

IMABONG JEMIMA IBANGA

STUDENT, BIOLOGY



THE EFFECTS OF ACETAMINOPHEN (PARACETAMOL) EXPOSURE ON THE DEVELOPING EMBRYOS OF THE CHICKEN, (GALLUS GALLUS DOMESTICUS)

Acetaminophen is the most popular analgesic-antipyretic drug today. It is freely recommended to pregnant women and children, because it is considered relatively safe when compared to other non-steroidal anti-inflammatory drugs. The aim of this research is to compare the effects of different concentrations of acetaminophen on chicken embryos. This research is prompted by the recent legalization of Marijuana in Canada, and the subsequent research that has ensued concerning the endocannabinoid system due to legalization. Research on the endocannabinoid system has revealed that apart from cannabinoids, acetaminophen can also excite and modulate the endocannabinoid system as well. This discovery has led to several research questions being asked, mainly focusing on the actual safety of acetaminophen use during pregnancy. This experiment employs the use of immunohistochemical imaging techniques to visualize the modulations that different dosages

of acetaminophen might have on the endocannabinoid system during early pregnancy. To accurately perform this experiment, the chicken will be used as a model system, because it offers ease of accessibility and embryo manipulation. Statistical analysis of results will be carried out using excel and One-Way ANOVA, and the comparative analysis of immunohistochemical pictures will be displayed.

Research Advisor: Dr. Mariola Janowicz and Dr. John Walsh