

THE ASSEMBLY ON

Environmental, Occupational, and Population Health

NEWSLETTER



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Dear EOPH Members,

We hope everyone is staying safe and healthy as we continue to navigate and respond to the COVID-19 pandemic. ATS has rescheduled portions of the 2020 international conference that will be held virtually August 5th-10th. We have also included some resources to help everyone stay informed as to the current status of the pandemic.

Also included in this June 2020 newsletter are some of our members' recent and "epub ahead of print" articles from the months of April 2020 to June 2020.

If you have a recent publication that you would like to share in the upcoming newsletter, please send the title and citation link to Sophia.Kwon@nyulangone.org and TID Section relevant publications to satya.achanta@duke.edu.

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 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 Sophia.Kwon@nyulangone.org.

Air Pollution and Environmental Exposures

The Need for a Tighter Particulate-Matter Air-Quality Standard.

Independent Particulate Matter Review Panel, Frey HC, Adams PJ, Adgate JL, Allen GA, **Balmes J**, Boyle K, Chow JC, Dockery DW, Felton HD, Gordon T, Harkema JR, Kinney P, Kleinman MT, McConnell R, Poirrot RL, Sarnat JA, Sheppard L, Turpin B, Wyzga R.

N Engl J Med. 2020 Jun 10. doi: 10.1056/NEJMs2011009. [Epub ahead of print] No abstract available.

PMID:32521130

Airborne PAHs inhibit gap junctional intercellular communication and activate MAPKs in human bronchial epithelial cell line.

Brózman O, Novák J, Bauer AK, Babica P.

Environ Toxicol Pharmacol. 2020 May 31;103422. doi: 10.1016/j.etap.2020.103422. [Epub ahead of print]

PMID:32492535

Biomass Fuel Use and Cardiac Function in Nepali Women.

Tiwana J, Benziger C, Hooper L, Pope K, Alurkar V, Kafle R, Sijali TR, Balmes JR, Kaufman JD, Bates MN.

Glob Heart. 2020 Feb 7;15(1):11. doi: 10.5334/gh.405.

PMID:32489784

Organized lymphatic tissue (BALT) in lungs of rhesus monkeys after air pollutant exposure.

Pabst R, Miller LA, **Schelegle E**, Hyde DM.

Anat Rec (Hoboken). 2020 May 23. doi: 10.1002/ar.24456. [Epub ahead of print] Review.

PMID:32445535

The Association Between Neighborhood Socioeconomic Disadvantage and Chronic Obstructive Pulmonary Disease.

Galiatsatos P, Woo H, **Paulin LM**, Kind A, Putcha N, Gassett AJ, Cooper CB, Dransfield MT, Parekh TM, Oates GR, Barr RG, Comellas AP, Han MK, Peters SP, Krishnan JA, Labaki WW, McCormack MC, Kaufman JD, Hansel NN.

Int J Chron Obstruct Pulmon Dis. 2020 May 5;15:981-993. doi: 10.2147/COPD.S238933. eCollection 2020.

PMID:32440110

Long-term ozone exposure is positively associated with telomere length in critically ill patients.

Wang C, Wolters PJ, Calfee CS, Liu S, Balmes JR, Zhao Z, Koyama T, Ware LB.

Environ Int. 2020 Aug;141:105780. doi: 10.1016/j.envint.2020.105780. Epub 2020 May 8.

PMID:32417614



[Supplementation with omega-3 fatty acids potentiates oxidative stress in human airway epithelial cells exposed to ozone.](#)

Corteselli EM, Gold A, Surratt J, Cui T, **Bromberg P**, Dailey L, Samet JM.
Environ Res. 2020 May 11;187:109627. doi: 10.1016/j.envres.2020.109627. [Epub ahead of print]
PMID:32417507

[Influence of total western diet on docosahexaenoic acid suppression of silica-triggered lupus flaring in NZBWF1 mice.](#)

Gilley KN, Wierenga KA, Chauhan PS, Wagner JG, Lewandowski RP, Ross EA, Lock AL, Harkema JR, Benninghoff AD, Pestka JJ.
PLoS One. 2020 May 15;15(5):e0233183. doi: 10.1371/journal.pone.0233183. eCollection 2020.
PMID:32413078

[Association of low FVC spirometric pattern with WTC occupational exposures.](#)

de la Hoz RE, Shapiro M, Nolan A, Celedón JC, Szeinuk J, Lucchini RG.
Respir Med 2020 [in press, doi: 10.1016/j.rmed.2020.106058].
PMID: 19141527

[Oleic acid and derivatives affect human endothelial cell mitochondrial function and vasoactive mediator production.](#)

Bass VL, Soukup JM, Ghio AJ, Madden MC.
Lipids Health Dis. 2020 Jun 6;19(1):128. doi: 10.1186/s12944-020-01296-6.
PMID:32505182

[Air pollution, neighborhood deprivation, and autism spectrum disorder in the Study to Explore Early Development.](#)

McGuinn LA, Windham GC, Messer LC, Di Q, **Schwartz J**, Croen LA, Moody EJ, Rappold AG, Richardson DB, Neas LM, Gammon MD, Schieve LA, Daniels JL.
Environ Epidemiol. 2019 Oct;3(5). doi: 10.1097/ee9.0000000000000067.
PMID:32478281

Transplant Medicine

[Correction: Impact of autologous blood transfusion after bone marrow harvest on unrelated donor's health and outcome: a CIBMTR analysis.](#)

Farhadfar N, Murthy HS, Logan BR, Sees JA, Ayas M, Battiwalla M, Beitinjane AM, Chhabra S, Diaz MA, Engles K, Frangoul H, Ganguly S, Gergis U, Kamani NR, Kamble RT, Kasow KA, Lazarus HM, Liesveld JL, Norkin M, O' Donnell PV, Olsson RF, Rossmann S, Savani BN, Schears R, Seo S, Solh MM, Spitzer T, Sugrue M, Yared JA, Linenberger M, **Schwartz J**, Pulsipher MA, Shah NN, Switzer GE, Confer DL, Shaw BE, Wingard JR.
Bone Marrow Transplant. 2020 Jun 8. doi: 10.1038/s41409-020-0963-9. [Epub ahead of print]
PMID:32514157

[A molecular boron cluster-based chromophore with dual emission.](#)

Anderson KP, Waddington MA, Balaich GJ, Stauber JM, Bernier NA, Caram JR, Djurovich PI, Spokoyny AM.
Dalton Trans. 2020 May 7. doi: 10.1039/d0dt00826e. [Epub ahead of print]
PMID:32379258



[Frailty after lung transplantation is associated with impaired health-related quality of life and mortality.](#)

Venado A, Kolaitis NA, Huang CY, Gao Y, Glidden DV, Soong A, Sutter N, Katz PP, Greenland JR, Calabrese DR, Hays SR, Golden JA, Shah RJ, Leard LE, Kukreja J, Deuse T, Wolters PJ, Covinsky K, Blanc PD, Singer JP.

