

Attached Table 2 List of Categories, Areas, Disciplines and Research Fields

(1) List of Categories, Areas, Disciplines and Research Fields for FY2010 Grants-in-Aid for Scientific Research

Category: Integrated Science and Innovative Science

Area	Discipline	Research Field	Item Number	Remark
Comprehensive fields	Informatics	Fundamental theory of informatics	1001	
		Software	1002	
		Computer system/Network	1003	A B
		Media informatics/Database	1004	A B
		Intelligent informatics	1005	
		Perception information processing/Intelligent robotics	1006	A B
		Sensitivity informatics/Soft computing	1007	A B
		Library and information science/Humanistic social informatics	1008	A B
		Cognitive science	1009	
		Statistical science	1010	
	Cerebral Neuroscience	Neuroscience in general	1101	
		Nerve anatomy/Neuropathology	1102	A B
		Neurochemistry/Neuropharmacology	1103	
		Neurophysiology and muscle physiology	1104	A B
		Fusional basic brain science	1105	
		Fusional brain recording science	1106	
		Fusional social brain science	1107	
	Laboratory animal science	Laboratory animal science	1201	
	Biomedical engineering	Biomedical engineering/Biological material science	1301	A B
		Medical systems	1302	
		Rehabilitation science/Welfare engineering	1303	A B
	Health/Sports science	Physical education	1401	A B
		Sports science	1402	A B
		Applied health science	1403	A B
	Human life science	General human life sciences	1501	A B
		Eating habits, studies on eating habits	1502	A B
	Science education/Educational technology	Science education	1601	※
		Educational technology	1602	※
	Sociology/History of science and technology	Sociology/History of science and technology	1701	
	Cultural property science	Cultural property science	1801	
	Geography	Geography	1901	
	Oncology	Carcinogenesis	1951	
		Tumor biology	1952	
		Tumor immunology	1953	
		Tumor diagnosis	1954	
		Clinical oncology	1955	
		Cancer epidemiology and prevention	1956	

Area	Discipline	Research Field	Item Number	Remark	
New multidisciplinary fields	Environmental science	Environmental dynamic analysis	2001		
		Environmental impact assessment/Environmental policy	2002	A B	
		Risk sciences of radiation/Chemicals	2003	A B	
		Environmental technology/Environmental materials	2004	A B	
		Nano/Micro science	Nanostructural science	2101	A B
			Nanomaterials/Nanobioscience	2102	A B
	Microdevices/Nanodevices		2103	A B	
	Social/Safety system science	Social systems engineering/Safety system	2201	A B	
		Natural disaster science	2202	A B	
	Genome science	Genome biology	2301		
		Medical genome science	2302		
		System Genome Science	2303		
	Living organism molecular science	Applied Genomics	2304	A B	
		Living organism molecular science	2401		
	Resource conservation science	Resource conservation science	2501		
	Area studies	Area studies	2601		
	Gender	Gender	2701		

Category: Humanities and Social Sciences

Area	Discipline	Research Field	Item Number	Remark
Humanities	Philosophy	Philosophy/Ethics	2801	
		Chinese philosophy	2802	
		Indian philosophy/Buddhist studies	2803	
		Religious studies	2804	
		History of thought	2805	
		Aesthetics/Art history	2806	
	The arts	Study of the arts/History of the arts/Arts in general	2851	
	Literature	Japanese literature	2901	
		Literature in English	2902	
		European literature (English literature excluded)	2903	
		Literatures/Literary theories in other countries and areas	2904	
	Linguistics	Linguistics	3001	※
		Japanese linguistics	3002	
		English linguistics	3003	
		Japanese language education	3004	
		Foreign language education	3005	※
	History	Historical studies in general	3101	
		Japanese history	3102	
		Asian history	3103	
		History of Europe and America	3104	
		Archaeology	3105	
	Human geography	Human geography	3201	
	Cultural anthropology	Cultural anthropology/Folklore	3301	

