

**COMPETITION TYPE BASES FOR SCIENCE NUCLEI OF THE MILLENNIUM SCIENCE INITIATIVE (MSI)
RESEARCH PROGRAM**

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I. COMPETITION PROCESS

1. INTRODUCTION

The Millennium Science Initiative (MSI) is a Program dependent of the Ministry of Economy, Development and Tourism, which responds to an innovative model for the developing world, the progress of science, technology and high-level innovation by granting resources for the creation and development of excellence scientific and technological research centers in the Natural, Exact and Social Sciences areas. The centers financed by the MSI – Science Nuclei and Institutes – are granted on the basis of the scientific merit of their researchers' and the work proposal through public competition, as well as a task mainly focused on four action axes:

- Cutting-edge scientific and technological research at levels similar to those of developed countries
- Training of young scientists
- Collaborative work in networks with other entities from the region and the world
- Outreach to the external environment of their progress, particularly to the educational sector, the industry, services and society

It is expected that these centers operate with efficiency and accuracy, increasing scientists' productivity to contribute with their results and products to the social, economic and cultural development of the country. In this activity, the Program has consolidated as a significant actor of the National System of Science, Technology and Innovation.

The MSI Program is part of the Chilean State's policy to advance towards an economy based on knowledge, thus making progress in the country's insertion among the most developed countries.

The present call seeks the formation and strengthening of high-level research Nuclei, through public competition, for contributing to the generation of scientific and technological knowledge that contributes to the country's competitiveness. It is expected that the Millennium Nuclei develop innovative scientific research, covering the four main lines of action defined above.

2. DEFINITIONS

For the correct interpretation of the bases, the following shall be understood:

2.1 National Commission for Millennium Science Initiatives, hereinafter indistinctly the “Millennium Science Initiatives Program”, the “Program” or the “MSI Program” or MSI: Is the Advisory Commission to the Minister of Economy, Development and Tourism regarding everything related to proposing policies addressed to the creation and development of excellence research centers for cutting-edge scientific and technological research in the country, as well as for the strengthening of high level science and technological capacities, and the dissemination and transfer of knowledge to productive sectors as a key factor for the long-term sustainable economic, social and cultural development within the National Innovation Strategy in Chile, pursuant to Supreme Decree Nº 151 of 1999, of the Ministry of Planning, and its modifications. This Program resides in the Ministry of Economy, Development and Tourism since January 01, 2011.

2.2 The MSI Board of Directors, indistinctly the “BD”: Is the senior coordination body of the Program, according to what was laid down in Supreme Decree Nº 151 of 1999, of the Ministry of Planning and its modifications.

2.3 MSI Program Committee, indistinctly the “PC”: Is the technical scientific body, which supervises the MSI Program, and the evaluation and selection of projects.

Its integration is defined in the S.D. Nº 151, of 1999, of the Ministry of Planning and its modifications. To comply with its duty, it is divided in two commissions, according to the action areas; the Natural and Exact Sciences Commission and the Social Sciences Commission. Each Commission shall elect one of its members as responsible of coordinating the work of all of them, which will be called "Convener".

2.4 Peer Reviewer: A scientist specialized in specific areas of natural, exact or social sciences, giving scientific technical support to the Program Committee in the evaluation of the Projects submitted to the current competition, appointed by the Undersecretariat at the proposal of the Program Committee.

2.5 MSI Executive Secretariat: This is an entity from the National Commission for Millennium Science Initiatives that resides in the Ministry of the Economy, Development and Tourism in charge of the compliance with the agreements of the Board of Directors, and the Program's management.

2.6 Project: Every science investigation proposal, which complies with the requirements established within these bases. Three kinds of proposals are recognized: preliminary proposals, full proposals and renewal projects.

2.7 Science Nucleus for Research in Natural and Exact Sciences, hereinafter indistinctly the Nucleus: it is a high-level research center of natural and exact science, both basic and strategically oriented, composed of associate investigators, preferably younger than 40 years old in the case of men and younger than 45 in the case of women, taking into account their future potential, acting as a center for developing science projects within one or several Host Institution(s). Nuclei focus mainly on the four action axes described in the point 1 of the current bases: cutting-edge scientific research; young scientists' formation; collaborative work in network with other entities from the region and the world, and projection of their advances towards outreach activities. Two or more Associated Researchers participate of it (Responsible, Deputy and other Associates), or other researchers, undergraduate students, graduate students or postdoctoral.

2.8 Science Nucleus for Research in Social Sciences, hereinafter indistinctly the Nucleus: It is a high-level research center in the following areas of empiric social sciences, either experimental or non-experimental: sociology, education, political science, psychology, archeology, anthropology, law and

economics, composed of associate investigators, preferably younger than 40 years old in the case of men and younger than 45 in the case of women, taking into account their future potential, acting as a center for developing science projects within one or several Host Institution(s). The center focus mainly on the four action axes described in the point 1: cutting-edge scientific research, young scientists' training, collaborative work in networks with other entities from the region and the world, and projection of their advances towards outreach activities. Two or more Associated Researchers participate of it (Responsible, Deputy and other Associates), or other researchers, undergraduate, graduate students or postdoctoral.

2.9 Science Institute, hereinafter indistinctly the Institute: It is a high level research center with legal status, in natural and/or exact sciences, either basic or strategically oriented, or in the following areas of empiric social sciences, either experimental or non-experimental: sociology, education, political science, psychology, archeology, anthropology, law and economics, with maximum operational flexibility and mainly focused on the four action axes described in the introduction of the current bases: cutting-edge scientific research, young scientists' training, collaboration work in network with other institutions in the region and Worldwide, and the projection of their advances towards outreach activities. About 10 Associated Researchers participate of it (Principal, Deputy and other Associates), or other researchers, students (undergraduate and graduate) and postdoctoral.

2.10 Associate Researcher: It corresponds to a researcher whose outstanding trajectory in scientific research, supported by publications and/or intellectual or industrial property and/or by the acknowledgement of the national and international scientific community, who has responsibility in the execution of the Project. The Associate Researcher works in the execution of the Project with a commitment to dedication in hours.

Notwithstanding the foregoing, two special kinds of Associate Researchers are recognized:

2.10.1 Principal Investigator: Associate Researcher responsible for directing and executing the Project, both in the scientific technical and in the administrative scope. His/her obligations shall be at least those described in number 14 of the current Bases.

2.10.2 Deputy Principal Investigator: Associate Researcher who will have the same responsibilities of the Principal Investigator in his absence or hindrance to act.

2.11 Adjunct Researcher: Researcher who supports the scientific technical activities of the Project, lacking administrative obligations.

2.12 Young Researcher: A researcher preferably under 35 years old who carries out scientific technical activities of the Project.

2.13 Senior Researcher: A researcher with an extensive and outstanding scientific career that will support and provide scientific technical advice to the Project and its researchers.

2.14 Post Doctorate: Professional with a doctor's degree who is performing a post-doctoral research related to some of the research lines of the Project.

2.15 Post-graduate Student: A graduate who is performing post-graduate studies or a thesis in relation to the research lines of the Project.

2.16 Undergraduate Student: Student who is performing his/her Bachelor thesis or degree paper related to the research lines of the Project.

2.17 Host Institution(s): Academic and/or research institution with legal status, sponsoring the Project and providing its facilities, the use of laboratories, equipment, basic infrastructure and others. There could be one or more host institutions, and their obligations are at least those listed in number 15 of these Bases.

2.18 Collaborative Formal Networks: Those activities intended to originate knowledge exchange among science groups of the centers and researchers from other national and international

institutions, thus strengthening research and the collaboration with other worldwide excellence research centers. At least two other parties must participate therein, besides MSI Nucleus.

2.19 Outreach: Those activities intended to promote diffusion and technological transfer of the science nuclei activities' results to the productive and social areas.

2.20 Visiting Professor: Professor or researcher, external to the Nucleus researchers' team, specialized in any of the Project's research lines, performing an internship at a laboratory or facility associated to the Nucleus, with research and/or teaching functions related the Project's actions.

2.21 The Undersecretariat: The Undersecretariat of Economy and Lower Size Companies.

2.22 The Undersecretary: The Undersecretary of Economy and Lower Size Companies.

2.23 Unit of Control and Renditions, or either "UCR": It is the unit depending of the Undersecretariat of Economy and Lower Size Companies, responsible for carrying out the transfers and to manage the accountabilities of the scientific Institutes and Nuclei, enforcing the regulations and agreements in force.

3. CALL FOR PROPOSALS, SELECTION AND APPLICATION PROCESS FOR NEW NUCLEI

3.1 SUBMISSION AND SELECTION: The submission and selection procedure for the new Nuclei will be performed in two stages.

3.1.1 Preliminary Proposals Submission Stage - PRESELECTION

The call for proposals will begin with the publication of the call in a newspaper of wide national circulation, in the web sites of the Ministry of the Economy, Development and Tourism, and of the Millennium Science Initiative.

