□ □ □ □ □

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2016

3

7

in silico

2023 5

NanoBRET

CXCR4 HIV

CXCR4

NanoBRET [1] CXCR4

CXCR4 [5]

Transcription activator-like effector nuclease (TALEN) DNA TALE

FokI FKBP FRB

1

[2]

in vivo

ON/OFF

Homology-directed repair HDR

HDR S/G2

G1 S/G2 Cdt1 CRISPR-

Cas9 anti-CRISPR HDR

[4]

S/G2 G1 Geminin Cas9

anti-CRISPR+Cdt1 G1 G1 Cas9

HDR anti-CRISPR AcrIIA4

AcrIIA5 [7]

HN--1e-H1wFG-HHp.(R&2HH

1. Sakyiamah MM, Nomura W, Kobayakawa T, Tamamura H*. Development of a NanoBRET-based Sensitive Screening Method for CXCR4 Ligands. Bioconjugate Chem. 30, 1442-1450, 2019. DOI:10.1021/acs.bioconjchem.9b00182
2. Matsumoto D, Tamamura H, Nomura W*. TALEN-Based Chemically Inducible, Dimerization-Dependent, Sequence-Specific Nucleases. Biochemistry 59, 197-204, 2020. DOI:10.1021/acs.biochem.9b00798
3. Kobayakawa T, Takano H, Ishii T, Tsuji K, Ohashi N, Nomura W, Furuta T, Tamamura H*. Synthesis of Hydrophilic Caged DAG-lactone for Chemical Biology Applications. Org. Biomol. Chem. 18, 4217-4223, 2020. DOI: 10.1039/D0OB00807A
4. Matsumoto D, Tamamura H, Nomura W*. A Cell Cycle-dependent CRISPR-Cas9 Activation System Based on an Anti-CRISPR Protein Shows Improved Genome Editing Accuracy. Commun. Biol. 3, 601, 2020. DOI:10.1038/s42003-020-01340-2
5. Arafiles JVV, Hirose H, Hirai Y, Kuriyama M, Sakyiamah MM, Nomura W, Sonomura K, Imanishi M, Otaka A, Tamamura H, Futaki S. Discovery of a Macropinocytosis-Inducing Peptide Potentiated by Medium-Mediated Intramolecular Disulfide Formation. Angew. Chem., Int. Ed. 60, 11928-11936, 2021. DOI:10.1002/anie.202016754
6. Tsuji K, Ishii T, Kobayakawa T, Ohashi N, Nomura W, Tamamura H*. Fluorescence Resonance Energy Transfer-based Screening for Protein Kinase C Ligands Using 6-methoxynaphthalene-labeled 1,2-diacylglycerol-lactones. Org. Biomol. Chem. 19, 8264-8271, 2021. DOI:10.1039/D1OB00814E
7. Matsumoto D, Kishi K, Matsugi E, Inoue Y, Nigorikawa K, Nomura W*. Cas9-Geminin and Cdt1-fused anti-CRISPR protein synergistically increase editing accuracy. FEBS Lett. 597, 985-994, 2023. DOI:10.1002/1873-3468.14608

H)r1H1wFG-HHp.(R&2HH

8. Matsumoto D & Nomura W*. Molecular Switch Engineering for Precise Genome Editing. Bioconjugate Chem. 32, 639-648, 2021. DOI:10.1021/acs.bioconjchem.1c00088
9. Negi S*, Imanishi M, Hamori M, Kawahara-Nakagawa Y, Nomura W, Kishi K, Shibata N,

Sugiura Y. The past, present, and future of artificial zinc finger proteins: design strategies and chemical and biological applications. J. Bioinorg. Chem. 28, 249-261, 2023.
DOI: 10.1007/s00775-023-01991-6

H--iHp.

10. _____* HIV-1

BIOINDUSTRY

39 (5), 15-25, 2022.

H

GoMADScan RAS superfamily core GTPase Lys [1]

de novo GTP IMPDH2 GTP tRNA [2] leading edge IMPDH GTP [4] TMEM55 A B [3,8] SAC1 SAC3 [5,9] Phosphatidylinositol LPIAT1 oscillation [6]

FcγRIIb PYKfyve INPP4A SHIP [7,10,11]

1. Yoshino H, Yin G, Kawaguchi R, Popov KI, Temple B, Sasaki M, Kofuji S, Wolfe K, Kofuji K, Okumura K, Randhawa J, Malhotra A, Majd N, Ikeda Y, Shimada H, Kahoud ER, Haviv S, Iwase S, Asara JM, Campbell SL, Sasaki AT. Identification of lysine methylation in the core GTPase domain by GoMADScan. PLoS One 14, e0219436, 2019. DOI:10.1371/journal.pone.0219436.
2. Kofuji S, Hirayama A, Eberhardt AO, Kawaguchi R, Sugiura Y, Sampetrean O, Ikeda Y, Warren M, Sakamoto N, Kitahara S, Yoshino H, Yamashita D, Sumita K, Wolfe K, Lange L, Ikeda S, Shimada H, Minami N, Malhotra A, Morioka S, Ban Y, Asano M, Flanary VL, Ramkissoon A, Chow LML, Kiyokawa J, Mashimo T, Lucey G, Mareninov S, Ozawa T, Onishi N, Okumura K, Terakawa J, Daikoku T, Wise-Draper T, Majd N, Kofuji K, Sasaki M, Mori M, Kanemura Y, Smith EP, Anastasiou D, Wakimoto H, Holland EC, Yong WH, Horbinski C, Nakano I, DeBerardinis RJ, Bachoo RM, Mischel PS, Yasui W, Suematsu M, Saya H, Soga T, Grummt I, Bierhoff H, Sasaki AT. IMP dehydrogenase-2 drives aberrant nucleolar activity and promotes tumorigenesis in glioblastoma. Nat. Cell Biol. 21, 1003-1014, 2019. DOI:10.1038/s41556-019-0363-9.
3. Takemasu S, Nigorikawa K, Yamada M, Tsurumi G, Kofuji S, Takasuga S, Hazeki K. Phosphorylation of TMEM55B by Erk/MAPK regulates lysosomal positioning. J. Biochem. 166,

175-185, 2019.
DOI:10.1093/jb/mvz026.

4. Wolfe K, Kofuji S, Yoshino H, Sasaki M, Okumura K, Sasaki AT. Dynamic compartmentalization of purine nucleotide metabolic enzymes at leading edge in highly motile renal cell carcinoma. Biochem. Biophys. Res. Commun. 516, 50-56, 2019.
DOI: 10.1016/j.bbrc.2019.05.190.
5. Nigorikawa K, Matsumura T, Sakamoto H, Morioka S, Kofuji S, Takasuga S, Hazeki K. Sac1 Phosphoinositide Phosphatase Regulates Foam Cell Formation by Modulating SR-A Expression in Macrophages. Biol. Pharm. Bull. 42, 923-928, 2019.
DOI:10.1248/bpb.b18-00907.
6. Takemasu S, Ito M, Morioka S, Nigorikawa K, Kofuji S, Takasuga S, Eguchi S, Nakanishi H, Matsuoka I, Sasaki J, Sasaki T, Hazeki K. Lysophosphatidylinositol-acyltransferase-1 is involved in cytosolic Ca^{2+} oscillations in macrophages. Genes Cells 24, 366-376, 2019.
DOI:10.1111/gtc.12681.
7. Isobe Y, Nigorikawa K, Tsurumi G, Takemasu S, Takasuga S, Kofuji S, Hazeki K. PIKfyve accelerates phagosome acidification through activation of TRPML1 while arrests aberrant vacuolation independent of the Ca2+ channel. J. Biochem. 165, 75-84, 2019.
DOI:10.1093/jb/mvy084.
8. Morioka S, Nigorikawa K, Okada E, Tanaka Y, Kasuu Y, Yamada M, Kofuji S, Takasuga S, Nakanishi H, Sasaki T, Hazeki K. TMEM55a localizes to macrophage phagosomes to downregulate phagocytosis. J. Cell Sci. 131, jcs213272, 2018.
DOI:10.1242/jcs.213272.
9. Morioka S, Nigorikawa K, Hazeki K, Ohmura M, Sakamoto H, Matsumura T, Takasuga S, Hazeki O. Phosphoinositide phosphatase Sac3 regulates the cell surface expression of scavenger receptor A and formation of lipid droplets in macrophages. Exp. Cell Res. 357, 252-259, 2017.
DOI: 10.1016/j.yexcr.2017.05.022.
10. Segawa T, Hazeki K, Nigorikawa K, Nukuda A, Tanizawa T, Miyamoto K, Morioka S, Hazeki O. Inhibitory receptor FcγRIIb mediates the effects of IgG on a phagosome acidification and a sequential dephosphorylation system comprising SHIPs and Inpp4a. Innate Immun. 23, 401-409, 2017.
DOI: 10.1177/1753425917701553.
11. Morioka S, Nigorikawa K, Sasaki J, Hazeki K, Kasuu Y, Sasaki T, Hazeki O. Myeloid cell-specific inositol polyphosphate-4-phosphatase type I knockout mice impair bacteria clearance in a murine peritonitis model. Innate Immun. 22, 444-451, 2016.
DOI:10.1177/1753425916652714.

H)r1H1wF[GHHH

12. Naffouje R, Grover P, Yu H, Sendilnathan A, Wolfe K, Majd N, Smith EP, Takeuchi K, Senda T, Kofuji S, Sasaki AT. Anti-Tumor Potential of IMP Dehydrogenase Inhibitors: A Century-Long Story. Cancers (Basel) 11, 1346, 2019. DOI:10.3390/cancers11091346.
13. _____ GTP 100 : GTP 37(16): 2743-2747. (2019)
14. _____, , Kara Wolfe, Jaskirat Randhawa, , , , , , , , GTP 35(10): 1633-1641. (2017)

H

(TBT) -1 (NRF-1) NRF-1 NRF-1 [3,4,7,8,11,12,15,16,23,27] MPP^+ MPP^+ [5,6,10,25] [1,2,9.13.14.17-22,24,26]

2022 TBT [28,29,31,33,34] TBT [30] c-Jun JunB [32] [35-38]

1. Takagi M, Sanoh S, Santoh M, Ejiri Y, Kotake Y, Ohta S. Detection of metabolic activation leading to drug-induced phospholipidosis in rat hepatocyte spheroids. ***Journal of Toxicological Sciences*** **41**, 155-164 (2016). DOI: 10.2131/jts.41.155
2. Santoh M, Sanoh S, Takagi M, Ejiri Y, Kotake Y, Ohta S. Acetaminophen induces accumulation of functional rat CYP3A via polyubiquitination dysfunction. ***Scientific Reports*** **6**, 21373 (2016). DOI: 10.1038/srep21373
3. Asanagi M, Yamada S, Hirata N, Itagaki H, Kotake Y, Sekino Y, Kanda Y. Tributyltin induces G2/M cell cycle arrest via NAD^+-dependent isocitrate dehydrogenase in human embryonic carcinoma cells. ***Journal of Toxicological Sciences*** **41**, 207-215 (2016). DOI: 10.2131/jts.41.207

4. Umeda K, Kotake Y, Miyara M, Ishida K, Sanoh S, Ohta S. Methoxychlor and fenvalerate induce neuronal death by reducing GluR2 expression. ***Journal of Toxicological Sciences*** **41**, 255-264 (2016). DOI: 10.2131/jts.41.255
5. Miyara M, Umeda K, Ishida K, Sanoh S, Kotake Y, Ohta S. Protein extracts from cultured cells contain nonspecific serum albumin. ***Bioscience, Biotechnology, and Biochemistry*** **80**, 1164-1167 (2016). DOI: 10.1080/09168451.2016.1151338.
6. Miyara M, Kotake Y, Tokunaga W, Sanoh S, Ohta S. Mild MPP^+ exposure impairs autophagic degradation through a novel lysosomal acidity-independent mechanism. ***Journal of Neurochemistry*** **139**, 294-308 (2016). DOI: 10.1111/jnc.13700
7. Ishida K, Tsuyama Y, Sanoh S, Ohta S, Kotake Y. Perfluorooctane sulfonate induces neuronal vulnerability by decreasing GluR2 expression. ***Archives of Toxicology*** **91**, 885-895 (2017). DOI: 10.1007/s00204-016-1731-x
8. Ishida K, Kotake Y, Sanoh S, Ohta S. Lead-Induced ERK activation is mediated by GluR2 non-containing AMPA receptor in cortical neurons. ***Biological and Pharmaceutical Bulletin*** **40**, 303-309 (2017). DOI: 10.1248/bpb.b16-00784
9. Santoh M, Sanoh S, Ohtsuki Y, Ejiri Y, Kotake Y, Ohta S. Acetaminophen analog *N*-acetyl-*m*-aminophenol, but not its reactive metabolite, *N*-acetyl-*p*-benzoquinoneimine induces CYP3A activity via inhibition of protein degradation. ***Biochemical and Biophysical Research Communications*** **486**, 639-644 (2017). DOI: 10.1016/j.bbrc.2017.03.073.
10. Sakamoto S, Miyara M, Sanoh S, Ohta S, Kotake Y. Mild MPP^+ exposure-induced glucose starvation enhances autophagosome synthesis and impairs its degradation. ***Scientific Reports*** **7**, 46668 (2017). DOI: 10.1038/srep46668
11. Ishida K, Saiki T, Umeda K, Miyara M, Sanoh S, Ohta S, Kotake Y. Prenatal exposure to tributyltin decreases GluR2 expression in the mouse brain. ***Biological and Pharmaceutical Bulletin*** **40**, 1121-1124 (2017). DOI: 10.1248/bpb.b17-00209
12. Ishida K, Aoki K, Takishita T, Miyara M, Sakamoto S, Sanoh S, Kimura T, Kanda Y, Ohta S, Kotake Y. Low-concentration tributyltin decreases GluR2 expression via Nuclear Respiratory Factor-1 inhibition. ***International Journal of Molecular Science*** **18**, E1754 (2017). DOI: 10.3390/ijms18081754
13. Sanoh S, Yamachika Y, Tamura Y, Kotake Y, Yoshizane Y, Ishida Y, Tateno C, Ohta S. Assessment of amiodarone-induced phospholipidosis in chimeric mice with a humanized liver. ***Journal of Toxicological Sciences*** **42**, 589-596 (2017). DOI: 10.2131/jts.42.589
14. Mori J, Sanoh S, Kashiwagi K, Hanada H, Shigeta M, Suzuki KT, Yamamoto T, Kotake Y, Sugihara K, Kitamura S, Kashiwagi A, Ohta S. Developmental changes in drug-metabolizing enzyme expression during metamorphosis of *Xenopus tropicalis*. ***Journal of Toxicological***

