

Research Subjects, Graduate School of Medical and Dental Sciences, Doctoral Program, Biomedical Sciences and Engineering Track

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BM : Institute of Biomaterials and Bioengineering
 MR : Medical Research Institute
 MT : Biomedical Laboratory Sciences
 DS:M&D Data Science Center

※ 1 : Institute of Physical and Chemical Research (Riken)
 ※ 2 : National Cancer Center

No.	Code	Department	Contact Person	Phone number	e-mail	Number of Students to be Admitted	Research Subject	Department Website	所属	
1	3010	Oral Pathology	IKEDA Tohru Scheduled to retire in March 2024	IKEDA Tohru	5803-5451	tohruhpa@tmd.ac.jp	8	1. Mechanism of bone destruction by oral cancer 2. Mechanism of infiltration and microenvironment of oral cancer 3. Development of digital histopathological diagnosis system 4. Novel diagnostic markers for salivary gland tumors	D	
2	3020	Bacterial Pathogenesis, Infection and Host Response	SUZUKI Toshihiko	SUZUKI Toshihiko	5803-4165	suzuki.bact@tmd.ac.jp	8	1. Molecular mechanisms of infection by pathogenic bacteria 2. Mechanisms of activation and regulation of inflammasomes 3. Study of virulent genes based on comparative genomics 4. Relationship between persistent bacterial infection and chronic inflammatory diseases	D	
3	3030	Molecular Immunology	AZUMA Miyuki Scheduled to retire in March 2024	AZUMA Miyuki	5803-5935	miyuki.mim@tmd.ac.jp	8	1. Cellular and molecular levels of functional analyses of immune diseases such as infection, allergy, autoimmune disease and cancer. 2. Analyses of lymphocyte functional molecules and development of immunotherapy by molecular targeting 3. Understanding of unique features of oral immune responses. 4. Therapeutic approach for control of oral diseases by immune intervention.	D	
4	3040	Advanced Biomaterials	UO Motohiro	UO Motohiro	5803-5467	uo.abm@tmd.ac.jp	8	1. Development of glass/ceramics for dentistry 2. Distribution and chemical state analysis of trace elements in the biological tissues 3. Development of dental composite resins 4. Non-destructive analysis methods for dental materials and tissues 5. Evaluations for various properties of dental materials and tooth	D	
5	3080	Dental Radiology and Radiation Oncology	MIURA Masahiko	MIURA Masahiko	5803-5897	masa.mdt@tmd.ac.jp	8	1. Differential diagnosis for oral and maxillofacial lesions using MRI 2. Clinical study on the prediction of prognosis after oral cancer treatment using CT 3. Clinical study on radiotherapy for oral cancer and development of novel therapeutic modalities 4. Radiobiological study on radiosensitization of oral cancer	D	
6	3090	Oral and Maxillofacial Surgical Oncology	HARADA Hiroyuki	HARADA Hiroyuki	5803-5506	hiro-harada.osur@tmd.ac.jp	8	1. Molecular biological research on the invasion and metastasis of oral cancer 2. Studies on the dysfunction and QOL of oral cancer after surgery 3. Clinical and basic research of oral cancer 4. Studies on the jaw reconstruction using by tissue engineering	D	
7	3110	Dental Anesthesiology and Orofacial Pain Management	MAEDA Shigeru	WAKITA Ryo	5803-5549	ryoanph@tmd.ac.jp	8	1. Non invasive drug delivery system 2. Autonomic nervous responses of non-invasive and invasive stimulation 3. Anxiety mechanism in central nervous system 4. Elucidation of the cause of chronic pain and the background factors related to chronic pain 5. Study on temporomandibular disorders and bruxism (sleep and awake)	D	
8	3130	Pediatric Dentistry / Special Needs Dentistry	IWAMOTO Tsutomu	KAKINO satoko	5803-5539	satokopd.pedo@tmd.ac.jp	8	1. Mechanisms of tooth development and dental diseases 2. Development of dental pulp examination and diagnostics in children 3. Study on abnormal oral morphology and function in children and its treatment 4. Study on oral biofilm formation and its inhibition 5. Oral management and oral health status of the persons with special needs 6. Development of self-help tools that combine with the retention device in the mouth for people with physical disability	D	
9	3140	Orthodontic Science	ONO Takashi	MATSUMOTO Yoshiro	5803-5527	y.matsumoto.orts@tmd.ac.jp	8	1. Comprehensive research related to respiratory function and cranio-maxillofacial morphology and function and central nervous system 2. Neurophysiological research related to stomatologic function and neuronal plasticity in the central and peripheral nervous systems 3. Morphological and molecular cytobiological research related to maxillofacial cranium and temporomandibular joint 4. Molecular cytobiological research related to biological reaction and tissue regeneration in response to functional changes or mechanical stresses 5. Biomaterial, bioengineering and biomechanical research related to morphologic and functional changes of occlusion in orthodontic treatment	https://www.tmd.ac.jp/english/dept/dentistry/orts/	D
10	3150	Cariology and Operative Dentistry	SHIMADA Yasushi	OTSUKI Masayuki	5803-5481	otsuki.ope@tmd.ac.jp	8	1. Study on caries prevention strategies 2. Development of novel diagnostic methods for dental caries 3. Study on remineralization therapy for dental caries 4. Improvement and evaluation of adhesive materials 5. Development of esthetic restorative treatment for minimal invasive dentistry 6. Development of tooth bleaching material and method	D	
11	3160	Masticatory Function and Health Science	FUEKI Kenji	FUEKI Kenji	5803-5514	kunfu.rpro@tmd.ac.jp	8	1. Clinical study (randomised controlled trials) on efficacy of prosthetic treatments 2. Study on association between masticatory function, brain function and cognitive function in denture wearers 3. Data sciences and epidemiologic study on association between prosthetic treatments and health 4. Diagnosis of dental disease and design of prosthesis design using AI 5. Study on material property and design of aesthetic restoration 6. Study on orofacial function, oral conditions, and devices on sports activities 7. Study on temporomandibular disorders (TMD), and sleep / awake bruxism	D	
12	3170	Pulp Biology and Endodontics	OKIJI Takashi	OKIJI Takashi	5803-5492	tokiji.endo@tmd.ac.jp	8	1. Dental pulp tissue regeneration 2. Immunohistochemical and molecular biological analysis of pulpal and apical periodontal diseases 3. Evaluation and improvement of nickel-titanium endodontic rotary instruments 4. Application of lasers, cone-beam CT and optical coherence tomography to endodontics	D	
13	3180	Advanced Prosthodontics	WAKABAYASHI Noriyuki	WAKABAYASHI Noriyuki	5803-4935	wakabayashi.rpro@tmd.ac.jp	8	1. Treatment Planning, Treatment and Evaluation in Prosthodontics 2. Design Optimization of Prosthodontic Biomaterials 3. Biological Evaluation of Oral Tissues in Prosthodontic Patients 4. Educational Development in Prosthodontics	https://www.tmd.ac.jp/pro/international/	D
14	3190	Regenerative and Reconstructive Dental Medicine	MARUKAWA Eriko	MARUKAWA Eriko	5803-5934	eriko.m.osur@tmd.ac.jp	8	1. Development of next-generation dental implant 2. Analysis and development of treatment methods for peri-implantitis 3. Optimization of the implant superstructure 4. Regeneration of bone and soft tissue	https://www.tmd.ac.jp/med/plas/english/	D
