

CURRICULUM VITAE
April 2018

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Education/Training:

1980–1984 Faculty of Pharmaceutical Sciences, Kyoto University
1984–1989 Department of Pharmacology, Graduate School of Pharmaceutical Sciences, Kyoto University
Ph.D., May 1989 Thesis Supervisor: Masamichi Satoh

Positions and Employment:

1989-1991 Postdoctoral Fellow, Department of Neuroscience, Osaka Bioscience Institute, Osaka, Japan
1992 Assistant Professor, Department of Biochemistry, Osaka Medical College, Osaka, Japan
1992-1996 Lecturer, Department of Biochemistry, Osaka Medical College, Osaka, Japan
1996-1998 Associate Professor, Department of Biochemistry, Osaka Medical College, Osaka, Japan
1998-2009 Team Leader, Laboratory for Neurobiology of Synapse, RIKEN Brain Science Institute, Wako, Japan
2018- Team Leader, Laboratory for Systems Molecular Ethology, RIKEN Center for Brain Science, Wako, Japan

Other Experience and Professional Memberships:

Editorial Boards: Chemical Senses (2005-)
Frontiers in Synaptic Neuroscience (2008-)
Neural Systems and Circuits (2010-2012)
Journal of Biochemistry (2016-)

Professional Societies: Society for Neuroscience, USA
The Japan Neuroscience Society
The Molecular Biology Society of Japan
The Japanese Biochemical Society
The Japanese Association for the Study of Taste and Smell (organizing committee)

Honors:

2006 Young Investigator Award, The Japanese Association for the Study of Taste and Smell
2018 22nd Ando Momofuku Award of Excellence, ANDO Foundation

Publications:

Peer-Reviewed Articles:

- 1 Tsunoda M, Miyamichi K, Eguchi R, Sakuma Y, Yoshihara Y, Kikusui T, Kuwahara M, Touhara K. Identification of an intra- and inter-specific tear protein signal in rodents. **Current Biology** (in press)
- 2 Koide T, Yabuki Y, Yoshihara Y. Terminal nerve GnRH3 neurons mediate slow avoidance from carbon dioxide in larval zebrafish. **Cell Reports** 22: 1115-1123 (2018)
- 3 Iwata T, Niimura Y, Kobayashi C, Shirakawa D, Suzuki H, Enomoto T, Touhara K, Yoshihara Y, Hirota J. A long-range cis-regulatory element for class I odorant receptor genes. **Nature Communications** 8: 885 (2017)
- 4 Ishii K, Osakada T, Mori H, Miyasaka N, Yoshihara Y, Miyamichi K, Touhara K. A labeled-line neural circuit for pheromone-mediated sexual behaviors in mice. **Neuron** 95: 123-137 (2017)
- 5 Wakisaka N, Miyasaka N, Koide T, Masuda M, Hiraki-Kajiyama T, Yoshihara Y. An adenosine receptor for olfaction in fish. **Current Biology** 27:1437-1447 (2017)
- 6 Yabuki Y, Koide T, Miyasaka N, Wakisaka N, Masuda M, Ohkura M, Nakai J, Tsuge K, Tsuchiya S, Sugimoto Y, Yoshihara Y. Olfactory receptor for prostaglandin F₂ α mediates male fish courtship behavior. **Nature Neuroscience** 19: 897-904 (2016)
- 7 Eckstrum KS, Weis KE, Baur NG, Yoshihara Y, Raetzman LT. Icam5 expression exhibits sex differences in the neonatal pituitary and is regulated by estradiol and bisphenol A. **Endocrinology** 157: 1408-1420 (2016)
- 8 Osterhout JA, Stafford BK, Nguyen PL, Yoshihara Y, Huberman AD. Contactin-4 mediates axon-target specificity and functional development of the accessory optic system. **Neuron** 86: 985-999 (2015)
- 9 Deleyrolle L, Sabourin JC, Rothhut B, Fujita H, Guichet PO, Teigell M, Ripoll C, Chauvet N, Perrin F, Mamaeva D, Noda T, Mori K, Yoshihara Y, Hugnot JP. OCAM regulates embryonic spinal cord stem cell proliferation by modulating ErbB2 receptor. **PLoS One** 10: e0122337 (2015)
- 10 Gu Z, Imai F, Kim IJ, Fujita H, Katayama K, Mori K, Yoshihara Y, Yoshida Y. Expression of the immunoglobulin superfamily cell adhesion molecules in the developing spinal cord and dorsal root ganglion. **PLoS One** 10: e0121550 (2015)
- 11 Takeuchi M, Matsuda K, Yamaguchi S, Asakawa K, Miyasaka N, Lal P, Yoshihara Y, Koga A, Kawakami K, Shimizu T, Hibi M. Establishment of Gal4 transgenic zebrafish lines for analysis of development of cerebellar neural circuitry. **Developmental Biology** 397: 1-17 (2015)
- 12 Amo R, Fredes F, Kinoshita M, Aoki R, Aizawa H, Agetsuma M, Aoki T, Shiraki T, Kakinuma H, Matsuda M, Yamazaki M, Takahoko M, Tsuboi T, Higashijima S, Miyasaka N, Koide T, Yabuki Y, Yoshihara Y, Fukai T, Okamoto H. The habenulo-raphé serotonergic circuit encodes an aversive expectation value essential for adaptive active avoidance of danger. **Neuron** 84: 1034-1048 (2014)
- 13 Miyasaka N, Arganda-Carreras I, Wakisaka N, Masuda M, Sümbül U, Seung HS, Yoshihara Y. Olfactory projectome in the zebrafish forebrain revealed by genetic single-neuron labeling. **Nature Communications** 5: 3639 (2014)
- 14 Sato T, Iwano T, Kunii M, Matsuda S, Mizuguchi R, Jung Y, Hagiwara H, Yoshihara Y, Yuzaki M, Harada R, Harada A. Rab8a and Rab8b are essential for multiple apical transport pathways but insufficient for ciliogenesis. **Journal of Cell Science** 127: 422-431 (2014)
- 15 Kaneko-Goto T, Sato Y, Katada S, Kinameri E, Yoshihara S, Nishiyori A, Kimura M, Fujita H, Touhara K, Reed RR, Yoshihara Y. Goofy coordinates the acuity of olfactory signaling. **Journal of Neuroscience** 33: 12987-12996 (2013)
- 16 Olivera A, Kitamura Y, Wright L, Allende ML, Chen W, Kaneko-Goto T, Yoshihara Y, Proia RL, Rivera J. Sphingosine-1-phosphate can promote mast cell hyper-reactivity through regulation of contactin-4 expression. **Journal of Leukocyte Biology** 94: 1013-1024 (2013)
- 17 Braubach OR, Miyasaka N, Koide T, Yoshihara Y, Croll RP, Fine A. Experience-dependent vs. experience-independent postembryonic development of distinct groups of zebrafish olfactory glomeruli. **Journal of Neuroscience** 33: 6905-6916 (2013)