***Sciences* 42** 605-613 (2017). DOI: 10.2131/jts.42.605

15. Umeda K, Miyara M, Ishida K, Sanoh S, Ohta S, Kotake Y. Carbofuran causes neuronal vulnerability to glutamate by decreasing GluR2 protein levels in rat primary cortical neurons. ***Archives of Toxicology* 92**, 401-409 (2018). DOI: 10.1007/s00204-017-2018-6
16. Hanaoka S, Ishida K, Tanaka S, Sakamoto S, Okuda K, Sanoh S, Ohta S, Kotake Y. Tributyltin induces epigenetic changes and decreases the expression of nuclear respiratory factor-1. ***Metallomics* 10**, 337-345 (2018). DOI: 10.1039/c7mt00290d
17. Takaoka N, Sanoh S, Okuda K, Kotake Y, Sugahara G, Yanagi A, Ishida Y, Tateno C, Tayama Y, Sugihara K, Kitamura S, Kurosaki M, Terao M, Garattini E, Ohta S. Inhibitory effects of drugs on the metabolic activity of mouse and human aldehyde oxidases and influence on drug-drug interactions. ***Biochemical Pharmacology* 154**, 28-38 (2018). DOI: 10.1016/j.bcp.2018.04.017
18. Ohtsuki Y, Sanoh S, Santoh M, Ejiri Y, Ohta S, Kotake Y. Inhibition of cytochrome P450 3A protein degradation and subsequent increase in enzymatic activity through p38 MAPK activation by acetaminophen and salicylate derivatives. ***Biochemical and Biophysical Research Communications* 509**, 287-293 (2019). DOI: 10.1016/j.bbrc.2018.12.124
19. Fujino C, Sanoh S, Tateno C, Ohta S, Kotake Y. Coordinated cytochrome P450 expression in mouse liver and intestine under different dietary conditions during liver regeneration after partial hepatectomy. ***Toxicology and Applied Pharmacology* 370**, 133-144 (2019). DOI: 10.1016/j.taap.2019.03.010
20. Fujino C, Sanoh S, Tamura Y, Ishida Y, Tateno C, Ohta S, Kotake Y. Changes in bile acid concentrations in chimeric mice transplanted with different replacement indexes of human hepatocytes. ***BPB Reports* 2**, 29-34 (2019). DOI: https://DOI.org/10.1248/bpbreports.2.2_29
21. Sanoh S, Tamura Y, Fujino C, Sugahara G, Yoshizane Y, Yanagi A, Kisoh K, Ishida Y, Tateno C, Ohta S, Kotake Y. Changes in bile acid concentrations after administration of ketoconazole or rifampicin to chimeric mice with humanized liver (2019). ***Biological and Pharmaceutical Bulletin* 42**, 1366-1375 (2019). DOI: 10.1248/bpb.b19-00249.
22. Ishida C, Sanoh S, Kotake Y. CYP1A2 down-regulation by obeticholic acid: usefulness as a positive control for the in vitro evaluation of drug-drug interactions. ***Journal of Pharmaceutical Sciences* 108**, 3903-3910 (2019). DOI: 10.1016/j.xphs.2019.08.021
23. Kidoguchi N, Ishida K, Sanoh S, Miyara M, Kotake Y. Triphenyltin inhibits GA-binding protein α nuclear translocation. ***Fundamental Toxicological Sciences* 7**, 33-40 (2020). DOI: https://DOI.org/10.2131/fts.7.33
24. Sanoh S, Hanada H, Kashiwagi K, Mori T, Goto-Inoue N, Suzuki KT, Mori J, Nakamura N, Yamamoto T, Kitamura S, Kotake Y, Sugihara K, Ohta S, Kashiwagi A. Amiodarone bioconcentration and suppression of metamorphosis in Xenopus. ***Aquatic Toxicology* 228**,

105623 (2020). DOI: 10.1016/j.aquatox.2020.105623

25. Yabuki A, Miyara M, Umeda-Miyara K, Takao S, Sanoh S, Kotake Y. MiT/TFE family members suppress L-leucyl-L-leucine methyl ester-induced cell death. ***Journal of Toxicological Sciences*** **46**, 143-156 (2021). DOI: 10.2131/jts.46.143
26. Takeda N, Nakamura Y, Ikeda K, Takaoka N, Hisaoka-Nakashima K, Sanoh S, Kotake Y, Nakata Y, Morioka N. Treatment with histone deacetylase inhibitor attenuates peripheral inflammation-induced cognitive dysfunction and microglial activation: The effect of SAHA as a peripheral HDAC Inhibitor. ***Neurochemical Research*** **46**, 2285-2296 (2021) DOI: 10.1007/s11064-021-03367-1
27. Motonaga M, Watanabe H, Tayama Y, Shimizu R, Sanoh S, Kotake Y, Kitamura S, Ohta S, Sugihara K. Comparison of the components of three types of miso (fermented soybean paste) by ^{1}H NMR metabolomic analysis. ***BPB Reports*** **4**, 148-154 (2021). DOI:10.1248/bpbreports.4.5_148
28. Yoshida K, DOI Y, Iwazaki N, Yasuhara H, Ikenaga Y, Shimizu H, Nakada T, Watanabe T, Tateno C, Sanoh S, Kotake Y. Prediction of human pharmacokinetics for low-clearance compounds using pharmacokinetic data from chimeric mice with humanized livers. ***Clinical and Translational Science*** **15**, 79-91 (2022). DOI: 10.1111/cts.13070
29. Takaoka N, Sanoh S, Ohta S, Esmaeeli M, Leimkühler S, Kurosaki M, Terao M, Garattini E, Kotake Y. Involvement of aldehyde oxidase in the metabolism of aromatic and aliphatic aldehyde-odorants in the mouse olfactory epithelium. ***Archives of Biochemistry and Biophysics*** **715**, 109099 (2022). DOI: 10.1016/j.abb.2021.109099
30. Hatamiya S, Miyara M, Kotake Y. Tributyltin inhibits autophagy by decreasing lysosomal acidity in SH-SY5Y cells. ***Biochemical and Biophysical Research Communications*** **592**, 31-37 (2022). DOI: 10.1016/j.bbrc.2021.12.118
31. Sato K, Sanoh S, Ishida Y, Tateno C, Ohta S, Kotake Y. Assessment of metabolic activation of felbamate in chimeric mice with humanized liver in combination with *in vitro* metabolic assays. ***Journal of Toxicological Sciences*** **47**, 277-288 (2022). DOI: 10.2131/jts.47.277
32. Umeda-Miyara K, Miyara M, Sanoh S, Kotake Y. Trehalose decreases mRNA and protein expressions of c-Jun and JunB in human cervical cancer HeLa cells. ***Journal of Biochemistry*** **172**, 177-187 (2022). DOI: 10.1093/jb/mvac051.
33. Mizutare T, Sanoh S, Kanazu T, Ohta S, Kotake Y. Improved Predictability of Hepatic Clearance with Optimal pH for Acyl-Glucuronidation in Liver Microsomes. ***Journal of Pharmaceutical Sciences*** **111**, 3165-3173 (2022). DOI: 10.1016/j.xphs.2022.08.015.
34. Imado E, Sun S, Abawa AR, Tahara T, Kochi T, Huynh TNB, Asano S, Hasebe S, Nakamura Y, Hisaoka-Nakashima K, Kotake Y, Irifune M, Tsuga K, Takuma K, Morioka N, Kiguchi N, Ago

Y. Prenatal exposure to valproic acid causes allodynia associated with spinal microglial activation. ***Neurochemistry International*** **160**, 105415 (2022). DOI: 10.1016/j.neuint.2022.105415.

35. Siswanto FM, Sakuma R, Oguro A, Imaoka S. Chlorogenic acid activates Nrf2/SKN-1 and prolongs the lifespan of Caenorhabditis elegans via the Akt-FOXO3/DAF16a-DDB1 pathway and activation of DAF16f. ***Journal of Gerontology Series A: Biological Sciences and Medical Sciences*** **77**, 1503-1516 (2022). DOI: 10.1093/gerona/glac062
36. Ihara K, Oguro A, Imaishi H. Diagnosis of Parkinson's disease by investigating the inhibitory effect of serum components on P450 inhibition assay. ***Scien***

H

DNA 8-hydroxygaunine 8-oxo-7,8-dihydrogaunine
G^O
G^O OGG1
5'-GpA-3' G OGG1
OOG1 [9,18,20]
5'-tailed duplex TD
editor 200
editor TD 80
E [19]
DNA

in vivo [13]

H

(i)
supF G^O
G^O [21] (ii) 5'-GpA-
3' G APOBEC3 5'-TpC-3' C
APOBEC3
APOBEC3

sequencer NGS
[23]
DNA dGTP
8-hydroxy-dGTP 8-oxo-7,8-dihydro-dGTP

MTH1

TD

HN--1eH1wF6HH

1. H. Kamiya, M. Ito, K. Nishi and H. Harashima: *In vivo* selection of active deoxyribonucleoside kinase by a mutagenic nucleoside analog. *J. Biotechnol*. **228**, 52-57 (2016 6) doi: 10.1016/j.jbiotec.2016.04.046
2. H. Kamiya, N. Nishigaki, A. Ikeda, S. Yukawa, Y. Morita, Y. Nakatsu, T. Tsuzuki and H. Harashima: Insertion and deletion mismatches distant from the target position improve gene correction with a tailed duplex. *Nucleosides Nucleotides Nucleic Acids* **35**, 379-388 (2016 7) doi: 10.1080/15257770.2016.1163384
3. T. Suzuki, T. Imada, N. Nishigaki, M. Kobayashi, I. Matsuoka, and H. Kamiya: Cleavage of target DNA promotes sequence conversion with a tailed duplex. *Biol. Pharm. Bull*. **39**, 1392-1395 (2016 8) doi: 10.1248/bpb.b16-00325
4. M. Nishihara, G. N. Kanda, T. Suzuki, S. Yamakado, H. Harashima and H. Kamiya: Enhanced transgene expression by plasmid-specific recruitment of histone acetyltransferase. *J. Biosci. Bioengng*. **123**, 277-280 (2017 3) doi: 10.1016/j.jbiosc.2016.09.008
5. T. Suzuki, T. Imada, Y. Komatsu and H. Kamiya: Comparison of DNA fragments as donor DNAs upon sequence conversion of cleaved target DNA. *Nucleosides Nucleotides Nucleic Acids* **36**, 428-434 (2017 6) doi: 10.1080/15257770.2017.1310385
6. T. Suzuki Y. Yanai, N. Nishigaki, Y. Nakatsu, T. Tsuzuki and H. Kamiya: Effects of mismatches distant from the target position on gene correction with a 5'-tailed duplex. *J. Biosci. Bioengng.* **125**, 619-623 (2018 5) doi: 10.1016/j.jbiosc.2017.12.017
7. T. Suzuki, Y. Kuramoto and H. Kamiya: Reduction of Werner syndrome protein enhances G:C A:T transition by O^6-methylguanine in human cells. *Chem. Res. Toxicol.* **31**, 319-324 (2018 5) doi: 10.1021/acs.chemrestox.8b00009
8. T. Suzuki, T. Goda and H. Kamiya: Durable transgene expression driven by CpG-free and - containing promoters in plasmid DNA with CpG-free backbone. *Biol. Pharm. Bull.* **41**, 1489-1493 (2018 9) doi: 10.1248/bpb.b18-00342
9. H. Kamiya, T. Makino, T. Suzuki, M. Kobayashi, I. Matsuoka: Mutations induced by 8-oxo-7,8-dihydroguanine in WRN- and DNA polymerase -double knockdown cells. *Mutagenesis* **33**, 301-310 (2018 10) doi: 10.1093/mutage/gey024
10. T. Suzuki, Y. Katayama, Y. Komatsu, H. Kamiya: Analysis of large deletion mutations induced by abasic site analog in human cells. *Genes Environment* **40**, 24 (2018 10) doi: 10.1186/s41021-018-0110-7
11. T. Suzuki, Y. Katayama, Y. Komatsu, H. Kamiya: Large deletions and untargeted substitutions induced by abasic site analog on leading versus lagging strand templates in human cells. *Mutagenesis* **34**, 421-429 (2019 9/11) doi: 10.1093/mutage/gez034

12. T. Suzuki, Y. Wakao, T. Watanabe, M. Hori, Y. Ikeda, H. Tsuchiya, K. Kogure, M. Harada-Shiba, M. Fujimuro, H. Kamiya: No enhancing effects of plasmid-specific histone acetyltransferase recruitment system on transgene expression i*n vivo*. *Nucleosides Nucleotides Nucleic Acids* **38**, 942-949 (2019 12) doi: 10.1080/15257770.2019.1638514

13. T. Suzuki, Y. Wakao, T. Goda, H. Kamiya: Conventional plasmid DNAs with a CpG-containing backbone achieve durable transgene expression in mouse liver. *J. Gene Med.* **22**, e3138 (2020 1) doi: 10.1002/jgm.3138
14. H. Kawai, K. Sato, W. Shirahama, T. Suzuki, H. Kamiya: Single-stranded DNA versus tailed duplex in sequence conversion of *lacZ* DNA. *Nucleosides Nucleotides Nucleic Acids* **39**, 1245-1250 (2020 9) doi: 10.1080/15257770.2020.1790596
15. R. Fukushima, T. Suzuki, H. Kamiya: New indicator *Escherichia coli* strain for rapid and accurate detection of *supF* mutations. *Genes Environment* **42**, 28 (2020 9) doi: 10.1186/s41021-020-00167-x
16. A. Takeishi, H. Kogashi, M. Odagiri, H. Sasanuma, S. Takeda, M. Yasui, M. Honma, T. Suzuki, H. Kamiya, K. Sugasawa, K. Ura, and A. Sassa: Tyrosyl-DNA phosphodiesterases are involved in mutagenic events at a ribonucleotide embedded into DNA in human cells. *PLoS ONE* **15**, e0244790 (2020 12) doi: 10.1371/journal.pone.0244790
17. T. Suzuki, Y. Katayama, Y. Komatsu, H. Kamiya: Similar frequency and signature of untargeted substitutions induced by abasic site analog under reduced human APE1 conditions. *J. Toxicol. Sci.* **46**, 283-288 (2021 6) doi: 10.2131/jts.46.283
18. T. Suzuki, H. Masuda, M. Mori, R. Ito, H. Kamiya: Action-at-a-distance mutations at 5'-GpA-3' sites induced by oxidised guanine in WRN-knockdown cells. *Mutagenesis* **36**, 349-357 (2021 9) doi: 10.1093/mutage/geab027 EDITOR'S CHOICE
19. H. Kawai, K. Yazama, Y. Yanai, R. Kamitsubo, H. Kamiya: Gene correction by 5'-tailed duplexes with short editor oligodeoxyribonucleotides. *J. Biosci. Bioengng.* **132**, 552-559, (2021 12) doi: 10.1016/j.jbiosc.2021.08.012
20. T. Suzuki, Y. Zaima, Y. Fujikawa, R. Fukushima, H. Kamiya: Paradoxical role of the major DNA repair protein, OGG1, in action-at-a-distance mutation induction by 8-oxo-7,8-dihydroguanine. *DNA Repair* **111**, 103276 (2022 3) doi: 10.1016/j.dnarep.2022.103276
21. R. Fukushima, T. Suzuki, Y. Komatsu, H. Kamiya: Biased distribution of action-at-a-distance mutations by 8-oxo-7,8-dihydroguanine. *Mutation Res.* (Fundam. Mol. Mech. Mutagen.) **825**, 111794 (2022 7 -12) doi: 10.1016/j.mrfmmm.2022.111794
22. H. Kawai, R. Kamitsubo, H. Kamiya: Correction of monomeric enhanced green fluorescent

protein (*mEGFP*) gene by short 5'-tailed duplexes. *J. Biosci. Bioengng.* **134**, 175-181 (2022 9) doi: 10.1016/j.jbiosc.2022.06.014

23. H. Kawai, R. Iwata, S. Ebi, R. Sugihara, S. Masuda, C. Fujiwara, S. Kimura, H. Kamiya: Development of a versatile high-throughput mutagenesis assay with multiplexed short read NGS using DNA-barcoded *supF* shuttle vector library amplified in *E. coli*. *eLife* **11**, e83780 (2022 10) doi: 10.7554/eLife.83780
24. T. Suzuki and H. Kamiya: Easily-controllable, helper phage-free single-stranded phagemid production system. *Genes Environment* **44**, 25 (2022 11) doi: 10.1186/s41021-022-00254-1

H)r1H1wF[GHH

1. T. Suzuki and H. Kamiya: Mutations induced by 8-hydroxyguanine (8-oxo-7,8-dihydroguanine), a representative oxidized base, in mammalian cells. *Genes Environment* **39**, 2 (2017 1) doi: 10.1186/s41021-016-0051-y

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1

pharmacokinetics (PK)/pharmacodynamics (PD)

MRSA

PK/PD

[1, 2, 3, 14] [4, 8, 12]
[5, 9] [6] [7, 10, 13] [11, 15, 16]

[17, 19, 23] [18] [20, 21, 22]

2

1. Matsumoto K, Watanabe E, Kanazawa N, Shigemi A, Yokoyama Y, Ikawa K, Morikawa N, Takeda Y. Pharmacokinetic/pharmacodynamic analysis of teicoplanin in patients with MRSA infections. Clin. Pharmacol. 8: 15-18, 2016. doi: 10.2147/CPAA.S96143.
2. Yokoyama Y, Matsumoto K, Ikawa K, Watanabe E, Yamamoto H, Imoto Y, Morikawa N, Takeda Y. The pharmacokinetics of ampicillin-sulbactam in anuric patients: dosing optimization for prophylaxis during cardiovascular surgery. Int. J. Clin. Pharm. 38: 771-775, 2016.
3. Matsumoto K, Abematsu K, Shigemi A, Kanazawa N, Watanabe E, Yokoyama Y, Ikawa K, Morikawa N, Takeda Y. Therapeutic drug monitoring of voriconazole in Japanese patients: analysis based on clinical practice data. J. Chemother. 28: 198-202, 2016. doi: 10.1007/s11096-

016-0286-5.

