

Joint Research and Collaboration with Overseas Reserch Insitutions  
Academic Year 2023

Kumamoto University		Collaborating Institute	Country	Research Topics	Participants
1	Faculty of Life Sciences (Pharmacy)	Koc University	Türkiye	Structural analysis of protein-synthetic compound complexes	10
2		Istanbul University	Türkiye	Development of biologically active quinone derivatives	10
3		South Valley University	Egypt	Development of anticancer compounds	6
4		Sam Ratulangi University	Indonesia	Search for the drug leads from marine sponges	10
5		Georgia State University	United States of America	Establishment of therapeutic approaches on intractable respiratory infection	8
6		Washington University in St. Louis	United States of America	Establishment of therapeutic approaches on intractable kidney diseases	6
7		The University of Manchester	United Kingdom	Comprehensive and pharmacological verification of therapeutic targets for glomerulonephritis identified by single cell analysis	1
8	Priority Organization for Innovation and Excellence	University of Melbourne	Australia	Research on representation theory of W-algebras	1
9		University of Zagreb	Croatia	Research on representation theory of W-algebras	1
10		University of Alberta	Canada	Research on representation theory of W-algebras	1
11	Faculty of Advanced Science and Technology	Commonwealth Scientific And Industrial Research Organisation (CSIRO)	Australia	CSIRO Manufacturing engagement with Kumamoto University IROAST on science innovation	7
12		Univeristy of Birmingham	United Kingdom	Fracture and fatigue of advanced materials	6
13		Karlsruhe Institute of Technology	Germany	Micromechanisms of Nanotribology	5
14		Peking University	China	Characterization of advanced medical materials	5
15		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
16		City, University of London	United Kingdom	AI-based performance evaluation and optimization of steel-concrete composite structures under strong earthquake	4
17		Technischen Universität Darmstadt	Germany	Structural performance and design methods of demountable structures	3
18		Sichuan University	China	Seismic performance and design of bolted precast RC walls	3
19		Zhengzhou University, Henan University of Engineering	China	Bond behavior and models of CFRP bars in ultra high-strength concrete	4
20		Sichuan University	China	Seismic performance and design of high resilient RC beam-column joints	4
21		Southwest Jiaotong University, Chengdu University of Technology	China	Seismic performance and key damage control approach of RC frames infilled by masonry wall: an experimental and numerical study	4
22		Harbin Engineering University	China	Application of CFRP in Ultra-high strength concrete structures-durability and bond behavior	3
23		Zhengzhou University	China	Fire-resistance of RC structures reinforced with high strength rebars	3
24		Ceracomp Co. Ltd.	Republic of Korea	Ferroelectric Photovoltaics	5
25		Changzhou University	China	Spin-state dependent catalytic performance of multinuclear Fe coordination clusters	5
26		Wayne State University	United States of America	Unveiling the electronic structure and spin states of two-dimensional MOF, Cu <sub>3</sub> (Trip-H) <sub>2</sub> and Cu <sub>3</sub> (Trip-Me) <sub>2</sub>	4
27		Korea Basic Science Institute	Republic of Korea	Pulse ESR characterization of molecular spin qubits	4
28		University of Southern California	United States of America	Collaborative project of development and application of large-scale nonadiabatic quantum molecular dynamics simulations	10
29		Chinese Academy of Science	China	Explores the origins of Juncus decipiens, a material used to make tatami mats.	4
30		Federal Scientific Center of the East Asia Terrestrial Biodiversity, Far Eastern Branch of the Russian Academy of Sciences	Russia	Phylogeography of the temperate grassland plant Tephrosieris kirilowii (Asteraceae) inferred from multiplexed inter-simple sequence repeat genotyping by sequencing (MIG-seq) data.	14
31		Department of Forestry, Northeast Forestry University	China	Phylogeography of the temperate grassland plant Tephrosieris kirilowii (Asteraceae) inferred from multiplexed inter-simple sequence repeat genotyping by sequencing (MIG-seq) data.	14
