# **JSPS**

Japan Society for the Promotion of Science

2004-05



http://www.jsps.go.jp/english/

# JSPS—2004-05 Contents

IVI	essag	ge from JSPS President	1	
Or	gani	zation	2	
	_			
	_	1		
IVII	.88101	1	5	
т	Research Support Activities			
I	1		6	
	_	New Research Initiatives in Humanities and Social Sciences		
		Research for the Future Program		
		1050dfoff for the rutate ringram		
II	21s	t Century COE Program	11	
$\mathbf{III}$		owships		
		Research Fellowships for Young Scientists		
	2	Postdoctoral Fellowships for Research Abroad	13	
<b>T</b> 7	Tool	armeticus I Scientific Communica		
IV		ernational Scientific Cooperation		
	1			
		European and Oceanian Countries		
		(1) Bilateral Collaborations		
		(2) Multilateral Collaborations		
		① JSPS Core-to-Core Program		
		2 Inter-Research Centers Cooperative Program (IRCP)		
		(3) Network Building to Foster Next Generation Rsearchers		
		1) Frontier of Science Symposium Series		
		2 Advanced Science Institute (ASI)	18	
		3 ESF-JSPS Frontier Science Conference Series for	10	
	_	Young Reserchers.		
	4	Collaboration with Asian Countries		
		Core University Program     Joint Research Projects and Joint Seminars		
		RONPAKU (Dissertation Ph.D.) Program		
		Asian Science Seminar		
		Scientist Exchanges		
	3	Fellowships for Foreign Researchers		
		(1) JSPS Postdoctoral Fellowships for Foreign Researchers		
		(2) JSPS Invitation Fellowships or Research in Japan		
		(2) JSPS Award for Eminent Scientists		
	4	International Meetings		
	-	I) JSPS International Meetings		
		2 Travel Grant for Academic Meetings		
		© 114Ver Grant for rectacing incomings		
V	Int	ernational Prize for Biology	28	
<u>'</u>				
VI	Un	iversity-Industry Research Cooperation	29	
T 107				
VII	Do	nations	30	
^		1		
Аp		dices		
	Ι	Distribution by Region and Program of Scientists Exchanged	_	
		through JSPS Programs in FY2003		
	II	List of Counterpart Foreign Academic Institutions		
	III	Map of Counterpart Institutions and JSPS Offices	34	
	IV	Number of Scientists Exchanged through JSPS Programs in		
		FY2001, 2002 and 2003	36	

# Message



It is always with the greatest pride that I observe the strong motivation, dedicated efforts and high achievements of scientists in Japan's universities and research institutes. As a core agency in the promotion of Japanese basic science, JSPS's mission is to make optimum use of its resources in support of the original and creative activities of these scientists.

1 October 2003 marked an epochal milestone for the Japan Society for the Promotion of Science, as it was on that day that JSPS became an "independent administrative institution." This closed the curtain on JSPS's long history as a quasi-governmental organization, operating under the supervision of the Ministry of Education, Culture, Sports, Science and Technology. Over that period, JSPS had initiated and carried out a wide range of programs including research grants, fellowships to foster young researchers, and international exchanges.

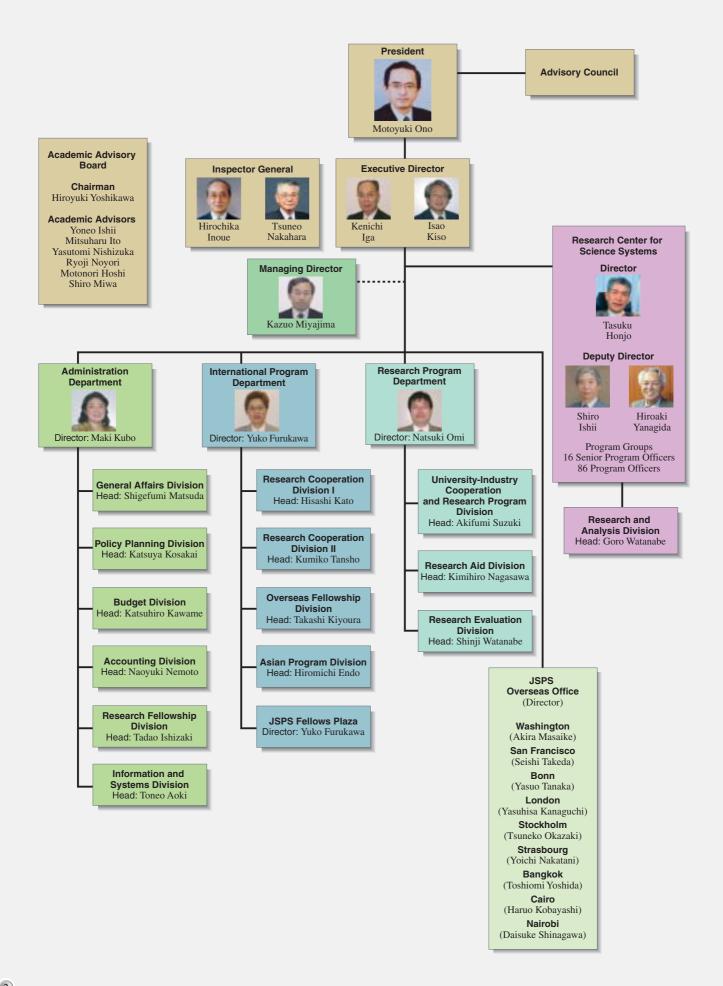
Building on those initiatives and achievements, I look forward now to taking advantage of JSPS's newly gained autonomy in enhancing our programs so as to make them even more beneficial to all scientists. On 1 April 2004, the national universities, core institutions for advancing science in Japan, became "university corporations." In this time of dramatic transition, the supporting role played by JSPS will be all the more vital not only for Japan's national universities, but also for its public and private universities and research institutions as well.

In 2003, JSPS established within its organization the "Research Center for Science Systems," which enlists the participation of over 100 frontline researchers in carrying out studies and evaluations germane to science promotion. Through its operation, the Center enhances JSPS's ability to exercise program accountability from a scientific perspective, especially in terms of ensuring flexibility, efficiency and transparency. In this way, the Center also works to strengthen researcher confidence in JSPS's programs.

While working to contribute to the advancement of science in Japan, it is the renewed desire of our entire staff to further develop JSPS as an organization that wins and enjoys the trust of researchers and academic communities throughout the world.

To this end, I ask all of you for your greatly appreciated support and cooperation.

Motoyuki Ono, President

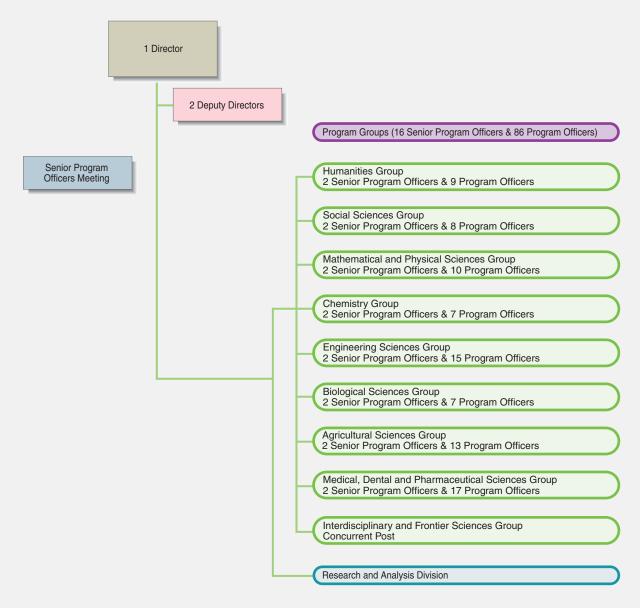


# **Research Center for Science Systems**

In July 2003, JSPS established the Research Center for Science Systems within its organization. The Center is staffed by researchers who as program officers play a key role in the management of JSPS's government-funded programs, including their planning, selection, evaluation and follow-up.

This program officer infrastructure of the Center's operation makes it possible to better reflect researchers' needs and specialists' views in achieving more effective implementation of JSPS's operations and programs.

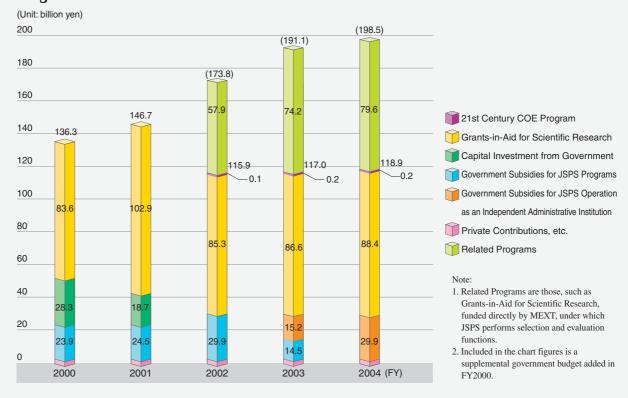
# Organizational Chart and Staffing



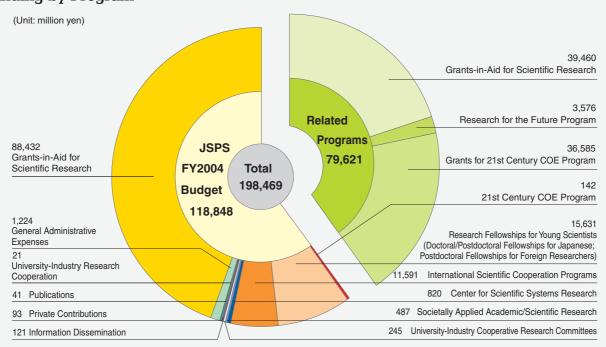
JSPS's budget for the 2004 fiscal year totals ¥119 billion. Of this amount, ¥29.9 billion are government subsidies provided to support JSPS's operation, ¥88.4 billion are subsidies from the National Treasury dedicated to Grants-in-Aid for

Scientific Research, and ¥0.2 billion are funds earmarked for the 21st Century COE Program. Altogether, some 99.5% of JSPS's budget comes in the form of funding from the Japanese government.

# JSPS Budget Allocation FY2000-2004



# **Funding by Program**



# Toward JSPS's New Mission as an Independent Funding Agency

# Grants-in-Aid for Basic Research Emphasized

- JSPS is working to make the Grants-in-Aid for Scientific Research Program, its main research fund, more convenient and flexible and more relevant to researchers' needs.
- O An electronic application system is being introduced to ease the filing burden on researchers.
- Application screening is also being enhanced by such means as increasing the number of examiners and limiting the volume of applications handled by each of them.

# 21st Century COE Program Advanced

The 21st Century COE Program seeks to strengthen the international competitiveness and institutional identities of Japanese universities. Under it, JSPS employs an open and fair process of application screening and project evaluation in supporting the creation of education and research hubs of the world's highest standard within these universities.

# Fellowships for Young Researchers Enhanced

- With an aim to fostering and securing talented young researchers, JSPS acts in the following ways to enhance the quality and flexibility of its fellowship programs: "Research Fellowships for Young Scientists" and "Postdoctoral Fellowships for Research Abroad."
  - (1) Increase the number of fellowships to doctoral course students
  - (2) Introduce a new screening and evaluation system designed to select young researchers of a high world caliber
  - (3) Install a comprehensive evaluation system that covers the spectrum from fellowship application screening through post-tenure follow-up
  - (4) Instill greater flexibility with regard to maternity and childcare leave.
- O In addition, JSPS will establish an incentive award for especially gifted young researchers.

# **International Cooperation Promoted**

- O JSPS is proactively advancing collaborations in cutting-edge research with the world's most scientifically advanced nations.
- O JSPS is systematically building an Asian research network to contribute to the fostering of talented researchers in countries of the region.
- To promote the internationalization of Japan's own research environment, JSPS is also increasing the number of researchers it invites from overseas, with particular emphasis placed on interaction among younger researchers.

### Research Center for Science Systems, Newly Established

○ The Research Center for Science Systems, a newly established organization within JSPS is staffed with frontline researchers. Serving as program officers, they are widely involved in JSPS's programs and operations and work to further enhance the quality of JSPS's application screening, project evaluation, and program planning and implementation functions.

# **Research Support Activities**

# 1 Grants-in-Aid for Scientific Research

Grants-in-Aid for Scientific Research are awarded for the purpose of advancing scientific research in Japan by encouraging creative and pioneering work across a spectrum of fields from the humanities and social sciences to the natural sciences. These grants are provided in support of projects organized by individual researchers or groups of researchers engaged in basic research,

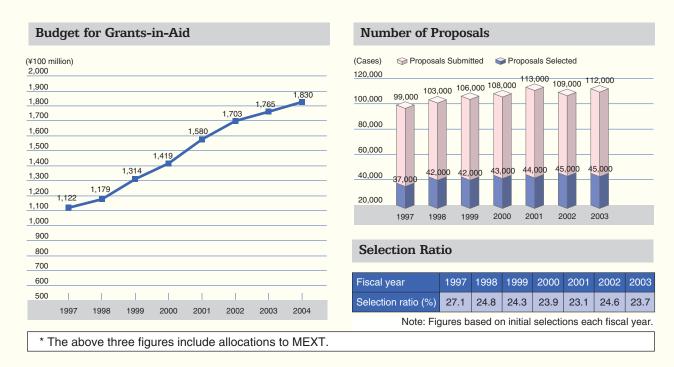
particularly research in critical fields attuned to advanced research trends at universities and research institutes.

