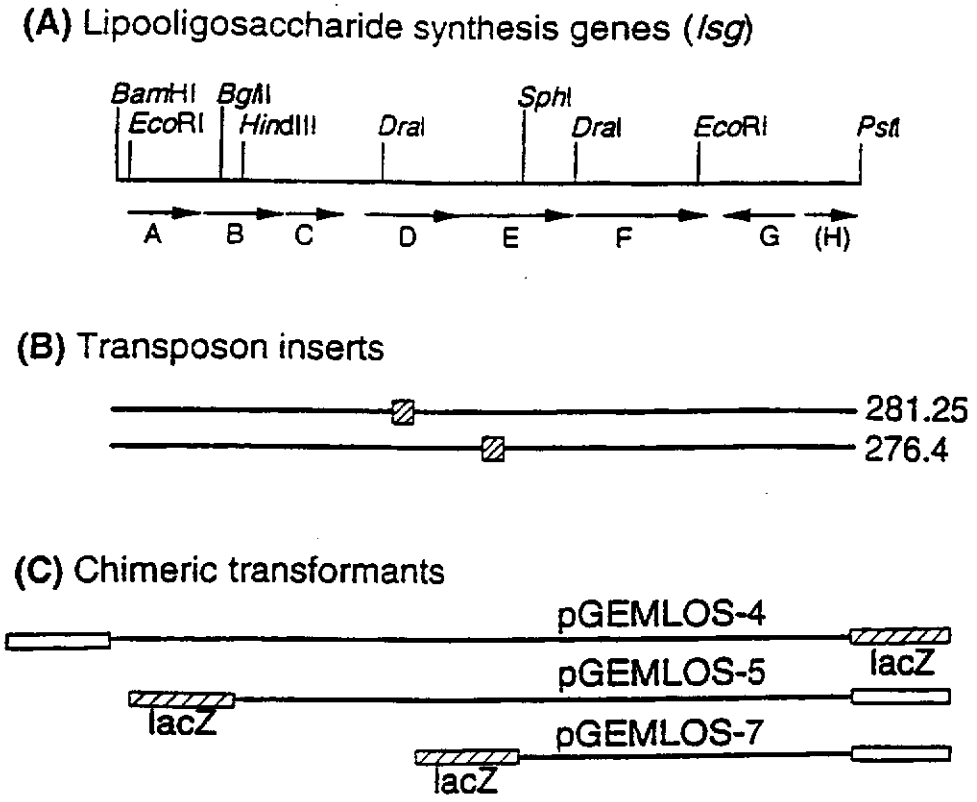
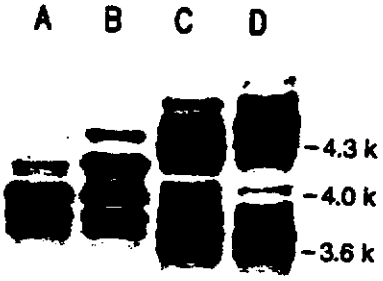

(A) Lipooligosaccharide synthesis genes (*lsg*)
BamHI
EcoRI
BglII
HindIII
DraI
SphI
DraI
EcoRI
PstI
A
B
C
D
E
F
G
(H)
(B) Transposon inserts
281.25
276.4
(C) Chimeric transformants
pGEMLOS-4
lacZ
pGEMLOS-5
lacZ
pGEMLOS-7
lacZ

FIG. 1



A=pGEM
B=pGEMLOS-7
C=pGEMLOS-5
D=pGEMLOS-4

FIG. 2

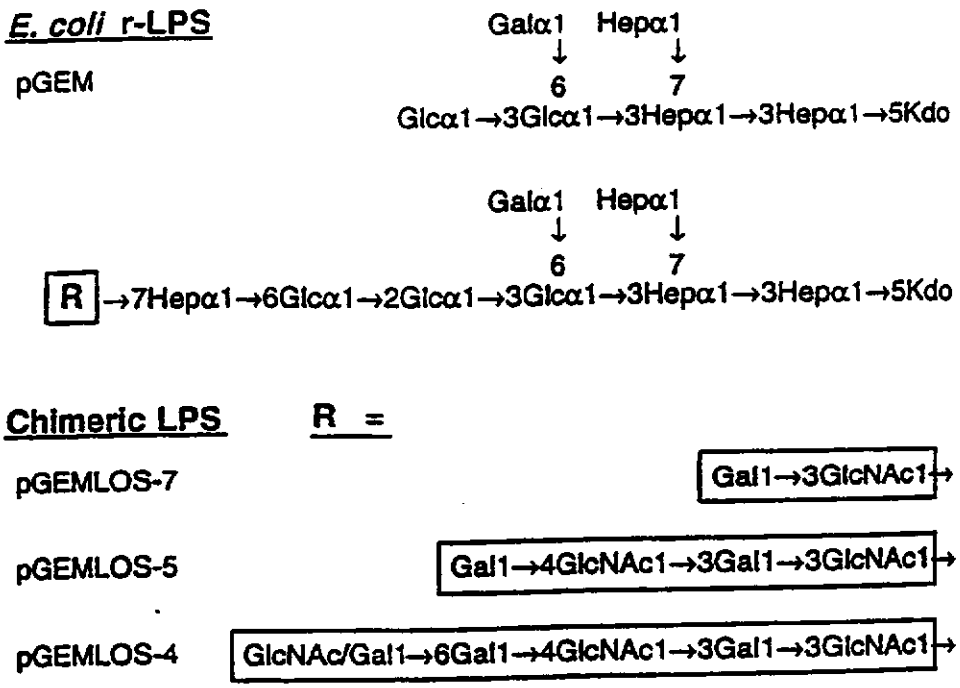

E. coli r-LPS
pGEM
Galα1 Hepα1
6 7
Glcα1→3Glcα1→3Hepα1→3Hepα1→5Kdo
Galα1 Hepα1
6 7
R →7Hepα1→6Glcα1→2Glcα1→3Glcα1→3Hepα1→3Hepα1→5Kdo
Chimeric LPS
R =
pGEMLOS-7
Gal1→3GlcNAc1→
pGEMLOS-5
Gal1→4GlcNAc1→3Gal1→3GlcNAc1→
pGEMLOS-4
GlcNAc/Gal1→6Gal1→4GlcNAc1→3Gal1→3GlcNAc1→

FIG. 3