

**Drosophila Board 2020 Elections
Candidate Statements
&
Link to Ballot:**

[**https://redcap.link/FlyBoardElection2020**](https://redcap.link/FlyBoardElection2020)

President

Yukiko Yamashita

Brian Calvi

Michelle Arbeitman

Doujia (DJ) Pan



<http://wi.mit.edu/yamashita>

Yukiko Yamashita, Ph.D.

Yukiko Yamashita obtained her Ph.D from Kyoto University, Japan, and conducted the postdoctoral fellowship with Minx Fuller at Stanford University (2001-2006). She has been a professor at the University of Michigan Ann Arbor (2007-2020), and recently moved to the Whitehead Institute for Biomedical Research/MIT, where is also an investigator of the Howard Hughes Medical Institute.

She studies the cellular mechanisms of stem cell self-renewal and differentiation, with a particular focus on understanding how adult stem cells divide asymmetrically, giving rise to one stem cell and one differentiating cell, to maintain tissue homeostasis. Another rising interest is the role of satellite DNA, a highly repetitive and non-coding element, in eukaryotic genomes during stem cell divisions and germ line lineages.

Yukiko is a strong advocate of research with model organisms, which she believes enables rigorous and reproducible research with the lasting impact. Yukiko hopes to improve the recognition of *Drosophila* as a model system in the broader field of life sciences.

Yamashita serves on the editorial boards of *eLife*, *Molecular Biology of the Cell*, *PLoS Biology* and *Scientific Reports*. Yamashita is a recipient of 2008 Searle Scholar Award, 2009 ASCB WICB junior award, 2011 MacArthur Fellowship, 2016 Tsuneko and Reiji Okazaki Award.



<https://biology.indiana.edu/about/faculty/calvi-brian.html>

Brian R. Calvi, Ph.D.

Brian Calvi has worked with *Drosophila* for 36 years, beginning with undergrad research in the laboratories of Hallie Krider and Art Chovnick at UCONN, then Ph.D. with Bill Gelbart at Harvard, and post-doc with Allan Spradling at the Carnegie Institution. He has been an independent investigator for the last 22 years and is now a Professor of Biology at Indiana University, Bloomington. Over the years he has used *Drosophila* as a model for mobile elements, DNA replication, cell division, genome stability, and cancer. His community involvement includes being a co-PI of FlyBase ([Flybase](#)), an *ex officio* member of the Fly Board, and serving on the executive steering committee of the Alliance of Genome Resources ([AGR](#)), an NHGRI funded effort to harmonize data from multiple model organisms. He has been a member of the GSA since 1988 and is currently an Associate Editor of *Genetics*. His election platform includes promoting diversity and inclusion at meetings and at all levels within the *Drosophila* Community. As a staunch advocate for flies, he also commits to leveraging the collective strength of the GSA and model organism communities to ensure continued support for *Drosophila* research.



<https://med.fsu.edu/biosci/arbeitman-lab>

Michelle Arbeitman, Ph.D.

Michelle Arbeitman attended college at UC Berkeley, where she first learned about *Drosophila* patterning genes, including the striking homeotic mutants. This inspired a lifelong fascination with *Drosophila* biology, which led next to PhD thesis work studying the ecdysone receptor with David Hogness at Stanford University. She then did post-doctoral training with Bruce Baker at Stanford University. Bruce and colleagues had recently identified the *fruitless* gene that directs reproductive behavior, and Michelle used genomic approaches to identify genes that are regulated by the sex hierarchy, with a focus on *fruitless*. While in the Baker lab, she and colleagues also published the first microarray gene expression analysis across the *Drosophila* life cycle. She continues to study sex differences at several different levels, including behavioral, neuroanatomical and molecular dimorphisms, performing systems-level genomic studies leading to single gene functional analyses. Michelle is now a Professor in the Department of Biomedical Sciences at Florida State University.

Michelle has been a long-time committed member and contributor to the Fly community. Since her graduate student days, Michelle has always enjoyed the Fly meeting and has been a consistent attendee. She and colleagues have run the “Sex Differences” workshop there for ~15 years. She served as a regional representative to the Fly board when she was an Assistant Professor, and also on the *Drosophila* Image Award committee. Most recently, Michelle was the Flyboard Treasurer (2017-2020). During her time as Treasurer she facilitated investment of the *Drosophila* Reserve Funds into the stock market, such that earnings could be used for *Drosophila* Trainee Awards, with the goal of maintaining a strong *Drosophila* community. She is currently an Associate Editor for the Genetics Society of America Journal G3: Genes | Genomes | Genetics. She is also a co-organizer of the upcoming 2021 Virtual *Drosophila* Research Conference. As Fly Board President, she would continue efforts to maintain a vibrant and strong *Drosophila* research community, by ensuring that diversity, equity and inclusion efforts are supported through on-going fund raising and advocacy efforts.