Thorax. 2020 May 6. pii: thoraxjnl-2019-213988. doi: 10.1136/thoraxjnl-2019-213988. [Epub ahead of print]

PMID:32376733

[Prevalence and impact of restrictive lung disease in liver transplant candidates.](#)

DuBrock HM, Krowka MJ, Krok K, Forde K, Mottram C, **Scanlon P**, Al-Naamani N, Patel M, McCormick A, Fallon MB, Kawut SM.

Liver Transpl. 2020 May 11. doi: 10.1002/lt.25794. [Epub ahead of print]

PMID:32394590

Influenza

[Baloxavir for the treatment of Influenza in allogeneic hematopoietic stem cell transplant recipients previously treated with oseltamivir.](#)

Salvatore M, Laplante JM, Soave R, Orfali N, Plate M, van Besien K, St George K.

Transpl Infect Dis. 2020 May 24:e13336. doi: 10.1111/tid.13336. [Epub ahead of print]

PMID:32449254

[Spatial and temporal clustering of patients hospitalized with laboratory-confirmed influenza in the United States.](#)

Sloan C, Chandrasekhar R, Mitchel E, Ndi D, Miller L, Thomas A, Bennett NM, Chai S, Spencer M, **Eckel S**, Spina N, Monroe M, Anderson EJ, Lynfield R, Yousey-Hindes K, Bargsten M, Zansky S, Lung K, Schroeder M, N Cummings C, Garg S, Schaffner W, Lindegren ML.

Epidemics. 2020 Jun;31:100387. doi: 10.1016/j.epidem.2020.100387. Epub 2020 Feb 10.

PMID:32371346

[Aetiology of Canine Infectious Respiratory Disease Complex and Prevalence of its Pathogens in Europe.](#)

Day MJ, **Carey S**, Clercx C, Kohn B, Marsillo F, Thiry E, Freyburger L, Schulz B, Walker DJ.

J Comp Pathol. 2020 Apr;176:86-108. doi: 10.1016/j.jcpa.2020.02.005. Epub 2020 Mar 17. Review.

PMID: 32359641

Neonatal and Pediatric Disease

[Vascular endothelial growth factor levels and bronchopulmonary dysplasia in preterm infants.](#)

Mariduena J, Ramagopal M, Hiatt M, Chandra S, **Laumbach R**, Hegyi T.

J Matern Fetal Neonatal Med. 2020 May 4:1-6. doi: 10.1080/14767058.2020.1760826. [Epub ahead of print]

PMID:32366142

[Whole Genome Sequencing Identifies Novel Functional Loci Associated with Lung Function in Puerto Rican Youth.](#)

Lee EY, Mak AC, Hu D, Sajuthi S, White MJ, Keys KL, Eckalbar W, Bonser L, Huntsman S, Urbanek C, Eng C, Jain D, Abecasis G, Kang HM, Germer S, Zody MC, Nickerson DA, Erle D, Ziv E, Rodriguez-Santana J, Seibold MA, Burchard EG.



Am J Respir Crit Care Med. 2020 May 27. doi: 10.1164/rccm.202002-0351OC. [Epub ahead of print]

PMID:32459537

Research Methods, Training, and Clinical Care

Operator Perception of a Single-Use Flexible Bronchoscope: Comparison With Current Standard Bronchoscopes.

Liu L, Wahidi M, Mahmood K, **Giovacchini C**, Shofer S, Cheng G.

Respir Care. 2020 Jun 2. pii: respcare.07574. doi: 10.4187/respcare.07574. [Epub ahead of print]

PMID:32487752

Impact of DNA Extraction Method on Variation in Human and Built Environment Microbial Community and Functional Profiles Assessed by Shotgun Metagenomics Sequencing.

Sui HY, Weil AA, Nuwagira E, Qadri F, Ryan ET, Mezzari MP, Phipatanakul W, Lai PS.

Front Microbiol. 2020 May 25;11:953. doi: 10.3389/fmicb.2020.00953. eCollection 2020.

PMID:32528434

Engaging with 'One Health' audiences

Chapman HJ, Dunham B.

Clin Teach. 2020;17(3):332-335. doi:10.1111/tct.13107

Global Health Content in Health Professions Curricula.

Chapman HJ, Veras-Estévez BA.

Strengthening Health Education Journal. 2020.

A proposal for the addressing the needs of the pediatric pulmonary work force.

Gaston B, Laguna TA, Noah TL, Hagood J, Voynow J, Ferkol T, Hershenson M, Boyne K, Delecaris A, Ross K, Gozal D, Celedón JC, Abman SH, Moore P, Davis S, Cornfield DN, Murphy T.

Pediatr Pulmonol. 2020 Jun 12. doi: 10.1002/ppul.24856. [Epub ahead of print]

PMID:32531116

The Network Medicine Imperative and the Need for an International Network Medicine Consortium.

Parini P, Altucci L, Balligand JL, Baumbach J, Ferdinandy P, Filetti S, Maron BA, Petrillo E, Silverman EK, Barabasi AL, Loscalzo J; International Network Medicine Consortium.

Am J Med. 2020 Apr 19. pii: S0002-9343(20)30340-5. doi: 10.1016/j.amjmed.2020.03.034. [Epub ahead of print] No abstract available.

PMID:32320696

Assigning mentors for new HSC faculty hires: A preliminary policy evaluation.

Sood A, Sigl D, Tigges B, Myers O, Greenberg N, Wilson B.

Chron Mentor Coach. 2019 Oct;3(Spec Iss 12):427-432.

PMID:32490172

Critical Care

Temporary Transvenous Diaphragmatic Neurostimulation in Prolonged Mechanically Ventilated Patients: A Feasibility Trial (RESCUE 1).

Ataya A, Silverman EP, Bagchi A, Sarwal A, Criner GJ, McDonagh DL.

Crit Care Explor. 2020 Apr 29;2(4):e0106. doi: 10.1097/CCE.0000000000000106. eCollection 2020 Apr.

PMID:32426748



Asthma and Allergy

Epigenome-Wide Association Study of DNA Methylation and Adult Asthma in the Agricultural Lung Health Study.

Hoang TT, Sikdar S, Xu CJ, Lee MK, Cardwell J, Forno E, Imboden M, Jeong A, Madore AM, Qi C, Wang T, Bennett BD, Ward JM, Parks CG, Beane-Freeman LE, King D, Motsinger-Reif A, Umbach DM, Wyss AB, **Schwartz DA**, Celedón JC, Laprise C, Ober C, Probst-Hensch N, Yang IV, Koppelman GH, London SJ. Eur Respir J. 2020 May 7. pii: 2000217. doi: 10.1183/13993003.00217-2020. [Epub ahead of print]

PMID:32381493

Epigenome-Wide Association Study of DNA Methylation and Adult Asthma in the Agricultural Lung Health Study.

