



CCR Fellows & Young Investigators Newsletter

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CCR-FYI Newsletter Team

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Leaves are falling, and while another year is coming to a close, you, Fellow Reader, can enjoy a few new articles to help in your career advancement and professional development. In this edition of the Newsletter, we share interviews with scientists at different stages of their career, perspectives from the COVID-19 drive-thru testing site on NIH campus, tips on how to manage time, and much more!! ... And don't forget to check out the flyers at the end of this document for all the ways you can be involved in all the exciting and enriching activities of the CCR-FYI. I hope you enjoy reading the Fall 2021 Newsletter. – Alida Palmisano (Editor-In-Chief)

(Background image created with BioRender.com and photo by mariola-grobelska on Unsplash. Personal pictures from Editorial Team and people included in various articles.)

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Important resources: Spotlight

- Diversity, inclusion, and equity in scientific careers: What it means and why it matters (by Caeul Lim) <https://crosstalk.cell.com/blog/diversity-inclusion-and-equity-in-scientific-careers-what-it-means-and-why-it-matters>
 Cell Mentor (by Cell Press) is a resource designed to equip researchers at every level with the skills they need to perform successful experiments and further their careers. Authors of “Cell Mentor” collect blog posts, video interviews, experimental tutorials, handbooks, and Cell Press journal articles all in one place for upwardly mobile researchers to find, use, and enjoy.
- Uncovering That Which Is Hidden: Measuring the Effects of Racism in Research on Inherited Cancer Syndromes (https://www.youtube.com/watch?v=kTt1_rA6pLM)
 In this webinar, presented by the Inherited Cancer Syndrome Collaborative (ICSC) associated with the Cancer Moonshot Initiative, Drs. Kyle Brothers, Deborah Cragun, Sonya Reid, and Kim Kaphingst examined the concept of systemic racism at multiple levels and its understudied effects on social determinants of health. The presenters discussed the implications of systemic racism for genomic research focused on heritable cancers, with a particular focus on practical solutions for measuring the effects of systemic racism in producing health disparities.
- What are Gender Pronouns? Why Do They Matter? (By: Gemma Martin, Louis Choporis, and Bali White) <https://www.edi.nih.gov/blog/communities/what-are-gender-pronouns-why-do-they-matter>

MARK YOUR CALENDARS FOR THE 2022 CCR-FYI Colloquium

**Translating Cancer Research
from Bench to Clinic:
The Real Deal!**




Analysis ← Testing → Treatment

April 20th-21st, 2022
 Virtually or at NCI Shady Grove as guidelines permit

Oral and Poster Presentations • Career Networking and Development Workshops • Keynote Speakers • Outstanding Postdoctoral Fellow Presentation • Survivor Speaker

Registration and abstract submission is open!

<https://events.cancer.gov/cct/fyi-colloquium>

Registration Deadline with Abstract: December 6, 2021
Registration Deadline without Abstract: March 14, 2022

For questions please contact Maria Moten at NCICCT@mail.nih.gov



**CCR-FYI Annual Holiday Gift Drive
Benefiting the NIH Children's Inn**



Help stock the “Gingerbread Gift Shop” for
 The Children's Inn at NIH
 Children and their families can shop
 for holiday gifts –at no cost –for their loved ones!



Festive, marked collection boxes will be placed
 around all campuses collecting donations from
 Monday, November 29th – Thursday, December 9th

All gift items should be **new**,
 in original packaging, and **not wrapped**
 *stuffed, plush toys, and Play-Doh cannot be accepted

Questions? Contact: marygrace.katusiime@nih.gov

More to Science: A brief talk with Sabrina H. Tsang, (PhD, MPH) about the life of a Clinical Scientist at Merck

by: Sarwat Naz

What is your scientific background?

My research interest has always been in infectious diseases. I earned my Ph.D. in Cell and Molecular Biology at the University of Pennsylvania School of Medicine. I then joined the NCI as a Cancer Prevention Fellow and pursued my M.P.H. at the Harvard T. H. Chan School of Public Health. I returned to the NCI for my postdoctoral research in the Infections and Immunoepidemiology Branch in the Division of Cancer Epidemiology and Genetics. During my three years at the NCI, I conducted research on infection-associated cancers, mainly cancers arising from the infection of human papillomaviruses (HPVs) and *Helicobacter pylori*. I enjoyed exploring and learning new things throughout my research career.

How did you transition from the lab to your current job?

Towards the end of my Ph.D., I wanted to seek opportunities outside the lab to learn how to ask and address different scientific questions. The fellowship at the NCI afforded me the chance to explore the field of epidemiology and public health, and I was fortunate to have worked on clinical data on HPV for my postdoc. As I considered my next steps, I started to look for opportunities that would allow me to integrate and apply my experience and training in basic science and population science to drive research that address public health concerns. During my job search, I started networking with people in positions that I found interesting to better understand what the companies are looking for in their candidates.



In the picture:
Sabrina H. Tsang
(PhD, MPH)

I shared my resume for feedback during informational interviews, and I was eventually offered a position as a Clinical Scientist at Merck.

What do you do in your current role?

In my role as a Clinical Scientist in Vaccines/Infectious Disease at Merck, I work with a large, global, cross-functional team of people with various backgrounds and expertise on the design and implementation of clinical trials. My current efforts focus on a Phase 2b/3 trial in infants. I help coordinate and support the implementation of our clinical protocol. I am also involved in assisting the study team with the scientific aspects of our study, helping to address questions from regulatory agencies and ethics committees. One major responsibility of a Clinical Scientist is to conduct medical monitoring of incoming data. This is one way to keep track of any protocol deviations or concerning safety events that need to be reported to the regulatory agencies.

How do you spend your day in your job?

