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## Phylogenetic analysis of Chinese sheeppox and goatpox virus isolates

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Sheeppox virus (SPPV) and goatpox virus (GTPV), members of the Capripoxvirus genus of the Poxviridae family are causative agents of sheep pox and goat pox respectively, which are important contagious diseases and endemic in central and northern Africa, the Middle and Far East, and the Indian sub-continent, and also are spreading in China. As for host preference, it was once a common belief that SPPV only infected sheep while GTPV only infected goats. But now, more consider that the host specificity of SPPV and GTPV strains was not limited to either sheep or goats. Conventional serological test cannot distinguish SPPV, GTPV and LSDV, so identification of these pathogens needs molecular methods. P32, GPCR and RPO30 genes are highly conserved among capripoxviruses. Sequence information of them can be used in differentiating SPPV, GTPV and LSDV, presenting the genetic relationship among different virus strains. In this study, three SPPVs and two GTPVs were collected from China in 2009 and 2011. The phylogenetic analysis of the P32, GPCR and RPO30 gene of the SPPVs and GTPVs revealed their genetic relatedness. Results showed that there was a close relationship among SPPV/GanS/2/2011, SPPV/GanS/1/2011 and SPPV/NingX/2009, and clustered on the same SPPV clade. GTPV/HuB/2009 and GS-V1 belonged to the GTPV lineage. GS-V1 was closely related to other GTPV vaccine strains. GTPV/HuB/2009 and GS-V1 were clustered with GTPVs from China and some southern Asian countries. This study may expand the datum for spread trend research of Chinese SPPVs and GTPVs, meanwhile provide theoretical references to improve the preventive and control strategy.

### Biography

Zhizhong Jing has completed his PhD from School of Post-graduate, Chinese Academy of Agricultural Sciences(CAAS). He now is the director of Zoonotic Diseases Research department of Lanzhou Veterinary Research Institute, CAAS. Studies on the technique of prevent and control on viral zoonosis, especially on diagnosis, monitoring, prevention and prewarning of the animal poxvirus diseases and emerging diseases. He has published more than 100 papers in reputed journals issued by language of Chinese and English.

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