

Kristen K. Coleman, PhD

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Education

University of Toledo

Toledo, OH, USA

Doctor of Philosophy in Biology (Ecology Track)

Awarded: May 05, 2017

- College: Natural Sciences and Mathematics
- Dissertation Title: Environmental Detection and Quantification of Airborne Influenza A Virus in an Elementary School, and its Implications for Student and Community Illness

University of Toledo

Toledo, OH, USA

Bachelor of Arts in Global Studies (Cum laude)

Awarded: May 03, 2013

- College: Language, Literature and Social Sciences

University of Maryland School of Medicine

Baltimore, MD, USA

Certificate in Clinical Research

Expected: May 2026

- As partial fulfillment of didactic plan for KL2 clinical research training grant

Academic Appointments & Experience

University of Maryland, School of Public Health

College Park, MD, USA

Department of Global, Environmental, and Occupational Health

August 2023 – present

Assistant Professor

University of Maryland, College of Agriculture & Natural Resources

College Park, MD, USA

Department of Veterinary Medicine

March 2024 – present

Affiliate Assistant Professor

University of Maryland School of Medicine

Baltimore, MD, USA

Institute for Clinical and Translational Research

July 2023 – present

KL2 Clinical Research Scholar

University of Maryland, School of Public Health

College Park, MD, USA

Maryland Institute for Applied Environmental Health

October 2021 – Aug 2023

Assistant Research Professor

Duke-NUS Medical School, National University of Singapore

Singapore, Singapore

Programme in Emerging Infectious Diseases

May 2017 – Sept 2021

Research Fellow (Senior)

National University of Singapore, Yong Loo Lin School of Medicine

Singapore, Singapore

Department of Medicine

August 2020 – Jan 2021

Research Fellow

Duke University Department of Medicine, Division of Infectious Diseases

Durham, NC, USA

Duke Global Health Institute

May – June 2019

Visiting Research Fellow

Duke-NUS Medical School, National University of Singapore

Singapore, Singapore

Programme in Emerging Infectious Diseases
Research Assistant

January – May 2017

University of Toledo, Department of Environmental Sciences
Graduate Teaching and Research Assistant

Toledo, OH, USA
August 2013 – Jan 2017

Duke University Department of Medicine, Division of Infectious Diseases
Duke Global Health Institute
Visiting Scholar

Durham, NC, USA
October 2016

Northwest Ohio District 2 Science Day
Assistant to the Director

Toledo, OH, USA
January 2015 – 2017

University of Toledo, College of Business and Innovation
Advanced Leadership Academy Scholar

Toledo, OH, USA
March – April 2015

University of Toledo Environmental Graduate Students
President

Toledo, OH, USA
December 2013 – 2014

Manuscripts

*Corresponding authorship; †Co-first authorship / Equal contribution

IF = impact factor

Published / In press:

1. **Coleman KK*** and Bemis IG. Avian Influenza Virus Infections in Felines: A Systematic Review of Two Decades of Literature. Open Forum Infect Dis. 2025; ofaf261, <https://doi.org/10.1093/ofid/ofaf261> (IF: 4.2)
2. Dao TD, **Coleman KK**, Bui VN, Bui AN, Tran LH, Nguyen QD, Than S, Pulscher LA, Marushchak, LV, Robie ER, Nguyen-Viet H, Pham PD, Christy NC, Brooks JS, Nguyen HC, Rubrum AM, Webby RJ, Gray GC. High Prevalence of Highly Pathogenic Avian Influenza A Virus in Vietnam's Live Bird Markets. Open Forum Infect Dis. July 2024. **Editor's choice**. doi: <https://doi.org/10.1093/ofid/ofae355> (IF: 4.2)
3. Lai J, **Coleman KK**, et al. Relative Efficacy of Masks and Respirators as Source Control for Viral Aerosol Shedding from People Infected with SARS-CoV-2: A Controlled Human Exhaled Breath Aerosol Experimental Study. eBioMedicine 2024; 105157. doi: <https://doi.org/10.1016/j.ebiom.2024.105157> (IF: 11.2)
4. **Coleman KK**, Kalliomäki P, Lai J, et al. Aerodynamic Size Distribution of SARS-CoV-2 Aerosol Shedding. Journal of Clinical and Translational Science. 2024;8(s1):105-105. doi:10.1017/cts.2024.309
5. Kalliomäki P, Sobhani H, Stratton P, **Coleman KK**, Aditya Srikakulapu A, Salawitch R, Russell R. Dickerson RR, Zhu S, Srebric J, and Milton DK. Ozone and ultra-fine particle concentrations in a hotel quarantine facility during 222 nm far-UVC air disinfection. Posted on medRxiv October 2, 2023.
6. Tan KS, Ong SWX, Koh MH, Tay DJW, Aw DZH, Nah YW, Abdullah MRB, **Coleman KK**, DK Milton, Chu JJH, Chow VTK, Tambyah PA, Tham KW*. SARS-CoV-2 Omicron variant shedding during respiratory activities. International Journal of Infectious Diseases 2023 Mar 21; doi: <https://doi.org/10.1016/j.ijid.2023.03.029> (IF: 12)
7. Wee LE, Arora S, Kwan-Ki Ko K, Conceicao EP, **Coleman KK**, Tan KY, Tohid HB, Liu Q, Tung GLT,

Jin See SW, Suphavitai C, Ling ML, Venkatachalam I*. Environmental contamination and evaluation of healthcare-associated SARS-CoV-2 transmission risk in temporary isolation wards during the COVID-19 pandemic. *Am. J. Infect. Control* 2022 Oct 27; doi: [10.1016/j.ajic.2022.09.004](https://doi.org/10.1016/j.ajic.2022.09.004) (IF: 4.3)

8. Lai J†, **Coleman KK**†, Tai S S-H, German J, Hong F, Albert B, Esparza Y, Srikakulapu AK, Schanz M, Maldonado IS, Oertel M, Fadul N, Gold TL, Weston S, Mullins K, McPhaul KM, Frieman M, Milton DK*. Exhaled Breath Aerosol Shedding of Highly Transmissible Versus Prior SARS-CoV-2 Variants. *Clin Infect Dis* 2022 Oct 26; doi: [10.1093/cid/ciac846/6773834](https://doi.org/10.1093/cid/ciac846/6773834) (IF: 21; Citations: 13)
9. Adenaiye OO, Lai J, de Mesquita PJB, Hong F, Youssefi S, German J, Tai SS, Albert B, Schanz M, Weston S, Hang J, Fung C, Chung HK, **Coleman KK**, Sapoval N, Treangen T, Berry IM, Mullins K, Frieman M, Ma T, Milton DK*. Infectious SARS-CoV-2 in Exhaled Aerosols and Efficacy of Masks During Early Mild Infection. *Clin Infect Dis* 2022 July 1; doi: [10.1093/cid/ciab797](https://doi.org/10.1093/cid/ciab797) (IF: 21; Citations: 101)
10. **Coleman KK**, Tay DJW, Tan KS, Ong SWX, Son TT, Koh MH, Chin YQ, Nasir H, Mak TM, Chu JJH, Milton DK, Chow VTK, Tambyah PA, Chen M, Wai TK*. Viral Load of SARS-CoV-2 in Respiratory Aerosols Emitted by COVID-19 Patients while Breathing, Talking, and Singing. *Clin Infect Dis* 2022 May 15; doi: [10.1093/cid/ciab691](https://doi.org/10.1093/cid/ciab691). (IF: 21; Citations: 169)
11. Wang X, Xiu L, Binder RA, Toh TH, Lee JSY, Ting J, Than ST, Qi W, **Coleman KK**, Perera D, Ma MJ, Gray GC*. A Pan-coronavirus RT-PCR Assay for Rapid Viral Screening of Animal, Human, and Environmental Specimens. *One Health* 2021, Volume 13, December 2021, 100274
<https://doi.org/10.1016/j.onehlt.2021.100274> (IF: 8.3)
12. **Coleman KK**, Robie ER, Abdelgadir A, Kozhumam AS, Binder RA, & Gray GC*. Six Decades of Human Adenovirus Type 4 Infections Reviewed: Increasing Infections Among Civilians Are a Matter of Concern. *Clin Infect Dis* 2021; doi: [10.1093/cid/ciab146](https://doi.org/10.1093/cid/ciab146). (IF: 21; Citations: 5)
13. Ong SWX†, Tan YK†, **Coleman KK**†, Tan BH, Leo YS, Wang DL, Ng CG, Ng OT, Wong MSY, and Marimuthu K*. Lack of viable SARS-CoV-2 among PCR-positive air samples from hospital rooms and community isolation facilities. *Infection Control & Hospital Epidemiology* 2021; doi: [10.1017/ice.2021.8](https://doi.org/10.1017/ice.2021.8). (IF: 6.5; Citations: 30)
14. Binder RA, Alarja NA, Robie ER, Kochev KE, Xiu L, Rocha-Melogno L, Abdelgadir A, Goli SV, Farrell AS, **Coleman KK**, Turner AL, Lautredou CC, Lednický JA, Lee MJ, Polage CR, Simmons RA, Deshusses MA, Anderson BD, and Gray GC*. Environmental and Aerosolized SARS-CoV-2 Among Hospitalized COVID-19 Patients. *J Infect Dis* 2020; doi: [10.1093/infdis/jiaa575](https://doi.org/10.1093/infdis/jiaa575). (IF: 7.7; Citations: 67)
15. **Coleman KK**†, Chia PY†, Tan YK†, Ong SWX†, Gum M, Lau SK, Sutjipto S, Lee PH, Than ST, Y BE, Milton DK, Gray GC, Schuster S, Barkham T, Prathim P, Vasoo S, Chan M, Ang PSP, Tan BH, Leo YS, Ng OT*, Wong MSY*, Marimuthu K*, for the Singapore 2019 Novel Coronavirus Outbreak Research Team. Detection of Air and Surface Contamination by SARS-CoV-2 in Hospital Rooms of Infected Patients. *Nature Communications* 2020; 11:2800. doi: [10.1038/s41467-020-16670-2](https://doi.org/10.1038/s41467-020-16670-2) (IF: 17.7; Citations: 854)
16. Ong SWX, **Coleman KK**, Chia PY, Thoon KC, Pada S, Venkatachalam I, Fisher D, Tan YK, Tan BH, Ng OT, Ang BSP, Leo YS, Wong MSY, Marimuthu K*. Transmission Modes of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Implications on Infection Control: A Review.

