

**DEADLINE: APRIL 10<sup>TH</sup>, 2014**

## INTEGRATED RESEARCH ON INDUSTRIAL BIOTECHNOLOGIES

### BACKGROUND

In order to successfully respond some of the main challenges of the future - including the expected increase by 30% in the global population, the rapid exploitation of fundamental natural resources, the modern dependency on non-renewable fossil fuels to satisfy energy needs and the impact of human activities on the environment - it becomes clear the urgency for a change in our contemporary approaches to the cycle of production, consumption, processing, storage, recycling and disposal of waste and biological resources.

In this context bioeconomy<sup>1</sup> is likely to play a strategic role, when it improves the management of renewable biological resources, drives changes in supply chains and generates new and diversified markets. Bioeconomy has the potential to fuel our economy, facilitate the creation of new job positions while improving the levels of environmental sustainability, well-being and the quality of life.

Bioeconomy already has a turnover of nearly €2 trillion and employs more than 22 million people, which corresponds to approximately 9% of the total employment in the EU. It includes agriculture, forestry, fisheries, food and pulp and paper production, as well as parts of chemical, biotechnological and energy industries. Each euro invested in bioeconomy research and innovation is estimated to trigger €10 of value added in bioeconomy sectors by 2025. So, the establishment of bioeconomy as a competitive, sustainable and inclusive growth model represents an opportunity that Italy cannot miss neither within the industrial production system nor when considering the scientific research realm.

Research is the driving force shaping our future society. This is true regardless the nature of the institution that is being involved (e.g. university or other public or private research institutions). The complex nature and the strong interdependency that characterizes

the challenges of the future are calling for an evolution in terms of research goals in several research areas, as well as for synergistic actions that successfully integrate all the contributions made by the different stakeholders. This should, at least in principle, facilitate the transfer of results from the lab to the market.

### AIMS

Within this research field the Foundation resources will be focused on a limited number of projects that are characterized by:

- a clear multidisciplinary approach,
- the potential to generate new knowledge on enabling technologies for all stakeholders implicated in the entire bioeconomy value chain,
- the potential to produce pilot applications that can be replicated on a large scale.

More specifically the Foundation intends to support research projects in the following scientific areas that are key:

- research that is meant to realize innovative consumer products developed using biotechnology processes;
- studies focusing on the reconversion of conventional industrial products and processes into bio-processes and bio-products that are able to optimize the use of natural resources;
- production of renewable biological resources as well as their conversion into value added products, such as food, feed, bio-based products<sup>2</sup> and bioenergy;
- development of technologies meant to protect and preserve the environment (bioremediation);
- innovative methods finalized to sustainable development in chemical/industrial and environmental biotechnologies.

For this call it is only admitted pre-competitive approaches. Nonetheless, preference will be given to projects that through a participatory approach can create bidirectional networks for knowledge and technology transfer with/to the industrial system.

<sup>1</sup> The term "bioeconomy" means an economy using biological resources from the land and sea, as well as waste, as inputs to food and feed, industrial and energy production. It also covers the use of bio-based processes for sustainable industries. (European Commission, "Strategy for sustainable bioeconomy in Europe", February 13, 2012, IP/12/124).

<sup>2</sup> Bio-based products are products that are at least in part derived from biological materials. (European Commission, "Strategy for sustainable bioeconomy in Europe", February 13, 2012, IP/12/124).

Through this call the Foundation intends also to encourage initiatives that foster dialogue with civil society under the Responsible Research and Innovation<sup>3</sup> framework.

## GUIDELINES

### Eligible applicants

Beyond the general requirements set out in the *"Guidelines for presentation"*, this call for proposals is intended to scientific research institutions engaged with the issues debated above which have at their disposal staff and research facilities.

With regards to the eligibility, it is mandatory for the lead organization to base the project's operational headquarters within Fondazione Cariplo's geographical area of interest (Lombardia and Novara and Verbano Cusio Ossola districts). The latter is not requested to the partners.

Proposals presented by a PI of any unfinished project funded by the Foundation within the Scientific Research Area is not eligible for funding under this call. By PI we mean a project leader of any operational unit of a funded project regardless whether this is the lead organization or a partner. Furthermore, by unfinished project we mean a project that still has to submit the final scientific and/or financial report. Submissions to the Foundation have to be carried out through the online system by uploading the requested documentations in the dedicated web platform. To be eligible it is mandatory to complete this operation by the deadline of this call for proposals.

### Eligible projects

The Foundation will select a limited number of projects that:

- are submitted by a partnership made up of at least two different eligible institutions. One of the latter needs to act as the lead organization;

- respect the priority areas indicated in this call.

In order to guarantee transparency and objectivity during the selection process, the Foundation will enforce a peer review process relaying on a panel of external, independent and international reviewers. At the end of this process, feedback on the projects will be sent to all applicants.

