Dear EOPH members,

In this September issue of the EOPH newsletter, we share some of our members’ recent “epub ahead of print” articles and information about Global Pulmonary Fibrosis Awareness Month.

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.

Air Pollution

Long-term exposure to road traffic noise, ambient air pollution, and cardiovascular risk factors in the HUNT and lifelines cohorts.

Attributable risks of emergency hospital visits due to air pollutants in China: A multi-city study.
Environ Pollut. 2017 Sep;228:43-49.

Particulate matter air pollution and liver cancer survival.
Deng H, Eckel SP, Liu L, Lurmann FW, Cockburn MG, Gilliland FD.

Inhalation of concentrated PM<sub>2.5</sub> from Mexico City acts as an adjuvant in a guinea pig model of allergic asthma.
Falcon-Rodriguez CI, De Vizcaya-Ruiz A, Rosas-Pérez IA, Osornio-Vargas ÁR, Segura-Medina P.
Environ Pollut. 2017 Sep;228:474-483.

Long-term exposure to residential ambient fine and coarse particulate matter and incident hypertension in post-menopausal women.

Particulate Matter Exposure and Stress Hormone Levels: A Randomized, Double-Blind, Crossover Trial of Air Purification.

The nexus between urbanization and PM<sub>2.5</sub> related mortality in China.

Bayesian estimation of physiological parameters governing a dynamic two-compartment model of exhaled nitric oxide.
Muchmore P, Rappaport EB, Eckel SP.

Community airborne particulate matter from mining for sand used as hydraulic fracturing proppant.
Peters TM, O'Shaughnessy PT, Grant R, Altmaier R, Swanton E, Falk J, Osterberg D, Parker E, Wyland NG, Sousan S, Stark AL, Thorne PS.
Role of atmospheric pollution on the natural history of idiopathic pulmonary fibrosis.

Cardiorespiratory responses of air filtration: A randomized crossover intervention trial in seniors living in Beijing: Beijing Indoor Air Purifier StudY, BIAPSY.

Differential pulmonary effects of wintertime California and China particulate matter in healthy young mice.
Sun X, Wei H, Young DE, Bein KJ, Smiley-Jewell SM, Zhang Q, Fulgar CCB, Castañeda AR, Pham AK, Li W, Pinkerton KE.

Thymic cytoarchitecture changes in mice exposed to vanadium.
Ustarroz-Cano M, Garcia-Pelaez I, Cervantes-Yepez S, Lopez-Valdez N, Fortoul TI.

Genetic and epigenetic susceptibility of airway inflammation to PM$_{2.5}$ in school children: new insights from quantile regression.
Zhang Y, Salam MT, Berhane K, Eckel SP, Rappaport EB, Linn WS, Habre R, Bastain TM, Gilliland FD.

Heat and mortality for ischemic and hemorrhagic stroke in 12 cities of Jiangsu Province, China.
Zhou L, Chen K, Chen X, Jing Y, Ma Z, Bi J, Kinney PL.

Asthma, Allergies, and Autoimmune Diseases

Irgm1 coordinately regulates autoimmunity and host defense at select mucosal surfaces.
JCI Insight. 2017 Aug 17;2(16).

Google Trends terms reporting rhinitis and related topics differ in European countries.

The Duffy antigen receptor for chemokines regulates asthma pathophysiology.

Skin prick tests and specific IgE in 10-year-old children: Agreement and association with allergic diseases.
Allergy. 2017 Sep;72(9):1365-1373.
An epigenome-wide association study of total serum IgE in Hispanic children.

Functional phenotypes determined by fluctuation-based clustering of lung function measurements in healthy and asthmatic cohort participants.
Thorax. 2017 Sep 2.

Effect of azithromycin on asthma exacerbations and quality of life in adults with persistent uncontrolled asthma (AMAZES): a randomised, double-blind, placebo-controlled trial.