32		Gangneung-wonju National University	Republic of Korea	Phylogeography of the temperate grassland plant Tephrosieris kirilowii (Asteraceae) inferred from multiplexed inter-simple sequence repeat genotyping by sequencing (MIG-seq) data.	14
33		Chinese Academy of Science	China	Phylogenomics and morphological evolution of the mega-diverse genus Artemisia (Asteraceae: Anthemideae): implications for its circumscription and infrageneric taxonomy.	23
34		Woods Hole Oceanographic Institution	United States of America	Study on role of hetero compounds produced by marine organisms in ecosystems based on observation of two- and three-dimensional chemical distributions	5
35		University of Camerino	Italy	Advanced SpM analysis of EXAFS	4
36		Jeonbuk National University	Republic of Korea	Electron microscopy observations of WO <sub>3</sub> particles	1

37	Indian Institute of Technology, Kharagpur	India	Electron microscopy characterization of Gd2O3 thin films	1
38	Virginia Tech	United States of America	Evolutionary mechanisms of Müllerian mimicry in millipedes	1
39	Independent	Hungary	Taxonomic revision of Riukiaria in main islands of Japan	1
40	University of Twente	Netherlands	Investigation regarding Multiscale Bio-Inspired Surface	1
41	The University of Adelaide	Australia	Investigation regarding Multiscale Bio-Inspired Surface	1
42	Shanghai Advanced Research Institute, Chinese Academy of Sciences	China	Investigation regarding Multiscale Bio-Inspired Surface	2
43	National University of Mongolia	Mongolia	Japan Mongolia Joint Workshop 2024	14
44	National Centre for Hydrometeorological Forecasting, Vietnam Meteorological and Hydrological Administration	Vietnam	Numerical and machine learning methods for storm surge predictions	5
45	Bucheon University	Republic of Korea	Development of Flood Analysis Algorithm for Integrated Multiple (EN) Physical Process Module(Typhoon, Wave, Hydrodynamic, and Urban Runoff) in Coastal Urban Areas	4
46	Korea University	Republic of Korea	Development of high-resolution ocean climate information production based on AR6 scenario	10
47	Kusan University	Republic of Korea	Development of risk management and prediction methods on coastal areas	3
48	Fisheries Research Institute, Council of Agriculture	Taiwan	Research on habitat situation and resource management of the hard clam Meretrix spp in Taiwan.	6
49	Mae Fah Luang University/Hiroshima University	Thailand	Japan-Thailand Joint Research and Development of a Teacher Training Program to Enhance Disaster Resilience	4
50	Cornell University, Weill Cornell Medicine	United States of America	Development of imaging of the immune microenvironment of glioblastoma using quantitative magnetic susceptibility mapping.	5
51	Helen Diller Family Comprehensive Cancer Center/University of California	United States of America	Developing rational therapeutic approaches for acral melanoma	4
52	Pompeu Fabra University	Spain	Involvement of renal NFAT5 in salt-sensitive hypertension and chronic kidney disease	3
53	National Institute of Health	United States of America	Physiological functions of tRNA modifications	7
54	Cornell University	United States of America	Mechanism on the regulation of cilium structure	4
55	Yale University	United States of America	Molecular mechanism on mental retardation	5
56	Brigham and Women's Hospital	United States of America	Pathophysiology of acute kidney injury	6
57	Georgia State University	United States of America	Elucidating the pathogenesis and developing novel therapies for chronic inflammatory disease	10
58	ALNYLAM PHARMACEUTICALS, INC.	United States of America	RNAi therapeutics for familial amyloidotic polyneuropathy	5
59	University of New Mexico College of Pharmacy	United States of America	Screening for novel drug discovery using animal disease models	5
60	Sapienza University of Rome	Italy	Neural stem cells in brain development and disease	5
