



**Millennium
Science
Initiative**

ANNUAL REPORT

PEER REVIEWERS' EVALUATION FORM

2022

EVALUATION FORM

CENTER DIRECTOR'S LAST NAME	Connelly
NAME OF THE INSTITUTE OR NUCLEUS	Millennium Institute Center for Genome Regulation
PERIOD EVALUATED	2022

INSTRUCTIONS

After reading the report, please evaluate each section using the following grading scale:

- **Outstanding**
- **Very Good**
- **Good**
- **Fair but requires important improvements**
- **Noncompetitive**

Include brief comments for each criterion and fill-in only the spaces in **light blue**.

COMPONENT 1: ADVANCED SCIENTIFIC/TECHNOLOGICAL RESEARCH**COMPONENT EVALUATION GUIDELINES**

Evaluate the scientific, technical, and methodological achievements of the center, in terms of the academic excellence or impact of the work developed as well as its quantity or productivity. Assess the level of fulfillment of the goals established during the center's existence, expressed through verifiable products, such as: scientific publications in high impact indexed journals or other relevant works that reflect the research and/or development with national and international recognition, either by its quality, productivity and/or leadership in its area of expertise. The following aspects should also be considered and positively valued:

- Multi, transdisciplinary and associative work among Associate Researchers and other participants of the Institute or Nucleus.
- Results and impact of products obtained in terms of relevance for the country and the world or the delivery of some other type of contribution to society.

If applicable, consider the center's plans in terms of the capacity to carry-out the research successfully and with high standards of scientific quality, as well as to generate relevant scientific works and excellence in the area of work. In particular, consider the work plan approach, the team formed to deal with it, and the coherence of them with respect to the objectives and goals. Also consider on that the organizational structure and integrated management capacity of the Institute or Nucleus

GRADE: *Very Good*

SUB-COMPONENT 1.1: Evaluate the **coherence** between the central objectives of the center and its direction, actions, and methodologies.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The scientists at the center are diligently working on the three major objectives

RL1: Functional genomics of adaptation and convergent evolution

RL2: Interaction networks that govern genome structure in communities of organisms

RL3: Genomics for conservation, ecosystem health and sustainable food production

They have displayed a good publication record and also formed a good collaborative network. The director should also encourage his team for intellectual property and applied aspects from the project.

SUB-COMPONENT 1.2: Comment on the **advances in the Center's research lines**, and of the Center as a whole (*achievements, impact, cutting-edge research, and others*).

COMMENTS: The research lines (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The summary of the scientific activity of the MI CGR has carried out on the three main research lines:

RL1: Functional genomics of adaptation and convergent evolution

With this research line the center aim to understand the molecular and evolutionary basis that govern animal plant-microbiome-abiotic interactions in extreme environments by analyzing existing whole-genome sequence data to identify genes involved in tolerance to extreme conditions.

RL2: Interaction networks that govern genome structure in communities of organisms

Sophisticated data analysis, mathematical modeling and systems biology have been used to make descriptions of unique ecological niches. By adding functional and causal elements, the team aims to understand how networks of organisms are influenced by environmental change.

RL3: Genomics for conservation, ecosystem health and sustainable food production

Conservation action plans are often considered at the species-level. Through genomics, they are trying to provide a more accurate estimation of biodiversity and detect SNPs involved in local adaptation to specific environmental conditions, which can be incorporated into species distribution models under scenarios of climate change.

The institute has made significant advancements on all the three mentioned research lines.

SUB-COMPONENT 1.3: Comment on the **collaborative and interdisciplinary work** between the Center's researchers. In particular, evaluate the collaboration between researchers from different research lines at the Center.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The scientists at the center are part of five formal collaborative networks that allow room for mutual contributions, shared goals, and complimentary lines of research:

- 1000 Genomes Project Chile
- Genome sequencing consortium for the SARS-CoV-2 virus
- Earth Biogenome Project
- Mission Microbiomes
- SymbioDiversity - Associated team France-Chile

Other Collaborative Networks:

The Center for Mathematical Modeling (CMM)

Millennium Institute Biodiversity of Antarctic and Subantarctic Ecosystems (MI BASE)

The publication record clearly shows the collaborative scientific output of the group,

SUB-COMPONENT 1.4: Evaluate the **Center's productivity** taking into account the following parameters:

- Publications (*level and quantity (by subject) and their possible impact; ISI publications or equivalent, Scopus or equivalent, SCIELO or equivalent (depending on the discipline) and other publications such as books or book chapters.*)
- Presentations at Congresses/Seminars and others
- Innovation and intellectual property resulting from the research.
- Researchers participating in ISI journal editorial committees or equivalent.
- Resources and funds obtained from the private sector
- Scientific awards
- Others relevant in your discipline

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

During the reported period (1 July to 31 December 2022), the scientists at the center published 40 research articles in peer-reviewed journals, of which 26 (63%) were in Q1 journals and 11 (27%) were in Q2. The Associate Researchers published 24 of these research articles, while other researchers (Adjuncts and Postdocs) published 16 articles. Among the 26 articles published by our Associate Researchers, Seven (18%) were collaborative works with other MI CGR researchers, four publications (10%) were

co-authored by students, and two of those publications were led by students of the MI CGR.

The team at of experienced and young researchers have delivered more than 30 oral and poster presentaions at the National and International level.

No patent and intellectual property have been generated for the reported period.

Three of the Associate Researchers participate on the editorial boards of five scientific journals, all of which are ISI/WOS or Similar a ISI/WOS standard.

No private funding has been reported.

No awards have been reported.

COMPONENT 1 FINAL COMMENTS: Enter general comments and/or suggestions to the Center regarding **Component 1: Advanced scientific/technological research.**

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The center is moving on the right track and the group has made significant advancements on all three objectives. The group has shown excellent publication records and also helped in generating trained human resources. The scientist should now also focus on the application part and generation of intellectual property.

COMPONENT 2: TRAINING OF YOUNG RESEARCHERS

COMPONENT EVALUATION GUIDELINES

This section should be evaluated considering the Center's achievements in the training of young scientists and advanced human capital as well as the plans implemented for the development (or leadership) of research lines by young researchers. In terms of advanced human capital, the number of postgraduate and undergraduate students in training and graduates, as well as the number of postdoctoral participants in the work of the Institute or Nucleus should be considered.

Also, consider the plans and potential for the training of young scientists and advancing human capital. Evaluate the plans for the development of lines of investigation led by young researchers. The strategy to formally incorporate them into this, or any other institution, should also be assessed. In terms of advancing human capital, consider the number of undergraduate and graduate students in training, as well as the number of postdoctoral researchers expected to work for the Institute or Nucleus. Plans with gender equity, should be positive considered.

GRADE: Very Good

SUB-COMPONENT 2.1: Comment on the **Center's students**, considering the following:

- Quantity and quality of students (*undergraduate, MSc, PhD*) and of postdocs with tutors belonging to the Center.
- Number of young people graduated during the period.
- Gender representation among the students

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The MI CGR hosted 63 students: 40 doctoral students, seven master's students, and 16 undergraduate students, as well as 20 postdoctoral researchers. Two students completed their PhD theses and have gone on to continue work in academic research either as postdocs or technicians within the MI CGR. Gender Equality has been taken care of.

SUB-COMPONENT 2.2: Evaluate the **number/type/quality of the publications** of the associate, junior or senior researchers, that are coauthored by Center's students.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The publication record is very good and the publications have surely added to the scientific knowledge. More than 40 publications have been reported in the project that are published in journal of international repute.

SUB-COMPONENT 2.3: Insert comments regarding the participation of the Center (*or of the Center's researchers*) in **formal training programs**, at different levels, for young scientist.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

There is no mention of formal training programs in the submitted report, however, the collaborative projects and research being carried at the centre give great opportunity for the scholars to gain insights into the scientific world.

COMPONENT 2 FINAL COMMENTS: Enter general comments and/or suggestions to the Center regarding **Component 2: Training of young researchers.**

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

Overall the center is doing well in the generation of good human resources.

COMPONENT 3: NETWORKING

COMPONENT EVALUATION GUIDELINES

Assess this component taking into consideration the achievements and plans in the development of **networking and fundraising activities**. In particular, consider the following:

- Develop and strengthening of networks. Work between scientists from the Center and researchers from other institutions, both national and foreign, on equal terms (*i.e. a relation based not only on providing students to other institutions*).
- The search for and acquisition of complementary financing sources, whether public or private.

