# Neurosciences Mentoring Plan

## 1. Overarching statement:

The department of Neurosciences is committed to mentoring faculty. The goal of mentoring is to facilitate the career aspirations of each faculty in accordance with developing national excellence in one or more of the various functions of academic health institutions: education, clinical care and/or biomedical research. Department leadership encourages and guides faculty in Entrepreneurialism, Inter disciplinary activities and Technology Innovation (MUSC Strategic goals 2010-15).

## 2. The departmental promotion and tenure (P&T) criteria for researchers and clinicians:

Details of the P&T requirements for basic scientists and clincians on the academic or education track are outlined below. All faculty should maintain an up-to-date CV in the format required by the College of Medicine (link for CV format can be found at http://www.musc.edu/com1/faculty/index.htm) that will be used as the primary document for evaluation by the departmental P&T committee for both mentoring and promotion/tenure. Details of the P&T requirements for basic scientists and clincians on the academic or education track are outlined below.

**Promotion Guidelines for Basic Research or Academic Clinical Faculty with 100% Time Devoted to Research and Education**

1. After a minimum of 3 years on the faculty, all Assistant and Associate Professors, and non-tenured Full Professors will be reviewed each year by the co-Chairs and the P&T Committee consisting of all tenured full professors with a primary appointment in Neurosciences. A written recommendation on promotion will be made to the faculty member.

2. Any faculty can request a promotion review at any time.

3. Ideal Situation for Promotion of Tenure-track Faculty:
(note that increased quality teaching involvement, such as directing a course, giving a large number of lectures and running the graduate program can partially offset the research requirements; teaching quality determined by syllabus, and the faculty and student evaluations of lectures and course organization)

Promotion to Associate Professor without Tenure

a) Four to 7 years as Assistant Professor
b) Two RO1 equivalent grants as PI
c) Established quality teaching obligations
d) Established collegial interactions with other faculty via scientific and/or committee collaborations
e) Established a laboratory with graduate students and postdoctoral fellows in training
f) Emerging national reputation verified by 3 outside letters of reference
g) Peer-reviewed publication record in top specialty journals (e.g. for neuroscience research this could include, J.Neuroscience, Neuron, Nature Neuroscience; for

pharmacology/physiology, Am.J.Physiol., JPET; for neurochemistry, JBC, Cell, EMBOJ; for general readership, Science, Nature, PNAS)

Promotion to Tenure

a) Five to 10 years as non-tenured faculty
b) Two RO1 equivalent grants as PI
c) Competitive renewal of one or more RO1 equivalents
d) Quality teaching obligation, showing leadership in one or more teaching block
e) Established scientific collaborations with other faculty
f) Record of training to completion graduate students and postdoctoral fellows
g) Some evidence of university citizenship by contributing to university and college committees
h) National reputation verified by 5 outside letters of reference
i) National reputation verified by invitations to speak outside MUSC and membership on review panels, editorial boards and national/international scientific society committees
j) Peer-reviewed publication record in top specialty journals (e.g. for neuroscience research this could include, J.Neuroscience, Neuron, Nature Neuroscience; for pharmacology/physiology, Am.J.Physiol., JPET; for neurochemistry, JBC, Cell, EMBOJ; for general readership, Science, Nature, PNAS)
k) Publication of well-cited review articles (e.g. Nature Rev series, Prog Neurobiol, Annual Reviews series, Trends series)

Promotion to Professor

a) Seven to 12 years as tenure-track faculty
b) Two RO1 equivalent grants as PI
c) Competitive renewal of two grants
d) Involvement as PI or multiple co-PI in programmatic funding
e) Quality teaching obligation, showing leadership in one or more teaching block
f) Established scientific collaborations with other faculty
g) Clear evidence of university citizenship by contributing to university and college committees
h) Record of training to completion graduate students and postdoctoral fellows
i) National reputation verified by 5 outside letters of reference
j) National reputation verified by invitations to speak outside MUSC and membership on review panels, editorial boards and national/international scientific society committees
k) Peer-reviewed publication record in top specialty journals (e.g. for neuroscience research this could include, J.Neuroscience, Neuron, Nature Neuroscience; for pharmacology/physiology, Am.J.Physiol., JPET; for neurochemistry, JBC, Cell, EMBOJ; for general readership, Science, Nature, PNAS)
l) Publication of well-cited review articles (e.g. Nature Rev series, Prog Neurobiol, Annual Reviews series, Trends series)

**Clinicians**

***1.*** Please refer to the College of Medicine's promotion guidelines for a general outline of requirements for promotion. More specific guidelines for the Department of Neurosciences are included in this document.

***2.*** The Department of Neurosciences recognizes two different career tracks for clinical faculty: Academic Clinicians (AC) and Clinician Educators (CE).

