

ISSUED: 9-11-2020

TITLE: Electron Microscopy Specialist	SALARY TABLE: SA	CLASS CODE: SA572
UNION: Staff Association – Local 2071, U.A.W	SALARY GRADE: 14	EEO CODE: 50
JOB GROUPING: None	FLSA: Non-Exempt	EMPLOYEE CLASS: SA

POSITION PURPOSE

Provide electron microscopy technical support to researchers and scientist for specific processing, sectioning and microscopy requests. Support scientific projects using an Electron microscopy instrument that is used to obtain high resolution images of biological and non-biological specimens that are used to view and investigate the detailed structure of tissues, cells, organelles and macromolecular diseases. The position will handle different samples and tissues, develop specific protocols for specific samples and best quality for imaging.

ESSENTIAL FUNCTIONS	% Time
Image acquisition. Work across multiple modalities of electron microscopy to image large volumes of tissue. Reconstruct and analyze cellular and subcellular structures. Examine biopsy specimen selection for orientation and cleanliness. Photograph selected cell structures for diagnosis. Transfer data to appropriate servers and media.	30
Train and provide service support to researchers regarding the use of the electron microscope. Train users in electron microscopy techniques pertaining to sample preparation and equipment operation for biological and materials applications.	30
Utilize tissue processors, microtomes and various support equipment for the purpose of tissue processing, specimen sectioning and additional handling.	10
Prepare and maintain liquid solutions, supplies, and ancillary material necessary for continued operation of the Electron Microscopy facility. File microscopy slides, tissue blocks (paraffin / resin), images and reports. Assist in retrieval of the slides as required.	10
System maintenance. Ensures that all equipment are in optimal and proper working condition. Coordinate preventative maintenance and repairs as needed. Responsible for the daily calibration and alignment of electron microscope when utilized. May advise on upgrades for performance enhancements. Participate in the documentation of related activities, as required.	10
Prepare tissue for examination of biopsy material. Dissect micron thin sections of tissue from subjects using electron microscopy. Use ancillary techniques (e.g. thin sectioning, immunolabeling, negative staining) for obtaining specimens. Prepare and apply stains, electron microscopy fixatives, and epoxy embedding media, etc., as needed. Examine slides for orientation and quality. Monitor and perform quality control of specimens.	5
Other duties as assigned	5

MINIMUM QUALIFICATIONS

Education

A Bachelor's degree with coursework in biochemistry, biology, biomedical engineering or equivalent education, preferred. Candidates with equivalent combination of education and experience may be considered.

Experience

Minimum one to three years of electron microscopy experience is required. Image analysis experience, preferred.

Knowledge, Skills and Abilities

The applicant must have knowledge of microbial pathogenesis (bacteria, viruses, parasites), molecular proteins, neuroanatomy, cell biology, cell culture, and sample preparation techniques, as well as a good working knowledge of electron microscopy. Ability to wear personal protective material when required. Ability to work with sharp objects such as, but not limited to: knives, diamond knives, razor blades, large and fine point probes, fine point tweezers, additional potentially hazardous sharp material. Ability to work independently with critical thinking skills, and minimal supervision. Ability to train others on use of the Electron Microscopy. Demonstrated skills in operating a variety of laboratory instrumentation and equipment. Knowledge and skill operating histologic equipment. Good organizational and problem solving skills. Good verbal and written communication skills. Histologic related computer program and application skills.

WORKING CONDITIONS

Laboratory environment.

ADDITIONAL COMMENTS

Will be required to work with Biological and Pathological Hazards associated with human and animal tissue.