

## Preface

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The 6th International Conference on Medical Geology (MEDGEO'15) was held from 26 July to 1 August 2015 in Aveiro (Portugal).

This conference was hosted by the Universidade de Aveiro under the sponsorship of the Instituto Superior Técnico—Universidade de Lisboa, the GeoBioTec Research Centre, the CERENA Research Centre and the IMGA—International Medical Geology Association. This conference, which is a biannual event, promotes the fruitful knowledge exchange between geoscientists and medical practitioners around the world, while showing the high standards of the scientific research that are being carried out in this emerging discipline.

This event received considerable national and international attention. Over 150 participants from

36 countries, namely Algeria, Brazil, Canada, China, Czech Republic, Denmark, Ecuador, Egypt, Finland, France, Greece, Hungary, Indonesia, Iran, Ireland, Israel, Italy, Korea, Latvia, Lithuania, Mexico, Netherlands, New Zealand, Nigeria, Portugal, Russia, Rwanda, Slovenia, South Africa, Spain, Sweden, Taiwan, UK, Ukraine, Uruguay and USA, have attended this Symposium. During 5 days, 135 papers (68 oral presentations and 67 poster presentations) were presented in MEDGEO'15 Conference distributed by the following topics: 1—Environmental contaminants in health and disease; 2—Environmental toxicology, pathology and epidemiology; 3—Climate change and human health; 4—Therapeutic properties of minerals and waters; 5—Urban medical geology; 6—Modeling, mapping and monitoring of environmental hazards and diseases; 7—Advances in analytical methods. This highlights the increasing importance of Medical Geology in current research, teaching and politics.

In view of the wide range of topics, the Organizers of MEDGEO'15 Conference selected to publish original papers under the theme “*Environmental contaminants in health and disease*” to be published in a special volume of the *Environmental Geochemistry and Health*. Generally, this volume addresses the environmental risk associated with the widespread contamination of environmental compartments for human health and ecosystems, how the physicochemical, mineralogical and biological characteristics of

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the solid/aqueous matrix that contains the contaminant determine the magnitude of the health risks, and finally the complex interrelationships inherent to the use of multidisciplinary datasets integrating environmental assessment with human exposure.

The papers “*Oral bioaccessibility of inorganic contaminants in waste dusts generated by laterite Ni ore smelting*”, “*Aluminum fractionation in acidic soils and river sediments in the Upper Mero basin (Galicia, NW Spain)*”, “*On the rubidium and lithium content and availability in the sub-arid south-eastern Mediterranean: potential health implications*” and “*Oxidative potential (OP) and mineralogy of iron ore particulate matter at the Gol-E-Gohar Mining and Industrial Facility (Iran)*” focus on discussion of the fractionation, availability and bioaccessibility estimation of heavy metals.

The papers “*Hair geochemical composition of children from Vilnius kindergartens as an indicator of environmental conditions*” and “*Human predisposition to cognitive impairment and its relation with environmental exposure to potentially toxic elements*” and “*DNA damage in oral epithelial cells of*

*individuals chronically exposed to indoor radon ( $^{222}\text{Rn}$ ) in a hydrothermal area*” explore the relationship between the total contents of potential toxic elements and their respective contents in human tissues and fluids, and investigate the efficacy of the selected biomarkers to provide complementary information on environmental exposure.

Finally, the papers “*Impact of micro- and macroelement content on potential use of freshwater sediments (gyttja) derived from lakes of eastern Latvia*” and “*Healing and edible clays: a review of basic concepts, benefits and risks*” address the benefits and risks of different valuable natural and geological resources used for therapeutic or wellness purposes.

We express our gratitude to the reviewers who have done a hard and excellent work to ensure the scientific quality of this issue. We are also deeply grateful to the Editor-in-Chief of Environmental Geochemistry and Health for the opportunity to publish this special issue.

The Guest Editors

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