ODASIS NEWSLETTER

Vol. 16

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

ODASIS ALUMNI ON THE FRONTLINES DURING THE 2020 PANDEMIC

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 2019-2020:

- Dr. Amaka Awoniyi
- Ms. Vida Cofie Robertson
- Dr. Norman Einstein
- Ms. Evelyn Escobar
- Dr. Foluso Fakorede
- Mrs. Debra Feldman
- Dr. David Feldman
- Dr. Sheri Funderburk
- Dr. Leonard Haas
- Dr. Gladston Hackett
- Dr. Roland Hamilton
- Dr. Andrew Harrison
- Dr. Tanya Howard-Williams
- Dr. Trent Lyons
- Mr. Bruce McLeod
- Dr. Jorge Mendez
- Dr. Nicholas Napoli
- Dr. Ramon Nunez
- Dr. Ewere Osian-Dugan
- Dr. Herbert Pardes
- Dr. Owano Pennycooke
- Dr. Schubert Perotte
- Dr. Elsa Pichardo
- Dr. Amanda Piedra
- Dr. Rachael Questelles
- Dr. Esi Rhett
- Dr. Angelique Ridore
- Ms. Carline Titus-Thermitus
- Ms. Daryl Von Herbert

ODASIS would like to thank Dr. Joan Bennett, Distinguished Professor of Plant Biology and Pathology, for her time and support in working with our students on their applications, as well as her assistance in editing this year's newsletter.

2020 ODASIS Virtual Graduation Ceremony

Unprecedented in ODASIS history, our Class of 2020 graduated in an entirely virtual ceremony. In the wake of the coronavirus pandemic, all in-person gatherings were suspended. Our speakers were incorporated in the video ceremony, rather than brought to a podium, and they presented online speeches instead. It was new, it was different, but we nevertheless celebrated our graduates with the same fervor as if we were in person. ODASIS staff and alumni sent in videos expressing their heartfelt congratulations on the graduates' successes and wishing them well for the future.

Dr. Felicia McGinty, who is Rutgers' Executive Vice Chancellor of Administration and Planning, said to the graduating class: "I want to encourage you to remember the why of what you're doing. To remember that as you become physicians, you have the power to heal. You are endowed with a gift and a sense of purpose. And how you use that gift matters. In the wake of this global pandemic, we need smart people, but we also need compassionate people to be the difference and to be the healers of the people."

Dr. Ricardo Verdiner, ODASIS alumnus and anesthesiologist, commended the seniors' hard work and perseverance in achieving their goals the right way. Dr. Randy Jackson, an ODASIS and EOF alumnus, reminded the current graduates always to have faith in themselves. "I'm a firm believer that things don't happen by accident," he said. "All of those exams and all of those classes and the MCAT and applications... that is meticulous planning and dedicating yourself to your craft. By no means do those things happen by accident. We are proponents of change."

Graduate Michael Sangobiyi, who will attend medical school in the fall, said "Being part of ODASIS has been one of the most tasking, yet rewarding endeavors I've partaken in while in college. I've never seen so many people who so unselfishly want to see others succeed. I'm immensely proud to see the strides that my peers have made. I look forward to seeing all of the great things we shall accomplish in our community, and our world."

ODASIS Director Dr. Kamal Khan gave upbeat and poignant congratulations to the graduates as he read out each graduate's name and future school.

As the ceremony came to an end, he made sure to leave them with parting words they could hold onto. "Always remember," he said to the students, "the ODASIS love is strong."

