



Intra- and Inter-individual Variation in Population of *Lactobacillus* and *Bifidobacterium* in Faeces of Some Healthy Individuals

O. S. Fadare^{1,2*}, S. Sabri², A. Pachenari², A. O. Momoh¹ and O. A. Makinde³

¹Department of Biological Sciences (Microbiology Unit), Elizade University, Ilara Mokin, Nigeria.

²Department of Natural Sciences, School of Science and Technology, Middlesex University, London, England.

³Department of Microbiology, Adekunle Ajasin University, Akungba Akoko, Nigeria.

Authors' contributions

This work was carried out in collaboration between all authors. Author OSF designed the study performed the test, performed the statistical analysis, wrote the protocol, wrote the first draft of the manuscript and managed literature searches. Author SS also performed the test. Author AP supervised the test. Authors AOM and OAM performed the statistical analysis. All authors read and approved the final manuscript.

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ABSTRACT

Aims: To evaluate the variation of *Lactobacillus* and *Bifidobacterium* population within and between healthy individuals.

Methodology: Five healthy participants were recruited, and advised not to consume yoghurt, antibiotics, alcohol and steroid during the study. Three (3) fecal samples from each participant obtained at one week interval (total of 15 samples a week) for three weeks were examined for each subject bacteria. The samples were collected in sterile specimen jars and immediately taken to the laboratory for analysis. MRS and BIM-25, a selective medium were used for the enumeration of *Lactobacillus sp* and *Bifidobacteria* respectively using plate count method. Target bacteria were confirmed by PCR technique and biochemical tests.

*Corresponding author: E-mail: shadrach_fadare@yahoo.com;

Results: All isolates picked from their respective selective media were confirmed to be *Lactobacillus* and bifidobacteria. The confirmation was carried out using both biochemical tests and PCR. The results of the statistical analysis of the data obtained using SPSS version 16 showed that intra-individual variation of the population of *Lactobacillus* and Bifidobacteria was significantly lower than inter-individual variation at $P < 0.05$.

Conclusion: This study establishes the fact that the composition level of *Lactobacillus* and *Bifidobacterium* varies within and between healthy human gut at different points in time.

Keywords: Gastrointestinal tract; *Lactobacillus*; *Bifidobacteria*; variation; population; microbiota; probiotics.

Retracted