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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 sixteenth issue of the Penn State McNair Journal. We congratulate the 2009 Penn State McNair Scholars and their faculty research advisors! This journal presents the research conducted in the summer of 2009 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; Regina Vasilatos-Younken, Associate Dean of the Graduate School, and Suzanne Adair, Assistant Dean and Senior Director of the Office of Graduate Educational Equity Programs, 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
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 204 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 191 students earn their baccalaureate degrees. Of these graduates, 146 or 76 percent have gone on to graduate school at institutions across the country and overseas. As of September 2009, 30 or 16 percent have earned their doctoral or professional degrees and another 71 or 37 percent have earned their master’s degrees only. Currently, there are 60 or 31 percent of alumni who are still enrolled in graduate programs. Among the institutions McNair alumni have attended or now attend are: Arizona State, Boston University, Cornell, DePaul, Harvard, Howard, Indiana University-Bloomington, Johns Hopkins, New York University, Ohio State, Penn State, Purdue, Rice University, Stanford, Temple, Texas A&M, 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, University of Pennsylvania, and Yale to name just a few.
Summer 2009 McNair Scholars and Program Staff

Standing (left to right): Felicia Sanders (Academic Coordinator), Arielle Riutort, Quortne Hutchings, Justin Meyer, Ilyas Abukar, Esteban Luna, Rafiquah Mustafaah, Teresa Tassotti (Program Director)

Sitting (left to right): Sopheavy Lim, Tatiana Gochez-Kerr, Dawn Gannon, Chelsie White, Alisa Shockley, Genevieve Miller-Brown, Judy Banker (Administrative Assistant)

Missing from photo: Marlena Freeman
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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Felicia Sanders, Academic Coordinator
Judy Banker, Staff Assistant

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Ola Sodiende
Jose Texidor
Erwin Vogler
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 from either Penn State University (PSU) or Virginia State University (VSU) who have now earned their graduate degrees as well as those alumni currently enrolled in graduate studies.

At the graduate level...