Characteristics of asthmatics with detectable IL-32γ in induced sputum.
Kwon JW, Chang HS, Heo JS, Bae DJ, Lee JU, Jung CA, Son JH, Park JS, Kim SH, Min KU, Park CS.

Residential greenness and allergic respiratory diseases in children and adolescents - A systematic review and meta-analysis.
Environ Res. 2017 Aug 10;159:212-221.

Oxidative stress and cellular pathways of asthma and inflammation: Therapeutic strategies and pharmacological targets.
Mishra V, Banga J, Silveyra P.

Validation of asthma recording in the Clinical Practice Research Datalink (CPRD).
Nissen F, Morales DR, Mullerova H, Smeth L, Douglas IJ, Quint JK.

The School Inner-City Asthma Intervention Study: Design, rationale, methods, and lessons learned.
Contemp Clin Trials. 2017 Sep;60:14-23.

Allergic sensitization to laboratory animals is more associated with asthma, rhinitis and skin symptoms than sensitization to common allergens.
Simoneti CS, Ferraz E, de Menezes MB, Bagatin E, Arruda LK, Vianna EO.

Effect of season of birth on cord blood IgE and IgE at birth: A systematic review and meta-analysis.

Vitamin D insufficiency, plasma cytokines, and severe asthma exacerbations in school-aged children.
Szentpetery SE, Han YY, Brehm JM, Acosta-Pérez E, Forno E, Boutaoui N, Canino G, Alcorn JF, Celedón JC.
Baseline Features of the Severe Asthma Research Program (SARP III) Cohort: Differences with Age.

Association of Breast Milk Fatty Acids and Allergic Disease Outcomes - a Systematic Review.
Allergy. 2017 Sep 4.

Breast milk polyunsaturated fatty acids: associations with adolescent allergic disease and lung function.

Allergen sensitization in a birth cohort at mid-childhood: focus on food component IgE and IgG4 responses.

Biomarkers and of Diseases

Predictive Value of Mean Platelet Volume for Pulmonary Embolism Recurrence.
Araz O, Albez FS, Ucar EY, Kerget B, Yilmaz N, Akgun M.

ALG13-CDG in a male with seizures, normal cognitive development, and normal transferrin isoelectric focusing.
Gadomski TE, Bolton M, Alfadhel M, Dvorak C, Ogunsakin OA, Nelson SL, Morava E.

Usefulness of serum lactate dehydrogenase/pleural fluid adenosine deaminase ratio for differentiating Mycoplasma pneunomiae parapneumonic effusion and tuberculous pleural effusion.
Kim CH, Park JE, Yoo SS, Lee SY, Cha SI, Park JY, Lee J.

Lee K, Jun SH, Choi MS, Song SH, Park JS, Lee JH, Park KU, Song J.

Short-Term Exposure to Ambient Air Pollution and Biomarkers of Systemic Inflammation: The Framingham Heart Study.

Blood monocyte transcriptome and epigenome analyses reveal loci associated with human atherosclerosis.
Seven-CpG-based prognostic signature coupled with gene expression predicts survival of oral squamous cell carcinoma.

Classifying oxidative stress by F2-isoprostane levels across human diseases: A meta-analysis.
van ’t Erve TJ, Kadiiska MB, London SJ, Mason RP.

Acute changes in serum immune markers due to swimming in a chlorinated pool.

Whole blood microRNA markers are associated with acute respiratory distress syndrome.

Brain

Markers associated with neuron-specific Ube3a imprinting during neuronal differentiation of mouse embryonic stem cells.
Eitoku M, Kato H, SUGANUMA N, Kiyosawa H.
Cytotechnology. 2017 Aug 5.

Diabetes, depressive symptoms, and functional disability in African Americans: the Jackson Heart Study.
Kalyani RR, Ji N, Carnethon M, Bertoni AG, Selvin E, Gregg EW, Sims M, Golden SH.

Long non-coding RNA MALAT1 promotes proliferation and suppresses apoptosis of glioma cells through derepressing Rap1B by sponging miR-101.
Li Z, Xu C, Ding B, Gao M, Wei X, Ji N.

