**Boilerplate Descriptions for Inclusion in Grant Proposals**

Include the General Information section and the relevant electron microscopy descriptions in the facilities section of your grant proposals.

General Information:The Electron Microscopy Core Facility (EMCF) is located in Wittson Hall 2012. The EMCF provides instrumentation and technical assistance to research programs involving Transmission Electron Microscopy and Scanning Electron Microscopy. Two full time Electron Microscopy Specialists are available for consultation, training, and contract services. All equipment and services are available on a fee-for-use basis. Operations of the EMCF are overseen by a faculty Director and the EMCF Advisory Committee composed of faculty members from various departments at UNMC and an institutional representative.

TEM Specific Language

The facility houses a 120 kV LaB6 equipped Tecnai G2 Spirit transmission electron microscope (FEI Company) that has a goniometer stage and tomography holder for precise tilting of specimens to generate stereoscopic images or to orient specimens for optimum viewing. Images are acquired digitally with an AMT digital imaging system. The facility has supporting equipment for all standard biological specimen preparation protocols. For TEM this includes a Leica Ultracut ultramicrotome, an LKB glass knife maker, Diatome diamond knives, centrifuges, embedding oven, a Pelco UV-2 cryochamber for low temperature embedding for immunocytochemistry and a Pelco Biowave variable wattage microwave system.

SEM Specific Language

For scanning electron microscopy the facility is equipped with a FEI Quanta 200 SEM. This instrument can operate in conventional high vacuum mode, variable pressure, low vacuum, and environmental SEM modes. This range of modes allows for examining non-conductive, beam sensitive and wet specimens as well as conventionally prepared SEM samples. The Quanta 200 is also equipped with Bruker AXS Quantax XFlash 4010 x-ray microanalysis detector, allowing for elemental microanalysis of SEM samples. In addition, a beam deceleration module improves detection of surface details of beam sensitive materials and a NavCam accessory assists users in locating regions of interest on multiple samples. All SEM images are acquired digitally. Support equipment for SEM includes a Hummer VI sputter coater and a Pelco critical point drying apparatus.