

Letter to the Editor

The Effect of Environmental Temperature on Hendra Virus Survival

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In their recent paper, Martin et al. (2015) use an alternative modelling approach to re-test our hypothesis of the effect of environmental temperature on Hendra virus survival (Scanlan et al. 2014). They identify a translation error in the calculated half-life of virus at 56 °C, the highest data point on the regression curve that formed the basis of our model. We have re-run the model with the corrected value (1.8 min). While the error is regrettable, it has no practical effect on the estimation of virus survival at the six locations used in the model, because the mean maximum temperature did not exceed 33 °C at any location in any month, well below the next highest data point (37 °C) on the curve. Hourly temperatures used in other simulations exceeded 37 °C on just eight occasions—0.06 % of total hours, and less than 0.5 % of hours in the hottest month in the hottest location. Thus our original conservative interpretation of the effect of environmental temperature on Hendra virus

survival is valid. Martin et al. (2015) incorrectly claim that we ‘state that HeV survival is a major driver of transmission and seasonality’. To the contrary, we state that ‘While temperature is an important factor in virus survival, additional factors contribute to a complex causality and effective transmission.’ We have linked a detailed erratum to our original publication.

REFERENCES

- Martin G, Plowright R, Chen C, Kault D, Selleck P, et al. (2015) Hendra virus survival does not explain spillover patterns and implicates relatively direct transmission routes from flying foxes to horses. *Journal of General Virology*. doi:10.1099/vir.0.000073
- Scanlan JC, Kung NY, Selleck PW, Field HE (2014) Survival of Hendra virus in the environment: modelling the effect of temperature. *EcoHealth* 12(1):121–130