CURRICULUM VITAE

Updated: January 15, 2025 Name: Marlene Rabinovitch

Address: Cardiopulmonary Research Program

Department of Pediatrics

Stanford University School of Medicine

CCSR Building, Room 1215a

269 Campus Drive

Stanford, CA 94305-5162

Education

1967 B.S. McGill University, Montreal, Quebec, Canada1971 M.D. McGill University, Montreal, Quebec, Canada

Awards

1971	Cushing Memorial Award in Pediatrics - McGill University
1994	Research Achievement Award, Canadian Cardiovascular Society
1996	Julius Comroe Lectureship - American Physiological Society
1997	Endowed Research Chair, Heart & Stroke Foundation of Ontario
1999	Award of Merit, Heart & Stroke Foundation of Canada
2000	MRC Distinguished Scientist Award
2002	Dunlevie Endowed Research Chair
2002	Paul Dudley White Lectureship, American Heart Association
2003	Gill Heart Institute Award for Outstanding Contribution to CV Research
2004	CIHR-Institute of Circulatory & Respiratory Health Lectureship and Prize
2004	The American Heart Association Basic Research Prize
2005	The American Heart Association Dickinson Richards Lecture
2006	The American Heart Association Distinguished Scientist Award
2008	American Thoracic Society, Recognition Award for Scientific Accomplishment
2010	Louis and Artur Lucian Award for Research in Circulatory Diseases, McGill Univ
2012	Judith Pool Award, North California Chapter of the Assoc. for Women in Science
2015	Mentor Award of Excellence, Department of Pediatrics, Stanford University
2016	J. Burns Amberson Lecturer, ATS International Conference, San Francisco, CA
2016	Robert F Grover Prize, Assembly on Pulmonary Circulation, ATS
2017	The American Heart Association Distinguished Scientist Lecturer, Anaheim, CA
2019	Robert Beamish Leadership Award, Univ. of Manitoba, Institute of CVSciences
2021	ATVB Distinguished Lecturer, AHA Scientific Sessions
2023	Research Achievement Award, American Heart Association

Postdoctoral Training

Internships and Residencies:

1971-1972 Intern in Pediatrics

University of Colorado, Medical Center, Denver, Colorado

1972-1973	Resident in Pediatrics, University of Colorado Medical Center, Denver, Colorado
	Clinical and Research Fellowships:
1974-1975	Clinical Fellow in Pediatric Cardiology
	Texas Children's Hospital, Baylor College of Medicine, Houston, Texas
1975-1976	Clinical Fellow in Pediatric Cardiology
	Children's Hospital Medical Center, Harvard Medical School, Boston,
	Massachusetts
1976-1977	Research Fellow in Pediatric Cardiology
	Children's Hospital Medical Center, Harvard Medical School, Boston,
	Massachusetts

Licensure and Certification

1975-1982	Medical License, Massachusetts
1976	Diplomate of American Board of Pediatrics
1976	Fellow, Royal College of Physicians & Surgeons of Canada (Peds Cardiology)
1979	Diplomate of the American Board of Pediatrics Sub-Board of Pediatric Cardiology
1981	Fellow of the American College of Cardiology
1982-present	Medical License, College of Physicians and Surgeons of Ontario, Canada
2002-present	Medical License, California

Current Memberships 1981 – present Ar

1981 – present	American College of Cardiology
1983 – present	Society for Pediatric Research
1983 – present	American Association of Investigative Pathology
1985 – present	American Thoracic Society
1988 – present	American Society of Cell Biology
1989 - present	American Society for Clinical Investigation
1996 – present	North American Vascular Biology Organization
2003 – present	American Heart Association
2004 - present	American Pediatric Society
2009 - present	Association of American Physicians

Academic Appointments

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1977-1978	Instructor in Pediatrics
	Children's Hospital Medical Center, Harvard Medical School, Boston,
	Massachusetts
1979-1982	Assistant Professor in Pediatrics
	Harvard Medical School, Boston, Massachusetts
1982-1988	Associate Professor in Pediatrics and Laboratory Medicine & Pathobiology
	University of Toronto, Ontario, Canada
1982-2002	Member, Graduate Faculty, Dept. of Laboratory Medicine & Pathobiology
	University of Toronto, Ontario, Canada
1988-2002	Professor of Pediatrics and Laboratory Medicine and Pathobiology
	University of Toronto, Ontario, Canada

1994-2002	Professor, Department of Medicine
	University of Toronto, Ontario, Canada
1996-2002	Member, Graduate Faculty, Institute of Medical Science
	University of Toronto, Ontario, Canada
1982-2002	Senior Associate in Pediatrics and Pathology
	The Hospital for Sick Children, Toronto, Ontario, Canada
1986-1988	Acting Director of Cardiovascular Research Institute
	The Hospital for Sick Children, Toronto, Ontario, Canada
1988-2002	Director of Cardiovascular Research
	Research Institute, The Hospital for Sick Children, Toronto, Ontario, Canada
2002-present	Dwight and Vera Dunlevie Professor of Pediatric Cardiology
	The Vera Moulton Wall Center for Pulmonary Vascular Disease
	Stanford University School of Medicine, Stanford, California
2002-2013	Professor (by courtesy) of Developmental Biology
	Stanford University School of Medicine, Stanford, California
2002-present	Graduate Faculty, Developmental Biology
	Stanford University School of Medicine, Stanford, California
2005-2015	Co-Director, Cardiovascular and Pulmonary Sciences Scholarly Concentration
	Stanford University School of Medicine, Stanford, California
2007-present	Associate Director for Translational Research – Pediatrics, CV Institute
	Stanford University School of Medicine, Stanford, California
2018-present	Director, Basic Science and Engineering Initiative, Betty Irene Moore Children's
	Heart Center, Stanford University

Major Visiting Appointments

1973-1974 Pediatrician for the Ministry of Health and Central Hospital of the Negev, Beersheba, Israel

Major Research Appointments

Major Research Appointments	
1	National Institutes of Health
	Study Section for Young Investigator Award
6	American Thoracic Society
	Program Committee (Pulmonary Circulation)
6-1989	Canadian Heart and Stroke Foundation and Heart and Stroke Foundation of
	Ontario, Grant Review Study Sections
6-1989	American Heart Association
	Grant Review Study Section
6-1989	Society for Pediatric Research
	Executive Council (Developmental Biology)
6-present	National Institutes of Health
	NHLBI Program Project Site Visit Teams Ad Hoc
7-1993	Association of Medical School Pediatric Department Chairmen
	Pediatric Scientist Training Program, Member of Selection Committee
7-1989	Searle Pharmaceutical Co.
	1 6 6-1989 6-1989 6-1989 6-present 7-1993

1988- 1991	Research and Development Consultant American Heart Association Executive Councils: (i) Cardiovascular Disease in the Young; (ii) Cardiopulmonary
1988-1990	and Critical Care Heart and Stroke Foundation of Ontario Vice Chairman of Scientific Review, Research Development Committee, Publications Committee
1988-1991	Medical Research Council of Canada Cardiovascular Research Committee A Study Section
1990-1994	National Institutes of Health Pathobiochemistry Study Section
1990-1992	American Heart Association Cardiopulmonary Program Committee
1991-1994	Medical Research Council of Canada Cardiovascular System 'A', Committee Chairman
1991-1992	American Thoracic Society Publications Policy Committee
1992-1995	American Heart Association Council on Cardiopulmonary and Critical Care Program Chairman for Scientific Sessions
1992-1997	Alberta Heritage Foundation for Medical Research Clinical Applications Advisory Committee
1993- 1997	Medical Research Council of Canada Committee for Policy, Planning, Analysis and Evaluation
1992-1993	Canadian Cardiovascular Society Pediatric Program Chairman
1993-1995	Heart and Stroke Foundation of Ontario, Canada Vice Chair of Research Policy
1994-present	National Institutes of Health Reviewer Reserve
1994	Canadian Society for Clinical Investigation Executive Councilor
1994	American Heart Association Intercouncil Working Group, Molecular and Gene Therapy
1995-1997	Medical Research Council of Canada Chair, Science & Research Advisory Committee
1998-present	World Congress of Pulmonary Circulation Scientific Advisory Committee
1998-2001	Society for Pediatric Research E. Mead Johnson Award Selection Committee
1998	Children's Hospital of Philadelphia Chair, External Advisory Board, Pediatric Cardiology Training Program
1999	The Children's Heart Foundation, Chicago Medical Advisory Board

1999-2002	Heart & Stroke/Richard Lewar Centre of Excellence, Toronto, Canada Executive Committee
1999-2002	Gairdner Foundation of Canada Co-Chair, Scientific Advisory Panel
2000-2002	Heart & Stroke Foundation of Canada Research Policy and Planning Advisory Committee
2000-2002	American Heart Association Member-at-large, Executive Committee, Council on Cardiopulmonary and Critical
2001-2002	Care Heart and Stroke Foundation of Canada Chair, Scientific Review
2001-2002	Doris Duke Foundation
	Translation Research Advisory Committee
2001-2003	Canadian Institutes of Health Research (formerly Medical Research Council of Canada)
2004 2007	Circulatory and Respiratory Institute Advisory Board
2001-2007	Burroughs Wellcome Fund Translational Research Advisory Committee
2002-2004	Gairdner Foundation of Canada
2002-2004	Medical Advisory Board
2002-present	·
	Hospital of Philadelphia, Univ. of Pennsylvania
2002-2005	Pulmonary Hypertension Association
	Scientific Advisory Board
2004-present	American Thoracic Society
	Pulmonary Circulation Council
2004-2007	American Pediatric Society
0000 0000	Executive Council
2006-2009	Pulmonary Vascular Research Institute
2000	Executive Committee
2006	NIH/NHLBI Strategic Working Group integrative Approaches to Pathogenetic
2000 2011	Research, Bethesda, Maryland
2008-2011 2008 – 2016	NIH/NHLBI Scientific Advisory Council to the Director
2006 – 2010	Max Planck Institute for Heart and Lung Research
2011 - 2017	Scientific Advisory Board of the Max Planck Society Children's Discovery Institute, Scientific Advisory Board
2011 - 2017	Washington University School of Medicine
2011 - 2016	NHLBI Lung Repair and Regeneration Consortium (LRRC)
2011 - 2010	External Advisory Board
2014 - 2016	American Heart Association
2011 2010	Chair, Distinguished Scientist Selection Committee
2018-present	Gladstone Institute Scientific Advisory Board
2019-2021	Amgen Cardiovascular and Metabolism Discovery Research
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Scientific Advisory Board

2020-2023 Medicine by Design Scientific Advisory Board, University of Toronto

2022- present Penn Cardiovascular Institute (CVI) and emerging CHOP CVI Scientific Advisory

Board, University of Pennsylvania

2022 Tiakis Biotech AG, Medical Advisory Board

2022-2023 Keystone Symposium: Pulmonary Hypertension: State of the Art and Therapeutic

Opportunities, Organizer

2024-2025 Pfizer Scientific Consultant 2024-present Merck, Scientific Consultant

2025 Ad Hoc Member, Boston Children's Hospital Scientific Advisory Committee

1996

Hospital/University Committees		
1980-1982	Harvard Student Financial Aid Committee	
	Harvard Medical School, Boston, Massachusetts	
1983	Pathology Search Committee	
	University of Toronto, Ontario, Canada	
1983	Pulmonary Search Committee	
	The Hospital for Sick Children, University of Toronto, Ontario, Canada	
1985	Equipment Committee, Research Institute	
	The Hospital for Sick Children, Toronto, Ontario, Canada	
1986	Cardiology Search Committee	
	The Hospital for Sick Children, University of Toronto, Ontario, Canada	
1987	Graduate Student Committee	
	Department of Laboratory Medicine & Pathobiology, University of Toronto, Ontario,	
	Canada	
1988	Cardiovascular Surgery Search Committee	
	The Hospital for Sick Children, Toronto, Ontario, Canada	
1988	Phase III Planning Committee	
	University of Toronto, Ontario, Canada	
1990	Department of Laboratory Medicine & Pathobiology, Promotions Committee	
	University of Toronto, Ontario, Canada	
1990	Department of Laboratory Medicine & Pathobiology, Search Committee	
	University of Toronto, Ontario, Canada	
1994	Faculty of Medicine, Graduate Review Committee	
	University of Toronto, Ontario, Canada	
1995-1997	Chairman, Staff Review Committee, Research Institute	
	The Hospital for Sick Children, Toronto, Ontario, Canada	
1996-2002	Executive Committee, Cardiovascular Sciences Collaborative Program	
	University of Toronto, Ontario, Canada	
1996	Search Committee, Pediatrics Chair	
	University of Toronto, Ontario, Canada	

Search Committee, Neonatology Division Head

University of Toronto, Ontario, Canada

1996-2002	Research Committee, Research Institute
400= 0000	The Hospital for Sick Children, Toronto, Ontario, Canada
1997-2002	Research Committee, Department of Pediatrics
1000 0000	The Hospital for Sick Children, Toronto, Ontario, Canada
1998-2002	Research Institute, Steering Committee
1000 0000	The Hospital for Sick Children, Toronto, Ontario, Canada
1998-2002	Research Institute, Chair, Translation Research Committee
1000 0000	The Hospital for Sick Children, Toronto, Ontario, Canada
1998-2002	Research Institute, Recruitment & Retention Committee
1000 0000	The Hospital for Sick Children, Toronto, Ontario, Canada
1999-2002	Department of Pediatrics, Grand Rounds Committee
0000	The Hospital for Sick Children, Toronto, Ontario, Canada
2002-present	Selection Committee, Medical Science Training Program (MSTP)
0000 0004	Stanford University School of Medicine, Stanford, California
2002-2004	Chair, Pediatric Pulmonary Division Chief Search Committee
0000 0004	Stanford University School of Medicine, Stanford, California
2002-2004	Member, Wall Center Professor Search Committee
0004 0005	Stanford University School of Medicine, Stanford, California
2004-2005	Member, Department of Medicine, Pulmonary Division Chief Search Committee
0004	Stanford University School of Medicine, Stanford, California
2004-present	Member, Steering Committee, Cardiovascular Institute
0005 0045	Stanford University School of Medicine, Stanford, California
2005-2015	Co-Director, Cardiovascular and Pulmonary Scholarly Concentration
2005 2000	Stanford University School of Medicine, Stanford, California
2005 – 2009	Chair, McCormick Lecture Committee
0000	Stanford University School of Medicine, Stanford, California
2006–present	Member, Executive Committee, Cardiovascular Medical Research and Education
2000 procent	Fund, Philadelphia, Pennsylvania Associate Director in Basic Research, Executive Committee, Cardiovascular
2009-present	Institute, Stanford University School of Medicine, Stanford, California
2019 procent	•
Zu ro-present	Director, Basic Science and Engineering Program, Betty Irene Moore Children's Heart Center, Stanford University School of Medicine, Stanford, California
2025	•
2020	Ad Hoc Member, Boston Children's Hospital Scientific Advisory Committee

Associate Editor

1999-2002 Pediatric Research1999-2004 Circulation Research

Editorial Board (past and present)

Circulation

Circulation Research

International Journal of Biochemistry & Cell Biology

American Journal of Respiratory Cell and Molecular Biology

The Canadian Journal of Cardiology

Journal of Cardiovascular Pathology

Molecular Medicine

American Journal of Physiology: Lung Cellular & Molecular Physiology

Arteriosclerosis, Thrombosis, and Vascular Biology

Journal of Clinical Investigation (Consulting Editor)

Annual Reviews of Physiology (2010-2015)

Vascular Pharmacology (2021-present)

Journal of American College of Cardiology: Basic to Translational Science journal (2020-present,

Section Editor)

Reviewer

American Journal of Cardiology

American Journal of Pathology

American Journal of Physiology; Cell Physiology

American Journal of Physiology: Heart and Circulatory Physiology

American Journal of Physiology: Lung Cellular and Molecular Physiology

American Journal of Respiratory Cell & Molecular Biology

American Review of Respiratory Diseases

Cardiovascular Research

Circulation

Circulation Research

Development

Developmental Biology

European Heart Journal

Human Molecular Genetics

Journal of Applied Physiology

Journal of Biological Chemistry

Journal of Cell Biology

Journal of Cell Physiology

Journal of Clinical Investigation

Journal of Thoracic and Cardiovascular Surgery

Laboratory Investigation

Nature Medicine

Pediatric Pulmonology

Pediatric Research

PNAS

Nature Communications

Major Research Interests

- 1. Pulmonary circulation in congenital heart disease
- 2. Pulmonary hypertension
- 3. Molecular mechanisms regulating vascular endothelial, smooth muscle cell and inflammatory cell interactions -extracellular matrix interactions
- 4. Endogenous retrovirus and inflammation

5. Gene regulation, metabolism and epigenetics, high throughput assays, gene regulation, gene therapy transgenic mouse models of altered cardiovascular development and disease

Research Support

Research Su	pport
1979-1982	NIH Grant R01 - HL24418
	Pulmonary Hypertension in Congenital Heart Disease
	(Principal Investigator)
1979-1982	NIH Grant R01 - HL2323
	SCOR in Pulmonary Hypertension
	(Co-investigator)
1982-1985	Heart and Stroke Foundation of Ontario, (Grant I - 4-14; Grant-in-Aid)
	Pathogenesis of Pulmonary Vascular Disease
	(Principal Investigator)
1982-1986	Heart and Stroke Foundation of Ontario, (Grant II – 094; Personnel Award)
	Pathogenesis of Pulmonary Vascular Disease
	(Principal Investigator)
1983-1989	Heart and Stroke Foundation of Ontario
	(Research Associate Award)
1984-1987	Medical Research Council Of Canada, (Grant MT 8546)
	In Vitro Studies of Ductus Arteriosus Endothelial and Smooth Muscle Cells
	(Principal Investigator)
1986-1989	Heart and Stroke Foundation of Ontario
	Endothelial Dysfunction in the Pathogenesis of Pulmonary Vascular Disease
	(Principal Investigator)
1987	Bellhouse Products Grant
	Endothelialization of Heart Valves
	(Principal Investigator)
1987-1989	Medical Research Council of Canada (Grant MT 8546 - renewal)
	Functional Interactions of Endothelial and Smooth Muscle Cells in the Ductus
	Arteriosus and Fetal Pulmonary Circulation
	(Principal Investigator)
1992 - 1994	Heart and Stroke Foundation of Ontario
	Career Investigator
1992-1995	Heart and Stroke Foundation of Ontario
	Elastase in Pulmonary Hypertension
	(Principal Investigator)
1992-1997	Medical Research Council Of Canada
	Regulation of Fibronectin and Hyaluronan Governs Vascular Smooth Muscle Cell
	Migration and Intimal Proliferation
	(Principal Investigator)
1993-1996	Medical Research Council of Canada
	Coordinator of Program Grant
	Interdisciplinary Program in Vascular Development and Disease

1993-1995	Cutter/Canadian Red Cross Society Use of the Blood Product Alpha-1 Antitrypsin in the Treatment of Bronchopulmonary Dysplasia
1994-1997	(Principal Investigator) Heart and Stroke Foundation of Ontario Career Investigator
1994-1996	Heart and Stroke Foundation of Ontario Regulation of Expression of Elastin and Elastase in Vascular Development (Principal Investigator)
1995-1998	Heart and Stroke Foundation of Ontario Endogenous Vascular Elastases in the Progression and Regression of Vascular Disease (Principal Investigator)
1996-2001	Medical Research Council of Canada (Coordinator of Program Grant) Interdisciplinary Program in Vascular Development and Disease (Principal Investigator)
1996-1999	Heart & Stroke Foundation of Ontario Regulation of Vasculogenesis by the Elastase Inhibitor Elafin: Studies Using a Transgenic Approach (Principal Investigator)
1997-1999	Servier Are mechanisms Regulating Adipsin and Elastase in Pulmonary Hypertension Related to Starvation or Dexfenfluramine (Principal Investigator)
1997-1998	PPH Cure Foundation Elastase Inhibition, Tenascin Withdrawal and L-Arginine in Preventing Progression and Inducing Regression of Pulmonary Vascular Disease (Principal Investigator)
1998-2001	Heart & Stroke Foundation Of Canada Apolipoprotein A, AML1, Elastase and Tenascin in Pulmonary Vascular Disease (Principal Investigator)
1999-2002*	Heart & Stroke Foundation of Canada Robert Freedom Endowed Chair for Cardiovascular Research *Funds not transferable to the United States beyond 2002
1999-2002	Heart & Stroke Foundation of Canada Regulation of Cardiovascular Remodeling by Elafin and a Novel Vascular Chymase: Studies Including a Transgenic Approach (Principal Investigator)
1999-2004* (2002)	The Hospital for Sick Children Foundation Ductus Gene Therapy Fund (Principal Investigator) *Funds not transferable to the United States beyond 2002.

2000-2002 University of Toronto, Dales Award

(Principal Investigator)

2000-2005*

(2002) Medical Research Council of Canada

Elastase Myocardial Remodeling and Progenitor Cells

(Principal Investigator)

*Funds not transferable to the United States beyond 2002.

2000-2005*

(2002) Medical Research Council of Canada

Distinguished Scientist Award

Elastase and the Extracellular Matrix in Vascular Disease *Funds not transferable to the United States beyond 2002.

2000-2006 NIH R01 (HL062512)

Chronic Lung Injury After Premature Birth

(Co- Principal Investigator)

2001-2006*

(2002) Canadian Institutes of Health Research (formerly Medical Research Council of

Canada) Coordinator, Interdisciplinary Program in Cardiovascular Development

and Disease

(Principal Investigator) (\$268,931/annum)

LC-3, Apolipoprotein D and Mechanisms of Neointimal Formation

(Principal Investigator)

*Funds not transferable to the United States beyond 2002.

2001-2006*

(2002)

Heart and Stroke Foundation of Canada

AML1, Mts1, Progression and Regression of Pulmonary Vascular Disease

(Principal Investigator)

*Funds not transferable to the United States beyond 2002.

2004-2006 Beckman Foundation for Translation Research, Stanford University

(Joint award with Dr. Martin Brown)

2006-2014 CMREF/PHBI

Stanford IPAH Transplant and Preparation Center

(Principal Investigator)

2007-2008 Scleroderma Research Foundation

Viral Mediated Pulmonary Hypertension as a Model for Scleroderma

(Principal Investigator)

2007-2008 National Scleroderma Foundation

S100A4/Mts1-Induced Pulmonary Hypertension and Scleroderma

(Principal Investigator)

2007-2013 NIH K12 RFA-HL-07-004:CDP

Stanford Career Development Program in the Genetics and Genomics of Lung

Diseases

(Co-Director; PI: M Krasnow)

2008-2012 NIH R01 HL086631 Mechanical Ventilation of Newborn Mice: Impact on Alveolarization and Lung Elastin (Co-Investigator; PI: RD Bland) 2009-2011 Children's Heart Foundation Computationally Guided Design of Biodegradable Drug Eluting Stents for the Treatment and Reversal of Vascular Stenoses in Children with Congenital Heart **Defects** (Principal Investigator) 2009-2011 Brigham and Women's Hospital Subaward 104957 on R01 HL060234 Heme Oxygenase 1/Carbon Monoxide in Lung Vascular Injury (Co-Investigator – Stanford Subcontract PI; PI: A.M.K. Choi) 2010-2011 NIH R21 HL098782 Identifying the Serine Elastase Elevated in Pulmonary Vascular Disease (Principal Investigator) 2010-2015 NIH N01-HV-00242 Proteomics of Inflammation, Immunity and Pulmonary Arterial Hypertension Project I: Dysregulated B Cells and PAH (PI: GP Nolan; PI of Project I: M Rabinovitch) 2011-2016 NIH/NHLBI U01 RFA HL-11-006 (UHL107393A) iPSC Derived EC as Surrogates Using Pulmonary Hypertension as a Prototype Disease (PIs: M. Rabinovitch, M. Snyder, J. Wu) 2011-2013 NIH R03 RFA-HL-11-032 Cell Specific Localization of Altered Gene Expression in Pulmonary Hypertension (Principal Investigator) 2013-2019 NIH K12 HL120001 Stanford Career Development Program in Omics of Lung Diseases (PIs: M. Rabinovitch, MP Snyder, MR Nicolls) 2014-2019 NIH R24 HL123767 Subaward from the Indiana University, Indianapolis, IN (Prime sponsor: NHLBI) Pulmonary Hypertension Breakthrough Initiative (Co-Investigator – Stanford Subcontract PI; PI: M Geraci) 2015-2019 NIH R01 HL122887 Integrative Omics as a Discovery Tool for Pulmonary Hypertension (PIs: M Rabinovitch, MR Nicolls, MP Snyder) 2017-2022 NIH R01 HL138473 Endothelial Injury, BMPR2 Dysfunction and Macrophage Activation Cause EndMT and PAH (PIs: M Rabinovitch, MR Nicolls) 2011-2024 NIH P01 HL108797 Cycle II Title: Elafin Therapy for Pulmonary Arterial Hypertension Cycle I Title: Elafin Therapy for Lung Diseases

	(Program Director; Principal Investigator on Project I; Leader on Administrative Core)
2006-2025	NIH R01 HL087118
2000 2020	The BMP-PPAR Axis and Pulmonary Hypertension
	(Principal Investigator)
2004-2024	NIH R01 HL074186
	Pulmonary Hypertension in Genetically Modified Mice
	(Principal Investigator)
2020-2025	NIH R38 HL143615-01A1
	Stanford Integrated Cardiovascular/Pulmonary Residency Research Training
	Program
	(PIs: J Wu, M Fischbein, M Rabinovitch)
2021-2024	NIH R01 HL152134
	High Shear Stress Alters Gene Regulation in Pulmonary Arterial Hypertension
	(Principal Investigator)
2021-2026	NIH UM1 HG011972
	Stanford Center for Connecting DNA Variants to Function and Phenotype
	(Co-Investigator; PI: J Engreitz)
2022-2026	NIH R01 HL141851
	Human iPSC Model for Elucidating Intracellular Crosstalk Signaling in Dilated
	Cardiomyopathy
	(Co-Investigator; PIs: JC Wu, LS Qi, W Wong)
2022-2026	NIH R01 HL165420
	Modeling Tyrosine Kinase Inhibitor-Induced Vascular Dysfunction Using Human iPSC
	(Co-Investigator; PIs: JC Wu, LS Qi, W Wong)
2023-2026	Advanced Research Projects Agency for Health (ARPA-H) - 1AY1AX000002
	Heart Enabling Advancements through Regenerative Tissue (HEART) Program
	(Co-Investigator; PI: M Skylar-Scott)
2023-2027	NIH R01 HL171609
	Mapping, programming, and correcting gene regulatory sequences for Alagille
	Syndrome
	(Co-Investigator; PI: J Engreitz)
2024-2027	California Institute for Regenerative Medicine (CIRM)
	Mapping and Modeling Endothelial Cell Fate Decisions for Pulmonary Arterial
	Hypertension
	(Co-Investigator; PI: X Qiu)
2024-2027	NIH R01 HL126644
	BMPR2, Monocytes and Macrophages in Pulmonary Artery Hypertension
	(PIs: M Rabinovitch, MR Nicolls)

