Curriculum Vitae

**Darrell N. Kotton, MD**

**January 22nd, 2022**

**Center for Regenerative Medicine (CReM) of**

**Boston University and Boston Medical Center**

**dkotton at bu.edu or www.kottonlab.com**

**Academic Training:**

1990-94 M.D. Washington University, St. Louis, MO (Medicine)

1989-90 Berklee College of Music, Boston, MA (Guitar Performance)

1985-89 B.A. University of Pennsylvania, Philadelphia, PA (Psychology)

**Postdoctoral Training:**

2002-2004 Post Doctoral Fellowship, Laboratory of Richard C. Mulligan, PhD, Department of Genetics, Harvard Medical School, Boston, MA

1999-2002 Post Doctoral Fellow, Laboratory of Alan Fine, MD, Pulmonary Center, Boston University School of Medicine (BUSM), Boston, MA

1998-2002 Fellow in Pulmonary and Critical Care Medicine, Boston University School of Medicine (BUSM), Boston, MA

1995-1997 Resident, Internal Medicine, Hospital of the University of Pennsylvania, Philadelphia, PA

1994-1995 Intern, Internal Medicine, Hospital of the University of Pennsylvania

**Academic Appointments:**

2016-current David C. Seldin Professor of Medicine (inaugural), BUSM

2013-current Professor of Medicine, BUSM

2013-current Professor of Pathology and Laboratory Medicine, BUSM

2008 - 2013 Associate Professor of Pathology and Laboratory Medicine, BUSM

2008 - 2013 Associate Professor of Medicine, BUSM

2006-2008 Assistant Professor of Pathology and Laboratory Medicine, BUSM

2004-2008 Assistant Professor of Medicine, BUSM

2002-2004 Instructor of Medicine, BUSM

1998-2002 Teaching Fellow in Medicine, BUSM

1995-1997 Assistant Instructor of Medicine, University of Pennsylvania

**Hospital Appointments:**

2002-current Attending Physician, Pulmonary and Critical Care Medicine, Boston Medical Center, Boston, MA

**Honors:**

2020 Association of American Physicians, Elected Member

2018 Educator of the Year Award, Boston University, Graduate Medical Sciences

2018 American Thoracic Society, Recognition Award for Scientific Accomplishments

2017 Association of American Medical Colleges, Research Resources Sharing Award (inaugural)

2016 David C. Seldin Endowed Professor of Medicine (inaugural)

2014 Robert Dawes Evans Senior Research Mentor Award, Boston Univ. Dept. of Medicine

2013 Alpha-1 Foundation, Researcher of the Year Award.

2010 American Society of Clinical Investigation, Elected Member

2010 Alpha-1 Foundation, Shillelagh Award, Honoring a Researcher whose work most impacts those with alpha-1 antitrypsin deficiency

2007 L. Jack Faling Award for Excellence in Teaching, Boston University Pulmonary Center

2001 Individual National Research Service Award, NIH/NHLBI

2001 American Lung Association Research Fellowship Training Award

2001 Evans Days Research Award, 1st Runner Up, Boston University School of Medicine

2001 Massachusetts Thoracic Society, 1st Place, Science Research Award

1999 Fellow of the Year Award, Boston University Department of Medicine

1997 Penn Pearls Teaching Award, University of Pennsylvania School of Medicine

1990-94 Washington University School of Medicine Class President

1990 Distinguished Student Scholarship Award, a 4-year full tuition scholarship from Washington University School of Medicine

1989 Phi Beta Kappa, University of Pennsylvania

1985 Benjamin Franklin Scholar, University of Pennsylvania Honors Student awardee

**Licenses and Certification:**

2001 Critical Care Medicine, American Board of Internal Medicine, recertification 2021

2000 Pulmonary Medicine, Diplomate, American Board of Internal Medicine, recertification 2012

1998 M.D., Massachusetts License

**Departmental and University Committees:**

2022 Chan-Zuckerberg Boston Biohub Planning Committee member

2021 Member, Search Committee for Chief Scientific Officer, Boston Medical Center

2021 Member, Search Committee for Department of Medicine Chief, BUSM/BMC

2020 Chair, Faculty Search Committee for Center for Regenerative Medicine, BUSM

2018 Chair, Search Committee for Director of the Whitaker Cardiovascular Institute, BUSM

2016-17 Boston University President’s Committee on Basic Life Sciences

2017 Chair, Center for Regenerative Medicine, Faculty Search Committee, BUSM

2015-current Member, Strategic Executive Committee, BU Clinical and Translational Science Institute

2015-2017 Boston University Task Force on University Collaboration with Industry

2015-2018 BUSM Department of Medicine, annual Evans Days Awards Selection Committee

2013-2018 Boston Medical Center, Advancement Committee

2015-2019 BUSM Evans Medical Foundation; Board of Directors

2011-2012 Evans Center, Committee for Integration of Basic, Clinical, and Translational Research

2010 Member, Search Committee for Pulmonary Center Director

2007-2012 BUSM Department of Medicine Animal Imaging Core Committee

2007-2010 BUMC Flow Cytometry Core Facility (FCCF) Advisory Committee

**Major Mentoring Activities (current and past laboratory trainees):**

2021-present Hirofumi Kiyokawa, MD, PhD, Post-doctoral fellow

2021-present Alex Holtz, MD, PhD, Post-doctoral fellow

2021-present PJ Schnorr, MD, Post-doctoral fellow

2019-present Andrea Alber, PhD, Post-doctoral fellow

2020-present Bibek Thapa, Graduate student

2019-present Martin Liang Ma, Graduate student (MD/PhD)

2018-present Ruobing Wang, MD, Post-doctoral fellow and Instructor, Harvard Medical School

2018-present Jessie Huang, PhD, Post-doctoral fellow

2018-present Claire Burgess, Graduate student (PhD)

2017-present Michael Herriges, PhD, Post-doctoral fellow

2016-present Yuliang (Leon) Sun, BS, Graduate Student (MD/PhD)

2016-2020 Kostas Alysandratos, MD, Pulmonary Fellow, currently Assistant Professor of Medicine, BUSM, Boston, MA

2017-2018 Swetha Duraiswamy, undergraduate student BU, currently BU student

2017 Jason Grosz, undergraduate student U. Penn, currently Penn student

2016-2019 John Kennedy, MD, Brigham&Women’s Hosp. Pulmonary Fellow, currently Instructor, Brigham and Women’s Hospital, Boston, MA

2015-2018 Killian Hurley, MD, PhD, Pulmonary Fellow, currently Assistant Professor of Medicine, Royal College of Surgeons in Ireland, Dublin, Ireland

2015-2017 Nicole Ruopp, MD, Pulmonary Fellow, currently Assistant Professor of Medicine, Tufts

2015 Matthew Brown, Undergraduate student, BU, currently lab technician

2014-2015 Anita Kurmann, MD, Post-doctoral fellow, deceased

2014-2016 Sinead Nguyen, Undergraduate student, BU, currently laboratory technician

2013-2017 Hector Marquez, MD, Pulmonary Fellow, currently Assistant Professor of Medicine, BUSM, Boston, MA

2013-2017 Anjali Jacob, BS, MD/PhD Graduate Student, currently pulmonary fellow, UCSF

2013-2017 Katie Benson McCauley, BS, PhD Graduate Student, currently Staff Scientist/PI, Novartis

2013-2019 George Kwong, BS, PhD Graduate Student, currently Industry Scientist, Invicro

2012-2013 Derek Liberti, BS, undergraduate student, BU, currently post-doctoral fellow, U. Penn

2012-2013 Chian Yang, BS, Graduate MA Student, currently industry scientist, Novartis

2012-2017 Mohamed Jamal, DMD, Postdoctoral Fellow, currently Assistant Professor of Endodontics, Dubai, UAE

2011-2017 Maria Serra, PhD, Postdoctoral Fellow, currently Postdoctoral Fellow, Turin, Italy

2010-2015 Finn Hawkins, MD, Pulmonary Fellow, currently Assistant Professor, BUSM

2009-2012 Laertis Ikonomou, PhD, Postdoctoral Fellow, currently Associate Professor, SUNY Buffalo

2008-2010 Aba Somers, MD, Pulmonary Fellow, currently Attending Pulmonologist

2008-2011 Constantina Christodoulou, PhD, PhD Graduate Student, currently Lab Head/Principal Investigator, Novartis, Cambridge, MA

2007-2011 Tyler Longmire, PhD, Graduate Student, currently Staff Scientist/PI, Novartis, Cambridge, MA

2006-2008 Sara Greenhill, MD, Pulmonary Fellow, currently Interventional Pulmonologist

2005-2006 Asha Anandaiah, MD, Medical Resident, currently Instructor, Harvard University

2004-2010 Andrew Wilson, MD, Pulmonary Fellow, currently Associate Professor of Medicine, BUSM, Boston, MA

**High School Student Rotators in the Kotton Laboratory:**

Gabi Horowitz

Jenny Jean

Raphael Deykin

Ezra Pemstein

Daniel Nissenbaum

Gili Schor

Jared Nissenbaum

Gabe Nissenbaum

Sam Orelowitz

Cora Wendlandt

Anne Joseph

Ava Nalavala

**Current Independent Faculty that trained in the Kotton Laboratory**:

Instructors: John Kennedy, MD, MSc, Asha Anandaiah, MD

Assistant Professors: Kostas Alysandratos, PhD, Killian Hurley, MD, PhD, Mohamed Jamal, PhD, Finn Hawkins, MD, Hector Marquez, MD, Nicole F. Ruopp, MD, Ruobing Wang, MD

Associate Professors: Andrew A. Wilson, MD, Laertis Ikonomou, PhD

**Mentored Grant Awards (serving as primary sponsor)**

Alpha-1 Foundation Research Fellowship; Killian Hurley, MD

K08 (NIH/NHLBI Career Training Grant); Andrew Wilson, MD

K08 (NIH/NHLBI Career Training Grant); Ruobing Wang, MD

American Lung Association Fellowship; Andrew Wilson, MD

Alpha-1 Foundation Research Fellowship; Andrew Wilson, MD

American Lung Association Fellowship; Finn Hawkins, MD

Cystic Fibrosis Foundation Fellowship; Finn Hawkins, MD

Flight Attendant Medical Research Institute (FAMRI) Young Clinical Scientist Award; Andrew Wilson, MD

American Association of Endodontics; Mohamed Jamal, DMD

F31 NIH/NHLBI (F31 HL129777) individual NRSA Predoctoral fellowship; Katie Benson

F31 NIH/NHLBI (F31 HL128085) individual NRSA Predoctoral fellowship ; George Kwong

F31 NIH/NHLBI individual NRSA Predoctoral fellowship; Anjali Jacob

F31 NIH/NHLBI individual NRSA Predoctoral fellowship; Claire Burgess

F30 NIH/NHLBI individual NRSA Predoctoral MD/PhD fellowship, Yuliang (Leon) Sun

F32 NIH/NHLBI individual NRSA Postdoctoral fellowship; Michael Herriges, PhD

FastStart Lab Award, Novartis, Yuliang (Leon) Sun

JumpStart NIH/NHLBI Award, Progenitor Cell Translational Consortium, George Kwong

Pulmonary Fibrosis Foundation Fellowship; Kostas Alysandratos, MD, PhD

JumpStart NIH/NHLBI Award, Progenitor Cell Translational Consortium, Liang (Martin) Ma

JumpStart NIH/NHLBI Award, Progenitor Cell Translational Consortium, Claire Burgess

Gilead Scholarship; Ruobing Wang, MD

**Graduate Student Thesis Committees**

PhD Alejandro Balasz, Harvard University

PhD Daniel Fabish, BU School of Dental Medicine

MA Heather Arnold, BU

MA Chian Yang, BU School of Engineering

PhD Jed Mahoney, BU School of Medicine

PhD Juliana Barrios, BU School of Medicine (Committee Chair)

PhD Kelsey Derricks, BU School of Medicine (Committee Chair)

PhD Abby Sarkar, Harvard Medical School

PhD Tim Norman, BU School of Medicine (Committee Chair)

MA Michael A. H. Ferguson, BU School of Engineering

PhD Aditya Mihtal, BU School of Medicine

PhD Chieh Lin, Carnegie Mellon University

PhD Elim Na, BU School of Medicine

PhD Evan Hoffman, Univ of Vermont

PhD Alex Ysasi, BU School of Medicine

PhD Taylor Matte, BU School of Medicine

PhD Jake Le Seur, BU School of Medicine

**Patents**

Title: DIFFERENTIATION OF STEM CELLS INTO THYROID TISSUE

US Patent No. 10,449,221 B2

Kotton/Serra/Hollenberg/Kurmann

Issued: Oct. 22, 2019

Title: ISOLATION OF HUMAN LUNG PROGENITORS DERIVED FROM PLURIPOTENT STEM CELLS

US Patent No. 10,386,368 B2

Kotton/Hawkins

Issued: Aug. 20, 2019

Title:  METHODS AND COMPOSITIONS RELATED TO DIFFERENTIATED LUNG CELLS

U.S. Patent No. 10,975,357 B2

Kotton/Jacob

Issued: April 13, 2021

Title: GENERATION OF AIRWAY EPITHELIAL ORGANOIDS FROM HUMAN PLURIPOTENT STEM CELLS

US Patent No. 10,590,392 B2

Kotton/McCauley/Hawkins

Issued: Mar.17, 2020

Title: GENERATION OF AIRWAY BASAL STEM CELLS FROM HUMAN PLURIPOTENT STEM CELLS

PCT Application No. PCT/US21/18714 – Filed February 19, 2021

Ref. No.: BU-2019-089

Kotton/Hawkins/Barilla/Suzuki/Davis

**Major Administrative Responsibilities:**

2009-current Founding Director, Center for Regenerative Medicine of BU and BMC

2012-current Co-Director, The Alpha-1 Center, Boston Medical Center

2008-2013 Co-Director, BUMC Small Animal Imaging Core Facility, BUSM

2010-2013 ARC Co-Director, Evans Center, Regenerative Medicine ARC, BUSM

2015-current Program Director, TL1 BU Pre/post-doctoral Training Program in Regenerative Medicine

2019-current Program Co-Director, T32 BU Training Program in Pulmonary Biology

2020-current Program Director, R38 PRIMER, Promoting Research for Internal Medicine Residents

**Other Professional Activities:**

**Professional Societies: Memberships, Offices, and Committee Assignments**

2020-current Association of American Physicians

2010-2020 Lifeboat Foundation

2010-current American Society for Clinical Investigation

2006-2009 Webmaster, The Boston University Pulmonary Center Website

2005-current International Society for Stem Cell Research

2002-current Massachusetts Thoracic Society

1998-current American Thoracic Society, Member

1997-2001 Director, Internal Medicine Overseas, Malawi Program, Health Volunteers Overseas

**Editorial Boards:**

2010-2015 Journal of Cellular Biochemistry, Associate Editor

2015-2017 American Journal of Respiratory Cell and Molecular Biology

2017-2020 Journal of Immunology and Regenerative Medicine

2018-current StemJournal

2021-22 Frontiers in Endocrinology, Guest Associate Editor, Special Issue on “Progenitors in Thyroid Development, Disease, and Regeneration.”

