

THE ASSEMBLY ON

Environmental, Occupational, and Population Health

NEWSLETTER



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Dear EOPH Members,

We hope you are enjoying the fall season! Please remember to submit your abstracts for the 2020 ATS Meeting—**Abstracts are due by October 30, 2019**, and be certain to indicate EOPH as your request review assembly if you would like your work considered for EOPH Assembly programming.

In this October issue of the EOPH Newsletter, we include some of our members' recent "epub ahead of print" articles. If you have a recent publication that you would like to share in the upcoming newsletter, please send the citation or link to tara.nordgren@medsch.ucr.edu.

Would you like to become more engaged with our social media accounts, but don't know where to start? Beginning in our August Newsletter, we have been sharing tips for doing just that. Check out our Twitter Tips section in this newsletter to learn more.

Are you interested in getting more involved with ATS and the EOPH assembly? Register [HERE](#) to indicate your interest!

Sincerely,

Your EOPH and TID Web Editorial Committee





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 tara.nordgren@medsch.ucr.edu.

Air Pollution and Environmental Exposures

[The "envirome" and what the practitioner needs to know about it.](#)

Peden DB.

Ann Allergy Asthma Immunol. 2019 Sep 24. pii: S1081-1206(19)31192-5. doi: 10.1016/j.anai.2019.09.014. [Epub ahead of print] Review.

PMID:31560947

[Proximity to Major Roadways and Asthma Symptoms in the School Inner-City Asthma Study.](#)

Hauptman M, Gaffin JM, Petty CR, Sheehan WJ, Lai PS, Coull B, Gold DR, Phipatanakul W.

J Allergy Clin Immunol. 2019 Sep 23. pii: S0091-6749(19)31239-4. doi: 10.1016/j.jaci.2019.08.038. [Epub ahead of print]

PMID:31557500

[Nonsteroidal Anti-Inflammatory Drugs Modify the Effect of Short-Term Air Pollution on Lung Function.](#)

Gao X, Coull B, Lin X, Vokonas P, Schwartz J, Baccarelli AA.

Am J Respir Crit Care Med. 2019 Sep 25. doi: 10.1164/rccm.201905-1003LE. [Epub ahead of print] No abstract available.

PMID:31553629

[Incident command post exposure to polycyclic aromatic hydrocarbons and particulate matter during a wildfire.](#)

Navarro KM, Cisneros R, Schweizer D, Chowdhary P, Noth EM, Balmes JR, Hammond SK.

J Occup Environ Hyg. 2019 Sep 23:1-10. doi: 10.1080/15459624.2019.1657579. [Epub ahead of print]

PMID:31545144

[Estimated time-varying exposures to air emissions from animal feeding operations and childhood asthma.](#)

Loftus C, Afsharinejad Z, Sampson P, Vedal S, Torres E, Arias G, Tchong-French M, Karr C.

Int J Hyg Environ Health. 2019 Sep 19. pii: S1438-4639(19)30663-7. doi: 10.1016/j.ijheh.2019.09.003. [Epub ahead of print]

PMID:31543304

[Innate Lymphoid Cell-Dependent Airway Epithelial and Inflammatory Responses to Inhaled Ozone: A New Paradigm in Pathogenesis.](#)

Harkema JR, Wagner JG.

Toxicol Pathol. 2019 Sep 19:192623319873872. doi: 10.1177/0192623319873872. [Epub ahead of print]

PMID:31537180

[Air pollution and DNA methylation: effects of exposure in humans.](#)



Rider CF, Carlsten C.

Clin Epigenetics. 2019 Sep 3;11(1):131. doi: 10.1186/s13148-019-0713-2. Review.

PMID:31481107

Research Methods, Therapeutics, and Clinical Strategies

Benefit:Risk Profile of Budesonide in Obstructive Airways Disease.

Tashkin DP, Lipworth B, Brattsand R.

Drugs. 2019 Sep 23. doi: 10.1007/s40265-019-01198-7. [Epub ahead of print] Review.

PMID:31549299

A Retrospective Comparative Analysis of Titanium Mesh and Custom Implants for Cranioplasty.

