

For Immediate Release



## Alarming carcinogen levels near open waste dump fires

Beirut, Lebanon- 30/11/2015 -Recent studies by the Air Quality Associated Research Unit in Lebanon warn of unprecedented carcinogens in ambient air, resulting from the emerging rash burning trend.

The rising number of waste dumpsites in Lebanon in the absence of a waste disposal mechanism has incited many to set fire to piles of trash. This new trend was not only especially alarming for environmentalists, but for air quality specialists and associated scientists as well. The Air Quality Associated Research Unit in Lebanon, formed in collaboration between the American University of Beirut (AUB), Notre Dame University (NDU), and Saint Joseph University (USJ) and funded by the Lebanese National Council for Scientific Research (LNCSR) and the University Research Board at AUB, decided to mobilize its forces and equipment to measure the levels of toxins emitted from the burning of trash and to evaluate the degree of resulting damage. The findings were startling.

A research team led by Dr. Najat Saliba, Professor of Chemistry at AUB and head of the AUB Waste Management Task Force, started by measuring the levels of dioxins and polycyclic aromatic hydrocarbons (PAHs) in the air and is now measuring the levels of other potentially present toxins. Compared to measurements of dioxins taken in 2014 in one of the highly industrial zones in Lebanon, the new sampling, which was conducted on the rooftop of a residential building next to a burned open dump, was up to 416 times more carcinogenic.

Previously, 0.1 adult and 0.4 children out of every million exposed to dioxins from industrial exhaust over their lifetimes were likely to develop cancer, an acceptable ratio according to the United States Environmental Protection Agency which allows a threshold of 1 out of every million. This number has now escalated to 34 adults and 176 children in the zone where open dumps have been set aflame in Lebanon.

A test for another family of carcinogens in the sampling, PAHs, revealed the first ever documented presence of Dibenz[*a,h*]anthracene in ambient air in Lebanon. This aromatic hydrocarbon is produced mainly by the incomplete combustion of waste and is classified as a type 1 carcinogen by the World Health Organization (WHO). With the combined effects of both toxins, the cancer risk from burning open dumps rises to a staggering count of 37 adults and 186 children out of every million.

The toxicity of these materials is worsened by their persistence. In fact, they are referred to as “persistent organic pollutants”, which means that they cling to anything from air, to soil, to human tissue and linger there for long periods of time. In other terms, exposure to these toxins will persist for quite some time after the open burning stops. Consequently, the Air

Quality Associated Research Unit firmly recommends that extreme measures be taken to stop any burning of waste immediately, as the current situation is nothing short of an emergency. For more information, please contact [ns30@aub.edu.lb](mailto:ns30@aub.edu.lb).

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### **Note to Editors**

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