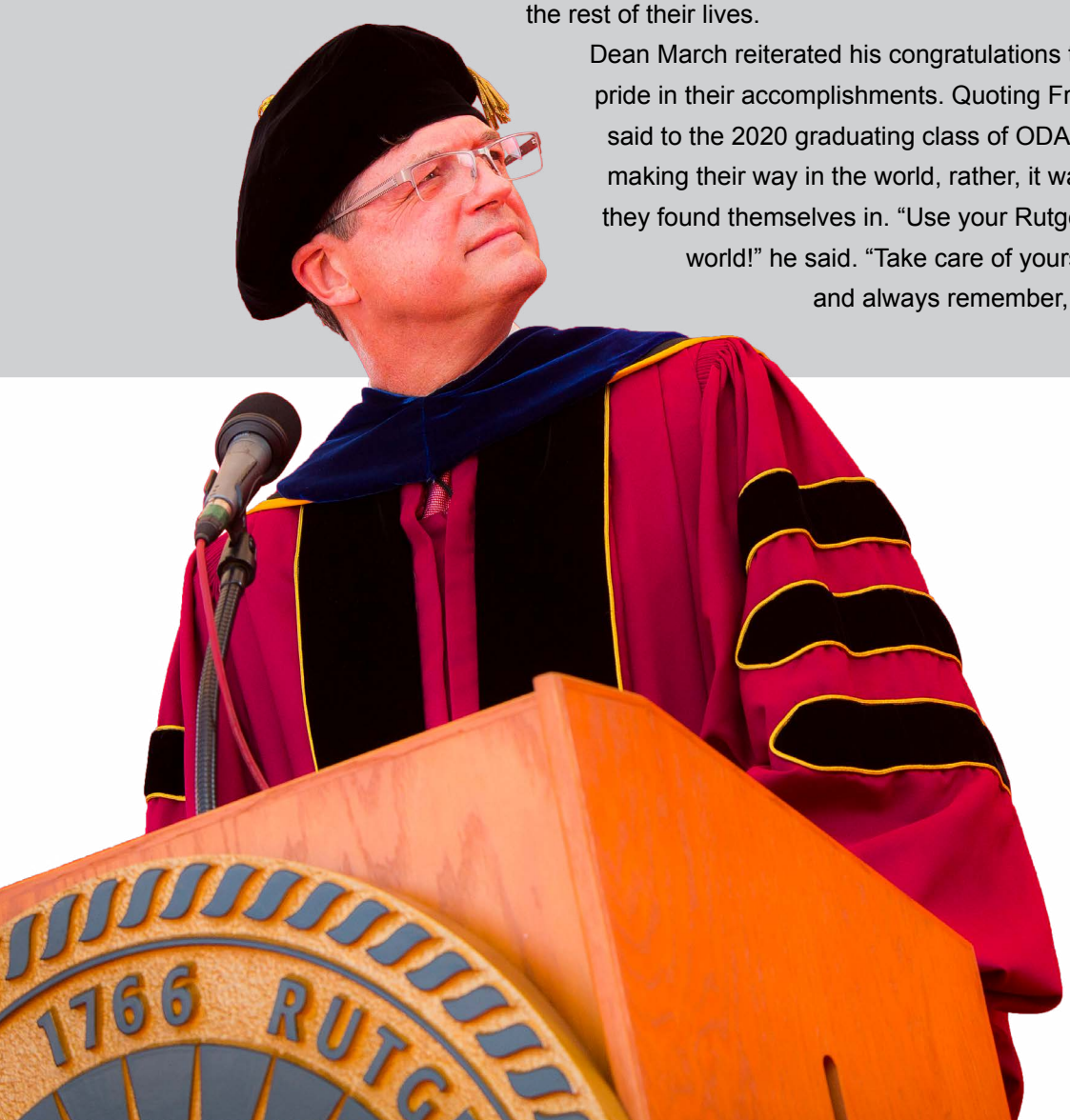
A Message to the Class of 2020 from the Executive Dean of the School of Arts and Sciences

In light of the global pandemic, we were unable to hold an in-person ceremony for the 2020 graduating class of ODASIS. However, our Virtual 2020 ODASIS Ceremony hosted a number of speakers to join us in commending our seniors. SAS Dean Peter March was one of our esteemed speakers. He is an avid supporter of ODASIS, and enjoys joining our students and staff in ODASIS Celebrations. He congratulated the students on their job well done, wishing them well for the future while also encouraging them to always remember where they came from and who helped them on their journey—a tribute to the past as the future arrives.

Dean March has three children of his own, and he gave them two pieces of advice when each of them graduated college. Those same pearls of wisdom are what he imparted on the graduating class of ODASIS as they step forward into this new chapter of their lives. The first: “work hard, play hard”, in that order. As Dean March said, if you are not working hard, then there is no excuse for play, which is quite true in college and even truer once you graduate.

The second piece of advice Dean March gave the seniors was to “be strong, and be kind”. And as Dean March stated, it’s not “either/or”; rather it’s “both/and”. The former half speaks to our inner strength and perseverance, while the latter references our capacity to show empathy to those around us. Dean March so eloquently stressed the importance of this holding the two in balance. Symmetry; “strength without kindness leads to cruelty and kindness without strength invites exploitation” he articulated. This lesson is something our seniors will take with them for the rest of their lives.

Dean March reiterated his congratulations to our students, expressing his pride in their accomplishments. Quoting Franklin D. Roosevelt, Dean March said to the 2020 graduating class of ODASIS that theirs was not a task of making their way in the world, rather, it was the task of remaking the world they found themselves in. “Use your Rutgers education to remake the world!” he said. “Take care of yourself so you can take care of others and always remember, *be strong, be kind*.”



Alumni Highlights

Foluso Fakorede, M.D.: The Inspiring Story of an ODASIS Alum Enacting Positive Change and Action

Foluso Fakorede, M.D., another noteworthy ODASIS alum, is a cardiologist on an important mission. Dr. Fakorede moved from New Jersey to the Mississippi Delta Area in an effort to prevent unnecessary amputations resulting from diabetes. Research shows that amputations happen more frequently with black patients than with white patients suffering from diabetes, and Dr. Fakorede works tirelessly to change these grim statistics. He believes that "amputation-first" treatments are a form of racial oppression and seeks to offer alternative methods for treating diabetes in his patients.

COVID-19 is exacerbating the vulnerability of the already at-risk black, diabetic population. Dr. Fakorede has seen an influx of patients with multiple health problems that have only been made worse by the coronavirus. Dr. Fakorede says that "high death rates have existed pre-COVID. COVID just expounded the problem, and exposed the problem to the rest of the country." He seeks to serve the communities disproportionally affected by the virus: blacks and diabetics. These are the same groups affected by amputations. Dr. Fakorede believes that these patients deserve a chance to be taught how to eat right and live right in order to prevent amputations as well as to promote their general health.

