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**EDUCATION:** 9/15 **MCAT:** Taken September 2015, results: Chemical and Physical Foundations of Biological Systems: 130 (97<sup>th</sup> percentile); Critical Analysis and Reasoning Skills: 123 (33<sup>rd</sup> percentile); Biological and Biochemical Foundations of living Systems: 127 (77<sup>th</sup> percentile); Psychological, Social, and Biological Foundations of Behavior: 123 (32<sup>nd</sup> percentile); Overall: 503 (61<sup>st</sup> percentile)

5/21 **DAT:** Taken May 2021, results (out of 30): Perceptual Ability: 17; Quantitative Reasoning: 22; Reading Comprehension: 21; Biology: 22; General Chemistry: 22; Organic Chemistry: 23; Total Science: 22; Academic Average: 22

12/23 **DAT:** Taken December 2023, results (out of 30): Perceptual Ability: 15; Quantitative Reasoning: 20; Reading Comprehension: 19; Biology: 20; General Chemistry: 21; Organic Chemistry: 20; Total Science: 20; Academic Average: 20

8/24-present

**Temple University – Kornberg School of Dentistry, Doctor of Dental Medicine Program**, Philadelphia, PA. A four-year doctorate program focused on training students to have the necessary skills and knowledge to practice dentistry in a clinical setting after completion. The program has a rigorous didactic curriculum to ensure each student is properly prepared to handle the many responsibilities involved in patient care. The pairing of the school's curriculum along with diverse clinical experiences and unique research opportunities help shape graduates into the most well-rounded version of themselves. The racial, ethnic, and socioeconomic diversity of the population in Philadelphia allows students consummate access to a patient pool suffering from a wide range of oral health conditions in need of treatment. The curriculum begins with learning about the normal structure and function of the body, which includes systems and dental tissues, in conjunction with preclinical courses concerned with dental anatomy, dental materials, occlusion, and operative dentistry. Second year courses involve the study of systems and diseases and the impact to oral health. The preclinical classes will cover almost every segment of dentistry, such as digital dentistry, endodontics, periodontics, orthodontics, pediatric, prosthodontics, and radiography. The third and fourth year focuses on gaining skill and proficiency in delivering comprehensive oral care to patients in a clinical setting and performing complex dental procedures required to practice general dentistry modern settings.

- 6/23-5/24      **Temple University – Kornberg School of Dentistry, Postbaccalaureate Program**, Philadelphia, PA. Able to work as a fully certified dental assistant helping third- and fourth-year dental students provide care to patients in the Temple dental clinics during the fall and spring semesters. Rotated through the clinic to help assist in various dental specialties including: AEGD, endodontics, periodontics, oral surgery, and pediatrics. Completed upper-level science courses relevant to the field of dentistry, such as Microbiome, Inflammation and Oral Disease, Regeneration of Bone and Dental Hard Tissues, and Introduction to Orthodontics. Cumulative GPA: 3.86/4.00, Sciences: 3.92/4.00
- 8/17-3/19      **Georgia Campus – Philadelphia College of Osteopathic Medicine, Doctor of Osteopathic Medicine Program**, Suwanee, GA. Program involved teaching osteopathic principles and practices along with compassionate patient care with established and evolving biomedical, clinical, and cognate sciences. As well as how to communicate effectively with patients, their families and other healthcare professionals with an emphasis on sensitivity to a diverse patient population.
- 1/11-5/14      **University of South Florida, Honors College**, Tampa, FL. Bachelor of Sciences degree in Biomedical Sciences with Honors, concentration in Cell Biology and Molecular Biology. Course work includes: biology, organic chemistry, immunology, physiology, cell metabolism, calculus, genetics, biochemistry, and cell biology. GPA: 3.51/4.00, Cumulative: 3.46/4.00, Major: 3.62/4.00, Sciences: 3.45/4.00, Non-Sciences: 3.47/4.00
- 8/09-12/10      **College of Central Florida**, Ocala, FL. GPA: 4.00/4.00, Cumulative: 3.40/4.00
- 8/08-6/09      **University of Miami**, Coral Gables, FL. Studied for Bachelor of Sciences degree in Pre-Medical Sciences. GPA: 2.11/4.00

#### **HONORS/AWARDS:**

- Dean's Honors (2009-2010)
- USF Dean's Honors (2011-2014)
- Honors College at USF

## EXPERIENCE:

10/09-8/11

**Researcher**, Cardiovascular Imaging Center of Central Florida, Ocala, FL, 2009-2011 (research advisor: Dr. Ganesh D. Aroura, Ph. D)

Hours per week: 15 hours. Total weeks: 40 weeks. Total hours: 600 hours.

