MARC Undergraduate Student Training in Academic Research (U-STAR)

Funded by: National Institutes of Health

Award: $2,044,968.00

Duration: June 1, 2012 – May 31, 2017

Units: Department of Chemistry/College of Agriculture, Human, and Natural Sciences

Project Contact: Dr. Margaret Whalen
mwhelen@tnstate.edu
(615) 963-5247

Collaborators: Department of Biological Sciences, TSU
Department of Psychology, TSU

INVESTIGATOR

Margaret Whalen, Ph.D.

Dr. Margaret Whalen is a full professor in the Department of Chemistry of the College of Agriculture, Human, and Natural Sciences at Tennessee State University.

Principal Investigator,
MARC Undergraduate Student Training in Academic Research (U-STAR)

Read more...

SUMMARY

The MARC*U-STAR program provides research experience and financial support for 10 students from underrepresented groups who intend to pursue a Ph.D. degree in Biomedical Sciences (biology, chemistry, biochemistry, psychology, epidemiology). Students participate in the program for two years. Students must have 60 or more credit hours by the time they begin the MARC program (June 1 of each year) and a grade point of 3.0 or higher. Students who participate in the program must also be able to participate in Academic Year Research (about 15 hours a week) and full-time summer research at another institution (i.e. any University that provides summer research opportunities) for a minimum of eight (8) weeks of the summer.

Tennessee State University has had a MARC/MARC*U-STAR Program for the last 30 years, which was directed by Dr. Prem Kahlon in the Department of Biological Sciences until his retirement in 2012. During this period the number of trainees has ranged from 6-12 per year. TSU’s program has trained 149 students and has a 100% graduation rate with an average GPA of 3.5. Of these 149 trainees, over 80% have gone on to do post-baccalaureate training.

Over the past 20 years our trainees have given over 300 presentations on their research at local, regional, and national scientific meetings. Over 100 of these presentations were at national meetings, including those of the American Chemical Society (ACS), American Society for Cell Biology (ASCB), and American Society for Biochemistry and Molecular Biology (ASBMB) as well as the Annual Biomedical Research Conference for Minority Students (ABRCMS). Our students have received a total of 57 awards for their research presentations over this time. Research conducted by our trainees has resulted in numerous peer-reviewed publications.

Minority Access to Research Careers (MARC)
Margaret Whalen, Ph.D.
Professor, Department of Chemistry
College of Agriculture, Human, and Natural Sciences
Tennessee State University

Dr. Margaret Whalen is a full professor in the Department of Chemistry of the College of Agriculture, Human, and Natural Sciences at Tennessee State University. She received a B.S. in Chemistry from the South Dakota School of Mines and Technology and a Ph. D in Biochemistry from the University of New Mexico (UNM). She did post-doctoral work at Los Alamos National Laboratory and in the Department of Medicine at UNM.

In 1999, Dr. Whalen joined Tennessee State University (TSU). She has been the Program Director of the Minority Access to Research Careers Undergraduate Student Training in Academic Research (MARC*U-STAR) program since June of 2012. Additionally, she serves as the Co-principal Investigator on the Meharry Medical College, Vanderbilt Ingram Cancer Center and Tennessee State University: Partners in Eliminating Cancer Disparities grant.

Dr. Whalen’s research examines the effects of selected environmental contaminants on immune function. The majority of her studies have focused on alteration of the immune function of human natural killer (NK) cells. NK cells are capable of killing tumor cells and virally infected cells and they and other immune cells are responsible for secreting factors that regulate immune responsiveness and influence cancer development. Thus, contaminants that alter the ability of these cells to perform their functions could increase the risk of tumor incidence and/or infections.

Selected and Significant Publications

