

### 3-4-13. Cloning, Expression and Characterization of a cDNA Encoding the Aquaporin from the Firefly, *Pyrocoelia rufa*

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We have cloned and characterized a cDNA encoding a putative member of the aquaporin gene family 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.