PositionScale

2025 National Research Experience Report

For Research Leaders and PIs

April 2025

Research Series

Accelerating Research Success for Tomorrow's Innovators™

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Author's Note

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Principal Investigators (PIs) play a pivotal role in shaping research excellence by establishing and nurturing high-performing laboratory teams. Creating a dynamic, innovative, and supportive lab environment is critical—not only for accelerating groundbreaking discoveries but also for promoting the professional growth and well-being of researchers.

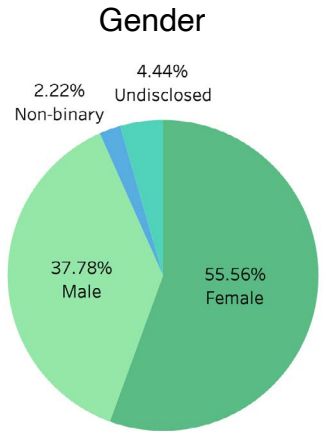
However, despite best intentions, many laboratories encounter systemic challenges that adversely affect productivity, mentorship quality, and overall research success. PositionScale's 2025 National Research Experience Report rigorously examines these challenges, providing detailed insights into their causes and impacts. Leveraging comprehensive national data, this report highlights key strengths and pinpoints critical areas requiring attention and improvement across lab operations, mentorship practices, training programs, and institutional support systems.

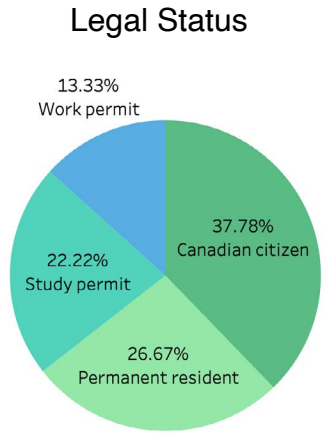
The findings presented here serve as a roadmap to strengthen research culture, drive innovation, and foster environments where talent thrives and excellence is consistently achieved. By synthesizing extensive survey data into clear, actionable insights, this report equips PIs and institutional leaders with strategic recommendations designed to elevate laboratory performance, enhance mentorship effectiveness, and optimize research outcomes.

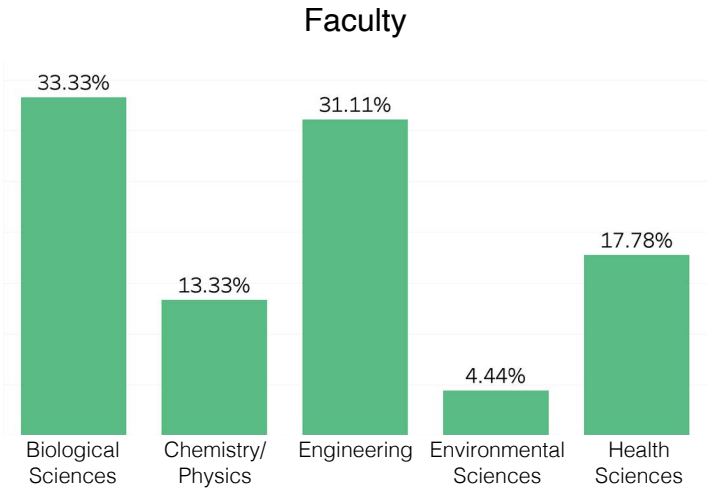
Data Sources & Demographics

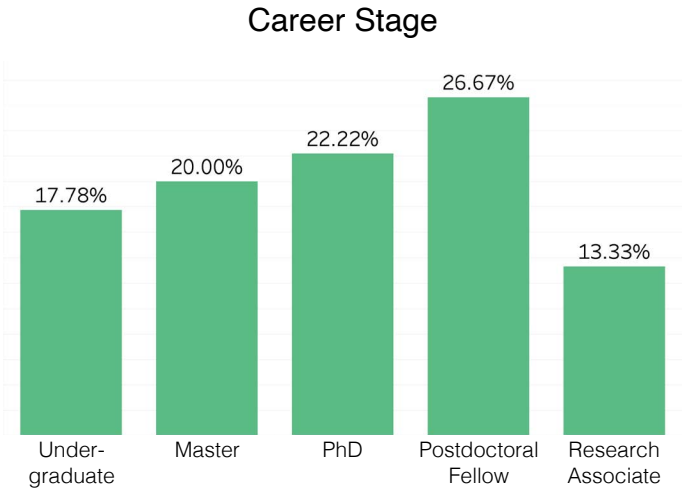
This report outlines critical findings from PositionScale's comprehensive 2025 National Lab Experience Survey conducted across Canada, aimed at evaluating the experiences, challenges, and needs of laboratory researchers nationwide. The survey gathered extensive responses from researchers spanning all career stages, including undergraduate and graduate researchers, postdoctoral fellows (PDFs), and research assistants and associates.

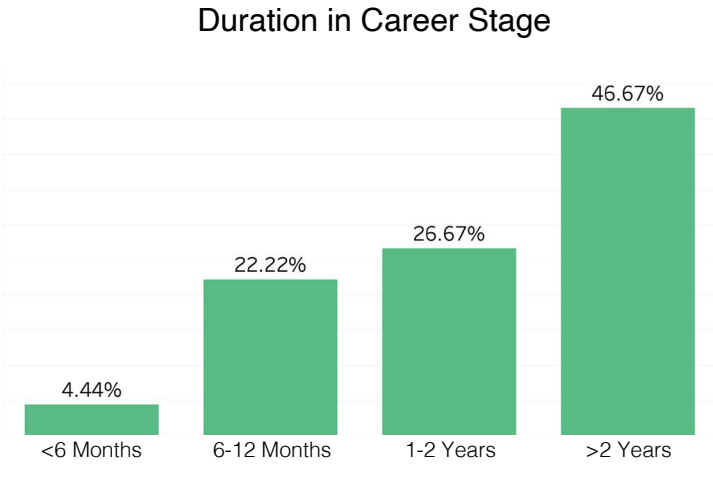
Detailed demographic data presented in this report reveal critical insights into the composition of Canada's research community, showcasing distributions across academic ranks, faculty affiliations, gender identity, legal status, and stages within their research careers.











Key Insights & Executive Summary

Explore our resources for more insights on how laboratories are shifting their management approach.

Executive Summary | Insights on Enhancing the Research Experience

Key findings & strategic imperatives

- **Lab Environment & Culture**: While many researchers describe their lab environments as generally positive, a non-negligible proportion report experiences of toxicity or a lack of support (28%). The data underscores an urgent need to establish lab environments that prioritize trust, open communication, and a respectful exchange of ideas. Research environments that foster mutual respect and encourage inquiry are essential to driving both academic productivity and retention.