15	3200	Plastic and Reconstructive Surgery	MORI Hiroki	MORI Hiroki	5803-5923	moriplas@tmd.ac.jp	8	1. Pre and post operative breast or facial contour evaluation using 3D camera 2. Sensory recovery in the nipple-sparing or skin-sparing mastectomy 3. Development of classification and algorithm in blepharoptosis and blepharospasm surgery 4. Adipogenesis in an external negative pressure lymphedema model - A new possibility of scaffold transplantation 5. Blood circulation study of the surgical flap using indocyanine green angiography and multi slice CT	https://www.tmd.ac.jp/med/plas/english/	M
16	3210	Head and Neck Surgery	ASAKAGE Takahiro	ARIIZUMI Yousuke	5803-5912	ariizumi.hns@tmd.ac.jp	8	1. Anatomy of skull base 2. Relationship between HPV and head and neck cancer 3. Standardization of neck dissection 4. Development of skull base surgery 5. Endoscopic diagnosis and transoral surgery for superficial pharyngeal carcinoma		M
17	3220	Radiation Therapeutics and Oncology	YOSHIMURA Ryoichi	YOSHIMURA Ryoichi	5803-5311	ysmrrad@tmd.ac.jp	8	1. Development of brachytherapy for oral cancer, prostate cancer, and uterine cancer 2. Clinical research and development of IMRT and SRT 3. Development of radiotherapy in multimodality treatment for cancer		M
18	3230	Oral and Maxillofacial Anatomy	IWANAGA Joe	FUKINO Keiko	5803-5435	fukifana@tmd.ac.jp	8	Gross anatomy and clinical anatomy research in dental, oral, and maxillofacial region		D
19	3240	Cognitive Neurobiology	UESAKA Naofumi	UESAKA Naofumi	5803-5445	uesaka.cnb@tmd.ac.jp	8	1. Elucidation of mechanisms of neural circuit formation 2. Elucidation of roles of Glia in development, function, and disease of brain 3. Elucidation of Oral-Brain crosstalk 4. Elucidation of the singularity phenomenon in brain tumor progression and its significance 5. Development and application of genetic tools that enable cell type-specific genetic manipulation 6. Elucidation of mechanisms by which like and disgust emotions are generated by taste		D
20	3250	Molecular Craniofacial Embryology and Oral Histology	ISEKI Sachiko	ISEKI Sachiko	5803-5578	s.iseki.emb@tmd.ac.jp	8	1. Molecular mechanisms of craniofacial morphogenesis 2. Application of developmental mechanisms of craniofacial tissues to regenerative medicine 3. Molecular mechanisms of congenital anomalies and their clinical application		D
21	3260	Cellular Physiological Chemistry	WATABE Tetsuro (currently assigned)	NAKAHAMA Ken-ichi	5803-5574	nakacell@tmd.ac.jp	8	1. Studies of cell-cell communication via gap junction. 2. Studies of the mechanism in bone remodeling		D
22	3290	Maxillofacial Surgery	YODA Tetsuya		5803-5498		8	1. Clinical study of cleft lip and palate, and orthognathic surgery. 2. Cell biology and bone regeneration for reconstruction of facial bone and alveolar bone. 3. Basic and clinical research of temporomandibular joint and masticatory muscle disorders. 4. Basic and clinical research of diseases in oral and maxillofacial region.		D

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23	3300	Maxillofacial Orthognathics	MORIYAMA Keiji	OGAWA Takuya	5803-5533	t-ogawa.mort@tmd.ac.jp	8	1. Research on etiology, diagnosis, and treatment for developmental and congenital anomalies in the craniofacial region 2. Biomaterials research for the development of new orthodontic appliances 3. Epidemiological research related to dentofacial growth and malocclusion 4. Research on mechanical stress and bone metabolism 5. Research on stomatognathic function and central nervous system	https://tmd-mort.com/en/index.html	D
24	4580	Reconstructive Plastic Surgery	TANAKA Kentaro	TANAKA Kentaro	5803-5923	kenta.plas@tmd.ac.jp	8	1. Development of functional and aesthetic reconstruction following cancer ablation in head and neck 2. Does the improvement of capillary patency rate contribute to the preservation of transferred fatty tissue volume? 3. Evaluation of "quality" of autologous transplanted tissue focusing on postoperative functional recovery of sweat glands 4. Evaluation of blood supply to various flaps using ICG fluorescence angiography 5. Development of functional and aesthetic reconstruction for facial paralysis		M
25	3320	Cell Biology	NAKATA Takao	NAKAMURA Satoko	5803-5143	info.cbio@tmd.ac.jp	8	1. Optogenetic control of intracellular signaling 2. Cell biological approach using optogenetics to understand the mechanism of calcium signaling 3. Applications of optogenetics to regenerative medicine 4. A simple model system of uneven emergence of polarity protein by light and optogenetic proteins 5. The study of cell differentiation to muscles, neurons, and osteocytes using optogenetic tools	https://www.tmd.ac.jp/english/cbio/	M
26	3330	Medical Biochemistry	ASAHARA Hiroshi (currently assigned)				8	1. Study on the tumor suppressor Hippo pathway 2. Study on the tumor suppressor RASSF proteins 3. Study on the molecular link between chronic inflammation and oncogenesis 4. Study on skeletal muscle progenitor cells and the development of drugs against sarcopenia 5. Development and analysis of senescent accelerating animals		M
27	3340	Joint Surgery and Sports Medicine	KOGA Hideyuki	NAKAMURA Tomomasa	5803-4675	nakamura.ort@tmd.ac.jp	8	1. Regeneration and reconstruction of bone and joint tissues using mesenchymal stem cells 2. Mechanism analysis and development of treatment methods of bone- and joint-related inflammation and fibrosis 3. Analysis of mechanism for bone- and joint-related pain and development of its treatment 4. Analysis of sports injury mechanism and development of its treatment 5. Development of new joint prosthesis		M
28	3380	Biochemistry	WATABE Tetsuro	WATABE Tetsuro	5803-5447	t-watabe.bch@tmd.ac.jp	8	1. Understanding the multiple aspects of cancer microenvironment 2. Formation of cancer associated fibroblasts (CAFs) through endothelial-to-mesenchymal transition (EndMT) 3. Structural and functional analysis of lysosomal membranes 4. Heparan sulfate proteoglycan-mediated intracellular transport 5. Roles of VASH1 in the regulation of microtubules		
29	3390	Cell Signaling	NAKASHIMA Tomoki	NAKASHIMA Tomoki	5803-5472	naka.csi@tmd.ac.jp	8	1. Signal transduction mechanisms of bone cells such as osteoclast, osteoblast and osteocytes. 2. Development of clinical applications for diseases of the skeletal and locomotor system. 3. Exploitation of osteonetwork (systemic network between bone and other systems).		D
30	3410	Periodontology (Periodontology)	IWATA Takanori	IWATA Takanori	5803-5486	iwata.peri@tmd.ac.jp	8	1. Research on periodontal regeneration and stem cell therapy 2. Research on the mechanisms of periodontal pathogenicity 3. Research on the association between periodontitis and systemic diseases 4. Analysis of bacterial flora related to periodontal diseases and peri-implantitis		D
31	3411	Periodontology (Photoperiodontics)	IWATA Takanori AOKI Akira	AOKI Akira	5803-4392,5488	aoperi@tmd.ac.jp	8	1. Research on the application of lasers/LEDs in periodontal and peri-implant therapy 2. Research on photobiomodulation (PBM) effects of lasers/LEDs on cells/tissues 3. Research on the application of antimicrobial photodynamic therapy (a-PDT) in periodontal and peri-implant therapy 4. Research on the application of optical coherence tomography (OCT) in periodontal therapy		D 【注1】
32	4650	Biosignals and Inheritance	KUSUYAMA Joji	KUSUYAMA Joji	022-795-5755	joji.kusuyama.bsin@tmd.ac.jp	8	1. Transmission Mechanism for parental lifestyle effects on offspring health 2. Functional analysis of placenta-derived bioactive compounds 3. Elucidation of information processing in placenta 4. Implementation of placenta-regulated inheritance in medicine and industry		D
