

## Summer Student Research Program Project Description

**FACULTY SPONSOR'S NAME AND DEGREE:** Stanley H. Weiss, MD, FACP, FACE  
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**PROJECT TITLE (200 Characters max):**  
*Asthma Epidemiology and PACNJ Assessment*

### **HYPOTHESIS:**

There exist substantial unexplained disparities in asthma with respect to region.

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

The Pediatric/Adult Asthma Coalition of New Jersey's (PACNJ; see [www.pacnj.org](http://www.pacnj.org)) designed its first survey of school nurses in NJ with assistance from the NJ State Department of Education. The second, third and fourth surveys were developed in consultation with Dr. Weiss at UMDNJ. Public and private schools that fulfilled the Pediatric/Adult Asthma Coalition of New Jersey's (PACNJ) award criteria for the Asthma Friendly School Award have been found to be more likely to participate. The survey data have been provided to Dr. Weiss for use in research analyses.

The data have been geo-coded. Initial findings include over a two-fold range in asthma prevalence amongst the 21 New Jersey counties. National data on individual schools has been merged, such as the demographic information. Other types of geographically-based data have been accessed for purposes of comparative analyses. This project represents an opportunity to assist with data analysis and interpretation and comparison of the various datasets.

In addition, as Dr. Weiss co-chairs the Evaluation Workgroup of the PACNJ, we periodically design and perform assessments of various PACNJ endeavors.

Familiarity with Geographic Information System (GIS) software is required for some analyses (and knowledge of SATScan, Geoviz, or related software would be advantageous). Proficiency with other computer software is essential for other types of data analyses, such as MS Excel, CDC EpiInfo and SAS.

### **SPONSOR'S MOST RECENT PUBLICATIONS RELEVANT TO THIS RESEARCH:**

1) V Mihaylov, AK Bhandari, A Tasslimi, T Lampmann, M Chavenson, DM Rosenblum, SH Weiss. Implementation and Assessment of a New Jersey School Nurse Asthma Action Plan. 134<sup>th</sup> American Public Health Association [APHA] Annual Meeting & Exposition (November 4-8, 2006) in Boston, MA. Oral Session 4028.0: Epidemiology of Asthma, Tuesday, November 7, 2006: 8:30 AM-10:00 AM, Abstract #141255.  
[http://apha.confex.com/apha/134am/techprogram/paper\\_141255.htm](http://apha.confex.com/apha/134am/techprogram/paper_141255.htm)

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2) SH Weiss, V Mihaylov, A Bhandari, DM Rosenblum, A Tasslimi, A Torre, C Campbell, M Chavenson, T Lampmann. Implementation and Assessment of the PACNJ Asthma Action Plan. Presented June 9, 2006 at a meeting of the Pediatric/Adult Asthma Coalition of New Jersey. NOTE: Both V Mihaylov and AK Bhandari worked on this as students. Based in part upon the MPH thesis of Mr. Mihaylov.

3) SH Weiss, J Parks, DM Rosenblum. Geographical variation in asthma prevalence within a state. 138<sup>th</sup> APHA Annual Meeting & Exposition, Denver, November 7-10, 2010, session 5104.0.

4) SH Weiss, CD Brady, DM Rosenblum, J Parks. Asthma Prevalence in School Children: Extensive Geographic Variation within a State. 2011 (Third North American) Congress of Epidemiology, June 22, 2011, Montreal, Canada.

5) Weiss SH, Krell JA. Implementation and Assessment of the Pediatric/ Adult Asthma Coalition of New Jersey (PACNJ) Asthma Treatment Plan: Analysis of the 2010 School Nurse Survey. UMDNJ-New Jersey Medical School, 2011. Report is posted on [www.pacnj.org](http://www.pacnj.org) website, as is a summary in PowerPoint. Based in part upon the MPH thesis of Ms. Krell.

6) Weiss SH. There is significant local geographic variation in asthma prevalence among school children. 139<sup>th</sup> APHA Annual Meeting & Exposition, Washington DC, 2011, oral presentation.

**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

THIS PROJECT IS HEART, LUNG & BLOOD- RELATED

Please explain Heart, Lung, Blood relevance: **This research concerns ASTHMA.**

THIS PROJECT EMPLOYS RADIOISOTOPES

THIS PROJECT INVOLVES THE USE OF ANIMALS

PENDING

APPROVED

IACUC PROTOCOL #

THIS PROJECT INVOLVES THE USE OF HUMAN SUBJECTS  [Some protocols do – see below] PENDING  APPROVED  IRB PROTOCOLS:

# 0120050099, "Implementation and Assessment of a New Jersey School Nurse Asthma Action Plan"

# 0120060025, "Factors Determining Asthma Prevalence in New Jersey School-Age Children: A Geographical Analysis" [Exempt]

# 0120050109, "Effectiveness of "The ABCs of Asthma: All 'Bout Control," An Asthma Educational Program for Classroom Teachers" [Exempt]

# 0120090182, "Evaluation of the Efficacy of Pediatric/Adult Asthma Coalition" [Exempt]

**THIS PROJECT IS SUITABLE FOR:**

UNDERGRADUATE STUDENTS  ENTERING FRESHMAN

SOPHOMORES  ALL STUDENTS

THIS PROJECT IS WORK-STUDY: Yes  or No  IT IS Eligible for work-study

## Summer Student Research Program Project Description

### **WHAT WILL THE STUDENT LEARN FROM THIS EXPERIENCE?**

- *Understand current public health issues related to asthma in New Jersey, and learn about various ongoing efforts.*

- *Learn how to approach the analysis of datasets, using both descriptive and analytic methods.*

- *Learn how to perform systematic hypothesis-directed analyses with the objective of assessing current PACNJ endeavors and providing guidance for future endeavors.*

- *Understand limitations of varying study and questionnaire designs, and advantages and limitations of extant databases.*