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OBSTACLES TO CONTINUOUS BACULOVIRUS PRODUCTION

The primary factor limiting the widespread use of baculovirus as an environmentally friendly alternative to chemical pesticides is the production cost. Previous economic analysis has demonstrated that continuous baculovirus production would result in a significantly decreased production cost. Unfortunately, utilizing a conventional continuous production process (i.e., 2 bioreactors in series – a bioreactor in which insect cells are grown followed by a bioreactor in which the cells are infected by baculovirus) rapidly leads to the accumulation of baculovirus mutants that are ineffective as a biopesticide. Our research involves the genetic modification of a key baculovirus gene (i.e., *fp25k*) that is known to be involved in baculovirus mutant formation. This genetic modification delayed, but did not eliminate, the formation of baculovirus mutations. The results of this research and the corresponding lessons learned will be discussed.

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