



We help the world breathe
PULMONARY • CRITICAL CARE • SLEEP

Assembly on Environmental, Occupational, and Population Health Newsletter

Volume 4 | Issue 11
December 2018

EOPH

Web Editorial Committee

Tara Nordgren, PhD

Anna Nolan, MD

Christopher Rider, PhD

Nuria Camina Garcia



Dear EOPH members,

We hope everyone is enjoying the holiday season! In this December issue of the EOPH newsletter, we share some of our members' recent "epub ahead of print" articles as well as other recent accomplishments by members in our assembly and fields. If you would like to keep up-to-date on the newest articles being published by our members and colleagues in the field, consider following us on Twitter ([@ATS_EOPH](#)) and Facebook ([@ATS.EOPH](#)). The ATS Environmental Health Policy Committee is also now on Twitter ([@AtsHealth](#))!

Do you have a topic you would like to hear more about or a journal article that you would like to hear discussed? Send all ideas/announcements to tara.nordgren@medsch.ucr.edu.

Sincerely,

Your Web Editorial Committee



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 tara.nordgren@medsch.ucr.edu.

Air Pollution and Environmental Exposures

[Particulate matter exposure and health impacts of urban cyclists: a randomized crossover study.](#) Cole CA, Carlsten C, Koehle M, Brauer M. Environ Health. 2018 Nov 14;17(1):78. doi: 10.1186/s12940-018-0424-8. PMID:30428890

[Associations between Ozone and Fine Particulate Matter and Respiratory Illness Found to Vary between Children and Adults: Implications for U.S. Air Quality Policy.](#) English P, Balmes J. Am J Respir Crit Care Med. 2018 Nov 28. doi: 10.1164/rccm.201811-2106ED. [Epub ahead of print] No abstract available. PMID:30485120

[Does Breathing Wood Smoke Make the Flu Worse? Sex Might Matter.](#) Frampton MW. Am J Respir Crit Care Med. 2018 Nov 27. doi: 10.1164/rccm.201810-2030ED. [Epub ahead of print] No abstract available. PMID:30480478

[Air Pollution and Non-Communicable Diseases: A Review by the Forum of International Respiratory Societies' Environmental Committee, Part 1: The damaging effects of air pollution.](#) Schraufnagel DE, Balmes J, Cowl CT, De Matteis S, Jung SH, Mortimer K, Perez-Padilla R, Rice MB, Riojas-Rodriguez H, Sood A, Thurston GD, To T, Vanker A, Wuebbles DJ. Chest. 2018 Nov 9. pii: S0012-3692(18)32723-5. doi: 10.1016/j.chest.2018.10.042. [Epub ahead of print] Review. PMID:30419235

[Air Pollution and Non-Communicable Diseases: A review by the Forum of International Respiratory Societies' Environmental Committee. Part 2: Air pollution and organ systems.](#) Schraufnagel DE, Balmes J, Cowl CT, De Matteis S, Jung SH, Mortimer K, Perez-Padilla R, Rice MB, Riojas-Rodriguez H, Sood A, Thurston GD, To T, Vanker A, Wuebbles DJ. Chest. 2018 Nov 9. pii: S0012-3692(18)32722-3. doi: 10.1016/j.chest.2018.10.041. [Epub ahead of print] Review. PMID:30419237

[The Association between Respiratory Infection and Air Pollution in the Setting of Air Quality Policy and Economic Change.](#) Croft DP, Zhang W, Lin S, Thurston SW, Hopke PK, Masiol M, Squizzato S, van Wijngaarden E, Utell MJ, Rich DQ. Ann Am Thorac Soc. 2018 Nov 6. doi: 10.1513/AnnalsATS.201810-691OC. [Epub ahead of print] PMID:30398895

[Per and polyfluoroalkyl substances \(PFAS\) blood levels after contamination of a community water supply and comparison with 2013-2014 NHANES.](#) Graber JM, Alexander C, Laumbach RJ, Black K, Strickland PO, Georgopoulos PG, Marshall EG, Shendell DG, Alderson D, Mi Z, Mascari M, Weisel CP. J Expo Sci Environ Epidemiol. 2018 Nov 27. doi: 10.1038/s41370-018-0096-z. [Epub ahead of print] PMID:30482936

[Recent spatial gradients and time trends in Dhaka, Bangladesh air pollution and their human health implications.](#) Rahman MM, Mahamud S, Thurston GD. J Air Waste Manag Assoc. 2018 Nov 14. doi: 10.1080/10962247.2018.1548388. [Epub ahead of print] PMID: 30427285

[Transformation of cadmium-associated schwertmannite and subsequent element repartitioning behaviors.](#) Fan C, Guo C, Chen M, Huang W, Wan J, Reinfelder JR, Li X, Zeng Y, Lu

G, Dang Z. Environ Sci Pollut Res Int. 2018 Nov 8. doi: 10.1007/s11356-018-3441-9. [Epub ahead of print] PMID:30411291

