

業績集 山田 雅雄
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論文(学術書分担章含む)

- 1) Ryuhei Hayashi, Kenichi Kamata, Marco Gerdol, Yuki Fujii, Takashi Hayashi1, Yuto Onoda, Nanae Kobayashi, Satoshi Furushima, Ryuya Ishiwata, Mayuka Ohkawa, Naoko Masuda, Yuka Niimi, Masao Yamada, Daisuke Adachi, SM Abe Kawsar, Sultana Rajia, Imtiaz Hasan, Somrita Padma, Bishnu Pada Chatterjee, Yuji Ise, Riku Chida, Kayo Hasehira, Nobumitsu Miyanishi, Tatsuya Kawasaki, Yukiko Ogawa, Hideaki Fujita, Alberto Pallavicini, and Yasuhiro Ozeki, Novel Galectins Purified from the Sponge Chondrilla australiensis: Unique Structural Features and Cytotoxic Effects on Colorectal Cancer Cells Mediated by TF-antigen Binding, Mar. Drugs 2024, 22(9), 400. 査読あり
- 2) Kamata K, Ohkawa M, Fujii Y, Ogawa Y, Rajia S, Yoshimoto S, Hasan I, Kawsar S M A, Ishiwata R, Taakakusaki S, Hayashi R, Adachi D, Hayashi T, Yamada M, Chattrjee B P, Ozeki Y, β -Trefoil Lectins of the Family Mytilidae from a Comparative Perspective, Trends in Carbohydrate Research, Vol.15, No.1, pp47-55 (2023). 査読あり
- 3) Boottanun P, Okatani C, Nagai M, Ungkulpasvich U, Yamane S, Yamada M, Kuno A, An improved evanescent fluorescence scanner suitable for high-resolution glycome mapping of formalin-fixed paraffin-embedded tissue sections, Analytical and Bioanalytical Chemistry, Vol 415, pp 6975-6984 (2023). 査読あり
- 4) Yamada M, Hirabayashi J, Glycan profiling by lectin microarray, Glycoscience Protocols (GlycoPODv2) [Internet]. Saitama (JP): Japan Consortium for Glycobiology and Glycotechnology; 2021-. 査読あり
- 5) Amin Md R, Yasmin F, Dey S, Mahmud S, Saleh Md A, Erman T B, Hasan I, Rajia S, Ogawa Y, Fujii Y, Yamada M, Ozeki Y, Kawsar S M A. Methyl β -D-galactopyranoside esters as potential inhibitors for SARS-CoV-2 protease enzyme: synthesis, antimicrobial, PASS, molecular docking, molecular dynamics simulations and quantum computations. Glycoconj J. 39, 261-290. (2022). 査読あり
- 6) Amin Md. R, Yasmin F, Hosen M A, Dey S, Mahmud S, Saleh Md. A, Erman T B, Hasan I, Fujii Y, Yamada M, Ozeki Y, Kawsar S M A. Synthesis, Antimicrobial, Anticancer, PASS, Molecular Docking, Molecular Dynamic Simulations and Pharmacokinetic Predictions of Some Methyl β -d-Galactopyranoside Analogs. Molecules 26, 7016. (2021). 査読あり
- 7) Onishi Y, Mise K, Kawakita C, Uchida HA, Sugiyama H, Sugawara R, Yamaguchi S, Yoshida M, Mitsuhashi T, Yamada M, Hirabayashi J, Wada J. Development of urinary diagnostic biomarker for IgA nephropathy by lectin microarray. Am J Nephrol. 53, 10-20. (2021). 査読あり

