

References

1. Lercher, M.J., A.O. Urrutia, and L.D. Hurst, *Clustering of housekeeping genes provides a unified model of gene order in the human genome*. Nat Genet, 2002. **31**(2): p. 180-3.
2. Castillo-Davis, C.I., et al., *Selection for short introns in highly expressed genes*. Nat Genet, 2002. **31**(4): p. 415-8.
3. Subramanian, S. and S. Kumar, *Gene Expression Intensity Shapes Evolutionary Rates of the Proteins Encoded by the Vertebrate Genome*. Genetics, 2004. **168**: p. 373-381.
4. Kumar, S., K. Tamura, and M. Nei, *MEGA3: An integrated software for Molecular Evolutionary Genetics Analysis and sequence alignment*. Briefings in Bioinformatics, 2004. **5**: p. 150-163.
5. Nei, M. and S. Kumar, *Molecular Evolution and Phylogenetics*. 2000, New York: Oxford University Press. xiv, 333.
6. Baudouin-Cornu, P., et al., *Molecular evolution of protein atomic composition*. Science, 2001. **293**(5528): p. 297-300.
7. Felsenstein, J., *Inferring Phylogeny*. 2003, Sunderland, MA: Sinauer Associates.
8. Baudouin-Cornu, P., et al., *Intimate evolution of proteins. Proteome atomic content correlates with genome base composition*. J Biol Chem, 2004. **279**(7): p. 5421-8.
9. Yang, Z. and W.J. Swanson, *Codon-substitution models to detect adaptive evolution that account for heterogeneous selective pressures among site classes*. Mol Biol Evol, 2002. **19**(1): p. 49-57.
10. Umbarger, H.E., *Amino acid biosynthesis and its regulation*. Annual Review of Biochemistry, 1978. **47**: p. 533-573.
11. Hermann, K.M. and R.L. Somerville, eds. *Amino acids: Biosynthesis and genetic regulation*. 1983, Addison-Wesley: Reading, MA.
12. Jordan, I.K., et al., *A universal trend of amino acid gain and loss in protein evolution*. Nature, 2005. **433**(7026): p. 633-8.
13. Chapin, F.S.I., *The mineral nutrition of wild plants*. Annual Review of Ecology and Systematics, 1980. **11**: p. 233-260.
14. White, T.C.R., *The Inadequate Environment: Nitrogen and the Abundance of Animals*. 1993, New York: Springer-Verlag.
15. Marschner, H., *Mineral Nutrition of Higher Plants*. 1995, London: Academic Press.
16. Sterner, R.W. and J.J. Elser, *Ecological stoichiometry : the biology of elements from molecules to the biosphere*. 2002, Princeton, N.J: Princeton University Press.
17. Elser, J.J., et al., *Biological stoichiometry from genes to ecosystems*. Ecology Letters, 2000. **3**: p. 540-550.
18. Elser, J.J., et al., *Organism size, life history, and N:P stoichiometry: towards a unified view of cellular and ecosystem processes*. BioScience, 1996. **46**: p. 674-684.
19. Vrede T, et al., *Fundamental connections among organism C : N : P stoichiometry, macromolecular composition, and growth*. Ecology, 2004. **85**: p. 1217-1229.
20. McNeill, S. and T.R.E. Southwood, *The role of nitrogen in the development of insect/plant relationships*, in *Aspects of Plant and Animal Coevolution*, J.S. Harborne, Editor. 1978, Academic Press: London. p. 77-98.
21. Mattson, W.J., *Herbivory in relation to plant nitrogen content*. Ann. Rev. Ecol. Syst, 1980. **11**: p. 119-161.