[National PM_{2.5} and NO₂ exposure models for China based on land use regression, satellite measurements, and universal kriging.](#) Xu H, Bechle MJ, Wang M, Szpiro AA, Vedal S, Bai Y, Marshall JD. Sci Total Environ. 2018 Nov 12;655:423-433. doi: 10.1016/j.scitotenv.2018.11.125. [Epub ahead of print] PMID:30472644

Climate Change

[Population Health Adaptation Approaches to the Increasing Severity and Frequency of Weather-Related Disasters Resulting From our Changing Climate: A Literature Review and Application to Charleston, South Carolina.](#) Runkle J, Svendsen ER, Hamann M, Kwok RK, Pearce J. Curr Environ Health Rep. 2018 Nov 8. doi: 10.1007/s40572-018-0223-y. [Epub ahead of print] Review. PMID:30406894

Asthma and Allergy

[Anxiety and non-eosinophilic asthma among adults in the United States.](#) Han YY, Forno E, Celedón JC. J Allergy Clin Immunol Pract. 2018 Nov 2. pii: S2213-2198(18)30710-4. doi: 10.1016/j.jaip.2018.10.039. [Epub ahead of print] No abstract available. PMID:30395990

[Impact of Parental Asthma, Prenatal Maternal Asthma Control and Vitamin D Status on Risk of Asthma and Recurrent Wheeze in 3-Year Old Children.](#) Mirzakhani H, Carey VJ, Zeiger R, Bacharier LB, O'Connor GT, Schatz MX, Laranjo N, Weiss ST, Litonjua AA. Clin Exp Allergy. 2018 Nov 21. doi: 10.1111/cea.13320. [Epub ahead of print] PMID:30461089

[Racial/ethnic differences in incidence and persistence of childhood atopic dermatitis.](#) Kim Y, Blomberg M, Rifas-Shiman SL, Camargo CA Jr, Gold DR, Thyssen JP, Litonjua AA, Oken E, Asgari MM. J Invest Dermatol. 2018 Nov 8. pii: S0022-202X(18)32798-2. doi: 10.1016/j.jid.2018.10.029. [Epub ahead of print] PMID:30414911

[Association between maternal pre-pregnancy body mass index, gestational weight gain, and offspring atopic dermatitis: a prospective cohort study.](#) Drucker AM, Pope EI, Field AE, Qureshi AA, Dumas O, Camargo CA Jr. J Allergy Clin Immunol Pract. 2018 Nov 8. pii: S2213-2198(18)30715-3. doi: 10.1016/j.jaip.2018.10.044. [Epub ahead of print] PMID:30414948

Chronic Obstructive Pulmonary Disease (COPD)

[Rural Residence and Poverty are Independent Risk Factors for COPD in the United States.](#) Raju S, Keet CA, Paulin LM, Matsui EC, Peng RD, Hansel NN, McCormack MC. Am J Respir Crit Care Med. 2018 Nov 2. doi: 10.1164/rccm.201807-1374OC. [Epub ahead of print] PMID:30384774

[Elevated circulating MMP-9 is linked to increased COPD exacerbation risk in SPIROMICS and COPDGene.](#) Wells JM, Parker MM, Oster RA, Bowler RP, Dransfield MT, Bhatt SP, Cho MH, Kim V, Curtis JL, Martinez FJ, Paine R 3rd, O'Neal W, Labaki WW, Kaner RJ, Barjaktarevic I, Han MK, Silverman EK, Crapo JD, Barr RG, Woodruff P, Castaldi PJ, Gaggar A, Investigators TSAC. JCI Insight. 2018 Nov 15;3(22). pii: 123614. doi: 10.1172/jci.insight.123614. [Epub ahead of print] PMID:30429371

Asthma-COPD overlap syndrome

[Controversies in Allergy: Is Asthma Chronic Obstructive Pulmonary Disease Overlap a Distinct Syndrome That Changes Treatment and Patient Outcomes?](#) Tashkin DP, Peebles RS Jr. *J Allergy Clin Immunol Pract*. 2018 Nov 14. pii: S2213-2198(18)30695-0. doi: 10.1016/j.jaip.2018.10.024. [Epub ahead of print] Review. No abstract available. PMID:30448110

Cellular Mechanisms and Preclinical Models of Exposure

[Aging leads to dysfunctional innate immune responses to TLR2 and TLR4 agonists.](#) Bailey KL, Smith LM, Heires AJ, Katafiasz DM, Romberger DJ, LeVan TD. *Aging Clin Exp Res*. 2018 Nov 7. doi: 10.1007/s40520-018-1064-0. [Epub ahead of print] PMID:30402800

[Tau-induced nuclear envelope invagination causes a toxic accumulation of mRNA in *Drosophila*.](#) Cornelison GL, Levy SA, Jenson T, Frost B. *Aging Cell*. 2018 Nov 9:e12847. doi: 10.1111/acel.12847. [Epub ahead of print] PMID:30411463

[Fitness and Genomic Consequences of Chronic Exposure to Low Levels of Copper and Nickel in *Daphnia pulex* Mutation Accumulation Lines.](#) Bull JK, Flynn JM, Chain FJJ, Cristescu ME. *G3 (Bethesda)*. 2018 Nov 2. pii: g3.200797.2018. doi: 10.1534/g3.118.200797. [Epub ahead of print] PMID:30389796

