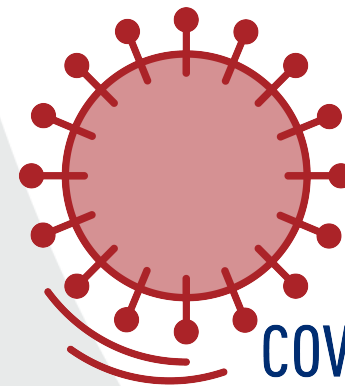


THE JACKSON LABORATORY

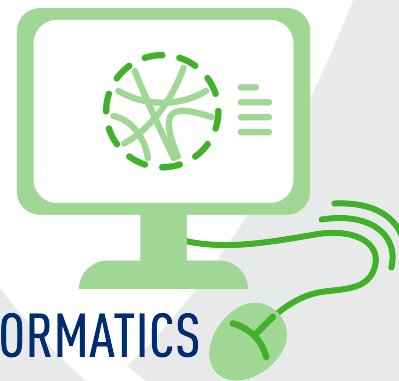
OPEN HOUSE

Meet our featured scientists!

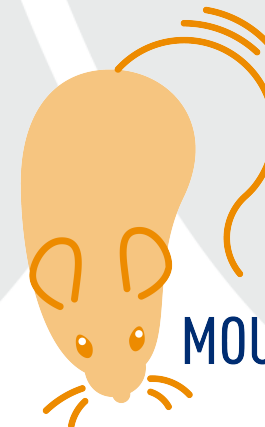
MIGHTY MICE
IN SPACE



COVID-19



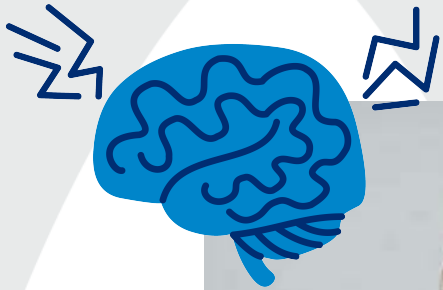
BIOINFORMATICS



MOUSE MODELS



The Jackson
Laboratory



Christina Vallianatos, Ph.D.

Genomics Educator

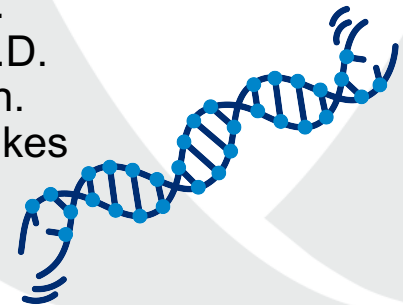
JAX Genomic Education

Co-host & organizer of the 2020 Virtual Open House

As a genetics education specialist, Christina focuses on the design, development, and implementation of courses and programming in genetics, genomics, and computational techniques for many learner types. Her projects range from behind-the-scenes work building lessons and organizing science events, to being in the spotlight teaching and presenting. Christina loves combining her passion for outreach and engagement with her content expertise in genetics to make science and STEM careers accessible and inclusive for all. Christina earned a B.S. in Neuroscience and a Ph.D. in Human Genetics from the University of Michigan. When she's not thinking about science, Christina likes to travel and explore new places and foods, read novels, and spent time with family and friends.



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Emaly Piecuch, Ph.D. **Genomics Educator** **JAX Genomic Education**

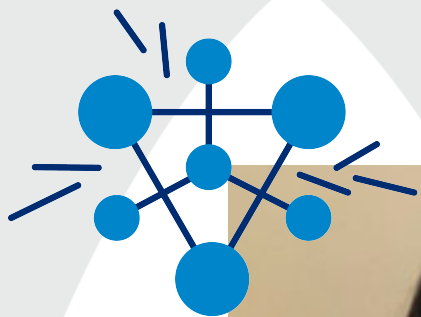
Co-host & organizer of the 2020 Virtual Open House

Emaly Piecuch is a Genomics Educator on the JAX Genomic Education team based in Bar Harbor, ME. Her ultimate career goal is to use her skills and education to disseminate the magic of science to everyone. Emaly earned her B.S. in Cell, Molecular and Developmental Biology from the Purdue University in 2012 and her Ph.D. in Genetics and Genomics from The University of Connecticut in 2019. Emaly spends her free time reveling in the profound beauty of the natural world.

