

Commentary

Closing the scissor-shaped curve: Strategies to promote gender equality in academia

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SUMMARY

Gender inequality in STEM fields remains pervasive and undermines the ability for talented individuals to excel. Despite advances, women still encounter obstacles in pursuing academic careers and reaching leadership positions. This commentary discusses the "scissor-shaped curve" and examines effective strategies to fix it, including data-driven initiatives that we have implemented at our university.

Introduction

The metaphor of an open scissors strikingly depicts the progressive decline in the representation of women at successive stages of the scientific and academic career trajectory (Figure 1). Women embark on these paths with equal enthusiasm and potential as their male counterparts. Yet, they often face systemic, cultural, and societal barriers that contribute to their underrepresentation over the course of an academic career path, particularly in senior roles. While early stages of the academic trajectory, including undergraduate and graduate education, show a notable balance in gender representation, this parity sharply diminishes at more advanced stages, such as for faculty and tenured professor positions. This disparity manifests as a "scissor-shaped curve" when the proportion of female and male scientists are plotted at each of the key career transitions. Indeed, these scissors curves can be found the world over, regardless of the scientific discipline or the particular country in which these data have been collected (see Figure 1A for representative scissor-shaped curves in the European Union [EU] and Switzerland).

While many in academia consider this to be a historical issue that has now been addressed, the scissors curves are far from being closed.^{1,2} This is despite numerous analyses showing that diverse teams are considerably more competitive in various respects, such as scientific output and impact, including from a recent analysis of 6.6 million papers across the medical sciences.³ The COVID pandemic has resulted in a further detrimental effect, negatively impacting the research productivity of women, particularly in medicine and social sciences.⁴

We are six women at various stages of our academic careers across different disciplines who have worked to promote gender equity and equality at our institution, the University of Lausanne, Switzerland. To provide context, Switzerland is viewed as a conservative society where women received the right to vote only in 1971, more than half a century after nations like Germany and the US. In the latest global equality ranking, Switzerland dropped eight places in 2023, indicating ongoing challenges that need to be overcome.

So, what drives the scissors effect, why does it persist, and what are the strategies we can implement to stem the flow of

talented women out of academia? These are some of the questions that we address in this commentary, endeavoring to apply a data-driven approach to understand and offer solutions to overcome these challenges. A historic approach of simply hoping this imbalance would disappear with time has not worked—a proactive, targeted, and multi-faceted strategy with unequivocal and sustained commitment at the national and institutional levels is essential to achieve gender equality.

Drivers of the scissors effect

The scissors shape results from a complex set of interconnected drivers that have been extensively studied in the literature.^{2,5,6} These include stereotypes and prejudices driven by gender bias that have been shown to impact hiring, salary, funding, research citations, consideration for prestigious awards, etc.; an academic culture that may not be supportive (or even hostile); challenges for women with responsibilities for family care, both child- and eldercare, which are still too often disproportionately the work of women; the need for more female role models, mentors, advocates, and sponsors; and



