Dear EOPH members,

In this February issue of the EOPH newsletter, we share some of our members’ recent “epub ahead of print” articles, information about the ATS 2018 Secretary-Treasurer Election, and some exciting news regarding Ms. Maya Rajavel, a student in Dr. Kent Pinkerton’s lab at UC Davis.

Please let us know about your recent publications, awards, and achievements. Also, we would appreciate suggestions or feedback for future issues at kbailey@unmc.edu or tnordgren@unmc.edu.

Sincerely,

Your web committee co-chairs,

Kristina Bailey and Tara Nordgren
Recent publications

This section highlights some of our assembly members’ exciting research that was recently ‘e-published.” It is possible that our search may miss your best work, so please send your recent publications to kbailey@unmc.edu or tara.nordgren@medsch.ucr.edu

Air Pollution, Ozone, and Ultrafine Particles

Cromar KR, Gladson LA, Ghazipura M, Ewart G.

News on Climate change, air pollution and allergic trigger factors of asthma.
D’Amato M, Cecchi L, Annesi-Maesano I, D’Amato G.

Local- and regional-scale air pollution modelling (PM$_{10}$) and exposure assessment for pregnancy trimesters, infancy, and childhood to age 15 years: Avon Longitudinal Study of Parents And Children (ALSPAC).
Environ Int. 2018 Jan 28;113:10-19.

Ambient Air Pollution and Chronic Bronchitis in a Cohort of U.S. Women.
Environ Health Perspect. 2018 Feb 6;126(2):027005.

Ambient air pollution, adipokines, and glucose homeostasis: The Framingham Heart Study.
Environ Int. 2018 Feb;111:14-22.

Temporal variations of fine and coarse particulate matter sources in Jeddah, Saudi Arabia.
Lim CC, Thurston GD, Shamy M, Alghamdi M, Khoder M, Mohorjy AM, Alkhalaf AK, Brocato J, Chen LC, Costa M.

Effects of Simulated Smog Atmospheres in Rodent Models of Metabolic and Immunologic Dysfunction.
McGee Hargrove M, Snow SJ, Luebke RW, Wood CE, Krug JD, Krantz QT, King C, Copeland CB, McCullough SD, Gowdy KM, Kodavanti UP, Gilmour MI, Gavett SH.

Persistent organic pollutant emission via dust deposition throughout Pakistan: Spatial patterns, regional cycling and their implication for human health risks.
Ozone-Induced Vascular Contractility and Pulmonary Injury are Differentially Impacted by Diets Enriched with Coconut Oil, Fish Oil, and Olive Oil.

Agricultural-Related Lung Diseases

An approach to the asthma-protective farm effect by geocoding: Good farms and better farms.

Effects of agricultural organic dusts on human lung-resident mesenchymal stem (stromal) cell function.
Nordgren TM, Bailey KL, Heires AJ, Katafiasz D, Romberger DJ.

Spatial Variation of Endotoxin Concentrations Measured in Ambient PM$_{10}$ in a Livestock-Dense Area: Implementation of a Land-Use Regression Approach.
de Rooij MMT, Heederik DJJ, van Nunen EJHM, van Schothorst IJ, Maassen CBM, Hoek G, Wouters IM.

Allergic Diseases

Treatment of allergic rhinitis using mobile technology with real world data: The MASK observational pilot study.

Methylene-tetrahydrofolate reductase contributes to allergic airway disease.
Eyring KR, Pedersen BS, Maclean KN, Stabler SP, Yang IV, Schwartz DA.

Asthma

The phosphatidylinositol 3-kinase (PI3K) signaling pathway is a determinant of zileuton response in adults with asthma.
Pharmacogenomics J. 2018 Jan 3.

Multiancestry association study identifies new asthma risk loci that colocalize with immune-cell enhancer marks.

Outdoor pollen is a trigger of child and adolescent asthma ED presentations: a systematic review and meta-analysis.
School exposure and asthma.
Esty B, Phipatanakul W.

