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The Isolation and Identification of *Acanthamoeba* from Air Ventilation System Samples in Selected Buildings in Kuantan

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Acanthamoeba, a free-living amoeba (FLA) is abundant in a wide range of the environmental conditions including water, soil and air. Since *Acanthamoeba* is an opportunistic pathogen, some of its species are found to be responsible for serious human diseases. Cysts and trophozoites of *Acanthamoeba* may be deposited in air ventilation systems with poor maintaining practices. This could predispose discomfort and diseases to human health especially towards immunosuppressed individuals. *Acanthamoeba* was isolated from dust samples taken from air ventilation systems in selected buildings in Kuantan. By using a sterile swab, the dust samples were collected from filters of the air ventilation systems. The dust samples were cultured on the non-nutrient agar plates with inactive *Escherichia coli* and incubated in 37°C incubator. The plates were examined daily for any presence of *Acanthamoeba* cysts up to 14 days of incubation. The results showed that all 75 dust samples collected were negative. The microscopic examination showed that all non-nutrient agar (NNA) plates were negative for *Acanthamoeba* from day 1 until day 14 of the incubation period. However, fungal growth was observed on the non-nutrient agar (NNA) plates after day 4 of incubation. The negative findings of this study may have been influenced by the environmental factor in Kuantan. Besides that, there are also limitations in the method employed in this study where direct swabs from air ventilation systems were used instead of using a more specific method such as establishing proper sampling points with air quality instruments to collect air samples. Thus, further studies should consider addressing these limitations and conditions.