

RECOMBINANT *COWPOX VIRUS* LACKING THE A-TYPE INCLUSION BODY PRODUCE LESS EXTRACELLULAR ENVELOPED VIRUS THAN WILD TYPE VIRUS IN HUMAN BUT NOT SIMIAN CELLS

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Poxviruses are DNA viruses that have a complex life cycle, include infectious intracellular forms that acquire cellular membranes to originate extracellular viruses that are release in medium. During this cycle, the poxviruses produce two types of inclusion bodies. The B-type inclusion bodies are seen in cells infected with all viruses of the family, but the A-type are seen in cells infected with few viruses, such as *Cowpox virus*. To better understanding the function of the A-type inclusion body in the biology of these viruses, we generated a recombinant virus contain selective markers in the locus of *ati* gene. Following this, a one-step growth experiment was done using two cell lines, one of human origin (A549) and the other of simian origin (BSC-40). As a result, we observe that the wild type *Cowpox virus* produce more extracellular viruses than the recombinant one at 3, 9 and 24 hours after infection in human cell line, but not in simian cell line, indicating a species-specific effect. As the formation of extracellular forms influence the dissemination of viruses into the host, the deletion of this gene can affect the pathogenesis and deserve more detailed studies.

Key-words, A-type inclusion body, *Cowpox virus*