IndiaBioscience

Young Investigator 101

A peer guide for early-career faculty in the life sciences in India


CAMP

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The original idea and initial draft for this compendium emerged as an outcome of YIM 2021 with co-organisers Imroze Khan (Ashoka University); Karishma Kaushik (formerly at Savitribai Phule Pune University); Shantala Hari Dass (formerly at IndiaBioscience); Smita Jain (formerly at IndiaBioscience); Vasudarani Devanathan (IISER Tirupati). The analogy of a Young Investigators' (YIs) professional journey as 'climbing a mountain' was inspired from a X (*formerly Twitter*) thread by Deepak Modi (ICMR-NIRRH, Mumbai).

In 2024, this project was taken forward by Karishma S Kaushik, in her current role as Executive Director, IndiaBioscience.

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Foreword

Karishma S Kaushik

Starting out as a Young Investigator is lonely. I cannot overstate the number of times I used this refrain during my five years as a Young Investigator (YI) at Savitribai Phule Pune University. I also cannot count the times I have heard a variation of the line from a fellow YI. Across the years, I have stopped to think, why is this so?

Across my early-career scientist years, and now as Executive Director at IndiaBioscience where my role involves facilitating networking and mentorship among YIs in the life sciences, I have had several opportunities to reflect on this. To start with, the transition from a postdoctoral researcher to a YI is steep, not only in terms of scientific responsibility but also in terms of the professional roles. For the first time in their careers, a YI finds themselves spearheading a research group, which involves building a research plan, defending grant proposals, hiring researchers, submitting research publications, as well as teaching and administrative responsibilities that come with being faculty. It is interesting to note that a new YI almost always takes on these numerous responsibilities as 'independent' professionals, a term which in itself carries a sense of isolation.

Several YIs are also undertaking significant personal changes as they start an independent career, which can include relocation back to India or inter-city transitions, each with a unique set of uncertainty and doubt. In the background of all this change, the looming question of **'Am I doing this right?'** is always one rejected grant, one tough conversation, and one set of delayed paperwork away.

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The flagship meeting series, the **Young Investigators' Meeting (YIM)** from IndiaBioscience, provides a broad platform for networking and mentorship among YIs in the life sciences in India, and supports the discussion of these challenges. In fact, it was after the first virtual YIM in 2021 that the idea for this compendium was born. I was fortunate to be a co-organiser at YIM 2021, and with Imroze Khan, Shantala Hari Dass, Smita Jain and Vasudharani Devanathan, the first draft of the questions for this compendium were written. Though the compendium was intended to be an outcome of the virtual YIM 2021, I had an opportunity to revive the project in 2024, in my new role at IndiaBioscience.

Beyond the fact that I was a part of the early stages of the draft concept of this compendium, reviving this project resonated at many levels. As a return to India and Ramalingaswami fellowship supported faculty at a state university, I knew first-hand how isolating and daunting the early PI years could be.

I relied on the support of a large set of colleagues, few in-person and many more via social media, who willingly shared inputs on how to navigate a fellowship position, how to build professional connections outside of my immediate setup, and how to continue to do impactful research in spite of intractable administrative challenges. The value of inputs from peers when starting out as a YI was also underscored across the virtual and in-person programs I led at IndiaBioscience, including the YI Huddles (an online meeting series from IndiaBioscience), and more recently, at YIM 2024.

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Inspired by a Twitter thread (X) by Deepak Modi (ICMR-NIRRH, Mumbai), this e-compendium compares the early stages of a YIs journey to climbing a mountain. Much like mountain climbers, ***YIs take on the challenges of being an independent researcher because they want to do it, and not because they have to do it.*** However, as YIs (and mountaineers) soon realise, intent and commitment are only the beginning, and training for the climb, understanding the terrain, getting one's gear ready, acclimatising to base camp, preparing for altitude, and finally, making a summit bid, are key aspects to advancing and enjoying the journey. Interestingly, these terms are as relatable in mountaineering as they are to starting out as a YI!

To YIs or those looking to be YIs, *I would suggest you view this peer guide as a first-stop place to understand the broader landscape of embarking on independent life science research in India*. While the nuances of each one's situation will vary, you will find the answers authentic, relatable and constructive, and most importantly, broadly applicable.

Concerned about how to navigate a faculty fellowship? *We have that answered!*

The best way to approach teaching responsibilities as a YI? *Hear it first-hand!*

New institute woes or archaic administrative processes? *You are not alone!*

Facing institute politics? *Your peers have too!*

Thinking of how to build a supportive but sustainable laboratory culture? *Read some honest thoughts!*

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As you read this e-compendium, ***you will realise that while the journey of a YI can be lonely, it does not have to be like that***. I hope this peer guide is your starting place to recognise that your considerations and challenges are not unique, and with collective insights from colleagues (who have scaled similar peaks!) you can find solutions and support.

Think of this compendium as a trek with a supportive set of peers. We hope you enjoy the chat (and the climb)!

At Yellowstone National Park, USA, a few months before the return to India. You can call it the 'building up the basics' phase!
Photo credit: Karishma S Kaushik

Karishma S Kaushik

Executive Director,
IndiaBioscience

Abbreviations

DBT	Department of Biotechnology, GoI
EMBO	European Molecular Biology Organisation
INYAS	Indian National Young Academy of Science
JRF	Junior Research Fellow
PI	Principal Investigator
RA	Research Associate
SE	Statement of Expenditure
UC	Utilisation Certificate
YI	Young Investigator
YIM	Young Investigators' Meeting

The climbing team

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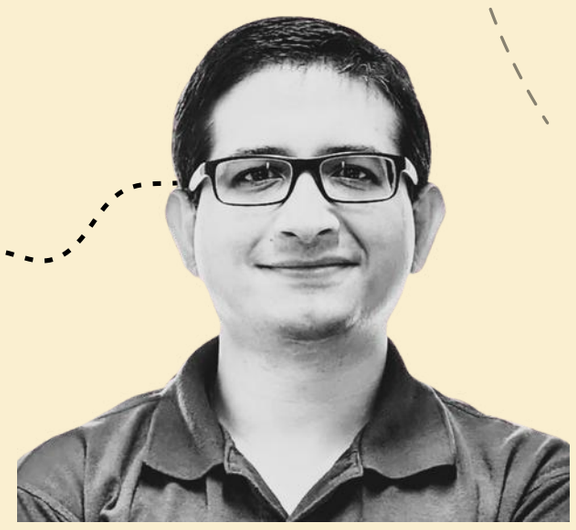


Saikat Chaudhury
CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad

1. Building up the basics

The mindset of a future Young Investigator (YI)

Focus: The main focus of this section is to convey to a future YI aspirant that it is important to be clear about the vision and what it takes to be an independent YI.

What would you suggest should be the mindset towards science and my career if I am planning to embark on being an independent researcher in India?

Meghna Krishnadas

To some extent, what your mindset should be depends on what you seek to gain out of your career or journey in science. If you are curious about natural systems and how things work and are seeking truth and knowledge, then that has to be kept as a top priority in terms of shaping your work. That should be the first thing, I'd say,

"define your priorities and what you seek out of academia."

And it's not just you and your career and your goals in academia, it would also be very useful for us, as a community of peers to know what we bring to academia. Some of that might clash with what is extant and prevailing and, that's where mindset comes in.

"Are you someone who is open to meeting resistance on what you think is the best way to do things?"

It's something that you should think about and prepare yourself for. Also, think long term about what matters most to you and how you can ensure that your generation or the next generation of researchers enjoys a better academic environment than the one you found.

There's this term that I have heard, 'anti-fragility'. **You will be bogged down on some days with things you don't like, you will face challenges, but can you be anti-fragile? Can you make sure that even if it bends, it doesn't break you? Developing that kind of mental strength is a critical part of mindset.**
Another point would be integrity, really stand up for what you believe in. But in relation to that, flexibility is important too. When and where do you need to change your outlook toward, let's say, your institution, the general climate, or even your science; flexibility and openness in mindset are important.

Poonam Thakur

Having clarity of mindset is important. This kind of work requires significant involvement and commitment. Taking a decision that is not based on sheer interest and surety can make the journey very difficult to manage later on. A clear vision of 'this is what I want to do with my career' is required.
Another important part of mindset is being comfortable with the idea of making decisions on a regular basis.

"Being a PI means making a decision per five minutes."

Tied to this is the fact that a PI is responsible for a lot of things, the lab's finances, projects, students' thesis and careers, and more. The comfort with making quick and judicious decisions and being held responsible is necessary.
Finally, an inclination to want to be a mentor which includes wanting to help and guide people in not just navigating a research project, but also their career. This factor would definitely favour someone wanting to be an independent researcher.

Sushmita Jha

You have to have a mindset of resilience, of flexibility, and course correction.
My PhD and postdoc were both abroad, so I didn't understand the ecosystem that comes with doing a PhD in India. I would say that the mindset definitely has to be one of resilience

What does it take to be an independent YI? What skills other than research prowess would I need to run a productive lab?

