

The 2021 Drosophila Board meeting was held via Zoom on March 15 at 11 am EST.

<https://cornell.zoom.us/j/97624049083?pwd=cTVTcytJQ1hjYjJkQzRObFYzcFd3UT09>

Participants: A. Veraksa, B. Calvi, M. Arbeitman, T. Tootle, S. Mohr, E. Rideout, T. DePellgrin, T. Reis, S. Russo Gelbart, B. Edgar, J. Brill, H. Araujo, A. Zelhof, S. Brown, W. Deng, N. Rusan, E. Bach, M. Peifer, K. Cook, N. Perrimon, L. Medows, C. Whitworth, B. Lazzaro, N. Tapon, H. Bellen, N. Singh, J. Treisman, T.T. Su, J. DiAngelo, E. Geisbrecht, A-M. Raicu, D. Andrew, M. Welte, J. Zirin, L. Grmai, A. Kiger, M. Wolfner

Minutes by T.T. Su

1. Welcome, introductions

The current president of the Drosophila Board, Mariana Wolfner, welcomed the attendees and started the introductions. She thanked six representatives who were ending their terms for their service. and did introductions. The election committee chaired by past-President Bruce Edgar oversaw the election of six new representatives, along with the new President-elect Michelle Arbeitman. They will start their terms at the end of this ADRC. In addition, for the first time, post-doctoral and graduate student representatives were elected and will join the Board at the same time. Lydia Grmai, Johns Hopkins, is the postdoc rep and Ana-Maria Raicu, Michigan State, is the graduate student rep.

2. Brief review of reports, and some announcements*.

a. Treasurer's report (Jessica Treisman)

Jessica Treisman, Treasurer, presented a summary of the report (attached) and thanked Michelle Arbeitman, the previous Treasurer, for starting investments in Vanguard. Since then both Larry Sandler and Finnerty award funds have been invested also in Vanguard and have produced some profit. Because the conferences are remote due to the pandemic, there has not been need to make travel awards. Instead, the extra funds available are being used for Diversity, Equity and Inclusiveness (DEI) efforts to benefit the fly community. These include 5% of the reserve funds and 1500\$ from the Sandler fund that was made available after the current President Mariana Wolfner spoke to the managers of the Sandler fund, following Board approval.

The DEI award committee met to decide upon the type of award to make. The announcement was posted on Flybase to reach a wide audience. Out of 16 applications received, 5 were chosen for funding at 2000\$ each. The choice was made to select those with the greatest potential impact (those without alternative funding options, those that reach a large number of students, etc.).

A suggestion was made to advertise and awards and to highlight the awardees at the upcoming Drosophila conference. In the Q&A that followed, the plan to continue the DEI awards was stated but with a better balance between trainee funding and outreach because cost of attending meetings will increase when we are back to in-person conference. A suggestion was made to fund one or the other each year.

b. GSA (Suzy Brown and Hugo Bellen)

Suzy Brown of GSA reported on the status of the 2021 Drosophila Conference. Registration is at 1700, making it the largest ever. Attendance reflects a 7% increase in students but a decrease in PIs.

New to this year, an entire undergraduate class (from Lake Forest) will be attending. GSA will see if this is something we can continue in the future. A grant from Burroughs Wellcome is funding international attendees and there is a 33% increase in non-US registrations. This could be because the meeting is remote and there are no travel and lodging costs. Professional Development programs showed strong attendance despite the need to delay some workshop due to a last-minute personnel loss. Rescheduled workshops will be held nonetheless. Workshops were in 6 languages including Arabic and Hungarian.

Suzy added that 2022 Drosophila Conference will be in-person, in San Diego, CA. Mark your calendars for April 6-10. Search continues for a venue for 2023. Depending on the site, we may need to rotate posters during the meeting instead of having them up at all times. Suzy will have options to present to the Board in May 2021. Drosophila Conference will join TAGC in 2024 March 6-10, in Washington DC.

In the Q&A, GSA staff explained that remote conferences are very expensive with the cost of technology and staff. But they could offer low registration costs which increased attendance and this, together with the grants, means we will be a little above break even. Several sponsors are lined up. In general, hybrid meetings are more expensive to run than fully remote.

