

International Joint Research Projects Selected for FY 2024

(1) Development of Cutting-Edge Medical Therapies (11 Projects)

New Projects (6 Projects)

Selected Year	Project Number	Area	Principal Investigator	Position	Affiliation	Project Title	IMSUT Host Researcher	Project Member(s) ( Institution / Department )
2024	K24-1114	1	Yoichi Kosodo	Professor	Korea Brain Research Institute	Uncovering human neural differentiation by advanced multi-omics for the regeneration of brain function	Yasushi Saeki	Korea Brain Research Institute, RIKEN Cluster for Pioneering Research (CPR), Hiroshima University/Graduate School of Integrated Sciences for Life, Division of Protein Metabolism, The Institute of Medical Science, The University of Tokyo
2024	K24-1115	1	Haiping He	Associate professor	Department of Hematology, Wuhu Hospital, East China Normal University	The study of primed-umbilical cord-derived mesenchymal stromal cells to improve immunosuppressive properties in the treatment of GVHD	Tokiko Nagamura-Inoue	Department of Hematology, Wuhu Hospital, East China Normal University, Health Science Center, East China Normal University, Department of Cell Processing and Transfusion, The Institute of Medical Science, The University of Tokyo
2024	K24-1116	1	Estelle DUPREZ	Professor	Centre de Recherche en Cancérologie de Marseille / Institut Paoli Calmettes	Deciphering and targeting EZH2 non-canonical activities to overcome therapy resistance in acute myeloid leukemia.	Atsushi Iwama	Centre de Recherche en Cancérologie de Marseille / Institut Paoli Calmettes, IRCMS, Kumamoto University, Div. Stem Cell and Molecular Medicine, The Institute of Medical Science, The University of Tokyo
2024	K24-1117	1	Patricia Ernst	Professor	University of Colorado/Anschutz Medical Campus	Functional interplay between endogenous MLL1/KMT2A and MLL1-fusion oncoproteins	Atsushi Iwama	University of Colorado/Anschutz Medical Campus, University of Colorado/Anschutz Medical Campus, National Cancer Center Tsuruoka Metabolomics Laboratory, The Institute of Medical Science, The University of Tokyo
2024	K24-1118	1	Daniel Nicodemus Wilson	Professor	University of Hamburg	Structures of the Gcn2 kinase on the ribosome	Toshifumi Inada	University of Hamburg, Division of RNA and gene regulation, The Institute of Medical Science, The University Of Tokyo
2024	K24-1119	1	Hiroyuki Yamano	Professor	University College London	Deciphering Molecular Dynamics of the APC/C ubiquitin system: Advanced IDR Visualisation and APC/C-Ribosome Interactions	Toshifumi Inada	University College London, The Institute of Medical Science, The University Of Tokyo

Continuing Projects (5 Projects)