Meghna Krishnadas

A key skill is people management. During our training as PhD researchers and even as postdocs, we're trained to do good science. But as a PI, suddenly you are in charge of getting people to work with you and keeping them motivated and engaged. And they may not share the same amount of interest in what is essentially your larger goal. So,

"learning how to keep people committed is essential."

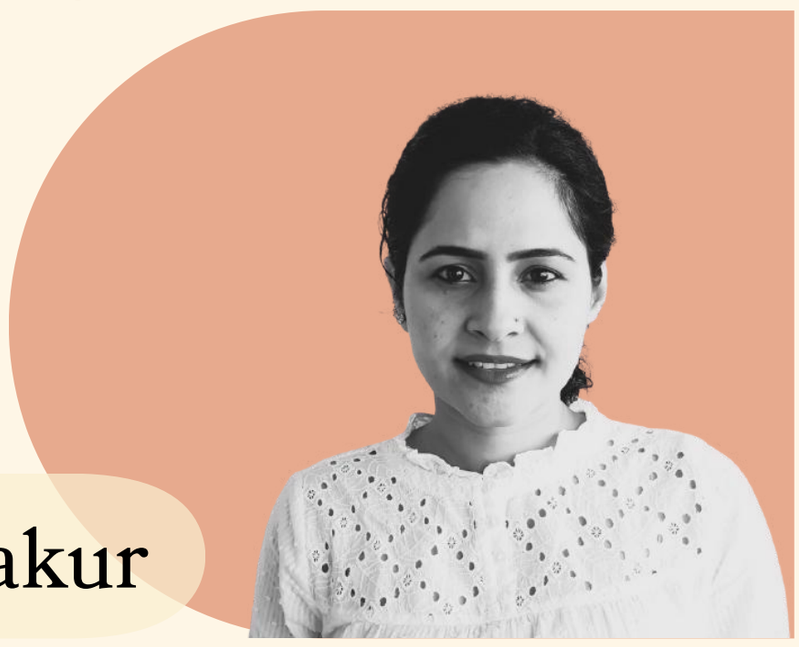
This is something you need to know that you have to learn. As a mentor, you also have to appreciate that you get folks with different capabilities, interests, and mindsets. And you should strive to learn how to make sure both you and your mentees benefit mutually.

Another thing is planning your time and your goals. Breaking your goals into short-term, mid-term, and long-term is a huge skill that you need. At any given point in time, you will be multitasking; you won't just be working on your science, you will have to contribute to a whole lot of things. So, being systematic and organised with your time is really important.

I really encourage people to plan their time away from distractions. You need to find some dedicated space and time in between all the chaos to focus on and take stock of things that truly matter.

And learn to say no, learn to say it politely. Don't take on more than you can handle. It leads to lot of stress, and you end up sacrificing your personal well-being and mental health.

"Keep this in mind and be prepared to say no whenever required, even if it might not always work."



Poonam Thakur

Mentoring and people skills are extremely important.

And mentoring can be learned and honed early in the lab. While pursuing a PhD or postdoc, there are always trainees and project students in the lab, and you should try to teach and guide them. Try to teach them one or two skills and see how you are able to manage different people. You can also design small projects for them and self-assess on how you are tracking the progress and following up with them.

There are many workshops that people can attend to learn other essential skills like leadership and management. In particular, the EMBO Lab Leadership course which I found very useful. I also attended a workshop on ethics in academia, which helped me better understand lab and resource management.

In order to build decision making, having insight into things work is important. Paying attention to things such as what kind of equipment and specifications one is working with and how lab resources and orders are managed is important.

"As a PI, 50% of your work is making decisions on what equipment and chemicals to order for your lab."

Sushmita Jha

One thing that I needed to learn a lot about was fund management. I came from a very well-funded lab in the US and never really thought about budgeting as much back then. When you start out in research, you don't really think about how much does an ELISA kit costs, or how much does this, which I do all the time, cost.
I would say that what it takes to be an independent YI will vary across the country, depending on what kind of institute you join and what kind of like community you have. If you are starting out in a very new IIT (like me), you might end up doing more than just your research, fund management, or thinking about your mentoring skills or leadership skills,

"infact you might end up having to develop the systems that allow you to do your science."

Mayuri Rege

Being resourceful is a critical skill that will help you achieve your goals, though perhaps not in the original way you had planned. And finally, excellent time-management and the ability to say no are essential. Your time is your most valuable asset. Be mindful of how you spend it.

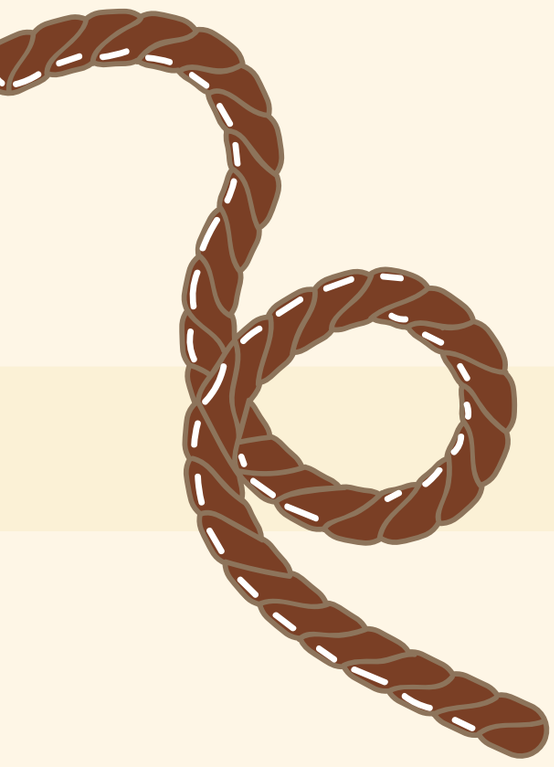
How important is it to develop independent thinking in terms of research questions and ideas from my PhD and postdoc research advisors?

Meghna Krishnadas

"Academia really requires you to exercise a lot of independent thinking."

The sooner and earlier you start doing that in your career, the better it is. It is unfortunate that we don't have such a push for independent thinking from day 1 of the PhD program.

It is absolutely pertinent to develop independent thinking, not just in terms of research and science, but also in other aspects like writing grants, managing funds and leading a team. If you do not get a chance to do that in your PhD, it is necessary that you seek to do that during a postdoc and specifically look for such opportunities.



Poonam Thakur

Asking independent research questions should start at least from the beginning of one's postdoc. You should have an open communication with your postdoc supervisor and let them in on your desire to be an independent researcher. In some cases, supervisors would clearly share which of their projects are off limits for their postdocs to carry forward to their own labs in the future. As a postdoc, you should formulate new questions and ideas, discuss them with your supervisor, and try to work on them on the side if the supervisor is on board.

Sushmita Jha

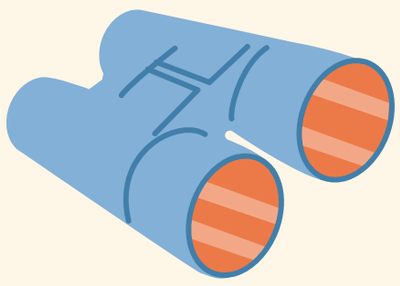
"I think you should be thinking about your independent journey fairly early on."

For final year PhD students, or even as they're getting to the final years, I encourage thinking about problems that arise from their research areas, but are uniquely theirs. I think at the level of your postdoc, you should be fairly independent.
And as you transition to a YI, I think you should not be taking problems from your previous PI forward. You can be in the same domain areas, and of course, you cannot completely disconnect from what you've learned during your PhD and postdoc. But what I would say is that

"come up with unique problem sets, which allow you to get funded in this ecosystem."

I'll give an example from my journey, so I worked on MS (Multiple Sclerosis) during my PhD and my postdoc. And during my interview, I was told, well, there's a very small group of people in India that get MS, so MS is not really a pressing problem for India (although that is not correct, really). But at that point of time, I was told, why don't you think about a problem that affects a larger population and is more relevant to the Indian subcontinent.

And my area of expertise was inflammation. And I switched to thinking about what are the other problems that affect the Indian subcontinent, which would be in the same area that I'm interested in, and then came up with gliomas, because I was so interested in glial biology and inflammation.



Mayuri Rege

While initially there might be some overlap, as a YI one must plan how to carve out a new exciting research area that is different from your prior research. It must be clear what new knowledge your lab is generating. This will naturally help in future grant and tenure applications, amongst other things.

I am well aware of the challenges of doing science in India. What coping skills would you suggest to keep going, despite the rainy days?

Meghna Krishnadas

Taking a break from work and telling oneself that it is okay to slow down. Learning to tell myself that it is okay if I don't achieve much in the next 2-3 months has really helped me.
It takes time to learn this, and it's also important to have a support system and interests outside of work. I make sure that on weekends, I spend time with my pets, and I'm not cramming that time with other things I want to do.

