



**Molecular Evolution & Bioinformatics** "Bioinformatics and Molecular Evolution" by Higgs and Attwood (2005) Blackwell Publishing [ISBN: 1405106832] 日本 Ch 1: explains how population genetics and molecular evolution are important and related to bioinformatics Ch 3: explains the basic mechanisms of molecular evolution (PDF available on Canvas) "Fundamental Concepts of Bioinformatics" by Krane and Raymer (2003) Benjamin Cummings [ISBN: 0805346333] THE REAL PROPERTY. Ch 3: presents the basics of molecular evolution (PDF available on Canvas) "Bioinformatics for Beginners" by Choudhuri (2014) Elsevier [ISBN: 9780124104716] Ch 2: presents the foundation of molecular evolution (PDF available on Canvas) (The book accessible on Elsevier website from UNL) BIOS477/877 L3 - 3 \*PDF files available in "Molecular Evolution readings" page on Canvas.

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**Molecular Evolution** What we can do: → reconstruct the evolutionary history of genes and genomes (evolution at the molecular level) → reconstruct the evolutionary history of populations and species (evolution at the organismal level) - can be tracked both in space and in time → attempt to build a classification of the living world 1 5 → reconstruct the evolution of adaptation (function) Ű -→ identify the driving forces behind the evolutionary process Tree of lif



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 Causes of Molecular Evolution

 Squee: 1
 A Construction

 Squee: 2
 A Construction

 B Construction
 A Construction

 Squee: 3
 A Construction

 B Construction
 B Construction































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