



Kothandaraman Purushothaman

- ASSISTANT PROFESSOR Medicine, Cardiology
- ASSISTANT PROFESSOR Pathology

Biography

Dr. K-Raman Purushothaman has obtained his M.D degree from Madras University and completed his post-doctoral training in pathology at Madras Medical College and Jawaharlal Nehru Institute of Post Graduate Medical Education & Research Center, in India. He joined with Dr. Moreno's Cardiovascular Research Laboratory as Director of Histology at the University of Kentucky and involved in the histopathological evaluation of human and experimental atherosclerosis.

His current research focuses on histopathologic quantification of atherosclerosis in human vasculatures from aortic, coronary, carotid and peripheral vessels-superficial femoral artery /limb vessels, degenerative mitral valve disease, and myocardial infarction. He is involved in detailed advanced immunohistochemistry techniques using the double- labeling, bi-color chromogens for studying the neovascularization of the plaque. He is also involved in the study of intimal, medial and adventitial, plaque compositional changes in the plaque progression and regression and the risk factors (diabetes mellitus, Haptoglobin genotypes, cigarette smoking and hypercholesterolemia) involving the association in inflammation and plaque rupture.

His animal experimental studies involve pre-clinical evaluation of drug eluting stents by analyzing the effects of drug eluting stents in stabilizing the vulnerable rabbit aortic plaques and study the plaque composition. His efforts will be to study the neovascularization and the implications in plaque rupture in diabetics versus non-diabetics based on the preliminary analysis in human aortic atherosclerotic plaques and to develop an animal model to study the mechanism involved in neovascularization in atherosclerotic plaques.

Selected Publications

Krishnan P, **Purushothaman KR**, Purushothaman M, Baber U, Tarricone A, Vasquez M, Wiley J, Kini A, Sharma SK, O'Connor WN, Moreno PR. Relation of Internal Elastic Lamellar Layer Disruption to Neointimal Cellular Proliferation and Type III Collagen Deposition in Human Peripheral Artery Restenosis. *Am J Cardiol*. 2016 Jan 15. Epub January 2016.

Purushothaman KR, Krishnan P, Meerarani , Wiley J, Alviar CL, Ruiz FJ, Zubatov Y, Kini AS, Sharma SK, Fuster V, Moreno PR. Expression of angiotensin-converting enzyme 2 and its end product angiotensin 1-7 is increased in diabetic atheroma: implications for inflammation and neovascularization. *Cardiovasc Pathol*. 2013 Jan-Feb;22(1):42-8.

Purushothaman KR, Purushothaman M, Levy AP, Lento PA, Evrard S, Kovacic JC, Briley-Saebo KC, Tsimikas S, Witztum JL, Krishnan P, Kini A, Fayad ZA, Fuster V, Sharma SK, Moreno PR. Increased expression of oxidation-specific epitopes and apoptosis are associated with haptoglobin genotype: possible implications for the plaque progression in human atherosclerosis. *J Am Coll Cardiol*. 2012 Jul 10;60(2):112-9.

Purushothaman KR, Meerarani P, Muntner P, O'Connor WN, Fuster V, Sharma SK, Moreno PR. Inflammation and Neovascularization in Diabetic Plaques are associated with Increased Reparative Collagen Content: Implication for Plaque Progression in Diabetic Atherosclerosis. *Vascular Medicine J* - 2011; 16(2):103-108.

Moreno PR, Lodder RA, **Purushothaman KR**, Charash WE, O'Connor WN, Muller JE. Detection of lipid pool, thin fibrous cap and inflammatory cell infiltration in human aortic atherosclerotic plaques by near infrared spectroscopy. *Circulation* 2002 February 26; 105(8): 923-927.

Moreno PR, **Purushothaman KR**, Fuster V, O'Connor WN. Intimo-medial damage and adventitial inflammation is increased beneath disrupted atherosclerosis in the aorta. Implications for plaque vulnerability *Circulation* 2002; 105: 2502-2509.