Brain network efficiency is influenced by the pathologic source of corticobasal syndrome.

The terminal latency of the phrenic nerve correlates with respiratory symptoms in amyotrophic lateral sclerosis.
Park JS, Park D.

Complementary cortical gray and white matter developmental patterns in healthy, preterm neonates.
Rajagopalan V, Scott JA, Liu M, Poskitt K, Chau V, Miller S, Studholme C.
Hum Brain Mapp. 2017 Sep;38(9):4322-4336.

Cancer

Interleukin-17A Promotes Lung Tumor Progression through Neutrophil Attraction to Tumor Sites and Mediating Resistance to PD-1 Blockade.
Elective Venovenous Extracorporeal Membrane Oxygenation for Resection of Endotracheal Tumor: A Case Report.

Interim 18F-FGD PET/CT may not predict the outcome in primary central nervous system lymphoma patients treated with sequential treatment with methotrexate and cytarabine.
Ann Hematol. 2017 Sep;96(9):1509-1515.

Predictive Factors and Treatment Outcomes of Tuberculous Pleural Effusion in Patients With Cancer and Pleural Effusion.
Lee J, Lee YD, Lim JK, Lee DH, Yoo SS, Lee SY, Cha SI, Park JY, Kim CH.

Nivolumab infusion reaction manifesting as plantar erythema and pulmonary infiltrate in a lung cancer patient.

Polymorphisms in Epithelial-Mesenchymal Transition-Related Genes and the Prognosis of Surgically Treated Non-small Cell Lung Cancer.

Phase I study of pemetrexed and concurrent radiotherapy for previously untreated elderly patients with locally advanced non-squamous non-small cell lung cancer.

Chronic Obstructive Pulmonary Disease

Severity of Airflow Obstruction in Chronic Obstructive Pulmonary Disease (COPD): Proposal for a New Classification.

Barriers and outcomes of an evidence-based approach to diagnosis and management of chronic obstructive pulmonary disease (COPD) in Australia: a qualitative study.

Chronic Obstructive Pulmonary Disease in Hispanics: A 9-Year Update.
Díaz A, Celli B, Celedón JC.
Am J Respir Crit Care Med. 2017 Sep 1.

Alpha-1 Antitrypsin PiMZ Genotype Is Associated with Chronic Obstructive Pulmonary Disease in Two Racial Groups.
Frequency of exacerbations in patients with chronic obstructive pulmonary disease: an analysis of the SPIROMICS cohort.

Obstructive Airway Disease: Rational, Evidence-Based Bronchodilator Therapy.
Newhouse MT, Amirav I. Respir Care. 2017 Sep;62(9):1224-1225.

Comparing microbiota profiles in induced and spontaneous sputum samples in COPD patients.

Triple Therapy for Chronic Obstructive Pulmonary Disease Management. Are Our Expectations Fulfilled?

Developmental Origins of Adult Disease

Early smoke exposure is associated with asthma and lung function deficits in adolescents.

Premature birth and low birth weight continue to increase the risk of asthma from age 7 to 43.

Adults born preterm: a review of general health and system-specific outcomes.

Childhood exposure to Libby amphibole asbestos and respiratory health in young adults.

Glucose Metabolism

Relationship between the triglyceride glucose index and coronary artery calcification in Korean adults.

Enhancement of Glucose Uptake by Meso-Dihydroguaiaretic Acid through GLUT4 Up-Regulation in 3T3-L1 Adipocytes.

Differences in characteristics of glucose intolerance between patients with NAFLD and chronic hepatitis C as determined by CGMS.
**Household Air and Environmental Pollution**

**Biomass smoke exposure as an occupational risk: cross-sectional study of respiratory health of women working as street cooks in Nigeria.**

**Surface Sampling Collection and Culture Methods for Escherichia coli in Household Environments with High Fecal Contamination.**
Exum NG, Kosek MN, Davis MF, Schwab KJ.

