

Strategic Japanese-Swedish Cooperative Program on
“Multidisciplinary BIO”

4th Call for Proposals to be submitted by March 25, 2009

I General Description

1. A scheme for joint funding of Japanese-Swedish research cooperation

Based on the agreement concluded in January 1999 between the Japanese and Swedish governments on cooperation in science and technology, Japan Science and Technology Agency (JST), the Swedish Agency for Innovation Systems (VINNOVA) and the Swedish Foundation for Strategic Research (SSF) have established a scheme for joint funding of Japanese-Swedish cooperative research projects. After consultations among JST, SSF and VINNOVA, “**Multidisciplinary BIO**” has been selected as the field of research for which the joint funding scheme will apply.

The first phase of the programme started in 2003 and three calls for proposals have since been completed. In this phase, JST, VINNOVA and SSF have jointly decided on funding a total of about 13 cooperative research projects.

2. Aim of programme and research field

The aim of the programme is to strengthen the collaboration between Sweden and Japan within “Multidisciplinary BIO” to achieve world-class scientific results, leading towards new innovative technologies. This area is currently undergoing strong development and is considered important in both countries in order to achieve growth and sustainability over the long run.

The research field is defined as multidisciplinary research, which combines life sciences with other scientific fields such as engineering,

physical, computer and mathematical sciences and combinations of two complementary - but fundamentally different - bio disciplines.

Examples of such research areas are bio-nanotechnology, bio-imaging, bio-MEMS, bioinformatics, computational biology, systems biology, tissue engineering, combinations of robotics and neuroscience, and biomimetics.

The programme aims to give leading researchers in Sweden and Japan a venue to initiate, and reinforce, strong and lasting links between the two countries by the means of focused research projects. Strengthening contacts and enlarging networks in Sweden and Japan are expected to give added value also to other, non-participating, actors in academy and industry.

3. Who can apply?

JST and VINNOVA/SSF invite Japanese and Swedish researchers to submit proposals for cooperative research projects in the research areas described above. An important criterion of the proposed collaboration is that it should build on and reinforce already on-going research activities in each research group and contribute significant added value to these. Researchers from industry may participate in the joint collaboration but, on the Swedish side, not as main applicants.

4. Financial support

JST and VINNOVA/SSF plan to support cooperative research projects including exchange of researchers, with a main emphasis on leading-edge researchers.

JST will support expenses for Japanese researchers, and VINNOVA/SSF will support expenses for Swedish researchers.

II. Support by JST (this section is for **Japanese applicants only**)

1. Budget for a Cooperative Research Project

Budgets will differ depending on the content of activities, but the total budget for the Japanese partner over a full 3-year period (i.e., 36 months) should not exceed 30 million yen, in principle. (Example: proposals envisaging a budget of 12 million yen for the first year, 10 million yen for the second year and 8 million yen for the third year are also possible.)

Due to budget limitations of this program, amounts will be adjusted in each year.

Expenses for facilities and equipment can be requested, in principle, only for the first fiscal year.

2. Cooperative Research Period

The cooperative research period shall be 3 years (i.e., 36 months) in total, counting from the start date (starting from mid 2009)

3. Details of Support

This program is designed to support additional expenses related to cooperation with the Swedish partner, with the precondition that the main research infrastructure is already in place in each research group.

3.1 Contract between Applicant and JST

Support will be implemented according to a contract for commissioned research made between JST and a university or public research institute, etc. (hereafter, "institution").

The contract for commissioned research will be made each year during the cooperative research period.

Since the contract is concluded on condition that all administrative procedures related to this project shall be handled in the institution, please consult with the department in charge at your institution.

The contract stipulates that Article 19 of the Industrial Technology Enhancement Act (Japanese version of the Bayh-Dole Act) and the Article 25 of the Act on Promotion of the Creation, Protection and Exploitation of Content (tentative translation) shall apply to all intellectual property rights (patents, utility model or design rights, rights to programs, databases and other

intangible property and know-how, and so on) generated as a result of this project, and that this can become the property of the institution with which the research leader is affiliated.

