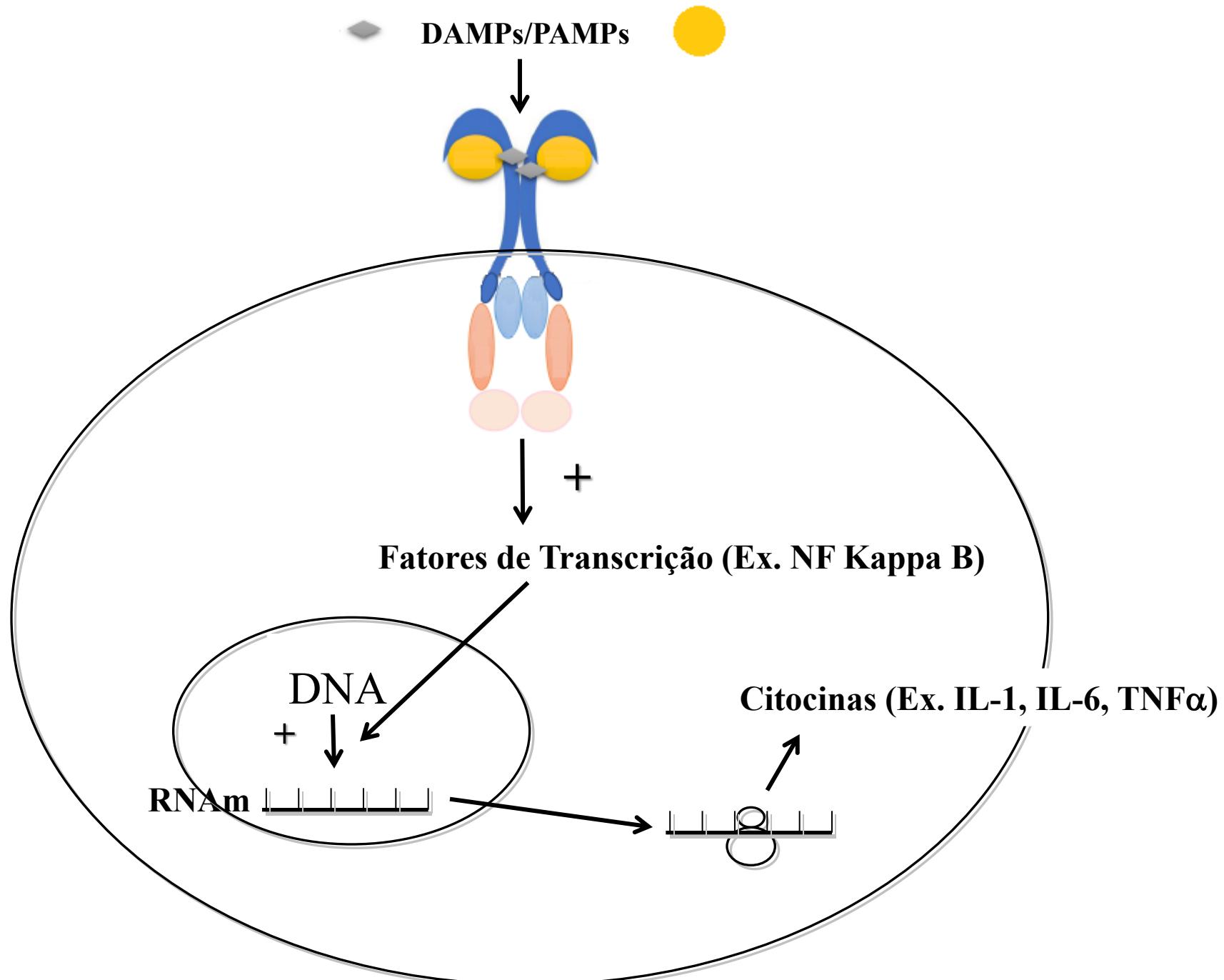


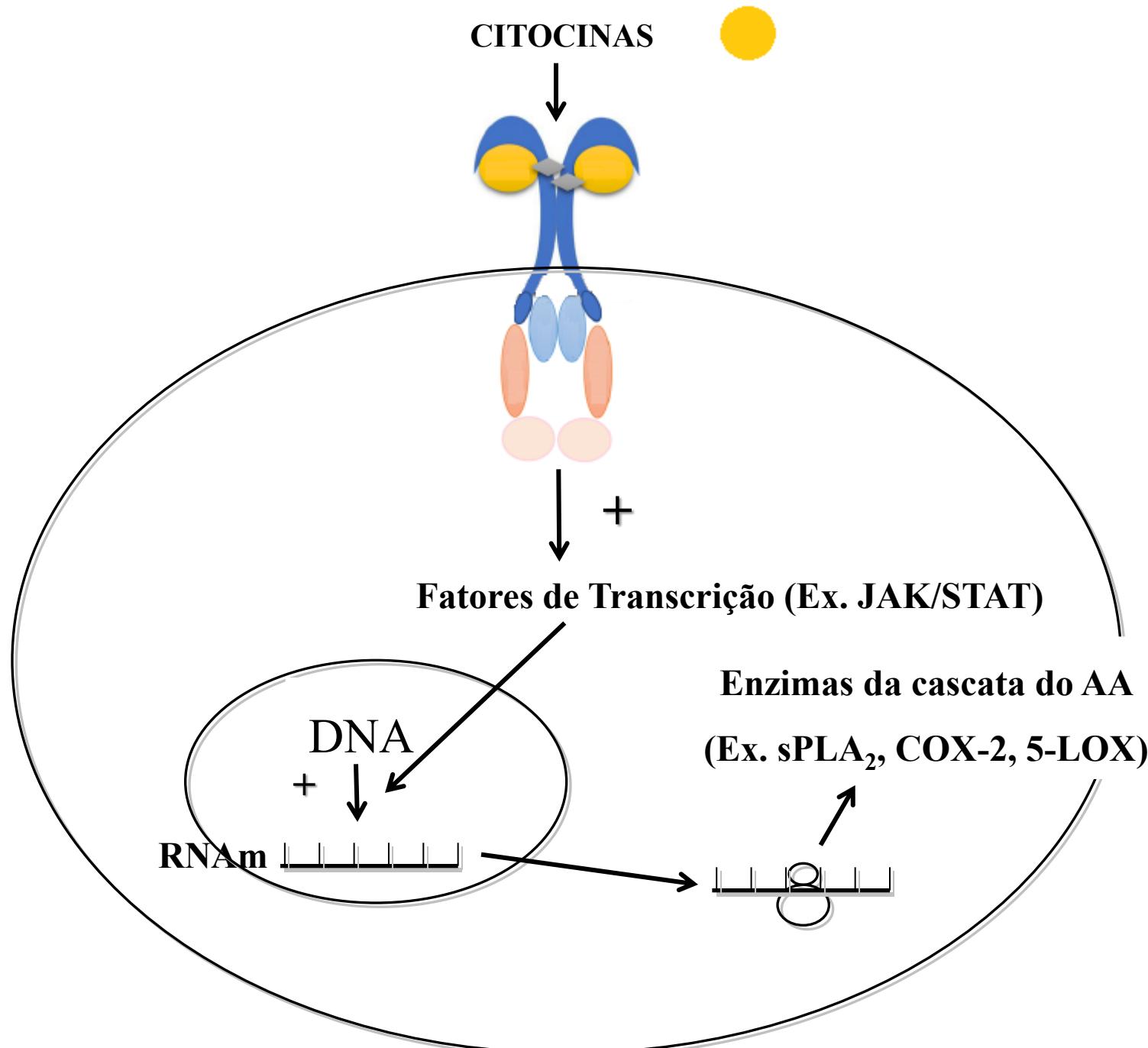
## - Fisiopatologia Inflamação e AINEs -