JSPS and the Ministry of Education, Culture, Sports, Science and Technology (MEXT) administer the screening of proposals and awarding of grants in the research categories listed below.

### **Details of Grants by Category**

Categories		Purpose		ction	Status F	=Y2003
Oategories		T dipose	Select	Award	Applied	Selected
Specially Promoted Research		Research that is highly appraised internationally and is likely to produce outstanding results Duration: 3-5 years	М	М	146	16
Scientific Research in Priority Areas		Specific areas that can elevate research in basic fields of science or that can contribute to the development of Japan's economy and society Duration: 3-6 years Grant: 20-600 million yen yearly per area	М	M	8,057	1,983
Scientific Research (A) (B) (C)		Creative and leading-edge research conducted by university researchers individually or in small groups Duration: 5 years Grant: 50-100 million yen per project	J	J		
		Creative research conducted by university researchers individually or in groups  Duration: 2-4 years, or 1 year for research planning  Category A: 20-50 million yen per project  Category B: 5-20 million yen per project  Category C: Up to 5 million yen per project	J	J	42,482	9,090
Exploratory Research	Uniquely original research in an early stage of development Duration: Up to 3 years Grant: Up to 5 million yen per project		J	М	14,001	1,478
Grant-in-Aid for Young Scientists (A)		Duration: 2-3 years  Cotogony A: 5-20 million you not project		М	15,708	4,430
Encouragement of Scientists	Duration: 1 year Grant: Up to 300 thousand yen		J	J	2,829	796
Grant-in-Aid for Special Purp	oses	Support for urgent or important research subjects	М	М	_	_
Publication of Scientific Research Results			М	М	225	117
Scientific Periodicals	Periodicals Publication of academic journals in order to promote international exchange		J	J	245	170
Scientific Literature			J	J	759	340
Databases		Compiling databases and making them accessible through various science information networks		J	278	164
Specially Designated Research Promotion				М	1	0
Grant-in-Aid for JSPS Fellows		(including poetdostoral tallows)		М	2,004	2,004
Creative Scientific Research		Aimed at the further cultivation of fruits obtained from highly creative research conducted under the Grants-in-Aid for Scientific Research		М	86	18

Note: M = function carried out by MEXTJ = function carried out by JSPS



# Flow of Program Implementation and Review Mechanism

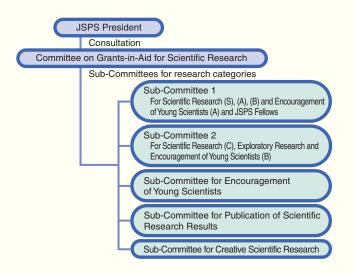
Grants-in-aid are awarded on the basis of a two-tier review of submitted proposals by JSPS's Committee on Grants-in-Aid for Scientific Research. The Committee is made up of approximately 4,500 reviewers, each being specialized in a program-related field.

For the selected proposals, the implementing researchers are awarded research grants. A list of these projects can be found in the database of the National Institute of Informatics and in printed publications. Unsuccessful applicants are notified of the review results by the Committee if

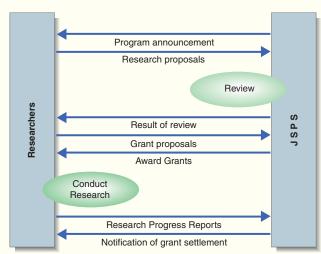
they requested such notification when applying for the grant.

New knowledge and other fruits obtained through these grant-supported projects are compiled into research reports available for perusal at the National Diet Library. English and Japanese summaries of these reports are posted in the database of the National Institute of Informatics. Moreover, through their dissemination via academic meetings and scientific publications, the fruits of these projects are being fed back into society.

#### **Review Mechanism**



# Flow of Program Implementation



# **Research Support Activities**

### 2 New Research Initiatives in Humanities and Social Sciences

Based on the June 2002 report "Advancing Research in Humanities and Social Sciences to Meet 21st Century Needs and Expectations" by a special committee of MEXT's Council for Science and Technology, the program "New Research Initiatives

in Humanities and Social Sciences" was launched in FY 2003 for the purpose of creating new academic disciplines and research domains in the humanities and social sciences.

### **Purpose**

In contemporary society, people face a myriad of issues not the least of which are a decline in ethical standards, adverse effects of globalization, and the increasing unsustainability of social systems. This Program seeks to elucidate the root causes of such issues. In analyzing and addressing them, it forges collaborations among researchers in a variety of

fields, predominately in the humanities and social sciences. In so doing, it works to advance multidisciplinary and integrative projects aimed at exploring and identifying new topics of research. The results of such projects are fed back into society as proposals for solving related issues.

#### **Features**

#### Researcher Leadership

Research themes geared to prevailing issues are set by the researchers themselves. Research projects are conducted in a manner that accommodates researcher initiative, while providing a flexible system of collaboration and a leadership paradigm conducive to program adjustment and operational efficiency.

#### **Multilateral Collaboration**

Interdisciplinary and integrative, multi-

disciplinary research is conducted through collaboration among researchers of various fields.

#### Societal Feedback

Fruits of research projects are disseminated back into society so as to contribute to the solution of prevailing issues.

# Fostering Project Leaders, Including Young Researchers

#### Framework

The Program's Steering Committee and Planning Committee, both established within JSPS, decide the research domains and topics to be pursued. Taking their concrete contents and investigative approaches into consideration, the Committees formulate specific themes for project research. In selecting project leaders, defining sub-themes and establishing research groups, views are sought from

researchers who specialize in cognate fields.

The composition of research teams is centered on researchers in the humanities and social sciences, and may include researchers in the natural sciences as well.

Project duration: 3-5 years

#### Program Budget -

The program budget for FY 2004 is approximately 400 million yen.

# FY2003 Research Domains and Project Research Themes

Research Domains	Project Research Themes		
Research Domain I	Research on the state of Japan, starting with Knowledge Assets, and on Its Future Transitions		
	① Use of Japan's knowledge assets		
	② Reconsidering the 10 year decline - merit and demerit of Japan's socioeconomic system		
	③ Shaping the formulae for the promotion of critical abilities in arts, science and technology		
Research Domain II	Research on Coexistence among Societies with Diverse Values in an Era of Globalization		
	① Reconstruction of knowledge towards building peace		
	② Reconstruction of knowledge towards new convivial societies		
	③ Reconstruction of knowledge towards global governance		
Research Domain III	Research on system of Social Ethics amidst Rapid Advances and Changes in Science/Technology and Market Economies		
	① Constructing the human relation theory from bottom-up communication		
	② Medical systems and ethics		
	③ Science & Technology governance		
Research Domain IV	Research on Learning from Past and Present Social Systems and Securing the Sustainable Development of Future Society		
	① Global governance of water		
	② Millennial Sustainability Studies		
	③ Interdisciplinary research for appreciating humanity - beyond the globalism		
	Resource distribution mechanisms and fairness		

# 3 Research for the Future Program

JSPS carries out the Research for the Future (RFTF) Program with a view to advancing science in ways that will furnish solutions for global issues in the 21st century, while promoting further socio-economic development and

creating a richer living standard for the Japanese people. The program, outlined below, places emphasis on university-led scientific research of a highly creative nature.

# Objectives of the Program

- ① With a view to the 21st century, to promote highly creative, farsighted research that will form the intellectual assets that provide the basis for solving global issues, developing societies and economies, and realizing an abundant living standard for the Japanese people.
- ② To advance university-led research that responds to society's various needs and that is conducted mainly by university researchers in collaboration, when expedient, with the industrial and other sectors.
- ③ To actively promote the participation of young postdoctoral researchers in research projects, and to otherwise contribute to their development.

#### **Method of Program Implementation**

- ① The RFTF Program Committee, comprising leading members of Japan's scientific research community, deliberates important matters related to program implementation and sets up "research promotion committees" in each designated field.
- ② The research promotion committees create guidelines for systematically carrying out the research in their respective fields, while providing each project team with needed guidance and support and taking responsibility to see that the research is effectively advanced.

- ④ To advance research through formats that combine outstanding intellectual resources with international perspectives, and that promote international collaboration.
- (5) To respect the opinions of frontline researchers, while giving ample expression to the purport of the findings and recommendations of the Council of Science and Technology when implementing research projects.
- ⑥ To further cultivate fruits obtained through research using Grants-in-Aid for Scientific Research and other funding, while making an active effort to create linkage with various research activities being carried out at universities.
- ③ Other entities such as the "university-industry cooperative research committees" established within JSPS may also provide needed guidance and support to the RFTF research projects.
- 4 A research evaluation committee is established within the RFTF Program Committee, which comprises outside experts and other leading researchers. It conducts mid-term evaluations at the 2-year point of project implementation and final evaluations when projects end after a period of five years. The mid-term results are used to decide whether to continue a project or to adjust its content or methodology.

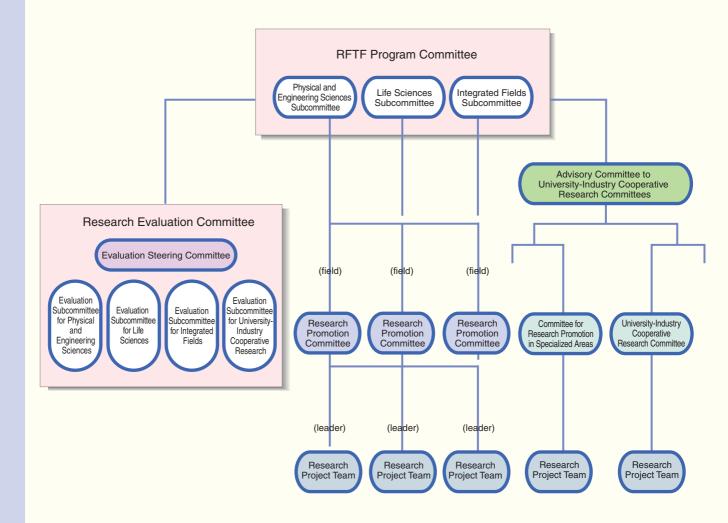
During the period from FY1996 to FY2001, JSPS distributed RFTF research grants to universities and other research institutions using government funding; from FY2002, it has been using subsidies from the Ministry of Education, Culture, Sports, Science and Technology. Though the method of grant

distribution has been modified, JSPS continues to perform research-evaluation and research-promotion functions so as to assure the consistency and continuity of RFTF projects.

Call for new projects under the Research for the Future Program ended in FY 2001.

# **Research Support Activities**

# Organization of the Research for the Future Program



### Research Fields under the RFTF Program

(As of April 2004)

# Life Sciences

- (1) Genome Research
- (2) Development / Differentiation / Regeneration
- (3) Plant Genetics

### Research Projects under the RFTF Program

(As of April 2004)

Fields	Number of Projects	
Life Sciences	26	



# 21st Century COE Program



# Targeted Support for Creating World-level Research and Education Bases

Based on its June 2001 report, "A Policy for the Structural Reform of Universities," the Ministry of Education, Culture, Sports, Technology and Science (MEXT) established a budget to launch in FY 2002 a new initiative called the 21st Century COE Program. Program works to cultivate a competitive academic environment among Japanese universities by giving targeted support to the creation of world-standard research and education bases (Centers of Excellence) in a range of disciplines.

By thus raising the standard of both education and research in them, the

Program seeks to elevate Japanese universities to the world's highest echelons, while fostering people of talent and creativity who will be qualified to assume roles as world leaders. In this way, the Program aims to promote the development of universities that are vigorous in the pursuit of their mandates and that are competitive at the highest levels of international excellence.

In carrying out this Program, JSPS has established the "21st Century COE Program Committee" to oversee grant selection and program implementation.

# **Application Guidelines**

The procedure outlined below is used to apply for grants under this Program. In FY 2004, proposals are solicited that seek to establish research/education COEs at the vanguard of new scientific fields. (In FY

2002 and 2003, applications were accepted in 10 designated categories of fields that spanned the humanities, social sciences and natural sciences.)

# **Eligible Institutions**

PhD-level departments of graduate schools (including collaborating departments and university-attached research institutes).

#### Eligible Proposals in FY 2004

Proposals to establish research/education COEs in new scientific fields:

- Proposals in areas of research/education that advance new fields of science
- Proposals in areas of research/education with already established infrastructures for propelling the creation of new scientific fields.

# **Application**

Application is made by university presidents based upon their plans for establishing a COE of the world's highest level within the subject graduate school or research institute.

#### Selection

Selection is made by the Program's screening committee based on a review of the COE project proposals submitted by each university. Subcommittees established in each new scientific domain evaluate the proposals through document and panel reviews.