- 18 Tachikawa KS, [Yoshihara Y](#), Kuroda KO. Behavioral transition from attack to parenting in male mice: a crucial role of the vomeronasal system. **Journal of Neuroscience** 33: 5120-5126 (2013)
- 19 Furutani Y, Kawasaki M, Matsuno H, Mitsui S, Mori K, [Yoshihara Y](#). Vitronectin induces phosphorylation of ezrin/radixin/moesin actin-binding proteins through binding to its novel neuronal receptor telencephalin. **Journal of Biological Chemistry** 287: 39041-39049 (2012)
- 20 Mizuguchi R, Naritsuka H, Mori K, Mao CA, Klein WH, [Yoshihara Y](#). Tbr2 deficiency in mitral and tufted cells disrupts excitatory-inhibitory balance of neural circuitry in the mouse olfactory bulb. **Journal of Neuroscience** 32: 8831-8844 (2012)
- 21 Walling SG, Brown RAM, Miyasaka N, [Yoshihara Y](#), Harley CW. Selective WGA uptake in the hippocampus from the locus coeruleus of DBH-WGA transgenic mice. **Frontiers in Behavioral Neuroscience** 6: 23 (2012)
- 22 Mori Y, Matsui T, Furutani Y, [Yoshihara Y](#), Fukuda M. Small GTPase Rab17 regulates the dendritic morphogenesis and postsynaptic development of hippocampal neurons. **Journal of Biological Chemistry** 287: 8963-8973 (2012)
- 23 Yoshihara S, Takahashi H, Nishimura N, Naritsuka H, Shirao T, Hirai H, [Yoshihara Y](#), Mori K, Stern P, Tsuboi A. 5T4 glycoprotein regulates the sensory input-dependent development of a specific subtype of newborn interneurons in the mouse olfactory bulb. **Journal of Neuroscience** 32: 2217-2226 (2012)
- 24 Langhauser M, Ustinova J, Rivera-Milla E, Ivannikov D, Seidl C, Slomka C, Finne J, [Yoshihara Y](#), Bastmeyer M, Bentrop J. Ncam1a and Ncam1b – two carriers of polysialic acid with different functions in the developing zebrafish nervous system. **Glycobiology** 22: 196-209 (2012)
- 25 Matsumoto I, Ohmoto M, Narukawa M, [Yoshihara Y](#), Abe K. Skn-1a (Pou2f3) specifies taste receptor cell lineage. **Nature Neuroscience** 14: 685-687 (2011)
- 26 Mitsui S, Igarashi KM, Mori K, [Yoshihara Y](#). Genetic visualization of the secondary olfactory pathway in Tbx21 transgenic mice. **Neural Systems and Circuits** 1: 5 (2011)
- 27 Ohmoto M, Maeda N, Abe K, [Yoshihara Y](#), Matsumoto I. Genetic tracing of bitter taste pathway in t2r5-WGA transgenic mice. **Biochemical and Biophysical Research Communications** 400: 734-738 (2010)
- 28 Haga S, Hattori T, Sato T, Sato K, Matsuda S, Kobayakawa R, Sakano H, [Yoshihara Y](#), Kikusui T, Touhara K. A male mouse pheromone ESP1 enhances female sexual behaviour via a select vomeronasal receptor. **Nature** 466: 118-122 (2010)
- 29 Takeuchi H, Inokuchi K, Aoki M, Suto F, Tsuboi A, Matsuda I, Suzuki M, Aiba A, Serizawa S, [Yoshihara Y](#), Fujisawa H, Sakano H. Sequential arrival and graded secretion of Sema3F by olfactory neuron axons specify map topography at the bulb. **Cell** 141: 1056-1067 (2010)
- 30 Koide T, Miyasaka N, Morimoto K, Asakawa K, Urasaki A, Kawakami K, [Yoshihara Y](#). Olfactory neural circuitry for attraction to amino acids revealed by transposon-mediated gene trap approach in zebrafish. **Proceedings of National Academy of Sciences USA** 106: 9884-9889 (2009)
- 31 Miyasaka N, Morimoto K, Tsubokawa T, Higashijima S, Okamoto H, [Yoshihara Y](#). From the olfactory bulb to higher brain centers: genetic visualization of secondary olfactory pathways in zebrafish. **Journal of Neuroscience** 29: 4756-4767 (2009)
- 32 Ohmoto M, Matsumoto I, Yasuoka A, [Yoshihara Y](#), Abe K. Genetic tracing of the gustatory and trigeminal neural pathways originating from T1R3-expressing chemosensory cells. **Molecular and Cellular Neuroscience** 38: 505-517 (2008)
- 33 Kaneko-Goto T, Yoshihara S, Miyazaki H, [Yoshihara Y](#). BIG-2 mediates olfactory axon convergence to target glomeruli. **Neuron** 57: 834-846 (2008)
- 34 Ichinohe N, Knight A, Ogawa M, Ohshima T, Mikoshiba K, [Yoshihara Y](#), Terashima T, Rockland KS. Unusual patch-matrix organization in the retrosplenial cortex of the reeler mouse and Shaking Rat Kawasaki. **Cerebral Cortex** 18: 1125-1138 (2008)
- 35 Furutani Y, Matsuno H, Kawasaki M, Sasaki T, Mori K, [Yoshihara Y](#). Interaction between telencephalin and ERM family proteins mediates dendritic filopodia formation. **Journal of Neuroscience** 27: 8866-8876 (2007)

