A NOVEL APPROACH FOR INHIBITING PROGRESSION OF FLU VIRUS INFECTION AT EARLY STAGES OF THE DISEASE BY INHALATION OF α-GAL/SA LIPOSOMES

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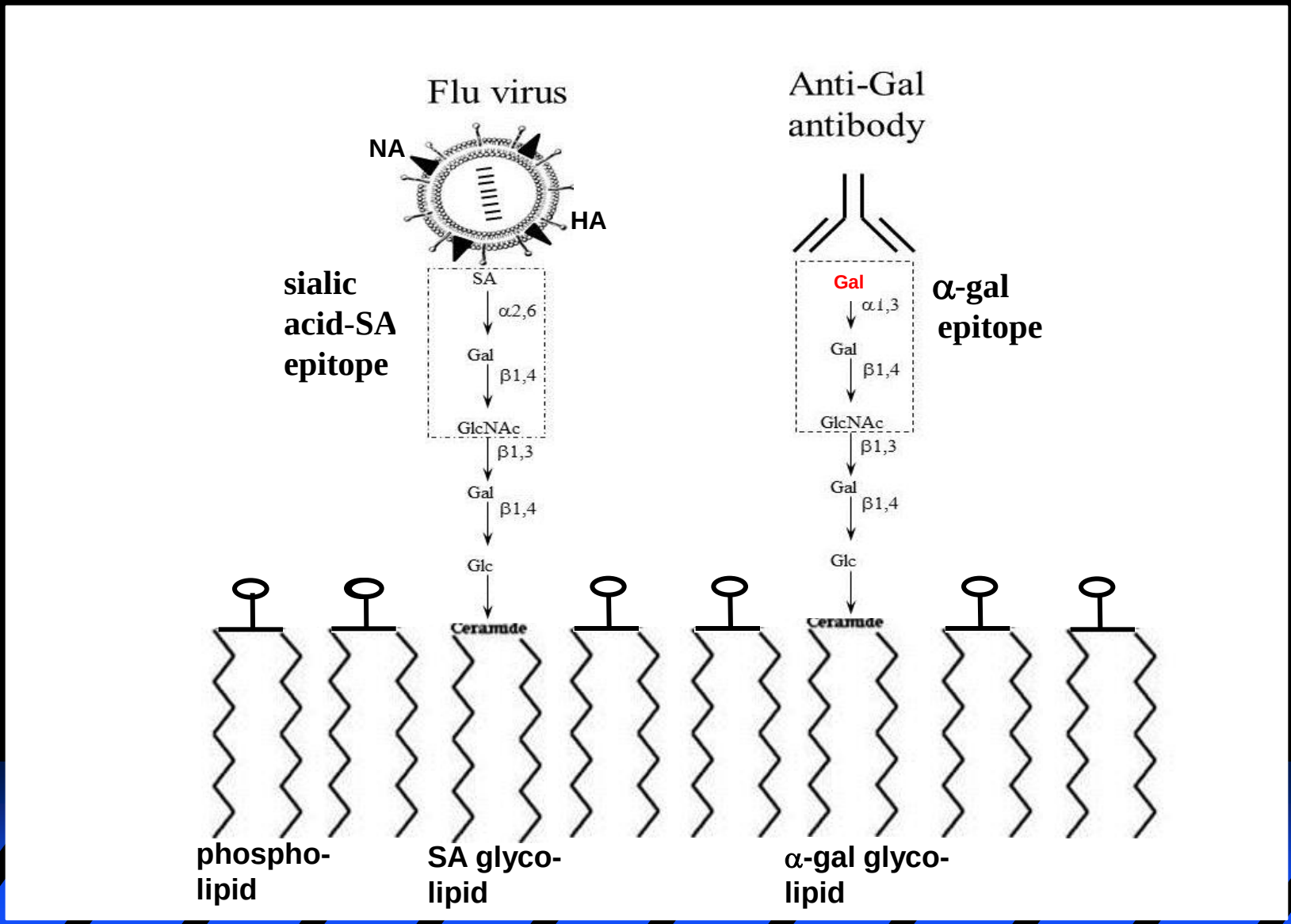
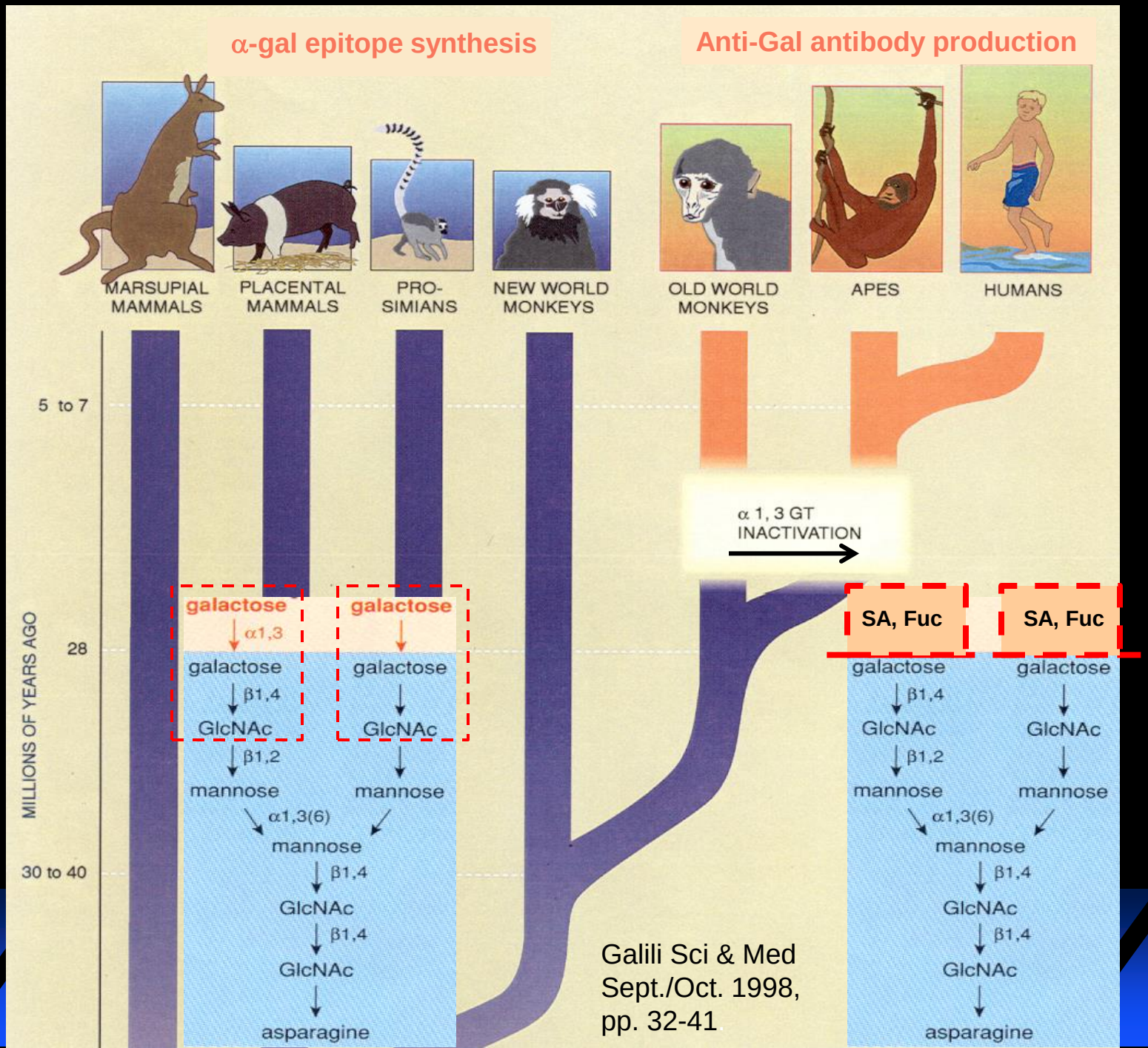
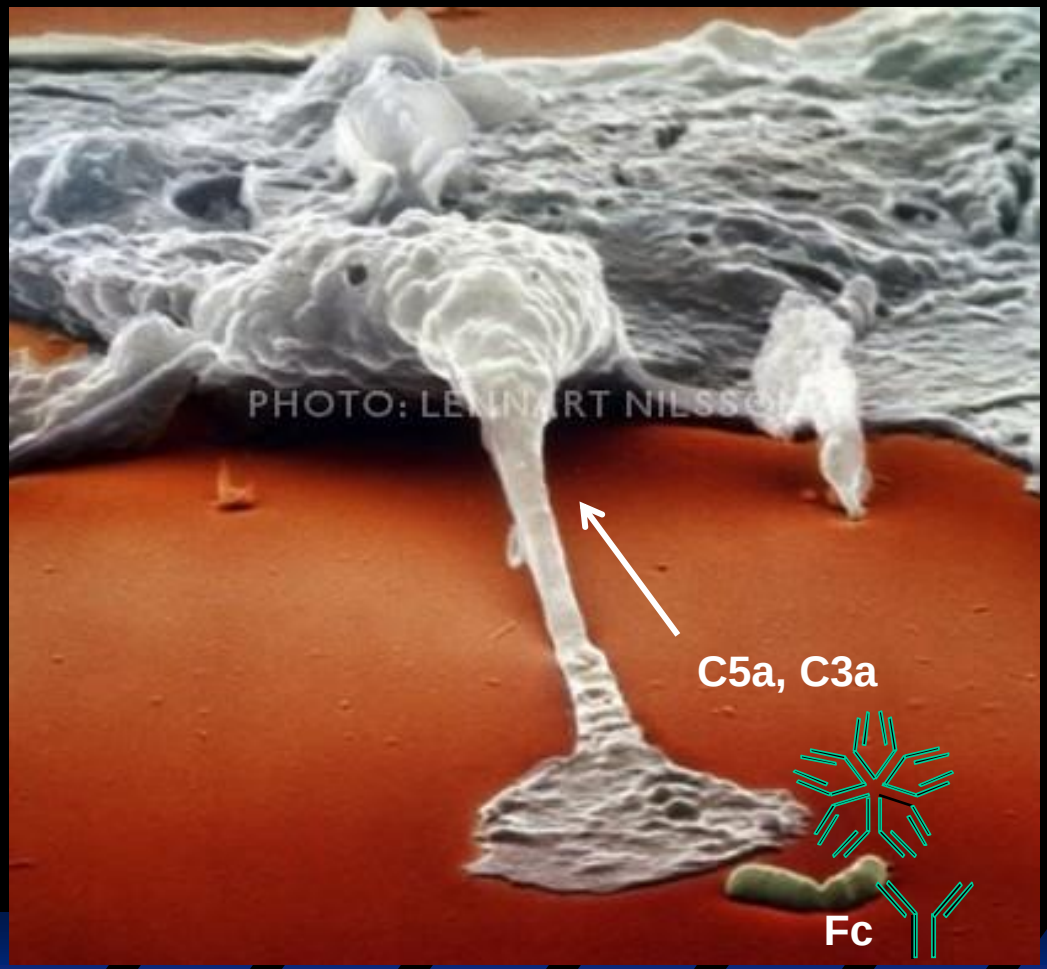
Ligand of HA on flu virus is sialic acid (SA)
Ligand of anti-Gal antibody is α-gal epitope

