

## 【SDTラット参考文献リスト】

(※発行年度順。動物カタログのReferencesとは異なります。)

### 2000

Shinohara M, Masuyama T, Shoda T, Takahashi T, Katsuda Y, Komeda K, Kuroki M, Kakehashi A, Kanazawa Y. A new spontaneously diabetic non-obese Torii rat strain with severe ocular complications. *Int J Exp Diabetes Res.* 2000; 1(2): 89-100. [PMID: 11469401]

### 2001

梯 彰弘, 金澤康徳. 新しい糖尿病網膜症モデル動物-SDTラット. *内分泌・糖尿病科.* 2001; 12(4): 386-90.

益山 拓, 布施雅規, 原 朱美, 菅原盛幸, 金澤真雄, 金澤康徳, 米田嘉重郎. 2型糖尿病モデルSDTラットの耐糖能低下に関する遺伝学的解析. *Diabetes Frontier.* 2001; 12: 818-9.

### 2002

篠原雅巳, 益山 拓, 正田俊之, 米田嘉重郎, 梯 彰弘, 黒木昌寿, 金澤康徳. 新しい糖尿病モデルSDT(Spontaneously Diabetic Torii)ラットについて. *Diabetes Frontier.* 2002; 13(1): 112-3.

金澤康徳, 米田嘉重郎. 糖尿病実験モデル動物一概论. *日本臨牀.* 2002; 60(増刊8): 19-24. [PMID: 12355745]

鈴木 進, 檜尾好徳. 非肥満糖尿病モデル動物. *日本臨牀.* 2002; 60(増刊8): 33-7. [PMID: 12355768]

梯 彰弘. シンポジウム4 糖尿病動物モデルとその臨床的意義-4糖尿病合併症動物モデル:網膜症を中心に. *糖尿病学の進歩.* 2002; 36: 318-23.

### 2003

Masuyama T, Fuse M, Yokoi N, Shinohara M, Tsujii H, Kanazawa M, Kanazawa Y, Komeda K, Taniguchi K. Genetic analysis for diabetes in a new rat model of nonobese type 2 diabetes, Spontaneously Diabetic Torii rat. *Biochem Biophys Res Commun.* 2003; 304(1): 196-206. [PMID: 12705906]

梯 彰弘. 糖尿病網膜症の形態学とモデル動物からみた糖尿病網膜症の発症機序. *内分泌・糖尿病科.* 2003; 17(1): 31-7.

### 2004

Masuyama T, Komeda K, Hara A, Noda M, Shinohara M, Oikawa T, Kanazawa Y, Taniguchi K. Chronological characterization of diabetes development in male Spontaneously Diabetic Torii rats. *Biochem Biophys Res Commun.* 2004; 314(3): 870-7. [PMID: 14741717]

篠原雅巳, 正田俊之, 及川寿浩, 益山 拓, 高橋統一, 勝田佳朋, 米田嘉重郎, 佐藤嘉兵, 金澤康徳. 自然発症2型糖尿病モデル雌性SDTラットの糖尿病病態について. *糖尿病.* 2004; 47(2): 111-6.

和田龍一, 矢島信久, 篠原雅巳, 八木橋操六. 新しい非肥満2型糖尿病モデルSpontaneously Diabetic Torii (SDT)ラットの末梢神経障害. *Diabetes Frontier.* 2004; 15(5): 731.

Miao G, Ito T, Uchikoshi F, Kamei M, Akamaru Y, Kiyomoto T, Komoda H, Nozawa M, Matsuda H. Stage-dependent effect of pancreatic transplantation on diabetic ocular complications in the Spontaneously Diabetic Torii rat. *Transplantation.* 2004; 77(5): 658-63. [PMID: 15021825]

Shinohara M, Oikawa T, Sato K, Kanazawa Y. Glucose intolerance and hyperlipidemia prior to diabetes onset in female Spontaneously Diabetic Torii (SDT) rats. *Exp Diabetes Res.* 2004; 5(4): 253-6. [PMID: 15763939]

水谷 伸, 泉 哲郎. 2型糖尿病動物モデル. *医学のあゆみ.* 2004; 別冊(4月): 207-10.

益山拓, 新しい非肥満2型糖尿病モデルSpontaneously Diabetic Torii (SDT)ラット 岩獣会報 Vol.30, No.4 119-124 (2004)

### 2005

Masuyama T, Katsuda Y, Shinohara M. A novel model of obesity-related diabetes: introgression of the *Leprfa* allele of the Zucker fatty rat into nonobese Spontaneously Diabetic Torii (SDT) rats. *Exp Anim.* 2005; 54(1): 13-20. [PMID: 15725677]

Miao G, Ito T, Uchikoshi F, Tanemura M, Kawamoto K, Shimada K, Nozawa M, Matsuda H. Beneficial Effects of Pancreas Transplantation: Regeneration of Pancreatic Islets in the Spontaneously Diabetic Torii rat. *Transplant Proc.* 2005; 37(1): 226-8. [PMID: 15808602]

Yamada H, Yamada E, Higuchi A, Matsumura M. Retinal neovascularisation without ischaemia in the spontaneously diabetic Torii rat. *Diabetologia.* 2005; 48(8): 1663-8. [PMID: 15977012]

篠原雅巳, 及川寿浩, 佐藤嘉兵. 自然発症糖尿病モデルSDT雌ラットにおける卵巣摘出およびエストロゲン処理が糖尿病病態に及ぼす影響について. *Reprod Immunol Biol.* 2005; 20(1): 5-9.

