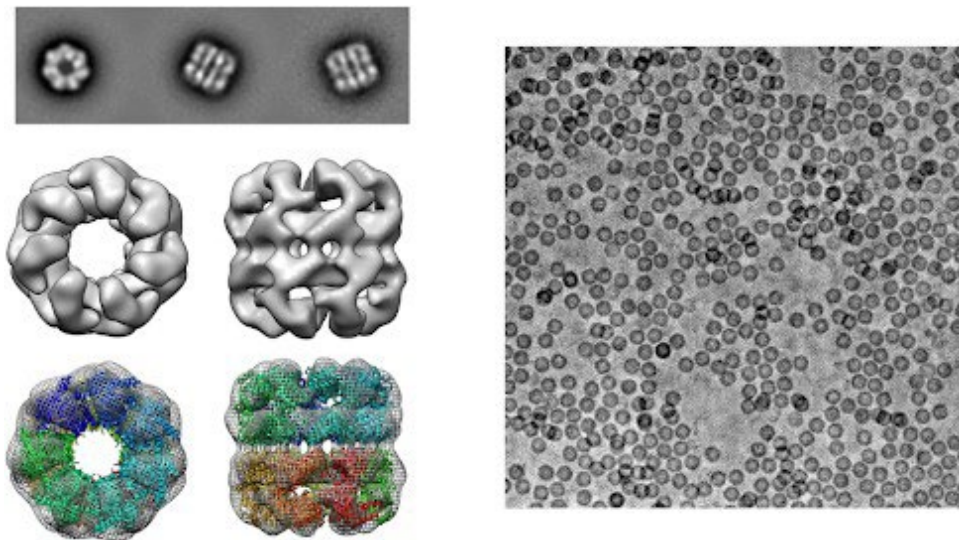


## New Methodologies for Preparing and Imaging Cryo-EM Samples.

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We have investigated using native mass spectrometry to land isolated protein complexes onto EM grids, subsequently solving their structure by negative stain EM. I will discuss these results and the potential for MS-EM to provide ideal samples for single-particle cryo-EM. I will also discuss a new imaging method we are developing, “Defocus Sweep Imaging”, which, via computational microscope control, allows the microscope defocus to be changed as movies are recorded. This allows high resolution close-to-focus information to be recorded at the beginning of an exposure when radiation damage is low, and lower resolution far-from-focus data to be recorded at the end of the exposure when the sample is highly damaged.



*Figure 1*