Selected Year	Project Number	Area	Principal Investigator	Position	Affiliation	Project Title	IMSUT Host Researcher	Project Member(s) ( Institution / Department )
2024	K22-1040	1	Yunwen Zheng	Professor	Guangdong Provincial Key Laboratory of Large Animal Models for Biomedicine, and School of Biotechnology and Health Sciences, Wuyi University	Reconstruction of human liver in Fah <sup>-/-</sup> rats with hiPSC derived liver organoids	Taniguchi Hideki	Guangdong Provincial Key Laboratory of Large Animal Models for Biomedicine, and School of Biotechnology and Health Sciences, Wuyi University, Division of Regenerative Medicine, Yokohama City University, School of Biotechnology and Health Sciences, Wuyi University, The Institute OF Medical Science, The University Of Tokyo
2024	K22-1073	1	Adam Clifford Wilkinson	Associate professor	University of Oxford	Hematopoietic stem cell rejuvenation therapies	Atsushi Iwama	University of Oxford, Center for Stem Cell Biology and Regenerative Medicine, University of Tsukuba, Laboratory of Stem Cell Therapy, Faculty of Medicine, University of Tsukuba, The Institute of Medical Science, The University of Tokyo
2024	K23-1050	1	Roland Beckmann	Professor	University Munich LMU	Structural basis of ribosome associated quality control	Toshifumi Inada	University Munich LMU, LMU, University of Munich LMU, The Institute of Medical Science, The University Of Tokyo
2024	K22-1059	1	Jacques-Olivier COQ	Professor	Centre National de la Recherche Scientifique	Mesenchymal Stromal Cell Therapy to Prevent Neurodevelopmental Disorders related to Low-Birth-Weight	Tokiko Nagamura-Inoue	Centre National de la Recherche Scientifique, Department of Cell Processing and Transfusion, Kyoto Women' s University/Department of Food and Nutrition, Aix Marseille University, Division of Metagenome Medicine, The Institute of Medical Science, The University of Tokyo
2024	K22-1039	1	Xiyun Yan	Professor	Institute of Biophysics, Chinese Academy of Sciences	Ferritin nanocaged doxorubicin for targeted hepatocellular carcinoma therapy	Yasushi Kawaguchi	Institute of Biophysics, Chinese Academy of Sciences, School of Basic Medical Sciences, Zhengzhou University, Division of Molecular Virology, Research Center for Zoonosis Control, Hokkaido University, The Institute of Medical Science, The University of Tokyo

## New Projects (4 Projects)

Selected Year	Project Number	Area	Principal Investigator	Position	Affiliation	Project Title	IMSUT Host Researcher	Project Member(s) ( Institution / Department )
2024	K24-2120	2	Lee-Yung Shih	Professor	Chang Gung Memorial Hospital at Linkou	Exploration of the functional role of FOXPI in the development of secondary myelofibrosis	YAUSHITO Nannya	Chang Gung Memorial Hospital at Linkou, Division of Hematology-Oncology, Chang Gung Memorial Hospital at Linkou, The Institute of Medical Science, Division Hematopietic Disease Control, Kyoto University, Department of Pathology and Tumor Biology, The Institute OF Medical Science, The University Of Tokyo
2024	K24-2125	2	Jiangning Song	Associate professor	Monash University	Deep learning-based multi-modal approaches for pan-cancer prognosis and cancer-specific biomarker discovery	Seiya Imoto	Monash University, Human Genome Center, Aichi Cancer Center / Division of Cancer Systems Biology, Monash University / Monash Biomedicine Discovery Institute, The Institute OF Medical Science, The University Of Tokyo
2024	K24-2121	2	Astari Dwiranti	Associate professor	Universitas Indonesia	Cell Technology for Testing Indonesian Natural Products as Anticancer and Antiaging Agents	Makoto Nakanishi	Universitas Indonesia, Department of Internal Medicine, Dr. Cipto Mangunkusumo General Hospital, Faculty of Medicine, Universitas Indonesia, Division of Surgical Oncology, Department of Surgery, Dr. Cipto Mangunkusumo General Hospital, Faculty of Medicine, Universitas Indonesia, Division of Thoracic Oncology, Department of Pulmonary Disease, Persahabatan Central General Hospital, Faculty of Medicine, Universitas Indonesia, Osaka University, Department of Biomolecular Science and Engineering, The Institute of Scientific and Industrial Research, Osaka University, The Institute of Medical Science, The University of Tokyo
2024	K24-2122	2	Hironori Funabiki	Professor	The Rockefeller University	Regulation of DNA methylation on the nucleosome	Makoto Nakanishi	The Rockefeller University, Division of Cancer Cell Biology, Yokohama City University, The Institute of Medical Science, The University of Tokyo

