

Joint Research and Collaboration with Overseas Reserch Insitutions
Academic Year 2021

	Kumamoto University	Collaborating Institute	Country	Research Topics	Participants
1	Priority Organization for Innovation and Excellence	Dana-Farber Cancer Institute	United States of America	Epigenetic regulation in multiple myeloma	5
2		Research Institute of Molecular Pathology (IMP)	Austria	Functional analysis of fertilization-related genes	1
3		Baylor College of Medicine	United States of America	Searching for candidate genes for the development of male contraceptives	2
4	Faculty of Life Sciences (Medicine)	MD Anderson cancer center	United States of America	Comprehensive analysis of gastrointestinal cancer for identifying novel biomarker	1
5		Dana-Farber Cancer Institute	United States of America	Analysis of microbiome and epigenetics for the development of novel biomarker in Gastrointestinal cancers	1
6		Pau Brousse Hospital	France	Perioperative chemotherapy and prognosis in colorectal liver metastases	1
7		Medicl University of Innsbruck	Austria	Primary tumor location and survival after resection of colorectal liver metastases	1
8		Duke-NUS Medical School	Singapore	Development of novel therapeutic strategy based on integrative genomic analyses in gastrointestinal cancer	1
9		University of Texas Southwestern Medical Center	United States of America	Molecular Signature Predictive of Long-Term Liver Fibrosis Progression to Inform Antifibrotic Drug Development.	1
10		Imperial College London	United Kingdom	Dynamics and pathogenesis of human T-cell leukemia virus type 1 infected cells	6
11		The Ohio State University	United States of America	Molecular mechanisms of HBZ	4
12		NATIONAL HEART, LUNG, AND BLOOD INSTITUTE	United States of America	Mechanisms of lung fibrosis	7
13		Friedrich Miescher Institute for Biomedical Research, Basel, 4051, Switzerland.	Switzerland	Mitochondrial protein acetylation by Sirt3	1
14		KAIST	Republic of Korea	Proteomics using proximity labeling technique	2
15		Max-Planck-Institute for Heart and Lung Research	Germany	Role of Sirt7 in the development of atherosclerosis	3
16		Johns Hopkins Medical Institutions	United States of America	Changes in mTORC1 activation through PKG redox regulation	3
17		Zurich University, Children Hospital. Zurich	Switzerland	Ureagenesis analysis in healthy and UCD patients	30
18		Zurich University, Children Hospital. Zurich	Switzerland	Establishment for patient's specific iPSCs derived from UCD patients and drug development.	8
19		Heidelberg University	Germany	International Registry for inherited metabolic diseases	120
20		Pompeu Fabra University	Spain	Involvement of renal NFAT5 in salt-sensitive hypertension	5
21		University of Florida College of Medicine	United States of America	Investigation of renal ammonia transporters in matabolic acidosis	5
22		University of California,Irvine	United States of America	Investigation of the Association of Interdialytic Weight Gain in Long Intervals with Residual Renal Function Decline	3
23		Helen Diller Family Comprehensive Cancer Center/University of California, San Francisco	United States of America	Developing rational therapeutic approaches for acral melanoma	4
24		Imperial College London	United Kingdom	Elucidation of the mechanism of the tumor immunity using the Tocky technology	3
25		University of Michigan Medical School	United States of America	The movement of HERV-K in the genome	1

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26	Faculty of Life Sciences (Medicine)	Nova Southeastern University	United States of America	Molecular mechanisms of NLRP3 inflammasome inhibition	2
27		Bristol-Myers Squibb K.K.	United States of America	Development of novel therapeutic strategy for Heart Failure	12
28		University of Utah	United States of America	Cardiac Metabolism Research	6
29		National Institute of Health (USA)	United States of America	Physiological functions of tRNA modifications	7
30		Cornell University (USA)	United States of America	Mechanism on the regulation of cilium structure	4
31		Yale University (USA)	United States of America	Molecular mechanism on mental retardation	5
32		University Health Network	Canada	Research for myeloid malignancies with DDX41 mutation	2
33		University of Saskatchewan	Canada	Pathological significance of DDX41 mutations on myeloid malignancies	1