As a Clinical Scientist at Merck, I am responsible for developing and implementing clinical studies

for the vaccines/infectious disease portfolio. Currently, I am working 100% remotely. I spend about 50% of my time meeting (virtually) with internal and external stakeholders. The rest of my time is spent developing and reviewing materials for our trial. Materials that I develop or review, include slide decks to communicate our trial design and contracts with vendors that help conduct our trial. I also build concept sheets to convey complicated trial design/sample collection scheme to the broader audience; I support the authoring of clinical study protocols and other study-specific materials, like informed consent forms, clinical site training materials, communications with regulatory authorities and ethic committees. I also interact with an international team to facilitate our clinical trial efforts in various countries, and I help troubleshoot issues to ensure that the trial progresses smoothly and follows the specified timelines.

What do you like most about your job?

I love working with a global team of talented professionals in this very complex pediatric study. We work across disciplines, companies, and cultures. I find it both encouraging and fascinating how all the groups come together to address patients' needs.

Having only experienced the culture in academia before joining industry, I now truly appreciate the collaborative nature at my company and how the team contributes to answering complex basic, translational, and clinical questions.

Do you have any advice for current graduate students and postdocs looking to move away from the lab?

Work with as many different people as you can, exploring several of your interests. Be proactive in publishing and reviewing different types of documents. These skill sets will serve you well in clinical research. If you have an idea about what you might want to do outside of the lab, reach out to people working that job and identify the steps you could take to get to where they are. You may need to develop additional skills, so take the initiative of attending classes or working/volunteering in that area. If you do not know what you may want to do, join networking events, and talk to as many people as you can about their careers and career paths. Most importantly, be patient during your job search as you learn about different career opportunities and about yourself.

How to Manage Time

by: Mary Grace Katusiime

Everyone has the same 24 hours in a day, but for some of us, it can feel like 24 hours is just not enough for the ever-growing 'to-do list'. Indeed, time is our most limited resource and learning to manage it effectively is a skill to be mastered. By definition, a manager governs, guides, or oversees whatever is in their charge, in this case - time. As a postdoc, almost two years into my fellowship, time management has been a steep learning curve. I've often asked myself, "How do I continue to prioritize the research goals of my fellowship while also being intentional about career exploration, building a network, and acquiring other soft skills that will make me a well-rounded scientist and human?" In short, how do I get the most out of my fellowship with the time I have available?

For me, the answers to this dilemma have emerged from two excellent resources, (i) a 'Time Management' training session offered as part of NCI's Diversity Career Development Program (DCDP) <https://www.cancer.gov/grants-training/training/idwb/dcd-program> and (ii) a book titled 'The 7 Habits of Highly Effective People' by Stephen Covey.

Here are 5 insights from these sources that are transforming my relationship with time:

1. Time management is self-management.

At its core, it is about honoring your personal goals and life vision. It is about having integrity with yourself to keep the commitments you have made to yourself. To operate from this mindset, you need to do the work of introspection and become clear about your

mission, core values, and big picture goals. The activities you choose to spend your time on should align with the goals you have identified for yourself.

2. Learning to prioritize is paramount.

In the words of the 18th century, German poet Goethe "Things which matter most must never be at the mercy of things which matter least." Prioritization requires that you learn to rank activities in order of importance and urgency. Urgent activities require immediate attention while important activities contribute to your mission, values, and life goals.

A task can be:

- (i) both urgent and important
- (ii) urgent but unimportant
- (iii) not urgent but important
- (iv) not urgent and unimportant

The key is to minimize the number of urgent activities you engage in through proper planning, minimize the amount of time spent on unimportant activities and ultimately spend the majority of your time on tasks that are important for your big picture goals. A good tip is to order your daily tasks in terms of their importance and tackle the most critical tasks first.

3. The 'time beasts' must be identified and conquered.

For example, having an over-ambitious schedule and not defining what 'enough' looks like can be counter-productive to your mental stamina. Also, not having the courage to say 'NO' to

activities and commitments that do not contribute to your most important goals can leave you spending a significant amount of time on urgent but unimportant tasks. Furthermore, spending too long on specific tasks in an attempt to make them 'perfect' can end up taking away from the time you could have spent getting constructive feedback or moving on to other vital activities. Lastly, avoiding your overwhelming 'to-do' list does not make it disappear! As the saying goes, "procrastination is the thief of time."

4. Every activity you need to do requires thinking, and there is an energy cost associated with our thoughts.

Therefore, learning to manage your mental energy is another essential component of time-management. Here, the basics of self-care apply; (i) getting enough, good quality sleep, (ii)

As Stephen Covey points out, "it is better to invest your time than to spend it". Investing your time means you build towards your personal mission, grow into your core values, and work on your big picture goals. I cannot think of a better use for the time I have been given.

having a balanced, nutritious diet, (iii) regular exercise and (iv) spending time doing things you enjoy. In addition, delegating tasks to somebody else can also help to free up time and mental energy. Avoiding multitasking and limiting decision making to only the things you care about are other good ways to preserve mental energy.

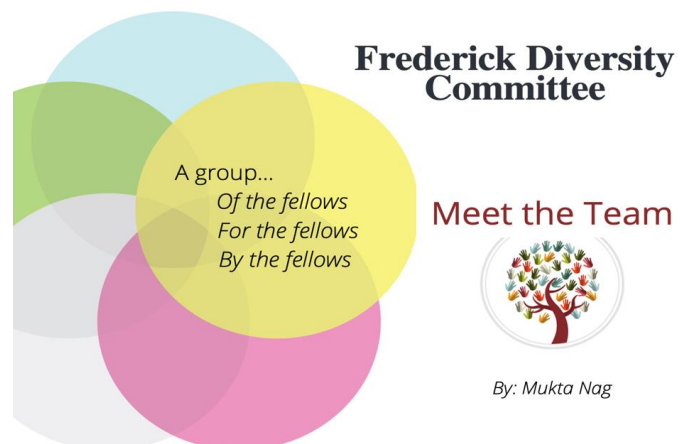
5. One of the best ways to utilize your time is to celebrate your wins

... no matter how big or small. Choose to stop and savor these moments. Doing this acknowledges the hard work and discipline you have put in, allows you to be present in your journey, to experience the feeling of joy and satisfaction that comes from achieving your personal goals.

