

Exciting new research collaboration is underway between the University of Nairobi (UoN), Universities of Kentucky (UKY) and Georgia (UGA) in the United States. This research is a continuation of the work between Profs. Stephen G. Kiama (UoN) and Ashley W. Seifert (UKY) who uncovered the Natural ability of African Spiny mice (Acomysspp.) to regenerate skin and ear wounds (Seifert et. al., Nature, 2012). Now, with funding from the U.S. National Science Foundation and the Office for International Science and Engineering, Kiama and Seifert along with Prof. Vanessa O. Ezenwa (UGA), postdoctoral scholarDr. Thomas R. Gawriluk (UKY) and graduate student Dr. John M. Kimani (UoN) will investigate the interaction between the immune system and regeneration in Acomys. Over the next four years, the team will be testing the hypothesis that a trade off exists between the innate and adaptive immune response and the ability to regenerate. To complete the project, the team is using wild Acomys and a sympatric mouse species that cannot regenerate and is performing a series of experiments at the Department of Veterinary Physiology and Anatomy. This study is one of the first to characterize the relationship between immunity and regeneration in a wild mammal, and will provide invaluable data on the understanding of wound healing in mammals. Pictured above and below are Thomas Gawriluk and John Kimani collecting serum from mice.