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WELCOME

Since 1991, the Penn State McNair Scholars Program has enriched the lives of students at Penn State. The McNair Program holds a very special place in our lives, as well as in the lives of the faculty and staff who work with our students. This publication celebrates their achievements and we offer it to our readers with pride and pleasure.

This is the fourteenth issue of the Penn State McNair Journal. We congratulate the 2007 Penn State McNair Scholars and their faculty research advisors! This journal presents the research conducted in the summer of 2007 by undergraduate students from Penn State who are enrolled in the Penn State McNair Scholars Program.

The articles within this journal represent many long hours of mutual satisfying work by the Scholars and their professors. The results of their research are published here and have also been presented at various research conferences around the country. We are especially proud to see how these students have grown as researchers and scholars. The hard work, dedication, and persistence required in producing new knowledge through research is most evident in these articles.

We very much appreciate the guidance, expertise, caring and patience of our fine group of Penn State faculty research advisors. For their ongoing support and assistance, we thank Graham Spanier, President of Penn State University; Rodney Erikson, Provost of Penn State University; Eva Pell, Senior Vice President of Research and Dean of the Graduate School; and Evelynn Ellis, Senior Director of the Office of Graduate Educational Equity, the administrative home of the McNair Scholars Program.

We are also fortunate to have the support and encouragement of many faculty and staff members who have worked with our students as social mentors or who have presented workshops and seminars on the many aspects of graduate and faculty life. You give the most precious of gifts to our students – your time in volunteering to support, encourage and nurture our Scholars’ hopes and dreams.

Teresa Tassotti
Project Director

Curtis Price
Academic Coordinator
TRIO PROGRAMS ON THE NATIONAL LEVEL

Since their establishment in the mid-sixties as part of Lyndon Johnson’s War on Poverty Program, the federal TRIO Programs have attempted to provide educational opportunity and make dreams come true for those who have traditionally not been a part of the educational mainstream of American society. The TRIO programs are funded under Title IV of the Higher Education Act of 1965. While student financial aid programs help students overcome financial barriers to higher education, TRIO programs help students overcome class, social and cultural barriers to higher education. There are eight TRIO programs, which include the original three – Upward Bound, Talent Search and Student Support Services. The additional programs are Educational Opportunity Centers, Upward Bound Math & Science Centers, the Ronald E. McNair Post-Baccalaureate Achievement Program, a dissemination program, and a training program for TRIO staff. McNair programs are located at 188 institutions across the United States and Puerto Rico. The McNair Program is designed to prepare participants for doctoral studies through involvement in research and other scholarly activities.

TRIO PROGRAMS AT PENN STATE

The 11 TRIO Programs at Penn State comprise six of the nine TRIO programs. There are two Educational Opportunity Centers, one in Philadelphia and the other serving southwestern Pennsylvania, two Talent Search Programs serving western Pennsylvania and the city of York, Ronald E. McNair Scholars Program, four Student Support Services Programs, Upward Bound, and Upward Bound Math & Science. These programs annually serve more than 6,000 students, from 6th graders through adults, all with clear potential for academic success. The programs operate at the following Penn State campuses: University Park, Wilkes-Barre, Greater Allegheny, and the Pennsylvania Institute of Technology. The programs also operate in communities across the state, often linking with middle schools, high schools, and community agencies. The programs focus on helping students overcome economic, social, and class barriers so that they can pursue education beyond high school.
MCNAIR SCHOLARS PROGRAM AT PENN STATE

Designed for low-income and first-generation college students, and students from groups underrepresented in graduate education, the McNair Scholars Program at Penn State encourages talented undergraduates to pursue the doctoral degree. The program works closely with these participants through their undergraduate career, encourages their entrance into graduate programs, and tracks their progress to successful completion of advanced degrees.

The goal of the McNair Program is to increase graduate degree attainment of students from the above-mentioned underrepresented segments of society. McNair Scholars are presented with opportunities to study and do research in the University's state-of-the-art facilities in order to hone those skills required for success in doctoral education. Through both academic year and summer program components, McNair Scholars are required to complete a series of steps that lead to their application and enrollment in a graduate program of their choice.