<https://www.utsouthwestern.edu/labs/pan/>

Duoia (DJ) Pan, Ph.D.

Duoia (DJ) Pan is currently Bashour Distinguished Chair of Physiology and HHMI Investigator at UT Southwestern Medical Center. Growing up in southwest China, DJ received a bachelor's degree in Biochemistry from Peking University. He then moved to the U.S. to pursue a doctor's degree at UCLA. His PhD thesis in the laboratory of Albert Courey focused on transcriptional regulation in early *Drosophila* embryos using biochemical and molecular approaches. Drawn by the awesome power of fly genetics, DJ joined the lab of Gerald Rubin at UC Berkeley for postdoctoral training, where he conducted forward genetic screens for developmental patterning genes using mosaic flies. As a principal investigator at UT Southwestern Medical Center (1998- 2004 and 2016-present) and Johns Hopkins University School of Medicine (2004-2016), DJ continued to combine biochemistry and genetics to elucidate signaling pathways controlling tissue growth. Having previously served on the election committee of the Fly Board, DJ hopes to advocate the importance of *Drosophila* research to the greater scientific community including funding agencies and commercial sponsors in his new role as Fly Board President.

Southeast Representative

Don Fox

Jeff Sekelsky

Wu Min Deng



<https://www.foxlabduke.com/don-fox>

Don Fox

I have been a member of the Drosophila community for 19 years, beginning as a graduate student with Mark Peifer (UNC-Chapel Hill), followed by a postdoc with Allan Spradling (Carnegie Institute), and now as a faculty member at Duke since 2011. My laboratory has studied the role of whole genome duplications (polyploidy) in organ development and organ injury repair. More about my lab's work can be found here: www.foxlabduke.com, <https://twitter.com/FoxLabDuke>. I have served the GSA/ Drosophila community in the past as a member of the Drosophila image award and DeLill Nasser award selection committees. In the southeast region, I have promoted frequent interactions amongst local fly labs by organizing a monthly "fly club", and also co-organizing a regional fly meeting in North Carolina's research triangle area, now entering its 5th year. Paralleling my current efforts as director of graduate studies for the genetics and genomics program at Duke, as a fly board member I would be enthusiastic about identifying ways to improve diversity and inclusion in the Drosophila community.



<http://sekelsky.bio.unc.edu/>

Jeff Sekelsky

Jeff Sekelsky is a Professor of Biology and Genetics at the University of North Carolina at Chapel Hill, where researchers in his lab investigate mechanisms and regulation of meiotic and mitotic recombination. He has been a member of GSA for more than 30 years. He is Senior Editor of the Genome Integrity and Transmission section of GENETICS, and thus has an interest in the future of publishing. As director of an inter-departmental PhD program and chair of the Training, Workforce Development, and Diversity B (TWD-B) study section that reviews NIGMS predoctoral T32 proposals, he is dedicated to improving graduate training.



<https://medicine.tulane.edu/deng-lab>

Wu-Min Deng

Wu-Min Deng received his PhD from the University of Edinburgh, Scotland, studying oogenesis and follicle cell patterning in *Drosophila* with Mary Bownes. He was a postdoctoral fellow with Hannele Ruohola-Baker at the University of Washington, Seattle, focusing on Notch signaling and germline-soma interaction in the ovary. In 2003, he started his independent lab at Florida State University, where his group worked on cell competition and developed models to study tumor initiation in *Drosophila*. Last year, his lab moved to Tulane University School of Medicine in New Orleans. Currently he is a member of the Louisiana Cancer Research Center and a Gerald & Flora Jo Mansfield Piltz Endowed Professor in Cancer Research. He continues to study tumor initiation and progression using the fly models developed in his lab. Wu-Min has been an active member of the fly community. He organized workshops in Annual *Drosophila* meetings, co-organized the Jiujiang fly meetings, and initiated and organized community fly meetings in Tallahassee and in Louisiana. He also edited a book entitled "*Drosophila* Model in Cancer". He is a strong advocate for research using model organisms, and is active in training young biologists.