Prevalence and features of asthma-chronic obstructive pulmonary disease overlap in
Northern Italy general population.
Guerriero M, Caminati M, Viegi G, Senna G, Pomari C.

Fluid Balance is Associated with Clinical Outcomes and Extravascular Lung Water in Children with
Acute Asthma Exacerbation.
Kantor DB, Hirshberg EL, McDonald MC, Griffin J, Buccigrosso T, Stenquist N, Smallwood CD, Nelson KA, Zurakowski D, Phipatanakul W, Hirschhorn JN.

The role of local CpG DNA methylation in mediating the 17q21 asthma-susceptibility
GSDMB/ORMDL3 expression quantitative trait locus.
Kothari PH, Qiu W, Croteau-Chonka DC, Martinez FD, Liu AH, Lemanske RF Jr., et al.

Gene-environment interaction between an IL4R variant and school endotoxin exposure contributes to
asthma symptoms in inner-city children.
Lai PS, Massoud AH, Xia M, Petty CR, Cunningham A, Chatila TA, Phipatanakul W.

The efficacy and safety of mannitol challenge in a workplace setting for assessing asthma prevalence.
de Menezes MB, Ferraz E, Brannan JD, Martinez EZ, Vianna EO.

Obese Asthmatics are Characterised by Altered Adipose Tissue Macrophage Activation.
Periyalil HA, Wood LG, Wright TA, Karihaloo C, Starkey MR, Miu AS, Baines KJ, Hansbro PM, Gibson PG.

Factors reducing omalizumab response in severe asthma.

Bioinformatics and Data Sharing

LipSpin: A New Bioinformatics Tool for Quantitative 1H NMR Lipid Profiling.

ClinVar: improving access to variant interpretations and supporting evidence.
Biomarkers

Pharmacogenomic biomarkers do not predict response to drotrecogin alfa in patients with severe sepsis.

Cancer

Whole blood FPR1 mRNA expression predicts both non-small cell and small cell lung cancer.
Int J Cancer. 2018 Jan 5.

Adaptive reprogramming of NK cells in X-linked lymphoproliferative syndrome.

Mod Pathol. 2018 Jan 12.

Nitrate in drinking water and colorectal cancer risk: A nationwide population-based cohort study.
Schullehner J, Hansen B, Thygesen M, Pedersen CB, Sigsgaard T.

Cardiovascular Disease

Detection of Deep Vein Thrombosis by Follow-up Indirect Computed Tomography Venography after Pulmonary Embolism.
Lee HJ, Cha SI, Shin KM, Lim JK, Yoo SS, Lee SY, Lee J, Kim CH, Park JY.

Li TT, Li TH, Peng J, He B, Liu LS, Wei DH, Jiang ZS, Zheng XL, Tang ZH.

Carotid artery ultrasound texture, cardiovascular risk factors, and subclinical arterial disease: the Multi-Ethnic Study of Atherosclerosis (MESA).
Mitchell CC, Korcarz CE, Tattersall MC, Gepner AD, Young RL, Post WS, Kaufman JD, McClelland RL, Stein JH.

Defining the relationship between COPD and CVD: what are the implications for clinical practice?
Morgan AD, Zakeri R, Quint JK.
Plasma n-3 and n-6 Fatty Acids Are Differentially Related to Carotid Plaque and Its Progression: MESA (the Multi-Ethnic Study of Atherosclerosis).
Steffen BT, Guan W, Stein JH, Tattersall MC, Kaufman JD, Sandfort V, Szklo M, Tsai MY.

Chronic Obstructive Pulmonary Disease (COPD)

Smoking duration alone provides stronger risk estimates of chronic obstructive pulmonary disease than pack-years.

Chronic Obstructive Pulmonary Disease in Hispanics. A 9-Year Update.
Díaz AA, Celli B, Celedón JC.

Association of thrombocytosis with COPD morbidity: the SPIROMICS and COPDGene cohorts.


Ensemble genomic analysis in human lung tissue identifies novel genes for chronic obstructive pulmonary disease.

