

CURRICULUM VITAE

Raed A. Dweik, MD, MBA
FACP, FRCPC, FCCP, FCCM, FAHA, ATSF

CONTACT INFORMATION:

Departments of Pulmonary and Critical Care Medicine / A-90
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CURRENT POSITION(S):

2018- Chairman, Respiratory Institute (Pulmonary, Critical Care, Infections Disease, Allergy and immunology), Cleveland Clinic Health System
 2011- Professor of Medicine, Cleveland Clinic Lerner College of Medicine of CWRU
 2004- Staff Scientist, Lerner Research Institute
 1996- Staff Physician, Departments of Pulmonary and Critical Care Medicine

TRAINING:

1993-1996 Fellowship in Pulmonary and Critical Care Medicine, Cleveland Clinic, Cleveland, OH
 1990-1993 Internship and Residency in Internal Medicine, Wright State University Dayton, OH
 1988-1990 Rotating internship and Residency, Jordan University Hospital Amman, Jordan

EDUCATION:

2015-2017 Masters of Business Administration (MBA): Full tuition scholarship
 Case Western Reserve University (CWRU), Cleveland, Ohio, USA
 1982-1988 Bachelor of Medicine and Surgery (MB; BS): Full scholarship
 University of Jordan School of Medicine, Amman, Jordan

LEADERSHIP EXPERIENCE (Selected):

2022 Founder and executive sponsor: Team-based Inter-professional Multidisciplinary Education (in Leadership Essentials (TIMELEss), Cleveland Clinic
 2022 Lead Sponsor: Sepsis Electronic Health Record Alert
 2022 Lead Sponsor: Sepsis Emergency Response Team (SERT), Cleveland Clinic
 2021-22 Wharton + Cleveland Clinic Healthcare Executive Leadership Program
 2021- Principal Investigator NIH-NHLBI T32:
 Supporting Multidisciplinary Achievement in Respiratory Research Training (SMARRT)
 2020-23 Member Cleveland Clinic Health System COVID Operations and Recovery Taskforce (CORT)
 2020- Chair Cleveland Clinic Health System Capital Committee
 2019 White House Summit of the Joint Committee on the Research Environment
 2019-21 Chair Steering Committee, Forum on Conflict of Interest in Academe
 Association of American Medical Colleges (AAMC)
 2018- External Member, MD Anderson Institutional Conflict of Interest (ICOI) Committee
 2018- External Member, Duke School of Medicine Institutional Conflict of Interest Committee (ICOIC)

2018-19	Chair Cleveland Clinic Health System Strategic (Value Creation) Capital Advisory Team (AT)
2018-19	Chair Cleveland Clinic Health System Routine (Recapitalization) Capital Review Committee (CRC)
2017-19	Member Cleveland Clinic Health System council on Clinical Enterprise Management (CEM)
2016-20	Chair, Document Development and Implementation Committee, American Thoracic Society
2015	Member, Cleveland Clinic Office of Professional Staff Affairs Advisory Council
2015	Member, Cleveland Clinic Board of Directors, Cleveland Clinic
2014-15	Member, Cleveland Clinic Board of Trustees, Cleveland Clinic
2014-	Principal Investigator and Director, Mentored Career Development (KL2) Program Cleveland Clinical and Translational Science Collaborative (CTSC) Case Western University School of Medicine (CWRU)
2014-	Member, Steering Committee of the Cleveland Clinical and Translational Science Collaborative (CTSC), Case Western University School of Medicine (CWRU)
2014-22	Chair, Innovation Management and Conflict of Interest, Cleveland Clinic Health System
2014-22	Chair, Cleveland Clinic Standing Committee on Research Conduct and Quality
2014-15	Chair, Committee on Appointments, Promotions and Tenure (CAPT) at CWRU
2013-16	Member, Committee on Appointments, Promotions and Tenure (CAPT) Case Western Reserve University (CWRU) School of Medicine (SOM)
2013-15	Board of Governors Round Table, Cleveland Clinic
2013	Foundations of Healthcare Communication, Cleveland Clinic
2013	Delegate and Coach to Improve Productivity and Quality, Cleveland Clinic
2012-17	Member, Cleveland Clinic Health System Strategic Capital Advisory Team
2012	Institutional Relations and Development, Insight into Medical Philanthropy, Cleveland Clinic
2011-15	Elected Member, Cleveland Clinic Board of Governors / Medical Executive committee
2009	Understanding Financial Reporting, Patient Experience within the Revenue Cycle
2008-13	Member, Respiratory Institute Executive Physician Committee, Cleveland Clinic
2008-13	Member, Respiratory Institute Administrative Council, Cleveland Clinic
2007	Executive Leadership Rotation, Cleveland Clinic
2005-06	Leading in Healthcare, Cleveland Clinic
2005-17	Director, Pulmonary Vascular Program, Respiratory Institute, Cleveland Clinic

CERTIFICATION:

1997	American Board of Critical Care Medicine, Recertified 2007 and 2017 (Valid Through 2027)
1996	American Board of Pulmonary Disease, Recertified 2006 and 2016 (Valid Through 2026)
1995	Royal College of Physicians of Canada (valid indefinitely)
1993	American Board of Internal Medicine, Recertified 2003 and 2013 (Valid Through 2023)
1991	Federal licensing examination (FLEX)
1989	Foreign Medical Graduate Examination in the Medical Sciences (FMGEMS)

LICENSURE: Licensed to practice in Ohio

PROFESSIONAL ASSOCIATIONS:

American College of Physicians, Fellow (FACP)
 American College of Chest Physicians, Fellow (FCCP)
 Royal College of Physicians of Canada, Fellow (FRCPC)
 American Heart Association (AHA), Fellow (FAHA)
 Society of Critical Care Medicine (SCCM), Fellow (FCCM)
 Pulmonary Vascular Research Institute (PVRI), Fellow
 American Thoracic Society, Fellow (ATSF)
 International Association for Breath Research (IABR), Founding Member
 American Physiological Society, Member
 American College of Physician Executives, Member

EDITORIAL BOARDS:

American Journal of Respiratory and Critical Care Medicine (AJRCCM)
 Journal of Clinical and Translational Science (CTS)
 Journal of Breath Research (JBR): Associate Editor
 Pulmonary Circulation (PC)

JOURNAL REVIEWER:

The New England Journal of Medicine, The Lancet, American Journal of Respiratory and Critical Care Medicine, Chest, Thorax, American Journal of Physiology, Journal of Biological Chemistry, European Respiratory Journal, Cleveland Clinic Journal of Medicine, Life Sciences, Annals of Allergy, Asthma & Immunology, American Journal of Gastroenterology, Kidney International, Circulation, Pulmonary Circulation...

GRANT REVIEWER:

2022- Ad Hoc member/reviewer: NIH-NHLBI Institutional Training T32-Awards
 2020- Chair: Department of Defense (DoD) Peer Review Medical Research Program (PRMRP)-
 Respiratory Health (RH): 2020, 2021, 2022
 2020- Member: NIH-NHLBI- Respiratory Sciences Small Business Activities Special Emphasis Panel
 2016-18 Chair: Lung Peer Review Committee, American Heart Association (AHA)
 2016-20 Member, AHA Go Red for Women Oversight Advisory Committee, American Heart Association
 2016 Member AHA Go Red for Women Network Reverse Site Visit
 2016 Member AHA Go Red for Women Network Review Panel
 2015-19 Regular Member (and ad hoc vice chair), Respiratory Integrative Biology and Translational
 Research, RIBT Study section, National Heart Lung and Blood Institute (NHLBI)-NIH
 2014-15 Co-Chair: Lung Peer Review Committee, American Heart Association (AHA)
 2014- Ad Hoc Reviewer, Special Emphasis Program Project (PPG) Review Panel, National Heart Lung
 and Blood Institute (NHLBI)-NIH
 2014- Director, Mentored Career Development Program (KL2)
 Chair, Steering Committee of the KL2, Clinical and Translational Science Collaborative (CTSC)
 2013- Member, steering Committee, Cleveland Clinical and Translational Science Collaborative (CTSC)
 2012- Reviewer, NIH Director's Pioneer Award, NIH
 2011-14 Ad Hoc Reviewer, Respiratory Integrative Biology and Translational Research, RIBT Study
 section, National Heart Lung and Blood Institute (NHLBI)-NIH

2010-15 Reviewer, Special Emphasis Panel, Small Business innovation Research (SBIR)
National Institute of Biomedical Imaging and Bioengineering (NBIB), NIH

2010-15 Reviewer, Special Emphasis Panel, NHLBI Clinical Trial Pilot Studies (R01/R34), NHLBI-NIH

2008 Ad Hoc Reviewer, Special Emphasis Panel, Conference grants (R13) NHLBI-NIH

2008-13 Member / Reviewer: Cardio-renal and Lung Peer Review Committee
American Heart Association (AHA)

2005-2010 Member / Reviewer, Mentored Clinical Scientist Development Award (K08)
National Heart Lung and Blood Institute (NHLBI)-NIH

2004-2009 Member / Reviewer, Mentored Patient Oriented Research Career Development Awards (K18, K23, K24 and K25), National Heart Lung and Blood Institute (NHLBI) - NIH

2003 Reviewer, Special Emphasis Panel, Institutional National Research Service Award (NRSA)
Research Training Grants, National Institute of Allergy and Infectious Diseases (NIAID) - NIH

2003 Research Grant Review Committee, Ohio Thoracic Society (OTS) / American Lung Association

AWARDS AND HONORS:

2017 Dean's Academic Achievement Award (MBA)

2017 Beta Gamma Sigma (BGS) Honor Society (MBA)

2012 Cleveland Clinic Outstanding Innovation in Translational Medicine Award

2010 Lerner Research Institute STAR Award

2008 Third Frontier Award: Ohio Department of Development

2007-08 Best Staff Senior Morning Report Award, Internal Medicine Residency Program Cleveland Clinic

2007 Scholarship in Teaching Award: Case Western Reserve University

2006-07 Teacher of the Year Award, Pulmonary Fellowship Program, Cleveland Clinic

2005- "Best Doctors in America" (**Every year since 2005**)

2004 Cleveland Clinic Foundation (CCF) Innovator Award

2001 American College of Chest Physicians Young Investigator Award

2000-08 Cleveland Clinic Distinguished Teacher Award, Internal Medicine Residency Program
(**2001-02, 2003-04, 2004-05, 2006-07, 2007-08**)

1999 Leadership Development in Pulmonary and Critical Care
American College of Chest Physicians (ACCP)

1995 Bruce Hubbard Stewart Fellow, Cleveland Clinic

1993 Best Resident Scholarly Paper Award
Wright State University Affiliated Hospitals

1991 Outstanding Post Graduate Level 1 (PGY1) Award
Wright State University Affiliated Hospitals

1982-1988 Full medical school scholarship: The University of Jordan

1982 Ranked first in the country in the National High School Graduation Examination (Tawjihi)

NATIONAL AND INTERNATIONAL COMMITTEES:

2019 White House Summit of the Joint Committee on the Research Environment

2019-21 Chair Steering Committee, Forum on Conflict of Interest in Academe
Association of American Medical Colleges (AAMC), Past Chair (2022-23)

2016-17 Member, quality Improvement and Implementation Committee (QIIC)
American Thoracic Society (ATS)

- 2016 Member Program Committee, AAMC Forum on Conflict of Interest in Academe Annual conference, Seattle, Washington
Association of American Medical Colleges (AAMC)
- 2015-23 Member Steering Committee, Forum on Conflict of Interest in Academe
Association of American Medical Colleges (AAMC)
- 2016-20 Chair, Document Development and Implementation Committee (DDIC)
American Thoracic Society (ATS)
- 2015 Member, organizing committee, Breath Analysis Summit International Conference of Breath Research. Zurich, Switzerland
- 2015 Vice-Chair, Document Development and Implementation Committee (DDIC)
American Thoracic Society (ATS)
- 2015-16 Member, Ethics and Conflict of Interest Committee, American Thoracic Society (ATS)
- 2015 Member, organizing committee, Breath Analysis Summit International Conference of Breath Research. Vienna, Austria
- 2014-15 Member, organizing committee Mid-Infrared Medical Systems (MIMeS), Princeton University
- 2013-20 Member, Document Development and Implementation Committee
American Thoracic Society (ATS)
Member, Selection of Trainees for the Methodology Training Program Subcommittee
- 2013 Member, organizing committee, Breath Analysis Summit International Conference of Breath Research, Saarbrücken, Germany
- 2012 Member, organizing committee, Breath Analysis for Biomedicine and National Security: Sensor Design Issues and Strategies for Biomarker Discovery", Sonoma, California (USA)
- 2011 Member / Participant NHLBI Programs of Excellence in Glycobiology
National Institutes of Health
- 2011 Member / Participant NHLBI Working Group in Lung Vascular Clinical Research National Institutes of Health
- 2010-15 Member, American Thoracic Society (ATS) Education Committee
Member, Maintenance of Certification (MOC) Subcommittee
Member, Guideline Implementation Subcommittee
Member, Question Writing and Review Subcommittee
Member, Post Graduate Course Review and selection Subcommittee
- 2010-13 Chair, American Thoracic Society (ATS) committee on "Pulmonary Hypertension Phenotypes"
- 2010-14 Member, American Heart Association (AHA), Cardiopulmonary, Critical Care, Perioperative and Resuscitation (3CPR) Cournand & Comroe Award Committee
- 2011 Member, organizing committee, Exhaled Breath Analysis Summit, Parma, Italy
- 2010 Chair, organizing committee, Engineering Conferences International, Exhaled Breath Analysis: from sensors to devices to applications. Barga, Italy
- 2010 Workshop member / participant: Strategic Plan for Lung Vascular Research Division of Lung Diseases of the National Heart Lung Blood Institute (NHLBI) and the Office of Rare Diseases Research (ORDR)
- 2009-15 Scientific Advisory Board (SAB) Member, Mid-Infrared Technologies for Health and the Environment, A National Science Foundation (NSF)
Engineering Research Center at Princeton University and Partners

2009	International Scientific Committee, International Conference on Breath and Breath Odor Research: BREATH 2009, Scientific Meeting of the International Association for Breath Research (IABR), Dortmund, Germany
2007-2011	Chair, American Thoracic Society (ATS) committee charged with writing the "Guidelines for the Interpretation of Exhaled Nitric Oxide Levels (FENO) for Clinical Application".
2008	Summit Director / Organizer, International Breath Analysis Summit, Scientific Meeting of the International Association for Breath Research (IABR)
2007-	Founding Member, International Association for Breath Research (IABR)
2005-2014	Member, American Thoracic Society (ATS) Chronic Beryllium Disease Committee for writing the ATS consensus statement on the Detection, Diagnosis and Management of Chronic Beryllium Disease
2004-2009	Member, Web Editorial Board, Web Master Respiratory Structure and Function Assembly, American Thoracic Society
2003-2008	Member, Spirometry Web Page Project, Respiratory Structure and Function Assembly, American Thoracic Society
2002-2005	Member, American Thoracic Society (ATS) taskforce to Standardize measurement of Nitric Oxide (NO) in exhaled breath
2002-2006	Member, ATS-ERS Working Group on measuring exhaled gases in mechanically ventilated patients
2001-2005	Member, Joint American Thoracic Society (ATS)-European Respiratory Society (ERS) taskforce on Exhaled Breath Condensate (EBC)

CLEVELAND CLINIC, LERNER COLLEGE OF MEDICINE, AND CASE WESTERN RESERVE UNIVERSITY COMMITTEES:

2022	Member, Cleveland Clinic Health System Operating Model Redesign, Governance work stream
2022	Member, Search Committee for Director of Case Comprehensive Cancer Center (CCCC), Case Western Reserve University (CWRU) School of Medicine (SOM)
2022-23	Chair Cleveland Clinic Health System Capital Committee
2020	Chair, Search Committee for Chair of the Digestive Disease and Surgery Institute (DDSI)
2020-21	Chair Cleveland Clinic Health System (Capital) Planning Committee (PC)
2018-	Member, Cleveland Clinic Health System Council of Institute Chairs
2018-19	Chair Cleveland Clinic Health System Strategic (Value Creation) Capital Advisory Team (AT)
2018-19	Chair Cleveland Clinic Health System Routine (Recapitalization) Capital Review Committee (CRC)
2016-17	Member, Committee to assess the concerns of non-tenure track faculty Case Western Reserve University (CWRU) School of Medicine (SOM)
2016-17	Member, ad hoc committee to improve the conflict of interests (COI) policies Case Western Reserve University (CWRU) School of Medicine (SOM)
2016	Leader, Annual Professional Review (APR) of the Heart and Vascular Institute
2016	Leader, Annual Professional Review (APR) of the Lerner Research Institute
2016	Leader, Annual Professional Review (APR) of Cleveland Clinic Florida
2016	Leader, Annual Professional Review (APR) of the Imaging Institute
2016-17	Chair, Search Committee for Chair of Neonatology
2015-16	Member, Review Committee for Chair of Pediatric Critical Care
2015	Member, Cleveland Clinic Board of Directors

