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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 fifteenth issue of the Penn State McNair Journal. We congratulate the 2008 Penn State McNair Scholars and their faculty research advisors! This journal presents the research conducted in the summer of 2008 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, the former 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
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 178 students earn their baccalaureate degrees. Of these graduates, 146 or 82 percent have gone on to graduate school at institutions across the country and overseas. As of September 2008, 30 or 17 percent have earned their doctoral or professional degrees and another 68 or 38 percent have earned their master’s degrees only. Currently, there are 55 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, John Hopkins, New York University, Ohio State, Penn State, Purdue, Rice University, Stanford, Temple, 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.
Summer 2008 McNair Scholars and Program Staff

Standing (left to right): Danielle Forbes, Marquita Stokes, Tiffany Velez, Jennifer Mulcahy-Avery, Patrick Reck, Blake Garcia, Janay Jeter, Victoria Jackson, Judy Banker (Staff Assistant)

Sitting (left to right): Damaris Fuster, Jacqueline Cauley, Robert Vary, Penelope Chambers, Teresa Tassotti (Program Director)

Missing from photo: Diana Barrantes, Genevieve Miller
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

PROGRAM AND EDITORIAL STAFF
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Judy Banker, Staff Assistant

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Rama B. Radhakrishna

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Ann Marie Daniel
Wayne Gersie
Joyce Hopson-King
Benjamin Hudson
Earl Merritt
Robert Packer
James Sellers
Erwin Vogler
Vernis Welmon
Michael Wityk
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...

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
Felix Acon-Chen (PSU 2004)  M.S., Stevens Institute of Technology
Taimarie Adams (PSU 2003)  J.D., Harvard University
Karla (James) Anderson (VSU 1999)  M.S., Central Michigan University
Omotayo Banjo (PSU 2004)  Ph.D., Penn State University
Angelo Berrios (PSU 2000)  M.S, Joseph’s University

Aaron Brundage (PSU 1995)  M.S., Penn State University  Ph.D., Purdue University
Sherese Burnham (PSU 1999)  M.A., University of Central Florida
Sofia Cerda-Gonzalez (PSU 1999)  D.V.M., Cornell 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 (PSU 1999)  M.S., Penn State University,  M.A., University of Michigan

Max Fontus (PSU 1999)  Ph.D., Indiana University-Bloomington
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

Dustin 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
<table>
<thead>
<tr>
<th>Name</th>
<th>University and Degree</th>
</tr>
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<tbody>
<tr>
<td>Leshawn Kee (VSU 1998)</td>
<td>M.A., Regents University</td>
</tr>
<tr>
<td>Haroon Kharem (PSU 1996)</td>
<td>Ph.D., Penn State University</td>
</tr>
<tr>
<td>Carrie (Hippchen) Kuhn (PSU 2001)</td>
<td>M.A., Stanford University</td>
</tr>
<tr>
<td>Judy Liu (PSU 1995)</td>
<td>M.S., University of California-Berkeley</td>
</tr>
<tr>
<td>LaShawne Long-Myles (PSU 2001)</td>
<td>M.Ed., Xavier University</td>
</tr>
<tr>
<td>Lanik Lowry (PSU 2002)</td>
<td>M.B.A., University of Maryland-College Park</td>
</tr>
<tr>
<td>Charmayne Maddox (PSU 2004)</td>
<td>M.Ed., Penn State University</td>
</tr>
<tr>
<td>Lourdes Marcano (PSU 1995)</td>
<td>M.A., University of Tennessee</td>
</tr>
<tr>
<td>Debra Marks (VSU 1996)</td>
<td>M.S., University of Virginia</td>
</tr>
<tr>
<td>Leanna Mellott (PSU 2000)</td>
<td>Ph.D., Ohio State University</td>
</tr>
<tr>
<td>Robert Miller (PSU 1999)</td>
<td>Ph.D., University of Kentucky</td>
</tr>
<tr>
<td>Bethany Molnar (PSU 1998)</td>
<td>M.S., Northeastern University</td>
</tr>
<tr>
<td>Nicole Morbillo (PSU 1998)</td>
<td>Ph.D., New York University</td>
</tr>
<tr>
<td>Ndidi Moses (PSU 2000)</td>
<td>M.A., Penn State University, J.D., University of Connecticut</td>
</tr>
<tr>
<td>Rashid Njai (PSU 2000)</td>
<td>M.P.H., University of Michigan</td>
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<tr>
<td>Julio Ortiz (PSU 2002)</td>
<td>Ph.D., Penn State University</td>
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<tr>
<td>Robert Osmanski (PSU 1995)</td>
<td>M.S., Penn State University</td>
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<tr>
<td>Hui Ou (PSU 2005)</td>
<td>M.S., Cornell University</td>
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<tr>
<td>Mark Palumbo (PSU 2000)</td>
<td>M.S., Wright State University</td>
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<tr>
<td>Tracie Parker (VSU 2003)</td>
<td>M.A., Ohio State University</td>
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<tr>
<td>Franche Pierre-Robinson (VSU 2002)</td>
<td>M.Ed., University of Illinios-Chicago</td>
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<tr>
<td>Caryn Rodgers (PSU 2000)</td>
<td>Ph.D., St. John’s University</td>
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<tr>
<td>Thomas Shields (PSU 1998)</td>
<td>M.A., Penn State University</td>
</tr>
<tr>
<td>Christie Sidora (PSU 2000)</td>
<td>M.A., Duquesne University</td>
</tr>
<tr>
<td>Andrew Snauffer (PSU 1996)</td>
<td>M.S., Michigan Technical University</td>
</tr>
<tr>
<td>Melik Spain (VSU 1996)</td>
<td>M.S., Virginia Tech University</td>
</tr>
<tr>
<td>Anthony Spencer (PSU 1999)</td>
<td>Ph.D., Northwestern University</td>
</tr>
<tr>
<td>Kashra Talafarro (PSU 2003)</td>
<td>M.Ed., University of Maryland-College Park</td>
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<tr>
<td>Shawnynee Vertilus (PSU 1998)</td>
<td>M.P.H./M.D., New York Medical College</td>
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<tr>
<td>Patrice White (VSU 2001)</td>
<td>M.A., University of Maryland-College Park</td>
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<tr>
<td>Kahlil Williams (PSU 2001)</td>
<td>M.A., University of Pennsylvania</td>
</tr>
<tr>
<td>Romon Williams (VSU 1995)</td>
<td>M.A., Wake Forest University</td>
</tr>
<tr>
<td>Wendy Williamson (PSU 1995)</td>
<td>M.B.A., Penn State University</td>
</tr>
<tr>
<td>Kenya Wright (VSU 1997)</td>
<td>M.S., North Carolina State University</td>
</tr>
<tr>
<td>Heneryatta Ballah (PSU 2004)</td>
<td>M.A., Ohio State University, now pursuing Ph.D. at same institution</td>
</tr>
<tr>
<td>Michael Benitez (PSU 2001)</td>
<td>M.Ed., Penn State University, now pursuing Ph.D. at Iowa State University</td>
</tr>
<tr>
<td>Laurian Bowles (PSU 1999)</td>
<td>M.A., University of London, M.A., Temple University now pursuing Ph.D. in Anthropology at same institution</td>
</tr>
<tr>
<td>Debbie Charles (PSU 001)</td>
<td>M.S., University of Maryland-College Park now pursuing V.M.D. at Tuskegee University</td>
</tr>
<tr>
<td>Catherine Crawford (PSU 1996)</td>
<td>M.Ed., Central Michigan University now pursuing</td>
</tr>
</tbody>
</table>
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
Tiana Garrett (VSU 2001) Ph.D., University of North Carolina-Chapel Hill now pursuing MPH at same institution
Antoinette Gomez (PSU 1994) M.S., Clark-Atlanta University now pursuing Ph.D. at University of Denver
Afiya Harman (PSU 2002) M.S., University of Pennsylvania now M.Ed at Chestnut Hill College
Maria Gutierrez-Jaskiewicz (PSU 2005) M.A., University of California-Berkeley now pursuing Ph.D. in Middle East Studies at same institution
Angel Miles (PSU 2003) M.A., University of Maryland-College Park, 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
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. at Clemson University
Anthony Paul Trace (PSU 2004) M.S., University of Virginia now pursuing Ph.D at same institution

