

ODASIS NEWSLETTER

Vol. 14



Office for Diversity and Academic Success in the Sciences (ODASIS)

*Meditations on the journey to
become a health care professional
today...read more from Elorm
Avakame, M.D., M.P.H., page 6.*

Upcoming Events

ODASIS Open House
Saturday, April 13, 2019

**2019 ODASIS Graduation and
Awards Ceremony**
Thursday, April 25, 2019

RUTGERS
School of Arts and Sciences

Thanks to all program donors!

ODASIS would like to thank all alumni for their generosity and contributions and would like to highlight those that donated during 2017-2018:

- Mr. Michael Albina
- Mr. Robert Alexander
- Dr. Paul Codjoe
- Dr. Didier Demesmin
- Dr. Donyell Doram
- Ms. Xenia Feliz
- Dr. Danielle Hairston
- Dr. Roland Hamilton
- Mr. Joseph Magadalenno Jr.
- Mr. Bruce McLeod
- Dr. Ronniel Mercado
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- Dr. Esi Rhett
- Dr. Angelique Ridore
- Ms. Elisa Riggins
- Mr. Squire Servance
- Mr. Nnajindu Ugoji
- Dr. Camille Walker
- Dr. Zakkiyah Waters



Congratulations to Corey Smith, M.D., F.A.C.E.P. for receiving the ODASIS Outstanding Alumni Achievement Award in recognition of all of the important work you do as a member of the medical profession and as a distinguished ODASIS alumnus!

In Celebration: Another Year of Accomplishments for ODASIS Students!



On April 26, 2018, ODASIS had the immense privilege of hosting the 32nd annual ODASIS Graduation & Awards Ceremony, an event that was attended by hundreds of guests including alumni, undergraduates, and their parents as well as several Rutgers faculty and staff members. The evening began with an introduction and warm congratulations by Dr. Elorm Avakame, a proud alumnus of both ODASIS and Harvard Medical School, as well as recipient of a Master's in Public Policy from the Harvard John F. Kennedy School of Government. Dr. Kenneth Breslauer, Dean of the Division of Life Sciences and the Vice President for Health Science Partnerships, delivered a rousing address welcoming our guests to the ceremony; he was followed by Dr. Karen Stubaus, the Executive Vice Chancellor of Rutgers University-New Brunswick, who introduced Dr. Brian Strom. Dr. Strom, the Chancellor of Rutgers School of Biomedical and Health Sciences as well as the Executive Vice President for Health Affairs. Chancellor Strom delivered stirring remarks on the importance of endurance and persistence in science and medicine. After Chancellor Strom's speech, Dr. Avakame went up once again to give an emotional and inspiring speech, where he emphasized the great difficulties and even greater rewards of pursuing a career in medicine. We were ecstatic to celebrate the acceptance of 43 of our graduating ODASIS students into medical school, dental school, and a variety of other prestigious postgraduate programs, with more yet to come.

The alumni speaker for this year's ceremony was Dr. Lynn O'Connor, who holds an M.P.H. from Yale University Medical School, an M.D. from Temple University Medical School, and is a well-recognized colon and rectal surgeon. Dr. O'Connor gave an inspiring address on the importance of perseverance and taking risks when pursuing a medical career, talking about her difficulty between choosing a safe career in radiation oncology or taking a risk and trying to be a surgeon. She encouraged the graduating students to be brave, persevere, not let other people's expectations become theirs, and to "never play it safe"- advice that they will surely take to heart.

Additionally, ODASIS was proud to present its Outstanding Alumni Achievement Award to Dr. Corey Smith, an M.D. at Summit Medical Group Urgent Care Center, who gave a few remarks thanking ODASIS and outlining the heavy responsibility that it is to be a doctor. The evening ended with remarks from the parents of Samantha Elfanagely, who talked about their immigrant experience and told the students how proud they are to see a ceremony like this. With a bevy of students, alumni, and parents who all came out to celebrate the graduating seniors and share a few special moments together, the 32nd ODASIS graduation ceremony was surely a night to remember.

Cultivating Student Success

Believe and Achieve at the 2017 ODASIS Motivational Workshop



On Friday, February 16 the ODASIS office held their annual High Achievers Workshop to recognize our students who had not only a 3.2 term GPA, but more importantly, at least a 3.2 BCPM. While this event is mainly aimed at our freshmen class, we also take the time to identify upper level students who were not previously recognized.

The event was held at the College Avenue Academic Building, where we were fortunate to have faculty and staff represented from a variety of offices, such as the Chemistry Department and the SAS Honors Program.

The event kicked off with Assistant Director Tiffany Nesbey recognizing the outstanding achievements of our 76 top performing students who have participated in a variety of ODASIS programs, such as the Access-Med program and Summer Strategic Plan. Tiffany stressed that STEM fields are challenging but highly rewarding, and that success in these fields requires ambition, diligence and perseverance.

Next, Associate Director Jonathan Langowski took a moment to acknowledge all of our guests, ranging from faculty & staff, to parents, family friends and, most importantly, our students. Jonathan then introduced our panel of guest speakers: Daniel Guzman, NJMS Class of 2018, Carlos Mendoza, RWJMS Access Med Phase II Class of 2022, as well as Samantha Elfangely, RWJMS Access Med Phase II Class of 2022.

Daniel Guzman shared with the audience his journey throughout undergrad. He acknowledged that NJMS was more difficult than he imagined, but he persisted, and is now anxiously awaiting to hear which residency he will be selected to next month.

