

Resource Summary Report

Generated by [PRECISE-TBI](#) on Sep 8, 2026

Rafael Yustes Laboratory

RRID:SCR_001845

Type: Tool

Proper Citation

Rafael Yustes Laboratory (RRID:SCR_001845)

Resource Information

URL: <http://www.columbia.edu/cu/biology/faculty/yuste/>

Proper Citation: Rafael Yustes Laboratory (RRID:SCR_001845)

Description: Laboratory that aims to understand the function of the cortical microcircuit by reverse-engineering of the cortical microcircuit using the mouse neocortex in vitro and in vivo as their experimental preparations. The techniques applied are electrophysiology, anatomy, and a variety of optical methods, including infrared-DIC, voltage- and ion-sensitive dye imaging with confocal, two-photon and second harmonic microscopy. They also use laser uncaging, biolistics, electroporation, electron microscopy and numerical simulations, and make extensive use of genetically modified mouse strains. They focus is on two major questions: (1) What is the function of dendritic spines? (2) What are the multicellular patterns of activity under spontaneous or evoked activation of the circuit? Resources include: * Cell Reconstructions: Cell Database, PDF Images, .DAT Files * Circuit Diagrams: Full Circuit Diagram, Inhibitory Circuit Diagram, Excitatory Circuit Diagram, Simplified Circuit Diagram, Layer to Layer Simplified Circuit, Circuit diagram references

Abbreviations: Yuste Lab

Synonyms: Rafael Yuste's Laboratory, Cortical Circuits and Dendritic Spines

Resource Type: data or information resource, database, image collection, laboratory portal, organization portal, portal

Keywords: electron microscopy, electrophoration, electrophysiology, anatomy, biolistics, circuit, confocal, cortical, infrared-dic, ion sensitive dye imaging, voltage sensitive dye imaging, microcircuit, microscopy, mouse, multicellular, neocortex, optical method, second harmonic, two-photon, laser uncaging, cortical circuit, dendritic spine, cortical microcircuit, canonical microcircuit, cell reconstruction, cell, image, inhibitory circuit, excitatory circuit

Availability: Free, Freely available

Resource Name: Rafael Yustes Laboratory

Resource ID: SCR_001845

Alternate IDs: nif-0000-10407

Record Creation Time: 20220129T080209+0000

Record Last Update: 20260905T132440+0000

Ratings and Alerts

No rating or validation information has been found for Rafael Yustes Laboratory.

No alerts have been found for Rafael Yustes Laboratory.

Data and Source Information

Source: [SciCrunch Registry](#)

Usage and Citation Metrics

We have not found any literature mentions for this resource.