社団法人日本栄養・食糧学会　　研究業績

＜学 会 賞＞

研究題目:(和)	糖尿病性骨減少症の病態生理学的研究		
(英)	Studies on Pathophysiological Aspects of Diabetic Osteopenia		
氏　名:(和)	石田 均		
(英)	Hitoshi Ishida		
所属機関:(和)	杏林大学医学部第三内科 教授		
(英)	Professor and Chief, Third Department of Internal Medicine, Kyorin University School of Medicine		
学　位:	医学博士(京都大学)	最終学歴:	1978年3月、京都大学医学部医学科卒業
会員番号:	0095027613	入会年度:	1982年

研究業績要旨(1,000 字以内)

全身性の代謝異常を生じる糖尿病では、慢性合併症の存在が患者の予後を決定する。そこで糖尿病に合併する可能性が指摘されていた骨・ミネラル系の代謝異常の病態ならびに成因について、基礎的および臨床的検討を加えた。

まず種々の糖尿病モデル動物を用いて、糖尿病状態下でのミネラル・ビタミンD代謝異常の存在を確認した。次いで日本人の糖尿病の大多数を占める2型糖尿病症例について検討を進め、骨塩量の低下とともにビタミンD代謝に異常が生じている事実を明らかにした（文献8－10）。そこでビタミンD代謝異常の成因を明らかにするために、2型糖尿病モデルのdb/dbマウスを用いて小腸ならびに腎のビタミンD受容体について検討したところ、これらの受容体数の減少と腎におけるビタミンD代謝の異常を認めた(文献7)。一方で骨代謝異常について、骨芽細胞機能の鋭敏なマーカーである血中osteocalcin(OC)を1型糖尿病モデルのSTZラットで測定したところ、対照に比し明らかな低下を認めた（文献6)。さらに2型糖尿病モデルのWistar fattyならびにNSZラットにも同様の血中OCの低下を認めた（文献5）ことから、骨形成の低下は1型と2型糖尿病に共通していることが示された。

次に破骨細胞機能に関して検討を進めたところ、Wistar fattyラットで骨吸収の亢進を示唆する成績を得た（文献4)。そこで2型糖尿病症例を対象に、骨芽ならびに破骨細胞機能を種々のマーカーを用いて検討することとした（文献1，3)。その結果、骨芽細胞機能の低下と同時に、一方で破骨細胞機能の亢進を認めた。またこれらの細胞機能のuncoupling機構を追究するために、coupling factorの1つで破骨細胞形成に対して抑制的な作用を有するosteoprotegerin (OPG)に関する検討を加えたところ、血中OPGは糖尿病症例においてむしろ高値の傾向を示すとともに、破骨細胞機能との間に正の相関を、そして骨塩量との間に負の相関を認めた（文献1)。したがって糖尿病状態下では破骨細胞機能の亢進が骨量の減少に重要な役割を果たすとともに、OPGは二次的に上昇し骨吸収の亢進とさらなる骨量の減少に対して抑制的に作用することが示された。

国民の高齢化に伴い骨量の減少を有する糖尿病患者の増加が容易に予想されることから、本研究を基盤とした骨減少症の病因の解明や、治療（文献2）ならびに予防法の確立が求められている。

報文等リスト

(1) この研究に直接関連するもの(10 編以内)
1. 10編を列挙致しました(文献1－10)。
2. そのうち、1編が JNSV 掲載論文です(文献9)。

(2) その他の論文(編数制限なし)
1. 134編を列挙致しました(文献11－144)。
2. そのうち、3編が JNSV 掲載論文です(文献66、75、125)。
3. 印刷中の1編については、掲載証明書を添付しました(文献11)。

(3) 過去 5 年間の本学会での活動状況
1. 2002年～2004年:理事、学会誌編集委員長
2. 2004年～現在　:各種授賞等選考委員会委員
3. 2006年～現在　:副会長

(4) 特記事項
なし

(1) この研究に直接関連する論文(10編)

1.	K. Suzuki, T. Kurose, M. Takizawa, M. Maruyama, K. Ushikawa, M. Kikuyama, C. Sugimoto, Y. Seino, S. Nagamatsu and H. Ishida. Osteoclastic function is accelerated in male patients with type 2 diabetes mellitus : the preventive role of osteoclastogenesis inhibitory factor/osteoprotegerin (OCIF/OPG) on the decrease of bone density.	Diabetes Res Clin Pract 68:117-125	2005
2.	A.W.Norman, J.E.Bishop, C.Bulla, C.Olivera, M.Mizwicki, L.Zanello, H.Ishida and W.H.Okamura. Molecular tools for stydy of genomic and rapid signal transduction responses initiated by $1\alpha,25(OH)_2$-vitamin D_3.	Steroids 67(6):457-466	2002
3.	K.Suzuki, C.Sugimoto, M.Takizawa, S. Ishizuka, M.Kikuyama, H.Togawa, Y.Taguchi, K.Nosaka,Y.Seino and H.Ishida. Correlations between bone mineral density and circulating bone metabolic markers in diabetic patients.	Diabetes Res Clin Pract 48:185-191	2000
4.	K.Suzuki, H.Ishida, N.Takeshita, Y.Taguchi, C.Sugimoto, K.Nosaka and Y.Seino. Circurating levels of tartrate-resistant acid phosphatase in rat models of non-insulin-dependent diabetes mellitus.	J Diab Comp 12(3):176-180	1998
5.	N. Takeshita, H. Ishida, T. Yamamoto, G. Koh, T. Kurose, K. Tsuji, Y. Okamoto, H. Ikeda and Y. Seino. Circulating levels and bone contents of bone γ-carboxyglutamic acid-containing protein in rat models of non-insulin dependent diabetes mellitus.	Acta Endocrinol 128(1):69-73	1993
6.	H. Ishida, Yu. Seino, T. Taminato, M. Usami, N. Takeshita, Yo. Seino, C. Tsutsumi, S. Moriuchi, Y. Akiyama, K. Hara and H. Imura. Circulating levels and bone contents of bone γ-carboxyglutamic acid-containing protein are decreased in streptozotocin-induced diabetes; possible marker for diabetic osteopenia.	Diabetes 37(6):702-706	1988
7.	H. Ishida, N. S. Cunningham, H. L. Henry and A. W. Norman. The number of 1,25-dihydroxyvitamin D_3 receptors is decreased in both intestine and kidney of genetically diabetic db/db mice.	Endocrinology 122(6):2436-2443	1988
8.	H. Ishida, Y. Seino, S. Matsukura, M. Ikeda, M. Yawata, G. Yamashita, S. Ishizuka and H. Imura. Diabetic osteopenia and circulating levels of vitamin D metabolites in type 2 (non-insulin-dependent) diabetes.	Metabolism 34(9):797-801	1985
*9.	H. Ishida, Y. Seino, S. Matsukura, S. Ishizuka and H. Imura. The role of vitamin D metabolites in hypercalcemia of Zucker fa/fa rats.	J Nutr Sci Vitaminol 31(1):1-5	1985
10.	H. Ishida, Y. Seino, K. Tsuda, J. Takemura, S. Nishi, S. Ishizuka and H. Imura. Effects of streptozotocin-induced diabetes on circulatig levels of vitamin D metabolites.	Acta Endocrinol 104(1):96-102	1983