Great Lakes Representative

Brian Lazzaro

Marc Halfon

Dan Bergstrahl



<http://www.lazzaro.entomology.cornell.edu/index.html>

Brian Lazzaro

It is an honor to be nominated for potential service on the Fly Board. My research career has revolved around *Drosophila* for the past 26 years, since my first day as an undergraduate in the lab. My program is focused on the intersection of evolutionary and functional genetics in the *D. melanogaster* immune response to bacterial infection, and the breadth and interactivity of the *Drosophila* community has fueled my career. If granted the opportunity, I would be delighted to invest back into our community in order to support of future generations of *Drosophila* researchers. I feel a deep affinity with the Genetics Society of America, and with the *Drosophila* community in particular. I have served as an editor for the journal GENETICS (2012-2019) and have attended every GSA *Drosophila* Research Conference since 1997 with the exception of 2005. My research trajectory and administrative experiences, including as founding Director of the Cornell Institute of Host-Microbe Interactions and Disease, illustrate my commitment to working across scientific subdisciplines and creating opportunity for more junior scientists. If elected to the Fly Board, two of my main priorities would be to amplify the work of early-career researchers, especially those who bridge traditional disciplinary boundaries, and to increase diversity, equity and inclusion within our ranks. The annual GSA Fly Meeting is one, but not the only, venue in which this can happen. I additionally see an essential role for the Fly Board and GSA in public engagement, education and outreach. This includes legitimate and impactful engagement with elected officials and legislators, which seems more important now than ever, around the value of fundamental scientific research. The *Drosophila* research community has been instrumental in my own career development, and service on the Fly Board would supply an opportunity for me to return that investment, with a goal to build and sustain both our local communities and the broader scientific environment.



<http://halfonlab.ccr.buffalo.edu/>

Marc Halfon

I'm honored to be nominated to represent the Great Lakes region. I've worked with *Drosophila* for 30 years, from starting in the late Fotis Kafatos's lab as a Harvard undergraduate, to studying neuromuscular development as a graduate student among the many wonderful fly groups at Yale, to investigating muscle development and transcriptional enhancers as a postdoc at Harvard Medical School. My laboratory at the University at Buffalo has helped pioneer methods for the computational identification of enhancers, and we use these methods to study questions of enhancer and gene regulatory network evolution in flies, mosquitoes, and other insects, as well as continuing our *Drosophila*-based studies of enhancer function and signal integration during muscle development.

The fly community's century-old tradition of openness, collegiality, and inclusiveness is unparalleled. We must ensure the continuation of this ethos, and increase our outreach to marginalized groups. Our community's values are directly reflected in the extensive and freely-shared resources—the Bloomington stock center, FlyBase, the Gene Disruption Project, the DGRC, etc.—that boost the ability of the entire community to conduct ground-breaking research on an amazing diversity of fundamental biological questions. In an effort to contribute back to the community, I developed and maintain REDfly, a database of *Drosophila* (and other insect) enhancers. Through this effort we have annotated over 25,000 validated fly enhancers, and have contributed the bulk of the regulatory data contained in the FlyBase-maintained genome annotation.

My experiences as both a user and a developer of community resources have taught me their great value, but also how difficult it is to procure the funding to keep them maintained. FlyBase and other resources have experienced steep funding cuts in the last several years. It's important that we continue to advocate for robust support of the resources that enable all of our research, and to make the case for the incredible value of model-organism research. My experience with a broad array of funding bodies, including NIH, NSF, and USDA, positions me well to aid in this effort.

2020 has been a year of changes and challenges. We have witnessed the inspiring resilience of our colleagues and trainees, and the unexpected fragility of our political and public health systems. Institutions of higher learning, especially public ones such as my own, are facing potentially crippling budget shortfalls in the coming year. The Fly Board will need to figure out how to best help support our community during these difficult times. Determining effective models for our annual meeting, that manage to balance both the significant benefits of in-person interaction with the safety, financial, and environmental advantages of virtual assembly, will be a major challenge. I welcome the opportunity to tackle these and other issues for this community to which I owe so much.



