



*We help the world breathe*  
PULMONARY • CRITICAL CARE • SLEEP

Volume 3 | Issue 1  
January 2017

# Assembly on Environmental, Occupational and Population Health (EOPH) Newsletter

---

## ***EOPH web editorial committee***

*Craig Glazer, MD MSPH*

*Kristina Bailey, MD*

*Nirupama Putcha, MD*

*Leonard Go, MD*

*Tara Nordgren, PhD*

*Claire McCarthy*

*Christopher Rider, PhD*

*Hissam Haider, MD*

---

Dear EOPH members,

Happy New Year! This month's newsletter has important reminders about voting for assembly leadership and late breaking abstract deadlines. As always, we also have a summary of the best work of our membership. Please contact us at [kbailey@unmc.edu](mailto:kbailey@unmc.edu) or [craig.glazer@utsouthwestern.edu](mailto:craig.glazer@utsouthwestern.edu) with any noteworthy publications, achievements, or suggestions for future issues.

Sincerely,

Your web committee co-chairs,

Kristina Bailey and Craig Glazer



## Thank you for your contributions!

EOPH contributions to the Assembly challenge increased by nearly \$10,000 compared to last year, with \$25,074 donated by our assembly. First time donors were also up. Thank you all for supporting the ATS foundation. Your generous donations will continue to support: Research Program, MECOR, Medical Education Research, Ziskind Clinical Research Scholar Award, and Assembly Awards and Scholarships.

## Deadline for late breaking abstracts rapidly approaching

The ATS is accepting late breaking abstracts until 5PM ET on Wednesday February 1<sup>st</sup>. Late breaking abstracts should report groundbreaking research findings that have a major impact on the fields of pulmonary, critical care or sleep medicine. Case reports will not be accepted. [Click here to apply.](#)

## Vote for EOPH leadership

Voting for EOPH leadership closes on February 1<sup>st</sup>. Please take the time to vote for our assembly leadership here: [VOTE](#)



## Recent publications

This section highlights some of our member's best work in the month of December.

### Air Pollution

[The burden of disease from air pollution in Israel: How do we use burden estimates to advance public health?](#) Samet JM. Isr J Health Policy Res. 2016 Dec 16;5:63.

[Effects of air pollution exposure on glucose metabolism in Los Angeles minority children.](#) Toledo-Corral CM, Alderete TL, Habre R, Berhane K, Lurmann FW, Weigensberg MJ, Goran MI, Gilliland FD. Pediatr Obes. 2016 Dec 6. doi: 10.1111/ijpo.12188. [Epub ahead of print]

[Surface area-dependence of gas-particle interactions influences pulmonary and neuroinflammatory outcomes.](#) Tyler CR, Zychowski KE, Sanchez BN, Rivero V, Lucas S, Herbert G, Liu J, Irshad H, McDonald JD, Bleske BE, Campen MJ. Part Fibre Toxicol. 2016 Dec 1;13(1):64.

[Subacute inhalation exposure to ozone induces systemic inflammation but not insulin resistance in a diabetic mouse model.](#) Ying Z, Allen K, Zhong J, Chen M, Williams KM, Wagner JG, Lewandowski R, Sun Q, Rajagopalan S, Harkema JR. Inhal Toxicol. 2016;28(4):155-63

[Some current challenges in research on air pollution and health.](#) Samet JM. Salud Publica Mex. 2014 Jul-Aug;56(4):379-85.

[Views of AAAAI members on climate change and health.](#) Sarfaty M, Kreslake JM, Casale TB, Maibach EW. J Allergy Clin Immunol Pract. 2016 Mar-Apr;4(2):333-5.e26. doi: 10.1016/j.jaip.2015.09.018.

[Inflammatory and Vasoactive Effects of Serum Following Inhalation of Varied Complex Mixtures.](#) Aragon MJ, Chrobak I, Brower J, Roldan L, Fredenburgh LE, McDonald JD, Campen MJ. Cardiovasc Toxicol. 2016 Apr;16(2):163-71.