Starting from the date of publication of the call for proposals, applicants will have a 35 working days period to submit a Preliminary Proposal, according to the indications contained in these bases. The Undersecretariat, through the Executive Secretariat, will be entitled to extend the deadline for the reception of the Preliminary Proposals due to well-founded reasons, resolution that will be informed through the same printed and electronic media mentioned in the previous paragraph.

The assessment and selection of the Preliminary Proposals by the Program Committee will be finished within a maximum 100 working days period, starting as from the competition application deadline, according to the process detailed in number 6.1 and the criteria described in number 7.1.1 of these bases.

The Undersecretariat, through the Executive Secretariat will notify the results of the assessment to applicants through registered letter, within a maximum 20 working days period as from the date of the Program Committee's Resolution.

3.1.2 Full Proposals Submission Stage – DEFINITIVE SELECTION

The authors of the selected Preliminary Proposals will be invited by the Undersecretariat, through the Executive Secretariat to submit a full proposal, which shall be subject to the following:

The authors of the selected Preliminary Proposals shall submit their science research full proposals within 30 working days starting from the date of the last notice of assessment results and selection of the Preliminary Proposals.

The Full Proposals submitted in due time will be sent by the Undersecretariat, through the Executive Secretariat to the convener of the Program Committee, who distributes each project at least to one member of the Committee and in parallel to Peer Reviewers for their assessment and selection, according to the process indicated in point 6.2 and the criteria established in point 7.1.2 of these bases.

The Undersecretariat, through the Executive Secretariat shall notify the applicants with a registered letter the results of the definitive selection process, and shall coordinate with the Program Committee the interviews to the Principal Investigators and other Associate Investigators of the selected projects.

The selected Full Proposals' investigators shall be interviewed and assessed personally by the Program Committee in Chile, as per the criteria established in number 7.3 of the current bases.

The evaluation as well as the notification previously indicated and the personal interview will be performed within a maximum 120 working days starting from the closing date of the Full Project' submission to the competition.

At the proposal of the Program Committee, the Undersecretariat will be entitled to re-organize the budget allocations requested or its components, or reject a Project if its cost is excessive for the objectives proposed.

3.2 APPLICATION FOR NEW NUCLEI

3.2.1 Application for New Nuclei Preliminary Proposals

Preliminary Proposals applications will be made through the website of the MSI Program. For this purpose, interested parties shall previously register in the system by entering the website www.iniciativamilenio.cl. **Users' registers will be accepted and validated until 2 working days before the applications' deadline.** Bases, application form models and instructions may be reviewed and downloaded from the same site.

Applications online by those who are registered and validated at the site will be received until 23:59 of the 35th working day starting from the last publication in the national newspapers, or on a later date in the event the deadline is extended by the Undersecretariat.

Preliminary Proposals not complying with the application requirements, with application forms or without attaching any of the requested background shall be declared inadmissible, a circumstance that will be notified to the interested party with a registered letter, indicating the cause for having been excluded from the bases.

The Preliminary Proposal title or name shall always start with the words "Millennium Nucleus", which in case the Project is awarded shall be kept as part of the Nucleus name during the entire execution period.

The researcher acting as Principal Investigator of the project shall not be replaced during the competition process. In addition, a maximum of one third of the participants of the group proposed as Associate Researchers may be replaced, including the Principal Investigator.

Each Preliminary Project shall be submitted by the Principal Investigator, and only one Project per applicant will be accepted.

For the application, indications contained in these bases shall be followed, as well as the instructions detailed in the Online Competition System site.

If necessary, applicants may be requested to send their applications through electronic mail in the forms and according to the instructions delivered for such purpose by the Program's Executive Secretariat.

3.2.2 Application for New Nuclei Full Proposals

Applicants for new nuclei formation whose Preliminary Proposals are awarded by the Program Committee will be invited to submit their full proposals which include a detailed research plan, an

annual budget and other support sources, references and additional documents. The final decision for the awarding of the competition will consider only the received Full Proposals.

Applications for Full Proposals shall be made in the www.iniciativamilenio.cl website. Online applications will be received within the 30 days working period, until 23:59 hrs. as from the date of the last notice of selected Preliminary proposals, together with an invitation to submit their corresponding Full Proposals.

Full Proposals not complying with the application requirements and background shall be declared inadmissible, a circumstance that will be notified to the Principal Investigator of the Project through registered letter.

For the application, indications contained in these bases shall be followed, as well as the instructions detailed in the Online Competition System site.

If necessary, applicants may be requested to send their applications through electronic mail in the forms and according to the instructions delivered for such purpose by the Program's Executive Secretariat.

3.3 BACKGROUND INFORMATION TO APPLY FOR PRELIMINARY PROPOSALS OF NEW NUCLEI

The application for Preliminary Proposals shall include the following background information, among other:

3.3.1 Item 1: General information: Data of the competition and of the Principal Investigator, name of the Nucleus proposed and declaration of commitment with the Project.

3.3.2 Item 2: Host Institution(s): Name(s) of the Institution(s) proposed to host the Project.

3.3.3 Item 3: Summary of the proposal: Brief summary explaining the concept of the Nucleus desired to create including areas for scientific research, previous work of the team, if any, achievements to be reached in the short and long term, training of human resources, network collaboration and outreach plans, and proposal of methodology to reach the goals.

3.3.4 Item 4: Scientific Personnel: The listing of scientific professional personnel participating of the Project shall be formed by a team of researchers, identifying the Associate Researchers acting as Principal Investigator and as Deputy Principal Investigator, and the senior scientific personnel. Resumes of the Principal Investigator and of the other Associate Researchers shall be included, indicating their experience as researchers. The Principal Investigator and the other Associate Researchers shall include in their resumes their experience in training young scientists as tutors of their pre-graduate and post-graduate thesis, as well as a list of their publications with editorial committee, and other pertinent products, of the last five year before the application of the Preliminary Proposal that shows the productivity and scientific excellence of the researchers. In the list, the most relevant five products must be highlighted, basing why they are considered as such.

3.4 BACKGROUND INFORMATION TO APPLY FOR FULL PROJECTS OF NEW NUCLEI

Application for Full Proposals shall include the following background information:

3.4.1 Item 1: General information: Data of the competition and of the Principal Investigator, who must be the same that submitted the application during the Preliminary Proposal stage; name of the proposed Nucleus and declaration of commitment with the Project, and caution of ethics when experiments with animals, environmental damage or distortion, or experiments with humans are contemplated.

3.4.2 Item 2: Host Institution(s): Institution(s) proposed to host. The Host Institution(s) must declare the resources, infrastructure and equipment provided for the implementation of the Project and that will be available to the Nucleus.

3.4.3 Item 3: Executive summary of the proposal.

3.4.4 Item 4: Scientific Personnel: Description of the scientific personnel participating of the Project which shall be formed by a team of researchers, identifying the Associate Researchers acting as Principal Investigator and as Deputy Principal Investigator, stating the dedication to the project of the Associate Researchers (according to the established in section 14.1.3) and their current responsibilities and activities, also identifying the Adjunct and the Senior scientific personnel. Resumes of the Principal Investigator and of the other Associate Researchers shall be included, indicating their experience as researchers, including a list of their publications with editorial committee, and other pertinent products, of the last five year before the application that shows the productivity and scientific excellence of the researchers. In the list, the most relevant five products must be highlighted, basing why they are considered as such. Whenever an Associate Researcher has a labor relationship with any entity different from the Host Institution(s), the Principal Investigator shall deliver a letter from such entity as per the instructions of point 5.8 of these bases, declaring to be aware and consent to the Researcher's participation in the Project.

3.4.5 Item 5: Proposed research activities: description of the research activities that will be developed during the validity of the agreement, its working area and the fundamental subjects that will be studied.

3.4.6 Item 6: Education and Investment in Human Resources: description of the incorporation and support program for young researchers and students.

3.4.7 Item 7: Outreach and connections to other sectors: description of the projection activities of the results and actions to external media (public and private sectors, and the society in general).

3.4.8 Item 8: Collaboration Networks: description of the collaborative work within national and International Networks.

3.4.9 Item 9: Available resources and equipment: description of the total available infrastructure and equipment for the Nucleus, including and identifying the resources provided by the Host Institution and by other institutions, indicating who will finance equipment maintenance and spare parts. The commitment of the other contributor institutions shall be included.

3.4.10 Item 10: Budget for the first year: description of expenses in personnel and equipment during the first year of validity of the agreement, according to the budget items established in these bases, point 12.

3.4.11 Item 11: Total Budget: general description of the Budget for expenses according to the budgetary items as established in point 12 of these bases.

3.4.12 Item 12: Additional contributions for research and for the Project: Full Proposals receiving financial support from other institutions shall specify such contributions.