Both Carlos and Samantha are a part of the Robert Wood Johnson Medical School Access Med Phase II program, as well as acting as supplemental instructors for the ODASIS office. Therefore, their presentation centered on note-taking skills and how to prepare for more difficult, upper-level courses.

The program then transitioned to honoring Dr. John Taylor from the Chemistry Department, who encouraged the students to chase down their dreams and passions, whatever they may be.

We now transitioned to the main reason for the day—recognizing and honoring our students through a picture driven presentation displaying all the High Achievers from Biology, Chemistry, Upper Level Sciences and the MCAT class.

The program concluded with a touching speech by Dean Lisa Sanon-Jules where, after detailing her personal struggles through her careers, she challenged every student to believe that they could accomplish anything they desired to.

Honoring Student Success at the 2018 High Achievers Ceremony



One of the greatest highlights of the academic year is the annual Motivational Workshop, a program that immerses ODASIS undergraduate participants with health professional schools from around the country. On Saturday, November 11, 2017 the department had the opportunity to connect 500 undergraduate students with over forty professional schools representing programs ranging from osteopathic medicine to dentistry. Students had the opportunity to connect with deans and admissions representatives and explore new

opportunities within health programs, as well as learn about graduate school programs and specialties they may not have previously known about. The event was not only attended by ODASIS participants, but also representatives from allied health professional schools, Rutgers faculty and staff, ODASIS supplemental instructors and staff, and program partners and mentors.

Before being introduced to the visiting schools, the ODASIS staff organized a small event to provide support to help students visualize their academic goals. Dr. Khan opened the event with a warm welcome and proud introduction of ODASIS alumna, Dr. Nicole Streeks-Wooden, M.D., who shared words of encouragement to those wishing to pursue a medical career. Vice Chancellor for Undergraduate Academic Affairs, Dr. Ben Sifuentes-Jauregui, served as the Motivational Faculty Speaker, while Dr. Paul Kimmel, from the Department of Chemistry and Chemical Biology, was the honorary recipient of the ODASIS Lifetime Achievement Award. Developmental Specialist, Ms. Yayoi Kumata, provided students with a presentation on effective study skills, and Irene Martinez, Rutgers-NJMS Class of 2022, provided students with an account of summer program opportunities. Associate Director, Jon Langowski, provided closing remarks for the event, highlighting the students' remarkable efforts throughout the term and encouraging them to foster connections with program representatives.

Alumni Highlights

Preparing for Success

This past year ODASIS once again saw remarkable results with our intensive, credit-bearing preparatory courses encompassing the DAT (dental school), GRE (graduate programs), and the MCAT (medical school). We had 23 participants in the DAT prep course which was held on Fridays and Saturdays during the Fall semester and the six topics were split amongst two instructors. One of the critical tools we utilized was the DAT Bootcamp program developed by Ari Rezaei, which helped our students collectively score a 22.7 for their Academic Average which ranks in the top 2%! Our GRE course is offered during the Spring semester for an all-day course held on Saturdays. The GRE course had over 90 student participants who utilized the new and improved 2018 GRE Prep Plus from Kaplan Test Prep. The scores received ranked in the top 25th percentile with a Verbal Reasoning Average of 156 and a Quantitative Average of 158. The year-long ODASIS MCAT prep course included 57 participants who incorporated a variety of testing companies to assist with the Critical Analysis and Reasoning Skills section, but the Princeton Review for all other subjects which has already resulted in a collective 507.6 average. We also added a hybrid-MCAT course open to all Rutgers University students which was offered in the Spring semester which included 53 students. While their results are still trickling in, there are over 30 scores with a group average of 508.8! ODASIS looks forward to continuing their successful path of assisting students matriculating into the graduate programs of their choice.



Dr. Eunice Martins



Dr. Eunice Martins

It is difficult to not be impressed and a little intimidated when talking to Dr. Eunice Martins; no wonder, because Dr. Martins is truly an impressive person. A native of New York, Dr. Martins was a top student at Rutgers who went on to study at the Yale School of Medicine, where she got her M.D. this past May. From being chosen to do a research program intended for undergraduate juniors and senior when she was a sophomore to helping run a clinic during med school and still finding the time to join a dance team, Ms Martins is everything that a pre-med student dreams of being.

It was therefore more than a little surprising to hear that for a

while she was not even sure about a pre-med student at all, much less a doctor. Dr. Martins entered college intent on majoring in neuroscience, and were it not for the ridiculous price of textbooks, it is very likely that ODASIS would have been deprived of one of its notable alumni; while she did not have much of an interest in being a doctor at that point, she decided to apply to the program upon hearing that it provided free books. Once there, she found a community of intelligent, driven people with backgrounds similar to hers. While the program could be "paternalistic" at times, it also opened her up to the idea of seriously pursuing medicine as her career and helped her gain access to opportunities that she otherwise would not have had.

After going on to med school, she found that Yale's more loosely structured program gave her access to even more opportunities than even college did. However, as she settled in for her first year of med school, Dr. Martins had a nagging feeling that she simply did not belong there. Everywhere she looked among her classmates, she saw people that knew how to do certain procedures better than her, people that were already experts on subjects she did not know much about, and people that had already started nonprofits. In short, Dr. Martins was struck with a classic case of imposter syndrome.

Today, Dr. Martins has started her residency and looks forward to working to one day working on public health issues among immigrants and refugees. When asked when the nagging feeling went away, however, she admitted that it really has not: she has dealt with it, however, by reminding herself to stay in her own lane and not compare herself to others. Not that she needs to worry much about comparisons; with the journey she has already had and the bright future ahead of her, it is easy to see that Dr. Eunice Martins is already an exceptional person.