The first stage of the screening of the research fields that have the indication “A” or “B” in the remarks column is carried out in separate groups. The basis for this division in separate groups is the keywords that need to be selected within each research category. Make sure to select A or B based on the Attached Table “List of Categories, Areas, Disciplines and Research Fields”, when applying for these research fields

The first stage of the screening of the research fields that have the symbol “※” is carried out in separate groups. The basis for this division in separate groups is the keywords that need to be selected within “Scientific Research (C)”. Make sure to select a division number from 1 to 5 based on the Attached Table “List of Categories, Areas, Disciplines and Research Fields”, when applying for these research fields

In the case of “Scientific Research (C)”, 10 research fields carried in the “List of Disciplines and Research Fields with a Time Limit” have been set up as areas for screening, besides the main table.

(Category: Humanities and Social Sciences)

Area	Discipline	Research Field	Item Number	Remark
Social sciences	Law	Fundamental law	3401	
		Public law	3402	
		International law	3403	
		Social law	3404	
		Criminal law	3405	
		Civil law	3406	
		New fields of law	3407	
	Politics	Politics	3501	
		International relations	3502	
	Economics	Economic theory	3601	
		Economic doctrine/ Economic thought	3602	
		Economic statistics	3603	
		Applied economics	3604	
		Economic policy	3605	
		Public finance/ Monetary economics	3606	
		Economic history	3607	
	Business administration	Business administration	3701	※
		Commerce	3702	
		Accounting	3703	
	Sociology	Sociology	3801	※
		Social welfare and social work studies	3802	
	Psychology	Social psychology	3901	
		Educational psychology	3902	
		Clinical psychology	3903	
		Experimental psychology	3904	
	Education	Education	4001	※
		Sociology of education	4002	
		Education on school subjects and activities	4003	※
Special needs education		4004		

Category: Science and Engineering

Mathematical and physical sciences	Mathematics	Algebra	4101	※	
		Geometry	4102		
		General mathematics (including Probability theory/ Statistical mathematics)	4103		
		Basic analysis	4104		
		Global analysis	4105		
		Astronomy	Astronomy	4201	
	Physics	Particle/Nuclear/Cosmic ray/ Astro physics	4301	※	
		Condensed matter physics I	4302		
		Condensed matter physics II	4303	※	
		Mathematical physics/ Fundamental condensed matter physics	4304		
		Atomic/Molecular/ Quantum electronics	4305		
		Biophysics/Chemical physics	4306		
		Earth and planetary science	Solid earth and planetary physics	4401	
	Meteorology/Physical oceanography/Hydrology		4402		
	Space and upper atmospheric physics		4403		
	Geology		4404		
	Stratigraphy/Paleontology		4405		
	Petrology/Mineralogy/ Science of ore deposit		4406		
	Geochemistry/Astrochemistry		4407		
	Plasma science	Plasma science	4501		
	Chemistry	Basic chemistry	Physical chemistry	4601	
			Organic chemistry	4602	
			Inorganic chemistry	4603	
		Applied Chemistry	Analytical chemistry	4701	
			Synthetic chemistry	4702	
			Polymer chemistry	4703	
			Functional materials chemistry	4704	
			Environmental chemistry	4705	
Chemistry related to living body			4706		
Materials chemistry		Functional materials/Devices	4801		
		Organic industrial materials	4802		
		Inorganic industrial materials	4803		
		Polymer/Textile materials	4804		