- 36 Sato Y, Miyasaka N, Yoshihara Y. Hierarchical regulation of odorant receptor gene choice and subsequent axonal projection of olfactory sensory neurons in zebrafish. **Journal of Neuroscience** 27: 1606-1615 (2007)
- 37 Miyasaka N, Knaut H, Yoshihara Y. Cxcl12/Cxcr4 chemokine signaling is required for placode assembly and sensory axon pathfinding in the zebrafish olfactory system. **Development** 134: 2459-2468 (2007)
- 38 Mitsui S, Saito M, Mori K, Yoshihara Y. A transcriptional enhancer that directs transgene expression in the telencephalic neurons. **Cerebral Cortex** 17: 522-530 (2007)
- 39 Oka Y, Katada S, Omura M, Suwa M, Yoshihara Y, Touhara K. Odorant receptor map in the mouse olfactory bulb: in vivo sensitivity and specificity of receptor-defined glomeruli. **Neuron** 52: 857-869 (2006)
- 40 Hirata T, Nakazawa M, Yoshihara S, Kitamura K, Yoshihara Y, Hibi M. Zinc finger gene Fez is required for development of olfactory system in mouse. **Development** 133: 1433-1443 (2006)
- 41 Matsuno H, Okabe S, Mishina M, Yanagida T, Mori K, Yoshihara Y. Telencephalin slows spine maturation. **Journal of Neuroscience** 26: 1776-1786 (2006)
- 42 Sato Y, Miyasaka N, Yoshihara Y. Mutually exclusive glomerular innervation by two distinct types of olfactory sensory neurons revealed in transgenic zebrafish. **Journal of Neuroscience** 25: 4889-4897 (2005)
- 43 Miyasaka N, Sato Y, Yeo SY, Hutson LD, Chien CB, Okamoto H, Yoshihara Y. Robo2 is required for establishment of a precise glomerular map in the zebrafish olfactory system. **Development** 132: 1283-1293 (2005)
- 44 Mitsui S, Saito M, Hayashi K, Mori K, Yoshihara Y. A novel phenylalanine-based targeting signal directs telencephalin to neuronal dendrites. **Journal of Neuroscience** 25: 1122-1131 (2005)
- 45 Yoshihara S, Omichi K, Yanazawa M, Kitamura K, Yoshihara Y. *Arx* homeobox gene is essential for development of mouse olfactory system. **Development** 132: 751-762 (2005)
- 46 Inaki K, Nishimura S, Nakashiba T, Itohara S, Yoshihara Y. Laminar organization of the developing lateral olfactory tract revealed by differential expression of cell recognition molecules. **Journal of Comparative Neurology** 479: 243-256 (2004)
- 47 Nagayama S, Takahashi YK, Yoshihara Y, Mori K. Mitral and tufted cells differ in the decoding manner of odor maps in the rat olfactory bulb. **Journal of Neurophysiology** 91: 2532-2540 (2004)
- 48 Hasegawa S, Yamaguchi M, Nagao H, Yoshihara Y, Mori K. Activated natural killer cells adhere to cultured hippocampal neurons and affect the dendritic morphology. **Journal of Neuroimmunology** 151: 126-136 (2004)
- 49 Inoue M, Nishimura S, Hori G, Nakahara H, Saito M, Yoshihara Y, Amari S. Improved parameter estimation for variance-stabilizing transformation of gene-expression microarray data. **Journal of Bioinformatics and Computational Biology** 2: 669-679 (2004)
- 50 Nishiyori A, Hanno Y, Saito M, Yoshihara Y. Aberrant transcription of unrearranged T cell receptor b gene in mouse brain. **Journal of Comparative Neurology** 469: 214-226 (2004)
- 51 Sapir T, Geiman RJ, Wang Z, Belasquez T, Mitsui S, Yoshihara Y, Frank E, Alvarez FJ, Goulding M. *Pax6* and *En1* regulate distinct aspects of Renshaw cell development. **Journal of Neuroscience** 24: 1255-1264 (2004)
- 52 Serizawa S, Miyamichi K, Nakatani H, Suzuki M, Saito M, Yoshihara Y, Sakano H. Negative feedback regulation ensures the one receptor – one olfactory sensory neuron rule in mouse. **Science** 302: 2088-2094 (2003)
- 53 Hanno Y, Nakahira M, Jishage K, Noda T, Yoshihara Y. Tracking mouse visual pathways with WGA transgene. **European Journal of Neuroscience** 18: 2910-2914 (2003)
- 54 Ichinohe N, Yoshihara Y, Hashikawa T, Rockland KS. Developmental study of dendritic bundles in layer 1 of the rat granular retrosplenial cortex with special reference to a cell adhesion molecule, OCAM. **European Journal of Neuroscience** 18: 1764-1774 (2003)
- 55 Treloar HB, Gabeau D, Yoshihara Y, Mori K, Greer CA. Inverse expression of OCAM in a subset of olfactory axons and a subset of mitral/tufted cells in the developing olfactory bulb. **Journal of Comparative Neurology** 458: 389-403 (2003)
- 56 Kinoshita N, Mizuno T, Yoshihara Y. Adenovirus-mediated WGA gene delivery for transsynaptic labeling of mouse olfactory pathways. **Chemical Senses** 27: 215-223 (2002)

