NSF announces over \$5M in funding to create new STEM education and research center at the Arecibo Observatory site

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Archive image of the Arecibo Observatory radio telescope taken on March 14, 2018, prior to its collapse on December 1, 2020. (Xavier J. Araújo Berríos)

Today, the U.S. National Science Foundation announced an investment of over \$5 million over five-years for a collaborative partnership between three higher education institutions and Cold Spring Harbor Laboratory to establish a new multidisciplinary, world-class educational center at the Arecibo Observatory site in Puerto Rico. The new center, the Arecibo Center for Culturally Relevant and Inclusive Science Education, Computational Skills, and Community Engagement (Arecibo C3), will serve as a catalyst for increased and inclusive engagement in a broad range of science, technology, engineering and mathematics disciplines, cutting-edge research and workforce development initiatives by students, teachers, researchers, local communities and the public within and outside of Puerto Rico.

"The new educational center builds on the great scientific, educational and cultural legacy of the Arecibo Observatory and is closely aligned with NSF's goal to create STEM opportunities everywhere," said James L. Moore III, NSF assistant director for STEM Education. "The center aims to create new opportunities for STEM education, exploration, discovery, engagement and participation of students, scientists and researchers in various STEM disciplines ranging from astronomy and radio science to biological, computer and natural sciences in Puerto Rico and beyond."

Funded under the Arecibo Center for STEM Education and Research (ACSER) solicitation [3], this new educational center is consistent with guidance provided in the "CHIPS and Science Act of

2022," which "encourages the National Science Foundation, in consultation with other federal agencies, to explore opportunities for strengthening and expanding the role of the Arecibo Observatory in Puerto Rico through education, outreach and diversity programs, and future research capabilities and technology at the site."

Four institutions will work together to establish Arecibo C3 and will collaborate with <u>Ciencia Puerto Rico [4]</u> and <u>STEM Program Evaluation</u>, <u>Assessment</u>, <u>and Research [5]</u>. The center's outreach plan will include dynamic collaborations with members of the Puerto Rico STEM community, the University of Puerto Rico system, private universities and STEM academic organizations to continue engaging faculty, K-12 students and teachers, families and the general public.

The four awardees are:

- Cold Spring Harbor Laboratory [6].
- University of Puerto Rico-Río Piedras. [7]
- Universidad del Sagrado Corazón [8].
- University of Maryland, Baltimore County [9].

The new center is expected to open in early 2024 and will continue Arecibo Observatory's legacy of leadership within Puerto Rico and the STEM community through education, outreach and workforce development. Arecibo C3 will include a research laboratory and a hands-on, interactive science center open to the public. It will honor the observatory's rich contributions to astronomy and extend its focus to interdisciplinary, fundamental and applied research that links astronomy data with touch, sound and vision. The center's research will also integrate the life sciences, computer and data sciences, and ultimately the breadth of all areas of STEM education.

"We, humans, are the ones who link all the sciences of the universe. Honoring the legacy of the Arecibo Observatory, NSF has entrusted Puerto Rico with a timely initiative centered on community, culture, education, all existing sciences and those yet to emerge," said Arecibo C3 Executive Director Wanda Díaz-Merced. "Through Arecibo C3, the scientific and harmonious vitality of the Puertorriqueños as maximum seekers of scientific truth will lead the path of science, focusing on the people and the maximum expression of the human intellect that resides in the constantly evolving life of the entire community."

Arecibo C3 will prioritize community engagement, particularly for underrepresented groups, in its STEM education and outreach programs. It will expand opportunities for student research and workforce development, foster professional development, and support collaborative research between faculty, K-12 teachers and students in Puerto Rico and the U.S. mainland. In addition,

Arecibo C3 will include a public science center that will focus on scientific themes, research and innovations through exhibitions, educational programming, science talks, films and enrichment activities for children, families, educators and the general public. A highlight of the science center will be an Arecibo Observatory Legacy Exhibition.

These collaborative partnerships will form the cornerstones of Arecibo C3 and will further NSF's overall strategy to develop the diverse and globally engaged workforce necessary to ensure that the nation remains a global leader in science and engineering research and innovation.

For more information about NSF programs, visit <u>nsf.gov</u> [10]. For updates on Arecibo C3, a new website is currently under development and will be accessible at <u>www.areciboc3.org</u> [11].

Tags:

- Observatorio de Arecibo [12]
- Arecibo Observatory [13]
- UPRRP [14]
- Universidad de Puerto Rico [15]
- NSF [16]
- Science communication [17]
- Science education [18]
- Wanda Díaz Merced [19]

Content Categories:

• Engineering, math, and computer science [20]

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Links

[1] https://www.cienciapr.org/en/external-news/nsf-announces-over-5m-funding-create-new-stem-education-and-research-center-arecibo [2] https://www.elnuevodia.com/ciencia-ambiente/espacio-astronomia/notas/embargo-la-upr-en-rio-piedras-es-seleccionada-como-coadministradora-del-nuevo-centro-educativo-en-el-observatorio-de-arecibo/ [3] https://www.nsf.gov/pubs/2023/nsf23505/nsf23505.pdf [4] https://www.cienciapr.org/ [5] https://spear-education.com/ [6]

https://www.nsf.gov/awardsearch/showAward?AWD_ID=2321759[7]

https://www.nsf.gov/awardsearch/showAward?AWD_ID=2321760 [8]

https://www.nsf.gov/awardsearch/showAward?AWD ID=2321762[9]

https://www.nsf.gov/awardsearch/showAward?AWD_ID=2321761 [10] https://www.nsf.gov/ [11]

http://www.areciboc3.org/ [12] https://www.cienciapr.org/en/tags/observatorio-de-arecibo [13]

https://www.cienciapr.org/en/tags/arecibo-observatory [14] https://www.cienciapr.org/en/tags/uprrp [15]

https://www.cienciapr.org/en/tags/universidad-de-puerto-rico [16] https://www.cienciapr.org/en/tags/nsf-0 [17]

https://www.cienciapr.org/en/tags/science-communication [18] https://www.cienciapr.org/en/tags/science-

education [19] https://www.cienciapr.org/en/tags/wanda-diaz-merced [20]

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