4. Kohama H, Ide T, Ikawa K, Morikawa N, Nishi S. Pharmacokinetics and outcome of tazobactam/piperacillin in Japanese patients undergoing low-flow continuous renal replacement therapy: dosage considerations. Clin. Pharmacol. 9: 39-44, 2017. doi: 10.2147/CPAA.S127502.
5. Sadahira T, Wada K, Ikawa K, Morikawa N, Kurahashi H, Yoshioka T, Ariyoshi Y, Kobayashi Y, Araki M, Ishii A, Watanabe M, Uehara S, Watanabe T, Nasu Y. Clinical pharmacokinetics of oral levofloxacin and sitafloxacin in epididymal tissue. J. Infect. Chemother. 23: 214-217, 2017. doi: 10.1016/j.jiac.2016.12.010.
6. Murao N, Ohge H, Ikawa K, Watadani Y, Uegami S, Shigemoto N, Shimada N, Yano R, Kajihara T, Uemura K, Murakami Y, Morikawa N, Sueda T. Piperacillin-tazobactam pharmacokinetics in plasma, peritoneal fluid and peritoneum of surgery patients, and dosing considerations based on site-specific pharmacodynamic target attainment. Int. J. Antimicrob. Agents 50: 393-398, 2017. doi: 10.1016/j.ijantimicag.2017.03.025.
7. Nakamura K, Ikawa K, Nishikawa G, Kobayashi I, Narushima M, Muramatsu H, Morinaga S, Kajikawa K, Kato Y, Watanabe M, Kanao K, Morikawa N, Sumitomo M. Clinical pharmacokinetics and pharmacodynamic target attainment of pazufloxacin in prostate tissue: dosing considerations for prostatitis. J. Infect. Chemother. 23: 809-813, 2017. doi: 10.1016/j.jiac.2017.08.005.
8. Ide T, Takesue Y, Ikawa K, Morikawa N, Ueda T, Takahashi Y, Nakajima K, Takeda K, Nishi S. Population pharmacokinetics/pharmacodynamics of linezolid in sepsis patients with and without continuous renal replacement therapy. Int. J. Antimicrob. Agents 51: 745-751, 2018. doi: 10.1016/j.ijantimicag.2018.01.021.
9. Sadahira T, Wada K, Ikawa K, Morikawa N, Mitsui M, Araki M, Fujiyoshi M, Ishii A, Watanabe M, Watanabe T, Nasu Y. Clinical pharmacokinetics of oral azithromycin in epididymal tissue. J. Infect. Chemother. 25: 832-834, 2019. doi: 10.1016/j.jiac.2019.05.011.
10. Nakamura K, Ikawa K, Nishikawa G, Kobayashi I, Tobiume M, Sugie M, Muramatsu H, Morinaga S, Kajikawa K, Watanabe M, Kanao K, Onita T, Morikawa N. Clinical pharmacokinetics of flomoxef in prostate tissue and dosing considerations for prostatitis based on site-specific pharmacodynamic target attainment. J. Infect. Chemother. 26: 236-241, 2020. doi: 10.1016/j.jiac.2019.08.019.
11. Ishihara N, Nishimura N, Ikawa K, Karino F, Miura K, Tamaki H, Yano T, Isobe T, Morikawa N, Naora K. Population pharmacokinetic modeling and pharmacodynamic target attainment simulation of piperacillin/tazobactam for dosing optimization in late elderly patients with pneumonia. Antibiotics (Basel) 9(3): 113, 2020. doi: 10.3390/antibiotics9030113.
12. Mimura Y, Yahiro M, Masumoto M, Fukui R, Okamoto R, Aichi M, Mihara Y, Ueda T, Takesue

Y, Ikawa K, Morikawa N, Kuragano T. The pharmacokinetics of oral metronidazole in patients with metronidazole-induced encephalopathy undergoing maintenance hemodialysis. Hemodial. Int. 24: 528-533, 2020. doi: 10.1111/hdi.12857.

13. Watanabe E, Matsumoto K, Ikawa K, Yokoyama Y, Shigemi A, Enoki Y, Umezaki Y, Nakamura K, Ueno K, Terazono H, Morikawa N, Takeda Y. Pharmacokinetic/pharmacodynamic evaluation of teicoplanin against *Staphylococcus aureus* in murine thigh infection model. J. Glob. Antimicrob. Resist. 24: 83-87, 2021. doi: 10.1016/j.jgar.2020.11.014.
14. Onita T, Ishihara N, Yano T, Nishimura N, Tamaki H, Ikawa K, Morikawa N, Naora K. Assessment of renal function and simulation using serum cystatin-C in an elderly patient with uncontrollable plasma vancomycin levels due to muscular dystrophy: a case report. YAKUGAKU ZASSHI 141: 441-445, 2021.
15. Matsubara K, Matsumoto K, Yokoyama Y, Watanabe E, Enoki Y, Shigemi A, Ikawa K, Terazono H, uncbpb.b2045, 20078ETEMC /Body /MCID 14 BD8 BT12 0 0 12 56.64 536.8845m[(H,)-(6.002 Tc .2

10.1007/s40121-022-00720-x.

21. Hirano T, Ohge H, Ikawa K, Uegami S, Watadani Y, Shigemoto N, Yoshimura K, Kitagawa H, Kaiki Y, Morikawa N, Takahashi S. Pharmacokinetics of flomoxef in plasma, peritoneal fluid, peritoneum, and subcutaneous adipose tissue of patients undergoing lower gastrointestinal surgery: dosing considerations based on site-specific pharmacodynamic target attainment. J. Infect. Chemother. 29: 186-192, 2023. doi: 10.1016/j.jiac.2022.10.017.
22. Kaiki Y, Ohge H, Ikawa K, Uegami S, Watadani Y, Shigemoto N, Hirano T, Yoshimura K, Kitagawa H, Morikawa N, Takahashi S. Pharmacokinetics of cefmetazole in plasma, peritoneal fluid, peritoneum, and subcutaneous adipose tissue of patients scheduled for lower gastrointestinal surgery: dosing considerations based on site-specific pharmacodynamic target

23. O Ikawa K, Ishihra N, Tamaki H, Yano T, Naora K, Morikawa N. Pulmonary pharmacokinetic and pharmacodynamic evaluation of ampicillin/sulbactam regimens for pneumonia caused by various bacteria, including *Acinetobacter baumannii*. Antibiotics (Basel) 12(2): 303, 2023. doi: 10.3390/antibiotics12020303.

2018 H 2019

collagen type I α2 chain [1] FDEIA

P75 homologue fructose 1,6-bisaldolase [2,3]

ribosomal proteins [4]

peroxidase-1 beta-glucosidase [5]

ELISA

ω5- [6]

[7]

[8]

[9] ω5-

1BS-18

1BS-18

ω5- [10]

thiopental propofol [11]

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-8 [14]

IgE IgE

amplified luminescence proximity homogeneous assay

[15] 21 1BS-18

ω5-

[16]

[17]

HN--1eH1wF6HH

1. Fujimoto W, Fukuda M, Yokooji T, Yamamoto T, Tanaka A, Matsuo H. Anaphylaxis provoked by ingestion of hydrolyzed fish collagen probably induced by epicutaneous sensitization. Allergol Int. 2016 Oct;65(4):474-476. doi: 10.1016/j.alit.2016.03.012.
2. Kimura H, Inami M, Hamaguchi Y, Takehara K, Akimoto S, Yokooji T, Matsuo H, Matsushita T. Foodg.53]TJ8 refB ependentkeersaxt5-2 ()6 (oodc oodg.53]TJrefBT8.01 Tw 0.53(y)20 (i)-4(nduc)-6 (

11. Shibata Y, Yokooji T, Itamura R, Sagara Y, Taogoshi T, Ogawa K, Tanaka M, Hide M, Kihira K, Matsuo H. Injury due to extravasation of thiopental and propofol: Risks/effects of local cooling/warming in rats. Biochem Biophys Rep. 2016 Sep 19;8:207-211. doi: 10.1016/j.bbrep.2016.09.005.
12. Shibata Y, Sagara Y, Yokooji T, Taogoshi T, Tanaka M, Hide M, Matsuo H. Evaluation of Risk of Injury by Extravasation of Hyperosmolar and Vasopressor Agents in a Rat Model. Biol Pharm Bull. 2018;41(6):951-956. doi: 10.1248/bpb.b18-00105.
13. Nagata M, Yokooji T, Nakai T, Miura Y, Tomita T, Taogoshi T, Sugimoto Y, Matsuo H. Blockade of multiple monoamines receptors reduce insulin secretion from pancreatic β-cells. Sci Rep. 2019 Nov 11;9(1):16438. doi: 10.1038/s41598-019-52590-y.
14. Okamoto T, Sugimoto S, Noda M, Yokooji T, Danshiitsoodol N, Higashikawa F, Sugiyama M. Interleukin-8 Release Inhibitors Generated by Fermentation of Artemisia princeps Pampanini Herb Extract With Lactobacillus plantarum SN13T. Front Microbiol. 2020 Jun 3;11:1159. doi: 10.3389/fmicb.2020.01159.
15. Koga Y, Yokooji T, Ogino R, Taogoshi T, Takahagi S, Ishii K, Chinuki Y, Morita E, Hide M, Matsuo H. A novel detection method for cross-linking of IgE-receptors by autoantibodies in chronic spontaneous urticaria. Allergol Int. 2022 Jan;71(1):94-102. doi: 10.1016/j.alit.2021.08.007.
16. Yamada Y, Yokooji T, Kunimoto K, Inoguchi K, Ogino R, Taogoshi T, Morita E, Matsuo H. Hypoallergenic Wheat Line (1BS-18H) Lacking ω5-Gliadin Induces Oral Tolerance to Wheat Gluten Proteins in a Rat Model of Wheat Allergy. Foods. 2022 Jul 22;11(15):2181. doi: 10.3390/foods11152181.
17. Taogoshi T, Shibata Y, Uno H, Yokooji T, Tanaka M, Hide M, Matsuo H. Classification of Skin Injury Risk Caused by Extravasation of Electrolyte Solutions or Infusions in a Rat Model. Biol Pharm Bull. 2022;45(9):1254-1258. doi: 10.1248/bpb.b22-00170.
18. Tanaka K, Kanie Y, Naitou M, Suzuki M, Umemura H, Tagami K, Sakai K, Furuta T, Yamada C, Izumi H, Yokooji T, Matsuo H, Ito K. [INSOLUBILITY AND ALTERATION OF ALLERGENIC ACTIVITY OF WHEAT PROTEINS IN PROCESSED FOODS]. Arerugi. 2017;66(3):222-230. doi: 10.15036/arerugi.66.222.
19. ,

Tanaka A, Sjölander S, Yokooji T, Matsuo H, Ito K. Exercise-induced allergic reactions on desensitization to wheat after rush oral immunotherapy. Allergy. 2020 Jun;75(6):1414-1422. doi: 10.1111/all.14182.

21. Nakagawa Y, Chinuki Y, Ogino R, Yamasaki K, Aiba S, Ugajin T, Yokozeki H, Kitamura K, Morita E. Cohort study of subclinical sensitization against galactose-α-1,3-galactose in Japan: Prevalence and regional variations. J Dermatol. 2022 Dec;49(12):1268-1277. doi: 10.1111/1346-8138.16570.

1. Tanaka K, Ogino R, Yamakawa S, Suda S, Hayashida K. Role and Function of Mesenchymal Stem Cells on Fibroblast in Cutaneous Wound Healing. Biomedicines. 2022 Jun 12;10(6):1391. doi: 10.3390/biomedicines10061391.
2. Ogino R, Yokooji T, Hayashida M, Suda S, Yamakawa S, Hayashida K. Emerging Anti-Inflammatory Pharmacotherapy and Cell-Based Therapy for Lymphedema. Int J Mol Sci. 2022 Jul 9;23(14):7614. doi: 10.3390/ijms23147614.
3. Morita E, Matsuo H, Kohno K, Yokooji T, Yano H, Endo T. A Narrative Mini Review on Current Status of Hypoallergenic Wheat Development for IgE-Mediated Wheat Allergy, Wheat-Dependent Exercise-Induced Anaphylaxis. Foods. 2023 Feb 23;12(5):954. doi: 10.3390/foods12050954.

1. _____, _____. , , . 2016 10 : 100-109. ISBN: 978-4-7878-2278-9.
2. , , _____. / / , , . 2020 9 : 226-230. ISBN: 978-4-521-74453-7.
3. _____, _____. , , . 2022 6 : 98-106. ISBN: 978-4-7878-2522-3.
4. _____. , PFAS , . 2022 10 : 837-840. ISBN: 01417-10.
5. _____. , , , 2021 12 : 33(12):5-9.ISSN 2187-8412.

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1. , , , _____, _____ 2019-004081,

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XBP1

[10] sXBP1mRNA

[9]

[1,3,4,6]

[15]

2020 P62

[20]

Aβ

[27] 4-HNE

[12, 26]

1. Hosoi T., Kohda T., Matsuzaki S., Ishiguchi M., Kuwamura A., Akita T., Tanaka J. and Ozawa K. (2016) Key role of HSP90 in leptin-induced STAT3 activation and feeding regulation. ***British Journal of Pharmacology*** 173: 2434-2445.
2. Hosoi T., Nakatsu K., Shimamoto A., Tahara H., and Ozawa K. (2016) Inhibition of telomerase causes vulnerability to endoplasmic reticulum stress-induced neuronal cell death. ***Neuroscience Letters*** 629: 241-244.
3. Thon M., Hosoi T., and Ozawa K. (2016) Dehydroascorbic acid-induced endoplasmic reticulum stress and leptin resistance in neuronal cells. ***Biochemical and Biophysical Research Communications*** 478: 716-720.
4. Hosoi T., Suyama Y., Kayano T., and Ozawa K. (2016) Flurbiprofen ameliorates glucose deprivation-induced leptin resistance. ***Frontiers in Pharmacology*** 7: 354.
5. Hosoi T., Kakimoto M., Tanaka K., Nomura J., and Ozawa K. (2016) Unique pharmacological property of ISRIB in inhibition of Aβ-induced neuronal cell death. ***Journal of Pharmacological Science*** 131: 292-295.