Research Tr	rainees (University of Toronto)
1984-1986	Herschel C. Rosenberg, M.D.
	Post-doctoral Research Fellow
	Supported by a Medical Research Council Fellowship
	Topic: Pulmonary Vascular Endothelial Injury, Altered Reactivity and Structural
	Remodeling: Hemodynamic and ultrastructural studies
1984-1985	Wendy Wilson, B.Sc.
	Supported by a Special Student-Graduate Studies
	Topic: Endothelial Derived Smooth Muscle Aligning Factor
1984-1989	Livia Todorovich (Todd)-Hunter, Ph.D.
	Graduate Student in Pathology
	Supported by a Canadian Heart Foundation Studentship
	Topic: Elastase Activity and Elastin Synthesis in Pathogenesis of Pulmonary
	Hypertension: Biochemical and Ultrastructural Studies
1986-1989	Sophronia Turner-Gomes, M.D.
	Post-doctoral Research Fellow
	Supported by a Canadian Heart Foundation Fellowship
	Topic: Platelet Activating Factor, Heightened Pulmonary Vascular Reactivity and
	Mitogenic Activity: Studies in patients and cell cultures
1986-1987	Roma Ilkiw, M.D.
	Post-doctoral Research Fellowship
	Supported by a Cardiology Research Fellow (Centennial Fellowship Grant -MRC)
	Topic: Elastase Inhibition and Prevention of Pulmonary Vascular Disease
1987-1989	Kazuo Maruyama, M.D.
	Post-doctoral Research Fellow (Japan)
	Supported by a Medical Research Council Fellowship
4007 4000	Topic: Elastase Inhibition and Progression of Pulmonary Vascular Disease
1987-1989	Jay LaBourene, M.D.
	Post-doctoral Research Fellow
	Supported by a Canadian Heart Foundation Fellowship
	Topic: Progressive Pulmonary Venous Obstruction: Hemodynamic biochemical, ultrastructural and cell culture studies
1987-1990	Li Zhu, M.D.
1907-1990	Post-doctoral Research Fellow
	Supported by a Hospital for Sick Children Foundation Award
	Topic: Ductus Arteriosus and Fetal Pulmonary Artery Cells In Culture
1987-1990	Toni Bothwell, M.Sc.
1007 1000	Graduate Student, Department of Pathology
	Supported by a Heart Foundation Studentship
	Topic: Pulmonary Vascular Smooth Muscle Mitogens and Growth Inhibitors
1987-1991	Nancy Boudreau, Ph.D.
	Graduate Student, Department of Pathology
	Supported by a Medical Research Council Studentship
	Topic: Extracellular Matrix Alterations and Smooth Muscle Differentiation

1990-1991 Jennita Slomp, M.Sc. Research Student Supported by Heart Foundation scholarship from the Netherlands Topic: SPARC Protein and Intimal Proliferation in The Ductus Arteriosus 1991-1993 Shin-ichi Oho, M.D. Post-doctoral Research Fellow Supported by a scholarship from Japan Topic: Regulation of Elastase Associated with Intimal Proliferation in Vascular Disease 1991-1994 Jun Kobayashi, M.D. Post-doctoral Research Fellow Supported by Medical Research Council Fellowship Topic: Expression and Regulation of Elastase in Endothelial Cells and Vascular **Smooth Muscle Cells** 1991-1998 Bin Zhou, M.D., Ph.D. Graduate Student, Department of Pathology Supported by Hospital for Sick Children Restracom Scholarship Topic: Regulation of Enhanced Fibronectin Translation and increased TGFß in the **Ductus** 1992-1995 Sam Shemie, M.D. Post-doctoral Research Fellow and Junior Staff in ICU Supported by a Ministry of Health Scholarship Topic: Regulation of Elastase Gene Expression in Monocrotaline-Induced Pulmonary Hypertension 1992-1994 Weimin Hu, M.D., Ph.D. Post-doctoral Research Fellow Supported by Canadian Heart Foundation Fellowship Topic: The Interleukin Responsive Element In The Fibronectin Promoter: Relevance to the Post-Cardiac Transplant Coronary Arteriopathy 1993-1995 Dennis Wigle, M.D., Ph.D. **Medical Scientist** Topic: Molecular Regulation of Elastase: Cis Elements in the Promoter/Enhancer and Trans-Acting Factors 1994-1997 Karen Thompson, Ph.D. Post-doctoral Research Fellow Supported by a Heart & Stroke Foundation of Ontario Fellowship Topic: Regulation of Growth Factor Activity by Elastase 1994-1998 Bryce Cowan, M.D., Ph.D. Graduate Student, Department of Pathology Supported by the Heart & Stroke Foundation of Ontario Studentship Topic: Cytokine-induction of Fibronectin is Related to Elastase. Molecular and Cellular Mechanisms & Efficacy of Gene Transfer Therapy 1994-1998 Peter Jones. Ph.D. Post-doctoral Research Fellow

Topic: Molecular Mechanisms Regulating Tenascin, Interactions with Fibronectin & Elastase in Vascular Remodeling in Development & Disease: Application of Transgenic Models 1995-2001 Syed Zaidi, Ph.D. Post-doctoral Research Fellow Topic: Elafin Transgenic Mouse Microtubule Associated Protein LC-3 and Post-Transcriptional Regulation of SMC Motility Genes 1995-1998 Caiying Guo, Ph.D. Post-doctoral Research Fellow Topic: Cloning a Novel Chymase Catherine Mason, M.D., Ph.D. 1996-1999 Graduate Student, Department of Laboratory Medicine & Pathobiology (formerly Pathology) Supported by a Medical Research Council Studentship Topic: Post-Transcriptional Regulation of Fibronectin in the Development of **Ductus Arteriosus Neointimal Formation** 1996-1998 Andrea Burry, M.Sc. Graduate Student, Department of Laboratory Medicine & Pathobiology Supported by a Heart & Stroke Foundation of Ontario Fellowship Topic: The Inter-Relation of TGF-, LC3 and Apolipoprotein D in the Fetal Lamb ductus arteriosus 1996-2000 Kyle Cowan, Ph.D. Graduate Student, Department of Laboratory Medicine & Pathobiology Supported by a Restracom Award Topic: Mechanisms of Vascular Cell Apoptosis & Regression of Structural Remodeling in Pulmonary Artery Organ Culture Jong-Kyun Lee, M.D. 1996-1997 Post-doctoral Research Fellow Supported by a Scholarship from Yonsei University, Korea Topic: Elastase Inhibitors in the Prevention of Myocarditis-Induced Cardiomyopathy 1996-1999 Yoshihide Mitani, M.D. Post-doctoral Research Fellow Supported by a Scholarship from MIE University, Japan Topic: Dexfenfluoramine, Elastase and Adipsin in the Pathobiology of Pulmonary Hypertension Stacy O'Blenes, M.D., M.Sc. 1997-1999 Graduate Student, Department of Laboratory Medicine & Pathobiology Supported by a Heart & Stroke Foundation of Ontario Fellowship Topic: Reciprocal Regulation of Elastase and Elastase Inhibitors In Vascular Biology 1997-1999 Agatha Lau, B.Sc., M.Sc. Graduate Student, Department of Laboratory Medicine & Pathobiology Supported by a Medical Resource Council Studentship

Topic: Regulation of LC3 by Elastin Peptides: RNA and Tubulin Binding Sites of LC3 1997-1998 Tiscar Cavelle-Garrido, M.D. Post-doctoral Research Fellow (co-supervised with Dr. Lisa Hornberger) Supported by a Restracom Award from The Hospital for Sick Children Topic: Proliferative Mechanism in Human Fetal Cardiac Myocytes 1998-2000 Pascale Dufourcq, Ph.D. Post-doctoral Research Fellow Supported by a Heart and Stroke Foundation of Canada Fellowship Topic: Role of AML1 in Smooth Muscle Cell Migration Haisong Ju, Ph.D. 1998-2000 Post-doctoral Research Fellow Supported by a Medical Research Council of Canada, Heart & Stroke Foundation of Canada Fellowship Topic: Elafin and Novel MCP-like Gene Knockout Mice: Impact on Vascular Development and Disease 1999-2001 Caroline Fallery, M.Sc. Graduate Student, Department of Laboratory Medicine & Pathobiology Topic: LC-3 is Phosphorylated through a MAP Kinase Pathway, Resulting in an Increase in Fibronectin mRNA Translation 1999-2001 Tilman Humpl M.D. Post-doctoral Fellow Supported by Department of Pediatrics, The Hospital for Sick Children Topic: Targeting Prostacyclin Synthase to the Ductus Arteriosus 1999-2002 Hamid Massaeli, Ph.D. Post-doctoral Fellow Supported by a Heart & Stroke Foundation of Ontario Fellowship Topic: The Human Vascular Chymase Gene 2000 Rakesh Bhattacharjee, M.D. **Medical Scientist** Supported by a McMaster Medical School/Medical Research Council Studentship Topic: Caspases have Elastase Activity Critical to Regression of Pulmonary Hypertension 1999-2001 Kunio Ohta, M.D. Post-doctoral Fellow Topic: Elastases Regulate Matrix Metalloproteinases in Inducing Regression of Pulmonary Vascular Disease 2000-2001 Robert VanSulven, M.D. Post-doctoral Fellow Topic: Cloning EVE (Endogenous Vascular Elastase) from Human Vascular **Smooth Muscle Cells** 2000-2002 Wesley Leung, M.Sc. **Graduate Student**

Supported by a Restracom Award, Heart & Stroke Foundation of Canada

Topic: ApoD and Smooth Muscle Cell Migration

2000-2002 Jennifer Sargeant, M.Sc., M.D.

Graduate Student

Supported by a Heart & Stroke Foundation of Ontario Fellowship

Topic: Targeted Gene Transfer in Biological Engineering of Congenital Heart

Disease

2000-2002 Takanori Nakajima, Ph.D.

Post-doctoral Fellow

Supported by a Canadian Health of Institute Research Fellowship

Topic: Progenitor Cells and Myocardial Remodeling

2002 Goran Jeremic

4th year Work Study Student, University of Waterloo Supported by funds from HSF/HSC Academic Chair

Topic: Mts1 and the Pathobiology of Pulmonary Hypertension

Research Trainees (University of Toronto and Stanford University)

2000-2004 Sandra Merklinger, Ph.D.

Graduate Student Institute of Medical Sciences

Supported by Heart & Stroke/Richard Lewar Centre of Excellence

Topic: ß3 Intergrin and Apoptosis Regression of Pulmonary Vascular Disease

2001-2008 Nesrine El-Bizri, Ph.D.

Post-doctoral Research Fellow

Supported by an American Heart Association/Pulmonary Hypertension

Association Fellowship

Topic: BMPR II and the Pathobiology of Pulmonary Vascular Disease

Research Trainees (Stanford University)

2002-2004 Allan Lawrie, Ph.D.

Post-doctoral Research Fellow

Supported by a Stanford Postdoctoral Fellowship

Topic: Mts1 and the Pathobiology of Pulmonary Vascular Disease

2002-2007 Edda Spiekerkoetter, M.D.

Post-doctoral Research Fellow

Supported by an American Heart Association/Pulmonary Hypertension

Association Fellowship

Topic: Cross Talk between S100A4/Mts1 and BMP in Smooth Muscle Cell

Migration

2004-2005 Eliana Martinez, M.D.

Post-doctoral Research Fellow

Supported by a Ludwig Translational Research Program Grant

Topic: The Role of BMBR II and Endothelial and Smooth Muscle Cell

Differentiation from Embryonic Stem Cells

2004-2005 Roham T Zamanian, M.D.

Post-doctoral Pulmonary Hypertension and Research Fellow

Supported by The Wall Center Foundation

Topic: Evaluation of Mts1 Levels in Patients with Primary and Secondary

Pulmonary Hypertension

2004-2006 Georg Hansmann, M.D.

Post-doctoral Research Fellow

Supported by an American Heart Association/Pulmonary Hypertension

Association Fellowship

Topic: Links Between Insulin Resistance and Pulmonary Hypertension

2004-2007 Nirupama S Deshpande, Ph.D.

Post-doctoral Research Fellow

Supported by The Wall Center Foundation

Topic: Regulation of LC3 Gene Expression in the Developing Nervous System and

Vasculature

2004-2009 Cristina C Alvira, M.D.

Post-doctoral Research Fellow

Supported by a Pediatric Intensive Care Fellowship

Topic: Maturational Differences in NfkB Activation in Response to Endotoxin, as

they Relate to Lung and Vascular Pathobiology

2005-2006 Lisa Chyi, M.D.

Post-doctoral Fellow

Supported by NIH Training Grant in Neonatology and Developmental Biology

Topic: Cross Talk between S100A4/Mts1 in Pulmonary Artery Smooth Muscle

Proliferation and Endothelial Function

2005-2006 Stefan Schellong

Visiting Researcher

Supported by a Boehringer Ingelheim Educational Fund and the German National

Academic Foundation Fellowship

Topic: The Role of PPAR Gamma and Apolipoproteine in Pulmonary

Hypertension

2005-2011 Vinicio A. de Jesus Perez, M.D.

Post-doctoral Fellow

Supported by NIH Training Grant in Pulmonary Medicine (2 yrs) and American

Lung Association postdoctoral Fellowship

Topic: The Role of the wnt Signaling Pathway in the Development of Pulmonary

Arterial Hypertension

2006 Alex Cheng

Undergraduate Student Researcher

Supported by American Heart Association

Topic: PPAR gamma protects the pulmonary artery against the development of

hypertension

2006 Alexandra Bruneau

Visiting Researcher

Supported by the Wall Center and Ministry of National Education, France

Topic: Smooth muscle cell motility is regulated by CLIC4 mediated internalization of S100A4/Mts1 and binding to myosin II

2006-2007 Janine M Bekker (Powers), Ph.D.

Post-doctoral Fellow

Supported by NIH/NHLBI Vascular Medicine Training Grant

Topic: LC3, a Microtubule Associated Protein, Regulates Matrix Proteins in

Pulmonary Hypertension

2006-2007 Katie Lynn Pricola

Medical Student Researcher-Medical Scholar, Stanford University School of

Medicine

Topic: SDF-1 and Pulmonary Hypertension

2006-2007 Laura Helena Rubinos

Medical Student, Baylor College of Medicine Supported by a Sarnoff Foundation Fellowship

Topic: PPAR Gamma in SMC leads to pulmonary hypertension

2006-2010 Yu-Mee Kim, Ph.D.

Post-doctoral Fellow

Supported by an American Heart Association Western Affiliate Postdoctoral

Fellowship

Topic: Murine Herpes Virus and the Pathobiology of Pulmonary Hypertension

2006-2008 Christophe Guignabert, Ph.D.

Post-doctoral Fellow

Supported by Institut National de la Sante et de la Recherché Medicale

(INSERM), France

Topic: Molecular & Cellular Effects Of Altered BMP Signaling In The Pulmonary

Circulation

2007-2009 Thomas Kleisli, M.D.

Post-doctoral Fellow

Supported by the Department of Surgery, Maricopa Medical Center, Phoenix,

Arizona

Topic: Regulation of Elastin Synthesis by Members of the Transforming Growth

Factor Superfamily

2007-2009 Tero-Pekka Alastalo, M.D., Ph.D.

Post-doctoral Fellow

Supported by the Juselius Foundation, Instrumentarium, and the Academy of

Finland

Topic: Impact of Altered Endothelial Cell PPAR Gamma Gene Regulation on

Pulmonary Hypertension

2007-2010 Hirofumi Sawada, M.D., Ph.D.

Post-doctoral fellow

Supported by a Fellowship from the Department of Pediatrics, Mie University

Graduate School of Medicine, Japan

Topic: Targeted Deletion of AML1 and the Development of Pulmonary

Hypertension

2008-2009 Molona Li Stanford University - Undergraduate Student Researcher Supported by American Heart Association Topic: Herpes Virus (gamma) Infection-induced Pulmonary Hypertension in Mts 1 2009-2010 Ying-Ju Lai, PhD Post-doctoral Fellow Supported by the Children's Heart Foundation Topic: Elastin and the Pathobiology of Pulmonary Arterial Diseases 2009-2011 David Pham Stanford University - Undergraduate Student Researcher Supported by American Heart Association Topic: Nitrated Fatty Acids as Modulators of PPARgamma function 2009-2011 Edda Spiekerkoetter, M.D. Instructor of Medicine, Pulmonary and Critical Care Division, Stanford Univ. School of Medicine Scholar in the Stanford K12 Career Development Program in Genetics and Genomics of Pulmonary diseases Topic: High Throughput Screening of Compounds Activating BMPRII 2010 - 2015 Toshie Saito, M.D. (transitioned to an Academic Appointed Research Associate) Post-doctoral Fellow Supported by NIH grants Topic: Elastin, Elastase and Autoimmunity in Pulmonary Hypertension 2011 - 2016 Nancy Ferreira-Tojais, PhD Post-doctoral Fellow Supported by NIH grants Topic: BMPs and Elastin Fiber Assembly 2011 – 2017 Caiyun Li, PhD Post-doctoral Fellow Supported by NIH grants Topic: Cell-specific PPAR-gamma Mediated Gene Regulation 2011 Aigin Cao, PhD Post-doctoral Fellow (transitioned to an Academic Appointed Research Associate) Supported by NIH grants Topic: BMPR2 Loss of Function and ER Stress 2011 – 2013 Christopher Rhodes, PhD Post-doctoral Fellow Supported by NIH grants Topic: RNAseq analysis of iPSC Derived versus Native PA Endothelial Cells in Patients with PAH vs. Controls 2011 – 2015 Nathaly Sweeney, MD Clinical/Research Fellow Supported by SOM, Cardiology Department Topic: DNA damage in pulmonary hypertension 2011 – 2016 Pin-I Chen, PhD (transitioned to an Academic Appointed Research Associate)

Post-doctoral Fellow Supported by NIH grants Topic: Beta arrestins at the crossroads of BMPR2 signaling 2011 - 2014 Rachel Hopper, MD Clinical/Research Fellow Topic: The role of HMGA1 in pulmonary hypertension 2011 – 2012 Akihito Sasaki, MD, PhD Post-doctoral Fellow Supported by NIH grant, Tokyo Medical and Dental University, and the Okawa Foundation Topic: Elafin: A novel treatment for PH 2011 - 2014 Nils Nickel, MD Post-doctoral Fellow Supported by NIH grants and the Defense Foundation of Germany (DFG) Topic: Innate immunity and DNA methylation changes in PH 2012 - 2016 Jan K Hennigs, MD Post-doctoral Fellow Supported by NIH grants and the Defense Foundation of Germany (DFG) Topic: Role of P53 in Pulmonary Hypertension 2013 - 2014 Isabel Diebold, MD Post-doctoral Fellow Supported by the German Heart Foundation Topic: Oxidant stress and DNA damage in Pulmonary Hypertension 2014 – 2017 Kazuya Miyagawa, MD, PhD Post-doctoral Fellow Supported by Japan Heart Foundation, and The Uehara Memorial Foundation Topic: Tunneling nanotubes and mitochondrial rescue dynamics in pulmonary hypertension 2014 - 2021Shalina Taylor, PhD Post-doctoral Fellow Supported by NIH URM Supplement and an NIH T32 award Topic: The role of neutrophils and other inflammatory cells in pulmonary hypertension, and the effect of elafin on neutrophil function 2015 -2022 Jan-Renier Moonen, MD, PhD Instructor (former Post-doctoral Fellow) Supported by the University Medical Center, Groningen, Netherlands Topic: Expression analysis of native and iPSC-derived vascular cells in pulmonary hypertension 2015 – 2020 Mingxia Gu, MD, PhD Instructor (2016 – present) Post-doctoral Fellow (2015-2016) Supported by the American Heart Association and NIH Topic: Using Patient-Specific IPSC Derived Endothelial Cells to Gain New Insights into Pathobiology and Therapy of FPAH and IPAH

2015 – 2021 Dan Li, PhD

Post-doctoral Fellow

Supported by the National Institute of Health and American Lung Association

Topic: Metabolite profiling regulates the smooth muscle cells dysfunction in PAH

2015 - 2022 David Marciano, PhD

Instructor (former Post-doctoral Fellow)

Supported by NIH T32 and Research Funds, Snyder Lab

Topic: Profiling cellular metabolism and the molecular mechanisms underlying

disease pathogenesis using multi-omics approaches

2015 – 2018 James Chappell, PhD

Post-doctoral Fellow

Supported by NIH K12 "Omics of Lung Disease" grant and Research Funds,

Snyder Lab

Topic: Endothelial cell biology by generation and interpretation of multi-omic

datasets

2016 Johanna Altman

Visiting Student Researcher

Supported by University of Vienna

Topic: Studies on B cells by CyTOF in patients with idiopathic and thromboembolic

pulmonary arterial hypertension

2016 - 2017 Ajay Bhatia, MD

Clinical Fellow, Cardiothoracic Surgery, Stanford Hospital

Topic: The impact of disturbed flow on pulmonary arterial endothelial cell function

in patients with APAH and CHD

2017 Diederik van der Feen, MD (PhD Candidate)

Visiting Instructor

Supported by University Medical Center Groningen

Topic: Identification of vascular molecular profiles associated with the reversibility

of flow-induced PAH.

2017 – 2020 Shoichiro Otsuki, MD, PhD

Post-doctoral Fellow

Supported by the National Institute of Health and Mie University Graduate School

of Medicine

Topic: The role of human endogenous retrovirus K (HERV-K) in PAH PAEC

2017 - 2018 Yoon Hong Chun, MD

Visiting Assistant Professor

Supported by College of Medicine, The Catholic University of Korea

Topic: Response of pulmonary arterial hypertension endothelial cells to laminar

and disturbed flow

2017 – 2018 Shuai Mao, MD

Visiting Assistant Professor

Supported by Guangzhou University of Chinese Medicine

Topic: Human induced pluripotent stem cell-derived vascular smooth muscle cells

in pulmonary hypertension: differentiation and therapeutic potential

2017 - 2018 Roger Thompson, MRCP, PhD

Visiting Post-doctoral Fellow

Supported by Fulbright Fellowship

Topic: The role of double-stranded RNA in pulmonary vascular remodeling

2018 – 2020 Rebecca Harper, PhD

Post-doctoral Fellow

Supported by the National Institute of Health

Topic: Monocyte and macrophage biology in pulmonary hypertension

2018 - 2023 Sarasa Isobe, MD, PhD

Post-doctoral Fellow

Supported by the National Institute of Health and Japanese Fellowship Topic: PPARgamma and DNA damage in pulmonary hypertension\

2018 – 2021 Tsutomu Shinohara, MD, PhD

Visiting Clinical Professor

Supported by Stanford Research Funds and Japanese Fellowship

Topic: High sheer in PH and Jagged 1 in pulmonary artery obstruction

2019 - 2021 Marcy Martin, PhD

Post-doctoral Fellow

Supported by: National Institute of Health T32 and Stanford Research Funds

Topic: Using organoid technology to model pulmonary hypertension

2021 - 2023 Jason Szafron, PhD

Post-doctoral Fellow (co-mentored with Alison Marsden)

Supported by: Parker B Francis Fellowship

Topic: Exploring the multi-scale growth and remodeling of pulmonary arteries in

pediatric pulmonary hypertension and its corresponding hemodynamic

consequences

2022-2024 Seo Woo Song, PhD

Visiting Scholar (joint with Mark Skylar-Scott's Lab)

Supported by: National Research Foundation of Korea Young Researcher

Program (South Korea) and Betty Irene Moore Heart Center Fund

Topic: high throughput approach to producing fibrin scaffolds that support SMC

alignment and growth and endothelial cells that sense flow

2022-present Mauro Lago Docampo, PhD

Post-doctoral Fellow

Supported by: National Institute of Health and Fundación Ramón Areces

Topic: aims to understand the impact of TBX4 variation on the interactome, DNA

binding, epigenetic regulation, gene expression and function

2022-present Mir Adil, PharmD, PhD

Post-doctoral Fellow

Supported by: National Institute of Health and MCHRI

Topic: uncovering the mechanism leading to the abnormal increase in the

expression of human endogenous retroviruses in myeloid cells

2022-present Chongyang Zhang, PhD

Post-doctoral Fellow

Supported by: National Institute of Health and American Heart Association

Topic: Aldehyde dehydrogenase ALDH3A1 and SOX17 are flow responsive

factors that regulate gene accessibility and gene regulation

2023-2024 Divya Guntur

Visiting Student Researcher

Supported by: OeAD- Marietta Blau fellowship and Austrian Marshall Plan

Foundation

Topic: ion channels and iPSCs derived-inflammatory cells from patients suffering from pulmonary arterial hypertension (PAH) to expand the boundaries of PAH

research and the opportunities for treatment

2024-present Jeonghyun Son

Post-doctoral Fellow

Supported by: Ulsan National Institute of Science & Technology, Republic of

Korea

Topic: Biofabricated vascular tubes for disease modeling in pulmonary

hypertension

2024-2025 Emmanouil Mavrogiannis

Visiting Student Researcher

Supported by: University Medical Center Groningen, the Netherlands

Topic: Inflammasome and HERV activation in pulmonary arterial hypertension

Graduate Student Committees

(University of Toronto, unless otherwise indicated)

- 1986 Michelle Bendeck, Ph.D. student in Pathology
- 1986 Therese Perrault, M.Sc. student in Physiology
- 1987 Tino Piscione, M.Sc. student in Physiology
- 1987 Don Kim, M.Sc. student in Pathology
- 1987 Edward Koo, Ph.D. student in Pathology
- 1987 Steve Circo, Ph.D. student in Physiology
- 1987 Awatif Jamal, M.Sc. student in Pathology
- 1989 Robert Pavolic, M.Sc. student in Biochemistry
- 1989 Yang Wang, Ph.D. student in Physiology
- 1989 Ross Tracey, Ph.D. student in Pharmacology (Univ. of Western Ontario)
- 1989 Aesim Cho, M.Sc. student in Biochemistry
- 1989 Anthony Panos, M.Sc. student, Institute of Medical Sciences
- 1989 Mary Nagai, Ph.D. student in Pathology
- 1990 David Ettenson, Ph.D. student in Pathology
- 1990 David Courtman, Ph.D. student in Pathology
- 1990 Julie Yu, Ph.D. student in Pathology
- 1990 Charlotte Newmann, Ph.D. student in Pathology
- 1991 Bingruo Wu, M.Sc. student in Clinical Biochemistry
- 1992 Ida Di Stefano, M.Sc. student in Pathology
- 1993 Sandra Daley, Ph.D. student in Pathology
- 1993 William Andrade, Ph.D. student in Pathology
- 1993 Robert Stewart, M.Sc. student in Pathology

1994	Yvonne Lo, M.Sc. student in Pathology
1994	Hariclia Antoniou, M.Sc. student in Pathology
1994	Lisa Wong, Ph.D. student in Pathology
1996	Fotula Karantzoulis, M.Sc. student in Pathology
1996	Joseph Lee, Ph.D. student in Pathology
1996	Ilana Bayer, Ph.D. student in Pathology
1996	Sharon Tai, M.Sc. student, Institute of Medical Sciences
1996	Tim Gray, M.Sc. student in Pathology
1997	Robert Diaz, M.Sc. student, Institute of Medical Sciences
1997	Mojegan Rezvani, Ph.D., student, Institute of Medical Sciences
1997	Ann Opavsky, Ph.D., student, Institute of Medical Sciences
1998	Leena Hajra, M.Sc. student in Laboratory Medicine & Pathobiology
1998	Frouz Paiwand, M.Sc. student in Laboratory Medicine & Pathobiology
1999	Sharon Tai, Ph.D. student in Laboratory Medicine & Pathobiology

Examining Committees (External Appraiser)

1994	Agnes Tay, Ph.D., student in Clinical Biochemistry
1994	Lea Fialkow, Ph.D., student, Institute of Medical Sciences
1995	Sergio Ribeiro, Ph.D., student, Institute of Medical Sciences
1996	Reena Sandhu, Ph.D., student in Pathology
2005	Chris Murriel, Ph.D., student in Molecular Pharmacology

