

**NIOSH Training Project Grants
University of Puerto Rico
Medical Sciences Campus
Annual Report**

**Grant Number 2 T01 OH008619-09
PI: Sergio Augusto Caporali Filho**

SECTION 1

TPG Summary

The broad purpose of the Industrial Hygiene Program at the University of Puerto Rico is train industrial hygienists for the continuous demand of these professionals in the island, the United States Virgin Islands and ultimately the continental United States. UPR TPG is a graduate program in Industrial Hygiene at the Master of Science level, with a basic curriculum including toxicology, occupational health, environmental health, ergonomics, noise and other physical agents, biostatistics, epidemiology, principles of industrial hygiene, principles of industrial safety, environmental health and safety law, ventilation, respiratory protection, industrial hygiene laboratory, an internship and a field studies course. Five (5) additional credit-hours are available for elective courses in the topics of advanced ergonomics design, applied statistics for industrial hygienists and exposure assessment. The duration of the training program is two (2) years, and students are required to conduct a three-month, full-time internship in an industry of their choice where they are guided through their proposed plan of work by a mentor from UPR and a mentor from the industry. Overall, UPR's TPG training is conducted by means of lectures, seminars, laboratory practices, field practices and research experiences.

On the long term, UPR's TPG is committed to populating the local industry with formally trained industrial hygienists, as well as promoting, through UPR's Graduate School of Public Health, a continuing education program to systematically fill the scientific gaps between academically trained industrial hygienists and those that have little or no academic training in the profession.

More specifically, UPR's TPG aims to: a) serve as a local resource for information dissemination, continuing education and consulting services; b) to conduct applied and basic research in the fields of occupational Hygiene, Safety and Ergonomics as to contribute to the development of the IH discipline; and c) to develop a leadership role in the IH profession on the Island.

Public Health Relevance:

UPR' TPG presence in Puerto Rico is of paramount importance for the ongoing support of Public Health Efforts towards the occupational environment. In the past 10 years UPR's TPG has been actively involved in public policy development pertaining to the industrial hygiene profession in the island.

Key Personnel:

Sergio A. Caporali Filho, Ph.D., CSP, CIH – Project Director and IH Program Coordinator and Faculty

University of Puerto Rico
School of Public Health
Medical Sciences Campus
P.O. Box 365067
San Juan, PR 00936
Phone: (787) 758-2525, ext. 1438
Fax: (787) 758-6719
sergio.caporali@upr.edu

Lida Orta Anés, Ph.D. – IH Program Faculty

University of Puerto Rico
School of Public Health
Medical Sciences Campus
P.O. Box 365067
San Juan, PR 00936
Phone: (787) 758-2525, ext. 1439
Fax: (787) 758-6719
lida.orta@upr.edu

To be announced – New IH Program Faculty

At the moment this annual report is written, we are finalizing the hiring process of a new full-time tenure track faculty member expected to be incorporated during the third quarter of academic year 2015-2016. This is the culmination of a long selection process that started in December 2014.

TPG web link:

<http://sp.rcm.upr.edu/index.php/asuntos-academicos/departamentos-academicos/departamento-de-salud-ambiental/maestria-en-ciencias-de-higiene-industrial>

SECTION II

Program Highlights:

Dr. Lida Orta Anés, during her sabbatical leave (09/14 -06/15), served as a visiting researcher at the Center for Research in Occupational Health (CISAL by Spanish initials) housed at the Universitat Pompeu Fabra, in Barcelona, Spain. As such she was involved in: a) the design, intervention, and evaluation of a participatory ergonomics model to be instituted in hospitals comprising the Salut del Mar Medical Center; b) the redesign, validation, data analysis and stakeholder engagement of the Central American Survey of Working Conditions and Health. The original survey was carried out in 2011 covering six countries in Central America and, with Dr. Orta's expertise in occupational health in Latin American populations, Puerto Rico was inserted in the group of countries carrying out the revised survey. In addition, Dr. Orta Anés developed two papers currently in the final draft revisions, and started working on another two on research data from projects initiated in Puerto Rico. Dr. Orta's work during this period will certainly result in long-term collaborations among the University of Puerto Rico and other research institutions in Latin America and Europe. The path for student and faculty

interchanges, and research collaborations was well cemented and will improve our teaching capability and the ability of interdisciplinary exchanges for our students.

As a researcher, **Dr. Sergio Caporali**: a) successfully concluded his federally funded applied research project on the effect of protective eyewear on the performance of earmuffs, yielding two international presentations (Brazil and Peru) and the acceptance of a peer review publication in the Brazilian Occupational Hygiene Technical Magazine; b) finished writing a chapter on Aerosol Monitoring for Dr. Thomas Fuller's book, Safety Program Director at Illinois State University; c) coordinated a full day workshop on Non-Ionizing Radiation, taught by Dr. Thomas Fuller, for our current IH students, prospective IH students who had been admitted to the program to start in 08/2015, and other IH program collaborators; and d) designed, coordinated and conducted a 3-day workshop on the Application of Engineering Economics Principles towards the justification of OEHS controls for the same audience described before. In addition, Dr. Sergio Caporali assumed the positions of Director of UPR's TPG and Coordinator of UPR's Industrial Hygiene Program on August 2014. As such, he was able to: a) get approval to hire a new faculty to take over the faculty position left open by the retirement of Dr. Jesús Gonzáles, UPR's TPG director until July 2014; b) lead the IH program Advisory Board into agreeing toward the updated profile of the faculty candidate to be hired; c) publish the announcement; d) organize and conduct the interview of applicants; and e) lead the efforts, together with Dr. Lida Orta, to initiate the hiring process of the selected candidate. **UPR's TPG new faculty member**, who will hopefully come on board beginning March 2016, is committed to the vision, mission and goals of our program. As such, this new faculty has committed to get IH certification within the first five years of employment and develop two new courses, one in Occupational Toxicology and the other on Fire Protection and Emergency Response to be offered to our master's students beginning August 2016.