- Research assistant for a public health lab associated with the Cardiovascular Imaging Center of Central Florida. Our main focus is on health disparities in cardiac care between different populations based on several parameters including race, gender, and age. My primary duties involve data collection and analysis from patient records.
- Results will determine the efficacy rate of PET imaging stress tests and myocardial perfusion imaging in detecting coronary artery disease (CAD) through analysis of patients' stress and rest ejection fraction.
- High-risk CAD patients were determined if there was a significant drop in the patients' stress ejection fraction from rest ejection fraction upon vasodilation, indicating buildup of atheromatous plaques in the coronary arteries.

5/12-5/14

**Researcher**, University of South Florida, Tampa, FL, 2012-2014, Organic Chemistry Research Lab of Dr. Jon C. Antilla (research mentor: Dr. Jon C. Antilla, Ph. D; studied and worked under postdoctoral Dr. Zuhui Zhang, Ph. D)

Hours per week: 20 hours. Total weeks: 60 weeks. Total hours: 1200 hours.

- Thesis research included synthesis using asymmetric catalytic compounds to develop methodology and applications in the field of chiral BINOL-Phosphoric Acid derivatives. Lab work included synthesis of a cyclic chiral phosphoric acid diester catalyst derived from (R)-BINOL with novel substituent groups attached at the 3,3'-positions of the molecule. The substituent groups on the catalyst serve as stereo-controlling groups to ensure the proper enantioselectivity by positioning the substrate to allow for attack only on one side of the substrate face leading to the formation of the product with the desired stereochemistry. Studies involved modifying the substituent groups of the substrate to observe if steric hindrances affect the product yield or enantiomeric excess (ee), a measure of the purity of the compound obtained to ensure the product has the correct stereochemistry, as well as, modifying the temperature of the

reaction to observe if varying temperatures affects the stereochemistry of the products. The novel phosphoric acid catalyst will then be utilized in reactions to see if this new derivative of BINOL-phosphoric acid improves the efficiency of reactions by creating a greater product yield and a more enantiomerically pure compound. The efficacy of the catalyst is then ready to be tested through carbon-carbon bond forming reactions that yield important substructures found in medicinal agents that may act as binding targets for enzymes or proteins in cells.

7/11-8/11

**Physician Shadowing**, Dr. Galina F. Bogorodskya, M.D., Southeastern Neurology, Gainesville, FL.

Hours per week: 25 hours. Total weeks: 4 weeks. Total hours: 100 hours.

- Able to sit in Dr. Bogorodskya's consultations with patients, and watch her administer different treatments, including: Botox injections for stroke patients, electromyograms (EMGs) to monitor electrical conduction of afferent and efferent neurons to skeletal muscles, and determine the course of action in patients with MS or other neurodegenerative disorders by analyzing MRI scans of the brain or other test results.

6/13-9/13

**Physician Shadowing**, Dr. Nirav Gupta, D.O., Twin Palm Orthopedics, Ocala, FL.

Hours per week: 25 hours. Total weeks: 12 weeks. Total hours: 300 hours.

- Shadowed Dr. Nirav Gupta, a Board-Certified Orthopedic surgeon, in June 2013. Able to observe patient visits in his office and several surgeries in the Operating Room at Ocala Regional Medical Center. Observed Dr. Gupta operating procedures for: shoulder replacements, full hip replacements, full knee replacements, carpal tunnel release, and shoulder arthroscopy. Gave me the opportunity to see how physically and mentally demanding it is to perform the surgeries of an orthopedic surgeon.