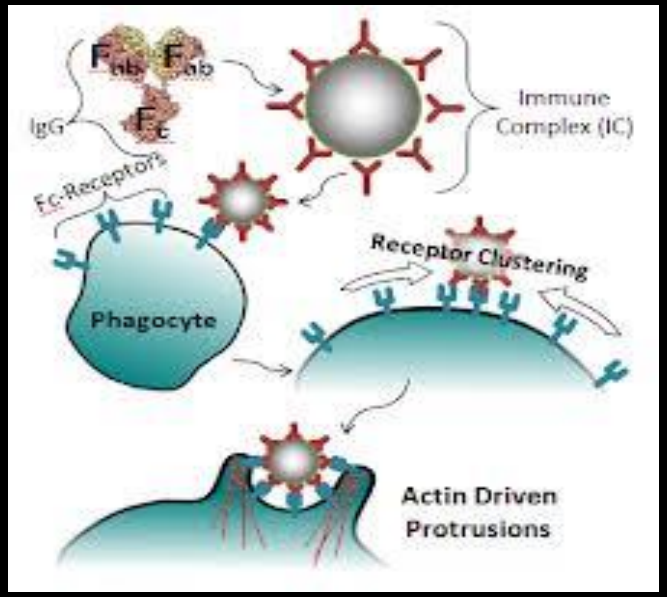


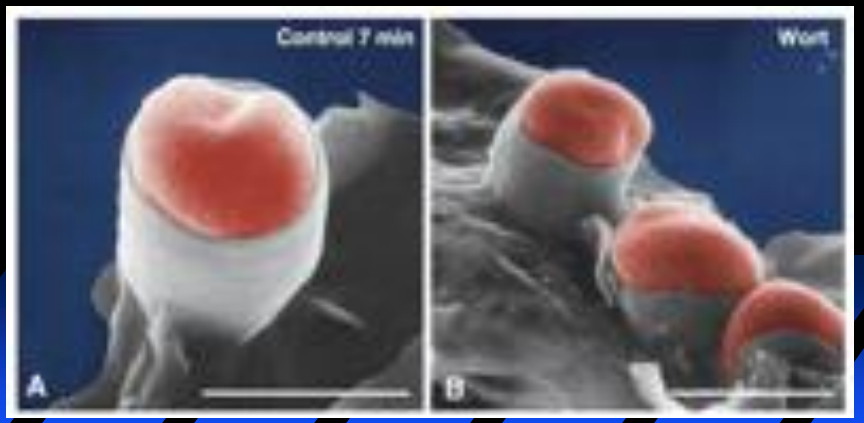


Galili Sci & Med Sept./Oct. 1998, pp. 32-41.

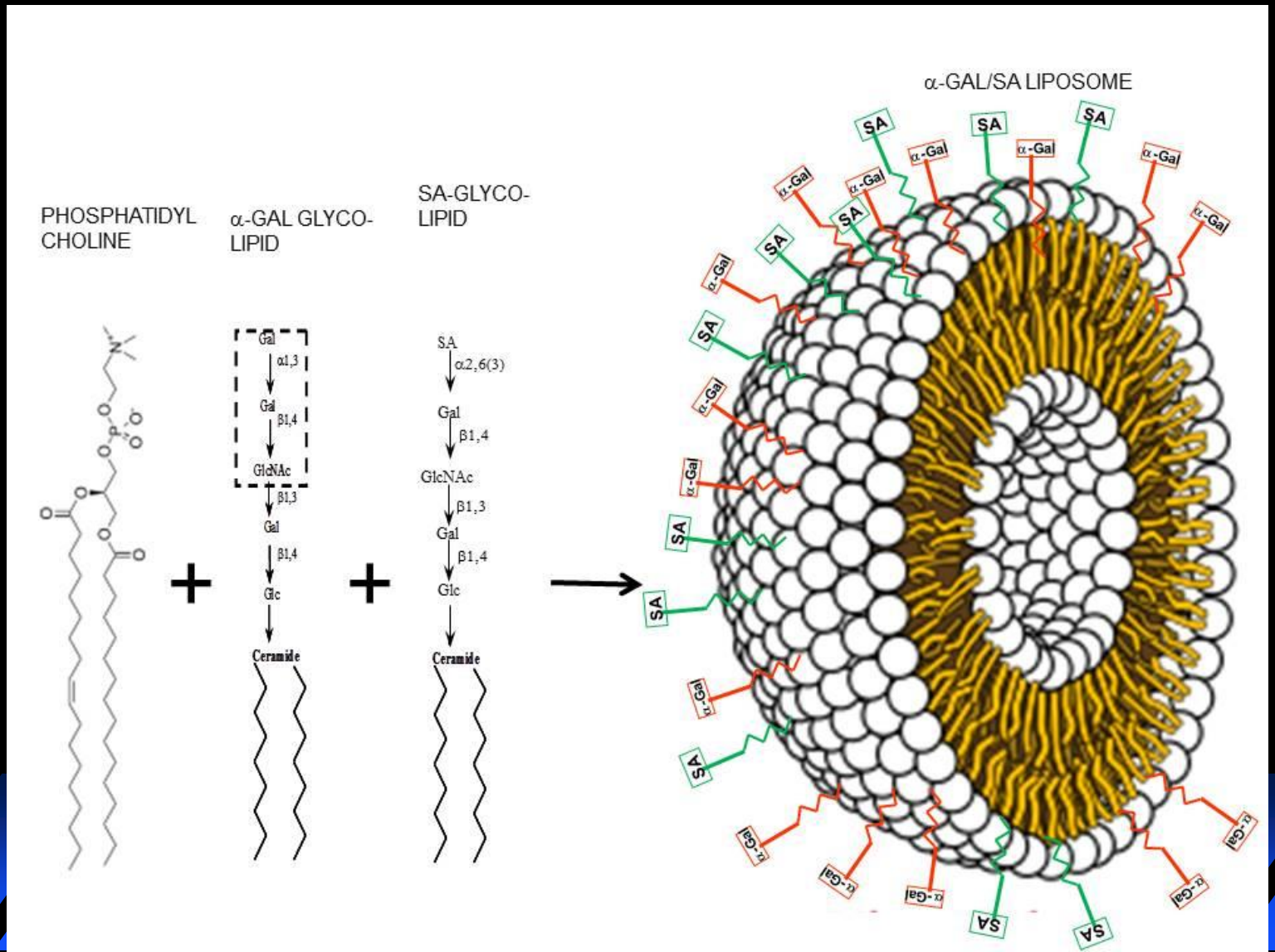
ANTI-GAL MEDIATED CHEMOTAXIS OF MACROPHAGES BY COMPLEMENT ACTIVATION AND PHAGOCYTOSIS BY Fc/Fc RECEPTOR INTERACTION