Human Lung DNA Methylation Quantitative Trait Loci Colocalize with COPD Genome-wide Association Loci.
Morrow JD, Glass K, Cho MH, Hersh CP, Pinto-Plata V, Celli B, Marchetti N, Criner G, Bueno R, Washko G, Choi AMK, Quackenbush J, Silverman EK, DeMeo DL.

Human airway branch variation and chronic obstructive pulmonary disease.

How Long Should We Be Vigilant Following a Hospitalization for a COPD Exacerbation?
Tan AM, Krishnan JA.
Am J Respir Crit Care Med. 2018 Jan 23.

The Long-Term Oxygen Treatment Trial for Chronic Obstructive Pulmonary Disease: Rationale, Design, and Lessons Learned.
Yusen RD, Criner GJ, Sternberg AL, Au DH, Fuhlbrigge AL, Albert RK, Casaburi R, Stoller JK,
Diesel Exhaust and Traffic Emissions


Environmental Exposure Measurements


Household Air Pollution


The short-term effects of indoor size-fractioned particulate matter and black carbon on cardiac autonomic function in COPD patients.
Environ Int. 2018 Jan 3;112:261-268.

ERS/ATS workshop report on respiratory health effects of household air pollution.
Eur Respir J. 2018 Jan 4;51(1).

The role of the indoor environment: Residential determinants of allergy, asthma and pulmonary function in children from a US-Mexico border community.
Svendsen ER, Gonzales M, Commodore A.

Intracellular Effects

Interleukin-13 stimulates production of nitric oxide in cultured human nasal epithelium.

Dietary omega-6, but not omega-3 polyunsaturated or saturated fatty acids, increase inflammation in primary lung mesenchymal cells.
Rutting S, Xenaki D, Lau E, Horvat JC, Wood LG, Hansbro PM, Oliver BG.

S-Glutathionylation of estrogen receptor alpha affects dendritic cell function.
Zhang J, Ye ZW, Chen W, Manevich Y, Mehrotra S, Ball LE, Janssen-Heininger YM, Tew KD, Townsend DM.

Lung Function and Respiratory Symptoms

Guidelines for Inclusion of Patient-Reported Outcomes in Clinical Trial Protocols: The SPIRIT-PRO Extension.

Isolated diffusing capacity reduction is a common clinical presentation in deployed Iraq and Afghanistan veterans with deployment-related environmental exposures.
Falvo MJ, Helmer DA, Klein JC, Osinubi OY, Ndirangu D, Patrick-DeLuca LA, Sotolongo AM.

Respiratory Symptoms in Young Adults and Future Lung Disease: The CARDIA Lung Study.
Am J Respir Crit Care Med. 2018 Jan 25.

Periodontal health status and lung function in two Norwegian cohorts.
Pérez Barrionuevo AM, Gómez Real F, Igland J, Johannessen A, Omenaas E, Franklin KA, Pérez Barrionuevo L, Åstrøm AN, Svanes C, Bertelsen RJ.
Cleaning at Home and at Work in Relation to Lung Function Decline and Airway Obstruction.
Am J Respir Crit Care Med. 2018 Feb 16.

Chlorine Countermeasures: Supplemental Oxygen Equals Supplemental Lung Injury?
Svendsen ER.

Occupational Health and Industrial Chemicals

Risk Factors for Declines in Kidney Function in Sugarcane Workers in Guatemala.

Respiratory effects of trichloroethylene.

Oxidative Stress as a Mechanism Involved in Kidney Damage After Subchronic Exposure to Vanadium Inhalation and Oral Sweetened Beverages in a Mouse Model.


Irritant-induced asthma to hypochlorite in mice due to impairment of the airway barrier.
Van Den Broucke S, Pollaris L, Vande Velde G, Verbeken E, Nemery B, Vanoirbeek J, Hoet P.
Arch Toxicol. 2018 Jan 24.

The Public Health Conundrum of Coal Mining.
Wagner GR.

Update on metal-induced occupational lung disease.
Wyman AE, Hines SE.