# 21st Century COE Program

#### Reference: Eligible fields in FY 2002 and FY 2003

Categories	Fields (examples)
○ Life sciences	Bioscience, biology, medical engineering and bioengineering, agricultural sciences, pharmaceutical sciences, etc.
Medical sciences	Medicine, dentistry, nursing, healthcare, etc.
○ Chemistry, material sciences	Chemistry, material sciences, metallurgy, fiber engineering, process engineering, etc.
<ul> <li>Mathematics, physics, earth sciences</li> </ul>	Mathematics, physics, earth sciences, applied physics, etc.
<ul> <li>Information sciences, electrical and electronic engineering</li> </ul>	Information sciences, telecommunication engineering, etc.
<ul> <li>Mechanical, civil, architectural and other fields of engineering</li> </ul>	Mechanical engineering, systems engineering, civil engineering, architecture, etc.
O Humanities	Literature, history, philosophy, psychology, education, drama, linguistics, art, etc.
Social sciences	Law, political science, economics, management, sociology, comprehensive policy, etc.
<ul> <li>Interdisciplinary, combined fields, new disciplines</li> </ul>	Environmental sciences, life sciences, energy sciences, area studies, international relations, etc.
<ul> <li>Interdisciplinary, combined fields, new disciplines</li> </ul>	Environmental sciences, life sciences, energy sciences, area studies, international relations, etc.

Projects under the categories marked ○ were selected in FY 2002, while those under the categories marked ● in FY2003.

### **Scheduled Funding**

36.7 billion yen (FY 2004)

#### Number of Selections (Figures in parenthesis are the number of applications.)

FY2002: 113 (464), FY2003: 133 (611), FY2004: 28 (320)

### **Outline of Project Evaluation Procedure**

Grant-funded projects under this Program are evaluated using the following procedure.

# **E**valuation Objective

Evaluations are conducted to verify the degree to which funded projects are being implemented effectively. Carried out by specialists and authorities in the subject field, these evaluations are meant to verify the projects' progress—whether their objectives are being effectively met—and to provide helpful guidance to the project teams.

On a broader plain, the evaluations serve to ensure the appropriate allocation of grant funds, including their prioritized and optimum distribution.

#### Evaluation Schedule

Projects funded under the Program are evaluated at mid-term after two years of implementation and upon completion. When deemed necessary, follow-up evaluations may also be conducted.

#### • Evaluation Methodology

Both a prepared evaluation checklist and procedure are used to ensure that evaluations to

gauge the progress of funded projects are conducted fairly, effectively and reliably.

#### Evaluation Procedure

In FY 2004, mid-term evaluations will be carried out by the following five sub-committees: Life Sciences; Chemistry, Material Sciences; Information Sciences, Electrical and Electronic Engineering; Humanities; and Interdisciplinary, Combined Fields, New Disciplines.

These sub-committees carry out document evaluations, hearings and panel reviews, and when necessary, conduct onsite inspections.

#### Evaluation Feedback

The 21st Century COE Program Committee reports the findings of each of its subcommittees to MEXT, which uses them to optimize the distribution of grant funds in the next Program phase. This may include increasing or decreasing the funding for projects or abolishing projects.

So as to provide appropriate guidance in advancing the establishment of their research/education COEs, these evaluation results are fed back to each project team.

# **Fellowships**

# 1 Research Fellowships for Young Scientists

In view of the growing need to foster young Japanese researchers who will play an important role in future scientific research activities, JSPS provides fellowships to:

- Postdoctoral researchers working at universities or research institutions on a non-employment basis;
- 2) graduate students in university doctoral programs.

	Doctor Course Students (DC)	Postdoctoral Fellows (PD)	Postdoctoral Fellows (SPD)
Tenure	2-3 years	3 years	3 years
Monthly Fellowship	¥200,000	¥364,000	¥446,000
Grants-in-Aid for Scientific Research	up to ¥1,50	00,000/year	up to ¥3,000,000/year

The recipients may, when deemed desirable for a stipulated period of time,

conduct research at other research institutions including those overseas.

### Number of Fellowships 1995-2004



### 2 Postdoctoral Fellowships for Research Abroad

These fellowships are awarded to young Japanese postdoctoral researchers who will conduct research at overseas universities or research institutions for a period of two years.

The fellowship covers travel expenses, a stipend, and a research grant. In FY2004, 133 of these fellowships will be awarded.



# **International Scientific Cooperation**

# 1 Collaboration with North and South America, European and Oceanian Countries

In the above countries, JSPS carries out exchanges through a variety of activities

stipulated in memoranda of understanding with its counterpart academic institutions.

# 1 Bilateral Collaborations

Bilateral collaborations are carried out in the following three formats:

#### 1) Joint Research Projects

Joint research projects, supported by JSPS and its foreign counterpart academic institutions, are small in scale and limited to a period of two years. Their amount of funding, areas of supported research, periods of implementation, and cost-sharing frameworks are established in the program implementation agreement concluded with each counterpart institution.

#### 2) Joint Scientific Seminars

Joint scientific seminars are normally held in Japan or the counterpart country, have participants from the two countries, and are limited to a duration of one week. Their amount of funding, areas of supported research, and cost-sharing frameworks are stipulated in the program implementation agreement concluded with each counterpart institution.

#### 3) Scientist Exchanges

It is the usual practice for the sending side to nominate candidates for exchange to the receiving side; the sending side pays the round-trip airfare of its own scientists, while the receiving side provides them with a living allowance. The amount of funding, periods of visit, areas of supported research, and cost-sharing frameworks are stipulated in the program implementation agreement concluded with each counterpart institution.

# North America -

# **■** United States of America

#### National Science Foundation (NSF)

- The program originated from discussions between Prime Minister Hayato Ikeda and US President John F. Kennedy and their joint communiqué of 1961.
- Areas of Cooperation:
   All academic fields, excluding the humanities
- Types of Activity: Joint research and joint seminars

#### **National Cancer Institute (NCI)**

- Cooperation began in 1974 as the Japan-US Cooperation in Cancer Research Program.
- Areas of Cooperation:
   Basic science, clinical science, and epidemiology and behavioral science
- Types of Activity: Joint seminars and joint research

#### Canada

# Natural Science and Engineering Research Council of Canada (NSERC)

- Cooperation started in 1976.
- Areas of Cooperation: Natural Sciences
- Type of Activity: Scientist exchanges

### Canadian Institutes of Health Research (CIHR)

- Cooperation started in 2003.
- Area of Cooperation: Health and Medical Research
- Type of Activity: Joint research

#### ■ Mexico −

#### El Consejo Nacional de Ciencia y Technologia (CONACYT)

- Cooperation started in 1977.
- Areas of Cooperation: All academic fields
- Type of Activity: Scientist exchanges

# Europe

#### France

# Centre National de la Recherche Scientifique (CNRS)

- Cooperation began in 1973.
- Areas of Cooperation: All academic fields
- Types of Activity: Joint research, joint seminars, and scientist exchanges

# Institut National de la Santé et de la Recherche Médicale (INSERM)

- The program began in 1974 and was modified in 1992.
- Areas of Cooperation: Biomedical sciences and related research
- Type of Activity: Joint research

# Institut National de la Recherche Agronomique (INRA)

- MoU between JSPS and INRA was concluded in 1999.
- Area of Cooperation: Agricultural research
- Type of Activity: Joint research

# Ministere des Affaires Etrangeres in France (MAE)

- The "SAKURA" program began in 2003.
- Area of Cooperation: All academic fields
- Types of Activity: Joint research and joint seminars

# ■ Germany –

#### Deutsche Forschungsgemeinschaft (DFG)

- Cooperation started in 1992.
- Areas of Cooperation: All academic fields
- Types of Activity: Joint research and joint seminars

# Deutsche Akademischer Austausch Dienst (DAAD)

- Cooperation started in 1973.
- Areas of Cooperation: All academic fields
- Type of Activity: Scientist exchanges

# **■** United Kingdom -

# **Royal Society**

- Cooperation started in 1971.
- Area of Cooperation: Natural sciences
- Types of Activity: Joint research, joint seminars and scientist exchanges

#### **British Academy**

- Cooperation started in 1973.
- Areas of Cooperation: Humanities and social sciences
- Type of Activity: Scientist exchanges

# British Council

- Cooperation started in 2004.
- Area of Cooperation: Natural sciences
- Types of Activity: Inviting British professors to Japan

# **■** European Countries –

- JSPS launched the Japan-Europe Research Cooperative Program in 1997 to promote cooperation with counterpart academic institutions in Europe, including those in Austria, Belgium, Finland, Hungary, Italy, the Netherlands, Poland, Slovakia, Slovenia, Spain and Switzerland.
- Types of Activity: Joint research and joint seminars
- JSPS also carries out separate scientist exchanges with counterpart institutions in other European countries (including Bulgaria, Czech, Denmark, Romania, Sweden, Russia, NIS and the Baltic States) in addition to the above countries.

#### Oceania -

#### Australia

### Australian Research Council (ARC)

- Cooperation in 1998.
- Area of Cooperation: All academic fields
- Types of Activity: Joint research and joint seminars

#### Australian Academy of Science (AAS)

- Cooperation started in 1977.
- Area of Cooperation: Natural science
- Type of Activity: Scientist exchanges



# **International Scientific Cooperation**

#### South America

### ■ Argentina, Brazil and Chile

- JSPS carries out programs to send and receive researchers under memoranda of understanding with counterpart
- academic institutions in South America including Argentina, Brazil, and Chile.
- Type of Activity: Scientist exchanges

# 2 Multilateral Collaborations

# **1) JSPS Core-to-Core Program**

In FY2003, JSPS initiated this program for the purpose of building and expanding a cooperative international framework in leading-edge fields of science among universities and research institutions in Japan and other academically advanced countries.

This program is given two implentation components: "Strategic Research Networks" and "Integrated Action Initiatives." The objective of the first is to expand and strengthen research networks that will from a relatively long-term perspective sustain and advance cooperative relations between researchers and research institutions in

Japan and in other scientifically advanced nations. The second component is provided to support short-term collaborations among such researchers that will lay the foundations for establishing cooperative research networks. Based on an evaluation of the results of these short-term collaborations, they may be elevated to Strategic Research Networks projects.

Transcending their own affiliated institutions, the co-chairs will form reseach groups to advance collaborations that combine the three components of joint research activities, scientific meetings and researcher exchanges.

#### FY2003 Projects "Integrated Action Initiatives"

Research Theme	Core Institute in Japan	Country	Partner Research Institutes
Nano-Science and Engineering in	University of Tsukuba (Graduate School of Pure and	EU	Katholieke Universteit Leuven
Superconductivity	Applied Sciences)	U.S.A.	Argonne National Laboratory
		U.S.A.	Lawrence Livermore National Laboratory
		UK	University of Cambridge
Molecular Analysis of cellular resonse to ionizing radiation for	Kyoto University (Radiation	Germany	Germany Science Foundation, Institute of Molecular Radiobiology
forthcoming radiotherapy of cancer patients	Biology Center)	Netherlands	Eraumus Medical Center
cancer panerne		Italy	Institute of Nazionale Tumori
		Australia	Queens Institute of Medical
Primate origins of human	Kyoto University	Germany	Max Planck Institute for Evolutionary Anthropology
evolution	(Primate Research Institute)	U.S.A.	Harvard University
Development of Advanced Muon and Positron Beam	High Energy Accelerator Research Organization (Institute of Materials Structure Science)	U.S.A.	University of California at Riverside
5 " (( " )	National Institutes of Natural	U.S.A.	University of California, Irvine
Promotion of functional genomics with Xenopus laevis/tropicalis	Sciences (National Institute for	Canada	University of Calgary
With Achiepus lacvis/hopisalis	Basic Biology)	UK	The Wellcome Trust / Cancer Research UK Institute

# FY2004 Projects "Integrated Action Initiatives"

Research Theme	Core Institute in Japan	Country	Partner Research Institutes
lutamatica al Danasanh Naturali fan	University of Tsukuba	U.S.A.	Fermi National Accelerator Laboratory
International Research Network for Computational Particle Physics	(Center for Computational	UK	University of Edinburgh
Computational Farticle Frigues	Sciences)	Germany	Deutches Electronen Synchrotron
		Canada	Laval University
		France	French Atomic Energy Commission, Saclay
libert at latera la la con Ociona	University of Tokyo	Germany	Friedrich-Schiller-Universitaet Jena
Ultrafast Intense Laser Science	(Graduate School of Science)	Italy	Palermo University
		UK	University of Strathclyde
		U.S.A.	University of Michigan
	Tokyo Medical and Dental	U.S.A.	Harvard University
Advanced Molecular Pathophysiology of Bone and Cartilage Diseases	University	Canada	University of Toronto
of Borie and Oarmage Biseases	(Medical Research Institute)	Austria	Institute of Molecular Pathology
"D	Nagoya University	U.S.A.	The University of Wisconsin
"Development Assistance and Law" in the 21st Century	(The Center for Asian Legal Exchange)		Cornell University
the 21st defitally		Sweden	Lund University
		Switzerland	Basel University
Molecular Mechanism of the Thymus	The University of Tokushima (Institute for Genome	Netherlands	Leiden University
Organogenesis	Research)	Australia	Monash University
	,	U.S.A.	University of Miami
Establishment of Japanese Virtual	National Institute of Natural	Germany	European Southern Observatory
Observatory in relation with International Virtual Observatory by utilizing state-of-	Sciences (National Astronomical	UK	University of Cambridge
the-art information technology	Observatory of Japan)	U.S.A.	Space Telescope Science Institute
International Collaboration on	National Institute for Materials	U.S.A.	University of Washington
combinatorial material exploration and its application to informatics	(Nano Materials Laboratories)	Germany	Max Planck Institute of Metals Research

# 2 Inter-Research Centers Cooperative Program (IRCP)

The objective of this program is to promote and support scientific cooperation between research centers (institutes or research groups) in Japan and in other countries, specifically those which carry out research projects on subjects encouraged by JSPS and the relevant funding agency in the counterpart country.

