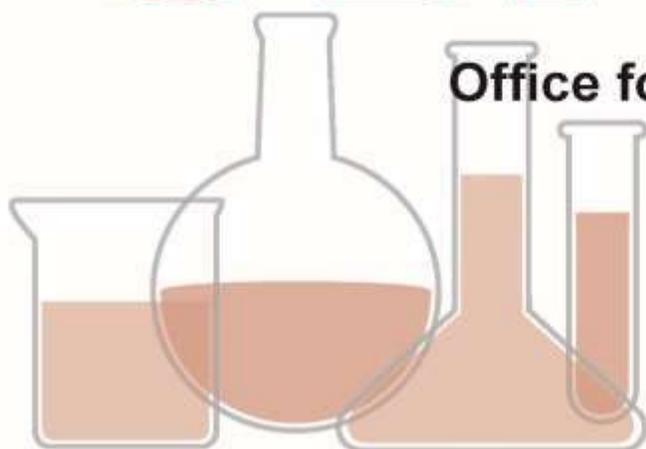


**RUTGERS**  
School of Arts and Sciences

# ODASIS

**Office for Diversity and Academic  
Success in the Sciences**



Rutgers University–New Brunswick  
School of Arts and Sciences  
Division of Life Sciences

# Triennial Report

**2013-2016**



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## Executive Summary

The Office for Diversity and Academic Success in the Sciences (ODASIS) at Rutgers University's School of Arts and Sciences is an academic support unit within the Division of Life Sciences that was first established in 1986. For well over thirty years, ODASIS has remained steadfast in fulfilling their mission of increasing the recruitment and academic success of underrepresented and educationally and economically disadvantaged students interested in pursuing careers in the science, technology, engineering, and mathematics professions. The Association of American Medical Colleges reports that Rutgers University currently ranks ninth in the United States for "supplying 15 or more African-American applicants to U.S. medical schools" (National Rankings, 2016).



In an effort to provide students with the resources and tools necessary to succeed in their academic and professional goals, ODASIS provides the following opportunities to students enrolled in the program:

- **Supplemental Instruction:** Supplemental Instructors and tutors facilitate small-group recitations to help students master content covered in larger lecture halls. Students are assessed through weekly quizzes and homework assignments. These sessions are held with a maximum of 10 students per session to allow for optimum opportunity for lecture discussion, concept review, and application of material.
- **Academic Planning and Advising:** The ODASIS team of Developmental Specialists and Assistant Directors are responsible for a cohort of students depending on the subject(s) students are enrolled in. ODASIS staff who advise first year students are responsible for creating four and five-year plans, taking into account individual strengths and career goals of each student. Second year advisors work with the students with a heavy focus on their performance in science courses, as well as participation in research and summer program opportunities. The Nelson Labs Assistant Director oversees and advises juniors enrolled in the ODASIS MCAT, DAT, and GRE prep courses, ensuring that they have the best possible support and preparation needed for their exams. The Director of ODASIS works closely with all seniors and provides advising and mock interview assistance to students ready to continue their education in medical school.
- **Pre-Mock & Mock Exams:** Students take pre-mock and mock exams prior to every scheduled Rutgers exam. These exams are designed to help students identify concepts and subject matter they need further assistance and direction with. Each pre-mock and mock exam is structured for three hours, with the first 90 minutes used for exam completion and the last 90 minutes used for an in-depth exam review and analysis. Supplemental Instructors are made available to go over problems with students during the mock reviews to ensure full understanding of material.
- **MCAT, DAT & GRE Preparatory Courses:** The MCAT, DAT, and GRE are standardized tests which weigh heavily on admission into medical, dental, and graduate programs. Creating affordable courses for students was a priority for this reason. These courses offer the opportunity for students to properly prepare for the heavily weighed exams. Participants gain access to resources, as well as receive small group instruction pertaining to each section of each exam.

- **Study Hall:** ODASIS students are required to attend four hours of study hall on a weekly basis to ensure that students keep up with their work as well as learn self-discipline. Effective study habits lead to an improved understanding of material, which leads to optimal exam scores.
- **Summer Opportunities:** Summer programs are unique in that they offer students the opportunity to gain valuable clinical or research experience. Students not enrolled in summer courses are assisted in getting matched with such opportunities.
- **Research and Dual-Enrollment Opportunities:** Students are prepared to apply for programs such as Access Med Phases I and II, where students are dually enrolled in both Rutgers and Robert Wood Johnson Medical School. ODASIS also partners to help students engage in credit-bearing summer research opportunities.
- **Early Intervention& Outreach:** ODASIS has the opportunity to partner with the New Brunswick Board of Education, Johnson & Johnson, FHI360, and the Rutgers Writing Program, all in an effort to implement pre-college and enrichment programs to high school students from the New Brunswick school district. Students are provided with SAT prep, college English courses, college placement preparation, lab opportunities, and mentoring.
- **Pre-College Preparation:** The summer prep program, formerly known as the Summer Merck program, exposes incoming students to college-level chemistry, calculus, and writing. Students are enrolled in a 2-credit Prep for General Chemistry course and have the opportunity to live on campus while completing their coursework. Workshops, medical school tours, and lab experiences are also provided to participants. Due to the success of the ODASIS programs and ability to maintain results for over three decades, ODASIS was included in the Rutgers New Brunswick Strategic Plan and was able to secure funding to continue implementing this highly successful pre-college program.

ODASIS has succeeded in remaining true to its mission through rigorous recruitment and retention strategies and now has greater student enrollment than ever before, both in its undergraduate and pipeline programs. There is, however, a need for expansion of the infrastructure in order to meet the increasing demands for services provided by ODASIS. For these reasons, intentional efforts were made this past year to seek and secure additional sources of funding to facilitate the program's continued success and growth.

## Quick Program Highlights

Between 2013 and 2016:

- **369** ODASIS students have graduated from Rutgers University
- **196** students have been accepted to medical school, dental school, optometry school, veterinary school, physical therapy, physician assistant, Master's in Biomedical Sciences programs, or other graduate programs / research
- The Strategic Plan Program has nearly doubled in the number of participants admitted.



*Dr. Wiley Lopez, RWJMS, Class of 2015*  
*ODASIS Class of 2012*



*Dr. Randy Jackson, RWJMS Class of 2017*  
*ODASIS Class of 2010*



*Dr. Natasha Ramsey, NYU Class of 2017*  
*ODASIS Class of 2011*

## About ODASIS

Since its foundation in 1986, the Office for Diversity and Academic Success in the Sciences (ODASIS) has been committed to providing underrepresented and disadvantaged students with the support, advising, and resources necessary to excel in the competitive fields of Science, Technology, Engineering, and Math. ODASIS students represent a population that has the ability to succeed in health careers; however, their backgrounds and educational environments could be a potential hindrance in reaching their full potential. Through ODASIS, these students are equipped to overcome those obstacles, and focus on their personal growth. Particular emphasis is placed upon student completion of graduate and/or professional school with the long-term goal of careers in the health professions.

According to the 2013 US Census, 17.1% of the population identifies as Hispanic/Latino, while 13.2% identifies as Black/African American, meaning that these populations combined comprise 30.3% of the entire population; however, the representation of these groups in the field of medicine is minimal. In 2014, only 4% of students enrolled in medical school programs were Hispanic/Latino and only 6% of students enrolled in medical school programs were Black/African Americans. ODASIS addresses this issue by targeting these specific demographic groups. Diversity in these fields is essential to building a healthcare system in which all patients are able to seek and obtain proper care. The importance of cultural competency has, therefore, been highlighted as being a critical component for building rapport with patients. ODASIS considers the impact that creating opportunities for students from diverse backgrounds has on the services provided to patients.

ODASIS has been designed to assist students academically and professionally throughout their undergraduate careers. The Academic Support Program is an all-encompassing program. Students benefit from academic advising, additional academic instruction, and numerous resources. Additionally, students have the opportunity to network and receive career guidance through motivational and networking events in order to foster commitment to their chosen STEM discipline as well as help students pave the path toward achieving their professional goals. Outside of the classroom, ODASIS further exposes students to the possibilities available within the STEM disciplines by facilitating tours to neighboring medical and graduate schools as well as providing opportunities to intern with ODASIS alumni. Parents are encouraged to become involved in their student's professional success by attending workshops held throughout the year designed to develop a support system for student that will lead them to be successful. By providing academic and career guidance to students, ODASIS hopes to cultivate a diversified workforce of scientists, engineers, doctors, educators, dentists, nurses, and other practicing health professionals.

ODASIS also boasts of having outreach programs with the goal of first and foremost helping high school students enter college and pursue careers in the STEM fields. This goal is achieved by preparing students to take the SAT, a defining prerequisite when applying for college. Furthermore, students also have the opportunity to receive peer mentoring, support in Math, English, and Science classes, and earn college credits. For students admitted into Rutgers University, ODASIS also offers the Summer Preparatory and Academic Success Program. The success of these programs have allowed students to continue in their desired career paths.

Rutgers University is dedicated to realizing the educational benefits of a diverse learning community, and ODASIS is one such example of this ongoing commitment. In the 2012 *Diverse Issues in Higher Education's* ranking, Rutgers University ranks 9<sup>th</sup> in top 100 degree-producing Universities for total minority participation in the Biological and Biomedical Sciences. It is the goal of ODASIS to build on these achievements by promoting the continued success of its students.



# Mission

The Office for Diversity and Academic Success in the Sciences (ODASIS) is an academic support unit within the Division of Life Sciences at Rutgers, The State University of New Jersey. The goal of ODASIS is to increase the recruitment and academic success of underrepresented students, as well as educationally and economically disadvantaged students, who are interested in pursuing careers in the science, technology, engineering, and mathematics professions. ODASIS intends to improve the percentage of underrepresented students entering the scientific fields by encouraging academic achievement in the sciences through unique and rigorous academic support. By cultivating the number, participation, and success of underrepresented and disadvantaged students who pursue scientific disciplines, ODASIS aims to minimize the achievement gap in professional education as well as create a highly qualified and diverse workforce.