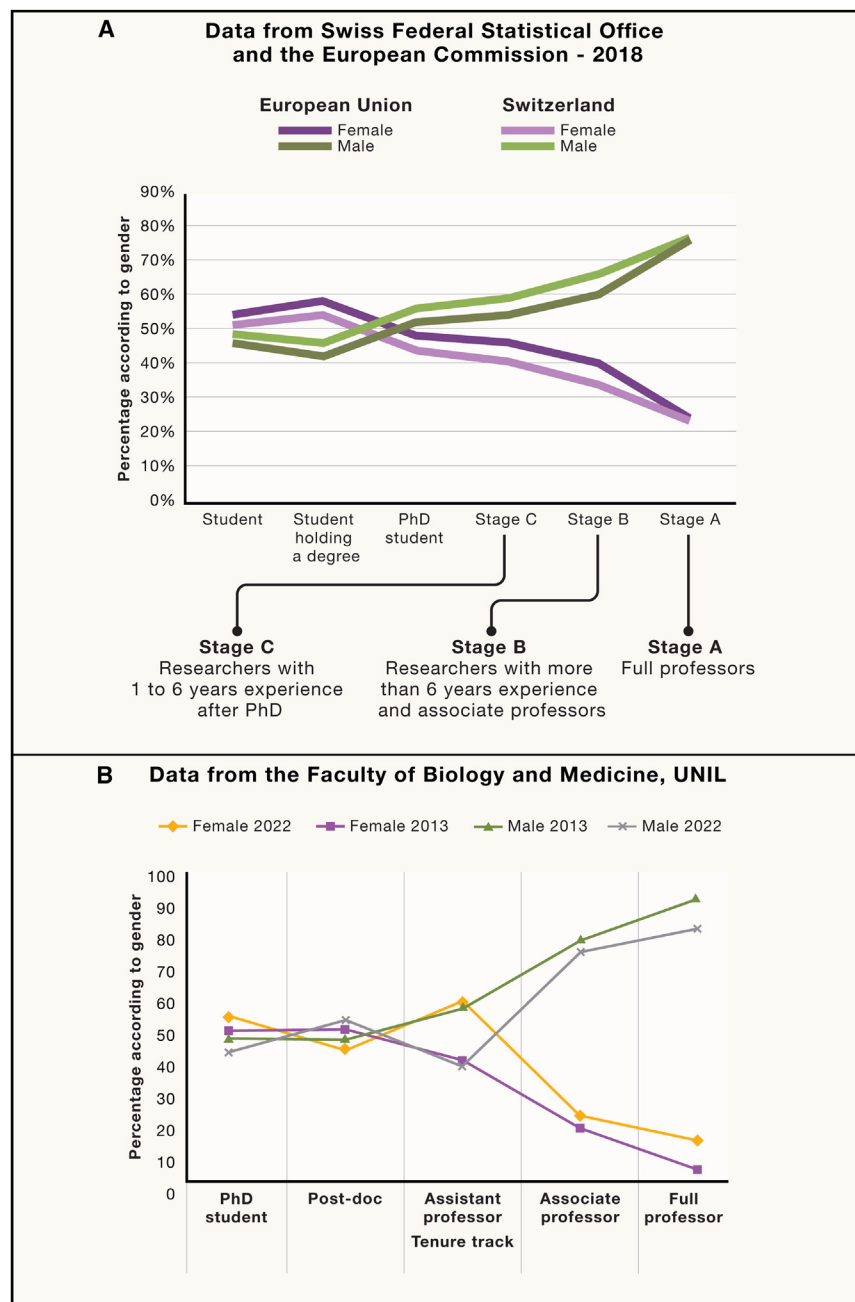


Figure 1. The scissor-shaped curves in STEM

(A) Data for the successive stages in the academic career trajectory, classified by gender, in the European Union and Switzerland in 2018, data collected by the Swiss Federal Statistical Office and the European Commission.

(B) Data classified by academic stage and gender for 2013 and 2022 from the Faculty of Biology and Medicine of the University of Lausanne, Switzerland, collected by UNISIS.

the substantial number of committees and excessive academic service with which senior women are often tasked. This also contributes to the so-called “minority tax,”⁷ whereby the under-represented group must develop the initiatives

needed to reverse a multitude of inequalities that were not of their making. This tax ends up adding even more to their workloads, siphoning away time from their core work—including research—which may further penalize those who

strive for an equitable academic environment.

Implicit bias can play a significant role in perpetuating gender inequality in science and academia, including in hiring and promotion commissions.⁸ Studies have reported that even well-intentioned faculty members can exhibit gender bias, rating male applicants as more competent and hireable than identically qualified female candidates.⁹ The finding that female faculty can be equally susceptible to unconscious bias against other women underscores the challenges we all face in identifying and overcoming this problem in our institutions.

The intersection of professional aspirations and family responsibilities often affects women disproportionately, including as mothers and as carers for elderly and ill relatives. Work-life balance is frequently listed as a major challenge faced by early-career researchers (ECRs). This highlights the importance of policies supporting flexible work arrangements, parental leave, and affordable childcare. Nonetheless, even when these policies are in place, recent surveys have reported historically high levels of dissatisfaction among ECRs worldwide. Younger generations, including all genders, view academia as less attractive. We have also observed this at our university, and this specific challenge is critical to understand and address.

