

PUBLICATION LIST

1. Watanabe N, Kaneko YK, **Ishihara H**, Shizu R, Yoshinari K, Yamaguchi M, Kimura T, Ishikawa T. (2025). Diacylglycerol kinase ζ is a positive insulin secretion regulator in pancreatic β -cell line MIN6. *Biochem Biophys Res Commun.* 742, 151109.
2. Fujishiro M, Nosoko M, Ikeda J, Takeuchi M, Yamamotoya T, Takayama T, Urakami T, Ogawa K, **Ishihara H**. (2024). Acetonemic vomiting: a potential complication of treatment with glucagon-like peptide-1 receptor agonists especially in lean type 2 diabetes patients. *Diabetol Int.* 16, 162-168.
3. Takubo M, Watanabe K, Saito H, Kohno G, **Ishihara H**. (2024). Therapy combining glucagon-like peptide-1 receptor agonist with sodium-glucose cotransporter 2 inhibitor suppresses atherosclerosis in diabetic apoE-deficient mice. *Exp Clin Endocrinol Diabetes.* 132, 507-514.
4. Yamamotoya T, Ohata Y, Akasaka Y, Hasei S, Inoue MK, Nakatsu Y, Kanna M, Yamazaki H, Kushiyama A, Fujishiro M, Ono H, Sakoda H, Yamada T, **Ishihara H**, Asano T. (2024). Trk-fused gene plays a critical role in diet-induced adipose tissue expansion and is also involved in thyroid hormone action. *PNAS Nexus.* 3, 150.
5. Kosuda M, Yamana M, Nagasawa A, Tanaka A, Watanabe K, **Ishihara H**. (2023). The role of carbonic anhydrases in glucose-stimulated insulin secretion from insulinoma MIN6 cells. *J Biol Regul Homeost Agents.* 37, 5785-5794.
6. Tanaka A, Kosuda M, Yamana M, Furukawa A, Nagasawa A, Fujishiro M, Kohno G, **Ishihara H**. (2023). A large-scale functional analysis of genes expressed differentially in insulin secreting MIN6 sublines with high versus mildly reduced glucose-responsiveness. *Sci Rep.* 13, 5654.
7. Fujishiro M, Tanaka S, Watanabe K, Imatake K, Suzuki Y, **Ishihara H**, Tani S. (2023). Association of glycated hemoglobin level with self-reported chewing problems in elderly community-dwelling individuals in japan. *J Multidiscip Healthc.* 16, 1231-1238.
8. Watanabe K, Yamaguchi S, Kosakai Y, Ioji T, Ishihara H. (2023). Efficacy and safety of switching from sitagliptin to ipragliflozin in obese japanese patients with type 2 diabetes mellitus: A single-arm multicenter interventional study. *Clin Drug Investig.* 43,927-937.
9. Tomofuji Y, Suzuki K, Kishikawa T, Shojima N, Hosoe J, Inagaki K, Matsubayashi S, **Ishihara H**, Watada H, Ishigaki Y, Inohara H, Murakami Y, Matsuda K, Okada Y, Yamauchi T, Kadowaki T. (2023). Identification of serum metabolome signatures associated with retinal and renal complications of type 2 diabetes. *Commun Med (Lond).* 3, 5.
10. Saigusa T, Watanabe K, Hada Y, Ishii K, Kameda W, Susa S, Ishizawa K, **Ishihara H**. (2022). Cardio-ankle vascular index is more closely associated than brachial-ankle pulse wave velocity with arterial damage and risk of cardiovascular disease in patients with diabetes. *BMC Cardiovasc Disord.* 22, 365.
11. Watanabe K, Takakubo N, Saigusa T, Nagasawa A, Yamana M, Ojima M, Kameda W, Susa S, Ishizawa K, **Ishihara H**. (2022). Fibrosis-4 index is closely associated with arterial damage and future risk of coronary heart disease in type 2 diabetes. *Int J Hypertens.* 2022,2760027.
12. **Ishihara H**. (2022). Mini-review: Metabolism-secretion coupling in glucose-stimulated insulin secretion. *Diabetol Int.* 13, 463-470.
13. Kosuda M, Watanabe K, Koike M, Morikawa A, Saito H, Kohno G, **Ishihara H**. (2022). Glucagon responses to glucose challenge in patients with idiopathic postprandial syndrome. *J Nippon Med.Sch.* 89, 102-107.

14. Tanaka S, Fujishiro M, Imatake K, Suzuki Y, **Ishihara H**, Tani S. (2022). Impact of female sex on the susceptibility to hypernatremia among older community-dwelling individuals in Japan. *Int J Gen Med.* 15, 777-785.
15. Watanabe K, Hada Y, Ishii K, Nagaoka K, Takase K, Kameda W, Susa S, Saigusa T, Egashira F, **Ishihara H**, Ishizawa K. (2022). Aortic arch calcification with pericardial fat mass detected on single chest X-ray image is closely associated with the predictive variables of future cardiovascular disease. *Heart Vessels.* 37, 654-664.
16. Furukawa A, Tanaka A, Yamaguchi S, Kosuda M, Yamana M, Nagasawa A, Kohno G, **Ishihara H**. (2021). Using recombinase-mediated cassette exchange to engineer MIN6 insulin-secreting cells based on a newly identified safe harbor locus. *J Diabetes Investig.* 12, 2129-2140.
17. Koike M, Saito H, Kohno G, Takubo M, Watanabe K, **Ishihara H**. (2021). Effects of GLP-1RA and SGLT2i, alone or in combination, on mouse models of type 2 diabetes representing different disease stages. *Int J Mol Sci.* 22, 11463.
18. Fujishiro M, **Ishihara H**, Ogawa K, Murase T, Nakamura T, Watanabe K, Sakoda H, Ono H, Yamamotoya T, Nakatsu Y, Asano T, Kushiyaama A. (2021). Impact of plasma xanthine oxidoreductase activity on the mechanisms of distal symmetric polyneuropathy development in patients with type 2 diabetes. *Biomedicines.* 9, 1052.
