Dear EOPH Members,

We hope everyone is staying safe and healthy as we continue to navigate and respond to the COVID-19 pandemic.

ATS has rescheduled the 2020 international conference that will be held virtually **August 5-10th**.

We have also included some resources to help everyone stay informed as to the current status of the pandemic.

Also included in this July 2020 newsletter are some of our members’ recent and “epub ahead of print” articles from the months of May 2020 to July 2020.

If you have a recent publication that you would like to share in the upcoming newsletter, please send the title and citation link to **sophia.kwon@nyulangone.org** and TID Section relevant publications to **satya.achanta@duke.edu**.

Are you interested in getting more involved with ATS and the EOPH assembly? Register **HERE** to indicate your interest!

Sincerely,

Your EOPH and TID Web Editorial Committees
Recent Publications
This section highlights some of our assembly members’ exciting research that was recently “e-published” or were submitted for inclusion in this newsletter. It is possible that our search may miss your best work, so please send your recent publications to Sophia.Kwon@nyulangone.org.

Air Pollution and Environmental Exposures

Serum-borne factors alter cerebrovascular endothelial microRNA expression following particulate matter exposure near an abandoned uranium mine on the Navajo Nation.

Association of Neutrophil to Lymphocyte Ratio With Pulmonary Function in a 30-Year Longitudinal Study of US Veterans.

The impact of measurement error in modeled ambient particles exposures on health effect estimates in multilevel analysis: A simulation study.

Comparing the performance of air pollution models for nitrogen dioxide and ozone in the context of a multilevel epidemiological analysis.

Modifiable risk factors for poor cognitive function in former American-style football players: Findings from the Harvard Football Players Health Study.

Organic dust-induced lung injury and repair: Bi-directional regulation by TNFα and IL-10.

Do Two Wrongs Make a Right? Persistent Uncertainties Regarding Environmental Selenium-Mercury Interactions.

Erythrocyte omega-3 index, ambient fine particle exposure and brain aging.

Air Pollution and Interstitial Lung Diseases: Defining Epigenomic Effects.

Air pollution and systemic inflammation in patients with suspected obstructive sleep apnea living in an urban residential area.

Particle depletion of diesel exhaust restores allergen-induced lung-protective surfactant protein D in human lungs.

Dibutyl Phthalate Augments Allergen-induced Lung Function Decline and Alters Human Airway Immunology: A Randomized Crossover Study.

Vascular effects of physical activity are not modified by short-term inhaled diesel exhaust: Results of a controlled human exposure study.

Personal strategies to minimise effects of air pollution on respiratory health: advice for providers, patients and the public.
Influenza and Other Infectious Diseases

Inhaled Corticosteroids Use and Risk of Invasive Pneumococcal Disease Risk in a Population-based Study.

Collective interactions augment influenza A virus replication in a host-dependent manner.

Neonatal and Pediatric Disease

Frequency of hand-to-head, -mouth, -eyes, and -nose contacts for adults and children during eating and non-eating macro-activities.

A prospective cohort study of in utero and early childhood arsenic exposure and infectious disease in 4- to 5-year-old Bangladeshi children.

Environmental chemical burden in metabolic tissues and systemic biological pathways in adolescent bariatric surgery patients: A pilot untargeted metabolomic approach.

Research Methods, Training, and Clinical Care

Visual Emphysema at Chest CT in GOLD Stage 0 Cigarette Smokers Predicts Disease Progression: Results from the COPDGene Study.

Statistical considerations for the analysis of massively parallel reporter assays data.

Information fraction estimation based on the number of events within the standard treatment regimen.
Asthma and Allergy

House Dust Microbiota in Relation to Adult Asthma and Atopy in a U.S. Farming Population

The Role of Aeroallergen Sensitization Testing in Asthma Management.

Methylation of cysteinyl leukotriene receptor 1 genes associates with lung function in asthmatics exposed to traffic-related air pollution.

Chronic stress and asthma in adolescents.

House dust microbiota in relation to adult asthma and atopy in a U.S. farming population.

An epistatic interaction between pre-natal smoke exposure and socioeconomic status has a significant impact on bronchodilator drug response in African American youth with asthma.

House dust microbiota in relation to adult asthma and atopy in a U.S. farming population.

