

**Manhattanville in West Harlem Implementation Plan Report
October 16, 2017 Submission**

Declaration Reference and Key Data

Obligation Section Number: **5.07(c)(i)**

Obligation Title: **Mind Brain Behavior K-12 Education Center**

Obligation Page Number: **52**

Obligation Trigger: **Issuance of TCO for Development Site 2**

Obligation Start Date: **August 25, 2016**

Obligation End Date: **25 Years from Commencement of the Education Center's Full Operation**

Obligation Status: **In Compliance**

Obligation

Mind Brain Behavior K-12 Education Center. CU shall locate within Development Site 2 (the proposed Jerome L. Greene Science Center) to be constructed in Stage 1 a Center to educate the community about diseases that affect the mind and brain as well as the advances being studied by CU's faculty and researchers. The Center shall encourage and design programs for local elementary, junior high school, and high school students. The Center shall commence operation upon issuance of the temporary certificate of occupancy for the Jerome L. Greene Science Center and operate for a 25-year period from commencement of full operation.

* The center opened to the public in February 2017. Therefore, this obligation will be in effect until 2042, 25 years from the commencement of the center's full operation.

Evidence of Compliance

1. Press release and/or announcement about center opening
2. Link to website
3. Annual report
4. Signage at Jerome L. Greene Science Center

Columbia University's Implementation Plan and all supporting documentation are made available on the Community Services Webpage at <http://manhattanville.columbia.edu/community/benefits-and-amenities>.

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EOC Checklist for Obligation 5.07(c)(i):

Please check to verify EOC items submitted for review.

- 1. Press release and/or announcement about center opening
- 2. Link to website
- 3. Annual report
- 4. Signage at Jerome L. Greene Science Center

Monitor's Notes / Comments:

Status:

Please check to indicate the status of Obligation 5.07(c)(i):

- In Compliance
- In Progress
- Not In Compliance
- Not Triggered

Public Programs at the Zuckerman Institute

Science and community come together at Columbia's Mortimer B. Zuckerman Mind Brain Behavior Institute

The Zuckerman Institute is delighted to call Manhattanville home and eager to share with our neighbors the challenge and excitement of learning how our minds and brains work. Our Education Lab, located near the 129th Street entrance of the Jerome L. Greene Science Center, is open year round and hosts a variety of hands-on brain science programs. Designed with feedback from the community, these programs harness the groundbreaking research of the institute in creative ways for school children, families, after-school groups, teachers and adults. Contact us to learn more about our programs; we have only just begun!

Community Brain Expo

What does a human brain feel like? Come find out at the Zuckerman Institute's Community Brain Expo. We invite our neighbors to join us for this free public event, held every spring, which features head-scratching demonstrations and mind-boggling activities for every age. Visitors put their minds to the test as they learn about how we see the world around us, how our memories work and other fundamental aspects of the mind and brain. Led by actual scientists, the event is organized by Columbia University Neuroscience Outreach, a group of Columbia graduate students devoted to sharing brain science with the public. The event is held in celebration of Brain Awareness Week.



The Zuckerman Institute's
Kelley Remole explains brain
science to a group of students.
Credit: Columbia University



Visitors at the Zuckerman Institute's 2016 Community Brain Expo. Credit: Michael DeVito



2016 BRAINYACs show off posters presenting their research. Credit: Zuckerman Institute

BRAINYAC: Brain Research Apprenticeships in New York at Columbia

Hands-on experience in a laboratory is essential for preparing today's youth to become tomorrow's scientists. With this in mind, the Zuckerman Institute's Brain Research Apprenticeships in New York at Columbia (BRAINYAC) program provides an immersive science research experience in which high school students train and work in neuroscience laboratories at Columbia University. The BRAINYAC program is open to students from select partner programs and schools that serve students in Upper Manhattan and the Bronx. Each student is matched with a Columbia neuroscientist, a mentor who guides the student through a research project. Students come away from the experience with an enhanced understanding of how laboratory research leads to transformative discovery, exposure to a professional academic environment and a stronger connection to science as a career. BRAINYAC receives generous support from the Pinkerton Foundation and the Stavros Niarchos Foundation.

For more information about the public programs at Columbia's Zuckerman Institute, please contact:

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Brain Insight Lectures and Teacher-Scholar Program

At the Brain Insight Lectures, free and open to the public, eminent Columbia scientists and scholars examine how brain science intersects with everyday life. Speakers have included Olajide Williams, MD, who spoke about how to prevent strokes in communities of color and Frances Champagne, PhD, discussed how our early experiences shape our behavior. Upcoming lecture by Thomas M. Jessell, PhD, will share his groundbreaking work on the neuroscience of movement. These lectures are the scientific cornerstone of our Teacher-Scholar Program, which introduces middle and high school science teachers in New York City to cutting-edge brain science for the duration of the school year. Using the lectures as case studies, the teachers participate in workshops and create a lesson plan each semester that brings neuroscience back to their classrooms. Teachers who complete the program emerge with greater knowledge of neuroscience, a deeper understanding of the scientific process and a toolbox of concrete ways to implement their knowledge in the classroom. These programs are made possible with generous support from the Stavros Niarchos Foundation.