19. Ichikawa C, Tanaka S, Takubo M, Kushimoto M, Ikeda J, Ogawa K, Tsujino I, Suzuki Y, Abe M, **Ishihara H**, Fujishiro M. (2021). Tuberculosis relapse in the epididymis after the completion of nine months of anti-tuberculosis chemotherapy in a patient with poorly controlled diabetes mellitus. *Ther Clin Risk Manag.* 17, 463-470.
20. Kitamura T, Watada H, Nagasaka S, **Ishihara H**, Shiba T, Ueki K, Namba M. (2020). Report of the Japan diabetes society's committee on validation of glucagon assay methods: Plasma glucagon levels measured by a novel system correlate with the pathology of diabetes. *Journal of the Japan Diabetes Society.* 63, 826-834.
21. Tanaka S, Fujishiro M, Watanabe K, Imatake K, Suzuki Y, Abe M, **Ishihara H**, Tani S. (2020). Effect of adult weight gain on non-alcoholic fatty liver disease and its association with anthropometric parameters in the lean Japanese population. *Diagnostics (Basel).* 10, 863.
22. Kitazawa T, Seino H, Ohashi H, Inazawa T, Inoue M, Ai M, Fujishiro M, Kuroda H, Yamada M, Anai M, **Ishihara H**. (2020). Comparison of tofogliflozin versus glimepiride as the third oral agent added to metformin plus a dipeptidyl peptidase-4 inhibitor in Japanese patients with type 2 diabetes: A randomized, 24-week, open-label, controlled trial (STOP-OB). *Diabetes Obes Metab.* 22, 1659-1663.
23. Egashira F, Kawashima M, Morikawa A, Kosuda M, **Ishihara H**, Watanabe K. (2020). A rare case of fulminant type 1 diabetes mellitus accompanied by both acute pancreatitis and myocarditis. *BMC Endocrine Disorders.* 20, 127.
24. Tanaka S, Takubo M, Kohno G, Kushimoto M, Ikeda J, Ogawa K, Suzuki Y, Abe M, **Ishihara H**, Fujishiro M. (2020). Inverse correlation between grip strength and serum phosphorus: A retrospective observational study in Japanese elderly with poorly controlled type 2 diabetes. *Geriatrics (Basel).* 5, 33.
25. Takubo M, Tanaka S, Kushimoto M, Ikeda J, Ogawa K, Suzuki Y, Abe M, **Ishihara H**, Fujishiro M. (2020). Hyponatremia associated with prophylactic low-dose trimethoprim during systemic corticosteroid therapy for AQP4-positive optic neuritis in a diabetic patient. *Antibiotics (Basel).* 9, 201.
26. Tanaka S, Abe M, Kohno G, Kushimoto M, Ikeda J, Ogawa K, Suzuki Y, **Ishihara H**, Fujishiro M. (2020). A single episode of hypoglycemia as a possible early warning sign of adrenal insufficiency. *Ther Clin Risk Manag.* 16, 147-153.

27. **Ishihara H**, Yamaguchi S, Sugitani T, Kosakai Y. (2019). Open-label study to assess the efficacy of ipragliflozin for reducing insulin dose in patients with type 2 diabetes mellitus receiving insulin therapy. *Clin Drug Investig.* 39, 1213-1221.
28. Kohno G, Ogawa K, Kushimoto M, Tanaka S, Ikeda J, Nishizawa T, Mitsuke K, Nakayama T, Suzuki Y, **Ishihara H**, Fujishiro M. (2019). Two adult siblings with myotonic dystrophy type 1 with different phenotypes presenting with chronic respiratory insufficiency and sleep apnea syndrome. *Front Neurol.* 10, 681.
29. Tanaka S, Fujishiro M, Ichijima R, Kohno G, Abe M, **Ishihara H**. (2019). Acute esophageal necrosis after cellulitis in an obese patient with diabetes mellitus. *J Diabetes Investig.* 11, 250-252.
30. Matsushima E, Shiota H, Watanabe K, Otsuka Y, Yamana M, Yamaguchi S, Egashira F, Kamei S, **Ishihara H**. (2019). Hemichorea after hypoglycemic episodes with negative MRI findings in an elderly woman with poorly controlled type 2 diabetes mellitus: a case report. *BMC Neurol.* 19, 131.
31. Nakatsu Y, Matsunaga Y, Yamamotoya T, Ueda K, Inoue M, Mizuno Y, Nakanishi M, Sano T, Yamawaki Y, Kushiyaama A, Sakoda H, Fujishiro M, Ryo A, Ono H, Minamino T, Takahashi S, Ohno H, Yoneda M, Takahashi K, **Ishihara H**, Katagiri H, Nishimura H, Kanematsu T, Yamada T, Asano T. (2019). Prolyl Isomerase Pin1 suppresses thermogenic programs in adipocytes by promoting degradation of transcriptional co-activator PRDM16. *Cell Reports.* 26, 3221-3230
32. **Ishihara H**, Yamaguchi S, Nakao I, Asahina S, Sakatani T. (2018). Efficacy and safety of ipragliflozin as add-on therapy to insulin in Japanese patients with type 2 diabetes mellitus (IOLITE): a 36-week, open-label extension of a 16-week, randomized, placebo-controlled, double-blind study. *Diabetol Int.* 10, 37-50.
33. Saito H, Ebashi M, Kushimoto M, Ikeda J, Egashira F, Yamaguchi S, Watanabe K, Ogawa K, Suzuki Y, **Ishihara H**, Fujishiro M. (2018). Elsberg syndrome related to varicella zoster virus infection with painless skin lesions in an elderly woman with poorly controlled type 2 diabetes mellitus. *Ther Clin Risk Manage.* 14, 1951-1954.
34. **Ishihara H**, Anai M, Seino H, Kitazawa T, Ohashi H, Ai M, Inoue M, Fujishiro M, Inazawa T, Kuroda H, Yamada M. (2018). Rationale and design of the STOP-OB study for evaluating the effects of tofogliflozin and glimepiride on fat deposition in type 2 diabetes patients treated with metformin/DPP-4 inhibitor dual therapy. *Diabetes Ther.* 9, 2117-2125.
