

# **Announcement by the Federal Ministry of Education and Research (BMBF)**

## **Directives**

### **governing the funding of research projects on plant research entitled "Plant Breeding Research for the Bioeconomy" under the National Research Strategy BioEconomy 2030**

**3 June 2015**

#### **0. Preamble**

This call for proposals for "Plant Breeding Research for the Bioeconomy" is part of a joint funding initiative of the Federal Ministry of Education and Research (BMBF) and the Federal Ministry of Food and Agriculture (BMEL). This measure consists of two complementary calls to promote research, development and innovation in the area of plant breeding research.

The evaluation of the BMBF's support for plant genome research showed that the transfer of knowledge between science and industry and the strengthening of the scientific basis make a major contribution to Germany's competitiveness as a location for research and development. In order to implement the recommendations, the two Ministries have launched a funding initiative which links together the relevant funding instruments of the Federal Government in an optimal way.

Within the framework of this initiative, the BMEL will primarily fund innovative industrial research and experimental development projects which focus on application or product orientation in the pre-competitive phase. The BMBF will promote application-oriented basic research in interdisciplinary collaborative projects in which the participation of an industrial partner is desired also in the start phase but is not mandatory. The BMBF will also support the training and establishment of young researchers by funding junior research groups and measures aimed at the further qualification of doctoral candidates.

The two Ministries will agree on the projects to receive funding.

#### **1. Funding purpose, legal basis**

##### **1.1 Funding purpose**

With its goal of implementing an internationally competitive bioeconomy by the year 2030, the Federal Government intends to achieve a lasting structural change away from an oil-based economy to a bio-based economy. Our bioeconomy research strategy pursues the visionary goal of producing sufficient healthy food to feed the world, even with the expected

population growth of the future, and at the same time to supply it with high-grade products made from renewable resources. The required restructuring of our national economy from its current form to a knowledge and bio-based economy can only be achieved if the associated principal goals such as sustainable food security, environmental and climate protection, as well as the conservation of biodiversity, can be brought together in a concerted master plan. However, under such an approach, the generation and availability of renewable resources must not be at the cost of soil fertility, the hydrological balance or climate protection.

In this context, in order to enable overall sustainable economic activity it is necessary to have an overall societal transformation process in which the interests of policy-makers, research, consumers and producers have a participatory role. This requires a more systemic approach in bioeconomy which brings together and integrates the proposed research activities in the fields of the natural sciences, technology, agriculture, social sciences and economics.

The basis of all bioeconomic value creation is efficient, demand-based plant production and use which dispenses with non-renewable resources and consciously minimises reductions in yield and post-harvest losses. In the context of existing competing uses (food, feed, fibre, fuel, etc.), the continuously rising demand for bio-based raw materials can only be met adequately if there is close cooperation between innovative plant research and modern agriculture. Ideally, this will mean that the knowledge-based decoding and application of biological processes will enable industry to develop resource-efficient material flows, products, processes and services which will ideally establish themselves on the market without delay and thus help increase the competitiveness of companies. The associated plant research must enable agriculture, as the principal producer of raw materials for the food industry, to significantly increase the production of raw materials on limited areas of arable land while at the same time fulfilling the requirements of sustainable production. But this also means that the increase and stabilization of crop yields must be achieved while paying attention to the protection and efficient use of resources (including soil, water, nitrogen, phosphate and energy), conserving biological diversity and in line with environmental and climate protection. These extensive requirements necessitate highly developed, productive and resistant crops with combined traits whose potential yield can be achieved not only with established conventional methods but also with new breeding methods and alternative technologies. In addition, these crops must be able to withstand the considerable climatic changes predicted for the future. This is the purpose of the "Plant Breeding Research for the Bioeconomy" funding activity, which has the aim of supporting research and development projects to develop optimized and also new solutions to the challenges of the sustainable and future-oriented production of crops or biomass.