6. Thon M., Hosoi T., and Ozawa K. (2016) Insulin enhanced leptin-induced STAT3 signaling by inducing GRP78. ***Scientific Reports*** 6: 34312.
7. Vauthier1 V., Roujeau1 C., Chen1 P., Sarkis C., Migrenne S., Hosoi T., Ozawa K., Rouillé Y., Foretz1 M., Mallet J., Launay J., Magnan C., Jockers1 R. and Dam J. (2017) Endospanin 1 affects oppositely body weight regulation and glucose homeostasis by differentially regulating central leptin signaling. ***Molecular Metabolism*** 6: 159-172.
8. Mechanisms of the action of adenine on anti-allergic effects in mast cells. ***Immunity, Inflammation and Disease*** 6: 97-105.
9. Hosoi T., Nakashima M., and Ozawa K. (2018) Incorporation of the Endoplasmic Reticulum Stress-Induced Spliced Form of XBP1 mRNA in the Exosomes. ***Frontiers in Physiology*** 9:1357.
10. Hosoi T., Kimura H., Yamawaki Y., Mori K., and Ozawa K. (2019) Immobilization stress induces XBP1 splicing in the mouse brain. ***Biochemical and Biophysical Research Communications*** 508: 516-520
11. Abd El-Hafeez A.A., Khalifa H.O., Mahdy E.A.M., Sharma V., Hosoi T., Ghosh P., Ozawa K., Montano M.M., Fujimura T., Ibrahim A.R.N., Abdelhamid M.A.A., Pack S.P., Shouman S.A., and Kawamoto S. (2019) Anticancer effect of nor-wogonin (5, 7, 8-trihydroxyflavone) on human triple-negative breast cancer cells via downregulation of TAK1, NF-κB, and STAT3. ***Pharmacological Reports*** 71: 289-298.
12. Hosoi T., Kuwamura A., Thon M., Tsuchio K., Abd El-Hafeez A.A., and Ozawa K. (2019) Possible involvement of 4-hydroxy-2-nonenal in the pathogenesis of leptin resistance in obesity. ***American Journal of Physiology- Cell Physiology*** 316: C641-C648
13. Kamegashira A, Yanase Y*, Takahagi S, Saito R, Uchida K, Kawaguchi T, Ishii K, Tanaka A, Ozawa K, Hide M*. (2020) Histamine- or VEGF-induced tissue factor expression and gap formation between vascular endothelial cells are synergistically enhanced by LPS, TNF-α, IL-33 or IL-1β. ***J Dermatol.*** 2020; 47: 1293-1300.
14. Urabe T, Yanase Y, Motoike S, Harada K, Hide I, Tanaka S, Tsutsumi Y, Kawamoto M, Sakai N*. (2020) Propofol induces the elevation of intracellular calcium via morphological changes in intracellular organelles, including the endoplasmic reticulum and mitochondria. ***European Journal of Pharmacology.*** 2020. 2020 Oct 5;884:173303.
15. Yanase Y, Matsuo Y, Takahagi S, Kawaguchi T, Uchida K, Ishii K, Tanaka A, Matsubara D, Ozawa K, (2021) Hide M. Coagulation factors induce human skin mast cell- and basophil-degranulation via activation of complement 5 and the C5a receptor. ***J Allergy Clin Immunol.*** 2021 Mar;147(3):1101-1104.

Central Acting Hsp10 Regulates Mitochondrial Function, Fatty Acid Metabolism, and Insulin Sensitivity in the Hypothalamus. ***Antioxidants (Basel).*** 10: 711.

17. Horiuchi K, Tsuchio K, Matsushima G, Thon M, Hosoi T, Ozawa K. (2021) The possible role of biochanin A in ameliorating endoplasmic reticulum stress-induced leptin resistance. ***Neuroreport,*** 32 :983-987.
18. Kakegawa J, Ohtsuka S, Yokoyama M, Hosoi T, Ozawa K, Hatanaka T. (2021) Thermal proteome profiling reveals GPX4 as the target of the autophagy inducer conophylline. ***Molecular Pharmacology***, 100: 181-192.
19. Tanaka K, Kuramoto K, Nakagawa T, Nomura Y, Ozawa K, Hosoi T. (2022) COOH-terminal fragment of APP interacts with p62, forms an aggregate, and induces autophagic degradation in Alzheimer's cell model. ***American Journal of Physiology Cell Physiology*** 323: C1633-C1641.
20. Tanaka K, Kuramoto K, Nakagawa T, Nomura Y, Ozawa K, Hosoi T. (2022) COOH-terminal fragment of APP interacts with p62, forms an aggregate, and induces autophagic degradation in Alzheimer's cell model. ***American Journal of Physiology Cell Physiology*** 323: C1633-C1641.
21. Preninka AI, Kuriya K, Yazawa K, Yoshii M, Yanase Y, Jockers R, Dam J, Hosoi T, Ozawa K. (2022) Homocysteine causes neuronal leptin resistance and endoplasmic reticulum stress. ***PLOS One*** 17: e0278965.
22. Urabe T, Miyoshi H, Narasaki S, Yanase Y, Uchida K, Noguchi S, Hide M, Tsutsumi YM, Sakai N. (2022) Characterization of intracellular calcium mobilization induced by remimazolam, a newly approved intravenous anesthetic. ***PLOS One.*** 2022 Feb 1;17(2):e0263395. doi: 10.1371/journal.pone.0263395. eCollection 2022.
23. Numata T, Takahagi S,Ishii K, Morioke S, Kan T, Mizuno H ,Yanase Y, Kawaguchi T, Tanaka A, Hide M. (2022) Immunological Changes of Basophil Hyperreactivity to Sweat. ***Frontiers in Immunol.*** 2022 Jun 29. Vao.13, Article 883605.
24. Matsubara D, Yanase Y, Ishii K, Takahagi S, Tanaka A, Ozawa K, Hide M*. (2022) Basophils activation of patients with chronic spontaneous urticaria in response to C5a despite failure to respond to IgE-mediated stimuli. ***Frontiers in Immunol.*** 28 September 2022. Doi:10.3389/fimmu.2022.994823.
25. Yamawaki Y, Kimura H, Nagata S, Ozawa K, Hosoi T. (2022) Peripheral Immune Activation in Mice Elicits Unfolded Protein Responses Independent on MyD88 Pathway in the Liver but not the Hypothalamus and Hippocampus. ***Frontiers in Physiology*** 13:854538.
26. Preninka AI, Kuriya K, Yazawa K, Yoshii M, Yanase Y, Jockers R, Dam J, Hosoi T, Ozawa K. (2022) Homocysteine causes neuronal leptin resistance and endoplasmic reticulum stress. ***PLOS One*** 17: e0278965.
27. Hosoi T, Yazawa K, Imada M, Tawara A, Tohda C, Nomura Y, Ozawa K. (2023) Alkannin

attenuates amyloid β aggregation and Alzheimer's disease pathology. ***Molecular Pharmacology*** in press

H)r1H1wF[GHH

1. Giménez-Arnau AM, DeMontojoye L, Asero R, Cugno M, Kulthanan K, Yanase Y, Hide M, Kaplan AP. The Pathogenesis of Chronic Spontaneous Urticaria: The Role of Infiltrating Cells. J Allergy Clin Immunol Pract. 2021 Apr 3:S2213-2198(21)00374-3. doi: 10.1016/j.jaip.2021.03.033.
2. Yanase Y, Takahagi S, Ozawa K, Hide M*. The Role of Coagulation and Complement Factors for Mast Cell Activation in the Pathogenesis of Chronic Spontaneous Urticaria. Cells. 2021; 10(7):1759.
3. Link between endoplasmic reticulum stress and autophagy in neurodegenerative disesases. Toru Hosoi, Jun Nomura, Keigo Tanaka, Koichiro Ozawa, Akinori Nishi, and Yasuyuki Nimura. ***Endoplasimic Reticulum Stress in Diseases*** 4, 37-45, doi.org/10.1515/ersc-2017-0004 (2017)
4. Neuroprotective Effects of 4-phenylbutyric Acid and Its Derivatives: Possible Therapeutics for Neurodegenerative Diseases. Seisuke Mimori, Toru Hosoi, Masayuki Kaneko, Koichiro Ozawa, Tetsuto Kanzaki, Akinori Nishi and Yasuyuki Nomura. ***Journal of Health Science*** 5 (2017) 9-17, doi: 10.17265/2328-7136/2017.01.0025
5. Insulin enhanced leptin-induced STAT3 signaling by inducing GRP78. Mina Thon, Toru Hosoi, and Koichiro Ozawa. ***Scientific Reports*** 6, 34312, doi:10.1038/srep34312 (2016)

H--iH

1. Yanase Y, Hide M. (2021) Living-cell analysis by surface plasmon resonance and its medical application. Biomedical Engineering. Chapter7. Jenny Stanford Publishing. ISBN 9789814877633. November 30, 2021.

1. 2020-1297

2. 2015 , (2009-100894 2009 4 17 , 2009-251958 2009 11 2 , PCT/JP2010/002691 2010 4 14 , 5780549 2015 7 24)

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⌐ ≡ ╨ ╘ *Serratia marcescnes* ≠ ⏐ — ◕ ɳ ↑ ⍨ ≠ ╣ ═ ≡ —

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⌐ [1] ⌐ ≡ ⏐ ≠ ⌂ ╨ ╢ ˊ ϰ ϟ ╨ [2]

╠ ⌐ *Vibrio cholerae* ─ MATE ˊ ϰ ϟ VcmN — ╙ ╠ ⌐ [3,4]

◦ Ẅ ☼ — ╢ ⏐ ╨ ≤ ╢ ≤ ⩾ ≠

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ⶕ ⌐ ≈ ≡ ╨ ∫ [5-8] ╕ *S-* ⍺ Ł fi ♠ a1- ♥ ϰ Ζ ◒ ⌐

╨ ≤ ╨ ╠ ⌐ [9]

— ◕ ɳ ↑ ▬ ϰ Ᵽ ⌐ ╢ *Vibrio cholerae* O1 ┘ NAG Ɑ w ˈ ○ — ⩾ ◕ ɳ

↑ ╨ ≤ — ╨ ╠ ⌐ [10-13]

♥ ϰ Ζ ◒ *Streptomyces* —♪ fi ◦ Ɋ Ẅ ♂ ⌐ ≈ ≡ ⩽ ⍦ ≠ ⩵

╨ ╢ ≤ ⌐ ╠ ┤ ♪ fi ◦ Ɋ Ẅ ♂ ┼ — — ┤ ╖ ≤ — —♪ fi ◦ Ɋ Ẅ ♂ —

╠ ┤ ╢ ≤ ╨ [14] D- ◘ ▬ ◒ fi ♀ ˈ ϰ — ⌐ ╢ Nω-hydroxy-

l-arginine hydrolase ─ ╨ ╠ ⌐ [15]

˝ ⌐ ╢ LP28 , LY45 , PY45 , SN35N ╢ —

╨ ╠ ⌐ [16-18] 174A ⌐ ╢ — ķ ◒ Ł ˈ ○ ◦ ϰ ╨ ╠ ⌐

╢ ≤ ≤ ╙ ⌐ , SN35N — ◦ ☻ ♥ ♪ ○ ⍺ ϰ γ - ˈ ▪ Ẅ ♂ — ⩵ ╨ [19, 20]

⌐ ╢ NBRC14001 — ◕ ɳ ↑ ▬ ⍺ ϰ ◓ ╨ , ˊ ˈ ◀ ϰ ◒

fi = ▬ Ᵽ ≠ ╢ lucensomycin ╨ ╢ ≤ ╨ ╠ ⌐ [21]

⍦ — ⌐ ╢ AMED ─ ⫠

◦ — ╨ — ≤ ≡ — ≠ ⍦

╠ ╢ *Campylobacter jejuni* — ⩾ ◕ ɳ ↑ ╨ ≠ —

╢ ≡ ╢ *C. jejuni* ST4526 ─ ⌂ ≤ pTet W □ ˈ Ẅ ϟ = ☻ Ᵽ ⌐ ╠ ┤

╠ ┘ — ╨ ╠ ⌐ [22] ╕ ⩽ — ⩾ ⌐ ╠ ┤ ╠

╢ *Herbiconiux* ┘ *Paenibacillus* — ⩾ ◕ ɳ ↑ ╨ [23, 24]

˝ ⌐ ╢ — – ˝ ◦ ⁱ Ł ˈ ⊦ ◒ ♥ Ẅ ╨ ╢ ≤ ≤ ╙ ⌐ ,

Tn*10* ╠ ┘ ╨ ≡ ˝ ⌐ ╢ Ł = ϰ ☻ ˊ ♣ ϰ ⩾ ╨

[25]

⌐ ╢ ≠ ╢ NBRC14063 ╠ ┘ NBRC14836 — ◕ ɳ ↑

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1. Shinsuke Toba, Yusuke Minato, Yuma Kondo, Kanami Hoshikawa, Shu Minagawa, Shiho Komaki, Takanori Kumagai, Yasuyuki Matoba, Daichi Morita, Wakano Ogawa, Naomasa Gotoh, Tomofusa Tsuchiya, Teruo Kuroda (2019) Comprehensive analysis of resistance-nodulation-cell division superfamily (RND) efflux pumps from *Serratia marcescens*, Db10, *Scientific reports*, 9(1), pp. 4854, 20190319, DOI: 10.1038/s41598-019-41237-7
2. Rui Ting Ni, Motoyasu Onishi, Minako Mizusawa, Ryoko Kitagawa, Takanori Kishino, Futoshi Matsubara, Tomofusa Tsuchiya, Teruo Kuroda & Wakano Ogawa (2020) The role of RND-type efflux pumps in multidrug-resistant mutants of *Klebsiella pneumoniae*, *Scientific Reports*, 10(1), 20200702, DOI: 10.1038/s41598-020-67820-x
3. Tsukasa Kusakizako, Yoshiki Tanaka, Christopher J Hipolito, Teruo Kuroda, Ryuichiro Ishitani, Hiroaki Suga, Osamu Nureki (2016) LCP crystallization and X-ray diffraction analysis of VcmN, a MATE transporter from *Vibrio cholerae*, *ACTA CRYSTALLOGRAPHICA SECTION F-STRUCTURAL BIOLOGY COMMUNICATIONS*, 72, pp. 552-557, 20160622, DOI: 10.1107/S2053230X16008931
4. Tsukasa Kusakizako, Derek P. Claxton, Yoshiki Tanaka, Andrés D. Maturana, Teruo Kuroda, Ryuichiro Ishitani, Hassane S. Mchaourab, Osamu Nureki (2019) Structural Basis of H^+-Dependent Conformational Change in a Bacterial MATE Transporter, *STRUCTURE*, 27(2), pp. 293-301, 20190205, DOI :10.1016/j.str.2018.10.004
5. Kana Fujii, Daichi Morita, Kenji Onoda, Teruo Kuroda, Hiroyuki Miyachi (2016) Minimum structural requirements for cell membrane leakage-mediated anti-MRSA activity of macrocyclic bis(bibenzyl)s., *Bioorg Med Chem Lett.*, 26(9), pp. 2324-2327, 20160501, DOI: 10.1016/j.bmcl.2016.03.033
6. Yuuki Shimozu, Yuriko Kimura, Akari Esumi, Hiroe Aoyama, Teruo Kuroda, Hiroshi Sakagami and Tsutomu Hatano (2017) Ellagitannins of *Davidia involucrata*. I. Structure of Davicratinic Acid A and Effects of Davidia Tannins on Drug-Resistant Bacteria and Human Oral Squamous Cell Carcinomas, *MOLECULES*, 22(3), 20170315, DOI: 10.3390/molecules22030470
7. Yuuki Shimozu, Teruo Kuroda, Tomofusa Tsuchiya, and Tsutomu Hatano (2017) Structures and Antibacterial Properties of Isorugosins H-J, Oligomeric Ellagitannins from Liquidambar formosana with Characteristic Bridging Groups between Sugar Moieties, *JOURNAL OF NATURAL PRODUCTS*, 80(10), pp. 2723-2733, 20171027, DOI: 10.1021/acs.jnatprod.7b00496
8. Yohei Morishita, Yu Aoki, Mei Ito, Daisuke Hagiwara, Kensho Torimaru, Daichi Morita, Teruo

Kuroda, Hanako Fukano, Yoshihiko Hoshino, Masato Suzuki, Tohru Taniguchi, Keiji Mori, and Teigo Asai (2020) Genome Mining-Based Discovery of Fungal Macrolides Modified by glycosylphosphatidylinositol (GPI)-Ethanolamine Phosphate Transferase Homologues, *ORGANIC LETTERS*, 22(15), pp. 5876-5879, 20200807 DOI: 10.1021/acs.orglett.0c01975