3.4.13 Item 13: Additional relevant information.

4. PROCEDURE FOR SELECTION AND APPLICATION OF NUCLEI RENEWAL

4.1 PRESENTATION AND SELECTION

Procedure will begin with an invitation to apply for competitive renewal competition issued by the Undersecretariat, through the Executive Secretariat of the MSI, to the Principal Investigators of each of the Nuclei in Natural and Exact Sciences or in Social Sciences that shall be renewed. This invitation will be sent through registered letter addressed to the Principal Investigator of the Nucleus.

Submission of Proposals from the Nuclei participating of this renewal will be sent by the Executive Secretariat of the MSI to peer reviewers, for their assessment according to the procedures described in number 6.3 and the criteria indicated in number 7.2 of these bases.

The Program Committee will analyze the assessments performed by the peer reviewers, and will invite all the Nuclei projects submitted for renewal to an interview and assessment pursuant to number 7.3.2 of these bases, within a maximum 120 working days as from the submission date of Renewal of the Nuclei Projects.

Nuclei participating in the Competitive Renewal process shall have approved the Science Technical Reports and the Investment Reports corresponding to their first stage of their Nuclei, in accordance with the corresponding information that must be reported at the date of application.

4.2 APPLICATION FOR NUCLEI RENEWAL

Applications for Nuclei Renewals shall be made through the MSI website. For this purpose, applicants shall previously register in the system, at the website www.iniciativamilenio.cl. **Registrations will be accepted until two working days before applications' deadline.** Bases, application form models and instructions may be reviewed and unloaded from the same site.

Online applications will be received until 23:59 hrs. of the 35th working day from the last invitation to submit proposals.

The Projects for Renewal which don't fulfill the application requirements, which don't submit any of the required background, or which fail to comply with the submission forms shall be declared inadmissible, a circumstance that will be notified to the Principal Investigator through registered letter.

The title or name of the renewal project shall always start with the words "Millennium Nucleus", which in case of renewal shall be kept as part of the Nucleus name during the rest of the execution period.

The renewal Project should be submitted by the Principal Investigator and only one Project per applicant will be accepted.

The researcher acting as Principal Investigator of the Project shall not be replaced during the competition process. Also, at least one of the researchers performing as Principal Investigator or Deputy Principal Investigator in the first stage of the Nuclei must keep such position at least until the end of the competition process. The research lines must have direct relation with those of the first stage.

The indications contained in these bases and the instructions detailed in the Online Competition System' site shall be followed for the application process.

If necessary, applicants may be requested to send their applications through electronic mail in the forms and according to the instructions delivered for such purpose by the Program's Executive Secretariat.

4.3 BACKGROUND INFORMATION FOR APPLICATION TO NUCLEI RENEWAL PROJECTS

Application for the Renewal of Nuclei Projects shall include the following:

4.3.1 Item 1: General information: Data of the competition and of the Principal Investigator, name of the Nucleus to be renewed, declaration of commitment with the Project and declaration of commitment with the caution of ethics when experiments with animals, environmental damage or distortion or experiments with human are to be performed.

4.3.2 Item 2: Host Institution(s): Institution(s) proposed to host. The Host Institution(s) must declare the resources, infrastructure and equipment provided for the implementation of the project and that will be available to the Nucleus.

4.3.3 Item 3: Executive Summary of the proposal.

4.3.4 Item 4: Goals and fundamentals of the Proposal: description of goals and fundamentals of the Proposal for a second stage, explaining expectancies in innovation and added value for this stage.

4.3.5 Item 5: Scientific Personnel: Description of scientific personnel participating which should be formed by a team of researchers, identifying the Associate Researchers acting as Principal Investigator and as Deputy Principal Investigator, indicating their dedication to the Project of the Associate Researchers (in accordance with what has been established in number 14.1.3) and their responsibilities and present activities, also identifying the Senior and Adjunct Scientific Personnel. The Associate Researchers not included in the first stage of the Nucleus, should also be identified. The resumes of the Principal Investigator and of the other Associate Researchers shall be included, indicating their experience as researchers and also including a list of their publications with editorial committee, and other pertinent products, of the last five year before the application that shows the productivity and scientific excellence of the researchers. In the list, the most relevant five products must be highlighted, basing why they are considered as such.

4.3.6 Item 6: Compliance with the goals from the First Stage: description of the achievements during the first stage of the Nucleus, starting with the scientific research, its working scope and the fundamental subjects studied, highlighting and explaining the achievements of those lines of research that could become in the future into a contribution to public and private sectors or to the society in general. Which was the youth training and human resources program, reporting how it has contributed for building capacities in young researchers to serve as independent investigators. The objectives achieved in collaborative networks, and the outreach activities (public, private sector and society in general) shall also be described, highlighting its impact. Besides, it must include a description of how the administrative and financial operation was performed during the first stage of Nucleus.

4.3.7 Item 7: New Approaches or Changes in the components of the Nucleus: description of the new approaches or changes in the components of the Nucleus for a second stage, specifying activities to be developed during a second stage, starting by scientific research, scope of work and the fundamental subjects to be studied, the projected program for young scientists training and human resources. The objectives achieved in Collaborative Networks, and Outreach activities of the results and actions towards the external environment (public, private sector and society in general) shall also be described, highlighting the impact of these activities. It must be mentioned which will be the proposed actions to strength or to create building capacities in young researchers to serve as independent investigators. It shall also describe how administrative and financial management will be performed during the second stage, including a general description of the budget of expenses detailing personnel fees, investment on equipment, tickets and travel expenses, infrastructure, operational and management expenses and contingencies, according to budgetary items established in number 12 of these bases. In the case of other information to be considered, the Nuclei receiving support from other institutions shall specify such contributions and attach your commitment.

5. COMMON REQUIREMENTS TO APPLY FOR NUCLEI

Researchers who meet the following requirements can apply to this competition:

5.1 To be Chilean or foreigner with permanent residence in Chile during the period of execution of the Nucleus. To apply for New Nuclei in Natural and Exact Sciences or in Social Sciences it will not be necessary for the Principal Investigator or the other Associate Researchers to have permanent residence in Chile during the period of application. Nevertheless, the development of the research and the activities of either the New or Renewed Nucleus should be performed within the national territory and its seat will be in the country, without detriment of the collaborative works which may be carried out in laboratories of other countries. The Principal Investigator and the other Associate Researchers shall remain in the country at least 8 months a year during the period of the Nucleus validity, except for duly justified exceptions indicated by the Principal Investigator and authorized by the Undersecretariat, through the Executive Secretariat of the MSI.

- 5.2** Associate Researchers shall form a group mostly young, preferably younger than 40 years old in the case of men and younger than 45 in the case of women.
- 5.3** Associate Researchers shall be currently performing research activities related to the competition's area, with publications in International magazines with editorial committee or other products, which show the scientific excellence of the researchers during the last five year before the application.
- 5.4** Principal Investigators shall not simultaneously apply in this category as researcher to more than one proposal for new Nuclei or Institutes.
Without prejudice of the above, Principal Investigators of existing Nuclei will be entitled to simultaneously apply to nuclei competitions in order to obtain renewal of his/her Nucleus, and in competitions for the creation of new Institutes.
The rest of researchers who apply as Associate Researchers, including the one that shall be appointed as Deputy Principal Investigator, can participate of more than one proposal for Nucleus or Institute. For Nuclei Renewal, any of the Associate Researchers who currently participates of the Scientific Nucleus can apply as Principal Investigator for the second period, who shall also comply with the regulations stated in the first part of this point.
- 5.5** Principal Investigators from Millennium Institutes or Nuclei in force which execution period ends after 12 months from the date of the Preliminary Proposals application cannot participate.
- 5.6** Participation of Associate Researchers during a Nucleus development should follow dedication regulations described in number 14.1.3 of these bases.
- 5.7** Associate Researchers must have an outstanding trajectory, considering as such the keeping of scientific production recognized by the national and international science community (publications, citations, computer high-level conferences¹, books², work presentations at conferences, patents and other relevant products that show the scientific excellence of the researchers).
- 5.8** At the time of the interview with the Program Committee, Principal Investigators of the selected Full Projects shall deliver to the representative of the MSI Executive Secretariat the printed documents, with original signatures corresponding to items 1, 2 and 4 of their projects, identical to those uploaded in the Online System, as well as the letter(s) indicated in point 3.4.4, if necessary, while Principal Investigators of the Renewal Projects invited shall do the same with the documents corresponding to items 1, 2 and 5 of their Projects.

6. EVALUATION PROCESS

During the different evaluation stages the Program Committee shall work under the coordination of one of its members, the so-called Program Committee Convener.

6.1. Preliminary Proposals Evaluation: All Preliminary Proposals shall be sent by the MSI Executive Secretariat to the members of the Program Committee; and at least two experts from the Program Committee shall prepare an evaluation report for each project, including notes and comments according to the evaluation criteria established in number 7 of these bases. Such reports will be used as working basis during the first meeting of the Program Committee. In case a Preliminary Proposal out of these competence areas is received, a peer evaluator expert in that area suggested by the Committee's own members may advise the Program Committee.

