

PREFACE

This book collects the papers presented at the 26th International Symposium on Ceramics in Medicine (Bioceramics 26), held in Barcelona, Spain, from November 6th to 8th, 2014. The 26th Bioceramics Meeting is the Annual Meeting of the International Society for Ceramics in Medicine, that brings together researchers and clinicians, in order to establish an open forum for presentation and discussion of the latest advances in the field of bioceramics research and their medical applications. Since the first meeting, the publication of a conference book has been a distinguishing mark of Bioceramics Symposia, and this book provides continuity to this tradition.

While bioceramic materials are in clinical use worldwide since the 1970's, their applications are increasing in many specialities, and the focus in bioceramics research has evolved, facing new challenges in the fields of regenerative medicine, tissue engineering, drug delivery, gene therapies and nanomedicine, among others. This evolution is in fact reflected in the papers gathered in this book.

The book includes papers on a number of topics covered in the Bioceramics Meeting. They have been organised in different sections: Additive manufacturing of ceramics and composites; Biostable ceramics and tough ceramics; Calcium phosphates; Cell-material interactions; Cements; Ceramics for drug delivery; Clinical applications; Coatings, surface engineering and interfaces; Composites and hybrid materials; Glasses and glass-ceramics; Nanoparticles and nanostructured ceramics; Preclinical models: animal studies; Scaffolds. The papers were selected after a peer review process of the abstracts and full papers, which involved more than 40 reviewers. We are grateful to all of them; without their collaboration this book would not exist.

We would also like to thank the Scientific Committee and the Local Organising Committee for their excellent work that made the Symposium possible, as well as all the sponsoring institutions and companies that have supported Bioceramics 26.

We hope that this book will provide knowledge and inspiration to the readers, and will contribute to further advance in the field of bioceramics for clinical applications.

Maria-Pau Ginebra

Cristina Canal

Montserrat Espanol

Edgar B. Montufar

Roman A. Perez

Bioceramics 26

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ISCM

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Bioceramics Symposia

Year	President	Location
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	Saurent 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	Takasi Nakamura, M. D., Ph. D	Kyoto, Japan
2006	Xingdong Zhang, Ph. D	Chengdu, China
2007	Guy Daculsi, Ph. D	Nantes, France
2008	Marcelo Prado, Ph. D	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
2014	Maria-Pau Ginebra, Ph. D	Barcelona, Spain