Area	Discipline	Research Field	Item Number	Remark
Engineering	Applied physics	Applied materials science/ Crystal engineering	4901	
		Thin film/Surface and interfacial physical properties	4902	
		Applied optics/Quantum optical engineering	4903	
		Applied physics, general	4904	
		Engineering fundamentals	4905	
	Mechanical engineering	Materials/Mechanics of materials	5001	
		Production engineering/ Processing studies	5002	
		Design engineering/ Machine functional elements/ Tribology	5003	
		Fluid engineering	5004	
		Thermal engineering	5005	
		Dynamics/Control	5006	
		Intelligent mechanics/ Mechanical systems	5007	
	Electrical and electronic engineering	Power engineering/ Power conversion/ Electric machinery	5101	
		Electronic materials/ Electric materials	5102	
		Electron device/ Electronic equipment	5103	
		Communication/Network engineering	5104	
		System engineering	5105	
		Measurement engineering	5106	
		Control engineering	5107	
	Civil engineering	Civil engineering materials/ Construction/ Construction management	5201	
		Structural engineering/ Earthquake engineering/ Maintenance management	5202	
		Geotechnical engineering	5203	
		Hydraulic engineering	5204	
		Civil engineering project/ Traffic engineering	5205	
		Civil and environmental engineering	5206	
		Architecture and building engineering	Building structures/materials	5301
	Architectural environment/equipment		5302	
	Town planning/Architectural planning		5303	
	Architectural history/design		5304	
	Material engineering	Physical properties of metals	5401	
		Inorganic materials/ Physical properties	5402	
		Composite materials/ Physical properties	5403	
Structural/Functional materials		5404		
Material processing/treatments		5405		
Metal making engineering		5406		
Process engineering	Properties in chemical engineering process/Transfer operation/Unit operation	5501		
	Reaction engineering/ Process system	5502		
	Catalyst/Resource chemical process	5503		
	Biofunction/Bioprocess	5504		
Integrated engineering	Aerospace engineering	5601		
	Naval and maritime engineering	5602		
	Earth system and resources engineering	5603		
	Recycling engineering	5604		
	Nuclear fusion studies	5605		
	Nuclear engineering	5606		
Energy engineering	5607			