3.2 Contract between Researchers

If a contract for cooperative research is necessary for implementing actual research cooperation, such a contract should be concluded between the Japanese institutions and the Swedish institutions. It is strongly advisable but not required that appropriate discussions of the issue of rights to intellectual property with Swedish researchers or research institutions take place, to ensure good collaboration. If an agreement is concluded, it should be reported in the application.

In Sweden teachers are exempt from the regulations in Act (1949:345) on the right of employers to inventions; teachers at universities, colleges or other establishments that belong to the education system have the right to their inventions. This so-called "teacher exemption" means that employers of teachers, unlike the rules which apply to other employer-employee relationships, cannot make any legal claim to the inventions of teachers unless special agreements to this effect have been concluded.

3.3 Funded expenses

Funding provided within this call is intended to enhance the capacity of the applicants to collaborate. Funding will therefore be provided mainly in support of collaborative activities and may include some of the local research that is necessary for the collaboration.

(1) Expenses for research exchanges

1) Travel expenses

In principle, travel expenses should be based on the rules of the institution to which the research leader belongs. JST provides travel expenses only for the Japanese researchers.

2) Expenses for holding symposiums, seminars and meetings

(2) Expenses for research activities

1) Expenses for facilities and equipment (only for the first fiscal year)

2) Expenses for consumables

3) Expenses for personnel

Stipend for a PhD student, or stipend or salary for a post-doctoral fellow

4) Others

Expenses for creating software, renting or leasing equipment, transporting equipment, etc. .

(3) Overhead expenses

Overhead expenses amounting to 10% or less of the total research expenses will be allowed. Overhead expenses should be provided for within the total budget.

(4) Expenses not covered/funded in the program

No expenses stated below shall be covered under this program:

- 1) Expenses related to acquiring real estate or constructing buildings or other facilities
- 2) Expenses related to procurement of major equipment
- 3) Expenses related to dealing with accidents or disasters occurring during cooperative research periods
- 4) Other expenses unrelated to implementation of this cooperative research project

III. Support by SSF/VINNOVA (this section is for **Swedish applicants only**)

1. Budget for a Cooperative Research Project

Budgets will differ depending on the content of activities, but the total budget for the Swedish partner over a full 3-year period should not exceed SEK 2 100 000 , i.e. SEK 700 000 per year.

2. Cooperative Research Period

The cooperative research period shall be 3 years in total, counting from the start date (starting from mid 2009)

3. Details of Support

This program is designed to support additional expenses related to cooperation with the Japanese partner, with the precondition that the main research infrastructure is already in place in each research group.

3.1 Contract between Applicant and SSF

Support will be implemented after confirmation has been received regarding start of project, in accordance with SSF's normal routines for project funding. Routines regarding payments (each half year in advance) and annual reports will also be according to SSF's normal routines. The payments also require that the annual reports are accepted.

3.2 Contract between Researchers

If a contract for cooperative research is necessary for implementing actual research cooperation, such a contract should be concluded between the Japanese institutions and the Swedish institutions. It is strongly advisable but not required that appropriate discussions of the issue of rights to intellectual property with Japanese joint researchers or research institutions take place, to ensure good collaboration. If an agreement is concluded, it should be reported in the application.

In Sweden teachers are exempt from the regulations in Act (1949:345) on the right of employers to inventions; teachers at universities, colleges or other establishments that belong to the education system have the right to their inventions. This so-called " teacher exemption" means that employers of teachers, unlike the rules which apply to other employer-employee

relationships, cannot make any legal claim to the inventions of teachers, unless special agreements to this effect have been concluded.

The Japanese contract stipulates that Article 19 of the Industrial Technology Enhancement Act (Japanese version of the Bayh-Dole Act) and the Article 25 of the Act on Promotion of the Creation, Protection and Exploitation of Content (tentative translation) shall apply to all intellectual property rights (patents, utility model or design rights, rights to programs, databases and other intangible property and know-how, and so on) generated as a result of this project, and that this can become the property of the institution with which the research leader is affiliated.

