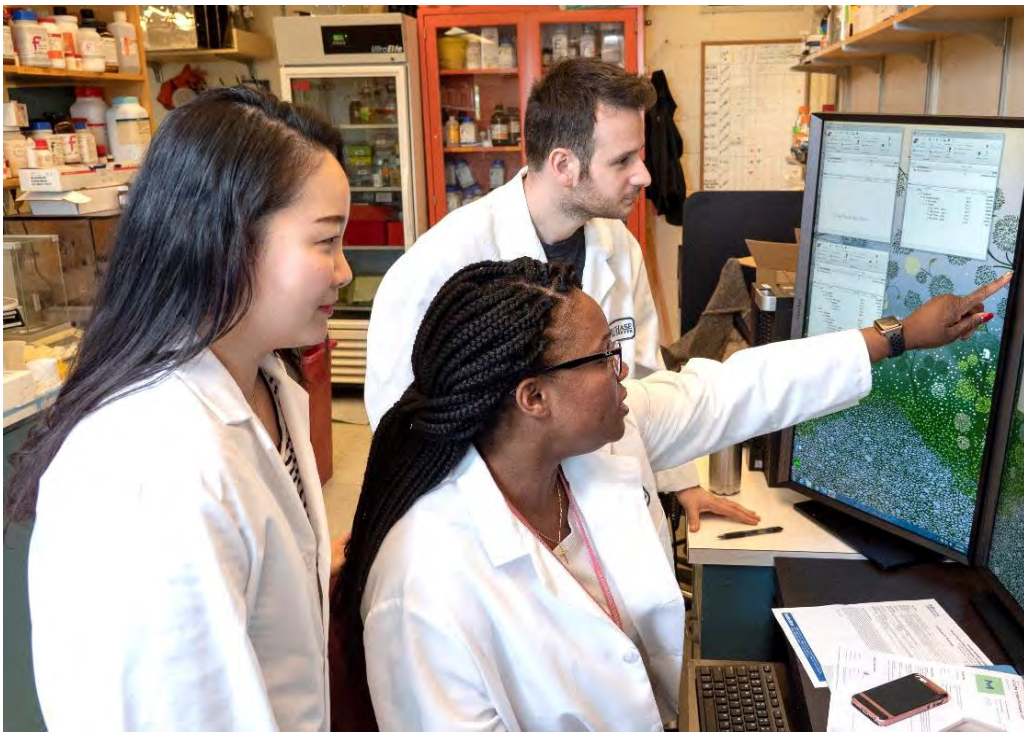

Fox Chase Cancer Center Postdoc Alumni *Newsletter*

June 2020

Trainees Dr. Eun-Ah Cho, Ms. Liz Blackman, and Dr. Nicola de Prisco; Photo by Tom Stephano

IN THIS ISSUE

And we're back...!

by Rob Sertori, Ph.D.

Welcome back to the Spring 2020 edition of the alumni newsletter! As alumni, YOU are an important part of our community. We want to keep you up to date about exciting changes at Fox Chase.

In the 1252 days since the last newsletter, the Office of Academic Affairs, which manages education and training programs for high school to postgraduate researchers, has grown. After celebrating 25 years at the Center, Dr. Glenn Rall was promoted to Chief Academic Officer to oversee the academic interests on both the research and clinical sides of the center. In his place, Dr. Amanda Purdy was promoted to the Director of Academic Affairs. Taking over as faculty director of the postdoctoral and graduate student program was Dr. John Karanicolas, who was recruited from University of Kansas to join the Center in 2016. Finally, Academic Affairs hired a new powerhouse: Ms. Sarah Whealen, a can-do-it-all administrative assistant who helps keep all the academic programs at the Center running smoothly.

