**Executive Summary of Program Assessment**

*The summary should be no more than three pages.*

**Campus:** UMSL

**College or School:** N/A (Office of Research Administration)

***(If applicable)***

**Academic Unit:** Center for Neurodynamics

**Date Submitted:** 1 August 2013

**Person Responsible for Success of the Program:** S. Bahar

**Submitted by:** Pat Dolan, Special Assistant to the Vice Chancellor for Academic Affairs

**Degree Programs Reviewed:** N/A

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| **Degree (e.g., BS, MA, PhD)** | **Program** | **Enrollment** | **Number of Degrees Awarded** |
| **Most Recent Fall Semester****(*provide year*)** | **5-Year Fall Semester Average** | **Most Recent Academic Year****(*provide year*)** | **5-Year Average** |
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**Changes Since Last Review**

Four new members joined the Center for Neurodynamics in 2010: Gualtiero Piccinini (Philosophy), Rob Paul (Psychology), Mike Griffin (Psychology), and Brenda Kirchhoff (Psychology). In the following year, another four UMSL scholars joined the Center: Berit Brogaard (Philosophy), Mike Nichols (Chemistry & Biochemistry), Carl Bassi (Optometry) and George Taylor (Psychology). Most recently, early in 2013, a new faculty member in the Department of Biology, Aimee Dunlap, joined the Center. We now have eleven faculty members from six departments and two colleges. Center members are involved in research ranging from studies of trauma recovery, behavioral neuroscience, nonlinear dynamics in neural processes, the philosophy of mind, brain activity in autistic savants, and neural computation.

Following the major expansion of the Center in terms of faculty members, we soon realized that there was a very large “constituency” of graduate students working in various departments who were studying the neurosciences but had no formal meeting place. This stems in part from the UMSL’s unique situation in which neuroscience in investigated by laboratories in a wide range of departments, but no formal neuroscience program exists on campus. The Center members realized that we could offer such an interdisciplinary home to graduate students working on all aspects of brain science. A first brainstorming (no pun intended) meeting of this graduate student group was held in late 2012, and the students drew up a list of activities that the Center could provide, such as informal workshops on grant-writing and applying for faculty positions, and mini-conferences where students could present their work, exchange ideas, get feedback from fellow students and faculty, and practice giving professional talks. A MyGateway group has been formed so that these graduate students can easily network and communicate. The group currently consists of 15 graduate students from Philosophy, Psychology, and Physics & Astronomy. Implementing the ideas discussed in the 2012 meeting is a major item in the Center’s Five-Year Plan.

The lack of a defined Neuroscience program at the graduate level was, until recently, paralleled by the absence of a Neuroscience program for undergraduates. The College of Arts and Sciences recognized that this need could be met by the establishment of a Neuroscience Certificate at the undergraduate level. While this Certificate is not formally affiliated with the Center for Neurodynamics, Center members such as Gualtiero Piccinini played a key role in establishing the Certificate, and most of the courses required for the Certificate are taught by Center members. All Center members have volunteered to provide support to the Certificate by mentoring undergraduate students in the research portion of their Certificate study.

**Strategies or Plans for Improving Program**

* Increase collaboration between members of the Center.
* Write joint grants based on these research collaborations and also Center-based grants to fund center activities, conferences, and possible joint equipment purchases.
* Organize local St. Louis neuroscience meetings, with participants including Center for Neurodynamics faculty and graduate students as well as neuroscientists from Wash U and SLU. These meeting could be day-long or two-day minisymposia which would provide an opportunity for the exchange of ideas among the entire St. Louis neuroscience community and would hopefully lead to new research collaborations.
* Organize regular Center mini-symposia to keep Center members, and interested graduate and undergraduate students (for example, all students involved in the Neuroscience Certificate), updated about each other’s research.
* Assist the College of Arts and Sciences to actively recruit excellent undergraduate students for the Neuroscience Certificate.
* Organize workshops for graduate students to provide them with information and mentoring about interdisciplinary grant-writing, how to set up a new lab, how to apply for a faculty position, etc.
* Organize mini-conferences for graduate students to present their work in an informal but conference-like setting.
* Explore the possibility of raising additional Center funds via donations from alumni and private giving.
* Clarify the financial expectations placed on the Center, and clarify Center’s position within UMSL. With the changing budget situation that the university faces, there have been changing expectations in terms of the rate of return on investment required of university centers within the entire UM System. As a key part of our Five-Year Plan, we hope to work with the UMSL administration in order to clarify the expectations of the campus and the system with regard to the Center. We feel that it is essential that Center members be kept fully appraised of any change in the requirements placed on Centers, so that we may clearly determine how to meet such requirements. The definition of return on investment must also be clarified with regard to our Center. We receive no money from the campus, and therefore it would be possible to calculate our rate of return as infinite, given that we have flow of funds into our GIF account. However, there has been some concern that because we receive no rate dollars from the university, we fail to meet the 3-to-1 return on investment required by the Campus. Because we fail to meet this requirement, it has been suggested that the Center be demoted to a group existing simply within the Department of Physics & Astronomy. It is the consensus of the Center members that this move would be extremely detrimental to a Center that has recently expanded to include members from six departments and two colleges. A growing organization should not be stuffed into a smaller box. The very essence of the Center is its interdisciplinarity, and to restrict that, rather than fostering further expansion, would be counterproductive.