

2009

## Message from Nancy M. Giardina

Nancy M. Giardina  
*Grand Valley State University*

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# McNair Scholars Journal

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GRAND VALLEY  
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## Message from Nancy M. Giardina

Assistant Vice President for Academic Affairs

We are proud to present the thirteenth volume of the Grand Valley State University McNair Scholars Journal. It is the culmination of intensive research conducted by our student scholars and their faculty mentors through our Ronald E. McNair Scholars Program.

The Ronald E. McNair Scholars Program, now in its 15th year here at Grand Valley State University, provides an opportunity for students and faculty to apply much of what is learned within the classroom by engaging, outside the classroom, in research activities in a particular area of scholarly interest. These research activities provide a journey through the challenges and affirmations of scholarly work and better prepare students for graduate study and the pursuit of a doctoral degree.

Thank you to the faculty mentors who have worked so closely with our McNair Scholars to propel their research skills towards the next level of educational challenges.

Congratulations to the nine McNair Scholars whose research is presented here. Your journey and the challenges you have met during this scholarly activity speak to your talents and persistence in pursuing both your educational and life goals. Thank you for sharing your talents with the university community and continuing the spirit of this program.

Finally, thank you to all the people behind the scenes that work to sustain this program and produce this journal. Your work is valued as well.



Nancy M. Giardina, Ed.D.

Assistant Vice President for Academic Affairs



GRAND VALLEY  
STATE UNIVERSITY

*“Before you can make a dream come true,  
you must first have one.” - Ronald E. McNair, Ph.D.*

Ronald Erwin McNair was born October 21, 1950, in Lake City, South Carolina, to Carl and Pearl McNair. He attended North Carolina A&T State University where he graduated Magna Cum Laude with a B.S. degree in physics in 1971. McNair then enrolled in the prestigious Massachusetts Institute of Technology. In 1976, at the age of 26, he earned his Ph.D. in physics.

McNair soon became a recognized expert in laser physics while working as a staff physicist with Hughes Research Laboratory. He was selected by NASA for the space shuttle program in 1978 and was a mission specialist aboard the 1984 flight of the USS Challenger space shuttle.

After his death in the USS Challenger space shuttle accident in January 1986, members of Congress provided funding for the Ronald E. McNair Post-Baccalaureate Achievement Program. The goal is to encourage low-income, first generation students, as well as students who are traditionally underrepresented in graduate schools, to expand their opportunities by pursuing graduate studies.



## Ronald E. McNair Post-Baccalaureate Achievement Program

### ***The Purpose***

The McNair Scholars Program is designed to prepare highly talented undergraduates to pursue doctoral degrees and to increase the number of individuals (from the target groups) on college and university faculties.

### ***Who are McNair Scholars?***

The McNair Scholars are highly talented undergraduate students who are from families with no previous college graduate, low-income background or groups underrepresented at the graduate level for doctoral studies. The program accepts students from all disciplines.

### ***Program Services***

The McNair Scholars are matched with faculty research mentors. They receive academic counseling, mentoring, advising, and GRE preparation. In addition to the above services, the McNair Scholars have opportunities to attend research seminars, conduct research, and present their findings orally or written via poster presentations. In the first semester of their senior year, the scholars receive assistance with the graduate school application process.

### ***Funding***

The Ronald E. McNair Post-Baccalaureate Achievement Program is a TRiO Program funded through the United States Department of Education and Grand Valley State University.

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