The duration of the projects is normally three years. Program support extends mainly to the provision of international airfares and living allowances for project participants, and to the defraying of other costs related directly to conducting the joint research work.

(FY2004)

Country	Research Institute	Research Theme	Counterpart Academic Institution
France	Japan: University of Tokyo (Institute of Industrial Science) France: Centre National de la Recherche Scientifique-CNRS (Department of Communication and Information Sciences and Technologies)	Multi-functional Integrated Devices and Systems by Micro / Nano Fabrication	CNRS
UK	Japan: Tokyo Institute of Technology (Research center for Quantum Effect Electronics) UK: Cambridge University (Department of Engineering)	Active Packaging for Optical and Electronic Microsystems	EPSRC
France	Japan: Tohoku University (Institute of Fluid Science) France: Institut National des Science Appliquees de Lyon	Intelligent Materials System for Biomedical Application and Structure Maintenance	CNRS

# **International Scientific Cooperation**

# 3 Network Building to Foster Next Generation Researchers

# 1 Frontier of Science Symposium Series

### National Academy of Sciences (NAS) - JAFoS

- Japanese-American Frontiers of Science (JAFoS)
  - This symposium series is implemented through cooperation between JSPS and the U.S. National Academy of Sciences (NAS).
- JAFoS has as its objective the encouragement of cross-disciplinary discussion among young researchers from Japan and the U.S.
- This series is intended to contribute to cultivating new academic horizons and to fostering researchers with broad international ties and perspectives.
- JAFoS has its origins in an August 1996 discussion between Mr. Hidenao Nakagawa, then Minister of State for Science and Technology, and Dr. Bruce Alberts, President of the National Academy of Sciences.

#### Alexander von Humboldt-Stiftung (AvH)

- Cooperation started in 1992.
- Areas of Cooperation: All academic fields
- Type of Activity: Scientist exchanges
- Japanese-German Frontiers of Science (JGFoS) Symposium
  - JSPS will also implement a symposium series through cooperation between JSPS and AvH.
  - JGFoS has its origins in a discussion between Mr. Junichiro Koizumi, Japanese Prime Minister, and Mr. Gerhard Schroeder, German Chancellor, at their April 2003 summit.
  - JGFoS has as its objective the encouragement of cross-disciplinary interaction and communication among young researchers from Japan and Germany.

# 2 Advanced Science Institute (ASI)

The Advanced Science Institute (ASI) program is designed to provide opportunities for promising researchers from the East Asia-Pacific region to meet and interact in a professional context, with the expectation that such interaction will stimulate life-long interest in international research cooperation and encourage international network building among them.

Each such ASI course lasts for approximately 7 days and assembles between 30 and 40 promising researchers who have obtained their doctoral degrees within the

preceding 10 years. Eminent senior researchers from around the world deliver lectures and guide workshops and interactive sessions. The ASI program is organized by JSPS and its counterpart institutions in the region, including the Australian Research Council (ARC), the National Research Council of Canada (NRCC), the Chinese Academy of Sciences (CAS), the National Natural Science Foundation of China (NSFC), the Korea Science and Engineering Foundation (KOSEF) and the National Science Foundation (NSF).

# **③ ESF-JSPS Frontier Science Conference Series for Young Researchers**

This Conference Series has been established for the purpose of providing opportunities to talented, young researchers from Japan and Europe to expand their knowledge and vistas of selected frontier fields of research. This is done through a process of lectures by and interactive dialogues with researchers who are both leaders and mentors in the subject field. These meetings also offer an ideal platform for

network building among the participants. In carrying out this program, JSPS and the European Science Foundation (ESF) select, through consultation, the meeting themes, whereas the meetings themselves are organized by an implementing institution in the host country. The participants, 40-50 nominated from the two sides, lodge together during these approximately one-week sessions.

### Heads of Research Councils of the G8 Countries (G8-HORCs)

Meetings of the G8-HORCs, held once a year, bring together the top leaders of principal science-promotion agencies in the G8-member nations (i.e., Canada, France, Germany, Italy, Japan, Russia, the UK, the US) for the purpose of holding free discussions on topics of common interest, including issues of a global nature and

S & T policy. The first meeting was held in West Germany in 1979 on a proposal made by the then Deutsche Forschungsgemeinschaft (DFG) president, Professor Heinz Maier-Leibnitz. The venue rotates among the members, with Japan having hosted the 13th meeting in 1994 and 21st meeting in 2002.

### Heads of Research Councils in Asia (A-HORCs)

JSPS proposed the meeting of A-HORCs for the purpose of holding candid exchanges of views on issues of SGT policy among top leaders of prinicipal science-promotion agencies in Japan, China and Korea. The first meeting, held in Tokyo on 6 November 2003, advanced a free discussion among the members on the state of S&T policy in their respective countries and on their current programs of international scientific cooperation.

### **2** Collaboration with Asian Countries

# ① Core University Program

The core university program provides a framework for international cooperative research in specifically designated fields and topics, centering around universities designated as core universities in Japan and in the counterpart Asian countries. Under the

program, universities and individual scientists in the affiliated countries carry out cooperative research projects with sharply focused topics and explicitly delineated goals.

There are two types of collaboration: one is bilateral and the other is multilateral basis.



# **International Scientific Cooperation**

### **Bilateral Collaboration**

Countries & Counterpart Institutions	Theme	Core Universities in Japan	Core Universities in Counterpart Countries
	Collaborative Studies on Accelerators, High Energy Physics and Synchrotron Radiation Science on the Basis of Electron Accelerators	High Energy Accelerator Research Organization	Institute of High Energy Physics, CAS
China Chinese Academy of Sciences (CAS)	Study of Plasma Confinement for Advanced Reactors and Fusion Engineering	National Institutes of Natural Sciences	Institute of Plasma Physics, CAS
	Combating Desertification and Enhancing Rural Development in Inland of China	Tottori University	Institute of Soil and Water Conservation, CAS
China Ministry of Education of	Establishment and Evaluation of Biosystem with Regional Resource Utilization/Application for Sustainable Development	University of Tsukuba	Peking University
People's Republic of China (MOE)	Management and Control of Urban Environment	Kyoto University	Tsinghua University
Indonesia	Sustainable Development of Fisheries Resources in Tropical Area	Tokyo University of Marine Science and Technology	Diponegoro University
Directorate General of Higher Education,	Marine Transportation Engineering	Hiroshima University	Institute of Technology Surabaya
Ministry of Education and Culture (DGHE)	Harmonization between Development and Environmental Conservation in Biological Production	University of Tokyo (Agricultural and Life Sciences)	Bogor Agricultural University
Indonesia	Wood Material Science	Kyoto University	R&D Unit for Biomaterials, LIPI
Indonesian Institute of Sciences (LIPI)	Environmental Conservation and Land Use Management of Wetland Ecosystem in Southeast Asia	Hokkaido University	R&D Center for Biology, LIPI
	Development and Applications of Advanced High Quality Energy	Kyoto University	Seoul National University
	Science and Technology for Next Generation Semiconductor Device, Equipment and Materials	Toyohashi University of Technology	Korea University of Technology and Education
Korea, Rep. Korea Science and	New Processing and Nanostructure/Property Relationship for Multi- functional Ceramic Materials	Osaka University	Hanyang University
Engineering Foundation (KOSEF)	Preparation and Applications of Functional and Ecological Soft Materials	Tokyo Institute of Technology	Korea Advanced Institute of Science and Technology
	Elucidation of Fish Resource Fluctuation and Development of Zero- Emission Fishery with Low Environmental Burden	Hokkaido University	Pukyong National University
	Development and Operation of the NGI (Next Generation Internet Technologies)	Kyushu University	Chungnam National University
Malaysia Vice-Chancellors' Council of National Universities in Malaysia (VCC)	Construction and Creation of Sustainable Society based on the Zero- Discharge Concept in Integrated Watershed Management	Kyoto University	University of Malaya
Philippines Department of Science	Studies on Development and Utilization of Fisheries Resources in the Coastal Waters in the Philippines	Kagoshima University	University of the Philippines in the Visayas
and Technology (DOST)	Environmental Issues Related to Infrastructure Development	Tokyo Institute of Technology	University of the Philippines
	Developmental Research and Clinical Applications of Dental Biomaterials for Oral Diseases and Severe Maxillofacial Defects	Tokyo Medical and Dental University	Chulalongkorn University
	Microbial Resources	Yamaguchi University	Kasetsart University
Thailand National Research	Molecular Epidemiologic Research on Emerging and Re-emerging Infectious Disease	University of Tokyo	Mahidol University
Council of Thailand	Perspectives of Flows, Middle Class, and State and Market for Asia	Kyoto University	Thammasat University
(NRCT)	Productivity Techniques and Effective Utilization of Aquatic Animal Resource	Tokyo University of Marine Science and Technology	Kasetsart University
	Natural Medicines	Toyama Medical and Pharmaceutical University	Chulalongkorn University, Chulabhorn Research Institute
Vietnam Vietnamese Academy of	Environmental Science and Technology for the Earth	Osaka University	Vietnam National University, Hanoi
Science and Technology (VAST)	Analysis of Various Factors on Emergence and Re-emergence of Tropical Infectious Diseases and Their Control Strategy	Nagasaki University	National Institute of Hygiene and Epidemiology

# **Multilateral Collaboration**

Countries & Counterpart Institutions	Fields	Core Universities in Japan	Core Universities in Counterpart Countries
Indonesia (LIPI)			R&D Center for Biotechnology, LIPI
Malaysia (VCC)	Biotechnology	Osaka University	University of Putra, Malaysia
Philippines (DOST)			University of the Philippines at Los Baños BIOTECH
Thailand (NRCT)			Mahidol University
Indonesia (LIPI)		University of Tokyo	R&D Center for Oceanology, LIPI
Malaysia (VCC)			University of Technology, Malaysia
Philippines (DOST)	Coastal Oceanography		University of the Philippines Diliman
Thailand (NRCT)			Chulalongkorn University
Vietnam (VAST)			Haiphong Institute of Oceanology

# 2 Joint Research Projects and Joint Seminars

# ■ Japan-China Scientific Cooperation Program

### Counterpart Institution: National Natural Science Foundation of China (NSFC)

- Cooperation started in 1996.
- Area of Cooperation: Natural sciences

# ■ Japan-India Cooperative Science Program

#### Counterpart Institution: Department of Science and Technology (DST) of Government of India

- Cooperation started in 1993 based on the agreement of the Japan-India Science Council, established by JSPS and DST.
- Areas of Cooperation:
- 1) Molecular structure, dynamics, and molecular materials, including supramolecular science
- 2) Advanced materials
- 3) Modern biology and biotechnology
- 4) Manufacturing sciences
- 5) Astronomy and astrophysics
- 6) Surface & interface science, including catalysis

# **■** Japan-Korea Basic Scientific Cooperation Program

### Counterpart Institution: Korea Science and Engineering Foundation (KOSEF)

- Cooperation started in 1991 based on the agreement of the Japan/Korea Joint Committee for Basic Scientific Research.
- Program Categories:
   Mathematics/physics, chemistry/material
   sciences, biology, informatics/mechatronics,
   geoscience/space science, medical science, and
   humanities and social sciences

# ③ RONPAKU (Dissertation Ph.D.) Program

This program provides financial support to researchers from Asian countries who wish to obtain their Ph.D. degrees from Japanese universities through the submission of a dissertation without going through a graduate study course.

A period of up to five years is allowed to do the dissertation research. The RONPAKU fellow

makes one visit of up to 90 days per year to a Japanese university to conduct his/her research under the supervision of a Japanese advisor. The Japanese advisor may, when deemed necessary, also visit the fellow's home university or research institution to supervise the fellow's research together with his/her home advisor.

# Number of RONPAKU Fellows for FY 2004

Country	Number of Fellows registered
Bangladesh	4
China	13
India	12
Indonesia	31
Korea	25
Malaysia	5
Mongolia	1
Philippines	10
Thailand	27
Vietnam	18
Total	146

# Number of Ph.D. Awardees under the RONPAKU Program (FY1978-FY2003)

Country	Number of Ph.D. Awardees
Bangladesh	2
China	36
India	13
Indonesia	98
Korea	33
Malaysia	13
Philippines	55
Singapore*	3
Thailand	152
Vietnam	2
Total	407

<sup>\*</sup> Singapore's participation in the RONPAKU Program ended on March 31, 2001.

# **International Scientific Cooperation**

# **4** Asian Science Seminar

JSPS holds about three seminars in Japan and other Asian countries every year. These seminars are designed to spur scientific

achievement in the region by introducing the latest scientific advances to the attending young Asian researchers.

