

CORONAVIRUS

Supporting women in academia during and after a global pandemic

The COVID-19 pandemic has created many new challenges and also magnified ongoing issues. In September 2020, the COVID-19 “childcare crisis” led to women leaving the U.S. workforce at nearly four times the rate as men (1). For women pursuing careers in academic science, the pandemic has imperiled many. Not only are we dealing with lost childcare and other family supports but we also continue to face long-standing inequalities and structural barriers within academia.

More than ever, now is the time to challenge long-standing institutional traditions and policies that propagate gender inequity. Solving such widespread problems will not be easy, but with persistent effort and multi-pronged approaches, institutions can restructure academic science so that it supports and retains the best and brightest minds. The most progressive and successful institutions will break the antiquated mold of academic science and eliminate barriers to recruiting and retaining women in science.

Below, we suggest a series of policy changes and institutional investments that will support the needs of women scientists so that we can achieve gender equity in academic science. Until this system is built, we will continue to lose women at every career stage.

POLICIES THAT SUPPORT WOMEN IN SCIENCE

Academia needs to build a system that anticipates that every scientist is managing at least 50% of a household in addition to a laboratory (2).

1. Support trainees when they start families. Many women delay having children because they are explicitly or implicitly discouraged from having children while in training. It is long past time that we embrace families in science. This requires clear institutional policies on paid parental leave for trainees, financial support from both institutions and funding agencies for trainees on leave, support groups for young parents, better lactation support, and, critically, access to high-quality on-campus childcare (3).

2. Provide equal pay and equitable laboratory start-up funds for women. Women in science continue to be paid less and have lower start-up packages for their laboratories (4, 5). We need transparent reporting of salaries and start-up packages for all new professors.

3. Rethink the tenure clock. For many women, tenure and promotion decisions are made shortly after they start

families (3). For others, promotion coincides with the equally labor-intensive parenting of older children. Many institutions offer tenure clock extensions, forcing women to request a special dispensation. These practices are inherently sexist. Policies to bolster the careers of women will stop making women-friendly policies the exception and instead make them the rule. Extend the tenure clock to 10 years for everyone. Early tenure should not be offered because it perpetuates salary inequities. Additionally, institutional metrics for tenure should be clearly delineated.

4. Provide mentorship. Establish parent mentorship teams led by parents (men and women) who have successfully navigated the current academic structures with children. A support network and a sense of belonging are paramount for success.

5. Support team science in academia. Teamwork provides an opportunity for increased productivity, synergistic research, and continued momentum when an individual has caretaking responsibilities. While much of science is already done in teams, women are often placed in underrecognized “subsidiary” roles. Institutional support that fosters, funds, and recognizes people who participate in team science is one way to support scientists who are also parents.

6. Maintain options for virtual seminars and scientific meetings beyond the pandemic. One positive of the pandemic is that we have embraced virtual meeting options. Continuing to offer scientists virtual speaking opportunities alleviates some of the burden of travel on parents of young children and will enable them to accept more speaking engagements.

FUNDING FOR WOMEN IN SCIENCE

Policy changes are not enough. Long-standing gender inequity requires that institutions invest in women to create a stable foundation for their careers.

1. Childcare and childhood education. Institutions should establish or expand reliable, high-quality, and on-campus childcare for young children of both trainees and faculty. Institutions should also address the challenges of parenting older school age children. Parents of older children struggle with after-school and summer care, transportation, sick days, the rising cost of education, and managing their child’s online learning during the pandemic. Embracing scientists as parents means finding creative solutions for all stages of parenthood.



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2. **Specialized transitional funding.** Women drop out of the academic career track between postdoctoral training and the first faculty position. Entice women into faculty positions by offering transitional funding specifically for them, giving them a strong foundation to start their laboratories.

3. **Continued financial support.** Recent efforts by the NIH offering 1-year R01 supplements to PIs with a qualifying life event (of rather limited definition) must be broadly adopted, implemented, and expanded in scope. The challenges of parenthood extend well beyond infancy and early childhood into the teen years when parents are likely caring for aging parents, as well. In a work environment that does not support caretaking for women or men, the brunt of this work defaults to women.

4. **Creative financial solutions.** Develop novel ways to identify scientists at risk of leaving science and offer them bridge funding and supplements to carry their laboratories through episodes when caregiving roles might affect their ability to stay in science. A select few academic institutions pay for all graduate students, but most institutions require PIs to cover graduate student stipends on grants. Instead, institutions could support one to two trainees in laboratories where the PI is pre-tenure and a primary caregiver. Policies such as this would relieve the financial burden of supporting trainees with limited grant funds and assist caregivers in maintaining productivity.

These recommendations are just the first steps toward eliminating gender inequity in academic science. We hope that they spur discussion and action. These changes will ensure that women can fully pursue scientific careers, enriching the scientific enterprise with a wider range of perspectives and resulting in unique and astonishing discoveries.

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