Hoang TT, Sikdar **S**, Xu CJ, Lee MK, Cardwell J, Forno E, Imboden M, Jeong A, Madore AM, Qi C, Wang T, Bennett BD, Ward JM, Parks CG, Beane-Freeman LE, King D, Motsinger-Reif A, Umbach DM, Wyss AB, Schwartz DA, Celedón JC, Laprise C, Ober C, Probst-Hensch N, Yang IV, Koppelman GH, London SJ. Eur Respir J. 2020 May 7. pii: 2000217. doi: 10.1183/13993003.00217-2020. [Epub ahead of print]

PMID:32381493

Estimated Prevalence of Asthma in US Children With Developmental Disabilities.

Xie **L**, Gelfand A, Delclos GL, Atem FD, Kohl HW 3rd, Messiah SE. JAMA Netw Open. 2020 Jun 1;3(6):e207728. doi: 10.1001/jamanetworkopen.2020.7728.

PMID:32543699

Association of Dietary Fiber on Asthma, Respiratory Symptoms and Inflammation in the Adult NHANES Population.

Saeed MA, Gribben KC, Alam M, Lyden ER, Hanson CK, LeVan TD. Ann Am Thorac Soc. 2020 May 5. doi: 10.1513/AnnalsATS.201910-776OC. [Epub ahead of print]

PMID:32369709

Epigenome-Wide Association Study of DNA Methylation and Adult Asthma in the Agricultural Lung Health Study.

Hoang TT, Sikdar S, Xu CJ, Lee MK, Cardwell J, Forno E, Imboden M, Jeong A, Madore AM, Qi C, Wang T, Bennett BD, Ward JM, Parks CG, Beane-Freeman LE, King **D**, Motsinger-Reif A, Umbach DM, Wyss AB, Schwartz DA, Celedón JC, Laprise C, Ober C, Probst-Hensch N, Yang IV, Koppelman GH, London SJ. Eur Respir J. 2020 May 7. pii: 2000217. doi: 10.1183/13993003.00217-2020. [Epub ahead of print]

PMID:32381493

Research nurses as practice facilitators to disseminate an asthma shared decision making intervention.

Shade L, Reeves K, Rees J, Hendrickson L, Halladay J, Dolor RJ, Bray P, **Tapp H**. BMC Nurs. 2020 May 18;19:40. doi: 10.1186/s12912-020-00414-0. eCollection 2020.

PMID:32477003

Differential effect of school-based pollution exposure in children with asthma born prematurely.

Gaffin JM, Hauptman M, Petty CR, Haktanir-Abul M, Gunnlaugsson S, Lai PS, Baxi SN, Permaul P, Sheehan WJ, Wolfson JM, Coull BA, Gold DR, Koutrakis P, Phipatanakul W. Chest. 2020 May 22. pii: S0012-3692(20)31500-2. doi: 10.1016/j.chest.2020.05.533. [Epub ahead of print] No abstract available.

PMID:32450239

Clinical phenotypes of atopy and asthma in COPD: a meta-analysis of SPIROMICS and COPDGene.



Putcha N, Fawzy A, Matsui EC, Liu M, Bowler RP, Woodruff P, O'Neal WK, Comellas AP, Han MK, Dransfield M, Wells JM, Lugogo N, Gao L, Talbot CC Jr, Hoffman E, Cooper CB, **Paulin LM**, Kanner RE, Criner G, Ortega VE, Barr RG, Krishnan JA, Martinez FJ, Drummond MB, Wise RA, Diette GB, Hersh CP, Hansel NN. Chest. 2020 May 22. pii: S0012-3692(20)31508-7. doi: 10.1016/j.chest.2020.04.069. [Epub ahead of print]

PMID:32450244

Cigarettes, E-cigs, and other Tobacco and Cannabis Smoke Exposures

Differences in flavourant levels and synthetic coolant use between USA, EU and Canadian Juul products.

Erythropel HC, Anastas PT, Krishnan-Sarin S, O'Malley SS, Jordt SE, Zimmerman JB.

Tob Control. 2020 Apr 27. pii: tobaccocontrol-2019-055500. doi: 10.1136/tobaccocontrol-2019-055500. [Epub ahead of print]

PMID:32341193

Occupational Injuries and Exposures

Gut carriage of antimicrobial resistance genes in women exposed to small-scale poultry farms in rural Uganda: A feasibility study.

Weil AA, Debela MD, Muyanja DM, Kakuhikire B, Baguma C, Bangsberg DR, Tsai AC, Lai PS.

PLoS One. 2020 Jun 11;15(6):e0229699. doi: 10.1371/journal.pone.0229699. eCollection 2020.

PMID:32525954

Impact of New Occupational and Clinical Standards on Spirometry.

Townsend MC, Graham BL.

J Occup Environ Med. 2020 May;62(5):e231-e232. doi: 10.1097/JOM.0000000000001871. No abstract available.

PMID:32398506

Assessing the interaction between depressive symptoms and alcohol use prior to antiretroviral therapy on viral suppression among people living with HIV in Rural Uganda.

Foley JD, Sheinfil A, Woolf-King SE, Fatch R, Emenyonu NI, Muyindike WR, Kekibiina A, Ngabirano C, Samet JH, Cheng DM, Hahn JA.

AIDS Care. 2020 Jun 1:1-7. doi: 10.1080/09540121.2020.1770671. [Epub ahead of print]

PMID:32482097

Isocyanate induced allergic contact dermatitis in a university undergraduate student: An occupational dermatitis case report, review of laboratory safety regulations, and implications for campus research.

Cook-Shimanek M, McGrath A, Pacheco KA.

Am J Ind Med. 2020 Jun 9. doi: 10.1002/ajim.23140. [Epub ahead of print]

PMID:32515098

Military Deployment and Respiratory Symptoms: Some Answers, Many Questions.

Garshick E, Blanc PD.

Chest. 2020 Jun;157(6):1407-1408. doi: 10.1016/j.chest.2020.02.023. No abstract available.

PMID:32505302

Letter to Editor regarding Franzblau et al. 2020: Asbestos-containing materials in abandoned residential dwellings in Detroit, Science of Total Environment, v714,1-8.

Frank AL.

Sci Total Environ. 2020 May 1:139129. doi: 10.1016/j.scitotenv.2020.139129. [Epub ahead of print] No abstract available.

PMID:32404238



[Biomass Fuel Use and Cardiac Function in Nepali Women.](#)

Tiwana J, Benziger C, Hooper L, Pope K, Alurkar V, Kafle R, Sijali TR, Balmes JR, Kaufman JD, Bates MN. Glob Heart. 2020 Feb 7;15(1):11. doi: 10.5334/gh.405.

PMID: 32489784

[Global use of asbestos - legitimate and illegitimate issues.](#)

Frank AL.

J Occup Med Toxicol. 2020 Jun 15;15:16. doi: 10.1186/s12995-020-00267-y. eCollection 2020. Review.