- **AC:** This track is designed to recognize clinical faculty with a strong commitment to either basic or clinical research along with delivery of excellent patient care. Research is of paramount importance in this track. The quality of the research will be judged by multiple criteria (as outlined under #5) including the physician's role as a project initiator or participant in well focused research projects, presentations at scientific meetings, publications in peer-reviewed journals, and research funding. The AC faculty member is usually actively involved in patient care (with less time commitment than the CE); usually as a subspecialist expert in a given field, and will be evaluated for this as part of the promotion process. The balance between time spent in clinical activities and research will vary from individual to individual and the evaluation process will take the time allocation of the applicant into account when weighing the various accomplishments. The AC is also expected to be involved in educational activities related to their discipline; usually with a smaller time commitment compared to the CE given their time spent in research activities.
- **CE:** This track recognizes clinicians who carry a heavy clinical load and are intimately involved in educational activities. These faculty are not expected to be the principal investigator on research grants for advancement, but should serve the general research mission of the department and serve as collaborators in clinical trials. Publications are expected, but these may take the form of book chapters, case reports, or publications relating to teaching methods or clinical care. The CE is a recognized clinical expert within his general or subspecialty field, as documented in peer review letters. Teaching is an integral part of this track, and excellence in teaching will be a more important consideration compared to the AC track (e.g. course leadership, curriculum design, residency directorship).

***3.*** Academic Clinicians (AC) and Clinician Educators (CE) will be evaluated in the following 4 domains: *1. Research, 2. Teaching, 3. Clinical Work, 4. Service to the Department/the University*. The promotion guidelines contain different criteria in each domain for the different faculty tracks (AC versus CE). Bullets # 5-7 lay out the various potential merits/accomplishments that will be looked for in the faculty member's application for promotion (general categories).

***4.*** ***Research***

Applicants will be evaluated for the following accomplishments (please refer to Table for specific requirements according to faculty track)

- Faculty member pursues independent research funding
- Faculty member obtains independent research funding (RO1, Merit award, or equivalent)
- Faculty member obtains funding for site initiated projects (high impact factor)
- Faculty member obtains funding as a collaborator in multicenter trial (lower impact factor)
- Faculty member is co-investigator on a study
- Success in attracting and conducting pharmaceutical clinical trials
- Number of publications in peer-reviewed journals (life-time and since last promotion). Strive for publications in highly regarded journals such as Annals of Neurology, Archives of Neurology, Neurology, and appropriate sub-specialty journals.
- Number of abstracts, book chapters, case reports and review articles
- Number of presentations given at scientific meetings
- Membership on editorial boards and grant review committees

***5.*** ***Teaching*** (please refer to Table for specific requirements according to faculty track)

- Established quality teaching obligations
- Favorable reviews from students, residents, and faculty
- Number of teaching functions
- Teaching awards
- Publication of textbook, book chapters, review articles
- Course director/instructor at national/regional meetings
- Course materials developed by the candidate (e.g. syllabi, handouts)
- Educational speaking activities in the community
- Supervision of student/resident research projects
- Advisor for students/residents
- Participation in thesis committees/teaching committees

***6.*** ***Clinical Work*** (please refer to Table for specific requirements according to faculty track)

- Active participation in clinical activities
- Favorable peer and chair reviews regarding quality of clinical work
- Departmental, University and Community reputation as an excellent clinician
- Regional, state, or national reputation for expertise in a particular disease/group of patients
- Specialty/ sub-specialty Board certification (Associate Professor: Requirement to have passed written boards and be eligible for oral boards/there are potential scheduling conflicts with oral boards that may make it impossible for the candidate to schedule oral boards in a timely manner. Full Professor: Full board certification required)
- Publications on clinical care issues
- Presenting workshops on diagnosis and treatment

***7.*** ***Service to the Department/the University***

- Service on departmental or University committees
- Course directorship
- Program development

***8.*** The standard for promotion for the individual faculty member who is 50:50 research/clinical on the academic clinician track or clinician educator track is outlined in the table below.

**Table: Promotion guidelines for Academic Clinicians and Clinician Educators**
**R= required, S= suggested**

| **Faculty Rank** | **Academic Clinician** | **Clinician Educator** |
|---|---|---|
| **Associate Professor** | | |
| Pursuit of research funding | R | R |
| One research grant awarded | R | |
| Collaborator in multicenter trials | S | S |
| Co-Investigator on funded project | S | S |
| Total # of peer reviewed publications | > 7 | > 4 |
| Publication of reviews, case reports, textbook chapters | R | R |
| Annual presentation at scientific meetings | R | S |
| Participation in teaching | R | R |
| Developed course material | S | R |
| Educational speaking activities, incl. Grand Rounds | R | R |
| Participation in clinical activities | R | R |
| Reputation as excellent clinician: 2 peer review letters | R | R |
| Board certification | S[1] | S[1] |
| Service on departmental/university committees | S | S |

