



## Department of Biological Sciences Seminar Series

---

Virginia Zakian, Ph.D.  
Princeton University



Monday,  
November 5

4:10 pm

1220 MRBIII

Tea Time

3:45

MRBIII Lobby

### ***Keeping telomeres in check: Novel methods of telomerase regulation***

Using mass spectrometry, we identified ~100 proteins that co-purify with budding yeast telomerase (Lin et al. 2015 Nature Comm.) ~60% of the telomerase-associated proteins have roles in proteolysis, while 35% affect RNA biogenesis. We focused on determining the roles of two highly conserved multi-protein complexes, the Cdc48-Npl4-Ufd1, which in yeasts through humans targets ubiquitylated proteins to the proteasome and three Pop proteins that are members of two RNase complexes, RNase P and RNase MRP that process structural RNAs. Both complexes limit the abundance of telomerase subunits. In my talk, I will focus on how Pop proteins regulate telomerase RNA.