



Hindawi

BioMed Research International

Special Issue on
Osteogenic Biomaterials in Contemporary Dentistry
2016

CALL FOR PAPERS

There have been developments and applications of osteogenic biomaterial substitutes in dentistry to replace missing dentition or to reinforce existing dentitions. The dentistry in practice has evolved into new treatment modality with the development and application of novel biocompatible materials. The examples are dental implants, bone graft materials, surgical plates, and any modification to increase biocompatibility and stability in dentition. These materials cover areas from replacing the missing teeth and/or degenerated supporting structures to the induction of new bone formation. Also, the osseointegrated materials further allowed orthopedic force application on these materials as skeletal anchorage to control tooth movements. Currently, modifications of the surface treatment or combination of osseointegrative materials to improve potential osseointegration are continuously endeavored.

Comprehension of recent advances in biomaterial of dentistry would lead to appropriate applications of these biomaterials and successful strategies to improve treatment outcomes to better serve patients.

Our previously published special issue became the first issue in a series of 2014 annual special issues and we believe that such a series can have a long-term impact in this field.

We invite investigators to contribute with original research articles as well as review articles that will stimulate the continuing efforts to understand the development and application of osteogenic biomaterials in dentistry. We are particularly interested in articles describing properties of osteogenic biomaterials in dentistry and their clinical applications.

Potential topics include, but are not limited to:

- ▶ Molecular mechanisms of osteogenic biomaterials
- ▶ The stability and safety of osteogenic substitutes
- ▶ Current knowledge in the osseointegration of metals and alloys used in dentistry
- ▶ Guided bone regeneration and tissue engineering approaches
- ▶ Clinical application of stem cells and the implications
- ▶ Clinical application of biocompatible materials and the implications (composites, bioabsorbable materials, etc.)
- ▶ Introduction of new surface treatments to increase the osseointegration *in vivo* or *in vitro* studies
- ▶ Histological identification of change in tissue adjacent to the biomaterials
- ▶ Nanoscale analysis of osseointegrated surfaces (i.e., nanotechnological approaches for porosity)
- ▶ Innovative advances in surgical procedure to improve osseointegration
- ▶ Modified dental implant as a gateway to the human body: implant mediated drug delivery system
- ▶ Smart module using implants: monitoring and control devices
- ▶ Contributing factors or precautions for successful placement and maintenance of biomaterials

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/bmri/biomaterials/osteod16/>.

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First Round of Reviews

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