Hugo Bellen reports that the fly community is well represented on GSA board with several fly people as members. Tracey DePellegrin has done an outstanding job and GSA is in good financial position. The new GSA president will be running a public communication and engagement committee, to communicate genetics to the outside world. GSA is in tune with the Drosophila Board when planning meetings and it is important for the Board to work with the GSA. A key issue of concern is Flybase. There is a shortfall of 6-8M\$ to support all model organism databases (yeast, worm, etc.). These concerns were raised in 2016, communicated to the NIH director Collins, and gathered 11K signatures in support of Fly base and stock centers. It may be time to do the same again. GSA wants to make sure support is there in the community. GSA will write letters, etc.

To sustain support for community resources, there is need to better integrate with other model organism communities. Vertical integration: will work on a problem together, e.g. develop a drug in fly, collaborate to test in fish. Horizontal integration: geneticist, bioinformatics, etc. work together rather than a typical RO1. Hugo warns that biology is moving into big science. There is tremendous interest in the NIH to integrate model organism research. Exactly how it is done will be up to the programs and program directors. He gave examples of the Gene Matcher program where someone interested in working on gene X in fly will be matched with a worm person interested in gene X. This could happen for human disease genes. There has been NIH Webinars in coordination with GSA to talk about these efforts. In response to a Q, Hugo added that NIH will be looking for diversity and inclusiveness in the teams.

c. ADRC organizing

i. 2021 ADRC, draft-report (Nasser Rusan, Amy Kiger).

Nasser Rusan reported on the 2021 ADRC, focusing on how it is different from the previous conferences. The committee had 6 instead of 4 members and was co-chaired by Rusan and Kiger. 209 talks were chosen from 439 abstracts and 80% of the speakers are non-PI and 55% are female. Plenary talks went from 12 to 16 and will include 4 non-science DEI talks, to elevate DEI issues to plenary status. Based on feedback from a community survey the fully remote meeting will be over 2

weeks . In week 1, there will be a plenary session each morning. This is recommended even for on-site meetings, to bring the community together each day. Concurrent platform sessions will occur each afternoon except on Sat to give free time.

Week 2 will feature technology talks and workshops in the afternoon. Posters will be presented twice through the week.

Sunday between two weeks: comment with the community events.

Three other changes are noteworthy. First, the selection of session chairs. The organizers got a list of 975 registered PIs from the GSA and they were grouped according to Pubmed results, career stage, demographics, etc. Information gathering was split among the organizers. This effort identified 192 potential chairs, from which 36 were selected. This process was meant to shift the focus away from the usual practice of selection chairs from people we know. Trainees co-chairs were selected mostly (75%) from self-nominations in response to a twitter call. The organizers recommend a formal way for self-nomination for PIs and trainees in the future.

Second, abstract submission. Registrants were asked to select a primary and secondary key word from 70 keywords given. This allowed each abstract to be considered by chairs of two distinct sessions. In some cases, abstracts ended up in a session that the author had not even considered and this will allow them to reach a new audience.

Third, a DEI platform session (different from plenary DEI talks). This will feature talks on practicing innovative inclusions, tools to advance research excellence, fly community driven work and initiatives.

Finally, Fly Art submitted in response to a twitter call will be featured on T shirts and a calendar. Michelle Arbeitman is the driver behind this.

ii. **ADRC 2022, organizing committee constitution, meeting-format (Erika Bach)**

Erika Bach thanked the 2021 organizers for sharing valuable plans and documents including emails. The 2022 meeting is currently scheduled as in-person, in April in San Diego. Three additional members have been added to the committee.

Q&A: Leanne Jones asked whether we are still tracking junior faculty and if there are any data. The answer is 'no'. Jones is willing to work with the GSA in this effort. Bruce Edgar asked about international representation among session chairs in 2021. Rusan answered that there are 4 international chairs among the 36. It was recommended that in the future, efforts should be made to make sure international PIs are better represented.

