

December 4, 2023 11:00 AM

<https://www.science.org/doi/10.1126/science.adf4915>

SCIENCE VOL. 382, NO. 6673 MORTALITY RISK FROM UNITED STATES COAL ELECTRICITY GENERATION

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Enstrom eLetter below submitted December 4, 2023 at 11:30 AM

Title: Allegation of Research Misconduct by Lucas Henneman

This is a formal Allegation of Research Misconduct by George Mason University Assistant Professor Lucas Henneman (Henneman) (<https://volgenau.gmu.edu/profiles/lhennem>). I am submitting my Allegation in accord with the DHHS Public Health Service Policies on Research Misconduct 42 CFR Part 93 (<https://oir.nih.gov/sourcebook/ethical-conduct/research-misconduct>). My Allegation is that Henneman has engaged in Falsification by repeatedly and deliberately falsifying the research record on the relationship between fine particulate matter (PM2.5) and mortality in the US. This Allegation focuses on the falsification in the November 24, 2023 *Science* article “Mortality risk from United States coal electricity generation” by Lucas Henneman, Christine Choirat, Irene Dedoussi, Francesca Dominici, Jessica Roberts, and Corwin Zigler ([DOI: 10.1126/science.adf4915](https://doi.org/10.1126/science.adf4915)).

This research was funded by nine NIH grants and five other grants: “Funding: This work was supported by the National Institutes of Health (grant NIH R01ES026217 to C.Z. and grants R01MD012769, R01ES028033, 1R01ES030616, 1R01AG066793, 1R01MD016054-01A1, 1R01ES 034373-01, 1RF1AG080948, and 1R01ES029950 to F.D.); the US Environmental Protection Agency (EPA) (grant 835872 to C.Z., F.D., and L.H.); EmPOWER Air Data Challenge (L.H., C.Z., and J.R.); the Alfred P. Sloan Foundation (grant G-2020-13946 to F.D.); and The Health Effects Institute (HEI) (grant R-82811201 to L.H. and grant 4953 to C.Z.).”

The Abstract of this article states “We estimated the number of deaths attributable to coal PM2.5 from 1999 to 2020 using individual-level Medicare death records representing 650 million person-years. Exposure to coal PM2.5 was associated with 2.1 times greater mortality risk than exposure to PM2.5 from all sources. A total of 460,000 deaths were attributable to coal PM2.5, representing 25% of all PM2.5-related Medicare deaths before 2009 and 7% after 2012.”

The November 23, 2023 Harvard Press Release states “PM2.5 from coal has been treated as if it’s just another [air pollutant](#). But it’s much more harmful than we thought, and its mortality burden has been seriously underestimated,” said lead author Lucas Henneman, assistant professor in the Sid and Reva Dewberry Department of Civil, Environmental, and Infrastructure Engineering at Mason. “These findings can help policymakers and regulators identify cost-effective solutions for cleaning up the country’s air, for example, by requiring emissions controls or encouraging utilities to use other energy sources, like renewables.” (<https://www.hsph.harvard.edu/news/press-releases/particulate-pollution-from-coal-associated-with-double-the-risk-of-mortality-than-pm2-5-from-other-sources/>).

However, the Abstract, the full article, and the press release make NO reference to the PM2.5 deaths controversy that has existed since 1993 or to the massive body of evidence that there is NO causal relationship between PM2.5 and mortality in the US. This uncited null evidence invalidates the Abstract, article, and Press Release statements that there are PM2.5-related deaths “attributable to” coal electricity generation. This uncited null evidence is well-known to the authors and has been deliberately ignored by the lead author Henneman. Since 2012, Henneman has been directly involved with prominent PM2.5 researchers, particularly Dominici and Zigler, who have repeatedly made PM2.5 death claims that ignore the evidence of NO PM2.5 deaths (<https://www.lucashenneman.org/uploads/cv.pdf>).

Extensive evidence that PM2.5 does not cause deaths and that Medicare records have been misused for PM2.5 death claims is described in my January 4, 2022 Scientific Misconduct Complaint to Harvard against Dominici (<http://scientificintegrityinstitute.org/JEEDominici010422.pdf>) and (<https://junkscience.com/2022/01/enstrom-files-misconduct-complaint-against-harvard-pm2-5-researchers/>). Also, on September 15, 2021, I made a strong case for removing Dominici from the NASEM Committee assessing causality regarding PM2.5 deaths for the national ambient air quality standards (NAAQS) (<http://scientificintegrityinstitute.org/NASEMDominici091521.pdf>).

I have sufficient evidence to satisfy the NIH “Requirements for Making a Finding of Research Misconduct” (42 CFR 93.104) (https://grants.nih.gov/policy/research_integrity/requirements.htm). The Henneman research represents a significant departure from accepted traditional practices of epidemiology, statistics, and toxicology. The misconduct has been committed intentionally, knowingly, and recklessly in order to promote an aggressive regulatory agenda. My Allegation can be proven by a preponderance of the evidence if I am given the opportunity to present all the evidence.

Finally, I can explain how my Allegation relates to the ongoing process of the Biden EPA to tighten the PM2.5 NAAQS in spite of strong evidence that such tightening is scientifically and economically unjustified. The adverse consequences of this tightening were described on September 19, 2023 by the House Energy Committee Chair Kathy McMorris Rodgers: “New EPA [PM2.5] standards will devastate American manufacturing and jobs” (<https://energycommerce.house.gov/posts/chair-rodgers-new-epa-standards-will-devastate-american-manufacturing-and-jobs>).

Thank you very much for your timely consideration of my Allegation.

Sincerely yours,

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