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6 October 2023

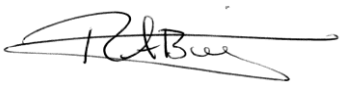
Dear David

I am very happy to provide my strongest recommendation for the renewal of NSF-funding to support the Neurobiology of Drosophila course. This course has been the premier of its kind since it began back in 1987. A quick look through the list of instructors and students, who have been part of these individual courses, reads like a who's-who of the fly community. Names such as Mike Bate, Claude Desplan, Volker Hartenstein and the Jan's - amongst many others. I had the privilege to act as an instructor for 3 years and know the quality of the students this course attracts. Almost all go on to run their own successful labs. Indeed, six of my lab members have taken the course over the years and they have all found this course to be instrumental to their transition to independence. They are now at institutions such as Harvard, epfl, Munich, and in industry (Syngenta).

An important aspect of this course is the collegiality it builds between the respective yearly cohorts - which persists throughout their careers. Such networks are critical for the development of successful research programs. It is without doubt that *Drosophila* has, and continues, to massively contribute to our understanding of the healthy brain. This information is now being actively translated to develop novel treatments for the significant neurological disorders that afflict us. A simple PubMed search for the term 'Drosophila' and a chosen disease show increasing numbers of papers being published using this model. The CSHL fly course has been central to this effort and its continuation must be guaranteed to capitalize on future breakthroughs.

In summary, I cannot rate the Neurobiology of Drosophila course highly enough.

Yours sincerely



Professor Richard Baines
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October 6, 2023

Dear Dr. Stewart,

I appreciate any opportunity to support the continuation of the Drosophila Neurobiology course at Cold Spring Harbor. I took the course in the summer of 2001, after finishing my PhD training in the biochemistry of mRNA splicing in Christine Guthrie's lab. I was both new to neuroscience and Drosophila, and this course solidified my entry into this new field. The immersion training and discussion with experts introduced me quickly to both broad and highly relevant and state of the art concepts. This helped me to establish my projects with perspective of broader significance and many additional ideas. It was also impactful that I could interact with so many faculty members in the field. This included Aaron DiAntonio, who ultimately became my postdoctoral mentor.

The course encouraged in a philosophy of experimentalism and risk-taking. This helped me and my first PhD student Xin Xiong, who took the course in 2009, to establish new methods to study axonal damage responses. This became a productive new research area that has been supported by a continuing RO1 grant (NS069844 (04/01/10 – 5/31/2025) which has thus far generated 10 primary papers, 7 contributing papers, 2 protocols and 4 invited review articles. To cover this area and related work by other labs in the field, I have served as a guest lecture in the course for two iterations.

I continue to benefit from long-lasting impacts from the course through the scientific and social connections that it fostered. These include the friendships and collaborative relationships that I formed with my fellow students. I regularly communicate with Dion Dickman (USC), Bing Ye (University of Michigan) and Yehuda Ben-Shahar (Washington University). Dion and I have shared significant reagents, ideas over the years and we have also grown to know each others' students so that we were able to support them in their future applications.

It is not an overstatement that the Drosophila Neurobiology course at Cold Spring Harbor was the most impactful opportunity of my entire career. It is also significant that the course has solidified a spirt of good will, robust scientific discourse and free exchange of ideas that supports continued innovation and discoveries.

Sincerely,

Catherine A. Collins

Catherine Collins
Associate Professor
Department of Neurosciences
Case Western Reserve University School of Medicine
Email: cxc1215@case.edu