Mind Brain Behavior K-12 Education Center

Link to website:

<https://zuckermaninstitute.columbia.edu/our-public-programs>



Columbia University in the City of New York

COLUMBIA | Zuckerman Institute

Mind. Brain. Behavior.

SCIENCE | PEOPLE | PUBLIC PROGRAMS | EVENTS | NEWS | ABOUT

SEARCH [email icon] [social icons] SUPPORT

Our Public Programs

Science and community come together at Columbia’s Zuckerman Institute. We are delighted to call Manhattanville home and eager to share with our neighbors the challenge and excitement of learning how our minds and brains work.

Students learn about the wonders of the brain at the 2016 Community Brain Expo (Credit: Michael DeVito).

DISCOVER SCIENCE WITH US

Our Education Lab is open year-round and hosts a variety of hands-on brain science programs in the Jerome L. Greene Science Center, located at 609 W 129th St. Designed with feedback from the community, these programs harness the groundbreaking research of the Institute in creative ways for school children, families, after-school groups, teachers and

Annual Report: Mind Brain Behavior K-12 Education Center

State Submission Reporting Period: **October 2016 - September 2017**

The ground floor of the Jerome L. Greene Science Center is open to all and is a neighborhood-based resource for brain science education. On February 11, 2017, the Mind Brain Behavior K12 Education center opened, called the Education Lab. Education programs bring together groundbreaking research in creative and exciting ways for school children, families, adults and teachers. Located near the 129th Street entrance to the building, this 1,500 square foot space was designed to resemble the scientific research laboratories of the Zuckerman Institute.

Saturday Science

One of the institute's program at the Education Lab is Saturday Science – a themed free event for students, families and community groups held once a month through the school year. Saturday Science activities and demonstrations are engaging and informative, providing launching points for further exploration, reflection and discovery.

Saturday Science events were successfully implemented on the following five dates in 2017: February 11, March 18, April 29, June 17 and September 18. During these events, a total of 445 people attended. Approximately 171 people in attendance were adults and 190 were K-12 aged children. Similarly, 52.81% of attendees who disclosed their zip codes were residents of program target communities.

Brain Insight Lectures

The Zuckerman Institute's free public lecture series, the Stavros Niarchos Foundation Brain Insight Lectures, examines ways that brain science intersects with everyday life. Each lecture features a Columbia researcher whose approaches to the science of brain and mind resonate with a public audience. The lectures, offered four times a year, are the scientific cornerstone of the Stavros Niarchos Foundation Teacher-Scholar program, a competitive program that introduces middle and high school science teachers in New York City to cutting-edge brain science for the duration of a school year. This series is beyond the requirement of Columbia's commitment.

Public Programming

Between the period of January 2017 through September 2017, the Education Lab has hosted a total of 35 events for a total number of 80 hours of brain science programming for the public. This includes BRAINYAC (the high school internship program described in the Youth Internships annual report), Saturday Science, and the programming of the Brain Insight Teacher-Scholar program. The number of hours for individuals involved in these programs totaled nearly 5,000 program contact hours (number of people multiplied by the number of hours they engaged in programming).

Program Outreach

Each program has a customized publicity strategies built on targeting communities in upper Manhattan and the South Bronx. For example, the Zuckerman Institute publicizes Saturday Science to reach students, families, teachers and community members in upper Manhattan and the South Bronx. Local schools, libraries and community organizations such as Manhattanville Community Center and YMCA Harlem and are informed of this free, fun-filled event electronically via email and through printed (flyer) materials. The Brain Insight Teacher-Scholar Program is publicized each spring during its application period via emails and printed flyers targeted to schools in the local community as well as city-wide. Flyers are hand-delivered to schools including PS 076 A Philip Randolph, Thurgood Marshall Academy, IS 223 Mott Hall High School, PS 161 Pedro Albizu Campos, and IS 195 Roberto Clemente.

Additional Supporting Documentation

- List of organizations informed about Saturday Science events
- Copies of Saturday Science flyers
- Copy of Brain Insight Teacher-Scholar Program flyer

The following organizations were targeted for the inaugural Saturday Science

Targeting consisted of physical flyers dropped off at the locations, emails, and/or phone calls

