

**Strategic Japanese-Spanish Cooperative Programme on**  
***“Nanotechnologies and new materials for environmental challenges”***  
**The 1<sup>st</sup> Call for Proposals to be submitted by June 30<sup>th</sup>, 2009**

**1. Background**

The present document announces the first joint call for research projects within the framework of the scientific cooperation program between Spanish Ministry of Science and Innovation (MICINN) and Japanese Science and Technology Agency (JST). The aim of the program is to strengthen the collaboration between Japan and Spain within the field of “Nanoscience and novel/emerging Materials” to achieve world-class scientific results, leading towards new innovative technologies. The call specifically focuses on **“Nanotechnologies and new materials for environmental challenges (clean and renewable energy production, energetic efficiency, and treatment, recycling and desalination of water)”**.

**2. Motivation**

The present call builds on the vision that Japan and Spain share a particular interest in providing sustainable solutions to environmental threats such as limited access to energy and water, demanding the development of cost-efficient technologies in the areas of clean and renewable energy as well as water recycling and desalination. Multidisciplinary research in these areas comprises a wide variety of scientific and technological approaches. Nanotechnologies have emerged as a strategically important research and technology platform that transversally intercepts these areas and holds the promise to propel big technological advances in each of them. For this reason, it has been decided to concentrate joint research efforts of Japan and Spain on specific applications of Nanotechnology and the development of new materials.

**3. Purpose of the call**

JST and MICINN invite Japanese and Spanish researchers to submit proposals for cooperative research projects in the research areas described above. All applicants must fulfill national eligibility rules for research grant application. 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 the industry may participate in the joint collaboration.

Topics under the scope of this call must be related to the following general fields:

- Novel materials for more efficient energy production, storage, transportation and conversion
- Novel nanomaterials and nanotechnology based systems for more efficient water recycling, filtering and desalination

#### **4. Financial support**

Funding provided within this call is intended to enhance the capacity of the applicants to collaborate. The program is designed to support additional expenses related to cooperation with a Spanish counterpart for a Japanese researcher or with a Japanese counterpart for a Spanish researcher, such as expenses for personal cost, consumables, small equipment and travel and/or conducting seminars/symposiums, with the precondition that the main research infrastructure is already ensured by each research group. JST and MICINN plan to support cooperative research projects including dispatching and inviting researchers to the counterpart country. JST will support the expenses for Japanese researchers, and MICINN will support the expenses for Spanish researchers. ***All budget items must conform to the national rules relevant for each applicant.***

##### **4.1. Budget for a Cooperative Research Project: JST**

Funding will be provided mainly in support of the collaboration vectors and of the local research that is necessary for the collaboration. Eligible concepts for JST are:

- Stipend or salary for a PhD student, salary for a post-doctoral (i.e. a temporary position for up to 3 years, financed according to national gross wages). In countries where national rules allow it, the salary of the young researcher may be included.
- Consumables
- Small equipment
- Travel and visiting costs.
- User charges for facilities.

Budget of a project may differ in each year, depending on the content of activities, but the total budget for the Japanese researcher over a full 3-year period (i.e., 36 months) should not exceed 30 million yen. (Example: a proposal may envisage a budget of 8 million yen for the first year, 12 million yen for the second year and 10 million yen for the final year). Due to budget limitations of this program, amounts will be adjusted each

year. Expenses for facilities and equipments may be requested, in principle, only for the first fiscal year.

#### **4.2. Contract between Applicant and JST**

Support will be implemented according to a contract for commissioned research entered between JST and a university or research institute, etc. (hereinafter referred to as the “institution”).

The contract for commissioned research will be renewed each year over the cooperative research period.

Since the contract is concluded on condition that all administrative procedures related to this project will be handled within the institution, the research leader should consult with the department in charge at his/her institution.

As for the contract between the Japanese institution and JST, it stipulates the 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) be applied 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 these can be the properties of the institution with which the research leader is affiliated.

#### **4.3. Budget for a Cooperative Research Project: MICINN**

The following categories of expenses can be financed within this programme:

- Personnel costs for temporary contracts.
- Small equipment.
- Consumables.
- Traveling and visiting cost.
- User charge for facilities.
- Sub-contracting necessary to carry out the proposed activities.

