

Accepted Manuscript

The Power of Discussion: Support for Women at the Fungal Gordon Research Conference

Meritxell Riquelme, M. Catherine Aime, Sara Branco, Alexandra Brand, Alistair Brown, N. Louise Glass, Regine Kahmann, Michelle Momany, Antonis Rokas, Frances Trail

PII: S1087-1845(18)30200-7
DOI: <https://doi.org/10.1016/j.fgb.2018.09.007>
Reference: YFGBI 3157

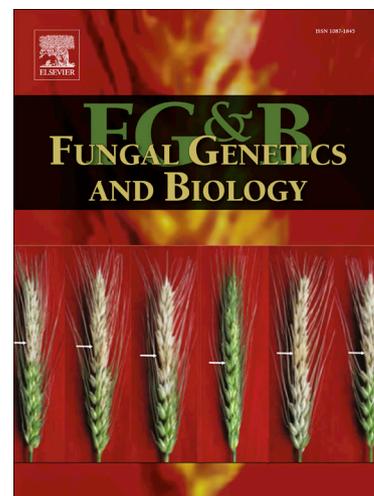
To appear in: *Fungal Genetics and Biology*

Received Date: 19 September 2018

Accepted Date: 21 September 2018

Please cite this article as: Riquelme, M., Catherine Aime, M., Branco, S., Brand, A., Brown, A., Louise Glass, N., Kahmann, R., Momany, M., Rokas, A., Trail, F., The Power of Discussion: Support for Women at the Fungal Gordon Research Conference, *Fungal Genetics and Biology* (2018), doi: <https://doi.org/10.1016/j.fgb.2018.09.007>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



The Power of Discussion: Support for Women at the Fungal Gordon Research Conference

Meritxell Riquelme^a, M. Catherine Aime^b, Sara Branco^c, Alexandra Brand^d, Alistair Brown^e, N. Louise Glass^f, Regine Kahmann^g, Michelle Momany^h, Antonis Rokasⁱ, and Frances Trail^j.

^aDepartment of Microbiology, Centro de Investigación Científica y Educación Superior de Ensenada (CICESE), Ctra. Ensenada-Tijuana No. 3918, Ensenada, Baja California, 22860, Mexico.

^bSystematic Mycology and Microbiology Laboratory, United States Department of Agriculture, Agricultural Research Service, Building 011A, BARC-W, Beltsville, MD 20705, USA

^cDepartment of Microbiology and Immunology, Montana State University, Bozeman, MT, 59717, USA

^dMRC Centre for Medical Mycology, University of Aberdeen, School of Medicine, Medical Sciences & Nutrition, Institute of Medical Sciences, Foresterhill, Aberdeen, Aberdeenshire AB25 2ZD, United Kingdom.

^eAberdeen Fungal Group, University of Aberdeen, Department of Molecular and Cell Biology, Institute of Medical Sciences, Aberdeen AB25 2ZD, UK

^fThe Plant and Microbial Biology Department, University of California, Berkeley, California 94720-3102 lglass@berkeley.edu.

^gMax Planck Institute for Terrestrial Microbiology, D-35043 Marburg, Germany

^hFungal Biology Group and Department of Plant Biology, University of Georgia, Athens, Georgia, United States of America

ⁱDepartment of Biological Sciences, Vanderbilt University, Nashville, TN, USA

^jDepartment of Plant Biology, Michigan State University, East Lansing, MI 48824-1312, USA.

Gordon Research Conferences (GRCs) are famous for fostering insight through wide-ranging discussions of cutting-edge science. In addition to the hallmark GRC scientific program, participants in the 2018 GRC on Molecular and Cellular Fungal Biology gained powerful insights into ways to better support women in science. Since 2016, GRC conference organizers have had the option of including The GRC Power Hour™ discussion session focusing on the challenges that women in science face (<https://www.grc.org/the-power-hour/>). 2018 was the first year that the GRC on Molecular and Cellular Fungal Biology included the Power Hour and it was such a rousing success that it is sure to be continued in the future.