J. TROY LITTLETON, MD, PhD

Professor
Department of Biology
Department of Brain and Cognitive Sciences

THE PICOWER INSTITUTE
FOR LEARNING AND MEMORY

October 9, 2023

Dear Colleagues,

It is a pleasure to enthusiastically recommend NSF funding for the Cold Spring Harbor *Drosophila* Neurobiology course. As both a student of the course back in 1993, and as PI of multiple students from my lab who have taken the course, I can confidently express how important it is to the future development of the next generation of *Drosophila* neuroscientists. As background, I'm a Professor of Neuroscience in the Departments of Biology and Brain and Cognitive Sciences and The Picower Institute for Learning and Memory at MIT. I received my M.D. and Ph.D degrees at Baylor College of Medicine working with Hugo Bellen, and performed postdoctoral research at the University of Wisconsin with Barry Ganetzky, both early founders of the *Drosophila* neurogenetics field. As a graduate student with Hugo, I took the course in 1993. My interactions with both the course faculty and lecturers provided me an invaluable opportunity to interact with leaders in the field whose expertise I would continue to draw upon throughout my early career. In addition, the toolkits and techniques I learned in the course helped to facilitate my transition and expand my experimental approaches during my postdoctoral training. Together, these experiences confirmed my desire to continue my career in the *Drosophila* neurobiology field and broadened my expertise in using Drosophila. Since 2000, my lab at MIT has been characterizing how neuronal synapses form, transmit information, and undergo structural and functional plasticity. In addition, we use *Drosophila* as a model to study a host of neurological disorders including autism, epilepsy, and Huntington's Disease. Given my incredibly positive experience in the course and its impact over my own career, I have continued to recommend the course for my graduate students and early career postdocs. Indeed, many of my former lab members have taken the course and had similarly positive experiences. Their ability to learn a host of new techniques outside of our lab's normal expertise has helped expand their scientific training and toolkits that they were able to apply to their research. In addition, their interactions with course faculty have been instrumental in choosing labs for postdoctoral training and in generating a faculty mentoring network within the field. As such, I'm indebted to the course for aspects of my own success as well as for facilitating the training of numerous members of my lab. Your continued support of the course will allow other scientists in our field to benefit as well. It's an amazing opportunity for our junior colleagues in training and networking, and I strongly encourage you to continue to support this important part of the *Drosophila* neurobiology field.

Sincerely,

J. Troy Littleton, M.D., Ph.D.
Menicon Professor of Neuroscience
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HHMI
HOWARD HUGHES MEDICAL INSTITUTE

Amita Sehgal, Ph.D.
Investigator

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October 16, 2023

David J. Stewart, Ph.D.
Executive Director, Meetings & Courses Program
President, Cold Spring Harbor Asia Conferences
Professor, School of Biological Sciences
Cold Spring Harbor Laboratory

Dear David:

I am writing in strong support of your NSF grant to maintain funding for the Cold Spring Harbor Drosophila Neurobiology course. This course is one of a kind and it has had tremendous impact in developing the careers of many illustrious neuroscientists.

As someone who has lectured in the course and also had trainees take the course, not to mention mentored others who have taken it, I can attest to the value of this course in preparing trainees for research in neuroscience using a Drosophila model, both technically as well as intellectually. In addition, the opportunity to interact with like-minded colleagues in the stimulating environment provided by Cold Spring Harbor Laboratory is unparalleled. I have heard people who took the course talk about if for years afterwards. Importantly, many of these people are highly successful investigators in academia today. It is actually interesting to look at the list of alumni and realize that some big names had their start here.

I would note that I've also had trainees apply to the course and get rejected. While this is disappointing for us, it speaks to the popularity of the course. I sincerely hope you can keep it going for the benefit of our community.

Sincerely,

Amita Sehgal
John Herr Musser Professor of Neuroscience
Director, Chronobiology & Sleep Institute

Ecology & Evolutionary Biology
UNIVERSITY OF TORONTO

October 10, 2023,

David J. Stewart, Ph.D.
Executive Director, Meetings & Courses Program
President, Cold Spring Harbor Asia Conferences
Professor, School of Biological Sciences
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Tel 516 367 8801
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Dear Dr. Stewart,

First, let me introduce myself. I am a University Professor at the University of Toronto and have run a Drosophila behaviour-neurogenetics laboratory for the past 40 years. I pasted my short bio below this letter in case you require more information about me.

In this letter, I provide my strongest support for the renewal of NSF funding for the highly successful Cold Spring Harbor Drosophila Neurobiology course, which has been taught at CSH since 1984. Many of the alumni of this course have gone on to become productive Drosophila neurobiologists or now work in related fields. The course always has and continues to provide access and training in state-of-the-art, cutting-edge concepts, and techniques for studying Drosophila neurobiology and behaviour. A glance at the course alumni list provides an international list of "who's who" in Drosophila neurobiology and behaviour.

