

虚血再灌流における脳微小循環内の白血球-血小板動態

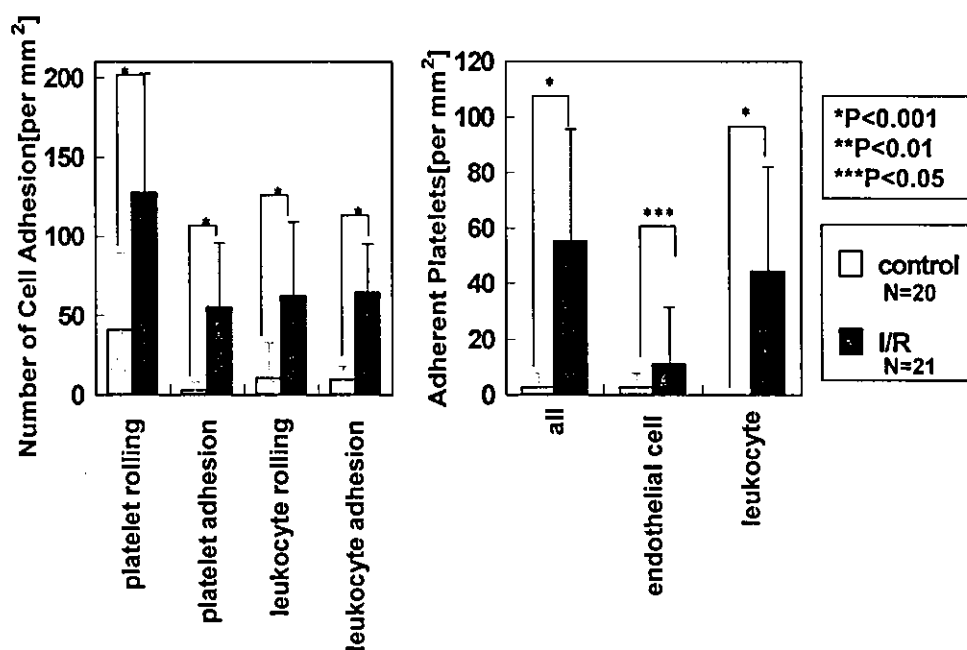


図6 虚血再灌流における脳微小循環内の内皮への白血球と血小板の粘着亢進

糖尿病時の虚血再灌流における脳微小循環内の白血球および血小板の粘着

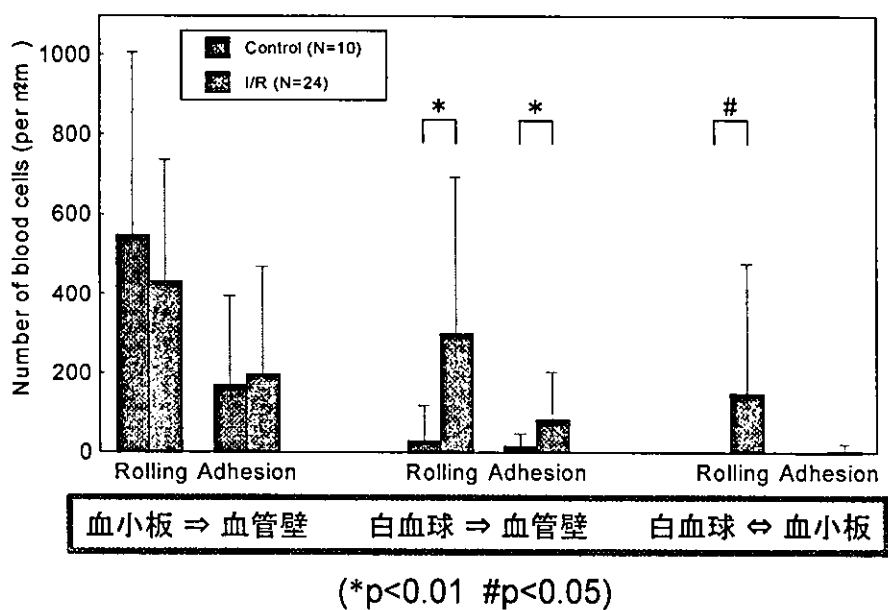


図7 糖尿病マウスの虚血再灌流における脳微小循環内の白血球と血小板粘着亢進



図 11 CAWS 誘導の腎血管傷害の
in vivo イメージング

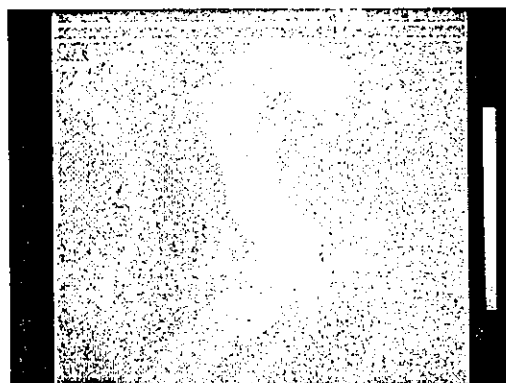


図 13 近尿細管へのデキストラン分子の流出

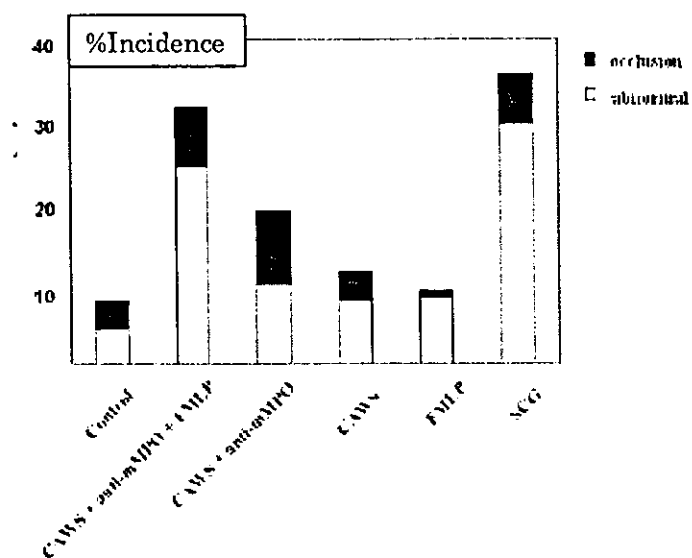


図 12 腎臓表面血管の流速の変化

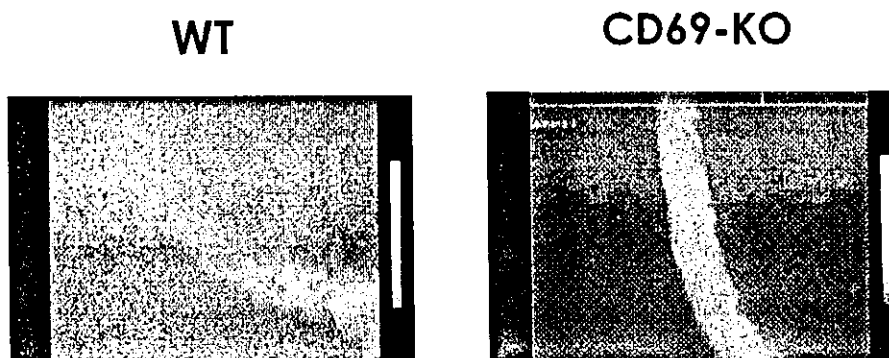


図 14 CD69-KO マウスにおける ROS 誘導の血栓形成の遅延

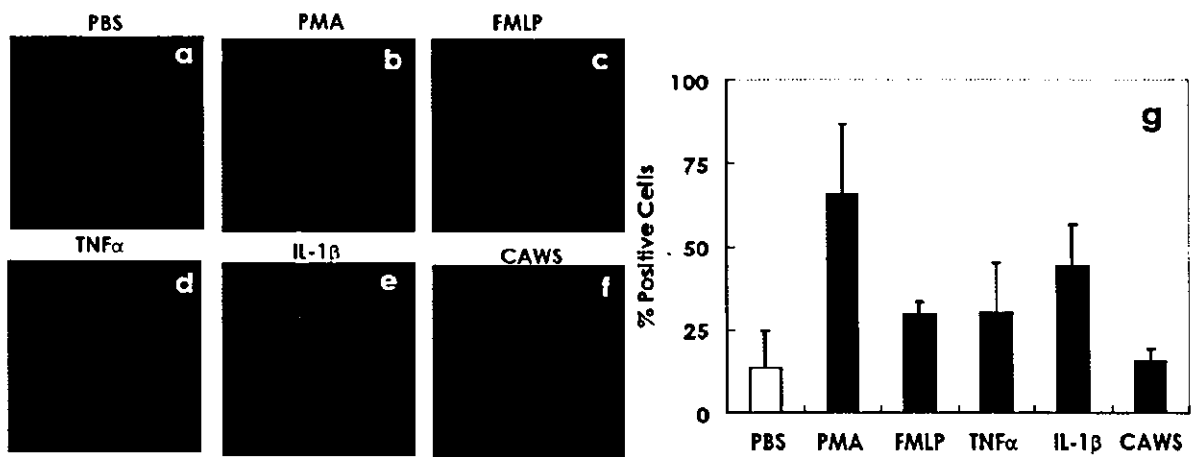
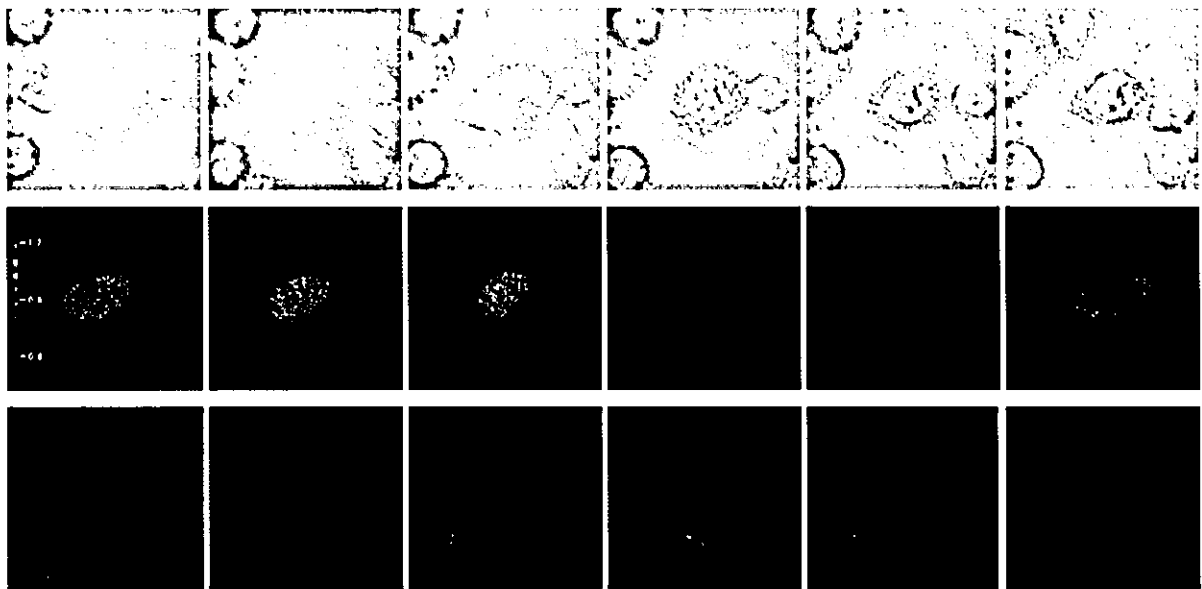


図 15 CD69 分子の好中球細胞膜局在変化

各刺激剤で活性化したときの CD69 の細胞表面への移行 (a: PBS, b: PMA, c: FMLP, d: TNFα, e: IL-1β, f: CAWS の刺激による表出画像。陽性細胞率)



120 分 140 分 150 分 160 分 170 分 180 分

図 16 NLS-CY を用いた核内カスパーゼ活性化のイメージング (上段からノマルスキー微分干渉像、蛍光強度比の擬似カラー像、ミトコンドリア膜電位 (テトラメチルローダミンメチルエステルの取り込み)

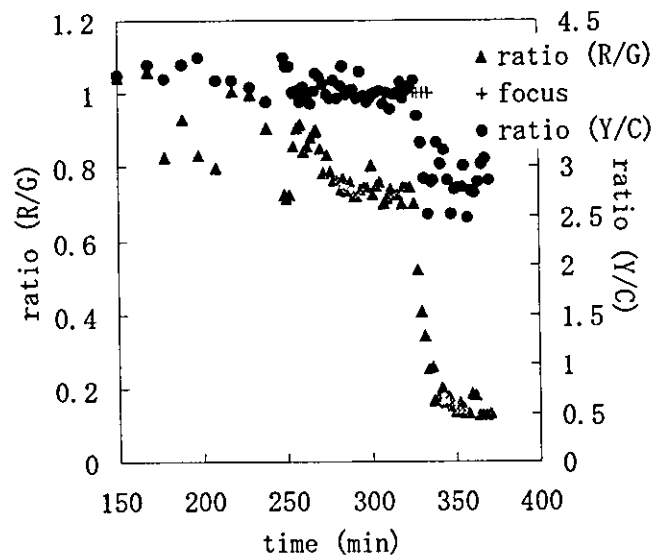


図 17 単一細胞中の細胞質および核のカスパーゼ活性化の同時検出による時間経過

G. 研究発表

G-1 論文発表

平成 16 年度

南谷晴之

- 1) Hirose Y., Sekizuka E., Nakadate H., Ozawa T., Minamitani H., Oshio C., Ishii H. : Role of oxidative stress in interaction between endothelial cells and platelets in diabetes, *Organ Microcirculation - A Gateway to Diagnostic and Therapeutic Interventions* , pp.239-241, ed. by H.Ishii, M.Suematsu, K.Tanishita, H.Suzuki, Springer-Verlag Tokyo, 2005.
 - 2) 南谷晴之、塚田孝祐 : 臓器血流と酸素代謝の光・イメージング解析、医学のあゆみ、210(3), pp200-204, 2004.
 - 3) Hirose Y., Nakadate H., Gokan H., Minamitani H., Sekizuka E., Oshio C., Izumida T., Sakamoto N., Shimozawa M., Yoshikawa T. : Enhanced platelet aggregability in diabetic patients established by laser light scattering method, *Microcirculation Annual*, 20, pp.49-50, 2004.
 - 4) Nakadate H., Sekizuka E., Oshio C., Hirose Y., Gokan H., Minamitani H. : The effect of shear stress on the accelerated adhesion of diabetic platelets, *Microcirculation Annual* , 20, pp.51-52, 2004.
