

Project Deliverable

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PP	Restricted to other programme participants (including the Commission)
RE	Restricted to a group defined by the consortium (including the Commission)
CO	Confidential, only for members of the consortium (including the Commission)
	X

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Abstract :

The present document describes an OVERALL STRATEGY OF THE TWINNING ACTIVITIES that will be implemented by DIGGAUG and UMU in order to foster joint academic research. The document puts particular focus on the three axis of the strategy and provides the list of the twinning activities that will be implemented during two next years.

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1. General issues

The overall objective of the BIOPARTNERS project is to stimulate cooperation and strategic partnership between Europe and Georgia in the thematic priority “Food, Agriculture and Biotechnology”. The operational project’ objective focuses on integrating Georgian materials science research into the European Research Area, through strengthening of research co-operation between DIBBAUG and its long term European scientific partner, University of Murcia (Spain), UMU. In order to achieve this goal, an ambitious work plan for improving the DIBBAUG’ capacities in Biotechnology research field has been carefully designed based on 5 strongly interrelated work packages one of which is Twinning Activities.

Twining activities are designed to be implemented jointly by DIBBAUG and UMU and are based on joint research plan which is the basis of the twinning work between the two research organizations.

As a first step, the Twinning plan which will enable partners to determine all the specific needs of the twinning work is prepared by DIBBAUG and UMU. Ending of the Twinning plan between DIBBAUG and UMU, making Twinning agreement and signing a Memorandum of Understanding between DIBBAUG and UMU is planned for June, 2012.

2. Overall Strategy of the Twinning activities

The strategy of the twinning activities is based upon three major axis:

- **AXIS 1 - Twinning plan and a Joint Research Plans development (design)**

This axis comprises a number of tasks aiming at setting the basis of the twinning work between the two research organizations by elaborating an overall Twinning Plan and a Joint Research Plan. For this purpose, in the first place, the Evaluation of the most advanced research directions for both organisations and cross-mapping of research priorities in order to identify common research interests as a basis for future joint activities was carried out. Several internal meetings of DIBBAUG's relevant staff aimed at ensuring that all members agree with the concept were carried out and formal on-line meeting of senior officials from both institutes was organized aimed at discussing and coordinating the twinning activities. During these meetings the joint research priorities directions for DIBBAUG and UMU and joint activities "covering" these directions were discussed and agreed by the partners. The next step is to validate this plan and to prepare and made a formal twinning agreement and sign Memorandum of Understanding.

- **AXIS 2 - Implementation and monitoring**

This axis concerns implementation and monitoring of joint twinning activities. Partners agreed that twinning activities designed at realizing Joint Research Plan include the several types of action. Organization of joint scientific workshops allows practical exchange, data and knowledge sharing between researchers. Several short term exchange visits of researchers and PhD students from both organizations are planned within the joint research agenda. Joint experiments will be conducted in UCBL and in other EU locations (using large scale EU research infrastructure). Participation in international events and presenting common results will be supported. The implementation of the twinning activities will be evaluated and an accurate feedback will be ensured by means of regular peer reviews, implemented by selected Scientific Reference Team.

- **AXIS 3 – Feasibility study for Joint laboratory establishment**

This axis is designed to investigate the feasibility, initial preparation and setting up (in case of positive result) joint laboratory between DIBBAUG and UMU, with ability to use common resources for the cooperative research on the base of beforehand agreed plans. A Feasibility study will be proceeded in order to identify the possible bottlenecks and to find the best way for avoid them while setting up the Joint Lab.

- **Sustainability plan and a project exit strategy**

In addition partners discussed and agreed that Sustainability plan aimed at ensuring further sustainability of the activities, including potential funding sources will be prepared and project exit strategy will be developed at the end of project period.

3. Development of Twinning and Joint Research plan of DIBBAUG and UMU

Elaboration of Joint Research Plan and Twinning Plan was preceded by several multi-step contacts and discussions on identification of joint research fields which have the mutual interest and potential for the growth.

3.1. Joint Research Plan

The core task for the development of the joint research plan was the evaluation of the most advanced research directions common for both organisation.

3.2. Twinning activities plan

After identification of joint research priorities as a basis for future research work within project implementation, the partners carried out several meetings aimed at developing the concept, design and timing of twinning activities. It was agreed that twinning activities plan will include the following actions:

1. Making formal twinning agreement
2. Management visits
3. Exchange of researchers
4. Implementation of joint experiments
5. Organisation of scientific workshops
6. Joint participation in international events

3.2.1. Actions content

- **Making formal twinning agreement**

The partners proposed to make formal twinning agreement and sign Memorandum of Understanding after validation and adjustment of the twinning plan. Both twinned partners are supposed to follow this plan in order to decrease risks and achieve a successful partnership.

- **Management visits**

Partners proposed to organise meetings of relevant senior officials of both organization in order to determine main parameters of the twinning activities.

- **Exchange of researchers**

Researchers and PhD students will be exchanged between both twinned organisations. 4+ scientists will be identified from both sides (i.e. 8+ in total) and will integrate the twinning organisation for short term secondments. The exchange of research will be of great importance for the development of joint experiments and it will be also of great help for the knowledge of the scientific situation in Georgia and Spain.