Rosinski CL, Patel S, Geever B, Chiu RG, Chaker AN, Zakrzewski J, Rosenberg DM, Parola R, Shah K, Behbahani M, Mehta AI.

Neurosurgery. 2019 Sep 13. pii: nyz358. doi: 10.1093/neuros/nyz358. [Epub ahead of print]

PMID:31529096

Interstitial Lung Disease

MUC5B variant is associated with visually and quantitatively detected preclinical pulmonary fibrosis.

Mathai SK, Humphries S, Kropski JA, Blackwell TS, Powers J, Walts AD, Markin C, Woodward J, Chung JH, Brown KK, Steele MP, Loyd JE, Schwarz MI, Fingerlin T, Yang IV, Lynch DA, Schwartz DA.

Thorax. 2019 Sep 26. pii: thoraxjnl-2018-212430. doi: 10.1136/thoraxjnl-2018-212430. [Epub ahead of print]

PMID:31558622

Asthma and Allergy

Ten-Eleven Translocation (TET) Enzymes Modulate the Activation of Dendritic Cells in Allergic Rhinitis.

Li H, Lu T, Sun W, Ma R, Zhong H, Wei Y, Chen D, Wen Y, Carlsten C, Wen W.

Front Immunol. 2019 Sep 26;10:2271. doi: 10.3389/fimmu.2019.02271. eCollection 2019.

PMID:31616436

Whole Genome Sequencing Identifies CRISPLD2 as a Lung Function Gene in Children with asthma.

Kachroo P, Hecker J, Chawes B, Ahluwalia TS, Cho M, Qiao D, Kelly RS, Chu SH, Virkud YV, Huang M, Barnes KC, Burchard EG, Eng C, Hu D, Celedón JC, Daya M, Levin AM, Gui H, Williams LK, Forno E, Mak ACY, Avila L, Soto-Quiros M, Cloutier MM, Acosta-Pérez E, Canino G, Bønnelykke K, Bisgaard H, Raby BA, Lange C, Weiss ST, Lasky-Su J; NHLBI Trans-Omics for Precision Medicine (TOPMed) Consortium.

Chest. 2019 Sep 23. pii: S0012-3692(19)33933-9. doi: 10.1016/j.chest.2019.08.2202. [Epub ahead of print]

PMID:31557467

Pharmacogenomics and Placebo Response in a Randomized Clinical Trial in Asthma.



Wang RS, Croteau-Chonka DC, Silverman EK, Loscalzo J, Weiss ST, Hall KT.
Clin Pharmacol Ther. 2019 Sep 26. doi: 10.1002/cpt.1646. [Epub ahead of print]

PMID:31557306

[Sex Steroid Hormones and Asthma in a Nationwide Study of U.S. Adults.](#)

Han YY, Forno E, Celedón JC.

Am J Respir Crit Care Med. 2019 Sep 16. doi: 10.1164/rccm.201905-0996OC. [Epub ahead of print]

PMID:31525075

[Mental health, long-term medication adherence, and the control of asthma symptoms among persons exposed to the WTC 9/11 disaster.](#)

Brite J, Friedman S, de la Hoz RE, Reibman J, Cone J.

J Asthma. 2019 Oct 10:1-10. doi: 10.1080/02770903.2019.1672722. [Epub ahead of print]

PMID:31550944

Cigarettes, E-cigs, and Cannabis Smoke Exposure

[Comparison of smoking-related DNA methylation between newborns from prenatal exposure and adults from personal smoking.](#)

Sikdar S, Joehanes R, Joubert BR, Xu CJ, Vives-Usano M, Rezwani FI, Felix JF, Ward JM, Guan W, Richmond RC, Brody JA, Küpers LK, Baiz N, Håberg SE, Smith JA, Reese SE, Aslibekyan S, Hoyo C, Dhingra R, Markunas CA, Xu T, Reynolds LM, Just AC, Mandaviya PR, Ghantous A, Bennett BD, Wang T, The BIOS Consortium, Bakulski KM, Melen E, Zhao S, Jin J, Herceg Z, Meurs JV, Taylor JA, Baccarelli AA, Murphy SK, Liu Y, Munthe-Kaas MC, Deary IJ, Nystad W, Waldenberger M, Annesi-Maesano I, Conneely K, Jaddoe VW, Arnett D, Snieder H, Kardina SL, Relton CL, Ong KK, Ewart S, Moreno-Macias H, Romieu I, Sotoodehnia N, Fornage M, Moutsier-Reif A, Koppelman GH, Bustamante M, Levy D, London SJ.