22. Elser, J.J., et al., *Nutritional constraints in terrestrial and freshwater food webs*. Nature, 2000. **408**(6812): p. 578-80.
23. Slansky, F. and P. Feeny, *Stabilization of the rate of nitrogen accumulation by larvae of the cabbage butterfly on wild and cultivated plants*. Ecological Monographs, 1977. **47**: p. 209-228.
24. Strong, D.R., J.H. Lawton, and T.R.E. Southwood, *Insects on plants*. 1984, Cambridge, Massachusetts: Harvard University Press.
25. Elser, J.J., et al., *Differential nitrogen use in animal and plant proteomes*. (submitted), in review.
26. Altschul, S.F., et al., *Gapped BLAST and PSI-BLAST: a new generation of protein database search programs*. Nucleic Acids Research, 1997. **25**(17): p. 3389-3402.
27. Duret, L. and D. Mouchiroud, *Expression pattern and, surprisingly, gene length shape codon usage in Caenorhabditis, Drosophila, and Arabidopsis*. Proc Natl Acad Sci U S A, 1999. **96**(8): p. 4482-7.
28. Fagan, W.F., et al., *Nitrogen in insects: Implications for trophic complexity and species diversification*. American Naturalist., 2002. **160**: p. 784-802.
29. Woods, H.A., et al., *Absorption and storage of phosphorus by larval Manduca sexta*. J Insect Physiol, 2002. **48**(5): p. 555-564.
30. Kerkhoff, D., et al., *Plant Allometry, Ecological Stoichiometry and the Scaling of Terrestrial Primary Production*. Global Ecology and Biogeography, 2005. **In press**.
31. Fagan, W.F. and R.F. Denno, *Stoichiometry of actual versus potential predator-prey interactions: insights into nitrogen limitation for strict and intraguild predators*. Ecology Letters, 2004. **7**: p. 876-883.
32. Denno, R.F. and W.F. Fagan, *Might nitrogen limitation promote omnivory among carnivorous arthropods?* Ecology, 2003. **84**: p. 2522-2531.
33. Tamura, K., M. Nei, and S. Kumar, *Prospects for inferring very large phylogenies using the neighbor-joining method*. Proc Natl Acad Sci U S A, 2004: p. In press.
34. Briscoe, A.D., C. Gaur, and S. Kumar, *The spectrum of human rhodopsin disease mutations through the lens of interspecific variation*. Gene, 2004. **332**: p. 107-18.
35. Subramanian, S. and S. Kumar, *Neutral substitutions occur at a faster rate in exons than in noncoding DNA in primate genomes*. Genome Res, 2003. **13**(5): p. 838-44.
36. Rosenberg, M.S. and S. Kumar, *Heterogeneity of nucleotide frequencies among evolutionary lineages and phylogenetic inference*. Mol Biol Evol, 2003. **20**(4): p. 610-21.
37. Tamura, K. and S. Kumar, *Evolutionary distance estimation under heterogeneous substitution pattern among lineages*. Mol Biol Evol, 2002. **19**(10): p. 1727-36.
38. Kumar, S. and S. Subramanian, *Mutation rates in mammalian genomes*. Proceedings of the National Academy of Sciences of the United States of America, 2002. **99**(2): p. 803-808.
39. Rosenberg, M.S. and S. Kumar, *Incomplete taxon sampling is not a problem for phylogenetic inference*. Proceedings of the National Academy of Sciences of the United States of America, 2001. **98**(19): p. 10751-10756.
40. Kumar, S. and S.R. Gadagkar, *Disparity index: a simple statistic to measure and test the homogeneity of substitution patterns between molecular sequences*. Genetics, 2001. **158**(3): p. 1321-7.
41. Rosenberg, M.S. and S. Kumar, *Taxon sampling, bioinformatics, and phylogenomics*. Syst Biol, 2003. **52**(1): p. 119-24.

42. Rosenberg, M.S., S. Subramanian, and S. Kumar, *Patterns of transitional mutation biases within and among Mammalian genomes*. Mol Biol Evol, 2003. **20**(6): p. 988-93.
43. Duret, L., D. Mouchiroud, and M. Gouy, *Hovergen - a Database of Homologous Vertebrate Genes*. Nucleic Acids Research, 1994. **22**(12): p. 2360-2365.
44. Altschul, S.F. and E.V. Koonin, *Iterated profile searches with PSI-BLAST - a tool for discovery in protein databases*. Trends in Biochemical Sciences, 1998. **23**(11): p. 444-447.
45. Waterston, R.H., et al., *Initial sequencing and comparative analysis of the mouse genome*. Nature, 2002. **420**(6915): p. 520-62.
46. Sonnhammer, E.L. and E.V. Koonin, *Orthology, paralogy and proposed classification for paralog subtypes*. Trends Genet, 2002. **18**(12): p. 619-20.
47. Lander, E.S., et al., *Initial sequencing and analysis of the human genome*. Nature, 2001. **409**(6822): p. 860-921.
48. Denno, R.F. and M.S. McClure, eds. *Variable Plants and Herbivores in Natural and Managed Systems*. 1983, Academic Press: New York. 717.
49. Chown, S. and K. Gaston, *Exploring links between physiology and ecology at macroscales: the role of respiratory metabolism in insects*. Biological Reviews, 1999. **74**: p. 87 - 120.
50. Denno, R.F. e.a., *Habitat persistence underlies intraspecific variation in the dispersal strategies of planthoppers*. Ecological Monographs, 1996. **66**: p. 389-408.
51. Efron, B. and R. Tibshirani, *An introduction to the bootstrap*. Monographs on statistics and applied probability ; 57. 1993, New York: Chapman & Hall. xvi, 436.
52. Lopez, R., et al., *WU-Blast2 server at the European Bioinformatics Institute*. Nucleic Acids Res, 2003. **31**(13): p. 3795-8.
53. Wenninger, E.J. and W.F. Fagan, *Effect of river flow manipulation on wolf spider assemblages at three desert riparian sites*. Journal of Arachnology, 2000. **28**: p. 115-122.
54. Fagan, W.F. and A. Stephens, *How local extinction changes rarity: An example with Sonoran Desert fishes*. (submitted), In review.