Lung health and other health outcomes across a lifespan

[Impaired Lung Function, Lung Disease and Risk of Incident Dementia.](#) Lutsey PL, Chen N, Mirabelli MC, Lakshminarayan K, Knopman DS, Vossel KA, Gottesman RF, Mosley TH, Alonso A. *Am J Respir Crit Care Med*. 2018 Nov 15. doi: 10.1164/rccm.201807-1220OC. [Epub ahead of print] PMID:30433810

[Peak flow variability in childhood and body mass index in adult life.](#) Lombardi E, Stern DA, Sherrill D, Morgan WJ, Wright AL, Garcia-Aymerich J, Serra Pons I, Guerra S, Martinez FD. *J Allergy Clin Immunol*. 2018 Nov 9. pii: S0091-6749(18)31575-6. doi: 10.1016/j.jaci.2018.10.035. [Epub ahead of print] No abstract available. PMID:30414860

[Dyspnea on exertion provokes unpleasantness and negative emotions in women with obesity.](#) Marines-Price R, Bernhardt V, Bhammar DM, Babb TG. *Respir Physiol Neurobiol*. 2018 Nov 22. pii: S1569-9048(18)30300-8. doi: 10.1016/j.resp.2018.11.008. [Epub ahead of print] PMID:30471435

Genetics, Genomics, and Epigenetics

[Accelerated rates of large-scale mutations in the presence of copper and nickel.](#) Chain FJ, Flynn JM, Bull JK, Cristescu ME. *Genome Res*. 2018 Nov 28. pii: gr.234724.118. doi: 10.1101/gr.234724.118. [Epub ahead of print] PMID:30487211

[Strategies for Pathway Analysis Using GWAS and WGS Data.](#) White MJ, Yaspan BL, Veatch OJ, Goddard P, Risse-Adams OS, Contreras MG. *Curr Protoc Hum Genet*. 2018 Nov 2:e79. doi: 10.1002/cphg.79. [Epub ahead of print] PMID:30387919

[A Comprehensive Gene-Environment Interaction Analysis in Ovarian Cancer using Genome-wide Significant Common Variants.](#) Kim S, Wang M, Tyrer JP, Jensen A, Wiensch A, Liu G, Lee AW, Ness RB, Salvatore M, Tworoger SS, Whittemore AS, Anton-Culver H, Sieh W, Olson SH, Berchuck A, Goode EL, Goodman MT, Doherty JA, Chenevix-Trench G, Rossing MA, Webb PM, Giles GG, Terry KL, Ziogas A, Fortner RT, Menon U, Gayther SA, Wu AH, Song H, Brooks-Wilson A,

Bandera EV, Cook LS, Cramer DW, Milne RL, Winham SJ, Kjaer SK, Modugno F, Thompson PJ, Chang-Claude J, Harris HR, Schildkraut JM, Le ND, Wentzensen N, Trabert B, Høgdall E, Huntsman D, Pike MC, Pharoah PDP, Pearce CL, Mukherjee B. *Int J Cancer*. 2018 Nov 29. doi: 10.1002/ijc.32029. [Epub ahead of print] PMID:30499236

[Maternal corticotropin-releasing hormone is associated with LEP DNA methylation at birth and in childhood: an epigenome-wide study in Project Viva.](#) Tian FY, Rifas-Shiman SL, Cardenas A, Baccarelli AA, DeMeo DL, Litonjua AA, Rich-Edwards JW, Gillman MW, Oken E, Hivert MF. *Int J Obes (Lond)*. 2018 Nov 21. doi: 10.1038/s41366-018-0249-0. [Epub ahead of print] PMID:30464231

[Assembly of a pan-genome from deep sequencing of 910 humans of African descent.](#) Sherman RM, Forman J, Antonescu V, Puiu D, Daya M, Rafaels N, Boorgula MP, Chavan S, Vergara C, Ortega VE, Levin AM, Eng C, Yazdanbakhsh M, Wilson JG, Marrugo J, Lange LA, Williams LK, Watson H, Ware LB, Olopade CO, Olopade O, Oliveira RR, Ober C, Nicolae DL, Meyers DA, Mayorga A, Knight-Madden J, Hartert T, Hansel NN, Foreman MG, Ford JG, Faruque MU, Dunston GM, Caraballo L, Burchard EG, Bleecker ER, Araujo MI, Herrera-Paz EF, Campbell M, Foster C, Taub MA, Beaty TH, Ruczinski I, Mathias RA, Barnes KC, Salzberg SL. *Nat Genet*. 2018 Nov 19. doi: 10.1038/s41588-018-0273-y. [Epub ahead of print] PMID:30455414

[DNA methylation in blood as a mediator of the association of mid-childhood body mass index with cardio-metabolic risk score in early adolescence.](#) Huang JV, Cardenas A, Colicino E, Schooling CM, Rifas-Shiman SL, Agha G, Zheng Y, Hou L, Just AC, Litonjua AA, DeMeo DL, Lin X, Oken E, Hivert MF, Baccarelli AA. *Epigenetics*. 2018 Nov 9:1-16. doi: 10.1080/15592294.2018.1543503. [Epub ahead of print] PMID:30412002