2/16-11/16

**Physician Shadowing**, Dr. Rakesh Prashad, M.D., Cardiology Associates of Central Florida, Ocala, FL

Hours per week: 10 hours. Total weeks: 36 weeks. Total hours: 360 hours.

- I observed Dr. Prashad's patient visits in his office and witnessed him perform numerous invasive cardiac procedures, such as the implantation of stents in major coronary arteries to remove

blockages and increase blood supply back to the heart. Following Dr. Prashad, I learned to properly take a patients' blood pressure manually and was able to take his patients' vital signs for the visits I observed.

5/19-11/19

**Dentist Shadowing**, Dental Assistant, Dr. Tina Chandra, D.D.S, L.V.I.F., Chandra Smile Designs, Ocala, FL  
Hours per week: 38 hours. Total weeks: 24 weeks. Total hours: 912 hours.

- Observed Dr. Chandra perform full mouth restoration procedures while helping to assist. Helped make bite molds for TMD bite guards. Also observed Dr. Chandra make crowns for patients and dentures. Dr. Chandra also allowed me to make clay figures of patients' bite molds. Assisted in different dental procedures and patient care while shadowing Dr. Chandra.

## HONORS COLLEGE THESIS:

5/14

**USF Honors Thesis.** "Asymmetric Catalysis by Chiral BINOL-Phosphoric Acid Derivatives."

Abstract: The underlying goal of the thesis was to utilize the methodology behind chiral BINOL phosphoric acid catalysts generated by members of Dr. Jon Antilla's lab to test the efficacy of the catalyst in novel reactions that have significance in synthesizing candidates of drug discovery and natural product synthesis. The reaction studied to test the efficacy of the chiral phosphoric acids on the Friedel-Crafts reaction of indole with 2-(hydroxy(phenyl)methyl)phenol. The catalyst screening involved the use of **PA3**, incorporating 9-anthryl groups as the substituents in the 3,3' positions of the chiral BINOL-phosphoric acid catalyst. The ee% yield of the 9-phenanthryl groups, the substituent with the greatest ability to exert steric hindrance on the substrate, has the lowest ee% yield of the BINOL phosphoric acid catalyst derivatives. Thus, signifying the marginal effects of the substituent groups on controlling the chiral environment of the substrates, as well as, control over the enantioselectivity of the products from the asymmetric catalyzed reactions based on their bulkiness and electronic arrangements. The aim of the reaction is to utilize the Lewis basic site of the chiral BINOL-phosphoric acid catalyst to hydrogen bond with the N-H group of the indole ring. The Bronsted acidic site donates a hydrogen bond the O-H moiety adjacent to the phenol and phenyl rings to stabilize the active site of the substrate for attack by the alkene double bond by the indole ring. The protonation of the O-H functional group at the recognition site by the Bronsted acidic site of the catalyst enables for

the formation of H<sub>2</sub>O, which acts as a favorable leaving group allowing the reformation of the indole double bond. The positive results of the reaction did show that the TRIP-phosphoric acid derivative was the most effective form of the catalyst to perform such a complex reaction, indicating there are limits to the effectiveness of the substituent bulkiness.

## WORK EXPERIENCE ACTIVITIES

- 8/09-12/10      **Administrative Intern**, Cardiology Associates of Central Florida, Ocala, FL.  
Hours per week: 12 hours. Total weeks: 35 weeks. Total hours: 420 hours.
- Computer-catalogued patient records and served as a file clerk for the Cardiology Associates of Central Florida.
- 10/21-9/22      **Pharmacy Technician**, Ocala Pharmacy, Bhavesh Patel, Ocala, FL  
Hours per week: 32 hours. Total weeks: 20 weeks. Total hours: 640 hours.
- Performed rapid COVID-19 antigen and PCR tests on patients, helped fill prescriptions, filled COVID-19 vaccine syringes, and helped check out patients in the drive thru pharmacy as well as in the store. Main responsibility was predominantly giving COVID-19 antigen tests to elderly patients so they were able to gain clearance to return to work or school or be admitted to hospitals for surgeries.
- 5/23-8/23      **National Entry Level Dental Assistant (NELDA)**, Dental Assisting National Board, Chicago, IL. Hours per week: 8 hours. Total weeks: 10 weeks. Total hours: 80 hours.
- Received certification as a National Entry Level Dental Assistant (NELDA) from the Dental Assisting National Board (DANB). I studied radiology, dental anatomy and morphology, and infection control during the summer and passed the NELDA exam to receive dental assisting certification. In addition, completed CPR certification during the summer semester to become fully qualified to assist third- and fourth-year Temple dental students.

