

薬理学講座

○主な研究内容

- 1 老化の解明、特に長寿遺伝子産物サーチュインの機能の解明

○Pub Med 掲載論文 (2018 年)

1. Resveratrol Ameliorates Mitophagy Disturbance and Improves Cardiac Pathophysiology of Dystrophin-deficient mdx Mice.

Kuno A, Hosoda R, Sebori R, Hayashi T, Sakuragi H, Tanabe M, Horio Y.

Sci Rep. 2018 Oct 22;8(1):15555. doi: 10.1038/s41598-018-33930-w.

PMID: 30348945 Free PMC Article

2. Empagliflozin, an SGLT2 inhibitor, reduced the mortality rate after acute myocardial infarction with modification of cardiac metabolomes and anti-oxidants in diabetic rats.

Oshima H, Miki T, Kuno A, Mizuno M, Sato T, Tanno M, Yano T, Nakata K, Kimura Y, Abe K, Ohwada W, Miura T.

J Pharmacol Exp Ther. 2018 Dec 14. pii: jpet.118.253666. doi: 10.1124/jpet.118.253666. [Epub ahead of print]

PMID: 30552292 Free Article

3. Resveratrol Decreases Oxidative Stress by Restoring Mitophagy and Improves the Pathophysiology of Dystrophin-Deficient mdx Mice.

Sebori R, Kuno A, Hosoda R, Hayashi T, Horio Y.

Oxid Med Cell Longev. 2018 Oct 29;2018:9179270. doi: 10.1155/2018/9179270. eCollection 2018.

PMID: 30510631 Free PMC Article

4. Empagliflozin normalizes the size and number of mitochondria and prevents reduction in mitochondrial size after myocardial infarction in diabetic hearts.

Mizuno M, Kuno A, Yano T, Miki T, Oshima H, Sato T, Nakata K, Kimura Y, Tanno M, Miura T.

Physiol Rep. 2018 Jun;6(12):e13741. doi: 10.14814/phy2.13741.

PMID: 29932506 Free PMC Article

5. Translational regulation by miR-301b upregulates AMP deaminase in diabetic hearts.

Tatekoshi Y, Tanno M, Kouzu H, Abe K, Miki T, Kuno A, Yano T, Ishikawa S, Ohwada W, Sato T, Niinuma T, Suzuki H, Miura T.

J Mol Cell Cardiol. 2018 Jun;119:138-146. doi: 10.1016/j.yjmcc.2018.05.003. Epub 2018 May 4.

PMID: 29733818

6. Does p53 Inhibition Suppress Myocardial Ischemia-Reperfusion Injury?

Yano T, Abe K, Tanno M, Miki T, Kuno A, Miura T, Steenbergen C.

J Cardiovasc Pharmacol Ther. 2018 Jul;23(4):350-357. doi: 10.1177/1074248418763612. Epub 2018 Mar 19.

PMID: 29554809 Free PMC Article

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- 2 細胞内カルシウムイオンの働きと意義

○Pub Med 掲載論文 (2016 年)

1. A Novel Target for the Treatment of Muscular Dystrophies.

Kuno A, Horio Y.

Oxid Med Cell Longev. 2016;2016:6714686. doi: 10.1155/2016/6714686. Epub 2016 Mar 17. Review. PMID: 27073590

2. Biochemical effects of the flavanol-rich lychee fruit extract on the melanin biosynthesis and reactive oxygen species.

Hagiwara K, Okura M, Sumikawa Y, Hida T, Kuno A, Horio Y, Yamashita T.

J Dermatol. 2016 Oct;43(10):1174-1183. doi: 10.1111/1346-8138.13326.

PMID: 26970333

3. Chronic Treatment With an Erythropoietin Receptor Ligand Prevents Chronic Kidney Disease-Induced Enlargement of Myocardial Infarct Size.

Nishizawa K, Yano T, Tanno M, Miki T, Kuno A, Tobisawa T, Ogasawara M, Muratsubaki S, Ohno K, Ishikawa S, Miura T. Hypertension. 2016 Sep;68(3):697-706. doi:

10.1161/HYPERTENSIONAHA.116.07480. Epub 2016 Jul 25.

PMID: 27456523

4. Guidelines for the use and interpretation of assays for monitoring autophagy (3rd edition).

Fujitani Y, Fujiwara Y, Fujiya M, Fukuda M, Fulda S, Fusco C, Gabryel B, Gaestel M, Gailly P, Gajewska M, Galadari S, Brady A, Hamada K, Hamai A, Hamann A, Hamasaki M, Hamer I, Hamid Q, Hammond EM, Han F, Han W, Handa JT, Hanover JA, Hansen M, Harada M, Harhaji-Trajkovic L, Harper JW, Harrath AH, Harris AL, Harris J, Hasler U, Isidoro C, Jutten B, Kaakoush NO, Kaarniranta K, Kaasik A, Kabuta T, Kaeffer B, Kågedal K, Kahana A, Kajimura S, Kakhlon O, KKishi S, Kitajima Y, Kitamoto K, Kitaoka Y, Kitazato K, Kley RA, Klimecki WT, Klinkenberg M, Klucken J, Knævelsrud H, IU, Nabi IR, Nabissi M, Nader GA, Nagahara Y, Nagai Y, Nagata K, Nagelkerke A, Nagy P, Naidu SR, Nair S, Nakano H, Nakatogawa H, Nanjundan M, Napolitano G, Naqvi NI, Sarwal MM, Sasakawa C, Sasaki M, Sass M, Sato K, Sato M, Satriano J, Savaraj N, Saveljeva S, Schaefer L, Schaible UE, Scharl M, Shibuya K, Shidoji Y, Shieh JJ, Shih CM, Shimada Y, Shimizu S, Shin DW, Shinohara ML, Shintani M, Shintani T, Shioi T, Shirabe K, Shiri-Sverdlov R, Shirihai O, Shore GC, Shu CW, Shukla D, Sibirny AA, Sica V, Sigurdson CJ, Sigurdsson EM, Sijwali PS, Sikorska B, Silveira WA, Silvente-Poirot S, Silverman GA, Simak J, Simmet T, Simon Suzuki H, Suzuki K, Suzuki N, Suzuki T, Suzuki YJ, Swanson Takemura G, Takigawa N, Talbot NJ, Tamagno E, Tamburini J, Tan CP, Tan L, Tan ML, Tan M, Tan YJ, Tanaka K, Tanaka M, Y, Yamada T, Yamamoto A, Yamanaka K, Yamashina S, Yamashiro S, Yan B, Yan B, Yan X, Yan Z, Yanagi Y, JJ, Yu JT, Yu J, Yu L, Yu WH, Yu XF, Yu Z,

Autophagy. 2016;12(1):1-222. doi: 10.1080/15548627.2015.1100356. No abstract available. Erratum in: Autophagy. 2016;12(2):443. Selliez, Iban [corrected to Seilliez, Iban].

PMID: 26799652

5 . Latitude and HLA-DRB1*04:05 independently influence disease severity in Japanese multiple sclerosis: a cross-sectional study.

Nakamura Y, Matsushita T, Sato S, Niino M, Fukazawa T, Yoshimura S, Hisahara S, Isobe N, Shimohama S, Watanabe M, Yoshida K, Houzen H, Miyazaki Y, Yamasaki R, Kikuchi S, Kira J; Japan Multiple Sclerosis Genetics Consortium.

J Neuroinflammation. 2016 Sep 6;13(1):239. doi: 10.1186/s12974-016-0695-3.

PMID: 27599848 Free PMC Article

6 . Efficacy of intravenous methylprednisolone pulse therapy in patients with multiple sclerosis and neuromyelitis optica.

Yamasaki R, Matsushita T, Fukazawa T, Yokoyama K, Fujihara K, Ogino M, Yokota T, Miyamoto K, Niino M, Nomura K, Tomioka R, Tanaka M, Kawachi I, Ohashi T, Kaida K, Matsui M, Nakatsuji Y, Ochi H, Fukaura H, Kanda T, Nagaishi A, Togo K, Mizusawa H, Murai H, Kira J.

Mult Scler. 2016 Sep;22(10):1337-48. doi: 10.1177/1352458515617248. Epub 2015 Nov 12.

PMID: 26564994

7 . A nationwide survey of combined central and peripheral demyelination in Japan.

Ogata H, Matsuse D, Yamasaki R, Kawamura N, Matsushita T, Yonekawa T, Hirotsu M, Murai H, Kira J. J J Neurol Neurosurg Psychiatry. 2016 Jan;87(1):29-36. doi: 10.1136/jnnp-2014-309831. Epub 2015 Feb 11.

PMID: 25673872

8 . SIRT1:A novel target for the treatment of muscular dystrophies.

Kuno A, Horio Y.

Oxid Med Cell Longev. 2016, in press

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- 2 細胞内カルシウムイオンの働きと意義

○Pub Med 掲載論文 (2015 年)

1. Kuno A, Tanno M, Horio Y.
The effects of resveratrol and SIRT1 activation on dystrophic cardiomyopathy.
Ann N Y Acad Sci. 2015 Aug;1348(1):46-54. doi: 10.1111/nyas.12812. Epub 2015 Jun 24.Review.
2. Di Sante G, Wang L, Wang C, Jiao X, Casimiro MC, Chen K, Pestell TG, Yaman I, Di Rocco A, Sun X, Horio Y, Powell MJ, He X, McBurney MW, Pestell RG.
Sirt1-deficient mice have hypogonadotropic hypogonadism due to defective GnRH neuronal migration.
Mol Endocrinol. 2015 Feb;29(2):200-12. doi: 10.1210/me.2014-1228. Epub 2014 Dec 29.
3. Hori YS, Hosoda R, Akiyama Y, Sebori R, Wanibuchi M, Mikami T, Sugino T, Suzuki K, Maruyama M, Tsukamoto M, Mikuni N, Horio Y, Kuno A.
Chloroquine potentiates temozolomide cytotoxicity by inhibiting mitochondrial autophagy in glioma cells.
J Neurooncol. 2015 Mar;122(1):11-20. doi: 10.1007/s11060-014-1686-9. Epub 2014 Dec 21.
4. Fujiyoshi M, Kuno A, Gotoh M, Fukai M, Yokoo H, Kamachi H, Kamiyama T, Korenaga M, Mizokami M, Narimatsu H, Taketomi A; Hepatitis Glyco-biomarker Study Group.
Clinicopathological characteristics and diagnostic performance of Wisteria floribunda agglutinin positive Mac-2-binding protein as a preoperative serum marker of liver fibrosis in hepatocellular carcinoma.
J Gastroenterol. 2015 Mar 15. [Epub ahead of print]
5. Murase H, Kuno A, Miki T, Tanno M, Yano T, Kouzu H, Ishikawa S, Tobisawa T, Ogasawara M, Nishizawa K, Miura T.
Inhibition of DPP-4 reduces acute mortality after myocardial infarction with restoration of autophagic response in type 2 diabetic rats.
Cardiovasc Diabetol. 2015 Aug 11;14:103. doi: 10.1186/s12933-015-0264-6.