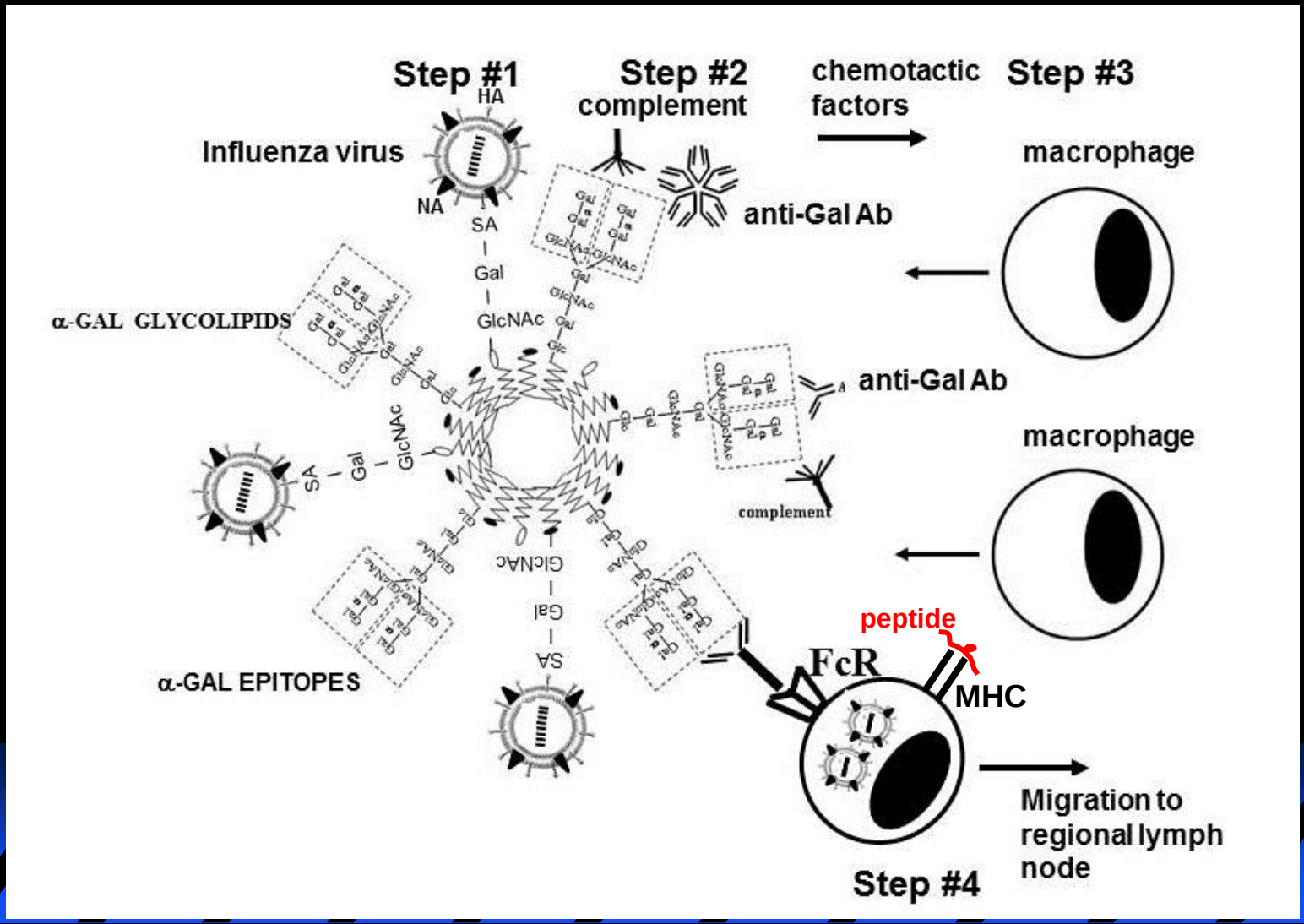




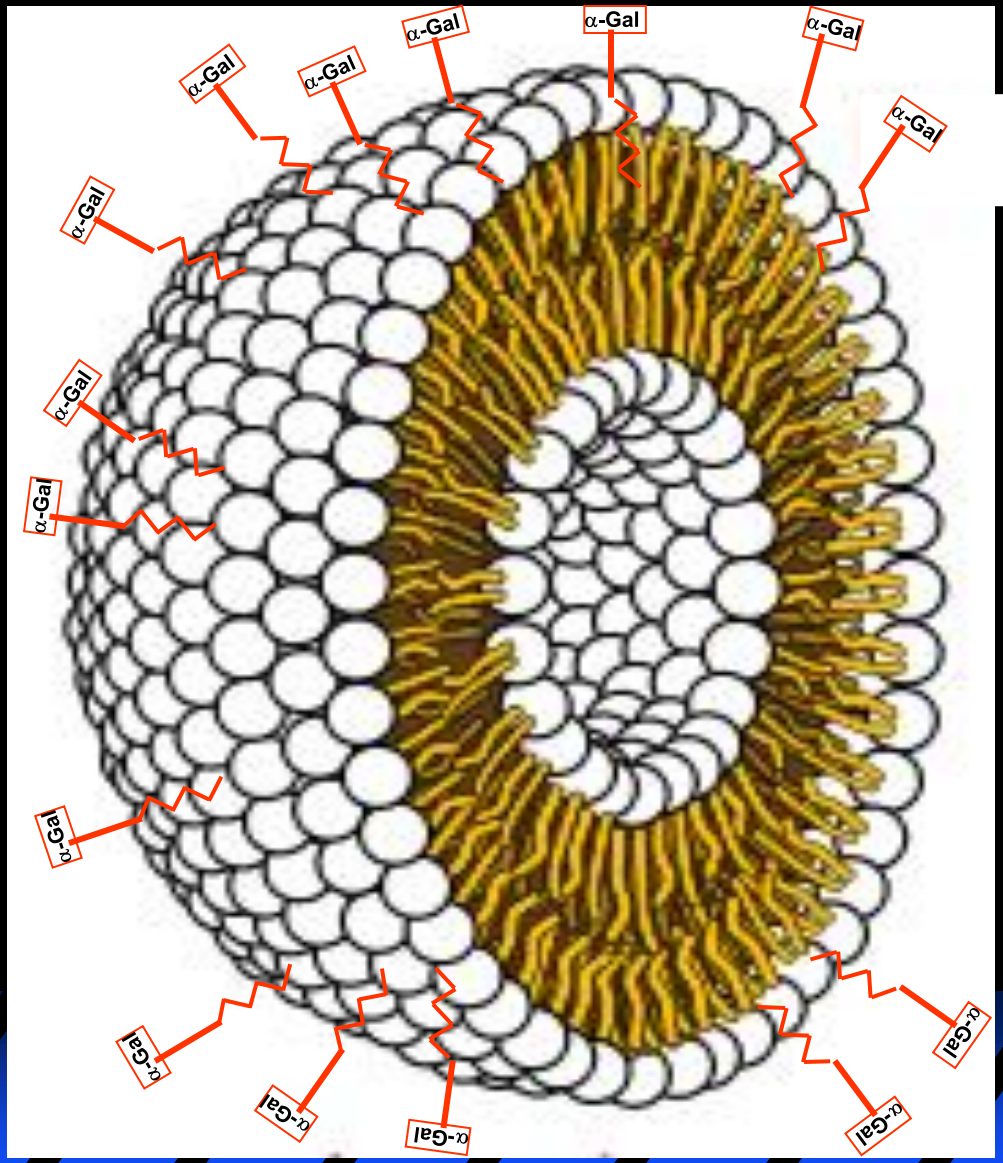
α-gal/SA liposome



Interaction of flu virus and of anti-Gal antibody with α-gal/SA liposomes

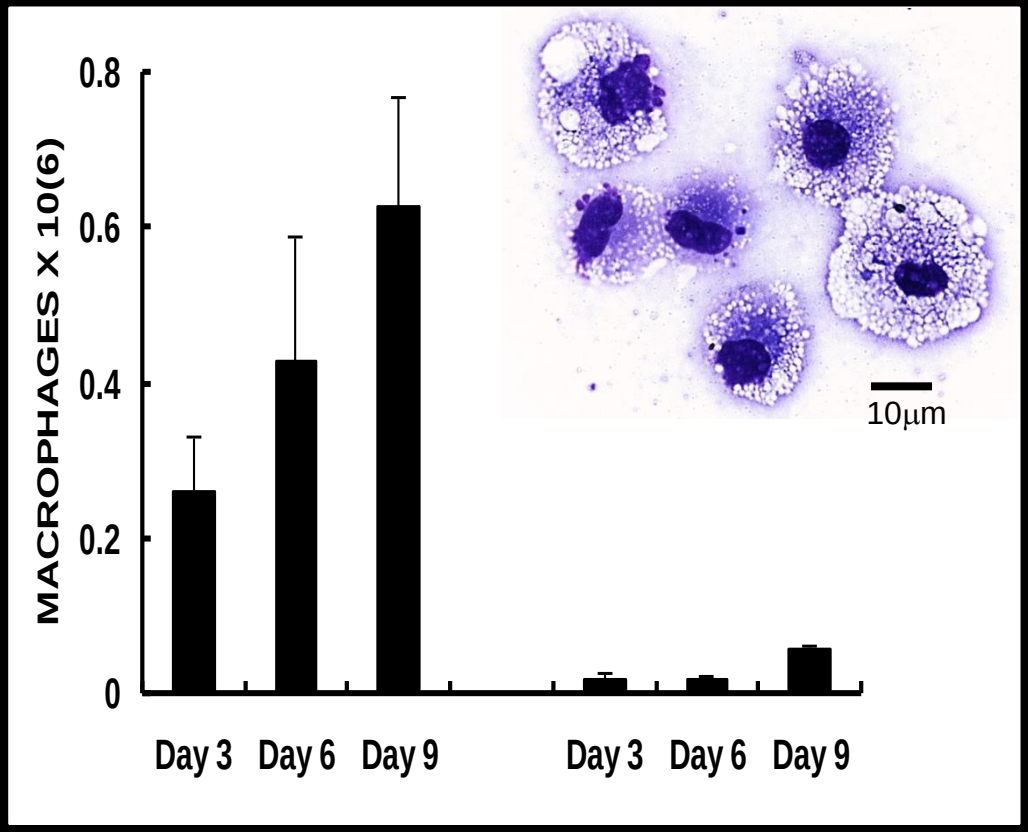


