

THE ICELANDIC RESEARCH FUND

Rules and guidelines for the grant year 2009

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1. Foreword by the Chairman of the Board of the Icelandic Research Fund

Applications for grants from the Icelandic Research Fund of the Science and Technology Policy Council have been advertised for the sixth time. The State Budget for 2008 specifies the intention of the government to almost double the appropriation to the Icelandic Research Fund during the period 2008-2011. Such increased appropriations will give the Fund's Board the opportunity to considerably increase its grants during the next grant period, thus meeting the urgent needs of our scientists for larger grants, most significantly a 67% increase to Grants of Excellence, each of which may increase to ISK 25 million per year for three years. Project Grants will also be increased by 30%, to a level of ISK 20 million for three years.

The Public Support for Scientific Research Act, No. 3/2003, states the grant policy and the allocation policy of the Icelandic Research Fund:

“The Science Committee of the Science and Technology Policy Council shall define the policy of the Icelandic Research Fund and Equipment Fund on allocations. The Board of the Icelandic Research Fund shall publish rules on applications, the method of processing and allocation of funds no later than six weeks prior to the deadline for application. They must specify the application criteria and the priorities of the Science and Technology Policy Council.”

The Funding Policy of the Icelandic Research Fund is to be found following the Guidelines in this document. The Fund's Guidelines are reviewed annually, and I would like to draw the applicants' attention to some important changes. The Board of the Icelandic Research Fund has decided that all applications and attachments shall be in English, barring exceptional circumstances. The Icelandic science community is small and it is therefore important to have the opportunity to, when applicable, submit the applications for evaluation abroad so as to ensure expert appraisals. As Icelandic scientists in all fields publish their results at an international level, the Fund's Board is confident that this requirement will meet with understanding while emphasizing that the applicants can be granted permission to submit their applications in Icelandic providing that the publication in their field is limited to the domestic venue.

It is also important to call the applicants' attention to the fact that the requirement of matching contributions has been lowered from 50% to 15%, while at the same time the Fund's Board has decided that overhead and facilities will not be accepted as part of the total cost of projects. The requirement of 50% matching contributions has imposed unnecessary restrictions on larger research teams, and the Board is of the opinion that this change will offer scientists more latitude. The recipients of Postdoctoral Grants will now be given the opportunity to apply for ISK 500,000 to meet operational expenses during the first year of each project.

The applicants to the Icelandic Research Fund are advised that they are also allowed to apply for a grant from the Equipment Fund for research instruments necessary for the project. The application period is the same, or October 1. The next general application deadline for the Equipment Fund will be February 1 2009.

A robust competitive fund is the best tool available to the authorities to invigorate the

Icelandic scientific community, and the Fund's Board is certain that a revitalised Icelandic Research Fund will in coming years be even better prepared to meet the ever-changing needs of our scientists.

Guðrún Nordal, professor
Chairman of the Board of the Icelandic Research Fund

2. The Board of the Icelandic Research Fund

The Board of the Icelandic Research Fund (IRF) is appointed by the Minister of Education for a period of three years following nominations by the Science Committee of the Science and Technology Policy Council. The Chairman of the Science Committee is also the Chairman of the Board. During the period 2006-2009 the Board consists of the following individuals:

Full members	Alternates
Dr. Guðrún Nordal, professor, University of Iceland, Chairman	Dr. Allyson Macdonald, professor, University of Iceland
Dr. Alda Möller, Seafood Industry Consultant	Dr. Jakob K. Kristjánsson, Arkea Technology Park
Dr. Unnur Thorsteinsdóttir, DeCode Genetics	Dr. Magnús Gottfreðsson, Landspítali University Hospital
Dr. Ólafur Arnalds, professor, Agricultural University of Iceland	Bryndís Brandsdóttir, M.Sc., Science Institute – University of Iceland
Dr. Bjarki A. Brynjarsson, Askar Capital Ltd.	Dr. Hannes Jónsson, professor, University of

Under Art. 3 of the Public Support for Scientific Research Act, No. 3/2003, the Fund's Board issues rules and guidelines for applications, evaluation process and funding allocation. The rules are as follows along with instructions on the preparation of applications and the IRF's grant allocation policy that has been approved by the Science Committee of the Science and Technology Policy Council.

3. Application deadlines, types of grants

The IRF allocates three types of grants with the application deadline October 1 2008:

- Grants of Excellence
- Project Grants
- Postdoctoral Grants

In addition, the Fund allocates several smaller grants, i.e.:

- Preparatory grants
- Patent application grants
- Dissemination grants
- Grants for preparation of international grant applications

Applications for those grants will be accepted with three application deadlines each year: April 1, August 15, and November 1.

