



# ECPGR Activity Grant Scheme Proposal Form

## Fourth Call

### Activity Proposal

Activity	
Full title	Improving a cooperation network between actors involved in conservation and utilization of <i>Beta</i> genetic resources
Acronym (or short title)	BETANET
Duration of Activity (in months)	12
Starting date	1/12/2017

### Applying Working Group(s)

	Working Group	Indicate name and surname of Working Group Chair
1.	<i>Beta</i>	Parthenopi Ralli
2.		
3.		
4.		

### Activity Coordinator

Activity Coordinator	
Name and Surname	Piergiorgio Stevanato
Nationality	Italian
Current position	Researcher
Institute	Department of Agronomy Food Natural Resources Animals Environment (DAFNAE)
Country	Italy
Telephone	+39 049 8272938
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**ECPGR Activity Grant Scheme  
Proposal Form**

**Fourth Call**

**Activity Partners**

*Please note that each partner need to be a member of a Working Group's Pool of Experts to be eligible.*

*A maximum of 12 funded partners can be listed. For self-funded partners please use the separate box below.*

Partner ID No.	Name and Surname	Institute	Country
1	Piergiorgio Stevanato	Department of Agronomy Food Natural Resources Animals Environment (DAFNAE) – University of Padova	Italy
2	Parthenopi Ralli	Institute of Plant Breeding and Phytogetic Resources – Hellenic Agricultural Organization – DEMETER	Greece
3	Lothar Frese	Institute for Breeding Research on Agricultural Crops – Julius Kühn-Institut (JKI)	Germany
4	Miguel Angelo Almeida Pinheiro de Carvalho	ISOplexis Genebank. University of Madeira	Portugal
5	Charlotte Allender	University of Warwick	United Kingdom
6	Dermot Grogan	Department of Agriculture, Food & the Marine	Ireland
7	Zivko Curcic	Institute of field and vegetable crops	Serbia

**Self-funded partners**

Partner No.	Name and Surname	Institute	Country
1	Stephan Weise	IPK Gatersleben	Germany
2	Guiseppe Mandolino	CREA-Research Center for Industrial Crops (CREA-CIN)	Italy
3	George Skaracis	Agricultural University of Athens	Greece
4	Michael Chester	Royal Botanic Gardens Kew	United Kingdom
5	Chiara Broccanello	University of Padova	Italy
6	Paul Townson	Lion Seeds Ltd	United Kingdom
7	Axel Schechert	Strube Research GmbH & Co. KG	Germany
8	Stefan Martens	IASMA - Edmund Mach Foundation Research and Innovation Centre	Italy
9	Bahram Heidari	Shiraz University	Iran
10	Mahdi Hassani	Researcher in Sugar Beet Seed Institute(SBSI) Karaj, Iran	Iran
11	Bruno Desprez	Florimond Desprez Créations Variétales	France

**ECPGR Activity Grant Scheme  
Proposal Form**

**Fourth Call**

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**Description of Activity**

*Please address the following aspects:*

- *Background:* Explain the context behind the choice of this Activity, e.g. why this has been prioritized or selected. If this is the continuation of a preceding Activity, please indicate how and why the new Activity will build on previous results/experiences
- *Justification:* Explain why this Activity is justified in terms of making progress towards achieving the ECPGR objectives
- *Methodology or Approach:* Explain how the partners will operate. What are the respective roles and synergies they can add? Explain the rationale of meeting (or not) as part of the Activity.
- *Expected impact.* Clearly specify the expected impact from this Activity for the respective ECPGR objective(s), compared to the current state of progress of those same objectives. Explain how the impact will be obtained.
- *Links with other non-ECPGR projects or individuals:* If applicable, clearly explain the objectives of the linked projects and the reasons for complementarity with the ECPGR Activity.

Describe the Activity - (max. 1000 words):

*Aim:* The ultimate goal is to discuss and decide on an *in situ* management work plan of the Working Group (WG) on *Beta*, to reinforce links between the ECPGR WG and the World *Beta* Network (WBN) and to establish new links with nature conservation agencies through the EU funded project Farmer's Pride.

*Background:* Wild species of the genus *Beta* and *Patellifolia* have been and still are being used for genetic improvement of the cultivated beets. There is an impressive number of scientific papers, reviews and books on the specific value of species and their populations as well as on the geographic distribution patterns of genetic diversity which the applicants can provide on request.

The CBD and the Treaty recommend the implementation of PGR conservations work plans combining the best elements of *in situ* and *ex situ* conservation concepts. The task of *ex situ* conservation of the genetic resources of the genus *Beta* and *Patellifolia* is shared by genebanks collaborating within the WBN. While *ex situ* conservation is rather well organised and functioning the implementation of *in situ* conservation concepts is lagging behind. The sustainable use of PGR can only be guaranteed if *ex situ* and *in situ* conservation actions complement each other. This is not yet the case for *Beta* / *Patellifolia*. For all the above reasons it is important to facilitate the conservation and sustainable use of the *Beta* and *Patellifolia* genetic resources through strengthening the relationships between genebanks, species conservation agencies and users in the public and private sector.