"I also urge that you respect this of others, and understand that different people go through rough days at different times. A key skill is to give people the space to work, but also making sure the work gets done without stressing them out further."

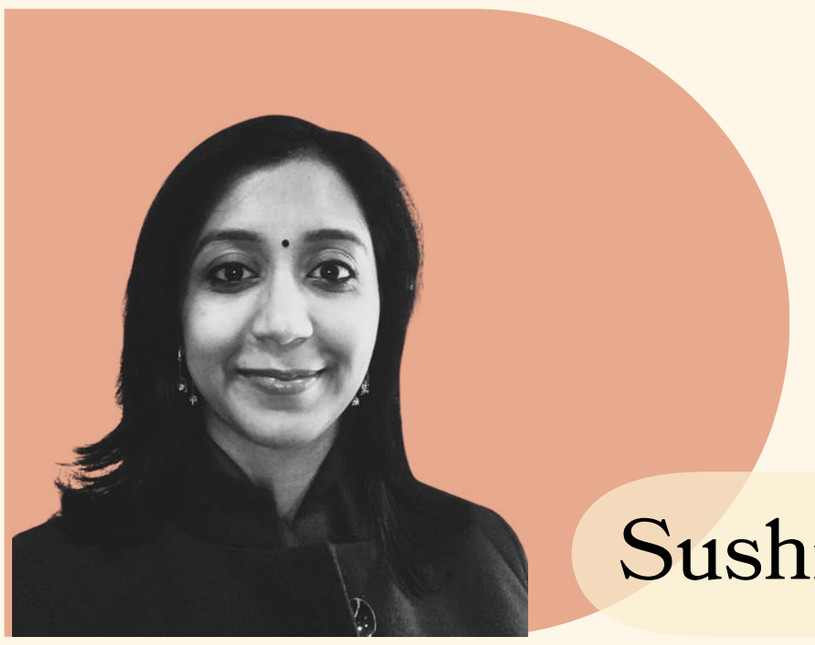
Poonam Thakur

It is necessary to have a good network of mentors and peers in order to cope. You need people who will provide you a shoulder to cry on, on the rainy days. Because no matter how well prepared you are,

"it is highly likely that you would run into something that is very challenging to deal with."

And talking to senior colleagues and mentors can really help in such situations. Also, having a good support system at home, like family and a partner who can keep one grounded, is essential.

Another coping mechanism is to keep one's hobbies alive. **Even though at the beginning, it might be tempting to burn yourself out with work, it's important to rest and recover in between.** On the difficult days, instead of powering through, taking a break to rest can help in thinking more innovatively and creatively later.



Sushmita Jha

Having good friends around.

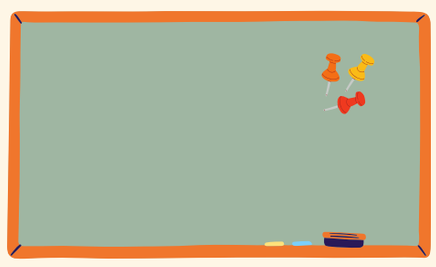
"And also having a sense of humor."

Talk with other people who've been in the system longer, colleagues from across the institute, especially people who are in the same domain as you.
Being open about what are you facing, I think that always helps.

"And the mindset has to be that it's not something that can't be resolved with a little bit of thinking and help."

Mayuri Rege

To tackle such situations I have found it useful to engage in teaching.



It helps you stay connected to the subject and remind yourself why you are doing this in the first place. I think it helps that this is an activity that I have some control over and can get a sense of achievement (getting students excited about biology) despite any failures in the lab. I know others who cook, exercise etc., possibly for a similar reason.

What is the timeframe that I should keep in mind for getting my lab up and running? Or should I need to set milestones for getting my lab up and running and become a productive lab?

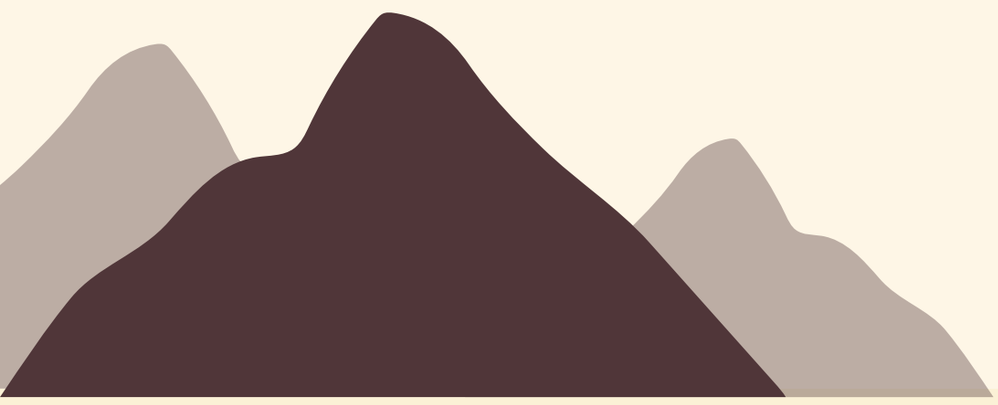
Sushmita Jha

I think it will vary from institute to institute. I don't think you can have a really black and white answer here. Because at some places, you will have a startup grant and a lab space will already be given to you. You don't really have to wait for external funding. For me, it took two years to get my lab completely set up.

"Even though I had a porta cabin allocated to me, there was no permanent building that was there at the time."

You need to ask these things early on, when you are going for interviews to the institute. These are the questions that you should be asking: If I were to join, what would be the typical startup grant? What is the kind of support that I can expect to get? What will be the teaching load? All these answers would help you actually plan out the timeframe for youself. The timescale will vary with also the kind of work that you do. For example, if you are doing mouse work, it will take longer.

How much should I allow the larger ecosystem to influence me and my thoughts regarding my own career path during early days of starting up?



Meghna Krishnadas

The effect of the larger ecosystem on one's career path is inevitable to some extent,

because there are forces at play which are beyond your control. But I think it's a decision we all make about how we are going to let the system shape who we are.

"A good way to not be swayed and influenced too much is to self-reflect regularly and ask yourself what your ultimate priorities are regarding not just your career, but your science and have you moved away from what you had envisioned."

Sushmita Jha

You have to make your research relevant to the ecosystem. You are asking the Indian ecosystem to fund your research. I can't tell the funding agencies to fund me for a research problem that is not relevant for the ecosystem. That would be unfair.

I would say **openness to others' ideas and advice is important**. Make sure that you're open and listening to everything around you and learning from it, but also have a thick skin. Because sometimes people have negative or narrow opinions. For example, I was told that it is not possible to collaborate in India, but I have set up very good collaborations that have been ongoing for many years now.

"You need to have a thick skin about not getting too negative."

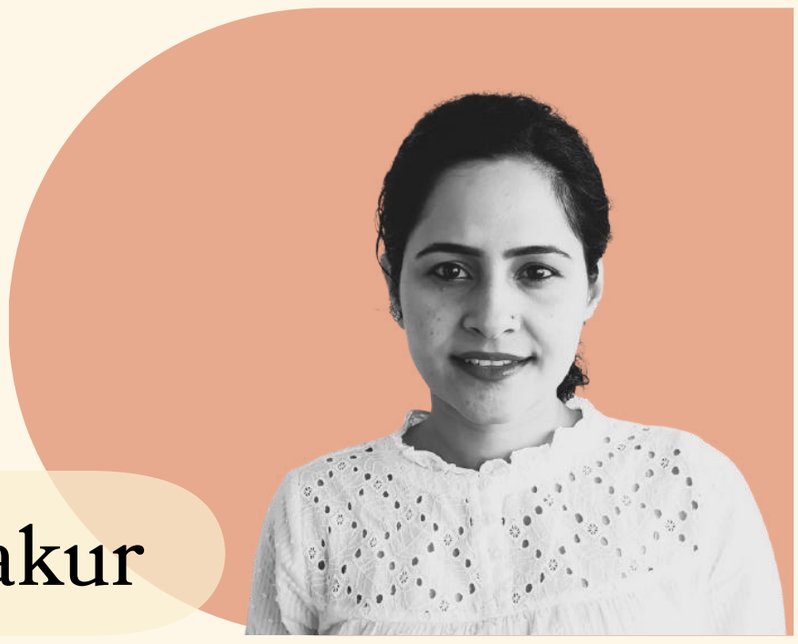
What are some of the more serious challenges than my mindset (commitment, drive, motivation) that I should prepare myself for being a YI in India?

Meghna Krishnadas

You have to be prepared to make compromises and take advice and criticisms.

There would come a time when your vision for science and the larger goal of the institution may not align and even though you have to stand up for their beliefs, you should know when to be flexible and take suggestions.

