

共同利用・共同研究システム形成事業～学際領域展開ハブ形成プログラム～「4D システム発生・再生学
イニシアティブ」

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1. Shimazoe MA[†], Iida S[†], Minami K[†], Higashi K[†], Tamura S, [Kobayashi Y^{1\)}](#), Fujishiro S, Xiong L, Nakazato K, Ashwin SS, Nishiyama T, Nagata Y, Kanemaki MT, Kawaguchi A, Ohkawa Y, Schermelleh L, Toyoda A, Kurokawa K, [Ochiai H^{1\)}](#), Sasai M, Maeshima K.
Cohesin prevents local mixing of condensed euchromatic domains in living human cells.
bioRxiv. 2026 Mar 2; doi: 10.1101/2025.08.27.672592.
2. [Gao X^{1\)}](#), [Ko C^{1\)}](#), Dong Y, [Fujii T^{1\)}](#), [Uchino S^{1\)}](#), [Kobayashi Y^{1\)}](#), Harada A, Ohishi H, [Ohkawa Y^{1\)}](#), Kimura H, [Ochiai H^{1\)}](#).
Minute-scale coupling of chromatin marks and transcriptional bursts.
bioRxiv. 2026 Feb 10; doi: 10.64898/2026.02.08.704500.
3. [Sumiya E^{1\)}](#), Saeki K, Nakano K, [Kikutake C^{1\)}](#), [Kurisaki N^{1\)}](#), Nakaima N, Kurumata-Shigeto M, [Kitada Y^{1\)}](#), Morioka Y, Go Y, [Suyama M^{1\)}](#), Yoshimura Y, Goto M, Ito M, Nakayama M, Akiyama H, Peduto L, Okamura T, Matsushita Y, [Sawa S^{1\)}](#).
Medullary cavity expansion is mediated by distinct cell populations during fetal bone development.
Nature Communications, In Press.
4. [Fukui T^{1\)}](#), [Watanabe M^{1\)}](#), [Kobayashi R^{1\)}](#), [Yamada T^{1\)}](#), [Nakano K^{1\)}](#), [Tanaka K^{1\)}](#), Harada A, Okamura T, Sonoda K-H, [Ohkawa Y^{1\)}](#), [Sumiya E^{1\)}](#), [Shao R^{1\)}](#), [Suyama M^{1\)}](#), Taniuchi I, Kojo S, [Sawa S^{1\)}](#).
A hierarchical Rorc(γ t) cis-regulatory cascade orchestrates differentiation of ROR γ t⁺ innate immune cells.
Immunity. 2026 Mar 24. doi: 10.1016/j.immuni.2026.02.002. Online ahead of print.
5. Kopczyńska M, [Nakayama C^{1\)}](#), Stepień A, [Ito S^{1\)}](#), Imami K, Gdula M, [Nojima T^{1\)}](#), Kamieniarz-Gdula K.
SETD2 methyltransferase activity promotes correct transcription initiation and termination.
EMBO Rep. 2026 Mar 23. doi: 10.1038/s44319-026-00744-1. Online ahead of print.
6. Morino K, Meguro A, [Nagasaki M^{1\)}](#), Motoike NI, Akiyama M, Kawaguchi T, Numa S, Mori Y, Yasukura S, Akada M, Nakao S, Kamei T, Nakata A, Takeuchi M, Yamada N, Mizuki Y, Yoshida T, Momozawa Y, Kamatani Y, Anzawa H, Tabara Y, Matsuda F, Kinoshita K, Ohno-Matsui K, Fuse N, Yamamoto M, Tsujikawa A, Mizuki N, Miyake M.
Genome-wide Meta-Analysis for High Myopia Provides Insights into Disease Mechanisms and Reveals a Causal Link to Primary Open-Angle Glaucoma.
Ophthalmol Sci. 2026 Mar 18. doi: 10.1016/j.xops.2026.101165. Online ahead of print.