- **Relationship with Principal Investigators (PIs)**: Though most researchers report satisfactory relationships with their PIs, nearly 18% indicate that these relationships fall short of ideal mentorship standards. This highlights a critical opportunity: improving communication and mentoring frameworks within labs must be prioritized. PIs play a central role in shaping the research experience and career trajectory of their trainees—structured mentorship training and feedback mechanisms are essential.

- **Collaboration & Teamwork**: Researchers generally feel respected and valued by peers; however, issues remain around communication breakdowns, inconsistent workload distribution, and unequal access to shared resources. Labs must adopt clearer norms, shared expectations, and equitable systems to ensure a collaborative and high-functioning team dynamic.

- **Work-Life Balance & Mental Health**: Although most researchers report spending 10–30 hours per week in the lab, many feel implicit or explicit pressure to exceed those hours. Concerningly, nearly 16% say mental health struggles are minimized or dismissed. Institutions and lab leaders must normalize mental health discourse, establish clear boundaries around work expectations, and build a culture that promotes well-being and sustainable productivity.

- **Institutional Support & Researchers Satisfaction**: While satisfaction with funding opportunities is relatively high, many researchers express doubts about whether they would choose the same institution again. This signals deeper concerns about the adequacy of academic, career, and research support services. Institutions must evaluate and enhance their support systems to improve the research experience and long-term loyalty.

- **Training, Leadership, & Career Development**: Researchers consistently report gaps in hands-on training—particularly in experimental methods, data analysis, and scientific writing. Moreover, uncertainty about future academic or non-academic career paths remains prevalent. There is a pressing need for more robust and accessible training programs, coupled with proactive career development services that reflect the diverse futures researchers envision.

Improving academic lab environments requires structural changes that prioritize collaboration, streamline operations, and better support researchers in their pursuit of scientific progress:

Current State

> In our lab, a lot of things just kind of happen as they come up. There aren't clear protocols or shared systems for tracking progress, so new people often don't know where to start. When someone leaves, we lose a lot of context. It's not that people don't care — everyone's just really busy. But without some basic structure, it slows everything down and makes it harder to collaborate.

Researcher
Engineering
UBC

> Our lab runs pretty well day to day, and the team gets along, but I think things could be a bit more organized. Sometimes people double up on tasks without realizing, or things get missed because no one's tracking them. It works, but with just a few shared tools or routines, I think we could avoid a lot of small issues that add up.

Researcher
Health Sciences
University of Alberta

Aspirational

> What I really appreciate about our lab is how smoothly things run. There's a clear process for onboarding, project updates, and sharing information. Everyone knows where to find what they need, and it makes it easy to stay focused. It doesn't feel overmanaged — just well thought out. When someone new joins, they settle in fast, and when people move on, we keep moving forward without skipping a beat.

Researcher
Chemistry
SFU

Lab Environment & Culture

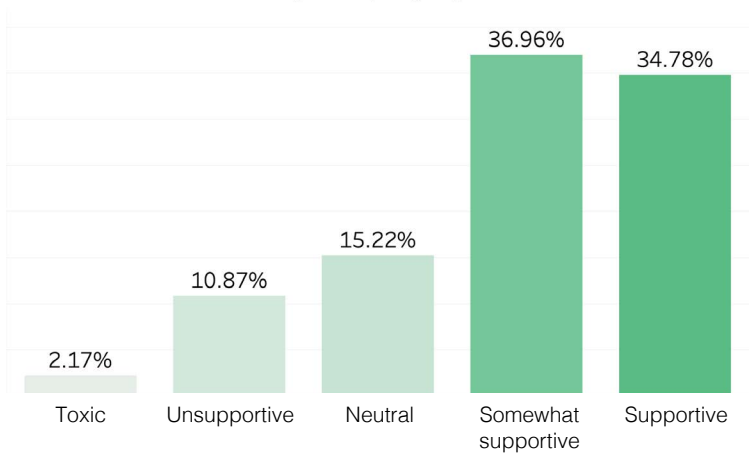
Research success depends on strong lab culture, structured mentorship, and intentional support for career growth and well-being.

- Lab culture directly impacts student success and retention. **While most researchers describe their lab environment as supportive, 28% feel it does not meet an ideal standard.** A well-structured, professionally managed lab culture is critical for sustaining research excellence. When researchers feel valued and supported, they are more engaged, productive, and more likely to continue in research. PIs play a key role by setting clear expectations, modeling positive leadership, and fostering mutual respect.

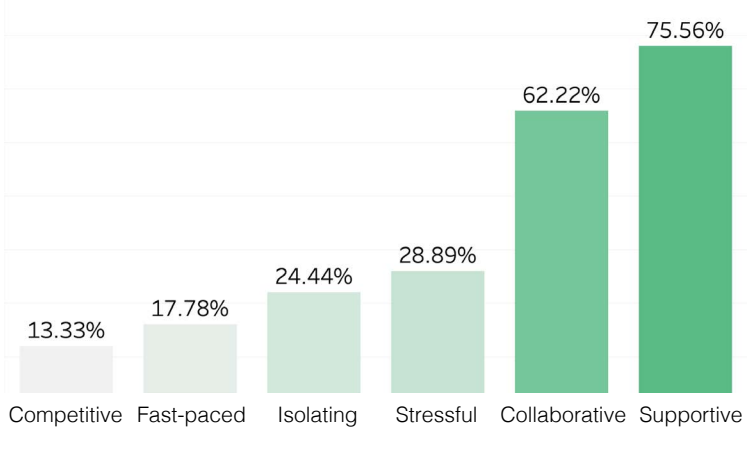
- Collaboration matters—but so does reducing stress. **Many researchers report a collaborative (62%) and supportive (76%) lab environment, yet a number also experience isolation (24%) and stress (29%).** A well-functioning team thrives on open communication and shared problem-solving, but without intentional effort to build connection, researchers can feel left out or overwhelmed. PIs can help by implementing structured mentorship, encouraging peer support, and holding regular check-ins.

- A strong learning environment requires psychological safety in asking questions. **While 60% of researchers feel comfortable doing so, over a third (37%) hesitate, and 3% feel actively discouraged.** These barriers can stifle innovation, slow progress, and lead to disengagement. When researchers aren't sure their questions are welcome, they may avoid seeking clarification—causing inefficiencies, repeated mistakes, or missed learning.