d. **Highlights from stock centers, resource centers and resource development; 5' each please.**

i. **Bloomington Drosophila Stock Center (BDSC; Kevin Cook)**

Kevin Cook reported that 2020 was challenging but the worst is behind us. Shipment was stopped for 2 months and orders were down, yet the Center still had to pay 1.5 times for hourly workers. Stock orders have rebounded to 95% of typical and they expect to break even this grant year. The calendar year saw an 18% fee increases to offset inflation and expanded operation, not COVID-related. This is the first increase for several years. Stock collection continues to expand to 78K stocks and there is a better management system in place. The split GAL4 in fly intestine project is completed and is on the

website already. US Postal service melt down in 2020 made shipping difficult. New delivery options now include UPS or overnight. Shipping to the UK is by international mail only and continues to be problematic. Cook urged the UK rep to talk to the UK regulatory agencies and the rep replies with the need to wait until BREXIT settles down.

ii. Vienna Drosophila Stock Center (VDRC; Lisa Meadows)

VDRC reports similar experiences in 2020 as Bloomington. Orders are back to normal the last quarter but they took a financial hit. No fee increase this year because of a big increase last year. They anticipate financial pressure for a long time. 20% of their funding is from the Austrian government and it is not happy about supporting resources used internationally. So, there may be need to increase user fees further. In general, shipping has not been an issue except to the UK because of BREXIT.

(There was no verbal report from the Tokyo stock center but Mariana notes that similar issues are noted in the written report and that work on a cryo-preservation method in the same report is worth a look.)

iii. Drosophila Genomics Resource Center (Andrew Zelhof)

Andrew Zelhof thanked the fly community for sending them reagents. Pandemic hit early in the FY but the departure of a research associate for grad school meant reduced salary costs, so they will break even in this FY which ends in March. Shipping by FEDEX only shipping problems is an ongoing issue. Zelhof asked the community to check out new reagents on the webpage and to share the newsletter with lab members and they have only PI's emails.

iv. DSRC/TRiP (Stephanie Mohr)

Stephanie Mohr reports that the DSRC is in its 15th yr., described the current offerings and gave an update on new efforts in three technology groupings.

Cell: DSRC performs RNAi screens in house with collaborators or ship reagents as requested. This is expanding to RNAi in mosquitoes and CRISPR sgRNA libraries with capability to do both CRISPRa and CRISPRi screens. New tools will include new cell-based assays, libraries, and species including other arthropods and new Cas types.

In vivo: continues to make shRNA stocks for RNAi based on community request and human disease connections; SgRNA stocks for CRISPRi and a; Double sgRNA lines for knocking down pairs of paralogs. Next tools will include: inducible split GAL4, LexA-QUAS-shRNA for combination use with GAL4; binary systems; and Nano-body recognized epitope tagged stocks.

Bioinformatics: a suite of tools such as DIOPT, RSVP, etc. ortholog search is the most popular tool. New: scRNAseq data mining, CRISPR guide search for mosquito. Infrastructure improvements by HMS IT has been helpful.

Funding: Traditionally funded with an RO1 for DRC and an RO1 for TRiP, they have transitioned to a p41 and are in year 3 of funding. They have ORIP R24 grants for reagent making but will need to continue getting these.

v. Gene disruption project (GDP) and Human cDNA project (Hugo Bellen)

Hugo Bellen described their continued effort to tag all genes with GAL4. The plan is to replace the entire reading frame with GAL4, so one can use UAS-GFP to see expression or excise T2A GAL4 to make mutants. Problem: efficiency. Solution: added guide sequences flanking the insertion, to make excision more efficient. In collaboration with Perrimon, they have made 2500 T2A GAL4 stocks. But they are running out of support and NIGMS will fund just one p41. An application to ORIP is pending. The ultimate goal is to tag (replace) 10,000 genes with human homologs. The same technology works in Zebrafish and the group is planning to start this project. In collaboration with Sue Celniker, an effort is on-going to rescue fly mutants with human cDNA. 5000 transgenics have been made in collaboration with Tokyo stock center.

- e. Flybase (
 - i. Highlights (Susan Russo Gelbart)
 - ii. Funding situation and progress with the Alliance (Norbert Perrimon and Brian Calvi)

Susan Russo Gelbart said thanks to the community for paying Flybase fees. Please keep contributing and tell your colleagues to contribute.

Perrimon: Flybase team is doing well. They will make links available to access scRNAseq results.

Perrimon and Calvi describe a dire situation regarding funding for Flybase. Funding for Flybase is up for renewal in 2023 and the budget will be half of 2016 budget. Alliance is funded by an U24 grant that will expire in 2014. Flybase gets some funds from the Alliance but even with that and a supplement from the NSF, they will need funds to cover the rest. Fees help but is not a major contribution to Flybase. Yeast, worm etc. websites are going away and will be just Alliance. <https://www.alliancegenome.org>. The fly community wants to keep Flybase operational to make information of high value to fly people available (this could be lost in Alliance website). As Hugo mentioned, they plan to contact the NIH to tell them about the issues. A letter is being drafted from Alliance to Francis Collins. Will need letter of support from the GSA and the Fly Board. There is need to keep the community excited. Without sufficient funds, Flybase will need reduce what they do.

Q&A. The attendees asked what other support letters would help. From Societies? From other communities (HHMI, Wellcome, Gates, etc.)? There was a question about having additional channels of communication with Collins. There was a suggestion to make the point that of 25M\$ devoted for model organism research, only a small fraction is needed to keep Flybase and stock centers going, without which we will not be able to work.

3. Dan Lindsley award for service to the fly community? (led by Mariana Wolfner)

Nassar Rusan and Amy Kiger presented the rationale for a new award. In selecting the keynote speaker for the 2021 fly meeting, they recognized the contributions of the candidates not just to science but to the whole fly community. There is GSA service award but fly service award. After discussion, there was agreement among the attendees to make a service award but the question of naming it after Dan Lindsley is to be shelved for the next Board Meeting.

4. Call for a new meeting:

Another Board Meeting will be scheduled soon after the fly meeting. We will discuss the Mission Statement, updates for the Board website, and naming the service award.

Minutes, Drosophila Board meeting June 1, 2021

Minutes from a Zoom Fly Board meeting that occurred on June 1, 2021. This is a second Zoom Flyboard meeting that happened in conjunction with the 2021 ADRC because there were remaining items for discussion. Past President Mariana Wolfner and President Tin Tin Su ran the meeting.

Drosophila Community Members in attendance were: Mariana Wolfner, Stephanie Mohr, Helena Araujo, Lydia Grmai, Alexey Veraksa, Justin DiAngelo, Susan Russo Gelbart, Tin Tin Su, Kevin Cook, Erika Bach, Brian Calvi, Thomas Kaufman, Andrew Zelhof, Julie Brill, Ana-Maria Raicu, Tânia Reis, Suzy Brown, Michelle Arbeitman, Debbie Andrew, Rachel Smith-Bolton, Jessica Treisman, Nicolas Tapon, Michael Welte, Brian Lazzaro Norbert Perrimon, Nadia Singh, Tatsushi Igaki, Elizabeth Rideout, Brian Oliver, Cale Whitworth, Nasser Rusan, Tracey DePellegrin, Bruce Edgar, Leanne Jones, James Thompson, Lisa Meadows, Hugo Bellen

A) The first discussion topic was Flybase funding cuts and how to maintain support for Flybase that was led by Mariana Wolfner. A letter from the Flyboard was sent to NHGRI director Dr. Eric Green and NIH Institute directors. A letter of response from Dr. Green was received and discussed. The letter from Dr. Green indicated that the cuts were made in consideration of the broader community that NHGRI serves. A discussion about finding alternative funding sources for Flybase ensued.

Outcomes of the conversation include:

- 1) The fly community should look to partner with other NIH institutes, beyond NHGRI. This could be through direct contact with NIH institute directors.
- 2) Partnerships with other model organism databases could be considered to enable trans-NIH funding.
- 3) Encourage Drosophila colleagues to pay the Flybase fees to help maintain support. A consideration of equity is needed when charging fees.
- 4) Consider other ways to present a case for funding Flybase. One suggestion was to use the GSA blog to discuss curation efforts. Another was to make clear that the Drosophila community has training and outreach supported by Flybase.
- 5) Drosophila colleagues can apply for grants for computational tool development and include support for Flybase curators. The Flyboard can help by letting colleagues know to consider this approach.
- 6) There have been efforts to obtain funding from HHMI, Gates, and Chan Zuckerberg, but none of those approaches have led to support of Flybase.
- 7) Other countries' funding agencies have provided support, though it is much less than NIH/NSF amounts, and that is an ongoing conversation.
- 8) The idea of a stand-alone White Paper for Flybase was discussed (see below).
- 9) The funding cuts will impact development of new tools, especially after 2022. This could have a big negative impact on the Fly community, since the science will be moving forward but it may not be accessible from Flybase.

