

**B7**

**Molecular cloning and expression of a cDNA encoding the aquaporin from the firefly, *Pyrocoelia rufa***

**Kwang Sik Lee, Seong Ryul Kim, Sang Mong Lee<sup>1</sup>, Hung Dae Sohn and Byung Rae Jin**

*College of Natural Resources and Life Science, Dong-A University, Busan 604-714, Korea. <sup>1</sup>Department of Sericultural and Entomological Biology, Miryang National University, Miryang 627-130, Korea*

A cDNA encoding a putative member of the aquaporin gene family was cloned from a cDNA library of the firefly, *Pyrocoelia rufa*. Sequence analysis of the cDNA encoding the aquaporin of *P. rufa* revealed that the 813 bp cDNA has an open reading frame of 271 amino acid residues. The deduced protein sequence of the aquaporin gene of *P. rufa* was aligned to the insect aquaporins and several mammalian aquaporins. The protein sequence of *P. rufa* aquaporin reveals two regions of NPA motifs conserved in the aquaporin family. Phylogenetic analysis further confirmed the deduced protein sequence of the *P. rufa* aquaporin gene to be belonged to the insect aquaporin family. Northern blot analysis suggested expression of the *P. rufa* aquaporin gene in diverse tissues at the transcriptional level. The cDNA encoding the aquaporin of *P. rufa* was expressed as a 34 kDa band in baculovirus-infected insect cells.