## **1.2 Legal basis**

Project grants will be awarded in accordance with these funding regulations, the BMBF's standard terms and conditions for grants on an expenditure or cost basis and the administrative regulations under Sections 23 and 44 of the Federal Budget Code (BHO). There is no legal entitlement to funding. The funding provider will take a decision after due assessment of the circumstances and within the framework of the budget funds available. Grants for applicants engaged in economic activity are as a rule state aid within the meaning of article 107 of the Treaty on the Functioning of the European Union (TFEU). The funding under these regulations fulfils the requirements of Commission Regulation (EU) No. 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty on the Functioning of the European Union (General Block Exemption Regulation – GBER) (OJ L 187 of 26.6.2014, p. 1). The funding is therefore compatible with the internal market within the meaning of Article 107(3) of the Treaty on the Functioning of the European Union (TFEU) and exempt from the obligation to inform under Article 108(3) TFEU. In accordance with Article 1(4)(a) and (b) of the GBER, undertakings which are subject to an outstanding recovery order following a previous Commission decision declaring an aid illegal and incompatible with the internal market are ineligible for funding. These funding regulations apply in conjunction with the National Research Strategy BioEconomy 2030 (see [www.bmbf.de/de/1024.php](http://www.bmbf.de/de/1024.php) ) and the documents linked there.

## **2. Object of funding**

### **2.1 Overall aims**

In addition to the principal successes of public funding to date, an external study evaluating the plant research funded by the BMBF since 1998 highlights the pressing need for research in relation to the societal challenges of the future. According to the study, key issues for research policy include securing the food supply with regard to quality, quantity and safety while at the same time sustainably protecting the available resource basis, but also maintaining biodiversity as a valuable natural resource and as a source of future developments as well as the systematic and efficient use of available research data and results by bioinformatics. This will also support the National Programme for Plant Genetic Resources. Moreover, it is also a major goal to further strengthen the excellence of German plant research which currently occupies a leading position in worldwide terms and thus to maintain its competitiveness. Potential future economic value creation in the context of the bioeconomy will always mainly depend on the selection and the use and innovative potential of relevant crops.

## **2.2 Research topics**

The key challenges of the bioeconomy, which increasingly require systemic and interdisciplinary solutions in particular, also pose new tasks for research. The results of existing plant research and the above-mentioned recommendations have led to the definition of new priority topics which are to be investigated intensively in research projects geared to excellence and innovation under the "Plant Breeding Research for the Bioeconomy" funding activity. The thematic fields to be addressed are:

- Functional biodiversity and its potential for plant breeding.
- The plant as a system in its environment (plant as a meta-organism) – its potential for agriculture
- Predictive breeding research
- Resource-use efficiency as a breeding aim
- "Green" bioinformatics: biostatistics and data management as a knowledge basis for applied crop research

## **2.3 Research objectives**

Credit will be given to project ideas based on technological, biological and bioinformatic resources which have been developed as part of relevant previous or parallel BMBF activities in the field of plant research. These resources include the high-tech tools developed for genome sequence analysis, already developed omics technology platforms, bioinformatic data resources [in particular the Plant Primary Database (PPD)], as well plant phenotyping platforms. However, project ideas must be closely related to the research topics and goals listed in the following sections.

### **2.3.1 Functional biodiversity and its potential for plant breeding**

In the context of this call, the term "functional biodiversity" means the variety of interactions between different habitats, species and genes. The focus is on the natural genetic biodiversity in the gene pool of the main species of crops and in this context particularly those species where extensive or complete genome sequences are already available. In addition, the introduction of previously unknown species of plants or crops or the rediscovery of previously neglected wild plants as crops is also of interest, particularly the utilization of their allelic/genomic diversity. If research is planned on an "orphan crop" (such as millet), the planned project must, however, aim to achieve a clear innovation, and a long-term perspective leading to the market or the consumer must be evident.

Possible research objectives include:

- i) new products or innovative applications for the supply of food and feed for industrial use or in the field of secondary plant substances or biologically active substances (e.g. phytopharmaceuticals);
- ii) new sources of quantitative resistance and tolerance to biotic and abiotic stressors.

### **2.3.2 The plant as a system in its environment (plant as a meta-organism) – its potential for agriculture**

Studying the plant as a system in interaction with its environment (soil/air/insects/other plants/micro-organisms) is of growing importance. The plant in question is considered as an integrated organism that interacts with its environment (as a kind of ecosystem). The research should focus on the investigation of agronomically relevant crops under outdoor conditions. Possible research objectives include:

- i) Characterization and putting to use of the plant microbiome (in, on and in direct proximity to the plant, incl. the plant-soil microbiome);
- ii) Utilization of the interactions of the microbiome (e.g. via predictive models on biosynthetic networks, see 2.3.3), for example for the development of new plant protection approaches;
- iii) Research and application of the potential, the interactions and communication paths of plant-growth regulators or "biologicals" (small synthetic, in some cases natural molecules which among other things influence plant growth);
- iv) Development, derivation and deployment of "antagonists" (including phytohormones, e.g. for defence against pathogens) and positive "probiotic factors" (use of viable microorganisms, e.g. for boosting growth).

