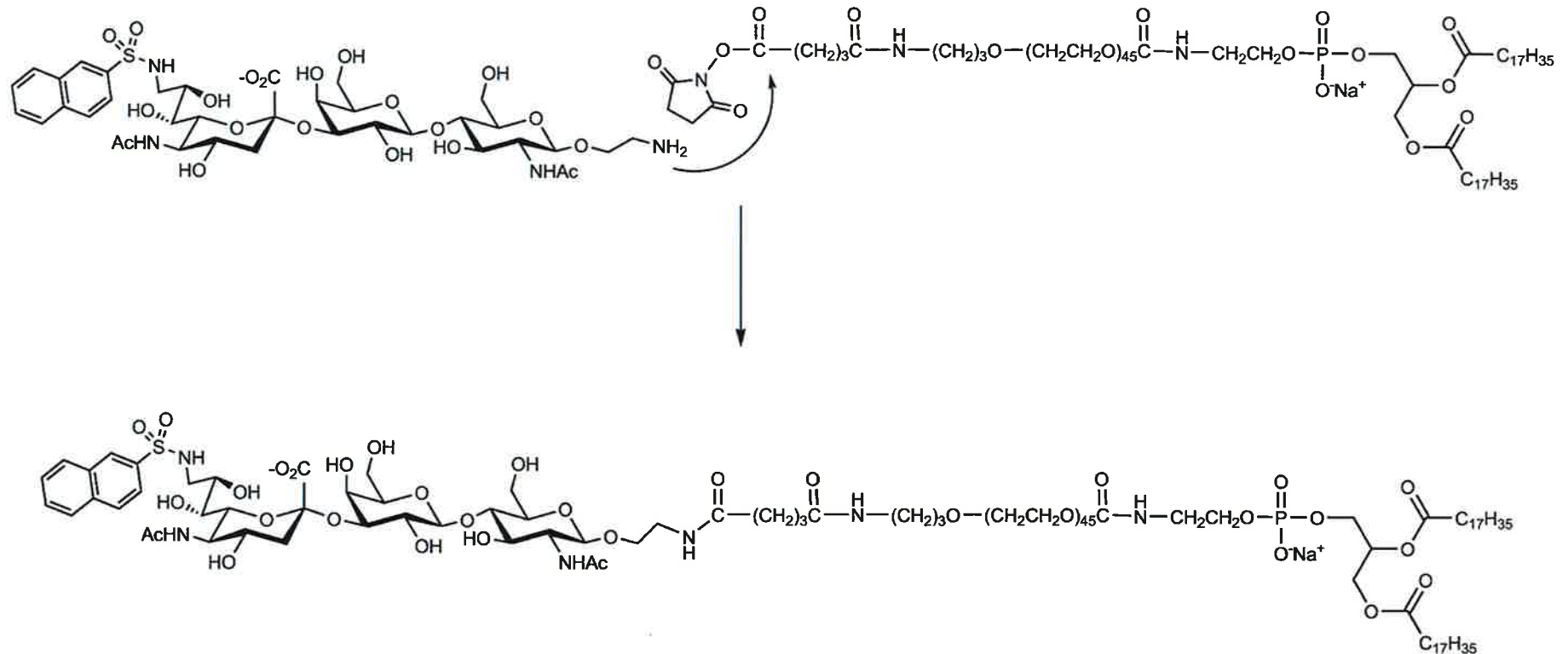


Preparation of glyco-PEG-lipids for cell targeting (Module 3)

...for preparation of glyco-PEG-lipids for cell targeting:



Module 3: Preparation of liposomes and their use in flow cytometry



T H E
S C R I P P S
R E S E A R C H
I N S T I T U T E*

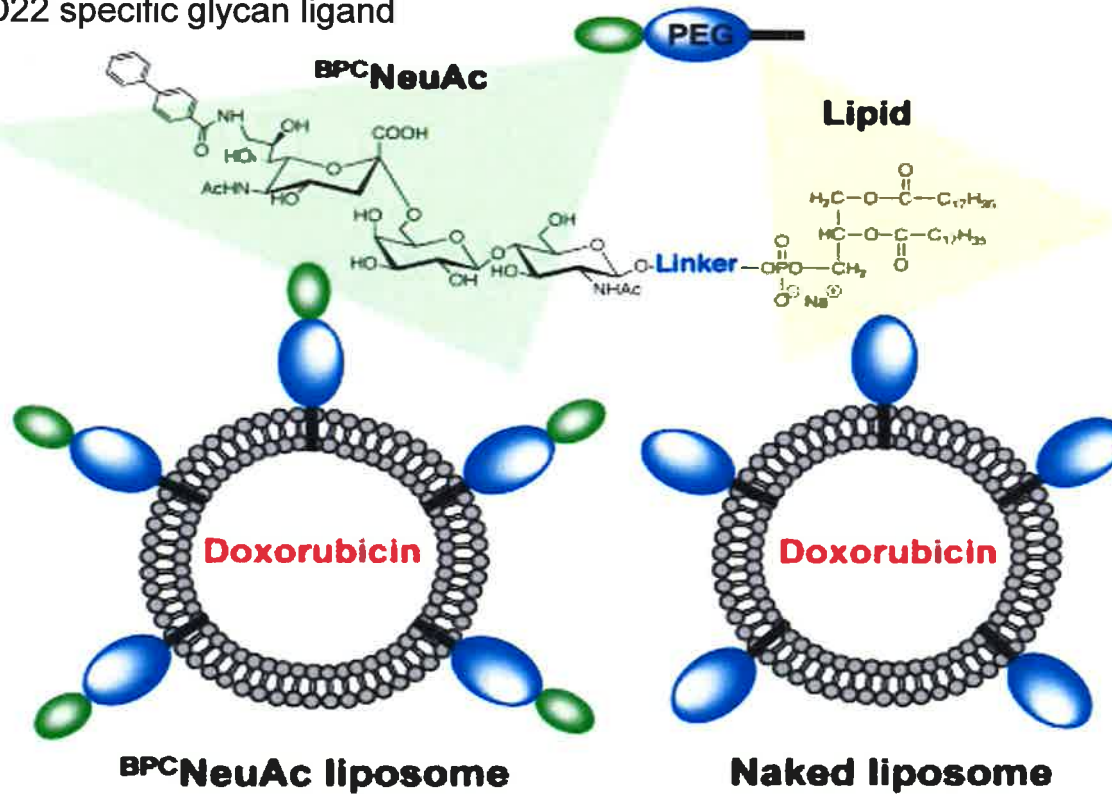
Shiteng Duan
E-mail: sduan@scripps.edu

Things you will learn during module 3

1. Preparation of human liposomes displaying CN146
 - Preparation of lipid films (End of the day)
 - Hydration of the lipid films with PBS
 - Sonication and extrusion of liposomes
2. Analysis of liposome binding to Siglec-expressing CHO cells
 - Flow cytometry (3:30 to 4PM)
 - Data analysis (Flowjo software)