- 8) Kawsar sMa, Hasen I, Rajia S, Koide Y, Fujii Y, Hayashi R, Yamada M, Ozeki Y., Diverse Localization Patterns of an R-Type Lectin in Marine Annelids, *Molecules*. 2021 Aug 7;26(16):4799. doi: 10.3390/molecules26164799. 査読あり
- 9) Swarna RR, Asaduzzaman AKM, Kabir SR, Arfin N, Kawsar SMA, Rajia S, Fujii Y, Ogawa Y, Hirashima K, Kobayashi N, Yamada M, Ozeki Y, Hasan I. Antiproliferative and Antimicrobial Potentials of a Lectin from Aplysia kurodai (Sea Hare) Eggs. *Mar Drugs* 19, 394. (2021). 査読あり
- 10) Mise K, Imamura M, Yamaguchi S, Watanabe M, Higuchi C, Katayama A, Miyamoto S, Uchida HA, Nakatsuka A, Eguchi J, Hida K, Nakato T, Tone A, Teshigawara S, Matsuoka T, Kamei S, Murakami K, Shimizu I, Miyashita K, Ando S, Nunoue T, Yoshida M, Yamada M, Shikata K, Wada J. Novel urinary glycan biomarkers predict cardiovascular events in patients with type 2 diabetes: A multicenter prospective study with 5-year follow up (U-CARE Study 2). *Front Cardiovasc* 24, 668059. (2021). 査読あり
- 11) Kawakita C, Mise K, Onishi Y, Sugiyama H, Yoshida M, Yamada M, Wada J. Novel urinary glycan profiling by lectin array serves as the biomarkers for predicting renal prognosis in patients with IgA nephropathy. *Sci Rep.* 11, 3394. (2021). 査読あり
- 12) K Mise, M Imamura, S Yamaguchi, S Teshigawara, A Tone, HA Uchida, J Eguchi, A Nakatsuka, D Ogawa, M Yoshida, M Yamada, K Shikata, J Wada. Identification of novel urinary biomarkers for predicting renal prognosis in patients with type-2 diabetes by glycan profiling in a multicenter prospective cohort study: U-CARE Study 1. *Diabetes Care* 41, 1765-1775. (2018). 査読あり
- 13) H. Iha and M. Yamada, Glycan profiling of adult T-cell leukemia (ATL) cells with the high-resolution lectin microarrays, Chapter 5, T-cell leukemia - characteristics, treatment and prevention, Edited by Mariko Tomita, *InTech Chapters publisher* ISBN 978-953-51-0996-9 (2018) 査読あり(学術書分担章)
- 14) J. Hirabayashi, M. Yamada, A. Kuno, and H. Tateno, Lectin microarrays: concept, principle and applications. *Chem Soc Rev* 42, 4443-4458. (2017). 査読あり
- 15) 山田雅雄、池辺詠美、藤田裕子、緒方正男、伊波英克、高感度レクチンアレイを用いた成人T細胞白血病／リンパ腫(ATL)細胞の糖鎖プロファイリング. *Bio Clinica* 26, 916-919. (2015). 査読あり
- 16) K-F Suen, M S Turner, G Feng, B Liu, A Althage, A Slavin, W Ou, E Zuo, M Eckart, T Ogawa, M Yamada, T Tuntland, J Harris, J W Trauger. Transient expression of an IL-23R extracellular domain Fc fusion protein in CHO versus HEK cells results in improved plasma exposure. *Protein Expr Purif* 71, 96-102. (2015). 査読あり
- 17) M. Toyoda, M. Yamazaki-Inoue, Y. Itakura, A. Kuno, T. Ogawa, M. Yamada, H. Akutsu, Y. Takahashi, S. Kanzaki, H. Narimatsu, J. Hirabayashi, and A. Umezawa, Lectin microarray