<http://blogs.rochester.edu/bergstralh/>

Dan Bergstralh

Dan Bergstralh is an Assistant Professor of Biology at the University of Rochester, where he started his lab in 2016. Dan earned his BS at Maryland and his PhD studying cancer chemotherapy and innate immunity in Jenny Ting's lab at the University of North Carolina. He first started working with flies as a postdoc with Jeff Sekelsky at UNC, and continued to perform fly research during his second postdoc with Daniel St Johnston at the Gurdon Institute, University of Cambridge. Building on that work, Dan's lab studies the interaction between cell division and adhesion, particularly in developing epithelial tissues. He is an enthusiastic member of the fly community and has given posters and talks at the Annual Drosophila Meeting since first attending in 2009. Dan is passionate about training future fly researchers, and actively participates in training at the high school level (through programs like Upward Bound) and above. He is also keen to promote inclusion, and is a member of the Inclusion and Outreach Committee of the Society for Developmental Biology.

Midwest Representative

Jason Tennessen

Rachel Smith-Bolton

Leonard Dobens

Chiswili (Yves) Chabu



<https://www.tennesenlab.com>

Jason M. Tennesen

Jason Tennesen received his BA in Biology from Lawrence University in Appleton, WI (2001) and was awarded *magna cum laude* for his thesis research on the *C. elegans* gene *sup-9*. His graduate studies in Ann Rougvie's lab at the University of Minnesota (2001-2007) examined how the *C. elegans* heterochronic genes *lin-42* and *daf-12* cooperatively regulate adult maturation and stress-induced dauer formation. As a postdoctoral fellow in Carl Thummel's lab at the University of Utah (2007-2013), Jason studied how the nuclear receptors dERR and HNF4 regulate central carbon metabolism during *Drosophila* larval development. Since starting his own lab at Indiana University in 2014, Jason has focused on understanding how carbohydrate metabolism supports the biosynthetic and energetic demands of *Drosophila* larval growth. Jason serves as the graduate program director for the Genome, Cell and Developmental Biology graduate program within the Indiana University Department of Biology and teaches an Advanced Genetics course for graduate students and upper level undergraduates. He is also dedicated to undergraduate education and teaches a freshman-level Introductory Biology course, serves as faculty advisor to the IU Biology Club, and regularly publishes studies that are co-authored by undergraduates. As a first-generation college student who became interested in science due to a Federal TRIO program for underprivileged high school students (RCMS; University of Wisconsin Green Bay), Jason is dedicated to supporting similar initiatives that increase the participation, retention, and advancement of underrepresented populations within the scientific community. In this regard, he collaborates with the Indiana University Groups Scholars Program to build a support network for first-generation, underrepresented students in his Introductory Biology class and Groups Scholars students regularly conduct research in his lab. He actively participates in the *Drosophila* community by attending conferences, overseeing finances for the Midwest *Drosophila* Research Conference, and serving on internal IU advisory committees that oversee the Bloomington *Drosophila* Stock Center and the *Drosophila* Genomics Resource Center.



<https://mcb.illinois.edu/faculty/profile/rsbolton>

Rachel Bolton-Smith

I am an Associate Professor and Associate Head of the Department of Cell and Developmental Biology at the University of Illinois at Urbana-Champaign. My lab studies tissue repair and regeneration in damaged imaginal discs, using genetic and genomic approaches to identify the mechanisms that enable regeneration, constrain regeneration, and ensure proper patterning and cell fate after tissue repair.

Despite being an introvert, I am an enthusiastic proponent of meetings and courses that bring scientists together to exchange ideas, foster opportunities, and build networks. I have been involved in a wide variety of meetings and courses, from the Embryology course at the Marine Biological Laboratory in Woods Hole, to the Tissue Regeneration Gordon Research Conference. Especially close to my heart are the Annual *Drosophila* Research Conference, where I have co-organized three workshops, and the Midwest *Drosophila* Research Conference, for which I have served as organizer and co-organizer, session moderator and poster judge, and for which I currently serve on the standing organizing committee. One of the great strengths of the Midwest fly meeting is the large number of students from primarily undergraduate institutions who attend and give posters and talks, and as a member of the Fly Board I would seek to increase the involvement of students from PUIs and Minority-Serving Institutions at our local and national meetings.

