THE ASSEMBLY ON Environmental, Occupational, and Population Health NEWSLETTER



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TID SECTION WEB EDITORIAL COMMITTEE Satya Achanta, DVM, PhD, DABT *TID Web Director* satya.achanta@duke.edu



Dear EOPH Members,

We hope everyone is enjoying the winter season! In this February 2020 issue of the EOPH Newsletter, we include some of our members' recent "epub ahead of print" articles from the month of January 2020. If you have a recent publication that you would like to share in the upcoming newsletter, please send the citation or link to <u>tara.nordgren@medsch.ucr.edu</u>.

Have you registered to attend the ATS 2020 Meeting in Philadelphia yet? You can learn more about this year's programming and register to attend with early registration rates through March 12th <u>HERE</u>. Please also consider registering for the *EOPH PGME Course: "PG20* – Does my patient have environmental or occupational lung disease?"—Please try to register by March 1st to allow for planning!

Are you interested in getting more involved with ATS and the EOPH assembly? Register <u>HERE</u> 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 <u>tara.nordgren@medsch.ucr.edu</u>.

and Population Health Newsletter

Air Pollution and Environmental Exposures

Air Quality Index and air quality awareness among adults in the United States.

Mirabelli MC, Ebelt S, Damon SA.

Environ Res. 2020 Jan 25;183:109185. doi: 10.1016/j.envres.2020.109185. [Epub ahead of print]

The Assembly on Environmental, Occupational,

PMID:32007750

Research Methods, Therapeutics, and Clinical Care

The ATS/ERS 2019 Spirometry Statement and Occupational Spirometry Testing in the U.S. Townsend MC.

Am J Respir Crit Care Med. 2020 Jan 13. doi: 10.1164/rccm.201911-2267LE. [Epub ahead of print] No abstract available.

PMID:31930925

Reply to: The ATS/ERS 2019 Spirometry Statement and Occupational Spirometry Testing in the U.S.

Graham BL, Steenbruggen I.

Am J Respir Crit Care Med. 2020 Jan 13. doi: 10.1164/rccm.201912-2530LE. [Epub ahead of print] No abstract available. PMID:31930926

Ambrisentan in portopulmonary hypertension: A multicenter, open-label trial.

Preston IR, Burger CD, Bartolome S, Safdar Z, Krowka M, Sood N, Ford HJ, Battarjee WF, Chakinala MM, Gomberg-Maitland M, Hill NS.

J Heart Lung Transplant. 2020 Jan 21. pii: S1053-2498(20)30011-5. doi: 10.1016/j.healun.2019.12.008. [Epub ahead of print]

PMID:32008947

<u>Trends in Unmet Need for Physician and Preventive Services in the United States, 1998-2017.</u> Hawks L, Himmelstein DU, Woolhandler S, Bor DH, Gaffney A, McCormick D. JAMA Intern Med. 2020 Jan 27. doi: 10.1001/jamainternmed.2019.6538. [Epub ahead of print]

PMID:31985751

The economic burden of caregiving in epilepsy: An estimate based on a survey of US caregivers. Hussain SA, Ortendahl JD, Bentley TGK, Harmon AL, Gupta S, Begley CE, Khilfeh I, Knoth RL. Epilepsia. 2020 Jan 17. doi: 10.1111/epi.16429. [Epub ahead of print]

PMID:31953846



Post-Acute Kidney Injury Proteinuria and Subsequent Kidney Disease Progression: The Assessment, Serial Evaluation, and Subsequent Sequelae in Acute Kidney Injury (ASSESS-AKI) Study.

Hsu CY, Chinchilli VM, Coca S, Devarajan P, Ghahramani N, Go AS, Hsu RK, Ikizler TA, Kaufman J, Liu KD, Parikh CR, Reeves WB, Wurfel M, Zappitelli M, Kimmel PL, Siew ED; ASSESS-AKI Investigators.

JAMA Intern Med. 2020 Jan 27. doi: 10.1001/jamainternmed.2019.6390. [Epub ahead of print]

PMID:31985750

Long-term safety and efficacy studies of epinephrine HFA metered-dose inhaler (Primatene_® Mist): a two-stage randomized controlled trial.