I have been involved in the course in several ways. I lectured in the course for over a decade, I ran laboratories for the course, and most importantly, for the present grant, many of my former trainees had the pleasure of taking the course and, in two cases, in later years instructed the course themselves. Participating in this wonderful course put many of my trainees' career paths on an upward trajectory. The course inspired many of them to continue on in science and run their own Drosophila laboratories or to use the knowledge obtained in the course in their work in government and industry. Below is a list of my trainees, their involvement in the CSH Drosophila Neurobiology course, and their career trajectories.

--My former PhD student, Dr. Karla Kaun, an Associate Professor at Brown University, runs a Drosophila lab studying learning, memory and addiction. She was a lead instructor in the course in 2014, 2015 and 2016. Karla Kaun was a student in the course in 2003.
--My former PhD student, Dr. Steven de Belle, instructed the course in 1999, 2000, 2001, 2002, and is a Professor at Arizona State University running a Drosophila learning and memory laboratory. He has also had several secondments at NSF.
--My former post-doctoral fellow, Dr. Jeff Dason, was a student in the course in 2005. He is an Assistant Professor at the University of Windsor, Ontario, Canada, where he runs a Drosophila neurobiology laboratory.
--My former post-doctoral fellow, Dr. Scott Douglas, took the course in 2005. He is currently a Scientific Patent Lawyer in Boston, USA.
--My former PhD student, Dr. Amsale Belay, was a research assistant in the course in 2003 a student in 2002. She runs a clinical genomics company at Mount Sinai Hospital in Toronto.
--My former graduate student trainee, Dr. Yehuda Ben-Shahar, was a research assistant in the course in 2002 and a student in the course in 2001. He is a Professor at Washington University (St Louis), where he runs a Drosophila and honeybee behaviour genetics laboratory.
--My former PhD student, Dr. Craig Reidl, was a research assistant in the course in 2001 and a student in the course in 1998. He works for Health Canada.
--My colleague and collaborator, Prof. Joel Levine, runs a Drosophila social behaviour and circadian rhythm research lab at the University of Toronto. He was a student in the course in 1995.
--My former graduate student trainee, Dr. Elena Sawin, took the course in 1994. She is a cytogeneticist at a hospital in London Ontario, Canada.

I continue to hear accolades about the CSH Drosophila Neurobiology Course. This exemplarily course must continue to be funded by NSF. A remarkable six Nobel prizes have been given to 11 researchers for their research using Drosophila since 1933. The training offered by the CSH Drosophila Neurobiology course continues to set the stage for ground-breaking studies, setting a course for scientific research in the coming decades in this vital field.

Supporting the NSF grant to renew funding for the Drosophila Neurobiology course is of the highest priority.

Warm Regards,

Marla B. Sokolowski, Ph.D., F.R.S.C.
University Professor,
Senior Fellow of Massey College,
Distinguished Fellow of the Canadian Institute for Advanced Research (CIFAR),
Former Co director of the Child and Brain Development Program, CIFAR,
Departments of Ecology and Evolutionary Biology and Cell and Systems Biology,

University of Toronto,
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Marla B. Sokolowski (University Professor, Department of Ecology and Evolutionary Biology, & Cell and Systems Biology, University of Toronto) is an internationally renowned behaviour geneticist whose ground-breaking research has permanently changed how we frame questions about individual differences in behaviour. Her comprehensive, multidisciplinary analyses of gene-environment interactions have been instrumental in refuting longstanding ideas of genetic determinism and continue to shape fundamental concepts in the evolution of behaviour, genetic pleiotropy, and plasticity. Her foundational discoveries in the fruit fly have been extended to other diverse animals and humans. She has received Distinguished Visiting Professorships in the U.S.A. and Europe, where she regularly contributes to graduate education. Awards and honours recognizing her work include: Fellow of the Royal Society of Canada (RSC) in 1998; a Tier 1 Canada Research Chair (2001-2015); Fellow of Massey College (2004); the Genetics Society of Canada's Award of Excellence (2007); Senior Fellow of the Canadian Institute for Advanced Research (2013); the Queen Elizabeth II Diamond Jubilee Medal (2013, RSC); the Distinguished Investigator Award from the International Behaviour and Neurogenetics Society (2014); University Professor, University of Toronto (2010); and the RSC's Flavelle Medal for research in the Biological Sciences (2020). She was the Weston Fellow and co-director of the Canadian Institute for Advanced Research's Child and Brain Development Program from 2008-2019. In addition, she directed the Life Sciences Division of the Academy of Sciences of the RSC from 2009-2012. Most recently, in 2021, a special issue of the Journal of Neurogenetics (vol. 35(3)) was published in her honour. In 2022, she was awarded the JJ Berry Smith Doctoral Supervision Award from the School of Graduate Studies, University of Toronto, in recognition of her outstanding supervision of 40 graduate students and 20 postdoctoral fellows, in addition to the University College Alumni of Influence Award and the distinction of Distinguished Fellow from the Canadian Institute for Advanced Research (CIFAR).