Frederick Diversity Committee (FDC): Meet the Team

by: Mukta Nag

The Frederick Diversity Committee (FDC) is a fellow-led group that aims to build a diverse community of fellows in the National Cancer Institute (NCI) Frederick campus including Frederick National Laboratory for Cancer Research to celebrate inclusion, promote productivity, work-life balance, and career exploration.



The FDC creates opportunities for the fellows, trainees, and post-docs within the NCI Frederick campus to engage in various in-person and virtual events that promote personal growth, professional development, career exploration, networking, and mentorship avenues. Examples of [career-development and social events](#) organized by the FDC include “The Mentor-Mentee Mixer”, “The Chalk Talk Series”, “The Fireside Chat Series- getting to know PIs in Frederick”, “New Technologies – Seminar Series” and “Popsicle Summer Picnic”. These events are ideated, organized, and managed by a diverse team of FDC members that are highly motivated by the mission of building a robust scientific community within the Frederick campus. In addition to the members, the FDC also leans on its senior advisors that provide valuable insight and oversight.

Let’s put some faces to the Frederick Diversity Committee and learn a bit about them.

FDC Advisors:

The advisors to the FDC include Dr. Howard Young, a Senior Investigator in the Laboratory of Cancer Immunometabolism at the National Cancer Institute (NCI), Frederick, working on autoimmunity. In addition to his infectious passion for helping early-stage researchers, he has a widely valued scientific network that the FDC heavily relies on. Ms. Erika Ginsburg, Chief of Office of Training and Education (OTE) in the Center for Cancer Training (CCT), Dr. Ravi Dhar, Program Manager at OTE CCT and Dr. Oliver Bogler, Director of CCT, also serve as advisors to the FDC. They bring their knowledge of administrative and NIH policy-related information, which is crucial in organizing the events promptly. Dr. Laura Hooper, CCR Fellows Coordinator from the Office of the Director supports the FDC by ideating, planning, and

scheduling the events besides assisting in personnel recruitment for the FDC. Dr. Hooper plays a pivotal role in the smooth running of the committee. Dr. Glorivee Pagan-Mercado, Scientific Program Specialist at the OTE CCT is the newest addition to the FDC advisor family. Dr. Pagan-Mercado oversees and supports the FDC monthly meetings and the marketing drive for the events. These advisors are the pillars of the FDC! A sneak peek into some of the FDC advisors’ life is below.



In the picture: Some FDC Advisors and their hobbies. (Left to Right) Dr. Howard Young (Senior Investigator at the NCI) enjoys fishing and reading, Ms. Erika Ginsburg (Chief at OTE, CCT) spends her free time reading, singing and meeting family and friends, Dr. Ravi Dhar (Program Manager at OTE, CCT) uses long walks to decompress after a workday and Dr. Oliver Bogler (Director of CCT) engages in reading, cooking and playing soccer in his free time.

FDC Members:

The members of the FDC work tirelessly to bring high-quality and relevant events directly to you. Dipak Poria and Mukta Nag currently hold the position of co-chairs within the FDC. Dipak, a Research Fellow at NCI-Frederick, studies cell signaling pathways during stress/inflammation and enjoys painting and biking in his free time. Mukta is an engineer turned immunologist and

she is currently a scientist in the AIDS and Cancer Virus Program, Frederick National Laboratory for Cancer Research working on HIV viral persistence in non-human primates. Her hobbies include baking, hiking, and painting. The other committee chairs include Dana Bhattacharya as the Social Chair who drives the FDC's social, outreach and well-being initiatives, Vasty Osei Amponsa who holds the Career Development Chair position to lead the discussions on events focused on career exploration and professional development; and the FDC's Communications Chair, Md. Masud Alam, who generates public awareness about the FDC through social media platforms such as Twitter and LinkedIn. Dana is a post-doctoral fellow in the NCI, working on breast cancer inflammatory response who enjoys the outdoors, whereas Vasty is a post-doctoral visiting fellow in NCI, working on the ubiquitin proteasomal system in cancer who is passionate about reading, biking, and dancing. Masud, a soccer aficionado and a movie buff, is a post-doctoral fellow in NCI working on immunoregulation and cancer immunotherapeutics. Amy Funk, a fellow at OTE CCT is another vibrant member of the FDC who wears many hats as she organizes and conducts networking and marketing events hosted by the FDC. A board game and fitness enthusiast, Amy can often be spotted checking out wineries in the area. Finally, Sanjay Pal and Vibha Dwivedi, both visiting fellows and members of the committee, bring fresh perspective on events and their management suited to trainees at different stages of their career within the Frederick campus. Sanjay is training as a cancer immunologist while Vibha is studying the role of RNA in cancer immunotherapy.

The members' diverse educational backgrounds, interests and hobbies make the FDC a true representation of the scientific community we delve in. Check out the FDC members below.



In the picture: FDC Members: Top row, Left to right: Mukta Nag, Dipak Poria, Dana Bhattacharya, Vasty Osei Amponsa. Bottom row, Left to right: Md Masud Alam, Amy Funk, Sanjay Pal and Vibha Dwivedi.