Special application forms will be issued for each type of grant. The forms can be found on the RANNÍS home page, www.rannis.is/sjodir/rannsoknasjodur.

4. Eligibility rules for applications for Grants of Excellence, Project Grants and Postdoctoral Grants

The role of the IRF is to support scientific research in Iceland. For this purpose the Fund supports specific research projects of individuals, research teams, universities,

research institutes, and companies.¹

Principal Investigators (PI's) must have completed their studies at recognized universities and have research experience. When a research grant is applied for as part of research studies, the academic instructor shall be responsible for the project management.

The same individual can apply for more than one grant as principal investigator. However, the IRF will only provide one grant for each project.

5. Grants of Excellence

Grants of Excellence are intended for extensive projects which are likely to carry Icelandic research to the forefront at the international level. The principal investigator, and other main applicants, shall have acquired recognized experience in research and the management of large research projects. Projects of excellence shall have clear goals and well-defined milestones. The application shall clearly define the expectations for the gains and the impact of the project.

The following points weigh heavily in the evaluation of the applications for Grants of Excellence and need to be specifically addressed in the application.

- The management of the project shall be the responsibility of a scientist with a recognized scientific background, leadership qualities and experience in the management of research projects.
- Co-operation of a highly qualified team of scientists.
- The contribution of master's degree and doctoral students.
- Co-operation with foreign research teams and scientists.
- Matching contributions of institutions or companies undertaking the research.

Grants of Excellence are funded for up to three years, a maximum of ISK 25 million per year. The grant from the IRF can fund up to 85% of the total project cost less the cost for overhead and facilities. Please note that overhead and facilities will no longer be considered as matching contributions to the project cost.

Grants of Excellence can serve as matching contributions or additional financing for large projects supported by foreign competition funds.

Projections of maximum grants from the IRF depend on planned increases in the appropriations to the Fund in 2009. The IRF reserves the right to review the rules on funding levels should changes be made to these plans.

6. Project Grants

Project Grants are funded for one, two or three years. The grant level can total up to ISK 20 million for a three-year project, ISK 13 million for a two-year project, and ISK 6.5 million for a one-year project. A fairly even distribution is expected from one year

¹ Art. 2 of the Public Support for Scientific Research Act, No. 3/2003.

to the next. The grant provided by the IRF amounts to a total of 85% of the total project cost less the cost for overhead and facilities. Please note that overhead and facilities will no longer be considered as matching contributions to the project cost.

Each project shall have clear objectives and well-defined milestones. The projected cost should be justified; the expenditure of the grant defined, and it should be stated who will carry out each part of the project. A detailed cost estimate is required, clearly explaining all parts of the project, their individual cost and financing. The application shall clearly describe the anticipated gains and impact of the project.

Projections of maximum grants from the IRF depend on planned increases in the appropriations to the Fund in 2009. The IRF reserves the right to review the rules on funding levels should changes be made to these plans.

7. Postdoctoral Grants

Postdoctoral Grants are intended for scientists who have completed their PhD (doctoral degrees) in the past 5 years and wish to establish themselves in scientific research in Iceland. The grants are allocated for up to three years.

The level of Postdoctoral Grants for the grant year 2009 is ISK 4.44 million (ISK 370,000 per month) and they are exclusively intended to pay the wages and wage-related expenses of the scientist. In addition, an application can be made for up to ISK 500,000 for the operational expenses of the project.

The postdoctoral scientist is permitted to apply for a project grant during the second and third grant year. However, the IRF will not pay any cost already covered by the Postdoctoral Grant.

The applicant for a Postdoctoral Grant must submit, along with his/her application, a letter of support, on a specific form, from his/her prospective host institution regarding wages, facilities, rights and professional environment, the expected co-operation and other relevant matters. The contribution of the host institute is taken into account in the evaluation of the application and its stated support becomes a part of the eventual grant agreement. The letter of support should be signed by a legally authorised representative of the host institute.

A request by a grantee for transfer between institutions shall be submitted to the IRF, the continuation of the grant being subject to its approval.

8. Eligible cost

Wages and wage-related costs

The applicants shall take into account general wage agreements and institutional agreements in the calculation of wages. Wage costs include wage-related costs. The rate for contracted work cannot be used as a reference in the calculation of wages. The following table shows the maximum wage costs recognized by the IRF as project cost for 2009:

Position	Maximum wages and wage-related expenses per month
Research Scholar/Scientist 1 (e.g. professor)	ISK 530,000
Research Scholar/Scientist 2 (e.g. associate or assistant professor)	ISK 425,000
Post doc	ISK 370,000
Doctoral student	ISK 265,000
Researcher	ISK 265,000
Master's degree student	ISK 210,000

Staff doing research and being dependent on project income may apply for their own wages to the IRF.