Category: Biological Sciences

Area	Discipline	Research Field	Item Number	Remark	
Biology	Basic biology	Genetics/Genome dynamics	5701		
		Ecology/Environment	5702		
		Plant molecular biology/ Plant physiology	5703		
		Morphology/Structure	5704		
		Animal physiology/ Animal behavior	5705		
		Biodiversity/Systematics	5706		
	Biological science	Structural biochemistry	5801		
		Functional biochemistry	5802		
		Biophysics	5803		
		Molecular biology	5804		
		Cell biology	5805		
		Developmental biology	5806		
	Evolutionary biology	5807			
		Physical anthropology	5901		
	Anthropology	Applied anthropology	5902		
		Agricultural sciences	Agriculture	Breeding science	6001
	Crop science/Weed science			6002	
	Horticulture/Landscape architecture			6003	
Plant pathology	6004				
Applied entomology	6005				
Agricultural chemistry	Plant nutrition/Soil science		6101		
	Applied microbiology		6102		
	Applied biochemistry		6103		
	Bioproduction chemistry/ Bioorganic chemistry		6104		
	Food science		6105		
Forestry	Forest science		6201		
	Wood science		6202		
Fisheries science	General fisheries		6301		
	Fisheries chemistry		6302		
Agro-economics	Agronomy		6401		
	Agro-engineering		Irrigation, drainage and rural engineering/Rural planning	6501	
Agricultural environmental engineering			6502		
Agricultural information engineering			6503		
Zootechnical science/ Veterinary medical science	Zootechnical science/ Grassland science	6601			
	Applied animal science	6602			
	Basic veterinary science/ Basic zootechnical science	6603			
	Applied veterinary science	6604			
	Clinical veterinary science	6605			
Boundary agriculture	Boundary agriculture	6701			
	Applied molecular and cellular biology	6702			
Medicine, dentistry, and pharmacy	Pharmacy	Chemical pharmacy	6801		
		Physical pharmacy	6802		
		Biological pharmacy	6803	※	
		Drug development chemistry	6804		
		Environmental pharmacy	6805		
		Medical pharmacy	6806		
	Basic medicine	General anatomy (including histology/embryology)	6901	※	
		General physiology	6902		
		Environmental physiology (including physical medicine and nutritional physiology)	6903		
		General pharmacology	6904		
		General medical chemistry	6905		
		Pathological medical chemistry	6906		
		Human genetics	6907		
		Human pathology	6908	※	
		Experimental pathology	6909	※	
		Parasitology (including sanitary zoology)	6910		
		Bacteriology (including mycology)	6911		
		Virology	6912		
Immunology	6913				
Medicine, dentistry, and pharmacy	Boundary medicine	Medical sociology	7001		
		Applied pharmacology	7002		
		Laboratory medicine	7003		
	Society medicine	Hygiene	7101		
		Public health/Health science	7102		
		Legal medicine	7103		
	Clinical internal medicine	General internal medicine (including psychosomatic medicine)	7201		
		Gastroenterology	7202	※	
		Circulatory organs internal medicine	7203	※	
		Respiratory organ internal medicine	7204	※	
		Kidney internal medicine	7205	※	
		Neurology	7206	※	
		Metabolomics	7207	※	
		Endocrinology	7208		
		Hematology	7209	※	
		Collagenous pathology/ Allergology	7210	※	
		Infectious disease medicine	7211		
		Pediatrics	7212	※	
	Embryonic/Neonatal medicine	7213			
	Dermatology	7214	※		
	Psychiatric science	7215	※		
	Radiation science	7216	※		
	Clinical surgery	General surgery	7301	※	
		Digestive surgery	7302	※	
		Thoracic surgery	7303	※	
		Cerebral neurosurgery	7304	※	
		Orthopaedic surgery	7305	※	
		Anesthesiology/Resuscitation studies	7306	※	
		Urology	7307	※	
		Obstetrics and gynecology	7308	※	
Otorhinolaryngology		7309	※		
Ophthalmology		7310	※		
Pediatric surgery		7311			
Plastic surgery		7312			
Emergency medicine	7313				
Dentistry	Morphological basic dentistry	7401			
	Functional basic dentistry	7402			
	Pathobiological dentistry/ Dental radiology	7403			
	Conservative dentistry	7404			
	Prosthetic dentistry	7405			
	Dental engineering/ Regenerative dentistry	7406			
	Surgical dentistry	7407	※		
	Orthodontic/Pediatric dentistry	7408			
	Periodontal dentistry	7409			
	Social dentistry	7410			
Nursing	Fundamental nursing	7501			
	Clinical nursing	7502			
	Lifelong developmental nursing	7503			
	Community health/ Gerontological nursing	7504	※		

(2) Table separate from the "List of Categories, Areas, Disciplines and Research Fields for FY2010 Grants-in-Aid for Scientific Research"