PMID:32549902

[State Variability in Diagnosed Conditions for IDEA Part C Eligibility.](#)

Barger B, Squires J, Greer M, Noyes-Grosser D, Eile JM, Rice C, Shaw E, Surprenant KS, Twombly E, London S, Zubler J, Wolf RB.

Infants Young Child. 2019 Dec;32(4):231-244. doi: 10.1097/iy.000000000000151.

PMID:32327900

[Associations of alpha and gamma-tocopherol during early life with lung function in childhood.](#)

Kumar R, Ferrie R, Balmert L, Kienzl M, Rifas-Shiman SL, Gold DR, Sordillo JE, Kleinman K, Camargo CA Jr, Litonjua AA, Oken E, Cook-Mills J.

J Allergy Clin Immunol. 2020 Apr 25. pii: S0091-6749(20)30567-4. doi: 10.1016/j.jaci.2020.04.019. [Epub ahead of print]

PMID:32344059

[Exposure to Particle Beta Radiation in Greater Massachusetts and Factors Influencing Its Spatial and Temporal Variability.](#)

Blomberg AJ, Li L, Schwartz JD, Coull BA, Koutrakis P.

Environ Sci Technol. 2020 Jun 2;54(11):6575-6583. doi: 10.1021/acs.est.0c00454. Epub 2020 May 12.

PMID:32363859

[Effects of Home Particulate Air Filtration on Blood Pressure: A Systematic Review.](#)

Walzer D, Gordon T, Thorpe L, Thurston G, Xia Y, Zhong H, Roberts TR, Hochman JS, Newman JD.

Hypertension. 2020 Jul;76(1):44-50. doi: 10.1161/HYPERTENSIONAHA.119.14456. Epub 2020 Jun 1.

PMID:32475316

[Ambient particle radioactivity and gestational diabetes: A cohort study of more than 1 million pregnant women in Massachusetts, USA.](#)

Papatheodorou S, Gold DR, Blomberg AJ, Hacker M, Wylie BJ, Requia WJ, Oken E, Fleisch AF, Schwartz JD, Koutrakis P.

Sci Total Environ. 2020 Sep 1;733:139340. doi: 10.1016/j.scitotenv.2020.139340. Epub 2020 May 11.

PMID:32464573

[Assessment of Maternal Glycemia and Newborn Size Among Pregnant Women Who Use Wood Stoves in Northern New England.](#)

Fleisch AF, Seshasayee SM, Garshick E, Chipman JW, Koutrakis P, Baker ER, Karagas MR.

JAMA Netw Open. 2020 May 1;3(5):e206046. doi: 10.1001/jamanetworkopen.2020.6046. No abstract available.

PMID:32463466



Cellular Mechanisms

[Alcohol Use Disorders are Associated with a Unique Impact on Airways Epithelial Cell Gene Expression.](#)

Bailey KL, Smith H, Mathai SK, Huber J, Yacoub M, Yang IV, Wyatt TA, Kechris K, Burnham EL.

Alcohol Clin Exp Res. 2020 Jun 11. doi: 10.1111/acer.14395. [Epub ahead of print]

PMID:32524622

[MyD88 regulates a prolonged adaptation response to environmental dust exposure-induced lung disease.](#)

Johnson AN, Harkema JR, Nelson AJ, Dickinson JD, Kalil J, Duryee MJ, Thiele GM, Kumar B, Singh AB, Gaurav R, Glover SC, Tang Y, Romberger DJ, Kielian T, Poole JA.

Respir Res. 2020 Apr 22;21(1):97. doi: 10.1186/s12931-020-01362-8.

PMID:32321514

[Tissue Specific Fate of Nanomaterials by Advanced Analytical Imaging Techniques - A Review.](#)

Graham UM, Dozier AK, Oberdörster G, Yokel RA, Molina R, Brain JD, Pinto JM, Weuve J, Bennett DA.

Chem Res Toxicol. 2020 May 18;33(5):1145-1162. doi: 10.1021/acs.chemrestox.0c00072. Epub 2020 May 12.

PMID:32349469

[Lung Development Genes and Adult Lung Function.](#)

Portas L, Pereira M, Shaheen SO, Wyss AB, London SJ, Burney PGJ, Hind M, Dean CH, Minelli C.

Am J Respir Crit Care Med. 2020 May 11. doi: 10.1164/rccm.201912-2338OC. [Epub ahead of print]

PMID: 32392078

[Age Associated B Cells Appear in Patients with Granulomatous Lung Diseases.](#)

Phalke S, Aviszus K, Rubtsova K, Rubtsov A, Barkes B, Powers L, Warner B, Crooks JL, Kappler JW, Fernández-Pérez ER, Maier LA, Hamzeh N, Marrack P.

Am J Respir Crit Care Med. 2020 Jun 5. doi: 10.1164/rccm.201911-2151OC. [Epub ahead of print]

PMID:32501729

[Synergistic Effect of WTC-Particulate Matter and Lysophosphatidic Acid Exposure and the Role of RAGE: In-Vitro and Translational Assessment.](#)

Lam R, Haider SH, Crowley G, Caraher EJ, Ostrofsky DF, Talusan A, Kwon S, Prezant DJ, Wang Y, Liu M, **Nolan A.**Int J Environ Res Public Health. 2020 Jun 17;17(12):E4318. doi: 10.3390/ijerph17124318.

PMID: 32560330 **Free article.**

[MultiOMICs of WTC-Particulate Induced Persistent Airway Hyperreactivity: Role of Receptor for Advanced Glycation End Products.](#)

Haider SH, Veerappan A, Crowley G, Ostrofsky D, Mikhail M, Lam R, Wang Y, Sunseri M, Kwon S, Prezant DJ, Liu M, Schmidt AM, **Nolan A.**Am J Respir Cell Mol Biol. 2020 Apr 21. doi: 10.1165/rcmb.2019-0064OC.

PMID: 32315541

[Evaluation of IL-1 Blockade as an Adjunct to Linezolid Therapy for Tuberculosis in Mice and Macaques.](#)

Winchell CG, Mishra BB, Phuah JY, Saqib M, Nelson SJ, Maiello P, Causgrove CM, Ameal CL, Stein B, Borish HJ, White AG, Klein EC, Zimmerman MD, Dartois V, Lin PL, Sasseti CM, Flynn JL.

Front Immunol. 2020 May 12;11:891. doi: 10.3389/fimmu.2020.00891. eCollection 2020.

PMID:32477361



Cancer

[Inverted Papilloma of the Orbit and Nasolacrimal System.](#)

Wang J, **Ford J**, Esmaeli B, Langer P, Esmaili N, Griepentrog GJ, Couch SM, Nguyen J, Gold KG, Duerksen K, Burkat CN, Hartstein ME, Gandhi P, Sobel RK, Moon JY, Barmettler A.