 - 5) Shibuya N., Iwata Y., Minamitani H., Ushiyama A., Ohkubo C. : Blood flow dynamics and intravascular oxygen tension of tumor microvessels in photodynamic therapy, *Microcirculation Annual*, 20, pp.87-88,2004.
 - 6) Terao S., Sekizuka E., Ishikawa M., Yamaguchi N., Minamitani H., Kawase T. : Color imaging of platelets and leukocytes labeled with different fluorescent material in brain pial vessels of C57BL/6 mouse, *Microcirculation Annual*, 20, pp.99-100, 2004.
 - 7) Nagao T., Murayama K., Koshio O., Ohno H., Miura N., Takahashi K., Mabuchi A., Minamitani H., Suzuki K. : 腎臓血管傷害のイメージング、*Pharma Medica*, 22(5), pp185-189, 2004.
 - 8) Tsukada K., Sekizuka E., Oshio C., Tsujioka K., Minamitani H. : Red blood cell velocity and oxygen tension measurement in cerebral microvessels by double wavelength photoexcitation, *J.Appl. Physiol.*, 96, pp1561-1568, 2004.
- 鈴木和男
- 9) Ovejero, C., Cavard, C., Perianin, A., Hakvoort, T., Vermeulen, J., Godard, C., Fabre, M., Chafey, P., Suzuki, K., Romagnolo, B., Yamagoe, S., and, Perret, C.: Identification of the leukocyte cell-derived chemotaxin2 (LECT2) as a direct target gene of s-catenin in the liver. *Hepatology* 40:167-176, 2004.
 - 10) Saito, T., Okumura, A., Watanabe, H., Asano, M., Ishida-Okawara, A., Sakagami, J., Sudo, K., Hatano-Yokoe, Y., Abo, T., Iwakura, Y., Suzuki, K., and Yamagoe, S.: Increase of Hepatic NKT Cells in LECT2-Deficient Mice Contributes to Severe Concanavalin A-Induced Hepatitis. *J. Immunol.* 173:579-585, 2004.
 - 11) Suzuki, S., Honma, K., Matsuyama, T., Suzuki, K., Toriyama, K., Yamamoto, K., Miyazaki, K., Nakamura, M., Yu, K. and Kumatori, A.: Critical roles of Interferon regulatory factor-4 in CD11b^{high}CD8⁻ dendritic cell development. *Proc Natl Acad Sci USA.* 101, 8981-8986, 2004.