**Peer-Reviewer Panels for journals:**

2018-current Nature

2020-current Nature Cell Biology

2014-current Nature Biotechnology

2014-current Nature Protocols

2009-current Science

2012-current Cell Stem Cell

2019-current Cell

2009-current New England Journal of Medicine

2008-current Journal of Clinical Investigation

2015-current Stem Cell Reports

2011-current Development

2015-current eLife

2011-current Stem Cell Research

2012-current Chest

2007-current Stem Cells

2009-current Molecular Therapy

2007-current Respiratory Research

2007-current Circulation

2006-current American Journal of Physiology: Lung Cell and Molecular Physiology

2006-current American Journal of Respiratory Cell and Molecular Biology

2006-current American Journal of Respiratory and Critical Care Medicine

**Major Committee Assignments:**

# Private/Foundation

2025 Organizing Chair, Gordon Research Conference on Lung Development, Injury, and Repair

2023 Organizing Vice-Chair, Gordon Research Conference on Lung Development, Injury, and Repair

2018-current Mentoring Program (Mentor), American Thoracic Society

2016-2019 Addgene, Board of Directors

2018-2019 Addgene, Governance Committee, Chair

2012-2014 FASEB Lung Conference, Vermont, Organizing Chair of Meeting

2013-current International Society for Stem Cell Research, Program Abstract Review Committee

2009-current Vermont Lung Stem Cell Meeting, Organizing, and Program Committee

2010-current Lifeboat Foundation, Scientific Advisory Board

2010-current Alpha-1 Foundation, Grants Advisory Council, Vice-Chair

2015-current Alpha-1 Foundation, Tissue Bank Advisory Committee, Chair

2010-2013 American Thoracic Society, Annual Meeting Program Committee

2010-2018 American Thoracic Society, Stem Cells and Regenerative Medicine Committee

2006-current American Thoracic Society, Respiratory Cell & Molecularly Biology Assembly, committee member

**National**

2018-present NIH/NHLBI Board of External Experts (BEE)

2019-2022 NIH/NHLBI Protocol Review Committee (PRC) for SARS-CoV2/COVID-19

2015-2018 External Advisory Board, University of Vermont Center for Regenerative Medicine

2018-present External Advisory Board, University of Cincinnati, Center for Stem Cell and Organoid Medicine (CuSTOM)

**State:**

2010-2012 Stem Cell Advisory Committee, UMASS Center for Stem Cell Biology and Regenerative Medicine

**Study Sections**

National Institutes of Health

2020 NHLBI AdHoc study section on COVID-19 Cell Based Therapies

2015-17 NHLBI CFTR-directed therapeutics STTR (ZHL1 CSR-I M2 1)

2014 NHLBI PCBC (Progenitor Cell Biology Consortium) ad hoc reviewer

2010 NHLBI Workgroup: Cell plasticity in lung injury and repair

2006 NHLBI/NIH Strategic Planning Committee for Theme 3: Lung Injury/Inflammation, Repair/Remodeling, Replacement/Regeneration, committee member

2004 Study Section member, NIAID RFA 03-015 “Cooperative Centers for Translational Research in Human Immunology and Biodefense”

CIRM

2012-current CIRM, California Institute for Regenerative Medicine, Grants Working Group

Cystic Fibrosis Foundation

2016 Cystic Fibrosis Foundation Therapeutics (CFFT) Ad hoc study section

Alpha-1 Foundation

2011-current Alpha-1 Foundation, annual grants study section, Associate Chair.

**Current Other Support:**

**T32HL007035 (Mizgerd/Kotton)** 07/01/21-6/30/25

**Role: MPI**

**Biology of the Lung: A Multidisciplinary Program**

This award, now continuously funded for the past 50 years, supports the research training of MD, PhD, and MD/PhD graduate students, postdoctoral fellows, or clinical fellows, focused on lung biology, injury, repair, development, and regeneration.

**2R01 HL095993 (Kotton)** 06/01/09 – 05/31/23

NIH/NHLBI 1.3 months $290,000

**Role: PI**

**Derivation of lung epithelia from iPS cells for advanced disease modeling**

This proposal focuses on developing iPSC-derived type 2 alveolar epithelial cells (AEC2s) for advanced disease modeling in order to reveal the mechanisms that are responsible for AEC2 dysfunction and to identify druggable pathways that can ameliorate downstream parenchymal lung disease.

**1R01DK105029 (Hollenberg/Kotton)** 12/1/15- 11/30/2024

NIH//NIDDK 1.2 month $250,000

**Role: PI**

**Thyroid follicular cell development in mice and humans**

This grant proposes to derive functional human thyroid epithelial cells from iPS cells for understanding the developmental biology of the thyroid gland and for regenerative transplantation into hypothyroid mouse models. The role of BMP and FGF signaling in regulating thyroid lineage specification from anterior foregut endoderm is studied. The ability of the thyroid epithelial cells to secrete functional thyroid hormones is examined

**1R01HL128172 (Kotton)** 09/15/15- 06/30/2020 (NCE)

NIH/NHLBI 1.5 months $340,500

**Epigenomic and transcriptomic networks in normal and defective lung development**

**Role: PI**

This grant employs ChIP-Seq methods to interrogate genome-wide histone modifications in order to define the epigenetic landscape that unfolds during lung lineage specification using human iPS cell models. Systems biology computational models are assembled in order to understand the epigenomic changes that encoder the earliest stages of human lung epithelial development.

**TL1TR001410 (Kotton)** 03/31/15-3/31/25

NIH/NCATS 0.4 months $11,703

**Role: PI**

**Regenerative Medicine Training Program**

This grant proposes a comprehensive training program in stem cell biology and regenerative medicine, focused in part on hands on training in iPS cell models of human disease and drug discovery.

**U01148692 (Kotton/Hawkins, MPI)** 07/01/19 – 06/30/21

NIH/NHLBI 0.5 months $83,000

**Role: PI**

**Generation of functional lung stem cells from human iPSCs**

This grant focuses on extensive characterization of the phenotype, karyotypic stability, purity, expansion/scale-up potential, functional capacity, and in vivo teratoma potential of iPSC-derived lung resident stem cells of the airways and alveoli in preparation for developing a cellular clinical product.

**U01HL134745 (Whitsett/Kotton/Morrisey MPI)** 9/1/16-8/31/23

NIH/NHLBI        1.7 months $225,000

**Role: PI**

**Editing Alveolar Progenitor Cells for Correction of Monogenic Disease**

Role: PI

This grant studies the pathogenesis of lung disease due to ABCA3 mutations and develops gene editing therapies for the correction of this disorder in alveolar epithelial progenitors and their mature progeny

**U01HL134766 (Chapman/Kotton MPI)** 9/21/16-5/31/23

NIH/NHLBI 1.1 months $199,000

**Epithelial Stem/Progenitor Cells as Repair Agents in Diffuse Alveolar Damage**

**Role: PI**

This multi-institutional project develops epithelial progenitor strategies for treating disorders of the lung that arise from injury or damage to the alveolar epithelium

**U01TR001810 (Kotton/Wilson/Morrisey/Raby)** 09/15/16 – 06/30/21 NIH/NCATS 1.1 months $543,000

**A National iPS Cell Network with Deep Phenotyping for Translational Research**

**Role: PI**

This grant establishes the training mechanisms and multi-institutional networks necessary for broad sharing of gene editing tools and iPS cells across the national CTSI network

**N01 75N92020C00005 (PI: Kotton)** 5/01/2020-4/31/2025 NIH/NHLBI

**National Biorepository for Lung Diseases-Specific Induced Pluripotent Stem Cells**

**Role: PI**

This grant supports training courses for investigators interested in developing in vitro lung disease models and sustains the sharing of lung organoids and banked iPSCs generated from individuals with a wide variety of lung diseases.

**U01HL152976 (Kotton)** 7/01/2020- 6/30/2024

NHLBI 1.2 months, $300,000

**Developing a patient-specific organoid model of pulmonary fibrosis using iPSCs**

**Role: PI**

This grant develops a multilineage in vitro model system based on iPSC-derived lung organoids to study the

pathogenesis of idiopathic and familial pulmonary fibrosis, focused on the role of telomerase mutations in

initiating disease

**1R01HL153246-01 (Kropski)** 7/01/2020–6/30/2025

NIH/NHLBI 0.1 months, $40,000

**Mechanisms of epithelial repair and remodeling in pulmonary fibrosis**

**Role: Co-Investigator**

Utilizing innovative transgenic mouse, organoid and inducible pluripotent stem cell (iPSC)-based models, we

will investigate the mechanisms through which GPR87 contributes to fibrotic susceptibility and adaptive versus

pathologic lung epithelial repair.

**1R38HL143584** (Ramachandran/Kotton MPI) 7/01/2020–6/30/2024

NIH/NHLBI 0 months, $207,678

**PRIMER: Promoting Research In Medical Residency**

**Role: PI**

This grant supports a training program for internal medicine residents interested in pursuing basic science or

translational research

**Past Other Support:**

**1R01GM122096 (Bar-Joseph)** 08/01/17- 07/31/21

NIH/NIGMS 0.6 months $75,000

**Role: Co-investigator (Subcontract PI)**

**Reconstructing regulatory networks from time series single cell data**

This grant takes a systems biology approach, employing time series profiles captured by single cell RNA sequencing to understand the fate trajectories of lung epithelial cells as they differentiate during embryonic development

**R01GM120060 (Quinton)** 02/-01/17-01/31/21

NIH/NIGMS 0.6 months $15,425

**Role: Co-investigator**

**Liver-derived protection during pneumonia and sepsis**

The goal of this study will be to determine how transcriptional responses of hepatocytes drive pulmonary and systemic antibacterial defense while limiting multi-organ failure during severe infection.

**MassCPR Award (Kotton)**  05/01/2020- 04/30/2021

Massachusetts Consortium for Pathogen Readiness

**Role: PI**

**Human iPSC derived lung organoids for modeling COVID-19 infection**

This grant focuses on differentiating human iPSCs into lung epithelial lineages in vitro and engineering a scalable, shareable model of COVID-19 infections for drug discovery in collaboration with the Massachusetts research community

**Celgene Corporation SRA (Kotton)**  04/09/2018-04/08/2021

Celgene Corporation0 months, $290,629

**iPSC disease modeling focused on interstitial lung disease related to SFTPC mutations**

**Role: PI**

This grant develops lung organoid models of pulmonary fibrosis as part of a consortium

**Novartis SRA (Kotton)**  12/21/2018- 06/30/2021

Novartis Institute of Biomedical Research (NIBR) 0 months, $164,535

**Characterization of iPSC derived alveolar epithelial type II cells**

**Role: PI**

This grant profiles alveolar epithelial type II cells generated from human iPSCs to characterize surfactant processing capacity

J**ohnson & Johnson Services, Inc. (PIs: Kotton, Emili, Chen)**  1/1/2019 - 12/31/2021

Johnson & Johnson Services, Inc. 0.6 calendar $350,477

**A new human iPSC in vitro system to model the inception of lung adenocarcinoma**

**Role: PI**

The overall goal of this work is to define the molecular changes that precede malignant transformation of in

vitro derived alveolar cells.

**Astra Zeneca ECHO ID: 10038592 (Kotton)** Astra Zeneca LB 12/16/2019- 12/15/2021

**Modeling COPD using human iPSC in vitro** 0 months, $150,015

**Role: PI**

This grant develops proximal airway epithelial cells from iPSCs for the purpose of modeling injury responses to tobacco smoke exposure

**1R24HL123828-01 (Kotton/Mostoslavsky)** 7/01/14- 4/30/20 (NCE) (NIH/NHLBI 0.1 months $350,000

Role: PI

A National Resource for Lung disease-specific iPS cells (No Cost Extension)

This grant proposes an infrastructure for the banking, sharing, and national distribution of lung disease specific iPS cell lines, as well as infrastructure for training others in the derivation and directed differentiation of iPS cells.

**1R01HL122442-01 (Kotton)** 03/01/14-02/28/19 NIH/NHLBI 0.6 months $250,000

Role: PI

iPSC Modeling of the Role of NKX2-1 in Human Lung Development and Disease (No Cost Extension)

This grant proposes to utilize patient-specific iPS cell lines made from children with Brain-Thyroid-Lung syndrome due to mutations in the gene encoding human NKX2-1. These cell lines are used to define the transcriptomic changes of early human lung development and understand how those programs are abnormally altered during the emergence of pediatric lung disease caused by these mutations.

**R01HL127426 (Ramirez)** 09/01/15-06/30/19

Co-Investigator, Subcontract PI 0.46 Months $7,128

Molecular and biological function of long non-coding RNA transcripts divergent to lung developmental genes

This proposal seeks to understand the molecular mechanisms of the Nkx2-1-AS1 and Gata6-AS1 in lung cell differentiation during development.

**1R01 HL108678 (Kotton/Ott)**  09/15/11-5/31/15

NIH/NHLBI

Role: Principal Investigator   
Bioengineering of Transplantable Humanized Lungs from iPS Cells

**R01 HL111574 (Oikonomou)**  09/01/11-8/31/16

NIH/NHLBI

Role: Investigator   
Defining the genetic program of primordial lung progenitors

U01 HL107443 (Chui, Mostoslavsky, Murphy, Steinberg) 07/05/11 – 06/30/16

NIH/NHLBI

Role: Investigator

Globin Gene Expression in Sickle Cell Genotype-Specific iPS Cells

**Lung Cancer Research Concept Award (Kathuria)** 09/15/13-9/14/14  
DOD   
Role: Investigator

In vivo tagging of lung epithelial cells to define the early steps of tumor cell dissemination

**U01 HL099997 (Morrisey)** 08/1/13 - 4/30/15

NIH/NHLBI PCBC

Role: Investigator

NHLBI Progenitor Cell Biology Consortium (PCBC) Administrative Coordinating Center, at Univ of MD.

