

CURRICULUM VITAE

Ramani Ramchandran PhD

Professor
Department of Pediatrics
Division of Neonatology

OFFICE ADDRESS:

Children's Research Institute
9000 W Wisconsin Ave
Milwaukee, WI 53226

EDUCATION:

1987 - 1990 B.Sc. (Biochemistry and Microbiology), SIES College, University of Bombay
1990 - 1992 M.Sc. (Biochemistry), SIES College, University of Bombay
1992 - 1997 Ph.D. (Biochemistry and Molecular Biology), Medical College of Georgia, Augusta, GA

POSTGRADUATE TRAINING AND FELLOWSHIP APPOINTMENTS:

1997 - 2002 Research Fellow, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA

FACULTY APPOINTMENTS:

2002 - 2006 NCI Scholar, Laboratory of Pathology, Center for Cancer Research, NCI, NIH, Rockville, MD
2007 - 2012 Associate Professor, Primary: Department of Pediatrics, Children's Research Institute, Medical College of Wisconsin, Milwaukee, WI
2007 - Present Associate Professor, Secondary: Department of Cell Biology, Neurobiology and Anatomy, Medical College of Wisconsin, Milwaukee, WI
2012 - Present Professor (with Tenure), Pediatrics, Medical College of Wisconsin

ADMINISTRATIVE APPOINTMENTS:

2007 - Present Director, Developmental Vascular Biology Program, Medical College of Wisconsin, Milwaukee, WI

AWARDS AND HONORS:

2001 - Present Ruth L. Kirchstein NRSA Award
2002 - Present NCI Scholar Award
2004 - Present Nominated for Outstanding Mentor Award, NCI, NIH
2010 - Present Donald and Judith Alstadt Research Foundation Award
2012 - Present Clinical & Translational Science Institute – In Recognition of Outstanding Contributions to the Master of Science Program in Clinical & Translational Science, Medical College of Wisconsin
2013 - Present Distinguished Alumnus Award, Medical College of Georgia

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

American Association for the Advancement of Science (Past)
American Association for Cancer Research (Past)
American Society of Gene Therapy (Past)
Society for Developmental Biology
Association for Laboratory Automation
North American Vascular Biology Association
American Association of Anatomists

EDITORSHIPS/EDITORIAL BOARDS/JOURNAL REVIEWS:

Editorial Board

Indian Journal of Clinical Medicine
PLoS ONE
Vascular Cell

Journal Review

Archives of Biochemistry and Biophysics
FASEB
Journal of Biological Chemistry
Journal of Nanobiotechnology
Molecular Cancer Research
Molecular and Cellular Biochemistry
Clinical Chemistry
Physiological Genomics
Nature
Blood
Journal of Cellular and Molecular Medicine
BMC Developmental Biology
Molecular Cancer
Circulation Research
PLoS ONE
Neurotoxicology and Teratology
ATVB
Trends in Cardiovascular Medicine
Molecular Cancer Research
PNAS
Journal of Proteomics
Zebrafish
Brain Disorders & Therapy
Scientific Reports
Cancer Research

LOCAL/REGIONAL APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

2009 - 2011 Member/Grant Reviewer, Research Affairs Committee, Medical College of Wisconsin, Milwaukee, WI
2009 Poster/Abstract Reviewer, MCW Research Day, Medical College of Wisconsin, Milwaukee, WI
2009 - 2011 Reviewer/Ad Hoc Member, Cancer Center Research Grants Committee, Medical College of Wisconsin, Milwaukee, WI
2010 Reviewer, 2010 Pilot Research Innovative Awards (PIR), Children's Research Institute, Milwaukee, WI
2011 Member/Grant Reviewer, Women's Health Research Program Steering Committee, Medical College of Wisconsin, Milwaukee, WI
2011 Grant Reviewer, Digestive Disease Center, Medical College of Wisconsin, Milwaukee, WI
2019 Reviewer, 2019 CRI Multi-Year Innovative Research Grants, Medical College of Wisconsin, Milwaukee, WI
2019 Poster Judge, Cardiovascular Center Retreat 2019, Medical College of Wisconsin, Milwaukee, WI
2019 Poster Judge, Annual Graduate School and Postdoc Research Poster Day, Medical College of Wisconsin, Milwaukee, WI

NATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS:

2003 Ad Hoc Grant Reviewer, K series, National Institute of Heart, Lung and Blood, Bethesda, MD
2003 - 2004 Special Emphasis Panel Member, R series, Cardiovascular Disease Study Section, National Institutes of Health, Bethesda, MD
2007 Reviewer, National Science Foundation Proposal, Developmental Systems Program, National Science Foundation, Arlington, VA
2008 Ad-Hoc Reviewer, Lytmos Group Inc.
2008 Reviewer, NIH Study Section, SBIR /STTR ZRG1-CB-D, Cell Biology applications, Asynchronous Electronic Discussion, National Institutes of Health, Bethesda, MD
2009 Special Emphasis Panel Reviewer, ZRG1 MOSS-C02 AED, Asynchronous Electronic Discussion,

National Institutes of Health, Bethesda, MD
2009 Ad-Hoc Reviewer, Vascular Cell and Molecular Biology Study Section, National Institutes of Health, Bethesda, MD
2009 Reviewer and Alternate Chair, NIH Study Section, SBIR/STTR, Cell Biology/Instrumentation, Asynchronous Electronic Discussion, National Institutes of Health, Bethesda, MD
2009 Reviewer, Challenge Grant Reviews, National Institutes of Health, Bethesda, MD
2009 Grant Reviewer, Spring 2009 R4 Basic Cell & Molecular Biology 3 Committee, American Heart Association
2009 Grant Reviewer, NIH Study Section, SBIR/IMST-16, Cell Biology, Center for Scientific Review, National Institutes of Health, Bethesda, MD
2010 Ad-Hoc Reviewer, 2010/10 ZRG1 IMST-J (16) B Small Business: Cell Biology and Molecular Imaging -- Study Section (Cell Biology & Molecular Imaging), NIH
2010 Grant Reviewer, Vascular Cell and Molecular Biology Study Section, National Institutes of Health, Bethesda, MD
2010 Chair, Hybrid Symposium Session, 2010 AAA Annual Meeting, Anaheim, CA
2011 Grant Reviewer, Mayo Alzheimer's Disease Research Center, Rochester, MN
2011 - 2017 Chartered Member, Vascular Cell and Molecular Biology (VCMB) Study Section, National Institutes of Health, Bethesda, MD
2011 Member, Vascular Cell and Molecular Biology Study Section, Center for Scientific Review, National Institutes of Health, Bethesda, MD
2011 Grant Reviewer, ZRG1-IMST-J (16) Small Business: Cell Biology and Molecular Imaging Study Section Review, National Institutes of Health, Bethesda, MD
2012 - Present PPG Reviewer, NHLBI
2012 - Present Grant Reviewer, RFA CA 11-011 R1) and 012 (R21) Research Answers to NCI's, NIH
2012 - Present Grant Reviewer, IMST (15) Small Business: Cell, Molecular and Computational Biology, NIH

INVITED LECTURES/WORKSHOPS/PRESENTATIONS:

Local

Signaling cue for vascular development from axon guidance gene family. Children's Research Institute, Medical College of Wisconsin, Milwaukee, WI, 2006 - Present
Angioblast development in vertebrates. Children's Research Institute, Medical College of Wisconsin, Milwaukee, WI, 2007 - Present
Vascular function of a novel serine threonine kinase unravels multiple steps in vertebrate angioblast development. Blood Research Institute, Milwaukee, WI, 2007 - Present
Angioblast development in vertebrates. Human and Molecular Genetics Center, Medical College of Wisconsin, Milwaukee, WI, 2007 - Present
Developmental Vascular Biology Program. Graduate School, Medical College of Wisconsin, Milwaukee, WI, 2007 - Present
Snrk-1 and Dusp-5 function in vascular development and disease, Department of Pharmacology and Toxicology, Medical College of Wisconsin, Milwaukee, WI, 2008 - Present
Novel Signaling Molecules and Pathways in Vertebrate Angioblast Development and Disease. Department of Biochemistry, Medical College of Wisconsin, Milwaukee, WI, 2008 - Present
Functional Interplay of a Kinase and a Phosphatase Gene in Vertebrate Vascular Development and Disease. Herma Heart Center, Children's Hospital of Wisconsin, Milwaukee, WI, 2008 - Present
Scientific Career - Skills Necessary for Success! Postdoctoral Education, Medical College of Wisconsin, Milwaukee, WI, 2009 - Present
Developmental Vascular Biology Program. Open House with Convocation. Graduate School, Medical College of Wisconsin, Milwaukee, WI, 2009 - Present
Developmental Vascular Biology Program. IDP Lunch Series. Graduate School, Medical College of Wisconsin, Milwaukee, WI, 2009 - Present
Navigation of vessels: lessons learned from axon guidance. Department of Physiology, Medical College of Wisconsin, Milwaukee, WI, 2009 - Present
Developmental Vascular Biology Program. IDP Mini-Symposium. Graduate School, Medical College of Wisconsin, Milwaukee, WI, 2009 - Present
Vasculogenesis mechanisms in vertebrates. CBNA Presentation, Medical College of Wisconsin, Milwaukee, WI, 2010 - Present
How to make sense of anti-sense RNA? CRI Noon Conference, Medical College of Wisconsin, Milwaukee,