### **2.3.3 Predictive breeding research**

The aim of this approach is the attribute-oriented integration of results from genome research and phenotyping using bioinformatic approaches. Possible research objectives include:

- i) Further development of precision breeding technologies using marker assisted selection to create crops with "innovative" features (Smart Breeding 2.0);
- ii) Development of new methods of plant breeding, including the development of epigenetic markers, provided that relevant practical results can be achieved in agronomically significant applications in the foreseeable future;
- iii) New methods and technologies for the targeted breeding of plants (e.g. application-oriented developments in the area of targeted mutagenesis in order to increase genetic variation, or the area of genome editing);

- iv) Systemic prediction models to be able to forecast plant reactions to biotic/abiotic stress and interactions with the environment (climate/microbiome) (e.g. predictive models for biosynthetic networks).

#### **2.3.4 Resource-use efficiency as a breeding aim**

The focus of this research area are innovative approaches to the breeding of new crop varieties which achieve an agronomically acceptable yield level that is as high as possible with the lowest possible use of inputs and low demands on the soil and cultivation areas.

Possible research objectives include:

- i. Development of crops which deliver significantly higher yields than previously used varieties deliberately using less resources (water, nutrients, crop protection, fertilization, energy etc.) per unit area of arable land;
- ii. Investigation of factors limiting the yield potential of crops, e.g. via photosynthesis, efficiency (e.g. CO<sub>2</sub> absorption and fixing, light energy utilization), efficiency of water utilization, resistance to disease and nitrogen assimilation;
- iii. Identification and characterization of economically profitable crops that are suitable for use in unconventional cultivation regimes, in particular against the background of significant savings in water, nutrients, cultivation area and crop protection measures, regardless of the climate or season.

#### **2.3.5 "Green" bioinformatics: biostatistics and data management as a knowledge basis for applied crop breeding**

The focus of this research field are interdisciplinary collaborative alliances led by bioinformaticians or statisticians in which possible solutions for issues related to breeding biology are addressed. One aim is to help create the conditions for easy and user-friendly access to data through the standardization of the generation, processing (incl. quality control), storage and utilization of (e.g. high-throughput/sequence/phenotyping) data from plant breeding research. Biostatistical processes and approaches are expected to be made more transparent in particular for users, who are often not experts in bioinformatics, or easier to transfer to other applications. Biological research questions – preferably oriented to the research objectives listed under 2.3.1 and 2.3.2 – can be used to develop e.g. services or bioinformatic data associations (possibly including modelling) required for this.

#### **2.4 Funding modules**

The funding modules in this call offer two main options. One option is for collaborative projects that pursue highly innovative research ideas for which a great deal of basic research

will be needed for the purpose of reviewing or applying them, but which in all cases must be goal or application-oriented (see Module A).

In the second option, the support is directed particularly at young scientists (see Module B). In this context the German Bioeconomy Council has noted: "On the one hand, a biobased economy requires well-trained specialists such as natural scientists, engineers and economists. On the other hand, there is a need for extensively trained skilled staff who understand and will pass on the system aspects of the bioeconomy and relationships across industry boundaries. In this case, new training programs and funding measures, in particular interdisciplinary research programs, must help to motivate graduates to venture forth beyond the boundaries of their disciplines and to move in both the academic world and the private economy."<sup>1</sup>

On this basis, the research topics listed under 2.2 are expected to be pursued within the framework of the following funding modules:

#### **2.4.1 Module A – "INNOVATION"**

Research and development as part of application-oriented interdisciplinary collaborative projects in which the participation of an industrial partner is desired, but not mandatory in the start phase. Thus, project ideas can also be considered that have not been the focus of economic interests at the beginning of the project period. However, in possible further funding phases, public private partnership consortia must be created which continue the project with a strict application-oriented goal (see 2.5 for the funding phases).

#### **2.4.2 Module B – "YOUNG SCIENTISTS"**

##### **2.4.2.1 Module B 1 – Target group: "Post-docs"**

Funding of a highly qualified project leadership position in conjunction with an additional small research team (comprising up to two doctoral students and a laboratory assistant) as part of an individual project. This independent research team is expected to work in association with a renowned institute or company. The research should be highly innovative and can involve an element of risk; it should also involve a major share of basic research. The projects may be implemented in a period of up to 5 years. Additional qualification measures will be offered as part of a funding award for the project leader. The measures will be organized and supported by the PLANT 2030 managing office. Project leaders should not have received their doctorates more than 5 years ago. Applications are particularly welcome from female post-docs, including those who would like to resume their career following lengthy periods of maternity leave. The selected junior scientists are expected to gain further

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<sup>1</sup> Key Issues Paper of the Bioeconomy Council: "En route to the biobased economy", 2013

high-level academic qualifications and to be committed to translating relevant results into applications.

