BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Arjun Deb	Assistant Professor of Medicine & Cell and Molecular Physiology
eRA COMMONS USER NAME deb00001	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Calcutta Medical College, University of Calcutta, India	M.B.B.S	1991-1997	Medical School
Mayo Clinic College of Medicine, Rochester, MN	Diplomate, ABIM	1999-2002	Internal medicine (Residency)
Mayo Clinic College of Medicine, Rochester, MN	Diplomate, ABIM/CV Diseases	2002-2005	Cardiovascular Diseases (Fellowship, Clinical & Basic Research)
Duke University Medical Center, Durham, NC	Post doc	2005-2007	Cardiovascular & Stem Cell biology (Post doctoral fellowship)

B. POSITIONS AND AWARDS

Positions and Employment

1998-1999 House staff, Internal Medicine, Post Graduate Institute of Medical Education & Research, Chandigarh, India
1999-2002 Resident, Internal Medicine, Mayo Clinic College of Medicine, Rochester, MN
2002-2005 Clinical & Research Fellow, Cardiovascular Diseases (Laboratory of Dr Noel Caplice), Mayo Clinic College of Medicine, Rochester, MN
2005-2007 Research Fellow, Cardiology & Stem cell Biology Research Program (Laboratory of Dr Victor Dzau), Duke University Medical Center, Durham, NC
2008-present Assistant professor of Medicine, University of North Carolina, Chapel Hill
2008-present Member, UNC McAllister Heart Institute, University of North Carolina, Chapel Hill
2009-present Assistant professor of Cell & Molecular Physiology, University of North Carolina, Chapel Hill
2009-present Member, Lineberger Comprehensive Cancer Center, University of North Carolina, Chapel Hill

Honors and Awards

1996 MCSU Silver Medal for Best Overall Academic performance in Medical School
2000 Winner of National Medical Jeopardy Contest at American College of Physicians Meeting, Philadelphia
2002 Mayo Foundation Outstanding Achievement Award for excellence in internal medicine residency
2002 Diplomate of the American Board of Internal Medicine
2003 Winner, Young Investigator Award, Scientific Sessions, American College of Cardiology, Chicago, IL
2005 Bristol Myers Squibb/American College of Cardiology Travel Award
2005 Diplomate of the American Board of Cardiovascular Diseases
2006 American Heart Association Post Doctoral Scholar Award (Atlantic Affiliate)
2006 Glaxo Smith Kline Beecham Cardiovascular Research Foundation Young Investigator Award
2006 NIH Pathway to Independence Award
2008 Ellison Medical Foundation New Scholar in Aging Award
2009 Medical Foundation of North Carolina Excellence Fund Award
2010 Cardiovascular Division Excellence Seed Grant Award, UNC Chapel Hill
2010 American College of Cardiology Foundation/Keating Career Development Award in Hypertension & Peripheral Vascular Disease
2010 Winner, Louis N and Arnold M Katz Basic Science Research Prize at the American Heart Association Scientific Meeting, Chicago, IL