- 12) Ishida-Okawara, A., Ito-Ihara, T., Muso, E., Ono, T., Saiga, Kan., Nemoto, K. and Suzuki, K.: Neutrophil contribution to the crescentic glomerulonephritis in SCG/Kj mice. *Nephrol., Dial. Transplant.* 19, 1708-1715, 2004.
- 13) Ohashi, Y.Y., Kameoka, Y., Persad, A.S., Kohi, F., Yamagoe, S., Hashimoto, K. and Suzuki, K.: Novel missense mutation found in Japanese patient with myeloperoxidase deficiency. *Gene* 327, 195-200, 2004.
- 14) Hoshino, A., Hanaki, K., Suzuki, K. and Yamamoto, K.: Applications of T-lymphoma labeled with fluorescent quantum dots to cell tracing markers in mouse body. *Biochem. Biophys. Res. Comm.* 314, 46-53, 2004.
- 15) A. Hoshino, K. Fujioka, T. Oku, S. Nakayama, M. Suga, Y. Yamaguchi, K. Suzuki, K., M. Yasuhara, K. Yamamoto. Quantum dots targeted to the assigned organelle in living cells *Microbiol. Immunol.* 48: 985-994, 2004
- 16) N. Nagai-Miura, Y. Shingo, Y. Adachi, A. Ishida-Okawara, T. Oharaseki, K. Takahashi, S. Naoe, K. Suzuki and N. Ohno. Induction of Coronary Arteritis with Administration of CAWS (*Candida albicans* Water-Soluble Fraction) Depending on Mouse Strains. *Immunopharmacol. Immunotoxicol.* 26:527-543, 2004.
- 17) Y. Kameoka, A. S. Persad and K. Suzuki. Genomic variations in myeloperoxidase gene in the Japanese population. *Jpn. J. Infect. Dis.* 57: S12-13, 2004
- 18) Y. Aratani, F. Kura, H. Watanabe, H. Akagawa, Y. Takano, K. Suzuki, M.C. Dinauer, N. Maeda, and H. Koyama. In vivo role of myeloperoxidase for the host defense. *Jpn. J. Infect. Dis.* 57: S15, 2004
- 19) E. Muso, T. Ito-Ihara, T. Ono, E. Imai, K. Yamagata, A. Akamatsu, K. Suzuki. Intravenous immunoglobulin (IVIg) therapy in MPO-ANCA related polyangiitis with rapidly progressive glomerulonephritis in Japan. *Jpn. J. Infect. Dis.* 57: S17-18, 2004
- 20) Shiohara A, Hoshino A, Hanaki K, Suzuki K, and Yamamoto K. On the cyto-toxicity caused by quantum dots. *Microbiol.Immunol.*48:669-676, 2004.
- 21) Ito, M., Nagata, N., Yumoto, F., Yamagoe, S., Suzuki, K., Adachi, K. and Tanokura, M.: ^1H , ^{13}C , ^{15}N resonance assignments of the cytokine LECT2. *Journal of Biomolecular NMR* 29:543-544, 2004.
- 22) T. Oharaseki, Y. Kameoka, F. Kura, A.S. Persad, K. Suzuki, S. Naoe : Susceptibility loci to coronary arteritis in animal model of Kawasaki disease induced with *Candida albicans*-derived substances. *Microbiol.Immunol.* in press.
- 23) 鈴木和男「バイオイメージングが切り開く新たな診断・治療評価技術」医学のあゆみ 210巻 171
- 24) 長尾朋和、鈴木和男「血管炎初期反応のイメージング」医学のあゆみ 210巻 196-199
- 25) 長尾朋和、村山 研、越尾 修、大野尚仁、三浦典子、高橋 啓、馬淵綾子、南谷晴之、鈴木和男 腎臓血管傷害のイメージング *PharmaMedica* 22: 185-189, 2004 (医療薬学雑誌)

川西 徹

- 26) T. Suzuki, T. Nishimaki-Mogami, H. Kawai, T. Kobayashi, Y. Shinozaki, Y. Sato, T. Hashimoto, Y. Asakawa, K. Inoue, Y. Ohno, T. Hayakawa, and T. Kawanishi, Screening of novel nuclear receptor agonists by a convenient reporter gene assay system using GFP derivatives, *Phytomedicine* (in press)
- 27) H. Tanaka, C. Komikado, H. Shimada, K. Takeda, I. Namekata, T. Kawanishi, K. Shigenobu: The R(-)-Enantiomer of Efonidipine Blocks T-type but Not L-type Calcium Current in Guinea-Pig Ventricular Myocardium, *J Pharmacol. Sci.*, (in press)
- 28) H. Kawai, T. Suzuki, T. Kobayashi, H. Sakurai, H. Ohata, K. Honda, K. Momose, I. Namekata, Hikaru Tanaka, K. Shigenobu, R. Nakamura, T. Hayakawa, and T. Kawanishi: Simultaneous real-time detection of initiator and effector-caspase activation by double FRET analysis. *J. Pharmacol.Sci.* (in press)
- 29) T. Kobayashi, H. Kawai, T. Suzuki, T. Kawanishi and T. Hayakawa: Improved sensitivity of insulin in MALDI-TOF MS by premixing matrix CHCA with transferrin. *Rapid. Com. In Mass Spec.*, 18, 1156-1160 (2004)
- 30) H. Kawai, T. Suzuki, T. Kobayashi, H. Mizuguchi, T. Hayakawa, T. Kawanishi. Simultaneous imaging of initiator / effector caspase activity and mitochondrial membrane potential during cell death in living HeLa cells. *Biochim. Biophys. Acta*, 1693, 101-110 (2004)
- 31) T. Hashimoto, H. Ohata, and K. Momose (2004) Itch-scratch response induced by lysophosphatidic acid in mice. *Pararmacology* 72, 51-56.
- 32) 大幡久之、新岡丈治、金明淑、安藤さなえ、山本雅幸、百瀬和享 (2004) メカノセンシタイザーとしてのリゾホスファチジン酸の 役割、日本薬理学雑誌、124, 329-335.
- 33) 川西 徹、河合 洋 : 細胞傷害機構のイメージング、実験医学 22, 428-429 (2004)
- 新井孝夫
- 34) Maruyama, K., Ohuchi, T., Yoshida, K., Shibata, Y., Sugawara F. and Arai, T. (2004) Protective properties of neoechinulin A against SIN-1-induced neuronal cell death. *J. Biochem. (Tokyo)* 136: 81-87.
- 35) 新井孝夫 (2004) モノクローナル抗体をもちいたポリグルタミン酸化チューブリンの神経細胞内局在、実験医学、22: 1876-1877.
- 36) Okada, Y., Suzuki, A., Takagi S., Hirai, H., Saitoh R., Adachi, A., Ueki M., Fujii T. and Arai, T. Polyglutamylation of tubulin during differentiation of neural precursor cells. *Bioimages* (in press)
- 関塚永一
- 37) Hirose Y., Sekizuka E., Nakadate H., Ozawa T., Minamitani H., Oshio C., Ishii H. : Role of oxidative stress in interaction between endothelial cells and platelets in diabetes, *Organ Microcirculation - A Gateway to Diagnostic and Therapeutic Interventions* , pp.239-241, ed. by H.Ishii, M.Suematsu, K.Tanishita, H.Suzuki, Springer-Verlag Tokyo, 2005.
- 38) Hirose Y., Nakadate H., Gokan H., Minamitani H., Sekizuka E., Oshio C., Izumida T., Sakamoto N., Shimozawa M., Yoshikawa T. : Enhanced platelet aggregability in diabetic patients established by laser light scattering method, *Microcirculation Annual*, 20, pp.49-50, 2004.
- 39) Nakadate H., Sekizuka E., Oshio C., Hirose Y., Gokan H., Minamitani H. : The effect of shear stress on the accelerated

adhesion of diabetic platelets, *Microcirculation Annual*, 20, pp.51-52, 2004.

- 40) Ishikawa M., Sekizuka E., Zhang J.H., Nanda A., Granger D.N. : Platelet and leukocyte adhesion in the cerebral microvasculature, *Microcirculation Annual*, 20, pp.63-67, 2004.
- 41) Terao S., Sekizuka E., Ishikawa M., Yamaguchi N., Minamitani H., Kawase T. : Color imaging of platelets and leukocytes labeled with different fluorescent material in brain pial vessels of C57BL/6 mouse, *Microcirculation Annual*, 20, pp.99-100, 2004.
- 42) Tsukada K., Sekizuka E., Oshio C., Tsujioka K., Minamitani H. : Red blood cell velocity and oxygen tension measurement in cerebral microvessels by double wavelength photoexcitation, *J.Appl.Physiol.*, 96, pp1561-1568, 2004.