33	5100	Inorganic Biomaterials	KAWASHITA Masakazu	KAWASHITA Masakazu	5280-5016	kawashita.bcr@tmd.ac.jp	8	1. Development of ceramic micro/nano-particles for cancer treatment 2. Formation of antibacterial and bioactive titanium oxide surface layer on titanium by surface chemical modification 3. Elucidation of bone-bonding mechanism of hydroxyapatite -From a view point of protein adsorption- 4. Study on organically modified octacalcium phosphate 5. Development of antibacterial biomaterials for bone regeneration and infection prevention	https://www.tmd.ac.jp/bcr/index-e.html	D (BM)
34	3420	Global Health Promotion	FUJIWARA Takeo	FUJIWARA Takeo	5803-5190	fujiiwara.hlth@tmd.ac.jp	8	1. Social epidemiology (impact of social inequality, social capital, social network, and social support on health) 2. Life-course epidemiology (impact of child poverty and adverse childhood experiences on health) 3. Prevention on child abuse and neglect 4. Disaster and child and their family's mental health 5. Climate change and health 6. Epidemiological studies related to COVID-19	https://tmdglobalhealthpromotion.com/	M
35	3430	Parasitology and Tropical Medicine	ISHINO Tomoko	ISHINO Tomoko	5803-5193	tishino.vip@tmd.ac.jp	4	1. Elucidation of molecular mechanisms of Plasmodium infection of host cells. 2. Research on the cellular and molecular basis for malaria parasite life cycle 3. Research on drug resistance in malaria parasites 4. Research on a communication system by small RNAs in blood fluke, Schistosoma japonicum 5. Research on mechanisms of action of novel anti-schistosomal drugs	https://sites.google.com/view/tmd-parasitology	M
36	3440	Forensic Medicine	UEMURA Koichi Scheduled to retire in March 2024	UEMURA Koichi	5803-5197	kuemura.legm@tmd.ac.jp	Not recruiting this year	1. Studies on the mechanisms of cell death induced by drugs 2. Forensic toxicology / Alcohol medicine 3. Forensic pathology 4. Drug analysis		M
37	3460	Health Care Management and Planning	OKADA Shusho	OKADA Shusho	5803-4030	sokd.hcm@tmd.ac.jp	8	1. Administrative Measures to Promote Medical DX 2. Development of services that contribute to disease prevention and measures to ensure quality 3. Measures to promote data health 4. Measures to promote the international expansion of medical care 5. Differentiation and collaboration of medical functions, measures to realize medical concepts		M
38	3470	Molecular Epidemiology	KOCHI Yuta (currently assigned)	KOCHI Yuta	5803-4817	y-kochi.gfd@mri.tmd.ac.jp	8	1. Study on gene-environment interaction in the development of common chronic diseases. 2. Study on Developmental Origins of Health and Diseases (DOHaD). 3. Bioinformatics on disease mechanism. 4. Environment and epigenetic changes. 5. Application of personal genome information to human health care.		M (MR)
39	3490	Health Policy and Informatics	FUSHIMI Kiyohide	FUSHIMI Kiyohide	5803-4025	kfushimi.hci@tmd.ac.jp	8	1. Health information management for the development of DPC case mix system and PDPS payment system 2. Quantitative analytical method for planning and assessment of health care providing system 3. Methodology for hospital profiling and assessment of hospital functions 4. Utilization of electronic health data of health system 5. Health cost analysis and hospital management		M
40	3500	Life Sciences and Bioethics	YOSHIDA Masayuki	YOSHIDA Masayuki	5803-4724	masabec@tmd.ac.jp	4	1. Bioethical issues surrounding medical research 2. Development of efficient IRB management 3. Clinical and basic research in Medical Genetics 4. Genetic Counselor course (Master course only) https://www.tmd.ac.jp/bec/45_5b0631b6d7471/general/ 5. Clinical and basic research in vascular biology and atherosclerosis		M (ME)
41	3510	Forensic Dentistry	SAKURADA Koichi	SAKURADA Koichi	5803-4387	sakurada.fde@tmd.ac.jp	8	1. Personal identification based on dental findings 2. Personal identification using hard tissues such as teeth and bones, soft tissues, and body fluids 3. Personal identification based on facial reconstruction and image analysis 4. Development of new identification methods with biochemical or molecular biological techniques		D
42	3520	Health Care Economics	KAWABUCHI Koichi	IGARASHI Isao	5803-5931	igarashi.hce@tmd.ac.jp	8	1. Cross-sectional research on healthcare, dental care, nursing care, long-term care, and pharmaceuticals from the viewpoint of economics 2. Proposals on policy making in efficient delivery of healthcare, nursing care, and long-term care 3. Borderless and mutual development of various specialties such as dental care, healthcare, economics, management and accounting		D
43	3530	Dental Education Development	Under Selection				8	1. Research on curriculum for health care professional education 2. Comparative study of domestic and international dental education 3. Research and development of educational methods in health care professional education 4. Research and development of English education programs in health care professional education		D
44	3540	Oral Health Promotion	AIDA Jun	ZAITSU Takashi	5803-5476	zaitso.ohp@tmd.ac.jp	8	1. Research on epidemiology for oral health, relationships between oral and general health, and prevention of oral diseases 2. Research on social determinants of health inequalities and oral health promotion 3. Research on community dentistry and international oral health 4. Research on oral health care system 5. Research on tele-dental system		D
45	3560	Educational System in Dentistry	TSURUTA Jun	TSURUTA Jun	03-5803-5458	turucie@tmd.ac.jp	8	1. Development of programs and evaluation systems (curriculum) for undergraduate and postgraduate dental education which meet international standards 2. Development of teaching and learning methods for dental clinical education using simulators and VR simulators 3. Development of QA system for undergraduate and postgraduate dental education programs 4. Development of evaluation methods of validity and reliability of a QA system for dental education programs		D (CE)

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46	3570	Educational Media Development	KINOSHITA Atsuhiko	KINOSHITA Atsuhiko	5803-4643	kinoshita.emdv@tmd.ac.jp	8	1. Development of computer-assisted clinical simulation system for medical and dental practice training. 2. Development of new education system using information and communication technologies for medical and dental students. 3. Development and study of computerized dental simulator for training of dental cavity preparation and prosthodontic tooth preparation practices. 4. Development and study of dental model and kit for practical training. 5. Development of composing and screening system for original 3D movies from operator's viewpoint.		D
47	4480	Insured Medical Care Management	AI Masumi	AI Masumi	5803-4772	ai.vasc@tmd.ac.jp	8	1. Development of methodology and materials for education on medical insurance system and rules for insured medical treatment 2. Studies on management and supports for billing for medical service fees at insurance medical institutions 3. Studies on affairs of medical insurance system and provision of medical services		M
48	4500	Global Health Entrepreneurship	NAKAMURA Keiko	NAKAMURA Keiko	5803-4048	nakamura.ith@tmd.ac.jp	8	1. International development of trade and workforce for health services 2. Development of social business models for equitable delivery of healthcare 3. Lessons for healthcare entrepreneurs from the Healthy Cities Program 4. Evaluation of health impact of climate change 5. Community mHealth Integrated Care (ComHIC) to manage hypertension/diabetes in diverse economy settings		M