61	Icahn School of Medicine at Mount Sinai, Mayo Clinic, Jacksonville, Memorial Sloan Kettering Cancer Center, The University of Texas MD Anderson Cancer Center	United States of America	Comparing Anticoagulation Strategies for Venous Thromboembolism Associated With Active Cancer: A Systematic Review and Meta-Analysis.	13
62	Division of Cardiology, Montefiore Medical Center, Albert Einstein College of Medicine, Division of Cardiology, Jacobi Medical Center, Albert Einstein College of Medicine, Division of Cardiovascular Medicine, The University of Iowa, and others	United States of America	Net clinical benefit of dual antiplatelet therapy in elderly patients with acute coronary syndrome: A systematic review and meta-analysis	11
63	Icahn School of Medicine, Montefiore Medical Center, Albert Einstein College of Medicine, University of Iowa Hospitals and Clinics, Gill Heart and Vascular Institute, University of Kentucky	United States of America	P2Y12 Inhibitors in Patients with Non-ST-Segment Elevation Acute Coronary Syndrome: Insights from a Systematic Review and Meta-Analysis of Randomized Trials.	6
64	Max-Planck-Institute	Germany	Functional analysis of SIRT7	6
65	Swiss Federal Institute of Technology in Lausanne(EPFL)	Switzerland	Functional analysis of SIRT7	6
66	Bristol-Myers Squibb Company	United States of America	Development of ANGPTL2 Neutralizing Antibody for the Treatment of NASH/Heart Failure	10
67	Fralin Biomedical Research Institute at VTC (Virginia Tech)	United States of America	Clarifying Molecular basis of Heart failure	6
68	Imperial College London	United Kingdom	Dynamics and pathogenesis of human T-cell leukemia virus type 1 infected cells	6
69	The Ohio State University	United States of America	Molecular mechanisms of HBZ	4
70	University of California	United States of America	Pathogenesis of HTLV-1 and HTLV-2	4
71	Department of Chemistry, Brown University	United States of America	Anti-inflammatory effects of supersulfides	2
72	University of Michigan Medical School	United States of America	The movement of HERV-K in the genome	2
73	University of Leicester	United Kingdom	Identification and biological functions of new supersulfide metabolites	2
74	University of Oxford	United Kingdom	Circadian rhythm-mediated expression of endogenous retroviruses	2

Faculty of Life Sciences (Medicine)

75	MD Anderson cancer center	United States of America	Comprehensive analysis of gastrointestinal cancer for identifying novel biomarker	1
76	Dana-Farber Cancer Institute (Harvard university)	United States of America	Analysis of microbiome and epigenetics for the development of novel biomarker in Gastrointestinal cancers	1
77	Pau Brousse Hospital	France	Perioperative chemotherapy and prognosis in colorectal liver metastases	1
78	Medicl University of Innsbruck	Austria	Primary tumor location and survival after resection of colorectal liver metastases	1
79	Duke-NUS Medical School	Singapore	Development of novel therapeutic strategy based on integrative genomic analyses in gastrointestinal cancer	1
80	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
81	Department of Transfusion Medicine, Warren G. Magnuson Clinical Center, National Institutes of Health	United States of America	Search for biomarkers related to liver fibrosis and liver cancer in Japan and the United States	4
82	Alaska Native Medical Center, Arctic Investigations Program, Centers for Disease Control	United States of America	Novel, unique mechanisms of HCC pathogenesis in Alaska Native persons with HBV infection: the role of HBV genotype F1b, and genotype-specific HBV mutations in causing HCC	10
83	Stanford University Medical Center – Gastroenterology and Hepatology	United States of America	Real-World Evidence from the Asia Liver Consortium for HCV (REAL-C)	20
84	Stanford University Medical Center – Gastroenterology and Hepatology	United States of America	Real-World Evidence from the Asia Liver Consortium for HBV (REAL-B)	20
85	Queen Mary Hospital	China	Usefulness of high-sensitivity HB core-related antigens in Hong Kong	4
86	Center of Excellence in Hepatitis and Liver Cancer, Department of Biochemistry, Chulalongkorn University	Thailand	Analysis of microbiome involved in liver disease progression of hepatitis patients during antiviral therapy in Japan and the Kingdom of Thailand, and examination of virus elimination treatment for hepatitis B	5