- 57 Mizuno T, Kawasaki M, Nakahira M, Kagamiyama H, Kikuchi Y, Okamoto H, Mori K, Yoshihara Y. Molecular diversity in zebrafish NCAM family: three members with different VASE usage and distinct localization. **Molecular and Cellular Neuroscience** 18: 119-130 (2001)
- 58 Nagao H, Yoshihara Y, Mitsui S, Fujisawa H, Mori K. Two mirror-image sensory maps with domain organization in the mouse main olfactory bulb. **NeuroReport** 11: 3023-3027 (2000)
- 59 Tian L, Nyman H, Kilgannon P, Yoshihara Y, Mori K, Andersson LC, Rauvala H, Gallatin WM, Gahmberg CG. Intercellular adhesion molecule-5 induces dendritic outgrowth by homophilic adhesion. **Journal of Cell Biology** 150: 243-252 (2000)
- 60 Tian L, Kilgannon P, Yoshihara Y, Mori K, Gallatin WM, Carpen O, Gahmberg CG. Binding of T lymphocytes to hippocampal neurons through ICAM-5 (telencephalin) and characterization of its interaction with the leukocyte integrin CD11a/CD18. **European Journal of Immunology** 30: 810-818 (2000)
- 61 Tabuchi K, Sawamoto K, Suzuki E, Ozaki K, Sone M, Hama C, Tanifuji-Morimoto T, Yuasa Y, Yoshihara Y, Nose A, Okano H. The *GAL4/UAS-WGA* system as a powerful tool for tracing *Drosophila* transsynaptic neural pathways. **Journal of Neuroscience Research** 59: 94-99 (2000)
- 62 Mizuno T, Yoshihara Y, Kagamiyama H, Ohsawa K, Imai Y, Kohsaka S, Mori K. Neuronal adhesion molecule telencephalin induces rapid cell spreading of microglia. **Brain Research** 849: 58-66 (1999)
- 63 Yoshihara Y, Mizuno T, Nakahira M, Kawasaki M, Watanabe Y, Kagamiyama H, Jishage K, Ueda O, Suzuki H, Tabuchi K, Sawamoto K, Okano H, Noda T, Mori K. A genetic approach to visualization of multisynaptic neural pathways using plant lectin transgene. **Neuron** 22: 33-41 (1999)
- 64 Nakai Y, Yoshihara Y, Hayashi H, Kagamiyama H. cDNA cloning and characterization of mouse *nifS*-like protein, mNfs1: mitochondrial localization of eukaryotic NifS-like proteins. **FEBS Letters** 433: 143-148 (1998)
- 65 Okuda-Ashitaka E, Minami T, Tachibana S, Yoshihara Y, Nishiuchi Y, Kimura T, Ito S. Nocistatin, a peptide blocking nociceptin action in pain transmission. **Nature** 392: 286-289 (1998)
- 66 Sakurai E, Hashikawa T, Yoshihara Y, Kaneko S, Satoh M, Mori K. Involvement of dendritic adhesion molecule telencephalin in long-term potentiation. **NeuroReport** 9: 881-886 (1998)
- 67 Benson DL, Yoshihara Y, Mori K. Polarization and cell-type specific localization of telencephalin, an ICAM-related protein, in hippocampal neurons. **Journal of Neuroscience Research** 52: 43-53 (1998)
- 68 Tamada A, Yoshihara Y, Mori K. Telencephalin, a dendritic adhesion molecule, promotes neurite outgrowth. **Neuroscience Letters** 240: 163-166 (1998)
- 69 von Campenhausen H, Yoshihara Y, Mori K. OCAM reveals segregated mitral/tufted cell pathways in developing accessory olfactory bulb. **NeuroReport** 8: 2607-2612 (1997)
- 70 Sugino H, Yoshihara Y, Copeland NJ, Gilbert DL, Jenkins NA, Mori K. Genomic organization and chromosomal localization of the mouse telencephalin gene, a neuronal member of the ICAM family. **Genomics** 43: 209-215 (1997)
- 71 Yoshihara Y, Kawasaki M, Tamada A, Fujita H, Hayashi H, Kagamiyama H, Mori K. OCAM: a new member of the NCAM family related to zone-to-zone projection of olfactory and vomeronasal axons. **Journal of Neuroscience** 17: 5830-5842 (1997)
- 72 Hino H, Mori K, Yoshihara Y, Iseki E, Akiyama H, Nishimura T, Ikeda K, Kosaka K. Reduction of telencephalin immunoreactivity in the brain of patients with Alzheimer's disease. **Brain Research** 753: 353-357 (1997)
- 73 Fujimori KE, Takauji R, Yoshihara Y, Tamada A, Mori K, Tamamaki N. A procedure for in situ hybridization combined with retrograde labeling of neurons: application to the study of cell adhesion molecule expression in DiI-labeled rat pyramidal neurons. **Journal of Histochemistry and Cytochemistry** 45: 455-459 (1997)
- 74 Tian L, Yoshihara Y, Mizuno T, Mori K, Gahmberg CG. The neuronal glycoprotein, telencephalin, is a cellular ligand for CD11a/CD18 leukocyte integrin. **Journal of Immunology** 158: 928-936 (1997)
- 75 Mizuno T, Yoshihara Y, Inazawa J, Kagamiyama H, Mori K. cDNA cloning and chromosomal localization of the human telencephalin and its distinctive interaction with lymphocyte function-associated antigen-1. **Journal of Biological Chemistry** 272: 1156-1163 (1997)

