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List of Abbreviations

AIHA	American Industrial Hygiene Association
IH	Industrial Hygiene
IRB	Institutional Review Board
LEV	Local Exhaust Ventilation System
NIOSH	National Institute for Occupational Safety and Health
PI	Principal Investigator
PPE	Personal Protective Equipment
TPG	Training Program Grant
UPR	University of Puerto Rico
UPR-TPG	University of Puerto Rico Training Program Grant

Abstract

From 07/13 through 06/19 UPR-TPG provided funding for the post-graduate education in IH of a total of 61 students, 54 full-time and 7 part-time students, all of whom from underrepresented minority. During this project period, UPR-TPG graduated 44 funded students, have funded 11 students through their first year who are expected to graduate by 05/20 and 1 part time student through her first year who is expected to graduate in 05/21. During this project period, a total of 5 out of the 61 students did not to finish our educational program, 4 students due to personal reasons, and 1 due to Hurricane Maria in 2017.

From a total of 52 funded students, 42 benefited from attending the AIHCe during their permanence in the program. Attendance to this conference provided a variety of opportunities to students, such as networking with future peers, attending research presentations, interacting with sampling equipment manufacturers, comparing and valuing their academic training, and meeting with our alumni and hearing from their experience in the field. In 2016 UPR-TPG faculty, with the assistance of NIOSH TPG Program Coordinator, were able to take 9 students to visit NIOSH Laboratories in Pittsburgh, where they attended presentations on NIOSH current research on noise control, respiratory protection, and mine safety.

After Hurricane Maria in 09/17, all our students were heavily engaged in gathering, organizing and distributing hurricane relief goods to very hard to reach underprivileged communities. Our program assumed a leadership role in training community members in the proper use of PPE for hurricane recovery activities, in infectious disease prevention, in collecting and treating water for human consumption, in recognizing and controlling physical and chemical hazards after a hurricane. Our students were actually engaged in mold sampling and remediation with faculty, were they learned all aspects of respiratory protection while conducting mold evaluation, remediation and control.

During this project period, UPR-TPG underwent a complete curricular revision, taking into account input received from all its stakeholders. This curricular revision significantly increased IH credit hour offerings yet not reducing the offerings in other public health related courses. Beginning in 2017, all our students are required to take training in HIPPA law, research subject protection and responsible conduct of research. Several revised courses include applied research projects as part of their projects or assignments, in the areas of ergonomics, industrial ventilation and noise. This experience allow students to assume different positions within the research study, from study participants, to co-investigators and research assistants.

Moreover, new and more real-life laboratory practices have been implemented where students conduct ergonomics evaluations, full shift air and noise monitoring, industrial ventilation systems' assessments as well as emergency plans and evacuation procedures.

The impact of all this effort is a group of bilingual IH graduates with strong technical training in hazard evaluation and control, with over 500 hours of practical experience in anticipation, recognition, evaluation and control of occupational hazards, and targeted training in IH management programs and tools used in today's industrial environment.

Significant Results/Impact

UPR-TPG provided funding for the post-graduate education in IH of a total of 61 students, 54 full-time and 7 part-time students, all of whom from underrepresented minority. During this project period, UPR-TPG graduated 44 funded students, have funded 11 students through their first year who are expected to graduate by May 2020 and 1 part time student through her first year who is expected to graduate in May 2021. During this project period, a total of 5 out of the 61 students (8.2%) did not to finish UPR-TPG educational program, 4 students due to personal reasons, and 1 due to Hurricane Maria in 2017.

From a total of 52 funded students that qualified for travel support during this project period, 42 of them benefited from attending the AIHA Conference and Exposition during their permanence in the program. Attendance to this conference provides a variety of opportunities to students, among them are: networking with future peers, attending research presentations, interacting with sampling equipment manufacturers, comparing and valuing their academic training at UPR-TPG, and meeting with UPR-TPG alumni and hearing from their experience in the field. In 2016 UPR-TPG faculty, with the assistance of NIOSH TPG Program Coordinator, were able to take 9 students to visit NIOSH Laboratories in Pittsburgh, where they attended presentations on NIOSH current research on noise control, respiratory protection, and mine safety.

