

MCDB 4550/5550
Molecular and Cellular Biophysics
Perkins
Assignment #13
Due Tuesday, April 30th at the end of class

1. Bring three (3) well thought out questions about the literature paper to class and hand them in.

Additional questions on the paper for you to answer.

- 1.1 What was the central hypothesis for why xrRNAs were not digested prior to this paper?
- 1.2 What is the force range for unfolding hairpins of RNA and how does that compare the mechanical unfolding of these xrRNAs?
- 1.3 Explain why threading of the 5' end of the xrRNA through the pseudoknot is critical to preventing digestion?
- 1.4 Which mutation studied was crucial in establishing this insight and why?