Kerwin EM, Tashkin DP, Korenblat PE, Greos LS, Pearlman DS, Bensch GW, Miller SD, Marrs T, Luo MZ, Zhang JY.

J Asthma. 2020 Jan 20:1-12. doi: 10.1080/02770903.2020.1713147. [Epub ahead of print]

PMID:31959019

Prevalence of hypermobile Ehlers-Danlos syndrome in postural orthostatic tachycardia syndrome. Miller AJ, Stiles LE, Sheehan T, Bascom R, Levy HP, Francomano CA, Arnold AC. Auton Neurosci. 2020 Jan 10;224:102637. doi: 10.1016/j.autneu.2020.102637. [Epub ahead of print]

PMID:31954224

Should Initial Management for Lumbar Herniated Nucleus Pulposus Resulting in a Dense Nerve Palsy Be Surgical.

Shenoy K, Goz V, Levine MJ, Kaye ID. Clin Spine Surg. 2020 Jan 6. doi: 10.1097/BSD.0000000000000922. [Epub ahead of print] No abstract available.

PMID:31913175

Cystic Fibrosis

Procalcitonin predicts the severity of cystic fibrosis pulmonary exacerbations and readmissions in adult patients: a prospective cohort study.

Bailey KL, Murphy PJ, Lineberry OK, Haack MR, Dickinson JD, Kalil AC. J Investig Med. 2020 Jan 21. pii: jim-2019-001183. doi: 10.1136/jim-2019-001183. [Epub ahead of print]

PMID:31969379

Asthma and Allergy

Budesonide/formoterol therapy: effective and appropriate use in asthma and chronic obstructive pulmonary disease.

Mapel DW, Roberts MH, Davis J. J Comp Eff Res. 2020 Jan 27. doi: 10.2217/cer-2019-0161. [Epub ahead of print]

PMID:31983228

Racial disparities in allergic outcomes persist to age 10 years in black and white children. Sitarik A, Havstad S, Kim H, Zoratti EM, Ownby D, Johnson CC, Wegienka G.



Ann Allergy Asthma Immunol. 2020 Jan 13. pii: S1081-1206(20)30006-5. doi: 10.1016/j.anai.2020.01.001. [Epub ahead of print]

PMID:31945477

Adherence to adding inhaled corticosteroids to rescue therapy in a pragmatic trial with adults with asthma: A pilot study.

Cardet JC, Busse PJ, Carroll JK, Casale TB, Coyne-Beasley T, Dixon-Williams S, Fagan M, Forth VE, Fuhlbrigge AL, Hernandez ML, Kaelber D, Kaplan B, Lorenzi M, Madison S, Maher NE, Majewski K, Manning B, McKee MD, Nazario S, Pace WD, Pencina MJ, Rand CS, Rodriguez-Louis J, She L, Shields J, Teng JE, Wechsler ME, Wisnivesky JP, Yawn BP, Israel E.

Ann Allergy Asthma Immunol. 2020 Jan 8. pii: S1081-1206(20)30002-8. doi: 10.1016/j.anai.2019.12.027. [Epub ahead of print]

PMID:31923550

Nasal DNA methylation profiling of asthma and rhinitis.

Qi C, Jiang Y, Yang IV, Forno E, Wang T, Vonk JM, Gehring U, Smit HA, Milanzi EB, Carpaij OA, Berg M, Hesse L, Brouwer S, Cardwell J, Vermeulen CJ, Acosta-Pérez E, Canino G, Boutaoui N, van den Berge M, Teichmann SA, Nawijn MC, Chen W, Celedón JC, Xu CJ, Koppelman GH. J Allergy Clin Immunol. 2020 Jan 14. pii: S0091-6749(20)30034-8. doi: 10.1016/j.jaci.2019.12.911. [Epub ahead of print]

PMID:31953105

Cigarettes, E-cigs, and Cannabis Smoke Exposure

DNA Methylation is Predictive of Mortality in Current and Former Smokers.

Morrow JD, Make B, Regan E, Han M, Hersh CP, Tal-Singer R, Quackenbush J, Choi AMK, Silverman EK, DeMeo DL.