2015-19	Member Continuing Education Action Committee (CEAC)
2015-16	Member, Search Committee for Chair of Neurosurgery
2015	Chair, Search Committee for Chair of the Medicine Institute
2015	Leader, Annual Professional Review (APR) of the Imaging Institute
2015	Leader, Annual Professional Review (APR) of the Heart and Vascular Institute
2015	Leader, Annual Professional Review (APR) of the Lerner Research Institute
2015	Member, Annual Professional Review (APR) of the Digestive Disease Institute
2015	Member, Cleveland Clinic Credentialing Committee
2014-15	Member, Search Committee for Chair of the Neurological Institute (NI)
2014-15	Chair, Search Committee for Chair of the Department of Molecular Cardiology
2014	Co-chair, Search Committee for Director of the Center for Clinical Genomics
2014-15	Member, Cleveland Clinic Board of Trustees
2014-22	Member, Cleveland Clinic Board of Directors Innovation Management and Conflict of Interest Committee
2014-15	Chair, Committee on Appointments, Promotions and Tenure, Case Western Reserve University
2014-	Chair, Cleveland Clinic Innovation Management and Conflict of Interest Committee
2014-20	Director, Cleveland Clinic Innovation Management and Conflict of Interest Program
2014-22	Member, Cleveland Clinic Research Compliance Committee
2014-22	Chair, Cleveland Clinic Standing Committee on Research Conduct and Quality
2014-22	Member, Case Western Reserve University outside Interests Committee
2014-	Director, Mentored Career Development Program (KL2) Clinical and Translational Science Collaborative (CTSC)
2014-	Chair, Steering Committee of the Mentored Career Development Program (KL2), Clinical and Translational Science Collaborative (CTSC)
2014-	Member, Steering Committee of the Cleveland Clinical and Translational Science Collaborative (CTSC), Case Western University School of Medicine
2014	Leader, Annual Professional Review (APR) of the Imaging Institute Department Chair Review: Nuclear Medicine
2014	Leader, Annual Professional Review (APR) of the Heart and Vascular Institute Department Chair Review: Cardiovascular Medicine Department Chair Review: Vascular Surgery
2014	Leader, Annual Professional Review (APR) of the Lerner Research Institute Department Chair Review: Immunology
2013-	Member, Steering Committee, Mentored Career Development Award (KL2), Cleveland Clinical and Translational Science Collaborative (CTSC)
2013-16	Member, Committee on Appointments, Promotions and Tenure Case Western Reserve University
2013-14	Co-chair, Cleveland Clinic Institutional Genomic Strategy Committee
2013-14	Co-chair, Review Committee of the Center for Personalized Healthcare
2013	Vice Chairman, Innovation Management and Conflict of Interest Committee
2013	Chair, Review Committee of the Chair of Genomics Medicine Institute
2013	Leader, Annual Professional Review (APR) of the Imaging Institute Department Chair Review: Diagnostic Radiology Department Chair Review: Regional Radiology

2013 Leader, Annual Professional Review (APR) of the Heart and Vascular Institute
Department Chair Review: Cardiac and Thoracic Surgery

2013 Leader, Annual Professional Review (APR) of the Lerner Research Institute
Department Chair Review: Genomic Medicine
Department Chair Review: Neurosciences
Department Chair Review: Stem Cell Biology

2013-14 Member, Search Committee: Chair, Department of General Anesthesia

2013 Chair, Review Committee: Chair, Anesthesia Institute

2013-14 Chair, Search Committee: Chair, Department of Pediatric Hospital Medicine

2013- Member, Cleveland Clinic Annual Top 10 Medical Innovations Selection Committee

2012 Member, Annual Professional Review (APR) of the Neurological Institute (NI)

2012 Member, Annual Professional Review (APR) of the Emergency Medicine Institute

2012 Member, Annual Professional Review (APR) of the Orthopedics and Rheumatology Institute

2012 Member, Annual Professional Review (APR) of the Lerner Research Institute
Department Chair Review: Molecular Cardiology

2012 Member, Annual Professional Review (APR) of the Anesthesiology Institute

2012 Member, Annual Professional Review (APR) of the Medicine Institute

2012-15 Physician onboarding series: Cleveland Clinic Governance

2012-19 Member, Capital Advisory Team

2012-22 Member, Cleveland Clinic Innovation Management and Conflict of Interest Committee

2011 Member, Annual Professional Review (APR) of the Emergency Medicine Institute

2012 Member, Search Committee: Chair, Department of Cancer Biology

2011 Member, Annual Professional Review (APR) of the Neurological Institute

2011 Member, Annual Professional Review (APR) of the Orthopedics and Rheumatology Institute

2011 Member, Annual Professional Review (APR) of the Lerner Research Institute

2011-12 Member, Search Committee: Chair, Pediatric Institute

2011-15 Elected Member, Cleveland Clinic Board of Governors / Medical Executive Committee

2011-12 Working group Leader on shared medical appointments (SMA), Respiratory Institute pilot in pulmonary hypertension

2011-12 Member, Review Committee: Department of Cancer Biology

2010 Elected Member, Nominating Committee for the election of Cleveland Clinic Staff Officers

2009-10 Member, Search Committee: Chair, Clinical Pathology

2009-10 Member, Review Committee: Chair, Infectious Disease

2009 Member, Search Committee: Chair, Academic Internal Medicine

2009 Core Faculty for Internal Medicine Residency Program Site Review

2009 Core Faculty for Pulmonary/Critical Care Fellowship Site Review

2009 Elected Member, Nominating Committee for the election of Cleveland Clinic Staff Officers

2008-13 Member, Respiratory Institute Executive Physician Committee

2008-13 Member, Respiratory Institute Administrative Council, Cleveland Clinic

2008-13 Member, Respiratory Institute Education Committee, Cleveland Clinic

2008-15 Member, Continuing Health Science Education Council, Cleveland Clinic

2004-09 Chairman, Fellow Research Advisory Committee (RAC), Department of Pulmonary, Allergy and Crit. Care Medicine, Cleveland Clinic

2004-19 Residency Candidate Interviewer Internal Medicine Residency Program

2004-07 Assistant Director, General Clinical Research Center (GCRC)
 2003-18 Admissions Committee (Inaugural Committee Member)
 Cleveland Clinic Lerner College of Medicine of CWRU
 2003-04 Member, General Advisory Council, General Clinical Research Center (GCRC), Cleveland Clinic
 2003 Judge, Medical Student Oral Research Presentations, 9th Annual Student Research Day,
 Cleveland Clinic
 2002-04 Pulmonary Curriculum Planning Committee, Cleveland Clinic Lerner College of Medicine of
 CWRU
 2002-04 Research Education Task Force, Cleveland Clinic Lerner College of Medicine of CWRU
 2001-02 General Clinical Research Center (GCRC) Proposal Working Group
 1996-2009 Pulmonary Fellow Selection Committee, Department of Pulmonary and Critical Care Medicine
 1995-96 Member Ethics Committee, Cleveland Clinic Foundation
 Member right of conscience task force
 Member ethics policy review task force

TEACHING:

2014 Director: Pulmonary Hypertension Fellow Education Day and 10th annual PH symposium
 2013 Course Director, American College of Chest Physicians PAH Prep Course
 2012-17 Thesis committee and Clinical Preceptor: Hoi (Queenie) Cheong, Molecular Medicine PhD
 candidate
 2011 Medical Student Journal Club mentor / facilitator
 2009-17 Co-director: Annual PH Education Day, Cleveland Clinic Pulmonary and Critical Care Fellowship
 2009 Advances in Research and Medicine, CCLCM, November
 Panelist: How to pick a mentor and a research project?
 2009, 2010 Advances in Research and Medicine 2, CCLCM, January
 Seminar: Noninvasive method to diagnose and monitor asthma
 2009-17 Activity Co-director: Pulmonary Hypertension Advanced Case Team (PHACT) multidisciplinary
 conference, Cleveland Clinic
 2009-11 Chair, Thesis committee, Ilka Decker, CCLCM 2012, Iron Metabolism in Pulmonary Hypertension
 2009-10 Member, Thesis committee, Iva Dostanic-Larson, CCLCM 2011
 Determining the Biological Role of Manganese Superoxide Dismutase (MnSOD) Enzyme in
 Pathophysiology of Pulmonary Hypertension
 2009 Member, Qualifying Examination Committee, Susan Westerfield
 Cleveland Clinic Ph.D. Program in Molecular Medicine
 2008-10 Chair, Thesis committee, Stephen Hart, CCLCM 2010, acute effect of nitric oxide on pulmonary
 insufficiency in congenital heart disease
 2006-17 Director, Clinical Preceptorships in Pulmonary Hypertension
 - Heart Failure fellows
 - Vascular Medicine fellows
 - CLINSCHOP IM resident elective PH rotation
 - Visiting Fellows and residents
 - Medical Students

- 2006-16 Second Year Clinical Correlation: Pulmonary Hypertension: Pathophysiology and Clinical Findings, Cleveland Clinic Lerner College of Medicine of CWRU
- 2006-17 Director: Pulmonary Hypertension Preceptorship, Center for Advanced Skills Training (CAST)
- 2004-06 First Year Seminar, The Pleura: Cleveland Clinic Lerner College of Medicine
- 2002-04 Pulmonary Curriculum Planning Committee: Research Education Task Force, Cleveland Clinic Lerner College of Medicine
- 1996-2006 Attending physician on the pulmonary primary (inpatient) and consultation services. Bedside and didactic teaching of medical students, residents, and pulmonary fellows including morning reports and journal clubs. Cleveland Clinic.
- 1996- Attending physician in Medical Intensive Care Unit. Bedside and didactic teaching of medical students, residents, and fellows. Cleveland Clinic.

Junior Faculty, Fellow, Resident and Student Mentorship:

- 1999 Omar Minai, M.D., Pulmonary Fellow
Exhaled nitric oxide in obstructive sleep apnea
- 1999-2000 Metin Ozkan, M.D., Post-Doctoral Fellow
(Awardee: Turkish government grant and travel award)
Exhaled Nitric oxide and carbon monoxide in lung disease
Current position: Associate Professor of Medicine, GATA Gogus Hastaliklari, Ankara, Turkey.
- 2000-2001 Walid Saber, M.D., Internal Medicine Resident
Pulmonary function testing in patients with chronic beryllium disease: natural history
Last known position: Associate Staff, Internal Medicine, CCF Lorain
- 2000-2001 Satya Acharya, M.D., Research Fellow
Exhaled gases in mechanically ventilated critically ill patients
Current position: Private practice.
- 2001 George Samuel. M.D., Internal Medicine Resident
(Winner: American College of Chest Physicians Young Investigator Award)
Risk factors for progression from beryllium sensitization to chronic beryllium disease
- 2001-2002 Mehdavini Londhe-Nerkar, M.D., Research Fellow
Exhaled gases in primary pulmonary hypertension
Current position: Internal Medicine Residency, New York.
- 2001-2002 Ahmet Uluer. M.D., Internal Medicine-Pediatrics Resident
(Awardee: RPC internal grant)
Exhaled gases in sepsis, exhaled gases in cardiopulmonary bypass
Current position: Assistant Professor, Pediatric Pulmonary Diseases, Boston University
- 2001-2003 Roberto Machado, M.D., Pulmonary fellow
Breath condensates in lung disease. Electronic Nose in detecting lung cancer
Current position: Associate Professor, University of Illinois in Chicago
- 2002-2003 Fayrooz Al-Ashkar, M.D., Internal Medicine Resident
Exhaled gases in methacholine challenge and asthma
- 2002-2004 Mohammad Taher, M.D., Research Fellow
Exhaled gases in Lung Transplant recipients,
- 2002-2005 Cristine Radojicic. M.D., Allergy staff
(Awardee: RPC internal grant)

- 2003-2005 Nitric oxide and mucociliary clearance in chronic sinusitis
Jennifer Duncan, B.S., Graduate Student, Pre Med
Exhaled gases in beryllium disease
- 2005-2007 Bashar Sharaf Aldeen, M.D., Clinical Research Fellow
Pulmonary Hypertension Registry
- 2005-2010 Metin Aytakin, Ph.D., Post-Doctoral Fellow
(Awardee: American Heart Association / Pulmonary Hypertension Association grant)
Matrix and smooth muscle dysfunction in pulmonary hypertension
Current position: Associate Professor
- 2006-2018 Gustavo Heresi, M.D., Pulmonary Fellow
(Awardee: Gilead Scholar Grant)
(Awardee: RPC internal grant)
(Awardee: NIH-NHLBI K23 grant)
Biomarkers in pulmonary hypertension
Metabolic Changes in pulmonary hypertension
Current position: Staff physician, Cleveland Clinic
- 2007-2009 Natalia Grob, Medical Student, Case Western Reserve University
Exhaled NO in asthma, Exhaled breath condensate in lung disease
- 2007-2008 Meisam Moghbelli, M.D., Internal Medicine Resident
Referral patterns in pulmonary hypertension
- 2007-2010 Deepa George, M.D., Research Fellow
Whole lung allergen challenge in asthma
- 2008-2009 Amit Bhatt, M.D., Internal Medicine Resident
Transjugular intrahepatic portosystemic shunts in portopulmonary hypertension
- 2008-2009 Nattapong Jaimchariyatam, MD, MSc, Research Fellow
Determinants of Nocturnal Hypercapnia in OSA Patients
- 2008-2010 Omar Batal, M.D., Internal Medicine Resident
BNP in pulmonary hypertension
- 2008-2010 Sarah Haserodt, Pre-doctoral, M.D. Candidate
Hyaluronan in pulmonary hypertension
- 2008-2010 Praneet Kumar, M.D., Internal Medicine Resident
Sildenafil and RV structure and function in pulmonary hypertension
- 2008-2012 Alquam Mashir
Nitric oxide measurements in biological systems
- 2009-2010 Aiping Chua, MD, Research Fellow
(Awardee: RPC internal grant)
Exhaled breath analysis in OSA
- 2009-2011 Kelly Paschke, Pre-doctoral, M.D. Candidate
Exhaled Breath Analysis
- 2010- 2012 Jamie Newman, Pre-doctoral, Ph.D. Candidate
Exhaled Breath Analysis
- 2010-2014 David Grove, Ph.D., Post-Doctoral Fellow
Exhaled Breath Analysis
Headspace measurement of Volatile Organic Compounds

2010-2011	Joseph Cody, Pre-doctoral, M.D. Candidate Lung Matrix
2010-2018	Adriano Tonelli, M.D., Pulmonary Staff physician (Awardee: CTSA / KL2 Grant) (Awardee: NIH-NHLBI RO1) Vascular dysfunction in pulmonary hypertension
2011-2013	Frank Cikach, Pre-doctoral, M.D. Candidate Exhaled Breath Analysis
2011	Phillip Braun, Pre-doctoral, Ph.D. Candidate (Princeton) Exhaled Breath Analysis
2011-	Liping Tian Hyaluronan in the lung, metabolism in pulmonary hypertension
2011	Tanya Das Ph.D., Visiting Professor (Sabbatical) Role of hyaluronan in cell migration and proliferation on pulmonary hypertension
2011-2013	Ibrahim Hanouneh, M.D., GI and hepatology fellow Exhaled Breath Analysis in Liver disease
2011-12	Michael Samara, M.D., Cardiology and heart failure fellow Exhaled Breath Analysis in congestive heart failure
2011-16	Naim Alkhouri, M.D., Pediatric GI staff (Awardee: NASPGHAN George Ferry Young Investigator Development Award) Exhaled Breath Analysis in pediatric non-alcoholic fatty liver disease (NAFLD)
2012	Elif Tuba Kucera, PhD candidate Gremlin in Pulmonary Hypertension
2012	Kelly Paschke, Medical Student (Awardee: American Society of Nephrology (ASN) Student Research Grant) Exhaled nitric oxide (FeNO) in Renal Failure
2012	Lauren Chen, High school student Exhaled Breath Analysis: Environmental Effects
2012-2017	Jarrold Barnes, Ph.D., Post-Doctoral Fellow (Awardee: Ruth L. Kirschstein National Research Service Award (NRSA)) (Awardee K99R00 pathway to independence award) Glucose Metabolic Flux in IPAH
2012	Neha Sardesai, Masters in Science in Engineering Candidate, University of Maryland Baltimore Campus Exhaled Breath: Fractionation
2012	Thomas Fellowes, Pre-doctoral / Chemistry, (Princeton) Exhaled Breath: Chemical Composition
2012-2014	Laith Al-Kukhun, M.D., Clinical Research Fellow (Awardee: Jubran-Yabroudi International Education Fund) Pulmonary Hypertension
2012	Luma Dababneh, M.D., Visiting Scientist Peripheral circulation in pulmonary hypertension
2013-	Kulwant Aulak, Ph.D., Senior Research Associate Nitric oxide synthase modifications in pulmonary hypertension, platelets in PH