9. Yu Ishima, Kaori Watanabe, Victor T. G. Chuang, Iyo Takeda, Teruo Kuroda, Wakano Ogawa, Hiroshi Watanabe, Yasunori Iwao, Tatsuhiro Ishida, Masaki Otagiri, Toru Maruyama (2018) *S*-Nitrosated -1-acid glycoprotein exhibits antibacterial activity against multidrug-resistant bacteria strains and synergistically enhances the effect of antibiotics, *FASEB BIOADVANCES*, 1(3), pp. 137-150, 20190204, DOI: 10.1096/fba.1018
10. Anirban Sarkar, Daichi Morita, Amit Ghosh, Goutam Chowdhury, Asish K. Mukhopadhyay, Keinosuke Okamoto and Thandavarayan Ramamurthy (2019) Altered Integrative and Conjugative Elements (ICEs) in Recent *Vibrio cholerae* O1 Isolated From Cholera Cases, Kolkata, India. *Front. Microbiol*, 6(10), pp. 2072, 20190906, DOI: 10.3389/fmicb.2019.02072
11. Daichi Morita, Masatomo Morita, Munirul Alam, Asish K. Mukhopadhyay, Fatema-tuz Johura, Marzia Sultana, Shirajum Monira, Niyaz Ahmed, Goutam Chowdhury, Shanta Dutta, Thandavarayan Ramamurthy, Prosenjit Samanta, Eizo Takahashi, Keinosuke Okamoto, Hidemasa Izumiya, and Makoto Ohnishi (2020) Whole-Genome Analysis of Clinical *Vibrio cholerae* O1 in Kolkata, India, and Dhaka, Bangladesh, Reveals Two Lineages of Circulating Strains, Indicating Variation in Genomic Attributes, *mBio*, 11(6), e01227-20. 20201106 DOI: 10.1128/mBio.01227-20
12. Daichi Morita, Eizo Takahashi, Masatomo Morita, Makoto Ohnishi, Tamaki Mizuno, Shin-ichi Miyoshi, Devarati Dutta, Thandavarayan Ramamurthy, Goutam Chowdhury, Asish K. Mukhopadhyay, Keinosuke Okamoto (2020) Genomic characterization of antibiotic resistance-encoding genes in clinical isolates of *Vibrio cholerae* non-O1/non-O139 strains from Kolkata, India: generation of novel types of genomic islands containing plural antibiotic resistance genes, *Microbiology and Immunology*, 64(6), pp. 435-444, 202006 DOI: 10.1111/1348-0421.12790
13. Eizo Takahashi, Sadayuki Ochi, Tamaki Mizuno, Daichi Morita, Masatomo Morita, Makoto Ohnishi, Hemanta Koley, Moumita Dutta, Goutam Chowdhury, Asish K Mukhopadhyay, Shanta Dutta, Shin-Ichi Miyoshi, Keinosuke Okamoto (2021) Virulence of Cholera Toxin Gene-Positive *Vibrio cholerae* Non-O1/non-O139 Strains Isolated From Environmental Water in Kolkata, India, *Front Microbiol*, 20(12), pp. 726273, 20210820 DOI: 10.3389/fmicb.2021.726273

14. Yasuyuki Matoba, Shogo Kihara, Yoshimi Muraki, Naohiko Bando, Hironari Yoshitsu, Teruo Kuroda, Miyuki Sakaguchi, Kure'e Kayama, Hulin Tai, Shun Hirota, Takashi Ogura, and Masanori Sugiyama (2017) Activation Mechanism of the Streptomyces Tyrosinase Assisted by the Caddie Protein, *Biochemistry*, 56(41), pp. 5593-5601, 20170913, DOI :10.1021/acs.biochem.7b00635
15. Kosuke Oda, Natsuki Shimotani, Teruo Kuroda, Yasuyuki Matoba (2020) Crystal structure of an N -hydroxy-l-arginine hydrolase found in the D-cycloserine biosynthetic pathway, *ACTA CRYSTALLOGRAPHICA SECTION D-STRUCTURAL BIOLOGY*, 76, pp. 506-514, 20200601, DOI: 10.1107/S2059798320004908
16. Higashikawa, F., Noda, M., Awaya, T., Danshiitsoodol, N., Matoba, Y., Kumagai, T., Sugiyama M. Anti-obesity effect of *Pediococcus pentosaceus* LP28 on overweight subjects: a randomized, double-blind, placebo-controlled clinical trial. *Eur. J. Clin. Nutr.* 70, 582-587, May 2016. doi: 10.1038/ejcn.2016.17.
17. Panthavee, W., Noda, M., Danshiitsoodol, N., Kumagai, T., Sugiyama, M. Characterization of exopolysaccharides produced by thermophilic lactic acid bacteria isolated from tropical fruits of Thailand. *Biol. Pharm. Bull*. 40, 621-629, May 2017. doi: 10.1248/bpb.b16-00856.
18. Noda, M., Shiraga, M., Kumagai, T., Danshiitsoodol, N., Sugiyama, M. Characterization of the SN35N strain–specific exopolysaccharide encoded in the whole circular genome of a plant-derived *Lactobacillus plantarum. Biol. Pharm. Bull*. 41, 536-545, April 2018. doi: 10.1248/bpb.b17-00840.
19. Noda, M., Miyauchi, R., Danshiitsoodol, N., Matoba, Y., Kumagai, T., Sugiyama, M. The expression of bacteriocin production and self-resistance in *Lactobacillus brevis* 174A is mediated by two regulatory proteins. *Appl. Environ. Microbiol.* 84, e02707-02717, March 2018. DOI: 10.1128/AEM.02707-17.
20. Matoba, Y., Noda, M., Yoshida, T., Oda, K., Ezumi, Y., Yasutake, C., Izuhara-Kihara, H., Danshiitsoodol, N., Kumagai, T., Sugiyama, M. Catalytic specificity of the *Lactobacillus plantarum* cystathionine γ-lyase presumed by the crystallographic analysis. *Sci. Rep.* 10, 14886, September 2020. DOI: 10.1038/s41598-020-71756-7.
21. Sho Nishimura, Kazune Nakamura, Miyako Yamamoto, Daichi Morita, Teruo Kuroda, and Takanori Kumagai (2021) Genome Sequence-Guided Finding of Lucensomycin Production by *Streptomyces achromogenes* Subsp. *streptozoticus* NBRC14001, *MICROORGANISMS*, 10(1), 20211226, DOI: 10.3390/microorganisms10010037
22. Daichi Morita, Hiroki Arai, Junko Isobe, Emi Maenishi, Takanori Kumagai, Fumito Maruyama, Teruo Kuroda (2023) Whole-Genome and Plasmid Comparative Analysis of *Campylobacter jejuni* from Human Patients in Toyama, Japan, from 2015 to 2019, *Microbiology Spectrum*, 11(1),

pp. e02659-22, 20230109, DOI: 10.1128/spectrum.02659-22, س ≤ ─ نجم

23. Miona Yajima, Yoshi Yamano, Daichi Morita, Sachiko Sugimoto, Teruo Kuroda, Katsuyoshi Matsunami (2022) Complete Genome Sequence of *Herbiconiux* sp. Strain L3-i23 Isolated from Soil in Japan, *Microbiol Resour Announc*, 11(11), pp. e00815-22, 20221117, DOI: 10.1128/mra.00815-22
24. Daichi Morita, Yoshi Yamano, Sachiko Sugimoto, Katsuyoshi Matsunami, Teruo Kuroda (2022) Draft Genome Sequence of *Paenibacillus* sp. Strain L3-i20, Isolated from Soil in Japan, *Microbiol Resour Announc*, pp. e0007722, 20220516, DOI: 10.1128/mra.00077-22
25. Noda, M., Kumagai, T., Yamaoka, M., Danshiitsoodol, N., Sugiyama, M. (2023) Construction of a temperature-sensitive shuttle vector between lactic acid bacteria and *Escherichia coli* and its application to a Tn*10*-based random mutagenesis tool in lactic acid bacteria. *Biol. Pharm. Bull*., in press, March 2023.

1. ض _____ 2 ⊢ ╪ ≤ Ẇ, , 2018
2. _____ ⊢ Ẇ ◦ ♫ ▬ ◦ ˡ Ẇ ☼ 15 ⊢ 2 , ج , 2016

1. _____ 6441065 , 2018 11 30
2. _____ ⌟ 6084084 , 2017 02 03 ,
3. _____, _____, ر , ؤ ج , . ϖ ł ▫ ○ ◖ ♫ ◌ ☻ ⊢ ϖ א Ł ◘ ♀ ▶ ☻ ─ ⌂ . 2017-108739. 2017 6 .

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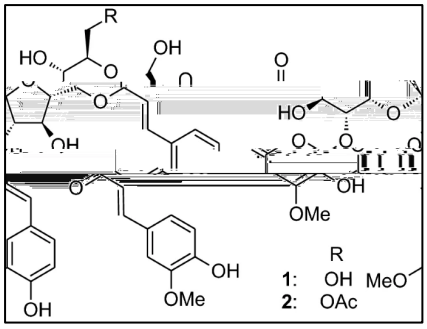

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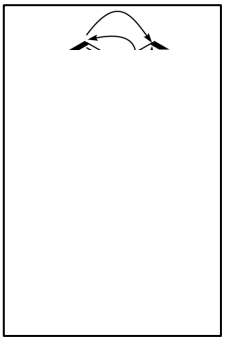

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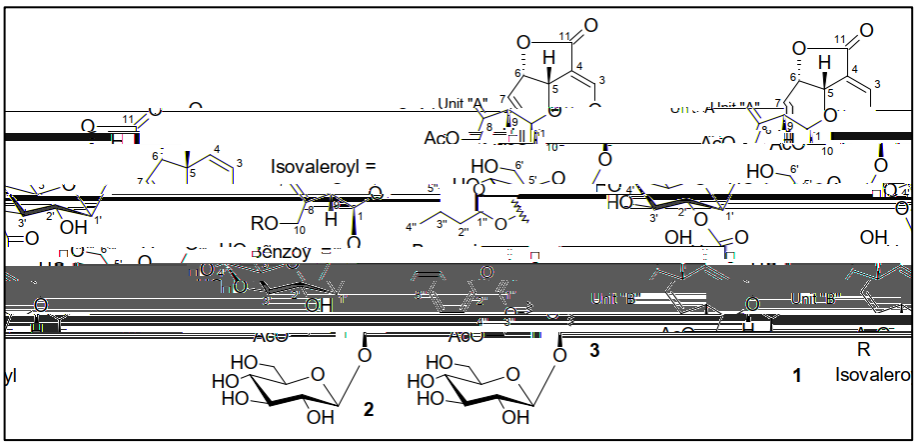

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1. Four new glucosides from the aerial parts of *Equisetum sylvaticum*

   By: Wang, Zhichao; Tian, Yusen; Sugimoto, Sachiko; Yamano, Yoshi; Kawakami, Susumu; Otsuka, Hideaki; Matsunami; Katsuyoshi

   Journal of Natural Medicines (2022), 76(4), 832-841 DOI: 10.1007/s11418-022-01643-0

2. Crotofolane-type diterpenoids: crotocascarins R-V, rearranged trinorcrotofolane: crotocascarin δ and a phorbol derivative from the leaves of *Croton cascarilloides*

   Kawakami, Susumu; Inagaki, Masanori; Nishimura, Motohiro; Otsuka, Hideaki; Matsunami; Katsuyoshi; Nehira, Tatsuo; Shinzato, Takakazu

   Chemical & Pharmaceutical Bulletin (2022), 70(4), 286-292 DOI: 10.1248/cpb.c21-01034

3. Omphalines A-E: ent-rosane-type diterpenoids from the madagascar endemic plant, *Omphalea oppositifolia*

   Kawakami, Susumu; Kanagawa, Chieko; Rakotondraibe, Liva Harinantenaina; Inagaki, Masanori; Nishimura, Motohiro; Otsuka, Hideaki; Seyama, Toshio; Matsunami; Katsuyoshi; Rakotoarisoa, Falitiana Marrino; Rakotonandrasana, Stephan Richard; et al

   Chemical & Pharmaceutical Bulletin (2022), 70(12), 901-906 DOI: 10.1248/cpb.c22-00648

4. Cytotoxic and antileishmanial triterpenes of *Tabebuia aurea* (Silva Manso) leaves

   Mahmoud, Amany Hamouda; Mahmoud, Basma Khalaf; Samy, Mamdouh Nabil; Fouad, Mostafa Ahmad; Kamel, Mohamed Salah; Matsunami; Katsuyoshi

   Natural Product Research (2022), 36(23), 6181-6185 DOI: 10.1080/14786419.2022.2062350

5. Cytotoxicity and chemical profiling of the Red Sea soft corals *Litophyton arboreum*

   Mahmoud, Amany Hamouda; Zidan, Sabry A. H.; Samy, Mamdouh Nabil; Alian, Abdallah; Abdelmohsen, Usama Ramadan; Fouad, Mostafa Ahmed; Kamel, Mohamed Salah; Matsunami; Katsuyoshi

   Natural Product Research (2022), 36(16), 4261-4265 DOI: 10.1080/14786419.2021.1974437

6. Diterpenes and sterols from the Red Sea soft coral *Sarcophyton trocheliophorum* and their cytotoxicity and anti-leishmanial activities

   Zidan, Sabry A. H.; Abdelhamid, Reda A.; Alian, Abdallah; Fouad, Mostafa A.; Matsunami; Katsuyoshi ; Orabi, Mohamed A. A.

   Journal of Asian Natural Products Research (2022), 24(8), 794-802 DOI: 10.1080/10286020.2021.1979522

7. Isolation of three new diterpenes from *Dodonaea viscosa*

   Sagara, Toshinori; Sugimoto, Sachiko; Yamano, Yoshi; Nehira, Tatsuo; Masuda, Kazuma; Otsuka, Hideaki; Matsunami; Katsuyoshi

   Chemical & Pharmaceutical Bulletin (2021), 69(1), 40-47 https://doi.org/10.1248/cpb.c20-00327

8. Six new phenylpropanoid derivatives from chemically converted extract of *Alpinia galanga* (L.) and their antiparasitic activities

   Sulistyowaty, Melanny Ika ; Uyen, Nguyen Hoang; Suganuma, Keisuke; Chitama, Ben-Yeddy Abel; Yahata, Kazuhide; Kaneko, Osamu ; Sugimoto, Sachiko; Yamano, Yoshi; Kawakami, Susumu ; Otsuka, Hideaki; Matsunami; Katsuyoshi

   Molecules (2021), 26(6), 1756 https://doi.org/10.3390/molecules26061756

9. Symplocosins C

Yamano, Yoshi; Otsuka, Hideaki; Matsunami; Katsuyoshi
Molecules (2020), 25(11), 2500 DOI: 10.3390/molecules25112500

15. Ebenamariosides A-D: triterpene glucosides and megastigmanes from the leaves of *Diospyros maritima*
Kawakami, Susumu; Miura, Erika; Nobe, Ayaka; Inagaki, Masanori; Nishimura, Motohiro; Matsunami; Katsuyoshi ; Otsuka, Hideaki; Aramoto, Mitsunori
Chemical & Pharmaceutical Bulletin (2019), 67(12), 1337-1346 DOI: 10.1248/cpb.c19-00803

16. A New Macrolactone, Racemolide Along With Seven Known Compounds With Biological Activities From Mangrove Plant, *Lumnitzera racemosa*
Gomaa Darwish, Ahmed Gomaa; Samy, Mamdouh Nabil; Sugimoto, Sachiko; Otsuka, Hideaki; Matsunami; Katsuyoshi
Natural Product Communications (2019), 14(6), 1934578X19861255
https://doi.org/10.1177/1934578X198612

17. Isolation of sesquiterpene-amino acid conjugates, Onopornoids A-D, and a flavonoid glucoside from *Onopordum alexandrinum*
Sugimoto, Sachiko; Yamano, Yoshi; Desoukey, Samar Y.; Katakawa, Kazuaki; Wanas, Amira S.; Otsuka, Hideaki; Matsunami; Katsuyoshi
Journal of Natural Products (2019), 82(6), 1471-1477 DOI: 10.1021/acs.jnatprod.8b00948

18. Lasianosides A-E: new iridoid glucosides from the leaves of *Lasianthus verticillatus* (Lour.) Merr. And their antioxidant activity
Al-Hamoud, Gadah Abdulaziz; Orfali, Raha Saud; Perveen, Shagufta; Mizuno, Kenta; Takeda, Yoshio; Nehira, Tatsuo; Masuda, Kazuma; Sugimoto, Sachiko; Yamano, Yoshi; Otsuka, Hideaki; Matsunami; Katsuyoshi
Molecules (2019), 24(21), 3995 DOI: 10.3390/molecules24213995

19. Four new flavonoids isolated from the aerial parts of *Cadaba rotundifolia* Forssk. (Qadab)
Al-Hamoud, Gadah Abdulaziz; Orfali, Raha Saud; Sugimoto, Sachiko; Yamano, Yoshi; Alothyqi, Nafee; Alzahrani, Ali Mohammed; Matsunami; Katsuyoshi
Molecules (2019), 24(11), 2167 DOI: 10.3390/molecules24112167