After the passage of Hurricane Maria in September 2017, UPR-TPG funded students were heavily engaged, under the supervision of UPR-TPG faculty, in gathering, organizing and distributing hurricane relief goods to very hard to reach underprivileged communities within Puerto Rico. Besides food and water donations, UPR-TPG assumed a leadership role in training community members in the proper use of donated PPE for hurricane recovery, in infectious disease prevention, in collecting and treating water for human consumption, in recognizing and controlling hazards after a hurricane such as power generator noise abatement. Although Maria represented a strong blow into everybody's lives in Puerto Rico, UPR, and certainly UPR-TPG students, UPR-TPG efforts towards bringing relief to those in need became a strong learning opportunity for its students, especially in non-traditional field occupational hygiene put into practice. Moreover, in August 2018, first year UPR-TPG students together with Dr. Caporali were heavily engaged in mold sampling and remediation in one of UPR-TPG's laboratories located in at UPR-Cayey. Not only students were engaged in actual mold sampling, but all were trained in respiratory protection, were medically evaluated and properly fitted to a full face or half face respirator in order to actively perform mold remediation. This

practical and applied research effort will eventually result in a publication on proper mold remediation and control techniques in the tropics.

During this project period, UPR-TPG underwent a complete curricular revision from 2013 to 2019, taking into account input received from its own advisory board, its alumni, NIOSH's annual reviews, local industry, faculty and active students. This curricular revision strengthened the IH component presence within UPR-TPG's academic curricula increasing its credit hour offering from 56.7% to 69.5% of the total credit hour, yet not reducing the offerings in other public health related courses and only increasing the total credit hour in 3%. This enhancement was accomplished by redistributing the contact hours, creating new IH topic courses, and creating more IH focused courses that replaced courses that although addressed important topics for the profession did not do so with a focused in IH.

As part of the above mentioned curricular revision, since 2016, UPR-TPG has provided its first year funded students with a specific budget to partially support the purchase of textbooks that have been incorporated into the new revised industrial hygiene curriculum. Among these textbooks are the AIHA Industrial Hygiene White Book, the ACGIH TLV booklet, Konz Work Design and Occupational Ergonomics book, the AIHA Noise Manual, and the ACGIH Industrial Ventilation Design Manual. These text books are used in the new UPR-TPG curriculum courses, and are becoming their reference text for technical exams within their academic work.

Consistent with UPR-TPG newly approved competitive proposal, since 2018 first year IH students have to create a research student account with UPR's IRB. Through the process of creating such account, students acquire training in HIPPA law, research subject protection and responsible conduct of research. Furthermore, as part of the mentioned curricular revision several applied research projects have been initiated during this reporting period, where all IH students have active participation:

- a) A new 3-credit course, SAAM 6571, titled "Research Topics in Occupational Health and Occupational Epidemiology", led by Dr. Lida Orta from UPR-TPG and co-instructed by Dr. Cruz Maria Nazario from UPR's Department of Biostatistics and Epidemiology, started to be offered to 2nd year IH students where they develop a research poster to be presented in a technical meeting such as the one with the University of South Florida. UPR-TPG students for the first four years of this reporting period had a similar research experience with Dr. Orta, but it was limited to a 1-credit course that was substituted by SAAM 6571.
- b) The new 3-credit Physical Hazards Control Course, SAAM 6512, incorporated the participation of all enrolled students in an applied research study measuring the performance of earmuffs worn together with safety eyewear, either as research subjects or research data analysts. Students voluntarily choose either to actively participate in the study or process unidentified study data as part of a course assignment. This 5-year research study has been approved by UPR

Institutional Review Board and is on its second year of implementation. Using a dual microphone dosimeter acquired with NIOSH TPG funding, this research study objectively measures Noise Insertion Loss from a set of 5 different earmuffs when worn together with a set of 5 different safety glasses/goggles. Students not only have the opportunity to participate as research subjects, but they also have access to the research data in order to evaluate the effect of different eye protection on the performance of earmuffs.

- c) The revised 3-credit Chemical Hazards Control Course, SAAM 6565, incorporated the participation of all enrolled students in an applied research study measuring the effectiveness of LEV engineering controls required in OSHA 29CFR 1926.1153 Table 1, for tasks of cutting and polishing concrete with a handheld grinder. This on-going study was implemented in the spring of 2019 and will be incorporated as part of SAAM 6565 for the next 5-year reporting period. Students participate as co-investigators while Dr. Caporali, course instructor, is the study participant operating the tools in an outdoor laboratory implemented in one of UPR-TPG collaborator companies. Students monitor LEV performance while correlating it with respirable silica exposure and with real time respirable aerosol exposure for the two tasks under study. Students then are required to present their finding in class in a poster like format.