Miao G, Ito T, Uchikoshi F, Tanemura M, Kawamoto K, Shimada K, Nozawa M, Matsuda H. Development of islet-like cell clusters after pancreas transplantation in the

spontaneously diabetic Torii rat. *Am J Transplant.* 2005; 5(10): 2360-7. [PMID: 16162183]

山田耕太郎, 細川雅也, 藤本新平, 長嶋一昭, 福田一仁, 小川栄一, 藤田義人, 上田直哉, 山田祐一郎, 稲垣暢也, 清野 裕. Spontaneously Diabetic Torii (SDT)ラットにおける糖尿病性下痢の検討. *Diabetes Frontier.* 2005; 16(5): 634.

益山 拓, 篠原雅巳, 梯 彰弘. 新しい自然発症2型糖尿病モデルSDTラット. *分子細胞治療.* 2005; 4(6): 523-6.

## 2006

Matsuoka M, Ogata N, Minamino K, Higuchi A, Matsumura M. High levels of pigment epithelium-derived factor in the retina of a rat model of type 2 diabetes. *Exp Eye Res.* 2006; 82(1):172-8. [PMID: 16054135]

Sasase T, Ohta T, Ogawa N, Miyajima K, Ito M, Yamamoto H, Morinaga H, Matsushita M. Preventive effects of glycemic control on ocular complications of Spontaneously Diabetic Torii rat. *Diabetes Obesity Metab.* 2006; 8(5): 501-7. [PMID: 16918584]

篠原雅巳, 及川寿浩, 牛島太郎, 佐藤嘉兵. 非肥満2型糖尿病モデル雌性SDTラットにおける卵巣摘出およびエストロゲン処理が糖尿病病態に及ぼす影響について. *Diabetes Frontier.* 2006; 17(4): 545-6.

Takehashi A, Saito Y, Mori K, Sugi N, Ono R, Yamagami H, Shinohara M, Tamemoto H, Ishikawa SE, Kawakami M, Kanazawa Y. Characteristics of diabetic retinopathy in SDT rats. *Diabetes Metab Res Rev.* 2006; 22(6): 455-61. [PMID: 16572493]

鈴木 進. ①2型モデル ②非肥満型モデル 非肥満糖尿病モデル動物. *Diabetes Frontier.* 2006; 17(5): 653-7.

## 2007

Yamada K, Hosokawa M, Fujimoto S, Nagashima K, Fukuda K, Fujiwara H, Ogawa E, Fujita Y, Ueda N, Matsuyama F, Yamada Y, Seino Y, Inagaki N. The spontaneously diabetic Torii rat with gastroenteropathy. *Diabetes Res Clin Pract.* 2007; 75(2): 127-34. [PMID: 16959364]

Ideno J, Mizukami H, Takehashi A, Saito Y, Okada T, Urabe M, Kume A, Kuroki M, Kawakami M, Ishibashi S, Ozawa K. Prevention of diabetic retinopathy by intraocular soluble flt-1 gene transfer in a spontaneously diabetic rat model. *Int J Mol Med.* 2007; 19(1): 75-9. [PMID: 17143550]

Shinohara M, Masuyama T, Takehashi A. The Spontaneously Diabetic Torii (SDT) rat with retinopathy lesions resembling those of humans. *Animal Models of Diabetes: Frontiers in Research*, Second Edition, ed by Shafir E. New York, Taylor and Francis Group, 311-321, 2007.

Sasase T, Morinaga H, Yamamoto H, Ogawa N, Matsui K, Miyajima K, Kawai T, Mera Y, Masuyama T, Shinohara M, Ohta T, Matsushita M. Increased fat absorption and impaired fat clearance cause postprandial hypertriglyceridemia in Spontaneously Diabetic Torii rat. *Diabetes Res Clin Pract.* 2007; 78(1): 8-15. [PMID: 17448560]

Matsuoka M, Ogata N, Minamino K, Matsumura M. Leukostasis and pigment epithelium-derived factor in rat models of diabetic retinopathy. *Mol Vis.* 2007; 13: 1058-65. [PMID: 17653050]

Sugiyama T, Okuno T, Fukuhara M, Oku H, Ikeda T, Obayashi H, Ohta M, Fukui M, Hasegawa G, Nakamura N. Angiotensin II receptor blocker inhibits abnormal accumulation of advanced glycation end products and retinal damage in a rat model of type 2 diabetes. *Exp Eye Res.* 2007; 85(3): 406-12. [PMID: 17678894]

大川勝正, 望月一男, 志田英士, 鈴木敏博, 大場知子, 松本 透, 保苅義則, 橋詰昌幸, 横越 英彦. 若齢期の繰り返すストレスが雄性SDTラットの自発運動量などに及ぼす影響. *Diabetes Frontier.* 2007; 18(4): 433.

篠原雅巳, 正田俊之. 雌性SDTラットの糖尿病性眼合併症の病理組織学的特徴. *Diabetes Frontier.* 2007; 18(4): 434-5.

Ohta T, Matsui K, Miyajima K, Sasase T, Masuyama T, Shoda T, Koizumi H, Shinohara M, Matsushita M. Effect of insulin therapy on renal changes in Spontaneously Diabetic Torii rats. *Exp Anim.* 2007; 56: 355-62.

Shoda T, Shinohara M, Takahashi T, Miyajima K, Takehashi A, Miyakawa Y. Histopathological features of diabetic ocular complications in the Spontaneously Diabetic Torii (SDT) Rat. *J Toxicol Pathol.* 2007; 20: 179-83.

