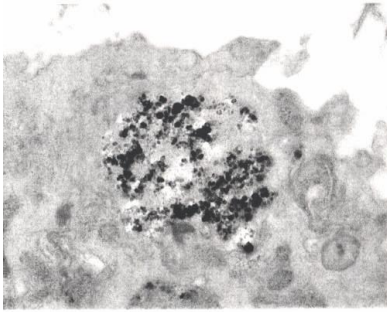


## WMA Statement on the Prevention of Air Pollution due to Vehicle Emissions

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Diesel Soot in Alveoli of a three month old child (Bunn, Thorax 56:932, 2001)



**At the 65<sup>th</sup> General Assembly of the World Medical Association (WMA) in Durban, SA (10-11-2014), there has been unanimously adopted the resolution:**

### **“WMA Statement on the Prevention of Air Pollution due to Vehicle Emissions”.**

The World Medical Association (WMA) as the Confederation of National Medical Associations which are the legal representations of the medical profession in their respective countries regards it as important mission to serve humanity by endeavouring to improve public health. The WMA represents some 10 million physicians all over the world, its secretariat is in Geneva-Ferney close to WHO. The yearly General Assembly is the highest ranking body of decision, the statement, a resolution indeed, calling member organisations to request specific action of their respective governments as below:

1. Introduce Best available technology (BAT) standards for all new diesel vehicles (both, on-road and off-road)
2. Incentivise retrofitting with BAT filters for all in-use engines
3. Monitor and limit the concentration of nanosize soot particles in urban air.
4. Conduct epidemiological studies detecting and differentiating the health effects of ultrafine particles.
5. Build professional and public awareness of the importance of diesel soot and the existing methods of eliminating particles.
6. Contribute to developing strategies to protect people from soot particles in aircraft passenger cabins, trains, homes and the general environment. These strategies should include plans to develop and increase use of public transportation.

According to estimates by WHO (2014) urban air pollution including pollution in vehicle cabins is responsible 3.7million death per year (i.e. 6.7% of all) Especially, diesel soot is a proven carcinogenic (IARC 10-2013). Furthermore, it exhibits a lot of toxic effects, most of them in the cardiovascular system (Brooks et al. 2010) and respiratory system (ERS 2010). On top of it, soot as well as methane, both are acknowledged as extraordinary greenhouse drivers per unit mass 500.000 time CO<sub>2</sub>. In Science (1/2012) Kerr appealed to reduce them urgently.

In addition to air pollution causing a reduction of quality of live for more than 100 million people WMA emphasis a tremendous economic loss on macroeconomic scale due to reduced productivity and increased costs of health treatments.

Despite new and strict regulations in a variety of countries based on limitation of ultrafine particles by number count, a large fleet of in-use vehicles, on-road and off-road ones, construction equipment and ship diesel engines will continue polluting the air unless retrofit is forced. In many regions concentrations of particulate matter are exceeding WHO recommendation by the factor 50. Government induced retrofit is a necessity for improving air quality and consequently health of the population within reasonable time. About 85 million diesel engines are equipped with particle filters of highest standards, a major part by retrofit with VERT-certification, requiring elimination of nano-particles; benefit is about times exceeding costs, however, the obstacle is in many cases: Who reaps the benefits and who is carrying the burden of costs?

**It is incumbent on governments to find the appropriate ways and means.**

Brook RD et al. 2010. Particulate Matter Air Pollution and Cardiovascular Disease. Circulation 121: 2331-78

European Respiratory Society 2010. Air Quality and Health. <http://www.ersnet.org/publications/air-quality-and-health.html>

International Agency for Research on Cancer 2013. Diesel and Gasoline Engine Exhausts and Some Nitroarenes. <http://monographs.iarc.fr/ENG/Monographs/vol105/index.php>

Kerr RA 2012. Ice-Free Arctic Sea May Be Years, Not Decades, Away. Science 337 (6102): 1591