ERAfrica

New Knowledge Partnerships

The Projects

Interfacing Challenges

New Ideas

Renewable Energies

New Knowledge Partnerships

8.29 Million €

17 Projects 65 Institutions

18 Participating Countries

ERAfrica is funded under FP7
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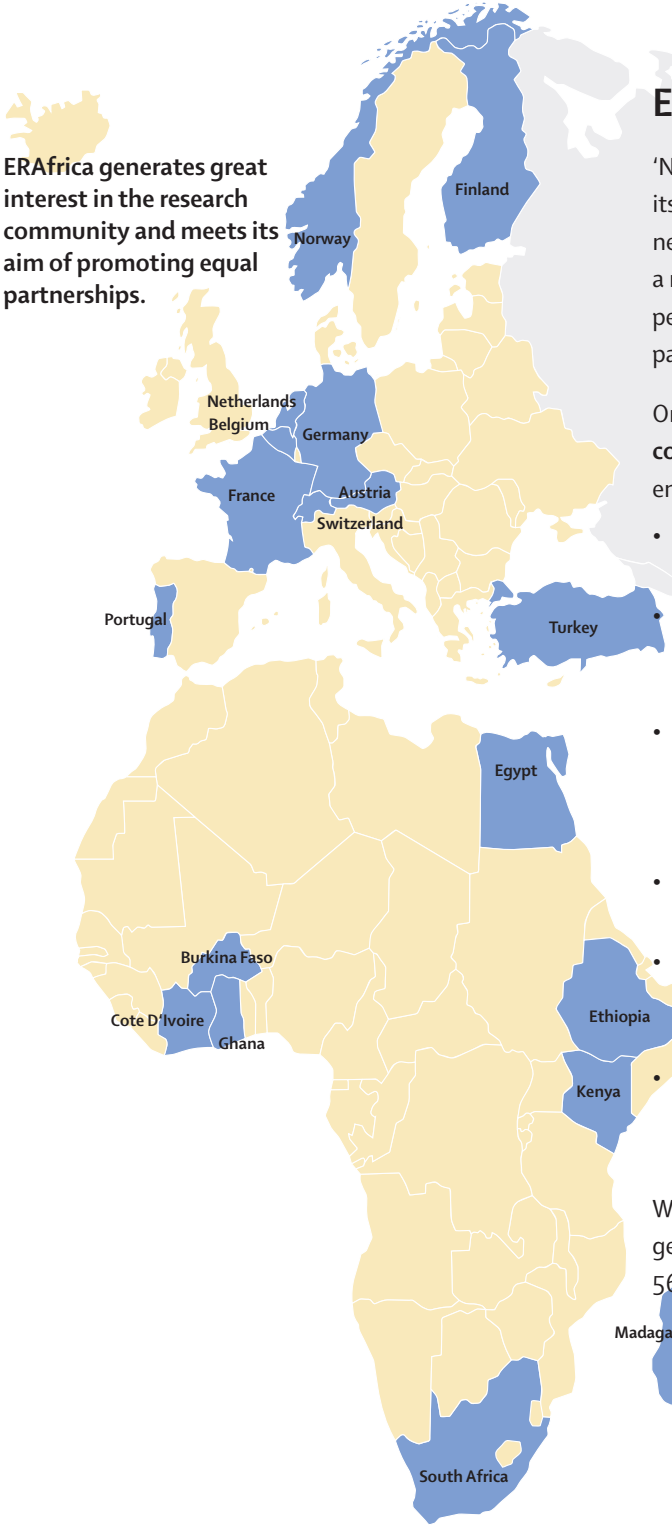
http://www.erafrica.eu

ERAfrica new knowledge partnerships

CAPACITIES

ERAfrica generates great interest in the research community and meets its aim of promoting equal partnerships.



