# Visualizing the Chemical Origins of Life

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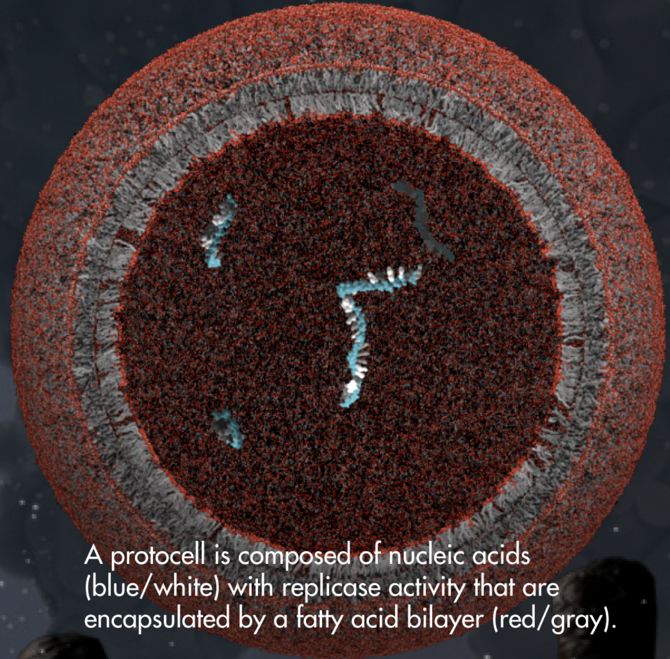
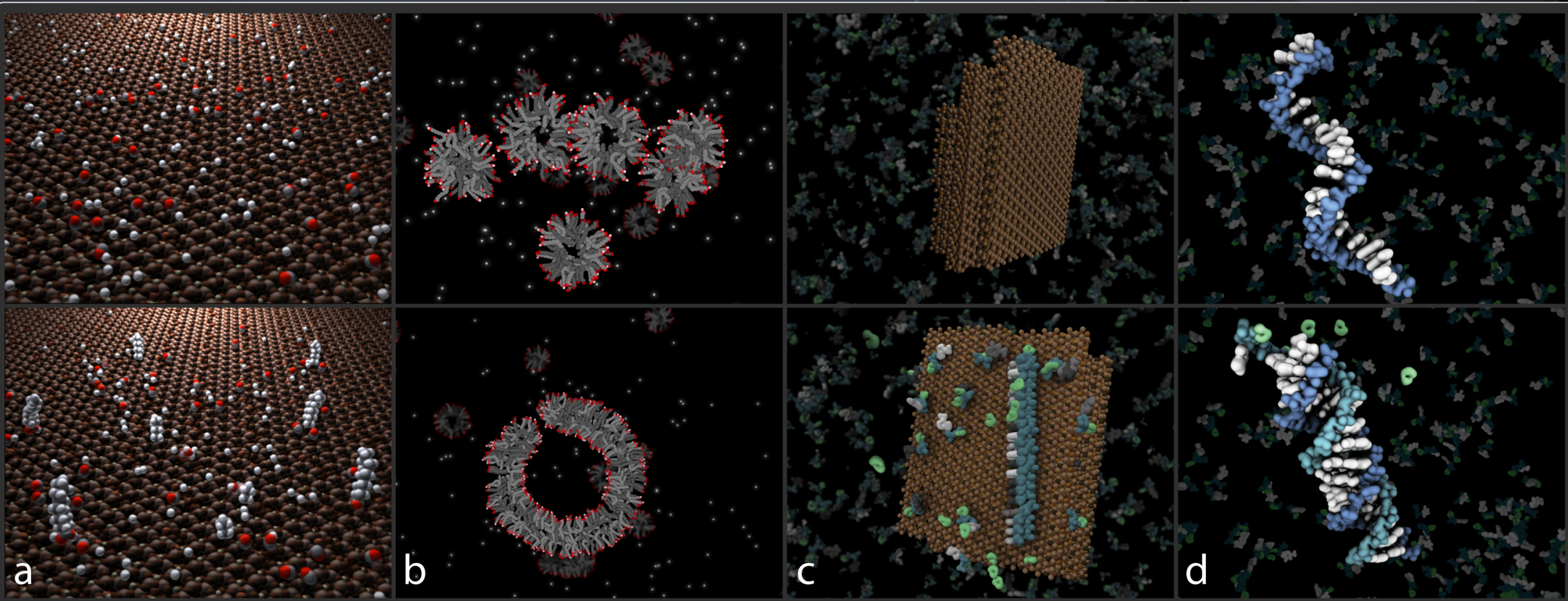
The goal of this 2-year Discovery Corps Fellowship is to make scientific research and concepts on the chemical origins of life more accessible to the public at large and the scientific community through the creation of dynamic, 3D molecular visualizations. These visualizations will be created in collaboration with the Szostak group (MGH/Harvard), which is actively involved in origins of life research, and will be integrated into a multimedia exhibit at the Museum of Science.



A protocell is composed of nucleic acids (blue/white) with replicase activity that are encapsulated by a fatty acid bilayer (red/gray).




Single frames from assorted reearch-based visualizations. (a) Fatty acids may have formed from carbon monoxide and oxygen, a reaction catalyzed by metals found in the mineral face (Rushdi & Simoneit, 2001). (b) Micelles in an acidic environment form vesicles readily (Chen & Szostak, 2004). (c) Clays such as montmorillonite are able to catalyze the formation of RNA polymers (Ferris, 2003) (d) Single-stranded RNA is able to polymerize in the absence of enzymes (Schrum et al., submitted).