BU Subcontract for ancillary studies to complement U. of Penn Project (Kotton=subcontract PI)

Generation & Characterization of a Lung Stem Cell “Tool Kit” to Generate Functional Lung Epithelial Lineages

**U01HL110-967 (Morrisey)** 01/01/13 – 12/31/14

NIH/NHLBI LRRC CReATV3

Role: Investigator

NHLBI Lung Regeneration and Repair Consortium (LRRC) Administrative Coordinating Center at Duke University. BU Subcontract for ancillary studies to complement U. of Penn Project (Kotton=subcontract PI)

Generation and analysis of gene corrected SFTPC mutations in human iPSC lines

**R13 NIH/NHLBI (Kotton)**

Role: PI/ Organizing Chair

The Lung Epithelium in Health and Disease (FASEB Science Research Conference)

Award to support FASEB Lung Epithelium in Health and Disease, biennial meeting in Saxtons River, VT, 2014.

**R21 HL108689** (Weiss) 08/1/12 - 7/31/13

NIH/NHLBI

BU Subcontract with BWH (Kotton)

De-Cellularized Human Lungs for Ex-Vivo Lung Regeneration

**P01HL047049-16A1 (Cardoso PPG PI; Kotton Project 3 Leader)** 12/1/07-1/31/13

NIH/NHLBI

Determinants of Cell Fate and Differentiation in the Developing Lung

Project 3: Embryonic Stem Cell Modeling of Lung Lineage Specification

Role: Project 3 Leader

**IDEA in Stem Cell Research** (Kass) 09/1/10 - 8/31/13

NYSTEM

Role: Sub-Project PI, Boston University Component

Mechanistic study of an inherited arrhythmia in a complex genetic background using iPS cell derived cardiomyocytes

**RC4 HL106625 (Weiss)** 09/17/10 - 8/30/13

NIH

Role: Sub-Project PI, Boston University Component

Bioengineering New Lungs from Cadaveric Scaffolds

**Research Grant (Kotton)** 7/1/11 - 6/30/13

Alpha-1 Foundation

Role: Principal Investigator

Generation of bioartificial lungs from gene corrected PiZZ iPS cells

**P01 HL47049 (Cardoso)** 02/01/08 - 01/31/13

NIH/NHLBI

Role: Investigator

Microscopy-Image Analysis and FACS Core

**R01 HL095993-01 (Kotton)** 7/01/09-7/31/13

NIH/NHLBI

Derivation of Transplantable Lung Epithelial Progenitors from iPS Cells

Role: Principal Investigator

**RC2HL101535-01 (Kotton)** 9/30/09-8/31/12

NIH/NHLBI

Characterization of human hematopoietic and endodermal progenitors derived from iPS cells free of reprogramming transgenes

Role: Principal Investigator

**Pilot and Feasibility Award (Kotton)** 04/01/10 – 03/31/12

Cystic Fibrosis Foundation

Role: Principal Investigator

Derivation of Pluripotent Stem Cells (iPS) for Cystic Fibrosis Therapy

**USAMRC 07138002 (Fine)** 7/1/08-6/30/11

Congressionally Directed Medical Research Programs (CDMRP). Department of the Army.

Acute Lung Injury: Making the Injured Lung Perform Better and Rebuilding Healthy Lungs*,*

Role: Sub-Project PI, Boston University Component

[**R21HL086610-01A1**](https://commons.era.nih.gov/commons/genericStatus.do?actionRole=nonPI&applID=7305473&uhf-token=u5LQYzW%2BAhDlrWtQFGQ8%2FqlpkYY%3D) **(Kotton)** 4/1/08-3/31/10

NIH/NHLBI

Hemangioblast Transplantation for Reconstitution of Lung Endothelium

Role: Principal Investigator

**R21HL086414-02 (Kotton)** 9/30/06-9/30/08

NIH/NHLBI

Cell-specific Delivery of RNAi to Pulmonary Alveolar Macrophages in vivo

Role: Principal Investigator

**RO1 HL083034-01A1 (Ramirez)** 7/1/06-6/30/11

NIH/NHLBI

Lung Alveolar Type I Cell Morphogenesis

Role: Co-PI

**A-05-005 (Kotton)** 1/1/06-1/1/08

American Thoracic Society/Alpha-1 Foundation

Stem cell-based therapy for alpha-1 antitrypsin deficiency

Role: Principal Investigator

**K08 HL 71640** (Kotton) 02/04/03 - 01/31/08

NIH/NHLBI

Role: Principal Investigator

Bone Marrow Cells as Progenitors of Alveolar Epithelium

**Bibliography:**

**Complete List of Published Work (142 papers) in MyBibliography (copy/paste this URL into browser):**

<https://www.ncbi.nlm.nih.gov/sites/myncbi/1xKZymjcezw5t/bibliography/47844369/public/?sort=date&direction=descending>

**peer reviewed articles:**

1. Wang SW, Herriges MJ, Hurley K, **Kotton DN**, Klein AM. CoSpar identifies early cell fate biases from single-cell transcriptomic and lineage information. Nat Biotechnol 2022.
2. Wang R, Hume AJ, Beermann ML, Simone-Roach C, Lindstrom-Vautrin J, Le Suer J, Huang J, Olejnik J, Villacorta-Martin C, Bullitt E, Hinds A, Ghaedi M, Rollins S, Werder RB, Abo KM, Wilson AA, Mühlberger E, \***Kotton DN**, \*Hawkins FJ. Human airway lineages derived from pluripotent stem cells reveal the epithelial responses to SARS-CoV-2 infection. Am J Physiol Lung Cell Mol Physiol 2022;322:L462-l78.
3. Ng WH, Johnston EK, Tan JJ, Bliley JM, Feinberg AW, Stolz DB, Sun M, Wijesekara P, Hawkins F, **Kotton DN**, Ren X. Recapitulating human cardio-pulmonary co-development using simultaneous multilineage differentiation of pluripotent stem cells. eLife 2022;11.
4. Na E, Allen E, Baird LA, Odom CV, Korkmaz FT, Shenoy AT, Matschulat AM, Jones MR, **Kotton DN**, Mizgerd JP, Varelas X, Traber KE, Quinton LJ. Epithelial LIF signaling limits apoptosis and lung injury during bacterial pneumonia. Am J Physiol Lung Cell Mol Physiol 2022;322:L550-l63.
5. **Kotton DN**, Nilsson M. Editorial: Progenitors and Stem Cells in Thyroid Development, Disease, and Regeneration. Front Endocrinol 2022;13:848559.
6. Kathiriya JJ, Wang C, Zhou M, Brumwell A, Cassandras M, Le Saux CJ, Cohen M, Alysandratos KD, Wang B, Wolters P, Matthay M, **Kotton DN**, Chapman HA, Peng T. Human alveolar type 2 epithelium transdifferentiates into metaplastic KRT5(+) basal cells. Nat Cell Biol 2022;24:10-23.
7. Hume AJ, Heiden B, Olejnik J, Suder EL, Ross S, Scoon WA, Bullitt E, Ericsson M, White MR, Turcinovic J, Thao TTN, Hekman RM, Kaserman JE, Huang J, Alysandratos KD, Toth GE, Jakab F, **Kotton DN**, Wilson AA, Emili A, Thiel V, Connor JH, Kemenesi G, Cifuentes D, Mühlberger E. Recombinant Lloviu virus as a tool to study viral replication and host responses. PLoS Pathog 2022;18:e1010268.
8. Gil CH, Chakraborty D, Vieira CP, Prasain N, Calzi SL, Fortmann SD, Hu P, Banno K, Jamal M, Huang C, Sielski MS, Lin Y, Huang X, Dupont MD, Floyd JL, Prasad R, Longhini ALF, McGill TJ, Chung HM, Murphy MP, **Kotton DN**, Boulton ME, Yoder MC, Grant MB. Specific mesoderm subset derived from human pluripotent stem cells ameliorates microvascular pathology in type 2 diabetic mice. Sci Adv 2022;8:eabm5559.
9. Yan B, Freiwald T, Chauss D, Wang L, West E, Mirabelli C, Zhang C, Nichols E, Malik N, Gregory R, Bantscheff M, Ghidelli-Disse S, Kolev M, Frum T, Spence JR, Sexton JZ, Alysandratos KD, **Kotton DN**, Pittaluga S, Bibby J, Niyonzima N, Olson MR, Kordasti S, Didier P, Wobus C, Laurence A, Lionakis MS, Kemper C, Afzali B, Kazemian M. SARS-CoV-2 drives JAK1/2-dependent local complement hyperactivation. Sci Immunol 2021;6.
10. Suzuki S, Hawkins FJ, Barillà C, Beermann ML, \***Kotton DN**, Davis BR. Differentiation of human pluripotent stem cells into functional airway basal stem cells. STAR Protoc 2021;2:100683.
11. Sun YL, Hurley K, Villacorta-Martin C, Huang J, Hinds A, Gopalan K, Caballero IS, Russo SJ, Kitzmiller JA, Whitsett JA, Beers MF, **Kotton DN**. Heterogeneity in Human Induced Pluripotent Stem Cell-derived Alveolar Epithelial Type II Cells Revealed with ABCA3/SFTPC Reporters. Am J Respir Cell Mol Biol 2021;65:442-60.
12. 13. Posabella A, Alber AB, Undeutsch HJ, Droeser RA, Hollenberg AN, Ikonomou L, **Kotton DN**. Derivation of Thyroid Follicular Cells From Pluripotent Stem Cells: Insights From Development and Implications for Regenerative Medicine. Front Endocrinol 2021;12:666565.
13. Moreira JD, Gopal DM, **Kotton DN**, Fetterman JL. Gaining Insight into Mitochondrial Genetic Variation and Downstream Pathophysiology: What Can i(PSCs) Do? Genes (Basel) 2021;12.
14. Mirabelli C, Wotring JW, Zhang CJ, McCarty SM, Fursmidt R, Pretto CD, Qiao Y, Zhang Y, Frum T, Kadambi NS, Amin AT, O'Meara TR, Spence JR, Huang J, Alysandratos KD, **Kotton DN,** Handelman SK, Wobus CE, Weatherwax KJ, Mashour GA, O'Meara MJ, Chinnaiyan AM, Sexton JZ. Morphological cell profiling of SARS-CoV-2 infection identifies drug repurposing candidates for COVID-19. Proc Natl Acad Sci U S A 2021;118.
15. Li Y, Renner DM, Comar CE, Whelan JN, Reyes HM, Cardenas-Diaz FL, Truitt R, Tan LH, Dong B, Alysandratos KD, Huang J, Palmer JN, Adappa ND, Kohanski MA, **Kotton DN**, Silverman RH, Yang W, Morrisey EE, Cohen NA, Weiss SR. SARS-CoV-2 induces double-stranded RNA-mediated innate immune responses in respiratory epithelial-derived cells and cardiomyocytes. Proc Natl Acad Sci U S A 2021;118.
16. Hekman RM, Hume AJ, Goel RK, Abo KM, Huang J, Blum BC, Werder RB, Suder EL, Paul I, Phanse S, Youssef A, Alysandratos KD, Padhorny D, Ojha S, Mora-Martin A, Kretov D, Ash PEA, Verma M, Zhao J, Pattern JJ, Villacorta-Martin C, Bolzan D, Perea Resa C, Bullitt E, Hinds A, Tilston-Lunel A, Varelas X, Farhangmehr S, Braunschweig U, Kwan JH, McComb M, Basu A, Saeed M, Perissi V, Burks EJ, Layne MD, Connor JH, Davey R, Chneg X, Wolozin BL, Blecowe BJ, Wuchty S, Lyons SM, Kozakov D, Cifuentes D, Blower M, **\*Kotton DN**, Wilson AA, Muhlberge E, Emili A. Actionable Cytopathogenic Host Responses of Human Alveolar Type 2 Cells to SARS-CoV-2. Mol Cell 2021;81:212.
17. 18. Geusz RJ, Wang A, Lam DK, Vinckier NK, Alysandratos KD, Roberts DA, Wang J, Kefalopoulou S, Ramirez A, Qiu Y, Chiou J, Gaulton KJ, Ren B, **Kotton DN**, Sander M. Sequence logic at enhancers governs a dual mechanism of endodermal organ fate induction by FOXA pioneer factors. Nature Communications 2021;12:6636.
18. 19. Dobrindt K, Hoagland DA, Seah C, Kassim B, O'Shea CP, Murphy A, Iskhakova M, Fernando MB, Powell SK, Deans PJM, Javidfar B, Peter C, Møller R, Uhl SA, Garcia MF, Kimura M, Iwasawa K, Crary JF, **Kotton DN**, Takebe T, Huckins LM, tenOever BR, Akbarian S, Brennand KJ. Common Genetic Variation in Humans Impacts In Vitro Susceptibility to SARS-CoV-2 Infection. Stem Cell Reports 2021;16:505-18.
19. Chen DY, Khan N, Close BJ, Goel RK, Blum B, Tavares AH, Kenney D, Conway HL, Ewoldt JK, Chitalia VC, Crossland NA, Chen CS, **Kotton DN**, Baker SC, Fuchs SY, Connor JH, Douam F, Emili A, Saeed M. SARS-CoV-2 Disrupts Proximal Elements in the JAK-STAT Pathway. J Virol 2021;95:e0086221.
20. Alysandratos KD, Russo SJ, Petcherski A, Taddeo EP, Acín-Pérez R, Villacorta-Martin C, Jean JC, Mulugeta S, Rodriguez LR, Blum BC, Hekman RM, Hix OT, Minakin K, Vedaie M, Kook S, Tilston-Lunel AM, Varelas X, Wambach JA, Cole FS, Hamvas A, Young LR, Liesa M, Emili A, Guttentag SH, Shirihai OS, Beers MF, **Kotton DN**. Patient-specific iPSCs carrying an SFTPC mutation reveal the intrinsic alveolar epithelial dysfunction at the inception of interstitial lung disease. Cell Rep 2021;36:109636.
21. Hawkins FJ, Suzuki S, Beermann ML, Barillà C, Wang R, Villacorta-Martin C, Berical A, Jean JC, Le Suer J, Matte T, Simone-Roach C, Tang Y, Schlaeger TM, Crane AM, Matthias N, Huang SXL, Randell SH, Wu J, Spence JR, Carraro G, Stripp BR, Rab A, Sorsher EJ, Horani A, Brody SL, Davis BR, **Kotton DN**. Derivation of Airway Basal Stem Cells from Human Pluripotent Stem Cells. Cell Stem Cell. 2020 Oct 19:S1934-5909(20)30492-6. doi: 10.1016/j.stem.2020.09.017. PMID: 33098807
22. Alysandratos KD, Herriges MJ, **Kotton DN**. Epithelial Stem and Progenitor Cells in Lung Repair and Regeneration. Annu Rev Physiol. 2020 Oct 19. doi: 10.1146/annurev-physiol-041520-092904. PMID: 33074772
23. Huang J, Hume AJ, Abo KM, Werder RB, Villacorta-Martin C, Alysandratos KD, Beermann ML, Simone-Roach C, Lindstrom-Vautrin J, Olejnik J, Suder EL, Bullitt E, Hinds A, Sharma A, Bosmann M, Wang R, Hawkins F, Burks EJ, Saeed M, Wilson AA, Mühlberger E, **Kotton DN.** SARS-CoV-2 Infection of Pluripotent Stem Cell-Derived Human Lung Alveolar Type 2 Cells Elicits a Rapid Epithelial-Intrinsic Inflammatory Response. Cell Stem Cell. 2020 Sep 18:S1934-5909(20)30459-8. doi: 10.1016/j.stem.2020.09.013. PMID: 32979316
24. Dost AFM, Moye AL, Vedaie M, Tran LM, Fung E, Heinze D, Villacorta-Martin C, Huang J, Hekman R, Kwan JH, Blum BC, Louie SM, Rowbotham SP, Sainz de Aja J, Piper ME, Bhetariya PJ, Bronson RT, Emili A, Mostoslavsky G, Fishbein GA, Wallace WD, Krysan K, Dubinett SM, Yanagawa J\*, **Kotton DN**\*, Kim CF\*. Organoids Model Transcriptional Hallmarks of Oncogenic KRAS Activation in Lung Epithelial Progenitor Cells. Cell Stem Cell. 2020 Oct 1;27(4):663-678.e8. doi: 10.1016/j.stem.2020.07.022. Epub 2020 Sep 4.PMID: 32891189 \*=denotes equal contribution as co-senior author.
25. Giadone RM, Liberti DC, Matte TM, Rosarda JD, Torres-Arancivia C, Ghosh S, Diedrich JK, Pankow S, Skvir N, Jean JC, Yates JR 3rd, Wilson AA, Connors LH, **Kotton DN**, Wiseman RL, Murphy GJ. Expression of Amyloidogenic Transthyretin Drives Hepatic Proteostasis Remodeling in an Induced Pluripotent Stem Cell Model of Systemic Amyloid Disease. Stem Cell Reports. 2020 Aug 11;15(2):515-528. doi: 10.1016/j.stemcr.2020.07.003. Epub 2020 Jul 30.PMID: 32735824
26. Kaserman JE, Hurley K, Dodge M, Villacorta-Martin C, Vedaie M, Jean JC, Liberti DC, James MF, Higgins MI, Lee NJ, Washko GR, San Jose Estepar R, Teckman J, **Kotton DN,** Wilson AA. A Highly Phenotyped Open Access Repository of Alpha-1 Antitrypsin Deficiency Pluripotent Stem Cells. Stem Cell Reports. 2020 Jul 14;15(1):242-255. doi: 10.1016/j.stemcr.2020.06.006. Epub 2020 Jul 2.PMID: 32619491
27. Wang R, McCauley KB, **Kotton DN**, Hawkins F. Differentiation of human airway-organoids from induced pluripotent stem cells (iPSCs). Methods Cell Biol. 2020;159:95-114. doi: 10.1016/bs.mcb.2020.03.008. Epub 2020 Apr 25.PMID: 32586451
28. Cohen Y, Shen J, Semu D, Leman DP, Liberti WA 3rd, Perkins LN, Liberti DC, **Kotton DN,** Gardner TJ. Hidden neural states underlie canary song syntax. Nature. 2020 Jun;582(7813):539-544. doi: 10.1038/s41586-020-2397-3. Epub 2020 Jun 17.PMID: 32555461
29. Basil MC, Katzen J, Engler AE, Guo M, Herriges MJ, Kathiriya JJ, Windmueller R, Ysasi AB, Zacharias WJ, Chapman HA, **Kotton DN**, Rock JR, Snoeck HW, Vunjak-Novakovic G, Whitsett JA, Morrisey EE. The Cellular and Physiological Basis for Lung Repair and Regeneration: Past, Present, and Future. Cell Stem Cell. 2020 Apr 2;26(4):482-502. doi: 10.1016/j.stem.2020.03.009. Review. PMID: 32243808; PMCID: PMC7128675.
30. Hurley K, Ding J, Villacorta-Martin C, Herriges MJ, Jacob A, Vedaie M, Alysandratos KD, Sun YL, Lin C, Werder RB, Huang J, Wilson AA, Mithal A, Mostoslavsky G, Oglesby I, Caballero IS, Guttentag SH, Ahangari F, Kaminski N, Rodriguez-Fraticelli A, Camargo F, Bar-Joseph Z, **Kotton DN**. Reconstructed