49	4600	Clinical Biostatistics	HIRAKAWA Akihiro	HIRAKAWA Akihiro	5803-5150	a-hirakawa.crc@tmd.ac.jp	8	1. Methodology for trial designs and statistical methods in clinical studies 2. Theoretical and practical research on data science in medical and health fields 3. Bayesian approach for clinical science 4. Regulatory science in pharmaceutical and medical device development	https://tmd-clinicalbiostatistics-lab.com/	M
50	4610	Infectious Disease Emergency Preparedness	YAZAWA Tomoko	YAZAWA Tomoko	5803-5213	t-yazawa.idep@tmd.ac.jp	8	1. Preparedness and response to infectious disease pandemics 2. Structure of healthcare system for Infectious diseases 3. Risk communication with clear policies and strategies		M
51	3590	Rehabilitation Medicine	KOGA Hideyuki (currently assigned)	SAKAI Tomoko	5803-5649	t_sakai.orth@tmd.ac.jp	8	1. Rehabilitation for total joint arthroplasty 2. Motion and gait analysis of healthy and disabled subjects 3. Biomechanical research for prevention of sports injury 4. Patient safety in rehabilitation medicine 5. Osteoporosis of children (individuals) with severe motor and intellectual disabilities		M (MH)
52	3600	Gerodontology and Oral Rehabilitation	MINAKUCHI Shunsuke Scheduled to retire in March 2024	MINAKUCHI Shunsuke	5803-5582	s.minakuchi.gerd@tmd.ac.jp	8	1. Research on the whole body control at the time of older people's dental treatment 2. Development of the new denture materials which was adapted for the aged society 3. Implant over denture for the old patient 4. Complete denture using CAD/CAM technique 5. Oral hypofunction and Oral frailty		D 【注3】
53	4570	Dysphagia Rehabilitation	TOHARA Haruka	FUKUYAMA Rie	5803-5559	fukuyama.rie.tmd@gmail.com	8	1. The effects of aging and frailty on swallowing function 2. The effect of dysphagia rehabilitation 3. Development of non-invasive device detects aspiration 4. Development of devices for evaluating oral and swallowing function 5. Basic research on nutritional status and intestinal bacteria using gastrostomy rats	https://www.tmd.ac.jp/english/dept/dentistry/drh/	D
54	3610	Laboratory Medicine	TOHDA Shuji	TOHDA Shuji	5803-5334	tohda.mlab@tmd.ac.jp	8	1. Molecular diagnostic tests for cancer and infectious diseases 2. Molecular pathogenesis of leukemia/lymphoma cells and its application for drug sensitivity tests 3. Search for signalling molecules to regulate leukemia stem cells for developing novel molecular-targeted drugs 4. Analysis of pathophysiology of cases showing abnormal data in clinical laboratory tests		M
55	3620	Intensive Care Medicine	WAKABAYASHI Kenji	WAKABAYASHI Kenji	03-5803-5959	wakabayashi.ccm@tmd.ac.jp	8	1. Analysis of the effect of rapid response system and associated risk factors for patient safety in Japanese hospitals 2. Investigation of the roles and mechanisms of extracellular vesicles in critical illness 3. Development of new medical device in the ICU 4. ICU mortality prediction using a machine learning approach		M
56	3640	Pharmacokinetics and Pharmacodynamics	NAGATA Masashi	NAGATA Masashi	5803-5601	mna-mpha@tmd.ac.jp	2	1. Pharmacokinetics and pharmacodynamics of drugs in disease states 2. Clinical pharmacokinetics and therapeutic drug monitoring 3. Prediction of PK and PD using AI method 4. Mechanism of drug-induced dysglycemia		M (MH)
57	3650	Medical Education Research and Development	YAMAWAKI Masanaga	Medical Education Research and Development	5803-4508	mkoizumi.merd@tmd.ac.jp	8	1. Research on Medical Education & Professional Development 2. Research on Interprofessional Education 3. Research on cognitive development in medical competence 4. Social Implementation of Innovation in Medical Educational 5. Research on Education in Health Promotion		M
58	3660	Acute Critical Care and Disaster Medicine	WAKABAYASHI Kenji (currently assigned)				8	1. Research on mechanisms of biological responses to severe stress and development of new therapeutic strategy 2. Clinical and basic research in related to serious torso/multiple trauma and epidemiology of trauma 3. Research on coagulopathy following traumatic injury/sepsis 4. Research on disaster medicine for largely scaled disasters such as earthquake and terrorism 5. Basic research on lipid mediators involved in multiple organ dysfunction after hemorrhagic shock		M
59	3670	Clinical Oncology	MORI Takehiko (currently assigned)	MORI Takehiko (currently assigned)	5803-5211	mori.hema@tmd.ac.jp	Not recruiting this year	1. Palliative care for cancer patients and their family; theory and practice 2. Precision medicine for cancer 3. Analysis of genetic profile for carcinoma of unknown primary 4. Role of biomarkers for the effect of novel anti-cancer drugs 5. Communication and consensus building in cancer therapy and care		M
60	3690	General Dentistry	NITTA Hiroshi	TONAMI Ken-ichi	5803-5565	ken1.gend@tmd.ac.jp	8	1. Research on the diversity of diagnosis and treatment plans for patients with multiple symptoms. 2. Research on the analysis of various factors required to make an accurate diagnosis 3. Research on the development of training methods for improving the abilities of students and residents 4. Behavioral science research in dentistry 5. Research on curriculum development and evaluation of dental education		D
61	3700	Psychosomatic Dentistry	TOYOFUKU Akira	TOYOFUKU Akira	5803-5909	toyoompm@tmd.ac.jp	8	1. Study on pathophysiological mechanisms of oral psychosomatic disorders 2. Psychosomatic study on oro-facial medically and psychiatrically unexplained symptoms 3. Psychopharmacological study on oral psychosomatic disorders 4. Brain imaging study of oral psychosomatic disorders with phantom pain or bite 5. Study on guidelines for the management of oral psychosomatic disorders		D
62	4490	Professional Development in Health Sciences	TAKADA Kazuki	TAKADA Kazuki	5803-4684	takada.rheu@tmd.ac.jp	Not recruiting this year	1. Needs assessment in health care 2. Needs assessment in professional development in health science fields		M
63	3580	Family Medicine	HASHIMOTO Masayoshi	secretary, Department of General Medicine	5803-5229	secretary.fmed@tmd.ac.jp	8	1. Research on the relationship between the characteristic of physicians and patients' medical seeking behavior or their health status 2. Research on non-verbal communication using artificial intelligence (AI) 3. Other researches of family medicine/general practice		M
64	4620	Infectious Diseases	GU Yoshiaki	GU Yoshiaki	5803-4138	yogu.cid@tmd.ac.jp	8	1. Antimicrobial stewardship in hospitals and clinics 2. Public awareness of infectious diseases and antimicrobial resistance 3. Prevention and treatment of healthcare-associated infection 4. Preparedness and response to health crisis due to infectious diseases		M
65	3730	Neuroanatomy and Cellular Neurobiology	TERADA Sumio	TERADA Sumio	5803-5149	terada.nana@tmd.ac.jp	8	1. Molecular mechanism of cytoskeletal dynamics 2. Spectroscopy development for a biomolecular localization and network analysis 3. Development of novel biosensors for cell biological applications 4. Microscopy development to visualize the dynamics of small chemical molecules	https://www.tmd.ac.jp/grad/nana/	M