Teaching Experience

1977-1982	Lectureship, Harvard Medical School, Pediatric Pathology, Cardiology and
	Nuclear Medicine, Boston, Massachusetts
1979-1982	Post-doctoral and Medical School teaching, Harvard Medical School for Pathology
	Residents, Cardiology Residents, Cardiology Fellows and Cardiovascular Surgical
	Residents, Boston, Massachusetts
1982-2002	Post-doctoral, Medical and Graduate School Teaching University of Toronto,
	Ontario, Canada
2002-present	Post-doctoral, Medical and Graduate School Teaching, Stanford University School
	of Medicine, Stanford, California
2005- 2015	Co-Director, MED 223 – Cardiovascular and Pulmonary Science Seminar
	Co-Director, Cardiovascular Pulmonary Research Scholarly Concentration for
	Medical Students

Principal Clinical and Hospital Service Positions

1976-1982	Attending physician on cardiac ward and cardiac consulting service
	Children's Hospital Medical Center, Boston, Massachusetts
1982-2002	Attending physician on cardiac ward and cardiac consulting service
	Hospital for Sick Children, Toronto, Ontario, Canada
1986-1988	Acting Director of Cardiovascular Research
	Research Institute, Hospital for Sick Children, Toronto, Ontario, Canada

1988-2002 Director of Cardiovascular Research

Research Institute, Hospital for Sick Children, Toronto, Ontario, Canada

2002-present Pediatric Cardiologist

Lucile Packard Children's Hospital, Stanford University, Stanford, California

2002-present Scientist

Vera Moulton Wall Center for Pulmonary Vascular Diseases, Stanford University School of Medicine, Stanford, California

Visiting Professorships and Named Lectureships (Named lectureships are underlined)

- 1980 University of Colorado, Department of Pediatrics Cardiology, Denver, Colorado
- 1981 University of Michigan, Department of Pediatrics Cardiology, Ann Arbor, Michigan
- 1981 Columbia University, Departments of Pediatrics and Pulmonary Medicine, New York, New- York
- 1983 Mayo Clinic, Department of Pediatric Cardiology, Minneapolis, Minnesota
- 1984 University of British Columbia (Children's Hospital), Departments of Cardiology and Pathology, Vancouver, British Columbia, Canada
- 1985 Bellevue NYU Medical Center, Leo M. Taran Lectureship, New York, New York
- 1986 University of Utah, Departments of Pediatrics and Pathology, Salt Lake City, Utah
- 1986 Vanderbilt University, Department of Pulmonary Medicine and Pediatric Cardiology, Nashville, Tennessee
- 1987 Albert Einstein College of Medicine, Dennison Young Memorial Lectureship, New York, New-York
- 1987 William Rashkind Memorial Lectureship, Philadelphia, Pennsylvania
- 1987 University of Minnesota, Department of Medicine, Minneapolis, Minnesota
- 1987 Yale University Medical School, Department of Pediatrics and Cardiology, New Haven, Connecticut
- 1987 Johns Hopkins Hospital, Departments of Anesthesiology and Pediatrics, Baltimore, Maryland
- 1988 British Heart Foundation Fellowship, London, England
- 1989 University of Southwest Texas at Dallas, Department of Pediatrics, Dallas, Texas
- 1990 University of Minnesota, Department of Pediatrics, Minneapolis, Minnesota
- 1990 Cincinnati Children's Hospital, University of Cincinnati, Cincinnati, Ohio
- 1990 University of Washington, Department of Pediatrics, Seattle, Washington
- 1991 Johns Hopkins University, Richard Rowe Memorial Lectureship, Department of Pediatrics, Baltimore, Maryland
- 1991 Robert Wood Johnson Medical School, Division of Pediatrics, Pulmonary and Critical Care Medicine, New Brunswick, New Jersey
- 1991 Emory University, Dept. of Pediatrics, Frances Glynn Mason Lectureship, Atlanta, Georgia
- 1992 St. Boniface General Hospital Research Centre, University of Manitoba, Women's Hospital Health Sciences Centre, Winnipeg, Manitoba, Canada
- 1992 University of Leiden, Anatomy Department, Leiden, The Netherlands
- 1992 University of Wales at Cardiff, British Society of Toxicology, Cardiff, Wales, United Kingdom

- 1993 University of Padova, Department of Cardiovascular Surgery, Padova, Italy
- 1993 New York University, Cardiology Grand Rounds, New York, New York
- 1993 Children's Hospital of Philadelphia, Ann Newman Lectureship, Philadelphia, Pennsylvania
- 1993 Washington University Medical School, St. Louis, Missouri
- 1993 CIBA Geigy, Basel Switzerland
- 1994 Consultant, Nexagen, Boulder, Colorado
- 1994 Cardiovascular Research Group, University of Calgary, Alberta, Canada
- 1994 Dennison Young Professor, Division of Pediatric Cardiology, Montefiore Medical Center, New York. New York
- 1994 Kenneth Brown Visiting Professor, Toronto Hospital, Toronto, Ontario, Canada
- 1994 Toronto Hospital, Transplantation Day, Toronto, Ontario, Canada
- 1995 St. Elizabeth's Medical Center, Tufts University School of Medicine, Boston, Massachusetts
- 1995 McMaster University, Hamilton, Ontario, Canada
- 1995 Royal Free Hospital, London, England
- 1995 Cardiovascular Research Group, University of Calgary, Alberta, Canada
- 1995 Department of Pediatrics, University of Utah, Salt Lake City, Utah
- 1995 Donald Fyler Lectureship, Department of Cardiology, Children's Hospital, Harvard Medical School, Boston, Massachusetts
- 1995 Rene Robaire Memorial Lectureship, McGill University, Montreal, Ontario, Canada
- 1996 Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts
- 1996 Visiting Scientist, Boston University School of Medicine, Boston, Massachusetts
- 1996 Julius Comroe Lectureship, Experimental Biology Meeting, Washington, DC
- 1996 Keynote Speaker, Margaret P. Moffat Graduate Research Day, University of Western Ontario, London, Ontario, Canada
- 1997 Department of Biochemistry, Queen's University, Kingston, Ontario, Canada
- 1997 Department of Pharmacology, University of Sherbrooke, Quebec, Canada
- 1998 David W. Smith Memorial Lectureship, The Western Society for Pediatric Research, Carmel. California
- 1998 Cazden Visiting Professor, Oregon Health Sciences University, Portland, Oregon
- 1998 Visiting Scholar, Ohio State University Medical Center, Columbus, Ohio
- 1998 Cleveland Clinic, Featured Lectureship, Cleveland, Ohio
- 1998 Children's Hospital Medical Center, Division of Cardiology and the Developmental Biology Group, Cincinnati, Ohio
- 1998 Duke University Medical Center, Durham, North Carolina
- 1999 Department of Anesthesiology & Division of Pediatric Cardiology, Columbia University, New- York, New York
- 1999 Institute for Medicine & Engineering, University of Pennsylvania, Philadelphia, Pennsylvania
- 1999 Cardiology Grand Rounds, McGill University, Montreal, Quebec, Canada
- 1999 Regina Gluck Memorial Lectureship, North Shore University, Long Island, New York
- 1999 Cardiovascular Grand Rounds, Brigham & Women's Hospital, Boston, Massachusetts
- 2000 Distinguished Scientist Seminar, University of Mobile, Alabama

- 2000 Harold and Marilyn Menkes Memorial Lectureship, The John Hopkins University, Baltimore, Maryland
- 2000 Pharmacia, Featured Lectureship, Missouri
- 2000 Zuberbuhler Lectureship, Children's Hospital of Pittsburgh, Pennsylvania
- 2000 Department of Cell Biology & Anatomy, Mt. Sinai School of Medicine, New York, New York
- 2000 Consultant, University of Michigan, Child Health Research Center, Ann Arbor, Michigan
- 2001 University of Florida, Gainesville, Florida
- 2001 University of New Mexico Health Sciences, Albuquerque, New Mexico
- 2001 Vanderbilt University, Nashville Tennessee
- 2001 Molecular and Cellular Pathology Seminar and the Cell Adhesion and Matrix Research Center, University of Alabama, Birmingham, Alabama
- 2001 Research Day Lectureship, University of North Carolina of Chapel Hill, North Carolina
- 2001 International Conference on Pulmonary Hypertension, Vienna, Austria
- 2001 R.W. Mead Johnson Pharmaceutical Research Institute, Johnson and Johnson, Springhouse, Pennsylvania
- 2002 Pediatric Grand Rounds, New York Presbyterian Hospital, New York, New York
- 2002 Dunlevie Family Lecture, Lucille Packard Children's Hospital, Stanford University, Stanford, California
- 2002 Frontier of Congenital Cardiac Science Conference, Canadian Cardiovascular Society, Dr. Peter Olley Symposium, Edmonton, Alberta, Canada
- 2002 Paul Dudley White International Lectureship, American Heart Association, Chicago, Illinois
- 2002 Millenium Pharmaceutical Roundtable, South San Francisco, California
- 2003 Robert H. Miller Visiting Professorship, University of Florida, Gainesville, Florida
- 2003 Anna Borun and Harry Borun Foundation, Visiting Professorship, University of California Los- Angeles, Los Angeles, California
- 2003 Gill Lectureship in Cardiovascular Science; University of Kentucky, Lexington, Kentucky
- 2003 University of Florida, Visiting Professor, Jacksonville, Florida
- 2003 University of Colorado, Department of Cell Biology and Pediatrics, Denver, Colorado
- 2003 Visiting Professor, Maastricht, Holland
- 2003 Children's Hospital of Los Angeles, Los Angeles, California
- 2003 Frontiers in Heart Failure Research, Distinguished Visitors Seminar Series, Ottawa, Ontario. Canada
- 2004 Pediatric Grand Rounds, Children's Hospital of Philadelphia, Philadelphia, Pennsylvania
- 2004 Pulmonary Grand Rounds, Washington University, St. Louis, Missouri
- 2004 Cardiology Grand Rounds, Department of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania
- 2004 Jefferson Research Day, Potts Lectureship, Thomas Jefferson University, Philadelphia, Pennsylvania
- 2004 Program Summarizer, Aspen Lung Conference, Aspen, Colorado
- 2004 Institute of Circulatory and Respiratory Health Distinguished Lecture and Prize in Cardiovascular Sciences, Vancouver, BC
- 2004 Pediatric Grand Rounds, University of Texas Southwest, Dallas, Texas

- 2005 Medical Grand Rounds and Rheumatology Grand Rounds, Johns Hopkins University School of Medicine, Baltimore, Maryland
- 2005 Medical Grand Rounds Naimi Lecture at Tufts-New England Medical Center, Boston, Massachusetts
- 2005 Dickinson W. Richards Memorial Lecture, American Heart Association Scientific Sessions, Dallas, Texas
- 2006 Keynote Speaker, the 9th International Workshop on Scleroderma Research, Boston Massachusetts
- 2006 Keynote Speaker, NIH Workshop Hereditary Hemorrhagic Telangiectasia: Vascular Biology and Pathophysiology, Bethesda, Maryland
- 2006 3rd National Research Forum for Young Investigators in Circulatory and Respiratory Health, Jacques Genest Senior Lectureship, Winnipeg, Canada
- 2006 Keynote Lecturer, 109th Annual Meeting of the Japanese Pediatric Society, Kanazawa, Japan
- 2006 Visiting Professor, University of Rochester/Strong Memorial Hospital, Rochester, New York
- 2006 Pediatric Grand Rounds Vanderbilt University, Nashville, Tennessee
- 2007 Visiting Professor and Awards Banquet Lecturer, Dalhousie University School of Medicine, Halifax, Nova Scotia (Sponsored by the Cardiovascular Surgery Department)
- 2007 Guest Faculty and Keynote Lecturer, University of Pittsburgh Center for Vascular Remodeling and Regeneration Inaugural Retreat, Pittsburgh, Pennsylvania
- 2007 Department of Medicine Grand Rounds, University of Minnesota, Minneapolis, Minnesota
- 2007 Department of Medicine Grand Rounds (Hecht Lectureship), University of Chicago, Illinois
- 2008 Grand Rounds and Research Seminar, Massachusetts General Hospital, Boston, Massachusetts
- 2008 Fellow's Research Day Keynote Lecturer, Dept. of Pediatrics, University of Washington, Seattle, Washington
- 2009 Keynote Lecturer, 2nd Workshop on Vascular Matrix Biology and Bioengineering, Whistler, British Columbia, CANADA
- 2009 Research Seminar for the Pediatrics Division, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio
- 2009 I. Jerome Flance Lecturer, Washington University School of Medicine, St. Louis, Missouri
- 2009 AHA Visiting Professorship, University of Michigan
- 2009 Robert M. Berne Lectureship, University of Virginia, Charlottesville, Virginia
- 2009 Keynote Lecturer, Joint ZMF & Doctoral Days, Medical University of Graz, Austria
- 2009 Jerry Elliot Memorial Lectureship, New England Conference on Perinatal Research, Chatham, Massachusetts
- 2010 Special Lecture, 27th Annual Conference on High Frequency Ventilation of Infants, Children, and Adults, Snowbird, Utah
- 2010 Keynote Lecturer, 11th International Workshop on Scleroderma Research, Boston, Massachusetts
- 2010 Luis Melo Memorial Lecture in Molecular Cardiology, Queens University Cardiovascular Conference, Queens University, Kingston, Ontario, Canada

- 2011 Lucian Award Lecture, McGill University, Montreal, Quebec, Canada
- 2011 Pfizer Visiting Professorship in Pulmonary Vascular Disease, University of Washington, Seattle, Washington
- 2011 Inaugural Lois T. Ellison Lectureship, Georgia Health Sciences University, Augusta, Georgia
- 2012 7th International Workshop on Cardiovascular Biology and Translational Medicine, Royal College of Physicians, London
- 2012 Giles F. Filley Lecture, Thomas L. Petty Aspen Lung Conference, Aspen, Colorado
- 2012 Speaker, Texas Heart Institute Research Seminar, Houston, Texas
- 2013 Guest Speaker, Ontario-on-a-Chip MATCH Day, University of Toronto, Canada
- 2013 Invited Speaker, Seminar Series, David Geffen School of Medicine at UCLA, Los Angeles, CA
- 2013 Keynote Lecture, Arteriosclerosis, Thrombosis and Vascular Biology Scientific Sessions, Orlando, Florida
- 2013 Lecturer, Cardiology Grand Rounds, University of Pennsylvania Cardiovascular Institute, Philadelphia, Pennsylvania
- 2013 Keynote Lecture, Japanese Pulmonary Circulation Society, 2nd Scientific Meeting, Tokyo, Japan
- 2014 CVI Seminar Series, Boston University, Boston, Massachusetts
- 2014 Pediatric Grand Rounds, NYU Langone Medical Center, New York, NY
- 2014 Lecturer, Genetics Dept. Seminar Series, University of Wisconsin-Madison, Wisconsin
- 2014 Grand Rounds, UCSD School of Medicine, San Diego, California
- 2014 State of the Art Review Lecture, 1st Annual Drug Discovery and Development Symposium for Pulmonary Hypertension, Bethesda-Washington, DC
- 2014 Next Generation Genetic Association Studies PI Meeting, NIH, Bethesda, MD
- 2015 Guest Speaker, Lucille Packard Children's Hospital Fundraising Auxiliary, Stanford, California
- 2015 Speaker, Cardiovascular Research Center Seminar Series, Duke University, Durham, NC
- 2015 Visiting Professor, Children's Discovery Institute Symposium and Pediatrics Grand Rounds, Washington University, St. Louis, Missouri
- 2015 Jack Reeves Lecturer, Grover Conference on Pulmonary Circulation in the "omics" era: New Insights into Pathogenesis, Sedalia, Colorado
- 2015 32nd Annual Laurence H. Green Memorial Lecturer and Lecturer, Cardiovascular Grand Rounds, Brigham and Women's Hospital, Boston, Massachusetts
- 2016 Lecturer, University Lecture Series (ULS), University of Texas, Southwestern Medical Center, Dallas, TX
- 2016 Speaker, 9th International Conference Neonatal & Childhood Pulmonary Vascular Disease, University of California, San Francisco, California
- 2016 Speaker, PACCM Basic & Translational Research in Lung Disease Conference, University of Pittsburgh Medical Center, Pennsylvania
- 2016 Speaker, NHLBI Tenure Track Seminar Series, National Institutes of Health, Bethesda, Maryland
- 2016 Featured Speaker, Sarnoff Cardiovascular Research Foundation's 36th Annual Scientific Meeting, Cambridge, Massachusetts

- 2016 J. Burns Amberson Lecturer, American Thoracic Society International Meeting, San Francisco, California
- 2016 Speaker, Cody Lecture Series, Cincinnati Children's Heart Institute, Cincinnati, Ohio
- 2016 Schaffer Visiting Professorship, Children's Hospital Colorado, Denver, Colorado
- 2016 Speaker, First Annual Cardiovascular Symposium, University of California, Los Angeles
- 2016 Speaker, Medicine Grand Rounds, Stanford University School of Medicine, CA
- 2017 R.L. Johnson Visiting Professorship, Grand Rounds, Univ of Texas Southwestern, Dallas, TX
- 2017 Cardiology Grand Rounds, University of Chicago, Illinois
- 2017 Distinguished Scientist Lecturer, American Heart Association Scientific Sessions, Anaheim, CA
- 2018 Plenary Speaker, 13th John Vane Memorial Symposium on Prostacyclin Science and Pulmonary Vascular Disease
- 2018 Speaker, 1st International Symposium on Pulmonary Artery Reconstruction and Right Ventricle Rehabilitation, Stanford, CA
- 2018 Sol Permutt Memorial Lecture, Johns Hopkins University School of Medicine, Baltimore, MD
- 2019 Speaker, Stanford Single Ventricle Scientific Summit, Stanford, CA
- 2019 Guest Lecturer, University of Pennsylvania Respiration Research Retreat, PA
- 2019 Anandi L Sharma Visiting Professor of CV Med, Mt. Sinai Heart, The CV Institute of Mt. Sinai Hospital and Icahn School of Medicine of Mt. Sinai, NY City, NY
- 2019 Cardiology Grand Rounds, Yale School of Medicine, New Haven, CT
- 2019 Robert Beamish Leadership Award Lecture, 21st Annual ICS Naranjan Dhalla Cardiovascular Awards Day, Institute of CV Sciences, St. Boniface Hospital Albrechtsen Research Centre, University of Manitoba, Rady Faculty of Health Sciences, Winnipeg, Manitoba, CANADA
- 2019 Speaker, Stanford-Penn CV Research Symposium, CVI Institute, Stanford University School of Medicine
- 2020 Speaker, Frontiers in CV Science Seminar Series, Stanford University, CA
- 2020 Speaker, Stanford Pulmonary, Allergy and Critical Care Grand Rounds, Stanford University, CA
- 2021 Keynote Speaker, Ottawa Hospital Research Institute's virtual annual Research Day
- 2022 Keynote Speaker, Brigham and Women's Hospital Lung Research Day
- 2022 Virtual Talk, Ludwig Boltzmann Institute for Lung Vascular Research, Graz Austria
- 2022 Speaker, 11th International Workshop on Scleroderma Research
- 2022 Grand Rounds Speaker, Division of Pulmonary, Allergy & Critical Care Medicine, Stanford University, CA
- 2022 Speaker, Stanford-Penn CV Research Symposium, CVI Institute, University of Pennsylvania
- 2022 Speaker, NHLBI Virtual Workshop on Mitochondria in the Pathogenesis of Lung and Sleep Disorders
- 2022 Speaker, Stanford-Weill Cornell Cardiovascular Research Symposium, Stanford, CA
- 2023 Speaker, 14th Annual Pediatrics Research Retreat, Stanford Univ, Stanford, CA
- 2024 Grand Rounds Speaker, Dept. of Pediatrics, Stanford Univ, Stanford, CA

* Accepted

Guest Faculty and/or Chair Major Symposia

- 1981 1st World Congress of Pediatric Cardiology, (London, England)
- 1981 University of Utah, Department of Cardiovascular Surgery, Postgraduate Course: Pediatric Cardiac Surgery, Salt Lake City, Utah
- 1981 Columbia University, Department of Pathology: Postgraduate Course: Biopsy Diagnosis, New-York, New York
- 1983 Second International Symposium on Applied Physiology in Critical Care and Anesthesia with Emphasis on Children, Erasmus University Rotterdam, The Netherlands, Aruba
- 1983 Canadian Cardiovascular Society, Toronto, Ontario, Canada
- 1983 Canadian Thoracic Society, Toronto, Ontario, Canada
- 1984 American Heart Association, Miami, Florida
- 1985 World Congress of Pediatric Cardiology, New York, New York
- 1985 Inter-American Congress of Cardiology, Vancouver, British Columbia, Canada
- 1985 N.I.H. Pulmonary Circulation Workshop, Washington, DC
- 1985 American Academy of Pediatrics, San Antonio, Texas
- 1985 American Heart Association, Washington, DC
- 1985 International Congress of Pediatric Cardiology, Porto Allegre, Brazil
- 1985 Mead Johnson Neonatology Symposium, Marco Island, Florida
- 1986 American College of Cardiology Course, Lake Louise, Alberta, Canada
- 1986 American Thoracic Society Symposium, Kansas City, Missouri
- 1986 International Satellite Symposium on Pulmonary Circulation (International Physiological Society) Madison, Wisconsin
- 1986 Bronchopulmonary Dysplasia Symposium, Aspen, Colorado
- 1986 Pediatric Cardiology Meeting sponsored by Children's Hospital of Pittsburgh, Pennsylvania
- 1986 Grover Conference on Pulmonary Circulation, University of Colorado, Dekkers, Colorado
- 1987 Banff Hypoxia Symposium, Banff, Alberta, Canada
- 1987 American College of Cardiology, New Orleans, Louisiana
- 1987 Conference on Pulmonary Hypertension, University of Paris, France
- 1987 American Thoracic Society Symposium, New Orleans, Louisiana
- 1987 Conference on Perinatal Physiology and Pathophysiology, New York, New York
- 1987 Aspen Lung Conference, Aspen, Colorado
- 1987 Elastin Gordon Conference, Meriden, New Hampshire
- 1987 American Society of Anesthesiologists, Atlanta, Georgia
- 1987 9th International Meeting of Cardiology APIC, St. Malo, France
- 1988 Perinatal Cardiology, University of Albuquerque, New Mexico
- 1988 International Academy of Pathologists, Dublin, Ireland (in conjunction with BHF Fellowship)
- 1988 Perinatal Research Society, San Diego, California
- 1989 Pediatric Cardiopulmonary Update, University of Colorado, (Beaver Creek, Colorado)
- 1989 Mead Johnson Clinical Scholar, San Diego, California

- 1989 N.I.H. Workshop, Washington, DC
- 1989 American Thoracic Society, Cincinnati, Ohio
- 1989 Tokyo University, Pediatric Department Centennial, Tokyo, Japan
- 1989 American Heart Association Annual Meeting, New Orleans, Louisiana
- 1990 American College of Cardiology, New Orleans, Louisiana
- 1990 American Academy of Pathology Cardiovascular Pathology Symposium, Boston, Massachusetts
- 1990 Pediatric Cardiology Symposium, Padova, Italy
- 1990 Pediatric Cardiology Symposium, Pittsburgh, Pennsylvania
- 1990 American Heart Association Symposium on Endothelium
- 1990 American Thoracic Society, Boston, Massachusetts
- 1991 American Heart Association Postgraduate Course
- 1991 American Society of Pediatric Department Chairman, Frontiers in Science Program, San-Diego, California
- 1991 New York Cardiological Society, New York, New York
- 1991 UCLA Pediatric Cardiology Conference, Los Angeles, California
- 1992 American Heart Association-Pulmonary Hypertension Plenary Session, Miami, Florida
- 1992 National Heart Foundation For Infants and Adolescents, Society of Pediatric Cardiology, Ecuador, South America
- 1992 University of Arkansas Pediatric Cardiovascular Surgery Symposium, Little Rock, Arkansas
- 1992 American College of Cardiology Symposium, Atlanta, Georgia
- 1992 Restenosis Summit, Cleveland Clinic, Cleveland, Ohio
- 1992 Children's Hospital, Pulmonary Circulation, The Netherlands
- 1992 National Heart & Lung Institute, Connective Tissue and Lung Disease, London, England
- 1992 American Heart Association Plenary Session, Anaheim, California
- 1993 Conference on Pediatric Cardiology A Team Approach, Vail, Colorado
- 1993 Congress of Cardiology, Mexico City, Mexico
- 1993 FASEB Symposium Speaker, American Physiological Society, New Orleans, Louisiana
- 1993 American Thoracic Society, San Francisco, California
- 1993 World Congress of Pediatric Cardiology, Paris, France
- 1993 Conference on Primary Pulmonary Hypertension, Florence, Italy
- 1993 Congenital Heart Disease: Postgraduate Course, Chicago, Illinois
- 1993 Gordon Conference on Elastin, Meriden, New Hampshire
- 1993 Newborn Medicine Update, Marina del Rey, California
- 1993 Canadian Atherosclerosis Society, Vancouver, British Columbia, Canada
- 1993 Canadian Cardiovascular Society, Vancouver, British Columbia, Canada
- 1993 American Heart Association Plenary Session, Atlanta, Georgia
- 1994 American Heart Association, Thrombosis Council Conference, Orlando, Florida
- 1994 International Scleroderma Society Meeting, Sydney, Australia
- 1994 Restenosis Summit VI, Cleveland, Ohio
- 1994 Canadian Association of Pathologists, Toronto, Ontario, Canada
- 1994 Symposium on Inflammatory Mechanism of Atherogenesis/ Atherosclerosis, University of Michigan, Ann Arbor, Michigan

- 1994 Xth International Symposium on Atherosclerosis, Montreal, Quebec, Canada
- 1994 Pulmonary Hypertension Advisory Board, Zeneca Pharmaceuticals, Chicago, Illinois
- 1995 Symposium on Cardiovascular Issues of the 90's, Orlando, Florida
- 1995 2nd Symposium on Cardiac Allograft Vasculopathy, St. Louis, Missouri
- 1995 Pulmonary Hypertension Meeting, Vail, Colorado
- 1995 National Institute of Health Workshop Pulmonary Hypertension, Bethesda, Maryland
- 1995 Consultant, Division of Cardiology, Children Hospital of Philadelphia, Pennsylvania
- 1995 31st Annual Meeting of Japanese Society of Pediatric Cardiology, Utsunomiya, Japan
- 1995 Symposium on Cardiovascular Disease, Seoul, Korea
- 1995 Congenital Heart Disease Symposium, The Hospital for Sick Children, Toronto, Ontario, Canada
- 1995 American Thoracic Society, Postgraduate Course, Seattle, Washington
- 1995 American College of Cardiology Conference, Adults with Congenital Heart Disease, Toronto, Ontario, Canada
- 1995 Great Lakes Lung Conference, Niagara-on-the-Lake, Canada
- 1995 Consultant, Institut de Recherché Internationales Servier, Paris, France
- 1996 12th Annual CNMC Symposium on ECMO and Advanced Therapies for Respiratory Failure, Keystone, Colorado
- 1996 Cardiology Research Rounds, Toronto Hospital, Toronto, Ontario, Canada
- 1996 Institute of Medical Science Annual Science Day, University of Toronto, Ontario, Canada
- 1996 Restenosis Summit VIII, Cleveland Clinic Foundation, Cleveland, Ohio
- 1996 Keynote Speaker, Williams Syndrome International Professional Conference, Philadelphia, Pennsylvania
- 1996 Keynote Plenary Speaker, 9th Annual Meeting of the Mediterranean Association of Cardiology and Cardiac Surgery, Tel Aviv, Israel
- 1996 IXth International Vascular Biology Meeting, Seattle, Washington
- 1997 Experimental Biology Meeting, Symposium on Lung Vascular Injury and Remodeling During Development, New Orleans, Louisiana
- 1997 American Society for Investigative Pathology/North American Vascular Biology Organization Meeting, Symposium on Extracellular Matrix and Vascular Remodeling, New Orleans, Louisiana
- 1997 Symposium for the Society of Cardiovascular Anesthesiologists, Baltimore, Maryland
- 1997 Restenosis Summit IX, Cleveland Clinic Foundation, Cleveland, Ohio
- 1997 Chair & Speaker, American Thoracic Society Workshop, San Francisco, California
- 1997 American College of Cardiology, Congenital Heart Disease Meeting, Toronto, Ontario, Canada
- 1997 XIV Annual Meeting, International Society for Heart Research, Vancouver, British Columbia, Canada
- 1997 Francois Brenot Memorial Symposium on the Pathogenesis of Primary Pulmonary Hypertension, Corsica, France
- 1997 XIth International Symposium on Atherosclerosis, Paris, France
- 1997 Symposium of the Experimental Pathology Section, Royal College Meeting, Vancouver, British Columbia, Canada
- 1997 Symposium on SHR & Cardiovascular Genetics, Montreal, Quebec, Canada

