

Welcome to new GSA staff members



Raeka Aiyar, PhD, has joined as GSA's new **Communications and Engagement Manager**, where she is working to strengthen the Society's communications activities—including social media, press, newsletters—and to engage the membership in many of these. Raeka has a BSc from the University of Waterloo (Canada) in

Biology and Bioinformatics and obtained her PhD in 2010 from the European Molecular Biology Laboratory (EMBL Heidelberg, Germany) in the lab of GSA member and *GENETICS* and *G3* Editor Lars Steinmetz. In addition to her diverse track record in genetics research (functional genomics, transcription, yeast genetics, bioinformatics, synthetic biology), she brings several years of experience in science communication and outreach. Raeka's interests in promoting and fostering quality genetics research, engaging with researchers worldwide, and advocating for scientists align with GSA's mission to support the genetics community. Please contact her at raiyar@genetics-gsa.org with your suggestions!



William Anderson has joined as the **Web Designer** for GSA and our sister society ASHG, the American Society of Human Genetics, where he handles everything from email blasts to designing and developing GSA webpages. Hailing from Silver Spring, MD by way of Washington, DC, William graduated from Bowie State

University with his BA in Fine Arts with a concentration in Computer Graphics/Graphic Design. He brings a wealth of diverse artistic knowledge and graphic design know-how to the Society. He has worked as a desktop publisher, web publisher, web developer, e-commerce coordinator, web designer, graphic designer, illustrator, production artist, web specialist, and front-end developer at companies ranging from small start-ups to major enterprise-level corporations. "I have a deep passion for web and graphic design," says William. "As an artist and designer I am not here to just point, click, and make things pretty, but to deliver our messages through the best design principles and practices."



SUPPORTING WOMEN on the tenure-track — 4 ways PIs can help

Lauren Dembeck

Lauren Dembeck is a GSA Trainee Representative and a PhD student in Trudy Mackay's lab at North Carolina State University studying the quantitative genetics of adaptation and speciation in *Drosophila*.

In the life sciences, there are now more female than male undergraduate and graduate students; however, with each subsequent academic transition, more women drop out of the running for a tenure-track faculty position. This phenomenon referred to as the "leaky pipeline" is evidenced by women holding a mere 18% of full professor positions in the biological sciences¹. Furthermore, Sheltzer and Smith recently published a study in the *Proceedings of the National Academy of Sciences* demonstrating that elite male principal investigators tend to employ fewer female students and postdocs². Given that academic pedigree and university prestige are important factors in university hiring decisions, this deficit may negatively impact the number of women hired for assistant professor positions. While we seem to have succeeded in encouraging girls to study biological

sciences at the undergraduate level, we still have much work to do in keeping those women in science past the graduate student level. Here are a handful of ways that professors can support women in pursuit of tenured professorship²:

Advocate for family support services on campus and flexibility from funding agencies. Female PhDs frequently cite marriage and childbirth as the primary reasons they opt out of an academic career³. In addition to the physical burden of childbirth and recovery, childcare is an extreme financial burden. For example, in 2010, the average annual cost of fulltime daycare for an infant in the U.S. was \$11,666⁴ – 36% of the NIH postdoctoral stipend and nearly half of most graduate student stipends^{5,6}. By offering subsidized, on-campus childcare, universities would simultaneously increase their attractiveness to high quality

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researchers and lessen the financial burden for cash-strapped female graduate students, postdocs, and young faculty members.

Additionally, while there are maternity extensions available for individual fellowships, there is no such extension for grants. GSA Board member Mohamed Noor of Duke University, who has mentored many successful female trainees, suggests that to ease the pressure on both PIs and postdocs or students working on a grant-funded projects, funding agencies could add an automatic 3-month extension to the grant if a student or postdoc working on that project has or adopts a baby.

Contact your colleagues to help with the “two-body problem”. 83% of female scientists have partners who are also scientists and a quarter of female PhDs marry PhDs³. In the highly competitive field of academia, finding one position is challenging enough; finding two positions in the same institute or city is especially difficult. PIs can work with graduate student and postdoc candidates to help their partners find positions by contacting other PIs at the same (or nearby) institute(s) on behalf of the partner. Even if there are no available positions at the time, the established network would be invaluable and could lead to future opportunities.