Dr. Fakorede chose to remain in the Delta area, rather than take a lucrative job up north. He said that he felt the South- particularly the low-income black community- needed him. "It was a public health crisis," he said. Dr. Fakorede spent years studying the health disparities plaguing in the area. In the Delta area, Dr. Fakorede could treat patients who looked like him, who responded better to him than doctors of other races. He established an out-patient clinic to serve the influx of patients suffering from uncontrolled diabetes. One such as patient was David* who had already undergone an amputation to his right leg and was suffering from an infection in his left. Instead of amputating from his knee, Dr. Fakorede shot gas into David's arteries in order to restart blood flow. In this way, Dr. Fakorede was able to pinpoint the clot and minimize the surgery to the amputation of just one toe. Dr. Fakorede's dedication to the Delta area and his work to combat the racial disparities within the healthcare system are an inspiration to everyone who wants to change the problem of racial disparities in health care.

A Profile in Courage: An ODASIS Alumna on the Frontlines

With the outbreak of the coronavirus striking the US early this year, doctors and healthcare workers everywhere have been working around the clock to stifle its spread. One of our own alumni, Dr. Huda Sayed Johnny, a palliative care specialist at Northside Hospital in Atlanta, is a key member of the hospital's COVID-19 ICU team in the wake of the pandemic.

Through the influx of patients admitted to the hospital with COVID-19, Dr. Sayed took extra measures to ensure that patients remained virtually connected with their families to ease their worries as they underwent treatment. One such family was the Hall family. Stuart Hall fell sick in late March, and subsequently suffered a heart attack due to the formation of a blood clot triggered by the virus. His odds were grim. When Dr. Sayed entered his room, Hall was already in a medically induced coma, breathing on a mechanical ventilator. She understood immediately that this dire situation was made even scarier for Hall's family since they weren't allowed to be with him in the hospital, due to COVID-19 protocols. So, while doubling down to treat Hall's condition, Dr. Sayed also worked to keep his family connected to him throughout the process.

Dr. Sayed went above and beyond in making sure the Halls stayed virtually connected to Stuart throughout the entirety of his operation. Dr. Sayed made daily phone calls to Kellee, Stuart's wife, to translate medical jargon in order to keep her up-to-date and understanding of what was happening to her husband. She also brought an iPad to his room to allow the family to video chat with Stuart. Dr. Sayed's empathy—her ability to put herself in the family's shoes—allowed her to both treat the patient and comfort his family, bridging the physician-patient gap. "I think what I learned from Stuart is resilience," she said. "He had a great team who worked hard to bring him home, and that's what we did."

Making the Pre-Med Journey Together: A Success Story of Two ODASIS Alumni

The pre-med journey is long and tenuous. It often leaves hopeful future doctors questioning why they chose the path in the first place. However, these two ODASIS alumni made it through "pre-medical life" and attained their goal of getting into medical school. This is their story.

Jayson Suriano and Jorge Caceda knew each other from high school, and after discovering that they had the same plans in college, they decided to stick together. Jayson heard about ODASIS through his father, and introduced Jorge to the program. In 2016, the pair applied to the Summer Preparatory Program before their first semester of college. Although the month-long ODASIS program was rigorous, Jayson and Jorge found that it allowed them to grow as individuals and form lasting friendships. It also propelled them into a successful start to their college experience.

After completing their freshman year with outstanding grades, Jayson and Jorge went on to take organic chemistry. When confronted with the academic challenges of the course, the pair realized they would have to

** Indicates Name changed*

adapt their study habits. They attended more ODASIS office hours and participated in more study halls. The end result: both Jayson and Jorge excelled in the class. Later, when it came time to study for the MCAT, Jayson and Jorge enrolled in the ODASIS MCAT prep course. Throughout the rigors of the course, they never lost sight of their ultimate goal. They worked to keep each other motivated and together they persevered through the bumps in the road.

Then, during their final year at Rutgers, the pair sought to give back to the program that had been so instrumental in their academic journeys. Jayson became a Biochemistry supplemental instructor. To future students, he says: "I want you to leave with the wisdom that I have acquired over this journey, that no matter what you feel today, good or bad, no matter how had it gets or how unpredictable this process can become, just remember that you ARE GOING TO BE A DOCTOR!" Jorge went on to become an instructor for the MCAT prep course. To incoming ODASIS students, he says: "As you all continue chiseling out your own path to becoming a doctor, I urge you all to remain focused and never let your confidence waver. Be patient, learn lessons from the setbacks and turn it into a comeback. More importantly, don't forget about your final goal."

Jayson will be attending Sidney Kimmel Medical College at Thomas Jefferson University, and Jorge will attend Rutgers New Jersey Medical School. Their stories serve as a testament to the success of ODASIS students in the pre-medical pathway, and the power of friendship along the journey.