Srinivasan K, Ramarao P. Animal models in type 2 diabetes research: An overview. *Indian J Med Res* 125, March 2007, 451-472

## 2008

Shimada K, Ito T, Tanemura M, Komoda H, Fumimoto Y, Kawamoto K, Nishida T, Kaneko H, Sawa Y. Development of  $\beta$ -cells in native pancreas after pancreas allo-transplantation in the Spontaneously Diabetic Torii SDT rat. *J Surg Res.* 2008; 145(2): 229-37. [PMID: 17764693]

Fujii H, Hamada Y, Fukagawa M. Bone formation in spontaneously diabetic Torii-newly established model of non-obese type 2 diabetes rats. *Bone.* 2008; 42: 372-9. [PMID: 18037364]

Ookawa K, Mochizuki K, Yokogoshi H. Effect of repeated stress in early childhood on the onset of diabetes mellitus in

- male Spontaneously Diabetic Torii rats. *J Vet Med Sci.* 2008; 70(2): 145-51. [PMID: 18319574]
- Kenichi Matsui, Takeshi Ohta, Tomohiro Oda, Tomohiko Sasase, Nobuhisa Ueda, Katsuhiko Miyajima, Taku Masuyama, Masami Shinohara, Mutsuyoshi Matsushita. Diabetes-associated complications in spontaneously diabetic torii fatty rats. *Exp Anim.* 2008; 57(2): 111-21. [PMID: 18421173]
- Shimada K, Ito T, Miao G, Tanemura M, Komoda H, Fumimoto Y, Kawamoto K, Nishida T, Kaneto H, Sawa Y. Regeneration of beta cells in the native pancreata after syngeneic and allogeneic pancreas transplantations in spontaneously type 2 diabetic Torii rats. *Transplant Proc.* 2008; 40(2): 438-40. [PMID: 18374094]
- Okuno T, Oku H, Sugiyama T, Ikeda T. Electroretinographic study of spontaneously diabetic Torii rats. *Doc Ophthalmol.* 2008; 117: 191-6. [PMID: 18343964]
- Fuse M, Yokoi N, Shinohara M, Masuyama T, Kitazawa R, Kitazawa S, Seino S. Identification of a major locus for islet inflammation and fibrosis in the spontaneously diabetic Torii rat. *Physiol Genomics.* 2008; 35(1): 96-105. [PMID: 18612083]
- Fukumoto M, Takai S, Ishizaki E, Sugiyama T, Oku H, Jin D, Sakaguchi M, Sakonjo H, Ikeda T, Miyazaki M. Involvement of angiotensin II-dependent vascular endothelial growth factor gene expression via NADPH oxidase in the retina in a type 2 diabetic rat model. *Curr. Eye Res.* 2008; 33(10): 885-91 [PMID: 18853323]
- Morinaga H, Yamamoto H, Sakata K, Fukuda S, Ito M, Sasase T, Miyajima K, Ueda N, Ohta T, Matsushita M. Characterization of hepatic glucose metabolism disorder with the progress of diabetes in male Spontaneously Diabetic Torii rats. *J Vet Med Sci.* 2008; 70(11): 1239-45. [PMID: 19057144]
- 佐藤江里, 田村綾女, 丹藤雄介, 須田俊宏, 中村光男, 山岸昌一. Spontaneously Diabetic Torii (SDT)ラットにおけるセルレイン誘導急性浮腫性膵炎とReceptor for Advanced Glycation Endproducts (RAGE)の発現. *弘前医学.* 2008; 59: 110-7.
- 秋元敏雄. 非肥満糖尿病モデル動物. *日本臨床.* 2008; 66巻(増刊号3): 611-5.
- 中村二郎. 糖尿病合併症のモデル動物. *日本臨床.* 2008; 66巻(増刊号3): 623-7.
- ## 2009
- Hasegawa G, Fukui M, Hosoda H, Asano M, Harusato I, Tanaka M, Shiraishi E, Senmaru T, Sakabe K, Yamasaki M, Kitawaki J, Fujinami A, Ohta M, Obayashi H, Nakamura N. Telmisartan, an angiotensin II type 1 receptor blocker, prevents the development of diabetes in male Spontaneously Diabetic Torii rats. *Eur J Pharmacol.* 2009; 605(1-3): 164-9. [PMID: 19171132]
- Jin D, Takai S, Sugiyama T, Hayashi T, Fukumoto M, Oku H, Kitaura Y, Ikeda T, Miyazaki M. Long-Term Angiotensin II Blockade May Improve Not Only Hyperglycemia but Also Age-Associated Cardiac Fibrosis. *J Pharmacol Sci.* 2009; 109(2): 275-84. [PMID: 19202318]
- Hamada Y, Fujii H, Fukagawa M. Role of oxidative stress in diabetic bone disorder. *Bone.* 2009; 45(Suppl.1): S35-8.
- Sasase T, Morinaga H, Abe T, Miyajima K, Ohta T, Shinohara M, Matsushita M, Kakehashi A. Protein kinase C beta inhibitor prevents diabetic peripheral neuropathy, but not histopathological abnormalities of retina in Spontaneously Diabetic Torii rat. *Diabetes Obes Metab.* 2009; 11(11): 1084-7. [PMID: 19614949]
- Matsui K, Oda T, Nishizawa E, Sano R, Yamamoto H, Fukuda S, Sasase T, Miyajima K, Ueda N, Ishii Y, Ohta T, Matsushita M. Pancreatic Function of Spontaneously Diabetic Torii Rats in Pre-Diabetic Stage. *Exp Anim.* 2009; 58(4): 363-74. [PMID: 19654434]
- Inokuchi C, Ueda H, Hamaguchi T, Miyagawa J, Shinohara M, Okamura H, Namba M. Role of macrophages in the development of pancreatic islet injury in spontaneously diabetic torii rats. *Exp Anim.* 2009; 58(4): 383-94. [PMID: 19654436]
- Morinaga H, Ohta T, Matsui K, Sasase T, Fukuda S, Ito M, Ueda M, Ishii Y, Miyajima K, Matsushita M. Effect of food restriction on adipose tissue in spontaneously diabetic Torii fatty rats. *Exp Diabetes Res.* 2009; 2009: Article ID 715057. [PMID: 19696902]
- Matsumoto Y, Torimoto K, Matsuyoshi H, Hirayama A, Fujimoto K, Yoshimura N, Hirao Y. Long-term effects of diabetes mellitus on voiding function in a new model of type 2 diabetes mellitus, the Spontaneously Diabetic Torii (SDT) rat. *Biomed Res.* 2009; 30(6): 331-5. [PMID: 20051641]
- ## 2010
- Fukuda M, Nakanishi Y, Fuse M, Yokoi N, Hamada Y, Fukagawa M, Negi A, Nakamura M. Altered expression of aquaporins 1 and 4 coincides with neurodegenerative events in retinas of spontaneously diabetic Torii rats. *Exp Eye Res.* 2010; 90(1): 17-25. [PMID: 19748503]
- Fujii H, Kono K, Nakai K, Goto S, Komaba H, Hamada Y, Shinohara M, Kitazawa R, Kitazawa S, Fukagawa M. Oxidative and Nitrosative Stress and Progression of Diabetic Nephropathy in Type 2 Diabetes. *Am J Nephrol.* 2010; 31(4): 342-52. [PMID: 20224273]