Org type (CU, com)	Organization
CU - outreach	BRAINYAC
CU - outreach	Columbia Neuroscience Society
Sch	Columbia Secondary School
CU - outreach	Double Discovery Center
Comm (grp)	Get Healthy Harlem
Comm (grp)	Henrietta Lyle of CB 10
Comm (grp)	Friends of the Children
CU - outreach	Late Night Science
Comm (grp)	Morningside Area Alliance
Comm (grp)	NYC Mission Society
Comm (grp)	Graham Community Center
sch	Harlem Link Charter
pers	Milton Tingling
sch	MS 54 Booker T. Washington Middle School
sch	PS 161 Pedro Albizu Campos
Comm (Grp)	Boys and Girls Club of Harlem
CU - outreach	Brain Expo attendees
Comm (Grp)	BioBus
CU - outreach	Columbia University Neuroscience Outreach
CU - outreach	Columbia Neuroscience Society
Comm	NYPL Countee Cullen Library
Comm	NYPL Harlem Library
Comm	NYPL Schomburg
Comm	Harlem Children's Zone
Comm	Harlem YMCA
Comm	Lt JP Kennedy Jr Community Center
Comm	New York City Housing Authority St.Nicholas I Community Center
Comm	Urban Advantage
Comm	Parenting a Second Time Around (PASTA)
Sch	IS 286 Renaissance Leadership Academy
Sch	PS 180 Hugo Newman
Sch	PS 149 Sojourner Truth
Sch	Wadleigh Secondary School for the Performing Arts
Sch	Thurgood Marshall Academy
Sch	KIPP Infinity Charter School
Sch	PS 036 Margaret Douglas
Sch	PS 129 John H Finley
Sch	PS 161 Perdo Albizu Campos
Sch	Democracy Preparatory Charter School
Sch	Frederick Douglass Academy II Secondary School
Sch	Future Leaders Institute Charter School
Sch	Knowledge and Power Prep Academy IV
Sch	Opportunity Charter School
Sch	PS 076 A Philip Randolph
Sch	PS 123 Mahalia Jackson
Sch	PS 165 Robert E Simon
Sch	PS 250 Westside Collaborative
Sch	KIPP Star Middle School



Students and families are invited to

SATURDAY SCIENCE

AT THE ZUCKERMAN INSTITUTE EDUCATION LAB

February 11, 1-4 pm

MEET THE BRAIN

March 18, 1-4 pm

**WHAT MAKES
A SENSE?**

A themed
exploration of
the mind, brain
and behavior

LOCATION

Jerome L. Greene
Science Center
3227 Broadway (at 129th St.)
New York, NY 10027

REGISTER AT

ZSatSci.eventbrite.com



zuckermaninstitute.columbia.edu

zuckermaninstitute

zuckermanbrain

COLUMBIA | ZUCKERMAN INSTITUTE
Mortimer B. Zuckerman Mind Brain Behavior Institute

Join Columbia's Zuckerman Institute for

SATURDAY SCIENCE

An interactive journey to explore the mind, brain, and behavior

THIS MONTH'S THEME

Say Hello to Your Brain

September 16, 2017
1:00–4:00 p.m.

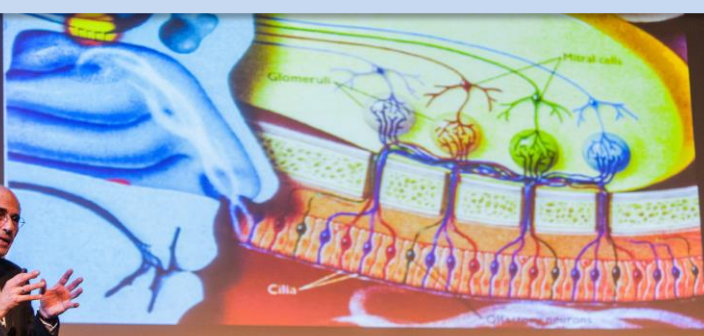
Greene Science Center
609 West 129th Street
New York

Columbia's Zuckerman Institute invites learners of all ages to explore the workings of the brain through hands-on activities and authentic scientific resources. Free, monthly event, open to the public. RSVP recommended.

For more information and to RSVP:
<https://zuckermaninstitute.columbia.edu/sat-sci>

COLUMBIA | Zuckerman Institute
MORTIMER B. ZUCKERMAN MIND BRAIN BEHAVIOR INSTITUTE





Richard Axel, MD, Nobel laureate and co-director of the Zuckerman Institute, speaks at a recent Brain Insight Lecture



A Teacher-Scholar attends a program lecture with her students

Columbia University's Mortimer B. Zuckerman Mind Brain Behavior Institute invites teachers to be a

Stavros Niarchos Foundation

Brain Insight Teacher-Scholar

The Zuckerman Institute's Teacher-Scholar program is a one-of-a-kind professional development program that introduces middle- and high school teachers from New York City schools into the fascinating field neuroscience.

During 12 sessions spanning the academic year, this competitive program combines public science lectures with teacher-only seminars to enhance teachers' brain science knowledge while augmenting their science teaching skills.

Teachers emerge with a greater knowledge of neuroscience, enhanced scientific literacy, and concrete ways to implement their knowledge in the classroom.

Teachers receive a stipend for successful completion of the program.

Deadline to apply: May 15, 2017

Program details and application: <http://tinyurl.com/TeacherScholar2017>

Questions? Contact us: publicprograms@zi.columbia.edu or (212) 853-0600



JEROME L.
GREENE

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CENTER

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XING SCHOOL



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Zuckerman Institute Education Lab