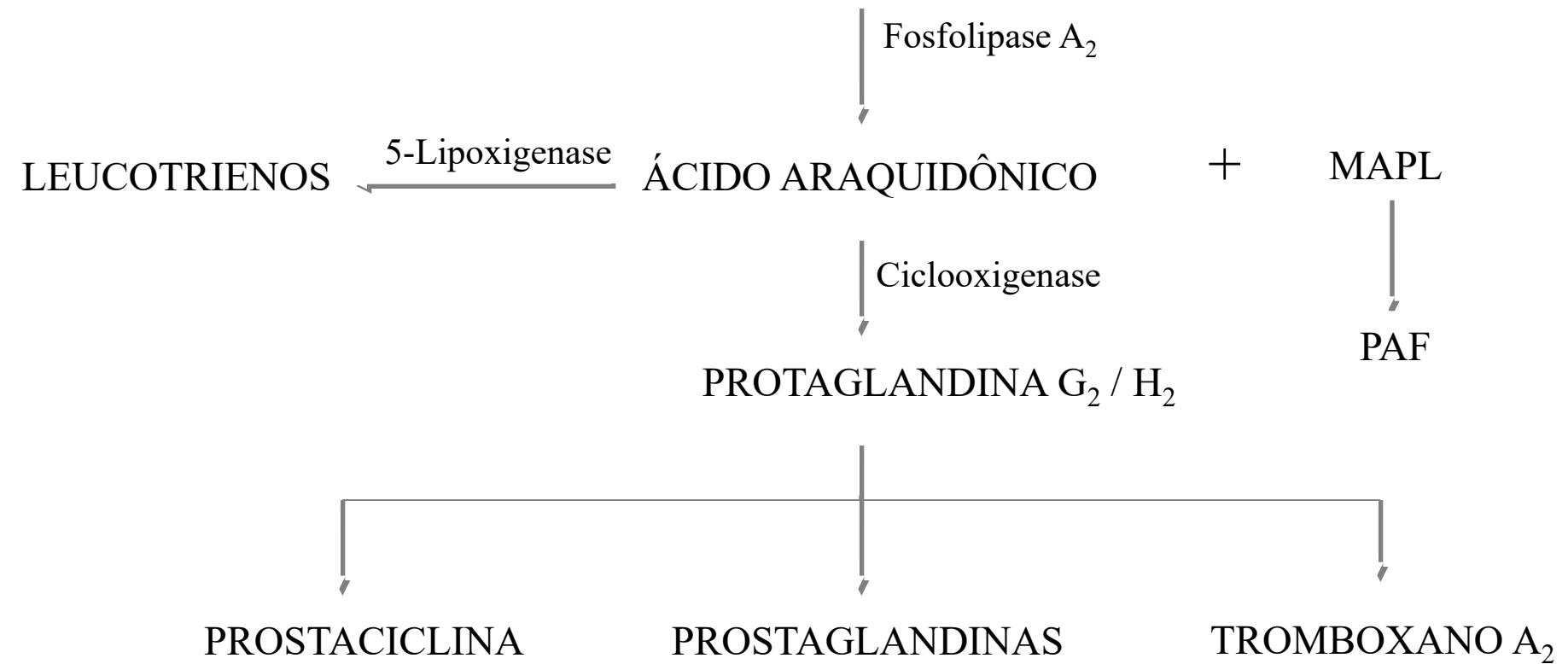
- Prof. Dr. Rogério Cardoso de Castro -

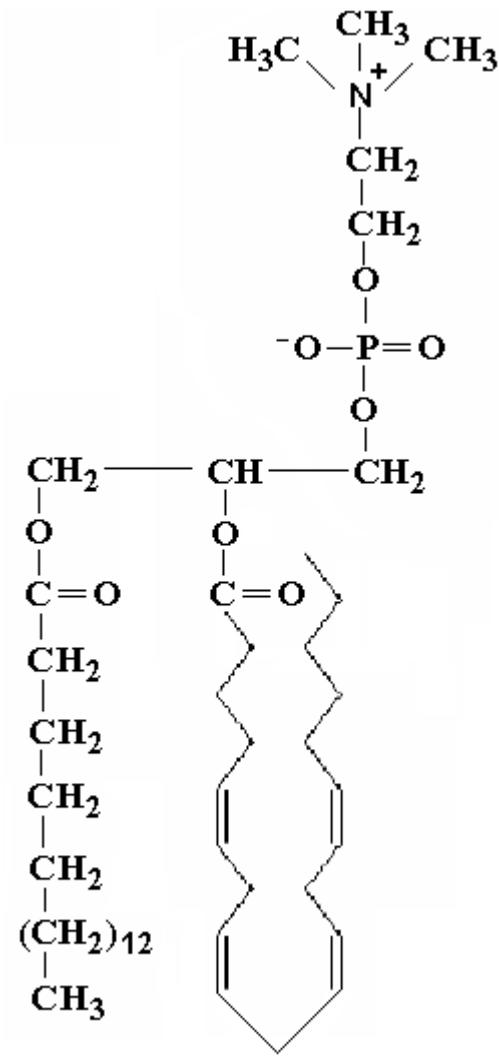
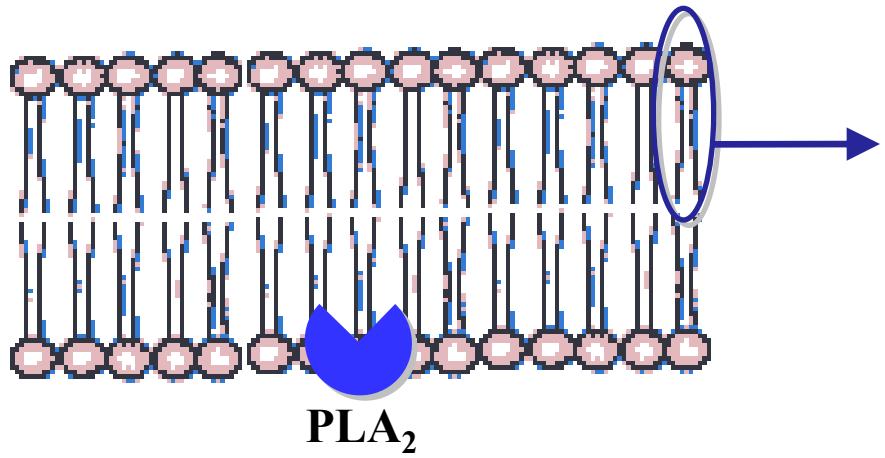