7. [Ishikawa M^{1\)}](#), [Ngo YX](#), [Nishikawa I^{1\)}](#), [Kato H](#), [Maeda R](#), [Mizuno R](#), [Mizuno J](#), [Izumi K](#), [Sada A^{1\)}](#).
Spatial organization of epithelial heterogeneity through undulating structures of the skin and oral mucosa.
J Invest Dermatol. 2026 Mar 3:S0022-202X(26)00138-7. doi: 10.1016/j.jid.2026.02.014. Online ahead of print.
8. [Siedlecki-Wullich D](#), [Ayril AM](#), [Iohan L](#), [Lemeu C](#), [Buiche V](#), [Blary K](#), [Chapuis J](#), [Eysert F](#), [Beury D](#), [Delacre M](#), [Hot D](#), [Masuda T^{1\)}](#), [Knobeloch KP](#), [Prinz M](#), [Lambert JC](#), [Kilinc D](#).
Inflammatory stimulus enhances synaptic material uptake by adult APP microglia in a microfluidic neuron-microglia co-culture model.
J Neuroinflammation. 2026 Feb 19;23(1):75. doi: 10.1186/s12974-026-03748-9.
9. [Nakayama C^{2\)}](#), [Fang Q^{2\)}](#), [Daigaku Y](#), [Aoi Y](#), [Ito S^{2\)}](#), [Takahashi M](#), [Shimatani R^{2\)}](#), [Minamisawa T](#), [Ozturk Y](#), [Kimura H](#), [Shilatifard A](#), [Tellier M](#), [Nojima T^{1\)}](#).
NELF prevents transcriptional readthrough into DNA replication zones in cancer cells.
EMBO Rep. 2026 Feb 20. doi: 10.1038/s44319-026-00700-z.
10. [Imado Y](#), [Takahashi M^{1\)}](#), [Soma Y](#), [Aburaya S^{1\)}](#), [Nakatani K^{1\)}](#), [Hanai T](#), [Bamba T^{1\)}](#), [Izumi Y^{1\)}](#).
Evaluation of LC/MS methods for hydrophilic metabolites to enable integration of human blood metabolome data.
Mass Spectrom (Tokyo). 2026;15(1):A0188. doi: 10.5702/massspectrometry.A0188. Epub 2026 Feb 10.
11. [Heravizadeh O](#), [Nakatani K](#), [Tomiyasu N^{1\)}](#), [Torigoe T^{1\)}](#), [Yamashita T^{1\)}](#), [Takahashi M^{1\)}](#), [Izumi Y^{1\)}](#), [Bamba T^{1\)}](#)
Multi-condition machine learning models for understanding retention mechanisms and predicting retention time in supercritical fluid chromatography/mass spectrometry.
Anal Chim Acta. 2026 Feb 1:1385:345026. doi: 10.1016/j.aca.2025.345026. Epub 2025 Dec 17.
12. [Guzman GEC](#), [da Costa DR](#), [Lira ES](#), [Santos SD](#), [Ramos TC](#), [Takahashi DY](#), [Fujita A^{1\)}](#).
StatGraph: an R package for complex network statistical analyses based on spectrum.
Softwarex. 2026 Feb;33:102459. doi: 10.1016/j.softx.2025.102459.
13. [Gochi K](#), [Sumiya E^{1\)}](#), [Sakitani N](#), [Otsuka Y](#), [Muratani M](#), [Sawa S^{1\)}](#), [Ochi H](#), [Sawada Y](#), [Nakahama K-I](#), [Shinohara M](#).
A novel stromal cell source of RANKL during sustained osteoclast activation in disuse osteoporosis
The Journal of Physiology, 2026 Feb;604(3):1235-1254. doi: 10.1113/JP289268.
14. [Funagura N^{2\)}](#), [Koga T^{2\)}](#), [Etoh K^{2\)}](#), [Hong S^{2\)}](#), [Ichiyasu H](#), [Fujiwara Y](#), [Yasunaga KI^{2\)}](#), [Usuki S^{2\)}](#), [Noda A^{2\)}](#), [Sagara A^{2\)}](#), [Hino S^{2\)}](#), [Komohara Y](#), [Sakagami T](#), [Inoue T](#), [Nakao M^{2\)}](#).
Histone demethylase KDM7A negatively regulates fibrotic macrophage polarization and lung fibrosis progression
Commun Biol. 2026 Jan 23;9(1):309. doi: 10.1038/s42003-026-09610-1.
15. [Shiota A](#), [Kan-O K](#), [Ishii Y](#), [Koga T^{2\)}](#), [Sawada T](#), [Yasunagara KI^{2\)}](#), [Usuki S^{2\)}](#), [Katsuno T](#), [Inoue S](#), [Ogawa T](#), [Jo A](#), [Fukuyama S](#), [Nakao M^{2\)}](#), [Ogata H](#), [Kido MA](#), [Tsukita S](#), [Matsumoto K](#), [Okamoto I](#).
Epigenetic dysregulation of the NKX2-1/SPDEF axis drives persistent goblet cell differentiation and epithelial barrier dysfunction in chronic obstructive pulmonary disease
Respirology. 2026 Jan 20. doi: 10.1002/resp.70201.
16. [Nagasaki M^{1\)}](#), [Katayama T](#), [Moriya Y](#), [Sekiya Y^{1\)}](#), [Kawashima S](#), [Teraoka R^{1\)}](#), [Machida S^{1\)}](#), [Matsubara T^{1\)}](#), [Hashimoto H^{1\)}](#), [Asakura A^{1\)}](#), [Nagano A](#), [Yamashita R](#), [Takada T](#), [Mitsuhashi N](#), [Kamada M](#), [Ohkawa Y^{1\)}](#), [Tokunaga K](#), [Kawai Y](#), [Variant Information Standardization Collegium.](#)

JoGo 1.0: the ACTG hierarchical nomenclature and database covering 4.7 million haplotypes across 19,194 human genes.

Nucleic Acids Res. 2026 Jan 6;54(D1):D1159-D1173. doi: 10.1093/nar/gkaf1232.