- Sasase T. J Ophthalmol. 2010; 2010: 615641 (7pages). Pathophysiological characteristics of diabetic ocular complications in spontaneously diabetic Torii rat. [PMID: 20508774]
- Ishii Y, Ohta T, Sasase T, Morinaga H, Hata T, Miyajima K, Katusda Y, Masuyama T, Shinohara M, Kakutani M, Matsushita M. A high-fat diet inhibits the progression of diabetes mellitus in type 2 diabetic rats. Nutr Res. 2010; 30(7): 483-91. [PMID: 20797481]
- Kishi H, Komatsu W, Miura Y, Kawanobe T, Nonaka T, Ohhira S. Effects of habitual perilla (shiso) tea drinking on the incidence of diabetes mellitus in spontaneously diabetic Trii (SDT)rats. Biosci Biotechnol Biochem. 2010; 74(12): 2490-3. [PMID: 21150101]
- Ohta T, Miyajima K, Yamada T. Changes in glycolipid metabolism during a high-sucrose feeding in Spontaneously Diabetic Torii (SDT) rats, a genetic model of nonobese type 2 diabetes. J. Anim. Vet. Adv. 2010; 9 (22): 2883-2889. [PMID: none]
- ## 2011
- Fukuda M, Naka M, Mizokami J, Negi A, Nakamura M. Diabetes induces expression of aquaporin-0 in the retinal nerve fibers of spontaneously diabetic Torii rats. Exp Eye Res. 2011; 92(3): 195-201. [PMID: 21232536]
- Masami Shinohara. Establishment and Clinical Features in Spontaneously Diabetic Torii Rat. The Open Diabetes J. 2011; 4: 18-20. [PMID: none]
- Norihide Yokoi, Masanori Fuse, Susumu Seino. Genetics of the Spontaneously Diabetic Torii Rat. The Open Diabetes J. 2011; 4: 21-5. [PMID: none]
- Taku Masuyama. Characteristics of Diabetes in the SDT Rat. The Open Diabetes J. 2011; 4: 26-9. [PMID: none]
- Sumiaki Fukuda, Katsuhiko Miyajima, Tomohiko Sasase, Takeshi Ohta. Spontaneously Diabetic Torii *Lepr<sup>fa</sup>* (SDT Fatty) Rat: A Novel Model of Obese Type 2 Diabetes. The Open Diabetes J. 2011; 4: 30-6. [PMID: none]
- Akihiro Kakehashi. Diabetic Ocular Complications in the SDT Rat. The Open Diabetes J. 2011; 4: 37-40. [PMID: none]
- Fumihiko Toyoda, Akihiro Kakehashi, Kana Hashimoto, Nozomi Kinoshita, Chiho Kanbara, Hiroko Yamagami, Hiroyuki Tamemoto, San-e Ishikawa, Yoh Dobashi, Masanobu Kawakami, Yasunori Kanazawa. Accumulation of AGEs and VEGF in Eyes of SDT Rats. The Open Diabetes J. 2011; 4: 41-4. [PMID: none]
- Takeshi Ohta, Tomohiko Sasase. Diabetic Nephropathy in Spontaneously Diabetic Torii (SDT) Rats. The Open Diabetes J. 2011; 4: 45-9. [PMID: none]
- Tomohiko Sasase, Takeshi Ohta. Torii Rat. The Open Diabetes J. 2011; 4: 50-4. [PMID: none]
- Yasuko Mera, Hisayo Morinaga, Takeshi Ohta, Tomohiko Sasase. Glucose and Lipid Metabolism in Spontaneously Diabetic Torii Rat. The Open Diabetes J. 2011; 4: 55-9. [PMID: none]
- Masami Shinohara, Toshihiro Oikawa, Kahei Sato, Yasunori Kanazawa. Effect of Oophorectomy and Estrogen Administration on Diabetic Pathogenesis in Female Spontaneously Diabetic Torii Rats. The Open Diabetes J. 2011; 4: 96-100. [PMID: none]
- Akihiro Kakehashi, Mikiko Takezawa, Fumihiko Toyoda, Nozomi Kinoshita, Chiho Kambara, Hiroko Yamagami, Noriaki Kato, San-e Ishikawa, Masanobu Kawakami, Yasunori Kanazawa. Aldose Reductase Inhibitor Fidarestat Prevents Diabetic Ocular Complications in Spontaneously Diabetic Torii Rats. The Open Diabetes J. 2011; 4: 101-7. [PMID: none]
- Fumihiko Toyoda, Akihiro Kakehashi, Ayumi Ota, Nozomi Kinoshita, Chiho Kambara, Hiroko Yamagami, Hiroyuki Tamemoto, Hiroto Ueba, Yoh Dobashi, San-e Ishikawa, Masanobu Kawakami, Yasunori Kanazawa. Prevention of Proliferative Diabetic Retinopathy and Cataract in SDT Rats with Aminoguanidine, an Anti-Advanced Glycation End Product Agent. The Open Diabetes J. 2011; 4: 108-13. [PMID: none]
- Nozomi Kinoshita, Akihiro Kakehashi, Yoh Dobashi, Ryuichiro Ono, Fumihiko Toyoda, Chiho Kambara, Hiroko Yamagami, Yusuke Kitazume, Eiji Kobayashi, Yasuhiro Osakabe, Motoshige Kudo, Masanobu Kawakami, Yasunori Kanazawa. Effects of Topical Nipradilol on Early Diabetic Retinopathy in SDT Rats. The Open Diabetes J. 2011; 4: 114-8. [PMID: none]
- Hiroaki Mizukami, Masashi Urabe, Akihiro Kume, Keiya Ozawa. Gene Therapy for Diabetic Retinopathy in Animal Models and Humans. The Open Diabetes J. 2011; 4: 119-22. [PMID: none]
- Takeshi Ohta, Katsuhiko Miyajima, Takahisa Yamada. Pathophysiological Changes in Pre-Diabetic Stage of Spontaneously Diabetic Torii (SDT) Rats. J Anim Vet Adv. 2011; 10(7): 813-7. [PMID: none]
- Goto S, Fujii H, Kono K, Nakai K, Hamada Y, Yamato H, Shinohara M, Kitazawa R, Kitazawa S, Nishi S, Fukagawa M. Carvedilol ameliorates low-turnover bone disease in non-obese type 2 diabetes. Am J Nephrol. 2011; 34(3): 281-90. [PMID: 21829007]