Mimi (Abel) Hughes (PSU 2002) M.S., University of California-Los Angeles Ph.D., University of California-Los Angeles
Juan Abreu (PSU 2002) J.D., Rutgers University
Taimarie Adams (PSU 2003) J.D., Harvard University
Karla (James) Anderson (VSU 1999) M.Ed., Central Michigan University
Heneryatta Ballah (PSU 2004) M.A., Ohio State University
Omotayo Banjo (PSU 2004) Ph.D., 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
Andra Colbert (VSU 2005) M.Ed., Johns Hopkins 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
Natasha Faison-Njai (PSU 1999) M.S., Penn State University, M.Ed., University of Michigan
Max Fontus (PSU 1999) Ph.D., Indiana University-Bloomington
Tiana Garrett (VSU 2001) Ph.D., University of North Carolina
Michael Godeny (PSU 2002) Ph.D., University of Florida
Cristina Gonzalez (PSU 1999) M.D., Albert Einstein Medical School
Sherie Graham (PSU 2002) M.P.H., University of Michigan
Mark Harewood (VSU 2000) M.A., Webster University
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
Dustbin Holloway (PSU 2002) Ph.D., Boston University
Marissa (Graby) Hoover (PSU 2000) M.S., Temple University
Meng He (PSU 2002) M.S., American University
Jeffrey Himes (PSU 1997) M.A., West Virginia University
Alisa Howze (PSU 1994) Ph.D., Texas A&M University
Andrea Jones (VSU 1998) M.A., Virginia State 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
LaShawne Long-Myles (PSU 2001) Ph.D., University of California-Berkeley
Lanik Lowry (PSU 2002) M.A., University of Maryland-College Park
Charmayne Maddox (PSU 2004) M.Ed., Penn State University
Lourdes Marcano (PSU 1995) M.A., University of Tennessee
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-Hindes (PSU 1998) M.A., Northeastern University
Nicole Morbillo (PSU 1998) D.P.T., New York University
Ndidi Moses (PSU 2000) M.A., Pennsylvania State University, University of Connecticut
Rashid Njai (PSU 2000) M.P.H., University of Michigan
Julio Ortiz (PSU 2002) Ph.D., University of Puerto Rico
Robert Osmanski (PSU 1995) M.S., Penn State University
Hui Ou (PSU 2005) M.S., Cornell University
Mark Palumbo (PSU 2000) M.S., Wright State University
Tracie Parker (VSU 2003) Ph.D., Wright State University
Caryn Rodgers (PSU 2000) Ph.D., St. John’s University
Thomas Shields (PSU 1998) M.A., Pennsylvania State University
Christie Sidora (PSU 2000) M.Ed., Duquesne University
Andrew Snauffer (PSU 1996) M.S., Michigan Technical University
Melik Spain (VSU 1996) M.S., Virginia Tech University
Anthony Spencer (PSU 1999) Ph.D., Northwestern University
Kashra Tallaferro (PSU 2003) M.Ed., University of Maryland-College Park
Constance Thompson (VSU 1996) M.S., Cornell University
Shawntyee Vertilus (PSU 1998) M.P.H./M.D., New York Medical College
Patrice White (VSU 2001) M.A., University of Maryland-College Park
Kahlil Williams (PSU 2001) M.A., University of Pennsylvania
Romon Williams (VSU 1995) Ph.D., University of Pennsylvania
Wendy Williamson (PSU 1995) M.S., Wake Forest University
Michele Wisniewski (PSU 2004) M.B.A., Penn State University
Pharm.D., Massachusetts College of Pharmacy (Pharmacy)
Kenya Wright (VSU 1997) M.S., North Carolina State University
Robert Allen Young (PSU 2007) M.Ed., University of Pittsburgh (Higher Education)
Felix Acon-Chen (PSU 2004) M.S., Stevens Institute of Technology; second master in Space Systems Engineering at same institution
Michael Benitez (PSU 2001) M.Ed., Penn State University, now pursuing Ph.D. in Educational Leadership at Iowa State University
Laurian Bowles (PSU 1999) M.A., University of London, M.A., Temple University, now pursuing Ph.D. in Anthropology at same institution
Debbie Charles (PSU 001) M.S., University of Maryland-College Park, now pursuing V.M.D. at Tuskegee University
Catherine Crawford (PSU 1996) M.Ed., Central Michigan University, now pursuing graduate studies at Cappella 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. in Meteorology at same institution
Antoinette Gomez (PSU 1994) M.S., Clark-Atlanta University now pursuing Ph.D. at University of Denver
Maria Gutierrez-Jaskiewicz (PSU 2005) M.A., University of California-Berkeley, now pursuing Ph.D. in Middle East Studies at Yale University
Atiya Harmon (PSU 2002) M.S., University of Pennsylvania, now pursuing M.Ed. at Chestnut Hill College
Angel Miles (PSU 2003) M.A., University of Maryland-College Park, now pursuing Ph.D. in Women’s Studies at same institution
Zakia Posey (PSU 1999) M.S., Michigan State University, now pursuing Ph.D. in Anthropology at same institution
Kristin Rauch (PSU 2004) M.S., University of California-Davis, now pursuing Ph.D. in Anthropology at same institution
Cavin Robinson (PSU 2002) M.A., DePaul University, now pursuing Ph.D. in Philosophy at same institution
Sassy Ross (PSU 2001) M.F.A., New York University now pursuing Ph.D. in English at University of Utah
Steven Thompson (PSU 1997) M.S., Indiana University-Purdue, now pursuing Ph.D. in Media Studies at Clemson University
Anthony Paul Trace (PSU 2004) M.S., University of Virginia now pursuing Ph.D in Physical and Biological Sciences at same institution

At the undergraduate level ...