WI, 2010 - Present
Early mechanistic steps of vasculogenesis process revealed in zebrafish. June Multidisciplinary Research Conference, Medical College of Wisconsin, Milwaukee, WI, 2010 - Present
Successful Strategies for Science and Life. Summer Research Lecture Series, Medical College of Wisconsin, Milwaukee, WI, 2010 - Present
Functional characterization of Snrk-1 gene in developing vasculature-an update. CVRC Works-in-Progress, Medical College of Wisconsin, Milwaukee, WI, 2010 - Present
2011 Targeting Dusp-5: An emerging option for treating vascular anomalies. CTSI Seminar Presentation, Medical College of Wisconsin, Milwaukee, WI, 2011 - Present
Bridging the gap from targets to drugs (Valley of Death): A proposal for a SE WI Drug Development Core. Medical College of Wisconsin, Milwaukee, WI, 2011 - Present
Small Molecule Identification for a Vascular Target: Dusp-5. Pediatric Surgery Multidisciplinary Research Conference, Medical College of Wisconsin, Milwaukee, WI, 2011 - Present
Insights on Aortic Coarctation Defects from Studying Embryonic Vasculogenesis Process in Zebrafish. Children's Research Institute Scientific Symposium, Medical College of Wisconsin, Milwaukee, WI, 2011 - Present

Regional

A serendipitous discovery of a novel signaling pathway in vascular development and disease. 3rd Mayo Clinic Angiogenesis Symposia, Rochester, MN, 2008 - Present
Developmental vasculogenesis mechanisms in vertebrates. Department of Molecular Cardiology, Lerner Research Institute, Cleveland Clinic Foundation, Cleveland, OH, 2009 - Present
Vasculogenesis mechanisms in development and disease. Department of Pharmacology, University of Illinois College of Medicine, Chicago, IL, 2009 - Present
Vasculogenesis mechanisms in embryonic development and disease. Division of Biological Sciences, University of Missouri-Columbia, Columbia, MO, 2009 - Present
Vascular development in a developing vertebrate embryo and disease. GE Health Care Research Institute, Waukesha, WI, 2009 - Present
Vasculogenesis mechanisms in a developing vertebrate. 2010 Mayo Angiogenesis Symposia, Mackinac Island, MI, 2010 - Present
A Robo:Sox nexus in vascular development. Children's Environmental Health Sciences Core Center, External Advisory Committee Meeting, Intercontinental Hotel, Milwaukee, WI, 2010 - Present
Small molecule discovery targeting vascular anomalies, Vascular Birthmarks Foundation Conference, New York, NY, 2012 - Present

National

Anti-angiogenic function of two collagen molecules: Endostatin and Restin. National Institutes of Health, Bethesda, MD, 2002 - Present
Anti-angiogenic function of two collagen molecules: Endostatin and Restin. Department of Gastroenterology, BIDMC-Harvard Medical School, Boston, MA, 2002 - Present
Signaling mechanisms of collagen fragments during angiogenesis and embryogenesis. National Institute of Child Health and Development, Bethesda, MD, 2003 - Present
Studying angiogenesis and neurogenesis in zebrafish. National Cancer Institute, Rockville, MD, 2003 - Present
Roundabout4's function and signaling mechanisms in vertebrate vascular development. Gordon Conference on Angiogenesis and Microcirculation, Newport, RI, 2004 - Present
Conservation of mechanism across neural and vascular development in zebrafish. NIDCR, NIH, Bethesda, MD, 2004 - Present
Mechanism conservation across neural and vascular development in zebrafish. RexAhn Corporation, Rockville, MD, 2004 - Present
Functional role of Robo4 gene in zebrafish development. National Cancer Institute, Bethesda, MD, 2004 - Present
Signaling cue for vascular development from axon guidance gene family. University of Kentucky, Lexington, KY, 2005 - Present
Robo4 signaling cues in vascular development. Vascular Biology Faculty and HIF Retreat, Gaithersburg, MD, 2005 - Present
Robo guidance cues in vascular development. Emory University, Atlanta, GA, 2005 - Present

Axon guidance gene function in vertebrate vascular development. National Institute of Standards and Technology, Gaithersburg, MD, 2006 - Present

Zebrafish: A model organism fishing discoveries swimmingly! Charles River Laboratory Zebrafish Workshop, The Comus Inn, Dickerson, MD, 2006 - Present

Lessons for vascular development from roundabout axon guidance gene family. Medical College of Georgia, Augusta, GA, 2006 - Present

Functional Interplay of a kinase and a phosphatase gene in vertebrate vascular development and disease. Dartmouth Medical School, Hanover, NH, 2008 - Present

Intricacy of vascular development in zebrafish. Department of Biological Sciences, University of Delaware, Newark, DE, 2009 - Present

Dusp-5: a putative target for vascular disease. Caliper Life Sciences, San Francisco, CA, 2010 - Present

Vascular Development in Vertebrates. Physiology and Biophysics, University of Louisville School of Medicine, Louisville, KY, 2010 - Present

Nogo-B receptor is essential for angiogenesis in vivo via Akt pathway. American Heart Association, San Francisco, CA, 2010 - Present

Vasculogenesis mechanisms in a developing vertebrate. Cardiovascular Seminar Series, University of Virginia Health System, Charlottesville, VA, 2010 - Present

Transcriptional mechanisms regulating embryonic angiogenesis, Department of Biochemistry & Molecular Biology at Wayne State University, School of Medicine, Detroit, MI, 2011 - Present

The role of sox and robos in angiogenesis, 5th Mayo Clinic Angiogenesis Symposium, Minneapolis, MN, 2012 - Present

Transcriptional regulation of etv-2 during cardiovascular development in vertebrates, University of Kansas Medical Center, Kansas City, KS, 2012 - Present

Serendipitous discovery implicates signaling molecules in vascular, Physiology Department, Georgia Health Sciences University, Augusta, GA, 2012 - Present

Novel therapeutic targets for vascular anomalies, Temple University School of Medicine, Philadelphia, PA, 2012 - Present

Novel targets for the treatment of pediatric vascular tumors and anomalies, Emory University School of Medicine, Atlanta, GA, 2012 - Present

The Role of MMP-17 Ortholog in Embryonic Zebrafish Development, American Society for Matrix Biology and the Society for Glycobiology, San Diego, CA, 2012 - Present

Transcriptional Regulation of Roundabout4 (Robo4) in the Developing Vasculature, Biochemistry Department, Georgia Health, Augusta, GA, 2012 - Present

International

Enigma of long-non-coding RNA in Vertebrate Biology. The Chinese University of Hong Kong, Hong Kong, China, 2010 - Present

Developmental vasculogenesis mechanisms during embryogenesis and disease in vertebrates. Beihang University of Aeronautics and Astronautics, Beijing, China, 2010 - Present

Developmental vasculogenesis mechanisms during embryogenesis and disease in vertebrates. Department of Biology and Center for Chinese Medicine, Hong Kong University of Science and Technology Clear Water Bay Road. Hong Kong, China, 2010 - Present

Vasculogenesis mechanisms during vertebrate embryonic development. AU-KBC Research Centre, Anna University, Chennai, India, 2011 - Present

Tools for a Successful Career in Science. K.J.Somaiya College of Science and Commerce, Somaiya Vidyavihar Complex, Vidyavihar-East, Mumbai, India, 2011 - Present

The role of matrix in tumor metastasis, CSIR-Indian Institute of Chemical Technology, Hyderabad, India, 2013

COMMITTEE SERVICE:

Medical College of Wisconsin

1993 - 1997 Member, Student Government Association, Medical College of Georgia, Augusta, GA

1994 President, Medical College of Georgia, MCG International Club, Augusta, GA

1994 Graduate School Member, Student Judicial Committee, Medical College of Georgia, Augusta, GA

1995 - 1997 Graduate School Representative, Student Services Committee, Medical College of Georgia, Augusta, GA

2007 - 2009 Member, Genetics Division, Medical College of Wisconsin, Milwaukee, WI
 2007 - Present Head, Developmental Vascular Biology Program, Medical College of Wisconsin, Milwaukee, WI
 2007 - Present Member, Interdisciplinary Program in Biomedical Sciences (IDP Program), Medical College of Wisconsin, Milwaukee, WI
 2008 Member, Developmental Biology Division, Medical College of Wisconsin, Milwaukee, WI
 2008 Member-Cell Biology Web Design Committee, Medical College of Wisconsin, Milwaukee, WI
 2009 Member, Cardiovascular Center, Medical College of Wisconsin, Milwaukee, WI
 2009 - Present Co-Chair with Dr. Ravi Misra, Vascular Biology Interest Group, Medical College of Wisconsin, Milwaukee, WI
 2009 Full Member, NIEHS Children's Environmental Health Sciences Center, University of Wisconsin-Milwaukee, Milwaukee, WI
 2009 Member, MCW Graduate School Nominating Committee, Medical College of Wisconsin, Milwaukee, WI
 2009 Member, Post-Doctoral Steering Committee, Medical College of Wisconsin, Milwaukee, WI
 2009 Member, Cancer Center, Medical College of Wisconsin, Milwaukee, WI
 2009 Affinity Group Leader, Vascular Biology, Medical College of Wisconsin, Milwaukee, WI
 2010 Member, Office of Research Innovation Task Force #3, Medical College of Wisconsin, Milwaukee, WI
 2010 Member, CTSI Clinical Scientist Mentoring Team, Medical College of Wisconsin, Milwaukee, WI
 2010 Member, Research Core Facilities Committee, Medical College of Wisconsin, Milwaukee, WI
 2010 Member, CVC Scientific Advisory Committee, Medical College of Wisconsin, Milwaukee, WI
 2011 Research Member, MCW Cancer Center in the Cancer Cell Biology Research Program, Medical College of Wisconsin, Milwaukee, WI
 2012 - Present Member, Women's Health Research Program (WHRP) Advisory Group, Medical College of Wisconsin