[Pulmonary Function: From Genome Wide Association Studies to Genome-Wide Interaction Studies.](#) Christiani DC. *Am J Respir Crit Care Med*. 2018 Nov 8. doi: 10.1164/rccm.201810-1986ED. [Epub ahead of print] No abstract available. PMID:30407846

Interstitial Lung Disease

[Short-term progression of interstitial lung disease in systemic sclerosis predicts long-term survival in two independent clinical trial cohorts.](#) Volkmann ER, Tashkin DP, Sim M, Li N, Goldmuntz E, Keyes-Elstein L, Pinckney A, Furst DE, Clements PJ, Khanna D, Steen V, Schraufnagel DE, Arami S, Hsu V, Roth MD, Elashoff RM, Sullivan KM; SLS I and SLS II study groups. *Ann Rheum Dis*. 2018 Nov 8. pii: annrheumdis-2018-213708. doi: 10.1136/annrheumdis-2018-213708. [Epub ahead of print] PMID:30409830

Methods, Diagnostics, and Biomarkers

[Development and Validation of LC-MS-MS Assay for the Determination of the Emerging Alkylating Agent Laromustine and Its Active Metabolite in Human Plasma.](#) Nassar AF, Wisniewski AV, Wu T, Lam TT, King I. *J Chromatogr Sci*. 2018 Nov 3. doi: 10.1093/chromsci/bmy100. [Epub ahead of print] PMID: 30395213

[A Gene Expression Classifier from Whole Blood Distinguishes Benign from Malignant Lung Nodules Detected by Low-Dose CT.](#) Kossenkov AV, Qureshi R, Dawany NB, Wickramasinghe J, Liu Q, Majumdar RS, Chang C, Widura S, Kumar T, Horng WH, Konnisto E, Criner G, Tsay JJ, Pass H, Yendamuri S, Vachani A, Bauer T, Nam B, Rom WN, Showe MK, Showe LC. *Cancer Res*. 2018 Nov 28. doi: 10.1158/0008-5472.CAN-18-2032. [Epub ahead of print] PMID:30487137

[Correlation over time of toenail metals among participants in the VA normative aging study from 1992 to 2014.](#) Wu AC, Allen JG, Coull B, Amarasiriwardena C, Sparrow D, Vokonas P, Schwartz J, Weisskopf MG. *J Expo Sci Environ Epidemiol.* 2018 Nov 27. doi: 10.1038/s41370-018-0095-0. [Epub ahead of print] PMID:30482937

[Reply to: New Meta- and Mega-analyses of Magnetic Resonance Imaging Findings in Schizophrenia: Do They Really Increase Our Knowledge About the Nature of the Disease Process?](#) van Erp TGM, Walton E, Hibar DP, Schmaal L, Jiang W, Glahn DC, Pearlson GD, Yao N, Fukunaga M, Hashimoto R, Okada N, Yamamori H, Clark VP, Mueller BA, de Zwarte SMC, Ophoff RA, van Haren NEM, Andreassen OA, Gurholt TP, Gruber O, Kraemer B, Richter A, Calhoun VD, Crespo-Facorro B, Roiz-Santiañez R, Tordesillas-Gutiérrez D, Loughland C, Catts S, Fullerton JM, Green MJ, Henskens F, Jablensky A, Mowry BJ, Pantelis C, Quidé Y, Schall U, Scott RJ, Cairns MJ, Seal M, Tooney PA, Rasser PE, Cooper G, Shannon Weickert C, Weickert TW, Hong E, Kochunov P, Gur RE, Gur RC, Ford JM, Macciardi F, Mathalon DH, Potkin SG, Preda A, Fan F, Ehrlich S, King MD, De Haan L, Veltman DJ, Assogna F, Banaj N, de Rossi P, Iorio M, Piras F, Spalletta G, Pomarol-Clotet E, Kelly S, Ciufolini S, Radua J, Murray R, Marques TR, Simmons A, Borgwardt S, Schönborn-Harrisberger F, Riecher-Rössler A, Smieskova R, Alpert KI, Bertolino A, Bonvino A, Di Giorgio A, Neilson E, Mayer AR, Yun JY, Cannon DM, Lebedeva I, Tomyshev AS, Akhadorov T, Kaleda V, Fatouros-Bergman H, Flyckt L; Karolinska Schizophrenia Project, Rosa PGP, Serpa MH, Zanetti MV, Hoschl C, Skoch A, Spaniel F, Tomecek D, McIntosh AM, Whalley HC, Knöchel C, Oertel-Knöchel V, Howells FM, Stein DJ, Temmingh HS, Uhlmann A, Lopez-Jaramillo C, Dima D, Faskowitz JI, Gutman BA, Jahanshad N, Thompson PM, Turner JA. *Biol Psychiatry.* 2018 Nov 20. pii: S0006-3223(18)31935-8. doi: 10.1016/j.biopsych.2018.10.003. [Epub ahead of print] No abstract available. PMID:30470561