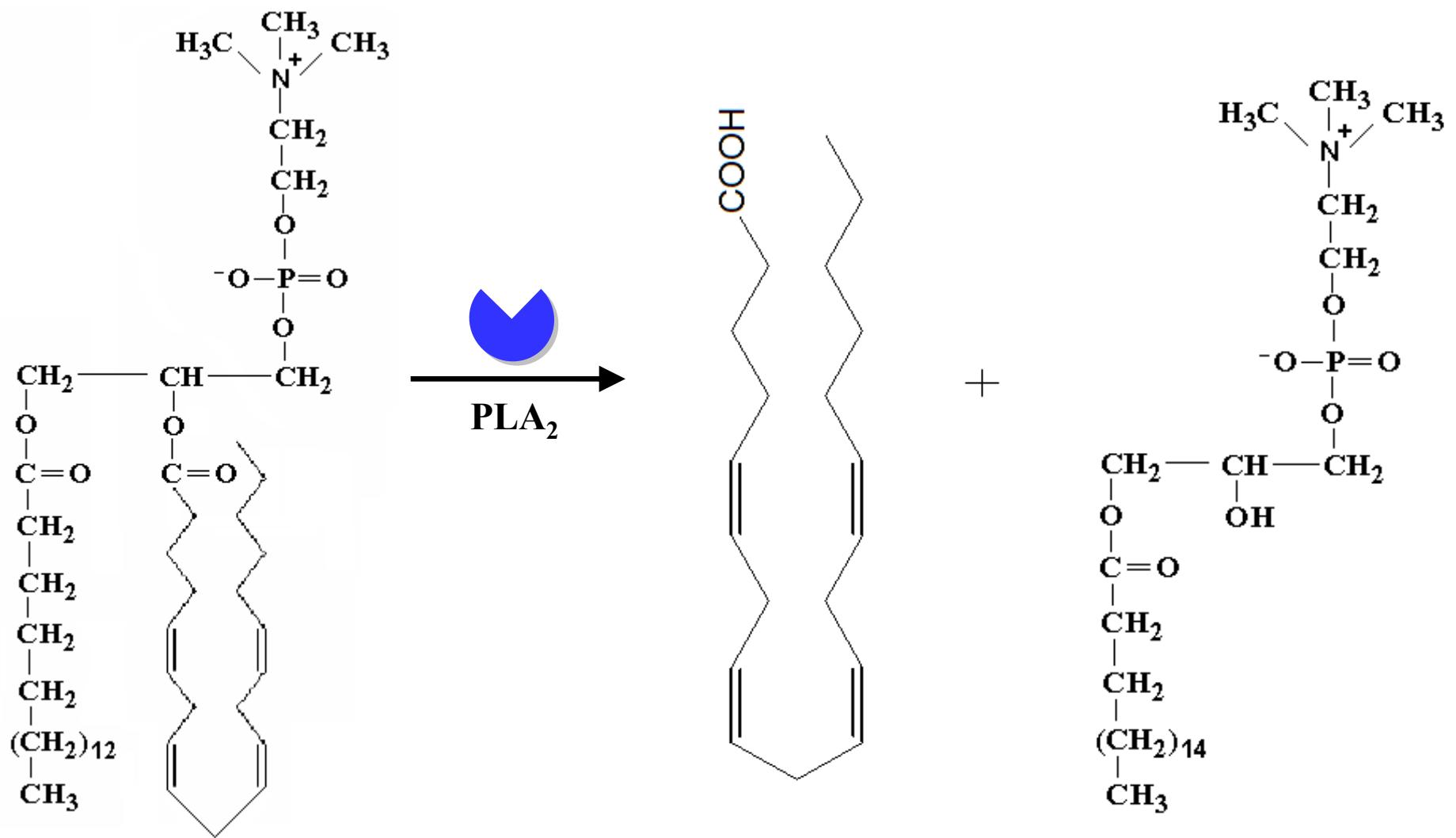


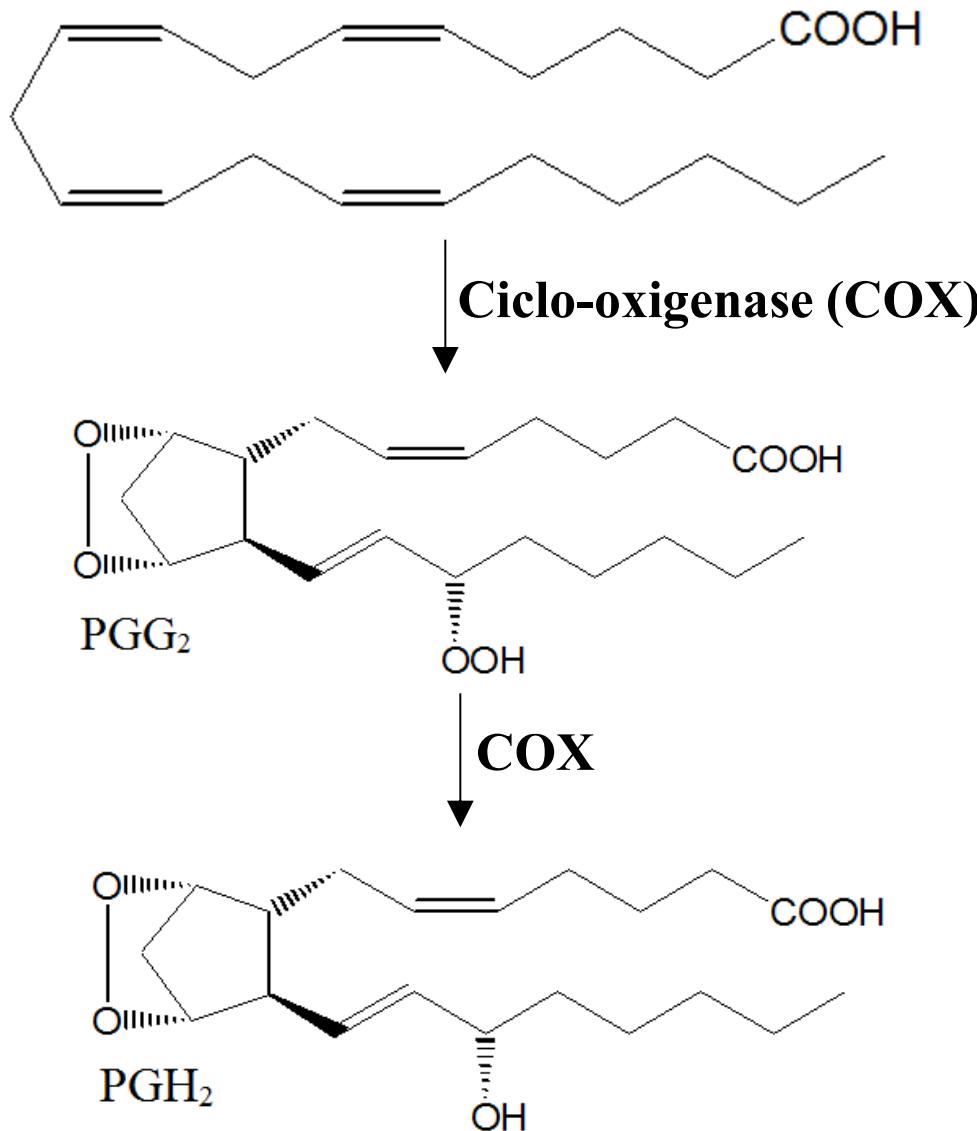


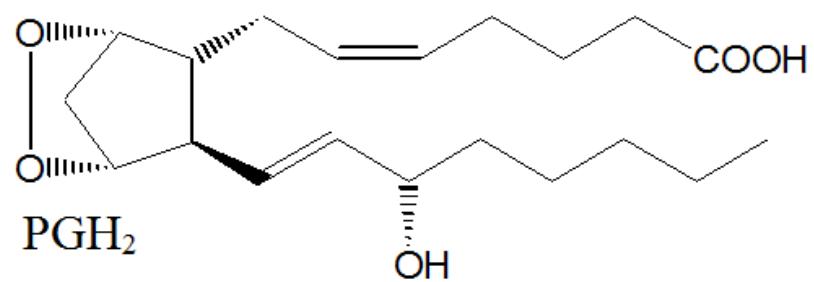
## FOSFOLIPÍDEOS DE MEMBRANA



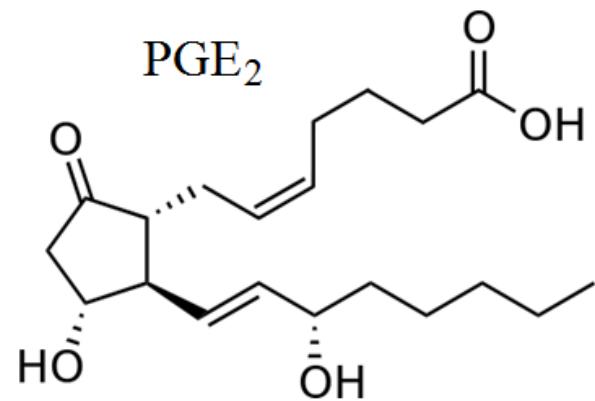




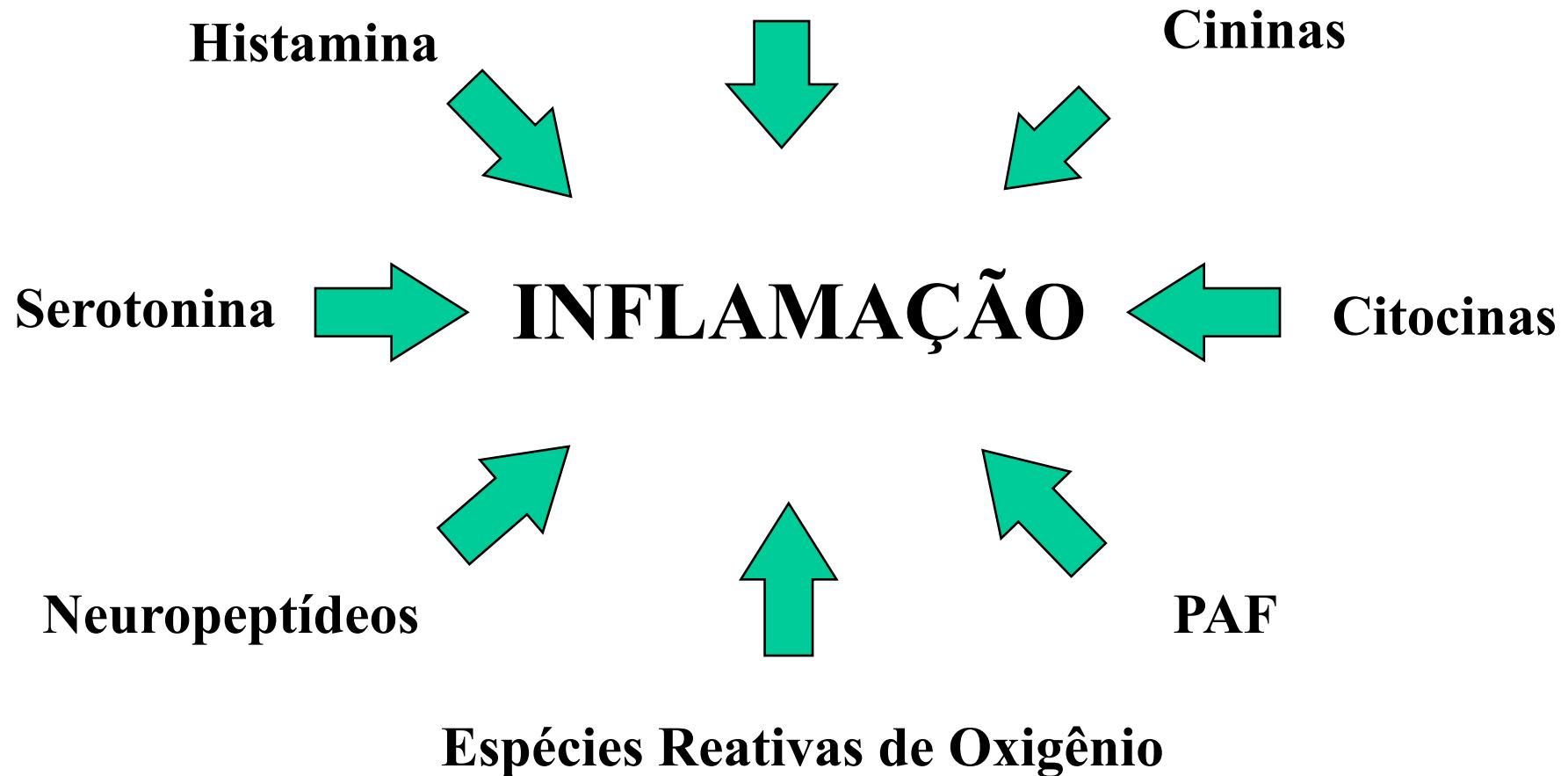




# PGE<sub>2</sub> Sintase

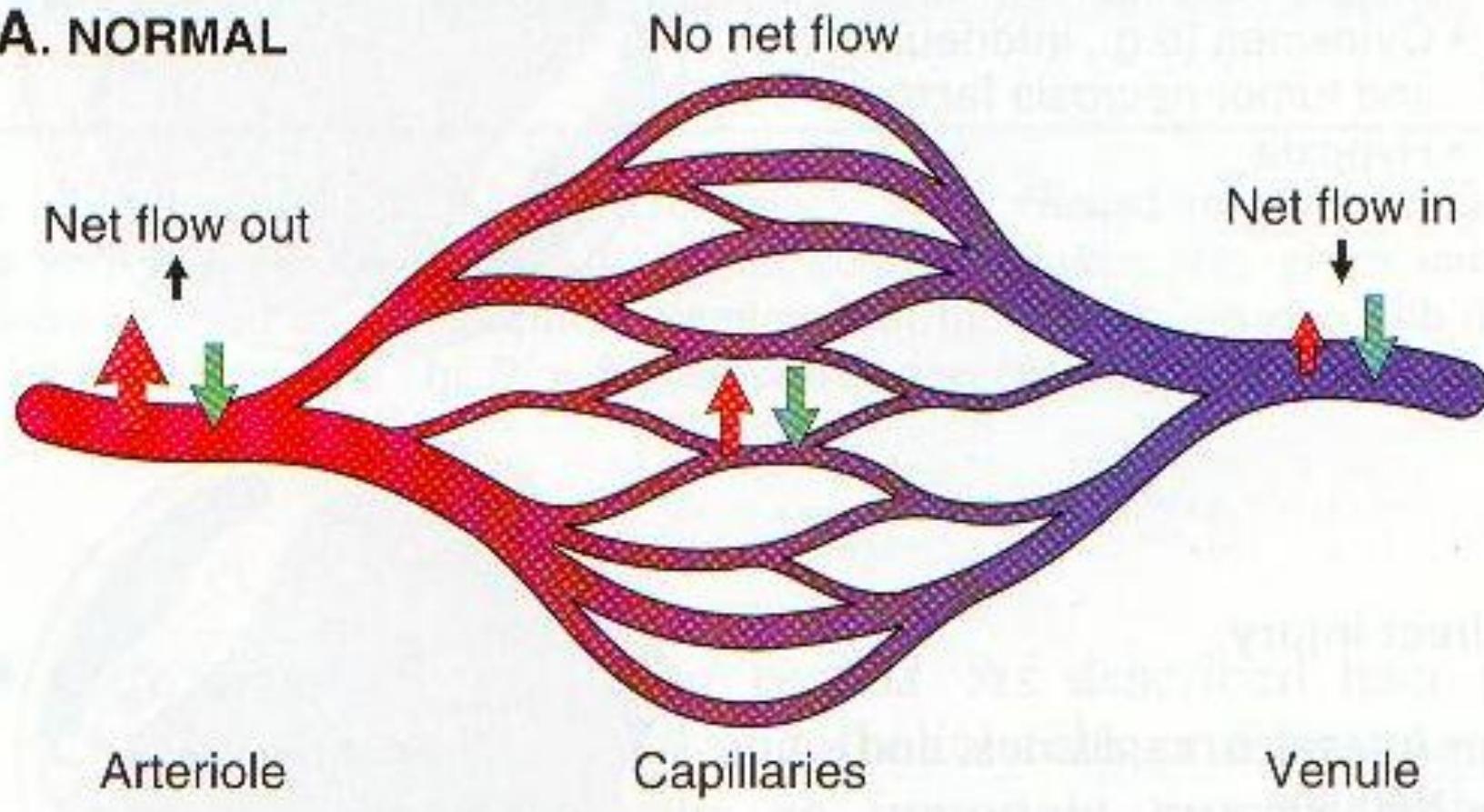


# Prostaglandinas



# PERFUSÃO TECIDUAL NORMAL

A. NORMAL