35. **Ishihara H**, Yamaguchi S, Nakao I, Sakatani T. (2018). Ipragliflozin add-on therapy to a GLP-1 receptor agonist in Japanese patients with type 2 diabetes (AGATE): A 52-week open-label study. *Diabetes Ther.* 9, 1549-1567.
36. Yoshida N, Midorikawa Y, Higaki T, Nakayama H, Tsuji S, Matsuoka S, **Ishihara H**, Moriyama M, Takayama T. (2018). Diabetes mellitus not as an unfavorable factor on the prognosis of hepatitis C virus-related hepatocellular carcinoma. *Hepatol Res.* 48, 28-35.
37. Yamamotoya T, Nakatsu Y, Kushiyaama A, Matsunaga Y, Ueda K, Inoue Y, Inoue M, Sakoda H, Fujishiro M, Ono H, Kiyonari H, **Ishihara H**, Asano T. (2017). Trk-fused gene (TFG) regulates pancreatic β cell mass and insulin secretory activity. *Sci Rep.* 7, 13026.
38. Nakatsu Y, Mori K, Matsunaga Y, Yamamotoya T, Ueda K, Inoue Y, Mitsuzaki-Miyoshi K, Sakoda H, Fujishiro M, Yamaguchi S, Kushiyaama A, Ono H, **Ishihara H**, Asano T. (2017). The prolyl isomerase Pin1 increases β -cell proliferation and enhances insulin secretion. *J Biol Chem.* 292, 11886-11895.
39. Fujishiro M, Horita A, Nakagawara H, Mawatari T, Kishigami Y, Tominaga Y, Moriyama M, **Ishihara H**. (2017). Severe hypertriglyceridemia possibly masked acute pancreatitis and led to a difficult diagnosis in an obese patient with ketoacidosis-onset type 2 diabetes. *Intern Med.* 56, 2611-2616.

40. **Ishihara H**, Yamaguchi S, Nakao I, Okitsu A, Asahina S. (2016). Efficacy and safety of ipragliflozin as add-on therapy to insulin in Japanese patients with type 2 diabetes mellitus (IOLITE): a multi-centre, randomized, placebo-controlled, double-blind study. *Diabetes Obes Metab.* 18, 1207-1216
41. **Ishihara H**, Wollheim CB. (2016). Is zinc an intra-islet regulator of glucagon secretion? *Diabet Int.* 7, 106-110
42. Fujishiro M, **Ishihara H**. (2016). Controversy regarding gastric cancer and diabetes. *J Gastroenterol.* 51, 80-81.
43. Tanji Y, Yamaguchi S, Ishigaki Y, Katagiri H, Oka Y, **Ishihara H**. (2015). DPP-4 Inhibition Ameliorates Pancreatic β -Cell Failure and Improves Glucose Tolerance in the Mouse of Wolfram Syndrome. *J Diabetes Mellitus.* 5, 72-80.
44. Shinjo T, Nakatsu Y, Iwashita M, Sano T, Sakoda H, **Ishihara H**, Kushiya A, Fujishiro M, Nishimura F, Asano T. (2015). High-fat diet feeding significantly attenuates anagliptin-induced regeneration of islets of Langerhans in streptozotocin-induced diabetic mice. *Diabetol Metab Syndr.* 7, 50.
45. Yamaguchi S, Ikejima M, Furukawa A, Abe M, Nakazaki M, **Ishihara H**. (2015). Octreotide for hypoglycemia caused by sulfonylurea and DPP-4 inhibitor. *Diabetes Res Clin Pract.* 109, e8-e10.
46. Shinjo T, Nakatsu Y, Iwashita M, Sano T, Sakoda H, **Ishihara H**, Kushiya A, Fujishiro M, Fukushima T, Tsuchiya Y, Kamata H, Nishimura F, Asano T. (2015). DPP-IV inhibitor anagliptin exerts anti-inflammatory effects on macrophages, adipocytes, and mouse livers by suppressing NF- κ B activation. *Am J Physiol Endocrinol Metab.* 309, E214-E223.
47. Otsuka Y, Yamaguchi S, Furukawa A, Kosuda M, Nakazaki M, **Ishihara H**. (2015). Addition of sitagliptin or metformin to insulin monotherapy improves blood glucose control via different effects on insulin and glucagon secretion in hyperglycemic Japanese patients with type 2 diabetes. *Endocr J.* 62, 133-143.
48. **Ishihara H**. (2013). The cutting-edge of medicine ; glucagon renaissance. *Nihon Naika Gakkai Zasshi.* 102, 3237-3243.
49. Okamoto M, Egashira F, Taki M, Nakajima H, Ogihara N, Takamura H, Yoshikawa S, Hayashi Y, **Ishihara H**. (2013). Usefulness of the Pain Vision PS-2100, a device for the quantitative analysis of perception and pain sensation, for evaluating early stage diabetic polyneuropathy. *J Japan Diab Soc.* 56, 343-349.
50. Tsukita S, Yamada T, Uno K, Takahashi K, Kaneko K, Ishigaki Y, Imai J, Hasegawa Y, Sawada S, **Ishihara H**, Oka Y, Katagiri H. (2012). Hepatic glucokinase modulates obesity predisposition by regulating BAT thermogenesis via neural signals. *Cell Metab.* 16, 825-832.
51. Choi M, Ozeki J, Hashizume M, Kato S, **Ishihara H**, Makishima M. (2012). Vitamin D receptor activation induces peptide YY transcription in pancreatic islets. *Endocrinology.* 153, 5188-5199.
52. Usui M, Yamaguchi S, Tanji Y, Tominaga R, Ishigaki Y, Fukumoto M, Katagiri H, Mori K, Oka Y, **Ishihara H**. (2012). Atf6 α -null mice are glucose intolerant due to pancreatic β -cell failure on a high-fat diet but partially resistant to diet-induced insulin resistance. *Metabolism.* 61, 1118-1128.
53. **Ishihara H**. (2011). Cross-talk among pancreatic alpha, beta and delta cells stimulated by incretin hormones. *Nihon Rinsho.* 69, 795-800.