# Organizational Chart

**Dr. Kenneth Breslauer**

Vice-President, Health Science Partnerships



**Dr. Martha Haviland**

Director, Office of Undergraduate Instruction, Division of Life Sciences



**Dr. Kamal Khan**

Director, ODASIS



**Jonathan Langowski, Ed.M.**  
**(Ed.D. Candidate)**

Assistant Director for Upper-Level Sciences & Preparatory Courses



**Shama Huq**  
Administrative  
Coordinator



**Sean Foley**  
Developmental Specialist  
for High School Programs



**Tiffany Nesbey, MHS**  
Assistant Director for First-Year and Pre-College Programs



**Chirag Patel**  
Upper-Level Sciences  
Developmental Specialist



**Jose Perez**  
Administrative  
Assistant



**Yayoi Kumata**  
Biology  
Developmental  
Specialist



**Kelsey Calcagni**  
Math  
Coordinator





ODASIS is led by a Director Dr. Kamal Khan, two Assistant Directors Jonathan Langowski and Tiffany Nesbey, three Developmental Specialists, two Coordinators, an Administrative Coordinator, and an Administrative Assistant. In addition, ODASIS employs Supplemental Instructors and Group Leaders for academic support sessions in courses such as General Biology, General Chemistry, Organic Chemistry, Physics, Systems Physiology, Genetics, Biochemistry, and Mathematics. ODASIS also depends on the invaluable assistance of work study students through the Federal Work Study Program and departmental support at Rutgers University.

## Academic Support Programs

The ODASIS Academic Support Program continues to execute our mission by promoting and ensuring the advancement of economically disadvantaged and underrepresented minority students majoring in the sciences.

The main components of the Academic Support Program include:

### **I. Supplemental Instruction:**

Supplemental Instruction sessions are offered alongside the following Rutgers University courses: Mathematics, General Chemistry, General Biology, Organic Chemistry, Genetics, Basic Statistics for Research, Systems Physiology, Biochemistry and other upper-level life science courses. General Biology Supplemental Instruction is given in the form of a 1-credit recitation program. Additionally, a special ODASIS recitation section for General Chemistry has been implemented through the Chemistry department.

Supplemental Instruction is a small-group session consisting of 8 to 10 students led by a Supplemental Instructor - an undergraduate or graduate student who demonstrates mastery of the subject. Instructors are trained to identify challenging course material and impart skills for comprehension and problem solving. A carefully structured and comprehensive syllabus has been designed in accordance with each department's course curriculum. In weekly two-hour Supplemental Instruction sessions, instructors create a student-centered environment that promotes holistic learning. Students thus obtain a comprehensive understanding of scientific topics which helps them increase their proficiency in course content, earn higher grades, and ultimately become more competitive applicants to graduate programs.

### **II. Academic Advising:**

The ODASIS office provides STEM-focused academic advising to all participants throughout their undergraduate careers. ODASIS Developmental Specialists build a rapport with their case load of students and carefully track each student's academic progress. These relationships enable the ODASIS staff to provide individualized academic and career advisement.

The program has 3 Developmental Specialists, two Assistant Directors and a Director who are all involved in providing quality advisement to students. Each Developmental Specialist is responsible for a case load of 150 students and are trained to provide their expertise in specific STEM subject areas. Advising consists of time-management strategies, exam error analysis, and developing individualized four- or five-year academic plans in accordance with students' major/minor goals and graduation requirements. The ODASIS staff also provides assistance with course selection, scholarship opportunities, and test-preparation for the MCAT, DAT and GRE examinations. Students also

receive assistance with their applications to post graduate programs including resume and personal statement critiques, mock interviews and individualized advice on school selection.

On a program-wide basis, instructional materials used are consistently evaluated for their relevancy in a rapidly-evolving science education environment. Access-Med Supplemental Instructors and Group Leaders are evaluated on a "360 Degree" basis by both student participants and ODASIS staff. This assures that we deliver highly efficient and consistently improving academic instruction and support to our student participants. Detailed electronic records regarding longitudinal program results are also kept for statistical evaluation.

## RESULTS

The graphs detailed on Pg. 19 compare student outcomes in the four subject areas of Chemistry, Biology, Organic Chemistry, and Math. These charts show grade performances from 2015 -2016 for both ODASIS students and a comparison of ODASIS and non-ODASIS students.

## Access-Med Program

The Access-Med Program is designed to prepare students for successful entry into health professional graduate schools. This program involves a collaboration between Rutgers University, Seton Hall University, and Robert Wood Johnson Medical School, in which undergraduate students are awarded opportunities for academic and professional growth through the RWJ- Medical School. The program consists of two phases. The first phase is intended for second and third year students to help them explore health related fields as well as specialties within those fields. The second phase is reserved for qualified students who wish to attend Robert Wood Johnson Medical School.

The main components of the Academic Support Program include:

### I. Access-Med Phase I:

Phase I identifies competitive students and provides academic support, as well as opportunities to explore various fields in the health sciences. A minimum GPA of 2.9 is required for entry into this program. Students learn more about possible careers in the health professions by attending medical conferences hosted by Robert Wood Johnson Medical School (RWJMS), going on field trips to medical schools, dental schools, PT & PA schools in addition to establishing mentoring relationships with upperclassmen, ODASIS faculty, and staff. Students have the opportunity to enroll in medical or research-based summer programs, such as Biomedical Career Programs (UMDNJ-RWJMS), Summer Medical & Dental Enrichment Programs (UMDNJ-NJMS), and the PREP Program (UMDNJ-SOM).

### II. MCAT Preparatory Program:

The MCAT Preparatory Program is a credit-bearing 8-month program with stringent eligibility requirements for Phase 1 students in their junior and senior year who are interested in attending medical school. This program immediately precedes the selection of some students for Access-Med Phase II. The student's performance in the program is used to assess his/her acceptance to Phase II. Similar credit-bearing exam preparatory courses are also available for students preparing for the DAT and the GRE.

### III. Access-Med Phase II:

Phase II is open to students in their junior year who are currently Access-Med Phase I participants and who meet specific requirements in GPA and coursework completion. Upon successful completion of the MCAT preparatory course, the MCAT exam, and mandatory course work, participants in this phase will be reviewed for possible acceptance to Robert Wood Johnson Medical School. During their senior year, these students take four medical school courses along with their Rutgers University courses. RWJMS basic science courses count toward fulfilling credits for a student's B.A. / B.S. degree.

## RESULTS

During the 2013-2014 Academic year a total of 75 students were accepted into Access-Med Phase I. Eight students were accepted into Access Med Phase II and are currently medical students at Robert Wood Johnson Medical School. In 2014-2015, 80 students were accepted into Access-Med Phase I. Eight students were accepted into Robert Wood Johnson through the Access Med Phase II Program that year as well. Most recently in 2015-2016, 84 students were accepted into Access-Med Phase I. Seven students were accepted into Robert Wood Johnson through the Access Med Phase II Program that year as well.

The majority of Access Med participants remain in New Jersey health professional schools after they graduate from Rutgers. As of 2016, there are approximately 700 ODASIS alumni practicing medicine, dentistry, and allied health

professions in New Jersey, indicating a long-term commitment toward obtaining residency and serving communities in New Jersey, many of whom completed the Access Med Program.

From the graduating class of 2014, 53 Access Med students were accepted into professional schools. Of the students graduating in 2015, 59 students who had participated in Access Med were accepted into professional schools. These numbers do not include the students who were accepted into Access Med Phase II.



### **2016 Access Med Phase II Students**

*Valerie DeJesus, Iman Ali, Stephanie Chisom Amaefuna, Duniel Coke, Nanaama O'Hene, Motunrayo Becky Adu, Jennipher Ventura, and Anevea Tinnery*

## **The Office of Institutional Diversity and Inclusion: The Collaborative**

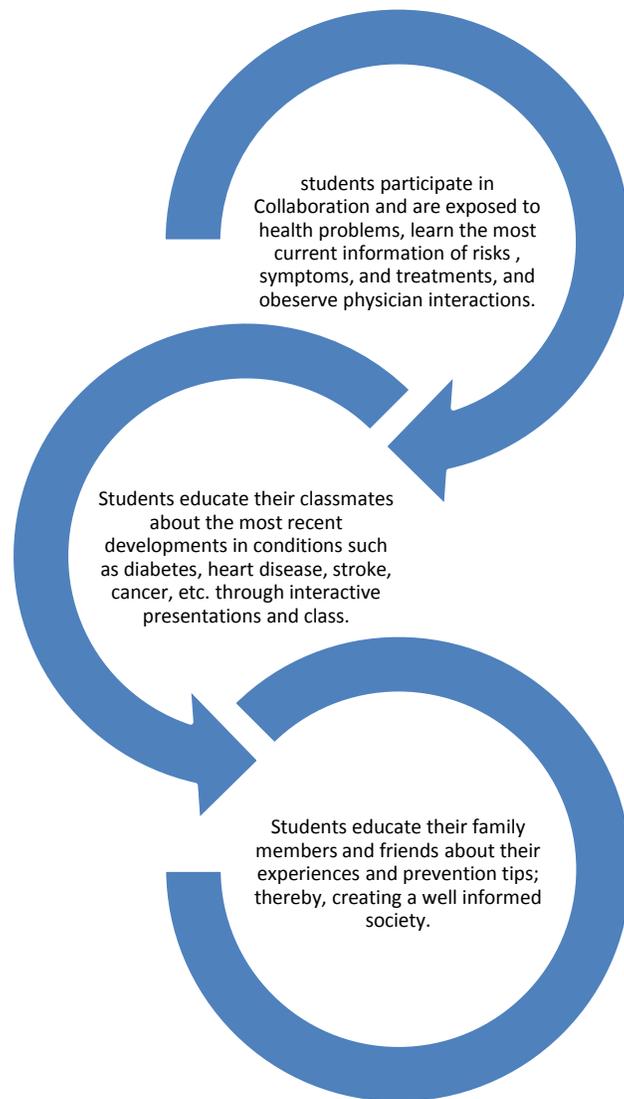
Since 1998, ODASIS has incorporated the Collaborative into the ODASIS curriculum through a course entitled "Health Issues in the African American Community." This advanced level course at Rutgers University examines the field of community health as a combination of sciences, skills, and beliefs.