20. Eight ent-kaurane diterpenoid glycosides named diosmariosides A-H from the leaves of *Diospyros maritima* and their cytotoxic activity
Kawakami, Susumu; Nishida, Shoko; Nobe, Ayaka; Inagaki, Masanori; Nishimura, Motohiro; Matsunami; Katsuyoshi; Otsuka, Hideaki; Aramoto, Mitsunori; Hyodo, Tadashi; Yamaguchi, Kentaro
Chemical & Pharmaceutical Bulletin (2018), 66(11), 1057-1064 DOI: 10.1248/cpb.c18-00529

21. Nematicidal compounds of *Peperomia japonica*

Nagashima, Kazumi; Yamano, Yoshi; Sugimoto, Sachiko; Ishiwata, Kenji; Kanuka, Hirotaka; Otsuka, Hideaki; Matsunami; Katsuyoshi

Phytochemistry Letters (2018), 27, 30-35 https://doi.org/10.1016/j.phytol.2018.06.015

22. Ardisiatetrons A and B: tetronic acid derivatives and triterpenes from the leaves of *Ardisia quinquegona* and their biological activity leishmania activity

Asaumi, Shintaro; Kawakami, Susumu; Sugimoto, Sachiko; Matsunami; Katsuyoshi; Otsuka, Hideaki; Shinzato, Takakazu

Chemical & Pharmaceutical Bulletin (2018), 66(7), 757-763 DOI: 10.1007/s11418-021-01513-1

23. Phenolic compounds from the leaves of *Breynia officinalis* and their tyrosinase and melanogenesis inhibitory activities

Sasaki, Ayano; Yamano, Yoshi; Sugimoto, Sachiko; Otsuka, Hideaki; Matsunami; Katsuyoshi; Shinzato, Takakazu

Journal of Natural Medicines (2018), 72(2), 381-389 DOI: 10.1007/s11418-017-1148-8

24. Biological activity of *Entada phaseoloides* and *Entada rheedei*

Sugimoto, Sachiko; Matsunami; Katsuyoshi; Otsuka, Hideaki

Journal of Natural Medicines (2018), 72(1), 12-19 DOI: 10.1007/s11418-017-1146-x

25. Microtropins Q-W, ent-labdane glucosides: microtropiosides G-I, ursane-type triterpene diglucoside and flavonol glycoside from the leaves of *Microtropis japonica*

Terazawa, Saori; Uemura, Yuka; Koyama, Yuka; Kawakami, Susumu; Sugimoto, Sachiko; Matsunami; Katsuyoshi; Otsuka, Hideaki; Shinzato, Takakazu; Kawahata, Masatoshi; Yamaguchi, Kentaro

Chemical & Pharmaceutical Bulletin (2017), 65(10), 930-939 DOI: 10.1248/cpb.c17-00459

26. Aliphatic glucoside, zanthoionic acid and megastigmane glucosides: zanthoionosides A-E from the leaves of *Zanthoxylum ailanthoides*

Teshima, Serika; Kawakami, Susumu; Sugimoto, Sachiko; Matsunami; Katsuyoshi; Otsuka, Hideaki; Shinzato, Takakazu

Chemical & Pharmaceutical Bulletin (2017), 65(8), 754-761 DOI: 10.1248/cpb.c17-00211

27. Chemical structures of constituents from the leaves of *Polyscias balfouriana*

Sugimoto, Sachiko; Yamano, Yoshi; Khalil, Hany Ezzat; Otsuka, Hideaki; Kamel, Mohamed Salah; Matsunami; Katsuyoshi

Journal of Natural Medicines (2017), 71(3), 558-563 DOI: 10.1007/s11418-017-1081-x

28. Crotofolane-type diterpenoids, crotocascarins L-Q, and a rearranged crotofolane-type diterpenoid, neocrotocascarin, from the stems of *Croton cascarilloides*

Kawakami, Susumu; Inagaki, Masanori; Matsunami; Katsuyoshi; Otsuka, Hideaki; Kawahata,

Masatoshi; Yamaguchi, Kentaro
Chemical & Pharmaceutical Bulletin (2016), 64(10), 1492-1498 DOI: 10.1248/cpb.c16-00500

29. Dianthosaponins G-I, triterpene saponins, an anthranilic acid amide glucoside and a flavonoid glycoside from the aerial parts of Dianthus japonicus and their cytotoxicity
Kanehira, Yuka; Kawakami, Susumu; Sugimoto, Sachiko; Matsunami; Katsuyoshi; Otsuka, Hideaki
Journal of Natural Medicines (2016), 70(4), 816-824 DOI: 10.1007/s11418-016-1019-8

30. Sulfated glucosides of an aliphatic alcohol and monoterpenes, and megastigmanes from the leaves of *Meliosma pinnata* spp. *arnottiana*
Uemura, Yuka; Kawakami, Susumu; Sugimoto, Sachiko; Matsunami; Katsuyoshi; Otsuka, Hideaki; Shinzato, Takakazu
Chemical & Pharmaceutical Bulletin (2016), 64(6), 638-643 https://doi.org/10.1248/cpb.c16-00148

31. New isolinariins C, D and E, flavonoid glycosides from *Linaria japonica*
Widyowati, Retno; Sugimoto, Sachiko; Yamano, Yoshi; Sukardiman; Otsuka, Hideaki; Matsunami; Katsuyoshi
Chemical & Pharmaceutical Bulletin (2016), 64(5), 517-521 DOI: 10.1248/cpb.c16-00073

32. Officinalioside, a new lignan glucoside from *Borago officinalis* L.
Samy, Mamdouh Nabil; Hamed, Ashraf Nageeb El-Sayed; Sugimoto, Sachiko; Otsuka, Hideaki; Kamel, Mohamed Salah; Matsunami; Katsuyoshi
Natural Product Research (2016), 30(8), 967-972 DOI: 10.1080/14786419.2015.1088540

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1. Validation of *Cis* and *Trans* Modes in Multistep Phosphotransfer Signaling of Bacterial Tripartite Sensor Kinases by Using Phos-tag SDS-PAGE, *PLOS ONE*, e0148294, 16 pages (2016), E. Kinoshita-Kikuta, E. Kinoshita, Y. Eguchi, and T. Koike. doi:10.1371/journal.pone.0148294
2. A Phos-tag SDS-PAGE method that effectively uses phosphoproteomic data for profiling the phosphorylation dynamics of MEK1, *Proteomics*, 16, 1825-1836 (2016), E. Kinoshita, E. Kinoshita-Kikuta, Y. Kubota, M. Takekawa, and T. Koike. doi:10.1002/pmic.201500494
3. A novel thiol-affinity micropipette tip method using zinc(II)–cyclen-attached agarose beads for enrichment of cysteine-containing molecules, *Journal of Chromatography B*, 1031, 195-201 (2016), H. Kusamoto, A. Shiba, N. Koretake, H. Fujioka, Y. Hieda, E. Kinoshita-Kikuta, E. Kinoshita, and T. Koike. doi:10.1016/j.jchromb.2016.07.049
4. Specific glutamic acid residues in targeted proteins induce exaggerated retardations in Phos-tag SDS-PAGE migration, *Electrophoresis*, 38, 1139-1146 (2017), E. Kinoshita, E. Kinoshita-Kikuta, K. Karata, T. Kawano, A. Nishiyama, M. Yamato, and T. Koike. doi:10.1002/elps.201600520
5. Phos-tag SDS-PAGE methodology that effectively uses phosphoproteomic data for profiling the phosphorylation dynamics of MEK1, *Journal of Electrophoresis*, 61 9-15 (2017), E. Kinoshita, E. Kinoshita-Kikuta, and T. Koike. doi:10.2198/electroph.61.9
6. A Phos-tag-based micropipette-tip method for rapid and selective enrichment of phosphopeptides, *Electrophoresis*, 38, 2447-2455 (2017), E. Tianfei Yuan, Y. Ino, M. Kawaguchi, Y. Kimura, H. Hirano, E. Kinoshita-Kikuta, E. Kinoshita, and T. Koike. doi:10.1002/elps.201700175
7. TAMRA/TAMRA fluorescence quenching systems for the activity assay of alkaline phosphatase, *Sensors*, 17, 1877-1888 (2017), A. Shiba, E. Kinoshita-Kikuta, E. Kinoshita, and T. Koike. doi:10.3390/s17081877
8. A simple method for determining the ligand affinity toward a zinc-enzyme model by using a TAMRA/TAMRA interaction, *Dalton Transactions*, 47, 1841-1847 (2018), H. Kusamoto, A. Shiba, M. Tsunehiro, H. Fujioka, E. Kinoshita-Kikuta, E. Kinoshita, and T. Koike. doi:10.1039/C7DT04364C
9. Increase in constitutively active MEK1 species by introduction of MEK1 mutations identified in cancers, *BBA Proteins and Proteomics*, 1867, 62-70 (2019), E. K.-Kikuta, E. Kinoshita, S. Ueda, Y. Ino, Y. Kimura, H. Hirano, and T. Koike. doi:10.1016/j.bbapap.2018.05.004
10. A method for profiling the phosphorylation state of tyrosine protein kinases, *BBA Proteins and Proteomics*, 1867, 71-75 (2019), Y. Uezato, I. Kameshita, K. Morisawa,S. Sakamoto, E. Kinoshita, E. K.-Kikuta, T. Koike, and Y. Sugiyama. doi:10.1016/j.bbapap.2018.05.003
11. Gel-based analysis of protein phosphorylation status by rapid fluorometric staining using TAMRA-labeled Phos-tag, *Journal of Electrophoresis*, 63, 255-32 (2019), H. Kusamoto, E. K.-

Kikuta, T. Nishimura, T. Nagai, E. Kinoshita, and T. Koike. doi:10.2198/jelectroph.63.25

12. Quantitative monitoring of His and Asp phosphorylation in a bacterial signaling system by using Phos-tag Magenta/Cyan fluorescent dyes, *Electrophoresis*, 45, 3005-3013 (2019), E. K.-Kikuta, H. Kusamoto, S. Ono, K. Akayama, Y. Eguchi, M. Igarashi, T. Okajima, R. Utsumi, E. Kinoshita, and T. Koike. doi:10.1002/elps.201900261
13. A strategy to identify protein-N-myristoylation-dependent phosphorylation reactions of cellular proteins by using Phos-tag SDS-PAGE, *PLoS ONE*, 14, 225510-225527, (2019), E. K.-Kikuta, A. Tanikawa, A. Kiwado, K. Moriya, E. Kinoshita, T. Koike, T. Utsumi. doi:10.1371/journal.pone.0225510
14. An immuno-dot blot assay for screening histidine kinase inhibitors, *Analytical Biochemistry*, 600, 113765-113768 (2020), E. K.-Kikuta, S. Maruta, Y. Eguchi, M. Igarashi, T. Okajima, R. Utsumi, E. Kinoshita, and T. Koike. doi.org/10.1016/j.ab.2020.113765
15. Phos-tag-based micropipette-tip method for analysis of phosphomonoester-type impurities in synthetic oligonucleotides, *Journal of Chromatography B*, 1151, 122198-122206 (2020), M. Tsunehiro, K. Sasaki, E. K.-Kikuta, E. Kinoshita, and T. Koike. doi.org/10.1016/j.jchrimb.2020.122198
16. Crystal Structure of [3-(1,4,7,10-Tetraazacyclododecan-1-yl)propan-1-amine]zinc(II) Bis(perchlorate), *X-ray Structure Analysis Online*, 36, 46-47 (2020), Y. Ichimaru, M. Imai, H. Fujioka, T. Koike, H. Kurosaki, and K. Kato. doi.org/10.2116/xraystruct.36.43
17. Protein-*N*-myristoylation-dependent phosphorylation of serine-13 of tyrosine kinase Lyn by casein kinase 1γ at the Golgi during intracellular protein traffic, *Scientific Reports*, 10, 16273-16285 (2020), E. K.-Kikuta, T. Utsumi, A. Miyazaki, C. Tokumoto, K. Doi, H. Harada, E. Kinoshita, and T. Koike. doi.org/10.1038/s41598-020-73248-0
18. A dot-blot-staining method for detecting phosphoproteins with a Phos-tag Aqua fluorescent dye, *Journal of Electrophoresis*, 64, 7-11 (2020), E. K.-Kikuta, K. Akayama, E. Kinoshita, and T. Koike. doi:10.2198/jelectroph.64.7
19. An assay of human tyrosine protein kinase activities by using an Escherichia coli protein-expression system, BioTechniques, 70, 209-217 (2021), E. K.-Kikuta, M. Yoshimoto, M. Yano, E. Kinoshita, and T. Koike. doi:10.2144/btn-2020-0154
20. Crystal Structure of [^{1}(1),^{1}(4),^{1}(10),^{5}(1),^{5}(4),^{5}(7),^{5}(10)-octaaza-1,5(1,4)-dicyclododecana-3,7(1,3)-dibenzenacyclo-octaphane]zinc(II) tetrakis(nitrate), [*m*,*m*-bis(Zn^{II}-cyclen)]$(NO_3)_4$, *X-ray Structure Analysis Online*, 37, 15-16 (2021), Y. Ichimaru, J. Wanchun, Y. Yamaguchi, K. Sugiura, M. Imai H. Kurosaki, H. Fujioka, T. Koike, Y. Hieda, and K. Kato. doi.org/10.2116/xraystruct.37.15
21. Aqua(1,4,7,10-tetraazacyclodecane–cyclen)zinc(II) diperchlorate, *IUCrData*, 6, x210397, 19p

(2021), Y. Ichimaru, K. Kato, H. Kurosaki, H. Fujioka, M. Sakai, Y. Yamaguchi, J. Wanchun, K. Sugiura, M.Imai, and T. Koike. doi.org/10.1107/S2414314621003977

22. Crystal Structure of bis{1,3-bis[bis(pyridin-2-ylmethyl)amino]propan-2-olato-dizinc(II)}-orthophosphate tris(perchlorate) octahydrate, $[(\text{Phos-tag})_2\text{-}PO_4^{3-})](ClO_4^{-})_3\cdot 8H_2O$, *X-ray Structure Analysis Online*, 37, 87-88 (2021), Y. Ichimaru, K. Kato, W. Jin, K. Sugiura, E. K.-Kikuta, E. Kinoshita, H. Kurosaki, and T. Koike. doi.org/10.2116/xraystruct.37.87
23. Characterization of the Binding of Adenosine-5'-monophosphate to a μ-Type Alkoxide-linked Dinuclear Zinc(II) Complex in Crystal and Solution State, *Bulletin of the Chemical Society of Japan*, 94, 2670-2677 (2021), E. K.-Kikuta, Y. Ichimaru, Y. Yamano, K. Kato, H. Kurosaki, E. Kinoshita, and T. Koike. doi:10.1246/bcsj.20210280
24. Characterization of phosphorylation status and kinase activity of Src family kinases expressed in cell-based and cell-free protein expression systems, *Biomolecules*, 11, 1448-1462 (2021), E. K.-Kikuta, E. Kinoshita, M. Suga, M. Higashida, Y. Yamane, T. Nakamura, and T. Koike. doi.org/10.3390/biom11101448
25. Evaluation of four phosphopeptide enrichment strategies for mass spectrometry–based proteomic analysis, *Proteomics*, 2100216, 1-8 (2021), Y. Ino, E. Kinoshita, E. K.-Kikuta, T. Akiyama, Y. Nakai, M. Osada, A. Ryo, H. Hirano, T. Koike, and Y. Kimura. doi.org/10.1002/pmic.202100216
26. Crystal Structure of $[\{m,m\text{-bis}(Zn^{II}\text{-cyclen})\}_3(\mu_2\text{-}CO_3)_2(H_2O)_2](ClO_4)_8\cdot H_2O$, *X-ray Structure Analysis Online*, 38, 53-55 (2022), Y. Ichimaru, K. Kato, K. Sugiura, C. Hirata, W. Jin, H. Fujioka, H. Kurosaki, and T. Koike. doi.org/10.2116/xraystruct.38.53
27. [1,4,8,11-Tetraazacyclotetradecane-κ^4N bis-nitrato-κ^2O,O′ zinc(II)] methanol solvate, IUCrData, 7, x220854, 9p (2022), Y. Ichimaru, K. Kato, M. Kurihara, W. Jin, T. Koike, and H. Kurosaki. doi.org/10.1107/S2414314622008549
28. Use of Escherichia coli expression system for analyzing kinase motifs, *Journal of Electrophoresis*, 66, 13-20 (2022), E. Kinoshita-Kikuta, Y. Ino, Y. Kimura, T. Akiyama, E. Kinoshita, and T. Koike. doi:10.2198/jelectroph. 66.13
29. Characterization of Zinc(II) Complex of 1,4,7,10-Tetrazacyclododecane and Deprotonated 5-Fluorouracil (FU) in Crystalline/Solution States and Evaluation of Anticancer Activity: Approach for Improving the Anticancer Activity of FU, Inorganic Chemistry Communications, 147, 110221-110226 (2023), Y. Ichimaru, K. Katoa, R. Nakatani, K. Sugiura, Hi. Mizutani, E. K,-Kikuta, T. Koike, W. Jin, M. Imai, and H. Kurosaki. doi.org/10.1016/j.inoche.2022.110221

