



## **Impact on the quality of life and health of residents living close to a wastewater treatment plant due to airborne biocolloids**

Apostolos Vantarakis

Patras, Medicine, PATRAS, Greece (avanta@upatras.gr, +302610969875)

**Objectives:** To investigate the effects on the quality of life among residents assigned close to a wastewater treatment plant. The present research work examines the concentrations of airborne microorganisms in bioaerosols originating from wastewater treatment plants and the impact on the health status, the general health perception and the overall life satisfaction of the residents. It also presents the general problems in the life quality faced by people living close to a wastewater treatment plant.

**Methods:** We conducted a cohort study including 235 residents living close to an urban wastewater treatment plant (within a radius of 500 m). A standardized questionnaire was completed by the participants to the study for a three months period. In parallel, the concentrations of airborne microorganisms in bioaerosols originating from the wastewater treatment plant have been investigated.

**Results:** Significantly increased risks for the onset of central nervous system symptoms such as headache, unusual tiredness, and concentration difficulties have been noticed. Furthermore, an increased risk for respiratory and skin diseases has been found. A high rate of residents declared to feel irritable and moody. Gastrointestinal symptoms were also recorded among the residents and specifically to the young population. The presence of pathogenic airborne microorganisms originating from the wastewater treatment plant has been recorded.

**Conclusions:** Epidemiological investigations are needed to determine the cause of the symptoms. Clinical investigations are also needed to determine the cause of the symptoms and finally, further field studies are required in order to assess the real causal agents.