MEDICAL COLLEGE TEACHING ACTIVITIES:

Medical Student Education

2007 Cell Signaling, Topic: Vascular and Axon Guidance Signaling, Advanced Cell Biology Course, Medical College of Wisconsin, Milwaukee, WI
 2008 Developmental and Stem Cell Biology, Topic: Genetic Core of Development and LPM, Medical College of Wisconsin, Milwaukee, WI
 2008 - 2010 Mechanisms of Cellular Signaling, Topic: Angiogenesis and Development of Vasculature, Medical College of Wisconsin, Milwaukee, WI
 2008 - 2010 Advanced Molecular Genetics (of Cancer), Topic: Cancer Angiogenesis, Medical College of Wisconsin, Milwaukee, WI
 2010 Advanced Cell Signaling, Topic: Targeting Signaling Pathways in Angiogenesis (Avastin), Medical College of Wisconsin, Milwaukee, WI
 2011 Methods in Grant Preparation, Medical College of Wisconsin, Milwaukee, WI
 2011 - 2012 Taught - Advanced Molecular Genetics: Angiogenesis and Metabolism

MCW STUDENTS, FACULTY, RESIDENTS AND CLINICAL/RESEARCH FELLOWS MENTORED:

High School Students

BriAnna Williams, Medical College of Wisconsin, - 2012 Mentor

Undergraduate Students

Philip Loscombe, MCW, 2006 (Summer)
 Annie Kroll, MCW, 2007 (Summer)
 Codie Vassar, MCW, 2010 (Summer)
 Suzanna Sellars, MCW, 2010 (Summer)
 Medical College of Wisconsin, 2010 Diversity Summer Health-Related Research Educational Program (DSHREP)
 Marguerite Cullen, MCW, 2011 (Summer)
 Scott Brunson, MCW, 2011 (Summer)

Codie Vassar, Medical College of Wisconsin, - 2010 Mentor
Annie Kroll, Medical College of Wisconsin, - 2007 Mentor
Marguerite Ullén, Medical College of Wisconsin, - 2011 Mentor
Andrew Straszewski, Medical College of Wisconsin, - 2012 Mentor
Suzanna Sellars, Medical College of Wisconsin, - 2010 Mentor
Raman Kutty, Medical College of Wisconsin, - 2012 Mentor
Colin Stair, Medical College of Wisconsin, - 2012 Mentor
Scott Brunson, Medical College of Wisconsin, - 2011 Mentor

Medical Students

Xiaoguang Ma, MCW, 2007 Rotation
Ann DeLaForest, MCW, 2007 Rotation
Abby Kroken, MCW, 2007 Rotation
Amber Petersen, MCW, 2009 Rotation
Kevin Wright, MCW, 2009 Rotation
Scott Brunson, MCW, 2011 Trainee

Graduate Students

Aaron Mull, MCW, 2007 Trainee
Noah Leigh, MCW, 2009 - 2012 Trainee

Committees

Stephanie Cossette, MCW, 2008 Member, Graduate Thesis Committee
Kerry Veth, MCW, 2008 Member, Graduate Thesis Committee
Adam Gastonguay, MCW, 2009 Member, Graduate Thesis Committee
Mika Nagaoka, MCW, 2009 Member, Mock Proposal Committee, IDP Program
Kurt Kolander, MCW, 2009 Member, Graduate Thesis Committee
Emily Walker, MCW, 2010 Member, Mock Proposal Committee, IDP Program
Noah Leigh, MCW, 2010 Member, Graduate Thesis Committee

PhD Students Advised

MCW, 2009 PhD in Basic and Translational Science Program
Bret Kelso, Medical College of Wisconsin, 2011 T-32 Mentor Committee,
Physiology/NA/Biotechnology and Bioengineering

Postdoctoral Students

Kallal Pramanik, Ph.D., MCW, 2007 - 2010
Keguo Li, Ph.D., MCW, 2007 - Present
Changzoon Chun Ph.D., MCW, 2007 - Present
Ganesh Samant, Ph.D, MCW, 2007 - Present
Indranil Sinha, Ph.D., MCW, 2009 - 2010
Srividya Suryanarayana, Ph.D., MCW, 2010 - Present
Marcus Schupp, Ph.D., MCW, 2010 - Present
Anil Challa, Ph.D., MCW, 2011 - Present
Padmanabhan Vakeel, Ph.D., MCW, 2011 - Present

EXTRAMURAL STUDENTS, FACULTY, RESIDENTS, AND CLINICAL/RESEARCH FELLOWS

MENTORED:

High School Students

Swati Rushi, 2004 (Summer)
Krupa Nataraj, 2005 (Summer)
Teresa Gomez, 2005 (Summer)

Undergraduate Students

Rebecca Hassel, 2003 (Summer)
Robert Kao, 2004 - 2005
David Rhee, 2004 (Summer)

Galen Nelson, 2005 (Summer)
Shobhit Singla, 2006 (Summer)
Philip Loscombe, Harvard, - 2006 Mentor

Medical Students

Jeffrey Hyo Chung, Harvard Medical School, 2001 - 2002 Mentor
Milwaukee School of Engineering, 2011 Research Mentor, CREST Research and Teaching Symposium

Graduate Students

Guru Nanak Dev University, Punjab, India, 2005 Thesis External Reader
Galen Nelson, Bethel University, St. Paul, MN, 2006 Thesis Advisor

Students Advised

Robert Kao, Boston College, 2005 Thesis Advisor

Postdoctoral Students

Venkatesha Shivalingappa, Ph.D., 2000 - 2002
Dayadevi Jirage, Ph.D., 2003
Sukhbir Kaur, Ph.D., 2004 - 2006

Clinical/Research Fellows

Research Fellows, Harvard Medical School, 2000 - 2002 Supervisor

INTERNATIONAL ELECTED/APPOINTED LEADERSHIP AND COMMITTEE POSITIONS::

2009 Grant Reviewer, Call for Young Researchers, The Center for Scientific Review of the National Institutes of Health, Italian Ministry of Health, Directorate for Health and Technologies Research, Italy
2010 Grant Reviewer, Dutch Cancer Society, Amsterdam, Holland

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. Thirugnanam K, Cossette S, Lu Q, Chowdhury SR, Harmann LM, Gupta A, Spearman A, Sonin DM, Bordas M, Kumar SN, Pan AY, Simpson PM, Strande JL, Bishop E, Zou MH and **Ramchandran R**. Cardiomyocyte-specific SNRK prevents inflammation in the heart. JAHA 2019 In press.
2. Chowdhury TA, Li K, **Ramchandran R**. Lessons learned from a lncRNA odyssey for two genes with vascular functions, DLL4 and TIE1. Vascul Pharmacol. 2019 Mar;114:103-109. PMID: PMC6436643
3. Gupta A, Brahmabhatt J, Syrlybaeva R, Bodnar C, Bodnar N, Bongard R, Pokkuluri PR, Sem DS, **Ramchandran R**, Rathore R, Talipov MR. Role of Conserved Histidine and Serine in the HCXXXXXRS Motif of Human Dual-Specificity Phosphatase 5. J Chem Inf Model. 2019 Apr 22;59(4):1563-1574.
4. Eisa-Beygi S, Benslimane FM, El-Rass S, Prabhudesai S, Abdelrasoul MKA, Simpson PM, Yalcin HC, Burrows PE, **Ramchandran R**. Characterization of Endothelial Cilia Distribution During Cerebral-Vascular Development in Zebrafish (Danio rerio). Arterioscler Thromb Vasc Biol. 2018 Dec;38(12):2806-2818. PMID: PMC6309420
5. Chowdhury TA, Koceja C, Eisa-Beygi S, Kleinstiver BP, Kumar SN, Lin CW, Li K, Prabhudesai S, Joung JK, **Ramchandran R**. Temporal and Spatial Post-Transcriptional Regulation of Zebrafish *tie1* mRNA by Long Noncoding RNA During Brain Vascular Assembly. Arterioscler Thromb Vasc Biol. 2018 Jul;38(7):1562-1575. PMID: PMC6023729
6. Prabhudesai S, Koceja C, Dey A, Eisa-Beygi S, Leigh NR, Bhattacharya R, Mukherjee P, **Ramchandran R**. Cystathionine γ -Synthase Is Necessary for Axis Development *in Vivo*. Front Cell Dev Biol. 2018;6:14. PMID: PMC5820354
7. Lu Q, Xie Z, Yan C, Ding Y, Ma Z, Wu S, Qiu Y, Cossette SM, Bordas M, **Ramchandran R**, Zou MH. SNRK (Sucrose Nonfermenting 1-Related Kinase) Promotes Angiogenesis In Vivo. Arterioscler Thromb Vasc Biol. 2018 Feb;38(2):373-385. PMID: PMC5785416

