Professor Spencer Barrett

Editor-in-Chief

*Proceedings of the Royal Society B: Biological Sciences*

June 12th, 2023

Dear Professor Barrett,

We wish to submit an original research article titled: “Modelling the effects of antibiotic usage in livestock on human salmonellosis” for consideration by the *Proceedings of the Royal Society B: Biological Sciences*.

In this paper, we show that current interventions to curtail antibiotic usage in livestock may have the unintended impact of increasing the incidence of salmonellosis in humans. However, we also identify that ensuring adequate farm-to-fork security will be sufficient to control these increases in foodborne disease. The results in this study are significant, given recent implementation of interventions worldwide to control modes of application and usage of antibiotic usage in livestock, despite a knowledge gap in the understanding of the impact of antibiotic curtailment in a one-health context.

We believe that this research will appeal to a wide range of readers of the P*roceedings of the Royal Society B: Biological Sciences*. In particular, we believe that modelling the dynamics of antimicrobial resistance and *Salmonella* spp. in both livestock and human populations will be of broad interest, and not limited, to those in veterinary sciences, ecology, evolutionary biology, epidemiology and mathematical biology.

We confirm that this work is original, has not been previously published elsewhere, and is not under consideration by another journal. We have no conflicts of interest to disclose. Please address all correspondence concerning this manuscript to me at [alexanderliangkang.morgan@usys.ethz.ch](mailto:alexanderliangkang.morgan@usys.ethz.ch).

Thank you for your consideration of this manuscript.

Best Regards,

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