(2) その他の論文 （134編）

11.	N.Nakano, N.Miyazawa, T.Sakurai, T.Kizaki, K.Kimoto, K.Takahashi, H.Ishida, M.Takahashi, K.Suzuki and H.Ohno. Gliclazide inhibits proliferation but stimulates differentiation of white and brown adipocytes.	J Biochem	in press
12.	T.Uehara, K.Suzuki, H.Yamanaka, T.Kizaki, T.Sakurai, Y.Ishibashi, H.Ishida,and H.Ohno. SHP-2 positively regulates adipogenic differentiation in 3T3-L1 cells.	Int J Mol Med 19:895-900	2007
13.	S.Nezu, A.Tanaka, H.Yasui, M.Imamura, H.Nakajima, H.Ishida and S.Takahashi. Presence of antimitochondrial autoantibodies in patients with autoimmune hepatitis.	J Gastroenterol Hepatol 21:1448-1454	2006
14.	T.Kishino, H.Haradome, H.Mori, S.Takahashi, H.Ishida and T.Watanabe. Choledochocele demonstrated on conventional sonography.	J Clin Ultrasound 34:199-202	2006
15.	T.Shimoyama, S.Yamaguchi, K.Takahashi, E.Ito, H.Seki, K.Ushikawa, H.Katahira, K.Yoshimoto, H.Ohno, S.Nagamatsu, and H.Ishida. Gliclazide protects 3T3L1 adipocytes against insulin resistance induced by hydrogen peroxide with restoration of GLUT4 translocation.	Metabolism 55(6):722-730	2006
16.	K.Watanabe, M.Beinborn, S.Nagamatsu, H.Ishida, and S.Takahashi. Menetrier's disease in a patient with Helicobacter pylori infection is linked to elevated glucagons-like peptide-2 activity.	Scan J Gastroenterol 40: 477-481	2005
17.	Y.Yamaguchi, N.Katsumi, M.Tauchi, M.Toki, K.Nakamura, K.Aoki, Y.Morita, M.Miura, K.Morozumi, H.Ishida, and S.Takahashi. A prospective randomized trial of either famotidine or omeprazole for the prevention of bleeding after endoscopic mucosal resection and the healing of endoscopic mucosal resection-induced ulceration.	Aliment Pharmacol Ther 21(suppl.2): 111-115	2005
18.	T.Kisino, K.Nakamura, H.Mori, Y.Yamaguchi, S.Takahashi, H.Ishida, S.Saitou, and T.Watanabe. Acute pancreatitis during haemodialysis.	Nephrol Dial Transplant 20:2012-2013	2005
19.	S. Yamaguchi, H. Katahira, S. Ozawa, Y. Nakamichi, T. Tanaka, T. Shimoyama, K. Takahashi, K. Yoshimoto, M. Ohara-Imaizumi, S. Nagamatsu, and H. Ishida. Activators of AMP-activated protein kinase enhance GLUT4 translocation and its glucose transport activity in 3T3L1 adipocytes.	Am J Physiol 289:E643-E649	2005
20.	Y. Yamaguchi, K. Morozumi, T. Yamato, N. Katsumi, N. Abe, M. Sugiyama, H. Ishida, and S. Takahashi. New guide wire technique for stent placement through an occluded self-expandable metal stent: the hairpin technique.	J Gastroenterol Hepatol 20:595-598	2005
21.	Y. Yamaguchi, N. Abe, K. Imase, H. Mizuno, K. Chinen, H. Mori, M. Sugiyama, Y. Atomi, H.Ishida, and S. Takahashi. A case of mucin hypersecreting intraductal papillary carcinomas occurring simultaneously in liver and pancreas.	Gastrointestinal Endoscopy 61(2):330-334	2005
22.	K.Watanabe, A.Tanaka,K.Imase,K.Tokunaga,H.Sugano,A.Kai,H.Ishida,T.Itoh and S.Takahashi. Amoxicillin resistance in Helicobacter pylori : studies from Tokyo, Japan from 1985 to 2003.	Helicobacter 10:4-11	2005
23.	E. Ito, S. Ozawa, K. Takahashi, T. Tanaka, H. Katsuta, S. Yamaguchi, M. Maruyama, M. Takizawa, H. Katahira, K. Yoshimoto, S. Nagamatsu and H. Ishida. PPAR-γ Overexpression selectively suppresses insulin secretory capacity in isolated pancreatic islets through induction of UCP-2 protein.	Biochem Biophys Res Commun 324:810-814	2004
24.	Y. Sato, H. Tokuue, N. Kawamura, S. Nezu-Yajima, H. Nakajima, H. Ishida and S. Takahashi. Short-term interferon therapy for chronic hepatitis C patients with low viral load.	Hepato-Gastroenterology 51:968-972	2004

