

氏名	所属	職名	取得学位	専門分野	主な論文・著作・業績
吉岡 芳親	基盤的研究部門	教授	理学博士・医学博士	バイオイメー ジ ング 生体計測 一般生理学	① Fujiwara S, Ogasawara K, Chida K, Ogasawara Y, Nomura J, Oshida S, Fujimoto K, Tsutsui S, Setta K, <u>Yoshioka Y</u> : Feasibility of diffusion-weighted imaging (DWI) for assessing cerebrospinal fluid dynamics: DWI-fluidography in the brains of healthy subjects. Magn Reson Med Sci. 24(2): 166-175 (2025) ② Tsurugizawa T, Kumamoto T, <u>Yoshioka Y</u> : Utilization of potato starch suspension for MR-microimaging in ex vivo mouse embryos. iScience. 25(12): 105694 (2022) ③ Chen T, Mori Y, Inui-Yamamoto C, Komai Y, Tago Y, Yoshida S, Takabatake Y, Isaka Y, Ohno K, <u>Yoshioka Y</u> : Polymer-brush-afforded SPIO nanoparticles show unique biodistribution and MRI contrast in mouse organs. Magn Reson Med Sci. 16(4): 275-283 (2017) ④ Mori Y, Chen T, Fujisawa T, Kobashi S, Ohno K, Yoshida S, Tago Y, Komai Y, Hata Y, <u>Yoshioka Y</u> : From cartoon to real time MRI: in vivo monitoring of phagocyte migration in mouse brain. Sci Rep. 4: 6997 (2014) ⑤ <u>Yoshioka Y</u> , Oikawa H, Ehara S, Inoue T, Ogawa A, Kanbara Y, Kubokawa M: Noninvasive measurement of temperature and fractional dissociation of imidazole in human lower leg muscles using 1H-nuclear magnetic resonance spectroscopy. J Appl Physiol. 98: 282-287 (2005)
和田 学	基盤的研究部門	教授	博士（医学）	タンパク質・抗体工 学 オミックス バイオインフォマ ティクス	① Saka K, Kakuzaki T, Metsugi S, Kashiwagi D, Yoshida K, Wada M, Tsunoda H, Teramoto R. Antibody design using LSTM based deep generative model from phage display library for affinity maturation. Sci Rep. 2021 Mar 12;11(1):5852. ② Fukuzawa T, Sampei Z, Haraya K, Ruike Y, Shida-Kawazoe M, Shimizu Y, Gan SW, Irie M, Tsuboi Y, Tai H, Sakiyama T, Sakamoto A, Ishii S, Maeda A, Iwayanagi Y, Shibahara N, Shibuya M, Nakamura G, Nambu T, Hayasaka A, Mimoto F, Okura Y, Hori Y, Habu K, Wada M, Miura T, Tachibana T, Honda K, Tsunoda H, Kitazawa T, Kawabe Y, Igawa T, Hattori K, Nezu J. Long lasting neutralization of C5 by SKY59, a novel recycling antibody, is a potential therapy for complement-mediated diseases. Sci Rep. 2017 Apr 24;7(1):1080. ③ Kitazawa T, Igawa T, Sampei Z, Muto A, Kojima T, Soeda T, Yoshihashi K, Okuyama-Nishida Y, Saito H, Tsunoda H, Suzuki T, Adachi H, Miyazaki T, Ishii S, Kamata-Sakurai M, Iida T, Harada A, Esaki K, Funaki M, Moriyama C, Tanaka E, Kikuchi Y, Wakabayashi T, Wada M, Goto M, Toyoda T, Ueyama A, Suzuki S, Haraya K, Tachibana T, Kawabe Y, Shima M, Yoshioka A, Hattori K. A bispecific antibody to factors IXa and X restores factor VIII hemostatic activity in a hemophilia A model. Nat Med. 2012 Oct;18(10):1570-4. ④ 和田 学. 自然言語 AIを活用した創薬標的探索研究開発. 医薬品モデリティにおける創薬技術開発と展望. (ISBN: 978-4-86502-271-1) 株式会社情報機構. 第8章. (2024年6月24日発刊) ⑤ 特許第7765290号「細胞外プリン受容体リガンドを検出するシステムおよび当該システムを導入した非ヒト動物」