The IRF neither pays for overtime nor the wages of those who are simultaneously receiving full pay for other work.

Operational expenses

This item shall consist of the sum of all the necessary supplies for the project with the exception of items coming under overhead or facilities.

Initial expenses

Expenses of up to ISK 500,000 for the purchase of instruments and equipment may be entered as operational expenses for each year. Applications for more expensive instruments and equipment shall be submitted to the Equipment Fund.

The deadline for applying to the Equipment Fund is October 1 for instruments directly related to the projects for which applications are made to the IRF. Such applications will be processed at the same time as applications to the IRF (see further the rules for the Equipment Fund).

Travel expenses

This item consists of the sum total of travel and subsistence expenses. All travel and how it relates to the project should be justified in detail.

Contracted service

This item contains work which is not carried out by the participants in the project while being necessary for its progress.

Overhead and facilities

The IRF does not fund costs of overhead or facilities or any surcharge on wages beyond wage-related expenses (see further the Fund's allocation policy). It is no longer permitted to assign to the project any costs for overhead or facilities as matching funds, as the requirement for matching funds has been reduced accordingly.

9. Other

The IRF can, on the basis of evaluation of the application, decide to support only a part of the work packages described in the application. The IRF shall be authorized to seek other financing for specific work packages or for the project as a whole.

10. Peer review and evaluation process

Expert Panels, each consisting of seven individuals, with extensive research experience, make a professional appraisal of all new applications for grants from the IRF and submit to the IRF a report on each application (the appointment to the Expert Panels is explained on the RANNÍS home page). The Science Committee of the Science and Technology Policy Council appoints Expert Panels for the period 2007-2009. The fields are as follows:

- Engineering, technical science and empirical sciences.
- Natural science and environmental science.
- Health science and life sciences.
- Social sciences and humanities.

These four principal fields include numerous professional categories of science and technology, listed at the end of this document.

At least two specialists outside the Expert Panels evaluate each application. The Expert Panels then assess all the applications, establish a ranking list based on the expert evaluations, and finalise each application with a reasoned written report.

The Expert Panels divide the applications into five categories:

- I. Excellent
- II. Very good
- III. Good
- IV. Fair
- V. Applications containing serious procedural errors and applications outside the range of responsibilities of the IRF.

- The chairmen of the Expert Panels meet to discuss any matters of contention which may have arisen, before they finalise their reports to the IRF.
- In addition to the professional appraisals submitted by the Expert Panels, the IRF must take into consideration the allocation policy approved by the STPC, in their deliberations.
- Before the IRF makes final decisions on any grants, it shall discuss the allocation of funds in meetings with the chairmen of the Expert Panels.
- Under Art. 4 of the Act No. 3/2003 the decisions of the IRF on allocations shall not be subject to administrative complaints.
- The applicants will receive a reply and a copy of the report of the Expert Panel at the end of the allocation process.

11. Distribution of payments and progress reports

Grants are provided for up to three years providing there is satisfactory progress in the projects, and subject to appropriations to the Fund. The IRF enters its first grant agreement with the grantee within four months from the allocation, and continuation is dependent on the progress of the project.

Annual reports

By January 10 each year, an annual report shall be submitted describing the progress of the project during the previous year. It shall give an account of all important changes in the project and confirm that the research plan has been complied with. Furthermore, a cost estimate for the following grant year shall be submitted. The annual reports are assessed by the staff at RANNÍS and they make recommendations on continued support to the IRF. The IRF and the staff at RANNÍS shall be authorized to request, if necessary, further information from the grantees upon the evaluation of the annual reports. The Expert Panels will appraise the annual reports if the RANNÍS staff or the IRF considers this necessary.

The first payment of each year (40%) is made upon the signing of the grant agreement, the second payment (40%) is made on September 1, and the final payment (20%) of each year is made when the annual report, i.e. the report for the grant year in question, has been approved. When the annual report has been approved, next year's grant agreement will be sent to the principal investigators. The IRF reserves the right to agree to another division of payments in special circumstances (e.g. in the event of large projects). The grantees may also request another division of payments.

Final reports

Upon the conclusion of a project the principal investigators shall submit a final report explaining the work undertaken in the project, its final results and conclusions. The Expert Panels and the staff at RANNÍS shall appraise the final reports. The final disbursement (20% of the final year) shall be made at the close of the appraisal, unless serious reservations have been made regarding the report. The appraisal of the final report will be taken into consideration if the principal investigator applies for a grant from the Fund for new projects.

12. Applications – general instructions

Please note that specific application forms are needed for each type of grant as seen below:

1. Application – Grant of Excellence
2. Application – Project Grant
3. Application – Postdoctoral Grant

All applications and supporting documents should be in English to ensure that the applications may be submitted for evaluation abroad. Exemptions are granted when publications in the field are exclusively in Icelandic. In such cases the applicant should seek instructions from RANNÍS.