- analysis of pluripotent and multipotent stem cells. *Genes Cells* 16, 1-11. (2014). 査読あり
- 18) K. Inoue, J. Wada, J. Eguchi, A. Nakatsuka, S. Teshigawara, K. Murakami, D. Ogawa, T. Terami, A. Katayama, A. Tone, I. Iseda, K. Hida, M. Yamada, T. Ogawa, and H. Makino, Urinary fetuin-A is a novel marker for diabetic nephropathy in type-2 diabetes identified by lectin microarray. *PLoS ONE*, 8, e77118. (2013). 査読あり
- 19) S. Miyagawa, S. Takeishi, A. Yamamoto, K. Ikeda, H. Matsunari, M. Yamada, M. Okabe, E. Miyoshi, M. Fukazawa, and H. Nagashima, Survey of glycoantigens in cells from a1-3galactosyltransferase knocking pig using a lectin microarray. *Xenotransplantation* 17, 61-70. (2013). 査読あり
- 20) N. Sasaki, K. Moriwaki, N. Uozomi, K. Noda, N. Taniguchi, A. Kameyama, H. Narimatsu, S. Takeishi, M. Yamada, N. Koyama, and E. Miyoshi, High levels of E4-PHA-reactive oligosaccharides: potential as marker for cells with characteristics of hepatic progenitor cells. *Glycoconj Journal* 26, 1213-1223. (2012). 査読あり
- 21) W Huang, D Wang, M Yamada, and L-X Wang, Chemoenzymatic synthesis and lectin array characterization of a class of N-glycan clusters. *J. Am Chem Soc* 131, 17963-17971. (2012). 査読あり
- 22) M. Yamada Chapter 9, Lectin Microarrays. *Microarray Methods and Protocols*. Robert S. Matson ed. CRC Press 141-150 (2009). 査読あり(学術書分担章)
- 23) A. Kuno, Y. Itakura, M. Toyoda, Y. Takahashi, M. Yamada, A. Umezawa, and J. Hirabayashi, Development of a data-mining system for differential profiling of cell glycoproteins based on lectin microarray. *J. Proteomics Bioinformatics* 1, 68-74 (2008). 査読あり
- 24) Y. Ebe, A. Kuno, N. Uchiyama, S. Kuno, M. Yamada, T. Sato, H. Narimatsu, and J. Hirabayashi, Application of lectin microarray to crude samples: differential glycan profiling of lectin mutants. *J. Biochem* 139, 323-327 (2006). 査読あり
- 25) N. Uchiyama, A. Kuno, S. Koseki-Kuno, Y. Ebe, K. Horio, M. Yamada, and J. Hirabayashi, Development of a Lectin Microarray Based on an Evanescent-Field Fluorescence Principle. *Methods in Enzymology* 415, 341-351 (2006) 査読あり
- 26) A. Kuno, N. Uchiyama, S. Kuno, Y. Ebe, S. Takashima, M. Yamada, and J. Hirabayashi, Evanescent-field fluorescence-assisted lectin microarray: a new strategy for glycan profiling. *Nature Methods* 2, 851-856 (2005). 査読あり
- 27) K. Kucho, Y. Tsuchiya, Y. Okumoto, M. Harada, M. Yamada, and M. Ishiura, Construction of unmodified oligonucleotide-based microarrays in the thermophilic cyanobacterium Thermosynechococcus elongatus BP-1: screening of the candidates for circadianly expressed genes. *Genes Genetic Systems* 79, 319-329. (2004). 査読あり
- 28) 山田雅雄 抗原抗体反応を利用したスライドガラスセンサーチップにおける菌体検

出技術の開発、食品産業のための高機能バイオセンサー、STAFF 編、化学工業社
340-346 (2003)

