



COURSE DESCRIPTION

ACADEMIC CENTER SCHOOL OF MEDICAL SCIENCES		DEPARTMENT DEPARTMENT OF INTERNAL MEDICINE		
COURSE NAME HYPERTENSION AND METABOLIC DISEASES: BENCH TO BED		() CORE COURSE (X) OPTIONAL COURSE	HOURS 30	CREDITS 2
PROGRAM / PROJECT NAME PHYSIOPATHOLOGY AND SURGICAL SCIENCES <u>Key Focus Area:</u> Cardiovascular System		DISTRIBUTION OF HOURS -		
		TYPE OF CLASS	HOURS	N. OF CREDITS
		THEORETICAL	15	1
		PRACTICAL	15	1
		TOTAL	30	2
PREREQUISITES			(x) Master's program course (x) Doctorate's program course	

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Epidemiology: prevalence, cardiovascular risk factors, pseudohypertension, white coat hypertension. Pathophysiology: sympathetic nervous system, renin-angiotensin-aldosterone system, endothelin, adipose tissue, oxidative stress, vascular changes, insulin resistance, salt sensitivity, secondary hypertension. Clinic: blood pressure measurement, initial assessment, isolated systolic hypertension, refractory hypertension, type 2 diabetes mellitus, dyslipidemia, obesity, metabolic syndrome. Complications: target organ lesions, left ventricular hypertrophy, coronary heart disease, heart failure, vascular remodeling, endothelial dysfunction, microcirculation, atherosclerosis, cerebrovascular disease, hypertensive nephrosclerosis, hypertensive retinopathy. Therapy: lifestyle changes, diet and exercise, diuretics, beta-blockers, central sympatholytics, vasodilators, calcium antagonists, converting enzyme inhibitors, angiotensin receptor blockers, new antihypertensive drugs, oral hypoglycemic agents, insulin, anti-oxidants, fibrates, statins.

BASIC BIBLIOGRAPHY

1. Aguila M.B., Pinheiro A.R., Mandarin-de-Lacerda C.A. Spontaneously hypertensive rats left ventricular cardiomyocyte loss attenuation through different edible oils long-term intake. Int J Cardiol 100:461-466, 2005.
2. Izzo Jr JL, Black HR. Hypertension Primer – the essentials of high blood pressure. 3rd ed, Dallas: American Heart Association, 2003.
3. Amiri F, Viridis A, Neves MF, Iglarz M, Seidah NG, Touyz RM, Reudelhuber TL, Schiffrin EL. Endothelium-restricted overexpression of human endothelin-1 causes vascular remodeling and endothelial dysfunction. Circulation 2004;110:2233-2240.
4. Neves MF, Endemann D, Amiri F, Viridis A, Pu Q, Rozen R, Schiffrin EL. Small artery mechanics in hyperhomocysteinemic mice: effects of angiotensin II. J Hypertens 2004; 22:959-966.
5. Viridis A, Neves MF, Amiri F, Touyz RM, Schiffrin EL. Role of NAD(P)H oxidase on vascular alterations in angiotensin II-infused mice. J Hypertens 2004; 22:535-542.
6. Endemann DH, Pu Q, De Ciuceis C, Savoia C, Viridis A, Neves MF, Touyz RM, Schiffrin EL. Persistent remodeling of resistance arteries in type 2 diabetic patients on antihypertensive treatment. Hypertension. 2004;43:399-404.
7. Pu Q, Neves MF, Viridis A, Touyz RM, Schiffrin EL. Endothelin antagonism on aldosterone-induced oxidative stress and vascular remodeling. Hypertension. 2003; 42:49-55.
8. Neves MF, Viridis A, Schiffrin EL. Resistance artery mechanics and composition in angiotensin II-infused rats: effects of aldosterone antagonism. J Hypertens. 2003; 21:189-198.
9. Viridis A, Neves MF, Amiri F, Viel E, Touyz RM, Schiffrin EL. Spironolactone improves angiotensin-induced vascular changes and oxidative stress. Hypertension. 2002; 40:504-510.

PROGRAM / PROJECT COORDINATOR

DATE	SIGNATURE
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