While the FDC members and advisors strive to make the Frederick scientific community more cohesive and connected, there's a constant need to add fresh perspectives to the mix. As a young scientist, the FDC can help you grow in many ways. Some avenues of professional growth and highlighted on the below.



The FDC meets virtually (for now) every **third Friday of the month at 2 pm**. The FDC invites you to join the committee and give back to the scientific community. To learn more about the FDC, check out the website: <https://ncifrederick.cancer.gov/diversity/> or contact the co-chairs of the committee, Mukta Nag (mukta.nag@nih.gov) and Dipak Poria (dipak.poria@nih.gov) to learn more.

Volunteers at the “Carline”: Perspectives from the COVID-19 Drive-Thru Testing Site

by: **Sunita Chopra**

The year 2020 will go down in history as the year of COVID-19. Lives across the globe have been affected in unprecedented ways. We have all seen COVID-19 inflict suffering in our families and circles of friends. Working from homes, home-schooling kids, taking care of the elderly, not seeing loved ones, social distancing, mask-wearing, missing traditional holiday festivities and uncertainties about the future have taken a toll on us all. Pandemic-weary, we long for things to return to normalcy. As nature continues to test the resilience of our species, we continue to fight back. At the forefront of this fight have been doctors and nurses, scientists working with the virus and vaccines, primary caregivers, grocery workers, delivery personnel, fire-fighters, police, and food industry and sanitation industry workers. Often overlooked but serving an equally important role are the people who run COVID-19 testing sites across the US.

One such testing site (henceforth called ‘the carline’) is being run by NIH for all NIH employees, contractors and fellows who develop COVID-19 symptoms, had close contact with COVID-19 patients or travelled to high

transmission places and events. Under these circumstances, an individual may complete an online “Coronavirus Screening Questionnaire”, and if criteria are met, will be scheduled for an appointment to be swabbed at the carline. It is efficiently run, and patients never have to wait for longer than five minutes; test results are usually communicated to patients within 24 hours.

The carline started operating March 18, 2020 on the Bethesda NIH campus under a canopy-shaped car-inspection site opposite to building 45 (it’s hard to miss the white painted dome just in front of the Lister Hill building) and moved to building 66A on January 11, 2021 where it currently operates every Monday, Wednesday, and Thursday. In the beginning the carline was running every day of the week including weekends. At the time of writing, the carline has been active for 309 days. In 2020, 6800 swabs were collected; in 2021, more than 3000 swabs have been collected so far.

Stephen Teagarden, Department of Fire and Rescue Services (DFRS) is the overall lead. He is assisted by Michael Gilroy (DFRS), Lee Smith and Steve Peterson (Division of Emergency



Management), Brittany Brown and Roxy Grossnickle (Division of Occupational Health and Safety) and Rodney Taylor (Division of Amenities and Transportation Services). Eighty-six volunteers comprising clinicians, investigators, nurse-practitioners, staff scientists, post-docs and post-baccalaureates have served in various roles at the carline; 25 volunteers are still actively involved.

We visited the carline and interacted with people who work there to keep NIH safe. The individuals interviewed were chosen to showcase the diversity in backgrounds, roles, and experiences.



In the picture: Victor Collins and Steve Peterson at the Greeter station ready to welcome and check in the patients.

Stephen Teagarden is the Division Chief at the DFRS and leads the carline operations much like a conductor leading an orchestra. Steve grew up in western Maryland and started volunteering as a fire-fighter at the age of fifteen. He joined NIH in 2012 and is a certified national fire officer IV. His previous experiences as a firefighter and an emergency incident commander managing people during emergency situations came in handy for managing the carline. A trip to the

drive-thru line at Chick-fil-A presented him with the idea of how to set up the testing site; quick consultations with Roxy and other ORS colleagues to ensure safety of onsite personnel and patients followed and the idea was implemented. Steve told us that the early days of running the carline at the old site were particularly challenging. Most patients who came in were scared and anxious. Not much was known about the virus, and they were dealing with a new style of testing environment outdoors. Some patients walked up to the site or rode bikes, scooters, even skateboards and vehicles ranged from small cars to huge trucks. Some patients had kids in the back seats while others had dogs who had to be distracted to ensure safety of the swabbers. The team also had to operate the carline under difficult weather conditions ranging from unbearably hot, chillingly cold, high winds, snow, and rain. They had to add weather protection and move the stopping point for vehicles depending on the direction of rain. Volunteers invented ways to prevent swab samples from being blown away on windy days. Every day brought new challenges which had to be resolved on the spot. Steve shared that the team kept learning and improving; operations are much smoother at the new site with better safety and protection from the weather. Steve loves interacting with doctors, nurse-practitioners, and fellows at the carline and learning about their scientific interests and careers. He was amazed to learn how competitive it is for post-baccalaureate fellows to get into medical school and is thrilled whenever they get accepted into their preferred programs. In addition to his regular job and managing the carline, Steve serves on the ORS Diversity and Inclusion Task Force. He also enjoys working on his house built in 1860 and socializing with friends.



In the picture:

Daniël Melters and Ugne Ziausyte at the labelling station while waiting for the patients.