The entire Program Committee shall review and analyze the evaluation reports of each Preliminary Proposal submitted by the expert members, and then proceed with their evaluation and ranking according to the scores obtained to select the Preliminary Proposals passing to the second stage. A minutes will be issued containing the list of Preliminary Proposals selected to submit a Full Proposal.

¹ For researchers of computing and informatics area.

² For researchers in the field of Social Sciences, books in prestigious publishers in this area are accepted.

The Program Committee may meet in person or virtually. In the last case, the certificate shall be signed only by the Convener, and individual evaluations signed by each member of the Program Committee participating in the Preliminary Project evaluation shall be attached.

The MSI Executive Secretariat shall notify the results to the competition applicants. All applicants to Preliminary Proposals will receive a copy of the evaluation of their preliminary proposal.

In the case of Preliminary Proposals applicants selected for the second stage, they will also receive an invitation to prepare and submit the Full Proposal within the term established in number 3.1.2 of the current bases.

6.2 Full Projects Evaluation: Once Full Proposals have been submitted, shall be sent to the Convener of the Program Committee who shall distribute each Project for evaluation to at least one member of the Program Committee according to his/her competence area. In the event a project out of such competence areas is received, the Program Committee will be entitled to receive the advisory service of an external evaluator expert in such area, as suggested by the Committee's members. Simultaneously, each project shall be delivered to two external peer reviewers, specialists in the specific field of each Project.

Evaluation shall be carried out according to the criteria and scores as established in number 7 of these bases. The results of these evaluations shall serve as qualification basis for the selection of the final projects that will pass to the final interview stage.

Convener shall issue a minutes with the results of the evaluation process, establishing the Full Proposals selected for the round of interviews, which will be sent to the MSI Executive Secretariat, so that applicants are notified about the results of this stage of the Competition.

Copy of the evaluations shall be sent to all members of the Program Committee.

All applicants shall receive a copy of their evaluation at the end of the competition process.

In the case of selected applicants, they shall also receive an invitation to an interview with the Program Committee that will meet in Chile for these purposes.

6.3 Nuclei Competitive Renewal: The evaluation will be carried out by a member of the Program Committee on the specialty and a peer reviewer, or by two peer reviewers in absence of the necessary experience in the Program Committee.

Evaluation will be performed according to the criteria and scoring established in the number 7.2 of these bases and to the Annual Reports delivered as of the competition's date, the Nucleus original proposal of the for the first three-year period and the Renewal Proposal focused on a phase 3-year continuation period.

One copy of the evaluation report will be sent to all the Program Committee members, and to the Executive Secretariat of the MSI Program, before the interviews in Chile.

All applicants for renewal will receive a copy of their evaluation at the end of the competition process, and will be invited to an interview with the Program Committee in Chile.

6.4 Final Ranking: The Program Committee will interview all final groups, in both new and in renewal according to the criteria and scoring as established in number 7.3 of these bases, preparing a final ranking for each project as per their merits in order to recommend awarding.

The Program Committee will also prepare a minutes including a brief final report on each of the projects, which shall be submitted to the Board of Directors' analysis.

In case of equal merits of the final and/or renewal proposals, the Program Committee shall apply the following criteria to decide:

1° Preference shall be given to the proposal which Associate Researchers team considers the participation of a higher proportion of female researchers.

2° Preference order shall be given to the proposal which a higher proportion of Host Institutions are located outside the Región Metropolitana.

3° Preference order shall be given to the proposal which a higher proportion of Associate Investigators are from institutions located outside the Región Metropolitana.

4° Preference order shall be given to the proposal which a lower average age of the Associate Investigators.

5° Preference shall be given to the proposal that has obtained a higher score in the interview under the criterion “Scientific, methodological merit, clearness and soundness reflected in the oral presentation of the Project” in the case of new Nuclei, and under the criterion “Scientific, methodological merit, clearness and soundness reflected in the oral presentation about the first stage achievements, and application for a second 3-year period” in the case of renewal Projects.

7. QUALIFICATIONS, EVALUATION CRITERIA AND WEIGHTING FACTORS

The scoring scale to be used by evaluators for both new and renewal Nuclei Projects, and throughout the different stages of the competition is as follows:

Score 1, equals Outstanding

Score 2, equals Very good

Score 3, equals Good

Score 4, equals Fair but requires important improvements

Score 5, equals Non competitive

7.1 FOR NEW NUCLEI

The scientific-technical evaluation criteria and their weighting factors will be:

7.1.1 Preliminary Proposals

| | |
|---|-------------------|
| <p>Academic and scientific excellence of the Principal Investigator in terms of domestic and international acknowledgment of the quality and quantity of scientific productivity and excellence (scientific publications, citations, papers presentations at conferences, industrial property products, licenses of right, spin offs, agreements and consultancies to the public and/or private sectors, awards, etc.*) and leadership in his/her area of specialty (projects developed, citation in international specialized media or other objective parameters) considering the priority focus on young researchers as established in point 5.2 of the bases.</p> <p><i>*If necessary, include other relevant products for each discipline, e.i. international conferences with external referee in the computer field or books of international publishers with an editorial board in Social Sciences.</i></p> | <p>25%</p> |
| <p>Academic and scientific excellence of the Deputy Principal Investigator and Associate Investigators in terms of domestic and international acknowledgment of the quality and quantity of scientific productivity and scientific excellence (scientific publications, citations, papers presentations at conferences, industrial property products, licenses of right, spin offs, agreements and consultancies to the public and/or private sectors, awards, etc.*) and leadership in his/her area of specialty (projects developed, citation in international specialized media or other objective parameters) considering the priority focus on young researchers as established in point 5.2 of the bases.</p> | <p>20%</p> |

| | |
|--|------------|
| <i>*If necessary, include other relevant products for each discipline, e.i. international conferences with external referee in the computer field or books of international publishers with an editorial board in Social Sciences.</i> | |
| Academic and scientific excellence of the Principal Investigator in terms of domestic and international acknowledgment of the quality and quantity of scientific productivity and excellence (scientific publications, citations, papers presentations at conferences, industrial property products, licenses of right, spin offs, agreements and consultancies to the public and/or private sectors, awards, etc.*) and leadership in his/her area of specialty (projects developed, citation in international specialized media or other objective parameters) considering the priority focus on young researchers as established in point 5.2 of the bases. | 40% |
| Plans and potential for training of young scientists, including plans for these young scientists can lead new research or development lines during the Project execution. | 15% |

7.1.2 Full Proposals

| | |
|--|------------|
| Academic and scientific excellence of the Principal Investigator in terms of domestic and international acknowledgment of the quality and quantity of scientific productivity and excellence (scientific publications, citations, papers presentations at conferences, industrial property products, licenses of right, spin offs, agreements and consultancies to the public and/or private sectors, awards, etc.*) and leadership in his/her area of specialty (projects developed, citation in international specialized media or other objective parameters) considering the priority focus on young researchers as established in point 5.2 of the bases. <i>*If necessary, include other relevant products for each discipline, e.i. international conferences with external referee in the computer field or books of international publishers with an editorial board in Social Sciences.</i> | 13% |
| Academic and scientific excellence of the Deputy Principal Investigator and Associate Investigators in terms of domestic and international acknowledgment of the quality and quantity of scientific productivity and scientific excellence (scientific publications, citations, papers presentations at conferences, industrial property products, licenses of right, spin offs, agreements and consultancies to the public and/or private sectors, awards, etc.*) and leadership in his/her area of specialty (projects developed, citation in international specialized media or other objective parameters) considering the priority focus on young researchers as established in point 5.2 of the bases. <i>*If necessary, include other relevant products for each discipline, e.i. international conferences with external referee in the computer field or books of international publishers with an editorial board in Social Sciences.</i> | 10% |
| Scientific, technical and methodological merit of the proposal, taking into account trans-disciplines and associative work among Associate Researchers and the rest of the Project's participants and the potential to project it as a center of high international level on the basis of scientific excellence and leadership of the Associate Investigators, the capability of training young scientists, connections with foreign institutions and possible additional sources of funding, and based expectations in generating products of industrial property, licenses of right, spin offs, agreements and consultancies to the publics and/or private sectors. | 40% |
| Plans and potential for training of young scientists, including plans for these young scientists can lead new research or development lines during the Project execution. | 17% |
| Proposal of plan for diffusion and outreach activities. | 10% |

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| External collaborations of the Project relating to joint work of the project scientists with researchers from other national or foreign institutions. Complementary public or private financing sources. | 10% |
|--|------------|

7.2 FOR NUCLEI RENEWAL

The following scientific technical evaluation criteria will be applied by the Program Committee:

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| Fulfillment of the goals during the first stage regarding academic and scientific excellence of the work and the researchers ,technical and methodological quality and quantity and scientific excellence (scientific publications, citations, papers presentations at conferences, industrial property products, licenses rights, spin offs, agreements and consultancies to the public and/or private sectors, awards, etc.*) and leadership in his/her area of specialty (projects developed, citation in international specialized media or other objective parameters), trans-disciplines and associative work among the researchers of the Nucleus, results and impacts of products of the Nucleus that show the impact in the country. <i>*If necessary, include other relevant products for each discipline, e.i. international conferences with external referee in the computer field or books of international publishers with an editorial board in Social Sciences.</i> | 25% |
| Focalization, scientific and research merit of the proposal for a second stage. Objectives, work plan approach and manner to address the displayed issues. | 20% |
| Compliance with goals during the first stage regarding education and training of advanced human capital. Number of post graduate and under graduate students and graduates, and number of post-doctorates participating of the work within the Nucleus. | 10% |
| Plans and potential for the development of educational and training activities of advanced human capital during the second stage. Number of post graduate and under graduate students and graduates, and number of post doctorates participating of the work within the Nucleus. | 10% |
| Compliance with goals during the first stage regarding to the development of Collaboration Network activities and interactions for performance of joint work by the Nucleus scientists with investigators from other national and foreign institutions. Plans and potential for the development of Networks during a second stage. | 15% |
| Fulfillment of the goals during the first stage regarding the development of diffusion and Outreach activities of the Nucleus. Plans and potential for the development of these activities during the second stage. | 15% |
| Management capacity within the organization and administration of the Nucleus and the use of financial resources during the first stage, and subsequent plans for the second stage. Timely performance of administrative duties such as Annual Report, Final Technical Report, Investment Monthly Reports, Management System. | 5% |

7.3 EVALUATION CRITERIA AND WEIGHTING FACTORS FOR FINAL INTERVIEW

The scientific and technical evaluation criteria and the scoring to be applied by the Program Committee in the final interview will be:

7.3.1 FOR NEW NUCLEI

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|--|------------|
| Scientific and methodological merit, clearness and forcefulness of the Project oral presentation, expressed in the oral defense. | 45% |
| Level and solidity of the group of Associate Researchers, expressed in the oral defense. | 25% |

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|--|------------|
| Capacity projected over team work and group synergy. | 25% |
| Potential of the proposal to contribute to the development of the country. | 5% |

7.3.2 FOR NUCLEI RENEWAL

| | |
|---|------------|
| Scientific and methodological merit, clearness and soundness of the oral presentation on the achievements of the first stage and application for a second 3-year stage. | 45% |
| Level and solidity of the group of Associate Researchers, expressed in the oral defense. | 25% |
| Capacity projected over teamwork, and group synergy expressed in the oral defense. | 25% |
| Potential of the proposal to contribute to the development of the country. | 5% |

7.4 WEIGHTING FACTORS FOR THE FINAL RANKING OF THE NEW AND RENEWED PROJECTS

The weighting factors to be applied by the Program Committee for the final ranking of the Projects will be as follows:

- Definite Projects or Projects for Renewal (written version) 60%
- Final Interview 40%.

8. RESOLUTION OF THE COMPETITION

The Program Committee will rank the Projects, including in only one ranking the Nuclei running for renewal and the new Nuclei, according to the weighting factors percentages specified in 7.4.

The Board of Directors shall meet in Santiago, and will receive the Program Committee, which will explain the grounds for ranking and its recommendation for awarding the competition. The Board of Directors shall analyze the arguments presented by the Program Committee in its evaluation report, and it shall issue and sign the minutes of award proposed by the Program Committee, which will be sent to the Undersecretariat.

The Undersecretary shall award the competition with a Resolution, no later than 15 working days as from the reception of the minutes of award duly signed by the Board of Directors, and according to budgetary availability.

The Undersecretary will be entitled, on grounded bases, to conditionally grant Projects with an awardable condition according to the Program Committee proposal, subject to budgetary availability of the immediately next year; pursuant to the order previously established in the proposed minutes of award.

Once the competition has been awarded, applicants shall be notified of the results through registered letter. All finalists, either of new proposals or Nuclei renewal shall receive their final evaluation reports.

II. FUNDING AGREEMENT

9. SIGNATURE OF THE AGREEMENT

Once the Awarding Resolution has been notified, the agreements between the Undersecretariat, Principal Investigator, Deputy Principal Investigator and Host Institution(s), if any, shall be underwritten into within a 40 working day period as from the total processing of the administrative action, where the conditions, obligations and rights by the parties shall be established, without prejudice of the regulations contained in these bases.

10. FUNDING

Funding delivered by the Undersecretary to the awarded Projects will be as established in the Resolution to launch the call for proposals and it shall not be adjustable.

Funding for the awarded Projects will be executed within a maximum 36 (thirty six) month period. Execution and expenses associated to the project can only be carried out within this period and expenses of any kind will not be accepted after the close of the Nucleus. Funding for each year of the Project will be delivered in one or more annual payments.

Annual funding subsequent to the start-up of the Project will be conditional to the approval of the corresponding resources from the pertinent Budget Law, without the right to receive any compensation in the event this does not happen.

Funding of the Projects awarded by the current competition will be incompatible with the reception of other public funds to carry out the same activities defined within the Project, except for the funds intended to supplement and broaden the activities defined within this same Project.

11. CONDITIONS FOR THE TRANSFERENCE OF RESOURCES

The Undersecretariat shall make the agreed transference of resources after the following mandatory requirements will be accomplished:

11.1 Approval of the Annual Plan for the Use of the Resources by the Undersecretariat through Administrative Resolution within a maximum of 15 (fifteen) working days period as from the reception date by the Undersecretariat of the Annual Plan for the Use of the Resources made by the Principal Investigator.

11.2 Submission of scientific-technical annual reports and monthly investment reports indicated on number 17 of these bases to the Undersecretariat according to the conditions established by the Program.

11.3 Subscription of insurance policy of responsibility with immediate execution clause. To guarantee the correct execution of the foreseen funds and the compliance with the obligations imposed by the agreement to be entered into with the Undersecretariat, the Principal Investigator or whoever replaces him in his obligations shall annually retain a responsibility insurance policy of responsibility with an immediate execution clause in the name of the Undersecretariat, in the amount of the resources approved in the "Annual Allocation for the Use of the Resources". The insurance policy shall be handed in to the Undersecretariat at the approval of the "Annual Plan for the Use of the Resources".

The validity of the insurance will be 18 months as from the date of the total processing of the Administrative Action approving the "Annual Plan for the Use of the Resources". The insurance policy will be returned to the subscriber once the Undersecretary has approved the corresponding monthly investment reports and the annual scientific technical reports or the final reports of the project, whichever appropriate. In case it is necessary to partially or entirely use the insurance referred to in this letter, the Principal Investigator shall replace it by another with the same characteristics and in the same amount, with validity for the remaining of the 18-month period of the original policy.

For the last year of the Project, the term of the policy must be of 20 months from the counted since the total processing of the administrative act approving the Annual Plan for the Use of the Resources.

Notwithstanding the above, the first transference of resources will be performed once the Administrative Action of the Undersecretariat is totally processed, approving the corresponding Funding Agreement and the requirements established in previous letters a) and c) have been fulfilled.

12. FINANCEABLE EXPENSES ITEMS

Exclusively the following items can be charged against the funds transferred:

- 12.1 Personnel fees:** The Nucleus shall pay the labor and social security obligations for researchers belonging to any of the categories listed below. This also includes payment to institutions that cover workers in respect of occupational and transport accidents. The following annual amounts can be paid to the categories indicated hereunder:
- 12.1.1 Associate Researcher and Principal Investigator,** up to 30 (thirty) million pesos per year, and to whom acts as Principal Investigator, up to 40 (forty) million pesos a year. Nevertheless, Associate Researchers receiving a salary under any type of agreement with their corresponding institutions, will be entitled to receive individually up to 9.6 (nine point six) million pesos per year, and up to 12 (twelve) million annual pesos, when acting as Principal Investigator. If an Associate Researcher is part of the research team of more than one Institute or Millennium Nucleus, the sum of the salaries funded by MSI may not exceed the limits established at this point. The compliance of this requirement will be duly verified by the UCR.
 - 12.1.2 Adjunct Researcher,** up to 9.6 (nine point six) million pesos per year.
 - 12.1.3 Senior Researcher,** up to 9.6 (nine point six) million pesos per year.
 - 12.1.4 Young Researcher,** up to 30 (thirty) million pesos per year.
 - 12.1.5 Postdoctoral,** up to the amount defined by the FONDECYT Postdoctoral Program of CONICYT for these kind of researchers, as long as that such amount does not exceed a maximum of 30 (thirty) million pesos per year. These resources will be delivered as scholarships or fees to doctors autonomously selected by each Nucleus according to merits, funding availability and particular interest.
 - 12.1.6 Postgraduate Student,** up to 12 (twelve) million pesos per year. These resources will be given as scholarships to those students who are studying or performing their postgraduate thesis, who will be autonomously selected by each Nucleus according to merits, funding availability and particular interest. The dedication of the fellows must be exclusive to the studies that they are developing, with the exception of academic activities such as assistantships for cathedra, laboratory, academic collaboration, diffusion and communication of sciences and practices in the public or private sectors.
 - 12.1.7 Undergraduate Student,** up to 4 (four) million pesos per year. These resources will be given as scholarships to undergraduate students, who will be autonomously selected by each Nucleus according to merits, funding availability and particular interest.
 - 12.1.8 Technical personnel for laboratory or professionals for researchers' support,** up to 24 (twenty four) million pesos per year, each.
 - 12.1.9 Administrative Personnel,** up to twenty (20) million pesos per year for the category of Manager. Also it may be included in this concept other administrative fees for other administrative personnel.

