

Federal Ministry of Education and Research
Announcement of the Funding Guidelines
for Partner Projects of the
German Network for Bioinformatics Infrastructure – de.NBI

1. Purpose of funding, legal basis

1.1 Purpose of funding

Technological progress in modern life sciences in the field of nucleic acid sequencing means that further omics and also imaging techniques will produce ever greater volumes of data (big data) in ever shorter periods. The analysis and utilization of these data offers new opportunities and potential for the acquisition of knowledge and the value-adding process in science, industry, and society.

However, this generation of data on a grand scale presents enormous challenges for the processing, storage, and archiving of the data collected. Only if it is possible to fulfil these demands can these data be used appropriately at a later date in order to generate knowledge. An internationally competitive and at the same time standardized administration, provision, and utilization of large data volumes can only be achieved on the basis of appropriate, powerful hardware resources, suitable databases, and high-performance bioinformatics tools. The continuously growing complexity and volume of the data sets requires a concomitant further development of these bioinformatics tools. Only in this way will it be possible in future to realize the goal of generating information, and thus ultimately knowledge, from these data.

The Federal Ministry of Education and Research (BMBF) is rising to the challenges posed by the utilization of big data in the life sciences by a systematic expansion of the German Network for Bioinformatics Infrastructure – de.NBI. The establishment of the de.NBI network will expand and improve the availability of hardware – in other words, computing and storage capacities – as well as data resources and bioinformatics tools in the life sciences. A wide range of training and educational activities will ensure that the extensive bioinformatics experience of the partners in the de.NBI consortium can be passed on to users in life science research.

The de.NBI network consists of six local, specialized, and technically well-equipped service centres with great expertise in various fields of modern life sciences. The network will be complemented by two network nodes: a database node with four local databases and a data management node. The German Network for Bioinformatics Infrastructure launched in March 2015 offers an extensive portfolio of bioinformatics services. The funding measure for the de.NBI partner projects is intended to complement the services of the German Network for Bioinformatics Infrastructure by integrating further expertise available outside the network. The new partner projects will cooperate closely with the existing de.NBI service centres and network nodes. In addition to partners from university and non-university institutions, industrial partners with R&D capacity (especially SMEs) can be integrated in the funding measure as de.NBI partners. Attention will be focused on incorporating topics and services complementing the areas in the current network. Partner projects to be integrated into the network (service providers/databases) are required to make their bioinformatics services available during the entire funding period and to continuously further develop them.

The expansion of the German Network for Bioinformatics Infrastructure to include partner projects is intended to provide bioinformatics services in all fields of the life sciences and thus to ensure that pioneering technologies are utilized in all areas of life science research. This will make a sustained contribution to improving the competitiveness of Germany as a research location.

1.2 Legal basis

The Federal Government awards grants pursuant to these present guidelines, to § 23 and § 44 of the Federal Budget Code (BHO), and the relevant administrative regulations (VV), as well as the regulations for applications for grants on an expenditure basis (AZA) and/or the regulations for applications for grants on a cost basis (AZK) of the BMBF. Applicants have no legal claim to funding. The funding agency will make a decision at its own discretion within the scope of the available budget.

Funding in accordance with these present regulations meets the requirements of Commission Regulation (EC) No. 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the common market in application of Articles 107 and 108 of the Treaty (General Block Exemption Regulation - GBER), published in the Official Journal of the European Union L 187/1 of 26.06.2014, p. 1, and is therefore compatible with the common market under Article 107(3) of the Treaty on the Functioning of the European Union and is not subject to the notification requirement in accordance with Article 108(3) of said Treaty.

In accordance with Article 1, Para. 4 (a) and (b) of the GBER, any enterprise that has not complied with a recovery order following a previous Commission Decision declaring an aid illegal and incompatible with the common market is not eligible for funding.

2 Projects eligible for funding

Projects will be funded that complement the expertise of the existing German Network for Bioinformatics Infrastructure. Both the services offered and also the databases and data management will be extended and enhanced by expanding the expertise and capacity currently available in the network. The size of a partner project will be largely determined by the topics and the existing capacity in this field. The partner projects must be capable of being integrated into the existing de.NBI network in order to prevent redundancies in de.NBI services. The partner projects may be integrated by linking them to existing de.NBI service centres and network nodes.

Partner projects are therefore recommended to establish contact with existing de.NBI service centres and network nodes and/or the de.NBI administration office before submitting an application. The description of the service centres and the network nodes as well as the contact details of the partners can be found at the following link www.denbi.de. The administration office can be contacted at the following link contact@denbi.de. After funding has been granted, the project partners are incorporated into the existing network structures as equal partners.

The following topics are possible examples of fields in which the project partners could complement the existing network:

- epigenetics
- metabolomics
- lipidomics
- imaging informatics

- mechanistic modelling
- simulation of metabolic pathways
- simulation tools for systems biology
- comparative phylogenetic and genomic algorithms
- optimization of databases and their data structure
- metadata level/metainformation for integrating omics data
- bioinformatics methods for synthetic biology

However, other key topics can also be taken up in addition to those suggested above.