25.	H. Ishida, M. Takizawa, S. Ozawa, Y. Nakamichi, S. Yamaguchi, H. Katsuta, T. Tanaka, M. Maruyama, H. Katahira, K. Yoshimoto, E. Itagaki and S. Nagamatsu. Pioglitazone improves insulin secretory capacity and prevents the loss of β cell mass in obese diabetic db/db mice: possible protection of β cells from oxidative stress.	Metabolism 53(4):488-494	2004
26.	T. Kishino, H. Mori, K. Nishikawa, N. Ishiyama, H. Yasui, M. Sugiyama, Y. Atomi, M. Sakamoto, S. Saito, H. Ishida, S. Takahashi and T. Watanabe. Hepatocellular carcinoma containing sarcomatous lesions in a normal liver, accompanied by secondary budd-chiari syndrome.	J Clin Gastroenterol 38(3):296-297	2004
27.	H. Katsuta, S. Ozawa, T. Ninomiya, T. Shimoyama, E. Ito, T. Tanaka, S. Yamaguchi, H. Katahira, S. Nagamatsu, M. Horie and H. Ishida. Insulinotropic action of glutamate is dependent on the inhibition of ATP-sensitive potassium channel activities in MIN 6 β cells.	Biochem Biophys Res Commun 311:660-664	2003
28.	Y. Yamaguchi, M. Sugiyama, Y. Sato, Y. Mine, T. Yamato, H. Ishida and S. Takahashi. Annular pancreas complicated by carcinoma of the bile duct: diagnosis by MR cholangiopancreatography and endoscopic ultrasonography.	Abdom Imaging 28:381-383	2003
29.	Y.Nakamichi, T.Kikuta, E.Ito, M.Ohara-Imaizumi, C.Nishiwaki, H.Ishida and S.Nagamatsu. PPAR-γ overexpression suppresses glucose-induced proinsulin biosynthesis and insulin release synergistically with pioglitazone in MIN6 cells.	Biochem Biophys Res Commun 306:832-836	2003
30.	Y.Yamaguchi, T.Yamato, N.Katsumi, Y.Imao, K.Aoki, Y. Morita, M.Miura, K.Morozumi, H.Ishida and S.Takahashi. Short-term and long-term benefits of endoscopic hemoclip application for Dieulafoy's lesion in the upper GI tract.	Gastrointestinal Endoscopy 57(6):653-656	2003
31.	A. Tanaka, K. Watanabe, K. Tokunaga, S. Hoshiya, K. Imase, H. Sugano, M. Shingaki, A. Kai, T. Itoh, H. Ishida and S. Takahashi. Evalution of Hericobactor pylori stool antigen test before and after eradication therapy.	J Gastroenterol Hepatol 18:732-738	2003
32.	K.Kimoto, K.Suzuki, T.Kizaki, Y.Hitomi, H.Ishida, H.Katsuta, E.Ito, T.Oogawara, K.Suzuki, K.Honke and H.Ohno. Gliclazide protects pancreatic beta-cells from damage by hydrogen peroxide.	Biochem Biophys Res Commun 303:112-119	2003
33.	Y. Yamaguchi, T. Yamato, N. Katsumi, K. Morozumi, T. Abe, H. Ishida and S. Takahashi. Endoscopic hemostasis: Safe treatment for peptic ulcer patients aged 80 years or older?	J Gastroenterol Hepatol 18:521-525	2003
34.	Y.Nakamichi, M.Ohara-Imaizumi, H.Ishida and S.Nagamatsu. An insulin-related peptide expressed in 3T3L1 adipocytes is localized in GLUT4 vesicles and secreted in response to exogenous insulin, which augments the insulin-stimulated glucose uptake.	J Cell Sci 116:73-79	2003
35.	K. Suzuki, M. Mizutani, Y. Hitomi, T. Kizaki, H. Ohno, H. Ishida, S. Haga and S. Koizumi. Association of SH2-B to phosphorylated tyrosine residues in the activation loop of TrkB.	Res Commun Mol Pathol Pharmacol 111:27-40	2002
36.	N.Katsumi, Y.Yamaguchi, T.Yamato, K.Morozumi, T.Abe, H.Ishida and S.Nagamatsu. Multiple ulcerative lesions of the stomach: a rare case of eosinophilic gastroenteritis.	Gastrointestinal Endoscopy 56(5):762-764	2002
37.	N.Abe, T.Watanabe, S.Ozawa, T.Masaki, T.Mori, M.Sugiyama, H.Ishida, S.Nagamatsu and Y.Atomi. Pancreatic endocrine function and glucose transporter (GLUT)-2 expression in rat acute pancreatitis.	Pancreas 25(2):149-153	2002
38.	M.Ohara-Imaizumi, Y.Nakamichi, T.Tanaka, H.Katsuta, H.Ishida and S.Nagamatsu. Monitoring of exocytosis and endocytosis of insulin secretory granules in the pancreatic β-cell line MIN6 using pH-sensitive green fluorescent protein (pHuorin) and confocal laser microscopy.	Biochem J 363:73-80	2002

39.	K.Watanabe, S.Hoshiya, K.Tokunaga, A.Tanaka, H.Watanabe, S.Nagamatsu, H.Ishida and S.Takahashi. Helicobacter pylori and acetylsalicylic acid synergistically accelerate apoptosis via FAS antigen pathway in rabbit gastric epithelial cells.	Digest Dis Sci 47(4):809-817	2002
40.	M.Ohara-Imaizumi, Y.Nakamichi, T.Tanaka, H.Ishida and S.Nagamatsu. Imaging exocytosis of single insulin secretory granules with evanescent wave microscopy —Distinct behavior of granule motion in biphasic insulin release—.	J Biol Chem 277(6):3805-3808	2002
41.	M. Horie, N. Mizuno, T. Tsuji, A. Ishida-Takahashi, T. Haruna, H. Ishida, Y. Seino and S. Sasayama. Disopyramide and its metabolic block ATP-sensitive K+ channels in clonal pancreatic β -cells and enhance insulin release.	Cardiovasc Drugs Ther 15:31-39	2001
42.	S.Nagamatsu, Y.Nakamichi, M.Ohara-Imaizumi, S.Ozawa, H.Katahira, K.Yoshimoto, T.Watanabe and H.Ishida. Adenovirus-mediated preproinsulin gene transfer into adipose tissues ameliorates hyperglycemia in obese diabetic KKA^{y} mice.	FEBS lett 509:106-110	2001
43.	M.Ohara-Imaizumi, Y.Nakamichi, S.Ozawa, H.Katsuta, H.Ishida and S.Nagamatsu. Mastoparan stimulates GABA release from MIN6 cells —relationship between SNARE proteins and mastoparan action—.	Biochem Biophys Res Commun 289:1025-1030	2001
44.	T.Kizaki, K.Suzuki, Y.Hitomi, K.Iwabuchi, K.Onoé, S.Haga, H.Ishida, T.Ookawara, K.Suzuki and H.Ohno. Negative regulation of LPS-stimulated expression of inducible nitric oxide synthase by AP-1 in macrophage cell line J774A.1.	Biochem Biophys Res Commun 289:1031-1038	2001
45.	E.Itagaki, S.Ozawa, S.Yamaguchi, K.Ushikawa, T.Tashiro, H.Katahira, M.Takizawa, K.Yoshimoto, S.Murakawa and H.Ishida. Increases in plasma ACTH and cortisol after hypertonic saline infusion in patients with central diabetes insipidus.	J Clin Endocrinol Metab 86(12):5749-5754	2001
46.	T.Miura, W.Suzuki, E.Ishihara, I.Arai, H.Ishida, Y.Seino and K.Tanigawa. Impairment of insulin-stimulated GLUT4 translocation in skeletal muscle and adipose tissue in the Tsumura Suzuki obese diabetic mouse: a new genetic animal model of type 2 diabetes.	Eur J Endocrinol 145:785-790	2001
47.	Y.Yamaguchi, T.Yamato, N.Katsumi, T.Hashimoto, K.Morozumi, M.Sugiyama, H.Ishida and S.Takahashi. Endoscopic treatment of hemorrhagic gastric ulcer in patients aged 80 years or more.	Hepato-Gastroenterology 48:1195-1198	2001
48.	T.Kizaki, K.Suzuki, Y.Hitomi, K.Iwabuchi, K.Onoe, H.Ishida, T.Izawa, L.L.Ji and H.Ohno. Activation and apoptosis of murine peritoneal macrophages by acute cold stress.	Biochem Biophys Res Commun 283:700-706	2001
49.	H.Katahira, S.Nagamatsu, S.Ozawa, Y.Nakamichi, S.Yamaguchi, H.Furukawa, M.Takizawa, K.Yoshimoto, E.Itagaki and H.Ishida. Acute inhibition of proinsulin biosynthesis at the translational level by palmitic acid.	Biochem Biophys Res Commun 282:507-510	2001
50.	Y.Yamaguchi, T.Yamato, N.Katsumi, K.Morozumi, T.Abe, H.Ishida and S.Takahashi. Endoscopic hemoclipping for upper gastrointestinal bleeding due to Malloy-Weiss syndorome.	Gastrointestinal Endoscopy 53(4):427-430	2001
51.	S.Nagamatsu, Y.Nakamichi, T.Watanabe, S.Matsushima, S.Yamaguchi, J.Ni, E.Itagaki and H.Ishida. Localization of cellubrevin-related peptide, endobrevin, in the early endosome in pancreatic β cells and its physiological function in exo-endocytosis of secretory granules.	J Cell Sci 114(1):219-227	2001
52.	M.Horie, M.Watanuki, K.Tsuji, H.Ishida, A.Ishida-Takahashi, Y.Yuzuki, Y.Seino and S. Sasayama. Blockade of cardiac ATP-sensitive K^{+} channel by cibenzoline targets its pore-forming subunit.	J Cardiovasc Pharm 35: 434-442	2000

