Figure 1
SELF-LIMITING INFLAMMATION

CHRONIC INFLAMMATION
Loss of resolution

Figure 2
Figure 3

Linoleic acid (18:2n-6)
- Δ6-desaturase
  - Gamma-linolenic acid (18:3n-6)
    - Elongase 5
      - Dihomo-gamma-linolenic acid (20:3n-6)
        - Δ5-desaturase
          - Arachidonic acid (20:4n-6)
            - Elongase 2 or 5
              - Adrenic acid (22:4n-6)
                - Elongase 2 or 5
                  - Δ6-desaturase
                    - β-oxidation
                      - Osbond acid (22:5n-6)
Fatty acid exposure

- Receptors
- Membrane (phospholipid) composition

Raft assembly ← Fluidity → Second messengers (PLs, lyso-PLs, ceramides, DAGs, endocannabinoids, eicosanoids ...)

Signals

- Inflammatory cell responses

(Patho)physiology

Health/Disease risk/Disease severity/Clinical outcome
ARA

5-LOX

4-series LTs

Inflammatory actions

COX

PGE₂

Inflammation “stop” signal

15-LOX

Lipoxin A₄

Figure 6
Linoleic acid → Gamma-Linolenic acid → Dihomo-Gamma-Linolenic acid → Arachidonic acid → Longer chain/more unsaturated omega-6 fatty acids

9-HODE ↔ Linoleic acid ↔ 13-HODE

$PGE_1$ ↔ Dihomo-Gamma-Linolenic acid ↔ LT-like compounds

2-series PGs ↔ Arachidonic acid ↔ 4-series LTs