Applications and supporting documents should be delivered in two hard copies (original + one copy) and on a CD. **Incomplete applications will be rejected.** Every application should be accompanied by the following supporting documentation (use chapter headings below and separate documents):

A. Project Description

B. Curriculum Vitae (applicant's and co-applicants' names in the title)

C. Cost Justification

D. Price Quote (if equipment cost is applied for/see initial costs)

E. Declaration of the Host Institution (Postdoctoral Grants only)

Please note that no other appendices should accompany the application.

Application form instructions:

1. Principal investigator: Name of the individual responsible for the application and the execution of the project. Include a postal address that RANNÍS and the Fund should use for communications with the PI.

2. Project: The name of the project in Icelandic and English should not exceed 150 characters. Include the name of the Expert Panel. The scientific category should be consistent with the accompanying list of scientific categories of the Expert Panels listed at the end of this document. Both the number and designation of the scientific category should be stated. If the project is interdisciplinary, or if the applicant is not certain where to place the application, two Expert Panels may be specified.

3. Research facility: Please state the name and address of the legal representative of the institution where the research will be conducted. For Postdoctoral Grant applications the host institution and its legal representative should be listed.

4. Budget overview: Please state the amount (in ISK thousands) requested in the grant application to the IRF, in addition to other financing of the project. It is important that all amounts are consistent with item 11 (item 9 in the application for a Postdoctoral Grant).

5-6. Abstract in Icelandic and English: A general description of the project in Icelandic and English. Please include a brief description of the objectives, execution and value of the project. This description will be made public and shall not exceed 1,500 characters.

7. Co-applicants: Please state the names of all the applicants, other than the principal investigator, who will receive wages or other remuneration if the grant is funded. Include also anyone who will provide funding, facilities, equipment, etc., to the project. Please note that the names of master's degree and doctoral students should be stated in item 8 (except for Postdoctoral Grants).

8. Participation of master's degree or doctoral students: Please name the master's degree and doctoral projects that will be carried out in connection with the project (except for Postdoctoral Grants).

9. Project accounting (Item 7 in the application for a Postdoctoral Grant): Please name the person/company responsible for the project accounting.

10. Other projects in which the principal investigator participates (Item 8 in Postdoctoral Grant application): If the principal investigator participates in other research projects (domestic or foreign) this should be stated here, including his/her work contribution to the projects each year. There is no objection to the principal investigator taking part in more than one project.

11. Budget plan for the project period (Item 9 in the application for a Postdoctoral Grant): The applicants are required to fill in two or three simple budget tables (A, B and C). In applications for Postdoctoral Grants only two tables need to be filled in (A and B). The RANNÍS home page contains an algorithm (excel file) that connects the two tables and can be used to fill in the tables in the application form and calculate the total cost. The algorithm is provided in both Icelandic and English for applications for a Project Grant: (*Project Grant – Budget tables*) and a Postdoctoral Grant (*Postdoctoral Grant – Budget tables*) but only in English for a Grant of Excellence (*Grant of Excellence – Budget tables*).

Consistency between all the tables is important, and between them and item 4. In item 11A (9A in an application for a Postdoctoral Grant) the applicants are asked to explain the part of the project costs that they are applying for to the IRF, any matching contributions, and the total cost of the project. In general, the amount requested from the IRF may not exceed 85% of the total cost of the project. When an application is made for a Postdoctoral Grant there is no requirement made for any additional funding.

Please note that a detailed report explaining the cost should accompany the application, and the document should be marked: **Explanation of all costs.**

Further information on the handling of the costs is provided in the IRF's grant policy.

A. Budget table (table in the application form): Please explain all expenses for the project for the entire project period, equal to the amount applied for to the IRF and matching funds (other funding). The item wages (wages and wage-related expenses) applied for to the Fund need to be in accordance with the table in item B, and the matching funds shall be in accordance with the table in item C.

B. Expected breakdown of salaries (table in the application form): Please state the names of those who are to receive wages in the project, on the one hand from the grant made by the IRF, and, on the other, from other sources. This should apply to all those who are to receive wages, students and assistants, in addition to specialists. The information should be as specific as possible. If it is still not known which individuals are to receive wages (e.g. if no research students have been engaged) this should also be mentioned. It is important that this table is consistent with item 8.

C. Other or own financing of the project (table in the application form): Please explain the matching contributions, i.e. all financing other than financing by the IRF. This means grants that have already been acquired (upper part of the table), grants that are being applied for or will be applied for (lower part of the table). The table shall also state any contributions to the project by universities, institutions or companies.