## COMMUNITY SERVICE ACTIVITIES:

- 1/08-6/08      **Volunteer**, Boys & Girls Club of America, Ocala, FL.  
Hours per week: 12 hours. Total weeks: 28 weeks. Total hours: 336 hours.
- Worked with counselors to develop educational lesson plans in Math and Reading for first-grade level students.
- 8/09-12/10      **Volunteer**, Munroe Regional Medical Center, Ocala, FL.  
Hours per week: 5 hours. Total weeks: 68 weeks. Total hours: 340 hours.
- General tasks included answering phone calls, patient transport, making copies of patient charts, and assisting patients in daily activities.
- 8/10-8/11      **Volunteer**, Ocala Regional Medical Center, Ocala, FL.  
Hours per week: 5 hours. Total weeks: 32 weeks. Total hours: 160 hours.
- General tasks included answering phone calls, patient transport, making copies of patient charts, and assisting patients in daily activities. Volunteered to make arts and crafts with patients and families. Served refreshments in cafeteria.
- 12/11-1/12      **Volunteer**, Medical Volunteer, African Impact Volunteer Program, Hospital and Orphanage Volunteering  
Hours per week: 60 hours. Total weeks: 4 weeks. Total hours: 240 hours.
- Medical volunteer project took place at the Karuri Health Center. Aided nurses in a mother and childcare clinic with immunizations of two- to six-week old infants for tuberculosis, polio, DPT, and pneumococcus; also assisted with giving older children their measles vaccine. Worked with nurses in antenatal clinic assisting in checkups of pregnant women to ensure no pregnancy complications. Observed and aided nurses' management of the child-delivery process. Aided nurses in the outpatient clinic to administer injections for antibiotics or antihistamines and help clean wounds or burns. Administered stitches to wounds that needed treatment in outpatient wing with the assistance of nurses, and observed the resident biochemist run diagnostic tests on patients' blood, urine, or stool samples to discern treatment path.

5/15-1/17                      **Volunteer**, Medical Intern, Dr. Sukumaran Ramaswami, M.D., Internal Medicine, Ocala, FL  
Hours per week: 25 hours. Total weeks: 72 weeks. Total hours: 1800 hours.

- Worked in the capacity of helping Dr. Ramaswami while he treated patients suffering from a variety of common illnesses. Involved taking patients' vitals and cleaning open wounds.

6/19-10/19                      **Volunteer**, Dental Assistant, FREEDOM Dental Clinic, Ocala, FL  
Hours per week: 9 hours. Total weeks: 5 weeks. Total hours: 45 hours.

- Helped assist UF dental students perform procedures on underprivileged patients in the local community which included providing free oral hygiene education along with assisting in prophylactic teeth cleanings, dental X-rays, extractions, fillings, root canals, and dental examinations. Program occurred on a monthly basis on Saturdays from 7 am – 4 pm.

## **ORGANIZATIONS AND AFFILIATIONS:**

January 2008 - June 2008                      Boys and Girls Club of America

- Volunteered as a tutor for students in after school care.

August 2012 - May 2014                      Pre-Med AMSA

- Attended General Body Meetings, learned of volunteer opportunities, and listened to invited speakers.

August 2012 - May 2014                      USF Honors College

- Enrolled in the Honors College since Sophomore year.



## **HOBBIES/INTERESTS**

- International Travel
- Playing the Saxophone and listening to Jazz and Classical music
- Golf
- Basketball
- Cornhole
- Reading - Science Fiction, Fantasy/Adventure, Fiction
- Amateur Geology
- Nature Hiking
- Photography
- Cooking
- Building/Crafting