#### **2.4.2.2 Module B 2 – Target group: "Doctoral candidates"**

*[Prerequisite: Participation in a project funded under funding modules A or B1 for which corresponding funds can be applied for prospectively in relation to individual measures (including research stays) by the responsible project leader.]*

Funding is available for example for "soft skills" training activities and establishing contact with industry mentors (with the organization and support of the PLANT 2030 managing office) as well as for research stays (within the collaboration involved or at other locations in Germany or abroad) for technology skills development (for example in the field of bioinformatics). The regular meeting of the doctoral candidates supported in this module is also planned in the form of "Graduiererkollegs" including exchanges of experience and visits to relevant industrial companies (to be organized by the PLANT 2030 managing office). Prior to the submission of applications, project leaders with project proposals in the funding modules A or B1 should consider whether they intend to employ doctoral candidates to help carry out their projects and if these are to participate in the above-mentioned activities. Following a positive evaluation of the project outline, the project management organization must be contacted in the course of the formal submission process regarding questions about the concrete allocation of funds. The project outline must document the intention to participate in this funding module and the reasons which justify such participation.

#### **2.5 Funding duration**

An excellence-driven multi-phase programme consisting of up to three successive funding phases of 3 years each will be employed (except for B1 where the funding period is up to 5 years). Thus, project outlines can be submitted for collaborative projects in Module A with a prospective maximum funding duration of 9 years. After the first three years, evidence must be provided that the set milestones have been achieved and plans must also be presented for medium-term milestones (to be achieved after 6 years) and long-term milestones (after 9 years). Thus, one funding phase lasts no more than three years.

Before the expiry of each 3 year period of funding, an interim evaluation decides whether approval may be given to proceed to the next funding phase. In this process, the funded projects will be in direct competition with one another because the number of funded projects will be reduced between each funding round.



### **3. Funding Recipients**

Research proposals may be submitted by institutions of higher education, non-university research institutions and commercial companies which are headquartered in Germany. Research institutions which receive joint basic funding from the Federal Government and the *Länder* can only be granted project funding supplementary to their basic funding for additional expenditure under certain preconditions.

A prerequisite for funding in Module B1 is that the university or research institution hosting the junior research group in Germany makes available the working facilities required for carrying out the project (basic equipment in terms of laboratory space and other infrastructure) and supports the leader of the junior research group in all matters. In the interests of the optimal transfer of technology and resources, the location of such junior research groups at commercial companies is explicitly welcomed. It must be ensured that the scientific work of the group is performed self-sufficiently and to the greatest extent independently of the work of the host institution. Applicants (in the project outline phase) can be German or foreign holders of doctorates. A relevant declaration of the host institution must be added to the project outline. In the event of a positive evaluation of the project outline, a formal application must then be made via the host academic institution or host company.

### **4. Prerequisites for funding**

In their own interest, applicants should familiarize themselves with the EU's Framework Programme for Research and Innovation in the context of the planned national project. They should check whether the proposed project includes specific European components which make it eligible for exclusive EU funding. Furthermore, they should check whether an additional application for funding can be submitted to the EU in the context of the intended national project. The result of such checks is to be described briefly in the national application for funding.

The terms of cooperation between the partners in a collaborative project must be laid down in a cooperation agreement. Before a funding decision can be taken, the cooperation partners must prove that they have reached a basic agreement on certain criteria stipulated by the BMBF. For further details please refer to BMBF form 0110 ([https://foerderportal.bund.de/easy/easy\\_index.php?auswahl=easy\\_formulare&formularschrank=bmbf&menue=block#t6](https://foerderportal.bund.de/easy/easy_index.php?auswahl=easy_formulare&formularschrank=bmbf&menue=block#t6)).

Projects put forward by large companies can only be funded if the project would not be conducted or not conducted to the same extent without public funding, or if public funding leads to a significant increase in the pace of the development process; that is to say, if it has an incentive effect within the meaning of Article 6 GBER.