山下 典生	基盤的研究部門	准教授	博士（医学）	医用画像 画像処理 画像診断システム	① Yamashita F, Sasaki M, Fukumoto K, Otsuka K, Uwano I, Kameda H, Endoh J, Sakai A: Detection of changes in the ventral tegmental area of patients with schizophrenia using neuromelanin-sensitive MRI. Neuroreport. 27(5):289-294 (2016) ② Yamashita F, Sasaki M, Saito M, Mori E, Kawaguchi A, Kudo K, Natori T, Uwano I, Ito K, Saito K: Voxel-based morphometry of disproportionate cerebrospinal fluid space distribution for the differential diagnosis of idiopathic normal pressure hydrocephalus. J Neuroimaging. 24(4):359-365 (2014) ③ Maikusa N, Yamashita F, Tanaka K, Abe O, Kawaguchi A, Kabasawa H, Chiba S, Kasahara A, Kobayashi N, Yuasa T, Sato N, Matsuda H and Iwatsubo T: Improved volumetric measurement of brain structure with a distortion correction procedure using an ADNI phantom. Med Phys. 40(6):062303 (2013) ④ Yamashita F, Sasaki M, Takahashi S, Matsuda H, Kudo K, Narumi S, Terayama Y, Asada T: Detection of changes in cerebrospinal fluid space in idiopathic normal pressure hydrocephalus using voxel-based morphometry. Neuroradiology. 52(5):381-386 (2010) ⑤ 特許第6211211号「名称：磁気共鳴イメージング装置用ファントム」
瀬川 宏知	基盤的研究部門	准教授	博士（農学）	抗体医薬 細胞生物学 ウイルス学	①Shiraiwa H, Narita A, Kamata-Sakurai M, Ishiguro T, Sano Y, Hironiwa N, Tsushima T, Segawa H, Tsunenari T, Ikeda Y, Kayukawa Y, Noguchi M, Wakabayashi T, Sakamoto A, Konishi H, Kuramochi T, Endo M, Hattori K, Nezu J, Igawa T. Engineering a Bispecific Antibody with a Common Light Chain: Identification and Optimization of an Anti-CD3 Epsilon and Anti-GPC3 Bispecific Antibody, ERY974. Methods. 154: 10-20 (2019). ②Ishiguro T, Sano Y, Komatsu S, Kamata-Sakurai M, Kaneko A, Kinoshita Y, Shiraiwa H, Azuma Y, Tsunenari T, Kayukawa Y, Sonobe Y, Ono N, Sakata K, Fujii T, Miyazaki Y, Noguchi M, Endo M, Harada A, Frings W, Fujii E, Nanba E, Narita A, Sakamoto A, Wakabayashi T, Konishi H, Segawa H, Igawa T, Tsushima T, Mutoh H, Nishito Y, Takahashi M, Stewart L, ElGabry E, Kawabe Y, Ishigai, M, Chiba S, Aoki M, Hattori K, Nezu J. An Anti-glypican 3/CD3 Bispecific T cell-redirecting Antibody for Treatment of Solid Tumors. Sci Transl Med. 9(410):eaal4291 (2017). ③ Suzuki K, Tsunoda H, Omiya R, Matoba K, Baba T, Suzuki S, Segawa H, Kumanogoh A, Iwasaki K, Hattori K, Takagi J. Structure of the Plexin Ectodomain Bound by Semaphorin-Mimicking Antibodies. PLOS ONE. 11(6):e0156719 (2016). ④ Nishimura K, Sano M, Ohtaka M, Furuta B, Umemura Y, Nakajima Y, Ikehara Y, Kobayashi T, Segawa H, Takayasu S, Sato H, Motomura K, Uchida E, Kanayasu-Toyoda T, Asashima M, Nakauchi H, Yamaguchi T, Nakanishi M. Development of defective and persistent Sendai virus vector: a unique gene delivery/expression system ideal for cell reprogramming. J Biol Chem. 286(6): 4760-4771 (2011). ⑤ Miyazaki M, Segawa H, Yamashita T, Zhu Y, Takizawa K, Hasegawa M, Taira H. Construction and characterization of a fluorescent Sendai virus carrying the gene for envelope fusion protein fused with enhanced green fluorescent protein. Biosci Biotechnol Biochem. 74(11): 2293-2298 (2010).