87	Division of Gastroenterology and Hepatology, Department of Internal Medicine, E-Da Cancer Hospital	Taiwan	Usefulness of high-sensitivity HB core-related antigens in Taiwan	5
88	Institute of Clinical Medicine National Yang-Ming University	Taiwan	Identification of pathological progression-related factors due to hepatitis virus infection by utilizing multi-layered omics technology using samples collected in a multipurpose cohort	5
89	Reference Centre for Viral Hepatitis at Central research Institute of Epidemiology	Russia	The Role of HBcrAg in Differentiation of HBsAg-positive Patients with Active and Inactive Disease	3
90	Indiana Center of Liver Research, Indiana University School of Medicine	United States of America	The study for chemoresistance of cholangiocarcinoma by targeting DNA damage response	2
91	Department of Medicine, School of Clinical Medicine, The University of Hong Kong	China	Research on viral hepatitis based on the Japan-U.S. Medical Cooperation Plan	9
92	Angers University Hospital	Republic of Cameroon	Evaluation of POCT reagents for HBcrAg in Cameroon	5
93	Aklilu Lemma Institute of Pathology (ALIPB), Addis Ababa University	Ethiopia	Evaluation of POCT reagents for HBcrAg in Ethiopia	5
94	Laboratoire de Virologie, Département de Biologie des Agents Infectieux Institut de Biologie, CHU Angers	France	Evaluation of POCT reagents for HBcrAg in France	5
95	Laboratoire Mixte de Vaccinologie (LAMIVAC)	Burkina Faso	Evaluation of POCT reagents for HBcrAg in Burkina Faso	5
96	University of North Carolina at Chapel Hill	United States of America	Evaluation of POCT reagents for HBcrAg in Kongo	5
97	Institut Pasteur du Cambodge	Kingdom of Cambodia	Evaluation of POCT reagents for HBcrAg in Cambodge	5
101	Karolinska Institute	Sweden	Analysis of hematopoietic stem cell characteristics using thermal proteome	5
102	Jagiellonian University	Poland	Regulations of erythroid differentiation in hematopoietic stem cells	4
103	Virginia Commonwealth University	United States of America	Roles for maternal bile acid synthetic enzymes in fetal development	4
104	Lund University	Sweden	Development of a gene induction system to hematopoietic stem cells using nano-straw technology	4
105	Cedars-Sinai Medical Center	United States of America	Intravital imaging of mouse brain	4
106	University of California	United States of America	Coupling and uncoupling of midline morphogenesis and a large-scale cell flow in avian gastrula	1
107	Stanford University	United States of America	Application of biophysical analysis to gastrulation movements	2
108	University of Miami	United States of America	Fluid dynamics based visualization/quantification technique to a large-scale cell flow during gastrulation	2
109	Beihang University	China	ETV2 induces endothelial, but not hematopoietic, lineage specification in birds	9
110	Kazan Federal University	Russia	ETV2 induces endothelial, but not hematopoietic, lineage specification in birds	9
111	Zhejiang University	China	ETV2 induces endothelial, but not hematopoietic, lineage specification in birds	9
112	Burapha University	Thailand	Dosage compensation of Z sex chromosome genes in avian fibroblast cells	12
113	Mahidol University	Thailand	Dosage compensation of Z sex chromosome genes in avian fibroblast cells	12
114	Burapha University	Thailand	A Bird's-Eye View of Endangered Species Conservation	4
115	Mahidol University	Thailand	A Bird's-Eye View of Endangered Species Conservation	4
116	Kazan Federal University	Russia	A Bird's-Eye View of Endangered Species Conservation	4

117	International Research Center for Medical Sciences	Guangzhou Laboratory	China	How studies in developmental epithelial-mesenchymal transition and mesenchymal-epithelial transition inspired new research paradigms in biomedicine	4
118		Chinese Academy of Sciences	China	How studies in developmental epithelial-mesenchymal transition and mesenchymal-epithelial transition inspired new research paradigms in biomedicine	4