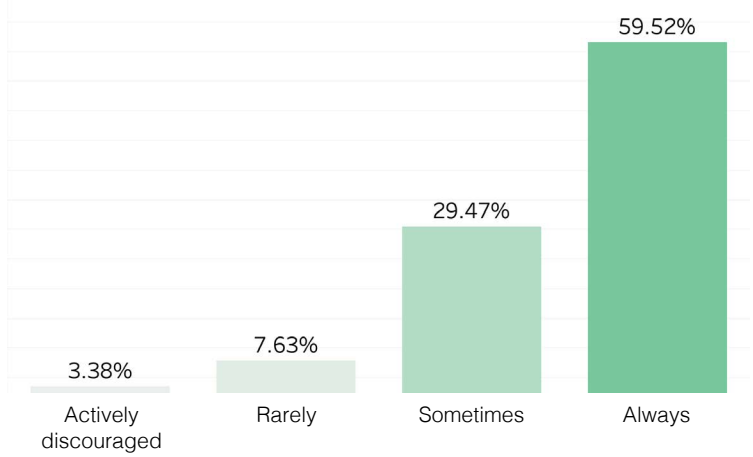
Laboratory Satisfaction



Laboratory Environment Characteristics[1]



Comfort Level in Seeking Guidance



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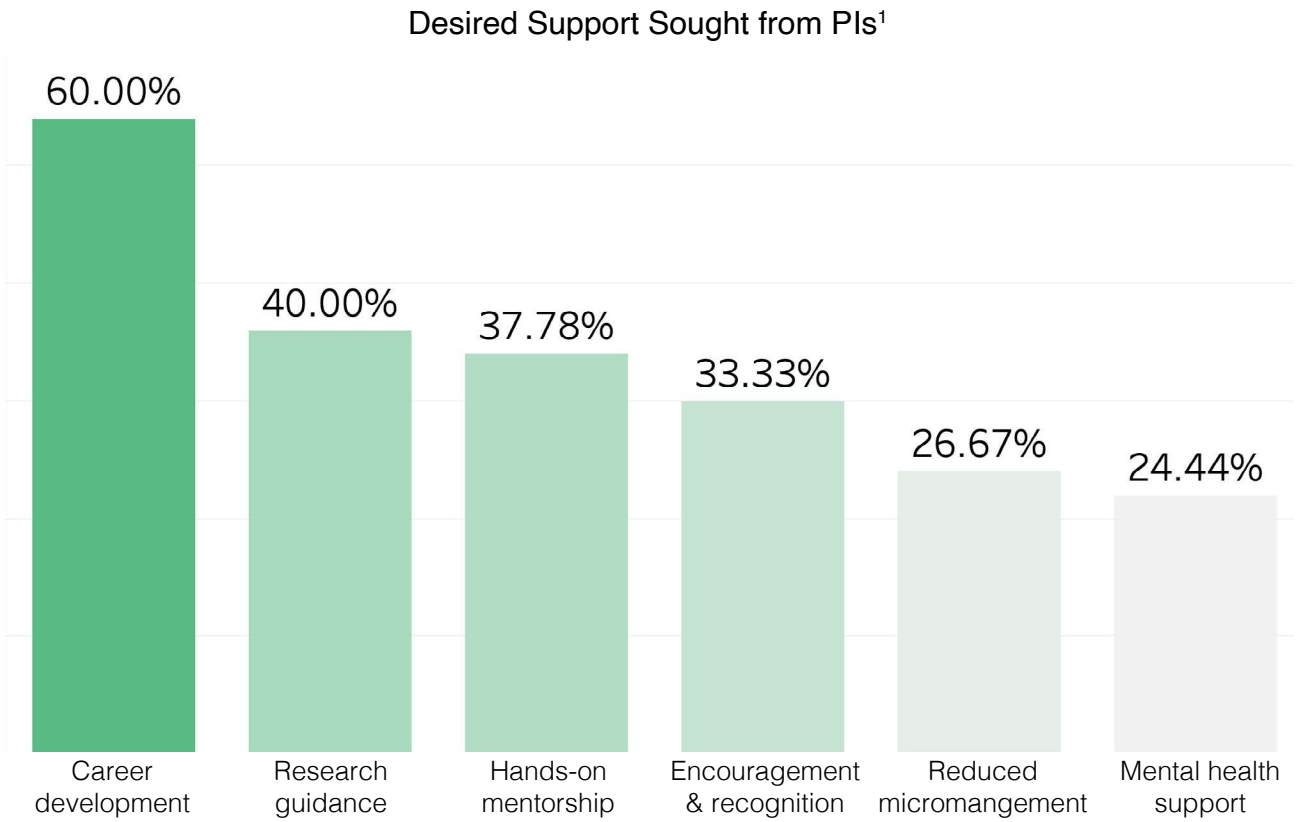
Relationship with Principal Investigators (PIs)

These findings highlight the need for PIs to provide both individualized mentorship and broader structural support to effectively meet the diverse needs of their researchers, with 60% opting for Career Development guidance and 40% citing the need for increased research guidance.



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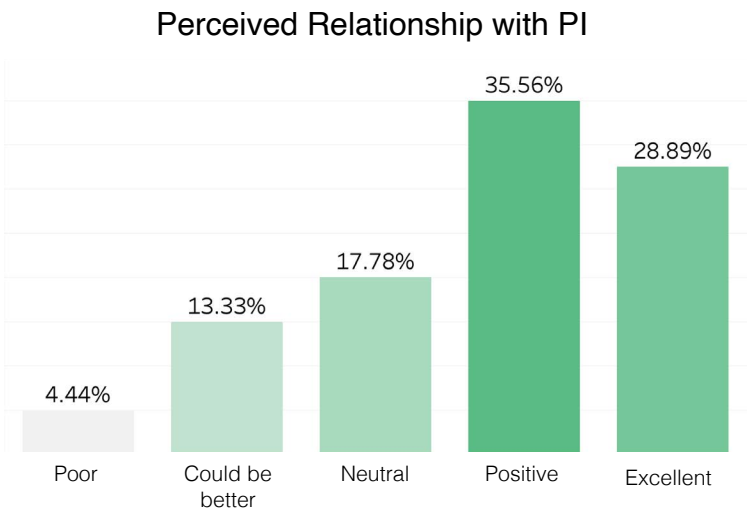
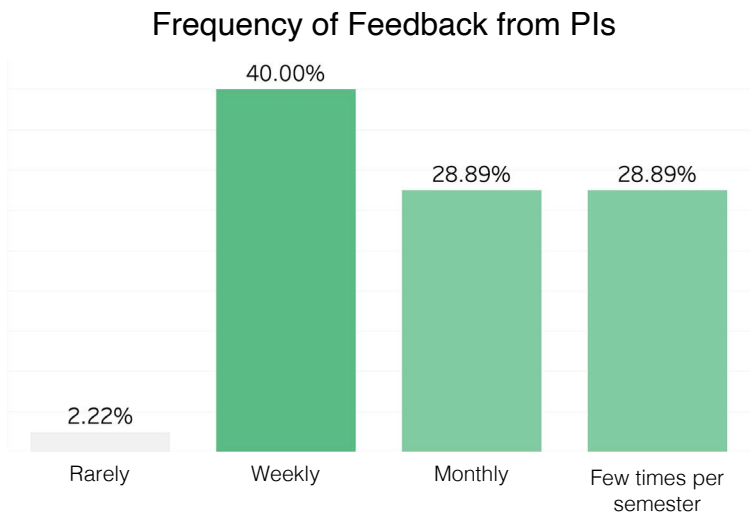
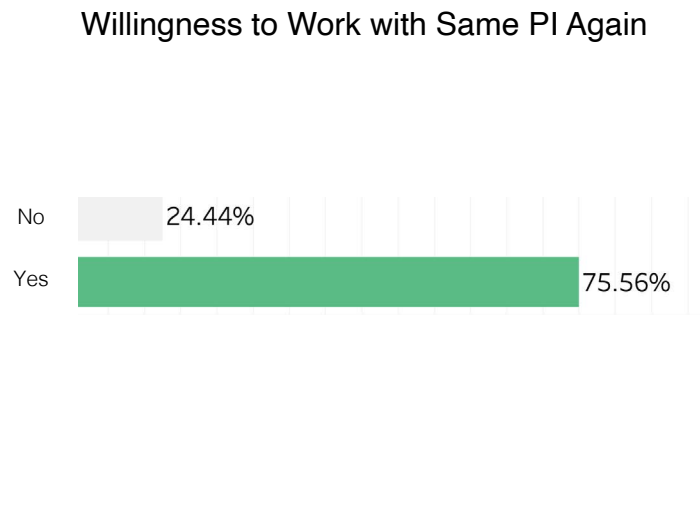
Strong PI-student relationships, consistent mentorship, and proactive feedback create a supportive environment that enhances engagement and retention.