Fox Chase faculty have made monumental accomplishments in the last two years. Faculty have received 66 grants and published 1605 papers. New faculty have been recruited, including two interviewed later in this issue (see *In the Spotlight*). Moreover, five professors were awarded with endowed chairs, the highest honors an academic institution bestows: Dr. Hoss Borghaei (Gloria and Edmund M. Dunn Chair in Thoracic Oncology), Dr. Margie Clapper (Samuel M.V. Hamilton Chair in Cancer Prevention), Dr Erica Golemis (William Wikoff Smith Chair in Cancer Research), Dr. Mariusz Wasik (Donald E. and Shirley C. Morel, Stanley and Stella Bayster Chair in Molecular Diagnostics), and Dr. Johnathan Whetstine, (Jack Schultz Chair in Basic Science).

Fox Chase continues to attract and support great trainees. Postdoctoral fellows Jaye Gardiner and John Krais recently received funding from the American Cancer Society. Eight first-author papers from trainees have been published since January. Our graduate students and postdocs are taking on new challenges around the Center, including organizing the upcoming Research Day (page 7), leading How-To seminars (page 5), and writing this edition of the alumni Newsletter.

We hope you enjoy reading about the recent events and advances at Fox Chase Cancer Center. This is the first ever Fox Chase alumni newsletter written by current trainees for past trainees - please let us know what you think!

The Postdoc Alumni Newsletter is published by the Academic Affairs Office for current and former trainees of Fox Chase Cancer Center.

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In the Spotlight: Johnathan Whetstine, Ph.D.

by Bailee Sliker, Ph.D.

Recently, postdoc **Dr. Bailee Sliker** sat down with Dr. John Whetstine, Professor, Program Leader, Cancer Epigenetics Program, Jack Schultz Chair in Basic Science, to discuss his move from Mass General in Boston to Fox Chase Cancer Center in late 2018 to build the epigenetics program and his views on how good mentorship (both personally and professionally) can affect one's life and career.

Photo by Tom Stephano

BS: What are some things people should know about you?

JW: I am a very family-oriented person and spend a lot of my time with my wife and two children. Furthermore, my mom is a central figure in my life as she raised my brother and me. She encouraged me to do what I like and to do it well. In life, I have a strong commitment and desire to make the circle around me better and I never feel a challenge is greater than you can achieve; so dream big and just go for it.

BS: There are many ways to get to a career in research. Tell me about your journey and how you ultimately got to this point in your career.

JW: A lot of pieces have helped to shape me as a scientist and have gotten me to this point. I didn't come from a scientific family, but I was lucky in high school to have a teacher who really shaped my life and opened my eyes to what is possible. I still have an award for doing well in his class that I take with me to all of my offices. In college, while working on circadian rhythms, I was lucky enough to have two mentors who cared about me and taught me to pursue the love of scientific questions. At the end of undergrad, I wanted to combine genetics and chemistry so I pursued a Ph.D in Pharmacology. My Ph.D mentor really cared about me and didn't just tell us what we wanted to hear. He also opened the door for my wife to get a job and shaped her career as well. My PI during my postdoc had a great vision and drive and he let us discover. He provided the resources, environment, and mentorship to allow us to reach the overall goal. One of my biggest mentors was Kurt Isselbacher, who unfortunately just recently passed away. He always told me that your metric is what you discover and what you publish. He said that you want to **leave a legacy** bigger than yourself, which can be done by training others and the environment that you create. In addition to these mentors, my love of seeing something new started during my time in undergrad and was further confirmed in my Ph.D where a complex result further pushed me to follow my gut and use rational design to test these results. During my postdoc, I worked on a project that was potentially not possible—from that we found demethylases, which opened the door to the current focus of our lab today, DNA amplification. All of these things together have gotten me to where I am today.

BS: In 2019, your lab officially opened its doors at Fox Chase Cancer Center after a move from MGH. How did you ultimately decide to make the move to Fox Chase?

JW: Fox Chase was looking for a scientific leader who focused on research similar to ours and they wanted to continue to build a larger team in the epigenetics space. A major player in what drew me here is the desire of the institution to build a team across an enterprise versus just individual empire building. Fox Chase has such a legacy of focusing on discovery and then working clinically to move these discoveries forward which is a major reason why being here is so special. The friendliness as well as the care for trainees are additional reasons as to why this place is so exceptional. Everyone at Fox Chase is on a mission to beat cancer together, and I wanted to be part of this team to build something bigger.