The Collaborative continues to play a vital role in supporting ODASIS's efforts to address the needs of underrepresented and economically disadvantaged students by providing them with one (1) college credit for completing 40 hours of service learning at a site of their choice. This initiative helps to bridge identified gaps in reaching students' potential admission into the medical and scientific fields.

The Collaborative mission complements the focus of "Health Issues in the African American Community" by providing a concrete exchange of services between the "volunteer" and the "institution," where the reciprocity is equal and the participant has certain standards for their involvement. The Collaborative is a program that aims to provide education outside of the classroom, and it functions within ODASIS in the following manner:

The Collaborative program fosters a health advocacy cycle, by which students transmit valuable information to the larger community to result in group learning. Students who participate in the Collaborative program are exposed to health care realities and learn the most current information on risks, symptoms and treatments.

Empowered with this information, Collaborative students educate their classmates about the most recent developments in diseases and conditions such as diabetes, heart disease, stroke and cancer through interactive presentations and class discussions. They also go home and educate others; parents, siblings, cousins, aunts, uncles, grandparents, neighbors, work colleagues, etc.



### Reasons for doing The Collaborative

1. Students get to experience a unique facet of learning in their academic career, getting the opportunity to try their interest and passion in medicine and/or the allied health professions.
2. They build knowledge and expertise in medicine and/or the allied health professions, and get to see what the real world/ work life is like for their field of interest.
3. They connect and form relationships with doctors, nurses and other health professionals.
4. They find new skills and problem-solving strategies.
5. They get to understand the “ins” and “outs” of the business and organization site they are placed in.

### Program Components:

Students in the Collaborative Program do one of the following for their independent projects at the Collaborative sites:

#### 1. Doctor Feature (Shadowing):

- Students seek out a physician or another health care provider to “shadow.” Shadowing requires observing the selected doctor on a weekly basis and keeping a journal of the day’s thoughts, events, and questions. Students focus on a variety of topics including, but not limited to:
  - The responsibilities of the doctor within the facility
  - The doctor’s interactions with overall environment (i.e., the doctor’s relationships with other doctors, co-workers, patients)
  - How the doctor is perceived by others

- Treatment of patients by the doctor including both positive and negative influencers (e.g., racial factors, economic factors, etc.) and
- Ethical/ moral decision-making processes.

## 2. Patient Feature (Observation):

- Students focus on a collective group of patients and observe them, paying close attention to:
  - Approximate percentage of patients representing different ethnic backgrounds (Hispanic, African American, Asian, etc.)
  - Type of disease(s) that these patients have and the treatment that is being rendered
  - Patients' opinions of treatments and medical staff
  - Patients' concerns, fears, apprehensions
  - Patients' mental and physical condition.

Journal entries focus on these topics and other observations, thoughts, interviews, and conclusions. For their final paper, students in the Collaborative Program write about their case study experience, including Collaborative site background information, notes, facts, statistics, and personal revelations, addressing the following questions:

- How did this experience affect your decision to work in the medical field?
- Did this experience make you want to continue to pursue this type of career?
- What are some of the perceptions of the medical field and how has it changed your view?

## RESULTS

Total number of ODASIS students participating in the Collaborative:

- 22 during the 2013-2014 period; 16 of whom are now enrolled in professional schools
- 40 during the 2014-2015 period; 8 of whom are now enrolled in professional schools
- 31 during the 2015-2016 period; 4 of whom are now enrolled in professional schools

### Some of our past and present internship sites include:

- Allies Inc.
- American Conference on Diversity
- Broadway House for Continuing Care
- Children's Center
- Embrace Kids Foundation/ Adopt a Family
- Eric B. Chandler Health Center
- Eye Associates of Central NJ, P.C.
- Francis E. Parker Memorial Home
- Interfaith Network of Care
- Lazos America Unida
- Martin and Edith Stein Hospice
- Middlesex Interfaith Partners with the Homeless
- Newark Beth Israel Medical Center/Geriatric
- New Brunswick Community Interpreter Project
- NJ Women and AIDS Network
- Overlook Hospital in Summit NJ
- PhotoVoice New Brunswick
- The Chai Project
- Robert Wood Johnson University Hospital (RWJUH)
- AIDS Program
- Somerset Community Action Program
- St. Joseph's ER
- St. Peter's University Hospital
- The University of Medicine and Dentistry of NJ-UMDN

# Summer Programs

## Summer Preparatory and Academic Support Program

The Summer Preparatory and Academic Support Program consists of intensive academic support during the summer in introductory chemistry and calculus courses, as well as the required Expository Writing course. The purpose of the program is to reinforce and strengthen students' foundation in foundational courses.

The Chemistry, Calculus, and Expository Writing courses are taught at a college pace over a five week time span. Students gain the skills needed to avoid performance failures once they are enrolled in these courses during the fall semester of their freshmen year.

The benefits of this program include:

- ✓ Free textbooks for all courses
- ✓ Two (2) college credits upon successful completion of the program
- ✓ Room and board at Richardson apartments
- ✓ Exposure to undergraduate programs offered through ODASIS, such as the Biomedical Careers Program
- ✓ The opportunity to experience the various campuses of New Brunswick, thus ensuring a smooth transition into college life upon entry in the fall
- ✓ Exposure to on- and off-campus resources



### RESULTS:

Final grades for 2014-2016 were as follows:

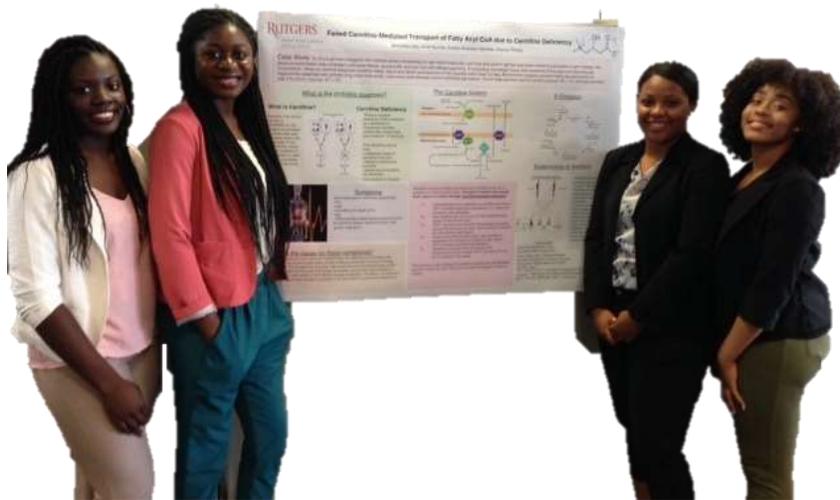
Letter Grade	Summer 2014		Summer 2015		Summer 2016	
	# of Students	% of Students	# of Students	% of Students	# of Students	% of Students
A	8	30.8%	11	29.7%	21	55.3%
B+	6	23.1%	6	16.2%	12	31.6%
B	6	23.1%	8	21.6%	5	13.1%
C+	4	15.3%	3	8.1%	0	0%
C	2	7.7%	6	16.2%	0	0%
D	0	0	3	8.1%	0	0%
F	0	0	0	0	0	0%
<b>TOTAL</b>	<b>26</b>	<b>100%</b>	<b>37</b>	<b>100%</b>	<b>38</b>	<b>100%</b>



Summer 2016 participants outside of the Temple University School of Podiatric Medicine

## Biomedical Careers Program (BCP)

The Biomedical Careers Program (BCP) is a coalition between Robert Wood Johnson Medical School, Rutgers University, and Seton Hall University that was established and designed to provide undergraduate students with exposure to research and careers in medicine. This three-phase program has been designed to give students the preparation necessary to excel as they progress in their careers. Each phase of BCP offers students the opportunity to



take upper level science courses in order to gain further knowledge and be better prepared for a career in the health professions. All phases of BCP include seminars and workshops, which cover topics such as professionalism, cultural competence and patient-centered care, and stress management. While this highly competitive program requires a great deal of dedication and commitment, it gives students the foundation to become successful professionals.

Student applications are reviewed by a committee comprised of faculty from Rutgers University and Robert Wood Johnson Foundation, as well as the New Jersey Educational Opportunity Fund. BCP is sponsored and funded by Rutgers University and Robert Wood Johnson Medical School. Considerable financial resources are also provided by the Robert Wood Johnson Foundation and the New Jersey Educational Opportunity Fund.

### Program Components:

**Level I** is designed for students at the beginning of their undergraduate career, having completed at least one year of college including general chemistry, one semester of introductory biology, and one semester of an introductory mathematics course. The Level I curriculum includes the following:

- Introduction to Microbiology (lecture and laboratory)
- Introduction to General or Organic Chemistry (lecture)
- Learning skills and strategies workshop
- Health professions career seminars and workshops

**Level II** is designed for students who have completed at least two semesters of general biology, general chemistry, organic chemistry, physics, and one semester of college level mathematics.

The Level II curriculum includes the following:

- Advanced biology (typically genetics or physiology, depending on prior coursework)
- Laboratory in either genetics or systems physiology (depending on advanced biology courses completed)
- MCAT Preparatory Program
- Learning skills workshop
- Clinical work and / or health professions career seminars and workshops

**Level III** is designed for students who are at or near the point of applying to professional schools and have completed nearly all pre-professional science requirements.

Level III curriculum includes the following:

- Advanced biology, generally either immunology or neuroscience (depending on prior coursework)
- Research or clinical internship
- Health professions career seminars and workshops
- Learning skills workshops

Students in all levels have the opportunity to develop close relationships with medical school faculty, staff, and students who can provide individual counseling on career choices and application procedures.

