# Hiroaki Matsunami

List of Publications by Year
in descending order



| 82 | 6,215 | 101384 36 | 76769 74 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 93 | 93 | 93 | 6676 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Aging-related olfactory loss is associated with olfactory stem cell transcriptional alterations in humans. Journal of Clinical Investigation, 2022, 132, . | 3.9 | 20 |
| 2 | Olfactory receptor 2 in vascular macrophages drives atherosclerosis by NLRP3-dependent IL-1 production. Science, 2022, 375, 214-221. | 6.0 | 81 |
| 3 | Sequence coevolution and structure stabilization modulate olfactory receptor expression. Biophysical Journal, 2022, 121, 830-840. | 0.2 | 4 |
| 4 | Large-Scale G Protein-Coupled Olfactory Receptorâ€“Ligand Pairing. ACS Central Science, 2022, 8, 379-387. | 5.3 | 23 |
| 5 | Hot Spot Mutagenesis Improves the Functional Expression of Unique Mammalian Odorant Receptors. International Journal of Molecular Sciences, 2022, 23, 277. | 1.8 | 6 |
| 6 | Interactions among key residues regulate mammalian odorant receptor trafficking. FASEB Journal, 2022, 36, . | 0.2 | 1 |
| 7 | Abstract 2655: The GPCR OR13A1 is essential for lymphoma cells. Cancer Research, 2022, 82, 2655-2655. | 0.4 | 1 |
| 8 | Estrogen and sex-dependent loss of the vocal learning system in female zebra finches. Hormones and Behavior, 2021, 129, 104911. | 1.0 | 11 |
| 9 | 19-hydroxy Steroids in the Aromatase Reaction: Review on Expression and Potential Functions. Journal of the Endocrine Society, 2021, 5, bvab050. | 0.1 | 6 |
| 10 | Generation and Characterization of a Cell Type-Specific, Inducible Cre-Driver Line to Study Olfactory Processing. Journal of Neuroscience, 2021, 41, 6449-6467. | 1.7 | 4 |
| 11 | Machine Learning Assisted Approach for Finding Novel High Activity Agonists of Human Ectopic Olfactory Receptors. International Journal of Molecular Sciences, 2021, 22, 11546. | 1.8 | 10 |
| 12 | Comparative Genomic Analysis of the Pheromone Receptor Class 1 Family (V1R) Reveals Extreme Complexity in Mouse Lemurs (Genus, Microcebus) and a Chromosomal Hotspot across Mammals. Genome Biology and Evolution, 2020, 12, 3562-3579. | 1.1 | 12 |
| 13 | Non-neuronal expression of SARS-CoV-2 entry genes in the olfactory system suggests mechanisms underlying COVID-19-associated anosmia. Science Advances, 2020, 6, . | 4.7 | 865 |
| 14 | Modulation of the combinatorial code of odorant receptor response patterns in odorant mixtures. Molecular and Cellular Neurosciences, 2020, 104, 103469. | 1.0 | 33 |
| 15 | Single-cell analysis of olfactory neurogenesis and differentiation in adult humans. Nature Neuroscience, 2020, 23, 323-326. | 7.1 | 165 |
| 16 | Structural instability and divergence from conserved residues underlie intracellular retention of mammalian odorant receptors. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 2957-2967. | 3.3 | 27 |
| 17 | Maternally inherited peptides as strain-specific chemosignals. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 30738-30743. | 3.3 | 8 |
| 18 | Concentration-Dependent Recruitment of Mammalian Odorant Receptors. ENeuro, 2020, 7, ENEURO.0103-19.2019. | 0.9 | 12 |

