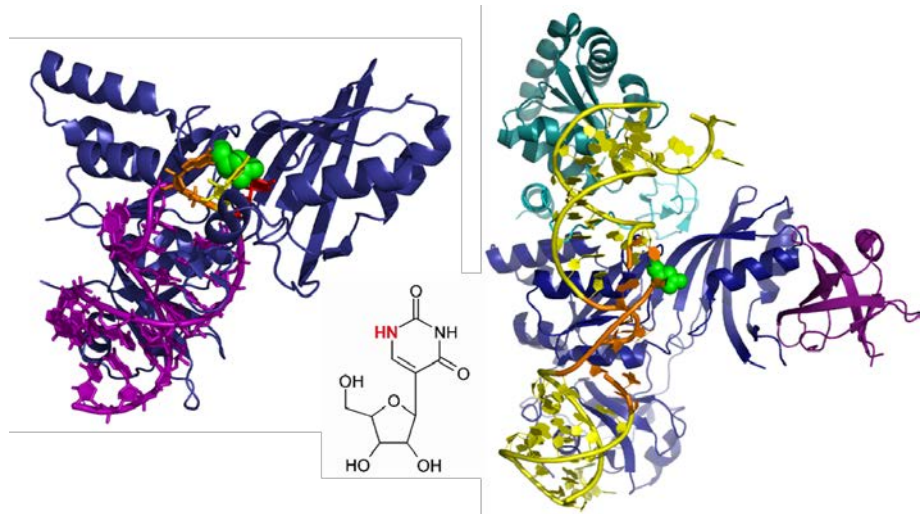




Two tales about RNA modification by pseudouridine synthases: why pseudouridines are not fake



Pseudouridine is the most abundant RNA modification found in all types of RNA including mRNA. However, the cellular function of pseudouridines and pseudouridine synthases remains enigmatic. Combining biochemical, biophysical and cellular approaches, we have uncovered a second, critical function of a bacterial pseudouridine synthase: this enzyme not only modifies all tRNA, but it also acts as a tRNA chaperone helping tRNA to adopt its functional three-dimensional structure. Furthermore, we have characterized the molecular mechanism of a complex eukaryotic synthase, the H/ACA small Ribonucleoprotein complex, which reveals critical features for correct guide RNA positioning. The implications of these findings for RNA-binding proteins and guide-RNA systems in general will be discussed.

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Host: Dr. Frank Sicheri

Date: Thursday June 22nd, 2017

Time: 2PM

Place: Donnelly Centre, 160 College St
Red Seminar Room