**Prostaglandinas**  
**Leucotrienos**  
**PAF**  
**Histamina**  
**Serotonina**  
**Cininas**  
**Neuropeptídeos**  
**Óxido Nítrico**

**Vasodilatação  
arteriolar**

**Aumento do fluxo  
sanguíneo local**

**RUBOR  
CALOR**

**Aumento da  
pressão hidrostática**

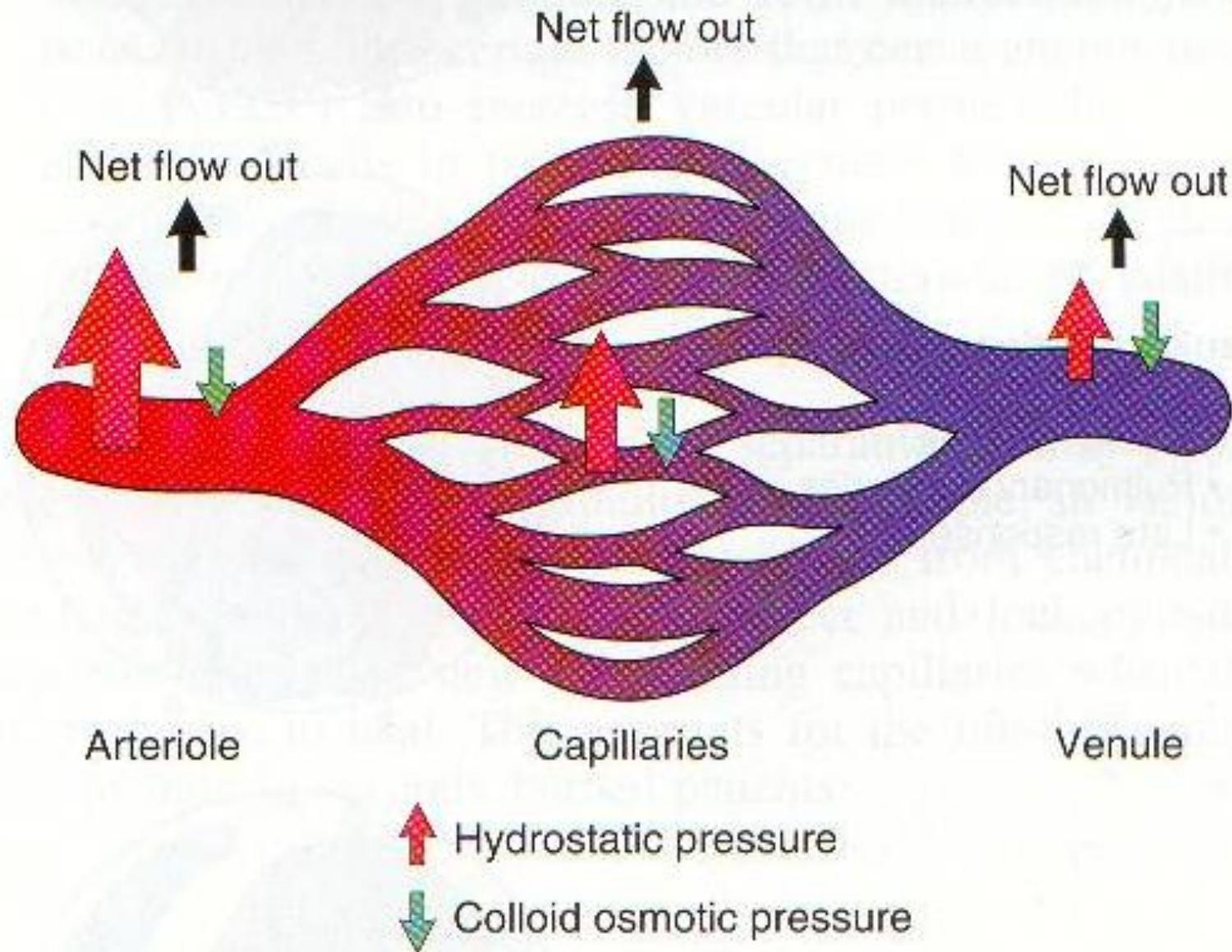
**EDEMA**

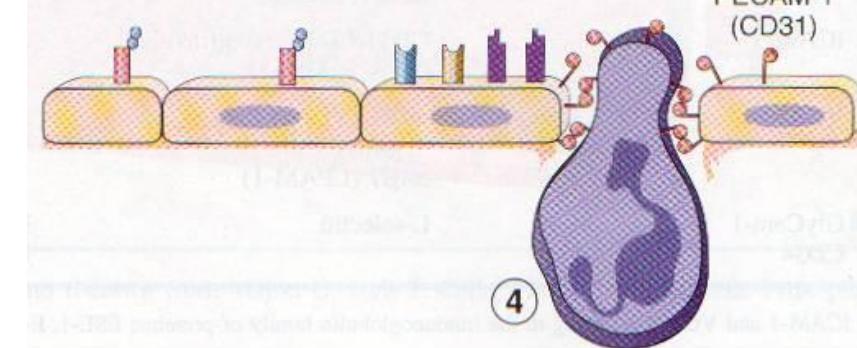
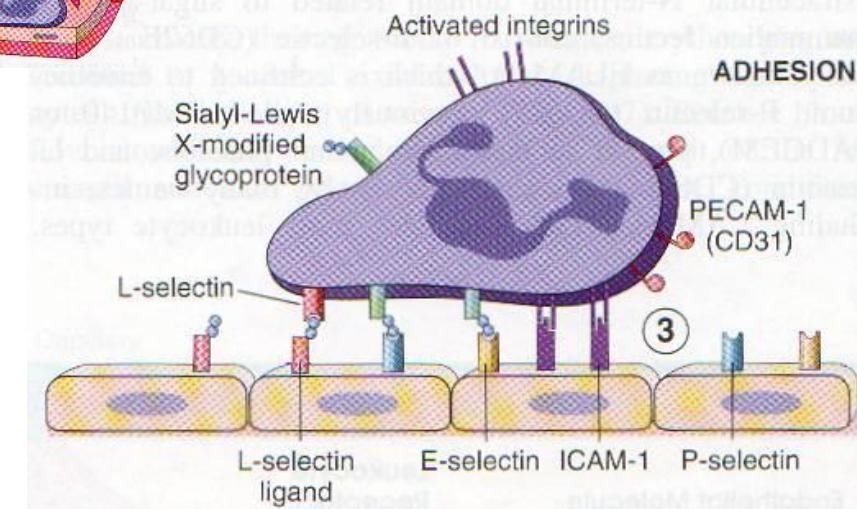
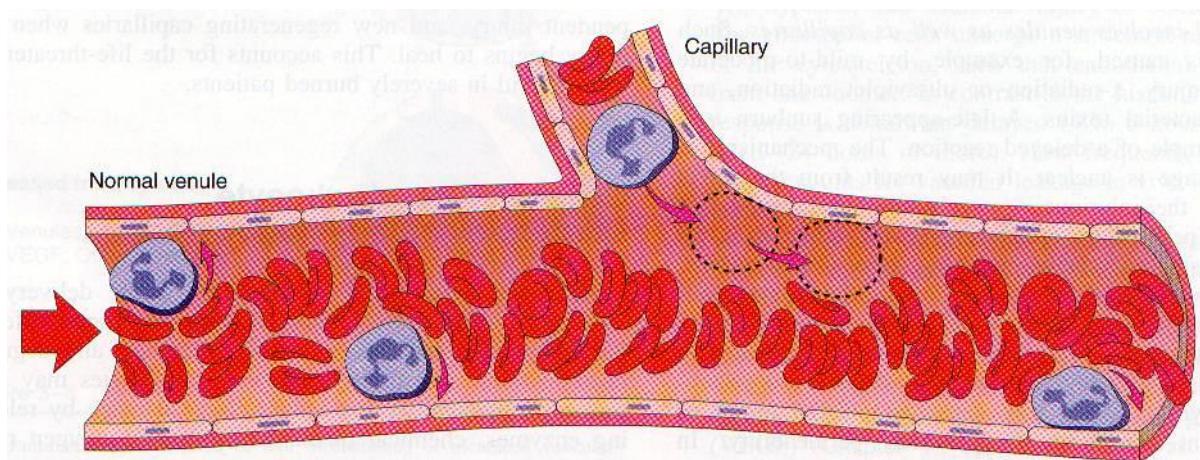
**Redução da  
pressão oncótica**