- 29) M. Ikeda, H. Kudo, R. Shinohara, N. Misawa, K. Kakuta, F. Shimpuku, A. Tsukune, and M. Yamada, Cu wiring in organic low-k interlayer dielectrics using a novel damascene process. *Proc Adv Metal* 28, 523-527 (1999). 査読あり
- 30) J. Lin, M. Nakabayashi, A. Tsukune, and M. Yamada, Ta₂O₅ thin films with exceptionally high dielectric constant. *Applied Phys. Lett* 74, 2370-2374 (1999). 査読あり
- 31) J. Lin, A. Tsukune, T. Suzuki, and M. Yamada, Different effect of annealing temperature on resistivity for stoichiometric, W rich, and N rich tungsten nitride films. *J. Vac. Sci. Technol.* 17, 936-941. (1999). 査読あり
- 32) J. Lin, A. Tsukune, T. Suzuki, and M. Yamada. Conversion of tungsten nitride to pure tungsten. *J. Vac Sci Technol* A16, 611-615 (1998). 査読あり
- 33) M. Hosaka, T. Kouno, Y. Hayakawa, H. Niwa, and M. Yamada. Ti layer thickness dependence on electromigration performance of Ti/AlCu metallization, IEEE International reliability physics proc. IEEE catalog No. 98CH36173, 329-334. (1998). 査読あり
- 34) T. Kouno, H. Niwa, and M. Yamada. Effect of TiN microstructure on diffusion barrier properties in Cu metallization. *J. Electrochem. Soc.*, vol.145, No6, 2164 (1998). 査読あり
- 35) T. Kouno, M. Hosaka, H. Niwa, and M. Yamada. Effect of Al₃Ti intermetallic compound on electromigration lifetime of Al alloy interconnections. *J. Appl. Phys* 84, 742-750. (1998) 査読あり
- 36) J. Lin, A. Tsukune, M. Yamada, G. Q. Yao, G. G. Qin, Contribution of excitation in Si nanoparticles to Sm photoluminescence from Sm-doped porous silicon. *Phys Rev* B57, R2046 (1998). 査読あり
- 37) T. Kouno, M. Hosaka, H. Niwa, and M. Yamada. Anomalous behabior of resistance in Al alloy interconnections stacked with Ti layers during electromigration test. *J Vac Sci Technol* 15, 205 (1997). 査読あり
- 38) S. Takeishi, H. Kudo, R. Shinohara, M. Hoshino, S. Fukuyama, J. Yamaguchi, and M. Yamada. Plasma-enhanced chemical vapor deposition of fluorocarbon films with high thermal resistance and low dielectric constants. *Journal of Electrochemical Society* 144, 1797-1800 (1997). 査読あり
- 39) 武石 俊作, 工藤 寛, 篠原 理華, 山田 雅雄「プラズマ気相成長を用いた高耐熱性・低誘電率フッ化炭素膜の形成」応用物理 第65巻 1153-1157. (1996). 査読あり
- 40) H. Kudo, R. Shinohara, S. Takeishi, N. Awaji, and M. Yamada, Densified SiOF film formation for preventing water absorption. *Jpn. J. Appl. Phys*, 35, 1583 (1996). 査読あり
- 41) S. Takeishi, H. Kudo, R. Shinohara, A. Tsukune, Y. Satoh, H. Miyazawa, H. Harada, and M. Yamada. Stabilizing dielectric constants of fluorine-doped SiO₂ films by N₂O-plasma