BS: How will being at Fox Chase impact your research?

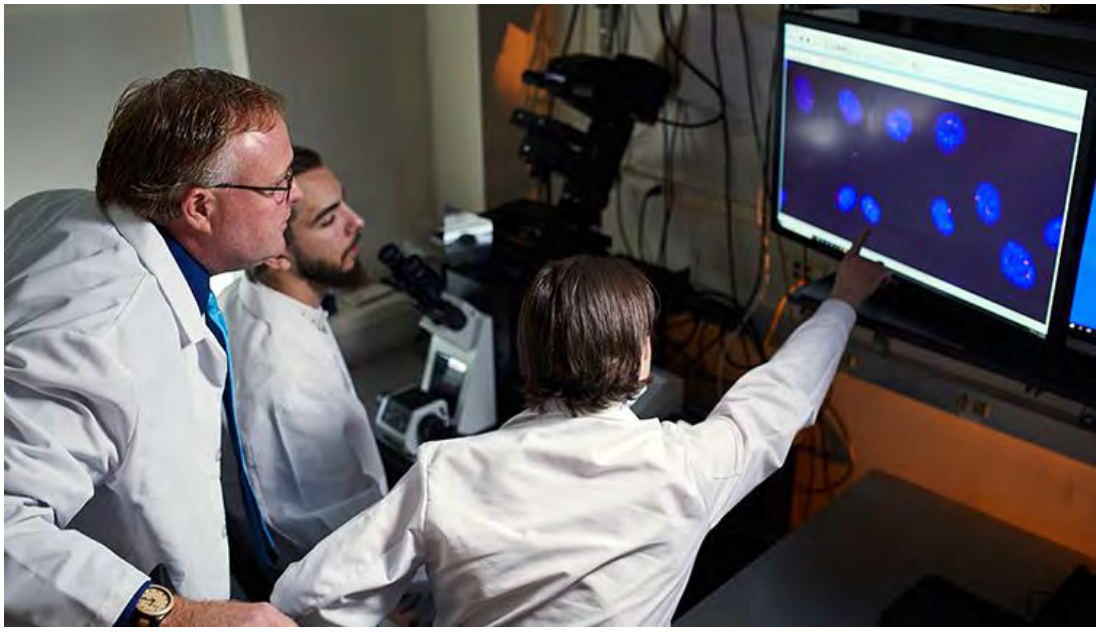
JW: The impact on my research has already started. There is a great opportunity to collaborate with medical oncologists, both junior and senior, at the center, which leads to the start of clinical trials. The ease of setting up these clinical collaborations is crucial to furthering cancer treatment.

BS: What are your goals for advancing the cancer epigenetics program?

JW: Fox Chase has a foundation in this area, thus the goal is to build on the great group and foundation already present, that supports a fundamental base in basic science and love of discovery, by hiring and bringing in new faculty to expand on the energy of the program. The first search is currently underway and we have a goal of eventually hiring 5 new faculty. I would like to serve to connect our investigators with clinical staff to build a stronger network overall. We, as a program, want to bring in novel technologies and cool models to build upon the culture. My long-term goal, however, which is a lofty one, is for Fox Chase to be the place for early-to-mankind trials for epigenetic therapies.

Dr. Whetstine offers to readers this advice: never give up despite the obstacles that get in your way and never forget why you do what you do! Dr. Whetstine plans to bring this energy to Fox Chase and we look forward to his impact on the Center!

Keep up to date with Dr. Whetstine's research on Twitter (**@WhetstineLab**) and http://www.whetstinelab.com/.



Dr. John Whetstine pictured with his lab. Photo by Michael Confer.

A NOTE ABOUT THE AUTHOR

Bailee Sliker, Ph.D. is postdoctoral fellow in Dr. Paul Campbell's Lab at Fox Chase. Her passion lies in improving the lives of individuals with pancreatic cancer. She aspires to be a Principal Investigator in academia and continue investigating pancreatic cancer.

In the Spotlight: Israel Cañadas, *Ph.D.*

by Alejandra Contreras, Ph.D., MSc.