At the undergraduate level...

Lauren Kessler (PSU) May 2008
Robert Ksiazkiewcz (PSU) May 2008
Andrae Laws (PSU) May 2008
Amber Ortega (PSU) May 2008
Luis Ocampo (PSU) May 2008
Fawn Patchell (PSU) December 2007
Anjana Patel (PSU) May 2008
Sue Annie Rodriguez (PSU) May 2008
Angelica Smith (PSU) December 2007
Scott Test (PSU) May 2008
Katherine Wheatle (PSU) May 2008
Daniel Zaccariello (PSU) May 2008

On to graduate school in Fall 2008...

Robert Ksiazkiewcz now pursuing graduate studies in Public Administration at the University of Pittsburgh
Amber Ortega now pursuing graduate studies in Atmospheric Sciences at University
Fawn Patchell now pursuing graduate studies in Nutrition Sciences at Penn State University
Anjana Patel now pursuing graduate studies in Public Health at Drexel University
Sue Annie Rodriguez now pursuing graduate studies in Human Development and Family Studies at Arizona State University
Scott Test now pursuing graduate studies in Library Sciences at Clarion University
Katherine Wheatle now pursuing graduate studies in Public Health at Emory University
Daniel Zaccariello now pursuing graduate studies in Political Science at Rice University

In graduate school as of Fall 2008...

Luis Agosto (PSU 2005) University of Pennsylvania (Virology)
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)
Andra Colbert (VSU 2005) Johns Hopkins University (Education)
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)

Paula Henderson (PSU 2005) Barry University
Juliet Iwelumor (PSU 2006) Penn State University (Biobehavioral Health)
Irene Karedis (PSU 2006) Institute of World Politics
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)
Tiffany Polanco (PSU 2004) Rutgers University (Animal Science)
Natalie Ragland (PSU 2001) Ross University (Veterinary Medicine)
Adriana Segura (PSU 2006) Northwestern University (Medicine)
Kedesha Sibliss (VSU 2003) Howard University (Medicine)
Luisa Soaterna (VSU 2004) Virginia Commonwealth University (Health Administration)

Joshua Walker (PSU 2007) University of California-Davis (Atmospheric Sciences)
Michele Wisniewski (PSU 2004) Massachusetts College of Pharmacy (Pharmacy)
Robert Allen Young (PSU 2007) University of Pittsburgh (Higher Education)