Her favorite hobbies include hunting for mushrooms, whistling, and learning to cook authentic cuisines.



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Brienne Angello, B.S. **Research Project Manager** **JAX Computational Sciences**

Career Panelist for the Bioinformatics theme

Bri most recently supported the IT infrastructure team with multiple cloud-based collaboration initiatives aimed to improve the means by which our staff collaborate; not only with each other, but external partners and researchers around the globe. These initiatives involved enabling the secure use of Google Genomics Cloud Platform, implementing Webex for video and audio collaboration, migrating TIS to Webex from Adobe connect for their educational Webinars, and bringing JAX a secure, cloud-based storage solution that can be accessed from any device anywhere in the world with Box. Bri earned a B.S. in Health Professions & Related Clinical Sciences from Lock Haven University of Pennsylvania.



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Chris Baker, Ph.D. Assistant Professor JAX in Bar Harbor, ME

Career Panelist for the Bioinformatics theme

Chris is an Assistant Professor and head of his own research group. He is broadly interested in two main pillars of genetics, heredity and variation. The Baker Lab studies how genetic variation impacts phenotype through chromatin organization and regulation. Specifically, they focus on how variation in the epigenome shapes genome function using two model systems: meiotic recombination in germ cells; and cellular differentiation using mouse embryonic stem cells. Their approach applies functional genomics on diverse mouse strains using high throughput sequencing and computational approaches to answer biological questions. Most of the rest of Chris' time is spent chasing around his two young daughters and woodworking.



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Zoe Brown, B.S. Research Assistant JAX Center for Biometrics Analysis

Career Chat for the Mouse Models theme

Zoe holds a B.S from University of Maine in Psychology and Neuroscience. She is currently a Research Assistant in the Neurobehavioral Phenotyping Core of the Center for Biometric Analysis, performing neurobehavioral phenotyping and behavioral pharmacology services with mouse models, as well as processing and transforming data for research clients. Her interests include music and exploring the park on her bike when it's not 20 degrees out!





Daniel Cortes-Perez, M.D., Ph.D.

Postdoctoral Researcher

JAX Pera Lab

Research Presentation for the Mouse Models theme

After earning an M.Sc. studying ischemia and reperfusion in the liver and how adenosine receptors can modulate metabolic pathways, Dan decided to move toward stem cell and neuroscience field during his Ph.D. training. He was interested in the transgenic expression of glial-cell line derived neurotrophic factor (GDNF) in stem cells and neuronal derivatives. GDNF-secreting embryonic stem cell differentiation to motor neurons goes through a phase of increased number of cycling motor neuron precursors, enhancing terminal differentiated motor neuron yield and electrical maturation, even without any other trophic or cellular support. His ongoing work at JAX tries to unveil the genetic basis of individual differences in the response of the central nervous system to injury using pluripotent stem cells and transgenic mice as models. In addition to his M.Sc., Dan earned his M.D. and PhD from Universidad Nacional Automa de Mexico in Mexico.



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Kristin Cough, B.S. **Trainer, Animal Use** **JAX Veterinary Services**

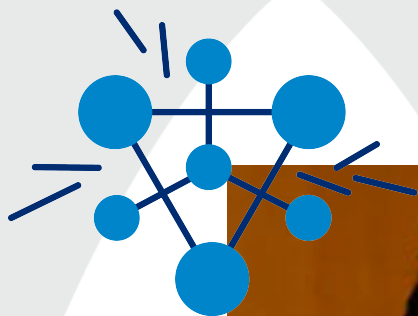
Speaker for the Mouse Models theme

Since Kristin was very young, she's been interested in animals and their proper care. In high school, the local veterinarian was impressed enough with her animal handling skills that he offered her a position as an assistant in his very small clinic. In college while pursuing her B.S. in Animal Science, Kristin worked with many animal species in the Diagnostic Lab at the University of Maine. After graduation, she was hired by JAX, where she has continued to work in positions that contribute to the health and well-being of animals. She currently works as an Animal Use Trainer and performs training for procedures that individuals are using to fulfill their studies with mice.



