

The "Chemistry" between Science and Society ^[1]

Submitted by [Greetchen Díaz-Muñoz](#) ^[2] on 2 January 2012 - 12:00am



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Dr. Jorge Colón (holding poster, on front) and members of the AAAS Caribbean Division, with Haitian scientists and educators during the first workshop in Puerto Rico. Photo by: Edward W. Lempinen/AAAS

Two years after a devastating earthquake in Haiti ^[4] on January 12, there are there are still many challenges facing our neighboring country. Given the need to rebuild and recover infrastructure and systems, science ^[5] promises to play a vital role. Contrary to what many people think, Haiti has educational institutions and basic research resources to support local science in its territory. Although much was devastated by the last earthquake, the reality is that there is talent to continue and enhance the work of Haitian scientists and science educators. On June 2011, The American Association for the Advancement of Science ^[6] (AAAS), released a report entitled Science for Haiti ^[7]. It includes recommendations and strategies to strengthen science and science education in Haiti in order to advance economic and social development. This report is the result of an extraordinary effort of Haitians and foreign scientist and educators that meet together ^[8] after the earthquake with the hope that science could help Haiti come out in a better position following the most recent disaster.

Puerto Rico, Part of the History

Six months after the earthquake, a group of Haitian scientists traveled to Puerto Rico to meet with colleagues from the United States, the Caribbean and Africa, as well as with Haitian Diaspora

members. They had a workshop, followed by others in Haiti, where they took into account Haitian reality and their specific needs and conceived the ideas for the report. The first discussions to plan and implement future projects also took place during these meetings, all framed by the idea that science has to be led by Haitians based on their own development goals, with the help and assistance of the international scientific community.

The efforts of the Science for Haiti project was conducted under the leadership of the Caribbean Division ^[9] of AAAS and its president, Dr. Jorge Colón ^[10] from Puerto Rico, in collaboration with colleagues from the College of Natural Resources of the University of Idaho and The Association of American Geographers. This initiative joined other collaboration projects that were already taking place between Puerto Rico and Haiti, including the training of Haitian professionals ^[11] in Puerto Rican soil.

Collaboration at the Right Moment in Time

To Dr. Colón ^[12], one of the more rewarding experiences as president of the AAAS Caribbean Division has been the project Science for Haiti. Before 2010, Jorge, like many of us, never imagined the catastrophe of major proportions that would affect Haiti. Moreover, he probably never imagined that he might play an important role in the initiatives that Haitian scientists lead today for the recovery of their country. However, his commitment to science and society motivated him and colleagues to achieve the development of initiatives of this magnitude, at the right moment. The report, according to AAAS CEO, Alan I. Leshner ^[13], is a model for countries all around the world. As his term as president of the AAAS Caribbean division draws to a close in 2012, Dr. Colón hopes to work for the continuity of this project and help implement some of the recommendations outlined in the report.

A History of Service to Science and the Community

Dr. Colón ^[14], a member of CienciaPR ^[15], was born in Cayey, Puerto Rico. Dr. Colón was motivated to study chemistry on account of his father, who is also a chemist, and after performing undergraduate research in photochemistry ^[16] with Dr. Rafael Arce at the University of Puerto Rico ^[17]. Currently, Dr. Colón is a professor at the Department of Chemistry ^[18], University of Puerto Rico, Río Piedras. In addition to teaching undergraduate and graduate courses in chemistry, he has an ambitious research program. One of his projects investigates effective ways to use laminar inorganic nanomaterials ^[19] to carry and deliver anti-cancer drugs to the heart of the tumors. The goal is to use as these compounds as a therapy in humans to replace current treatments that have noxious side effects. Another interesting project seeks to use inorganic materials to develop new solar cells that can perform artificial photosynthesis ^[20]. The low production cost and efficiency of these cells could minimize the dependence on fossil fuels as a source of energy. With regard to the last project Dr. Colón mentioned that he is currently participating in a collaboration to include Puerto Rico as part of the "Solar Army" ^[21], a collaborative project initiated by the California Institute of Technology (Caltech) created to teach solar energy concepts to students at schools and universities ^[22] and encourage more research on this topic. In Puerto Rico, as around the world, the issue of fuel is of great concern.

In addition to distinguishing himself in the academic arena, Dr. Colón has found that science also allows him to work to respond to the call of social responsibility. Access to scientific information

and the enjoyment of the benefits of scientific progress is a human rights issue. Dr. Colón, who was involved in civil disobedience in Vieques to protest the bombing of the island by the U.S. Navy [23], knows firsthand the importance of access to scientific information and of joining people together to achieve a common interest. Jorge sees analogies between Vieques and Haiti. Vieques, like Haiti, lived a disaster that affected its population's health and welfare; but with the will and help of people from the mainland and abroad, the Viequenses were able to produce initiatives such as, The Guide for Sustainable Development of Vieques [24], a report of which Jorge was co-author and which provided the basis for the elaboration of The Sustainable Development for Vieques Master Plan [25], which it is not implemented yet. Thanks to his previous experience with Vieques, Dr. Colón understood the importance of a project such as Science for Haiti and was crucial in its development.

"Like the people of Vieques, Haitians deserve a future of peace with justice, to work toward achieving their full potential. I am sure that both populations will accomplish it with our continued and determined collaboration," commented Dr. Jorge Colón who through his work demonstrates that there really is **"chemistry" between science and society**.

If you wish to contact Dr. Jorge Colón you can visit his profile [12] at CienciaPR [15].

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