- 1998 American Society for Transplant Physicians Symposium, Cerromar Beach, Puerto Rico
- 1998 IBC's Novel Treatments for Pulmonary Hypertension, San Diego, California
- 1998 American Heart Association, Cardiovascular Function Symposium, Lake Tahoe, Nevada
- 1998 Bristol-Myers Squibb Pharmaceutical Research Institute, Princeton, New Jersey
- 1998 Chair, American Society for Investigative Pathology session on Signal Transduction at the Experimental Biology Meeting, San Francisco, California
- 1998 XIII World Congress of Cardiology Meeting, Porto Alegre, Brazil
- 1998 Amnon Rosenthal Symposium, Michigan Congenital Heart Institute, Ann Arbor, Michigan
- 1998 Primary Pulmonary Hypertension Symposium, Evian, France
- 1998 International Society for Heart & Lung Transplant (ISHLT) on Coronary Allograft Vasculopathy, Washington, DC
- 1998 Society for Pediatric Pathology Interim Meeting, Toronto, Ontario, Canada
- 1998 American Heart Association Workshop on Mechanisms of Target Organ Injury in Hypertension, Philadelphia, Pennsylvania
- 1998 American Society for Histocompatibility & Immunogenetics (ASHI), Vancouver, British Columbia, Canada
- 1998 American Heart Association Scientific Conference on Control Mechanisms in the Fetal and Neonatal Pulmonary Circulation, Sedalia, Colorado
- 1998 Moderator, American Heart Association 71st Scientific Sessions, Dallas, Texas
- 1998 Canadian Society of Atherosclerosis Thrombosis and Vascular Biology Symposium, Ottawa, Ontario, Canada
- 1998 American Thoracic Society Workshop on Airway & Pulmonary Vascular Smooth Muscle Function in Health & Disease, Sundance, Utah
- 1999 2nd Annual Course on Frontiers in Diagnosis & Management of Congenital Heart Disease, Newport, Rhode Island
- 1999 Restenosis Cybersummit, Cleveland, Ohio
- 1999 NIH Chair, Working Group on Primary Pulmonary Hypertension, Bethesda, Maryland
- 1999 Boston University of Medicine, External Advisory Committee, Boston, Massachusetts
- 1999 American College of Cardiology, Congenital Heart Disease in Adults, Toronto, Ontario, Canada
- 1999 Gordon Research Conference on Collagen, New Hampshire
- 1999 NHLBI Working Group on Tissue Genesis/Organogenesis, Bethesda, Maryland
- 1999 Research Industry Day for Cardiovascular and Cancer Research Koffler Institute for Pharmacy Management, University of Toronto, Ontario, Canada
- (i) 49th Annual Meeting, Korean Pediatric Society, Keynote Lectureship, Plenary Session,
 (ii) Special Lecture, Yonsei Medical College and (iii) Lecture for members of the Korean
 Pediatric Society, Seoul, South Korea
- 1999 Moderator, American Heart Association 72nd Scientific Sessions, Atlanta, Georgia
- 1999 Guidant conference on Mechanisms of Restenosis, Atlanta, Georgia
- 1999 23rd International Neonatal Conference, Key Biscayne, Florida
- 1999 10th Annual Day in Transplantation & Immunology, Toronto General Hospital, University of Toronto, Ontario, Canada
- 2000 Society for Pediatric Research, Mead Johnson Award Committee Meeting, New York, New York

- 2000 Gene Therapy Conference on Mother and Child, Salt Lake City, Utah
- 2000 Keystone Symposium on Intracellular Signaling, Breckenridge Colorado
- 2000 Arteriosclerosis, Thrombosis & Vascular Biology (ATVB), Denver/Boulder, Colorado
- 2000 American Thoracic Society Symposia, Toronto, Ontario, Canada
- 2000 Symposium on Arterial Remodeling: Mechanisms and Interventions, Amsterdam, The Netherlands
- 2000 International Society for Heart & Lung Transplant Meeting, Osaka, Japan
- 2000 Canadian Cardiovascular Congress, Vancouver, British Columbia, Canada
- 2000 The Southeastern Pediatric Cardiology Society Meeting, Charlotte, North Carolina
- 2000 American Society for Pharmacology and Experimental Therapeutics, Medical College of Georgia, Augusta, Georgia
- 2000 American Society of Hematology, San Francisco, California
- 2001 Pulmonary Hypertension, Vienna, Austria
- 2001 XVII World Congress of the International Society for Heart Research, Winnipeg, Manitoba, Canada
- 2001 American College of Cardiology, Orlando, Florida
- 2001 2nd International Pediatric Cardiovascular Symposium: Transplantation in Complex CHD, Children's Healthcare of Atlanta, Atlanta, Georgia
- 2001 American Heart Association, Anaheim California
- 2001 Lovelace Respiratory Research Institute Annual Symposium, Santa Fe, New Mexico
- 2001 Canadian Society of Clinical Chemists, Hamilton, Ontario, Canada
- 2001 First Canadian Hypertension Pulmonary Symposium, Toronto, Ontario, Canada
- 2001 Society for Pediatric Research Lung Club, Baltimore, Maryland
- 2001 World Congress of Pediatric Cardiology, Toronto, Ontario, Canada
- 2001 Perinatal Research, Jerry Elliott Memorial Lectureship, Aspen, Colorado
- 2002 International Society for Heart & Lung Transplantation, Satellite Symposium 3: Updates on Pulmonary Hypertension, Washington, DC
- 2002 4th Centenary of William Harvey Graduation Symposium on Advances in Cardiovascular Medicine, Padova, Italy
- 2002 American Pediatric Society, Pediatric Academic Societies & Exposition, Baltimore, Maryland
- 2002 American College of Cardiology, 13th Annual Congenital Heart Disease in Adults Symposium, Stevenson, Washington
- 2002 Western Society for Pediatric Cardiology, Monterey, California
- 2002 Canadian Cardiovascular Society, Peter Olley Symposium, Edmonton, Alberta, Canada
- 2002 American Heart Association, Paul Dudley White International Lectureship, Chicago, Illinois
- 2003 ECMO Symposium, Visiting Professor, Keystone, Colorado
- 2003 Curriculum of Excellence in Neonatology: Respiratory Disorders, Paris, France
- 2003 3rd World Congress of Pulmonary Hypertension, Venice, Italy
- 2003 Elastin and Elastic Fibers Gordon Research Conference, Meriden, New Hampshire, Discussion Leader
- 2003 Pulmonary Hypertension Symposium, Cambridge, England
- 2003 International Society of Atherosclerosis and Satellite Symposium in Fakuoka, Japan

- 2003 18th International Workshop on Surfactant Replacement, Prague, Czech Republic
- 2003 American Heart Association Scientific Session, Orlando, Florida, Moderator
- 2003 Pediatric Academic Societies' Annual Meeting, Seattle, Washington
- 2003 Translational Research in Primary Pulmonary Hypertension, NIH, Bethesda, Maryland
- 2004 Scleroderma Research Foundation Scientific Workshop, San Francisco, California
- 2004 International Vascular Biology Meeting, Toronto, Ontario, Canada
- 2004 Western Society of Pediatric Cardiology Meeting, Napa, California
- 2004 3rd International Developmental Biology of the Lung, Quebec City
- 2004 Burroughs Wellcome Fund, Clinical Scientist Award in Translation Research, Session Moderator "Translational Research Issues"
- 2004 Pulmonary Hypertension Association, Session Moderator and discussant, Miami, Florida
- 2004 Perinatal Biology Meeting, Brown University, Providence Rhode Island, Advisor
- 2004 German Pediatric Cardiac Association Meeting, Weimar, Germany
- 2004 British Pediatric Cardiac Association Meeting, Dublin, Ireland
- 2005 Neonatology 2005, Atlanta, Georgia
- 2005 Experimental Biology and International Union of Physiological Sciences, San Diego, California
- 2005 Pediatric Academic Societies, Washington, District of Columbia
- 2005 American Thoracic Society, San Diego, California
- 2005 American Heart Association, Scientific Sessions 2005, Dallas, Texas
- 2005 Gordon Research Conference, Waterville Valley, New Hampshire
- 2005 New Directions in Neonatology, Würzburg, Germany
- 2005 Annual Symposium in Honor of Dr. Leon Farhi on Pulmonary Function in Health & Disease, Buffalo, New York
- 2006 Keystone Symposium on Molecular Biology of the Vasculature and Atherothrombosis, Keystone, Colorado
- 2006 Sociedad Iberoamericana de Neonatologia (SIBEN) Cancun, Mexico
- 2006 4th Annual Retreat of the Molecular Biology and Medicine of the Lung, Giessen, Germany
- 2006 30th Annual Newborn Conference, Miami Beach, Florida
- 2006 American Heart Association, Scientific Sessions 2006 Symposium, Chicago, Illinois
- 2006 NHLBI International PAH meeting "Evolution of Pulmonary Hypertension: Emerging Diseases and Novel Therapeutics" at the National Institutes of Health, Bethesda, Maryland
- 2007 Vascular Biology Symposium (American Society for Investigative Pathology, North American Vascular Biology Organization and Experimental Biology), Washington District of Columbia
- 2007 International Childhood Pulmonary Vascular Disease Conference, UCSF, San Francisco, California
- 2007 Section Leader and Speaker, Gordon Elastin Research Conference, University of New England, Biddeford, Maine
- 2007 Session Chair, "How to Choose an Animal Model of Pulmonary Hypertension" session, American Heart Association Scientific Sessions 2007, Orlando, Florida
- 2007 Pulmonary Hypertension in the Young Conference, Royal College of Physicians, London, UK

- 2008 American Thoracic Society International Convention, State of the Art Talk, Toronto, Ontario, Canada
- 2008 International Symposium on Williams Syndrome, Yale University, New Haven, Connecticut
- 2008 4th World Congress on Pulmonary Hypertension, Dana Point, California
- 2008 Pulmonary Vascular Research Institute Scientific Sessions, Malaga, Spain
- 2008 American Thoracic Society's Grover Conference, Sedalia, Colorado
- 2009 3rd Annual Pulmonary Vascular Research Institute AGM, Mexico City, Mexico
- 2009 Guest Faculty for Research Seminar Series, Division of Pulmonary, Allergy and Critical Care Medicine, Emory University, Atlanta, Georgia
- 2009 Pittsburgh International Lung Conference, Spotlight on Pulmonary Hypertension and Pulmonary Vascular Biology, University of Pittsburgh, Pittsburgh, Pennsylvania
- 2010 Pulmonary Vascular Research Institute Annual Meeting, Workshops, and Debates, Lisbon, Portugal
- 2010 Keystone Symposia on Molecular and Cellular Biology, Hypoxia: Molecular Mechanisms of Oxygen Sensing and Response Pathways, Keystone Resort, Keystone, Colorado
- 2010 Penn Cardiovascular Institute Third Annual Symposium on Cardiovascular Development and Disease, University of Pennsylvania, Philadelphia, Pennsylvania
- 2010 American Thoracic Society International Meeting, New Orleans, Louisiana
- 2010 Biomedicine Lecture Series, National Heart, Lung, and Blood Institute, Bethesda, Maryland
- 2010 Speaker, Harvard Lung Conference, Boston, Massachusetts
- 2010 American Heart Association Scientific Sessions, Chicago, Illinois
- 2010 Research Seminar, Cardiovascular Biomedical Research Unit, University of Sheffield Medical School, Sheffield, UK
- 2011 Advanced Pediatric Cardiac Imaging Symposium, Stanford University, Stanford, California
- 4th International Conference on Neonatal & Childhood Pulmonary Vascular Disease, Plenary Session, University of California, San Francisco, California
- 2011 Pulmonary Vascular Research Institute Annual Meeting, Workshops, and Debates, Panama City, Panama
- 2011 Speaker, 2011 NEO Conference, Orlando, Florida
- 2011 Speaker, University of Alberta, Canada
- 2011 Speaker, Stanford Cardiovascular Institute, Frontiers of Cardiovascular Science Seminar Series, Stanford University, Stanford, California
- 2011 Speaker, Gordon Research Conference: Elastin & Elastic Fibers, Biddeford, Maine
- 2011 Speaker, American Heart Association Scientific Sessions, Orlando, Florida
- 2012 Speaker, American Thoracic Society International Meeting, San Francisco, California
- 2012 Speaker, NAVBO Workshops in Vascular Biology (Developmental Vascular Biology and Genetics and Genomics of Vascular Disease), Pacific Grove, Monterey Peninsula, California
- 2012 Speaker, Scientific Sessions, PHA Conference, Orlando, Florida
- 2012 2nd Munich Lung Conference, Munich Germany
- 2013 Speaker, Gordon Research Conference in Vascular Cell Biology, Ventura, California

- 2013 Speaker, 5th World Symposium on Pulmonary Hypertension, Nice, France
- 2013 Plenary Talk, ISHLT Scientific Meeting, Montreal, Canada
- 2013 Speaker, NAVBO Workshop on Vascular Matrix Biology and Bioengineering, Hyannis Cape Cod, Massachusetts
- 2014 Speaker, Joint Symposium of the Excellence Cluster Cardio-Pulmonary System (ECCPS) and the Pulmonary Vascular Research Institute (PVRI), Bad Nauheim, Germany
- 2014 7th International Conference on Neonatal & Childhood Pulmonary Vascular Disease, Plenary Session, University of California, San Francisco, California
- 2014 Chair & Speaker, American Thoracic Society International Meeting, San Diego, California
- 2014 Operational Safety Monitoring Board (OSMB) for Next Generation Genetic Association Studies, Baltimore, MD
- 2014 Chair, Distinguished Scientists Selection Committee Meeting, AHA Scientific Sessions, Chicago, IL
- 2015 Scientific Advisor, German Center for Lung Research Annual Meeting, Hamburg, Germany
- 2015 Speaker, American Thoracic Society International Meeting, Denver, Colorado
- 2015 Speaker, NAVBO Biology of Signaling in the Cardiovascular System (BSCVS) Workshop, Hyannis, Cape Cod, Massachusetts
- 2015 Speaker, Stanford Cardiovascular Medicine and Research Retreat, Stanford University, Stanford, California
- 2015 Speaker and Moderator, American Heart Association Scientific Sessions, Orlando, Florida
- 2016 Speaker, American Thoracic Society International Meeting, San Francisco, California
- 2017 Speaker, 81st Annual Scientific Meeting of the Japanese Circulation Society
- 2017 Speaker, Angiogenesis and Vascular Disease, Keystone Symposia Conference, Santa Fe, NM
- 2017 Speaker, American Thoracic Society International Meeting, Washington, DC
- 2017 Speaker, American Heart Association Scientific Sessions, Anaheim, CA
- 2018 Speaker, 6th World Symposium on Pulmonary Hypertension, Nice, France
- 2018 Speaker, 6th International Ottawa Heart Conference on Precision Medicine in Cardiovascular Disease, Ottawa, Ontario, Canada
- 2018 Speaker and Chair, American Thoracic Society International Meeting, San Diego, CA
- 2018 Speaker, Scientific Sessions, Pulmonary Hypertension Association's International PH Conference, Orlando, Florida
- 2018 Speaker, Medicine by Design, Global Speaker Series, University of Toronto, Canada
- 2018 Speaker and Moderator, American Heart Association Scientific Sessions, Chicago, IL
- 2019 12th International Conference on Neonatal & Childhood Pulmonary Vascular Disease, Plenary Session, University of California, San Francisco, California
- 2019 Speaker, American Thoracic Society International Meeting, Dallas, TX
- 2019 Speaker, 3rd JCS Council Forum on Basic CardioVascular Research (BCVR), Japan
- 2019 Guest Speaker, Respiratory Institute, Cleveland Clinic, Cleveland, OH
- 2021 Speaker, Live Webinar Series, Pulmonary Vascular Research Institute
- 2021 Distinguished Lecturer, Vascular Discovery: From Genes to Medicine
- 2021 Scientific Sessions A Virtual Experience
- 2021 Virtual Speaker, North American Vascular Biology Organization Seminar

- 2021 Speaker, Scleroderma Research Global Webinar
- 2022 Virtual Speaker, 6th Meeting on Pulmonary Hypertension Research, organized by the Pulmonary Hypertension Program of the Biomedical Research Network Center on Respiratory Diseases (CIBERES)
- 2022 Virtual Speaker, 14th HHT International Scientific Conference
- 2022 Speaker, International Vascular Biology Meeting, Oakland, CA
- 2022 Virtual Speaker, North American Vascular Biology Organization Seminar
- 2023 Speaker, American Thoracic Society International Meeting, Washington, DC
- 2023 Speaker, American Heart Association Integrative Omics Symposium
- 2023 Invited Speaker (Postdoc presented), Gordon Research Conference in Vascular Cell Biology, Ventura Beach, CA
- 2023 Organizer and Speaker, Keystone Symposia Pulmonary Hypertension: State of the Art and Therapeutic Opportunities, Santa Fe, New Mexico
- 2023 Speaker, American Heart Association Scientific Sessions, Philadelphia, PA
- 2024 Speaker, Pfizer Cardiovascular Symposium
- 2024 Speaker, Cardiology Grand Rounds at Emory/Children's Healthcare of Atlanta, Georgia
- 2024 Speaker, Cardiovascular Institute Frontiers in CV Science, Stanford Univ, Stanford, CA
- 2024 Speaker, University of Pennsylvania
- 2024 Speaker, American Thoracic Society International Meeting, San Diego, CA
- 2024 Speaker, 7th WORLD SYMPOSIUM ON PULMONARY HYPERTENSION Barcelona, Spain
- 2024 Grand Rounds, Heart Center, Stanford Univ, Stanford, CA
- 2024 Speaker, American Heart Association Scientific Sessions, Chicago, IL
- 2024 Panel Discussion Speaker: Medicine by Design, University of Toronto

Patents

1. Rabinovitch, Marlene. Use of FK506 for the Treatment of Pulmonary Arterial Hypertension. The Board of Trustees of Leland Stanford Junior University, assignee. Patent PCT/US2012035793. 30 Apr. 2012. Print.

Peer Reviewed Publications

- 1. Jacobson JR, Gillette PC, Corbett BN, Rabinovitch M, McNamara DG. Intracardiac electrography in endocardial cushion defects. *Circulation* 1976; 54:599-603.
- 2. Rabinovitch M, Rosenthal A, Sade RM, Castaneda AR, Treves S, Nadas AS. Regional lung function studies and radionuclide angiography in D-transposition of the great arteries. *Pediatr Res* 1977; 11:1117-21.
- 3. Rabinovitch M, Haworth SG, Castaneda AR, Nadas AS, Reid LM. Lung biopsy in congenital heart disease: A morphometric approach to pulmonary vascular disease. *Circulation* 1978; 58:1107-22.
- 4. Rabinovitch M, Fischer KC, Gamble WJ, Reid L, Treves S. Thallium-201: Quantitation of right ventricular hypertrophy in chronically hypoxic rats. *Radiology* 1979; 130:223-5.

^{*} Accepted

- 5. Rabinovitch M, Rowland T, Castaneda AR, Treves S. Thallium-20: Scintigraphy in patients with anomalous origin of the left coronary artery from the main pulmonary artery. *J Pediatr* 1979; 94:244-7.
- 6. Goldstein JD, Rabinovitch M, Van Praagh R, Reid L. Unusual vascular anomalies causing persistent pulmonary hypertension in a newborn. *Am J Cardiol* 1979; 43:962-8.
- 7. Rabinovitch M, Gamble WJ, Nadas AS, Reid L. Rat pulmonary circulation after chronic hypoxia: Hemodynamic and structural features. *Am J Physiol* 1979; 236:H818-27.
- 8. Rabinovitch M, Haworth SG, Vance Z, Vawter G, Castaneda AR, Nadas AS, Reid LM. Early pulmonary vascular changes in congenital heart disease studied in biopsy tissue. *Human Pathol* 1980, 11(5Suppl):499-509.
- 9. Rabinovitch M, Keane JF, Fellows KE, Castaneda AR, Reid L. Quantitative analysis of the pulmonary wedge angiogram in congenital heart defects: A correlation with hemodynamic data and morphometric findings in lung biopsy tissue. *Circulation* 1981, 63:152-64.
- 10. Rabinovitch M, Castaneda AR, Reid L. Lung biopsy with frozen section as a diagnostic aid in patients with congenital heart defects. *Am J Cardiol* 1981, 47:77-84.
- 11. Rabinovitch M, Gamble WJ, Miettinen OS, Reid L. Age and sex influence on pulmonary hypertension of chronic hypoxia and in recovery. *Am J Physiol* 1981, 240:H62-72.
- 12. Rabinovitch M, Fischer KC, Treves S. Quantitative Thallium-201 myocardial imaging in assessing the right ventricular pressure in patients with congenital heart defects. *Br Heart J* 1981 45:198-205.
- 13. Murphy J, Rabinovitch M, Goldstein JD, Reid LM. The structural basis of persistent pulmonary hypertension of the newborn infant. *J Pediatr* 1981, 98:962-7.
- 14. Fujii A, Rabinovitch M, Mathews EC. A case of spontaneous resolution of idiopathic pulmonary hypertension. *Br Heart J* 1981, 46:574-577.
- 15. Rabinovitch M, Herrera-DeLeon V, Castaneda AR, Reid L. Growth and development of the pulmonary vascular bed in patients with tetralogy of Fallot with and without pulmonary atresia. *Circulation* 1981, 64:1234-49.
- 16. Fujii A, Rabinovitch M, Keane JF, Fyler DC, Treves S. Radionuclide angiocardiographic assessment of pulmonary vascular reactivity in patients with left to right shunt and pulmonary hypertension. *Am J Cardiol* 1982, 49:356-61.
- 17. Rabinovitch M, Grady S, David I, VanPraagh R, Sauer U, Buhlmeyer K, Castaneda AR, Reid L. Compression of intrapulmonary bronchi by abnormally branching pulmonary arteries associated with absent pulmonary valves. *Am J Cardiol* 1982, 50:804-13.
- 18. Rabinovitch M, Konstam MA, Gamble WJ, Papanicolaou N, Aronovitz M, Treves S, Reid L. Changes in pulmonary blood flow affect vascular response to chronic hypoxia in rats. *Circ Res* 1983, 52:432-41.
- 19. Jaffin BW, Gundel WD, Capless MA, Castaneda AR, Rabinovitch M, Wackers FJ. Aneurysm of the pulmonary artery as a cause of severe chest pain. *Arch Intern Med* 1983, 143:1484-5.
- 20. Penkoske PA, Westerman GA, Marx GR, Rabinovitch M, Norwood WI, Castaneda AR. Transposition of the great arteries and ventricular septal defect: Results with the senning operation and closure of the ventricular septal defects in infants. *Ann Thorac Surg* 1983, 36:281-8.

- 21. Fried R, Meyrick B, Rabinovitch M, Reid L. Polycythemia and the acute response in awake rats following chronic hypoxia. *J Appl Physiol* 1983, 55:1167-72.
- 22. Freedom R, Moes C, Pelach A, Smallhorn J, Rabinovitch M, Olley PM, Williams W, Trusler G, Rowe R. Bilateral ductus arteriosus (or remnant): An analysis of 27 patients. *Am J Cardiol* 1984, 53:884-91.
- 23. Rabinovitch M, Keane JF, Norwood WI, Castaneda AR, Reid L. Vascular structure in lung biopsy tissue correlated with pulmonary hemodynamic findings after repair of congenital heart defects. *Circulation* 1984, 69:655-67.
- 24. Vogel M, Ash J, Rowe R, Trusler G, Rabinovitch M. Congenital unilateral pulmonary vein stenosis complicating transposition of the great arteries. *Am J Cardiol* 1984, 54:166-71.
- 25. Todd L, Mullen M, Olley PM, Rabinovitch M. Pulmonary toxicity of monocrotaline differs at critical periods of development. *Pediatr Res* 1985, 19:731-7.
- 26. Cloutier A, Ash JM, Smallhorn JF, Williams WG, Trusler GA, Rowe RD, Rabinovitch M. Abnormal distribution of pulmonary blood flow after the Glenn shunt or Fontan procedure: Risk of development of arteriovenous fistulae. *Circulation* 1985, 72:471-9.
- 27. Wilson W, Mullen M, Olley PM, Rabinovitch M. Hyperoxia induced pulmonary vascular and lung abnormalities in young rats and potential for recovery. *Pediatr Res* 1985, 19:1059-67.
- 28. Fried R, Falkovsky G, Newburger J, Gorchakova AI, Rabinovitch M, Gordonova MI, Tyler D, Reid L, Burakovsky V. Pulmonary arterial changes in patients with ventricular septal defects and severe pulmonary hypertension. *Pediatr Cardiol* 1986, 7:147-54.
- 29. Rabinovitch M, Bothwell T, Hayakawa BN, Williams WG, Trusler GA, Rowe RD, Olley PM, Cutz E. Pulmonary artery endothelial abnormalities in patients with congenital heart defects and pulmonary hypertension: A correlation of light with scanning electron microscopy and transmission electron microscopy. *Lab Invest* 1986, 55:632-53.
- 30. Wilson WL, Bothwell T, Rabinovitch M. A pulmonary artery endothelial factor causes unidirectional alignment of smooth muscle cells. *Tissue Cell* 1987, 19:177-82.
- 31. Rosenberg HC, Williams WG, Trusler GA, Higa T, Rowe RD, Rabinovitch M. Structural composition of central pulmonary arteries. Growth potential following surgical shunts. *J Thorac Cardiovasc Surg*, 1987, 94:498-503.
- 32. Bohn D, Tamura M, Perrin D, Barker G, Rabinovitch M. Ventilatory predictors of pulmonary hypoplasia in congenital diaphragmatic hernia confirmed by morphometric assessment. *J Pediatr*, 1987, 111:423-31.
- 33. Coles JG, Kielmanowicz S, Freedom RM, Benson LN, Moes F, Olley PM, Rabinovitch M, Rosenberg H, Sherret H, Rowe RD, McLaughlin MD, Trusler, GA, Williams WG. Surgical experience with the modified Fontan procedure. *Circulation* 1987, 76(3 Pt 2):III61-67.
- 34. Rabinovitch M, Andrew M, Thom H, Trusler GA, Williams WG, Rowe RD, Olley PM. Abnormal endothelial Factor VIII associated with pulmonary hypertension and congenital heart defects. *Circulation* 1987, 76:1043-52.
- 35. Todorovich-Hunter L, Ranger P, Johnson D, Keeley F, Rabinovitch M. Altered elastin and collagen synthesis associated with progressive pulmonary hypertension induced by monocrotaline. A biochemical and ultrastructural study. *Lab Invest* 1988, 58:184-95.