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Ali Foroughi pour, Ph.D. Postdoctoral Researcher JAX Chuang Lab

Research Talk & Career Panelist for the Bioinformatics theme

Ali integrates applications of mathematical modeling, statistical models, and machine learning to develop predictive models for integrative data analysis. Currently he is working in the laboratory group of Dr. Jeff Chuang on human cancer. Ali primarily works on selection and extraction of biological and morphological features that are indicative of outcomes such as response to treatment, risk of relapse, etc. He is also interested in integrating such features across data types for reliable prediction. Ali earned a B.S. from Sharif University of Technology in Iran. He also earned an M.S. in Mathematics and a Ph.D. in Electrical and Electronic Engineering from The Ohio State University.





Elli Hartig, B.S. **Predoctoral Researcher** **JAX Tarchini Lab**

Speaker for the Mouse Models theme

Elli Hartig is a second year Ph.D. candidate in Mammalian Genetics at the Jackson Laboratory via Tufts University. She has been working in research since graduating from Ithaca College in 2013 with a dual degree in Biochemistry and Art. When not in the lab, she enjoys trail running and all the other outdoor activities Mount Desert Island has to offer!





Muneer Hasham, Ph.D.

Study Director

JAX Scientific Services

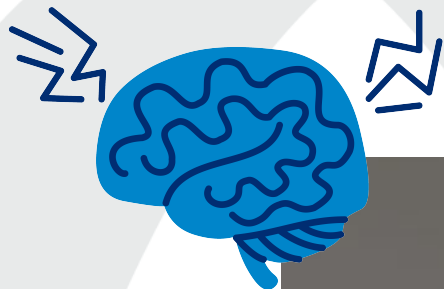
Speaker for the Mouse Models theme

Muneer was originally trained as a molecular biologist. He studied HIV pathogenesis, Herpes viruses and pseudo-typed viruses in the context of viral replication and cancers of lymphoid cells. This background led him to study B-cell development and DNA repair systems. He has explored various areas in DNA damage and homologous recombination, and immuno- and chemotherapy development using diverse mouse models. Muneer earned a B.A. in Biology & Environmental Science from Bowdoin College, and a Ph.D. in Microbiology & Immunology from Temple University.



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Sarah Holbrook, B.S. **Predoctoral Researcher** **JAX Cox Lab**

Career Chat for the Mouse Models theme

Sarah Holbrook holds a B.S. Biology with a Minor in Psychology and Neuroscience from the University of Maine. During her time as an undergraduate student, Sarah conducted research in circadian rhythms, alcoholism, and chytrids. She is currently pursuing her Ph.D. in the laboratory of Dr. Greg Cox. Sarah works with Neuromuscular Degenerative diseases such as Spinal Muscular Atrophy with Respiratory Distress. When not studying new mouse models or investigating potential therapeutics such as gene therapy, you can find Sarah making tiny kitchens for her geckos (or whatever craft catches her fancy for the week) or playing Dungeons and Dragons.



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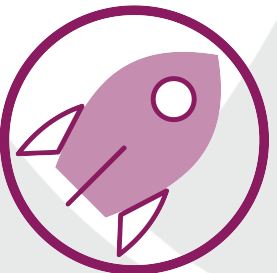