*Justification:* Designing and implementing conservation, characterization and utilization of *Beta* genetic resources initiatives require intensive cooperation between all actors involved. As many institutions that contributed to the WG activities in the past have been reorganised there is need to establish or re-new partnerships.

- *Methodology or Approach:* A meeting will be organized by the Dept. DAFNAE of University of Padova (Italy) to convene researchers as well as partners in industry and governmental agencies from European countries who are involved in conservation, characterization, documentation and utilization of beet genetic resources. During the meeting an *in situ* management work plan will be outlined and after the meeting further elaborated with involvement of the Farmer's Pride project team. The work plan including a list of MAWP populations will be published in the meeting report and presented to ECPGR Secretariat and Executive Committee. The chair of the WG on *Beta* is partner of the Farmer's Pride project. This fortunate situation will allow the WG on *Beta* to closely collaborate with the

**ECPGR Activity Grant Scheme  
Proposal Form**

**Fourth Call**

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Farmer's Pride team and allow for tuning the crop specific activities with the overarching activities of the EU project.

- *Expected impact:*

1. Improved long-term *in situ* and *ex situ* conservation of beet genetic resources in Europe with a specific focus on complementary conservation action planning. A list of MAWP will be available at the end of the action. The respective sites can be used to establish a European multi-species genetic reserve network.
2. Development of research project proposals required for *in situ* conservation planning.
3. New and/or improved links between all stakeholder groups involved in beet genetic resources programmes in Europe, the USA, Morocco, and I.R. of Iran.

*Links with other non-ECPGR projects or individuals:* European breeding researchers collaborate with the USDA/ARS since the 1980s. The task-sharing in the field of *ex situ* conservation as well as the exchange of germplasm and information has been and is very beneficial to partners in Europe and the USA, and for the global community of beet researcher as well. A joint research project on genetic diversity of *B. nana* (partners in Greece, USA, Germany) is almost finished and research on *Patellifolia* is ongoing (several partners in the EU, USA). The results will contribute to a better conservation of native European beet CWR.

**ECPGR Activity Grant Scheme  
Proposal Form**

**Fourth Call**

**Expected products and related ECPGR Objectives**

*List concrete products and results that are obtained by the Activity and the corresponding number(s) of the ECPGR Outcome(s) and/or Output(s) and/or Activities to which each product/result will contribute.*

Task	Expected products/results	Corresponding ECPGR outcome, output, activity
1	Complementary conservation action plan	Outcome 3, output 3.2, activity 3.2.6 Outcome 3, output 3.4, activity 3.4.1 Outcome 3, output 3.5, activity 3.5.1
2	Research project proposals focussed on diversity studies and conservation planning	Outcome 3, output 3.2, activity 3.2.4
3	Improved links between all stakeholder groups involved in beet genetic resources conservation and utilization programmes	Outcome 5, output 5.3, activity 5.3.1 Outcome 5, output 5.4, activity 5.4.1 Outcome 6, output 6.3, activity 6.3.1

**Workplan for the proposed period of the Activity**

*Brief description of meetings and/or main actions of the Activity.*

	Type of Action (indicate if "meeting" or "other action")
1	<p><i>Meeting</i></p> <p><i>Action 1 (relates to Task 1, 2 and 3):</i> A meeting will be held at the Venice International University located at San Servolo. During the first part of the meeting, four key note lectures will be presented to prepare the discussion and elaboration of the complementary conservation action plan. Past investigations of the genetic diversity of CWR will be reviewed. The first review will deal with wild species of section <i>Beta</i>, the second review will focus on section <i>Corollinae</i> and the genus <i>Patellifolia</i>, the third paper review the geographic origin of CWR traits of interest to or used in plant breeding and crop production and the fourth presentation could focus on general aspects such as measure of biological variation applied in landscape genetics. The organizers will arrange the participation of representatives of regional or local nature conservation agencies to discuss with them the genetic reserve concept and to learn to what extent these agencies can support the conservation of <i>Beta</i> CWRs in Italy. The participation of representatives from breeding companies will be arranged as well, in order to find ways to fund innovative breeding research projects which will underpin the value of <i>Beta</i> CWR and genetic reserves. In addition, participants will present papers or posters on ongoing research projects. This will allow us to gather comprehensive information on genetic diversity, conservation and use of beet PGR in Europe and non-European countries.</p> <p>The second part of the meeting will be divided into two thematic workshops, namely i) complementary conservation action planning and the role of AEGIS, EURISCO, and GenResIS and ii) research required for national conservation planning as condition for sustainable use. During a plenary session the work shop results will presented and discussed. In addition, the C&amp;E-data transfer concept and concept for inclusion of new C&amp;E data into EURISCO, the need to change the IDBB homepage into a <i>Beta</i> and <i>Patellifolia</i> PGR portal and the current user's interest in evaluation of germplasm will be addressed by the Chair. We currently consider the submission of a joint action on Beta / Doc &amp; Info WG on documentation proposal dealing with transfer of historical and inclusion of new C&amp;E data into EURISCO. The WG members will be asked for their opinions and to what extent they could support the necessary work. During the meeting</p>

