

TO THE EDITOR—We thank Gautret et al for their comments and interest in our work. We found it compelling to see the Web of Science data that illustrated the acceleration of scholarly publications at the intersection of climate change and vector-borne disease. This trend is perhaps unsurprising, considering that each of the last 3 decades has been successively warmer at the Earth's surface than any preceding decade since 1850, and well-accepted science has demonstrated the devastating ecologic effects of these changes [1].

However, we do not agree with their 2 primary arguments. First, Gautret et al imply that a recent decline in vector-borne disease morbidity and mortality is evidence for a lack of an association between global climate change and these conditions. Such ecological inferences are highly prone to correlation without causation, much like associations between vaccine use and autism risk. While we agree that there has been a precipitous decline in malaria and other neglected tropical disease deaths of late, to suggest that this is proof that climate change does not impact their control ignores the fact that, from 2005 to 2015, global financing for malaria control more than doubled between 2005 and 2014, from an estimated \$960 million to \$2.5 billion [2, 3]. Additionally, this argument fails to acknowledge that artemisinin-based combination therapies became newly available during this period, largely resolving the scourge of chloroquine resistance [4]. Indeed, studies like ours, in western Uganda, which demonstrated increased transmission after severe flooding, as well as other studies from highland regions of Ethiopia and Columbia, which provided evidence for an increase in the altitude of malaria distribution in warmer years [5], are precisely the sort of data that demonstrate that climate change can thwart our best efforts to eliminate the burden of malaria.

However, we take particular exception to their second point—that the scientific community is overly concerned with global climate change. While the spread of malaria into new areas may currently contribute a small number of cases to the global burden of disease, affected populations, with little acquired immunity, will disproportionately suffer. Moreover, the extension of vector-borne diseases into new environments can have disastrous consequences for both disease control and elimination, as seen in the recent global distribution of dengue virus, chikungunya virus, and Zika virus [6]. Unfortunately, as with many diseases of poverty, those who are affected most are likely to be those with the fewest resources to respond. Therefore, we propose that the high level of interest in relationships between climate change and vector-borne diseases is both warranted and just. Indeed, we

believe that the scientific community must maintain strict adherence to both the scientific method and the precautionary principle to ensure accurate and appropriate focus on the subject [7].

Note

Potential conflicts of interest. Both authors: No reported conflicts. Both authors have submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest. Conflicts that the editors consider relevant to the content of the manuscript have been disclosed.

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Received 4 January 2017; editorial decision 6 January 2017; accepted 10 January 2017; published online January 18, 2017.

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The Journal of Infectious Diseases® 2017;215:662–3