REQUEST: Funding to remodel and equip space for use as a dedicated Research Training Laboratory (RTL) to support the research training programs at the Morehouse School of Medicine.

MSM has allocated approximately 1000 sq. feet of space to its Graduate Education in Biomedical Sciences Training Program for use as a dedicated RTL. The space has been designated for the delivery of laboratory-based courses to students in the growing Ph.D. Program in Biomedical Sciences. The funding is needed to cover the costs for the required demolition, wall relocation, electrical and plumbing relocation and upgrades, laboratory furniture and casework, including a large fume hood, cabinets, benches, sinks and all hardware. The laboratory will provide bench and sit-down space to accommodate 20-30 research trainees in a single class. Classes may include a mix of Ph.D. in Biomedical Sciences students, M.S. in Biomedical Research students, M.S. in Biomedical Technology students, M.S. in Clinical Research students, undergraduate RISE trainees, and occasionally postdoctoral fellows or junior faculty seeking funding to learn new skills.

The current Graduate Core Curriculum (M.S & Ph.D.) includes a year-long Graduate Core Course Sequence which is divided into 4 modules (two per semester). A laboratory-training component accompanies each module. These laboratories provide a background, introduction, and hands on experience in selecting, designing, and utilizing laboratory methods and instruments to solve scientific problems. Historically, with one or two students entering the program each year, training of this sort could occur bench-side in individual instructors' laboratories without dramatically disrupting their ongoing research efforts. These courses have now grown substantially to accommodate each year, 4-8 PhD students, and 2-8 MS students, and sometimes additional post-baccalaureate or undergraduate trainees. It is not unusual to have 10 students crowding around various instruments in a small faculty lab, halting research in the lab for the duration of the class. In many cases, the class must be taught in shifts, unnecessarily doubling or even tripling the amount of research faculty time required for instruction, along with the downtime for research in the affected laboratories.

The lack of secure, dedicated, teaching-laboratory space for MSM's research students has been an obstacle to further development of laboratory-based research courses in the graduate curriculum, and to increasing the number of students in the program. We have committed to a curricular goal of weaving hands-on bench-side training and experience into every appropriate didactic component of our research-training program. This provides our students opportunities to improve retention of concepts learned by putting them into action; creating physical as well as mental memory. Our program has grown to a point where bench-side training in our core curriculum is no longer feasible in the laboratories of individual PI's. Even talented research faculty who are willing to invite a student or two into their lab to observe or even try out a method, balk at opening their doors to so many students at once and thereby disrupting their research program. They would, however, be willing to share their knowledge in a dedicated teaching lab where their time can be more

effectively used training a larger number of students at once without risk to the equipment, supplies, and research progress in their own laboratories.

Secure and dedicated laboratory space for hands-on training in research methods for 20 or so research trainees constitutes a urgent, immediate need for advancing the research training program at MSM, for improving our students' access to increasing numbers of our best research faculty as well as visiting faculty, and increasing the number of students we can effectively train in our programs.

Additional potential uses for the space would include vendor- or core-laboratory sponsored in-service training sessions on research methodologies for research faculty and staff, post-doctoral fellows, and graduate students when the RTL is not being used for courses. Indeed the existence of this RTL would provide opportunities for the research faculty to develop additional research-methods-based courses to supplement the more theoretical courses in our current graduate curriculum.