Annually discuss how to handle unacceptable behavior and harassment within your lab group. Microaggression and harassment, including sexual harassment, may contribute to women leaving academia⁷. Some students, postdocs, and faculty members may never have received any training on how to handle harassment. PIs can be proactive in preventing these issues by having a yearly discussion within their groups of what harassment entails and the procedures for reporting it to the institution’s Human Resources department. This may also prevent instances where cultural differences lead to misunderstandings. As the leader of a lab group, the PI should let all members of the lab, female or male, know they are respected and supported.

Ask for opinions from lab members and colleagues, especially females, when hiring. A PI is usually the sole decision maker when it comes to accepting graduate students and hiring postdocs into the lab. Unfortunately, PIs may unconsciously discriminate against female applicants by underestimating their qualifications⁸. To avoid unconscious gender biases, PIs can be proactive by asking their current lab members and colleagues to review and provide feedback on potential graduate student and postdoc applications. Implicit Bias tests available online (for example, <https://implicit.harvard.edu/implicit/> or <http://www.understandingprejudice.org/iat/>) can also be helpful in recognizing gender bias.

References

- ¹ National Science Board (2014) *Science and Engineering Indicators 2014*. <http://www.nsf.gov/statistics/seind14/>.
- ² Sheltzer, J.M. and Smith, J.C. (2014) Elite male faculty in the life sciences employ fewer women. *PNAS*, 111(28):10107-10112. DOI: 10.1073/pnas.1403334111
- ³ Rosser, S.V. and Taylor, M.Z. (2009) Why are we still worried about women in science? *Academe*. <http://www.aaup.org/article/why-are-we-still-worried-about-women-science>.
- ⁴ Child Care Aware of America (2012) Parents and the high cost of child care. http://www.naccrra.org/sites/default/files/default_site_pages/2012/cost_report_2012_final_081012_0.pdf
- ⁵ NIH, AHRQ, and HRSA (2014) Ruth L. Kirschstein National Research Service Award (NRSA) Stipends, Tuition/Fees and Other Budgetary Levels Effective for Fiscal Year 2014. <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-14-046.html>.
- ⁶ Patel, V. (2014) To Improve Equity, Focus on Stipends, Graduate Students Say. *The Chronicle of Higher Education*. <http://chronicle.com/article/To-Improve-Equity-Focus-on/144759/>.
- ⁷ Clancy, K.B.H., Nelson, R.G., Rutherford, J.N. and Hinde, K. (2014) Survey of Academic Field Experiences (SAFE): Trainees Report Harassment and Assault. *PLoS ONE*, 9(7): e102172. DOI:10.1371/journal.pone.0102172.
- ⁸ Milkman, K.L., Akinola, M. and Chugh, D. (2013) *Discrimination in the Academy: A field experiment* (Social Science Research Network, Rochester, NY). DOI: 10.2139/ssrn.2063742.

“DOMESTICATED ANIMALS’ JUVENILE APPEARANCE TIED TO EMBRYONIC CELLS”

—*Science News*, July 14, 2014



Why do domesticated animals share characteristics like floppy ears, white patches, and smaller snouts? In a *GENETICS Perspectives* article, Wilkins *et al.* propose a hypothesis that links many aspects of “domestication syndrome” with mild defects in neural crest cells.

Their hypothesis, and many adorable photos of puppies, were widely covered by the popular press and discussed on blogs and social media, including articles at *Science News*, *Slate*, *The Daily Mail*, *Mashable*, *Pacific Standard*, *The Economist*, *Psychology Today*, *AAAS Science Reports*, *Guokr*, *The Conversation*, *LiveScience*, *Australasian Science*, *io9*, *IFLS*, and the *Sydney Morning Herald*.

The “Domestication Syndrome” in Mammals: A Unified Explanation Based on Neural Crest Cell Behavior and Genetics. Adam S. Wilkins, Richard W. Wrangham, and W. Tecumseh Fitch. *GENETICS* July 2014 197:795-808

GSA JOURNALS SOCIAL MEDIA BUZZ



WOULD FRED SANGER GET FUNDED TODAY?

Yes, Fred Sanger would probably succeed even in today’s sluggish funding climate, argued Stan Fields in a *GENETICS Perspectives* article in June. His take attracted a lot of attention on social media and blogs. “I don’t think we’ve seen the last of game-changing ideas from individual scientists,” Fields told *Nature* magazine’s “Social Selections” blog.

Would Fred Sanger Get Funded Today? Stanley Fields. *GENETICS* June 2014, 197:435-439