Fetal Origins of Asthma: A Longitudinal Study from Birth to Age 36 Years.

July 2020
**Cigarettes, E-cigs, and other Tobacco and Cannabis Smoke Exposures**

**Predictive validity of the adult tobacco dependence index: Findings from waves 1 and 2 of the Population Assessment of Tobacco and Health (PATH) study.**

**Occupational Injuries and Exposures**

**Allergy and Lung Injury Among Rescue Workers Exposed to the World Trade Center Disaster Assessed 17 Years After Exposure to Ground Zero**
Caruana DL, Huang PH, Li JC, Cheslack-Postava K, Szema AM

**Gamma-Butyrolactone Overdose Potentially Complicated by Co-Ingestion of Industrial Solvent N-Methyl-2-pyrrolidone.**

**Evidence for Environmental-human Microbiota Transfer at a Manufacturing Facility with Novel Work-related Respiratory Disease.**

**Acute differences in blood lipids and inflammatory biomarkers following controlled exposures to cookstove air pollution in the STOVES study.**

**Evidence for Environmental-human Microbiota Transfer at a Manufacturing Facility with Novel Work-related Respiratory Disease.**

**Cellular Mechanisms**

**Ozone-derived oxysterols impair lung macrophage phagocytosis via adduction of some phagocytosis receptors.**
**Cancer**

**Novel genetic variants in genes of the Fc gamma receptor-mediated phagocytosis pathway predict non-small cell lung cancer survival.**

**Novel genetic variants of KIR3DL2 and PVR involved in immunoregulatory interactions are associated with non-small cell lung cancer survival.**

**COPD, Chronic Bronchitis, and other Chronic Lung Diseases**

**Methotrexate and rheumatoid arthritis associated interstitial lung disease.**

**Chronic Hypersensitivity Pneumonitis, an Interstitial Lung Disease with Distinct Molecular Signatures.**

**Interstitial lung abnormalities detected incidentally on CT: a Position Paper from the Fleischner Society.**

**Increased airway iron parameters and risk for exacerbation in COPD: an analysis from SPIROMICS.**

**SARS-CoV-2 / COVID-19**

**The Promise and Challenge of Home Health Services During the COVID-19 Pandemic.**
Improving Clinical Trial Enrollment - In the Covid-19 Era and Beyond.

Gene expression and in situ protein profiling of candidate SARS-CoV-2 receptors in human airway epithelial cells and lung tissue.

Another invisible enemy indoors: COVID-19, human health, the home, and United States indoor air policy.


"The Most Dangerous Strain".
Updates from Terrorism and Inhalation Disasters Section

The highly controversial deployment of tear gas agents against protestors during COVID-19 pandemic continues around the country...


Sven-Eric Jordt, PhD, Associate Professor of Anesthesiology at Duke University School of Medicine shared their expert opinion on toxic effects of tear gas agents, potential cumulative effects during COVID-19 pandemic, and possible spike in the number of positive COVID-19 cases.

ATS calls for moratorium on tear gas use

June 11, 2020 -- The American Thoracic Society calls for a moratorium on the use of tear gas and other chemical agents deployed by law enforcement against protestors participating in demonstrations, including current campaigns sparked by the death of George Floyd.

“The use of chemical crowd control agents is outlawed in the time of war. They cause significant short- and long-term respiratory health injury and likely propagate the spread of viral illnesses, including COVID-19,” said ATS President Juan C. Celedón, MD, DrPH, ATS.

“Recent research calls into question the assumed safety of tear gas such as 2-chlorobenzalmalononitrile (CS), and the highly concentrated pepper oil used in exploding shells and grenades,” said Sven-Eric Jardt, PhD, a leading researcher in tear gas and related lung injury. Those studies have identified chronic bronchitis, compromised lung function, and acute lung injury (in military recruits) as consequences of tear gas exposure.


ATS 2020 VIRTUAL is coming in August 5-10

Register today for ATS virtual meeting:

**Fees & Categories**

All Members (including members in-training): $50.00
Non-Members (including non-members in-training): $150.00

**Registration Fees Include**

Registration for ATS 2020 Virtual Conference includes access to all available virtual content through November 10, 2020.

**ATS Refund Policy**

For ATS 2020 Virtual, all conference registration sales are final. The ATS will not offer refunds.

