19th International Conference on
Microbial Interactions & Microbial Ecology

December 12-13, 2024

Rome, Italy

Sarcopenia and the Gut Microbiome (Clostridium symbiosum and Clostridium citroniae)

Mohanad Mahmoud
Central South University, China

Clostridium symbiosum (P < 0.001, Q = 0.035) and Clostridium citroniae (P = 0.001, Q = 0.060) are recently identified anaerobic bacteria isolated from the gut of patients with sarcopenia both Clostridium symbiosum (P < 0.001, Q = 0.035) and Clostridium citroniae thought to be associated with severity of the disease. The purpose of this study is to demonstrate the mechanisms of Clostridium symbiosum (P < 0.001, Q = 0.035) and Clostridium citroniae (P = 0.001, Q = 0.060) in developing sarcopenia. we performed cross sectional study using bioinformatics tools analyzing the whole genome sequence for Clostridium symbiosum (P < 0.001, Q = 0.035) and Clostridium citroniae (P = 0.001, Q = 0.060). The software tRNAscan-SE predicted tRNA genes. REPuter and manual alignment were used to detect repeated sequences. Basic Local Alignment (BLAST) used to determine predicted CDSs. The NCBI non-redundant protein database was used to search for the open reading frame. Ribosomal binding sites RBS script used to detect translation start codon. We searched InterProScan for protein families. Comparing their genomes reveals that Clostridium symbiosum and Clostridium citroniae have a similar metabolic pathway. The genome annotations of Clostridium symbiosum (P < 0.001, Q = 0.035) and Clostridium citroniae (P = 0.001, Q = 0.060) reveal interesting facts on mechanisms, metabolic pathways, and virulence characteristics for both strains and their association with sarcopenia. Clostridium symbiosum and Clostridium citroniae illustrated genes for protein degradation and a lack of genes for short chain fatty acids production. Clostridium symbiosum is involved in quinolinate biosynthesis, whereas Clostridium citroniae is associated with bile salt hydrolysis.

Biography

Mohanad Mahmoud was born in Darfur, Sudan, and is a graduate of Omdurman Islamic University. He obtained an MSc. degree in medical microbiology at Sudan University of Science and Technology. Currently, he is a Ph.D. student at Central South University in China . He has expertise in medical microbiology and a passion for improving health and wellbeing. He has years of experience in evaluation, and teaching both in hospitals and at Alfashir University in Sudan.

Received: October 28, 2024; **Accepted**: October 29, 2024; **Published**: December 13, 2024