BRIGHAM AND WOMENS' HOSPITAL

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Job Title: Research Fellow   Date: April 10, 2020

Job Code: Grade: FLSA Status:

GENERAL SUMMARY/ OVERVIEW STATEMENT: Summarize the nature and level of work performed.

The Pulmonary and Critical Care Medicine is a large group of physician-scientists, epidemiologists, basic scientists, and geneticists with major research initiatives in lung diseases and chronic disease epidemiology. In this position, a highly motivated Research Fellow will be engaged in multiple projects related to disease mechanisms of COPD with specific attention to analysis of single cell tracing in animal models of COPD. The primary responsibilities of the research fellow will be to conduct experimental research on the role of environmental pollutants in exacerbating cigarette smoke-induced detrimental effects on lung function. These studies will involve using primary and immortalized cells, wild-type and transgenic animal models, and molecular biology and protein biochemistry techniques. The successful candidate will work primarily with Dr. Yohannes Tesfaigzi and collaborators in the following specific areas: 1) Designing and executing cell and molecular biology studies, 2) handling and improving on animal models of chronic lung diseases, 3) cell lineage tracing.

PRINCIPAL DUTIES AND RESPONSIBILITIES: Indicate key areas of responsibility, major job duties, special projects and key objectives for this position. These items should be evaluated throughout the year and included in the written annual evaluation.

Together with Dr. Tesfaigzi and collaborators to design studies based on findings from cell culture. animal models, and human population studies to understand underlying molecular mechanisms of chronic lung diseases. The *in vitro* studies and population studies will use samples from humans with and without emphysema, chronic bronchitis, and asthma. Based on the molecular understanding of proteins of interest, peptides and small molecules will be designed for testing their potential therapeutic efficacy in animal models of lung diseases. These studies have implications for developing better treatments for patients with chronic lung diseases based detailed understanding of underlying mechanisms.

QUALIFICATIONS: (MUST be realistic, neither overstated nor understated, and related to the essential functions of the job.)

DVM or MD, or PhD in Biochemistry or Biological sciences, with 1+ year experience in biomedical research. Expertise in gene targeting, protein analyses using latest molecular biology and immunology techniques; experience with in vivo CRISPR and single cell RNA sequencing is a plus.

SKILLS/ ABILITIES/ COMPETENCIES REQUIRED: (MUST be realistic, neither overstated nor understated, and related to the essential functions of the job.)

The candidate is expected to work independently under the guidance of the supervisor and perform non-routine and specialized research protocols. Strong command of subject matter but still strives to learn new methods, improve current techniques, publish the findings in peer-review journals, and over time compete is expected to compete for intra- and extramural funding.

HOSPITAL WIDE RESPONSIBILITIES: These are required of all staff, regardless of position. Do not remove these standards.
Works within legal, regulatory, accreditation and ethical practice standards relevant to the position and as established by BWH/Partners; follows safe practices required for the position; complies with appropriate BWH and Partners policies and procedures; fulfills any training required by BWH and/or Partners, as appropriate; brings potential matters of non-compliance to the attention of the supervisor or other appropriate hospital staff.

APPROVAL:

(NAME)
Department Mgr._____ Title: _____ Date: _____

(NAME)
Other, As Appropriate_____ Title: _____ Date: _____

The above is intended to describe the general contents and requirements of work being performed by people assigned to this classification. It is not intended to be construed as an exhaustive statement of all duties, responsibilities or skills of personnel so classified.