## RESULTS

In 2014, 30 ODASIS students were accepted to The Biomedical Careers Program (BCP). In 2015, 29 ODASIS students were enrolled into BCP. In 2016, 38 ODASIS students were enrolled into BCP. The topics covered a broad spectrum of research areas such as "Overexpression of SENP6 in Cancer" and "Estimating Axonal Strain Using Internodal Proteins as Fiducial Markers."

## The Cancer Institute of New Jersey Student Research Project: CURE - Continuing Umbrella for Research Experience

The CURE Program gives students the opportunity to conduct research at The Cancer Institute of New Jersey (CINJ). Established in 1991, CINJ is the state's first and only National Cancer Institute-designated Comprehensive Cancer Center. As one of only 39 such centers nationwide, CINJ is dedicated to improving the prevention, detection, treatment, and care of patients with cancer, through the transformation of laboratory discoveries into clinical practice. CINJ began seeing patients in 1993 and has over 70,000 patient visits each year.

### CURE Program Component

- 1) Selected students start during the first week of March.
- 2) Students are committed to two summers and an academic year in between. During the academic year students are responsible for working 4 hours per week while during the summer they are responsible for working full time.
- 3) In the beginning, students take a course for 2 hours per week for approximately 4 weeks (i.e. two hours of class and two hours in the lab). The course is titled Intro to Cancer Biology which focuses on the fundamentals of cancer.
- 4) Students can choose to work in any of the following areas:
  - Laboratory Research **OR**
  - Non- Laboratory Research (students can select from one of the following)
    - Regulatory issues in Clinical Research
    - Pharmacy
    - Nursing
- 5) Students are also required to attend an annual retreat where fellow students present their research. This one day seminar is sponsored by the New Jersey Commission and Cure Program.
- 6) Students are required to submit a proposal based on the research they conduct. A set of questions will be provided to each student that will help them develop the proposal. Portions of the proposal are due as followed:
  - At the end of 6 months of the program – 5 pages of the proposal
  - At the end of 1 year of the program – 10 pages of the proposal
  - At the end of the term of the program – 15 pages; final proposal

## RESULTS

ODASIS has successfully helped a number of students to engage in research at The Cancer Institute of New Jersey, setting them on a course for future success in research positions.

### Participants of the CINJ- Cure Program 2013-2014:

Marissa Trinidad  
Steffany Conyers

### Participants of the CINJ- Cure Program 2014-2015:

Michael Boateng  
Matthew McCue  
Nathaniel Baffoe-Mensah

### Participants of the CINJ- Cure Program 2015-2016:

Michael Anywanu  
Soporu Ezenou  
Paul Gallina  
Tolu Nurudeen

### Student successes after completion of CURE program:

Ezinne Ugoji Class of 2014- University of Pennsylvania School of Medicine  
Janet Alvarez Class of 2015- Rutgers- New Jersey Medical School  
Chioma Menome Class of 2015- Keck School of Medicine

# ENTRANCE EXAM PREPARATORY PROGRAMS

## MCAT PREPARATORY COURSE

Poor performance on the MCAT has been identified by medical school admission faculty as a major barrier for admission into medical schools for underrepresented students. These findings underscore the importance of continuing to offer superior preparation for the MCAT. ODASIS is working to help students combat this hurdle.

The syllabus for the course exposes students to a range of successful MCAT preparation strategies. The course aims to help students improve their thought processes, problem-solving skills, and test-taking abilities. By ensuring that program participants develop a diverse set of skills tailored to the various sections of the MCAT, ODASIS intends to cultivate the most competitive medical school applicant pool as possible.



Students accepted into the face-to-face MCAT Preparatory Program are required to attend sessions every Friday from 4:00pm to 8:00pm and every Saturday from 8:00am to 5:00pm for 8 months during the academic year, including spring break. Participation in the program during the spring semester is dependent upon the successful completion of the intensive winter break session.

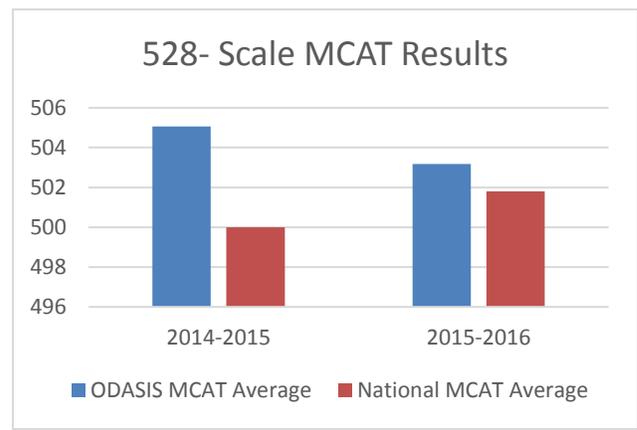
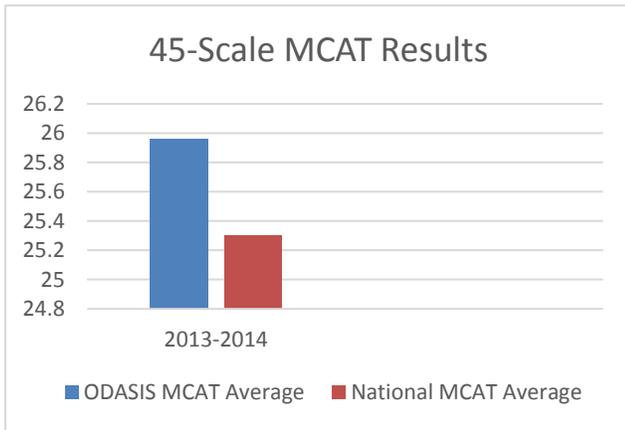
Following the recent changes to the MCAT, the curriculum and schedule of the MCAT Preparatory Course have also been altered to accommodate to the new MCAT topics and length. The 2015 MCAT is focused on including physical, biological, and social sciences. The new categories are:

- Biological and Biochemical Foundations of Living Systems
- Chemical and Physical Foundations of Biological Systems
- Psychological, Social, and Biological Foundations of Behavior
- Critical Analysis and Reasoning Skills

The 2014-2015 cohort of MCAT students were the first to prepare and take the revised MCAT. These students attended sessions every Friday from 4:00pm to 9:00pm and Saturday from 8:00am to 5:00pm during the fall semester. During the spring semester, students attended sessions Saturday and Sunday from 8:00am to 5:00pm. Participation in the program during the spring semester continued to be dependent upon the successful completion of the intensive winter break session.

## RESULTS

- During the 2013-2014 academic year, total participation in the MCAT Preparatory program reached 64 students. During 2013-2014, ODASIS students' average composite score was 25.96 compared to the national average of 25.3.
- During the 2014-2015 academic year, total participation in the MCAT Preparatory program reached 55 students.
- ODASIS students' average composite score was a 505.06. The average scores for students nationwide who took the MCAT in April and May was 500.0.
- Of the 55 students who tested in 2015, 27 students scored 500 or higher on the MCAT, making these students competitive applicants. The remainder of students scored 495 and higher.
- Of the 64 students who tested in 2014, 11 students scored 30 or higher on the MCAT.
- Of the 39 students who test in 2016, 8 scored above a 510, and 25 students scored 500 or higher on the MCAT with a class average of 504.58.
- The achievement for the MCAT preparatory classes during the past three years is above average not only for underrepresented students, but for students of any background.



## GRE PREPARATORY PROGRAM

This course is offered to all Rutgers University students in both the spring semester and summer session I.

The GRE is a standardized test used by almost all graduate and professional schools in America to assess applicants to their programs. ODASIS aims to equip more Rutgers University students with the necessary skills to study effectively for the course through a series of lectures, practice tests, discussion groups, and regular assignments. The course focuses on problem based learning in the areas of Verbal Reasoning, Analytical Writing, and Quantitative Reasoning. Students enrolled in the course receive 3 college credits and are assessed on the basis of attendance, weekly assignments, class participation, and discussion group initiatives.

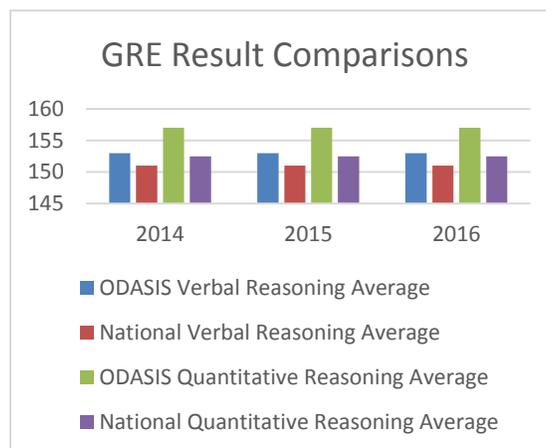
The course runs for fourteen weeks from 9:00am to 5:00pm every Saturday, with additional Friday sessions from 4:00pm to 8:00pm as needed. In addition, on the basis of students' course schedules, a few discussion group sessions were scheduled to foster an academic community where students could help each other by taking practicing exams and presenting challenging problems/passages to each other.

### RESULTS:

- In 2016, 68 students were accepted into the GRE Prep Course, wherein the students who participated recorded an average score of 153 for Verbal Reasoning and 157 for Quantitative Reasoning.
- In 2015, 56 students were accepted into the GRE Preparatory Course,
- In 2014, 43 students were accepted into the GRE Preparatory Course.
- Over the span of those three classes, the recorded average for Verbal Reasoning was a 153 and the Quantitative Reasoning section was a 157.
- The 50th percentile, or "average GRE score", is about 303, or 151 for Verbal Reasoning and 152.5 for Quantitative Reasoning.