[Presenting signs and patient co-variables in Gaucher disease: outcome of the Gaucher Early Diagnosis Consensus \(GED-C\) Delphi initiative.](#) Mehta A, Kuter DJ, Salek SS, Belmatoug N, Bembi B, Bright J, Vom Dahl S, Deodato F, Di Rocco M, Goker-Alpan O, Hughes DA, Lukina EA, Machaczka M, Mengel E, Nagral A, Nakamura K, Narita A, Oliveri B, Pastores G, Pérez-López J, Ramaswami U, Schwartz IV, Szer J, Weinreb NJ, Zimran A. *Intern Med J.* 2018 Nov 10. doi: 10.1111/imj.14156. [Epub ahead of print] PMID:30414226

Occupational Exposures, Health, and Mechanisms

[STING-dependent sensing of self-DNA drives silica-induced lung inflammation.](#) Benmerzoug S, Rose S, Bounab B, Gosset D, Duneau L, Chenuet P, Mollet L, Le Bert M, Lambers C, Geleff S, Roth M, Fauconnier L, Sedda D, Carvalho C, Perche O, Laurenceau D, Ryffel B, Apetoh L, Kiziltunc A, Uslu H, Albez FS, Akgun M, Togbe D, Quesniaux VFJ. *Nat Commun.* 2018 Dec 6;9(1):5226. doi: 10.1038/s41467-018-07425-PMID:30523277

[Letter to the Editor \(February 14, 2018\) concerning the paper "Histological findings and lung dust analysis as the basis for occupational disease compensation in asbestos-related lung cancer in Germany".](#) Baur X, Belpoggi F, Budnik LT, Casteleyn L, Frank AL, Oliver LC, Peak D, Rosenman K, Soskolne CL, Weitowitz HJ. *Int J Occup Med Environ Health.* 2018 Nov 13. pii: 89305. doi: 10.13075/ijom.1896.01332. [Epub ahead of print] No abstract available. PMID:30421745

[Potential Hazards Not Communicated in Safety Data Sheets of Flavoring Formulations, Including Diacetyl and 2,3-Pentanedione.](#) LeBouf RF, Hawley B, Cummings KJ. *Ann Work Expo Health.* 2018 Nov 8. doi: 10.1093/annweh/wxy093. [Epub ahead of print] PMID:30407491

[Greater Odds for Angina in Uranium Miners than Non-uranium Miners in New Mexico.](#) al Rashida VJM, Wang X, Myers OB, Boyce TW, Kocher E, Moreno M, Karr R, Assad N, Cook LS, Sood A. *J Occup Environ Med.* 2018 Nov 29. doi: 10.1097/JOM.0000000000001482. [Epub ahead of print]

PMID:30335677

[Impact of occupational exposure on human microbiota.](#) Lai PS, Christiani DC. *Curr Opin Allergy Clin Immunol.* 2018 Nov 29. doi: 10.1097/ACI.0000000000000502. [Epub ahead of print] PMID:30507717

[Association of Long-term Ambient Black Carbon Exposure and Oxidative Stress Allelic Variants With Intraocular Pressure in Older Men.](#) Nwanaji-Enwerem JC, Wang W, Nwanaji-Enwerem O, Vokonas P, Baccarelli A, Weisskopf M, Herndon LW, Wiggs JL, Park SK, Schwartz J. *JAMA Ophthalmol.* 2018 Nov 8. doi: 10.1001/jamaophthalmol.2018.5313. [Epub ahead of print] PMID:30419128

Cannabis Use

[Alcohol and Cannabis Use Alter Pulmonary Innate Immunity.](#) Bailey KL, Wyatt TA, Katafiasz DM, Taylor KW, Heires AJ, Sisson JH, Romberger DJ, Burnham EL. *Alcohol.* 2018 Nov 9. pii: S0741-8329(18)30171-X. doi: 10.1016/j.alcohol.2018.11.002. [Epub ahead of print] PMID:30419300

Cancer

[Alcohol consumption and lung cancer risk: A pooled analysis from the International Lung Cancer Consortium and the SYNERGY study.](#) Brenner DR, Fehringer G, Zhang ZF, Lee YA, Meyers T, Matsuo K, Ito H, Vineis P, Stucker I, Boffetta P, Brennan P, Christiani DC, Diao N, Hong YC, Landi MT, Morgenstern H, Schwartz AG, Rennert G, Saliba W, McLaughlin JR, Harris CC, Orlov I, Barros Dios JM, Ruano Raviña A, Siemiatycki J, Koushik A, Cote M, Lazarus P, Fernandez-Tardon G, Tardon A, Le Marchand L, Brenner H, Saum KU, Duell EJ, Andrew AS, Consonni D, Olsson A, Hung RJ, Straif K. *Cancer Epidemiol.* 2018 Nov 13;58:25-32. doi: 10.1016/j.canep.2018.10.006. [Epub ahead of print] PMID:30445228

