

**Behavior of Digestives Enzymes During the Larval Development of  
*Lithobates catesbeianus*.**

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The bull frog tadpoles (*Lithobates catesbeianus*) are omnivores and carnivores as adults and such change in eating habits requires changes in the digestion physiology. Thus, the objective of this study was to evaluate the enteric maltase and pancreatic enzymes trypsin and amylase activity during larval development of *L. catesbeianus*. The tadpoles were kept in aquarium, at 27° C and separated by developmental stage. Pancreas and intestine were removed from 100 animals of each stage, frozen in liquid nitrogen and stored at -70°C for later homogenization and enzymes activities assay. The enzymes had presented activity since the 26<sup>o</sup> stage; amylase (3.17 U.mg<sup>-1</sup>), trypsin (44.30 U.mg<sup>-1</sup>) and maltase (26.99 U.mg<sup>-1</sup>), at 31 stage the activities of amylase, 7.60 U.mg<sup>-1</sup>, and trypsin, 92.78 U.mg<sup>-1</sup>, increased more than twofold, while maltase grow was less expressive, 29.03 U.mg<sup>-1</sup>. From stage 36 to 40 all enzymes activities showed expressive increase (amylase 28.19 U.mg<sup>-1</sup>, trypsin 261.97 U.mg<sup>-1</sup>, and maltase 81.62 U.mg<sup>-1</sup>). However, from stage 41 the enzymes activities decreased, found more accentuated in amylase (0.19 U.mg<sup>-1</sup>) and trypsin (5.85 U.mg<sup>-1</sup>) in comparison to maltase (14. 19 U.mg<sup>-1</sup>). In the 45 stage, there was further increase in activity, and values of 7.60 U.mg<sup>-1</sup> for amylase, 83.93 U.mg<sup>-1</sup> for trypsin and 24.05 U.mg<sup>-1</sup> for maltase. The change of enzymatic activity may be related to the animal energy needs during its development, the change of eating habits of carnivorous to omnivorous and the fact that amylase and trypsin enzymes are induced enzymes and maltase is a constitutive enzyme.

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