17. Umakoshi Y, [Izumi Y^{1\)}](#), Hashidate-Yoshida T, Shindou H, [Bamba T^{1\)}](#).
A widely targeted analytical method for oxylipins including enantiomers using chiral liquid chromatography tandem mass spectrometry.
J Chromatogr A. 2026 Jan 4;1765:466551. doi: 10.1016/j.chroma.2025.466551. Epub 2025 Nov 17.
18. Moriuchi A, [Izumi Y^{1\)}](#), [Yamashita Y^{1\)}](#), [Takahashi M^{1\)}](#), [Bamba T^{1\)}](#).
Separation of homologues and positional isomers of secondary alcohol ethoxylates via supercritical fluid chromatography.
J Chromatogr A. 2026 Jan 4;1765:466543. doi: 10.1016/j.chroma.2025.466543. Epub 2025 Nov 13.
19. Nambu R, Naito T, Haruyama M, Hosokawa J, Shimizu H, Takeuchi I, Hagiwara SI, Mizuochi T, Takaki Y, Ishige T, Nishizawa T, Kudo T, Ito N, Kawai Y, Kakuta Y, [Nagasaki M^{1\)}](#), Shimizu T, Iwama I, Arai K.
Orofacial granulomatosis in pediatric Crohn's disease: clinical outcomes and genetic background in the era of biologics: a retrospective study in Japan.
Intestinal research. 2026 Jan 2. doi: 10.5217/ir.2025.00109. Online ahead of print.
20. Matsuda C, Ichiki A, [Sato Y^{1\)}](#), Kudo Y, Saotome M, Takayama C, Le KM, Uchino S, [Higuchi R^{1\)}](#), [Kawata K^{1\)}](#), [Tomimatsu K^{1\)}](#), Ozawa M, Ikawa M, [Ohkawa Y^{1\)}](#), [Baba Y^{1\)}](#), Kimura H.
Organization and Dynamics of Transcription Elongation Foci in Mouse Tissues.
J Mol Biol. 2026 Jan 1;438(1):169395. doi: 10.1016/j.jmb.2025.169395. Epub 2025 Aug 13.
21. Guzman GEC, Stadler PF, [Fujita A^{1\)}](#).
Spectral densities approximations of incidence-based locally treelike hypergraph matrices via the cavity method.
Phys Rev E. 2026 Jan;113(1-1):014309. doi: 10.1103/g997-gp7j.
22. [Yabuki Y^{2\)}](#), [Shioda N^{2\)}](#).
RNA-mediated aggregation mechanism of prion-like proteins and its application to drug discovery.
J Pharmacol Sci. 2026 Jan;160(1):64-68. doi: 10.1016/j.jphs.2025.11.006.
23. [Kojima F^{1\)}](#), [Morishita S^{1\)}](#), [Uda S^{1\)}](#), [Yutsudo N^{1\)}](#), Ogawa Y, [Kubota H^{1\)}](#).
Evaluation of the insulin-dependent and -independent hypoglycemic effects and understanding their breakdown in the progression of obesity using mice.
PLoS One. 2025 Dec 23;20(12):e0337739. doi: 10.1371/journal.pone.0337739.
24. Maehara K, [Ohkawa Y^{1\)}](#).
Geometry-preserving vector field reconstruction of high-dimensional cell-state dynamics using ddHodge.
Nat Commun. 2025 Dec 29;16(1):11342. doi: 10.1038/s41467-025-67782-6.
25. [Fujii T^{1\)}](#), [Tomimatsu K^{1\)}](#), [Kato M^{1\)}](#), [Ito M^{1\)}](#), Sato S, Kurumizaka H, [Sato Y^{1\)}](#), Maehara K, Kimura H, Harada A, [Ohkawa Y^{1\)}](#).
Reconstructing epigenomic dynamics through a single-cell multi-epigenome data integration framework.
Nat Commun. 2025 Dec 17;16(1):11006. doi: 10.1038/s41467-025-67016-9.
26. Semmy D, Abe K, Honda M, Omori H, Ogamino S, Mercurio TC, Asakawa K, Nishimura EK, Oki S, [Ohkawa Y^{1\)}](#),

Ishitani T.

ER Stress Ire1-Xbp1s Pathway Maintains Youthful Epidermal Basal Layer Through the Regulation of Cell Proliferation.

Aging Cell. 2025 Dec;24(12):e70258. doi: 10.1111/accel.70258.

27. Dewa KI, Kaseda K, Kuwahara A, Kubotera H, Yamasaki A¹⁾, Awata N¹⁾, Komori A, Holtz MA, Kasai A, Skibbe H, Takata N, Yokoyama T, Tsuda M, Numata G, Nakamura S, Takimoto E, Sakamoto M, Ito M¹⁾, Masuda T¹⁾, Nagai J.
The astrocytic ensemble acts as a multiday trace to stabilize memory.
Nature. 2025 Dec;648(8092):146-156. doi: 10.1038/s41586-025-09619-2.
28. Nakanishia K, Ajiro T, Yukishima K, Tsukamoto Y, Kikuta J, Sawa S¹⁾, Tomura M, Kinoshita N, Shimanuki W, Suzuki A, Arai S, Maeshima K, Ichisawa T, Katakai T, Hayasaka H, Ishii M, Umemoto E.
Pyruvate–GPR31 axis induces LysoDC dendrite protrusion to M-cell pockets for effective immune responses.
Gut Microbes, 2025 Dec;17(1):2536089. doi: 10.1080/19490976.2025.2536089
29. Ishikawa M¹⁾, Phung, HM, Dumrongphuttidecha T, Sada A¹⁾.
New insights into signaling networks in skin regeneration and aging.
Curr. Opin. Cell Biol 2025 Dec; 97:102594-102594. doi: 10.1016/j.ceb.2025.102594.
30. Iha H¹⁾, Kikutake C¹⁾, Suyama M¹⁾.
Integrative and accurate annotations enhance current nonsense-mediated mRNA decay rules.
Nucleic Acids Res. 2025 Nov 26;53(22):gkaf1306. doi: 10.1093/nar/gkaf1306.
31. Kitamura Y, Yokomoto-Umakoshi M, Nakano Y, Nakatani K, Umakoshi H, Nakao H¹⁾, Kaneko H, Iwahashi N, Fujita M, Ogasawara T, Fukumoto T, Sakamoto R, Izumi Y¹⁾, Bamba T¹⁾, Ogawa Y.
Inflammatory Markers Link Steroid Profiles to Bone Status in Patients with Autonomous Cortisol Secretion.
J Clin Endocrinol Metab. 2025 Nov 18;dgaf632. doi: 10.1210/clinem/dgaf632. Online ahead of print.
32. Miura S¹⁾, Horisawa K¹⁾, Inada H¹⁾, Sakaguchi Y¹⁾, Yorino M¹⁾, Suzuki A¹⁾.
Activation of canonical Wnt signaling is required for efficient direct reprogramming into human hepatic progenitor cells.
Stem Cell Reports. 2025 Nov 11;20(11):102688. doi: 10.1016/j.stemcr.2025.102688. Epub 2025 Oct 30.
33. Yanagihara Y, Takahashi M¹⁾, Izumi Y¹⁾, Kinoshita T, Takao M, Bamba T¹⁾, Imai Y.
Dnmt1 determines bone length by regulating energy metabolism of growth plate chondrocytes.
Nat Commun. 2025 Nov 4;16(1):9492. doi: 10.1038/s41467-025-65145-9.
34. Matsubara T¹⁾, Machida S¹⁾, Owusu SPK¹⁾, Asakura A¹⁾, Hashimoto H¹⁾, Matsuoka M¹⁾, Nagasaki M¹⁾.
QTFPred: robust high-performance quantum machine learning modeling that predicts main and cooperative transcription factor bindings with base resolution.
Brief Bioinform. 2025 Nov 1;26(6):bbaf604. doi: 10.1093/bib/bbaf604.
35. Takeda H¹⁾, Izumi Y¹⁾, Koike Y, Koike T, Nakatani K¹⁾, Hata K¹⁾, Matsumoto M, Shiomi M, Bamba T¹⁾.
Characterizing lipoprotein profiles in coronary atherosclerosis development through quantitative lipidomics and proteomics approaches.
NPJ Cardiovasc Health. 2025 Oct 30;2(1):55. doi: 10.1038/s44325-025-00091-5.