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Davie@hms.harvard.edu
David L. Van Vactor, Ph.D.

October 5, 2023

David J. Stewart, Ph.D.
Executive Director, Meetings & Courses Program
Cold Spring Harbor Laboratory
1 Bungtown Road/P.O. Box 100
Cold Spring Harbor NY 11724

Dear David,

It is a pleasure to write my most enthusiastic letter of support for the CSHL Course on *Drosophila* Neurobiology: Genes, Circuits & Behavior. As a prior instructor and co-director of this wonderful course, and as a mentor to several students in my lab and others at Harvard who went on to take this course, I can say with complete confidence that this is a world-class resource in our field. The unique immersion experience with one of the premier model systems for molecular and genetic analysis of neural circuits in vivo gives students powerful hands-on training that not only enables them to move forward with sophisticated tools in their own research, but also attenuates the fear-factor that unfamiliar methods can sometimes intimidate students and postdocs new to the field. The combination of cellular, electrophysiological and behavioral analysis really does prepare students in this class for multidisciplinary success, as indicated by the exceptional record of this course in producing new investigators and leaders in the field. Aside from focused apprentice training in a thesis lab, there are few opportunities for emerging trainees to gather as broad a range of expertise as efficiently as one can in this course. As Director of Harvard's largest life science PhD program, I can assure you that students benefit tremendously from access to the both the curriculum and amazing networking opportunities at CSHL. CSHL plays a unique role in our national ecosystem of science education. I hope that your NSF application is successful, and that this resource can be available to future generations.

Yours Sincerely,

Prof. David Van Vactor, Ph.D.
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Boston, MA 02115, USA
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Prior Testimonials for the Drosophila Neurobiology Course (collected 2015)

Claude Desplan
Silver Professor
NYU
Class of 85'

*"This was a very long time ago but **I sincerely think that it has changed my perception of the world of Science**. It was organized by the Jan's and by Pat O'Farrell, and a number of prominent scientists visited us and inspired us. Among them, I still remember Eric Wieschaus being so excited when showing us a video (cassette!) of a gastrulating embryo, or Ralph Greenspan teaching us the joy of Genetics. The students were also amazing: One of them, from Spyros Artavanis' lab was working late at night as she was (secretly) discovering the EGF repeats in Notch that she had just cloned. My roommate was Udi Isaacoff from Berkeley who has since invented many tools to probe electric activity of the neurons. **It convinced that I belonged to the exciting world of science and could become a significant participant. It should continue to inspire new generations**"*

Paul Garrity
Professor
Brandeis University
Class of 92'

*"The Neurobiology of **Drosophila had a dramatic impact on my career. It was my first intensive introduction to Drosophila neuroscience** and exposed me to topics (like physiology and learning and memory) and techniques (like electrophysiological preparations and behavioral assays) still relevant to my lab today. It was also a **great opportunity to get to know and interact with established leaders in the field in-depth in a small group setting**. Finally, during the course I met other researchers who were relatively new in the field and they have been an important part of my professional network."*

Jessica Treisman
Professor
Skirball Institute of Biomolecular Medicine
NYU School of Medicine
Class of 90'