○ List of Disciplines and Research Fields with a Time Limit

Area	Detail	Item Number	Set Period
Pain science	Pain is the major factor affecting human quality of life (QOL), and thus pain control is one of the most important issues of medical care in the 21st century. The research field "pain science" attempts to totally promote pain researches encompassing various fields of biomedical sciences, such as pharmacology, esthematology, and neuroscience. The "pain science" includes (1) neurological, biochemical and molecular biological studies of the pain development and its regulation, (2) neurophysiological and pathophysiological approaches to the pain transmission and its regulation, (3) neurophysiological and psychological approaches to elucidate the motivation effects on pain development and transmission, (4) basic pharmacological, preclinical and clinical studies to develop innovative drugs and to elucidate pharmacological effects and side effects of new analgesics, and underlying mechanisms, (5) interdisciplinary and fusional studies (painclinic, clinical psychology etc.) on the treatments of intractable chronic pain, and (6) researches on genetic factors regulating the pain susceptibility, and effects of generation, development, ageing and genders on pain.	9025	FY2006 — FY2010
Museology	Importance of museums is growing as centers of lifelong learning in Japan, the world's fastest aging country. Museums have become diverse in type to fulfill various purposes in recent years. Some museums have tried to integrate humanities and natural sciences by the exhibition of cultural, historical assets and scientific materials on the same floor. Others have changed their nature from a conventional "place of just displaying materials for study and research" to a sort of "laboratory for the purpose of on-site training and experience." Actually, some museums are digital archives or the so-called virtual museums in response to the demands of the age. Museums make younger generations interested in sciences and help senior people maintain their intellectual abilities. They now form part of society as institutions that enhance people's understanding of culture, history, and science. Museology (or museum studies) aims at how to organize and manage museums and museum collections. This is a multi-disciplinary science, covering a wide area of research from archaeology, cultural anthropology, architecture, to preservation science. This science has a special role to play for social education in the age of highly developed information technology.	9028	FY2007 — FY2010
Stem cell biology and medical science	Studies of stem cell biology are broad and cover not only the field of basic biology including cell biology, developmental biology and reproductive biology but also the field of applied biology such as medical sciences, especially clinical regenerative medicines. Its expanding objects include embryonic stem cells, tissue-specific stem cells, reproductive stem cells, cancer stem cells, and iPS (induced pluripotent stem cells). Studies of these targets also promote identification and characterization of novel stem cells. The research progress is evident on the basic concept of biology such as self-replication, totipotency, multipotency, and re-programming of genetic cascades for regeneration. Together with such research progresses, the stem cell biology is now not restricted to each of the fields of biological sciences but has expanded over the fields to understand integratively common principle of stem cells, which would in turn promote technological innovation. Therefore, applications of challenging research that would advance this key field of biology are encouraged.	9032	
Chemical biology	Chemical biology is a new research field of the post-genome era where life phenomena are clarified by making good use of the technology and methodology of chemistry. Research in chemical biology can be achieved by observing the biological properties of various compounds obtained by the synthesis of new compounds or selecting from a chemical library that includes natural products. Furthermore, it aims at understanding and controlling physiological functions based on this information, and creating the basis of life sciences for a new generation. The results achieved in this field are useful with regard to drug-discovery, medical diagnosis, and the development of selective agricultural chemicals with low environmental load. It is also expected to have an academic influence on biotechnology and environmental science. This research field is remarkably interdisciplinary and closely related to organic chemistry, biochemistry, biology, pharmacology, medicinal science, agriculture and fishery study, microbiology, engineering, and so on. Promotion of the study of "Chemical Biology" originated by diversity of chemical compounds is strongly expected.	9033	FY2008 — FY2010
Quantum beam science	Quantum beams are beams that show both wave-like and particle-like properties. They come in wide range of energies, wavelengths, and types, such as electromagnetic beams (laser beams, X-rays, gamma-rays), lepton beams (electrons, positrons, muons, neutrinos etc.), and hadron beams (protons, neutrons, mesons, ions). Recently the usage of these many different types of quantum beams is advancing rapidly, not just in basic science, but also in medical and industrial fields. The R&D of quantum beam sources and the application of these beams is important for the advancement of accelerator physics and surrounding fields. Such efforts will also lead to the realization of the technological foundation required in fields ranging from fundamental science to its applications. This grant aims to support research projects that will lead to developing the technological foundation, such as new technology to generate beams, new accelerating mechanisms for making accelerators smaller, and new analysis methods to diagnose the structure and properties of materials, which will be necessary to a wide range of fields.	9034	