36. Ohyagi M, Ito M¹⁾, Iizuka-Koga M, Mise-Omata S, Yoshimura A.
Stage-specific roles of clonally expanded CD8⁺ T cells in regulating amyloid pathology in Alzheimer's disease models.
Nat Commun. 2025, Oct 27;16(1):9458. doi: 10.1038/s41467-025-64503-x.
37. Aihara R¹⁾, Takahashi M¹⁾, Morino K¹⁾, Matsubara K¹⁾, Kunimura K¹⁾, Nishikimi A, Izumi Y¹⁾, Bamba T¹⁾, Fukui Y¹⁾, Urano T¹⁾.
Phospholipase D1 is a critical mediator of neutrophil extracellular trap formation and venous thrombosis.
Front Immunol. 2025 Oct 21: 16:1666184. doi: 10.3389/fimmu.2025.1666184.
38. Morino K¹⁾, Akiyoshi S¹⁾, Matsubara K¹⁾, Sugiura Y, Izumi Y¹⁾, Yotsumoto S, Yamamura K, Maeda R, Takahashi M¹⁾, Nakata K¹⁾, Bamba T¹⁾, Nakahara T, Sakata D, Urano T¹⁾, Fukui Y¹⁾, Kunimura K¹⁾.
Sulfotransferase SULT2B1 contributes to the epithelial-immune microenvironment homeostasis in imiquimod-induced psoriatic dermatitis.
Front Immunol. 2025 Oct 17: 16:1632426. doi: 10.3389/fimmu.2025.1632426.
39. Hosoe S, Katakami N, Taya N, Omori K, Takahara M, Konya Y¹⁾, Obara S, Hidaka A¹⁾, Nakao M, Takahashi M¹⁾, Izumi Y¹⁾, Bamba T¹⁾, Shimomura I.
Association Between Myristic Acid in Plasma Triglycerides and Metabolic Dysfunction–Associated Steatotic Liver Disease in Patients With Type 2 Diabetes.
Diabetes. 2025 Oct 1;74(10):1839-1849. doi: 10.2337/db25-0099.
40. Frosch M, Shimizu T, Wogram E, Amann L, Gruber L, Groisman AI, Fliegau M, Schwabenland M, Chhatbar C, Zechel S, Rosewich H, Gärtner J, Quintana FJ, Buescher JM, Blank T, Binder H, Stadelmann C, Letzkus JJ, Hopf C, Masuda T¹⁾, Knobloch KP, Prinz M.
Microglia-neuron crosstalk through Hex-GM2-MGL2 maintains brain homeostasis.
Nature. 2025 Oct;646(8086):913-924. doi: 10.1038/s41586-025-09477-y.
41. Nonaka D¹⁾, Yoshida S¹⁾, Nakano K, Li X¹⁾, Okamura T, Umemoto E, Yamada T¹⁾, Watanabe M¹⁾, Jinno S, Ito M¹⁾, Tsuda M, Noguchi N¹⁾, Jiang J-X, Sumiya E¹⁾, Sawa S¹⁾.
Fibroblast-derived CSF1 maintains colonization of gut mucosal macrophage to resist bacterial infection.
Mucosal Immunology, 2025 Oct;18(5):1113-1123. doi: 10.1016/j.mucimm.2025.06.011.
42. Murayama R¹⁾, Horisawa K¹⁾, Miura S¹⁾, Taniguchi S¹⁾, Shu J¹⁾, Takahashi M¹⁾, Izumi Y¹⁾, Bamba T¹⁾, Ishigami K¹⁾, Suzuki A¹⁾.
Differential effects of liver regeneration on aging-related changes in gene expression and metabolic function.
Aging Cell. 2025 Oct;24(10):e70197. doi: 10.1111/accel.70197.
43. Yamasaki A¹⁾, Shintaku H¹⁾, Harada A¹⁾, Maehara K¹⁾, Tanaka K¹⁾, Saeki M, Ito M¹⁾, Konishi H, Tsuda M, Prinz M, Kishi Y, Ohkawa Y¹⁾, Yamamoto S¹⁾, Masuda T¹⁾.
Cyclin-dependent kinase inhibitor 1A mediates mouse line- and fate-dependent cellular responses in Cx3cr1-Cre genetic tools.
Cell Rep. 2025 Sep 23;44(9):116267. doi: 10.1016/j.celrep.2025.116267.
44. Ibusuki M, Nakatani K¹⁾, Matsuda Y, Umakoshi H, Yokomoto-Umakoshi M, Takayanagi H, Sakamoto R, Kawazoe T, Oki E, Yoshizumi T, Izumi Y¹⁾, Bamba T¹⁾, Ogawa Y.

Plasma Steroid Profiles in Individuals With Class II/III Obesity: Association With Weight Loss After Metabolic Surgery.

J Endocr Soc. 2025 Sep 22;9(11):bvaf151. doi: 10.1210/jendso/bvaf151. eCollection 2025 Nov.