### Programs students were accepted into include:

Rowan School of Health Related Professions—Doctor of Physical Therapy program  
 Columbia University - Doctor of Physical Therapy program  
 Rutgers School of Health Related Professions - Physical Therapy program  
 Graduate School of Biomedical Sciences - Rowan University



## Early Intervention & Outreach



ODASIS's commitment to address student development early on has put ODASIS in the forefront of new high school programs. ODASIS has partnered with the New Brunswick Board of Education and Johnson & Johnson to provide assistance to New Brunswick High School and New Brunswick Health Sciences Technology High School. These programs are all designed to provide students from the New Brunswick Public School district with exposure to STEM professions, Rutgers University student mentors, faculty, and facilities. Success in our high school programs provides students with a unique opportunity for a gateway into any university and a fantastic way to enhance college applications.

ODASIS has implemented strategies that have fortified the educational foundation of these high school students, making them more competitive for entry and success in college and in the workforce. Much success has been achieved in early identification of potential college science majors in high school students and incoming first-year Rutgers students. ODASIS pre-college programs have included partnerships with corporations such as Johnson & Johnson and nonprofit human development organizations such as FHI360.

### Saturday Scholars SAT Prep Program

Students who are enrolled in the Johnson & Johnson 11<sup>th</sup> Grade Saturday Scholars SAT Prep Program are provided with an opportunity to enhance their understanding of mathematical and scientific concepts and applications, as well as to improve their writing and reading comprehension skills. The program is designed to strengthen problem-solving skills, abstract reasoning, critical thinking, and written expression. Students are provided with two classes, an SAT Math class and an SAT English class, which take place every Saturday from September thru May. Students are prepared and required to take their SAT in the month of June. Students are given five diagnostic assessments throughout the program to monitor and evaluate their progress. The program requires an application process including a personal statement, transcripts, and two letters of recommendation. The Saturday Scholars program continues to be a successful program as it increases academic performance, SAT scores, and admission into college.

### RESULTS

#### 2013-2014

36 students participated. The average score of students determined through a diagnostic examination at the beginning of the program was determined to be 1343. This was out of a 2400 scale. At the conclusion of the program, students had an average score of 1625 also calculated through a diagnostic examination, which was significantly higher than the district average of 1237. This means that the average score showed an improvement of 282 points.

**2014- 2015**

Program began with 43 participants and ended with 36 participants. The average score of students at the beginning of the program as determined through a diagnostic examination was 1338. This was out of a 2400 scale. At the conclusion of the program, students had an average score of 1565 also calculated through a diagnostic examination, which was significantly higher than the district average of 1237. This means that the average score showed an improvement of 328 points.

**2015- 2016**

Program began with 26 participants and ended with 25 participants (participation numbers were lower than years prior due to an overlap in the same population who were enrolled in the Bridge to Employment program). In March 2016, the Educational Testing Service (ETS) implemented a new SAT test design. This new design now includes only two required sections: Evidence Based Reading and Writing (EBRW) and Math, along with an optional essay component, bringing the exam back down to a 1600 scale. The average diagnostic score at the beginning of the program was a low 940. At the conclusion of the program, students had an average diagnostic score of 1054, thus increasing their average by 114 points. The greatest increase was seen by a student who increased her overall composite score by 570 points. Additionally, all students participated in a 3 week Summer English Prep component to prepare for the Rutgers Basic Composition course they will be enrolled in this fall.

**12th Grade College English Program**

The 12<sup>th</sup> Grade College English Program provides high school seniors from the New Brunswick High School and the New Brunswick Health Sciences Technology High School with an opportunity to earn up to six college credits through the successful completion of Rutgers Basic Composition (English 100) and Expository Writing (English 101). Students who are accepted into this program take these college level English courses with professors from the Rutgers University Writing Program. Students admitted are enrolled as non-matriculated students at Rutgers University. The students first complete Basic Composition during the fall semester and receive 3 college credits for those with a final grade of "C" or better. Student who complete Basic Composition with a final grade of "C+" or higher and who have been recommended by their professor continue on in the spring semester with Expository Writing. Upon successful completion of the spring course, students will earn an additional 3 college credits. Fulfillment of these writing requirements ensures that the students will qualify for college-level science courses that have a writing pre-requisite or co-requisite during their first year of college; this prevents students from having to be placed into remedial writing courses which would limit the number of science courses into which students can enroll. Students enrolled in this program are also provided with college advising and assistance with college and scholarship research and application processes. Additionally, these students are also provided with a Math Placement Prep class during the spring semester to help prepare them for college entrance placement exams.

The aim of the program is to increase student placement into college-level English courses upon matriculation in their undergraduate studies. It is a highly selective process which requires the recommendation of a high school English teacher and / or successful completion of the New Brunswick Saturday Scholars SAT Preparatory Program. The complete application includes an official transcript, SAT scores, and an application form. Due to the rigor of the 12<sup>th</sup> grade English Preparation Program coursework, successful students from the New Brunswick Saturday Scholars program are given priority. These students have completed a full year of Saturday classes in their junior year and have complied with the attendance policy along with satisfactory completion of course work. In addition to compliance, an SAT English score of at least 500 is required.

**RESULTS****2013-2014**

In the fall of 2013, 25 of the 26 students participating in the English 100 course (Rutgers Basic Composition) successfully completed the course and earned 3 college credits. In the spring of 2014, 22 students participated in the English 101 course (Rutgers Expository Writing). All of these students successfully completed the course and earned 3 college credits. Of the 2013-2014 cohort of students, all were accepted to at least one four-year college or university; 19 out of 22 students attended Rutgers University Fall 2014. 19 out of the 22 students placed into college level math classes. The total scholarship awarded to students amounted to \$351,890.

**2014-2015**

In the fall of 2014, 26 students participated in English 100 course (Rutgers Basic Composition) and all successfully completed the course; they all earned 3 college credits. In the spring of 2015, 25 students participated in English 101 course (Rutgers Expository Writing). 24 out of 25 students successfully passed the course and received 3 college credits. Of the 2014-2015 cohort of students, all were accepted to at least one four-year college or university; 19

out of the 25 students committed to Rutgers this fall. 24 out of the 25 students placed into college level math classes. The total scholarships and tuition aid awarded to students amounted to \$1,630,093.

### **2015-2016**

In the fall of 2015, 30 students participated in the English 100 course (Rutgers Basic Composition). 29 out the 30 students successfully completed the course and received 3 college credits. In the spring of 2016, 26 students participated in the English 101 course (Rutgers Expository Writing). 25 out of 26 students successfully passed the course and received 3 college credits. Of the 2015-2016 cohort of students, all were accepted to at least one four-year college or university; 18 out of the 26 students attended Rutgers this fall. All students have placed into college level math. The total scholarships and tuition aid awarded to students amounted to \$4,116,270.00.

## **Bridge to Employment Program**

Bridge to Employment (BTE) is a Johnson & Johnson sponsored program that collaborates with FHi360 and has been established worldwide for over ten years. This highly rigorous program is designed to connect young students to the health care industry and the many career opportunities aligned with the STEM professions. Through educational and work-based experiences, BTE aims to prepare students for higher education and ultimately, a professional role in the health care industry. The strategies involved are categorized in the following major elements: Academic Enrichment, Applied Learning Opportunities, Career Exploration, and Link to Higher Education.

The BTE site in New Brunswick, New Jersey, aims to accomplish the following long-term goals in comparison to the city's general population: Higher math and science GPA of the students; higher SAT scores of the students; greater number of high school students graduating with college credits; increased number of students applying to competitive institutions of higher education in the math, science, or health care disciplines; fewer number of students requiring remedial placement in college; and an increased number of students graduating high school with internship and job shadowing experiences. A new cohort of students is selected every three years.

## **RESULTS**

The last BTE cohort completed their program in the 2011-2012 school year. There were a total of 28 students enrolled in the last cohort, of which 11 students attended the Rutgers University-New Brunswick Campus.

### **2013-2014**

Recruitment year: 42 students were recruited and accepted to BTE program

- 23 Students accepted from New Brunswick Health Sciences Technology High School
- 19 Students accepted from New Brunswick High School

### **2014-2015**

Year 1: 41 students confirmed their acceptance and participated with the BTE program

- Students were paired with 2 Johnson & Johnson mentors
- Students completed an Applied Learning Project focused on Product Development
- Went on 3 college tours: Princeton University, Rutgers University, The College of New Jersey
- Went on 2 company tours: Johnson & Johnson Skillman Campus, Johnson & Johnson World Headquarters-New Brunswick
- Monthly Saturday Classes with Supplemental Instruction in core high school classes
- Monthly workshops, topics included:
  - Working With My Mentor
  - Study Smarter, Not Harder
  - Note Taking
  - Selecting a Summer Program
  - Developing a Resume
  - Studying for the Sciences
  - Critical Thinking for College and Beyond
  - Nutrition & Fitness
  - Preparing for College: Setting Goals & Packaging Yourself
  - Effective Leadership
  - Plan Your Success
  - Ethical Decision Making
  - Effective Communication
  - Less Stress, More Success

### **2015-2016**

Year 2: The program began with 41 students, however, ended with a total of 36 participants.

- Students continued receiving mentorship from their 2 previously assigned Johnson & Johnson mentors
- Students attended weekly SAT prep sessions every Saturday throughout the year
  - Students began the program with an overall diagnostic score of 964 on a 1600 scale.
  - At the completion of the program, the average diagnostic score was 1095, thus increasing their overall score by 131 points.

- The greatest increase was a student who increased their overall diagnostic score by 270 points.
- Went on 3 college tours: Rowan University, Columbia University, New York University
- Went on 2 company tours: Johnson & Johnson Synthes Lab- West Chester, PA, Johnson & Johnson World Headquarters- New Brunswick (BTE Connect w/ North Plainfield site)
- Liberty Science Center visit
- Bi-Monthly Workshops, topics included:
  - Class Officer Elections
  - Presentation Skills
  - College Application Process
  - Naviance Workshop
  - Mock Interviews
- Students participated in a 3 week Summer English Prep component to prepare for the Rutgers Basic Composition course they will be enrolled in this fall.