**Aumento da  
permeabilidade  
vascular**

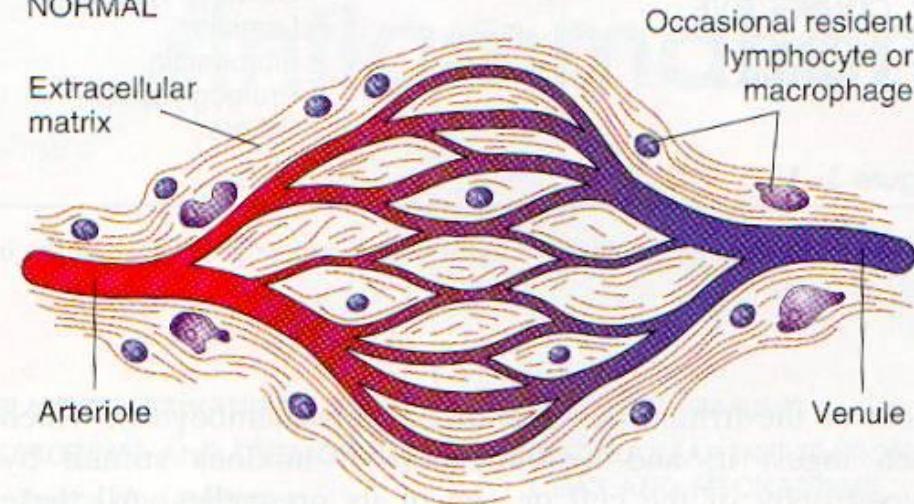
**Extravasamento de  
proteico**

## B. ACUTE INFLAMMATION

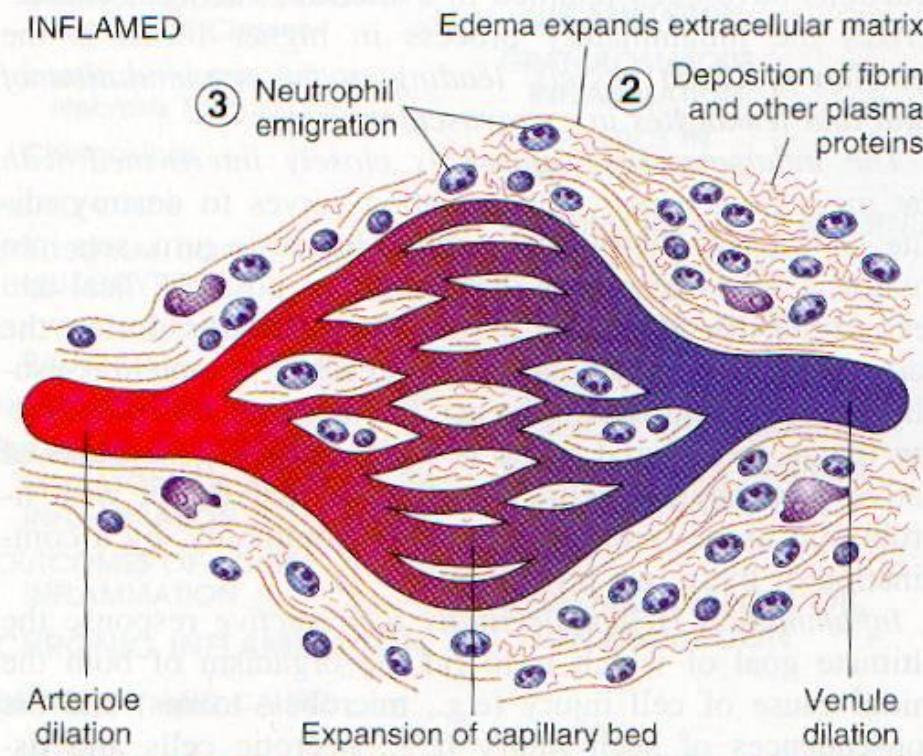




NORMAL



INFLAMED



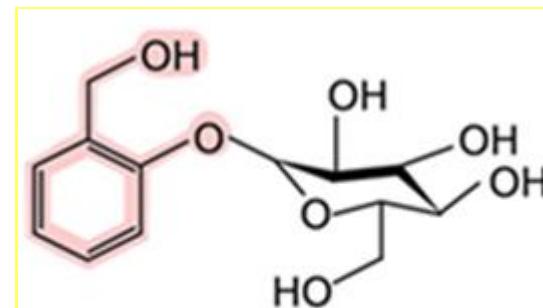
Increased blood flow

①

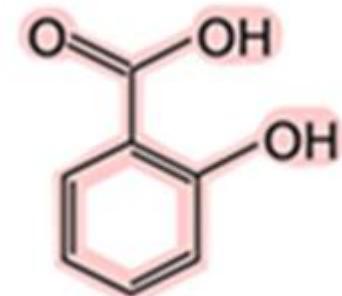
# FARMACOLOGIA DOS ANTI-INFLAMATÓRIOS NÃO ESTEROÍDAIS

“AINEs”

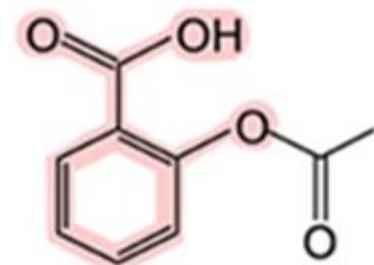
# *Salix alba*



Salicina



Ácido salicílico



Ácido Acetilsalicílico



A historical advertisement for Bayer Aspirin. On the left is a black and white portrait of a man with a full, dark beard and mustache, wearing a dark suit, white shirt, and a bowler hat. To his right is a large circular logo containing the word "BAYER" in a stylized font, with "B" at the top, "A" in the middle, and "Y" and "E" stacked vertically. A large, bold "ASPIRIN" is printed below the logo. Above the logo, the word "Genuine" is written in a cursive script with arrows pointing towards the logo. Below the portrait and logo, there is text: "SAY 'BAYER' when you buy Aspirin. Insist! Unless you see the 'Bayer Cross' on tablets, you are not getting the genuine Bayer product prescribed by physicians over 25 years and proved safe by millions for: Gold... Headache... Toothache... Rheumatism... Neuralgia... Lumbargia... Neuralgia... Pain, Pain... Always take 'Bayer' package which contains proper directions." There is also a small image of a Bayer aspirin box in the lower right corner of the ad area.

# **Relação Nacional de Medicamentos Essenciais**

## **2020**

	60 mg a 240 mg de salicina (dose diária)	comprimido
salgueiro ( <i>Salix alba</i> L.)	60 mg a 240 mg de salicina (dose diária)	elixir
	60 mg a 240 mg de salicina (dose diária)	solução oral
ácido salicílico	50 mg/g (5%) (FN)*	pomada
ácido acetilsalicílico	100 mg 500 mg	comprimido comprimido