66	3740	Systems Neurophysiology	SUGIHARA Izum Scheduled to retire in March 2024	SUGIHARA Izum	5803-5152	isugihara.phy1@tmd.ac.jp	Not recruiting this year	1. Development mechanisms and functional significance of the compartmentalization in the brain 2. Neuronal circuitry mechanisms in sensorimotor, autonomic and cognitive control 3. Sensorimotor integration in the oculomotor system	https://www.tmd.ac.jp/med/eng/eng/phy1-E.html	M
67	3760	Molecular Neuroscience	TANAKA Kohichi Scheduled to retire in March 2024	TANAKA Kohichi	5803-5846	tanaka.aud@mri.tmd.ac.jp	Not recruiting this year	1. The pathophysiology of major mental illnesses 2. The pathophysiology of neurodegenerative diseases 3. The role of neurotransmitters in brain development 4. The role of glial cells in brain function 5. Generation of animal models for neuropsychiatric disorders using genome editing tools		M (MR)
68	3770	Neuropathology	OKAZAWA Hitoshi	OKAZAWA Hitoshi	5803-5847	okazawa.npat@mri.tmd.ac.jp	Not recruiting this year	1. Elucidation of molecular mechanisms of polyglutamine diseases 2. Elucidation of molecular mechanisms of Alzheimer's diseases 3. Development of novel therapeutics against neurodegenerative diseases 4. Elucidation and therapeutic application of molecular mechanisms of neural stem cell differentiation		M (MR)
69	3780	Ophthalmology and Vision Science	OHNO Kyoko	TAKASE Hiroshi	5803-5302	h.takase.oph@tmd.ac.jp	8	1. Study on the mechanism of high myopia 2. Study on the mechanism of macular diseases 3. Study on the mechanism of uveitis 4. Development of new diagnostic tools in uveitis		M
70	3790	Otorhinolaryngology	TSUTSUMI Takeshi	TSUTSUMI Takeshi	5803-5303	tsutsumi.oto@tmd.ac.jp	8	1. Molecular biology in hearing and dysequilibrium disorder 2. Evaluation of gravity perception (basic and clinical researches) 3. Function of the inner ear hair cell (basic research) 4. Investigation of images and image-guided surgery in Otorhinolaryngology 5. Development of the management procedure for carcinoma in external auditory canal		M

No.	Code	Department	Contact Person	Phone number	e-mail	Number of Students to be Admitted	Research Subject	Department Website	所属
93	3990	Stem Cell Regulation	TAGA Tetsuya	TAGA Tetsuya	5803-5814	taga.scr@mri.tmd.ac.jp	Not recruiting this year		M (MR)
94	4050	Respiratory Medicine	MIYAZAKI Yasunari	MIYAZAKI Yasunari	5803-5950	miyazaki.pilm@tmd.ac.jp	8		M
95	4060	Gastroenterology and Hepatology	OKAMOTO Ryuichi	OKAMOTO Ryuichi	5803-5877	dept.gast@tmd.ac.jp	8		M
96	4070	Specialized Surgeries	FUJII Yasuhisa (currently assigned)	Nishizawa Masato	5803-5261	nishizawa.srg1@tmd.ac.jp	8		M
97	4080	Cardiovascular Medicine	SASANO Tetsuo	SASANO Tetsuo	5803-5205	sasano.cvm@tmd.ac.jp	8		M
98	4091	Anesthesiology (Anesthesiology)	UCHIDA Tokujiro	UCHIDA Tokujiro	5803-5325	uchida.mane@tmd.ac.jp	8		M
99	4092	Anesthesiology (Perinatal and Pediatric Anesthesiology)	UCHIDA Tokujiro TOYAMA Satoshi	TOYAMA Satoshi	5803-5325	toyama.mane@tmd.ac.jp	8		
100	4100	Cardiovascular Surgery	FUJITA Tomoyuki	FUJITA Tomoyuki	5803-5270	tfujita.cvs@tmd.ac.jp	8		M
101	4110	Nephrology	UCHIDA Shinichi	SOHARA Eisei	5803-5214	esohara.kid@tmd.ac.jp	8		M
102	4120	Comprehensive Reproductive Medicine	MIYASAKA Naoyuki	MIYASAKA Naoyuki	5803-5322	n.miyasaka.gyne@tmd.ac.jp	8		M
103	4130	Urology	FUJII Yasuhisa	Tanaka Hajime	5803-5295	hjturo@tmd.ac.jp	8	https://tmd.tokyo/	M
104	4140	Gastrointestinal Surgery	KINUGASA Yusuke	TANIOKA Toshiro	5803-5254	tanioka.srg1@tmd.ac.jp	8	https://www.tmdsurgery.com/	M
105	4150	Thoracic Surgery	OKUBO Kenichi	OKUBO Kenichi	5803-4071	okubo.thsr@tmd.ac.jp	8		M
106	4440	Igakuken Disease-oriented Molecular Biology	HARA Takahiko ARAI Makoto HASEGAWA Masato MIYAOKA Yuichiro TANNO Hidetaka	HARA Takahiko	5316-3310	hara-tk@igakuken.or.jp	8	https://www.igakuken.or.jp/english/index.html	※3 【注2：連携大学院分野】
107	4160	Clinical Anatomy	AKITA Keiichi	AKITA Keiichi	5803-5390	akita.fana@tmd.ac.jp	8		M
108	4170	Systems BioMedicine	ASAHARA Hiroshi	ASAHARA Hiroshi	5803-5015	asahara.syst@tmd.ac.jp	8	https://www.tmdsystemsbiomedicine.com/	M
109	4180	Comprehensive Pathology	OHASHI Kenichi (currently assigned)	Morito Kurata	5803-5177	kurata.pth2@tmd.ac.jp	8		M
110	4190	Molecular Oncology	TANAKA Shinji	TANAKA Shinji	5803-5184	tanaka.monc@tmd.ac.jp	8		M
111	4200	Surgical Pathology	AKASHI Takumi	AKASHI Takumi	5803-5660	akashi.path@tmd.ac.jp	8		M (MH)
112	4210	Experimental Animal Model for Human Disease	KANAI Masami	KANAI Masami	5803-5784	mkanai.arc@tmd.ac.jp	8		M (EA)
113	4220	Signal Gene Regulation	Under Selection						M (RC)
115	4290	Biofunction Research	ITAKA Keiji	ITAKA Keiji	5280-8088	itaka.bif@tmd.ac.jp	8		M (BM)
116	4320	Applied Gene Medicine	SASAKI Takehiko (currently assigned)				8		M (MR)
117	4330	Molecular Cytogenetics	Under Selection		5803-5820				M (MR)

No.	Code	Department	Contact Person	Phone number	e-mail	Number of Students to be Admitted	Research Subject	Department Website	所属
118	4360	Hematology	MORI Takehiko	MORI Takehiko	5803-5211	mori.hema@tmd.ac.jp	8 1.Exploration of tumorigenesis and treatment-refractoriness of hematological malignancies 2.Development of novel diagnostic methods and treatments for complications, including infections, of hematological disorders 3.Development of novel cellular therapy for hematological malignancies		M
119	4370	Molecular Endocrinology and Metabolism	YAMADA Tetsuya	IKEDA Kenji	5803-5216	kikeda.mem@tmd.ac.jp	8 1. Molecular mechanisms of diabetes mellitus and metabolic syndrome and their Therapeutic Strategies 2. Mechanisms of thermogenesis in systemic energy metabolism 3. Molecular Mechanisms of thermogenic fat induction 4. Epigenetic regulation of metabolic syndrome and its clinical implications 5. Molecular mechanisms of hormone-producing tumors and their pathophysiology		M
120	4380	Hepatobiliary and Pancreatic Surgery	TANABE Minoru	TANABE Minoru	5803-5928	tana.msrg@tmd.ac.jp	8 1. Establishment of multidisciplinary treatment for HPB malignancies based on surgery 2. Identification of new strategies for the minimum invasive surgery in HPB diseases 3. Development of therapeutic agents and markers related to drug-susceptibility for HPB malignancies 4. Clinical and basic research for liver transplantation 5. Pathophysiological research for liver microcirculation		M
121	4390	Orthopaedic and Spinal Surgery	KOGA Hideyuki (currently assigned)	Toshitaka Yoshii	5803-5279	yoshii.orth@tmd.ac.jp	8 1. Bone and cartilage metabolism 2. Development and evaluation of biomaterials for clinical application 3. Mechanism of spinal ligament ossification 4. Development of measuring device for spinal cord magnetic signals 5. Research of bone and spinal metastatic tumors		M
122	4400	Diagnostic Radiology and Nuclear Medicine	TATEISHI Ukihide	FUJIOKA Tomoyuki	5803-5311	radiology.mrad@tmd.ac.jp	8 1. Development of new imaging device 2.Development of imaging application using AI 3.Development of methodology for clinical trials using radioisotope 4. Development of new imaging drugs		M (MH)
123	4410	Genomic Function and Diversity	KOCHI Yuta	KOCHI Yuta	5803-4817	y-kochi.gfd@mri.tmd.ac.jp	8 1. Functional analysis of risk loci for complex diseases 2. Expression and splicing quantitative trait locus (eQTL and sQTL) analysis 3. Transomics analysis of complex diseases 4. Prediction of disease states based on genomic data	https://www.tmd.ac.jp/english/gfd/	M (MR)
