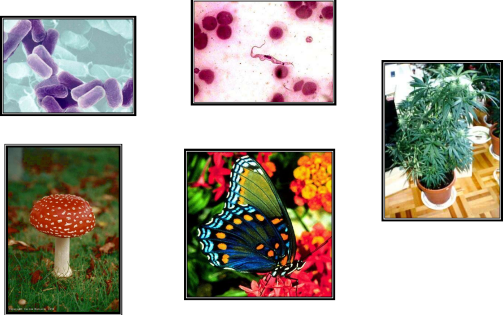
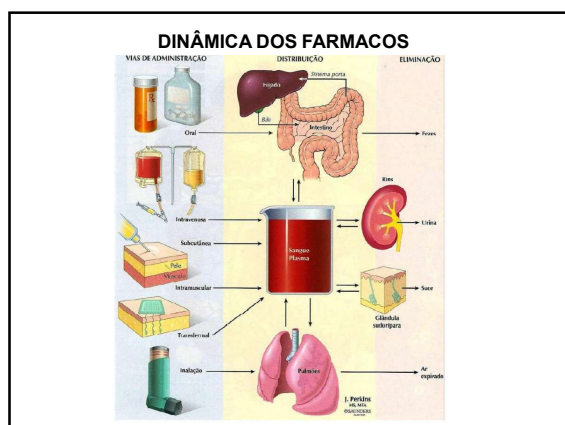
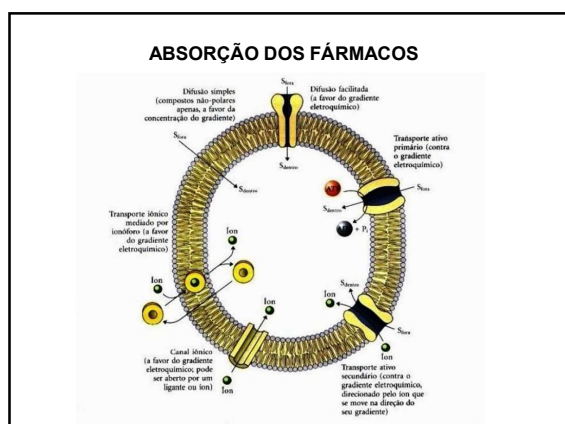


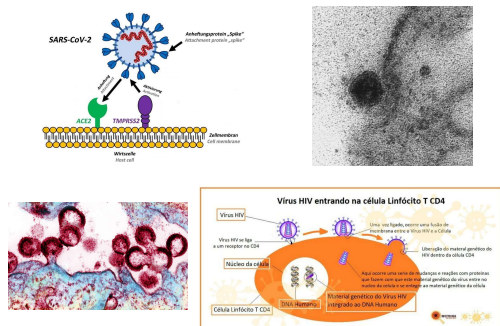
SUPERFÍCIE CELULAR
estrutura e fisiologia das membranas biológicas



