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ESBIO

Development of a coherent approach to human
biomonitoring in Europe

Coordination Action
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**Concept of an EU platform for exchange of expertise and experiences
between institutions performing human biomonitoring activities**

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[M. Fátima Reis, Institute of Preventive Medicine – Lisbon Faculty of Medicine]

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PU	Public	
PP	Restricted to other programme participants (including Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	x
CO	Confidential, only for members of the consortium (including the Commission Services)	

Institute of Preventive Medicine – Lisbon Faculty of Medicine



ESBIO Project

WP1 – Deliverable 1.5

**Concept of an EU platform for exchange of expertise and experiences
between institutions performing human biomonitoring activities**

M. Fátima Reis, João Tedim and Susana Segurado

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Executive summary

Central to ESBIO's objectives¹ of integrating and standardizing human biomonitoring (HBM) research and surveillance in a European perspective is the requirement for an arena for the open exchange of information between interested groups, to be envisaged within WP1 in the form of a web-based platform.

The concept for the form that this platform will take has been in development during WP1: it will embody a dynamic system for the management and integration of HBM interests, supported by a web-based structure. It aims to assemble the state-of-the-art of scientific knowledge in the HBM field and, by promoting an active exchange of information and expertise between all interested parties, act to bridge the gap between science and policy-making. Specifically, it will enable the systematization and organization of disperse data on HBM activities and the return of ensuing information to either parties conducting the activities or other interested parties. Analyses producing corresponding information from input data will be adaptable to the user's perspective and requirements, as will be the form this output information will take.

Management functions will include online organization of HBM-related events and this function has already been tested during WP1, as have the other projected functions. As such, the first phase of implementation can be considered to have been tested in that the online inventory compiled as a WP1 objective illustrates the

creation of a dedicated website for the purpose of data collection and information generation. Data on all ongoing HBM activities registered by the parties conducting the research or surveillance actions can be analyzed to create simple query overviews, directories categorized according to user specifications or themed newsletters, meeting the objective of providing regular information to relevant stakeholders.

Further implementation steps are foreseen and include the creation of discussion forums under the scope of the online management of information-sharing events, and the creation of links to, and compilation of information on, labs with experience in HBM analyses.

The development of future implementation strategies will require a continued awareness of particular needs and constraints of players in the HBM field to guarantee their effective participation.

Maintenance of the system once implemented will require, in parallel, the identification of users' future needs, preceded by the identification, motivation and mobilization of all relevant players. Additional dissemination and deployment strategies will need to be developed and indicators of platform use established to maintain user interest and fidelity in the long-term.

A person in the form of a platform manager should be responsible for identifying concrete performable actions, potential future actions to fulfill needs even before they arise, and mobilizing human and financial resources.

¹ Expert team to Support **BIO**monitoring (http://www.eu-humanbiomonitoring.org/sub/esbio_o.htm)

Introduction

The overall objective of the ESBIO Project is to develop a coordinated approach for human biomonitoring (HBM) in Europe, in line with Action 3 of the EU Environment and Health Action Plan² by providing strong scientific support for the EU Pilot Project to be launched by the end of 2006. Project development and accomplishment of objectives are based on dedicated work packages (WP) and on defined deliverables that systematically contribute to the enhancement of the current state of the art in the HBM field.

Central to ESBIO's objectives is the requirement for an arena for the open exchange of methodologies, results and expertise, to be envisaged within WP1 in the form of a web-based platform. The pooling and exchange of information between parties conducting or using results from activities in HBM or in health or environmental monitoring in isolation is fundamental to accomplishing these objectives. Additionally, at the Project level, preparing guidelines for the best practice for a coordinated approach to biomonitoring in the EU, to be tested out in the European Pilot Project (WP2), determining how biomonitoring can be most efficiently integrated with environmental monitoring and registered health data (WP3), deciding how ethically sound a biomonitoring activity is (WP4), assessing and selecting appropriate biomarkers (WP6), and assessing implications and costs of various alternatives for the Pilot Project (WP5) all depend on the availability of up-to-date and complete information on current and recent biomonitoring activities. Moreover, maintaining the relevance of the conclusions reached will depend during the Pilot Project on a forum for feedback and open debate of the same issues. The exchange of information and expertise is also fundamental for the success of future HBM activities in Europe and the use of biomonitoring as a policymaking tool. It is foreseen that the integration of HBM activities and specifically the harmonization of study protocols and guidelines will improve cost-efficiency through shared development of tools and strategies, and will allow comparability and an enlargement of scale leading to increased significance of results. Last but not least, the foreseen networking and coordination will foster transfer of expertise to countries with little or no biomonitoring experience and, by including all relevant stakeholders and institutions responsible for policy-making, provide them with more complete information and results on which to base EU policy decisions.