Area	Detail	Item Number	Set Period
Element strategy	<p>Serious concerns about the crisis of unstable balance of demand and supply of useful elements, especially in resource-limited Japans, requests forceful promotion of "Elemental strategy" that aims to not only cope with depletion of scarce elements but also develop new functions using ubiquitous elements and substitution of poisonous elements. For example, depletion of indium, platinum group and dysprosium elements used in transparent electrode for liquid crystal display, catalysts, and magnets gives serious influences on social life. It is, therefore, highly desired to establish the academic base that realizes the substitution of harmful and poisonous elements with harmless ones, and the reduction of the usages of the former on a large scale. Novel and enthusiastic researches are expected to be proposed by science and technology fields such as chemistry, solid state physics, environmental science, and materials science, etc.</p>	9035	FY2008 — FY2010
Children studies (Studies of environment on children)	<p>The quality of the physical, human, and socio-cultural environment surrounding children (from infancy through youth) has deteriorated as a result of urbanization, the impact of information technology, the declining birthrate, and changes in the local community, and it has various influences on the body and the psychology of children. The conservation and restoration of a good environment for young people from the viewpoint of nurturing them should be a socially, as well as academically, important task.</p> <p>The environment surrounding children has been studied in wide-ranging research fields such as pedagogies, childcare studies, psychology, pediatrics, public health, child psychiatry, neurosciences, physical education, architecture, urban engineering, environmental science, robotics, and cognitive science. However, now the need for a fusion-type research incorporating divergent disciplines is apparent. This program promotes research on the environmental problems surround children which would, from an interdisciplinary perspective, study the influence of environment on young peoples bodies and psychology, by organizing various studies such as those of architecture and engineering on the physical environment (so-called "hardware"), and those on education and human, and socio-cultural environments ("software")</p>	9036	
Medical Physics/ Radiological Technology	<p>"Medical Physics / Radiological Technology" is a research area in which physical and technological issues within radiology are explored. In recent years, various medical technologies based on radiation physics including radiation therapies using particle beams and a number of diagnostic technologies such as molecular imaging, are developed and have become widely used in a short period of time. Together with the rapidly growing needs for radiation therapies and diagnostic imaging, basic research which supports these fundamental technologies are very important in the expanding field of radiology. At the same time, such basic research supports development of technologies and human resources which will be necessary in a wide range of fields from basic to clinical application, including medical imaging engineering, radiation therapy, heavy particle therapy, nuclear medicine, and radiation protection. Although this field primarily aims clinical application toward radiology, the academic foundation and techniques are positioned to be in the fields of science and engineering. Therefore, researches where fundamental technologies which will cover a wide range of fields from science and engineering to medicine, and researches where new research area will be established will be expected.</p>	9037	FY2009 — FY2010
Biomass energy	<p>Due to environmental issues and a sudden rise in fossil fuels, research on biomass energy is now expected worldwide to be developed as one of the alternative energies. The major research in such fields involves biomass conversion to biofuels, technologies for thermal recycling, development of sustainable biomass production technologies, and establishment of cycling system of regional agriculture and biomass energy. In addition, fundamental research relevant to synthesis/structure/function of biomass resources is included. Furthermore, also included is research on life cycle impact assessment by increasing biomass energy production and socio-scientific research such as effects on dietary and poverty issues. Projects by young researchers on free and bottom-up thinking basis are also very much welcomed.</p>	9038	
Non-invasive neuroimaging	<p>Methods for non-invasive neuroimaging (NIN) of brain function include positron emission tomography (PET), functional magnetic resonance imaging (fMRI), near infra-red spectroscopy (NIRS), electroencephalography (EEG), magnetoencephalography (MEG) and transcranial magnetic stimulation (TMS). With the recent remarkable progress in these methods, NIN is now considered to be a very important multi-disciplinary area for not only neuroscience but also other areas such as cognitive science, psychology, linguistics, information science, magnetic science, medical technology, basic medicine and clinical medicine. It is expected that a large number of approaches will be applied to this new area for investigating basic mechanisms of human brain functions and evaluating higher brain functions in patients with neurological and psychiatric disorders.</p>	9039	