- 36. Rabinovitch M, Bothwell T, Mullen M, Hayakawa BN. High-pressure pulsation of central and microvessel pulmonary artery endothelial cells. *Am J Physiol*, 1988, 254(2 Pt 1):C338-43.
- 37. Coles JG, Leung M, Kielmanowicz S, Freedom RM, Benson LN, Rabinovitch M, Sherret H, Dasmahapatra H, Trusler G, McLaughlin PR, Williams WG. Repair of tricuspid atresia: Utility of right ventricular incorporation. *Ann Thorac Surg* 1988, 45:384-9.
- 38. Rabinovitch M, Mullen M, Rosenberg H, Maruyama K, O'Brodovich H, Olley PM. Angiotensin II prevents hypoxic pulmonary hypertension and vascular changes in rats. *Am J Physiol*, 1988, 254(3 Pt 2):H500-8.
- 39. Ilkiw R, Maruyama K, Rabinovitch M. Intralipid effect on normal and hypoxic remodeled rat pulmonary vasculature. *Am J Physiol* 1988, 255(6 Pt 2):H1499-508.
- 40. Rabinovitch M, Bothwell T, Beharry S, Jackowski G. Qualitative and quantitative differences in protein synthesis comparing fetal lamb ductus arteriosus endothelium and smooth muscle with cells from adjacent vascular sites. *Dev Biol* 1988, 130:250-8.
- 41. Rosenberg HC, Rabinovitch M. Endothelial injury and vascular reactivity in monocrotaline pulmonary hypertension. *Am J Physiol* 1988, 255:H1484-91.
- 42. Ilkiw R, Todorovich L, Maruyama K, Shin J, Rabinovitch M. SC-39026, a serine elastase inhibitor, prevents muscularization of peripheral arteries, suggesting a mechanism of monocrotaline- induced pulmonary hypertension in rats. *Circ Res* 1989, 64:814-25.
- 43. Rabinovitch M, Boudreau N, Vella G, Coceani F, Olley PM. Oxygen-related prostaglandin synthesis in ductus arteriosus and other vascular cells. *Pediatr Res* 1989, 26:330-5.
- 44. LaBourene JI, Coles JG, Johnson DJ, Mehra A, Keeley FW, Rabinovitch M. Alterations in elastin and collagen related to the mechanism of progressive pulmonary venous obstruction in a piglet model: A hemodynamic, ultrastructural and biochemical study. *Circ Res* 1990, 66:438-56.
- 45. Zhu L, Williams WG, Bellhouse B, Pugh S, Rabinovitch M. Effective endothelialization of polyurethane surfaces: Response to shear stress and platelet adhesion. *ASAIO Transactions* 1990, 36:811-16.
- 46. Boudreau N, Rabinovitch M. Developmentally regulated changes in extracellular matrix in endothelial and smooth muscle cells in the ductus arteriosus may be related to intimal proliferation. *Lab Invest* 1991, 64:187-99.
- 47. Boudreau N, Turley E, Rabinovitch M. Fibronectin, hyaluronan, and a hyaluronan binding protein contribute to increased ductus arteriosus smooth muscle cell migration. *Dev Biol* 1991, 143:235-47
- 48. Turner-Gomes SO, Rabinovitch M. Effect of ambient oxygen changes on platelet activating factor production by fetal ovine endothelial cells. *Prostaglandins* 1991, 41:463-72.
- 49. Ye C, Rabinovitch M. Inhibition of elastolysis by SC-37698® reduces development and progression of monocrotaline pulmonary hypertension. *Am J Physiol* 1991, 261:H1255-67.
- 50. Hinek A, Mecham Robert P, Keeley FW, Rabinovitch M. Impaired elastin fiber assembly related to reduced 67-kD elastin-binding protein in fetal lamb ductus arteriosus and in cultured aortic smooth muscle cells treated with chondroitin sulfate. *J Clin Invest* 1991, 88:2083-94.

- 51. Maruyama K, Ye C, Woo M, Venkatacharya H, Lines L, Silver MM, Rabinovitch M. Chronic hypoxic pulmonary hypertension in rats and increased elastolytic activity. *Am J Physiol* 1991, 261(6 Pt 2):H1716-26.
- 52. Silver MM, Bohn D, Shawn DH, Shuckett B, Eich G, Rabinovitch M. Association of pulmonary hypertension with congenital portal hypertension. *J Pediatr* 1992, 120:321-9.
- 53. Turner-Gomes SO, Andrew M, Rabinovitch M. Abnormalities in von Willebrand factor and antithrombin III after cardiopulmonary bypass operations for congenital heart disease. *J Thorac Cardiovasc Surg* 1992, 103:87-97.
- 54. Sato K, Webb S, Tucker A, Rabinovitch M, O'Brien RF, McMurtry IF, Stelzner TJ. Factors influencing the idiopathic development of pulmonary hypertension in the fawn hooded rat. *Am Rev Resp Dis* 1992, 145:793-97.
- 55. Todorovich-Hunter L, Dodo H, McCready L, Keeley F, Rabinovitch M. Increased pulmonary artery elastolytic activity and monocrotaline-induced progressive hypertensive pulmonary vascular disease in adult rats compared to infant rats with non-progressive disease. *Am Rev Resp Dis* 1992, 146:213-23.
- 56. Boudreau N, Clausell N, Boyle J, Rabinovitch M. Transforming growth factor ß regulates increased ductus arteriosus endothelial glycosaminoglycan synthesis and a post-transcriptional mechanism control increased smooth muscle fibronectin, features associated with intimal proliferation. *Lab Invest* 1992, 67:350-59.
- Hinek A, Boyle J, Rabinovitch M. Vascular smooth muscle cell detachment from elastin and migration through elastic laminae is promoted by chondroitin sulfate-induced "shedding" of the 67-kD cell surface elastin binding protein. *Exp Cell Res* 1992, 203:344-53.
- 58. Zhu L, Dagher E, Johnson DJ, Bedell-Hogan D, Keeley FW, Kagan HM, Rabinovitch M. A Developmentally regulated program restricting insolubilization of elastin and formation of laminae in the fetal lamb ductus arteriosus. *Lab Invest* 1993, 68:321-31.
- 59. Hinek A, Rabinovitch M. The ductus arteriosus migratory smooth muscle cell phenotype processes tropoelastin to a 52-kDa product associated with impaired assembly of elastic laminae. *J Biol Chem* 1993, 268:1405-13.
- 60. Hinek A, Rabinovitch M, Keeley F, Okamura-Oho Y, Callahan J. The 67 kD elastin/laminin-binding protein is related to an alternately spliced form of ß-galactosidase. *J Clin Invest* 1993, 91:1198-205.
- 61. Koppel R, Rabinovitch M. Regulation of fetal lamb ductus arteriosus smooth muscle cell migration by indomethacin and dexamethasone. *Pediatr Res* 1993, 33(4 Pt 1):352-8.
- 62. Clausell N, Molossi S, Rabinovitch M. Increased interleukin-1ß and fibronectin expression are early features of the development of the post-cardiac transplant coronary arteriopathy in piglets. *Am J Pathol* 1993, 142:1772-86.
- 63. Johnson DJ, LaBourene J, Rabinovitch M, Keeley FW. Relative efficiency of incorporation of newly synthesized elastin and collagen into aorta, pulmonary artery and pulmonary vein of growing pigs. *Connect Tissue Res* 1993, 29:213-21.
- 64. Clausell N, Rabinovitch M. Upregulation of fibronectin synthesis by interleukin-1ß in coronary artery smooth muscle cells is associated with the development of the post-cardiac transplant arteriopathy in piglets. *J Clin Invest* 1993, 92:1850-8.

- 65. Molossi S, Clausell N. Rabinovitch M. Coronary artery endothelial interleukin-1ß mediates enhanced fibronectin production related to post-cardiac transplant atherosclerosis in piglets. *Circulation* 1993, 88(5 Pt 2):II248-56.
- 66. Houde, C, Bohn DJ, Freedom RM, Rabinovitch M. Profile of pediatric patients with pulmonary hypertension. *Br Heart J* 1993, 70:461-8.
- 67. Gao Y, Burrows P, Benson L, Rabinovitch M, Freedom M. Scimitar syndrome in infancy. *J Am Coll Cardiol* 1993, 22:873-82.
- 68. Cullinane C, Clarke J, Rabinovitch M, Bohn D, Silver M. Hyperplasia of pulmonary arterial media in infantile familial pulmonary hypertension associated with severe metabolic acidosis. *Modern Pathol* 1993, 6:699-706.
- 69. Clausell N, Molossi S, Sett S, Rabinovitch M. In vivo blockade of tumor necrosis factor- in cholesterol-fed rabbits after cardiac transplant inhibits acute coronary artery neointimal formation. *Circulation* 1994, 89:2768-79.
- 70. Coceani F, Kelsey L, Ackerley C, Gelboin H, Rabinovitch M. Cytochrome P450 during ontogenic development: occurrence in the ductus arteriosus and other tissues. *Can J Physiol Pharmacol* 1994, 72:217-26.
- 71. Oho S, Rabinovitch M. Post-cardiac transplant arteriopathy in piglets is associated with fragmentation of elastin and increased activity of a serine elastase. *Am J Pathol* 1994, 145:202-10.
- 72. Hinek A, Rabinovitch M. 67-kD elastin binding protein is a protective "companion" of extracellular insoluble elastin and intracellular tropoelastin. *J Cell Biol* 1994, 126:563-74.
- 73. Kobayashi J, Wigle D, Childs T, Zhu L, Keeley FW, Rabinovitch M. Serum-induced vascular smooth muscle cell elastolytic activity through tyrosine kinase intracellular signaling. *J Cell Physiol* 1994, 160:121-31.
- 74. Belik J, Keeley FW, Baldwin F, Rabinovitch M. Pulmonary hypertension and vascular remodeling in the fetal sheep. *Am J Physiol* 1994, 266 (6 Pt 2):H2303-9.
- 75. Zhu L, Wigle D, Hinek A, Kobayashi J, Ye C, Zuker M, Dodo H, Keeley FW, Rabinovitch M. The endogenous vascular elastase which governs development and progression of monocrotaline-induced pulmonary hypertension in rats is a novel enzyme related to the serine proteinase adipsin. *J Clin Invest* 1994, 94:1163-71.
- 76. Koppel R, Han R, Cox D, Tanswell K, Rabinovitch M. Alpha 1 antitrypsin protects neonatal rats from pulmonary vascular and parenchymal effects of oxygen toxicity. *Pediatr Res* 1994, 36:763-70.
- 77. Molossi S, Clausell N, Rabinovitch M. Reciprocal induction of tumor necrosis factor- and interleukin-1ß activity mediates fibronectin synthesis in coronary artery smooth muscle cells. *J Cell Physiol* 1995, 163:19-29.
- 78. Molossi S, Elices M, Arrhenius T, Diaz R, Coulber C, Rabinovitch M. Blockade of very late antigen-4 integrin binding to fibronectin with connecting segment-1 peptide reduces accelerated coronary arteriopathy in rabbit cardiac allografts. *J Clin Invest* 1995, 95:2601-10.
- 79. Molossi S, Clausell N, Sett S, Rabinovitch M. ICAM-1 and VCAM-1 expression in accelerated cardiac allograft arteriopathy and myocardial rejection are influenced differently by cyclosporine-A and tumor necrosis factor-blockade. *J Pathol* 1995, 176:175-82.

- 80. Clausell N, Correa de Lima V, Molossi S, Liu P, Turley E, Gotlieb A, Adelman AG, Rabinovitch M. Expression of tumor necrosis factor alpha and accumulation of fibronectin in coronary artery restenotic lesions retrieved by atherectomy. *Br Heart J* 1995, 73:534-9.
- 81. Clausell N, Butany J, Molossi S, Lonn E, Gladstone P, Rabinovitch M, Daly P. Abnormalities in intramyocardial arteries detected in cardiac transplant biopsies and lack of correlation with abnormal intracoronary ultrasound or endothelial dysfunction in large epicardial coronary arteries. *J Am Coll Cardiol* 1995, 26:110-9.
- 82. Molossi S, Elices M, Arrhenius T, Rabinovitch M. Lymphocyte transendothelial migration toward smooth muscle cells in interleukin-1ß stimulated co-cultures is related to fibronectin interactions with 4ß1 and 5ß1 integrins. *J Cell Physiol* 1995, 164:620-3.
- 83. Oho S, Koo E, Daley SJ, Gotlieb AI, Rabinovitch M. Increased elastin-degrading activity and neointimal formation in porcine aortic organ culture: Reduction of both features with a serine proteinase inhibitor. *Arterioscler Thromb Vasc Biol* 1995, 15:2200-06.
- 84. Schindler MB, Bohn DJ, Bryan AC, Cutz E, Rabinovitch M. Increased respiratory system resistance and bronchial smooth muscle hypertrophy in children with acute postoperative pulmonary hypertension. *Am J Respir Crit Care Med* 1995, 152(4 Pt 1):1347-52.
- 85. Coles J, Yemets I, Najm H, Lukanich JM, Perron J, Wilson G, Rabinovitch M, Nykanen D, Benson L, Rebeyka I, Trusler G, Freedom R, Williams W. Experience with repair of congenital heart defects using adjunctive endovascular devices. *J Thoracic and Cardiovasc Surg* 1995, 110:1513-20.
- 86. Thompson K, Rabinovitch M. Exogenous leukocyte and endogenous elastases can mediate mitogenic activity in pulmonary artery smooth muscle cells by release of extracellular matrix-bound basic fibroblast growth factor. *J Cell Physiol* 1996, 166:495-505.
- 87. Cowan B, Baron O, Crack J, Coulber C, Wilson GJ, Rabinovitch M. Elafin, a serine elastase inhibitor, attenuates post-cardiac transplant coronary arteriopathy and reduces myocardial necrosis in rabbits after heterotopic cardiac transplantation. *J Clin Invest* 1996, 97:2452-68.
- 88. Hinek A, Molossi S, Rabinovitch M. Functional interplay between interleukin-1 receptor and elastin binding protein regulates fibronectin production in coronary artery smooth muscle cells. *Exp Cell Res* 1996, 225:122-31.
- 89. Jones PL, Rabinovitch M. Tenascin-C is induced with progressive pulmonary vascular disease in rats and is functionally related to increased smooth muscle cell proliferation. *Circ Res* 1996, 79:1131-42.
- Coceani F, Kelsey L, Seidlitz E, Marks GS, McLaughlin BE, Vreman HJ, Stevenson DK, Rabinovitch M, Ackerley C. Carbon Monoxide formation in the ductus arteriosus in the lamb: Implications for the regulation of muscle tone. *Br J Pharmacol* 1997, 120:599-608.
- 91. Clausell N, Daly PA, Molossi S, Lima VC, Adelman AG, Gotlieb AI, Rabinovitch M. Histological and immunohistochemical characteristics of eccentric coronary artery lesions retrieved by atherectomy from cardiac transplant recipients. *Cardiovasc Path* 1997, 6:23-9.
- 92. Jones PL, Cowan KN, Rabinovitch M. Tenascin-C, proliferation and subendothelial fibronectin in progressive pulmonary vascular disease. *Am J Pathol* 1997, 150:1349-60.

- 93. Jones PL, Crack J, Rabinovitch M. Regulation of tenascin-C, a vascular smooth muscle cell survival factor that interacts with the vß3 integrin to promote epidermal growth factor receptor phosphorylation and growth. *J Cell Biol* 1997, 139:279-93.
- 94. Zhou B, Boudreau N, Coulber C, Hammarback J, Rabinovitch M. Microtubule-associated protein 1 light chain 3 is a fibronectin mRNA-binding protein linked to mRNA translation in lamb vascular smooth muscle cells. *J Clin Invest* 1997, 100:3070-82.
- 95. Thompson K, Kobayashi J, Childs T, Wigle D, Rabinovitch M. Endothelial and serum factors that include apolipoprotein A1 tether elastin to smooth muscle cells inducing serine elastase activity via tyrosine kinase-mediated transcription and translation. *J Cell Physiol* 1998, 174:78-89.
- 96. Wigle D, Thompson K, Yablonsky S, Jones PL, Zaidi S, Coulber C, Rabinovitch M. AML1-like transcription factor induces serine elastase activity in ovine pulmonary artery smooth muscle cells. *Circ Res* 1998, 83:252-63.
- 97. Stiskal JA, Dunn MS, Shennan AT, O'Brien KKE, Kelly EN, Koppel RI, Cox DW, Ito S, Chappel L, Rabinovitch M. Alpha 1-proteinase inhibitor therapy for the prevention of chronic lung disease of prematurity: A randomized, controlled trial. *Pediatrics* 1998, 101:89-94.
- 98. Zhou B and Rabinovitch M. Microtubule involvement in translational regulation of fibronectin expression by light chain 3 of microtubule-associated protein 1 in vascular smooth muscle cells. *Circ Res* 1998, 83:481-9.
- 99. Lee JK, Zaidi SHE, Liu P, Dawood F, Cheah AYL, Wen WH, Saiki Y, Rabinovitch M. A serine elastase inhibitor reduces inflammation and fibrosis and preserves cardiac function following experimental murine myocarditis. *Nat Med* 1998, 4:1383-91.
- 100. Zhou B, Coulber C, Rabinovitch M. Tissue-specific and developmental regulation of transforming growth factor-ß expression in fetal lamb ductus arteriosus endothelial cells. *Pediatr Res* 1998, 44:865-72.
- 101. Jones PL, Jones FS, Zhou B, Rabinovitch M. Induction of vascular smooth muscle cell tenascin-C gene expression by denatured type I collagen is dependent upon a ß3 integrin-mediated mitogen-activated protein kinase pathway and a 122-base pair promoter element. *J Cell Sci* 1999, 112:435-45.
- 102. Mason CAE, Bigras J-L, O'Blenes SB, Zhou B, McIntyre B, Nakamura N, Kaneda Y, Rabinovitch M. Gene transfer in utero biologically engineers a patent ductus arteriosus in lambs by arresting fibronectin-dependent neointimal formation. *Nat Med* 1999, 5:176-88.
- 103. Zaidi SHE, Hui C-C, Cheah AYL, You X-M, Husain, M, Rabinovitch M. Targeted overexpression of elafin protects mice against cardiac dysfunction and mortality following viral myocarditis. *J Clin Invest* 1999, 103:1211-9.
- 104. Cowan KN, Jones PL, Rabinovitch M. Regression of hypertrophied rat pulmonary arteries in organ culture is associated with suppression of proteolytic activity, inhibition of tenascin-C and smooth muscle cell apoptosis. *Circ Res* 1999, 84:1223-33.
- 105. Mason CAE, Chang P, Fallery C, Rabinovitch M. Nitric oxide mediates LC-3-dependent regulation of fibronectin in ductus arteriosus intimal cushion formation. *FASEB J* 1999, 13:1423-34.
- 106. Stiskal JA, Ito S, Cox DW, Shennan AT, O'Brien KKE, Kelly EN, Longley TB, Rabinovitch M, Dunn MS. Functional and antigenic concentrations of alpha1-proteinase inhibitor after

- administration for the prevention of chronic lung disease of prematurity. *Biol Neonate* 1999, 76:134-43.
- 107. Cowan KN, Jones PL, Rabinovitch M. Elastase and matrix metalloproteinase inhibitors induce regression and tenascin-C antisense prevents progression of vascular disease. *J Clin Invest* 2000, 105:21-34.
- 108. Mitani Y, Zaidi SHE, Dufourcq P, Thompson K, Rabinovitch M. Nitric oxide reduces vascular smooth muscle cell elastase activity through cGMP-mediated suppression of ERK phosphorylation and AML1B nuclear partitioning. *FASEB J* 2000, 14:805-14.
- 109. Cowan KN, Heilbut A, Humpl T, Lam C, Ito S, Rabinovitch M. Complete reversal of fatal pulmonary hypertension in rats by a serine elastase inhibitor. Nat Med 2000, 6:698-702.
- 110. Zaidi SHE, You X-M, Ciura S, O'Blenes S, Husain M, Rabinovitch M. Suppressed smooth muscle proliferation and inflammatory cell invasion following arterial injury in elafin-overexpressing mice. *J Clin Invest* 2000, 105:1687-95.
- 111. Hornberger LK, Singhroy S, Cavalle-Garrido T, Tsang W, Keeley F, Rabinovitch M. Synthesis of extracellular matrix and adhesion through 1 Integrins are critical for fetal ventricular myocyte proliferation. *Circ Res* 2000, 87:508-15.
- 112. Dyamenahalli U, Smallhorn JF, Geva T, Fouron JC, Cairns P, Jutras L, Huges V, Rabinovitch M, Mason CA, Hornberger LK. Isolated ductus arteriosus aneurysm in the fetus and infant: A multi-institutional experience. *J Am Coll Cardiol* 2000, 36:262-9.
- 113. O'Blenes SB, Zaidi SHE, Cheah AYL, McIntyre B, Kaneda Y, Rabinovitch M. Gene transfer of the serine elastase inhibitor elafin protects against vein graft degeneration. *Circulation* 2000, 102(19Suppl3):289-95.
- 114. O'Blenes SB, Fischer S, McIntyre B, Keshavjee S, Rabinovitch M. Hemodynamic unloading leads to regression of pulmonary vascular disease in rats. *J Thorac Card Surg* 2001, 121:279-89.
- 115. Guo C, Ju H, Leung D, Massael H, Shi M, Rabinovitch M. A novel vascular smooth muscle chymase is upregulated in spontaneously hypertensive rats. *J Clin Invest* 2001, 107:703-15.
- 116. Ju H, Gros R, You X, Tsang S, Husain M, Rabinovitch M. Conditional and targeted overexpression of vascular chymase causes hypertension in transgenic mice. *Proc Natl Acad Sci USA* 2001, 98:7469-74.
- 117. O'Blenes CA, Kinnear C, Rabinovitch M. TNF-induces fibronectin synthesis in coronary artery smooth muscle cells by a NO-dependent post-transcriptional mechanism. *Circ Res* 2001, 89:26-32.
- 118. Barolet AW, Nili N, Cheema A, Robinson R, Natarajan MK, O'Blenes S, Li J. Eskandarian MR, Sparkes J, Rabinovitch M, Stauss BH. Arterial elastase activity after balloon angioplasty and effects of elafin, an elastase inhibitor. *Arterioscler Thromb Vasc Biol* 2001, 21:1269-74.
- 119. Zaidi SHE, You X-M, Ciura S, Husain M, Rabinovitch M. Overexpression of the serine elastase inhibitor elafin protects transgenic mice from hypoxic pulmonary hypertension. *Circulation* 2002, 105:516-21.
- 120. Mitani Y, Mutlu A, Russell JC, Brindley DN, DeAlmeida J, Rabinovitch M. Dexfenfluramine protects against pulmonary hypertension in rats. *J Appl Physiol* 2002, 93:1770-78.