All resources will be subject to tax payment, except for the ones given as scholarships. Funding allocated to cover expenses considered as scholarships to undergraduate and postgraduate students can include registration, tuition fees, maintenance expenses and purchase of books, instruments or any necessary element for the investigation.

It is the responsibility of each of the participants benefiting from these fees to issue their invoices, income-tax statement and payment of the corresponding taxes.

12.2 Expenses in tickets, travel expenses; expenses for the organization of scientific and academic teaching events: Trips and transportation and other related expenses such as travel insurances which should be carried out to develop the research within the Project will be financed. Only economy class tickets will be financed, except for health and age reasons, situations to be previously authorized by the Undersecretariat through the Executive Secretariat of the Program. Travel expenses must be equivalent to the referential amounts established by FONDECYT (<http://www.conicyt.cl/fondecyt/files/2015/04/Anexo-Valores-Viáticos-y-Pasajes.pdf>).

Expenses associated with attendance or organization to congresses, seminars, courses, lectures or other similar such as registrations, rooms and equipment rentals, feeding and translation services which correspond to the performance of the event are considered within this item.

12.3 Expendable Supplies, Materials, and Maintenance: Comprises all materials or supplies needed in order to develop the research work proposed. It includes office stationery, laboratory reagents, expendable supplies, laboratory analysis, patents granting, computer services, computer supplies, equipment rentals, and freight, transportation and equipment repair and maintenance expenses, or lease of any device or transportation means directly related to the research and essential to its performance or development.

12.4 Goods and Equipment: Comprises the purchase of major and minor equipment and their accessories, if applicable. The costs will include the import, customs clearance, storage, customs fees, transport and installation in their final destination. All equipment must be duly insured. In the case of donated equipment all additional expenses necessary for its use in its final destination are considered.

Funding for purchase of vehicles could be authorized by the Undersecretariat through the Executive Secretariat in case the Nuclei require them exclusively for field work in connection to the development of the Project.

12.5 Infrastructure: Comprises the costs of building minor infrastructure such as repairs, remodeling, reconditioning physical spaces, completion, facilities for the installation of new equipment and for maintenance of infrastructure and other. Up to 10% of the total grant for the Project may be destined to this item. The purchase of buildings or its construction will not be financed.

12.6 Administration Expenses: These correspond to the services operating costs, diffusion and public relations associated to the Nucleus, obtaining Legal Status (in the event the Nucleus desires to obtain it), among other. The total amount for this category should not exceed 10% of the total amount allocated to the Nucleus.

Nuclei should count with permanent professional services in the management and finance accounting areas.

12.7 Costs of Insurance Policies: These correspond to the expenses associated to insurance policies to guarantee the correct execution of the foreseen funds, and the compliance with the obligations contained in the agreement with the Undersecretariat, the subscription of insurance policies against robbery, fire and natural catastrophe on the equipment and installations financed with resources transferred by the Undersecretariat and personal insurances in case of researchers that in the course of investigations associated to the Nucleus are exposed to risk activities. It also includes the cost of the accident insurances policies that cover personnel hired by the Nucleus in their workplace or on their way.

12.8 Publications and subscriptions to scientific journals: These include all the expenses associated to publications derived from the research Project, as well as subscriptions to scientific journals related to the research or purchase of scientific books. Edition costs of informative posters or other printed material used for publicity and outreach activities of the Nucleus could also be included.

12.9 Consultancies: Comprises the costs for retaining specific and temporary consultancy services required to develop the Nucleus. It includes the cost of retaining visiting professors and internships of young researchers or external students in laboratories of the Nucleus, which for the purposes of this agreement, don't belong to this Project.

12.10 Overall expenses incurred by the Host Institution(s) ("Overhead Expenses"): Correspond to the funding for the Project given to the Host Institutions (s) on account of the use of infrastructure, equipment, services or other derived from the operation of the project. These may not exceed 10% of the allocated funds for the Project. It will not be possible to generate agreements of purchase, sale or lease of equipment or infrastructure with natural persons belonging to the staff recruited at honorarium by the Nucleus, or maintain an employment contract with the Nucleus or the Host Institution.

12.11 Contingencies: Comprises all sudden, non-scheduled expenses indispensable to the performance of the Project. Its amount must not exceed 2% of the total annual allocated funds.

The Undersecretary will not be responsible for any social security debt of the participants in the Nucleus, as well as for any income taxes, and fiscal or municipal income taxes.

13. PERIOD FOR THE PROJECT'S EXECUTION

The Project shall be executed within a maximum 36 (thirty six) month period, as from the total processing of the administrative action approving the funding agreement.

In the event the Project's execution is delayed for reasons not related to the Nucleus, the Principal Investigator will be entitled to request the Undersecretariat through the Executive Secretariat for an extension of the period and the funding agreement. The amendment to the Project's execution period will be approved with the corresponding administrative action for a maximum 9 month period, and in no event shall mean an increase of the Nucleus funding.

Nuclei will be entitled to apply for a renewal for a unique additional period of 36 (thirty six) months, competing with other Projects, new or for renewal, at an open competition provided that there are resources available in the corresponding Budget Law. The MSI Executive Secretariat, is authorized to suspend temporarily transfers to renewed Nuclei that do not comply the full financial closure of the first stage at 90 calendar days from the date of termination of the agreement. The total financial closure of the first stage will be done through a closing document, as stated in article 22 of these bases.

In case a Nucleus is approved for a second three year period, the expenses for the period between closure of the first three years and the beginning of the second three year period could be retrospectively recognized as expenses for the new stage, with the previous approval by the Undersecretariat through the Executive Secretariat. Likewise, during this period funding could be requested to the Undersecretary for Outreach activities and Formal Collaboration Networks, which could be formalized once the Nucleus in is rebooted.

14. OBLIGATIONS OF THE PRINCIPAL INVESTIGATOR

The obligations of the Principal Investigator are both in the technical scientific execution of the Project and in its administration.

14.1 Obligations of the Scientific Technical Execution of the Project

The Principal Investigator will have the following obligations:

- 14.1.1** The general scientific technical management of the Project and the development of its inherent activities.
- 14.1.2** Should remain in the country at least for 8 months per calendar year during the Project's execution. This obligation also extends to the Deputy Principal Investigator and Associate Researchers, except for cases duly qualified and previously authorized by the Undersecretariat through the Program's Executive Secretariat. In case a Project includes Associate Researchers, either Chilean or foreign with domicile abroad, the Principal Investigator shall request them at the moment of formalizing the corresponding Funding Agreement a letter of commitment for residence in Chile for at least the period indicated at the beginning of this paragraph.
- 14.1.3** Should devote a weekly time commitment to research and/or arrangements required for the development of research of the scientific Nucleus, and ensure that the remaining Research Associates do the same. Won't be able to participate as a Research Associate or equivalent category simultaneously in more than two collaborative research MSI centers or other public agencies like the National Science, Technology and Innovation System. The remaining Research Associates are not required to meet the same standard.