- Positive PI-student relationships bolster trust and collaboration. **36% of researchers report not having a positive relationship with their PI**. A strong PI-student dynamic is essential for cultivating trust, enhancing teamwork, and boosting student engagement and retention in research.
- Consistent mentorship and feedback underpin ongoing growth. Although many researchers receive mentorship on a regular basis, **60% indicate that they only receive feedback monthly, a few times per semester, or rarely.** Scheduling weekly or bi-weekly check-ins or feedback sessions can help ensure researchers receive consistent guidance, helping them navigate challenges, refine their skills, and remain fully engaged in their research.
- Student satisfaction with PI selection highlights key areas for improvement. **While most researchers (76%) would choose the same PI again, nearly a quarter (24%) would opt for a different mentor.** This underscores the significant impact of positive mentorship on student retention, productivity, and long-term career success. PIs who proactively seek and act on student feedback, foster open communication, and nurture a supportive lab culture are more likely to see higher satisfaction and stronger outcomes for everyone involved.







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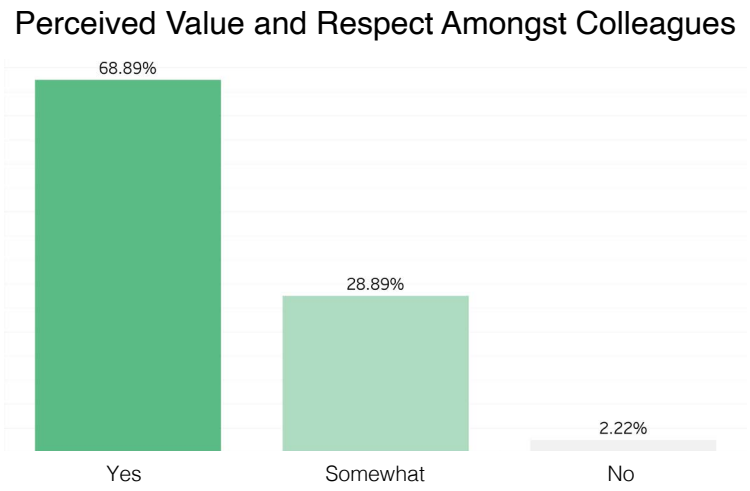
Collaboration & Teamwork

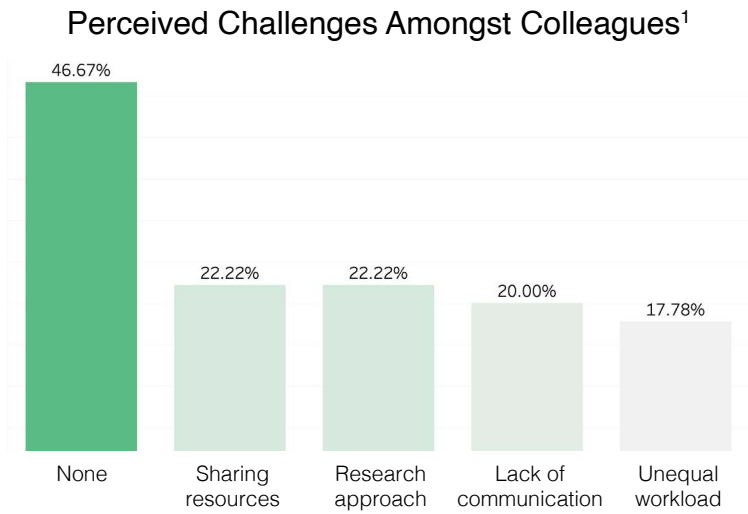
Effective collaboration among researchers is essential, yet persistent challenges—such as communication gaps, workload imbalances, and resource access limitations—must be systematically addressed to enhance teamwork and optimize lab efficiency.

- **The majority of researchers feel valued by their colleagues (69%), while 29% felt somewhat respected. A small minority did not feel respected and often felt overlooked (2%).** Strengthening team dynamics through open communication, team-building initiatives, and consistent recognition of contributions is essential for fostering an inclusive and productive lab environment.

- **While effective teamwork enhances efficiency and research outcomes, challenges such as communication gaps (20%), unequal workload (18%), and conflicting research approaches (22%) create obstacles.** Establishing structured coordination strategies and clearly defining roles will improve collaboration and ensure research continuity.

- **Access to shared resources (22%) remains a critical issue that can hinder progress.** Streamlining resource management, ensuring equitable workload distribution, and implementing clear operational frameworks will enhance lab efficiency and support long-term research success.