While many of the interventions to close the scissor-shaped curve to date have been focused on the key inflection point of the transition from postdoc to tenure-track assistant professor, a comprehensive study of gender and retention patterns in the US found that a negative workplace climate emerged as the major reason senior women chose to leave tenured positions.¹⁰ Another recent study emphasized how the loss of female talent as a result of sexism is also a massive loss of public funding.¹¹ Together with the prevalence of sexual harassment in academia,¹² the challenges may seem insurmountable. These studies underscore not only the critical importance of hiring and promoting women in a fair and equitable manner, but also the need to build and cultivate research environments that are respectful, inclusive, and supportive to ensure that we retain these women.

In the following sections, we discuss strategies employed both nationally in

Switzerland and locally within our own university to address some of these gender-related challenges. We highlight a selection of key, impactful initiatives that are making advances toward achieving gender equality, several of which are part of broader equality, diversity, and inclusion (EDI) programs. We also highlight a key distinction between gender equity and equality. Gender equity entails tailoring support to meet individual needs, acknowledging that women may not begin from the same starting position as men, and thus paves the way for achieving gender equality. Gender equality champions equal opportunities and rights for all, irrespective of gender. It is also important to clarify that our focus on the strategies below does not imply they are the sole solutions to close the scissors curve. Instead, we offer these examples as informative suggestions, potentially beneficial for other institutions to consider in their own efforts to promote gender equity and equality.

Strategies to address inequality at the national and regional levels

In 2013, the revised [Swiss Federal law](#) on the promotion of research and innovation mandated that research organizations must ensure equal opportunities and achieve equality between men and women. This legislative change propelled Swiss universities and the Swiss National Science Foundation (SNSF) to embark on a detailed assessment of gender dynamics in academia. A recent [analysis of gender distribution](#) in academia shows a significant imbalance among professors across Switzerland's universities. Only 24% of professors are women, similar to the 26% observed across the 27 EU member countries. This disparity is even more pronounced in science, technology, engineering, and math (STEM) and medical fields, where women currently hold just [18% of full professorships](#), with even fewer in medicine. The SNSF, the major public funder of research and development in Switzerland, recognized the challenge of addressing this imbalance as a key objective. In addition to [surveys](#) of thousands of ECRs about the research climate, the SNSF commissioned an in-depth literature review entitled [Gender Equality Measures in Academia](#). This comprehensive report aggregates multi-

ple international studies, including Swiss-specific data, and reinforces the key drivers of gender imbalance discussed above. Importantly, its authors discuss representative examples of strategies implemented by various countries and academic institutes to mitigate the different challenges. Such efforts to promote equity and equality must be maintained at all costs.

The SNSF implemented several important initiatives to promote gender equality, predominantly targeted toward female ECRs. These included dedicated funding schemes such as a [Gender Equality Grant](#), which provides financial support for various career advancement activities, including participation in career courses and workshops, professional coaching, mentoring, and networking events. The SNSF also offers a [Flexibility Grant](#) to support ECRs during maternity leave. This can be used for childcare expenses and/or to employ a support scientist to maintain project momentum. Beyond these individual-focused awards, the SNSF funds the [SPIRIT](#) program, aimed at fostering gender awareness and equality in research. In the past (2017–2021), SNSF also supported the funding of female ECRs starting independent groups through the [PRIMA](#) program, although this important initiative has now been phased out along with several other individual-targeted funding schemes. We consider this decision to be premature, as there is still much that needs to be done to ensure equity for women.

SNSF also analyzed whether there are any [differences in funding rates](#) between women and men, as has been reported for some funding bodies. The most recent numbers reported are reassuring. As one example, for the [Ambizione](#) grant, which is targeted to researchers in their first independent position, no statistical difference was found in the percentage of successful grantees relative to the proportions of applicants based on gender. However, this can vary considerably by scientific discipline, and it is important to note that the overall [proportion of women applying to SNSF grants](#) remains lower than men—and so continued efforts must be made to encourage more women to apply. This is also a challenge that many funding bodies encounter.