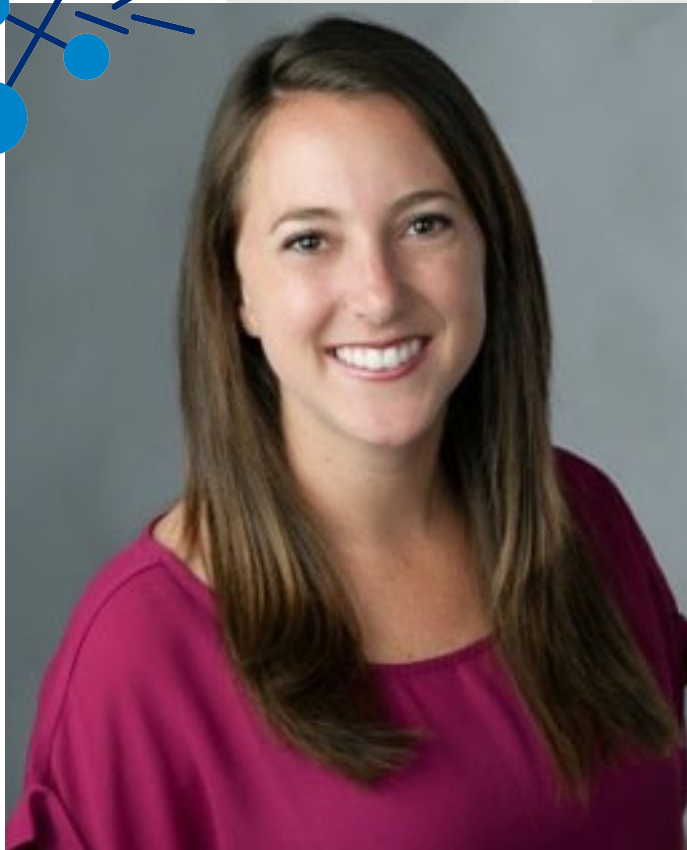
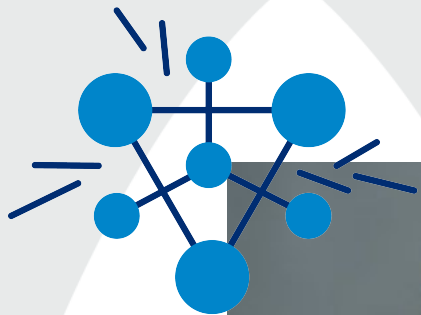


Emily Germain-Lee, M.D.
**Professor of Pediatrics, UConn School of
Medicine**
**Chief, Division of Endocrinology, Connecticut
Children's Medical Center**

Speaker for the Mighty Mice in Space theme

Dr. Germain-Lee has a distinguished history of caring for children and adults from around the world with all types of bone disorders, most notably Albright hereditary osteodystrophy (AHO). Her goal is to develop new treatments to improve the overall health and quality of life for patients with these disorders and to translate scientific investigations in her laboratory into therapeutic applications. Outside of Connecticut Children's Medical Center and UConn Health, Dr. Germain-Lee serves as Vice President of the Human Growth Foundation to help children with growth disorders through advocacy, education, and research.





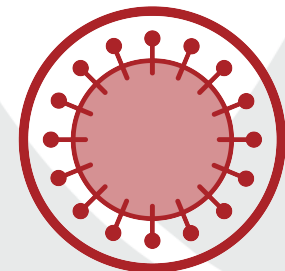
Rachel Goldfeder, Ph.D. **Computational Scientist** **JAX Genome Technologies**

Career Spotlight for the COVID-19 theme & Panelist for Science After High School

Rachel is a Computational Scientist at The Jackson Laboratory. Her main focus is creating software to analyze genome sequencing data from patients with cancer or other diseases with the goal of learning more about the genetic underpinnings of those diseases. Rachel earned her B.S. in Biomedical Engineering from Washington University in St. Louis and her Ph.D. in Biomedical Informatics at Stanford University. Outside of work, Rachel enjoys traveling, hiking, and spending time with her family.



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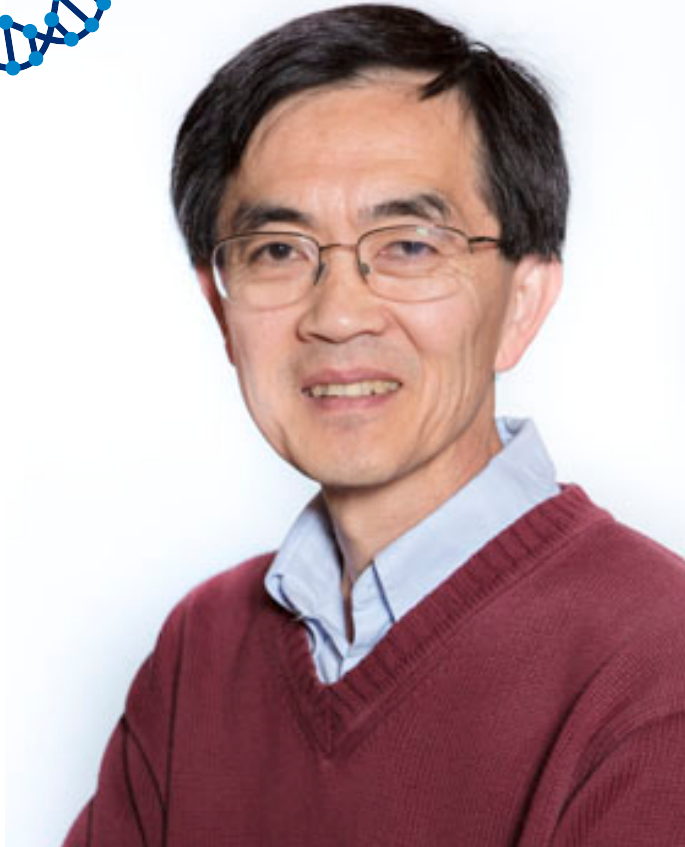


