Curriculum Vitae

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Education:

April, 1989-March, 1992:

Department of Biophysics, Faculty of Science, Kyoto University
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April, 1987-March, 1989:

Department of Biophysics, Faculty of Science, Kyoto University
Awarded the degree of MSc.

April, 1983-March, 1987:

Faculty of Science, Kyoto University
Awarded the degree of BSc.

Research Experience:

October, 2008-present:

・ National Institute of Genetics: Professor

■ April 2023-present
Graduate Institute for Advanced Studies,
The Graduate University for Advanced Studies (SOKENDAI): Professor
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■ October 2008-March 2023
Department of Genetics, School of Life Science,
The Graduate University for Advanced Studies (SOKENDAI): Professor
*April, 2022-March, 2023: Dean of School of Life Science
*April, 2016-March, 2018: Dean of School of Life Science

April,1998-September, 2008:

・ Behavioral Genetics Laboratory, RIKEN Brain Science Institute (BSI)

July, 2003- September, 2008: Deputy Laboratory Head
April, 2003 –June, 2003: Staff Scientist
April, 1998 –March, 2003: Research Scientist

■ December, 2001-March, 2005:
PRESTO, Japan Science and Technology Agency: Researcher

April, 1993-March, 1998:

・ Prof. Susumu Tonegawa's Laboratory, Massachusetts Institute of Technology

April, 1996-March, 1998: Senior Postdoctoral Associate
April, 1995-March, 1996: Uehara Foundation Postdoctoral Fellow
April, 1993-March, 1995: HFSP Postdoctoral Fellow

April, 1992-March, 1993: Japan Society for the Promotion of Science
Postdoctoral Fellow

Publications (Peer Reviewed Papers):

1. Hagihara, H. Iwasato, T. (22nd of 131 in total) Miyakawa, T. et al Large-scale animal model study uncovers altered brain pH and lactate levels as a transdiagnostic endophenotype of neuropsychiatric disorders involving cognitive impairment. ***eLife*** 89376.2 (2024)

2. Wang, L., Nakazawa, S., Luo, W, Sato, T., Mizuno, H., Iwasato, T. Short-term dendritic dynamics of neonatal cortical neurons revealed by *in vivo* imaging with improved spatiotemporal resolution. ***eNeuro*** 10(11) ENEURO.0142-23. (2023)

3. Nakagawa, N., and Iwasato, T. Golgi polarity shift instructs dendritic refinement in the neonatal cortex by mediating NMDA receptor signaling. ***Cell Rep.*** 42:112843 (2023)

4. Banerjee, P., Kubo, F., Nakaoka, H., Ajima, R., Sato, T., Hirata, T., Iwasato, T. Spontaneous activity in whisker-innervating region of neonatal mouse trigeminal ganglion. ***Sci Rep.*** 12(1), 16311. (2022)

5. Rao, M. S., Mizuno, H., Iwasato, T., Mizuno, H. Ras GTPase-activating proteins control neuronal circuit development in barrel cortex layer 4. ***Front. Neurosci.*** 16:901774. (2022)

6. Sato, H., Hatakeyama, J., Iwasato, T., Araki, K., Yamamoto, N., Shimamura, K. Thalamocortical axons control the cytoarchitecture of neocortical layers by area-specific supply of VGF. ***eLife.*** 11:e67549 (2022)

7. Yoshihi, K., Kato, K., Iida, H., Teramoto, M., Kawamura, A., Watanabe, Y., Nunome, M., Nakano, M., Matsuda, Y., Sato, Y., Mizuno, H., Iwasato, T., Ishii, Y., Kondoh, H. Live imaging of avian epiblast and anterior mesendoderm grafting reveals the complexity of cell dynamics during early brain development. ***Development*** 149(6), dev199999 (2022)

8. Pal, S., Dwivedi, D., Pramanik, T., Godbole, G., Iwasato, T., Jabaudon, D., Bhalla, U. S., Tole, S. An early cortical progenitor-specific mechanism regulates thalamocortical innervation ***J. Neurosci.*** 41(32), 6822-6835. (2021)

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9. Nakazawa, S., Iwasato, T. Spatial organization and transitions of spontaneous neuronal activities in the developing sensory cortex. ***Dev. Growth Differ.*** 63(6), 323-339. (2021)

10. Mizuno, H., Rao, M., Mizuno, H., Sato, T., Nakazawa, S., Iwasato, T. NMDA receptor enhances correlation of spontaneous activity in neonatal barrel cortex ***J. Neurosci.*** 41(6), 1207-1217. (2021)

11. Iwasato, T. In vivo imaging of neural circuit formation in the neonatal mouse barrel cortex. ***Dev. Growth Differ.*** 62(7-8), 476-486. (2020)

12. Nakazawa, S., Yoshimura, Y., Takagi, M., Mizuno, H., Iwasato, T. Developmental Phase Transitions in Spatial Organization of Spontaneous Activity in Postnatal Barrel Cortex Layer 4.***J Neurosci.*** 40(40):7637-7650. (2020)

13. Iwasato, T., Erzurumlu, R. S. Development of tactile sensory circuits in the CNS. ***Curr Opin Neurobiol.*** 53:66–75,

14. Mizuno, H., Nakazawa, S., Iwasato, T. In vivo two-photon imaging of cortical neurons in neonatal mice. ***J. Vis. Exp.*** (140), e58340, (*JoVE)* (2018)

15. Nakazawa S, Mizuno H, Iwasato T. Differential dynamics of cortical neuron dendritic trees revealed by long-term in vivo imaging in neonates. ***Nat Commun.*** 9(1), 3106. (2018)

16. Mizuno H, Nakazawa S, Iwasato T. In vivo two-photon imaging of cortical neurons in neonatal mice. ***J. Vis. Exp.*** (140), e58340, (*JoVE)* (2018)

17. Mizuno, H., Ikezoe, K., Nakazawa, S., Sato, T., Kitamura, K., Iwasato, T. Patchwork-type tpontaneous activity in neonatal barrel cortex layer 4 transmitted via thalamocortical projections. ***Cell Rep.*** 22(1), 123-135. (2018)

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    + *The Corresponding Authors*

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    + *The Corresponding Authors*

55. Datwani, A., Iwasato, T., Itohara, S., and Erzurumlu, R.S. NMDA receptor-dependent pattern transfer from afferents to postsynaptic cells and dendritic differentiation in the barrel cortex. ***Mol. Cell Neurosci.*** 21: 477-92 (2002).

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Book Chapter

1. Erzurumlu, R.S. and Iwasato, T. (2006) Patterning of the Somatosensory Maps with NMDA receptors. Erzurumlu, R.S., Guido, W. and Molner Z. ed. Development and Plasticity in Sensory Thalamus and Cortex. P.158-182. Spinger