

# RESEARCH BRIEFS

## Exercise and Immune System Cells

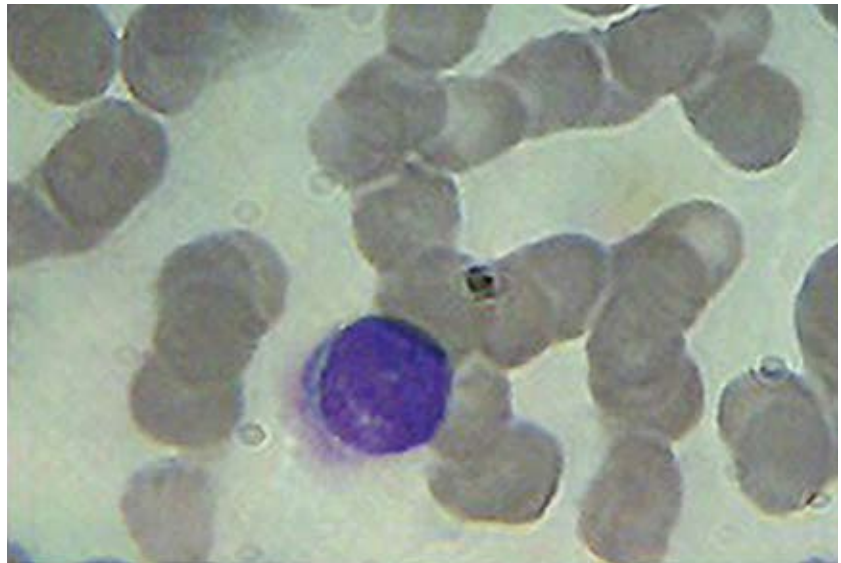
Dr. James W. Navalta, Department of Physical Education and Recreation,



*Dr. James Navalta*

was awarded a Summer Faculty Research Scholarship to study the elimination of immune cells through apoptosis, which is a genetically

directed cell death process. As the immune system represents a line of defense against foreign pathogens, it is necessary to maintain a balance of immune system cells for good health.



*A white blood cell, called a lymphocyte (in purple), surrounded by lighter colored red blood cells. Lymphocytes carry out a variety of immune functions including making antibodies to help deal with future sickness, as well as direct cell to cell killing of foreign microbes.*



The project will study immune cell death brought on by cycling exercise under three conditions: rest, immediate post-exercise, and two hours after exercise. The search for apoptotic cells due to exercise will be conducted microscopically.

Dr. Navalta's tests will be innovative because most similar tests have used the treadmill alone, and

with Dr. Brian K. McFarlin of the Laboratory of Integrated Physiology in the Department of Health and Human Performance at the University of Houston. Dr. McFarlin has conducted cycling tests and compiled a database of blood smears that will be used for the evaluation of cell death brought about with this type of exercise.

***Too few immune cells leave the body vulnerable to illness. Too many immune cells can be harmful, if the cells lose the ability to recognize one's own body, as in autoimmune disorders.***

comparisons to other exercises which are non weight-bearing (such as cycling or swimming) have not been investigated. Thus, he will formulate a comparison of immune cell death by using two different exercise types.

This collaborative project will be completed in cooperation

Outcomes of this critical project will no doubt improve exercise recommendations for many people. Moreover, Dr. Navalta will present his findings at regional and national sports medicine conferences, and he plans to submit a journal article for *Medicine and Science in Sports and Exercise*.

## What Motivates Students to Cheat?

Dr. Michelle W. Trawick is an associate professor of economics who is studying cheating in business courses. Her goal is to try to stop the cheating by discovering the motivation for it. Curbing this behavior is at the forefront of ethics literature, and it is a hot topic in business programs because of very public, real-world examples of unethical decision-making.

Existing research shows that students who select into business majors are more likely to cheat than their



*Dr. Michelle Trawick*

non-business peers. Researchers believe that cheating is greater in business majors because business students are motivated to perform well for extrinsic purposes (“show me the money”), such as getting the best job possible right out of college, instead of for intrinsic purposes (the love of learning). With these results fairly well established, Professor Trawick will look at business majors at two institutions to determine if cheating motivation varies across major fields of study within business. For example, is it possible that accountants are motivated differently than economists?

The literature further suggests that there are cures to cheating in business courses through the application of a variety of in-class deterrents. Professor Trawick’s research will test for the efficacy of these in-class deterrents across majors within the college. Perhaps, if motivation differs across majors, then successful deterrents will differ as well.

The results of Professor Trawick’s work will benefit students in business courses at WKU and in their careers after graduation.

## Tango!

Clifton Brown, of the Department of Theatre and Dance at WKU, was recently awarded a Junior Faculty Scholarship to study an intriguing social dance, the Tango, in Buenos Aires. He will study the dance as it has evolved and as it reflects the origins of the dance as an Argentinian folk tradition. He will work with private instructors and with a tango master at public dance schools.

The experience will expand his knowledge and choreographic expertise, as well as improve his partnering skills, movement repertoire, and instructional technique. WKU students will benefit culturally and from the breadth of new instruction Professor Brown will bring back. He will also



*Clifton Brown*

create a new work for the WKU Dance Company and will use the new knowledge for future projects involving national and international dance companies. A further outcome will be the creation of university and public workshops in a global dance form that will enhance the traditional course in ballet, modern dance, and jazz.