- 121. Opavsky MA, Martino T, Rabinovitch M, Penninger J, Richardson C, Petric M, Trinidad C, Butcher L, Chan J, Liu PP. Enhanced ERK-1/2 activation in mice susceptible to coxsackievirus-induced myocarditis. *J Clin Invest* 2002, 109:1561-9.
- 122. Sokol J, Bohn D, Lacro RV, Ryan G, Stephens D, Rabinovitch M, Smallhorn J, Hornberger LK. Fetal pulmonary artery diameters and their association with lung hypoplasia and postnatal outcome in congenital diaphragmatic hernia. *Am J Obstet Gynecol* 2002, 186(5 Pt1):1085-90.
- 123. Sun M, Opavsky MA, Stewart DJ, Rabinovitch M, Dawood F, Wen WH, Liu PP. Temporal response and localization of integrins beta1 and beta3 in the heart after myocardial infarction: Regulation by cytokines. *Circulation* 2003, 107:1046-52.
- 124. O'Blenes SB, Merklinger SL, Jegatheeswaran A, Campbell A, Rabinovitch M, Rebeyka I, Van Arsdell G. Low molecular weight heparin and unfractionated heparin are both effective at accelerating pulmonary vascular maturation in neonatal rabbits. *Circulation* 2003, 108(Suppl1):II161-6.
- 125. Sarjeant JM, Lawrie A, Kinnear C, Yablonsky S, Leung W, Massaeli H, Prichett W, Veinot JP, Rassart E, Rabinovitch M. Apolipoprotein D inhibits platelet-derived growth factor-BB-induced vascular smooth muscle cell proliferated by preventing translocation of phosphorylated extracellular signal regulated kinase 1/2 to the nucleus. *Arterioscler Thromb Vasc Biol* 2003, 23(12):2172-77.
- 126. Ohta K, Nakajima T, Cheah, AYL, Zaidi S, Kaviani N, Dawood, F, You, X, Liu, P, Husain, M, Rabinovitch M. Elafin overexpressing mice have improved cardiac function after myocardial infarction. *Am J Physiol Heart Circ Physiol* 2003, 287(1):H286-92.
- 127. Greenway S, van Suylen R J, Du Marchie Sarvaas G, Kwan E, Ambartsumian N Lukanidin E, Rabinovitch M. S100A4/Mts1 produces murine pulmonary artery changes resembling plexogenic arteriopathy and is increased in human plexogenic arteriopathy. *Am J Pathol* 2004, 164(1):253-62.
- 128. Leung WC, Lawrie A, Demaries S, Massaeli H, Burry A, Yablonsky S, Sarjeant JM, Fera E, Rassart E, Pickering JG, Rabinovitch M. Apolipoprotein D and platelet-derived growth factor-BB synergism mediates vascular smooth muscle cell migration. *Circ Res* 2004. 95:179-86.
- 129. Jackson WT, Giddings TH, Jr, Taylor M P, Mulinyawe S, Rabinovitch M, Kopito RR, Kirkegaard K. Subversion of cellular autophagosomal machinery by RNA viruses. *PLoS Biol.* 2005, 3(5): e156.
- 130. Humpl T, Zaidi SH, Coe JY, Russell J, Kaneda Y, Massaeli H, Benson LN, Rabinovitch M, Gene transfer of prostaglandin synthase maintains patency of the newborn lamb arterial duct. *Pediatr Res* 2005; 58(5):976-80.
- 131. Merklinger S L, Jones P L, Martinez E C, Rabinovitch M. Epidermal growth factor receptor blockade mediates smooth muscle cell apoptosis and improves survival in rats with pulmonary hypertension. *Circulation* 2005, 112(3):423-31.
- 132. Cowan KN, Leung WC, Mar C, Bhattacharjee R, Zhu Y, Rabinovitch M. Caspases from apoptotic myocytes degrade extracellular matrix: a novel remodeling paradigm. *FASEB J* 2005; 19(13):1848-50.
- 133. Lawrie A, Spiekerkoetter E, Martinez E C, Ambartsumian N, Sheward W J, MacLean M R, Harmar A J, Schmidt A, Lukanidin E, Rabinovitch M. Interdependent serotonin

- transporter and receptor pathways regulate S100A4/Mts1, a gene associated with pulmonary vascular disease. *Circ Res* 2005; 97(3):227-35.
- 134. Merklinger SL, Wagner RA, Spiekerkoetter E, Hinek A, Knutsen RH, Kabir MG, Desai K, Hacker S, Wang L, Cann GM, Ambartsumian NS, Lukanidin E, Bernstein D, Husain M, Mecham RP, Starcher B, Yanagisawa H, Rabinovitch M. Increased fibulin-5 and elastin in S100A4/Mts1 mice with pulmonary hypertension. *Circ Res* 2005; 97(6)(6): 596-604.
- 135. Alvira CM, Abate A, Yang G, Dennery PA, Rabinovitch M. Nuclear factor-kappaB activation in the neonatal mouse lung protects against Lipopolysaccharide-induced inflammation. *Am J Respir Crit Care Med* 2007; 175(8):805-15.
- 136. Hansmann G, Wagner RA, Schellong S, de Jesus Perez VA, Urashima T, Wang L, Sheikh AY, Suen RS, Stewart DJ, Rabinovitch M. Pulmonary arterial hypertension is linked to insulin resistance and reversed by PPAR-gamma activation. *Circulation* 2007; 115(10):1275-84.
- 137. Bland RD, Xu L, Ertsey R, Rabinovitch M, Albertine KH, Wynn KA, Kumar V, Ryan RM, Swartz DD, Csiszar K, Fong KS. Dysregulation of pulmonary elastin synthesis and assembly in preterm lambs with chronic lung disease. *Am J Physiol Lung Cell Mol Physiol* 2007; 292(6):L1370-84.
- 138. Bland RD, Mokres LM, Ertsey R, Jacobson BE, Jiang S, Rabinovitch M, Xu L, Shinwell ES, Zhang F, Beasley MA. Mechanical ventilation with 40% oxygen reduces pulmonary expression of genes that regulate lung development and impairs alveolar septation in newborn mice. *Am J Physiol Lung Cell Mol Physiol*. 2007; 293(5):L1099-110. (PMID: 17704187)
- 139. Bland RD, Ertsey R, Mokres LM, Xu L, Jacobson BE, Jiang S, Alvira CM, Rabinovitch M, Shinwell ES, Dixit A. Mechanical ventilation uncouples synthesis and assembly of elastin and increases apoptosis in lungs of newborn mice. Prelude to defective alveolar septation during lung development? *Am J Physiol Lung Cell Mol Physiol* 2008; 294(1):L3-14. (PMID: 17934062)
- 141. Cann GM, Guignabert C, Ying L, Deshpande N, Bekker JM, Wang L, Zhou B, Rabinovitch M. Developmental expression of LC3alpha and beta: absence of fibronectin or autophagy phenotype in LC3beta knockout mice. *Dev Dyn* 2008; 237(1):187-95. (PMID: 18069693)
- 142. El-Bizri N, Wang L, Merklinger SL, Guignabert C, Desai T, Urashima T, Sheikh AY, Knutsen RH, Mecham RP, Mishina Y, Rabinovitch M. Smooth muscle protein 22alpha-mediated patchy deletion of Bmpr1a impairs cardiac contractility but protects against pulmonary vascular remodeling. *Circ Res* 2008; 102(3):380-8. (NIHMSID: NIHMS76611)
- 143. Spiekerkoetter E, Alvira CM, Kim YM, Bruneau A, Pricola KL, Wang L, Ambartsumian N, Rabinovitch M. Reactivation of gammaHV68 induces neointimal lesions in pulmonary arteries of S100A4/Mts1-overexpressing mice in association with degradation of elastin. *Am J Physiol Lung Cell Mol Physiol* 2008; 294(2):L276-89. (PMID: 18083765)
- 144. Daley E, Emson C, Guignabert C, de Waal Malefyt R, Louten J, Kurup VP, Hogaboam C, Taraseviciene-Stewart L, Voelkel NF, Rabinovitch M, Grunig E, Grunig G. Pulmonary arterial remodeling induced by a Th2 immune response. *J Exp Med* 2008; 205(2):361-72. (PMCID: PMC2271018)

- 145. Hansmann G, de Jesus Perez VA, Alastalo, T, Alvira CM, Guignabert C, Bekker JM, Schellong S, Urashima T, Wang L, Morrell NW, Rabinovitch M. An antiproliferative BMP-2/PPARgamma/apoE axis in human and murine SMCs and its role in pulmonary hypertension. *J Clin Invest* 2008; 118(5):1846-57. (PMCID: PMC2276393)
- 146. Fan X, Krieg S, Kuo CJ, Wiegand SJ, Rabinovitch M, Druzin ML, Brenner RM, Giudice LC, Nayak NR. VEGF blockade inhibits angiogenesis and reepithelialization of endometrium. *FASEB J* 2008; 22(10):3571-80. (PMCID: PMC2537439)
- 147. El-Bizri N, Guignabert C, Wang L, Cheng A, Stankunas K, Chang CP, Mishina Y, Rabinovitch M. SM22alpha-targeted deletion of bone morphogenetic protein receptor 1A in mice impairs cardiac and vascular development, and influences organogenesis. *Development* 2008; 135(17):2981-91. (NIHMSID: NIHMS76627)
- 148. Zamanian RT, Hansmann G, Snook S, Lilienfeld D, Rappaport KM, Reaven GM, Rabinovitch M, Doyle RL. Insulin resistance in pulmonary arterial hypertension. *Eur Respir J* 2009; 33: 318-24. (NIHMSID: NIHMS99141)
- 149. de Jesus Perez VA, Alastalo T-P, Wu JC, Axelrod JD, Cooke JP, Amieva M, Rabinovitch M. Bone morphogenetic protein 2 induces pulmonary angiogenesis via Wnt-b-catenin and Wnt-RhoA-Rac1 pathways. *J Cell Biol* 2009; 184(1):83-99. (PMCID: PMC2615088)
- 150. Ying L, Lau A, Alvira CM, West R, Cann GM, Zhou B, Kinnear C, Jan E, Sarnow P, van de Rijn M, Rabinovitch M. LC3 mediated fibronectin mRNA translation induces fibrosarcoma growth by increasing connective tissue growth factor. *J Cell Sci* 2009; 122(Pt 9):1441-51. (NIHMSID: NIHMS86971)
- 151. Wu JC, Chruscinski A, De Jesus Perez VA, Singh H, Pitsiouni M, Rabinovitch M, Utz PJ, Cooke JP. Cholinergic modulation of angiogenesis: Role of the 7 nicotinic acetylcholine receptor. *J Cell Biochem* 2009; 108(2):433-46. (NIHMSID: NIHMS308788)
- 152. Spiekerkoetter E, Guignabert C, de Jesus Perez V, Alastalo TP, Powers JM, Wang L, Lawrie A, Ambartsumian N, Schmidt AM, Berryman M, Ashley RH, Rabinovitch M. S100A4 and Bone Morphogenetic Protein-2 Codependently Induce Vascular Smooth Muscle Cell Migration via Phospho-Extracellular Signal-Regulated Kinase and Chloride Intracellular Channel 4. *Circ Res* 2009; 105(7):639-47. (NIHMSID: NIHMS144701)
- 153. Guignabert C, Alvira CM, Alastalo T-P, Sawada H, Hansmann G, Zhao M, Wang L, El-Bizri N, Rabinovitch M. Tie2-Mediated Loss of Peroxisome Proliferator-Activated Receptor-{gamma} in Mice Causes PDGF-Receptor {beta}-Dependant Pulmonary Arterial Muscularization. Am J Physiol Lung Cell Mol Physiol 2009; 297(6):L1082-90. (PMCID: PMC2793182)
- 154. Mokres LM, Parai K, Hilgendorff A, Ertsey R, Alvira CM, Rabinovitch M, Bland RD. Prolonged Mechanical Ventilation with Air Induces Apoptosis and Causes Failure of Alveolar Septation and Angiogenesis in Lungs of Newborn Mice. *Am J Physiol Lung Cell Mol Physiol* 2010; 298(1): L23–L35. (PMCID: PMC2806196)
- 155. Nakahira K, Haspel JA, Rathinam VA, Lee SJ, Dolinay T, Lam HC, Englert JA, Rabinovitch M, Cernadas M, Kim HP, Fitzgerald KA, Ryter SW, Choi AM. Autophagy proteins regulate innate immune responses by inhibiting the release of mitochondrial DNA mediated by the NALP3 inflammasome. *Nat Immunol.* 2011; 12(3):222-30. (NIHMSID: NIHMS256871)

- 156. Alvira CM, Guignabert C, Kim YM, Chen C, Wang L, Duong TT, Yeung RS, Li DY, Rabinovitch M. Inhibition of Transforming Growth Factor-Beta Worsens Elastin Degradation in a Murine Model of Kawasaki Disease. *Am J Pathol* 2011; 178(3):1210-20. (PMCID: PMC3070551)
- de Jesus Perez VA, Ali Z, Alastalo TP, Ikeno F, Sawada H, Lai YJ, Kleisli T, Spiekerkoetter E, Qu X, Rubinos LH, Ashley E, Amieva M, Dedhar S, Rabinovitch M. BMP promotes motility and represses growth of smooth muscle cells by activation of tandem Wnt pathways. *J Cell Biol* 2011; 192(1):171-88. (PMCID: PMC3019546)
- 158. Lee SJ, Smith A, Guo L, Alastalo TP, Li M, Sawada H, Liu X, Chen ZH, Ifedigbo E, Jin Y, Feghali-Bostwick C, Ryter SW, Kim HP, Rabinovitch M, Choi AM. Autophagic Protein LC3B Confers Resistance Against Hypoxia-Induced Pulmonary Hypertension. Am J Respir Crit Care Med 2011; 183(5):649-58. (PMCID: PMC3081281)
- Hilgendorff A, Parai K, Ertsey R, Jain N, Navarro EF, Peterson JL, Tamosiuniene R, Nicolls MR, Starcher BC, Rabinovitch M, Bland RD. Inhibiting Lung Elastase Activity Enables Lung Growth in Mechanically Ventilated Newborn Mice. Am J Respir Crit Care Med 2011; Sep 1;184(5):537-46 (PMCID: PMC3175547)
- 160. Alastalo T-P, Li M, de Jesus Per ez VA, Pham D, Sawada H, Wang JK, Koskenvuo M, Wang L, Freeman BA, Chang HY, Rabinovitch M. Disruption of PPARγ/β-catenin-mediated regulation of apelin impairs BMP-induced mouse and human pulmonary arterial EC survival. *J Clin Invest* 2011; 121(9):3735-46. (PMCID: PMC3163943)
- 161. Kim YM, Haghighat L, Spiekerkoetter E, Sawada H, Alvira CM, Wang L, Acharya S, Rodriguez-Colon G, Orton A, Zhao M, Rabinovitch M. Neutrophil Elastase Is Produced by Pulmonary Artery Smooth Muscle Cells and Is Linked to Neointimal Lesions. *Am J Pathol* 2011 Jul 14. 179(3):1560-72. (PMCID: PMC3157285)
- 162. Tamosiuniene R, Tian W, Dhillon G, Wang L, Sung YK, Gera L, Patterson AJ, Agrawal R, Rabinovitch M, Ambler K, Long CS, Voelkel NF, Nicolls MR. Regulatory T cells limit vascular endothelial injury and prevent pulmonary hypertension. *Circ Res.* 2011; 109(8):867-79. (NIHMSID: NIHMS324758)
- Dempsie Y, Nilsen M, White K, Mair KM, Loughlin L, Ambartsumian N, Rabinovitch M, MacLean MR. Development of pulmonary arterial hypertension in mice over-expressing S100A4/Mts1 is specific to females. *Respir Res* 2011; 12(1):159. (PMCID: PMC3276452)
- Hilgendorff A, Parai K, Ertsey R, Juliana Rey-Parra G, Thébaud B, Tamosiuniene R, Jain N, Navarro EF, Starcher BC, Nicolls MR, Rabinovitch M, Bland RD. Neonatal mice genetically modified to express the elastase inhibitor elafin are protected against the adverse effects of mechanical ventilation on lung growth. *Am J Physiol Lung Cell Mol Physiol*. 2012 Aug;303(3):L215-27. (PMCID: PMC3423862)
- de Jesus Perez VA, Yuan K, Orcholski ME, Sawada H, Zhao M, Li CG, Tojais NF, Nickel NP, Rajagopalan V, Spiekerkoetter E, Wang L, Dutta R, Bernstein D, Rabinovitch M. Loss of Adenomatous Poliposis Coli-α3 Integrin Interaction Promotes Endothelial Apoptosis in Mice and Humans. *Circ Res.* 2012 Dec 7;111(12):1551-64. (NIHMSID: NIHMS418292)

- 166. Razavi H, Stewart SE, Xu C, Sawada H, Zarafshar SY, Taylor CA, Rabinovitch M, Feinstein JA. Chronic Effects of Pulmonary Artery Stenosis on Hemodynamic and Structural Development of the Lungs. *Am J Physiol Lung Cell Mol Physiol*. 2013 Jan 1;304(1):L17-28. (PMID: 23043077)
- 167. Vanderpool RR, El-Bizri N, Rabinovitch M, Chesler NC. Patchy deletion of Bmpr1a potentiates proximal pulmonary artery remodeling in mice exposed to chronic hypoxia. *Biomech Model Mechanobiol* 2013 Jan;12(1):33-42. (NIHMSID: NIHMS394028)
- Morrisey EE, Cardoso WV, Lane RH, Rabinovitch M, Abman SH, Ai X, Albertine KH, Bland RD, Chapman HA, Checkley W, Epstein JA, Kintner CR, Kumar M, Minoo P, Mariani TJ, McDonald DM, Mukouyama YS, Prince LS, Reese J, Rossant J, Shi W, Sun X, Werb Z, Whitsett JA, Gail D, Blaisdell CJ, Lin QS. Molecular determinants of lung development. *Ann Am Thorac Soc.* 2013 Apr;10(2):S12-6. (NIHMSID: NIHMS561622)
- 169. Spiekerkoetter E, Tian X, Cai J, Hopper RK, Sudheendra D, Li CG, El-Bizri N, Sawada H, Haghighat R, Chan R, Haghighat L, de Jesus Perez V, Wang L, Reddy S, Zhao M, Bernstein D, Solow-Cordero DE, Beachy PA, Wandless TJ, ten Dijke P, Rabinovitch M. FK506 Activates BMPR2, rescues endothelial dysfunction, and reverses pulmonary hypertension. *J Clin Invest* 2013 Aug 1;123(8):3600-13. (PMCID: PMC3726153)
- 170. Tian W, Jiang X, Tamosiuniene R, Sung YK, Qian J, Dhillon G, Gera L, Farkas L, Rabinovitch M, Zamanian RT, Inayathullah M, Fridlib M, Rajadas J, Peters-Golden M, Voelkel NF, Nicolls MR. Blocking macrophage leukotriene b4 presents endothelial injury and reverses pulmonary hypertension. *Sci Transl Med*. 2013 Aug 28;5(200):200ra117. (NIHMSID: NIHMS577022)
- 171. Sawada H, Saito T, Nickel NP, Alastalo TP, Glotzbach JP, Chan R, Haghighat L, Fuchs, G, Januszyk M, Cao A, Lai YJ, de Jesus Perez VA, Kim YM, Wang L, Chen PI, Spiekerkoetter E, Mitani Y, Gurtner GC, Sarnow P, Rabinovitch M. Reduced BMPR2 Expression Induces GM-CSF Translation and Macrophage Recruitment in Humans and Mice to Exacerbate Pulmonary Hypertension. *J Exp Med* 2014 Feb 10;211(2):263-80. (PMCID: PMC3920564)
- 172. Hilgendorff A, Parai K, Ertsey R, Navarro EF, Jain N, Carandang F, Peterson J, Mokres LM, Milla C, Preuss S, Alejandre Alcazar MA, Khan S, Masumi J, Ferreira-Tojais N, Mujahid S, Starcher BC, Rabinovitch M, Bland RD. Lung matrix and vascular remodeling in mechanically ventilated elastin haplo-insufficient (Eln+/-) newborn mice. *Am J Physiol Lung Cell Mol Physiol.* 2015 Mar 1;308(5):L464-78. (PMCID: PMC4346771)
- 173. Emrich FC, Okamura H, Dalal AR, Penov K, Merk DR, Raaz U, Hennigs JK, Chin JT, Miller MO, Pedroza AJ, Craig JK, Koyano TK, Blankenberg FG, Connolly AJ, Mohr FW, Alvira CM, Rabinovitch M, Fischbein MP. Enhanced caspase activity contributes to aortic wall remodeling and early aneurysm development in a murine model of marfan syndrome. *Arterioscler Thromb Vasc Biol.* 2015 Jan;35(1):146-54. 2015 Jan;35(1):146-54. (PMID: 25359856)
- 174. Jiang X, Nguyen TT, Tian W, Sung YK, Yuan K, Qian J, Rajadas J, Sallenave JM, Nickel NP, de Jesus Perez V, Rabinovitch M, Nicolls MR. Cyclosporine does not prevent microvascular loss in transplantation but can synergize with a neutrophil elastase

- inhibitor, elafin, to maintain graft perfusion during acute rejection. *Am J Transplant*. 2015 Jul;15(7):1768-81. (NIHMSID: NIHMS654620)
- 175. Diebold I, Hennigs JK, Miyagawa K, Li CG, Nickel NP, Kaschwich M, Cao A, Wang L, Reddy S, Chen P-I, Nakahira K, Alejandre Alcazar MA, Hopper RK, Ji L, Feldman BJ, Rabinovitch M. BMPR2 Preserves Mitochondrial Function and DNA Integrity During Reoxygenation to Promote Endothelial Survival and Reverse Pulmonary Hypertension. *Cell Metab* 2015 Apr 7;21(4):596-608. (NIHMSID: NIHMS675310)
- 176. Nickel NP, Spiekerkoetter E, Gu M, Li CG, Li H, Kaschwich M, Diebold I, Hennigs JK, Kim KY, Miyagawa K, Wang L, Cao A, Sa S, Jiang X, Stockstill RW, Nicolls MD, Zamanian RT, Bland RD, Rabinovitch M. Elafin Reverses Pulmonary Hypertension via Caveolin-1 Dependent Bone Morphogenetic Protein Signaling. *Am J Respir Crit Care Med* 2015 Jun 1;191(11):1273-86. (PMCID: PMC4476518)
- 177. Spiekerkoetter S, Sung Y, Sudheendra D, Bill M, Aldred M, van de Veerdonk M, Vonk-Noordegraaf A, Long-Boyle J, Dash R, Yang P, Lawrie A, Swift A, Rabinovitch M, Zamanian RT. Low Dose FK506 (Tacrolimus) in End-Stage Pulmonary Arterial Hypertension. *Am J Respir Crit Care Med* 2015 Jul 15;192(2):254-7. (PMCID: PMC4532822)
- 178. Rhodes CJ, Im H, Nickel NP, Cao A, Hopper R, Tojais NF, Wang L, Li CG, Chen P-I, Spiekerkoetter E, Xian Z, Chen R, Zhao MM, Kaschwich M, Wu J, Snyder MP, Rabinovitch M. RNA Sequencing Analysis Detection of a Novel Pathway of Endothelial Dysfunction in Pulmonary Arterial Hypertension. *Am J Respir Crit Care Med* 2015 Aug 1;192(3):356-66. (PMCID: PMC4584250)
- 179. Qian J, Tian W, Jiang X, Tamosiuniene R, Sung YK, Shuffle EM, Tu AB, Valenzuela A, Jiang S, Zamanian RT, Fiorentino DF, Voelkel NF, Peters-Golden M, Stenmark KR, Chung L, Rabinovitch M, Nicolls MR. Leukotrine B4 Activates Pulmonary Artery Adventitial Fibroblasts in Pulmonary Hypertension. *Hypertension*. 2015 Dec;66(6):1227-39. (NIHMSID: NIHMS722829)
- 180. Vattulainen-Collanus S, Akinrinade O, Li M, Koskenvuo M, Li CG, Rao SP, de Jesus Perez V, Sawada H, Koskenvuo JW, Alvira C, Rabinovitch M, Alastalo TP. Loss of PPARgamma in endothelial cells leads to impaired angiogenesis. *J Cell Sci.* 2016 Feb 15;129(4):693-705. (PMCID: PMC5108588)
- 181. Hopper RK, Moonen JA, Diebold I, Cao A, Rhodes CJ, Tojais NF, Hennigs JK, Gu M, Wang L, Rabinovitch M. In Pulmonary Arterial Hypertension, Reduced BMPR2 Promotes Endothelial-to-Mesenchymal Transition Via HMGA1 and its Target Slug. *Circulation*. 2016 May 3;133(18):1783-94. (NIHMSID: NIHMS770012)
- 182. Zorzanelli L, Maeda NY, Clavé MM, Aiello VD, Rabinovitch M, Lopes AA. Serum Cytokines in Young Pediatric Patients with Congenital Cardiac Shunts and Altered Pulmonary Hemodynamics. *Mediators Inflamm*. 2016;2016:7672048. Epub 2016 Aug 30. (PMCID: PMC5021473
- 183. Gu M, Shao N-Y, Silin Sa S, Li D, Termglinchan V, Ameen M, Karakikes I, Sosa G, Grubert F, Lee J, Cao A, Taylor S, Ma Y, Zhao Z, Chappell J, Hamid R, Austin ED, Gold JD, Wu JC, Snyder MP, Rabinovitch M. Patient-Specific iPSC Derived Endothelial Cells Uncover Pathways that Protect Against Pulmonary Hypertension in BMPR2 Mutation Carriers. Cell Stem Cell. 2017 Apr 6;20(4):490-504. (PMCID: PMC5500296)

- 184. Sa S, Gu M, Chappell JC, Shao N-Y, Li D, Ameen M, Elliot K, Grubert F, Li CG, Taylor S, Cao A, Ma Y, Fong R, Nguyen L, Wu JC, Snyder MP, Rabinovitch M. iPSC Model of Pulmonary Arterial Hypertension Reveals Novel Gene Expression and Patient Specificity. *Am J Respir Crit Care Med* 2017 Apr 1;195(7):930-41. (PMCID: PMC5387706)
- 185. Chen P-I, Cao A, Miyagawa K, Tojais NF, Hennigs JK, Li CG, Sweeney NM, Inglis AS, Wang L, Li D, Ye M, Feldman BJ, and Rabinovitch M. Amphetamines Promote Mitochondrial Dysfunction and DNA Damage in Pulmonary Hypertension. *JCI Insight* 2017, Jan 26;2(2):e90427. (PMCID: PMC5256132)
- 186. Zorzanelli L, Maeda NY, Clavé MM, Thomas A, Galas F, Rabinovitch M, Lopes AA. Relation of Cytokine Profile in Clinical and Hemodynamic Features in Young Patients With Congenital Heart Disease and Pulmonary Hypertension. *Am J Cardiol*. 2017 Jan 1;119(1):119-25. (PMCID: PMC5021473)
- 187. Okamura H, Emrich F, Trojan J, Chiu P, Dalal AR, Arakawa M, Sato T, Penov K, Koyano T, Pedroza A, Connolly AJ, Rabinovitch M, Alvira C, Fischbein MP. Long-term miR-29b suppression reduces aneurysm formation in a Marfan mouse model. *Physiol Rep.* 2017 Apr;5(8). Epub 2017 Apr 28. (PMCID: PMC5408287)
- Newman JH, Rich S, Abman SH, Alexander JH, Barnard J, Beck GJ, Benza RL, Bull TM, Chan SY, Chun HJ, Doogan D, Dupuis J, Erzurum SC, Frantz RP, Geraci M, Gillies H, Gladwin M, Gray MP, Hemnes AR, Herbst RS, Hernandez AF, Hill NS, Horn EM, Hunter K, Jing ZC, Johns R, Kaul S, Kawut SM, Lahm T, Leopold JA, Lewis GD, Mathai SC, McLaughlin VV, Michelakis ED, Nathan SD, Nichols W, Page G, Rabinovitch M, Rich J, Rischard F, Rounds S, Shah SJ, Tapson VF, Lowy N, Stockbridge N, Weinmann G, Xiao L. Enhancing Insights into Pulmonary Vascular Disease through a Precision Medicine Approach. A Joint NHLBI-Cardiovascular Medical Research and Education Fund Workshop Report. Am J Respir Crit Care Med 2017 Jun 15;195(12):1661-70. (PMCID: PMC5476915)
- 189. Amsallem M, Sweatt AJ, Aymami MC, Kuznetsova T, Selej M, Lu H, Mercier O, Fadel E, Schnittger I, McConnell MV, Rabinovitch M, Zamanian RT, Haddad F. Right Heart End-Systolic Remodeling Index Strongly Predicts Outcomes in Pulmonary Arterial Hypertension: Comparison with Validated Models. *Circ Cardiovascular Imaging*. 2017 Jun;10(6). (PMCID: PMC5527228)
- 190. Tojais NF, Cao A, Lai YJ, Wang L, Chen PI, Alcazar MAA, de Jesus Perez V, Hopper RK, Rhodes CJ, Bill MA, Sakai LY, Rabinovitch M. Codependence of Bone Morphogenetic Protein Receptor 2 and Transforming Growth Factor-β in Elastic Fiber Assembly and Its Perturbation in Pulmonary Arterial Hypertension. Arterioscler Thromb Vasc Biol. 2017 Aug;37(8):1559-69. (PMCID: PMC5593082)
- 191. Zamanian RT, Hedlin H, Greuenwald P, Wilson DM, Segal JI, Jorden M, Kudelko K, Liu J, Hsi A, Rupp A, Sweatt AJ, Tuder R, Berry GJ, Rabinovitch M, Doyle RL, De Jesus Perez V, Kawut SM. Features and Outcomes of Methamphetamine Associated Pulmonary Arterial Hypertension. Am J Respir Crit Care Med. 2018 Mar 15;197(6):788-800. (PMCID: PMC5855067)
- 192. Saito T, Miyagawa K, Chen SY, Tamosiuniene R, Wang L, Sharp O, Samayoa E, Harada D, Moonen JAJ, Cao A, Chen PI, Hennigs JK, Gu M, Li CG, Leib RD, Li D, Adams CM, Del Rosario PA, Bill MA, Haddad F, Montoya JG, Robinson W, Fantl WJ, Nolan GP,