34		Faculty of Advanced Science and Technology	University of Southern California	United States of America	Collaborative project of development and application of large-scale nonadiabatic quantum molecular dynamics simulations
35	Archaeological Museum of Pella		Greece	Joint research of the Palace at ancient Pella	5
36	University of Virginia		United States of America	Intelligent mobile escort robot that estimates human intentions	6
37	Melbourne University		Australia	Study of epoch of reionization with MWA telescope	20
38	National Centre for Radio Astrophysics		India	Gravitational wave detection with pulsar timing array	30
39	Franklin & Marshall College		United States of America	Pulsar search in Large Magellanic Cloud	5
40	University of Bordeaux		France	Development of optically active flexible materials based on molecular assembly-templated chiral hybrid nanostructures	20
41	Lanzhou Institute of Chemical Physics		China	Strategic nanofabrication of enhanced chirality and analytical applications	22
42	University of Dhaka		Bangladesh	Development of novel molecular recognition system for rapid analysis of water pollutants	20
43	Faculty of Advanced Science and Technology	Brookhaven National Laboratory	United States of America	Development of Supramolecular Nano-catalyst System for Carbondioxide Reduction	12
44		Noakhali Science and Technology University	Bangladesh	Development of hybrid hydrogels	5
45		Jilin University	China	Development of sensors using photo-functional molecular gels	12
46		Baku State University	Azerbaijan	Development of carbon-coated nano-composites	5
47		Universitat de València	Spain	Development of photo-sensing polymer hybrid with nano-dispersed photo-functional molecular gels	10
48		University of Connecticut	United States of America	Development of Supramolecular Organic Systems Exhibiting Chiroptical Function	6
49		Vytautas Magnus University	Lithuania	Nano-architectural approach and empirical study realizing high-speed micro analysis for environmental samples using highly-ordered π -JST Japan-Thai-Philippines e-ASIA Joint Research Program (Development of Functional Nanocarbon-Based Catalysts for Biomass Conversion	10
50		Chulalongkorn University(Thailand),De La Salle University(Philippines),Malaysia University,Kumamoto University	Other(Asia)		10

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51	Faculty of Advanced Science and Technology	University of Tübingen, Germany, Brescia University, Italy	Italy	JSPS International Joint Research Program 「design of highly sensitive gas recognition interfaces using 1D/2D nano materials」	10
52		Chulalongkorn University(Thailand), Kumamoto University	Thailand	JSPS「Biomass conversion into value-added compounds using nanocarbon-based catalysts」	10
53		Indonesian Institute of Sciences	Indonesia	JSPS「Development of electrochemical devices and membrane reactors based on proton conducting graphene oxide composite」	10
54		The University of Adelaide Australia	Australia	Australian Research Council(ARC)Research hub 「Advanced Manufacturing with 2D Materials」	10
55		University of Maribor	Slovenia	Fabrication of cellular material through explosive compaction and the mechanical behavior	7
56		Novosibirsk State Technical University	Russia	Shock imprinting of metal	7
57		Dalian University of Technology	China	Explosive welding of Al and Ti with stainless steel	5
58		Beijing Institute of Technology	China	Synthesis of graphene through shock-wave processing	6
59		Commonwealth Scientific And Industrial Research Organisation (CSIRO)	Australia	CSIRO Manufacturing engagement with Kumamoto University IROAST on science innovation	7
60		Palacky University in Olomouc	Czech Republic	Functional analysis of transcription factors regulating shoot regeneration	2
61		LANGEBIIO, CINVESTAV-IPN	Mexico	Hormonal and transcriptional control of carpel margin development	3
62		Ceracomp Co. Ltd.	Republic of Korea	Ferroelectric Photovoltaics	4
63		École Nationale d'Ingénieurs de Saint-Étienne (ENISE), École Centrale de Lyon (ECL), University of Lyon	France	Properties and modelling of Textile reinforced concrete under aggressive environment	4
64		City, University of London	United Kingdom	AI-based performance evaluation and optimization of steel-concrete composite structures under strong earthquake	4
65		Technischen Universität Darmstadt	Germany	Structural performance and design methods of demountable structures	3