In the middle of his freshly painted office, surrounded by boxes, new equipment, and stacks of paperwork sits Dr. Israel Cañadas, a new faculty member in the Blood Cell Development and Function (BCDF) Program at Fox Chase Cancer Center (FCCC). On a chilly day in January we learn about his journey from humble beginnings as an inquisitive, precocious boy in Spain to driven cancer researcher in search of the next big leap forward in cancer therapy.

From humble beginnings

Dr. Cañadas began his journey to becoming an assistant professor in Spain, where he is from, driven by an innate curiosity to investigate the natural world around him. During his childhood, he enjoyed playing with dinosaurs, and his toy microscope, which he used to observe plants from the forest, and he dreamed of celestial body movement as he played with his planet models. It was in high school when he performed his first research project with the objective to study a frog's anatomy through dissection. As a result, Israel started to understand how organs work as part of an entire system, similar to how they work within many other animals including humans.

A dream takes shape

Encouraged by his teachers, Dr. Cañadas studied Biology in college and decided to pursue a Ph.D. degree. He received a Ph.D in Biomedicine from Pompeu Fabra University in Barcelona, Spain, under the supervision of Dr. Edurne Arriola, where he achieved his dream of working in the cancer field. Through Dr. Arriola's mentorship and support, Israel developed a passion for studying cancer, particularly small cell lung cancer (SCLC) and translating his findings to the clinic to ultimately find a cure for patients.

Taking the road abroad

Supported by his wife and motivated by his passion for cancer research, Dr. Cañadas decided to come to the US to complete his postdoc training in the Department of Medical Oncology at the Dana Farber Cancer

Dr. Israel Cañadas in his new lab. Photo by Tom Stephano

Institute. In a positive and optimistic environment working with Dr. David Barbie, his mentor at Dana Farber, Israel focused his efforts on translational oncology. He worked on identifying novel targets for cancer therapy and the mechanisms behind patient response to these therapies.

Giving back to the field

As part of his most recent discoveries, Dr. Cañadas identified a novel epigenetically regulated subclass of endogenous retroviruses that engages pathologic innate immune signaling in mesenchymal cancer subpopulations of SCLC, with potentially important implications for cancer immunotherapy. In addition, he is developing novel functional *ex vivo* organotypic 3D culture platforms. This innovative culture platform uses surgically resected murine and patient-derived tumor samples and incorporates features of the tumor microenvironment to model the dynamic response to immune checkpoint blockade, thus allowing the validation of promising therapeutic combinations. Using this sophisticated approach, he will be able to identify and characterize novel mechanisms of response and resistance to immunotherapy. Applying these cutting-edge platforms and using SCLC as a model, he has the desire to identify and characterize biological mechanisms by which intratumor heterogeneity may influence the tumor microenvironment and response to therapy, ultimately providing insights into tumor immunology and informing clinical strategies to improve immunotherapies not only in SCLC but also in other types of cancer.

Planning for a future at Fox Chase

Dr. Cañadas is pretty optimistic and excited about his career at FCCC moving forward. He is interested in continuing his work on SCLC, studying tumor immunity and the tumor microenvironment to develop immunotherapies. He is primarily interested in delineating mechanisms of tumor resistance to immunotherapy and in leveraging innate immune signaling pathways to break therapy resistance and restore immunogenicity. In addition, Israel's research interests also include identification of predictive biomarkers to distinguish those patients who can benefit from new immunotherapies, contributing to the establishment of precision oncology. Israel expects a collaborative and productive working environment with the scientists and staff of the BCDF Program, as well as with medical doctors from the FCCC Hospital to accomplish his ultimate goal: to cure cancer.