### Asian Science Seminars Held in FY 2003

Title	Period	Venue	Co-host
The Development of Information Technology supporting Distance-education in Asia	Nov. 18 - 26, 2003 (9 days)	Tokyo, Japan	Tokyo Institute of Technology
Winter School on NMR Spectroscopy at the Frontier of Progress in Life Science	Jan. 19-31, 2004 (13 days)	Osaka, Japan	Institute for Protein Research, Osaka University
International Workshop on Single-molecule Biophysics	Jan. 4, 5 and 9-15, 2004 (9 days)	Bangalore, India	National Institute of Genetics National Centre for Biological Sciences, India DST



Photograph courtesy of Osaka University



Photograph courtesy of Tokyo Institute of Technology

# **5** Scientist Exchanges

JSPS implements this program under Memoranda of Understanding concluded with counterpart institutions listed below. Japanese scientists who visit the counterpart countries under this program are selected through a competitive process. Scientists from these countries are nominated by the counterpart institutions to JSPS.

Country	Counterpart Institution	Field
Bangladesh	University Grants Commission	Social Science, Natural Science
	Chinese Academy of Sciences	Natural Science
China	Chinese Academy of Social Sciences	Humanities & Social Science
	Ministry of Education P. R. C.	Humanities & Social Science, Natural Science
India	Indian National Science Academy	Natural Science
Indonesia	Directorate General of Higher Education, Department of National Education	Humanities & Social Science, Natural Science
	Indonesian Institute of Sciences	Humanities & Social Science, Natural Science
Korea, Rep.	Korea Science and Engineering Foundation	Humanities & Social Science, Natural Science
Malaysia	Vice-Chancellors' Council of National Universities in Malaysia	Humanities & Social Science, Natural Science
Philippines	Department of Science and Technology	Humanities & Social Science, Natural Science
Singapore	National University of Singapore	Humanities & Social Science, Natural Science
Thailand	National Research Council of Thailand	Humanities & Social Science, Natural Science
Vietnam	Vietnamese Academy of Science and Technology	Humanities & Social Science, Natural Science

# 3 Fellowships for Foreign Researchers

JSPS provides an array of programs at each career stage—postdoctoral, professor and Nobel

laureate—to invite researchers from overseas to Japan.

# 1 JSPS Postdoctoral Fellowships for Foreign Researchers

# 1 JSPS Postdoctoral Fellowships for Foreign Researchers

This program was established in 1988 to allow researchers employed at Japanese universities and research institutes to invite promising young researchers from overseas to Japan to participate in collaborative research activities under their guidance. In providing such opportunities, the program seeks to assist the young Fellows in advancing their own research while stimulating Japanese academic

circles, particularly their younger generations, through close collaboration.

Two application channels are provided:

a) Prospective Japanese host researchers apply to JSPS,

or

b) Foreign postdoctoral researchers apply through the nominating authority in their home country. (See pages 32-33.)

#### **ELIGIBILITY**

- 1) Be a citizen of a country that has diplomatic relations with Japan.
- Hold a doctorate degree when the Fellowship goes into effect, which must have been received within 6 years prior to April 1 of that fiscal year.

#### **DURATION**

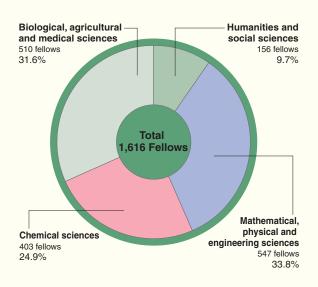
12 to 24 months

#### TERMS of AWARDS

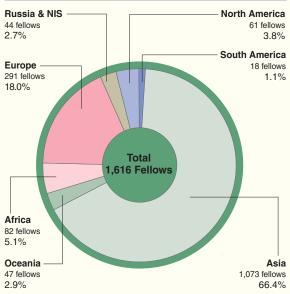
- 1) A round-trip air ticket
- 2) A monthly allowance of ¥392,000
- 3) A settling-in allowance of ¥200,000
- 4) An annual domestic research travel allowance of ¥58,500
- Overseas travel accident and sickness insurance coverage

(A research grant of up to ¥1,500,000 per year is also available to cover cooperative research-related expenses. Application for this grant is made by the host researcher.)

FY2003
Distribution of Postdoctoral Fellows by Research Field









# **International Scientific Cooperation**

# (2) JSPS Postdoctoral Fellowship Program (Short-term)

This program is specially established to provide young researchers from the US, Canada and Europe opportunities to conduct, under the guidance of their hosts, cooperative research with leading research groups in universities and other Japanese institutions. It serves to expand scientific exchange between Japan and the following countries: the US, Canada, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the UK.

Two application channels are provided:

- a) Prospective Japanese host researchers apply to JSPS,
- b) Foreign researchers in the US, the UK, France, Germany or Sweden apply through the nominating authority or JSPS liaison office in their home country. (See pages 32-33 and foldout page.)

#### **ELIGIBILITY**

Each candidate for the Fellowship must:

- (1) Be a citizen or permanent resident of one of the 19 participating countries.
- (2) Hold a doctorate degree when the Fellowship goes into effect, which must have been received within 10 years; or be enrolled in a doctoral course and be scheduled to receive a Ph.D. within 2 years.

#### **DURATION**

15 days to 11 months

#### **TERMS of AWARDS**

- 1) A round-trip air ticket
- 2) A monthly maintenance allowance of ¥392,000
- A settling-in allowance of ¥200,000 (only for Fellows with a tenure of three or more months)
- An annual domestic research travel allowance of ¥58,500
- 5) A monthly research support allowance of ¥81,000
- Overseas travel accident and sickness insurance coverage



Postdoctoral Fellow, Dr. Aaron T. Setterdahl and his host researcher, Prof. Hase, Osaka University

# **③ JSPS Summer Program**

This program is implemented as a component of the JSPS Postdoctoral Fellowships for Foreign Researchers. It provides young researchers from North America and Europe with an opportunity to participate in a summer research program in Japan. The first week of the program is dedicated to a orientation session on Japanese language, culture and research systems conducted by the Graduate University for Advanced Studies. The rest of the time, Fellows conduct research under the

guidance of their hosts at Japanese universities and research institutes. Just before departing Japan, a meeting is held for them to report their research results.

Applications are submitted by foreign researchers through the nominating authority in their countries. Participating countries are assigned the following quotas: The US (65), the UK (10), France (13), Germany (13), and Canada (9).

#### ELIGIBILITY

Each candidate for the Fellowship must:

- (1) Be a citizen or permanent resident of one of the 5 participating countries.
- (2) Fulfill either of the following conditions:
  - Hold a doctorate degree when the Fellowship goes into effect, which must have been received within 6 years.
  - Be enrolled in a university graduate course.

#### DURATION

2 months in the summer

#### TERMS of AWARDS

- 1) A round-trip air ticket
- 2) A maintenance allowance of ¥534,000
- 3) A domestic research travel allowance
- 4) A research support allowance of up to ¥100,000
- Overseas travel accident and sickness insurance coverage

(JSPS will cover the following expenses separately from the allowance: meals and accommodation charges during the orientation and report session.)





Summer Program orientation at the Graduate University for Advanced Studies

# 2 JSPS Invitation Fellowships for Research in Japan

# 1 Short-Term Program

Through this program, scientists with distinguished records of research achievement are invited to Japan to hold discussions with Japanese researchers, participate in seminars, give lectures, or perform similar functions that will contribute to advancement of research in the subject field.

Two application channels are provided:

a) Prospective Japanese host researchers apply to JSPS,

or

b) Foreign postdoctoral researchers apply through the nominating authority in their home country. (See pages 32-33.)

### ELIGIBILITY

- 1) Be a citizen of a country that has diplomatic relations with Japan.
- Senior scientists, university professors, and other persons with substantial professional experience.

#### **■**DURATION

14 to 60 days

#### **TERMS of AWARDS**

- 1) A round-trip air ticket
- 2) A daily maintenance allowance of ¥18,000
- 3) Domestic research travel allowance of ¥150,000
- Overseas travel accident and sickness insurance coverage



# **International Scientific Cooperation**

# 2 Long-Term Program

This program is designed to allow Japanese researchers to invite their overseas colleagues to Japan to participate in cooperative research activities at Japanese universities and research institutes.

- Two application channels are provided:
- a) Prospective Japanese host researchers apply to JSPS,
- b) Foreign postdoctoral researchers apply through the nominating authority in their home country. (See pages 32-33.)

#### **ELIGIBILITY**

- 1) Be a citizen of a country that has diplomatic relations with Japan.
- 2) Meet degree requirements:
  - a) Have held a doctorate degree for a period of more than 6 years prior to April of the subject fiscal year, or
  - b) Be a university professor, associate/assistant professor, research associate, or other person who does not hold a doctoral degree but has substantial professional experience.

#### **DURATION**

2 months (61 days) to 10 months

#### **■TERMS of AWARDS**

- 1) A round-trip air ticket
- 2) A monthly maintenance allowance of ¥369,000
- 3) Domestic research travel allowance of ¥100,000
- 4) Research expenses of ¥40,000
- Overseas travel accident and sickness insurance coverage



Long-term Fellow, Dr. Mohammad H. Rashid and his host researcher, Prof. Fumio Kato, Shiga University

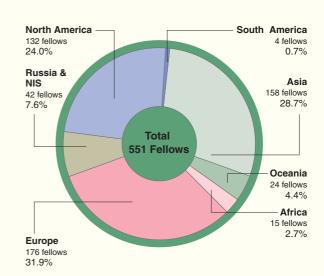


Long-term Fellow, Dr. Kyung-Ho Sim, Kyoto University

#### FY2003 Distribution of Invitees by Research Field

#### Biological, agricultural Humanities and and medical sciences social sciences 130 fellows 70 fellows 23.6% 12.7% Total 551 Fellows Mathematical Chemical physical and sciences engineering sciences 102 fellows 249 fellows 45.2% 18.5%

# FY2003 Distribution of Invitees by Region



### JSPS Award for Eminent Scientists

JSPS awards invitations to Nobel laureates and other leading scientists to come to Japan for the purpose of associating directly with young Japanese researchers so as to mentor, stimulate and inspire them to greater attainments. The awardees may also be asked to contribute their advice and expertise on ways to enhance the planning, conducting and evaluating of scientific research at Japanese universities and research institutes.

#### **ELIGIBILITY**

Foreign researchers such as Nobel laureates, who possess a record of excellent research achievements and who are mentors and leaders in their respective fields.

#### DURATION

Visits should be made within a year

#### ■TERMS of AWARDS

- 1) First-class roundtrip air ticket(s)
- 2) A per diem of ¥42,000
- 3) A daily family allowance of ¥10,000



Sir Harold Walter Kroto, 1996 Nobel Laureate in Chemistry, invited by Toyo University

# 4 International Meetings

# 1 JSPS International Meetings

To advance international scientific cooperation, this program funds the convening of international scientific meetings in Japan. The objective is to promote interaction at

information exchange among researchers from various countries with an eye to elevating the level of the subject research in both Japan and the broader scientific community.

#### **MAIN CRITERIA FOR HOLDING MEETINGS**

- 1) They must contribute to the advancement of science in Japan and the participating countries.
- The themes must be clearly defined and of scientific value, e.g., they must have the potential to develop new knowledge or concepts or new research methodologies.
- 3) There must be a significant reason for holding them in Japan.
- 4) At least a quarter of the participants at each meeting should be foreign researchers.
- 5) Both the organization and operation of the meeting must be clearly established.
- Number of meetings to be supported annually Approximately 45
- Funding

Up to 3.5 million yen

# 2 Travel Grant for Academic Meetings

This program provides travel grants to Japanese researchers who deliver presentations at overseas

academic meetings.



# **International Prize for Biology**

The endowment for the International Prize for Biology was established in 1985 in commemoration of Emperor Showa's 60th year of reign and in recognition of his longtime devotion to biological research. JSPS

acts as the executive secretariat of the Committee on the International Prize for Biology. The Prize is awarded every year to a scientist with eminent achievement in a selected field of biology.



### Past Winners of the Prize

1985	Taxonomy or Systematic Biology	1994	Systematic Biology and Taxonom
	Edred J.H. Corner (UK)		Ernst Mayr (U.S.A.)
1986	Systematic Biology and Taxonomy	1995	Cell Biology
	Peter H. Raven (U.S.A.)		Ian R. Gibbons (UK)
1987	Developmental Biology	1996	Biology of Reproduction
	Sir John B. Gurdon (UK)		Ryuzo Yanagimachi (Japan)
1988	Population Biology	1997	Plant Science
	Motoo Kimura (Japan)		Elliot M. Meyerowitz (U.S.A.)
1989	Marine Biology	1998	Biology of Biodiversity
	Sir Eric Denton (UK)		Otto T. Solbrig (U.S.A.)
1990	Behavioral Biology	1999	Animal Physiology
	Masakazu Konishi (U.S.A.)		Setsuro Ebashi (Japan)
1991	Functional Biology of Plants	2000	Developmental Biology
	Marshall D. Hatch (Australia)		Seymour Benzer (U.S.A.)
1992	Comparative Physiology and Biochemistry	2001	Paleontology
	Knut Schmidt-Nielsen (U.S.A.)		Harry B. Whittington (UK)
1993	Ecology	2002	Biology of Evolution
	Edward O. Wilson (U.S.A.)		Masatoshi Nei (U.S.A.)
		2003	Cell Biology
			Shinya Inoué (U.S.A.)