Am J Respir Crit Care Med. 2020 Jan 29. doi: 10.1164/rccm.201902-0439OC. [Epub ahead of print]

PMID:31995399

Compliance in controlled e-cigarette studies.

Rebuli ME, Liu F, Urman R, Barrington-Trimis JL, Eckel SP, McConnell R, Jaspers I. Nicotine Tob Res. 2020 Jan 29. pii: ntaa017. doi: 10.1093/ntr/ntaa017. [Epub ahead of print]

PMID:31993664

Reply to: Are Electronic Cigarette Users at Risk for Lipid-Mediated Lung Injury?

Balmes JR.

Am J Respir Crit Care Med. 2020 Jan 9. doi: 10.1164/rccm.201912-2499LE. [Epub ahead of print] No abstract available.

PMID:31917603

Changes in Flavor Preference in a Cohort of Long-term Electronic Cigarette Users.

Du P, Bascom R, Fan T, Sinharoy A, Yingst J, Mondal P, Foulds J.

Ann Am Thorac Soc. 2020 Jan 24. doi: 10.1513/AnnalsATS.201906-472OC. [Epub ahead of print]

PMID:31978316





Occupational Injuries and Exposures

Respiratory Diseases in Post-9/11 Military Personnel Following Southwest Asia Deployment. Krefft SD, Wolff J, Zell-Baran L, Strand M, Gottschall EB, Meehan R, Rose CS. J Occup Environ Med. 2020 Jan 17. doi: 10.1097/JOM.000000000001817. [Epub ahead of print]

PMID:31977922

<u>A Cross-sectional Study of Gender-related Differences in Reporting Fatigue and Pain among Latino/A</u> Migrant Farmworkers.

Ramos AK, Carvajal-Suarez M, Trinidad N, Michaud TL, Grimm B, LeVan T, Siahpush M. J Agromedicine. 2020 Jan 15:1-11. doi: 10.1080/1059924X.2020.1713272. [Epub ahead of print]

PMID:31941431

Potential toxicities of carbon nanotubes: time for a reminder.

van Zandwijk N, Frank AL.

Expert Rev Respir Med. 2020 Jan 14:1-2. doi: 10.1080/17476348.2020.1715213. [Epub ahead of print] No abstract available.

PMID:31920124

Cellular and Molecular Mechanisms

Synthesis of Multifunctional 2-Aminobenzimidazoles on DNA via Iodine-Promoted Cyclization. Su L, Feng J, Peng T, Wan J, Fan J, Li J, O'Connell J, Lancia DR Jr, Franklin GJ, Liu G. Org Lett. 2020 Jan 30. doi: 10.1021/acs.orglett.9b04578. [Epub ahead of print]

PMID:31999466

TGF-β2 silencing to target biliary-derived liver diseases.

Dropmann A, Dooley S, Dewidar B, Hammad S, Dediulia T, Werle J, Hartwig V, Ghafoory S, Woelfl S, Korhonen H, Janicot M, Wosikowski K, Itzel T, Teufel A, Schuppan D, Stojanovic A, Cerwenka A, Nittka S, Piiper A, Gaiser T, Beraza N, Milkiewicz M, Milkiewicz P, Brain JG, Jones DEJ, Weiss TS, Zanger UM, Ebert M, Meindl-Beinker NM.

Gut. 2020 Jan 28. pii: gutjnl-2019-319091. doi: 10.1136/gutjnl-2019-319091. [Epub ahead of print]

PMID:31992593

Emerging patterns of tyrosine sulfation and O-glycosylation cross-talk and co-localization.

Mehta AY, Heimburg-Molinaro J, Cummings RD, Goth CK.

Curr Opin Struct Biol. 2020 Jan 9;62:102-111. doi: 10.1016/j.sbi.2019.12.002. [Epub ahead of print] Review.

PMID:31927217

Cancer

Conceptualizing Health Behaviors as Acute Mood-Altering Agents: Implications for Cancer Control.

Dunton GF, Kaplan JT, Monterosso J, Pang RD, Mason TB, Kirkpatrick MG, Eckel SP, Leventhal A. Cancer Prev Res (Phila). 2020 Jan 16. pii: canprevres.0345.2019. doi: 10.1158/1940-6207.CAPR-19-0345. [Epub ahead of print]



PMID:31948998

Systematic review and meta-analysis of epidemiological literature evaluating the association between exposure to man-made vitreous fibers and respiratory tract cancers.