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|---|---|---|---|
| 19 | Semiochemical responsive olfactory sensory neurons are sexually dimorphic and plastic. ELife, 2020, 9, . | 2.8 | 21 |
| 20 | The N-terminal region of RTP1S plays important roles in dimer formation and odorant receptor-trafficking. Journal of Biological Chemistry, 2019, 294, 14661-14673. | 1.6 | 15 |
| 21 | Real-time In Vitro Monitoring of Odorant Receptor Activation by an Odorant in the Vapor Phase. Journal of Visualized Experiments, 2019, , . | 0.2 | 3 |
| 22 | A Scalable, Multiplexed Assay for Decoding GPCR-Ligand Interactions with RNA Sequencing. Cell Systems, 2019, 8, 254-260.e6. | 2.9 | 22 |
| 23 | Axonal Odorant Receptors Mediate Axon Targeting. Cell Reports, 2019, 29, 4334-4348.e7. | 2.9 | 19 |
| 24 | Beta-caryophyllene enhances wound healing through multiple routes. PLoS ONE, 2019, 14, e0216104. | 1.1 | 60 |
| 25 | Mammalian class I odorant receptors exhibit a conserved vestibular-binding pocket. Cellular and Molecular Life Sciences, 2019, 76, 995-1004. | 2.4 | 16 |
| 26 | Odorant Receptor 7D4 Activation Dynamics. Angewandte Chemie - International Edition, 2018, 57, 4554-4558. | 7.2 | 26 |
| 27 | Odorant Receptor 7D4 Activation Dynamics. Angewandte Chemie, 2018, 130, 4644-4648. | 1.6 | 8 |
| 28 | Molecular mechanism of activation of human musk receptors OR5AN1 and OR1A1 by ( R) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 3<br>Sciences of the United States of America, 2018, 115, E3950-E3958. | 3.3 | 57 |
| 29 | Structureâ€“Function Relationships of Olfactory and Taste Receptors. Chemical Senses, 2018, 43, 81-87. | 1.1 | 45 |
| 30 | An Antimicrobial Peptide and Its Neuronal Receptor Regulate Dendrite Degeneration in Aging and Infection. Neuron, 2018, 97, 125-138.e5. | 3.8 | 79 |
| 31 | Carbon chain shape selectivity by the mouse olfactory receptor OR-I7. Organic and Biomolecular Chemistry, 2018, 16, 2541-2548. | 1.5 | 10 |
| 32 | Lessons from single-cell transcriptome analysis of oxygen-sensing cells. Cell and Tissue Research, 2018, 372, 403-415. | 1.5 | 8 |
| 33 | The role of Olfr78 in the breathing circuit of mice. Nature, 2018, 561, E33-E40. | 13.7 | 43 |
| 34 | Vapor detection and discrimination with a panel of odorant receptors. Nature Communications, 2018, 9, 4556. | 5.8 | 58 |
| 35 | A Testosterone Metabolite 19-Hydroxyandrostenedione Induces Neuroendocrine Trans-Differentiation of Prostate Cancer Cells via an Ectopic Olfactory Receptor. Frontiers in Oncology, 2018, 8, 162. | 1.3 | 41 |
| 36 | High-Throughput Odorant Receptor Deorphanization Via Phospho-S6 Ribosomal Protein Immunoprecipitation and mRNA Profiling. Methods in Molecular Biology, 2018, 1820, 95-112. | 0.4 | 5 |

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|---|---|---|---|
| 37 | Numerical Models and In Vitro Assays to Study Odorant Receptors. Methods in Molecular Biology, 2018, 1820, 77-93. | 0.4 | 14 |
| 38 | Split luciferase complementation assay for the analysis of G proteinâ€coupled receptor ligand response in Saccharomyces cerevisiae. Biotechnology and Bioengineering, 2017, 114, 1354-1361. | 1.7 | 3 |
| 39 | The role of metals in mammalian olfaction of low molecular weight organosulfur compounds. Natural Product Reports, 2017, 34, 529-557. | 5.2 | 33 |
| 40 | Live-cell Measurement of Odorant Receptor Activation Using a Real-time cAMP Assay. Journal of Visualized Experiments, 2017, , . | 0.2 | 9 |
| 41 | Modification of the response of olfactory receptors to acetophenone by CYP1a2. Scientific Reports, 2017, 7, 10167. | 1.6 | 32 |
| 42 | Variation in olfactory neuron repertoires is genetically controlled and environmentally modulated. ELife, 2017, 6, . | 2.8 | 86 |
| 43 | Olfactory receptor accessory proteins play crucial roles in receptor function and gene choice. ELife, 2017, 6, . | 2.8 | 34 |
| 44 | Smelling Sulfur: Copper and Silver Regulate the Response of Human Odorant Receptor OR2T11 to Low-Molecular-Weight Thiols. Journal of the American Chemical Society, 2016, 138, 13281-13288. | 6.6 | 60 |
| 45 | The human olfactory transcriptome. BMC Genomics, 2016, 17, 619. | 1.2 | 87 |
| 46 | Single cell transcriptome analysis of mouse carotid body glomus cells. Journal of Physiology, 2016, 594, 4225-4251. | 1.3 | 90 |
| 47 | Human olfactory receptor responses to odorants. Scientific Data, 2015, 2, 150002. | 2.4 | 102 |
| 48 | Molecular recognition of ketamine by a subset of olfactory G proteinâ€“coupled receptors. Science Signaling, 2015, 8, ra33. | 1.6 | 14 |
| 49 | Muscarinic acetylcholine receptor M3 modulates odorant receptor activity via inhibition of Î²-arrestin-2 recruitment. Nature Communications, 2015, 6, 6448. | 5.8 | 18 |
| 50 | Implausibility of the vibrational theory of olfaction. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E2766-74. | 3.3 | 76 |
| 51 | Cyclic Regulation of Sensory Perception by a Female Hormone Alters Behavior. Cell, 2015, 161, 1334-1344. | 13.5 | 161 |
| 52 | Responsiveness of G protein-coupled odorant receptors is partially attributed to the activation mechanism. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14966-14971. | 3.3 | 48 |
| 53 | Mammalian odorant receptors: functional evolution and variation. Current Opinion in Neurobiology, 2015, 34, 54-60. | 2.0 | 33 |
| 54 | Reply to Turin et al.: Vibrational theory of olfaction is implausible. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, E3155. | 3.3 | 19 |

