

Neuroscience Graduate Program at Vanderbilt University

The Neuroscience Graduate Program at Vanderbilt University is an interdisciplinary and transinstitutional program administered through the Vanderbilt Brain Institute (VBI). Founded in 1999, the Neuroscience Graduate Program has grown into one of the premier biomedical graduate programs at Vanderbilt and in the nation. The program is currently home to 81 students, with a core mission to prepare the next generation of leaders in the neurosciences. Trainees from our program typically go on to do postdoctoral fellowships in the best laboratories across the world, and many have now transitioned into faculty positions at premier academic institutions.

Although there are many facets to the training environment at Vanderbilt that we feel prepare our students well for their future role as leaders in our discipline, the one that we have chosen to highlight in this application is our strong emphasis on outreach and community service. More specifically, because of its tremendous innovation, we will focus on *Brain Matters*, a series of educational, interactive exhibits that resides at One Hundred Oaks in Nashville, a repurposed shopping mall that features mixed-us retail and clinical space and that houses many of Vanderbilt's community clinics.

Brain Matters was developed as a partnership between the Vanderbilt/NIMH Silvio O. Conte Center for Neuroscience Research and the Vanderbilt Brain Institute, and was funded through an ARRA supplement to the Conte Center grant. The focus of the supplement was to develop educational materials to expand the Conte Center's outreach mission, and has resulted in a set of state-of-the-art interactive exhibits that provide information on the brain, brain science, mental health and mental illness.



The emphasis on *Brain Matters* for this application is because much of the design and content of the exhibits came from the ideas and labors of past and present trainees of our Neuroscience Graduate Program. For example, although the conceptual development and progress were overseen by Dr. Randy Blakely, Director of the Conte Center, and Dr. Mark Wallace, Director of the VBI, the project was managed by Dr. Christopher Ciarleglio, a newly minted PhD from the graduate program

(see attached letter), who is currently a postdoctoral fellow at Brown.

Dr. Ciarleglio is the embodiment of the goals of the program. As a graduate student, Chris founded Vanderbilt Reviews Neuroscience (VRN), featuring reviews of doctoral candidates in the Neuroscience Graduate Program. With his neuroscience training, his creative and editorial experience in developing VRN, and his strong commitment to public outreach, Dr. Ciarleglio was the ideal candidate to manage the Conte project.

In his role with the project, Dr. Ciarleglio oversaw all aspects of the design and installation of a series of three exhibit spaces that greatly enhance the patient experience by providing a fun and informative educational resource they can peruse while waiting for appointments (each clinic visitor receives an electronic pager).

The three content spaces for *Brain Matters* are titled: Inside the Mind, Brain Matters and Neuroscience Discovery (see Appendix for additional detail). Once the themes for these three exhibits were arrived upon, Dr. Ciarleglio initiated content development working in conjunction with an advisory board and members of the Neuroscience Training Faculty. However, most instrumental in the process were the efforts of a team of program students, led by a current graduate student in the program, Andrew Hardaway (see attached letter). Andrew and his team continue to develop content for the exhibits, with a focus on several areas that comprise the core content themes of the exhibits. These include: Brain Chemistry, Brain Structure and Function, Mental Health and Mental Illness, Neuroscience History and Case Studies and finally Neuroscience Discovery – which highlights the work of Vanderbilt neuroscientists.

In addition to their yeoman efforts in this content development, our graduate students have partnered with high school students from the School for Science and Math at Vanderbilt, in order to further streamline content, to promote the exhibit in the local school system, and to generate kid-friendly content to entertain and educate the younger visitors. Such a creative partnership further illustrates and reinforces our program's dedication to community education.

The unique synergy between the Neuroscience Graduate Program, the VBI and the Conte Center continues and expands now as the Conte Center begins its second funding cycle. In a creative and constructive way to continue to grow support for our neuroscience training efforts, two neuroscience students, Gwynne Davis and Justin Siemann, have been awarded support through the Conte, and will assist in outreach by serving as docents at tours of the exhibit, helping with content development and promoting education in local elementary and high schools. Additionally, the Conte Center will provide additional support for summer students involved in the Blueprint Program for Enhancing Neuroscience Diversity through Undergraduate Research Education Experiences (BP-ENDURE), and NIH-funded training initiative in which the VBI and Neuroscience Graduate Program is one of the host sites for these intensive summer research experience.

Although *Brain Matters* and the powerful partnership between the Neuroscience Graduate Program, the VBI and the Conte Center represent the cornerstone of this application, it is important to reinforce that outreach and education efforts have been an integral component of our training environment since it began.

The annual Brain Blast, part of Brain Awareness *Month* as it is celebrated at Vanderbilt, is a highlight of our outreach efforts. Brain Blast is coordinated by a committee of Neuroscience graduate students and manned by faculty, staff and student volunteers. In 2012 our program hosted a successful day of brain awareness fun, with record attendance of over 1000 participants. The new site for this event was One Hundred Oaks, as this represented an additional means to make our community aware of *Brain Matters*.

In summary, we believe that these unique and innovative ways in which our program focuses on education and outreach represent a powerful tool toward achieving our goal of training leaders who will always have an emphasis on furthering neuroscience education and understanding in the broader community. Additional detail in support of application can be found in the Appendix materials.