Glycoengineered Outer Membrane Vesicles: A Novel Platform for Bacterial Vaccines

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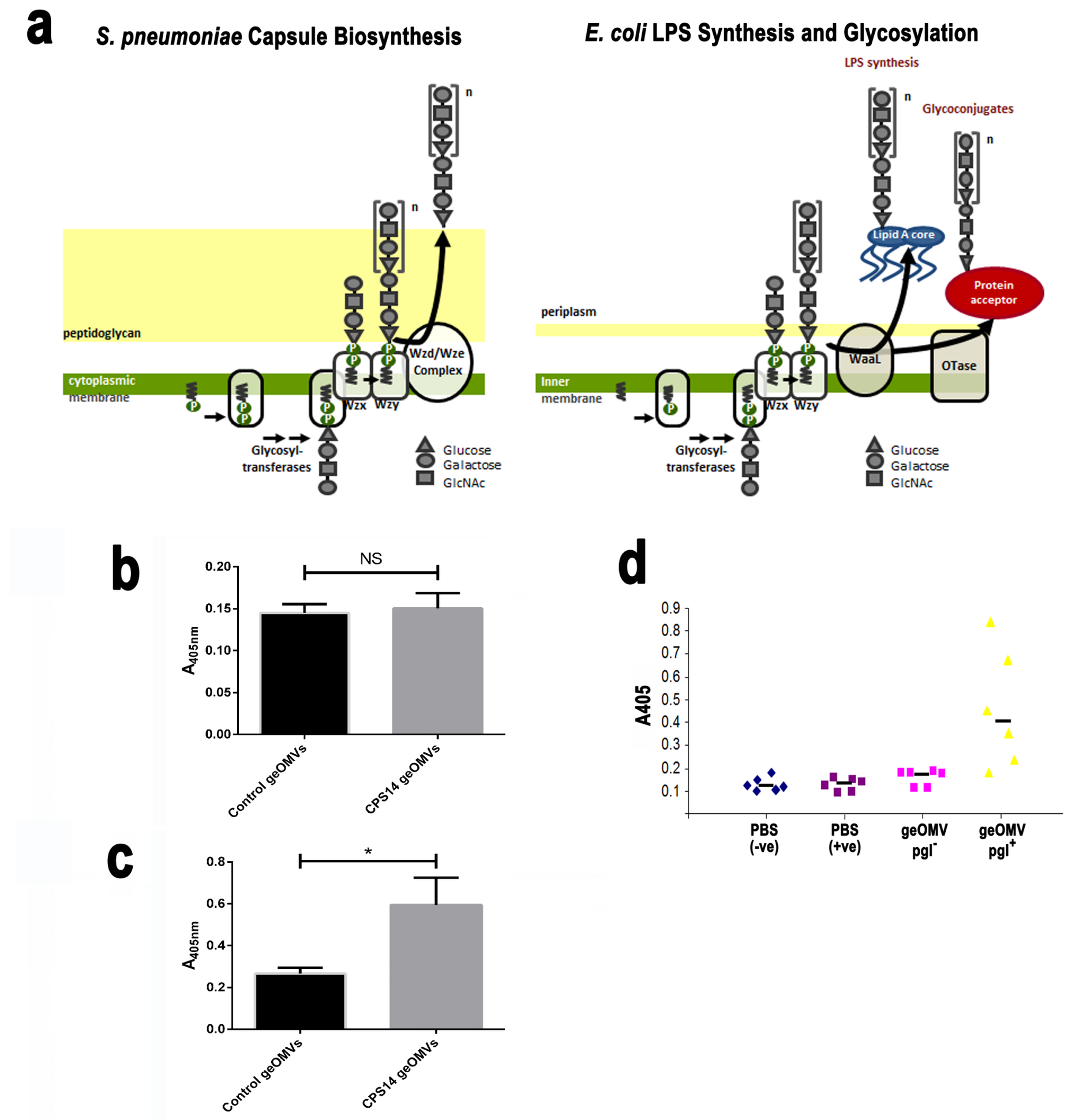
Suplementary Information

Figure S1. Supplementary Data. (a) The comparison of pneumococcal capsule synthesis and *E. coli* LPS/glycoprotein synthesis. **(b) & (c)** Sera from mice injected with geOMVs displaying pneumococcal serotype 14 capsule antigens is specific for *S. pneumoniae* serotype 14. Mouse sera from 10 animals (Day 21) were incubated in wells of ELISAs plates seeded with whole cell *S. pneumoniae* serotype 9V (b) or 14 (c). As a negative control, sera from 4 mice injected with empty control OMVs was tested on the same plate layout. Means from each group were compared and significant differences were found between control OMVs sera and CPS14 geOMVs sera in (c) (* p-value < 0.0001). No significant differences were found between groups in (b) (NS p-value = 0.45). Error bars are SD and p-values were calculated by the unpaired t-test. **(d)** ELISA data of the IgY response of chicken vaccinated with *Campylobacter* geOMVs. Each symbol represents data of one chicken and the median is indicated with a line. Animal sera (Day 28) was used at a dilution of 1:10.


a
S. pneumoniae Capsule Biosynthesis
E. coli LPS Synthesis and Glycosylation
LPS synthesis
Glycoconjugates
n
peptidoglycan
cytoplasmic membrane
periplasm
Inner membrane
Wzd/Wze Complex
Wzx
Wzy
WaaL
OTase
Lipid A core
Protein acceptor
Glycosyl-transferases
Glucose
Galactose
GlcNAc
b
NS
A405nm
0.20
0.15
0.10
0.05
0.00
Control geOMVs
CPS14 geOMVs
c
*
A405nm
0.8
0.6
0.4
0.2
0.0
Control geOMVs
CPS14 geOMVs
d
A405
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
PBS (-ve)
PBS (+ve)
geOMV pgl-
geOMV pgl+