S[1]: Requirement to have passed written boards and be eligible for oral boards.

| Faculty Rank | Academic Clinician | Clinician Educator |
|---|---|---|
| **Full Professor** | | |
| Pursuit of research funding | R | R |
| One research grant awarded | R | S |
| Collaborator in multicenter trials | R | S |
| Co-Investigator on funded project | R | R |
| # of peer reviewed publications *since last promotion* | > 10 | > 4 |
| Publication of reviews, case reports, textbook chapters | R | R |
| Annual presentation at scientific meetings | R | S |
| Participation in teaching | R | R |
| Developed course material | S | R |
| Educational speaking activities, incl. Grand Rounds | R | R |
| Participation in clinical activities | R | R |
| Reputation as excellent clinician: 2 peer review letters | R | R |
| Board certification | R | R |
| Service on departmental/university committees | R | R |

**P&T Committee Procedures:** The P&T committee is composed of all tenured full professors and chaired by the research (Dr. McGinty) and clinical (Dr. Chimowitz) mentoring champions. Every faculty member who is at least 3 years into faculty service must submit annually a promotion dossier regardless of whether they wish to be formally considered for promotion (see #5 for how this mechanism is used for mentoring as well as promoting). Two committee members are assigned to each faculty, one of which is the assigned departmental mentor (see #5 below), to present the dossier to the committee. There is discussion and notes are taken regarding the comments, and if the person is requesting promotion, a vote is taken. A majority vote is required to send the dossier forward to the department co-chairs. The co-chairs then request up to 10 outside letters, and based on the letters will decide whether to forward the dossier to the COM P&T committee. In rare instances, the co-chairs may reconvene the committee to discuss issues that may have been raised in the letters prior to making a decision.

In addition to the departmental P&T criteria outlined in the attached documents, the department of Neurosciences abides by the university criteria for promotion in determining a

faculty member's readiness for promotion. These criteria, as well as a complete description of the university's promotion and tenure process and requirements are available at http://academicdepartments.musc.edu/com1/faculty/index.htm

Materials required for submission as part of a faculty member's promotion packet are available at:

***Regular Faculty***

*Promotion Packet*

PDF Format http://academicdepartments.musc.edu/com1/faculty/Rgprom.pdf

MS Word Format http://academicdepartments.musc.edu/com1/faculty/Rgprom.doc

*Tenure Packet*

PDF Format http://academicdepartments.musc.edu/com1/faculty/Rgtenure.pdf

MS Word Format http://academicdepartments.musc.edu/com1/faculty/Rgtenure.doc

***Modified Faculty***

*Promotion Packet*

PDF Format http://academicdepartments.musc.edu/com1/faculty/Modprom.pdf

MS Word Format http://academicdepartments.musc.edu/com1/faculty/Modprom.doc

## 3. Progress documentation:

Because all faculty begin to submit a dossier of annual progress to the department P&T committee for review no later than their 3rd year at MUSC, their progress is documented through this process (see #5 below for additional details).

**Mentee Evaluation of Mentor**

At the junior faculty member's annual review, the substance of the year-long mentoring process will be reviewed by the mentee. At this time, the mentoring relationship will be evaluated by the mentee by completing the "Mentor/Mentee relationship evaluation form" (Appendix 2).

**Mentor Evaluation of Mentee**

Prior to the junior faculty member's annual review, the substance of the year-long mentoring process will be reviewed by the mentor. At this time, the mentoring relationship will be evaluated using the "Mentor/Mentee relationship evaluation form" (Appendix 2).

## 4. Faculty resources:

Faculty resources are primarily the mentoring team established for each faculty member. For Associate or Full Professors, especially female or URM faculty, the department will provide funds for leadership training if this is among the faculty aspirations and the co-chairs and mentoring team agree that this will be useful for faculty development. Additional resources include:

**College of Medicine Resources**

Can be found at:

http://academicdepartments.musc.edu/com1/faculty/resources_faculty.htm

The faculty handbook can be found at:

http://academicdepartments.musc.edu/faculty_senate//handbook/handbook.pdf

A detailed list of institutional and state and national resources for supporting clinical and translational research, basic science research, and education are provided in Appendix 1.

