Focus on: Molecular Evolution

Evolutionary Influences

“Nothing in biology makes sense except in the light of evolution.” Those words were written in 1973 by the evolutionary biologist Theodosius Dobzhansky. Today a great number of studies in biology can trace some of their methodological roots to evolutionary biology. For example, researchers take advantage of directed evolution approaches to generate novel variants of antibodies and fluorescent proteins, and examining evolutionary relationships among proteins forms the basis for predicting protein function. The field of paleomicrobiology is also firmly grounded in the use of molecular evolution tools. But as Michel Drancourt and colleagues detail in their review article in this section, the field is evolving with technology, shifting from the use of ancient DNA toward preserved proteins and even lipids in the quest to understand how ancient organisms impacted modern biology. We hope this article provides readers a glimpse into how the latest tools are making Dobzhansky’s words ring truer than ever.

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