Lessons

Peer Graded Assignment: Bioinformatics Application Challenge

Submit by September 11, 11:59 PM PDT

Important Information
It is especially important to submit this assignment before the deadline, September 11, 11:59 PM PDT, because it must be graded by others. If you submit late, there may not be enough classmates around to review your work. This makes it difficult - and in some cases, impossible - to produce a grade. Submit on time to avoid these risks.

Instructions
My submission
Discussions

Instructions

In this Application Challenge, we are going to hop in the Bioinformatics Time Machine and head back to 1996.

Pretend that you are working with Mohamed Marahiel to discover the non-ribosomal code by determining the structural components of gramicidin synthetase, a protein that makes the non-ribosomal peptide gramicidin. You know that it has an adenylation domain (A-domain), but you do not know where it is located in the sequence of amino acids making up the protein.

Fortunately, Peter Brick just published the 3-D structure of firefly luciferase, which has similarities to A-domains. You think that this information might be useful in finding the A-domain of gramicidin synthetase, and so you obtain the amino acid sequence of gramicidin synthetase, which you decide to compare against the much shorter sequence for firefly luciferase to locate the A-domain in the gramicidin synthetase sequence.

Throughout this challenge, you will need two datasets (in FASTA format):

- the amino acid sequence of gramicidin synthetase (grs.fa)
- the amino acid sequence of firefly luciferase (firefly_luc.fa)

Review criteria **less**

Everyone enrolled in the course must review at least five other submissions to ensure everyone receives a grade; however, many learners complete more to help their peers who are still waiting.

Copying answers from the rubric is a violation of the Coursera honor code. Please assign 0 points to any question whose text significantly matches the rubric text. If significant matches with the rubric are found for multiple questions, then please assign the entire assignment a 0 and notify the course staff.