## 5. Mentoring plan:

We have mentoring champions for the following areas: basic research (Peter Kalivas and Jackie McGinty), clinical research (Mark Chimowitz and Jacobo Mintzer), Technology Innovation (Bruce Frankel), Clinical Practice and Interdisciplinary activities (Sunil Patel and Jonathan Edwards). All mentors are also responsible for education. When a person is hired as an Assistant or Associate the mentoring champions will create a mentoring team of 1-3 senior faculty to meet at least quarterly with the faculty member, or more often on an as needed basis. The mentoring team will assist with all aspects of faculty development, including reading research grants, advising the chairs on possible committee or teaching opportunities for the faculty, and how to best structure balances between the teaching, clinical and research missions as suits the needs of the faculty to maximize their career potential and advancement towards promotion. Annually all faculty complete a promotion dossier, regardless of whether or not they are formally applying for promotion. For those not requesting promotion, they are reviewed by the P&T committee (see above) and comments provided to the co-Chairs by the mentoring champions (also chairs of the P&T committee). The department co-Chairs then compose a letter to each faculty outlining how that faculty member is on track for promotion and where deficiencies may lie. In addition, the letter will outline mechanisms for dealing with deficiencies that the mentoring team will help the faculty member enact.

In addition to the P&T process, a specific mentoring plan is triggered if a faculty member receives a rating of below satisfactory in any category during the annual contract review. The mentoring plan put into place may be a Performance Improvement Plan as stipulated by the faculty handbook if over 50% of the categories are rated below satisfactory. Otherwise it is a departmental process. This mentoring process is designed to help the faculty remediate any deficiencies towards a goal of satisfactory or better in the next annual contract review. The mentoring plan will be written and specific requirements for both the department chair and faculty member delineated. The faculty member and chair will meet at least quarterly during the year to review progress towards the mentoring goals. In addition to the chair and faculty member, the mentoring committee may also consist of the mentoring team if one exists (i.e. senior faculty will likely not have a mentoring team) or other persons felt important in the mentoring process by either the faculty member or chair.

## 6. Measures of success:

The departmental mentoring plan is monitored by success in education, clinical activity and research. Ultimately, this is reflected in rates of promotion. As well, in the annual contract interview, the co-chairs will engage the faculty member in a discussion of how they believe mentoring is progressing and develop plans for improvement as needed. Specific metrics are outlined below:

In addition to the evaluation forms completed by both the mentor and mentee, the department of Neurosciences will also monitor the following items to ensure the success of the faculty, department, college, and MUSC overall.

**A. Departmental measures:**

1. Surveys of faculty on their satisfaction with the plan and their job overall
2. Attrition of faculty within the department
3. Percentage of eligible faculty promoted within a 5-year period.
4. Total funding from all mentored activities
5. Total number of publications overseen by mentors

**B. Individual measures:**

Short term measures:

1. Understanding the P&T requirements policies and procedures
2. Established relationship with a mentor in areas of teaching, research, clinical and/or faculty development
3. Documentation of short and long term career goals
4. Maintenance of a comprehensive curriculum vitae

Long term measures:

1. Competitive funding
2. Excellence in research, teaching, and clinical practice
3. Time frame for promotion.

**C. Research-related metrics for determining the effectiveness of mentoring**

1. Number of grants submitted and funded
2. Number of original publications
3. Importance of original publications (e.g., journal quality, impact factor, editorial written on paper)
4. Career development progress of mentee e.g., presentation of research at national / international meetings, invited presentations at meetings or other universities, election to study sections or specialty societies, promotion of mentee
5. Research awards of mentee

**D. Teaching related metrics for determining the effectiveness of mentoring**

1. Teaching accomplishments of mentee, e.g., formal courses taught, course materials developed, innovative teaching methods developed
2. Number of educational publications
3. Importance of educational publications (e.g., journal quality, impact factor, editorial written on paper)
4. Number of educational grants submitted and funded by mentee
5. Career development progress of mentee, e.g., presentations at national / international meetings, invited presentations at meetings or other universities, membership on education committees in or outside of the institution, promotion of mentee
6. Honors and awards for teaching to the mentee

**E. Clinically-related metrics for determining the effectiveness of mentoring**

1. Inpatient and Outpatient – Satisfaction scores
2. Hospital metrics for mortality, Infections Rates (surgeons), subspecialty specific metrics as set by the various neuro-clinical services through the Neurosciences Service line

3. Documentation (Inpatient and outpatient) and billing compliance
4. Clinic Cancellations and Bump rates
5. Establishment and growth of subspecialty programs eg: Epilespy, DBS, Gamma Knife etc.
6. Develop multi-disciplinary clinics across departments and ancillary services.

## Appendix 1. Institutional, State and National Resources for Supporting Faculty Development at MUSC

### 1. Institutional Resources

### 1.1 Research Support

There are a number of institutional resources that support clinical, translational, and basic science research. These are listed on the MUSC Research and Discovery website (**http://research.musc.edu/index.html**). Some of these resources are described below:

- **The South Carolina Translational Research (SCTR) Institute.** The recently NIH funded MUSC Clinical Translational Science Award (CTSA) that is called the South Carolina Translational Research (SCTR) Institute (http://sctr.musc.edu/) provides research support to investigators across campus. Within SCTR is the **SUCCESS Center** which provides research navigation support such as collaborator and mentor matching and links to institutional cores and programs. Additionally, the SUCCESS center (https://sctr.musc.edu/index.php/programs/success-center) provides consultation for regulatory submissions and study subject recruitment, lists studies on clinical trials registry, and helps with grant budget development. At SCTR there is a toolkit that can help the most inexperienced investigator navigate the process required to get clinical trials underway and much more. MAP-R is a web portal that identifies approvals needed for all types of grant submissions Visit https://sctrweb2.musc.edu/research_toolkit to find a wealth of information and pertinent advice about research at MUSC.