[PubMed search filters for the study of putative outdoor air pollution determinants of disease.](#) Curti S, Gori D, Di Gregori V, Farioli A, Baldasseroni A, Fantini MP, Christiani DC, Violante FS, Mattioli S. BMJ Open. 2016 Dec 21;6(12):e013092. doi: 10.1136/bmjopen-2016-013092.

[Predictors of polycyclic aromatic hydrocarbon exposure and internal dose in inner city Baltimore children.](#) Peters KO, Williams AL, Abubaker S, Curtin-Brosnan J, McCormack MC, Peng R, Breyse PN, Matsui EC, Hansel NN, Diette GB, Strickland PT. J Expo Sci Environ Epidemiol. 2016 Dec 14.

[Acute Ozone-Induced Pulmonary and Systemic Metabolic Effects Are Diminished in Adrenalectomized Rats.](#) Miller DB, Snow SJ, Schladower MC, Richards JE, Ghio AJ, Ledbetter AD, Kodavanti UP. Toxicol Sci. 2016 Apr;150(2):312-22. doi: 10.1093/toxsci/kfv331.

[Commuting mode and pulmonary function in Shanghai, China.](#) Gaffney AW, Hang JQ, Lee MS, Su L, Zhang FY, Christiani DC. Eur Respir J. 2016 Mar;47(3):733-41. doi: 10.1183/13993003.00637-2015.

[Long-term outdoor air pollution and DNA methylation in circulating monocytes: results from the Multi-Ethnic Study of Atherosclerosis \(MESA\).](#) Chi GC, Liu Y, MacDonald JW, Barr RG, Donohue KM, Hensley MD, Hou L, McCall CE, Reynolds LM, Siscovick DS, Kaufman JD. Environ Health. 2016 Dec 1;15(1):119.

[Characteristics of atmospheric single particles during haze periods in a typical urban area of Beijing: A case study in October, 2014.](#) Liu L, Wang Y, Du S, Zhang W, Hou L, Vedal S, Han B, Yang W, Chen M, Bai Z. J Environ Sci (China). 2016 Feb;40:145-53. doi: 10.1016/j.jes.2015.10.027.

[Criteria air pollutants and emergency nursing.](#) Castner J, Gittere S, Seo JY. J Emerg Nurs. 2015 May;41(3):186-92. doi: 10.1016/j.jen.2014.08.011. Review.

## Particulate matter

[Acute increase in blood pressure during inhalation of coarse particulate matter air pollution from an urban location.](#) Byrd JB, Morishita M, Bard RL, Das R, Wang L, Sun Z, Spino C, Harkema J, Dvonch JT, Rajagopalan S, Brook RD. J Am Soc Hypertens. 2016 Feb;10(2):133-139.e4.

[Differential DNA methylation and PM<sub>2.5</sub> species in a 450K epigenome-wide association study.](#) Dai L, Mehta A, Mordukhovich I, Just AC, Shen J, Hou L, Koutrakis P, Sparrow D, Vokonas PS, Baccarelli AA, Schwartz JD. Epigenetics. 2016 Dec 16:0.

[Acute effect of fine particulate matter on mortality in three Southeastern states from 2007-2011.](#) Lee M, Koutrakis P, Coull B, Kloog I, Schwartz J. J Expo Sci Environ Epidemiol. 2016 Mar-Apr;26(2):173-9. doi: 10.1038/jes.2015.47.

[Effects of urban particulate matter with high glucose on human monocytes U937.](#) Zhang Y, Mo Y, Gu A, Wan R, **Zhang Q**, Tollerud DJ. J Appl Toxicol. 2016 Apr;36(4):586-95.

[Use of the Adaptive LASSO Method to Identify PM2.5 Components Associated with Blood Pressure in Elderly Men: The Veterans Affairs Normative Aging Study.](#) Dai L, Koutrakis P, Coull BA, Sparrow **D**, Vokonas PS, Schwartz JD. Environ Health Perspect. 2016 Jan;124(1):120-5. doi: 10.1289/ehp.1409021.

