



# BioCop



FOOD-CT-2004-06988

BioCop

New Technologies to Screen Multiple Chemical Contaminants in  
Foods

Integrated Project

Priority 5; Food Quality and Safety

Competitive Call

Full Call Text

Deadline: 27<sup>th</sup> February 2008

## **Announcement of a Competitive Call for an Additional Project Partner**

BioCop is currently active in the *Sixth Framework programme of the European Community for research, technological development and demonstration activities contributing to the creation of the European research area and to innovation (2002-2006)*

Project contract number – FOOD-CT-2004-06988

Project acronym – BioCop

Project full name – New Technologies to Screen Multiple Chemical Contaminants in Foods

Instrument type – Integrated project

### **Summary of task(s) requested**

The BioCop initiative is a five year Integrated Project (IP), led by Professor Chris Elliott from the Institute of Agri-Food and Land Use, Queens University Belfast.

The project includes 33 partners representing 16 EU Member States.

The BioCop project runs from the 1st January 2005 – 31st December 2009 and the expected duration of participation of the new partner in the project will be from the 1<sup>st</sup> January 2008 – 31st December 2009.

### **Description of the Call**

BioCop wishes to recruit a new partner from a laboratory organisation to join BioCop's existing consortium at the beginning of year 4 and thereon for the remainder of the project. The participation of the new partner is required to carry out certain validation, training and demonstration activities within the project. It is important to note that the new partner will only be active in years 4 and 5 (with possible extension) of BioCop; however the new partner will be required to have a full understanding of Phases 1 and 2 of the project to appreciate their important role in the final phases.

The selection of a new partner who can assist in the further development of Phase 2 and particularly Phase 3 activities will indeed be an asset to achieving the overall aims of the BioCop project. BioCop feel that the inclusion of a new partner will be of substantial benefit to the project and the European consumer in general.

The preparation of the new partner to undertake their specific tasks will be undertaken as part of the new partner integration plan.

### **Introduction**

Chemical Contaminant monitoring in foodstuffs is a highly important and complex issue. A huge investment in time and effort is placed on these activities by regulatory and industrial laboratories. Currently done on a toxin-by-toxin basis, as fresh demands from consumers and regulators grow to improve the quality and safety of food, the need for improved technologies has never been greater. The BioCop project has been constructed to supply regulators, consumers and industry with long-term solutions to the complex problems associated with chemical contaminant monitoring. BioCop's innovative techniques will screen for multiple chemical contaminants in food to better support and ensure this goal.

Rapid and efficient transcriptomics, proteomics and biosensor-based technologies are being developed in BioCop to develop screening methods for a range of pesticides, heavy metals, natural toxins, therapeutic drugs and endocrine disrupters in foods.

### Specific Objectives:

- To develop innovative means of performing sample preparation based on aptamers, microwave and pressurised liquid extraction to permit the rapid co-extraction of multiple chemical contaminants from food matrices
- To improve existing confirmatory methods to support the newly developed innovative multi-analyte screening procedures (where current chemical methods are known to be inadequate)
- To train scientists to use the newly developed analytical tools in the most effective manner
- To disseminate project information to audiences ranging from scientists to consumers and regulators
- To provide long-term training mechanisms for BioCop technologies through higher learning institutions and the development of a distance learning MSc course
- To bring the new tests to the marketplace through the inclusion of commercial partners

BioCop is a five-year project with three very distinct phases:

Phase 1 is based on the development of the new technology platforms in Work Packages 1 –4 (transcriptomics, proteomics, biosensors and binding proteins). The activities in Work Packages 5 – 10 (marine toxins, pesticides, endocrine disruptors, therapeutics, heavy metals and mycotoxins) during this phase are to support the technology producers as much as possible. Their main task is to ensure that as many of the technology platforms developed can be applied to a wide a range of chemical contaminants as possible.

Phase 2 of BioCop is dedicated to the validation of the new methods developed to ensure they are fit-for-purpose, i.e. that they can be proven to perform to the specifications as detailed in the BioCop Description of Work. These descriptions were based on proving that the new technologies developed will greatly enhance the ability to detect multiple chemical contaminants present in foods. The validation procedures will be lead by the participants of Work Packages 5 to 10.

Phase 3 of BioCop is aimed at training a wide range of scientists in the use and advantages of the new methodologies developed. The demonstration of these procedures to a wide group of stakeholders ranging from governments, industry to consumers is also a critical component. These activities are all included within the scope of Work packages 11 – 13 (consumer science, demonstration, management and training).