- 76 Yoshihara Y, Kawasaki M, Tamada A, Nagata S, Kagamiyama H, Mori K. Overlapping and differential expression of BIG-2, BIG-1, TAG-1, and F3: four members of an axon-associated cell adhesion molecule subgroup of the immunoglobulin superfamily. **Journal of Neurobiology** 28: 51-69 (1995)
- 77 Yoshihara Y, Kawasaki M, Tani A, Nagata S, Kagamiyama H, Mori K. BIG-1: a new TAG-1/F3-related member of the immunoglobulin superfamily with neurite outgrowth-promoting activity. **Neuron** 13: 415-426 (1994)
- 78 Yoshihara Y, Oka S, Nemoto Y, Watanabe Y, Nagata S, Kagamiyama H, Mori K. An ICAM-related neuronal glycoprotein, telencephalin, with brain segment-specific expression. **Neuron** 12: 541-553 (1994)
- 79 Koshimoto H, Katoh K, Yoshihara Y, Nemoto Y, Mori K. Immunohistochemical demonstration of embryonic expression of an odor receptor protein and its zonal distribution in the rat olfactory epithelium. **Neuroscience Letters** 169: 73-76 (1994)
- 80 Katoh K, Yoshihara Y, Mori K. Development of glomerular structure in rabbit olfactory bulb: three-dimensional reconstitution under the confocal laser scanning microscopy. **NeuroImage** 1: 199-207 (1994)
- 81 Nemoto Y, Ikeda J, Katoh K, Koshimoto H, Yoshihara Y, Mori K. R2D5 antigen: a calcium-binding phosphoprotein predominantly expressed in olfactory receptor neurons. **Journal of Cell Biology** 123: 963-976 (1993)
- 82 Kawasaki M, Yoshihara Y, Yamaji M, Watanabe Y. Expression of prostaglandin endoperoxide synthase in rat brain. **Molecular Brain Research** 19: 39-46 (1993)
- 83 Yoshihara Y, Katoh K, Mori K. Odor stimulation causes disappearance of R4B12 epitope on axonal surface molecule of olfactory sensory neurons. **Neuroscience** 53:101-110 (1993)
- 84 Koshimoto H, Katoh K, Yoshihara Y, Mori K. Distribution of putative odour receptor proteins in olfactory epithelium. **NeuroReport** 3: 521-523 (1992)
- 85 Yoshihara Y, Yamaji M, Kawasaki M, Watanabe Y. Ontogeny of cytosolic phospholipase A activity in rat brain. **Biochemical and Biophysical Research Communications** 185: 350-3 (1992)
- 86 Tani A, Yoshihara Y, Mori K. Increase in cytoplasmic free Ca²⁺ elicited by noradrenalin and serotonin in cultured local interneurons of mouse olfactory bulb. **Neuroscience** 49: 193-199 (1992)
- 87 Yoshihara Y, Oka S, Watanabe Y, Mori K. Spatially and developmentally regulated expression of HNK-1 carbohydrate antigen on a novel phosphatidylinositol-anchored glycoprotein in rat brain. **Journal of Cell Biology** 115: 731-744 (1991)
- 88 Satoh M, Ueda H, Tamura S, Yoshihara Y, Fukushima N. Inositol 1,4,5-trisphosphate activates Ca²⁺ channels in the plasma membranes of rat brain nerve terminals. **Advances in Experimental Medicine and Biology** 287: 97-100 (1991)
- 89 Yoshihara Y, Watanabe Y. Translocation of phospholipase A2 from cytosol to membrane in rat brain induced by calcium ions. **Biochemical and Biophysical Research Communications** 170: 484-490 (1990)
- 90 Yoshihara Y, Ueda H, Fujii N, Shide A, Yajima H, Satoh M. Purification of a novel type of calcium-activated neutral protease from rat brain – possible involvement in production of the neuropeptide, kyotorphin, from calpastatin fragments -. **Journal of Biological Chemistry** 265: 5809-5815 (1990)
- 91 Ueda H, Yoshihara Y, Misawa H, Fukushima N, Katada T, Ui M, Takagi H, Satoh M. The kyotorphin (tyrosine-arginine) receptor and a selective reconstitution with purified Gi, measured with GTPase and phospholipase C assays. **Journal of Biological Chemistry** 264: 3732-3741 (1989)
- 92 Yoshihara Y, Ueda H, Imajoh S, Takagi H, Satoh M. Calcium-activated neutral protease (CANP), a putative processing enzyme of the neuropeptide, kyotorphin, in the brain. **Biochemical and Biophysical Research Communications** 155: 546-553 (1988)
- 93 Ueda H, Fukushima N, Yoshihara Y, H. Takagi. A Met-enkephalin releaser, kyotorphin-induced release of plasma membrane-bound Ca²⁺ from rat brain synaptosomes. **Brain Research** 419: 197-200 (1987)
- 94 Kitabatake S, Tsurutani R, Nakajima H, Tomita K, Yoshihara Y, Ueda H, Takagi H, Imahori K. A novel method for the synthesis of kyotorphin, Tyr-Arg, and ³H-Tyr-Arg, catalyzed by tyrosyl-tRNA synthetase from *Bacillus stearothermophilus*. **Pharmaceutical Research** 4: 154-157 (1987)