寺崎 一典	基盤的研究部門	准教授	博士（医学）	核薬学 放射線薬品学 分子イメージング	①Ono Y, Yosuke Akamatsu Y, Araya S, Yamazaki R, Fujiwara S, Chida K, Masakazu Kobayashi M, Koji T, Terasaki K, Ogasawara K. Clinical features and treatment outcomes in patients in their twenties with ischemic moyamoya disease. Cerebrovasc Dis Extra. 14(1):105-115(2024) ②Ogasawara K, Takahashi T, Igarashi S, Yabuki M, Omori D, Akamatsu Y, Chida K, Kobayashi M, Fujiwara S, Terasaki K. Effect of the addition of 123I-iomazenil single-photon emission computed tomography to brain perfusion single-photon emission computed tomography on the detection accuracy of misery perfusion in adult patients with ischemic moyamoya disease. Ann Nucl Med. 37(5):280-288(2023) ③Kimura K, Kubo Y, Dobashi K, Katakura Y, Chida K, Kobayashi M, Yoshida K, Fujiwara S, Terasaki K, Kawamura T, Ogasawara K. Angiographic, Cerebral hemodynamic, and cognitive outcomes of indirect revascularization surgery alone for adult patients with misery perfusion due to ischemic moyamoya disease. Neurosurgery. 90(6):676-683(2022) ④Igarashi S, Ando T, Takahashi T, Yoshida J, Kobayashi M, Yoshida K, Terasaki K, Fujiwara S, Kubo Y, Ogasawara K. Development of cerebral microbleeds in patients with cerebral hyperperfusion following carotid endarterectomy and its relation to postoperative cognitive decline. J Neurosurg. 1:1-7(2021) ⑤Iwata R, Terasaki K, Ishikawa Y, Harada R, Furumoto S, Yanai K, Pascali C. A concentration-based microscale method for 18F-nucleophilic substitutions and its testing on the one-pot radiosynthesis of [18F]FET and [18F]fallypride. Appl Radiat Isot. 166:109361(2020)
和田 直子	基盤的研究部門	准教授	学士（農学）	発生工学 分子生物学	① Wada NA, Takeiri A, Motoyama S, Matsuzaki K, Tanaka K, Matsuo S, Fujii-Takeiri E, Tateishi H, Matsumoto K, Niimi N, Sassa A, Grúz P, Masumura K, Mishima M, Jishage K, Sugiyama K, Nohmi T. Mitomycin C-induced DNA double-strand breaks are enhanced by catalytical inactivation of DNA polymerase κ in mice. Genes and Environ. 2025 Nov 6;47(1):22. ② Iida M, Ohtomo S, Wada NA, Ueda O, Tsuboi Y, Kurata A, Jishage KI, Horiba N. TNF-α induces Claudin-1 expression in renal tubules in Alport mice. PLoS One. 2022 Mar 10;17(3):e0265081 ③ Ueda O, Wada NA, Kinoshita Y, Hino H, Kakefuda M, Ito T, Fujii E, Noguchi M, Sato K, Morita M, Tateishi H, Matsumoto K, Goto C, Kawase Y, Kato A, Hattori K, Nezu J, Ishiguro T, Jishage KI. Corrigendum: Entire CD3 ϵ, δ, and γ humanized mouse to evaluate human CD3-mediated therapeutics. Sci Rep. 2018 Mar 19;8:46960. ④ Takeiri A*, Wada NA* (*equal contribution), Motoyama S, Matsuzaki K, Tateishi H, Matsumoto K, Niimi N, Sassa A, Grúz P, Masumura K, Yamada M, Mishima M, Jishage KI, Nohmi T. In vivo evidence that DNA polymerase kappa is responsible for error-free bypass across DNA cross-links induced by mitomycin C. DNA Repair (Amst). 2014 Dec;24:113-121. ⑤ 特許第7765290号「細胞外プリン受容体リガンドを検出するシステムおよび当該システムを導入した非ヒト動物」