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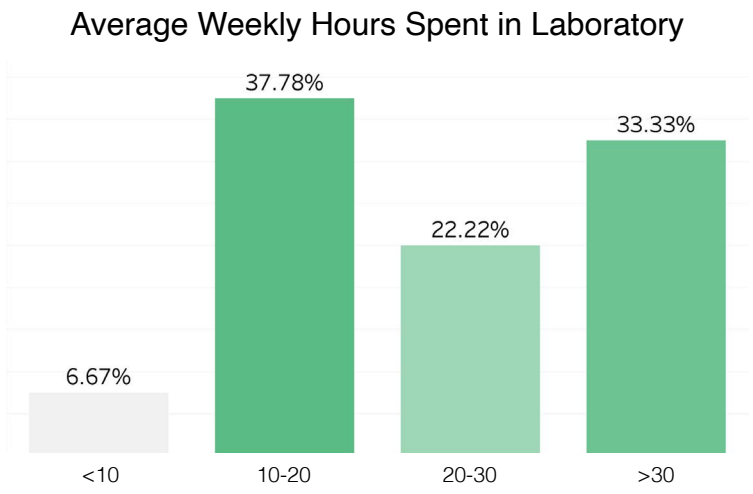
Work-Life Balance & Well-Being

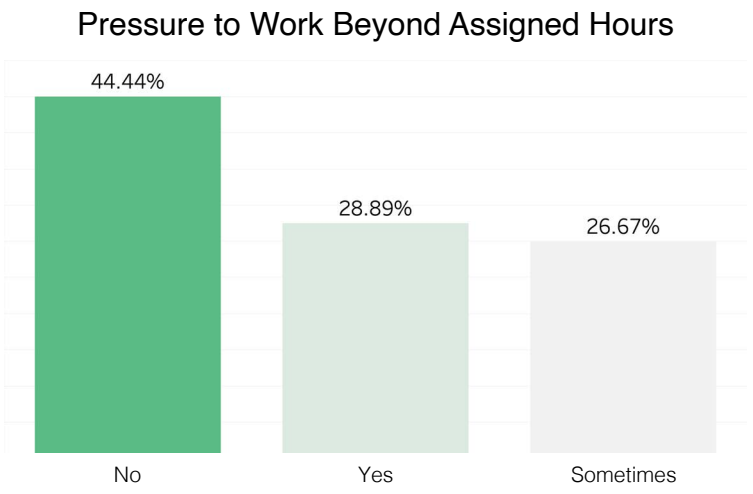
Balancing lab hours and strengthening mental health support is essential, as many researchers face pressure to overwork and encounter gaps in critical resources, impacting both well-being and research productivity.

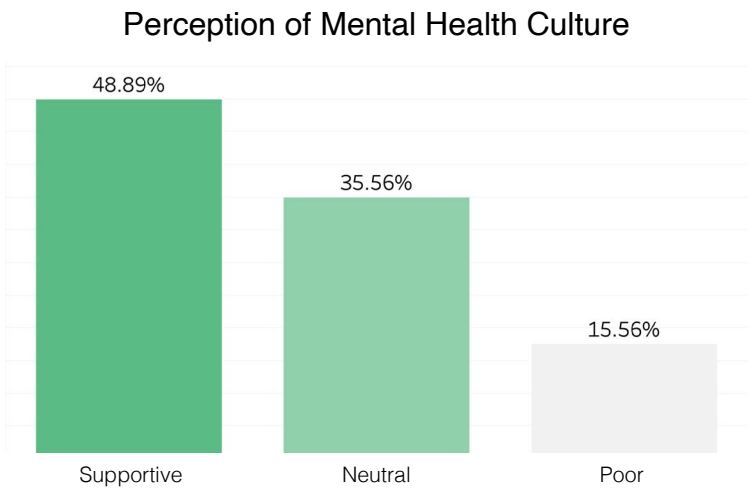
- **With 33% of researchers spending over 30 hours per week in the lab, maintaining a healthy balance between research and personal life is essential for preventing burnout and sustaining long-term productivity.** Encouraging flexible scheduling, promoting effective time management strategies, and fostering a culture that prioritizes well-being alongside research progress will help create a more sustainable and supportive work environment.

- **While 44% of researchers feel in control of their schedules, 56% experience pressure to work beyond their assigned hours.** This persistent overwork leads to burnout, decreased productivity, and reduced well-being, ultimately affecting research outcomes and student retention. Establishing clear workload expectations, encouraging open discussions about healthy work boundaries, and modeling a balanced approach to research are essential for sustaining long-term success.

- **A majority of researchers (51%) report a lack of active support or a culture where mental health struggles are ignored or discouraged.** A strong mental health culture reduces stress, enhances well-being, and improves research productivity and retention. Fostering open dialogue, providing accessible resources, and actively promoting well-being are critical steps in creating a supportive and sustainable lab environment.







University Assessment

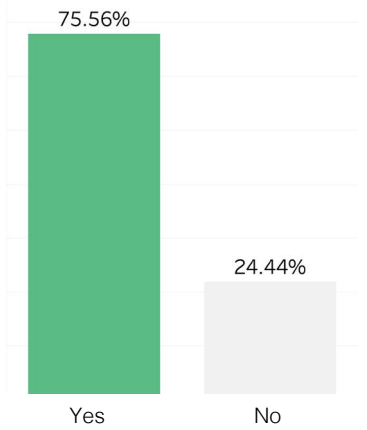
While researchers highly value funding and career development resources, many perceive significant gaps in university support, with some questioning their choice of institution and others highlighting deficiencies in research support.

- **24% of researchers would not choose the same university, signaling opportunities to enhance their experience.** Student satisfaction is closely tied to the quality of academic resources and support, impacting retention and success rates. Gathering targeted feedback and collaborating with university administration to address key concerns can strengthen overall student experience and institutional reputation.

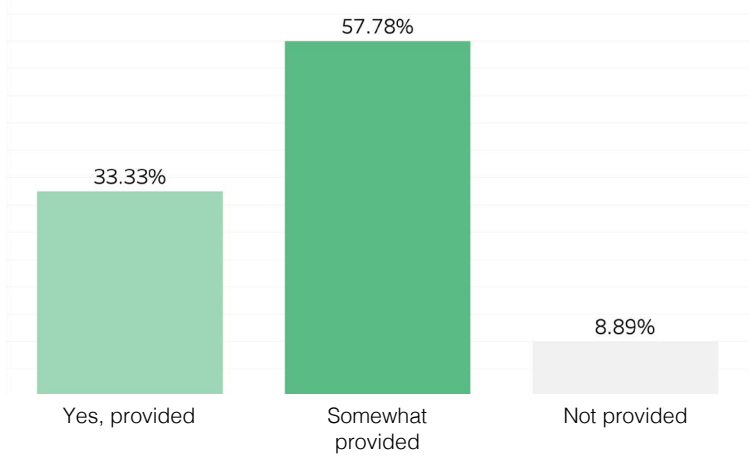
- **While 33% of researchers feel adequately supported, 58% identify gaps, and 9% struggle to access necessary resources, highlighting critical areas for improvement.** Adequate support is essential for student success, research productivity, and well-being. Collaborating with university leadership to address these gaps can enhance academic progress and overall satisfaction.

