Hello and Welcome back! We have had a very eventful Winter! As the weather starts to get colder and colder, let us look back on some of the accomplishments and events from October 2020 – February 2021. We will also look ahead to the upcoming events for Spring 2021!

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NEW FACES

Anica Law, MD, MS
Assistant Professor of Medicine
Pulmonary, Allergy, Sleep, and Critical Care Medicine

Kevin Brueck, PhD
Research Fellow
Bosmann Lab

Sarah Walachowski, PhD
Postdoctoral Fellow
Bosmann Lab
This winter has been a memorable one to say the least...with the emergence of new strands of COVID-19, the release of the COVID Vaccine, a presidential election, and political outbursts, it has been a very unusual and, quite frankly, exhausting winter!

We, however, have been thriving as a department and community of our own! Our research labs are filled with faculty, researchers, and trainees as research and training continues. We are also happy to announce that our clinicians have received the COVID Vaccine and now have protection! We hope that with continued vaccinations for all members of the Pulmonary Center (and everyone else), we will once again be working together in more normal fashion soon.

This winter has also brought us some pleasant news in the form of new pulmonary members, grants, awards, new babies, and a plethora of publications from faculty, and staff!
“The BU Pulmonary Center Social Justice forum (SJF) is a biweekly, hour-long (5-6pm), trainee-initiated discussion platform for all members of the BU Pulmonary Center and the larger BU community to virtually gather, educate, discuss and share their knowledge and experiences regarding different forms of social injustices including (but not limited to) racism, gender inequality, sexual orientation, immigration status, and everything in between (any relevant suggestions are welcome).

The goal of this forum is to make everyone feel more aware and empowered to make positive changes; to educate ourselves on issues our colleagues in the workplace might have to face (or have already faced).

The SJF is a safe space, meaning that all opinions are welcomed with an open mind and is an opportunity for us to get to know each other, empathize with one another, and come out as better-informed global citizens in addition to being great scientists and clinicians.

Interested participants can reach out to Anukul Shenoy for login information.

The Social Justice Forum Webpage
We recently launched a new webpage on our Pulmonary Center site to host news and upcoming events regarding the Social Justice Forum:

www.bumc.bu.edu/pulmonarycenter/sjf/
CONGRATULATIONS!

We are very proud to welcome the newest member to the Pulmonary Center!

DJ Wallman’s Son:

Mack Mayo Wallman  
Born 2/9/2021

Shelsey Johnson’s Daughter:

Winifred (“Winnie”) James Johnson  
Born 12/23/2020

Also, an update on PJ Maglione’s twins:

Stephen Nissim & Walden James  
Born 3/25/2020
Established in 1950, the University Lecture spotlights the outstanding and thought-provoking research of a Boston University faculty member. The 2020 distinguished lecturer was our own Joseph Mizgerd, ScD, Director of the BU Pulmonary Center, Professor of Medicine, Microbiology and Biochemistry, and a NEIDL investigator. The lecture was delivered Nov. 17, 2020 by Zoom due to COVID precautions, and was titled “From Cough to COVID: How Respiratory Infections Produce Problems and Our Bodies Fight Back.”

As we in the Pulmonary Center know but was summarized nicely by the President’s office, Dr. Mizgerd and his team study pulmonary immunology and its influence on acute lower respiratory tract infections. They are illuminating the regulation and function of immune cells and signals in the lung, and how variations in these parameters determine pneumonia susceptibility and outcome. He is an Outstanding Investigator of the US National Heart, Lung, and Blood Institute and an American Thoracic Society Fellow. Dr. Mizgerd has a prominent voice related to respiratory infections, serving the National Institutes of Health on lung infection-related Study Sections, Working Groups, and Boards of Scientific Counselors; the American Thoracic Society in lung infection-related courses, working groups, and committees; and the scientific community by creating a now longstanding and recurring Gordon Research Conference on the Biology of Acute Respiratory Infection.