124	4420	Human Genetics and Disease Diversity	TANAKA Toshihiro	TANAKA Toshihiro	5803-5230	ttana.brc@tmd.ac.jp	8 1. Elucidation of genetic architecture of human diseases using genetic information 2. Biomarker identification for genome-based personalized medicine 3. Functional Genomics 4. Statistical Genetics, Bioinformatics		M
125	4470	Applied Regenerative Medicine	SEKIYA Ichiro	SEKIYA Ichiro	5803-4017	sekiya.arm@tmd.ac.jp	8 1.Development of regenerative medicine with stem cells 2.Realization and industrialization of cell and regenerative therapy 3.Establishment of safety test for regenerative medicine 4.Translational research		M (SR)
126	4460	JFCR Cancer Biology	HIROTA Toru TAKEUCHI Kengo TOMIDA Akihiro SAITO Noriko TAKAHASHI Akiko MARUYAMA Reo		03-3570-0446	thirotat@jfcrc.or.jp	8 1. Molecular mechanisms of carcinogenesis and identification of cell-of-origin of cancer 2. Understanding mitotic chromosome dynamics in cancer, to exploit mitotic control to cancer intervention 3. Application of nanobiotechnology in cancer diagnostics 4. Pathological and genetic analysis of human cancer such as malignant lymphoma and lung cancer 5. Strategy for innovative drug therapy based on cancer biology 6. Regulation of gene expression in the nucleus and higher-order chromatin structure in cancer		※4 【注2：連携大学院分野】
127	4520	Computational and Systems Biology	SHIMAMURA Teppei				8 1. Exploration of disease etiologies driven by integrative analysis of clinical and omic data. 2. Molecular classification of and systems approach to understanding disease based on omic profiling. 3. Prediction for personalized/precision/preventive medicine. 4. Development of methodologies for the above.		M (MR)
128	4530	Personalized Genomic Medicine for Health	ISHIKAWA Kinya	ISHIKAWA Kinya	5803-4390	pico.nuro@tmd.ac.jp	8 1. Developing a new personalized genomic medicine for preventing common health problems, such as cancer, cardiovascular disease, and aging. 2. Studying monogenic disease toward gene identification, discovering pathogenesis and fundamental therapy.		M (PH)
129	4540	Organogenesis and Neogenesis	TAKEBE Takanori	YONEYAMA Yosuke	5803-4157	yone.iior@tmd.ac.jp	8 1. Developing self-organizing complex organoids by modeling organogenesis 2. Applying human organoid technology for drug development and (re)generative medicine 3. Studying novel inter-cellular communications mediated by physical cell-to-cell contact 4. Devising "Organo-Machines" based on the integral-disciplinary approach		M
130	4550	Integrated Analytics	MIYANO Satoru	SATORU Miyano	5280-8620	mddsc.dsc@tmd.ac.jp	8 1. Knowledge acquisition from big data by supercomputer and AI technologies 2. Unravelling the origin and heterogeneity of cancer by large-scale data analysis and mathematical modeling 3. Study on large-scale multi-omics data analysis 4. Study on system modeling and simulation for diseases		M&Dデータ科学センター
131	4560	Biostatistics	TAKAHASHI Kuniyuki	TAKAHASHI Kuniyuki	5280-8625	kunihikot.dsc@tmd.ac.jp	8 1. Biostatistical methodologies for medical and dental data analysis 2. Statistical assessments of spatio-temporal data 3. Statistical analysis for effective use of real-world database 4. Statistical methods and their applications for meta-analysis		M&Dデータ科学センター
132	4630	AI Systems Medicine	SHIMIZU Hideyuki	SHIMIZU Hideyuki	5280-8630	shimizu.dsc@tmd.ac.jp	8 1. Analysis of biomedical data 2. AI drug discovery 3. Systems Biology approach for cancer therapeutics 4. AI-driven bioengineering	https://shimizuhideyuki-lab.org/	M&Dデータ科学センター
133	4660	Neuroimmunology	SHICHITA Takashi	SHICHITA Takashi	5803-5838	shichita-tk@cmn.tmd.ac.jp	8 1. Elucidation of the molecular and cellular mechanisms of inflammation (brain damage) associated with brain injury 2. Elucidation of the molecular and cellular mechanisms of neural circuit repair (brain healing) after brain injury 3. Understanding the link between inflammation and repair after brain injury, leading to drug discovery that restores brain function	http://www.strk-renaissance.sakura.ne.jp	M (MR)
134	5020	Biomedical Devices and Instrumentation	MITSUBAYASHI Kohji	MITSUBAYASHI Kohji	5280-8091	m.bdi@tmd.ac.jp	8 1. Basic and applied research on "BioMedical Sensing" (integration with various engineering technologies) 2. Wearable devices and artificial organs with MEMS-tech and biocompatible polymers 3. Bio-fluorometric sensing of disease-based breath chemicals 4. Real-time imaging of transcutaneous volatiles for metabolic evaluation 5. Novel wearable biosensors (i.e. Head-set type gas-sensing system for transcutaneous blood volatiles)		BM
135	5030	Biomedical Informatics	NAKAJIMA Yoshikazu	NAKAJIMA Yoshikazu	5280-8173	nakajima.bmi@tmd.ac.jp	8 1. Fundamental and applied researches on bio-imaging. 2. Research on high-dimensionalization of medical images and data. 3. Research on computer analysis and diagnosis of medical data. 4. Research on description of biological information, human-body simulation and their application for medicine. 5. Research on computer-integrated surgical assistance systems.		BM
136	3280	Precision Biomedical Engineering	IKEUCHI Masashi	IKEUCHI Masashi	5280-8040	ikeuchi.mech@tmd.ac.jp	8 1. Polymer 3-D Micro/Nano Fabrication Technology 2. Micro-scale Soft Robotics 3. Integrated Microdevice for Mechanobiology Study 4. Medical Microsystem for Assisted Reproductive Technology 5. Automatic Micro-fluidic Tissue Culture System		BM
137	5050	Material-Based Medical Engineering	KISHIDA Akio	KISHIDA Akio	5280-8028	kishida.mbme@tmd.ac.jp	Not recruiting this year 1. Research on the materials and the engineering for tissue engineering and regenerative medicine 2. Research on the processing and high functionality of biological materials 3. Research on the novel method for evaluating inflammatory responses on medical materials in vitro 4. Research on the control technology of cellular functions by extracellular matrix-bound nanovesicles 5. Research on the high selective cell capture devices for immunomodulation		BM
138	5060	Organic and Medicinal Chemistry	KAGECHIKA Hiroyuki	KAGECHIKA Hiroyuki	5280-8032	kage.chem@tmd.ac.jp	8 1. Medicinal Chemistry of Retinoid and Nuclear Receptors 2. Development of Novel Modulators of Gene Transcription or Signaling Pathway for Clinical Application toward Intractable Diseases 3. Development of Functional Fluorescent Molecules for Elucidation of Cellular Signaling Pathway 4. Aromatic architecture based on the amide conformational properties		BM
139	5070	Chemical Bioscience	HOSOYA Takamitsu	HOSOYA Takamitsu	5280-8117	thosoya.cb@tmd.ac.jp	8 1. Drug seed development based on new synthetic methodologies 2. Development of new methods to connect molecules based on strained molecules 3. Probe synthesis for target protein identification of bioactive compounds 4. Probe design and synthesis for in vivo molecular imaging		BM
140	5080	Medicinal Chemistry	TAMAMURA Hirokazu	TAMAMURA Hirokazu	5280-8036	tamamura.mr@tmd.ac.jp	8 1. Development of bifunctional molecules using organic synthesis. 2. Development of peptidomimetics and drug discovery templates. 3. Development of antiviral agents and anti-cancer agents. 4. Development of bioprobes and chemical biology.	http://www.tmd.ac.jp/i-mde/www/en/biomolecular/index1.html	BM