Single-Cell Fate Trajectories Define Lineage Plasticity Windows during Differentiation of Human PSC-Derived Distal Lung Progenitors. Cell Stem Cell. 2020 Jan 27. pii: S1934-5909(19)30527-2. doi: 10.1016/j.stem.2019.12.009.PubMed PMID: 32004478.

1. Ikonomou L, Herriges MJ, Lewandowski SL, Marsland R 3rd, Villacorta-Martin C, Caballero IS, Frank DB, Sanghrajka RM, Dame K, Kańduła MM, Hicks-Berthet J, Lawton ML, Christodoulou C, Fabian AJ, Kolaczyk E, Varelas X, Morrisey EE, Shannon JM, Mehta P, **Kotton DN**. The in vivo genetic program of murine primordial lung epithelial progenitors. Nature Communications. 2020 Jan 31;11(1):635. doi:10.1038/s41467-020-14348-3. PubMed PMID: 32005814; PubMed Central PMCID:PMC6994558.
2. Mithal A, Capilla A, Heinze D, Berical A, Villacorta-Martin C, Vedaie M, Jacob A, Abo K, Szymaniak A, Peasley M, Stuffer A, Mahoney J, **Kotton DN**, Hawkins F, Mostoslavsky G. Generation of mesenchyme free intestinal organoids from human induced pluripotent stem cells. Nature Communications. 2020 Jan 10;11(1):215. doi: 10.1038/s41467-019-13916-6. PubMed PMID: 31924806; PubMed Central PMCID:PMC6954238.
3. Jacob A, Vedaie M, Roberts DA, Thomas DC, Villacorta-Martin C, Alysandratos KD, Hawkins F. **Kotton DN**. Derivation of self-renewing lung alveolar epithelial type II cells from human pluripotent stem cells. Nature Protocols. 2019. Dec. 14(12):3303-3332. doi: 10.1038/s41596-019-0220-0. Epub 2019 Nov 15. PubMed PMID: 31732721.
4. Kwong G, Marquez HA, Yang C, Wong JY, **Kotton DN**. Generation of a Purified iPSC-Derived Smooth Muscle-like Population for Cell Sheet Engineering. Stem Cell Reports. 2019 Aug 6. PMID: 31422908.
5. Reeves EP, Dunlea DM, McQuillan K, O'Dwyer CA, Carroll TP, Saldova R, Akepati PR, Wormald MR, McElvaney OJ, Shutchaidat V, Henry M, Meleady P, Keenan J, Liberti DC, **Kotton DN**, Rudd PM, Wilson AA, McElvaney NG. Circulating Truncated Alpha-1 Antitrypsin Glycoprotein in Patient Plasma Retains Anti-Inflammatory Capacity. J Immunol. 2019 Apr 15. PMID: 30796179.
6. Hawkins FJ, **Kotton DN**. Pulmonary Ionocytes Challenge the Paradigm in Cystic Fibrosis. Trends Pharmacol Sci. 2018 Oct;39(10):852-854. doi: 10.1016/j.tips.2018.08.005. Epub 2018 Sep 10. PubMed PMID: 30213439.
7. McCauley KB, Hawkins F, **Kotton DN**. Derivation of Epithelial-Only Airway Organoids from Human Pluripotent Stem Cells. Curr Protoc Stem Cell Biol. 2018 May;45(1):e51. doi: 10.1002/cpsc.51. Epub 2018 May 4. PubMed PMID: 30040246; PubMed Central PMCID: PMC6060639.
8. Reeves EP, O'Dwyer CA, Dunlea DM, Wormald MR, Hawkins P, Alfares M, **Kotton DN**, Rowe SM, Wilson AA, McElvaney NG. Ataluren, a New Therapeutic for Alpha-1 Antitrypsin-Deficient Individuals with Nonsense Mutations. Am J Respir Crit Care Med. 2018 Oct 15;198(8):1099-1102. doi: 10.1164/rccm.201802-0338LE. PubMed PMID: 30011228; PubMed Central PMCID: PMC6221570.
9. McCauley KB, Alysandratos KD, Jacob A, Hawkins F, Caballero IS, Vedaie M, Yang W, Slovik KJ, Morley M, Carraro G, Kook S, Guttentag SH, Stripp BR, Morrisey EE, **Kotton DN**. Single-Cell Transcriptomic Profiling of Pluripotent Stem Cell-Derived SCGB3A2+ Airway Epithelium. Stem Cell Reports. 2018 May 8;10(5):1579-1595. doi: 10.1016/j.stemcr.2018.03.013. Epub 2018 Apr 12. PubMed PMID: 29657097.
10. Jacob A, Morley M, Hawkins F, McCauley KB, Jean JC, Heins H, Na CL, Weaver TE, Vedaie M, Hurley K, Hinds A, Russo SJ, Kook S, Zacharias W, Ochs M, Traber K, Quinton LJ, Crane A, Davis BR, White FV, Wambach J, Whitsett JA, Cole FS, Morrisey EE, Guttentag SH, Beers MF, **Kotton DN**. Differentiation of Human Pluripotent Stem Cells into Functional Lung Alveolar Epithelial Cells. Cell Stem Cell. 2017 Oct 5;21(4):472-488.e10. doi: 10.1016/j.stem.2017.08.014. PMID: 28965766.
11. Serra M, Alysandratos KD, Hawkins F, McCauley KB, Jacob A, Choi J, Caballero IS, Vedaie M, Kurmann AA, Ikonomou L, Hollenberg AN, Shannon JM, **Kotton DN**. Pluripotent stem cell differentiation reveals distinct developmental pathways regulating lung versus thyroid lineage specification. Development. 2017. doi: 10.1242/dev.150193. PMID: 28947536.
12. Luo J, Qin L, Kural MH, Schwan J, Li X, Bartulos O, Cong XQ, Ren Y, Gui L, Li G, Ellis MW, Li P, **Kotton DN**, Dardik A, Pober JS, Tellides G, Rolle M, Campbell S, Hawley RJ, Sachs DH, Niklason LE, Qyang Y. Vascular smooth muscle cells derived from inbred swine induced pluripotent stem cells for vascular tissue engineering. Biomaterials. 2017;147:116-32. doi: 10.1016/j.biomaterials.2017.09.019. PMID: 28942128.
13. Hawkins F, Kramer P, Jacob A, Driver I, Tomas DC, McCauley KB, Skvir N, Crane AM, Kurmann AA, Hollenberg AN, Ngyen S, Wong BG, Khalil AS, Huang SXL, Guttentag S, Rock JR, Shannon JM, Davis BR, **Kotton DN**. Prospective Isolation of NKX2-1 Expressing Human Lung Progenitors Derived from Pluripotent Stem Cells. Journal of Clinical Investigation. May 2, 2017. doi: 10.1172/JCI89950. PMID: 28463226
14. Rashid S, **Kotton DN**, Bar-Joseph Z. TASIC: Determining branching models from time series single cell data. Bioinformatics. 2017 Apr 4. doi: 10.1093/bioinformatics/btx173. [Epub ahead of print] PubMed PMID: 28379537.
15. Coleman FT, Blahna MT, Kamata H, Yamamoto K, Zabinski MC, Kramnik I, Wilson AA, **Kotton DN**, Quinton LJ, Jones MR, Pelton SI, Mizgerd JP. The capacity of pneumococci to activate macrophage NF-kB determines necroptosis and pneumonia severity. J Infect Dis. 2017 Mar 25. doi: 10.1093/infdis/jix159. [Epub ahead of print] PubMed PMID: 28368460.
16. McCauley KB, Hawkins F, Serra M, Thomas DC, Jacob A, **Kotton DN**. Efficient Derivation of Functional Human Airway Epithelium from Pluripotent Stem Cells via Temporal Regulation of Wnt Signaling.

Cell Stem Cell. 2017 Mar 22. pii: S1934-5909(17)30072-3. doi: 10.1016/j.stem.2017.03.001. PubMed PMID: 28366587.