眞島利和

- 43) Majima T. : Soft X-ray imaging of living cells in water flash contact soft X-ray microscope, *Trends in Analytical Chemistry*, 23, 520-525 (2004)
- 44) 眞島利和、雨宮邦招 : 密着型フラッシュ軟X線顕微鏡、*Radioisotopes*, 53, 245-256 (2004)

船津高志

- 45) Zhang, G., T. Tanii, T. Zako, T. Funatsu, and I. Ohdomari. The immobilization of DNA on microstructured patterns fabricated by maskless lithography. *Sensors and Actuators B*. 97: 243-248, 2004.
- 46) Zhang, G.-J., T. Tanii, T. Funatsu, and I. Ohdomari. 2004. Patterning of DNA nanostructures on silicon surface by elec-

tron beam lithography of self-assembled monolayer. *Chem Comm*. 786-787.

- 47) Ueno T., H. Taguchi, H. Tadakuma, M. Yoshida and T. Funatsu. 2004. GroEL mediates protein folding with a two successive timer mechanism. *Molecular Cell*, 14: 423-434
- 48) Okochi, M., T. Nomura, T. Zako, R. Iizuka, H. Ueda, T. Funatsu, M. Leroux, and M. Yohda. Kinetics and binding sites for interaction of prefoldin with group II chaperonin: contiguous non-native substrate and chaperonin binding sites in archaeal prefoldin. *J. Biol. Chem.* 279: 31788-31795. 2004.
- 49) Tanii, T., T. Hosaka, T. Miyake, G. Zhang, T. Zako, T. Funatsu, and I. Ohdomari : Preferential immobilization of biomolecules on silicon microstructure array by means of electron beam lithography on organosilane self-assembled monolayer resist. *Appl.Surf.Sci.* 234: 102-106, 2004.
- 50) Zako T., T. Funatsu, M. Youhda : Kinetic analysis of interactions between archaeal prefoldin and chaperonin. *Recent Res. Develop. Biophys.* 3: 475-483 (2004)
- 51) 上野太郎、多田限尚史、船津高志 2004.5 「1 分子イメージングによるシャペロン研究」細胞における蛋白質の一生 (共立出版 小椋光、遠藤斗志也、森正敬、吉田賢右編) in press

中山俊憲

- 52) Koike, J., Wakao, H., Ishizuka, Y., Sato, T., Hamaoki, M., Seino, K., Koseki, H., Nakayama, T., and Taniguchi, M.: Bone marrow allograft rejection mediated by a novel murine NK receptor, NKG2I. *J. Exp. Med.* 199:137-143 (2004).

- 53) Watanabe, H., Shimizu, T., Nishihara, J., Abe, R., Nakayama, T., Taniguchi, M., Sabe, H., Ishibashi, T., and Shimizu, H.: Ultraviolet A-induced production of matrix metalloproteinase-1 is mediated by macrophage migration inhibitory factor (MIF) in human dermal fibroblasts. *J. Biol. Chem.* 279:1676-1683 (2004).
- 54) Hasegawa, A., Cheng, X., Kajino, K., Berezov, A., Murata, K., Nakayama, T., Yagita, H., Murali, R., and Greene, M. I.: Fas disabling small exocyclic peptide mimetics limit apoptosis by an unexpected mechanism. *Proc. Natl. Acad. Sci. USA* 101:6599-6604 (2004).
- 55) Kobayashi, S., Kaneko, Y., Seino, K., Yamada, Y., Motohashi, S., Koike, J., Sugaya, K., Kuriyama, T., Asano, S., Tsuda, T., Wakao, H., Harada, M., Kojo, S., Nakayama, T., and Taniguchi, M.: Impaired IFN- γ production of V α 24 NKT cells in non-remitting sarcoidosis. *Int. Immunol.* 16:215-222 (2004).
- 56) Harada, M., Seino, K., Wakao, H., Sakata, S., Ishizuka, Y., Ito, T., Kojo, S., Nakayama, T., and Taniguchi, M.: Down-regulation of the invariant V α 14 antigen receptor in NKT cells upon activation. *Int. Immunol.* 16:241-247 (2004).
- 57) Hiroshima, K., Iyoda, A., Shibuya, K., Haga, Y., Toyozaki, T., Iizasa, T., Nakayama, T., Fujisawa, T., and Ohwada, H.: Genetic alterations in an early-stage pulmonary large cell neuroendocrine carcinoma. *Cancer* 100:1190-1198 (2004).
- 58) Kondo, N., Ishii, Y., Son, A., Sakakura-Nishiyama, J., Kwon, Y.-W., Tanito, M., Nishinaka, Y., Matsuo, Y., Nakayama, T., Taniguchi, M., and Yodoi, J.: Cysteine-dependent immune regulation by TRX and MIF/GIF family proteins. *Immunol. Letters* 92:143-147 (2004).
- 59) Inami, M., Yamashita, M., Tenda, Y., Hasegawa, A., Kimura, M., Hashimoto, K., Seki, N., Taniguchi, M., and Nakayama, T.: CD28 costimulation controls histone hyperacetylation of the IL-5 gene locus in developing Th2 cells. *J. Biol. Chem.* 279:23123-23133 (2004).
- 60) Yamashita, M., Ukai-Tadenuma, M., Miyamoto, T., Sugaya, K., Hosokawa, H., Hasegawa, A., Kimura, M., Taniguchi, M., DeGregori, J., and Nakayama, T.: Essential role of GATA3 for the maintenance of Type 2 helper T (Th2) cytokine production and chromatin remodeling at the Th2 cytokine gene loci. *J. Biol. Chem.* 279:26983-26990 (2004).
- 61) Shimizu, E., Koike, J., Wakao, H., Seino, K., Koseki, H., Kakiuchi, T., Nakayama, T., and Taniguchi, M.: Role of a NK receptor, KLRE-1, in bone marrow allograft rejection: analysis with KLRE-1 deficient mice. *Blood* 104:781-783 (2004).
- 62) Yamashita, M., Shinnakasu, R., Nigo, Y., Kimura, M., Hasegawa, A., Taniguchi, M., Nakayama, T.: Interleukin (IL)-4-independent maintenance of histone modification of the IL-4 gene loci in memory Th2 cells. *J. Biol. Chem.* 279:39454-39464 (2004).
- 63) Nakai, Y., Iwabuchi, K., Fujii, S., Ishimori, N., Dashtsoodol, N., Watano, K., Mishima, T., Iwabuchi, C., Tanaka, S., Bezbradica, J. S., Nakayama, T., Taniguchi, M., Miyake, S., Yamamura, T., Kitabatake, A., Joyce, S., Van Kaer, L., and Onoe, K.: Natural killer T cells accelerate

- atherogenesis in mice. Short title: NKT cells and atherosclerosis in mice. *Blood* 104:2051-2059 (2004).
- 64) Diao, H., Kon, S., Iwabuchi, K., Kimura, C., Morimoto, J., Ito, D., Segawa, T., Maeda, M., Hamuro, J., Nakayama, T., Taniguchi, M., Yagita, H., Van Kaer, L., Onoe, K., Denhardt, D., Rittling, S., and Uede, T.: Osteopontin as a mediator of NKT cell function in T cell-mediated liver diseases. *Immunity* 21:539-550 (2004).
- 65) Katsumoto, T., Kimura, M., Yamashita, M., Hosokawa, H., Hashimoto, K., Hasegawa, A., Omori, M., Miyamoto, T., Taniguchi, M., and Nakayama, T.: STAT6-dependent differentiation and production of IL-5 and IL-13 in murine NK2 cells. *J. Immunol.* 173:4967-4975 (2004).
- 66) Kimura, M., Hosokawa, H., Yamashita, M., Watarai, H., Hasegawa, A., Iwamura, C., Taniguchi, M., Takagi, T., Ishii, S., and Nakayama, T.: Regulation of Th2 cell differentiation by murine Schnurri-2. *J. Exp. Med. in press* (2005)
- 67) Ishikawa, A., Motohashi, S., Ishikawa, E., Fuchida, H., Higashino, K., Otsuji, M., Iizasa, T., Nakayama, T., Taniguchi, M., and Fujisawa, T.: A phase I study of galactosylceramide (KRN7000)-pulsed dendritic cells in patients with advanced and recurrent non-small cell lung cancer. *Clin. Can. Res. in press* (2005).
- 68) 山下政克、中山俊憲 BCGによるI型アレルギー-疾患治療の可能性 医学のあゆみ別冊 208(3) : 171-176 (2004・1)
- 69) 中山俊憲、清野宏、笹月健彦 編集 免疫研究のフロンティア- : 分子、細胞から個体レベルでの免疫システムの解明とそれが導く新しい臨床応用 実験医学増刊 (2004・4)
- 70) 中山俊憲 システムとしての免疫系—分子、細胞、場のダイナミックな統合とシステムの破綻としての免疫疾患 実験医学 増刊 22(5) : 16-20 (2004・4)
- 71) 山下政克、中山俊憲 Th2/Tc2細胞分化に伴うTh2サイトカイン遺伝子(IL-4, IL-5, IL-13)座のクロマチンリモデリング 実験医学 増刊 22(5) : 64-71 (2004)
- 72) 本橋新一郎、中山俊憲 NKT細胞免疫系活性化によるがん免疫療法 Medical Science Digest 30(4) : 29-33 (2004・4)
- 73) 中山俊憲 T細胞の分化成熟 キーワードで理解する免疫学イラストマップ 鳥山一編集 羊土社 (2004・4)
- 74) 木村元子、中山俊憲 アレルギー-疾患とヘルパーT細胞の機能 アレルギー・免疫別冊 11(4) : 32-39 (2004・4)
- 75) 山下政克、中山俊憲 クロマチン修飾を介した免疫反応の制御 : Th2細胞分化をモデルに 細胞工学 23(10) : 1166-1170 (2004)
- 76) 中山俊憲 Th1/Th2細胞免疫システムの形成と維持-Th2依存性の気道炎症制御機構とTh2サイトカイン遺伝子(IL-4, IL-5, IL-13)座のクロマチンリモデリング-耳鼻免疫アレルギー 22(3) : 1-8 (2004)
- 77) 山下政克、中山俊憲 Th2細胞分化に伴うTh2サイトカイン遺伝子座のクロマチンリモデリング Molecular Medicine 臨時増刊号 免疫 2005 41 : 11-19 (2004・12)
- 78) 中山俊憲、橋本香保子 内在性リガンド認識とIL-12による自然免疫系と獲得免疫系の橋渡し-NKT細胞活性化の新しい分子機構 Annual Review 免疫 2005 中外医学社 88-92 (2004・12)
- 79) 中山俊憲 アレルギー-発症を制御するTh2細胞の分化・機能維持に関する研究 アレルギー 33 : 48-51 (2004)