Moreover on UPR-TPG's curricular revision, new laboratory practices have been implemented from 2013 to 2019. Through formal and informal collaborative agreements with local industries, IH students are now conducting ergonomics evaluations, full shift air and noise monitoring, industrial ventilation systems assessments as well as emergency plans and evacuation procedures. Revised courses now have either projects, assignments or laboratory practices that allow UPR-TPG students more so than before to perform workplace evaluations in real work scenarios with the mentorship of course instructors, that are then delivered and evaluated by industry final customers. The enhancement of UPR-TPG hands on component in revised courses have captured students' attention and increased applied knowledge transfer.

In addition to course work practice and research experiences, UPR-TPG faculty involve trainees in their applied research and service activities:

- a) Dr. Aluisio Pimenta leads several EPA projects in diesel emission reduction and is also the research PI on a pro bono project that evaluates diesel emission exposure reduction inside the cabins of commercial vehicles that have had their engine retrofitted, have been retrofitted with oxidizing catalytic converters, or have being replaced by less polluting units.
- b) Dr. Lida Orta Anés is the PI on a major anthropometry project in Puerto Rico and consistently and frequently involves UPR-TPG trainees in data acquisition and processing.
- c) Dr. Sergio A. Caporali Filho provides a significant amount of IH services to local industry and as such involves UPR-TPG trainees as frequently as possible in

air and noise sampling, as well as ventilation assessment and surface sampling.

The impact of all this effort is a group of bilingual IH graduates with strong technical training in hazard evaluation and control, with over 500 hours of practical experience in anticipation, recognition, evaluation and control of occupational hazards, and targeted training in IH management programs and tools used in today's industrial environment. All of our graduates are in high demand for IH positions in Puerto Rico and the Continental United States. Some of UPR-TPG graduates have or currently occupy very influential positions within the profession due to their hard work, their dedication, but most importantly due their academic training.

Finally, the changes, enhancements and curricular revision that took place during this reporting period, besides been approved by UPR-TPG's Advisory Board and been based on the "voice of the local and national IH customer", were very well accepted and recognized by UPR-TPG students, as depicted in this verbatim testimonial included in one of our trainees' funding appointment termination:

"As a result of my post graduate studies in Industrial Hygiene (IH) I was able expand my knowledge in the field thru courses such as ergonomics, bio statistics, industrial hygiene principles, physical control methods and apply these concepts in the laboratory setting. In addition to the concepts learned and the technical skills acquired, we were guided in the development of qualitative and quantitative analysis based on IH methods of anticipation, recognition, evaluation and control. Thanks to the NIH program for its contribution in developing qualified professionals in the field, the Industrial Hygiene program of the University of Puerto Rico and its highly qualified group of Professors, I am ready to make and immediate impact in ensuring the safety and health of all employees in the workplace. Pending research publication: Local Exhaust Ventilation Effectiveness to Control Respirable Crystalline Silica Exposure in Concrete Cutting with Retrofitted Handheld Grinder".

Table 2. Trainees and Graduates Supported Since Beginning of Project Period¹ (07/01/2013-06/30/2019)

Submit one report per academic program. Fill in header.