Drs. Rachna Thakker and Pamela Juarez

Anyone who has gone through any pre-med program knows the challenge it poses: long, sleepless nights, tight schedules, difficult work, and tests that seem to get even harder no matter how long one studies. Drs. Rachna Thakker and Pamela Juarez, both alumni from the ODASIS program, can attest to the difficulties that are par for the course in programs like ODASIS- and how those same challenges can bind people together.

Today, Dr. Thakker and Dr. Juarez are both successful dentists in the New Jersey area, but not that long ago they were struggling with the same challenges that ODASIS students go through and more. Although ODASIS and Rutgers back then did not look much like what they are today, the challenges that it posed to new students were no less daunting: Dr. Juarez recalled a time when she was compelled to attend a study session on her birthday, despite her pleading otherwise. When the two recall these moments, however, they laughed and smiled. It was hard, it was frustrating, but maybe that is why they became so inseparable- it was during this time that they became friends, after all.

As time went on, Dr. Thakker and Dr. Juarez came to appreciate the discipline and habits that ODASIS instilled in them. As they both found their affinity for dentistry, they also found that it only got harder after college: they had to face the struggles of the DET and then dental school, which they attended together at what is now the Rutgers School of Dental Medicine. Dental school was like no challenge they had faced before, and Dr. Thakker mentioned that nothing prepares one for dental school, ODASIS gave them a good head start. They had so many responsibilities that managing their time got substantially harder, and they even recalled studying incessantly even during “one or two Christmases”.

Having gone through dental school and now working in successful dental practices, one would assume that those days of change, hardship, and challenges would seem to be over; an assumption that is quickly dispelled upon talking to them. Both of them are still growing and challenging themselves, trying to learn about new technologies and treatments in a field that changes every single day; the grit and persistence that got them to where they are today never went away. When



Rachna Thakker D.D.S. and Pamela Juarez D.D.S.

asked for advice about how to survive the grueling schedules and the long hours, Dr. Thakker and Dr. Juarez offered a few simple words that are nonetheless useful for anyone going into a health profession: “never give up”. However, seeing them laugh and smile together, still fast friends after so many years and so many changes, it seems that there is something else that students can learn from their example: it always helps to have a friend by your side.

Academic Year 2017-2018 Grade Comparisons

General Biology

	ODASIS	vs.	Rutgers
≥B	52.70%		42.77%
	ODASIS	vs.	Rutgers
≥C	82.04%		73.11%

General Chemistry

	ODASIS	vs.	Rutgers
≥B	50.57%		34.06%
	ODASIS	vs.	Rutgers
≥C	92.61%		67.51%

Mathematics

	ODASIS	vs.	Rutgers
≥B	44.58%		32.81%
	ODASIS	vs.	Rutgers
≥C	77.11%		58.07%

Biochemistry

	ODASIS	vs.	Rutgers
≥B	96.84%		69.58%
	ODASIS	vs.	Rutgers
≥C	97.89%		88.34%

Organic Chemistry

	ODASIS	vs.	Rutgers
≥B	63.68%		39.87%
	ODASIS	vs.	Rutgers
≥C	94.03%		73.03%

Genetics

	ODASIS	vs.	Rutgers
≥B	67.72%		54.63%
	ODASIS	vs.	Rutgers
≥C	90.55%		81.66%

Physics

	ODASIS	vs.	Rutgers
≥B	79.76%		54.61%
	ODASIS	vs.	Rutgers
≥C	98.21%		86.17%

Systems Physiology

	ODASIS	vs.	Rutgers
≥B	76.79%		47.28%
	ODASIS	vs.	Rutgers
≥C	92.86%		75.17%

In Their Words—Charting a Path to Success

Sopuru Ezeonu



When I think of ODASIS, one word comes to mind: family. A family is a group of people known for their support and love. In the four years since I began the program, ODASIS has supported me tremendously in my academics and

dreams. I have also experienced a ton of love, albeit tough love at times, that pushed me to keep going no matter what. Words can never be enough to express my gratitude, and that goes for my advisors as well as my peers.

With the help of my ODASIS advisors, I had a road map for my four years at Rutgers. From courses down to study times, I knew what I had to do to excel academically and reach my goal. My parents and I always remark that there is no program like ODASIS at other universities. No other college program offers as much supplemental instruction and opportunities to trips to top health professional schools. Not to mention, I participated in the ODASIS MCAT prep class, which prepared me greatly for the test that would determine my

future. Their help did not end there; my advisors, especially Dr. Khan, were a tremendous aid while applying to medical school. As a result, I can proudly say that I received acceptance to multiple medical schools with scholarships. For all of this, to my advisors and Dr. Khan, I say thank you.

My peers in the ODASIS program are also worthy of recognition. From the 26 friends I made at the ODASIS Summer Prep program in 2014, and all the other friends I made throughout my four years, I am so grateful. They made the journey bearable, fun, and worthwhile. There is so much I can say about how ODASIS impacted my life, which leads to my advice. For those interested and those currently in the program, take advantage of everything ODASIS has to offer! So much is made available by the help of the advisors, but it's up to you to grab it! The grab may not be so easy and may take some work, but it will definitely be worth your while.