- 14.1.4** To request in writing the change of Associate Researchers in any of its sub-categories, to the Undersecretariat through the Executive Secretariat, and/or the increase or decrease of the hours devoted to the Project, according to what is stated in paragraph 14.1.3 of these bases.
- 14.1.5** To report on time and in writing to the Undersecretary through the Executive Secretariat of any inconvenient that delays or prevents the development of the Nucleus.
- 14.1.6** To watch over for a permanent disposition and support between the MSI Institutes and Nuclei while granting loans, rentals or other for services and/or laboratory equipment of the Nucleus, by mutual agreement between the parties.
- 14.1.7** To make available for the Undersecretariat through the Executive Secretariat all the background information required to implement the evaluations of the Nucleus.
- 14.1.8** To send to the Undersecretariat through the Executive Secretariat and according to its requirements all the information on the Publications in journals or books that could have resulted from the Nucleus, as well as industrial property products, knowledge transfer products or consultancies that impact to any sector of the society.
- 14.1.9** To watch over that all Publications during the development of the Project indicate the authors, the affiliations³ to the performing MSI Nucleus, according to the editorial standards of the publication means, as well as the funding of the Millennium Science Program Initiative from the Ministry of Economy, Development and Tourism. The Principal Investigator should watch over for the proper and permanent display of the Millennium Science Initiative of the Ministry of Economy, Development and Tourism in all leaflets, flyers and posters, publications of activities or investigations financed according to instructions issued in writing by the Undersecretariat through the Executive Secretariat.
- 14.1.10** To register in the stationery and in the documents and communications issued by the MSI Nucleus, the acknowledgment to the funding by the Millennium Science Initiative of the Ministry of Economy, Development and Tourism. Likewise, all the equipment and goods financed with resources of the Undersecretariat should be duly identified with a self-adhesive plate provided by the Undersecretariat through the Executive Secretariat, containing information on the funding source after the first transfer of funds.
- 14.1.11** To supply the duly outreach activities performed by the Nucleus through the different communications media, emphasizing the role by the Millennium Science Initiative of the Ministry of Economy, Development and Tourism. The Principal Investigator shall consider hiring a communications professional for such purposes.
- 14.1.12** Ensure that the Communications Manager mentioned in the previous point, is in permanent contact with MSI. This person should be in charge of generating scientific images related to the Nucleus, notes and interviews on the progress of the investigation and report accordingly the calendar of the scheduled activities of diffusion.
- 14.1.13** To participate, whenever an invitation is made, in the financing competitions the Program calls.
- 14.1.14** Coordinate, organize and ensure the participation of the team in visits to the Nucleus or other meetings that MSI calls.

14.2 Obligations concerning to Administrative issues

³ In scientific publications and books the following sentence of filiation should be indicated: “The Millennium Nucleus (Institute code / Nucleus and name) is developed with contributions from the Millennium Science Initiative of the Ministry of Economy, Development and Tourism from the Innovation for Competitiveness Fund, from the National Innovation Strategy Fund, from the Regular Fund, or another, as appropriate”. In case of the institution that hosts the authors of the publication, it should be mentioned when magazines permit, the Nucleus name, as follows: “Millennium Nucleus...”

Regarding administrative and financial management of the Project, the Principal Investigator is required to:

- 14.2.1** Open and maintain a joint bank account, whose holders are the Principal Investigator and the Deputy Principal Investigator, exclusively for the administration of the funds transferred by the Undersecretariat to the Nucleus for the Project execution. This account shall be used only for deposit and withdrawal of the financial resources allocated to the Project, during its execution and until six months after closing.
- 14.2.2** To hire an employee in charge of the management, administration and finances area of the Nucleus, so as to guarantee adequate capacities in these aspects. This obligation could be performed through the Nucleus or the Host Institution or a company related with accountancy. Specific financial management activities, such as purchase of domestic or imported equipment, could be performed by the Host Institution(s).
- 14.2.3** To issue the Investment Reports indicated in point 17.2 of the current bases which contain the income and expense vouchers according to the processes established, with the authentic documents or the relation and location of them, as applicable, which justifies the expenses made with the resources transferred.
- 14.2.4** To allow the Undersecretariat the examination at any time of the information and administrative and accounting documentation of the Project, of both the Undersecretariat as audits the Comptroller General of the Republic might do.
- 14.2.5** To present annually an Annual Plan on the Use of Resources distributed by the annual budget requested and available for the financeable budgetary items according to number 12 of the current bases. The amounts established for each item may be re-assigned among their categories during the course of the year up to 30% of the total approved budget. For re-assignments higher than 30%, the Principal Investigator shall request the authorization in writing to the Undersecretariat through the Program's Executive Secretariat, who shall answer to such request within a maximum period of ten working days as from the date of the request. Redistributions upper 30% must be authorized by the Executive Secretariat of the Program previously to the expenses associated with it, in writing. It will not be allowed to increase the amount of scholarships or of individual resources assigned to each Investigator (per equal N° of hours or services) included in the "Fees" item of number 12.1, considered in the Annual Plan on the Use of Resources.
- 14.2.6** To develop the Project according to the Annual Plan on the Use of Resources approved by the Undersecretariat and its eventual modifications.
- 14.2.7** To deliver to the Host Institution(s) the necessary funding committed in the Project.
- 14.2.8** In the purchase and administration of the equipment and capital assets acquired for the Project with the funding delivered by the Undersecretariat, the Principal Investigator together with the Host Institution(s) undertake to:
 1. Assign the equipment to Project activities, and
 2. To operate and maintain the equipment and capital assets. They should assign or hire suitable personnel and necessary goods for a normal operation and maintenance of these assets and equipment during the performance of the Project.
- 14.2.9** To take insurances in favor of Host Institution (s) against robberies, fire and damages on the equipment and other non-expendable goods purchased with funding from the Undersecretariat which are used to carry out the project or agree with the host institutions that within its insurance policies against robberies, fire and damage, are included equipment and other non-expendable property purchased with funds provided by the Undersecretariat for the Project implementation.

- 14.2.10** To inform the insurance company where the annual responsibility policy is taken, with an immediate execution clause for the correct use of the advanced funds and the compliance with the obligations imposed by the agreement, about any amendment approved with the Undersecretariat regarding the funding agreement.
- 14.2.11** To identify with the logo of the Millennium Science Initiative of the Ministry of Economy, Development and Tourism the official documents, equipment and assets financed by the Program.
- 14.2.12** To control the acknowledgement of the benefits and rights established in the current labor laws for the hired scientific personnel and to watch over the enforcement of the security standards at the laboratories.
- 14.2.13** To submit reports to the Undersecretariat through the Executive Secretariat as specified in number 17 of these bases.
- 14.2.14** To timely provide the necessary information requested by the Executive Secretariat for the calculation of performance indicators and progress.

15. OBLIGATIONS OF THE HOST INSTITUTIONS

Host Institution(s) shall:

- 15.1** Assign the personnel committed to the development of the Project.
- 15.2** Access without cost to the facilities and to the infrastructure committed in the proposal of the Nucleus for the implementation of the Project.
- 15.3** To perform the necessary formalities to secure the patentable inventions and results from the Project with the corresponding records, except if they are inconvenient and if the Undersecretariat so declares. Such is the case of researches on subjects which could ethically, bio-ethically or otherwise raise any objection.
- 15.4** Support and promote the Outreach and network activities to contribute to the transference of results from the Project.
- 15.5** To purchase the necessary equipment for its development with resources assigned to the Project whenever the Principal Investigator requests so.

In compliance with this activity, the Host Institution (s) will have the following responsibilities:

15.5.1 To assure the Principal Investigator and its Associate Researchers the primary right for the use of the equipment. Upon prior request of the Principal Investigator and due to scientific collaboration reasons regarding the Project, the Host Institution(s) should facilitate the access and use of the equipment to other researchers who will be identified by the Principal Investigator.

15.5.2 To report in writing to the Undersecretariat through the Executive Secretariat any conflict with the Principal Investigator due to or on the occasion of the Project development, so that the Undersecretary arbitrates the corresponding measures.

The background information on the purchase of the equipment shall be requested in the name of the Host Institution(s), specially mentioning that they are purchased for the Nucleus. From the end of the Nucleus, the ownership of the assets and equipment acquired with the MSI Program resources during its performance shall belong to the Host Institution(s). In the event there is more than one Host Institution, the ownership of goods and equipment shall be determined by the main location, use and/or line of research related to each good or equipment.

16. INTELLECTUAL AND INDUSTRIAL PROPERTY

The Nucleus' Principal Investigator undertake to adopt the necessary measures to protect the research's results, for which must keep all the generated information and knowledge with integrity, complete, and protected from any disclosure. Systems for custody of information and confidentiality agreements should be implemented, among other measures.

The copyright and industrial property related to the research's results shall be ruled by the general standards on the matter as prescribed in the national legislation, or in the contractual agreements to be established between the host institution(s) and researchers according to the laws in force.

17. FOLLOW UP AND REPORTS OF THE PROJECT

The Program Committee and the Undersecretariat, through the Executive Secretariat of the MSI Program will keep a permanent follow up and control of the performance of the Nucleus. The Principal Investigator and the Host Institution(s) will give to the personnel of the Executive Secretariat or to whom the Undersecretariat appoints as replacement, the necessary conditions for such purposes.

17.1 Requested Scientific Technical Reports:

17.1.1 Online MSI Report Management System: Within the first half of each year, you must complete the online report, which provides the basis for generating statistics on the MSI centers. This report is quantitative of the scientific research and production, and of the team that forms the center and will serve as a basis for generating the Annual Scientific Report or Annual Report. The Principal Investigator must ensure the accuracy and completeness of the provided information.

17.1.2 Annual Scientific Technical Report or Annual Report, should contain a detail report of the research management; the scientists' training, and Collaboration Networks and Outreach activities. Besides, a report on the accomplished activities and the resources used should be included.