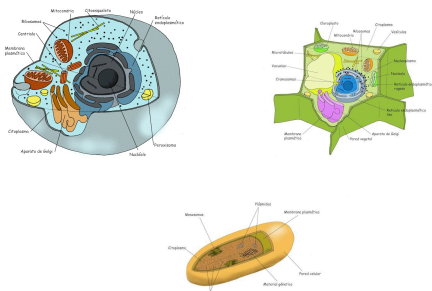




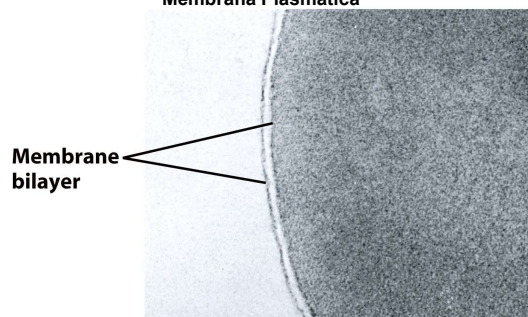
“ABSORÇÃO” DE PATÓGENOS

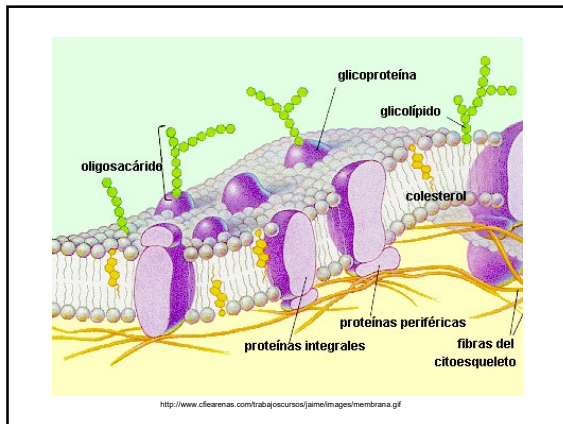


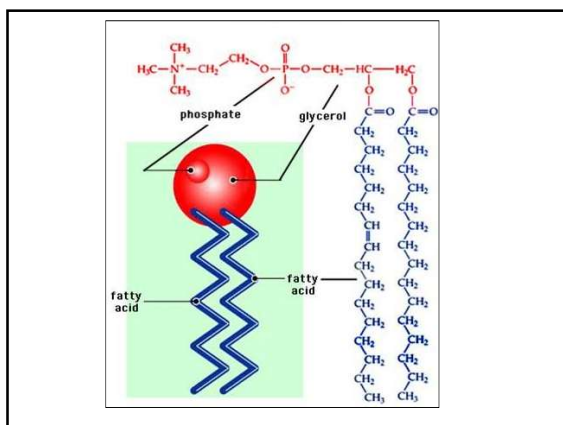
Membrana Plasmática

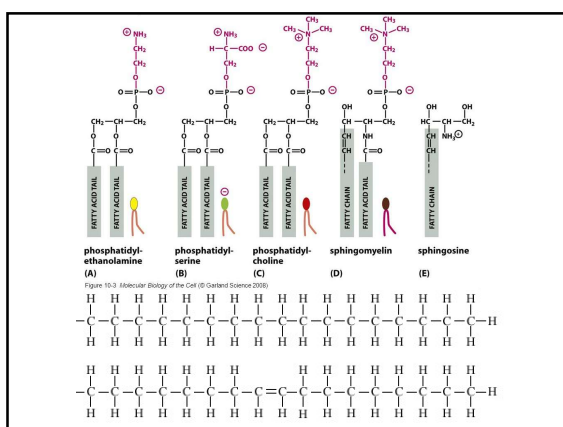


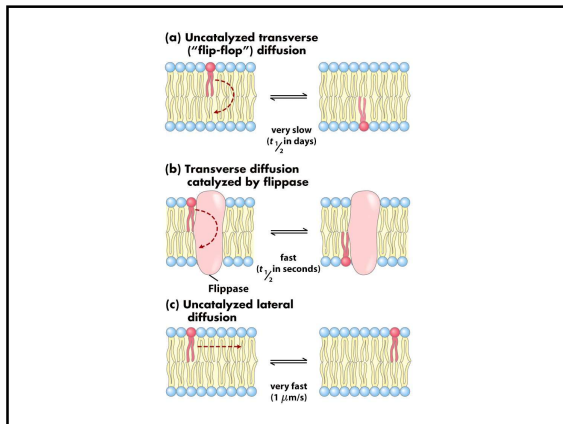
Membrana Plasmática

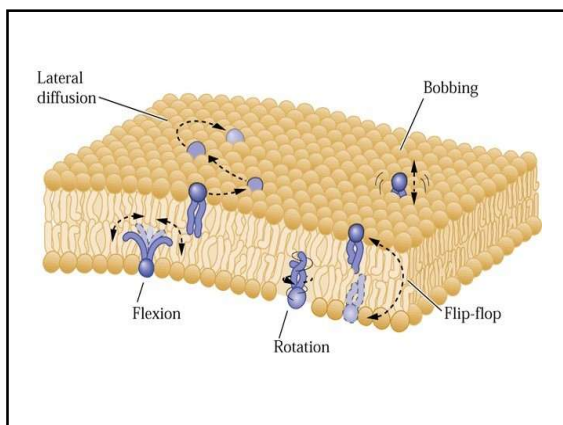






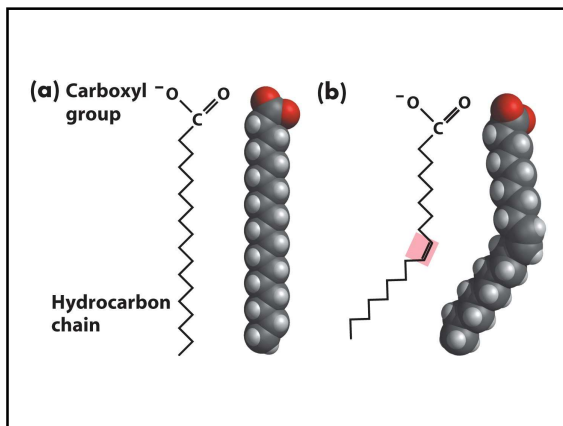






Movimiento de fosfolípidos

La Membrana Plasmática es una estructura dinámica. En esta imagen se representan cuatro movimientos diferentes que realizan los fosfolípidos de membrana, rotación, traslación, flexión y movimientos flip-flop. A este estado de la membrana se le llama estado fluido. Por lo tanto son capaces de girar sobre su propio eje, se desplazan a lo largo de la bicapa en todas direcciones, sus cadenas hidrocarbonadas son flexibles y son capaces de pasar de una monocapa a otra respectivamente.



