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*Anatomy & Physiology • Biology • Chemistry • Earth & Environmental Sciences • Physics
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Mr. Aaron Yeow, EPA CASAC

I write to request that this letter be shared with the Clean Air Scientific Advisory Committee (CASAC) at their upcoming meeting. I write in opposition to the disbanding of the Particulate Matter Review Panel of the CASAC. First and foremost, I am a chronic asthma sufferer. I am also an atmospheric scientist who has worked for over 30 years on problems associated with air pollution and climate change, including working on agricultural and forest smoke management as well as working on ozone precursor studies in both Florida and Oregon. I've taught Air Pollution Meteorology and Atmospheric Chemistry at Florida State University, where I used to serve as a professor and research associate in geophysical fluid dynamics. I'm also acutely aware of the need to reduce wildfire danger in communities, particularly in the west in the summer months, which could cause increased exposure in winter months, but would be necessary to minimize catastrophic threats in summer. The presence of fine particulate matter in air has been well established in the literature as being a major contributor to disease, particularly in vulnerable populations. My work in Florida was done in collaboration with agencies in both Democratic and Republican administrations, and was foundationally related to public health concerns that were grounded in science, not politics.

By eliminating the 20-member Particulate Matter Review Panel to the Clean Air Scientific Advisory Committee, the EPA will have little outside scientific expertise available to provide the latest perspective from the peer-reviewed science community and its research. In a recent op-ed in the *New York Times*, the EPA's own former and most recent staff director of an important Scientific Advisory Board, Dr. Christopher Zarba, who worked for 38 years at EPA, has called on the agency to reverse this decision. I join him in that call. I have no doubts about the abilities of the CASAC, but they can't possibly cover the gamut of important scientific aspects of a complex issue such as air pollution.

It is a complete abrogation of the mission of the Environmental Protection Agency to take the actions proposed here in eliminating the role of informed outside scientific experts, as has happened in other recent actions at EPA. It is akin to a decision that might have been made as acid rain or tobacco smoke rules and regulations were being considered as it became clear that public health was severely compromised if significant government action had not been taken by regulatory authority. I'm old enough to remember the frequent air pollution episodes of New York City, when I grew up just north of the Bronx in the 1960s, and the smog episodes of Los Angeles basin when I began my graduate study at UCLA in the late 1970s, and have seen the results of improved air quality (and benefited medically from it) thanks to the implementation of Clean Air Act. These small particles are direct threats to public health and if not regulated, will increase death and disease. Similarly, ozone precursors need to be regulated to reduce lower atmosphere ozone concentrations, which also pose significant

health risks. I also have collaborated on atmospheric deposition research related to reactive gaseous mercury, and am concerned that the EPA has not moved fast enough to regulate mercury in the atmosphere.

Given that the important work of the CASAC will inform the process of updating federal regulations on criteria air pollutants, and the important contribution that particles in the PM 2.5 and PM 10 standards to deterioration of public health, this poor decision needs to be reversed immediately, and the advisory board restored or reconstituted. For one thing, it is my understanding that there is no epidemiologist among the members of the CASAC. Much of the important research that informs our understanding about PM 2.5 particles and their negative affects on asthma is rooted in epidemiological studies. Without such expertise on the CASAC, there is an important missing perspective; the Director also lacks this ability to make informed decisions related to toxicology, immunology, exposure levels, modeling and monitoring, among other aspects. Science advisory boards exist to provide that expertise needed to serve the public servants who volunteer or are chosen to serve on committees on the CASAC and others. There must be honest attention paid to the science.

Some exposure studies in the international literature have even suggested that the standard for PM 2.5 should be further tightened and that even ultrafine particles need to be incorporated into actionable criteria. Although I'm not as familiar with that research as I am with the presently regulated small particles and ozone and its precursors, I have grave concerns that we are headed backwards, and that EPA is devolving away from its core mission. Let's not lose site of important mission of the EPA, as reflected in the Clean Air Act, 42 U.S.C. §7401 et seq. of 1970¹:

The Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. Among other things, this law authorizes EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and public welfare and to regulate emissions of hazardous air pollutants.

One of the goals of the Act was to set and achieve NAAQS in every state by 1975 in order to address the public health and welfare risks posed by certain widespread air pollutants.

As an asthma sufferer, I have decreasing confidence that the EPA is willing to protect the public health of our citizenry, including my own children and grandchildren, some of whom also suffer from asthma. EPA's mission is to protect human health and the environment. I strongly urge you to restore my faith that you are willing to do that, by bringing independent scientific expertise back to your decision-making process when it comes to air quality.

I am more than willing to speak with you more about this decision, if you are needing further information.

Sincerely,

<electronically signed 12-4-2018 6:59 PM>

Dr. Paul Ruscher, PhD
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¹ <https://www.epa.gov/laws-regulations/summary-clean-air-act>