

## Investigation of *In-vitro* Antibacterial Properties of Human Cerumen of Healthy Individuals Attending the National Hospital of Sri Lanka

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Previous studies have revealed the prevalence of bacterial ear infections is moderately high in developing countries. Since the absence of human cerumen may lead to ear infections according to the literature, it is important to find the antibacterial properties of human cerumen. This study focused on the investigation of *in-vitro* antibacterial properties of human cerumen of healthy individuals attending the ENT clinic, NHSL (National Hospital of Sri Lanka) - Colombo 10 to assess antibacterial activity against *E. coli*, *P. aeruginosa*, and *S. aureus*. An *in-vitro* cross sectional study of healthy individuals, both males and females, of all age groups, without any middle or external ear pathology to study the antibacterial activity using the spread plate count method. A hundred cerumen specimens were collected from healthy individuals and only 44 specimens were sterile and 56 were non-sterile. Sterile cerumen samples were further examined with *E. coli*, *P. aeruginosa* and *S. aureus*, and their inhibitory growth in the presence of human cerumen was observed. The present study revealed that human cerumen showed 93% antibacterial activity against *E. coli*, whereas 89% and 66% were shown against *P. aeruginosa* and *S. aureus* respectively. The current study concluded that human cerumen possesses an antibacterial activity against *S. aureus*, *P. aeruginosa* and *E. coli*.

**Keywords:** *human cerumen, antibacterial properties, antibacterial activity*