3.3 Funded expenses

Funded expenses include costs for performing research activities and implementation of research exchanges.

(1) Expenses for research activities

1) Salaries for the Swedish researchers actively participating in research exchanges

2) Expenses for facilities and equipment.

Since the project is premised on making full use of existing facilities and equipment, only expenses for equipment essential for Japanese-Swedish research exchanges are covered.

3) Expenses for consumables

Expenses for procurement of raw materials, consumables, chemicals, etc.

4) Other

Expenses for creating software, renting or leasing equipment, for transporting equipment and for other expense items not covered above.

(2) Expenses for Research Exchanges

1) Travel expenses

In principle, travel expenses should be based on the rules of the institution with which the research leader is affiliated. Travel expenses, accommodation expenses and per diem are accepted. Swedish

applicants cannot apply for expenses for researchers from the Japanese side.

2) Expenses for holding symposiums, seminars and meetings

Expenses related to organizing symposiums and so on are covered under the project, e.g. consumables, printing and binding expenses, transportation- and telecommunications fees, meeting fees (excluding expenses for alcoholic drinks), honoraria.

(3) Overhead Expenses

Since all administrative procedures related to this project are to be carried out by institutions, 35% of overhead expenses for research exchange and research activity expenses will be allowed. Overhead expenses should be provided for within the total budget.

IV. Application

The Japanese and Swedish applicants shall write a common application that shall be handed in both to JST and SSF/VINNOVA in parallel. The application shall be written in English. For the Japanese applicants a Japanese version is also required.

The application shall include:

A project description including how collaboration will be carried out, with clear statements of what Swedish and Japanese researchers respectively will do in the project;

a description of the expected outcome of the proposed project, scientifically as well as in terms of its relevance for industry and society;

a description of the ongoing activities and specific strengths of the Swedish and Japanese groups respectively, which form the basis for the proposed joint project;

a description of the expected added value from the proposed joint project, including how the competence, technology and other resources in the different groups complement each other;

a description of how the project is expected to help strengthen research cooperation between Japan and Sweden over the longer term;

a description of the added value expected from the multidisciplinary bio approach in the proposed joint project; and

a discussion of how the proposed joint project compares with other comparable activities worldwide.

1. Application Forms

The following application forms have been prepared, in Japanese (J) and English (E). The common forms are available from the respective funding agency.

Form 1J/E	Application outline (title of cooperative research project, names of research leaders, cooperative research period)
Form 2J/E	Leader's Information (CV of research leaders*)
Form 3J/E	List of names of individuals involved in the cooperative research project in Japan and Sweden

Form 4J/E	Description of the cooperative research project including the points stated above <i>-maximum of 6 pages-</i>
Form 5J/E	Action plan for the cooperative project
Form 6 E	Maximum 15 selected references to publications (or other relevant output) by the Japanese-side research leader in the past 5 years
Form 7 E	Maximum 15 selected references to publications (or other relevant output) by the Swedish-side research leader in the past 5 years
Form 8J/E	Budget plan for the project

** The description shall include a short Curriculum Vitae (CV) from both Japanese and Swedish project leaders, which include basic information on education, past and present positions and membership of relevant organizations/associations. Each description should not be more than 1/2 page A4.*

2. Preparation of Application Forms

Please fill in the particulars in all the application forms described above.

3. Submittal of Application Forms for Japanese Applicants

Application forms prepared by Japanese researchers shall be submitted to JST by 17:00 (Japanese Standard Time) on March 25, 2009, through online application system "e-Rad" (<http://www.e-rad.go.jp/index.html>).

4. Submittal of Application Forms for Swedish applicants

Submit the applications via the application portal (<http://apply.stratresearch.se>) by March 25 at 14.00 hours. Instructions on how to fill in the information are also available there.