17. Le YH, Nguyen KC, **Coleman KK**, Nguyen TT, Than ST, Hai PH, Manh ND, Nghia ND, Dan PT, Mai HV, Long TP, Bailey ES, Warkentien TE, Gray GC*. Virus Detections Among Patients with Severe Acute Respiratory Illness, Northern Vietnam. *PLoS ONE* 2020. 15(5): e0233117. doi:[10.1371/journal.pone.0233117](https://doi.org/10.1371/journal.pone.0233117) (IF: 3.7; Citations: 5)
18. Xiu L, Binder RA, Alarja NA, Kochev K, **Coleman KK**, Than ST, Bailey ES, Bui VN, Toh TH, Erdman DD, Gray GC*. A RT-PCR Assay for the Detection of Coronaviruses from Four Genera. *J Clin Virology* Volume 128, July 2020, 104391. doi:[10.1016/j.jcv.2020.104391](https://doi.org/10.1016/j.jcv.2020.104391) (IF: 14.5; Citations: 39)
19. **Coleman KK**, Wong JCC, Jayanthi J, Nguyen TT, Wong AWL, Yadana S, Thoon KC, Chan KP, Low JG, Kalimuddin S, Dehghan S, Kang J, Shamsaddini A, Seto D, Su YCF, Gray GC*. Adenoviral Infections in Singapore: Should New Antiviral Therapies and Vaccines Be Adopted? *J Infect Dis* Volume 221, Issue 4, 15 February 2020, Pages 566–577, jiz489, doi:[10.1093/infdis/jiz489](https://doi.org/10.1093/infdis/jiz489) (IF: 7.7; Citations: 20)
20. **Coleman KK***, Sigler WV. Airborne Influenza A Virus Exposure in an Elementary School. *Scientific Reports* 2020 Feb 5;10(1):1859. doi:[10.1038/s41598-020-58588-1](https://doi.org/10.1038/s41598-020-58588-1) (IF: 5; Citations: 49)
21. Yadana S, **Coleman KK***, Nguyen TT, Hansen-Estruch C, Kalimuddin S, Thoon KC, Low JG, & Gray GC. Monitoring for Airborne Respiratory Viruses in a General Pediatric Ward in Singapore. *J Public Health Res.* 2019; 8(3). doi:[10.4081/jphr.2019.1407](https://doi.org/10.4081/jphr.2019.1407) (IF: 2.2; Citations: 13)
22. Bui VN, Nguyen TT, Nguyen-Viet H, Bui AN, McCallion K, Hu-Suk L, Than ST, **Coleman KK***, Gray GC*. Bioaerosol Sampling to Detect Avian Influenza Virus in Hanoi's Largest Live Poultry Market. *Clin Infect Dis* 2019 Mar 5;68(6):972-975. doi:[10.1093/cid/ciy583](https://doi.org/10.1093/cid/ciy583) (IF: 21; Citations: 23)
23. **Coleman KK***, Nguyen TT, Yadana S, Hansen-Estruch C, Lindsley WG, Gray GC; Bioaerosol Sampling for Respiratory Viruses in Singapore's Mass Rapid Transit Network. *Scientific Reports* 2018; 8:17476 doi:[10.1038/s41598-018-35896-1](https://doi.org/10.1038/s41598-018-35896-1) (IF: 5; Citations: 69)
24. Hansen-Estruch C*, **Coleman KK**, Nguyen TT, Thoon KC, Low JG, Gray GC. Respiratory Polyomaviruses and Pediatric Illness in Singapore. *Frontiers in Pediatrics* 2018; doi:[10.3389/fped.2018.00228](https://doi.org/10.3389/fped.2018.00228) (IF: 3.4; Citations: 7)
25. Borkenhagen LK*, Mallinson KA, Tsao RW, Ha SJ, Lim WH, Toh TH, Anderson BD, Fieldhouse JK, Philo SE, Chong KS, Lindsley WG, Ramirez A, Lowe JF, **Coleman KK**, Gray GC. Surveillance for Respiratory and Diarrheal Pathogens at the Human-Pig Interface in Sarawak, Malaysia. *PLoS ONE* 2018; 13(7). doi:[10.1371/journal.pone.0201295](https://doi.org/10.1371/journal.pone.0201295) (IF: 3.7; Citations: 53)
26. **Coleman, KK***. Environmental Detection and Quantification of Airborne Influenza A Virus in an Elementary School, and its Implications for Student and Community Illness. (Electronic Thesis or Dissertation). 2017. http://rave.ohiolink.edu/etdc/view?acc_num=toledo1493372170333178

In progress:

1. Gomez J, Bemis IG, Shittu I, Gray GC, **Coleman KK***. Highly Pathogenic Avian Influenza A(H5N1) Outbreak in Household Cats: A Case Series Involving Treatment with Oseltamivir. *Emerging Infectious Diseases*. *Submitted May 7, 2025*. (IF: 7.2)
2. Yeh KB*, Bahnfleth WP, Bradford E, Cardona C, **Coleman KK**, Hudson PJ, Dadonaite B, Hutchins RJ, Maresso A, MacIntyre CR, Scotch M. Hail Mary: Three things we can do now to reduce the risk of avian influenza

spillovers. *PNAS*. 2025. *In press*. (IF: 9.8)

3. **Coleman KK**[†], Petri Kalliomäki[†], et al. Aerodynamic Size Distribution and Rates of SARS-CoV-2 Aerosol Shedding
4. **Coleman KK**, Srebric J, Milton DK. The world needs a new and effective strategy for characterizing human-to-human transmission of influenza and other respiratory pathogens.
5. Lai J, **Coleman KK**, et al. Human-to-Human Transmission of Influenza in a Randomized Controlled Transmission Trial.

Professional Meetings, Workshops, & Presentations

American Industrial Hygiene Association (AIHA) and the Integrated Bioscience and Built Environment Consortium (IBEC) Panel [Session](#); Avian Influenza and Worker Safety: Navigating the H5N1 Challenge (Mar 27, 2025)

Coleman KK. Avian Influenza Virus and Potential Zoonotic Risk to Animal Workers

National Academies of Sciences, Engineering, and Medicine (NASEM) Potential Research Priorities to Inform Readiness and Response to Highly Pathogenic Avian Influenza A (H5N1): A Workshop (Oct 22-23, 2024)

New England Federation of Humane Societies [Webinar](#) (Oct 9, 2024)

Coleman KK. Avian Influenza Virus in Felines and Potential Zoonotic Risk to Humans

Los Alamos National Laboratory (LANL): Spillover from Avian Influenza Symposium; National Press Club, Washington, D.C. (Sept 17, 2024)

American Industrial Hygiene Association (AIHA) Potomac Chapter Meeting (Feb 13, 2024)

Coleman KK. A One Health Approach to Understanding Pandemic Respiratory Virus Transmission

Virginia-Maryland College of Veterinary Medicine, Dept. of Veterinary Medicine Fall 2023 One Health Seminar

Coleman KK. A One Health Approach to Understanding Pandemic Respiratory Virus Transmission

American Association for Aerosol Research (AAAR) 41st Annual Conference, Portland, Oregon (Oct 3-7, 2023)

Coleman KK, Petri Kalliomäki, et al.

Poster title: Aerodynamic Size Distribution and Rates of SARS-CoV-2 Aerosol Shedding: Omicron BA.4 and BA.5

UTMB Public Health Symposium, Galveston, TX (April 5, 2023)

Dao DT, **Coleman KK**, Pulscher LA, [Marushchak LV](#), Bui VN, Bui AN, Tran LH, Nguyen GH, Than S, Robie ER, Peret TC, Nguyen-Viet H, Pham PD, Christy NC, Nguyen H, Brooks JS, and Gray GC.

Poster title: Live Bird Market Workers in Vietnam Remain at Risk of Suffering Avian Influenza Virus Spillover Infections.

International Society of Indoor Air Quality and Climate (ISIAQ) 30th Anniversary Webinar (Dec 14, 2022)

Morawska L, **Coleman KK**, and Kinney K (moderator).

Webinar title: *The long history of airborne infection transmission: why don't we use the knowledge we have?*

Presentation: *A One Health Approach to Understanding Pandemic Respiratory Virus Transmission*

SPHL100 Expert Panel Discussion: Environmental Health / Climate Change. (Dec 12, 2022)

Wilson S, Jones G, **Coleman KK**, and Sieck N.

Department of Environmental Sciences (DES) Seminar, The University of Toledo, Ohio (Nov 16, 2022)

Coleman KK.

K. Coleman, 2025

Seminar: *Bioaerosol Sampling in Community and Occupational Settings: A One Health Approach to Understanding Pandemic Respiratory Virus Transmission*

American Association for Aerosol Research (AAAR) 40th Annual Conference, Raleigh, North Carolina (Oct 3-7, 2022)

Coleman KK.

Oral presentation: *Evolution of SARS-CoV-2 Shedding in Exhaled Breath Aerosols*

COVID-19 PROTECT Meeting: Understanding viral emissions, transmission routes and mitigation, University of Leeds, UK (Sept 30, 2022)

Coleman KK.

Oral presentation: *Evolution of SARS-CoV-2 Shedding in Exhaled Breath Aerosols*

Options XI for the Control of Influenza, Belfast, UK (Sept 26-29, 2022)

Lai J, **Coleman KK**, et al.

Poster presentation: *Evolution of SARS-CoV-2 Shedding in Exhaled Breath Aerosols*

11th International Aerosol Conference, Athens, Greece (Sept 4-9, 2022)

Coleman KK.

Oral presentation: *Evolution of SARS-CoV-2 Shedding in Exhaled Breath Aerosols*

Indoor Air 2022, University of Eastern Finland, Kuopio, Finland (June 12-16, 2022)

Tham KW, **Coleman KK.**

Oral presentation: *A Comparison of Retrieved Respiratory Viral Loads Emitted by Infected SARS-CoV-2 Patients*

NIAID SARS-CoV-2 Assessment of Viral Evolution (SAVE) Program. Guest Presentation (April 28, 2022)

Coleman KK, Lai J.

Presentation: *Evolution of SARS-CoV-2 Shedding in Exhaled Breath Aerosols*

Public Health Research at Maryland Event, SPH Research, Innovation and Practice Poster Session 2022, The University of Maryland, College Park (April 5, 2022)

Coleman KK, Lai J, et al.

Poster: *Impact of SARS-CoV-2 variants on viral load in exhaled breath aerosols*

MIEH733 Foodborne, Waterborne and Airborne Infectious Diseases. Guest Lecture, The University of Maryland School of Public Health (March 17, 2022)

Coleman KK.

Lecture: *Bioaerosol Sampling for Respiratory Pathogens in Community and Occupational Settings*

MIEH Seminar (MIEH688), The University of Maryland School of Public Health (Nov 2, 2021)

Coleman KK.

Seminar: *One Health is Public Health: Southeast Asia to Maryland*

The 69th Annual Meeting of the American Society of Tropical Medicine and Hygiene (Nov 15-19, 2020)

Binder RA, Alarja NA, Robie ER, Kochek KE, Xiu L, Rocha-Melagno L, Abdelgadir A, Goli SV, Farrell AS,

Coleman KK, Turner AL, Lautredou CC, Lednický JA, Lee MJ, Polage CR, Simmons RA, Deshusses MA, Anderson BD, Gray GC.

Poster: *Environmental and Aerosolized SARS-CoV-2 Among Hospitalized COVID-19 Patients*

World One Health Congress, Virtual Edition 2020 (Oct 30 - Nov 3, 2020)

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Tung DD, Coleman **KK**, Bui VN, Son TT, Nguyen-Viet H, Robie ER, Phu PH, Gray GC.

Poster: *Avian Influenza Virus Surveillance in Live Bird Markets, Northern Vietnam*

BRTMA-International Congress on Tropical Medicine, Sibul, Sarawak Malaysia (Nov 13-15, 2019)

Guest speech: *Employing the One Health Approach in Surveilling for Novel Respiratory Viruses in Public Places*

6th International Symposium on One Health Research, Mongolia (September 18-19, 2019)

Guest speech: *Bioaerosol Sampling for Respiratory Viruses in Singapore's Mass Rapid Transit Network*

SingHealth Duke-NUS Infectious Diseases Research Institute (IDRI) Scientific Retreat (March 16, 2019)

Guest speech: *Bioaerosol Sampling for Respiratory Viruses in Singapore's Mass Rapid Transit Network*

Duke One Health Respiratory Diseases Training Program; SGH Academia, Singapore (July 23-27th, 2018)

Lecture: *Project SOP and Detection Algorithm: Adenovirus*

Lecture: *Virology of Influenza Virus*

12th Singapore Association for Laboratory Animal Science (SALAS) Annual Conference, Singapore (Nov 9th, 2018)

Guest speech: *Viral Aerosol Surveillance at the Human-Animal Interface in Southeast Asia*

ISIRV – International Meeting on Respiratory Pathogens (IMRP); Singapore (March 7-9, 2018)

Oral presentation: *Bioaerosol Sampling for Respiratory Viruses in Singapore's Mass Rapid Transit Network* **Mentee's poster:** *A Pilot Study Using Stationary Bioaerosol Sampling to Detect Avian Influenza Virus in a Vietnamese Poultry Market*

Mentee's poster: *Exploring the Risk of Hospital-Acquired Respiratory Virus Infections in a General Pediatric Ward in Singapore*

Duke-NUS EID Science Retreat; Singapore (January 19th, 2018)

Poster & rapid-fire talk: *Bioaerosol Sampling for Respiratory Viruses in Singapore's Mass Rapid Transit Network*

Mentee's poster: *Identifying Airborne Respiratory Viruses in a General Pediatric Ward in Singapore*

Mentee's poster: *A Pilot Study Using Stationary Bioaerosol Sampling to Detect Avian Influenza Virus in a Vietnamese Poultry Market*

Duke One Health Workshop on Emerging Respiratory Virus Threats; National Institute for Veterinary Research (NIVR) Hanoi, Vietnam (April 10th, 2017)

Lecture & hands-on training: *Bioaerosol Sampling for Infectious Respiratory Viruses*

Duke Kunshan University Bioaerosol Workshop; Kunshan, China (April 8th, 2017)

Lecture & hands-on training: *Bioaerosol Sampling for Infectious Respiratory Viruses*

Duke-NUS EID Science Retreat; Sentosa, Singapore (January 20th, 2017)

Poster and rapid-fire talk: *Elementary Student Exposure to Airborne Influenza A Virus*

ISIRV - Options IX for the Control of Influenza; Chicago, IL, USA (August 25th, 2016)

Poster: *The Persistence of Airborne Influenza A Virus in an Elementary School and Proposed Effects on Student Health and Absenteeism*

7th Annual Midwest Graduate Research Symposium; Toledo, OH, USA (April 2016)

Oral presentation: *Airborne Influenza A Virus Detection as a Predictive Indicator of Student Illness and Absenteeism*

Ottawa Hills Local School District; Ottawa Hills, OH, USA (March 2016)

Guest talk: *Tracking germs in the air you breathe: How the flu can make you sick*

Dr. Von Sigler's EEES 1170: Microbes in Society; University of Toledo, OH, USA (March 2016)

Guest lecture: *Airborne Influenza A Virus: Children's Health and School Absenteeism*

American Society for Microbiology Ohio Branch Spring 2015 Meeting; Elyria, OH, USA (April 2015)

Oral presentation: *Detection of Airborne Influenza A Virus using an Electrochemical Immunosensor*

Dr. Von Sigler's EEES 1170: Microbes in Society; University of Toledo, OH, USA (April 2015)

Guest lecture: *Airborne Influenza A Virus and the Health of Elementary Schoolchildren*

6th Annual Midwest Graduate Research Symposium; Toledo, OH, USA (March 2015)

Oral presentation: *Airborne Influenza A Virus and the Health of Elementary Schoolchildren*

Dr. Von Sigler's PUBH 5520: Biological Agents Course; University of Toledo, OH, USA
(June 2014; May 2015)

Guest lecture: *Aerobiology Research: Monitoring Influenza A Virus in Schools*

Teaching Experience

*Course includes a laboratory component; †Graduate level course

University of Toledo

EEES 1140*	Environmental Problems Lab (Lecturer)	2013 - 2017
EEES 1170	Microbes and Society (Guest lecturer)	2014 - 2016
EEES 4150/5150*	Organic Evolution (Lab set-up TA)	2014 - 2016
PUBH 5520*†	Biological Agents (Lecturer and lab set-up)	2014 - 2016

University of Maryland

MIEH309-0204	Environmental Health Research: Public Health Aerobiology	2022 – present
MIEH309-0202	Environmental Health Research: One Health	2024 – present
MIEH415/615†	Airborne Infection	2024 – present

Guest lecturer for:

MIEH733	Foodborne, Waterborne and Airborne Infectious Diseases	Spring 2022-present
MIEH771	Exposure Assessment of Environmental Hazards	Spring 2023-present
BIOE489K-0101	Special Topics in Bioengineering: Pulmonary Engineering	Fall 2023, 2024
EPIB330	Introduction to Infectious Disease Epidemiology	Spring 2024
MIEH321	Environmental Determinants of Emerging Infectious Diseases	Spring 2025

Funding/Awards/Honors

K. Coleman, 2025

2024 UMD SPH Research Excellence Honoree

UMB Institute for Clinical and Translational Research KL2 Career Development Award (salary, research and didactic support; July 2023-26)

\$792,720 Singapore NMRC COVID-19 Research Fund. Project title: Mitigating SARS-CoV-2 transmission through expiratory droplet control and environmental intervention (PI: Tham Kwok Wai; Co-PI: Kristen Coleman)

Award recipient of the 2019 Post-Doctoral Research Exchange Program: Duke and Duke-NUS Medical School Collaborative Research Initiative (30-day visit to Duke University)

Singapore Association for Laboratory Animal Science (SALAS) Guest Speaker Plaque of Appreciation

\$450 Singapore International Infectious Disease Conference (SIIDC) Fellowship (2017)

\$1,631 University of Toledo Graduate Research Award (awarded to only four UT students per year; 2015-2016)

\$80,000 University of Toledo Department of Environmental Sciences Graduate Assistantship (4 years), plus full PhD tuition waiver (2013-2017)

University of Toledo College of Business and Innovation Advanced Leadership Academy Scholarship (2015)

University of Toledo Undergraduate Institutional Honors (2013)

\$8,000 University of Toledo Tower Blue Scholarship (2008-2012)

\$3,600 University of Toledo First Generation Award (2008-2012)

Continuing Education

Duke One Health Training Program (May 16 – June 8, 2019)

GLHLTH 731: Introduction to the One Health Approach

GLHLTH 735: An Introduction to Entomology, Zoonotic Diseases, and Food Safety

Duke GH777 Global Scholars Program (January – April 2019)

GLHLTH 777: Infectious Disease Epidemiology in Global Settings

SingHealth Duke-NUS Academic Medical Centre

Inaugural Global Health Introductory Course (July 19-21st, 2018)

Mentees

Current:

Ansley Chartrand

Undergraduate Research Assistant, University of Maryland (2024-present)

Upcoming position: MPH student at George Washington University, Milken Institute School of Public Health

Esther Fadaka

Undergraduate Research Assistant, University of Maryland (2023-present)

Upcoming position: Accelerated BS+MPH student at UMD SPH

Ian Bemis

Graduate Research Assistant, Virginia-Maryland College of Veterinary Medicine (2024-present)

Current position: PhD student (2nd year) at UMD VetMed

Maya Hoffman

Undergraduate Research Assistant, University of Maryland (2024-present)

Nathaniel Monteparte

Undergraduate Research Assistant, University of Maryland (2024-present)

Tyler Spielman

Undergraduate Research Assistant, University of Maryland (2024-present)

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Grace Herron
Undergraduate Research Assistant, University of Maryland (2023-present)
Current position: Bioengineering student at UMD

Anna Pulley
Graduate Research Assistant, University of Maryland School of Public Health (2023-present)
Current position: PhD student at UMD GEOH

Mariana Lim
Undergraduate Research Assistant, University of Maryland (2023-present)
Current position: Neuroscience student at UMD

Akshaya Ganesh
Undergraduate Research Assistant, University of Maryland (2023-present)
Current position: Pre-medical student at UMD

Former:
Matthew Lubman
Undergraduate Research Assistant, University of Maryland (2021-2023)
Subsequent position: MHA student at George Washington University, Milken Institute School of Public Health

Thé Son Than, DVM
Research Assistant, Duke-NUS Medical School (October 2018 – July 2021)
Subsequent position: MA student, International Degree Program of Animal Vaccine Technology in the Graduate Institute of Animal Vaccine Technology at National Pingtung University of Science and Technology, Taiwan

Diego Galán, BA
Duke-Singapore Student Scholar Fellow (October 2018 – July 2019)
Subsequent positions: Duke University Medical Student graduate, University of Cambridge MPhil in Public Health graduate

Than Yong Yi, BS
Undergraduate Student Intern, Duke-NUS Medical School (2017-2018)
Subsequent position: Student, National University of Singapore, Singapore

Tham Nguyen, MPH
Research Associate, Duke-NUS Medical School (January 2017 – July 2018)
Subsequent position: PhD graduate, University of Queensland School of Public Health, Australia;
Current position: Postdoc at Duke-NUS Medical School

Su Yadana, BS, MPH
Research Assistant, Duke-NUS Medical School (July 2017 – July 2018)
Subsequent positions: MPH graduate, Columbia University Mailman School of Public Health, New York; Research Scientist at EcoHealth Alliance, New York
Current position: PhD student in Global Public Health Sciences at George Washington University, Milken Institute School of Public Health

Christophe Hansen-Estruch, MD
Duke University Medical Student (3rd year), Duke-Singapore Student Scholar Fellow (January – July 2017)
Subsequent position: General Surgery Resident, The University of Alabama

Professional Affiliations

University of Maryland Department of Veterinary Medicine

UT College of Business and Innovation Advanced Leadership Academy
 Association for Women in Science (AWIS)
 American Society for Microbiology (ASM)
 International Society for Influenza and other Respiratory Virus Diseases (ISIRV)
 Infectious Diseases Society of America (IDSA)
 American Association for Aerosol Research (AAAR)
 International Society of Indoor Air Quality and Climate (ISIAQ)

Service

PhD Committee Member for Kha-Ai Tran (2024 – present)
 PhD Committee Member for Taiwo Alawode (2024 – present)
 PhD Committee Member for Anna Pulley (TBD)
 Medical Foster for City Dogs and City Kitties Rescue, Washington D.C. (2024-present)
 Reviewed and interviewed applicants for Airborne Infection Research Technician (Summer 2024)
 Clark Leadership Chair Search Committee (2023-2024)
 PHAB Lab germicidal UV light fixture set-up for UMD graduation ceremonies (2022)
 Duke-NUS House of Microbial Experts (HOME) Departmental Planning Group, *Representative* (2017 – 2021)
 Northwest Ohio District 2 Science Day, *Judge and Assistant to the Director* (2015-2017)
 Ottawa Hills Local School District, *Science Fair Feedback Specialist* (2015)
 DES Environmental Graduate Students (EGS), *President* (2013)
 Graduate Student Association (GSA), *Active Member* (2013-2016)
 Midwest Graduate Research Symposium (MGRS), *Volunteer* (2014, 2015)
 GSA Travel Reimbursement Committee, *Member* (2013-2014)
 Wrap Up Toledo, *Volunteer* (2010-2014)
 Clean Water for the World, *Walk for Water Toledo Participant* (April 2014)
 Clean Water for the World; SewHope, *Volunteer Liaison* (2014)
 Lake Erie Center Seminar Series, *Transportation Coordinator* (2013)
 Kappa Delta Shamrock N' Run 5K, *Logistics Committee Member* (2012)
 Toledo Songfest, *Volunteer Performer* (3rd place, 2011)
 LJ Brauer Memorial Foundation, *Fundraiser Volunteer* (2011)
 RockeTHON: The University of Toledo's Dance Marathon, *Fundraiser Volunteer* (2011, 2012)
 Prevent Child Abuse America, *Fundraiser Volunteer* (2011, 2012)
 Yell & Tell: Stop Child Abuse Now Inc., *Fundraiser Volunteer* (2011)
 Girl Scouts of the USA, *Social Event Volunteer* (2011, 2012)

Academic Service as of August 2023

-Academic Editor of *PLOS Global Public Health* (2024-present)
 -Peer reviewed a manuscript for the *Infectious Diseases* journal (2024)
 -Reviewed and interviewed applicants for Airborne Infection Research Technician (summer 2024)
 -Comprehensive PhD Written Exam Committee Member for Anna Pulley (TBD)
 -Comprehensive PhD Written Exam Committee Member for Taiwo Alawode (Summer 2024)
 -Search committee chair for Engineering Technician (September 2023 – December 2023)
 -Faculty search committee member for Endowed Professor & Clark Leadership Chair in Airborne Infectious Disease Transmission
 K. Coleman, 2025

(September 2023 – 2024)

-Peer reviewed a manuscript for *Singapore Medical Journal* (September 2023)

-Peer reviewed a scientific manuscript for the new American Chemical Society (ACS) Journal *Environmental Science & Technology Air* (August 2023)

Policy Citations (hyperlinks embedded in sources)

2021

1. EU Policy on Air Quality. April 19, 2021. [The Publications Office of the European Union](#).

2020

1. Advice on the use of masks in the context of COVID-19: interim guidance, 5 June 2020. [World Health Organization](#).
2. Transmission of SARS-CoV-2 and Mitigating Measures EMG-SAGE. June 12, 2020. [UK Government](#).
3. TWEG: Evidence of wider environmental transmission of SARS-CoV-2, 12 June 2020. [UK Government](#).
4. Infection prevention and control during health care when coronavirus disease (COVID-19) is suspected or confirmed: interim guidance, 29 June 2020. [World Health Organization](#).
5. Transmission of SARS-CoV-2: implications for infection prevention precautions: scientific brief, 09 July 2020. [World Health Organization](#).
6. COVID-19 / SARS-CoV-2: Background information for the Health Council. 29 Oct 2020. National Institute for Public Health and the Environment. [Dutch Ministry of Health, Welfare and Sport](#).

2019

1. NIOSH bibliography of communication and research products 2018. [Centers for Disease Control and Prevention](#). April 1, 2019. (Two publications cited in this document)

Media and Science/Medical News Recognition (hyperlinks embedded in titles and sources)

2025

1. New Study Says Domestic Cats Need to Be Evaluated More For HPAI H5N1 Implications. [Bovine Vet](#). Jan 13, 2025.
2. Cats May Have Gotten Bird Flu from Raw Pet Food. Here's What to Know. [The New York Times](#). Jan 23, 2025.
3. Could the Bird Flu Become Airborne? [The New York Times](#). Feb 3, 2025.
4. CDC Report Suggests Bird Flu Is Spreading Undetected to Humans. [Science Alert](#). Feb 17, 2025.
5. People can give their cats bird flu, CDC study suggests. [USA Today](#). Feb 20, 2025.
6. Dairy Workers May Have Passed Bird Flu to Pet Cats, C.D.C. Study Suggests. [New York Times](#). Feb 20, 2025.
7. Bird Flu Concern Increases As Indoor Cats Die, Unknown How Infection Occurred. [The Travel](#). Feb 22, 2025.
8. H5N1 is spreading. America is not ready. [Washington Post](#). Mar 4, 2025.
9. Opinion: Cows, cats and rats: Why H5N1 spreading to more species is so worrisome. [Washington Post](#). Mar 4, 2025.
10. Opinion: How to Protect Your Cat from Bird Flu. [Washington Post](#). Mar 6, 2025.
11. How to protect your pets from bird flu. [Popular Science](#). Mar 10, 2025.
12. Mutations, Misinformation and the Mother of All Pandemics. [Truthdig](#). March 31, 2025.
13. Solutions to Bird Flu Hatched. [Maryland Today](#). April 30, 2025.
14. Bird flu study points to risk of another pandemic. [UMD SPH](#). May 7, 2025.

2024

1. University of Maryland embarking on first-of-its-kind study on how flu is transmitted. [WYPR](#). Jan 5, K. Coleman, 2025

2024.

2. Catching the flu ‘for the love of science’: U. Md. Study explores how it spreads. [WTOP](#). Jan 15, 2024.
3. Public Health Researchers Look to Borrow...Your Flu? [Maryland Today](#). Feb 15, 2024.
4. I made \$9,450 and erased my credit card debt by joining 2 clinical trials. I just had to agree to get the flu and dysentery. [Business Insider](#). Feb 23, 2024.
5. Work of ICTR Scholar Featured in Business Insider. [The Elm](#). March 12, 2024.
6. Preprint: Avian Influenza Virus Infections in Felines: A Systematic Review of Two Decades of Literature. [Avian Flu Diary](#). May 6, 2024.
7. Understanding the Current Avian Influenza Outbreak in Dairy Cattle and Risk to the Public. [AGNR News](#). May 23, 2024.
8. Researcher Warns Pet Cats Risk Getting Bird Flu and Possibly Infecting People. [AGNR News](#). June 14, 2024.
9. Domestic Cats Can Contract and Spread Bird Flu, Study. [Daily Jang](#). June 17, 2024.
10. Bird Flu Is Infecting Cats (and the Occasional Dog). Here’s What to Know. [The New York Times](#). June 17, 2024.
11. A Bird-Flu Pandemic in People? Here’s What It Might Look Like. [The New York Times](#). June 17, 2024.
12. Pets Can Catch Bird Flu and Could Spread It To Us, Concludes 20 Years of Data. [IFL Science](#). June 18, 2024.
13. How Your Cat or Dog Could Warn of a Bird Flu Outbreak. [The New York Times](#). Aug 16, 2024.
14. Bird flu now infecting domestic cats across US. [NewsNation](#). Aug 20, 2024.
15. ‘A drastic uptick’: Bird flu is infecting domestic cats in multiple states. [KNOE News](#). Aug 21, 2024.
16. America's Pet Cats Face Bird Flu Threat. [Newsweek](#). Aug 22, 2024.
17. Avian Bird Flu Outbreak Among House Cats. [TMZ](#). Aug 24, 2024.
18. Bird Flu Cases May be Spreading from Cat Owners to Their Pets. [Newsweek](#). Nov 4, 2024.
19. Could cats become a carrier of bird flu? [The New York Times](#). Dec 11, 2024.
20. Two California house cats die from bird flu as three more appear to be infected. [The Guardian](#). Dec 19, 2024.
21. Recall of raw and frozen cat food in Oregon after feline dies of bird flu. [The Guardian](#). Dec 26, 2025.
22. Cats keep catching and spreading a puzzling and deadly disease: Is your cat safe? [USA Today](#). Dec 27, 2024.
23. Bird flu cases are on the rise for humans and animals. Here's how to protect your pets. [NPR](#). Dec 28, 2024.
24. Bird flu Q&A: What to know to help protect yourself and your pets. [NPR](#). Dec 30, 2024.

2023

1. Adenovirus Outbreak Has Infected Thousands of Children in India. [Asian Scientist Magazine](#). [PressNewsAgency](#). Mar 30, 2023.
2. ‘Bold’ study that gave people COVID reveals ‘supershedder’ phenomenon. [Nature](#). June 15, 2023.
3. Some expired COVID-19 tests are still usable. Here’s how you can check. [The Diamondback](#). Sept 24, 2023.
4. Kristen Coleman Named First UMB/UMCP KL2 Clinical Research Scholar. [SPH News](#). Sept 27, 2023.
5. Here’s how much coronavirus people infected with COVID-19 may exhale. [Science News](#). Sept 25, 2023.
6. WMUC interview. Sept 29, 2023.
7. COVID-19 numbers in Maryland and region surge amid decline in preventive measures. [Maryland Daily Record](#).

2022

1. How do I know if I have a cold, the flu or COVID-19? [Associated Press](#). [ABC News](#). [The Seattle Times](#). Jan 7, 2022.
2. What is 'Flurona' and What Are the Symptoms? Chicago-Area Doctor on What to Know. [NBC Chicago](#). Jan 7, 2022.
3. Coronavirus: UAE reports 2,627 Covid-19 cases, 930 recoveries, no deaths. [Khaleej Times](#). (Dubai) Jan 7, 2022.
4. Q&A: How can you differentiate cold, flu and COVID-19? [Daily Sabah](#). (Turkey) Jan 10, 2022.
5. Chemists have learned to find SARS-CoV-2 in the street air. [N + 1: научные статьи, новости, открытия](#). (Russia) Jan 14, 2022.
6. Want to keep Omicron away? Wear a better mask, like the N95. [Tampa Bay Times](#). Jan 25, 2022.
7. Which masks are safest? Schools around the country struggle to answer. [The Washington Post](#). Jan 28, 2022.
8. Omitting indoor air quality from COVID-19 guidance for shelters and long-term care homes is a grave mistake. [The Conversation](#). [Newsbreak](#). [Global Advisors](#). [Foreign Affairs New Zealand](#). [MedicalXpress](#). [Today UK News](#). Feb 20-21, 2022.
9. Coronavirus FAQ: I'm a one-way masker. What strategy will give me optimal protection? [NPR](#). Feb 25, 2022.
10. Doctors see increase in prolonged cold, flu symptoms. [KTSM](#). [Fox5 San Diego](#). April 5, 2022.
11. What do we know about "stealth omicron" so far? [Associated Press](#). [ABC News](#). [PBS](#). April 12, 2022.
12. Coronavirus FAQ: I'm a one-way masker. With mask mandates going away, is that helpful? [NPR](#). April 19, 2022.
13. Will 'one-way masking' be enough as mask mandates fall? [Advisory Board](#). April 20, 2022.
14. askST: Is the acute hepatitis outbreak linked to adenovirus infection? [The Straits Times](#). May 11, 2022.
15. **Live TV interview with WJLA's Dave Lucas**. Topic: COVID-19, Omicron. July 22, 2022.
16. D.C.-area health officials urge precautions as coronavirus cases rise. [The Washington Post](#). July 30, 2022.
17. How do the rates of SARS-CoV-2 shedding into exhaled breath aerosol differ between individuals infected by different variants? [The Medical News](#). Aug 3, 2022.
18. Synthetic mouse embryos with brains and hearts. Audio interview. [BBC News World Service](#). Science in Action. Aug 4, 2022.
19. Senate Holds All-Night 'Vote-a-Rama', With Democrats' Agenda at Stake. [The New York Times](#). Aug 7, 2022.
20. A Health Care Bill, Minus Covid. [The New York Times](#). Aug 8, 2022.
21. How much virus does a person with COVID exhale? New research has answers. [Nature](#). Aug 17, 2022.
22. Are outdoor events still safe in the age of BA.5? [Public Good News](#). Aug 17, 2022.
23. Los expertos advierten: "Se debería presionar a los gobiernos para mejorar la calidad del aire en los interiores". [NIUS](#). Aug 19, 2022.
24. ¿Cuántos virus exhala una persona con COVID? [Investigacion Y Ciencia: EPIDEMIOLOGÍA](#). Sept 1, 2022.
25. Alpha, Delta, and Omicron patients may exhale more viruses. [CIDRAP](#) News Scan for Oct 26, 2022.

2021

1. Why the Flu Season Basically Disappeared This Year. [Healthline](#). Feb 12, 2021.
- 2–3. Adenovirus type 4 infections more common than thought, large-scale systematic review finds. [Duke-NUS Medical School](#). [MedicalXpress](#). Mar 10, 2021.
4. Double-masking not necessary, proper mask usage more important: Singapore experts. [Yahoo News](#). Mar 13, 2021.
5. **2020 Top 50 SARS-CoV-2 Articles**. [Nature Communications](#). March 12, 2021.
6. The Next Trick: Pulling Coronavirus Out of Thin Air. [The New York Times](#). Mar 24, 2021,
7. El siguiente paso en la batalla contra el coronavirus: un sistema que lo detecta y lo atrapa en el aire. [Infobae](#). Mar 25, 2021.

8. Live [CNA938 Radio interview](#) with Daniel Martin for Health Matters. Increasing global HAdV-4 infections. Mar 25, 2021.
9. Could an air sampler help detect airborne coronavirus? [Times of India](#). April 9, 2021.
10. Adenovirus type 4 infections tripled among civilians in last decade. [Healio](#). April 19, 2021.
- 11. Dr Kristen Coleman on COVID-19 being "airborne". Live [TV interview](#) on Asia Tonight.** [Channel News Asia](#). May 17, 2021.
12. News Scan for Aug 09, 2021. [CIDRAP](#). Aug 9, 2021.
13. We're doing COVID-19 wrong. We should mandate vaccines for teachers, not masks for kids. [USA Today](#). [Newsbreak](#). [Yahoo!](#). Aug 10, 2021.
14. NUS: SARS-COV-2 particles can be aerosolised when talking and singing. [Bernama](#). (Malaysia). [The Organization of Asia-Pacific News Agencies](#). (UNESCO) Aug 11, 2021.
15. Covid-19: news on the mode of transmission of the coronavirus. [Futura-Sciences](#). (France) Aug 11, 2021.
16. Singapore studies reveal spread of COVID-19 during talking. [Technology Times](#). (Pakistan) Aug 11, 2021.
17. National University of Singapore finds SARS-CoV-2 particles can be aerosolised when talking, singing. [Borneo Post](#). (Malaysia) Aug 11, 2021.
18. Breathing, talking and singing can spread Covid-19: NUS study. [AsiaOne](#). Aug 11, 2021.
19. Fine aerosols emitted during talking and singing may play a crucial role in COVID-19 transmission: Singapore study. [Science Daily](#). [MedicalXpress](#). [NUS News](#). (Singapore) [Mirage News](#). (Australia) [AlphaGalileo](#). (UK) Aug 11, 2021.
20. Not just coughing and sneezing - talking and singing can also spread Covid-19: NUS study. [The Straits Times](#). (Singapore) Aug 11, 2021.
21. SARS-CoV-2 particles float in the air while talking, singing. [Harian Metro](#). (Malaysia) Aug 11, 2021.
22. Fine aerosols generated during talking, singing may play a major role in SARS-CoV-2 transmission. [The Medical News](#). Aug 11, 2021.
23. Covid-19 patients can spread virus by breathing: Study. [The Straits Times](#). (Singapore) Aug 12, 2021.
24. Covid Patients Release More Viral Particles During Talking, Singing. [Dailyhunt](#). Aug 12, 2021
25. Talking and singing can also spread Covid-19: NUS study. [MSN](#). Aug 12, 2021.
26. Fine Aerosols Emitted Plays Vital Role in COVID Transmission. [Medindia](#). (India) Aug 13, 2021.
27. COVID Booster: Heart failure theories, optimising lockdowns, and breathing into a cone for 30 minutes. [COSMOS magazine](#). (Australia) Aug 13, 2021.
28. Researchers Continue to Zero in on How COVID-19 Spreads. [Maryland Today](#). Aug 13, 2021.
29. Donald Milton on aerosol transmission of COVID. [Salon](#). [Newsbreak](#). Aug 15, 2021.
30. New studies hint that the coronavirus may be evolving to become more airborne. [Science News](#). Aug 17, 2021.
31. Corona virus is getting more airborne. [Technology Times](#). (Pakistan) Aug 18, 2021.
32. FINE AEROSOLS FROM TALKING AND SINGING CONTAIN MORE VIRAL PARTICLES. [Futurity](#). Aug 23, 2021.
33. These are the particles that contain the highest concentration of COVID-19. [World Economic Forum](#). Aug 25, 2021.
34. Viral Load of SARS-CoV-2 in Respiratory Aerosols Emitted by COVID-19 Patients while Breathing, Talking, and Singing. [Duke Today](#). Aug 29, 2021.
35. An air purifier can help protect you from coronavirus and smoke pollution. How to pick and use one. [The Washington Post](#). Aug 31, 2021.
36. COVID-19 virus is evolving to get better at becoming airborne, new study shows. [Science Daily](#). Sept 16, 2021.
37. It's Questionable: Cloth Mask's Effectiveness Against Covid-19. [Newsbreak](#). Sept 19, 2021.
38. The Importance of Indoor Air Quality and the Best Way to Care for it. [PR Newswire](#). [Yahoo!](#). [Benzinga](#). [Yahoo! Finance](#)

[USA. WFMZ-TV 69. Crwe World. Jotup.](#) Sept 23, 2021.

39. People Are Getting Sick from Coronavirus Spreading Through the Air – and That's a Big Challenge for Reopening. [Haaretz.](#) (Israel) Oct 26, 2021.

40. Nuevos estudios afirman que el coronavirus evoluciona para transmitirse en mayor parte por el aire. [infobae.](#) Oct 30, 2021.

41. Los aerosoles pueden permanecer hasta 10 veces más tiempo en las esquinas de una habitación. [infobae.](#) Nov 8, 2021.

42. News story from Big News Network on Friday 17 December 2021. *Big News Network.* (UAE) Dec 17, 2021.

43. Covid: así se mueve la enfermedad por el aire. [Latercera.](#) Dec 17, 2021.

44. COVID: how the disease moves through the air. [The Conversation.](#) [Global Advisors.](#) [Foreign Affairs New Zealand.](#) [Yahoo!.](#) [Devdiscourse.](#) (UK) [The Hindu Business Line.](#) [Latestly.](#) [The Week.](#) [The Hindustan Times.](#) [Tribune India.](#) [The Deccan Herald.](#) (India) [MedicalXpress.](#) [iflscience.](#) Dec 17-21, 2021.

45. Cosmos' top 10 science images of 2021. [COSMOS magazine.](#) Dec 24, 2021.

46. A Christmas present from WHO – the truth about how Covid is spread – and what to do about it. [Daily Maverick.](#) (South Africa) Dec 29, 2021.

46 – 218. <https://oxfordjournals.altmetric.com/details/113470508/news/page:1>

2020

1. Corona transmission through the air we breathe: Are two meters really sufficient? [Der Tagesspiegel.](#) (Germany) Apr 15, 2020.

2. Coronavirus is particularly contagious before it breaks out. [Heute.](#) (Germany) April 19, 2020.

3. Covid-19 ist vor Ausbruch besonders ansteckend. [L'essentiel.](#) (Luxembourg) April 19, 2020.

4. Covid-19 is particularly contagious before the outbreak. [20 Minuten.](#) (Switzerland) Apr 19, 2020.

5. Could a normal cold protect against a severe Covid 19 course? [Der Tagesspiegel.](#) (Germany) April 27, 2020.

6–13. Widely Used Surgical Masks Are Putting Health Care Workers at Serious Risk. [Scientific American.](#) [The Medical News.](#) [Health Leaders Media.](#) [The Daily Times.](#) [St. Louis Post-Dispatch.](#) [Lancaster Online.](#) [Reading Eagle.](#) [Kaiser Health News.](#) April 28, 2020.

14. Massive use of surgical masks puts health workers at serious risk. [Kaiser Health News.](#) April 28, 2020.

15. Experts say widely-used surgical masks are putting health care workers at serious risk. [The Raw Story.](#) April 28, 2020.

16–33. Widely used surgical masks are putting health care workers at serious risk. [Miami Herald.](#) [Raleigh News & Observer.](#) [The Fresno Bee.](#) [Ledger Enquirer.](#) [Lexington Herald Leader.](#) [Belleville News-Democrat.](#) [Myrtle Beach.](#) [The Island Packet.](#) [Bradenton Herald.](#) [The Bellingham Herald.](#) [Herald Sun.](#) [Star-Telegram.](#) [The Tribune.](#) [The Sacramento Bee.](#) [Tri-City Herald.](#) [union-bulletin.](#) [Finger Lakes Times.](#) [Herald Mail Media.](#) April 29, 2020.

34. Uso masivo de máscaras quirúrgicas pone en grave riesgo a los trabajadores de salud. [MSN.](#) April 29, 2020.

35. Widely used surgical masks are putting people at serious risk. [Considerable.](#) April 30, 2020.

36. One Health Team Researcher Publishes Report on Airborne Influenza A Virus Exposure in a United States Elementary School. [Duke One Health News.](#) April 29, 2020.

37. Why we should all be wearing face masks. [BBC News.](#) May 6, 2020.

38. Why we should all be wearing face masks. [Business & Financial Times.](#) May 7, 2020.

39. Disinfectant tunnels don't stop Covid-19 spread but may harm people going through: Experts. [The Straits Times.](#) May 20, 2020.

40. Disinfection tunnels ineffective, may be harmful: Experts. [The New Paper.](#) May 21, 2020.

41. Experts caution against use of disinfection tunnels. [The Straits Times.](#) May 21, 2020.

42. Coronavirus: Experts caution against use of disinfection tunnels. [The Straits Times.](#) May 21, 2020.

43. Experts: The Disinfectant Room Does Not Prevent Coronavirus Distribution. [Nusantaraty](#). (Malaysia) May 22, 2020.
44. Corona infection risk: which places are particularly dangerous? [MSN](#). (Germany) May 22, 2020.
45. Coronavirus: Automated escalator handrail cleaner on trial at KK Hospital. [The Straits Times](#). May 25, 2020.
46. Automated escalator handrail cleaning device installed at KKH. [The New Paper](#). May 26, 2020.
47. KKH trying out automated escalator handrail cleaning device. [The Straits Times](#). May 26, 2020.
48. Duke One Health Team Members Publish Research on the Viral Etiology of Severe Acute Respiratory Illness in Northern Vietnam. [Duke One Health News](#). May 28, 2020.
- 49 – 73. People are getting sick from coronavirus spreading through the air – and that’s a big challenge for reopening. [The Conversation](#). [Shelton Herald](#). [The Darien Times](#). [Lincoln Journal Star](#). [Arizona Daily Star](#). [Bozeman Daily Chronicle](#). [GoDanRiver.com](#). [Fredericksburg](#). [The News & Advance](#). [The News Herald \(United States\)](#). [oanow.com](#). [gokagit.com](#). [Bristol Herald Courier](#). [The North Platte Telegraph](#). [Idaho Press](#). [Star-Herald](#). [Omaha World-Herald](#). [Greensboro](#). [The Roanoke Times](#). [Winston-Salem Journal](#). [Reading Eagle](#). [Dispatch Argus](#). [The Raw Story](#). [Foreign Affairs New Zealand](#). [MedicalXpress](#). June 16, 2020.
74. Airborne ability of coronavirus is a challenge to reopening. [Kitsap Sun](#). June 16, 2020.
75. Coronavirus is infecting people through the air — making reopening much harder. [Alternet](#). June 16, 2020.
76. COVID-19 by Air: What You Need to Know. [EDGE Media Network](#). June 16, 2020.
- 77 – 78. Coronavirus Drama: How Common is Airborne Spread of the Virus? [The National Interest](#). [Yahoo! News](#). June 17, 2020.
79. Covid-19 spreads through the air. That’s a big challenge for reopening. [EarthSky](#). June 19, 2020.
80. People are getting sick from coronavirus spreading through the air—and that’s a big challenge for reopening. [infosurhoy](#). June 19, 2020.
81. COVID-19 patients can 'shed high load of virus' in first week, irrespective of symptoms: Singapore study. [Channel News Asia](#). June 19, 2020.
82. Contaminating ability of Covid-19 patients highest in first week of illness, negligible after second week: NCID. [The Straits Times](#). June 19, 2020.
83. Contamination by Covid-19 patients peaks during first week of illness: Study. [The Straits Times](#). June 20, 2020.
84. Covid-19 patients most infectious in 1st week of illness, but odds of transmission significantly reduced after 2nd week: S’pore study. [TODAY](#). June 20, 2020.
85. COVID-19 patients can ‘shed high load of virus’ in first week, irrespective of symptoms: Singapore study. [Borneo Bulletin](#). June 20, 2020.
86. Singapore study shows covid-19 patients most infectious in first week of illness, but odds of transmission significantly reduced after second week. [Malaymail](#). June 20, 2020.
87. Contamination by patients peaks during first week of illness: Study. [The Straits Times](#). June 20, 2020.
88. Covid-19 Patients Most Infectious In 1st Week of Illness, But Odds of Transmission Significantly Reduced After 2nd Week: S’pore Study. [Bru Direct](#). June 22, 2020.
89. The biggest challenge standing in the way of reopening. [Considerable](#). June 22, 2020.
90. Why companies as diverse as eBay, IKEA and Mars are increasingly supporting US clean energy policies. [The Bismarck Tribune](#). June 30, 2020.
91. Evidence for Spread of SARS-CoV-2 via Aerosol. [Duke One Health News](#). June 30, 2020.
92. Do I Really Need to Wear A Mask Outdoors? Here’s the Science. [Forbes](#). June 30, 2020.
93. Stealth infections. From the Black Death to polio, the most dangerous pathogens have moved silently, transmitted by

apparently healthy people. Aeon. June 30, 2020.

94. COVID-19 SPECIAL: 239 scientists flag risk of airborne transmission of coronavirus. The Straits Times. July 6, 2020.

95. Airborne transmission of virus: Local experts say no cause for panic. The New Paper. July 6, 2020.

96. Coronavirus pandemic: 239 scientists flag risk of airborne virus. The Straits Times. July 6, 2020.

97 – 101. WHO says the coronavirus isn't airborne, but 239 scientists disagree. Either way, your precautions should remain the same. Business Insider. Business Insider Australia. Business Insider Singapore. Business Insider Nederland. Pressfrom. July 7, 2020.

102. La covid-19 també es pot transmetre a través de l'aire? Vilaweb. (Spain) July 7, 2020.

103. Researchers call for aerosols to be recognized as a source of infection. Der Standard. (Austria) July 9, 2020.

104. Live CNA938 morning news radio interview with Arnold & Yasmin. July 9, 2020.

105. Is COVID-19 a seasonal disease? The Conversation. October 15, 2020.

106 – 107. ¿Es la COVID-19 una enfermedad estacional? Cadena SER. La Nueva España. October 16, 2020.

108. Ferret Study Reinforces Role of Aerosols in SARS-CoV-2 Spread. The Scientist Magazine. October 28, 2020.

2019

1. Addressing airborne biological threats with bioaerosol sampling. Asia-Pacific Biotech News (APBN). 2019.

2. Potential Role of Bioaerosol Sampling in Disease Surveillance. Medhealth-eportal. (European Union) Jan 3, 2019.

3. Planes, Trains and Viruses: How Transit Air Might Predict the Next Outbreak. Duke Global Health Institute. Feb 18, 2019

4. Planes, trains and viruses: How transit air might predict the next outbreak. Medical Xpress. Feb 20, 2019.

5. Planes, Trains and Viruses: How Transit Air Might Predict the Next Outbreak. Science & Technology Research News. Mar 5, 2019

6. Duke-NUS One Health Team Monitors Airborne Respiratory Viruses in a General Pediatric Ward in Singapore. Duke One Health News. May 30, 2019.

7. Duke University Welcomes Scholars from Ten Nations to the One Health Training Program. Duke One Health News. May 30, 2019.

8. Duke-NUS Researchers Find Four New Strains of Adenovirus. Duke Today. Oct 23, 2019.

9. Duke-NUS researchers uncover four new strains of adenovirus, linked to respiratory diseases, in Singapore. Duke-NUS Medical School. Oct 24, 2019.

10. Four new strains of human adenovirus. Science Daily. Oct 24, 2019.

11. Researchers discover 4 new strains of human adenovirus. ScienMag. Oct 24, 2019.

12. Scientists find new strains of human adenovirus in Singapore. Medical News. Oct 24, 2019.

13. Researchers discover 4 new strains of human adenovirus. Science Codex. Oct 24, 2019.

14. Researchers find four new strains of adenovirus. Medical Xpress. Oct 24, 2019.

15. Duke-NUS researchers uncover four new strains of adenovirus. Asia Research News. Oct 24, 2019.

16. Researchers discover 4 new strains of human adenovirus. EurekAlert!. Oct 24, 2019.

17. Duke-NUS researchers uncover four new strains of adenovirus, linked to respiratory diseases, in Singapore. Singapore National Eye Centre. Oct 24, 2019.

18. New strains of Adenovirus found in Singapore. International Business Times. Oct 25, 2019

19. Four new strains of human adenovirus. Pharma News. Oct 25, 2019.

20. Singaporean Researchers Discover 4 New Strains of Adenovirus. Thailand Medical News. Oct 25, 2019.

21. Duke-NUS uncovers 4 new AdV strains linked to respiratory diseases. BioSpectrum Asia. Oct 25, 2019.

22. Researchers find four new strains of adenovirus. *Hakim.pro: Diseases*. (Azerbaijan) Oct 25, 2019.
23. DUKE-NUS Scientists Find Four New Strains of Adenovirus. *BioTecNika*. Oct 25, 2019.
24. Researchers find four new strains of adenovirus. *M3 India*. Oct 26, 2019.
25. 导致新马民众感染严重呼吸道疾病 本地研究员寻获腺病毒四种新毒株. *Zaobao SG*. Oct 28, 2019.
26. Local researchers discover 4 new strains causing human adenovirus infections in Singapore and Malaysia. *NUS News*. Oct 28, 2019.
27. 当地研究人员发现了四种新的腺病毒株. *Lianhe Zaobao*. Oct 28, 2019.
28. Duke researchers have discovered four new strains of adenovirus. *Duke Global Health Institute Insider*. Oct 29, 2019.
29. Duke One Health Team Members Publish Report on Increase in Severe Adenovirus Infections in Singapore. *Duke One Health News*. Oct 30, 2019.
30. Four New Strains of Adenoviruses Which Causes Serious Respiratory Diseases Discovered. *SingHealth Research E-bulletin*. Nov 5, 2019.
31. Duke-NUS researchers uncover four new strains of adenovirus, linked to respiratory diseases, in Singapore. *SingHealth*. Nov 20, 2019.
32. Adenovirus Infection Strikes College Campuses. *Infection Control Today*. Dec 9, 2019.

2018

1. Prevalence of Respiratory Polyomaviruses among Pediatric Patients with Respiratory Symptoms in Singapore. *Duke One Health News*. Oct 29, 2018.
2. Air samples collected on MRT rides to detect and monitor viruses: Duke-NUS study. *The Straits Times*. Dec 4, 2018.
3. 杜克-国大医学院研究：东西和东北线列车存呼吸道病毒. *Channel 8 News*. Dec 4, 2018.
4. Live studio interview on Singapore Tonight. *Channel NewsAsia*. Dec 4, 2018. (11mins55s into the clip)
5. 本地研究非侵入性仪器探测病毒防瘟疫. *Lianhe Wanbao*. Dec 4, 2018.
6. 针对拥挤公共空间杜克-国大研发新病毒采样仪器. *Shin Min Daily News*. Dec 4, 2018.
7. Detecting viruses on MRT with portable device. *NUS News*. Dec 4, 2018
8. Duke-NUS study highlights potential role of bioaerosol sampling to address airborne biological threats. *Duke-NUS Medical School*. Dec 4, 2018.
9. Potential role of bioaerosol sampling in disease surveillance. *Science Daily*. Dec 5
10. Detecting viruses on MRT with portable device. *The Straits Times*. Dec 5, 2018.
11. Air samples collected on MRT rides to detect and monitor viruses: Duke-NUS study. *AsiaOne*. Dec 5
12. Duke-NUS highlights potential role of bioaerosol sampling in disease surveillance. *EurekAlert!*. Dec 5
13. All pumped up to detect airborne viruses. *The New Paper*. Dec 5, 2018.
14. Study highlights potential role of bioaerosol sampling to address airborne biological threats. *MedicalXpress*. Dec 5, 2018.
15. 研究员：未来或可用空气抽样法提早测出重大传染病. *Lianhe Zaobao*. Dec 5, 2018.
16. Scientists highlight potential role of bioaerosol sampling in disease surveillance. *Infection Control Today*. Dec 5
17. Potential role of bioaerosol sampling in disease surveillance. *(e) Science News*. Dec 5, 2018.
18. Detecting viruses on MRT with portable device. *Singapore General Hospital*. Dec 5, 2018.
19. Detecting Viruses on MRT with Portable Device. *KK Women's and Children's Hospital*. Dec 5, 2018.
20. Detecting Viruses on MRT with Portable Device. *Sengkang General Hospital*. Dec 5, 2018.

21. Detecting Viruses on MRT with Portable Device. *SingHealth*. Dec 5, 2018.
22. Detecting Viruses on MRT with Portable Device. *National Neuroscience Institute*. Dec 5, 2018.
23. *Tamil Murasu*. Dec 5, 2018.
24. Duke-NUS researchers highlight possible role of bioaerosol sampling in pandemic surveillance. *Medical News*. Dec 6, 2018.
25. New tech for disease surveillance. *International Travel & Health Insurance Journal (ITIJ)*. Dec 6, 2018.
26. Duke-NUS highlights potential role of bioaerosol sampling to address airborne biological threats. *BioSpectrum Asia*. Dec 11, 2018.
27. Potential Role of Bioaerosol Sampling in Disease Surveillance. *Pharma Horizon*. Dec 12, 2018.
28. How Clean Is the Air on Your MRT Train? *Asian Scientist Magazine*. Dec 14, 2018.
29. Bioaerosol Sampling for Respiratory Viruses in Singapore's Mass Rapid Transit Network. *Duke One Health News*. Dec 29, 2018.
30. Refining Surveillance for Zoonotic Respiratory Viruses in Sarawak, Malaysia (2018-2019). *BassConnections*.