# **University-Industry Research Cooperation**

# **Research Cooperation**

JSPS has created a great number of university-industry cooperative research committees since its establishment in 1932 as a non-profit foundation. Such committees, each focusing on a specific industrial subject, are organized at the request of academia or industry for the purpose of advancing inter-sectoral scientific information exchange and discussion on scientific application or technical development. JSPS supports these committees with an aim at promoting their smooth operation and at publishing scientific literature on their fruits. The operating expenses of these committees are paid for by membership fees from the private companies participating in them. Over the years, 175 such committees have been organized, some of which have completed their work and been dissolved. There are currently 57 active committees.

An advisory committee, composed of members from both academia and industry, serves two functions: 1) It receives and deliberates requests from academia and/or industry for organizing university-industry cooperative research committees on specific themes; and 2) it proposes new and budding fields of scientific research that have the potential to be advanced through university-industry cooperation. Committees for Research Promotion in Specialized Areas and Frontier R&D Committee are created upon the recommendation of this advisory committee. These committees are currently working actively in the fields of "Global Carbon Cycle and Methane-Hydrate Resources Under Seafloor," "Material Sciences and System Design Toward Advanced Electronics," "Research on Software Infrastructure," "Photonic Information Systems," "Research on nanometer CMOS systems and related core technologies for wireless sensor networked society" and "Development of Risk Based Maintenance Technology in Chemical Process Industries."

For a list of the university-industry cooperative research committees, please see JSPS's homepage:

http://www.jsps.go.jp/english/e-soc/main.html

#### **International Symposia for University-Industry Cooperation**

This program, established in 1990, provides partial financial support for international symposia on specific research topics. To be eligible, these symposia must be organized by JSPS university-industry committees and be aimed at advancing

international scientific information exchange through university-industry cooperation. They are required to have at least 100 participants, including no fewer than 20 foreign scientists.

# M

# **Donations**

# **Tax-Exempt Status of Donations**

Donations made to JSPS as a "specific contribution to a public interest corporation" or as a "specified contribution" are tax deductible both

by individuals and corporations. Also, assets bequeathed to JSPS are exempt from estate tax.

#### **Donations Received from the General Public**

JSPS has established a "special sciencepromotion trust" to receive donations made by members of the general public in support of research activities or initiatives that require urgent or special funding.

# **Donation-Supported Activities**

Private companies, groups and individuals donate funds to JSPS to carry out specific activities

or programs. Those implemented at present are as follows:

#### • Kaya Conferences

Commemorating the achievements of the late Dr. Seiji Kaya, this endowment, supported by contributions from industrial circles, funds annual scientific meetings in the field of solid state physics, referred to as "Kaya Conferences."

#### Ono/Sumitomo Japan-China Medical Researcher Exchange

Funded jointly by Ono Pharmaceutical Co. Ltd. and Sumitomo Pharmaceutical Co. Ltd., this program works to promote exchange between Japanese and Chinese medical researchers. It does so by inviting 4-6 Chinese medical researchers to Japan each year over the 10-year period of 1995-2004.

#### • Inokuchi Memorial Fund for Human Sciences

Under this program, private funding is used to organize an annual seminar for the purpose of advancing human sciences.

#### • JSPS Tropical Bio-Resources Research Fund

Inheriting assets from a dissolved private trust, JSPS uses this Fund to support approximately eight researchers a year in overseas fieldwork and other research activities.

#### • Fujita Memorial Fund for Medical Research

From an endowment by the family of the late Dr. Noboru Fujita, research grants are provided each year to 5-8 young medical researchers in the field of surgery.

# **Donations for Overseas Academic Cooperation**

Launched in 1980, this program supports international cooperation activities carried out by academic research institutions in other countries. When such activities are deemed essential, JSPS

solicits funds from private companies and other organizations and contributes them to the overseas implementing institutions.

# **Raising Funds for Holding International Academic Conferences**

For international conferences that are held in Japan and meet certain eligibility criteria, JSPS

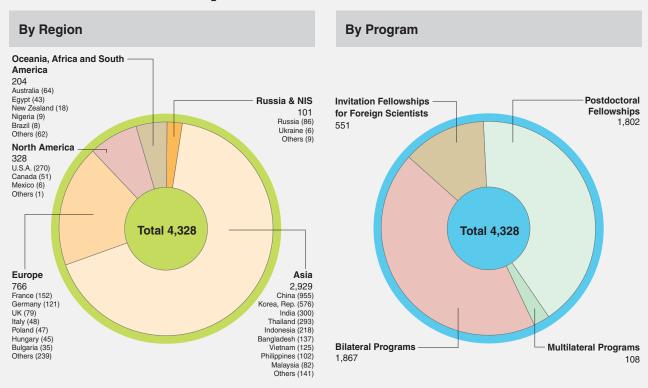
acts in place of the sponsor to raise funds, using its special tax-exempt status.

#### Such conferences held in FY2004

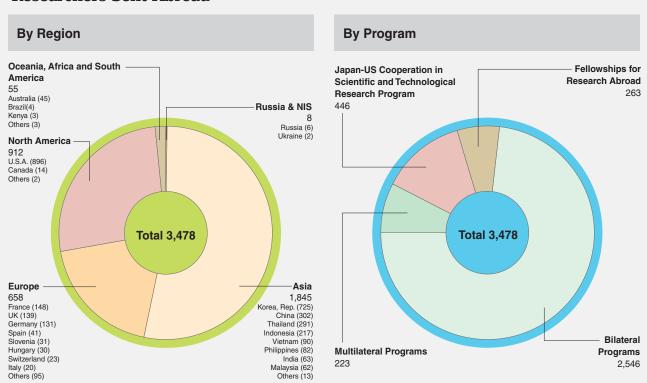
Title	Date
Seventh Congress of the Asian Federation of Societies for Ultrasound in Medicine and Biology	17-21 May 2004
The 14th International Symposium on Olfaction and Taste	5-9 July 2004
World Congress of Behavioral and Cognitive Therapies 2004	20-24 July 2004
The 20th World Congress of International Federation for Home Economics	1-7 August 2004
16th International Congress of the IFAA	22-27 August 2004
24th Congress of the International Council of the Aeronautical Sciences, 2004 Yokohama	29 August-3 September 2004
The IXth International Conference on Molecule-Based Magnets	4-8 October 2004
International Symposium on Stereodynamics of Chemical Reactions 2004	28 November-3 December 2004
The 19th World Congress of the International Association for The History of Religions	24-30 March 2005

# Distribution by Region and Program of Scientists Exchanged through JSPS Programs in FY2003

# Researchers invited to Japan



### **Researchers Sent Abroad**



# List of Counterpart Foreign Academic Institutions

Region	Country	y	Counterpart Institution	Address	Invitation Fellowship	Postdoctoral Fellowship	Scientist Exchanges	Research Project/ Seminar	Multilateral Cooperation
П	Bangladesh		University Grants Commission (UGC)	Agargaon, Sher-e-Bangla Nagar, Dhaka-1207, BANGLADESH Tel. 02-8111331			0		
		Α	Chinese Academy of Sciences (CAS)	52, Sanlihe Rd., Beijing, 100864, CHINA Tel. 010-6859-7224			0		0
		В	Chinese Academy of Social Sciences (CASS)	5, Jianguomennei Dajie, Beijing, 100732, CHINA Tel. 010-6512-9920			0		
	China	С	Ministry of Education P.R.C. (MOE)	37, Xidan Damucang Hutong, Beijing, 100816, CHINA Tel. 010-6609-6524			0		
	Cillia	D	Chinese Academy of Medical Sciences (CAMS)**	9 Dongdansantiao, Beijing, 100730, CHINA Tel. 010-6529-5933			0		
		Е	National Natural Science Foundation of China (NSFC)	83 Shuangqing Road, Haidian District, Beijing 100085, CHINA Tel. 010-6232-6998				0	0
	India	Α	Indian National Science Academy (INSA)	Bahadur Shah Zafar Marg, New Delhi 110002, INDIA Tel. 011-23221931 – 23221950 (20 lines)			0		
	Iliula	В	Department of Science and Technology (DST)	Technology Bhavan, New Mehrauli Road, New Delhi 110016, INDIA Tel. 011-26567373			0	0	
	Indonesia	A	Directorate General of Higher Education, Department of National Education (DGHE)	Jl. Raya Jenderal Soedirman, Pintu 1 Senavan, Tromolpos 190, Jakarta 10002, INDONESIA Tel. 021-5731903			0		
Asia	maonesia	В	Indonesian Institute of Sciences (LIPI)	JI. Jenderal Gatot Subroto No.10, Jakarta 12710, INDONESIA Tel. 021-5251542			0		
	Israel		Israel Association for the Promotion of International Scientific Relations (IAPISR)	Hakirya East Bldg. III, P.O.Box 18195 91181 Jerusalem, ISRAEL Tel. 02-653-7862			0		
	Korea, Rep		Korea Science and Engineering Foundation (KOSEF)	180-1 Gajeong-Dong, Yuseong-Gu, Daejeon-City 305- 350, REP. OF KOREA Tel. 042-869-6114	0		0	0	
	Malaysia		Vice-Chancellors' Council of National Universities in Malaysia (VCC)	Institute of Research Management & Consultancy University of Malaya, A205 IPSR Building, 50603 Kuala Lumpur, MALAYSIA Tel. 03-7967-4643			0		
	Mongolia		Ministry of Science, Technology, Education and Culture (MOSTEC)	210620a Baga Toiruu 44, Zasgiingazriin III bait, Sukhbaatar duureg, Ulaanbaatar, MONGOLIA Tel. 976-11-322480					0
	Philippines		Department of Science and Technology (DOST)	Bicutan, Taguig, Metro Manila, PHILIPPINES Tel. 02-837-2939			0		
	Singapore		National University of Singapore (NUS)	10 Kent Ridge Crescent, Singapore 119260, SINGAPORE Tel. 06874-4826			0		
	Thailand		National Research Council of Thailand (NRCT)	196 Phaholyothin Rd., Chatuchak, Bangkok 10900, THAILAND Tel. 02-579-2690			0		
Ш	Vietnam		Vietnamese Academy of Science and Technology (VAST)	Hoang Quoc Viet Road, Cau Giay, Hanoi, VIETNAM Tel. 04-7564607			0		
l a	Australia	A	Australian Academy of Science (AAS)	GPO Box 783 Canberra, ACT 2601 AUSTRALIA Tel. 02-6247-5777	0	0	0		
Oceania	rustunu	В	Australian Research Council (ARC)	GPO Box 2702 Canberra ACT 2601 AUSTRALIA Tel. 02-6284-6600		0		0	0
Ш	New Zealar	nd	Ministry of Research, Science and Technology (MoRST)*	P.O. Box 5336, Wellington, NEW ZEALAND Tel. 04-971-2912	0	0			
		A	Federal Ministry of Science and Transport (BMWV)***	Minoritenplatz 5, A-1014, Wien, AUSTRIA Tel. 1-531200			0		
	Austria	A	Austrian Exchange Service (ÖAD)*	Alser Strasse 4/1/15/6, A-1090 Wien, AUSTRIA Tel. 01-4277-28189		0			
		В	Austrian Science Fund (FWF)	Weyringergasse 35, A-1040 Wien, AUSTRIA Tel. 01-5056740-0				0	
	Belgium		Fund for Scientific Research – Flanders (FWO)	Egmontstraat 5, B-1000 Brussels, BELGIUM Tel. 02-512-9110		0	0	0	
	Deigium		Fonds National de la Recherche Scientifique (FNRS)	rue d'Egmont 5, B-1000 Brussels, BELGIUM Tel. 02-504-9211		0	0	0	
	Bulgaria		Ministry of Education and Science (MES)	24 Knjiaz Dondukov Blvd., 1000 Sofia, BULGARIA Tel. 0988-04-94		0	0		
	Czech Rep.		Academy of Sciences of the Czech Republic (ASCR)	Národní 3, 117 20 Prague 1, CZECH REP. Tel. 0221-403-111		0	0		
	Denmark		Danish Rectors' Conference (DRC)	Vester Voldgade 121A, 4 sal DK-1552 Copenhagen V., DENMARK Tel. 033-92-5403		0	0		
Europe	Estonia		Estonian Science Foundation (EstSF)*	6 Kohtu St., 10130 Tallinn, ESTONIA Tel. 0372-6451-741		0			
Enr	Finland		Academy of Finland (AF)	Vilhonvuorenkatu 6, P.O. Box 99, 00 501 Helsinki, FINLAND Tel. 09-7748-8317		0	0	0	
		A	Centre National de la Recherche Scientifique (CNRS)	3, rue Michel-Ange, 75794 Paris, cedex 16, FRANCE Tel. 01-44-96-46-95	0	0	0	0	0
	France	В	Institut National de la Santé et de la Recherche Médicale (INSERM)	101, rue de Tolbiac, 75654 Paris, Cedex 13, FRANCE Tel. 01-44-23-60-00				0	
	Tance	С	Institut National de la Recherche Agronomique (INRA)	147 rue de l'Université 75338 Paris Cedex 07, FRANCE Tel. 01-42-75-90-00				0	
		D	Ministere des Affaires Etrangeres (MAE)/EGIDE****	28 rue de la Grange aux Belles,75010 Paris, FRANCE Tel. 01-40405751				0	
		Α	Alexander von Humboldt-Stiftung (AvH)	Jean-Paul-St. 12, D-53173 Bonn, GERMANY Tel. 0228-833-174	0	0	0	0	
	Germany	В	Deutscher Akademischer Austausch Dienst (DAAD)	Kennedyallee 50, D-53175 Bonn, GERMANY Tel. 0228-882-0	0	0*	0		
		С	Deutsche Forschungsgemeinschaft (DFG)	Kennedyallee 40, D-53175 Bonn, GERMANY Tel. 0228-885-2347				0	

<sup>\*</sup> Cooperate with JSPS in nominating fellowship candidates only.

