## Testimony of Nicole M. Karn, PhD Before the Senate Workforce and Higher Education Committee Senator Jerry Cirino, Chair April 18, 2023

Chair Cirino, Vice Chair Rulli, Ranking Member Ingram, and Members of the Workforce and Higher Education Committee:

My name is Nicole Karn, and I am an associated professor of chemistry at The Ohio State University, where I have taught for eight years. Prior to OSU, I taught for four years at Ohio Northern University. I do not represent either university, but rather am submitting testimony as a private citizen in opposition to Senate Bill 83.

On March 16, 2023 Senator Cirino appeared on the Saving Liberty podcast to discuss SB83. In this podcast Sen. Cirino stated that he "[doesn't] want anybody to be discriminated against." If only this bill was intended to prevent discrimination against all people. It appears to me that this bill is intended to maintain white supremacy by making programs aimed at ending systemic racism illegal as evidenced by Sec. 3345.87 of the bill. Furthermore, this bill will lead to increased discrimination of faculty from marginalized groups (Black, Indigenous, and people of color) and women through a centering of student evaluations of teaching which are known to be prejudiced. I'll address each of these issues in turn.

It is well known within science, technology, engineering, and math (STEM) fields that women and minorities- Black and Brown people- are more likely to drop out of a STEM major or perform more poorly in STEM gateway courses than their cis white male peers (Harris et al.). Why is this? Often, the culture of STEM classrooms doesn't foster a sense of belonging, science identity, or self-efficacy for all students, and can lead students to feel stereotype threat. This is particularly true for students from historically excluded groups (women and black, Indigenous, and people of color). In many cases, this is because STEM courses are often taught by White men. Only 10.1 % of STEM faculty are from underrepresented groups (APLU INCLUDES Project) and only 34.5 % of STEM faculty are women (Yale Scientific). When students struggle to see themselves in their teachers and mentors, they often opt for other majors and careers in which they do.

This white male patriarchy is the culture that this bill wishes to maintain by making illegal the diversity, equity, and inclusion (DEI) practices that have been shown to improve student retention and learning (White et al., Tanner and references within). Banning DEI eliminates the acknowledgement of lived experiences of all students and turns those lived experiences into controversial beliefs. We need to acknowledge the lived experiences of all students to make sure that, as Sen. Cirino puts it, "no one is discriminated against." And, if the goal of

this bill is to "put students first" as Sen. Cirino has claimed on the Saving Liberty podcast, then clearly, banning DEI programs is not the answer. I'd encourage you to read the short Letter to the Editor published in Science called "Systemic racism in higher education." This letter, published in 2020, has four authors in addition to 10,234 signatories. Clearly, systemic racism is of utmost concern to thousands of STEM faculty.

I have been part of a working group within the Department of Chemistry and Biochemistry at The Ohio State University focused on improving the student experience in our gateway chemistry courses in order to increase retention and grades among historically excluded groups. To do so, we have focused on evidence-based inclusive teaching practices which include structured teaching and active learning. Specifically, we plan to implement problem-based learning in which students work together to solve challenging chemistry problems and to make space for peer mentoring. In order for these activities to work, faculty must enter the classroom with the expectation that all students can learn the material presented, but that each student enters with different exposures to the topics presented in the course. These types of activities have been shown to improve retention and grades for all students (Canning et al.), not just women and those from historically excluded groups. The Ohio State University has received \$2.5 million in funding for this project by the Howard Hughes Medical Institute Driving Change Program. Under SB83, this type of grant could not be awarded to an Ohio university.

I'd also like to draw attention to another aspect of SB 83 in which student evaluations will account for at least fifty percent of the teaching area component of faculty evaluation (lines 466-468). It is well documented that teaching evaluations are highly flawed and prejudiced against women and people from marginalized groups (Heffernan). Additionally, women and people from marginalized groups are more likely than their cis white male counterparts to receive abusive comments in open ended questions in teaching evaluations. Personally, I dread opening my teaching evaluations for fear of the kinds of comments I may receive as a woman. By mandating that student evaluations of teaching account for at least fifty percent of the teaching area component in faculty evaluations, this bill will discriminate against women and people in marginalized groups more than their cis white male peers. Furthermore, the provision in the bill that additional post-tenure review be required should a faculty member receive "does not meet performance expectations" within two of three consecutive years dictates that these post-tenure evaluations will result in the firing of women and people in marginalized groups more than their cis white male counterparts. We cannot let this happen.

I'd like to leave you with a quote by bell hooks from her book "Teaching to Transgress: Education as the Practice of Freedom." She states,

"... any radical pedagogy must insist that everyone's presence is acknowledged. That insistence cannot be simply stated. It has to be

demonstrated through pedagogical practices. To begin, the professor must genuinely value everyone's presence. There must be ongoing recognition that everyone influences the classroom dynamic, that everyone contributes."

Every student, no matter their political beliefs, is welcome and valued in my classroom, and while I can't speak for all faculty, I understand this to be overwhelmingly true at my university. You must consider the adverse effects this bill will have reducing discrimination against both students and faculty at Ohio Universities. I urge you to vote no on SB83.

## References:

- R. B. Harris, M.R. Mack, J., Bryant, E.J. Theobald, S. Freeman;, Reducing achievement gaps in undergraduate general chemistry could lift underrepresented students into a "hyperpersistent zone".Sci. Adv., **2020**, 6, eaaz5687(2020).DOI:10.1126/sciadv.aaz5687
- K. N. White, K. Vincent-Layton, and B. Villarreal; Equitable and Inclusive Practices Designed to Reduce Equity Gaps in Undergraduate Chemistry Courses, Journal of Chemical Education **2021** *98* (2), 330-339 DOI: 10.1021/acs.jchemed.0c01094
- K. D. Tanner, Structure matters: twenty-one teaching strategies to promote student engagement and cultivate classroom equity. CBE Life Sci Educ. **2013** Fall;12(3):322-31. doi: 10.1187/cbe.13-06-0115.
- T. Heffernan; Sexism, racism, prejudice, and bias: a literature review and synthesis of research surrounding student evaluations of courses and teaching, Assessment & Evaluation in Higher Education, **2022**, 47:1, 144-154, DOI: <u>10.1080/02602938.2021.1888075</u>
- J. Bennett, L. Lattuca, K. Redd, and T. York; Strengthening Pathways to Faculty Careers in STEM: Recommendations for Systemic Change to Support Underrepresented Groups, Lessons from the APLU INCLUDES Project

## Yale Scientific

https://www.yalescientific.org/2020/11/by-the-numbers-women-in-stem-what-do-the-statistics -reveal-about-ongoing-gender-disparities/

- E. A. Canning, K. Muenks, D.J. Green, M. C. Murphy, STEM faculty who believe ability is fixed have larger racial achievement gaps and inspire less student motivation in their classes. *Sci. Adv.* **2019**, 5, eaau4734, .DOI:10.1126/sciadv.aau4734
- P. H. Barber, T. B. Hayes, T. L. Johnson, L. Marquez-Magana; Systemic racism in higher education. *Science*, **2020**, 369, 1440-1441(2020).DOI:<u>10.1126/science.abd7140</u>