[High Keratin 8/18 Ratio Predicts Aggressive Hepatocellular Cancer Phenotype.](#) Golob-Schwarzl N, Bettermann K, Mehta AK, Kessler SM, Unterluggauer J, Krassnig S, Kojima K, Chen X, Hoshida Y, Bardeesy NM, Müller H, Svendova V, Schimek MG, Diwocky C, Lipfert A, Mahajan V, Stumptner C, Thüringer A, Fröhlich LF, Stojakovic T, Nilsson KPR, Kolbe T, Rüllicke T, Magin TM, Strnad P, Kiemer AK, Moriggl R, Haybaeck J. *Transl Oncol.* 2018 Nov 12;12(2):256-268. doi: 10.1016/j.tranon.2018.10.010. [Epub ahead of print] PMID:30439626

[The Case for Patient Navigation in Lung Cancer Screening in Vulnerable Populations: A Systematic Review.](#) Shusted CS, Barta JA, Lake M, Brawer R, Ruane B, Giamboy TE, Sundaram B, Evans NR, Myers RE, Kane GC. *Popul Health Manag.* 2018 Nov 8. doi: 10.1089/pop.2018.0128. [Epub ahead of print] PMID:30407102

Infectious Disease

[Gastrointestinal microbiota disruption and risk of colonization with carbapenem-resistant *Pseudomonas aeruginosa* in ICU patients.](#) Pettigrew MM, Gent JF, Kong Y, Halpin AL, Pineles L, Harris AD, Johnson JK. *Clin Infect Dis.* 2018 Nov 1. doi: 10.1093/cid/ciy936. [Epub ahead of print] PMID:30383203

Therapeutics, Clinical Trials, and Clinical Care

[Forced oscillation technique in veterans with preserved spirometry and chronic respiratory symptoms.](#) Butzko RP, Sotolongo AM, Helmer DA, Klein-Adams JC, Osinubi OY, Berman AR, Ortiz-

Pacheco R, Falvo MJ. Respir Physiol Neurobiol. 2018 Nov 30;260:8-16. doi: 10.1016/j.resp.2018.11.012. [Epub ahead of print] PMID:30508589

[Organs at Risk Considerations for Thoracic Stereotactic Body Radiation Therapy: What Is Safe for Lung Parenchyma?](#) Kong FS, Moiseenko V, Zhao J, Milano MT, Li L, Rimner A, Das S, Li XA, Miften M, Liao Z, Martel M, Bentzen SM, Jackson A, Grimm J, Marks LB, Yorke E. Int J Radiat Oncol Biol Phys. 2018 Nov 26. pii: S0360-3016(18)34014-8. doi: 10.1016/j.ijrobp.2018.11.028. [Epub ahead of print] PMID:30496880

[Ambulatory blood pressure monitoring tolerability and blood pressure status in adolescents: the SHIP AHOY study.](#) Hamdani G, Flynn JT, Daniels S, Falkner B, Hanevold C, Ingelfinger J, Lande MB, Martin LJ, Meyers KE, Mitsnefes M, Rosner B, Samuels J, Urbina EM. Blood Press Monit. 2018 Nov 19. doi: 10.1097/MBP.0000000000000354. [Epub ahead of print] PMID:30451702

[A Randomized, Placebo-Controlled, Multiple-Ascending-Dose Study to Assess the Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of the Soluble Guanylate Cyclase Stimulator Praliquat in Healthy Subjects.](#) Hanrahan JP, Wakefield JD, Wilson PJ, Mihova M, Chickering JG, Ruff D, Hall M, Milne GT, Currie MG, Profy AT. Clin Pharmacol Drug Dev. 2018 Nov 13. doi: 10.1002/cpdd.627. [Epub ahead of print] PMID:30422390

Terrorism and Inhalational Disasters Section Updates



Tear gas use against migrants – TID Chair warns of health effects in children

In the wake of the use of tear gas agents against migrants at the US-Mexico border in the last month, Dr. Sven-Eric Jordt, Chair of the TID section, voiced concerns about the adverse health effects in exposed children and explained the chemistry and mechanism of action of these painful and choking agents in the national and international media. The Jordt laboratory discovered that tear gas agents work through transient receptor potential (TRP) ion channels in the sensory innervation of the airways, causing severe irritation and respiratory distress. Dr. Jordt is Associate Professor of Anesthesiology at Duke University School of Medicine.

<https://www.cnn.com/2018/11/27/health/tear-gas-migrant-children-border-trnd/index.html>

http://www.washingtonpost.com/politics/2018/11/26/you-could-actually-put-it-your-nachos-eat-it-fox-quest-says-gas-used-mexican-border/?utm_term=.ed2f4b0f22da

<https://www.scientificamerican.com/article/how-tear-gas-works-a-rundown-of-the-chemicals-used-on-crowds/>

<https://www.newsweek.com/what-are-effects-tear-gas-1231058>

<https://expansion.mx/tendencias/2018/12/03/esto-es-todo-lo-que-un-nino-sufre-con-el-gas-lacrimogeno>

Radio: listen at 9:14.

