RESEARCH NOTE

MOLECULAR CHARACTERIZATION OF *SALMONELLA* SPP DIRECTLY FROM SNACK AND FOOD COMMONLY SOLD IN LAGOS, NIGERIA

Stella Smith[1], Bolanle Opere[2], Muinah Fowora[1], Abdulrahman Aderohunmu[2], Rita Ibrahim[2], Emmanuel Omonigbehin[1], Moses Bamidele[1] and Adeniyi Adeneye[3]

[1]Molecular Biology and Biotechnology Division, Nigerian Institute of Medical Research, Lagos; [2]Department of Microbiology, Lagos State University, Ojo; [3]Public Health Division, Nigerian Institute of Medical Research, Lagos, Nigeria

Abstract. Food borne Salmonella infection is an important cause of morbidity and mortality. A total of 200 food samples commonly sold in Lagos, Nigeria comprising raw and cooked meat as well as meat products and spoilt meat were analysed for the presence of *Salmonella* spp using REVEAL serology kit, culture methods employing RPVA (Rappaport Vassiliadis agar), SSA (Salmonella-Shigella agar) and BSA (brilliant sulphite agar) and PCR method for direct detection from samples using primer salm3/4 and ST11/ST15 sets. Using the REVEAL serology kit, 74% of the samples were positive for *Salmonella* spp, while culture methods showed only 19% to be *Salmonella* spp. The PCR method revealed that *Salmonella* spp was present in 62% and 54% of the samples using primer set salm3/4 and ST11/ST15, respectively. However, the primer set ST11/ST15 was more reliable in the identification of *Salmonella* spp directly from food samples. These tools should prove useful in the continuous monitoring and control strategies especially for ready-to-eat foods, as well as in retail meat outlets, slaughter houses, fast food restaurants for the prevention and reduction of this pathogen that is of significant importance in the food industry.

Keywords: *Salmonella*, food samples, PCR, Nigeria

Correspondence: Dr SI Smith, Molecular Biology and Biotechnology Division, Nigerian Institute of Medical Research, PMB 2013, Yaba, Lagos, Nigeria.
Tel: +234 1 4822269; Fax: +234 1 342 5171
E-mail: stellaismith@yahoo.com