D-9 Mitochondrial DNA Sequence at the Cytochrome b Gene of *Bombina orientalis*

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The polymerase chain reaction(PCR) was used to generate sequences of 716 base pairs(bp) of the mitochondrial cytochrome *b* protein coding gene from 4 populations of *B. orientalis*. DNA sequences were compared with 10 individuals of Korean *B. orienatalis* and aligned by comparison with the *Xenopus laevis* which was analysed full DNA sequences. There are 32bp(4.5%) of substitutions in the *B. orientalis* with transition and transversion. The ratio of transition and transversion was 2:1, whereas 188bp(26.2%) of base substitutions occured between the outgroup, *X. laevis*.. Among transitions, T and C mismatches are predominated, 76 sites(40.4%), whereas transversions between A and C, A and T are 34 sites (18.6%) and 35 sites (18.9%) respectively. The DNA sequences are 100% homology in Cheju 3 individuals and over 95% homology within species, while 75% homology between outgroup, *X. laevis*.

3.0%(7 amino acid) of amino acids were substituted from the 238 amino acids translated from the mtDNA 716bp cytochrome *b* gene within species and differed from 17.6%(42 amino acid) of amino acids with outgroup, *X. laevis*. Based on Tamura-Nei distance, conservative nucleotide substitutions revealed 0.00-0.05 within species and 0.28 between outgroup.

D-10 Propofol Inhibits Gap Junctional Communication by Activating Protein Kinase C in Cultured Rat Liver Cells

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An intravenous anesthetics, propofol was found to inhibit gap junctional communication by phosphorylating connexin protein in clone 9 rat liver cells. Gap junctional communication as measured by the transfer of scrap-loaded fluorescent dye was severely inhibited by the treatment with propofol. The phosphorylation states of connexin 43, the major gap junction protein in clone 9 cells, were examined on 8% SDS-PAGE followed by western blot analysis. It was found that propofol treatment increases the activity of protein kinase C in the membrane fraction and phosphorylates connexin 43. However, treatment of cells with GF 109203X and calphostin C which are known inhibitors of protein kinase C, restored gap junctional communication in clone 9 cells. Data suggest that propofol activates intracellular protein kinase C activity and inhibits gap junctional communication by phosphorylating connexin protein.