## Continuing Projects (7 Projects)

Selected Year	Project Number	Area	Principal Investigator	Position	Affiliation	Project Title	IMSUT Host Researcher	Project Member(s) ( Institution / Department )
2024	K23-2042	2	Kinoshita Masaki	Senior Research Fellow	University of Nottingham	Identification of the cellular behavior in xenogenic environment in interspecies chimaera	Kobayashi Toshihiro	University of Nottingham, National Institute for Physiological Sciences, Nara Medical University, The Institute of Medical Science, The University of Tokyo
2024	K22-2043	2	Patrick Tan	Professor	Duke-NUS Medical School	Understanding of epigenetic heterogeneity in intractable cancers	Tatsuhiko Shibata	Duke-NUS Medical School, Department of Surgery, Kyushu University Beppu Hospital, Division of Cancer Biology, Nagoya University Graduate School of Medicine, Laboratory of Molecular Medicine, The Institute of Medical Science, The University of Tokyo
2024	K22-2103	2	Iwei Yeh	Professor	University of California, San Francisco	The development of acral melanoma model and a novel early diagnostic method based on stem cell dynamics	Emi K Nishimura	University of California, San Francisco, Division of Aging and Regeneration, Tokyo Medical and Dental University, The Institute of Medical Science, The University of Tokyo
2024	K22-2056	2	Xiaodong He	Lecturer	Shandong University	Functional polarization of tumour-associated macrophages by tumor microenvironment	Makoto Nakanishi	Shandong University, Cancer Cell Biology, Institute of Medical Science, University of Tokyo, The Institute of Medical Science, The University of Tokyo
2024	K22-2057	2	Heinrich Leonhardt	Professor	Ludwig Maximilians University Munich	Regulation and Function of DNA methylation	Makoto Nakanishi	Ludwig Maximilians University Munich, Cancer Cell Biology, Yokohama City University/Structural Biology lab, The Institute of Medical Science, The University of Tokyo
2024	K23-2093	2	Gozde Korkmaz	Assistant professor	School of Medicine, Koç University	Functional interrogation of house-keeping enhancers&rsquo; role in cancer	Kenta Nakai	School of Medicine, Koç University, Institute for Life and Medical Sciences, Kyoto University, Functional Analysis in silico, Human Genome Center, The Institute OF Medical Science, The University Of Tokyo
2024	K23-2090	2	Pierre-Antoine Defossez	Professor	CNRS/Univ Paris	Genome stability and DNA methylation	Makoto Nakanishi	CNRS/Univ Paris, Cancer cell Biology, Yokohama City University/Structural Biology Laboratory, The Institute of Medical Science, The University of Tokyo

## (3) Infectious Diseases and Immunology (12 Projects)

## New Projects (2 Projects)

Selected Year	Project Number	Area	Principal Investigator	Position	Affiliation	Project Title	IMSUT Host Researcher	Project Member(s) ( Institution / Department )
2024	K24-3123	3	Mayda Gursesl	Professor	Izmir Biomedicine and Genome Center	Immunopathology of, and Response to, Protozoan Parasites	Cevayir Coban	Izmir Biomedicine and Genome Center, Malaria Immunology, The Institute of Medical Science, The University of Tokyo
2024	K24-3124	3	Jesus Hernandez	Professor	Centro de Investigación en Alimentación y Desarrollo, A.C.	Discovery of antibodies with potential therapeutic applications aided by machine learning and artificial intelligence.	Kenta Nakai	Centro de Investigación en Alimentación y Desarrollo, A.C., Laboratory of Functional Analysis in silico, Centro de Investigación en Alimentación y Desarrollo, AC/ Laboratory of Immunology, The Institute OF Medical Science, The University Of Tokyo