Basic and application of our liposomes

CD22 specific glycan ligand

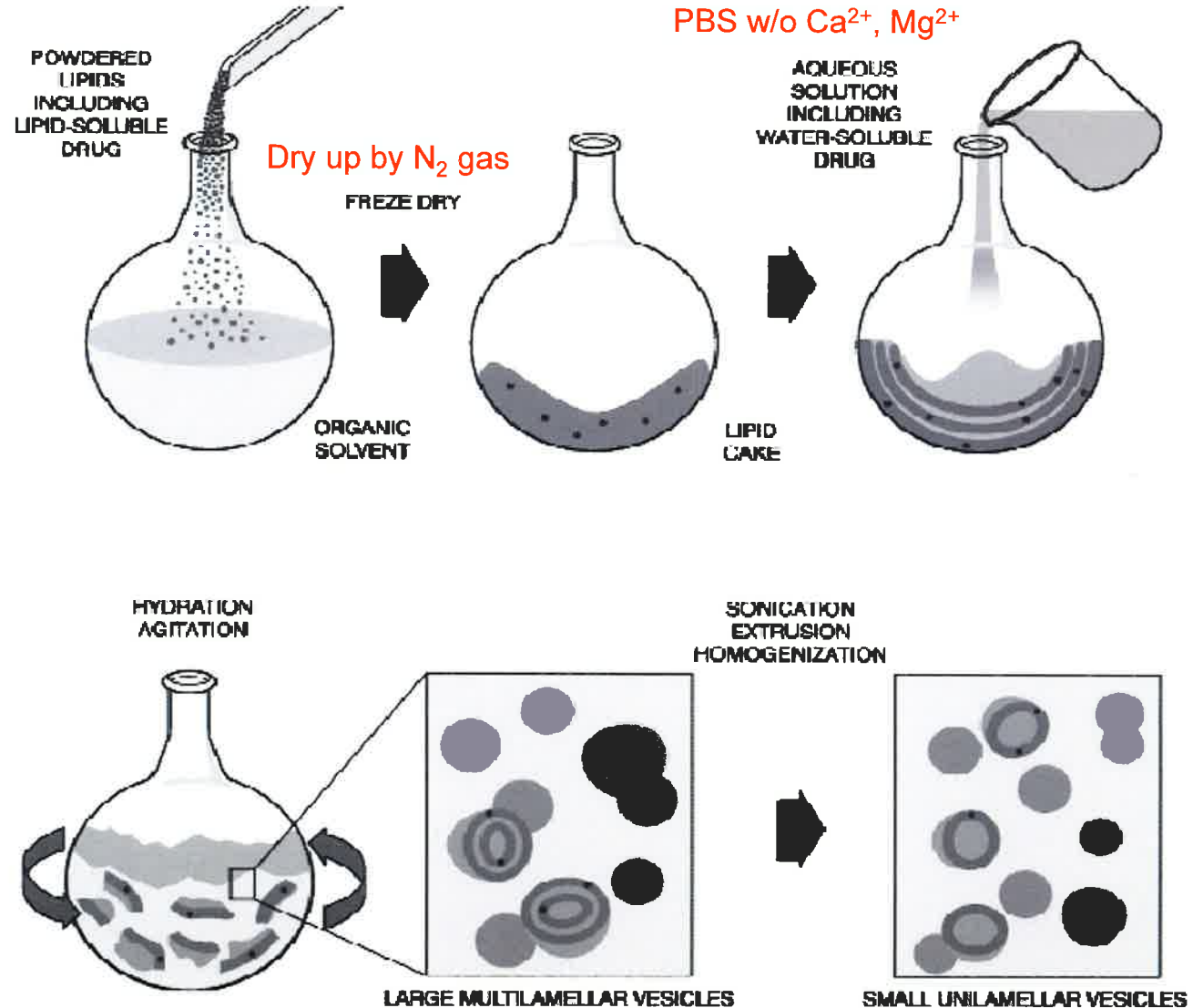


Chen WC et al, Blood 2010

Preparation of liposomes

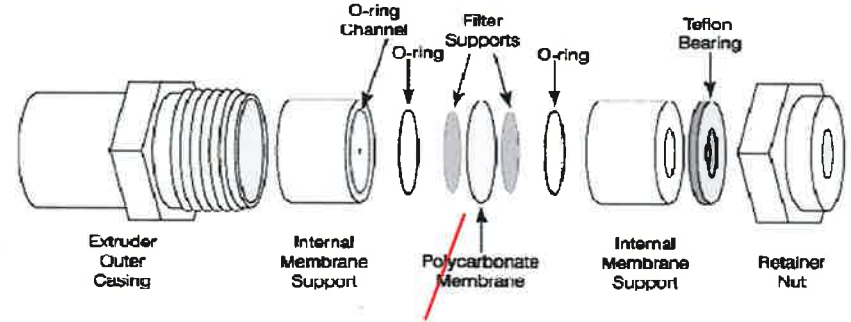
DSPC: 57 (56)%
Chol: 38%
PEG-DSPE: 5-X%
Glycan-PEG-DSPE: X%
(AF647-DSPE: 0.1%)