C. PEER REVIEWED PUBLICATIONS

1. **Deb A,** Patterson C. Closer to fine: Fewer Steps to endothelial stemness. *Arterioscler Thromb Vasc Biol*. 2010. (10):1880-1.
2. Huang J, Zhang Z, Guo J, Ni A, **Deb A**, Zhang L, Mirotsou M, Pratt RE, Dzau VJ. Genetic Modification of Mesenchymal Stem Cells Overexpressing CCR1 Increases Cell Viability, Migration, Engraftment, and Capillary Density in the Injured Myocardium. *Circ Res* 2010 Apr 8.[Epub ahead of print]
3. **Deb A**, Patterson C. Hard Luck Stories: The Reality of Endothelial Progenitor Cells Continues to Fall Short of the Promise. *Circulation* 2010;121:850-852 (Editorial)
4. Zhang Z, **Deb A**, Zhang Z, Pachori A, We H, Guo J, Pratt R, Dzau VJ. Secreted frizzled related protein 2 protects cells from apoptosis by blocking the effect of canonical Wnt3a.*J Mol Cell Cardiol* 2009 46(3):370-7
5. **Deb A*,** Guo J, Ni A, Davis B, Huang J, Zhang J, Mu H, Dzau V J. SFRP2 regulates cardiomyogenic differentiation by inhibiting a positive transcriptional auto-feedback loop of Wnt3a. *Stem Cells* 2008;26(1) 35-44 (corresponding author)
6. Mirotsou M, Zhang Z, **Deb A**, Zhang L, Gneechi M, Noiseux N, Mu H, Pachori A, Dzau V. Sfrp2 mediates the paracrine survival signal of Akt genetically modified mesenchymal stem cell for myocardial protection and repair. *Proc Natl Acad Sci* U.S.A 2007 104(5):1643-8
7. Noiseux N, MD, Gnecchi M, Lopez-Ilasaca M, Zhang L, Solomon S, **Deb A**, Dzau V, Pratt R. Mesenchymal stem cells over-expressing Akt dramatically repairs infarcted myocardium and improves cardiac function despite infrequent cellular fusion or differentiation. *Molecular Therapy* 2006;(6):840-50
8. Miller D, **Deb A***, Edwards W, Zehr K, Oliveira A. Primary synovial sarcoma of the mitral valve. *Cardiovasc Pathol* 2005; 14(6): 331-333 **(*co first author)**
9. Friday B, **Deb A**. Systemic complications of Infective Endocarditis. *Circulation* 2005; 112(20) e324
10. Wolk R, **Deb A**, Caplice NM, Virend K. Somers. Leptin receptor and functional effects of leptin in 'late outgrowth' human endothelial progenitor cells. *Atherosclerosis* 2005; 183(1):131-139
11. **Deb A**, Natt N. 68-year-old man with generalized weakness. *Mayo Clin Proc*. 2002; 77(7):705-8
12. **Deb A,** Wang S, Skelding K, Miller D, Simper D, Caplice N. Bone Marrow derived smooth muscle like cells are present in adult human heart valves. *J Heart Valve Dis* 2005;14:674-678
13. Liu C, Wang S, **Deb A** et al. Commercial C-reactive protein (CRP) preparation but not dialyzed CRP exhibits pro-apoptotic, anti-migratory, anti-proliferative and anti-angiogenic effects on human endothelial cells and endothelial progenitor cells in vitro. Implications of presence of sodium azide in commercial preparation. *Circ Res* 2005:97(2) 135-143
14. Caplice N, **Deb A**. Myocardial Cell Replacement. The Science, the Clinic and the Future. *Nat Clin Pract Cardiovasc Med* 2004.1(2):90-95
15. **Deb A,** Skelding K, Wang S, Reeder M, Simper D, Caplice N. Integrin characteristics and in vivo homing of human smooth muscle progenitor cells. *Circulation* 2004;110:2673-2677
16. **Deb A**, Caplice N. Lipoprotein a: New insights into mechanisms of atherogenesis and thrombosis. *Clin Cardiol.* 2004;27:258-264
17. Simper D, Wang S, **Deb A** et al. Endothelial progenitor cells are decreased in blood and endothelial cells of non cardiac origin are enriched in transplant atherosclerosis of cardiac subjects with vasculopathy. *Circulation* 2003. 107: 143-149
18. **Deb A**, Tefferi A. Systemic Mastocytosis. [Images in Clinical Medicine] *N Engl J Med*. 2003. 349(7); e7
19. **Deb A**, Wang S, Skelding KA, Simper D, Caplice NM. Bone Marrow-Derived Cardiomyocytes Are Present in Adult Human Heart. A study in gender mismatched bone marrow transplantation patients. *Circulation*. 2003;107(9):1247-49