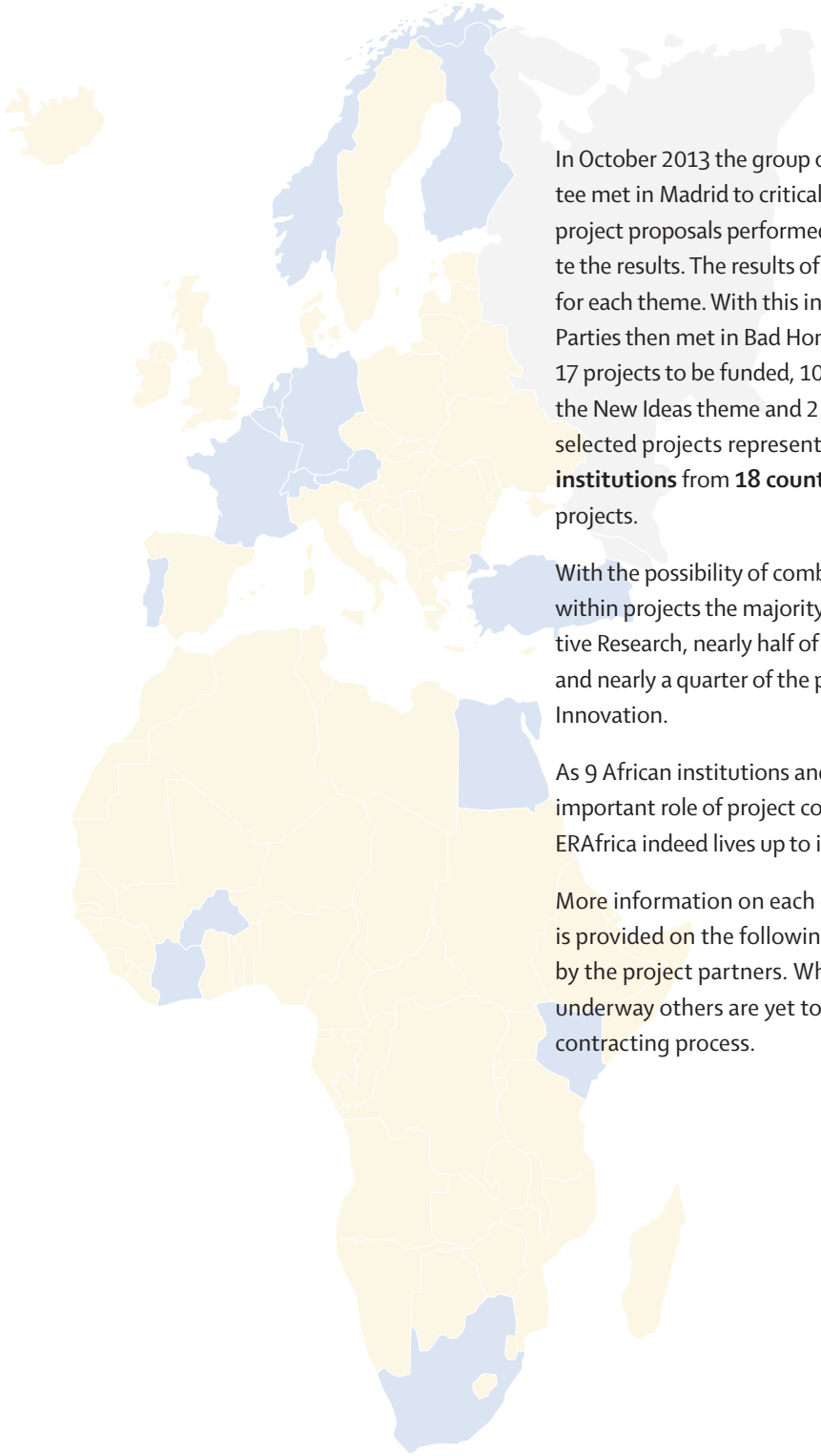
ERAfrica – The Projects

'New Knowledge Partnerships' - the slogan of ERAfrica points out its central message: Africa and Europe acting as equal partners in a new approach towards joint funding in S&T. ERAfrica aims to serve as a model for future cooperative ventures between Africa and Europe and offers a new opportunity for joint research and innovation partnerships.

