**Hypotheses:** a) White-nosed coatis (*Nasua narica*) in the Monteverde region of Costa Rica are infected with *Trypanosoma cruzi*, the causative agent of Chagas disease.
b) The (sero)prevalence of *T. cruzi* in white-nosed coati populations varies according to density of human habitation.

**Proposed research:** Trapping sites of coatis will be identified as rural or urban according to density of human habitation. Coatis will be captured in Tomahawk traps and anesthetized by Dr. Jesus Suarez, a skilled local veterinarian. Chemical immobilization will be accomplished using a combination of the drugs ketamine and acepromazine, following dosages that have proven successful in this species. All trap-related injuries will be addressed on site and fluid replacement therapy will be provided. Samples of blood, feces, anal secretions and ectoparasites will be collected to evaluate presence of *T. cruzi* and explore the possibility for a fecal-oral transmission cycle.

**Results:** A total of 20 individuals were captured during the field season. All non-target animals captured were immediately released. Difficulties in delineating urban vs. nonurban populations without good estimates of coati territory size in this region forced me to abandon this aspect of the study. Coati anal glands proved difficult to visualize and express; no anal gland cultures were positive for trypanosome epimastigotes. Blood and fecal samples were taken successfully from all individuals. Due to permit limitations, no ectoparasite samples were able to be imported to the United States. Blood samples are still undergoing sequencing in the lab of Michael Yabsley, our collaborator at UGA, but initial screening with PCR demonstrates that seven of twenty (35%) of individuals were infected by a species of trypanosome. Sequencing will differentiate between *T. cruzi* and non-pathogenic species such as *T. rangeli*. ChemBio’s Chagas Stat-PAK was used in the field as a preliminary evaluation of infection. All field test results were negative, but sequencing will allow us to have an idea of the sensitivity and specificity of this diagnostic tool in detecting coati infection. Blood samples were also screened for a wide variety of other pathogens: *Babesia, Anaplasma, Ehrlichia, Mycoplasma*, and *Bartonella*. Serology is also underway to determine exposure of coatis to canine distemper virus, canine parvovirus, and feline panleukopenia virus. Feces are being examined for presence of *Baylisascaris procyonis* and other gastrointestinal parasites, but results are still pending. In this sense, the samples that I collected during my project will serve to answer questions about wildlife health in this community that reach far beyond the scope of my initial STAR proposal.