45. Dumrongphuttidecha, T¹, Ishikawa, M¹, Cabezas-Wallscheid, N, Sada, A¹.
Retinoic acid signaling alters the balance of epidermal stem cell populations in the skin.
J Invest Dermatol. 2025 Sep 18:S0022-202X(25)02433-9. doi: 10.1016/j.jid.2025.09.008.
46. Matsumura, T, Ryuda, M, Matsumoto, H, Kamiyama, T, Jinnai, K, Kondo, S, Nakamura, A², Hayakawa, Y, Niwa, R
Stress-induced organismal death is genetically regulated by the mTOR-Zeste-Phae1 axis.
Proc Natl Acad Sci U S A. 2025 Sep 16;122(37):e2427014122. doi: 10.1073/pnas.2427014122.
47. Tomiyasu N¹, Izumi Y¹, Heravizadeh O¹, Takahashi M¹, Bamba T¹.
Evaluation of separation performance and quantification accuracy in lipidomics methods.
J Chromatogr A. 2025 Sep 13:1758:466165. doi: 10.1016/j.chroma.2025.466165. Epub 2025 Jun 22.
48. Shalaby O, Ohmori T², Miike K², Tanigawa S², Wilan Krisna LA, Calcagni A, Ballabio A, Kubota Y, Schmidt LS, Linehan WM, Ito T, Baba M, Nishinakamura R².
Folliculin deletion in the mouse kidney results in cystogenesis of the loops of Henle via aberrant TFEB activation.
Am J Pathol. 2025 Sep;195(9):1643-1659. doi: 10.1016/j.ajpath.2025.05.010.
49. Nakagawa T, Hata K¹, Izumi Y¹, Nakashima H, Katada S, Matsuda T, Bamba T¹, Nakashima K.
E3 ubiquitin ligase RMND5A maintains the self-renewal state of human neural stem/precursor cells by regulating Wnt and mTOR signaling pathways.
FEBS Lett. 2025 Sep;599(17):2504-2522. doi: 10.1002/1873-3468.70067. Epub 2025 May 16.
50. Suzuki R¹, Horisawa K¹, Maehara K¹, Ohkawa Y¹, Suzuki A¹.
In silico separation of in vitro transcription-derived duplicates from PCR duplicates to enhance sequence data utilization.
Bioinform Biol Insights. 2025 Aug 26:19:11779322251365042. doi: 10.1177/11779322251365042.
51. Taoka H, Murakawa T, Kawaguchi K, Koizumi M, Kaminishi T, Sakamaki Y, Tanaka K, Harada A, Inoue K, Kanki T, Ohkawa Y¹, Fujita N.
Transcriptional dynamics uncover the role of BNIP3 in mitophagy during muscle remodeling in Drosophila.
Elife. 2025 Aug 13:14:RP105834. doi: 10.7554/eLife.105834.
52. Kulmanov M, Ashouri S, Liu Y, Abdelhakim M, Alsolme E, Nagasaki M¹, Ohkawa Y¹, Suzuki Y, Tawfiq R, Tokunaga K, Katayama T, Abedalthagafi MS, Hoehndorf R, Kawai Y.
Phased genome assemblies and pangenome graphs of human populations of Japan and Saudi Arabia.
Sci Data. 2025 Aug 12;12(1):1316. doi: 10.1038/s41597-025-05652-y.
53. Walsh CM, Colbert R, Reynolds JP, Dunne E, Aiyegbusi ED, O'Carroll R, Wychowaniec JK, Masuda T¹, Knobloch KP, Prinz M, Brougham DF, Dooley D.
Localised delivery of interleukin-13 from a PLGA microparticle embedded GelMA hydrogel improves functional and histopathological recovery in a mouse contusion spinal cord injury model
Bioact Mater. 2025 Aug 8;53:855-874. doi: 10.1016/j.bioactmat.2025.07.018.

54. Kohno K, Shirasaka R, Hirose K, Masuda T¹, Tsuda M.
Interleukin-4 induces CD11c+ microglia leading to amelioration of neuropathic pain in mice.
Elife. 2025 Aug 1;14:RP105087. doi: 10.7554/eLife.105087.
55. Guzman GEC, Fujita A¹.
Statistical methods for hypergraphs: a parameter estimator, a model selection, and a comparative test.
J Complex Netw. 2025 Aug;13(4):cna019. doi: 10.1093/comnet/cna019.
56. Hirohata K, Kino S, Yamane T, Bandoh K, Bamba T¹, Sternisha SM, Torisu T, Fukuhara M, Yamaguchi Y, Uchiyama S.
Use of cesium chloride density gradient ultracentrifugation for the purification and characterization of recombinant adeno-associated virus.
Eur Biophys J. 2025 Aug;54(6):415-425. doi: 10.1007/s00249-025-01751-1. Epub 2025 May 19.
57. Egashira S, Maehara K, Tanaka K¹, Nakamura M, Takemoto T, Ohkawa Y¹, Harada A.
Histone H2B isoform H2bc27 is expressed in the developing brain of mouse embryos.
J Biochem. 2025 Jul 31;178(2):109-119. doi: 10.1093/jb/mvaf026.
58. Taya N, Katakami N, Omori K, Hosoe S, Watanabe H, Takahara M, Miyashita K, Konya Y¹, Obara S¹, Hidaka A¹, Nakao M¹, Takahashi M¹, Izumi Y¹, Bamba T¹.
Shimomura I. Plasma Diacylglycerols Are Associated with Carotid Intima-Media Thickness Among Patients with Type 2 Diabetes.
Int J Mol Sci. 2025 Jul 20;26(14):6977. doi: 10.3390/ijms26146977.
59. Mori T¹, Ueno K, Nagasaki M¹, Matsuda K.
A POLR1D-regulating single-nucleotide polymorphism as a predictive marker candidate for platinum-based chemotherapy in gastrointestinal cancers.
Ther Adv Med Oncol. 2025 Jul 13;17:17588359251355079. doi: 10.1177/17588359251355079.
60. Nakamura K², Ortuste-Quiroga HP², Horii N², Fujimaki S², Moroishi T, Nakayama KI¹, Hino S, Saito Y, Nishino I, Ono Y².
Iron supplementation alleviates pathologies in a mouse model of facioscapulohumeral muscular dystrophy.
J Clin Invest. 2025 Jul 1;135(17):e181881. doi: 10.1172/JCI181881.
61. Ishii Y, Shiota A, Takao T¹, Yamamoto N, Ogawa T, Jo A, Shinozaki S, Fukuyama S, Koga T, Ito M¹, Tanaka H, Tamura A, Tsukita S, Matsumoto K, Okamoto I, Kan-O K.
Claudin-3 deficiency inhibits allergic responses in an ovalbumin-induced asthma mouse model.
Allergol Int. 2025 Jul;74(3):472-475. doi: 10.1016/j.alit.2024.12.003.
62. Guzman GEC, Stadler PF, Fujita A¹.
Vertex-wise graph's spectral density decomposition and its application.
J Complex Netw. 2025 Jul; 13(4):cna013. doi: 10.1093/comnet/cna013.
63. Ibi Y², Miike K², Ohmori T², Cai C-L, Tanigawa S², Nishinakamura R².
In vitro generation of a ureteral organoid from pluripotent stem cells.
Nat Commun. 2025 Jun 20;16(1):5309. doi: 10.1038/s41467-025-60693-6.
64. Kina, H², Izumu, N, Hanyu-Nakamura, K², Yoshitani, T², Yamane, M², Niwa, H², Tomari, Y, Nakamura, A².