GRADE: Very Good

SUB-COMPONENT 3.1: Comment on the participation of the Center's research teams in **formal national and/or international networks**, already established or in the process of being established. Evaluate their quantity, quality and if they involve additional funding for the research lines.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

From July to December 2022, the MI CGR strengthened its collaborative networks, both in Chile and abroad. They are a part of five formal collaborative networks and two additional networks with which we seek to collaborate in joint research projects, data analysis, publications, as well as outreach and science communication. They also launched the MI CGRs new website and hosted two "Interactomics" seminars with international speakers. These seminars are open to the public and by using a hybrid format (*i.e. attendees can come in person or attend via videoconference*), we can reach a wide and diverse audience both within Chile and internationally.

The researchers also participated in interviews, wrote articles for non-academic publications, and strengthened collaborative links with the private sector and industry. The RL3 lends itself particularly well for collaborations with the agriculture and aquiculture sectors.

SUB-COMPONENT 3.2: Appraise the **relevance, projection and achievements of the networks** established, or in the process of being established, by the Center.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

Several outstanding achievements should be highlighted, mainly:

- a) The creation of collaborative networks among the center's researchers to carry out specific and interdisciplinary research projects. These collaborative networks originated during the first scientific meeting of the MI CGR researchers in Quintay in November 2022.
- b) The center has been mentoring many students - 63 in total among undergraduate, Masters and PhD students - who are carrying out research projects in all three of our research lines. Mentoring students allows researchers to develop and share the talent, skill, and expertise that they have acquired throughout their professional careers.
- c) The researchers at the center have published 40 research articles in peer-reviewed journals.
- d) The center has hosted two Interactomics Seminars, which are open to both academics and the general public and have allowed international researchers to strengthen their collaborations in Chile.

SUB-COMPONENT 3.3: Comment on the participation of the Center in **other collaborative activities**. Evaluate their quantity, quality, and achievements.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The MI CGR has developed partnerships and collaborations with other research organizations and institutions listed below:

- **The Center for Mathematical Modeling (CMM)**
- **Millennium Institute Biodiversity of Antarctic and Subantarctic Ecosystems (MI BASE)**

As mentioned both are premier institutions working in sciences and mathematics. These will surely increase the scientific output of the MI CGR. The collaborative network is excellent

COMPONENT 3 FINAL COMMENTS: Enter general comments and/or suggestions to the Center regarding **Component 3: Networks**.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The Institution has developed good collaborative network and has made satisfactory progress.

COMPONENT # 4: OUTREACH

COMPONENT EVALUATION GUIDELINES

Comment on the achievements, and proposed plans, for the Center's **technological and knowledge transfer, scientific diffusion, and outreach**. Although you may not have a detailed understanding of the context or of the Chilean culture, consider the Center's outreach strategy in terms of the coherence between it and the objectives set by the Center. If possible, refer to the pertinence of the applied methodologies. Plans that have an innovative and high impact profile should be highly valued.

GRADE: Outstanding

SUB-COMPONENT 4.1: Comment on the **outreach activities** carried out by the Center. Albeit you may not have a detailed understanding of the context or culture, give your opinion regarding the quantity, quality, relevance, projection, and achievements of these outreach activities.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The researchers have communicated part of the work that they do at the MI CGR to academic and non-academic audiences through interviews, round tables, and other for a. The director has participated in TXPLUS rockstars program. The team has participated in round table meetings, conferences, workshops, seminars, symposiums and lecture series at different levels. The number of events covered are adequate. The participation ensures the propagation of the work done by the MI CGR to normal people and the community.

SUB-COMPONENT 4.2: Taking into consideration the connections with the **productive and service sectors** (*public or private*), **education sector, and with the community in general**, comment on: joint ventures, development projects and other similar initiatives. Assess quantity, quality, relevance, projection, and achievements of these connections.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

One of the Associate Researcher Ariel Orellana participated in the round table discussion at Fruittrade. where he and other experts proposed novel solutions to the new challenges posed by climate change in the Chilean fruit sector.

The team members has also focussed on initiatives concerning the challenges faced by women in science and technology.

Overall in addition to academic outreach the team has focussed on social welfare on the community as well.

COMPONENT 4 FINAL COMMENTS: Enter general comments and/or suggestions to the Center regarding **Component 4: Outreach**.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

Excellent measures have been taken to propagate scientific and societal topics in the community with adequate representation by the team members of MI CGR at different levels.

General Comments

Finally, enter general comments, suggestions, and recommendations about this Millennium Center.

Weaknesses: (detailed explanation required; no character limit)

No intellectual property right has been generated as of now: The director should also motivate the team to look for an application part in the project, which will truly merit the center.