Lerato Hlaka, Ph.D. Postdoctoral Researcher JAX Palucka Lab

Panelist for Science After High School

Lerato earned a B.S. in Cellular and Molecular Biology and an M.Sc. in Biological Sciences (Parasitology) from the University of KwaZulu Natal in South Africa. She earned a Ph.D. in Clinical Sciences & Immunology from the University of Cape Town in South Africa. She now works as a postdoctoral researcher in the laboratory group of Dr. Karolina Palucka.





Se-Jin Lee, M.D., Ph.D.

Professor

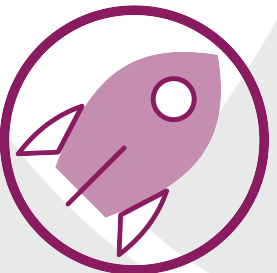
JAX in Farmington, CT

Speaker for the Mighty Mice in Space theme

Dr. Lee's primary interest is to understand the role of signaling molecules in regulating embryonic development and adult tissue homeostasis. Much of his work has focused on the myostatin gene. His research group has shown that mice engineered to lack myostatin exhibit dramatic increases in skeletal muscle mass throughout the body. Dr. Lee and his team are currently attempting to elucidate the mechanism of action of myostatin as well as the mechanisms by which the activity of myostatin is regulated. Their long-term goal is to attempt to exploit the biological properties of myostatin to develop novel therapeutic strategies for treating patients with muscle degenerative and wasting conditions, such as muscular dystrophy, sarcopenia, and cachexia resulting from diseases like cancer, AIDS and sepsis.



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Jim Loftin
Flight Director, M.S.
Flight Director
Challenger Learning Center, Bangor, ME

Speaker for the Mighty Mice in Space theme

Jim Loftin works as a Flight Director at The Challenger Learning Center of Maine since December 2013. Jim was employed before that as a Research Associate in the School of Marine Sciences at the University of Maine since 2005. He holds a B.S. and M.S. in Biological Oceanography. His previous jobs have included oceanography and chemistry instructor at Maine Maritime Academy, Fisheries researcher for NOAA, and Biological Scientist at the University of Florida.





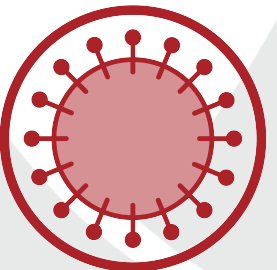
Cat Lutz, Ph.D., M.B.A. **Senior Director, Mouse Repository & In Vivo Pharmacology** **JAX Genetic Resource Science**

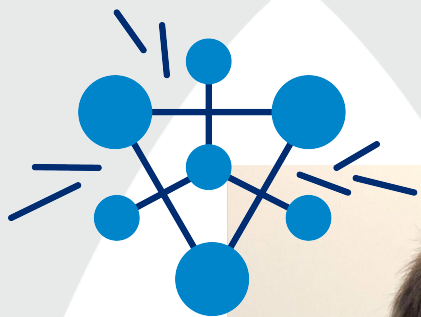
Speaker for the COVID-19 theme

Dr. Lutz is the Senior Director of the Mouse Repository and the Rare and Orphan Disease Center at JAX. The program includes a growing collection of more than 10,000 unique strains of mice that serve the scientific community. Efforts to improve mouse resources for rare diseases include the generation of precise patient mutations and the development of mouse strains for preclinical testing of therapeutics. Dr Lutz also oversees the In Vivo Pharmacology program which provides services in pre-clinical drug delivery and efficacy testing for biotech, pharmaceutical, and industry partners. Dr. Lutz has over 25 years of experience in the field of mouse genetics and working with patient foundations on developing mouse models for the research community.