- 95 Ueda H, [Yoshihara Y](#), Fukushima N, Shiomi H, Nakamura A, Takagi H. Kyotorphin (tyrosine-arginine) synthetase in rat brain synaptosomes. **Journal of Biological Chemistry** 262: 8165-8173 (1987)
- 96 Ueda H, [Yoshihara Y](#), Takagi H. A putative Met-enkephalin releaser, kyotorphin enhances intracellular Ca²⁺ in the synaptosomes. **Biochemical and Biophysical Research Communications** 137: 897-902 (1986)
- 97 Ueda H, Matsumoto S, [Yoshihara Y](#), Fukushima N, Takagi H. Uptake and release of kyotorphin in the rat brain synaptosomes. **Life Sciences** 38: 2405-2411 (1986)
- 98 Ueda H, [Yoshihara Y](#), Nakamura A, Shiomi H, Satoh M, Takagi H. How is kyotorphin (Tyr-Arg) generated in the brain? **Neuropeptide** 5: 525-528 (1985)

Review Articles:

- 1 Miyasaka N, Wanner AA, Li J, Mack-Bucher J, Genoud C, [Yoshihara Y](#), Friedrich RW. Functional development of the olfactory system in zebrafish. **Mechanisms of Development** 130: 336-346 (2013)
- 2 [Yoshihara Y](#), De Roo M, Muller D. Dendritic spine formation and stabilization. **Current Opinion in Neurobiology** 19: 146-153 (2009)
- 3 Miyasaka N, Sato Y, [Yoshihara Y](#). Axon guidance of olfactory sensory neurons in zebrafish. **Chemical Senses** 30: 92-93 (2005)
- 4 [Y. Yoshihara](#). Visualizing selective neural pathways with WGA transgene: combination of neuroanatomy with gene technology. **Neuroscience Research** 44: 133-140 (2002)
- 5 [Yoshihara Y](#), Nagao H, Mori K. Sniffing out odors with multiple dendrites. **Science** 291: 835-837 (2001)
- 6 Mori K, von Campenhausen H, [Yoshihara Y](#). Zonal organization in mammalian olfactory system. **The Royal Society Philosophical Transactions: Biological Sciences** 355: 1801-1812 (2000)
- 7 Mori K, Nagao H, [Yoshihara Y](#). The olfactory bulb: coding and processing of odor molecule information. **Science** 286: 711-715 (1999)
- 8 [Yoshihara Y](#), Mori K. Basic principles and molecular mechanisms of olfactory axon pathfinding. **Cell and Tissue Research** 290: 457-463 (1997)
- 9 Mori K, [Yoshihara Y](#). Molecular recognition and olfactory processing in the mammalian olfactory system. **Progress in Neurobiology** 45: 585-620 (1995)
- 10 [Yoshihara Y](#), Mori K. Telencephalin: a neuronal area code molecule? **Neuroscience Research** 21: 119-124 (1994)
- 11 [Yoshihara Y](#), Oka S, Ikeda J, Mori K. Immunoglobulin superfamily molecules in the nervous system. **Neuroscience Research** 10: 83-105 (1991)

Book Chapters:

- 1 Miyasaka N, Wakisaka N, [Yoshihara Y](#). Genetic mosaic labeling and immunofluorescence techniques in zebrafish brain. In *Immunocytochemistry and Related Techniques, Neuromethods* (eds. A. Merighi and L. Loss) pp.81-92, Springer (2015)
- 2 [Yoshihara Y](#). Zebrafish olfactory system. In *Olfactory System: How is the Odor Information Translated into Motivational Behaviors in the Brain?* (ed. K. Mori) pp.71-96 Springer (2014)
- 3 [Yoshihara Y](#). Molecular genetic dissection of the zebrafish olfactory system. In *Chemosensory Systems in Mammals, Fishes and Insects* (eds. W. Meyerhof and S. Korsching) pp.97-120, Springer (2009)
- 4 [Yoshihara Y](#). Immunoglobulin superfamily cell adhesion molecules. In *Encyclopedic References of Neuroscience* (eds. M. D. Binder, N. Hirokawa, U. Windhorst) pp.1923-1926 (2009)
- 5 [Yoshihara Y](#), Mori K. IgSF molecules involved in olfactory axon projection. In *Molecular Basis of Axon Growth and Nerve Pattern Formation* (ed. H. Fujisawa) pp.143-153, Karger (1997)
- 6 Mori K, Tamada A, Sugino H, Mizuno T, [Yoshihara Y](#). Multiple functional roles of brain segment-specific neuronal recognition molecule, telencephalin. In *Integrative and Molecular Approach to Brain Function*. (eds. M. Ito and Y. Miyashita) pp.97-106, Elsevier (1996)

Invited Talks:

03/1996 19th Taniguchi International Symposium on Brain Sciences, Kyoto, Japan
03/1997 20th Taniguchi International Symposium on Brain Sciences, Kyoto, Japan
12/1997 Senri Life Science Foundation "Shin-Tekijuku" Osaka, Japan
12/1997 20th Annual Meeting for the Molecular Biology Society of Japan, Kyoto, Japan
07/1998 Workshop of MEXT Grant "Neuronal Apoptosis", Hamamatsu, Japan
09/1998 Tokyo Metropolitan Institute of Gerontology, Tokyo, Japan
09/1998 COE International Symposium on "Plasticity and Regeneration of Neural Network", Tokyo, Japan
10/1998 71st Annual Meeting for Japanese Biochemistry Society, Nagoya, Japan
11/1998 20th Annual Meeting for Japan Society for Biomedical Gerontology, Tokyo, Japan
12/1998 Osaka University, Graduate School of Engineering Science, Osaka, Japan
12/1998 Tsukuba University, Tsukuba, Japan
07/1999 22nd Annual Meeting for Japan Neuroscience Society, Osaka, Japan
10/1999 1st MIT-RIKEN Neuroscience Symposium on "New Frontiers in Brain Science", Boston, USA
10/1999 72nd Annual Meeting for Japanese Biochemistry Society, Yokohama, Japan
10/1999 Kyoto University, Institute for Virus Research, Kyoto, Japan
11/1999 6th Synapse Research Meeting, Okazaki, Japan
02/2000 Azabu University, Sagamihara, Japan
02/2000 8th International Conference on "Peace through Mind/Brain Science", Hamamatsu, Japan
04/2000 22nd Annual Meeting for Japanese Society of Biological Psychiatry, Tokyo, Japan
04/2000 Japanese Biochemistry Society, Kanto Branch Symposium, Yokohama, Japan
04/2000 National Institute of Genetics, Mishima, Japan
09/2000 24th Annual Meeting for Japan Neuroscience Society, Kyoto, Japan
11/2000 2nd Korea-Japan Joint Workshop on Neurobiology and Neuroinformatics, Kyongju, Korea
03/2001 78th Annual Meeting for Physiological Society of Japan, Kyoto, Japan
04/2001 RIKEN BSI Neuronal Function Research Group 1st Workshop, Wako, Japan
06/2001 Tokyo Medical and Dental University, Tokyo, Japan
07/2001 Nagasaki University, Faculty of Pharmaceutical Sciences, Nagasaki, Japan
07/2001 26th Workshop of Japan Society of Histochemistry and Cytochemistry, Kyoto, Japan
10/2001 35th Annual Meeting of Japanese Association for the Study of Taste and Smell, Kochi, Japan
12/2001 National Institute for Basic Biology, Okazaki, Japan
12/2001 24th Annual Meeting for the Molecular Biology Society of Japan, Yokohama, Japan
03/2002 World Brain Awareness Week, Wako, Japan
05/2002 The University of Tokyo, Graduate School of Medicine, Tokyo, Japan
05/2002 RIKEN BSI Neuronal Function Research Group 2nd Workshop, Wako, Japan
03/2004 RIKEN BSI-CDB Joint Symposium, Kobe, Japan
10/2004 Tohoku University, Institute of Development, Aging and Cancer, Sendai, Japan
12/2004 27th Annual Meeting for the Molecular Biology Society of Japan, Kobe, Japan
07/2005 University of Hohenheim, Institute of Physiology, Stuttgart, Germany
07/2005 28th Annual Meeting for Japan Neuroscience Society, Yokohama, Japan
08/2005 Summer Workshop of MEXT Grant "Tougou-Nou", Nagano, Japan
10/2005 The University of Tokyo, Graduate School of Medicine, Tokyo, Japan
10/2005 Osaka University, Graduate School of Frontier Biosciences, Osaka, Japan
11/2005 3rd International Symposium on Taste and Olfactory Perception, Fukuoka, Japan
11/2005 Gunma University, Institute for Molecular and Cellular Regulation, Maebashi, Japan
06/2006 Kyoritsu College of Pharmacy, Tokyo, Japan