**Check out session information:** [https://conference.thoracic.org/program/session-information/index.php](https://conference.thoracic.org/program/session-information/index.php)

**The relevant ATS 2020 Virtual sessions for TID membership –**

Session: **A90 - EMERGING DANGERS FROM E-CIGARETTES: LET'S HAVE A VAPE DEBATE**
Chairs: Ilona Jaspers, Ph.D and Sven Eric Jordt, Ph.D

Date & Time: **Wednesday, 08/05/2020, 08:30 AM - 10:30 AM**
Room: **ATS 2020 Virtual**

Session: **C11: EVOLVING KNOWLEDGE OF THE EFFECT OF CANNABIS AND CANNABINOIDS ON THE LUNG**
Chairs: Kristina Bailey, MD and Laura E Crotty Alexander

Date & Time: pending
Room: **ATS 2020 Virtual**

Session: **D85: ENVIRONMENTAL EXPOSURES AND THE AIRWAY MICROBIOME**
Chairs: Christopher Carlsten, MD and Ilona Jaspers Ph.D

Date & Time: pending
Room: **ATS 2020 Virtual**

**ATS 2021 is calling for input:** [https://conference.thoracic.org/program/call-for-input/session-types.php](https://conference.thoracic.org/program/call-for-input/session-types.php)
Recent publications from TID members and relevant to TID section:

DOI: https://doi.org/10.1016/S0140-6736(20)31560-9. (https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31560-9/fulltext#.XxHoXXefJ-4.twitter)

*Five Decades of Global Chemical Terror Attacks: Data Analysis to Inform Training and Preparedness.*

*Analysis of Chemical Simulants in Urine: A Useful Tool for Assessing Emergency Decontamination Efficacy in Human Volunteer Studies.*

*Impact of Local High Doses of Radiation by Neutron Activated Mn Dioxide Powder in Rat Lungs: Protracted Pathologic Damage Initiated by Internal Exposure.*

*Dose Assessment for Atmospheric Discharge of Long-Lived Radionuclides in Nuclear Power Plant Decommissioning.*

*Cooking Gas Explosions As Cause Of Burns Among Patients Admitted To A Regional Burn Centre In Nigeria.*


*Specific sources of health risks caused by size-resolved PM-bound metals in a typical coal-burning city of northern China during the winter haze event.*
Impact on rats from acute intratracheal inhalation exposures to WTC dusts.
Cohen MD, Prophete C, Horton L, Sisco M, Park SH, Lee HW, Zelikoff J, Chen LC.
PMID: 32448006

Efficacy and safety of inhaled budesonide on prevention of acute mountain sickness during emergent ascent: a meta-analysis of randomized controlled trials.
Nepal G, Yadav JK, Rehrig JH, Bhandari N, Baniya S, Ghimire R, Mahotra N.
PMID: 32440464 Free PMC article.

Global Characteristics of Chemical, Biological, and Radiological Poison Use in Terrorist Attacks.
Aydin B.
PMID: 32238210

Application of calcium nebulization for mass exposure to an accidental hydrofluoric acid spill.
PMID: 32209280

Environmental and Health Impacts of Air Pollution: A Review.
Manisalidis I, Stavropoulou E, Stavropoulos A, Bezirtzoglou E.
PMID: 32154200 Free PMC article. Review.

Circulating and tissue biomarkers as predictors of bromine gas inhalation.
PMID: 32645215

In Vitro Interaction of Organophosphono- and Organophosphorothioates with Human Acetylcholinesterase.
Worek F, Thiermann H, Koller M, Wille T.
PMID: 32630769

Broad spectrum treatment for ocular Insult induced by organophosphate chemical warfare agents.
Gore A.
PMID: 32579218

The National Institutes of Health Chemical Countermeasures Research Program (NIH CCRP): A collaborative opportunity to develop effective and accessible chemical medical countermeasures for the American people.
PMID: 32573018
The Role of a Regional Poison Center in Assessing and Managing Disaster Risk.
Jacobitz KL, Nailon RE.

Binding of Organophosphorus Nerve Agents and Their Simulants to Metal Salts.
Gold J, Szilvási T, Abbott NL, Mavrikakis M.


The Effects of Gamma Irradiation on Chemical Biomarker Recovery from Mixed Chemical/Biological Threat Exposure Specimens.

