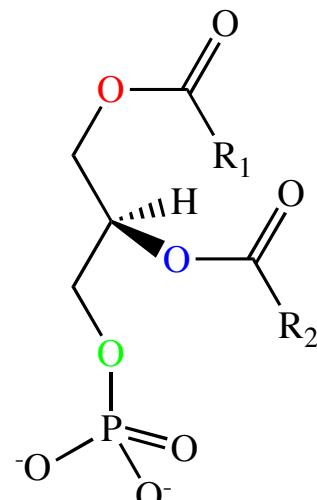


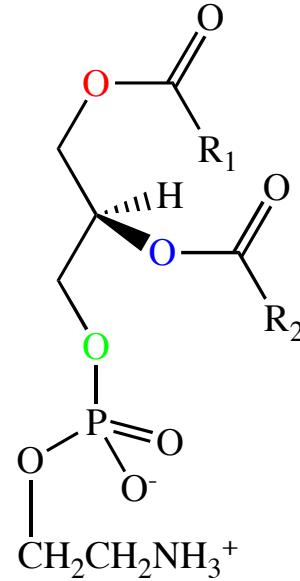
Fatty Acids

Shorthand nomenclature	Chemical structure
Saturated fatty acids	
14:0	A wavy line representing a 14-carbon chain ending in a carboxylic acid group (-COOH).
16:0	A wavy line representing a 16-carbon chain ending in a carboxylic acid group (-COOH).
18:0	A wavy line representing a 18-carbon chain ending in a carboxylic acid group (-COOH).
Monounsaturated fatty acids	
16:1n-7	A wavy line representing a 16-carbon chain with one double bond, ending in a carboxylic acid group (-COOH).
18:1n-9	A wavy line representing a 18-carbon chain with one double bond, ending in a carboxylic acid group (-COOH).
Polyunsaturated fatty acids	
18:2n-6	A wavy line representing a 18-carbon chain with two double bonds, ending in a carboxylic acid group (-COOH).
18:3n-3	A wavy line representing a 20-carbon chain with three double bonds, ending in a carboxylic acid group (-COOH).
20:5n-3	A wavy line representing a 22-carbon chain with five double bonds, ending in a carboxylic acid group (-COOH).
22:5n-3	A wavy line representing a 22-carbon chain with four double bonds, ending in a carboxylic acid group (-COOH).
22:6n-3	A wavy line representing a 22-carbon chain with six double bonds, ending in a carboxylic acid group (-COOH).

