

## **Abstract:**

“Chemical Evolution with Phage Display”: “Phages are viruses that reproduce by infecting bacteria. A foreign (non-phage) protein can be attached to the outside of the phage by genetically fusing the foreign protein’s gene to the gene for a phage protein. A foreign protein displayed in this way retains the capabilities of the stand-alone protein. But it also acquires critical additional capabilities: reproduction and heritable variation. This allows displayed proteins to evolve under artificial selection in a way that mimics the evolution of living organisms under natural selection. A great variety of new proteins have been artificially evolved in this way.”