H)r1H1wF[5HH

1. Phos-tag
   , 64, 35-39 (2020), _____ _____ _____. doi:10.2198/electroph.64.35
2. Phos-tag

, 93, 877-882 (2021), _____ _____ _____. doi:10.14952/SEIKAGAKU.2021.930877

3. "Recent advances in the Phos-tag technique focused on the analysis of phosphoproteins in a bacterial two-component system", *Journal of Proteomics*, 252, 104429, 5p (2022), E. Kinoshita-Kikuta, E. Kinoshita, and T. Koike. doi:10.1016/j.jprot.2021.104429.
4. "History of Phos-tag technology for phosphoproteomics", *Journal of Proteomics*, 252, 104432, 7p (2022), E. Kinoshita, E. Kinoshita-Kikuta, and T. Koike. doi:10.1016/j.jprot.2021.104432
5. "Phos-tag-based phosphate affinity chromatographic techniques", *Journal of Chromatography Open*, 2, 10051, 11p (2022), E. Kinoshita-Kikuta, E. Kinoshita, and T. Koike. doi:10.1016/j.jcoa.2022.100051
6. Src

, 66, 71-97 (2022), _____ _____ _____. doi:10.2198/electroph.66.71

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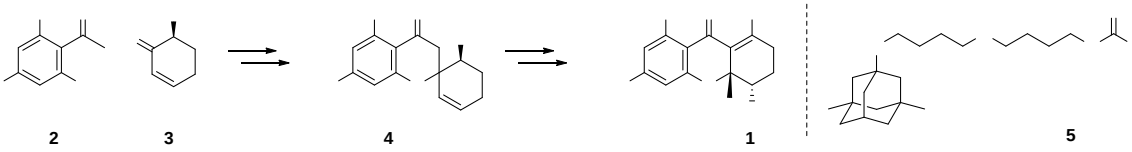

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[4] *Streptomyces* (**8**)

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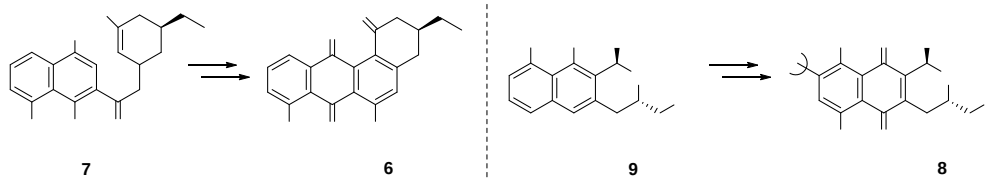

1. Adachi, K.; Hasegawa, S.; Katakawa, K.; Kumamoto, T. Total Synthesis of (+)-Blennolide C and (+)-Gonytolide C via Spirochromanone. *Tetrahedron Lett.* **2017**, *58* (47), 4479 4482. 2017 11 , DOI: 10.1016/j.tetlet.2017.10.038.
2. Kumamoto, T.; Hasegawa, S.; Adachi, K.; Katakawa, K. Total Synthesis of (±)-4-Deoxyblennolide C via Spirochromanone. *Heterocycles* **2021**, *103* (2), 1064-1077. 2021 2 , DOI: 10.3987/COM-20-S(K)60.
3. Kumamoto, T.; Nakajima, M.; Uga, R.; Ihayazaka, N.; Kashihara, H.; Katakawa, K.; Ishikawa,

T.; Saiki, R.; Nishimura, K.; Igarashi, K. Design, Synthesis, and Evaluation of Polyamine-Memantine Hybrids as NMDA Channel Blockers. *Bioorg. Med. Chem.* **2018**, *26* (3), 603–608. 2018 2 , DOI: 10.1016/j.bmc.2017.12.021.

4. Miyake, H.; Nakajima, R.; Kumamoto, T. Asymmetric Total Synthesis of Brasiliquinones B and C via Oxidative Cyclization of a Hydroquinone-Silyl Enol Ether Hybrid. *J. Org. Chem.* **2022**, *87* (18), 12491–12497. 2022 8 , DOI: 10.1021/acs.joc.2c01653.
5. Hashimoto, M.; Taguchi, T.; Ishikawa, K.; Mori, R.; Hotta, A.; Watari, S.; Katakawa, K.; Kumamoto, T.; Okamoto, S.; Ichinose, K. Unveiling Two Consecutive Hydroxylations: Mechanisms of Aromatic Hydroxylations Catalyzed by Flavin - Dependent Monooxygenases for the Biosynthesis of Actinorhodin and Related Antibiotics. *ChemBioChem* **2020**, *21* (5), 623–627. 2019 9 , DOI: 10.1002/cbic.201900490.

6. Kumamoto, T.; Kainuma, M.; Takahashi, A.; Matsuo, Y.; Katakawa, K.; Taguchi, T.; Ichinose, K. Total Synthesis of 6-Deoxydihydrokalafungin, a Key Biosynthetic Precursor of Actinorhodin, and Its Epimer. *Molecules* **2021**, *26* (21), 6397. 2021 10 , DOI: 10.3390/molecules26216397.

7. Hashimoto, M.; Watari, S.; Taguchi, T.; Ishikawa, K.; Kumamoto, T.; Okamoto, S.; Ichinose, K. Actinorhodin Biosynthesis Terminates with an Unprecedented Biaryl Coupling Reaction. *Angew. Chem. Int. Ed.* **2023**, *62* (5), e202214400. 2022 12 , DOI: 10.1002/anie.202214400.

8. Katakawa, A.; Kainuma, M.; Suzuki, K.; Tanaka, S.; Kumamoto, T. Asymmetric total syntheses of teretifolione B and methylteretifolione B via Diels-Alder reaction of optically active pyranobenzyne and substituted furans. *Tetrahedron*, **2017**, *73* (34), 5063-5071. 2017 8 , DOI: 10.1016/j.tet.2017.06.050.
9. Kainuma, M.; Yamada, A.; Katakawa, A.; Kumamoto, T. Preparation of Optically Active 2,2-Disubstituted 5-Hydroxychromenes by the Enzymatic Resolution of Racemic Esters. *Heterocycles*, **2018**, *97* (1), 604-611. 2018 5 , DOI: 10.3987/COM-18-S(T)45.

10. Kutsumura, N.; Koyama, Y.; Nagumo, Y.; Nakajima, R.; Miyata, Y.; Yamamoto, N.; Saitoh, T.; Yoshida, N.; Iwata, S.; Nagase, H. Antitrichomonal activity of delta opioid receptor antagonists, 7-benzylidenenaltrexone derivatives. *Bioorg. Med. Chem.*, **2017**, *25* (16), 4375-4383. 2017 8 , DOI: 10.1016/j.bmc.2017.06.026
11. Nakajima, R.; Novakova, Z.; Tueckmantel, W.; Motlova, L.; Barinka, C.; Kozikowski, A. P. 2-Aminoadipic acid-C(O)-glutamate based prostate-specific membrane antigen ligands for potential use as theranostics. *ACS Med. Chem. Lett.*, **2018**, *9* (11), 1099-1104. 2018 10 ,

DOI: 10.1021/acsmedchemlett.8b00318.

12. Saitoh, T.; Seki, K.; Nakajima, R.; Yamamoto, N.; Kutsumura, N.; Nagumo, Y.; Irukayama-Tomobe, Y.; Ogawa, Y.; Ishikawa, Y.; Tanimura, R.; Yanagisawa, M.; Nagase, H. Essential structure of orexin 1 receptor antagonist YNT-707, Part IV: The role of D-ring in 4, 5-epoxymorphinan on the orexin 1 receptor antagonistic activity. *Bioorg. Med. Chem. Lett.*, **2019**, *29* (18), 2655-2658. 2019 9 , DOI: 10.1016/j.bmcl.2019.07.039
13. Saitoh, T.; Seki, K.; Nakajima, R.; Yamamoto, N.; Kutsumura, N.; Nagumo, Y.; Irukayama-Tomobe, Y.; Ogawa, Y.; Ishikawa, Y.; Yanagisawa, M.; Nagase, H. Essential structure of orexin 1 receptor antagonist YNT-707, part V: Structure-activity relationship study of the substituents on the 17-amino group. *Bioorg. Med. Chem. Lett.*, **2020**, *30* (3): 126893. 2020 2, DOI: 10.1016/j.bmcl.2019.126893
14. Tsuchiya, H.; Iwamoto, M.; Miyamoto, H.; Sakumoto, C.; Tamamizu, T.; Inoshita, Y.; Koyama, Y.; Sato, Y.; Kumamoto, T. Practical and Scalable Synthesis of a Glucokinase Activator via One-pot Difluorination and Julia Olefination. *Org. Process Res. Dev.*, **2020**, *24* (7), 1294–1303. 2020 6 , DOI: 10.1021/acs.oprd.0c00180.
15. Arakawa, H.; Yamada, H.; Arai, K.; Kawanishi, T.; Nitta, N.; Shibata, S.; Matsumoto, E.; Yano, K.; Kato, Y.; Kumamoto, T.; Aoki, I.; Ogihara, T. Possible utility of peptide-transporter-targeting [^{19}F]dipeptides for visualization of the biodistribution of cancers by nuclear magnetic resonance imaging. *Int. J. Pharmaceut.*, **2020**, *586*, 119575. 2020 8 , DOI: 10.1016/j.ijpharm.2020.119575.
16. Shintani, Y.; Kato, K.; Kawami, M.; Takano, M.; Kumamoto, T. Direct N^1-Selective Alkylation of Hydantoins Using Potassium Bases. *Chem. Pharm. Bull.*, **2021**, *69* (4), 407-411. 2021 4 , DOI: 10.1248/cpb.c20-00857.
17. Katakawa, K.; Kumamoto, T. HIV Conocurvone Teretifolione B **2018**, *76* (7), 722 729. 2018 7 , DOI: 10.5059/yukigoseikyokaishi.76.722.
18. Kumamoto, T.; Katakawa, K. Chemistry of Anti-HIV Active Trimeric Pyranonaphthoquinone Conocurvone: Synthetic Studies towards Monomeric Teretifolione B and Related Compounds. *Heterocycles* **2020**, *100* (2), 177-193. 2019 12 , DOI: 10.3987/REV-19-915.

19. Shirai, T. Frontier Researches in Medicinal Chemistry Contribute to the Field of Pharmacy, *YAKUGAKU ZASSHI*, **2022**, *142* (4), 345. 2022 4 , DOI: 10.1248/yakushi.21-00185-F

H--iH

20. Kumamoto, T.; Katakawa,T. Recent Progress in Aryne Cycloaddition Reactions, in *Cycloaddition Reactions: Advances in Research and Applications*, Margetic, D. Ed, Nova Scientific Pub Inc, NY, **2019** pp. 1-45.

HfiøFp̂H

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1, 2, 4, 7-9, 13, 14, 16

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connexin43 (Cx43)

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Toll-like receptor 7 TLR7

resiquimod

TLR7 11

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Cx43

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HN--1e-H1wF6HH

1. Morioka N., Fujii S., Kondo S., Zhang F.F., Miyauchi K., Nakamura Y., Hisaoka-Nakashima K., Nakata Y.: Downregulation of spinal astrocytic connexin43 leads to upregulation of interleukin-6 and cyclooxygenase-2 and mechanical hypersensitivity in mice. ***GLIA***, 66:428-444, 2018. doi: 10.1002/glia.23255.
2. Morioka N., Kodama K., Tomori M., Yoshikawa K., Saeki M., Nakamura Y., Zhang F.F., Hisaoka-Nakashima K., Nakata Y.: Stimulation of nuclear receptor REV-ERBs suppresses production of pronociceptive molecules in cultured spinal astrocytes and ameliorates mechanical hypersensitivity of inflammatory and neuropathic pain of mice. ***Brain Behav. Immun.***, 78, 116-130, 2019. doi: 10.1016/j.bbi.2019.01.014.
3. Hisaoka-Nakashima K., Tomimura Y., Yoshii T., Ohata K., Takada N., Zhang F.F., Nakamura Y., Liu K., Wake H., Nishibori M., Nakata Y., Morioka N.: High-mobility group box 1-mediated microglial activation induces anxiodepressive-like behaviors in mice with neuropathic pain. ***Prog. Neuropsychopharmacol. Biol. Psychiatry***, 92, 347-362, 2019. doi: 10.1016/j.pnpbp.2019.02.005.
4. Morioka N., Miyauchi K., Miyashita K., Kochi T., Zhang F.F., Nakamura Y., Liu K., Wake H., Hisaoka-Nakashima K., Nishibori M., Nakata Y.: Spinal high-mobility group box-1 induces long-lasting mechanical hypersensitivity through the toll-like receptor 4 and upregulation of interleukin-1β in activated astrocytes. ***J. Neurochem.***, 150, 728-758, 2019. doi: 10.1111/jnc.14812.
5. Hisaoka-Nakashima K., Taki S., Watanabe S., Nakamura Y., Nakata Y., Morioka N.: Mirtazapine increases glial cell line-derived neurotrophic factor production through lysophosphatidic acid 1 receptor-mediated extracellular signal-regulated kinase signaling in astrocytes. ***Eur. J. Pharmacol.***, 860, 172539, 2019. doi: 10.1016/j.ejphar.2019.172539.
6. Hisaoka-Nakashima K., Azuma H., Ishikawa F., Nakamura Y., Wang D., Liu K., Wake H., Nishibori M., Nakata Y., Morioka N.: Corticosterone induces HMGB1 release in primary cultured rat cortical astrocytes: involvement of pannexin-1 and P2X7 receptor-dependent mechanisms. ***Cells***, 2020;9(5). pii: E1068. doi: 10.3390/cells9051068.
7. Nakamura Y., Fukushige R., Watanabe K., Kishida Y., Hisaoka-Nakashima K., Nakata Y., Morioka N.: Continuous infusion of substance P into rat striatum relieves mechanical hypersensitivity caused by a partial sciatic nerve ligation via activation of striatal muscarinic receptors. ***Behav. Brain Res.***, 391, 112714, 2020. doi: 10.1016/j.bbr.2020.112714.
8. Ogawa Y., Irifune M., Mukai A., Shimizu Y., Doi M., Oue K., Yoshida M., Kanematsu T., Morioka N., Nakata Y., Sakai N.: The indirect γ-aminobutyric acid (GABA) receptor agonist

gabaculine-induced loss of the righting reflex may inhibit the descending analgesic pathway. ***Pharmacol. Biochem. Behav.***, 198, 173034, 2020. doi: 10.1016/j.pbb.2020.173034.