Epigenomics. 2019 Sep 19. doi: 10.2217/epi-2019-0066. [Epub ahead of print]

PMID:31536415

[Risk Analysis for the Carcinogen Pulegone in Mint- and Menthol-Flavored e-Cigarettes and Smokeless Tobacco Products.](#)

Jabba SV, Jordt SE.

JAMA Intern Med. 2019 Sep 16. doi: 10.1001/jamainternmed.2019.3649. [Epub ahead of print] No abstract available.

PMID:31524930

Cellular and Molecular Mechanisms

[Neutrophils Deficient in Innate Suppressor IRAK-M Enhances Anti-tumor Immune Responses.](#)

Zhang Y, Diao N, Lee CK, Chu HW, Bai L, Li L.

Mol Ther. 2019 Sep 23. pii: S1525-0016(19)30422-8. doi: 10.1016/j.ymthe.2019.09.019. [Epub ahead of print]

PMID:31607540

[Defect-induced electronic states amplify the cellular toxicity of ZnO nanoparticles.](#)



Persaud I, Raghavendra AJ, Paruthi A, Alsaleh NB, Minarchick VC, Roede JR, Podila R, Brown JM. *Nanotoxicology*. 2019 Sep 25:1-17. doi: 10.1080/17435390.2019.1668067. [Epub ahead of print]

PMID:31553248

[Exposure to silver nanoparticles primes mast cells for enhanced activation through the high-affinity IgE receptor.](#)

Alsaleh NB, Mendoza RP, Brown JM.

Toxicol Appl Pharmacol. 2019 Sep 5:114746. doi: 10.1016/j.taap.2019.114746. [Epub ahead of print]

PMID:31494149

[Mitochondrial biology in airway pathogenesis and the role of NRF2.](#)

Cho HY, Kleeberger SR.

Arch Pharm Res. 2019 Sep 4. doi: 10.1007/s12272-019-01182-5. [Epub ahead of print] Review.

PMID:31486024

[Antigenic pressure on H3N2 influenza drift strains imposes constraints on binding to sialylated receptors, but not phosphorylated glycans.](#)

Byrd-Leotis L, Gao C, Jia N, Mehta A, Trost J, Cummings SF, Heimbürg-Molinaro J, Cummings RD, Steinhauer DA.

J Virol. 2019 Sep 4. pii: JVI.01178-19. doi: 10.1128/JVI.01178-19. [Epub ahead of print]

PMID:31484755

Cancer

[Molecular Analysis of a Patient With Neurofibromatosis 2 \(NF2\) and Peritoneal Malignant Mesothelioma.](#)

Glass C, Sholl LM, Landgraf JR, Chirieac L, Roggli VL.

Am J Surg Pathol. 2019 Sep 20. doi: 10.1097/PAS.0000000000001359. [Epub ahead of print]

PMID:31567203

[Asbestos, Pleural Plaques, and Lung Cancer: Untangling the Relationships.](#)

Harber P.

Am J Respir Crit Care Med. 2019 Sep 20. doi: 10.1164/rccm.201908-1676ED. [Epub ahead of print] No abstract available.

PMID:31539279

Genetics, Epigenetics, and Genomics

[Clinical spectrum of AIFM1-associated disease in an Irish family, from mild neuropathy to severe cerebellar ataxia with colour blindness.](#)

Bogdanova-Mihaylova P, Alexander MD, Murphy RP, Chen H, Healy DG, Walsh RA, Murphy SM.