Since 1991, the McNair Scholars Program at Penn State has helped 162 students earn their baccalaureate degrees. Of these graduates, 133 or 82 percent have gone on to graduate school at institutions across the country and overseas. As of September 2007, 25 or 15 percent have earned their doctoral or professional degrees and another 60 or 37 percent have earned their master’s degrees only. Currently, there are 56 or 35 percent of alumni who are still enrolled in graduate programs. Among the institutions McNair alumni have attended or now attend are: Boston University, Cornell, DePaul, Harvard, Howard, Indiana University-Bloomington, John Hopkins, New York University, Ohio State, Penn State, Purdue, Stanford, UCLA, University of California-Berkeley, University of California-Davis, University of Chicago, University of Maryland-College Park, University of Michigan, University of North Carolina-Chapel Hill, and University of Pennsylvania, to name just a few.
Standing (left to right): Teresa Tassotti (Program Director), Judy Banker (Staff Assistant), Luis Ocampo, Patrick Reck, Shanya Cordis, Jennifer Mulcahy-Avery, Dan Zaccariello, Scott Test, Benjamin Ogrodnik, Curtis Price (Academic Coordinator)

Sitting (left to right): Angelica Smith, Katherine Wheatle, Fawn Patchell, Aimy Wissa, Lauren Kessler, Anjana Patel, Sue Annie Rodriguez
ABOUT RONALD E. MCNAIR

Dr. Ronald Erwin McNair, the second African American to fly in space, was born on October 21, 1950, in Lake City, South Carolina. In 1971, he received a Bachelor of Science degree, magna cum laude, in physics from North Carolina A&T State University. He continued his education at the Massachusetts Institute of Technology (MIT) where, in 1976, he earned his Ph.D. in physics.

While at MIT, McNair performed some of the earliest development of chemical and high-pressure CO lasers. He went on to study laser physics at E'cole D'ete Theorique de Physique in Les Houches, France. He was well published and nationally known for his work in the field of laser physics through the Hughes Laboratory.

In 1978, McNair realized his dream of becoming an astronaut when he was selected from a pool of several thousand applicants to be included in the first class of thirty-five applicants for the space shuttle program. Ronald McNair and six other astronauts died on January 28, 1986 when the space shuttle Challenger exploded after launching from the Kennedy Space Center in Florida.

McNair was an accomplished saxophonist; held a sixth-degree, black belt in karate; and was the recipient of three honorary doctorates and a score of fellowships and commendations. He was married to the former Cheryl Moore and is the father of two children, Reginald Ervin and Joy Cheray. After his death, Congress approved funding to honor the memory of McNair by establishing the Ronald E. McNair Post-Baccalaureate Achievement Program, which became the sixth program funded under the TRIO Programs umbrella.

“Historians, who will write about McNair, the man, will discover that there was much more to him than his scholastics achievements. Friends who knew him, say he walked humbly and never boasted about his achievements. They say his commitments were to God, his family and to the youths he encouraged to succeed.”

(Ebony, May 1986)
SPECIAL ACKNOWLEDGEMENTS

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McNair Alumni on the Move

We congratulate our recent graduates and are very proud of their accomplishments. We also extend congratulations to those Penn State McNair alumni who have earned their graduate degrees as well as those alumni currently enrolled in graduate studies.

At the graduate level...

Juan Abreu (PSU 2002)  J.D., Rutgers University
Taimarie Adams (PSU 2003)  J.D., Harvard University
Karla (James) Anderson (VSU 1999)  M.S., Central Michigan University
Michael Benitez (PSU 2001)  M.Ed., Penn State University
Angelo Berrios (PSU 2000)  M.Ed., Joseph’s University
Aaron Brundage (PSU 1995)  M.S., Penn State University
Ph.D., Purdue University
Sherese Burnham (PSU 1999)  M.S., University of Central Florida
Sofia Cerda-Gonzalez (PSU 1999)  D.V.M., Cornell University
Debbie Charles (PSU 2001)  M.S., University of Maryland-College Park
Catherine Crawford (PSU 1996)  M.Ed., Central Michigan University
Trinaty Crosby (PSU 2005)  M.S.W., Howard University
Evelyn Cruz (VSU 1996)  M.S., University of Virginia
Natasha Deer (PSU 1995)  M.A., Florida State University
Alicia DeFrancesco (PSU 1997)  M.B.A., Babson College
Lurie Daniel (PSU 2000)  J.D., New York University
Jorge Delgado (PSU 2004)  M.S., Purdue University
Eve Dunbar (PSU 1998)  Ph.D., University of Texas-Austin
Carol Elias (VSU 1997)  M.Ed., Virginia State University
Mark Elwell (PSU 2002)  M.S., Cornell University
Max Fontus (PSU 1999)  Ph.D., Indiana University-Bloomington
Michael Godeny (PSU 2002)  Ph.D., University of Florida
Antoinette Gomez (PSU 1994)  M.S., Clark-Atlanta University
Cristina Gonzalez (PSU 1999)  M.D., Albert Einstein Medical School
Sherie Graham (PSU 2002)  M.S., University of Michigan
Derek Gray (VSU 1998)  M.A., SUNY-Albany
Mark Harewood (VSU 2000)  M.S., Webster University
Afiya Harman (PSU 2002)  M.S., University of Pennsylvania
Janet Harris (PSU 1996)  M.Ed, Duquesne University
Angela Hess (PSU 1998)  Ph.D., University of Iowa
Priscilla Hockin-Brown (PSU 1996)  M.S., Michigan State University
Ph.D., Rutgers University
Dustin Holloway (PSU 2002)  Ph.D., Boston University
Marissa (Graby) Hoover (PSU 2000)  M.S., Temple University
Meng He (PSU 2002)  M.A., American University
Jeffrey Himes (PSU 1997)  M.S., West Virginia University
Alisa Howze (PSU 1994)  Ph.D., Texas A&M University
Michelle Jones-London (PSU 1996)  Ph.D., Penn State University
Leshawn Kee (VSU 1998)  M.A., Regents University
Haroon Kharem (PSU 1996)  Ph.D., Penn State University
Carrie (Hippchen) Kuhn (PSU 2001)  M.A., Stanford University
Judy Liu (PSU 1995) M.S., University of California-Berkeley Ph.D., University of California-Berkeley
Charmayne Maddox (PSU 2004) M.Ed., Penn State University
Debra Marks (VSU 1996) M.S., University of Virginia
Leanna Mellott (PSU 2000) Ph.D., Ohio State University
Robert Miller (PSU 1999) Ph.D., University of Kentucky
Bethany Molnar (PSU 1998) M.S., Northeastern University
Nicole Morbillo (PSU 1998) Ph.D., New York University
Ndidi Moses (PSU 2000) M.A., Penn State University, J.D., University of Connecticut
Hui Ou (PSU 2005) M.S., Cornell University
Mark Palumbo (PSU 2000) M.S., Wright State University Ph.D., Wright State University
Caryn Rodgers (PSU 2000) Ph.D., St. John’s University
Thomas Shields (PSU 1998) M.A., Penn State University
Christie Sidora (PSU 2000) M.A., Duquesne University
Melik Spain (VSU 1996) M.S., Virginia Tech University
Anthony Spencer (PSU 1999) Ph.D., Northwestern University
Shawntee Vertilus (PSU 1998) M.P.H./M.D., New York Medical College
Patrice White (VSU 2001) M.S., University of Maryland-College Park
Romon Williams (VSU 1995) M.S., Wake Forest University
Wendy Williamson (PSU 1995) M.B.A., Penn State University
Kenya Wright (VSU 1997) M.S., North Carolina State University
Mimi (Abel) Hughes (PSU 2002) M.S., University of California-Los Angeles now pursuing Ph.D. at same institution
Heneryatta Ballah (PSU 2004) M.A., Ohio State University, now pursuing Ph.D. at same institution
Laurian Bowles (PSU 1999) M.A., University of London, now pursuing Ph.D. at Temple University
Latia Eaton (VSU 2003) M.S.W., University of Baltimore now pursuing second masters at St. Mary’s Seminary
Felecia Evans-Bowser (PSU 2002) M.S., Texas Tech University, now pursuing Ph.D. at same institution
Natasha Faison (PSU 1999) M.S., Penn State University, now pursuing Ph.D. at Eastern Michigan University
Tiana Garrett (VSU 2001) Ph.D., University of North Carolina-Chapel Hill now pursuing MPH at same institution
Lanik Lowry (PSU 2002) M.S., University of Maryland-College Park now pursuing second masters at same institution
LaShawne Long-Myles (PSU 2001) M.Ed., Xavier University now pursuing Ph.D. at Georgia State University
Angel Miles (PSU 2003) M.A., University of Maryland-College Park, now pursuing Ph.D. at same institution
Rashid Njai (PSU 2000) M.P.H., University of Michigan, now pursuing Ph.D. at same institution
Robert Osmanski (PSU 1995) M.S., Penn State University, now pursuing second masters at Bloomsburg University
Tracie Parker (VSU 2003) M.A., Ohio State University, now pursuing Ph.D. at same institution
Zakia Posey (PSU 1999) M.S., Michigan State University, now pursuing Ph.D. at same institution
Kristin Rauch (PSU 2004)  M.S., University of California-Davis now pursuing Ph.D. at same institution
Steven Thompson (PSU 1997)  M.S., Indiana University-Purdue, now pursuing Ph.D. at Clemson University
Anthony Paul Trace (PSU 2004)  M.S., University of Virginia now pursuing Ph.D at same institution
Kahlil Williams (PSU 2001)  M.A., University of Pennsylvania now pursuing Ph.D. at same institution

At the undergraduate level...