A Fruitful Partnership: ODASIS and the Honors College

The partnership between the Rutgers University Honors College and ODASIS has helped many students and facilitates academic success, made possible with the help of Lisa Sanon-Jules, one of the Honors College Deans. We especially thank Dean Sanon Jules for her focused assistance to students in both ODASIS and the Honors College. Her efforts have made it easy and efficient to work between the two programs, much to the benefit of the students who are lucky enough to be in both.

Below are the stories of three recent graduates of Rutgers University who were members of both the Honors College and ODASIS. All three graduated with honors and have been accepted to medical schools.

Michael Sangobiyi graduated from Rutgers in May of 2020, and credits both ODASIS and the Honors College as instrumental to his undergraduate academic success. "Being in ODASIS," Michael says, "provided me with a supportive environment where I could flourish both academically and socially, and the community became like a family to me." Michael says that the Honors College "provided him with an environment that supported his pursuit of knowledge in its many forms and allowed me to broaden my horizons." The program's focus on interdisciplinary learning, along with the science-based instruction of ODASIS, helped him explore different disciplines to gain a greater understanding of the complexity of the medical field. Throughout his journey through the pre-medical track, people affiliated with each program provided Michael with the support and encouragement he needed to succeed. He says these mentors helped him grow as a scholar during group study sessions. Both programs helped shape Michael into the person that he is today, and for that he is eternally grateful. Michael is now a first year student at Sidney Kimmel Medical College at Thomas Jefferson University.

Danielle Grant is also a recent graduate of Rutgers University. During her undergraduate education, both ODASIS and the Honors College played a tremendous role in her academic and leadership roles. "ODASIS," she says, "provided the main support for most of my science classes by providing extra recitation and materials, which proved vital for my success at Rutgers." Danielle says that the Honors College allowed her to "expand outside of academics and achieve mentoring and residential leadership positions as an HC Ally and as a Community Liaison." The combination of leadership positions she obtained through the Honors College and the academic support she received through ODASIS allowed Danielle to maximize her opportunities at Rutgers and pursue extracurricular interests in addition to her academic coursework. The dual role the Honors College and ODASIS played in Danielle's journey allowed her to build a well-rounded application for medical school, leading to her entry to Sidney Kimmel Medical College at Thomas Jefferson University this year.

Christopher Stephen is another recent graduate who was a member of both ODASIS and the Honors College, and is presently in his first year at the University Of Pennsylvania Perelman School Of Medicine. Both organizations were instrumental in helping Chris forge his path, and offered a host of resources to supplement his journey. Both organizations created a learning environment that was conducive to success, and fostered the beginnings of many friendships for Chris. Chris says, "ODASIS allowed me to meet great friends who were also in the pre-medical path, which is an invaluable resource when going through such a competitive, energy demanding path," while the Honors College, "due to its interdisciplinary nature, facilitated the friendships between me and many driven people from other disciplines, which I believe is just as important." Along with friendships, both ODASIS and the Honors College offered unique academic trips, study spaces, and events for their participants. ODASIS in particular was invaluable in creating a community for underrepresented students. The two organizations work together to foster success.

Charting a Path to Success

New Heights: A Successful ODASIS EOF Student Taking on A New Challenge

Thu Truong is a recent graduate of Rutgers ODASIS, and is now in her first year of podiatry school. She provides an exemplary model of an ODASIS EOF student. During her years at Rutgers, she not only took advantage of the opportunities offered to her, but she developed opportunities for other students and has left a lasting impact upon our ODASIS community.

Thu was a Teaching Assistant for a course called 'Health Issues in African American Communities.' While teaching, Thu could gauge student responses, and when she saw that the class's understanding of the material fell short, she worked to address the gap. There was a mismatch between students' understanding of in-class material and its real-world application. To bridge the gap, Thu expanded the course into the realm of community service. She took the time to find "real life" opportunities accessible to campus, to provide students with opportunities to participate in public service activities. These opportunities provided an outlet for the call-to-action that is inherent in the course. Thu went 'above and beyond' in shaping the structure of this course. She reached out to ODASIS alumni to provide shadowing opportunities for current ODASIS students. Thu is responsible for the creation of a one-credit independent study course that allowed experiential learning in healthcare professions. Thu's efforts have expanded the course to four times its original size over the span of merely a few years, and have greatly inspired all students who took the course.

As a pre-health student with aspirations to attend medical school, Thu led by example throughout her time in ODASIS. She balanced her intensive coursework with her community service involvement, her position as a TA and resource for other students to turn to for guidance and tutoring, and her volunteer position as a member of a First Aid Squad. The grace and dynamism with which Thu integrated these activities is a shining example of the values ODASIS promotes. She is selfless and motivated in helping those around her, and those character traits not only will stick with her throughout podiatry school and her future career as a physician, but they inspire the community around her as well.

Triumph through Tragedy: ODASIS Scholar Dr. Manny Sanchez Gonzales

"The patient has now become the doctor." Dr. Manny Gonzales survived a life-threatening disease, and is now helping others do the same. He is in fact working in the very hospital, and alongside the very team, that saved his life.

