



JOSEPH R. SEEMILLER

FULBRIGHT RESEARCH SCHOLARSHIP TO THE
UNIVERSITY OF COLOGNE, GERMANY



An accomplished musician, who earned a bachelor's degree, cum laude, in neuroscience with a minor in computer science, Joseph R. Seemiller plans to bring all of his skills together during his Fulbright scholarship studies at the University of Cologne, Germany. Under the supervision of Professor Alexander Drzezga, M.D., Seemiller will research the neurological functional networks that characterize the progression of Alzheimer's disease. This research will aid the ability to diagnose the disease at an earlier stage. Seemiller will use his musical talents to better integrate into the community in Cologne by playing clarinet in a local ensemble.

Seemiller was a National Science Foundation summer research intern at the University of Pittsburgh in 2011 and at DePaul University in 2012. He is a member of Alpha Sigma Nu (the national Jesuit honor society), Beta Beta Beta (the national biology honor society), Alpha Lambda Delta (the national freshman honor society) and Nu Rho Psi (the national honor society for neuroscience).

He was an active volunteer at Scranton, giving time and service to the Leahy Clinic for the Uninsured and at Geisinger Community Medical Center's emergency room. He played clarinet in the University's concert band, served as vice president for presentation for the University's Health Professions Organization and as a President's Alumni Liaison. He also acted as director of technology for Student Government.

Seemiller's Fulbright scholarship to the University of Cologne will combine his early passion for computer programming with medical imaging to use graph theory to examine the neural functional connectivity of Alzheimer's patients as compared to healthy control patients. Seemiller said that graph-theoretical analysis has emerged as a powerful way of modeling the brain's functional interrelationships.

After his Fulbright studies in Germany, Seemiller will attend The Commonwealth Medical College.

He is a graduate of Palmerton Area High School and the son of Joseph and Linda Seemiller, Lehigh.