Dear Editors,

We submit this manuscript entitled "Spatial model of lymphocyte search in influenza-infected lung reveals constraints on chemokine directed migration" for consideration of publication in Royal Society Interface. Our paper implements an agent-based model of bronchial influenza infection and the subsequent T cell response using new empirical values of chemokine secretion. The paper shows that chemokine levels have a limited yet important role in directing T cell migration and that the spatial effects of chemokine diffusion can actually hinder T cell search in rapidly spreading viruses. We feel this work will be of interest to investigators modeling the immune response for the ultimate purpose of improving vaccine design.

We recommend the following reviewers for their expertise in influenza and/or immunological modeling:

1. Rob de Boer - University of Utrecht
2. Fred Adler - University of Utah
3. Judy Day - University of Tennessee
4. Hulin Wu - Univ. of Rochester

We ask that you excuse the following people from review due to involvement in and discussion of earlier iterations of this work:

1. Alan Perelson - Los Alamos National Laboratories
2. Catherine Beauchemin - Ryerson University
3. Rustom Antia - Emory University

This work has not been published elsewhere, and is complementary to a previous publication from our group (H Mitchell, D Levin, et al. J Virol 2011;85(2):1125-1135).

All authors have read and approved the revised manuscript and report no conflicts of interest.

Respectfully yours,

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