While these strategies are significantly benefiting ECRs and contributing to a

closing of the scissors curve at the earlier stages, a major issue remains at the most senior ranks of academia, where there are still few women leaders of departments or institutes. Recognizing this, [swissuniversities](#), the 38 institutions in the Swiss higher education sector, which includes ten universities and two federal institutes of technology, have launched the collaborative [H.I.T. Program](#) (High Potential University Leaders Identity and Skills Training). This ongoing leadership initiative is part of the [swissuniversities Programme P-7](#), “Diversity, Inclusion and Equal Opportunities in the development of Higher Education Institutions” and is specifically designed for female associate and full professors. Participants receive individualized coaching, leadership training, opportunities for professional networking, peer mentoring, and leadership shadowing experiences. These resources are geared not only toward equipping women for top positions in academia but also toward enhancing their skills in promoting gender equality and diversity within their respective fields. The early outcomes from the H.I.T. program are highly encouraging: three years after the inaugural program concluded (2019–2020), over half of the first 22 graduates have assumed new leadership roles at a Swiss university or faculty management levels or in national academic bodies.

There are also significant regional efforts in place, including the [REGARD](#) program in Western Switzerland, a mentoring network formed by the Equal Opportunities and Diversity Office at [swissuniversities](#), directed to the development of transversal skills from PhD students through to professors. The REGARD initiative has been running for nearly 20 years, with close to 3,000 participants and 235 free workshops to date, ranging from “writing and publishing in academia” to “pushing back against sexism” to “ally training for men.” The “Réseau Romand de Mentoring pour Femmes” ([Romand Network of Mentoring for Women](#)) is similarly dedicated to supporting women's professional development through mentoring where experienced professionals (mentors) provide guidance, advice, and support to women (mentees) aiming to advance their careers or navigate professional challenges. Since its creation, >260

Table 1. Challenges driving the scissor-shaped curve, proposed solutions, and initiatives

Challenges	Implemented solutions and initiatives	
	University-wide level (UNIL)	Faculty level (FBM)
Work environment		
Institutional advocates and commissions	vice rector dedicated to EDI central office dedicated to EDI EDI commission	vice dean dedicated to EDI FBM EDI commission Medicine and Gender commission
Hiring and unconscious gender biases	rectorate directive for professorial recruitment procedures	guidelines for hiring committees include unconscious bias training
Hiring committee composition	hiring committee with the presence of at least two female professors	female representation in committees
Pay gap between genders	no pay gap	no pay gap
Research evaluation criteria	redefining evaluation criteria and procedures (on a departmental basis) applying the principles of the DORA Declaration	signee of the DORA Declaration
Academic advancement and promotions	separate evaluation of key criteria: research and teaching, and institutional commitment/service.	separate evaluation of key criteria: research, teaching, institutional commitment/service, and clinical (if applicable)
Academic mentoring	training programs for PhD students, postdoctoral researchers, and professors with EDI components women-specific mentoring: UNIL-PROWD (postdoctoral level), support/financial contribution to regional/national programs, e.g., Réseau Romand de Mentoring pour femmes (PhD to professors), H.I.T. (professors), and others	training programs for masters students, PhD students, and postdoctoral researchers with EDI components through Skills for Scientists
Academic networking	support of regional/national programs: H.I.T., Ateliers REGARD, Réseau Romand de Mentoring pour femmes	women professors forum
Female role models in academia	supports regional/national programs: Réseau Romand de Mentoring pour femmes, H.I.T., and others	teaching by women professors at the Schools of Medicine, Biology, and Nursing funding scientific events with at least 50% female speakers equality prize
Funding schemes	specific funding for women in early career stages (Tremplin grant) as part of specific P7 funding from swissuniversities support programs such as H.I.T. and DIVMED	specific funding for women in early-career stages (Transition grant)
Protected research time	specific funding for women in early career stages (Tremplin grant)	
Departmental culture and leadership	mandatory leadership and management courses for new professor hires	leadership courses for junior and senior group leaders advancing into leadership and managerial positions
Harassment, bullying	UNIL position and program HELP courses (on demand, online, and on site) and campaigns for prevention of harassment and sexism	
Work-life balance		
Maternity leave policies and return to work support	information guide for (future) parents and their supervisors/directors financial support for pre-school childcare during conferences or other academic activities for parents in junior reserachers positions (PhD students to senior post docs)	parental leave support