## ➤ Salicilatos

Ácido Salicílico

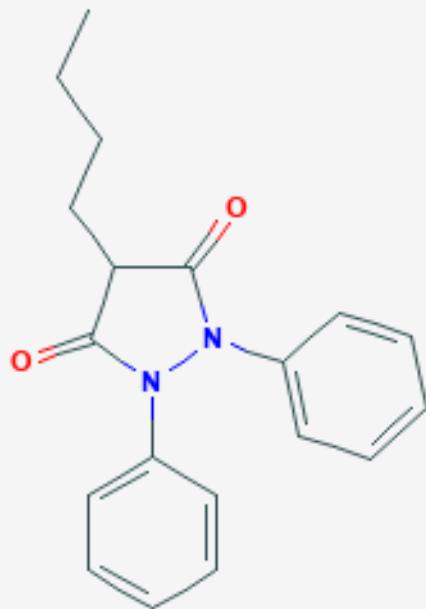
Ácido Acetilsalicílico

Salicilato de Metila

➤ Derivados pirazolônicos

Fenilbutazona

Dipirona



*Pubchem*



*Pubchem*

➤ Fenamatos

Ácido Mefenâmico

➤ Derivados heterocíclicos do ácido acético

Indometacina

Etodolaco

Cetorolaco

➤ Derivados do ácido propiônico

Ibuprofeno

Cetoprofeno

Naproxeno

Flurbiprofeno

Loxoprofeno

➤ Ácidos Enólicos

Piroxicam

Tenoxicam

Meloxicam

Lornoxicam

➤ Composto sulfonanilídico

Nimesulida

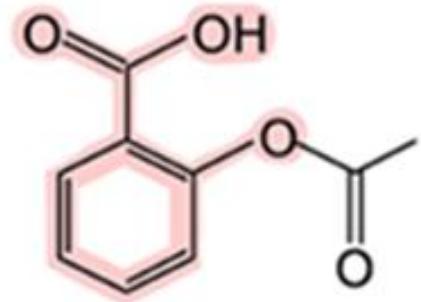
➤ Derivados do ácido fenil-acético

Diclofenaco

Aceclofenaco

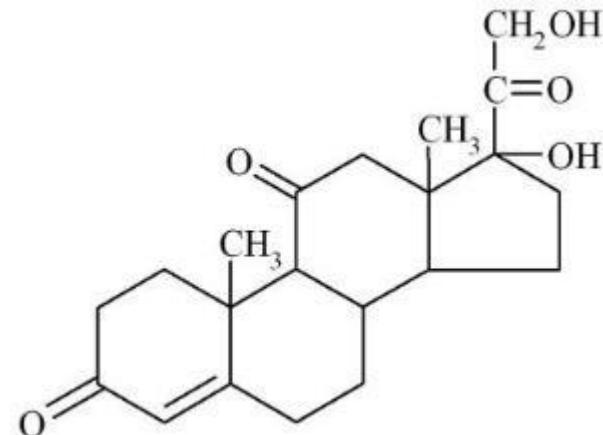
Nepafenaco

# Porque não esteroidais ?

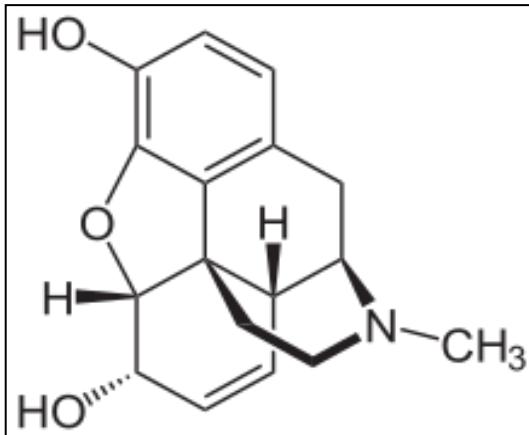


**Ácido Acetilsalicílico**

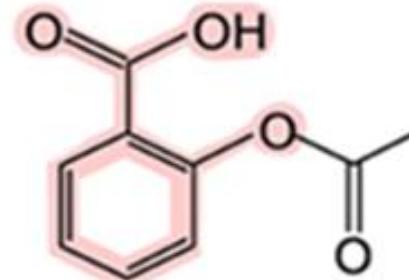
X



**CORTISONA**

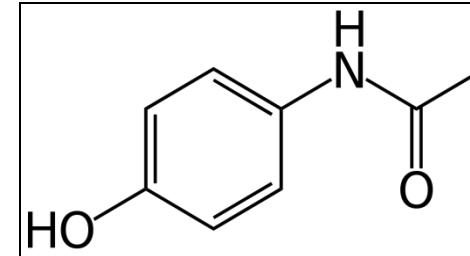


X



**Ácido Acetilsalicílico**

**Morfina**

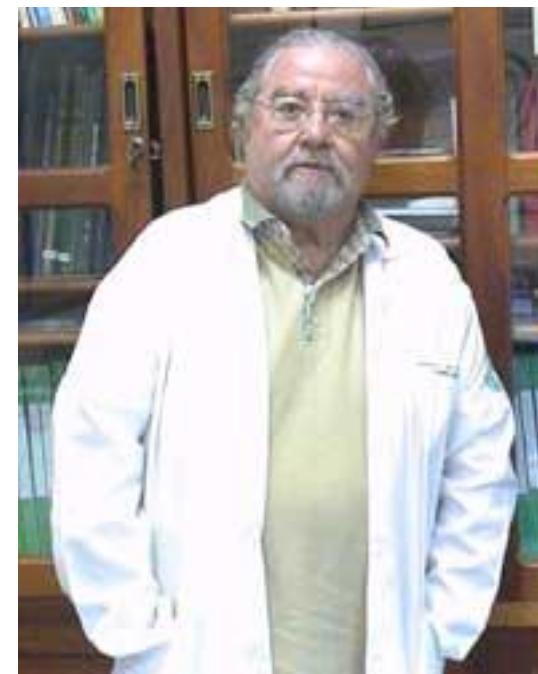


**Paracetamol**

**John R. Vane**  
**(1927-2004)**



**Sérgio Henrique Ferreira**  
**(1934-2016)**



## **Prêmio Nobel de Medicina e Fisiologia de (1982)**

[Nat New Biol. 1971 Jun 23;231\(25\):232-5.](#)

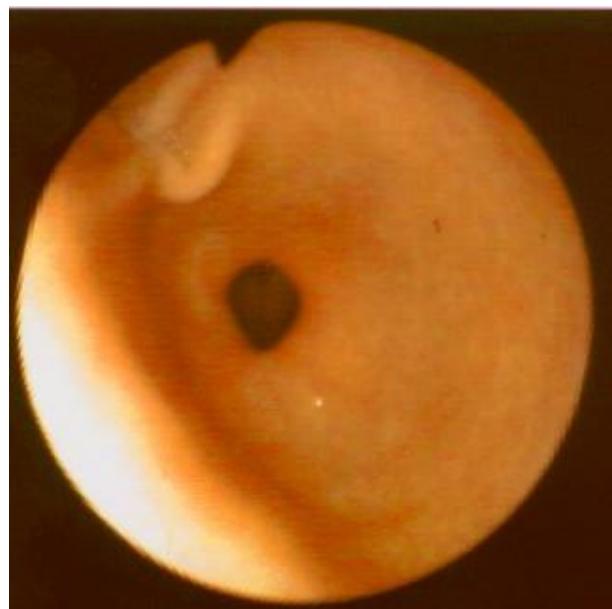
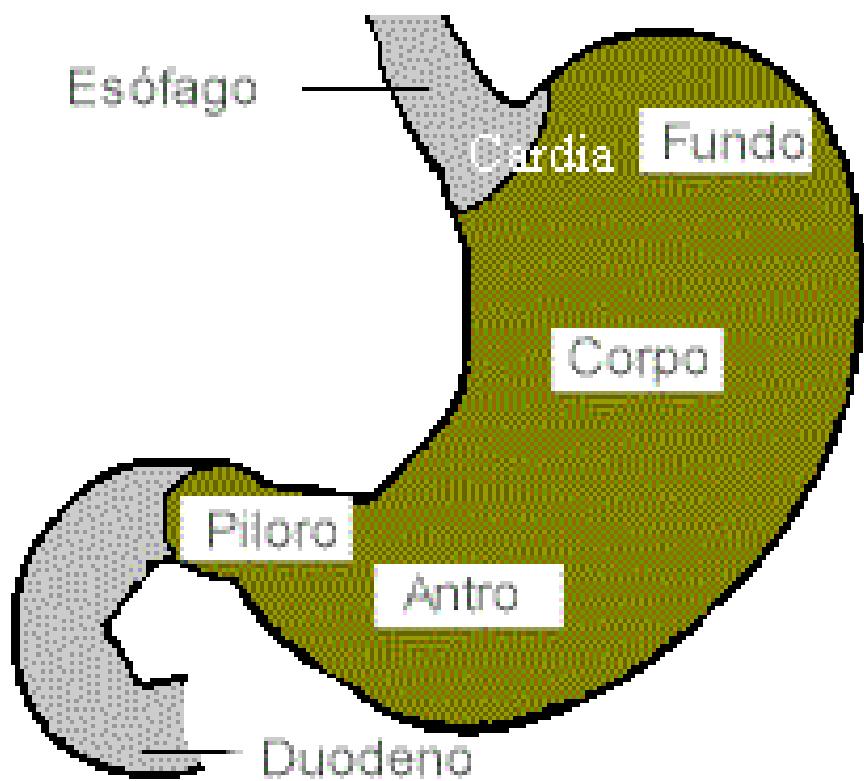
**Inhibition of prostaglandin synthesis as a mechanism of action for aspirin-like drugs.**