- 80) Kudo, N., Yasumasu, S., Iuchi, I. and Tanokura, M. (2004) Crystallization and preliminary X-ray analysis of HCE-1, a hatching enzyme of Medaka fish, *Oryzias latipes*. *Acta Crystal. D60*, 725-726.
- 81) Kim, Y.-T., Kurita, R., Kojima, M., Nishii, W., Tanokura, M., Muramatsu, T., Ito, H. and Takahashi, K. (2004) Identification of arginine residues important for the activity of *Escherichia coli* signal peptidase I. *Biol. Chem.* 385, 381-388.
- 82) Nara, M., Yumoto, F., Nagata, K., Tanokura, M., Kagi, H., Ojima, T. and Nishita, K. (2004) Fourier transform infrared spectroscopic study on the binding of Mg²⁺ to a mutant Akazara scallop troponin C (E142Q). *Biopolymers* 74, 77-81.
- 83) Miyazono, K., Kudo, N. and Tanokura, M. (2004) Cloning, purification, crystallization, and preliminary crystallographic analysis of acylphosphatase from *Pyrococcus horikoshii* OT3. *Acta Crystal. D60*, 1135-1136.
- 84) Kamo, M., Kudo, N., Lee, W. C., Motohshima, H. and Tanokura, M. (2004) Crystallization and preliminary X-ray crystallographic analysis of peptide deformylase from *Thermus thermophilus* HB8. *Acta Crystal. D60*, 1299-1300.
- 85) Kato, Y., Nagata, K., Takahashi, M., Lian, L., Herrero, J., Sudol, M. and Tanokura, M. (2004) Common mechanism of ligand recognition by Group-II/III WW domains - Redefining their functional classification. *J. Biol. Chem.* 279, 31833-31841.
- 86) Bekker, E. G., Creagh, A. L., Sanaie, N., Yumoto, F., Y. Lau, G. H., Tanokura, M., Haynes, C. A. and Murphy, M. E. P. (2004) Specificity of the synergistic anion for iron-binding by ferric binding protein from *Neisseria gonorrhoeae*. *Biochemistry* 43, 9195-9203.
- 87) Hu, F., Furihata, K., Ito-Ishida, M., Kaminogawa, S. and Tanokura, M. (2004) Nondestructive observation of bovine milk by NMR spectroscopy: Analysis of existing states of compounds and detection of new compounds. *J. Agr. Food Chem.* 52, 4969-4974.
- 88) Nagata, K., Tsutsui, S., Lee, W. C., Ito, K., Kamo, M., Inoue, Y. and Tanokura, M. (2004) Crystallization and preliminary X-ray analysis of carboxypeptidase 1 from *Thermus thermophilus*. *Acta Crystal. D60*, 1445-1446.
- 89) Kato, Y., Akai, A., Suzuki, R., Hosokawa, H., Ninomiya, H., Masaki, T., Nagata, K. and Tanokura, M. (2004) ¹H, ¹³C and ¹⁵N assignments of the tandem WW domains of human MAGI-1/BAP-1. *J. Biomol. NMR* 29, 539-540.
- 90) Ito, M., Nagata, N., Yumoto, F., Yamagoe, S., Suzuki, K., Adachi, K. and Tanokura, M. (2004) ¹H, ¹³C, ¹⁵N resonance assignments of the cytokine LECT2. *J. Biomol. NMR* 29, 543-544.
- 91) Lee, W. C., Ohshiro, T., Matsubara, T., Izumi, Y. and Tanokura, M. (2004) Crystallization and preliminary x-ray analyses of desulfurization enzyme DszB and its C27S mutant complexed with biphenyl-2-sulfinic acid. *Acta Crystal. D60*, 1636-1638.
- 92) Oda, Y., Muramatsu, T., Yumoto, F., Ito, M. and Tanokura, M. (2004) Backbone ¹H, ¹³C and ¹⁵N resonance assignment of the

- N-terminal domain of human eRF1. *J. Biomol. NMR* 30, 109-110.
- 93) Furusawa, Y., Nagarajan, V., Tanokura, M., Masai, E., Fukuda, M. and Senda, T. (2004) Crystal structure of the terminal oxygenase component of biphenyl dioxygenase derived from *Rhodococcus* sp. strain RHA1. *J. Mol. Biol.* 342, 1041-1052.
- 94) Sasaki, H., Nakagawa, A., Muramatsu, T., Suganuma, M., Sawano, Y., Kojima, M., Kubota, K., Takahashi, K. and Tanokura, M. (2004) The three-dimensional structure of aspergilloglutamic peptidase from *Aspergillus niger*. *Proc. Japan Acad.* 80B, 435-438.
- 95) Miyazono, K., Sawano, Y. and Tanokura, M. (2004) Crystal structure of acylphosphatase from hyperthermophilic archaeon *Pyrococcus horikoshii* OT3. *Proc. Japan Acad.* 80B, 439-442.
- 96) Pan, D. and Tanokura, M. (2004) Purification and characterization of an aminopeptidase from *Lactobacillus helveticus* JCM 1004. *Food Chem.* 88, 511-516.
- 97) Suzuki, T., Someya, S., Hu, F. and Tanokura, M. (2004) Comparative study of catechin composition in five Japanese persimmons (*Diospyros kaki*). *Food Chem.*, in press.
- 98) 永田宏次、田之倉優 (2004) タンパク質の発見. ゲノミクス・プロテオミクスの新展開—生物情報の解析と応用— (今中忠行 監修)、534-538、エヌ・ティー・エス、東京.
- 99) 加藤有介、田之倉優 (2004) リン酸化とタンパク質立体構造. *Molecular Medicine*, 41, 522-529.
- 100) Kato, Y., Ito, M., Kawai, K., Nagata, K., Lee, W. C. and Tanokura, M. (2004) Determinants of ligand specificity in groups I and IV WW domains. *Animal Cell Technology: Basic and Applied Aspects* (Yagasaki, K., Miura, Y., Hattori, M. and Nomura Y., eds.) 13, 31-35 Kluwer Academic Publishers, Dordrecht, The Netherlands.
- 101) 田之倉優、李愚哲 (2004) タンパク質の結晶化とX線構造解析—ニトロ/フラビン還元酵素と脱硫酵素を例として. 日本農芸化学会誌 78, 565-567.
- 102) 加茂昌之、田之倉優 (2004) タンパク質の形をみた立役者たち. X線結晶構造解析による高精度立体構造解析. 化学と教育 52, 463-466.
- 103) 岩崎わかな、田之倉優 (2004) EF-hand蛋白質CBP40のカルシウム結合および非結合状態の立体構造. 日本結晶学会誌 46, 359-363.
- 村松知成
- 104) Y.T.Kim, R.Kurita, M. Kojima, W. Nishii, M. Tanokura, T. Muramatsu, H. Ito, K. Takahashi : Identification of arginine residues important for the activity of *Escherichia coli* signal peptidase I, *Biol. Chem.* 385, 381-388 (2004)
- 105) T. Muramatsu, Y. Oda, F. Yumoto, M. Ito, M.Tanokura : Analysis of dynamic structure of eukaryotic release factor 1 (eRF1), *Bioimages* 12, 37-37 (2004)
- 106) Y.Oda, T. Muramatsu, F. Yumoto, M. Ito, M.Tanokura : Backbone ¹H, ¹³C and ¹⁵N resonance assignment of the N-terminal domain of human eRF1, *J. Biomol. NMR* 30, 109-110 (2004)
- 107) H.Sasaki, A.Nakagawa, T.Muramatsu, M. Suganuma, Y.Sawano, M.Kojima, K. Kubota, K.Takahashi, M.Tanokura : The three-dimensional structure of aspergil-

loglutamic peptidase from *Aspergillus niger*", *Proc. Japan Acad.* 80(B), 435-438 (2004)

松村英夫

108) H.Matsumura, V.Neytchev, N.Terezova, and I.Tsoneva, Ca ion permeation through liposome membranes with heat generation by square-wave electric field, *Colloids and Surfaces B*, 33 (2004) 243-249.