2013-15	Florian Rieder, M.D., GI Fellow Exhaled Breath Analysis in Inflammatory Bowel Disease (IBD)
2013	Kerry Orton, Pre-doctoral / Chemistry, (Miami University of Ohio) (Awardee: Miami University's Honors Urban Leadership Internship Program) Exhaled Breath: Chemical Composition
2013	Simon Abi-Saleh, Pre-doctoral / Premed, (St. Joseph University, Lebanon) Nitric oxide synthases in the lung
2013-15	Mostafa Ahmad, M.D., Clinical Research Fellow (Awardee: Egyptian government training grant and travel award) Pulmonary Hypertension
2014	Carmen Kakish, Medical Student Pulmonary Hypertension Registry
2014-18	Noel Mellor, Pre-doctoral / Chemistry, (The College of Wooster, Ohio) Volatile Organic Compounds in blood headspace Metabolism in pulmonary hypertension
2015-16	Wael Dakkak, M.D., Clinical Research Fellow Pulmonary Hypertension
2016-18	Tawfeq Naal, M.D., Clinical Research Fellow Pulmonary Hypertension: noninvasive monitoring
2016-18	Batool Abuhlimeh, M.D., Clinical Research Fellow Pulmonary Hypertension
2016-17	Divya Sasidhar, High school student Exhaled breath analysis
2016-18	Ghaleb Khirfan, M.D., Clinical Pulmonary Fellow Pulmonary Hypertension
2017	Nick Dudenhoefer, Pre-Med student Exhaled breath analysis
2017-21	Celia Melillo, Pre-Med student Pulmonary hypertension registry and right heart catheterization
2018	Eric Hancock, Pre-Med student Pulmonary hypertension registry and right heart catheterization
2018-	Deborah Paul, MS Pulmonary hypertension Improvement with Diet and Exercise (PHINE) study
2018-19	Ruth McDowell, Post-Doctoral Fellow Mitochondrial metabolism in Pulmonary hypertension
2018-19	Brittany Brauer, Pre-Med student Pulmonary hypertension Improvement with Diet and Exercise (PHINE) study
2018-20	Charles Casa, Pre-Med student Pulmonary hypertension
2019-	Xiaoshuang Li, Post-Doctoral Fellow Chronic Thromboembolic Pulmonary hypertension
2019-	Wayne Tsuang, MD, Pulmonary faculty K23 mentorship committee Improving Access to Lung Transplant through Broader Geographic Sharing

- 2020- Wayne Tsuang, MD, Pulmonary faculty PhD thesis committee
Towards Translational Geospatial Medicine in Lung Transplantation
- 2020- Carli Lehr, MD, Pulmonary faculty K08 mentorship committee
Developing a Donor-Candidate Risk Prediction System to Optimize Lung Allocation and Transplant Outcomes
- 2021- Carli Lehr, MD, Pulmonary faculty PhD thesis committee
Updating risk predictions for lung transplant candidates bridged with extracorporeal membrane oxygenation using novel national data: The impact of new extracorporeal membrane oxygenation variables on lung transplant outcomes
- 2022- Seth Bauer, PharmD, K08 mentorship committee
Personalized vasopressor therapy in patients with septic shock

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| 2008 | Guest Editor: Proceedings of the Breath Analysis Summit 2007 and Scientific Meeting of the International Association for Breath Research. <i>Journal of Breath Research</i> . IOP Publishing. Bristol, UK 2008. |
| 2009 | Section Editor: Pulmonary Disease. In: Carey WD, editor. <i>Current Clinical Medicine</i> . Elsevier. Philadelphia, PA., USA 2009 |
| 2010-14 | Section Editor: Pulmonary Disease. In: Carey WD, editor. <i>First Consult</i> . Elsevier. Philadelphia, PA., USA 2010 |
| 2011 | Guest Editor: Proceedings of the Engineering Conferences International (ECI) Conference: Exhaled Breath Analysis From Sensors to Devices and Applications. <i>Journal of Breath Research</i> . IOP Publishing. Bristol, UK 2011. |
| 2012- | Section Editor: Pulmonary Disease. In: Cleveland Clinic Disease Management Project. Cleveland, OH. USA 2012- |
| 2013- | Activity Director: Respiratory Virtual Grand Rounds Webcast Series. Cleveland Clinic CME. Cleveland, OH, USA 2013-14. http://www.clevelandclinicmeded.com/online/respiratory-vgr/ |
| 2015- | Associate Editor: <i>Journal of Breath Research</i> . IOP Publishing. Bristol, UK. |

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- 2015 Inside Science TV - breath testing interview. **(Dweik RA, featured contributor)**.
- 2020-2022 Numerous, print, radio, TV, and social medial appearances and engagements related to the COVID 19 pandemic: uncertainty, social distancing, masks, healthcare system capacity and response, vaccines, breath testing, etc.
- 2021- Founder and Host of the **Respiratory Exchange** podcast: designed for healthcare professionals and covers timely and timeless clinical and leadership topics in the disciplines of pulmonary medicine, critical care medicine, allergy/immunology, infectious disease and related disciplines
- 2021- Founder and Host of the **Respiratory Inspirations** podcast: designed for patients and families and covers timely and timeless topics in the areas of lung disease, critical and serious illness, allergies, the immune system immunology, infectious disease and related topics.

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53. Chua AP, Aboussouan L, **Dweik R**. Using FENO and STOP-BANG Scores To Predict AHI In OSA Patients. *Annual Meeting of the Associated Professional Sleep Societies, LLC, May 31 – June 4, 2014 in Minneapolis, Minnesota*.
54. Zein J, Comhair S, Bleecker E, Busse W, Calhoun W, Castro M, Chung KF, **Dweik R**, Fitzpatrick A, Gaston B, Israel E, Jarjour N, Moore W, Teague G, Wenzel S, Erzurum S. The Effects of Aging and Menopause on Asthma Severity in Women. *Chest* 2014. *March 1; 145 (3 Suppl): 22A*.
55. Zeft A1, Costanzo D, Alkhouri N, Patel N, Grove D, Spalding SJ, **Dweik R**. A122L Metabolomics Analysis of Breath Volatile Organic Compounds Reveals Unique Breathprints in Children with Juvenile Idiopathic Arthritis. *Arthritis Rheumatol*. 2014 Mar; 66 Suppl 11:S159. *Doi: 10.1002/art.38543*
56. O.A. Minai, M. Ribeiro Neto, F. Cikach, K. Zell, X. Wang, **R.A. Dweik**. The Value Of Non-Invasive Biomarkers As Predictors Of Pulmonary Hypertension In Patients With IPF: A Prospective Study. *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.
57. J. Zein, S. Comhair, **R.A. Dweik**, W.C. Moore, E.R. Bleecker, W.W. Busse, W. Calhoun, M. Castro, K.F. Chung, E. Israel, N.N. Jarjour, W.G. Teague, S.E. Wenzel, B. Gaston, A.M. Fitzpatrick, S.C. Erzurum. The Distinctive Role Of Age And Asthma Duration On Asthma Severity. *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.
58. J.W. Barnes, L. Tian, S.A.A. Comhair, K. Aulak, **R.A. Dweik**. Glucose Metabolic Flux Regulates Nitric Oxide And Hyaluronan Matrices In Idiopathic Pulmonary Arterial Hypertension, *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.

59. D.M. Laskowski, J. Escano, J. Newman, D. Grove, **R.A. Dweik**. Breath Fractionation To Determine Areas Of Highest Concentration Of Volatile Organic Compounds In Exhaled Breath *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.
60. S. Farha, **R.A. Dweik**, F.F. Rahaghi, R.L. Benza, P.M. Hassoun, R.P. Frantz, F. Torres, D. Quinn, S.A.A. Comhair, S.C. Erzurum, K. Asosingh. Role Of KIT Inhibition By Imatinib In Pulmonary Arterial Hypertension. *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.
61. N. Alkhouri, MD, D. Grove, F. Cikach, K. Eng, **R.A. Dweik**. Volatile Organic Compounds In The Breath As Noninvasive Markers For Obstructive Sleep Apnea In Obese Children. *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.
62. A.-P. Chua, L.S. Aboussouan, D.M. Laskowski, O.A. Minai, **R.A. Dweik**. Predicting Sleep Apnea: The Complementary Role Of FENO And STOP BANG. *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.
63. H.K. Rokadia, **R.A. Dweik**, G.A. Heresi. Validation Of ESC/ERS Proposed Echocardiographic Criteria For The Detection Of Pulmonary Hypertension. *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.
64. O.A. Minai, L.H.R. Alkukhun, A.R. Tonelli, K. Zell, X. Wang, K. McCarthy, **R.A. Dweik**. Impaired Heart Rate Recovery Is Associated With Worse Pulmonary Hemodynamics And RV Function In Treatment Naive PAH Patients. *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.
65. A.R. Tonelli, D.I. Conci, B. Tamarappoo, J. Newman, **R.A. Dweik**. Prognostic Value Of Echocardiographic Changes In Patients With Pulmonary Arterial Hypertension Receiving Parenteral Prostacyclin Therapy *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.
66. J.W. Barnes, E.T. Kucera, M. Aytekin, L. Tian, S.A.A. Comhair, **R.A. Dweik**. Increased Glucose Uptake Regulates BMP Signaling By Two Distinct Mechanisms *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.
67. D. Grove, N. Patel, K. Eng, F. Cikach, R. Lopez, N. Alkhouri, **R. Dweik**. Using Breath Volatile Organic Compounds to Diagnose Inflammatory Bowel Disease In Children. *ATS 2014, May 18 – 21, 2014 in San Diego, CA*.
68. David Grove, Ammar Matloob, Sophia Ali Patel, Vera Okwu, **Raed A. Dweik**, Naim Alkhouri. Exhaled Breath Analysis for Volatile Organic Compounds Reveals New Insights into the Pathogenesis of Irritable Bowel Syndrome. 2015: A1371, 10.1164/ajrccm-conference.2015.191.1_MeetingAbstracts.A1371
69. Gustavo A. Heresi, , Omar A. Minai, Nancy D. Bair, Nicholas G. Smedira, **Raed A. Dweik**. Heart Rate Recovery as a Predictor of Outcome in Chronic Thromboembolic Pulmonary Hypertension. 2015: A5413, 10.1164/ajrccm-conference.2015.191.1_MeetingAbstracts.A5413
70. Liping Tian, , Jarrod W. Barnes, Jacqueline Loftis, James M. Hiznay, Suzy A.A. Comhair, Mark E. Lauer, **Raed A. Dweik**. The Contribution of Sugar Nucleotides in the Pathogenesis of IPAH. 2015: A5947, 10.1164/ajrccm-conference.2015.191.1_MeetingAbstracts.A5947
71. Jarrod W. Barnes, , Liping Tian, Gustavo Heresi-Davila, Carol F. Farver, Kewal Asosingh, Suzy A.A. Comhair, Kulwant Aulak, **Raed A. Dweik**. O-GlcNAc Transferase Directs Cell Proliferation in Idiopathic Pulmonary Arterial Hypertension. 2015: A5138, 10.1164/ajrccm-conference.2015.191.1_MeetingAbstracts.A5138
72. Gustavo A. Heresi, , Steven K. Malin, Jarrod W. Barnes, Liping Tian, **Raed A. Dweik**, John P. Kirwan. Glucose Metabolism Dysregulation and Energy Wasting in Idiopathic Pulmonary Arterial Hypertension. 2015: A5135, 10.1164/ajrccm conference.2015.191.1_MeetingAbstracts.A5135
73. Gustavo A. Heresi, , Steven K. Malin, Jarrod W. Barnes, Liping Tian, Adriano R. Tonelli, John P. Kirwan, **Raed A. Dweik**. Beta Cell Dysfunction and Energy Wasting are Associated with Inflammation and Markers of Vascular Dysfunction in Idiopathic Pulmonary Arterial Hypertension. 2015: A5136, 10.1164/ajrccm-conference.2015.191.1_MeetingAbstracts.A5136

74. Naim Alkhouri , Leila K. Gozal, Ammar Matloob, Vera Okwu, Abdelnaby Khalyfa, Maria Luz Alonso-Alvarez, Alex Gileles-Hillel, Rocio Lopez, **Raed A. Dweik**, David Gozal. Evaluation of Circulating Markers of Hepatic Apoptosis and Inflammation in Obese Children with and Without Obstructive Sleep Apnea. 2015: A2614, 10.1164/ajrccm-conference.2015.191.1_MeetingAbstracts.A2614
75. Mark E. Lauer, Alana K. Majors, Suzy Comhair, Lisa M. Ruple, Ryszard Dworski, Deepa Grandon, Daniel Laskowski, Carol F. Farver, **Raed A. Dweik**, Serpil C. Erzurum, Vincent C. Hascall, Mark A. Aronica. Hyaluronan in Asthma Severity and Experimental Asthma Exacerbation. 2015: A2498, 10.1164/ajrccm-conference.2015.191.1_MeetingAbstracts.A2498
76. Jarrod W. Barnes , Jacqueline Loftis , James M. Hiznay , Suzy A.A. Comhair , Mark E. Lauer , **Raed Dweik**. Altered Sugar Nucleotide Levels Facilitate Changes in Glycosylation in IPAH. American Journal of Respiratory and Critical Care Medicine 2016, Volume 193
77. Jarrod W. Barnes , Liping Tian , Suzy A.A. Comhair , **Raed Dweik**. O-GlcNAc Transferase Regulates Glucose Metabolism in Idiopathic Pulmonary Arterial Hypertension. American Journal of Respiratory and Critical Care Medicine 2016, Volume 193
78. Jarrod W. Barnes , Liping Tian , Elif T. Kucera , Metin Aytekin , Nina Dvorina , William Baldwin , Micheala Aldred , Carol F. Farver , Suzy A.A. Comhair , **Raed Dweik**. BMPR2 Mutation-Independent Mechanisms of Disrupted BMP Signaling in IPAH. American Journal of Respiratory and Critical Care Medicine 2016
79. Samar Y. Farha , Bo Hu , Suzy Comhair , Joe G. Zein , **Raed Dweik** , Serpil C. Erzurum , Micheala Aldred. Maternal Ancestry and Risk of Pulmonary Arterial Hypertension. American Journal of Respiratory and Critical Care Medicine 2016, Volume 193
80. Aaron B. Waxman , Lisa M. Grove , David M. Systrom , Jane A. Leopold , **Raed Dweik** , Gustavo A. Heresi , Serpil C. Erzurum , Mitchell A. Olman. Patients with Exercise Induced Pulmonary Arterial Hypertension Exhibit Coagulation System and Endothelial Activation. American Journal of Respiratory and Critical Care Medicine 2016, Volume 193
81. Wael Dakkak , Youlan Rao , Xuan Zhou , **Raed Dweik** , Adriano R. Tonelli. Plasma Levels of Leptin and Adiponectin Have Limited Prognostic Value in Pulmonary Arterial Hypertension. American Journal of Respiratory and Critical Care Medicine 2016, Volume 193
82. Mostafa K. Ahmed , **Raed Dweik** , Adriano R. Tonelli. Transpulmonary Gradients in Pulmonary Arterial Hypertension and Their Relationship with Hemodynamic Determinations. American Journal of Respiratory and Critical Care Medicine 2016, Volume 193
83. Adriano R. Tonelli , Mostafa K. Ahmed , Wael Dakkak , Kulwant Aulak , **Raed Dweik**. The Ratio of Pulmonary Artery Over Wedge Nitrite Predicts the Pulmonary Vascular Response to Inhaled Nitric Oxide in Idiopathic Pulmonary Arterial Hypertension. American Journal of Respiratory and Critical Care Medicine 2016, Volume 193
84. Khawaja Zaki , Xiaofeng Wang , **Raed Dweik** , Gustavo A. Heresi. Non-Invasive Estimation of Pulmonary Artery Wedge Pressure. American Journal of Respiratory and Critical Care Medicine 2016, Volume 193
85. Steven M. Kawut , Margaret F. Doyle , Michael J. Krowka , Kimberly Forde , Gustavo A. Heresi , **Raed Dweik** , Kari E. Roberts , Karen Krok , Mamta Patel , Grace Lin , Jae Oh , Michael Fallon. Monocyte Subsets in Pulmonary Vascular Complications of Liver Disease. American Journal of Respiratory and Critical Care Medicine 2016, Volume 193
86. Steven M. Kawut , Michael J. Krowka , Kimberly Forde , Gustavo A. Heresi , **Raed Dweik** , Kari E. Roberts , Karen Krok , Mamta Patel , Sahin Batra , Grace Lin , Jae Oh , Michael Fallon. Metabolomic Differences in Pulmonary Vascular Complications of Liver Disease. American Journal of Respiratory and Critical Care Medicine 2016, Volume 193

