DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[30Day-10–09BQ]

Agency Forms Undergoing Paperwork Reduction Act Review

The Centers for Disease Control and Prevention (CDC) publishes a list of information collection requests under review by the Office of Management and Budget (OMB) in compliance with the Paperwork Reduction Act (44 U.S.C. Chapter 35). To request a copy of these requests, call the CDC Reports Clearance Officer at (404) 639–5960 or send an e-mail to omb@cdc.gov. Send written comments to CDC Desk Officer, Office of Management and Budget, Washington, DC or by fax to (202) 395–5806. Written comments should be received within 30 days of this notice.

Proposed Project

Examining In-vehicle Exposures to Air Pollutants and Corresponding Health Outcomes of Commuters—New—National Center for Environmental Health, (NCEH) and Agency for Toxic Substances and Disease Registry (ATSDR), Centers for Disease Control and Prevention, (CDC).

Background and Brief Description

Numerous studies have found associations between ambient fine particulate matter (PM$_{2.5}$) and adverse cardiovascular outcomes. Several recent epidemiologic studies suggest that vehicle-related emissions, in particular, may be linked to many of the adverse effects and that specific sub-populations may be more susceptible to health risks due to their enhanced exposures to vehicle-related PM$_{2.5}$ sources. Commuters are a potentially susceptible, yet poorly characterized, sub-population. Importantly, recent epidemiologic studies indicate that specific sub-groups, including those with asthma, may be at risk to cardiovascular health effects due to their pre-existing health condition. A more complete understanding of in-vehicle exposures for the commuter population, especially those with asthma, is therefore becoming increasingly necessary as commuting durations and roadway congestion have steadily increased throughout the U.S. during the last 20 years. The National Center for Environmental Health (NCEH), Centers for Disease Control and Prevention (CDC) will conduct this study to characterize in-vehicle exposures to traffic-related air pollutants among commuters, with and without asthma, and any health impacts that these exposures may have on the commuter.

A total of 40 participants (20 adults with physician-diagnosed asthma and 20 healthy adults) living in the Atlanta metro area will be recruited for participation in this study. Participants will be excluded if they meet specific criteria including: ever being diagnosed with severe asthma, ever suffering a myocardial infarction, smoking tobacco products, or ever being diagnosed with a pulmonary disease such as emphysema, chronic obstructive pulmonary disorder (COPD), or any type of lung cancer, will be excluded.

Prior to their scheduled commute, participants will complete a one-time baseline questionnaire to assess medical history and general exposures. Additionally, a short symptom diary recording any respiratory symptoms will be completed by the participant prior to the commute and health measurements for lung function, lung inflammatory markers, heart rate, and biomarkers of systemic inflammation will be conducted by a trained field technician. In-vehicle exposures to particulate matter and other air pollutants will then be measured for all participants during their commute. After the commute, the symptom diary and health measurements will be conducted again to assess any potential changes in respiratory and cardiovascular health effects. Each participant will conduct the commute two times during the study year. The information learned from the health measurements and diary entries before and after the commute will be important in better understanding the potential acute health impacts associated with exposures to in-vehicle traffic pollutants and respiratory and cardiovascular health, and whether urban commuters—especially those with asthma—should be viewed as a susceptible sub-population given their enhanced exposures to PM$_{2.5}$ and gas-phase pollutants.

There is no cost to participants other than their time. The estimated annual burden hours are 180 hours.
## Estimated Annualized Burden Hours

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Instrument type</th>
<th>No. of respondents</th>
<th>No. of responses per respondent</th>
<th>Average burden per respondent (in hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible participants</td>
<td>Baseline questionnaire</td>
<td>40</td>
<td>1</td>
<td>20/60</td>
</tr>
<tr>
<td></td>
<td>Symptom survey</td>
<td>40</td>
<td>5</td>
<td>2/60</td>
</tr>
<tr>
<td></td>
<td>Scripted commute data collection</td>
<td>40</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

**SUMMARY:** The inventions listed below are owned by an agency of the U.S. Government and are available for licensing in the U.S. in accordance with 35 U.S.C. 207 to achieve expeditious commercialization of results of federally-funded research and development. Foreign patent applications are filed on selected inventions to extend market coverage for companies and may also be available for licensing.

**ADDRESSES:** Licensing information and copies of the U.S. patent applications listed below may be obtained by writing to the indicated licensing contact at the Office of Technology Transfer, National Institutes of Health, 6011 Executive Boulevard, Suite 325, Rockville, Maryland 20852–3804; telephone: 301/496–7057; fax: 301/402–0220. A signed Confidential Disclosure Agreement will be required to receive copies of the patent applications.

**Erythroid Progenitor Cell Line for Hematological Disease Applications**

**Description of Invention:** *Plasmodium vivax* (malaria) is a significant health concern in many parts of Asia, Latin America, North Africa, and the Middle East. There is a lack of continuous culture systems for this pathogen. The subject technology is an erythroid progenitor continuous cell line (termed CD36E) identified by erythroid markers CD36, CD33, CD44, CD71, CD235, and globoside. These CD36E cells are heterozygous for Fya and Fyb (Duffy antigen). Due to recent evidence that *Plasmodium vivax* (*P. vivax*) can infect erythroid progenitor cells (reference: YX Ru et al. and T. Panichakul et al.), these cells can be potentially used for culturing *P. vivax* and other species of malaria. This in turn could aid development of malaria related treatments and/or products. In addition, the cell line can also be used for other hematological disease applications that involve red blood cells or red blood cell precursors. The CD36E cells also produce alpha, beta, and chi hemoglobin and therefore may be used for research involving hemoglobin.

**Advantages:** Immortalized erythroid progenitor cell line.

**Development Status:** In vitro data can be provided upon request.

**Market:**
- Malaria
- Anti-malaria drug screening
- Hematological diseases
- Hemoglobin

**Inventors:** Susan Wong, Neal S. Young, Ning Zhi (NHLBI).

**Relevant Publications:**


**Licensing Status:** Available for biological materials licensing.

**Licensing Contact:** Kevin W. Chang, Ph.D.; 301–435–5018; changke@mail.nih.gov.

**Collaborative Research Opportunity:** The National Heart Lung and Blood Institute, Hematology Branch, is seeking statements of capability or interest from parties interested in collaborative research to further develop, evaluate, or commercialize the CD36E cell line. Please contact Cecilia Pazman, Ph.D., at pazmance@mail.nih.gov for more information.

**Parvovirus B19 Codon Optimized Structural Proteins for Vaccine and Diagnostic Applications**

**Description of Invention:** Parvovirus B19 (B19V) is the only known pathogenic human parvovirus. Infection by this viral pathogen can cause transient aplastic crisis in individuals with high red cell turnover, pure red cell aplasia in immunosuppressed patients, and hydrops fetalis during...