



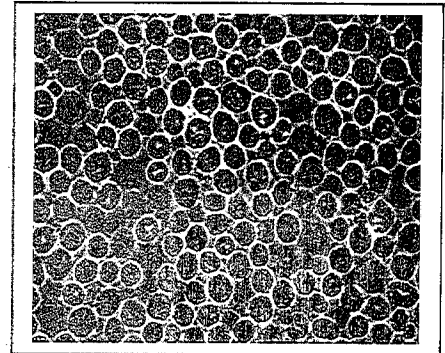
Title of Invention

(Below is limited to 1-page only; be careful not to disclose vital technology content. Please delete these words when the document is finished)

PI : Prof. Hui-Wen Chen

Department of Veterinary Medicine, National Taiwan University

Experience: <https://sites.google.com/site/winnichenlab/>



Market Needs:

Many biological studies and biomedical applications hinge on this intricate interface, and numerous methods have been devised to recreate this interface on a robust substrate for practical applications. As cells are inherently fragile and prone to different biological processes that may alter surface biochemistry (i.e. apoptosis and vesicle budding), prior efforts to preserve membrane compositions include (1) Reconstituting purified plasma membranes on planar or spherical substrates, and (2) Fixating cells in their entirety using chemical crosslinkers such as formaldehyde or glutaraldehyde. However, these techniques remain inadequate in replicating the complex and fluid cell membrane interface.

Our Technology: The present invention provides a robust inanimate platform with a cell-like exterior applicable for biomimetic interactions with chemical compounds, biomolecules, pathogens, and cells. In the present embodiments, the internally fixated cells were applied for hemagglutination in the presence of viruses.

Strength: Other applications of the invention that will be explored include but are not limited to drug screening, immune modulation, tissue engineering, agglutination assay system, filtration system to remove pathogens and toxins, and a general tool for biomembrane study. In these applications, the invention will be used for biomimetic interactions with chemical compounds, immune cells, tissue culture, agglutinating agents, pathogens, toxins, and other compounds and molecules via their preserved fluid membrane interface.

Competing Products: None

Intellectual Properties: Pending

Contact (do not need to fill out):

Center for Industry-Academia Cooperation, NTU
Tel: 02-3366-9945, E-mail: ntuciac@ntu.edu.tw