[Low-Concentration PM2.5 and Mortality: Estimating Acute and Chronic Effects in a Population-Based Study.](#) Shi L, Zanobetti A, Kloog I, Coull BA, Koutrakis P, Melly SJ, Schwartz JD. Environ Health Perspect. 2016 Jan;124(1):46-52. doi: 10.1289/ehp.1409111.

[Long-term PM2.5 Exposure and Neurological Hospital Admissions in the Northeastern United States.](#) Kioumourtzoglou MA, Schwartz JD, Weisskopf MG, Melly SJ, Wang Y, Dominici F, Zanobetti A. Environ Health Perspect. 2016 Jan;124(1):23-9. doi: 10.1289/ehp.1408973. Erratum in: Environ Health Perspect. 2016 Jan;124(1):28.

## Influenza

[Increased Antiviral Treatment Among Hospitalized Children and Adults With Laboratory-Confirmed Influenza, 2010-2015.](#) Appiah GD, Chaves SS, Kirley PD, Miller L, Meek J, Anderson E, Oni O, Ryan P, **Eckel S**, Lynfield R, Bargsten M, Zansky SM, Bennett N, Lung K, McDonald-Hamm C, Thomas A, Brady **D**, Lindegren ML, Schaffner W, Hill M, Garg S, Fry AM, Campbell AP. Clin Infect Dis. 2016 Nov 10. pii: ciw745.

[Identification of Barriers to Influenza Vaccination in Patients with Chronic Obstructive Pulmonary Disease: Analysis of the 2012 Behavioral Risk Factors Surveillance System.](#) Hsu DJ, North CM, Brode SK, Celli BR. Chronic Obstr Pulm Dis. 2016;3(3):620-627.

## Smoking

[Exercise Decreases and Smoking Increases Bladder Cancer Mortality.](#) Liss MA, **White M**, Natarajan L, Parsons JK. Clin Genitourin Cancer. 2016 Dec 1. pii: S1558-7673(16)30342-1.

[Thirdhand Smoke: New Evidence, Challenges, and Future Directions.](#) Jacob P 3rd, Benowitz NL, Destailats H, Gundel L, Hang B, Martins-Green M, Matt GE, Quintana PJ, Samet JM, Schick SF, Talbot P, Aquilina NJ, Hovell MF, Mao JH, Whitehead TP. Chem Res Toxicol. 2016 Dec 21.

[The Case for Requiring Graphic Warning Labels on Smokeless Tobacco Product Packages.](#) Pakhale S, **Samet J**, Folan P, Leone F, White A; American Thoracic Society Tobacco Action Committee.. Ann Am Thorac Soc. 2016 Mar;13(3):329-33. doi: 10.1513/AnnalsATS.201512-814PS.

[HDAC3 mediates smoking-induced pancreatic cancer.](#) Edderkaoui M, Xu S, Chheda C, Morvaridi S, Hu RW, Grippo PJ, Mascariñas E, Principe DR, Knudsen B, Xue J, Habtezion A, Uyeminami **D**, **Pinkerton KE**, Pandol SJ. Oncotarget. 2016 Feb 16;7(7):7747-60. doi: 10.18632/oncotarget.6820.

[Acculturation-related predictors of very light smoking among Latinos in California and nationwide.](#) Rodriguez EJ, Stoecklin-Marois MT, Hennessy-Burt TE, Tancredi DJ, **Schenker MB**. J Immigr Minor Health. 2015 Feb;17(1):181-91. doi: 10.1007/s10903-013-9896-3.

[Distal airway dysfunction identifies pulmonary inflammation in asymptomatic smokers.](#) Berger KI, Pradhan DR, Goldring RM, Oppenheimer BW, Rom WN, Segal LN. ERJ Open Res. 2016 Nov 29;2(4). pii: 00066-2016.

[Greater Coronary Heart Disease Risk With Lower Intensity and Longer Duration Smoking Compared With Higher Intensity and Shorter Duration Smoking: Congruent Results Across Diverse Cohorts.](#) Lubin JH, Albanes **D**, Hoppin JA, Chen H, Lerro CC, Weinstein SJ, Sandler DP, Beane Freeman LE. Nicotine Tob Res. 2016 Dec 9. pii: ntw290.

