Molecular perspectives on Pliocene hydroclimate in southwestern North America

Tripti Bhattacharya
Syracuse University

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For Zoom information, please contact
Tracy Baker tbaker@ucar.edu

For live stream information, visit the CGD Seminar Webpage

ABSTRACT
Geologic evidence suggests drastic reorganizations of subtropical terrestrial hydroclimate during past warm intervals, including the mid-Pliocene Warm Period (MP, 3.3 to 3.0 Ma). Despite having similar to present-day level of atmospheric CO2, geologic evidence suggests that the MP featured much wetter conditions on subtropical continents. The mechanisms and precise patterns of regional hydroclimate during the MP remain unclear. In this talk, I show that compound specific isotopic analyses of lipid biomarkers can be used to constrain the drivers of Pliocene subtropical hydroclimate, with special focus on western North America. Our results show that regional SST patterns play a key role in determining Pliocene subtropical hydroclimate, with implications for understanding current variability and future change.