8. Kutty RG, Talipov MR, Bongard RD, Lipinski RAJ, Sweeney NL, Sem DS, Rathore R, **Ramchandran R**. Dual Specificity Phosphatase 5-Substrate Interaction: A Mechanistic Perspective. *Compr Physiol*. 2017 Sep 12;7(4):1449-1461.
9. Hopp EE, Cossette SM, Kumar SN, Eastwood D, **Ramchandran R**, Bishop E. Sucrose Non-Fermenting Related Kinase Expression in Ovarian Cancer and Correlation with Clinical Features. *Cancer Invest*. 2017 Aug 09;35(7):456-462. PMID: PMC6167932
10. **Ramchandran R**, Chaluvally-Raghavan P. miRNA-Mediated RNA Activation in Mammalian Cells. *Adv Exp Med Biol*. 2017;983:81-89.
11. Bongard RD, Lepley M, Thakur K, Talipov MR, Nayak J, Lipinski RAJ, Bohl C, Sweeney N, **Ramchandran R**, Rathore R, Sem DS. Serendipitous discovery of light-induced (In Situ) formation of an Azo-bridged dimeric sulfonated naphthol as a potent PTP1B inhibitor. *BMC Biochem*. 2017 May 31;18(1):10. PMID: PMC5452347
12. Kutty RG, Xin G, Schauder DM, Cossette SM, Bordas M, Cui W, **Ramchandran R**. Dual Specificity Phosphatase 5 Is Essential for T Cell Survival. *PLoS One*. 2016;11(12):e0167246. PMID: PMC5147890
13. Cossette SM, Bhute VJ, Bao X, Harmann LM, Horswill MA, Sinha I, Gastonguay A, Pooya S, Bordas M, Kumar SN, Mirza SP, Palecek SP, Strande JL, **Ramchandran R**. Sucrose Nonfermenting-Related Kinase Enzyme-Mediated Rho-Associated Kinase Signaling is Responsible for Cardiac Function. *Circ Cardiovasc Genet*. 2016 Dec;9(6):474-486. PMID: PMC5177517
14. Talipov MR, Nayak J, Lepley M, Bongard RD, Sem DS, **Ramchandran R**, Rathore R. Critical Role of the Secondary Binding Pocket in Modulating the Enzymatic Activity of DUSP5 toward Phosphorylated ERKs. *Biochemistry*. 2016 Nov 08;55(44):6187-6195.
15. Palen K, Weber J, Dwinell MB, Johnson BD, **Ramchandran R**, Gershan JA. E-cadherin re-expression shows in vivo evidence for mesenchymal to epithelial transition in clonal metastatic breast tumor cells. *Oncotarget*. 2016 Jul 12;7(28):43363-43375. PMID: PMC5190029
16. Iden M, Fye S, Li K, Chowdhury T, **Ramchandran R**, Rader JS. The lncRNA PVT1 Contributes to the Cervical Cancer Phenotype and Associates with Poor Patient Prognosis. *PLoS One*. 2016;11(5):e0156274. PMID: PMC4883781
17. Rana U, Liu Z, Kumar SN, Zhao B, Hu W, Bordas M, Cossette S, Szabo S, Foeckler J, Weiler H, Chrzanowska-Wodnicka M, Holtz ML, Misra RP, Salato V, North PE, **Ramchandran R**, Miao QR. Nogo-B receptor deficiency causes cerebral vasculature defects during embryonic development in mice. *Dev Biol*. 2016 Feb 15;410(2):190-201. PMID: PMC4767500
18. Kilari S, Cossette S, Pooya S, Bordas M, Huang YW, **Ramchandran R**, Wilkinson GA. Endothelial Cell Surface Expressed Chemotaxis and Apoptosis Regulator (ECSCR) Regulates Lipolysis in White Adipocytes via the PTEN/AKT Signaling Pathway. *PLoS One*. 2015;10(12):e0144185. PMID: PMC4686900
19. Saha S, Chakraborty PK, Xiong X, Dwivedi SK, Mustafi SB, Leigh NR, **Ramchandran R**, Mukherjee P, Bhattacharya R. Cystathionine γ -synthase regulates endothelial function via protein S-sulfhydration. *FASEB J*. 2016 Jan;30(1):441-56. PMID: PMC4684530
20. Neumann TS, Span EA, Kalous KS, Bongard R, Gastonguay A, Lepley MA, Kutty RG, Nayak J, Bohl C, Lange RG, Sarker MI, Talipov MR, Rathore R, **Ramchandran R**, Sem DS. Identification of inhibitors that target dual-specificity phosphatase 5 provide new insights into the binding requirements for the two phosphate pockets. *BMC Biochem*. 2015 Aug 19;16:19. PMID: PMC4545774
21. LaDisa JF Jr, Bozdag S, Olson J, **Ramchandran R**, Kersten JR, Eddinger TJ. Gene Expression in Experimental Aortic Coarctation and Repair: Candidate Genes for Therapeutic Intervention? *PLoS One*. 2015;10(7):e0133356. PMID: PMC4514739
22. Hoepfner LH, Sinha S, Wang Y, Bhattacharya R, Dutta S, Gong X, Bedell VM, Suresh S, Chun C, **Ramchandran R**, Ekker SC, Mukhopadhyay D. RhoC maintains vascular homeostasis by regulating VEGF-induced signaling in endothelial cells. *J Cell Sci*. 2015 Oct 01;128(19):3556-68. PMID: PMC4647168
23. Sampath V, Menden H, Helbling D, Li K, Gastonguay A, **Ramchandran R**, Dimmock DP. SIGIRR genetic variants in premature infants with necrotizing enterocolitis. *Pediatrics*. 2015 Jun;135(6):e1530-4. PMID: PMC4444800
24. Li K, Chowdhury T, Vakeel P, Kocejka C, Sampath V, **Ramchandran R**. Delta-like 4 mRNA is regulated by adjacent natural antisense transcripts. *Vasc Cell*. 2015;7:3. PMID: PMC4409748
25. Rajasimha HK, Shirol PB, Ramamoorthy P, Hegde M, Barde S, Chandru V, Ravinandan ME, **Ramchandran R**, Haldar K, Lin JC, Babar IA, Girisha KM, Srinivasan S, Navaneetham D, Battu R,

