
Editor's foreword

In his *Historia naturalis* (77 A.D.) Plinio il Vecchio describes the use of alum (aluminium sulfate and potassium) as a curative and astringent in the pharmacopoeia of the ancient Egyptians and Phoenicians. In more recent times, in 1852 to be precise, the commercial value of aluminium actually exceeded that of gold. In experimentation upon animals aluminium was noted as a neurotoxic agent as far back as the end of the nineteenth century [1]. When aluminium became recognized as an etiopathogenic agent for dialysis dementia [2] then it was possible to foresee new potential in the biomedical field in concurrence with the hypothesis that aluminium may well be the cause or at least one of the causal factors in some neurodegenerative diseases such as Alzheimer's.

Only in recent years has intensive interdisciplinary research in various laboratories begun to be carried out, such as the recently concluded strategic project funded by the European Community through COST (*Cooperation in Science and Technology*) D8 "*Metals in Medicine*". Such research aims to understand better the possible chemical and biomolecular basis of neurotoxicity in aluminium. It is in this context that we have, in recent years, tried to give our contribution to establish some relevant points of this research [3–5].

One of the aims of this special issue on *Aluminium Chemistry* is to complete a previous volume of *Coordination Chemistry Reviews* [6] in the hope not only of reviewing the state of the art of the bio-inorganic chemistry of aluminium, but also in the hope that our contribution might encourage others in the difficult task

of gaining a deeper knowledge of the nature and properties of aluminium in order to understand better what its impact might be on biological targets. Many thanks go to all the authors who contributed so generously to this volume by sharing their experience and new ideas as we look for new strategies in the possible prevention and cure (Chelation Therapy) of the effects of aluminium which have proven in some circumstances to damage the quality of life.

References

- [1] V. Doelken, Arch. Exp. Pathol. Pharmacol. 40 (1897) 98.
- [2] A.C. Alfrey, G.R. LeGendre, W.D. Kaehnny, N. Engl. J. Med. 294 (1976) 184.
- [3] M. Nicolini, P. Zatta, B. Corain (Eds.), *Aluminum in Chemistry, Biology and Medicine*, Raven Press, New York, 1991, pp. 1–117.
- [4] M. Nicolini, P. Zatta, B. Corain (Eds.), *Aluminum in Chemistry, Biology and Medicine*, Life Chem. Rep. 11, 1994, pp. 1–267.
- [5] P. Zatta, M. Nicolini (Eds.), *Aluminum Toxicity in Infants Health and Disease*, World Scientific, Singapore, 1995, pp. 1–245.
- [6] B. Corain, G.G. Bombi, M. Nicolini, P. Zatta (Eds.), *Aluminium Chemistry*. Coord. Chem. Rev. (Special issue) 149 (1996) 1–404.

Paolo Zatta
Department of Biology,
CNR Center on Metalloproteins,
Viale G. Colombo 3,
35121 Padova, Italy
E-mail: zatta@mail.bio.unipd.it