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Guidelines for applicants

PROJECT GRANTS 2024
PLANT SCIENCE, AGRICULTURE AND FOOD BIOTECHNOLOGY

Facts about the call

Total amount available for granting:
DKK 34.7 million

Amount available per grant:
Up to **DKK 4.4 million**

Call opens: Call closes:
21 June 2024   **21 August 2024 at 14:00 CEST**

Applicant notification:
December 2024

Earliest start date: Latest start date:
1 January 2025   **1 November 2025**

Review committee:
Committee on Plant Science, Agriculture and Food Biotechnology

Contact:
Camilla Stensgaard Andersson
Grant Manager
csa@novo.dk

Maria Santamaria Fernandez
Scientific Manager (Food)
msf@novo.dk

Signe Kynding Borgen
Senior Scientific Manager (Plant & Agriculture)
skb@novo.dk

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All Grant Recipients must comply with the 'General Terms and Conditions' for grants from the Novo Nordisk Foundation (the Foundation).

The Foundation will treat all applicant and application information confidentially. Read more about how the Foundation processes personal data under 'privacy & security' in the online application system, NORMA. See how to access NORMA in section 2 of these guidelines.

You can find more information about the Foundation's application and granting process at the NORMA Help Centre. Detailed information about the different parts of the application is available in NORMA.

1 PROJECT GRANTS FOR RESEARCH WITHIN PLANT SCIENCE, AGRICULTURE[1] AND FOOD BIOTECHNOLOGY

1.1 Purpose

Applications are invited for project grants to support excellent research within plant science, agriculture and food biotechnology. **Projects must be based at a university or other non-profit research institution in Denmark, Finland, Iceland, Norway, or Sweden.**

1.2 Areas of support

The proposed research should address major challenges within plant, agricultural, and food science associated with developing sustainable agriculture and food production. The research should be fundamental in character with a clear and strategic outlook to improve sustainability and potential solutions. The proposed research should significantly extend existing knowledge beyond state-of-the-art and may have a high-risk profile. The research should be based on life science research disciplines.

Non-exclusive list of prioritized areas:
- Development of plants with high productivity, resiliency, and resource-use-efficiency for food, fiber, materials, fuel and energy, chemicals, or climate change mitigation
- Utilisation of microorganisms to improve sustainability across the value chain from primary agricultural production to end-product
- Development of agricultural-, food-, and forestry systems with higher productivity, circularity, and biodiversity, and with minimum impact on environment and climate
- Development of plant-, microorganism-, and fungi-based ingredients and foods with high functionality, and organoleptic quality. *The proposed research should primarily focus on the technological aspects of food science and biotechnology, while nutrition and health-related aspects may be considered only to a limited extent*
- Utilisation of ingredients derived from precision fermentation, fungi, algae, insects and cellular agriculture for food production

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[1] Agriculture is here defined as terrestrial farming and cultivation of plants, including forestry.

- Development of methods and technologies, including those driven by data science, that enable and support sustainable agriculture and food production. *A significant proportion of the proposed research should explore the use of the new method or technology for its intended application.*

The program will not support:
- Research primarily focusing on livestock, livestock commodities, and feed
- Research focusing on aquaculture, or its derived commodities
- Research with their main research component on nutritional uptake and clinical studies.

Projects with a focus on pharmaceuticals and therapeutics should submit their application to the Novo Nordisk Foundation Committee on Bioscience and Basic Biomedicine, while proposals focusing on industrial biotechnology and environmental biotechnology should be submitted to the Novo Nordisk Foundation Committee Industrial Biotechnology and Environmental Biotechnology.

IMPORTANT! For the biotechnology requirement, the OECD short definition of biotechnology will be used as a reference for assessments. The OECD single definition of biotechnology is: the application of science and technology to living organisms, as well as parts, products and models thereof, to alter living or non-living materials for the production of knowledge, goods and services. Essentially, any chemical or physical modification of a biological entity or product is considered biotechnology within this call.

1.3   Eligibility

Researchers with an independent research program at a university or other non-profit research institution in Denmark, Finland, Iceland, Norway, or Sweden are eligible to apply for these project grants. Eligible candidates may be junior-level researchers, under the condition that they can document to have established themselves as independent researchers. As the grant does not cover salary of the grantee, the applicant must be guaranteed their own salary for the entire project period.[2]

In addition to the main applicant, applications may include one or more co-applicants who contribute scientifically to the project and will receive a financial share of the grant. A co-applicant must have an independent research program at a university or other non-profit research institution. There is no geographic restriction to the location of co-applicants. The project may also include research partners who do not receive funding from the grant. Those research partners may be located at a for-profit organization.

The applicant has the main responsibility for developing the project, writing the application, and carrying out the proposed research.