54. Kirkpatrick CL, Wiederkehr A, Baqu   M, Akhmedov D, Wang H, Gauthier BR, Akerman I, **Ishihara H**, Ferrer J, Wollheim CB. (2011). Hepatic nuclear factor 1alpha (HNF1alpha) dysfunction down-regulates X-box-binding protein 1 (XBP1) and sensitizes beta-cells to endoplasmic reticulum stress. *J Biol Chem.* 286, 32300-32312.
55. Gao J, Ishigaki Y, Yamada T, Kondo K, Yamaguchi S, Imai J, Uno K, Hasegawa Y, Sawada S, **Ishihara H**, Oyadomari S, Mori M, Oka Y, Katagiri H. (2011). Involvement of endoplasmic stress

protein C/EBP homologous protein in arteriosclerosis acceleration with augmented biological stress responses. *Circulation*. 124, 830-839.

56. Suzuki T, Imai J, Yamada T, Ishigaki Y, Kaneko K, Uno K, Hasegawa Y, **Ishihara H**, Oka Y, Katagiri H. (2011). Interleukin-6 enhances glucose-stimulated insulin secretion from pancreatic β cells: potential involvement of the PLC-IP3-dependent pathway. *Diabetes*. 60, 537-547.
57. Tominaga R, Yamaguchi S, Satake C, Usui M, Tanji Y, Kondo K, Katagiri H, Oka Y, **Ishihara H**. (2010). The JNK pathway modulates expression and phosphorylation of 4E-BP1 in MIN6 pancreatic β -cells under oxidative stress condition. *Cell Biochem Funct*. 28, 387-393.
58. Fonseca SG, Ishigaki S, Osowski CM, Lu S, Lipson KL, Ghosh R, Hayashi E, **Ishihara H**, Oka Y, Permutt MA, Urano F. (2010). Wolfram syndrome 1 gene negatively regulates ER stress signaling in rodent and human cells. *J Clin Invest*. 120, 744-755.
59. **Ishihara H**. (2009). Stress responses in pancreatic β -cells: roles of translational control. *Seikagaku*. 81, 474-485.
60. Tokita A, Ishigaki Y, Okimoto H, Hasegawa H, Koiwa Y, Kato M, **Ishihara H**, Hinokio Y, Katagiri H, Kanai H, Oka Y. (2009). Carotid arterial elasticity is a sensitive atherosclerosis value reflecting visceral fat accumulation in obese subjects. *Atherosclerosis*. 206, 168-172.
61. Imai J, Katagiri H, Yamada T, Ishigaki Y, Suzuki T, Kudo H, Uno K, Hasegawa Y, Gao J, Kaneko K, **Ishihara H**, Nijima A, Nakazato M, Asano T, Minokoshi Y, Oka Y. (2008). Regulation of pancreatic beta cell mass by neuronal signals from the liver. *Science*. 322, 1250-1254.
62. Yamaguchi S, **Ishihara H**, Yamada T, Tamura A, Usui M, Tominaga R, Munakata Y, Satake C, Katagiri H, Tashiro F, Aburatani H, Tsukiyama-Kohara K, Miyazaki J, Sonenberg N, Oka Y. (2008). ATF4-mediated induction of 4E-BP1 contributes to pancreatic β cell survival under endoplasmic reticulum stress. *Cell Metab*. 7, 269-276.
63. Ishigaki Y, Katagiri H, Gao J, Yamada T, Imai J, Hasegawa Y, Kaneko K, Ogihara T, **Ishihara H**, Sata Y, Takikawa K, Nishimichi N, Matsuda H, Sawamura T, Oka Y. (2008). Impact of plasma oxidized low-density lipoprotein removal on atherosclerosis. *Circulation*. 118, 75-83.
64. Kimura T, Kaneko Y, Yamada S, **Ishihara H**, Senda T, Iwamatsu A, Niki I. (2008). The GDP-dependent Rab27a effector coronin 3 controls endocytosis of secretory membrane in insulin secreting cell lines. *J Cell Sci*. 121, 3092-3098.
65. Kato T, Ishiwata M, Yamada K, Kasahara T, Kakiuchi C, Iwamoto K, Kawamura K, **Ishihara H**, Oka Y. (2008). Behavioral and gene expression analyses of Wfs1 knockout mice as a possible animal model of mood disorder. *Neurosci Res*. 61, 143-158.
66. Hasegawa Y, Ogihara T, Yamada T, Ishigaki Y, Imai J, Uno K, Gao J, Kaneko K, **Ishihara H**, Sasano H, Nakauchi H, Oka Y, Katagiri H. (2007). Bone marrow (BM) transplantation promotes β -cell regeneration after acute injury through BM cell mobilization. *Endocrinology*. 148, 2006-2015.
67. Nishio M, Tsurudome M, **Ishihara H**, Ito M, Ito Y. (2007). The conserved carboxyl terminus of human parainfluenza virus type 2 V protein plays an important role in virus growth. *Virology* 362, 85-98.
68. Takahashi R, **Ishihara H**, Takahashi K, Tamura A, Yamaguchi S, Yamada T, Katagiri H, Oka Y. (2007). Efficient and controlled gene expression in mouse pancreatic islets by arterial delivery of tetracycline-inducible adenoviral vectors. *J Mol Endocrinol*. 38, 127-136.
69. Takei D, **Ishihara H**, Yamaguchi S, Yamada T, Tamura A, Katagiri H, Maruyama Y, Oka Y. (2006). WFS1 protein modulates the free Ca^{2+} concentration in the endoplasmic reticulum. *FEBS Lett*. 580, 5635-5640.

70. Imai J, Katagiri H, Yamada T, Ishigaki Y, Ogihara T, Uno K, Hasegawa Y, Gao J, **Ishihara H**, Sasano H, Oka Y. (2006). Cold exposure suppresses serum adiponectin levels through sympathetic nerve activation in mice. *Obesity*. 14, 1132-1141.
71. Uno K, Katagiri H, Yamada T, Ishigaki Y, Ogihara T, Imai J, Hasegawa Y, Gao J, Kaneko K, Iwasaki H, **Ishihara H**, Sasano H, Inukai K, Mizuguchi H, Asano A, Shiota M, Nakazato M, Oka Y. (2006). Neuronal Pathway from the Liver Modulates Energy Expenditure and Systemic Insulin Sensitivity. *Science*. 312, 1656-1659.