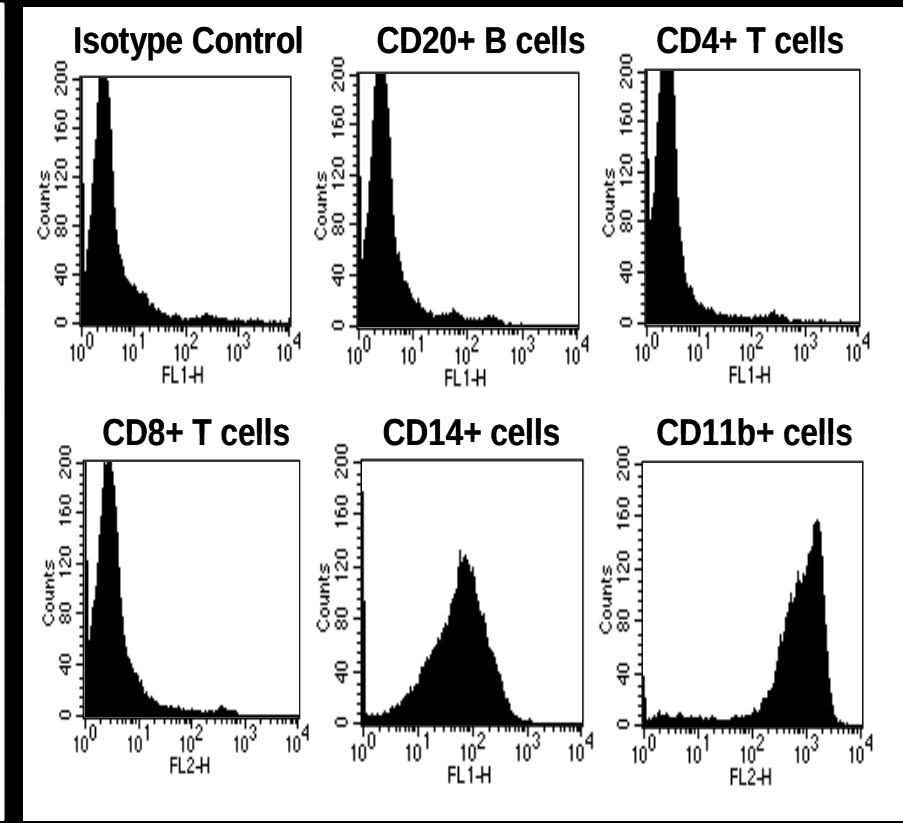
α-GAL LIPOSOMES: LIPOSOMES PRESENTING MULTIPLE α-GAL EPITOPES



α-gal liposome
10(15) α-gal/mg

Recruitment of macrophages by α-gal liposomes (10mg) into PVA sponge discs implanted subcutaneously in GT-KO mice