- Devarakonda R, Kini U, Vijayachandra K, Verma IC. Organization for rare diseases India (ORDI) - addressing the challenges and opportunities for the Indian rare diseases' community. *Genet Res (Camb)*. 2014 Aug 13;96:e009. PMID: PMC7044965
26. Menden H, Welak S, Cossette S, **Ramchandran R**, Sampath V. Lipopolysaccharide (LPS)-mediated angiopoietin-2-dependent autocrine angiogenesis is regulated by NADPH oxidase 2 (Nox2) in human pulmonary microvascular endothelial cells. *J Biol Chem*. 2015 Feb 27;290(9):5449-61. PMID: PMC4342461
 27. Nayak J, Gastonguay AJ, Talipov MR, Vakeel P, Span EA, Kalous KS, Kutty RG, Jensen DR, Pokkuluri PR, Sem DS, Rathore R, **Ramchandran R**. Protein expression, characterization and activity comparisons of wild type and mutant DUSP5 proteins. *BMC Biochem*. 2014 Dec 18;15:27. PMID: PMC4299175
 28. Cossette SM, Gastonguay AJ, Bao X, Lerch-Gaggl A, Zhong L, Harmann LM, Kocejka C, Miao RQ, Vakeel P, Chun C, Li K, Foeckler J, Bordas M, Weiler H, Strande J, Palecek SP, **Ramchandran R**. Sucrose non-fermenting related kinase enzyme is essential for cardiac metabolism. *Biol Open*. 2014 Dec 12;4(1):48-61. PMID: PMC4295165
 29. Schupp MO, Waas M, Chun CZ, **Ramchandran R**. Transcriptional inhibition of *etv2* expression is essential for embryonic cardiac development. *Dev Biol*. 2014 Sep 01;393(1):71-83. PMID: PMC4137469
 30. Wang L, Cossette SM, Rarick KR, Gershan J, Dwinell MB, Harder DR, **Ramchandran R**. Astrocytes directly influence tumor cell invasion and metastasis in vivo. *PLoS One*. 2013;8(12):e80933. PMID: PMC3851470
 31. Zhou X, Fan LX, Li K, **Ramchandran R**, Calvet JP, Li X. SIRT2 regulates ciliogenesis and contributes to abnormal centrosome amplification caused by loss of polycystin-1. *Hum Mol Genet*. 2014 Mar 15;23(6):1644-55. PMID: PMC3929098
 32. Leigh NR, Schupp MO, Li K, Padmanabhan V, Gastonguay A, Wang L, Chun CZ, Wilkinson GA, **Ramchandran R**. *Mmp17b* is essential for proper neural crest cell migration in vivo. *PLoS One*. 2013;8(10):e76484. PMID: PMC3788140
 33. Span EA, Goodsell DS, **Ramchandran R**, Franzen MA, Herman T, Sem DS. Protein structure in context: the molecular landscape of angiogenesis. *Biochem Mol Biol Educ*. 2013;41(4):213-23. PMID: PMC4074543
 34. Kilari S, Remadevi I, Zhao B, Pan J, Miao R, **Ramchandran R**, North PE, You M, Rahimi N, Wilkinson GA. Endothelial cell-specific chemotaxis receptor (ECSCR) enhances vascular endothelial growth factor (VEGF) receptor-2/kinase insert domain receptor (KDR) activation and promotes proteolysis of internalized KDR. *J Biol Chem*. 2013 Apr 12;288(15):10265-74. PMID: PMC3624410
 35. Wickramasekera NT, Gebremedhin D, Carver KA, Vakeel P, **Ramchandran R**, Schuett A, Harder DR. Role of dual-specificity protein phosphatase-5 in modulating the myogenic response in rat cerebral arteries. *J Appl Physiol (1985)*. 2013 Jan 15;114(2):252-61. PMID: PMC3544499
 36. François M, **Ramchandran R**. Studies on Axenfeld-Rieger syndrome patients and mice reveal *Foxc1*'s role in corneal neovascularization. *Proc Natl Acad Sci U S A*. 2012 Feb 07;109(6):1818-9. PMID: PMC3277551
 37. Patra CR, Kim JH, Pramanik K, d'Uscio LV, Patra S, Pal K, **Ramchandran R**, Strano MS, Mukhopadhyay D. Reactive oxygen species driven angiogenesis by inorganic nanorods. *Nano Lett*. 2011 Nov 09;11(11):4932-8. PMID: PMC3212653
 38. Samant GV, Schupp MO, François M, Moleri S, Kothinti RK, Chun CZ, Sinha I, Sellars S, Leigh N, Pramanik K, Horswill MA, Remadevi I, Li K, Wilkinson GA, Tabatabai NM, Beltrame M, Koopman P, **Ramchandran R**. Sox factors transcriptionally regulate *ROBO4* gene expression in developing vasculature in zebrafish. *J Biol Chem*. 2011 Sep 02;286(35):30740-30747. PMID: PMC3162435
 39. Lakshmikanthan S, Sobczak M, Chun C, Henschel A, Dargatz J, **Ramchandran R**, Chrzanowska-Wodnicka M. *Rap1* promotes VEGFR2 activation and angiogenesis by a mechanism involving integrin $\alpha v \beta 3$. *Blood*. 2011 Aug 18;118(7):2015-26. PMID: PMC3158727
 40. Chun CZ, Remadevi I, Schupp MO, Samant GV, Pramanik K, Wilkinson GA, **Ramchandran R**. *Fli+* etsrp+ hemato-vascular progenitor cells proliferate at the lateral plate mesoderm during vasculogenesis in zebrafish. *PLoS One*. 2011 Feb 25;6(2):e14732. PMID: PMC3045372
 41. Zhao B, Chun C, Liu Z, Horswill MA, Pramanik K, Wilkinson GA, **Ramchandran R**, Miao RQ. Nogo-B receptor is essential for angiogenesis in zebrafish via Akt pathway. *Blood*. 2010 Dec 09;116(24):5423-33. PMID: PMC3012551
 42. Li K, **Ramchandran R**. Natural antisense transcript: a concomitant engagement with protein-coding transcript. *Oncotarget*. 2010 Oct;1(6):447-52. PMID: PMC3248111
 43. Verma A, Bhattacharya R, Remadevi I, Li K, Pramanik K, Samant GV, Horswill M, Chun CZ, Zhao B,

- Wang E, Miao RQ, Mukhopadhyay D, **Ramchandran R**, Wilkinson GA. Endothelial cell-specific chemotaxis receptor (ecscr) promotes angioblast migration during vasculogenesis and enhances VEGF receptor sensitivity. *Blood*. 2010 Jun 03;115(22):4614-22. PMID: PMC2881497
44. Li K, Blum Y, Verma A, Liu Z, Pramanik K, Leigh NR, Chun CZ, Samant GV, Zhao B, Garnaas MK, Horswill MA, Stanhope SA, North PE, Miao RQ, Wilkinson GA, Affolter M, **Ramchandran R**. A noncoding antisense RNA in tie-1 locus regulates tie-1 function in vivo. *Blood*. 2010 Jan 07;115(1):133-9. PMID: PMC2803688
45. Jia Y, Wu SL, Isenberg JS, Dai S, Sipes JM, Field L, Zeng B, Bandle RW, Ridnour LA, Wink DA, **Ramchandran R**, Karger BL, Roberts DD. Thiolutin inhibits endothelial cell adhesion by perturbing Hsp27 interactions with components of the actin and intermediate filament cytoskeleton. *Cell Stress Chaperones*. 2010 Mar;15(2):165-81. PMID: PMC2866983
46. Makky K, Duvnjak P, Pramanik K, **Ramchandran R**, Mayer AN. A whole-animal microplate assay for metabolic rate using zebrafish. *J Biomol Screen*. 2008 Dec;13(10):960-7.
47. Kanungo J, Zheng YL, Amin ND, Kaur S, **Ramchandran R**, Pant HC. Specific inhibition of cyclin-dependent kinase 5 activity induces motor neuron development in vivo. *Biochem Biophys Res Commun*. 2009 Aug 14;386(1):263-7. PMID: PMC2758157
48. Kaur S, Samant GV, Pramanik K, Loscombe PW, Pendrak ML, Roberts DD, **Ramchandran R**. Silencing of directional migration in roundabout4 knockdown endothelial cells. *BMC Cell Biol*. 2008 Nov 03;9:61. PMID: PMC2613885
49. Garnaas MK, Moodie KL, Liu ML, Samant GV, Li K, Marx R, Baraban JM, Horowitz A, **Ramchandran R**. Syx, a RhoA guanine exchange factor, is essential for angiogenesis in Vivo. *Circ Res*. 2008 Sep 26;103(7):710-6. PMID: PMC2758496
50. Chun CZ, Kaur S, Samant GV, Wang L, Pramanik K, Garnaas MK, Li K, Field L, Mukhopadhyay D, **Ramchandran R**. Snrk-1 is involved in multiple steps of angioblast development and acts via notch signaling pathway in artery-vein specification in vertebrates. *Blood*. 2009 Jan 29;113(5):1192-9. PMID: PMC2635085
51. Pramanik K, Chun CZ, Garnaas MK, Samant GV, Li K, Horswill MA, North PE, **Ramchandran R**. Dusp-5 and Snrk-1 coordinately function during vascular development and disease. *Blood*. 2009 Jan 29;113(5):1184-91. PMID: PMC2635084
52. Kaur S, Abu-Asab MS, Singla S, Yeo SY, **Ramchandran R**. Expression pattern for unc5b, an axon guidance gene in embryonic zebrafish development. *Gene Expr*. 2007;13(6):321-7. PMID: PMC2562791
53. Isenberg JS, Jia Y, Field L, Ridnour LA, Sparatore A, Del Soldato P, Sowers AL, Yeh GC, Moody TW, Wink DA, **Ramchandran R**, Roberts DD. Modulation of angiogenesis by dithiolethione-modified NSAIDs and valproic acid. *Br J Pharmacol*. 2007 May;151(1):63-72. PMID: PMC2012973
54. Kanungo J, Li BS, Goswami M, Zheng YL, **Ramchandran R**, Pant HC. Cloning and characterization of zebrafish (*Danio rerio*) cyclin-dependent kinase 5. *Neurosci Lett*. 2007 Feb 02;412(3):233-8. PMID: PMC2696171
55. Arbiser JL, Kau T, Konar M, Narra K, **Ramchandran R**, Summers SA, Vlahos CJ, Ye K, Perry BN, Matter W, Fischl A, Cook J, Silver PA, Bain J, Cohen P, Whitmire D, Furness S, Govindarajan B, Bowen JP. Solenopsin, the alkaloidal component of the fire ant (*Solenopsis invicta*), is a naturally occurring inhibitor of phosphatidylinositol-3-kinase signaling and angiogenesis. *Blood*. 2007 Jan 15;109(2):560-5. PMID: PMC1785094
56. Hu G, Tang J, Zhang B, Lin Y, Hanai J, Galloway J, Bedell V, Bahary N, Han Z, **Ramchandran R**, Thisse B, Thisse C, Zon LI, Sukhatme VP. A novel endothelial-specific heat shock protein HspA12B is required in both zebrafish development and endothelial functions in vitro. *J Cell Sci*. 2006 Oct 01;119(Pt 19):4117-26.
57. Kaur S, Castellone MD, Bedell VM, Konar M, Gutkind JS, **Ramchandran R**. Robo4 signaling in endothelial cells implies attraction guidance mechanisms. *J Biol Chem*. 2006 Apr 21;281(16):11347-56.
58. Bedell VM, Yeo SY, Park KW, Chung J, Seth P, Shivalingappa V, Zhao J, Obara T, Sukhatme VP, Drummond IA, Li DY, **Ramchandran R**. roundabout4 is essential for angiogenesis in vivo. *Proc Natl Acad Sci U S A*. 2005 May 03;102(18):6373-8. PMID: PMC1088354
59. Chan B, Sinha S, Cho D, **Ramchandran R**, Sukhatme VP. Critical roles of CD146 in zebrafish vascular development. *Dev Dyn*. 2005 Jan;232(1):232-44.
60. **Ramchandran R**, Karumanchi SA, Hanai J, Alper SL, Sukhatme VP. Cellular actions and signaling by endostatin. *Crit Rev Eukaryot Gene Expr*. 2002;12(3):175-91. PMID: PMC3270378
61. Hanai J, Gloy J, Karumanchi SA, Kale S, Tang J, Hu G, Chan B, **Ramchandran R**, Jha V, Sukhatme VP,