- annealing. *Thin Solid Films*, Vol.308-09, No.31 501-506 (1997). 査読あり
- 42) A. Takazawa, T. Tamura, and M. Yamada, Porous β -SiC fabrication by electrochemical anodization. *Jpn. J. Appl. Phys.* 32, 3148-3153 (1993). 査読あり
- 43) A. Takazawa, T. Tamura and M. Yamada, A photoluminescence mechanism of porous Si: Luminescence decay, *J. Appl. Phys.* 75(5), 2489 (1994). 査読あり
- 44) K. Yoshikawa, T. Kimura, H. Noshiro, S. Otani, M. Yamada, and Y. Furumura, RuO₂ Thin Films as Bottom Electrodes for High Dielectric Constant Materials, *Jpn. J. Appl. Phys.* 33, L867 (1994). 査読あり
- 45) T. Tamura, K. Takai, H. Noshiro, M. Kimura, S. Otani, and M. Yamada. Influence of electrode contacts on leakage current of SrTiO₃ capacitors. *Jpn. J. Appl. Phys.* 33, L1697 (1994). 査読あり
- 46) T. Kimura, H. Yamauchi, H. Machida, H. Kokubun, and M. Yamada. Synthesis of Novel Sr Sources for Metalorganic Chemical Vapor Deposition of SrTiO₃, *Jpn. J. Appl. Phys.*, 33(9B), 5119 (1994). 査読あり
- 47) 34) K. Kondo, M. Nakaishi, M. Yamada, M. Yamabe, and K. Sugishima. Stress stability of Ta absorbers on X-ray masks, *Microelec. Eng.*, 21, 75-78. (1993)
- 48) 35) T. Tamura, A. Takazawa, and M. Yamada, Blueshifts in the photoluminescence of porous Si by immersing in deionized water. *Jpn. J. Appl. Phys.* 32, 322-329. (1993). 査読あり
- 49) M. Yamada, K. Kondo, T. Sasaki, A. Takazawa, and T. Tamura, Effects of surface treatments on the photoluminescence of porous Si and a suggested mechanism for the photoluminescence. *MRS Proc Mat Res Sci* 28, 275-281. (1993). 査読あり
- 50) A. Takazawa, T. Tamura, and M. Yamada, Comparison of microsecond photoluminescence decay between as-prepared and dry-oxidized porous Si. *Appl. Phys. Lett.* 63, 940-942 (1993). 査読あり
- 51) K. Kondo, M. Nakabayashi, K. Kawakami, T. Chijimatsu, M. Nakaishi, M. Yamada, M. Yamabe, and K. Sugishima, Stress stability of β -tantalum and its crystal structure, *J. Vac. Sci. Technol.* 11, 1067-1074 (1993). 査読あり
- 52) A. M. Green, M. Yamada, T. Kendelewicz, A. Herrera-Gomez, and W. E. Spicer, In overlayers on Sb passivated GaAs. *J. Vac. Sci. Technol.* B10, 1918-1923. (1992). 査読あり
- 53) M. Yamada, K. Kondo, Comparing effects of vacuum annealing and oxidation on the photoluminescence of porous Si. *Jpn. J. Appl. Phys.* 31, 993-1002 (1992). 査読あり
- 54) A. Takazawa, M. Yamada, T. Tamura, Comparison of photoluminescence life times between as-prepared and dry-oxidized porous Si, *Jpn. J. Appl. Phys.* 31, 1451-1459 (1992). 査読あり
- 55) M. Nakaishi, M. Yamada, K. Kondo, M. Yamabe, K. Sugishima, Anomalous etching

- residues of sputter-deposited Ta on reactive ion etching using chlorine based plasmas. *Jpn. J. Appl. Phys.* 31, 625-630 (1992). 査読あり
- 56) C. J. Spindt, M. Yamada, P. L. Meissner, K. E. Miyano, A. Herrera, W. E. Spicer, A. J. Arko, J. M. Woodall, and G. D. Pettit, Electronic structures and Schottky barrier formation on GaAs surfaces prepared by thermal desorption of a protective arsenic coating. *Phys. Rev. B* 45, 11108-11112 (1992). 査読あり
- 57) A. M. Green, A. K. Wahi, M. Yamada, T. Kendelewicz, and W. E. Spicer, Modification of Schottky barrier heights at InP interfaces using Sb interlayers. *J. Vac. Sci. Technol. A* 10, 1954-1961 (1992). 査読あり
- 58) M. Yamada, A. M. Green, A. Herrera-Gomez, T. Kendelewicz, and W. E. Spicer, Photoemission study of interfacial chemistry at metal/InP(110) interfaces with Sb interlayers. *Phys. Rev. B* 45, 13531-13539 (1992). 査読あり
- 59) M. Yamada, A. K. Wahi, T. Kendelewicz, and W. E. Spicer, Schottky barrier formation on InP(110) passivated with one monolayer of Sb, *Appl. Surface Sci.* 56, 625-634. (1992). 査読あり
- 60) M. Yamada, C. J. Spindt, K. E. Miyano, P. L. Meissner, A. Herrera-Gomez, T. Kendelewicz, and W. E. Spicer, Effects of annealing InP(110) surfaces on Schottky barrier heights at Pd/InP(110) interfaces. *J. Appl. Phys.* 71, 314-323. (1992). 査読あり
- 61) M. Yamada, A. K. Wahi, T. Kendelewicz, and W. E. Spicer, Fermi level pinning on ideally terminated InP(110) surfaces. *Phys. Rev. B* 45, 3600-3612. (1992). 査読あり
- 62) A. M. Green, A. Herrera-Gomez, M. Yamada, T. Kendelewicz, and W. E. Spicer, Annealing out of thermal process-induced defects at InP(110) surfaces - A novel method. *J. Appl. Phys.* 30, 1982-1989 (1991). 査読あり
- 63) C. J. Spindt, M. Yamada, P. L. Meissner, K. E. Miyano, A. Herrera, W. E. Spicer, A. J. Arko, J. M. Woodall, and G. D. Pettit, Au and Al Schottky barrier formation on GaAs surfaces prepared by thermal desorption of a protective arsenic coating. *J. Vac. Sci. Technol. A* 9, 2090-2096 (1991). 査読あり
- 64) M. Yamada, M. Nakaishi, and K. Sugishima, An etching mechanism of Ta by using chlorine-based plasmas, *J. Electrochem.* 138, 496-503 (1991). 査読あり
- 65) M. Yamada, A. K. Wahi, P. L. Meissner, A. Herrera, T. Kendelewicz, and W. E. Spicer, One monolayer of Sb or Bi used as a buffer layer preventing oxidation of InP, *Appl. Phys. Lett.* 58, 1413. (1991). 査読あり
- 66) M. Yamada, A. K. Wahi, P. L. Meissner, A. Herrera-Gomez, T. Kendelewicz, and W. E. Spicer, Effect of annealing Sb/InP(110) interfaces and Schottky barrier formation of Ag on annealed Sb/InP(110) surfaces. *Appl. Phys. Lett.* 58, 243. (1991), 査読あり
- 67) A. K. Wahi, M. Yamada, T. Kendelewicz, W. E. Spicer, Large Schottky barrier heights on