87. J. Barnes, L. Tian, N.E. Mellor, S.A. Comhair, **R. Dweik**. O-GlcNAc Transferase Regulates Angiogenesis in Idiopathic Pulmonary Arterial Hypertension. American Thoracic Society 2017
88. P. Raeisi-Giglou, X. Wang, W. Dakkak, N. Bair, **R. Dweik**, A.R. Tonelli, Effect of Weight on Parenteral Prostacyclin Analogues Dosing in Pulmonary Hypertension Patients. American Thoracic Society 2017
89. G. Khirfan, V. Tejwani, X. Wang, N. Bair, J.A. DiDonato, **R.A. Dweik**, N. Smedira, G.A. Heresi. High Density Lipoprotein Cholesterol in Chronic Thromboembolic Pulmonary Hypertension. American Thoracic Society 2017
90. K. Aulak, J. Barnes, L. Tian, N.E. Mellor, S.A. Comhair, B. Willard, **R. Dweik**. Specific O-GlcNAc Modification at Ser-615 Modulates Ser-1177 Phosphorylation of eNOS and Leads to Vascular Dysfunction in Pulmonary Arterial Hypertension. American Thoracic Society 2017
91. N.E. Mellor, **R. Dweik**, J. Barnes. Tissue Transglutaminase 2 in Pulmonary Arterial Hypertension Vascular Remodeling. American Thoracic Society 2017
92. G. Agmy, R. Dweik, A. Tonelli, O. ElShinawy, L. Shahban, M. Ahmed. Tricuspid Regurgitation Velocity Versus Right Ventricular Systolic Pressure in Echocardiographic Diagnosis of Pulmonary Hypertension. American Thoracic Society 2017
93. G. Khirfan, T. Naal, J. Newman, G.A. Heresi, R.A. Dweik, A.R. Tonelli. Prevalence, Phenotypic Characteristics and Prognostic Impact of Hypoxemia in Patients with Idiopathic or Heritable Pulmonary Arterial Hypertension. American Thoracic Society 2017

Conferences Chaired and/or Organized:

- | | |
|-------------|---|
| 2005 | Organizing Committee, Lung Summit 2005
Innovations in Pulmonary and Critical Care Medicine |
| 2005 | Director / Organizer, Pulmonary Hypertension Education Month |
| 2005 | Co-Director, Pulmonary Hypertension Symposium |
| 2006 | Founding Director, Pulmonary Hypertension Summit: Translating Discoveries into Patient Care
(Also 2007, 2009, 2011, 2013, 2016, and 2017) |
| 2006 | Director, Pulmonary Hypertension Symposium: Practical Aspects of PH Evaluation and Management (Also 2007, 2008, 2009, 2010, 2011, 2013, 2016, 2017) |
| 2007 | Conference Chair and Host, Breath Analysis Summit
The Scientific Meeting of the International Association of Breath research |
| 2010 | Chair, Engineering Conferences International: Exhaled Breath Analysis from Sensors to Devices and Applications |
| 2011 | Course Director, Cleveland Clinic Academy
Middle East Cultural Competence: Patient Care and Working Relationship
(January 2011, December 2011, and December 2012) |

- 2011 Organizing Committee, Breath Analysis Summit 2011
- 2011 Conference Chair and Host, Beryllium Summit 2011
4th International Conference on Beryllium Disease
- 2013** Organizing Committee, Breath Analysis Summit:
The Scientific Meeting of the International Association of Breath research
- 2014** Organizing committee, International Nitric Oxide Conference
- 2014 Organizing committee, Princeton Workshop on Precision Monitoring of Human Metabolism
- 2014 Organizing committee, Princeton Mid Infrared MEDical Systems (MiMES)
- 2014 Director, Pulmonary Hypertension Fellow Education Day and Symposium
- 2015** Director, Inaugural KL2-CTSC reunion
CWRU, Cleveland Clinic, University Hospitals, Metrohealth, Cleveland VA
- 2015 Organizing Committee, Breath Analysis Summit: Vienna, Austria
The Scientific Meeting of the International Association of Breath research
- 2016** Organizing Committee, Breath Analysis Summit: Zurich, Switzerland
The Scientific Meeting of the International Association of Breath research
- 2017** Co-Director, Pulmonary Hypertension Summit

Invited Lectures / Talks / Presentations (National and International):

- 1997** Nitric oxide levels in the airways in humans.
American Thoracic Society (ATS) Annual International Conference.
San Francisco, California, May 1997.
- 1997 Nitric oxide synthase in the human airway epithelium
Clinical Respiratory Physiology Forum 1997: Inhaled Nitric Oxide. Shanghai Medical University.
Shanghai, P.R. China. November 1997.
- 1998** Potential role of nitric oxide in V/Q matching in the pulmonary circulation. Division of
Pulmonary and Critical Care Medicine. SUNY at Stony Brook.
Stony Brook, NY. March 1998.
- 1998 Oxygen regulation of nitric oxide production in the lungs
Division of Pulmonary and Critical Care Medicine. Cook County Hospital/Rush Medical School.
Chicago, IL. May 1998.

- 1998 Nitric oxide production in the Lungs
Department of Pulmonary and Critical Care Medicine invited speaker lecture series. Cleveland Clinic Foundation, May 1998.
- 1998 Endogenous nitric oxide in asthma and primary pulmonary hypertension
Division of Pulmonary and Critical Care Medicine, University of Tennessee Medical School, Memphis, TN. June 1998.
- 1998 Kinetics of nitric oxide production in the lung
National Jewish Medical and Research Center
Denver, CO. July 1, 1998
- 1998 Drug-Induced Pulmonary Disease.
Horizons in Pulmonary Care and Critical Care Medicine
The Cleveland Clinic Foundation, Cleveland, OH, August 26, 1998
- 1999 Nitric Oxide: Physiology and Clinical Correlates.
Sunrise Seminar (SS104)
American Thoracic Society (ATS) Annual International Conference
San Diego, California, April 27, 1999
- 1999 Mechanisms of decreased NO in lungs of individuals with primary pulmonary hypertension.
American Thoracic Society (ATS) Annual International Conference
San Diego, California, April 27, 1999
- 1999 Nitric oxide (NO) reaction products increase in segmental antigen challenge model of asthma exacerbation.
American Thoracic Society (ATS) Annual International Conference
San Diego, California, April 28, 1999
- 1999 The Scientific Basis for Treatment of Chronic Beryllium Disease (CBD) with corticosteroids. CBD Support Group, Toledo, Ohio, May 13, 1999
- 1999 Pleural Disease, Annual Intensive Review of Internal Medicine
The Cleveland Clinic Cleveland, OH. (**Also 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2011, 2012**)
- 1999 Nitric oxide (NO) and NO reaction products in a segmental antigen challenge model of asthma exacerbation.
Merck second Annual Respiratory Young Investigator Meeting.
New York, NY September 23, 1999

- 1999 Moderator ACCP session: Cultural Diversity Impact on Clinical Decision Making and Doctor-Patient-Family Communication.
American College of Chest Physicians Annual International Meeting
Chicago, IL November 1, 1999
- 2000** Panel Discussion: Beryllium Research Workshop
Department of Energy, Office of Science and, Office of Environment, Safety and Health,
Bethesda, MD, October 18-19, 2000
- 2000 Hemoptysis Case-Based Approach, Role of bronchoscopy
American College of Chest Physicians
San Francisco, CA. October 24, 2000
- 2001** Nitric Oxide Production in the Lung and its regulation by oxygen.
University of Pennsylvania, Institute for Environmental Medicine
Philadelphia, PA. April 6, 2001
- 2001 NO in lung Health and Disease. Sunrise Seminar (SS108)
American Thoracic Society (ATS) Annual International Conference
San Francisco, California, May 21, 2001
- 2001 Nitric oxide reactions in the asthmatic airway
NATO Advanced Study Institute. Disease Markers in Exhaled Breath: Basic Mechanisms and
Clinical Applications
Knossos Royal Village, Crete, June 25, 2001
- 2001 NO production in the lung and its regulation by oxygen
NATO Advanced Study Institute. Disease Markers in Exhaled Breath: Basic Mechanisms and
Clinical Applications
Knossos Royal Village, Crete, June 27, 2001
- 2001 Chairman, Poster Discussion Session
NATO Advanced Study Institute. Disease Markers in Exhaled Breath: Basic Mechanisms and
Clinical Applications
Knossos Royal Village, Crete, June 26, 2001
- 2001 Chairman, Evening Session: Technical Aspects of Exhaled Carbon Monoxide (CO)
NATO Advanced Study Institute. Disease Markers in Exhaled Breath: Basic Mechanisms and
Clinical Applications
Knossos Royal Village, Crete, June 29, 2001
- 2001 NO in lung Health and Disease
National Institute for Occupational Safety and Health (NIOSH)
Morgantown, WV. August 2001

- 2001 NO in lung physiology and Disease
University of Pittsburgh, Department of Pulmonary and Critical Care Medicine
Pittsburgh, PA. September 19, 2001
- 2001 Effect of smoking and race on developing chronic beryllium disease in sensitized individuals.
American College of Chest Physicians
Philadelphia, PA. November 6, 2001
(Winner of Young Investigator Award)
- 2002 Chairman, Poster Discussion Session: A92
Role of gaseous molecules in airway inflammation and asthma
American Thoracic Society (ATS) 98th Annual International Conference
Atlanta, Georgia 2002
- 2002 High Levels of Nitric Oxide (NO) in Exhaled Breath in Patients with Chronic Beryllium Disease
Beryllium Research Symposium: Basic Mechanisms and Human Health
National Library of Medicine, National Institutes of Health
Bethesda, MD, June 25- 26, 2002
- 2002 HLA-DP-Unrestricted TNF- α Release in Be-Stimulated PBMC from Berylliosis Patients. Massimo Amicosante, Floriana Berretta, Alberto Franchi, Paola Rogliani, Chiara Dotti, Monica Losi, **RA Dweik**, Cesare Saltini
Beryllium Research Symposium: Basic Mechanisms and Human Health
National Library of Medicine, National Institutes of Health
Bethesda, MD. June 25- 26, 2002
- 2002 Nitric Oxide (NO) Attenuation of Interferon Gamma (IFN-Gamma) Responses in Chronic Beryllium Disease (CBD): Evidence for Mechanisms Independent of Interleukin (IL)-18. MJ Thomassen, C Farver, **RA Dweik**, D Culver, B Yen-Lieberman, M Kavuru, and BP Barna.
Beryllium Research Symposium: Basic Mechanisms and Human Health, National Library of Medicine, National Institutes of Health, Bethesda, MD. June 25- 26, 2002
- 2002 Consistency of offline exhaled gas measurements. American College of Chest Physicians (ACCP), San Diego, CA, November 6, 2002.
- 2002 Measuring exhaled NO and other gases in ventilated patients.
American Thoracic Society workshop on exhaled nitric oxide and nitric oxide oxidative metabolism in exhaled breath condensate
Toronto, Canada. December 12-15, 2002.
- 2002 Consistency of offline exhaled gas measurements.
American Thoracic Society workshop on exhaled nitric oxide and nitric oxide oxidative metabolism in exhaled breath condensate

Toronto, Canada. December 12-15, 2002.

- 2002 A Model of NO buildup and decay in asthma
American Thoracic Society workshop on exhaled nitric oxide and nitric oxide oxidative
metabolism in exhaled breath condensate
Toronto, Canada. December 12-15, 2002.
- 2002 Redox chemistry of the nitrogen oxides in the lower airway in asthma
American Thoracic Society workshop on exhaled nitric oxide and nitric oxide oxidative
metabolism in exhaled breath condensate
Toronto, Canada, December 12-15, 2002.
- 2004** Chronic Beryllium Disease (CBD): Diagnosis and Disease Progression
Beryllium National Research Symposium 2004
National Jewish Medical and Research Center
Denver, Colorado. January 28 - 30, 2004
- 2004 Nitric Oxide in the Lung
Adult Cardiac Peri-Operative/Transplant Consensus Conference
Columbia University / INOTherapeutics, the Hilton Short Hills
Short Hills, NJ. April 7 - 8, 2004
- 2004 Update in Critical Care Medicine: Recent Studies That Will Change Your Practice
The 2nd Pan Arab Conference and
The 7th Jordanian Internal Medicine Conference
Amman, Jordan. April 25-29, 2004
- 2004 State of The Art in the Diagnosis and Treatment of Pulmonary Hypertension
The 2nd Pan Arab Conference and
The 7th Jordanian Internal Medicine Conference
Amman, Jordan. April 25-29, 2004
- 2004 Nitric Oxide in Lung Physiology and Disease
Visiting Professor, Department of Physiology
Gazi University, Ankara, Turkey, May 14, 2004
- 2004 Update on Diagnosis and Evaluation of Beryllium Health Effects
Update on Beryllium Related Health Effects: from diagnosis to compensation
American Thoracic Society (ATS) 100th Annual International Conference
Orlando, Florida, May 26, 2004
- 2004 Visiting Professor, Vorarlberg University of Applied Sciences
Dornbirn, Austria. September 23-26, 2004
Chair: Breath Gas analysis and Physiology Session

Speaker: Nitric Oxide in Exhaled Breath: A window on lung Physiology and Disease

Member: Poster Prize committee

Member: Panel Discussion: International Society for Breath Diagnostic Research

- 2005** Nitric Oxide in Endocrinology
8th French American Meeting in Endocrinology
Paris, France. February 3, 2005
- 2005 Diagnosis and Management of Beryllium Sensitization and CBD
International Beryllium Research Conference 2005
Montreal, Canada. March 7-11, 2005
- 2005 Panelist: Teaching Points from Current Clinical Cases
International Beryllium Research Conference 2005
Montreal, Canada. March 7-11, 2005
- 2005 Recognition of Lung Cancer through Multidimensional Analysis of Exhaled Breath by an Electronic Nose
11th International Symposium on Olfaction and Electronic Nose (ISOEN)
Barcelona, Spain, April 13-15, 2005
- 2005 Lung Summit 2005: Innovations in Pulmonary and Critical Care Medicine
Member Program Organizing Committee
Session Moderator: Carbon Monoxide, Hydrogen and exhaled breath Condensate in Lung disease
Speaker: Review of Nitric Oxide
Speaker: Nitric Oxide in Pulmonary Hypertension, insights into disease severity and prognosis
Speaker: Carbon Monoxide in Lung disease
- 2005 Low Levels of Exhaled Nitric Oxide in Severe Asthma for the Severe Asthma Research Program (SARP)
American Thoracic Society (ATS) Annual International Conference
San Diego, California. May 2005
- 2005 Poster Discussion Session co-chair [D99]: Detection of NO in Exhaled Breath: Does It Predict Disease?
American Thoracic Society (ATS) Annual International Conference
San Diego, California. May 2005
- 2005 Mini-Symposium Session co-chair [D13] Exhaled Breath Condensate - A New Measure of Inflammation in Asthma.
American Thoracic Society (ATS) Annual International Conference
San Diego, California. May 2005

- 2006** Severe Asthma, 7th Annual Meeting of Hospital Angeles de las Lomas, Mexico City, Mexico. January 27-28, 2006
- 2006 Pulmonary Hypertension, 7th Annual Meeting of Hospital Angeles de las Lomas, Mexico City, Mexico. January 27-28, 2006
- 2006 Exhaled Breath Analysis in Lung Health and Disease
Michigan Thoracic Society Scientific Sessions
Update in Pulmonary & Critical Care Medicine
Lansing, MI. April 28, 2006
- 2006 Poster Discussion Session Chair
Session Title: B91- Biomarkers to Assess Airway Inflammation
American Thoracic Society (ATS) Annual International Conference
San Diego, California. May 22, 2006
- 2006 Thematic Poster Session Facilitator
Session Title: C116- Non-Invasive Assessment Of The Airway In Asthma, Session American Thoracic Society (ATS) Annual International Conference
San Diego, California. May, 23 2006
- 2006 The role of nitric oxide in lung physiology and disease Institute of Pathology
Case Western Reserve University, Cleveland, OH, June 5, 2006
- 2006 Pulmonary Hypertension Association's 7th International PH Conference and Scientific Sessions: Roadmap to a Cure.
Panel member: Anticoagulation, Drug-Drug Interactions, and New Studies
Panel member: Liver Disease and Portopulmonary Hypertension
Minneapolis, MN. June 23-25, 2006
- 2006 International Association of Breath Research Scientific Meeting
- Recognition of lung cancer by an electronic nose
- Low levels of Nitric Oxide in Exhaled Breath in Severe Asthma
Prague, Czech Republic, September 4-5, 2006
- 2006 Pulmonary Hypertension Summit 2006 Cleveland, OH
- Summit Director - Session Moderator
- Speaker: PH, Historic Perspective
- Speaker: Pathobiologic Basis of Current PH Therapies
- 2006 Visiting Professor, Mayo Clinic Rochester, Minnesota, September 29, 2006
- Exhaled Breath analysis: a window on lung physiology and disease
- The Pathobiologic Basis of Pulmonary Hypertension Therapy