72. Yamada T, **Ishihara H**, Tamura A, Takahashi R, Yamaguchi S, Takei D, Tokita D, Satake C, Tashiro F, Katagiri H, Aburatani H, Miyazaki J, Oka Y. (2006). WFS1-deficiency increases endoplasmic reticulum stress, impairs cell cycle progression and triggers the apoptotic pathway specifically in pancreatic β -cells. *Hum Mol Genet*. 15, 1600-1609.
73. Yamada T, Katagiri H, Ishigaki Y, Ogihara T, Imai J, Uno K, Hasegawa Y, Gao J, **Ishihara H**, Nijima A, Mano H, Aburatani H, Asano T, Oka Y. (2006). Signals from intra-abdominal fat modulate insulin and leptin sensitivity through different mechanisms: Neuronal involvement in food-intake regulation. *Cell Metab*. 3, 223-239.
74. Takahashi R, **Ishihara H**, Tamura A, Yamaguchi S, Yamada T, Takei D, Katagiri H, Endou H, Oka Y. (2006). Cell-type specific activation of metabolism reveals that β -cell secretion suppresses glucagon release from α -cells in rat pancreatic islets. *Am J Physiol Endocrinol Metab*. 290, E308-E316.
75. Satoh J, Takahashi K, Takizawa Y, **Ishihara H**, Hirai M, Katagiri H, Hinokio Y, Suzuki S, Tsuji I, Oka Y. (2005). Secondary sulfonylurea failure: Comparison of period until insulin treatment between diabetic patients treated with gliclazide and glibenclamide. *Diabetes Res Clin Pract*. 70, 291-297.
76. Ishigaki Y, Katagiri H, Yamada T, Ogihara T, Imai J, Uno K, Hasegawa Y, Gao J, **Ishihara H**, Shimosegawa T, Sakoda H, Asano T, Oka Y. (2005). Dissipating excess energy stored in the liver is a potential treatment strategy for diabetes associated with obesity. *Diabetes*. 54, 322-332.
77. Imai J, Katagiri H, Yamada T, Ishigaki Y, Ogihara T, Uno K, Hasegawa Y, **Ishihara H**, Sasano H, Mizuguchi H, Asano T, Oka Y. (2005). Constitutively active PDX1 induced efficient insulin production in adult murine liver. *Biochem Biophys Res Commun*. 326, 402-409.
78. Yamaguchi S, **Ishihara H**, Tamura A, Yamada T, Takahashi R, Takei D, Katagiri H, Oka Y. (2004). Endoplasmic reticulum stress and N-glycosylation modulate expression of WFS1 protein. *Biochem Biophys Res Commun*. 325, 250-256.
79. Gauthier BR, Brun T, Sarret EJ, **Ishihara H**, Schaad O, Descombes P, Wollheim CB. (2004). Oligonucleotide microarray analysis reveals PDX1 as an essential regulator of mitochondrial metabolism in rat islets. *J Biol Chem*. 279, 31121-31130.
80. **Ishihara H**, Takeda S, Tamura A, Takahashi R, Yamaguchi S, Takei D, Yamada T, Inoue H, Soga H, Katagiri H, Tanizawa Y, Oka Y. (2004). Disruption of the WFS1 gene in mice causes progressive beta-cell loss and impaired stimulus-secretion coupling in insulin secretion. *Hum Mol Genet*. 13, 1159-1170.
81. Carobbio S, **Ishihara H**, Fernandez-Pascual S, Bartley C, Martin-Del-Rio R, Maechler P. (2004). Insulin secretion profiles are modified by overexpression of glutamate dehydrogenase in pancreatic islets. *Diabetologia*. 47, 266-276.
82. Oude Weernink PA, Meletiadis K, Hommeltenberg S, Hinz M, **Ishihara H**, Schmidt M, Jakobs KH. (2004). Activation of type I phosphatidylinositol-4-phosphate 5-kinase isoforms by the Rho GTPases, RhoA, Rac1, and Cdc42. *J Biol Chem*. 279, 7840-7849.
83. Huynh H, Wang X, Li W, Bottini N, Williams S, Nika K, **Ishihara H**, Godzik A, Mustelin, T. (2003). Homotypic secretory vesicle fusion induced by the protein tyrosine phosphatase MEG2 depends on polyphosphoinositides in T cells. *J Immunol*. 171, 6661-6671.

84. Nagai T, Tanaka-Ishikawa M, Aikawa R, **Ishihara H**, Zhu W, Yazaki Y, Nagai R, Komuro I. (2003). Cdc42 plays a critical role in assembly of sarcomere units in series of cardiac myocytes. *Biochem Biophys Res Commun.* 305, 806-810.
85. **Ishihara H**, Maechler P, Gjinovci A, Herrera PL, Wollheim CB. (2003). Islet β -cell secretion determines glucagon secretion from the neighboring α -cells. *Nat Cell Biol.* 5, 330-335.
86. Nakazaki M, Kakei M, **Ishihara H**, Koriyama N, Hashiguchi H, Aso K, Fukudome M, Oka Y, Yada T, Tei C. (2002). Association of upregulated activity of KATP channels with impaired insulin secretion in UCP1-expressing insulinoma cells. *J Physiol.* 540.3, 781-789.
87. Rubi B, Antinozzi PA, Herrero L, **Ishihara H**, Asins G, Serra D, Wollheim CB, Maeshler P, Hegardt FG. (2002). Adenovirus-mediated overexpression of liver carnitine palmitoyltransferase I in INS1E cells: effects on cell metabolism and insulin secretion. *Biochem J.* 364, 219-226.
88. Antinozzi PA, **Ishihara H**, Newgard CB, Wollheim CB. (2002). Mitochondrial metabolism sets the maximal limit of fuel-stimulated insulin secretion in a model pancreatic beta cell: a survey of four fuel secretagogues. *J Biol Chem.* 277, 11746-11755.
