BACTERIOLOGICAL PROFILING AND ANTIMICROBIAL SUSCEPTIBILITY PATTERNS OF ISOLATES FROM STREET-VENDED *PANIPURI* SOLD IN BHARATPUR, NEPAL

Sujan Khadka, Sanjib Adhikari, and Kamal Rai

[1] *Department of life Sciences, Biochemistry and Molecular Biology, Central China Normal University, Wuhan, China*
[2] *Department of Microbiology, Birendra Multiple Campus, Tribhuvan University, Bharatpur, Chitwan, Nepal*
[3] *Qingdao Institute of Bioprocess and Bioenergy Technology, Chinese Academy of Sciences, Beijing, China*

ABSTRACT

With the major objective to isolate and identify the bacteria, a total of 300 samples (100 each of *Pani, Puri* and *Masala*) were collected and processed at the Microbiology laboratory of Birendra Multiple Campus for 4 months. *Pani, Puri* and *Masala* samples were collected and were transported aseptically within 2 hours to the laboratory and further processed by standard microbiological techniques. Altogether, 212 isolates of 13 different bacteria were obtained including *Escherichia coli*, *Klebsiella* spp, *Enterobacter* spp, *Citrobacter* spp, *Acinetobacter* spp, *Pseudomomas* spp, *Proteus mirabilis, Proteus vulgaris, Salmonella* Typhi, *S.* Paratyphi , *Shigella* spp, *Staphylococcus aureus* and *Bacillus cereus* among which 104(49.1%) isolates were from *Masala*, 72(34%) isolates were from *Pani* and 36(17%) isolates were from *Puri. S. aureus* 50(23.5%) and *E. coli* 30(14.2%), were highly isolated Gram positive and Gram negative bacteria respectively. Moreover, 11(36.7%) *E. coli*, 8(50%) *Pseudomonas* spp, 6(33.3%) *S.* Typhi and 4(14.8%) *S. aureus* were MDR. A chi-square test is used to assess the association of bacterial contamination of *Panipuri* with age, literacy, gender, personal hygiene and area of sample collection. Finally, significant associations were noted between them. Consequently, the findings of this study may be helpful to the concerned authorities to implement policies to abate the rate of food-borne infections in Bharatpur city.
Keywords: Street-vended foods, unhygienic, *Pani, Puri, Masala,* Isolates, MDR

Professional Biography (100-150 words)

I am Sujan Khadka (first author), MSc Scholar in Central China Normal University, China where I am currently studying Biochemistry and Molecular Biology. I have conducted and still doing research works which are going to be published soon.
Sanjib Adhikari has completed his Master Degree in Microbiology from Gurunanak University, Punjab as being a Scholar of Silver Jubilee Scholarship from an Indian Embassy. After accomplishment of his Master degree, he has been working as a head of department of Microbiology in Birendra Multiple Campus, Chitwan, Nepal. He has published his article entitled "**Production, Purification and Characterization of Hemicellulose from Penicillium janthinellum 3CHP"** in Nepal Journal of Science and Technology.

Kamal Rai is Phd Scholar in Chinese Academy of Sciences, Beijing. He has accomplished his Master Degree from Trichandra College, which is affiliated to Tribhuvan University, Nepal. He has also published his research article entitled "**Bacteriology of enteric fever cases at Nepal Police Hospital, Kathmandu"** in Nepal Medical College Journal.

Recent Publications

- Adhikari S and Chadda BS (2013). Production, Purification and Characterization of Hemicellulose from Penicillium janthinellum 3CHP. Nepal Journal of Science and Technology 14(2):123-130.
- Rai K, Shah PK., et al (2015), Bacteriology of enteric fever cases at Nepal Police Hospital, Kathmandu Target symptoms and target mechanisms. Nepal Med Coll J 2015 17(1-2):54-57.



Email Id:sukha11@yahoo.com

Any Comments:

I am really thankful to all the teams who have provided me a chance to submit this abstract. I have done several research works and all of them are on the way of publication. If I get this chance to present this paper, I will learn more about several other research progresses in the world by attending the conference. I will be absolutely glad to get this opportunity. The above research work was unique work done in our area, probably the first one. Though it doesn't include any molecular level analysis, it can explain about the food contamination, increasing antibiotic resistance and behaviour of vendors responsible for these consequences.

Waiting for your positive response,

Thanks a tone

Sujan Khadka