Another aspect that you should be prepared for is the fact that not everyone would appreciate your science or care about it enough. This is true, especially of the non-scientific section of academia (like support staff or administrative staff), who one inevitably has to work with as a PI.



Poonam Thakur

"Delays in grant approvals and funds release is something that typically happens in India and you should be prepared to deal with it."

It would be ideal to have one or two grant proposals written and ready while joining as an independent YI. You can then apply for grants quickly, and it reduces the down time.

You should speak to the institute/university that you are joining about the kind of support they can provide. Can some basic resources and equipment be made available to start off the work, or would you have to rely entirely on your grant or fellowship. If your research or vision for your lab is especially resource heavy, then that should be a big factor is deciding where you join, because institutional support is critical.

It is also important to assess if your colleagues can step in and help if they have some equipment that would be of use to you. I had very supportive and helpful colleagues and peers, without whom starting and running a lab during the COVID-19 pandemic would have been impossible.

Sushmita Jha

I think you have to be prepared that the systems might not be so much in place. And we are moving towards it. And that, there will be bureaucracy, there will be delays. In my case, though, fund release was very interesting, because the one time that I've had a fund release issue, the people in the funding agency actually called me up and told me that there'd be a delay. So I think there's a sense of community.

Early on, in my YI days, we hosted Bruce Alberts. And I remember talking to him and saying, I joined and it's been about a year and I don't have a lab space yet. And I don't know what I'm doing. And he said, “For the first year of my career, I didn't have a lab space, I didn't have any funding. And what I did was, I made a list of all the things that I would need for my experiments. And that's all I did, plan for a year. And then when I did get the funding, it really helped me”. That was some good advice.

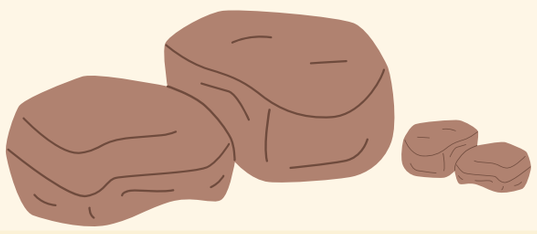
“So yeah, delays do happen, but planning helps.”

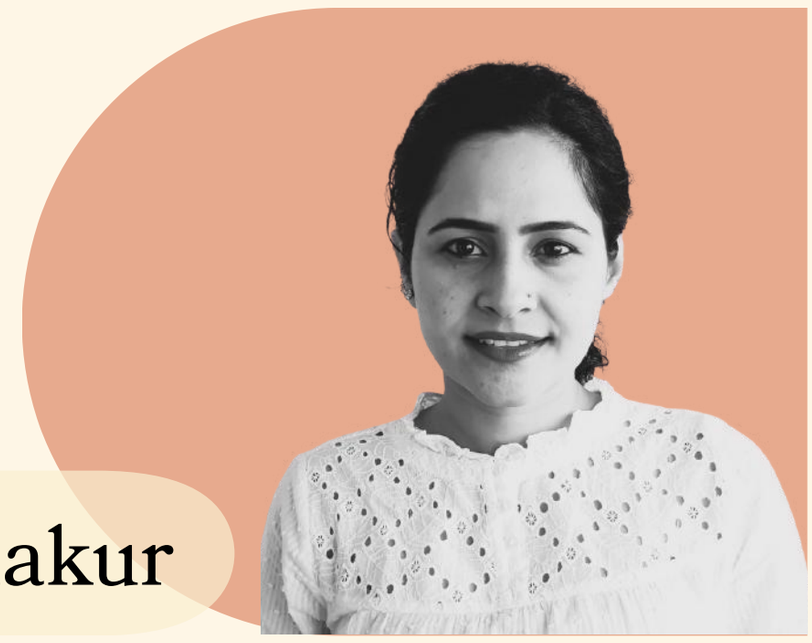
How much will having a (strong) network or mentors or being part of networking meetings like YIMs help in shaping my thoughts on embarking a journey of being an independent YI in India?

Meghna Krishnadas

Networking undoubtedly matters a lot. And you should try to build connections right from your PhD days, especially if you are in India and considering an academic career here. That said, connections shouldn’t always be built only for gains.

“I urge everyone to network because science is not done in a vacuum and connections and collaborations are good for science and research to grow.”





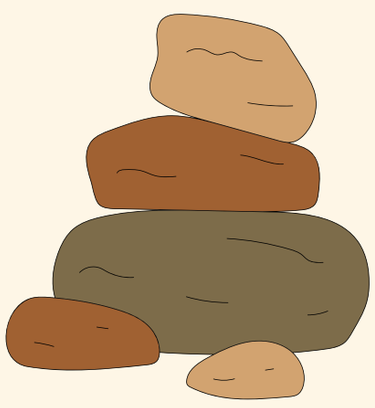
Poonam Thakur

"The YIM was a very important stepping stone for me in returning to India as an independent researcher. It helped in understanding the Indian scientific ecosystem; how things are moving and what people's expectations and beliefs are."

It also aided in identifying potential mentors and knowing which places are hiring.

Sushmita Jha

Connecting with other YIs, and talking with them, and setting up networks with them really helps. It helps you feel part of a community.



2. The trek in

The decision to become a YI in India

Focus: Once the person has made up their mind to embark on the journey, there are a myriad of questions that pop up, the answers to which will help solidify thoughts and plan better.

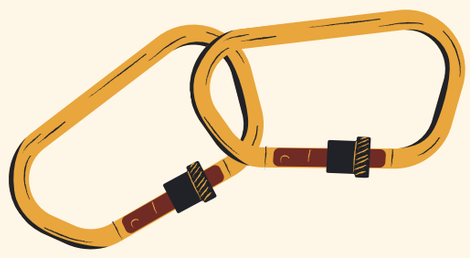
How much in advance should I start planning for a faculty position in India?

Meghna Krishnadas

About 1-2 years into a postdoc, you should start thinking about where you want to apply and how to go about it. It helps to talk with people who are working at the institute, and having a good network would come in handy while approaching people directly or through a previous connection.

"Anywhere that you are going to put in your application, prep yourself for it both mentally and logistically at least 1.5 years in advance."

It takes considerable time for applications to be reviewed and to get a response. Positive responses sometimes take longer, rejections come in quicker. For someone who might have financial or familial responsibilities, they should definitely factor in a period of 1-1.5 years at least between the application and a possible position.



Poonam Thakur

You should start preparing to become a PI during your postdoc. I attended as many skill building workshops as possible which helped me in reaffirming my path. During my second postdoc stint, which was in Germany, I also started applying to and attending conferences in India since I wished to return and practice science here.

This allowed me to network with people in my specific field and let them know that I wish to return to India, so that if any they hear of any open positions or opportunities, they will think of me.

Of course, not everyone plans all aspects in advance and it is not absolutely necessary to do that. But staying in touch with peers is definitely very helpful. I started my ground work 2-3 years in advance.

Sushmita Jha

I had started about two years in advance. Just as I had started my postdoc, I knew that I would like to have a faculty position in India. I had made that clear to my supervisor that this was my goal. I knew that I loved teaching. And so during my postdoc, I had sought out teaching workshops that were being carried out.

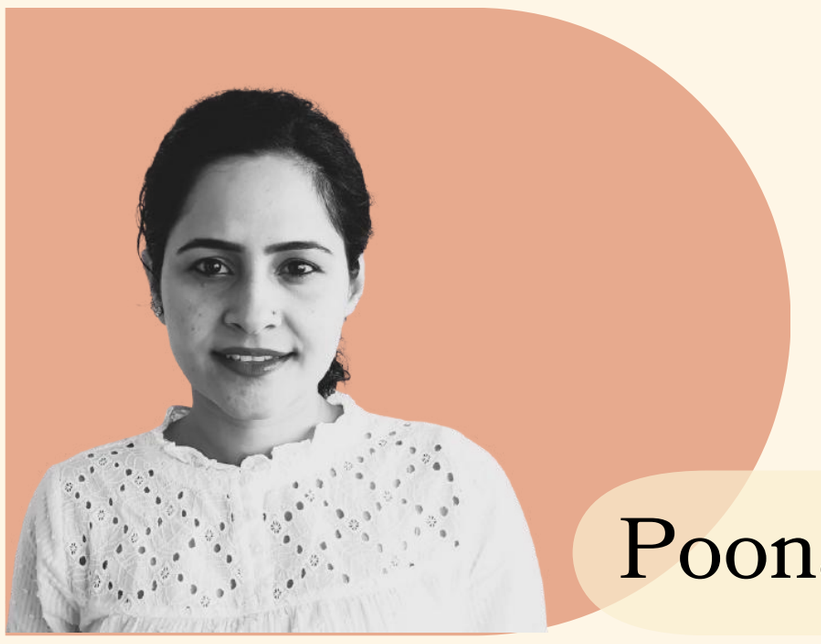
And because I was in the Department of Cell and Molecular Physiology at UNC School of Medicine, I actually volunteered to teach the nursing students, physiology, and medical physiology sections. The students gave me reviews. I also asked the instructor for that course to share her reviews, which I used for my application later. The comment that I got back from my application committee was that,

"we really appreciate that you have so much teaching experience and that you have sought out these ways to show that you are capable of teaching."