I am committed to promoting equity and inclusion for historically excluded students – for example, I attend and serve as a poster judge at ABRCMS, chair the Diversity, Equity and Inclusion committee for UIUC's School of Molecular and Cellular Biology, and mentor individual undergraduates through the Illinois Promise program. In addition, I have been fortunate to obtain Diversity Supplements through NIH to support training in my lab. I believe the Fly Board can take a strong lead in fostering an inclusive environment and supporting scientists from diverse backgrounds. I would also like to see the development of additional opportunities and support networks for our trainees who aspire to careers outside of academia. This need is especially acute in the Midwest, where many of our leading universities are not located near centers of biotechnology, industry, publishing, journalism, or seats of government.



<https://sbc.umkc.edu/profiles/faculty-gdo/dobens-leonard.html>

Leonard Dobens, Ph.D.

Leonard Dobens, PhD. I received a BS from Boston College, where I was a work study and did research in William H. Petri's lab, my first exposure to *Drosophila* oogenesis, which I continue to use both for teaching and research endeavors. I received a PhD from Dartmouth College and did postdoctoral work in Fotis Kafatos's lab at Harvard. I was an Instructor at Harvard Medical School working with Laurel Raftery on TGF- β signaling before starting my own lab at UMKC. I rose through the ranks and served as Director of Research and am currently Chair of the Genetics, Developmental and Evolutionary Biology Department. My research is focused on the role of protein turnover in the regulation of developmental and nutritional signals and we study the role of the gene Tribbles in this process.

I have been a member of the GSA since 1991 and I have organized Kansas City area fly meetings and the regional Midwest Fly meeting in Allerton, IL for two years. There I began the collection of registration fees online, a change that put that meeting on a much more stable financial footing going forward. I organize the bi-annual Tribbles meeting held in Beijing in 2017 and online due to COVID this year and use this meeting to invite *Drosophila* speakers to disseminate the powerful work in flies on Tribbles to a broader audience of workers focus on the role of this gene in metabolic disease. If elected I will build on Tina Tootle's efforts to request support from the national board for summer educational programs. I will also ask for help IT support from the GSA for web site design to promote the continued success of regional Midwest fly meeting. In addition, I will seek funds from the national board for small travel grants to the Bloomington Stock Center for on-site genetic screens, exploiting our proximity to the labs and tools they maintain there.



<https://biology.missouri.edu/people/chabu>

Chiswili Yves Chabu

I am interested in mechanistic principles that govern how localized cell-cell signaling events are initiated, deployed, and how they are integrated at the tissue scale to control organ size and patterning in *Drosophila*.

In addition to developmental biology, my lab is interested in understanding how cell-cell signaling evolve in a tumor context. We seek to delineate how emergent cell-cell signaling dynamics drive tumor progression. We are particularly interested in extracellular vesicle (EV)-mediated EGFR/RAS cell-cell signaling. Under normal physiological conditions, diverse cell types relay homeostasis cues by releasing EV that contain specific signaling molecules. Tumor cells usurp this process and secrete EV to sculpt a tumor-promoting microenvironment. The underlying mechanisms remain unclear. We are delineating the molecular basis of cargo sorting and tumor EV secretion. This work is generating mechanistic insights into how tissues functionalize EV to achieve homeostasis under normal conditions and how these mechanisms are corrupted in tumors.

My wish to be part of the fly board is motivated two main interests: 1) to contribute to inclusive excellence in our fly community by extending strong support to our under-represented trainees and 2) to promote active advocacy strategies for *Drosophila* research by fostering collaborations between fly biologists and investigators working in mammalian systems.

Heartland Representative

Tânia Reis

Jocelyn McDonald

Matthew Sieber

Erin Kelleher



<https://medschool.cuanschutz.edu/endocrinology/research/metabolism-obesity-and-diabetes/reis-lab>

Tânia Reis

I am an Associate Professor in the Division of Endocrinology, Metabolism and Diabetes in the Department of Medicine at the University of Colorado Anschutz Medical Campus. The goal of my research is to identify genetic and neuronal pathways regulating energy homeostasis. My lab uses *Drosophila* larvae to identify genes and neuronal networks acting in regulatory pathways within and between organs to prevent metabolic dysfunction.

I started my career using *Drosophila* as a graduate student in Bruce Edgar's lab, at the Fred Hutch in Seattle. I recognized the power of the fly system and decided as a postdoc to develop *Drosophila* larvae as a model to study the genetics of obesity. In Iswar Hariharan's lab at UC Berkeley I designed a new assay for body fat and used an unbiased screen to identify 66 genes that control fat storage, two-thirds of which have clear mammalian homologs. In parallel, by genetically ablating the functions of specific regions of the brain, I established the first neuronal map of body fat regulation in *Drosophila* larvae. In 2011 I began my Assistant Professor position and was promoted to Associate Professor in 2018. I am currently training two PhD students and am a very active member of our graduate training programs, including acting as the current Chair of the Admissions Committee for the Molecular Biology PhD program.

