

Preface

The International Symposium on Metallomics 2007 (ISM 2007), was held in Nagoya, Japan 28 November–1 December 2007. This event was organized by the Chemical Society of Japan, with sponsorship of IUPAC, in order to highlight a newly emerging scientific concept. The term “metallomics” was proposed in 2004 to describe integrated biometal science, and has been receiving growing attention because it embraces all research fields related to metals in biological systems. A better understanding of the distribution, biological roles and functions, and physiological regulation and metabolism of metals in biological systems demands interdisciplinary cooperation between scientists in a variety of fields, such as chemistry, physics, biology, medicine, pharmacy, and agriculture. Metallomics can thus be expected to play a more widely recognized role in health, the environment, nutrition, food, toxicology, public hygiene, and bioremediation, to name just a few societally important application areas. Furthermore, the development of metallomics as a scientific field complements genomics and proteomics, and contributes toward more comprehensive insights into life processes.

This first International Symposium on Metallomics was attended by about 340 delegates from 30 countries. The scientific program comprised 98 oral presentations including 6 plenary, 15 keynote, and 35 invited lectures, and 124 poster presentations. The proceedings covered a broad range of topics, which were delineated as

- metallomics research on (a) environment and metals, (b) metallotoxicology, (c) health and food/nutrition, and (d) plants and metals;
- metallomics research combined with genomics and proteomics;
- advanced technologies for trace analysis;
- chemical speciation of bio-trace elements;
- bioimaging and biosensing technologies;
- bioinorganic chemistry of metalloproteins and metalloenzymes;
- biological regulation of metals and their mechanisms of metabolism;
- drug design and chemotherapy of bioinorganic medicine;
- medical diagnosis of health and disease; and
- development of standard reference materials for biological, clinical, and environmental analysis.

The program thus provided a comprehensive overview of all aspects of current interest and activity in metallomics, and it is hoped that this collection of works from the scientific proceedings will serve as a valued record and a source of future inspiration. It is a pleasure to report that the Royal Society of Chemistry, UK, will launch a new journal entitled *Metallomics—Integrated Biometal Science* from January 2009 (<<http://www.rsc.org/Publishing/Journals/mt/index.asp>>), which will help to stimulate ongoing development and facilitate the exchange of information in the metallomics community. Professor Joe Caruso (Cincinnati University) will serve as editor-in-chief.

An important outcome of this inaugural event is that the International Advisory Board has decided to launch a biennial series of symposia on Metallomics, and that ISM 2009 will take place in Cincinnati, USA during June 2009 under the chairmanship of Prof. Caruso. In conclusion, it is with sorrow that we report the sudden death of Prof. Kazuo T. Suzuki (Chiba University, Japan) on 15 July 2008, whilst the editorial work for this special issue was in progress. He was Co-chair of the Organizing Committee for ISM 2007 and, as one of the world leaders in this field, presented a plenary lecture on that occasion. We mourn his passing and remember his outstanding contributions to science. This will be the subject of a memorial lecture, which I expect to deliver during ISM 2009.

Hiroki Haraguchi

Conference Editor and Chairman