So, I think depending on where you are going, plan ahead of time.

When you're applying somewhere, the least that you should do is see the kind of courses that are being taught there, or the kind of research that's going on there, or the kind of infrastructure that's available. Very carefully look at what the advertisement says, what are they looking for? **And it is not just about what you are capable of doing, but also about what would you bring to the table that is not there already. Identify the gaps.**

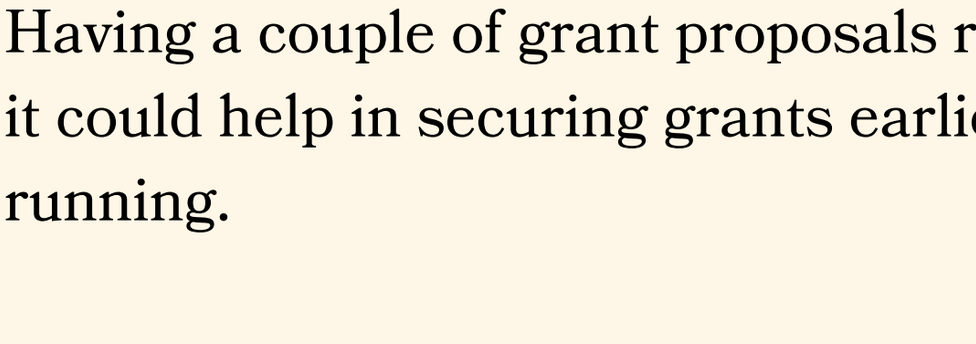
How important is it to have a grant proposal ready or funded grant/fellowship before applying for a job? Should I already start work on some preliminary research that I can carry forward into my new lab?



Poonam Thakur

Having a couple of grant proposals ready before applying for a job would be useful, as it could help in securing grants earlier. This would be crucial in getting the lab up and running.

As a postdoc, you should try to work on some side projects of your own (with the due knowledge and approval of your supervisor). This will give you an opportunity to formulate your research questions and hypotheses, and also for some ideas to fail. Such failure at a later stage of having started an independent lab would be much harder to navigate.



Sushmita Jha

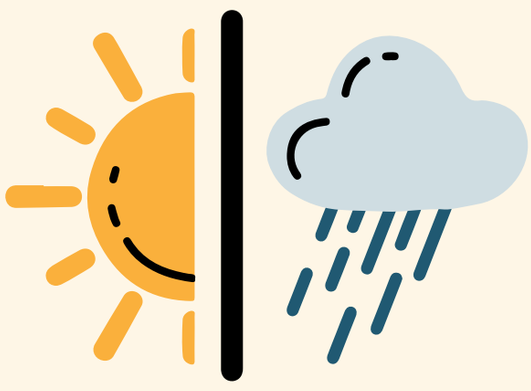
I don't think that preliminary work is needed. But I think if you have a grant proposal ready, that is a great sign. And if you have one ready, you should mention that in your application.

How can I understand the challenges better to make sure I am well informed to make the decision of embarking on this journey?

Meghna Krishnadas

Again, by networking and building connections. It is indeed only by listening to others' lived experience that you can gauge what the best path is for you.

At the end of one's PhD, it is a good idea to try and talk to someone who has tread the academic path recently. That would give an idea about what the prevailing climate is and what the current requirements and challenges are of getting into academia. This is particularly important considering that the climate does change over time.



Sushmita Jha

Connect with the people who are already in the ecosystem and talk to them. It could be informal, it could be at meetings like Young Investigators' Meetings (YIM), where you get to meet many different people. I think you can also set up a zoom meeting or a google meet or a phone call and just talk about the ground realities and unique challenges. If you're coming to India, visit the place, that's the best thing to do. That way you have a better sense of how people work and how open the system is.

I have lived and worked outside India for many years, and I am completely cut off from the ecosystem. How can I get back in touch with colleagues to assess options to return?

Meghna Krishnadas

I would strongly recommend staying in touch with people in India. You should know who your peers and colleagues will be and build connections.

"Someone who has a wide network will see more doors of opportunities open for them simply because more people happen to know them."

Even though the purpose of networking may not be only to get more opportunities, it is something that is a welcome consequence of it.

There are ways to network; by attending conferences, workshops, networking events and connecting over social media. Once a connection is made, it has to be built by staying in touch either over social media or email conversations. One can always write to a connection in an institute or university and request to visit them or give an informal talk at their institute. This would give one access and visibility to other peers and potential mentors in that institute.

Saikat Chowdhury

I left India after completing my undergrad and returned after almost 15 years to join as a PI. I had no familiarity with the system. As I was interested in returning, I applied to the YIM. Attending YIM turned out to be a pivotal decision, greatly influencing my choice to return and my subsequent employment at CSIR-Centre for Cellular & Molecular Biology. It provided a valuable platform for learning from other YIs who had recently joined. Representatives from various funding agencies also participate and share information about different funding opportunities for YIs. Also, the participation of directors from various institutes made it an excellent networking opportunity,

allowing me to connect with professionals in my field and explore potential openings in institutes in India.

Sushmita Jha

It was very difficult for me. I could sense a lot of colleagues feeling as if, I didn't really know ground reality, which was true. Of course, I didn't.

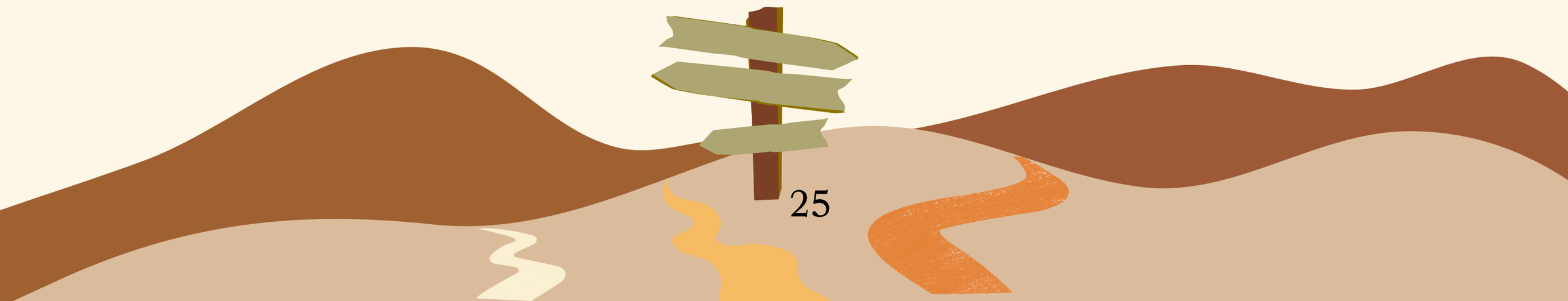
I had to find people who are working in related areas, the kind of people that I would like to connect with. I would just go and talk to people and connect with them. Sometimes it was just about writing a mail and saying, I would like to talk to you. And these are areas that I'm interested in. And I've read your papers with interest. And I would love to talk to you about your research and tell you a little bit about what I plan to do.

“There are always people in the ecosystem who are very open to talk to you.”

Changing tracks: I want to start my academic career in India, but if things don't work out, how feasible is it to change tracks? (to a different career path, let’s say)

Meghna Krishnadas

I think it is perfectly okay to do that. As important it is to be sure of this career path before starting, sometimes it takes time to gauge the reality of being in it. The feasibility of changing tracks would depend on what one is looking to transition into. And being aware of transferrable skills and knowledge (which would depend on the kind of research one is involved it) is needed to come up with a plan of action.



Before you quit, you have to know what you are good at, what you want to do, and what are the options available, and weigh them properly.

If someone does decide to change tracks from academia, they should remember that they have a moral responsibility to the people who work with them or have joined their lab. I strongly advise against leaving someone in the lurch, and this would require you to consider a transition time both for yourself and for your lab members. Open and honest communication with the lab is paramount.

Sushmita Jha

I think that's extremely feasible. I've seen colleagues who've done that successfully. A journey in science is mostly about being able to figure things out, it could be a scientific problem, but it could also be other problems at large. And there is so much that needs to be done in different areas. Right from science communication, to advocacy, to administration, to patenting and regulation. I think all these are extremely viable options.

Is it a viable option to 'return to India', and if things do not work out, move back to a faculty position outside India?

Meghna Krishnadas

I think this depends a great deal on the field of research that one is engaged in. However, it is a viable option, and there are some folks who have done this. It you are considering such a transition, you should hold yourselves to the standards expected of where you're planning to move. Also, think about how you can highlight the things you have learnt being a PI in India.

Sushmita Jha

If you're able to make that choice or transition, then I guess that is a very individual decision. I have seen someone do this.