From 2014-2019 I co-organized a workshop at the annual GSA Fly Meeting. Since 2018 I have been a lecturer at the Cold Spring Harbor Lab's *Drosophila* Neurobiology Summer Course and in 2022 I will become Course Co-Director. As an immigrant female scientist and mother of two kids, including a young girl, I devote significant effort to becoming an advocate for equity and inclusion in science. I am also Chair of the GSA Childcare at Conferences Committee, with the goal of making it easier for scientists with children to attend conferences. I am eager to bring these passions and skills to the Fly Board.



<https://mcdonaldlab.org/>

Jocelyn McDonald

Jocelyn McDonald received her B.S. in Biochemistry and Molecular Biology from Marquette University. She began working with *Drosophila* during her PhD training with Chris Doe at the University of Illinois, Urbana-Champaign, where she studied the development of the fly embryonic nervous system. She then began a postdoctoral fellowship with Denise Montell at Johns Hopkins School of Medicine, to study *in vivo* collective cell migration using the *Drosophila* border cell model. Jocelyn spent the first part of her independent research career as a principal investigator at the Lerner Research Institute of the Cleveland Clinic. In 2015, she moved to Kansas State University, where she continues to study how cell collectives move within intact tissues and organs. Her laboratory's recent work has focused on determining how cell collectives stay together during migration, how cells regulate their shapes while moving collectively, and how the surrounding tissues influence cell motility. Jocelyn is dedicated to training young scientists, from undergraduate to postdoctoral levels, in research and in the classroom. She has been an active participant in local, regional, and national fly communities. Jocelyn is particularly interested in advocating for increased funding and support for research resources and genetic tools for flies and other model organisms.



<https://www.utsouthwestern.edu/labs/sieber/about/>

Matthew Sieber

The primary goal of research in my lab is to understand the dynamic changes in metabolic programs that support development and disease progression. Using a combination of genetics, molecular biology, and systems-based approaches (metabolomics, proteomics, and transcriptomics) we are investigating metabolic mechanisms that support reproduction and development in *Drosophila* and mammalian tissues. We utilize *Drosophila* oogenesis as a discovery tool to conduct genetic and in-depth biochemical studies of the metabolic mechanisms that support quiescence, growth, and differentiation. We then examine the conserved nature of these mechanisms using model systems such as xenopus oocytes, yeast, human cells, and mice. My work has provided fundamental insight into several key areas including: 1) Defining the changes in mitochondrial metabolism that drive cellular quiescence. 2) Showing that cholesterol metabolism regulates differentiation in the intestinal epithelia. 3) Defining the mechanisms that control metabolic reprogramming in development and disease models. My approach utilizes collaborations with labs in several model systems allowing us to conduct more comprehensive studies of the conserved metabolic mechanisms that drive development and disease progression.

Moving forward as a regional representative of the fly board my priority would be supporting the development of young *Drosophila* researchers by encouraging collaboration and resource development. I would accomplish this by first facilitating interaction and coordination between the major genetic model system communities. And second by promoting efforts to develop resources that facilitate human disease modeling in the *Drosophila* system. In this ever-changing scientific environment, we in the *Drosophila* community must continue to evolve and provide the next generation of researchers a road map to continue *Drosophila*'s role as a pioneering system for biological research.



<http://nsmn1.uh.edu/eskelleh/>

Erin Kelleher

Erin Kelleher received her Ph.D. in 2009 from the University of Arizona, where she studied the evolution of reproductive proteins in cactus-breeding *Drosophila*. As a post-doc in Daniel Barbash's lab at Cornell, she started working on transposable elements and their regulation by the piRNA pathway in the female germline. Since 2013 she has managed her own laboratory at the University of Houston, which studies the evolution of TE regulation and cellular responses to transposition. University of Houston is an exceptionally diverse research university as well as a designated Hispanic Serving Institution (HSI), and Erin is committed to building inclusive and diverse scientific communities. She has been an active member of the *Drosophila* community since 2004, and a frequent attendee of the *Drosophila* Research Conference, having twice co-chaired the Evolution and Quantitative Genetics Session (2015 and 2019). She was also a founding co-organizer of the Southeast Texas Evolutionary Genetics and Genomics (STEGG) Symposium.