*"I took the course in my last year of graduate school, **and it was very useful in helping me make the transition to a postdoc in neurobiology**. I probably could have picked up the developmental aspects in other ways, but without it I would never have had any practical experience of electrophysiology. It was also great to have an opportunity to interact informally with the faculty - I remember many chats with Don Ready, as well as Tom Schwarz demonstrating larval dissections on a banana and Tim Tully capsizing my canoe in the harbor. And the intensive course formed a strong bond between the students, who included Yi Zhong, Francois Schweisguth, Kendal Broadie, John Abrams and Nir Hacohen. ."*

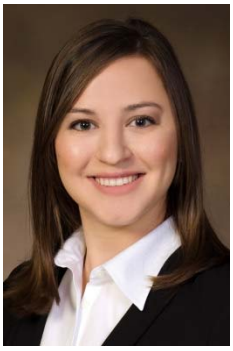
Leslie Vosshall
Robin Chemers Neustein Professor
The Rockefeller University
Class of '91

*"**The CSHL Neurobiology of Drosophila course was transformative for me**. I took it in the summer of 1991, mid-way through my PhD, when my graduate project was in disarray and my self-confidence at the lowest point in my career. The course gave me 3 weeks of intellectual refreshment and access to questions and approaches that I had never considered prior to taking the course. **The opportunity to mingle with world-class scientists in an informal setting was matchless**. That year, I had the chance to interact with Seymour Benzer, who provided major input into my thesis work on biological clocks. I also discussed career strategy with Charles Zuker and currently still count him as a trusted mentor and now friend. **This course that I took 23 years ago still influences me to this day, in the form of techniques we use in my laboratory, life-long friends I made among fellow students, and in my belief that summer courses are essential for young scientists to succeed."***

Joel Levine
Associate Professor
University of Toronto Missasauga
Class of '95

*"I was enrolled in the course in 1995 after spending my first year in a fly lab. I learned a lot about flies and fly research from the morning lectures and **I developed a "can do" attitude from the rapid exposure to a variety of methods during the labs**; maybe, most important, **I had the opportunity to meet and connect with people from among the faculty and other students who are friends and collaborators to this day**. "The course" as we called it left me with a sense that I was part of a culture and that almost anything is possible with the fly. **The course was inspiring** and I am touched and honored that 20 years after my time as a student, I will return as faculty. **The course promotes values and skills, networks of relationships form and the culture of discovery associated with CSHL continues to thrive as a consequence of it."***

Sarah MacNamee
Graduate student
University of Arizona
Class of '12



*"The 2012 Drosophila Neurobiology course **had a transformative effect on my dissertation research and, perhaps more importantly, it introduced me to leaders and peers in the fly community**. When I was accepted to the course, I had recently received an NSF GRF. This funding enabled me to pursue a novel research direction not possible using the lab's existing model system, and while the fly offered necessary tools and techniques, the decision to use this model system required me to pioneer whole-cell recordings in Drosophila glia. Drosophila Neurobiology certainly accelerated my understanding of fly genetics, tools and techniques in a tangible way, but I derived an even greater benefit from first-hand exposure to the reasoning, planning, and logic that goes into selection of genetic tools. This course provides training in the "cultural norms" and implicit understandings that pervade the fly community, essentials for a newcomer that cannot be gained from textbooks and emails. Through the hands-on laboratory learning portions of the course, the quality my whole-cell recordings improved enormously and will soon be published. **Since taking the course, my relationships with instructors and students have taken the form of on-going mentorships and collaborations, and our lab has received it's first grant for a Drosophila project based on my preliminary data (NSF IOS-1353739).** All of this makes the course indispensable for a young scientist entering the field."*

Matthew Clark:
Graduate student
University of Oregon
URM participant,
Class of ’13

“During my time at CSHL, I was able to engage in in-depth discussions with visitors about their work and learn how I could apply these state-of-the-art techniques to my own research. ***I now feel confident about my research directions since I gained a broad perspective of where the rest of the field is headed.*** *My experiences allowed me to explore the advantages and limitations of using optophysiology and electrophysiology as circuit breaking tools. I am currently assessing how to couple optogenetics with electrophysiology following an initial instructional visit to the lab of Richard Baines, a former course director. As I wrap up my graduate studies,* ***I hope to use the connections formed during the course to pursue postdoctoral studies*** *in a Drosophila circuit breaking electrophysiology lab.”*