Abundant piRNA production mediated by the Drosophila GTSF1 homolog Tpp ensures Aubergine localization and germ plasm assembly.

Proc Natl Acad Sci U S A. 2025 Jun 17;122(24):e2419375122. doi: 10.1073/pnas.2419375122.

65. Otsuka Y, Kabayama K, Miura A, Takahashi M¹, Hata K¹, Izumi Y¹, Bamba T¹, Fukase K, Toyoda M. Single-cell mass spectrometry imaging of lipids in HeLa cells via tapping-mode scanning probe electrospray ionization. Commun Chem. 2025 May 14;8(1):147. doi: 10.1038/s42004-025-01521-2.
66. Habash SA, Takahashi N, Eltalkhawy YM, Abdelnaser RA, Ogata-Aoki H, Okada S, Takizawa H, Usuki S², Etoh K, Hino S², Morino-Koga S², Ogawa M², Suzu S. Macrophages with different origins proliferate ex vivo and do not lose their core intrinsic features. iScience. 2025 May 12;28(6):112635. doi: 10.1016/j.isci.2025.112635."
67. Oike A², Shibata S, Arima T, Okae H². Syncytin-1 Is Responsible for the Fusion Between Human Trophoblasts and Endometrial Stromal Cells Dev Growth Differ. 2025 Jun;67(5):270-278. doi: 10.1111/dgd.70014.
68. Kujirai T, Kato J, Yamamoto K, Hirai S, Fujii T¹, Maehara K, Harada A, Negishi L, Ogasawara M, Yamaguchi Y, Ohkawa Y¹, Takizawa Y, Kurumizaka H. Multiple structures of RNA polymerase II isolated from human nuclei by ChIP-CryoEM analysis. Nat Commun. 2025 May 28;16(1):4724. doi: 10.1038/s41467-025-59580-x.
69. Yabuki Y², Hori K², Zhang Z², Matsuo K², Kudo K², Usuki S², Gadotti VM², Chen L², Ueno S², Chiba S, Fukunaga K, Zamponi GW, Shioda N². Cav3.1 T-Type Calcium Channel Acts as a Gateway for GABAergic Excitation in the Medial Prefrontal Cortex That Leads to Chronic Psychological Stress Responses in Mice. Acta Physiol (Oxf). 2025 May;241(5):e70043. doi: 10.1111/apha.70043.
70. Betsuno R, Yamane T, Tsuji H, Nakajima Y, Imai M, Bamba T¹, Uchiyama S. Permeation of Nicotinamide Mononucleotide (NMN) in an Artificial Membrane as a Cosmetic Skin Permeability Test Model. J Cosmet Dermatol. 2025 May;24(5):e70222. doi: 10.1111/jocd.70222.
71. Morito M, Hata K¹, Izumi Y¹, Bamba T¹, Matsumori N. Comprehensive Identification of Lipid–Membrane Protein Interactions via Advanced Proteomics and Extended Lipid-Immobilized Bead Technology. Anal Chem. 2025 Apr 29;97(16):8880-8889. doi: 10.1021/acs.analchem.5c00074. Epub 2025 Apr 15.
72. Morita K, Hatano A, Kokaji T, Sugimoto H, Tsuchiya T, Ozaki H, Egami R, Li D, Terakawa A, Ohno S, Inoue H, Inaba Y, Suzuki Y, Matsumoto M, Takahashi M¹, Izumi Y¹, Bamba T¹, Hirayama A, Soga T, Kuroda S. Structural robustness and temporal vulnerability of the starvation-responsive metabolic network in healthy and obese mouse liver. Sci Signal. 2025 Apr 22;18(883):eads2547. doi: 10.1126/scisignal.ads2547. Epub 2025 Apr 22.
73. Imabayashi K¹, Yada Y¹, Kawata K¹, Yoshimura M, Iwasaki T, Baba A¹, Harada A¹, Akashi K, Niuro H, Baba Y¹.

Critical roles of chronic BCR signaling in the differentiation of anergic B cells into age-associated B cells in aging and autoimmunity.

Sci Adv. 2025 Apr 18;11(16):eadt8199. doi: 10.1126/sciadv.adt8199.