## Continuing Projects (10 Projects)

Selected Year	Project Number	Area	Principal Investigator	Position	Affiliation	Project Title	IMSUT Host Researcher	Project Member(s) ( Institution / Department )
2024	K22-3045	3	Peter Ernst	Professor	University of California, San Diego	Development of mucosal vaccines designed for infant based on the understanding of the infantile nasopharyngeal and gut mucosal immune system	Ken J ISHII	University of California, San Diego, University of California, San Diego (UCSD), Chiba University/Future Medicine Education and Research Organization, Chiba University Hospital/Department of Human Mucosal Vaccinology, Chiba University / Inovative Medicine, Wakayama Medical University / Department of Pediatrics, Wakayama Medical University / Department of Otolaryngology, Wakayama Medical University, The Institute of Medical Science, The University of Tokyo
2024	K22-3062	3	Catherine Jia-Yun Tsai	Postdoctoral fellow	University of Auckland	Harnessing the group A streptococcus pilus to develop novel universal influenza vaccines	Ken J ISHII	University of Auckland, University Of Auckland, Department of Human Mucosal Vaccinology, Chiba University Hospital, Influenza Virus Research Center, National Institute of Infectious Diseases (NIID), The Institute of Medical Science, The University of Tokyo
2024	K22-3046	3	Warren Leonard	NIH Distinguished Investigator	National Institutes of Health (NIH)	Control of T cell and NK cell exhaustion to overcome viral infection and cancer development	Satoshi Takahashi	National Institutes of Health (NIH), National Institutes of Health (NIH), Project Division of Clinical Precision Research Platform, Graduate School of Pharmaceutical Sciences, Graduate School of Medicine, The Institute of Medical Science, The University of Tokyo
2024	K22-3082	3	Kaixia Mi	Professor	Institute of Microbiology, Chinese Academy of Sciences	Analysis of the mechanisms of co-infection with Mycobacterium and HIV in human macrophage lineage cells	Yasushi Kawaguchi	Institute of Microbiology, Chinese Academy of Sciences, Division of Molecular Virology, Research Center for Asian Infectious Diseases, The Institute of Medical Science, The University of Tokyo
2024	K23-3095	3	Jiri Zahradnik	Principal Investigator	Charles University	Prediction and monitoring of SARS-CoV-2 emerging lineages	Kei Sato	Charles University, The Institute of Medical Science, The University of Tokyo
2024	K22-3076	3	Anna Katharina Simon	Professor	Oxford University	Elucidation of mechanisms involved in tissue specific immunity during infection and vaccination	Cevayir Coban	Oxford University, Kennedy Institute of Rheumatology, University of Oxford, Malaria Immunology, Kennedy Rheumatology Institute, Oxford University, Max Delbrück Center Berlin, The Institute of Medical Science, The University of Tokyo
2024	K23-3044	3	Jacelyn Mei San Loh	Senior Research Fellow	University of Auckland	Development of a mucosal vaccine against Strep A infections	Ken J ISHII	University of Auckland, University of Auckland, Department of Molecular Medicine and Pathology - Infection and Immunity, Chiba University Hospital, Department of Human Mucosal Vaccinology, Chiba University Hospital, Department of Human Mucosal Vaccinology and HanaVax, The Institute of Medical Science, The University of Tokyo
2024	K22-3069	3	Zhihai Qin	Professor	Institute of Biophysics, Chinese Academy of Sciences	To study the molecular mechanism of COVID-19 protein ORF3a to stimulate the production of cytokine in macrophages	Yasushi Kawaguchi	Institute of Biophysics, Chinese Academy of Sciences, Research Institute for Microbial Diseases (RIMD), Osaka University, The Institute of Medical Science, The University of Tokyo
2024	K22-3063	3	Peter Katsikis	Professor	Erasmus University Medical Center	Human Systems Immunology of vaccine and immunotherapy	Ken J ISHII	Erasmus University Medical Center, (2) Division of Vaccine Science, Department of Microbiology and Immunology, International Vaccine Design Center (vDesC), Erasmus MC, University Medical Center/Immunology, Oxford University/SWD school of pathology, Division of Vaccine Science, Department of Microbiology and Immunology, International Vaccine Design Center (vDesC), Institute for Quantitative Biosciences, Hyogo College of Medicine/Immunology, The Institute of Medical Science, The University of Tokyo
2024	K23-3086	3	Eicke Latz	Professor	Deutsches Rheuma-Forschungszentrum Berlin (DRFZ)	The role of lysosomal RNase T2 in RNA-sensing Toll-like receptor responses	Kensuke Miyake	Deutsches Rheuma-Forschungszentrum Berlin (DRFZ), Div Innate Immunity, Dep Microbiol. Immunol., Wakayama Medical University, The Institute of Medical Science, The University of Tokyo