53.	T.Kishino, Y.Yamaguchi, T.Yamagishi, T.Hashimoto, Y.Kyomasu, H.Mori, M.Sugiyama, Y.Atomi, S. Saito, H.Ishida and S.Takahashi. Submucosal tumor (SMT)-like esophageal squamous cell carcinoma with gastric metastasis.	Hepato-Gastroenterology 47:1581-1584	2000
54.	S.Fujimoto, Y.Tsuura, H.Ishida, K.Tsuji, E.Mukai, M.Kajikawa, Y.Hamamoto, T.Takeda, Y.Yamada and Y.Seino. Augmentation of basal insulin release from rat islets by preexposure to a high concentration of glucose.	Am J Physiol 279:E927-E940	2000
55.	E.Mukai, H.Ishida, S.Fujimoto, M.Kajikawa, Y.Okamoto, J.Fujita, Y.Hamamoto, Y.Tsuura, Y. Yamada, N.Furukawa, T.Ohta and Y.Seino. The insulinotropic mechanism of the novel hypoglycemic agent JTT-608: direct enhancement of Ca^{2+} efficacy and increase of Ca^{2+} influx by phosphodiesterase inhibition.	Br J Pharmacol 129:901-908	2000
56.	S.Hoshiya, K.Watanabe, K.Tokunaga, A.Tanaka, H.Ninomiya, M.Shingaki, T.Itoh, S.Saito, H.Ishida and S.Takahashi. Relationship between eradication therapy and clarithromycin-resistant Helicobacter pylori in Japan.	J Gastroenterol 35:10-14	2000
57.	S. Nagamatsu, Y. Nakamichi, C. Yamamura, S. Matsushima, T. Watanabe, S. Ozawa, H. Furukawa and H.Ishida. Decreased expression of t-SNAREs, syntaxin 1 and SNAP-25, in pancreatic β -cells is involved in impaired insulin secretion from diabetic GK rat islets.	Diabetes 48(12):2367-2373	1999
58.	Y.Sunaga, N.Inagaki, T.Gonoi, Y.Yamada, H.Ishida, Y.Seino and S.Seino. Troglitazone but not pioglitazone affects ATP-sensitive K^+ channel activity.	Eur J Pharmacol 381:71-76	1999
59.	Y. Tsuura, S. Fujimoto, M. Kajikawa, H. Ishida and Y. Seino. Regulation of intracellular ATP concentration under condition of reduced ATP consumption in pancreatic islets.	Biochem Biophys Res Commun 261:439-444	1999
60.	M. Kajikawa, H. Ishida, S. Fujimoto, E. Mukai, M. Nishimura, Y. Tsuura, J. Fujita, A. W. Norman and Y. Seino. An insulinotropic effect of vitamin D analog with increasing intracellular Ca^{2+} concentration in pancreatic β -cells, through non-genomic signal transduction.	Endocrinology 140(10):4706-4712	1999
61.	T. Miura, E. Ishihara, H. Ishida, Y. Seino and K. Tanigawa. A genetic non-insulin dependent diabetic mice, KK-Ay mice, has elevated alpha-glucosyldisaccharide digestive/absorptive capacity in small intestine.	Biomed Res 19(5):335-338	1998
62.	Y. Tsuura , H. Ishida, T. Shinomura, M. Nishimura a nd Y. Seino. Endogenous nitric oxide inhibits glucose-induced insulin secretion by suppression of phosphofructokinase activity in pancreatic islets.	Biochem Biophys Res Commun 252 :34-38	1998
63.	H. Ishida, S. Kato, M. Nishimura, N. Mizuno, S. Fujimoto, E. Mukai, M. Kajikawa,Y. Yamada, H. Odaka, H. Ikeda and Y. Seino. Beneficial effect of long-term combined treatment with voglibose and pioglitazone on pancreatic islet function of genetically diabetic GK rats.	Horm Metab Res 30(11):673-678	1998
64.	E. Mukai, H. Ishida, M. Horie, A. Noma, Y. Seino and M. Takano. The antiarrhythmic agent cibenzoline inhibits K_{ATP} channels by binding to Kir 6.2.	Biochem Biophys Res Commun 251 :477-481	1998
65.	Y.Tsuura, H.Ishida, M.Nishimura, S.Fujimoto, M.Kajikawa and Y.Seino. Ouabain suppresses ATP elevation in response to fuel secretagogues in pancreatic islets.	Biochem Biophys Res Commun 249:853-857	1998
*66.	T.Miura, T.Koide, R.Ohichi, M.Kako, M.Usami, E.Ishihara, N.Yasuda, H.Ishida, Y.Seino and K.Taniga wa. Effect of Acarbose(α -glucosidase inhibitor) on disaccharase activity in small intestine in KK-Ay and dd Y mice.	J Nutr Sci Vitaminol 44:371-379	1998