The Annual Report should be submitted during the month of March of the year following the reported one, being the Undersecretariat through the Executive Secretariat entitled to agree to another date with the Principal Investigator in exceptional and substantiated cases. Those Nuclei with an execution period longer or equal than 6 months as of December 31 of the year reported shall file their Annual Report. The preparation and delivery of the Scientific Technical Annual Report shall not be required in the corresponding to year three (3) in the case of non-renewed Nuclei, and corresponding to year six (6) in the case of Nuclei awarded with a second term. In such cases, the information corresponding to year three or six, whichever the case, shall be contained in the Final Scientific Technical Report.

Once the Annual Scientific Technical Report has been submitted, the Undersecretariat through the Executive Secretariat within a 40 working day period may approve it or make comments to the format, subjects and information therein contained, which shall be notified in writing to the Principal Investigator within the same period of time. The Principal Investigator shall send a reply to the remarks within 10 working days from the date of notice. The Undersecretariat will have a 10 working days period as from the reception of the reply to the remarks to answer accordingly.

If the Principal Investigator does not submit a report or does not reply to the remarks on the previously indicated deadline, or if this reply is unsatisfactory, it will be considered as a serious breach of contract, thus allowing the Undersecretariat to the anticipated termination of the subscribed agreement and/or temporarily or permanently stop the transfers, according to the decision of the MSI Executive Secretariat, being the Undersecretariat authorized to enforce the constituted guarantee.

17.1.3 Final Scientific Technical Report, it shall be delivered within 60 working days from the finalization of the execution of the Project. The report should contain all the information

related to the development of the Project as well as the results achieved and the training of scientists, publications, patent, inventions, number of graduate students, activities in Collaboration Networks and Outreach activities, innovations and impacts produced by the Project, conclusions. Those Nuclei awarded with a second 3-year term of operation shall be excluded from the first 3-year Final Report.

On exceptional cases, the Undersecretariat through the Executive Secretariat will be entitled to extend the period established in the previous paragraph.

Once the Final Scientific Technical Report has been submitted, the Undersecretariat through the Executive Secretariat will be entitled to approve or make remarks in writing to the Principal Investigator within 80 working days. The Principal Investigator should reply to the remarks within 20 working days from the date of the notification. The Undersecretariat will have the following 20 working days from the reception of the reply to the remarks, to give its pronouncement.

If the Principal Investigator does not submit the report or does not reply to the remarks on the previously mentioned deadline, or if these replies are considered unsatisfactory, it will be considered as a serious breach of contract, allowing the Undersecretariat to make the established guarantee effective.

17.1.4 Publications Report: Once a year and during the two years following the termination of the Nucleus, it should be sent to the MSI Executive Secretariat a list detailing publications generated from research in the Nucleus, which were accepted during the period of execution and after two years after the termination of the Nucleus.

17.2 Requested Investment Reports:

17.2.1 Monthly Investment Report: The Principal Investigator should monthly submit a detailed report on the amount of resources received and on accountability of expenses, in accordance to regulations on accountability from the Office of the Comptroller General of the Republic.

The Principal Investigator shall submit to the UCR, during the first 5 working days after the closing date, understood as such the last working day of the previous month, all the background information and documents of the expenses, according to what is described in the Accountability Manual. The Undersecretariat may approve or make remarks to these reports within 15 working days after their reception, and this will be informed in writing, via electronic mail or other automatized way to the Principal Investigator or the Deputy Principal Investigator during the same period of time. The Principal Investigator shall reply to these remarks, within the deadline established by UCR, which may not exceed 45 calendar days, counted from the date of notification.

If the Principal Investigator does not give a reply or if this reply is unsatisfactory, the accountability will be rejected, being forced to return the resources corresponding to the expenses not made, rejected or not accounted for, thus allowing the Undersecretariat to the anticipated termination of the subscribed agreement and/or temporarily or permanently stop the transfers, according to the decision of the MSI Executive Secretariat.

18. MODIFICATIONS TO THE PROJECT

Based on the follow up of the Project, the analysis and the assessment of the annual scientific technical reports and of the monthly investment report and any other information available, the Undersecretariat through the Executive Secretariat will be entitled to suggest to the Principal Investigator the introduction of modifications to the activities of the Project, as long as neither the nature nor the maximum amount of the public resources involved in this Project are modified.

Likewise, on the basis of partial results obtained during the development of the Project, the Principal Investigator will be entitled to propose to the Undersecretariat modifications to the activities of the

Project considered to contribute to the improvement of the objectives of the Project, and which do not modify the nature or the maximum amount of the public resources involved.

The Principal Investigator will be entitled to request in writing the incorporation or replacement of the Host Institution(s) or an Associate Researcher to the Undersecretariat through the Executive Secretariat. The Undersecretariat will resolve, establishing the conditions for the incorporation or replacement, within 20 working days.

Any amendment to the Project will be approved with the corresponding Administrative Action.

19. CHANGE OF THE PRINCIPAL AND/OR DEPUTY INVESTIGATOR DURING THE PROJECT'S EXECUTION

In cases of absence or temporary impairment of the Principal Investigator, the Deputy Responsible Investigator will be immediately appointed as Principal Investigator.

In duly justified cases, the Principal Investigator will be entitled to request in writing to the Undersecretariat through the Executive Secretariat, to change the position he/she holds within the Project and/or to change the Deputy Principal Investigator for another person who complies with the requirements to be appointed in such position. The issue shall be submitted to the consideration of the Board of Directors and taking into account their opinion, the Undersecretariat through the Executive Secretariat will have 20 working days to reply to this request.

In case of death, permanent impairment or resignation of the Principal Investigator, within a 60 working days period from the moment of becoming aware of the fact, the Undersecretariat should confirm the status as Principal Investigator of the Deputy Principal Investigator, or appoint another researcher who can fulfill similar requirements to the ones demanded from the Principal Investigator, all this with the previous recommendation by the Program Committee.

20. ANTICIPATED TERMINATION OF THE AGREEMENT

The parties will be entitled to the anticipated termination of the agreement if the Principal Investigator, together with the team of Associate Researchers obtains funding for a new Project with greater projection and magnitude as a science entity and which implies obtaining legal status. In this case, unused resources up to the anticipated termination date shall be reimbursed to the Undersecretariat within 20 working days from the approval of the anticipated termination by the Undersecretariat.

Also, the Undersecretariat will be entitled to anticipated termination of this agreement at the request of the MSI Executive Secretariat due fortuitous, force majeure or survival cause not attributable to the Principal Investigator of the Nucleus or to the Host Institution(s), restraining the Project development.

In this case, the Principal Investigator of the Nucleus shall restore any balance unused, not accounted for or observed from the resources the MSI Program has transferred him, within a 30 working days period as from the Undersecretariat's notice through registered letter of the anticipated termination of the Project.

If the anticipated termination the Nucleus was caused by culpable breach of the obligations assumed Principal Investigator of the Nucleus or the Host Institution(s), the Undersecretary, with a previous report from the MSI Executive Secretariat will be entitled to reasonably resolve the restoration of the total or partial amount, as determined, of the resources received duly readjusted. The readjustment will be equivalent to the Consumer Price Index variation verified between the date when resources were received and the date of their restoration.

In the event the total restoration of the aforesaid resources is not made within a 30 working days period, counted as from the date of notice of the Agreement termination, the Undersecretariat shall make effective the guarantees established.

The Undersecretariat, at the proposal of the Program Executive Director shall terminate in anticipation the Agreement in case of serious non-compliance of its obligations by the Principal Investigator and/or the Host Institution(s).

The following shall be considered as serious non-compliances of the agreement:

- a. Unjustified delay of over 10 working days in the delivery of reports indicated on number 17.1 of these bases.
- b. Unjustified delay of over 10 working days in the delivery of reports indicated on number 17.2 of these bases.
- c. Unjustified non-compliance by the Principal Investigator with the duties indicated in number 14.1 of these bases.
- d. Unjustified non-compliance by the Principal Investigator with the duties indicated in number 14.2 of these bases.
- e. Unjustified non-compliance by Host Institution(s) with the duties indicated in number 15 of these bases.
- f. Unjustified non-compliance by the Principal Investigator with the duties indicated in number 14.1.7 of these bases.

21. JURISDICTION

The parties set their domicile in Santiago city and district, consequently any controversy that may arise as regards the interpretation of this Agreement during its execution shall be solved by the Ordinary Courts of Justice of the Republic of Chile.

22. VALIDITY AND FORCE OF THE AGREEMENT

The Agreement shall be valid as from the completion of the entire processing of its approval Administrative Action, and it shall have a validity of 44-month, and within such period the Undersecretariat, through the MSI Executive Secretariat, shall make a pronouncement on the science technical reports and the last investment report which will be made through an closing document sent by the Department of Administration of the Undersecretariat.