

December 4, 2009

Technical Report

US Department of Energy

Grant type: Equipment and infrastructure support

Project Title: Bioenergetics Research Initiative

Project Period: 08/01/05 – 07/31/07

Principal Investigator: Scott Trappe, Ph.D.

General Project Overview and Final Technical Report

This equipment grant was utilized to enhance the infrastructure of the Human Performance Laboratory at Ball State University. The laboratory's primary focus is human based exercise physiology conducting research in the areas of sports performance, aging and exercise, unloading (space flight and bed rest), pediatric exercise and clinical exercise physiology. The main equipment supported by this grant was an ultrasound unit for cardiac and skeletal muscle imaging at the whole organ level, microscope system for micro imaging of skeletal muscle tissue, running treadmill for energy expenditure assessment, autoclave for sterilization, and upgrade to our dual x-ray absorptiometry (DEXA) system that was utilized for body composition measurements. The equipment was involved in several human metabolic and skeletal muscle research projects as highlighted above. In particular, this equipment served a support role for other large-scale clinical projects funded by the National Institutes of Health (NIH), National Aeronautics and Space Administration (NASA), and corporate sponsors.