66		Sichuan University	China	Seismic performance and design of bolted precast RC walls	3
67		Zhengzhou University	China	Bond behavior and models of CFRP bars in ultra high-strength concrete	3
68		Sichuan University	China	Seismic performance and design of high resilient RC beam-column joints	4
69		Southwest Jiaotong University	China	Seismic performance and key damage control approach of RC frames infilled by masonry wall: an experimental and numerical study	3
70		Dalian University of Technology	China	Seismic performance and design of concrete columns confined by steel-FRP composite tube	3
71	Zhejiang University	China	Basic research on a smart sensor eco-formwork system for I-Construction of concrete structures	2	
72	Joint Research Center for Human Retrovirus Infection	Muhimbili University of Health and Allied Sciences	Tanzania	Collaboration study on HIV/AIDS and COVID-19 in Tanzania	20
73		Muhimbili University of Health and Allied Sciences	Tanzania	Intercontinental Research and Educational Platform Aiming for Eradication of HIV/AIDS	41
74		University of Oxford, UK	United Kingdom	Analysis of HIV-1 peptides presented by HLA class I	8
75		University of Oxford, UK	United Kingdom	A study of HLA-B35 in HIV-1 infection	5

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76	Joint Research Center for Human Retrovirus Infection	University of Oxford, UK	United Kingdom	A study of AIDS vaccine development	8
77		Simon Fraser University, USA	Canada	A study of HLA-associated polymorphism	6
78		National Cancer Institute (NCI) -Frederick, USA	United States of America	A study of HLA class I and NK receptor in HIV-1 infection	8
79		National Cancer Institute (NCI) -Frederick, USA	United States of America	A study of HLA associated with HIV-1 disease progression	5
80		National Hospital of Tropical Diseases, Vietnam	Viet Nam	A study of HIV-1 subtype A/E in Hanoi cohort	15
81		University of Cambridge	United Kingdom	Elucidating the virological feature of newly emerged SARS-CoV-2	20
82		University of Minnesota	United States of America	Function of APOBEC3 proteins	2
83		Mahidol University	Thailand	Development of novel anti-tumor reagents using mouse model.	6
84		Khon Kaen University	Thailand	Development of novel anti-cholangiocarcinoma therapy.	7
85		Burapha University	Thailand	Evaluation of Thai traditional herb extracts of anticancer potential on cholangiocarcinoma	6
86		Mae Fah Luang University School of Medicine	Thailand	Antimicrobial resistance of bacteria from Thai food.	6
87		Mahidol University	Thailand	Development of PDX mice	6
88		Chaing Mai University, Faculty of Associate Medical Science	Thailand	Developmental of antibody therapy for hematological malignancies.	5
89		Burapha University	Thailand	Evaluation of Thai traditional herb extracts of anticancer potential.	5
90		NYU School of Medicine	USA	Development and characterization of a panel of anti-idiotypic antibodies to 1C10 that cross-neutralize HIV-1 subtype B viruses.	5
91	Université de Montréal	Canada	Research for clinical application of CD4mimic small molecule	5	
92	Institute of Resource Development and Analysis	Universite Paris Descartes	France	Analysis of the Bnc2 gene function using the exchangeable gene trap mouse line; Ayu21-18.	10
93		Gwangju Institute of Science and Technology (GIST)	Republic of Korea	Analysis of the Ccdc55 gene function using the exchangeable gene trap mouse line; Ayu21-T93.	10
94		Gwangju Institute of Science and Technology (GIST)	Republic of Korea	Analysis of the Igsf4 gene function using the exchangeable gene trap mouse line; Ayu21-W34.	10
95		Seoul National University College of Medicine	Republic of Korea	Analysis of the Cd99 gene function using the exchangeable gene trap mouse line; Ayu21-B6T44 (A)	10
96		Seoul National University College of Medicine	Republic of Korea	Analysis of the Cd99 gene function using the exchangeable gene trap mouse line; Ayu21-B6T44 (B)	10
97		Max Planck Institute of Molecular Biomedicine	Germany	Analysis of the Cd99 gene function using the exchangeable gene trap mouse line; Ayu21-B6T44.	10
98		Max Planck Institute of Molecular Cell Biology and Genetics	Germany	Analysis of the Hmbox1 gene function using the exchangeable gene trap mouse line; Ayu21-T346.	10