67.	M.Nishimura, H.Ishida, Y.Tsuura, S.Kato, N.Mizuno, S.Fujimoto, E.Mukai, M.Kajikawa, M.Usami and Y.Seino. Necessity of endogenous GTP derived from glucose-6-phosphate for insulin secretion augmented by glucose under protein kinase A activation.	Biochem Biophys Res Commun 243:253-257	1998
68.	N. Mizuno, H. Yoshitomi, H. Ishida, H. Kuromi, J. Kawaki, Y. Seino and S. Seino. Altered Bcl-2 and Bax expression and intracellular Ca^{2+} signaling in apoptosis of pancreatic β -cells and the impairment of glucose-induced insulin secretion.	Endocrinology 139(3):1429-1439	1998
69.	S. Fujimoto, H. Ishida, S. Kato, Y. Okamoto, K. Tsuji, N. Mizuno, S. Ueda, E. Mukai and Y. Seino. The novel insulinotropic mechanism of pimobendan: direct enhancement of the exocytotic process of insulin secretory granules by increased Ca^{2+} sensitivity in β cells.	Endocrinology 139(3):1133-1140	1998
70.	E. Mukai, H. Ishida, S. Kato, Y. Tsuura, S. Fujimoto, A. Ishida-Takahashi, M. Horie, K. Tsuda and Y. Seino. Metabolic inhibition impaires ATP-sensitive K^+ channel block by sulfonylurea in pancreatic ß cells.	Am J Physiol 274(Endocrinol. Metab.37): E38-E44	1998
71.	M. Horie, A. Ishida-Takahashi, T. Ai, T. Nishimoto, Y. Tsuura, H. Ishida, Y. Seino and S. Sasayama. Insulin secretion and its modulation by antiarrhythmic and sulfonylurea drugs.	Cardiovas Res 34:69-72	1997
72.	J.Fujita,K.Tsuda,H.Obayashi,I.Fukui,H.Ishida and Y.Seino. Nisoldipine blocks the increase of intracellular free calcium-ion concentration assoiciated with elevated sodium-lithium counter transport activity in erythrocytes in patients with NIDDM.	Diabetic Med 14:499-502	1997
73.	A.Kubota,Y.Yamada,K.Yasuda,Y.Someya,Y.Ihara,S.Kagimoto,R.Watanabe, A.Kuroe,H.Ishida and Y.Seino. Gastric inhibitory polypeptide activates MAP kinase through the wortmannin-sensitive and-insensitive pathways.	Biochem Biophys Res Commun 235:171-175	1997
74.	T.Shimura, T.Miura, M. Usami, E. Ishihara, K. Tanigawa, H.Ishida and Y.Seino. Docosahexanoic acid (DHA) improved glucose and lipid metabolism in KK-Ay mice with genetic non-insulin-dependent diabetes mellitus (NIDDM)	Biol Pharm Bull 20(5):507-510	1997
*75.	T.Miura, Y. Ohnishi, S.Takagi, M.Sawamura, N. Yasuda, H.Ishida, K. Tanigawa, Y. Yamori and Y. Seino. A comparative study of fish oil and lard with high fat diet on blood glucose in genetically diabetic (db/db) mice.	J Nutr Sci Vitaminol 43(2):225-231	1997
76	K. Obayashi, M. Horie, L-H. Xie, K. Tsuchiya, A. Kubota, H. Ishida and S. Sasayama. Angiotensin II inhibits protein kinase A-dependent Cl^- conductance in heart via PTX-sensitive G proteins.	Circulation 95(1):197-204	1997
77.	P-Z. Xiao, J.Satoh, G. Muto, Y.Muto, M.Sagara, K.Takahashi, H.Seino, S.Hirai T.Masuda, S-I. Tanaka, H.Ishida, Y.Seino and T.Toyata Improvement of glucose tolerance with immunomodulators in Type 2 diabetic animals.	Biotherapy 9:189-197	1996
78.	N. Kitazawa, T. Miura, M. Kato, M. Usami, K. Tanigawa, H. Ishida and Y. Seino. Determination of hemoglobin A_{1c} in normal and diabetic mice: neonatal streptozotocin-induced diabetic mice and KK-Ay mice.	Biol Pharm Bull 19(8):1078-1079	1996
79.	S. Kato, H. Ishida, Y. Tsuura, K. Tsuji, M. Nishimura, M. Horie, T. Taminato, S. Ikehara, H. Odaka, H. Ikeda, Y. Okada and Y. Seino. Alterations in basal and glucose-stimulated voltage-dependent Ca2+ channel activities in pancreatic β cell of non-insulin-dependent diabetes mellitus GK rats.	J Clin Invest 97(11):2417-2425	1996