- **Implementation of joint experiments**

The joint experiments will be carried out in both scientific fields: Biotechnology and Biomedicine. Both partners DIBBAUG and UMU have a long interest in the activity and impact of green and black tea catechins on the human health. Studies for reveal the activity of these catechins alone, or in combination with other drugs, for the prophylaxis and treatment of certain cancers will be carried out. DIBBAUG will produce high standard extracts of these catechins and the UMU (together with scientist from the Georgian Group participating in the exchange of research) will assay the activity of these extracts on human cancer cell lines. There is also a great potential interest in the commercialization of these green extracts by a Spanish spin-off company. A second field of work will be the extraction and biological activities of inulin from dry extracts of topinambur (*Helianthus tuberosus* L). DIBBAUG has a great experience in the isolation of this kind of products, and the UMU has also a wide background in the study of inulins from different sources, including chicory and artichoke inulins. The biotechnological use of novels inulins for nutrition and biomedicine will be explored. These studies will concentrate in the use of inulin as a prebiotic and in the use of Jerusalem artichoke inulin as a carrier for colonic drugs. All these joint activity will be carried out in parallel with other twinning activities including the exchange of researchers. Although these activities have been initially planned for joint experiments, the groups will also analyze other possible cooperation in the biotechnology field.

- **Organisation of scientific workshops**

5+ Scientific workshops Scientific workshops will be organised in order to allow sharing of data, information and knowledge

- **Joint participation in international events**

The list of international scientific events for 2012-2013 WHERE DIBBAUG AND UMU PLAN are going TO PARTICIPATE

DATE	NAME	FULL NAME	PLACE	ADRESS
16th July 2012	Info Day and Brokerage Event on Call FP7-KBBE-2013-7	Food, Agriculture and Fisheries, and Biotechnology Info Day and Brokerage Event on Call FP7-KBBE-2013-7	Brussels, Belgium	Charlemagne Building Rue de la Loi 170, 1040 - Brussels
4-9 Sep 2012	22nd IUBMB & 37th FEBS	22nd IUBMB & 37th FEBS Congress:	Seville, Spain	Conference and Exhibition Centre 41020, Avda. Alcalde

	Congress	"From single Molecules to systems biology"		Luis Uruñuela n° 1, FIBES Seville
24 - 26 Sep 2012	Euro Phages 2012	Euro Phages 2012 — Bacteriophage in Medicine, Food and Biotechnology	Oxford, United Kingdom	St Hilda's College Oxford, Cowley Place, Oxford, OX4 1DY, England, UK
16 - 17 Oct, 2012	Microscon 2012	Microscon 2012 — 1st Swiss International Conference on Industrial Microbiology	Olten, Switzerland	Hotel Arte Riggerbachstrasse 10 CH-4600 Olten
18-19 March, 2013	Biotech 2013	3rd Annual International Conference on Advances in Biotechnology Biotech 2013	Singapore, Singapore	11 Canning Walk Singapore 17888
7-10 May, 2013		Euro Food Chem XVII	Istanbul, Turkey	???

3.2.2. The list of the Twinning activities in 2012

Twining activities	Details	Month of finalisation
Management visits	Meetings of relevant senior officials of both organizations will be organized	TBC
Making formal twinning agreement	a formal agreement between DIBBAUG and UMU will be set up. This will include: - Organisation of Joint strategic seminar between DIBBAUG and UMU in order to insure that all the relevant staff agrees with concept (with the participation of Scientific Reference Team) -A formal signature of the twinning agreement	9
Exchange of researchers	Researchers and PhD students will be exchanged between both twinned organisations. 4+ scientists will be identified	TBC

	from both sides (i.e. 8+ in total) and will integrate the twinning organisation for short term secondments;	
Implementation of joint experiments	<p>The activities below will be developed during the project</p> <p>Activity 1. In vitro and in vivo investigation of the bioactive properties of dry extracts from Georgian green tea. To search for the activity of these extracts alone or in combination with other drugs used for the treatment of cancers.</p> <p>Activity 2. Extraction and biological activities of inulin from dry extracts of topinambur (<i>Helianthus tuberosus</i> L). Production of inulin-containing functional food additives.</p> <p>It was agreed that DIBBAUG would produce and investigate dry extracts from Georgian green tea and from high inulin-containing dry extracts of topinambur (<i>Helianthus tuberosus</i> L) and provide UMU with them for further investigation</p>	TBC
Organisation of scientific workshops	5+ Scientific workshops will be organised in order to allow sharing of data, information and knowledge;	TBC
Joint participation in international events	<p>DIBBAUG and UMU will present their joint work at conferences, congresses and they will jointly participate in events organized by European commission under the framework of FP7 such as Food, Agriculture and Fisheries, and Biotechnology Info Day and Brokerage Event on Call FP7-KBBE-2013-7</p> <p>,</p>	

4. Monitoring of twinning activities implementation and indicators of performance

BIOPARTNERS collaborators put special attention to the issues of regular monitoring of project implementation. It was suggested that the project management and relevant staff of both organizations will meet twice a year in order to provide accurate feedback analysis of project activities, correcting plans and adjusting future activities.

It is also planned to organise two peer reviews of twinning activities by the Scientific Reference Team members who are to be selected and approved. One review is envisaged for validation of the Twinning plan and another one is for implementation of twinning activities. The goal of the reviews will be to analyse the project teams' work, to identify possible weaknesses, and to discuss future opportunities for collaboration between DIBBAUG, UMU and other European Union organisations.

Indicators of Twinning activities	Target
Scientific workshops	5+
Short term researchers exchanged	8+
Management staff visits	3+
Joint experiments	3+

5. Cooperation Sustainability Plan

The activities between the two twinning partners will allow creation of synergies for long term collaboration.

Cooperation Sustainability Plan will be elaborated well before the end of the project. This will allow the continuation of the cooperation between the two twinning organisations beyond the project end. The plan may include:

- Project exit strategy development that will allow the continuation of the twinning activities after the end of the project.
- Continuation of use of common data, information, knowledge and material on-line tool;
- Continuation of using of common networks;

Appropriate funding sources will be detected and analyzed, proposal might be prepared.