Budget of a project may differ in each year, depending on the content of activities, but the total budget for Spanish research group over a full 3-year period (i.e., 36 months) should not exceed 250.000 €. Amounts will be adjusted considering other founded projects on related topics.

#### **4.4. Applicants Eligibility for MICINN**

The entities eligible for MICINN funding are universities and other public research institutions, technology centers, private non-profit institutions, and private companies

that develop R&D activities in Spain. Industrial participants are encouraged to join the consortia as actual partners for development and/or valorization of the research results. Nevertheless, Spanish private companies must participate together with at least one Spanish public research or private non-profit institution in the same consortium.

#### **4.5. 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 Spanish institutions. It is strongly advised, though not required, that appropriate discussions of the issue of rights regarding intellectual properties with among the concerned parties take place, in order to ensure good collaboration. If an agreement is concluded, it should be reported in the application, or in any case before the signature of the contract.

#### **4.6. Cooperative Research Period**

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

### **5. Application**

The Japanese and Spanish applicants shall write a common application that shall be handed in both to JST and MICINN in parallel. The application shall be written in English. For the Japanese applicants a Japanese version of the application is also required. For the Spanish applicant an abstract of the application in Spanish is also required.

#### **5.1. Application Content**

The application shall include:

- a) Project description and work plan, including how collaboration will be carried out, with clear statements of what roles Japanese and Spanish researchers will play in the project;
- b) Description on the expected outcome of the proposed project, scientifically as well as in terms of its relevance for the industry and society;
- c) Description on the ongoing activities and specific advantages of the Spanish and Japanese groups respectively, which form the basis for the proposed joint project.
- d) Description on the expected added value from the proposed joint project, including how the competence, technology and other resources in each group complement each other;

- e) Description of how the project is expected to help strengthen research cooperation between Japan and Spain over the longer term. Indicate the expected plan for exchange/visit of scientist, joint training or other collaboration activities within the project.
- f) Description on the added value expected from the multidisciplinary approach in the proposed joint project; and
- g) Discussion on how the proposed joint project compares with other comparable activities worldwide.

## **5.2. Application Forms**

The following application forms have been prepared, in Japanese (J) and English (E):

- Form 1J/E Application outline (title of cooperative research project, names of research leaders, cooperative research period).
- Form 2J/E Summary
- Form 3J/E Resume information on research leaders (their CVs\*).
- Form 4J/E Name list of individuals committed to the cooperative research project in Japan and Spain.
- Form 5J/E Description of the cooperative research project including the points stated above -maximum of 6 pages-.
- Form 6J/E Plan for the cooperative project,
- Form 7J/E Budget plan for the project.

## **5.3. Submission of Applications**

Deadline for proposal submission is June 30, 2009.

On Japanese side, applicants should submit their applications to JST **by 5:00 pm (Japanese Standard Time) on June 30, 2009**, through online application system (<http://www.e-rad.go.jp/index.html>).

Spanish applicants shall send their application forms by online application system to MICINN web site (see below).

## **6. Evaluation of Project Proposals**

### **6.1. General Evaluation Procedure**

Experts committees selected by JST and MICINN respectively will drive the peer review process in each country. A common model of evaluation form and scoring system will be used for all the evaluation reports. Based on the results of the evaluation, the experts

committees will propose a ranking list of proposals recommended for funding, JST and MICINN will make a common decision regarding funding of selected proposals.

## **6.2. Evaluation Criteria**

The following general evaluation criteria will apply to each proposed project:

### 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. In addition, the proposed activities shall be supported by the applicants utilizing their 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 program's 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 Activities

The proposed activities can be expected to achieve one 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.
- 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.

## **6.3. Announcement of Decision**

The final decision regarding supported projects in the first year will be notified to the applicants in October-November 2009.

## **7. Responsibilities of Research Leaders after Proposals are Approved**

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

### **7.1. Annual Progress Report**

At the end of each fiscal year, the research leaders shall promptly submit a common progress report on the status of research exchange to both JST and MICINN. The Japanese and Spanish institutions with which the research leaders are affiliated shall promptly submit financial reports on supported expenses to JST and MICINN respectively according to the specific national regulations.