Naturally, I am a little nervous about my next journey at medical school, but I feel prepared for these challenges because ODASIS instilled valuable keys that I know will help me through my next chapter. With that, a big thank you to everyone at ODASIS, my family. I can't wait to continue to make you all proud!

Elorm Avakame



I'll start, like many other college speakers, by saying "I've been where you've been." But I mean that literally. Nelson Labs? Trying to study in an ODASIS office that's way too loud to study in? I've been there. LSM? Beck Hall? Been there too. I've slept there during all-nighters. I congratulate you on getting to where you are, but I also want to say some words about what lies ahead.

I've been where you've been, but more importantly, I've been where you're going. Know the next few years will be academically challenging. At times I wished I was back in Organic Chemistry and longed for the days I studied for my MCAT. You may need to find new study habits; what worked in college may not work at the next level. If something isn't working, make sure to ask for help early. It took me way too long to ask for help—don't make that mistake. The challenge is also personal. You'll have new peers, and some of you will be away from friends and family.

The first and most important thing is to find your people. For four years, ODASIS has given you friends, study partners, and a support system. But they can't come with you. I once heard, "If you want to go fast, go alone, but if you want to go far, go together." Find people to "go together" with.

The next thing is to run your own race. Avoid comparing yourself to your peers. Some may have started non-profits or published in top journals and you may wonder if you belong: we call this "impostor syndrome". Know you're not an impostor. Every application is carefully reviewed, and there are no accidents. It's okay to doubt yourself sometimes, but it is never okay to let those doubts keep you from taking full advantage of the opportunities in front of you.

Let's also talk seriously about mental health. Studies show that over 1 in 4 medical students experience depression and that over 10% have considered suicide. There's a stigma around these issues, especially in minority communities. Mental health isn't something we "do". But you have to take care of yourself before you can care for others.

So, why should you even go to medical school?

Think about what it means to become a healer. You'll deliver babies and comfort dying people with the same hands. To be invited into these intimate moments is a sacred privilege, and it makes this work different from any other.

Think about what you mean to your communities. Black and brown bodies have worse health outcomes across most conditions. Our babies are more likely to die, our children more likely to have asthma, our parents more likely to have diabetes and heart disease. Health professionals from underrepresented groups are more likely to serve disadvantaged populations, and that's no accident. We understand that those are our people. Now you have that same opportunity and obligation.

Our communities need what you represent. A little black boy once came in and as soon as I entered his room his mom said to me, "...I want to thank you for being here. My son's dad isn't in his life. One uncle's in jail, and the other was murdered. I want him to know he can become whatever he wants, but it's been hard for him to believe that because he hasn't seen any examples...Now, he has a reason to believe."

The road is long and you will struggle, but you are capable of more than you can imagine. And the mission is worth it. On behalf of the community of healers that's come through this program, congratulations and welcome.

Daniel Cabrera



Walking through Nelson Labs the week of my graduation, I couldn't help but look at the wall of ODASIS student pictures. Each visit to this building over the past four years was accompanied by this same ritual. The vast array of pictures, once nothing but hall décor to me, began to represent stories and my experiences with some amazing people. Few moments during

my final undergraduate semester brought forth more pride and joy than reminiscing how much my future colleagues and I changed throughout the years.

My journey with ODASIS began similarly to many of my peers. I had graduated from high school with a respectable GPA and confidence in my classroom abilities. How difficult could the state school of New Jersey be? I joined ODASIS my first semester more a skeptic than a participant.

I can now say that freshman year was my moment of hubris. Though it may not feel relevant at first, the same way that Daniel was unsure as to why he had to wax a car in the Karate Kid, everything one experiences in ODASIS is to prepare you for a better future. The program method can be surmised from the word "expectations." It was expected that we should always be punctual (and an hour early for interviews). It was expected that we do well in our courses. It was expected that we have productive summers in programs throughout

the country. It was expected that we finish what we started. Of course, these expectations cannot be met without support from others. The relationships you build here culminate in one of the most stressful times for a pre-med student: the application cycle.

Applying to medical school is no easy task, especially when you're the first in your family to do it. The term "Dean of Admissions" is frightening. The days without emails worry you. The uncertainty in the air is palpable. However, thanks to the friends I met, and Dr. Khan's guidance, I maintained a positive and determined mindset. There were days where I found myself in Dr. Khan's office being scolded for thinking I could take "no" for an answer. The mock interviews allowed me to have the utmost confidence as I walked into my first interview. Through ODASIS I had a group of people that vouched for me, enabled me to network, and introduced me to others who wanted to help me achieve my goal.

This snippet isn't enough of a testament to the ways ODASIS helped me receive multiple medical school acceptances. The experience is so ingrained into the undergraduate career that you may not even notice its impact until you're walking down the ODASIS hallway one final time as a senior. To the incoming students, even those who may be skeptics, my advice is to leave no stone unturned. Recognize opportunities you are presented with early on, and then go out and seek more. These are my expectations of you.

Thank you to everyone I've met along the way, including but not limited to: Dr. Khan, Jon, Shama, and Chirag.

Michael Layana (EOF)



No one in ODASIS is a stranger to adversity, and I am no exception; in fact, it would not be an exaggeration to say that I have faced it my entire life. Like many other students in the program, I was not born in this country. My story began in Guayaquil, Ecuador, the second largest city in the country; when I eventually moved to the United States to be with the rest of my family,

I did not speak a drop of English.

I wish I could say that things got a little easier after that, but truth be told, they did not. Learning English was not easy, and it did not help that my family was in dire financial straits at the time. When I began high school, I really did not think about medical school or being a doctor; in underprivileged communities like mine, the expectation was for students to graduate high school and get a job nearby to sustain themselves. College was out of reach for most people, and medical school? Forget about it.