\*\*Supported by a private contribution.

\*\*\* ÖAD administers the program on behalf of BMWV.

\*\*\*EGIDE administers the program on behalf of MAE.

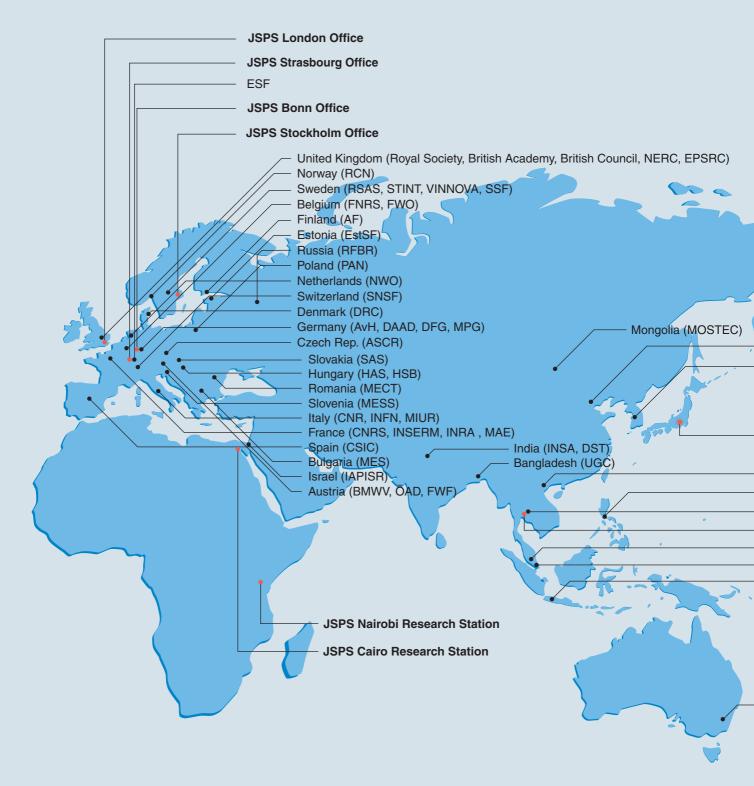
Country		<b>Counterpart Institution</b>	Address	Invitation Fellowship	Postdoctoral Fellowship	Scientist Exchanges	Research Project/ Seminar	Multilateral Cooperation
Germany	D	Max-Planck-Gesellschaft zur Förderung der Wissenshaften e.V. (MPG)	Hofgartenstrasse 8, D-80539 München, GERMANY Tel. 89-2108-1281					0
	Α	Hungarian Academy of Sciences (HAS)	9 Roosevelt tér, H-1051 Budapest, HUNGARY Tel. 01-411-6100		0	0	0	
Hungary	В	Hungarian Scholarship Board (HSB)*	House of Professors, 1146 Budapest, Ajtó si Dürer sor 19-21, HUNGARY Tel. 01-384-9008	0	0			
	Α	National Research Council (CNR)	Piazzale Aldo Moro, 7-00185, Roma, ITALY Tel. 06-49933977			0	0	
Italy	В	National Institute of Nuclear Physics (INFN)	Piazza dei Caprettari, 70-00186, Roma, ITALY Tel. 06-6840031					0
	С	Italian Ministry of Education, University and Research (MIUR)*	Piazza J-Kennedy, 20 I-00144 Roma, ITALY Tel. 06-5849-7639	0	0			
Netherlands		Netherlands Organization for Scientific Research (NWO)	P.O. Box 93138, 2509 AC The Hague, THE NETHERLANDS Tel. 070-344-060	0	0	0	0	
Norway		Research Council of Norway (RCN)*	Stensberggaten 26, P.O. Box 2700 St. Hanshaugen, N-0131 Oslo, NORWAY Tel. 022-03-7000	0	0			
Poland		Polish Academy of Sciences (PAN)	Plac Defilad 1, P.O. Box 24, 00-901, Warsaw, POLAND Tel. 022-656-62-16		0	0	0	
Romania		Ministry of Education, Research and Youth (MECT)	21-25, Mendeleev Str., Sector 1, 010362 Bucharest, ROMANIA Tel. 021-2128-7004		0	0		
Russia		Russian Foundation for Basic Research (RFBR)	Leninsky Prospekt, 32A, 119991, B-334, GSP-1 Moscow, RUSSIA Tel. 095-938-13-38				0	
Slovakia		Slovak Academy of Sciences (SAS)	Stefanikova 49, 814-38 Bratislava, SLOVAKIA Tel. 02-5249-2751		0	0	0	
Slovenia		Ministry of Education, Science and Sport (MESS)	Trg OF13, SI-1000 Ljubljana, SLOVENIA Tel. 01-478-46-00		0	0	0	
Spain		Consejo Superior de Investigaciones Científicas (CSIC)	Calle Serrano, 117 28006 Madrid, SPAIN Tel. 91-585-5119			0	0	
	A	Royal Swedish Academy of Sciences (RSAS)	Box 50005, S-10405, Stockholm, SWEDEN Tel. 08-673-9619		0	0		
Sweden	В	Swedish Foundation for International Cooperation in Research and Higher Education (STINT)*****	Skeppargatan 8, SE-114 52, Stockholm, SWEDEN Tel. 08-6627690					
	C	Swedish Agency for Innovation Systems (VINNOVA)*	101 58 Stockholm, SWEDEN Tel. 08-473 3000	0	0			
	D	Swedish Foundation for Strategic Research (SSF)*	P.O. Box 70483, SE-107 26 Stockholm, SWEDEN Tel. 08-791-1014		0			
Switzerland		Swiss National Science Foundation (SNSF)	Wildhainweg 20, CH-3001 Berne, SWITZERLAND Tel. 031-308-22-22		0	0	0	
	Α	Royal Society	6-9 Carlton House Terrace, London, SW1Y 5AG, UK Tel. 020-7451-2557	0	0	0	0	
	В	British Academy	10 Carlton House Terrace, London, SW1Y 5AH, UK Tel. 020-7969-5200		0	0	0	
UK	С	British Council	10 Spring Gardens, London SW1A 2BN, UK Tel. 020-7930-8466		0*			
	D	Natural Environment Research Council (NERC)	Polaris House, North Star Ave., Swindon, SN2 1EU, UK Tel. 01793-411500					0
	Е	Engineering and Physical Science Research Council (EPSRC)	Polaris House, North Star Ave., Swindon, SN2 1EU, UK Tel. 01793-444174					0
Europe		European Science Foundation (ESF)	1 quai Lezay-Marnésia 67080 Strasbourg Cedex, FRANCE Tel. 03-88767146					0
	Α	Natural Sciences and Engineering Research Council of Canada (NSERC)	350 Albert Street, Ottawa, Ontario K1A 1H5, CANADA Tel. 613-995-4273	0	0	0		
Canada	В	Canadian Institutes of Health Research (CIHR)	410 Laurier Ave. W., 9th Floor, Address Locator 4209 A Ottawa, Ontario. K1A 0W9, CANADA Tel. 613-941-2672	0	0		0	
		National Research Council (NRC)	M-58 1200 Montreal Rd., Ottawa, Ontario K1A 0R6, CANADA Tel. 613-998-6847					0
Mexico		National Council for Science and Technology (CONACYT)	Av. Constituyentes 1046, 3er. Piso, Col. Lomas Altas, 11950-Mexico, D.F., MEXICO Tel. 05-327-7400			0		
Mexico Mexico	Α	National Science Foundation (NSF)	4201 Wilson Boulevard, Arlington, VA 22230, U.S.A. Tel. 703-306-1701		0*		0	0
Non	В	Social Science Research Council (SSRC)*	810 Seventh Ave., 31st Flr., New York, NY 10019, U.S.A. Tel. 212-377-2700		0			
U.S.A.	C	National Cancer Institute (NCI)	Bethesda, Maryland 20892-7301, U.S.A. Tel. 301-496-4761				0	
	D	National Institutes of Health (NIH)*	Bldg. 31, Rm B2C39, Bethesda, Maryland 20892-2220, U.S.A. Tel. 301-496-1653	0	0			
	Е	National Academy of Sciences (NAS)	2101 Constitution Avenue, N.W. Washington, D.C. 20418, U.S.A. Tel. 202-334-2445				0	
Argentina		Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)	Rivadavia 1917, 1033 Buenos Aires, ARGENTINA Tel. 11-4953-7230			0		
South America Brazil		Brazilian Academy of Sciences (ABC)	Rua Anfilofio de Carvalho 29-3 CEP:-20030-060 20.001-970 Rio de Janeiro, BRAZIL Tel. 021-220-4794			0		
H Brazil		National Council for Scientific and Technological Development (CNPq)	CX. Postal 11-1142 Brasilia DF CEP 70740, BRAZIL Tel. 061-348-9440			0		
Chile		Chilean National Commission for Scientific and Technological Research (CONICYT)	Canadá 308-Bernarda Morín 551, Casilla 297-V, Correo 21, Santiago, CHILE Tel. 02-365-4400			0		
UN		The United Nations University (UNU)******	5-53-70 Jingumae, Shibuya, Tokyo 150-8925, JAPAN Tel. 03-3499-2811		0			

<sup>\*\*\*\*\*</sup> This is not a reciprocal researcher exchange program based on a Memorandum of Understanding; rather JSPS solicits application in Japan for STINT's own fellowship program.

\*\*\*\*\*\* UNU is operated by UNU Institute of Advanced Studies (UNU/IAS).

Cooperate with JSPS in recruiting candidates for the Summer Program only.