80.	A. Ishida-Takahashi, M. Horie, Y. Tsuura, H. Ishida, T. Ai and S. Sasayama. Block of pancreatic ATP-sensitive K+ channels and insulinotropic action by the antiarrhythmic agent cibenzoline.	Br J Pharmacol 117:1749-1755	1996
81.	K. Miyamoto, Y. Ogura, H. Nishiwaki, N. Matsuda, Y. Honda, S. Kato, H. Ishida and Y. Seino. Evaluation of retinal microcirculatory alterations in the GK rats, a spontaneous model of non-insulin-dependent diabetes.	Invest Ophthalmol and Visual Sci 37(5):898-905	1996
82.	K. Miyamoto, Y. Ogura, H. Nishiwaki, N. Matsuda, Y. Honda, S. Kato, H. Ishida and Y. Seino. Retinal circulatory abnormalities in the spontaneous diabetic GK (Goto-Kakizaki) rats.	Microcirculation Ann 11:123-124	1995
83.	T. Miura, N. Usami, Y. Tsuura, H. Ishida and Y. Seino. Effect of chitosan on blood glucose and lipid in normal and diabetic mice.	Biol Pharm Bull 18(11):1623-1625	1995
84.	K. Suzuki, H. Ishida, C. Sugimoto, Y. Taguchi, H. Matsuda, K. Nosaka, Y. Someya, S. Kadowaki and Y. Seino. The urinary concentration of sialic acid is increased in non-insulin-dependent diabetic patients with microangiopathy:a possible useful marker for diabetic microangiopathy.	Diabetic Med 12(12):1092-1096	1995
85.	N. Inagaki, H. Kuromi, T. Gonoi, Y. Okamoto, H. Ishida, Y. Seino, T. Kaneko, T. Iwanaga and S. Seino. Expression and role of ionotropic glutamate receptors in pancreatic islet cells.	FASEB J 9(5):686-691	1995
86.	Y. Okamoto, H. Ishida, Y. Tsuura, K. Yasuda, S. Kato, H. Matsubara, M. Nishimura, N. Mizuno, H. Ikeda and Y. Seino. Hyperresponse in calcium-induced insulin release from electrically permeabilized pancreatic islets of diabetic GK rats and its defective augmentation by glucose.	Diabetologia 38(7):772-778	1995
87.	K. Masuda, Y. Okamoto, Y. Tsuura, S. Kato, T. Miura, K. Tsuda, H. Horikoshi, H. Ishida and Y. Seino. Effects of troglitazone (CS-045) on insulin secretion in isolated rat pancreatic islets and HIT cells: an insulinotropic mechanism distinct from glibenclamide.	Diabetologia 38(1)24-30	1995
88.	Y. Seino and H. Ishida. Diabetic osteopenia-pathophysiology and clinical aspects.	Diabetes Metab Rev 11(1):21-35	1995
89.	S. Kadowaki, K. Suzuki, C. Sugimoto, M. Usami, T. Miura, Y. Akasawa, H. Ishida and Y. Seino. Urinary growth hormone secretion is increased in the patients with non-insulin-dependent diabetes mellitus complicated with diabetic microangiopathy.	Res Rep of Suzuka Univ of Med Sci and Technol 2:47-53	1995
90.	S. Kadowaki, K. Suzuki, C. Sugimoto, M. Usami, H. Ishida and Y. Seino. Urinary transferrin:a more sensitive protein marker for diabetic microangiopathy than urinary albumin?	Res Rep of Suzuka Univ of Med Sci and Technol 1:61-67	1994
91.	Y. Tsuura, H. Ishida, S. Hayashi, K. Sakamoto, M. Horie and Y. Seino. Nitric oxide opens ATP-sensitive K+ channels through suppression of phosphofructokinase activity and inhibits glucose-induced insulin release in pancreatic ß cells.	J Gen Physiol 104(6):1079-1098	1994
92.	Y. Okamoto, H. Ishida, Y. Tsuura, S. Kato, M. Nishimura, H. Matsubara, N. Mizuno, M. Usami and Y. Seino. The role of cytosolic Ca2+ in the potentiation on glucose-induced insulin secretion in rat pancreatic ß cells by gastric inhibitory polypeptide and cholecystokinin.	Endocrinol and Metab 1(1):103-108	1994
93.	Y. Tsuura, H. Ishida, Y. Okamoto, S. Kato, M. Horie, H. Ikeda and Y. Seino. Reduced sensitivity of dihydroxyacetone on ATP-sensitive K+ channels of pancreatic beta cells in GK rats.	Diabetologia 37(11):1082-1087	1994

94.	S. Kato, H. Ishida, K. Tsuji, Y. Tsuura and Y. Seino. Ion channels in diabetic ß cells.	In:Pathogenesis and Treatment of NIDDM and Its Related Problems, N. Sakamoto, K. G. M. M. Alberti, N. Hotta(eds), Excerpta Medica Amsterdam, p.167-170	1994
95.	S. Kato, H. Ishida, Y. Tsuura, Y. Okamoto, K. Tsuji, M. Horie, Y. Okada and Y. Seino. Increased calcium channel currents of pancreatic ß cells in neonatally streptozotocin-induced diabetic rats.	Metabolism 43(11):1395-1400	1994
96.	A. Kato, T. Miura, H. Yano, K. Masuda, H. Ishida and Y. Seino. Suppressive effect of Polygonati Rhizoma on hepatic glucose output, GLUT2 mRNA expression and its protein content in rat liver.	Endocrine J 41(2):139-144	1994
97.	H. Ishida, K. Tsuji, Y. Okamoto, Y. Tsuura, S. Kato, T. Kurose, H. Imura and Y. Seino. Functional alterations in the intracellular calcium signaling system and ion channels of pancreatic B-cells in non-insulin-dependent diabetes mellitus.	In:Frontiers of Insulin Secretion and Pancreatic B-cell Research, P. R. Flatt and S. Lenzen (eds), Smith-Gordon, London p.453-460	1994
98.	Y. Seino, Y. Okamoto, Y. Tsuura, S. Kato, K. Tsuji and H. Ishida. The molecular mechanisms of impaired glucose-induced insulin secretion from pancreatic ß cells in non-insulin-dependent diabetes mellitus: Altered functions of ATP-sensitive K+ channels and intracellular calcium signaling system.	In:Current Trends in Experimental Endocinology and Current Topics in Clinical Endocrinology 2(1):131-138	1994
99.	H. Ishida, K. Suzuki, Y. Someya, M. Nishimura, C. Sugimoto, M. Goto, Y. Taguchi, H. Kasahara, S. Kadowaki, H. Imura and Y. Seino. A possible compensatory role of parathyroid hormone-related peptide on maintenance of calcium homeostasis in patients with non-insulin-dependent diabetes mellitus.	Acta Endocrinol 129(6):519-524	1993
100.	Y. Tsuura, H. Ishida, Y. Okamoto, S. Kato, K. Sakamoto, M. Horie, H. Ikeda, Y. Okada and Y. Seino. Glucose sensitivity of ATP sensitive K+ channels is impaired in ß cells in the GK rat, A new genetic model of NIDDM.	Diabetes 42(10):1446-1453	1993
101.	S. Hayashi, M. Horie, Y. Tsuura, H. Ishida, Y. Okada, Y. Seino and S. Sasayama. Disopyramide blockes pancreatic ATP-sensitive K+ channels and enhances insulin release.	Am J Physiol 265(2): (Cell Physiol 34): C337-C342	1993
102.	K. Tsuji, T. Taminato, H. Ishida, Y. Okamoto, Y. Tsuura, S. Kato, T. Kurose, Y. Okada, H. Imura and Y. Seino. Selective impairment of the cytoplasmic Ca2+ response to glucose in rat pancreatic ß-cells of streptozotocin-induced non-insulin-dependent diabetic rats.	Metabolism 42(11):1424-1428	1993
103.	X-H. Gu, T. Kurose, S. Kato, K. Masuda, H. Ishida and Y. Seino. Suppressive effect of GABA on insulin secretion from the pancreatic ß-cells in the rat.	Life Sci 52(8):687-694	1993
104.	T. Kurose, K. Tsuda, H. Ishida, K. Tsuji, Y. Okamoto, T. Tsuura, S. Kato, M. Usami, H. Imura and Y. Seino. Glucagon, insulin and somatostatin secretion in response to sympathetic neural activation in strptozotocin-induced diabetic rats. A study with the isolated perfused rat pancreas in vitro.	Diabetologia 35(11):1035-1041	1992
105.	S. Than, H. Ishida, M. Inaba, Y. Fukuba, Y. Seino, M. Adachi, H. Imura and S. Ikehara. Bone marrow transplantation as a strategy for treatment of non-insulin-dependent diabetes mellitus in KK-AY mice.	J Exp Med 176(10):1233-1238	1992