Strengths: (detailed explanation required; no character limit)

1. The team is working on all the mentioned objectives.
2. Good publication record.
3. The center is participating in around 5 collaborative networks.
4. Around 60 scholars are working and gaining knowledge on different aspects.

Final comments: (detailed explanation required; no character limit)

The center is working well on all the proposed objectives and has good publication, scientific outreach and Education and Capacity Building. The center should be continuously supported. The team should work on generating patents for technology in the coming years.



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ANNUAL REPORT

PEER REVIEWERS' EVALUATION FORM

2022

EVALUATION FORM

CENTER DIRECTOR'S LAST NAME	Miguel L. Allende Connelly
NAME OF THE INSTITUTE OR NUCLEUS	Millennium Institute Center for Genome Regulation
PERIOD EVALUATED	2022

INSTRUCTIONS

After reading the report, please evaluate each section using the following grading scale:

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- **Very Good**
- **Good**
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COMPONENT 1: ADVANCED SCIENTIFIC/TECHNOLOGICAL RESEARCH

COMPONENT EVALUATION GUIDELINES

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If applicable, consider the center's plans in terms of the capacity to carry-out the research successfully and with high standards of scientific quality, as well as to generate relevant scientific works and excellence in the area of work. In particular, consider the work plan approach, the team formed to deal with it, and the coherence of them with respect to the objectives and goals. Also consider on that the organizational structure and integrated management capacity of the Institute or Nucleus

GRADE: **Outstanding** with respect to scientific quality, productivity and impact
and **Very good** with respect to creating added value

SUB-COMPONENT 1.1: Evaluate the **coherence** between the central objectives of the center and its direction, actions, and methodologies.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

Overall, the Center is doing really fine, considering that the report is about its first year. Nevertheless, there is room for improvement and one would expect that this will take place now after getting the Center set-up and running.

The coherence in the objectives of the Center is reasonable, which is not surprising since it seems to be partly based on activities of an earlier CGR activity in Chile. As one would expect, however, coherence and overall aligned direction of the groups involved in the Center could and should still be improved. Much of the work should be aligned a bit more and directed toward working at different aspects of a common theme across the different activities.

One option and certainly a very important topic – given the regional differences across Chile from north to south and considering the aspect of global warming – could be temperature, which already is a central topic of some of the Center's activities. Much of the ongoing activities could be adapted or modified so as to contribute even more to this common theme and in a more concise manner, producing more added value, as one would expect from a Millennium Center. Such direction of ongoing activities toward a collaborative effort around a main theme objective has not yet been achieved to an extent that one could expect. The Center's activities do not need to be a one-pronged effort focusing on one topic only, but contributions of the individual projects to a common theme should be clearly visible.

The Center should discuss further of how to define a common theme and align the various activities toward it. For example, the work on otters has clearly its value, but one wonders how it will contribute over a funding period of 10 years. Only with aligning its great science toward a common objective (or several related ones) the Center will meet its full potential and create its full impact, being more than funding provided to individual scientific groups.

SUB-COMPONENT 1.2: Comment on the **advances in the Center's research lines**, and of the Center as a whole (*achievements, impact, cutting-edge research, and others*).

COMMENTS: The research lines (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The scientific advances of the Center and its impact are great considering that the report is about its first year. In the report there is little information about how this will extend into the future. While the track record implies a successful continuation of scientific and in consequence societally important output, better definition of a thematic direction would be useful and improve productivity and impact even further.

SUB-COMPONENT 1.3: Comment on the **collaborative and interdisciplinary work** between the Center's researchers. In particular, evaluate the collaboration between researchers from different research lines at the Center.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

There is a substantial number of publications that are authored by scientists of more than one group, clearly indicating the good collaborative nature of MI CGR. This has to be applauded!

Nevertheless, the Center should aim at more collaboration and interaction

between groups and therefore an even higher percentage of publications authored by more than one group. Focusing more on a common theme would certainly be one factor that could drive such a process forward.

SUB-COMPONENT 1.4: Evaluate the **Center's productivity** taking into account the following parameters:

- Publications (*level and quantity (by subject) and their possible impact; ISI publications or equivalent, Scopus or equivalent, SCIELO or equivalent (depending on the discipline) and other publications such as books or book chapters.*)
- Presentations at Congresses/Seminars and others
- Innovation and intellectual property resulting from the research.
- Researchers participating in ISI journal editorial committees or equivalent.
- Resources and funds obtained from the private sector
- Scientific awards
- Others relevant in your discipline

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The Center's scientists have been very productive indeed. This clearly indicates the value of MI CGR. They have published very well both in numbers and the achieved impact.