On January 15, 2013 Funding Parties from **15 African and European countries** launched a joint call for projects in three thematic fields encompassing three types of collaborative activities:

- **Renewable Energies:** funding projects addressing renewable energy topics.
- **Interfacing Challenges:** funding projects which are conducted at the interface of key societal challenges where African and European collaboration stands to have added value.
- **New Ideas:** funding outstanding idea-driven projects generated in a bottom-up approach where the emphasis is placed on clearly evidenced originality and novelty of the idea, approach or expected outputs.
- **Collaborative Research:** joint undertakings by consortia designed to produce new knowledge through scientific research.
- **Collaborative Innovation:** joint undertakings by consortia designed to bridge the gap between the outcomes of research projects and commercialisation.
- **Capacity Building:** joint undertakings by consortia designed to assist relevant organisations to improve their capacities and/or their enabling environment for research and innovation

With a total amount of **€ 10.7 million** available for funding the call generated 124 proposals of which 106 eligible proposals involving 560 organisations requested an amount of **€ 64.8 million**.

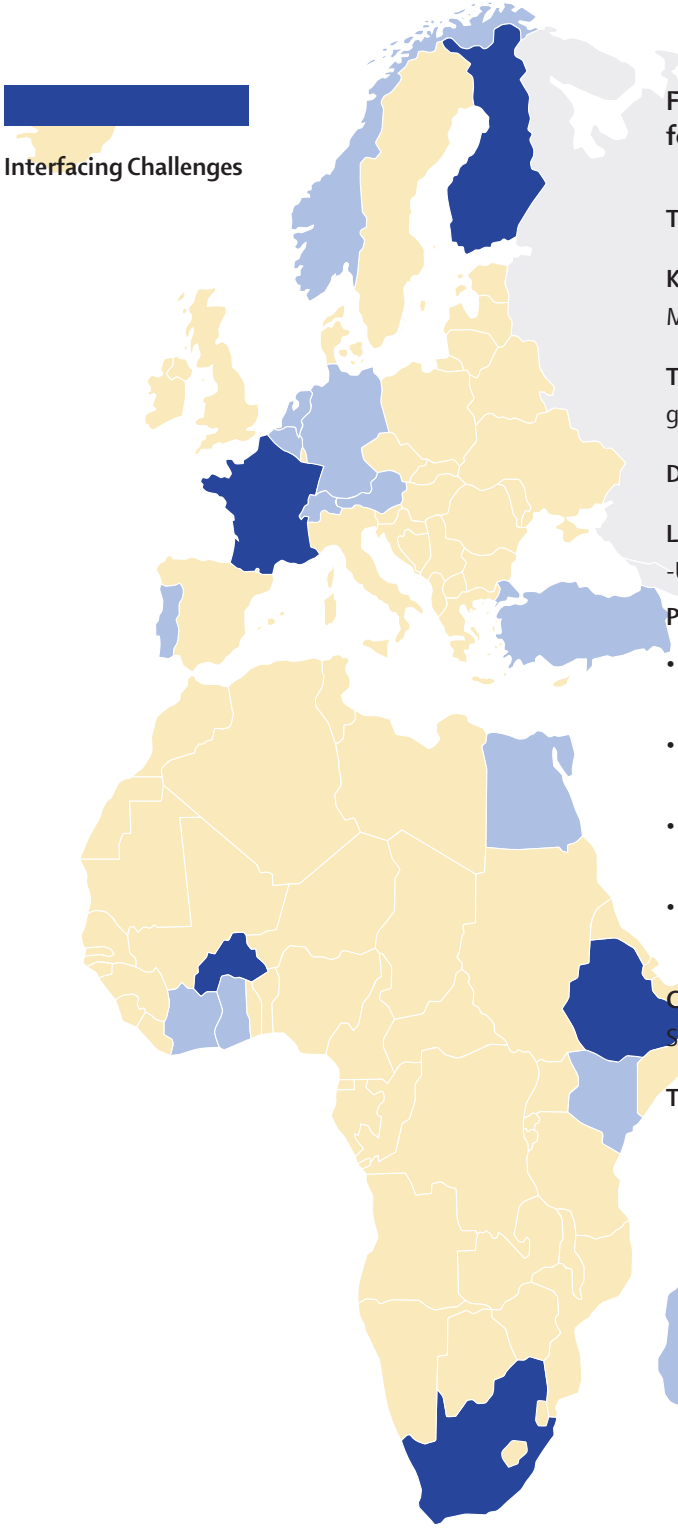


In October 2013 the group of experts of the ERAfrica Review Committee met in Madrid to critically review the results of the peer reviews of project proposals performed by external evaluators and to consolidate the results. The results of their meeting were rankings of proposals for each theme. With this information at hand the Group of Funding Parties then met in Bad Honnef, Germany, in November and selected 17 projects to be funded, 10 in the Interfacing Challenges theme, 5 in the New Ideas theme and 2 in the Renewable Energies theme. These selected projects represent a total amount of **€ 8.29 million** and **65 institutions** from **18 countries** will jointly work together in these projects.

With the possibility of combining different collaborative activities within projects the majority of the projects will be active in Collaborative Research, nearly half of them plan activities in Capacity Building and nearly a quarter of the projects plan activities in Collaborative Innovation.

As 9 African institutions and 8 European institutions have the important role of project coordination the overall picture shows that ERAfrica indeed lives up to its aim of true partnerships.