J Peripher Nerv Syst. 2019 Sep 15. doi: 10.1111/jns.12348. [Epub ahead of print]

PMID:31523922



[Plasma sRAGE Acts as Genetically Regulated Causal Intermediate in Sepsis-Associated ARDS.](#)

Jones TK, Feng R, Kerchberger VE, Reilly JP, Anderson BJ, Shashaty MGS, Wang F, Dunn TG, Riley TR, Abbott J, Ittner CAG, Christiani DC, Mikacenic C, Wurfel MM, Ware LB, Calfee CS, Matthay MA, Christie JD, Meyer NJ.

Am J Respir Crit Care Med. 2019 Sep 5. doi: 10.1164/rccm.201810-2033OC. [Epub ahead of print]

PMID:31487195

Occupational Exposures

[The Prevalence of Pulmonary Nodules on Computed Tomography in World Trade Center Rescue and Recovery Workers.](#)

Sigel KM, Xu D, Weber J, Wisnivesky JP, Celedón JC, de la Hoz RE.

Ann Am Thorac Soc. 2019 Sep 9. doi: 10.1513/AnnalsATS.201907-517RL. [Epub ahead of print] No abstract available.

PMID:31499008

Updates from Terrorism and Inhalation Disasters Section



Tear gas:



While the discussion on the indiscriminate use of tear gas against protesters in Hong Kong is still burning, there have been several incidents of launching tear gas canisters around the world.

The Office of the United Nations High Commission for Human Rights issued new guidance related to “less-lethal weapons” including police batons, tear gas and tasers. The document is addressed to a wide array of stakeholders as it aims to cover all aspects of these weapons from design to use. The document is available [here](#).

<https://www.lawfareblog.com/united-nations-issues-human-rights-guidance-law-enforcement>

US lawmakers introduce bill to stop tear gas sales to Hong Kong

<https://www.scmp.com/news/china/diplomacy/article/3026631/us-lawmakers-introduce-bill-stop-tear-gas-sales-hong-kong>

Vaping crisis:

As the number of vaping related deaths and hospitalizations continue to rise across the country, the faculty at Duke University are urging the vaping ban on campus. See the links:



<https://www.dukechronicle.com/article/2019/10/college-vaping-epidemic-letter-faculty-concerned-about-vaping-at-duke>

<https://www.cbs17.com/news/local-news/durham-county-news/duke-faculty-urge-university-officials-to-ban-vaping-on-campus/>

Job openings:

The Jordt Lab at Duke University School of Medicine is looking for a veterinary research scientist. Please see the job posting and spread this to your colleagues/trainees/friends who might be interested in this position. Please see the link for more details:

https://careers.duke.edu/job/Durham-ASSOCIATE-IN-RESEARCH-NC-27710/600928500/?locale=en_US

The lab is also looking for postdoctoral research scientists to work on inhalational toxicology projects. Interested candidates should send their CV and a cover letter to sven.jordt@duke.edu or satya.achanta@duke.edu.

ATS 2020

ATS is calling for [abstracts](#) for 2020 ATS international conference. Please choose EOPH as the primary assembly during the abstract submission so that the abstract will be appropriately reviewed and grouped in a thematic session.

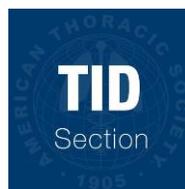
SUBMISSION DEADLINE:

WEDNESDAY, OCTOBER 30, 2019 (5 p.m. Eastern Time).

The [Best of ATS Video Lecture Series \(BAVLS\)](#) is soliciting educational videos. The deadline for submission is November 15th, 2019.



TID section is on [twitter](#)
Follow TID section on [@ATSTIDSection](#)



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



In the News

Numerous EOPH Assembly members have been in the news to share information regarding the vaping youth epidemic and lung injury:

- Dan Croft, MD from University of Rochester Medical Center was recently featured on NBC's nightly news program (9/11/19). Click [HERE](#) to see the video—Dr. Croft is at minute 1:30 in the video discussing the inflammatory effects of e-cigarette aerosols.
- Ilona Jaspers, PhD from the University of North Carolina has an article on Heraldnet, titled "[Viewpoints: A cloud of suspicion envelops e-cigarettes](#)".
- Chris Carlsten, MD from the University of British Columbia was interviewed for the Times Colonist report titled, "[About 21% of B.C. teens have tried vaping despite warnings: survey](#)."
- Sven-Eric Jordt, PhD from Duke University was interviewed for the LA Times article titled, "[Hoodies, watches and other camouflaged vaping devices confound parents, schools](#)."