106.	Y. Okamoto, H. Ishida, T. Taminato, K. Tsuji, T. Kurose, Y. Tsuura, S. Kato, H. Imura and Y. Seino. The role of cytosolic Ca2+ in impaired sensitivity to glucose of rat pancreatic islets exposed to high glucose in vitro.	Diabetes 41(12):1555-1561	1992
107.	H. Ishida, Y. Seino, N. Takeshita, T. Kurose, K. Tsuji, Y. Okamoto, Y. Someya, K. Hara, Y. Akiyama, H. Imura and M. Nozawa. Effect of pancreas transplantation on decreased levels of circulating bone γ-carboxyglutamic acid-containing protein and osteopenia in rats with streptozotocin-induced diabetes.	Acta Endocrinol 127(1):81-85	1992
108.	Y. Tsuura, H. Ishida, Y. Okamoto, K. Tsuji, T. Kurose, M. Horie, H. Imura, Y. Okada and Y. Seino. Impaired glucose sensitivity of ATP-sensitive K+ channels in pancreatic ß cells in streptozotocin-induced NIDDM rats.	Diabetes 41(7):861-865	1992
109.	K. Tsuji, T. Taminato, H. Ishida, Y. Okamoto, Y. Tsuura, S. Kato, T. Kurose, Y. Seino and H. Imura. Cytoplasmic Ca2+ response in pancreatic ß cells of NON mice.	In:Current Concepts of a New Animal Model:the NON Mouse, N. Sakamoto, N. Hotta and K. Uchida (eds), Elsevier, Amsterdam, p.61-72	1992
110.	L. Cancela H. Ishida, J. E. Bishop and A. W. Norman. Local chromatin changes accompany the expression of the calbindin D-28k gene:tissue specificity and effect of vitamin D activation.	Mol Endocrinol 6(3):468-475	1992
111.	Y. Seino and H. Ishida. The pathophysiology and etiology of diabetic osteopenia.	Jpn J Med 30(6):624-626	1991
112.	Yu. Seino, H. Ishida, J. Fujita, N. Takeshita, T. Taminato and Yo. Seino. Bone γ-carboxyglutamic acid-containing protein in streptozotocin-induced diabetic rats.	In:Current Status of Prevention and Treatment of Diabetic Complications, N. Sakamoto, K. G. M. M. Albelti and N. Hotta (eds), Excerpta Medica, Amsterdam, p.347-350	1990
113.	N. Takeshita, Yu. Seino, H. Ishida, Yo. Seino, H. Tanaka, C. Tsutsumi, K. Ogata,K. Kiyohara, H. Kato, M. Nozawa, Y. Akiyama, K. Hara and H. Imura. Increased circulating levels of γ-carboxyglutamic acid-containing protein (BGP) and decreased bone mass in children on anticonvulsant therapy.	Calcif Tissue Int 44(1):80-85	1989
114.	K. Tsuji, T. Taminato, M. Usami, H. Ishida, N. Kitano, H. Fukumoto, G. Koh, T. Kurose, Y. Yamada, H. Yano,Y. Seino and H. Imura. Characteristic features of insulin secretion in the streptozotocin-induced NIDDM rat model.	Metabolism 37(11):1040-1044	1988
115.	H. Ishida and A. W. Norman. Demonstration of a high affinity receptor for 1,25-dihydroxyvitamin D_3 in rat pancreas.	Mol Cell Endocrinol 60:109-117	1988
116.	H. Ishida, N. S. Cunningham, H. L. Henry and A. W. Norman. Endogeneous diabetes decreases the number of 1,25-dihydroxyvitamin D_3 receptors both in intestine and kidney.	In:Vitamin D:Molecular, Cellular and Clinical Endocrinology, ed by A. W. Norman, K. Schaefer, H. -G. Grigoleit and D. V. Herrath, de Gruyter, p. 885-886	1988

117.	P. P. Minghetti, L. Cancela, H. Ishida and A. W. Norman. 1,25-dihydroxyvitamin D3, its receptor and the eukaryotic genome.	In:Vitamin D:Molecular, Cellular and Clinical Endocrinology, ed by A. W. Norman, K. Schaefer, H. -G. Grigoleit and D. V. Herrath, de Gruyter, p.479-488	1988
118.	T. Kurose, Y. Seino, H. Ishida, K. Tsuji, H. Fukumoto, G. Koh, J. Takeda, N. Kitano, N. Inagaki, K. Tsuda, T. Taminato and H. Imura. Effect of vitamin D on gastrin and gastric somatostatin secretion from the isolated perfused rat stomach.	Life Sci 42(20):1995-2001	1988
119.	M. Nozawa, I. Ohtsu, H. Ikebukuro, H. Kato, H. Ishida, N. Takeshita, Y. Seino, T. Taminato and H. Imura. Effects of pancreatic transplantation on diabetic osteopenia in the rat.	In:Recent Trends in Management of Diabetes Mellitus, N. Sakamoto, K. G. M. M. Alberti and N. Hotta (eds.),Elsevier, Amsterdam, p.391-394	1987
120.	L. Cancela, I. Nemere, G. Theofan, V. Leathers, H. Reichel, E. Belk, Y. Fujisawa, H. Ishida, J.E. Bishop, G. Jones, P. P. Minghetti and A. W. Norman. The vitamin D endocrine system; pleiotropic interactions which contribute to calcium homeostasis.	In:A. W. Norman, T. C. Vanaman and A. R. Means (eds.)Calcium Binding Proteins in Health and Disease, Academic Press, San Diego, p.13-21	1987
121.	G. Koh, Y. Seino, K. Tsuda, S. Nishi, H. Ishida, J. Takeda, H. Fukumoto, T. Taminato and H. Imura. Effect of the α2-blocker DG-5128 on insulin and somatostatin release from the isolated perfused rat pancreas.	Life Sci 40(11):1113-1118	1987
122.	N.Nishi, Y. Seino, H. Ishida, M. Seno, T. Taminato, H. Sakurai and H. Imura. Vagal regulation of insulin, glucagon, and somatostatin secretion in vitro in the rat.	J Clin Invest 79(4):1191-1196	1987
123.	J. Fujita, Y. Seino, H. Ishida, T. Taminato, S. Matsukura, T. Horio, S. Imamura, A. Naito, T. Tobe, K. Takahashi, O. Midorikawa and H. Imura. A functional study of a case of glucagonoma exhibiting typical glucagonoma syndrome.	Cancer 57(4):860-865	1986
124.	H. Nozawa, I. Otsu, H. Ikebukuro, H. Ishida, Y. Seino and T. Taminato. Reversal of osteopenia in streptozotocin diabetic rats by pancreatic transplantation.	Life Supp Syst 3(Suppl.1):685-690	1985
*125.	H. Imura, Y. Seino and H. Ishida. Osteopenia and circulating levels of vitamin D metabolites in diabetes mellitus.	J Nutr Sci Vitaminol 31(Suppl.):S27-S32	1985
126.	Yu. Seino, H. Ishida, H. Imura, Y. Akazawa, O. Aochi, S. Hamada, N. Horiuchi, M. Hoshi, M. Ikeda, T. Igarashi, K. Izumi, T. Kanatsuna, H. Kido, S. Matsukura, A. Matsuoka, K. Miyamura, T. Morita, T. Mozai, S. Nanbu, K. Nanjo, K. Nonaka, A. Ohsawa, A. Ohtsuka, Y. Sako, Yo. Seino, J. Seki, M. Shichiri, Y. Shigeta, K. Shima, M. Yamamoto and M. Yawata. Diabetic osteopenia in central Japan.	Diabete and Metabolism 11(4):216-219	1985
127.	Y. Seino, H. Ishida, N. Kitano, J. Takeda, T. Taminato, S. Matsukura and H. Imura. The heterogeneity of immunoreactive glucagon in a patient with glucagonoma.	Biomed Res 6:45-50	1985
128.	H. Ishida, Yu. Seino, H. Imura, Y. Akazawa, T. Igarashi, T. Kanatsuna, Y. Shigeta,K. Shima, Yo. Seino, J. Seki, K. Nonaka, M. Shichiri, M. Hoshi, A. Matsuoka, K. Miyamura and T Mozai. Diabetic osteopenia in Japanese.	In:Current Topics in Clinical and Experimental Aspects of Diabetes Mellitus, Excerpta Medica Amsterdam,p.411-416	1985