The new partner will play an important role in three of the major objectives of BioCop as listed below:

#### 1. Role in Training

The existing training infrastructure within BioCop will be utilised to train representatives from the new partners' organisation. They in turn will train other scientists from the network of other laboratories (i.e. cascade training). This programme will be rolled out to enable a programme of training for scientists to be trained on BioCop new (sensor) technologies

## 2. Role in Validation

Within BioCop many new tests will be developed for a wide range of chemical contaminants. However, the measuring devices will be based on a small number of platforms:

1. Measurement of gene expression using a chip-based array reader
2. Measurement of protein-protein interaction using a chip-based array reader
3. Measurement of contaminant-protein interaction using optical and electrochemical biosensors

The Phase 2 task of the new partner will be to use a selection of these platforms to perform a series of validation studies based on food commodities important to their region (grain cereals, poultry and aquaculture based products). The results of this validation study will be compared to the existing methodologies available within the partners' laboratory. A series of control samples (already being produced within BioCop) will also be made available to this partner to allow comparisons to be performed.

This work will be highly complementary to the Phase 2 activities already planned for BioCop. The assay developers will get essential feedback on how the methods perform in a different climate and with different types of samples. Substantial additional information will also be obtained about the robustness of the prototype devices produced in BioCop and how the prototype test kits developed stand up to the additional rigours of transportation to another world region.

We require a partner whom has considerable experience in producing validation data for the methods they routinely use for contamination analysis and whom fully understands the importance of this validation.

## 3. Role in dissemination

The SME cluster in the project will ensure full exploitation of all developed technologies. This will be greatly assisted by the substantial phase of demonstration and training to all stake holders (regulators, food industries, laboratory networks and consumers) included within the project. The new partner will have a major role in these training and demonstration activities.

The Phase 3 task of the new partner will be the organisation of a workshop for scientists from Southeast Asia. Successful technologies and applications developed will be showcased to an audience comprising representatives and stakeholders from a range of Southeast Asian countries.

Currently a detailed demonstration plan has been prepared for BioCop and the workshop will be incorporated into this plan. The new partner will have a major input into tailoring the event for the intended audience.

### Interaction with other Work Packages

The new partner will play an important role in WPs 6, 8, 9 and 10 during years 4 and 5 in the testing, validation, training and demonstration of the new methods of analysis developed for heavy metal and mycotoxin contamination in foods, and pesticides and fluoroquinolone monitoring. They will also be required to play an important role in WP12 during year 5 with the demonstration of the new methods of analysis developed for a range of the target compounds included within the project.

Deliverable list relating to new partner. This list will be integrated into the full project deliverable list on recruitment of a new partner.

Deliverable No	<i>Deliverable Title</i>
13.1b	Integration plan for new partner prepared and implemented
13.2b	Detailed training plan for new partner prepared and implemented
6.1b	Completion of training in biosensor platforms for pesticide analysis
8.1b	Completion of training in biosensor platforms for therapeutic analysis
9.1b	Completion of training in biosensor platforms for heavy metal analysis
10.1b	Completion of training in biosensor platforms for mycotoxin analysis
6.2b	Completion of validation activities for pesticide methods
8.2b	Completion of validation activities for therapeutic methods
9.2b	Completion of validation activities for heavy metal methods
10.2b	Completion of validation activities for mycotoxin methods
12.1b	Completion of detailed plan for workshop agreed by WP12 leadership team
12.2b	Completion of Asian workshop

Expected duration of participation in project: from 01/2008 to 12/2009

**(IPs) Estimated costs and funding for the tasks:**

Research costs: max. €50,000 Commission contribution (to be supported by Commission funding of up to 50% of actual costs)

Demonstration costs: max. €50,000 Commission contribution (to be supported by Commission funding of up to 35% of actual costs)

Training costs: max. €50,000 Commission contribution (to be supported by Commission funding of up to 100%)

Total Commission funding available €150,000

**Competitive Call Details**

Call identifier –

Language in which proposal should be submitted – English

Date of close of call – 27<sup>th</sup> February 2008

Time of close of call - 17h00 Brussels time

## **Further Information and Correspondence**

Web address for further information (call webpage) - <http://www.biocop.org/call.html>

Mail address for further information and assistance: [contact@biocop.org](mailto:contact@biocop.org) (Help Desk) and [chris.elliott@gub.ac.uk](mailto:chris.elliott@gub.ac.uk) (Project Co-ordinator)

### **Restrictions on participation:**

The call is for a set description of activities, for which only one successful proposer from a laboratory organisation will be selected.

### **Submission procedure (paper submission only)**

All proposals must be submitted on paper in one stage, as described in the "Guide for Proposers" published at: <http://www.biocop.org/call.html>

All proposals must be submitted to the following address:

Attn: Prof. Chris Elliott  
Agri-Food and Land Use,  
School of Biological Sciences, Room 1209A David Keir Building,  
Stranmillis Road  
Belfast  
BT9 5AG  
Northern Ireland

All proposals must arrive at the specified address no later than the 27th February 2008; 17h00 (GMT) Proposers are reminded that it is their own responsibility to ensure that the submission of their proposal arrives in time.

If multiple paper versions of your proposal are submitted, the last one to arrive before the close of the call will be evaluated (if for example, an error is discovered in version 1 and you wish to send a corrected version before the close of the call then please clearly date and label this as Version 2)

After the close of the call, no additions or changes to the proposals may be taken into account.

