

Talha Ehtasham
CISC 436
Homework 1, Problem 4b
BLAST Report

Longest ORFs:

**ATGAAAATCAACTCAGAGTTCTTTCAAGAACAGCAAGAGGTGTATTTGGTATCAGTTA
A**

Gene: DNA Gyrase subunit A - Helps supercoil circular, closed DNA using ATP to maintain chromosome structure.

E-value: 0.004

Bit score: 40.8 bits

% identity: 100%

Starting position: 6858

ATGCCTTCAGGATTTATATCACCACAAAGTTTATTTTGCTTGTTTCTTGA

Gene: Bifunctional 5,10-methylene-tetrahydrofolate dehydrogenase/5,10-methylene-tetrahydrofolate cyclohydrolase - Used in the synthetic pathway that forms folic acid and pteroylglutamic acid.

E-value: 0.034

Bit score: 37.7 bits

% identity: 100%

Starting position: 14521

ATGATGCCAAACTTTACCTTTATTTTGGATTGCAATTTTAA

Gene: Thymidylate kinase - Enzyme that catalyzes phosphorylation of dTMP to dTDP, important compounds used in synthesis of DNA

E-value: 0.62

Bit score: 33.9

% identity: 100%

Starting position: 8928

***None of the starting positions correspond to the first occurrence of ATG