Suder Egnot N, Benson SM, Vater MF, Hazan R, Patel O, Marsh GM.

Regul Toxicol Pharmacol. 2020 Jan 25;112:104585. doi: 10.1016/j.yrtph.2020.104585. [Epub ahead of print] Review.

PMID:31991162

A framework for advancing our understanding of cancer-associated fibroblasts.

Sahai E, Astsaturov I, Cukierman E, DeNardo DG, Egeblad M, Evans RM, Fearon D, Greten FR, Hingorani SR, Hunter T, Hynes RO, Jain RK, Janowitz T, Jorgensen C, Kimmelman AC, Kolonin MG, Maki RG, Powers RS, Puré E, Ramirez DC, Scherz-Shouval R, Sherman MH, Stewart S, Tlsty TD, Tuveson DA, Watt FM, Weaver V, Weeraratna AT, Werb Z. Nat Rev Cancer. 2020 Jan 24. doi: 10.1038/s41568-019-0238-1. [Epub ahead of print] Review.

PMID:31980749

COPD and other Obstructive Pulmonary Diseases

Machine Learning Characterization of COPD Subtypes: Insights from the COPDGene Study.

Castaldi PJ, Boueiz A, Yun J, San Jose Estepar R, Ross JC, Washko G, Cho MH, Hersh CP, Kinney GL, Young KA, Regan EA, Lynch DA, Criner GJ, Dy JG, Rennard SI, Casaburi R, Make BJ, Crapo J, Silverman EK, Hokanson JE; COPDGene Investigators.

Chest. 2019 Dec 27. pii: S0012-3692(19)34456-3. doi: 10.1016/j.chest.2019.11.039. [Epub ahead of print] Review.

PMID:31887283

Increase in Airway Obstruction between 1993 and 2012 in Switzerland: An Observational Study.

West EA, Strassmann A, Wang C, Turk A, De Hoogh K, Röösli M, Bopp M, Buist AS, Dressel H, Puhan MA; SNC Study Group.

Ann Am Thorac Soc. 2020 Jan 28. doi: 10.1513/AnnalsATS.201907-542OC. [Epub ahead of print]

PMID:31991089

Associations Among 25-Hydroxyvitamin D Levels, Lung Function, and Exacerbation Outcomes in COPD: An Analysis of the SPIROMICS Cohort.

Burkes RM, Ceppe AS, Doerschuk CM, Couper D, Hoffman EA, Comellas AP, Barr RG, Krishnan JA, Cooper C, Labaki WW, Ortega VE, Wells JM, Criner GJ, Woodruff PG, Bowler RP, Pirozzi CS, Hansel NN, Wise R, Brown TT, Drummond MB; SPIROMICS Investigators. Chest. 2020 Jan 17. pii: S0012-3692(20)30030-1. doi: 10.1016/j.chest.2019.11.047. [Epub ahead of print]

PMID:31958447

Updates from Terrorism and Inhalation Disasters Section



TID Section Announcements

TID Section Membership Meeting When: Tuesday, May 19 4:30 PM -6:30 PM Where: Loews Philadelphia – Washington A (Third Level).

TID Section Hands-On-Training event

Protect Yourself: PPE for Chemical and Biological Inhalation Disasters When and where: coming soon

Time for elections.... we are talking about TID Section elections, not 2020 US Presidential elections!

