Prostaglandins
  - Way to remember structure
  - These guys are cool because...

  - _membered ring_ w/
  - _membered_ __________
  - ____________

  - Made from:

  @ Made in USA.

Fatty Acid Synthesis: (Anyone want a RigiMac?) 🍔lots of Fatty Acid

* * *
* 3/4 Main steps to Elongation:
  * 1.
  * 2.
  * 3.
  * 4.
Terpenes
Squalene epoxidase

Squalene

Squalene oxide

Lanosterol

Protosterol cation

Cholesterol

19 steps
Prostaglandins

Start with arachidonic acid C=20

- all Cis

\[ \text{Cyclooxygenase} \]

- form 5-membered ring

\[ H^* \] stabilized by res.

\[ \text{Peroxy radical} \]

\[ \rightarrow \]

\[ \text{PG}_A \text{ B C D} \] - double bond carbonyl group

\[ \text{F} \]

\[ \beta \text{ hydroxy ketone} \]

\[ \text{F} \]

\[ 1, 8 \text{ diol} \]

linoleic acid

- for physiological

- long inflammation

\[ \rightarrow \text{OH (PGF}\_2\text{)} \]

\[ \text{Hydroperoxidase} \]

\[ \text{Aspirin block} \]

- acetylsalicylic acid

- block cyclooxygenase

- antiinflammatories

- prost.

- stomach acid regulation
biosynthesis of lanosterol and cholesterol

squalene

$s\xrightarrow{\text{squalene epoxidase}}\text{H}_2\text{O}_2$

squalene oxide

lanosterol

$\xrightarrow{19\text{ steps}}$ cholesterol

$\rightarrow$ Progesterone $\rightarrow$ aldosterone

$\Delta$ Estrogens

$\rightarrow$ Cortisol