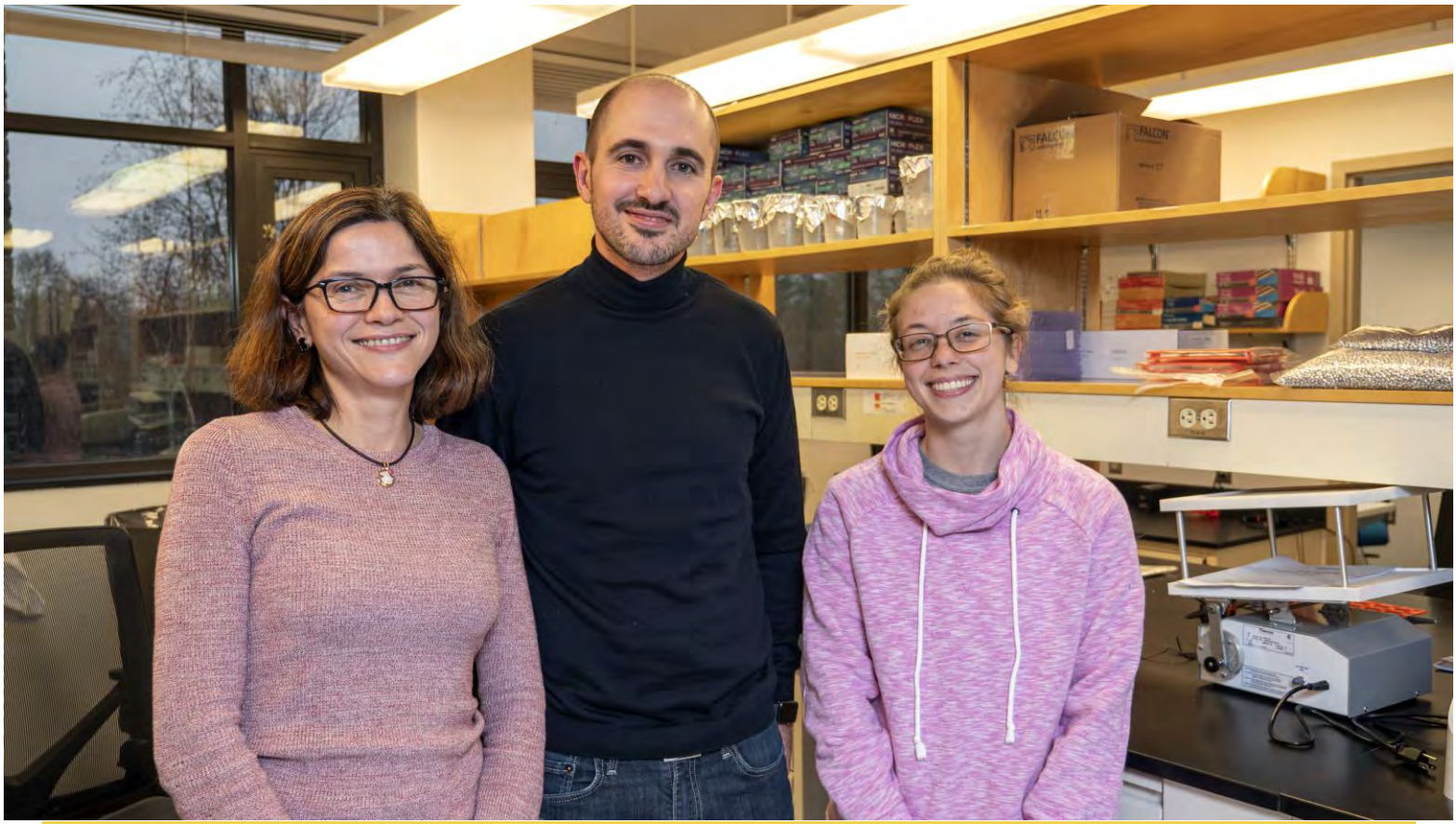
With a big smile on his face, Israel advises us to enjoy the scientific work we do daily and tells us to realize how important and unique it is to do science, especially when the knowledge learned can benefit the health of cancer patients. Israel's career will be centered on identifying new therapeutic opportunities and his passion for science will drive improving overall patient health.

Keep up to date with Dr. Cañadas's research by following him on Twitter (**@Isra_canadas**) and visiting his lab's website: **https://www.foxchase.org/israel-canadas**

A NOTE ABOUT THE AUTHOR

Alejandra Contreras, Ph.D., MSc, is a Postdoctoral Fellow in David Wiest's Lab. She is passionate about human genomics as a way to achieve robust and cost-effective means of preventing, diagnosing, and treating complex diseases, such as cancer. She aims to continue working in functional genomics in humans in the future.