More information on each of the 17 projects selected for funding is provided on the following pages. The descriptions were written by the project partners. Whereas some projects are already underway others are yet to be started after completing the contracting process.



FolEA – Contribution of cereal-based fermented foods to folate intake in European and African countries

Type of activity: Collaborative Research Project

Keywords: Biotechnology for nutrition and health, Biochemistry, Microbiology

Thematic area corresponding to criteria of ERAfrica: Biotechnology for nutrition and health

Duration: 36 Months

Lead Partner: Institut de Recherche pour le Développement (IRD) -UMR 204 Nutripass / France

Partner Institutions:

- Institut de Recherche en Sciences Appliquées et Technologies / Département Technologie Alimentaire / Burkina Faso
- University of Helsinki – Department of Food and Environmental Sciences / Finland
- University of Pretoria – Department of Human Nutrition, Faculty of Health Sciences / South Africa
- Addis Ababa University – College of Natural Sciences – Center for Food Science and Nutrition / Ethiopia

Cooperating countries: Burkina Faso, Ethiopia, Finland, France, South Africa

Total financial volume: 341.736 €

Summary:

Folate (vitamin B9) is involved in vital functions of cell metabolism. Inadequate dietary intakes lead to deficiencies, which induce important health problems, ranging from megaloblastic anaemia, cardiovascular risks, to neural tube defects. Folate deficiency is commonly observed in developing countries, but also in many industrialized contexts.

Even if the most important natural source of dietary folate is leafy vegetable, cereals can greatly contribute to folate intakes. Indeed, they contain non-negligible amounts of folate, and are frequently consumed. Some countries have established mandatory food fortification with synthetic folic acid, but despite the observed beneficial effects, concerns exist over the possible adverse effects in some subpopulations in case of large-scale fortification.

Another solution to improve the folate content of cereal-based staple foods would be to use in situ fortification by fermentation. In addition to the advantages presented by fermentation (increase in sanitary and nutritional quality), this process is an ancestral way of preserving food products and is a sustainable process (low effluents production and little energy consumption). The production of folates by lactic acid bacteria (LAB) during food fermentation has been validated in dairy products but the data on cereal based fermented foods (CBFF) are scarce. Furthermore, the bioavailability of natural folate forms (vitamers) has been rarely studied, especially in African foods.