20. Young A.L, Baysal B.E, **Deb A**, Young W.F. Jr. Familial malignant catecholamine-secreting paraganglioma with prolonged survival associated with mutation in the succinate dehydrogenase B gene. *J Clin Endocrinol Metab.* 2002;87(9):4101-5

Book Chapters, Letters, Others

1. **Deb A**, Wang S, Skelding KA, Simper D, Caplice NM. Quantifying chimeric cardiomyocytes. Circulation. 2003 108(8): e60 (Letter)
2. **Deb A**, Caplice N. Concerns Regarding Stem Cell Therapy From The Clinical Perspective. A guide to cardiac Cell Therapy (Taylor & Francis Ltd, London 2005)
3. Oliveira G, **Deb A**, Murphy J. Acute coronary syndromes. Mayo Medical Manual (lippincott & Williams) (In press)
4. **Deb A**, Mirotsou M, Dzau V. Tissue Regeneration of the Cardiovascular System and Stem Cells. Hurst's The Heart (13th Ed)

Abstracts

1. **A Deb**, RS Wright, B Williams, GW Barsness, SL Kopecky. Do observed gender differences in acute myocardial infarction outcome exist among diabetic patients? *J Am Coll Cardiol.* 2002 (9) Suppl B: 2703
2. **Deb A,** Wang S, Skelding K, Simper D, Caplice N. Bone marrow derived cardiomyocytes are present in adult human heart*. J Am Coll Cardiol 2003*. 41(6 Suppl B):544
3. **Deb A,** Wang S, Skelding K, Miller D, Simper D, Caplice N. Bone Marrow derived smooth muscle like cells are present in adult human heart valves. *Circulation* 2003.108 (17) (Suppl): 962
4. **Deb A,** Skelding K, Reeder M, Wang S, Simper D, Caplice N. Integrin characteristics and in vivo homing of human smooth muscle progenitor cells. *Circulation* 2003.108(17) (Suppl): 1452

D. RESEARCH SUPPORT

Ongoing Research Support

1) NIH R01 HL 102190: 06/15/10-05/31/15
Role: Principal Investigator
Role of Wnts in cardiac repair This grant investigates the role of Wnts in regulating repair processes in the heart following acute ischemic injury.

2) Ellison Medical Foundation New Scholars in Aging: 08/01/08-07/31/2012
Role: Principal Investigator
Role of Wnts in cardiac aging This grant investigates the role of Wnts in regulating cardiac stem cell biology and aging of the adult heart.

3) NIH R00 Pathway to independence award (R00HL088317): 02/01/2008-01/30/2012
Role: Principal Investigator
Role of Sfrp2 in cardiac regeneration This grant investigates how Sfrp2 regulates resident cardiac stem cell differentiation and regeneration following myocardial injury

4) American College of Cardiology/Keating Award for hypertension and peripheral vascular disease: 07/01/2010-06/30/211
Role: Principal Investigator
Role of Wnts in enhancing human EPC function This grant investigates how specific Wnts can enhance human EPC function and increase blood flow in peripheral vascular disease

Completed Research Support

1) Medical Foundation of North Carolina Excellence Seed Grant Fund Award: 07/01/09-06/30/10
Role: Principal Investigator
Role of Wnt1 in enhancing endothelial progenitor cells This grant explores the mechanisms and effects of Wnt1 in promoting function of human peripheral blood derived endothelial progenitor cells.

2) Glaxo Smith Kline Beecham Cardiovascular Research & Education Foundation International Young Investigator Award: 07/01/06-06/30/08
Role: Principal Investigator
Role of paracrine effects of mesenchymal stem cells in mediating cardiomyogenesis This grant investigates the paracrine effects of genetically modified mesenchymal stem cells in inducing cardiomyogenic differentiation of pluripotent embryonic stem cells

3) NIH K99 Pathway to independence award (K99HL088317): 12/01/2006-11/30/2007
Role: Principal Investigator
Role of Sfrp2 in cardiac regeneration This grant investigates Wnt mediated molecular mechanisms regulating cardiomyogenic differentiation of ES cells.