The current, very good level should be the benchmark on which future work should orient itself. Not always will it possible to publish at an impact the work would deserve, since ever so often also luck, connections and fashion are involved in how one could publish interesting results. However, the Center's scientists should continue aiming high, as they already do.

One wonders a bit about patenting. Given that the Center has interactions with companies and industry, one would expect that this aspect is on the scientists' mind. Not always is interesting work patentable and even if, it does not always make sense to pursue a patent. However, the scientists should keep patenting in mind and go for it, when a result shows promise. This does not mean that the Center itself has to do the patenting. They could pass on the information to an industrial partner who is then going for it. However, the Center should get a fair share of any potential revenues.

COMPONENT 1 FINAL COMMENTS: Enter general comments and/or suggestions to the Center regarding **Component 1: Advanced scientific/technological research**.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

Overall, science and the productivity are at a very high level. Therefore, the Center is doing fine. This path could be improved further still by focusing the various projects more in terms of contributing different kinds and forms of information around a common theme. One suggestion could be “temperature”, but it is clearly up the Center’s scientists to decide of how they would orient their research.

COMPONENT 2: TRAINING OF YOUNG RESEARCHERS

COMPONENT EVALUATION GUIDELINES

This section should be evaluated considering the Center's achievements in the training of young scientists and advanced human capital as well as the plans implemented for the development (or leadership) of research lines by young researchers. In terms of advanced human capital, the number of postgraduate and undergraduate students in training and graduates, as well as the number of postdoctoral participants in the work of the Institute or Nucleus should be considered.

Also, consider the plans and potential for the training of young scientists and advancing human capital. Evaluate the plans for the development of lines of investigation led by young researchers. The strategy to formally incorporate them into this, or any other institution, should also be assessed. In terms of advancing human capital, consider the number of undergraduate and graduate students in training, as well as the number of postdoctoral researchers expected to work for the Institute or Nucleus. Plans with gender equity, should be positive considered.

GRADE: Very good

SUB-COMPONENT 2.1: Comment on the Center's students, considering the following:

- Quantity and quality of students (*undergraduate, MSc, PhD*) and of postdocs with tutors belonging to the Center.
- Number of young people graduated during the period.
- Gender representation among the students

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The Center does a good job concerning student education and training. Numbers are high and students are involved in various activities and areas of expertise. Also, a high percentage of the students are women.

One question that arises, however, concerns the low number of merely two PhD students completing their thesis, apparently. Given the large number of PhD students (40) overall, one would expect more of them finishing within a given year. As a matter of course, there can be large variations in this number between years. One would expect this number to increase substantially in the years to come, however.

Another point that should be discussed by the researchers of the Center or associated to it is the distribution of the students. There are some groups, in

which there are many students, and there are other groups, in which there is not a single one. While it is difficult to assess the reasons for this, one would expect that the Center is aiming at and active in providing education and training across its participant institutions and groups.

SUB-COMPONENT 2.2: Evaluate the **number/type/quality of the publications** of the associate, junior or senior researchers that are coauthored by Center's students.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

A point that should be discussed within the Center concerns the number of students, who are authors on publications. If "students" in annex 3 of the report includes PhD students, the number of five students out of 40 being co-authors would be small. According to the summary table on page 11, it is even only three. Given the number of PhD students, this should improve.

SUB-COMPONENT 2.3: Insert comments regarding the participation of the Center (*or of the Center's researchers*) in **formal training programs**, at different levels, for young scientist.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

Going along with the distribution of students, there are several PIs who do not participate in training, apparently. Again, the reasons for this are difficult to assess on the basis of the provided information. One would expect this to improve, however. As a network of excellence, the Center should aim at strengthening also this part across its participants.

COMPONENT 2 FINAL COMMENTS: Enter general comments and/or suggestions to the Center regarding **Component 2: Training of young researchers**.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

In principle, training seems to be fine. However, the points raised in the paragraphs above should be considered by the Center and appropriate actions should be taken in order to improve the training aspect further.