**ECPGR Activity Grant Scheme  
Proposal Form**

**Fourth Call**

	<p>the Chair and the former Chair of the Beta WG will inform the members of the WG about the results that will come out from the Chairs' meeting that is going to take place in October 2017 in Slovenia and the activities and priorities that should be carried out from the WG in order to implement the ECPGR objectives for phase IX and to fulfill the gaps identified. The members will discuss and decide the WG priorities for the phase X as well according to the suggestions that will be made in the meeting from the ECPGR Secretariat and Executive Committee.</p> <p>Services:          Outcome 3, output 3.2, activity 3.2.4 and 3.2.6              output 3.4, activity 3.4.1              output 3.5, activity 3.5.1          Outcome 5, output 5.3, activity 5.3.1              output 5.4, activity 5.4.1          Outcome 6, output 6.3, activity 6.3.1</p>
2	<p><i>Other action</i></p> <p><i>Action 2 (relates to Task 1 and 3):</i> Gathering information via phone calls / visits with National Focal Points and questionnaires about possible partners willing to support or assist in practice the implementation of the <i>Beta / Patellifolia</i> complementary conservation work plan in Europe and adjacent regions. This action is need to link <i>ex situ</i> genebanks with nature conservation agencies in Europe. The action will be directed by the University of Padova with the support of its fundraising and public relation office. The members of the WG on <i>Beta</i> will support the action by providing addresses of agencies responsible for nature conservation programmes planning and implementation at all relevant administrative levels (NUTS1 to 3 and LAU 1 and 2). WG members will contact appropriate persons, provided information on the value of beet PGR, the conservation needs and concepts and seek support of the agencies in the field of beet PGR <i>in situ</i> conservation. Our goal is to contact and establish working relationships with at least 50 different agencies in Europe, i.e. with agencies that are responsible for the <i>in situ</i> management of multi-species sites that include <i>Beta</i> and/or <i>Patellifolia</i> as described by GenResIS.</p> <p>WG members will produce information material to assist public relation and communication with institutions in Europe playing a role in beet PGR conservation and use. The WG will prepare, print and disseminate a brochure on beet genetic resources conservation and use in general and will also produce illustrated species portraits with information on the geographic distribution, conservation status and past uses. To this end four author groups will be determined during the meeting (general paper, <i>Beta</i> species portrait, <i>Corollinae</i> species portrait, <i>Patellifolia</i> species portrait). The materials will also be made available to the Farmer's Pride team.</p> <p>A website will be created to host visit schedules, to share experiences and disseminate promotional communication material and summary of information gathering activity. Deliverables including all materials will be available online. From 2019 onwards, the website will replace the IDBB homepage which may be switched off in the near future.</p> <p>Services:          Outcome 3, output 3.2, activity 3.2.4 and 3.2.6              output 3.4, activity 3.4.1          Outcome 5, output 5.3, activity 5.3.1              output 5.4, activity 5.4.1</p>

**ECPGR Activity Grant Scheme  
Proposal Form**

**Fourth Call**

	Outcome 6, output 6.3, activity 6.3.1
3	<p><i>Other action</i></p> <p><i>Action 3 (relates to Task 2 and 3):</i> Research needs addressed during the meeting will be outlined in a series of research notes to be written after the meeting. This action will be carried out in close cooperation with the Chair of the Study Group Breeding and Genetics of the International Institute for Beet Research (IIRB). The research notes will be circulated among potential project partners. The ECPGR will be informed on the number of notes and the research category such as landscape genetics, evaluation or pre-breeding.</p> <p>Services: Outcome 3, output 3.2, activity 3.2.4</p>

**Project work plan**

Month \ Action	1	2	3	4	5	6	7	8	9	10	11	12	
Action 1	X	X	X	X	X	X	X	X	1				
Action 2					X	X	X	X	X	X	X	2	
Action 3									X	X	X	X	3

**Ciphers indicate products to be delivered**

- 1 = Meeting report including complementary conservation workplan online.
- 2 = List of cooperating nature conservation agencies available. Website established and operating.  
General paper and species portraits online and printed.
- 3 = Qualified list of research notes available.

**Additional remarks**

*Indicate any additional remark(s) that is/are important for the evaluation/implementation of the proposed Activity*

<p>Remarks:</p> <p>Once accepted, this proposal will offer the opportunity to different stakeholders to collaborate and exchange opinions regarding the conservation, evaluation and utilization of <i>Beta</i> and <i>Patellifolia</i> germplasm, above all as regards the genetic resistances to biotic and abiotic stresses. The foreseen project will strengthen networking, facilitate the dissemination of knowledge and enhance the relationship among the participants as well as establish relationships between the PGR conservation and user community and the nature / species conservation community.</p> <p>Some of the cost of self funded partners participation will be covered by DAFNAE funds. The participation of Stephan Weise will be funded through the EURISCO travel budget.</p>
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**Please send the completed form together with the budget table to the  
Chair of the submitting Working Group for submission of the Activity proposal.**