109) K.Furusawa and H.Matsumura, Colloidal Nanoparticles: Electrokinetic Characterization, *Dekker Encyclopedia of Nanoscience and Nanotechnology*, (2004) 773-786.

110) H.Matsumura, K.Kawasaki, N.Okumura, M.Kambara, W.Norde, Characterization of the surface of protein-coated dental materials by wetting and streaming potential measurements, *J. B. M.R.*, submitted.

山本健二

111) Akiyoshi Hoshino, Kouki Fujioka, Taisuke Oku, Masakazu Suga, Yu F. Sasaki, Toshihiro Ohta, Masato Yasuhara, Kazuo Suzuki, and Kenji Yamamoto; Physico-chemical Properties and Cellular Toxicity of Nanocrystal Quantum Dots Depend on Their Surface Modification, *Nano Letters* (in press)

112) Akiyoshi Hoshino, Kouki Fujioka, Taisuke Oku, Masakazu Suga, Yukio Yamaguchi, Kazuo Suzuki, Masato Yasuhara, and Yamamoto Kenji, Quantum Dots Targeted to the Assigned Organelle in Living Cells. *Microbiol. Immunol* (in press)

113) Akiyoshi Hoshino, Ken-ichi Hanaki,

Kazuo Suzuki, and Kenji Yamamoto; Application of T-lymphoma labeled with fluorescent quantum dots to cell tracing markers in mouse body, *Biochemical and Biophysical Research Communications*, 314 (2004) 46-53

114) Amane Shiohara, Akiyoshi Hoshino, Ken-ichi Hanaki, Kazuo Suzuki, and Kenji Yamamoto; On the Cyto-Toxicity Caused by Quantum Dots, *Microbiol. Immunol.*,48(9)(2004), 669-675

115) Kenji Yamamoto and Noriyoshi Manabe, Randomness and Organization of the Bio-Nano-Particles into the Functional Structure. Applied Mechanics, Science Council of Japan, *Theoretical and Applied Mechanics*, Japan (Vol.53), 111-114.

116) A. Aringazin A.K., Dahnovsky Yu., Krevchik V.D., Semenov M.B., Veremyev V.A., Ovchinnikov A. A., Yamamoto K. : Two-dimensional tunnel bifurcations with dissipation, *Hadronic Journal*. · 2004, – v. 27, N 2. – P. 115-150

鈴木弘美

117) Himeda T, Ohara Y, Asakura K, Kontani Y, Murakami M, Suzuki H, Sawada M. A lentiviral expression system demonstrates that L(*) protein of Theiler's murine encephalomyelitis virus (TMEV) is essential for virus growth in a murine macrophage-like cell line. (2005) *Virus Res.* Mar;108(1-2):23-28.

118) Imamura K, Hishikawa N, Ono K, Suzuki H, Sawada M, Nagatsu T, Yoshida M, Hashizume Y. Cytokine production of activated microglia and decrease in neurotrophic factors of neurons in the hippocampus of Lewy body disease brains. *Acta*

- Neuropathol* (Berl). (2004)
- 119) 鈴木弘美, 澤田 誠: 脳機能障害とミクログリアのかかわりおよび細胞を用いた標的化治療・診断 医学のあゆみ No.210(3); 187-190, 2004
- 塚田孝祐
- 120) Tsukada K., Sekizuka E., Oshio C., Tsujioka K., Minamitani H.: Red blood cell velocity and oxygen tension measurement in cerebral microvessels by double-wavelength photoexcitation, *Journal of Applied Physiology*, 96(4), 1561-8, 2004.
- 121) 南谷晴之, 塚田孝祐: 臓器血流と酸素代謝の光・イメージング解析, 医学のあゆみ, 210(3), pp. 200-204, 2004
- 122) 塚田孝祐: 低酸素のバイオイメージング, 医学のあゆみ「レドックス」, 印刷中
- 朽津和幸
- 123) Higashi, K., Takasawa, R., Yoshimori, A., Goh, T., Tanuma, S., Kuchitsu, K. (2005) Identification of a novel gene family, paralogs of an inhibitor of apoptosis proteins present in plants, fungi, and animals. *Apoptosis in press*.
- 124) Fukuta, N., Miyasaka, M., Saitou, R., Kuchitsu, K., Nakayama, M. (2005) The relationship between various image of acyanic petal of *Eustoma gradiflorum* under UV light and flavonoid content. *Hort. Res. in press*.
- 125) Kadota, Y., Watanabe, T., Fujii, S., Maeda, Y., Ohno, R., Higashi, K., Sano, T., Muto, S., Hasezawa, S., Kuchitsu, K. (2005) Cell-cycle dependence of elicitor-induced signal transduction in tobacco BY-2 cells. *Plant Cell Physiol.* 46(1):156-165 2005年1月
- 126) Karita, E., Yamakawa, H., Mitsuhashi, I., Kuchitsu, K., Ohashi, Y. (2004) Three types of tobacco calmodulins characteristically activate plant NAD kinase at different Ca^{2+} concentration and pHs. *Plant Cell Physiol.* 45(11): 1371-1379. 2004年11月
- 127) Kadota, Y., Watanabe, T., Fujii, S., Higashi, K., Sano, T., Nagata, T., Hasezawa, S., Kuchitsu, K. (2004) Crosstalk between elicitor-induced cell death and cell cycle regulation in tobacco BY-2 cells. *The Plant J.* 40(10):131-142. 2004年9月
- 128) Kurusu, T., Sakurai, S., Miyao, A., Hirochika, H., Kuchitsu, K. (2004) Identification of a putative voltage-gated Ca^{2+} -permeable channel (OsTPC1) involved in Ca^{2+} influx and regulation of growth and development in rice. *Plant Cell Physiol.* 45(6): 693-702
- 129) Kadota, Y., Furuichi, T., Ogasawara, Y., Goh, T., Higashi, K., Muto, S., Kuchitsu, K. (2004) Identification of putative voltage-dependent Ca^{2+} -permeable channels involved in cryptogein-induced Ca^{2+} transients and defense responses in tobacco BY-2 cells. *Biochem. Biophys. Res. Comm.* 317:823-830
- 130) Kadota, Y., Goh, T., Tomatsu, H., Tamauchi, R., Higashi, K., Muto, S. and Kuchitsu, K. (2004) Cryptogein-induced initial events in tobacco BY-2 cells: pharmacological characterization of molecular relationship among cytosolic Ca^{2+} transients, anion efflux and production of reactive oxygen species. *Plant Cell Physiol.* 45(2):160-170

