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# FUNCTIONAL DIVERSITY IN MAMMAL ASSEMBLAGES INCREASES WITH MULTI-MILLION YEAR CLIMATIC STABILITY WORLD-WIDE

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Understanding how current and historical climatic conditions affect geographical patterns of diversity is a fundamental question in biogeography. Deep-time climatic changes have caused extinction, speciation, and range dynamics. However, the influence of multimillion-year paleoclimatic changes on of present-day patterns in functional diversity patterns remains virtually unexplored. Using climate reconstructions from the Miocene, Pliocene and the Last Glacial, I quantified the relative importance of current environment, biogeographic regions, and past climatic changes for global patterns in mammal functional diversity. I found that current functional diversity is partially linked to climatic stability since the Miocene and with weaker, but also important links to Quaternary glacial-interglacial climatic oscillations. Additionally I found that functional diversity exhibited strong variation among biogeographic regions, supporting the role of evolutionary and biogeographic history in structuring broad-scale patterns in functional diversity. Overall, the results indicate that past climate changes have left moderate multimillion-year disequilibrium legacies in contemporary mammal functional diversity, supplementing strong relations to current environment and strong differences among biogeographic regions.

**Thursday, October 20th, 2016**

**FCUL (Building C2), 12h00-13h00, room 2.2.14**  
**Videoconference from Azores**