- Zamanian RT, Nicolls MR, Chiu CY, Ariza ME, Rabinovitch M. Upregulation of Human Endogenous Retrovirus-K is Linked to Immunity and Inflammation in Pulmonary Arterial Hypertension. *Circulation*. 2017 Nov 14:136(20):1920-35. (PMCID: PMC5685911)
- 193. Tamosiuniene R, Manouvakhova O, Mesange P, Saito T, Qian J, Sanyal M, Lin YC, Nguyen LP, Luria A, Tu AB, Sante JM, Rabinovitch M, Fitzgerald DJ, Graham BB, Habtezion A, Voelkel NF, Aurelian L, Nicolls MR. A Dominant Role for Regulatory T Cells in Protecting Females Against Pulmonary Hypertension. *Circ Res.* 2018 Jun 8;122(12):1689-1702. (PMCID: PMC5993601)
- 194. Alejandre Alcazar MA, Kaschwich M, Ertsey R, Preuss S, Milla C, Mujahid S, Masumi J, Khan S, Mokres LM, Tian L, Mohr J, Hirani DV, Rabinovitch M, Bland RD. Elafin treatment rescues EGFR-Klf4 signaling and lung cell survival in ventilated newborn mice. *Am J Respir Cell Mol Biol.* 2018 Nov;59(5):623-34. (PMCID: PMC6236693)
- 195. Yang W, Marsden AL, Ogawa MT, Sakarovitch C, Hall KK, Rabinovitch M, Feinstein JA. Right ventricular stroke work correlates with outcomes in pediatric pulmonary arterial hypertension. *Pulm Circ*. 2018 Jul-Sep;8(3):2045894018780534. (PMCID: PMC6432686)
- 196. Taylor S, Dirir O, Zamanian RT, Rabinovitch M, Thompson AAR. The Role of Neutrophils and Neutrophil Elastase in Pulmonary Arterial Hypertension. *Front Med (Lausanne)*. 2018 Aug 3;5:217. (PMCID: PMC6090899)
- 197. Miyagawa K, Shi, Chen P-I, Hennigs JK, Zhao Z, Wang M, Li CG, Saito T, Taylor S, Sa S, Cao A, Wang L, Snyder MP, Rabinovitch M. Smooth Muscle Contact Drives Endothelial Regeneration by BMPR2-Notch1 Mediated Metabolic and Epigenetic Changes. *Circ Res.* 2019 Jan 18;124(2):211-24. (PMCID: PMC6400637)
- 198. Li CG, Mahon C, Sweeney NM, Verschueren E, Katamani V, Li D, Hennigs JK, Marciano DP, Diebold I, Abu-Halawa O, Elliott M, Sa S, Guo F, Wang L, Cao A, Guignabert C, Sollier J, Nickel NP, Kaschwich M, Cimprich KA, Rabinovitch M. PPARγ Interaction with UBR5/ATMIN Promotes DNA Repair to Maintain Endothelial Homeostasis. *Cell Reports*. 2019 Jan 29;26(5):1333-43. (PMCID: PMC6436616)
- 199. Thomaz AM, Kajita LJ, Aiello VD, Zorzanelli L, Galas FR, Machado CG, Barbero-Marcial M, Jatene MB, Rabinovitch M, Lopes AA. EXPRESS: Parameters associated with outcome in pediatric patients with congenital heart disease and pulmonary hypertension subjected to combined vasodilator and surgical treatments. *Pulm Circ*. 2019 Feb 26:2045894019837885. (PMCID: PMC6688149)
- 200. Sweatt AJ, Hedlin HK, Balasubramanian V, Hsi A, Blum LK, Robinson WH, Haddad F, Hickey PM, Condliffe RA, Lawrie A, Nicolls MR, Rabinovitch M, Khatri P, Zamanian RT. Discovery of Distinct Immune Phenotypes Using Machine Learning in Pulmonary Arterial Hypertension. *Circ Res.* 2019 Mar 15;124(6):904-19. (PMCID: PMC6428071)
- 201. Yang W, Dong M, Rabinovitch M, Chan FP, Marsden AL, Feinstein JA. Evolution of hemodynamic forces in the pulmonary tree with progressively worsening pulmonary arterial hypertension in pediatric patients. *Biomech Model Mechanobiol*. 2019 Jun;18(3):779-96. (PMID: 30635853)
- 202. Tian W, Jiang X, Sung YK, Shuffle E, Wu TH, Kao PN, Tu AB, Dorfmüller P, Cao A, Wang L, Peng G, Kim Y, Zhang P, Chappell J, Pasupneti S, Dahms P, Maguire P, Chaib H, Zamanian R, Peters-Golden M, Snyder MP, Voelkel NF, Humbert M, Rabinovitch M, Nicolls MR. Phenotypically Silent Bone Morphogenetic Protein Receptor 2 Mutations

- Predispose Rats to Inflammation-Induced Pulmonary Arterial Hypertension by Enhancing the Risk for Neointimal Transformation. *Circulation*. 2019 Oct 22;140(17):1409-1425. (PMCID: PMC6803052)
- 203. Reyes-Palomares A, Gu M, Grubert F, Berest I, Sa S, Kasowski M, Arnold C, Shuai M, Srivas R, Miao S, Li D, Snyder MP, Rabinovitch M, Zaugg JB. Remodeling of active endothelial enhancers is associated with aberrant gene-regulatory networks in pulmonary arterial hypertension. *Nat Commun*. 2020 Apr 3;11(1):1673. (PMCID: PMC7125148)
- Zhang J, He Y, Yan X, Chen S, He M, Lei Y, Zhang J, Gongol B, Gu M, Miao Y, Bai L, Cui X, Wang X, Zhang Y, Fan F, Li Z, Shen Y, Chou CH, Huang HD, Malhotra A, Rabinovitch M, Jing ZC, Shyy JY. MicroRNA-483 amelioration of experimental pulmonary hypertension. *EMBO Mol Med*. 2020 May 8;12(5):e11303. (PMCID: PMC7207157)
- 205. Grubert F, Srivas R, Spacek DV, Kasowski M, Velasco MR, Sinnott-Armstrong N, Greenside P, Narasimha A, Liu Q, Geller B, Sanghi A, Kulik M, Sa S, Rabinovitch M, Kundaje A, Dalton S, Zaugg J, Snyder MP. Landscape of Cohesin-Mediated Chromatin Loops in the Human Genome. *Nature*. 2020 Jul;583(7818):737-743. (PMCID: PMC7410831)
- 206. Sayed N, Liu C, Ameen M, Himmati F, Zhang JZ, Khanamiri S, Moonen JR, Wnorowski A, Cheng L, Rhee JW, Gaddam S, Wang KC, Sallam K, Boyd JH, Woo YJ, Rabinovitch M, Wu JC. Clinical trial in a dish using iPSCs shows lovastatin improves endothelial dysfunction and cellular cross-talk in LMNA cardiomyopathy. *Sci Transl Med*. 2020 Jul 29;12(554):eaax9276. (PMID: 32727917)
- 207. van der Feen DE, Bossers GPL, Hagdorn QAJ, Moonen JR, Kurakula K, Szulcek R, Chappell J, Vallania F, Donato M, Kok K, Kohli JS, Petersen AH, van Leusden T, Demaria M, Goumans MTH, De Boer RA, Khatri P, Rabinovitch M, Berger RMF, Bartelds B. Cellular senescence impairs the reversibility of pulmonary arterial hypertension. Sci Transl Med. 2020 Jul 29;12(554):eaaw4974. (PMID: 32727916)
- 208. Kanchan K, Iyer K, Yanek LR, Carcamo-Orive I, Taub MA, Malley C, Baldwin K, Becker LC, Broeckel U, Cheng L, Cowan C, D'Antonio M, Frazer KA, Quertermous T, Mostoslavsky G, Murphy G, Rabinovitch M, Rader DJ, Steinberg MH, Topol E, Yang W, Knowles JW, Jaquish CE, Ruczinski I, Mathias RA. Genomic integrity of human induced pluripotent stem cells across nine studies in the NHLBI NextGen program. Stem Cell Res. 2020 Jul;46:101803. (PMID: 32442913)
- 209. Dong M, Yang W, Tamaresis JS, Chan FP, Zucker EJ, Kumar S, Rabinovitch M, Marsden AL, Feinstein JA. Image-based scaling laws for somatic growth and pulmonary artery morphometry from infancy to adulthood. *Am J Physiol Heart Circ Physiol*. 2020 Aug 1;319(2):H432-H442. (PMCID: PMC7473930)
- 210. Miao Y, Tian L, Martin M, Paige SL, Galdos FX, Li J, Klein A, Zhang H, Ma N, Wei Y, Stewart M, Lee S, Moonen JR, Zhang B, Grossfeld P, Mital S, Chitayat D, Wu JC, Rabinovitch M, Nelson TJ, Nie S, Wu SM, Gu M. Intrinsic Endocardial Defects Contribute to Hypoplastic Left Heart Syndrome. *Cell Stem Cell*. 2020 Oct 1;27(4):574-89. (PMID: 32810435)
- 211. Paige SL, Galdos FX, Lee S, Chin ET, Ranjbarvaziri S, Feyen DAM, Darsha AK, Xu S, Ryan JA, Beck AL, Qureshi MY, Miao Y, Gu M, Bernstein D, Nelson TJ, Mercola M, Rabinovitch M, Ashley EA, Parikh VN, Wu SM. Patient-Specific Induced Pluripotent Stem

- Cells Implicate Intrinsic Impaired Contractility in Hypoplastic Left Heart Syndrome. *Circulation*. 2020 Oct 20;142(16):1605-08. (PMID: 33074758)
- 212. Hennigs JK, Cao A, Li CG, Shi M, Mienert J, Miyagawa K, Körbelin J, Marciano DP, Chen PI, Roughley M, Elliott MV, Harper RL, Bill MA, Chappell J, Moonen JR, Diebold I, Wang L, Snyder MP, Rabinovitch M. PPARgamma-p53-Mediated Vasculoregenerative Program to Reverse Pulmonary Hypertension. *Circ Res* 2021; Feb 5;128(3):401-18. (PMID: 33322916)
- 213. Amsallem M, Sweatt AJ, Arthur Ataam J, Guihaire J, Lecerf F, Lambert M, Ghigna MR, Ali MK, Mao Y, Fadel E, Rabinovitch M, de Jesus Perez V, Spiekerkoetter E, Mercier O, Haddad F, Zamanian RT. Targeted proteomics of right heart adaptation to pulmonary arterial hypertension. *Eur Respir J* 2021 Apr 8;57(4):2002428. (PMID: 33334941)
- 214. Li D, Shao N-Y, Moonen J-R, Zhao A, Shi M, Otsuki S, Wang L, Nguyen T, Yan E, Maricano DP, Contrepois K, Li CG, Wu JC, Snyder MP, Rabinovitch M. ALDH1A3 Coordinates Metabolism with Gene Regulation in Pulmonary Arterial Hypertension. *Circulation* 2021 May 25;143(2):2074-90. (PMID: 33764154)
- 215. Gu M, Donato M, Miao Y, Mao S, Saito T, Otsuki S, Wang L, Harper RL, Sa S, Khatri P, Rabinovitch M. iPSC-Endothelial Cell Phenotypic Drug Screening and in Silico Analyses Identify Tryphostin-AG1296 for Pulmonary Arterial Hypertension. *Science Transl Med* 2021 May 5;13(592):eaba6480. (PMID: 33952674)
- 216. Culley MK, Zhao J, Tai YY, Tang Y, Perk D, Negi V, Yu Q, Woodcock CC, Handen A, Speyer G, Kim S, Lai YC, Satoh T, Watson AM, Aaraj YA, Sembrat J, Rojas M, Goncharov D, Goncharova EA, Khan OF, Anderson DG, Dahlman JE, Gurkar AU, Lafyatis R, Fayyaz AU, Redfield MM, Gladwin MT, Rabinovitch M, Gu M, Bertero T, Chan SY. Frataxin deficiency promotes endothelial senescence in pulmonary hypertension. *J Clin Invest* 2021 Jun 1;131(11):136459. (PMID: 33905372)
- 217. Sweatt AJ, Miyagawa K, Rhodes CJ, Taylor S, del Rosario PA, His A, Haddad F, Spiekerkoetter E, Roof MB, Bland RD, Swietlik EM, Graf S, Wilkins MR, Morrell NW, Nicolls MR, Rabinovitch M, Zamanian RT. Severe Pulmonary Arterial Hypertension is Characterized by Increased Neutrophil Elastase and Relative Elafin Deficiency. *Chest* 2021 June 26:S0012-3692(21)01255-1. Online ahead of print. (PMID: 34181952)
- 218. Wilk AJ, Lee MJ, Wei B, Parks B, Pi R, Martínez-Colón GJ, Ranganath T, Zhao NQ, Taylor S, Becker W; Stanford COVID-19 Biobank, Jimenez-Morales D, Blomkalns AL, O'Hara R, Ashley EA, Nadeau KC, Yang S, Holmes S, Rabinovitch M, Rogers AJ, Greenleaf WJ, Blish CA. Multi-omic profiling reveals widespread dysregulation of innate immunity and hematopoiesis in COVID-19. *J Exp Med*. 2021 Aug 2;218(8):e20210582. (PMID: 34128959)
- 219. Otsuki S, Saito T, Taylor S, Li D, Moonen JR, Marciano D, Harper RL, Cao A, Wang L, Ariza ME, Rabinovitch M. Monocyte released HERV-K dUTPase engages TLR4 and MCAM causing endothelial mesenchymal transition. *JCI Insight* 2021 Aug 9;6(15):146416. (PMID: 34185707)
- 220. Martin M, Zhang J, Miao Y, He M, Kang J, Huang HY, Chou CH, Huang TS, Hong HC, Su SH, Wong SS, Harper RL, Wang L, Bhattacharjee R, Huang HD, Chen ZB, Malhotra A, Rabinovitch M, Hagood JS, Shyy JY. Role of endothelial cells in pulmonary fibrosis via SREBP2 activation. *JCI Insight*. 2021 Nov 22;6(22):e125635. (PMID: 34806652)

- 221. Dong ML, Lan IS, Yang W, Rabinovitch M, Feinstein JA, Marsden AL. Computational simulation-derived hemodynamic and biomechanical properties of the pulmonary arterial tree early in the course of ventricular septal defects. *Biomech Model Mechanobiol*. 2021 Dec;20(6):2471-89. (PMID: 34585299)
- Yu Z, Zhou X, Liu Z, Pastrana-Gomez V, Liu Y, Guo M, Tian L, Nelson TJ, Wang N, Mital S, Chitayat D, Wu JC, Rabinovitch M, Wu SM, Snyder MP, Miao Y, Gu M. KMT2D-NOTCH Mediates Coronary Abnormalities in Hypoplastic Left Heart Syndrome. Circ Res. 2022 Jul 22;131(3):280-282. (PMID: 35762338)
- 223. Taylor S, Isobe S, Cao A, Contrepois K, Benayoun BA, Jiang L, Wang L, Melemenidis S, Ozen MO, Otsuki S, Shinohara T, Sweatt AJ, Kaplan J, Moonen JR, Marciano DP, Gu M, Miyagawa K, Hayes B, Sierra RG, Kupitz CJ, Del Rosario PA, Hsi A, Thompson AAR, Ariza ME, Demirci U, Zamanian RT, Haddad F, Nicolls MR, Snyder MP, Rabinovitch M. Endogenous retroviral elements generate pathologic neutrophils in pulmonary arterial hypertension. *Am J Resp Crit Care Med*. 2022 Oct 15;206(8):1019-34. (PMID: 35696338; PMCID in progress)
- 224. Moonen JR, Chappell J, Shi M, Shinohara T, Li D, Mumbach MR, Zhang F, Nair RV, Nasser J, Mai DH, Taylor S, Wang L, Metzger RJ, Chang HY, Engreitz JM, Snyder MP, Rabinovitch M. KLF4 recruits SWI/SNF to increase chromatin accessibility and reprogram the endothelial enhancer landscape under laminar shear stress. *Nat Commun.* 2022 Aug 23:13(1):4941. (PMCID: PMC9399231)
- 225. Abud KCO, Machado CM, Vilas Boas LS, Maeda NY, Carvalho ES, Souza MFS, Gaiolla PV, Castro CRP, Pereira J, Rabinovitch M, Lopes AA. Respiratory viruses and postoperative hemodynamics in patients with unrestrictive congenital cardiac communication: a prospective cohort study. *Eur J Med Res.* 2023 Jan 20;28(1):38. (PMID: 36670454)
- 226. Wang L, Moonen JR, Cao A, Isobe S, Li CG, Tojais NF, Taylor S, Marciano DP, Chen PI, Gu M, Li D, Harper RL, El-Bizri N, Kim YM, Stankunas K, Rabinovitch M. Dysregulated Smooth Muscle Cell BMPR2 ARRB2 Axis Causes Pulmonary Hypertension. *Circ Res.* 2023 Mar 3;132(5):545–564. (PMID: 36744494; PMCID: PMC10008520)
- 227. Culley MK, Rao RJ, Mehta M, Zhao J, El Khoury W, Harvey LD, Perk D, Tai YY, Tang Y, Shiva S, Rabinovitch M, Gu M, Bertero T, Chan SY. Frataxin deficiency disrupts mitochondrial respiration and pulmonary endothelial cell function. *Vascul Pharmacol*. 2023 Aug;151:107181. (PMID: 37164245)
- 228. Ferrian S, Cao A, McCaffrey EF, Saito T, Greenwald NF, Nicolls MR, Bruce T, Zamanian RT, Del Rosario P, Rabinovitch M, Angelo M. Single-Cell Imaging Maps Inflammatory Cell Subsets to Pulmonary Arterial Hypertension Vasculopathy. *Am J Respir Crit Care Med*. 2024 Jan 15;209(2):206-18. (PMID: 37934691)
- 229. Isobe S, Nair RV, Kang HY, Wang L, Moonen JR, Shinohara T, Cao A, Taylor S, Otsuki S, Marciano DP, Harper RL, Adil MS, Zhang C, Lago-Docampo M, Körbelin J, Engreitz JM, Snyder MP, Rabinovitch M. Reduced FOXF1 Links Unrepaired DNA Damage to Pulmonary Arterial Hypertension. *Nat. Commun.* 2023 Nov 21;14(1):7578. (PMID: 37989727)
- 230. Szafron JM, Yang W, Feinstein JA, Rabinovitch M, Marsden AL. A Computational Growth and Remodeling Framework for Adaptive and Maladaptive Pulmonary Arterial

- Hemodynamics. *Biomech Model Mechanobiol.* 2023 Dec;22(6):1935-51. (PMID: 37658985)
- 231. Tsutomu Shinohara T, Moonen JR, Chun YH, Lee-Yow YC, Okamura K, Szafron JM, Kaplan J, Cao A, Wang L, Guntur D, Taylor S, Isobe S, Dong M, Yang W, Guo K, Franco BD, Pacharinsak C, Pisani LJ, Saitoh S, Mitani Y, Marsden AL, Engreitz JM, Körbelin J, Rabinovitch M. High Shear Stress Reduces ERG Causing Endothelial-Mesenchymal Transition and Pulmonary Arterial Hypertension. *Arterioscler Thromb Vasc Biol.* 2024 Dec 26. doi: 10.1161/ATVBAHA.124.321092. Online ahead of print. PMID: 39723537; NIHMS2041924

Peer Reviewed Publications – In Progress (under review/revision)

- BMPR2 Regulates Hypoxic Exosome Signaling to Maintain Vascular Homeostasis.
 Marciano DP, Harper RL, Viswanathan V, Chappell J, Khan RI, Jung KO, Wang L, Otsuki S, Perrino J, Melemenidis S, Li D, Martin M, Elliott KA, Maydan D, Chu A, Li CG, Pratx G, Rabinovitch M, Snyder MP (Manuscript under revision for Nature Cardiovascular Research)
- 2. Activation of Circulating Classical Dendritic Cells is Linked to an Endogenous Retroviral Response in Idiopathic Pulmonary Arterial Hypertension. T Saito, Zhou X, Chen S-Y, Ferrian S, Nishimura T, Nair RV, Otsuki S, Angelo RM, Zamanian RT, Haddad F, Ariza ME, Nolan GP, Fantl W, Snyder MP, Rabinovitch M. (Manuscript under revision for Clinical and Translational Medicine)
- 3. R L Harper, X Zhou, D P Marciano, A Cao, L Wang, S Deivanayagam, M Martin, M Snyder, *M Rabinovitch Single cell RNA sequencing of circulating MNC in pulmonary arterial hypertension reveal an interferon/ STAT1 apoptotic signature with an impaired immune response. *Respiratory Research* (under revision)

Manuscripts In Preparation:

none

Book Chapters and Requested Articles

- 1. Rabinovitch M, Reid L. Quantitative structural analysis of the pulmonary vascular bed in congenital heart defects. In Pediatric Cardiovascular Disease. 1980. pp. 149-68.
- 2. Rabinovitch M. Lung biopsy and wedge angiogram in congenital heart defects. Symposium of World Congress of Pediatric Cardiology. Churchill Livingstone, Edinburgh 1981.
- 3. Rabinovitch M. Pulmonary vascular disease. Chapter 6 in congenital heart disease section in Thoracic and Cardiovascular Surgery 4th edition. Glenn WW1, Bove AE, Geha AS, Hammond GL and Laks H, editors. Appleton-Century Crafts, New York, New York 1982.

- 4. Rabinovitch M. Pulmonary Hypertension: Chapter in heart diseases in Infants, Children and Adolescents. Moss AJ, Adams FM and Emmanouilides GC, editors. Williams and Wilkins, Baltimore. (3rd edition), 1983.
- 5. Freedom R, Rabinovitch M. The angiography of the pulmonary circulation in patients with pulmonary atresia and ventricular septal defect. Chapter in Pediatric Cardiology, University Park Press, Baltimore 1983.
- 6. Pelech A, Rabinovitch M, Freedom R. The absent pulmonary valve. A consideration of tetralogy of Fallot and other variants. Chapter in Pediatric Cardiology. University Park Press, Baltimore 1983.
- 7. Rabinovitch M. Development of pulmonary circulation and myocardium. Chapter in Applied Physiology in Critical Care. Martinus Nijholf, The Hague Netherlands.
- 8. Olley PM, Rabinovitch M. Developmental pharmacology of the cardiovascular system in Pediatric Clinical Pharmacology. Ed. I. Radde and S. MacLeod. PSG publishing Co., Littleton, Ma, 1985.
- 9. Rabinovitch M. Morphometric development of pulmonary vascular bed: pharmacologic implications. Pediatric Pharmacol, 1985, 5:31-48.
- 10. Burrows FA, Rabinovitch M. The pulmonary circulation in children with congenital heart disease: morphologic and morphometric considerations. Can Anes Soc J 1985, 32:364.
- 11. Burrows PE, Freedom RM, Rabinovitch M, Moes CAF. The investigation of pulmonary arteries in congenital heart disease. Radiologic Clinics of North America, SW Miller ed., 1985, 23:689.
- 12. Rabinovitch M. Pulmonary vascular disease: Lung biopsy studies. In Symposium of the 2nd World Congress of Pediatrics Cardiology. E. Doyle, M. Engle, W. Gersony, W Rashkind, N. Talner editors, Springer Verlag, New York, New York 1986.
- 13. Burrows FA, Klinck JR, Rabinovitch M, Bohn DJ. Pulmonary hypertension in children: Perioperative management. Can Anaesth Soc J 1986, 33:606-628.
- 14. Rabinovitch M. Mechanism of high flow, high-pressure pulmonary hypertension in Pulmonary Circulation, Health and Disease. JA Will, CA Dawson, EK Weir editors, Academic Press. Orlando. Florida. 1987.
- 15. Rabinovitch M. Dilator prostaglandins and structural changes in pulmonary arteries. Am Rev Resp Dis 1987,136:777-9.
- 16. Rabinovitch M. Pulmonary circulation in ventricular septal defect in perspectives in Pediatric Cardiology. RH Anderson, WH Neches, SC Park and JR Zuberbuhler editors, Futura, Mount Kisco New York, 1988.
- 17. Rabinovitch, M. Intrapulmonary connections and nonconnections in perspectives in Pediatric Cardiology. RH Anderson, WH Neches, SC Park and JR Zuberbuhler, editors, Futura, Mount Kisco, New York, 1988.
- 18. Rabinovitch M. Problems of pulmonary hypertension in children with congenital heart disease. Chest, 1988, 119-26S.
- 19. Rabinovitch M. Endothelial changes associated with high pulmonary blood pressure in endothelial cells. US Ryan editor, CRC Press, Miami, 1988.
- 20. Rabinovitch M. Pulmonary vascular disease in The Right Ventricle. Konstam M, Isner J, editors, Kluwer Academic Publishers, Boston, I988.

- 21. Rabinovitch M. Abnormal structural development of the pulmonary vascular bed in bronchopulmonary dysplasia in Pediatric Bronchopulmonary Dysplasia. E. Bancalari and T. Stocker editors. Hemisphere Publishing Corp. (Harper & Row), Washington, 1988.
- 22. Rabinovitch M. Hypoxia and the newborn circulation in Tolerable Limits of Hypoxia. J Sutton, C. Houston, G. Coates editors, Bench Mark Press, Indianapolis, Indiana, 1988.
- 23. Rabinovitch M. New developments in pathogenesis of pulmonary hypertension in the newborn and child. Acta Paediatr Jpn 1989, 31:631-40.
- 24. Rabinovitch M. Pathophysiology of high flow high-pressure pulmonary vascular disease in Pulmonary Vascular Physiology and Pathophysiology. J Reeves, K Weir, editors, in the series Lung Biology in Health and Disease C. L'Enfant, editor, Marcel Dekker, NY, 1989.
- 25. Rabinovitch M. Hypertension Pulmonaire in Coeur 19:254-265, F Julien editor, 1988. Pulmonary hypertension. Update for 4th edition (see 4).
- 26. Rabinovitch M. Structure and function of the pulmonary vascular bed: An update in pediatric cardiology. N Talner and W Friedman editors, Cardiology Clinics 7:227-38, 1989.
- 27. Keeley FW, Todorovich L, Rabinovitch M. Elastin and elastases in the pathology of the arterial wall in Elastin and Elastases. W. Hornebeck and L. Robert editors. CRC Press, Boca Raton, Florida, 1989 Volume II
- 28. Rabinovitch M. Persistent and pulmonary hypertension of the newborn syndrome (PPHNS), fetal and neonatal cardiology. W. Long editor, WB Saunders, Philadelphia 1989:656-66.
- 29. Rabinovitch M. and Turner-Gomes SO. Platelet endothelial factors in Advances in Pediatrics. L. Barness editor. Year Book Medical Publishers, Chicago1989, Vol. 36:91-108. Rabinovitch M. Pulmonary vascular obstructive disease: Basic mechanisms and implications to therapy. Current Opinion in Pediatrics, D.G. Nathan, editor. 1989,1:110-9.
- 30. Trusler GA, Williams WG, Cohen AJ, Rabinovitch M, Moes CAF, Smallhorn JF, Coles JG, Lightfoot NE and Freedom RM. The cavopulmonary shunt: Evolution of a concept in congenital heart disease. Circulation 1990, 82 (suppl IV): IV-131-IV-138.
- 31. Rabinovitch M. Autoimmune disease and unexplained pulmonary hypertension. Circulation 1992, 85:380-381.
- 32. Ye C, Rabinovitch M. New developments in the pulmonary circulation in children. Current Opinion in Cardiology, 1992, 7:124-33.
- 33. Rabinovitch M, Freedom R. Pulmonary vascular disease. Neonatal Heart Disease, 1992, Springer& Verlag, London, England. Edition 45-64.
- 34. Rabinovitch M. Pathology and anatomy of pulmonary atresia and ventricular septal defect. Progress in Pediatric Cardiology F. Puga, guest editor, William W. Miller, editor, 1992, 1:9-17.
- 35. Rabinovitch M. Investigational approaches to pulmonary hypertension. Toxicol Pathol 1992, 19:458-469.
- 36. Clausell N, Coles J, Rabinovitch M. Coronary arteriopathy postcardiac transplant in a heterotropic piglet model: The role of matrix-cytokine intereaction. Transplant Proc 1993, 25:859-60.