1. **Kotton D**. Interview with Darrell Kotton. Regen Med. 2017 Apr;12(4):337-338. doi: 10.2217/rme-2017-0054. Epub 2017 Jun 16. PubMed PMID: 28621167.
2. Dame K, Cincotta S, Lang AH, Sanghrajka RM, Zhang L, Choi J, Kwok L, Wilson T, Kańduła MM, Monti S, Hollenberg AN, Mehta P**, Kotton DN**, Ikonomou L. Thyroid Progenitors Are Robustly Derived from Embryonic Stem Cells through Transient, Developmental Stage-Specific Overexpression of Nkx2-1. Stem Cell Reports. 2017 Feb 14;8(2):216-225. doi: 10.1016/j.stemcr.2016.12.024. Epub 2017 Feb 2. PubMed PMID: 28162994; PubMed Central PMCID: PMC5312259. 5: Hollenberg AN, Choi J, Serra M, Kotton DN. Regenerative therapy for hypothyroidism: Mechanisms and possibilities. Mol Cell Endocrinol. 2017 Apr 15;445:35-41. doi: 10.1016/j.mce.2016.11.012. Epub 2016 Nov 19. PubMed PMID: 27876515; PubMed Central PMCID: PMC5373653.
3. Finn Hawkins, Scott A. Rankin, **Darrell N. Kotton**, and Aaron M. Zorn. Chapter 1: The Genetic Programs Regulating Embryonic Lung Development and Induced Pluripotent Stem Cell Differentiation. Jobe, Whitsett et al. 2016 in press.
4. Hollenberg AN, Choi J, Serra M, **Kotton DN**. Regenerative therapy for hypothyroidism: Mechanisms and possibilities. Mol Cell Endocrinol. 2017 Apr 15;445:35-41. doi: 10.1016/j.mce.2016.11.012. Epub 2016 Nov 19. PubMed PMID: 27876515; PubMed Central PMCID: PMC5373653.
5. Liberti WA, Markowitz JE, Perkins LN, Liberti DC, Leman DP, Guitchounts G, Velho T, **Kotton DN**, Lois C, Gardner TJ. Unstable neurons underlie a stable learned behavior. Nature Neuroscience. 2016 Oct 10. doi: 10.1038/nn.4405. PubMed PMID: 27723744.
6. Kurmann AA, Serra M, Hawkins F, Rankin SA, Mori M, Astapova I, Ullas S, Lin S, Bilodeau M, Rossant J, Jean JC, Ikonomou L, Deterding RR, Shannon JM, Zorn AM, Hollenberg AN, **Kotton DN**. Regeneration of Thyroid Function by Transplantation of Differentiated Pluripotent Stem Cells. Cell Stem Cell. 2015 Nov 5;17(5):527-42. doi: 10.1016/j.stem.2015.09.004. Epub 2015 Oct 22. PubMed PMID: 26593959.
7. Wilson AA, Ying L, Liesa M, Segeritz CP, Mills JA, Shen SS, Jean J, Lonza GC, Liberti DC, Lang AH, Nazaire J, Gower AC, Müeller FJ, Mehta P, Ordóñez A, Lomas DA, Vallier L, Murphy GJ, Mostoslavsky G, Spira A, Shirihai OS, Ramirez MI, Gadue P, **Kotton DN**. Emergence of a stage-dependent human liver disease signature with directed differentiation of alpha-1 antitrypsin-deficient iPS cells. Stem Cell Reports. 2015 May 12;4(5):873-85. doi: 10.1016/j.stemcr.2015.02.021. Epub 2015 Apr 2. PubMed PMID: 25843048; PubMed Central PMCID: PMC4437473.
8. Crane AM, Kramer P, Bui JH, Chung WJ, Li XS, Gonzalez-Garay ML, Hawkins F, Liao W, Mora D, Choi S, Wang J, Sun HC, Paschon DE, Guschin DY, Gregory PD, **Kotton DN**, Holmes MC, Sorscher EJ, Davis BR. Targeted correction and restored function of the CFTR gene in cystic fibrosis induced pluripotent stem cells. Stem Cell Reports. 2015 Apr 14;4(4):569-77. doi: 10.1016/j.stemcr.2015.02.005. Epub 2015 Mar 12. PubMed PMID: 25772471; PubMed Central PMCID: PMC4400651.
9. Weiss DJ, Chambers D, Giangreco A, Keating A, **Kotton D**, Lelkes PI, Wagner DE, Prockop DJ; ATS Subcommittee on Stem Cells and Cell Therapies. An official American Thoracic Society workshop report: stem cells and cell therapies in lung biology and diseases. Ann Am Thorac Soc. 2015 Apr;12(4):S79-97. doi: 10.1513/AnnalsATS.201502-086ST. PubMed PMID: 25897748.
10. Tafaleng EN, Chakraborty S, Han B, Hale P, Wu W, Soto-Gutierrez A, Feghali-Bostwick CA, Wilson AA, **Kotton DN**, Nagaya M, Strom SC, Roy-Chowdhury J, Stolz DB, Perlmutter DH, Fox IJ. Induced pluripotent stem cells model personalized variations in liver disease resulting from α1-antitrypsin deficiency. Hepatology. 2015 Jul;62(1):147-57. doi: 10.1002/hep.27753. Epub 2015 Apr 13. PubMed PMID: 25690322; PubMed Central PMCID: PMC4482790.
11. Hawkins F, **Kotton DN**. Embryonic and induced pluripotent stem cells for lung regeneration. Ann Am Thorac Soc. 2015 Mar;12 Suppl 1:S50-3. doi: 10.1513/AnnalsATS.201410-457MG. PubMed PMID: 25830836.
12. Ikonomou L, **Kotton DN**. Derivation of Endodermal Progenitors From Pluripotent Stem Cells. J Cell Physiol. 2015 Feb;230(2):246-58. doi: 10.1002/jcp.24771. Review. PubMed PMID: 25160562; PubMed Central PMCID: PMC4344429.
13. West JD, Austin ED, Gaskill C, Marriott S, Baskir R, Bilousova G, Jean JC, Hemnes AR, Menon S, Bloodworth NC, Fessel JP, Kropski JA, Irwin D, Ware LB, Wheeler L, Hong CC, Meyrick B, Loyd JE, Bowman AB, Ess KC, Klemm DJ, Young PP,Merryman WD, **Kotton D**, Majka SM. Identification of a common Wnt-associated genetic signature across multiple cell types in pulmonary arterial hypertension. Am J Physiol Cell Physiol. 2014 Sep 1;307(5):C415-30. PubMed PMID: 24871858; PubMed Central PMCID: PMC4154073.
14. **Kotton DN**, Morrisey EE. Lung Regeneration: Mechanisms, Applications, and Emerging Stem Cell Populations. Nature Medicine. Aug. 2014. PMID: 25100528
15. **Kotton DN**, Rossant J. Modeling pulmonary alveolar proteinosis with induced pluripotent stem cells. Am J Respir Crit Care Med. 2014 Jan 15;189(2):124-6. doi: 10.1164/rccm.201312-2122ED. PubMed PMID: 24428646.
16. Hamvas A, Deterding R, Balch WE, Schwartz DA, Albertine KH, Whitsett JA, Cardoso WV, **Kotton DN**, Kourembanas S, Hagood JS. Diffuse lung disease in children: Summary of a scientific conference. Pediatr Pulmonol. 2014 Apr;49(4):400-9. doi: 10.1002/ppul.22805. Epub 2013 Jun 24. PubMed PMID: 23798474.
17. Leung A, Nah SK, Reid W, Ebata A, Koch CM, Monti S, Genereux JC, Wiseman RL, Wolozin B, Connors LH, Berk JL, Seldin DC, Mostoslavsky G, **Kotton DN**, Murphy GJ. Induced pluripotent stem cell modeling of multisystemic, hereditary transthyretin amyloidosis. Stem Cell Reports. 2013 Oct 31;1(5):451-63. doi: 10.1016/j.stemcr.2013.10.003. eCollection 2013. PubMed PMID: 24286032; PubMed Central PMCID: PMC3841264.
18. Mills JA, Wang K, Paluru P, Ying L, Lu L, Galvão AM, Xu D, Yao Y, Sullivan SK, Sullivan LM, Mac H, Omari A, Jean JC, Shen S, Gower A, Spira A, Mostoslavsky G, **Kotton DN**, French DL, Weiss MJ, Gadue P. [Clonal genetic and hematopoietic heterogeneity among human-induced pluripotent stem cell lines.](http://www.ncbi.nlm.nih.gov/pubmed/23940280) Blood. 2013 Sep 19;122(12):2047-51. doi: 10.1182/blood-2013-02-484444. Epub 2013 Aug 12. PMID: 23940280
19. Furmanov K, Elnekave M, Sa'eed A, Segev H, Eli-Berchoer L**, Kotton DN**, Bachrach G, Hovav AH. [Diminished Memory T-Cell Expansion Due to Delayed Kinetics of Antigen Expression by Lentivectors.](http://www.ncbi.nlm.nih.gov/pubmed/23824049) PLoS One. 2013 Jun 18;8(6):e66488. Print 2013. PMID: 23824049
20. Goldman O, Han S, Sourrisseau M, Dziedzic N, Hamou W, Corneo B, D'Souza S, Sato T, **Kotton DN**, Bissig KD, Kalir T, Jacobs A, Evans T, Evans MJ, Gouon-Evans V. [KDR identifies a conserved human and murine hepatic progenitor and instructs early liver development.](http://www.ncbi.nlm.nih.gov/pubmed/23746980) Cell Stem Cell. 2013 Jun 6;12(6):748-60. doi: 10.1016/j.stem.2013.04.026. PMID: 23746980
21. Smith BW, Rozelle SS, Leung A, Ubellacker J, Parks A, Nah SK, French D, Gadue P, Monti S, Chui DH, Steinberg MH, Frelinger AL, Michelson AD, Theberge R, McComb ME, Costello CE, **Kotton DN**, Mostoslavsky G, Sherr DH, Murphy GJ. [The aryl hydrocarbon receptor directs hematopoietic progenitor cell expansion and differentiation.](http://www.ncbi.nlm.nih.gov/pubmed/23723449) Blood. 2013 Jul 18;122(3):376-85. doi: 10.1182/blood-2012-11-466722. Epub 2013 May 30. PMID: 23723449
22. Brudner M, Karpel M, Lear C, Chen L, Yantosca LM, Scully C, Sarraju A, Sokolovska A, Zariffard MR, Eisen DP, Mungall BA, **Kotton DN**, Omari A, Huang IC, Farzan M, Takahashi K, Stuart L, Stahl GL, Ezekowitz AB, Spear GT, Olinger GG, Schmidt EV, Michelow IC. [Lectin-dependent enhancement of Ebola virus infection via soluble and transmembrane C-type lectin receptors.](http://www.ncbi.nlm.nih.gov/pubmed/23573288) PLoS One. 2013;8(4):e60838. doi: 10.1371/journal.pone.0060838. Epub 2013 Apr 2. PMID: 23573288
23. Repasy T, Lee J, Marino S, Martinez N, Kirschner DE, Hendricks G, Baker S, Wilson AA, **Kotton DN**, Kornfeld H. [Intracellular bacillary burden reflects a burst size for Mycobacterium tuberculosis in vivo.](http://www.ncbi.nlm.nih.gov/pubmed/23436998) PLoS Pathog. 2013 Feb;9(2):e1003190. doi: 10.1371/journal.ppat.1003190. Epub 2013 Feb 21. PMID: 23436998
24. Wilson AA, Kwok LW, Porter EL, Payne JG, McElroy GS, Ohle SJ, Greenhill SR, Blahna MT, Yamamoto K, Jean JC, Mizgerd JP, **Kotton DN.** [Lentiviral delivery of RNAi for in vivo lineage-specific modulation of gene expression in mouse lung macrophages.](http://www.ncbi.nlm.nih.gov/pubmed/23403494) Mol Ther. 2013 Apr;21(4):825-33. doi: 10.1038/mt.2013.19. Epub 2013 Feb 12. PMID: 23403494
25. Terrenoire C, Wang K, Tung KW, Chung WK, Pass RH, Lu JT, Jean JC, Omari A, Sampson KJ, **Kotton DN**, Keller G, Kass RS. [Induced pluripotent stem cells used to reveal drug actions in a long QT syndrome family with complex genetics.](http://www.ncbi.nlm.nih.gov/pubmed/23277474) J Gen Physiol. 2013 Jan;141(1):61-72. doi: 10.1085/jgp.201210899. PMID: 23277474
26. Sommer CA, Christodoulou C, Gianotti-Sommer A, Shen SS, Sailaja BS, Hezroni H, Spira A, Meshorer E, **Kotton DN**, Mostoslavsky G. [Residual expression of reprogramming factors affects the transcriptional program and epigenetic signatures of induced pluripotent stem cells.](http://www.ncbi.nlm.nih.gov/pubmed/23272148) PLoS One. 2012;7(12):e51711. doi: 10.1371/journal.pone.0051711. Epub 2012 Dec 14. PMID: 23272148
27. Sommer AG, Rozelle SS, Sullivan S, Mills JA, Park SM, Smith BW, Iyer AM, French DL, **Kotton DN**, Gadue P, Murphy GJ, Mostoslavsky G. [Generation of human induced pluripotent stem cells from peripheral blood using the STEMCCA lentiviral vector.](http://www.ncbi.nlm.nih.gov/pubmed/23149977) J Vis Exp. 2012 Oct 31;(68). doi:pii: 4327. 10.3791/4327. PMID: 23149977
28. Ge X, Ren Y, Bartulos O, Lee MY, Yue Z, Kim KY, Li W, Amos PJ, Bozkulak EC,Iyer A, Zheng W, Zhao H, Martin KA, **Kotton DN**, Tellides G, Park IH, Yue L, Qyang Y. Modeling supravalvular aortic stenosis syndrome with human induced pluripotent stem cells. Circulation. 2012 Oct 2;126(14):1695-704. doi:10.1161. Epub 2012 Aug 22. PubMed PMID: 22914687.
29. Longmire TA, Ikonomou L, Hawkins F, Christodoulou C, Cao Y, Jean JC, Kwok LW, Mou H, Rajagopal J, Shen SS, Dowton AA, Serra M, Weiss DJ, Green MD, Snoeck HW, Ramirez MI, **Kotton DN**. “Efficient Derivation of Purified Lung and Thyroid Progenitors from Embryonic Stem Cells”. Cell Stem Cell. 2012 Apr 6;10(4):398-411. PMID: 22482505
30. Cheng X, Ying L, Lu L, Galvão AM, Mills JA, Lin HC, **Kotton DN,** Shen SS, Nostro MC, Choi JK, Weiss MJ, French DL, Gadue P. “[Self-renewing endodermal progenitor lines generated from human pluripotent stem cells”.](http://www.ncbi.nlm.nih.gov/pubmed/22482503) Cell Stem Cell. 2012 Apr 6;10(4):371-84. PMID: 22482503
31. Varma, S, Cao Y, Tagne, JB, Lakshminarayanan M, Li J, Friedman TB, Morell, RJ, Warburton D, **Kotton DN**, Ramirez MI. *Grainyhead-like* *2* Forms a Positive Feed-back Loop with *Nkx2-1* Coordinating Lung Epithelial Cell Identity, Migration and Cell-cell Interactions. Journal of Biological Chemistry. Epub 2012 Sep 6. PubMed PMID: 22955271; PubMed Central PMCID: PMC3481326.
32. Ohle S, Anandaiah A, Fabian A, Fine A, **Kotton DN**. Maintenance and repair of the lung endothelium does not involve contributions from marrow-derived endothelial precursor cells. Am J Respir Cell Mol Biol. 2012 Feb 9. [Epub ahead of print]. PMID: 22323363
33. **Kotton DN**, Muse VV, Nishino M. Case records of the Massachusetts General Hospital. Case 2-2012. A 63-year-old woman with dyspnea and rapidly progressive respiratory failure. N Engl J Med. 2012 Jan19;366(3):259-69. PubMed PMID:22256809.
