

LAB#23: Biochemical Evidence of Evolution

Name: _____

Period _____

Date: _____

Laboratory Experience #23

Worth 80 Lab Minutes

Bridge



If two organisms have similar portions of DNA (genes), these organisms will probably make similar proteins. If two organisms have identical or almost identical proteins, the *amino acid sequence* within the protein is similar. Scientists believe that organisms with similar DNA have common origins. The more similar their DNA



is, the more similar their proteins will be and the more closely related the organisms are likely to be. Thus, scientists use *biochemical evidence* (the amino acid sequence of proteins) to establish how organisms have evolved. Hemoglobin, a component of red blood cells, is one of the most widely studied of all proteins. In this activity, you will analyze the amino acid sequence of the hemoglobin protein in three species: human, horse and gorilla. You will establish evolutionary relationships based on this analysis.

Which organism do you predict are most similar horse, gorilla, or human?
Explain why?



Objective:

To show how biochemical evidence can be used to support evolution

Essential Question:

How can biochemical evidence support evolution?

Biochemical Evidence For Evolution Lab 12 Answer Key

O García



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