Manny was diagnosed with Non-Hodgkin's Lymphoma when he was 15, and spent months in Nemours duPont Hospital for Children fighting the disease. He told his doctors that if he made it out of there alive, this—helping and treating patients—is what he aspired to do.

The doctor that saved his life, Dr. Powell, has never lost touch with Manny. He has been there for Manny every step of the way throughout his journey to become a physician, all the way through medical school. "He paid me one of the greatest honors of my life when he allowed me to help him don his white coat when he became a first-year medical student," Dr. Powell said.

Manny attended Sidney Kimmel Medical College at Thomas Jefferson University, and is currently doing his residency in the very hospital where his body was healed and his dream to become a doctor was born. Manny's experiences as a patient suffering a life-threatening disease plays a huge role in the values and goals that he sets for himself as a physician. He said, "The way I was treated when I was a patient is a constant reminder to me on how I want to treat my patients."

Now, Dr. Gonzales is working with Dr. Powell. In the near future, he will be an oncologist, working to help kids beat cancer. To their bedside, he will bring something many other doctors can't offer. "We see it all the time, said Dr. Powell, "but he's lived it. And so, when he talks to a child, he helps the kiddo know what to expect, drawing from his experience. That's a very, very rare thing." It was simply chance that allowed Dr. Gonzales to do his residency at Nemours, but he says he wants to continue working there for the rest of his life. "My heart and my soul is here," Dr. Gonzales says. "Every day that I come in here, this is my passion."

Overcoming Obstacles: A Story of One ODASIS Alum's Battle with COVID-19

Dr. Troy Randle is an ODASIS alumnus who is now working hard to battle COVID-19. Dr. Randle is a cardiologist who works at Virtua Health and is based in South Jersey. Earlier this year, despite his efforts to stay protected, Dr. Randle contracted the virus. His battle with the coronavirus was a close call, but Dr. Randle has managed to beat the odds.

Dr. Randle's symptoms were different from those he had grown accustomed to seeing among patients in the hospital, and they soon became crippling. Dr. Randle said, "I don't usually get headaches, but the headache was just front and back, and it felt like it was squeezing in both directions. A lot of times during the day I would be fine, functioning. And in the evenings, it would get worse … my wife would see me walking around the bedroom fine but then I'd be balled up in the fetal position."

These heightened symptoms were caused by a clot in Randle's vertebral artery that had formed due to the virus. The clot, in turn, caused Dr. Randle to suffer a stroke. By the time he made it to the ER, health care professionals were beginning to notice that strokes were becoming increasingly common among COVID-19 patients. Dr. Randle said that there was another patient in Virtua Health's system also under the age of 50 who had suffered a stroke.

This trend for strokes was also seen at Jefferson University Hospital, where Dr. Pascal Jabbour says that both young and old patients infected with the corona virus have been suffering from strokes. These strokes are hitting patients with increasing intensity and are growing worse with time. Doctors said that normal strokes are caused by a clot in only one vessel. InCOVID-19 patients, however, they've seen clots in multiple vessels of the brain, causing strokes to potentially occur in several portions of the brain.

With these dangerous new effects of COVID-19, both Dr. Randle and Dr. Jabbour caution that timing is key. "If you think you are experiencing a stroke, waste no time. Immediately call 911."

Over 47,000 folks helped to vote in November by VotER!

Thanks to the incredible work done by our growing community of medical students, physicians, advanced practice providers, social workers, and frontline HCWs across the country, we helped to get almost 50,000 people ready to vote this November!

Alister Martin, M.D., M.P.P., Rutgers ODASIS alumnus, Harvard Medical School and Kennedy School of Government graduate, and founder of the VotER initiative.

Academic Year 2019-2020 Grade Comparisons

General Biology

	ODASIS	vs.	Rutgers
≥B	34.76%		43.81%
	ODASIS	vs.	Rutgers
≥C	81.05%		74.57%

General Chemistry

	ODASIS	vs.	Rutgers
≥B	52.88%		35.47%
	ODASIS	vs.	Rutgers
≥C	89.45%		71.57%

Mathematics

	ODASIS	vs.	Rutgers
≥B	47.65%		31.17%
	ODASIS	vs.	Rutgers
≥C	79.21%		57.04%

Biochemistry

	ODASIS	vs.	Rutgers
≥B	92.75%		71.24%
	ODASIS	vs.	Rutgers
≥C	97.25%		88.67%

Organic Chemistry

	ODASIS	vs.	Rutgers
≥B	65.78%		44.57%
	ODASIS	vs.	Rutgers
≥C	88.24%		78.29%

Genetics

	ODASIS	vs.	Rutgers
≥B	69.74%		58.32%
	ODASIS	vs.	Rutgers
≥C	93.48%		82.25%

Physics

	ODASIS	vs.	Rutgers
≥B	70.15%		57.62%
	ODASIS	vs.	Rutgers
≥C	93.54%		88.24%

Systems Physiology

	ODASIS	vs.	Rutgers
≥B	68.22%		49.81%
	ODASIS	vs.	Rutgers
≥C	89.45%		77.82%

Summer Research Programs

Bryan Cabezas - Identification of HMGA2 Independent Genes in TSC2 Tumorigenesis, Columbia University, SPURS Summer Biomedical Research Program, Cohort of 2020

