SUGIHARA LAB.

Lipid-based biotechnology

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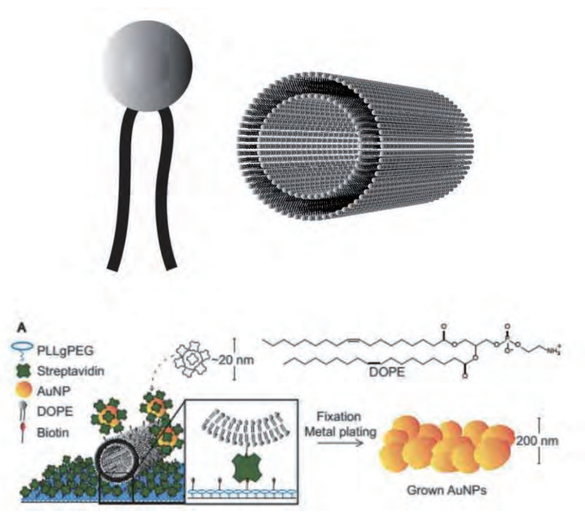
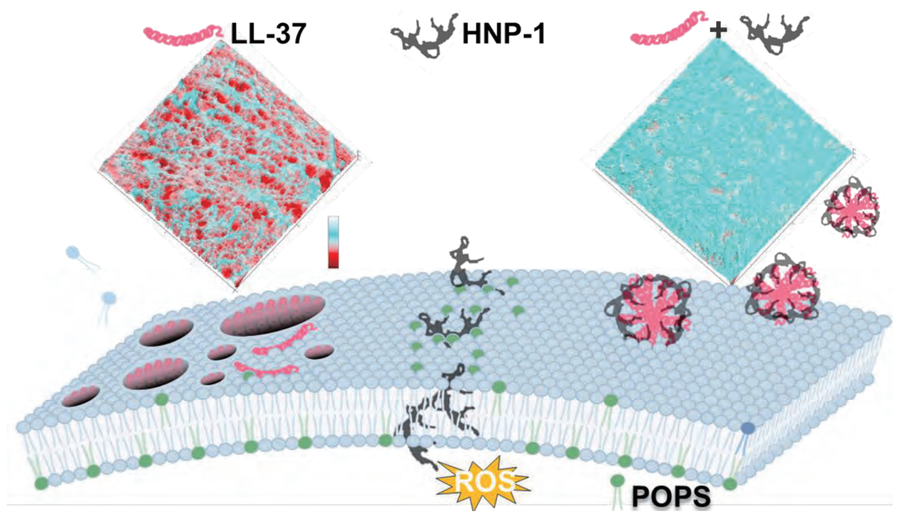
Development of Biotechnology Based on Lipid Self-Assembly

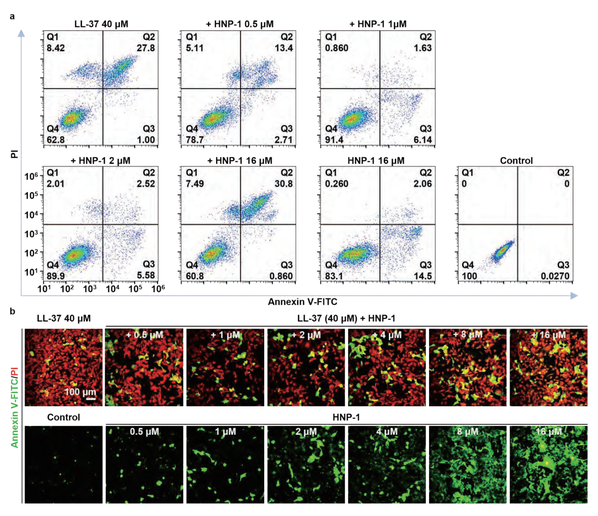
Life began with the self-assembly of molecules. We investigate how lipid self-assembly generates diverse structures and functions from the perspectives of biophysics and physical chemistry. By leveraging this knowledge, we aim to develop new antimicrobial drugs and biosensors, contributing to innovation in drug discovery and diagnostics.

Lipid self-assembly



Development of novel antimicrobial drugs using peptides





Mechanochromic polymers

Chameleon packaging

Flexible force sensors