08:00-09:00  CTL – Foot & Ankle: Postural Deformities

**Moderators:** Margaret WONG (Hong Kong) & Henry Siu Fai YIP (Hong Kong)

**BIOMECHANICS OF PLANOVALGUS AND CAVOVARUS**
Michael STEPHENS (Ireland)

**ADULT ACQUIRED FLATFOOT**
Margaret WONG (Hong Kong)

**CAVOVARUS CORRECTION**
Michael STEPHENS (Ireland)

**PERONEAL SPASTIC FLATFOOT (TARSAL COALITION)**
Tsukasa KUMAI (Japan)

09:00-10:30  Free Papers – Basic Science: Antibiotic Release / Articular Cartilage, Imaging & Reconstruction

**Moderators:** Erdal CILA (Turkey) & William LU (Hong Kong)

17891  OPTIMAL LOCAL DOSAGE OF HOUSEKEEPING ANTIBIOTICS TO INHIBIT S. AUREUS WITHOUT INDUCING OSTEOBLAST NECROSIS: IN VITRO STUDY
Kit Ying LEUNG, Kelvin Wai Kwok YEUNG, Richard KAO, Paul CHU, Kenneth CHEUNG (Hong Kong)

17914  AN ANTI-BACTERIAL COATING IN DENTAL IMPLANT USED IN ORTHOPAEDICS/ FEASIBILITY STUDY OF ANTI-BACTERIAL COATING IN DENTAL IMPLANT FOR ORTHOPAEDIC USE
Kit Ying LEUNG, Kelvin Wai Kwok YEUNG, Richard KAO, Paul CHU, Kenneth CHEUNG (Hong Kong)

17953  AN IN VITRO GENTAMYCIN RELEASE STUDY ON STRONTIUM CONTAINING HYDROXYAPATITE (SR-HA) BIOACTIVE BONE CEMENT COMPARED WITH POLYMETHYLACRYLATE (PMMA)
Wai Ching LIU, Chi Tak WONG, William Weijia LU, Richard KAO (Hong Kong)

16757  HISTOLOGICAL ASSESSMENT OF DEGENERATION OF CRUCIATE LIGAMENTS IN OSTEOARTHRITIC KNEES AND THEIR ASSOCIATION WITH CLINICAL AND FUNCTIONAL STATUS OF THE KNEE JOINT
Akshay GOEL, Aditya AGGARWAL, Bishan Das RADOTRA, S.S. GILL (India)

17757  REGIONAL CHANGES OF T1ρ AND T2 RELAXATION OF ENZYMATICALLY DEGRADED PORCINE PATELLAR CARTILAGES IN VITRO
Zhiyang ZHOU, Xuenong ZOU, Steffen RINGGAARD, Haisheng LI, Lijin ZOU, Michael BENDTSEN, Casper FOLDAGER, Hans STØDKILDE-JØRGENSEN, Cody BÜNGER (Denmark)

18071  3D-T1ρ IMAGING AND QUANTITATION OF ARTICULAR CARTILAGE AT 7.0T
Xuenong ZOU, Zhiyang ZHOU, Steffen RINGGAARD, Haisheng LI, Lijin ZOU, Hans STØDKILDE-JØRGENSEN, Cody BÜNGER (Denmark)

18100  COMPARISON OF THERAPEUTIC EFFECT OF ENZYMATIC HYDROLYZED COLLAGEN AND GLYCOASMIN
Tomas TRČ (Czech Republic)

18262  3.0T MRI IN FOLLOW-UP AFTER MICROFRACTURING - DO RELATIVE T2 VALUES IN REPAIR TISSUES CORRELATE WITH THE KOOS SCORE?
Florian KUTSCHA-LISSBERG, Lukas NEGRIN, Stephan DOMAYER, Christian GÄBLER, Vilmos VÉCSEI (Austria)

18471  ISOLATED UNICOMPARTMENTAL OSTEOARTHRITIS OF THE KNEE: DIFFERENCE IN DISTRIBUTION OF ARTHRITIC LESIONS

10:30-11:00  Break / Poster Discussion
Staphylococcus aureus is commonly seen in orthopaedic implant related infections. A high local concentration of antibiotics is toxic to osteoblasts, thereby inhibiting bone formation. Account has to be taken while designing antibiotic coated implants and delivering antibiotics locally. Cefazolin, vancomycin and gentamicin are usually used. However, the correlations between such antibiotics and osteoblast activity have not been well studied in the optimal dosage to inhibit that bacteria without inducing cytotoxic effect. This study aims to investigate the tolerance of osteoblasts against such antibiotics in-vitro. Osteoblasts (SaOs2) were cultured in antibiotic free medium and then exposed to concentrations of each antibiotic between 10,000ug/ml and 0.001ug/ml. Viable cells at 24 hours were counted using Thiazolyl Blue Tetrazolium Bromide (MTT) assay. By using the same concentration gradient, minimal inhibition concentration of such antibiotics to S. aureus was studied. In cytotoxicity test, osteoblasts die as the concentration of antibiotics increases to 10,000ug/ml, whereas all the cells can survive as the concentration reduces to 1000ug/ml or below. In minimal inhibition concentration testing, it suggests 0.625ug/ml of gentamicin and/or vancomycin is able to inhibit S. aureus activity. For cefazolin the concentration even reduces to 0.15625ug/ml. According to guideline, the recommended daily dosages of cefazolin, gentamicin and vancomycin are 35.7ug/ml, 3.75ug/ml and 17.86ug/ml, respectively. By using the in-vitro results, these clinical dosages do not induce any toxic effect to osteoblasts and are also capable to inhibit S. aureus activity.