V. Evaluation of Project Proposals

1. Evaluation Procedure

Committees consisting of experts selected by JST and VINNOVA/SSF respectively will evaluate all proposals. Based on the results of the evaluation, JST and VINNOVA/SSF will make a common decision regarding funding of selected proposals.

The members of the Swedish program committee are appointed for the program period and are selected from academy and industry.

The members of the program committee in Japan will be selected after the proposals have been received.

2. Evaluation Criteria

The following general evaluation criteria apply:

1) Conformity with Program Aims and Designated Research Fields

The proposed activity shall conform to the aims of the program and the research fields that the program designates (**see note**). In addition, the proposed activity shall be supported by the institutional resources available.

2) Capability of Research Leaders (one on each side)

The research leaders shall have the insight or experience necessary for pursuing the activity and the ability to manage the cooperation and reach the project goals during this period of support.

3) Appropriateness of Plan

The plan shall incorporate an appropriate system for implementing the activity and be realistic in relation to the project budget.

4) Effect of the Activity

The proposed activity can be expected to achieve any of the following, through the cooperation with researchers in the counterpart country:

- Opening up of a new field or new advances in science and technology through the creation of new scientific knowledge in an existing research field.
- Identification of novel applications based on new groundbreaking technologies.
- Nurturing of researchers able to play a central role in future research exchanges with the counterpart country.
- Sustained development of research exchanges with the counterpart country initiated by this activity.

5) On-going research activity

The proposed collaboration shall build on, reinforce and add significant value to already on-going research activities in each research group.

(note) *Practical combination of life science with other scientific field or combinations of two complementary - but fundamentally different - bio disciplines is the key factor for evaluation.*

Practical combination means that combination of two fields or two disciplines makes synergistic effect which is expected to produce new research area, new research method or drastically important results.

3. Announcement of Decision

The final decision regarding supported projects will be notified to the applicants at the earliest in June, 2009.

VI. Responsibilities of *Japanese Applicants*

1. Submitting a Report on the Implementation Status of Systems Specified in the Guidelines for Managing and Auditing Public Research Funds at Research Institutes

The contract for a project requires that each research institute submit a report based on the reporting guidelines concerning the status of development, implementation, and other aspects of management and audit systems for research funds. (Research projects without a status report may not be approved.)

For the aforementioned reason a status report must be submitted by research institutes to the Office of Research Funding Administration, Research and Coordination Division, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT) by Friday, October 31, 2009 using forms available from the website at the following URL given below. (Research projects without the status report will/may not be approved.)

URL: http://www.mext.go.jp/a_menu/02_b/07101216.htm

However, if a status report has already been submitted in conjunction with applications for other projects or with other instances in or after April 2008, there is no need to submit a new report. In this case, a letter (in any format) indicating the date of the prior submission of the status report must be enclosed with the application.

In addition, if the project continues during and after fiscal year 2010, our plan is to request the submission of another report in the fall of 2009. Therefore, research institutes should heed announcements from MEXT and the Japan Science and Technology Agency. After the submission of a report, as the need arises, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) (as well as other fund distributing agencies) may request on-site investigations regarding the status of the development of management and audit systems.

In addition, with regard to reported contents, research funds may not be delivered if it is judged that problems such as improper or insufficient compliance to the required items specified by the Notification of the

Director-General of the Science and Technology Policy Bureau of May 31, 2007 are not resolved.

2. Treatment of Information on Accepted Projects

The information regarding the individual accepted projects (program name, research title, name of representative researcher, budget size, and duration of the project) is treated as “information that is scheduled to be made public” defined by Article 5(1)(a) of the Law Concerning Access to Information held by Incorporated Administrative Agencies, etc (Law No. 140 of 2001). The information will be made public via the website of appropriate agencies after project acceptance.

3. Information Sharing from the Research and Development Management

System (e-Rad) to the Government Research and Development Database*

Various types of information may be provided to the database created by the Cabinet Office through the research and development management system (e-Rad) managed by MEXT.

