



The R. Omar & Evelyn Rilett Family Life Sciences Lecture Series

School of Biological Sciences

Rewriting the blueprint for the cephalopod nervous System in RNA

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Genetic information is stored in DNA and realized in proteins after passing through RNA. Its transient residence in RNA provides a prime opportunity for modification. Changes in DNA are permanent and perilous—those in RNA go away and thus safer. There are a variety of systems for altering RNA in cells. Alternative splicing, of course, is a well-studied example. My lab focuses on RNA editing through adenosine deamination, a system for introducing point mutations within RNA. All multicellular metazoans use this system, but cephalopods take it to a new level, particularly in their nervous system. I will discuss how cephalopods use RNA editing, the molecules it is targeting, where it is taking place both within and between cells, and how it responds to changes in the environment. I will also introduce the trade-offs between evolution at the DNA and RNA levels. Finally, I will touch on how RNA editing may be redirected for therapeutic advantage.

Contact Sally Little (salitt2@ilstu.edu) for appointments with this speaker

Thursday, April 19, 2018 at 4:00 p.m.
Moulton Hall 214

*Pre-Seminar Social held at 3:30pm located outside
Felmley Science Annex Room 133*

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