12. Attached documents: The necessary supporting documents are as follows:

A. Detailed project description:

The project description should not exceed 15 pages in addition to bibliography (1.5 line spacing, 12 point Times/Times New Roman, or similar). It shall explain the following and be divided into the following sections:

- a. State of the art and proficiency.
- b. Objectives of the project and originality.
- c. Methodology, work plan and timescale.
- d. Co-operation (domestic/foreign).
- e. Contribution of doctoral and master's degree students to the project.
- f. Proposed deliverables and impact.
- g. Proposed publication of results.

The applicants make the obvious demand that the parties reviewing the application are experts in the field of science under which the application falls. In return, one of the prime premises for a high-quality appraisal is that the project has been described in detail so that the appraisal can be made on the basis of the information provided in the application. A high-quality project description will facilitate the professional appraisal of the application. The following points should be kept in mind:

- It is imperative that the project has well-defined objectives and has been divided into well-defined work packages.
- Each work package of the project should be described individually, their respective connection explained, as applicable, and the time necessary for each to be estimated.

- The main milestones in the project planning and schedule that mark the boundary between the stages in the project shall be described. In the event of a two or a three-year project, such milestones shall be defined and described for the end of the first, second and third grant year.
- The research methods used should be explained, and the reason for their use in each instance. The methodology for the gathering of information (and its scope) and the analysis of the data should be available.
- Any co-operation within the project should be explained, both between the different scientists and researchers, and whether there is active co-operation between universities, institutions and companies. International co-operation in the project should be especially explained.
- Information on which parts of the project comprise doctoral or master's degree projects, if applicable, and at which school (or department) the students are studying, and what the students' contribution in the project entails.
- Explanations and arguments should be given for the expected benefit and utilization of the results of the project. The benefit could be knowledge-related, environmental, economic, social, etc. The returns of the projects would be measurable "units" resulting from the project. Examples of returns are: published scientific articles, university diplomas, software, databases, prototypes, production methods, new products, patents, models, research methods, confirmed scientific theories, etc.
- Furthermore, it should be explained how the results would be promoted, as well as their publications in professional journals, reports, conferences, etc., and whether, and then how, the proprietary rights to the results would be protected.

The IRF would like to advise the applicants to acquire the necessary permits from the Data Protection Authority, the National Bioethics Committee and/or the Animal Testing Committee, as applicable.

B. Curriculum vitae: The curriculum vitae for the principal investigator and co-applicants shall not exceed four pages. Each CV should describe their studies and careers, in addition to a list of publications during the past 5-10 years.

C. Detailed budget and justification of costs for the duration of the project: All expenses and the financing of the project should be explained in detail. This report should be consistent with item 11 in the application. The Fund may request the annual accounts of an institution or company should this be deemed necessary. All parts of the work, their costs and financing should be clearly explained.

D. A price quote from the supplier/agent must be attached when applying for the cost of instruments and equipment.

E. Declaration from the host institution (Postdoctoral Grants only): An application for a Postdoctoral Grant should be accompanied by a declaration of the host institution on a specific form. The declaration should explain the contribution of the host institution as regards wages, facilities, rights and professional environment, expected co-operation and other relevant items. The contribution of the host institution is taken into consideration in the appraisal of

the application, and the declaration will become part of the eventual grant agreement. This declaration should be signed by a legal representative of the host institution.

13. Signatures (Item 11 in the application for a Postdoctoral Grant): The principal investigator/applicant and all the other co-applicants shall sign this along with the person responsible for the research facilities or host institution. By his/her signature the principal investigator/applicant confirms that all the information in the application is accurate and that nothing significant has been left out. By their signatures all the other participants confirm their participation and that of the universities, institutions or companies for which they are responsible fully consistent with the application and the supporting documents, including the financing of the project.

13. Funding policy of the Icelandic Research Fund

Approved by the Science Committee of the Science and Technology Policy Council in August 2008 for publication in its entirety with the Fund's rules on allocation.

The Icelandic Research Fund supports both basic research and applied research, making clear demands of scientific progress, publication and delivery of scientific conclusions. The main criteria being the publication of results and the likelihood that results will lead to the registration of patents or intellectual property rights. Research projects will be supported based on their scientific quality, the qualifications of the applicants and the research facilities, and the likelihood that the results will lead to publications, as well as their value and utilization for Icelandic society. This will ensure that comparable criteria will be used in the evaluation of grant applications, whether for basic or applied research.

The role of the Science Committee regarding the Icelandic Research Fund's grant policy is explained in Art. 8 of the Public Support for Scientific Research Act, No. 3/2003, stating:

“The Science Committee of the Science and Technology Policy Council shall define the policy of the Icelandic Research Fund and Equipment Fund on allocations. The Board of the Icelandic Research Fund shall publish rules on applications, the method of processing and allocation of funds no later than six weeks prior to the deadline for application. They must specify the application criteria and the priorities of the Science and Technology Policy Council.”