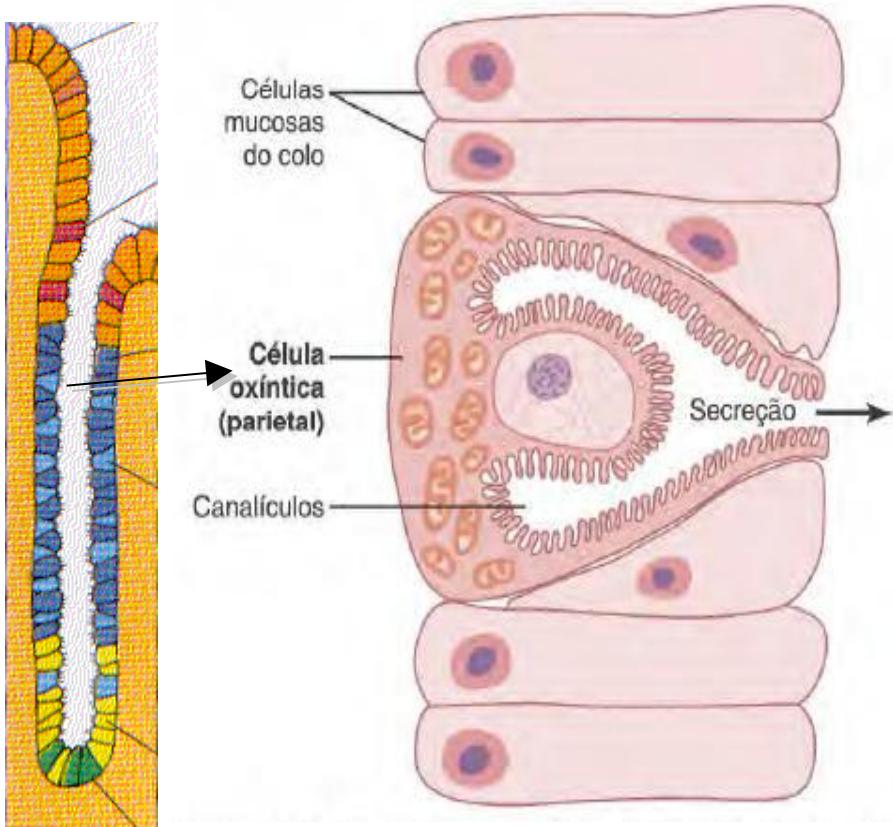
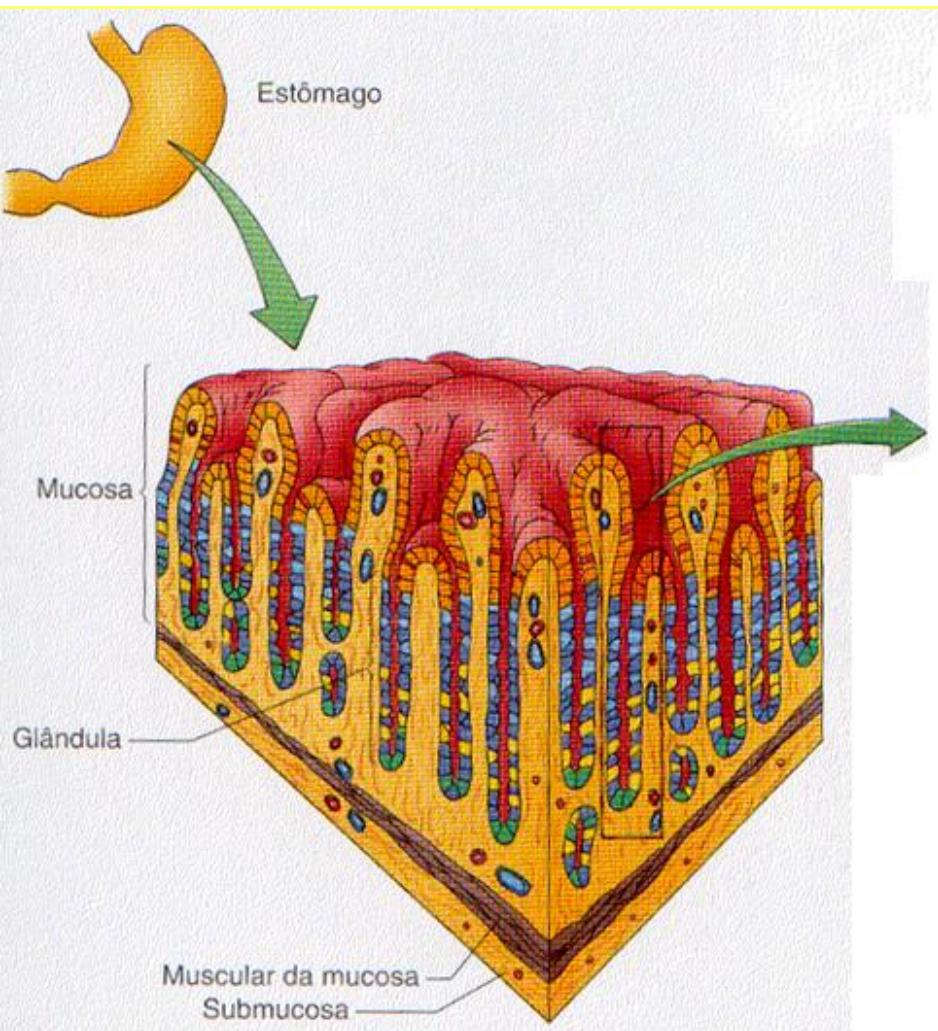
[Vane JR.](#)

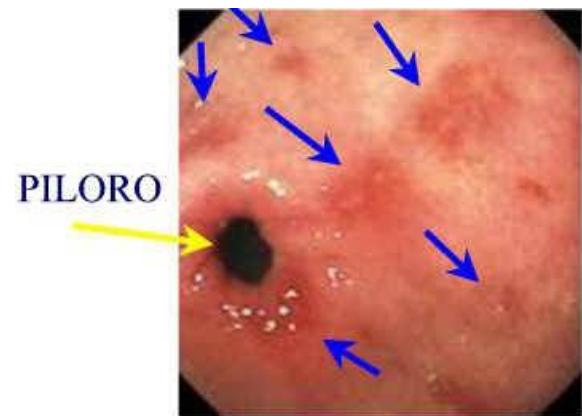
[Nat New Biol. 1971 Jun 23;231\(25\):237-9.](#)

**Indomethacin and aspirin abolish prostaglandin release from the spleen.**

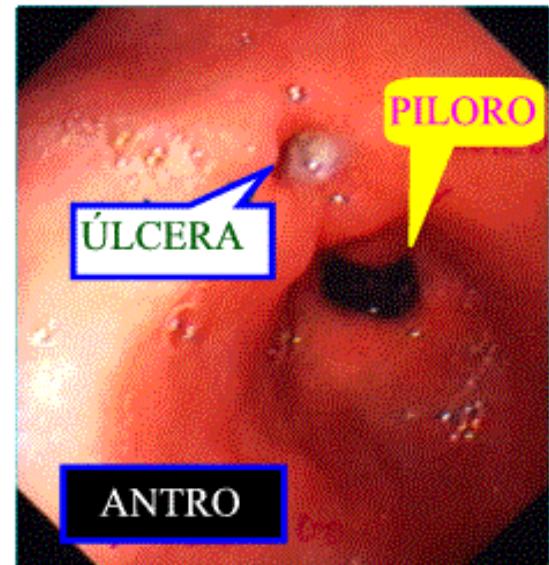
[Ferreira SH, Moncada S, Vane JR.](#)







Erosões do antro num indivíduo que tomava diariamente Ibuprofeno



# FISIOPATOLOGIA DOS DISTÚRBIOS GÁSTRICOS

## INDUZIDOS PELOS AINEs

**Uso de AINEs**



**Inibição da COX-1 presente em células da submucosa gástrica**

**Redução da produção de PGE<sub>2</sub> no estômago**

**Aumento da secreção de H<sup>+</sup> do suco gástrico**

**Redução da produção de muco com bicarbonato**

**Distúrbios Gástricos**

## SELETIVOS PARA COX-1

- ✓ **Ácido Acetilsalicílico**
- ✓ **Indometacina**
- ✓ **Cetorolaco**
- ✓ **Fenilbutazona**
- ✓ **Ácido Mefenâmico**
- ✓ **Cetoprofeno**
- ✓ **Ibuprofeno**
- ✓ **Naproxeno**
- ✓ **Flurbiprofeno**