COMPONENT 3: NETWORKING

COMPONENT EVALUATION GUIDELINES

Assess this component taking into consideration the achievements and plans in the development of **networking and fundraising activities**. In particular, consider the following:

- Develop and strengthening of networks. Work between scientists from the Center and researchers from other institutions, both national and foreign, on equal terms (*i.e. a relation based not only on providing students to other institutions*).
- The search for and acquisition of complementary financing sources, whether public or private.

GRADE: Outstanding

SUB-COMPONENT 3.1: Comment on the participation of the Center's research teams in **formal national and/or international networks**, already established or in the process of being established. Evaluate their quantity, quality and if they involve additional funding for the research lines.

COMMENTS:

Participation in national and international networks is excellent. They fit to the projects pursued in the Center and will contribute to their success. From the good track record one can expect that interaction will become even better, once the Center has found its way entirely.

SUB-COMPONENT 3.2: Appraise the **relevance, projection and achievements of the networks** established, or in the process of being established, by the Center.

COMMENTS:

This is not an accidental repetition of the text from above. Copy-pasting was done intentionally.

Participation in national and international networks is excellent. They fit to the projects pursued in the Center and will contribute to their success. From the good track record one can expect that interaction will become even better, once the Center has found its way entirely.

SUB-COMPONENT 3.3: Comment on the participation of the Center in **other collaborative activities**. Evaluate their quantity, quality, and achievements.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

Also the other interactions are fine. One would hope, however, that particularly the interaction with industry will become stronger. Pro-active activities of the Center should be taken to improve or form new connections between the Center and companies with related interests.

COMPONENT 3 FINAL COMMENTS: Enter general comments and/or suggestions to the Center regarding **Component 3: Networks**.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The MI CGR is doing fine with interaction nationally and internationally. It should seek to strengthen this further on the basis of the existing interactions.

COMPONENT # 4: OUTREACH

COMPONENT EVALUATION GUIDELINES

Comment on the achievements, and proposed plans, for the Center's **technological and knowledge transfer, scientific diffusion, and outreach**. Although you may not have a detailed understanding of the context or of the Chilean culture, consider the Center's outreach strategy in terms of the coherence between it and the objectives set by the Center. If possible, refer to the pertinence of the applied methodologies. Plans that have an innovative and high impact profile should be highly valued.

GRADE: Very good

SUB-COMPONENT 4.1: Comment on the **outreach activities** carried out by the Center. Albeit you may not have a detailed understanding of the context or culture, give your opinion regarding the quantity, quality, relevance, projection, and achievements of these outreach activities.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

The outreach activities are fine, considering that it is a report about the first year. However, outreach is carried mostly by few people of the Center. While there will always be people who are better at this than others and/or better placed to communicate beyond science, the Center should try to get more participants involved in this. Activities should be across the country and in various forms, whatever is possible at the different sites.

SUB-COMPONENT 4.2: Taking into consideration the connections with the **productive and service sectors (public or private), education sector, and with the community in general**, comment on: joint ventures, development projects and other similar initiatives. Assess quantity, quality, relevance, projection, and achievements of these connections.

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

This aspect takes time to develop. One would ask the Center to be more proactive in seeking new interactions and to broaden the basis, with more

participants becoming involved in this. Even a small activity somewhere in a provincial institution could make a difference, if appropriate action is taken.

COMPONENT 4 FINAL COMMENTS: Enter general comments and/or suggestions to the Center regarding **Component 4: Outreach.**

COMMENTS: (enter any type of pertinent comment you may have; try to be as detailed as possible; no character limit)

Outreach is fine, considering the novelty of the Center. More and broader activity in this is expected, however.

General Comments

Finally, enter general comments, suggestions, and recommendations about this Millennium Center.

Weaknesses: (detailed explanation required; no character limit)

There are no real weaknesses. Nevertheless, there is room for improvement at various levels as outlined in detail in the above paragraphs. One would expect that the Center will be active to go along these lines and become a better and more close group of scientists with a common goal.

Strengths: (detailed explanation required; no character limit)

The center is a very good partnership with a sound basis. There are differences in the performance of individual participants, as one would expect, in all areas looked at in the evaluation. They will not disappear because of the Center, but it should be one of the central objectives of the Center to make the excellent basis wider and the interaction broader.

Final comments: (detailed explanation required; no character limit)

An excellent activity !

With several years to go, it could still improve on the current sound basis in all areas. One would expect this to happen during the entire course of the funding period, of course. However, many improvements should be visible after 2,5 years already, which is about half through the initial funding period of five years.