119		University of Arizona	United States of America	How studies in developmental epithelial-mesenchymal transition and mesenchymal-epithelial transition inspired new research paradigms in biomedicine	4
120		University Paris-Saclay	France	Twenty years of EMT: A state of the field from TEMTIA X	9
121		FAU-University Erlangen-Nürnberg	Germany	Twenty years of EMT: A state of the field from TEMTIA X	9
122		Baylor College of Medicine	United States of America	Twenty years of EMT: A state of the field from TEMTIA X	9
123		University of Liège CHU	Belgium	Twenty years of EMT: A state of the field from TEMTIA X	9
124		The University of Tennessee Knoxville	United States of America	Twenty years of EMT: A state of the field from TEMTIA X	9
125		INSERM UMR-S	France	Twenty years of EMT: A state of the field from TEMTIA X	9
126		Queensland University of Technology and Translational Research Institute	Australia	Twenty years of EMT: A state of the field from TEMTIA X	9
127		Chinese Academy of Sciences	China	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
128		University of Nottingham	United Kingdom	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
129		European Bioinformatics Institute	United Kingdom	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
130		University of Bristol	United Kingdom	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
131		University of Birmingham	United Kingdom	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
132		University of Manchester	United Kingdom	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
133		University of Leicester	United Kingdom	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
134		Stazione Zoologica Anton Dohrn Napoli	Italy	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
135		Queen Mary University of London	United Kingdom	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
136		University of Barcelona	Spain	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
137		Barcelona Institute of Science and Technology	Spain	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
138		UiT - The Arctic University of Norway	Norway	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
139		Dartmouth College	United States of America	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
140		Emory University	United States of America	Hagfish genome elucidates vertebrate whole-genome duplication events and their evolutionary consequences	44
141		Rutgers University	United States of America	The role of ketone body metabolism in age associated diseases	2
142	University of Eastern Finland	Finland	The role of ketone body metabolism in cardiovascular development	2	
143	The Danish Research Institute of Translational Neuroscience.	Denmark	Integration of epegenetic modifications during the heart development	2	
144	Korea Advanced Institute of Science and Technology (KAIST)	Republic of Korea	Relationship between angiogenesis and metabolism	3	
145	UT Health San Antonio	United States of America	Epigenetic dysregulation of hematological malignancies	8	
146	National Institutes of Health	United States of America	High-resolution analysis of higher order chromatin structures	8	
147	Cancer Science Institute National University of Singapore	Singapore	Regulation of hematopoietic stem cells	6	
148	A*STAR, Bioinformatics Institute	Singapore	Understanding of Imprinting Immune Competence in Hematopoietic Stem Cells	6	
149	University of California San Francisco	United States of America	Understanding of Imprinting Immune Competence in Hematopoietic Stem Cells	6	
150	Insitute of Resource Development and Analysis	Medical Research Council Harwell	United Kingdom	Research on simple vitrification of mouse oocytes derived from ultrasuperovulation technique	3
151		Jackson Laboratory	United States of America	Development of experimental animals using ultrasuperovulation technique	4
152		Spanish National Biotechnology Centre	Spain	Research on genome editing technique using ultrasuperovulation technique	5
153		Institut Pasteur	France	Research on education system for reproductive technology	4