Jacqueline Cauley (PSU) – B.A., May 2009
Penelope Chambers (PSU) – B.S. December 2008
Shanya Cordis (PSU) – B.A. May 2009
Damaris Fuster (PSU) – B.A. May 2009
Blake Garcia (PSU) – B.A. May 2009
Janay Jeter (PSU) – B.A. August 2009
Jennifer Mulcahy-Avery (PSU) – B.A. May 2009
Benjamin Ogrodnik (PSU) – B.A. August 2009
Patrick Reck (PSU) – B.A. August 2009
Marquita Stokes (PSU) – B.A. May 2009
Robert Vary (PSU) – B.S. May 2009
Tiffany Velez (PSU) – B.A. August 2009
Aimy Wissa (PSU) – B.S., December 2008
On to graduate school in Fall 2009...

Jacqueline Cauley now pursuing graduate studies in Celtic Studies at Queen’s University (Ireland)
Penelope Chambers now pursuing graduate studies in Economics at University of Paris (France)
Blake Garcia now pursuing graduate studies in Political Science at Texas A&M University
Jennifer Mulcahy-Avery now pursuing graduate studies in Clinical Psychology at Boston University
Benjamin Ogrodnik now pursuing graduate studies in English at Ohio State University
Robert Vary now pursuing graduate studies in Mathematics at University of Florida
Aimy Wissa now pursuing graduate studies in Aerospace Engineering at University of Maryland-College Park

In graduate school as of Fall 2009...

Luis Agosto (PSU 2005) University of Pennsylvania (Microbiology)
Christopher Arlene (PSU 2004) Harvard University (Public Policy)
Saalim Carter (PSU 2007) University of Chicago (History)
Dipnil Chowdhury (PSU 2007) University of Pennsylvania (Systems Engineering)
Michael Collins (VSU 2005) Howard University (Medicine)
Latoya Currie (VSU 1999) Virginia Commonwealth University (Education)
Alana Curry (VSU 2007) Tuskegee University (Veterinary Medicine)
Jennifer Geacone-Cruz (PSU 2002) Bunka So-en Daigaku University (Fashion Design)
Oneximo Gonzalez (PSU 2007) University of Pittsburgh (Biomedical Engineering)
Kathy Goodson (VSU 2005) University of Maryland-College Park (Biochemistry)
Dennis Harney (PSU 1993) University of Pennsylvania (Governmental Administration)
Juliet Iwelumor (PSU 2006) Penn State University (Biobehavioral Health)
Robert Ksiazkiewcz (PSU 2007) University of Pittsburgh
Renee Killins (PSU 2007) Purdue University (Life Sciences)
Chong Mike Lee (PSU 2007) Penn State University (Molecular Biology)
Edward Mills (VSU 2003) University of Illinois at Urbana-Champaign (History)
Shartaya Mollett (PSU 2007) University of Pittsburgh (Social Work)
LaShauna Myers (PSU 2003) University of Pennsylvania (Higher Education)
Fawn Patchell (PSU 2007) Penn State University (Nutrition Sciences)
Anjana Patel (PSU 2008) Drexel University (Public Health)
McKenna Philpot-Bowden (VSU 2004) St. Joseph’s University (Education)
Tiffany Polanco (PSU 2004) Rutgers University (Animal Science)
Natalie Ragland (PSU 2001) Ross University (Veterinary Medicine)
Sue Annie Rodriguez (PSU 2008) Arizona State University (Human Development & Family Studies)
Armando Saliba (PSU 2003) University of Incarnate Word (Public Administration)
Adriana Segura (PSU 2006) Northwestern University (Medicine)
Kedesha Sibliss (VSU 2003) Howard University (Medicine)
Luisa Soaterna (VSU 2004) Virginia Commonwealth University (Health Administration)
Scott Test (PSU 2008) Clarion University (Library Sciences)
Katherine Wheatle (PSU 2008) Emory University (Public Health)
Daniel Zaccariello (PSU 2008) Rice University (Political Science)