A. Priorities of the Science and Technology Policy Council

The Icelandic Research Fund is one of the most powerful public tools available to strengthen the infrastructure of the research community by providing grants to research projects on the basis of applications. The STPC's policy states: “It is important to ensure continuity² in providing research grants, ranging from basic research to innovation, in the market and to ensure an active co-operation between universities, research centres and companies. This promotes that the results will be beneficial for social and economic returns. Companies need to be more active participants in research and innovation, and market premises should be taken into account in the allocation of grants, e.g. in the financing of high-gain/high-risk research and development projects.”

Companies are encouraged to participate in, and apply for project grants from competition research funds to complement their own contributions to research, technological progress and innovation. The Board is of the opinion that projects which meet quality criteria and are carried out in active professional and financial co-operation between companies, universities and institutions should, other things being equal, be given priority for receiving grants from competition funds.

The Board recommends that the allocation policy and working practices of the

² This refers to continuity in the provision of grants from the Research Fund, the Technological Development Fund, the Venture Fund and business-related funds, e.g. the AVS R&D Fund of the Ministry of Fisheries in Iceland.

competition funds be regularly reviewed so as to harmonize and simplify public administration, increase continuity in the allocations of grants, ensure efficiency and improve the appraisal of applications in view of the scientific and societal benefit.³ The conclusions of any consultation between the funds should be thoroughly publicized so as to prevent any misunderstanding regarding access to grants that might mitigate the will of companies, institutions, universities and individuals for progress. Instructions for applicants should state clearly where the application for support should be made.

The Science and Technology Policy Council is of the opinion that the procedure for the review of applications which cover two or more fields of science, as well as applications which overlap between science, technology and arts, need to be reviewed. Emphasis should be put on international collaboration in development and innovation projects and that an incentive system should be developed for this purpose.

Projects should be supported irrespective of where they are carried out and the funding system should attend to the various needs of the Icelandic research society. Clear and many-faceted criteria should be applied to the performance and quality in the review of applications. Special attention should be called to the allocation of competition funds to research that is considered to be of great value for Icelandic society. Such research must meet quality criteria and demands even though it does not meet traditional standards of scientific results, such as the publication of scientific papers at international level, for patents or new products.

The Science and Technology Policy Council has always emphasized that the projects should:

- Promote the development of scientific and technical knowledge.
- Aim for well-defined benefits for society and the economy.
- Promote the formation of research teams, knowledge clusters and increased co-operation between universities, research centres and companies.
- Include the training of young scientists and technicians.
- Strengthen the international competitiveness of scientists and increase international participation in the field of science.

B. The Icelandic Research Fund's allocation policy for 2009

The Icelandic Research Fund provides grants according to law and the general priorities of the Science and Technology Policy Council, which have been stated in item A. The Science Committee emphasizes that in the review of applications the following points should carry weight:

- Research projects should be supported according to their merit based on scientific value, the qualifications of the applicants and research facilities and the probability that the project will produce measurable results and benefits.
- The likelihood that the project will lead to the publication of the results, the registration of a patent, intellectual property rights or other utilization.

³ In an outside appraisal made of the activities of the Science and Technology Policy Council 2003-2006 the need of increased continuity in the activities and criteria of public competition funds was emphasized, that a common vision should shape the emphases and policies of the funds, and that several multidisciplinary fields should be defined with long-term goals.

- In the review of the applications the scientific and societal benefits should be taken into consideration.
- Projects which meet quality criteria and are carried out in an active, professional and financial co-operation of companies, universities and institutions should, other things being equal, be given priority for grants from competition funds.
- Results, which are financed by grants from the Icelandic Research Fund, should be made public and made available to everybody unless otherwise agreed.

The Science Committee would also like to bring the following points to the attention of the Icelandic Research Fund:

- The allocation of grants from the Fund should be decided on the basis of the total cost of the project.
- The Fund should take into account the circumstances of the applicants (e.g. independently working researchers) and the nature of the project, e.g. the cost of administrating co-operative ventures.
- Postdoctoral Grants should intertwine the efforts of the grantees and reinforce the operations of the host institute.
- The procedure for the review of applications which cover two or more fields of science, as well as applications which overlap between science, technology and arts, need to be reviewed.
- Projects supported by the Icelandic Research fund should be regularly reviewed.