Mohamed Faacy Farook (PSU) December 2006
Tamara Fleming (PSU) December 2006
Saalim Carter (PSU) May 2007
Dipnil Chowdhury (PSU) May 2007
Alana Curry (VSU) May 2007
Oneximo Gonzalez (PSU) May 2007
Renee Killins (PSU) May 2007
Chong Mike Lee (PSU) May 2007
Elizabeth Medina (PSU) May 2007
Michael Mollenhauer (PSU) May 2007
Shartaya Mollett (PSU) May 2007
Milton Newberry (PSU) May 2007
Courtnee Evan-Spino (PSU) May 2007
Joshua Walker (PSU) May 2007
Robert Allen Young (PSU) May 2007

On to graduate school in Fall 2007...

Saalim Carter now pursuing graduate studies in History at the University of Chicago
Dipnil Chowdhury now pursuing graduate studies in Systems Engineering at the University of Pennsylvania
Alana Curry now pursuing graduate studies in Veterinary Science at the Tuskegee Institute
Oneximo Gonzalez now pursuing graduate studies in Biomedical Engineering at the University of Pittsburgh
Renee Killins now pursuing graduate studies in Interdisciplinary Life Sciences at Purdue University
Chong Mike Lee now pursuing graduate studies in Biochemistry, Microbiology and Molecular Biology at Penn State University
Shartaya Mollett now pursuing graduate studies in Social Work at the University of Pittsburgh
Joshua Walker now pursuing graduate studies in Atmospheric Sciences at the University of California-Davis
Robert Allen Young now pursuing graduate studies in Social Work at the University of Pittsburgh
In graduate school as of Fall 2007...

Felix Acon-Chen (PSU 2005)  
Stevens Institute of Technology (Mechanical Engineering)

Luis Agosto (PSU 2005)  
University of Pennsylvania (Virology)

Omotayo Banjo (PSU 2004)  
Penn State University (Media Studies)

Jennifer Carman (PSU 2000)  
Strayer University (Health Administration)

Andra Colbert (VSU 2005)  
Johns Hopkins University (Education)

Michael Collins (VSU 2005)  
Howard University (Medicine)

Latoya Currie (VSU 1999)  
Virginia Commonwealth University (Education)

Jennifer Geacone-Cruz (PSU 2002)  
Bunka So-en Daigaku University (Fashion Design)

Kathy Goodson (VSU 2005)  
University of Maryland-College Park (Biochemistry)

Maria Gutierrez-Jaskiewicz (PSU 2005)  
University of California-Berkeley (Middle East Studies)

Dennis Harney (PSU 1993)  
University of Pennsylvania (Governmental Administration)

Juliet Iwelumor (PSU 2006)  
Penn State University (Biobehavioral Health)

Jessica Lewis (PSU 2003)  
Colorado Technical University (Business)

Lourdes Marcano (PSU 1995)  
University of Tennessee (Business Administration)

Edward Mills (VSU 2003)  
University of Illinois at Urbana-Champaign (History)

LaShauna Myers (PSU 2003)  
University of Pennsylvania (Higher Education)

Nikkia Ogburn (VSU 1997)  
Longwood University

Julio Ortiz (PSU 2002)  
Penn State University (Information Science Technology)

Tiffany Polanco (PSU 2004)  
Rutgers University (Animal Science)

Natalie Ragland (PSU 2001)  
Ross University (Veterinary Medicine)

Kenya Ramey (VSU 2006)  
Temple University (African-American Studies)

Cavin Robinson (PSU 2002)  
DePaul University (Philosophy)

Sassy Ross (PSU 2001)  
New York University

Adriana Segura (PSU 2006)  
Northwestern University (Medicine)

Kedesha Sibliss (VSU 2003)  
Howard University (Medicine)

Kashra Taliaferro (PSU 2003)  
University of Maryland-College Park (Education)

Selima Taylor (PSU 2004)  
New York University (Health Science Administration)