- n-InP - a novel approach. *Appl. Phys. Lett.* 58, 2701-2710 (1991). 査読あり
- 68) M. Yamada, A. M. Green, A. K. Wahi, T. Kendelewicz, and W. E. Spicer, Thermal stability of Schottky barriers at Au and Ag/InP(110) interfaces with Sb interlayers. *Appl. Phys. Lett.* 59, 3121-3130 (1991). 査読あり
- 69) M. Yamada, K. Kondo, M. Nakaishi, J. Kudou, and K. Sugishima, Process technologies for Ta/Sic X-ray masks, *J. Electrochem. Sci.* 137, 231-240. (1990). 査読あり
- 70) M. Nakaishi, M. Yamada, K. Sugishima, Improvements of stress controllability and radiation resistance by adding carbon to boron-nitride. *J. Electrochem. Sci.* 137, 442-449 (1990). 査読あり
- 71) K. Kondo, M. Yamada, M. Nakaishi, J. Kudo, and K. Sugishima, Effects of X-ray mask structures and processes on X-ray mask distortion. *Microelec. Eng.* 11, 309-312. (1990). 査読あり
- 72) M. Nakaishi, M. Yamada, and M. Nakamura, Backside helium cooling of X-ray masks in reactive ion etching processes. *Jpn. J. Appl. Phys.* 28, 448-455. (1990). 査読あり
- 73) M. Yamada, M. Nakaishi, J. Kudou, T. Eshita, and Y. Furumura, An X-ray mask using Ta and heteroepitaxially grown SiC. *Microelec. Eng.* 9, 135-138. (1989). 査読あり
- 74) M. Yamada, M. Nakaishi, and K. Nakagawa, The BNC:H films for X-ray mask membranes, Proceedings of the symposium on dry process. edited by J. Nishizawa, 88, *Electrochem Soc Int J.* 178-191. (1988). 査読あり
- 75) S. Hattori, M. Yamada, J. Tamano, M. Ieda, S. Morita, K. Yoneda, S. Ikeda, and S. Ishibashi, Application of plasma polymerized film to electron beam lithography, *J. Appl. Poly. Sci.* 38, 127-138 (1984). 査読あり
- 76) S. Hattori, S. Morita, M. Yamada, J. Tamano, and M. Ieda, A breakthrough to the plasma deposited dry developable e-beam resist, *Polymer Eng. and Sci.*, 23, 1043-1051 (1983). 査読あり
- 77) J. Tamano, M. Yamada, M. Ichikawa, K. Yoneda, S. Morita, and S. Hattori, アフターグローレアクションによる多層膜電子線レジストの成膜と特性、*真空* 26, 520-527 (1983). 査読あり
- 78) M. Yamada, J. Tamano, K. Yoneda, S. Morita, S. Hattori, Electron beam vacuum lithography using a plasma co-polymerized MMA-TMT resist, *Jpn. J. Appl. Phys.* 21, 768-777 (1982). 査読あり
- 79) M. Yamada, S. Hattori, and S. Morita, Bubbles formed by plasma polymerization of MMA in a tail flame of SF₆-Ar-MMA mixture discharge. *Jpn. J. Appl. Phys.* 21, 1520-1528 (1982). 査読あり
- 80) M. Yamada, S. Hattori, and S. Morita, A dry development model for a positive electron beam resist, *J. Electrochem. Soc.* 129, 2598-2607 (1982). 査読あり