Trainees				Graduates				
Trainee ID, Year of Entry, Prior Degree & Institution, (Current Academic Advisor or Mentor and Department). Identify Under Represented Minority with (URM).	OM Trainees: Previous Residency Training Specialty	Title of Research Project or Research Topic	Degree Program (BS, MS, MPH, PhD, DrPH, DNP, etc.)	Date Degree or Certificate Awarded (mm/yyyy)	Date of Certificate for OM (mm/yyyy)	Employed in OSH Field or in OSH Advanced Study (Y/N)	Current Employer	Current Position
ID 8870 (Claudio-Cintron, Hector, Elias), 2012, BSc, UPR-Arecibo, Jesus Gonzalez, (URM)			MS	May-17		Y	Pratt and Whitney	EHS Specialist
ID 5127 (Melendez-Lebron, Rocio, del Pilar), 2012, BSc, UPR-Bayamon, Jesus Gonzalez, (URM)			MS	May-14		Y	UPR	Medical Technologist
ID 9413 (Ortiz, Yadira), 2012, BSc, UPR, Jesus Gonzalez, (URM)			MS	May-14		Y	Shire Pharmaceutical	EHS Specialist
ID 6468 (Santiago-Eliza, Frances), 2012, BSc, UPR-Humacao, Jesus Gonzalez, (URM)			MS	May-14		Y	Ethicon LLC	EHS Specialist
ID 4516 (Velez-Miranda, Ivy, S), 2012, BSc, UPR-Arecibo, Jesus Gonzalez, (URM)	-		MS	May-14		Y	Abbvie	EHS Professional 1
ID 8286 (Acevedo-Ortiz, Frances Michelle), 2013, BSc, University of Puerto Rico, Jesus Gonzalez, (URM)			MS	May-15		Y	Department of Veterans Affairs	Industrial Hygienist
ID 3689 (Garrido, Villafane, Anneliz), 2013, BSc, UPR, Jesus Gonzalez, (URM)			MS	May-15		Y	Naval Hospital Camp Pendleton	Industrial Hygienist
ID 6811 (Maldonado-Rodriguez, Yari, M), 2013, BSc, UPR-Arecibo, Jesus Gonzalez, (URM)			MS	May-15		Y	Spain	n/a
ID 9743 (Salas-Fuentes, Cynthia), 2013, BSc, UPR-Arecibo, Jesus Gonzalez, (URM)			MS	Dec-15		Y	FMC Dupont Agricultural del Caribe Industrial	Industrial Hygienist
ID 2770 (Claudio-Cintron, Glorimar), 2013, BSc, UPR-Arecibo, Jesus Gonzalez, (URM)			MS	May-15		Y	Jansen/ Johnson and Johnson	Industrial Hygienist and Safety Specialist
ID 0087 (Perez-Ramos, Natalia), 2013, BSc, UPR-Humacao, Jesus Gonzalez, (URM)			MS	May-15		Y	PALL Life Sciences	EHS Specialist
ID 1683 (Rivera-Machado, Grechannie, Marie), 2013, BSc, UPR-Aguadilla, Jesus Gonzalez, (URM)			MS	May-15		Y	Ingenieros del Toa, Inc	Industrial Hygiene Consultant

ID 5602 (Rodriguez-Rodriguez, Lizmar), 2013, BSc, UPR-Bayamon, Jesus Gonzalez, (URM)		MS	May-15		Y	Cardinal Health, Inc	Senior EHS Specialist
ID 6891 (Lopez, Jeannette M., Montalvo), 2013, BSc, UPR-Aguadilla, Sergio A. Caporali (UPR)		MS	Jun-16		Y	Industrial C&S of PR, LLC (ABB)	EHS Technician
ID 8178 (Maldonado-Remigio, Ilych), 2014, BSc, UPR, Sergio A. Caporali, (URM)		MS	Jun-16		Y	US Customs & Border Protection-Laboratories and Scientific Services	Industrial Hygienist
ID 6614 (Duran-Lebron, Madian, M), 2014, BSc, UPR-Rio Piedras, Sergio A. Caporali, (URM)		n/a	Left Program		n/a	n/a	n/a
ID 6906 (Chan-Ye, Liza), 2014, BSc, UPR-Rio Piedras, Sergio A. Caporali, (URM)		MS	Feb-17		Y	Greenbelt Endoscopy Center	Compliance Officer
ID 6653 (Aulet-Gonzalez, Bianca, L), 2014, BSc, UPR-Aguadilla, Sergio A. Caporali, (URM)		n/a	Left Program		n/a	n/a	n/a
ID 3693 (De Jesus Casado, Migdaliz, De Jesus), 2014, BSc, UPR-MSC, Sergio A. Caporali (URM)		MS	Jul-17		Y	Department of Defense (DOD), Navy, Naval Hospital	Industrial Hygienist
ID 6242 (Vargas Alcantara, Isolina, Madais), 2015, BSc, UPR-Mayaguez, Sergio A. Caporali (URM)		MS	Jun-17		Y	Janssen/Johnson and Johnson	EHS Specialist
ID 2242 (Santana, Erika, Santana), 2015, BSc, UPR-Byamon, Sergio A. Caporali (URM)		MS	Jun-17		Y	IPR-Astrazeneca	EHS Specialist
ID 1563 (Rivera, Deniel, Oscar). 2015, BSc, UPR-Cayey, Sergio A. Caporali (URM)		MS	Jun-17		N	UPR - MSC	PhD Student
ID 6375 (Medina-Laabes, Abadi, Marie), 2015, BSc, UPR-Humacao, Sergio A. Caporali (URM)		MS	Jun-17		OSH Field	McNeil, Healthcare Consumer/SACFIHS/UPR Susan Harwood Grant	Industrial Hygiene Consultant/Experience IH Consultant/Outreach Trainer
ID 5046 (Maisonet Mercado, Janice, Maisonet), 2015, BSc, UPR, Sergio A. Caporali (URM)		MS	Jun-18		OSH Field	Patheon	EHS Specialist
ID 2173 (Guzman, Ernack, Ernesto), 2015, BSc, UPR-Rio Piedras, Sergio A. Caporali (URM)		MS	Jun-18		OSH Field	AXISCARE Care Health Logistics	EHS Specialist and Firefighter
ID 9188 (Goitia, Jose D, Lugo), 2015, BSc, UPR-Cayey, Sergio A. Caporali (URM)		MS	Jun-17		OSH Field	IDT inc. (Janssen/Johnson and Johnson)	Industrial Hygiene Consultant
ID 3321 (Gaud Figueroa, Lilliam, Enid), 2015, BSc, UPR-Mayaguez, Sergio A. Caporali (URM)		MS	Jun-17		OSH Field	Pfizer Consumer Healthcare	Industrial Hygienist
ID 8293 (Garcia Martinez, Tania, Isabel), 2015, BSc, UPR, Sergio A. Caporali (URM)		MS	Jun-17		OSH Field	US Army Corps of Engineers	Industrial Hygienist
ID 2404 (Valentin, Hector, Rosario), 2016, BSc, UPR, Sergio A. Caporali (URM)		MS	Jun-18		OSH Field	IDT Inc.	Industrial Hygiene Consultant

