

Writing Assignment #2:

PNAS Paper: "Mechanism for a transcriptional activator that works at the isomerization step"

Authors: Simon L. Dove, Franklin W. Huang and Anne Hochschild

Online at [PNAS](#) site

The paper by Dove and colleagues addresses the mechanism involved in activation of open complex formation by κ cl. To this end the authors use a combination of chimeric proteins and altered promoter sequences to investigate activation by κ cl.

The authors argue that the studies of the chimeric proteins and promoters described in the paper shed light on the mechanism of κ activation of open complex formation.

Despite this, they never determine what type of activation they are observing in their assays. What step in the initiation process (closed complex formation, open complex formation, or promoter clearance) do you think is being used by the chimeric transcription apparatus described by the authors? Why?

If you could pick only one figure in the paper, which would you say provides the strongest evidence for the model the authors describe in the discussion? Provide an argument in favor of your choice.

Directions:

The answers to the questions should be in the form of a **2 PAGE ESSAY, DOUBLE SPACED, USING #12 FONT SIZE with one inch margins** on top, bottom, left, and right.

All papers should be **left justified. No excuses!**

The essay should synopsise the important points of the paper that pertain to the question (no more than two paragraphs) and propose an answer to the questions posed. The quality of the answer will depend on the quality of the supporting arguments as well as the quality of the presentation.

Criteria for evaluation:

1. The student introduced the paper's topic effectively through a concise and clear summary of the key conclusions that can be made based on the experiments presented in the reading assignment.
2. The paper demonstrated a clear understanding of the experiments presented in the reading assignment.

3. The paper presented an insightful perspective to the study question(s). Answers were well supported with logical arguments based on the data in the paper.
4. The study question(s) were answered in the space allowed.
5. The paper:
 - a. was well organized with informative topic sentences, effective transitions, and clear expression of ideas;
 - b. had a logical flow; and
 - c. demonstrated correct grammar and mechanics.
6. The title of the essay concisely synopsised the topics covered and drew the reader's interest.