

E. 結論

KO マウスを用いた解析から、脳内における ApoE 受容体としては VLDLR が主要な役割を果たしていること、ApoE は神経細胞の分化発生や移動及び配置決定に関わるシグナルを伝えている可能性が示唆された。また、ApoER2 及び LDLR はタウ蛋白の高度リン酸化において重要な役割を果たしていることが示唆された。

F. 健康危険情報

なし

G. 研究発表

1. 論文発表

Magoori K, Kang M-J, Iwazaki MI, Kakuuchi H, Ioka RX, Kamataki A, Kim D-H, Asaba H, Iwasaki S, Takei YA, Sasaki M, Usui U, Okazaki M, Takahashi S, Ono M, Nose M, Sakai J, Fujino T, Yamamoto TT. Severe hypercholesterolemia, impaired fat tolerance and advanced atherosclerosis in mice lacking both Low-density lipoprotein receptor-related protein 5 (LRP5) and apolipoprotein E. *J. Biol. Chem.*, 278:11331-11338, 2003.

Fujino T, Ikeda Y, Osborne TF, Takahashi S, Yamamoto TT, Sakai J. Sources of acetyl-CoA : acetyl-CoA synthetase1 and 2. *Curr. Med. Chem. - Immunol, End Met Agents* 3, 207-210, 2003.

Takahashi S, Sakai J, Fujino T, Miyamori I, Yamamoto TT. The very low density lipoprotein (VLDL) receptor - a peripheral lipoprotein receptor for remnant lipoproteins into fatty acid active tissues. *Mol. Cell Biochem.*, 248:121-127, 2003.

Yamamoto J, Ikeda Y, Iguchi H, Fujino T, Tanaka T, Asaba H, Ioka RX, Iwasaki S, Kaneko I, Takahashi S, Sakaue H, Kodama T, Yanagisawa M, Yamamoto TT, Ito S, Sakai J. A krüppel-like factor KLF 15 mediates fasting-induced transcriptional activation of mitochondrial acetyl-CoA synthetase gene,

AceCS2.

J. Biol. Chem., 2004 (in press)

2. 学会発表

Fujino T. Roles of LDL-receptor related protein 5, LRP5, in lipoprotein and glucose metabolism. Gordon Research Conferences, atherogenesis 2003年 ニューハンプシャー、アメリカ合衆国

H. 知的財産権の出願・登録状況

1. 特許取得

なし

2. 実用新案登録

なし

研究成果の刊行に関する一覧表

書籍

| 著者氏名 | 論文タイトル | 書籍全体の編集者名 | 書籍名 | 出版社名 | 出版地 | 出版年 | ページ |
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雑誌

| 発表者氏名 | 論文タイトル | 発表誌名 | 巻名 | ページ | 出版年 |
|--|---|----------------------|----------|-----------|------|
| (道川) Sawamura N, Ko M, Yu W, Zou K, Hanada K, Suzuki T, Gong JS, Yanagisawa K, and Michikawa M. | Modulation of amyloid precursor protein cleavage by cellular sphingolipids. | J Biol Chem | in press | | 2004 |
| Kamata T, Katsube K, Michikawa M, Yamada M, Takada S, Mizusawa H. | R-spondin, a novel gene with thrombospondin type 1 domain, was expressed in the dorsal neural tube and affected in Wnts mutants. | Biochim Biophys Acta | 1676 | 51-62 | 2004 |
| Zou K, Kim D, Kakio A, Byun K, Gong JS, Kim M, Sawamura N, Nishimoto S, Matsuzaki K, Lee B, Yanagisawa K, and Michikawa M. | Amyloid β -Protein (A β)1-40 Protects Neurons from Damage Induced by A β 1-42 in Culture and in Rat Brain. | J Neurochem | 87 | 609-619 | 2003 |
| Sawamura N, Gong JS, Chang TY, Yanagisawa K, Michikawa M. | Promotion of tau phosphorylation by MAP Kinase Erk1/2 Is accompanied by reduced cholesterol level in detergent-insoluble membrane domains in Niemann-Pick C1-deficient cells. | J Neurochem | 84 | 1086-1096 | 2003 |
| Watabe K, Sakamoto T, Kawazoe Y, Michikawa M, Miyamoto K, Yamamura T, Saya H, Araki N. | Tissue culture methods to study neurological disorders: establishment of immortalized Schwann cells from murine disease models. | Neuropathology | 23 | 68-78 | 2003 |
| Sakaguchi N, Muramatsu H, Ichihara-Tanaka K, Maeda N, Noda M, Yamamoto T, Michikawa M, Ikematsu S, Sakuma S, Muramatsu T. | Receptor-type protein tyrosine phosphatase zeta as a component of the signaling receptor complex for midkine-dependent survival of embryonic neurons. | Neurosci Res | 45 | 219-224 | 2003 |
| Michikawa M. | The Cholesterol paradox: is high total or low HDL Cholesterol level a risk for Alzheimer's disease. | J Neuro Res | 72 | 141-146 | 2003 |
| Michikawa M. | Role of cholesterol in pathogenesis of Alzheimer's disease. | Mol Neurobiol | 27 | 1-11 | 2003 |
| (伊藤) Tada T, Ito J, Asai M, and Yokoyama S. | Fibroblast growth factor 1 is produced prior to apolipoprotein E in the astrocytes after cryo-injury of mouse brain. | Neurochem Int | in press | | |

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|--|---|--|----------|-----------------|------|
| (藤野) Yamamoto J, Ikeda Y, Iguchi H, <u>Fujino T</u> , Tanaka T, Asaba H, Ioka RX, Iwasaki S, Kaneko I, Takahashi S, Sakaue H, Kodama T, Yanagisawa M, Yamamoto T. T, Ito S and Sakai J. | A krüppel-like factor KLF 15 mediates fasting-Induced transcriptional activation of mitochondrial acetyl- CoA synthetase gene, AceCS2. | J Biol Chem | in press | | 2004 |
| Takahashi S, Sakai J, <u>Fujino T</u> , Miyamori I, Yamamoto TT. | The very low density lipoprotein (VLDL) receptor - a peripheral lipoprotein receptor for remnant lipoproteins into fatty acid active tissues. | Mol Cell Biochem | 248 | 121-127 | 2003 |
| <u>Fujino T</u> , Ikeda Y, Osborne TF, Takahashi S, Yamamoto TT and Sakai J. | Sources of acetyl-CoA : acetyl-CoA synthetase1 and 2. | Curr Med Chem - Immun, Endoc & Metab Agents | 3 | 207-210 | 2003 |
| Magoori K, Kang M-J, Iwazaki MI, Kakuuchi H, Ioka RX, Kamataki A, Kim D-H, Asaba H, Iwasaki S, Takei YA, Sasaki M, Usui U, Okazaki M, Takahashi S, Ono M, Nose M, Sakai J, <u>Fujino T</u> and Yamamoto TT. | Severe hypercholesterolemia, impaired fat tolerance and advanced atherosclerosis in mice lacking both Low-density lipoprotein receptor- related protein 5 (LRP5) and apolipoprotein E. | J Biol Chem | 278 | 11331- 11338 | 2003 |

20030202

以降は雑誌/図書等に掲載された論文となりますので、
「研究成果の刊行に関する一覧表」をご参照ください。