



RESEARCH PAPER

ISOLATION AND CHARACTERIZATION OF BACTERIA FROM MOBILE PHONES OF STUDENTS AND EMPLOYEES AT UNIVERSITY OF GONDAR, ETHIOPIA

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Present study was designed to isolate and characterize bacteria from mobile phones of University of Gondar students and employees to show that mobile phones are potential reservoir for number of bacteria. Total 50 mobile samples included in this study for isolation of bacteria and 17 selected colonies of bacteria isolated from mobile phones were further processed. Out of these colonies, we found *E. coli*, *E. aerogenes*, *Streptococcus spp.* and *S. aureus* in the percentage of 23.53%, 23.53%, 17.65% and 35.30% respectively. The finding of this research indicates that bacteria isolated and characterized from mobile phones are known to cause infections in human beings; therefore sharing of mobiles, usage of mobile during eating should be discouraged. Personal hand hygiene is very important and also washing of hand before and after handling of food and phone decontamination should be adopted by people to prevent cross and self contamination by these bacteria.

Key words: Bacteria, Mobile phone, Personal hygiene, Contamination.

INTRODUCTION

A mobile phone is a long range, portable electronic device for personal telecommunication. Aside the standard voice function of a mobile phone, a mobile phone can support many additional services such as SMS for text messaging, email, pocket switching for access to the internet, and MMS for sending and receiving photos and video (Al-Abdalall, 2010; Ekrakene and Igeleke, 2007). At present, Ethiopia has the fastest growth rate of mobile phone subscribers from different parts of the world. The use of mobile phones by individuals may serve as a potential vehicle for the spread of pathogenic microorganisms (Brady *et al* 2006).

A mobile phone can spread infectious diseases by its frequent contact with hands (Kilic *et al* 2009). Mobile phones are increasingly becoming an important means of communication. The vast

majority of mobile phones are hand held (Al-Abdalall, 2010). Today mobiles have become one of the most indispensable accessories of professional and social life. Although they are usually stored in bags or pockets, mobile phones are handled frequently and held close to the face station. Thus the present study was conducted to determine whether mobile phones play a vital role in the spread of bacterial pathogens and to proffer possible control or preventive measures that could be instituted to avoid this likely vehicle of infections.

It is also focused to show the necessity of cleanliness in handling personal objectives like cell phones carefully with proper cover which would prevent the multiplication of microorganisms both pathogenic and non pathogenic (Suganya and Judia Harriet Sumathy, 2012).