

## PREFACE

This book includes papers collected for the 25th Symposium and Annual Meeting of the International Society for Ceramics in Medicine (BIOCERAMICS 25), held in Bucharest, Romania, from 07 to 10 November, 2013. The papers were selected by reviewing the full papers of authors whose abstracts submitted to the Symposium were accepted after a blind peer-reviewing process, and reflected the most recent progress made in the study of bioceramics and their applications in medicine.

The papers presented at BIOCERAMICS 25 have been categorized into xxx topics, even many of these papers present an interdisciplinary nature. The papers are focused not just on synthesis, processing and characterization of bioceramics, but also on surface modification, tissue engineering, nanomaterials and drug delivery. Which means that bioceramics are facing advanced towards the regeneration of the tissue by biomimetic design of structure and integration of biological function to optimize the tissue response. The strong contribution related to the application of bioceramics and composite materials in dentistry and orthopedics presented in this book confirm the importance of these materials for clinical practice in medical units.

We acknowledge all the members of the Executive Committee of the International Society for Ceramics in Medicine (ISCM), and of the International and Local Scientific Committee for their support and contribution. Also, we express our sincere thanks to the reviewing committee because they ensure the existence of this book.

A special homage should pay to the Professor Racquel LeGeros, who was one of the founders of ISCM and a pioneer in the field of calcium phosphates, biomimetic design, bioceramics and calcium phosphate cements. Also, special thanks should pay to Professor Larry L. Hench, Professor Paul Ducheyne, Professor Tadashi Kokubo and Professor Guy Daculsi, the pioneers in bioceramics with an invaluable experience who contribute to the progress of bioceramics and the development of the ISCM.

We express our gratitude to the keynote speakers who will provide for all participants the latest news in the field during Bioceramics 25 and support this world-wide event in bioceramics and their applications in medicine: Kunio Ishikawa (Japan), Xingdong Zhang (China), Besim Ben-Nissan (Australia), James C. Kirkpatrick (Germany), Luigi Ambrosio (Italy), Rui Reis (Portugal), Roger Narayan (USA), Julian R. Jones (U.K.), Marcelo Henrique Prado da Silva (Brazil) and Marc Bohner (Switzerland).

We hope that many scientists will be inspired by this book and will move forward the field of bioceramics and their applications in medicine.

We wish to emphasize that BIOCERAMICS 25 will provide not just a good opportunity to think about the future of bioceramics by reflecting upon their history but also an opportunity to network with clinicians and researchers, as well as universities, hospitals and companies.

**Iulian Antoniac**

**Simona Cavalu**

**Teodor Traistaru**

# **Bioceramics 25**

**President:** Iulian Antoniac

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### **International Society for Ceramics in Medicine** **ISCM**

**General Secretary:** Guy Daculsi (France)

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**Honorary Members:** Laurent Sedel (France), Mario Barbosa (Portugal), Klaas de Groot (Netherland), Larry Hench (USA), Hironobu Oonishi (Japan), William Bonfield (UK).

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## BIOCERAMICS SYMPOSIA

<u>Year</u>	<u>President</u>	<u>Site</u>
1988	Hironobu Oonishi, M.D.	Kyoto, Japan
1989	Gunther Heimke, Ph.D.	Heidelberg, Germany
1990	Samuel F. Hulbert, Ph.D.	Terre Haute, USA
1991	William Bonfield, Ph.D.	London, UK
1992	Takao Yamamuro, M.D.	Kyoto, Japan
1993	Paul Ducheyne, Ph.D.	Philadelphia, USA
1994	Antti Yli-Urpo, Ph.D.	Turku, Finland
1995	Larry L. Hench, Ph.D.	Ponte Vedra, USA
1996	Tadashi Kokubo, Ph.D.	Otsu, Japan
1997	Laurent Sedel, M.D.	Paris, France
1998	Raquel Z. LeGeros, Ph.D.	New York, USA
1999	Hajime Ohgushi, M.D.	Nara, Japan
2000	Antonio Moroni, M.D.	Bologna, Italy
2001	Ian C. Clarke, Ph.D.	Palm Springs, USA
2002	Besim Ben-Nissan, Ph.D.	Sydney, Australia
2003	Mario A. Barbosa, Ph.D.	Porto, Portugal
2004	Panjian Li, Ph.D.	New Orleans, USA
2005	Takashi Nakamura, M.D., Ph.D.	Kyoto, Japan
2006	Xingdong Zhang, Ph.D.	Chengdu, China
2007	Guy Daculsi, Ph.D.	Nantes, France
2008	Marcelo Prado, D.Sc.	Buzios, Brasil
2009	Sukyoung Kim, Ph.D.	Daegu, Korea
2011	Eyüp Sabri Kayali, Ph.D.	Istanbul, Turkey
2012	Kunio Ishikawa, Ph.D.	Fukuoka, Japan
2013	Iulian Antoniac, Ph.D.	Bucharest, Romania

## **ACKNOWLEDGEMENTS**

### **Review Committee**

Madalina Albu, Aurora Antoniac, Iulian Antoniac, Marc Bohner, Simona Cavalu, Cosmin Mihai Cotrut, Stefan Cristea, Ioan Cristescu, Guy Daculsi, Diana Dudea, Nicholas Dunne, Maria Pau Ginebra, Karlis Gross, Kunio Ishikawa, Eyup Sabri Kayali, Tadashi Kokubo, Dan Laptoiu, Adrian Manescu, Horia Manolea, Rodica Marinescu, Marioara Moldovan, Cornel Munteanu, Tudor Petreus, Diana Popescu, Marcelo Henrique Prado da Silva, Lucien Reclaru, Matteo Santin, Viorica Simon, Cosmin Sinescu, Alina Sionkowska, Teodor Traistaru, Liliana Verestiu, Alina Vladescu.

### **For the Support of**

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European Society for Biomaterials (ESB)

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National Union of Stomatological Association (UNAS)

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