

Study on the Presence of Pathogenic Microorganism on Indian Currency Notes in Circulation in Guduvancherry Area, Chennai †

Kamali T ¹, Subhamoy Banerjee ^{1,*}

¹ School of Life Science, B S Abdur Rahman Crescent Institute of Science and Technology, Vandalur, Chennai-600048

* Correspondence: subhamoy.sls@crescent.education;

† Presented at Virtual symposium to observe World Antimicrobial Awareness week “Applications of biotechnology and microbiology with special emphasis on Antimicrobial resistance”, 18-24 November 2020, Chennai, India

Received: 10.11.2020; Revised: 15.11.2020; Accepted: 17.11.2020; Published: 10.01.2021

Abstract: Currency notes are considered a potential vehicle for the transmission of pathogenic microbes since the currencies circulate extensively. Currency notes of small denominations are more exposed to various environments and contaminant. Opportunistic pathogens responsible for several diseases are reported to be found on currency notes all around the world (India, Pakistan, Brazil, Ethiopia, Singapore, etc.). The main objective of this work is to isolate the pathogens from Indian currency notes in circulation in the Guduvancherry area, Chennai, which is a highly-populated area. Samples were collected from a snack shop and panipoori shop (street-side vendor) as it is observed that people often consume food there without washing hands after exchanging money. The currency notes with denomination Rs.10 are randomly collected and stored in a sterile sealed pack at the source. The currency notes were immediately transferred to the laboratory. The organism was isolated from currency notes using cotton swabs, and those isolates are cultured and screened using different bacterial culture techniques. Different groups of bacteria like *Staphylococcus spp.*, *Pseudomonas spp.*, *Salmonella spp.*, *E.coli* and *Shigella spp.* were isolated on different selective media like EMB agar, Cetrimide agar, MS agar, S S agar media. Also, bioinformatics analysis, such as Malacard, suggests various communicable diseases associated with these pathogenic strains. Thus, this work sheds light on currency notes as a possible vector of public health hazards.

Keywords: pathogen; Indian currency; selective media; Malacard; *E.coli*; *Staphylococcus spp.*

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Funding

This research received no external funding.

Acknowledgments

This research has no acknowledgment.

Conflicts of Interest

The authors declare no conflict of interest.