Ophthalmic Plast Reconstr Surg. 2020 Jun 4. doi: 10.1097/IOP.0000000000001719. [Epub ahead of print]

PMID:32501879

[Epigenome-wide gene-age interaction analysis reveals reversed effects of *PRODH* DNA methylation on survival between young and elderly early-stage NSCLC patients.](#)

Chen C, Wei Y, Wei L, Chen J, Chen X, Dong X, He J, Lin L, Zhu Y, Huang H, You **D**, Lai L, Shen S, Duan W, **Su L**, Shafer A, Fleischer T, Bjaanæs MM, Karlsson A, Planck M, Wang R, Staaf J, Helland Å, Esteller M, Zhang R, Chen F, Christiani DC.

Aging (Albany NY). 2020 Jun 8;12. doi: 10.18632/aging.103284. [Epub ahead of print]

PMID:32511103

[Development of an Integer-based Risk Score to Predict 90-Day Mortality After Hepatectomy in Patients With Hepatocellular Carcinoma.](#)

Qi Y, LeVan TD, Haynatzki G, Are C, Farazi PA.

Am J Clin Oncol. 2020 Jun 9. doi: 10.1097/COC.0000000000000724. [Epub ahead of print]

PMID:32520789

[Black patients referred to a lung cancer screening program experience lower rates of screening and longer time to follow-up.](#)

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Updates from Terrorism and Inhalation Disasters Section



Congratulations to the new executive committee of TID Section!!!



Incoming Chair:

Rakesh Patel, Ph.D.

Professor and Vice Chair for Research,
Dept. of Pathology
Director, Center for Free Radical Biology
University of Alabama at Birmingham



Elected Co-Chair:

Shama Ahmad, Ph.D.

Associate Professor, Dept. of Anesthesiology
and Perioperative Medicine
University of Alabama at Birmingham

Thank you, outgoing Chair!

Erik Svendsen, PhD,

Director

Division of Environmental Health Science & Practice
Center for Disease Control

for your leadership and services to TID Section





Section on Terrorism and Inhalation Disasters

TID
Section



Erik Svendsen, PhD
Past Chair and Nominating
Committee Chair



Sven-Eric Jordt, PhD
Chair Appointee



Rafael de la Hoz, MD, MPH, MSc
EOPH Program Committee Rep



Matthew McGraw, MD
EOPH Planning
Committee Rep



Jessica Castner, PhD, RN-BC, FAEN, FAAN
Nominating Committee Members



Stella Hines, MD, MSPH



Satya Achanta, DVM, PhD, DABT
Web Director

**TID Section had a successful virtual membership meeting on June 24th
12:00 noon – 2:00 PM EST via Zoom!**

More than 60 people have attended the event!

The keynote speaker Dr. Matt Karwowski, MD, MPH, FAAP delivered a talk on
EVALI and it was very well received.



Keynote Speaker for TID Section Membership Meeting
Dr. Matt Karwowski, MD, MPH, FAAP
Chief Medical Officer of the Division of Laboratory Sciences
National Center for Environmental Health, Center for Disease Control
**CDC Laboratory Investigation of Lung Injury
Associated with E-cigarette Use, or Vaping**

****The entire session has been recorded and it will be made available to membership very soon!****



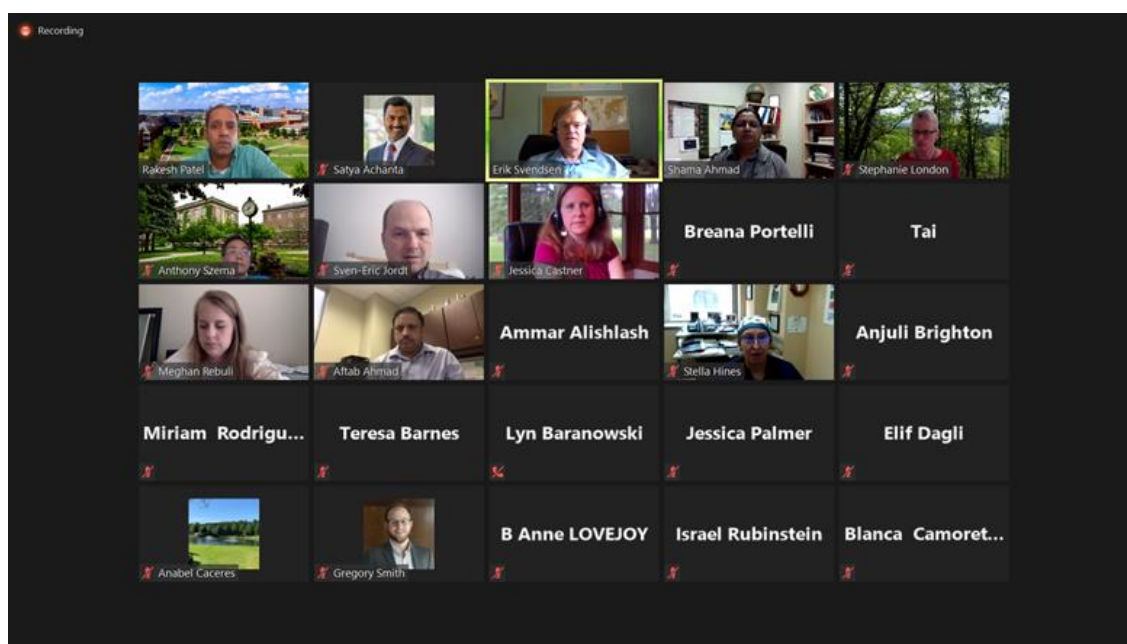
Dr. Erik Svendsen, PhD talked about the efforts of CDC in managing COVID-19 pandemic.

Dr. Sven-Eric Jordt, PhD talked about the use of tear gas agents during the BLM protests.

EOPH President, Dr. Stephanie London, MD, DrPH gave her remarks and particularly highlighted the collaboration between EOPH Assembly and TID Section. Further, Dr. London appreciated the efforts of TID Section in getting the statement of ATS on tear gas agents.

Co-chairs of EOPH Early Career Working Group (ECPWG), Jason Rose, MD, MBA and Meghan Rebuli, PhD presented accomplishments in 2020 and goals in 2021. If you are interested to get involved in ECPWG, please reach out to co-chairs. Jason Rose (rosejj@upmc.edu) & Meghan Rebuli (meradfor@email.unc.edu)

Virtual moment for TID Section members!!!



The highly controversial use of tear gas agents during COVID-19 pandemic



(<https://www.nytimes.com/2020/06/03/us/tear-gas-risks-protests-coronavirus.html>)

Sven-Eric Jordt, PhD and Satya Achanta, DVM, PhD, DABT shared their expert opinion on toxic effects of tear gas agents, potential cumulative effects during COVID-19 pandemic, and possible spike in the number of positive COVID-19 cases.