Important restrictions regarding NNF grants and proposals:
- Applications from Master students and PhD students will not be taken into consideration.

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[2] A letter from the administrating institution documenting employment and/or funding secured for the applicant's salary must be provided upon request from the Novo Nordisk Foundation but is not required for the submission of an application for the grant.

- At any given time, the applicant may only have *one* Novo Nordisk Foundation "Project Grant" application under evaluation[3]. If the applicant submits more than one application, only the first application submitted will be evaluated, while any subsequent applications will receive an administrative rejection. After having received notification on the funding decision, the applicant may submit a new application for a Novo Nordisk Foundation "Project Grant".
- The applicant may submit applications for other grant types, e.g., Research Leader Programmes or Pioneer Innovation Grants, while their "Project Grant" application is under evaluation if they cover different research activities.
- It is not possible to be the grant holder for more than one active Project Grant within Plant Science, Agriculture and Food Biotechnology or Biotechnology-based Synthesis and Production.
- Researchers holding a Project Grant within Plant Science, Agriculture and Food Biotechnology or Biotechnology-based Synthesis and Production, may apply for a new Project Grant within this area as main applicant during the *final year of the grant*, however, the grant periods cannot overlap.
- It is possible for a Project Grant holder to be a co-applicant on an application submitted by another eligible applicant.

1.4   Funding

The grant period should be 1-3 years. The total grant amount is up to DKK 3.4 million for a 3-year grant. For projects that are a collaboration between a main applicant and a co-applicant located in a different Nordic country, the total amount is up to DKK 4.4 million for a 3-year grant. The grant amount should be distributed approximately equally each year, and for projects shorter than three years, the total grant amount should be proportionally reduced.

Applicants may apply for funding for the following types of expenses directly related to the project:

- **Salary** for scientific staff below the hiring level of the main applicant. The salary may include pension, holidays, etc. in accordance with the current agreements and regulations at the Nordic administrating institution (please, consult with the administrating institution regarding current agreements and regulations). *Note, funding from the grant cannot cover salary for the main applicant or co-applicants.*
- **Salary** for research technician (costs for technical/scientific assistance)
- **Operating expenses**
- **Equipment** (a maximum amount of DKK 200,000 per budget year)
- **Travel expenses** in connection to conducting the research project
- **Conference participation** (a maximum amount of DKK 25,000 per budget year)
- **Publication costs** (a maximum amount of DKK 25,000 per budget year)
- **Tuition fee**

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[3] Mutually exclusive calls: 'Project Grants' in Bioscience and Basic Biomedicine', 'Project Grants in Clinical and Translational Medicine', 'Project Grants in Endocrinology and Metabolism', Project Grants in Natural and Technical Sciences', 'Project Grants in Industrial Biotechnology and Environmental Biotechnology' and 'Project Grants in 'Plant science, Agriculture and Food biotechnology.

Full-time equivalents (FTEs)
For each salary entry, please specify the FTE in years within the designated FTE field. This will indicate the proportion of a full-time position that the project funding will support for each year of the grant period. One full-time employee for one year equals 1.0 FTE.

Bench fee (not applicable to Danish universities)
Bench fee can be included in the budget for support of individual researchers to cover expenses needed to conduct the proposed research.

Bench fee is calculated per academic employee actively working on the project [eligible to apply for salary]. It may only be used for expenses related to the research project which cannot be included within another individual budget category. Bench fee may account for a maximum of DKK 8,000 per month per FTE. The budget must specify the expenses covered by the bench fee, which may include:
- Common or shared laboratory expenses and consumables
- Laboratory utilities (electricity, gas, water)
- Maintenance of essential equipment
- Service contracts
- Technical and IT support

PLEASE NOTE that bench fee cannot cover rent, administrative support, representation, social contributions etc. A valid bench fee policy in line with the Foundation's requirements must be available at the time of application, and this official documentation from the administrating/co-applicant's institution must be provided upon request.

Project supplement (for Danish universities only)
The project supplement contributes to the coverage of indirect costs at Danish universities, and replaces budget posts such as administrative costs, bench fee and parental leave.

More information on the joint model for project supplement is found at Universities Denmark's website. Questions related to the project supplement should be directed to the research support units at your university.

Administrative support (not applicable to Danish universities)
Administrative support may account for a maximum of 5% of the total budget and must be included therein. The administrative support:
- can cover expenses such as for accounting, payment of salaries, purchasing, hiring, as well as auditing and financial reporting on the project
- cannot cover administrative expenses that are not directly related to the project

- can via the host institution be shared between the institutions of the main- and co-applicant(s), as detailed in the application budget
- is not automatically included in the grant and must be stated/applied for in the application budget but should not be specified in detail

The Foundation will not award funding for:
- Commercial activities
- Overhead/indirect costs (such as rent, electricity, water and maintenance)
- Double funding of projects:
    - If the applicant has received funding for the proposed project from other sources, in part or in full, this must be accounted for in the budget, as no budgetary overlaps are allowed
    - If an identical or overlapping project proposal has been submitted to other funding institutions than the Foundation, it must be noted in the application
    - If the applicant receives funding for the project, or parts of the project, from other sources following submission of the application to the Foundation, the Foundation must be informed immediately

1.5   Language

The application and all additional materials must be submitted in English.