99		Seoul National University College of Medicine	Republic of Korea	Analysis of the Kcnk5 gene function using the exchangeable gene trap mouse line; Ayu21-81.	10
100		Christain Albrechts Universitat Kiel	Germany	Analysis of the Sppl2b gene function using the exchangeable gene trap mouse line; Ayu21-T160.	10

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101	Institute of Resource Development and Analysis	Mount Sinai School of Medicine	United States of America	Analysis of the Nr1h2 gene function using the exchangeable gene trap mouse line; Ayu21-W143.	10
102		University of Miami	United States of America	Analysis of the Mbd5 gene function using the exchangeable gene trap mouse line; Ayu21-B205.	10
103		Semmelweis University	Hungary	Analysis of the Duclg2 gene function using the exchangeable gene trap mouse line; Ayu21-KBW131.	10
104		University of Bristol	United Kingdom	Analysis of the Mir142 gene function using the knockout mouse line; 21-KBW111reKO.	10
105		St George's University of London	United Kingdom	Analysis of the Wdr11 gene function using the exchangeable gene trap mouse line; Ayu21-KBW205.	10
106		Medical Research Council Harwell	United Kingdom	Research on simple vitrification of mouse oocytes derived from ultrasuperovulation technique	3
107		Jackson Laboratory	United States of America	Development of experimental animals using ultrasuperovulation technique	4
108		Spanish National Biotechnology Centre	Spain	Research on genome editing technique using ultrasuperovulation technique	5
109		Institut Pasteur	France	Research on education system for reproductive technology	4
110		Spanish National Biotechnology Centre	Spain	Development of experimental animals using ultrasuperovulation technique	5
111		Shanghai Jiao Tong University	China	Development of experimental animals using ultrasuperovulation technique	3
112			United States of America	Development of experimental animals using ultrasuperovulation technique	4
113		Laboratory Animal Resource Center, Korea Research Institute of Bioscience and Biotechnology(KRIBB)	Republic of Korea	Development of experimental animals using ultrasuperovulation technique	3
114		University of Pennsylvania	United States of America	DSCR-1functional Analysis in endothelium	3
115		Harvard Medical School	United States of America	System analysis of vascular remodeling	2
116		Northwestern University Feinberg School of Medicine	United States of America	Lymphatic vascular development	6
117		CNIC	Spain	DSCR-1functional Analysis with arteriosclerosis	3
118	Institute of Molecular Embryology and Genetics	University of Texas	United States of America	Epigenetic regulation of energy metabolism	10
119		Novartis Institutes	United States of America	Epigenetic regulation of energy metabolism	10
120		University of Leicester	United Kingdom	Analysi of energy metabolism in knockout mice	10
121		University of Cologne	Germany	Analysi of energy metabolism in knockout mice	10
122		National Institute of Health	United States of America	Computational analysis of cell morphology	10
123		Ningbo University	#N/A	Functional analysis of chromatin factors	10
124		Suez Canal University	Egypt	Analysis of cancer epigenome	10
125		Khon Kaen University	Thailand	Analysis of cancer epigenome	10

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126	Institute of Molecular Embryology and Genetics	The University of Melbourne,	Australia	Study on meiosis in marsupial germ cell	2
127		University of North Carolina at Chapel Hill	United States of America	Mechanism of temozolomide sensitivity in glioblastoma	3
128	International Research Center for Medical Sciences	Coordination Centre for Transplantation of Organs, Tissue and Cells, Ministry of Healthcare of Ukraine	Ukraine	Cellular mechanism of chorioallantoic fusion in birds	2
129		Kazan Federal University	Russia	Molecular analysis of developmental arrest control and avian reprogramming	2
130		Mahidol University	Thailand	Reprogramming of avian fibroblast cells	2
131		National Taiwan University	Taiwan	Analysis of cancer metastasis using the avian CAM model	2
132		Rice University	United States of America	Regulation of pluripotency exit in human pluripotent stem cells	2
133		A*STAR, Bioinformatics Institute	Singapore	Understanding of Imprinting Immune Competence in Hematopoietic Stem Cells	8
134		IRCCS San Raffaele Scientific Institute	Italy	Understanding of Imprinting Immune Competence in Hematopoietic Stem Cells	8
