

Abstract

The annual killifish *Austrofundulus limnaeus* has the highest tolerance of oxygen deprivation of any vertebrate. My current research is focused on understanding the molecular mechanisms that support anoxia tolerance in this species. I have reached a stage in my research where I must forge new collaborations with researchers who have the skills and techniques required to help me advance my studies towards biomedical relevance. I propose to use the funds requested in this proposal to support the initiation of two collaborations that will allow me to translate my basic research in annual killifish embryos into mammalian models. I believe this work will make my research more attractive to the NIH in future proposal submissions. The work outlined in this proposal would occur during a planned sabbatical leave during the 2009/2010 academic year.