1.6   Application process

Application system opens	**21 June 2024**
Application deadline	**21 August 2024, 14:00 CEST**
Evaluation of applications	**September-November 2024**
Applicant notification	**December 2024**
Earliest possible start date	**1 January 2025**

When all applications have been assessed, applicants will be notified about whether they have been awarded a grant. The notification e-mail will be sent from norma-noreply@novo.dk to the e-mail address used when creating a profile in NORMA.

PLEASE NOTE: The Foundation does not provide feedback in case an application is declined.

During a trial period in 2022-2024, the grant selection procedure will encompass two parallel schemes: 1) Traditional committee-based evaluation, and 2) Partial randomization. For both selection procedures, all applications are assessed by the committee and categorized as either "high quality" (fundable), or "non-meritorious" (not fundable). Only applications categorized as fundable will undergo further evaluation and potentially be selected for granting through either scheme 1) with traditional committee-based evaluation, or through scheme 2) with partial randomization. Those fundable applications that are unanimously evaluated by the committees as highest rated will be granted. The remaining fundable applications, "the grey zone", will undergo further normal assessment by the committee (scheme 1). In parallel to scheme 1, the

applications allocated to the grey zone will undergo a randomization process where all applications from the grey zone (including those selected by scheme 1) will be randomly selected for funding, one application at a time, until the same total number of applications is reached through scheme 2 as selected for funding through scheme 1. Successful applicants will not be informed about which scheme their application was selected through. The purpose of implementing partial randomization in the evaluation procedure is to test new ways of grant-giving and generate new knowledge on open competition funding of research projects.

1.7   Assessment criteria

NNF's Committee on Plant Science, Agriculture and Food Biotechnology will primarily assess the applications based on the following criteria:

- Novelty and originality of the research idea
- Potential impact on the research areas mentioned in Section 1.2
- Feasibility of the proposed research
- Achievements of the applicant and co-applicants

As a general rule, the Novo Nordisk Foundation processes all applications and grants in accordance with the rules followed by public research councils and foundations. This applies, in particular to conditions concerning confidentiality, reviewer eligibility, impartiality and conflicts of interest. Applications from ineligible applicants will not be reviewed.

If you have an active grant from the Foundation, this may be taken into consideration in the evaluation of your application for a new grant. In general, it is recommended that the main applicant has delivered results on the active grant(s) before submission of a new application to the Foundation. If you apply while having an active grant from the Foundation, you must describe how the project you propose in this application is different from and/or coherent with the project(s) already funded and briefly describe the progress of the already funded project(s). This information should be included in the **Project Description**.

2 The application and grant management system NORMA

2.1 Creating and submitting an application

The Foundation uses the application and grant management system NORMA:
https://norma.novonordiskfonden.dk

If you do not have a user profile in NORMA, you can create one by clicking **Register** on the login page. The main applicant should only have one user profile. Please use your work e-mail address for registration.

The registered user who submits an application will be legally responsible for the truthfulness of the content of the application.

You can find guidance on how to create and submit an application at: NORMA Help Centre.

If you experience technical problems and cannot find a solution in the NORMA Help Centre, please contact NORMA Support: norma-support@novo.dk.

3 Application content

This section provides guidelines on the content required in the sections of the online application form for this call. Detailed information about the different parts of the application is available in NORMA.

3.1 Applicant

The **Applicant** tab pertains to information about all those involved in an application, meaning the main applicant or contact person applying on behalf of an organisation/institution as well as any co-applicants.

MAIN APPLICANT
The main responsible party for the application can enter their details through the Applicant Details-task with the type 'Applicant'. After filling in all mandatory fields, the applicant should complete the task to save the details.

CV
Please provide your brief CV with information on education, employment history, recent research funding, current supervision/training/teaching activities, summary of publication and bibliometric information (total number of peer-reviewed publications, first/corresponding/senior authorships, citation information, h-index), and other relevant information if space allows (max. 4,000 characters, including spaces).

PUBLICATION LIST
Please provide the complete reference information for your most important publications (up to 10). Include all authors (or number of authors, if necessary) for each publication and use bold or underline for your name. Applicants should include a link to an updated profile with a full publication list for the applicant on either Google Scholar, Web of Science, Scopus or ORCID. (max. 5,000 characters, including spaces).

