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Syr-Darya Valley fever virus



Offline [arw36](#) 198.137.18.199 [over 3 years ago](#)

This virus is included in the human virus database provided by Geoghagen et al. 2016 and is described in L'vov et al. 2014. I have not found any information on the ICTV taxonomic database/reports or the ArboCat from CDC. Any info on this virus, and why it is not included? If isolated from human blood and pathogenic, I would imagine this is important virus to cover.

Geoghegan, J. L., Senior, A. M., Di Giallonardo, F., & Holmes, E. C. (2016). Virological factors that increase the transmissibility of emerging human viruses. *Proceedings of the National Academy of Sciences*, 113(15), 4170-4175.

L'vov, D. K., Al'khovskii, S. V., Shchelkanov, M., Shchetinin, A. M., Deriabin, P. G., Gitel'man, A. K., ... & Botikov, A. G. (2014). Genetic characterization of the Syr-Darya valley fever virus (SDVFFV) (Picornaviridae, Cardiovirus) isolated from the blood of the patients and ticks *Hyalomma as. asiaticum* (Hyalomminae), *Dermacentor daghestanicus* (Rhipicephalinae) (Ixodidae) and *Ornithodoros coniceps* (Argasidae) in Kazakhstan and Turkmenistan. *Voprosy virusologii*, 59(4), 15-19.



Offline [Elliot Lefkowitz](#) 138.26.21.102 [over 3 years ago](#)

A quick BLAST search with the sequence referenced in the publication abstract (accession number KJ191558 that points to the sequence for Sikhote-Alin virus strain P-113) showed that it was highly similar to Theiler's murine encephalomyelitis virus, the exemplar virus for the species *Cardiovirus B* (https://talk.ictvonline.org/ictv-reports/ictv_online_report/positive-sense-rna-viruses/picornavirales/w/picornaviridae/678/genus-cardiovirus).

A more thorough analysis will be required to definitively determine its taxonomic placement. But based on the species demarcation criteria provided for the *Cardiovirus* genus (see ICTV report chapter in the link above), this virus would be characterized as an isolate belonging to the existing species, *Cardiovirus B*.

Offline [arw36](#) 24.181.5.181 [over 3 years ago](#) [in reply to Elliot Lefkowitz](#)



Thanks for your help!



Offline [Nick Knowles](#) 86.0.244.188 [over 3 years ago](#)

Syr-Darya Valley fever virus (SDVFFV) and Sikhote-Alin virus (SAV) were apparently isolated from humans and ticks and from ticks taken from wild boars, respectively. They were originally described as being serologically related to each other and to Mengo virus (a strain of EMCV) by complement fixation, but distinct from each other by virus neutralization. As far as I am aware, both viruses were only isolated in mice. The paper published by L'vov et al. (2014) describes the sequence of SDVFFV as being most closely related to Theiler's murine encephalomyelitis virus (TMEV; species *Cardiovirus B*). However, the accession number given in the paper refers to SAV! This sequence is clearly a strain of TMEV. I presume that SDVFFV as described in the publication is also a TMEV. It is possible that these viruses were already in the mice used for virus isolation, as is suspected for the TMEV-related Vilyuisk human encephalomyelitis virus (VHEV). More evidence is required to prove a link with human, pigs and ticks. The evidence as presented in the L'vov et al. (2014) (SDVFFV) and the sequence of SAV (KJ191558) clearly show them to belong to the species *Cardiovirus B*.



Offline [arw36](#) 24.181.5.181 [over 3 years ago in reply to Nick Knowles](#)

Thanks!

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