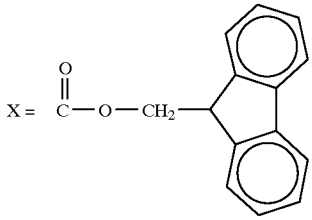
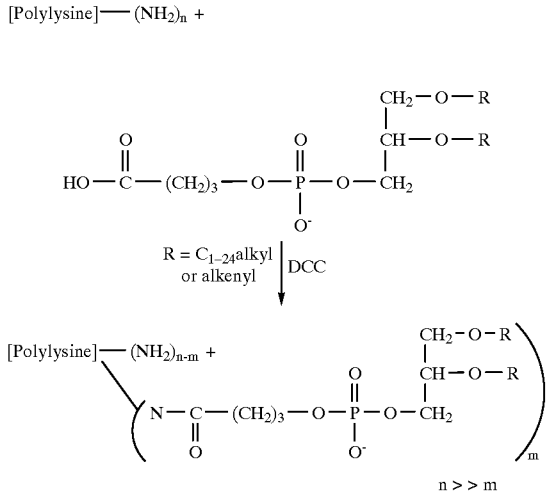
-continued

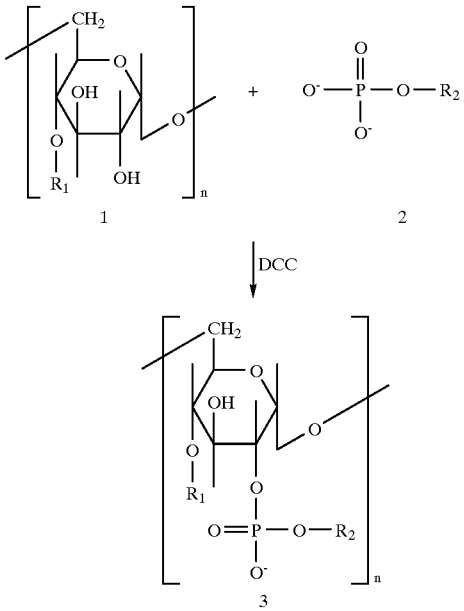


R = C_{1-24} alkyl, alkenyl

SCHEME 11



SCHEME 12



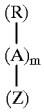
R_1 = —CH_2—CH_2—$^+NH(CH_2CH_3)_2$

R_1 = straight chain or branched alkyl, alkenyl, cycloalkyl, aryl, alkoxy, thioalkyl or thioether group having from 12 to about 24 carbon atoms

n = 50–600 (chain length)

We claim:

1. A compound having the structure:



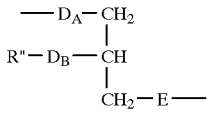
and salts thereof where:

R is R_A or R_B, where R_A is a C_{1-23} alkyl or alkenyl group and R_B is a steroid selected from the group consisting of stigmasterol, ergosterol and cholic acid;

m is 1;

A is selected from any of A_1–A_2 where:

A_1 is



where —D_A is bonded to R and —E is bonded to Z;

R", independently of R, is R_A or R_B, where R_A is a C_{1-23} alkyl or alkenyl group and R_B is a steroid selected from the group consisting of stigmasterol, ergosterol and cholic acid;

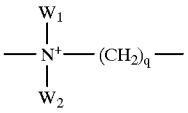
D_A and D_B, independently of one another, are selected from the group consisting of D_1 and D_2 where:

D_1 is —Y_1—CO—Y_2—, where Y_1 and Y_2, independently of one another, are O or NH, and wherein at least one of Y_1 and Y_2 is NH; and

D_2 is —CH═CH—O—;

E is selected from the group consisting of E_1–E_3 where:

E_1 is



where W_1 and W_2, independently of one another, are C_{1-24} alkyl, alkenyl or aryl; and q is 1 to 6;

E_2 is —PO^-_4—$(CH_2)_2$—NH—;

E_3 is —$(PO^-_4)_r$—NH—, where r is 1 or 2: