

## THE ROLE OF CATALASE DURING ANOXIA AND REOXYGENATION IN SNAILS *HELIX ASPERSA*.

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Many anoxic-tolerant species are capable of increase the activity of certain antioxidant enzymes during hypoxia or anoxia exposure. The antioxidant enzyme catalase was inhibited in this study (using aminotriazol) to analyze its role in the anoxia/reoxygenation process in *Helix aspersa*. The animals injected with saline and exposed to anoxia/reoxygenation (5 h anoxia) did not show any catalase modulation. The injection of aminotriazol (3 mg/kg) caused an expected inhibition (by 76%) of catalase activity in hepatopancreas. Both groups did not present alterations in Se-GPx and GST activities during anoxia/reoxygenation. In the saline group, levels of carbonyl proteins increased (by 58%) during reoxygenation in relation to anoxia-exposed animals. Surprisingly, the reoxygenation/aminotriazol animals did not present an augment in carbonyl proteins. Instead, they exhibited a decrease of 29-41% (0.5 to 12 h reoxygenation) in protein carbonyl levels when compared to the respective reoxygenation/saline snails. The administration of aminotriazol also conferred a significant diminution in hepatopancreas TBARS concentration during reoxygenation. The surprisingly diminution of oxidative damage during reoxygenation in aminotriazol-injected animals was attributed to the observed in-vitro OH-scavenger property of aminotriazol (at 5 to 50 mM, which is the hepatopancreas concentration of aminotriazol after administration). These results indicate that catalase is not of relevance for prevention of oxidative damage in snails after the stress of anoxia and reoxygenation. **Acknowledgments:** <sup>2</sup>PPG Fisiologia Geral (IB-USP) and Instituto-do-Milênio (Redoxoma-CNPq).