135		Institute of Molecular Biology (IMB), Mainz	Germany	Role of tRNA modifier in erythropoiesis	2
136		Korea Advanced Institute of Science and Technology (KAIST)	Republic of Korea	Impact of inflammation on early hematopoiesis	3
137		Sorbonne University	France	Characterization of aged human hematopoiesis	2
138		University of Cambridge	United Kingdom	Characterization of aged human hematopoiesis	2
139		University Hospital Zurich	Switzerland	Role of Inflammation in hematopoietic stem cell homeostasis and pethogenesis	7
140		University of California San Francisco	United States of America	Understanding of Imprinting Immune Competence in Hematopoietic Stem Cells	8
141		Korea Advanced Institute of Science and Technology (KAIST)	Republic of Korea	In vivo analysis of neuronal circuit formation	3
142		Max Planck Institute for Heart and Lung Research	Germany	In vitro imaging of drug treated kidney cells	3
143		Meritorious Autonomous University of Puebla	Mexico	In vivo investigations on neurological disorders	2
144		National Institute of Psychiatry Ramon de la Fuente Muñiz	Mexico	In vivo investigations on neurological disorders	2
145		University of Modena and Reggio Emilia	Italy	In vivo investigations on neurological disorders	2
146	École polytechnique fédérale de Lausanne (EPFL)	Switzerland	In vivo optogenetics	3	
147	Deutsches Zentrum für Neurodegenerative Erkrankungen, (DZNE)	Germany	In vivo brain imaging	2	
148	Cincinnati Children's Hospital Medical Center	United States of America	Dysregulation of metabolism in leukemia cells	4	
149	Erasmus University Medical Center	Netherlands	Dysregulation of bone marrow niche in myeloid malignancies	4	
150	National University of Singapore	Singapore	Effect of developmental stages in leukemic trasformation	4	

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151	International Research Center for Medical Sciences	Imperial College London	United Kingdom	Time-dependent dynamic mechanisms of T cell regulation by single cell technologies	4
152		National Cancer Institute, NIH	United States of America	Role of FLCN-TFE3 axis in Renal Cell Carcinoma development	4
153		National Institutes of Health	United States of America	3D Chromatin structure dynamics in myeloid cell differentiation	2
154		Ghent University	Belgium	ATAC-seq and ChIP-seq analysis in myeloid cell differentiation	2
155	Faculty of Life Sciences (Pharmacy)	Sam Ratulangi University	Indonesia	Search for the drug leads from marine sponges	10
156		Technical University of Denmark	Denmark	Search for the drug leads from fungi	14
157		Colorado State University	United States of America	Search for the drug leads from fungi	14
158		Georgia State University	United States of America	Establishment of therapeutic approaches on intractable respiratory infection	8
159		Washington University in St. Louis	United States of America	Establishment of therapeutic approaches on intractable kidney diseases	6
160		The University of Manchester	United Kingdom	Comprehensive and pharmacological verification of therapeutic targets for glomerulonephritis identified by single cell analysis	1
161		Massachusetts General Hospital (Harvard Medical School)	United States of America	Analysis of factors determining the prognosis of stroke	2
162		Pirbright Institute	United Kingdom	Development of African swine fever virus vaccine	1
163		University of Oxford	United Kingdom	Development of African swine fever virus vaccine	1
164		University College of London	United Kingdom	Study on the correlation between CTLA-4 mutations and regulatory T cell function	1
165		Anadolu University	Turkey	Development of anti-cancer heterocyclic compounds	10
166		Istanbul University	Turkey	Development of biologically active quinone compounds	10
167		Koc University	Turkey	Dynamic structural analysis of protein-low molecular weight inhibitor complexes	10
168		Minia University	Egypt	Development of neuroprotective heterocyclic compounds	5
169	Faculty of Life Sciences (Health Sciences)	Faculty of Health and Medical Sciences, University of Surrey	United Kingdom	Generation Z's Views of Care and Care Careers An International Comparison	11
170		University of Pavia	Italy	Study of novel diagnostic methods in amyloidosis	5
171	Faculty of Humanities and Social Sciences	TU Braunschweig	Germany	Experiences of adults conceived via anonymous donor insemination	5