Corrosive Effects of Tear Gas Could Intensify Coronavirus Pandemic

<https://www.nytimes.com/2020/06/03/us/tear-gas-risks-protests-coronavirus.html>

White House says police didn't use tear gas and rubber bullets in incident that cleared protesters with chemical irritants and projectile munitions

https://www.washingtonpost.com/lifestyle/media/trump-demands-journalists-correct-stories-on-the-use-of-tear-gas-according-to-the-cdc-it-was-tear-gas/2020/06/02/bf68726c-a544-11ea-bb20-ebf0921f3bbd_story.html

From tear gas to rubber bullets, here's what 'nonlethal' weapons can do to the body

<https://www.nationalgeographic.com/science/2020/06/what-nonlethal-weapons-can-do-to-the-body-george-floyd/#close>



Tear-Gassing Protesters During An Infectious Outbreak Called 'A Recipe For Disaster'

https://www.npr.org/sections/health-shots/2020/06/05/870144402/tear-gassing-protesters-during-an-infectious-outbreak-called-a-recipe-for-disast?utm_source=newsletter&utm_medium=email&utm_content=quoted%20on%20National%20Public%20Radio&utm_campaign=dukedailyjune8_20

Here's why tear gas could worsen symptoms of coronavirus — and prompt more spread

https://money.yahoo.com/heres-why-tear-gas-could-worsen-symptoms-of-coronavirus-and-prompt-more-spread-181427002.html?soc_src=social-sh&soc_trk=tw

Tear Gassing Protesters Could Increase Their Risk for COVID-19

<https://www.discovermagazine.com/health/tear-gassing-protesters-could-increase-their-risk-for-covid-19>

Tear gas: Treatment, tips, and practical advice for protestors

<https://www.digitaltrends.com/features/how-to-treat-tear-gas/>

Tear-gassing protesters “is a very effective way of spreading coronavirus,” doctors say

<https://www.salon.com/2020/06/04/tear-gassing-protesters-is-a-very-effective-way-of-spreading-coronavirus-doctors-say/>



(<https://www.eenews.net/stories/1063309747>)



FLASH....FLASH....FLASH!!!



ATS calls for moratorium on tear gas use

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Press Releases from the ATS ► 2020 Press Releases ► Tear Gas Use During COVID-19 Pandemic Irresponsible; Moratorium Needed, Says American Thoracic Society

Tear Gas Use During COVID-19 Pandemic Irresponsible; Moratorium Needed, Says American Thoracic Society

June 11, 2020 -- [The American Thoracic Society](#) calls for a moratorium on the use of tear gas and other chemical agents deployed by law enforcement against protestors participating in demonstrations, including current campaigns sparked by the death of George Floyd.

"The use of chemical crowd control agents is outlawed in the time of war. They cause significant short- and long-term respiratory health injury and likely propagate the spread of viral illnesses, including COVID-19," said ATS President Juan C. Celedón, MD, DrPH, ATSF.

"Recent research calls into question the assumed safety of tear gas such as 2-chlorobenzalmalononitrile (CS), and the highly concentrated pepper oil used in exploding shells and grenades," said Sven-Eric Jordt, PhD, a leading researcher in tear gas and related lung injury. Those studies have identified chronic bronchitis, compromised lung function, and acute lung injury (in military recruits) as consequences of tear gas exposure.

<https://www.thoracic.org/about/newsroom/press-releases/journal/2020/tear-gas-use-during-covid-19-pandemic-irresponsible-moratorium-needed,-says-american-thoracic-society.php>

Dr. Sven-Eric Jordt, PhD, Associate Professor at Duke University School of Medicine and executive committee of TID Section contributed to drafting of this statement on tear gas agents.



(<https://www.discovermagazine.com/health/tear-gassing-protesters-could-increase-their-risk-for-covid-19>)



Key points of ATS statement on tear gas agents (courtesy of Dr. Sven-Eric Jordt, PhD) –

“Based on the lack of crucial research, the escalation of tear gas use by law enforcement, and the likelihood of compromising lung health and promoting the spread of COVID-19, the American Thoracic Society calls for a moratorium on CS tear gas and OC pepper weapons use”, said Dr. Celedón.

- **Outlawed in the time of war**
- **Significant short- and long-term respiratory health injury**
- **Likely propagate the spread of viral illnesses, including COVID-19**
- **Chronic bronchitis, compromised lung function, and acute lung injury (in military recruits)**
- **Exposes uninvolved persons such as innocent bystanders and the media.**

“Outcomes of a study by the U.S. military are a clear warning sign. Recruits exposed to CS tear gas in training just once had a strongly increased likelihood to develop respiratory illnesses such as influenza, pneumonia, or bronchitis, conditions often caused by viral infections.”

Mil Med. 2014 Jul;179(7):793-8. doi: 10.7205/MILMED-D-13-00514.

Covid-19 patients :

“... loss of their sense of smell. ”

“...lose their capability to sense irritants, increasing their risk of inhaling tear gas and developing chemical injuries.. ”



ATS 2020 VIRTUAL is coming in August 5-10

https://conference.thoracic.org/program/index.php?_ga=2.31580988.364561536.1593316025-1343231238.1517242217

Stay tuned for the updates and registration

Check out session information: <https://conference.thoracic.org/program/session-information/index.php>

The relevant ATS 2020 Virtual sessions for TID membership –

Session: A90 - EMERGING DANGERS FROM E-CIGARETTES: LET'S HAVE A VAPE DEBATE

Chairs: Ilona Jaspers, Ph.D and Sven Eric Jordt, Ph.D

Date & Time: **Wednesday, 08/05/2020, 08:30 AM - 10:30 AM**

Room: **ATS 2020 Virtual**

Session: C11: EVOLVING KNOWLEDGE OF THE EFFECT OF CANNABIS AND CANNABINOIDS ON THE LUNG

Chairs: Kristina Bailey, MD and Laura E Crotty Alexander

Date & Time: pending

Room: **ATS 2020 Virtual**

Session: D85: ENVIRONMENTAL EXPOSURES AND THE AIRWAY MICROBIOME

Chairs: Christopher Carlsten, MD and Ilona Jaspers Ph.D

Date & Time: pending

Room: **ATS 2020 Virtual**

ATS 2021 is calling for input: <https://conference.thoracic.org/program/call-for-input/session-types.php>



Recent publications from TID members and relevant to TID section:

Ton HT, Phan TX, Ahern GP. Inhibition of TRPA1 by General Anesthetics [published online ahead of print, 2020 Jun 24]. *Mol Pharmacol*. 2020;mol.119.118851. doi:10.1124/mol.119.118851

Lazrak A, Song W, Zhou T, et al. Hyaluronan and halogen-induced airway hyperresponsiveness and lung injury [published online ahead of print, 2020 Jun 23]. *Ann N Y Acad Sci*. 2020;10.1111/nyas.14415. doi:10.1111/nyas.14415

[Cooking Gas Explosions As Cause Of Burns Among Patients Admitted To A Regional Burn Centre In Nigeria.](#)

Belie O, Mofikoya BO, Fadeyibi IO, Ugburo AO, Buari A, Ugochukwu NN.

Ann Burns Fire Disasters. 2020 Mar 31;33(1):62-68.