During my sophomore year, however, I started discovering my passion for the sciences, a love which I am proud to say I still hold today and a passion that carried me into college just a couple of years later. Going into college, though, I pictured myself finishing

it, getting my degree in mathematics, and getting a job that would allow me to provide for myself and my family, not an ignoble goal by any means. But as I would soon discover, it simply was not my goal. Aside from the sciences, my other lifelong passion has been being able to help my community in any way I can.

ODASIS showed me that with medicine, one can do both. I first found out about the program when an alumnus from the program came to speak at my school, and after I started my first semester at Rutgers I joined it as soon as I could. Anyone who has gone through it can attest to how tough and sometimes annoying the program can be, but the discipline it gave me and the people I have met through it made it truly invaluable. Having so many people around you who share your passion and your goals is an experience like nothing else in the world.

As I head to medical school in the fall, I know that there are still many challenges still ahead of me. But there are also so many dreams that once sounded far fetched to me that are now within my grasp: helping my community in any way I can, educating young students about health and the sciences, even going to my home country to learn about how they practice medicine and working in a clinic there, all while supporting myself and my family. Even with all the difficulties that are yet to come, I cannot help but feel lucky to be where I am today.

High School Programs

ODASIS has had the privilege to partner with the New Brunswick Public School district, as well as Johnson & Johnson World Headquarters, to strengthen the education and development of New Brunswick students through programs such as the Advancement via Individual Determination (AVID) Supplemental Instruction program, Bridge to Employment (BTE) program, Saturday Scholars SAT prep program, and the Rutgers College English program. Students enrolled in these programs have all demonstrated a great dedication and commitment to their future success. Though they are aware of the demands and rigors of these programs, they know the rewards are worth the sacrifices in order to build a strong foundation for their postsecondary experiences and futures in STEM professions.

Students enrolled in our Johnson & Johnson Saturday Scholars SAT prep component sacrificed their Saturdays over the course of eight months, and due to their relentless commitment, they saw an increase in their SAT scores by an average of 120 points, some evening increasing their score by over 300 points! We are also pleased to report

that 100% of students who participated in the Expository Writing course successful passed the course and received six college credits towards their college degrees!

Assistant Director Tiffany Nesbey attributes the successes of each program to the countless efforts of program partners including, but not limited to, instructors, parents, and school faculty and staff, as well as our invaluable Developmental Specialist of High School Programs, Sandile Manzini. While Tiffany notes that the instructors are an especially integral part of the team, as they go above and beyond their roles and responsibilities, the greatest key component centers on the commitment the students have in helping each other throughout the program and the sense of family the program fosters. Participants have made sacrifices by giving up their weekday afternoons and Saturdays, essentially going to school six days a week, all in an effort to attend these programs and come one step closer to fulfilling their dreams. Through the ODASIS High School Programs, students have the platform to not only meet their goals and aspirations, but exceed them.

Strategic Plan Scholars

While most high school graduates were in the midst of celebrating their recent graduation, ODASIS had the privilege to host 40 incoming first year students as a part of their highly coveted Strategic Plan (STP) program, which is made possible through the generosity of Rutgers University and ODASIS alumni.

The STP program provides incoming freshmen interested in pursuing careers in the sciences with a strong foundation and exposure to their core fall courses. After a highly selective recruitment process, an elite group of students was selected to enroll in the rigorous program. Students were enrolled in classes that prepared them for their Rutgers Chemistry, Calculus, and Expository Writing courses.

In addition to their academic experiences in the classroom, STP

scholars were also provided with additional opportunities including workshops, one-on-one tutoring, a chemistry lab demonstration, seats at the Robert Wood Johnson Medical School's BCP Symposium, as well as a medical school trip to Columbia University's Vagelos College of Physicians and Surgeons.

Our Strategic Plan scholars began their summer with great enthusiasm as new members of the Rutgers community and performed well above expectations. We are pleased to share that over 80 % of the 2018 STP participants received a final grade of B or higher! These students are well on their way to becoming exceptional contributors to the university and science communities.



Program Results 2012-2018

College/University Enrollment

Class of 2018: **33 of 38** students accepted to Rutgers and other University Programs

Class of 2017: **56 of 58** students accepted to Rutgers and other University Programs

Class of 2016: **26 of 26** students accepted to Rutgers and other University Programs

Class of 2015: **26 of 26** students accepted to Rutgers and other University Programs

Class of 2014: **22 of 22** students accepted to Rutgers and other University Programs

Class of 2013: **23 of 23** students accepted to Rutgers and other University Programs

Class of 2012: **36 of 36** students Rutgers and other University Programs

In total, **100%** went on to attend a college and/or university

Summer Research Programs



Halle Sarkodie - Rutgers Cancer Institute of New Jersey- Continuing Umbrella for Research Experience (CURE)

This summer, I was a student research assistant for Dr. Subhajyoti De's lab at the Rutgers Cancer Institute of New Jersey through the Continuing Umbrella for Research Experience (CURE) program. Our primary focus was on heterogeneity within a tumor and the impact the different regions within a tumor would have on our knowledge of not just the tumor in focus, but of cancer and tumor growth as a whole. The lab helped me further my understanding of different types of cancer, especially of non-small cell lung cancer and lung adenocarcinoma.