If you feel that you're not able to meet your aspirations here, decide what it is that would give you happiness. Finally, it is not about doing what everybody else tells you to do; it has to be about what gives you fulfillment.

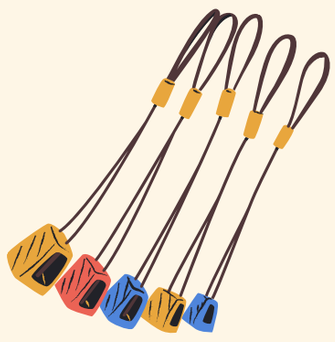
I am a postdoc in India and I think I am ready to apply for an independent faculty position, but I have heard the foreign postdoc experience is preferred/a must for a job prospect. Is this true?

Meghna Krishnadas

Unfortunately, it is true. I do think it can vary depending on where one's applying and what kind of recommendations one comes with, but by and large, many institutions and universities look for experience working outside of India in faculty candidates.

"It is an unsaid rule, but one that nonetheless influences hiring to quite an extent."

It is sad that even though we pride ourselves on our work and research, we somehow do not consider candidates trained in Indian institutions to be at par with international standards. I hope that this situation would change soon, given that (ironically) people who come back after working abroad sometimes bring with them a new cultural outlook. They can advocate for hiring an individual purely based on their science, talents and research ideas rather than what stamp they carry.



Sushmita Jha

Definitely, people do look at where you did your postdoc. It does matter. But I think being productive matters more.

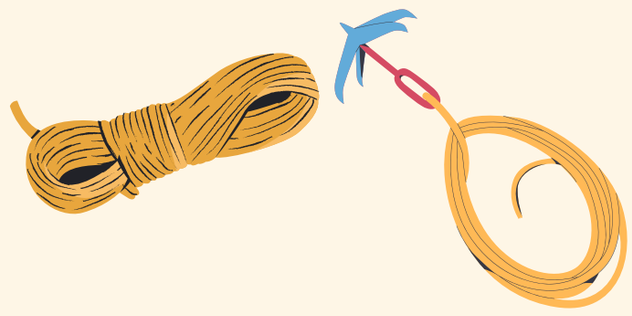
If you do your postdoc from India, but you've been productive, I don't think anybody's going to deny you a position because you didn't do a postdoc abroad. And I've seen people who didn't have a postdoc at all, get positions as faculty. In fact, I can talk about the IIT like-system because I've been here.

We also have something called a faculty associate program, which means that if you just finished your PhD, you could still apply for a faculty position, even if you haven’t defended. You can be a faculty associate and when you finish your defense, you apply for an assistant professor job.

Undergraduate teaching is time consuming and I do not see any immediate link between teaching and research. Is it worth spending time on developing teaching skills? Will it negatively affect my research output?

Poonam Thakur

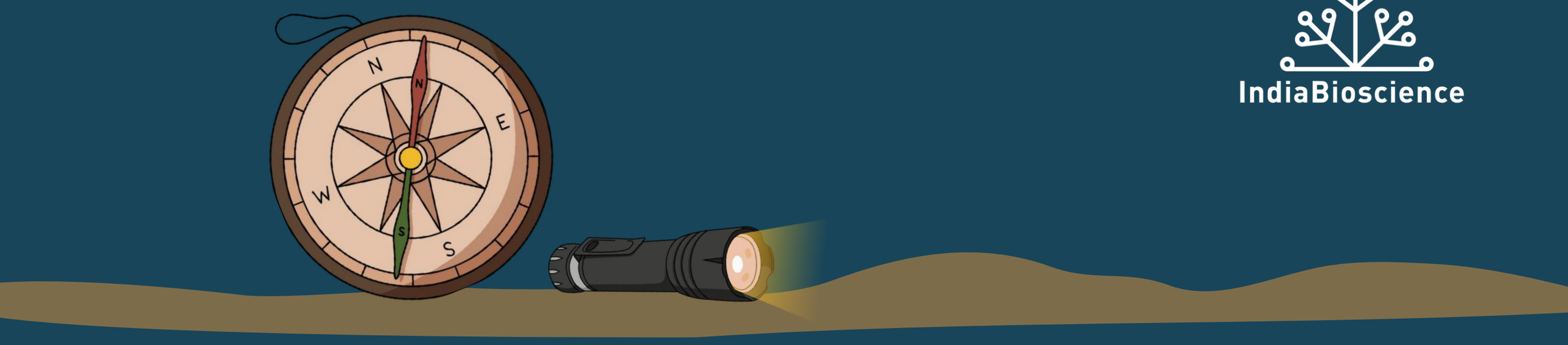
Undergraduate teaching does consume significant time. You have to make this decision at the time of applications - whether or not you would be okay with a faculty job in an institution that involves teaching. That said, having undergraduate students can also be advantageous as you get access to many interns and trainees. They can contribute to the lab’s work significantly, and also provide mentoring opportunities to your PhD students and postdocs.



"Deciding on spending time on teaching is purely based on personal interest. Honing mentoring and people management skills is non-negotiable for a life in research, but typical college style teaching is a choice you have to make."

Sushmita Jha

Ask about what is the teaching commitment before joining. It can be a huge investment of time. And if you don't like teaching, then chances are you will end up getting graded poorly by the students. And in an IIT-like system, those student reviews go into your file. And they are part of the basis for your promotions and your career track. If you're not very interested in undergraduate teaching, don't apply to the teaching heavy institutes.



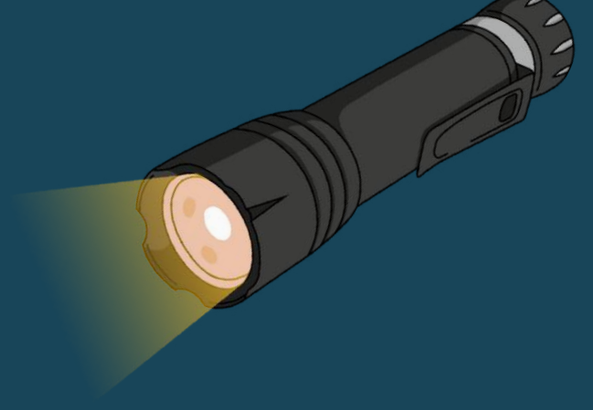
IndiaBioscience

3. Choosing the terrain

Navigating the academic job market: how, what and when?

Focus: The length and breadth of the scope and considerations of academic positions in the life sciences in India.

How do I decide what kind of a place — research institute, university, private institute — to apply to?



Poonam Thakur

A lot of people, when they are coming back to India, want to stay close to family, which itself is a criterion in narrowing down places.

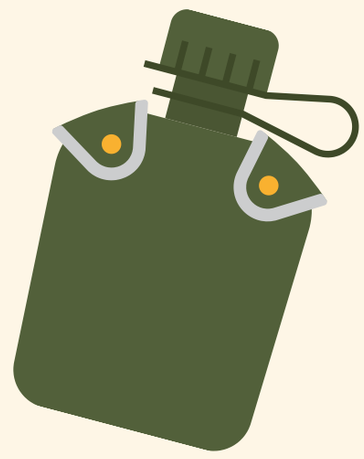
Another thing is, when one considers a university or one of the IITs or IISERs, there is going to be a fair component of teaching as well. So one can think, is teaching my cup of tea or not, will I enjoy it or not? Because you will be required to teach at such places, there is no other way about it. If teaching is something you absolutely don't like, then maybe these are not for you. Ultimately, I think it's best to apply broadly and try for multiple offers and among those decide on the one that aligns most closely with what you want to do.

"It is important that you talk to someone from the institutes you are planning to apply to because, irrespective of its kind, each institute has its own culture and way of doing things."

Saikat Chowdhury

When considering where to apply, it's crucial to be well-informed about the institutions. Universities, as well as prestigious institutes like IISERs or IITs, have large student populations, which can be advantageous. However, it's important to note that their primary focus is high quality undergraduate education. Having said that, some of them are performing extremely well in terms of research these days. So, if you're passionate about teaching and want to balance it with research, these are ideal choices. On the other hand, research institutes have a different emphasis. While they may have fewer teaching obligations, they are committed to specific research agendas. It's essential to understand this distinction when applying. One drawback of research institutes is their smaller student body as compared to universities or teaching institutes. They often have limited enrollment capacities. However, they compensate with a wealth of technical expertise among their staff. This expertise proves invaluable for utilising high-end equipment and developing specialised skills necessary for various research areas.

In the last decade or more, excellent private universities and institutes have come up in India. They are more like the liberal arts college in the US. These institutes have recruited excellent young faculty who are doing exceptionally well. So new opportunities are coming up in India also from private institutes and universities.
In summary, each type of institute has its pros and cons. It's important to consider these factors carefully when making your choices.