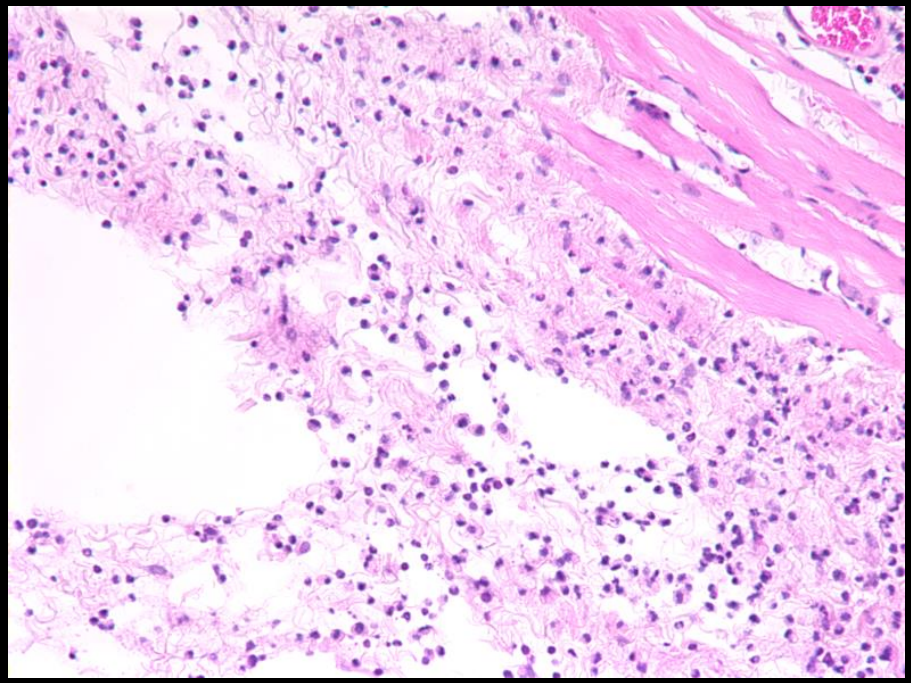


α-gal nanoparticles saline

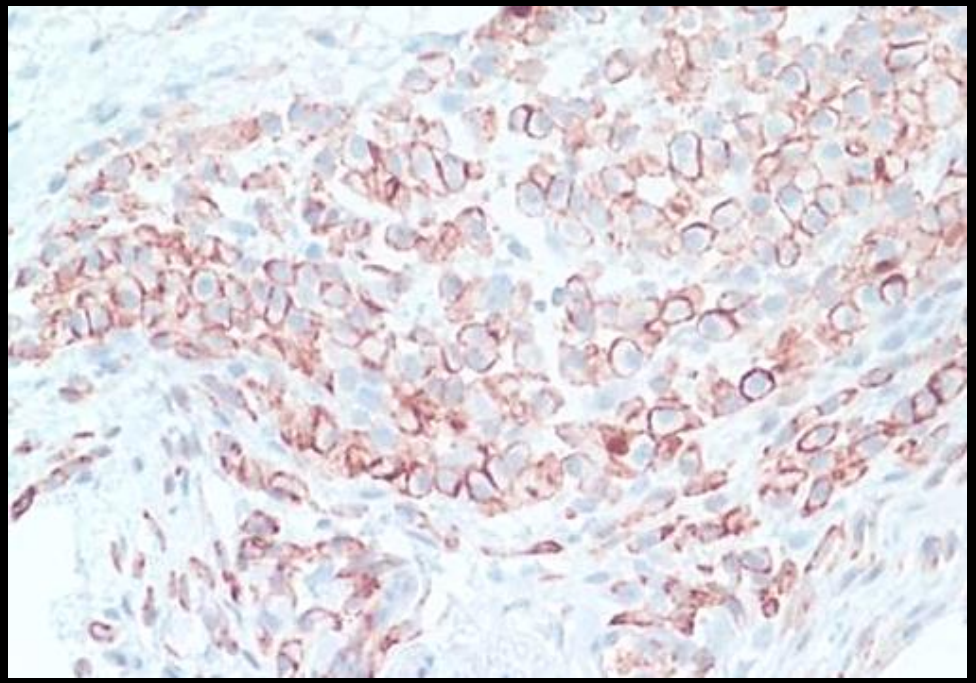
Galili et al. BURNS **36**: 239-251, 2010

Recruitment of macrophages within 24h by α-gal liposomes(10mg) injected intradermal in α1,3GT knockout mouse (GT-KO mice)

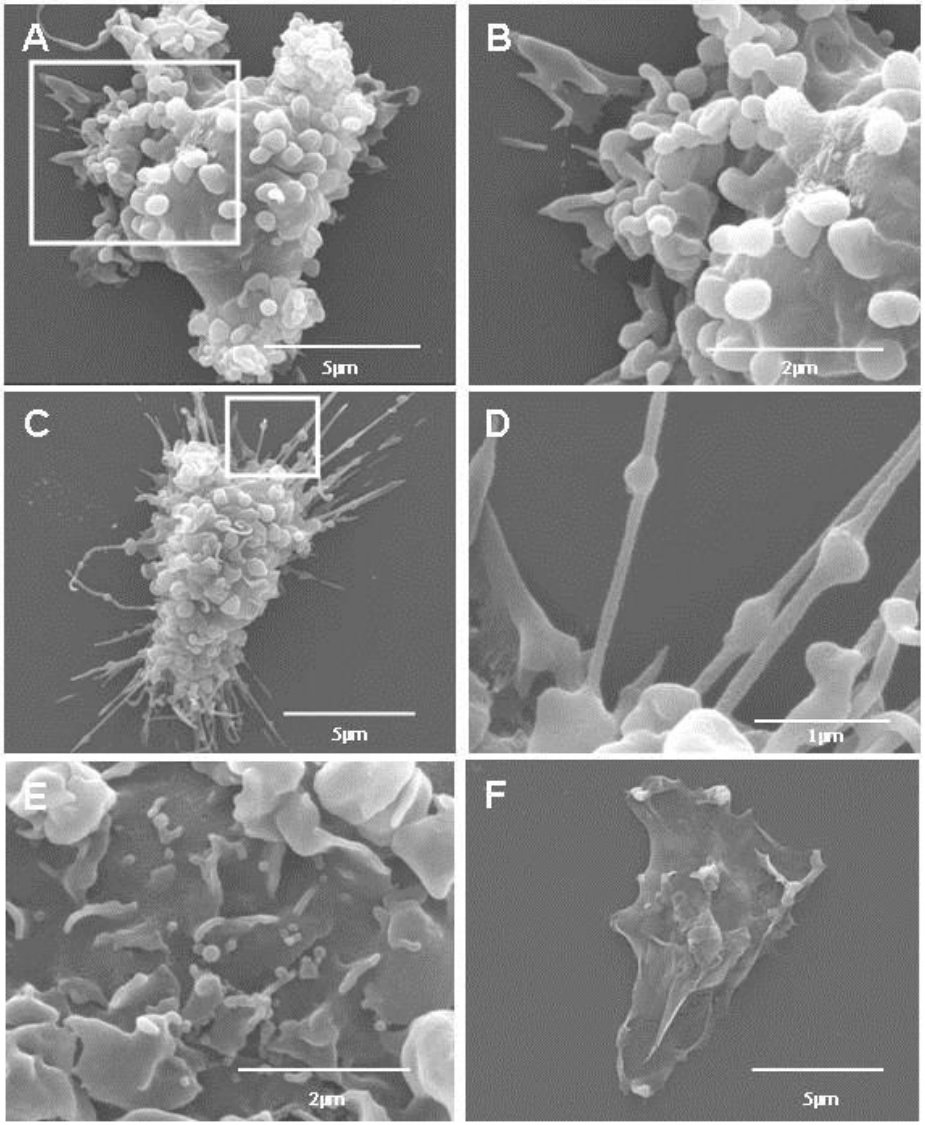
Hematoxylin & eosin

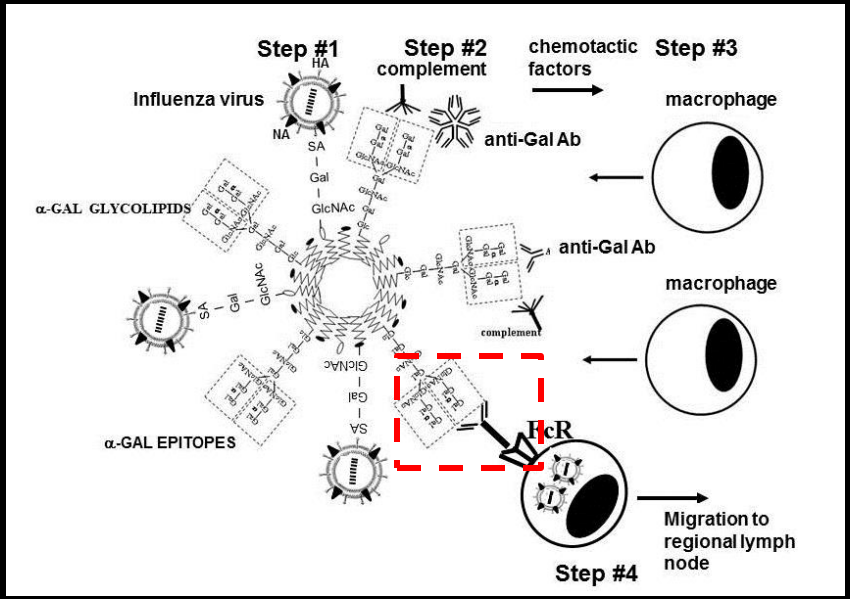


Anti-macrophage Ab (F4/80)