B) The second topic of discussion was regarding implementing a new Service Award for Drosophila colleagues that was led by Mariana Wolfner. There was conversation that the idea of a Service Award was presented to Mariana by a Drosophila colleague and by the ADRC 2021

committee. The Flyboard voted and it was unanimous in favor of implementing a Service Award. There was another unanimous vote in favor of having one Service Award granted each year with a range of colleagues eligible for the award, including faculty and Drosophila community members not in faculty positions. There was discussion about whether the Service award should be named for a member of the Drosophila community that passed away. By a unanimous vote it was decided against naming the Service Award for a colleague. A committee will be formed by President Tin Tin Su to write a policy for the Service Award.

Discussion of Service Award:

- 1) There was a discussion about naming of the award. Several people discussed whether it would be fair to name the award after one colleague, since we have so many outstanding colleagues. It was suggested that when the policy is written for how the award be granted that colleagues that have passed away and had outstanding service contributions can be mentioned as examples. It was also noted that we can have a way to honor colleague posthumously through a webpage. There was strong support for not naming the award after one colleague, with many issues raised about naming the award.
- 2) Items to consider when drafting the policy were discussed and included the following. The award should be the same each year, with the awardee being offered the choice to make a short presentation at the fly meeting, as one suggestion. The committee drafting the policy can consider whether the award alternates between a faculty member and non-faculty member each year. This is the intent of the Fly Board as long as there are deserving nominees each year. Another thing to consider is to allow nominations to remain active for several years.
- 3) The policy should be written to take into account colleagues that may have non-traditional service roles and should allow for fluidity.
- 4) There should be equity across years in granting the award.
- 5) Language for the award could include: "in the spirit of contributions to the community by _____, we established a service award"

Tin Tin Su provided time for two announcements:

C) The third topic of discussion was about the European community starting a Drosophila society. Nick Tapon announced that there is a webpage that details the leadership positions and committees, if people would like more information. (<https://europeandrosophilasociety.org/>)

D) There was an announcement from the trainee representative, Ana-Maria Raicu, that there is survey for graduate students in Drosophila laboratories. It was requested that the survey is forwarded to students. (<https://forms.gle/ztz3XLDCDmjTR5TL8>)

E) The fifth topic of discussion was the Flyboard mission statement and updating the Wikipage for the Flyboard. Bruce Edgar and Tin Tin Su provided discussion topics. There was discussion about refining the statement, with it being more Drosophila community directed. We should clarify the mission and take an opportunity to make changes. The statement should be succinct

and timeless. It was decided that a committee will be formed by Tin Tin Su to work on the mission statement and update the Wikipage.

Items that should be considered:

- 1) Descriptions about education and outreach are not detailed enough.
- 2) What are the roles of Flyboard regional representatives.
- 3) Who can update the Wiki and what is the process to update? Use this an opportunity to assign someone to be responsible for maintaining the content of the Wiki, with support from Flybase.

F) Tin Tin Su led a conversation about drafting a Drosophila White Paper. There was a consensus that a new Drosophila White Paper should be written, with the last one drafted in 2016. There was discussion that the White Paper is a critical document that funders/directors at NIH and NSF use to understand the goals of the community. If the topic is in the White Paper that indicates that it is important to the larger Drosophila community and has broad support. The goal is to lay out priorities for funding in the US, with a focus on resource priorities. Tin Tin Su will form a committee to draft the White Paper, with a completed draft by end of 2021.

Items that should be considered:

- 1) Should there be two White Papers, one for Flybase funding and one that covers a range of topics important for the Drosophila community. What is the most impactful way forward? The general consensus was that given the critical need for attention to Flybase funding, there will be a Flybase White Paper with important points incorporated into a separate comprehensive White Paper.
- 2) In the past there have been project-specific White Papers, such as modEncode and 12 genomes.
- 3) Should there be an essay publication that is built from the White Paper.
- 4) How should topics like DEI, impact of Covid and other non-resource topics be considered in the White Paper?
- 5) It was noted that in the past the Flyboard presidents wrote the White Paper.
- 6) Is there a way to get Drosophila community input without having an expensive in-person meeting?

Tin Tin Su brought up the question of demographics in the fly community. She will work with Tracey DePellegrin (GSA) to determine what information already exists.