* In order to appropriately evaluate research and development supported by public funds and to effectively and efficiently plan policies for general strategies and resource allocation, the Council for Science and Technology Policy of the Cabinet Office has constructed a unified, comprehensive database containing various categories of information that provides search and analysis capabilities for necessary information.

4. Unreasonable Overlaps and Excessive Concentration

In order to eliminate unreasonable overlaps and excessive concentration of public funds, information regarding part of the content of the application (or accepted projects) may, to a necessary extent, be provided to offices in charge of managing competitive funds, including those of other Offices and Ministries, through the research and development management system (e-Rad) and other means. (In addition, when information on applications overlapping in other competitive funding programs is requested, relevant information may similarly be made available.)

5. Regulations Associated with National Security Export Control

Not only the export of research equipment, but also technical data and assistance may be subject to export regulations. All Japanese researchers must comply with all relevant laws and institutions of Japan and other involved nations as well as international rules.

Reference:

Ministry of Economy, Trade, and Industry website

<http://www.meti.go.jp/policy/anpo/index.html>

In recent years, there have been numerous suggestions and media reports that Japan's crucial advanced technology information has inadvertently been leaked to foreign entities, which has affected Japan's industrial competitiveness and other national issues. Also, from the perspective of national security export control, those who possess sensitive technology critical to national security must act cautiously because a careless leak of technology involving the development, production, or use of weapons of mass destruction, once in the hands of terrorists, can have a serious impact on the maintenance of peace and safety of Japan and the international community. [Source: "The Guidance for the Control of Sensitive Technologies (January 2008)" available in Japanese at the above website.]

With regard to bringing back information, documents, or samples from foreign countries, you must follow their laws. If you plan to use biological/genetic resources of foreign countries for your research, you must sufficiently know in advance about their ratification and compliance status regarding relevant treaties such as the Cartagena Protocol on Biosafety, the Convention on Biological Diversity and so on.

Refer to the following websites for detailed information on the access to biological/genetic resources and the Convention on Biological Diversity.

References:

Japan Bioindustry Association website

<http://www.mabs.jp/index.html>

Convention on Biological Diversity website
<http://www.cbd.int>

6. Ensuring Bioethics and Safety

When a researcher conducts life science research, he/she must observe laws, ordinances, and guidelines issued by each Ministry to ensure bioethics and safety. If organizations with which the researchers are affiliated require approvals, reports, or confirmations associated with his/her research, he/she must follow the procedures specified by the organizations.

The following are main laws and regulations issued by various Ministries. Please note that some research topics may be subject to other laws and regulations.

- (1) Act on the Regulation of Human Cloning Techniques (Act No. 146 of 2000)
- (2) Guidelines for the Handling of Specific Embryos (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology, No. 173 of 2001)
- (3) Guidelines for the Derivation and Use of Human Embryonic Stem Cells (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology, No. 87 of 2007)
- (4) Ethics Guidelines for Research on the Human Genome and Gene Analysis (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology, and Ministry of Health, Labor, and Welfare, and Ministry of Economy, Trade, and Industry, No. 1 of 2004)
- (5) Ordinance for Implementation Standards for Clinical Tests of Drugs (Ordinance of the Ministry of Health and Welfare, No. 28 of 1997)
- (6) On the Approach of Research and Development Using Human Tissues Obtained from Surgery (Report of the Health Science Council, the Ministry of Health and Welfare, 1998)

- (7) Ethics Guidelines for Epidemiological Research (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology, and Ministry of Health, Labor, and Welfare, No. 1 of 2007)
- (8) Guidelines for Gene Therapy Clinical Research (Public Notice of the Ministry of Education, Culture, Sports, Science and Technology, and Ministry of Health, Labor, and Welfare, No. 2 of 2004)
- (9) Ethics Guidelines for Clinical Research (Public Notice of the Ministry of Health, Labor, and Welfare, No. 415 of 2008, Revised on July 31, 2008, Effective on April 1, 2009)
- (10) Act on the Conservation of Biological Diversity through Regulations on the Use of Living Modified Organisms (Act No. 97 of 2003)

In addition, the following website offers detailed information on how the Ministry of Education, Culture, Sports, Science and Technology (MEXT) ensures bioethics and safety.