**POUCO SELETIVOS PARA COX-2**  
(menos do que 5 vezes mais seletivos para COX-2)

- ✓ Diclofenaco
- ✓ Piroxicam

**SELETIVOS PARA COX-2**  
(entre 5 e 50 vezes mais seletivos para COX-2)

- ✓ Meloxicam
- ✓ Etodolaco
- ✓ Celecoxibe

**ALTAMENTE SELETIVOS PARA COX-2**  
(acima de 50 vezes mais seletivos para COX-2)

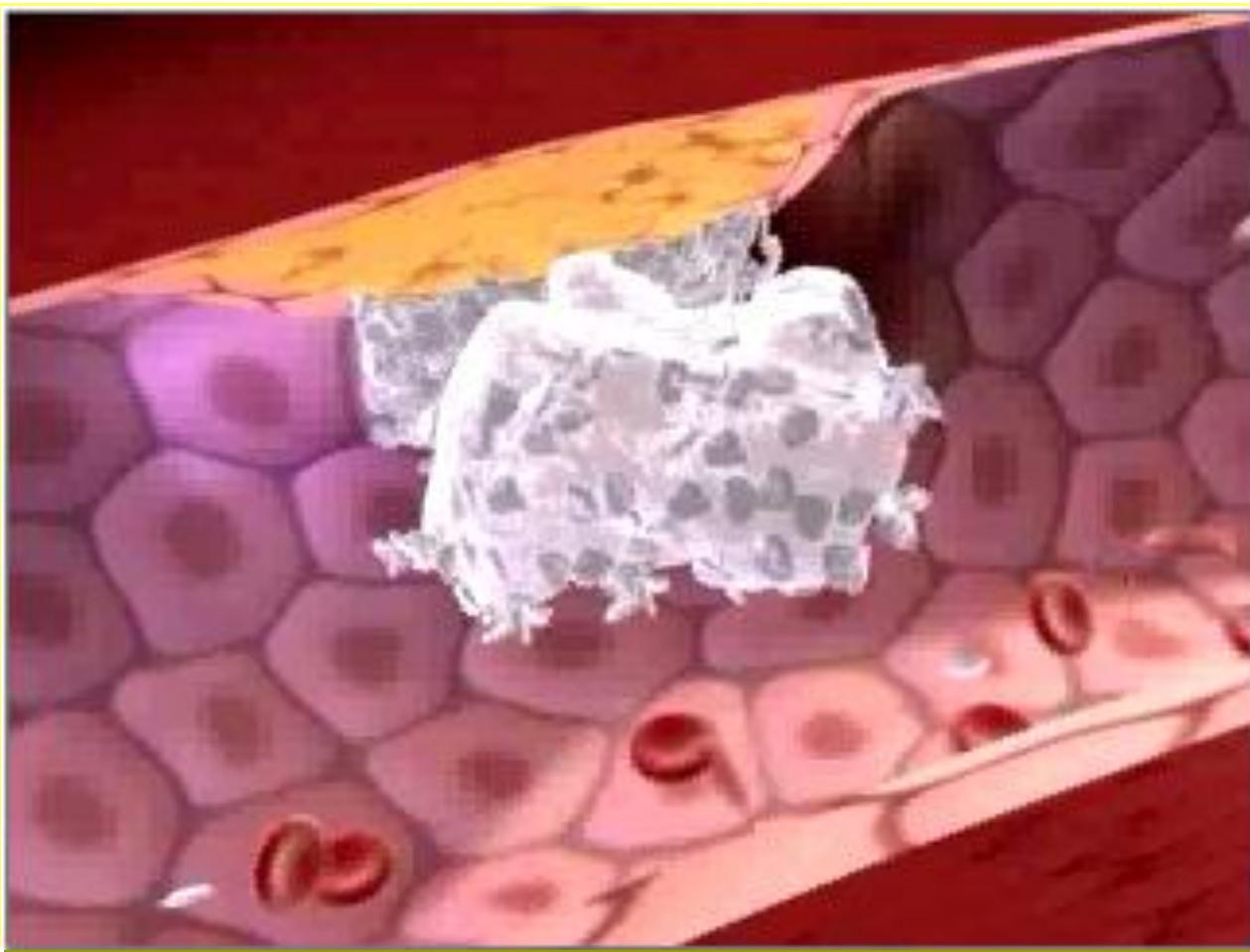
- ✓ Rofecoxibe

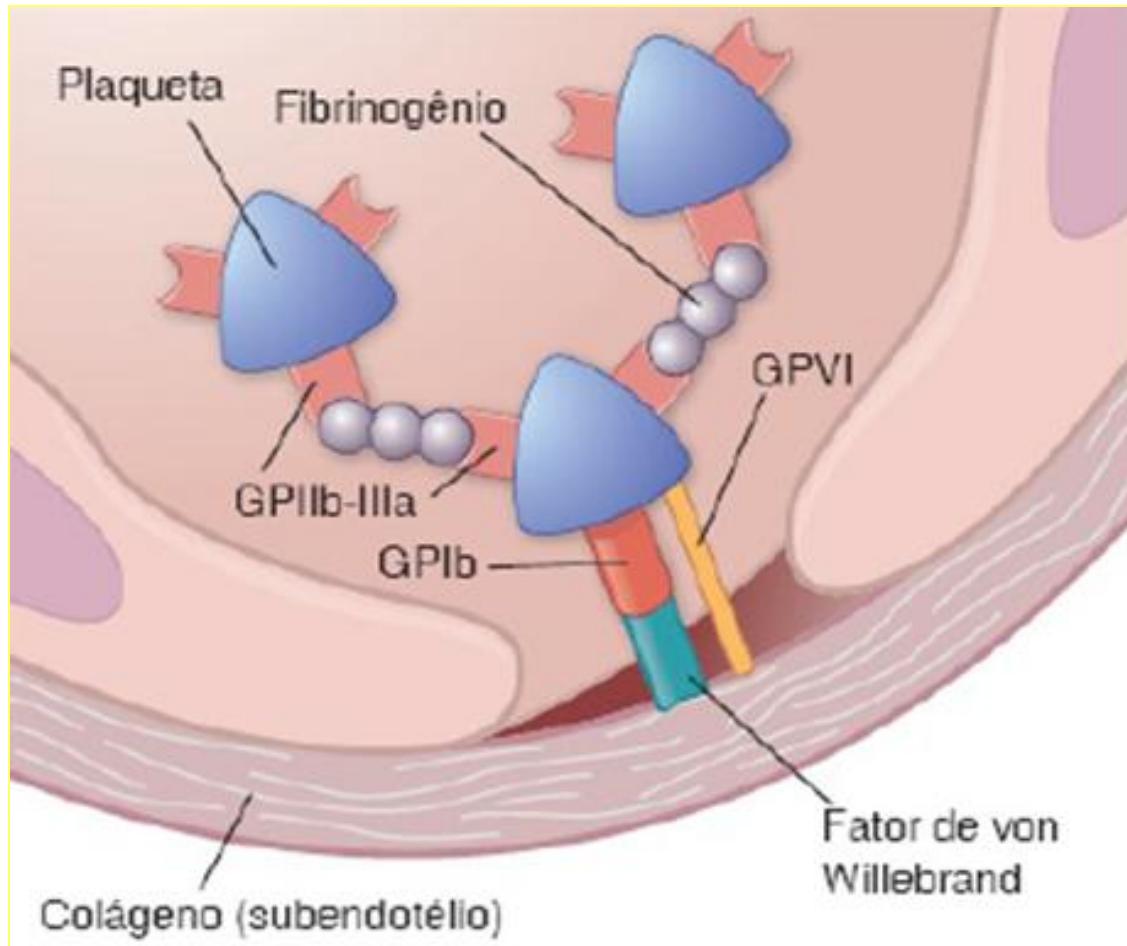
# Estudo APPROve

- Polipose Adenomatosa Familiar (FAP)
  - forma assintomática
  - pré-maligna



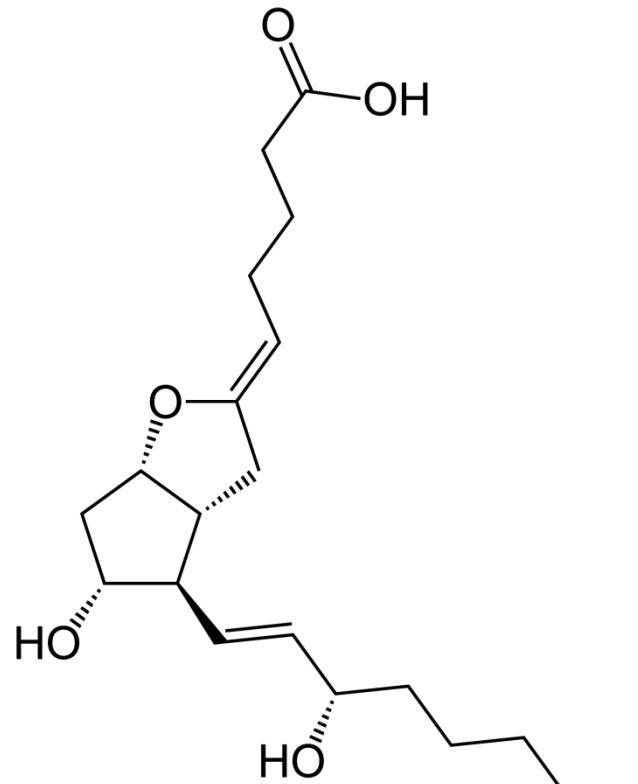
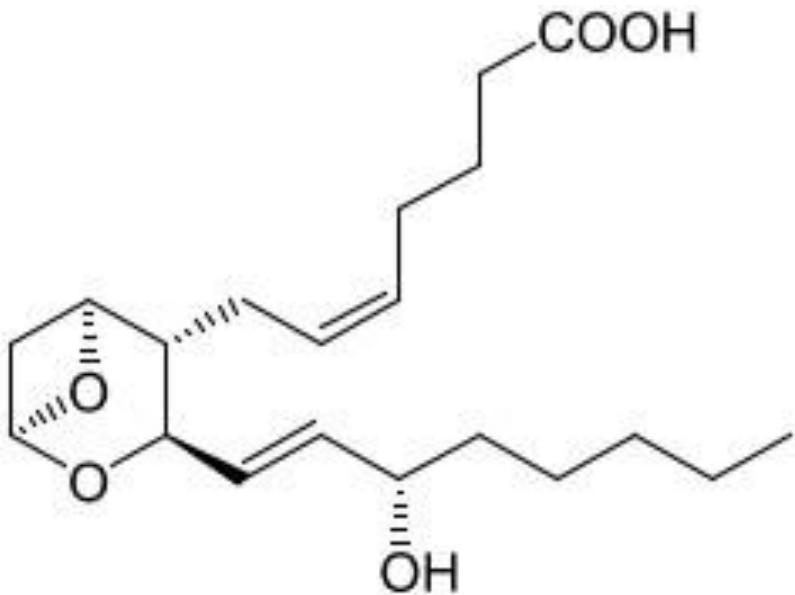
[www.tumoriereditari.info/tumore.htm](http://www.tumoriereditari.info/tumore.htm)





# TROMBOXANO A<sub>2</sub> (TX A<sub>2</sub>)

# X PROSTACICLINA (PGI<sub>2</sub>)



## **REFERÊNCIAS**

**BRUNTON, L. L.; CHABNER, B. A; KNOLLMANN, B. C. (Org.) As bases farmacológicas da terapêutica de Goodman & Gilman.** 12. ed. Porto Alegre: AMGH (Artmed/McGraw-Hill), 2012.

**FUCHS, F. D.; WANNMACHER, L.** **Farmacologia clínica:** fundamentos da terapêutica racional. 4. ed. Rio de Janeiro: Guanabara Koogan, 2014.

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**KATZUNG, B. G.; MASTERS, S. B.; TREVOR, A. J.** **Farmacologia básica e clínica.** 12. ed. Porto Alegre: AMGH (Artmed/McGraw-Hill), 2014.

**RANG, H. P.; DALE, M. M; RITTER, J. M.; FLOWER, R. J.; HENDERSON, G.** **Farmacologia.** 7. ed. Rio de Janeiro: Elsevier, 2012.