- 2007** Twenty-second Annual Critical Care Seminar of Northeast Indiana
“Where We are & Where We are Going”
-Exhaled nitric oxide in lung physiology and Disease
-Inhaled Nitric oxide Case Studies
Ivy Tech Community College
Fort Wayne, IN. February 28, 2007
- 2007 Visiting Professor, Scott and White Clinic
Nitric Oxide in Lung Disease
Temple, Texas. February 2007
- 2007 American Thoracic Society (ATS) Annual International Conference
Session Chair: B96 non-invasive biomarkers of lung disease
San Francisco, CA. May 21, 2007
- 2007 The Third International Conference on Beryllium Disease
Speaker: The diagnosis and Management of Chronic Beryllium Disease
The University of Pennsylvania School of Medicine
Philadelphia, PA. October 16-19, 2007
- 2007 CHEST 2007, the International Meeting of the American College of Chest Physicians. Session
Moderator: Pulmonary Vascular Disease: Pulmonary HTN Evaluation and Treatment
Chicago, IL. October 24, 2007
- 2007 Breath Analysis Summit
The Scientific Meeting of the International Association of Breath research
- Summit Director
- Session Moderator
- Speaker
Cleveland, OH. November 1-3, 2007
- 2007 Pulmonary Hypertension Summit 2007
- Summit Director
- Session Moderator
- Speaker: New Pathobiologic Targets of Therapy
Cleveland, OH. November 16-17, 2007
- 2008** Case Discussant and Faculty: PG29 Case-Based Pulmonary Function Test Interpretation.
American Thoracic Society (ATS) Annual International Conference
Toronto, Canada. May 17, 2008
- 2008 Lead Facilitator: B36 Non-Invasive Assessment of Lung Function By Exhaled Breath Analysis
American Thoracic Society (ATS) Annual International Conference
Toronto, Canada. May 19, 2008

- 2008 Session Chair: D102 Clinical Significance and Methodology Of Exhaled Breath Component Measurement
American Thoracic Society (ATS) Annual International Conference
Toronto, Canada. May 21, 2008
- 2008 Panel member: Ask the Experts
Panel member: Liver Disease and Portopulmonary Hypertension
Pulmonary Hypertension Association's 8th International PH Conference and Scientific Sessions:
A Journey of Hope and Discovery
Houston, TX June 20-22, 2008
- 2008 Keynote speaker: Breath Analysis: The New Frontier in Medical Testing
National Science Foundation (NSF) workshop on Mid-InfraRed Technologies for Health and the Environment (MIRTHE)
Johns Hopkins University, August 08, 2008
- 2008 Keynote speaker: Breath Analysis: The New Frontier in Medical Testing
Engineering Conferences International (ECI): Application of Intelligent Particles and Sensors in Environmental and Process Engineering
Penang, Malaysia, August 24-28, 2008
- 2008 5th Annual Pulmonary Hypertension Symposium 2008
- Course Director
- Session Moderator
- Speaker: History, epidemiology and Pathobiology
Cleveland, OH. November 7, 2008
- 2008 Appropriate Timing Enhances the Utility of Plasma Brain Natriuretic Peptide in Predicting Survival in Pulmonary Arterial Hypertension.
American Heart Association (AHA)
New Orleans, Louisiana, November 2008
- 2008 Great Debates in Pulmonary Arterial Hypertension
Current Drugs for Treating PAH Do Not Target the Mechanism of PAH-PRO
American Heart Association (AHA)
New Orleans, Louisiana, November 2008
- 2009** Speaker: Pulmonary Hypertension Therapy: have we achieved our goals?
Speaker: The role of biomarkers in the diagnosis and management of PAH
Pulmonary Vascular Research Institute (PVRI)
The Second International Pulmonary Hypertension Congress
The Eastern Mediterranean Region
Casablanca, Morocco, February 2009

- 2009 Congress of the Lebanese Pulmonary Society & the Annual Meeting of the Mediterranean Union of Thoracic Disease
Speaker: Management of Pulmonary Hypertension
Speaker: Applications of Exhaled Breath analysis
Beirut Lebanon, April 2009

- 2009 Pulmonary Hypertension
Rainbow Babies and Children's Hospital, Case Western Reserve University
Cleveland, OH. April 24, 2009

- 2009 Postgraduate Course, [PG24] Controversies in Pulmonary Hypertension Management: Past Imperfect, Future Continuous
- Speaker: Role of Biomarkers In PH: Real or Imagined?
- Workshop [WS8] Understanding Exhaled Nitric Oxide Gas Exchange
- Speaker: Nitric Oxide in Pulmonary Hypertension
- Facilitator, Poster session: [B47] Sarcoidosis and Beryllium Disease: Mechanisms and Epidemiology
- Facilitator, Poster session: [C65] Pulmonary Hypertension Associated With Lung Diseases or Other Illnesses: Pathogenesis, Diagnosis, and Clinical Outcomes
American Thoracic Society (ATS) Annual International Conference
San Diego, California, May 2009

- 2009 Arginase and Superoxide Dismutase Inactivation in PH
Pittsburgh International Lung Conference: Spotlight on Pulmonary Hypertension and Pulmonary Vascular Biology
Pittsburgh, PA. October 9-10, 2009

- 2009 Pulmonary Hypertension Summit 2009: Translating Discoveries into Patient Care
- Summit Director
- Session Moderator
- Speaker: Biomarkers in PH
Cleveland, OH. November 20-21, 2009

- 2009 Keynote Speaker: 2nd Annual Workshop on Breath Analysis for Biomedicine and National Security: Sensor Design Issues and Strategies for Biomarker Discovery
University of California Davis and Stanford Research Institute International, Corp.
Menlo Park, CA. November 16th-17th, 2009

- 2009 Visiting Professor, Pulmonary, Allergy, & Critical Care Medicine
Advances in Exhaled Breath Analysis
Emory University School of Medicine
Atlanta, Georgia. December 2009

- 2010** Division of Lung Diseases of the National Heart Lung Blood Institute (NHLBI) and the Office of Rare Diseases Research (ORDR) Workshop: Strategic Plan for Lung Vascular Research
- Panel Member
- Speaker: Expanding Hypotheses in Lung Vascular Research Session
NIH, Bethesda, Maryland, March 2010
- 2010 GULF Thoracic Pulmonary Conference
- Speaker: Consensus Update in Pulmonary Hypertension Classification
- Speaker: Novel Therapeutic Agents in Pulmonary Hypertension
- Workshop leader: Pulmonary Hypertension: New Therapeutic Tools Workshop
Abu Dhabi, UAE March 2010
- 2010 Visiting Professor, American University in Beirut
Exhaled Breath: The New Frontier in Medical Testing
Beirut, Lebanon, March 2010
- 2010 Pulmonary Grand Rounds: Exhaled Breath Analysis
MetroHealth Medical Center Pulmonary Grand Rounds
Cleveland, OH. April 2010
- 2010 Speaker: Clinical Utility Exhaled Nitric Oxide in Pulmonary Hypertension
Session Facilitator
American Thoracic Society (ATS) Annual International Conference
New Orleans, LA. May 2010
- 2010 Hyaluronan (HA) mediates the effects of nitric oxide (NO) on cell proliferation in pulmonary hypertension
8th International Conference on Hyaluronan
Kyoto, Japan. June 2010
- 2010 Pulmonary Hypertension Related to Liver Disease
Division of Pulmonary, Critical Care, and Sleep Disorders, University of Louisville
Louisville, KY. September 2010
- 2010 Engineering Conferences International Conference: Exhaled Breath Analysis from Sensors to Devices and Applications
- Conference Chair
- Session Moderator
- Speaker
Barga, Italy. October 24-29, 2010
- 2010 American College of Chest Physicians (ACCP) Annual International CHEST Conference
- Speaker: Clinical Utility Exhaled Nitric Oxide (F_ENO)
- Session Chair: Pulmonary Hypertension: Basic science

Vancouver, BC, Canada. October / November 2010

- 2010 Cleveland Clinic International Innovation Summit
Top 10 Medical Innovations 2011 Panel
Presentation: Exhaled Nitric Oxide
Cleveland Clinic, November 2010
- 2010 7th Annual Pulmonary Hypertension Symposium 2010
- Course Director
- Session Chair
Cleveland, OH. November 19, 2010
- 2010 Visiting Professor, Meakins-Christie Laboratory of McGill University
Advances and Challenges in Breath Analysis
Montreal, Canada. November 2010
- 2011** 15th Annual Meakins International Workshop on Asthma and COPD
Meakins-Christie Laboratory of McGill University
Utility of exhaled nitric oxide (FENO) in the diagnosis and management of asthma
Jordan. January 2011
- 2011 US Department of State (DOS) CME Conference
Speaker: Update in pulmonary disease
- My Patient Has a Cough and a Fever
- My Patient Has a Lung Nodule
- Interpretation of Common Lung Function Tests
- Asthma – The Scope of the Problem
- Asthma in Children
- Asthma – Common and Uncommon Symptoms
- Diagnosis of Asthma
- Asthma Treatment Principles
- Asthma – Three Interesting Cases
Singapore, Singapore. February 2011
- 2011 Visiting Professor: Princeton University
Dept. of Civil and Environmental Engineering
Center for Mid-Infrared Technologies for Health and the Environment
Medical Applications of Exhaled Breath Analysis
Princeton, New Jersey. March 2011
- 2011 US Department of State (DOS) CME Conference
Speaker Update in pulmonary disease:
- My Patient Has a Cough and a Fever
- My Patient Has a Lung Nodule
- Interpretation of Common Lung Function Tests

- Asthma – The Scope of the Problem
 - Asthma in Children
 - Asthma – Common and Uncommon Symptoms
 - Diagnosis of Asthma
 - Asthma Treatment Principles
 - Asthma – Three Interesting Cases
- Istanbul, Turkey. April 2011

- 2011
- Speaker: Postgraduate Course: Biomarkers In Asthma and COPD
Exhaled NO: on the rise again?
 - Speaker: Mini-symposium: Biomarkers in Pulmonary Hypertension
 - Speaker: Detectable Plasma Cardiac Troponin I Is Associated With Advanced Disease and Poor Prognosis in Pulmonary Arterial Hypertension
 - Speaker: Mini symposium: Biomarkers in the Clinic: From Imaging to Molecular Profiling: Exhaled Breath Analysis of Patients with Pulmonary Hypertension Using Selected Ion Flow Tube Mass Spectrometry (SIFT-MS)”
 - Speaker: Mini symposium: Biomarkers in the Clinic: From Imaging To Molecular Profiling: Exhaled Breath Analysis Of Patients With End Stage Renal Disease Using Selected Ion Flow Tube Mass Spectrometry (SIFT-MS)
 - Session Facilitator: Pulmonary Hypertension Experimental Models
American Thoracic Society (ATS) Annual International Conference
Denver, CO. May 2011
- 2011
- NHLBI Working Group in Lung Vascular Clinical Research
Facilitator: Clinical endpoints
National Institutes of Health
Bethesda, Maryland, August 11, 2011
- 2011
- Lung Summit 2011: Controversies in pulmonary and critical care medicine
- Speaker: Pulmonary hypertension in critical illness
Cleveland Clinic, September 9, 2011
- 2011
- Breath Analysis Summit 2011
- Organizing Committee
- Session Chair
- Speaker: Exhaled nitric oxide (FENO)
Parma, Italy, September 11-14, 2011
- 2011
- Mid Infra-Red Technologies for Health and the Environment (MIRTHE) conference on medical applications
- Organizing Committee
- Session Chair (closed advisory session)
- Speaker: Exhaled Breath Analysis
Princeton, October 11-12, 2011

- 2011 Beryllium Summit 2011: 4th International Conference on Beryllium Disease
- Conference Chair and Host
- Session Chair
- Speaker: Advances in the diagnosis and management of beryllium sensitization and chronic beryllium disease
Cleveland Clinic, October 20-22, 2011
- 2011 Pulmonary Hypertension Summit 2011: Translating Discoveries into Patient Care
- Conference Chair
- Session Chair
- Speaker: Surviving Critical illness in pulmonary hypertension
- 2012** American Thoracic Society – Saudi Thoracic Society joint conference
- Speaker: Exhaled Nitric Oxide (FENO) in Asthma: State of the Art
- Speaker: Pulmonary Hypertension: Classification and Diagnostic Approach
- Workshop Leader: Pulmonary Hypertension: Therapeutic Choices
Riyadh, Saudi Arabia, January 9-12, 2012
- 2012 16th Annual Meakins International Workshop on Asthma and COPD
Meakins-Christie Laboratory of McGill University
- Speaker: Utility of exhaled nitric oxide (FENO) in the diagnosis and management of asthma
Montreal, Canada. February 4-6, 2012
- 2012 PittCon
Speaker: The State of Breath Analysis: Achievements and Challenges
Orlando, Florida, March 13, 2012
- 2012 The Alfred P. Fishman Symposium: Pulmonary Vascular Phenotypes in Research and Clinical Care. University of Pennsylvania
- Speaker: Exhaled Breath in Pulmonary Hypertension
Philadelphia, PA. April 14, 2012
- 2012 Pulmonary Grand Rounds: Medical College of Wisconsin
Exhaled Breath Analysis: the new frontier in medical testing.
Milwaukee, WI. May 11, 2012
- 2012 American Thoracic Society (ATS) Annual International Conference
- Chair: PH Phenotypes Committee
- Lead Facilitator: D39-Evaluation and Monitoring Of Asthma And Copd
- Facilitator: Experimental Models in Pulmonary Hypertension
San Francisco, CA. May 18-23, 2012

- 2012 World Association of Sarcoidosis and Other Granulomatous Disorders North American Conference
- Co-Chair: original research session
Cleveland, OH. October 4-6, 2012
- 2012 Breath Analysis for Biomedicine and National Security: Sensor Design Issues and Strategies for Biomarker Discovery.
Keynote Speaker: Off-line Testing for Volatiles - Strengths and Weaknesses
Sonoma, California (USA), October 28-Nov 1, 2012
- 2012 Visiting professor, Pennsylvania State University: Exhaled Breath Analysis
Milton S. Hershey Medical Center Department of Medicine
Hershey, Pennsylvania. March 7-8, 2013
- 2013** American Thoracic Society (ATS) Annual International Conference
- Committee Chair
- Lead Facilitator: C34-Non-Invasive Assessment of The Airway
Philadelphia, Pennsylvania. May 17-22, 2013
- 2013 Johns Hopkins University, Department of Medicine
Division of Allergy and Clinical Immunology
Visiting Professor: Pulmonary Grand Rounds: Exhaled Breath Analysis
Baltimore, MD. May 23, 2013
- 2013 Breath Analysis Summit: The Scientific Meeting of the International Association of Breath research
Member, Organizing Committee
Keynote speaker: From breath-print to individual molecules: utility of exhaled breath in the diagnosis and monitoring of systemic diseases
Saarbrücken, Germany. June 8-12, 2013
- 2013 Pulmonary Hypertension Summit 2013: Translating Discoveries into Patient Care
- Conference Chair
- Session Chair
Cleveland, Ohio. November 15-16, 2013
- 2013 American Thoracic society –Saudi Thoracic Society Conference
- Speaker: Pulmonary Hypertension: What is new in the diagnosis and management?
- Speaker: Use Exhaled Nitric Oxide (FENO) In Asthma Diagnosis and Treatment
Jeddah, Saudi Arabia. November 21-23, 2013
- 2014** Workshop on Precision Monitoring of Human Metabolism.
- Organizing committee Speaker
Princeton University, Princeton, NJ. February 17th, 2014

