

**Scientific Misconduct in Fine Particulate Matter Epidemiology by Dr. C. Arden Pope, III,  
in Collaboration with Drs. Daniel Krewski, Michael Jerrett, and Richard Burnett,  
with the Complete Cooperation of the American Cancer Society:  
Focus on September 1, 2013 AJRCCM Paper on Air Pollution and Mortality in CA**

James E. Enstrom, Ph.D., M.P.H.  
UCLA School of Public Health  
Los Angeles, CA 90095-1772  
and  
Scientific Integrity Institute  
Los Angeles, CA 90024-2905  
[jenstrom@ucla.edu](mailto:jenstrom@ucla.edu)

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This document presents detailed documented evidence of scientific misconduct in fine particulate matter epidemiology by Clive Arden Pope, III, Ph.D., Mary Lou Fulton Professor of Economics at Brigham Young University (<https://economics.byu.edu/Pages/Faculty/C-Arden-Pope.aspx>). This scientific misconduct has been conducted with the close collaboration of Daniel Krewski, Ph.D., Professor at the University of Ottawa Faculty of Medicine (<http://www.med.uottawa.ca/epid/eng/krewskibio.html>), Michael Jerrett, Ph.D., Professor and Chair of Environmental Health Sciences at the UC Berkeley School of Public Health (<http://ehs.sph.berkeley.edu/people/jerrett.htm>), Richard T. Burnett, Ph.D., Senior Research Scientist at Health Canada, Ottawa (<http://www.zoominfo.com/p/Rick-Burnett/52191135>). This collaboration has been made possible with the complete cooperation of the American Cancer Society during the past twenty years, involving Vice President of Epidemiology Emeritus Michael J. Thun, M.D. (<http://www.cancer.org/research/researchprograms/funding/epidemiology-cancerpreventionstudies/ourstaff/michael-j-thun>) and Vice President of Epidemiology Susan M. Gapstur, Ph.D. (<http://www.cancer.org/research/researchprograms/funding/epidemiology-cancerpreventionstudies/ourstaff/susan-m-gapstur>).

(111513 text omitted)

The serious misuse of PM2.5 epidemiologic findings by EPA and CARB is reflected in the US House Science Committee criticism of EPA science and regulations dating back to a November 15, 2011 letter to the White House from Congressmen Andy Harris, M.D., and Paul Broun, M.D. (<http://science.house.gov/press-release/harris-and-broun-question-administration%E2%80%99s-environmental-cost-benefit-analyses>). This letter and numerous additional letters up to a July 22, 2013 letter have requested the Harvard Six Cities Study (H6CS) and ACS CPS II data used by EPA (<http://science.house.gov/press-release/committee-threatens-subpoena-epa-secret-science>). The basic issues are summarized in a July 30, 2013 Wall Street Journal commentary “The EPA’s Game of Secret Science” by US House Science Committee Chairman Lamar Smith (<http://online.wsj.com/news/articles/SB10001424127887323829104578624562008231682>).

Because EPA did not comply with their prior requests, the US House Science Committee issued an August 1, 2013 subpoena on EPA to produce the “secret science” data from H6CS and ACS CPS II (<http://science.house.gov/press-release/smith-subpoenas-epa-s-secret-science>). Dr. Pope is co-author on four of the seven papers specifically cited in the subpoena. He is first author on “Pope et al. 2002. Lung Cancer, Cardiopulmonary Mortality, and Long-term Exposure to Fine Particulate Air Pollution.” *Journal of the American Medical Association* 287: 1132-1141” and “Pope et al. 2009. “Fine Particulate Air Pollution and Life Expectancy in the United States.” *New England Journal of Medicine* 360: 376-386.” He is third author on “Jerrett et al. 2009 “Long-term ozone exposure and mortality”, *New England Journal of Medicine* 360; 1085-1095” and eighth author on “Krewski et al. 2009. “Extended Follow-up and Spatial Analysis of the American Cancer Society Study Linking Particulate Air Pollution and Mortality, HEI Research Report 140, Health Effects Institute. Boston, MA.” A fifth study is “Krewski et al. 2000. ‘Reanalysis of the Harvard Six Cities Study and the American Cancer Society Study of Particulate Air Pollution and Mortality.’ Special Report to Health Effects Institute. Cambridge MA. July.” This 2000 HEI Reanalysis Report was conducted in order to check the accuracy of the highly controversial Pope 1995 paper, as described in the 1997 *Science* and *Reason* articles.

(111513 text omitted)

The final and most glaring example of Dr. Pope’s dishonesty is the September 1, 2013 *AJRCCM* paper “Spatial Analysis of Air Pollution and Mortality in California” that he co-authored with Drs. Jerrett, Krewski, Burnett, and Thun and eight other Jerrett Project investigators (<http://www.atsjournals.org/doi/abs/10.1164/rccm.201303-0609OC>). This paper was published exactly one month after the subpoena was issued for the CPS II data used in the paper. The paper is highly misleading and completely ignores the overwhelming null evidence in the October 28, 2011 Jerrett Final Report (<http://www.arb.ca.gov/research/apr/past/06-332.pdf>). The positive relationship that it does report is based on a “conurbation” land use regression model that normalizes out the low death rates in the urban areas of California. This ad hoc model was not even mentioned in the original proposal. Furthermore, the paper does not cite the overwhelming null California PM2.5 mortality evidence that is summarized in my September 28, 2012 *ASA JSM* 2012 paper (<http://www.scientificintegrityinstitute.org/ASAS092812.pdf>). The serious flaws in the *AJRCCM* paper are discussed in detail by Dr. William Briggs in his blogs of August 6, 2013 (<http://wmbriggs.com/blog/?p=8720>) and September 11, 2013 (<http://wmbriggs.com/blog/?p=8990>). The *AJRCCM* paper and the defiance of its authors reinforces the importance of the subpoena of EPA “secret science” data and the urgent need for independent reanalysis of the ACS CPS II data that underlies this paper and the subpoenaed papers, as explained by Dr. Briggs on September 25, 2013 (<http://wmbriggs.com/blog/?p=9241>).