Pictured below: Drs. Alejandra Contreras, Israel Cañadas, and Bailee Sliker. Photo by Tom Stephano.



Have you heard

by Bailee Sliker, Ph.D. and Cristina Uribe-Alvarez, Ph.D.

7th Rally for Medical Research Hill Day at Washington DC. Pictured from left to right: Dr. Cristina Uribe Alvarez, Dr. Mariana Fragoso, Mr. Jeremy Moore, Dr. Erin Tagai, and Dr. Katelynn Milora

Advocating for science: *Rally for medical research*

In September 2019, four post-doctoral fellows attended the 7th Rally for Medical Research Hill Day in Washington DC to advocate for an additional $1 billion increase in the approved NIH funding budget. The team was led by Jeremy Moore, the Senior Director of Communications at Fox Chase Cancer Center, and included our trainees Drs. Mariana Fragoso, Erin Tagai, Katelynn Milora, and Cristina Uribe Alvarez. During the event the team met with Pennsylvania Senators Pat Toomey and Robert Casey, and the PA House of Representatives, Madeleine Dean, Mary Gay Scanlon, and Brendan Boyle to raise awareness that more funds are needed to support the development of junior scientists throughout their career trajectories.

The FCCC training program offers a variety of skill and career building opportunities, including advocating for science and engaging with policy makers. Attending the rally allowed our post-doctoral fellows to develop communications skills to persuasively convey their passion for research, and to connect with the policymakers to justify the need for continued funding for research at leading institutes like FCCC. The $3 billion increase in budget for fiscal year 2020 equated to a 7.7% raise and a final budget of 42.1 billion. Go team!!

Travel awards and trainee-led seminars

To diversify the experiences of the Center's trainees, the Office of Academic Affairs hosted the 1st annual training award competition where award recipients received funds to attend a national workshop or training conference. Upon their return, recipients organized workshops to disseminate their newly acquired knowledge. Last year awardees were Dr. Bailee Sliker, who attended the cancer biology training consortium (CABTRAC) 2019 and focused her workshop on the use of social media for career development where she highlighted the importance of having a personal brand and promoting your career on LinkedIn and Twitter. Dr. Mariana Fragoso attended a CRISPR workshop at the Broad Institute in Cambridge, MA, and then organized a workshop focused on the scientific basis, history, applications and future directions of CRISPR/Cas systems as well as some protocols for using CRISPR *in intro* and *in vivo* with the assistance of fellow trainees Dr. John Krais and Dr. Robert Sertori.

Finally, Marya Kozinova attended a Programming for Biology course held at the Cold Spring Harbor Laboratory. Her workshop will be focused on scripting in Python and the use of Python for genomics data analysis.

These knowledge enrichment opportunities were made possible by a generous donation by an alum of the postdoctoral program. If you would like to enhance the training offered at FCCC by donating to the program, please reach to our Director of Academic Affairs, Dr. Amanda Purdy at amanda.purdy@fccc.edu. Donations can also be made payable to Fox Chase Cancer

Dr. Bailee Sliker discusses how to use social media to build a professional brand (main photo). Drs. Krais, Fragoso, Sertori discuss the history, technical hurdles, and in vivo applications for CRISPR (inset).

Center and mailed to: Fox Chase Cancer Center Attn: Academic Affairs, 333 Cottman Ave., West Bldg #216, Philadelphia, PA 19111.

Community Building among Fox Chase's Trainees

Community engagement is one of the ways that junior scientists can make an impact beyond the bench. FCCC trainees have participated in many community-building activities over the past few months. To help raise awareness and money for pancreatic cancer research, postdocs from the Marvin and Concetta Greenberg Pancreatic Cancer Institute ran/walked in the Pancreatic Cancer Action Network Annual Purple stride 5k event at Fairmount Park in Philadelphia. Through their effectors, postdocs helped to raise over $5000 for research!

