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The closely related species *Actinobacillus actinomycetemcomitans*, *Hemophilus aphrophilus* and *Hemophilus paraphrophilus* are common findings in oral microbiota. The aims of this study were to compare the distribution of three species in healthy subjects and periodontitis patients using PCR for 16s rRNA gene. The DNA was extracted from the subgingival plaque and saliva in 112 subjects for restriction enzyme analysis with *HinfI* and *HhaI*. By the compare of restriction enzyme pattern for each pathogen, we found that *Actinobacillus actinomycetemcomitans* was the major distributor in healthy and periodontitis patients. In general, periodontal pathogens were distributed more frequent in subgingival plaque than in saliva. We confirmed that the PCR method for 16s rRNA gene was important for screening and monitoring of periodontal disease.

#### **F821** Microsatellite Polymorphism of D12S391 and D12S67 Genes in the Korean Population

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The highly polymorphic microsatellite loci D12S391 and D12S67 were investigated in healthy Korean subjects. Using the polymerase chain reaction and polyacrylamide gel electrophoresis, we examined the allele frequency and genotype distribution. We observed 13 alleles were identified for D12S391 (n=359) and 11 alleles for D12S67 (n=279) in this study. Heterozygosities were 0.811 at D12S391 and 0.733 at D12S67, respectively. The p values of two loci were calculated, 0.637 and 0.149, by Exact test. Therefore no deviation from Hardy-Weinberg equilibrium was observed. The most frequent allele at D12S391 loci was allele 18 (0.298) followed by allele 19 (0.245), allele 20 (0.152), and minor alleles

(0.335). The size of PCR fragments at D12S67 locus ranged from 233 bp to 273 bp. The genotype distribution and allele frequency of D12S391 and D12S67 in the Korean subjects were similar to those of the Japanese population. This study was demonstrated that the D12S391 and D12S67 was a useful tool for forensic identification and parentage testing.

#### **F822** Developmental and Genetic Characterization of *Drosophila* pleiohomeotic genes

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Polycomb group (PcG) gene products function in maintaining the expression pattern of the homeotic genes. Pleiohomeotic (Pho) protein is a unique protein containing a DNA binding motif among PcG proteins. *pho* mutation produces a relatively weak phenotypes compared to a zygotic mutation of *Polycomb* and a maternal mutation of *extra sex comb*. PcG proteins form a few complexes with a different combination. Pho was recently found to be a member of a complex. However, its interaction with other PcG genes was not investigated genetically. Pho shows pleiotropic effects including the roles in the formation of cuticle, head, nervous system, the regulation of the homeotic genes and the segmentation. *pho* was expressed uniformly at early embryonic stage and its expression was concentrated in the central nervous system at later embryonic stage. *pho* also enhanced the mutant phenotypes of the *Polycomblike* in embryonic and adult cuticle, but the expression of the homeotic genes was little affected. This results indicate that *pho* has various roles during *Drosophila* development and works with other PcG proteins. We will also present the effect of *pho* ectopically expressed by GAL4/UAS system.