



# Quantitative Analysis of Fission Yeast Transcriptomes and Proteomes in Proliferating and Quiescent Cells



Data on absolute molecule numbers will empower the modeling, understanding, and comparison of biological systems. We quantified all RNA and most protein concentrations in fission yeast during cellular proliferation and quiescence. While mRNAs are typically expressed in a narrow range above 1 copy/cell, most non-coding RNAs are present below 1 copy/cell. Proteins are 10-60,000-fold more abundant than their corresponding mRNAs, with concentrations regulated to functional demands. Upon transition to quiescence, the proteome changes substantially, but, in contrast to mRNAs, proteins do not uniformly decrease but scale with cell volume.

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Host: Dr. Brenda Andrews

**Date:** Monday November 4, 2013

**Time:** 4:00 p.m.

**Place:** FitzGerald Building  
150 College Street  
Room 103