- 2014 GULF Thoracic Pulmonary Conference and Meakins-Christie Laboratory workshop of McGill University
 - Speaker, Current and Novel Biomarkers in Pulmonary Arterial Hypertension
 - Speaker, Nitric Oxide: Measurement in asthma: Is it a valid tool?
 Dubai, UAE. March 13-15, 2014
- 2014 American Thoracic Society (ATS) Annual International Conference
 - Speaker: Hyaluronan in Pulmonary Hypertension
 San Diego, California. May 16-21, 2014
- 2014 International Nitric Oxide Conference
 - Organizing committee
 - Speaker: Roles and Therapy of Inhaled or Exhaled Nitric Oxide in the Lung
 Cleveland, Ohio. June 17, 2014
- 2014 Mid Infrared MEditional Systems (MiMES) Planning Workshop
 - Organizing committee - Speaker
 Princeton University, July 22-23, 2014
- 2014 Mid Infra-Red Technologies for Healthcare and the Environment (MIRTHE) Summer Workshop
 Speaker: Breath Analysis Workshop: clinical applications
 Princeton University, August 7-8, 2014
- 2014 Cleveland Clinic International Innovation Summit
 Top 10 Medical Innovations 2014 Panel
 Presentation: New Medications for Idiopathic Pulmonary Fibrosis
 Cleveland Convention Center, October 2014
- 2015** Bayer Pharmaceuticals
 Nitric Oxide (NO) Deficiency Round Table
 Presentation: Exhaled NO as a biomarker in pulmonary hypertension
 New Jersey, February 2015
- 2015 Panelist: Convey Global Disclosure System
 American Association of Medical Colleges (AAMC), Forum on Conflict of Interest (FOCI) in
 Academe
 Atlanta, Georgia. April 17, 2015
- 2015 Utility of Breath Analysis in Diagnosis / Monitoring of Lung and Systemic Disease
 Dartmouth College of Engineering / Visiting Professor
 Dartmouth, New Hampshire.
 May 29, 2015

- 2015 The Nitric Oxide Pathway as a Target in the Treatment of Pulmonary Arterial Hypertension
Yale Pulmonary Hypertension Symposium
Yale School of Medicine
Greenwich, Connecticut.
June 04, 2015
- 2015 Mechanisms of metabolic dysregulation in pulmonary hypertension
Division of Pulmonary and Critical Care Medicine Research Conference
Yale School of Medicine / Visiting Professor
New Haven, Connecticut.
June 05, 2015
- 2015 Pulmonary Hypertension: Classification and Diagnostic Approach
First National Pulmonary Hypertension Summit
Tabriz, Iran.
June 11, 2015
- 2015 Pulmonary Hypertension in COPD
First National Pulmonary Hypertension Summit
Tabriz, Iran.
June 12, 2015
- 2015 Medical Applications of Exhaled Breath Analysis: State of the Art
Princeton College of Engineering
Princeton, New Jersey. June 15, 2015
- 2015 SIFT-MS and Breath-Based Diagnosis
SIFT user meeting
The Ohio State University
Columbus, Ohio. July 8, 2015
- 2015 Novel Methods in Pulmonary Hypertension Phenotyping
The American Thoracic Society Grover Conference
Lost Valley Ranch, Sedalia, CO
September 12, 2015
- 2015 Conflicted About Conflicts of Interest (COIs): When IRBs Don't Know About or Disagree with
Investigator COI Management Plans (Advanced Forum for IRB Professionals Track)
Public Responsibility in Medicine and Research (PRIM&R) Advancing Ethical Research (AER)
Conference
Boston, Massachusetts. November 14, 2015
- 2016 Pulmonary Hypertension Summit 2016: Translating Discoveries into Patient Care
Conference Chair. **Cleveland, Ohio; Weston, Florida; and Abu-Dhabi**

(First Cleveland Clinic International Conference to be held simultaneously in 3 location)

March 18-19, 2016

- 2016 Forum on Conflict of Interest (FOCI) in Academe Annual Conference
American Association of Medical Colleges (AAMC)
Moderator: Industry Experience in the Wake of the Sunshine Act
Facilitator: Conflicts of Interest in clinical Care
Facilitator: The Sunshine Act
Seattle, Washington. April 8, 2016
- 2016 Invited Speaker: Innovations in Academic-Industrial Collaborations: Reaching for Pioneering
Funding Mechanism
Translational Science 2016 Annual conference
Association for Clinical and Translational Science
Washington, DC. April 13-15 2016
- 2016 Managing Conflict of Interest: How to Interact with Industry
Midwest Vascular Surgical Society Meeting
Columbus OH. September 9, 2016
- 2016 Exhaled breath analysis in lung and systemic disease: from molecules to smell-prints and
breath-prints
International Association of Breath Research Summit
Zurich, Switzerland. September 14-16, 2016
- 2016 Pulmonary Hypertension: Classification, and Evaluation
Lung India Foundation (LIFE) Freedom to Breathe 4 City Tour
Mumbai, Hyderabad, Chennai, New Delhi; India.
September 18-27, 2016
- 2016 Pulmonary Hypertension: Treatment
Lung India Foundation (LIFE) Freedom to Breathe 4 City Tour
Mumbai, Hyderabad, Chennai, New Delhi; India.
September 18-27, 2016
- 2016 Acute Pulmonary Embolism: Approach to Risk Assessment
Lung India Foundation (LIFE) Freedom to Breathe 4 City Tour
Mumbai, Hyderabad, Chennai, New Delhi; India.
September 18-27, 2016
- 2016 Chronic Thromboembolic Pulmonary Hypertension (CTEPH)
Lung India Foundation (LIFE) Freedom to Breathe 4 City Tour
Mumbai, Hyderabad, Chennai, New Delhi; India.
September 18-27, 2016

- 2016 Newer Anticoagulants
Lung India Foundation (LIFE) Freedom to Breathe 4 City Tour
Mumbai, Hyderabad, Chennai, New Delhi; India.
September 18-27, 2016
- 2017** Session chair: Inflammation and immunity in PAH
11th Annual PVRI World Congress
Miami Florida
January 26-29, 2017
- 2017 Breath Metabolomics in Lung and Systemic Disease
Pittcon 2017
Chicago, IL, March 5-9, 2017
- 2017 Breakout Session 1.1: Conflict of Commitment
Breakout Session 2.2: Competing Pressure of Entrepreneurship and Compliance
Peer Learning Session 4.3: COI in Clinical Care
Forum on Conflict on Interest in Academe (FOCI)
Association of American Medical Colleges (AAMC)
New Orleans, LA. April 6-7, 2017
- 2017 OFFICIAL ATS DOCUMENT DEVELOPMENT WORKSHOP
Types of ATS documents
American Thoracic Society (ATS) International Conference
Washington DC, May 19, 2017
- 2017 GUIDELINE METHODOLOGY TRAINING PROGRAM INFORMATION SESSION
Clinical Practice Guidelines
American Thoracic Society (ATS) International Conference
Washington DC, May 22, 2017
- 2017 OFFICIAL ATS DOCUMENTS: HOW TO GET INVOLVED
Meet the professor Seminar
American Thoracic Society (ATS) International Conference
Washington DC, May 23, 2017
- 2017 ATS CLINICAL PRACTICE GUIDELINES: CLINICAL PRACTICE ON THE CUTTING EDGE
Session co-chair
American Thoracic Society (ATS) International Conference
Washington DC, May 24, 2017
- 2017 Leadership Forum
Achieving Diversity, Inclusion, and Equity in Academic Medicine

Association of American Medical Colleges (AAMC)
Washington DC, June 13-14, 2017

- 2017 Pathobiologic Basis of Current PH therapy
Pulmonary Grand Rounds / Visiting Professor
University of California Davis
Sacramento, CA, June 15, 2017
- 2017 Mechanisms of Metabolic Dysregulation in Pulmonary Hypertension
Keynote speaker
University of California Davis Lung Research Day
Davis, CA, June 16, 2017
- 2018** Clinical Immersion Training Program
Clinical Training Director
Grand Hyatt Hotel
San Diego, CA, January 23, 2018
- 2018 Is Pulmonary Hypertension a Metabolic Disease?
Visiting Professor
Augusta University
Augusta, GA, January 26, 2018
- 2018 Health Science Research: Current Trends and future directions
Visiting Professor
Texas A&M Health Science Center
College Station, TX, January 31, 2018
- 2018 Forum on Conflict on Interest in Academe (FOCI)
Association of American Medical Colleges (AAMC)
Austin, TX. March 21-23, 2018
- 2018 OFFICIAL ATS DOCUMENT DEVELOPMENT WORKSHOP
Types of ATS documents
American Thoracic Society (ATS) International Conference
San Diego, May 18, 2018
- 2018 OFFICIAL ATS DOCUMENTS: HOW TO GET INVOLVED
Meet the professor Seminar
American Thoracic Society (ATS) International Conference
San Diego, May 22, 2018
- 2018 ATS CLINICAL PRACTICE GUIDELINES: CLINICAL PRACTICE ON THE CUTTING EDGE
Session co-chair

American Thoracic Society (ATS) International Conference
San Diego, May 22, 2018

- 2019** AAMC Symposium on Conflicts of Interest and Journal Disclosures
Association of American Medical Colleges (AAMC)
Washington, DC. February 12, 2019

- 2019 Forum on Conflict on Interest in Academe (FOCI)
Association of American Medical Colleges (AAMC)
Philadelphia, PA. March 27-29, 2019

- 2019 External Examiner
University of Jordan Faculty of Medicine, Amman, Jordan
May 10-15, 2019

- 2019 Visiting professor
Porto-pulmonary Hypertension
University of Jordan Faculty of Medicine, Amman, Jordan
May 13, 2019

- 2019 ATS CLINICAL PRACTICE GUIDELINES: CLINICAL PRACTICE ON THE CUTTING EDGE
Session co-chair
American Thoracic Society (ATS) International Conference
Dallas, TX, May 21, 2019

- 2019 Leadership Forum
Reaffirming Our Commitment to Ending Gender Harassment in Academic Medicine
Association of American Medical Colleges (AAMC)
Washington DC, June 19, 2019

- 2019 White House Joint Commission on Research Environment (JCORE) Summit
Eisenhower Executive Office Building
1650 Pennsylvania Ave NW,
Washington, DC, November 5, 2019

- 2019 Association of American Medical Colleges (AAMC) Annual Meeting: Learn Serve Lead 2019
- Group of Chairs Meeting
- Group on Research Advancement and Development (GRAND)
Phoenix, Arizona, Nov 08 - 12, 2019

- 2019 Exhaled breath analysis in health and disease
Indian Young Professional Organization (YPO)
Mumbai, India, November 18, 2019

- 2019 Joint meeting of Indian Chest Society and Indian Academy of Pulmonary and Critical Care Medicine, National Pulmonary Conference (NAPCON)
Pulmonary Hypertension: evaluation and management
Exhaled nitric oxide (FeNO) in managing Asthma
Cochin (Kochi), Kerala, India, November 21-24
- 2021 Pulmonary Hypertension Phenotypes
Saudi association of Pulmonary Hypertension (SAPH) Virtual meeting
Virtual
February 12, 2021
- 2021 Beryllium Disease Due to Concrete Dust
CHEST Journal Club
Virtual
March 25, 2021
- 2021 Chair, Chairs Welcome and AAMC Leadership Plenary
Forum on Conflict of Interest in Academe (FOCI-A)
Association of the American Medical Colleges (AAMC)
Virtual
April 24, 2021
- 2021 Moderator, Managing COI in Clinical Care
Forum on Conflict of Interest in Academe (FOCI-A)
Association of the American Medical Colleges (AAMC)
Virtual
April 25, 2021
- 2021 Chair, Closing Plenary: A Conversation with NIH on Disclosure and Undue Foreign Influence
Forum on Conflict of Interest in Academe (FOCI-A)
Association of the American Medical Colleges (AAMC)
Virtual
April 26, 2021
- 2021 Pulmonary Hypertension Phenotypes
4th International Pulmonary Vascular Diseases Summit
Iranian Pulmonary Hypertension Society
Virtual
June 24, 2021
- 2021 Chair: COVID Preparedness
Critical Care Conference – Views from the SARS-CoV-2 Frontline
Cleveland Clinic London, London-UK | Virtual
June 24, 2021

- 2021 Keynote Speaker
Response to the COVID-19 Pandemic: Lessons from a large US health system
Lebanese Pulmonary Society (LPS) Annual Meeting
Beirut, Lebanon | Virtual
October 9, 2021
- 2022 Chair: Case Studies in Conflict of interest (COI) in Clinical Care
Forum on Conflict of Interest in Academe (FOCI-A)
Association of the American Medical Colleges (AAMC)
Atlanta, GA
April 27-29, 2021
- 2022 Fraction of Exhaled Nitric Oxide (FeNO) Use in Asthma
American Thoracic Society (ATS) International Conference
San Francisco, CA
May 15, 2022
- 2022 Breath Analysis to Identify Malnutrition in Clinical Settings
Session 3: Measuring Malnutrition: Methods and Tools
NIH Malnutrition Workshop
September 13, 2022

Invited Lectures / Talks / Presentations (Local and Regional):

- 1994** The Cleveland Clinic Foundation Department of Pulmonary and Critical Care Medicine Second Annual Research Day.
- Speaker: BiPAP as "salvage" for CPAP failures in obstructive sleep apnea.
Visiting Professor: Richard A. Matthay, M.D. September 1994.
- 1994 The Cleveland Clinic Foundation
Department of Pulmonary and Critical Care Medicine Conference
Bronchoscopy after an acute MI, October 1994
- 1995** The Cleveland Clinic 15th Annual Research Day. Inhaled steroids and beta-agonists inhibit oxidant production by airway cells in vivo. September 1995
- 1996** The Cleveland Clinic Foundation Department of Pulmonary and Critical Care Medicine Fourth Annual Research Day.
Speaker: Regulation of inducible nitric oxide synthase gene expression in human airway epithelium, Visiting Professor: Michael Matthay, MD September 1996
- 1997** The Cleveland Clinic Foundation Department of Pulmonary and Critical Care Medicine Fifth Annual Research and Alumni Day.
- Speaker: Inspired oxygen regulates nitric oxide production in the lungs.

Visiting Professor: Jack A. Elias, M.D. October 10, 1997.

- 1997 The Cleveland Clinic Respiratory Therapy Department
The Cleveland Clinic Foundation
- Speaker: Nitric oxide in lung physiology and pathology. October 23, 1997
- 1998 Department of Pulmonary and Critical Care Medicine Conference
The Cleveland Clinic Foundation
- Speaker: Drug-induced pulmonary disease. March 1998.
- 1998 Department of Pulmonary and Critical Care Medicine Conference
The Cleveland Clinic Foundation
- Speaker: Nitric oxide in the Lungs. May 1998.
- 1999 Department of Pulmonary and Critical Care Medicine Conference
The Cleveland Clinic Foundation
- Speaker: Nitric Oxide: Physiology and Clinical Correlates. May 17, 1999
- 1999 Department of Pulmonary and Critical Care Medicine Conference
The Cleveland Clinic Foundation
- Speaker: Nitric Oxide: Clinical Applications. June 22, 1999
- 1999 The Cleveland Clinic Respiratory Therapy Department
The Cleveland Clinic Foundation
Speaker: Pleural effusion. August 12, 1999
- 1999 The Cleveland Clinic Foundation
Section of Allergy and Immunology
- Speaker: Nitric oxide in asthma. August 27, 1999.
- 1999 The Cleveland Clinic Foundation Department of Pulmonary and Critical Care Medicine Sixth
Annual Research and Alumni Day. Visiting Professor: Michael Holtzman, M.D.
Speaker: Mechanisms of decreased nitric oxide in primary pulmonary hypertension. October 1,
1999
- 1999 Department of Pulmonary and Critical Care Medicine Conference
The Cleveland Clinic Foundation
- Speaker: Clinical and Laboratory methods used in studying the role of nitric oxide in lung
biology. November 15, 1999
- 2000 Beryllium and beryllium-induced lung disease.
The Cleveland Clinic Foundation, Department of Pulmonary and Critical Care Medicine
Conference
March 13, 2000

- 2000 Chronic Beryllium Disease
The Cleveland Clinic Foundation, Clinical Immunology Laboratory
April 19, 2000
- 2000 Nitric oxide in lung health and disease
The Cleveland Clinic Foundation, Internal Medicine Noon Conference
May 17, 2000
- 2000 Beryllium and beryllium-induced lung disease.
The Cleveland Clinic Foundation, Internal Medicine Noon Conference
June 12, 2000; Also December 13, 2001
- 2000 Drug-induced pulmonary disease
The Cleveland Clinic Foundation, Internal Medicine Noon Conference
November 8, 2000
- 2000 Therapeutic applications of inhaled NO.
The Cleveland Clinic Foundation, Internal Medicine Noon Conference
December 5, 2000
- 2000 Exhaled Carbon Monoxide in Airway Disease
The Cleveland Clinic Foundation, Seventh Annual Research and Alumni Day
Visiting Professor: Augustine M.K. Choi, M.D., December 15, 2000
- 2001** Nitric Oxide in Lung Health and Disease
The Cleveland Clinic Foundation, Internal Medicine Grand Rounds. April 5, 2001.
- 2001 Inhaled Nitric Oxide in ARDS
The Cleveland Clinic Foundation, Department of Pulmonary and Critical Care Medicine
Conference, May 7, 2001
- 2001 Drug-induced pulmonary disease
The Cleveland Clinic Foundation, Department of Pulmonary and Critical Care Medicine
Conference, September 2001
- 2001 Nitric Oxide Chemistry in the Asthmatic Airway
(Session Moderator and Speaker)
The Cleveland Clinic Foundation Eighth Annual Research and Alumni Day
Visiting Professor: Robert Mason, M.D., November 30, 2001
- 2002** Opportunities in Pulmonary Research
The Cleveland Clinic Foundation, Pulmonary and Critical Care Medicine Conference, August 27,
2002

