of OA. Both IL-4R and TGF genes have been shown to exhibit genetic polymorphisms with functional consequences. We examined whether these gene polymorphisms modified individual susceptibility to hand OA in Finnish women.

**Methods:** Radiographs of both hands of 543 Finnish women aged 45–63 years were examined and classified for the presence of OA using reference images. Hand OA was defined by the presence of radiographic findings of grade 2 or more in at least two joint pairs (symmetrical OA) or in at least two DIP joint pairs (symmetrical DIP OA). The IL-4R Ser503Pro (rs1805015) and TGFβ1 Leu10Pro (rs1982073) genotypes were determined using TaqMan-based methods. Data regarding anthropometric measures and other risk factors were collected by questionnaire.

**Results:** No significant association was found between the IL-4R Ser503Pro polymorphism and hand OA. However, the TGF-β1 10Pro allele posed a 1.8-fold (95% CI 1.0–2.6) risk of symmetrical OA and symmetrical DIP OA, respectively. Moreover, the risk of symmetrical OA was almost 6-fold (OR 5.6, 95% CI 1.3–24.7) among carriers of the combination of IL-4R 503Pro and TGF-β1 10Leu alleles.

**Conclusions:** Our results suggest that the studied IL-4R- and TGF-β1 gene polymorphisms may play a role in the etiology of polyarticular hand OA.

**362 LACK OF ASSOCIATION BETWEEN THE CALM1 CORE PROMOTER POLYMORPHISM (~16C/T) AND SUSCEPTIBILITY TO KNEE OSTEOARTHRITIS IN A CHINESE HAN POPULATION**

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**Purpose:** By a convincing genome-wide association study, the CALM1 core promoter functional polymorphism (~16C/T) had been reported to be associated with susceptibility to osteoarthritis (OA) in a Japanese population. However, this association could not be replicated in subsequent studies in UK Caucasians. Our objective was to assess whether the SNP was associated with knee OA in a Chinese Han Population.

**Methods:** The SNP was genotyped in 183 patients with primary knee OA and in 210 age-matched controls.

**Results:** There was no significant difference (P>0.05) in genotype or allele frequencies between our cases and our controls. There was also no significant difference when the cases were stratified by sex. Still, no association of genotype with clinical variables was observed.

**Conclusions:** Our data implies that the CALM1 core promoter polymorphism is not a risk factor for OA etiology in Han Chinese. Our study highlights the heterogeneous nature of OA genetic susceptibility.

**363 GENETIC POLYMORPHISM OF INTERLEUKIN-1β (~511C/T) IN SUSCEPTIBILITY TO KNEE OSTEOARTHRITIS IN A CHINESE HAN POPULATION**

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**Purpose:** The association of the interleukin-1β (~511C/T) polymorphism with susceptibility to osteoarthritis (OA) had been observed in several studies but the results seemed controversial. This study was to assess whether the SNP was associated with knee OA in a Chinese Han Population.

**Methods:** The SNP was genotyped in 487 patients with primary knee OA and in 453 age-matched controls using RFLP assay.

**Results:** There was no significant difference (P>0.05) in genotype or allele frequencies between our cases and our controls. There was also no significant difference when the cases were stratified by sex. Still, no association of genotype with clinical variables was observed.

**Conclusions:** Our data implies that the 86-bpVNTR polymorphism in interleukin-1 receptor antagonist gene is not a risk factor for OA etiology in Han Chinese.

**365 SNPS ASSOCIATED WITH NORMAL Variation IN ADULT HUMAN HEIGHT ARE NOT ASSOCIATED WITH OSTEOARTHRITIS SUSCEPTIBILITY**

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**Purpose:** A compelling genetic association with OA of a functional SNP (rs143383, T/C) in the 5' UTR of the GDF5 gene has been observed in Asian and European cohorts. Intriguingly, this SNP is also significantly associated with normal variation in human height, opening up the possibility that there are common mechanistic pathways between these two polygenic traits. A large number of additional loci that influence human height have very recently been reported, including SNPs in the genes IHH, HHIP, PTC1, ACAM, and HMGA2. Our aim was to assess whether any of these SNPs were also associated with risk for primary OA.

**Methods:** Twenty-five SNPs that had previously been associated with normal variation in human height were genotyped (using Sequenom MassArray iPLEX) in 3433 case-control samples ascertained in the UK (1588 cases, 741 normal controls) and in Spain (810 OA cases, 294 normal controls). Association with OA was examined in the two populations individually and by meta-analysis.

**Results:** The strongest association in the UK dataset was observed for rs1042725 from within HMGA2 (OR of 1.14 (95%CI 1.01−1.30), additive model p=0.03). This trend was not observed in the Spanish cohort (OR 0.96, 95% CI 0.78–1.17), p=0.67. Two SNPs were associated with OA in the Spanish cohort: rs16896089 from within LCORL (OR 1.42, 95% CI 1.10–1.82), p=0.006 and rs1390401 from within ZNF678 (OR 1.64, 95% CI 1.23–2.18), p=0.007, but neither SNP was associated in the larger UK dataset (p=0.65 and p=0.67 respectively).

Meta-analysis provided no evidence for significant association, with all p values >0.05.

**Conclusions:** We do not find robust evidence for association to OA of any of the twenty-five SNPs genotyped, within the power limits of our study. These SNPs, which reside within or close to 19 genes, have recently been shown to associate with normal variation in human height. Our study indicates that, if human height and OA have a shared genetic component, the effect sizes of common variants affecting both traits are likely to be small and will require larger-scale association studies to identify their role.

**366 ASSOCIATION OF SINGLE NUCLEOTIDE POLYMORPHISMS OF LEP AND KNEE OSTEOARTHRITIS**

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**Purpose:** Leptin is a 16kDa non-glycosylated peptide hormone encoded by the gene obese (ob), the murine homologue of the human gene LEP. The available studies of leptin and osteoarthritis (OA) show that Leptin may participate in the pathogenesis of OA, together with mechanical overload (due to the activation of mechanoreceptors at the chondrocyte surface), as well as other specific conditions such as obesity and its associated complications (vascular insulin resistance, type 2 diabetes, and severe alteration of lipids and glucose metabolism). Our objective was to evaluate the genetic association of knee OA and 3 tag single nucleotide polymorphisms (tag SNPs) (rs12706832, in the exon_3 region, +4998 start codon; rs11761556, in the intron_1 region,+4933 start codon;...