

Molecular Cloning and Characterization of a Venom Protease
Gene from the Bumblebee, *Bombus ignitus*

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A venom protease gene was cloned from the bumblebee, *Bombus ignitus*. The *B. ignitus* venom protease cDNA contains an open reading frame of 1080 bp encoding for 360 amino acid residues. The deduced amino acid sequence of the *B. ignitus* venom protease cDNA was closest in structure to *Apis mellifera* venom protease (61% protein sequence identity). *B. ignitus* venom protease possesses catalytic triad residues and 14 cysteine residues common to venom proteases. Northern blot analysis revealed that the *B. ignitus* venom protease mRNA expression was detected in both fat body and venom gland. In addition, *B. ignitus* venom protease mRNA was expressed in both female and queen, but no expression was found in the male.