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Table 1. Continued

Challenges	Implemented solutions and initiatives	
	University-wide level (UNIL)	Faculty level (FBM)
On-campus childcare	four on-campus daycares for children from 2 months to 4.5 years old (267 places) 12 weeks of holiday activities/camps for children (during school vacations) emergency child care for sick children breastfeeding facilities and changing tables in every building	
Limited meetings in the evening		FBM faculty council meetings to start earlier (4 or 4.30 p.m. instead of 5.30 p.m.)
Flexible hours		based on department or lab
Societal influences		
Stereotypes/implicit bias/normative ideal researcher	job discovery day to break gender stereotypes (e.g., Journée “Oser tous les Métiers”)	
Parental influences	family educational activities, e.g., “L'éprouvette,” open days during the school year	
Teacher influences	class activities for school-age children, e.g., “L'éprouvette”	undergraduate courses for the prevention of sexism and harassment through the Medicine and Gender commission at the School of Medicine, UNIL, integrating gender-oriented courses for medical students
Peer influences	Ateliers REGARD, H.I.T., etc.	women professors forum
Self-perception	individual education activities “L'éprouvette” ; Ateliers REGARD, H.I.T., etc.	

mentees have participated in the two-year program typically involving regular meetings, discussions, and guidance tailored to the mentee’s specific needs and goals. While the percentage of female STEM professors across Switzerland has [nearly doubled over the past decade](#)—gradually increasing each year from 11.4% in 2011 to 18.4% in 2020—there is an evident need for continued progress in closing the gender gap. Alongside these impactful national and regional programs, individual universities and institutes also play a vital role at the local level, as we will discuss in the next sections.

Strategies to address inequality at the University of Lausanne

The University of Lausanne (UNIL) is no exception to the highly competitive culture of the academic world where [women face even greater obstacles than men](#) in gaining access to professorships and positions of institutional responsibility. UNIL is organized into [seven Faculties](#), with one nearing gender parity at the profes-

rial level. However, the Faculty of Biology and Medicine (FBM) notably lags behind, with only 18% of full professor positions currently held by women ([Figure 1B](#)). Although this represents a >2.5-fold increase compared to the mere 7% recorded in 2013 ([Figure 1B](#)), showing the progress made in recent years, it nonetheless underscores the substantial imbalance remaining at the senior levels. While UNIL continues to provide support and targeted initiatives for women (as summarized in [Table 1](#)), the pursuit of gender equality should not be the responsibility of women alone.¹³ Systemic change within the whole institution is essential. In that respect, UNIL’s leadership is focusing on two main areas: implementing more equitable recruitment practices and ensuring that the women who are hired are supported and have the opportunity to stay at UNIL following tenure evaluation, enabling their continued presence and growth within the university.

The implementation of good recruitment practices aims to make the hiring

process egalitarian and transparent, to recruit more outstanding women. The recently established guidelines for faculty hiring committees encompass a comprehensive series of key measures. These include promoting recruitments at an early stage in the career, i.e., tenure-track assistant professors, to broaden the candidate pool, along with proactive searches for women candidates when their representation is <30% in the department that has an open position. Additionally, if the percentage of female applicants remains <30%, there is provision to extend the deadline to encourage more applications. The composition of the hiring commission and presidency is also critical, requiring diverse representation from different academic levels, with an emphasis on achieving gender parity among senior members. This, however, currently has the drawback of placing a heavier load on women. All commission members must first complete mandatory training on avoiding academic recruitment biases. An evaluation grid is then

designed before assessing candidates, containing clear and standardized points, including the discussion of EDI themes during interviews and a holistic research evaluation approach aligned with the Declaration on Research Assessment (DORA) principles. Further, a gender-specific evaluation is requested, separating male from female applicants, and starting with discussion of candidates from the underrepresented gender in the department. Finally, the commission report must include a dedicated section specifying adherence to these measures, ensuring effective monitoring by the UNIL equality office.

