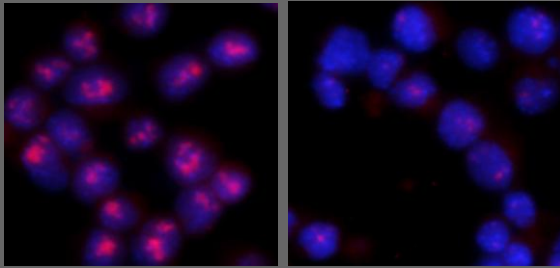
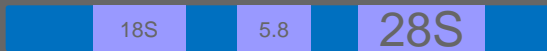


Developmental regulation of rRNA processing in embryonic stem cells

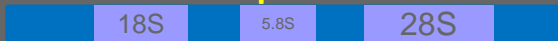
Josue Gutierrez

probe

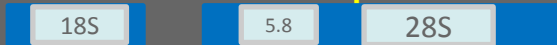
47S pre-rRNA



47S pre-rRNA



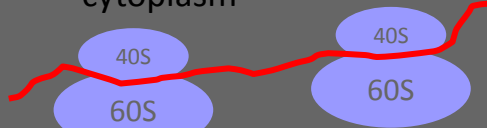
32S pre-rRNA



Mature rRNA



cytoplasm



Background:

Embryonic stem cells (ESCs) are valuable resources for regenerative medicine and understanding how ESCs maintain their unique pluripotent characteristic is the prerequisite for therapeutic applications. ESCs are highly proliferative which places a heavy burden on the metabolic and synthetic needs of a cell. The specific goal of our research is to investigate how embryonic stem cells regulate their growth and translational machinery in anticipation of future cell growth. This provides insight into our current knowledge of stem cell biology and will help to develop a more efficient methodology for differentiation of ESCs towards lineage-specific cell types.