- **Funding Opportunities** are available through the KL2 and Pilot Project Program of SCTR and the University Research Committee.
  https://sctr.musc.edu/index.php/education/k12
  https://sctr.musc.edu/index.php/programs/pilot-projects
  http://research.musc.edu/urc/home.htm

- **SCTR Vouchers** can be requested for up to $1,000 for research services and supplies per approved protocol every six months. Investigators are limited to two active vouchers in any one six month period as long as they are for two different protocols. For more information please visit https://sctr.musc.edu/index.php/voucher.

  If you think that applying for a SCTR Voucher could be beneficial to your research study, please visit http://sctr.musc.edu and fill out a Service Request Form. The SUCCESS Center staff reviews all voucher requests and a decision of award is made within two business days of application.

- **The Office of Research Development (ORD)**
  **(**http://research.musc.edu/ord/index.html), which is funded through the Vice President

for Academic Affairs & Provost's Office, focuses on program and proposal development, identifies funding opportunities, develops proposal concepts, networks faculty members with complementary interests, provides grant-writing consultation and workshops, offers pre-submission critiques, compiles institutional data, and prepares competitive proposals for research resources and research training. New faculty and trainees are encouraged to visit the office in 101 Basic Science Bldg to meet the ORD staff and learn about networking opportunities. The following are among the services offered by the Office of Research Development:

Research Project Grant (RPG) Retreats are held approximately 3 times / yr. These interactive half-day sessions give individual investigators the opportunity to gain constructive criticism on a specific research concept or proposal. Researchers at any phase of career development are encouraged to present or attend.

ORD Alerts mailing list is a service for MUSC faculty and trainees to receive research news and funding opportunities by email (**http://research.musc.edu/ordalerts.html**.)

Community of Science (COS) is an external web-based system, offered as an institutional subscription service, that provides a range of services including searchable databases for funding opportunities and expertise, as well as a personalized workbench from which to access and manage COS services.

Institutional "Boilerplate" is a compilation of information about MUSC, its components and programs, primarily used to assist MUSC faculty, staff, and trainees in preparing institutional resources and environment sections for research grant and contract proposals.

Grantsmanship Workshops are held twice per year. Led by an external consultant, the workshop content focuses on the NIH organization, peer review system, grantsmanship tips, and the ABCs of an R01 or other NIH grant application. Individual and team consultations are also offered. The workshops and consultation opportunities are an institutional research support service, provided at no charge to investigators or programs.

MyPeerReview is an internal, on-line searchable database of information about MUSC faculty service on review panels and study sections for the NIH and other federal and non-federal sponsors, as well as journals for which MUSC faculty members have served or currently serve as an ad hoc reviewer, member, editorial board, etc.

- **Grant Writing Help** is provided by: i. The Office of Scientific Editing and Publications (OSEP) which provides support to augment manuscript and grant writing skills for MUSC faculty, trainees, and staff

**http://research.musc.edu/APR/OSEP.html**, and ii. through the SUCCESS center https://sctr.musc.edu/index.php/programs/success-center.

- **Grant Administrative Support**. The Office of Research and Sponsored Programs (ORSP) and Office of Grants and Contracts Accounting (OGCA) provide the fundamental support need to obtain and manage sponsor-supported research funding. In addition to individual support, their websites provide important information regarding basic information needed for submission, and management of grants and contracts.
    - Office of Research and Sponsored Programs (http://research.musc.edu/orsp/index.html)
    - Office of Grants and Contracts Accounting (http://academicDepartments.musc.edu/vpfa/finance/gca/index.htm)

**Some Specific Resources for Clinical and Translational Research:**

- **Clinical & Translational Research Center (CTRC)**. The primary purpose of the CTRC is to support clinical and translational research projects within the institution and SCTR affiliate members as well as pilot studies that may lead to future NIH or other sources of peer-reviewed clinical/translational research grant support. The specialized staff of the CTRC consist of research nurses, laboratory personnel, nutritionists, IT specialists, and professional/administrative personnel. A core laboratory, fully-equipped outpatient clinic, dental suite, and imaging suite comprise the highly-technical physical facilities that are on hand to support your research. https://sctr.musc.edu/index.php/programs/clinical-a-translational-research-center

- **Biostatistics Consultation** through the SCTR Biostatistics & Epidemiology Program. Services offered are:
    - Biostatistical Education: Consultation and assistance in understanding one or more biostatistical concepts
    - Methodology/Study Design: Guidance with selecting an appropriate study design or developing a statistical analysis plan
    - Power Analysis / Sample Size Calculation: Assistance with determining the statistical power or sample size required for a proposed study
    - Data Analysis: Assistance with analyzing data collected for a research study
    - Other: (e.g. help with presentations, manuscripts, etc.)

