

Master in Biomedicine

Subject Name: Cardiovascular Pathologies and Atherosclerosis

Credits ECTS: 3

Coordinator: Dr. Juan Carlos Laguna Egea

Program

1. Basic Atherosclerosis: Concept. Atheromatous plaque temporal evolution. Cellular types and signaling pathways involved.
2. Clinical Atherosclerosis: Cardiovascular diseases derived from atherosclerosis and their public health transcendence. Risk factor concept. Non modifiable risk factors. Modifiable risk factors: Smoking, obesity, diabetes and insulin resistance. Multifactorial control of cardiovascular risk.
3. Obesity and Type 2 Diabetes Mellitus as risk factors for atherosclerosis and cardiovascular disease.
4. Dyslipemia. Classification. Etiopathogenic mechanisms.
5. Dyslipemia. Diagnostic. Therapy.
6. Hypertension. Concept and types. Etiopathogenic mechanisms. Derived pathologies.
7. Hypertension. Therapy and Public Health transcendence.
8. Endothelial dysfunction. Etiopathogenic mechanisms. Hyperhomocysteinemia. Causes and consequences.
9. Non conventional risk factors. Epidemiology and diagnostic uses.
10. Diet and plasma lipids: Dietary control of dyslipemia.
11. Drugs and dyslipidemia. Molecular targets for hypolipidemic drugs

Bibliography

- Página web de la SEA (Sociedad Española de Arteriosclerosis) www.searteriosclerosis.org
- Lusis AJ. Atherosclerosis. Nature 2000; 407:233-240
- Libby P, Aikawa M. Stabilization of atherosclerosis plaques: New mechanisms and clinical targets. Nature Medicine 2002; 8:1257-1262.
- Chait A y col. Lipoprotein-associated inflammatory proteins: markers or mediators of cardiovascular disease? J Lipid Res 2005; 46:389-403.
- Daugherty A y col. Cytokine regulation of macrophage functions in atherogenesis. J Lipid Res 2005; 46:1812-1822.

- Steinberg D. An interpretative history of the cholesterol controversy, part III: mechanistically defining the role of hyperlipidemia. *J Lipid Res* 2005; 46:2037-2051.
- Stone NJ y col. Recent National Cholesterol Education Program Adult treatment Panel III update: Adjustments and options. *Am J Cardiol* 2005; 96(suppl):53E-59E.