My time in the program has further confirmed the importance of living a healthy lifestyle to limit the risk of cancer. Additionally, the lab gave me a look at my major, Biological Sciences, in a deeper context than in the classroom setting. I get to apply what I've learned in my major lecture halls, as well as refine what I've learned in my labs. The knowledge I've gained is definitely going to follow me throughout the remainder of my undergraduate years and afterwards.



Jessica Amoako - Johns Hopkins Medical Institute

Research is an area that I have been curious about and to learn more about it, and this summer I had the opportunity to begin working as a research assistant in the lab of Dr. Jennifer Kavran at Johns Hopkins Medical Institute in Baltimore, M.D. My project focused on the regulatory pathway called, Hippo Pathway which is vital in the control of cell proliferation and apoptosis. My main focus was on purifying the core kinase, MST2, involved in the mammalian version of Hippo pathway using SDS gels and column chromatography. Then with the purified protein, I was able to form protein complexes with the Mob protein substrate of MST2 and later use X-ray Crystallography to view trays for protein crystals. In crystalizing the complex between these two protein the goal was to be able to understand the molecular basis of binding events and in the future develop therapeutic interventions against tumorigenesis if there were any disruptions in this pathway. In working on my project, I have learned to apply molecular biology knowledge that I learned last semester in a biophysics point of view. Although, my commitment to my research meant spending over 50 hours a week for 10 weeks in the lab, I learned more than I wouldn't have in a classroom setting. This experience has taught me the importance and necessity of doing research as a physician, and I plan on continuing research even throughout my medical school journey.



Jidefor Okafor - Bridging the Gaps Summer Research Program, Keck School of Medicine of University of Southern California

This summer I worked with Dr. Troy McEachron in the Department of Translational Genomics to study pediatric osteosarcomas. Osteogenic sarcomas, or osteosarcomas (OS), are a heterogeneous disease at the molecular and cellular levels. A typical culture can consist of cells of varying sizes and shapes, and containing different numbers of nuclei. OS is a rare type of cancer, but the most common form of malignant bone tumor. It is most frequently diagnosed in patients with more active growth plates, making it a hallmark adolescent cancer. Using a heterogeneous K7M2 cell line, McEachron lab studies osteosarcoma tumor development and metastasis in mouse models. My project focused on identifying cell variations and characterizing their differences based on morphology, DNA content, and protein expression. Specifically, I checked for expression of VEGF, a protein involved in angiogenesis which promotes tumor growth. Using immunofluorescent imaging, I was able to find differences in DNA content and VEGF expression between the cell variations. By sorting the cells into different groups via Flow Cytometry, we were able to isolate large cells, small cells, and cells with high DNA content for future comparisons. Future plans include monitoring each group in culture to see if they change morphologies, and injecting cells from each group into mice to compare rates of tumorigenesis. In addition, I had the opportunity to shadow a pediatrician and orthopedist at the Children's Hospital of Los Angeles, witnessing healthcare behind-the-scenes and learning how to perform casting."



Johvany Plaisime - NYU Summer Undergraduate Research Program (SURP)

The Summer Undergraduate Research Program at New York University (NYU) is geared towards exposing students to neuroscience research by teaching them how to conduct experiments and effectively communicate those results to the public via presentations or a manuscript. This past summer, I worked in Dr. Cristina Alberini's Lab to study protein degradation in memory across different developmental ages. We assessed the memory and learning processes of juvenile, young and adult rats through behavioral training and subsequently analyzed the prefrontal and hippocampal sections with biochemical staining. I also attended talks given by distinguished professors in the NYU's center for neural science and presented my findings at NYU's Diversity Conference.



Kelly Annie Mercado - Travelers Summer Research Fellowship Program, Weill Cornell Medicine

The Travelers Summer Research Fellowship Program gave me a deeper insight into the field of medicine, including learning about issues that greatly affect the health of traditionally underserved groups. Through the experiences of laboratory research, I worked alongside Weill Cornell Faculty, and I was exposed to scientific research on a level I have never would have imagined. I learned about the role of imaging techniques of diseased tissue such as that of breast cancer and glaucoma. Most formalin preserved human samples lose a large percentage of what they contain through weak linked bonds that are attained through the formalin interaction. With an EDC Fixation to replace the formalin, we have helped discover that Extracellular Vesicles (EVs) intertwine within an extracellular matrix. That connection is believed to be the reason for which cancer metastasis in the human body. We believe to have found a mechanism through which cancer is spreading and through this knowledge, we want to create a drug that stops the metastasis of cancer which kills millions each year. This experience provided me with research techniques that could be applicable to any area of medicine. On top of research, we were immersed into lecture series that explored topics in cardiovascular physiology, which exposed me to basic science concepts that are relevant to a more specific understanding of hypertension and cardiovascular disease, both of which are major problems in minority communities. We attended a series of talks by minority physicians about various medical specialties, addressing issues of concern in these physicians' daily work plus views of the bigger picture in healthcare to minority communities.



