

## Eicosanoids

### I. Background

- A. arachidonic acid (AA)
  - 1. phospholipase A<sub>2</sub>
- B. paracrine

### II. Prostaglandins

- A. History
- B. Description
- C. Function
- D. cyclooxygenase
  - 1. prostaglandin H<sub>2</sub> (PGH<sub>2</sub>)
- E. Blocking cyclooxygenase - two isoforms of cox - 60-65% homologous at aa level
  - 1. cox 1
  - 2. cox 2
  - 3. aspirin
  - 4. cox 2 inhibitors

### III. Thromboxanes

- A. Description
- B. Function
- C. Synthesis
  - 1. thromboxane synthase

### IV. Prostacyclins

- A. Description
- B. Function
- C. Synthesis
  - 1. prostacyclin synthase

### V. Leukotrienes

- A. Description
- B. Function
- C. Synthesis
  - 1. leukotriene synthase
- D. Actions