- **Funding opportunities (58%) and career development services (38%) are the most valuable resources for researchers, yet 18% feel they have received little to no support.** Access to these resources is vital for research success and advancement, while gaps can hinder growth and achievement. Expanding the availability and accessibility of funding, career services, and professional development programs can ensure comprehensive support throughout academic and research journeys.

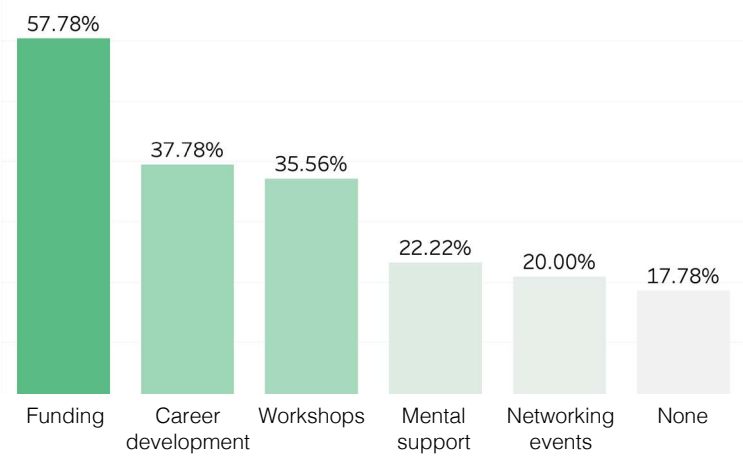
Willingness to Re-enroll at Same University



Perceived Support Provided by University



Most Valuable University-Provided Resources[1]



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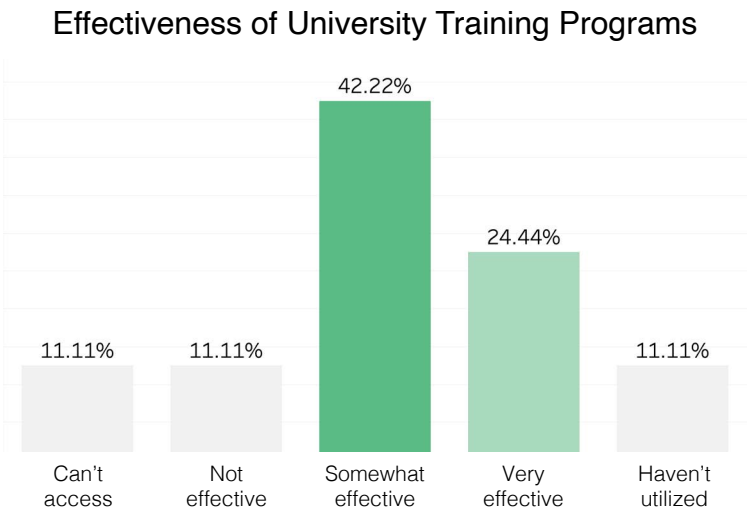
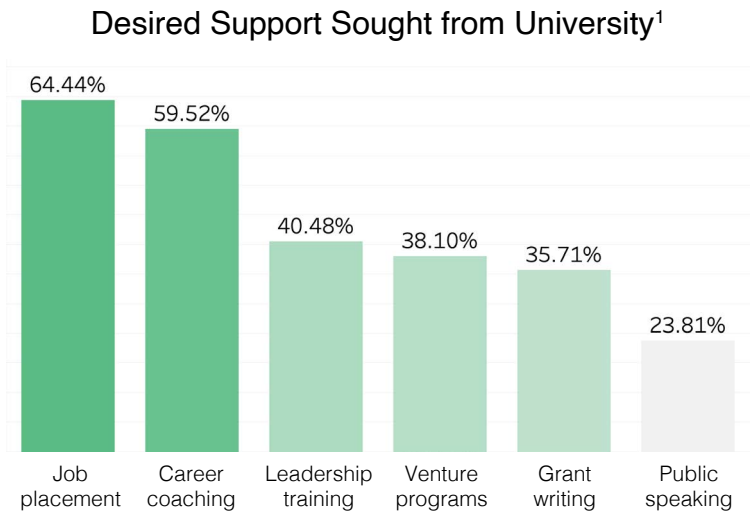
Universities should improve awareness and accessibility of training programs and significantly expand resources in job placement, career coaching, leadership, grant writing, and communication to better support researchers' career readiness.

- **While nearly a quarter (24%) of researchers rate university workshops and training programs as highly effective, a substantial segment (42%) finds them only somewhat effective, while 33% report inavailability, underutilization, or ineffectiveness.** Given their importance for research skills, academic success, and career readiness, universities should enhance communication of available workshops, refine content and delivery based on student feedback, and prioritize broader accessibility.

- **Researchers show strongest demand for enhanced job placement resources (64%), career coaching (60%), and leadership and management training (41%), alongside notable interest in entrepreneurship, grant writing, and science communication training.** Strengthening career development offerings in these key areas is essential to equipping researchers with specialized skills, bolstering their confidence, and effectively preparing them for successful transitions into diverse professional pathways. Institutions should prioritize expanding support focused on industry networking, targeted job placement initiatives, and critical competencies such as leadership, grant writing, and communication skills.





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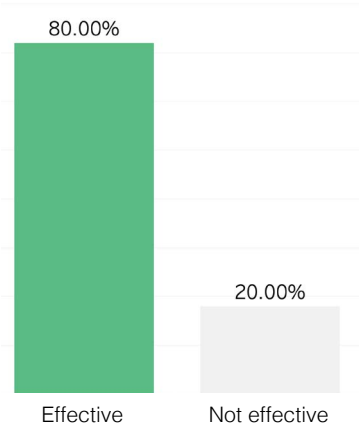
Leadership, Training, & Future Career Perspectives

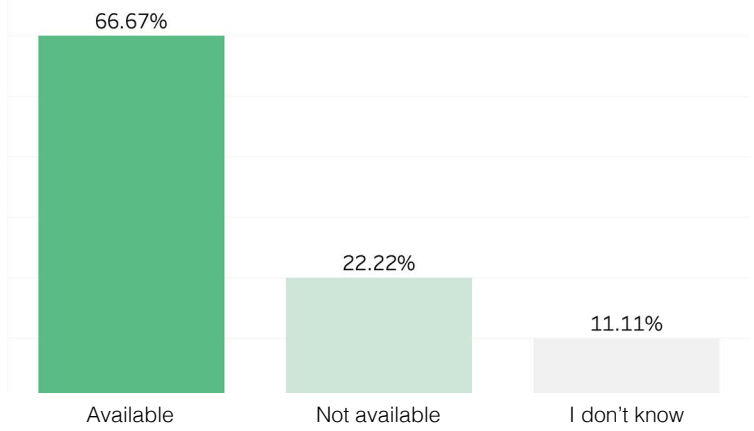
Researchers require structured onboarding and enhanced training in experimental techniques, data analysis, and scientific writing, despite adequate preparation in basic lab techniques.

