

## Progress in Molecular Biology and Translational Science

### Development of insect cell line using CRISPR technology

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#### **Abstract:**

In this chapter, we delineated the methods of CRISPR technology that has been used for the development of engineered insect cell line. We elaborated on how CRISPR/Cas9 genome editing in *Drosophila melanogaster*, *Bombyx mori*, *Spodoptera frugiperda* (Sf9 and Sf21), and Mosquitoes enabled the use of model or non-model insect system in various biological and medical applications. Also, the application of synthetic baculovirus genome along with CRISPR/Cas9 vector system to enable genome editing of insect cell systems for treatment of communicable and non-communicable diseases.