

Curriculum Vita

Name

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Education

1990 M.D., Kyoto University School of Medicine, Kyoto, Japan
1994 – 1997 Medical Science Graduate Program, Kyoto University School of Medicine, Kyoto, Japan
1999 Ph.D. in Medical Science (Anesthesiology), Kyoto University School of Medicine, Kyoto, Japan

Professional Training and Employment

1990 Resident in Anesthesia, Kyoto University Hospital, Kyoto, Japan
1991 – 1992 Resident in Anesthesia, Ohtsu Municipal Hospital, Shiga, Japan
1992 – 1994 Medical Staff in Anesthesia, Ohtsu Municipal Hospital, Shiga, Japan
1997 – 1999 Instructor, Department of Anesthesia, Kyoto University Hospital, Kyoto, Japan
1999 – 2002 Postdoctoral Research Fellow, Vollum Institute, Oregon Health Sciences University, Portland, Oregon
2002 – present Assistant Professor, Section of Neurobiology and Waggoner Center for Alcohol and Addiction Research, University of Texas at Austin

Grants and Awards

1994 – 1997 Japan Scholarship Foundation Predoctoral Scholarship
Cellular and molecular investigation of opioid receptors
1998 – 1999 Grant-in-Aid for Scientific Research (10770750)
Ministry of Education, Science and Culture of Japan
Cellular mechanism of opioid tolerance (PI)
1999 – 2000 Uehara Memorial Foundation Postdoctoral Fellowship
Opioid action on midbrain dopamine neurons
2002 – 2003 Texas Commission on Alcohol and Drug Abuse Grant
Alcohol action in the brain reward circuit (PI)
2003 – 2005 Alcoholic Beverage Medical Research Foundation Grant
Alcohol action on ion channels in the brain reward circuit (PI)
2003 – 2008 NIH R01 DA015687
Calcium signaling in the reward circuit & drug addiction (PI)
2004 – 2009 NIH R01 AA014874
Mu receptors and ethanol/dopamine interactions (Co-PI)
2006 – 2011 NIH R01 AA015521 (pending)
Alcohol action on neurons in the brain reward circuit (PI)

Memberships

- 1991 – 2002 Japan Society of Anesthesia
- 1998 – present American Association for the Advancement of Science
- 1998 – present Society for Neuroscience
- 2003 – present Research Society on Alcoholism

Teaching – Organized courses

- Spring 2003 Molecular Basis of Drug Addiction (BIO381K: graduate course, 1 hr/week)
- Fall 2003-2005 Neurobiology of Disease (BIO365T: undergraduate course, 3 hrs/week)

Teaching – Other activities

- Fall 2002 NEU382T (Principles of Neuroscience): gave a 1.5-hr lecture
- Spring 2003 ICMB Undergraduate Seminar Course: gave a 1-hr lecture
- Spring 2003 Neurobiology Journal Club: supervised three 1-hr student presentations
- Fall 2003 NEU185 (Principles of Neuroscience): supervised three 1-hr student presentations
- Spring 2005 BIO181C (ICMB Undergraduate Seminar Course): gave a 1-hr lecture and organized a section termed “The Plastic Brain” (total 4 lectures).
- Spring 2005 Neurobiology Journal Club: supervised two 1-hr student presentations

Local responsibilities

- 2003 – present Institute for Neuroscience Seminar Committee
- 2006 – present CMB International Admissions Committee

National Responsibilities

- 8/2002 Ad Hoc Reviewer, US Army Congressionally Directed Medical Research Program
- 2/2005 Ad Hoc Reviewer, NIH, Neurobiology of Motivated Behavior Study Section
- Ad Hoc Reviewer:
Nature Reviews Neuroscience, Journal of Neuroscience, Journal of Pharmacology and Experimental Therapeutics, Alcoholism; Clinical Experimental Research, Pflugers Archiv: European Journal of Physiology

Bibliography

Research Articles

Okamoto T, Harnett MT, **Morikawa H** (2006) Hyperpolarization-activated cation current (I_h) is an ethanol target in midbrain dopamine neurons. *J Neurophys* 95: 619-626.

(This paper was accompanied by the following editorial focus:

Lupica CR, Brodie MS (2006) Queer currents, steady rhythms, and drunken DA neurons. *J Neurophysiol* 95: 585-586.)

Cui G, Okamoto T, **Morikawa H** (2004) Spontaneous opening of T-type Ca^{2+} channels contributes to the irregular firing of dopamine neurons in neonatal rats. *J Neurosci* 24: 11079-11087.

Paladini CA, Robinson S, **Morikawa H**, Williams JT, Palmiter R (2003) Dopamine controls the firing pattern of dopamine neurons via a network feedback mechanism. *Proc Natl Acad Sci USA* 100:2866-2871.

Morikawa H, Khodakhah K, Williams JT (2003) Two intracellular pathways mediate mGluR-induced Ca^{2+} mobilization in dopamine neurons. *J Neurosci* 23:149-157.

Shoda T, Fukuda K, Uga H, Mima H, **Morikawa H** (2001) Activation of μ -opioid receptor induces expression of c-fos and junB via mitogen-activated protein kinase cascade. *Anesthesiology* 95:983-989.