- While the majority of researchers (80%) report receiving adequate training on lab techniques and equipment, **the remaining 20% highlight the importance of continuously assessing and refining training programs to ensure all researchers are fully prepared for research success.**
- With two-thirds (67%) of researchers confirming structured onboarding or training in their labs, 22% note its absence. **Establishing a clear onboarding process is crucial for helping new members quickly integrate, master lab protocols, and contribute effectively to a cohesive and efficient research environment.**
- **With researchers identifying a clear need for more structured training in experimental techniques (56%), data analysis (51%), and scientific writing (42%)**—alongside interest in presentation skills, grant writing, and teaching—universities must expand and strengthen these training programs to enhance research quality, academic performance, and career readiness, ensuring holistic student development.

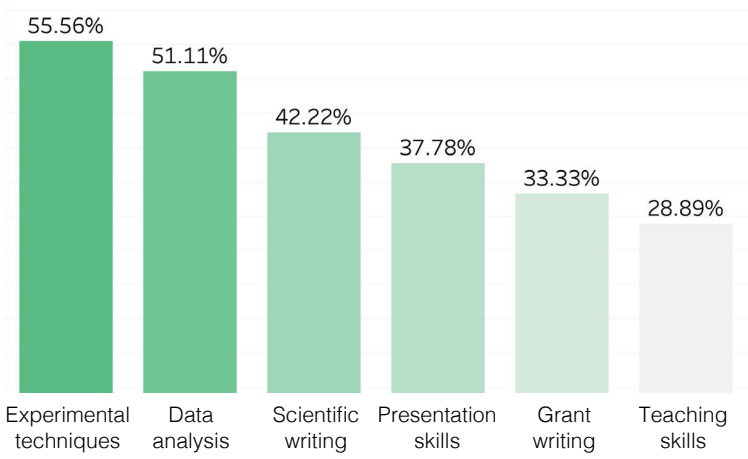
Laboratory Training Effectiveness



Availability of Structured Training in Lab Environments



Areas Identified for Furthur Training[1]



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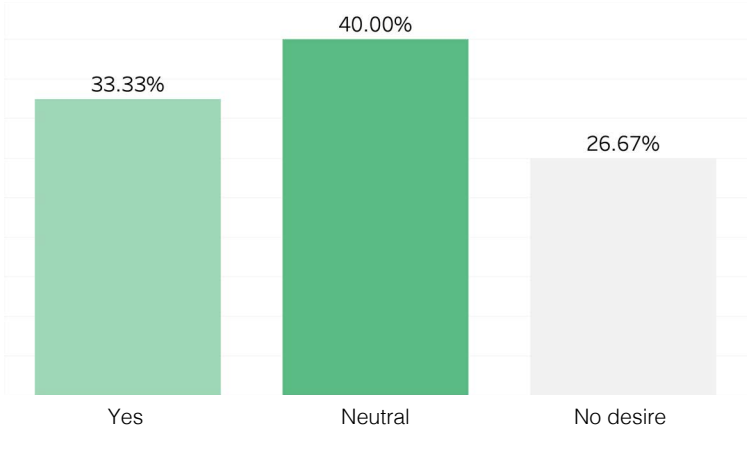
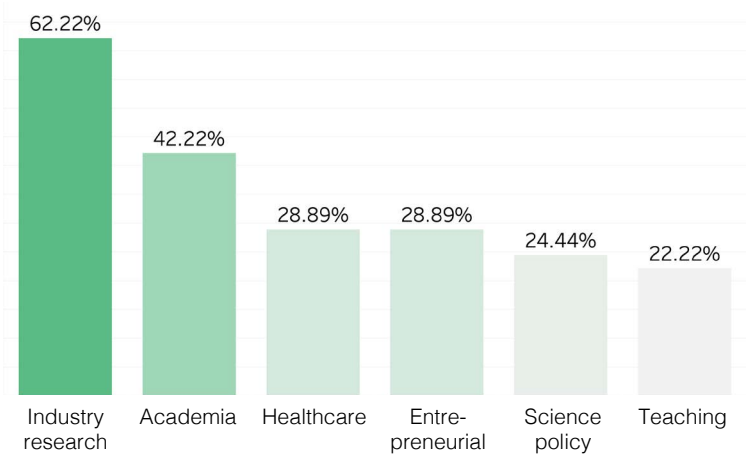
Although researchers express strong interest in industry research and academic careers, varied confidence levels and ongoing career uncertainty highlight the critical need for institutions to provide targeted, comprehensive support and resources.

- **With only 33% of researchers enthusiastic about continuing in academia, 27% considering leaving, and 40% remaining undecided**, academic institutions must proactively address uncertainty and dissatisfaction by enhancing mentorship, career guidance, and targeted support, thereby improving student satisfaction, retention, and institutional success.
- **With the majority of researchers aspiring to do industry research (62%), there is notable interest in academia (42%), healthcare careers (29%), entrepreneurial ventures (29%), science communication or policy (24%), and teaching (22%)**. Institutions must align career development resources and mentorship programs to these diverse career paths, ensuring researchers are effectively supported in achieving their long-term professional goals.
- **With nearly half of researchers (49%) only somewhat confident about securing their next position,** universities must enhance career support services—including targeted job search resources, networking opportunities, and skill development programs—to improve student preparedness, marketability, and confidence in transitioning to post-graduation careers.

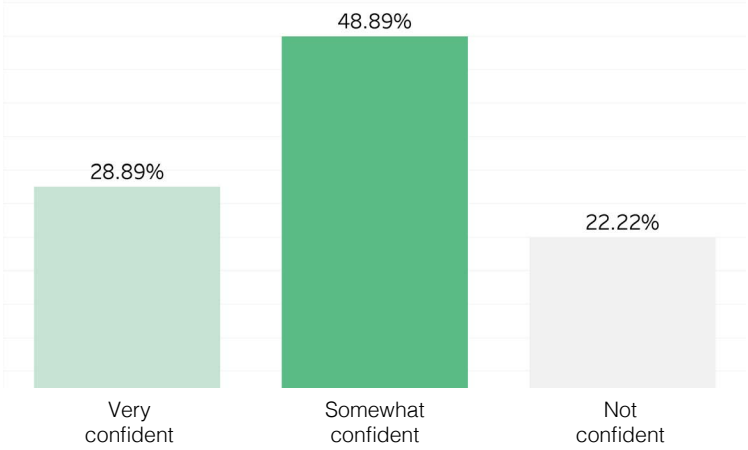
Desire to Stay in Academia



Career Aspirations and Long-Term Professional Goals[1]



Confidence in Securing Employment



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Great research starts with great lab culture

Structured mentorship will unlock new levels of operational efficiency.