Canada Representative

Sarah Hughes

Rodrigo Fernandez-Gonzalez

Elizabeth Rideout

Savraj Grewal



<https://www.ualberta.ca/medical-genetics/about/faculty/sarah-hughes.html>

Sarah Hughes

I have always had a penchant for working with *Drosophila*. Throughout my training including my PhD with Dr. Henry Krause at the University of Toronto and my post-doctoral studies with Dr. Rick Fehon at Duke University I have focused on using flies to understand the fundamental basis of development and human disease. I continue to work with *Drosophila* as an Associate Professor in the Departments of Medical Genetics and Cell Biology at the University of Alberta. My current work stems from my long-standing interest in understanding the regulation of proliferation, cell adhesion and cell polarity in epithelial cells and more recently in the neural stem cells of the larval brain. I also have an ongoing interest in subcellular localization and regulation of mRNA during development. I have served in several different leadership capacities within the North-American fly community. I was a co-organizer of the 10th Canadian *Drosophila* Research Conference (CanFly) in 2009, RiboWest 2015, 14th CanFly 2017, and the 10th Canadian Developmental Biology Meeting in 2020. I also served as a session co-chair on Patterning, Morphogenesis and Organogenesis at the 59th GSA *Drosophila* Research Conference in 2018. I have experience serving in other leadership roles. For example from 2017-2018 I was a member of the Conference Committee for the Canadian Society of Molecular Biosciences (CSMB). Similarly, I have been a member of multiple grant review panels in Canada (CIHR, CRS, CBCF), and Internationally (US Department of Defense CDMRP). I have held leadership roles locally such as acting chair of the Department of Medical Genetics (2018/2019). I feel that the Fly community is vibrant group that fosters a collaborative and supportive research environment. I view the *Drosophila* Fly Board as an essential component of this vibrancy, providing a communication portal for all members of the community and to serve a critical advocacy role promoting the fundamental importance of the Fly Research community and *Drosophila* researcher to the overall scientific and teaching community, government, other funding agencies and the general population.



<https://www.quantmorph.ca/>

Rodrigo Fernandez-Gonzalez

I am an Associate Professor in the Institute of Biomedical Engineering at the University of Toronto, cross-appointed to the Department of Cell and Systems Biology, and the Ted Rogers Centre for Heart Research, as well as the Developmental and Stem Cell Biology Program at The Hospital for Sick Children. I am also the Tier II Canada Research Chair in Quantitative Cell Biology and Morphogenesis. I received a bachelor's degree in Computer Engineering from the Universidad Autonoma de Madrid (2000), and a Ph.D. in Bioengineering from UC Berkeley and UC San Francisco (2006). I conducted postdoctoral work with Jen Zallen (Sloan-Kettering Institute) studying the role of mechanical forces during axis elongation in *Drosophila* embryos. I established my lab at the University of Toronto (2012). My current work investigates the mechanical and biochemical signals that cells use to coordinate their behaviours during embryonic development and tissue repair, using quantitative microscopy, computer modelling, and genetic, biophysical and pharmacological manipulations.

Election Statement: "Throughout my career, the *Drosophila* community has been extremely welcoming and supportive. I find this particularly remarkable in my case, as I always felt as a bit of an outsider with very different training than most of my colleagues. And yet, that difference has always been celebrated, time and time again, by my *Drosophila* peers. I am now looking forward to giving back to the *Drosophila* community. As a member of the Board and the Canadian representative, I will continue to promote diversity and inclusion in our community. I plan to do this through different mechanisms, including the development of outreach programs that introduce students from racially-isolated, high-poverty schools to the importance of *Drosophila* in research; supporting the inclusion of diversity as a criterion for speaker selection in the Annual *Drosophila* Research Conference (aka "the Fly meeting"); or advocating to include a Canadian site in the rotation for the Fly meeting once in-person conferences resume, which will facilitate attendance for trainees and scientists from a number of countries for whom admission to the US is currently a problem."



