INVESTIGATION OF HISTOLOGICAL EFFECTS OF IRON-FORTIFIED RICE TO THE SELECTED ORGANS OF *Mus musculus* (ALBINO MICE)

An Undergraduate Research Study presented to

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ABSTRACT

The study determined the histological effect of Iron-fortified rice diet on the selected organs of *Mus musculus* (albino mice) in comparison with normal rice diet. A total of 20 mice were divided equally into four different treatments for eight weeks. The control (T0) was given normal mice feed, treatment 1 (T1) was given mice feed mixed with iron-fortified rice with a ratio of 1:4, treatment 2 (T2) were given mice feed mixed with normal rice with the ration of 1:4, and treatment 3 (T3) was given normal rice mixed with iron-fortified rice with a ratio of 1:1 and the selected organs (pancreas, liver, spleen, brain, heart, and kidneys) of each albino mice were sampled for histological examination. The mice under T0 produced less evidence of histological change compared to T1, T2, T3, degrees of histological change for each treatment group in that order. There was higher incidence of hemosiderin deposits in T2 and T3 in which the researchers hypothesized that normal rice has an inhibitory effect on iron metabolism. The results highly suggest that iron-fortified rice in the diet of albino mice has little to no histologic effect on the selected organs compared to normal rice.