PMID: 32523497 **Free PMC article.**

[Systematic Review and Evaluation of Mathematical Attack Models of Human Inhalational Anthrax for Supporting Public Health Decision Making and Response.](#)

Chen X, Bahl P, de Silva C, Heslop D, Doolan C, Lim S, MacIntyre CR.

Prehosp Disaster Med. 2020 Jun 4:1-8. doi: 10.1017/S1049023X20000734. Online ahead of print.

PMID: 32495728

[Specific sources of health risks caused by size-resolved PM-bound metals in a typical coal-burning city of northern China during the winter haze event.](#)

Lin YC, Zhang YL, Song W, Yang X, Fan MY.

Sci Total Environ. 2020 Sep 10;734:138651. doi: 10.1016/j.scitotenv.2020.138651. Epub 2020 Apr 27.

PMID: 32460085

[Impact on rats from acute intratracheal inhalation exposures to WTC dusts.](#)

Cohen MD, Prophete C, Horton L, Sisco M, Park SH, Lee HW, Zelikoff J, Chen LC.

Inhal Toxicol. 2020 Apr;32(5):218-230. doi: 10.1080/08958378.2020.1768322. Epub 2020 May 25.

PMID: 32448006

[Clinical course of 2019 novel coronavirus disease \(COVID-19\) in individuals present during the outbreak on the Diamond Princess cruise ship.](#)

Kato H, Shimizu H, Shibue Y, Hosoda T, Iwabuchi K, Nagamine K, Saito H, Sawada R, Oishi T, Tsukiji J, Fujita H, Furuya R, Masuda M, Akasaka O, Ikeda Y, Sakamoto M, Sakai K, Uchiyama M, Watanabe H, Yamaguchi N, Higa R, Sasaki A, Tanaka K, Toyoda Y, Hamanaka S, Miyazawa N, Shimizu A, Fukase F, Iwai S, Komase Y, Kawasaki T, Nagata I, Nakayama Y, Takei T, Kimura K, Kunisaki R, Kudo M, Takeuchi I, Nakajima H.

J Infect Chemother. 2020 May 13;26(8):865-9. doi: 10.1016/j.jiac.2020.05.005. Online ahead of print.

PMID: 32405245 **Free PMC article.**

[Global Characteristics of Chemical, Biological, and Radiological Poison Use in Terrorist Attacks.](#)

Aydin B.

Prehosp Disaster Med. 2020 Jun;35(3):260-266. doi: 10.1017/S1049023X20000394. Epub 2020 Apr 2.

PMID: 32238210



[Application of calcium nebulization for mass exposure to an accidental hydrofluoric acid spill.](#)

Choe MSP, Lee MJ, Seo KS, Kam S, Kim KY, Je D, Kim SH, Nho WY, Park HI, Shin S, Ryoo HW.
Burns. 2020 Mar 21:S0305-4179(19)30718-1. doi: 10.1016/j.burns.2020.02.015. Online ahead of print.
PMID: 32209280

[Environmental and Health Impacts of Air Pollution: A Review.](#)

Manisalidis I, Stavropoulou E, Stavropoulos A, Bezirtzoglou E.
Front Public Health. 2020 Feb 20;8:14. doi: 10.3389/fpubh.2020.00014. eCollection 2020.
PMID: 32154200 **Free PMC article.** Review.

COVID-19

[Updated Approaches against SARS-CoV-2.](#)

Li H, Zhou Y, Zhang M, Wang H, Zhao Q, Liu J.
Antimicrob Agents Chemother. 2020 May 21;64(6):e00483-20. doi: 10.1128/AAC.00483-20. Print 2020 May 21.
PMID: 32205349 **Free PMC article.** Review.

[Clinical features of severe pediatric patients with coronavirus disease 2019 in Wuhan: a single center's observational study.](#)

Sun D, Li H, Lu XX, Xiao H, Ren J, Zhang FR, Liu ZS.
World J Pediatr. 2020 Jun;16(3):251-259. doi: 10.1007/s12519-020-00354-4. Epub 2020 Mar 19.
PMID: 32193831 **Free PMC article.**

[Hydroxychloroquine and azithromycin as a treatment of COVID-19: results of an open-label non-randomized clinical trial.](#)

Gautret P, Lagier JC, Parola P, Hoang VT, Meddeb L, Mailhe M, Doudier B, Courjon J, Giordanengo V, Vieira VE, Dupont HT, Honoré S, Colson P, Chabrière E, La Scola B, Rolain JM, Brouqui P, Raoult D.
Int J Antimicrob Agents. 2020 Mar 20:105949. doi: 10.1016/j.ijantimicag.2020.105949. Online ahead of print.
PMID: 32205204 **Free PMC article.**

[COVID-19 diagnosis and management: a comprehensive review.](#)

Pascarella G, Strumia A, Piliago C, Bruno F, Del Buono R, Costa F, Scarlata S, Agrò FE.
J Intern Med. 2020 Apr 29:10.1111/joim.13091. doi: 10.1111/joim.13091. Online ahead of print.
PMID: 32348588 **Free PMC article.** Review.

[The neuroinvasive potential of SARS-CoV2 may play a role in the respiratory failure of COVID-19 patients.](#)

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J Med Virol. 2020 Jun;92(6):552-555. doi: 10.1002/jmv.25728. Epub 2020 Mar 11.
PMID: 32104915 **Free PMC article.** Review.

[A Review of SARS-CoV-2 and the Ongoing Clinical Trials.](#)



Tu YF, Chien CS, Yarmishyn AA, Lin YY, Luo YH, Lin YT, Lai WY, Yang DM, Chou SJ, Yang YP, Wang ML, Chiou SH.

Int J Mol Sci. 2020 Apr 10;21(7):2657. doi: 10.3390/ijms21072657.

PMID: 32290293 **Free PMC article.** Review.

[Emergence of a Novel Coronavirus, Severe Acute Respiratory Syndrome Coronavirus 2: Biology and Therapeutic Options.](#)

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PMID: 32161092 **Free PMC article.** Review.

[COVID-19 pathophysiology: A review.](#)

Yuki K, Fujiogi M, Koutsogiannaki S.

Clin Immunol. 2020 Jun;215:108427. doi: 10.1016/j.clim.2020.108427. Epub 2020 Apr 20.

PMID: 32325252 **Free PMC article.** Review.

[Treatment options for COVID-19: The reality and challenges.](#)

Jean SS, Lee PI, Hsueh PR.

J Microbiol Immunol Infect. 2020 Jun;53(3):436-443. doi: 10.1016/j.jmii.2020.03.034. Epub 2020 Apr 4.

PMID: 32307245 **Free PMC article.** Review.

[COVID-19 patients' clinical characteristics, discharge rate, and fatality rate of meta-analysis.](#)

Li LQ, Huang T, Wang YQ, Wang ZP, Liang Y, Huang TB, Zhang HY, Sun W, Wang Y.

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[Coronavirus disease 2019: What we know?](#)

He F, Deng Y, Li W.