Area	Detail	Item Number	Set Period
Social symbiosis and exclusion	<p>Since the 1980s, the spread of social exclusion, social inequality, etc. and social justice as a socio-political response to these problems have become a major challenge in developed countries. In Japan, since the mid-1990s, problems of income disparity and social inequality, and then in the 2000s, the poverty issue became major public concerns. Not only fatherless families, disabled persons and the aged, who have been the object of attention since long before, but also the spread of poverty and social exclusion across a broader spectrum of the population such as, for example, younger people and children, and, in addition to general socio-economic inequality, even the disparity in medical treatment and health have been increasingly highlighted. This area includes theoretical research on the social accumulation and spread of poverty and social exclusion, inequality and other matters, the grasping of the actual circumstances, and the measurement and the estimate of their influences. Moreover, concerning the question how society tackles these issues, this area also includes research on policies responding to actual social exclusions and to the mechanisms that generate social exclusion, and analysis of legal systems in relation to these issues. In addition, any synchronic and diachronic comparative research projects, such as empirical researches on the actual circumstances of social disparity, inquiries on the policy trends and on the revision of legal systems in developed countries, studies on the poverty issues in developing countries, and various historical studies are all important. JSPS is expecting researches that will contribute significantly to the development of this field.</p>	9040	
Design science	<p>For the sake of the welfare of humanity and the enrichment of human life, the science of design opens an appropriate pathway for exciting and potentially transformational technology. The science of design has as its research object machines and tools, furniture, space, construction, cities, regions, culture, welfare and care, media, information-processing equipment, information content, drama, etc., in short, all the phenomena that support and enrich human living space. For the science of design, a fusion of knowledge that transcends a wide range of disciplines, starting from design research, which concerns design as such, to design engineering, modeling engineering, architecture, landscape engineering, sciences of living, anthropology, cognitive science and psychology, ergonomics, medical science and hygienics, sensory science, sensory engineering, information science, acoustics, computer science, social science, art science, etc., is necessary. Consequently, the science of design requires a broad based inter-disciplinary approach encompassing disciplines ranging from arts and social sciences to science and technology, as well as aesthetics and ethics. This area has as its object the individual elements of the phenomena that make up our living spaces, the collectivity and organization of these elements, and the combination of these elements and societies that consist of various cultures. For this area, JSPS is expecting ambitious and creative research originating from an alliance of disciplines that transcends traditional disciplines, and consists of a merger of humanities-fields, science-fields and arts-fields. The aim of this research is the creation of a bright future for mankind.</p>	9041	FY2010 — FY2011
Mechanobiology	<p>The cells that make up a living body are being exposed to a variety of mechanical stimuli that are caused not only by gravitation, but also by the movement of skeletal muscles and smooth muscles of internal organs in the body. At the same time the cells sense these stimuli and respond to them. That this mechanism is essential for the functional maintenance of the living body is, of course, clear from auditory sense and the sense of touch, and also when one considers amyotrophy of astronauts and osteoporosis. Moreover, excessive mechanical stimuli (elevated blood pressure) cause severe diseases, such as arterial sclerosis, cardiac failure, etc. On the other hand, with the growth, division, alteration of shape and movement of the cell, the occurring forces are fed back, and the functions of the cells regulate themselves. It is considered that insufficiencies of cells lead to developmental anomalies and cancer. In this way, the cell's capacity of reception of and response to mechanical stimuli is a core function that supports life, and is a fundamental and highly important subject of research not only for the development of basic biology, but also for the development of astromedicine, regenerative medicine, medical engineering, dentistry and engineering, and agriculture. JSPS is expecting research that aims at the creation of new academic fields, by integrating related research, and by making the mechanism of sensing of, and responding to mechanical stimuli that living bodies and cells possess, the pivotal axis of the research.</p>	9042	

(Note 1)

This table, in combination with the main table, applies only to “Scientific Research (C)”, screening division “General”.

(Note 2)

The set period is the fiscal year when the call for proposals is organized. Notwithstanding the set period, research projects of 3 to 5 years are being sought.