We are now soliciting suggestions for nominees for our Terrorism and Inhalation Disasters (TID) Section leadership positions. As we greatly value your input, we would like to invite you to submit suggestions for nominations for the following positions:

- 2020–21 TID Section Co-Chair (this person will transition to Section Chair in 2021-2022 and serve as TID Nominating Committee Section Chair in 2022–2023)
- 2020–21 TID Nominating Committee Members (2 members will be elected)

Position Descriptions:

Section Co- Chair (2020–21) Transitions to Section Chair (2021-2022):

The appropriate candidate for Section Co-Chair should have prior involvement in the section and must show strong leadership qualities. Additionally, he/she must be willing to make a significant time contribution to be an effective leader for the Section. The Section Co- Chair is a two-year term. In the year that a Co-Chair is elected he/she will serve as Co-Chair for the first year and transition to Chair in the second year. An election for the next Co-Chair will occur at the end of the Co-Chair's first year term. In the first year as Co-Chair this individual is responsible for working jointly with the Section Chair, this will help ensure continuity within the Section and will assist in bringing the Co-Chair up to speed. In year two as Chair of the section, this individual is responsible for coordinating all section activities including the section meeting at the conference. This individual is also responsible for selecting a section representative for the Planning Committee, Program Committee under the assembly in which the section resides. The Section



Chair will also be asked to provide expert assistance and guidance to the ATS leadership and ATS staff. The Section Chair will also meet regularly via telephone conference calls with the Section's Executive Committee, comprised of the Section Chair, Section Co-Chair, Planning Committee Rep, Program Committee Rep, Section Web Director, and Section Nominating Committee Chair.

Nominating Committee Members (2) for (2020–21):

The two members of the Nominating Committee are elected by the Section members. It is essential that all members of the Nominating Committee have prior Section experience and possess the ability to match the leadership needs of the section with potential candidates. There must be 2 candidates elected for this position.

If you have suggestions for nominees, please send them to the Terrorism and Inhalation Disasters (TID) Section Nominating Committee at <u>TID@thoracic.org</u>. Suggested nominations will be considered and discussed by the Section on Terrorism and Inhalation Disasters Nominating Committee. **Submission of suggested nominees does not guarantee selection by the Nominating Committee.** All final candidates will be contacted by the Nominating Committee Chair or its members. The deadline for suggestions is **Friday, February 28, 2020**. The results will be announced at the **TID Section Membership Meeting on Tuesday, May 19 4:30 PM -6:30 PM at the Loews Philadelphia – Washington A (Third Level)**.

CE course of interest

Postgraduate Course. PG20. DOES MY PATIENT HAVE ENVIRONMENTAL OR OCCUPATIONAL LUNG DISEASE?

Do you need postgraduate medical education (PGME) credits or interested in learning more about manifestation and treatment of environmental and occupational lung diseases? Attending the <u>ATS</u> <u>2020 International Conference</u>? Please consider registering for the *EOPH PGME Course:* "*PG20* – Does my patient have environmental or occupational lung disease?" We have a great lineup of expert speakers that will cover a range of environmental and occupational lung diseases. Registration includes continental breakfast and boxed lunch, along with interaction with field experts.

DOES MY PATIENT HAVE ENVIRONMENTAL OR OCCUPATIONAL LUNG DISEASE?

Location: PENNSYLVANIA CONVENTION CENTER, Room 121 C (100 Level) Date: Saturday, May 16, 2020 Time: 8:00 AM – 4:00 PM

Course Description:

The contribution of environmental and occupational exposures to the burden of many common lung diseases is under-appreciated. Failure to recognize these contributions can lead to misdiagnosis or suboptimal treatment. Many clinicians are often unsure of how to respond to patient questions regarding whether exposures caused their lung disease. This highly interactive session will provide a multi-disciplinary approach to the diagnosis and treatment of environmental



The Assembly on Environmental, Occupational, and Population Health Newsletter

and occupational lung diseases, teach clinicians about environmental contributors to common lung diseases, and update the audience on emerging exposure-related lung diseases.

A full description of the course can be found in the Online Program Itinerary, here.

Registration instructions can be found here.

Our very own Chair of TID section, **Dr. Erik R. Svendsen, PhD**, will be talking on "**Inhalational Disasters: Are We Ready?**" in addition to many other exciting talks in this course.

Accomplishments



Congratulations to Dr. Jessica Castner, PhD, RN-BC, FAEN, FAAN on her appointment as Editor-in-Chief of the Journal of Emergency Nursing!!! Under Dr. Castner's leadership, the Journal of Emergency Nursing is planning two special theme issues relevant to TID Section - on environmental health (July 2020) and disasters (September 2020). Please consider submitting your work to Journal of Emergency Nursing. Please contact Dr. Castner with any questions (jcastner@castnerincorp.com).



