i-STEAM with CSATS

PennState College of Education College of Engineering

CSATS Center for Science and the Schools

Mechanobiology: An in-depth example to teach central dogma

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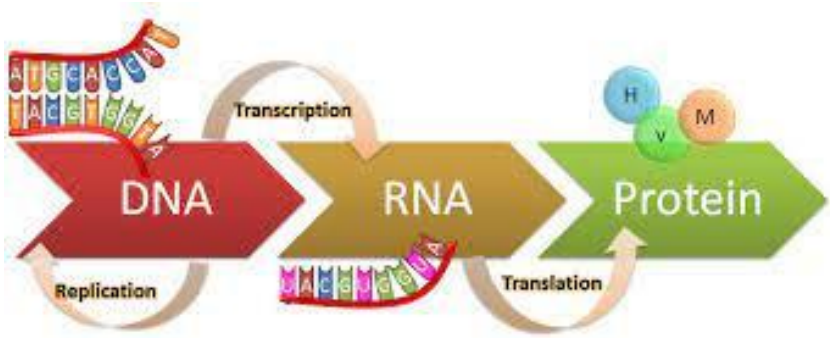
Thursday, May 19, 2022 (9 a.m. - 3:30 p.m.)
Virtual

Target Audience: Biology Teachers of High School Students

- This workshop is FREE to all educators and ACT 48 is available.
- This workshop is aligned to the PA Science and Technology standards, Engineering Education standards, and Next Generation Science Standards.
- Enrollment is limited to 24 teachers. Apply here.
- For more information email Amber Cesare at ams5306@psu.edu.

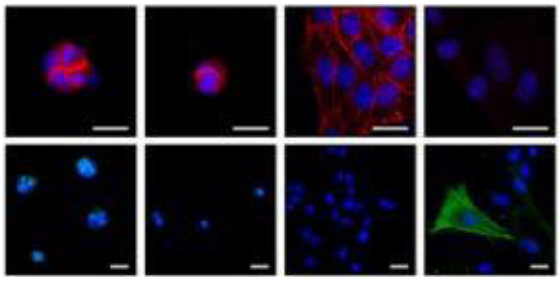
Apply Today!

Sponsored by: NSF National Science Foundation



Even though our cells' genetic makeup does not change, the genes that are activated and the proteins that are expressed are often controlled by physical and chemical stimuli. The Central Dogma of Biology is key to understanding how these signal cause phenotypic changes to tissues and to identify therapeutic targets to treat conditions that arise when these processes are abnormal.

This free, online workshop will look closely at a specific example in which the physiology of mammary cells change due to the mechanics caused by the physical forces from the extracellular matrix during cancer. Known as mechanobiology, participants will participate in practical exercises that mimic the work of mechanobiologists as they investigate how physical changes affect the transcription, translation, and expression of genes. With support from mechanobiologists and CSATS, teachers will leave the workshop able to use these activities and data sets to help their students learn about the Central Dogma through participation in the practices of scientists.



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