34. **Kotton DN.** (Editorial) The 2012 Nobel Prize in Physiology or Medicine: Democratizing Pluripotency for Lung Researchers. American Journal of Respiratory and Critical Care Medicine. In press 2012.
35. **Kotton DN**. Next generation regeneration: the hope and hype of lung stem cell research. American Journal of Respiratory and Critical Care Medicine. In press 2012.
36. Christodoulou C, **Kotton DN**. Are embryonic stem and induced pluripotent stem cells the same or different? Implications for their potential therapeutic use. Cell Cycle. 2012 Jan 1;11(1):5-6. Epub 2012 Jan 1. PubMed PMID: 22186787.
37. Bais MV, Shabin ZM, Young M, Einhorn TA, **Kotton DN**, Gerstenfeld LC. Role of Nanog in the maintenance of marrow stromal stem cells during post natal bone regeneration. Biochem Biophys Res Commun. 2011 Nov 28. [Epub ahead of print] PubMed PMID: 22142851.
38. Wang K, Terrenoire C, Sampson KJ, Iyer V, Osteen JD, Lu J, Keller G, **Kotton DN**, Kass RS. Biophysical properties of slow potassium channels in human embryonic stem cell derived cardiomyocytes implicate subunit stoichiometry. J Physiol. 2011. Dec 15;589(Pt 24):6093-104. Epub 2011 Oct 24. PubMed PMID: 22025662.
39. ChristodoulouC, LongmireTA, ShenSS, BourdonA, Sommer CA, GadueP, SpiraA, Gouon-EvansV, Murphy GJ, Gustavo MostoslavskyG, **Kotton DN.**“Mouse embryonic and induced pluripotent stem cells display similar capacity to form definitive endoderm despite molecular differences in imprinted genes.” Journal of Clinical Investigation (in press) 2011.
40. Sahin E, Colla S, Liesa M, Moslehi J, Müller FL, Guo M, Cooper M, **Kotton D**, Fabian AJ, Walkey C, Maser RS, Tonon G, Foerster F, Xiong R, Wang YA, Shukla SA, Jaskelioff M, Martin ES, Heffernan TP, Protopopov A, Ivanova E, Mahoney JE, Kost-Alimova M, Perry SR, Bronson R, Liao R, Mulligan R, Shirihai OS, Chin L, DePinho RA. “[Telomere dysfunction induces metabolic and mitochondrial compromise.](http://www.ncbi.nlm.nih.gov/pubmed/21307849)” Nature. 2011 Feb 17;470(7334):359-65. Epub 2011 Feb 9. PMID: 21307849.
41. Ikonomou L, Hemnes AR, Bilousova G, Hamid R, Loyd JE, Hatzopoulos AK, **Kotton DN**, Majka SM, Austin ED. “Programmatic Change: Lung Disease Research in the Era of Induced Pluripotency.” Am J Physiol Lung Cell Mol Physiol. 2011 Oct 7.
42. Studwell AJ, **Kotton DN**. “A shift from cell cultures to creatures: in vivo imaging of small animals in experimental regenerative medicine.” Mol Ther. 2011 Nov;19(11):1933-41
43. Siqueira MF, Flowers S, Bhattacharya R, Faibish D, Behl Y, **Kotton DN**, Gerstenfeld L, Moran E, Graves DT. “[FOXO1 modulates osteoblast differentiation.](http://www.ncbi.nlm.nih.gov/pubmed/21281751)” Bone. 2011 Jan 28. [Epub ahead of print]. PMID: 21281751
44. Novak A, Shtrichman R, Germanguz I, Segev H, Zeevi-Levin N, Fishman B, Mandel YE, Barad L, Domev H, **Kotton D**, Mostoslavsky G, Binah O, Itskovitz-Eldor J. “Enhanced reprogramming and cardiac differentiation of human keratinocytes derived from plucked hair follicles, using a single excisable lentivirus.” Cell Reprogram. 2010 Dec;12(6):665-78. Epub 2010 Oct 21. PMID: 20964482.
45. Borok Z, Whitsett JA, Bitterman PB, Thannickal VJ, **Kotton DN**, Reynolds SD, Krasnow MA, Bianchi DW, Morrisey EE, Hogan BL, Kurie JM, Walker DC, Radisky DC, Nishimura SL, Violette SM, Noble PW, Shapiro SD, Blaisdell CJ, Chapman HA, Kiley J, Gail D, Hoshizaki D. “Cell plasticity in lung injury and repair: report from an NHLBI workshop”, April 19-20, 2010. Proc Am Thorac Soc. 2011 Jun;8(3):215-22.
46. Ford C.C. and **Kotton DN.** Chapter 27: “Human Pluripotent Cells for Regenerative Medicine”. Text book: *Human Stem Cell Technology and Biology: Research Guide and Laboratory Manual.* John Wiley and Sons, Inc. in press. (2010).
47. Somers A, Jean JC, Sommer CA, Omari A, Ford CC, Mills JA, Ying L, Sommer AG, Jean JM, Smith BW, Lafyatis RA, Demierre MF, Weiss DJ, French DL, Gadue P, Murphy GJ, Mostoslavsky G, **Kotton DN**. “[Generation of Transgene-Free Lung Disease-Specific Human iPS Cells Using a Single Excisable Lentiviral Stem Cell Cassette”.](http://www.ncbi.nlm.nih.gov/pubmed/20715179) Stem Cells. 2010 Aug 16. [Epub]. PMID: 20715179.
48. Ott HC, Clippinger B, Conrad C, Schuetz C, Pomerantseva I, Ikonomou L**, Kotton D**, Vacanti JP. “Regeneration and orthotopic transplantation of a bioartificial lung. Nature Medicine. 2010 Aug;16(8):927-33. Epub 2010 Jul 13. PMID: 20628374.
49. [Wu J](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Wu%20J%22%5BAuthor%5D), [Qian J](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Qian%20J%22%5BAuthor%5D), [Li C](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Li%20C%22%5BAuthor%5D), [Kwok L](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Kwok%20L%22%5BAuthor%5D), [Cheng F](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Cheng%20F%22%5BAuthor%5D), [Liu P](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Liu%20P%22%5BAuthor%5D), [Perdomo C](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Perdomo%20C%22%5BAuthor%5D), [**Kotton D**](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Kotton%20D%22%5BAuthor%5D)**,** [Vaziri C](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Vaziri%20C%22%5BAuthor%5D), [Anderlind C](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Anderlind%20C%22%5BAuthor%5D), [Spira A](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Spira%20A%22%5BAuthor%5D), [Cardoso WV](http://www.ncbi.nlm.nih.gov/pubmed?term=%22Cardoso%20WV%22%5BAuthor%5D), [Lü J](http://www.ncbi.nlm.nih.gov/pubmed?term=%22L%C3%BC%20J%22%5BAuthor%5D). “mir-129 regulates cell proliferation by downregulating Cdk6 expression. Cell Cycle. 9(9): 1809-18. May 2010.
50. Furmanov K, Elnekave M, Lehmann D, Clausen BE, **Kotton DN**, Hovav AH. “The role of skin-derived dendritic cells in CD8+ T cell priming following immunization with lentivectors”. J Immunol. 2010 May 1;184(9):4889-97. PMID: 20357252.
51. Cao Y, Vo T, Millien G, Tagne JB, **Kotton D**, Mason RJ, Williams MC, Ramirez MI. *“*[Epigenetic mechanisms modulate thyroid transcription factor 1-mediated transcription of the surfactant protein B gene.](http://www.ncbi.nlm.nih.gov/pubmed/19906647?itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum&ordinalpos=2)”J Biol Chem. 2010 Jan 15;285(3):2152-64. Epub 2009 Nov 10.PMID: 19906647.
52. Bais M, McLeanJ, Sebastiani P, Young M, Wigner N, Smith T, **Kotton DN**, Einhorn TA, Gerstenfeld LC.“Transcriptional Analysis of Fracture Healing and the Induction of Embryonic Stem Cell-Related Genes” *PLoS One .2009.*
53. Greenhill SR and **Kotton DN**, “Pulmonary alveolar proteinosis: a bench-to-bedside story of granulocyte-macrophage colony-stimulating factor dysfunction”. Chest. 136:571-7. Aug 2009.
54. Wilson AA, Murphy GJ, Hamakawa H., Kwok LW, Srinivasan S, Hovav AH, Mulligan RC, Amar S, Suki B, and **Kotton DN**.” Amelioration of emphysema in mice through lentiviral transduction of long-lived pulmonary alveolar macrophages”. Journal of Clinical Investigation. Epub Dec 2009. PMID: 20038801
55. Sommer CA, Gianotti Sommer A, Longmire TA, Christodoulou C, Thomas DD, Gostissa M, Alt FW, Murphy GJ, **Kotton DN**, Mostoslavsky G. “Excision of Reprogramming Transgenes Improves the Differentiation Potential of iPS Cells Generated with a Single Excisable Vector.” Stem Cells. Nov 10, 2009. PMID: 19904830.
56. Gianotti-Sommer A, Rozelle SS, Sullivan S, Mills JA, Park SM, Smith BW, Iyer AM, French DL, **Kotton DN**, Gadue P, Murphy GJ, Mostoslavsky G. Generation of human induced pluripotent stem cells from peripheral blood using the STEMCCA lentiviral vector. 2013 Apr 29. StemBook [Internet]. Cambridge (MA): Harvard Stem Cell Institute; 2008. Available from http://www.ncbi.nlm.nih.gov/books/NBK133275/PubMed PMID: 23658981.
57. Sommer CA, Stadtfeld M, Murphy GJ, Hochedlinger K, **Kotton DN**, Mostoslavsky G. “iPS Cell Generation Using a Single Lentiviral Stem Cell Cassette.” Stem Cells. Dec 18, 2008 [Epub ahead of print].
58. [Pan H, Mostoslavsky G, Eruslanov E, **Kotton DN**, Kramnik I.](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=17967462&ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum) “Dual-promoter lentiviral system allows inducible expression of noxious proteins in macrophages”. J Immunol Methods. 329(1-2):31-44. Jan 2008.
59. [Wilson AA, Kwok LW, Hovav AH, Ohle SJ, Little FF, Fine A, **Kotton DN**.](http://www.ncbi.nlm.nih.gov/pubmed/18323534?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum) “Sustained Expression of α1-antitrypsin After Transplantation of Manipulated Hematopoietic Stem Cells”. Am J Respir Cell Mol Biol. 39(2):133-41. Aug 2008.
60. [Murphy J](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Murphy%20J%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlusDrugs1), [Summer R](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Summer%20R%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlusDrugs1), [Wilson AA](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Wilson%20AA%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlusDrugs1), [**Kotton DN**](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Kotton%20DN%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlusDrugs1), [Fine A](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=Search&Term=%22Fine%20A%22%5BAuthor%5D&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlusDrugs1). “The Prolonged Life-Span of Alveolar Macrophages.” Am J Respir Cell Mol Biol. 38(4):380-5. April 2008.
61. Cardoso WV, and **Kotton DN**. “Specification and Patterning of the Respiratory System.” StemBook. 2008.
62. **Kotton DN**, Fine A. “Lung Stem Cells”. Cell & Tissue Research. 331(1):145-56. Jan 2008.
63. Wilson AA, **Kotton DN**. “Another notch in stem cell biology: Drosophila intestinal stem cells and the specification of cell fates.” Bioessays. 30(2): 107-109. Feb 2008.
64. Murphy GJ, Mostoslavsky G, **Kotton DN**, and Mulligan RC. “Exogenous Control of Mammalian Gene Expression via Modification of Translational Termination.” Nature Medicine 12(9):1093-9. Sep 2006.
65. **Kotton DN,** Fabian AJ, Mulligan RC. “Failure of Bone Marrow to Reconstitute Lung Epithelium.” Am J Respir Cell Mol Biol. 33:328-334. Oct 2005.
66. **Kotton DN**, Fabian AJ, Mulligan RC. “A novel stem cell population in adult liver with potent hematopoietic reconstitution activity.” Blood. 106:1574-1580. Sept 2005.
67. Mostoslavsky G, **Kotton DN**, Fabian AJ, Grey JT, Mulligan RC. “Efficiency of transduction of highly purified hematopoietic stem cells by lentiviral and retroviral vectors under conditions of minimal in vitro manipulation.” Molecular Therapy 11(6):932-40. June 2005.
68. Summer R, **Kotton DN**, Liang S, Fitzsimmons K, Sun X, Fine A. “Embryonic lung side population cells are hematopoietic and vascular precursors”. Am J Respir Cell Mol Biol. 33:32-40. July 2005.
69. Summer R, **Kotton DN**, Sun X, Fitzsimmons K, and Fine A. “The Origin and Phenotype of Lung Side Population Cells.” Am J Physiol Lung Cell Mol Physiol. Mar 2004.
70. **Kotton DN**, Summer R, and Fine A. “Lung stem cells: New paradigms.” Exp Hematol. 32(4): 340. Apr 2004.
71. Summer R, **Kotton DN**, Sun X, Ma B, Fitzsimmons K, Fine A. “Side population cells and Bcrp1 expression in lung.” Am J Physiol Lung Cell Mol Physiol. 285(1):L97-104. July 2003.
72. **Kotton D** and Fine A. “Derivation of lung epithelium from bone marrow cells.” Cytotherapy. 5(2):169-73. May 2003.
73. **Kotton DN**, Summer RS, Sun X, Ma BY, Fine A. “Stem cell antigen-1 expression in the pulmonary vascular endothelium.” Am J Physiol Lung Cell Mol Physiol. 284(6):L990-6. June 2003.
74. **Kotton DN**, Ma BY, Cardoso, WV, Sanderson EA, Summer, RS, Williams MC, and Fine A. “Bone Marrow-Derived Cells as Progenitors of Lung Alveolar Epithelium.” Development 128: 5181-5188. December 2001.
75. **Kotton D**, Kotton B, Itani AL. “Nontraumatic Carotid-Ophthalmic Aneurysm Presenting as Recurrent Epistaxis.” American Journal of Rhinology 9:1:9-13. January 1995.

