

Introduction to the Special Issue

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Published online: 19 December 2006
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Research on signs of extraterrestrial life is a new exciting challenge for a wide and interdisciplinary scientific community. Due to its intrinsic complexity, such research can be approached from different perspectives. Astrobiology research requires the weaving together of knowledge coming from geology, climatology, chemistry, biology, and astrophysics.

The fascinating theoretical challenge to define life, the intense laboratory studies aiming to get nearest the borders of prebiotic chemistry and biology, the research on favorable sites for the search for signs of life in the Solar System and the development of related technologies were the subject of the workshop entitled “The National Workshop on Astrobiology: Search for Life in the Solar System” organized by INAF – Osservatorio Astronomico di Capodimonte and held in Capri, Italy on 26–28 October, 2005.

The main aim of the workshop was to meet the Italian community involved in astrobiological studies, together with the participation of influential scientists coming from all over the world. Almost 50 people attended the workshop with 3 days of intensive and enjoyable presentations and discussions.

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This special issue is a record of the meeting. All the papers presented here underwent a full refereeing process. Theoretical and experimental works, projects and new technologies concerning the study of the origin of life are reported in this volume.

The articles included in the issue cover topics such as the origin and definition of life, chirality, primordial genomics, prebiotic chemistry, research into signs of life in the solar system, and space technologies. The abstracts of some posters presented during the workshop are also included. These are themes that could help and encourage astrobiologists to achieve a better understanding of mechanisms related to the origin of life.

The organizers would like to thank the following sponsors of the meeting for their financial support: National Institute of Astrophysics (INAF), Osservatorio Astrofisico di Catania, Università “La Sapienza” Roma, Università “La Tuscia” Viterbo and Regione Campania.

Thanks also to the Italian Space Agency (ASI) and the Italian Chemical Society (SCI) for their support. We are particularly grateful to Mimma Lauria for administrative and logistic support, to Novaetech srl for its technical assistance, to Francesca Esposito for the development and maintenance of the web site and to Elena Mazzotta Epifani for assistance during the meeting.