Paladini CA, Fiorillo CD, **Morikawa H**, Williams JT (2001) Amphetamine selectively blocks inhibitory glutamate transmission in dopamine neurons. *Nat Neurosci* 4:275-281.

Morikawa H, Manzoni OJ, Crabbe JC, Williams JT (2000) Regulation of central synaptic transmission by 5-HT_{1B} auto- and heteroreceptors. *Mol Pharmacol* 58:1271-1278.

Morikawa H, Imani F, Khodakhah K, Williams JT (2000) Inositol 1,4,5-triphosphate-evoked responses in midbrain dopamine neurons. *J Neurosci* 20:RC103.

Morikawa H, Mima H, Uga H, Shoda T, Fukuda K (1999) Opioid potentiation of N-type Ca^{2+} channel currents via pertussis toxin-sensitive G proteins in NG108-15 cells. *Pflügers Arch* 438:423-426.

Fukuda K, Shoda T, **Morikawa H**, Kato S, Mima H, Mori K (1998) Activation of phospholipase A₂ by the nociceptin receptor expressed in Chinese hamster ovary cells. *J Neurochem* 71:2186-2192.

Fukuda K, Kato S, Shoda T, **Morikawa H**, Mima H, Mori K (1998) Partial agonistic activity of naloxone on the opioid receptors expressed from complementary deoxyribonucleic acids in Chinese hamster ovary cells. *Anesth Analg* 87:450-455.

Morikawa H, Fukuda K, Mima H, Shoda T, Kato S, Mori K (1998) Nociceptin receptor-mediated Ca^{2+} channel inhibition and its desensitization in NG108-15 cells. *Eur J Pharmacol* 351:247-252.

Morikawa H, Fukuda K, Mima H, Shoda T, Kato S, Mori K (1998) Tyrosine kinase inhibitors

suppress N-type and T-type Ca^{2+} channel currents in NG108-15 cells. *Pflügers Arch* 436:127-132.

Kato S, Fukuda K, **Morikawa H**, Shoda T, Mima H, Mori K (1998) Adaptations to chronic agonist exposure of μ -opioid receptor-expressing Chinese hamster ovary cells. *Eur J Pharmacol* 19:221-228.

Morikawa H, Fukuda K, Mima H, Shoda T, Kato S, Mori K (1998) Desensitization and resensitization of δ -opioid receptor-mediated Ca^{2+} channel inhibition in NG108-15 cells. *Br J Pharmacol* 123:1111-1118.

Mima H, **Morikawa H**, Fukuda K, Kato S, Shoda T, Mori K (1997) Ca^{2+} channel inhibition by endomorphins via the cloned μ -opioid receptor expressed in NG108-15 cells. *Eur J Pharmacol* 340:R1-R2.

Fukuda K, Shoda T, **Morikawa H**, Kato S, Mori K (1997) Activation of mitogen-activated protein kinase by the nociceptin receptor expressed in Chinese hamster ovary cells. *FEBS Lett* 28:290-294.

Fukuda K, Kato S, **Morikawa H**, Shoda T, Mori K (1996) Functional coupling of the δ -, μ -, and κ -opioid receptors to mitogen-activated protein kinase and arachidonate release in Chinese hamster ovary cells. *J Neurochem* 67:1309-1316.

Morikawa H, Fukuda K, Kato S, Mori K, Higashida H (1995) Coupling of the cloned μ -opioid receptor with the ω -conotoxin-sensitive Ca^{2+} current in NG108-15 cells. *J Neurochem* 65:1403-1406.

Clinical Case Reports

Morikawa H, Mima H, Fujita H, Mishima S (1995) Oxygen embolism due to hydrogen peroxide irrigation during cervical spinal surgery. *Can J Anaesth* 42:231-233.

Morikawa H, Hirota K, Kito K, Fujita H, Mishima S (1994) Re-expansion pulmonary oedema following removal of intrathoracic haematoma. *Acta Anaesthesiol Scand* 38:518-520.

Abstracts

Harnett MT, **Morikawa H** (2005) Active repolarization of synaptically-driven NMDA plateau potentials in midbrain dopamine neurons via Ca^{2+} -induced Ca^{2+} release and SK channels. *Soc Neurosci Abstr*

Okamoto T, **Morikawa H** (2004) Ethanol enhancement of hyperpolarization-activated cation currents in midbrain dopamine neurons. *Soc Neurosci Abstr*

Cui C, **Morikawa H** (2004) Calcium influx through T-type calcium channels triggers spontaneous miniature outward currents in dopamine neurons of neonatal rats. *Soc Neurosci Abstr*

Okamoto T, Blednov YA, **Morikawa H** (2003) Ethanol stimulates G protein-gated K^+ channels in dopamine neurons. *Soc Neurosci Abstr*

Cui G, **Morikawa H** (2003) Spontaneous outward currents in dopaminergic neurons of neonatal rats. Soc Neurosci Abstr

Morikawa H, Blednov YA (2003) Ethanol enhancement of G protein-gated K^+ channels in dopamine neurons. Res Soc Alcoholism Abstr

Morikawa H, Williams JT (2001) IP_3 -independent release of calcium mediated by mGluR in midbrain dopamine neurons. Soc Neurosci Abstr

Morikawa H, Imani F, Khodakhah K, Williams JT (2000) $InsP_3$ -evoked responses in midbrain dopamine neurons. Soc Neurosci Abstr