Beyond recruitment, to ensure that women faculty who join UNIL can thrive here, it is critical to provide a respectful and supportive work environment that recognizes their expertise, skills, and accomplishments. To this end, the culture must change to become more inclusive. It goes without saying that UNIL's aspiration for inclusivity goes far beyond achieving gender parity, aiming to value and encompass the plurality of profiles and life paths. UNIL's leadership is committed to a campus free of sexism, harassment, and discrimination, where every individual feels valued and supported. In 2023, UNIL launched the "Help platform," a significant initiative that involved redefining existing procedures with inputs from diverse experts (legal, psychological, social) to enhance support services (Table 1). This ensures that no incident of unacceptable behavior is overlooked or unaddressed. Moreover, all new faculty hires must enroll in a mandatory course for management and leadership, including training specifically designed to pre-empt and prevent such situations (Table 1). UNIL is also dedicated to raising awareness through ongoing communication campaigns to promote mutual respect and appreciation for diversity. Importantly, the leadership regularly conducts independent surveys to gauge the community's perceptions of campus conditions, enabling quantifiable progress and necessary adjustments to strategies and policies.

The UNIL leadership is firmly committed to stop perpetuating a sexist and discriminatory culture. Despite this, there are still obstacles. Beyond the documented biases, a significant hurdle

lies in engaging the entire UNIL community in this effort. As mentioned above, equal opportunities are not the sole responsibility of the successive generations of women who have historically championed this cause. However, there remains a divide in commitment among some established scientists. For example, a recent study conducted by Prof. Julia Nenwitsch (University of St. Gallen, Switzerland) reveals that although male leaders theoretically support gender equality, their practical involvement varies dramatically. Some are actively engaged, but others are still reluctant to incorporate these values on a daily basis. Another formidable obstacle is the inherently slow pace of cultural transformation. The change we seek is profound and must be far-reaching. It is a process where complacency has no place, and it demands consistent and dedicated effort to achieve lasting change.

Strategies to address inequality at the Faculty of Biology and Medicine

The FBM at UNIL is actively creating initiatives to combat gender disparities within its academic framework, along with other minorities. This includes ensuring that the culture is open and inclusive and champions diversity, with engagement from all in the community. Central to these efforts is the establishment of a permanent "EDI" commission, operating in direct collaboration with the FBM dean's office. The EDI commission is composed of eight voting members from clinical and basic sciences, with a minimum of three ECRs, and is supported by a project manager. The EDI commission's initiatives are multifaceted, encompassing a range of tailored strategies and interventions designed to foster an equitable academic environment. These programs, listed in Table 1, range from providing individualized support for women using diverse strategies, to broader programs aimed at cultivating a conducive atmosphere for systemic cultural transformation within the workplace.

A cornerstone strategy, implemented by UNIL in 2013, involves comprehensive and transparent monitoring across its different Faculties. This data collection tracks each cohort of students, postdocs, and faculty members at all stages to visualize progress at each level. From 2013 to

2022, the FBM experienced a notable increase in the proportion of female professors (all ranks) from 15.2% to 24.8% across all disciplines. The largest augmentation was observed in the life sciences specifically, where the proportion of women professors is now 30% across all ranks combined. Over these nine years, this positive trajectory was largely accounted for by the cumulative proportion of competitive new hires at the level of tenure-track assistant professors. Indeed, in 2022, 58% of faculty at this stage were women (Figure 1B). This encouraging development leads us to anticipate a further narrowing of the scissors curve at the associate and full professor stages as these women advance through the tenure-track process in the coming years. However, we also acknowledge the ongoing formidable challenge in achieving gender equality in medical sciences at our institution, as in many others, a situation compounded by the limited allocation of protected research time compared to clinical responsibilities.

Following the recruitment of new faculty, it is of course critical to ensure they are well supported in contributing to an inclusive university culture. The FBM organizes annual 3-day leadership courses with a strong emphasis on EDI (Table 1). One is targeted to junior principal investigators (all genders) to develop essential competencies and skills for effective leadership and the management of diverse high-performing teams with a culture of inclusiveness. The second is tailored for senior leaders (all genders), helping them to refine their leadership style and enhance their effectiveness in leading individuals, teams, and institutes toward inclusivity.

Another exemplary initiative within the FBM is the "Women Professors Forum." This platform enables female professors to share experiences, strategies, and challenges faced in their academic journeys, thereby fostering a sense of community and solidarity. Additionally, the FBM actively promotes gender balance in decision-making bodies and in each hiring committee. It also promotes EDI through the Equality Prize, recognizing individuals or groups who significantly contribute to EDI improvements at the faculty level. This award raises the profile

of its laureates in the traditional media and social media, enhancing their visibility. Recognizing the importance and power of visible role models to inspire female ECRs, the FBM also launched the “50% speakers” subsidy. This supports research events including seminars, conferences, and symposia that feature at least 50% female speakers. To date, thirty-seven events have been supported, with funding proportional to the number of speakers planned. These collective measures (Table 1), coupled with gender parity in the Dean’s office, help create a supportive environment for women, as evidenced by the positive feedback received in numerous informal discussions.

