Role of Varicella Zoster virus ORF9p in the secondary egress:
importance of its interaction with the cellular Adaptin Protein-1.

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ORF9p (homologous to HSV-1 VP22) is a VZV tegument protein essential for the viral replication. During the lytic cycle it is the mostly expressed gene. We have recently demonstrated that it is a substrate of the viral kinase ORF47p and that its ORF47p-dependent phosphorylation is important for the secondary envelopment process. We also have identified an acidic cluster (AC) within the protein that is important for its correct localization in the infected cells and for the interaction with ORF47p. The recombinant VZV expressing ORF9p–ΔAC presents an accumulation of capsids in the perinuclear space. ORF9p seems then to play an important role in several steps of the egress process. In this context, we sought to identify cellular partners of ORF9p that might be important for these functions. Via a two-hybrid screen we identified AM1P1 (μ subunit of the cellular adaptin-1 complex) as potentially interacting with ORF9p.

CONCLUSIONS and PERSPECTIVES:
- ORF9p interacts with the AP1 complex.
- VZV-ORF9 L231A presents a strong growth defect whereas the mutation of Y61, L215 or Y268 has little impact on viral infectivity.
- The interaction of ORF9p with AP1 complex is strongly impaired with the L231A mutant.
- VZV ORF9p L231A and VZV ORF9p 33-320 display defect in the egress process.
- Is ORF9p palmitoylated? On Cysteine 10? Is this palmitoylation necessary for the interaction with the AP-1 complex?
- Is ORF9p important for the correct localization of glycoproteins at the site of secondary egress?
- Are these ORF9p mutant strains still able to infect dendritic and T cells? To enter and exit latency? To induce PHN?

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