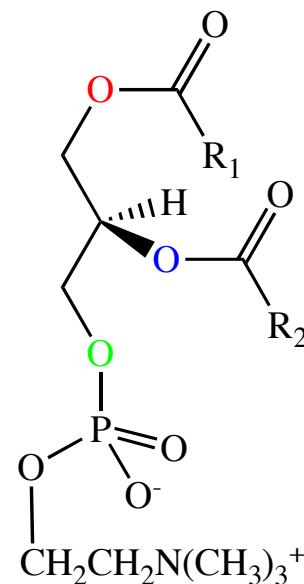
Phospholipids



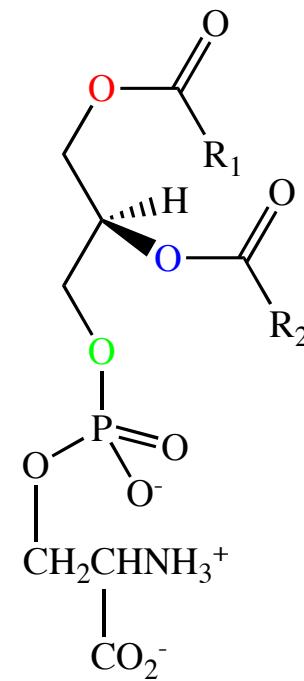
Phosphatidic acid
PA



Phosphotidyl
ethanolamine
PE

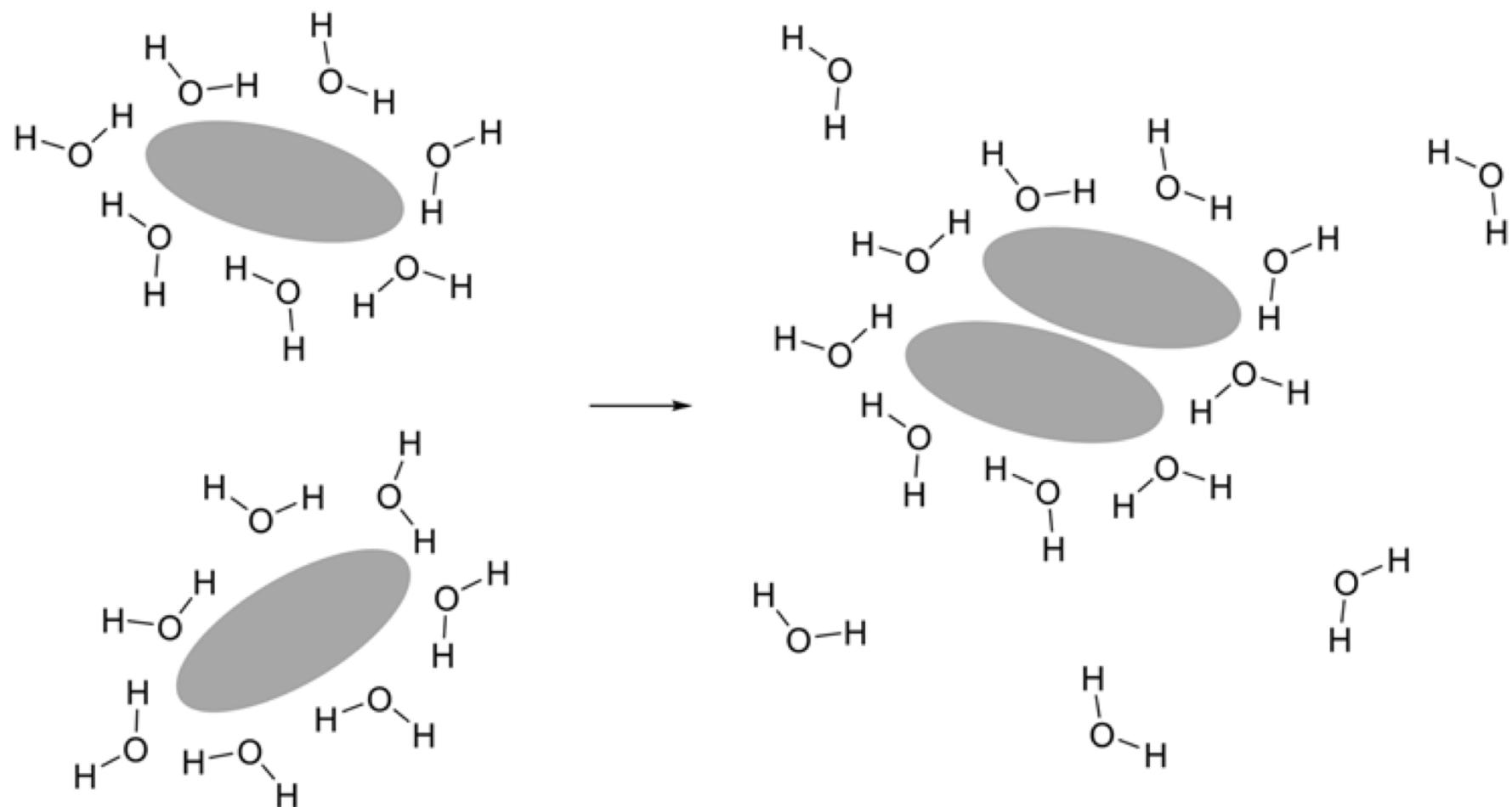


Phosphotidyl
choline
PC

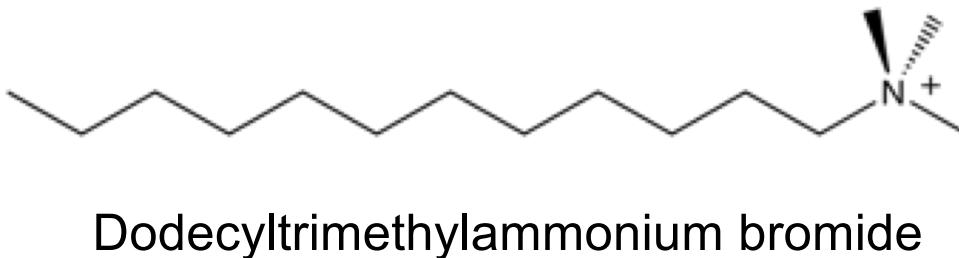


Phosphotidyl
serine
PS

Illustration of the Hydrophobic Effect

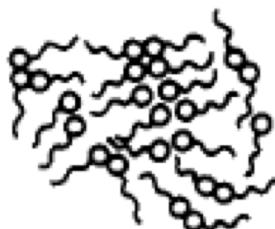
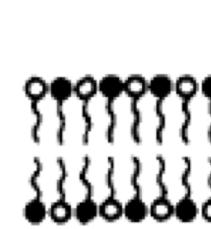
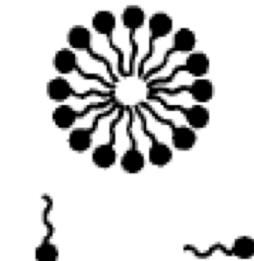


Effect of salt on CMC of DTAB



[NaBr]	cmc (μ M)	ΔG° micelle (kcal/mol)	ΔH° (kcal/mol)	ΔS° (cal/molK)
0	302	-4.8	-0.3	15
0.0175	182	-5.1	-0.4	16
0.05	130	-5.3	-0.4	16
0.10	66	-5.7	-0.5	17

pH Dependence of Fatty Acid Aggregation

$\text{pH} < 7$	$\text{pH} \sim 7$	$\text{pH } 7 - 9$	$\text{pH } \sim 9$	$\text{pH} > 9$
 2 Phases: Oil, Aqueous	 3 Phases: Oil, Lamellar, Aqueous	 2 Phases: Lamellar, Aqueous	 3 Phases: Lamellar, Micellar, Aqueous	 2 Phases: Micellar, Aqueous