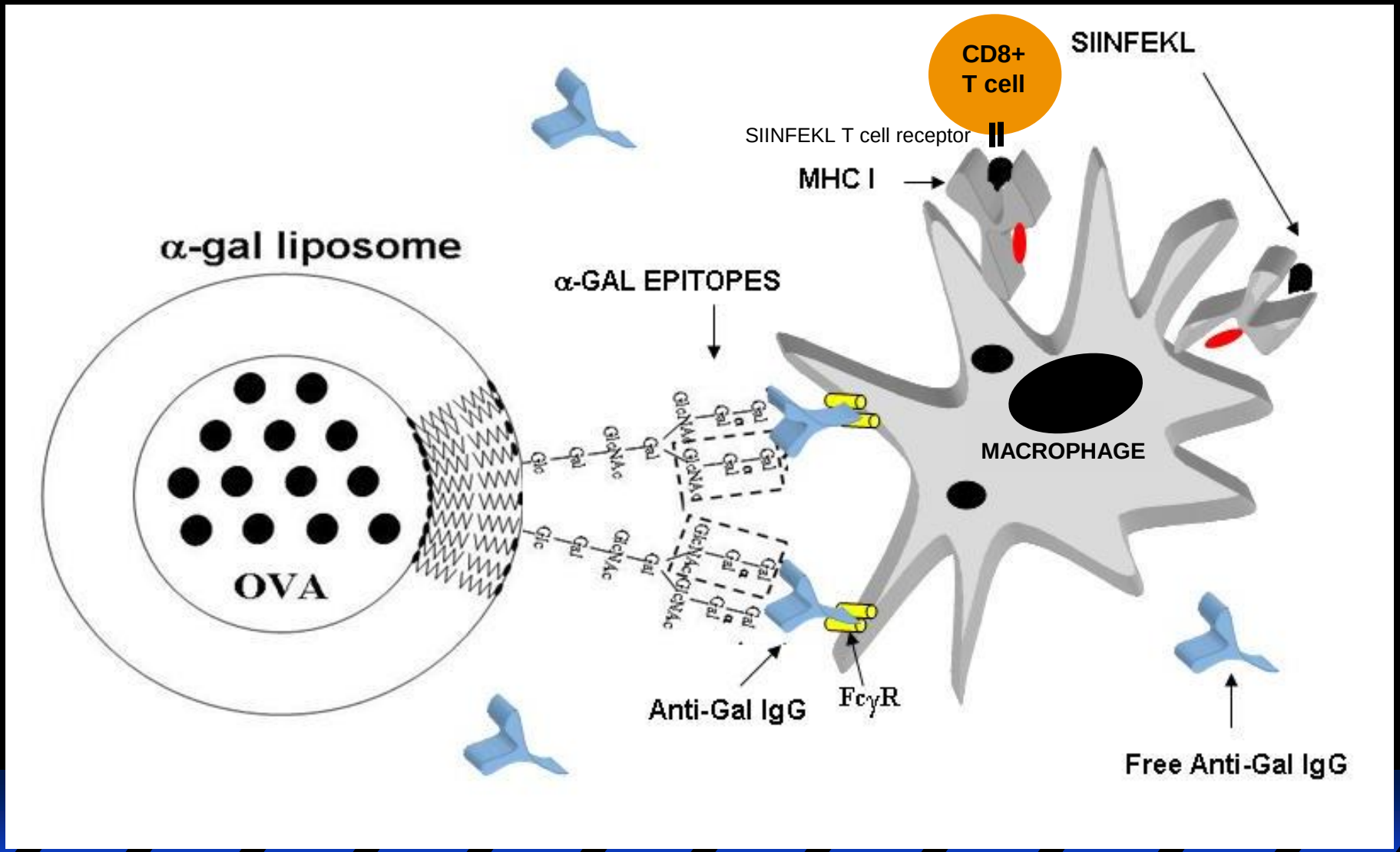
BINDING OF α-GAL LIPOSOMES TO MACROPHAGES VIA Fc/FcR INTERACTION WITH ANTI-GAL ON THE LIPOSOMES





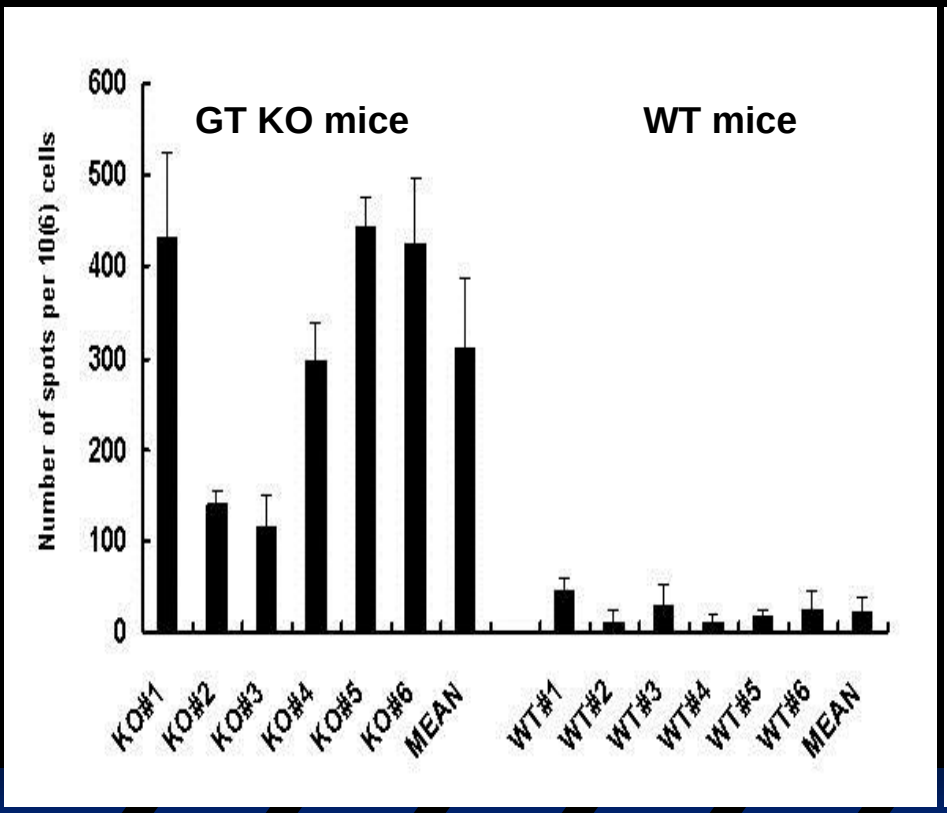
Galili U. TOTERMJ **6**: 1-11, 2013.

UPTAKE OF α-GAL LIPOSOMES CONTAINING OVALBUMIN (OVA) INTO MACROPHAGES VIA Fc/FcR INTERACTION WITH ANTI-GAL ON THE LIPOSOMES

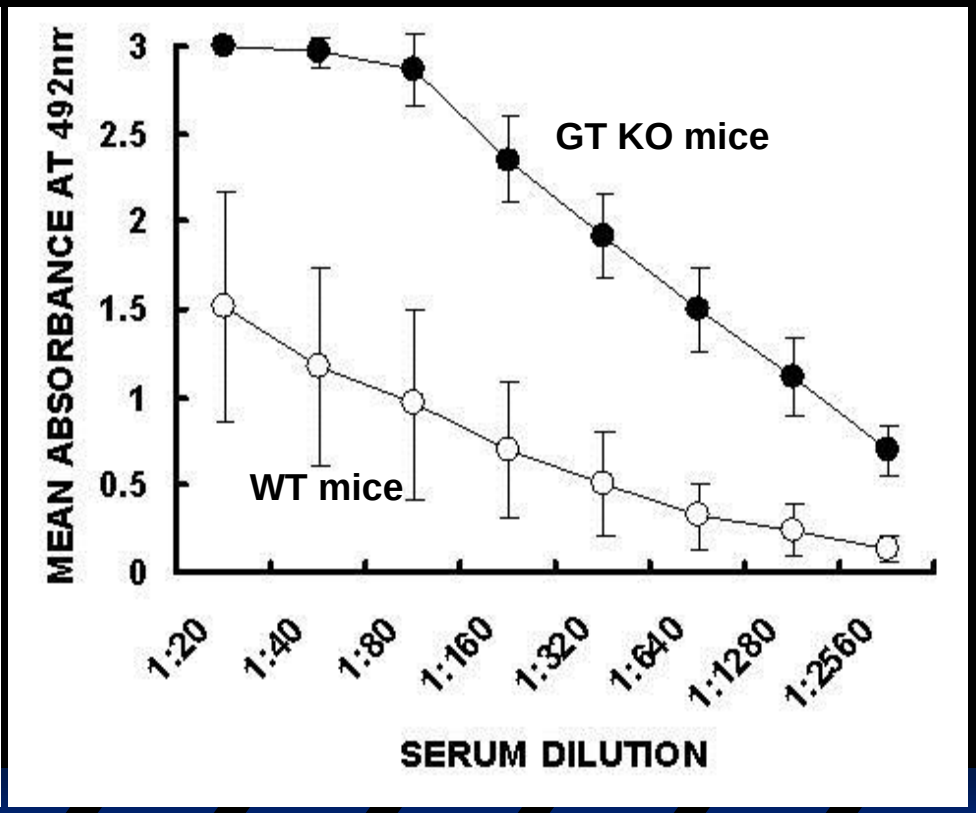


SIINFEKL SPECIFIC CD8+ T CELLS (ELISPOT) AND ANTI-OVA ANTIBODIES (ELISA) IN GT-KO MICE OR WILD TYPE (WT) MICE IMMUNIZED WITH OVA ENCAPSULATED IN α-GAL LIPOSOMES

SIINFEKL specific CD8+ T cells

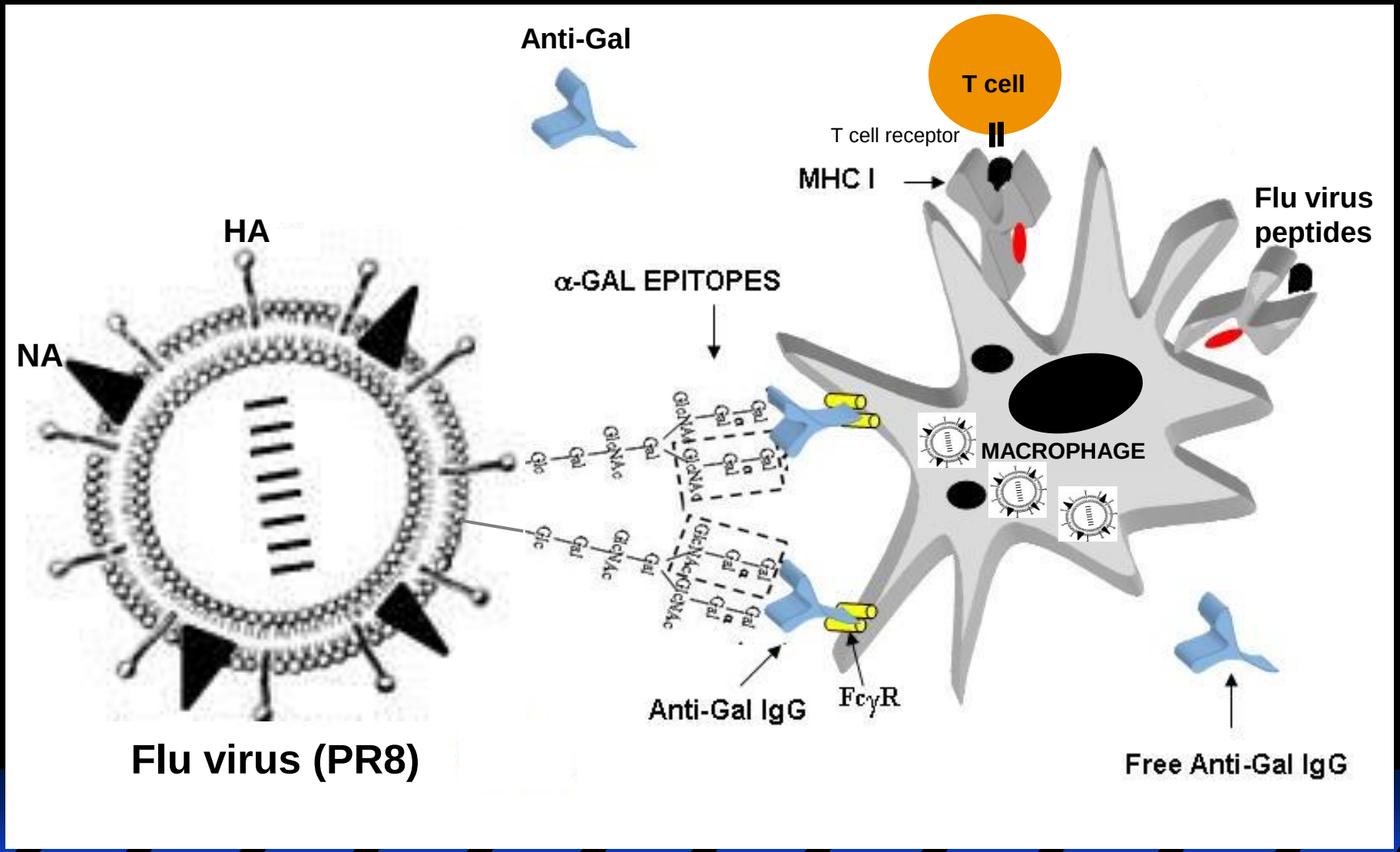


ANTI-OVA ANTIBODIES IN SERUM



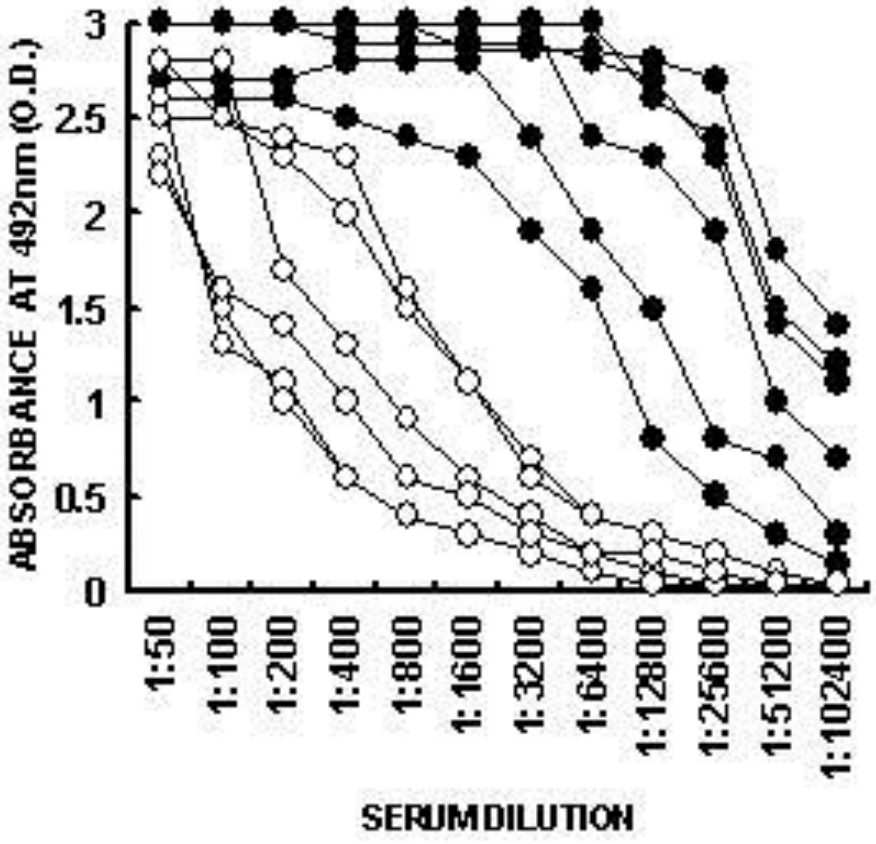
Abdel-motal U et al. VACCINE **27**: 3072-3082, 2009.