**Modeling indoor particulate exposures in inner-city school classrooms.**

**Different types of housing and respiratory health outcomes.**
Gan WQ, Sanderson WT, Browning SR, Mannino DM.

**Kerosene lighting contributes to household air pollution in rural Uganda.**
Muyanja D, Allen JG, Vallarino J, Valeri L, Kakuhikire B, Bangsberg DR, Christiani DC, Tsai AC, Lai PS.
Indoor Air. 2017 Sep;27(5):1022-1029.

**24-h Nitrogen dioxide concentration is associated with cooking behaviors and an increase in rescue medication use in children with asthma.**
Environ Res. 2017 Aug 7;159:118-123.

**Interstitial Lung Diseases and Fibrosis**

**Cobalt related interstitial lung disease.**
Adams TN, Butt YM, Batra K, Glazer CS.

**Prevalence and incidence of interstitial lung diseases in a multi-ethnic county of Greater Paris.**
Eur Respir J. 2017 Aug 3;50(2).

**Human lung injury following exposure to humic substances and humic-like substances.**
Ghio AJ, Madden MC.

**Thy1 (CD90) Expression Is Elevated in Radiation-Induced Periprosthetic Capsular Contracture: Implication for Novel Therapeutics.**
Hansen TC, Woeller CF, Lacy SH, Koltz PF, Langstein HN, Phipps RP.

**Supplemental Oxygen in Interstitial Lung Disease: An Art in Need of Science.**
Johannson KA, Pehndharkar SR, Mathison K, Fell CD, Guenette JA, Kalluri M, Kolb M, Ryerson CJ.
A case of mild phenotype Alport syndrome caused by COL4A3 mutations.

Exactly what is restrictive spirometry capturing?
Mannino DM. Int J Tuberc Lung Dis. 2017 Sep 1;21(9):956.

High fasting insulin concentrations may be a pivotal predictor for the severity of hepatic fibrosis beyond the glycemic status in non-alcoholic fatty liver disease patients before development of diabetes mellitus.

Myocardial Infarction and Obstructive Sleep Apnea


Prevalence of obstructive sleep apnea in the general population: A systematic review.

Kept in the loop: longitudinal strain-volume relationships for the assessment of left ventricular mechanical performance.

Occupational Lung Diseases

Occupational exposures to solvents and metals are associated with fixed airflow obstruction.

Inhalation dosimetry modeling provides insights into regional respiratory tract toxicity of inhaled diacetyl.
Cichocki JA, Morris JB. Toxicology. 2017 Aug 1;388:30-39.

High exposure to endotoxin in farming is associated with less new-onset pollen sensitisation.

Case-Finding for Persistent Airway Obstruction in Farmers: A Questionnaire With Optimal Diagnosis Criteria.

Predicting occupational asthma and rhinitis in bakery workers referred for clinical evaluation.
Impact of hepatic P450-mediated biotransformation on the disposition and respiratory tract toxicity of inhaled naphthalene.

Utility of Lung Clearance Index Testing as a Noninvasive Marker of Deployment-related Lung Disease.
Krefft SD, Strand M, Smith J, Stroup C, Meehan R, Rose C.

Asbestos-related diseases in mineworkers: a clinicopathological study.
ERJ Open Res. 2017 Aug 25;3(3).

Comparison of the toxicity of sintered and unsintered indium-tin oxide particles in murine macrophage and epidermal cells.
Olgun NS, Morris AM, Barber TL, Stefaniak AB, Kashon ML, Schwegler-Berry D, Cummings KJ, Leonard SS.

Early detection, clinical diagnosis, and management of lung disease from exposure to diacetyl.
Rose CS.
Toxicology. 2017 Aug 1;388:9-14.

Challenges and Opportunities for Occupational Epidemiology in the Twenty-first Century.
Stayner LT, Collins JJ, Guo YL, Heederik D, Kogevinas M, Steenland K, Wesseling C, Demers PA.