141	5090	Metallic Biomaterials	Under Selection				Not recruiting this year 1. Development of zirconium alloys for minimizing MRI artifacts 2. Bio-functionalization of metals by electrochemical surface treatment and modification techniques 3. Strengthening of titanium alloys by severe working 4. Control of differentiation of stem cells on nanometer-level surface topography 5. Elucidation of interfacial reaction between materials and tissues		BM
142	5110	Organic Biomaterials	MATSUMOTO Akira	MATSUMOTO Akira	5280-8020	matsumoto.bsr@tmd.ac.jp	8 1. "On-skin-pancreas" technology for precision medicine in diabetes 2. Boronic acids-based molecular-recognition chemistry as a platform for diagnostic and therapeutic applications 3. Development of stimulus-cleavable chemistry and its application to biomaterials science and engineering 4. Next-era microneedle materials technology for home-use multidrug administration	http://www.tmd.ac.jp/bsr/index.html	BM
143	5120	Diagnostic and Therapeutic Systems Engineering	KAJI Hirokazu	KAJI Hirokazu	5280-8163	kaji.bmc@tmd.ac.jp	8 1. Biofabrication technology 2. Implantable drug delivery devices 3. Minimally invasive cell delivery system 4. Microphysiological systems	https://www.tmd.ac.jp/bmc/	BM
146	5130	Molecular Cell Biology	SHIBUYA Hiroshi	SHIBUYA Hiroshi	5803-4901	shibuya.mcb@mri.tmd.ac.jp	8 1. Molecular mechanism in cellular signaling of growth and differential factors 2. Molecular mechanism in the onset and progress of diseases 3. Molecular mechanism in the early development	https://www.tmd.ac.jp/mcb/	MR
147	5140	Developmental and Regenerative Biology	NISHINA Hiroshi	NISHINA Hiroshi	5803-4659	nishina.dbio@mri.tmd.ac.jp	Not recruiting this year 1. Study on signaling pathways that regulate cell survival and death 2. Study on signaling pathways that regulate embryonic stem cell proliferation and differentiation 3. Study on liver formation and regeneration using mice and fish 4. Study on molecular mechanisms regulating circadian clock		MR

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148	5150	Homeostatic Medicine	TOYOSHIMA Fumiko	TOYOSHIMA Fumiko	toyoshima.hm@tmd.ac.jp	8	1. Study on the regulatory mechanisms for autoantibody production in SLE and Guillain-Barre syndrome 2. Study on organelle signaling in B lymphocyte activation 3. Study on glycan signals that regulate antibody production 4. Development of novel drugs for multiple sclerosis and type 1 diabetes that regulate regulatory B cells. 5. Development of novel cancer immunotherapy		MR
149	5160	Advanced Nanomedical Engineering	UCHIDA Satoshi	UCHIDA Satoshi	5803-4954 uchida.anme@tmd.ac.jp	8	1. Development of nano DDS for mRNA, nucleic acids, and gene therapeutics 2. Molecular designing and engineering of mRNA for the delivery and therapeutic use 3. Development of mRNA vaccines for infectious disease prevention and cancer therapy 4. Disease treatment using mRNA therapeutics		MR
150	5170	Structural Biology	ITO Nobutoshi	ITO Nobutoshi	5803-4594 ito.str@tmd.ac.jp	8	1. Structural biology by X-ray crystallography and cryo-electron microscopy 2. Structural and kinetic analyses of protein-protein interactions 3. Molecular recognition of small-molecule ligands (drugs) by proteins 4. Computational biology of biological macromolecules using structural information		MR
151	5180	Biomolecular Pathogenesis	MATSUDA Noriyuki	MATSUDA Noriyuki	nr-matsuda.biom@tmd.ac.jp	8	1. Elucidation of molecular function of causative genes for hereditary Parkinson's disease, i.e., PINK1, Parkin, and DJ-1. 1-A. Study on the function of DJ-1 focusing on a novel post-translational modification. 1-B. Study on the function of PINK1 and Parkin during mitophagy (process for selective mitochondrial degradation). 2. Elucidation of the intracellular role of ubiquitin-mediated selective autophagy and mitophagy. 3. Identification of novel factors involved in membrane traffic during selective organelle degradation, and elucidation of their functions.		MR
155	5370	Functional Genome Informatics	NIKAIDO Itoshi	NIKAIDO Itoshi	5803-4057 itoshi.nikaido.fgin@tmd.ac.jp	8	1. Development of data science technologies for large-scale genome analysis using machine learning and computer science 2. Development of new experimental techniques for large-scale genome science 3. Study of the development of regenerative medicine and drug discovery using large-scale genome analysis		MR
156	5500	Medical Chemistry	SEGAWA Katsumori	SEGAWA Katsumori	5803-4905 segawa.mche@tmd.ac.jp	8	1. Identification of factors responsible for cellular membrane dynamics. 2. Aberrant membrane dynamics and associated diseases. 3. Identification of factors responsible for cellular homeostasis.		MR
157	5220	RIKEN Molecular and Chemical Somatology	TANIUCHI Ichiro SODEOKA Mikiko ISHIGAKI Kazuyoshi TANAKA Motomasa WATANABE Rikiya HAGIHARA Shinya	TANIUCHI Ichiro	045-503-7044 ichiro.taniuchi@riken.jp	8	1. Regulatory mechanisms for the lymphocyte development (Ichiro Taniuchi) 2. Design and synthesis of bioactive molecules based on synthetic organic chemistry and chemical biology research (Mikiko Sodeoka) 3. Discovery, target identification and analyses of mechanism of action of bioactive compounds that regulate biological function (Nobumoto Watanabe) 4. Molecular basis of psychiatric diseases and neurodegenerative disorders (Motomasa Tanaka) 5. Development of digital detection technology for disease-biomarkers based on single molecule biophysics (Rikiya Watanabe) 6. Regulation of physiological function of plants with synthetic molecules		※1 【注1：連携大学院分野】
158	5230	NCC Cancer Science	ARAKAWA Hirofumi MASUTOMI Kenkichi HAMAMOTO Ryuji YASUNAGA Masahiro KOGA Yoshikatsu UEMURA Yasushi	ARAKAWA Hirofumi	3547-5273 harakawa@ncc.go.jp	8	1. Carcinogenesis and molecular mechanism 2. Functions of cancer-associated genes and their alterations 3. Genomic, epigenomic and proteomic analysis of cancer and personalized medicine 4. Tumor microenvironment/cancer stem cells/non-coding RNA/signaling pathway 5. Molecular target/drug delivery/diagnosis and therapy		※2 【注1：連携大学院分野】
160	5390	Interdisciplinary Sciences	HIEDA Mitsunori NAKABAYASHI Jun YAGISHITA Kazuyoshi NARA Masayuki TOKUNAGA Shin-ichi	HIEDA Mitsunori	047-300-7120 hieda.las@tmd.ac.jp	8	1. Histopathological image analysis of hepatocellular carcinoma by artificial intelligence 2. The effects of hyperbaric oxygen environment on healing acceleration in soft tissue injuries 3. Spectroscopic analysis for molecules of life 4. Problems of graph theory as the basis of network structure in life science		
161	5400	Data Science Algorithm Design and Analysis	BANNAI Hideo	BANNAI Hideo	5280-8623 hdbn.dsc@tmd.ac.jp	8	1. Algorithms and data structures for matching, searching, and discovering patterns 2. Algorithms and data structures for compression and compressed data processing 3. Combinatorics on strings		DS
162	5410	AI Technology Development	BANNAI Hideo (Currently assigned)	BANNAI Hideo	5280-8623 hdbn.dsc@tmd.ac.jp	Not recruiting this year	1. Statistical theory and data-analytic approaches 2. Explainable AI technologies for systematic understanding of diseases 3. Analysis of omics data for healthcare 4. Network biology for uncovering gene regulatory networks		DS
163	5420	Molecular and Mechanistic Immunology	KATO Kazuki	KATO Kazuki	080-7218-6743 kato.kazuki@tmd.ac.jp	8	Our current research focus on 1. mechanism of anti-viral immune response 2. mechanism of autoimmune disease caused by self-attacking immune response 3. development of drugs targeting autoimmune and cancer disease 4. development of novel cell manipulation technology by using the CRISPR-Cas system, adaptive immune systems in prokaryotes		IR