○その他論文 (2015 年)

- 1.

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○Pub Med 掲載論文 (2014 年)

1. [Tanno M¹](#), [Kuno A¹](#), [Ishikawa S¹](#), [Miki T¹](#), [Kouzu H¹](#), [Yano T¹](#), [Murase H¹](#), [Tobisawa T¹](#), [Ogasawara M¹](#), [Horio Y¹](#), [Miura T²](#).
Translocation of glycogen synthase kinase-3 β (GSK-3 β), a trigger of permeability transition, is kinase activity-dependent and mediated by interaction with voltage-dependent anion channel 2 (VDAC2).
[J Biol Chem](#). 2014 Oct 17;289(42):29285-96. doi: 10.1074/jbc.M114.563924. Epub 2014 Sep 3.
2. [Kunimoto R¹](#), [Jimbow K²](#), [Tanimura A³](#), [Sato M¹](#), [Horimoto K¹](#), [Hayashi T⁴](#), [Hisahara S⁴](#), [Sugino T⁴](#), [Hirobe T⁵](#), [Yamashita T²](#), [Horio Y⁴](#).
SIRT1 regulates lamellipodium extension and migration of melanoma cells.
[J Invest Dermatol](#). 2014 Jun;134(6):1693-700. doi: 10.1038/jid.2014.50. Epub 2014 Jan 30.
3. [Yano T¹](#), [Ferlito M](#), [Aponte A](#), [Kuno A](#), [Miura T](#), [Murphy E](#), [Steenbergen C](#).
Pivotal role of mTORC2 and involvement of ribosomal protein S6 in cardioprotective signaling.
[Circ Res](#). 2014 Apr 11;114(8):1268-80. doi: 10.1161/CIRCRESAHA.114.303562. Epub 2014 Feb 20.
4. [Di Sante G¹](#), [Wang L](#), [Wang C](#), [Jiao X](#), [Casimiro MC](#), [Chen K](#), [Pestell TG](#), [Yaman I](#), [Di Rocco A](#), [Sun X](#), [Horio Y](#), [Powell MJ](#), [He X](#), [McBurney MW](#), [Pestell RG](#).
Sirt1-Deficient Mice Have Hypogonadotropic Hypogonadism due to Defective GnRH Neuronal Migration.
[Mol Endocrinol](#). 2015 Feb;29(2):200-12. doi: 10.1210/me.2014-1228. Epub 2014 Dec 29.

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○Pub Med 掲載論文 (2013 年)

1. [Hori YS](#), [Kuno A](#), [Hosoda R](#), [Horio Y](#).
Regulation of FOXOs and p53 by SIRT1 Modulators under Oxidative Stress. ([PLoS One](#). 2013 Sep 11;8(9):e73875. doi: 10.1371/journal.pone.0073875.)
2. [Hosoda R](#), [Horio Y](#), [Shimoda K](#), [Hamada M](#), [Hamada H](#), [Hamada H](#).
Regioselective hydroxylation and glucosylation of flavanones with cultured plant cells of Eucalyptus perriniana. ([Nat Prod Commun](#). 2013 Jul;8(7):905-6.)
3. [Kuno A](#), [Hori YS](#), [Hosoda R](#), [Tanno M](#), [Miura T](#), [Shimamoto K](#), [Horio Y](#).
Resveratrol improves cardiomyopathy in dystrophin-deficient mice through SIRT1 protein-mediated modulation of p300 protein. ([J Biol Chem](#). 2013 Feb 22;288(8):5963-72. doi: 10.1074/jbc.M112.392050. Epub 2013 Jan 6.)
4. [Hosoda R](#), [Kuno A](#), [Hori YS](#), [Ohtani K](#), [Wakamiya N](#), [Oohiro A](#), [Hamada H](#), [Horio Y](#).
Differential cell-protective function of two resveratrol (trans-3,5,4'-trihydroxystilbene) glucosides against oxidative stress. ([J Pharmacol Exp Ther](#). 2013 Jan;344(1):124-32. doi: 10.1124/jpet.112.198937. Epub 2012 Oct 5.)