The fight against vitamin deficiency is an "interfacing challenge". It is related to food security, health, but also biodiversity. The objective of this project is to evaluate the possibility of improving folate intakes by target populations, by increasing the folate contents of traditional cereal staple foods through fermentation. Therefore, we will make use of the diversity of microorganisms naturally present in those food products. This project consists of 4 work-packages:

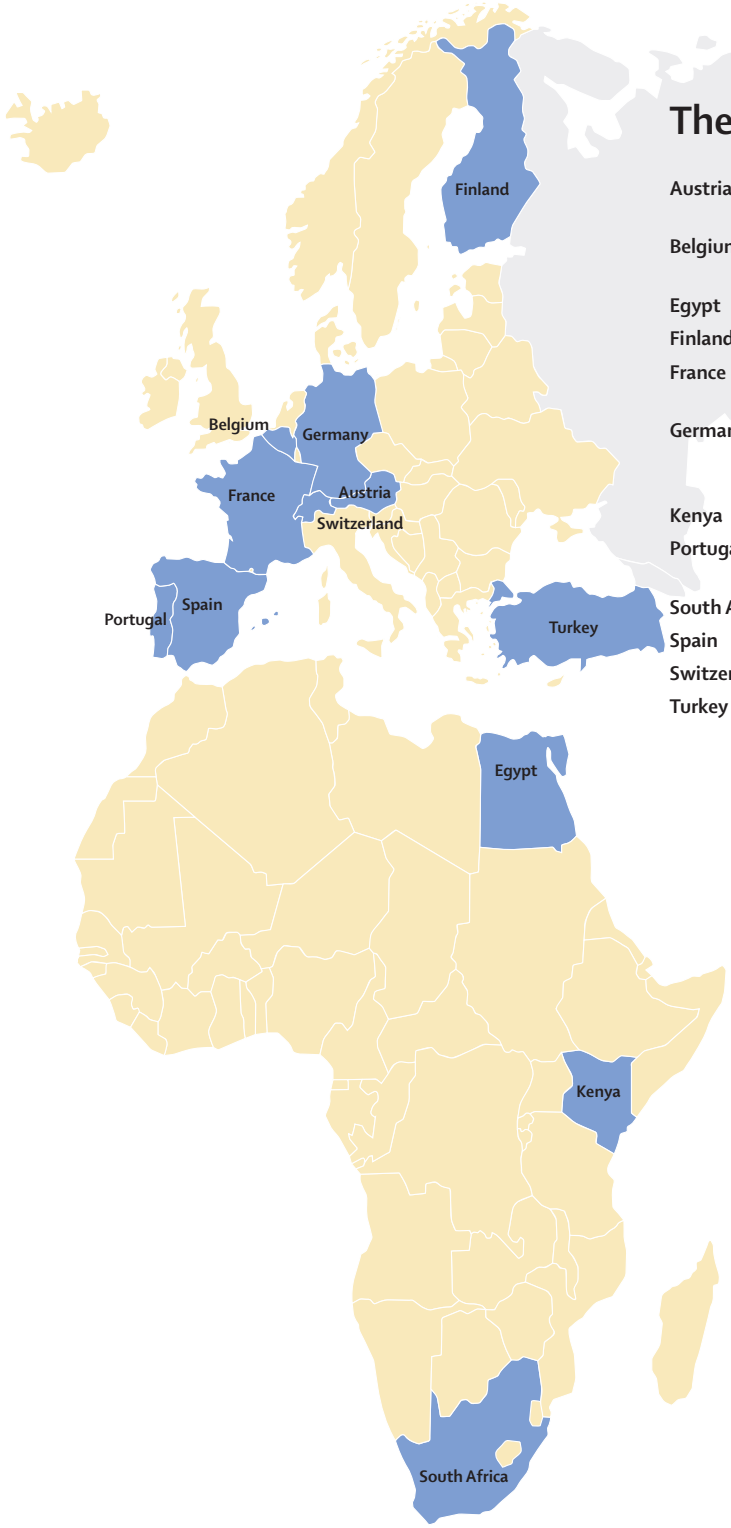
In WP1, an estimation of the contribution of CBFF to the cover of folate needs in the target populations will be calculated, for the five countries of the consortium (Finland, France, Burkina-Faso, Ethiopia, South-Africa) that represent various nutritional contexts.