Action items:

1. Tin Tin Su will form a service award committee.
2. Tin Tin Su will form a Flyboard Wikipage/Mission statement committee.
3. Mariana, Tin Tin and Michelle will meet to draft the White Papers and circulate for comments.

FINAL MEETING MINUTES (11/04/21)

A special meeting of the Flyboard occurred on October 27, 2021 to discuss Diversity, Equity and Inclusion (DEI). The meeting was led by Flyboard President Tin Tin Su. Before the meeting Tin Tin provided the Flyboard three powerpoint slides that outlined the agenda and served as a framework for the discussion (provided below). The third slide has a set of action items that will be voted on by the Flyboard. Based on the discussion, there was broad agreement on nearly all items in the agenda, except for whether the Annual Drosophila Research Conference (ADRC) organizers should be required to include the Flyboard President/Flyboard in speaker decisions. The Genetics Society of America (GSA) executive director Tracey DePellegrin and GSA Scientific Editor Sarah Bay also provided information about GSA efforts.

Discussion points from the meeting:

- 1) Colleagues discussed that it would be useful for GSA to collect demographic information about our community, to help future organizers craft a meeting that reflects the diversity of our community.
- 2) It was proposed that the ADRC chair and committee should be provided with a timeline, and notes from previous organizers about best practices. A best practices statement should be written and provided to meeting organizers. This statement is envisioned to be a constantly-evolving document that will help to ensure consistency across years in having a diverse, equitable and inclusive meeting. The goal is to enact these new processes for the organizers of the 2023 ADRC.
- 3) It was proposed that a member of the ADRC committee be designated as the DEI representative for the group, and part of each ADRC committee meeting should devote time to considering how the group was proceeding with respect to DEI.
- 4) Given there was not broad agreement regarding including the Flyboard President/Flyboard in ADRC speaker decisions, it was suggested that the ADRC committee considers Flyboard and GSA as a resource to support their efforts. Board members expressed appreciation for the tremendous amount of work that goes into organizing the ADRC and understand that appointing an organizing committee requires trusting that they will do the best they can.
- 5) While not on the agenda, the idea of a land acknowledgement was suggested. The idea was to be respectful of indigenous people who historically lived in the regions where a given ADRC meeting occurs. This could happen at the 2022 meeting if the GSA DEI committee can help with a statement. It was noted that these acknowledgements are most effective if accompanied by concrete actions; with respect to this it was noted that the Fly community does have scholarships and outreach efforts.
- 6) There was discussion about changing the ADRC format to broaden the types of colleagues considered for plenary talks. One idea was a plenary-style session for pre-faculty, with speakers selected from the platform talk abstracts.

The next step is for the Flyboard to vote on the action items in slide 3.

Slide 1

10/27/21 Special meeting of the Fly Board

1. SAFE SPACE
Be open to & respectful of different perspectives

2. Seek to understand as you would want to be understood

3. This is not about good person/bad person

4. Lean into the topic, but be aware of what makes you uncomfortable

5. We all want to make the community welcoming and inclusive, even if we disagree on how to go about it

Meeting rules, modified from a CU training module courtesy of Tania Reis

Slide 2

Focus for Today's 1 hour meeting

Less on describing the problems and more on discussing solutions. We will use this time to come up with concrete action items for the Fly Board.

Agenda: potential action items

GENERAL

- Discuss keeping a database of fly people from traditionally under-represented groups that can be mined for names of speakers, committee members, etc.
- Discuss adding to Fly Board reps from HBCUs, other minority serving institutions, or community colleges.
- Improve the fly demographic database through a survey. (GSA data are from surveys with 30-40% response rate and do not include many categories. These show a community that is 2/3 white and 1/3 other categories regarding ethnicity.)

COMMITTEES

- Develop a mechanism for orderly transfer of information from each committee one year to the next
- Generate a timeline of what each committee does when (rushing can lead to you picking people you are familiar with).

CONFERENCES

- Discuss advising organizers to match or do better than what demographics suggest.
- Decide whether ADRC committee should share their plenary choices with the Board before inviting.
- Discuss how to develop a broadly advertised and accessible process for all speaker nominations (including self-nomination).
- Tracey: GSA E&I committee will share what they are working on to make conference experience more inclusive and equitable.