ID 6529 (Torres, Gabriel E, Rosaly), 2016, BSc, Interamerican University of Puerto Rico, Sergio A. Caporali (URM)			MS	Jun-18		OSH Field	Bayer Agricultural Biotechnology	EHS Specialist
ID 4016 (Santiago, Marielisa, Morales), 2016, BSc, Interamerican University of Puerto Rico, Sergio A. Caporali (URM)			MS	Jun-18		n/a	Costco Wholesale	n/a
ID 9548 (Rosario, Waidy, Garcia), 2016, BSc, UPR-Cayey, Sergio A. Caporali (URM)			MS	Jun-18		OSH Field	Ingenieros del Toa, Inc	Industrial Hygiene Consultant
ID 5675 (Roman, Jann, Carlos), 2016, BSc, UPR, Sergio A. Caporali (URM)			MS	Jun-19		N	State Elections Comission	Registration Official
ID 7347 (Rodriguez-Soto, Lourdes), 2016, BSc, UPR, Sergio A. Caporali (URM)			MS	Jun-18		OSH Field	Abbvie	EHS Specialist
ID 8067 (Nevarez, Veronica, Navedo), 2016, BSc, UPR-Bayamon, Sergio A. Caporali (URM)			MS	Jun-18		n/a	Looking for a Job in OSH field	n/a
ID 4439 (Melendez, Juan, Diego), 2016, BSc, UPR, Sergio A. Caporali (URM)			MS	Jun-18		OSH Field	Johnny Meat Center	Industrial Hygienist
ID 7204 (Lopez, Zaida I, Feliciano), 2016, BSc, UPR-Aguadilla, Sergio A. Caporali (URM)			MS	Jun-18		n/a	Looking for a Job in OSH field	n/a
ID 0096 (Cruz, Alexandra, Torres), 2016, BSc, UPR-Humacao, Sergio A. Caporali (URM)			n/a	Left Program		n/a	n/a	n/a
ID 8463 (Ching, Yeilu, Ching), 2016, BSc, UPR-Rio Piedras, Sergio A. Caporali (URM)			MS	Left Program		n/a	n/a	n/a
ID 9713 (Amador, Tania, Crespo), 2016, BSc, UPR-Aguadilla, Sergio A. Caporali (URM)			MS	Jun-18		Y	Lufthansa Technik	EHS Specialist
ID 3325 (Salgado, Jessimar, Graulau), 2017, BSc, UPR-Rio Piedras, Sergio A. Caporali (URM)			MS	Jun-19		n/a	n/a	Interviewing for IH job
ID 5358 (Rivera-Dávila, Merari, E.), 2017, BSc, UPR-Rio Piedras, Sergio A. Caporali (URM)			MS	Jun-19		n/a	n/a	n/a
ID 6752 (Quijano-Martínez, Kamilie, N.), 2017, BSc, University of Turabo, Sergio A. Caporali (URM)			MS	Jun-19		Y	Walt Disney Parks & Resorts, Lake Buena Vista, FL	EHS and Industrial Hygiene Intern
ID 5776 (Ortiz-Rodriguez, Isa, M.), 2017, BSc, UPR-Mayaguez, Sergio A. Caporali (URM)			MS	Jun-19		n/a	n/a	Interviewing for IH job
ID 5700 (Meléndez, Valery, Olmeda), 2017, BSc, UPR-Humacao, Sergio A. Caporali (URM)			MS	6/01/2020 (expected)		n/a	n/a	n/a
ID 3952 (Lopez Acevedo, Tania, M.), 2017, BSc, UPR-Aguadilla, Sergio A. Caporali (URM)			MS	Jun-19		Y	IDT, Inc	EHS Specialist
ID 2376, (Flores-Quñones, Keysha, Y), 2017, BSc, UPR-Rio Piedras, Sergio A. Caporali (URM)			MS	Jun-19		Y	IPR Pharmaceuticals, Canóvanas	IH Intern

