On April 20th, the culmination of over 275 hours of research resulted in oral and poster presentations by the 2012-2013 McNair Scholars. Topics ranged from antiretroviral drugs on repairing DNA to locomotor evolution in primates. They also included humanity and social science related topics such as the representation of a Hindu goddess Kali to outcomes of school teacher burnout.

In addition to the 16 oral presentations, the scholars also presented their work in poster form. “I had never created a poster before,” McNair Scholar, Shelby Manning stated. “I worked hard on it and I think it came out really well.”

The luncheon provided an opportunity for the program and scholars to thank the faculty members for their diligent role as mentors. Not only do mentors assist in conducting academic research, they also help scholars navigate the graduate school process. Moreover mentors view this as an opportunity to introduce students to the world of the academia, often going far beyond the traditional student-teacher roles.

“My mentor, Dr. Carol Ward, really embodied the culture of academia in anthropology and has brought me into it,” said McNair Scholar, Zachariah Winkler. “The McNair Program and my mentor have allowed me to develop into what I envision a scientist to be. I still have a lot to work on in becoming an actual academic, but I am fully doing what I have always wanted to do.”

After submitting a final research paper to the program, five to six scholars will be selected by an editorial review board for inclusion in the twenty-second volume of the *MU McNair Scholars Journal*. 
The 2012-2013 McNair Scholars have already made plans for their future. Many are graduating and heading off to graduate school, while those not graduating have already lined up their summer and fall plans.

**Graduating Seniors Graduate School Plans**

Brittany Bennett has accepted a position at Edward Jones in St. Louis, MO as part of their Rotational Development Program. She plans to pursue her MBA after a few years.

Darnell Cage will be pursuing a law degree part-time at St. Louis University this fall and will be a structural engineer for Boeing in St. Louis.

Antoine Culbreath will be attending Ball State University where he will pursue a Master's in Applied Behaviors Analysis with an emphasis in Autism.

Tim Cunningham graduated in December 2012 and is remaining at Mizzou to pursue his fully funded Master’s in Business Administration.

Megan Dowdle was awarded a Biotechnology Training Program traineeship and will pursue her PhD in Biochemistry at the University of Wisconsin-Madison.

Stacey Frasher received the Ridgel Fellowship to pursue her Doctor of Nurse Practice specializing in Family Nurse Practitioner here at MU.

Meron Ghidey is off to Baylor University’s Institute of Biomedical Studies to pursue his PhD.

Carmen Harjoe will be attending a zoology PhD program in Oregon State University with full funding.

Carolyn Lacey is attending the University of Missouri as a graduate student in the Molecular Microbiology and Immunology PhD Program.

Carrie McKinley will still be looking to pursue a doctoral degree in behavioral neuroscience researching substance abuse disorders.

Paulos Mengsteab is off to the University of Washington in Seattle, Washington to enter a post-baccalaureate program in biomedical engineering.

Akia Parks will attend Georgia Tech and Emory where she will pursue a PhD in biomedical engineering.

Rosalyn Reese is taking a year off before pursuing her graduate degree.

Ashley Schulz is obtaining more teaching assistant experience here at Mizzou before pursuing her Masters of Science in Forestry degree.

Jessica Stokes will be attending the University of Texas-Austin for her PhD in inorganic chemistry.

Jerry Steward is entering a post-baccalaureate prep program here at MU.

Chad Tucker was accepted into multiple Masters of Music programs and expects to pursue it after taking a year off.

Michelle Tang received full funding to pursue her PhD in plant biology at the University of California, Davis.

**Non-graduating Scholars Summer Research/Internship Plans**

Jeremy Clincy is continuing his work this summer in Dr. Sarafianos’ lab at MU.

Amber Forbis is staying at home with her three children before entering graduate school in Fall 2014.

Jale’Rosa Hickman is shadowing a school psychologist in Oceanside, California.

Maranda Johnson is beginning a new research project this summer with her McNair Mentor Dr. Cohen.

Alicia Lorio will be a research assistant this summer for Dr. Manfra in the nursing program at Mizzou.

Shelby Manning is interning at Guardian Angel Community Services in Joliet, Illinois as a Sexual Assault Services Assistant.