The establishment of this arena has already been tested by accomplishments within WP1 including the establishment of an updated and detailed inventory of recent (past ten years) and ongoing HBM research and non-research activities and databases within Europe and the holding of a conference with the objectives of getting together providers of HBM data, identifying expertise and institutions involved in HBM research and surveillance activities, providing a forum for discussion of problems in conducting HBM, stimulating exchange of experiences on human biomonitoring and improving and divulging existing information on HBM.

² COM(2004)416 adopted by the Commission on 9th June 2004

The option to implement online all related functionalities aimed to take advantage of the communication and dissemination capabilities of the web environment, allowing researchers and other experts involved in HBM to register the details of their biomonitoring activities and to share among all relevant stakeholders the benefits of the innovative capacities which provide them with an efficient way of working together and transforming disperse data and experiences into the added value of knowledge and, simultaneously, a basis for policy-making.

Moving to implementation

In response to the foreseen benefits of close cooperation and coordination in the HBM field at a European level, a concept for an EU web platform on HBM has been established. The concept builds on the existing dedicated websites, created for the online updating of inventory (<http://www.hbm-inventory.org>), and to manage the Conference on the “State of the Art of Human Biomonitoring within Europe” organised in Lisbon from 19.03.06 - 21.03.06 (<http://conference.HBM-inventory.org>).

The basic idea was the creation of an integrated and dynamic **Web Management System** based on those existing dedicated websites. In this system, all relevant stakeholders will gradually be integrated, starting from the ESBIO Project and extending beyond it, mainly to build up knowledge from disperse data and to facilitate the systematic improvement of the relationship between those involved in HBM activities and those involved in policymaking. In this “picture”, other stakeholders will be welcome and will play an important role in shaping up the final objectives of the platform. By providing a broad target audience of both users and potential participants, ease of access (in terms of time and user), ease of implementation of new functionalities and ease of maintenance of the developed software, the platform, as an online integrated solution, improves and expands the developed websites. A global access system such as this maximizes its main advantage over stand-alone software applications: the community-building capabilities.

The platform’s objectives, in short, can be enunciated as: to bring together available data and transform it into knowledge through the added value of statistical analysis, to bridge the gap between scientific and political sides, and to actively promote exchange of HBM experience and information among teams and countries, open to extension at an international level, beyond European borders, with international institutions.

This Web Management System will then be able to support online management of events – as was first exemplified by the online organization of the Conference on the State of the Art of Human Biomonitoring within Europe –, and of data, based on implemented functionalities used to update the inventory and to create overviews but still open to further developments.

Developing and implementing such an EU web platform in the HBM field will require the effective adoption of the following measures:

- to broadly divulge the website dedicated to collecting HBM data;
- to identify HBM information needs and incorporate them into the inventory website, in order to avoid duplication of efforts to generate information at a European level;
- to generate and provide (or make generation easily available) regular or over-time information on the HBM field, in the form of overviews (e.g. of activities by selected parameters, of laboratories by HBM activity, or by biomarker or country, and of institutions or users by country or activity), attempting to meet all users' needs;
- to create or improve conditions for the effective management of information-sharing and other events and broadly divulge this capacity, completing in this way communication actions taken by specific groups;
- to raise awareness of particular needs and constraints of all players in the HBM field, essential for their effective participation;
- to set out clear rules for participation and openness to all relevant stakeholders in relation to known initiatives in the HBM field;
- to create discussion forums under the scope of the online management of information-sharing events, and links to, and compilation of information on, labs with experience in HBM analyses;
- to identify and mobilise human and financial resources for the development of the platform;
- to foresee a human resource in the form of a platform manager responsible for identifying concrete performable actions, potential future actions to fulfill needs even before they arise;
- to ensure maintenance of the system not only by the promoters but specially by all those who will benefit from the promising platform outcomes:
 - a) timely information generated by analysis of data input by the owner and all other users;
 - b) common forum for exchange of knowledge and experiences between teams and countries, including international institutions and the international level beyond European borders;
 - c) high potential for better co-operation among scientific, societal and political sides.

In conclusion, this means that to make the platform happen all players have to deliver what is expected from their side, implicating that identification of sources and invitation to deliver material have to be regular automatic tasks ensured by the system.

Given the needed conditions in terms of human and financial basic resources (to be defined), implementation steps will include a number of actions such as:

- identification, motivation and mobilization of all relevant players for continuous participation;
- development of additional information dissemination and deployment strategies;
- definition of user access profile, implementing a practice for openness and transparency, while respecting data contributors' permission;
- development of platform use indicators, for example by monitoring user access and information delivery, in order to shape the proposed solution for present and future challenges in the HBM field.