9. Nakamura Y., Fukushige R., Watanabe K., Kishida Y., Hisaoka-Nakashima K., Nakata Y., Morioka N.: Continuous infusion of substance P inhibits acute, but not subacute, inflammatory pain induced by complete Freund's adjuvant., ***Biochem. Biophys. Res. Commun.***, 533, 971-975, 2020. doi: 10.1016/j.bbrc.2020.09.113.
10. Hisaoka-Nakashima K., Yokoe T., Watanabe S., Nakamura Y., Kajitani N., Okada-Tsuchioka M., Takebayashi M., Nakata Y., Morioka N.: Lysophosphatidic acid induces thrombospondin-1 production in primary cultured rat cortical astrocytes. ***J. Neurochem.***, 158, 849-864, 2021. doi: 10.1111/jnc.15227.
11. Phama T., Jakkampudia S., Furukawab K., Chengc F.Y., Linc T.C., Nakamura Y., Morioka N., Abe M.: p-Nitroterphenyl Units for Near-Infrared Two-Photon Uncaging of Calcium Ions. ***J. Photochem. Photobiol.***, 409, 113154, 2021.
12. Morioka N., Kondo S., Harada N., Takimoto T., Tokunaga N., Nakamura Y., Hisaoka-Nakashima K., Nakata Y.: Downregulation of connexin43 potentiates noradrenaline-induced expression of brain-derived neurotrophic factor in primary cultured cortical astrocytes. ***J. Cell. Physiol.***, 236, 6777-6792, 2021. doi: 10.1002/jcp.30353.
13. Nakamura Y., Fukuta A., Miyashita K., Zhang F.F., Wang D., Liu K., Wake H., Hisaoka-Nakashima K., Nishibori M., Morioka N.: Perineural high-mobility group box 1 induces mechanical hypersensitivity through activation of spinal microglia: involvement of glutamate-NMDA receptor dependent mechanism in spinal dorsal horn. ***Biochem. Pharmacol.***, 186, 114496, 2021. doi: 10.1016/j.bcp.2021.114496.
14. Kochi T., Nakamura Y., Ma S., Hisaoka-Nakashima K., Wang D., Liu K., Wake H., Nishibori M., Irifune M., Morioka N.: Pretreatment with high mobility group box-1 monoclonal antibody prevents the onset of trigeminal neuropathy in mice with a distal infraorbital nerve chronic constriction injury. ***Molecules***, 26, 2035, 2021. doi: 10.3390/molecules26072035.
15. Morioka N., Kondo S., Takimoto T., Tokunaga N., Nakamura Y., Hisaoka-Nakashima K.: Decreased connexin43 expression in the hippocampus is related to the antidepressant effect of amitriptyline in neuropathic pain mice. ***Biochem. Biophys. Res. Commun.***, 566, 141-147, 2021. doi: 10.1016/j.bbrc.2021.06.020.
16. Morioka N., Kodama K., Tsuruta M., Hashizume H., Kochi T., Nakamura Y., Zhang F.F., Hisaoka-Nakashima K.: Stimulation of nuclear receptor REV-ERBs suppresses inflammatory responses in spinal microglia. ***Neurochem. Int.***, 151:105216, 2021. doi:

10.1016/j.neuint.2021.105216.

17. Sato F., Nakamura Y., Ma S., Kochi T., Hisaoka-Nakashima K., Wang D., Liu K., Wake H., Nishibori M., Morioka N.: Central high mobility group box-1 induces mechanical hypersensitivity with spinal microglial activation in a mouse model of hemi-Parkinson's disease. ***Biomed. Pharmacother.***, 145, 112479, 2022. doi: 10.1016/j.biopha.2021.112479.

18. Onizuka C., Irifune M., Mukai A., Shimizu Y., Doi M., Oue K., Yoshida M., Kochi T., Imado E., Kanematsu T., Nakamura Y., Morioka N., Nakata Y., Sakai N.: Pentobarbital may protect against neurogenic inflammation after surgery via inhibition of substance P release from peripheral nerves of rats. ***Neurosci. Lett.***, 771, 136467, 2022. doi: 10.1016/j.neulet.2022.136467.

19. Kochi T., Nakamura Y., Ma S., Uemoto S., Hisaoka-Nakashima K., Irifune M., Morioka N.: Mirogabalin alleviates nociceptive hypersensitivity without causing sedation in a mouse model of post-traumatic trigeminal neuropathy. ***Behav. Brain Res.***, 425, 113829, 2022. doi: 10.1016/j.bbr.2022.113829.
20. Tokunaga N., Takimoto T., Nakamura Y., Hisaoka-Nakashima K., Morioka N.: Downregulation of connexin 43 potentiates amitriptyline-induced brain-derived neurotrophic factor expression in primary astrocytes through lysophosphatidic acid receptor1/3, Src, and extracellular signal-regulated kinase. ***Eur. J. Pharmacol.***, 925, 174986, 2022. doi: 10.1016/j.ejphar.2022.174986.
21. Hisaoka-Nakashima K., Ohata K., Yoshimoto N., Tokuda S., Yoshii N., Nakamura Y., Wang D., Liu K., Wake H., Yoshida T., Ago Y., Hashimoto K., Nishibori M., Morioka N.: High-mobility group box 1-mediated hippocampal microglial activation induces cognitive impairment in mice with neuropathic pain. ***Exp. Neurol.***, 355, 114146, 2022. doi: 10.1016/j.expneurol.2022.114146.

22. Imado E., Sun S., Abawa A.R., Tahara T., Kochi T., Huynh T.N.B., Asano S., Hasebe S., Nakamura Y., Hisaoka-Nakashima K., Kotake Y., Irifune M., Tsuga K., Takuma K., Morioka N., Kiguchi N., Ago Y.: Prenatal exposure to valproic acid causes allodynia associated with spinal microglial activation. ***Neurochem. Int.***, 160, 105145, 2022. doi: 10.1016/j.neuint.2022.105415.

23. Hisaoka-Nakashima K., Moriwaki K., Yoshimoto N., Yoshii N., Nakamura Y., Ago Y., Morioka N.: Anti-interleukin-6 receptor antibody improves allodynia and cognitive impairment in mice with neuropathic pain following partial sciatic nerve ligation. ***Int. Immunopharmacol.***, 112, 109219, 2022. doi: 10.1016/j.intimp.2022.109219.

H)r1H1wF[GHH

1. Morioka N., Nakamura Y., Zhang F.F., Hisaoka-Nakashima K., Nakata Y.: Role of Connexins in Chronic Pain and Their Potential as Therapeutic Targets for Next-Generation Analgesics. ***Biol. Pharm. Bull.*** 42, 857-866, 2019. doi: 10.1248/bpb.b19-00195.

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1. Morioka N., Hisaoka-Nakashima K., Nakata Y.: Regulation by Nicotinic Acetylcholine Receptors of Microglial Glutamate Transporters: Role of Microglia in Neuroprotection. In: Akaike A., Shimohama S., Misu Y., editors. Nicotinic Acetylcholine Receptor Signaling in Neuroprotection., Springer; 2018. Chapter 5., 2018 Apr 4

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1. _____ _____ 2020-131885
2. _____ _____ 2021-067829

HEÊH

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[1,2,5,7,9,11,13-16,20,21,23,29]

P- P-gp

P-gp

P-gp P-gp

A549 P-gp

ERK P-gp

PEPT reduced folate carrier

EMT [3,6,8,12,17-19,22,24-26,28,30]

EMT

EMT RNA miR-

34a p53 PAI-1

EMT

[33-35]

iE-DAP

PEPT2 iE-DAP

NOD1 2022

PEPT2

EMT α 2

Nrf2

EMT

1. Takano, M., Nagahiro, M. and Yumoto, R.: Transport mechanism of nicotine in primary cultured alveolar epithelial cells. J. Pharm. Sci., 105, 982-988 (2016) (doi: 10.1002/jps.24627) (Selected for inclusion in the Ronald T. Borchardt Dedicated Issue)
2. Takano, M., Naka, R., Sasaki Y., Nishimoto S. and Yumoto, R.: Effect of cigarette smoke extract on P-glycoprotein function in primary cultured and newly developed alveolar epithelial cells. Drug Metab. Pharmacokinet., 31, 417-424 (2016) (doi: 10.1016/j.dmpk.2016.08.006)
3. Kawami, M., Harabayashi, R., Miyamoto, M., Harada, R., Yumoto, R. and Takano, M.: Methotrexate-induced epithelial-mesenchymal transition in the alveolar epithelial cell line A549. Lung, 194, 923-930 (2016)
4. Nishihashi, K., Kawashima, K., Nomura, T., Urakami-Takebayashi, Y., Miyazaki, M., Takano, M. and Nagai, J.: Cobalt chloride induces expression and function of breast cancer resistance protein (BCRP/ABCG2) in human renal proximal tubular epithelial cell line HK-2. Biol. Pharm. Bull., 40 (1), 82-87 (2017)
5. Kawami, M., Yamada, Y., Toshimori, F., Yumoto, R., Issarachot, O., Junyaprasert, V.B. and Takano, M.: Effect of Curcuma comosa extracts on the functions of peptide transporter and P-glycoprotein in intestinal epithelial cells. Pharmazie, 72, 123-127 (2017) (doi: 10.1691/ph.2017.6147.)
6. Kawami, M., Deguchi, J., Yumoto, R., Sakakibara, N., Tsukamoto, I., Konishi, R. and Takano, M.: Effect of COA-Cl on transforming growth factor-β1-induced epithelial-mesenchymal transition in RLE/Abca3 cells. Drug Metab. Pharmacokinet., 32, 224-227 (2017)
7.

Pharmazie, 73 (2), 104-109 (2018) (doi: 10.1691/ph.2018.7116) (International joint authorship)

12. Kawami, M., Harabayashi, R., Harada, R., Yamagami, Y., Yumoto, R. and Takano, M.: Folic acid prevents methotrexate-induced epithelial-mesenchymal transition via suppression of secreted factors from the human alveolar epithelial cell line A549. Biochem. Biophys. Res. Commun., 497, 457-463 (2018) (doi: 10.1016/j.bbrc.2018.02.111)
13. Kawami, M., Shimonakamura, T., Yumoto, R. and Takano, M.: Transport of AOPP-albumin into human alveolar epithelial A549 cells. J. Pharm. Pharm. Sci., 21, 247-255 (2018) (doi: 10.18433/jpps29905)
14. Takano, M., Higashi, M., Ito, H., Toyota, S., Hirabayashi, Y. and Yumoto, R.: Functional expression of breast cancer resistance protein and cholesterol effect in human erythrocyte membranes. Pharmazie, 73, 700-705 (2018) (doi: 10.1691/ph.2018.8724)
15. Kawami, M., Honda, N., Miyamoto, M., Yumoto, R. and Takano, M.: Reduced folate carrier-mediated methotrexate transport in the human distal lung epithelial NCl-H441 cells. J. Pharm. Pharmacol., 71, 167-175 (2019) (Oct 15. doi: 10.1111/jphp.13022)
16. Takano, M., Takeuchi, T., Kuriyama, S. and Yumoto, R.: Role of peptide transporter 2 and MAPK signaling pathways in the innate immune response induced by bacterial peptides in alveolar epithelial cells. Life Sci., 229, 173-179 (2019) (doi: 10.1016/j.lfs.2019.05.042.)
17. Kawami, M., Harada, R., Ojima, T., Yamagami, Y., Yumoto, R. and Takano, M.: Association of cell cycle arrest with anticancer drug-induced epithelial-mesenchymal transition in alveolar epithelial cells. Toxicology, 424, 152231 (2019) (doi: 10.1016/j.tox.2019.06.002.)
18. Kawami, M., Honda, N., Hara, T., Yumoto, R. and Takano, M.: Investigation on inhibitory effect of folic acid on methotrexate-induced epithelial-mesenchymal transition focusing on dihydrofolate reductase. Drug Metab. Pharmacokinet., 34, 387-395 (2019) (doi.org/10.1016/j.dmpk.2019.08.003)
19. Yamamoto, A., Kawami, M., Konaka, T., Takenaka, S., Yumoto, R. and Takano, M.: Anticancer drug-induced epithelial-mesenchymal transition via p53/miR-34a axis in A549/ABCA3 cells. J. Pharm. Pharm. Sci., 22, 516-524 (2019) (doi: 10.18433/jpps30660.)
20. Takano, M., Higa, S., Furuichi, Y., Naka, R. and Yumoto, R.: Suppression of P-glycoprotein by cigarette smoke extract in human lung-derived A549/P-gp cells. Drug Metab. Pharmacokinet., 35, 214-219 (2020) (doi.org/10.1016/j.dmpk.2019.12.001)
21. Uddin, M., Kawami, M., Yumoto, R. and Takano, M.: Effect of transforming growth factor-β1 on functional expression of monocarboxylate transporter 1 in alveolar epithelial A549 cells. Naunyn-Schmiedeberg's Archives of Pharmacology, 393, 889-896 (2020) (doi.org/10.1007/s00210-019-01802-3)
22. Yamagami, Y., Kawami, M., Ojima, T., Futatsugi, S., Yumoto, R. and Takano, M.: Role of plasminogen activator inhibitor-1 in methotrexate-induced epithelial-mesenchymal transition in alveolar epithelial A549 cells. Biochem. Biophys. Res. Commun., 525, 543-548 (2020) (doi.org/10.1016/j.bbrc.2020.02.131)

23. Takano, M., Higashi, M., Baba, S., Kawami, M. and Yumoto, R.: Transport of ribavirin in human myelogenous leukemia cell line K562. Pharmazie, 75, 329-334 (2020) (doi: 10.1691/ph.2020.0440)
24. Takano, M., Deguchi, J., Senoo, S., Izumi, M., Kawami, M. and Yumoto, R.: Suppressive effect of quercetin against bleomycin-induced epithelial-

1069-1076 (2022)

1. _____ . HAB Newsletter, 26 (1), 8-9 (2019)
2. Kawami, M., Yumoto, R. and Takano, M.: Preventive approach against drug-induced pulmonary fibrosis through the suppression of epithelial-mesenchymal transition. BIOCELL, 46 (8), 1861-1865 (2022) (doi: 10.32604/biocell.2022.019667)
3. _____ RNA. 283 (1), 47-52 (2022)

1. _____ II 6 VI. SBO19-20; pp.105-113 (2016) 12
2. _____ , . 7 pp.325-333 2017 4
3. _____ II 6 V. SBO 51; pp.237-241 (2017) 10
4. _____ . pp.22-28 2018 11
5. _____ II 6 V. SBO 51: pp. 241-245 (2021) 5

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RNA

miR-22 miR-140-3p

RNA

PURMX Therapeutics

http://www.telomere.jp/drugdiscovery

Aging switch RNA

RNA

miR-3140-3p

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http://www.telomere.jp/biomarker

http://www.telomere.jp/hpa

A) →

RNA

B)

C)

D) →

HN--1e-H1wF6GHH

1. Basak M, Chaudhary DK, Takahashi RU, Yamamoto Y, Tiwari S, Tahara H, Mittal A. Immunocyte Derived Exosomes: Insight into the Potential Chemo-immunotherapeutic Nanocarrier Targeting the Tumor Microenvironment. ACS Biomaterials Science and Engineering. 2023;9(1):20-39.10.1021/acsbiomaterials.2c00893
2. Lin CY, Nhat Nguyen UT, Hsieh HY, Tahara H, Chang YS, Wang BY, Gu BC, Dai YH, Wu CC, Tsai IJ, Fan YJ. Peptide-based electrochemical sensor with nanogold enhancement for detecting rheumatoid arthritis. Talanta. 2022;236.10.1016/j.talanta.2021.122886
3. Ko K, Takahashi K, Nagashima S, Bunthen E, Ouoba S, Hussain MRA, Akita T, Sugiyama A, Sakaguchi T, Tahara H, Ohge H, Ohdan H, Kubo T, Ishikawa N, Takafuta T, Fujii Y, Mimori M, Okada F, Kishita E, Ariyoshi K, Kuwabara M, Tanaka J. Mass Screening of SARS-CoV-2 Variants using Sanger Sequencing Strategy in Hiroshima, Japan. Scientific Reports. 2022;12(1).10.1038/s41598-022-04952-2
4. Kato M, Ogata H, Tahara H, Shimamoto A, Takekita Y, Koshikawa Y, Nishida K, Nonen S, Higasa K, Kinoshita T. Multiple Pre-Treatment miRNAs Levels in Untreated Major Depressive Disorder Patients Predict Early Response to Antidepressants and Interact with Key Pathways. International Journal of Molecular Sciences. 2022;23(7).10.3390/ijms23073873

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