**Invited Lectures and Presentations**

1. Invited speaker, The Scientist, webinar and expert panelist. “Understanding Stem Cells: One Cell at a Time”. August 19th, 2022.
2. Invited speaker, American Thoracic Society, Annual meeting, San Francisco. Patient information lecture. “Stem cells and lung disease: what every patient should know.” May, 2022
3. Invited plenary speaker. Lung Epithelial-Mesenchymal FUSION Conference, “Generation of lung specific mesenchyme from pluripotent stem cells.” Cancun, Mexico, May, 2022
4. Invited speaker, Cincinnati CUSTOM (Center for stem cells and organoid medicine) Conference. “Pluripotent Stem Cell for Modeling and Treating Lung Disease.” April 2022.
5. Gordon Research Conference on Lung Development, Injury, and Repair. Invited speaker. “Pluripotent stem cells to model and treat lung disease.” New Hampshire, October 2021.
6. Till and McCullough Stem Cell Meeting. Invited speaker. “Pluripotent stem cells as models of lung development and disease.” Ontario, Canada. 2021.
7. Visiting Professor. Rutgers University. 2021.
8. Invited speaker. UCSF Graduatge Program in Molecular Biology. “Pluripotent stem cells to model and treat lung disease.” San Francisco, CA. 2021.
9. Children’s Interstitial and Diffuse Lung Disease Research Newtork. Special Interest Group Meeting. Invited Keynote Speaker. “Lung Organoids to Model chILD.” Via Zoom. Dec 3rd, 2020.
10. Carnegie Mellon University. Biomedical Engineering Department seminar series. Invited speaker. “Pluripotent stem cells for modeling lung development and disease.” Pittsburg, PA via Zoom. Nov 12th, 2020.
11. University of Pennsylvania. Lung Biology Institute Annual Symposium. Invited Keynote Speaker. “Pluripotent stem cells for modeling lung development and disease.” Philadelphia, PA via Zoom. Oct 28, 2020.
12. Evans Days. Department of Medicine Invited Speaker. “Stem cell models of COVID-19.” Boston Medical Center/Boston University via Zoom. Boston, MA via Zoom. Nov 4th, 2020.
13. Department of Endocrinology Grand Rounds. Invited Speaker. “Thyroid Regeneration via Transplantation of Pluripotent Stem Cells.” Boston Medical Center/Boston University School of Medicine. Boston, MA via Zoom. Oct 19th, 2020.
14. American Thoracic Society annual meeting. Seminar series on transformative discoveries. Invited speaker. “Derivation of Self-Renewing Alveolar Type 2 Cells from Human Pluripotent Stem Cells.” Via Zoom. Aug 5th, 2020.
15. Department of Medicine, Grand Rounds. Invited Speaker. Boston Medical Center. “Stem cells and COVID-19: What every physician should know.” Boston, MA via Zoom. Sept 18th, 2020.
16. American Thyroid Association, annual international meeting, invited plenary talk: “Thyroid Regeneration via Directed Differentiation of iPS Cells.” Chicago, IL, Nov 1, 2019.
17. MD Anderson, Grand Rounds, “Pluripotent Stem Cells to Model and Treat Lung Disease.” Houston, TX, October 30th, 2019.
18. Brown University, Department of Medicine, Brown Investigators in Respiratory Diseases (BIRDs) visiting Professor and invited speaker, “Pluripotent Stem Cells for Modeling Lung Development and Disease.” Providence, RI, October 7, 2019.
19. Boston Children’s Hospital/Harvard Medical School, Department of Newborn Medicine, Grand Rounds invited speaker. “Modeling Surfactant Dysfunction with Pluripotent Stem Cell-Derived Alveolar Epithelium.” Boston, MA. Sept 9, 2019.
20. Alpha-1 Foundation, Patient Education Day. Invited Speaker. “Future Directions in Alpha-1 Antitrypsin Deficiency Research.” Denver, CO. May 4, 2019.
21. Experimental Biology, Annual Meeting. Invited Symposium Speaker. “Pluripotent stem cell models of lung development and disease.” Orlando, FL. April 8, 2019.
22. Novartis Institutes for Biomedical Research, Respiratory Research Annual Symposium. Invited speaker. “Pluripotent stem cell models of lung disease.” June 10, 2019
23. Department of Medicine Grand Rounds. “Discovery of the Month: Differentiation of Human Pluripotent Stem Cells into Functional Lung Alveolar Epithelial Cells.” March 15, 2019.
24. Keystone meeting on Cellular Plasticity. Invited Seminar Presentation: “Pluripotent stem cells for modeling lung development and disease.” Keystone, CO, February, 2019.
25. Kyoto University International Lung Research Seminar. “Pluripotent stem cells to model lung development and disease.” Kyoto, Japan. October 29th, 2018.
26. 54th Scientific Meeting of the Japanese Medical Society for Lung Surfactant and Biological Interface. Invited Speaker. “Modeling Surfactant Dysfunction with Pluripotent Stem Cell-Derived Alveolar Epithelium.” Fukuoka, Japan. October 27th, 2018.
27. Medimmune Research Seminar. “Pluripotent stem cells to model lung development and disease.” Gaithersburg, MD. Sept 13th. 2018.
28. FASEB Lung Epithelium in Health and Disease Conference. Invited Speaker. “Pluripotent stem cells to model lung development and disease.” NY. July 31st, 2018.
29. American Thoracic Society Annual Meeting. Invited Plenary Speaker. “Derivation of alveolar type 2 cells from induced pluripotent stem cells.” San Diego, CA. May 23rd, 2018.
30. American Thoracic Society Annual Meeting. Research Achievement Award Recipient Seminar Presentation. “Pluripotent Stem Cells to Model Lung Development and Disease.” San Diego, CA. May 21st, 2018.
31. University of North Carolina, Chapel Hill. Pulmonary Section. Invited Speaker. “Pluripotent stem cell models of lung development and disease.” December 18th, 2017.
32. National Jewish Hospital, Denver, CO. Department of Medicine and Pulmonary Section Grand Rounds Speaker. “Pluripotent stem cell models of lung development and disease.” November 15th, 2017
33. University of Colorado, Denver. Pulmonary Department. Invited Speaker. “Pluripotent stem cell models of lung development and disease.” November 14th, 2017
34. AAMC Sharing Research Resources Webinar, Invited speaker as recipient of first prize for research resource sharing, October 16th, 2017.
35. Alpha-1 Education Day, Invited Speaker. “Alpha-1 Lung Disease Research Update.” Boston, MA, August 5, 2017.
36. Rare Lung Disease Consortium, Invited Speaker. “Pluripotent stem cell modeling of children’s interstitial lung disease (chILD).” San Diego, CA. July 6, 2017.
37. Brigham and Women’s Hospital, Pulmonary and Critical Care Medicine Grand Rounds Speaker. “Pluripotent stem cells to model lung development and disease.” Boston, MA, March 28, 2017.
38. Boston Children’s Hospital, Pulmonary Section, Grand Rounds Speaker. Boston, MA, December 5, 2016
39. CTSA Shared Mentoring Workshop, Tufts University, invited mentor. Boston, MA, October 21, 2016.
40. Cystic Fibrosis Foundation Therapeutics, Invited speaker. “iPS Cells for Cystic Fibrosis Research.” Lexington, MA. May 12, 2016.
41. Cleveland Clinic, Respiratory Institute Research Celebration, keynote speaker, “Lung Regeneration: An Achievable Mission.” Cleveland, OH. April 29, 2016.
42. The Paul Epstein, MD Memorial Seminar. University of Pennsylvania, Center for Pulmonary Biology. “Pluripotent Stem Cells for Modeling Lung Development and Disease.” Philadelphia, PA. April 14, 2016.
43. University of Illinois at Chicago. Pulmonary Grand Rounds Speaker. “Pluripotent stem cells for modeling lung development and disease.” Chicago, IL. March 23, 2016.
44. The Hastings Center for Pulmonary Research, University of Southern California, keynote speaker for Center inaugural symposium. “Lung Regeneration: An Achievable Mission.” Los Angeles, CA. March 11, 2016.
45. University of Massachusetts Medical School, Invited Grand Rounds Speaker, Department of Medicine, “Stem Cells and Regenerative Medicine: A Primer for Physicians.” December 3, 2015, Worcester, MA.
46. The Channing Institute, Harvard Medical School, Invited Grand Rounds Speaker, November, 17, 2015. Boston, MA
47. Stanford University, Division of Pulmonary and Critical Care Medicine, Grand Rounds Speaker. “Lung Regeneration.” Palo Alto, CA. November, 13, 2015.
48. Cold Spring Harbor-Asia/International Society for Stem Cell Research. Invited Featured Speaker. “Pluripotent stem cells for reconstitution of endodermal organ function.” Suzhou, China. October 22, 2015.
49. Pediatric Rare Lung Disease: NHLBI/NIH workshop. Invited Speaker. “iPS cells for modeling pediatric rare lung diseases.” Bethesda, MD. September 3-4. 2015.
50. Vermont Lung Stem Cell Meeting. Panel Discussion Leader. July 28 2015. Burlington, VT.
51. American Thoracic Society, President’s Discovery Series featured speaker. “Lung Regeneration: An Achievable Mission.” May 18, 2015. Denver, CO.
52. American Thoracic Society Center for Career Development, annual meeting panelist/speaker. “Clinician-Scientist Careers.” May 18, 2015. Denver, CO.
53. Children’s Interstitial Lung Disease (ChILD) Foundation, 11th annual conference, invited speaker. “Induced Pluripotent Stem Cells for modeling and treating ChILD.” July 19, 2015. Boston, MA.
54. American Society for Investigative Pathology, annual meeting, invited seminar speaker. “Pluripotent stem cells for modeling lung disease.” Boston, MA, March 28th, 2015.
55. Framingham Heart Study/NHLBI. Invited SHARe Seminar Speaker. “Pluripotent Stem Cells for modeling development and disease.” Framingham, MA. March 3rd, 2015.
56. Keystone Meeting: Endoderm Lineages in Development and Disease. Session Chair: “Stem Cell-derived endoderm organs.” February 12th, 2015. Keystone, CO.
57. Keystone Endoderm Meeting. Invited speaker. “Generation of functional, transplantable thyroid progenitors from pluripotent stem cells.” February 10th, 2015. Keystone, CO.
58. Proteostasis Therapeutics Inc, Seminar speaker, “Pluripotent stem cells for disease modeling and therapeutic development.” Cambridge, MA. Feb. 5, 2015.
59. Biogen-Idec, invited seminar speaker. “Pluripotent stem cells for modeling disease and personalized medicine.” January 8th, 2015, Boston, MA.
60. Boston University School of Medicine, Department of Pathology, Grand Rounds Speaker, “Pluripotent Stem Cells for Modeling Disease.” Boston, MA. February 4, 2015.
61. Boston University/Boston Medical Center, Department of Medicine, Grand Rounds Speaker, “Stem cells and regenerative medicine: a primer for physicians.” Boston, MA. Jan. 30, 2015
62. American College of Rheumatology Annual Meeting, invited symposium speaker: Lung Regeneration and Cell-based Therapies. Boston, MA. Nov. 17, 2014.
63. Lundberg-Kienlen Visiting Professor and annual seminar speaker: Pluripotent Stem Cells for Lung Disease. Oklahoma State University. Stillwater, OK. Nov. 12, 2014.
64. Lung Regeneration and Repair Consortium, NIH/NHBLI, invited speaker, “Induced Pluripotent Stem Cells for Lung Research,” Boston Children’s Hospital, Boston, MA. June 9-10, 2014.
65. The Giles F. Filley Lecturer at the Thomas L. Petty Aspen Lung Conference, “Applications of ES and iPS cells for lung regeneration.” Aspen, CO, June 6, 2014.
66. American Thoracic Society annual meeting, invited symposium speaker, “Pluripotent Stem Cells for Modeling Lung Disease.” San Diego, CA. May 19th, 2014.
67. International Transplant Nurses Society, Buckeye Chapter, invited speaker. “Next Generation Regeneration: A Stem Cell Primer for Clinicians.” Cleveland, OH. April 17, 2014.
68. University of Southern California, Department of Pulmonary and Critical Care Medicine, seminar speaker, “Pluripotent Stem Cells for Modeling Lung Development and Disease.” Los Angeles, CA, April 4, 2014.
69. Novartis Institute for Biomedical Research, invited symposium speaker. “Pluripotent stem cell modeling of development and disease.” Cambridge, MA. March 12, 2014.
70. Hermansky-Pudlak Syndrome Network annual meeting, “State of iPS cell research and the potential derivation of distal lung epithelia.” Uniondale, NY. March 8, 2014.
71. Mount Sinai School of Medicine, Department of Regenerative and Developmental Biology invited seminar speaker, “Pluripotent Stem Cells for Modeling Development and Disease.” New York, NY. March 6, 2014.
72. Canadian Society for Transplantation Annual meeting, opening plenary keynote speaker, “Next Generation Regeneration: Pluripotent Stem Cells for Tissue Engineering.” Montreal, Canada. February 27, 2014.
73. University of Rochester, NY. Dept of Pediatrics and Dept of Environmental and Occupational Medicine, visiting Professor seminar series, “Pluripotent Stem Cell Modeling of Lung Development and Disease.” Rochester, NY. February 4, 2014.
74. Boston VA Hospital, Department of Medicine Grand Rounds invited speaker, “Next Generation Regeneration: A stem cell primer for physicians.” January 2014.
75. GMS, Graduate Medical Sciences student interview day, keynote speaker, “Pluripotent Stem Cell Research.” Boston University School of Medicine, Boston, MA. January 16, 2014.
76. Massachusetts General Hospital Pediatric Pulmonary Grand Rounds invited speaker, “Lung Stem Cells,” November 21, 2013.