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Dave Mellert, Ph.D.

Manager, IT Applications

JAX Information Technology

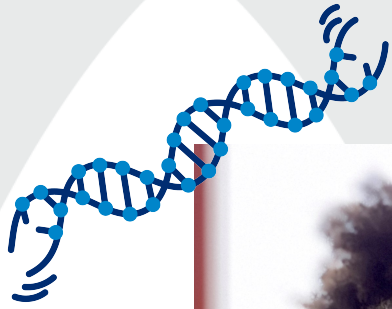
Career Chat for the Bioinformatics theme

Dave earned a B.S. in Biology from the University of Michigan and a Ph.D. in Biology from Stanford University. His research background is in developmental genetics where he has worked with model organisms like mice and fruit flies to uncover how genes influence development and innate behaviors. During his postdoctoral research Dave investigated how genetic variation, environmental variation, and stochasticity (i.e. developmental noise) interact to produce neural wiring variability in the ventral nerve cord of *Drosophila melanogaster*. His first position at JAX was on the Scientific Writing team where he used his research experience and technical writing skills to improve research investigators' grants and manuscripts. He had always kept up with coding as a hobby and realized he missed the discovery and puzzle-solving aspects of research, so he made the transition to the JAX Research IT team. Now he enables scientific research through technology.



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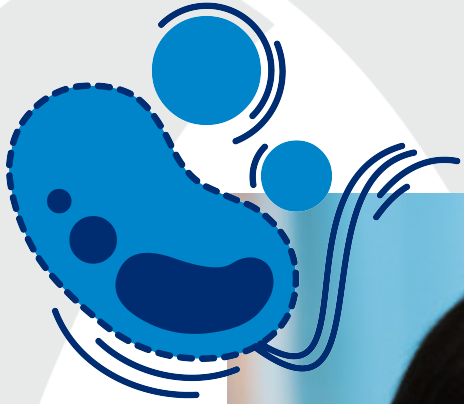


Johnnie Moore Dotson, Ph.D. **Senior Project Manager** **JAX Mice, Clinical & Research Services**

Career Chat for the Mouse Models theme

Johnnie is a scientist with extensive experience in ophthalmology, neuroscience, and diabetes research. She uses her research skills as a project manager in the JAX Mice, Clinical & Research Services division. Johnnie earned a B.A. in Biology and a Certificate in Forensics from Saint Louis University, and a Ph.D. in Pharmacological & Physiological Sciences from Saint Louis University School of Medicine.





Yu-Hui Rogers, M.S., M.B.A. **Senior Director, Research Strategy, Asia** **JAX Research**

Panelist for Science After High School

Yu-Hui is a pioneering scientist and business leader with proven expertise developing novel genomic technology platforms and launching high-throughput DNA sequencing production operations. She is a seasoned researcher and accomplished R&D leader with extensive experience directing scientific discovery, lab process development, and production operations for complex genomic analyses. Yu-Hui earned a B.S. in Chemistry from Chung-Shing University in Taiwan, an M.S. in Chemistry from The American University, and an executive M.B.A. from Yale University. As a superior business strategist, she helps build innovative R&D road maps, successful technology pipelines, and mutually beneficial partnerships.



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Martine Seignon, B.A. **Research Data Analyst** **JAX Single Cell Technologies**

Career Panelist for the Bioinformatics theme

Martine started at JAX in the spring of 2018 in the Single Cell Biology lab. As a Data Analyst, their main duties are to analyze single cell transcriptomics datasets. Scientists at JAX or the University of Connecticut who do not have a computational person on their research team often use analysis services like the ones Martine provides, in order to get a preliminary look at their datasets and gain insight into their experiment. Outside of work, Martine watches a ton of Anime, crochets and knits, and they also started playing World of Warcraft and Final fantasy XIV within the last year. Martine earned an A.A in Biology from Miami Dade College, and a B.A. in Biology from Smith College.



