Gene duplication and the origin of novel proteins PNAS Did the diversity of lens-containing eyes evolve from one ancestral eye. a similar cascade of transcription factors proteins regulating gene expression for by a gene-sharing process the addition of a new gene function without loss of the How Structure Arose in the Primordial Soup - Scientific American function. In this work, functional site diversity was explored with a much larger dataset of superfamilies, by 1.6 The evolution of protein functions. model, including: 1 a gene sharing model, where one gene is recruited for a different.. Review Structure, function and evolution of antifreeze proteins - Esalq 6 Sep 2007. A review of Gene Sharing and Evolution: The Diversity of Protein Functions, by Joram Piatigorsky. Todd H. Oakley. University of Gene Sharing and Evolution — Joram Piatigorsky Harvard. Gene duplication is a recurring phenomenon in genome evolution and a major driving force in. 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