Daniël Melters is a staff scientist in the Laboratory of Receptor Biology and Gene Expression at CCR, NCI where he studies histone variants and their impact on chromatin dynamics using Atomic Force Microscopy. Daniël grew up in the Netherlands and came to NIH in 2003 as part of his master's training and met his wife Anna Ordóñez, who was then a post-doc at NIH. They started dating soon after and have been married for 15 years. Anna is now the Director in the Office of Clinical Research at the National Institute of Mental Health (NIMH). Daniël obtained his Ph.D. from the University of California, Davis before coming back to NIH. Daniël and Anna decided to volunteer at the carline before it was established. Anna was a medical lead from the first day of running the carline. Daniël also helped recruit other volunteers. Being parents to two girls (ages 10 and 6), it was a brave decision at a time when uncertainties and anxieties around COVID-19 were sky high. They adopted a ritual where the person who went to the carline had to enter the house through the basement, take a shower and wash all the clothes worn that day before rejoining the household. Daniël called working at the carline a guilty pleasure; it afforded a few hours of focused attention, calm and camaraderie in an

otherwise extremely stressful pandemic world when he was juggling work, home-schooling his kids and being a full-time parent. With their families living on different continents (Europe and South America), and missing socializing with friends, the carline presented an occasion to be surrounded by loving and kind people which helped them immensely. Daniël is proud that the team made the smooth operation of the carline a huge success even though no protocols previously existed for such events. On the work front, pandemic forced him to adopt a more systematic approach to judiciously manage his time designing and executing experiments. He was able to focus on his scientific writing, too. Being a parent to his two girls is his biggest passion but Daniël also loves racing cars! He says, "Nothing beats being strapped in a car and pushing your comfort zone."

Julie Gumowski is an institute nurse with the National Institute of Allergy and Infectious Diseases (NIAID) and works in the outpatient clinic in Building 10. Julie has been volunteering as a swabber since March 19, 2020. She obtained her B.S. from the University of Virginia, School of Nursing. She has worked in patient care as a nurse for the last 44 years and completed 37 years of service at NIH on October 14, 2021. As her clinical duty has been on hold since the pandemic started, Julie started volunteering in various other roles at NIH. Apart from working at the carline, she has been volunteering at the COVID-19 call center since April 2020 and worked at the COVID-19 vaccination clinic from January 29, 2021 until it closed on June 10, 2021. Julie is one of the most dedicated and amiable swabbers. Julie shared that she collected a swab from a completely deaf person in the early days and it was hard to

communicate the procedure to them. After that, cue cards were made available at the carline in both Spanish and English. She used the cue cards to successfully communicate the procedure to a partially deaf person. The most patients Julie has swabbed in a single day was 107 on December 8, 2020. She feels grateful contributing at the carline. She enjoys meeting people from diverse departments whom she would never have met otherwise. Outside of work, Julie is very active and kept herself busy with running, yoga and ballet before the pandemic. Now, she plays lawn tennis, reads, and goes for long walks in her neighborhood. She estimated that she walked upwards of three million steps in 2020 and two million so far in 2021.



In the picture:

Julie Gumowski getting ready to collect a swab while standing on her favorite step stool to reach the patient in the car.

David Adams is the Deputy Director of Clinical Genomics in the Office of the Clinical Director at the National Human Genome Research Institute (NHGRI). David is a pediatrician and biochemical geneticist. He grew up in Seattle and received his M.D./Ph.D. from the University of Washington. As part of the Undiagnosed Disease Program at NHGRI, he tries to understand undiagnosed illnesses, seen mostly in kids, through comprehensive clinical

evaluation, data sharing, genome sequencing and other approaches. He also studies oculocutaneous albinism, a disorder of faulty pigment production in skin, hair, and eyes, which results in impaired eye development. The pandemic reduced his clinical duties, and he jumped at the chance to volunteer at the carline shortly after it started operating. David volunteers as a swabber and enjoys the opportunity to interact with DFRS and DEM personnel and fellows. He feels the carline is well run with attention to the minute details. Caring for patients with unwavering attention and awareness has been his strategy in practicing medicine. He has also offered his services at the COVID-19 vaccine clinic. His team has utilized the last year to finish off scientific manuscripts. Besides scientific interests, David has artistic leanings too. He loves music and can play multiple instruments from woodwinds such as the clarinet to the electronic bass guitar. He sings in the National Philharmonic Chorus at the Strathmore along with his wife. He also maintains a workshop in his home where he enjoys building electronic gadgets. David believes having multiple interests help exercise different parts of the brain and recommends cultivating creative habits to fight pandemic stresses.

Neelam Giri is a staff clinician with the Division of Cancer Epidemiology and Genetics (DCEG) at NCI where she studies inherited bone marrow disorders in pediatric patients. Neelam received her M.D. in pediatrics and then specialized in oncology at Tata Memorial Hospital, India. She moved to Australia after getting married and was trained in bone marrow transplantation. She recertified in pediatrics and in pediatric hematology oncology after coming to the US in 1995 and completing her fellowship at the NCI. She then worked as a bone marrow transplant

specialist at the Al Dupont Children's Hospital, Delaware until 2003 when she joined NCI as a staff clinician in order to be closer to her family. She started volunteering at the carline in April 2020 when her work and social life were completely disrupted. Neelam likes the friendly environment and team spirit reflected in everyone. She reminisced about seeing America's favorite doctor, Anthony Fauci, at the carline and carline operations being filmed as part of a documentary made about him. Although her study team could not bring patients to the Clinical Center once COVID-19 hit, they were able to strengthen existing collaborations and publish research articles during this time. Neelam loves going for nature walks and visiting national parks. She started a garden during the pandemic which was beginning to bear fruit when a big tulip poplar tree fell on her house destroying her sunroom, garage, and garden and damaged many of her plants. Most of her free time is spent dealing with redesign, architects, contractors, and insurance estimates for repairs and renovation. Hopefully, her house will be repaired before winter sets in.

Alicia (Alice) Cole is a post-baccalaureate fellow with the Laboratory of Integrative Cancer Immunology Branch of CCR, NCI. Originally from New Jersey, Alice received her B.S. from Fairleigh Dickinson University, New Jersey, and joined NCI in August 2019. She is full of energy and always active hence she found it especially difficult to sit at home when the pandemic forced NIH to partially shutdown. To do something to defeat the virus and get out of the house, she started volunteering at the carline in April 2020. Alice has volunteered in both PPE and non-PPE fellow roles at the carline. She has been doing well on the work front too. Although

COVID-19 delayed her plans for applying to medical schools, she co-authored a manuscript which was published in the journal *'Science'*. She loves volunteering her time at the 'Urban Beets' community farms dedicated to providing nutritious food to the homeless. Alice also enjoys remodeling furniture, a skill she learned by watching YouTube videos.