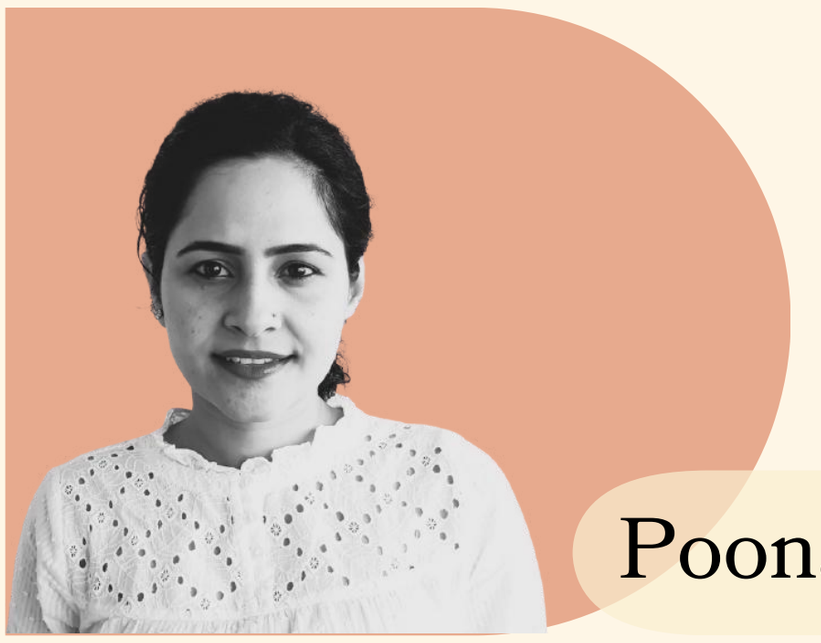
Mayuri Rege

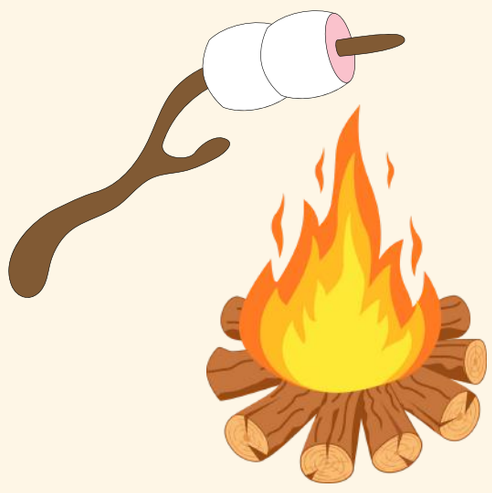
This would depend on where you think you're going to be a good fit. From the institution's perspective, as well as from your perspective.

Often people assume that going to a research institute is something that is very coveted, but that also comes with a lot of its own challenges, which are not taken into account. Just because you don't get through to an institute like that, does not mean that your science is not good or that you're not a valued person. It just means that at that time, they are not looking for someone like you. This aspect is a bit underappreciated.

In teaching heavy institutes, it is important that you find out about the time commitment that would be needed, to assess if it would work for you.

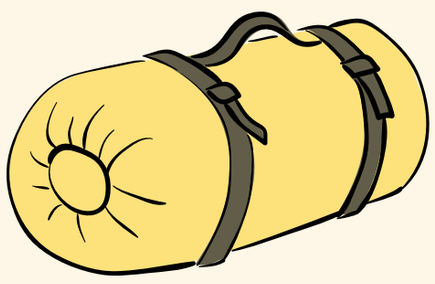
I visit India for 3 weeks in a year, and that's the only time I have to establish in person connections. Is it important to give seminars, talks, etc. before applying for a position at a particular institute?





Poonam Thakur

Whenever you are on your annual visit to India, you can write to an institute asking to give a talk there. There, you can speak to the institute head about applications and get guidance. This may not be a prerequisite for applying somewhere, but would definitely help. During my final postdoctoral stint, I had also started applying to and attending conferences in India, which helped a lot in getting leads for potential positions.

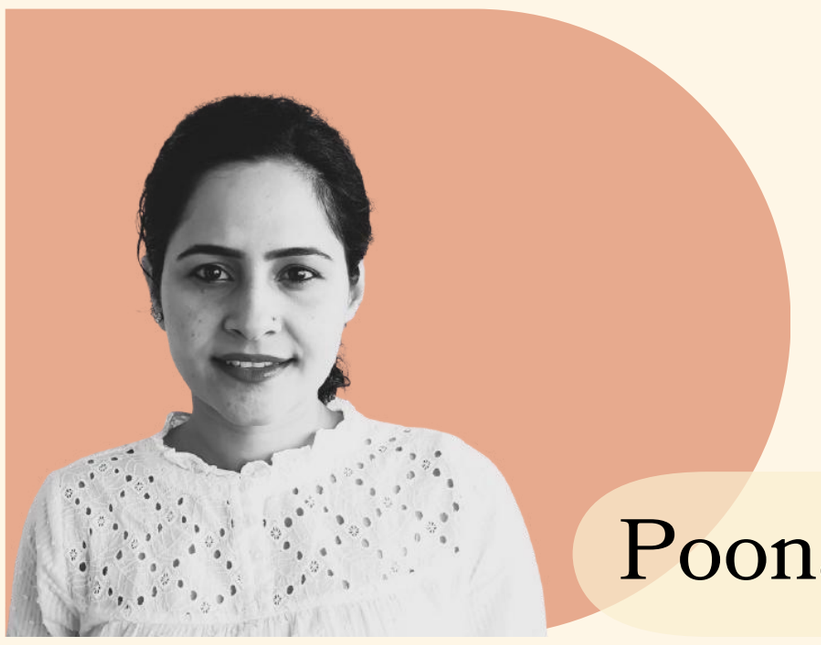


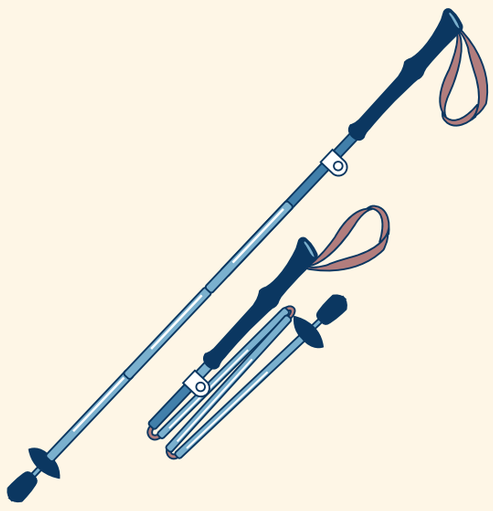
Saikat Chowdhury

I strongly recommend that postdocs or scholars planning to return to India attend the YIM. You will gain valuable insights from recent young investigators and institutional leaders.
If you're planning to move to India, be proactive, and reach out to institutes of interest in advance. Schedule visits to these institutes to present your research and engage with both young and senior faculty. This interaction will give you a comprehensive understanding of how these institutes operate.

Many institutions, such as CSIR-CCMB, have rolling advertisements for potential faculty candidates, while others have ongoing or upcoming calls. Therefore, it's beneficial to contact individuals you know or use the contacts listed on the institutes' websites. When you visit these institutes, present your ongoing research and future research plans as an independent PI to the scientific community and students at the institute. This can significantly enhance your prospects.

How do we know if we have a sufficient publication profile for an academic job? Do they always have to be 1st or corresponding authors? I have heard that one needs to have a high impact factor publication to get an academic job, how true is it? What about preprints (e.g., bioRxiv) are they considered seriously?



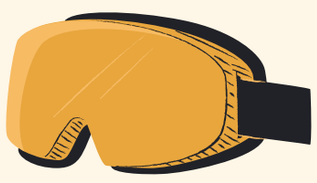


Poonam Thakur

"I was also skeptical about my publications' list, whether or not it's good enough to start applying, and then I went to a YIM meeting and that's when I realised that I have a 'good enough' CV."

There I got feedback and people showed interest and I got an evaluation of sorts.

And say if you're not able attend any such events to get feedback, the best thing to do is to look at the CVs of the most recent hires of the institute, and see what their publications' list looks like. The number of papers they have, what kind of journals they have published in, the regularity of publishing, all this can give you some idea. But you should do this for someone working closer to your field or discipline of study, because there might be field to field differences.

