



## **Jeff Coller, Ph.D.**

### **Titles & Department**

Bloomberg Distinguished Professor of RNA Biology and Therapeutics;  
Professor, Molecular Biology and Genetics

### **Specialization Areas**

Optimized expression systems, mRNA stability, mRNA translation.

### **Summary of Research & Work**

Dr. Coller's work focuses developing novel therapeutics for devastating rare diseases, improving gene therapy manufacturing and efficacy, and exploring novel disease diagnostics. His work has been foundational in understanding human gene expression and how the genetic code is a major determinant of mRNA fate.

Recent projects include:

- Modulating RNA levels: Tethered mRNA amplifier
- Modulating RNA stability: Codon optimization
- Modulating RNA translation efficiency: Acetylation of cytidine and mRNA deadenylation via CCR4

### **Publications**

- [Development of a tethered mRNA amplifier to increase protein expression](#)
- [Roles of mRNA poly\(A\) tails in regulation of eukaryotic gene expression](#)
- [Suppression of premature transcription termination leads to reduced mRNA isoform diversity and neurodegeneration](#)
- [Codon optimality-mediated mRNA degradation: Linking translational elongation to mRNA stability](#)
- [Codon optimality is a major determinant of mRNA stability](#)
- [Acetylation of cytidine in messenger RNA promotes translation efficiency](#)