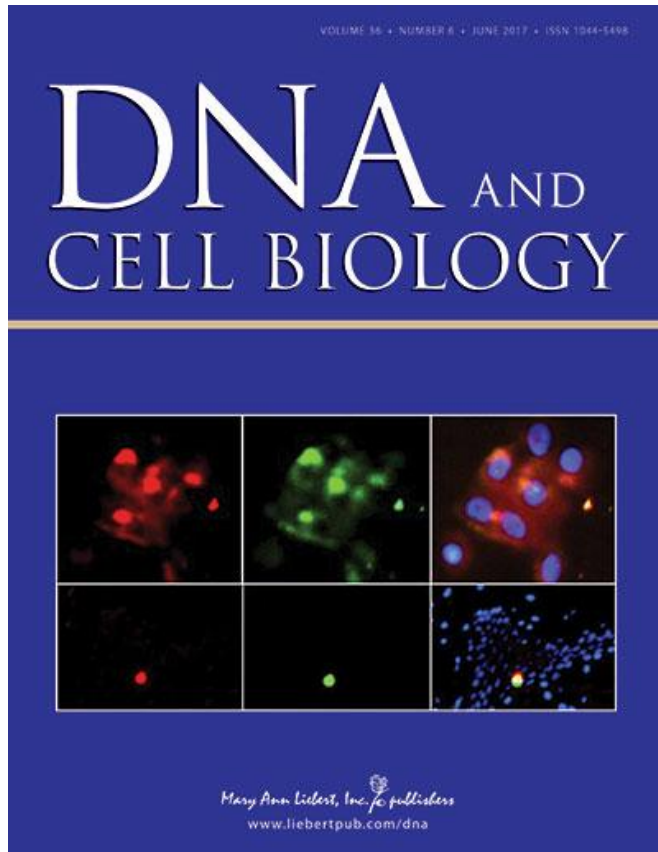


Do mast cells contribute to more severe disease in dengue infection?

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Why mosquito-borne dengue virus causes more severe disease in some individuals, including hemorrhagic fever with or without shock, remains controversial and researchers are focusing on the factors related to the interaction between the virus and the host immune system, including the role of mast cells. An in-depth review of the latest research showing how mast cells can be both protective and can contribute to the most severe forms of dengue is presented in the article "Role of Mast Cells in Dengue Virus Pathogenesis,"

published in *DNA and Cell Biology*, a peer-reviewed journal from Mary Ann Liebert, Inc., publishers.

Coauthors Berlin Londono-Renteria, Kansas State University, Manhattan, KS, Julio Marinez-Angarita, Instituto Nacional de Salud, Bogota, Colombia, and Andrea Troupin and Tonya Colpitts, University of South Carolina School of Medicine, Columbia, SC, study how mast cells recognize and interact with dengue virus and how mosquito saliva may affect the degranulation response of [mast cells](#) and the local immune responses during [dengue virus](#) infection in human skin. The researchers provide insights on what occurs during the early stages of dengue transmission and the mechanisms involved in mast cell activation and degranulation, which can increase the permeability of the human vasculature, causing it to become leaky.

"Mast cells are best known for their roles in allergies (such as pollen or food) and, for rare people, sensitivity to the saliva injected by mosquitos during bites. In this BIT, Colpitts and co-authors demonstrate the contributions of these cells to the pathogenesis of dengue, a severe disease," says Carol Shoshkes Reiss, PhD, Editor-in-Chief of *DNA and Cell Biology* and Professor, Departments of Biology and Neural Science, and Global Public Health at New York University, NY. "Understanding this may lead us to new approaches to the treatment of dengue fever and [dengue shock syndrome](#). The latter secondary infection can be life-threatening."

More information: Berlin Londono-Renteria et al, Role of Mast Cells in Dengue Virus Pathogenesis, *DNA and Cell Biology* (2017). [DOI: 10.1089/dna.2017.3765](https://doi.org/10.1089/dna.2017.3765)

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