77. American Society of Histocompatibility and Immunogenetics (ASHI), Annual national meeting, opening keynote speaker, “Next Generation Transplantation: pluripotent stem cells for engineering autologous tissues.” Chicago, IL, November 18, 2013.
78. 7th Annual Yale Fibrosis Symposium, Invited speaker, “Induced Pluripotent Stem Cells.” New Haven, CT. November 15, 2013.
79. Cleveland Clinic Transplant Surgery Grand Rounds invited speaker, “Next generation transplantation: iPS cells for engineering autologous tissue.” Cleveland, OH, November 11, 2013.
80. Cedars Sinai Medical Center, Department of Medicine Grand Rounds speaker, “Pluripotent Stem Cells for modeling development and disease.” Los Angeles, CA, October 24, 2013.
81. Evans Center Research Retreat. Invited featured speaker. “Beyond the iPS Bank: post-Evans Center ARC graduation for the CReM.” Boston, MA. October 16, 2013.
82. Vanderbilt University. Division of Pulmnary and Critical Care Medicine. Grand Rounds Speaker. “Pluripotent stem cell models of lung development and disease.” Nashville, TN, October 14, 2013.
83. Beth Israel Deaconess Medical Center. Division of Endocrinology, Diabetes & Metabolism, Grand Rounds speaker. “Pluripotent stem cell models of thyroid development and disease.” Boston, MA, October 4, 2013.
84. Lung Repair and Regeneration Consortium (LRRC). Invited speaker for annual NIH symposium meeting. “Pluripotent stem cell modeling of lung development and disease.” Philadelphia, PA, Sept. 24, 2013.
85. Gordon Research Conference on Lung Development, Injury, and Repair. Invited Speaker. “Pluripotent stem cell modeling of lung development and disease.” August 22, 2013.
86. Vermont Lung Stem Cell Meeting. Invited Symposium Session Chair. “ES cells, iPS cells, and Cell Therapies for Lung Disease.” Burlingotn, VT. July 30, 2013.
87. Groote Schuur Hospital, University of Cape Town. Department of Medicine Invited Grand Rounds Speaker. “Next Generation Regeneration: A Stem Cell Primer for Physicians.” Cape Town, South Africa, July 18, 2013.
88. University of Cape Town. Department of Surgery Grand Rounds, “Next Generation Regeneration: a stem cell primer for surgeons.” Cape Town, South Africa, July 17, 2013.
89. Boston Medical Center, Leadership for Change, Invited Keynote Speaker. “Stem Cells and the Pursuit of Personalized Medicine.” Boston, MA. June 19, 2013.
90. Medical University of South Carolina, Department of Pediatrics Grand Rounds Speaker. “Next Generation Regeneration: A Stem Cell Primer for Pediatricians.” Charleston, SC. May 10, 2013.
91. Medical University of South Carolina. Pulmonary Biology Seminar Invited Speaker. “Stem cells to model and treat lung disease.” Charleston, SC. May 10, 2013.
92. Experimental Biology, annual international meeting, invited symposium speaker. “Origins of Cells that Contribute to Pulmonary Epithelial and Vascular Remodeling”. Boston, MA, April 22, 2013.
93. Alpha-1 Foundation 50 year Research Celebration, invited plenary speaker. “Next Generation Regeneration: in pursuit of stem cell therapies for Alphas.” University of Massachusetts/Alpha-1 Foundation, Worcester, MA, April 20, 2013.
94. Massachusetts General Hospital, Division of Gastroenterology Grand Rounds speaker, “Pluripotent Stem Cell Models of Liver and Lung Disease.” Boston, MA. April 9, 2013.
95. Association of Health Care Journalists, annual national meeting invited speaker, “Stem Cells: Hope or Hype?” Boston, MA, March 15, 2013.
96. Massachusetts General Hospital, Department of Medicine Grand Rounds invited speaker, “Next Generation Regeneration: A Stem Cell Primer for Physicians.” Boston, MA, February 14, 2013.
97. World iPS Cell Summit, invited plenary speaker, “iPS Cell Models of Diseases Affecting Foregut Endodermal Lineages.” Boston, MA, October 31, 2012.
98. University of Pennsylvania, Institute of Environmental Medicine, Visiting Professor, “Pluripotent Stem Cell Models of Development and Disease,” Philadelphia, PA, October, 19, 2012.
99. National Institutes of Health, Grant Awardees Meeting on Tissue Engineering, invited speaker, “3D Tissue Engineering of a Biortificial Lung with iPS Cells,” Bethesda, MD, October 23, 2012.
100. Boston University School of Medicine/BMC-Boston Children’s Combined Program in Pediatrics, Grand Rounds Speaker, “Stem Cells and Regenerative Medicine: A Primer for Pediatricians.” Boston, MA, September 13, 2012.
101. Boston University Board of Trustees, Campaign Leadership Meeting, sole featured faculty speaker at the invitation of President Brown, ‘Next Generation Regeneration’, New York City, April 18, 2012
102. Pediatric & Diffuse Lung Disease in Children Research Conference. Invited Speaker. “Pluripotent Stem Cells for Childhood Interstitial Lung Diseases (ChILD).” San Diego, CA. June 14, 2012.
103. American Thoracic Society, Annual Meeting, “Stem Cells” Minisymposium Chair. San Francisco, CA. May 2012.
104. American Thoracic Society, Annual Meeting, Invited Symposium Speaker. “ARRA Stimulus Grant Awardees Presentation: Derivation of Endoderm from iPSCs.”. San Francisco, CA. May 2012.
105. American Transplant Congress, Annual Meeting. Invited Symposium Speaker and Symposium Chair, “Next Generation Transplantation: iPS Cells for Tissue Engineering.” Boston, MA. June 5, 2012
106. Pediatric Academic Societies, Annual Meeting. Invited plenary speaker, “New cell-based therapies for bronchopulmonary dysplasia.” Boston, MA. April 29, 2012.
107. Boston University Development Office, Featured Speaker at BU New England Alumni Breakfast. “An Apollo Mission For Our Time: Stem Cells, Regenerative Medicine, and BU’s Giant Step.” Mandarin Hotel, Boston, MA, Jan 24, 2011.
108. Boston University Henry M. Goldman School of Dental Medicine, Department of Molecular and Cell Biology, Invited Grand Rounds Speaker. “Pluripotent Stem Cell Modeling of Development and Disease.” Jan 14, 2012
109. Washington University School of Medicine, Visiting Professor, “Pluripotent Stem Cells in Lung Development and Disease”, St. Louis, MO, November 7, 2011.
110. Boston Medical Center, Department of Medicine, Grand Rounds Presentation, “Stem Cells and Regenerative Medicine: A Primer for Clinicians”, Boston, MA, October 28, 2011.
111. Vermont Lung Stem Cell Conference, “Pluripotent Stem Cells in Lung Development and Disease”. Burlington, VT, July 2011.
112. Newton-Wellesley Hospital, Grand Rounds Presentation, “Stem Cells and Regenerative Medicine: A Primer for Clinicians”, July 2011.
113. American Thoracic Society International Conference, Meet the Professor Invited Seminar, “Induced Pluripotent Stem Cells: Tips and Tricks for Lung Researchers,” Denver, Co, May 15, 2011
114. American Thoracic Society International Conference, Invited Symposium Lecture, “De Novo Derivation of Endodermal Lung Progenitors from Pluripotent Stem Cells”, Denver, CO, May 18, 2011.
115. American Thoracic Society International Conference, Symposium Chair, “Stem Cells and Regenerative Medicine in Lung Disease and Transplantation,” May 18, 2011.
116. American Thoracic Society International Conference, Invited Symposium Lecture, “Generation of Induced Pluripotent Stem Cell-Derived Vascular Progenitor Cells,” May 18, 2011.
117. University of Colorado Denver, Gates Center for Regenerative Medicine, Visiting Professor Lecture, “Pluripotent Stem Cells as Models of Lung Development and Disease.” March 2, 2011.
118. Boston University Development Office, Invited by University President to be Featured Speaker at West Coast Alumni Breakfast. “An Apollo Mission For Our Time: Stem Cells, Regenerative Medicine, and BU’s Giant Step.” Los Angeles, CA. Feb 2, 2011.
119. Keystone Conference on Lung Development. Santa Fe, NM. “ES and iPS Cell Models of Lung Development and Disease.” February 2011.
120. New England Journal of Medicine, Clinicopathological Conference (CPC) Discussant, “Case Records of the Massachusetts General Hospital: A 63 year old woman with dyspnea and rapidly progressive respiratory failure.” Boston, MA, January 21, 2011.
121. McEwen Centre for Regenerative Medicine. Toronto, Canada. “Pluripotent Stem Cells: Implications for Lung Disease and Development.” October 12, 2010.
122. Harvard Lung Conference. Boston, MA. “Pluripotent Stem Cells: Novel Sources of Lung Progenitors.” October 6, 2010.
123. FASEB Conference on Lung Epithelium in Health and Disease. Saxtons River, Vermont. “Directed Differentiation of ES and iPS Cells.” August 13, 2010.
124. Alpha-1 Foundation Annual Meeting. Invited Keynote Speaker. “Stem Cells and Gene Therapy for Alpha-1 Antitrypsin Deficiency.” Orlando, FL. June 13, 2010.
125. American Thoracic Society Annual Conference. Symposium Lecture. “Induced Pluripotent Stem Cells as Models of Lung Development” New Orleans, LA. May 2010.
126. Evans Center for Biomedical Research, ARC: Affinity Research Collaboratives Celebration Day, Boston University. Invited Speaker. “Advancing Regenerative Medicine with The Boston University Induced Pluripotent Stem (iPS) Cell Bank.” February 16, 2010
127. University of Southern California. Pulmonary Grand Rounds Speaker. “Induced Pluripotent Stem Cells for the Study of Lung Development and Disease.” February 5, 2010.
128. Alpha-1 Foundation, Alpha-1 Patient Education Day. Invited Speaker. “Stem cell and gene therapy research for Alpha-1 Antitrypsin Deficiency”. Boston, MA. September 12, 2009.
129. Vermont Lung Stem Cell Conference (NIH/NHLBI Sponsored). Invited Speaker. “ES and iPS Cells: A Future Source of Lung Epithelial Progenitors?” Burlington, VT. July 2009.
130. American Thoracic Society Annual Conference, Post Graduate Course invited lecture, San Diego, CA. “Induced Pluripotent Stem (iPS) Cells: Implications for Pulmonologists” May 2009.
131. American Thoracic Society Annual Conference. Symposium Lecture. “Induced Pluripotent Stem Cells: A Future Source of Lung Progenitors?” San Diego, CA. May 2009.
132. American Society for Investigative Pathology (AISP) Annual Meeting, Invited Speaker. “iPS Cells: A Future Source of Lung Epithelial Progenitors?” New Orleans, LA. March 2009.
133. NIH/NHLBI: Lung Stem Cell Biology and Cell Based Therapy Meeting. “Induced Pluripotent Stem (iPS) Cells: A Future Source of Lung Progenitors?”. University of Illinois, Chicago, IL. Nov. 7, 2008.
134. University of Massachusetts, Worcester, Department of Medicine: Research Grand Rounds. “Gene Delivery to Alveolar Macrophages in vivo.” June 4, 2008.
135. American Thoracic Society Annual Conference, Post Graduate Course invited lecture, Toronto, Canada, “Pulmonary hypertension: endothelial progenitor cells are part of the problem.” May 2008.
136. Tufts Medical Center, Pulmonary and Critical Care Medicine, Boston, MA, “Stem cell strategies to reconstitute the alveolar epithelium.” March 19, 2008.
137. Massachusetts General Hospital, Division of Transplant Surgery Grand Rounds, Boston, MA, “Stem cells and transplant surgeons: friends or foes?” Jan 22, 2007.
138. American Thoracic Society Annual Conference, Symposium Lecture, San Francisco, CA, “Stem cells to reconstitute the lung alveolus.” May 2006.
139. University of Cincinnati, Cincinnati Children’s Medical Center, Department of Pulmonary Biology, Cincinnati, OH, “Embryonic Stem Cell Modeling of Early Lung Lineage Specification,” Sept, 2006.
140. University of Cincinnati, Cincinnati Children’s Medical Center, Division of Pediatric Surgery, Visiting Professor, “Understanding Stem Cells, Clinical Relevance for the Surgeon,” Cincinnati, OH, Sept, 2006.
141. Massachusetts General Hospital, Gastroenterology Grand Rounds, Boston, MA, “A novel stem cell population in adult liver with potent hematopoietic reconstitution activity.” Nov. 2005.
142. American Thoracic Society Annual Conference, Symposium Lecture, San Diego, CA, “Stem cells and alveolar repair.” May 2005.
143. University of Pennsylvania, Pulmonary and Critical Care Division, Philadelphia, PA, “Stem Cell-Based Strategies to Reconstitute the Alveolus.” Jun 2005.
144. American Thoracic Society Annual Conference, Symposium Lecture, Orlando, Florida, “Stem Cell-Based Strategies to Reconstitute the Alveolus.” May 23, 2004.
145. Caritas-Carney Hospital, Medical Grand Rounds, Boston, MA, “Understanding Stem Cells: Clinical Relevance for the Internist.” 2004.
146. Long Island Jewish Health System, Department of Surgery Grand Rounds, “Understanding Stem Cells: Clinical Relevance for the Surgeon.” February 26, 2004.
147. Association Francaise Contre Les Myopathies, Paris, France, “Cystic Fibrosis and Neuromuscular Disease: Perspectives from Cell Therapy” 2002.
148. Boston University Evans Days Research Symposium, “Marrow Stem Cells as Precursors of Alveolar Epithelium.” 2000.
149. Woods Hole Conference on Developmental Lung Biology, “Bone Marrow Stem Cells as Precursors of Alveolar Epithelium.” 1999.
150. Massachusetts Thoracic Society, “Hereditary Hemorrhagic Telangiectasia Presenting as Hypoxemia.” 1999.