J Med Virol. 2020 Jul;92(7):719-725. doi: 10.1002/jmv.25766. Epub 2020 Mar 28.

PMID: 32170865 **Free PMC article.** Review.

[The Novel Coronavirus: A Bird's Eye View.](#)

Habibzadeh P, Stoneman EK.

Int J Occup Environ Med. 2020 Apr;11(2):65-71. doi: 10.15171/ijoem.2020.1921. Epub 2020 Feb 5.

PMID: 32020915 **Free PMC article.** Review.

[The origin, transmission and clinical therapies on coronavirus disease 2019 \(COVID-19\) outbreak - an update on the status.](#)

Guo YR, Cao QD, Hong ZS, Tan YY, Chen SD, Jin HJ, Tan KS, Wang DY, Yan Y.

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[An overview of COVID-19.](#)



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[The SARS-CoV-2 outbreak: What we know.](#)

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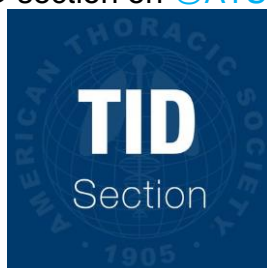
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PMID: 32247050 **Free PMC article.** Review.



TID section is on **twitter**
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TID section is soliciting ideas for putting together podcasts, webinars, and journal clubs. Please contact Satya Achanta, DVM, PhD, DABT (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.



COVID-19 RESOURCES

ATS Resources

The ATS Clinical Problems (CP) Assembly has a closed, internal Facebook page hosted by MeiLan Han that is being consistently updated with COVID-19 updates/resources for rapid dissemination among members. All ATS members may have access to this page—you will need to enter your ATS member number to join. The link to the Facebook page is [HERE](#). A major goal of this resource is to also add to knowledge by posting experiences with clinical care associated with COVID-19, as well as more general news regarding coronavirus.

Also, with information evolving as quickly as it is and responding to requests from members, ATS has created a new channel through Slack that might be useful if you wish to share information with each other and your colleagues. We are sending this to ATS leaders only, however, you are welcome to invite other ATS member colleagues to join. The ATS channel ats-covid19.slack.com can be accessed [HERE](#).

Disclaimer: Staff will be monitoring postings but will not be able to judge content, and thus, these are simply platforms for exchange, with everyone understanding that nothing posted is official, ATS-vetted information. Also, please keep in mind HIPPA regulations when sharing information.

Other Resources

The New York Times has made their very extensive, frequently updated, coronavirus coverage freely available without a subscription. You can access this information by navigating from the [New York Times homepage](#), or click the link [HERE](#) to go directly to the resources.

The Center for Systems Science and Engineering at Johns Hopkins University is providing a map of the global spread of COVID-19 that updates regularly. You can access the site [HERE](#).

Advice for Pulmonary Function Testing

Very important PFT advice that you might have missed was issued late last month by members of the ATS Proficiency Standards for Pulmonary Function Testing Committee, called "Advice Regarding COVID 19 For Pulmonary Function Laboratories." Its link is here: [HERE](#) - you have to scroll to the bottom of the page. It states that:

"Concern has been raised that pulmonary function testing could represent a potential avenue for COVID 19 transmission due to the congregation of patients with lung disease and because of the potential for coughing and droplet formation surrounding pulmonary function testing procedures."

The Committee recommends "that pulmonary function testing be limited to tests that are only essential for immediate treatment decisions, that the type of pulmonary function testing be limited to the most essential tests when possible, and that measures to protect both the staff and individuals being tested should be put in place."

Based on ACOEM's and CAOHC's recommendations about postponing non-essential routine spirometry and hearing tests, OSHA issued an enforcement guidance on postponing various testing and training activities during the pandemic. News release here: <https://www.osha.gov/news/newsreleases/national/04162020-0>



Enforcement memo here (with specific examples of types of testing to be postponed):

<https://www.osha.gov/memos/2020-04-16/discretion-enforcement-when-considering-employers-good-faith-efforts-during>.

Also NIOSH continues to recommend that NIOSH-approved spirometry courses be suspended due to the risk of cross-contamination from asymptomatic infected students to non-infected students.

[Webalogue by the Ecohealth Knowledge to Action Research Group](#)

Check out the recorded Webalogue by the Ecohealth Knowledge to Action Research Group: Learning for Planetary Health: Early Lessons from a Pandemic, available [HERE](#) (link directly to video [HERE](#)). The summary of the Webalogue is as follows:

We are experiencing the greatest challenge for public health in several generations with the COVID-19 pandemic, and with this challenge will emerge unprecedented opportunity as governments and citizens prepare for a post-COVID future. This webinar will begin by exploring the origins of the outbreak with lessons from the animal-human interface. We will then learn from previous economic collapses and what these lessons teach us about the coming weeks and months as we emerge from the current wave of disease and devastated economy to become a more healthy planet. We will begin exploring the relationships and resources needed for a recovery that makes us stronger and better able to face the challenges to planetary health that are even more critical than the COVID-19 pandemic, but that appear less imminent to society. One goal is to articulate a shared vision of this future where society bounces back, but bounces back to a better place than our pre-pandemic world.

Moderator: Chris Buse, Centre for Environmental Assessment Research, UBC

Speakers:

- Mira Ziolo, Consulting Veterinarian at Wildlife Rescue Association of BC, PhD Student, UBC Interdisciplinary PhD student
- Tim Takaro, Professor, Faculty of Health Sciences, Simon Fraser University
- Trevor Hancock, Retired Professor and Senior Scholar, School of Public Health and Social Policy, University of Victoria

[Other News](#)

Tara Nordgen, PhD won the magnificent mentor award from U. of California Riverside from students in the biomedical sciences graduate program.



ATS 2020 International Conference

As you may know the ATS 2020 International Conference has been canceled.

ATS 2020 Virtual! Is scheduled for Aug 5-10th

[CLICK HERE FOR MORE INFO](#)
[ATS 2020 ABSTRACTS ONLINE](#)



In a world of uncertainty, the American Thoracic Society remains steadfastly committed to bringing you the latest scientific findings and analysis of the most critical issues impacting pulmonary, critical care, and sleep medicine.

The planning for ATS 2020 Virtual Continues!

The ATS 2020 Virtual program features:

- ✓ Clinical Trials
- ✓ The Clinical Year in Review Series
- ✓ Case-Based Presentations
- ✓ Infectious Diseases
- ✓ Lung Regeneration (and Repair)
- ✓ Environmental and Inhaled Factors That Contribute to Lung Injury
- ✓ Lung Injury and Repair Mechanisms
- ✓ Clinical Diagnosis and Management: Lung Disease, Sleep, and Critical Care
- ✓ Big Data from Clinic and Cells — Managing Disease
- ✓ ePosters of the Scientific Research, Case Reports, and Late Breaking Abstracts

ATS 2020 Virtual will also features an exhibit hall and a variety of industry-sponsored learning opportunities.

Juan C. Celedón, MD, DrPH, ATSF

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