Graduate students, Simon Kelow and Lei Ki, celebrate during a recent trainee event

Holidays are a time to come together and celebrate! On December 13th, the trainee-led social committee organized a holiday celebration. The highlight of the evening was three rounds of trivia that included the categories of current events, geography, and Fox Chase history. The event ended with an ugly Christmas sweater competition where the winner was a plain white sweater!

One of the driving forces behind our community efforts is to share the traditions, cultures, and food of our trainees. Most recently, to celebrate the Chinese New Year, the social committee also organized a potluck where Chinese trainees shared some of their traditional dishes.

Dumpling preparation in celebration of Chinese New Year

Selected List of Publications

Kurimchak, Alison M., et al. "Functional proteomics interrogation of the kinome identifies MRCKA as a therapeutic target in high-grade serous ovarian carcinoma." Science Signaling 13.619 (2020).

Khowsathit, Jittasak, et al. "Computational Design of an Allosteric Antibody Switch by Deletion and Rescue of a Complex Structural Constellation." ACS central science (2020).

Krais, John J., et al. "RNF168-mediated ubiquitin signaling inhibits the viability of BRCA1 null cancers." Cancer Research (2020).

Notable New Jobs

Dr. Rashid Gabbasov from Dr. Denise Connolly's lab is now a Scientist at Carisma Therapeutics.

Dr. Linara Gabitova, alumna of Dr. Igor Astsaturov's lab, recently joined Carisma Therapeutics.

Dr. Katie Milora was a postdoc with Dr. Glenn Rall before she joined AlphaBioCom to start her career as a medical writer.

Dr. Valerie Sodi, joined BioTek Instruments as Field Applications Scientist after she worked as a postdoc in Dr. Denise Connolly's lab for about 3 years.

Dr. Minshi Wang, who was a postdoc in Dr. David Wiest's lab, joined Wuxi Advanced Therapies as a Process Development Scientist.

Fellowships

Dr. Jaye Gardiner, a postdoc fellow in Dr. Cukierman lab received a $163,500 grant from the American Cancer Society to support her research of the role of the tumor microenvironment in pancreatic cancer.

She was also selected as an American Association for the Advancement of Science IF/THEN® Ambassadors. This organization seeks to further women in STEM by empowering innovators and inspiring the next generation of pioneers.

Dr. John Krais, a postdoctoral researcher in Dr. Neil Johnson's lab, recently received a two-year, $75,000 grant from the Ovarian Cancer Research Alliance for his investigation of DNA repair processes in BRCA1 mutant cancers.

New Faces 2019-2020

Gregory Conway joined Dr. Neil Johnson's lab in January 2019 after receiving a PhD from University of Maryland, Baltimore.

Nhi My Dang joined Dr. Jose Russo's lab at Fox Chase in January 2019 as a postdoc. She received her PhD degree in Medical Sciences at Nagasaki University, Japan.

Avishekh Gautam joined Dr. Sid Balachandran's lab in September 2019 after completion of his PhD from Hallym University, South Korea.

Reem Ghinnagow received her PhD from Institut Pasteur de Lille, France in 2017. She worked as a postdoc at INSERM in France and joined the Grivennikov lab in May 2019.

Rashida Ginwala is a new postdoc in Dr. Philop Abbosh's lab. She joined the Abbosh lab in October 2019 after she receiving her PhD at Drexel University, Philadelphia.

Sharon Harrison recently joined Dr. Camille Ragin's lab as a postdoc in June 2019. Previously she received her PhD from University of the West Indies.

Leonid Kharin completed his MD in 2016 at Rostov State Medical University in Russia. In October of 2019, he joined Dr. Erica Golemis's lab as a new postdoc.

Dmitry Levchenko received his MD from Kharkiv National Medical University in Ukraine. Dmitry has been working as postdoc in Dr. John Whetstine's lab since January 2020.

In August 2019, Sven Miller joined Dr. John Karanicolas' lab as a postdoc. Sven completed his PhD at the University of Utah in Salt Lake City.

Bailee Sliker is a new postdoc in Dr. Paul Campbell's lab. She received her PhD from University of Nebraska Medical Center in Omaha before joining Fox Chase in May 2019.