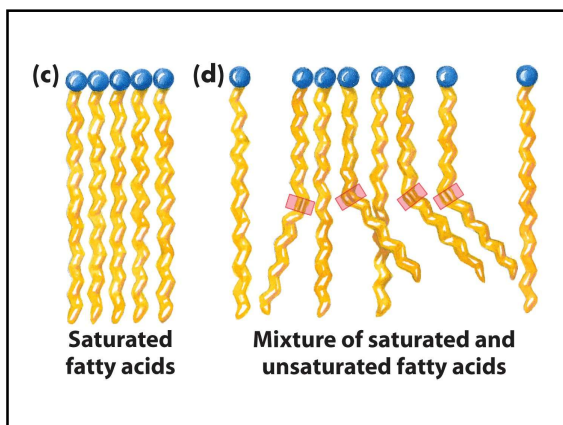


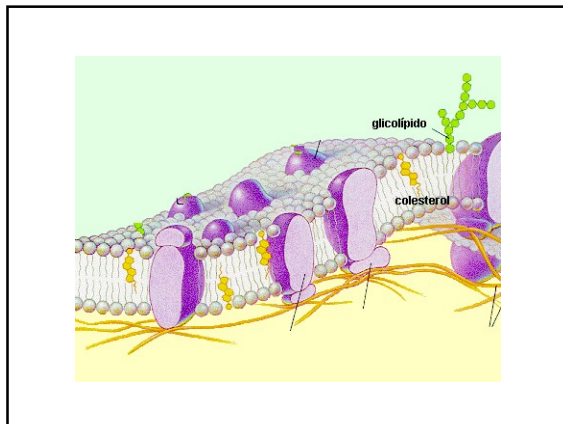
TABLE 11-2 Fatty Acid Composition of *E. coli* Cells Cultured at Different Temperatures

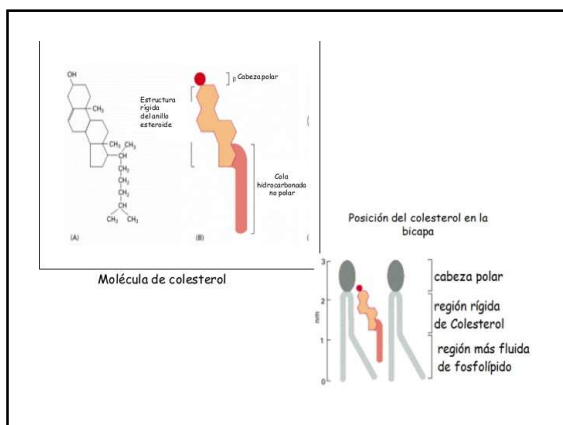
	Percentage of total fatty acids*			
	10 °C	20 °C	30 °C	40 °C
Myristic acid (14:0)	4	4	4	8
Palmitic acid (16:0)	18	25	29	48
Palmitoleic acid (16:1)	26	24	23	9
Oleic acid (18:1)	38	34	30	12
Hydroxymyristic acid	13	10	10	8
Ratio of unsaturated to saturated [†]	2.9	2.0	1.6	0.38

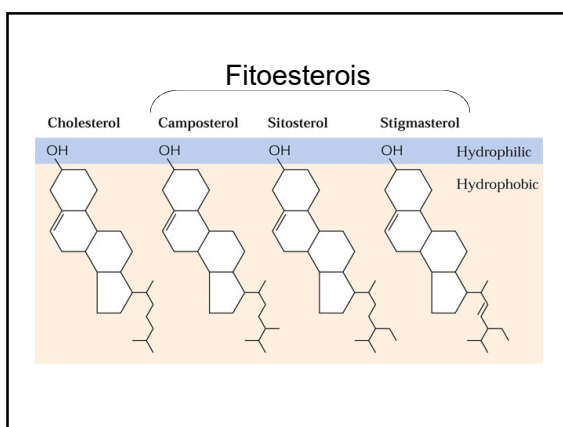
Source: Data from Marr, A.G. & Ingaham, J.L. (1962) Effect of temperature on the composition of fatty acids in *Escherichia coli*. *J. Bacteriol.* **84**, 1260.