### **BTE Alumni Update**

ODASIS is pleased to report that this year two students from the original 2003-2007 BTE cohort graduated from medical school. One student graduated from Robert Wood Johnson Medical School and will work in pediatrics. The other student graduated from New York University School of Medicine and will pursue internal medicine. Additionally, one student from the second BTE cohort (2009-2012) was accepted to Robert Wood Johnson Medical School and will begin his first year this fall.

## **AVID SUPPLEMENTAL INSTRUCTION PROGRAM**

The Advancement Via Individual Determination (AVID) Program is designed to assist students who are in the academic "middle". Statistically speaking, these students perform well on standardized testing, but their grades do not reflect their abilities. ODASIS plays a large role in providing supplemental instructors for the AVID students at New Brunswick High School. The supplemental instructors are Rutgers University juniors and seniors who have been or are presently members of the ODASIS program. A large majority of the students are minorities pursuing careers in the sciences.

AVID provides college-level supplemental instruction to high school and middle school students. Rutgers University undergraduate students serve as peer "supplemental instructors" for selected participants from New Brunswick High School, New Brunswick Middle School, McKinley Middle School, and Woodrow Wilson Middle School.

The AVID program allows Rutgers University to connect and help serve the community, and its undergraduates become personally vested in the success of their peers, ensuring a commitment to their academic success. These are college students enrolled in the ODASIS MCAT courses, Rutgers Honors Program, and MAPS Program.

The AVID program demonstrates students' investment in the success of their peers, as well as AVID's commitment to academic and personal achievement. The AVID program allows students to visualize a wide range of potential futures that they would have never otherwise considered, and prepares them to successfully seek out those futures.

## **RESULTS**

### **2013 – 2014 AVID Program Participants**

At the New Brunswick High School, AVID's program participants are divided into six sections based upon grade level. Sections include two ninth grade components, one 10<sup>th</sup> grade component, two 11<sup>th</sup> grade components, and one 12<sup>th</sup> grade component. Students are selected during their final year in middle school and are encouraged to participate in AVID throughout their high school career. At the middle school level, students are split into three groups (6<sup>th</sup>, 7<sup>th</sup>, and 8<sup>th</sup> grade). In 2013-2014 the NBHS had a total of 113 students participating in the AVID program. At the middle school level there were 96 students at the New Brunswick Middle School who participated in the AVID program, 17 students at McKinley Middle School, and at WWMS there were a total of 27 students, making for a grand total of 253 AVID students participating in the program.

### 9th Grade AVID (Section 1) Students' GPA

GPA	# of Students
Below 2.00	2
2.00 – 2.99	7
3.0 – 4.00	4

\*One of the students in this class increased their GPA higher than a 4.0.

### 9th Grade AVID (Section 2) Students' GPA

GPA	# of Students
Below 2.00	0
2.00 – 2.99	11
3.00 – 4.00	6

### 10th Grade AVID Students' GPA

GPA	# of Students
Below 2.00	4
2.00 – 2.99	11
3.00 – 4.00	6

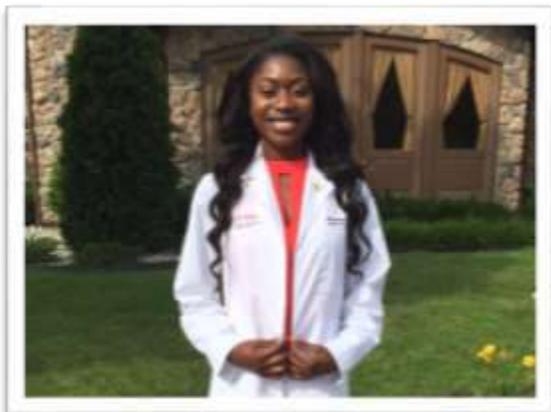
**2014 – 2015: Grades have not been released by the schools.**

**2015 – 2016: Grades have not been released by the schools.**

This would not be possible if not for the generous support, sponsorship, and commitment of the New Brunswick Board of Education, Johnson & Johnson, FHi360, and the Rutgers Writing Program.

At ODASIS, we are constantly being reminded that efforts to help students achieve academic and personal success are good investments in our student's academic and life prospects. In this next section, students acknowledge what ODASIS programs have meant to them.

## Alumni Testimonials



### Motunrayo Becky Adu

My name is Motunrayo, and it means "I have joy again". I am the third child out of four of Nigerian immigrants to the United States of America, and I have been *privileged* to be pursuing an education at Robert Wood Johnson Medical School, where I am working to become a medical doctor. I believe that it is my purpose to use the skills that I have been given in service of others and to leave an impact on this world. It is for this reason that I want to pursue a career in medicine. I not only want to

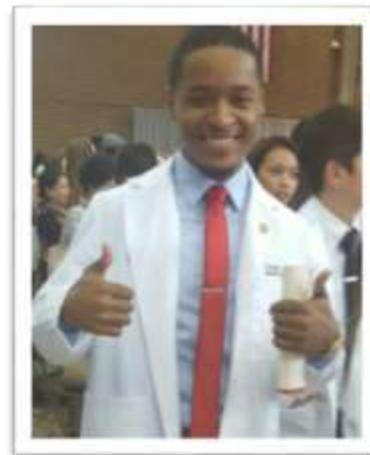
have an impact on one's life and heal people of their illnesses, but I also want to be equipped to be valuable, to bring joy to many different communities worldwide who, while being different from my own color and language, are the same in the burdens we all collectively share.

ODASIS has played a huge role in helping me live out my dream. Starting from the Summer Prep Program my freshman year to ACCESS MED Phase II my senior year, ODASIS has been there every step of the way supporting me, encouraging me, and providing me with the necessary tools and resources needed for me to succeed. Not only has ODASIS provided me with the necessary academic advising, they have provided me with something much more and that is a sense of family. From the advisors to the instructors to the students, ODASIS represents what exactly it means to be a family. ODASIS has been my home away from home for four years and I am truly grateful to have been part of such an inspiring program that helps you live out your dream.

## Duniel Coke

Hello! My name is Duniel and I am a recent Rutgers graduate with a degree in Biological Sciences. I have a passion for physiology and anatomy. I feel that these subjects relate heavily to my other passion, which is sports.

During my time at Rutgers University, I was involved in clubs and other school activities. I was able to balance all of this with the help of the ODASIS program. ODASIS put me around like-minded individuals. They gave me structure and knowledge and paved a way for me to succeed in the sciences at Rutgers. I am really looking forward to working with the incoming freshmen class as a volunteer chaperone for the five week summer chemistry program!



## Nanaama O'Hene



My name is Nanaama O'Hene and I recently graduated with the class of 2017 from Rutgers University where I obtained a B.A in Biological Sciences. Throughout all of my undergraduate career, I was an avid participant of ODASIS. I really attribute much of my success in getting into medical school to the help I received from ODASIS and my advisors. From their supplemental instruction sessions to the rigorous MCAT preparatory course, I found ODASIS to be one of the most important and helpful support systems at Rutgers.

Thanks to all of the program's help, I was given the opportunity to begin my professional education at Rutgers Robert Wood Johnson Medical School in pursuit of a Doctor of Medicine during my senior year of undergrad the Access Med Phase II program. This year has been such an exciting year full of new experiences, and I am looking forward to working as a volunteer chaperone with the freshmen that will join the ODASIS 5 week summer prep program this year!

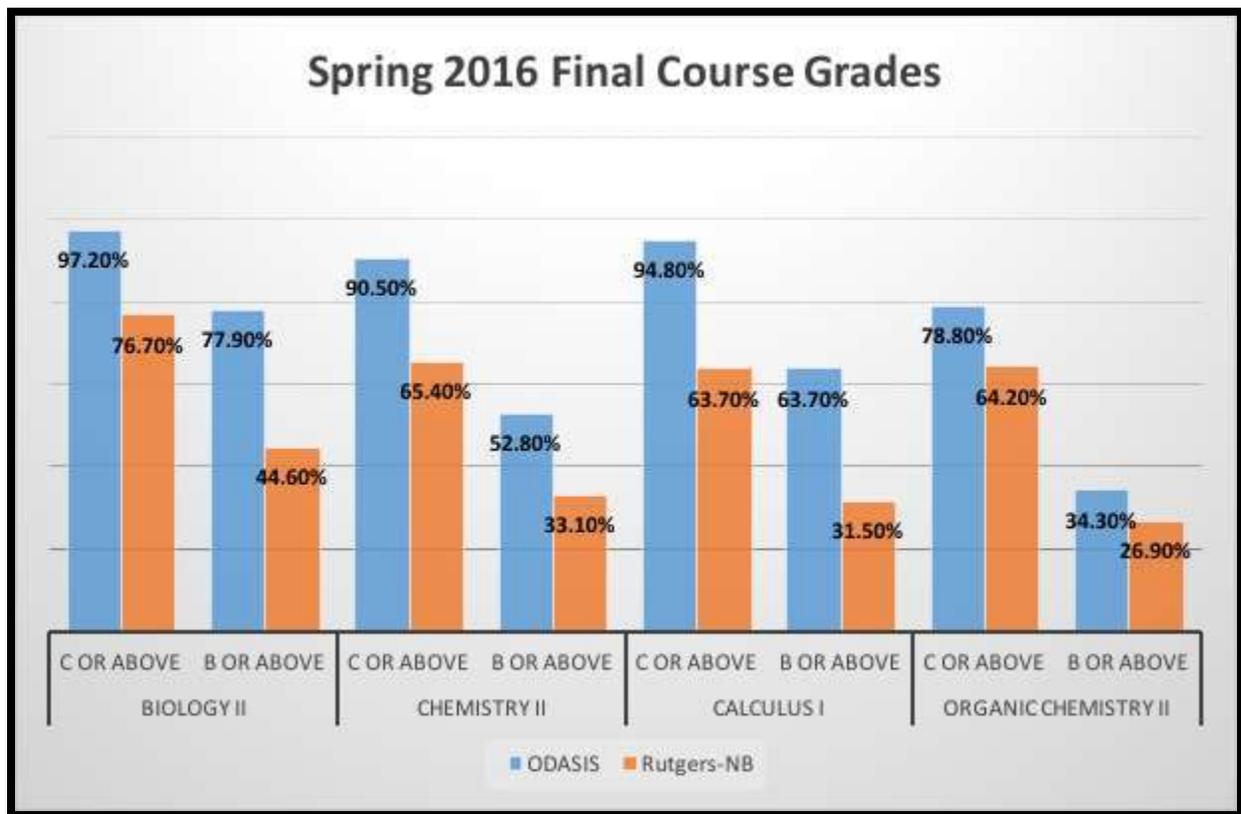
## Wylie Lopez

As I prepare myself to begin residency at the Harvard Combined Orthopaedic Residency Program, I become nostalgic thinking back on the road that led me here. I laugh when I think about all the mistakes I made along the way, and what I could have done differently to remedy those situations. During my second year at Rutgers, I was fortunate to be introduced to ODASIS. This program laid the foundation that allowed me to become an upper-tier student in all of my classes. The secret is behind the strategies implemented to help students learn how to truly study. Combined with career guidance, motivational workshops, mandatory study hall hours, and free tutoring, this program was an incredible resource to me.