154		Spanish National Biotechnology Centre	Spain	Development of experimental animals using ultrasuperovulation technique	5
155		Shanghai Jiao Tong University	China	Development of experimental animals using ultrasuperovulation technique	3
156		Mouse Biology Program, University of California, Davis	United States of America	Development of experimental animals using ultrasuperovulation technique	4
157		Laboratory Animal Resource Center, Korea Research Institute of Bioscience and Biotechnology(KRIBB)	Republic of Korea	Development of experimental animals using ultrasuperovulation technique	3

158	Australia National University	Australia	Development of experimental animals using ultrasuperovulation technique	3
159	Institut Pasteur Montevideo	Uruguay	Research on education system for reproductive technology	3
160	Columbia University	United States of America	DSCR-1 functional Analysis in endothelium	3
161	Harvard Medical School	United States of America	System analysis of vascular remodeling	2
162	Northwestern University Feinberg School of Medicine	United States of America	Lymphatic vascular development	6
163	KAIST	Republic of Korea	Epigenome analysis of VEGF treated endothelium	3
164	Department of Veterinary Biosciences, Center for Retrovirus Research, The Ohio State University	United States of America	HTLV-1 intragenic viral enhancer influences immortalization phenotype in vitro, but is dispensable for persistence and disease development in animal models.	1
165	Department of Life Sciences, Imperial College London	United Kingdom	Single-cell level temporal profiling of tumour-reactive T cells under immune checkpoint blockade	3
166	Université de Bordeaux	France	Clonal succession rejuvenates CD8+ T cell responses against HIV-1	2
167	University of Oxford	United Kingdom	LC-MS analysis of HIV-1 peptides presented by HLA class I	8
168	University of Oxford	United Kingdom	A study of HLA-A11 in EV virus associated nasopharyngeal carcinoma	5
169	National Cancer Institute (NCI)	United States of America	A study of HLA-A11 in EV virus associated nasopharyngeal carcinoma	5
170	University of Oxford	United Kingdom	A study of AIDS vaccine development	8
171	Simon Fraser University	Canada	A study of HLA-associated polymorphism	6
172	National Cancer Institute (NCI)	United States of America	A study of HLA class I and NK receptor in HIV-1 infection	8
173	National Cancer Institute (NCI)	United States of America	A study of HLA associated with HIV-1 disease progression	5
174	National Hospital of Tropical Diseases	Vietnam	A study of HIV-1 subtype A/E in Hanoi cohort	15
175	Mahidol University	Thailand	Development of novel anti-tumor reagents using mouse model.	6
176	Khon Kaen University	Thailand	Development of novel anti-cholangiocarcinoma therapy.	7
177	Burapha University	Thailand	Evaluation of Thai traditional herb extracts of anticancer potential on cholangiocarcinoma	6
178	School of Medicine, Mae Fah Luang University	Thailand	Antimicrobial resistance of bacteria from Thai food.	6
179	Mahidol University	Thailand	Development of PDX mice	6
180	Chaing Mai University, Faculty of Associate Medical Science	Thailand	Developmental of antibody therapy for hematological malignancies.	5
181	Burapha University	Thailand	Evaluation of Thai traditional herb extracts of anticancer potential.	5
182	Chiang Mai University, Faculty of Science	Thailand	Establishment of novel anti-cancer immunotherapy	6
183	Siriraj Hospital of Mahidol University	Thailand	The mechanism of drug-resistant cholangiocarcinoma	6
184	Dana-Farber cancer Institute	United States of America	NK cell immunotherapy for Adult T cell Leukemia	3
185	The University of Texas Health Science Center at San Antonio	United States of America	APOBEC3 degradation is the primary function of HIV-1 Vif for virus replication in the myeloid cell line THP-1	8
186	University Hospital and Faculty of Medicine Tübingen	Germany	APOBEC3 degradation is the primary function of HIV-1 Vif for virus replication in the myeloid cell line THP-2	8
187	Suez Canal University	Egypt	APOBEC3 degradation is the primary function of HIV-1 Vif for virus replication in the myeloid cell line THP-3	8