



Masatoshi Inoue

Basic Life Research Scientist

Bioengineering

Bio

ACADEMIC APPOINTMENTS

- Basic Life Science Research Associate, Bioengineering

HONORS AND AWARDS

- The Award for Young Investigator, Japanese Society for Neuroscience (07/01/2020)
- The Award for Young Investigator of Japanese Society for Neurochemistry, Japanese Society for Neurochemistry (7/26/2019)
- Trainee Professional Development Awards, Society for Neuroscience (09/07/2017)

Publications

PUBLICATIONS

- **Genetically encoded calcium indicators to probe complex brain circuit dynamics in vivo.** *Neuroscience research*
Inoue, M. n.
2020
- **Comprehensive Dual- and Triple-Feature Intersectional Single-Vector Delivery of Diverse Functional Payloads to Cells of Behaving Mammals.** *Neuron*
Fenno, L. E., Ramakrishnan, C. n., Kim, Y. S., Evans, K. E., Lo, M. n., Vesuna, S. n., Inoue, M. n., Cheung, K. Y., Yuen, E. n., Pichamoorthy, N. n., Hong, A. S., Deisseroth, K. n.
2020
- **Rational Engineering of XCaMPs, a Multicolor GECI Suite for In Vivo Imaging of Complex Brain Circuit Dynamics** *CELL*
Inoue, M., Takeuchi, A., Manita, S., Horigane, S., Sakamoto, M., Kawakami, R., Yamaguchi, K., Otomo, K., Yokoyama, H., Kim, R., Yokoyama, T., Takemoto-Kimura, S., Abe, et al
2019; 177 (5): 1346+
- **Cortical layer-specific critical dynamics triggering perception.** *Science (New York, N.Y.)*
Marshall, J. H., Kim, Y. S., Machado, T. A., Quirin, S. n., Benson, B. n., Kadmon, J. n., Raja, C. n., Chibukhchyan, A. n., Ramakrishnan, C. n., Inoue, M. n., Shane, J. C., McKnight, D. J., Yoshizawa, et al
2019
- **Kilohertz two-photon brain imaging in awake mice.** *Nature methods*
Zhang, T. n., Hernandez, O. n., Chrapkiewicz, R. n., Shai, A. n., Wagner, M. J., Zhang, Y. n., Wu, C. H., Li, J. Z., Inoue, M. n., Gong, Y. n., Ahanonu, B. n., Zeng, H. n., Bito, et al
2019
- **Functional emergence of a column-like architecture in layer 5 of mouse somatosensory cortex in vivo.** *The journal of physiological sciences : JPS*
Koizumi, K. n., Inoue, M. n., Chowdhury, S. n., Bito, H. n., Yamanaka, A. n., Ishizuka, T. n., Yawo, H. n.
2019; 69 (1): 65–77
- **Rational Engineering of XCaMPs, a Multicolor GECI Suite for In Vivo Imaging of Complex Brain Circuit Dynamics.** *Cell*

Inoue, M. n., Takeuchi, A. n., Manita, S. n., Horigane, S. I., Sakamoto, M. n., Kawakami, R. n., Yamaguchi, K. n., Otomo, K. n., Yokoyama, H. n., Kim, R. n., Yokoyama, T. n., Takemoto-Kimura, S. n., Abe, et al
2019

- **Modulation of prefrontal cortex excitation/inhibition balance rescues social behavior in CNTNAP2-deficient mice.** *Science translational medicine*
Selimbeyoglu, A. n., Kim, C. K., Inoue, M. n., Lee, S. Y., Hong, A. S., Kauvar, I. n., Ramakrishnan, C. n., Fenno, L. E., Davidson, T. J., Wright, M. n., Deisseroth, K. n.
2017; 9 (401)
- **Simultaneous fast measurement of circuit dynamics at multiple sites across the mammalian brain.** *Nature methods*
Kim, C. K., Yang, S. J., Pichamoorthy, N., Young, N. P., Kauvar, I., Jennings, J. H., Lerner, T. N., Berndt, A., Lee, S. Y., Ramakrishnan, C., Davidson, T. J., Inoue, M., Bito, et al
2016; 13 (4): 325-328
- **Rational design of a high-affinity, fast, red calcium indicator R-CaMP2** *NATURE METHODS*
Inoue, M., Takeuchi, A., Horigane, S., Ohkura, M., Gengyo-Ando, K., Fujii, H., Kamijo, S., Takemoto-Kimura, S., Kano, M., Nakai, J., Kitamura, K., Bito, H.
2015; 12 (1): 64-70