EZE J. I., J Food Process Technol 2012, 3:10
http://dx.doi.org/10.4172/2157-7110.S1.009

OMICS Group Conferences
Accelerating Scientific Discovery

International Conference and Exhibition on
Probiotics

November 19-21, 2012 Hilton San Antonio Airport, USA

Effect of dietary probiotic (*saccharomyses cerevisiae*) supplementation on the management of *Trypanosoma brucei brucei* infection in rats

EZE J. I.
University of Nigeria, Nigeria

Effect of supplementing diets of rats with *Sacharomyces cerevisiae* on pathogenesis of *Trypanosoma brucei brucei* infection was studied. Thirty adult male albino rats, divided into 5 groups of 6 rats each were used for this study. Groups A, B and C were fed with diets containing 0.08, 0.12 and 0.16 mg of S. cerevisiae respectively, while groups D and E were fed with diets that were not supplemented. On day 28 post supplementation (PS), groups A, B, C and D rats were each infected with 1.00 x 10^6 *T b brucei* intraperitonealy. Group E was not infected. The groups fed the diets supplemented with probiotics before *T brucei* infection did not have significant ($p>0.05$) increase in PCV but haemoglobin (Hb) concentration and red blood cell (RBC) count significantly ($p<0.05$) increased in groups B and C, and A, B and C respectively when compared with group D. However, following infection with trypanosomes on day 28 PS, the PCV, Hb and RBC count of rats in the group on diet not supplemented was significantly ($p<0.05$) lower than other groups by day 35PS. On days 42 and 49 PS, the PCV and RBC of supplemented groups were significantly ($p<0.05$) higher than the unsupplemented group but lower ($p>0.05$) than group E. The parasitaemia level did not show any significant ($p>0.05$) difference on day 35 PS, but on day 42PS, groups B and C had significantly ($p<0.05$) lower parasitaemia than group D but not with group A. Supplementation resulted in increases in antibody titres to sheep red blood cells which later declined following *T. brucei* infection, but remained higher than the pre supplementation titres. At termination of the study (i.e. day 49 PS) supplemented groups had significantly ($p<0.05$) higher antibody titres than either the infected or the non infected controls. The total and differential leucocyte counts followed a similar pattern with initial increases in counts following supplementation followed by reductions after *T. brucei* infection. The results are indication that probiotics can be beneficial in management of T. brucei brucei infections.

jamesifeeze@yahoo.com