Lymphangioleiomyomatosis (LAM) is a rare lung disease that affects women in their childbearing years, promotes the cystic destruction of lung parenchyma, and is characterized by the abnormal growth of smooth muscle-like cells in the lungs, lymphatic system, and kidneys. Haploinsufficiency of the *TSC2* gene causes tumorigenesis to occur, and a biallelic loss results in embryonic death. Recently, Columbia University's LAMLab found the expression of *HMGA2*, an architectural transcription factor present during embryogenesis, is expressed in LAM *TSC2* haploinsufficient adult models and functions to proliferate LAM cells. The LAMLab has also convincingly linked *HMGA2* misexpression to *TSC2* loss of expression in TSC-LAM when their study found *HMGA2* expression was a requirement for mesenchymal tumorigenesis in *TSC2*(+/-) mouse models. Although, interestingly, in that study, 20% of the samples still presented renal tumors despite knockout of *HMGA2*.

The aim of this current study was to assess the gene expression of these *TSC2* haploinsufficient *HMGA2* independent renal tumors and elucidate genes that might explain their origin.

RNA-Seq data analysis found that in *HMGA2* null samples there was an upregulation of genes implicated in past studies with adenoma and carcinoma cell proliferation and regulation. Using IPA, pathways between these tumorigenic genes and *TSC2* were constructed to provide context on how these genes regulate *TSC2* expression and/ or can lead to these *HMGA2* independent tumors. Glutamate Receptor gene *GRIA4* was highly upregulated and has been implicated with epithelial neoplasia and metastasis. Also upregulated, was *CDH10*, a gene that plays a role in cell-cell adhesion and whose mutation can lead to Mesenchymal-Epithelial Transition (MET). MET may explain how these tumors can form via the transition to epithelial tissue.

Future directions include investigating the expression of the aforementioned genes in various kidney tissue samples. Additionally, by finding more genes and pathways associated with *HMGA2* and *TSC2*, a potential biomarker for the prognosis of LAM can be found.

Christopher Garrick - Obesity: Evaluation of Adherence to USPSTF Guidelines and Potential Bias, New Jersey Medical School: NERA III

I participated in NERA III through New Jersey Medical School, where I gained experience in the implications of bias and social determinants in medical care research. Through group collaboration, my time during the six-week program was spent preparing a QA/QI poster presentation centered around the quality assurance of obesity treatment in Newark, New Jersey. At the end of the program, my group and I presented and defended our QA/QI study to Dr. Steven E. Keller and Dr. Ping-Hsin Hen. I am grateful for my experience in this program because it gave me greater insight into how bias in research can perpetuate social stigmas and emphasized the importance of group collaboration.

Chioma Nwanonyiri - Evaluating Adherence to USPSTF Diagnostic and Treatment Guidelines for Depression, Research Institute: New Jersey Medical School

For this research project I along with 4 other group members researched health disparities pertaining specifically to major depressive disorder. My group looked into several biases that come into play in the treatment and diagnosis of MDD including, but not limited to, confirmation bias, gender bias, racial bias, and financial bias. We then took this information and used it to analyze a sample of simulated patient charts of which all patients were diagnosed with major depressive disorder. In doing this my group was able to conduct a quality assurance/quality improvement study to evaluate if guidelines were being followed in the diagnosis and treatment of depression in this group of patients at the given area. Regardless of the challenges faced in going virtual, I was still able to gain so much from this program. Thanks to the research, my mentors, and my peers, I learned much about the disparities and biases that different racial groups face when being treated or diagnosed with various illnesses and I also learned a great deal about the process of conducting research. It was truly a valuable experience!

Justin Rodriguez - Summer Program for Under-Represented Students (SPURS), Columbia University

This summer I participated in a virtual version of the Summer Program for Under-Represented Students (SPURS) hosted by Columbia University. As part of the virtual nature of the program, I attended daily seminars hosted by leaders in their respective fields, often research and medicine. I worked under Dr. Emily Mace and Dr. Seungmae Seo to study the effect of GATA2 mutations, a type of immunodeficiency caused by a lack of a specific transcription factor, in the immune cells of patients. In particular, I analyzed blood samples to characterize the expression patterns of natural killer cells and compare them between patients and healthy donor controls. This research is still ongoing, but we discovered several proteins that are expressed at significantly reduced levels in patients with GATA2 mutations. We suspect that several of these proteins are crucial to proper immune system function as patients without adequate levels experienced immunodeficiency. Our goal is to better characterize the immune cells of these patients in order to learn more about their condition and potential treatment options in the future.

ODASIS High School Programs: Another Year of Accomplishments!

ODASIS has had the privilege to partner with the New Brunswick Public School District and Johnson & Johnson Headquarters to provide another year of high school programs to aid in the education and development of New Brunswick youth. Our programs include the Advancement via Individual Determination (AVID) Supplemental Instruction program, Bridge to Employment (BTE), Saturday Scholars, and the Rutgers 12th Grade College English program. The high school programs housed in ODASIS offer the opportunity for New Brunswick students to expand their knowledge and successfully prepare for their postsecondary academic career. Not only do we provide academic support and test preparation, but we also provide exposure to STEM careers, networking opportunities, and skill-based workshops. This year, our participants in each of these programs have shown extraordinary resilience and commitment to their future successes, even as a global pandemic altered their day-to-day lives.