  These services are offered for several different settings:
  Assistance Preparing Grants (Federal, Foundation, Other)
  Assistance Preparing CTRC Protocols
  Assistance with Current CTRC Funded Project
  Unfunded Research Project (e.g. Abstract/Manuscript Preparation)

Links to these services are http://sctr.musc.edu/index.php/programs/biostats and http://sctrweb2.musc.edu/research_toolkit/preaward/grantproposal/statistic

- **Master of Science in Clinical Research Program (MSCR)** degree is offered by MUSC. This program teaches core competencies in clinical research methods, fosters development of a sustainable research focus, and provides the participant with the skills to compete for extramural support. https://sctr.musc.edu/index.php/education/mscr-masters-of-science-in-clinical-research

- **Society of Clinical Research and Translational Early Scientists (SOCRATES)** provides a forum for junior faculty to present their research projects in front of peers, senior researchers and statisticians, foster collaboration across multiple subspecialties at MUSC, and trouble shoot about ways to improve mentoring across campus https://sctr.musc.edu/index.php/programs/teach/133

**Some Specific Resources for Basic Science Research:**

- **Research Support** (http://research.musc.edu/researchresources.html)
    - Shared Core Facilities. A number of core facilities are available to support basic research (see information of each of these facilities in Research Shared Facilities on this website). In addition, an annual EXPOsition of these facilities that enables meetings with core personnel occurs in the Fall each year.
    - College of Graduate Studies (CGS) Office of Postdoctoral Affairs. In addition to providing useful information regarding practical aspects of hiring and mentoring postdoctoral scientists, the office also offers services to enable recruitment of postdoctoral scientists.

- **Responsible Conduct of Research (RCR).**
    - CGS RCR Retreat resources. All MUSC postdocs participate in a mandatory 2-day retreat focused on career development, conflict resolution, and compliance issues related to the responsible research practices. All lectures and handouts are available on the CGS website.(http://www.musc.edu/grad/postdoc/rcr.html)
    - The HHS Office of Research Integrity website has a wealth of educational resources on RCR practices with case scenarios, videos and tutorials for all stages of research professionals (http://ori.dhhs.gov)

- **Personnel/Trainees Relationships**
    - College of Graduate Studies (http://www.musc.edu/grad/)
        - Graduate Faculty Resources – application for appointment to graduate faculty and conflict of interest forms.

        - Mentoring Compact – AAMC recommendations for mentoring graduate students and postdocs (http://www.aamc.org/research/postdoccompact).
        - Graduate Council Minutes – record of monthly meetings and policy discussions.
        - Graduate Faculty Research – web-based database of faculty research interests to aid students looking for potential mentors.
        - Training Grants – listing of MUSC training grants and career development programs for graduate students and postdocs.
        - Student Handbook – specifics of graduate programs, resources, dissertation requirement, and CGS policies.
        - Summer Research Programs for Undergraduates and Health Professional Students. These programs provide students the opportunity of a 10-week long internship with MUSC faculty.(http://www.musc.edu/grad/summer/index.html)
    - Howard Hughes Medical Institute
        - "Lab Management: Making the Right Moves" is an essential resource for postdocs and faculty, available free on-line. (http://www.hhmi.org/resources/labmanagement/moves.html)
        - "Entering Mentoring" provides guidance in mentoring individuals with diverse learning and personality styles. (http://www.hhmi.org/catalog/main?action=product&itemId=272)
    - Human Resources Career Development Courses and Seminars. MUSC HR provides a variety of professional development workshops and seminars to facilitate more effective lab management and hiring practices. (http://academicDepartments.musc.edu/vpfa/hrm/training/trainingpage)
    - International Scientific Presenters Toastmasters. This club provides a supportive environment for learning how to give effective scientific presentations, and benefit from constructive feedback of peers and faculty sponsors.(http://scientific.freetoasthost.us)
    - CGS725 Teaching Techniques. This course is offered every Fall and Spring semester and is open to all students and postdocs. Contact the College of Graduate Studies office for registration information (weised@musc.edu)