ID 2837, (Encalada-Vega, Nigel, A.), 2017, BSc, Central University of Bayamon, Sergio A. Caporali (URM)		MS	Jun-19		Y	Transportation Security Administration	Transportation Security/Colateral Duty Safety Officer
ID 1660, (Cruz-Javier, Ericka, M.), 2017, BSc, UPR, Sergio A. Caporali (URM)		MS	Jun-19		Y	Walt Disney Parks & Resorts, Lake Buena Vista, FL	EHS and Industrial Hygiene Intern
ID 7800, (Uriarte-Rodríguez, Stephen, E.), 2018, BSc, UPR-Rio Piedras, Sergio A. Caporali (URM)		MS	6/01/2020 (expected)		n/a	n/a	n/a
ID 9022, (Torres Santiago, Ramón, A.), 2018, BSc, UPR-Arecibo, Sergio A. Caporali (URM)		MS	6/01/2020 (expected)		n/a	n/a	n/a
ID 6580, (Rodríguez-Alvarez, Zoe, Marie), 2018, BSc, UPR-Mayaguez, Sergio A. Caporali (URM)		n/a	Left Program		n/a	n/a	n/a
ID 5385, (Rivera-García, Alejandra), 2018, BSc, UPR-Rio Piedras, Sergio A. Caporali (URM)		MS	6/01/2020 (expected)		n/a	n/a	n/a
ID 5932, (Rivera-Aponte, Adriana, N.), 2018, BSc, UPR-Rio Piedras, Sergio A. Caporali (URM)		MS	6/01/2020 (expected)		n/a	n/a	n/a
ID 5336, (Ortiz-Aponte, Marian, L), 2018, BSc, UPR-Rio Piedras, Sergio A. Caporali (URM)		MS	6/01/2020 (expected)		n/a	n/a	n/a
ID 4772, (Nieves-Santiago, Liz, A.), 2018, BSc, UPR-Rio Piedras, Sergio A. Caporali (URM)		MS	6/01/2020 (expected)		n/a	n/a	n/a
ID 3060, (Hernandez-Cárdenas, Karyliz, K.), 2018, UPR-Mayaguez, Sergio A. Caporali (URM)		MS	6/01/2020 (expected)		n/a	n/a	n/a
ID 2940, (Frometa-Silva, Diana, Y.), 2018, BSc Interamerican University, Sergio A. Caporali (URM)		MS	6/01/2020 (expected)		n/a	n/a	n/a
ID 1933, (Cruz-Santiago, Xavier), 2018, BSc, UPR-Rio Piedras, Sergio A. Caporali (URM)		MS	6/01/2020 (expected)		n/a	n/a	n/a
ID 1350, (Colón-Berrios, Fabiola, A.), 2018, BSc, UPR-Ponce, Sergio A. Caporali (URM)		MS	6/01/2021 (expected)		n/a	n/a	n/a
ID 0316, (Alvarez-Rodríguez, Javier, E.), 2018, BSc, UPR-Arecibo, Sergio A. Caporali (URM)		MS	6/01/2020 (expected)		n/a	n/a	n/a

¹ List all NIOSH supported trainees and graduates by year of entry. Reporting period for renewals is from start date of prior competing award. New applicants should report last five years.

² Indicate certificate trainees with (Certificate).