74. Khor SS, Hirayasu K, Kawai Y, Kim HL, [Nagasaki M^{1\)}](#), Tokunaga K.
LILR genotype imputation with attribute bagging (LIBAG): leukocyte immunoglobulin-like receptor copy number imputation system.
Front Immunol, 2025 Apr 7;16:1559301. doi: 10.3389/fimmu.2025.1559301.
75. Hirano K, Nakabayashi C, Sasak M, Suzuki M, Aoyag Y, [Tanaka K^{1\)}](#), Murakam A, Tsuchiya M, Umemoto E, Takabayash S, Kitajima Y, [Ono Y^{2\)}](#), Matsukawa T, Matsushita M, [Ohkawa, Y^{1\)}](#), Mori Y, Hara Y.
Mg²⁺ influx mediated by TRPM7 triggers the initiation of muscle stem cell activation.
Sci Adv. 2025 Apr 4;11(14):eadu0601. doi: 10.1126/sciadv.adu0601.
76. [Nagasaki M^{1\)}](#), Hirayasu K, Khor SS, [Otokozawa R^{1\)}](#), [Sekiya Y^{1\)}](#), Kawai Y, Tokunaga K.
JoGo-LILR caller: Unveiling and navigating the complex diversity of LILRB3-LILRA6 copy number haplotype structures with whole-genome sequencing.
Hum Immunol. 2025 Mar 6;86(3):111272. doi: 10.1016/j.humimm.2025.111272.
77. Yokomoto-Umakoshi M, Fujita M, Umakoshi H, Ogasawara T, Iwahashi N, [Nakatani K^{1\)}](#), Kaneko H, Fukumoto T, Nakao H, Haji S, Kawamura N, Shimma S, Seki M, Suzuki Y, [Izumi Y^{1\)}](#), Oda Y, Eto M, Ogawa S, [Bamba T^{1\)}](#), Ogawa Y.
Multiomics analysis unveils the cellular ecosystem with clinical relevance in aldosterone-producing adenomas with KCNJ5 mutations.
PNAS. 2025 Mar 4;122(9):e2421489122. doi: 10.1073/pnas.2421489122.
78. Kamiyama T, Shimada-Niwa Y, Mori H, [Tani N^{2\)}](#), Takemata H, Fuji M, Takasu A, Katayama M, Kuwabara T, Seike K, Matsuda-Imai N, Senda T, Katsuma S, [Nakamura A^{2\)}](#), Niwa R.
Parasitoid wasp venoms degrade Drosophila imaginal discs for successful parasitism.
Sci Adv. 2025 Jan 31;11(5):eadq8771. doi: 10.1126/sciadv.adq8771.
79. [Wu Q^{1\)}](#), [Ito M^{1\)}](#), [Fujii T^{1\)}](#), [Tanaka K^{1\)}](#), [Nakatani K^{1\)}](#), [Izumi Y^{1\)}](#), [Bamba T^{1\)}](#), Baba T, [Maehara K^{1\)}](#), [Tomimatsu K^{1\)}](#), Takemoto T, [Ohkawa Y^{1\)}](#), [Harada A^{1\)}](#)
Defects in the H3t Gene Cause an Increase in Leydig Cells With Impaired Spermatogenesis in Mice.
Genes Cells. 2025 Jan;30(1):e13182. doi: 10.1111/gtc.13182. Epub 2024 Dec 3.
80. [Takao T^{1\)}](#), [Matsui A^{1\)}](#), [Kikutake C^{1\)}](#), Kan-o K, Inoue A, [Suyama M^{1\)}](#), Okamoto I, [Ito M^{1\)}](#) .
Maternal asthma imprints fetal lung ILC2s via glucocorticoid signaling leading to worsened allergic airway inflammation in murine adult offspring.
Nat Commun. 2025 Jan 13;16(1):631. doi: 10.1038/s41467-025-55941-8.
81. Amann L, Fell A, Monaco G, Sankowski R, Wu HZQ, Jordão MJC, Borst K, Fliegau M, [Masuda T^{1\)}](#), Ardura-Fabregat A, Paterson N, Nent E, Cook J, Staszewski O, Mossad O, Falk T, Louveau A, Smirnov I, Kipnis J, Lämmermann T, Prinz M.
Extrasinusoidal macrophages are a distinct subset of immunologically active dural macrophages.
Sci Immunol. 2024 Dec 20;9(102):eadh1129. doi: 10.1126/sciimmunol.adh1129.

82. Tsuruda M², Morino-Koga S², Zhao X², Usuki S², Yasunaga K- I², Yokomizo T², Nishinakamura R², Suda T², Ogawa M².
Bone morphogenetic protein 4 induces hematopoietic stem cell development from murine hemogenic endothelial cells in culture.
Stem Cell Reports. 2024 Dec 10;19(12):1677-1689. doi: 10.1016/j.stemcr.2024.10.005.
83. Ohishi H¹, Shinkai S, Owada H, Fujii T¹, Hosoda K, Onami S, Yamamoto T, Ohkawa Y¹, Ochiai H¹.
Transcription-coupled changes in genomic region proximities during transcriptional bursting.
Sci Adv. 2024 Dec 6;10(49):eadn0020. doi: 10.1126/sciadv.adn0020.
84. Ide H², Miike K², Ohmori T², Maruyama K², Izumi Y², Tanigawa S², Nishinakamura R².
Mouse embryonic kidney transplantation identifies maturation defects in the medulla.
Sci Rep. 2024 Dec 5;14(1):30293. doi: 10.1038/s41598-024-81984-w.
85. Kurosawa T, Ikemoto-Uezumi M¹, Yoshimoto Y, Minato K, Kaji N, Chaen T, Hase E, Minamikawa T, Yasui T, Horiguchi K, Iino S, Hori M, Uezumi A¹.
Tissue-specific functions of MSCs are linked to homeostatic muscle maintenance and alter with aging.
Aging Cell. 2024 Nov;23(11):e14299. doi: 10.1111/ace1.14299.
86. Matsuo K², Asamitsu S², Maeda K², Suzuki H, Kawakubo K², Komiya G², Kudo K², Sakai Y², Hori K², Ikenoshita S², Usuki S² Funahashi S, Oizumi H, Takeda A, Kawata Y, Mizobata T, Norifumi Shioda N², Yabuki Y².
RNA G-quadruplexes form scaffolds that promote neuropathological α -synuclein aggregation.
Cell. 2024 Nov 27;187(24):6835-6848.e20. doi: 10.1016/j.cell.2024.09.037.
87. Toh H¹, Okae H², Shirane K¹, Sato T¹, Hamada H, Kikutake C¹, Saito D¹, Arima T, Sasaki H¹, Suyama M¹.
Epigenetic dynamics of partially methylated domains in human placenta and trophoblast stem cells.
BMC Genomics. 2024 Nov 6;25(1):1050. doi: 10.1186/s12864-024-10986-9.
88. Morino K, Miyake M, Nagasaki M¹, Kawaguchi T, Numa S, Mori Y, Yasukura S, Akada M, Nakao S, Nakata A, Hashimoto H¹, Otokozawa R¹, Kamoi K, Takahashi H, Tabara Y, Matsuda F, Ohno-Matsui K, Tsujikawa A, Nagahama Study G.
Genome-wide Meta-analysis for Myopic Macular Neovascularization Identified a Novel Susceptibility Locus and Revealed a Shared Genetic Susceptibility with Age-Related Macular Degeneration.
Ophthalmol Retina. 2024 Nov 1:S2468-6530(24)00472-X. doi: 10.1016/j.oret.2024.09.016.
89. Tey SR, Anderson RS, Yu CH, Robertson S, Kletzien H, Connor NP, Tanaka K, Ohkawa Y¹, Suzuki M.
Cellular and transcriptomic changes by the supplementation of aged rat serum in human pluripotent stem cell-derived myogenic progenitors.
Front Cell Dev Biol. 2024 Oct 15;12:1481491. doi: 10.3389/fcell.2024.1481491.
90. Okino R², Goda Y², Ono Y².
The Hox-based positional memory in muscle stem cells.
J Biochem. 2024 Sep 30;176(4):277-283. doi: 10.1093/jb/mvae059.
91. Sakai H, Uno H, Yamakawa H, Tanaka K, Ikedo A, Uezumi A¹, Ohkawa Y¹, Imai Y.
The androgen receptor in mesenchymal progenitors regulates skeletal muscle mass via Igf1 expression in male