Pulmonary Hypertension

Pulmonary hypertension in interstitial lung disease: Limitations of echocardiography compared to cardiac catheterization.
Loss of KCNK3 is a hallmark of RV hypertrophy/dysfunction associated with pulmonary hypertension.

Radiation

Gilbert W. Beebe Symposium on 30 Years after the Chernobyl Accident: Current and Future Studies on Radiation Health Effects.
Samet JM, de González AB, Dauer LT, Hatch M, Kosti O, Mettler FA Jr., Satyamitra MM.

Respiratory Infections

Feasibility and yield of screening for non-communicable diseases among treated tuberculosis patients in Peru.
Byrne AL, Marais BJ, Mitnick CD, Garden FL, Lecca L, Contreras C, Yauri Y, Garcia F, Marks GB.

Association of day 4 cumulative fluid balance with mortality in critically ill patients with influenza: A multicenter retrospective cohort study in Taiwan.

Household-Contact Investigation for Detection of Tuberculosis in Vietnam.
Fox GJ, Nhung NV, Sy DN, Hoa NLP, Anh LTN, Anh NT, Hoa NB, Dung NH, Buu TN, Loi NT, Nhung LT, Hung NV, Lieu PT, Cuong NK, Cuong PD, Bestrashniy J, Britton WJ, Marks GB.

The Platelet Count can Predict In-hospital Death in HIV-negative Smear-positive Pulmonary Tuberculosis Inpatients.

GM-CSF overexpression after influenza a virus infection prevents mortality and moderates M1-like airway monocyte/macrophage polarization.

High Number of Early Respiratory Infections in Association with Allergic Sensitization to Mold promotes Childhood Asthma.
Perez Ramirez L, Wendroth H, Martin LJ, Pilipenko VV, He H, Kroner J, Ryan PH, LeMasters GK, Lockey JE, Bernstein DI, Khurana Hershey GK, Biagini Myers JM.
Miliary tuberculosis with co-existing pulmonary cryptococcosis in non-HIV patient without underlying diseases: a case report.
Sawai T, Nakao T, Koga S, Ide S, Yoshioka S, Matsuo N, Mukae H.

Infectious virus in exhaled breath of symptomatic seasonal influenza cases from a college community.

World Trade Center Firefighters

Predictive Biomarkers of Gastroesophageal Reflux Disease and Barrett's Esophagus in World Trade Center Exposed Firefighters: a 15 Year Longitudinal Study.

Blood Leukocyte Concentrations, FEV1 Decline, and Airflow Limitation. A 15-Year Longitudinal Study of World Trade Center-exposed Firefighters.

Things Worth Celebrating!

Please join us in congratulating Ms. Maya Rajavel, a high school student working in Dr. Kent Pinkerton’s lab at UC Davis. Her abstract was accepted for an oral presentation in the C16 Mini Symposium (Cigarette, E-Cigarette, and Marijuana Smoking: Human and Mouse Studies) to be held at the 2018 ATS Annual Meeting. Ms. Rajavel has volunteered in Dr. Kent Pinkerton’s lab for the last three summers. As described by Dr. Pinkerton, “Maya had just completed the 9th grade when she first started working in the laboratory. She has been truly amazing! Because of the highly impactful and significant research she completed over the past three summers, I encouraged Maya to submit an abstract to ATS.” The abstract Ms. Rajavel will be presenting is titled, “Age-related modulation of pulmonary innate immunity by environmental tobacco smoke against influenza A/PR/8/34 in mice.” We look forward to seeing her talk at the conference, and congratulations to Ms. Rajavel on this great achievement!
ATS 2018 Secretary-Treasurer Elections

The ATS Nominating Committee selected two candidates for the 2018-2019 secretary-treasurer position: Dr. John Balmes, professor of medicine at the University of California San Francisco and professor in the School of Public Health at UC Berkeley, and Dr. Lynn Schnapp, professor of medicine and division chief of Pulmonary, Critical Care, Allergy, and Sleep Medicine at the Medical University of South Carolina (MUSC) in Charleston. **Voting will take place Thursday, March 1 through Friday, March 23.** Results will be announced on the ATS website on April 1.