



## **PM1 analysis inside the human organism**

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Many large cities (Mega cities) in the developed and developing world have, for the last two decades, been plagued by high levels of atmospheric pollution, a problem that the European and worldwide scientific community, are at present studying with measurable success. However, due to rapid industrial development and the ever increasing traffic, many more studies are required to support decision makers and governments on measures to reduce atmospheric pollution and mitigate the associated serious health effects on the population. Registered health problems are numerous and dramatic in all ages groups, but particularly so in infants, and patients suffering from chronic diseases due to increased levels of pollutants and nocive substance inhaled, entering the lungs and blood stream and finally being deposited in several organs. Recent studies indicate that cardiac arrhythmias associated to increased atmospheric pollution pose a serious threat to human health (K.N. Grigoropoulos, et al. 2008, Issue 9b, 2008).

This prototype research study, based on an electron microscopic technique, had as purpose to detect and analyze in details the place, size and movement of PM1 substances in human cells. The research results show that the concentration of PM substances was very high in the studied specimens. The level of PM concentration is strongly incompatible with public health reasonable quality levels.