[Lung Mass in Smokers.](#) Washko GR, Kinney GL, Ross JC, San José Estépar R, Han MK, Dransfield MT, Kim V, Hatabu H, Come CE, Bowler RP, Silverman EK, Crapo J, Lynch DA, Hokanson J, Diaz AA; COPDGene Investigators.. Acad Radiol. 2016 Dec 8. pii: S1076-6332(16)30389-0.

[Secondhand Smoke Exposure and Subclinical Cardiovascular Disease: The Multi-Ethnic Study of Atherosclerosis.](#) Jones MR, Magid HS, Al-Rifai M, McEvoy JW, Kaufman JD, Hinckley Stukovsky KD, Szklo M, Polak J, Burke GL, Post WS, Blaha MJ, Navas-Acien A. J Am Heart Assoc. 2016 Dec 19;5(12). pii: e002965.

## Agriculture

[House Dust Endotoxin Levels Are Associated with Adult Asthma in a U.S. Farming Population.](#) Carnes MU, Hoppin JA, Metwali N, Wyss AB, Hankinson JL, O'Connell EL, Richards M, Long S, Beane Freeman LE, Sandler DP, Henneberger PK, Barker-Cummings C, Umbach DM, Thorne PS, London SJ. Ann Am Thorac Soc. 2016 Dec 15.

[Organophosphorus pesticide exposure and neurobehavioral performance in Latino children living in an orchard community.](#) Butler-Dawson J, Galvin K, Thorne PS, Rohlman DS. Neurotoxicology. 2016 Mar;53:165-72. doi: 10.1016/j.neuro.2016.01.009.

[Region of birth, sex, and reproductive health in rural immigrant latino farmworkers: the MICASA study.](#) McCurdy SA, Stoecklin-Marois MT, Tancredi DJ, Hennessy-Burt TE, **Schenker MB**. J Rural Health. 2015 Spring;31(2):165-75. doi: 10.1111/jrh.12083.

[House Dust Endotoxin Levels Are Associated with Adult Asthma in a U.S. Farming Population.](#) Carnes MU, Hoppin JA, Metwali N, Wyss AB, Hankinson JL, O'Connell EL, Richards M, Long S, Beane Freeman LE, Sandler DP, Henneberger PK, Barker-Cummings C, Umbach DM, Thorne PS, London SJ. Ann Am Thorac Soc. 2016 Dec 15.

[A comparison of health, health behavior, and access between farm and nonfarm populations in rural New York state.](#) Earle-Richardson G, Scribani M, Scott E, **May J**, Jenkins P. J Rural Health. 2015 Spring;31(2):157-64

[Inflammatory Airway Disease of Horses--Revised Consensus Statement.](#) Couëtil LL, Cardwell JM, Gerber V, Lavoie JP, Léguillette R, Richard EA. J Vet Intern Med. 2016 Mar-Apr;30(2):503-15. doi: 10.1111/jvim.13824.

[High pesticide exposure events and DNA methylation among pesticide applicators in the agricultural health study.](#) Rusiecki JA, Beane Freeman LE, Bonner MR, Alexander M, Chen L, Andreotti G, Barry KH, Moore LE, Byun HM, Kamel F, Alavanja M, Hoppin JA, Baccarelli A. Environ Mol Mutagen. 2016 Dec 20. doi: 10.1002/em.22067

## World Trade Center

[World Trade Center \(WTC\) dust exposure in mice is associated with inflammation, oxidative stress and epigenetic changes in the lung.](#) Sunil VR, Vayas KN, Fang M, Zarbl H, Massa C, Gow AJ, Cervelli JA, **Kipen H**, Laumbach RJ, Liou PJ, Laskin JD, Laskin DL. Exp Mol Pathol. 2016 Dec 13;102(1):50-58.