In terms of academic programs, the FBM also offers grants and fellowships, among which several are specifically tailored to support women pursuing careers in biology and medicine (Table 1). A notable example is the “transition grant” targeted to women biomedical and clinical researchers who are at the early inflection point of the scissors curve and ready to take their first step toward independence. Upon completion, these two-year funded research subsidies (six awards per call) aim to empower recipients to subsequently apply for fully independent principal investigator funding. For researchers who become parents, the FBM introduced the “parental leave support grant,” which provides funding for replacement personnel to ensure a smooth continuation of the research project during parental leave (minimum of four months leave). The support is for up to one year, so that the researcher can train the support technician and also allow a transfer period upon the parent’s return. As noted by a former recipient, the benefits of this grant are evident: “It is clear how vital this support is in avoiding gaps in ongoing projects, which can significantly impact one’s career. What often goes unnoticed, however, is the crucial role this support plays during pregnancy and, especially, in helping someone adjust to new family dynamics while maintaining their regular work routine.” Finally, a specific commission created within the FBM School of Medicine is dedicated to study and monitor the impact of gender in clinical practice and to establish synergies with other UNIL and hospital en-

ties. This commission is led by a team of gender medicine experts who recently developed specific undergraduate teaching sessions on preventing sexism and sexual harassment in the clinical environment.

While these initiatives, along with others detailed in Table 1, certainly represent important steps forward and have resulted in visible positive change (Figure 1B), progress is still not as rapid as desired. Like many other universities and funding bodies, the FBM and UNIL encounter resistance in sustaining and advancing critical gender equality initiatives. A major source of resistance is that some colleagues are either tired of the subject, or think it is no longer an issue. In addition, it may be difficult to acknowledge the existence of privileges and renounce them. The challenge is to ensure that these programs are not discontinued prematurely but are maintained and adapted as necessary to continuously foster and support gender equality.

Conclusions

This commentary argues that achieving gender equality in academia is an urgent imperative that cannot be ignored, nor can it be expected to happen naturally over time. Despite some progress in recent years, significant gender disparities persist, with women continuing to face multifaceted challenges throughout their academic careers. The negative impact of these challenges is not confined to individuals; it extends to the scientific community as a whole, where diversity and inclusion are proven crucial drivers of innovation and progress. Indeed, achieving gender equality in research has been defined by the European Research Area (ERA) as one of six priority areas to strengthen research excellence, urging its incorporation into the National Action Plan of each country to fulfill the ERA roadmap.

A proactive, multifaceted strategy is essential, one that operates on both national and institutional levels. While commendable efforts, including those implemented at our own university, are making significant strides in addressing gender imbalances, particularly among early-career researchers, challenges persist at the highest echelons of academia. One powerful way to achieve

gender equality could be to directly link public funding to an institution’s performance on gender balance. This would actually be relatively straightforward to implement and is connected to the goal of initiatives such as the Athena Swan Charter. It would also be a strong impetus to encourage more institutions to make their gender numbers transparent, including salary and allocated resources.

Additionally, we also want to emphasize the continued importance of engaging men as allies in the mission to combat gender bias and achieve true gender equality in science and academia. Unconscious biases affect us all, and it is incumbent upon all members of the academic community to work collectively to overcome these biases. Moreover, we recognize the added complexity of intersectionality in this context, where women who are also minoritized in other respects face compounded challenges, and this clearly requires further investigation and tailored solutions.

As we continue to forge ahead, we must remain vigilant and committed, ensuring that we do not take our eye off the ball when it comes to advancing gender equality. The road forward may be challenging, but achieving the goal of a more equitable and inclusive academic environment is undoubtedly worth the effort. Such a transformation will not only benefit women but will also enrich the entire scientific community and society at large.

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DECLARATION OF INTERESTS

The authors declare no competing interests.

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