1116-92-128 **Andrea Vazquez Quiles*** (andreavazquez054@gmail.com), PO BOX 2227, Toa Baja, PR 00951. *Cyclophosphamide induced loss in the murine olfactory systems.*

Chemotherapy is one of the most widely renown treatments of cancer, attempting the stop of cancer development through the use of drugs. Cyclophosphamide (CYP) is usually its primary agent, and known to have long term side effects, such as fatigue, hair loss and disruption in the sense of taste. The main reason for the latter is that CYP targets cells with high turnover rate,(not cancer directly) that are all cells that proliferate quickly. If the sense of smell depends on the presence of olfactory neurons that undergo replacement similar to the taste system; could CYP affect the main olfactory epithelium (MOE) and the vomeronasal organ (VNO)? To verify this, approximately 60 male mice received a single intraperitoneal injection of CYP, 16 were given saline, and they were sacrificed 1 to 105 days post injection. The heads were sectioned and the sections were processed with Ki67 antibody to label any cells undergoing division (G1/S/G2/mitosis). Clear differences were observed between the MOE and the VNO, but both tissues demonstrated a decrease in Ki67 labeling, especially in days 2/14 & 60. There was evident recovery on the day 30. So far, data suggests that the tissue was very affected by the CYP and that the MOE was more affected than the VNO. (Received August 03, 2015)