Wenjun Wu joined the lab of Dr. Y. Lynn Wang as a postdoc in March 2019. He received his PhD in Pharmaceutical Science at St. John's University, New York.

Daniel Yeggoni received his PhD from University of Hyderabad, India in 2017. He has been a member of Dr. John Karanicolas' lab since June 2019.

Looking forward

by Amanda Purdy, Ph.D., and Cristina Uribe-Alvarez, Ph.D.

25 years in the making

This fall we will be hosting the 25th Annual Fox Chase Cancer Center Trainee Research Day and for the first time, the event is being organized and fundraised for by trainees. To commemorate the special occasion, the event will be held at the nearby Knowlton Mansion. The program will include eight trainee presentations, two keynote speakers featuring a Bench to Bedside talk by Dr. Anthony Olszanski, Vice Chair, Associate Professor of FCCC's Department of Hematology/Oncology and Chief of Section of Solid Tumor Oncology, and a cancer metabolism talk by Dr. Ubaldo Martinez Outschoorn, Associate Professor at Jefferson University. In addition, the event will include round table discussions focused on transitioning from academia to industry, writing grant proposals, and translational science. We will also host two research poster sessions, and a small cocktail ceremony to thank everyone for their hard work through the year. As always, we expect a wonderful day filled with exciting science, networking, and potential collaborations.

If you are in the area, and want to attend the celebration please contact postdoctoral fellow Dr. Cristina Uribe-Alvarez at Cristina.Uribe-Alvarez@fccc.edu.

Coping during the COVID-19 pandemic

2020 has been an interesting year. From the changing landscape of our work-lives—alterations to how we interact with our colleagues, meet and collaborate, communicate findings, and perform experiments—to our personal-lives—changes to how we connect with family and friends, care for loved ones, and attend common rituals like weddings and funerals—the COVID-19 pandemic has affected the way we live at the most basic levels. To discern the impact at Fox Chase, we asked our graduate students and postdoctoral fellows how they have adjusted to this new normal. Here's what we found out.

The "new" workplace: Masks, gowns, and gloves decorate our bodies making new "uniforms". Where once every bay was full of researchers, now only two people at any one time are allowed in the lab. Many labs have instituted shift work—with morning, afternoon, and overnight hours—to allow ongoing experiments to continue. For those who can, working from home has become a good fallback. Although the home also presents challenges from a need to share workspaces, devices and bandwidth to multitasking childcare, data analysis, and ensuing there is toilet paper in the closet.

Beyond the workplace how are they coping with COVID? Many trainees have taken the opportunity to return to much loved hobbies like gardening, cooking, and working out. While others have taken action to educate the community about COVID and proper mask-wearing procedures.

Pictured below (Top row): Dr. Duangcheng Guo (Yang lab) dons his mask while working in the hood; exercising new healthy habits, Dr. Janusz Franco-Barraza (Cukierman lab) works from home at his new standing desk; Dr. Deb Vendramini Costa (Cukierman lab) balances the rigors of being a new mother while analyzing data for her next paper; Dr. Cristina Uribe-Alvarez (Chernoff lab) now wears a mask and gloves when she checks on her animals in the zebrafish facility. (Bottom row): Dr. Rob Sertori (Wiest lab) advocates for social distancing and non-essential workers staying at home; Sofiia Karchugina (Chernoff lab) recently got married on the other side of the world before racing back to the lab before the borders closed; Dr. Cristina Uribe-Alvarez displays the new required gear for traveling on public transport; and Dr. Rhoda Moise (Ragin lab) readies soil, pots, and seeds as she takes advantage of working from home.

Contact us!

We want to stay in contact with you! Please drop us an email with your contact information, or send us an invitation on LinkedIn (Group – Fox Chase Cancer Center Trainee Association): we're hoping to expand our database of former trainees to enable our current graduate students and postdocs to reach out for career advice or questions about particular fields, institutions or companies. Don't hesitate to reach out to Dr. Amanda Purdy, Director, Academic Affairs, Amanda.Purdy@fccc.edu, 215-728-7764