- **Networking Opportunities**
    - "B & BS" (halushpv@musc.edu). The B & BS club provides an informal forum for faculty, postdoctoral and graduate students to present their research ideas, grant proposals or research problems to a mixed audience that can provide useful feedback and often potential collaborations or exchange of reagents
    - MUSC Core Facilities "Octoberfest" Reception. This is an annual event for core facility directors to highlight the services available.
    - Research INKlings (http://research.musc.edu/inklings.html). INKlings is a monthly on-line newsletter of recent events of interest to MUSC researchers.
    - SACNAS promotes a diverse research academy by providing workshops and networking opportunities that encourage Chicano/Hispanic and Native

American students and postdocs to pursue and persist in STEM fields. This is also an excellent recruitment resource. (http://www.sacnas.org/)

- ABRCMS is an annual conference that brings underrepresented minority students and postdocs together to present their research in an environment that encourages their development into future STEM faculty. This is also an excellent recruitment venue. (http://www.abrcms.org/index.html)
- www.MinorityPostdoc.org hosts a variety of career development resources for postdocs, including job listings and articles, with an emphasis on minority scholars.

## 1.2 Resources for Education

### 1.2.1. Types of Educational Technology

a. Tegrity - Tegrity is a lecture capture service that lets faculty automatically capture every class – on and off campus – for later review by every student, anytime, anywhere. http://tegrity.musc.edu

b. Adobe Connect - Adobe Connect is a Web conferencing software that securely shares presentations and multimedia right from a desktop computer, supporting feedback from hundreds of participants — all using a web browser and the Adobe Flash® Player runtime. http://connect.musc.edu

c. WebCT - WebCT is MUSC's current Learning Management System. A Learning Management System is a software package that enables the management and delivery of learning content and resources to students. http://webct.musc.edu

**1.2.2 Education Technology Services (ETS)** Provides support in the areas of digital imaging, audio visual support in centrally scheduled classrooms and distance education technologies, and video production.

**1.2.3. Apple Tree Society** - The Apple Tree Society exists to foster dialogue and activity related to the scholarship of health professions teaching through campus and national partnerships. http://www2.edserv.musc.edu/appletree/

The following are the goals of the Society:

• Expand the faculty development opportunities related to teaching on **c**ampus.

• Initiate programs that recognize and enhance the value of teaching as a scholarly activity.

• Explore and support innovative methods and technologies for teaching and learning.

• Promote professional development of current and future educators.

Activities of the Society include:

• Monthly Brown Bags – noontime sessions on topics related to the Scholarship of teaching

• Workshops focused on development of teaching skills including lecture and

presentation skills, case based discussions, evaluating learners, and using technology such as WebCT (see below)
• Collegiality – informal meetings to discuss teaching and learning

**1.2.4. Copyright Toolkit** - Understanding and complying with the laws governing the use of copyrighted materials is daunting. The information on this site is directed at teaching faculty, students, scientific writers, researchers, and others at MUSC who use copyrighted works. It includes Copyright @ MUSC: Policies, Forms, & Resources, forms, and information about Coursepacks, Plagiarism and How to Cite Sources, releases, Images and text, and print and digital/online resources. Many of the links lead to the excellent copyright Websites of other universities.
http://copyright.library.musc.edu/page.php?id=1314

**1.2.5. Creating Collaborative Care/Interprofessional Education** - Creating Collaborative Care (C3) is a Quality Enhancement Plan (QEP) for the Medical University of South Carolina that focuses on inter-professional education. http://academicDepartments.musc.edu/c3/

**1.2.6. Faculty teaching awards** (College and University) - In recognition of faculty accomplishments the individual colleges, as well as the university, present annual awards in teaching, research, and service. These awards are very competitive underscoring the excellence of the faculty with respect to their achievements. The awards are sponsored by various groups. The university annual awards include:
- Developing Scholar Awards
- Outstanding Clinician Awards
- Teaching Excellence Awards (Developing Teacher, Educator-Lecturer, Educator-Mentor)
- Distinguished Faculty Service Awards

**1.2.7. Library resources** - http://www.library.musc.edu/
a. Computer labs – 4 computer labs are available for use by faculty for their classes. The labs host an average of 25 iMac computers that support the use of both Windows and Macintosh operating systems
b. Learning Commons – An initiative of the MUSC library currently under development designed to provide spaces for study and socialization and access to the latest technologies for teaching and learning.
c. Center for Academic and Research Computing – Works with faculty and staff across the campus to design, develop and support interactive instructional programs.
d. Journals The library currently provides access to approximately 17,498 e-journals and 34 current print-only subscriptions http://muscls.musc.edu/

**1.2.8. Center for Academic Excellence** - The CAE is dedicated to improving learning and teaching on campus. Health care providers must learn and re-

learn in order to adapt their practices to the latest advances in biomedical science. They also must collaborate with colleagues across professions to provide quality care and conduct groundbreaking research. That's why the CAE provides collaborative learning groups; and the effectiveness of these groups is why a majority of MUSC students choose to participate—in addition to their scheduled class time. Another vital part of the work of the CAE is teaching the material and the strategies necessary for success on national and state licensing board/certifying exams. Under the tutelage of CAE faculty and their fellow students, students approach these rigorous exams with confidence and exceed national performance averages. http://www.musc.edu/cae/