[Post-Traumatic Stress Disorder Dimensions and Asthma Morbidity in World Trade Center Rescue and Recovery Workers.](#) Mindlis I, Morales-Raveendran E, Goodman E, Xu K, Vila-Castelar C, Keller K, Crawford G, James S, Katz C, Crowley LE, de la Hoz RE, Markowitz S, Wisnivesky JP. J Asthma. 2016 Dec 1:0.

## Lung Cancer

[Molecular profiling of single circulating tumor cells from lung cancer patients.](#) Park SM, Wong DJ, Ooi CC, Kurtz DM, Vermesh O, Aalipour A, Suh S, Pian KL, Chabon JJ, Lee SH, Jamali M, Say C, Carter JN, Lee LP, Kuschner WG, Schwartz EJ, Shrager JB, Neal JW, Wakelee HA, Diehn M, Nair VS, Wang SX, Gambhir SS. Proc Natl Acad Sci U S A. 2016 Dec 27;113(52):E8379-E8386. doi: 10.1073/pnas.1608461113.

[Differential innate immune cell signatures and effects regulated by toll-like receptor 4 during murine lung tumor promotion.](#)

Alexander CM, Xiong KN, Velmurugan K, Xiong J, Osgood RS, Bauer AK. *Exp Lung Res.* 2016 Apr;42(3):154-73. doi: 10.3109/01902148.2016.1164263.

[Hazard Ratio of Smoking on Lung Cancer in Korea According to Histological Type and Gender.](#) Yun YD, Back JH, Ghang H, Jee SH, Kim Y, Lee SM, Samet JM, Lee KS. *Lung.* 2016 Apr;194(2):281-9.

[Diffuse malignant mesothelioma and synchronous lung cancer: A clinicopathological study of 18 cases.](#) Butnor KJ, Brownlee NA, Mahar A, Pavlisko EN, Sporn TA, **Roggli VL**. *Lung Cancer.* 2016 May;95:1-7. doi: 10.1016/j.lungcan.2016.02.007.

[Inflammatory cytokines and non-small cell lung cancer in a CT-scan screening cohort: Background review of the literature.](#) DeCotiis C, Hu Y, Greenberg AK, Huie M, Tsay JC, Pass H, Goldberg JD, Rom WN. *Cancer Biomark.* 2016;16(2):219-33. doi: 10.3233/CBM-150559. Review.

## Biomass smoke

[A cleaner burning biomass-fuelled cookstove intervention to prevent pneumonia in children under 5 years old in rural Malawi \(the Cooking and Pneumonia Study\): a cluster randomised controlled trial.](#) Mortimer K, Ndamala CB, Naunje AW, Malava J, Katundu C, Weston W, Havens **D**, Pope **D**, Bruce NG, Nyirenda M, Wang **D**, Crampin A, Grigg J, **Balmes J**, Gordon SB. *Lancet.* 2016 Dec 6. pii: S0140-6736(16)32507-7. doi: 10.1016/S0140-6736(16)32507-7.

## Nanoparticles/Nanotubules

[Silver Nanoparticle-Directed Mast Cell Degranulation Is Mediated through Calcium and PI3K Signaling Independent of the High Affinity IgE Receptor.](#) Alsaleh NB, Persaud I, **Brown JM**. *PLoS One.* 2016 Dec 1;11(12):e0167366. doi: 10.1371/journal.pone.0167366.

[MMP-9-Dependent Serum-Borne Bioactivity Caused by Multiwalled Carbon Nanotube Exposure Induces Vascular Dysfunction via the CD36 Scavenger Receptor.](#) Aragon M, Erdely A, Bishop L, Salmen R, Weaver J, Liu J, Hall P, Eye T, Kodali V, Zeidler-Erdely P, Stafflinger JE, Ottens AK, Campen MJ. *Toxicol Sci.* 2016 Apr;150(2):488-98. doi: 10.1093/toxsci/kfw015.

[Low-Temperature Treated Lignin as Both Binder and Conductive Additive for Silicon Nanoparticle Composite Electrodes in Lithium-Ion Batteries.](#) Chen T, **Zhang Q**, Pan J, Xu J, Liu Y, Al-Shroofy M, Cheng YT. *ACS Appl Mater Interfaces.* 2016 Nov 30;8(47):32341-32348.