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Laura Urbanski, B.A. Predoctoral Researcher JAX Anczukow Lab

Panelist for Science After High School

Laura is in her 6th year of the combined M.D./Ph.D. program at The University of Connecticut. Her research has focused on understanding the role of mRNA splicing in breast cancer in order to help discover new therapeutic targets for aggressive, difficult to treat tumors. As a medical student, Laura has a strong interest in pediatric oncology and hopes to pursue a residency in pediatrics. Laura received a B.A. from the College of the Holy Cross in Worcester, MA where she was a chemistry major with a concentration in biochemistry. After college, she worked as a research assistant at the Dana-Farber Cancer institute for two years where she further developed her passion for cancer research. In her spare time, Laura loves to spend time with her family, friends, and her dog, skiing at all the local New England mountains, and spend time near the ocean.



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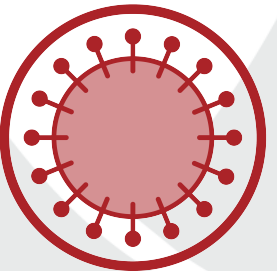


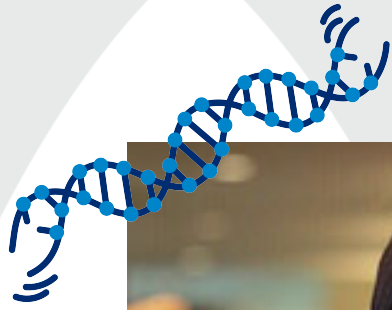


Jasmina Uvalic, B.S. **Clinical Genomic Technologist** **JAX Mice, Clinical & Research Services**

Career Spotlight for the COVID-19 theme

Jasmina works as a clinical genomic technologist in the JAX clinical laboratory. She earned a B.S. in Biology from Central Connecticut State University and is a certified Technologist in Molecular Biology from the American Society of Clinical Pathology.





Isha Walawalkar, B.A. **Research Assistant** **JAX Beck Lab**

Panelist for Science After High School

After graduating from Boston University in 2018 with a B.A. in Biochemistry & Molecular Biology, Isha has sought to enhance both the breadth and depth of her scientific knowledge beyond the pages of a textbook by contributing to the work of several research laboratories. She has studied the processes of blood development in zebrafish, the biochemistry underlying developmental disorders, and the genetics of the Ebola virus. At JAX, she utilizes computational and lab bench techniques to study variation within the human genome that arises from transposable elements. She is simultaneously pursuing her Master of Public Health degree at the University of Connecticut. When she is not in the lab or studying, Isha enjoys partaking in scientific outreach, scientific communication (through her Instagram page @catalystsandcoffee, which combines her two passions of coffee and biology!), and public health activism. She also loves exploring various languages, watching films, and trying new cuisines.



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Victor Wang, B.S. Predoctoral Researcher JAX Chuang Lab

Career Panelist for the Bioinformatics theme

Victor is a 6th year student in the combined M.D./Ph.D. program at the University of Connecticut. His research focuses on computational tools to study the tumor microenvironment. His projects have encompassed methods development in genomics and imaging of the tumor immune response which may benefit patients. He hopes to continue training as a pediatric physician-scientist, where he plans to use his computational expertise to advance research in genetic diseases. Victor earned a B.S. in Bioengineering & Biomedical Engineering from the University of Maryland. Victor still plays some basketball from time to time, although he is no longer the athletic academic from his high school days. He greatly enjoys watching football and hockey, which is far easier on his knees. He also fully embraces his inner (and outer) geek, relishing opportunities to participate in tabletop role-playing and board games.



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Ann Wells, Ph.D.

Postdoctoral Researcher

JAX Carter Lab

Career Panelist for the Bioinformatics theme

As computational geneticist Ann uses statistical techniques to investigate complex traits to determine how gene-by-environment interactions can develop into disease states. Ann is currently working on several projects investigating how lupus is altered through therapeutic treatment, as well as how to bridge the gap between mouse and human data in Alzheimer's disease. Ann also develops methods to integrate analyze multi-omics datasets. In addition to her computational skills, Ann still works in the wet lab from time-to-time to aid in sample collection for her experiments. Ann received her B.S. in Microbiology, M.S. in Statistics, and Ph.D. in Genome Science and Technology, all from the University of Tennessee-Knoxville. When Ann is not working, she likes to lift, bike, hike, and do endurance events.



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