129.	J.Takemura, Y. Seino, M. Seno, S. Nishi, H. Ishida, T. Taminato and H. Imura. Comparative study on hepatic clearance of SRIF 14 and 28.	In:Current Topics in Clinical and Experimental Aspects of Diabetes Mellitus, Excerpta Medica Amsterdam, p.105-108	1985
130.	J. Fujita, Y. Seino, H. Ishida, T. Taminato, Y. Horio, S. Imamura, A. Naito, T. Tobe and H. Imura. Clinical study in a case of glucagonoma.	In:Current Topics in Clinical and Experimental Aspects of Diabetes Mellitus, Excerpta Medica Amsterdam, p.228-232	1985
131.	T. Taminato, N. Kitano, J. Fujita, H. Ishida, Y. Seino, S. Matsukura and H. Imura. Glucagon secretion from glucagonoma cells.	In:Current Topics in Clinical and Experimental Aspects of Diabetes Mellitus, Excerpta Medica Amsterdam, p.100-104	1985
132.	S. Nishi, Y. Seino, J. Takemura, H. Ishida, M. Seno, T. Chiba, C. Yanaihara, N. Yanaihara and H. I mura. Vagal regulation of gastrin-releasing peptide(GRP), gastric somatostatin and gastrin secretion in Vitro.	Am J Physiol:Endocrinol and Metab 248(4):E425-E431	1985
133.	M. Seno, Y. Seino, J. Takemura, S. Nishi, H. Ishida, N. Kitano, H. Imura, T. Taminato and S. Matsukura. Comparison of somatostatin-28 and -14 clearance by the perfused rat liver.	Can J Physiol Pharmacol 63(1):62-67	1985
134.	H. Ishida, Y. Seino, S. Nishi, N. Kitano, M. Seno, T. Taminato, S. Matsukura, S. Ishizuka and H. Imura. Effects of insulin on altered mineral and vitamin D metabolism in streptozotocin-induced diabetes.	Acta Endocrinol 108(2):231-236	1985
135.	H. Ishida, Y. Seino, K. Tsuda, S. Matsukura, Y. Miyamoto, S. Ishizuka and H. Imura. Circulating levels of vitamin D metabolites in patients with hyperinsulinemia.	Human Nutr:Clin Nutr 38(6):473-475	1984
136.	Y. Tanaka, Yo. Seino, M. Ishida, K. Yamaoka, H. Yabuuchi,H. Ishida, S. Seino, Yu. Seino and H. Imura. Effect of vitamin D_3 on the pancreatic secretion of insulin and somatostatin.	Acta Endocrinol 105(4):528-533	1984
137.	H. Imura, Y. Seino and H. Ishida. Osteopenia and vitamin D metabolites in type 2 diabetic patients.	In:Endocrine Control of Bone and Calcium Metabolism(8B), ed. by D.V. Cohn, T. Fujita and J.T. Potts, Jr., Excepta Medica, p.99-101.	1984
138.	Y. Seino, S. Seino, M. Usami, K. Tsuda, J. Takemura, S. Nishi, H. Ishida and H. Imura. Somatostatin, glucagon and insulin secretion from isolated perfused pancreas of new genetically obese hyperglycemic rats.	Metabolism 33(5):429-431	1984
139.	K. Kurose, S. Seino, H. Ishida, J. Fujita, T. Taminato, S. Matsukura and H. Imura. Successful treatment of metastatic glucagonoma with dacarbazine.	Lancet 1:621-622	1984
140.	Y. Seino, S. Seino, J. Takemura, K. Tsuda, S. Nishi, H. Ishida, M. Seno, M. Usami, M. Ikeda and H. Imura. Changes in insulin, somatostatin, and glucagon secretion during the development of obesity in VMH-lesioned rats.	Endocrinology 114(2):457-461	1984
141.	H. Ishida, Y. Seino, S. Seino, K. Tsuda, J. Takemura, S. Nishi, S. Ishizuka and H. Imura. Effect of 1,25-dihydroxyvitamin D_3 on pancreatic B and D cell function.	Life Sci 33(18):1779-1786	1983

142.	J. Takemura, Y. Seino, S. Nishi, H. Ishida, M. Seno, T. Taminato, T. Chiba and H. Imura. Effects of prostaglandin E_2 and D_2 on gastric somatostatin and gastrin secretion.	Regul Peptides 6(3):379-384	1983
143.	S. Nishi, Y. Seino, S. Seino, K. Tsuda, J. Takemura, H. Ishida and H. Imura. Prostaglandin E_1 stimulation of somatostatin and insulin responses to glucose from the isolated perfused rat pancreas.	Prostagland Leuk Med 8(6):593-597	1982
144.	Y. Seino, M. Usami, H. Nakahara, J. Takemura, S. Nishi, H. Ishida, M. Ikeda and H. Imura. Effect of acetylsalicylic acid on blood glucose regulatory hormones in mild diabetes.	Prostagland Leuk Med 8(1):49-53	1982