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The impact of UL54 gene deletion of pseudorabies virus on the overall transcription of the virus

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Pseudorabies Virus (PRV) is a non-human pathogen herpes virus and a close relative to *Herpes Simplex Virus* 1 and 2 (HSV-1 and HSV-2). The UL54 gene of the virus encodes for the protein ICP27, which is multifunctional protein involved in for example: mRNA trafficking, regulation of transcription and the initial degradation of host mRNAs. It has been shown, that ICP27 also plays role in the recognition of "weak" viral polyA sites of late genes and in the 3' end formation of these transcripts, thus enhancing the expression of such genes. Our aim was to characterize a UL54 knock-out mutant virus, in order to find out the function of ICP27 in general viral transcription and whether it has a bias towards late genes. Latter may be important in the switching from early to late genes during transcription. Preliminary results indicate, that transcriptional activity in general, is lower in the mutant virus compared to wild-type and that early genes are less affected than late genes. Also, data from our relative DNA copy number experiment show, that the mutant virus is severely impaired in DNA replication.

Biography

Nandor Poka has earned his university diploma (equivalent to the Master's Degree) as Biologist in 2010 at University of Szeged. He won a one-year HAESF scholarship to the USA and worked as a young scientist at Harvard University-Wyss Institute from September 2010 to September 2011. Currently he is a Ph.D. student at University of Szeged, Department of Medical Biology and also pursuing a Master's Degree in computer studies.

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