mice.

Proc Natl Acad Sci U S A. 2024 Sep 24;121(39):e2407768121. doi: 10.1073/pnas.2407768121.

92. Ono C¹⁾, Kochi Y, Baba Y¹⁾, Tanaka S¹⁾

Humoral responses are enhanced by facilitating B cell viability by Fcrl5 overexpression in B cells.

Int Immunol. 2024 Sep 10;36(10):529-540. doi: 10.1093/intimm/dxae028.

93. Tanaka T²⁾, Yano T²⁾, Usuki S²⁾, Seo Y²⁾, Mizuta K²⁾, Okaguchi M²⁾, Yamaguchi M²⁾, Hanyu-Nakamura K²⁾, Toyama-Sorimachi N, Brückner K, Nakamura A²⁾.

Endocytosed dsRNAs induce lysosomal membrane permeabilization that allows cytosolic dsRNA translocation for Drosophila RNAi responses.

Nat Commun. 2024 Aug 14;15(1):6993. doi: 10.1038/s41467-024-51343-4.

94. Olan I, Ando-Kuri M, Parry AJ, Handa T, Schoenfelder S, Fraser P, Ohkawa Y¹⁾, Kimura H, Narita M, Narita M. HMGA1 orchestrates chromatin compartmentalization and sequesters genes into 3D networks coordinating senescence heterogeneity.

Nat Commun. 2024 Aug 12;15(1):6891. doi: 10.1038/s41467-024-51153-8.

95. Kitajima Y²⁾, Yoshioka K²⁾, Mikumoto Y²⁾, Ohki S²⁾, Maehara K¹⁾, Ohkawa Y¹⁾, Ono Y²⁾.

Loss of Tob1 promotes muscle regeneration through muscle stem cell expansion.

J Cell Sci. 2024 Aug 1;137(15):jcs261886. doi: 10.1242/jcs.261886.

96. Yamasaki A¹⁾, Imanishi I¹⁾, Tanaka K¹⁾, Ohkawa Y¹⁾, Tsuda M, Masuda T¹⁾.

IRF8 and MAFB drive distinct transcriptional machineries in different resident macrophages of the central nervous system.

Commun Biol. 2024 Jul 24;7(1):896. doi: 10.1038/s42003-024-06607-6.

97. Saito Y¹⁾, Harada A¹⁾, Ushijima M¹⁾, Tanaka K, Higuchi R¹⁾, Baba A¹⁾, Murakami D, Nutt SL, Nakagawa T, Ohkawa Y¹⁾, Baba Y¹⁾.

Plasma cell differentiation is regulated by the expression of histone variant H3.3.

Nat Commun. 2024 Jun 20;15(1):5004. doi: 10.1038/s41467-024-49375-x.

98. Watanabe M¹⁾, Matsui A¹⁾, Awata N¹⁾, Nagafuchi A¹⁾, Kawazoe M¹⁾, Harada Y¹⁾, Ito M¹⁾.

Differences in the characteristics and functions of brain and spinal cord regulatory T cells.

J Neuroinflammation. 2024 Jun 1;21(1):146. doi: 10.1186/s12974-024-03144-1.

99. Miura S¹⁾, Horisawa K¹⁾, Iwamori T¹⁾, Tsujino S¹⁾, Inoue K¹⁾, Karasawa S¹⁾, Yamamoto J¹⁾, Ohkawa Y¹⁾, Sekiya S¹⁾, Suzuki A¹⁾.

Hepatocytes differentiate into intestinal epithelial cells through a hybrid epithelial/mesenchymal cell state in culture.

Nat Commun. 2024 May 15;15(1):3940. doi: 10.1038/s41467-024-47869-2.

100. Tomimatsu K¹⁾, Fujii T¹⁾, Bise R, Hosoda K, Taniguchi Y, Ochiai H¹⁾, Ohishi H¹⁾, Ando K¹⁾, Minami R¹⁾, Tanaka K¹⁾, Tachibana T, Mori S, Harada A¹⁾, Maehara K¹⁾, Nagasaki M¹⁾, Uchida S, Kimura H, Narita M, Ohkawa Y¹⁾.

Precise immunofluorescence canceling for highly multiplexed imaging to capture specific cell states.

Nat Commun. 2024 May 8;15(1):3657. doi: 10.1038/s41467-024-47989-9.