carbons adjacent to one another may be attached to one another by a double or triple bond; or

when Y is H, X is a linear or branched carbon chain comprising 6 to 28 carbons, wherein at least one hydrogen on one of said carbons is replaced with an ethynyl group and wherein one or more of said carbons not having an the ethynyl group attached thereto may be independently replaced by an oxygen, selenium, silicon, sulfur, SO, SO_2 or NR_1, or wherein one or more pairs of said carbons adjacent to one another and not having an ethynyl group attached thereto may be attached to one another by a double or triple bond; wherein, R_1 is H or an alkyl comprising 1 to 6 carbons.

37. The virus of claim 36, wherein Y is an ethynyl group.

38. The virus of claim 36, wherein X is a linear carbon chain.

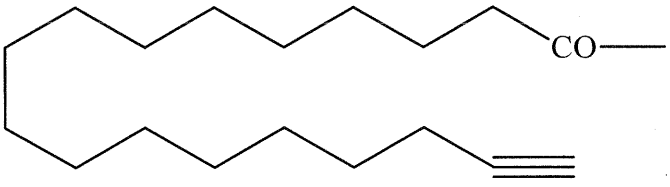
39. The virus of claim 36, wherein X is a carbon chain comprising 8 to 15 carbons.

40. The virus of claim 36, wherein X is a carbon chain in which all of the carbons of the carbon chain are carbon.

41. The virus of claim 36, wherein X is a carbon chain in which all of the bonds between the carbons of the carbon chain are single bonds.

42. The virus of claim 36, wherein the alkyne-modified fatty acid moiety is ~~15-ethynylpentadecanyl~~15-ethynylpentadecanoyl or ~~12-ethynyldodecanyl~~12-ethynyldodecanoyl.

43. The virus of claim 36, wherein the alkyne-modified fatty acid moiety is



or