## 2012

- Masuda T, Muto S, Fujisawa G, Iwazu Y, Kimura M, Kobayashi T, Nonaka-Sarukawa M, Sasaki N, Watanabe Y, Shinohara M, Murakami T, Shimada K, Kobayashi E, Kusano E. Heart angiotensin II-induced cardiomyocyte hypertrophy suppresses coronary angiogenesis and progresses diabetic cardiomyopathy. *Am J Physiol Heart Circ Physiol.* 2012; 302(9): H1871-83. [PMID: 22389386]
- Masuda T, Muto S, Fujisawa G, Iwazu Y, Kimura M, Kobayashi T, Nonaka-Sarukawa M, Sasaki N, Watanabe Y, Shinohara M, Murakami T, Shimada K, Kobayashi E, Kusano E. Heart angiotensin II-induced cardiomyocyte hypertrophy suppresses coronary angiogenesis and progresses diabetic cardiomyopathy. *Am J Physiol Heart Circ Physiol.* 2012; 302(9): H1871-83. [PMID: 22389386]
- Mifune T, Nishi Y, Tajiri Y, Masuyama T, Hosoda H, Kanagawa K, Kojima M. Increased production of active ghrelin is relevant to hyperphagia in nonobese spontaneously diabetic Torii rats. *Metabolism.* 2012; 61: 491-5. [PMID: 22001335]
- Ohta T, Shinohara M, Yamamoto T, Yamada T. Pancreatic abnormalities at a young age in Spontaneously Diabetic Torii (SDT) rats. *J Anim Vet Adv.* 2012; 11(9): 1322-1326.
- Ohta T, Miyajima K, Shinohara M, Yamamoto T, Yamada T. Inhibition of postprandial hyperglycemia prevents the incidence of diabetes in Spontaneously Diabetic Torii (SDT) rats. *J Anim Vet Adv.* 2012; 11(10): 1583-7.
- Ohta T, Morinaga H, Yamamoto T, Yamada T. Effect of phlorizin on metabolic abnormalities in Spontaneously Diabetic Torii (SDT) rats. *Open Journal of Animal Sciences.* 2012; 2 (2): 113-8.
- 篠原雅巳."SDTラット". 疾患モデルの作製と利用—糖尿病・肥満/感染症. エル・アイ・シー, 2012, p.65-78.
- Kim J, Shon E, Kim CS, Kim JS. Renal podocyte injury in a rat model of type 2 diabetes is prevented by metformin. *Exp Diabetes Res.* 2012; 2012: 210821. [PMID: 23056035]
- Inubushi T, Kamemura N, Oda M, Sakurai J, Nakaya Y, Harada N, Suenaga M, Matsunaga Y, Ishidoh K, Katunuma N. L-tryptophan suppresses rise in blood glucose and preserves insulin secretion in type-2 diabetes mellitus rats. *J Nutr Sci Vitaminol (Tokyo).* 2012;58(6):415-22. [PMID: 23419400]
- Yamaguchi T, Ohta T, Morinaga H, Hata T, Sato E, Matsushita M. Changes in protein tyrosine phosphatase activity in Spontaneously Diabetic Torii (SDT) rats. *Open J. Anim. Sci.* 2012; 2(4): 253-257.
- Lakshmanan A.P, Harima M, Sukumaran V, Soetikno V, R A

