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(Perspective on Big Data from the Analysis of Large Data Sets)
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Causes of protein evolution

Protein-coding genes in all organisms show nearly identical distributions of evolution rates that strikingly span about 3 orders of magnitude. The evolution of protein-coding genes is synergistically, albeit to different degrees, affected by the abundance of the respective proteins, their robustness to mutation, and specific biological functions. Additionally, evolution of proteins depends on global, genome-wide accelerations and decelerations as captured in the model of Universal Pacemaker of genome evolution. I will discuss the interplay between various determinants of protein evolution and will focus on new results on the connections between selection and protein robustness to mutation, and coevolution of protein and mRNA structures.

Date: Wednesday, April 1, 2015
Time: 4:10 - 5:00 PM
Room: 1414 Molecular Biology

Upcoming Speakers: http://bioinformatics.iastate.edu/seminar

Sponsored by: Office of the Vice Provost for Research and Big Data Initiative