Ca. 80 people, or roughly half of the conference participants, attended the Power Hour. The attendees included both males and females as well as junior and senior scientists, and spanned the diversity of attendees of the conference (Fig. 1). Current problems that women face in STEM (Science, Technology, Engineering, and Mathematics) were presented, including statistics on gender imbalance (<http://uis.unesco.org/en/topic/women-science>, (Holman et al., 2018)), a gender pay gap

(<https://www.newscientist.com/article/mg23731670-100-how-the-gender-pay-gap-permeates-science-and-engineering/>), and sexual harassment (<https://www.nap.edu/resource/24994/Sexual%20Harassment%20of%20Women%20ReportHighlights.pdf>).

Participants then broke into smaller groups for engaging, lively discussions on these and other topics (Fig. 2). Here we share with the broader fungal community the main issues that were discussed at the Fungal Power Hour and some of the simple strategies participants suggested (Fig. 3) to improve our field's support of women investigators.

1. **Unconscious gender bias.** As the name suggests, this refers to bias of which we are unaware. Suggested strategies for reducing unconscious bias against women in science are:

- Be aware that unconscious bias exists in science and guard against it. An excellent source for information is the Unconscious Bias Project (UBP) founded by graduate students at the University of California Berkeley:
<http://unconsciousbiasproject.org/>
- Make sure that women are represented on search and hiring committees, and that the evaluation of female candidates is discussed in a gender neutral and respectful manner. If your institution does not have a policy requiring diversity on search committees, consider suggesting that one be added. Though the dangers of over-burdening women with committee service is real and ongoing, representation on search and hiring committees are critically important for making sure that all candidates receive fair consideration.
- Biases in letters of recommendation are widespread and well documented (women tend to be 'caring' and 'organized', while men are 'brilliant' and 'outstanding'); <http://www.sciencemag.org/careers/2016/10/recommendation-letters-reflect-gender-bias>). Follow some basic guidelines to avoid bias in reference writing (https://csw.arizona.edu/sites/default/files/avoiding_gender_bias_in_letter_of_reference_writing.pdf; <https://www.chronicle.com/article/How-to-Write-a-Good/45944>). If you see a biased recommendation or nomination that someone else has written for you, consider requesting that it be improved as follows, "I notice you did not mention my ability to [XYZ]. Will you please add something on that?"
- Many participants noted that in committee and group discussions suggestions made by a female might not receive consideration, while the same suggestion made later by a male is accepted (<https://www.nytimes.com/2015/01/11/opinion/sunday/speaking-while-female.html>). If you first introduced the idea, you can note that with something like the following, "Yes, that is what I meant by my earlier comment. I am glad you agree."
- Be mindful that lab duties are assigned fairly. Many female graduate students and postdocs in the audience noted that they had more duties in the lab than their male labmates and that these duties were more traditionally female "housekeeping" chores. Many female PIs recalled

experiencing this same thing when they were in junior positions. One suggestion for avoiding gendered assignments is to have tasks rotate among lab members. Promote inclusive lab environment, with equal opportunities and expectations (<https://www.nature.com/articles/laband0209-69>).

- Encourage meeting organizers to invite diverse speakers (Casadevall, 2015). Help update and share the Women Researchers in Filamentous Fungi and Oomycetes (WRIFFO) spreadsheet:

<https://docs.google.com/spreadsheets/d/1WtS8Hz5r1cvMgg1m736Pi2jlpk1HYhxuXfilmVhgf78/edit#gid=0>

- Encourage Scientific societies to implement committees dedicated to promoting diversity and inclusion. These committees can work to promote diversity across societies including in officers and award recipients. The Mycological Society of America (MSA) Committee on Diversity and Inclusion is a good example. After publication of two studies on gender imbalance in Mycology (Branco and Vellinga, 2015); <https://msafungi.org/PUBLICATIONS/INOCULUM/InoculumMarch2018/DiversityintheMycologicalSocietyofAmerica.aspx>, the MSA has dedicated efforts to implement measures to promote diversity, including a membership survey and the establishment of the Diversity Award aimed at recruiting members from underrepresented groups.