Miguel A. Gonzalez - Biomedical Engineering- Stem Cell Research

This summer, I conducted stem cell research at the Biomedical Engineering Building under Dr. Rick Cohen. Our main goal is to better understand how stem cells react to different media in which they are grown in. We are aiming to extend the period of pluripotency as much as possible. In other words, we are trying to keep the stem cells from differentiating into specific types of cells (neural cells, cardiac cells, etc). We compare how well each stem cell and neural cell line metabolizes media from different companies, including Peptrotech and Gibco. We also analyze the effects of different supplements and proteins that we hypothesize will help the cells grow more efficiently. We view the cells under microscopes to inspect their performance based on the size, shape and overall appearance of the colonies. If we want to add a certain protein to the cells, we isolate it from bacteria that we grow. We will plate the bacteria with a desired plasmid and later scrap it. To isolate the protein from the bacteria, we will first use a sonicator which uses sound waves to lyse the bacteria. We will then put the bacteria through multiple centrifuge spins at different temperatures to purify the sample. Eventually, we will have a protein that we can feed to the stem cells or neural cells as a supplement. With our research, we are making improvements that will lead to more advanced medical treatment with stem cells and neural cells in the future.

Congratulations to the Class of 2018

Graduating Seniors and Alumni* accepted to Dental, Graduate Medical, Osteopathic, Physical Therapy, M.D./Ph.D., or B.A./M.D. Programs



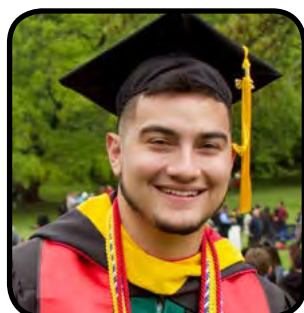
Tolulope Nurudeen



Samantha Elfanagely



Paul Gallina



Juan Cerezo

Rutgers–RWJMS

Blessing Ajayi
Ngozi Anaemejeh
Brian Anyanwu
Jefferson Ebube
Samantha Elfanagely
Alexis Etheridge
Michael Layana (EOF)
Carlos Mendoza (EOF)

Rutgers–NJMS

Daniel Cabrera
Robin Codjoe*
Irene Martinez*
Tolulope Nurudeen
Pablo Ortiz* (EOF)
Nitish Sharma* (EOF)
Mahir Sufian

EOF Students

Fiha Abdulrahman (EOF)	Leslie Hoyos (EOF)
Priscilla Arthur (EOF)	Wilner Laborde (EOF)
Andres Carvajal (EOF)	Rahyan Mahmud (EOF)
Rana Cheikhali (EOF)	Beshoy Malk (EOF)
Cesar Clarke (EOF)	Kevin Nolasco (EOF)
Michelle De Freitas (EOF)	Ana Sofia Pareja (EOF)
Steve El Eshaky (EOF)	Walid Rabah (EOF)
Shelly Farez (EOF)	Ali Raza (EOF)

DO Schools

Philadelphia College of Osteopathic Medicine - Jessica Bedele,
Mina Girgis, Percy Takyi,* Cassandra Yeboah*
Ohio University Heritage College of Osteopathic Medicine -
Princess Chisom Emeana*
Liberty University College of Osteopathic Medicine -
Mariam Kamel*
Rowan School of Osteopathic Medicine -
Caroline Paz,* Aslihan Sahin,* Eunice St. Victor,*
Touro College of Osteopathic Medicine -
Ana Christina Reyes*

Dental Programs

Temple University Kornberg School of Dentistry - Michael Vlassakis (EOF)
Stony Brook School of Dental Medicine - Mojtaba Wali*

Graduate Programs

Rutgers School of Health Professions- Doctor of Physical
Therapy Program - Elysha Bembury (EOF)
Temple University School of Podiatric Medicine -
Amanda Gallagher, Jinal Parikh (EOF)
New York College of Podiatric Medicine -
Janet Isaiiah* (EOF)
University of Massachusetts School of Law - Ruth Lavache
Rowan Graduate School of Biomedical Sciences - Jennifer Nunez* (EOF)
Gannon University- Doctor of Physical Therapy Program - Victoria Robell *

Other Medical Programs

Sidney Kimmel Medical College at Thomas Jefferson University -
Sopuru Ezeonu, Oluwatoni Okuboyejo
Lewis Katz School of Medicine at Temple University - Juan Cerezo (EOF),
Paul Gallina, Tochi Unegbu-Ogbonna
University at Buffalo Jacobs School of Medicine and Biomedical Sciences -
Arthur Gribachov
St. George's University School of Medicine - Tim Oyeniran*
Baylor College of Medicine (M.D./Ph.D. Program) - Juan Romero*
Boonshoft School of Medicine at Wright State University - Musunga Mulenga*

Alumni Graduating in 2018

Congratulations to our ODASIS Alumni Graduating in 2018 from Graduate, Doctoral, or Professional Programs



Ricardo Couso



Sunaina Belgrave



Julian Watson



Susana and Samantha Collazo

1264 ODASIS GRADUATES FROM 1990-2018

Profession	Number (%)	Profession	Number (%)
Medicine (MD)	536 (42.4%)	Medicine / Public Health (MD / MPH)	4 (0.3%)
Osteopathy (DO)	96 (7.6%)	Chiropractic (DC)	4 (0.3%)
Biomedical Sciences (MBS)	50 (4.0%)	Biomedical Engineering (MBE)	3 (0.2%)
Dentistry (DMD / DDS)	37 (2.9%)	Law (JD)	3 (0.2%)
Biomedical Research	15 (1.2%)	Optometry (OD)	4 (0.3%)
Physician Assistant (PA)	11 (0.9%)	Medicine / Biomedical Sciences (MD / MBS)	3 (0.2%)
Podiatry (DPM)	14 (1.1%)	Research (PhD)	3 (0.2%)
Nursing (RN / BSN / LPN / MSN)	10 (0.8%)	Medicine / Business (MD / MBA)	1 (0.1%)
Medicine / Research (MD / PhD)	8 (0.6%)	Osteopathy / Law (DO / JD)	1 (0.1%)
Pharmacy (Pharm D)	17 (1.3%)	Master of Science (MS)	1 (0.1%)
Osteopathy / Biomedical Sciences (DO / MBS)	7 (0.6%)	Veterinary (DVM)	2 (0.2%)
Public Health (MPH)	6 (0.5%)	Other (e.g., business, education)	412 (32.6%)
Physical Therapy (PT)	16 (1.3%)		

