## **Inflammatory cell** Pericyte VSMC **Multipotential Cell** Sensitizers Cbfa -1 Core binding factor alpha - 1

Type I collagen: Osteopontin,

VSMC (a mesenchymal cell)

## Modified atherosclerosis in ESRD (highest risk for mortality) Calciphylaxis an emerging epidemic? (poor prognosis)

**Elevated Pi, PTH** 

•Ca++, Vitamin D

Abnormal bone mineral metabolism (renal osteodystrophy)

UREMIA

II Hyperparathyroidism

ARTERIAL OSSIFICATION

Aging, AGE, and Diabetes
[GLUCOSE] T2DM
Ox Lipoprotein elevation
HDL-C low
•ROS \*
•Inflammatory Cytokines
•IL-1, IL-6, TNFalpha
•Growth Factors: TGF beta

Cbfa-1 is currently thought To be the "switch" that turns This mesons by mod Coll

bone sialoprotein, alk-phos, and osteocalcin

This mesenchymal Cell Into an osteoblast - like Cell