Partner projects will be funded for a period of three years. The duration of the partner projects should not exceed the total period of the de.NBI network (February 2020).

3 Grant recipients

Applications may be filed by universities and non-university research and scientific establishments and industrial companies with R&D capacity in Germany. The participation of small and medium-sized enterprises (SMEs) is explicitly encouraged. The European Commission's definition of SMEs can be found on the Internet at

http://ec.europa.eu/enterprise/policies/sme/facts-figures-analysis/sme-definition/index_en.htm and at http://ec.europa.eu/enterprise/policies/sme/files/sme_definition/sme_user_guide_de.pdf.

Research institutions that receive their basic funding from the Federal Government and/or the federal states can only be granted project funding in addition to their institutional funding for their additional project-related expenses and costs under certain conditions.

4 Prerequisites for funding

Applicants must be prepared to make a constructive joint contribution to the goals of the German Network for Bioinformatics Infrastructure and be willing to undertake interdisciplinary collaboration between bioinformatics and life science research.

The de.NBI network has a central administration office consisting of a coordination unit and a coordinator. The mission of the de.NBI coordinator is to steer the network. He or she ensures an exchange of information between the partners in the network and represents the interests of the network to third parties. Partner projects wishing to join the network must integrate themselves into the established structures of the network and acknowledge the function of the coordination unit.

The partner projects must demonstrate that with respect to the application of mathematical and experimental methods for data generation, data standardization, modelling, simulation, or systems analysis that they make use of standards and structures which are utilized and extended in the Bioinformatics Network. The general regulations governing data protection must be complied with on all levels of data storage and data processing. In addition, further regulations and international standards, such as those governing work with human biological material, may be relevant (e.g. OECD Guidelines for Human Biobanks and Genetic Research Databases, 2009 or the Council of Europe Recommendation on research on biological materials of human origin).

As part of the quality assurance of the funding instrument, the project partners who are granted funding will undertake to participate in the necessary measures (surveys, workshops, etc.).

The partner projects must accept the boundary conditions of the German Network for Bioinformatics Infrastructure, which defines the coordination structure of the overall project, the organization of cooperation processes, and coordinates the consolidation of the German Network for Bioinformatics Infrastructure. The present collaboration partners in the first round of funding of the German Network for Bioinformatics Infrastructure regulated their collaboration in a written cooperation agreement. The partner projects in the second round of funding will be admitted to this existing cooperation agreement. Before a decision is taken on funding, the new partner projects must be in basic agreement with the other members of the German Network for Bioinformatics Infrastructure on the minimum components mentioned in the information leaflet for applicants/grant recipients on the cooperation of partners in collaborative projects published by BMBF (form no. 0110): https://foerderportal.bund.de/easy/easy_index.php?auswahl=easy_formulare; see "Allgemeine Vordrucke und Vorlagen für Berichte" (general forms and templates for reports).

In the case of collaboration between industrial companies and research establishments, the conditions for a cooperative project, particularly with regard to contributions to the cost, the distribution of risks and findings, dissemination of the results, access to intellectual property rights, and rules for allocating such rights would have to be laid down before the start of the project.

5 Type and scope, rates of funding

Funding may take the form of non-repayable grants awarded for projects. The level of funding per project within the scope of the available budget will depend on the requirements of the project applied for. Funding may be granted for project-related extra expenses, such as personnel costs, equipment and travel expenses as well as, in well-justified exceptional cases, investments in connection with the project if they are not part of the applicant's basic equipment.

The basis for calculating the grants for universities, research and scientific establishments and comparable institutions is the project-related expenditure eligible for funding (the eligible project-related costs in the case of Helmholtz centres and the Fraunhofer Society [FhG]), up to 100% of which can be funded in individual cases.

For research projects at universities, a 20 % project lump sum will be added to the eligible expenses.

In determining the respective rate of funding, consideration must be given to the General Block Exemption Regulation (GBER). The GBER permits differentiated bonuses for small and medium-sized enterprises (SMEs), which may lead to a higher funding quota.

6 Other terms and conditions for the awarding of grants

The General Auxiliary Terms and Conditions for Funds Provided by BMBF to Commercial Enterprises for Research and Development Projects on a Cost Basis (NKBF98) will form an integral part of the notification of the award of cost-based grants.

The General Auxiliary Conditions for Grants for the Promotion of Projects (ANBest-P) and the Special Auxiliary Terms and Conditions for Funds Provided by BMBF for the Promotion of Projects on Expenditure Basis (BNBest-BMBF 98) will form an integral part of the notification of a grant on an expenditure basis, together with the conditions of the BNBest-mittelbarer Abruf-BMBF if the funding is to be made available according to a call procedure.