- 131) Kuriyama, I., Asano, N., Kato, I., Oshige, M., Sugino, A., Kadota, Y., Kuchitsu, K., Yoshida, H., Sakaguchi, K. and Mizushina, Y. (2004) L-homoserylamine ethanol, a novel dipeptide alcohol inhibitor of eukaryotic DNA polymerase from a plant cultured cells, *Nicotina tabacum* L. *Bioorg. Med. Chem.* 12: 957-962
- 132) Kadota, Y., Goh, T., Tomatsu, H., Tamauchi, R., Higashi, K., Muto, S. and Kuchitsu, K. (2004) Cryptogein-induced initial events in tobacco BY-2 cells: pharmacological characterization of molecular relationship among cytosolic Ca²⁺ transients, anion efflux and production of reactive oxygen species. *Plant Cell Physiol.* 45(2): 160-170
- 133) Kuriyama, I., Asano, N., Kato, I., Oshige, M., Sugino, A., Kadota, K., Kuchitsu, K., Yoshida, H., Sakaguchi, K. and Mizushina, Y. (2004) L-homoserylamine ethanol, a novel dipeptide alcohol inhibitor of eukaryotic DNA polymerase from a plant cultured cells, *Nicotina tabacum* L. *Bioorg. Med. Chem.* 12: 957-962
- 134) Kurusu, K., Sakurai, Y., Miyao, A., Hirochika, H. and Kuchitsu, K. (2004) Identification of a putative voltage-gated Ca²⁺-permeable channel (OsTPC1) involved in Ca²⁺ influx and regulation of growth and development in rice. *Plant Cell Physiol.* *in press.*
- 135) Kadota, Y., Furuichi, T., Ogasawara, Y., Goh, T., Higashi, K., Muto, S. and Kuchitsu, K. (2004) Identification of putative voltage dependent Ca²⁺-permeable channels involved in cryptogein-induced Ca²⁺ transients and defense responses in tobacco BY-2 Cells. *Biophys. Biochem. Res. Comm. in press.*
- 136) 来須孝光、朽津和幸 (2004) アブシジン酸のシグナル伝達とイオンチャネル 新版 植物ホルモンのシグナル伝達 (植物細胞工学シリーズ 20 号) 秀潤社 *in press.*
- 137) 朽津 和幸 (2004) 植物がストレスを感じる仕組みを「見る」ーホルモン受容部位や情報の伝達を可視化するバイオイメージング技術の開発ー、飯 哲夫 編「バイオデザインー生物の形と機能ー」 p. 60-62 NIAS アグリバイオサイエンス・シリーズ No. 1 独立行政法人農業生物資源研究所 (ISBN 4-931511-12-0)
- 138) 来須孝光、朽津和幸 (2004) アブシジン酸情報伝達とイオンチャネル. *細胞工学別冊 植物細胞工学シリーズ 20 「新版 植物ホルモンのシグナル伝達」*秀潤社
- 平成 15 年度
南谷晴之
- 139) Minamitani H., Tsukada K., Sekizuka E., Oshio C. : Optical bioimaging: From living tissue to a single molecule: Imaging and functional analysis of blood flow in organic microcirculation, *J. Pharmacol Sci.*, 93, pp227-233, 2003
- 140) Minamitani H. : Functional analysis of microcirculation disorder by using nano-molecular probes and bioimaging technique, *Microcirculation Annual*, 19, pp27-28, 2003.
- 141) Nagao T., Takahashi M., Matsuzaki K., Minamitani H. : Application of bioimaging techniques to mechanistic studies on photodynamic therapy, *Bioimages*, 11(2), pp53-60, 2003.
- 142) 塚田孝祐, 緒方嘉貴, 辻岡克彦, 南谷晴之 : 人工酸素運搬体 Neo Red Cell 交換輸血時の脳微小循環動態および酸素分圧計測, 脳

循環代謝, 15(4), pp196-197, 2003.

143) Iijima A., Haida M., Ishikawa N., Ueno A., Minamitani H., Shinohara Y. : Re-evaluation of tropicamide in the pupillary response test for Alzheimer's disease, *Neurobiol. Aging*, 24, pp789-796, 2003.

144) Nagao T., Takahashi M., Matsuzaki K., Minamitani H.: Application of bioimaging techniques to mechanistic studies on photodynamic therapy, *Bioimages*, 11(29), pp53-60, 2003.

145) Minamitani H., Tsukada K., Sekizuka E. and Oshio C.: Imaging and functional analysis of blood flow in organic microcirculation, *Journal of Pharmacological Science*, 93(3), pp.227-233, 2003.

146) Tsukada K., Sakai S., Hase K. and Minamitani H.: Development of catheter-type optical oxygen sensor and applications to bioinstrumentation, *Biosensors and Bioelectronics*, 18(12), pp 1439-1445, 2003.

鈴木和男

147) Matsuoka, T., Kato, K., Hoshino, N., Matsunaga, T., Saito, N., Suzuki, K., Yamada, M., Shimojo, N., Kono, Y., Arai, T. and Suzuki, K.: Disorganization of Actin Polymerization in Neutrophils of a Patient with Leukocyte Adhesion Dysfunction: A Bioimaging Analysis using a Polarized Microscopic System LC-Pol Scope. *Bioimages* 11, 105-114, 2003.

148) Ichimori, K., Fukuyama, N., Nakazawa, H., Aratani, Y., Koyama, H., Takizawa, S., Kameoka, Y., Ishida-Okawara, A., Kohi, F. and Suzuki, K.: Myeloperoxidase has di-

rectly-opposed effects on nitration reaction · Study on myeloperoxidase-deficient patient and myeloperoxidase-knockout mice. *Free Radical Research* 37, 481-489, 2003.

149) Murata, K., Inami, M., Kubo, S., Kimura, M., Yamashita, M., Hosokawa, H., Nagao, T., Suzuki, K., Hashimoto, K., Shinkai, H., Koseki, H., Taniguchi, M., Ziegler, S.F., H. and Nakayama, T.: CD69-null mice protected from arthritis induced with anti-type-II collagen antibodies. *Int. Immunol.* 15, 987-992, 2003.

150) Nunoi, H., Kohi, F., Kajiwara, H. and Suzuki, K.: Prevalence of Inherited Myeloperoxidase Deficiency in Japan. *Microbiol Immunol.* 47, 527-531, 2003.

151) Sakamoto, M., Hasegawa, A., Sugaya K., Hashimoto, K., Kimura, M., Yamashita, M., Suzuki, K. and Nakayama, T.: Distinct calcium response induced by T-cell antigen receptor stimulation in thymocytes and mature T cells. *Bioimages* 11, 1-8, 2003.

152) Suzuki, K.: Neutrophil functions of patients with MPO-ANCA-related vasculitis, *Internal Med.* 42, 552-553, 2003.

153) Kamei, K., Sano, A., Kikuchi, K., Makimura, K., Niimi, K., Suzuki, K., Uehara, Y., Okabe N., Nishimura, K., Miyaji, M.: The trend of imported myucoses in Japan. *J. Infect. Chemother.* 9, 16-20, 2003.

154) Mie, Ito., Oda, Y., Yamagoe, S., Suzuki K., Tanokura, M.: Expression, oxidative refolding and characterization of six-histidine-tagged recombinant human LECT2, a 16 kDa chemotactic protein with three disulfide bonds. *Protein Ex-*

- pression Purif.* 27, 272-278, 2003.
- 155) 鈴木和男: 自動計数装置が捉えた新たな発見白血球自動分類装置と好中球ペルオキシダーゼ異常症の検出]
- 156) 鈴木和男: 血管炎をめぐる世界の動き. 医学のあゆみ 206, 123-126, 2003.
- 157) 鈴木和男: 血管炎発症機構の解析研究—活性化好中球の関与. 医学のあゆみ 206, 133-139, 2003.
- 158) 鈴木和男: ANCA 関連血管炎の発症機序—活性化好中球の関与—. リウマチ科 29, 228-236, 2003.
- 159) 大川原明子、鈴木和男、猪原登志子、小野孝彦、武曾恵理、雑賀 寛、根本久一: 半月体形成性腎炎モデルとしての SCG/Kj マウスの好中球機能. *Pharma. Medica.* 21, 157-161, 2003.
- 川西 徹
- 160) H. Tanaka, T. Kawanishi, K. Shigenobu: Atrio-ventricular difference in myocardial excitation-contraction coupling -- influence of T-tubules and endocardial endothelium --, *Recent. Res. Devel. Physiol.*, 1, 253-262 (2003)
- 161) H. Tanaka, T. Kawanishi, K. Shigenobu, Optical Bioimaging: From Living tissue to a single molecule: atrio-Ventricular difference in myocardial excitation-contraction coupling – Sequential verses simultaneous activation of SR Ca²⁺ release units, *J. Pharmacol.Sci.*, 93, 248-252 (2003)
- 162) A. Ishii-watabe, E. Uchida, A. Iwata, R. Nagata, K. Satoh, K. Fan, M. Murata, H. Mizuguchi, N. Kawasaki, T. Kawanishi, T. Yamaguchi, T. Hayakawa, Detection of Replication-Competent Adenovirus Spiked into Recombinant Adenovirus Vector Products by Infectivity-PCR, *Mol. Therapy*, 8, 1009-1016 (2003)
- 163) H. Tanaka, K. Nishimaru, R. Makuta, W. Hirayama, T. Kawamura, T. Matsuda, Y. Tanaka, T. Kawanishi, and K. Shigenobu, Possible Involvement of prostaglandins F_{2α} and D₂ In acetylcholine-induced positive Inotropy In Isolated mouse left atria, *Pharmacology*, 67, 157-162 (2003)
- 164) T. Kobayashi, S. Niimi, T. Kawanishi, M. Fukuoka, and T. Hayakawa, Changes in peroxisomes proliferator-activated receptor g-regulated gene expression and inhibin/activin-follistatin system gene expression in rat testis ater an administration of di-n-butyl phthalate, *Toxicol. Lett.*, 138, 215-225 (2003)
- 165) Hashimoto, T., M. Yamashita, H. Ohata, and K. Momose (2003) Lysohosphatidic acid enhances *in vivo* infiltration and activation of guinea pig eosinophils and neutrophils via a Rho/Rho-associated protein kinase-mediated pathway. *J. Pharmacol. Sci.* 91 (1), 8-14.
- 166) Ohata, H, H. Yamada, T. Niioka, M. Yamamoto and K. Momose. (2003) Calcium imaging in blood vessel *in situ* employing two-photon excitation fluorescence microscopy. *J. Pharmacol. Sci.* 93, 242-247.
- 167) S. Niimi, T. Oshizawa, T. Yamaguchi, M. Harashima, T. Seki, T. Ariga, T. Kawanishi, T. Hayakawa, Specific expression of annexin III in rat-small-hepatocytes, *Biochem.Biophy. Res. Commm.* 300, 770-774 (2003)
- 168) 百瀬和享、松田武久、大池正宏、小原一男、Ismail Laher、杉浦清了、大幡久之、中