UPTAKE OF Flu VIRUS (PR8) ENGINEERED TO EXPRESS α-GAL EPITOPES INTO MACROPHAGES VIA Fc/FcR INTERACTION WITH ANTI-GAL ON THE VIRUS

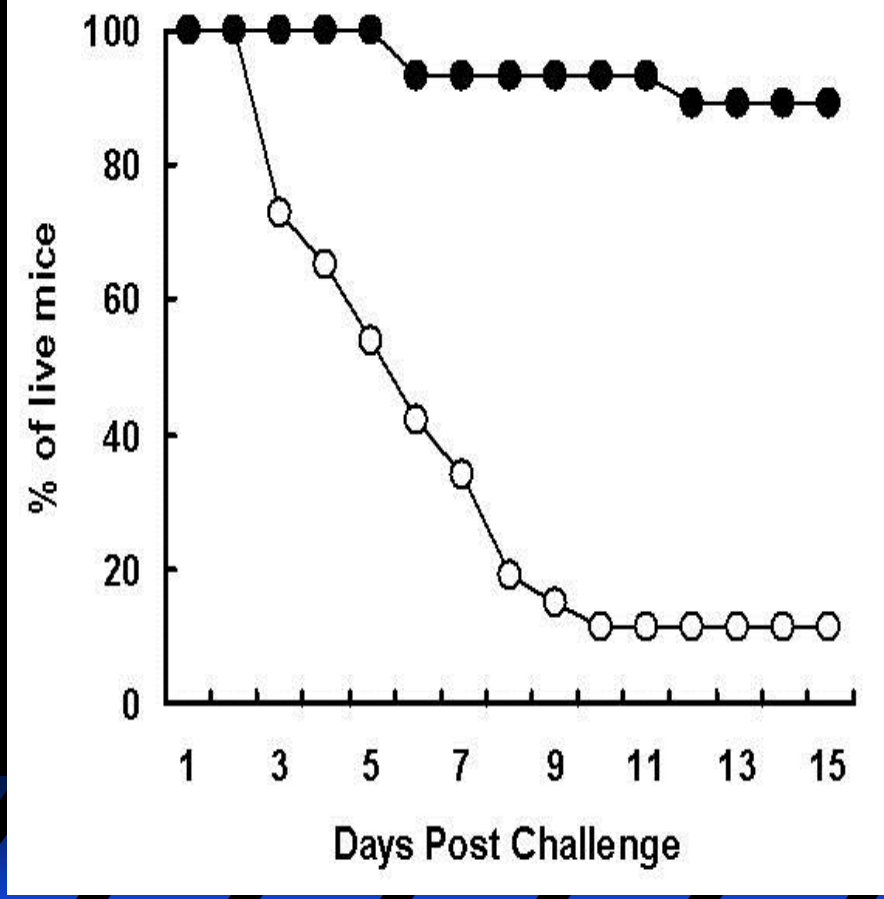


ANTI-FLU VIRUS ANTIBODY FORMATION AND PROTECTION AGAINST PR8 FLU VIRUS CHALLENGE FOLLOWING IMMUNIZAITON WITH FLU (○) OR α-GAL FLU VIRUS (●)

ANTI-FLU VIRUS ANTIBODY (ELISA)



SURVIVAL AFTER FLU CHALLENGE



Abdel-motal U et al. J. Virol. **81**: 9131-9141. 2007.

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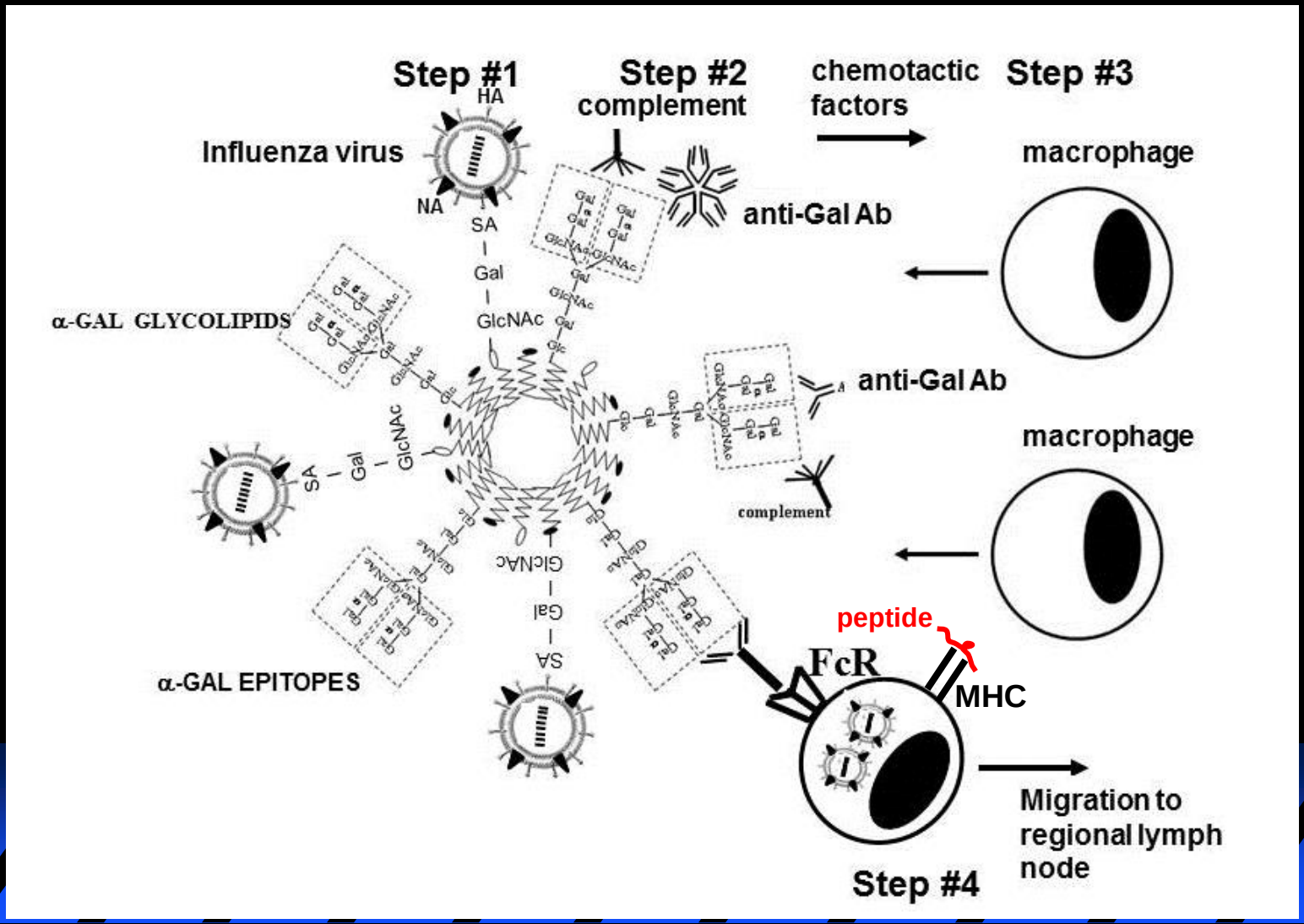

COLLABORATIONS

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