Twitter Tips!

Would you like to become more engaged with our social media accounts, but don't know where to start? Beginning with our August 2019 Newsletter, we are providing tips on how to do just that. Last month, we provided tips on how to optimize your Twitter profile, follow others on Twitter, and send your first Tweet. This month, we will be providing additional information on how to optimize your Twitter account and increase engagement. We look forward to engaging with you on Twitter soon!

What to include in Tweets to increase engagement: Hashtags

A hashtag, written with a # symbol preceding a word or category, is used on Twitter to curate keywords or topics on Twitter. By clicking on a hashtagged word in a Tweet, you can see a feed of tweets containing the hashtag.

Hashtag Tips:

- Use hashtags (#) to join relevant conversations and make your tweets easy to find.
- It is generally advised to limit the number of hashtags to 1-3 per tweet.
- Do not include any spaces or punctuation in the hashtags, as this will prevent them from working properly.
- Keep in mind that when you use a hashtag in a tweet, anyone searching that hashtag on Twitter can find your tweet.

What to include in Tweets to increase engagement: Mentions

When you include an individual's (or group's) twitter handle (or username) beginning with an @, this is called a mention. The person/account with the username that you include in your tweet will be notified of the mention.

Mention Tips:



- Use mentions if you want to draw someone’s attention to a Tweet. In example, if you would like to share an article with the EOPH Assembly, include @ATS_EOPH in your Tweet, and we will receive a notification of this mention.
- Mentions are publicly available; if you prefer to send a private message to an account, this is performed using the Direct Message (DM) function. Here, you click on the “envelope” icon in your Twitter app, type in the accounts you are interested in contacting directly, then enter your message and click the send button.

What to include in Tweets to increase engagement: Images, Videos, etc.

You can include images, videos, GIFs, and other content to your tweets to make them more interesting or informative.

Added Content Tips:

- After clicking the “Compose Tweet” box, you can click the “photo” icon to add a GIF or photo (up to 4 at once).
- Use landscape-oriented images with about a 2:1 dimension ratio for the best appearance on Twitter.
- You can record a video to share on Twitter by clicking the camera icon in the “Compose Tweet” box, or upload a previously recorded video from your gallery.

What to include in Tweets to increase engagement: Retweets

A Retweet is the re-posting of a Tweet that was originally tweeted by yourself or someone else.

Retweet Tips:

- If you see "RT" at the start of a Tweet, this is a way of indicating that this is a retweeted post (although this is not always utilized in retweets). Otherwise, you will see the “retweet” icon (icon of two arrows forming a box) beside the username of the account who retweeted the original post as an indicator that this is a retweeted post.
- You can easily see how many retweets a post has by looking at the value beside the “retweet” icon at the bottom of a Tweet (beside the heart/Like icon).
- To retweet a post, click on the “retweet” icon of a tweet. A dialogue box will pop up. You can add comments to the tweet, then click the “Retweet” button.

Increasing Twitter engagement—“Likes”:

- “Likes” on Twitter are identified with a heart shape. They are used to indicate appreciation for a Tweet.
- At the bottom of each tweet by the heart shape is a number indicating how many “likes” the tweet has received.” By clicking on the tweet, you can see who has “liked” the Tweet.
- You can see what tweets you have “liked” through your profile page (under “Likes” tab) and also see tweets that others have liked in the same way through their profile.

Increasing Twitter engagement—Replies/comments:



- If you like a post or would like to add to a discussion, consider adding a reply/comment to a Tweet. This can be done by clicking the conversation bubble icon at the bottom of a tweet (to the left of the “retweet” icon).
- Beside the icon is a value indicating the number of replies a tweet currently has. To view the replies, click on the Tweet.
- In addition to “liking”, replying to, or retweeting a primary tweet, you can also like, retweet, or reply to a comment/reply to a tweet in the same manner as you perform these functions for a primary tweet.