In WP2, we will estimate the potential of folate production by the microorganisms involved in fermentation of our model foods. We will choose one CBFF per country of the consortium, among the most consumed. A combination of metagenomic and classical microbiological approaches will be used.

In WP3, the measurement of folate content will be assessed for the samples studied in WP2. This will allow selecting a few LAB strains (the most producing ones) to identify the produced vitamers and study their potential absorption during food digestion.

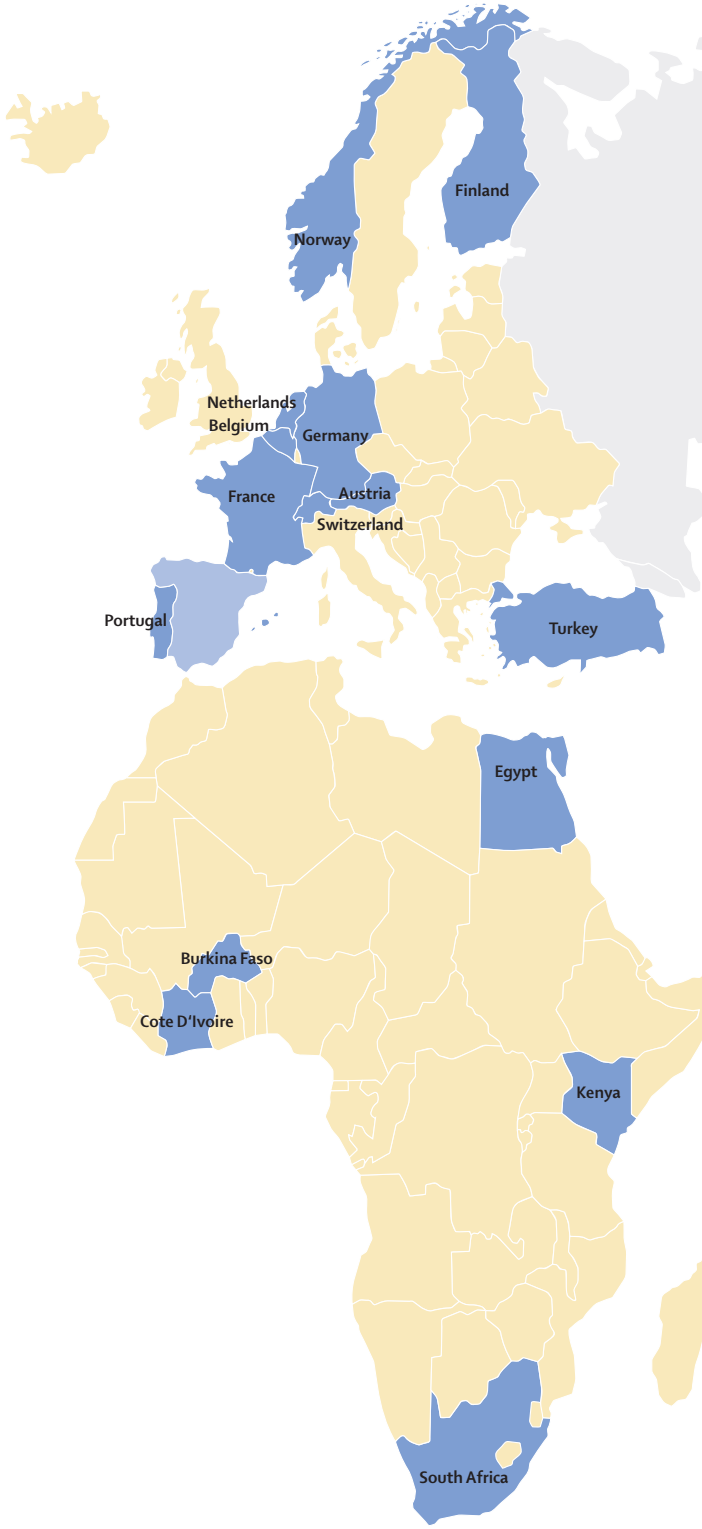
In WP4, the identified high folate-producing bacteria will be used to produce improved CBFF with high folate content. The consumer acceptability of those food products will be tested in each country. Finally, we will estimate the potential of using optimal CBFF to increase the folate intake by our target populations.