### **Acknowledgement of receipt:**

An acknowledgement of receipt will be posted to you as soon as possible after the close of the call (all proposals are not to be opened till after the close of the call) The sending of this receipt does not imply that a proposal has been accepted as eligible for evaluation.

### **Evaluation Criteria**

The evaluation criteria to be used in the competitive call are as described in the "Guidance Notes for Project Co-ordinators planning a competitive call" at <http://cordis.europa.eu/fp6/find-doc-management.htm#competitive>.

The Evaluation procedure will take place from the 27<sup>th</sup> February 2008 to the 12th March 2008. The consortium with the assistance two experts who are independent will evaluate all proposals.

## Structure of the proposal

The proposal comprises of **Part A and B**, both are required to make a complete proposal and must be submitted together.

- **Part A** is a set of three forms, A1, A2 and A3 which collect necessary administrative data about the proposal and the proposer. These documents are available in word format and can be accessed at: <http://www.biocop.org/call.html>

- **Part B** comprises of a structure or list of headings which should be followed, all sections need to be completed.

Part B includes the following:

- Front Page – the front page should clearly identify the following:

Project Full Title: New Technologies to Screen Multiple Chemical Contaminants in Foods

Project Acronym: BioCop

Project Contract Number: Food-CT-2004-06988

Instrument Type: Integrated Project (IP)

Date of preparation of your proposal:

Name of proposers organisation:

Name of proposer (co-ordinating person):

Proposer's telephone number:

Proposer's email address:

Proposer's fax number:

- Contents page
- Proposal summary page

Project Full title: as above

Project Acronym: as above

Proposal abstract: as in Part A

- Section B.0 Tasks addressed
- Section B.1 Outline Implementation plan
- Section B.2 Description of the participant
- Section B.3 Project Resources
- Section B.4 Other issues (inclusive of the ethical issues checklist)

Templates including detailed instructions on how to complete the following documents can be found in the "Guide for proposers" available at <http://www.biocop.org/call.html>

All the relevant background Information and references can also be found at the above URL.

If you require any further assistance then please do not hesitate to contact the BioCop help desk at: [contact@biocop.org](mailto:contact@biocop.org)

## Additional BioCop information

### The BioCop partnership

Partner Number	Partner Name	Partner Short Name
1	Queens University Belfast, United Kingdom	QUB
2	RIVM (EU-CRL on Residues), The Netherlands	RIVM
3	Biacore AB, Sweden	BCOR
4	University of Santiago de Compostela, Spain	USC
5	University of Zurich, Switzerland	UNIZH
6	Denseness Ltd, United Kingdom	XEN
7	RIKILT Institute of Food Safety, The Netherlands	RIKILT
8	National Veterinary School, France	ENVN
9	Laboratoire D'Hormonologie, Belgium	CER
10	Turku University, Finland	UTU
11	Institute of Chemical Technology, Czech Republic	VSCHT
12	EU Joint Research Centre (IRMM), Geel, Belgium	JRC
13	University of Utrecht, The Netherlands	UUT
14	Nestlé Research Centre, Switzerland	NESTLE
15	Central Science Laboratory, United Kingdom	CSL
16	Università di Roma Tor Vergata, Italy	URTV
17	Center for Analytical Chemistry, Austria	IFA
18	Fusion Antibodies Ltd, United Kingdom	FUSION
19	Institute of Biochemistry, Lithuania	UVS
21	Eurofins/Wiertz-Eggert-Jörissen GmbH, Germany	WEJ
22	Centre d'Analyse des Residus en Traces, Belgium	CART
23	Clondiag GmbH, Germany	CLON
24	GeneData AG, Switzerland	GENE
25	ANFACO (Fish Confederation), Spain	ANFACO
26	Community Reference Laboratory for Marine Biotoxins, Vigo, Spain	CRLMB
27	Palmsens, the Netherlands	PALM
28	Biopure, Austria	Bio
29	AFSSA, (EU-CRL for therapeutics) France	AFSSA
30	Swedish University of Agricultural Sciences, Sweden	SLU
31	National Food Centre, Ireland	NFC
32	Integralvision, United Kingdom	IV
33	Health Canada, Canada	HC

## **Description of project management**

BioCop has a successful project management infrastructure in place, the scientific co-ordination, financial and administration aspects are handled by the Project Co-ordinator.

Below sits the Top Management Group (TMG) which deals with the decision making with regards to the strategy and progress of the project, major project revisions, and project finance/administration *etc.*

A Project steering Committee (PSC) is tasked with monitoring the progress of the implementation plan for the project; formulation of revised implementation plans; the preparation and design of detailed dissemination activities; preparation of annual reports on scientific progress; interactions between WP's and ensuring Project information flows effectively. The chosen proposer will be invited to join the PSC.

An independent Project Advisory Board has a direct line of communication with the co-ordinator and the TMG. They are required to advise on the appropriateness of the project planning to deliver key objectives, and advise on issues arising within food safety *etc.*