

A Year Like No Other - the 2020 UGSP Newsletter

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“Each time new experiments are observed to agree with the predictions the theory survives, and our confidence in it is increased; but if ever a new observation is found to disagree, we have to abandon or modify the theory.” - Dr. Stephen Hawking

From the global push to develop a vaccine, institutional restructuring, and changing schedules to the massive transition into a virtual environment, the year of 2020 was nothing like anyone could have planned for. This near universal experience has led many to reassess the working model of their everyday lives, to reflect and experiment with how they approach their wellness and their connections with others, and to think critically about moving forward.

The Undergraduate Scholarship Program, under the direction of Dr. Darryl Murray, continues to support students who are from disadvantaged backgrounds and who are passionate about advancing biomedical, behavioral, and social science fields for the improvement of human health. This newsletter will highlight some of the ways in which current UGSP scholars have adapted to the challenges of 2020, provide insight into the perspective of both a mentee and mentor, as well as how UGSP alumni Dr. Kizzmekia Corbett has contributed to the development of the Moderna SARS-CoV-2 vaccine.

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Dr. Darryl Murray’s go-to wellness activity over this past year has been walking his family’s new rescue dog Pepper!



Dr. Kizzmekia Corbett – a Powerful Voice in Science During COVID-19

“The vaccine you are going to be taking was developed by an African American woman and that is just a fact.” - Dr. Anthony Fauci

Dr. Kizzmekia Corbett is one of the lead scientists on the task force assembled by the National Institutes of Health (NIH) in combatting and controlling the ongoing Coronavirus Pandemic. Affectionately called Kizzy by Dr. Fauci and other colleagues, Dr. Corbett is an immunologist in the Vaccine Research Center (VRC) at the National Institute of Allergy and Infectious Diseases who with Dr. Barney Graham, has been leading the coronavirus vaccine development. At the young age of 34, she is one of the key experts on coronaviruses and the development of a vaccine for SARS-CoV-2 (Coronavirus, Covid-19).

She will go down in history as a key figure during the pandemic.

Early on in her journey to her current position at the NIH VRC, Dr. Corbett participated in the American Chemical Society’s Project Summer Experiences for the Economically Disadvantaged (SEED) at University of North Carolina Chapel Hill as a high school student, earned her B.S. in Biological Sciences and Sociology with a full ride scholarship to the University of Maryland Baltimore County, and secured a summer internship at the NIH. As a UGSP Scholar in 2006, she completed her research project titled “The Effects of Respiratory Syncytial Virus Infection on Dendritic Cell Maturation by Toll-like Receptor Agonists” under the mentorship of Dr. Barney S. Graham, M.D., Ph.D. who is the current co-lead on the SARS-CoV-2 vaccine development team. At the time Dr. Corbett was motivated to study public health and microbiology to “[use] vaccines as a cost-effective prevention method for many diseases...” It is safe to say that her continued investment in public health has helped her to reach great heights and achieve one of her longtime goals of having “[a] career in biomedical research dedicated to preventing infection, and in turn, curing diseases.”

As of January 2021, Dr. Corbett and her team have worked with Moderna to develop a vaccine that has received emergency use authorization from the FDA and is currently being distributed in strategic phases to the American people. The effects of this pandemic are not exempt from the health disparities that many people face across the nation. For example, African Americans are being disproportionately affected having higher rates of hospitalizations, infections, and mortality rates. With Dr. Corbett at the helm representing African Americans and women in the sciences, her influence goes beyond the vaccine itself and has the potential to renew trust in medical sciences and to inspire the next generation of scientists from diverse backgrounds. In fact, the impact she is having is already being seen, extends beyond the laboratory and is being recognized and appreciated from colleagues and her hometown. Her former hometown of Hillsborough declared Jan. 12, 2021, as Dr. Kizzmekia "Kizzy" Corbett Day.

“To be honest, I didn't realize the level of impact that my visibility might have... I do my work because I love my work.” -Dr. Kizzmekia Corbett

Current Scholars

The path of each UGSP scholar is unique, but each must participate in 10-week summer internships and commit a year of service for every year that they were financially supported through the program. **Here you will find the names of current and payback UGSP scholars** and their go-to 2020 wellness practices.

Payback Scholars			
Alia Alhoms Yoga	Funto Akindona Journaling, watching some tv, baking	Larissa Ault Learning French, running, vegan cooking	Stefanie Brizuela Reading fiction, solving 3D puzzles, pyrography
Hank Cheng Deep breathing	Anahit Gevorgyan Walking in the evenings	Charlesice Hawkins Painting, digital art, dancing	Sarah Izabel Kundalini Yoga, working out, eating healthy
Makheni Jean-Pierre Biking like crazy	Amanda Jiang Playing with their cat, walking in the park	June Hee Kim Morning walks, baking	Sargis Manukyan Going for a walk, reading, checking in with friends
Nicholas Munyan Baking, home repair, doing odd hobbies	Abhijay Murugesan	Ixtaccihuatl Obregon	Alia Pederson Cooking
Sandy Reynolds Working out, reading, cooking	Nyree Riley New trails, taking care of their houseplants	Anna Savan Working out, hiking, outdoorsy things	

Current Scholars			
Amin Attari Mediterranean cooking, talking to family/ friends	Polycarpe Bagereka Working out, thrillers, hanging out with friends	Shiva Deljookorani Learning Kalimba, hiking, camping, cake decorating	Luis Estrada Playing violin, exercising, binging anime/podcasts
Syeda Fatima Painting, baking, spending time with family	Austin Gable Starting a new writing project	Jeisac Guzman Rivera Playing with their cat, reading, sci. docuseries	Lauren Heinzinger Creative writing (fiction), reading, walking at sunset
Mahin Hossain Painting, evening walks, calling friends/family	Laura Jett Walking, reading, playing Stardew Valley	Dartanyon Jones Long distance running, reading, writing	Robin Kee Yoga, listening to audiobooks, walking
Anirban Mahanty Boxing, working out, gaming, cooking	Evanjelin Mahmoodi Embroidery	Maxime Munyeshyaka Working out, walking, playing video games	Alondra Martinez Osorno
Audrey Randall Listening to music, reading, watching movies	Ian Stukes Playing videogames, YouTube, walking	Olufunmilayo Telli Baking sweets, painting, playing with their cats	Hao Dong Tian Strolling, Zumba, and eating balanced meals
Jacquelyn Willis Working out, binging shows, reading	Josette Yeboah Roller skating, binging series, reconnecting		

UGSP Alum and Mentor Reflections

We had the pleasure of speaking with **UGSP Alum, Caitlin Stavish, and her mentor, Dr. Ellen Leibenluft** about their personal, academic, and professional experiences over the years.

Caitlin is currently a PhD student at the University of Washington in the department of Child-Clinical Psychology. She explained that getting into graduate school has been her greatest achievement thus far and that her current work is aimed toward “[understanding] how children cope and evaluate threats in their environment and how certain aspects such as parental warmth, guidance, structuring, and so forth can help support a healthy coping mechanism or hinder it.”

Caitlin joined the lab of Dr. Ellen Leibenluft in 2018. Dr. Leibenluft is currently serving as a tenured Senior Investigator, Chief of the Section on Mood Dysregulation and Neuroscience, and as the Co-Branch Chief of the Emotion and Development Branch, Intramural Research Program at the National Institute of Mental Health, her research “...centers on children with severe irritability – children who get frustrated very easily and tend to have these emotional outbursts.” She explained that “[these children] often feel very bad afterwards... [and that] the research is focused on trying to understand what is going in their brains... [using] functional imaging, fMRI, to look at brain function... [and trying] to use that information to figure out new treatments. Particularly, new forms of psychotherapies or brain trainings where you play games and it trains you to be able to tolerate things more easily.”

Thinking about her past 30 years at the NIH, Dr. Leibenluft described her favorite aspects of work as “...Teaching – Working with people like Caitlin. The people that come through at all different levels... then go on to graduate school or medical school or they may decide to do something completely different – go into policy or teaching or any number of things... I also really enjoy working with the families, the children and the families, and it is really having a team that is sort of working together to figure out something that will ultimately be helpful. **That is what I really love about it... to use the kind of knowledge and data that you gain to work together with a group of people to ultimately be able to help these children and their families. It is the mission and process of the whole thing – it involves a lot of intellectual work and also a lot of teamwork!**”

Dr. Leibenluft’s research already had remote components, but those efforts have been expanded amidst the current circumstances of the pandemic. Aside from the challenges of collecting data safely, she explained that “...it has [also] been a real challenge keeping the group together [high morale] when it is all virtual... especially when it comes to bringing in new people...” For the more personal aspects of her life, Dr. Leibenluft also emphasized how important social interaction, albeit limited, as well as exercise have been for coping with the past year. In a similar vein, Caitlin recalled “...the difficulty of living alone in the pandemic before moving in with her partner in Boston and participating in virtual social support.”

As a mentor, Dr. Leibenluft hopes that her mentees learn to be critical of their own work. She says, “...you always have to know the soft underbelly of your work. In many ways you have to be the most astute critic of your own work because you know it the best... you need to always be questioning yourself, now you don’t want to get paralyzed by it... you want to be making smart, thoughtful decisions about how you are dealing with it so that if someone critiques your work you can say ‘Yes, you are right. That is a problem and we have dealt with it x, y, z way and if you have any other ideas that would be great.’” Her advice to other and future mentors is to “**encourage students to speak up ...really try to empower [them]... to get the best experience.**” She explained that “[While individualized mentoring] is very hard to pull off... it is really important to be able to assess people’s needs and figure out how to meet them... **mentoring is a**

lifelong proposition... many people when they leave, I am still in contact with them in some way or another. I really enjoy that part too.”

Caitlin’s advice for current and future scholars is to make decisions based on whatever is best at that time and to **“invest in people”** as they are friends and potential collaborators. Dr. Leibenluft’s final words of advice from this interview read, **“You know the thing about a research career is that it is not just one thing, it is a body of work typically. There may be one thing that is most prominent, but you have to follow it up.”** When asked about her achievements, Dr. Leibenluft described her legacy in parts. She said that her children were a major part of her personal legacy and that scientifically, her legacy includes the people she mentors and her contributions toward understanding and treating issues with irritability in children that can be detrimentally misdiagnosed. Reflecting on her own achievements, Caitlin stated that **“Getting into graduate school has been my greatest achievement. Getting through the application process and traveling to six different cities were huge and I am very proud of it. I’m also looking forward to going back in person because I started graduate school virtually. I would love to meet my cohort and develop a relationship whenever that may be.”** Let this story from both mentor and mentee serve as a source of encouragement moving forward as part of the UGSP family.