ODASIS is not the end-all-be-all. Despite the comprehensive nature of ODASIS preparatory programs, the courses required to get into medical school are still very difficult. I applied the same principles that ODASIS taught me over the years and combined it with countless hours of studying. This is how you get into medical school. After five long years I got accepted to Rutgers-Robert Wood Johnson Medical School and I am now at Harvard working on my residency.



## Semester At-A-Glance: Spring 2016



### Final Course Grades:

Biology			Chemistry		
	C or Above	B or Above		C or Above	B or Above
<b>ODASIS</b>	<b>97.2%</b>	<b>77.9%</b>	<b>ODASIS</b>	<b>90.5%</b>	<b>52.8%</b>
Rutgers-NB	76.7%	44.6%	Rutgers-NB	65.4%	33.1%

Organic Chemistry			Calculus		
	C or Above	B or Above		C or Above	B or Above
<b>ODASIS</b>	<b>78.8%</b>	<b>34.3%</b>	<b>ODASIS</b>	<b>94.8%</b>	<b>63.7%</b>
Rutgers-NB	64.2%	26.9%	Rutgers-NB	63.7%	31.5%

ODASIS students perform significantly better than the Rutgers University, New Brunswick undergraduate class as a whole. ODASIS students are supported, encouraged, and motivated by the program and are assisted throughout their four-year collegiate careers so that they can succeed in their classes and ultimately, achieve their goals.

## ODASIS GRADUATE OUTCOMES: 1990-2016

Profession	Number (%)	Profession	Number (%)
Medicine (MD)	442 (39.1%)	Medicine / Public Health (MD / MPH)	4 (0.4%)
Osteopathy (DO)	75 (6.6%)	Chiropractic (DC)	4 (0.4%)
Biomedical Sciences (MBS)	41 (3.7%)	Biomedical Engineering (MBE)	3 (0.3%)
Dentistry (DMD / DDS)	30 (2.6%)	Law (JD)	3 (0.3%)
Biomedical Research	13 (1.1%)	Optometry (OD)	4 (0.4%)
Physician Assistant (PA)	11 (0.9%)	Medicine / Biomedical Sciences (MD / MBS)	3 (0.3%)
Podiatry (DPM)	12 (1.1%)	Research (PhD)	3 (0.2%)
Nursing (RN / BSN / LPN / MSN)	10 (0.9%)	Medicine / Business (MD / MBA)	1 (0.1%)
Medicine / Research (MD / PhD)	8 (0.7%)	Osteopathy / Law (DO / JD)	1 (0.1%)
Pharmacy (Pharm D)	17 (1.5%)	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 (36.5%)
Physical Therapy (PT)	16 (1.4%)		

**“Luckily for me, the ODASIS program made sure that I wouldn’t have to face that journey alone.”**

*–Zariah Chappell, Rutgers Class of 2016*

## Conclusion

Since the inception of ODASIS, we have seen remarkable increases in student enrollment, academic performance, and retention rates facilitated through the expansion of the ODASIS programs. By providing in-depth supplemental instruction, counseling, and advising, ODASIS has been instrumental in helping students gain admission into graduate schools, medical schools, and other health allied professional and post-baccalaureate programs. In addition, ODASIS also offers students enrichment opportunities including visits to post-graduate institutions in medicine and the health-allied professions and informational workshops. Together, these programs increase students' opportunities for entry and success in graduate and professional programs.

ODASIS will continue to work toward optimizing resources and maximizing the number of students participating in our ODASIS programs by increasing the availability of academic support sessions, offering more research opportunities, strengthening supplemental and support programs, enhancing summer programs, and multiplying internship opportunities for ODASIS students.

### **Our goals for ODASIS in the coming years are to:**

- Highlight the brilliance and talent of ODASIS underrepresented undergraduate science majors at Rutgers University.
- Increase the availability of science and health allied programs for ODASIS participants.
- Continue to improve and enhance current academic support programs.
- Grow our program capacity so that we can increase the number of underrepresented graduates diversifying the medical, dental, health-allied, and other professional workforces.

These goals are paramount not only to satisfy the gap of qualified medical and health-allied professionals, but also to help repair the great disparity and lack of diverse professionals which are needed in these fields. To view the most recent and updated information regarding ODASIS programs, we invite you to visit the ODASIS website at the following address: <http://odasis.rutgers.edu>

The progress that has been accomplished is evident through the expansion and availability of more academic support sessions, more research opportunities, the increase of supplemental and support programs offered, the further development in the curriculum offered during summer programs, and the multiple internship opportunities for ODASIS students. The mission of ODASIS continues to be the same: to offer disadvantaged and underrepresented students with the academic support necessary to succeed in health related fields. The approach also continues to be the same: by providing in-depth supplemental instruction, counseling, and advising; however, ODASIS is constantly looking for innovative ways to accomplish these to ensure that students reach their potential.

Outreach programs are also an essential aspect of achieving ODASIS' mission. Through the preparation of high school students, a strong academic foundation is created and a smooth transition into college is expected. Because of the success of many students through the high school programs, many also opt to continue in ODASIS once they enter Rutgers University.

Help us continue increasing the number of underrepresented graduates diversifying the medical, dental, health-allied, and other professional workforces. To view the most recent and updated information regarding ODASIS programs, we invite you to visit the ODASIS website at the following address: <http://odasis.rutgers.edu>



# APPENDIX A

## ODASIS Programs

### **Academic Support Program**

The Academic Support program provides underrepresented and economically and/or educationally disadvantaged students with the tools that are necessary to succeed in their undergraduate careers. It offers Supplemental Instruction sessions, Problem Solving sessions, academic and career advisement, and motivational and study skills workshops. ODASIS also assists students with finding and obtaining research training summer enrichment opportunities, as well as scholarship opportunities.

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### **Access-Med Program**

ACCESS-MED is a consortium program for undergraduates offered by Rutgers University, Seton Hall University, and Rutgers Robert Wood Johnson Medical School. The program was established to provide academic enrichment, support, and advising for populations that are underrepresented in the health professions. The goal of the ACCESS-MED program is to provide pre-health students with opportunities to optimize their candidacy for health professional programs and careers.

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### **AVID Supplemental Instruction Program**

AVID is a program that is designed to help those students who are in the middle of their academic class. They are B and C students who often "fall through the cracks" because they do not qualify as gifted or advanced students, nor do they qualify as remedial students or students who need extra help. The AVID program is designed to aid these students in taking more challenging classes and in turn, achieve at a higher level.

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### **Bridge to Employment (BTE) Program**

The program's goals for students from the New Brunswick Public Schools in grades 10 thru 12 include increasing SAT scores and increasing the level of preparation in the sciences and other academic subjects. Through college experiences, mentoring programs, workshops, and academic support, the students involved in the BTE project will be transformed into competitive college applicants

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### **CASCADE Mentorship Initiative**

This program was designed to target specific community populations and provide them with early exposure to healthcare. Specifically, this initiative targets high school aged students and hopes to spark an interest in the healthcare field by using community leaders and mentors to provide friendship, education, and guidance throughout high school and college. The founders of the CASCADE Initiative set up a "mini-medical school" for participants, which consisted of several components including a teaching component, clinical skills component, and supplemental instruction component, all of which were geared towards sparking an early interest in science and healthcare related fields. The "Mini-Medical School" is divided into 5 subject areas.

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### **CURE Program - Cancer Institute of New Jersey**

The CURE (Continuing Umbrella for Research Experience) Program accepts 8 students each year – 4 from ODASIS and 4 from the New Brunswick Health Sciences Technology High School (NBHSTHS) - to conduct research at The Cancer Institute of New Jersey (CINJ). Established in 1991, CINJ is the state's first and only National Cancer Institute-designated Comprehensive Cancer Center. Participants are committed to research work for two summers and an academic year. During the academic year, students are responsible for working 4 hours per week, while during the summer, they are responsible for working full time.

## **Saturday Scholars SAT Prep Academy**

The Johnson & Johnson Saturday Scholars Academy provides an opportunity for 11th grade students from the New Brunswick High School and the New Brunswick Health Sciences Technology High School to enhance their understanding of mathematical and scientific concepts and application, and to improve their writing and reading comprehension skills. The program is designed to strengthen problem-solving skills, abstract reasoning, critical thinking, and written/oral expression.

Coupled with SAT preparation and other academic components, the New Brunswick scholars are also introduced to experimental science in both laboratory and classroom settings. In addition, the Academy hosts guest speakers every week from different professional tracks, particularly those from the science or health-allied professions. The speakers are able to provide the students with realistic perspectives about the time, effort, and energy that are invested into a potential career choice. Lastly, the primary goal and hope of the Academy is to develop competitive students for college admission and scholarships.