<https://www.cbc.ca/radio/thecurrent/the-current-for-november-28-2018-1.4922257>

Recent Publications Relevant to the TID Section

[Heme scavenging reduces pulmonary endoplasmic reticulum stress, fibrosis, and emphysema.](#) Aggarwal S, Ahmad I, Lam A, Carlisle MA, Li C, Wells JM, Raju SV, Athar M, Rowe SM, Dransfield MT, Matalon S. JCI Insight. 2018 Nov 2;3(21). pii: 120694. doi: 10.1172/jci.insight.120694. [Epub ahead of print] PMID:30385726

[Bromine-inhalation mimics ischemia-reperfusion cardiomyocyte injury and calpain activation in rats.](#) Ahmad S, Masjoan Juncos JX, Ahmad A, Zaky A, Wei CC, Bradley W, Zafar I, Powell P, Mariappan N, Vetal N, Louch WE, Ford DA, Doran S, Matalon S, Dell'Italia LJ. Am J Physiol Heart Circ Physiol. 2018 Oct 31. doi: 10.1152/ajpheart.00652.2017. [Epub ahead of print] PMID:30379573

[Pulmonary Function Testing in Animals.](#) Hoyle GW, Schlueter CF, Musah S. Methods Mol Biol. 2019;1894:323-330. doi: 10.1007/978-1-4939-8916-4_19. PMID:30547470

[Rapid analysis of sulfur mustard oxide in plasma using gas chromatography-chemical ionization-mass spectrometry for diagnosis of sulfur mustard exposure.](#) Manandhar E, Pay A, Veress LA, Logue BA. J Chromatogr A. 2018 Oct 19;1572:106-111. doi: 10.1016/j.chroma.2018.08.035. Epub 2018 Aug 18. PMID:30170867

[Consideration of Occupational and Environmental Lung Carcinogen Exposures for Lung Cancer Screening Using Low-Dose Chest CT.](#) de la Hoz RE, Weissman DN. Chest. 2018 Oct;154(4):996-997. doi: 10.1016/j.chest.2018.07.023. No abstract available. PMID:30290946

[Acute pulmonary effects of aerosolized nicotine.](#) Ahmad S, Zafar I, Mariappan N, Husain M, Wei CC, Vetal N, Eltoum IA, Ahmad A. Am J Physiol Lung Cell Mol Physiol. 2018 Oct 25. doi: 10.1152/ajplung.00564.2017. [Epub ahead of print] PMID:30358437

[Methyl isocyanate inhalation induces tissue factor-dependent activation of coagulation in rats.](#) Rancourt RC, Rioux JS, Veress LA, Garlick RB, Crutch CR, Peters E, Sosna W, White CW. Drug Chem Toxicol. 2018 Nov 14:1-7. doi: 10.1080/01480545.2018.1517773. [Epub ahead of print] PMID:30426789

[Validation of a novel irritant gas syndrome triage algorithm.](#) Culley JM, Donevant S, Craig J, Richter J, Tavakoli AS, Svendsen E, DiNardi S. Am J Disaster Med. 2018;13(1):13-26. doi: 10.5055/ajdm.2018.0284. PMID:29799609

[Anthrax Exposure, Belief in Exposure, and Postanthrax Symptoms Among Survivors of a Bioterrorist Attack on Capitol Hill.](#) Chiao S, Kipen H, Hallman WK, Pollio DE, North CS. Disaster Med Public Health Prep. 2018 Nov 12:1-6. doi: 10.1017/dmp.2018.115. [Epub ahead of print] PMID:30417804

To include your publications, news articles, or presentations pertinent to TID section in the future EOPH newsletters, please email your content to Satya Achanta, DVM, PhD (satya.achanta@duke.edu), Web Director of TID section.

In Memory: Dr. Frances Sommerfreund Silverman, 1942-2018

It is with deep sadness that we share the news of the sudden passing of **Dr. Frances Silverman**. Fran was a good friend, colleague, researcher and mentor to all of us, and she will be greatly missed.

FRANCES SOMMERFREUND SILVERMAN, 1942–2018

Frances Sommerfreund Silverman was born in Shanghai, China after her physician parents fled Vienna in 1942, narrowly escaping Hitler's tyranny. Frances lived in Wuhu, China to the age of 6 before emigrating to Canada where her family settled in Montreal.

Frances enrolled in a doctoral program in respiratory physiology at McGill University in 1968 under the late Professor David Bates, widely recognized one of the founding figures in the field of air pollution and health. After several years of study, Frances moved to Toronto to direct the Pulmonary Function Laboratory at the Gage Research Institute which was at the time, a joint Centre of the University of Toronto (Department of Medicine) and Toronto Western Hospital.

After completing her doctoral work at McGill in 1978, Frances was immediately appointed Assistant Professor in the Department of Medicine at the University of Toronto. Both then and throughout the rest of her career, Frances was proud to be one of a very small group of non-clinical appointees in an otherwise clinical Department.

Frances remained at the Gage Research Institute as an early faculty member in the fledgling discipline of Environmental Health where her research continued to focus on air contaminants, staying true to her first publication in the CMAJ in 1970 – “Problems in studies of human exposure to air pollutants”.

Over the years, her research activities expanded to include many health-relevant air contaminants that remain important today, including ozone, cigarette smoke, allergens and particulate matter arising from industry and motor vehicle emissions. Frances’s earliest work on the health consequences of ozone exposure in the 1970s was formative and continues to be cited regularly. From that and her other insights, she is widely regarded as one of the founding researchers in this area.