Future-focused labs will universally implement structured mentorship programs, directly enhancing operational efficiency. By establishing clear communication channels, defined expectations, and ongoing feedback loops, labs will reduce friction, prevent redundancy, and significantly accelerate research productivity. Structured mentorship will be viewed not just as good practice but as an operational imperative to maximize lab effectiveness.

Prioritizing well-being will drive sustainable productivity.

Leading research institutions will recognize holistic researcher well-being as a core pillar of sustainable productivity. By systematically addressing workload management, mental health, and work-life balance, labs will minimize burnout, reduce turnover, and maintain consistently high research output. Operational frameworks prioritizing wellness will enable labs to attract and retain top talent, creating resilient teams poised for long-term research success.

Comprehensive training programs will streamline lab operations.

Research labs will increasingly adopt comprehensive, structured onboarding and specialized training programs focused explicitly on productivity-enhancing skills—such as advanced experimental techniques, data analysis, scientific writing, and project management. By proactively closing critical skill gaps, labs will improve research accuracy, minimize downtime, and significantly boost operational efficiency, ensuring teams are agile, capable, and continuously optimized for peak performance.

Researcher Perspectives[1]

> Our lab environment often feels disorganized because there's no clear system for training. Small issues frequently escalate into significant delays. Introducing standardized procedures would save valuable time, reduce confusion, and greatly increase our ability to focus on impactful research rather than constantly managing avoidable inefficiencies.

> My PI is supportive but rarely provides structured or timely feedback, which leaves me unsure about my development or the quality of my work. Regular, dedicated mentorship meetings and clearer expectations would enhance our relationship, and boost my confidence.

> Our lab generally has a positive culture, but inconsistent access to essential resources create unnecessary tension and reduce productivity. Clearer communication from leadership, equitable resource management, and better-defined team responsibilities would foster greater harmony, improve efficiency, and help us achieve stronger outcomes together.

> I often feel pressured to extend my hours in the lab beyond what's sustainable. Mental health isn't discussed openly, and stress accumulates quickly. If our lab culture explicitly supported healthy boundaries and openly acknowledged mental health as vital to productivity, we'd feel more engaged, focused, and capable of delivering sustained, high-quality research.

1 Quotes paraphrased from the 2025 National Lab Experience Survey.

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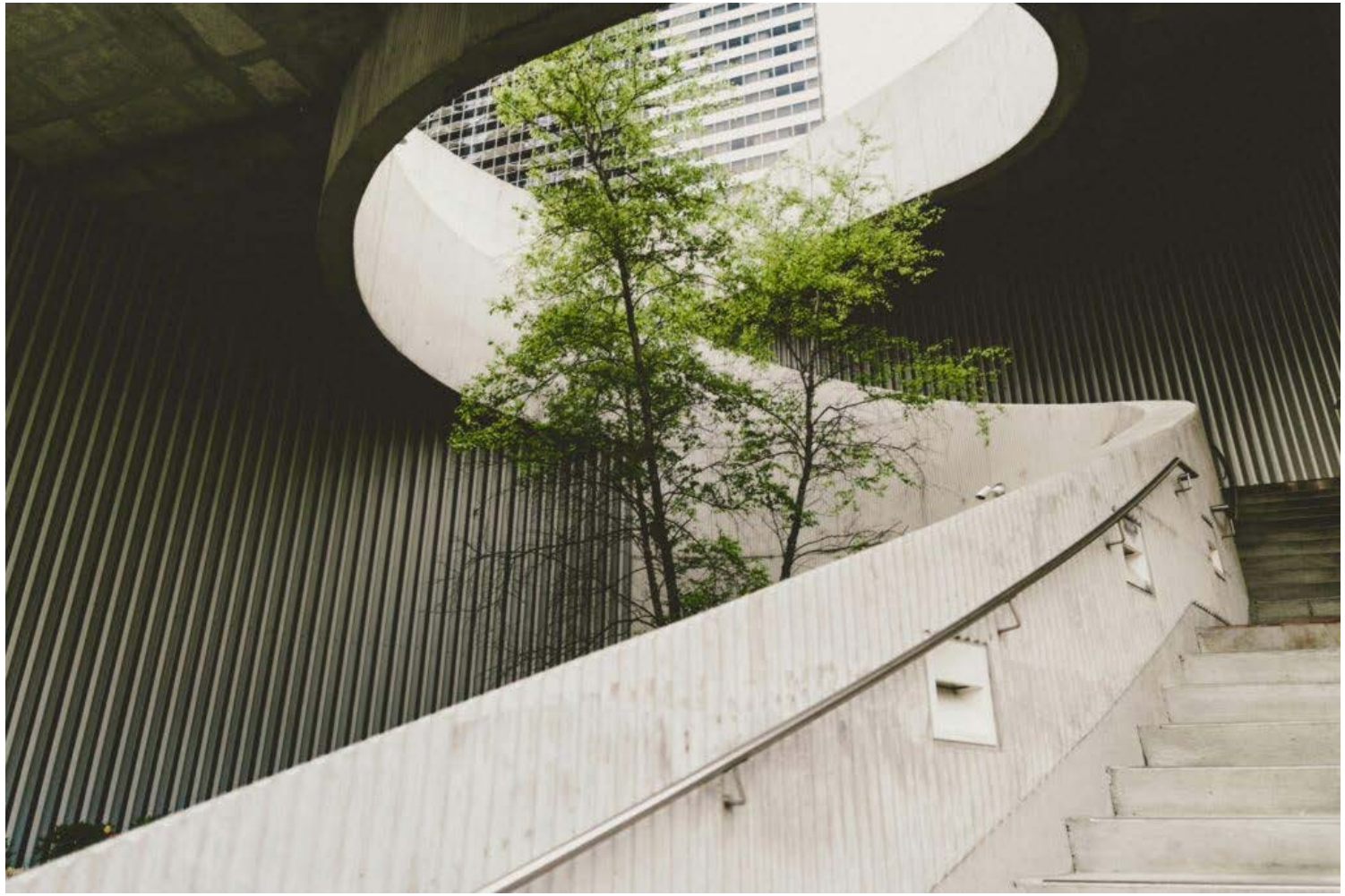

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