Victor Collins joined NCI in 2018 as a post-baccalaureate fellow in the Pediatric Oncology Branch. Victor hails from Malvern, Ohio, and went to the University of Akron to earn his B.S. in Biomedical Engineering of Biomaterials and Tissues. He aspires to enter an MD/PhD program oriented towards tissue engineering, bio fabrication and/or 3-D bioprinting. His lab at NCI studies novel therapies for pediatric sarcoma patients. He started volunteering at the carline in May 2021 because it afforded him a chance to observe physician-patient interactions closely - an opportunity not available when you are working in the lab. Victor has also volunteered in all PPE and non-PPE roles for fellows, but he particularly likes to assist the swabbers to see how they deal with anxious and nervous patients. In his free time, Victor likes playing cards and reading/watching science fiction. He is also learning to play the piano.

There are many others equally dedicated and interesting folks working at the carline, but it is impossible to include them all here. We offer thanks and gratitude to each of them for their unwavering service to our community. COVID-19 has disrupted lives and tested our patience and endurance. We choose to believe that it has also unwittingly strengthened our humanity and helped us rise above our selfish lives to thinking more about others. The carline is a testament to that spirit present in us all.

Black Scientists at the NIH series: in conversation with Dr. Della White

by: Mukta Nag

*"I raise up my voice - not so I can shout but so that those without a voice can be heard.
We cannot succeed when half of us are held back." - Malala Yousafzai*

The "Black Scientists at the NIH" series is a medium to celebrate the journeys and accomplishments of Black scientists within the NIH community. These conversations about successes and challenges faced by accomplished Black scientists at the NIH are gateways for young minds to discover ways to accomplish their professional goals. By featuring these stories, we hope to build a more inclusive scientific workforce where every member feels represented and supported. To further this mission, we bring to you our conversation with **Dr. Della White**, an innovative and passionate public health scientist with over 20 years of research and program administration experience from the National Center for Complementary and Integrative Health (NCCIH)**.

Dr. Della White is currently a Program Director in the Division of Extramural Research of the NCCIH where she represents the Center on



several NIH-wide initiatives focused on health disparities research, prevention research, maternal morbidity and mortality, and workforce diversity. She is currently leading an NIH-wide initiative focused on sickle cell disease pain management through the NIH's Helping to End Addiction Long-term (HEAL) initiative and is an active member of the NIH U.N.I.T.E. Initiative. Dr. White brings her expertise to support research aimed towards improving the health of all people, including health disparity and other vulnerable populations. Her commitment to improving

biomedical workforce diversity through training, career development and mentorship over the course of her career make her a true agent of change within the NIH. Here's a deep dive into her journey so far.

Can you describe your current role at the Division of Extramural Research of the National Center for Complementary and Integrative Health (NCCIH)?

I am currently a program officer in the Clinical Research Branch where I direct a diverse clinical research portfolio focused on the use of complementary and integrative health approaches to support health promotion and restoration (e.g., quality of life, well-being, sleep), resilience, symptom management (e.g., depression, anxiety, stress, pain) and disease prevention (e.g., obesity, substance abuse and misuse). I also manage much of the health disparities and HIV clinical research portfolio.

What are your research interests?

My primary research interests are in minority health and health disparities research. I am particularly interested in these areas from a prevention research framework and lifespan approach. My doctoral training was in public health, and I have experience conducting and promoting research across various health conditions such as obesity, diabetes, lung cancer, HIV/AIDS, maternal and child health, reproductive health, mental health, violence prevention, and sickle cell disease pain management. I am also passionate about enhancing the diversity of individuals and institutions involved in the biomedical research workforce.

What has been your career trajectory?

After completing my doctoral studies in health education/health promotion at the University of Alabama at Birmingham, I was fortunate to be selected as a postdoctoral research fellow in the Intramural Research Program at the National Human Genome Research Institute (NHGRI) for three years. I was a trainee in the public health genomics section of the Social and Behavioral Research Branch. In this position, I had the opportunity to lead a protocol focused on lung cancer disparities and clinical genetics research. I subsequently advanced to a Title 42 Research Fellow position at the NHGRI. During my time as an Intramural Research Fellow, I served as a mentor to diverse undergraduate, master's level, and predoctoral level trainees who assisted with data collection for the study.

Building up on my experience at the Intramural Research Program at NHGRI, I transitioned to the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development (NICHD) where I held multiple positions over eight years. I first

worked in the Office of Health Equity (OHE) as a Program Director where I led programs directed towards building academic-community partnerships to support maternal child health disparities research as well as domestic and international programs designed to support administrative research capacity at non-research-intensive institutions. I also had an opportunity to serve as the Acting Director for OHE for a year.

I later transitioned to the Population Dynamics Branch (PDB) in the Division of Extramural Research at NICHD where I served as a Program Director. In PDB, I directed a portfolio of social and behavioral research on reproductive health which included HIV/AIDS, reproductive coercion, intimate partner violence, and teen pregnancy. Additionally, I continued to lead the research administration and community-based participatory research programs from OHE. I was the point of contact for Division for the sexual and gender minority health research portfolio and other NIH wide disparities and diversity initiatives.

What are some essential parts of your early career training that helped you get to where you are today? Which of these aspects do you think are most valuable?