07/2006 40th Annual Meeting of Japanese Association for the Study of Taste and Smell, Fukuoka, Japan
07/2006 29th Annual Meeting for Japan Neuroscience Society, Kyoto, Japan
11/2006 The University of Tokyo, Faculty of Pharmaceutical Sciences, Tokyo, Japan
11/2006 Hokkaido University, Faculty of Pharmaceutical Sciences, Sapporo, Japan
12/2006 Nagaoka Institute of Technology, Nagaoka, Japan
01/2007 Kyushu University, Faculty of Science, Fukuoka, Japan
03/2007 National Institute of Genetics, Mishima, Japan
06/2007 Tokyo Metropolitan Institute for Neuroscience, Fuchu, Japan
07/2007 9th China-Japan-Korea Joint Workshop on Neurobiology and Neuroinformatics, Cheju, Korea
09/2007 30th Annual Meeting for Japan Neuroscience Society, Yokohama, Japan
11/2007 5th International Symposium on Taste and Olfactory Perception, Fukuoka, Japan
11/2007 6th MIT-RIKEN Neuroscience Symposium on "New Frontiers in Brain Science", Boston, USA
11/2007 Yale University School of Medicine, New Haven, USA
12/2007 30th Annual Meeting for the Molecular Biology Society of Japan, Yokohama, Japan
07/2008 31st Annual Meeting for Japan Neuroscience Society, Tokyo, Japan
09/2008 18th European Chemoreception Research Organization Congress, Portoroz, Slovenia
11/2008 Kochi University School of Medicine, Kochi, Japan
12/2008 46th Annual Meeting for the Biophysical Society of Japan, Fukuoka, Japan
05/2009 Japan Cement Association, Tokyo, Japan
09/2009 UCSF Neuroscience Graduate Program, San Francisco, USA
09/2009 43rd Annual Meeting of Japanese Association for the Study of Taste and Smell, Asahikawa, Japan
12/2009 32nd Annual Meeting for the Molecular Biology Society of Japan, Yokohama, Japan
04/2010 Nara Medical University, Nara, Japan
05/2010 87th Annual Meeting for Physiological Society of Japan, Morioka, Japan
05/2010 Janelia Farm Conference: Form and Function of the Olfactory System, Ashburn, USA
07/2010 Tohoku University GCOE Retreat, Sendai, Japan
10/2010 10th China-Japan-Korea Joint Workshop on Neurobiology and Neuroinformatics, Kunming, China
11/2010 International Symposium on Systems Molecular Ethology, Tokyo, Japan
09/2011 34th Annual Meeting for Japan Neuroscience Society, Tokyo, Japan
09/2011 84th Annual Meeting for Japanese Biochemistry Society, Kyoto, Japan
11/2011 Senri Life Science Seminar: "Smell, Scent and Pheromone", Osaka, Japan
12/2011 International Institute for Advanced Studies, Research Conference, Kyoto, Japan
01/2012 Nagoya University GCOE Symposium, Nagoya, Japan
06/2012 16th International Symposium on Olfaction and Taste (ISOT), Stockholm, Sweden
09/2012 Workshop on "Neural Bases for Olfactory Information Processing", Tokyo, Japan
09/2012 35th Annual Meeting for Japan Neuroscience Society, Nagoya, Japan
11/2012 Cold Spring Harbor Asia Conference on "Neural Circuit Basis of Behavior", Suzhou, China
01/2013 University of Hyogo, Graduate School of Life Science, Harima, Japan
02/2013 RIKEN Joint Retreat, Shizuoka, Japan
02/2013 International Symposium on "Sensory Systems and Neural Circuits", Tokyo, Japan
02/2013 International Institute for Advanced Studies, Research Conference, Kyoto, Japan
03/2013 90th Annual Meeting for Physiological Society of Japan, Tokyo, Japan
06/2013 36th Annual Meeting for Japan Neuroscience Society, Kyoto, Japan
11/2013 11th International Symposium on Taste and Olfactory Perception, Fukuoka, Japan
11/2013 Autumn Symposium: Japan Society of Developmental Biologists, Kobe, Japan
12/2013 National Institute of Physiological Science, Meeting on "Memory Circuit", Okazaki, Japan
01/2014 Tokyo Institute of Technology, Workshop on "Sensory Systems", Yokohama, Japan

05/2014 Takasago International Corporation, Kanagawa, Japan
05/2014 ERATO Touhara Chemosensory Signal Project Symposium, Tokyo, Japan
07/2014 Okinawa Institute of Science and Technology (OIST) Developmental Neurobiology Course, Okinawa, Japan
09/2014 24th European Chemoreception Research Organization Congress, Dijon, France
10/2014 Plenary Lecture, Annual Meeting for Brewing Society of Japan, Tokyo, Japan
02/2015 Symposium on Olfactory Circuit and Behavior (Prof. Kensaku Mori Memorial Symposium), Tokyo, Japan
07/2015 38th Annual Meeting for Japan Neuroscience Society, Kobe, Japan
09/2015 25th European Chemoreception Research Organization Congress, Istanbul, Turkey
11/2015 KAO Corporation, Utsunomiya, Japan
12/2015 National Institute of Genetics, Workshop on "Circuit Construction in the Mammalian Brain", Mishima, Japan
05/2016 Kumamoto University, Graduate School of Pharmaceutical Sciences, Kumamoto, Japan
06/2016 17th International Symposium on Olfaction and Taste (ISOT), Yokohama, Japan
12/2016 4th "Imaging Structure and Function in the Zebrafish Brain" Conference, Max Planck Institute, Martinsried, Germany
01/2017 National Institute of Genetics, Mishima, Japan
01/2017 Tokyo Institute of Technology, Workshop on "Sense, Sensor, Sensation", Yokohama, Japan
03/2017 Kochi University School of Medicine, Kochi, Japan
04/2017 RIKEN Open Day, Wako, Japan
06/2017 Chemical Ecology Workshop, Hakodate, Japan
10/2017 National Institute of Physiological Sciences, Workshop on Emotion, Okazaki, Japan
10/2017 Sanofi Corporation Workshop, Tokyo, Japan
11/2017 Zebrafish Neural Circuits and Behavior Symposium, Bethesda, USA
11/2017 Monell Chemical Senses Center, Philadelphia, USA
12/2017 40th Annual Meeting for the Molecular Biology Society of Japan, Kobe, Japan
02/2018 ERATO Touhara Chemosensory Signal Project Symposium, Tokyo, Japan
03/2018 International Workshop on "Memory Dynamism", Toyama, Japan
03/2018 95th Annual Meeting for Physiological Society of Japan, Takamatsu, Japan
05/2018 8th NEURIZONS Conference "Fire, Wire, Inspire", Max Planck Institute, Göttingen, Germany
06/2018 Kavli Institute for Systems Neuroscience, Norwegian University of Science and Technology, Trondheim, Norway
07/2018 41st Annual Meeting for Japan Neuroscience Society, Kobe, Japan
08/2018 Okinawa Institute of Science and Technology (OIST) Developmental Neurobiology Course, Okinawa, Japan
10/2019 Naito Conference, Hokkaido, Japan
06/2020 13th Uehara International Symposium, Tokyo, Japan