For more information, about the University Lecture including access to a recorded version of the 2020 lecture delivered by Dr. Mizgerd, please visit the event webpage.
Dr. Chris Reardon traveled as a member of the BMC healthcare hero squad to see Tom Brady and Rob Gronkowski win another Super Bowl, courtesy of the Kraft Family and the New England Patriots organization. Dr. Reardon shares, “We had a photo shoot in Gillette Stadium with the New England Patriot cheerleaders and mascot. The trip included police escorts to and from the airports, a send-off by the Governor of Massachusetts, a meet and greet with Mr. Robert Kraft himself, and a ride on the PATRIOTS' private plane!!! We attended a concert put on just for us by Miley Cyrus with guest performances by Joan Jett and Billy Idol. The BMC squad members were treated to seats in a luxury box with a full spread of hot food and drinks throughout the game. I am not quite sure how I will be able to watch a game again in my living room after all of this royal treatment!”
How the SARS-CoV-2 Virus Hijacks and Rapidly Causes Damage to Human Lung Cells

October 7th, 2020

“There are important biological features specific to lung cells that are not reproduced by other cell types commonly used to study viral infection,” said Andrew Wilson, MD, associate professor of medicine at BUSM and CReM investigator. “Studying the virus in the context of the cell type that is most damaged in patients is likely to yield insights that we wouldn’t be able to see in other model systems.”


For more information, the full press release is available on-line:

Dr. Darrell Kotton Receives $2.4 Million NIH Grant to Study Lung Disease

December 17th, 2020

“[A] team of researchers led by Darrell Kotton, MD, the David C. Seldin Professor of Medicine, has been awarded a four-year, $2.4 million U01 grant from the National Institutes of Health/National Heart, Lung, and Blood Institute to better understand the mechanisms that initiate and perpetuate this deadly disease.

Dr. Kotton plans to develop a human, three-dimensional model system for the study of IPF using a biorepository of induced pluripotent stem cells
(iPSCs) that his team has generated from individuals with sporadic or familial pulmonary fibrosis to model IPF *in-vitro.*”

Information about this new grant is available from NIH Reporter: [Here](#)

**Faculty Named Boston Magazine “Top Docs”**

January 7th, 202

Ninety-six BUSM faculty are listed as “tops” in their respective fields. Including seven of our Pulmonary Center pulmonologists! Continue to the full article for the complete list.

*John Berk, M.D.*  
Associate Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine

*John Bernardo, M.D.*  
Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine

*Frederic Little, M.D.*  
Assistant Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine

*Arthur Theodore, M.D.*  
Clinical Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine

*Jeffrey Berman, M.D.*  
Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine

*Elizabeth Klings, M.D.*  
Associate Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine

*George O’Connor, M.D.*  
Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine

**Recent Excerpts from Pulmonary Center Spotlight Webpages**

**Past infections with other coronaviruses influence COVID-19**

Endemic coronaviruses have been causing human infections for many years, long before the recent emergence of SARS-CoV-2 which causes COVID-19. Jay Mizgerd and Manish Sagar (from the Section of Infectious Diseases) hypothesized that infections with endemic coronavirus, which are molecularly similar to SARS-CoV-2, might elicit cross-reactive immunity that influences what happens during a SARS-CoV-2 infection. They tested this hypothesis using medical records from the Boston Medical Center. They found that those who had been
diagnosed within the prior 5 years with an endemic coronavirus infection fared better during COVID-19, compared to others who were similarly tested in the same time-frame but did not have endemic coronaviruses diagnosed. The rates of SARS-CoV-2 infection were similar between the groups, as were the rates of SARS-CoV-2 hospitalization. However, those with prior coronavirus diagnoses were less likely to need ICU admission and were less likely to die. These findings suggest that immunity against endemic coronaviruses may cross-react with SARS-CoV-2 and help prevent serious infections in the lung. The study is published in the Journal of Clinical Investigation.

**COVID-19 study spanning 275 hospitals and 23 countries**

Dr. Walkey is co-Principal Investigator for the Society of Critical Care Medicine Discovery Viral Infection and Respiratory Illness Universal Study. This study, funded in part by the Gordon and Betty Moore Foundation, created an international registry that supplies de-identified clinical data from more than 40,000 patients at 275 hospitals in 23 countries for the conduct of rigorous research meant to improve the care and outcomes of patients hospitalized with COVID-19.