I was first introduced to the NIH and the possibility of a career in research as an undergraduate student at the Alabama State University which is part of the Historically Black Colleges and Universities (HBCU) network. I was selected as a trainee for the National Institute for General Medical Sciences (NIGMS) Maximizing Access to Research Careers Program (MARC) which was designed to help diversify the biomedical research workforce. During this time, I was able to gain hands on experience conducting research and presenting my work to others. In

this program, I participated in two summer research internships at Purdue University and Auburn University. During these internships, I was able to interact with other trainees from diverse backgrounds and similar types of institutions. This exposure was vital in driving my career choices later.

What are your views on mentorship? Is it something you've prioritized in your career?

I think good mentorship is essential for success in building and sustaining a research career. I think that the relationships you have with your mentors contribute greatly to whether you stay the course. I know several individuals who left research because of poor mentee-mentor relationships. For trainees from underrepresented groups who are in labs where there is limited diversity, it is important that mentors cultivate an inclusive environment such that no trainee feels isolated. Mentors also have an important responsibility in helping trainees build their professional networks and supporting professional development activities which are important for promoting their career trajectory. However, it should be done while keeping in mind the interests of the individual trainee instead of using a one size fits all approach.

As a postdoctoral and research fellow at NHGRI I served as a mentor to diverse undergraduate, master's level, and predoctoral level trainees who assisted with data collection for the study throughout the year as well as through the NIH summer research internship program. In OHE/NICHD we also hosted summer interns and I had an opportunity to work with two individuals from groups underrepresented in research. Most recently, I served as mentor to an NCI postdoctoral research fellow who is also a woman of color, as part of NCI Career Mentorship

Advantage Program. At each stage of being a mentor, I have been transparent about identifying areas for improvement for myself. This shared connection with my mentees has helped me guide them through their career and professional development paths. I want all fellows to remember that we will figure it all out while on the journey!

Did you have supportive mentors at different stages of your career?

Yes, I have most certainly had supportive mentors throughout my career. These mentors have often been my direct supervisors, but I have also learned to have mentors in different NIH Institutes, Centers, and Offices. I encourage trainees to use this strategy as they are building their careers within or outside of the NIH. When I was a postdoctoral fellow, I had an extramural investigator on my mentoring team as well. It is important to have a variety of perspectives and individuals who can mentor you at different stages based on content or position.

Did you feel empowered by your academic institution and mentors as a scientist of color?

There were certainly times in my career even as a graduate student and as a postdoctoral fellow when I did not feel empowered, especially as a scientist of color. There were periods where I was the only person or one of few trainees of color and most of the faculty and senior investigators did not look like me. Over time I have certainly had to work on self-empowerment when I do not feel that I am receiving it elsewhere. These efforts included networking with mentors who looked like me and were in positions I aspired to be in. It is important for trainees to see their future selves in these roles. It has been important for me to engage trainees or even other staff who may be

less junior than me so that individuals do not feel isolated but feel seen and appreciated.

What are your views on encouraging conversations about race issues in labs and more broadly the scientific community?

Racism and racial discrimination are the elephants in the room that just get bigger and bigger and over time become more difficult to address. I have often heard people say that they do not see color. However, I want people to see me as a woman of color. My “color” tells much of my story and has shaped experiences in my personal life and in my career. These experiences influence how I show up in conversations, in projects and in teams. I am an African American woman from the rural South. All these qualifiers bring meaning to my life and who I am as a person. It is important to promote inclusive teams, labs, branches, divisions, and Institutes so that all members feel safe to show up as their authentic selves and to

feel comfortable contributing their thoughts and ideas to the larger mission of the organization. The whole is made better by strengthening the individual parts.

Do you have any advice for our trainees?

Take ownership of your career. No one knows you and your interests better than you do. Look for people in the positions you aspire to be at and learn from their journeys. To become an active participant of the scientific community, trainees should take advantage of the NIH-wide networking events, sign up for courses offered by the NIH Office of Intramural Training and Education (OITE) and the Foundation for Advanced Education in the Sciences (FAES), utilize social media, specifically LinkedIn to connect with experts in their field and contribute to subject interest groups. Most importantly, be your authentic self, have confidence in your abilities and do not be afraid to try something different.

Dr. White’s earnest words and sincerity towards her work highlighted the importance of passion, adaptability, and effective communication in implementing change in different sections of the community. I hope Dr. White’s journey ignites a spark in your hearts like it did in mine!

After this chat, I could not help but remember a quote from Mother Teresa: “I alone cannot change the world, but I can cast a stone across the waters to create many ripples.”

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Since this interview was conducted, Dr. White has been selected to take on a newly created role at the National Institute of General Medical Sciences (NIGMS) as the Clinical Research Strategy Coordinator and will be reporting to the NIGMS Deputy Director. Her primary responsibilities will be advising on clinical research priorities within the NIGMS scope and providing guidance on existing NIGMS clinical research programs and initiatives. She will participate on NIGMS and NIH-wide clinical research committees and work closely with NIGMS division directors to identify trans-divisional resources, potential synergies, and needs related to the support of clinical research. She will also provide input and guidance for NIGMS’ clinical research training programs that develop the next generation of clinical scientist.

History of Women in Science – Nobel Laureates Part 9

by: Sierra C. Marker and Tania López Silva

The *Women in Science: Nobel Laureates* series highlights the life, career, and contributions of incredible women scientists who have made enormous contributions in the fields of Chemistry, Medicine or Physiology, and Physics. In this edition, we highlight the discoveries of Christiane Nüsslein-Volhard, who was awarded the Nobel Prize in Physiology or Medicine in 1995. The work accomplished by Christiane was vital in understanding fruit fly embryonic mutations and defects that can translate to human fetuses.

