

## PREFACE

The International Symposium on Ceramics in Medicine, best known as Bioceramics, had recent editions in countries that have never hosted the event before: 2003 in Australia and 2006 in China. Bioceramics comes to its 21st edition and it is the first time that the meeting is held in Latin America. This trend reflects the creation and improvement of new bioceramics research groups around the World. Bioceramics meetings held the Annual Meeting of the International Society for Ceramics in Medicine, ISCM. This Society has had an important role not only in the development of research groups, but also in education. The Executive Committee of the ISCM has directors of Biomedical Materials Research Institutes, which receive a considerable number of students annually.

The Bioceramics 21 Proceedings presents a section devoted to theoretical modelling, which is an important and new issue that involves several fields of knowledge. This trend is observed in the high number of papers involving biological and materials sciences. Following the evolution on regenerative medicine, a third generation of bioceramics is represented in these Proceedings by a variety of papers on tissue engineering, nanotechnology and smart materials.

These Proceedings enclose a CD-Rom with the selected full papers, which will be published in the periodical Key Engineering Materials. This is a new resource, which provides useful research tools. This is an evolution of the long term collaboration between Bioceramics meetings and Trans Tech Publications.

We would like to acknowledge all those who supported Bioceramics 21. Each individual and institutional help was very important for the success of this meeting. We thank particularly the Brazilian Government by its financing agencies CNPq, CAPES and FINEP, as well as FRF, from the Military Institute of Engineering (IME) and FAPERJ, both from the state of Rio de Janeiro. Finally, we thank the organizing committees for their valuable advices in the organization and helpful peer review of the papers.

We hope that Bioceramics 21 will be a forum for fruitful discussions that will shed light on new ideas and foster collaborative researches. We are sure that these proceedings will serve as an important research tool and the knowledge which will be returned to the community not only as published papers but also as products and processes.

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