

Acquisition of an SEM for Research and Research Training

Introduction

The NSF-Multiuser Research Instrumentation (MRI) proposal is a multi-PI effort (PI and 4 co-PIs) from four departments in the College of Basic and Applied Sciences at MTSU. The requested amount will be >\$250,000 to be used for purchase of a state-of-the-art Scanning Electron Microscope. The SEM will be used by faculty and students from five departments and will be the key instrument in the planned core microscopy facility: MTSU Microscopy and Imaging Center (MIMIC)

PIs: Marion Wells and Ngee-Sing Chong **Mentor:** Andrienne Friedli

Content Outline

The structure of the proposal is largely determined by the National Science Foundation proposal guidelines. These will be followed carefully.

Project Summary – will be written at the end as an overview

Project Description – introduction (similar to summary)

Project Environment - boilerplate information about MTSU establishing that the infrastructure is needed and climate is right for support (ORSP)

Current Instrument Capability - establish that old instrument is not sufficient (Wells)

Instrument Needs - case for new instrument (Wells)

Research Projects -summary of research projects will be written by co-PIs and edited by PI. This will be the longest section. (Wells)

Management Plan - define participant roles and qualifications (Chong)

Timeline for Implementation – plan for purchase and use in research and teaching activities. (Chong)

Results from Previous NSF projects -collect major goals and results from recent projects co-PIs have participated in within 5 years (Chong)

Partnerships: Biographical Sketches - written by each PI

Budget and Justification – according to quotes (Wells)

Current and Pending Support – written by each PI

References – cited literature (Chong)

Timeline

The collaborative group will meet monthly in Fall 2004 (more if needed) and the PIs and mentor will meet biweekly at a set time.

August:

- Decide on basic strategy and divide up tasks.
- Discuss options with CBAS Dean Cheatham and Dean Rao.

September:

- Visit U Memphis EM center as a model. Ask them about partnership and strategy.
- Get a list of people interested in SEM.
- Get a list of related equipment to prepare for an EM center.
- Look for broader interest in SEM from the community.

October:

- Pick appropriate co-PIs based on record and likelihood for commitment to the project after funding.
- Ask for biographical sketches and current/pending support.

November:

- Project descriptions due.
- Edit project description and put proposal together.
- Get quotes from vendors.
- Get appropriate letters of support.

December:

- Ask co-PIs to read and edit at least 2 versions.
- Investigate options for space to house the instruments.

January:

- Pre-review by internal, ORSP, and external reviewers
- Submit proposal before January 29th deadline.