## **5. Type, scope and rates of funding**

Funds will be awarded in the form of non-repayable project grants. The amount awarded per project will depend on the requirements of the proposed project and on the available budget. The basis for calculating the grants for universities, research and science institutions and similar establishments is the eligible project-related expenditure (in the case of the Helmholtz centres and the Fraunhofer Gesellschaft FhG, the eligible project-related costs), which can be funded up to 100% in individual cases. In the case of research projects at universities, a flat-rate grant amounting to 20% of total expenditure will be awarded in addition to the eligible expenditure. The calculation of each rate of funding must take account of the General Block Exemption Regulation (GBER). Additional funding can be granted to small and medium-sized enterprises (SMEs). In accordance with Article 28 GBER, costs for obtaining, validating and defending patents and other intangible assets of SMEs may be funded up to a maximum 50%.

## **6. Other terms and conditions for funding**

The *Nebenbestimmungen für Zuwendungen auf Kostenbasis des BMBF an Unternehmen der gewerblichen Wirtschaft für Forschungs- und Entwicklungsvorhaben* (Auxiliary Terms and Conditions for Funds Provided by the BMBF to Commercial Companies for Research and Development Projects on a Cost Basis – NKBF 98) will be part of the notification of award for grants on a cost basis.

Notification of award for grants on an expenditure basis will include the *Allgemeine Nebenbestimmungen für Zuwendungen zur Projektförderung* (ANBest-P) (General Auxiliary Conditions for Grants Provided for Projects on an Expenditure Basis), the *Besondere Nebenbestimmungen für Zuwendungen des BMBF zur Projektförderung auf Ausgabenbasis* (BNBest-mittelbarer Abruf-BMBF) for the drawdown of funds.

(BNBest-BMBF 98) (Special Auxiliary Terms and Conditions for Funds Provided by the BMBF for the Promotion of Projects on Expenditure Basis), and the *Besondere Nebenbestimmungen für den Abruf von Zuwendungen im mittelbaren Abrufverfahren im Geschäftsbereich des BMBF* (BNBest-mittelbarer Abruf-BMBF) for the drawdown of funds.

## **7. Procedure**

### **7.1 Involvement of a project management organization and request for documents**

The Federal Ministry of Education and Research has commissioned the following project management organization to implement the funding activity:

Projekträger Jülich (PtJ)

Geschäftsbereich Bioökonomie (BIO)

Forschungszentrum Jülich GmbH

<http://www.ptj.de>

The contact person is:

Dr. Rainer Büschges

Fachbereich Agrarforschung (BIO 5)

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Application forms, guidelines, information for applicants and the auxiliary terms and conditions for the award of grants are available at

[https://foerderportal.bund.de/easy/easy\\_index.php?auswahl=easy\\_formulare&formularschraenk=bmbf](https://foerderportal.bund.de/easy/easy_index.php?auswahl=easy_formulare&formularschraenk=bmbf) or can be obtained from the project management organization.

## **7.2 Two-phase application procedure**

The application procedure will take place in two phases.

### **7.2.1 Submission and selection of project outlines**

In the first phase, project outlines must be submitted in electronic form **in English** to the project management organization (PtJ, see 7.1) using the "easy-Online" electronic form system for applications and proposals (<https://foerderportal.bund.de/easyonline>).

The deadline for the submission of project outlines is **22 October 2015**. In the case of collaborative projects, the project outlines must be submitted by the proposed project coordinator in agreement with the project partners. The deadline for submissions is not a cut-off deadline. However, it may not be possible to consider project outlines received after this date.

The input screens at the "easy-Online" site are used only to enter the project outline's core details. The detailed description of the project is added as a PDF electronic file attachment to the application when submitting the final version. Detailed descriptions are to be formatted using the "Arial" typeface with font size 10 and line spacing of 1.5 with the following structure (where there are no input screens). The structure set out below [ a) to k) ] is mandatory. The outline must also be preceded by a table of contents:

- a. Title page with the name of the collaborative or individual project, its acronym (max. 15 characters), the chosen research objective, the chosen funding module as well as the participating applicants (incl. the address of applicant institutions, the names of

the project leaders with office postal addresses, telephone and fax numbers and e-mail addresses)