7 Procedure

7.1 Commissioning of a project management organization, application documents, other documents, and using the electronic application system

BMBF has commissioned the following project management organization to implement the funding measure:

Project Management Jülich

Life Sciences, Health, Universities of Applied Sciences

Forschungszentrum Jülich GmbH

52425 Jülich

Germany

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If there should be any amendments to this information, notice will be given in the Federal Gazette (Bundesanzeiger) or through some other appropriate channel. Forms for funding applications, guidelines, information sheets, instructions, and auxiliary terms and conditions can be accessed online at <http://www.foerderportal.bund.de/>. Copies can also be requested directly from the project management organization.

Applicants are obliged to use the electronic application system easy-Online to prepare formal applications for funding (<https://foerderportal.bund.de/easyonline>). It is recommended that applicants contact Project Management Jülich for advice in filing applications. Further information and explanations can be obtained there.

7.2 Funding procedures

The funding procedure consists of two stages and includes an in-depth review involving external experts.

7.2.1 Submission and selection of project outlines

In the first stage, project outlines are submitted to Project Management Jülich. The project outlines should contain all of the information needed for the panel of reviewers to make a conclusive expert recommendation on the selection of the partner projects. The objectives of the partner projects must be agreed upon in advance with the respective service centre and the de.NBI coordinator.

The project outlines must be submitted by the project manager of the partner project or in cases where several institutions have come together to form one collaborative project by the designated collaboration coordinator after approval by all project partners.

As an international evaluation procedure is foreseen, it is recommended that project outlines be submitted to the project management organization in English.

Project outlines must not exceed 20 pages (including appendix). Further binding requirements for project outlines are contained in the guide for applicants (www.ptj.de/denbi-partner). Applications that do not meet the requirements specified in this guide may be rejected without any further consideration.

Applications must be submitted electronically via the portal (<https://www.pt-it.de/ptoutline/application/denbi-partner>). The project outline must be uploaded as a PDF file. Furthermore, a project overview will be generated from data entered in an online form. The project overview and uploaded project outline will be evaluated together. To ensure that the electronic versions of the project overview and project outlines are legally valid, a printed version of both documents must be signed by the collaboration coordinator after they have been submitted electronically and sent to the responsible project management organization.

Project outlines may be submitted via the pt(outline portal before 22 February 2016. The portal will be closed immediately after the deadline for submission. The deadline for submission is not a cut-off deadline. However, it may not be possible to consider project outlines received after the specified date. For submission after the deadline, applicants must contact the responsible project management organization directly. Applications may not be submitted by email or fax.

No legal claim to funding can be derived from the submission of a project outline.

The de.NBI partner projects must structure their applications as follows:

- Description of the initial situation of the partner project
 - Priorities of the partner project, description of the way it will complement the network and how it is distinguished from service centres already funded in the network, giving special consideration to the service aspect
 - Organizational structure and management of the partner project
 - Actors involved and relevant expertise
 - Existing technical infrastructures, data resources, bioinformatics tools and other services that will be available to the network, as well as a proven degree of usage of the structures and services by experimental life science research
 - Activities in the area of training and further education
 - Interdisciplinary cooperations (bioinformatics – experimental research)
 - National and international involvement
- Description of mid-term and long-term objectives pursued by the project partner, as well as the strategies intended to achieve these aims. Outline of a sustainability concept for achieving these goals in the long term.
- Concept for integrating the project partner in the German Network for Bioinformatics Infrastructure and description of the resulting added value.

The project outlines received will be evaluated with the involvement of external experts according to the following criteria:

- Contribution of the partner project to the German Network for Bioinformatics Infrastructure: focus of the partner project, national significance, and international integration
- Feasibility and prospects of success: objectives, strategies, and management structure
- Scientific and technical qualifications of the applicants, relevant previous work
- Quality and relevance of the designated technical infrastructures, data resources including bioinformatics services; relevance to life science research
- Quality of the sustainability concept.

Partner projects suitable for funding will be selected on the basis of the result of the expert review. Those involved will be informed in writing of the results of the selection process. Applicants have no legal claim regarding the return of project outlines submitted.

7.2.2 Submission of formal funding applications and decision-making process

In the second stage of the procedure after the expert review, those applicants whose project outlines were given the necessary priority will be invited, in consultation with the de.NBI coordinator, to submit a formal application for funding by a set date. A decision on this application will be made after final examination. The formal applications for funding must be compiled using the easy-Online electronic application system. The necessary link will be sent to those invited to apply by the project management organization.

Guidelines, information sheets, instructions, and auxiliary terms and conditions can be accessed online at https://foerderportal.bund.de/easy/easy_index.php?auswahl=easy_formulare&formularschrank=bmbf.

7.3 Regulations to be followed

The approval, payment, and accounting of the funds, as well as proof and examination of proper use and, if necessary, revocation of the award and reclaiming of the funds awarded, are governed by the administrative regulations under § 44 of the Federal Budget Code (BHO) and §§ 48 to 49a of the Administrative Procedure Act (VwVfG) unless these funding guidelines permit an alternative procedure.

8 Entry into force

These funding guidelines shall enter into force on the day of their publication in the Federal Gazette (Bundesanzeiger).

Berlin, xx.xx.2015

Federal Ministry of Education and Research

Signed

Dr. Matthias Kölbl