Total 100 mol%

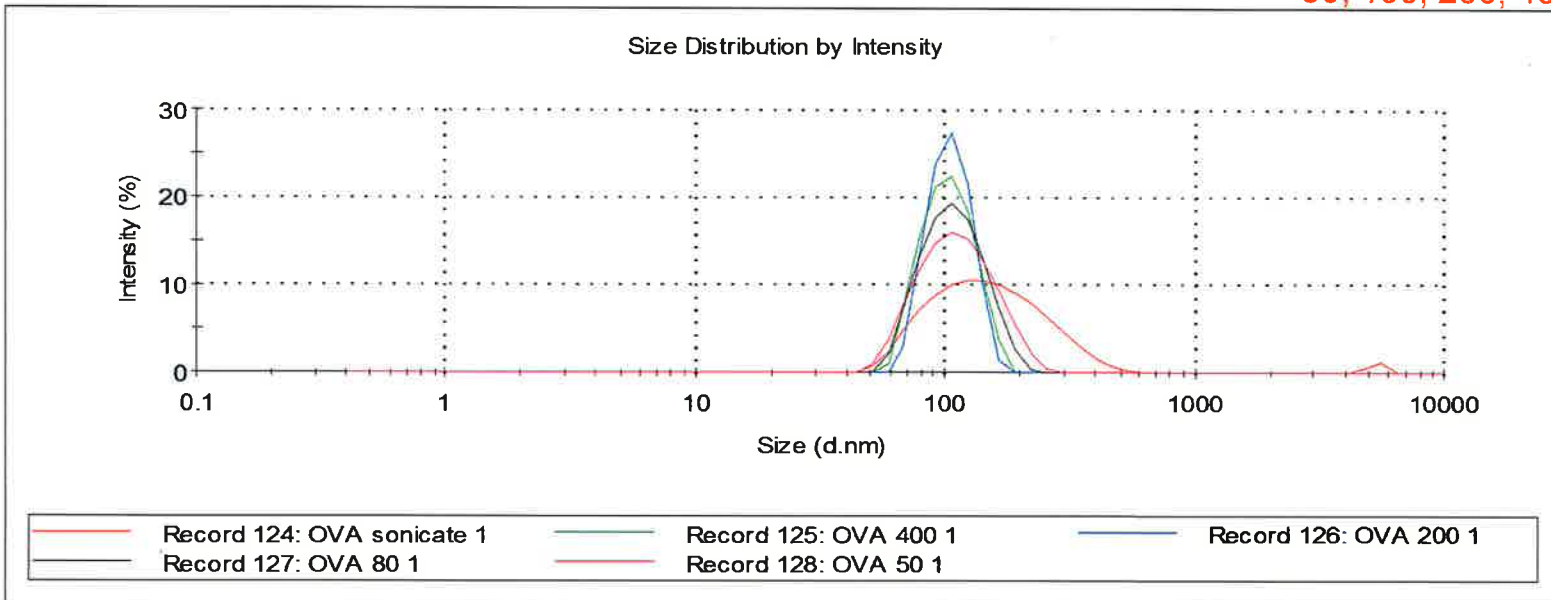


From Avanti polar lipids

Extrusion of liposomes

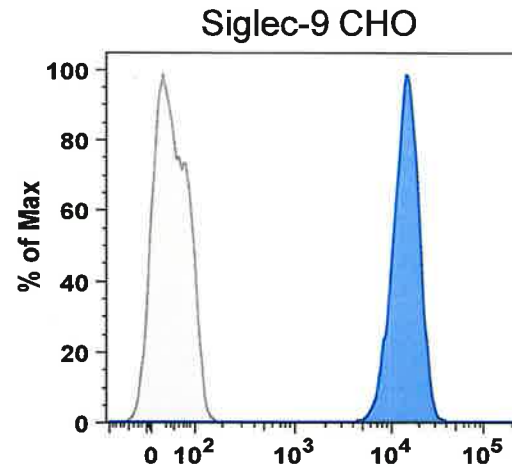
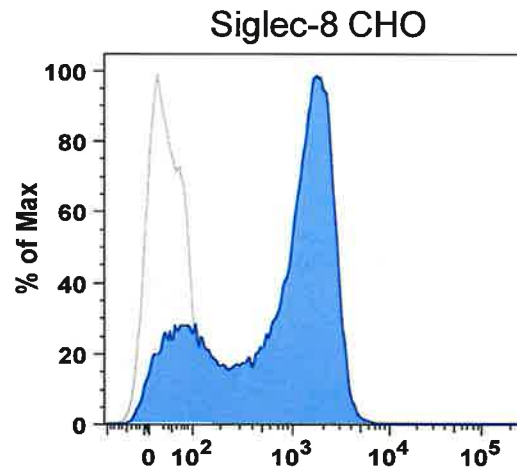
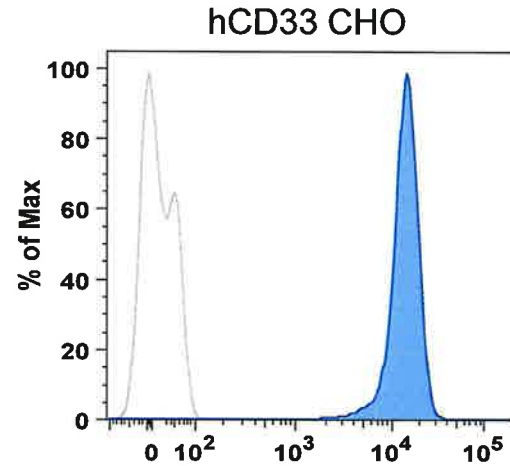
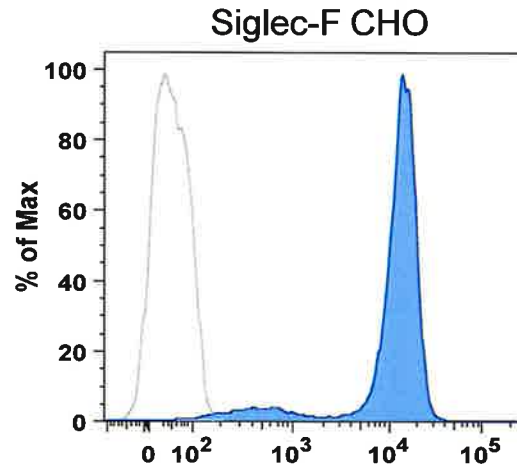


Membranes with different pore size
80, 100, 200, 400, 1000 nm



Liposomes: 103.6 ± 32.43 nm

Siglec-expressing CHO cells



Isotype

Siglec-Ab