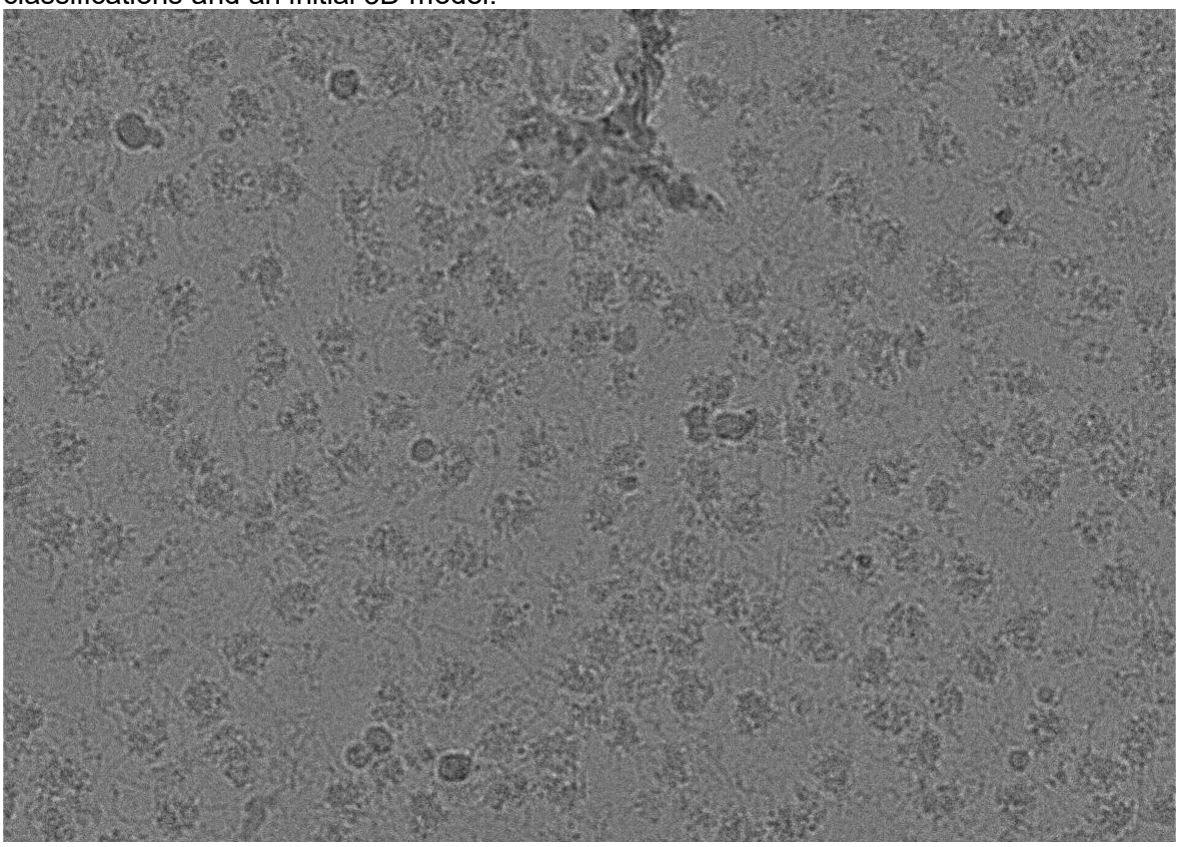
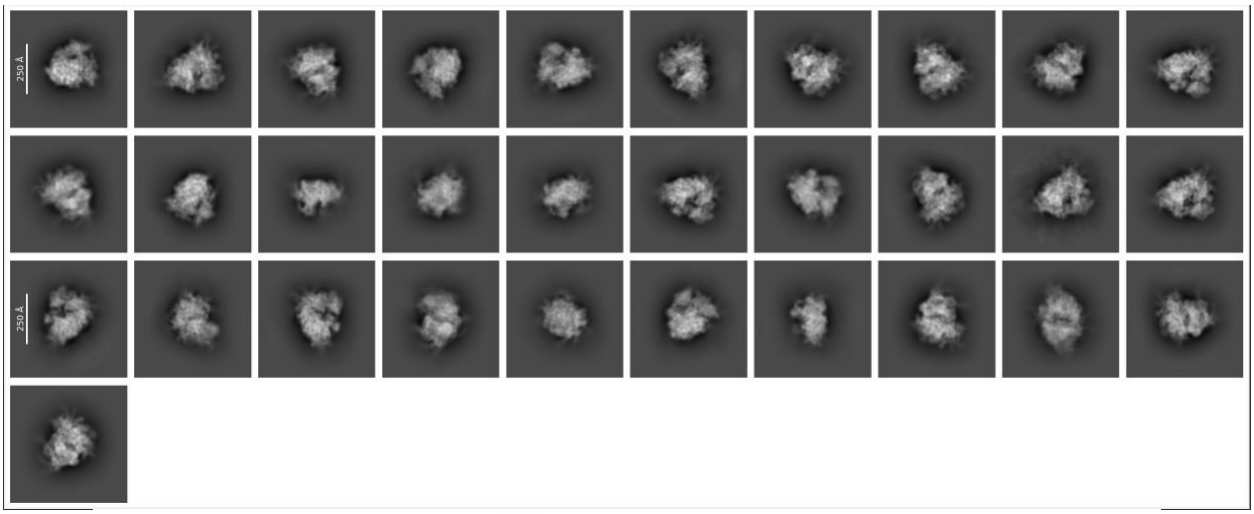
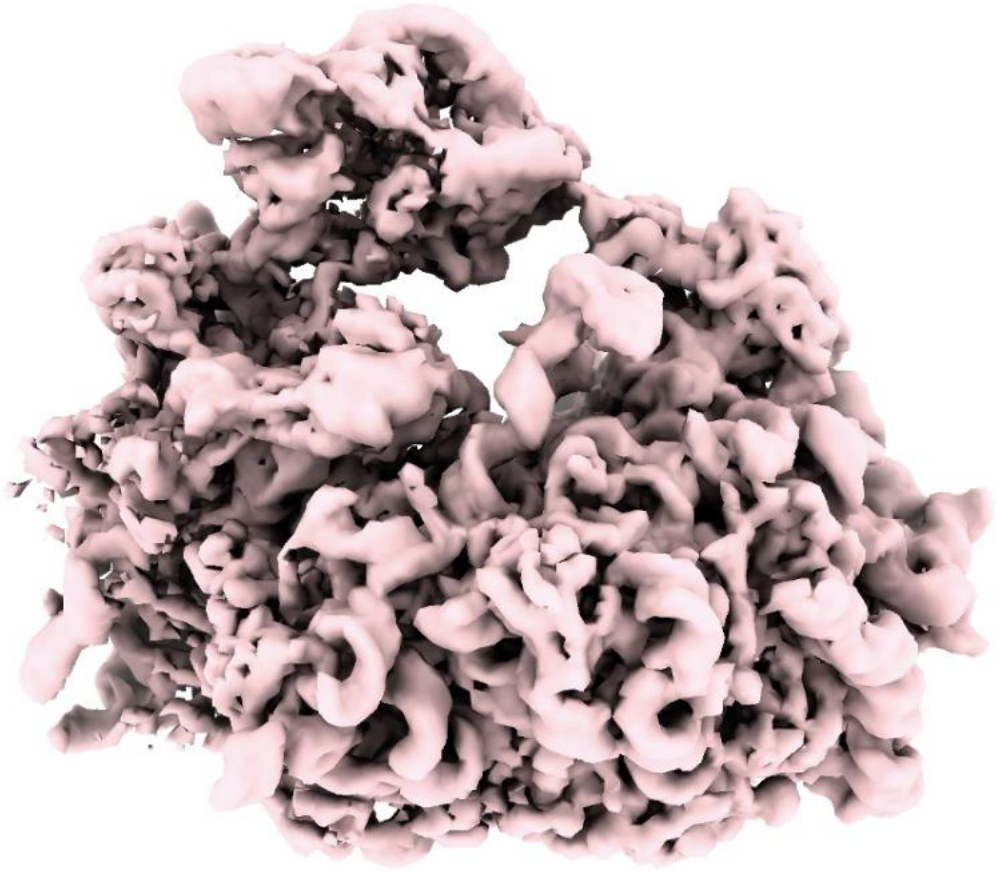
Name: Lilei Xu
PI: Jeannie Lee
Project name: SRP-ribosome complex
Specimen: Human SRP-ribosome complex under acute heat shock stress conditions purified from HEK293 cells.
Background: Our unpublished data show that under acute heat shock stress, more Signal Recognition Particles (SRP) will bind to ribosomes and inhibit translation to protect cells from heat stress via unknown mechanisms. We are wondering how SRP could transfer its function from protein translocation to translation inhibition by comparing the complex structure of SRP-ribosome under normal conditions and heat stress conditions.
Biological significance: This work aims to explain the translation inhibition mechanisms of SRP, which will help in understanding the novel function of SRP and give more insights into how mammalian cells respond to stress.
Specimen molecular weight: ~4.6 Mda
Specimen dimensions: ~30 nm sphere
Previous data: ~1274 mics have been collected on Talos. Here is one representative mic, 2D classifications and an initial 3D model.







Requested microscope: Talos Arctica
Phase plate (yes or no): no
Requested number of sessions (up to 4): 4