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## **Summer Biomedical Careers Program (BCP)**

The Biomedical Careers Program (BCP) was established in 1978 to serve educationally and/or economically disadvantaged undergraduate students interested in careers in the health professions. BCP offers an intensive six-week summer academic enrichment program, where students participate in science and health-care oriented activities. The program is sponsored by Rutgers Robert Wood Johnson Medical School, Rutgers University (New Brunswick campus), and the New Jersey Educational Opportunity Fund. BCP offers an academic program with three levels and six different curricula designed for students at various stages of their undergraduate education. The program is designed to increase the academic preparedness and facilitate the entry of students into medical or other health professional schools

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## **Summer Preparatory and Academic Support Program**

The Summer Preparatory Program is offered to newly enrolled first-year students of Rutgers University, to facilitate their transition into college-level Chemistry, Calculus and English. The students are engaged in intensive classroom instruction and valuable academic enrichment activities, in an effort to strengthen the foundation of course content and skills needed to excel in Rutgers rigorous science curriculum. The program responds to the need for academic support articulated by past and present students, who have encountered difficulties in adapting to the demands and pace of college science courses. The Summer Preparatory Program participants receive an introduction to the aforementioned courses and earn 2 college credits upon successful completion of the program.

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## **Test Preparation Courses**

The MCAT, DAT and GRE courses have played an integral role in the outstanding record of success of underrepresented students gaining acceptances into highly competitive medical, dental and health professional programs. Each test-preparation course bears 3 college credits, and features intensive instruction in the key content areas, as well as demonstrations of effective standardized test-taking skills. The MCAT and DAT courses provide ODASIS students with the resources needed to achieve competitive scores on the Medical College Admission Test and the Dental Admission Test, thereby significantly enhancing their chances for acceptance into medical/dental school. The GRE Preparation course equips Rutgers University students for the Graduate Record Examinations through problem-based learning in the topics of Verbal Reasoning, Analytical Writing, and Quantitative Reasoning.

**The Office of Institutional Diversity and Inclusion the Collaborative**

The Office of Institutional Diversity and Inclusion the Collaborative strives to emphasize service learning and implements an active learning approach which requires college students to spend time with the High school and Middle school students helping them with their courses and learn about community issues, thus fostering a cycle of continuous service learning and academic excellence.

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**12<sup>th</sup> Grade English 100 & 101**

In order to create a pipeline between our 11th grade Johnson & Johnson Saturday Scholars Academy and the demands of college writing courses, Basic Composition (English 100) was first implemented in the New Brunswick Health Sciences Technology High School during the 2003-2004 academic year. After two years, the New Brunswick Board of Education encouraged the inclusion of the New Brunswick High School students. The seniors accepted into the program take college level English courses taught by professors from the Rutgers University Writing Program. The students that complete Basic Composition with a C or better receive 3 college credits. Based on the professor's recommendation, certain students will be selected to continue in the spring with Expository Writing (English 101). Upon successful completion of the spring course, students will earn an additional 3 college credits. Fulfillment of these writing requirements ensure that the students will qualify for college-level science courses that have a writing pre-requisite or co-requisite during their first year of college; this prevents students from having to be placed into remedial writing courses which would limit the number of science courses into which students can enroll. Students enrolled in this program are also provide with college and scholarship application assistance, as well as a math placement preparatory class to help maximize their potential of placing into college level courses.

# APPENDIX B

## Partnerships

ODASIS' success is due not only to the dedication of its leadership and staff, but also to the generosity of its alumni and extensive support by organizations that help fund the ODASIS programs.

ODASIS is grateful to these partners who help fund, guide and inspire diversity students to succeed.

On behalf of The Office for Diversity and the Academic Support program, we would like to extend recognition to people like you, whose dedication and support continue to make ODASIS an annual success. Thank you for continuing to take interest in ODASIS programs.

We thank the following supporters, donors, funding agencies, and collaborators of ODASIS:

### **Rutgers University Administration**

The university is centrally administered from New Brunswick, although Chancellors at the Newark and Camden campuses hold significant autonomy for some academic issues. It has been this autonomy along with guidance and support that has allowed the inception, cultivation and success of ODASIS to continue.

### **The Rutgers Foundation**

The Rutgers University Foundation advances Rutgers' pursuit of excellence in education, research, and public service. They provide the bridge between donors and the schools and programs, faculty, and students that make up this university. They directly assist ODASIS doing outreach and helping through the process of obtaining external grants to help fund and support ODASIS.

### **The School of Arts and Sciences (The Division of Life Sciences)**

The School of Arts and Sciences (SAS), with more than 800 faculty and forty departments, combines superb teaching with world-class research in an environment of remarkable cultural diversity. SAS helps ODASIS by offering scholarships for selected incoming students which it awards through the Office of University Undergraduate Admissions at the time of admission to Rutgers.

### **EOF - Central State Government**

The Educational Opportunity Fund (EOF) program at Rutgers offers financial and academic support for New Jersey students whose economic and educational circumstances have put them at a disadvantage.

### **Merck Foundation**

The Merck Foundation's mission is to support organizations and innovative programs that are aligned with three priority areas of health, education and community.

### **Johnson & Johnson/FHI360**

The Johnson & Johnson Foundation supports community-based programs around the world that improve health and well-being.

**Bridge to Employment (BTE)** is a Johnson & Johnson program established with non-profit FHI360 that has been implemented across the world for over 10 years to connect young students to the health care industry and its plethora of career opportunities. Through educational and work-based experiences, BTE in partnership with ODASIS helps prepare its students for higher education and ultimately, a professional role in the health care industry. Though the BTE Program has not been offered in recent years, we are looking forward to re-starting this successful program in the New Brunswick area.

### **New Brunswick Board of Education & Rutgers University Writing Program**

Several years ago, it was found that the lack of scholarships available to New Brunswick High School students hindered their ability to pursue college careers. To enable students to improve their academic performance and therefore become more competitive and eligible for college scholarship money, New Brunswick Tomorrow (NBT) has partnered with New Brunswick High School to establish New Brunswick High School's Advancement Via Individual Determination (AVID) Supplemental Instruction program.

The AVID Supplemental Instruction program targets average-performing high school students who demonstrate the determination and drive to improve academically. Once students are identified, the AVID program provides participants with intensive supplemental instruction and encourages students to pursue higher education. The AVID Supplemental Instruction Program provides college-level supplemental instruction to high school students. Undergraduate student peers from Rutgers University serve as the "supplemental instructors" for students from the New Brunswick High School who are selected to participate in the program. In the Rutgers- 12<sup>th</sup> Grade English program, students take Rutgers University English 100 course during the fall semester and have the opportunity to earn three (3) college credits upon successful

completion. Students who successfully pass English 100 in the fall are eligible to enroll in English 101 during the spring semester and have the opportunity to earn another three college credits.

New Brunswick Tomorrow is a private, non-profit organization, dedicated to fostering public/private networks of agencies, institutions and volunteer organizations that serve to enrich the lives of the people of New Brunswick, promoting self-sufficiency and personal dignity for every individual. New Brunswick Tomorrow has partnered with ODASIS to work with 9th through 12th graders at the New Brunswick High School; to strengthen their preparation for entry into a four-year undergraduate institution by providing Math, English, and Science skills development.

#### **The Robert Wood Johnson Medical School (RWJMS)**

RWJMS is a public medical school located in Piscataway and New Brunswick, New Jersey, and one of the eight schools of the University of Medicine and Dentistry of New Jersey (UMDNJ). In June 28th, 2012 the New Jersey state legislature passed a bill that will dissolve the University of Medicine and Dentistry of New Jersey and merge most of its schools, including Robert Wood Johnson Medical School, with Rutgers University forming a new Rutgers School of Biomedical and Health Sciences. Members of the Rutgers Board of Governors estimated that the takeover of UMDNJ could "elevate Rutgers' status to among the top 25 most elite research universities in America. RWJMS' foundation was a grantor and helped fund ODASIS programs in 2007.

#### **Rutgers Biomedical and Health Sciences (formerly University of Medicine and Dentistry of New Jersey [UMDNJ-SOM])**

Rutgers Biomedical and Health Sciences (RBHS) is a leader in providing opportunities for medical education to New Jersey students. As well as the D.O. degree, the school offers a range of dual and joint-degree options to students with interests in law, management, public health or research.

As part of RBHS, New Jersey Medical School (NJMS) Summer PREP annually invites under-represented and disadvantaged students from colleges and universities across New Jersey for a six-week residential internship designed to help prepare them for health careers training opportunities through exposure to biomedical research, clinical shadowing, MCAT instruction, medical school admissions processes, and seminars. The program is funded via the New Jersey Commission on Higher Education's Educational Opportunity Fund (NJCHE-EOF).

The Summer PREP annually invites under-represented and disadvantaged students from colleges and universities across New Jersey for a six-week residential internship designed to help prepare them for health careers training opportunities through exposure to biomedical research, clinical shadowing, MCAT instruction, medical school admissions processes, and seminars. The program is funded via the New Jersey Commission on Higher Education's Educational Opportunity Fund (NJCHE-EOF).

#### **The Cancer Institute of New Jersey (CINJ)**

CINJ is dedicated to improving the prevention, detection, treatment, and care of patients with cancer, through the transformation of laboratory discoveries into clinical practice. CINJ delivers advanced comprehensive care to adults and children including access to clinical trials and conducts cutting-edge cancer research. CURE (Continuing Umbrella for Research Experience) Program at the Cancer Institute of New Jersey and in partnership with ODASIS provides research training and academic and professional enrichment activities for highly motivated underserved students.

#### **Rutgers Office for Institutional Diversity and Inclusion (OIDI)**

ODASIS has developed a close relationship with the Office for Institutional Diversity and Inclusion, particularly with Vice Chancellor for Institutional Diversity and Inclusion, Jorge Schement, since the office was created in April 2013. The OIDI provides leadership for administrative services at Rutgers to incorporate diversity, inclusion, equity and access into operations, fostering diversity and inclusion among the Rutgers student, faculty, and staff populations through an organized and centralized channel. The Vice President for Institutional Diversity and Inclusion supports research in the areas of diversity and inclusion, coordinates and supports diversity programs across the university, and assesses how the university is doing in these areas in relation to peer institutions