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Reply to Comment on “Chikungunya Arthritis Mechanisms in the Americas: A Cross-Sectional Analysis of Chikungunya Arthritis Patients Twenty-Two Months After Infection Demonstrating No Detectable Viral Persistence In Synovial Fluid”, Autoimmunity and Lesser Virulence of Asian Lineage of Chikungunya Virus?

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Dear Editor

We thank Gérardin et. al., for sharing their thoughts on potential mechanisms that might contribute to the pathogenesis of chikungunya arthritis. Although, we did not observe anti-citrullinated cyclic peptide (anti-CCP) antibodies in our cohort, post-translational modifications including citrullination, carbamylation, and malondialdehyde-acetaldehyde are emerging as having important clinical and mechanistic significance in rheumatoid arthritis. Therefore, one can postulate these modifications may have clinical and mechanistic significance in the context of viral-induced arthritis as well and further research into these mechanisms in chikungunya arthritis is needed.

With regard the possibility of pro-inflammatory T-cell responses, we are actively investigating the contribution of adaptive immunity. Studies on peripheral blood and synovial tissue T-cell antigen specificity will be important, and we are currently studying whether chronic chikungunya arthritis occurs in the context of aberrant epigenetic marks. Understanding the pathogenesis and developing targeted therapy is urgently needed as chikungunya outbreaks occur with increasing and profoundly disable affected individuals.

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