



# PUERTO RICO

## Key Organization(s) Promoting Bioscience Education

---

**INDUNIV** is a nonprofit organization representing industry, government, and the academic sector that promotes the island’s competitiveness in science and technology. Bioscience education is promoted through an Education Committee covering the Life Science Cluster, which includes the pharmaceutical, biotechnology, and medical device sectors. The committee works with the Association of Science Teachers and the Puerto Rico Manufacturers Association to impact math and science education at the K-12 level. INDUNIV developed and supports the Puerto Rico chapter of the Association of Science Teachers Web site.

## Examples of Bioscience Education Activities

---

### Teacher Preparation and Professional Development

The **Puerto Rico Math and Science Partnership (PR-MSP)** involves four universities within the Puerto Rico System (The University of Puerto Rico [UPR] Rio Piedras, Mayaguez, Cayey, and Humacao campuses) in partnership with the Puerto Rico Department of Education and supporting institutions that include the other seven campuses of the UPR system, the Inter American University of Puerto Rico System, and the Arecibo Observatory, as well as informal science education centers and industry partners. Through PR-MSP, mathematics and science

<b>PR</b>	<b>STATE SCIENCE STANDARDS &amp; REQUIREMENTS</b>
	<p><b>STANDARDS PROFILE</b></p> <ul style="list-style-type: none"> <li>Most recent update of K-12 Science Standards: N/A</li> </ul> <p><b>BIOSCIENCE-RELATED GRADUATION REQUIREMENTS:</b></p> <p>N/A</p>

faculty and scientists from university partners and supporting organizations work directly with K-12 mathematics and science teachers and school and district personnel to provide professional development supporting the implementation and evaluation of challenging research-based curriculum and assessment to optimize math and science education for 305,000 students in 584 K-12 schools across the Island.

The **Biomedical Research Education (BRED) Program** of Puerto Rico at the UPR-Medical Sciences campus offers professional development and internships for teachers. BRED also has a



mini-grant component for teachers interested in projects that will expose K-12 students to biomedical research and make them aware of the importance of biomedical R&D in reducing health disparities.

A number of pharmaceutical companies with operations in Puerto Rico, led by Pfizer, have created a **Pro-Education Corporate Alliance** to encourage employees to partner with teachers in their jurisdictions.

The **Puerto Rico BioAlliance** joined with Amgen, Abbott, Ortho, Lilly, and BD Biosciences to produce reading materials and a CD with presentations and suggested experiments for K-12 teachers.

A number of private foundations provide funding to support bioscience education in Puerto Rico. The **Amgen Foundation** works with the Science Teachers Association to provide funding to teachers to enable them to purchase equipment and supplies needed to teach science in their classrooms. The **Abbott and Pfizer Foundations** award grants to support math and science education.

The municipality of Juncos, with support from Amgen and in partnership with the UPR-Humacao Campus Natural Sciences faculty, provides support and training for science teachers.

### Experiential Learning and Outreach

Puerto Rico's universities participate in an annual **BioWeek** during which activities are held on the various campuses to provide K-12 students with lab experiences and the opportunity to participate in workshops.

The Chemistry Department at UPR-Mayaguez (UPRM) operates a Science on Wheels program that combines scientific demonstrations with grades 7–12 science teacher training in a mobile unit that transfers resources from UPRM to schools around the island.

The Center for Nanoscale Materials at UPR–Rio Piedras has an outreach component that provides education and training for students and teachers. Biosensors is one area of focus at the Center.

INDUNIV is developing a Puerto Rico Life Science Workforce Portal that will include an internship clearinghouse, a job opportunities page, a page providing information about careers in the life sciences, and other sections related to workforce development.

Planning is underway to construct a \$20 million science museum in Caguas. The museum, which is being designed to excite young people about the sciences, will be the first such museum in the Caribbean. It is on schedule to open in 2010.

### Bioscience-focused Schools and Programs

The **City of Caguas** opened a state-of-the-art secondary school specialized in science, mathematics, and technology in 2008, with a \$5 million investment. The school accepted its first class of 7th graders in 2008; it will eventually serve grades 7 through 12.

The **City of Carolina** operates a Math, Science and Technology and Languages School that is open from 3 to 8 p.m. The school is designed to enable high-performing students to increase their knowledge beyond their school curriculum.