The health outcomes she considered also expanded beyond airways measurements to increasingly more sophisticated measures such as genetic and epigenetic markers, inflammatory mediators, and vascular measures. Elegant and highly cited work in the early 2000s by Frances and her colleagues first established a mechanistic link between air pollution exposure and acute cardiovascular events.

Frances held appointments in the Department of Medicine (Division of Respiriology), the Dalla Lana School of Public Health (Division of Occupational and Environmental Health), The School of the Environment, the Faculty of Kinesiology and Physical Education, the Li Ka Shing Knowledge Institute, and the University Health Network. She was always most proud of her affiliation with the Gage Research Institute (later the Gage Occupational and Environmental Health Unit), where she served as Acting Director and a member of the Board of Directors.

Despite starting her career as a basic scientist, Frances rapidly understood that truly transformative and impactful research can only be achieved through collaboration. She focused her efforts at the poorly explored nexus that exists between the basic sciences, health sciences and engineering. There, she built a network of collaborators and developed a world-class research program to study air health effects in healthy human subjects as well as those with mild asthma, children and adolescents, and those with chronic obstructive lung disease and obesity using controlled exposure challenges.

Using this approach, Frances and her group bridged a critical gap between basic laboratory science and population health, providing much essential evidence needed for policy setting in Canada and abroad in relation to a range of contaminants from environmental tobacco smoke to vehicle emissions. Her work on air contaminants continued well past her retirement in 2012, and she remained actively engaged in research and mentorship until her death. Her curiosity and enthusiasm were infectious, and her level of energy unmatched. “Not bad for an old lady,” she would often observe.

Frances was a networker before networking was a thing, she prioritized the mentorship of young scientists long before it became a trend, and had a preternatural ability to see connections and seed innovative thinking. In her final year, Frances became an advocate for the rights of the elderly to health care access, arising from her own experiences in later life as a caregiver, her deep knowledge

of the health care system, her drive to help others, and her talent for building relationships. Despite retirement, she actively mentored students and kept up the schedule of an active faculty member until her last day where her final effort was to advocate tenaciously at a faculty retreat on the importance of the environment as a determinant of health.

Frances was a person of great goodness and integrity – a true Mensch in the Yiddish sense. She continually challenged all who knew her to be better and do better by example. Her spirit, her wisdom, and her generosity will be greatly missed.

ATS Environmental Health Police Committee has a new Twitter account!

The ATS Environmental Health Policy Committee has a new Twitter Account: ATS Environmental Health Policy ([@AtsHealth](#)). The Committee created the account to foster communication between the committee and ATS members, with a special focus on EOPH. The account will highlight committee activities, with specific “calls to action” for community engagement on significant and timely issues. The committee looks forward to engaging with you in the digital world!

In The News

This month, the Environmental Protection Agency’s Clean Air Science Advisory committee (CASAC) met in Washington DC. In leading up to this meeting, *Science* published a Q&A session with Dr. Chris Frey of North Carolina State University in Raleigh, who has served and/or chaired this committee since 2007. Please take the time to consider the commentary, as well as the important role that we, as environmental scientists, have in our collective response to the issues raised by Dr. Frey and others leading up to, and following the December 12-13, 2018 meeting. The article can be found [HERE](#).

Success in the efforts of ICOH and others to include occupationally exposed workers in UN TB Declaration

Dr. Rafael E. de la Hoz, chair of the Scientific Committee on Respiratory Disorders for ICOH, an international society of occupational physicians has provided news of a critical success in efforts to include occupationally exposed workers and workplace preventive measures in the United Nations Tuberculosis Declaration. As described by Dr. de la Hoz:

[ICOH] and other organizations recently succeeded in achieving inclusion of occupationally exposed workers and using occupational preventive measures into the UN Declaration on Tuberculosis. You can find the document at <http://www.stoptb.org/webadmin/cms/docs/Political-Declaraion-on-the-Fight-against-Tuberculosis.pdf>. Representatives of ICOH and other organizations attended the September 26, 2018 United Nations General Assembly Meeting on Tuberculosis (TB) in New York City, where, after a lengthy and tedious process, the UN Political Declaration on TB “United to End Tuberculosis: An Urgent Global Response to a Global Epidemic” was endorsed. Through the combined efforts of ICOH, IOHA, and other organizations, the suggested occupationally-related language was successfully added to this endorsed Declaration. Specifically, you can see that Paragraph 17 of the document identifies “health care workers, miners and others exposed to silica” as high-risk vulnerable groups. Also, Paragraph 31 states: “Commit to... implementing primary prevention in high-risk occupations by reducing silica dust exposures in mining, construction and other dusty workplaces, and worker tuberculosis surveillance and infection prevention and control in healthcare settings”.

The Statements and endorsers, including ATS, are located at <http://www.icohweb.org/site/ICOH-TB-Statements.asp>.

Interesting Clinical Cases?

The web committee is currently calling for “Quick Hit” clinical cases, which will be posted on the website and highlighted in this newsletter. This is an excellent peer-reviewed writing opportunity for trainees. Submit clinical cases to tara.nordgren@medsch.ucr.edu.