The Foundation foresee exclusively the costs related to the research activities that satisfy the following eligibility criteria and caps:

- A3 - "Equipment and software"  
this entry cannot exceed 30% of the total additional costs<sup>4</sup> and can exclusively include costs related to newly acquired software programs or equipment. It is expected that applicants ascribe only amortizable costs.
- A4 - "Other amortizable costs"  
this entry can include only patent costs.
- A6 - "Temporary staff"  
this entry must include only research personnel costs. The cost of administrative staff is not allowed.
- A7 - "Subcontractors and consultants"  
auditor costs should be included in this entry.
- A8 - "Materials and supplies"  
stationery and photocopy costs cannot be included in this entry.
- A9 - "Overheads"  
this entry cannot exceed 5% of the total additional costs<sup>5</sup>.
- A10 - "Others"  
this entry cannot exceed 10% of the total additional costs<sup>6</sup> and must include only travel expenses and conference fees for the research personnel involved in the project, meeting costs, and finally scientific and public dissemination costs.

The grant will cover 100% of project costs. Requested funding should range from 100,000 to 300,000 euros.

3 Responsible Research and Innovation (RRI) refers to ways of proceeding in Research and Innovation that allow those who initiate and are involved in the processes of research and innovation at an early stage (a) to obtain relevant knowledge on the consequences of the outcomes of their actions and on the range of options open to them and (b) to effectively evaluate both outcomes and options in terms of social needs and moral values and (c) to use these considerations (under a and b) as functional requirements for design and development of new research, products and services (DG for Research and Innovation Science in Society, "Options for Strengthening Responsible Research and Innovation", Luxembourg, 2013, ISBN 978-92-79-28233-1).

4 Sum of: A3, A4, A6, A7, A8, A10.

5 See footnote 5.

6 See footnote 5.

### Review criteria

Besides the quality of the research proposal, other elements will be considered during the evaluation process. These include:

- the level of analysis of the state of the art;
- the clarity in the exposition of the research aims, as well as the effectiveness and level of detail in presenting the adopted strategies;
- the originality and the level of innovation proposed by the project in terms of sustainable development;
- the relevance of the project with regards to the social challenges of next future;
- the adoption of multidisciplinary approaches;
- the nature of the partnership and degree of integration of the different, both national and international, research centres;
- the scientific leadership of the PI and the expertise of the research team;
- the engagement of young researchers<sup>7</sup> and their involvement in position of responsibility;
- the presence of synergistic actions that successfully combine the contributions of the various stakeholders within a systemic approach;
- the expected impact of the project results within enabling technologies as well as throughout the bioeconomy value chain;
- the creation of two ways networks between the research and industrial realms;
- the presence of initiatives that, in line with the Responsible Research and Innovation framework, foster dialogue with civil society;
- a clearly motivated budget and a reasonable duration of the project.

### Ineligible projects

It will be considered ineligible any proposal that:

- requires funding to set up new research centres or laboratories
- can be considered basic research studies with no concrete results
- is exclusively meant to technology transfer
- includes for-profit organizations as direct beneficiaries of the Foundation's grant.

### AVAILABLE BUDGET

The total budget allocated to this call for proposals consists of 3 million euros.

Before submitting their proposals, applicants are kindly invited to carefully read the documents listed below that can be easily found in Fondazione Cariplo's website at [www.fondazionecariplo.it](http://www.fondazionecariplo.it) and include:

- *Guidelines for presentation;*
- *Grant management and reporting guide;*
- *Intellectual property rights policy;*
- *Open access policy.*

By submitting their proposals, applicants acknowledge, agree and accept that the award of the grant requires the acceptance of the Foundation policies.

In order to apply for a grant under this call for proposals, it is strongly recommended to:

- Carefully fill in the online forms that specifically include:
  - *Anagrafica dell'organizzazione capofila* (new applicants should fill the form ex novo, while organizations already registered should check and update, when necessary, their detail);
  - *Modulo progetto* (in Italian);
  - *Dati Complementari* (in English);
  - *Piano economico.*
- Upload all the requested documents according to the *Guidelines for presentation*:
  - Detailed Project<sup>8</sup>;
  - Detailed Budget<sup>9</sup>;
  - Letter of support from the legal representative of the host institution for the lead organization;
  - Partnership agreement and letters of support from the partners;
  - Documentation of the organizations applying for the grant.

<sup>7</sup> In this call for proposals the term 'young researchers' means scientists who earned their doctoral degree (PhD) no more than 7 years ago.

<sup>8</sup> The detailed project shall be prepared in accordance with the template relating to the call that can be downloaded from the online section *Dati Complementari*.

<sup>9</sup> The detailed project plan shall be prepared in accordance with the template relating to the call that can be downloaded from the online section *Dati Complementari*.