14. Scientific categories of the Icelandic Research Fund's Expert Panels

EXPERT COUNCIL: ENGINEERING, TECHNICAL SCIENCES AND SCIENCES

SCIENCE AND TECHNOLOGY FIELD	MAIN CAT.	SUB-CAT. 1	SUB-CAT. 2	
1 ENGINEERING & TECHNOLOGY	10	Engineering and technology, general		
		101	Automation	
		102	Telecommunications	
		103	Digital Signal Processing	
		104	Composition	
		105	Computer Science	
		11	Construction Engineering (Construction and Structural Technology)	
			111	Structures / House Construction
			112	Concrete Technology and Techniques
			113	Soil Science and Road Building
		12	Mechanical Engineering (Mechanical and Metal Techniques)	
			121	Mechanical and Metal Techniques
			122	Utilization of the sources of energy
			123	Transport
		13	Electrical Engineering (Electrical, Electronic and Communications Techniques and Automation)	
			131	Electrical Engineering and Component Electronic Techniques
			132	Electronic Measurement and Instrumentation Techniques
			133	Electricity Science and Techniques
			134	Engineering Physics
		14	Chemical Engineering (Production and Processing Techniques, not Food Techniques)	
			141	Materials and Metalworking Techniques
			142	Production Techniques of the Chemical Industry and Metalworking
			143	Other Chemical Techniques
		15	Food Engineering (Food Techniques)	
		16	Fish Processing Technology	
			161	Fish Processing Techniques at Sea
			162	Fish Processing Techniques – Transport Systems
			163	Fish Processing Techniques – On-Shore Processing
		17	Industrial, Systems and Operations Engineering (Management, Control, Optimization)	
			171	Mechanics
			172	Materials Technology
			173	Construction Techniques
			174	Production Technology
		175	Power Technology	
		176	Ship Technology	
		177	Aerospace Technology	
	18	Surveying and Architecture		
		181	Surveying, Telemetry	
		182	Architecture, Planning Technology	
		1821	House Building	
	19	Information Technology		
		191	Software Engineering – Computer Science	
		192	Multimedia	
		193	New working methods / Electronic Communications	
		194	Telematics	
		195	Electronic Heritage	
		196	Information Technology in Production and Services	
		197	Software-controlled machines and equipment	
2 MATHEMATICS, COMPUTER SCIENCES	20	Mathematics, General Computer Science		
	21	Mathematics, Calculation Science		
		211	Algebra, Geometry, Mathematical Analysis	
		212	Symbolic Logic	
		213	Theoretical Computer Science	
		214	Practical Mathematics	
	22	Systems Analysis, Computer Science		
3 PHYSICS, CHEMISTRY	30	Physics and Chemistry, general		
	31	Physics		
		311	Microphysics	

	312	Nuclear Physics
	313	Atomic and Molecular Physics
	314	Physics of Solids
	315	Aerospace Physics, Plasma Physics
32	Chemistry	
	321	Physical Chemistry
	322	Analytical Chemistry
	323	Molecular Biophysics
	324	Inorganic Chemistry
	325	Organic Chemistry
	326	Biochemistry
	327	Environmental Chemistry
	328	Theoretical Chemistry
33	Astronomy, Aeronomy	

EXPERT COUNCIL: NATURAL SCIENCE AND ENVIRONMENTAL SCIENCE

SCIENCE & TECHNOLOGY FIELD	MAIN CAT.	SUB-CAT. 1	SUB-CAT. 2	
4 ENVIRONMENTAL & EARTH SCIENCE	40	Environmental and Earth Science, general		
	41	Geography, Land Formation		
	42	Geology		
	43	Geochemistry		
	44	Geophysics		
	45	Meteorology, Aeronomy		
	46	Oceanography		
	47	Hydrology, Groundwater Science		
	48	Soil Science		
	49	Environmental Science		
		491	Environmental Studies – general; Mapping and description, e.g. for environmental appraisal	
		492	CO ₂ -management / CO ₂ binding	
		493	Environmental Pollution – air, sea, land	
		494	Environmental Impact of Operations and Production	
		495	Global Environmental Changes	
	496	Soil Erosion		
	497	Environmental Recapture, Soil Reclamation		
	498	Nature and Environmental Conservation		
	499	Planning Technology, Landscape Architecture		
5 NATURAL SCIENCES AND BIOLOGY	50	Natural Science, Biology, general		
	51	Biology		
	52	Botany		
	53	Bacteriology		
	54	Zoology		
		541	Entomology	
	55	Ecology		
56	Biochemistry, Biophysics			
57	Limnology, Marine Biology			
6 FISHING & AGRICULTURAL SCIENCE	60	Fishing and Agricultural science, general		
	61	Agronomy		
	62	Animal Husbandry		
		621	Animal Husbandry	
		622	Domestic Animal Breeding	
		623	Care of Domestic Animals, Feeding	
	63	Forestry		
		631	Forestry	
		632	Forest Patrol	
		633	Plant and Forest Conservation	
	64	Horticulture		
		641	Plant Production	
		642	Plant Breeding	
		643	Garden Plant Cultivation	
	644	Crop Cultivation		
65	Fishing			
	651	Ocean Fishing		
	652	Freshwater Fishing		
66	Fish Farming			
	661	Cultivation of Freshwater Animals		
	662	Cultivation of Marine Animals		

	663	Control of Cultivation Environment and Techniques
	664	Feedstuff
	665	Genetics, Genetic Engineering, Breeding
69	Food Product Testing	
	691	Vegetables, Fruit
	692	Meat, Processed Meat
	693	Fish for Consumption
	694	Production of Meal and Fish Oil
	695	Traceability
	696	Consumers
	697	Food safety (Microbial Base)
	698	Chemical Contents, Chemical Pollution

EXPERT COUNCIL: HEALTH SCIENCES AND LIFE SCIENCES

SCIENCE & TECHNOLOGY FIELD	MAIN CAT.	SUB-CAT. 1	SUB-CAT. 2	
7 MEDICINE	70	Medicine, general		
	71	Anatomy		
		511	Cellular and Molecular Biology	
		711	Cellular Biology	
			7111	Genetics
		712	Embryology	
	72	Biophysics, Biochemistry		
		721	Biophysics	
		722	Biochemistry	
	73	Microbiology, Immunology		
		731	Microbiology	
		732	Immunology	
		733	Infectious Diseases	
	74	Pathology		
		741	Anatomical Pathology	
		742	Pathological Chemistry	
	75	Pharmacology, Toxicology		
		752	Pharmacology	
			7511	Bio pharmacology
		753	Toxicology	
	76	Clinical Medicine		
		761	Internal Medicine	
			7611	Pulmonary Medicine
			7612	Rheumatology
			7613	Oncology
			7614	Cardiology
			7615	Dermatology, Venereology
		762	Surgical Medicine	
			7621	Surgery
			7622	Gynaecology
			7623	Ophthalmology
			7624	Ear, Nose and Throat Medicine
		763	Psychiatry, Psychology	
		764	Radiation Therapy	
		765	Paediatrics	
		766	Family Medicine	
		767	Preventive Medicine	
			7671	Industrial Safety
			7672	Nutrition
			7673	Social Medicine
		768	Rehabilitation	
	77	Dentistry		
	771	Dental Caries		
	772	Cellular and Molecular Biology		
	773	Dental Structures		
	774	Pharmacological Studies		
	775	Biophysics		
	776	Microbiology of the Oral Cavity		
	777	Dental Pathology, Forensic Dentistry		
	778	Dental Mechanics, Orthodontics		
78	Nursing, Physiotherapy			
	781	Nursing		
	782	Physiotherapy		

		7821	Occupational Therapy
79	Biotechnology		
	791		Diagnostics (e.g. Immunologic Recognition, Genetic Probe, Bio detector)
	792		Genome Science, Molecular Model Construction
	793		Therapeutics (e.g. Vaccines, Immune suppressors, Organic Medication)
67	Veterinary Treatment		
	671		Biochemistry, Clinical Chemistry
	672		Cellular Biology, Pathology
	673		Domestic Animal Behaviour
	674		Pharmacological Research
	675		Biophysics, Nutrition
	676		Domestic Animal Hygiene
	677		Surgery
	678		Food Hygiene
	679		Internal Medicine

EXPERT COUNCIL: SOCIAL SCIENCE AND HUMANITIES

SCIENCE & TECHNOLOGY FIELD

8 SOCIAL SCIENCE

	MAIN CAT.	SUB-CAT. 1	SUB-CAT. 2
80	Social Science, general		
81	Geography, Anthropology, Ethnology		
		811	Geography
		812	Anthropology
		813	Ethnology
82	Sociology, Political Science		
		821	Sociology
		822	Political Science
		823	Demographics
83	Information Technology		
		831	Library Science
		832	Media Communication Studies
84	Economics, Business Administration		
		841	Macroeconomics
		842	Business Administration, Microeconomics
		843	Geography of Economics
85	Law		
		851	Open Court
		852	Rules of Procedure
		853	Criminal Law
		854	Commercial Law
		855	Civil Law
86	Pedagogy, Psychology		
		861	Pedagogy
		862	Didactics
		863	Psychology
		864	Social Work
		865	Criminology

9 HUMANITIES

90	Humanities, general		
91	Philosophy		
92	Literary Studies		
93	Linguistics		
		931	Grammar
		932	Languages
94	History		
95	Archaeology		
96	Theology		
97	Art History		
		971	Visual Arts
		972	Music