Autacoids
AND
INFLAMMATION
AUTACOIDS (self-care)

Histamine
Bradykinin
5-HT
Eicosanoids
Platelet Activating Factor (PAF)

NO: hormones, NO: somatostatin, gastrin (paracrine hormones)
Physical trauma
Chemical substances
Microorganisms
Agent inducing autoimmune response (asthma, arthritis)

Histamine
5-HT
Prostaglandin
IL-1
Bradykinin
Cyclooxygenase and lipoxygenase pathways (1)
Non-steroidal anti-inflammatory drugs
The cyclooxygenase (COX) enzymes

- There are two COX enzymes: COX-1 and COX-2.
- COX-1 is a constitutive, housekeeping enzyme involved in tissue homeostasis. Chromosome 9
- COX-2 is induced in inflammatory cells and produces the prostanoid mediators of inflammation. Chromosome 1
- Cox-3 has recently been described (dog)
Structural differences between COX-1 and COX-2

Non-steroidal anti-inflammatory drugs (NSAID) act on PG synthesis, not on nociceptors of PGs.
Prostaglandins and pain effects

VR1 = capsaicin sensitive channel
ASIC: acid-sensing ion channel
Cyclooxygenase and lipoxygenase pathways (2)
- FLAP = helper protein 5-LO activating protein
- 5-LO= 5-lipoxygenase
- 5-HETE= 5-hydroxyeicosatetraenoic acid