Contact dermatitis is an unrecognized problem in the construction industry: Comparison of four different assessment methods.
Timmerman JG, Heederik D, Spee T, van Rooy FG, Krop EJM, Rustemeyer T, Smit LAM.

Pregnancy, Prenatal, and Childhood Exposures

Sex differences in aortic augmentation index in adolescents.
Barraclough JY, Garden FL, Toelle B, O’Meagher S, Marks GB, Cowell CT, Celermajer DS, Ayer JG.

Radiofrequency-electromagnetic field exposures in kindergarten children.
Bhatt CR, Redmayne M, Billah B, Abramson MJ, Benke G.

Long-Acting β2-Agonists and Risk of Hypertensive Disorders of Pregnancy: A Cohort Study.
Blais L, Kettani FZ, Forget A, Beauchesne MF, Lemière C, Rey E.

Vitamin D prenatal programming of childhood metabolomics profiles at age 3 y.
Blighe K, Chawes BL, Kelly RS, Mirzakhani H, McGeachie M, Litonjua AA, Weiss ST, Lasky-Su JA.

Ghosh RE, Berild JD, Sterrantino AF, Toledano MB, Hansell AL.

Plane of nutrition during the rearing phase for replacement ewes of four genotypes: I - effects on growth and development, and on ovulation rate at first joining.
Keady TWJ, Hanrahan JP.
Plane of nutrition during the rearing phase for replacement ewes of four genotypes: II - effects on performance during first pregnancy and to weaning, and of their progeny.
Keady TWJ, Hanrahan JP.

Mechanisms and Treatment of Halogen Inhalation-Induced Pulmonary and Systemic Injuries in Pregnant Mice.

College-Aged Males Experience Attenuated Sweet and Salty Taste with Modest Weight Gain.
Noel CA, Cassano PA, Dando R.

Investigating causal relation between prenatal arsenic exposure and birthweight: Are smaller infants more susceptible?

Validation of maternal reported pregnancy and birth characteristics against the Medical Birth Registry of Norway.
Skulstad SM, Igland J, Johannessen A, Bertelsen RJ, Lønnebotn M, Omenaas ER, Svanes C, Real FG.

The Characterization of Polycyclic Aromatic Hydrocarbons in Northeastern US Trucking Terminals.
Walker ED, Hart JE, Garshick E, Cavallari JM, Davis ME, Smith TJ, Laden F.


Public and Environmental Health

Improving medical leadership education through the Feagin leadership program.

Mobility assessment of a rural population in the Netherlands using GPS measurements.
Klous G, Smit LAM, Borlée F, Coutinho RA, Kretzschmar MEE, Heederik DJJ, Huss A.

Environmental Health: Lessons from the Past and Looking to the Future.
Rice MB, Samet JM.

Public Health and All That Jazz.
Samet JM.
Lost in translation: The challenge of adapting integrated approaches for worker health and safety for low- and middle-income countries.
Sorensen G, Nagler EM, Pawar P, Gupta PC, Pednekar MS, Wagner GR.

Receptors, Inflammation, and Pain

Mitochondrial ROS induced by chronic ethanol exposure promote hyper-activation of the NLRP3 inflammasome.

Short-chain fatty acids, prebiotics, synbiotics, and systemic inflammation: a systematic review and meta-analysis.
McLoughlin RF, Berthon BS, Jensen ME, Baines KJ, Wood LG.

Involvement of Transient Receptor Potential Cation Channel Member A1 activation in the irritation and pain response elicited by skin-lightening reagent hydroquinone.

Spinal Cord Injury

Plasma leptin and reduced FEV1 and FVC in Chronic Spinal Cord Injury.
Garshick E, Walia P, Goldstein R, Teylan M, Lazzari A, Tun CG, Hart JE.
PM R. 2017 Aug 18.