Reference:

“Efforts for Promoting Bioethics and Safety” at the MEXT website

http://www.mext.go.jp/a_menu/shinkou/seimei/main.htm

7 Handling of Samples and Specimens

If a research plan involves the acquisition of samples or specimens in foreign countries, a researcher must make appropriate preparations regarding the handling of biological resources before application.

8. Protection of Interests and Human Rights

If a research plan requires agreements or cooperation from parties involved or social consensus, a researcher must make appropriate preparations regarding the protection of interests and human rights before application.

9. Social and Ethical Considerations

A research plan or its implementation deemed unacceptable from a social

and ethical standpoint will not be considered during the selection process. Also, any violation of the above mentioned guidelines or any inappropriate conduct may result in the cancellation of the selection or the termination of the research project, full or partial return of awarded funds, and a public announcement of the misconduct.

10. Responsibility for the Safety of Researchers

JST will not assume any responsibility for injuries or illnesses that occur during the period of this research exchange program.

11. Ban on the Military Application of Research Results

The military application of research results from this exchange program is strictly prohibited.

VII. Responsibilities of Research Leader After Proposal is Approved (this section is for **Japanese applicants only**)

After the proposal has been approved, research leaders and their affiliated institutions shall observe the following when carrying out the cooperative research and using supported expenses.

1. Annual Progress Report

At the end of each fiscal year, the research leader shall promptly submit a progress report on the status of research exchange, and the institution with which the research leader is affiliated shall promptly submit a financial report on supported expenses.

2. Final Report

After completion of the period of international research exchange, research leaders shall promptly submit a final report, in addition to a financial report, on the research exchange activities to JST. The report shall include a general summary (maximum five A4 pages) compiled jointly by both the Japanese and the Swedish research groups, which Swedish researchers are requested to submit to SSF. The research groups may write the remaining parts of the report separately. The joint summary report shall include a description of what significant added value has been obtained as a result of the project funded under the program Multidisciplinary BIO. Suggestions for how this type of program for joint funding of research cooperation between Japan and Sweden can be further developed and improved are highly appreciated. A copy of the Swedish report shall be attached to the final report delivered to JST.

If papers describing results of research exchange are presented to academic activities and so on, please attach a copy of such papers separately to the final report.

VIII. Responsibilities of Research Leader After Proposal is Approved (this section is for **Swedish applicants only**)

After the proposal has been approved, research leaders and their administering organisation shall observe the following when carrying out the cooperative research and using the research funds.

1. Annual Reports

The research leader shall promptly submit annual reports on the status of the research project, and report whether the project is following the financial plan, in accordance with SSF's normal routines.

2. Final Report

After completion of the period of international research exchange, research leaders shall promptly submit a final report on the activities of the research project to VINNOVA. The report shall include a general summary (maximum five A4 pages) compiled jointly by both the Japanese and the Swedish research groups. The research groups may write the remaining parts of the report separately. The joint summary report shall include a description of the outcome and what significant added value has been obtained as a result of the project funded under the program Multidisciplinary BIO.

Japanese applicants should contact the following for further information:



Saori Tsuchiya, Tetsuji Tanaka

JST

Tel. +81(0)3-5214-7375 Fax +81(0)3-5214-7379

sicpsw@jst.go.jp

Swedish applicants should contact the following for further information:



SWEDISH FOUNDATION *for*
STRATEGIC RESEARCH

Joakim Amorim

SSF

+46 (0)8 50581665

joakim.amorim@stratresearch.se



Henrik Fridén

VINNOVA

+46 (0)8 4733154

henrik.friden@VINNOVA.se