

Clinical Laboratory Medicine – Applying Your PhD to Patient Care

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Course Description: Clinical Laboratory Medicine is an area of Pathology dedicated to the laboratory analysis of patient specimens to diagnose/treat human diseases. Its various sub-disciplines include Clinical Microbiology, Clinical Chemistry/Toxicology, Molecular Genetics, and Immunopathology. Each field requires broad medical knowledge, a combination of classic and cutting-edge technology, and management skills to ensure consistent quality and regulatory compliance. Notably, the Medical Directors of clinical laboratories include both MD-trained Pathologists and PhD-trained scientists, with different accreditation/licensure mechanisms for each group/field. This Module will provide an overview of Clinical Laboratory Medicine, with particular emphasis on Microbiology, Chemistry/Toxicology, and Molecular Genetics. Following an introductory presentation, Clinical Laboratory tour, and HIPPA training, participants will spend ~2 hours per week for 5 weeks with the clinical service(s) of interest to them. (Precise schedules will be worked out on individual basis given each participant's interests, but will take place throughout January/February, 2017. Students would require general flexibility of their morning/afternoon schedules during this period). Activities will include some or all of: [1] practical didactic sessions; [2] clinical laboratory bench rounds, during which we trouble-shoot emergent laboratory issues with medical technologists; and [3] participation in the services' Diagnostic Management Teams, through which we provide consultative services to managing physicians. The latter is a unique Vanderbilt initiative designed to maximize laboratory support of patient care. For interested individuals, the possibility will exist to extend their participation beyond 5 weeks (pending overall interest and research mentor approval).

Learning Objectives: The goal of this Module is to provide a practical introduction to Clinical Laboratory Medicine for PhD students, including the duties of Medical Directors in the various sub-disciplines and the respective training pathways. Through this Module, students will better understand the role of these practitioners and learn what steps they may take to become one.