山貢一 (2003) メカニカルストレス応答による細胞機能制御 —創薬と再生臓器開発への応用—、日本薬理学雑誌、121(2),103-111

169) 小林 哲、新見伸吾、川西 徹、早川堯夫、肝臓における細胞外基質分解に関与する因子の mRNA レベルの変動に着目した化学物質の安全性評価法に関する研究、衛研報告 121, 109-110 (2003)

新井孝夫

170) Namekawa, S., Hamada, F., Sawado, T., Ishii, S., Nara, T., Ishizuka, T., Ohuchi, T., Arai, T., and Sakaguchi K: (2003) Dissociation of DNA polymerase α -primase complex during meiosis in *Coprinus cinereus*, *Eur. J. Biochem.*, 270, 2137-2146.

172) 大内敬、新井孝夫 (2003) リポソームを用いたモノクローナル抗体の生細胞導入法の開発とその応用、ナノバイオテクノロジーの最前線 (監修: 植田充美)、pp 258-265、シーエムシー出版

173) Toshiyuki Matsuoka Kaoru Kato, Nao Hoshino Tiichiro Matsunaga, Noriko Saito, Masahiro Yamada, Naoki Shimojo, Yoichi Kono, Takao Arai, and Kazuo Suzuki (2003) Disorganization of Actin Polymerization in Neutrophils of Patient with Leukocyte Adhesion Dysfunction: A Bioimaging Analysis System using a Polarized Microscopic System LC-Pol Scope, *Bioimages*, 11, 105-114.

関塚永一

174) Minamitani H., Tsukada K., Sekizuka E., Oshio C. : Optical bioimaging: From living tissue to a single molecule: Imaging and functional analysis of blood flow in

organic microcirculation, *J. Pharmacol Sci.*, 93, pp227-233, 2003

175) Morishita T., Kanazawa H., Sekizuka E., Ohara T., Miyazaki K., Nagata H., Ishii H. : Changes of hepatic microcirculation in cholestasis, *Microcirculation Annual*, 19, pp.61-62 (2003)

176) 関塚永一、大塩力、細田泰雄、宮崎耕司、石井裕正 : 胃潰瘍又は十二指腸潰瘍 DRG/PPS 対応 臨床検査のガイドライン 2003 (第五次案)、日本臨床検査医学会 「日常初期診療における臨床検査の使い方」小委員会および「日常診療における効率的な臨床検査の検討」研究班編 宇宙堂八木書店、東京、pp 52-57, 2003

177) 関塚永一、大塩力、細田泰雄、宮崎耕司、石井裕正 : 胃の悪性新生物 DRG/PPS 対応 臨床検査のガイドライン 2003 (第五次案)、日本臨床検査医学会 「日常初期診療における臨床検査の使い方」小委員会および「日常診療における効率的な臨床検査の検討」研究班編 宇宙堂八木書店、東京、pp58-63, 2003

178) 細田泰雄、関塚永一、宮崎耕司、長沼誠、井上詠、緒方晴彦、岩男泰、日比紀文、石井裕正 : 潰瘍性大腸炎 (手術なし) DRG/PPS 対応 臨床検査のガイドライン 2003 (第五次案)、日本臨床検査医学会 「日常初期診療における臨床検査の使い方」小委員会および「日常診療における効率的な臨床検査の検討」研究班編 宇宙堂八木書店、東京、pp64-67, 2003

179) 原田容治、井畑道夫、太田慎一、川本智章、桑山肇、関塚永一、長田宮誠、原澤茂、半田祐一、藤原研司、三浦総一郎、長峯川宏一、山中桓夫、長吉田武史 : 慢性膵炎を中心とした消化器疾患に対する「お腹日記」の有用性、*Pharma Medica*, 21(5), 153-162, 2003

180) 関塚永一、中楯浩康、広瀬耕徳、後閑治

彦、南谷晴之、大塩力：目で見る血液の流れー血液はさらさらと流れるだろうかー糖尿病における血管障害メカニズム、バイオイメージング 12 (3)、S3-S6、2003

眞島利和

- 181) Toshikazu Majima, Toshihisa Tomie, Hideaki Shimizu : Comparative Studies of X-ray Images and Fluorescence Images of the Same Specimens, *Journal de Physique IV104*, 157-160 (2003)
- 182) Kunio Furusawa, Hideo Matsumura, and Toshikazu Majima : Characterization of silica-coated hematite and application to the formation of composite particles including egg yolk PC liposomes, *Journal of Colloid and Interface Science*. 264, 95-100 (2003)
- 183) 眞島利和 : X線顕微鏡による生体系の観察, 現代化学 No.386. 51-55 (2003)
- 184) 眞島利和 : 軟X線顕微鏡による生きている細胞の高分解能イメージング、高分子学会、52(13)「バイオ・ナノテクノロジーによる応用展開」、3828-3829 (2003)
- 185) 眞島利和 : X線顕微鏡による細胞の機能イメージング、ナノバイオテクノロジーの最前線 (植田充美 監修) 407-413 (2003)

船津高志

- 186) Kanai, M., D. Uchida, S. Sugiura, Y. Shirasaki, J.S.Go, H. Nakanishi, T.Funatsu, and S. Shoji : PDMS microfluidics devices with PTFE passivated channels, *Micro Total Analysis System*, 2003
- 187) 上野太郎、多田隈尚志、船津高志 : 「シャペロン機能の 1 分子蛍光イメージング」センサマイクロマシーン準部門誌 123 巻 4

号 pp.107-111, 2003

- 188) 多田隈尚志 船津高志 : 「5 章 タンパク質を計測する 4 タンパク質の相互作用と機能」ナノテクノロジーハンドブック (□〜□) □編バイオ・化学へ使う、pp.94~99 (オーム社:ナノテクノロジーハンドブック編修委員会編) 2) "蛋白質を計測する 蛋白質の相互作用と機能", 2003
- 189) 船津高志 : 単一分子計測とバイオフォトリクス」応用物理 第 72 巻 第 6 号 pp.727-730
- 190) 多田隈尚志、船津高志、谷時雄 : 「mRNA 核外輸送の可視化」蛋白質核酸酵素 vol.48 pp.421-429 2003 (共立出版)
- 191) 船津高志 : 2 章「バイオのナノ構造」ナノテクノロジー基礎シリーズ バイオナノテクノロジー (オーム社 堀池靖浩、片岡一則 編)pp.11-33, 2003
- 192) 多田隈尚志、座古保、船津高志 : 蛍光分子イメージングを用いたナノ分子の検出と機能解析」ナノバイオテクノロジーの最前線 (シーエムシー出版) 6 章 4 節ナノバイオテクノロジー p p.371~379, 2003

中山俊憲

- 193) Kamata, T., Yamashita, M., Kimura, M., Murata, K., Inami M., Shimizu, C., Sugaya, K., Wang C.-R., Taniguchi, M., and Nakayama, T.: src homology 2 domain-containing tyrosine phosphatase SHP-1 controls the development of allergic airway inflammation. *J. Clin. Invest.* 111:109-119 (2003).
- 194) Kubo, S., Nakayama, T., Matsuoka, K., Yonekawa, H., and Karasuyama, H.: Long term maintenance of IgE-mediated memory in mast cells in the absence of detectable serum IgE. *J. Immunol.* 170:775-780 (2003).