- 81) M. Yamada and S. Hattori, A metal doping effect in an electron beam resist, *Jpn. J. Appl. Phys.*, 20, 1969-1978 (1981). 査読あり
- 82) S. Morita, S. Hattori, M. Ieda, J. Tamano, and M. Yamada, 真空リソグラフィにおけるプラズマ重合レジストとプラズマエッチング現像、高分子論文集 38, 657-665 (1981). 査読あり
- 83) S. Hattori, J. Tamano, M. Yamada, M. Ieda, S. Morita, K. Yoneda, S. Ishibashi, Vacuum lithography using plasma polymerization and plasma development, *Thin Solid Films* 83, 187-195 (1981). 査読あり
- 84) M. Yamada, 不規則平面大地上の VLF-LF 帯電磁波の伝播特性、電子通信学会誌 63, 604-610 (1980). 査読あり

外部研究費

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- 2) AMED 「再生医療の産業化に向けた評価基盤技術開発事業」再生医療等製品（脂肪細胞医薬品）の糖鎖プロファイリングを用いた品質管理システムの構築、2017-2018年度
- 3) AMED 「糖鎖利用による革新的創薬技術開発事業」超高感度・高速糖鎖プロファイリングシステムの開発 2016 - 2021 年度
- 4) 北海道経産局、平成 25 年度小規模事業者活性化補助金に係る補助事業「鳥インフルエンザ・ウイルス早期見極め用糖鎖アレイ製品開発事業」2013年度
- 5) NEDO 「糖鎖機能活用技術開発プロジェクト」エンリッチメント・デバイスの開発、2010 年度
- 6) 北海道経産局、平成 22 年度中小企業等の研究開発力向上及び実用化推進のための支援事業「糖脂質のアレイによる分析方法及び大腸癌糖脂質マーカーの開発」2010 年度
- 7) 厚生科研費「シュガーチップを用いた検査・診断技術の開発」2005-2007 年度
- 8) JSPS 特定領域研究「好熱性藍色細菌の DNA マイクロアレイの開発と生物時計研究への応用」2003-2004 年度
- 9) NEDO 「糖鎖エンジニアリングプロジェクト」レクチンアレイを用いた糖鎖プロファイリングシステムの開発、2002-2005 年度

クラウドファンディング

新型コロナウイルス感染症：重症化を抑える新薬の開発に向けた第一歩を

READYFOR 2020年12月 支援総額 5,369,000円 成立(目標額 5,000,000円)

特許

- 1) 光ファイバー型センサー、特願 2022-146003
- 2) 腎機能の低下の可能性を判定する判定方法およびキット 特開 2018-173371
- 3) 糖質プロファイリングによる血液腫瘍診断方法 公開番号 2013-007742
- 4) 細胞の状態を判別する方法 WO2010131641A1
- 5) 糖尿病性腎症の進行度の検出方法及び糖尿病性腎症の進行度の診断キットに糖尿病性腎症の進行度の指標となる物質及びその選別方法 公開番号 2009-105513