Cooper Medical School

Samantha Collazo
Susana Collazo
Megan O'Connell
Christopher Perez

University of Pennsylvania

Ricardo Couso
Ezinne Ugoji

Rutgers–Robert Wood Johnson Medical School

Gabrielle Abissi (Phase II)
Ijeoma Eleazu (Phase II)
Tesia McKenzie (Phase II)
Jharna Patel
Precious Tabansi* (Phase II)

Rutgers–New Jersey Medical School

Seherisch Ahmad
Khushboo Baldev
Daniel Guzman
Marcus Hughes
Jessi Munoz
Alvin Nyaboga
Julian Watson

Yale School of Medicine

Chris Marfo -
(and Yale School of Management)
Eunice Martins

USC Keck School of Medicine

Vanessa Arientyl
Aileen Baffo

New York Medical School

Farid Aboharb
Tiwalade Adediji

Other Graduate Programs

Harvard Medical School – Elorm Avakame
Rutgers School of Dental Medicine – Sunaina Belgrave
Columbia College of Physicians & Surgeons – Jeff Chukwuneka
NYIT College of Osteopathic Medicine – Shereen Dahab
Saint George's University School Of Medicine – Mohamed Elagami*
Rowan School of Osteopathic Medicine – Vladimir Joseph
Meharry Medical College – Samantha Lleras
Nova Southeastern University College of Dental Medicine – Chi Nguyen*
Howard University School of Medicine – Joshua Obamedo
Graduate School – Andrew Pauline
Temple University School of Medicine – Mariah Rice
SUNY Downstate College of Medicine – Benjamin Schindel
Wayne State University School of Medicine – Zain Siddiqui
Drexel College of Medicine – Forhad Ullah*
Drexel Graduate School – Chris Wachuku
Philadelphia College of Osteopathic Medicine – Allanda Williams*

ODASIS

Office for Diversity and Academic Success in the Sciences



Professor Khan received the Rutgers Clement A. Price Human Dignity Award in May 2018 for his commitment to promoting and practicing diversity and inclusion as director of ODASIS. Joining him at the award ceremony were (l. to r.) Juan Cerezo EOF SEBS'18 Microbiology; Tochi Unegbu-Ogbonna SAS'18 Biological Sciences; Paul Gallina SAS '18 Cell Biology and Neuroscience. All three ODASIS graduates are attending Temple Lewis Katz School of Medicine with full 4 years scholarships.

Three Decades of Helping Students Succeed in STEM

A conversation with Kamal Khan, director of the Office for Diversity and Academic Success in the Sciences

*I*n 1986, two Rutgers faculty members, Kamal Khan and Francine Essien, started an academic support program for disadvantaged and underrepresented students. Today, that program is called ODASIS, the Office for Diversity and Academic Success in the Sciences, and is recognized universitywide and beyond for its work preparing students for STEM professions. It has a staff of eight full-time employees and serves more than 1,000 students every year with a myriad of programs that begin at the high school level.

In the interview below, Khan, the longtime director, discusses how ODASIS got started and why it has been so successful.

Q: *Where did you grow up, and what is your educational background?*

A: I was born and raised in Trinidad and in 1973 I had the opportunity to spend the summer with my uncle and his family in New Jersey. He was a family physician in Camden and a great mentor in my life. I finished high school in Cherry Hill and continued at Rutgers for my undergraduate and graduate degree. I ultimately went on to receive my doctorate degree.

Q: *What inspired your commitment to helping students from underrepresented backgrounds?*

A: When I was a graduate student at Rutgers, I was an instructor in the sciences. I found that when you combine personal commitment and a regimented study method, the result was always success!

Q: *Is that the ODASIS approach?*

A: Yes, our unique program is to take each student and map out a rigorous program tailored for them. We have applied this model for the past 30 years and I am proud to say that over 1200 ODASIS alumni have gone on to pursue professions in the health allied fields. These professionals are some of our most generous alumni supporters!

Q: *What do you like most about your job?*

A: The satisfaction of seeing hundreds of students become successful doctors, dentists, and other medical professionals. Being able to mentor underrepresented students is amazing. These are some of the same students who once doubted themselves and are now the ones that come back to advocate for the ODASIS program. Seeing this big picture is my greatest reward!

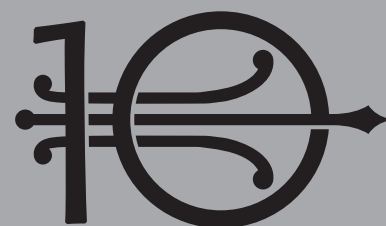
Q: *ODASIS has grown. Do you still have time to work one-on-one with students?*

A: Oh, absolutely! For example, with seniors going on to medical, dental, and other health related professional schools, I do mock interviews to prepare them for their interviews. This is very important work and has to be done on a one-to-one basis. The students have to be able to express themselves and demonstrate that they have the passion to become doctors and take care of people; the humanistic side of things is very important for their success and being able to help them one-on-one is very powerful!

RUTGERS

School of Arts and Sciences

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