Clinical factors associated with C-reactive protein in chronic spinal cord injury.
Goldstein RL, Walia P, Teylan M, Lazzari AA, Tun CG, Hart JE, Garshick E.

FEV1 and FVC and systemic inflammation in a spinal cord injury cohort.
Hart JE, Goldstein R, Walia P, Teylan M, Lazzari A, Tun CG, Garshick E.

Tobacco Smoke

Early Postnatal Secondhand Smoke Exposure Disrupts Bacterial Clearance and Abolishes Immune Responses in Muco-Obstructive Lung Disease.
Lewis BW, Sultana R, Sharma R, Noël A, Langohr I, Patial S, Penn AL, Saini Y.

Longitudinal Associations of Local Cigarette Prices and Smoking Bans with Smoking Behavior in the Multi-Ethnic Study of Atherosclerosis (MESA).
Epidemiology. 2017 Aug 16.

Cigarette smoke disrupts monolayer integrity by altering epithelial cell-cell adhesion and cortical tension.
Variable Susceptibility to Cigarette Smoke-Induced Emphysema in 34 Inbred Strains of Mice Implicates Abi3bp in Emphysema Susceptibility.

Viral, Bacterial, and Fungal Infections

A case series of histoplasmosis patients with elevated serum soluble interleukin-2 receptor levels.
J Infect Chemother. 2017 Sep;23(9):642-647.

Nasopharyngeal viral PCR in immunosuppressed patients and its association with virus detection in bronchoalveolar lavage by PCR.
Lachant DJ, Croft DP, McGrane Minton H, Prasad P, Kottmann RM.

Cytomegalovirus Viral Load in Bronchoalveolar Lavage to Diagnose Lung Transplant Associated CMV Pneumonia.
Lodding IP, Schultz HH, Jensen JU, Kirkby N, Perch M, Andersen C, Lundgren JD, Iversen M.

Evolutionary dynamics of an expressed MHC class IIB locus in the Ranidae (Anura) uncovered by genome walking and high-throughput amplicon sequencing.
Mulder KP, Cortazar-Chinarro M, Harris DJ, Crottini A, Campbell Grant EH, Fleischer RC, Savage AE.
Dev Comp Immunol. 2017 Nov;76:177-188.

Tedizolid inhibits MUC5AC production induced by methicillin-resistant Staphylococcus aureus in human airway epithelial cells.
J Infect Chemother. 2017 Sep;23(9):598-603.

Nationwide surveillance of bacterial respiratory pathogens conducted by the surveillance committee of Japanese Society of Chemotherapy, the Japanese Association for Infectious Diseases, and the Japanese Society for Clinical Microbiology in 2012: General view of the pathogens’ antibacterial susceptibility.

Prevalence and risk factors for colonization of Clostridium difficile among adults living near livestock farms in the Netherlands.

Things Worth Celebrating!

We know that many of you have successes to share with us. Please help us expand this section by emailing us your good news: kbailey@unmc.edu or tnordgren@unmc.edu.
Jack Harkema received a new appointment at Michigan State University, the Albert C. and Lois E. Dehn Endowed Chair in Pathobiology and Diagnostic Investigation. This is the first endowed chair at Michigan State University to be awarded to a Veterinary Pathologist (and an Inhalation Toxicologist).

Harkema’s research and productive collaborations are reflected in more than 240 publications with coauthors from 19 different units at MSU and 133 national and international laboratories. His most notable contributions to science include designing, constructing, and utilizing mobile air research laboratories to study the inhalation toxicology of “real-world” particulate air pollution found in urban and rural communities; illustrating how toxicologic pathology of the respiratory tract should be microscopically examined and morphometrically measured using state-of-the-art digital imaging techniques; and elucidating the pathobiology underlying the harmful health effects of commonly encountered air pollutants, like ozone and particulate matter.

#GPFAM: Global Pulmonary Fibrosis Awareness Month

September is Global Pulmonary Fibrosis Awareness Month. Spread awareness about lung scarring and the importance of fibrosis research this month!