Emma Rosenow will be participating in a summer geology field camp in Wyoming.

Sital Uprety is conducting research this summer at Texas A&M in College Station, Texas.

Caitlin Vore is conducting research MU as a Howard Hughes Medical Institute Intern this summer.

Zachariah Winkler is off to Northern Kenya to conduct paleoanthropological work with George Washington University.
Advice from a Scholar: Marc Canellas

We love hearing from past scholars. 2011-2012 McNair Scholar Marc Canellas gives some sage advice to McNair Scholars.

I was working with a new student in my aerospace engineering lab here at Georgia Tech last week and realized that some of the skills I was suggesting he learn over the summer to prepare for graduate school were exactly the types of skills that future McNair Scholars would benefit from. McNair already made me much more prepared than the typical graduate student; I’d like to use this opportunity to give back.

1. **Learn LaTex and JabRef software.** LaTex is a free manuscript processing language/software which is the standard for theses, dissertations, research papers, and conference submissions in the STEM fields. (I have even seen LaTex used for political science, economics, and philosophy papers.) JabRef is the free, reference management software comparable to EndNote or Zotero. Both are available across Linux/Mac/Windows platforms and take a few weeks to get used to but the resulting written documents will be well worth the effort.

I remember spending many evenings working with other McNair Scholars on our poster and oral presentations for the McNair Scholars Conference because we cared deeply about giving high-quality presentations. LaTex has become the standard writing software because it enables writers to create high-quality, professionally typeset, and well-structured documents. With LaTex, the content and the format of the document are clearly separated. One can focus solely on the content without bothering about the layout and let the software take care of the typesetting, structuring, page and figure formatting, in-text citations, etc. If the layout does need to be explicitly altered, then the LaTex code can be easily edited to customize the layout. Overall, learning LaTex has been one of the most valuable skills I have learned in graduate school so far, and I definitely wish I had used it when writing my thesis for the McNair Scholars Program.

2. **Learn how proposals are written.** External funding forms the financial foundation for research programs at most universities and for many R&D programs in industry with proposal-writing skills being absolutely essential to earning that funding. Through my current research project, I have had the opportunity to assist in the preparation of a grant proposal which was a far different experience from preparing my thesis for the McNair Program. Whereas theses focus solely on the academic matters of research such as what is your new approach and what are the interesting results; proposals care just as much about the practical matters of research such as qualifications, resources, funding, and timelines. A proposal is not a story of what has already been completed as much as it is an argument to convince someone else that your project is important and should be funded i.e. why it is important and relevant to the funding agency, and why the project will be successful. As a learning exercise it can be used to teach the business and financial side of research and to teach a new style of argument for a research project. Ultimately, whether students wish to enter academic or industry research programs, proposal writing skills and the perspectives that come with it will be absolutely necessary.

I hope these suggestions are useful. I miss hanging out with the McNair Scholars and each of you.

Marc Christopher Canellas,
Master’s Candidate – Aerospace Engineering,
Georgia Institute of Technology
NSF Funding for Recent McNair Alums

The McNair Scholars Program at Mizzou continues interacting with scholars and encourages them to seek finding additional funding for their studies. 2010-2011 McNair Scholar Michael McCoy, and 2011-2012 McNair Scholar Marc Canellas, have done just that. Each will receive three years of support and a $30,000 stipend plus a $10,500 cost of education allowance as awardees of the National Science Foundation’s Graduate Research Fellowship Program (NSF GRFP). Michael is a Biomedical Engineering student at Cornell University. Marc is in the Aerospace Engineering program at the Georgia Institute of Technology.

They join 2008-2009 McNair Scholar, Aaron Rosengren and 2007-2008 McNair Scholar Catera Wilder both entering their second year of having a NSF Fellowship. Aaron is continuing his Aeronautical and Aerospace Engineering program at the University of Colorado while Catera is continuing her Biomedical Engineering degree at the Georgia Institute of Technology.

For more information on all our past scholars, and the more than 100 past McNair Scholars with a doctoral degree see our “Where are they Now?” Newsletter, updated each summer.

The Challenger
McNair Scholars Program
10 A&S Building
University of Missouri
Columbia, MO 65211