

Summer Student Research Program

Project Description

FACULTY SPONSOR'S NAME AND DEGREE: Sue Ming, MD, PhD

PHONE: (973) 972 - 2922

DEPARTMENT AND INTERNAL MAILING ADDRESS: Neuroscience, DOC 8100

E-MAIL: mingxu@njms.rutgers.edu

PROJECT TITLE (200 Characters max):

Does Ability to Maintain Vigilance Improve After Sleep Apnea Treatment?

HYPOTHESIS:

Students suffer chronic sleep deprivation that impairs school performance

PROJECT DESCRIPTION (Include design, methodology, data collection, techniques, data analysis to be employed and evaluation and interpretation methodology)

BACKGROUND/OBJECTIVES: Sleep apnea causes daytime sleepiness, fatigue and depression, all of which improve after continuous positive airway pressure (CPAP) treatment. However, there is little data on how these symptoms impact vigilance testing, the determination of which is the purpose of this study.

METHODS: Patients with suspected sleep apnea will be enrolled through written consent. Subjects will complete questionnaires on sleepiness, fatigue and mood, and complete a 10-minute computer-based vigilance test. After medically recommended testing and a month of using CPAP, questionnaires and vigilance testing will be repeated and appropriate biostatistical analyses will be performed.

Prospective student research will be responsible for consenting subjects, collecting questionnaires and inputting data into a spreadsheet. In addition, the student researcher will conduct the vigilance test. Participation in data analysis and manuscript preparation is required. The student will be supervised by Dr. Sue Ming.

SPONSOR'S MOST RECENT PUBLICATIONS RELEVANT TO THIS RESEARCH:

Ming X, Koransky R, Kang V, Buchman S, Sarris CE, Wagner GC (2011). Sleep Insufficiency, Sleep Health Problems and Performance in High School Students. *Clinical Medicine Insights: Circulatory, Respiratory and Pulmonary Medicine* 5:71-9.

Kang V, Shao J, Zhang K, Mulvey MA, **Ming X**, Wagner GC (2012). Sleep Deficiency and Sleep Health Problems in Chinese Adolescents. *Clinical Insights: Pediatrics*. 6:11-17.

IS THIS PROJECT SUPPORTED BY EXTRAMURAL FUNDS?

Yes or No

(IF YES, PLEASE SUPPLY THE GRANTING AGENCY'S NAME)

THIS PROJECT IS: Clinical Laboratory Behavioral Other

THIS PROJECT IS CANCER-RELATED

Please explain Cancer relevance

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THIS PROJECT IS HEART, LUNG & BLOOD- RELATED

Please explain Heart, Lung, Blood relevance

THIS PROJECT EMPLOYS RADIOISOTOPES

THIS PROJECT INVOLVES THE USE OF ANIMALS

PENDING

APPROVED

IACUC PROTOCOL #

THIS PROJECT INVOLVES THE USE OF HUMAN SUBJECTS **X**

PENDING APPROVED **X** IRB PROTOCOL # M0120100128

THIS PROJECT IS SUITABLE FOR:

UNDERGRADUATE STUDENTS

ENTERING FRESHMAN

SOPHOMORES

ALL STUDENTS **X**

THIS PROJECT IS WORK-STUDY: Yes or No **X**

**THIS PROJECT WILL BE POSTED DURING ACADEMIC YEAR
FOR INTERESTED VOLUNTEERS:** Yes **X** or No

WHAT WILL THE STUDENT LEARN FROM THIS EXPERIENCE?

1. Learn methodology of conducting an epidemiology study,
2. Learn how to conduct a study involving human subjects,
3. Learn how to analyze data and interpret data,
4. Learn how to write a manuscript and get it published.