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Date: Friday, March 4, 2016

Time: 12:45-14:15

Room: Hall 3 (Posters &amp; Exhibition)

**The outcome of cancer treatment is independent of baseline HIV viral load and CD4 + cell count status: a pilot study from South Africa**A. Musyoki<sup>1,\*</sup>, O. Mgorosi<sup>1</sup>, T. Msibi<sup>2</sup>, S. Monokuane<sup>1</sup>, M.J. Mphahlele<sup>3</sup><sup>1</sup> Sefako Makgatho Health Sciences University, Pretoria, South Africa<sup>2</sup> University of Limpopo (Medunsa Campus)/Dr George Mukhari Academic hospital, Medunsa, Pretoria, South Africa<sup>3</sup> South African Medical Research Council, Pretoria, South Africa

**Background:** Increased life years of HIV positive patients has increased the number of HIV related chronic conditions and cancers. On the other hand, chemotherapy and radiotherapy remain key treatment methods for cancer, which could exacerbate the immunosuppression status. There is limited data on the outcome of cancer therapy in HIV positive patients on HAART in South Africa.

**Methods & Materials:** This prospective study was based on 34 cancer patients (31 female [mean: 43 years] and 3 males [mean: 36 years]). The majority had cervical cancer (22), followed by Kaposi sarcoma (7), ovarian cancer (3) and one each with vulvar and choriocarcinoma. The study population was referred to DGMAH from Limpopo, North West and Gauteng provinces. HIV viral load (HIV VL), CD4+ and CD8+ cell count were performed through NHLS.

**Results:** Data on follow-up of 6 to 12 months post cancer therapy was available for 10 patients from the gynaecology outpatient department. The mean age was 42.4 years (range: 25 to 60). Of the 10 patients, 50% were HAART experienced at recruitment with lower than detectable HIV VL and average CD4+ cell count of 411.6 cells/ul. The other 50% of patients were HAART naive with an average HIV VL of log 4.27 and CD4+ cell count of 267 cells/ul. All patients with a detectable HIV viral load attained a lower than detectable status by the end of cancer therapy. Seven patients experienced a significant ( $p=0.0001$ ) reduction of CD4+ cell count (the mean was from 261.67 to 41 cells/ul) by the end of cancer therapy. Seven patients achieved complete remission of cancer without complications after an average 8.5 (range: 6 to 12) months of follow-up. Complications were noted in two patients at the end of cancer therapy. One patient was lost to follow-up.

**Conclusion:** Although the sample size was limited, this study demonstrated that the outcome of cancer treatment appears to be independent of baseline HIV viral load and CD4+ cell count.

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**Effects of dietary supplementation of Lactobacillus plantarum probiotics from corn slurry on growth performance, gut morphometry and profile of the intestinal microbial flora of Clarias gariepinus fingerlings**A. Falaye<sup>1</sup>, B.O. emikpe<sup>2</sup>, E.T. Ogundipe<sup>3,\*</sup><sup>1</sup> University of Ibadan,, Ibadan, Nigeria<sup>2</sup> university of ibadan nigeria, ibadan, ng, Nigeria<sup>3</sup> University of Ibadan, Ibadan, Oyo, Nigeria

**Background:** Aquaculture growth is considered to be more rapid than all other animal food sectors. The increase in the intensification and commercialization of aquaculture production has been associated with need to overcome challenges such as development of appropriate feedstuffs as well as improvements in water-quality management. Many feed ingredients are not fully digested by fish, however, the addition of probiotics to feed can enhance digestibility of feed components. Hence, this Study was conducted to evaluate the effects of *Lactobacillus plantarum* on growth performance, gut morphometry and profile of the intestinal microbial flora of *Clarias gariepinus* fingerlings.

**Methods & Materials:** A total of 150 *Clarias gariepinus* fingerlings ( $2.35 \pm 0.48$ g/fish) were randomly allocated to five treatments, with three replicates of ten fish. *Lactobacillus plantarum* isolated from corn slurry was cultured using standard procedures. Five isonitrogenous diets were formulated at 35% crude protein (T<sub>0</sub>, T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub> and T<sub>4</sub>) with *L. plantarum* at inclusion levels of 0%, 0.5%, 1.0%, 1.5% and 2.0% respectively using Pearson Square method. Fish were fed twice daily at 09.00 and 17.00 hours at 5% body weight per day for 12 weeks.

**Results:** Results showed that weight gain and specific growth rate of *Clarias gariepinus* increased with increasing level of probiotics. The lowest Mean Weight Gain, and Specific Growth Rate, was recorded in T<sub>1</sub>, while the highest was obtained in T<sub>4</sub>. Feed conversion ratio was marginally lower in T<sub>4</sub> (1.97) when compared with other treatments. Villi length was statistically similar in T<sub>0</sub>, T<sub>1</sub> and T<sub>3</sub>, but was significantly higher ( $P<0.05$ ) in T<sub>4</sub>. Villi width was however significantly high in T<sub>1</sub>, T<sub>2</sub>, T<sub>3</sub> and T<sub>4</sub>. The highest cryptal depth was recorded in T<sub>4</sub> which was significantly higher, while the least value was recorded in T<sub>1</sub>. T<sub>4</sub> gave the highest enterobacteriaceae count while the least count was recorded in T<sub>0</sub>.

**Conclusion:** From these results, the use of *Lactobacillus plantarum* as a supplement in diets may be useful in improving growth performance, through increased absorptive capacity as well as increasing the intestinal microbial count in the gastro-intestinal tract of cultured *C. gariepinus* fingerlings.

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