89. Hagenfeldt-Johannson K, Herrera PL, Wang H, Gjinovci A, **Ishihara H**, Wollheim CB. (2001). beta-Cell-Targeted Expression of a Dominant-Negative Hepatocyte Nuclear Factor-1alpha Induces a Maturity-Onset Diabetes of the Young (MODY)3-Like Phenotype in Transgenic Mice. *Endocrinology.* 142, 5311-5320.
90. Rubi B, **Ishihara H**, Hegardt FG, Wollheim CB, Maeshler P. (2001). GAD65-mediated glutamate decarboxylation reduces glucose-stimulated insulin secretion in pancreatic beta cells. *J Biol Chem.* 276, 36391-39396.
91. Wang H, Maeshler M, Ritz-Laser B, Hagenfeldt KA, **Ishihara H**, Philippe J, Wollheim CB. (2001). Pdx1 level defines pancreatic gene expression pattern and cell lineage differentiation. *J Biol Chem.* 276, 25279-25286.
92. Yamamoto M, Hilgemann DH, Feng S, Bito H, **Ishihara H**, Shibasaki Y, Yin H. (2001). Phosphatidylinositol 4,5-bisphosphate induces actin stress-fiber formation and inhibits membrane ruffling in CV1 cells. *J Cell Biol.* 152, 867-876.
93. **Ishihara H**, Wollheim CB. (2000). What couples glycolysis to mitochondrial signal generation in glucose-stimulated insulin secretion? *IUBMB Life.* 49, 391-395.
94. Itoh T, **Ishihara H**, Shibasaki Y, Oka Y, Takenawa T. (2000). Autophosphorylation of type I phosphatidylinositol phosphate kinase regulates its lipid kinase activity. *J Biol Chem.* 275, 19389-19394.
95. Bito H, Furuyashiki T, **Ishihara H**, Shibasaki Y, Ohashi K, Mizuno K, Maekawa M, Ishizaki T, Narumiya S. (2000). A critical role for a Rho-associated kinase, p160ROCK, in determining axon outgrowth in mammalian CNS neurons. *Neuron.* 26, 431-441.
96. Tolias KF, Hartwig JH, **Ishihara H**, Shibasaki Y, Cantley LC, Carpenter CL. (2000). Type I α phosphatidylinositol-4-phosphate 5-kinase mediates Rac-dependent actin assembly. *Curr Biol.* 10, 153-156.
97. **Ishihara H**, Wang H, Drewes LR, Wollheim CB. (1999). Overexpression of monocarboxylate transporter and lactate dehydrogenase alters insulin secretory responses to pyruvate and lactate in beta cells. *J Clin Invest.* 104, 1621-1629.
98. **Ishihara H**, Wada T, Kizuki N, Asano A, Yazaki Y, Kikuchi M, Oka Y. (1999). Enhanced phosphoinositide hydrolysis via overexpression of phospholipase C β 1 or δ 1 inhibits stimulus-induced insulin release in insulinoma MIN6 cells. *Biochem Biophys Res Commun.* 254, 77-82.
99. Tolias KF, Rameh LE, **Ishihara H**, Shibasaki Y, Chen J, Prestwich GD, Cantley LC, Carpenter CL. (1998). Type I phosphatidylinositol-4-phosphate 5-kinases synthesize the novel lipids

phosphatidylinositol 3,5-bisphosphate and phosphatidylinositol 5-phosphate. *J Biol Chem.* 273, 18040-18046.

100. Ueda K, Tanizawa Y, **Ishihara H**, Kizuki N, Ohta Y, Matsutani A, Oka Y. (1998). Overexpression of mitochondrial FAD-linked glycerol-3-phosphate dehydrogenase does not correct glucose-stimulated insulin secretion from diabetic GK rat pancreatic islets. *Diabetologia.* 41, 649-653.
101. **Ishihara H**, Shibasaki Y, Wada T, Kizuki N, Yazaki Y, Asano T, Oka Y. (1998). Type I phosphatidylinositol-4-phosphate 5-kinases. Cloning of the third isoform and deletion/substitution analysis of members of this novel lipid kinase family. *J Biol Chem.* 273, 8741-8748.
102. Terasaki J, Anai M, Funaki M, Shibata T, Inukai K, Ogihara T, **Ishihara H**, Katagiri H, Onishi Y, Sakoda H, Fukushima Y, Yazaki Y, Kikuchi M, Oka Y, Asano T. (1998). Role of JTT-501, a new insulin sensitiser, in restoring impaired GLUT4 translocation in adipocytes of rats fed a high fat diet. *Diabetologia.* 41, 1400-1409.
103. Nakazaki M, **Ishihara H**, Kakei M, Inukai K, Asano T, Miyazaki JI, Tanaka H, Kikuchi M, Yada T, Oka Y. (1998). Repetitive mitochondrial Ca^{2+} signals synchronize with cytosolic Ca^{2+} oscillations in the pancreatic beta-cell line, MIN6. *Diabetologia.* 41, 279-286.
104. Yada T, Sakurada M, **Ishihara H**, Nakata M, Shioda S, Yaekura K, Hamakawa N, Yanagida K, Kikuchi M, Oka Y. (1997). Pituitary adenylate cyclase-activating polypeptide (PACAP) is an islet substance serving as an intra-islet amplifier of glucose-induced insulin secretion in rats. *J Physiol (Lond).* 505, 319-328.
105. Tanizawa Y, Okuya S, **Ishihara H**, Asano T, Yada T, Oka Y. (1997). Direct stimulation of basal insulin secretion by physiological concentrations of leptin in pancreatic beta cells. *Endocrinology.* 138, 4513-4516.
106. Ogihara T, Shin BC, Anai M, Katagiri H, Inukai K, Funaki M, Fukushima Y, **Ishihara H**, Takata K, Kikuchi M, Yazaki Y, Oka Y, Asano T. (1997). Insulin receptor substrate (IRS)-2 is dephosphorylated more rapidly than IRS-1 via its association with phosphatidylinositol 3-kinase in skeletal muscle cells. *J Biol Chem.* 272, 12868-12873.
107. Murata T, Katagiri H, **Ishihara H**, Shibasaki Y, Asano T, Toyoda Y, Pekiner B, Pekiner C, Miwa I, Oka Y. (1997). Co-localization of glucokinase with actin filaments. *FEBS Lett.* 406, 109-113.