- b. Summary (general aims, work plan and expected results in brief; max. one A4 page)
- c. Scientific background and current status of research and technology (also with regard to the patent situation; novelty of the approach; incl. previous work by the applicant(s), where applicable with preparatory work in relevant BMBF funding activities; max. three A4 pages)
- d. Project goals (overall goals of the project, relevance of the project to the funding policy goals stated under 2; scientific and/or technical objectives; max. two A4 pages)
- e. Project description (description of own research approach with particular focus on novel and original aspects max. two A4 pages)
- f. Structure of the overall collaboration (graphic overview; max. one A4 page; does not apply in the case of individual projects)
- g. Work plan (where applicable, work packages must be assigned to individual collaboration partners and tied to planned personnel and material resources; where applicable, discussion of the risks inherent to the project that could endanger the planned course of the project; in accordance with the principles of risk management, alternative solutions must also be stated together with their advantages and disadvantages; max. three A4 pages per collaboration partner)
- h. Division of tasks and cooperation with third parties (project organization or project management/coordination max. one A4 page)
- i. Gantt chart of the overall collaboration (graphic overview; max. one A4 page; does not apply in the case of individual projects)
- j. Provisional financial plan of the collaborative or individual project (tabular overview; please note: the costs of basic equipment are not eligible for funding; max. one A4 page)
- k. Potential for application and plan for possible exploitation [structured as follows: economic and scientific prospects of success and potential for scientific and economic follow-up, i.e. how the results can be utilized after the project; max. two A4 pages]

The following must be added as an annex.

- Description of the project partners (max. two A4 pages per partner): participating partners from science and industry together with their areas of expertise [e.g. by means of a brief CV in tabular form of the responsible project leader of each of the co-applicants; up to 5 important publications by each co-applicant (project leader) of relevance to the proposed project]

A legal claim to funding cannot be derived from the submission of a project outline.

The evaluation of the project outlines received will involve external experts and will be based on the following criteria:

- Relevance and contribution of the project proposal to achieving the funding policy objectives set out above
- Scientific and technological quality of the project (e.g. topicality, originality, inter- and transdisciplinarity)
- Performance of the project participants (particularly with regard to ideas and implementation potential, infrastructure, national and international competitiveness, etc.)
- Extent, intensity and, above all, quality of the planned cooperation between the individual partners and estimation of the added value of collaboration, also with a view to achieving synergy effects
- Feasibility of the project (suitability of the methods, the amount of time needed and the envisaged resources; effectiveness and efficiency of the proposed project organization and coordination)
- Significance of the plan for the utilization of the expected results and their potential for application.
- Plausibility and suitability of the financial planning (taking into account the distribution of risks among the applicant companies, project partners and the public sector)

Project proposals which are suitable for funding will be pre-selected on the basis of the evaluation. Applicants will be informed in writing of the results of this procedure.

Applicants have no legal claim to the return of their project outlines.

### **7.2.2 Submission of formal applications for funding and decision-making procedure**

In the second phase of the procedure, applicants whose project outlines have been reviewed positively will be invited – in coordination with the proposed coordinator in the case of collaborative projects – to present a formal application for funding, which will be decided on after final evaluation. The following information, which is supplementary to the project outline, must be added to the formal application. In doing so, the comments of the evaluation panel must be taken into account:

- Detailed financial plan of the collaborative or individual project (please note: the costs of basic equipment are not eligible for funding)
- Detailed work plan (including planning of resources related to the project, i.e. where applicable, work packages must be assigned to individual collaboration partners and tied to calculated personnel and material resources)

- Milestones incl. list of envisaged (interim) results (deliverables) and criteria for discontinuation (tabular overview; max. one A4 page)
- Detailed plan for exploitation [structured as follows: economic prospects of success; scientific and/or technical prospects of success (short, medium, long-term); potential for scientific and economic follow-up, i.e. how the results can be utilized after the project; max. two A4 pages]
- Reason for funding requirement (please note: The need for funding must be evident in the work plan and include detailed reasons; in the case of international partnerships, reasons must be included for the necessity of the involvement of the foreign partner and the added value thereof)
- Submission of a concrete timetable for the realization of a cooperation agreement within a short period of time, [incl. date of first consortium meeting (prior to the start of the project period), date of the agreement of the draft contract (prior to the start of the project period)];

In the event of a positive evaluation of the project outline, applicants are recommended to use the electronic application system "easy-Online"

(<https://foerderportal.bund.de/easyonline/>) for the submission of formal applications.

Approval and payment of and accounting for 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 pertaining to section 44 of the Federal Budget Code (BHO) and sections 48 to 49a of the Administrative Procedure Act (VwVfG) unless deviation is permitted under the present funding regulations.

## **8. Entry into force**

These funding regulations will enter into force on the day following publication in the Federal Gazette (*Bundesanzeiger*).

Berlin, 3 June 2015

Federal Ministry of  
Education and Research

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Head of Bio-Economy Division