# Map of Counterpart Institutions and JSPS Offices



#### **Directors of Overseas Offices**



Akira Masaike Washington Office



Seishi Takeda San Francisco Office



Yasuo Tanaka Bonn Office



Yasuhisa Kanaguchi London Office



Tsuneko Okazaki Stockholm Office



# Number of Scientists Exchanged through JSPS Programs in FY2001, 2002 and 2003

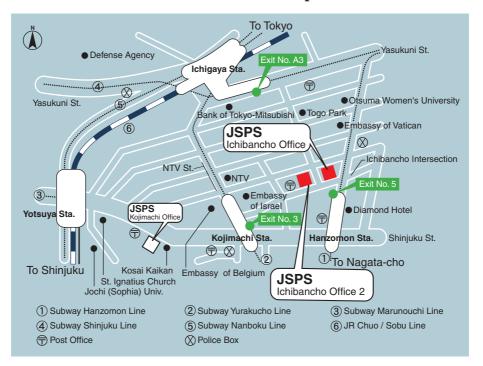
_						Foi	reign S	Scient	ists In	vited t	to Jap	an									Ja	apane	se Sci	entists	Sent	Abroa	ıd				
	Program		vitation	Scie	ntists				ostdocto ellowshi			Bilatera Program		Multila	teral Pro	grams		Total			owships arch Ab			Bilateral rogram		Multila	iteral Pro	ograms		Total	
	egion/Country FY		hort-ter		_	ong-ter				ı					ı																
He	<u> </u>	2001	2002		2001	2002	2003	2001	2002	2003	2001	2002	-	2001	2002	2003	2001		2003	2001	2002	2003	2001		2003	2001	2002	2003	2001		2003
	Total	447	469	414	106	150	137	1340	1711	1802	1789	1830	1867	120	105	108	3802	4265	4328	228	250	263	2971		2992	111	267	223	3310		3478
	Asia	145	149	87	48	72	71	863	1142	1073	1558	1618	1597	71	105	101	2685	3086	2929	3	6	7	1723	1780	1716	51	163	122	1777	1949	1845
	Oceania	15	15	20	3	8	4	40	50	47	26	6	12	4			88	79	83	5	3	4	45	68	41		4		50	75	45
ے	Africa	4	4	10	10	7	5	62	76	82							76	87	97			1	6	7	4				6	7	5
Region	Europe	138	152	144	22	39	32	237	297	379	173	175	208	3		3	573	663	766	68	82	101	400	390	470	55	58	87	523	530	658
"	Russia & NIS	27	23	32	16	11	10	43	56	44	17	19	15				103	109	101				8	7	7		2	1	8	9	8
	North America	114	122	117	6	12	15	87	74	159	12	4	33	42		4	261	212	328	151	158	150	779	847	749	5	40	13	935	1045	912
	South America	4	4	4	1	1		8	16	18	3	8	2				16	29	24	1	1		10	4	5				11	5	5
_																															
	Bangladesh	4	3	5	3	1	5	70	101	117	17	9	10	1	1		95	115	137				1	3	2				1	3	2
	Bhutan	1							2	2							1	2	2												
	Cambodia							1	1								1	1					1	1					1	1	
	China	54	60	21	13	10	12	406	549	513	402	452	405	21	12	4	896	1083	955	1	1		348	333	300	31	26	2	380	360	302
	India	32	34	26	15	28	26	147	205	162	64	101	81	6		5	264	368	300				67	52	60	5		3	72	52	63
	Indonesia	3	2	2				9	12	19	172	182	184	5	13	13	189	209	218		1	1	205	217	201		11	15	205	229	217
	Iran			3		1		12	15	13		1		3			15	17	16												
	Iraq	1	1							1							1	1	1												
	Israel	4	8	6	1	1		2	2	1	3						10	11	7			1	2	1					2	1	1
	Jordan		1					1	2				2				1	3	2								2			2	
	Korea, Rep.	26	24	17	6	16	17	146	157	133	325	390	396	9	9	13	512	596	576				592	644	725	15	9		607	653	725
	Malaysia	3	2			1	1	3	3	2	41	101	68	3	10	11	50	117	82	1	1	2	30	75	51		37	9	31	113	62
Asis	Mongolia	1			2	1	1	2	4	4				1	2		6	7	5												
Ä	Myanmar				1	1	1	3	4	5							4	5	6												
	Nepal	1			1	1		10	10	15						1	12	11	16												
	Pakistan		1	2	1	1	3	8	17	18				1	1	2	10	20	25												
	Philippines	2	2			1	2	11	9	13	89	76	75	1	18	12	103	106	102				92	70	71		13	11	92	83	82
	Singapore							2	2	3	75	17	19	3	3	4	80	22	26				62	14	6		1	1	62	15	7
	Sri Lanka	1	2	1	3	3	2	11	16	15							15	21	18												
	Syria							1	1								1	1													
	Thailand	6	4	2		2		1	6	12	267	212	253	7	26	26	281	250	293				229	293	225		53	66	229	346	291
	Turkey	2	2	1		1	1	5	9	8				2			9	12	10	1	2	2							1	2	2
	Vietnam	4	3	1	1	2		12	15	17	103	77	104	2	10	3	122	107	125		1	1	94	77	74		6	15	94	84	90
	Yemen				1	1											1	1													
	Taiwan													6		7	6		7						1		5			5	1

<u></u>	Australia	10	13	14	2	6	3	28	34	35	26	6	12	4		70	59	64	5	3	4	45	68	41		4		50	75	45
Oceania	New Zealand	5	2	6	1	2	1	12	15	11						18	19	18												
Ŏ	Papua New Guinea								1	1							1	1												
	Algeria		1		1			4	4	3						5	5	3												
	Burkina Faso						1											1												
	Cameroon								1	2							1	2												
	Congo(Dem. Rep.)						1	1	2	1						1	2	2												
	Egypt	1	3	4	4	5	2	27	31	37						32	39	43				2	3	1				2	3	1
	Ethiopia							2	3	4						2	3	4												
	Gabon			1														1												
	Ghana				1			4	5	6						5	5	6												
	Kenya						1	3	6	4						3	6	5				2	4	3				2	4	3
	Liberia																					2						2		
Africa	Mauritania								1	1							1	1												
< \	Mauritius							1								1														
	Morocco	1			1	1		2	3	2						4	4	2												
	Nigeria	1		1				6	6	8						7	6	9			1									1
	Senegal							1	1	1						1	1	1												
	South Africa			3				2	2	1						2	2	4												
	Sudan				1	1		4	2	4						5	3	4												
	Tanzania			1	2			2	3	3						4	3	4												
	Tunisia							2	3	2						2	3	2												
	Zambia	1						1	3	2						2	3	2												
	Zimbabwe									1								1												
	Albania							2	2	1						2	2	1												
	Austria	5	7	3		1	1	4	5	8	3	3	6			12	16	18	1	4	6	9	16	5		1		10	21	11
	Belgium	3	1	3	1			4	4	3		4	22			8	9	28		1	7	6	4	4				6	5	11
	Bulgaria	2	4	3	5	8	5	14	21	19	3	3	8			24	36	35				2	1	1				2	1	1
	Croatia		2	1													2	1												
	Czech Rep.	9	6	2	2	3	1	7	10	9	19	9	12			37	28	24			1	16	4	2		1	1	16	5	4
	Denmark	2		3				2	1	1	3	3	4			7	4	8	1	1	1	7	4	2				8	5	3
	Estonia			1		1	1			1							1	3												
	Finland			1				5	4	6	4	3	4			9	7	11				16	10	16				16	10	16
	France	20	30	17	1	6	6	58	71	102	25	33	27			104	140	152	8	10	14	49	42	103	6	13	31	63	65	148
	Germany	28	31	34	2	6	6	35	41	62	13	14	16	1	3	79	92	121	18	21	19	80	80	99	15	9	13	113	110	131
	Greece	1	3	1				1	2	5						2	5	6												
	Hungary	5	8	2	1	1	3	10	9	10	31	25	30			47	43	45	1			22	21	29		1	1	23	22	30
	Iceland									1								1												
	Ireland	1						1	1							2	1													
be	Italy	12	13	13	2	3	2	10	14	23	8	7	10			32	37	48	1	3	2	10	14	18	24	16		35	33	20
Europe	Latvia	1														1														
	Lithuania	1	1	1					1	1						1	2	2												
	Netherlands	3	8	9		1		4	6	8	2	1				9	16	17		5	2	5	4	13		2		11	11	15
	Newwer																													

	Ivorway		1	2	1	1		1	3	1						2	5	3												
	Poland	12	4	8	1	1	3	14	19	20	26	20	16			53	44	47				14	8	7		1	1	14	9	8
	Portugal	1														1														
	Romania	2	4	1	1	2		15	16	10	6	6				24	28	11						2						2
	Serbia Montenegro									2								2												
	Slovakia	2	2	2		1	1	5	7	8	5	12	12			12	22	23				13	14	10		1	1	13	15	11
	Slovenia	1	1	2				4	4	3	13	16	17			18	21	22				24	41	31				24	41	31
	Spain	2	6	2				2	2	8		4	10			4	12	20	1				3	14			27	1	3	41
	Sweden	2	3	5				4	10	14	8	6	5			14	19	24	2	2	3	19	6	10				21	8	13
	Switzerland	6	1	2				6	6	7	1	2	3	1		14	9	12	4	9	8	17	19	15				21	28	23
	Macedonia							1	1	2						1	1	2												
	UK	16	15	26	4	3	3	24	32	44	3	4	6	1		48	54	79	25	26	38	91	99	89	10	13	12	126	138	139
	Yugoslavia	1	1		1	1		4	5							6	7													
	Russia	23	19	29	11	6	9	32	41	33	13	14	15			79	80	86				8	7	6		1		8	8	6
	Azerbaijan			1	1	1			1	1						1	2	2												
	Belarus	1		1	1				1	2	2					4	1	3												
SIS	Georgia	1	1		1	1		1	1	1						3	3	1												
Russia & NIS	Kazakhstan							1	1							1	1													
Suss	Kyrgyz								1	1							1	1												
	Moldova		1					2	2	1						2	3	1												
	Ukraine	2	2	1	2	3	1	6	6	4	2	5				12	16	6						1		1	1		1	2
	Uzbekistan							1	2	1						1	2	1												
	Canada	22	13	15		4	7	14	13	29						36	30	51	7	4	7	12	8	7				19	12	14
erica	Costa Rica	1														1														
Am	Cuba				1				1	1						1	1	1												
North America	Mexico	1	2	2		1		2	2	1	4	4	3			7	9	6				3	1	2				3	1	2
_	U.S.A.	90	107	100	5	7	8	71	58	128	8		30	42	4	216	172	270	144	154	143	764	838	740	5	40	13	913	1032	896
	Argentina	1	1		1	1		1	2	2		4	2			3	8	4				2	1					2	1	
	Bolivia			1														1												
_	Brazil	2	2	1				2	6	7	2	1				6	9	8				4	3	4				4	3	4
erica	Chile	1	1	1						2	1	3				2	4	3				4		1				4		1
South America	Colombia							2	2	2						2	2	2												
South	Ecuador							1								1														
0)	Paraguay							1	1							1	1													
	Peru							1	5	4						1	5	4	1	1								1	1	
	Venezuela			1						1								2												

Note: The Number of Japanese sent abroad under the Japan-US Cooperation in Scientific and Technological Research Program is included under "Bilateral Programs".

# JSPS Offices in Tokyo



# Japan Society for the Promotion of Science

#### Ichibancho Office

Sumitomo-Ichibancho Bldg., 6 Ichibancho, Chiyoda-ku, Tokyo 102-8471

	[Telephone]	[Facsimile]
General Affairs Division	+81-3(3263)1722	+81-3(3221)2470
Policy Planning Division	+81-3(3263)1788	+81-3(3237)8238
Budget Division	+81-3(3263)2083	+81-3(3237)8238
Accounting Division	+81-3(3263)1723	+81-3(3237)8238
Information Systems Division	+81-3(3263)1902	+81-3(3237)8483
Research Cooperation Division I	+81-3(3263)1982	+81-3(3263)1673
Research Cooperation Division II	+81-3(3263)1725	+81-3(3263)1673
Overseas Fellowship Division	+81-3(3263)9094	+81-3(3263)1854
Asian Program Division	+81-3(3263)1724	+81-3(3263)1673
JSPS Fellows Plaza	+81-3(3263)1872	+81-3(3234)3700

#### Ichibancho Office 2

Sumitomo-Ichibancho FS Bldg., 8 Ichibancho, Chiyoda-ku, Tokyo 102-8472

10ky0 102-0-12		
	[Telephone]	(Facsimile)
Research Fellowship Division	+81-3(3263)3576	+81-3(3222)1986
University-Industry Cooperation and Research Program Division	+81-3(3263)4645	+81-3(3263)1716
Research Aid Division	+81-3(3263)0964	+81-3(3263)9005
Research Evaluation Division	+81-3(3263)1431	+81-3(3263)1824
Research and Analysis Division	+81-3(3263)1882	+81-3(3237)8236
Research Center for Science Systems	+81-3(3263)1882	+81-3(3237)8236

#### Kojimachi Office

Yamato Bldg., 5-3-1 Kojimachi, Chiyoda-ku, Tokyo 102-8471

# **JSPS Overseas Offices**

U.S.A.	■ JSPS Washington Office Suite 920, 1800 K Street N.W., Washington, D.C. 20006, U.S.A. Tel: +1-202-659-8190 Fax: +1-202-659-8199 E-mail: webmaster@jspsusa.org http://www.jspsusa.org/
	■ JSPS San Francisco Office 2150 Shattuck Avenue, Suite 920, Berkeley, CA 94704, U.S.A. Tel: +1-510-665-1890 Fax: +1-510-665-1891 E-mail: webmaster@jspsusa-sf.org http://www.jspsusa-sf.org/
Germany	■ JSPS Bonn Office Wissenschaftszentrum, Ahrstr. 58, 53175, Bonn, GERMANY Tel: +49-228-375050 Fax: +49-228-9577777 E-mail: jsps-bonn@t-online.de http://www.jsps-bonn.de/
UK	JSPS London Office 12 Berkeley Street, London W1J 8DT, UK Tel: +44-20-7629-3577 Fax: +44-20-7629-3588 E-mail: enquire@jsps.org http://www.jsps.org/
Sweden	■ JSPS Stockholm Office Fogdevreten 2, S-171 77 Stockholm, SWEDEN Tel: +46-8-5088-4561 Fax: +46-8-31-38-86 E-mail: gakushin2@jsps-sto.com http://www.jsps-sto.com/
France	■ JSPS Strasbourg Office Maison Universitaire France - Japon 42a, avenue de la Forêt-Noire, 67000 Strasbourg, FRANCE Tel: +33-3-9024-2017 Fax: +33-3-9024-2014 E-mail: jsps@japon.u-strasbg.fr http://jsps.u-strasbg.fr/
Thailand	JSPS Bangkok Office 113 TWY Office Center, 10th Fl., Serm-mit Tower, 159 Sukhumvit Soi 21, Bangkok 10110, THAILAND Tel: +66-2-661-6453 Fax: +66-2-661-6454 E-mail: jspsb@mozart.inet.co.th http://www.inet.co.th/org/jsps/
Egypt	JSPS Cairo Research Station 9 Al-Kamel Muhammad Street, Flat No.4, Zamalek, Cairo, EGYPT Tel & Fax: +20-2-7363752 E-mail: gakushin@xg8.so-net.ne.jp http://www014.upp.so-net.ne.jp/jsps-cairo/
Kenya	■ JSPS Nairobi Research Station Chiromo Access Road, Off Riverside Drive, Nairobi, KENYA Tel: +254-20-4442424 Fax: +254-20-4442112 E-mail: jsps1@africaonline.co.ke http://www.jspsnairobi.org/



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