



BioMed Research International

Special Issue on
**Emerging Insights on Surgical Techniques and
Biomaterials for Total Hip and Knee Arthroplasty**

CALL FOR PAPERS

There has been a great interest by global orthopaedic community in the development of new surgical techniques and biomaterials to improve long-term clinical outcomes after total joint replacement. In recent years, there are a myriad of symptomatic treatment options available in this field by the combination of numerous factors, including implant materials, prosthetic designs, and surgical techniques. Nevertheless, aseptic loosening, infection, and dislocation still represent the most critical problems leading to an increasing number of revision surgeries especially after ten or more years of operation. The aim of this issue is to provide novel concepts beneath modern total joint replacement and to ultimately build successful operative strategies by linking biomaterials science to clinical experience.

We thus invite authors to contribute original research articles as well as review articles leading to represent a next step forward for hip and knee arthroplasty and to promote the new technological development of implant devices with better functional and structural performances *in vivo* as the entire total joint constructs. We are particularly interested in articles describing the recent advances in knowledge of prosthetic designs, bone-implant interactions, biomaterials, and biomechanics.

Potential topics include, but are not limited to:

- ▶ In vivo/in vitro studies of timely clinical issue
- ▶ Clinical studies related to implant performance
- ▶ Alternative bearings used in total hip and knee replacement surgery
- ▶ Interactions and fixation between bone and implant surface
- ▶ Mechanical and tribological properties of natural/synthetic biomaterials
- ▶ Chemical and biological properties of natural/synthetic biomaterials
- ▶ Design optimization of implant devices, including experimental and computer simulations

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

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