- Thandavarayan, Suzuki K, Kodama M, Nagata M, Takagi R, Watanabe K. Modulation of AT-1R/AMPK-MAPK cascade plays crucial role for the pathogenesis of diabetic cardiomyopathy in transgenic type 2 diabetic(Spontaneous Diabetic Torii)rats. *Bioch. Pharm.* 83(2012) 653-660
- Robinson R, Barathi V A, Chaurasia S S, Wong T Y, Kern T S. Update in animal models of diabetic retinopathy: from molecular approaches to mice and higher mammals. *Disease Models & Mechan.* 5, 444-456(2012)
- Hirata M, Serizawa K, Aizawa K, Yogo K, Tashiro Y, Takeda S, Moriguchi Y, Endo K, Fukagawa M. 22-Oxalacetic acid prevents progress of endothelial dysfunction through antioxidative effects in rats with type 2 diabetes and early-stage nephropathy. *Nephrol. Dial. Transplant* 2012, 1-8.
- 平尾直啓、龍門徳彦、稲葉信博、千葉薫、笹瀬智彦、太田勲毅 SDT-fa/faおよびSDT+/+ラットの糖尿病発症・進展に2種の基礎飼料が及ぼす影響 実験動物技術 第47巻2号 3-11 (2012)

## 2013

- Kono K, Fujii H, Nakai K, Goto S, Kitazawa R, Kitazawa S, Shinohara M, Hirata M, Fukagawa M, Nishi S. Anti-oxidative effect of vitamin D analog on incipient vascular lesion in non-obese type 2 diabetic rats. *Am J Nephrol.* 2013; 37(2): 167-74. [PMID: 23406697]
- Tomohiko Sasase, Takeshi Ohta, Taku Masuyama, Norihide Yokoi, Akihiro Kakehashi, Masami Shinohara. The Spontaneously Diabetic Torii Rat: An Animal Model of Nonobese Type 2 Diabetes with Severe Diabetic Complications. *Journal of Diabetes Research.* Volume 2013, Article ID 976209, 12 pages.
- Ota A, Kakehashi A, Toyoda F, Kinoshita N, Shinmura M, Takano H, Obata H, Matsumoto T, Tsuji J, Dobashi Y, Fujimoto WY, Kawakami M, Kanazawa Y. Effects of long-term treatment with ranirestat, a potent aldose reductase inhibitor, on diabetic cataract and neuropathy in spontaneously diabetic torii rat. *J Diabetes Res.* 2013; 2013: 175901. [PMID: 23671855]
- Nakai K, Fujii H, Kono K, Goto S, Kitazawa R, Kitazawa S, Hirata M, Shinohara M, Fukagawa M, Nishi S. Vitamin D Activates the Nrf2-Keap1 Antioxidant Pathway and Ameliorates Nephropathy in Diabetic Rats. *Am J Hypertens.* 2013 Sep 11. [PMID: 24025724]
- Sasase T, Ohta T, Masuyama T, Yokoi N, Kakehashi A, Shinohara M. The Spontaneously Diabetic Torii (SDT) rat: An animal model of non-obese type 2 diabetes with severe diabetic complications. *Exp. Diabetes Res.* 2013; 2013: 976209. [PMID: 23691526]

住川守男、龍門徳彦、稲葉信博、榊原和佳子、前野孝之、千葉薫、石井幸仁、木村修一、美谷島克宏、太田毅. SDTラットにおける卵巣摘出による生理学的変化の検討. 実験動物技術. 2013; 48(1): 3-8.

榊原和佳子、龍門徳彦、住川守男、稲葉信博、前野孝之、千葉薫、石井幸仁、木村修一、Ton Bing、太田毅、山田宜永. Spontaneously Diabetic Torii (SDT)ラットの糖、脂質および骨代謝に精巣摘出が及ぼす影響. 実験動物技術. 2013; 48(2): 79-85.

## 2014

Mukai E, Ohta T, Kawamura H, Lee E-Y, Morita, A, Sasase T, Miyajima, K, Inagaki N, Iwanaga T, Miki T. Enhanced vascular endothelial growth factor signaling in islets contributes to  $\beta$ cell injury and consequential diabetes in Spontaneously Diabetic Torii rats. Diabetes Res. Clin. Pract. 2014; 106: 303-311. [PMID: 25262109]

Toyoda F, Tanaka Y, Ota A, Shimmura M, Kinoshita N, Takano H, Matsumoto T, Tsuji J, Kakehashi A. Effect of ranirestat, a new aldose reductase inhibitor, on diabetic retinopathy in SDT rats. J Diabetes Res. 2014;2014:672590. [PMID: 25215304]

Nakai K, Fujii H, Kono K, Goto S, Kitazawa R, Kitazawa S, Hirata M, Shinohara M, Fukagawa M, Nishi S. Vitamin D activates the Nrf2-Keap1 antioxidant pathway and ameliorates nephropathy in diabetic rats. Am J Hypertens. 2014 Apr;27(4):586-95. [PMID: 24025724]

## 2015

Goto S, Fujii H, Kono K, Nakai K, Awata R, Yonekura Y, Hirata M, Shinohara M, Nishi S, Fukagawa M. 22-Oxacalcitriol attenuates bone loss in nonobese type 2 diabetes. Bone. 2015 May;74:153-9. [PMID: 25645030]

Yokoi N, Beppu M, Yoshida E, Hoshikawa R, Hidaka S, Matsubara T, Shinohara M, Irino Y, Hatano N, Seino S. Identification of putative biomarkers for prediabetes by metabolome analysis of rat models of type 2 diabetes. Metabolomics. 2015;11(5):1277-1286. [PMID: 26366137]

Sasase T, Yokoi N, Pezzolesi MG, Shinohara M. Animal models of diabetes and metabolic disease 2014. J Diabetes Res. 2015;2015:571809. [PMID: 25973428]

Goto S, Fujii H, Kono K, Nakai K, Awata R, Yonekura Y, Hirata M, Shinohara M, Nishi S, Fukagawa M. 22-Oxacalcitriol attenuates bone loss in nonobese type 2 diabetes. Bone. 2015 May;74:153-9. [PMID: 25645030]

Yonekura Y, Fujii H, Nakai K, Kono K, Goto S, Shinohara M, Nishi S. Anti-oxidative Effect of the  $\beta$ -blocker Carvedilol on Diabetic Nephropathy in Non-obese Type 2 Diabetic Rats.