Dr. Stella E. Hines, MD, MSPH, Assistant Professor, Division of Occupational and Environmental Medicine, Division of Pulmonary and Critical Care Medicine, University of Maryland School of Medicine, Baltimore, MD published two articles in 2019. Both are focused on use of elastomeric half face respirators in healthcare environments. These resulted from a NIOSH/NPPTL R21 grant focused on this topic.

In September 2019, Dr. Hines received new funding for an investigator-initiated research study exploring use of the <u>CleanSpace Halo respirator</u> in US healthcare environments. This device is a new PAPR design incorporating use of a silicone face mask, intended for use in healthcare environments. Major goals of this study are to determine optimal deployment, storage, and cleaning and disinfection strategies for use of a reusable respiratory protective device to protect healthcare workers from airborne infectious disease hazards.

In February 2020, Dr. Hines traveled to the Center for Vaccine Development in Bamako, Mali (CVD-Mali) as part of a safety program evaluation of their respiratory protection program. CVD-Mali is unique in their use of reusable elastomeric half face respirators to protect health workers in a low or middle income nation.



CVD Mali, Respiratory Protection Program Evaluation, February 5-7, 2020



Feb 5, 2020 – UMB Team of Melissa McDiarmid, Stella Hines and Joanna Gaitens meet with CVD Mali Respiratory Protection Champions, Mamoudou Kodio, Diakaridia Sidibe, Awa Traore and Henry Budji



Dr. Fadima Cheick Haidara joins the group for the Closing Conference and discussion of priority interventions.

Volunteers donning Halos

ATS members, Dr. Katie Chin (left) and Dr. Stella Hines (right)





ATS member, Dr. Katle Chin works on her research project while trying out a Halo respirator









<u>Hines SE, Brown C, Oliver M, Gucer P, Frisch M, Hogan R, Roth T, Chang J, McDiarmid M</u>. **User acceptance of reusable respirators in health care.** <u>Am J Infect Control.</u> 2019 Jun;47(6):648-655. doi: 10.1016/j.ajic.2018.11.021. Epub 2019 Jan 10.

<u>Hines SE</u>, <u>Brown C</u>, <u>Oliver M</u>, <u>Gucer P</u>, <u>Frisch M</u>, <u>Hogan R</u>, <u>Roth T</u>, <u>Chang J</u>, <u>McDiarmid M</u>. **Storage and Availability of Elastomeric Respirators in Health Care.** <u>Health Secur.</u> 2019 Sep/Oct;17(5):384-392. doi: 10.1089/hs.2019.0039.

Akihito Okazaki, Yoshihiro Takeda, Yasuhiko Matsuda, Kazuhiko Shibata , and KazuoKasaharaChemical Pneumonitis Caused by Inhalation of White Phosphorus Fumes.https://doi.org/10.1164/rccm.201904-0734IMPubMed: 31491338



TID section is soliciting ideas for putting together **podcasts**, **webinars**, **and journal clubs**. Please contact Satya Achanta, DVM, PhD, DABT (<u>satya.achanta@duke.edu</u>), 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.



ATS 2020 International Conference

Reducing Our Carbon Footprint



Worried about the carbon footprint of your trip to the 2020 International Conference? Great news! Conference registration now includes the option to purchase \$20 in carbon offsets! Your contribution will go directly to CoolEffect, an organization that invests in greenhouse gas reduction and sequestration projects around the globe. All contributors will receive a green badge ribbon in their conference welcome packet. Let's all help the world breathe!

Time to start planning your conference schedule!

Be on the look-out in the coming months for ATS 2020 sessions sponsored by EOPH and TID, as well as other interesting postgraduate courses, seminars, and events taking place in Philadelphia this year! To begin, consider registering for the following postgraduate course (described in full detail in the TID Updates above)! Please register by March 1st to allow for planning!

PG20: DOES MY PATIENT HAVE ENVIRONMENTAL OR OCCUPATIONAL LUNG DISEASE?

Location: PENNSYLVANIA CONVENTION CENTER, Room 121 C (100 Level) Date: Saturday, May 16, 2020 Time: 8:00 AM - 4:00 PM