**THE ASTROMAP ROADMAP FOR EUROPEAN RESEARCH IN ASTROBIOLOGY** N. Walter[1] and the AstRoMap team: P. Rettberg, G. Horneck (D); F. Gomez (ES); Christian Muller (B), M. T. Capria, E. Palomba (IT); [1]European Science Foundation, BP 90015, 67080 Strasbourg cedex, France, nwalter@esf.org.

**Introduction:** The AstRoMap (Astrobiology and Space Missions Road Mapping) [1] project, supported by the European Commission seventh framework programme (FP7) has for main objective to define and design a **scientific roadmap for European research in Astrobiology**. This first roadmap for astrobiology in Europe will be addressed to the European Commission as well as space agencies and research funding organisations; it is intended to be a key contribution in shaping the scientific landscape for the astrobiology research in Europe.

**Preparatory Steps:** Over the past two years, the project partners have been very active in gathering background information on the European landscape and interest in astrobiology, through various surveys and expert workshops. These expert workshops considered:

- Origin of solar system (November 2014)
- Origin of organic compounds - steps to life (October 2013)
- Physico-chemical boundary conditions for habitability (May 2014)
- Biosignatures as facilitating life detection (May 2014)

The information produced through the project and its topical workshops **is to be integrated in a transversal and synthetic manner into the European Astrobiology Roadmap** by an expert panel (the Roadmap Panel) who will convene at two occasions in spring 2015.

**The AstRoMap Roadmap:** The AstRoMap roadmap should eventually be a document that will help and support the development of scientific programmes across Europe. It should consider the specificities of the astrobiology domain, the international programmatic landscape as well as Earth based (preparatory) activities and potential future scientific experiments, equipment and space missions. In this context, it is crucial to identify European strengths and areas of improvements.

The AstRoMap project is structured around four topics, the structure of the roadmap will follow these four topics (all of them should be considered in the context of astrobiology and life in the universe):

- Origin and evolution of planetary systems
- Origin of organic compounds, steps to life
- Physico-chemical boundary conditions for habitability
- Biosignatures as facilitating life detection

For each of the AstRoMap topic, the roadmap will detail:

- A limited number of key scientific objectives to be addressed in the next 20 years
- What are the main European Strengths?
- What are the main blocking factors?
- How to address and remove blocking factors?

This strategic document will also cover European and international programmatic landscape and potential and mission concepts.

With the second and final roadmap workshop being held in April 2015, the AbSciCon 2015 will be the first opportunity to present the general structure and content of the AstRoMap Roadmap.

**References:**

[1] www.astromap-eu.org

**Additional Information:** AstRoMap partners are:

- Centro de Astrobiologica (INTA-CSIC), Spain
- European Science Foundation, France
- Association pour un Réseau Européen d'Exo/Astrobiology (EANA), France
- B-USOC, Belgium
- Deutsches Zentrum für Luft- und Raumfahrt (DLR), Germany
- National Institute for Astrophysics (INAF), Italy

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