

REFERENCES

1. Chauhan AJ, Johnston SL. Air pollution and infection in respiratory illness. British medical bulletin. 2003;68:95-112.
2. Giuliano M, Stellavato A, Cammarota M, Lamberti M, Miraglia N, Sannolo N, et al. Effects of low concentrations of benzene on human lung cells in vitro. Toxicol Lett. 2009;188(2):130-6.
3. Bakand S, Winder C, Khalil C, Hayes A. Toxicity assessment of industrial chemicals and airborne contaminants: transition from in vivo to in vitro test methods: a review. Inhalation toxicology. 2005;17(13):775-87.
4. Agrawal MR, Winder C. Frequency and occurrence of LD50 values for materials in the workplace. Journal of applied toxicology : JAT. 1996;16(5):407-22.
5. Balakrishna S, Saravia J, Thevenot P, Ahlert T, Lominiki S, Dellinger B, et al. Environmentally persistent free radicals induce airway hyperresponsiveness in neonatal rat lungs. Particle and fibre toxicology. 2011;8:11.
6. Bakand S, Winder C, Khalil C, Hayes A. A novel in vitro exposure technique for toxicity testing of selected volatile organic compounds. Journal of environmental monitoring : JEM. 2006;8(1):100-5.
7. Bakand S, Hayes A. Troubleshooting methods for toxicity testing of airborne chemicals in vitro. Journal of pharmacological and toxicological methods. 2010;61(2):76-85.

8. Stevens JP, Zahardis J, MacPherson M, Mossman BT, Petrucci GA. A new method for quantifiable and controlled dosage of particulate matter for in vitro studies: the electrostatic particulate dosage and exposure system (EPDExS). *Toxicology in vitro : an international journal published in association with BIBRA.* 2008;22(7):1768-74.
9. Bakand S, Winder C, Hayes A. Comparative in vitro cytotoxicity assessment of selected gaseous compounds in human alveolar epithelial cells. *Toxicology in vitro : an international journal published in association with BIBRA.* 2007;21(7):1341-7.
10. Aufderheide M, Knebel JW, Ritter D. Novel approaches for studying pulmonary toxicity in vitro. *Toxicol Lett.* 2003;140-141:205-11.
11. Mudway IS, Kelly FJ. Ozone and the lung: a sensitive issue. *Molecular aspects of medicine.* 2000;21(1-2):1-48.
12. Langford SD, Bidani A, Postlethwait EM. Ozone-reactive absorption by pulmonary epithelial lining fluid constituents. *Toxicology and applied pharmacology.* 1995;132(1):122-30.
13. Samet JM, Dominici F, Curriero FC, Coursac I, Zeger SL. Fine particulate air pollution and mortality in 20 U.S. cities, 1987-1994. *The New England journal of medicine.* 2000;343(24):1742-9.
14. Li XY, Gilmour PS, Donaldson K, MacNee W. Free radical activity and pro-inflammatory effects of particulate air pollution (PM10) in vivo and in vitro. *Thorax.* 1996;51(12):1216-22.

15. Kadiiska MB, Mason RP, Dreher KL, Costa DL, Ghio AJ. In vivo evidence of free radical formation in the rat lung after exposure to an emission source air pollution particle. *Chemical research in toxicology*. 1997;10(10):1104-8.
16. Costa DL, Dreher KL. Bioavailable transition metals in particulate matter mediate cardiopulmonary injury in healthy and compromised animal models. *Environmental health perspectives*. 1997;105 Suppl 5:1053-60.
17. Silk SJ. Setting recommended limits for occupational exposure. *The Annals of occupational hygiene*. 1987;31(1):91-3.
18. Piantadosi CA, Zhang J, Demchenko IT. Production of hydroxyl radical in the hippocampus after CO hypoxia or hypoxic hypoxia in the rat. *Free radical biology & medicine*. 1997;22(4):725-32.
19. Chance B, Erecinska M, Wagner M. Mitochondrial responses to carbon monoxide toxicity. *Annals of the New York Academy of Sciences*. 1970;174(1):193-204.
20. Thom SR, Xu YA, Ischiropoulos H. Vascular endothelial cells generate peroxynitrite in response to carbon monoxide exposure. *Chemical research in toxicology*. 1997;10(9):1023-31.
21. Thom SR, Ischiropoulos H. Mechanism of oxidative stress from low levels of carbon monoxide. *Res Rep Health Eff Inst*. 1997(80):1-19; discussion 21-7.
22. Thom SR, Ohnishi ST, Fisher D, Xu YA, Ischiropoulos H. Pulmonary vascular stress from carbon monoxide. *Toxicology and applied pharmacology*. 1999;154(1):12-9.

23. Klees M, Heremans M, Dougan S. Psychological sequelae to carbon monoxide intoxication in the child. *The Science of the total environment.* 1985;44(2):165-76.
24. Heimbach DM, Waeckerle JF. Inhalation injuries. *Annals of emergency medicine.* 1988;17(12):1316-20.
25. Barret L, Danel V, Faure J. Carbon monoxide poisoning, a diagnosis frequently overlooked. *Journal of toxicology Clinical toxicology.* 1985;23(4-6):309-13.
26. Meredith T, Vale A. Carbon monoxide poisoning. *Br Med J (Clin Res Ed).* 1988;296(6615):77-9.
27. Hampson NB, Dunford RG, Kramer CC, Norkool DM. Selection criteria utilized for hyperbaric oxygen treatment of carbon monoxide poisoning. *The Journal of emergency medicine.* 1995;13(2):227-31.
28. Arashidani K, Yoshikawa M, Kawamoto T, Matsuno K, Kayama F, Kodama Y. Indoor pollution from heating. *Industrial health.* 1996;34(3):205-15.
29. Levy JI, Lee K, Yanagisawa Y, Hutchinson P, Spengler JD. Determinants of nitrogen dioxide concentrations in indoor ice skating rinks. *American journal of public health.* 1998;88(12):1781-6.
30. Franchi M, Carrer P, Kotzias D, Rameckers EM, Seppanen O, van Bronswijk JE, et al. Working towards healthy air in dwellings in Europe. *Allergy.* 2006;61(7):864-8.

31. Simoni M, Carrozzi L, Baldacci S, Scognamiglio A, Di Pede F, Sapigni T, et al. The Po River Delta (north Italy) indoor epidemiological study: effects of pollutant exposure on acute respiratory symptoms and respiratory function in adults. *Archives of environmental health*. 2002;57(2):130-6.
32. Garcia-Algar O, Zapater M, Figueroa C, Vall O, Basagana X, Sunyer J, et al. Sources and concentrations of indoor nitrogen dioxide in Barcelona, Spain. *J Air Waste Manag Assoc*. 2003;53(11):1312-7.
33. Blondeau P, Iordache V, Poupart O, Genin D, Allard F. Relationship between outdoor and indoor air quality in eight French schools. *Indoor air*. 2005;15(1):2-12.
34. Weschler CJ, Wells JR, Poppendieck D, Hubbard H, Pearce TA. Workgroup report: Indoor chemistry and health. *Environmental health perspectives*. 2006;114(3):442-6.
35. Kattan M, Gergen PJ, Eggleston P, Visness CM, Mitchell HE. Health effects of indoor nitrogen dioxide and passive smoking on urban asthmatic children. *The Journal of allergy and clinical immunology*. 2007;120(3):618-24.
36. Pilotto LS, Douglas RM, Attewell RG, Wilson SR. Respiratory effects associated with indoor nitrogen dioxide exposure in children. *International journal of epidemiology*. 1997;26(4):788-96.
37. Sahsuvaroglu T, Su JG, Brook J, Burnett R, Loeb M, Jerrett M. Predicting personal nitrogen dioxide exposure in an elderly population: integrating residential indoor and outdoor measurements, fixed-site ambient pollution concentrations, modeled pollutant levels, and time-activity patterns. *Journal of toxicology and environmental health Part A*. 2009;72(23):1520-33.

38. Dutton SJ, Hannigan MP, Miller SL. Indoor pollutant levels from the use of unvented natural gas fireplaces in Boulder, Colorado. *J Air Waste Manag Assoc.* 2001;51(12):1654-61.
39. Ruckerl R, Schneider A, Breitner S, Cyrys J, Peters A. Health effects of particulate air pollution: A review of epidemiological evidence. *Inhalation toxicology.* 2011;23(10):555-92.
40. Spengler JD, Sexton K. Indoor air pollution: a public health perspective. *Science.* 1983;221(4605):9-17.
41. Dennekamp M, Howarth S, Dick CA, Cherrie JW, Donaldson K, Seaton A. Ultrafine particles and nitrogen oxides generated by gas and electric cooking. *Occupational and environmental medicine.* 2001;58(8):511-6.
42. Lee K, Xue J, Geyh AS, Ozkaynak H, Leaderer BP, Weschler CJ, et al. Nitrous acid, nitrogen dioxide, and ozone concentrations in residential environments. *Environmental health perspectives.* 2002;110(2):145-50.
43. Wang B, Lee SC, Ho KF, Kang YM. Characteristics of emissions of air pollutants from burning of incense in temples, Hong Kong. *The Science of the total environment.* 2007;377(1):52-60.
44. Yang W, Lee K, Chung M. Characterization of indoor air quality using multiple measurements of nitrogen dioxide. *Indoor air.* 2004;14(2):105-11.
45. Halliwell B, Hu ML, Louie S, Duvall TR, Tarkington BK, Motchnik P, et al. Interaction of nitrogen dioxide with human plasma. Antioxidant depletion and oxidative damage. *FEBS letters.* 1992;313(1):62-6.

46. Kelly FJ, Tetley TD. Nitrogen dioxide depletes uric acid and ascorbic acid but not glutathione from lung lining fluid. *The Biochemical journal.* 1997;325 (Pt 1):95-9.
47. Spannhake EW, Reddy SP, Jacoby DB, Yu XY, Saatian B, Tian J. Synergism between rhinovirus infection and oxidant pollutant exposure enhances airway epithelial cell cytokine production. *Environmental health perspectives.* 2002;110(7):665-70.
48. Devalia JL, Sapsford RJ, Cundell DR, Rusznak C, Campbell AM, Davies RJ. Human bronchial epithelial cell dysfunction following in vitro exposure to nitrogen dioxide. *The European respiratory journal : official journal of the European Society for Clinical Respiratory Physiology.* 1993;6(9):1308-16.
49. Schierhorn K, Zhang M, Matthias C, Kunkel G. Influence of ozone and nitrogen dioxide on histamine and interleukin formation in a human nasal mucosa culture system. *American journal of respiratory cell and molecular biology.* 1999;20(5):1013-9.
50. Ayyagari VN, Janusziewicz A, Nath J. Pro-inflammatory responses of human bronchial epithelial cells to acute nitrogen dioxide exposure. *Toxicology.* 2004;197(2):149-64.
51. Ayyagari VN, Janusziewicz A, Nath J. Effects of nitrogen dioxide on the expression of intercellular adhesion molecule-1, neutrophil adhesion, and cytotoxicity: studies in human bronchial epithelial cells. *Inhalation toxicology.* 2007;19(2):181-94.

52. Persinger RL, Poynter ME, Ckless K, Janssen-Heininger YM. Molecular mechanisms of nitrogen dioxide induced epithelial injury in the lung. *Molecular and cellular biochemistry*. 2002;234-235(1-2):71-80.
53. Overton JH, Jr. Physicochemical processes and the formulation of dosimetry models. *Journal of toxicology and environmental health*. 1984;13(2-3):273-94.
54. Tsujino I, Kawakami Y, Kaneko A. Comparative simulation of gas transport in airway models of rat, dog, and human. *Inhalation toxicology*. 2005;17(9):475-85.
55. Kan H, Wong C-M, Vichit-Vadakan N, Qian Z. Short-term association between sulfur dioxide and daily mortality: The Public Health and Air Pollution in Asia (PAPA) study. *Environmental Research*. 2010;110(3):258-64.
56. Gasana J, Dillikar D, Mendy A, Forno E, Ramos Vieira E. Motor vehicle air pollution and asthma in children: A meta-analysis. *Environmental Research*. (0).
57. Woodruff TJ, Parker JD, Darrow LA, Slama R, Bell ML, Choi H, et al. Methodological issues in studies of air pollution and reproductive health. *Environmental Research*. 2009;109(3):311-20.
58. Seaton A, MacNee W, Donaldson K, Godden D. Particulate air pollution and acute health effects. *Lancet*. 1995;345(8943):176-8.
59. Oberdorster G, Ferin J, Lehnert BE. Correlation between particle size, in vivo particle persistence, and lung injury. *Environmental health perspectives*. 1994;102 Suppl 5:173-9.

60. Oberdorster G, Finkelstein J, Ferin J, Godleski J, Chang LY, Gelein R, et al. Ultrafine particles as a potential environmental health hazard. Studies with model particles. *Chest*. 1996;109(3 Suppl):68S-9S.
61. Peters A, Wichmann HE, Tuch T, Heinrich J, Heyder J. Respiratory effects are associated with the number of ultrafine particles. *American journal of respiratory and critical care medicine*. 1997;155(4):1376-83.
62. Murphy SA, BeruBe KA, Pooley FD, Richards RJ. The response of lung epithelium to well characterised fine particles. *Life sciences*. 1998;62(19):1789-99.
63. Zhang Q, Kusaka Y, Sato K, Nakakuki K, Kohyama N, Donaldson K. Differences in the extent of inflammation caused by intratracheal exposure to three ultrafine metals: role of free radicals. *Journal of toxicology and environmental health Part A*. 1998;53(6):423-38.
64. Kuschner WG, Wong H, D'Alessandro A, Quinlan P, Blanc PD. Human pulmonary responses to experimental inhalation of high concentration fine and ultrafine magnesium oxide particles. *Environmental health perspectives*. 1997;105(11):1234-7.
65. Kennedy TP, Dodson R, Rao NV, Ky H, Hopkins C, Baser M, et al. Dusts causing pneumoconiosis generate .OH and produce hemolysis by acting as Fenton catalysts. *Archives of biochemistry and biophysics*. 1989;269(1):359-64.

66. Kennedy T, Ghio AJ, Reed W, Samet J, Zagorski J, Quay J, et al. Copper-dependent inflammation and nuclear factor-kappaB activation by particulate air pollution. *American journal of respiratory cell and molecular biology*. 1998;19(3):366-78.
67. Vogelzang PF, van der Gulden JW, Folgering H, Kolk JJ, Heederik D, Preller L, et al. Endotoxin exposure as a major determinant of lung function decline in pig farmers. *American journal of respiratory and critical care medicine*. 1998;157(1):15-8.
68. Post W, Heederik D, Houba R. Decline in lung function related to exposure and selection processes among workers in the grain processing and animal feed industry. *Occupational and environmental medicine*. 1998;55(5):349-55.
69. Platts-Mills TA, Ward GW, Jr., Sporik R, Gelber LE, Chapman MD, Heymann PW. Epidemiology of the relationship between exposure to indoor allergens and asthma. *International archives of allergy and applied immunology*. 1991;94(1-4):339-45.
70. Sible Y, Reynolds HY. Macrophages and polymorphonuclear neutrophils in lung defense and injury. *The American review of respiratory disease*. 1990;141(2):471-501.
71. Agostini C, Chilosi M, Zambello R, Trentin L, Semenzato G. Pulmonary immune cells in health and disease: lymphocytes. *The European respiratory journal : official journal of the European Society for Clinical Respiratory Physiology*. 1993;6(9):1378-401.

72. Marathias KP, Preffer FI, Pinto C, Kradin RL. Most human pulmonary infiltrating lymphocytes display the surface immune phenotype and functional responses of sensitized T cells. *American journal of respiratory cell and molecular biology.* 1991;5(5):470-6.
73. Standiford TJ, Kunkel SL, Basha MA, Chensue SW, Lynch JP, 3rd, Toews GB, et al. Interleukin-8 gene expression by a pulmonary epithelial cell line. A model for cytokine networks in the lung. *The Journal of clinical investigation.* 1990;86(6):1945-53.
74. Marini M, Vittori E, Hollemborg J, Mattoli S. Expression of the potent inflammatory cytokines, granulocyte-macrophage-colony-stimulating factor and interleukin-6 and interleukin-8, in bronchial epithelial cells of patients with asthma. *The Journal of allergy and clinical immunology.* 1992;89(5):1001-9.
75. Anwar AR, Moqbel R, Walsh GM, Kay AB, Wardlaw AJ. Adhesion to fibronectin prolongs eosinophil survival. *The Journal of experimental medicine.* 1993;177(3):839-43.
76. Weisensee D, Bereiter-Hahn J, Schoeppe W, Low-Friedrich I. Effects of cytokines on the contractility of cultured cardiac myocytes. *International journal of immunopharmacology.* 1993;15(5):581-7.
77. Fuster V, Chesebro JH. Antithrombotic therapy: role of platelet-inhibitor drugs. I. Current concepts of thrombogenesis: role of platelets. (first of three parts). *Mayo Clinic proceedings Mayo Clinic.* 1981;56(2):102-12.

78. Paton JF. Pattern of cardiorespiratory afferent convergence to solitary tract neurons driven by pulmonary vagal C-fiber stimulation in the mouse. *Journal of neurophysiology*. 1998;79(5):2365-73.
79. Peters A, Doring A, Wichmann HE, Koenig W. Increased plasma viscosity during an air pollution episode: a link to mortality? *Lancet*. 1997;349(9065):1582-7.
80. Bignon J, Jaurand MC, Pinchon MC, Sapin C, Warnet JM. Immunoelectron microscopic and immunochemical demonstrations of serum proteins in the alveolar lining material of the rat lung. *The American review of respiratory disease*. 1976;113(2):109-20.
81. Chatelet F, Brianti E, Ronco P, Roland J, Verroust P. Ultrastructural localization by monoclonal antibodies of brush border antigens expressed by glomeruli. I. Renal distribution. *The American journal of pathology*. 1986;122(3):500-11.
82. Wright JR, Wager RE, Hamilton RL, Huang M, Clements JA. Uptake of lung surfactant subfractions into lamellar bodies of adult rabbit lungs. *J Appl Physiol*. 1986;60(3):817-25.
83. Vinitketkumnuen U, Kalayanamitra K, Chewonarin T, Kamens R. Particulate matter, PM 10 & PM 2.5 levels, and airborne mutagenicity in Chiang Mai, Thailand. *Mutation research*. 2002;519(1-2):121-31.
84. Hinds WC. *Aerosol technology: properties, behavior, and measurement of airborne particles*: Wiley; 1999.
85. Klaassen CD, Casarett LJ. *Casarett and Doull's Toxicology: The Basic Science of Poisons*: McGraw-Hill; 2001.

86. Marx U, Sandig V. Drug Testing In Vitro: Breakthroughs and Trends in Cell Culture Technology: John Wiley & Sons; 2007.
87. Zhang Z, Kleinstreuer C. Airflow structures and nano-particle deposition in a human upper airway model. *Journal of Computational Physics*. 2004;198(1):178-210.
88. Pauluhn J. Inhalation toxicology: Methodological and regulatory challenges. *Experimental and Toxicologic Pathology*. 2008;60(2-3):111-24.
89. Tu B, Wallin A, Moldeus P, Cotgreave IA. Cytotoxicity of NO₂ gas to cultured human and murine cells in an inverted monolayer exposure system. *Toxicology*. 1995;96(1):7-18.
90. Gerde P. How do we compare dose to cells in vitro with dose to live animals and humans? Some experiences with inhaled substances. *Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie*. 2008;60(2-3):181-4.
91. Aufderheide M, Mohr U. CULTEX--an alternative technique for cultivation and exposure of cells of the respiratory tract to airborne pollutants at the air/liquid interface. *Experimental and toxicologic pathology : official journal of the Gesellschaft fur Toxikologische Pathologie*. 2000;52(3):265-70.
92. Bakand S, Winder C, Khalil C, Hayes A. An experimental in vitro model for dynamic direct exposure of human cells to airborne contaminants. *Toxicol Lett*. 2006;165(1):1-10.

93. Becker S, Mundandhara S, Devlin RB, Madden M. Regulation of cytokine production in human alveolar macrophages and airway epithelial cells in response to ambient air pollution particles: further mechanistic studies. *Toxicology and applied pharmacology*. 2005;207(2 Suppl):269-75.
94. Rosas Perez I, Serrano J, Alfaro-Moreno E, Baumgardner D, Garcia-Cuellar C, Martin Del Campo JM, et al. Relations between PM10 composition and cell toxicity: a multivariate and graphical approach. *Chemosphere*. 2007;67(6):1218-28.
95. Kocbach A, Totlandsdal AI, Lag M, Refsnes M, Schwarze PE. Differential binding of cytokines to environmentally relevant particles: a possible source for misinterpretation of in vitro results? *Toxicol Lett*. 2008;176(2):131-7.
96. Alfaro-Moreno E, Nawrot TS, Vanaudenaerde BM, Hoylaerts MF, Vanoirbeek JA, Nemery B, et al. Co-cultures of multiple cell types mimic pulmonary cell communication in response to urban PM10. *The European respiratory journal : official journal of the European Society for Clinical Respiratory Physiology*. 2008;32(5):1184-94.
97. Duvall RM, Norris GA, Dailey LA, Burke JM, McGee JK, Gilmour MI, et al. Source apportionment of particulate matter in the U.S. and associations with lung inflammatory markers. *Inhalation toxicology*. 2008;20(7):671-83.
98. Martin LD, Rochelle LG, Fischer BM, Krunkosky TM, Adler KB. Airway epithelium as an effector of inflammation: molecular regulation of secondary mediators. *The European respiratory journal : official journal of the European Society for Clinical Respiratory Physiology*. 1997;10(9):2139-46.