## Occupational Health

[Integrated approach to health screening of former department of energy workers detects both occupational and non-occupational illness.](#) Stange B, McInerney J, Golden A, Benade W, Neill B, **Mayer A**, Witter R, Tenney L, Stinson K, Cragle **D**, Newman LS. *Am J Ind Med.* 2016 Mar;59(3):200-11. doi: 10.1002/ajim.22554.

[Predicting future protection of respirator users: Statistical approaches and practical implications.](#) Hu C, **Harber P**, Su J. *J Occup Environ Hyg.* 2016;13(5):393-400. doi: 10.1080/15459624.2015.1125483.

[Hospital nurses working wounded: motivations and obstacles to return to work as experienced by nurses with injuries.](#) Mullen K, Gillen M, Kools S, **Blanc P**. *Work.* 2015 Jan 1;50(2):295-304. doi: 10.3233/WOR-131800.

## COPD & Asthma



[Differences between absolute and predicted values of forced expiratory volumes to classify ventilatory impairment in chronic obstructive pulmonary disease.](#) Checkley W, Foreman MG, Bhatt SP, Dransfield MT, Han M, Hanania NA, Hansel NN, Regan EA, Wise RA; COPDGene Study Investigators.. *Respir Med*. 2016 Feb;111:30-8.

[Influence of housing characteristics on bacterial and fungal communities in homes of asthmatic children.](#) Dannemiller KC, Gent JF, Leaderer BP, Peccia J. *Indoor Air*. 2016 Apr;26(2):179-92.

[Sex differences in activation of lung-related type 2 innate lymphoid cells in experimental asthma.](#) Warren KJ, Sweeter JM, Pavlik JA, Nelson AJ, Devasure JM, Dickinson JD, Sisson JH, Wyatt TA, Poole JA. *Ann Allergy Asthma Immunol*. 2016 Dec 22. pii: S1081-1206(16)31314-X. doi: 10.1016/j.anai.2016.11.011.

[Whole genome prediction and heritability of childhood asthma phenotypes.](#) McGeachie MJ, Clemmer GL, Croteau-Chonka DC, Castaldi PJ, Cho MH, Sordillo JE, Lasky-Su JA, Raby BA, Tantisira KG, Weiss ST. *Immun Inflamm Dis*. 2016 Nov 28;4(4):487-496

[Obesity and chronic obstructive pulmonary disease: recent knowledge and future directions.](#) Hanson C, **LeVan T**. *Curr Opin Pulm Med*. 2016 Nov 30.

[The effect of obesity, weight gain, and weight loss on asthma inception and control.](#) Forno E, Celedón JC. *Curr Opin Allergy Clin Immunol*. 2016 Dec 24. doi: 10.1097/ACI.0000000000000339.

[Maternal depressive symptoms, maternal asthma, and asthma in school-aged children.](#) Medsker BH, Brew BK, Forno E, Olsson H, Lundholm C, Han YY, Acosta-Pérez E, Canino GJ, Almqvist C, Celedón JC. *Ann Allergy Asthma Immunol*. 2017 Jan;118(1):55-60.e1. doi: 10.1016/j.anai.2016.10.026.

[Cured meat intake is associated with worsening asthma symptoms.](#) Li Z, Rava M, Bédard A, **Dumas O**, Garcia-Aymerich J, Leynaert B, Pison C, Le Moual N, Romieu I, Siroux V, Camargo CA Jr, Nadif R, Varraso R. *Thorax*. 2016 Dec 20. pii: thoraxjnl-2016-208375. doi: 10.1136/thoraxjnl-2016-208375.

[Vitamin D Insufficiency and Asthma in a US Nationwide Study.](#) Han YY, Forno E, Celedón JC. *J Allergy Clin Immunol Pract*. 2016 Nov 29. pii: S2213-2198(16)30548-7. doi: 10.1016/j.jaip.2016.10.013.