<https://cps.med.ubc.ca/faculty/rideout/>

Elizabeth Rideout

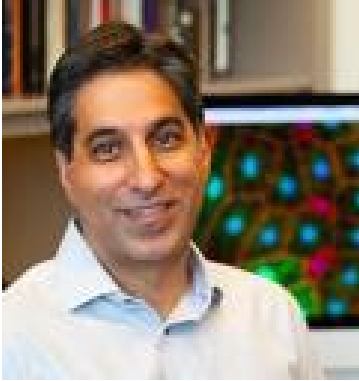
I am a lifelong *Drosophilist*, and am currently an Assistant Professor at The University of British Columbia (UBC) in Vancouver, Canada. I hold a Sex and Gender Science Chair in Genetics from the Canadian Institutes for Health Research, and am affiliated with the UBC Women's Health Research Cluster (WHRC) and the BC Women's Hospital Women's Health Research Institute (WHRI).

In my lab, we use *Drosophila* as a model to reveal how the sex-specific regulation of metabolic genes and pathways contributes to male-female differences in development, physiology, and aging. We also look at how these sex-specific metabolic adaptations impact reproduction. These scientific interests and approaches span many fields of *Drosophila* biology, and will help me serve the fly community through advocacy, knowledge sharing and resource building, and the annual *Drosophila* Research Conference.

Two things motivated me to stand as Canada's representative to the Fly Board. First, I want to continue expanding knowledge of sex differences in all aspects of *Drosophila* research. Flies have led the way in revealing genetic mechanisms of sex determination, in understanding reproduction at a molecular and cellular level, and in studying male-female differences in development, physiology, and behaviour. One specific goal I have is to establish and disseminate methods and guidelines for sex-specific analysis. This will allow all *Drosophila* researchers to include both sexes in diverse assays in line with funding agency and journal requirements.

Second, I want to maintain online access to the annual *Drosophila* meeting. While the recent GSA annual *Drosophila* meeting was conducted online due to Covid-19, I believe that the option for online participation should remain in future meetings. This will allow better engagement with the full and diverse community of *Drosophila* researchers, including those who are less able to travel (e.g. caregiving, health, cost, travel restrictions). I would therefore advocate for continuing the online option even if in-person meetings resume, and work to enhance participation and social interactions in this virtual setting.

These goals align with ongoing and past work I have done at the local and national levels (WHRI, WHRC, Canadian Society for Molecular Biosciences, Heart and Stroke Foundation) to increase uptake of sex- and gender-based analysis in biomedical research, and to increase awareness of sex differences. Also, I am one of 3 co-organizers for the 2021 Canadian Fly meeting, and have organized sessions for Canfly and many local meetings in the past.



<https://thegrewallab.com/>

Savraj Grewal

I obtained my PhD in Cell and Developmental Biology from Oregon Health Sciences in 2001. My thesis research was carried out in the lab of Dr Philip Stork, and was focused on understanding cross talk between MAP kinase and cAMP signaling in the regulation of neuronal gene transcription. From 2001 to 2007 I was a postdoctoral fellow in the lab of Dr Bruce Edgar at the Fred Hutchinson Cancer Research Centre, where I examined the links between the regulation of ribosome synthesis and the control of cell and tissue growth in *Drosophila*. Since 2007, I have been running my own lab as PI in the Department of Biochemistry and Molecular Biology at the University of Calgary, Alberta, Canada (www.thegrewallab.com).

The main research goal of my lab has been to understand the regulation of cell, tissue and body growth using *Drosophila*. Over the last few years most of this work has focused on two main areas. First, we have explored how environmental cues such as nutrient availability and hypoxia modulate the conserved insulin and TOR signaling pathways to control growth and homeostasis. Second, we have examined how regulation of tRNA synthesis and ribosome synthesis can drive protein synthesis to regulate tissue and body growth during development.

Highlights of contributions to the fly and scientific community

I was co-organizer of the Canadian Developmental Biology meeting in 2016 and 2020 (postponed due to COVID and now rescheduled for 2021). This is meeting, which is held every two years, is the main national conference for the Canadian developmental biology community.

I was a session chair at the 2019 Annual *Drosophila* Research Conference in Dallas (Cell Division and Growth Control session) and the 2020 TAGC meeting (Intracellular Dynamics session).

As the Canadian representative on the Fly board, there are two main areas that I would emphasize:

- 1, Advocate for *Drosophila* research and researchers within the broader Canadian scientific community, especially funders and other scientific organizations.
- 2, Ensure representation of the full diversity of Canadian fly researchers - especially trainees and researchers from historically marginalized groups.