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Study of Methylmercury Biomagnification in Wistar Rats (*Rattus norvegicus*) Fed with Methylmercury contaminated Tilapia (*Oreochromis niloticus*)

In the present paper, the biomagnification of methylmercury was studied in Wistar rats (*Rattus norvegicus*) fed with tilapia fish (*Oreochromis niloticus*) that were fed with diet contaminated with methylmercury. Wistar rats have several characteristics common to mammals in general and are frequently used in biomedical studies of physiological and morphological nature. Two groups of fish were fed with contaminated diet (Hg concentration 1 = $1.03 \pm 0.15 \mu\text{g g}^{-1}$ and Hg concentration 2 = $8.27 \pm 1.25 \mu\text{g g}^{-1}$) and one group was fed with diet not contaminated with methylmercury (control group). The experiment was conducted for a period of forty two days. Afterwards, two groups of Wistar rats were fed, via gavage, with tilapia fish muscle diets, contaminated with methylmercury from the previous experiment (Hg concentration 1 = $0.31 \pm 0.03 \mu\text{g g}^{-1}$ and Hg concentration 2 = $3.04 \pm 0.94 \mu\text{g g}^{-1}$) for twenty eight days. Another group was fed in the same way with fish muscle diet from the controls of the tilapia experiment. The rats were fed with one gram of crushed and homogenized fish feed and afterwards they were fed *ad libitum* with their usual pelletized feed. In the rats, the blood and biochemical parameters as well as somatic relations were analyzed periodically and did not present significant differences between the evaluated groups. In the other hand, the rats that were fed with fish muscle containing the highest level of added methylmercury presented higher bioaccumulation of Hg in the kidney, liver, spleen, muscle and brain if compared to the group with lower added Hg. Methylmercury was determined as total Hg by CV AAS. The results showed the following comparative degree of accumulation of Hg: kidney > liver > spleen > muscle = brain.