- 37. Gow R, Bohn D, Koren G, Olley P, Rabinovitch M. Cardiovascular Pharmacology. Pediatric Pharmacology and Therapeutics, Ingeborg C. Radde & Stuart M. MacLeod editors, 1993, 197-219.
- 38. Collins-Nakai RL, Rabinovitch M. Pulmonary vascular obstructive disease in congenital heart disease in adolescents and adults, Cardiology Clinics, vol. 11, no.4. W. B. Saunders, 1993, 675-87.
- 39. Rabinovitch M. Elastase activity and the pathophysiology of pulmonary hypertension in Eur Respir Rev, J.E. Bishop, T.W. Evans, G.J. Laurent editors, 1993, 3:16, 591-7.
- 40. Rabinovitch M. Elastase, remodeling of the extracellular matrix and pulmonary hypertension In Seminars in Respiratory and Critical Care Medicine, Dr. N.F. Voelkel editor, 1994, 15:199-206.
- 41. Rabinovitch M. Pathophysiology of Pulmonary Hypertension: Chapter in Moss and Adams Heart Disease in Infants, Children, and Adolescents. Emmanouilides GC, Riemenschneidier TA, Allen HD, Gutgesell HP editors. Williams and Wilkins, Baltimore. (5th edition) vol. II, 1994:1659-95.
- 42. Rabinovitch M. Elastase and Cell-Extracellular Matrix Interactions in the Pathogenesis of intimal Proliferation In Atherosclerosis X, Excerpta Medica, International Congress Series 1066. Woodford F.P., Davignon J, Sniderman A. editors1995: 338-49.
- 43. Rabinovitch M. Pulmonary vascular disease In Glenn's Thoracic and Cardiovascular Surgery (6th edition) vol. II. Drs. H Laks and L Permut, editors 1995:925-43.
- 44. Molossi S, Rabinovitch M. VLA-4 and lymphocyte trafficking in immune-inflammatory states Novel therapeutic approaches in allograft arteriopathy In Springer Seminars in Immunopathology. Drs. Miescher, Izui and M. Elices, editors, 1995, 16:443-65.
- 45. Keeley FW, Rabinovitch M. Matrix metabolism in hypertension in Pulmonary Vasculature Remodeling. J.E. Bishop, J. Reeves, G.J. Laurent, eds. Portland Press, London, pp149-69, 1995.
- 46. Rabinovitch M. Elastase and cell matrix interactions in the pathobiology of vascular disease. Acta Paediatrica Japonica, 37:6, 1995.
- 47. Rabinovitch M. Molossi S and Clausell N. Cytokine-mediated fibronectin production and transendothelial migration of lymphocytes in the mechanism of cardiac allograft vascular disease: Efficacy of novel therapeutic approaches. J of Heart and Lung Transplantation 14:S116-23, 1995.
- 48. Rabinovitch M. Pulmonary vascular development. Response to hypoxia. In Tissue Oxygen Deprivation. From Molecular to Integrated Function. Drs. G. Haddad and G. Lister editors, Marcel Dekker Inc, New York, 1996, pp307-33.
- 49. Rabinovitch M. Insights into the pathogenesis of primary pulmonary hypertension from animal models In Primary Pulmonary Hypertension Drs. L. Rubin and S. Rich, editors. Marcel Dekker, Inc., New York, 1996, pp63-82.
- 50. Rabinovitch M. It all begins with EVE (Endogenous Vascular Elastase). Isr J of Med Sci 1996, 32:803-8.
- 51. Rabinovitch, M. Prevention of coronary artery disease and chronic rejection. Symposium: Mechanism and prevention of chronic allogrant failure. 16th International Congress of the Transplantation Society, Barcelona, Spain, 1996, Spotlight supplement 96-7.

- 52. Rabinovitch M. Cell-extracellular matrix interations in the ductus arteriosus and perinatal pulmonary circulation In Seminars in Perinatology. Drs. R. Creasy and J Warshaw editors, Philadelphia, PA,1996, 20:531-41.
- Rabinovitch, M. Persistent pulmonary hypertension of the newborn in recent advances in pediatrics 15. Dr. T. David, editor. Churchill Livingstone, Scotland, UK, 1997,pp151-65.
- 54. Rabinovitch M. New concepts of pulmonary vascular disease: Chapter in Slide Atlas of Heart Diseases. Dr. Robert Freedom volume editor, Dr. Eugene Braunwald Editor-in-Chief, Current Medicine Inc. vol. XII, Philadelphia, PA, 1997.
- 55. Rabinovitch M. The committed vascular smooth muscle cell: A question of 'timing' or 'response to pressure' or both. Am J Respir Cell Mol Biol 1997, 16:364-5
- 56. Rabinovitch M. Pulmonary hypertension: Updating a mysterious disease. Cardiovascular Research, 1997, 34:268-272.
- 57. Rabinovitch M. Developmental biology of the pulmonary vasculature in Fetal and Neonatal Physiology, edition 2. Drs. R. Polin and W. Fox, eds. W.B. Saunders Co., Philadelphia, 1997, 1:913-92
- 58. Rabinovitch M. New insights and therapeutic strategies for post cardiac transplantation coronary artery disease Transplant Proc 1997 29(6): 2585-6.
- 59. Fishman AP, Fishman MC, Freeman BA, Gimbrone MA, Rabinovitch M, Robinson D, Gail DB. Mechanisms of proliferative and obliterative vascular disease. Insights from the pulmonary and systemic circulations. NHLBI Workshop summary. Am J Respir Crit Care Med 1998, 158(20): 670-4.
- 60. Rabinovitch M. Eisenmenger's Syndrome In Saunders Manual of Pediatric Practice. Dr. L. Finberg, editor, W. B. Saunders Co, Philadelphia, PA, 1998, 548-50.
- 61. Rabinovitch M. Diseases of the pulmonary vasculature in Textbook of Cardiovascular Medicine. Dr. E.J. Topol, editor. Lippincott-Raven Publishers, Philadelphia, 1998, 2:3001-29.
- 62. Rabinovitch M. Elastase and the pathobiology of unexplained pulmonary hypertension. Chest 1998
- 63. Rabinovitch M. Elastase and elastase inhibitors and pulmonary and coronary artery disease In Atherosclerosis XI (Proceedings of the 11th International Symposium on Atherosclerosis). Dr. B. Jacotot and D. Mathe, editors. Elsevier Science Ltd. Singapore, 1998, 317-26.
- 64. Rabinovitch M. Altered development of the pulmonary circulation in chronic lung injury In Chronic Lung Disease in Early Infancy. Dr. R. Bland and J. Coalson, editors. Marcel Dekker, Inc. 1999, 26:597-618.
- 65. Rabinovitch M. Proteolytic modulation of the extracellular matrix In The Fetal and Neonatal Pulmonary Circulations. Weir EK, Archer SL, Reeves JT, eds. AHA Monograph Series. 1999,117-29
- 66. Rabinovitch M. EVE and beyond, retro and prospective insights. Am J Physiol 277(1Pt1): L512 1999
- 67. Rabinovitch M. Pathophysiology as a basis for clinical decision making. J Heart Lung Transplant 1999;18:1041-5.

- 68. Cheronis JC and Rabinovitch M. Serine elastases in inflammatory and vascular diseases In Proteases as Targets for Therapy. Klaus von der Helm, Bruce D. Korant, John C. Cheronis, editors. Springer 2000, 259-75.
- 69. Strauss B, Rabinovitch M. Adventitial fibroblasts: Defining a role in vessel wall remodeling. A perspective. Am J Respir Cell Mol Biol 2000, 22: 1-3.
- 70. Rabinovitch M. Pathobiology of pulmonary hypertension: Impact on clinical management. In Seminars in Thoracic and Cardiovascular Surgery. Pediatric Cardiac Surgery Annual. James L Cox, editor. W.B. Saunders Co, Philadelphia, PA. 2000, 63-81.
- 71. Rabinovitch M. Pathology of Pulmonary Hypertension. Progress in Pediatric Cardiology. Elsevier Science Ltd. Ireland, 2001, 223-47.
- 72. Rabinovitch M. Tissue remodeling and extracellular matrix proteins in Transplant-Associated Coronary Artery Vasculopathy. Dr. Marlene I. Rose, editor. R.G. Landes Publisher, Georgetown, TX. 2001.
- 73. Rabinovitch M. Pathophysiology of pulmonary hypertension: Chapter in Moss and Adams Heart Disease in Infants, Children, and Adolescents. Emmanouilides GC, Riemenschneidier TA, Allen HD Gutgesell HP editors. Williams and Wilkins, Baltimore. (6th edition) vol. II, 2001.
- 74. Rabinovitch M. Monocrotaline-induced pulmonary hypertension in rats in Vascular Disease and Injury, Dr. C. Rogers and Dr. D. Simon, editors. Humana Press, Totawa, NJ. 2001.
- 75. Rabinovitch M. Pathobiology of Pulmonary Hypertension: Extracellular Matrix in Clinics in Chest Medicine, Pulmonary Hypertension. Dr. S. Rich and Dr. V McLaughlin, editors. W.B. Saunders Company, St. Louis, MO.2001.
- 76. Rabinovitch M. Linking a serotonin transporter polymorphism to vascular smooth muscle proliferation in patients with primary pulmonary hypertension. J Clin Invest 2001, 108:1109-11.
- 77. Rabinovitch M. Diseases of the Pulmonary Vasculature. Chapter in Textbook of Cardiovascular Medicine, Eric J. Topol, editors Lippincott-Williams and Wilkins, Philadelphia. PA. 2002.
- 78. Rabinovitch M, Bland RD. Novel notions in newborn lung disease. Nature Med 2002. 664:702-10.
- 79. Sarjeant JM, Rabinovitch M. Understanding and treating vein graft atherosclerosis. Cardiovasc Pathol 2002, 11(5):263-71.
- 80. Granton JT, Rabinovitch M. Pulmonary arterial hypertension in congenital heart disease. Cardiol Clin 20 (2002) 1-17.
- 81. Rabinovitch M. Developmental Biology of the Pulmonary Vasculature. Chapter in Pediatric Cardiology, Society of Cardiology, Columbia, editors McGraw Hill. 2002.
- 82. Rabinovitch M. The mouse through the looking glass: A new door into the pathophysiology of pulmonary hypertension. Circ Res 2004, 94:1001-4.
- 83. Humbert M, Morrell NW, Archer SL, Stenmark KR, MacLean MR, Lang IM, Christman BW, Weir EK, Eickelberg O, Voelkel NF, Rabinovitch M. Cellular and molecular pathobiology of pulmonary arterial hypertension. J Am Coll Cardiol 2004, 43:13S-24S.

- 84. Rabinovitch M. Aberrant cell growth and pulmonary hypertension. Chapter in Pulmonary Circulation. Peacock, A. and Rubin, L., Editors. Edward Arnold, London. 2004. Chapter 130, p.302.
- 85. Rabinovitch M. Pulmonary Vascular Remodeling in Hypoxic Pulmonary Hypertension. Chapter in Hypoxic Pulmonary Vasoconstriction: Cellular and Molecular Mechanisms JX-J Yuan Editor, Kluwer Academic Publishers. 2004. Chapter 23, p. 403.
- 86. Rabinovitch M. Developmental Biology of the Pulmonary Vasculature. Chapter in Fetal and Neonatal Physiology, RA Polin, WW Fox, SH Abman, Editors. Saunders, Philadelphia. 2004.
- 87. Newman JH, Fanburg BL, Archer SL, Badesch DB, Barst RJ, Garcia JG, Kao PN, Knowles JA, Loyd JE, McGoon MD, Morse JH, Nichols WC, Rabinovitch M, Rodman DM, Stevens T, Tuder RM, Voelkel NF, Gail DB. Pulmonary arterial hypertension: Future directions of a National Heart, Lung and Blood Institute/Office of Rare Diseases workshop. Circulation 2004, 109(24):2947-52.
- 88. Rabinovitch M. Novel medical approaches growth inhibitors. Chapter in Pulmonary Circulation, second edition. Peacock A. and Rubin L., Editors. Edward Arnold, London. 2004: 302-8.
- 89. Rabinovitch M. Cellular and molecular pathobiology of pulmonary hypertension conference summary. Chest, 2005; 128: 6 Suppl: 642S-6S.
- 90. Rabinovitch M. Diseases of the Pulmonary Vasculature. Chapter in Textbook of Cardiovascular Medicine, Eric J. Topol, Editor: 3rd Edition Lippincott-Williams and Wilkins, Philadelphia, PA. 2007. Chapter 104.
- 91. Rabinovitch M. (2007). Pathophysiology of Pulmonary Hypertension. In Allen HD, Driscoll DJ, Feltes TF, and Shaddy RE (Eds), Moss and Adams' Heart Disease in Infants, Children, and Adolescents (7th edition) Vol II (pp). Philadelphia, PA: Lippincott Williams and Wilkins Press.
- 92. Rabinovitch, M. Pathobiology of Pulmonary Hypertension. Chapter 369 in Annu. Rev. Pathol. Mech. Dis. AK Abbas, SJ Galli, PM Howley, Editors. Annual Reviews, Palo Alto, CA. 2007. Vol 2. P. 369-99
- 93. Rabinovitch M, Chesler NC, Molthen R, McLoughlin P, McMurtry I. Point/CounterPoint: Chronic Hypoxia-Induced Pulmonary Hypertension Does/Does Not Lead to Loss of Pulmonary Vasculature. J Appl Physiol. 2007, 103(4):1449-51.
- 94. Rabinovitch M. Developmental Biology of the Pulmonary Vasculature. Chapter in Fetal and Neonatal Physiology, RA Polin, WW Fox, SH Abman, editors. Saunders. Philadelphia. 2008.
- Rabinovitch, M. Molecular Pathogenesis of Pulmonary Hypertension, Invited Review, J Clin Invest, 2008. Vol 118, P. 2372-9.
- 96. Michelakis, ED, Wilkins M, Rabinovitch M. Emerging Concepts and Translational Priorities in Pulmonary Arterial Hypertension. Invited Review, Circulation, 2008; 118(14):1486-95.
- 97. Rich S, Rabinovitch M. Diagnosis and treatment of secondary (non-category 1) pulmonary hypertension. Review, Circulation. 2008:118(21)2190-9. (PMID: 19015413)
- 98. Lopes AA, Rabinovitch M. Can we start to think about consensus-oriented clinical practices? Cardiol Young. 2009 May;19 Suppl 1:1-3. (PMID: 19419597)

- 99. Rabinovitch M, Haworth SG. Balloon occlusion pulmonary wedge angiography and lung biopsy assessment in the child with a congenital cardiac defect. Cardiol Young. 2009 May;19 Suppl 1:13-5. (PMID: 19419600)
- 100. Hassoun PM, Mouthon L, Barberà JA, Eddahibi S, Flores SC, Grimminger F, Jones PL, Maitland ML, Michelakis ED, Morrell NW, Newman JH, Rabinovitch M, Schermuly R, Stenmark KR, Voelkel NF, Yuan JX, Humbert M. Inflammation, growth factors, and pulmonary vascular remodeling. Review, J Am Coll Cardiol. 2009 Jun 30;54(1 Suppl):S10-9. (NIHMSID: NIHMS154650)
- 101. Hansmann G, Rabinovitch M. The Protective Role of Adiponectin in Pulmonary Vascular Disease, Review?. Am J Physiol Lung Cell Mol Physiol. 2010 Jan;298(1):L1-2. (PMID: 19880503)
- 102. Rabinovitch M. PPARgamma and the Pathobiology of Pulmonary Arterial Hypertension. Chapter in Membrane Receptors, Channels and Transporters in Pulmonary Circulation. Jason X.-J. Yuan and Jeremy P.T. Ward, editors. Adv Exp Med Biol 2010;661:447-58. (PMID: 20204748)
- 103. Stenmark KR, Rabinovitch M. Emerging Therapies for the Treatment of Pulmonary Hypertension. Pediatr Crit Care Med. 2010 Mar;11(2 Suppl):S85-90. (PMID: 20216170)
- 104. Erzurum S, Rounds SI, Stevens T, Aldred M, Aliotta J, Archer SL, Asosingh K, Balaban R, Bauer N, Bhattacharya J, Bogaard H, Choudhary G, Dorn GW 2nd, Dweik R, Fagan K, Fallon M, Finkel T, Geraci M, Gladwin MT, Hassoun PM, Humbert M, Kaminski N, Kawut SM, Loscalzo J, McDonald D, McMurtry IF, Newman J, Nicolls M, Rabinovitch M, Shizuru J, Oka M, Polgar P, Rodman D, Schumacker P, Stenmark K, Tuder R, Voelkel N, Sullivan E, Weinshilboum R, Yoder MC, Zhao Y, Gail D, Moore TM. Strategic plan for lung vascular research: An NHLBI-ORDR Workshop Report. Am J Respir Crit Care Med. 2010 Dec 15;182(12):1554-62. Epub 2010 Sep 10. (PMCID: 3029941)
- 105. Rabinovitch, M. (2011). Molecular Pathogenesis of Pediatric Pulmonary Arterial Hypertension. In Beghetti, M, Barst RJ, Berger RMF, Humpl T, Ivy D, and Schulze-Neick I (Eds.) Pediatric Pulmonary Hypertension. (pp 27-46). Munich; Elsevier Press.
- 106. Rabinovitch M. (2011). Desarrollo normal del lecho vascular pulmonar. In Hipertensión pulmonar en niños (pp. 39-59). Diaz GF, Sandoval J and Sola A. (Eds.), Bogotá; Editorial Distribuna Press.
- 107. Rabinovitch M. (2011). Patogénesis molecular de hipertensión arterial pulmonar. In Hipertensión pulmonar en niños (pp. 60-83). Diaz GF, Sandoval J and Sola A. (Eds.), Bogotá; Editorial Distribuna Press.
- 108. Rabinovitch, M. (2011). Developmental Biology of the Pulmonary Vasculature. In Polin RA, Fox WW, and Abman SH (Eds.) Fetal and Neonatal Physiology, 4th Edition, Volume 1. (pp 757-72). Philadelphia, PA; Saunders Press.
- 109. Rabinovitch, M. (2011). Pulmonary Hypertension and the Extracellular Matrix (Ch 55). In Yuan JX-J, Garcia JGN, Hales CA, Rich S, Archer SL, and West JB (Eds). Textbook of Pulmonary Vascular Disease (pp 801-10). New York, NY; Springer Press.
- Rabinovitch M. (2012). Pulmonary Vascular Pathophysiology. In Moller J and Hoffman J (Eds.), Pediatric Cardiovascular Medicine (pp 71-80). Oxford: Blackwell Publishing Ltd Press.

- 111. Umar S, Rabinovitch M, Eghbali M. Estrogen paradox in pulmonary hypertension: current controversies and future perspectives. Am J Respir Crit Care Med. 2012 Jul 15;186(2):125-31. (PMCID: PMC3406082)
- 112. Rabinovitch, M. Molecular Pathogenesis of Pulmonary Arterial Hypertension, Invited Review, J Clin Invest, 2012; 122(12):4306-13. (PMCID: PMC3533531)
- 113. Rabinovitch M. (2013). Pathophysiology of Pulmonary Hypertension. In Allen HD, Driscoll DJ, Feltes TF, and Shaddy RE (Eds), Moss and Adams' Heart Disease in Infants, Children, and Adolescents Including the Fetus and Young Adult (8th edition) Vol II (pp 1401-32). Philadelphia, PA: Lippincott Williams and Wilkins Press.
- 114. Rabinovitch M. Combining induced pluripotent stem cell with next generation sequencing technology to gain new insights into pathobiology and treatment of pulmonary arterial hypertension. Pulm Circ 2013 Jan;3(1):153-5. (PMCID: PMC3641723)
- 115. Morrell NW, Archer SL, Defelice A, Evans S, Fiszman M, Martin T, Saulnier M, Rabinovitch M, Schermuly R, Stewart D, Truebel H, Walker G, Stenmark KR. Anticipated classes of new medications and molecular targets for pulmonary arterial hypertension. Pulm Circ. 2013 Jan;3(1):226-44. (PMCID: PMC3641734)
- Morrisey EE, Cardoso WV, Lane RH, Rabinovitch M, Abman SH, Ai X, Albertine KH, Bland RD, Chapman HA, Checkley W, Epstein JA, Kintner CR, Kumar M, Minoo P, Mariani TJ, McDonald DM, Mukouyama YS, Prince LS, Reese J, Rossant J, Shi W, Sun X, Werb Z, Whitsett JA, Gail D, Blaisdell CJ, Lin QS. Molecular determinants of lung development. Ann Am Thorac Soc. 2013 Apr;10(2):S12-6. (PMCID: 23955361)
- 117. Rabinovitch M. (2014). Pathology, Pathobiology, and Pathophysiology of Pulmonary Arterial Hypertension. In EM Cruz, D Ivy, J Jaggers (Eds). Pediatric and Congenital Cardiology, Cardiac Surgery and Intensive Care, (pp 2081-2101). Springer-Verlag London.
- 118. Edda Spiekerkoetter and Marlene Rabinovitch. Genomics in Pulmonary Arterial Hypertension. Braunwald's Heart Disease 9th edition, electronic version 2013.
- 119. Rabinovitch M, Guignabert C, Humbert M, and Nicolls MR. Inflammation and Immunity in the Pathogenesis of Pulmonary Arterial Hypertension. Circ Res. 2014 Jun 20;115(1):165-75. (PMCID: PMC4097142)
- 120. de Jesus Perez V, Yuan K, Alastalo TP, Spiekerkoetter E, Rabinovitch M. Targeting the Wnt signaling pathways in pulmonary arterial hypertension. Drug Discov Today. 2014 Jun 20. (PMID: 24955837)
- 121. Lopes AA, Barst RJ, Haworth SG, Rabinovitch M, Al Dabbagh M, Del Cerro MJ, Ivy D, Kashour T, Kumar K, Harikrishnan S, D'Alto M, Thomaz AM, Zorzanelli L, Aiello VD, Mocumbi AO, Santana MV, Galal AN, Banjar H, Tamimi O, Heath A, Flores PC, Diaz G, Sandoval J, Kothari S, Moledina S, Gonçalves RC, Barreto AC, Binotto MA, Maia M, Al Habshan F, Adatia I. Repair of congenital heart disease with associated pulmonary hypertension in children: what are the minimal investigative procedures? Consensus statement from the Congenital Heart Disease and Pediatric Task Forces, Pulmonary Vascular Research Institute (PVRI). Pulm Circ. 2014 Jun;4(2):330-41. (PMCID: PMC4070778)
- 122. Rabinovitch M, Hopper RK (2016). Pathophysiology of Pulmonary Hypertension. In Allen HD, Shaddy RE Penny DJ, Cetta F and Feltes TF (Eds), Moss and Adams' Heart

- Disease in Infants, Children, and Adolescents: Including the Fetus and Young Adult (9th Edition), Philadelphia, PA: Lippincott Williams and Wilkins Press. ISBN 978-1-4963-0024-9
- 123. Bonnet S, Provencher S, Guignabert C, Perros F, Boucherat O, Schermuly RT, Hassoun PM, Rabinovitch M, Nicolls MR, Humbert M. Translating Research into Improved Patient Care in Pulmonary Arterial Hypertension. Am J Respir Crit Care Med. 2016 Sep 20. (PMID: 27649290)
- 124. Rabinovitch M. NETs Activate Pulmonary Arterial Endothelial Cells. Arterioscler Thromb Vasc Biol. 2016 Oct;36(10):2035-7. (PMID: 27655779)
- 125. Kuebler WM, Nicolls MR, Olschewski A, Abe K, Rabinovitch M, Stewart D, Chan SY, Morrell NW, Archer SL, Spiekerkoetter E. A pro-con debate: current controversies in PAH pathogenesis at the American Thoracic Society International Conference in 2017. Am J Physiol Lung Cell Mol Physiol. 2018 Oct 1;315(4):L502-16. (PMID: 29846551)
- 126. Humbert M, Guignabert C, Bonnet S, Dorfmüller P, Klinger JR, Nicolls MR, Olschewski AJ, Pullamsetti SS, Schermuly RT, Stenmark KR, Rabinovitch M. Pathology and pathobiology of pulmonary hypertension: state of the art and research perspectives. Eur Respir J. 2019 Jan 24;53(1). pii: 1801887. (PMCID: PMC6351340)
- 127. Spiekerkoetter E, Goncharova EA, Guignabert C, Stenmark K, Kwapiszewska G, Rabinovitch M, Voelkel N, Bogaard HJ, Graham B, Pullamsetti SS, Kuebler WM. Hot topics in the mechanisms of pulmonary arterial hypertension disease: cancer-like pathobiology, the role of the adventitia, systemic involvement, and right ventricular failure. Pulm Circ. 2019 Nov 20;9(4): 2045894019889775. (PMCID: PMC6868582)
- 128. Goldenberg NM, Rabinovitch M, Steinberg BE. Inflammatory Basis of Pulmonary Arterial Hypertension: Implications for Perioperative and Critical Care Medicine. Anesthesiology. 2019 Oct;131(4):898-907. (PMCID: PMC6688149)
- 129. Reddy S, Handler SS, Wu S, Rabinovitch M, Wright G. Proceedings From the 2019 Stanford Single Ventricle Scientific Summit: Advancing Science for Single Ventricle Patients: From Discovery to Clinical Applications. J Am Heart Assoc. 2020 Apr 7;9(7):e015871. (PMID: 32188306)
- 130. Wilkins MR, Rabinovitch M. Novel and Relevant Mechanistic Pathways. Adv Pulm Hypertension 2020 Aug 19(2):42-6.
- 131. Rabinovitch M, Hopper RK. Pathophysiology of Pulmonary Hypertension. In Shaddy RE, Penny DJ, Feltes TF, Cetta F, and Mital S (Eds) *Moss and Adams' Heart Disease in Infants, Children, and Adolescents: Including the Fetus and Young Adult (10th Edition)*, Philadelphia, PA: Lippincott Williams and Wilkins Press. March 2021
- 132. Rabinovitch M. Are Senolytic Agents Guilty of Overkill or Inappropriate Age Discrimination? *Circulation*. 2023 Feb 21;147(8):667-8. (NIHMS1864752)
- 133. Eichstaedt CA, Belge C, Chung WK, Gräf S, Grünig E, Montani D, Quarck R, Tenorio-Castano JA, Soubrier F, Trembath RC, Morrell NW; for PAH-ICON associated with the PVRI. Genetic Counseling and Testing in Pulmonary Arterial Hypertension: A Consensus Statement on Behalf of the International Consortium Genetic Studies in PAH. *Eur Respir J.* 2023 Feb 23;61(2):2201471. PMID: 36302552; PMCID: PMC9947314.

- 134. Raj JU, Bland RD, Bhattacharya J, Rabinovitch M, Matthay MA. Life-saving effect of pulmonary surfactant in premature babies. *J Clin Invest*. 2024 May 1;134(9):e179948. (*PMID*: 38690742)
- 135. IGVF Consortium. Deciphering the Impact of Genomic Variation on Function. *Nature*. 2024 Sep;633(8028):47-57. doi: 10.1038/s41586-024-07510-0. PMID: 39232149.
- 136. Guignabert C, Aman J, Bonnet S, Dorfmüller P, Olschewski AJ, Pullamsetti S, Rabinovitch M, Schermuly RT, Humbert M, Stenmark KR. Pathology and pathobiology of pulmonary hypertension: current insights and future directions. *Eur Respir J.* 2024 Oct 31;64(4):2401095. (*PMID:* 39209474)
- 137. Hopper RK, Rabinovitch M. Pathophysiology of Pulmonary Hypertension. In Shaddy RE, Penny DJ, Feltes TF, Cetta F, and Mital S (Eds) Moss and Adams' Heart Disease in Infants, Children, and Adolescents: Including the Fetus and Young Adult (11th Edition), Philadelphia, PA: Lippincott Williams and Wilkins Press. March 2025