

INJURIOUS STIMULI

INTIMAL REDOX STRESS = ROS * URIC ACID hs CRP

Bacterial Insults (Nanobacteria)?
Viral Insults CMV - HSV-1

Infection Hemodynamic Stress

Modified LDL Homocysteine AII Glucose LPA

RESPONSE

A. Sensory / Responder Cell

* ADMA

ENDOTHELIAL CELL

1. Basement Membrane

ADAPTIVE CHANGES

ox.LDL-C

[REMODELING]

ROS

Modified LDL-C VLDL-C

2. Elastin

E.C.M. [I-5]

Low HDL-C

INTIMAL REDOX STRESS

4. S. Glycoproteins
5. Proteoglycans

3. Collagen

VSMC
PERICYTE

Calcific matrix vesicles
Osteoid Matrix
Vascularization (Vv)
VSMC - Pericyte
Bone Mineralization

Vasa Vasorum
Vv

I.E.L.

MEDIA

Adventitia

E.E.L.

VSMC
PERICYTE

Adventitia

E.E.L.

Vv

ph 2005