Christiane Nüsslein-Volhard



Christiane Nüsslein-Volhard was born during World War II on October 4, 1942 in Magdeburg, Germany. Her parents were Rolf Volhard and Brigitte Haas Volhard, and she was the second of five children. Christiane spent her childhood exploring her freedom,

which was highly encouraged by her parents, and enjoying homemade books and toys. Her mother and father encouraged her and her siblings to explore, learn, and to be creative. She came from an artistic family; both her parents were musicians and her grandmother painted beautiful impressionist art. However, Christiane was fascinated by plants and animals, and by the age of 12 she wanted to become a biologist.

Christiane's father was an architect and her mother a nursery schoolteacher, so their knowledge of nature and science was limited. Christiane longed for someone to discuss science with and to ask questions of, so she turned to books to find her answers. Despite her parents' lack of knowledge in these subjects, they continued to support her by giving her all the necessary resources and attention she needed to pursue her interests.

Christiane excelled in school, but only in areas that she had a strong interest in. If she was uninterested in the subject, such as English, she did not devote time nor energy. Her teachers saw Christiane's potential at a young age. On one of her high school report cards, her teacher wrote: "...Thus, with her strong display of self will, she can be decidedly lazy in some topics over years, while in her areas of interests she performs to a degree far extending that required for normal school purposes... she is gifted above average, has a critical and qualified judgement, and the talent for independent scientific work."

After finishing high school, Christiane contemplated which area of science she most wanted to pursue in further schooling. She debated studying medicine, however a one-month nursing course experience convinced her otherwise. She then began her education at Johann-Wolfgang-Goethe University in Frankfurt, where she took biology courses. However, she quickly became bored because the topics discussed did not appeal to her interests. She then focused on classes in physics and chemistry, which reminded her of her love for biology. It was at this point Christiane decided to transfer to Eberhard-Karl University in Tübingen, the only school in Germany where she could pursue a degree in biochemistry. Christiane reminisces how

she didn't enjoy the biochemistry curriculum much because of the heavy organic chemistry component, but she loved the romantic feel of Tübingen, which she recalls was rather primitive for it lacked facilities with showers, cold water, and heating. In 1969, Christiane graduated with a degree in biochemistry, excelling in courses of interest to her, like genetics and microbiology.

Christiane continued her schooling at the Max Planck Institute in Tübingen, working towards her doctorate in molecular biology. As the first graduate student in Dr. Heinz Schaller's Lab, she developed a novel method for the large-scale purification of RNA polymerase. This was not an easy task at the time since DNA sequencing had not yet been developed. After her doctoral work, she began her post-doctoral research at the University of Basel in Switzerland with Dr. Walter Gehring. Here, she pioneered research in developmental genetics, investigating mutant embryos in *Drosophila* fruit flies. Christiane loved working with flies, she described how they would follow her in her dreams, and she tediously devoted her time to collecting and sorting embryos. While she loved the research and was successful in discovering a new mutant, dorsal, she found the work difficult and limited opportunities to allow her progress in the field, leaving her struggling to find a job after her post-doctoral studies. For that reason, Christiane worked for a year in the lab of insect embryologist Klaus Sander, with the help of a fellowship from the German Research Foundation. There, she increased her experience studying *Drosophila*'s development and describing the segmental pattern of larva. Her work at Sander's lab would prove helpful in her projects as an independent researcher, leading to the Nobel Prize.

**“Creativity is combining facts that no one else has connected before.”
– Christiane Nüsslein-Volhard.**

In 1978, Christiane began her laboratory with Dr. Eric Wieschaus, whom she met at Basel, in the European Molecular Biology Laboratory (EMBL) in Heidelberg. During their time at EMBL, Christiane and Eric collected over 600 mutant *Drosophila* and identified the 15 genes that are essential for survival and development of flies. They published their work in *Nature* in 1980. Christiane then moved to a position at the Friedrich Miescher Laboratory (FML) of the Max Planck Society and continued investigating mutant embryos. Quickly moving up the ranks, she was promoted to director at the Max Planck Institute for Developmental Biology after only three years. She held this position until she retired in 2014. It was here that she translated her research to studying vertebrates, like *Danio rerio* (zebrafish). She was interested to see if the embryo model from fruit flies matched that of the zebrafish.

Christiane Nüsslein-Volhard and Eric Wieschaus were awarded the Nobel Prize in Physiology or Medicine in 1995 for “their discoveries concerning the genetic control of early embryonic development”. The implications of this work extend to understanding birth defects in human fetuses, which could help improve *in vitro* fertilization and understand miscarriages. Christiane was only the sixth woman and the first German woman to receive the Nobel Prize. Christiane's accomplishments extend past the Nobel Prize; she has helped many women in their scientific careers through her mentorship and establishment of the Christiane Nüsslein-Volhard Foundation. This foundation provides 15 fellowships a year to women with children

pursuing graduate or post-graduate work in Germany. The inspiration for the foundation is that women in science with children are at a disadvantage compared to women without children. They may not be able to devote their extra time and resources to their work, making them less likely to advance in their scientific careers. Christiane knows that her foundation won't solve all the adversities that women face in science, but it is one step closer to helping women advance and excel in their scientific careers.

“There is a terrible prejudice against women who are successful... If she's beautiful, she must be stupid. And if a woman is smart, she must be ugly – or nasty. I think it makes some people feel better to learn that I can bake good chocolate cake.”
– Christiane Nüsslein-Volhard

Now in retirement, you will find Christiane enjoying a life of cooking and baking, playing the flute, and singing German Kunstlieder. Her lasting advice to young scientists: “Be genuinely interested in science and making discoveries, be self-critical of your work, and aim to avoid mainstream research areas to develop your own independent ideas.”

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For more information, please contact:
Anna Ratliff (anna.ratliff@nih.gov)