108. Inukai K, Takata K, Asano T, Katagiri H, **Ishihara H**, Nakazaki M, Fukushima Y, Yazaki Y, Kikuchi M, Oka Y. (1997). Targeting of GLUT1-GLUT5 chimeric proteins in the polarized cell line Caco-2. *Mol Endocrinol.* 11, 442-449.
109. Shibasaki Y, **Ishihara H**, Kizuki N, Asano T, Oka Y, Yazaki Y. (1997). Massive actin polymerization induced by phosphatidylinositol-4-phosphate 5-kinase in vivo. *J Biol Chem.* 272, 7578-7581.
110. Katagiri H, Asano T, Inukai K, Ogihara T, **Ishihara H**, Shibasaki Y, Murata T, Terasaki J, Kikuchi M, Yazaki Y, Oka Y. (1997). Roles of PI 3-kinase and Ras on insulin-stimulated glucose transport in 3T3-L1 adipocytes. *Am J Physiol.* 272, E326-E331.
111. Soejima A, Inoue K, Takai D, Kaneko M, **Ishihara H**, Oka Y, Hayashi JI. (1996). Mitochondrial DNA is required for regulation of glucose-stimulated insulin secretion in a mouse pancreatic beta cell line, MIN6. *J Biol Chem.* 271, 26194-26199.
112. **Ishihara H**, Shibasaki Y, Kizuki N, Katagiri H, Yazaki Y, Asano T, Oka Y. (1996). Cloning of cDNAs encoding two isoforms of 68-kDa type I phosphatidylinositol-4-phosphate 5-kinase. *J Biol Chem.* 271, 23611-23614.
113. Takeuchi H, Inoue Y, **Ishihara H**, Oka Y. (1996). Overexpression of either liver type or pancreatic beta cell type glucokinase via recombinant adenovirus enhances glucose oxidation in isolated rat hepatocytes. *FEBS Lett.* 393, 60-64.
114. **Ishihara H**, Nakazaki M, Kanegae Y, Inukai K, Asano T, Katagiri H, Yazaki Y, Kikuchi M, Miyazaki JI, Saito I, Oka Y. (1996). Effect of mitochondrial and/or cytosolic glycerol 3-phosphatedehydrogenase

overexpression on glucose-stimulated insulin secretion from MIN6 and HIT cells. *Diabetes*. 45, 1238-1244.

115. Katagiri H, Asano T, **Ishihara H**, Inukai K, Shibasaki Y, Kikuchi M, Yazaki Y, Oka Y. (1996). Overexpression of catalytic subunit p110alpha of phosphatidylinositol 3-kinase increases glucose transport activity with translocation of glucose transporters in 3T3-L1 adipocytes. *J Biol Chem*. 271, 16987-16990.
116. Matsutani A, Takeuchi Y, **Ishihara H**, Kuwano S, Oka Y. (1996). Molecular cloning of human mitochondrial glycerophosphate dehydrogenase gene: genomic structure, chromosomal localization, and existence of a pseudogene. *Biochem Biophys Res Commun*. 223, 481-486.
117. Skelly RH, Schuppin GT, **Ishihara H**, Oka Y, Rhodes CJ. (1996). Glucose-regulated translational control of proinsulin biosynthesis with that of the proinsulin endopeptidases PC2 and PC3 in the insulin-producing MIN6 cell line. *Diabetes*. 45, 37-43.
118. Katagiri H, Terasaki J, Murata T, **Ishihara H**, Ogihara T, Inukai K, Fukushima Y, Anai M, Kikuchi M, Miyazaki JI, Yazaki Y, Oka Y. (1995). A novel isoform of syntaxin-binding protein homologous to yeast Sec1 expressed ubiquitously in mammalian cells. *J Biol Chem*. 270, 4963-4966.
119. Inukai K, Katagiri H, Takata K, Asano T, Anai M, **Ishihara H**, Nakazaki M, Kikuchi M, Yazaki Y, Oka Y. (1995). Characterization of rat GLUT5 and functional analysis of chimeric proteins of GLUT1 glucose transporter and GLUT5 fructose transporter. *Endocrinology*. 136, 4850-4857.
120. **Ishihara H**, Asano T, Tsukuda K, Katagiri H, Inukai K, Anai M, Yazaki Y, Miyazaki JI, Kikuchi M, Oka Y. (1995). Human GLUT-2 overexpression does not affect glucose-stimulated insulin secretion in MIN6 cells. *Am J Physiol*. 269, E897-E902.
121. **Ishihara H**, Tashiro F, Ikuta K, Asano T, Katagiri H, Inukai K, Kikuchi M, Yazaki Y, Oka Y, Miyazaki JI. (1995). Inhibition of pancreatic beta-cell glucokinase by antisense RNA expression in transgenic mice: mouse strain-dependent alteration of glucose tolerance. *FEBS Lett*. 371, 329-332.
122. Inukai K, Asano T, Katagiri H, Anai M, Funaki M, **Ishihara H**, Tsukuda K, Kikuchi M, Yazaki Y, Oka Y. (1994). Replacement of both tryptophan residues at 388 and 412 completely abolished cytochalasin B photolabelling of the GLUT1 glucose transporter. *Biochem J*. 302, 355-361.
123. **Ishihara H**, Asano T, Tsukuda K, Katagiri H, Inukai K, Anai M, Kikuchi M, Yazaki Y, Miyazaki JI, Oka Y. (1994). Overexpression of hexokinase I but not GLUT1 glucose transporter alters concentration dependence of glucose-stimulated insulin secretion in pancreatic beta-cell line MIN6. *J Biol Chem*. 269, 3081-3087.
124. Katagiri H, Asano T, **Ishihara H**, Inukai K, Anai M, Yamanouchi T, Tsukuda K, Kikuchi M, Kitaoka H, Ohsawa N, et (1994). Mitochondrial diabetes mellitus: prevalence and clinical characterization of diabetes due to mitochondrial tRNA^{Leu(UUR)} gene mutation in Japanese patients. *Diabetologia*. 37, 504-510.