2. **Work-life balance.** This concept includes finding a healthy mix of "work" (career and ambition) and "lifestyle" (health, pleasure, leisure, family and spiritual development/meditation). Though this can be a challenge for everyone in science, women are more often carrying the load at home and work. Suggested strategies for encouraging work-life balance included:

- Recognize the need for flexibility. Although achieving an effective work-life balance relieves work-place stress, external commitments also can be a source of stress, particularly for caregivers whose plans can be disrupted by unforeseen events. All people have times in their lives where they have increased responsibilities at home and have to temporarily reduce responsibilities at work. With planning, it should be possible to reduce "extra" assignments (such as committee work, outreach, etc.) during these periods, without being pressured or shamed. Even in the most supportive of environments, the feeling of being over-extended and not meeting our own expectations or those of others at home or at work can be a problem. Know your work-related rights and responsibilities as set out in Institutional guidelines and address any issues with management as soon as they arise. Agreeing to a plan with all involved will reduce the stress on all parties.
- Be thoughtful about CV gaps. If someone has a gap in his or her CV it should not be assumed that the gap detracts from the person's career trajectory. There are many different factors that can cause CV gaps, many of which are unavoidable. Be mindful, however, that hiring committees should not ask about personal lives and it is now illegal in many countries to ask personal questions during the interview process.

3. **Pay-gap bias.** The differences between men's and women's salaries for the same jobs are well-documented. Suggested strategies for narrowing the pay gap included:
- Know your worth. It was noted that many universities in the US are required to post salary information online. Salary information can also be found in online resources such as the Chronicle of Higher Education's salary data, (<https://data.chronicle.com/>). Several commented that Universities want to compare people in exact equivalents, and often this is a really small cohort, not statistically relevant, or they point to the few women who have made high salaries as proof of equity, so be sure to do your research.
 - Negotiate upfront. Several participants noted that in dual career couples, if the female gets a job offer, the deal for the male spouse is often significantly better than when the situation is reversed. Several suggested that, as much as possible, couples should negotiate details upfront and in writing to avoid a stall in the trailing spouse's career.
4. **Sexual harassment.** This includes many types of inappropriate behavior. In addition to unwanted physical or sexual advances, unwanted sexual statements or personal attention are also considered "conduct of a sexual nature". Suggested strategies for dealing with sexual harassment included:
- Know the procedures at your institution. Take advantage of training opportunities at your institution and encourage people in your group to do so as well. While policies on sexual harassment are very well established in the US, these may be vague or non-existent at many universities or research centers outside the US. Thus one of the main problems faced by an individual suffering sexual harassment is knowing what actions can be taken. As best as you can, advocate for making policies clear and well-publicized.
 - Endorse a code of conduct and no-harassment rules at Fungal meetings, similar to what the GRC announces at the beginning of conferences (<https://www.grc.org/about/grc-policies-and-legal-disclaimers/>). See also Safe Evolution for Society for the Study of Evolution meetings (<https://www.evolutionmeetings.org/safe-evolution.html>).
 - Encourage people to speak up when they feel it is appropriate to do so. This can be a difficult and draining process.
5. **Awareness:** what else can our communities actively do?
- Write about the gender gap in science (See for instance (Holman et al., 2018).
 - Peer reviewing – Promote fair peer-review (e.g., that does not benefit men, for example) and recruit a diverse set of reviewers. Important for both publishing and funding!!
- <https://www.nature.com/nature/journal/v530/n7590/full/nj7590-373c.html>;
- <https://blog.frontiersin.org/2017/12/08/gender-bias-women-science-open-data/>
- <https://arstechnica.com/science/2013/12/women-face-global-disparity-in-scientific-publishing/>

- Awards – nominate, nominate, nominate! Women and minorities tend to be nominated for awards much less than men. A combination of active and conscious nominations and diverse award committees can easily shift the balance.

Acknowledgements

We would like to thank Abigail LaBella for sharing the pictures taking during the session and Felicia Wu for her suggestions. We are grateful to all the colleagues that helped leading the discussion groups and all the participants of the session.

References

- Branco, S., Vellinga, E., 2015. Gender balance in Mycology. *Inoculum* 66.
- Casadevall, A., 2015. Achieving speaker gender equity at the American Society for Microbiology general meeting. *MBio.* 6, e01146.
- Holman, L., et al., 2018. The gender gap in science: How long until women are equally represented? *PLoS Biol.* 16, e2004956.





ACCEPTED MANUSCRIPT



ACCEPTED MANUSCRIPT