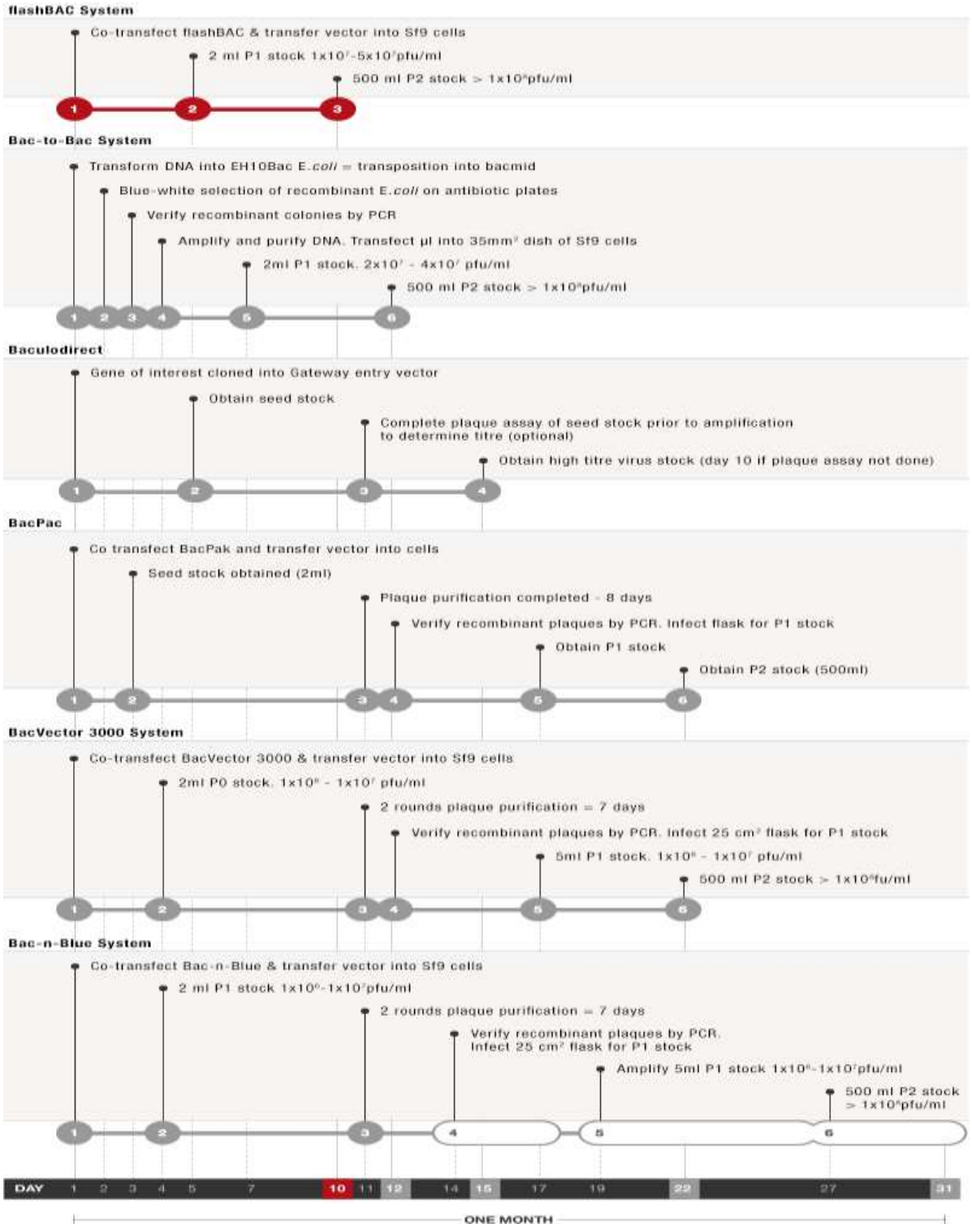
Figures and Data

*flash*BAC™ Systems offered by Mirus Bio:

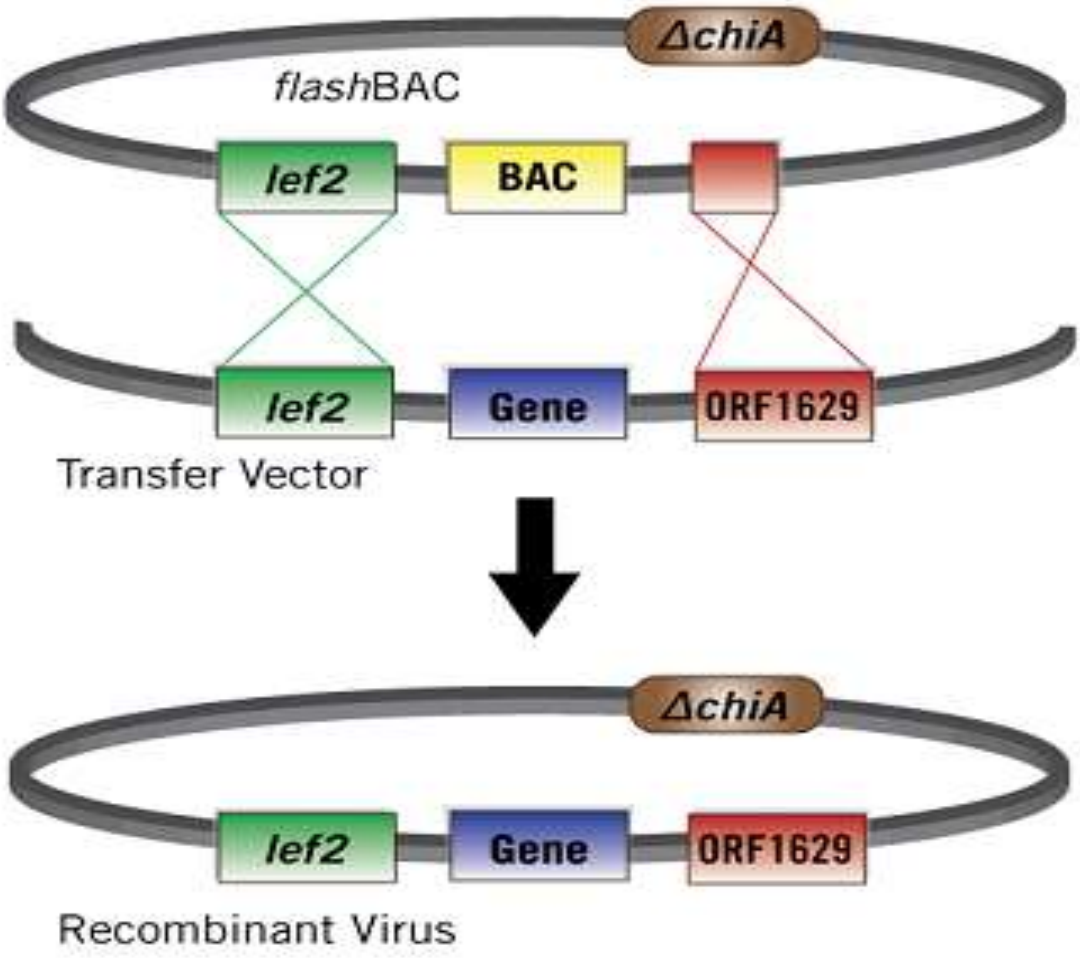
System	Description
***flash*BAC™**	The original *flash*BAC™ expression vector. Protein expression and secretion is improved by deletion of the chitinase gene from the AcMNPV genome. Optimal for expression of most nuclear or cytoplasmic proteins.
***flash*BAC™ GOLD**	Builds upon the basic *flash*BAC™ technology with the deletion of the chitinase and cathepsin protease genes from the AcMNPV genome. This system is ideal for high levels of expression of membrane and secreted proteins as well as proteins that are more susceptible to degradation.
***flash*BAC™ ULTRA**	The most advanced *flash*BAC™ vector system, optimized by deletions in the chitinase, cathepsin, p10, p74 and p26 genes. The ideal system for the most difficult to express proteins including nuclear, cytoplasmic, membrane and secreted proteins.

Additional details on the genetic modifications included in the flashBAC™ systems are described in Hitchman et al. 2010.

What makes the *flash*BAC™ Baculovirus Expression System better than other systems?



How does the *flash*BAC™ Baculovirus Expression System work?



***flash*BAC™ Overview**

***flash*BAC™ DNA Features:** *flash*BAC™ DNA contains a bacterial artificial chromosome (BAC) that enables manufacturing of recombinant virus DNA in *E. coli*. *lef2* and ORF1629 sequences flanking the BAC (in the *flash*BAC™ DNA) or gene of interest (in the transfer vector) allow for efficient homologous recombination in insect cells. A deletion in ORF1629 prevents replication of parental virus in insect cells. Deletion of the chitinase gene (*chiA*) maximizes production of secreted proteins and membrane-targeted proteins in insect cells.

Construction of Recombinant Virus Using *flash*BAC™: For baculovirus production, *flash*BAC™ DNA is mixed with transfer vector plasmid DNA containing the gene of interest to be inserted into the virus genome. Following co-transfection into insect cells, homologous recombination simultaneously removes the BAC, inserts the gene of interest and and restores ORF1629 allowing the production of infectious virus which can be harvested from the culture medium. Recombinant baculovirus can be used for subsequent transduction of insect or mammalian cells for protein expression.