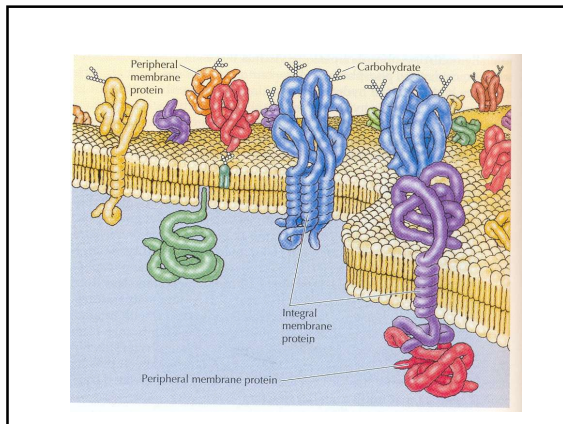
*The exact fatty acid composition depends not only on growth temperature but on growth stage and growth medium composition.

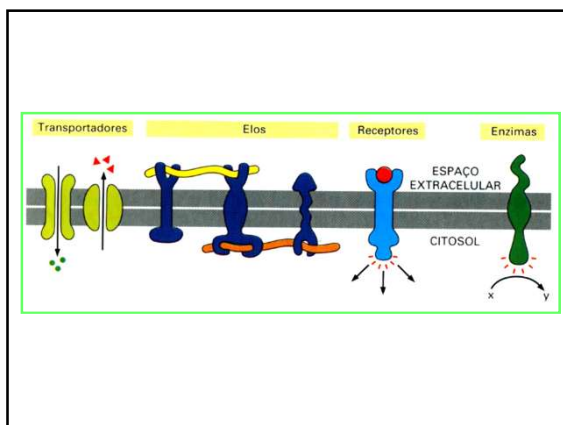
[†]Ratios calculated as the total percentage of 16:1 plus 18:1 divided by the total percentage of 14:0 plus 16:0. Hydroxymyristic acid was omitted from this calculation.









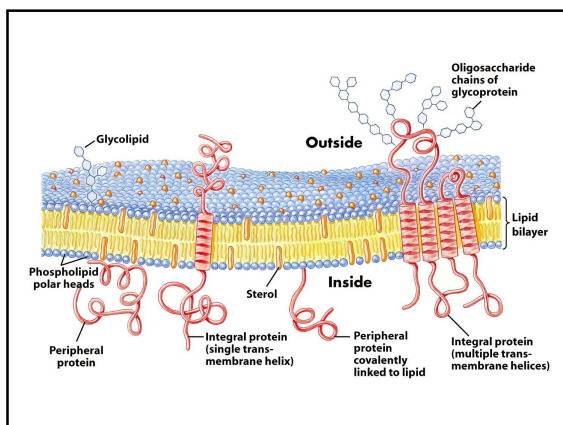


- A composição química das membranas oscila em torno dos valores médios de 60% de **proteínas** e 40% de **lipídios**.
- Associados às proteínas e os lipídios encontram-se açúcares, constituindo as **glicoproteínas** e os **glicolipídios**.

TABLE 11-1 Major Components of Plasma Membranes in Various Organisms

	Components (% by weight)			Sterol type	Other lipids
	Protein	Phospholipid	Sterol		
Human myelin sheath	30	30	19	Cholesterol	Galactolipids, plasmalogens
Mouse liver	45	27	25	Cholesterol	—
Maize leaf	47	26	7	Sitosterol	Galactolipids
Yeast	52	7	4	Ergosterol	Triacylglycerols, steryl esters
Paramecium (ciliated protist)	56	40	4	Stigmasterol	—
E. coli	75	25	0	—	—

Note: Values do not add up to 100% in every case, because there are components other than protein, phospholipids, and sterol; plants, for example, have high levels of glycolipids.



Glicocálix (glicocálice)

Extensão da própria membrana e não uma camada separada
constituída por: glicolípídios e glicoproteínas integrais



- Reconhecimento celular
- Inibição por contato
- Adesão celular