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|---|---|---|---|
| 55 | Conserved Residues Control Activation of Mammalian G Protein-Coupled Odorant Receptors. Journal of the American Chemical Society, 2015, 137, 8611-8616. | 6.6 | 69 |
| 56 | Molecular profiling of activated olfactory neurons identifies odorant receptors for odors in vivo. Nature Neuroscience, 2015, 18, 1446-1454. | 7.1 | 106 |
| 57 | Improving the odorant sensitivity of olfactory receptor-expressing yeast with accessory proteins. Analytical Biochemistry, 2015, 471, 1-8. | 1.1 | 26 |
| 58 | Calreticulin: Roles in Cell-Surface Protein Expression. Membranes, 2014, 4, 630-641. | 1.4 | 28 |
| 59 | In VivoIdentification of Eugenol-Responsive and Muscone-Responsive Mouse Odorant Receptors. Journal of Neuroscience, 2014, 34, 15669-15678. | 1.7 | 48 |
| 60 | The missense of smell: functional variability in the human odorant receptor repertoire. Nature Neuroscience, 2014, 17, 114-120. | 7.1 | 269 |
| 61 | QM/MM Model of the Mouse Olfactory Receptor MOR244-3 Validated by Site-Directed Mutagenesis Experiments. Biophysical Journal, 2014, 107, L5-L8. | 0.2 | 32 |
| 62 | Aldehyde Recognition and Discrimination by Mammalian Odorant Receptors via Functional Group-Specific Hydration Chemistry. ACS Chemical Biology, 2014, 9, 2563-2571. | 1.6 | 19 |
| 63 | Astringency: A More Stringent Definition. Chemical Senses, 2014, 39, 467-469. | 1.1 | 22 |
| 64 | Unfolding the Mystery of Olfactory Receptor Gene Expression. Developmental Cell, 2013, 27, 128-129. | 3.1 | 5 |
| 65 | Functional Evolution of Mammalian Odorant Receptors. PLoS Genetics, 2012, 8, e1002821. | 1.5 | 176 |
| 66 | Genetic Variation in the Odorant Receptor OR2J3 Is Associated with the Ability to Detect the â€œGrassyâ€• Smelling Odor, cis-3-hexen-1-ol. Chemical Senses, 2012, 37, 585-593. | 1.1 | 110 |
| 67 | Receptor-transporting Protein 1 Short (RTP1S) Mediates Translocation and Activation of Odorant Receptors by Acting through Multiple Steps. Journal of Biological Chemistry, 2012, 287, 22287-22294. | 1.6 | 42 |
| 68 | Crucial role of copper in detection of metal-coordinating odorants. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 3492-3497. | 3.3 | 104 |
| 69 | Calreticulin chaperones regulate functional expression of vomeronasal type 2 pheromone receptors. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 16651-16656. | 3.3 | 56 |
| 70 | G protein GÎ±o is essential for vomeronasal function and aggressive behavior in mice. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 12898-12903. | 3.3 | 159 |
| 71 | Activation State of the M3 Muscarinic Acetylcholine Receptor Modulates Mammalian Odorant Receptor Signaling. Science Signaling, 2011, 4, ra1. | 1.6 | 67 |
| 72 | Dynamic functional evolution of an odorant receptor for sex-steroid-derived odors in primates. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 21247-21251. | 3.3 | 42 |

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|---|---|---|---|
| 73 | SR1, a Mouse Odorant Receptor with an Unusually Broad Response Profile. Journal of Neuroscience, 2009, 29, 14545-14552. | 1.7 | 105 |
| 74 | Trafficking of Mammalian Chemosensory Receptors by Receptorâ€transporting Proteins. Annals of the New York Academy of Sciences, 2009, 1170, 153-156. | 1.8 | 26 |
| 75 | Odor Coding by a Mammalian Receptor Repertoire. Science Signaling, 2009, 2, ra9. | 1.6 | 487 |
| 76 | Evaluating cell-surface expression and measuring activation of mammalian odorant receptors in heterologous cells. Nature Protocols, 2008, 3, 1402-1413. | 5.5 | 178 |
| 77 | Synergism of Accessory Factors in Functional Expression of Mammalian Odorant Receptors. Journal of Biological Chemistry, 2007, 282, 15284-15293. | 1.6 | 160 |
| 78 | Genetic variation in a human odorant receptor alters odour perception. Nature, 2007, 449, 468-472. | 13.7 | 549 |
| 79 | Functional Expression of Mammalian Odorant Receptors. Chemical Senses, 2005, 30, i95-i96. | 1.1 | 7 |
| 80 | RTP Family Members Induce Functional Expression of Mammalian Odorant Receptors. Cell, 2004, 119, 679-691. | 13.5 | 528 |
| 81 | Taste perception: how to make a gourmet mouse. Current Biology, 2004, 14, R118-20. | 1.8 | 2 |
| 82 | Taste and pheromone perception in mammals and flies. Genome Biology, 2003, 4, 220. | 13.9 | 42 |