SUMMARY OF OWN RESEARCH
Please summarize your own research that is of relevance to this application (max. 2,000 characters).

SUPPLEMENTARY INFORMATION
This field can be utilized if there is additional information that is important for the committee's review of your application (max. 2,000 characters, including spaces).

PREVIOUS AND CURRENT GRANTS FROM NNF
If you have previously submitted other applications in the same calendar year, summarize how these applications are related to the current application.

If you have received any grants from NNF as an applicant or a co-applicant within the past five years, you must provide the application number, project title, grant period (in years), grant amount and the percentage share of the grant (100% if there is no co-applicant). Briefly summarize how any of the grants are related to the current application.

3.2   Co-applicant(s)

For this call, up to five co-applicants are allowed for the application. Co-applicants are expected to actively participate in organising and implementing the project and should, consequently, be allocated a share of the grant. The project description should clearly describe the role of all co-applicants, and the budget should clearly indicate the co-applicants' allocation of the total budget. Co-applicants must be invited through NORMA and subsequently enter their details in the system. Please follow the instructions in NORMA on how to invite co-applicants to your application.

Please note that co-applicants can read, edit and upload information into the application portal, **but only the main applicant is able to submit the final application.**

Inviting co-applicants can be time-consuming.
Please invite any co-applicant(s) as soon as possible and well in advance of the submission deadline.

When the co-applicants accept their invitation and have registered as a user in NORMA, they will gain access to the application. In addition, they will be assigned an APPLICANT DETAILS-task, available under MY TASKS from the APPLICANT PORTAL in NORMA. With this task, co-applicants should input the following details:
- Institutional affiliation
- Work and publication history
- Application history with NNF

In addition, co-applicants will be asked to upload additional documentation under SUPPORTING DOCUMENTS, such as:
- A short CV (maximum two pages)
- Support Letter from the institution

3.3   Institution

Please provide information about the institution where the grant will be administered. This institution is where the main applicant will be employed during the grant period, and the institution that will ultimately be responsible for administering and allocating the grant, including budgeting, financial reporting and staff supported by the grant.

It can take up to five working days to register a new administrating institution in NORMA.
The application cannot be submitted before the institution has been registered.

3.4   Proposal

Describe the project using the fields in the **Proposal** tab.

PROJECT TITLE
Please provide a short title for the project (maximum 150 characters, including spaces).

BRIEF PROJECT DESCRIPTION
Please provide a brief stand-alone summary of the project describing its purpose, the scientific question being addressed and activities (maximum 2,000 characters, including spaces, line breaks and special characters).

PROJECT DESCRIPTION
Please describe your proposed research project in detail. Elements to be included are (maximum 20,000 characters, including spaces):
- Major challenge being addressed and strategic outlook. How does the proposed research help to provide solutions enabling sustainable agriculture and/or food production?
- Specific aims, testable hypotheses, and success criteria.
- Critical knowledge gaps and identification of important research questions.
- Scientific background covering state-of-the-art most relevant to the project.
- Experimental plan including methods and technologies to be utilized and/or developed.
- Alternative approaches, risk assessment and contingency plans.
- Discussion of experimental outcomes and potential impact.

If the project will occur in more than one investigator's laboratory, include information regarding how work on the project will be divided and integrated. If the project is a part of larger project or is related to ongoing projects in the same group/team, this must be explained. The activities to be supported by the NNF grant should be specified.

ILLUSTRATION UPLOADS
A maximum of four illustrations can be uploaded here.

The following file formats for illustrations are accepted in the system: JPG, JPEG, PNG and BMP. The maximum accepted size for each illustration is 50 MB and 1050*1650 pixels.

LITERATURE REFERENCES
Please provide the reference information for the literature cited in the project description (maximum 8,000 characters, including spaces, line breaks and special characters).

LAY PROJECT DESCRIPTION
Please provide a brief summary for non-experts in lay language. If the application is awarded a grant, the text may be used for publication (maximum 1,000 characters, including spaces, line breaks and special characters).

3.5 Budget

Enter the project grant period, and the budget template will become available.
Only budget information submitted via the **Budget** tab will be considered in the review process. Any additional budget information attached under **Appendices** (or any other tabs) will not be considered.

3.6 Appendices

All uploads must be in PDF format. NORMA automatically places these uploads at the end of the application. Appendices other than those specified here are not permitted and will not be included in the evaluation.

HOSTING LETTERS
- **A hosting letter from the planned administrating institution** in Denmark, Finland, Iceland, Norway or Sweden acknowledging that the main applicant can conduct the proposed project at the institution.

Please do not attach other appendices such as recommendations, support letter from collaborators, offers on equipment, etc.

V.1 June 2024