



The Roger Lehecka Double Discovery Center

Getting community youth to, through, and beyond college



Photo: Internship at BRAINYAC.

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BRAINYAC, Where DDC Students Fall in Love with Neuroscience

BRAINYAC (Brain Research Apprenticeships in New York at Columbia) is the signature program for high-school students at Columbia's Zuckerman Institute, a state-of-the-art facility dedicated to the study of the brain and the mind that includes Nobel laureates Richard Axel, MD (2004) and Eric Kandel, MD (2000) as co-directors and principal investigators.

I was interested in neuroscience and research so when I heard about BRAINYAC, I jumped on the opportunity says Abriana Perez, DDC student and 2019 BRAINYAC intern. *Now that I have done this internship, I know that I want to study this in college and conduct research.*

This is what DDC's partnership with BRAINYAC is all about: providing community youth with meaningful access to unique opportunities where they can explore their interests and examine some of the most exciting scientific questions of our time. It awakens and nurtures the scientist in our students and helps to fortify the pipeline of a more diverse generation of researchers.

DDC students who participate in BRAINYAC are engaged in a 7-week immersive summer research experience with other local high-school students. They train and work full time in a Columbia University lab on a research project of their neuroscientist mentor. At the end of the internship, students develop a poster board that explains the focus of their mentor's research and their own contributions to the project.

The research projects are fascinating and different. Last summer, interns investigated autistic behavior, used antibodies to identify specific brain cells involved in memory and analyzed fMRI scans - functional magnetic resonance imaging that measures brain activity by detecting changes in blood flow. One student even worked in the lab of Nobel Prize winner Richard Axel to help uncover how cuttlefish, the chameleons of the sea, are able to change color for camouflage!

DDC's Abriana analyzed fMRI scans to determine the impact of traumatic experiences in the brain. This non-invasive technique can illustrate the brain's functions, show mental processes and evaluate the effects of brain diseases and treatments.

Typically, students master one to three lab techniques during their internships. *I learned how to analyze fMRI brain scans and how to handle pipettes for solutions – a lab tool to measure volume of liquid. I also studied two codes: R, a language for statistical computing; and python, a language for programming. And, very important, I learned how to socialize in a science lab and ask questions!* says Abriana.

October Was College Reps Month at DDC!

I loved that I could actually "see" students listening to what was being said, and the energy in the room, the enthusiasm to study and the air of success! remarked Phyllis Breland, Director of Opportunity Programs at Hamilton College, about the DDC students who attended her October 16 presentation on Hamilton College.

Admission professionals from some of the best colleges in the Northeast – Bard, Hamilton, Hobart and William Smith, and Trinity colleges – visited DDC to introduce their institutions to eager DDC students. College Reps month is one of several activities that DDC uses to expose students to a wide variety of schools.

DDC's approach to the college process emphasizes work with students and their parents that helps them to critically compare and evaluate college options – academically, socially and financially – so that they can find their "best fit" school. This facilitates students' persistence to graduation and ultimately positions them for continued success.

Another important component of DDC's approach is the College Prep class. Through these classes, students learn how to rigorously research different schools with particular focus on the availability of high-quality academic programs aligned to their interests; robust financial

packages that make college affordable and minimize potential debt burden; and comprehensive supports to ensure that they'll be in a nurturing environment. The priority is not just access but success through degree attainment.

Students who participated in the College Reps month sessions got a deep understanding of the admissions' criteria of the different institutions and how those institutions support their students' journeys through college. DDC students wanted more and asked a range of pointed questions: *What are your statistics on diversity?; What support programs do you have for first-generation students?; What club sports do you have?; and When do you have to declare a major?* Their inquiring NYC minds also wanted to know: *How is winter on campus, do you get much snow?* To which Katharine Hardy, Senior Associate Director of Admission at Bard College, responded: *We get as much snow as New York City, but it takes longer to melt!*

DDC Alum Spotlight: Laurent Delly DDC'91

I credit the Double Discovery Center with shaping who I am today. This high-caliber program was the opportunity of a lifetime and I will always be grateful!

DDC taught me resilience, encouraged me to press on during tough times and gave me the confidence to succeed. The program added so much to the public school curriculum, from science to literature. It opened my eyes to new experiences and helped me understand my culture and my identity as a citizen of the world. It is Kevin Matthews, the DDC Director at the time, who motivated me to go to Polytechnic University/Brooklyn Poly – now known as NYU Tandon School of Engineering – and who encouraged my best friend to go to Carnegie Mellon. My brother and sister joined DDC later on: my brother went to Rensselaer Polytechnic Institute and my sister went to Fordham.

I was accepted with full scholarship at Brooklyn Poly, but that does not mean it was always easy. I did not have all the answers. There were times when I thought I was not going to be able to stay on top of my studies or even get by. It was during those tough times that I remembered DDC's lessons about resilience and the sacrifices so many people made before me so that I could be there. I also had a community of supporters, mentors, and teachers from DDC who continued to push me to take risks and stay focused on my studies and my ultimate goals. Thanks to that support, I did push through and persevered.

Today, with my brother Price-Mars, I am the co-founder of Ideacoil, a New York City technology startup. We recently were selected by Columbia University School of Business to participate in the Columbia-Harlem Small Business Development Center (SBDC) program. SBDC chooses the most promising start ups in the community and offers two years of free step-by-step mentoring by industry leaders and access to very valuable business information. We are so excited!

None of this would have been possible without DDC, which groomed me to meet the challenges that all young people face as they persist to achieve their dreams. When you are in your teens, you do not know about the real world, you are somewhat innocent. I am so lucky to have had the opportunity at that crucial formative time to meet so many sharp, disciplined, career-focused instructors and graduate students from Columbia in the areas of engineering, medicine, and business. They inspired me, they motivated me, and they gave me a taste of what was ahead.

The DDC/Columbia environment makes a big impact. You are surrounded by the best at Columbia – professors give you guidance and graduate students help you with your essays and college applications. This is huge. It was such a privilege to be surrounded by people who had made it. Everyone was a mentor. They cared for us, they wanted us to succeed. This is

not always easy to find. Even at a young age, I knew that it was important to get guidance from parents and from people who know what it takes to get a better education to improve your life outcomes.

DDC will always be an important part of my life. I am very proud of my education, my career trajectory, and my heritage. I have established the Casimir & Delly Scholarship at DDC because I want to give back and help offer underserved young people an opportunity to become skilled, responsible members of society. I trust they will also want to give back, it's what I call "full circle" community support.

Today, we need DDC more than ever. Nobody is lucky enough to know how to face the challenges of all the negative situations in life. This is why I am a passionate advocate for DDC. I want everyone to know the difference this program makes in the life of local youth. Nowadays, I do whatever I can to support DDC and spread the word about its accomplishments. I hope all alumni will remember their roots and join me to give back and provide the coming generations with the same life-changing opportunities they enjoyed as students.

We all know that without DDC, we would not be where we are today!

**Calling all DDC Alumni and Former Volunteers!
We want to hear from you!**

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