Global Mental Health Research Center (Weidong Li's Lab)

Bio-X Institutes

• About the Lab •

Prof. Weidong Li's lab focuses on the mechanism and therapeutic of neuropsychiatric disorders by using animal modeling approaches. They also initiated a "China Super Brain Research Center" to investigate the brain function of the people with extraordinary abilities.

Facilities: Cellvizio in vivo optic fibered fluorescent microscopy, voltage sensitive dye imaging(VSDI), multichannel electrodes recording system, behavioral equipment, PET, EEG, Micro-Optical Sectioning Tomography(MOST), basic molecular equipment, patch clamp, PCR and so on.

• About the Team •

Professor Weidong Li got his Ph.D from Shinshu University (Japan) in 2001. He is now a Professor of Special Appointment (Eastern Scholar) at Shanghai Jiao Tong University, Vice Dean of Bio-X Institutes. His research areas are pathogenesis of schizophrenia and depression, animal models of neuropsychiatric disorders, learning and memory, molecular cognition, iPS and brain tumor and super brain research. Dr. Li won several prestigious awards, including Young Investigator Awards of National Alliance for Research on Schizophrenia and Depression, Shanghai "Shu Guang" Scholar, "Pujiang Talent" and "Eastern Scholar".

• Research Fields •

The application of Optogenetics, CLARITY and deep brain imaging in animal models

- Optogenetics is a technology that allows optical control of specific population of neurons without affecting other neurons in the brain at high temporal and spatial resolution.
- CLARITY (Clear, Lipid-exchanged, Anatomically Rigid, Imaging/immunostaining compatible, Tissue hydrogel) is the method of making brain tissue transparent using acrylamide.
- Deep brain imaging enables us to see neural activities in freely moving animal models by using headmounted mini fluorescent microscope.

Mental disorder, also called psychiatric disorder, is described as an impaired ability to function in ordinary life. Mental disorder is generally characterized by a combination of abnormal thoughts, emotions, behaviors and relationships. Examples are schizophrenia, depression, mental retardation and so on. Our lab mainly focuses on investigating the molecular roots of neurological and psychiatric disorders. With the application of new technology, we could achieve many interesting discoveries in the animal model for psychiatric disorders.

• Responsibility •

Seminar, Experiment, etc.

• Eligibility •

- In principle, we recruit junior and senior students
- Hold at least a 2.5 GPA on a 4.0 scale
- Students of non-English speaking countries must provide English language proficiency certificate, IELTS no less than 6.0, and TOEFL no less than 90 points. If you are in the college for English teaching programs, please provide relevant certificates
- Have at least one prior research experience

• Additional Financial Support •

N/A

• Contact •

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