Clin Exp Pharmacol Physiol. 2015 Jul 14. doi: 10.1111/1440-1681.12447. [PMID: 26173411]

Chen SJ, Aikawa C, Yoshida R, Matsui T. Methylglyoxal-derived hydroimidazolone residue of plasma protein can behave as a predictor of prediabetes in Spontaneously Diabetic Torii rats. Physiol Rep. 2015 Aug;3(8). [PMID: 26265747]

Toyoda F, Tanaka Y, Shimmura M, Kinoshita N, Takano H, and Kakehashi A. Diabetic Retinal and Choroidal Edema in SDT Rats. J Diabetes Res. 2016;2016:2345141. [PMID: 26783535]

Kato T, Relator R, Ngouv H, Hirohashi Y, Takaki O, Kakimoto T, Okada K. Segmental HOG: new descriptor for glomerulus detection in kidney microscopy image. BMC Bioinformatics. 2015 Sep 30;16:316. [PMID: 26423821]

Fujii H, Nakai K, Yonekura Y, Kono K, Goto S, Hirata M, Shinohara M, Nishi S, Fukagawa M. The Vitamin D Receptor Activator Maxacalcitol Provides Cardioprotective Effects in Diabetes Mellitus. Cardiovasc Drugs Ther. 2015 Nov 25. [PMID: 26602563]

Takaoka K, Yamamura M, Nishioka T, Abe T, Tamaoka J, Segawa E, Shinohara M, Ueda H, Kishimoto H, Urade M. Establishment of an Animal Model of Bisphosphonate-Related Osteonecrosis of the Jaws in Spontaneously Diabetic Torii Rats. PLoS One. 2015 Dec 14;10(12):e0144355. [PMID: 26659123]

前野孝之、榊原和佳子、住川守男、平尾直啓、山中沙織、千葉薫、勝田佳朋、榎美実、剣持佑介、Ton Bing、山田宜永、太田毅、美谷島克宏. Spontaneously Diabetic Torii (SDT)ラットにおける片腎摘出術の有用性の検討. 実験動物技術. 2015; 50(1): 3-10.

Yokoi N. Elucidation of genetic factors in diabetes based on studies of animal models. Diabetology International December 2015, Volume 6, Issue 4, pp 255-260 [PMID: none]

## 2016

稲葉信博、剣持佑介、龍門徳彦、平尾直啓、山中沙織、千葉薫、太田毅、山田宜永、美谷島克宏. 非肥満2型糖尿病モデル雄性SDTラットの精子形成における病態生理学的変化. 北信越畜産学会報、112号、1-7頁 2016

Karthikeyan M, Balasubramanian T and Pawan K. In-vivo Animal Models and In-vitro Techniques for Screening Antidiabetic Activity. J Develop Drugs 5:153 [PMID: none]

Toyoda F, Tanaka Y, Shimmura M, Kinoshita N, Takano H, Kakehashi A. Diabetic Retinal and Choroidal Edema in SDT Rats. J Diabetes Res. 2016;2016: ArticleID: 2345141. [PMID: 26783535]

## 2017

- Ohta T, Toriniwa Y, Ryumon N, Inaba N, Hirao T, Yamanaka S, Maeno T, Sakakibara W, Sumikawa M, Chiba K, Nakamura A, Miyajima K, Fatchiyah F, Yamada T. Maternal high-fat diet promotes onset of diabetes in rat offspring. *Anim Sci J*. 2017 Jan;88(1):149-155. [PMID: 27145882]
- Taniai-Riya E, Miyajima K, Kakimoto K, Ohta T, Yasui Y, Kemmochi Y, Anagawa-Nakamura A, Toyoda K, Takahashi A, Shoda T. Hepatocellular adenoma with severe fatty change in a male Spontaneously Diabetic Torii rat. *J Toxicol Pathol* 2017;30:69-73. [PMID: 28190927]
- Serizawa K, Yogo K, Tashiro Y, Kawasaki R, Endo K, Shimonaka Y, Hirata M. Epoetin beta pegol ameliorates flow - mediated dilation with improving endothelial nitric oxide synthase coupling state in nonobese diabetic rats *Cardiovasc Ther*. 2017 Apr; 35(2): e12250. [PMID: 28054454]
- Chen SJ, Aikawa C, Yoshida R, Kawaguchi T, Matsui T. Anti-prediabetic effect of rose hip (*Rosa canina*) extract in spontaneously diabetic Torii rats. *J Sci Food Agric*. 2017 Feb 9. [PMID: 28182280]
- Watanabe K, Fujii H, Goto S, Nakai K, Kono K, Watanabe S, Shinohara M, Nishi S. Newly Developed Rat Model of Chronic Kidney Disease-Mineral Bone Disorder. *J Atheroscler Thromb*. 2017 Jul 1. doi: 10.5551/jat.40170. [PMID: 28674323]
- Gonzalo Miyagusuku-Cruzado, Naoki Morishita, Keiichi Fukui, Norihiko Terahara, Toshiro Matsui. Anti-Prediabetic Effect of 6-O-Caffeoylsphorose in Prediabetic Rats and Its Stimulation of Glucose Uptake in L6 Myotubes. *Food Science and Technology Research*. 2017; 23(3), 449-456.
- Kim J, Jo K, Kim CS, Kim JS. Aster koraiensis extract prevents diabetes-induced retinal vascular dysfunction in spontaneously diabetic Torii rats. *BMC Complement Altern Med*. 2017 Nov 23;17(1):497. [PMID: 29169356]
- 横田 淳司、糖尿病に合併する膵障害の病態 - 自然発症2型糖尿病モデルラットの膵でのペントシジンの蓄積と終末糖化産物受容体の発現の検討-
- Cammalleri M, Del Monte M, Locri F, Marsili S, Lista L, De Rosa M, Pavone V, Rusciano D, Bagnoli P. Diabetic Retinopathy in the Spontaneously Diabetic Torii Rat: Pathogenetic Mechanisms and Preventive Efficacy of Inhibiting the Urokinase-Type Plasminogen Activator Receptor System. *J Diabetes Res*. Vol.2017 Article ID 2904150 1-18