上野 育子	基盤的研究部門	講師	博士 (ソフトウェア情報学) 博士 (医学)	医用画像 画像処理 画像診断システム	① Uwano I, Watanabe Y, Noguchi K, Sasaki M, Yamagami H, Sakai N; CAS-CARE Trial Investigators: Improving measurement accuracy of the degree of carotid in-stent stenosis using CT angiography: a comparison with DSA. Stroke Vasc Interv Neurol. 5(5):e001667 (2025) ② Uwano I, Kobayashi M, Setta K, Ogasawara K, Yamashita F, Mori F, Matsuda T, Sasaki M: Assessment of impaired cerebrovascular reactivity in chronic cerebral ischemia using intravoxel incoherent motion magnetic resonance imaging. J Stroke Cerebrovasc Dis. 30(12):106107 (2021) ③ Uwano I, Kameda H, Harada T, Kobayashi M, Yanagihara W, Setta K, Ogasawara K, Yoshioka K, Yamashita F, Mori F, Matsuda T, Sasaki M: Detection of impaired cerebrovascular reactivity in patients with chronic cerebral ischemia using whole-brain 7T MRA. J Stroke Cerebrovasc Dis. 29(9):105081 (2020) ⑤ Uwano I, Kudo K, Sato R, Ogasawara K, Kameda H, Nomura JI, Mori F, Yamashita F, Ito K, Yoshioka K, Sasaki M: Noninvasive assessment of oxygen extraction fraction in chronic ischemia using quantitative susceptibility mapping at 7 Tesla. Stroke. 48(8):2136-2141 (2017) ⑤ Uwano I, Kudo K, Yamashita F, Goodwin J, Higuchi S, Ito K, Harada T, Ogawa A, Sasaki M: Intensity inhomogeneity correction for magnetic resonance imaging of human brain at 7T. Med Phys. 41(2):022302 (2014)
佐々木 敏秋	基盤的研究部門	講師	博士 (工学)	放射線科学 核医学	①Beppu T, Iwaya T, Sato S, Nomura J, Terasaki K, Sasaki T, Yamada N, Fujiwara S, Sugai T, Ogasawara K. : PET with ¹¹C-methyl-L-methionine as a predictor of consequential outcomes at the time of discontinuing temozolomide-adjuvant chemotherapy in patients with residual IDH-mutant lower-grade glioma/Clin Nucl Med. 47(7):569-574(2022) ②Beppu T, Sato Y, Yamada N, Terasaki K, Sasaki T, Sugai T, Ogasawara K. : Impacts on histological features and ¹¹C-methyl-L-methionine uptake after one-shot administration with bevacizumab before surgery in newly diagnosed glioblastoma/Transl Oncol. 12(11): 1480-1487(2019) ③Beppu T, Sasaki T, Sato Y, Terasaki T. : High-uptake areas on ¹⁸F-FRP170 PET image necessarily include proliferating areas in glioblastoma : a superimposed image study combining 18F-FRP170 PET with ¹¹C-methionine PET/Advances in Molecular Imaging. 7:1-11(2017) ④Beppu T, Terasaki K, Sasaki T, Sato Y, Tomabechi M, Kato K, Sasaki M, Ogasawara K. : MRI and ¹¹C-methyl-L-methionine PET differentiate bevacizumab true responders after initiating therapy for recurrent glioblastoma/Clin Nucl Med. 41(11):852-857 (2016) ⑤Beppu T, Sasaki T, Terasaki K, Saura H, Mtsuura H, Ogasawara K, Sasaki M, Iwata R, Takai Y. : High-uptake areas on positron emission tomography with the hypoxic radiotracer ¹⁸F-FRP170 in glioblastomas include regions retaining proliferative activity under hypoxia/Ann Nucl Med. 29:336-341(2015)