164	5270	Anatomical and Pathological Sciences	HOSHI Osamu	HOSHI Osamu	5803-5361 o-hoshi.aps@tmd.ac.jp	8	1. Application of atomic force microscopy to biological fields. 2. Analysis of high-order structure of human chromosomes. 3. Analysis of dynamics of growth cones of neuron. 4. Molecular pathological study of biliary tract cancer and development of a novel therapy 5. Creation of digital content using cytological images, AI imaging diagnosis 6. Development of pathological diagnosis and pathological technology in developing countries		MT
165	5300	Hematological and Biophysical System Sciences	ITO Minami Associate Prof., NISHIO Miwako	NISHIO Miwako	5803-5882 mnishio.lmg@tmd.ac.jp	4	1. Mathematical models for context dependent visual information processing 2. Neural mechanisms underlying context dependent visual information processing 3. Developing methods to monitor vital information with aid of mathematical models		MT
166	5280	Clinical Information Applied Sciences	SUMI Yuki	AKAZA Miho	5803-5377 m-akaza.nuro@tmd.ac.jp	8	1. Pathogenic mechanisms of bronchial asthma, COPD, interstitial pneumonia 2. Gene therapy and immunotherapy for lung diseases 3. Pathogenesis of neuropsychiatric disease using non-invasive brain function tests and image analyses 4. Investigation of epilepsy using EEG 5. Evaluation of brain function using the event-related potential analysis		MT
167	5290	Clinical and Diagnostic Laboratory Science	KAKINUMA Sei	KAKINUMA Sei	5803-5365 skakinuma.gast@tmd.ac.jp	8	1. Development of novel disease models using human iPS cells and organoids to elucidate the pathophysiology of hepatobiliary diseases 2. Analysis of cell-to-cell interaction regulating development and progression of hepatobiliary diseases 3. Molecular mechanisms regulating homeostasis of stem/progenitor cells in hepatobiliary and pancreatic tissues 4. Research on molecular mechanisms regulating hepatic fibrosis and liver regeneration 5. Analysis on cell communication and signaling in the process of myocardial remodeling		MT
168	5310	Clinical Bioanalysis and Molecular Biology	OHKAWA Ryunosuke	OHKAWA Ryunosuke	5803-5374 ohkawa.alc@tmd.ac.jp	8	1. Development of a new biomarker to estimate residual risk for cardiovascular disease 2. Mechanism of HDL diversification and its effect on the character and function 3. Molecular mechanism of red blood cell-related lipids metabolism 4. Development of new models of neurological and mental disorders using genetically engineered mice 5. Study on molecular mechanisms of myelination in the central nervous system 6. Functional and structural analysis of cell adhesion molecules and extracellular matrix molecules		MT
169	5330	Molecular Microbiology and Immunology	SAITO Ryoichi	SAITO Ryoichi	5803-5368 r-saito.mi@tmd.ac.jp	8	1. Research on the evolution and diversity of multidrug-resistant bacteria 2. Research on the regulation system of virulence in pathogenic bacteria 3. Research on environmental microbiota dynamics and their interactions 4. Long-term immunity of virus-specific memory T cells 5. Hematopoietic stem cell mobilization and transplantation immunity 6. Immunotherapy and the molecular pathogenesis of leukemia		MT
170	1130	Lifetime Oral Health Care Science	ARAKAWA Shinichi	ARAKAWA Shinichi	5803-4968 shinperi@tmd.ac.jp	Not recruiting this year	1. Basic and clinical studies of the effects of ozone Ultrafine bubble water : Wound healing, Treatment for oral mucositis in patients, Periodontal therapy, Prevention of bacteremia and aspiration pneumonia, Preventing DUWL (Dental Unit Water Lines) contamination. 2. Clinical evaluation regarding Slight Acidic Electrolytic Water (SAEW) : Prevention of bacteremia and aspiration pneumonia, Preventing DUWL (Dental Unit Water Lines) contamination. 3. Development and evaluation of the education system for dental hygienists in perioperative oral care		OH
171	1140	Oral Care for Systemic Health Support	KABASAWA Yuhji	KABASAWA Yuhji	5803-4647 kabasawa.ocsh@tmd.ac.jp	8	1. Research on oral management and multidisciplinary collaboration during cancer treatment and perioperative period. 2. Research on the relationship between systemic disease and oral health. 3. Development of the new methods for oral care, oral mucositis prevention and oral mucosal disease treatment. 4. Research on social inequalities in oral health.		OH
172	1150	Preventive Oral Health Care Science	SHINADA Kayoko	SHINADA Kayoko	5803-4096 shinada.pvoh@tmd.ac.jp	Not recruiting this year	1. Oral Health strategy for preventive methods on oral diseases 2. Studies on preventive oral health care and oral health promotion 3. Development or assessment of oral care goods, materials and substances 4. Development and assessment of new programs in basic or clinical education for dental hygiene students 5. Development of education system for dental hygiene process or assessment		OH
173	1160	Oral Health Sciences for Community Welfare	MATSUO Koichiro	MATSUO Koichiro	5803-4545 matsuo.ohcw@tmd.ac.jp	8	1. Invention of oral frail preventive program for community dwelling older adults 2. Invention of monitoring system for eating behavior in dependent older adults 3. Innovative food technology systems for independent senior living 4. Establishment of oral management system during stroke recovery 5. Invention of perioperative oral management system for cancer patients		OH
174	1170	Oral Health Care Education	YOSHIDA Naomi	YOSHIDA Naomi	5803-4646 yoshida.ohce@tmd.ac.jp	8	1. Research and development of oral health education methods 2. Research and development of assessment tool for oral health 3. Development and evaluation of dental hygiene education system 4. Role of dental hygienists in team approaches to care of patients		OH
175	1620	Basic Oral Health Engineering	AOKI Kazuhiro	AOKI Kazuhiro	5803-4641 kazuhiro_aoki.bhoe@tmd.ac.jp	8	1. Development of novel bone anabolic reagents with suitable scaffold by interdisciplinary research among medical, dental, and engineering toward clinical applications. 2. Relationship between oral bacteria and systemic diseases - Interdisciplinary research toward improvement of lifestyle-related diseases - 3. Study on the quality of life related to functional restoration by dental prostheses 4. Research on the oral and maxillofacial prosthetic rehabilitation 5. Research on the role of dental technicians in team approaches		
176	1630	Digital Dentistry	KANAZAWA Manabu	TSUCHIDA Yumi	5803-5455 yumi.bmoe@tmd.ac.jp	8	1. The applications of the digital dentistry for the dental practice 2. The development of methods for fully digital removable dentures 3. Development of medical device software applying machine learning 4. The methods for the digitalized dental educations	https://www.tmd.ac.jp/ded/english/	
177	1640	Oral Biomedical Engineering	IKEDA Masaomi	IKEDA Masaomi	5803-5780 iked.a.csoe@tmd.ac.jp	8	1. Study on evaluation, improvement and development of CAD/CAM dental technology 2. Reevaluation of conventional analog techniques in dental laboratory 3. Application of dental technology by dental technician to various medical fields 4. Improvement of work environment and expansion of job categories for dental technicians 5. Study on international standardization of the dental technology in dental laboratory	https://www.tmd.ac.jp/english/oh/e/OP_F_55129a0981d7e/	