## 2018

- Masuda T, Watanabe Y, Fukuda K, Watanabe M, Onishi A, Ohara K, Imai T, Koepsell H, Muto S, Vallon V, Nagata D. Unmasking a sustained negative effect of SGLT2 inhibition on body fluid volume in the rat. *Am J Physiol Renal Physiol*. 2018 Sep 1;315(3):F653-F664. [PMID: 29790389]
- Watanabe K, Fujii H, Goto S, Nakai K, Kono K, Watanabe S, Shinohara M, Nishi S. Newly Developed Rat Model of Chronic Kidney Disease-Mineral Bone Disorder. *J Atheroscler Thromb*. 2018 Feb 1;25(2):170-177. [PMID: 28674323]
- Sohn E, Kim J, Kim CS, Jo K, Kim JS. Osteomeles schwerinae Extract Prevents Diabetes-Induced Renal Injury in Spontaneously Diabetic Torii Rats. *Evid Based Complement Alternat Med*. 2018 Apr 24;2018:6824215.
- Ohta T, Yamada T, Kamiya T, Gotoh T, Tsubaki, M, Shinohara M. Quick-fat diet inhibits the development of diabetes in Spontaneously Diabetic Torii rats. *Thai Journal of Pharmaceutical Sciences* 2018, 42 (4): 183-187 [PMID: None]
- Ohta T, Sasase T, Gotoh T, Shinohara M, Sirichaiyakul P, Furuta S, Techasakulsin R, Kamiya T, Yoshida C, Yamada T. Non-Obese Type 2 diabetic Rat Models-GK Rat and SDT Rat. *Open J. Anim. Sci*. 2018(8) 396-420

## 2019

- Kim CS, Kim J, Kim YS, Jo K, Lee YM, Jung DH, Lee IS, Kim JH, Kim JS. Improvement in Diabetic Retinopathy through Protection against Retinal Apoptosis in Spontaneously Diabetic Torii Rats Mediated by Ethanol Extract of *Osteomeles schwerinae* C.K. Schneid. *Nutrients*. 2019 Mar 4;11(3). [PMID: 30836664]
- Maejima T, Kumagai K, Yabe K, Yasuno K, Ishikawa K, Okado K, Sasaki N, Kai K, Mori K. Urothelial hyperplasia with calculi (papillomatosis) in the urinary bladder of a male spontaneous diabetic Torii rat. *Journal of Toxicologic Pathology*, August 31, 2019 [PMID: none]
- Tanaka Y, Takagi R, Ohta T, Sasase T, Kobayashi M, Toyoda F, Shimmura M, Kinoshita N, Takano H, Kakehashi A. Pathological Features of Diabetic Retinopathy in Spontaneously Diabetic Torii Fatty Rats. *J Diabetes Res*. 2019 Sep 15;2019:8724818. [PMID: 31637263]

## 2020

- Kazuma Kondo, Naohito Yamada, Yusuke Suzuki, Tatsuji Hashimoto, Kaoru Toyoda, Tadakazu Takahashi, Akio Kobayashi, Shoichiro Sugai, Kouichi Yoshinari.

Enhancement of acetaminophen-induced chronic hepatotoxicity in spontaneously diabetic torii (SDT) rats. *J Toxicol Sci.* 2020;45(5):245-260. [PMID: 32404557]

Yoshitomi Nakane, Yusuke Kemmochi, Naoto Ogawa, Tomohiko Sasase, Takeshi Ohta, Yoshikazu Higami, Fumio Fukai. Hyperglycemia contributes to the development of Leydig cell hyperplasia in male Spontaneously Diabetic Torii rats. *J Toxicol Pathol.* 2020 Apr;33(2):121-129. [PMID: 32425345]

## 2021

Kazuma Kobayashi, Tomohiko Sasase, Yukihito Ishii, Yoshiaki Katsuda, Katsuhiko Miyajima, Takahisa Yamada, Takeshi Ohta. The sphingosine-1-phosphate receptor modulator, FTY720, prevents the incidence of diabetes in Spontaneously Diabetic Torii rats. *Clin Exp Pharmacol Physiol.* 2021 Jun;48(6):869-876. [PMID: 32920892]

Tatsuya Maekawa, Sanae Nakamura, Katsuhiko Miyajima, Kinuko Uno, Ayane Yamaguchi, Kouhei Mandai, Takayuki Gotoh, Masami Shinohara, Yuichi Shinozaki, Tomohiko Sasase, Fatchiyah Fatchiyah, and Takeshi Ohta. Ocular Changes –Cataract And Retinal Lesion- In Spontaneously Diabetic Torii (SDT) Fatty Rats, An Obese Type 2 Diabetic Model. *Journal of Smart Bioprospecting and Technology.* 2021 Vol 2, No 2, 81-86.

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