The success of this multidisciplinary project depends on the collaboration between complementary partners. This project will strengthen existing collaborations and will be an opportunity to initiate new collaborations between African and European partners. It will also allow the formation of young researchers.



The Beginning – The Consortium

Austria	KEF/OeAD – Commission for Development Research at the Austrian Agency for International Cooperation in Education and Research
Belgium	CIUF/CUD – Inter-university Council of the French Community of Belgium/University Commission for Development
Egypt	MHESR – Ministry of Higher Education and Scientific Research
Finland	TEM – Finnish Ministry of Employment and the Economy
France	IRD – Institut de recherche pour le developpement (Coordinating Institution)
Germany	PT– DLR – International Bureau of the German Federal Ministry of Education and Research & BMBF – Federal Ministry of Education and Research
Kenya	MOST-KE – The Ministry of Higher Education Science and Technology
Portugal	FCT – Ministry of Science, Technology and Higher Education – Foundation for Science and Technology
South Africa	DST – Department of Science and Technology
Spain	MICINN – Ministry of Science and Innovation
Switzerland	SNSF – Swiss National Science Foundation
Turkey	TÜBITAK – The Scientific and Technological Research Council of Turkey



The Call – The Funding Parties

Austria	BMWF – Austrian Federal Ministry of Science and Research
Belgium	BELSPO – Federal Science Policy Office & CIUF/CUD – Inter-university Council of the French Community of Belgium/University Commission for Development & FNRS – Fund for Scientific Research & FWO – Research Foundation – Flanders
Burkina Faso	Ministère de la Recherche Scientifique et de l'Innovation
Côte-d'Ivoire	PASRES – Strategic Support Program for Scientific Research in Côte-d'Ivoire
Egypt	STDF – Science and Technology Development Fund
Finland	Academy of Finland TEM & Finnish Cultural Foundation & TEKES – Finnish Funding Agency for Technology and Innovation
France	IRD – Institut de recherche pour le developpement (Coordinating Institution)
Germany	BMBF – International Bureau IB of the Federal Ministry for Education and Research in Germany (Common Call Management: PT- DLR – International Bureau of the German Federal Ministry of Education and Research)
Kenya	The Ministry of Higher Education Science and Technology
The Netherlands	NWO-WOTRO – Netherlands Organisation for Scientific Research – Science for Global Development
Norway	The Research Council of Norway
Portugal	FCT – Foundation for Science and Technology – Ministry of Education and Science International Relations Department
South Africa	DST – Department of Science and Technology
Switzerland	SNSF – Swiss National Science Foundation
Turkey	TÜBITAK – The Scientific and Technological Research Council of Turkey

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1010 Vienna; Austria

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Editors: Dr. Mattias Larsen, mattias.larsen@oead.at
Matthias Weissgram, matthias.weissgram@oead.at

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