Eleventh grade students enrolled in our Johnson & Johnson Saturday Scholars program and our Bridge to Employment program dedicated their Saturdays to SAT test preparation for the school year. From September 2019 to May 2020, our students worked relentlessly to improve their SAT scores. Overall, our students, on average, increased their scores by over 100 points. Some students even increased their score by as high as 500 points! We are incredibly proud to report that even when the June administration of the SAT was cancelled due to the COVID-19 pandemic, our students continued their SAT test preparation throughout the summer so that they could continue to improve upon their scores.

High School Developmental Specialist Shannon Smith, who joined the ODASIS staff in February, is grateful to have such dedicated and passionate program partners that contribute to the successes of our programs and our students. These program partners include supplemental instructors, Rutgers English professors, parents, ODASIS staff, work study students, guest speakers, program alumni, the New Brunswick Pubic School District, New Brunswick High School, New Brunswick Health Sciences Technology High School, Johnson & Johnson Headquarters, and Johnson & Johnson mentors. Each of our high school program partners fulfills an integral component in our formula for student success. We would not be able to offer as many resources or opportunities to our participants without them. We are also grateful for our student participants who have been challenged with unforeseen circumstances. These students have made exceptional strides this year toward fulfilling their dreams and developing their interests, academics, and selves. We look forward to seeing what accomplishments our ODASIS High School Programs participants achieve throughout this year.

A Summer Unlike Any Other

Overcoming Obstacles with the 2020 Strategic Plan Summer Program

Much like the world around us, our Strategic Plan program looked a bit different this year. While most high school graduates were in the midst of celebrating their recent graduation, ODASIS had the privilege to host 28 incoming first year students as a part of first ever virtual summer bridge program, where students are exposed to foundational topics in Chemistry, Calculus and Expository Writing. After a very 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, our STP scholars were also provided with a variety of enriching activities. Each Wednesday morning, our students had professional workshops which included a *study smarter, not harder* seminar, an introduction to the importance of self-care, as well panel discussions with a first year Dean as well as the Director of the Health Professions Office. Moreover, every evening, our students collaborated in active study groups with five of our senior students to establish a sense of community, while more importantly enhancing their problem-solving skills. Those sessions truly paid off as we are pleased to share that over 85% of the 2020 STP participants received a final grade of B or higher! These students are well on their way to becoming extraordinary contributors to the university and health science communities.

Congratulations to the Class of 2020

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

Allopathic Medical Schools

RWJMS
Clifford Adam
Christle Antwi-Buosiako
Gloria Awuku
Jonathan Brisbon*
Myrhiam Diarra
Cassandra Gonzalez
Midori Lofton
Bintia Sakho
Nnenna Ukenna-Izuwa

Sidney Kimmel (Jefferson)
Azra Dees
Maria Gomez*
Danielle Grant
Steven Gravier-Leon (EOF)
Michael Sangobiyi
Jayson Suriano
Anika Valery
Samantha Young*

NJMS
Sampson Abah
Karla Larios
Sebastian Acevedo
Jorge Alonso Caceda
Rosamaria Dias
Steve El-Eshaky* (EOF)
Valeria Fernandez
Ethan Tyree
Maria Vega
Fabian Victoria
Alexandra Gomez*
Miguel Gonzalez
Cara Lescott
Karon Millar*
Bharath Nagaraj
Stephanie Perricho
Halle Sarkodie
Christian Zapf*

Lewis Katz School of Medicine at Temple University
Philip Duodu*
Malek Maddah
Johvany Plaisime

Other Allopathic Schools
Case Western Reserve Medical School
Devin Barzallo

Cooper Medical School at Rowan University
Mones Aboeletta*

Miller School of Medicine- U of Miami
Joseph Yunga Tigre*

UPENN Perelman School of Medicine
Ikenna Anusionwu*
Christopher Stephen

Osteopathic Medical Schools

Philadelphia COM
Paola Arteaga*
Lateefat Olaware*
Karen Ruiz*

Rowan SOM
Michael Anyanwu*
Jennifer Nguyen (EOF)

Other
Lincoln Memorial University-DeBusk College of Osteopathic Medicine
Daniel Casal*

William Carey University College of Osteopathic Medicine - Phu Huynh* (EOF)

Allied Health Professions

New York College of Podiatric Medicine
Thu Truong* (EOF)

Nova Southeastern Doctorate of Psychology Program
Kristy Kopeczi-Boocz

Rutgers Genetic Counseling Master's Program
Sarah Malarkey

Western University College of Podiatric Medicine
Alexis Llaneras*

Nursing Schools

New Jersey City University Nursing School
Jennifer Mora

Rutgers Newark School of Nursing
Jailene Liz

Rutgers School of Nursing
Jaida Allison

Dental Schools

Rutgers School of Dental Medicine
Genesis Perez
Darling Rojas

Howard University College of Dentistry
Derrick Johnson

Graduate Schools
Nebi Ghebre

Rutgers Cell Bio & Neuroscience Ph.D. program
Andrew Cruz (EOF)