### **7.2. Final Report**

After completion of the period of international research exchange, research leaders shall promptly submit to both JST and MICINN a final common scientific report. The report shall include a general summary (maximum five A4 pages) compiled jointly by both the Japanese and the Spanish research groups. If papers describing results of research exchange are presented to academic journals, societies and so on, copies of such papers must be separately attached to the final report. Final financial reports will be sent independently to JST by Japanese researchers and to MICINN by Spanish researchers according to the specific respective national regulations.

## **8. Contact points**

Japanese applicants should contact the following for further information:



Saori TSUCHIYA, Masahiro YAMAMURA  
Department of International Affairs  
Japan Science and Technology Agency  
Tel. +81(0)3-5214-7375 Fax +81(0)3-5214-7379  
[sicpsp@ist.go.jp](mailto:sicpsp@ist.go.jp)

Spanish applicants should contact the following for further information:



Rocío Lansac  
Deputy Direction for International Programmes  
Ministry of Science and Innovation  
Tel. 0034 91 603 77 54 Fax 0034 91603 88 91  
[rocio.lansac@micinn.es](mailto:rocio.lansac@micinn.es)

## **9A. Responsibilities of Spanish Applicants (For Spanish applicants only)**

### **(1) Formalización y presentación de solicitudes**

*Como se especifica en el punto 5.2. de esta convocatoria, los formularios de solicitud conjunta deberán cumplimentarse (1-7 J/E) en inglés (E) y en japonés (J) y enviarse a los dos organismos de financiación (MICINN y JST). Los solicitantes españoles deberán incluir la versión en inglés (E) de este formulario de solicitud conjunta como "documento adicional" de su solicitud formal a la convocatoria del Programa Nacional de Internacionalización de la I+D (Subprograma de Fomento de la Cooperación Científica Internacional (FCCI)*

*Actuaciones dentro del Marco del Plan E para la Dinamización de la Economía y el Empleo; modalidad ACI-PROMOCIONA, ACI-PLAN E), que se publicará próximamente.*

### **(2) Bioética y bioseguridad**

*En el caso de proyectos que impliquen investigación en humanos, con muestras biológicas de origen humano, experimentación animal, utilización de organismos modificados genéticamente o agentes biológicos de riesgo para la salud o el medio ambiente, se deberá incluir la siguiente documentación normalizada y firmada:*



- *impreso sobre implicaciones éticas o de bioseguridad;*
- *autorización firmada por el comité o autoridad que proceda en cada supuesto de los contemplados en el apartado anterior.*

## **9B. Responsibilities of Japanese Applicants (For Japanese applicants only)**

### **(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 from research institutes to Office of Research Funding Administration, Research and Coordination Division, Science and Technology Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT) by the expected contractual date, following the procedures and using the format available in the website below:

URL: [http://www.mext.go.jp/a\\_menu/02\\_b/08191222/001.htm](http://www.mext.go.jp/a_menu/02_b/08191222/001.htm)

Concerning details as submission deadline, submission manners and so on, Research Institutes Inspection Division, Department of General Affairs of JST will send a letter to successful applicants after his/her proposal is approved. JST shall proceed to a contract only when it confirms that such a report has been submitted.

However, if a status report has already been submitted in conjunction with applications for other projects or with other instances in or after April 2009, 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.

If the project continues during and after fiscal year 2011, our plan is to request the submission of another report in the fall of 2010. Therefore, research institutes should heed announcements from MEXT and JST.

After the submission of a report, as the need arises, 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 “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 “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 “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.)

## **10. Additional Instructions for Japanese Applicants**

### **(1) 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>

## **(2) 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](http://www.mext.go.jp/a_menu/shinkou/seimei/main.htm)

### **(3) 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.

### **(4) 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.

**(5) 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.

**(6) 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.

**(7) Ban on the Military Application of Research Results**

The military application of research results from this exchange program is strictly prohibited. Japanese applicants should contact the following for further information: