

**Joint Webinar on**  
**7<sup>th</sup> World Conference on**  
**Applied Microbiology and Beneficial Microbes**  
&  
**3<sup>rd</sup> International Conference on Applied Microbiology**  
**February 21-22, 2022 | Webinar**

**Molecular identification of probiotics isolated from some Nigerian traditional functional foods and beverage with *in vitro* probiotic traits targeting survivability potentials in the gastrointestinal tract**

Molecular identification of probiotics from traditional functional foods (Okpeye, Ogiri, Ukpaka, yoghurt, Pap or Akamu or ogi) were done. The probiotics were identified microscopically, phenotypically and biochemically using standard microbiological methods. Based on the 16S rDNA gene sequences, 17 of the 25 probiotics were assigned GenBank accession numbers MW672177 to MW672193 inclusive. Eight of the probiotics corresponded to no similarity. Sequencing results identified probiotics belonging to four taxa of LAB as *Lactobacillus spp* (7), *Bacillus spp* (5), *Pediococcus spp* (4) and *Streptococcus spp* (1) corresponding to P7 (*Lb. brevis* MW672178), P9 (*Lb. plantarum* MW672179), P10 (*Lb. paracasei* MW672180), OK14 (*L. brevis* MW672185), OK15 (*L. plantarum* MW672186), U20 (*Lb. fermentum* MW672188), Y13 (*Lb. brevis* MW672191); O19 (*B. cereus* MW672182), O20 (*B. cereus* MW672183), U10 (*B. cereus* MW672187), U13 (*B. cereus* MW672193), Y11 (*B. cereus* MW672189); P16 (*P. pentosaceus* MW672181), OK1 (*P. pentosaceus* MW672184), Y12 (*P. pentosaceus* MW672190), Y16 (*P. pentosaceus* MW672192) and P2 (*S. thermophiles* MW672177) respectively. The probiotics were highly tolerant to 4.5 and 6.5 % w/v NaCl. The probiotics retained viability in the presence to pH 2.5 and 0.3 % bile salt at an infinitesimal reduction of cell viability ranging from 0.31 – 0.89 % cfu/ml and 0.08 – 6.04 % cfu/ml respectively. The absence of bile salt hydrolase in all probiotics suggest the isolates were sampled from non - bile environment. The result showed that probiotics possesses basic *in vitro* probiotic traits sine qua non for survival potentials in the gastrointestinal tract.

**Biography**

Dr. Dinebari P. Berebon completed his PhD at the age of 39 years from the University of Nigeria, Nsukka. He is a lecturer in Department of Pharmaceutical Microbiology and Biotechnology, Faculty of Pharmaceutical Sciences, University of Nigeria, Nsukka. He has published more than 13 papers reputed journals and has served as reviewer to most reputed journals in his areas of specialization.

dinebari.berebon@unn.edu.ng



**Dinebari P. Berebon**

University of Nigeria, Nigeria