Workforce
Jose Ayala
Eymibell Camilo
Maxwell Quansah
Kayla Quispilaya

U.S. Air Force
Jasmyn Lettman

In 2020-2021, the AAMC ranked Rutgers-New Brunswick:

- **#3** out of 95 undergraduate institutions in number of African-American applicants to U.S. medical schools
- **#30** out of 125 undergraduate institutions in number of Hispanic, Latino, or of Spanish origin applicants to U.S. medical schools

** Indicates Alumni*

Alumni Graduating in 2020

Congratulations to our ODASIS Alumni Graduating in 2020 from Graduate, Doctoral, or Professional Programs

1393 ODASIS GRADUATES FROM 1990-2020

Profession	Number (%)	Profession	Number (%)
Medicine (MD)	613 (44.0%)	Medicine / Public Health (MD / MPH)	4 (0.3%)
Osteopathy (DO)	117 (8.4%)	Chiropractic (DC)	4 (0.3%)
Biomedical Sciences (MBS)	59 (4.2%)	Biomedical Engineering (MBE)	3 (0.2%)
Dentistry (DMD / DDS)	44 (3.2%)	Law (JD)	3 (0.2%)
Biomedical Research	15 (1.1%)	Optometry (OD)	4 (0.3%)
Physician Assistant (PA)	14 (1.0%)	Medicine / Biomedical Sciences (MD / MBS)	3 (0.2%)
Podiatry (DPM)	15 (1.1%)	Research (PhD)	3 (0.2%)
Nursing (RN / BSN / LPN / MSN)	14 (1.0%)	Medicine / Business (MD / MBA)	1 (0.1%)
Medicine / Research (MD / PhD)	8 (0.6%)	Osteopathy / Law (DO / JD)	1 (0.1%)
Pharmacy (Pharm D)	19 (1.3%)	Master of Science (MS)	1 (0.1%)
Osteopathy / Biomedical Sciences (DO / MBS)	7 (0.5%)	Veterinary (DVM)	2 (0.1%)
Public Health (MPH)	7 (0.5%)	Other (e.g., business, education)	412 (29.6%)
Physical Therapy (PT)	20 (1.4%)		

Osteopathic Medical Schools

Rowan SOM
Adenike Animasaun
Massah Bassie
Tosin Quadri
Katie Soler

Other Osteopathic Schools
PCOM - Chinwe Korie
Andrew Marcano
LECOM - Michael Valentim

Dental Schools

Rutgers Dental
Matthew Boller

Howard Dental
Jonathan Rodney

NYU Dental
Chiranjeev Sharma

U Penn Dental
Elaf Saeed

Allopathic Medical Schools

RWJMS
Brittany Baptiste
Haianha Desamour
Brittany Martinez
Chike Okafor
Nicole Tavernier
Ifeoluwa Aridegbe
Gerardo Lopez

USC Keck School of Medicine
Emilio Feliz
Diana Torres
Marissa Trinidad
Zariah Chappell
Djani Robertson
Chioma Moneme

Cooper Medical School at Rowan University
Adeima Ibanga
Myriam Cruz
Shifan Li
Ziyoda Abdujabborova

NJMS
Denese Brown
Hans Hess
Dara Jackson
Thobekile Ndlovu
Abimbola Adegbola
Cindy Ardila
Ashley Dixon
Jacklyn Johnson
Jorge Naranjo
Ikenna Obiakwata
Grace Suttle
Henry Uran Jr.
Gabriel Arismendi (ED)
David Prado
Nigel Scott
Valerie O'Besso
Andre Esteves
Marco Proano
Cesar Grandez
Rodney Nyaboga
Steffany Conyers

Other Allopathic Schools
Sidney Kimmel Medical College at Thomas Jefferson University
Alexus Cooper
Manny Sanchez

UCSF School of Medicine
Sara Rostamizadeh

University of Maryland School of Medicine
Ololade Sanusi

University at Buffalo School of Medicine and Biomedical Sciences
Grace Guadalupe

University of Connecticut Medical School
Samantha Casimir

Other Health Professions

Jennifer Alegun
Adesewa Adewusi

Middlesex County College Nursing Program
Jennifer Chabla

Penn State Food Science Graduate Program
Kezi Williams

Rowan GSBS
Musunga Mulenga
Madelyn Rodriguez
Brittany Urena

Rutgers Pharmacy
Ileana Arce

Rutgers SHRP PA Program
Sandra Kirollos

University College London Graduate School (MPH)
Kanya McRae

West Virginia SOM GSBS
Tatiana Fech

ODASIS

Office for Diversity and Academic Success in the Sciences

Summer 2020 ODASIS Scholarship Recipients from L to R: Fechi Nwodili, Rhoda Ukenna-Izuwa, Agustin Velasco, Emmanuel Worede Kal, Paul Okaro, Hawa Diallo.

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RUTGERS

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