**1.2.9. The Writing Center** - The Writing Center faculty members teach students to communicate effectively with their professors, their fellow students, and their patients. http://www.musc.edu/writingcenter/

**1.2.10. Enrollment Services** - Enrollment Services oversees student admissions, records and financial aid. http://www.musc.edu/em

## 2. State or National Resources

### 2.1. Funding Agencies

By going to the MUSC Research and Discovery website (**http://research.musc.edu/researchresources.html**) and clicking on Funding Opportunites under the Office of Research Development**,** information on the following opportunities is available:

- Funding alerts
- Federal and state funding opportunities
- Sponsor opportunities (Corporate and Foundations)
- New Investigator Funding Opportunities http://research.musc.edu/newinv_fund.html
- Postdoctoral Funding Opportunities
- Limited Submissions Competitions Opportunities

### 2.2. Associations

- **Association of American Medical Colleges (AAMC)**. The AAMC represents all 133 accredited U.S. medical schools; approximately 400 major teaching hospitals and health systems, including 68 Department of Veterans Affairs medical centers; and nearly 90 academic and scientific societies. Through these institutions and organizations, the AAMC represents 125,000 faculty members, 75,000 medical students, and 106,000 resident physicians.

Through its many programs and services, the AAMC strengthens the world's most advanced medical care by supporting the entire spectrum of education, research, and patient care activities conducted by member institutions. http://www.aamc.org/

- **Association of Women in Science (AWIS)** is a national advocacy organization championing the interests of women in science across all disciplines and employment sectors. By breaking down barriers and creating opportunities, AWIS strives to ensure that women in these fields can achieve their full potential. http://www.awis.org/
- **National Postdoctoral Association**. The NPA provides many resources useful for enriching the research environment, managing a research lab, and expectations of mentors and trainees. MUSC is an affiliate institution which provides membership to all faculty, postdocs, and students. http://www.nationalpostdoc.org/

## Appendix 2. Mentor/Mentee relationship evaluation.

**Part 1. TO BE COMPLETED BY MENTEE.**

**Mentee: _____**

**Mentor: _____**

| ITEM | Excellent | | Fair | | Poor |
|---|---|---|---|---|---|
| 1. The mentor is available on a regular basis and approachable. | 1 | 2 | 3 | 4 | 5 |
| 2. The mentor helps define goals | 1 | 2 | 3 | 4 | 5 |
| 3. The mentor has respect for the mentee | 1 | 2 | 3 | 4 | 5 |
| 4. The mentee has respect for the mentor | 1 | 2 | 3 | 4 | 5 |
| 5. The mentor is an appropriate role model for the mentee | 1 | 2 | 3 | 4 | 5 |
| 6. The mentor has a good understanding of the challenges presented to the mentee. | 1 | 2 | 3 | 4 | 5 |
| 7. The mentor has been helpful in guiding the mentee through the challenges presented | 1 | 2 | 3 | 4 | 5 |
| 8. The mentor provides both support and constructive criticism of the mentee. | 1 | 2 | 3 | 4 | 5 |
| 9. The mentee Maintains a portfolio of publications, lectures, clinical development, faculty/university service for periodic review with mentor(s) and annual review with Chair | 1 | 2 | 3 | 4 | 5 |

**Appendix 2 cont. Mentor/Mentee relationship evaluation.**

**Part 2. TO BE FILLED OUT BY MENTOR.**

**Mentee: _____**

**Mentor: _____**

| ITEM | Excellent | | Fair | | Poor |
|---|---|---|---|---|---|
| 1. The mentee is available on a regular basis and approachable. | 1 | 2 | 3 | 4 | 5 |
| 2. The mentee has developed a reasonable set of goals | 1 | 2 | 3 | 4 | 5 |
| 3. The mentor has respect for the mentee | 1 | 2 | 3 | 4 | 5 |
| 4. The mentee has respect for the mentor | 1 | 2 | 3 | 4 | 5 |
| 5. The mentee exhibits understanding of the requirments, policies, and procedures for promotion and tenure | 1 | 2 | 3 | 4 | 5 |
| 6. The mentee has a good understanding of the challenges presented to the mentee. | 1 | 2 | 3 | 4 | 5 |
| 7. The mentee has developed established relationship(s) with a mentor(s) in the areas of teaching, research, clinical service, and faculty development | 1 | 2 | 3 | 4 | 5 |
| 8. The mentee takes criticism/suggestions from the mentor and reacts appropriately | 1 | 2 | 3 | 4 | 5 |