Special Issue—Biomechanics

This Special Issue of *Osteoarthritis and Cartilage* came out of a discussion between Dr Roy D. Altman and one of the co-editors (Dr Van C. Mow) about two years ago that identified a special need of the Journal. That need is to attract more papers that deal with various bioengineering studies related to the theme of the Journal, including exciting new multi-disciplinary studies from the emerging fields of tissue and cellular engineering. It was felt also that this is important not only because bioengineering studies in the area of orthopaedic biomechanics have historically (for more than a century) made significant contributions to the understanding of the function of the musculoskeletal system, particularly that of articular cartilage, but also, in recent times, they have opened many innovative multi-disciplinary studies that have led to new understandings on tissue and cell functions. Shortly after that discussion, the Editorial Board of *Osteoarthritis and Cartilage* approved this project, and thus it was launched.

The knee, being a site of high prevalence of OA, was chosen to illustrate some possible types of bioengineering studies that reflect the nature of the field. Because of his extensive experience in knee biomechanics, including ligament and tendon biomechanics research, Dr Savio L.-Y. Woo was invited to co-edit this Special Issue. To determine the scope of this Special Issue, and to capture the excitement of the some emerging areas of tissue and cellular engineering, it was felt that we should include topics not only on the biomechanics of OA and cartilage, but also about joint anatomy, ligament and tendon biomechanics and healing, articular cartilage, osteochondral and ligament healing, mechano-signal transduction in cartilage and ligaments. Our objective was to collect a series of topically related papers that offered new views on some of the important topics of the day which provide a bioengineering perspective to the theme of the Journal of *Osteoarthritis and Cartilage*.

Due to the page limitation, however, many topics have not been included in this Special Issue. The choice of the topics covered was left entirely to the discretion of the co-editors, and we are solely responsible for our selections; hopefully the readers will understand our omissions. Nevertheless, we feel that we have provided a collection of sufficiently interesting papers to whet the readers’ appetite to motivate further explorations in bioengineering related multi-disciplinary research in OA and Cartilage.

We thank the Journal for giving us the opportunity to edit this Special Issue of *Osteoarthritis and Cartilage*, and we thank Dr Roy D. Altman for his kind invitation and especially patience during the long preparation period required to complete this Special Issue.

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1 October 1998