125. Inukai K, Asano T, Katagiri H, **Ishihara H**, Anai M, Fukushima Y, Tsukuda K, Kikuchi M, Yazaki Y, Oka Y. (1993). Cloning and increased expression with fructose feeding of rat jejunal GLUT5. *Endocrinology*. 133, 2009-2014.
126. **Ishihara H**, Asano T, Tsukuda K, Katagiri H, Inukai K, Anai M, Kikuchi M, Yazaki Y, Miyazaki JI, Oka Y. (1993). Pancreatic beta cell line MIN6 exhibits characteristics of glucose metabolism and glucose-stimulated insulin secretion similar to those of normal islets. *Diabetologia*. 36, 1139-1145.
127. Fukushima Y, Oka Y, Katagiri H, Saitoh T, Asano T, **Ishihara H**, Matsushashi N, Kodama T, Yazaki Y, Sugano K. (1993). Desensitization of canine histamine H2 receptor expressed in Chinese hamster ovary cells. *Biochem Biophys Res Commun*. 190, 1149-1155.
128. Asano T, Takata K, Katagiri H, **Ishihara H**, Inukai K, Anai M, Hirano H, Yazaki Y, Oka Y. (1993). The role of N-glycosylation in the targeting and stability of GLUT1 glucose transporter. *FEBS Lett*. 324, 258-261.

129. Katagiri H, Asano T, **Ishihara H**, Lin JL, Inukai K, Shanahan MF, Tsukuda K, Kikuchi M, Yazaki Y, Oka Y. (1993). Role of tryptophan-388 of GLUT1 glucose transporter in glucose-transport activity and photoaffinity-labelling with forskolin. *Biochem J.* 291, 861-867.
130. **Ishihara H**, Asano T, Katagiri H, Lin JL, Tsukuda K, Inukai K, Yazaki Y, Oka Y. (1993). Expression of GLUT-4 glucose transporter in unweighted soleus muscle of normal and STZ-induced diabetic rats. *Am J Physiol.* 264, E301-E307.
131. Katagiri H, Asano T, **Ishihara H**, Inukai K, Anai M, Miyazaki JI, Tsukuda K, Kikuchi M, Yazaki Y, Oka Y. (1992). Nonsense mutation of glucokinase gene in late-onset non-insulin-dependent diabetes mellitus. *Lancet.* 340, 1316-1317.
132. Asano T, Katagiri H, Takata K, Tsukuda K, Lin JL, **Ishihara H**, Inukai K, Hirano H, Yazaki Y, Oka Y. (1992). Characterization of GLUT3 protein expressed in Chinese hamster ovary cells. *Biochem J.* 288, 189-193.
133. Katagiri H, Asano T, **Ishihara H**, Tsukuda K, Lin JL, Inukai K, Kikuchi M, Yazaki Y, Oka Y. (1992). Replacement of intracellular C-terminal domain of GLUT1 glucose transporter with that of GLUT2 increases Vmax and Km of transport activity. *J Biol Chem.* 267, 22550-22555.
134. Asano T, Takata K, Katagiri H, Tsukuda K, Lin JL, **Ishihara H**, Inukai K, Hirano H, Yazaki Y, Oka Y. (1992). Domains responsible for the differential targeting of glucose transporter isoforms. *J Biol Chem.* 267, 19636-19641.
135. Lin JL, Asano T, Katagiri H, Tsukuda K, **Ishihara H**, Inukai K, Yazaki Y, Oka Y. (1992). Deletion of C-terminal 12 amino acids of GLUT1 protein does not abolish the transport activity. *Biochem Biophys Res Commun.* 184, 865-870.
136. Asano T, Katagiri H, Tsukuda K, Lin JL, **Ishihara H**, Inukai K, Yazaki Y, Oka Y. (1992). Glucose binding enhances the papain susceptibility of the intracellular loop of the GLUT1 glucose transporter. *FEBS Lett.* 298, 129-132.
137. Shibasaki Y, Asano T, Lin JL, Tsukuda K, Katagiri H, **Ishihara H**, Yazaki Y, Oka Y. (1992). Two glucose transporter isoforms are sorted differentially and are expressed in distinct cellular compartments. *Biochem J.* 281, 829-834.
138. Asano T, Katagiri H, Tsukuda K, Lin JL, **Ishihara H**, Yazaki Y, Oka Y. (1992). Upregulation of GLUT2 mRNA by glucose, mannose, and fructose in isolated rat hepatocytes. *Diabetes.* 41, 22-25.
139. Asano T, Shibasaki Y, Lin JL, Tsukuda K, Katagiri H, **Ishihara H**, Yazaki Y, Oka Y. (1991). Expression of the GLUT1 glucose transporter increases thymidine uptake in Chinese hamster ovary cells at low glucose concentrations. *Cancer Res.* 51, 4450-4454.
140. Lin JL, Asano T, Shibasaki Y, Tsukuda K, Katagiri H, **Ishihara H**, Takaku F, Oka Y. (1991). Altered expression of glucose transporter isoforms with aging in rats--selective decrease in GluT4 in the fat tissue and skeletal muscle. *Diabetologia.* 34, 477-482.
141. **Ishihara H**, Asano T, Katagiri H, Lin JL, Tsukuda K, Shibasaki Y, Yazaki Y, Oka Y. (1991). The glucose transport activity of GLUT1 is markedly decreased by substitution of a single amino acid with a different charge at residue 415. *Biochem Biophys Res Commun.* 176, 922-930.
142. Katagiri H, Asano T, Shibasaki Y, Lin JL, Tsukuda K, **Ishihara H**, Akanuma Y, Takaku F, Oka Y. (1991). Substitution of leucine for tryptophan 412 does not abolish cytochalasin B labeling but markedly decreases the intrinsic activity of GLUT1 glucose transporter. *J Biol Chem.* 266, 7769-7773.
143. Tsukuda K, Asano T, Lin JL, Katagiri H, **Ishihara H**, Takaku F, Oka Y. (1991). Peptide-based radioimmunoassay specific for GLUT1 glucose transporter. *Diabetes.* 40, 315-318.