若井 淳	基盤的研究部門	講師	博士（獣医学）	実験動物学 獣医学	①. Kato, K., Morinaga, R., Yokoyama, T., Fushuku, S., Wakai, J., Nakamuta, N., Yamamoto, Y.: Effects of CO ₂ on time-dependent changes in cardiorespiratory functions under sustained hypoxia / Respir. Physiol. Neurobiol. 300:103886 (2022) ②. Kato, K., Wakai, J.*, Ozawa, K., Sekiguchi, M., Katahira, K.: Different sensitivity to the suppressive effects of isoflurane anesthesia on cardiorespiratory function in SHR/Izm, WKY/Izm, and Crl:CD(SD) rats / Exp. Anim. 65:393-402 (2016) *Corresponding author ③. Wakai, J., Takayama, A., Yokoyama, T., Nakamuta, N., Kusakabe, T., Yamamoto, Y.: Immunohistochemical localization of dopamine D2 receptor in the rat carotid body / Acta Histochem. 117:784-789 (2015) ④. Wakai, J., Takamura, D., Morinaga, R., Nakamuta, N., Yamamoto, Y.: Differences in respiratory changes and Fos expression in the ventrolateral medulla of rats exposed to hypoxia, hypercapnia, and hypercapnic hypoxia / Respir. Physiol. Neurobiol. 215:64-72 (2015) ⑤. Wakai, J., Kizaki, K., Yamaguchi-Yamada, M., Yamamoto, Y.: Differences in tyrosine hydroxylase expression after short-term hypoxia, hypercapnia or hypercapnic hypoxia in rat carotid body / Respir. Physiol. Neurobiol. 173:95-100 (2010)
森 太志	基盤的研究部門	助教	博士（情報科学）	数値流体力学解析 バイオメカニクス 画像処理	① Mori F, Saito M, Fujimoto K, Kubo Y, Koji T, Akamatsu Y, Ogasawara K, Matsuda T, Uwano I, Yamashita F, Tanaka R, Sasaki M: Accuracy of computational fluid dynamics indices of unruptured cerebral aneurysms with 3 T magnetic resonance angiography. Neuroradiology. (2025) ② Mori F, Kaneko A, Matsuzawa T, Nishimura T: Computational fluid dynamics simulation wall model predicting air temperature of the nasal passage for nonhuman primates. Am J Phys Anthropol. 174(4):839-845 (2021) ③ Mori F, Ishida F, Natori T, Miyazawa H, Kameda H, Harada T, Yoshioka K, Yamashita F, Uwano I, Ito K, Sasaki M: Computational fluid dynamics analysis of lateral striate arteries in acute ischemic stroke using 7T high-resolution magnetic resonance angiography. J Stroke Cerebrovasc Dis. 28(11):104339 (2019) ④ Oshida S, Mori F, Sasaki M, Sato Y, Kobayshi M, Yoshida K, Fujiwara S, Ogasawara K: Wall shear stress and T1 contrast ratio are associated with embolic signals during carotid exposure in endarterectomy. Stroke. 49(9):2061-2066 (2018) ⑤ 文部科学省補助金 第1回AI for Science萌芽的挑戦研究創出事業(SPreAD)「課題名：脳腫瘍手術支援における深層学習を用いたトラクトグラフィ自動生成ツールの開発」2026年
中尾 良太	基盤的研究部門	助教			①特許第7796415号「名称：エリスロポエチンポリペプチドを含む融合タンパク質」共同出願 ②特許第7536294号「名称：抗体のF c 領域改変体」共同出願