Successful use of extracorporeal membrane oxygenation in acute respiratory distress syndrome following accidental chlorine gas inhalation at a swimming pool.

Metal oxide nanoparticles for the decontamination of toxic chemical and biological compounds.
Denet E, Espina-Benitez MB, Pitault I, Pollet T, Blaha D, Bolzinger MA, Rodriguez-Nava V, Briançon S.

Global Characteristics of Chemical, Biological, and Radiological Poison Use in Terrorist Attacks.
Aydin B.

Intramuscular aminotetrazole cobinamide as a treatment for inhaled hydrogen sulfide poisoning in a large swine model.

TID section is on twitter. Follow TID section on @ATSTIDSection
TID section is soliciting ideas for putting together podcasts, webinars, and journal clubs. Please contact Satya Achanta, DVM, PhD, DABT (satya.achanta@duke.edu), Web Director of TID section, if you are interested to lead any of these activities. Also, please email your publications, news articles, or presentations pertinent to TID section to include in the future EOPH newsletters.
COVID-19 RESOURCES

ATS Resources

The ATS Clinical Problems (CP) Assembly has a closed, internal Facebook page hosted by MeiLan Han that is being consistently updated with COVID-19 updates/resources for rapid dissemination among members. All ATS members may have access to this page—you will need to enter your ATS member number to join. The link to the Facebook page is HERE. A major goal of this resource is to also add to knowledge by posting experiences with clinical care associated with COVID-19, as well as more general news regarding coronavirus.

Disclaimer: Staff will be monitoring postings but will not be able to judge content, and thus, these are simply platforms for exchange, with everyone understanding that nothing posted is official, ATS-vetted information. Also, please keep in mind HIPPA regulations when sharing information.

Other Resources

The New York Times has made their very extensive, frequently updated, coronavirus coverage freely available without a subscription. You can access this information by navigating from the New York Times homepage, or click the link HERE to go directly to the resources.

The Center for Systems Science and Engineering at Johns Hopkins University is providing a map of the global spread of COVID-19 that updates regularly. You can access the site HERE.

Advice for Pulmonary Function Testing

Very important PFT advice that you might have missed was issued late last month by members of the ATS Proficiency Standards for Pulmonary Function Testing Committee, called "Advice Regarding COVID 19 For Pulmonary Function Laboratories." Its link is here: HERE - you have to scroll to the bottom of the page.

https://www.thoracic.org/professionals/clinical-resources/disease-related-resources/pulmonary-function-laboratories.php

It states that:

“Concern has been raised that pulmonary function testing could represent a potential avenue for COVID 19 transmission due to the congregation of patients with lung disease and because of the potential for coughing and droplet formation surrounding pulmonary function testing procedures.”

The Committee recommends “that pulmonary function testing be limited to tests that are only essential for immediate treatment decisions, that the type of pulmonary function testing be limited to the most essential tests when possible, and that measures to protect both the staff and individuals being tested should be put in place.”

Based on ACOEM’s and CAOHC’s recommendations about postponing non-essential routine spirometry and hearing tests, OSHA issued an enforcement guidance on postponing various testing and training activities during the pandemic. News release here: https://www.osha.gov/news/newsreleases/national/04162020-0
ATS 2020 International Conference

ATS 2020 Virtual! Is scheduled for Aug 5-10th

CLICK HERE FOR MORE INFO
ATS 2020 ABSTRACTS ONLINE

The ATS 2020 Virtual program features:
✓ Clinical Trials
✓ The Clinical Year in Review Series
✓ Case-Based Presentations
✓ Infectious Diseases
✓ Lung Regeneration (and Repair)
✓ Environmental and Inhaled Factors That Contribute to Lung Injury
✓ Lung Injury and Repair Mechanisms
✓ Clinical Diagnosis and Management: Lung Disease, Sleep, and Critical Care
✓ Big Data from Clinic and Cells — Managing Disease
✓ ePosters of the Scientific Research, Case Reports, and Late Breaking Abstracts

PLEASE REGISTER AT

ATS VIRTUAL 2020 Registration

ATS 2020 Virtual will also features an exhibit hall and a variety of industry-sponsored learning opportunities.

Juan C. Celedón, MD, DrPH, ATSF
Lynn M. Schnapp, MD, ATSF, President-Elect
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