- 2002 Effect of smoking on the progression to chronic beryllium disease in sensitized individuals
(Session Moderator and Speaker)
The Cleveland Clinic Foundation Ninth Annual Research and Alumni Day
Visiting Professor: Lee Newman, M.D., December 13, 2002.
- 2003** Beryllium and beryllium-induced lung disease.
The Cleveland Clinic Foundation, Internal Medicine Noon Conference
January 16, 2003
- 2003 Nitric Oxide in asthma
The Cleveland Clinic Section of Allergy and Immunology, February 5, 2003
- 2003 Drug-induced pulmonary disease
The Cleveland Clinic Foundation, Department of Pulmonary and Critical Care Medicine
Conference, July 2003
- 2003 The Effect of Hypoxia on Nitric Oxide Production in the Lung,
The Cleveland Clinic Foundation Tenth Annual Research and Alumni Day
Visiting Professor: John West, M.D., December 5, 2003
- 2004** The Pleura
Medical Student Seminar, Cleveland Clinic Lerner College of Medicine of
Case Western Reserve University, November 12, 2004
- 2004 PAH: Disease Mechanisms in Pathophysiology
The first Annual Symposium on Pulmonary Arterial Hypertension
The Cleveland Clinic Foundation, November 13, 2004
- 2005** The Pathophysiology of Pulmonary Hypertension
The Cleveland Clinic Foundation, Department of Pulmonary, Allergy and Critical Care Medicine
Conference, November 2005
- 2005 PAH: Pathophysiologic basis of therapy
The second Annual Symposium on Pulmonary Arterial Hypertension
The Cleveland Clinic Foundation
Symposium Co-director, November 19, 2005
- 2005 Inhaled Nitric Oxide in ARDS
The Cleveland Clinic Foundation, Department of Pulmonary and Critical Care Medicine
Conference, December 2005
- 2006** Basic Pathophysiology of Pulmonary Hypertension
Medical Student Seminar part of Clinical Correlation
Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, May 2006

- 2006 The Pulmonary Circulation and Nitric Oxide: Process of Discovery talk
Cleveland Clinic Lerner College of Medicine of CWRU, June 2006
- 2006 Opportunities in Pulmonary Research
The Cleveland Clinic Foundation, Department of Pulmonary and Critical Care Medicine
Conference, September 25, 2006
- 2007** Pulmonary Hypertension Update
Cleveland Clinic Internal Medicine noon conference, December 12, 2007
- 2007 Introduction to Pulmonary Hypertension
Cleveland Clinic Department of Pulmonary and Critical Care Medicine Conference, July 24, 2007
- 2007 Pathobiologic Basis of Pulmonary Hypertension Therapy
Grand Rounds: Section of Vascular Medicine, Cleveland Clinic
September 12, 2007
- 2007 Keynote speaker: Pulmonary hypertension walk for the cure: from wishful thinking to hopeful
optimism!!
Cleveland Area Pulmonary Hypertension Support Group (CAPHS)
Let's Walk and Roll: A Fun Walk for a Cure and Awareness of Pulmonary Hypertension,
September 15, 2007
- 2007 Opportunities in Pulmonary Hypertension Research, Department of Pulmonary and Critical Care
Medicine Conference, Cleveland Clinic, September 24, 2007
- 2007 Pulmonary Hypertension: evaluation and management
Cleveland Clinic, Internal Medicine noon conference, December 12, 2007
- 2007 Pleural effusion: a practical approach to valuation and management
Cleveland Clinic, Internal Medicine noon conference, December 20, 2007
- 2008** Biomarkers
Cleveland Clinic, Graduate Program in Molecular Medicine, May 12, 2008
- 2008 The PHuture of pulmonary hypertension therapy: scientific discoveries that will change the way
we diagnose treat and monitor PH
Respiratory Institute, Pulmonary Medicine and Thoracic Surgery Update
May 22, 2008
- 2008 Beryllium and beryllium-induced lung disease.
The Cleveland Clinic Foundation, Department of Pulmonary and Critical Care Medicine
Conference, June 9, 2008

- 2008 The PHuture of pulmonary hypertension
Cleveland Area Pulmonary Hypertension Support (CAPHS) Group, July 12, 2008
- 2008 Pulmonary Hypertension: evaluation and management
Cleveland Clinic, General Internal Medicine Grand rounds, July 30, 2008
- 2008 Collagen vascular-interstitial lung disease / pulmonary hypertension: Which to treat?
Ohio thoracic Society (OTS), Columbus, OH, September 13, 2008
- 2008 Pulmonary Hypertension: Evaluation and Management
Vascular Medicine Grand Rounds, Cleveland Clinic
October 29, 2008
- 2008 Pulmonary Hypertension
Internal Medicine Grand Rounds, Cleveland Clinic, October 30, 2008
- 2008 Pathophysiology of Pulmonary Hypertension
Department of Pulmonary and Critical Care Medicine Conference
Cleveland Clinic, November 17, 2008
- 2008 Pulmonary Hypertension: evaluation and management
Cleveland Clinic, Internal Medicine noon conference, November 18, 2008
- 2008 Pulmonary Hypertension
Huron Hospital Grand Rounds, January 26, 2009
- 2009** Beryllium-induced lung disease.
Cleveland Clinic, Respiratory Institute Conference, February 23, 2009
- 2009 Keynote Speaker: American Lung Association 2009 Asthma Walk Kickoff
House of Blues, Cleveland, OH, March 10, 2009
- 2009 COPD Education Day Cleveland Clinic Respiratory Institute
Speaker: PH in COPD, September 23, 2009
- 2009 Pulmonary Hypertension Education Day Cleveland Clinic Respiratory Institute
- Co-director and Speaker: PH Epidemiology and Pathobiology
November 18, 2009
- 2010** Asthma Education Day, Cleveland Clinic Respiratory Institute
- Speaker: nitric oxide in asthma, January 20, 2010
- 2010 Chronic Beryllium Disease
Cleveland Clinic, Internal Medicine Noon Conference, January 26, 2010

- 2010 Clinical Applications of Exhaled Breath Analysis
Cleveland Clinic Internal Medicine Grand Rounds, February 11, 2010
- 2010 Exhaled Breath Analysis
Cleveland Clinic Infectious Disease Research Conference, February 26, 2010
- 2010 Exhaled Breath Analysis: Physics and chemistry meet medicine
Cleveland State University College of Sciences, Cleveland, OH, February 26, 2010
- 2010 Exhaled Breath Analysis: from bench, to bedside, to clinic, and into the home
Invacare, April 2010
- 2010 Clinical Utility of Exhaled nitric oxide (F_ENO)
Lung Summit 2010, Cleveland Clinic, August 20, 2010
- 2010 Exhaled Breath: A Rich Source of Biomarkers in Biology and Medicine
Human Performance Consortium, Case Western Reserve University
Cleveland OH, September 2010
- 2010 Biomarkers in Pulmonary Hypertension
Cleveland Clinic Respiratory Institute Research Day
Cleveland Clinic, December 3, 2010
- 2011** NO more waiting to exhale: Nitric oxide and other biomarkers in breath Department of
Pathobiology, Lerner Research Institute
Cleveland Clinic, January 4, 2011
- 2011 Middle East Cultural Competence: Patient Care and Working Relationship
Course Director, Cleveland Clinic Academy
January 19, 2011, December 8, 2011, December 2012
- 2011 Catching your breath in the 21st century: Analysis of exhaled volatiles in human health and
disease
Section of Heart Failure, Department of Cardiovascular Medicine, Heart and Vascular Institute,
Cleveland Clinic, January 27, 2011
- 2011 Pulmonary Hypertension: evaluation and management
Cleveland Clinic, Internal Medicine noon conference, February 14, 2011
- 2011 Exhaled Breath Analysis
Section of Pediatric Gastroenterology, Pediatric Institute, Cleveland Clinic
April 20, 2011

- 2011 Diversity at the Cleveland Clinic: challenges of a major health care organization in building diversity into the workplace
Chief Resident Retreat, Cleveland Clinic, July 27, 2011, (**Also 2012 and 2013**)
- 2011 Pulmonary Hypertension
Cleveland Clinic, Internal Medicine Resident Education Day, September 2, 2011
- 2011 Chronic Beryllium Disease
Cleveland Clinic, Pulmonary Fellows Education Day, September 7, 2011
- 2011 Keynote speaker: Pulmonary Hypertension: past, present, and PHuture
Cleveland Area Pulmonary Hypertension Support Group (CAPHS)
September 10, 2011
- 2012** Nitric oxide and other biomarkers in exhaled breath
Showcase Seminar, Lerner Research Institute, Cleveland Clinic, January 18, 2012
- 2012 Pulmonary Hypertension Education Day, Cleveland Clinic Respiratory Institute
- Co-director - Speaker: Pathobiologic basis of therapy
May 09, 2012
- 2012 Lung Summit 2012, Cleveland Clinic, Cleveland, OH, November 9, 2012
- Session Moderator: Asthma
- Speaker: Utility of exhaled NO (F_ENO) in routine asthma care
- 2013** Diversity at the Cleveland Clinic: Focus on the Middle East
Cultural Diversity Fair, Cleveland Clinic, April 26, 2013
- 2013 Pulmonary Hypertension in kidney disease
Cleveland Clinic, Nephrology Grand Rounds, April 29, 2013
- 2013 Conflict of interest: Training Workshop
Cleveland Clinic, December 17, 2013, January 6, 2014
- 2013 Conflict of interest: Investigator Education
Cleveland Clinic, December 11, 2013
- 2013 Conflict of interest: Researcher Orientation
Cleveland Clinic, December 13, 2013
- 2014** Research Misconduct Overview
Board of Governors: January 22, 2014
Lerner Research Institute Leadership committee: April 18, 2014
Research Conduct and Quality Committee: April 21, 2014

- Taussig Cancer Institute: October 22, 2014
Cleveland Clinic
- 2014 Sensor Development for Breath Analysis: opportunities and challenges
Biosensors and Analytics Conference, Lorain, Ohio, April 23rd, 2014
- 2014 The Sunshine Act: Here Comes the Sun...
Radiology Quality Committee (RQC): April 1, 2014
Clinical Research Roundtable: May 13, 2014
COI office Roundtable: June 13, 2014
COI office Roundtable: June 14, 2014
Cleveland Clinic
- 2014 Conflict of Interest: Update
Clinical Research Roundtable: May 13, 2014
Imaging Institute: August 18, 2014
Pediatric Institute: August 19, 2014
Taussig Cancer Institute: October 22, 2014
Cleveland Clinic
- 2014 Mentored Career Development Program (KL2) Scholar Orientation
Cleveland Clinic
June 6, 2014
- 2014 Mentored Career Development Program (KL2) Informational Sessions
Cleveland Clinic: September 9, 2014
University Hospitals Case Medical Center: September 11, 2014
Metro Health Medical Center
September 17, 2014
- 2015** Cleveland Clinic Abu Dhabi: Update
Cleveland Clinic Board of Governors (BOG) / Medical Executive Committee (MEC)
March 11, 2015
- 2015 Conflict of Interest in Education
Cleveland Clinic Graduate Medical Education Council (GMEC)
March 11, 2015
- 2015 KL2 program Re-design
Cleveland Translational Science Collaborative (CTSC)
May 27, 2015
- 2015 Nitric Oxide and Other Biomarkers in Exhaled Breath: from Bench to Bedside
Process of Discovery

- Cleveland Clinic Molecular Medicine Program
June 18, 2015
- 2015 Conflict of Interest in Medicine and Research
Molecular Medicine Program
Cleveland Clinic
June 26, 2015
- 2015 Pulmonary Vascular Disease Center of Excellence: Goals and progress
Lerner Research Institute (LRI) strategic Research Council
July 24, 2015
- 2015 Diversity at the Cleveland Clinic
Chief Resident Leadership Workshop
August 4, 2015
- 2015 Exhaled Breath Analysis: The Future of Medical Testing
Cleveland Clinic Internal Medicine Grand Rounds
August 27, 2015
- 2015 NO More Waiting to Exhale: Nitric Oxide and Other Biomarkers in Exhaled Breath
Advanced Research in Medicine Seminar
Cleveland Clinic Lerner College of Medicine (CCLCM)
October 23, 2015
- 2015 Redesigning the mentored career development (KL2) program
Case western Reserve University CTSC External advisory Board
November 22, 2015
- 2015 Exhaled Breath Analysis: The Future of Medical Testing
Grand Rounds in Pulmonary Science; Sleep Medicine and Pulmonary Case Conference
Division of Pulmonary, Critical Care and Sleep Medicine
Case Western Reserve University
December 22, 2015
- 2016** Exhaled Breath Analysis: The Future of Medical Testing
Internal Medicine Grand Rounds / Visiting Professor
Metro Health Medical Center
January 07, 2016
- 2016 Pulmonary Hypertension: overview of evaluation and management
Pulmonary Medicine Grand Rounds / visiting Professor
Metro Health Medical Center
January 08, 2016

- 2016 Conflict of Interest
Leading in Healthcare
Cleveland Clinic
May 13, 2016
- 2016 Conflict of Interest in Medicine and Research
Molecular Medicine Program
Cleveland Clinic
July 15, 2016
- 2016 Cultural Competence
Chief Residents' Leadership Workshop
Cleveland Clinic
August 9, 2016
- 2017** Current Therapies for WHO Group 1 PH
2017 Cleveland Clinic Fellow's Education Day
Pulmonary Vascular Disease
Cleveland Clinic
February 8, 2017
- 2017 Cultural Diversity at the Cleveland Clinic
Chief Residents' Leadership Workshop
Cleveland Clinic
August 10, 2017
- 2018** Respiratory Institutes Accomplishments
Respiratory Institute Town Hall
Cleveland Clinic
June 18, 2018
- 2018 Conflict of Interest in Medicine and Research
Molecular Medicine Program, Cleveland Clinic
July 12, 2018
- 2018 Cultural Competence in the Health Care Organization
Chief Residents' Leadership Workshop
Cleveland Clinic, August 02, 2018
- 2018 Conflict of Interest in Medicine
Imaging Institute
Cleveland Clinic
August 24, 2018

- 2018 Improving patient access in a capacity restrained system
Respiratory Institute Town Hall
Cleveland Clinic
August 24, 2018
- 2018 From Good to Great: a strategic vision for an integrated ONE Respiratory Institute
Cleveland Clinic
August 31, 2018
- 2018 Respiratory Institute Update
Cleveland Clinic Alumni Board of Directors
Cleveland Clinic
September 14, 2018
- 2019** The Future of the Respiratory Institute: a vision for ONE
Respiratory Institute Town Hall
Cleveland Clinic
January 14, 2019
- 2019 Respiratory Institute Annual Professional Review
Cleveland Clinic Health System Board of Governors
Cleveland Clinic
May 6, 2019
- 2019 State of the Respiratory Institute
Respiratory Institute Town Hall
Cleveland Clinic
June 4, 2019
- 2020** Respiratory Institute Strategic Retreat
Cleveland Clinic
February 1, 2020
- 2020 COVID-19 Preparedness
Cleveland Clinic Health System Executive Team
Cleveland Clinic
March 28, 2020
- 2020 COVID-19 Preparedness
Cleveland Clinic Health System Staff Meeting
Cleveland Clinic
March 28, 2020

- 2020 COVID-19 Critical Care Outcomes
Cleveland Clinic Health System Staff Meeting
Cleveland Clinic
May 6, 2020
- 2020 Respiratory Institute year in review / COVID-19 Response and Outcomes
Cleveland Clinic Health System Board of Governors
Cleveland Clinic
May 21, 2020
- 2020 State of the Respiratory Institute
Respiratory Institute Town Hall
Cleveland Clinic
June 9, 2020
- 2020 Capital spending consideration in response to the COVID-19 pandemic
Cleveland Clinic Health System Executive Team
Cleveland Clinic
June 16, 2020
- 2020 Launching the Minority / Multicultural Lung Health Center (MCLHC)
Respiratory Institute Town Hall
Cleveland Clinic
July 8, 2020
- 2020 Presidential Debate: Preparation during a pandemic
Tabletop exercise: Command center and crisis response team
Cleveland Clinic
September 14, 2020
- 2020 EMERGENCY WORKSHOP: Cyber-attacks and Ransom-ware Preparedness
Command center and crisis response team
Cleveland Clinic
November 11, 2020
- 2020 Respiratory Institute Overview
Human Resources
Cleveland Clinic
November 17, 2020
- 2021** How to build high functioning teams
Quality in Leadership (QuIL) workshop
Cleveland Clinic
January 21, 2021