**Dr. O’Connor and the New Asthma Guidelines**

George O’Connor, MD, MS, a Pulmonary Center faculty member and associate editor of JAMA, and Stephanie Lovinsky-Desir, MD, MS from Columbia University, wrote an editorial in JAMA on a new update to the NIH asthma guidelines that was also published in that issue of JAMA. Drs. O’Connor and Lonvinsky-Desir provided perspective on the aspects of asthma management that were included in the guidelines update, including the intermittent use of inhaled corticosteroid in mild asthma, the single maintenance and reliever therapy (SMART) approach to long-term asthma management, the role of measuring exhaled nitric oxide in asthma management, and environmental control measures for allergic asthma. The SMART approach to asthma management, using a corticosteroid – formoterol inhaler for both regular maintenance therapy and “as needed” use to relieve asthma symptoms, is a paradigm shift in outpatient asthma management that will require changes in practice by clinicians as well as changes in medication coverage by medical payers.

**New Ways to Attack Necrotic Tuberculous Granulomas in the Lung**

Dr. Igor Kramnik published new insights about the biology of necrotic TB granulomas in the Journal of Clinical Investigation. Dr. Kramnik’s research revealed that TB susceptibility is linked to dysfunction of macrophage stress responses. They identified a mechanism of escalating stress from hyperactivity of the type I interferon pathway, which is aberrantly activated in TB patients. Interrupting the vicious cycle of the interferon-driven stress response
in macrophages using a small molecule inhibitor ISRIB reduced inflammation and damage in the lungs of MTB-infected mice. Unresolving stress plays a causal role in the progression of TB lung lesions towards necrosis. Correction of the aberrant stress response may offer a novel therapeutic strategy for shortening TB treatment and reducing pathogen transmission.

AWARDS AND ACCOMPLISHMENTS

Evans Day Awards:

Outstanding Citizenship Award:
Michael Ieong, M.D.,
Assistant Professor,
Pulmonary, Allergy, Sleepy & Critical Care Medicine

Special Recognition Teaching Award:
Matt Jones, Ph.D.,
Associate Professor,
Pulmonary, Allergy, Sleep & Critical Care Medicine

1st place
Clinical Science poster:
Mike Garcia, M.D.,
Pulmonary Fellow

1st place
Basic Science poster:
Jessie Huang, Ph.D.,
Postdoctoral Fellow

2nd place
Basic Science poster:
Anukul Shenoy, Ph.D.,
Postdoctoral Fellow

2nd place
Basic Science poster:
Michael Herriges, Ph.D.,
Postdoctoral Fellow

Evans Day Section with most abstract submissions: CReM & Computational Biomedicine
New Activities:

Katie Steiling, M.D.
Assistant Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine
New Appointment: Co-chair for a committee tasked with developing an official research statement on interventions to mitigate disparities in lung nodule care.

New Grants:

Markus Bosmann, M.D.
Associate Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine
New R01 Award: Bacterial polyphosphates in sepsis, NIH.

Finn Hawkins, M.D.
Assistant Professor of Medicine
Award: Regenerating Airway Epithelium with Basal Cells Derived from Human iPSCs, The Cystic Fibrosis Foundation.

Darrell Kotton, M.D.
Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine
& Andrew Wilson, M.D.
Associate Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine
Grant Supplement: Derivation of lung epithelia from iPS cells for advanced disease modeling, NHLBI.

Darrell Kotton, M.D.
Professor, Pulmonary, Allergy, Sleep & Critical Care Medicine
Grant: Understanding the mechanisms that initiate and perpetuate Idiopathic pulmonary fibrosis (IPF), NIH.

Saravanan Subramaniam, Ph.D.
Research Assistant Professor
Aniara Coagulation Research Grant: Complement -mediated inflammation and coagulation in SARS-CoV-2 infection, Aniara Diagnostica.
UPCOMING EVENTS

**Gordon Snider Lecture**
4/14/2021
3:30pm

Naftali Kaminski, MD
Yale School of Medicine
Professor of Medicine (Pulmonary); Section Chief, Pulmonary, Critical Care & Sleep Medicine
Boehringer Ingelheim Pharmaceuticals, Inc.

(During the regular Pulmonary CCR Conference Zoom meeting time. Please contact linstein@bu.edu for Zoom login details.)

**Jerry Brody Lecture**
Lecture Date TBD

Wellington Cardoso, M.D., PhD
Columbia University School of Medicine
Professor of Medicine and of Genetics and Development; Director of the Columbia Center for Human Development

**Mary Williams Lecture**
Lecture Date TBD

Nicholas Heaton, PhD
Duke University School of Medicine
Assistant Professor of Molecular Genetics and Microbiology
Member of the Duke Cancer Institute
Congratulations to the Pulmonary Center members for the following publications this quarter:


