SUPPLEMENTARY MATERIAL

Supplementary Table 1. Selection criteria for PECO 1 and PECO 2 questions

Research question	Search definition	Inclusion criteria	Exclusion criteria
PECO 1			
Do climate change and air quality have a direct and significant impact on the incidence, prevalence and/or severity of allergic diseases? Do climate change and air quality modify the expression of the proteins of different allergens, turning them into more aggressive allergens? What is the impact of climate change and air quality specifically on conjunctivitis, asthma, rhinitis, food allergy and atopic dermatitis?	((climate change[Title/Abstract]) OR (greenhouse gas*[Title/Abstract])) AND ((airway diseases [Title/Abstract] OR airway pathology [Title/Abstract] OR Respiratory diseases[Title/Abstract] OR Respiratory pathology[Title/Abstract] OR allergic diseases [Title/Abstract] OR asthma[Title/Abstract] OR conjunctivitis[Title/Abstract] OR rhinitis[Title/Abstract] OR "food allergy"[Title/Abstract] OR "Atopic dermatitis"[Title/Abstract] OR eczema)[Title/Abstract])) AND ((inciden* OR prevalen* OR sever* OR epidemiol* OR allergenicity) OR (“house dust mites” OR pollen OR alternaria)) ("2016/01/01"[Date - Publication] : "3000"[Date - Publication])	• Publications providing quantitative data on changes in the incidence, prevalence and/or severity of allergic diseases as a consequence of climate change and air quality. • Publications analysing if climate change and air quality have an impact on the expression of proteins in the genes of different allergens, which intensifies their action and makes them more aggressive. • tudies published within the last 5 years (2016-2021). • Publications in English or Spanish.	• Publications that did not provide quantitative data on changes in the incidence, prevalence and/or severity of allergic diseases attributable to climate change and/or air quality. • Publications that provide data on changes in incidence, prevalence and/or severity of allergic diseases over time, but which are not directly attributable to climate change and/or air quality. • Publications that focus their data on allergic pathologies differing from conjunctivitis, asthma, rhinitis, food allergy and/or atopic dermatitis.
PECO 2			
Does air quality have a direct impact on the inflammatory immune response? Does this response depend on factors inherent to the subject (genetic and/or epigenetic factors)? Is this response dependent on external factors (e.g. exposure time)?	((air quality [Title/Abstract])) AND ((airway diseases [Title/Abstract] OR airway pathology [Title/Abstract] OR Respiratory diseases [Title/Abstract] OR Respiratory pathology[Title/Abstract] OR allergic diseases [Title/Abstract] OR asthma[Title/Abstract] OR conjunctivitis[Title/Abstract] OR rhinitis[Title/Abstract] OR "food allergy"[Title/Abstract] OR "Atopic dermatitis"[Title/Abstract] OR eczema)[Title/Abstract])) AND ((physiopatho* OR immune* OR response OR inflamma* OR eosinophils OR lymphocytes OR neutrophils OR macrophages OR dendritic cells OR cytokines OR interleukin OR TNF) OR (genetic OR epigenetic OR exposure time)) AND (("2016/01/01"[Date - Publication] : "3000"[Date - Publication]))	• Publications that providing quantitative data on the change in the immune response attributable to air quality and, in particular, quantitative data on the change in the values of the main inflammatory mediators involved: eosinophils, lymphocytes, neutrophils, macrophages, dendritic cells, IL, TNF, etc.). • Studies published within the last 5 years (2016-2021). • Publications in English or Spanish.	• Publications that did not provide quantitative data about how the main inflammatory mediators are involved in allergic pathology as a consequence of air quality. • Publications that provide data on changes in the inflammatory immune response over time but which are not directly attributable to air quality.

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Supplementary Table 2. List of included publications after full-text reading for PECO 1 and PECO 2 questions

PECO 1

Citation	MMAT	Study type
Choi YJ, Lee KS, Oh JW. The Impact of Climate Change on Pollen Season and Allergic Sensitization to Pollens. Immunol Allergy Clin North Am. 2021 Feb;41(1):97-109. doi: 10.1016/j.iac.2020.09.004. Epub 2020 Nov 5. PMID: 33228876.(59)	80	Quantitative descriptive. Review
Chen NT, Chen MJ, Wu CD, Guo YL. Emergency room visits for childhood atopic dermatitis are associated with floods? Sci Total Environ. 2021 Jun 15;773:145435. doi: 10.1016/j.scitotenv.2021.145435. Epub 2021 Jan 28. PMID: 33940726. (27)	80	Quantitative non-randomized. case-crossover study
Deng X, Thurston G, Zhang W, Ryan I, Jiang C, Khwaja H, Romeiko X, Marks T, Ye B, Qu Y, Lin S. Application of data science methods to identify school and home risk factors for asthma and allergy-related symptoms among children in New York. Sci Total Environ. 2021 May 20;770:144746. doi: 10.1016/j.scitotenv.2020.144746. Epub 2021 Jan 23. PMID: 33736384. (69)	80	Quantitative non-randomized. Cross-sectional study
Nassikas NJ, Spangler K, Wellenius GA. Asthma Exacerbations Attributable to Ozone Air Pollution in New England. R I Med J (2013). 2021 Nov 1;104(9):20-23. PMID: 34705902 (70)	60	Quantitative non-randomized. Epidemiological study
Eloge TJ, Nadine O, Solange D, Telefo PB, Annesi-Maesano I. Clinical Manifestations and Changes of Haematological Markers among Active People Living in Polluted City: The Case of Douala, Cameroon. Int J Environ Res Public Health. 2021 Jan 14;18(2):665. doi: 10.3390/ijerph18020665. PMID: 33466768; PMCID: PMC7830361. (33)	60	Quantitative non-randomized. Cross-sectional study
Bao N, Lu Y, Huang K, Gao X, Gui SY, Hu CY, Jiang ZX. Association between short-term exposure to ambient nitrogen dioxide and the risk of conjunctivitis in Hefei, China: A time-series analysis. Environ Res. 2021 Apr;195:110807. doi: 10.1016/j.envres.2021.110807. Epub 2021 Jan 28. PMID: 33515578. (30)	60	Quantitative non-randomized. Epidemiological study
Fadadu RP, Grimes B, Jewell NP, Vargo J, Young AT, Abuabara K, Balmes JR, Wei ML. Association of Wildfire Air Pollution and Health Care Use for Atopic Dermatitis and Itch. JAMA Dermatol. 2021 Jun 1;157(6):658-666. doi: 10.1001/jamadermatol.2021.0179. PMID: 33881450; PMCID: PMC8060890.(34)	60	Quantitative non-randomized. Cross-sectional time-series study
Yang H, Yan C, Li M, Zhao L, Long Z, Fan Y, Zhang Z, Chen R, Huang Y, Lu C, Zhang J, Tang J, Liu H, Liu M, Guo W, Yang L, Zhang X. Short term effects of air pollutants on hospital admissions for respiratory diseases among children: A multi-city time-series study in China. Int J Hyg Environ Health. 2021 Jan;231:113638. doi: 10.1016/j.ijheh.2020.113638. Epub 2020 Oct 17. PMID: 33080524.(54)	40	Quantitative non-randomized. Meta-analysis
Stas M, Aerts R, Hendrickx M, Delcloo A, Dendoncker N, Dujardin S, Linard C, Nawrot T, Van Nieuwenhuyse A, Aerts JM, Van Orshoven J, Somers B. Exposure to green space and pollen allergy symptom severity: A case-	0	Quantitative non-randomized. Time-

crossover study in Belgium. Sci Total Environ. 2021 Aug 10;781:146682. doi: 10.1016/j.scitotenv.2021.146682. Epub 2021 Mar 22. PMID: 33812114. (51)		stratified case-crossover study
Pan R, Wang X, Yi W, Wei Q, Gao J, Xu Z, Duan J, He Y, Tang C, Liu X, Zhou Y, Son S, Ji Y, Zou Y, Su H. Interactions between climate factors and air quality index for improved childhood asthma self-management. Sci Total Environ. 2020 Jun 25;723:137804. doi: 10.1016/j.scitotenv.2020.137804. Epub 2020 Mar 7. PMID: 32213400. (45)	100	Quantitative non-randomized. Epidemiological study
Mazdiyasni O, AghaKouchak A. Natural Disasters Are Prejudiced Against Disadvantaged and Vulnerable Populations: The Lack of Publicly Available Health-Related Data Hinders Research at the Cusp of the Global Climate Crisis. Geohealth. 2020 Jan 14;4(1):e2019GH000219. doi: 10.1029/2019GH000219. PMID: 34585033; PMCID: PMC8456234. (58)	80	Quantitative descriptive. Epidemiological study
Patella V, Florio G, Palmieri M, Bousquet J, Tonacci A, Giuliano A, Gangemi S. Atopic dermatitis severity during exposure to air pollutants and weather changes with an Artificial Neural Network (ANN) analysis. Pediatr Allergy Immunol. 2020 Nov;31(8):938-945. doi: 10.1111/pai.13314. Epub 2020 Aug 20. PMID: 32585042. (46)	80	Quantitative non-randomized. Observational study
Todkill D, de Jesus Colon Gonzalez F, Morbey R, Charlett A, Hajat S, Kovats S, Osborne NJ, McInnes R, Vardoulakis S, Exley K, Edeghere O, Smith G, Elliot AJ. Environmental factors associated with general practitioner consultations for allergic rhinitis in London, England: a retrospective time series analysis. BMJ Open. 2020 Dec 4;10(12):e036724. doi: 10.1136/bmjopen-2019-036724. PMID: 33277274; PMCID: PMC7722376.(71)	80	Quantitative non-randomized. Observational study
Qiu H, Bai CH, Chuang KJ, Fan YC, Chang TP, Yim SH, Ho KF. Association of ambient non-methane hydrocarbons exposure with respiratory hospitalizations: A time series study in Taipei, Taiwan. Sci Total Environ. 2020 Aug 10;729:139010. doi: 10.1016/j.scitotenv.2020.139010. Epub 2020 Apr 27. PMID: 32361457. (47)	80	Quantitative non-randomized. Epidemiological study
Loftus C, Afsharinejad Z, Sampson P, Vedal S, Torres E, Arias G, Tchong-French M, Karr C. Estimated time-varying exposures to air emissions from animal feeding operations and childhood asthma. Int J Hyg Environ Health. 2020 Jan;223(1):187-198. doi: 10.1016/j.ijheh.2019.09.003. Epub 2019 Sep 19. PMID: 31543304; PMCID: PMC7020853. (42)	60	Quantitative non-randomized. Observational study
van Zoest V, Hoek G, Osei F, Stein A. Bayesian analysis of the short-term association of NO2 exposure with local burden of asthmatic symptoms in children. Sci Total Environ. 2020 Jun 10;720:137544. doi: 10.1016/j.scitotenv.2020.137544. Epub 2020 Feb 24. PMID: 32145626. (53)	60	Quantitative non-randomized. Epidemiological study
Figgs LW. Emergency department asthma diagnosis risk associated with the 2012 heat wave and drought in Douglas County NE, USA. Heart Lung. 2019 May-Jun;48(3):250-257. doi: 10.1016/j.hrtlng.2018.12.005. Epub 2019 Jan 24. PMID: 30686617. (28)	80	Quantitative non-randomized. Observational study
Noh SR, Kim JS, Kim EH, Jeon BH, Kim JH, Kim YM, Kim J, Han Y, Ahn K, Cheong HK. Spectrum of susceptibility to air quality and weather in individual children	80	Quantitative non-randomized. Observational study

with atopic dermatitis. Pediatr Allergy Immunol. 2019 Mar;30(2):179-187. doi: 10.1111/pai.13005. Epub 2018 Dec 27. PMID: 30428138 (44)		
Neumann JE, Anenberg SC, Weinberger KR, Amend M, Gulati S, Crimmins A, Roman H, Fann N, Kinney PL. Estimates of Present and Future Asthma Emergency Department Visits Associated With Exposure to Oak, Birch, and Grass Pollen in the United States. Geohealth. 2019;3(1):11-27. doi: 10.1029/2018GH000153. PMID: 31106285; PMCID: PMC6516486.(60)	60	Quantitative descriptive. Epidemiological study
Achakulwisut P, Anenberg SC, Neumann JE, Penn SL, Weiss N, Crimmins A, Fann N, Martinich J, Roman H, Mickley LJ. Effects of Increasing Aridity on Ambient Dust and Public Health in the U.S. Southwest Under Climate Change. Geohealth. 2019;3(5):127-144. doi: 10.1029/2019GH000187. PMID: 31276080; PMCID: PMC6605068. (25)	60	Quantitative descriptive. Epidemiological study
Pan R, Gao J, Wang X, Bai L, Wei Q, Yi W, Xu Z, Duan J, Cheng Q, Zhang Y, Su H. Impacts of exposure to humidex on the risk of childhood asthma hospitalizations in Hefei, China: Effect modification by gender and age. Sci Total Environ. 2019 Nov 15;691:296-305. doi: 10.1016/j.scitotenv.2019.07.026. Epub 2019 Jul 3. PMID: 31323575. (29)	60	Quantitative non-randomized. Observational study
Kowalska M, Skrzypek M, Kowalski M, Cyrys J, Ewa N, Czech E. The Relationship between Daily Concentration of Fine Particulate Matter in Ambient Air and Exacerbation of Respiratory Diseases in Silesian Agglomeration, Poland. Int J Environ Res Public Health. 2019 Mar 29;16(7):1131. doi: 10.3390/ijerph16071131. PMID: 30934830; PMCID: PMC6479870. (40)	60	Quantitative non-randomized. Epidemiological study
Hussain S, Parker S, Edwards K, Finch J, Jeanjean A, Leigh R, Gonem S. Effects of indoor particulate matter exposure on daily asthma control. Ann Allergy Asthma Immunol. 2019 Oct;123(4):375-380.e3. doi: 10.1016/j.anai.2019.07.020. Epub 2019 Jul 26. PMID: 31351980.(72)	60	Quantitative non-randomized. Observational study
Timmerman T, de Brito JM, de Almeida NM, de Almeida FM, Arantes-Costa FM, Guimaraes ET, Lichtenfels AJFC, Rivero DHRF, de Oliveira RC, de Lacerda JPA, Moraes JM, Pimental DA, Saraiva-Romanholo BM, Saldiva PHN, Vieira RP, Mauad T. Inflammatory and functional responses after (bio)diesel exhaust exposure in allergic sensitized mice. A comparison between diesel and biodiesel. Environ Pollut. 2019 Oct;253:667-679. doi: 10.1016/j.envpol.2019.06.085. Epub 2019 Jul 5. PMID: 31330358 (73)	60	Quantitative randomized controlled. Observational study
Alotaibi R, Bechle M, Marshall JD, Ramani T, Zietsman J, Nieuwenhuijsen MJ, Khreis H. Traffic related air pollution and the burden of childhood asthma in the contiguous United States in 2000 and 2010. Environ Int. 2019 Jun;127:858-867. doi: 10.1016/j.envint.2019.03.041. Epub 2019 Apr 3. PMID: 30954275.(55)	40	Quantitative non-randomized. Epidemiological study
Castner J, Guo L, Yin Y. Ambient air pollution and emergency department visits for asthma in Erie County, New York 2007-2012. Int Arch Occup Environ Health. 2018 Feb;91(2):205-214. doi: 10.1007/s00420-017-1270-7. Epub 2017 Oct 17. PMID: 29043427. (31)	80	Quantitative non-randomized. Observational study
Hutchinson JA, Vargo J, Milet M, French NHF, Billmire M, Johnson J, Hoshiko S. The San Diego 2007 wildfires and Medi-Cal emergency department presentations, inpatient hospitalizations, and outpatient visits: An	60	Quantitative non-randomized. Observational study

observational study of smoke exposure periods and a bidirectional case-crossover analysis. PLoS Med. 2018 Jul 10;15(7):e1002601. doi: 10.1371/journal.pmed.1002601. PMID: 29990362; PMCID: PMC6038982. (36)		
James KA, Strand M, Hamer MK, Cicutto L. Health Services Utilization in Asthma Exacerbations and PM10 Levels in Rural Colorado. Ann Am Thorac Soc. 2018 Aug;15(8):947-954. doi: 10.1513/AnnalsATS.201804-273OC. PMID: 29979621; PMCID: PMC6322037. (37)	40	Quantitative non-randomized. Observational study
Schultz AA, Schauer JJ, Malecki KM. Allergic disease associations with regional and localized estimates of air pollution. Environ Res. 2017 May;155:77-85. doi: 10.1016/j.envres.2017.01.039. Epub 2017 Feb 10. PMID: 28193558; PMCID: PMC6230689. (48)	80	Quantitative non-randomized. Observational study
Liu Y, Xie S, Yu Q, Huo X, Ming X, Wang J, Zhou Y, Peng Z, Zhang H, Cui X, Xiang H, Huang X, Zhou T, Chen W, Shi T. Short-term effects of ambient air pollution on pediatric outpatient visits for respiratory diseases in Yichang city, China. Environ Pollut. 2017 Aug;227:116-124. doi: 10.1016/j.envpol.2017.04.029. Epub 2017 Apr 28. PMID: 28458242. (41)	60	Quantitative non-randomized. Observational study
Ruggieri S, Drago G, Longo V, Colombo P, Balzan M, Bilocca D, Zammit C, Montefort S, Scaccianoce G, Cuttitta G, Viegi G, Cibella F; RESPIRA Project Group. Sensitization to dust mite defines different phenotypes of asthma: A multicenter study. Pediatr Allergy Immunol. 2017 Nov;28(7):675-682. doi: 10.1111/pai.12768. Epub 2017 Sep 7. PMID: 28783215. (61)	60	Quantitative non-randomized. Observational study
Siwarom S, Puranitee P, Plitponkarnpim A, Manuyakorn W, Sinitkul R, Arj-Ong Vallipakorn S. Association of indoor air quality and preschool children's respiratory symptoms. Asian Pac J Allergy Immunol. 2017 Sep;35(3):119-126. doi: 10.12932/AP0838. PMID: 27996287. (50)	40	Quantitative non-randomized. Observational study
Kim J, Kim H, Lim D, Lee YK, Kim JH. Effects of Indoor Air Pollutants on Atopic Dermatitis. Int J Environ Res Public Health. 2016 Dec 9;13(12):1220. doi: 10.3390/ijerph13121220. PMID: 27941696; PMCID: PMC5201361.(39)	80	Quantitative randomized controlled. Observational study
Tham EH, Lee AJ, Bever HV. Aeroallergen sensitization and allergic disease phenotypes in Asia. Asian Pac J Allergy Immunol. 2016 Sep;34(3):181-189. doi: 10.12932/AP0770. Erratum in: Asian Pac J Allergy Immunol. 2017 Mar;35(1):66. PMID: 27543739. (56)	60	Quantitative descriptive. Review
Mendes A, Papoila AL, Carreiro-Martins P, Bonassi S, Caires I, Palmeiro T, Aguiar L, Pereira C, Neves P, Mendes D, Botelho MA, Neuparth N, Teixeira JP. The impact of indoor air quality and contaminants on respiratory health of older people living in long-term care residences in Porto. Age Ageing. 2016 Jan;45(1):136-42. doi: 10.1093/ageing/afv157. Epub 2015 Nov 11. PMID: 26563886. (43)	60	Quantitative non-randomized. Cross-sectional study.

* Sorted by date (from most current to oldest)

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PECO 2

Citation	MMAT	Study type
Eloge TJ, Nadine O, Solange D, Telefo PB, Annesi-Maesano I. Clinical Manifestations and Changes of Haematological Markers among Active People Living in Polluted City: The Case of Douala, Cameroon. Int J Environ Res Public Health. 2021 Jan 14;18(2):665. doi: 10.3390/ijerph18020665. PMID: 33466768; PMCID: PMC7830361. (33)	60	Quantitative non-randomized. Cross-sectional study
Park KH, Sim DW, Lee SC, Moon S, Choe E, Shin H, Kim SR, Lee JH, Park HH, Huh D, Park JW. Effects of Air Purifiers on Patients with Allergic Rhinitis: a Multicenter, Randomized, Double-Blind, and Placebo-Controlled Study. Yonsei Med J. 2020 Aug;61(8):689-697. doi: 10.3349/ymj.2020.61.8.689. PMID: 32734732; PMCID: PMC7393300. (57)	80	Quantitative randomized controlled. Controlled trial
Dominguez-Rodriguez A, Rodríguez S, Baez-Ferrer N, Abreu-Gonzalez P, Abreu-Gonzalez J, Avanzas P, Carnero M, Moris C, López-Darias J, Hernández-Vaquero D. Impact of Saharan dust exposure on airway inflammation in patients with ischemic heart disease. Transl Res. 2020 Oct;224:16-25. doi: 10.1016/j.trsl.2020.05.011. Epub 2020 Jun 3. PMID: 32504824. (32)	40	Quantitative non-randomized. Epidemiological study
Shiraiwa M, Ueda K, Pozzer A, Lammel G, Kampf CJ, Fushimi A, Enami S, Arangio AM, Fröhlich-Nowoisky J, Fujitani Y, Furuyama A, Lakey PSJ, Lelieveld J, Lucas K, Morino Y, Pöschl U, Takahama S, Takami A, Tong H, Weber B, Yoshino A, Sato K. Aerosol Health Effects from Molecular to Global Scales. Environ Sci Technol. 2017 Dec 5;51(23):13545-13567. doi: 10.1021/acs.est.7b04417. Epub 2017 Nov 27. PMID: 29111690.(49)	60	Quantitative descriptive. Review
Siwarom S, Puranitee P, Plitponkarnpim A, Manuyakorn W, Sinitkul R, Arj-Ong Vallipakorn S. Association of indoor air quality and preschool children's respiratory symptoms. Asian Pac J Allergy Immunol. 2017 Sep;35(3):119-126. doi: 10.12932/AP0838. PMID: 27996287.(50)	40	Quantitative non-randomized. Observational study
Mendes A, Papoila AL, Carreiro-Martins P, Bonassi S, Caires I, Palmeiro T, Aguiar L, Pereira C, Neves P, Mendes D, Botelho MA, Neuparth N, Teixeira JP. The impact of indoor air quality and contaminants on respiratory health of older people living in long-term care residences in Porto. Age Ageing. 2016 Jan;45(1):136-42. doi: 10.1093/ageing/afv157. Epub 2015 Nov 11. PMID: 26563886. (43)	60	Quantitative non-randomized. Cross-sectional study.
Bhagwat SS, Larsen AK, Seternes OM, Bang BE. Mixed exposure to bacterial lipopolysaccharide and seafood proteases augments inflammatory signalling in an airway epithelial cell model (A549). Toxicol Ind Health. 2016 Nov;32(11):1866-1874. doi: 10.1177/0748233715590914. Epub 2016 Jul 9. PMID: 26149191.(62)	60	Quantitative randomized controlled. Ex vivo and in vitro assay

Supplementary Table 3. List of excluded publications after full-text reading for PECO 1 and PECO 2 questions

PECO 1

Citation	Reason for exclusion
Gioda A, Beringui K, Justo EPS, Ventura LMB, Massone CG, Costa SSL, Oliveira SS, Araujo RGO, Nascimento NM, Severino HGS, Duyck CB, de Souza JR, Saint Pierre TD. A Review on Atmospheric Analysis Focusing on Public Health, Environmental Legislation and Chemical Characterization. Crit Rev Anal Chem. 2021 Jun 7:1-23. doi: 10.1080/10408347.2021.1919985. Epub ahead of print. PMID: 34092145.	Does not include quantitative data related to our stated research objectives
Seth D, Bielory L. Allergenic Pollen Season Variations in the Past Two Decades Under Changing Climate in the United States. Immunol Allergy Clin North Am. 2021 Feb;41(1):17-31. doi: 10.1016/j.iac.2020.09.006. Epub 2020 Nov 5. PMID: 33228870.	Does not include quantitative data related to our stated research objectives
Luschkova D, Zeiser K, Ludwig A, Traidl-Hoffmann C. Atopic eczema is an environmental disease. Allergol Select. 2021 Aug 23;5:244-250. doi: 10.5414/ALX02258E. PMID: 34476334; PMCID: PMC8383845.	Does not include quantitative data related to our stated research objectives
Visez N, de Nadaï P, Choël M, Farah J, Hamzé M, Sénéchal H, Pauwels M, Frérot H, Thibaudon M, Poncet P. Biochemical composition of Phleum pratense pollen grains: A review. Mol Immunol. 2021 Aug;136:98-109. doi: 10.1016/j.molimm.2021.05.014. Epub 2021 Jun 4. PMID: 34098345.	Does not include quantitative data related to our stated research objectives
Katelaris CH. Climate Change and Extreme Weather Events in Australia: Impact on Allergic Diseases. Immunol Allergy Clin North Am. 2021 Feb;41(1):53-62. doi: 10.1016/j.iac.2020.09.003. Epub 2020 Nov 5. PMID: 33228872.	Does not include quantitative data related to our stated research objectives
Pacheco SE, Guidos-Fogelbach G, Annesi-Maesano I, Pawankar R, D' Amato G, Latour-Staffeld P, Urrutia-Pereira M, Kesic MJ, Hernandez ML; American Academy of Allergy, Asthma & Immunology Environmental Exposures and Respiratory Health Committee. Climate change and global issues in allergy and immunology. J Allergy Clin Immunol. 2021 Dec;148(6):1366-1377. doi: 10.1016/j.jaci.2021.10.011. Epub 2021 Oct 21. PMID: 34688774.	Does not include quantitative data related to our stated research objectives
Pawankar R, Wang JY. Climate Change, Air Pollution, and Biodiversity in Asia Pacific and Impact on Respiratory Allergies. Immunol Allergy Clin North Am. 2021 Feb;41(1):63-71. doi: 10.1016/j.iac.2020.09.008. PMID: 33228873.	Does not include quantitative data related to our stated research objectives
Kishikawa R, Koto E. Effect of Climate Change on Allergenic Airborne Pollen in Japan. Immunol Allergy Clin North Am. 2021 Feb;41(1):111-125. doi: 10.1016/j.iac.2020.09.005. PMID: 33228868.	Does not include quantitative data related to our

	stated research objectives
Rojo J, Oteros J, PECOrnell A, Maya-Manzano JM, Damialis A, Zink K, Werchan M, Werchan B, Smith M, Menzel A, Timpf S, Traidl-Hoffmann C, Bergmann KC, Schmidt-Weber CB, Buters J. Effects of future climate change on birch abundance and their pollen load. Glob Chang Biol. 2021 Nov;27(22):5934-5949. doi: 10.1111/gcb.15824. Epub 2021 Aug 17. PMID: 34363285.	Does not include quantitative data related to our stated research objectives
Price D, Hughes KM, Thien F, Suphioglu C. Epidemic Thunderstorm Asthma: Lessons Learned from the Storm Down-Under. J Allergy Clin Immunol Pract. 2021 Apr;9(4):1510-1515. doi: 10.1016/j.jaip.2020.10.022. Epub 2020 Oct 22. PMID: 33172604.	Does not include quantitative data related to our stated research objectives
Federico MJ, Denlinger LC, Corren J, Szefler SJ, Fuhlbrigge AL. Exacerbation-Prone Asthma: A Biological Phenotype or a Social Construct. J Allergy Clin Immunol Pract. 2021 Jul;9(7):2627-2634. doi: 10.1016/j.jaip.2021.05.011. Epub 2021 May 26. PMID: 34051392.	Does not include quantitative data related to our stated research objectives
Kapwata T, Wright CY, du Preez DJ, Kunene Z, Mathee A, Ikeda T, Landman W, Maharaj R, Sweijd N, Minakawa N, Blesic S. Exploring rural hospital admissions for diarrhoeal disease, malaria, pneumonia, and asthma in relation to temperature, rainfall and air pollution using wavelet transform analysis. Sci Total Environ. 2021 Oct 15;791:148307. doi: 10.1016/j.scitotenv.2021.148307. Epub 2021 Jun 8. PMID: 34139502.	Does not include quantitative data related to our stated research objectives
Murphy VE, Karmaus W, Mattes J, Brew BK, Collison A, Holliday E, Jensen ME, Morgan GG, Zosky GR, McDonald VM, Jegasothy E, Robinson PD, Gibson PG. Exposure to Stress and Air Pollution from Bushfires during Pregnancy: Could Epigenetic Changes Explain Effects on the Offspring? Int J Environ Res Public Health. 2021 Jul 13;18(14):7465. doi: 10.3390/ijerph18147465. PMID: 34299914; PMCID: PMC8305161.	Does not include quantitative data related to our stated research objectives
Davies JM, Berman D, Beggs PJ, Ramón GD, Peter J, Katelaris CH, Ziska LH. Global Climate Change and Pollen Aeroallergens: A Southern Hemisphere Perspective. Immunol Allergy Clin North Am. 2021 Feb;41(1):1-16. doi: 10.1016/j.iac.2020.09.002. Epub 2020 Nov 5. PMID: 33228867.	Conference abstract
Fussell JC, Kelly FJ. Mechanisms underlying the health effects of desert sand dust. Environ Int. 2021 Dec;157:106790. doi: 10.1016/j.envint.2021.106790. Epub 2021 Jul 29. PMID: 34333291; PMCID: PMC8484861.	Does not include quantitative data related to our stated research objectives
Ye T, Guo Y, Chen G, Yue X, Xu R, Coêlho MSZS, Saldiva PHN, Zhao Q, Li S. Risk and burden of hospital admissions associated with wildfire-related PM2·5 in Brazil, 2000-15: a nationwide time-series study. Lancet Planet Health. 2021 Sep;5(9):e599-e607. doi: 10.1016/S2542-5196(21)00173-X. PMID: 34508681.	Does not include quantitative data related to our stated research objectives
Braun M, Klingelhöfer D, Groneberg DA. Sooty bark disease of maples: the risk for hypersensitivity pneumonitis by fungal spores not only for woodman. J Occup Med Toxicol. 2021 Jan 21;16(1):2. doi: 10.1186/s12995-021-00292-5. PMID: 33478566; PMCID: PMC7819180.	Does not include quantitative data related to our

	stated research objectives
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Fadadu RP, Grimes B, Jewell NP, Vargo J, Young AT, Abuabara K, Balmes JR, Wei ML. Association of Wildfire Air Pollution and Health Care Use for Atopic Dermatitis and Itch. JAMA Dermatol.	Does not include quantitative data related to our

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Li S, Huff RD, Rider CF, Yuen ACY, Carlsten C. Controlled human exposure to diesel exhaust and particle-depleted diesel exhaust with allergen modulates transcriptomic responses in the lung epithelium. American journal of respiratory and critical care medicine 2021; 203(9)	Conference abstract
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