- Sokol S. Endostatin is a potential inhibitor of Wnt signaling. *J Cell Biol.* 2002 Aug 05;158(3):529-39. PMID: PMC2173844
62. Hanai J, Dhanabal M, Karumanchi SA, Albanese C, Waterman M, Chan B, **Ramchandran R**, Pestell R, Sukhatme VP. Endostatin causes G1 arrest of endothelial cells through inhibition of cyclin D1. *J Biol Chem.* 2002 May 10;277(19):16464-9.
63. Karumanchi SA, Jha V, **Ramchandran R**, Karihaloo A, Tsiokas L, Chan B, Dhanabal M, Hanai JI, Venkataraman G, Shriver Z, Keiser N, Kalluri R, Zeng H, Mukhopadhyay D, Chen RL, Lander AD, Hagihara K, Yamaguchi Y, Sasisekharan R, Cantley L, Sukhatme VP. Cell surface glypicans are low-affinity endostatin receptors. *Mol Cell.* 2001 Apr;7(4):811-22.
64. Hanna NN, Seetharam S, Mauceri HJ, Beckett MA, Jaskowiak NT, Salloum RM, Hari D, Dhanabal M, **Ramchandran R**, Kalluri R, Sukhatme VP, Kufe DW, Weichselbaum RR. Antitumor interaction of short-course endostatin and ionizing radiation. *Cancer J.* 2000;6(5):287-93.
65. **Ramchandran R**, Bengra C, Whitney B, Lanclos K, Tuan D. A (GATA)(7) motif located in the 5' boundary area of the human beta-globin locus control region exhibits silencer activity in erythroid cells. *Am J Hematol.* 2000 Sep;65(1):14-24.
66. Kamphaus GD, Colorado PC, Panka DJ, Hopfer H, **Ramchandran R**, Torre A, Maeshima Y, Mier JW, Sukhatme VP, Kalluri R. Canstatin, a novel matrix-derived inhibitor of angiogenesis and tumor growth. *J Biol Chem.* 2000 Jan 14;275(2):1209-15.
67. Dhanabal M, Volk R, **Ramchandran R**, Simons M, Sukhatme VP. Cloning, expression, and in vitro activity of human endostatin. *Biochem Biophys Res Commun.* 1999 May 10;258(2):345-52.
68. Lu H, Dhanabal M, Volk R, Waterman MJ, **Ramchandran R**, Knebelmann B, Segal M, Sukhatme VP. Kringle 5 causes cell cycle arrest and apoptosis of endothelial cells. *Biochem Biophys Res Commun.* 1999 May 19;258(3):668-73.
69. Dhanabal M, **Ramchandran R**, Waterman MJ, Lu H, Knebelmann B, Segal M, Sukhatme VP. Endostatin induces endothelial cell apoptosis. *J Biol Chem.* 1999 Apr 23;274(17):11721-6.
70. **Ramchandran R**, Dhanabal M, Volk R, Waterman MJ, Segal M, Lu H, Knebelmann B, Sukhatme VP. Antiangiogenic activity of restin, NC10 domain of human collagen XV: comparison to endostatin. *Biochem Biophys Res Commun.* 1999 Feb 24;255(3):735-9.
71. Dhanabal M, **Ramchandran R**, Volk R, Stillman IE, Lombardo M, Iruela-Arispe ML, Simons M, Sukhatme VP. Endostatin: yeast production, mutants, and antitumor effect in renal cell carcinoma. *Cancer Res.* 1999 Jan 01;59(1):189-97.
72. Gong X, Hou Z, Endsley MP, Gronseth EI, Rarick KR, Jorns JM, Yang Q, Du Z, Yan K, Bordas ML, Gershan J, Deepak P, Geethadevi A, Chaluvally-Raghavan P, Fan Y, Harder DR, **Ramchandran R**, Wang L. Interaction of tumor cells and astrocytes promotes breast cancer brain metastases through TGF- β /ANGPTL4 axes. *NPJ Precis Oncol.* 2019;3:24. PMID: PMC6776663
73. Thirugnanam K, Cossette SM, Lu Q, Chowdhury SR, Harmann LM, Gupta A, Spearman AD, Sonin DL, Bordas M, Kumar SN, Pan AY, Simpson PM, Strande JL, Bishop E, Zou MH, **Ramchandran R**. Cardiomyocyte-Specific *Snrk* Prevents Inflammation in the Heart. *J Am Heart Assoc.* 2019 Nov 19;8(22):e012792. PMID: PMC6915262
74. Parashar D, Geethadevi A, Aure MR, Mishra J, George J, Chen C, Mishra MK, Tahiri A, Zhao W, Nair B, Lu Y, Mangala LS, Rodriguez-Aguayo C, Lopez-Berestein G, Camara AKS, Liang M, Rader JS, **Ramchandran R**, You M, Sood AK, Kristensen VN, Mills GB, Pradeep S, Chaluvally-Raghavan P. miRNA551b-3p Activates an Oncostatin Signaling Module for the Progression of Triple-Negative Breast Cancer. *Cell Rep.* 2019 Dec 24;29(13):4389-4406.e10. PMID: PMC7380555
75. Bongard RD, Lepley M, Gastonguay A, Syrlybaeva RR, Talipov MR, Lipinsky RAJ, Leigh NR, Brahmabhatt J, Kutty R, Rathore R, **Ramchandran R**, Sem DS. Discovery and Characterization of Halogenated Xanthene Inhibitors of DUSP5 as Potential Photodynamic Therapeutics. *J Photochem Photobiol A Chem.* 2019 Apr 15;375:114-131. PMID: PMC6910256
76. Chen C, Gupta P, Parashar D, Nair GG, George J, Geethadevi A, Wang W, Tsaih SW, Bradley W, **Ramchandran R**, Rader JS, Chaluvally-Raghavan P, Pradeep S. ERBB3-induced furin promotes the progression and metastasis of ovarian cancer via the IGF1R/STAT3 signaling axis. *Oncogene.* 2020 Apr;39(14):2921-2933. PMID: PMC7346970
77. Gronseth E, Gupta A, Koceja C, Kumar S, Kutty RG, Rarick K, Wang L, **Ramchandran R**. Astrocytes influence medulloblastoma phenotypes and CD133 surface expression. *PLoS One.* 2020;15(7):e0235852. PMID: PMC7337293
78. Jamal MH, Nunes ACF, Vaziri ND, **Ramchandran R**, Bacallao RL, Nauli AM, Nauli SM. Rapamycin treatment correlates changes in primary cilia expression with cell cycle regulation in epithelial cells.

- Biochem Pharmacol. 2020 Aug;178:114056. PMID: PMC7899243
79. Spearman AD, Gupta A, Pan AY, Gronseth EI, Thirugnanam K, Gudausky TM, Foerster SR, **Ramchandran R**. Hepatic Vein Blood Increases Lung Microvascular Angiogenesis and Endothelial Cell Survival-Toward an Understanding of Univentricular Circulation. *Semin Thorac Cardiovasc Surg*. 2020 Winter;32(4):980-987. PMID: PMC7647938
80. Thirugnanam K, **Ramchandran R**. SNRK: a metabolic regulator with multifaceted role in development and disease. *Vessel Plus*. 2020;4. PMID: PMC7508454
81. Dey A, Prabhudesai S, Zhang Y, Rao G, Thirugnanam K, Hossen MN, Dwivedi SKD, **Ramchandran R**, Mukherjee P, Bhattacharya R. Cystathione γ -synthase regulates HIF-1 α stability through persulfidation of PHD2. *Sci Adv*. 2020 Jul;6(27). PMID: PMC7458453
82. Parashar D, Nair B, Geethadevi A, George J, Nair A, Tsaih SW, Kadamberi IP, Gopinadhan Nair GK, Lu Y, **Ramchandran R**, Uyar DS, Rader JS, Ram PT, Mills GB, Pradeep S, Chaluvally-Raghavan P. Peritoneal Spread of Ovarian Cancer Harbors Therapeutic Vulnerabilities Regulated by FOXM1 and EGFR/ERBB2 Signaling. *Cancer Res*. 2020 Dec 15;80(24):5554-5568. PMID: PMC7744365
83. Bogush N, Tan L, Naib H, Faizullahoy E, Calvert JW, Iismaa SE, Gupta A, **Ramchandran R**, Martin DIK, Graham RM, Husain A, Naqvi N. DUSP5 expression in left ventricular cardiomyocytes of young hearts regulates thyroid hormone (T3)-induced proliferative ERK1/2 signaling. *Sci Rep*. 2020 Dec 14;10(1):21918. PMID: PMC7736286
84. Gupta A, Rarick KR, **Ramchandran R**. Established, New and Emerging Concepts in Brain Vascular Development. *Front Physiol*. 2021;12:636736. PMID: PMC7907611
85. Sampath V, **Ramchandran R**. The Yin and the Yang of Transformative Research During the COVID-19 Pandemic-A Perspective. *Front Pediatr*. 2021;9:650302. PMID: PMC8264183
86. Spearman AD, Gupta A, Pan AY, Gudausky TM, Foerster SR, Konduri GG, **Ramchandran R**. sVEGFR1 Is Enriched in Hepatic Vein Blood-Evidence for a Provisional Hepatic Factor Candidate? *Front Pediatr*. 2021;9:679572. PMID: PMC8236596
87. George J, Li Y, Kadamberi IP, Parashar D, Tsaih SW, Gupta P, Geethadevi A, Chen C, Ghosh C, Sun Y, Mittal S, **Ramchandran R**, Rui H, Lopez-Berestein G, Rodriguez-Aguayo C, Leone G, Rader JS, Sood AK, Dey M, Pradeep S, Chaluvally-Raghavan P. RNA-binding protein FXR1 drives cMYC translation by recruiting eIF4F complex to the translation start site. *Cell Rep*. 2021 Nov 02;37(5):109934. PMID: PMC8675433
88. Ren B, **Ramchandran R**, Yang X. Editorial: Molecular Mechanisms and Signaling in Endothelial Cell Biology and Vascular Heterogeneity. *Front Cell Dev Biol*. 2021;9:821100. PMID: PMC8718799
89. Gupta A, Thirugnanam K, Thamilarasan M, Mohieldin AM, Zedan HT, Prabhudesai S, Griffin MR, Spearman AD, Pan A, Palecek SP, Yalcin HC, Nauli SM, Rarick KR, Zennadi R, **Ramchandran R**. Cilia proteins are biomarkers of altered flow in the vasculature. *JCI Insight*. 2022 Mar 22;7(6). PMID: PMC8986075
90. Subramaniam S, Liu J, Fletcher C, **Ramchandran R**, Weiler H. Coagulation Factor IIIa (*f3a*) Knockdown in Zebrafish Leads to Defective Angiogenesis and Mild Bleeding Phenotype. *Front Cell Dev Biol*. 2022;10:852989. PMID: PMC8978257
91. Thirugnanam K, **Ramchandran R**. SNRK: A metabolic regulator with multifaceted role in development and disease *Vessel Plus*. 2020;4.
92. Kaur S, Abu-Asab MS, Singla S, Yeo SY, **Ramchandran R**. Expression pattern for unc5b, an axon guidance gene in embryonic zebrafish development (Gene Expression 13, 6, (321-327)) *Gene Expression*. 2007;14(2):129.
93. Thirugnanam K, Prabhudesai S, Van Why E, Pan A, Gupta A, Foreman K, Zennadi R, Rarick KR, Nauli SM, Palecek SP, **Ramchandran R**. Ciliogenesis mechanisms mediated by PAK2-ARL13B signaling in brain endothelial cells is responsible for vascular stability. *Biochem Pharmacol*. 2022 Aug;202:115143.
94. Merbach M, **Ramchandran R**, Spearman AD. Hepatic factor may not originate from hepatocytes. *Front Cardiovasc Med*. 2022;9:999315. PMID: PMC9486074
95. **Ramchandran R**. Endothelial cells and their role in the vasculature: Past, present and future *Frontiers in Cell and Developmental Biology*. 15 September 2022;10.
96. Zakaria ZZ, Eisa-Beygi S, Benslimane FM, **Ramchandran R**, Yalcin HC. Design and Microinjection of Morpholino Antisense Oligonucleotides and mRNA into Zebrafish Embryos to Elucidate Specific Gene Function in Heart Development. *J Vis Exp*. 2022 Aug 09(186). PMID: PMC10388372
97. Yan Y, Logan S, Liu X, Chen B, Jiang C, Arzua T, **Ramchandran R**, Liu QS, Bai X. Integrated

- Excitatory/Inhibitory Imbalance and Transcriptomic Analysis Reveals the Association between Dysregulated Synaptic Genes and Anesthetic-Induced Cognitive Dysfunction. *Cells*. 2022 Aug 11;11(16). PMID: PMC9406780
98. Chowdhury S, **Ramchandran R**, Palecek SP, Acevedo-Acevedo S, Bishop E. Sucrose Nonfermenting-Related Kinase Expression Is Related to a Metabolic Switch in Ovarian Cancer Cells That Results in Increased Fatty Acid Oxidation. *Cancer Invest*. 2023 Apr;41(4):330-344.
99. **Ramchandran R**. Endothelial cells and their role in the vasculature: Past, present and future. *Front Cell Dev Biol*. 2022;10:994133. PMID: PMC9520988
100. George J, Li Y, Kadamberi IP, Parashar D, Tsaih SW, Gupta P, Geethadevi A, Chen C, Ghosh C, Sun Y, Mittal S, **Ramchandran R**, Rui H, Lopez-Berestein G, Rodriguez-Aguayo C, Leone G, Rader JS, Sood AK, Dey M, Pradeep S, Chaluvally-Raghavan P. RNA-binding protein FXR1 drives cMYC translation by recruiting eIF4F complex to the translation start site. *Cell Rep*. 2023 Mar 28;42(3):112228. PMID: PMC10233815
101. **Ramchandran R**, Del Fattore A, Wingert RA. Editorial: Editors' showcase-insights into molecular and cellular pathology. *Front Cell Dev Biol*. 2023;11:1235103. PMID: PMC10303773
102. Thirugnanam K, Gupta A, Nunez F, Prabhudesai S, Pan AY, Nauli SM, **Ramchandran R**. Brain microvascular endothelial cells possess a second cilium that arises from the daughter centriole. *Frontiers in Molecular Biosciences*. 2023;10.
103. Thirugnanam K, Gupta A, Nunez F, Prabhudesai S, Pan AY, Nauli SM, **Ramchandran R**. Brain microvascular endothelial cells possess a second cilium that arises from the daughter centriole. *Front Mol Biosci*. 2023;10:1250016. PMID: PMC10657992
104. Wan T, Rousseau H, Mattern C, Tabor M, Hodges MR, **Ramchandran R**, Spearman AD. Glenn circulation causes early and progressive shunting in a surgical model of pulmonary arteriovenous malformations. *bioRxiv*. 2024 Apr 05. PMID: PMC11014550

Books, Chapters, and Reviews

1. **Ramchandran R**, Karumanchi SA, Hanai JJ, Alper SA, and Sukhatme VP. "Cellular actions and signaling by endostatin" in *Critical Reviews in Eukaryotic Gene Expression*. 2002, 12: 175-91. (review)
2. Samant GV, Kaur S, and **Ramchandran R**. "Slit-Robo signaling in development and disease" in *Adhesion and Guidance Receptors in Angiogenesis*, 2010: 103-117 ISBN: 978-81-7895-500-1, Editor: Julie Gavard
3. Li, K and **Ramchandran R**. Natural antisense transcript: A concomitant engagement with protein-coding transcript. *Oncotarget*, 2010. In press.
4. Chun, C, Sood, R, and **Ramchandran R**. "Vasculogenesis and Angiogenesis: Contributions to Vascular Anomalies" in *Vascular Tumors and Developmental Malformations: Pathogenic Mechanisms and Molecular Diagnosis*. Springer, 2011. In press

Editorials, Letters to Editor, Other

1. Proceedings of Meetings: Knebelmann B, Dhanabal M, **Ramchandran R**, Waterman M, Lu H, Sukhatme VP. Endostatin inhibits VEGF and bFGF induced MAPK activation in endothelial cells. *Proc. Amer. Assoc. Cancer Res*. 40, March 1999.
2. Dissertation: **Ramchandran R**. A GATA ten motif found in the γ -globin LCR possesses insulator and silencer properties [dissertation]. Augusta (GA): Medical College of Georgia: 1997. (Under the direction of Dorothy Y.H. Tuan, Ph.D.)
3. Dissertation: Leigh, N. Functional Investigation of a MMP-17 like protein in *Danio Rerio* [dissertation]. Milwaukee (WI): Medical College of Wisconsin: 2009. (Under the direction of Ramani Ramchandran, Ph.D.)
4. Patent: Glypicans and Binding partners for Endostatin. Serial number 60/193982. Sukhatme VP, Karumanchi SA, Jha V, **Ramchandran R**, and Tsiokas L.

Abstracts

1. **Ramchandran R**, Bengra C, Whitney B, Lanclos K, and Tuan D. A (GATA)7 motif located in the 5' boundary area of the human γ -globin locus control region exhibits conditional silencer activity. Presented at the 10th conference on Hemoglobin Switching, Orcas Island, WA, June 1996.
2. ***Ramchandran R**, *Dhanabal M, Jha V, Segal M, Waterman M, Lu H, Knebelmann B, Iruela-Arispe ML, Dickerson M, Reimer C, Rook S, Ennis S, DeSilva T, Ray J, Rice G, and Sukhatme VP. Apomigren, a sub-fragment of restin derived from collagen XV, shows enhanced anti-angiogenic activity. Presented

- at the 91st AACR meeting in San Francisco, CA, April 2000.
3. Bal H, **Ramchandran R**, and Soppannavar T. Shoal: A Zebrafish-centric cross-species database. Presented at the Third European Meeting on Zebrafish and Medaka Development and Genetics Conference, Paris, France June 2003.
 4. Isenberg JS, Ia Y, Field L, Wink DN, **Ramchandran R**, and Roberts DD. Redox NSAIDs and angiogenesis. Presented at the Redox-Based NSAIDs in Cancer Treatment, Prevention and Angiogenesis: A Novel Solution to an Old Problem. National Institutes of Health, Bethesda, MD, April 2006.
 5. Kao RM, Leaner VD, Nelson G, **Ramchandran R***, and Birrer MJ*. Unsuspected role of c-jun oncogene in zebrafish embryonic kidney morphogenesis. Presented at the 7th International conference on Zebrafish Development and Genetics, Wisconsin, USA June 2006.
 6. Kaur S, Field L, and **Ramchandran R**. Differential signaling readouts of robo1 and robo4 in endothelial cells. Presented at the 7th International conference on Zebrafish Development and Genetics, Wisconsin, USA June 2006.
 7. Kaur S, Loscombe P, Pendrak ML, Roberts DD, and **Ramchandran R**. Silencing of directional migration in Robo4 knockdown endothelial cells. Presented at the Gordon Conference in Ventura, CA, USA February 2007.
 8. Liu M, Moodie K, Garnaas M, Marx R, Fu Q, Yan S, Zhuang Z, **Ramchandran R**, Baraban J, and Horowitz A. A genetic mouse model of ischemic cardiomyopathy. Presented at the AHA Council on Basic Cardiovascular Sciences in Keystone, CO, USA July-August 2007.
 9. Garnaas M, Liu M, Marx R, Li K, Baraban J, Horowitz A, and **Ramchandran R**. Dartmouth Medical School, Johns Hopkins University, Medical College of Wisconsin. Syx, a novel Rho A guanine exchange factor, is essential for angiogenesis in vivo. Presented at Experimental Biology 2008, San Diego, CA.
 10. Chun C, Kaur S, Samant S, Wang L, Pramanik K, Garnaas M, Li K, Field L, Mukhopadhyay D, and **Ramchandran R**. Snrk-1 is involved in multiple steps of angioblast development and acts upstream of gridlock in artery-vein specification in vertebrates. Presented at the 8th International Conference on Zebrafish Development and Genetics in Madison, Wisconsin, USA June 2008.
 11. Horswill M, Samant G, Garnaas M, Pramanik K, Chun C, and **Ramchandran R**. Structure and functional analysis of Snrk-1 in vascular development. Presented at the 8th International Conference on Zebrafish Development and Genetics in Madison, Wisconsin, USA June 2008.
 12. Li K, Horswill M, Bedell V, and **Ramchandran R**. Differentially expressed transcripts in cloche mutant. Presented at the 8th International Conference on Zebrafish Development and Genetics in Madison, Wisconsin, USA June 2008.
 13. Samant G, Kaur S, Pramanik K, Loscombe P, Pendrak M, Roberts D, and **Ramchandran R**. Roundabout4, an essential gene in zebrafish angiogenesis in vivo is responsible for the directional migration of differentiated endothelial cells in vitro. Presented at the 8th International Conference on Zebrafish Development and Genetics in Madison, Wisconsin, USA June 2008.
 14. Pramanik K, Chun C, Garnaas M, Samant G, Li K, and **Ramchandran R**. Dusp-5 and Snrk-1 functionally coordinate vascular development in vivo. Presented at the 8th International Conference on Zebrafish Development and Genetics in Madison, Wisconsin, USA June 2008.
 15. Makky K, Duvnjak P, Pramanik K, Ramchandran, R, and Mayer A. A high-throughput assay to measure whole body metabolic rate using zebrafish larvae. Presented at LabAutomation 2009, Palm Springs, California, USA January 2009.
 16. Samant G, Pramanik K, Leigh N, Horswill M, Beltrame M, and **Ramchandran R**. Sox transcription factor mediated transcriptional regulation of Robo4 expression and function. Presented at American Association of Anatomists, Anaheim, CA, USA April 2010.
 17. Sinha I, Pramanik K, Das A, Salato V, Olson A, Neumann T, Sem D, North PE and **Ramchandran R**. Dusp-5: A potential target for vascular anomalies. Presented at 9th International Meeting on Zebrafish and Genetics, Madison, WI, USA June 2010.
 18. Li K, Blum Y, Verna A, Liu Z, Pramanik K, Leigh NR, Chun CZ, Samant GV, Zhao B, Garnaas MK, Horswill MA, Stanhope SA, North PE, Miao RQ, Wilkinson GA, Affolter M, and **Ramchandran R**. Identification of Natural Antisense Transcripts for tie-1 and dll4. Presented at the 9th International Meeting on Zebrafish and Genetics, Madison, WI USA June 2010.
 19. Horswill M, Garnaas M, Samant G, Chun CZ, Sinha I, Li K, Pramanik K, **Ramchandran R**. Identification of novel sucrose non-fermenting related kinase (Snrk-1) substrate(s) during vascular development and disease. Presented at the 9th International Meeting on Zebrafish and Genetics, Madison, WI USA June 2010.
 20. Samant GV, Chun CZ, Sinha I, Horswill MA, Pramanik K, Beltrame M and **Ramchandran R**. Sox

- transcription factor mediated transcriptional regulation of Robo4 expression and function. Presented at the 9th International Meeting on Zebrafish and Genetics, Madison, WI USA June 2010.
21. Chun C, Remadevi I, Samant, G, Pramanik K, Wilkinson G, and **Ramchandran R**. Fli+/etsrp hemato?vascular progenitor cells proliferate at the lateral plate mesoderm during vasculogenesis in Zebrafish. Presented at the 9th International Meeting on Zebrafish and Genetics, Madison, WI USA June 2010.
 22. Lakshmikanthan S, Sobczak M, Chun CZ, Henschel A, Dargatz J, **Ramchandran R**, and Chrzanowska-Wodnicka M. Rap1b promotes angiogenesis via integrin ???3-dependent VEGFR2 activation. Presented at the 16th International Vascular Biology Meeting, Los Angeles, CA USA June 2010.
 23. Chrzanowska-Wodnicka M, Lakshmikanthan S, Sobczak M, Chun CZ, Henschel A, Dargatz J, and **Ramchandran R**. Small G protein Rap1b regulates VEGF-mediated angiogenesis through integrin ?V?3. Presented at ASCB (The American Society for Cell Biology, Philadelphia, PA USA July 2010.
 24. Bhattacharya R, Pramanik K, Wang E, Guangqi E, Guha S, **Ramchandran R** and Mukhopadhyay D. Protein kinase D regulates differentiation and VEGF-mediated signaling in endothelial cells. Presented at the 4th Mayo Clinic Angiogenesis Symposium, Mackinac Island, MI USA August 2010.
 25. Pace J, Leigh N, **Ramchandran R** and Imig J. Modulators of the EET pathway affect development and angiogenesis in zebrafish embryos. Presented at MCW Research Day Meeting, Medical College of Wisconsin, Milwaukee, WI USA September 2010.
 26. Brosig Soto C, North P, Peterson T, **Ramchandran R**, Weber D. Linking congenital cardiovascular malformations to neurobehavioral outcomes in a zebrafish model: Preliminary Studies. Children's Environmental Health Sciences Center, University of Wisconsin-Milwaukee.
 27. Pace J, Leigh N, **Ramchandran R**, Imig JD. Modulators of a CYP Pathway Affect Development and Angiogenesis in Zebrafish Embryos. Experimental Biology National Conference 2011, Washington, DC.
 28. Weber D, Brosig C, North, P, Peterson T, **Ramchandran R**. Linking Congenital Cardiovascular Malformations to Neurobehavioral Outcomes in a Zebrafish Model: Preliminary Studies. 4th Annual Pediatric Behavioral Health Research Conference: Building and Sustaining Research Teams, Milwaukee, WI.
 29. Retreats/Open House Abstracts or Posters: 2005 NCI PI Retreat, Marriott, Bethesda, MD; 2006 NCI PI Retreat, Marriott, Bethesda, MD; 2007, Children's Research Institute, Milwaukee, WI, Open House, Developmental Vascular Biology Program; 2007 Summer Student Presentations (Anne Kroll), MCW Milwaukee, WI; 2008 Panel Discussion Member, New Faculty Orientation for Department of Pediatrics, MCW - Topic: How to be a successful independent investigator!
 30. **Ramchandran R**, Dhanabal M, Volk R, Waterman MJF, Segal M, Lu H, Knebelmann B, and Sukhatme VP. Anti-angiogenic activity of Restin, NC10 domain of human Collagen XV. AACR Meeting, 1999.
 31. Hanai J, Gloy J, Karumanchi SA, **Ramchandran R**, Kale S, Jha V, Sukhatme VP, and Sokol S. Endostatin functions by inhibiting ?-catenin signaling. Keystone Symposia, 2002.
 32. Zhao B, Chun C, Liu Z, Horswill M, Pramanik K, Wilkinson GA, **Ramchandran R**, and Miao Q. Nogo-B Receptor Is Essential for Angiogenesis in Vivo via Akt Pathway, American Heart Association's Specialty Conferences in 2010 is among the top 10 percent of the accepted abstracts represent your abstract as a poster presentation at Scientific Sessions 2010, November 13-17, in Chicago.
 33. Lakshmikanthan S, Sobczak M, Chun CZ, Henschel A, Dargatz J, **Ramchandran R**, and Chrzanowska-Wodnicka M. Rap1b promotes angiogenesis via integrin ???3-dependent VEGFR2 activation. Presented at the 16th International Vascular Biology Meeting, Los Angeles, CA USA June 2010.
 34. Duffy KJ, Johnson C, Santoro J, and **Ramchandran R**. A Novel Approach to Identify Candidate Genes in Patients with Lymphatic Malformations. Upcoming Presentation at David W. Smith Workshop on Morphogenesis and Malformations, Los Angeles, CA. September 2011.