- 2021 Capital spending plans for a COVID-19 recovery
Cleveland Clinic Health System Executive Team
Cleveland Clinic
March 23, 2021
- 2021 Cultural Competence in Healthcare
Chief Resident and Chief Fellow Workshop
Cleveland Clinic
March 30, 2021
- 2021 Respiratory Institute year in review: challenges and opportunities
Cleveland Clinic Health System Board of Governors
Cleveland Clinic
May 26, 2021
- 2021 Conflict of Interest in Medicine and Research
Molecular Medicine Program
Cleveland Clinic
June 9, 2015
- 2021 Conflict of Interest in Clinical Practice and Research
Imaging Institute Town Hall
Cleveland Clinic
June 9, 2015
- 2021 State of the Respiratory Institute
Respiratory Institute Town Hall
Cleveland Clinic
June 11, 2021
- 2021 Pulmonary Hypertension as a metabolic Disease
Inaugural Keynote Lecture
Respiratory Institute Scientific Exchange (RISE)
Cleveland Clinic
August 13, 2021
- 2021 The Respiratory Institute as a team of highly functioning teams: The Value of Highly
Subspecialized Destination Clinical Programs / Centers of Excellence
Cleveland Clinic
August 30, 2021
- 2022** Cultural Competency and High Performance Teams
Anesthesia Institute , May 25, 2022

- 2022 Introduction to TIMELEss: Kick off
Team-based Inter-professional Multidisciplinary Education (in) Leadership Essentials (TIMELEss)
Respiratory Institute, Cleveland Clinic
July 12, 2022
- 2022 Cultural Competence in Healthcare
Chief Resident and Chief Fellow Workshop
Cleveland Clinic
July 28, 2022
- 2022 Building and Leading High Functioning Teams
Team-based Inter-professional Multidisciplinary Education (in) Leadership Essentials (TIMELEss)
Respiratory Institute, Cleveland Clinic
October 12, 2022
- 2023** Mid-program retreat and looking forward
Team-based Inter-professional Multidisciplinary Education (in) Leadership Essentials (TIMELEss)
Respiratory Institute, Cleveland Clinic
January 10, 2022
- 2023 New Integrated Hospital Care Institute Leadership Retreat
Cleveland Clinic
February 4, 2023

Research support and Projects:**A. Ongoing Research Support**

1 T32 HL155005-01A1 (Dweik)

07/01/2021-06/30/2026

NIH/NHLBI

Supporting Multidisciplinary Achievement in Respiratory Research Training (SMARRT)

The main goals of this project are: 1) to provide postdoctoral (MD, PhD, MD/PhD) trainees who are engaged in pulmonary, allergy or critical care medicine and research with multidisciplinary didactic training, coupled to a team mentored research experience, 2) to enhance the ability of trainees to work as part of an integrated, multidisciplinary team by developing a knowledge base and skills in research methods, communication skills, professionalism, the ethical conduct of research and rigorous analysis of reproducible findings, and 3) to recruit, retain and accelerate the independent career development of a pool of young investigators with the multidisciplinary skills necessary for an independent research career in basic, clinical, translational or population health research.

Role: Principal Investigator

P01 HL108800 (Loyd and Hemnes)

09/15/2017-06/30/2022

NIH/NHLBI

Hormonal, Metabolic, and Signaling Interactions in PAH

Our long term studies indicate that altered estrogen signaling, along with defects in intracellular trafficking and insulin resistance, work independently and in concert to drive the vascular dysfunction characteristic of PAH. Our goal is to develop and apply therapies which are directed against these mechanisms central to PAH.

Role: Core Leader, Core B

KL2 TR002547 (Dweik)

05/15/2018 - 04/30/2023

NIH/NCATS

KL2 Mentored Clinical Research Scholar Award Program (Institutional Career Development Core): The KL2 Program supports mentored research career development for clinical investigators who have recently completed professional training and who are commencing basic, translational and/or clinical research. This award is administratively linked to UL1TR0022548 - Clinical and Translational Science Collaborative of Cleveland.

Role: Principal Investigator, KL2 program

Recently completed support:

R01 HL130209 (Dweik)

04/15/2016-02/28/2020

NIH/NHLBI

Mechanisms of metabolic dysregulation in pulmonary hypertension

The goals of the project are to: 1) Determine the mechanistic role of the OGT/O-GlcNAc axis in cell proliferation in IPAH; 2) Investigate the specific molecular regulation of eNOS activity by O-GlcNAc in IPAH pathogenesis; and 3) Establish glucose metabolic dysregulation as a modifiable marker of clinical outcomes in IPAH.

Role: Principal Investigator

P01 HL103453 (Erzurum)

08/02/2011-06/30/2021

NIH/NHLBI

Asthma Inflammation Research (AIR)

The overall objective of this Program Project is to translate our current collaborative and mechanistic research discoveries into innovative clinical approaches.

Role: Co-Investigator, Project 3

P01 HL081064 (Erzurum)

02/15/2015-01/31/2020

NIH/NHLBI

Pathobiology of Asthma

Our overarching goal in the Program is to uncover the fundamental mechanisms by which airway epithelial cells acquire pro-inflammatory functions and airway smooth muscle cells take on a hypercontractile and remodeling phenotype so that we can apply the discoveries to develop more effective and targeted therapies for asthma patients.

R01 HL130307 (Tonelli)

07/01/2016-06/30/2021

NIH/NHLBI

Extrapulmonary Microvascular Dysfunction in Pulmonary Arterial Hypertension

The major goals of this project are to: 1) study the link between the pulmonary and extrapulmonary circulations and identify the mechanisms involved in the extrapulmonary vascular dysfunction in IPAH; and 2) challenge the extrapulmonary microvasculature in patients with IPAH to predict response to therapy.

Role: Co-Investigator

Investigator-Initiated Projects:**2008-**

BREath Analysis and Testing in Human Health

(BREATH) study

2008 - . Cleveland Clinic

Role: Principal Investigator

2007-

Pulmonary Hypertension in the ICU study (PHICUS):

2007 - . Cleveland Clinic

Role: Co-investigator and Mentor (PI Gustavo Heresi)

2006-

Pulmonary Hypertension Universal TissUe REpository (PHUTURE) project

2006 - . Cleveland Clinic

Role: Principal Investigator

2006-

Pulmonary Hypertension Breakthrough Initiative (PHBI)/ Transplant Center

2006 - . Cardiovascular Medical Research and Education Fund (CMREF)

Role: Co-investigator, Member: Protocol Exceptions Committee, (PI: Serpil Erzurum)

2005-

Pulmonary Hypertension Registry, 2005 - Cleveland Clinic, Role: Principal Investigator

2002-

Chronic Beryllium Disease Registry

2002 - . The Cleveland Clinic Foundation

Role: Principal Investigator

Research Grants/Projects (Completed):

2013-15

Actelion: SYMPHONY: A Study of Macitentan in Pulmonary arterial Hypertension to validate the PAH-SYMPACT

2013- A multi-center, open-label, single-arm, Phase 3b study of macitentan in patients with Pulmonary Arterial Hypertension to psychometrically validate the PAH-SYMPACT instrument

Role: Cleveland Clinic Site Co-Investigator

2009-2014

Bayer: CHEST-2 Study

Long-term extension, multi-centre, multi-national study to evaluate the safety and tolerability of oral BAY 63 2521 (1 mg, 1.5 mg, 2 mg, or 2.5 mg tid) in patients with Chronic Thromboembolic Pulmonary Hypertension (CTEPH).

Role: Cleveland Clinic Site Co-Investigator

2009-2014

Bayer: PATENT-2 Study

Long-term extension, multi-centre, multi-national study to evaluate the safety and tolerability of oral BAY 63 2521 (1 mg, 1.5 mg, 2 mg, or 2.5 mg tid) in patients with symptomatic Pulmonary Arterial Hypertension (PAH).

Role: Cleveland Clinic Site Co-Investigator

2010-2014

Six-minute walk test (6MWT), B-type natriuretic peptide (BNP), and nocturnal hypoxia as predictors of pulmonary hypertension (PH) in patients with pulmonary fibrosis

Cleveland Clinic

Role: Co-Investigator

2010-2014

NIH National Heart Lung and Blood Institute & Johns Hopkins University

An Open Label Clinical Trial of Ambrisentan and Tadalafil combination therapy in pulmonary arterial hypertension associated with the scleroderma spectrum of disease (ATPAHSS)

Role: Cleveland Clinic Site Co-Investigator

2011-2013

GeNO LLC: Phiano, A Phase 2, Open-Label, Dose-Escalation Study in Subjects with Pulmonary Arterial Hypertension, (PAH, WHO Group 1) and Pulmonary Hypertension Secondary to Idiopathic Pulmonary Fibrosis, (PH-IPF WHO Group 3) Using Inhaled NITROSyl™

Role: Cleveland Clinic Site Co-Investigator

2013-2014

Bayer: An open-label phase IIIb study of riociguat in patients with in-operable CTEPH, or recurrent or persisting PH after surgical treatment who are not satisfactorily treated and cannot participate in any other CTEPH trial.

Role: Cleveland Clinic Site Co-Investigator

2013-2014

Actelion: MAESTRO

MAcitenan in Eisenmenger Syndrome To Restore exercise capacity

Role: Cleveland Clinic Site Co-Investigator

2010-2013

R21 RR026231 (Wysocki) 7/1/10-6/30/13

NIH

Laser spectroscopic instrumentation for isotopic sensing of biogenic Nitric Oxide

The research proposed in this project will lead to development of a novel laser spectroscopic sensing instrumentation, which will provide unique capabilities of biogenic NO quantification.

Role: Co-investigator

2008-2013

BRCP 08-049 (Dweik) 7/01/08-6/31/13

State of Ohio Third Frontier Program \$3,800,000

Breath Analysis: Targeted Sensor Development and Commercialization for Health Care Diagnostics

State of Ohio Third Frontier Research Commercialization Program (RCP)

Role: Principal Investigator

2006-2012

Cotherix, Actelion 2006 - 2012

Registry to Evaluate Early and Long-term PAH Disease Management (REVEAL)

Role: Cleveland Clinic Site Principal Investigator

2009-2012

Novartis: QTI571A2301 2009- 2012

A 24-week randomized placebo-controlled, double-blind multi-center clinical trial evaluating the efficacy and safety of oral QTI571 as an add-on therapy in the treatment of severe pulmonary arterial hypertension:

Imatinib in Pulmonary arterial hypertension, a Randomized, Efficacy Study (IMPRES)

Role: Cleveland Clinic Site Principal Investigator

2009-2011

Gilead Scholars Program (Heresi) 2009 - 2011

Gilead Sciences, Myeloperoxidase (MPO) in Pulmonary Hypertension

Role: Mentor

2010-2011

NIH: SBIR PA-09-080 – R43/R44 7/01/10-9/30/11

S-nitrosothiol Analyzer for the Clinical Diagnosis of Cardiovascular Disease

Role: Co-investigator. Lead PI: ACBIO - Accord Biomaterials, Inc

2009-2011

Gilead Sciences: GS-US-235-0101

2009- 2011

A Phase 2, Randomized, Double-blind, Placebo-controlled, Multicenter, Dose-ranging Study of Cicletanine in Subjects with Pulmonary Arterial Hypertension.

Role: Cleveland Clinic Site Principal Investigator

2008-2010

AHA 0826095 (Aytekin)

7/01/08-6/30/10

Hyaluronan in Pulmonary Arterial Hypertension

\$34,000

American Heart Association (AHA)-Pulmonary Hypertension Association (PHA)

Role: Mentor

2005-2008

Principal Investigator: Clinical and biological predictors of treatment response in pulmonary hypertension.

2005 - 2012. Cleveland Clinic GCRC

Role: Principal Investigator

2002-2007

5K23 HL068863-06 (Dweik)

07/10/02-06/30/07

NIH

\$663,250

Nitric Oxide/Carbon Monoxide in Pulmonary Hypertension

Role: Principal Investigator

2001-2006

Nitric Oxide and oxidant Production & Reactions in Severe Asthma

National Institutes of Health, R01

7/1/01 – 3/30/06

Principal Investigators: Serpil C. Erzurum, M.D, and Benjamin Gaston, M.D.

Role: Co-Investigator

1999-2007

Exhaled gases in lung disease

10/99 – 3/2007. The Cleveland Clinic Foundation. Role: Principal Investigator

2006-2007

A Microsensor Array for Exercise and Health Monitoring 2/13/06-8/3/07

NASA: NNC06AA11A Role: Principal Investigator

2003-2007

5M01RR018390-04, NIH/NCRR General Clinical Research Center (GCRC) at Cleveland Clinic

(PI Richard Rudick)

05/22/03-03/31/07

Role: Co-Investigator and Assistant Director

2002-2005

Nitric oxide and mucociliary clearance in chronic sinusitis

2002- 2005 CCF RPC. Principal Investigator: Cristine Radojicic, Allergy staff. Role: Mentor

2001-2007

The genetics and cytokine profiles in sarcoidosis and Chronic Beryllium Disease (CBD)

Cleveland Clinic Foundation

9/1/2001- 2007

Principal Investigators: Daniel Culver, M.D. and Barbara Barna, PhD. Role: Co-Investigator

2001-2005

Breath Condensate Measurement in Lung Disease

Cleveland Clinic Foundation

4/1/2001- 2005

Principal Investigator: Roberto Machado, M.D., Role: Mentor

2001-2004

Principal Investigator: Beryllium Clinical Evaluations and BeLPT Tests

The Department of Energy (DOE)

01/01 - 01/04

DE-AC05-76OR000033, RFP-99-47473, PO 12C-79735

1999-2004

National Institutes of Health, R01 HL60917-02

Nitric Oxide Production & Reactions in the Lung

4/1/99 -3/30/04

Principal Investigator: Serpil C. Erzurum, Role: Co-Investigator

1999-2003

The Department of Energy (DOE) Cleveland Clinic Foundation RPC# 5281

Genetic predisposition to chronic beryllium lung disease 4/99 - 12/03

Principal investigators: Cesare Saltini, MD. Role: Principal Investigator at Cleveland Clinic

1998-2000

The Cleveland Clinic Foundation, IRB#2619

7/98 - 10/00

Exhaled nitric oxide in obstructive sleep apnea: effect of short and long term CPAP therapy.

Role: Principal Investigator

1998-2003

The Cleveland Clinic Foundation, RPC#5729: Levels of nitric oxide in patients with primary pulmonary hypertension and normal volunteers. Principal investigator: Francisco Kaneko, MD

Role: Co-Investigator

1997-2000

Mechanisms regulating airway inflammation in asthma utilizing segmental antigen challenge. The Cleveland Clinic Foundation, RPC#5794 \$25,000, Principal investigator: Mani Kavuru, MD

Role: Co-Investigator:

1997-2005

Biochemical efficacy and safety of a new pooled human plasma alpha(1)-antitrypsin, Respitin RPC# 4844,
Principal Investigator: James Stoller, MD
Role: Co-Investigator

1996-1997

A randomized, double-blind, parallel group trial evaluating the safety and efficacy of Salmeterol 50 mcg BID and Fluticasone propionate 100 mcg BID individually and in combination, and placebo in subjects with asthma. Glaxo, Inc., Glaxo protocol No.SFCA3002.
Principal investigator: Mani S Kavuru, MD 8/96 - 8/97
Role: Co-Investigator

1995-1996

A 12-month, open label trial to assess the long-term safety of Salmeterol 50 mcg BID via the Diskus® in adolescent and adult subjects with asthma. Glaxo, Inc., Glaxo protocol No. SLGA 3009, \$90,000, Principal investigator: Mani S Kavuru, MD 5/95 - 6/96
Role: Co-Investigator

1995-1997

Genetic predisposition to chronic beryllium lung disease
The Department of Energy (DOE) 10/95 - 10/97
Cleveland Clinic Foundation RPC# 5281, Principal investigators: Cesare Saltini, MD, and Herbert Wiedemann, MD.
Role: Co-Investigator

1995-1998

The Cleveland Clinic Foundation, RPC# 5232, \$23,007 11/95 - 6/98
The effect of hyperoxia on nitric oxide synthase gene expression in human airway epithelium Role: Principal Investigator

1995-2004

Exhaled nitric oxide in asthma: relationship to exacerbations
The Cleveland Clinic Foundation, RPC# 5254 10/95 - 10/04
Role: Principal Investigator