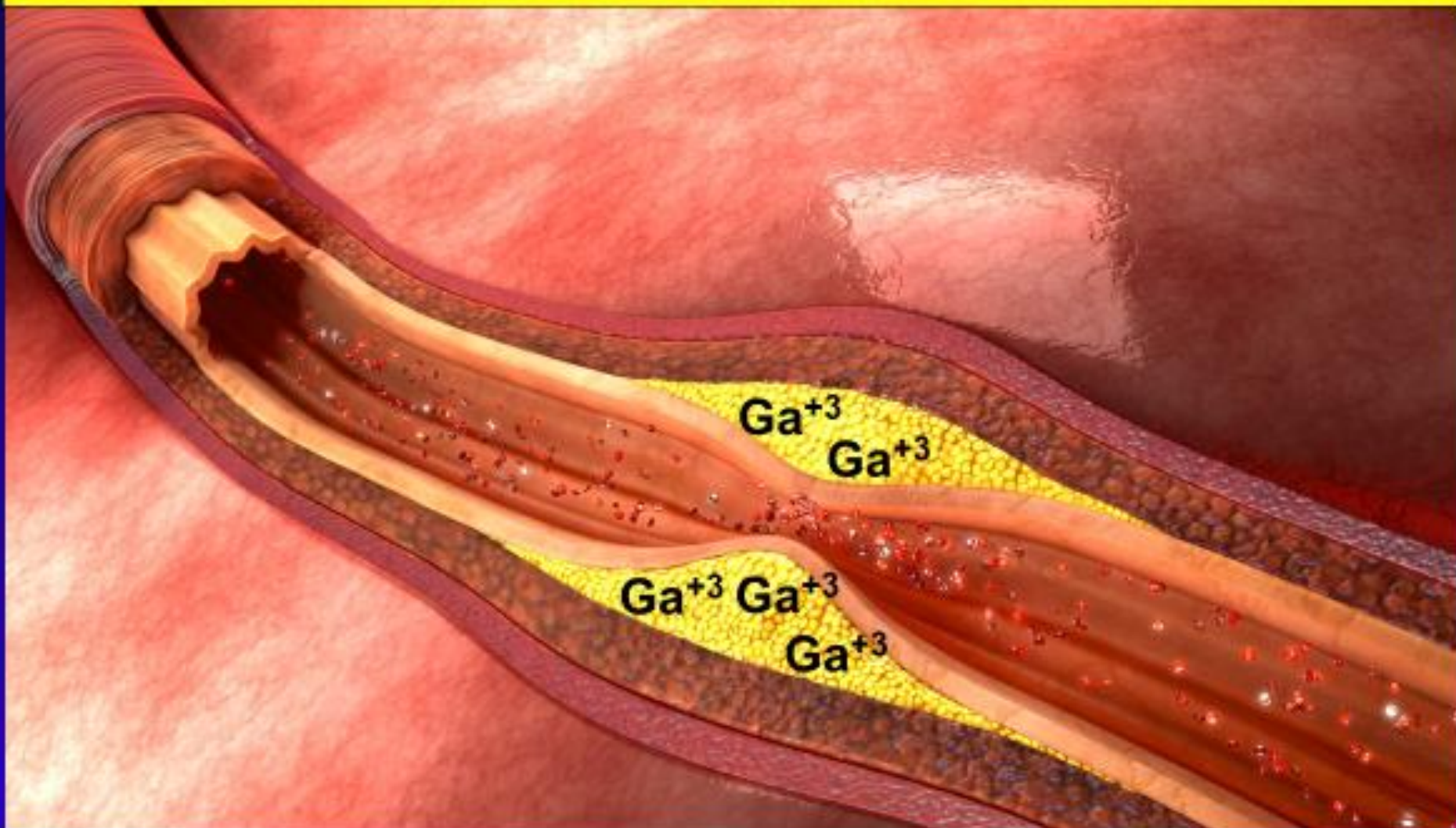


Gallium Clathrate of Micro-Hydroxyapatite Crystals in Plaque



Clonal Hematopoiesis

Atherosclerosis has been thought to be an inflammatory process. Recent work shows this to be very likely.

Clonal Hematopoiesis of Indeterminate Potential (CHIP)

“The presence of an expanded somatic blood-cell clone in persons without other hematologic abnormalities”

Jaiswal S. et al., New England Journal of Medicine 2017; 377:111-121

Mutated stem cells in bone marrow produce mutated lymphocytes which then differentiate into **mutated macrophage cells** which express predominately the **proinflammatory chemokines IL-1b and IL-6**

“The presence of CHIP in peripheral-blood cells was associated with nearly a **doubling in the risk of coronary heart disease in humans and with accelerated atherosclerosis in mice.”**

Atherosclerotic Plaque Formation

