

Z 124 **Phylogenetic analysis of fibroblast growth factor (FGF) gene family**

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The fibroblast growth factors (FGFs) are mitogens that have been implicated in diverse functions including morphogenesis, cellular differentiation, angiogenesis, tissue remodeling, inflammation, and oncogenesis. Using the BLAST search program, the exact mapping of the FGF family was performed and compared with the previous data determined by in situ hybridisation, genetic linkage or physical mapping. Interestingly, highly related copies of FGF-7 gene, located on chromosome 15q15-q21.1, were identified on chromosome 1q32.3, 9p21.3, 9q12, 15q15.2, 18p11.21, and 21p11.2. In order to understand the evolutionary relationship within the FGF gene family, a phylogenetic tree was constructed by the neighbor-joining method using the amino acid sequences of the genes, indicating that the FGF gene family was divided into six groups through evolutionary divergence.

Z 125 **The early zoeal stages of *Alpheus lobidens* De Haan, 1850 and *Alpheus sudara* Banner and Banner, 1966 (Decapoda, Caridea, Alpheidae) reared in the laboratory**

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The early zoeal stages of the alpheid shrimps *Alpheus lobidens* De Haan, 1850 and *Alpheus sudara* Banner and Banner, 1966 are described and illustrated in detail from laboratory-reared larvae for the first time. Morphological characteristics of the first larvae are compared with those of other previously known species of *Alpheus*, *Athanas*, and *Synalpheus*. A provisional key to the first larvae of 9 species of the Alpheidae occurring in Korean coast is provided.