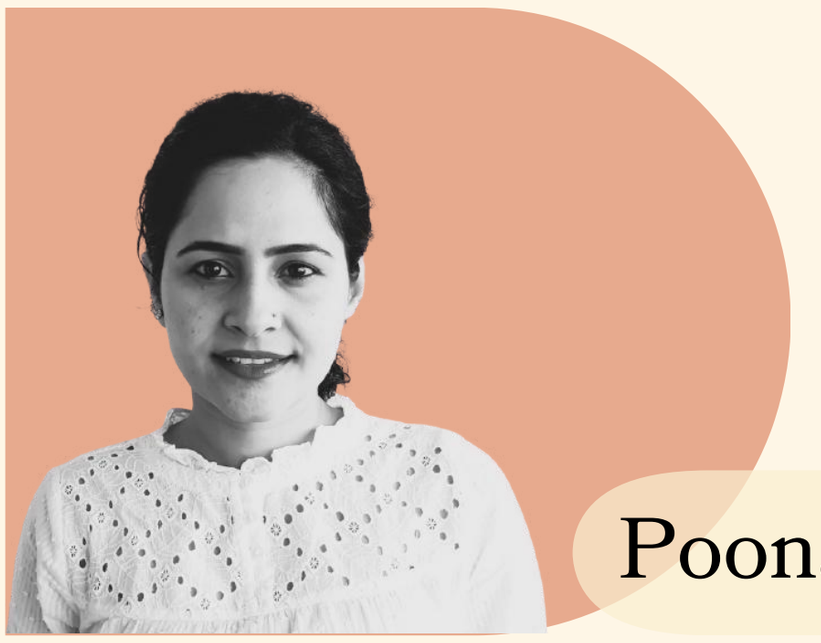


Saikat Chowdhury

Nobody expects an extensive CV, especially within a reasonable, short timeframe. One downside I've noticed is that some people extend their postdoc period unnecessarily for getting a long list of publications, which is not essential. A postdoc phase should be a period of semi-supervised independent research where you refine your skills. The primary goal is to produce high-quality, impactful publications—not to be confused with high-impact-factor journals—that showcase your productivity.
While many Western institutions consider preprints (e.g., bioRxiv) seriously as publications, most places in India still emphasise on publications in reputable peer-reviewed journals. First-author publications are particularly important because they demonstrate that you led the research efforts rather than being just a contributor.

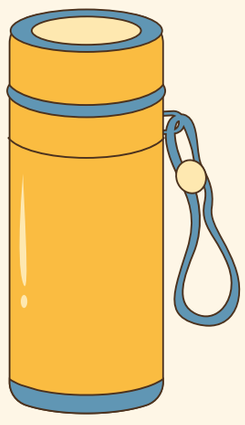
What truly matters are the skills you develop as a trainee and how you plan to utilise them. Your publications serve as tickets for the show—getting interview calls for jobs. Ultimately, what will matter most is your research proposal and how you intend to execute it as an independent PI. This needs to be very strong and convincing in your application dossier and when you present it at the interview.

How many referee letters do I need and who all can I consider for this? How do we choose our referee to provide recommendations? What are points that we should keep in mind?



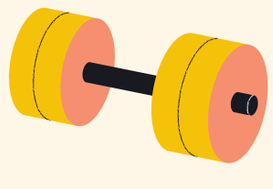
Poonam Thakur

To be honest, one doesn’t really have a lot of choice in this. One would have had a set of mentors. And if not them, may be a doctoral committee member or a collaborator can pitch in. But I don’t think you can go beyond this network to choose your referees. You already know you have these six people in the circle and you have to choose two or three of them.



Vasudharani Devanathan

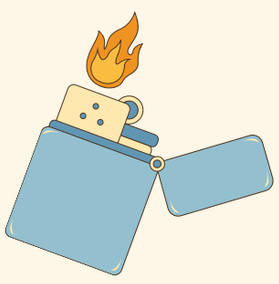
I think during our career, it is important not to close ourselves to a small community. Open up and talk to people.



Of course, the natural choice is your PI or the person you are working with. But, if you collaborate with somebody, and let's say you did a couple of experiments. It's good to stay in touch with that person and from time to time, exchange the progress and talk to them.

So, indirectly, they also become your mentor. And if you make it a long relationship, wherein you have been updating them about what you are doing and all that, you could reach out to that person as well.

Keeping in regular touch doesn’t mean writing them an email every day. But if anything significant happens in your career, like a new publication or conference or an award, you let them know. You can also tell the person that you would like to be in regular touch to seek their advice. And, often people don't say no. And then, you build up that relationship and that person also can be a reference.



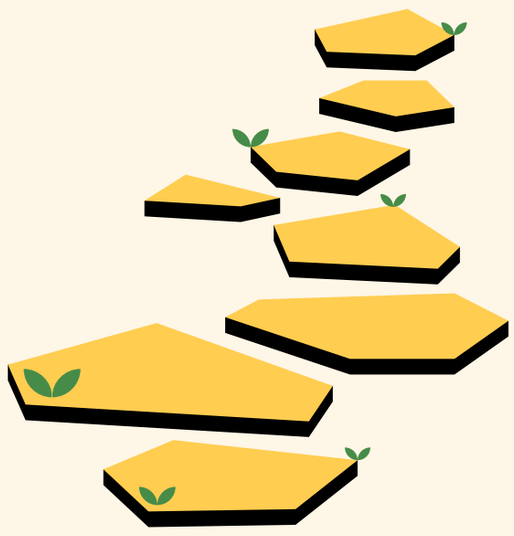
I never receive responses to emails sent to Heads, Directors, etc. How do I get information on potential positions/ my application in this case? How long should I wait to hear from an institute? When would it be safe for me to consider that I have not been shortlisted?

Poonam Thakur

This is somewhat of a tricky terrain and depends on many factors. It is best to talk to some of the recent hires in the institute and ask them about the application turnaround times. Unfortunately, due to the sheer volume of applications, no institute is able to send regret letters or information about rejections.

In such cases, you can write to the institute expressing your interest in giving a talk (you can time this with your annual visit back to India), and most institutes say yes. Once you’re there, you can talk to the HOD, Dean, or Director and tell them that you have sent or plan to send an application. They can guide you.

YIM is a good place to try and find out from people about potential hiring, especially in your specific field.



Saikat Chowdhury

Don't feel too discouraged if you don't get responses from people right away. This often happens because they are busy or overwhelmed with their workload. This issue is common in most of the institutes in India, where limited time and manpower can make it difficult to respond to all applicants.

It's perfectly acceptable to follow up. You can check in with the institute about the status of your application and ask if there are any updates or opportunities. Also, consider reaching out to senior PIs. Email multiple contacts regarding your application and maintain an open mind throughout the process. Once you do so, please give some time for receiving responses. Some amount of patience is necessary.

Does having a re-entry/any other fellowship/ grant help my application? How do I go about identifying host centers? What should I keep in mind while asking a university/institute to host my fellowship?

Poonam Thakur

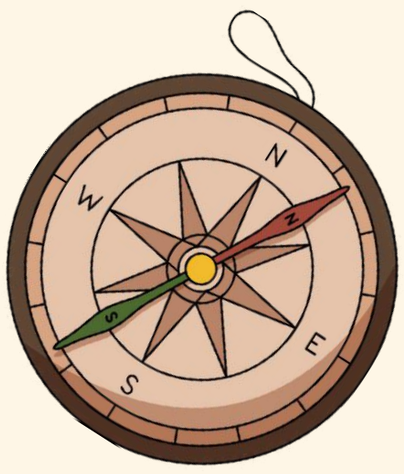
"I have observed a huge variation in how these fellowships are executed in an institute."

In some institutes, fellows may get a lot of support, be allowed to mentor PhD students, and get an independent lab space. But in some others, they may not be given these facilities and would be expected to share students or not take any students and work by themselves, and some places may expect them to teach and so on.

But if one considers applying to their target institutes after the tenure of a fellowship, they may no longer be in the age bracket for assistant professorship, and instead be eligible for associate professorship. So one has to think if they can build a strong enough portfolio in the meantime to be considered. Considering the uncertainties, it might be better to apply to your target institutions simultaneously while applying for such fellowships, and list your target institutions as hosts.

Further, depending on the fellowship, you may or may not be allowed to apply for other grants, so you might be partly dependent on the host institution for the execution of your project work.

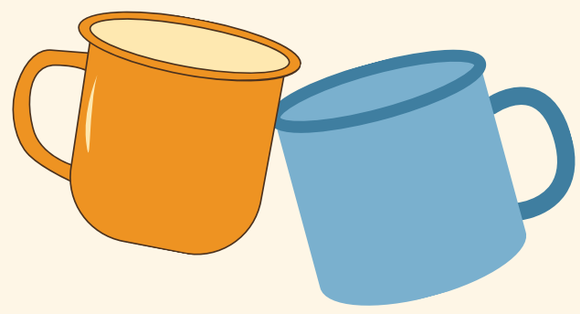
Changing the institute in the middle of a grant or fellowship can be challenging, and some fellowships don’t allow that. So, one has to carefully look at the terms and conditions before executing the fellowship.



Sushmita Jha

For any of the transition grants or position fellowships, it is amazing if you have them. They give you a lot of flexibility. Some of these grants also specify that you have to spend 90% of your time doing research, which allows you to take that time, get your data, get your work done, and ensure that you're established early on before integrating into the system. Writing these grants ahead of time definitely is a very good idea.

What are topics open for negotiation / discussion in an academic job interview - start up grants, teaching load, promotion path? Does it change if I have a fellowship?



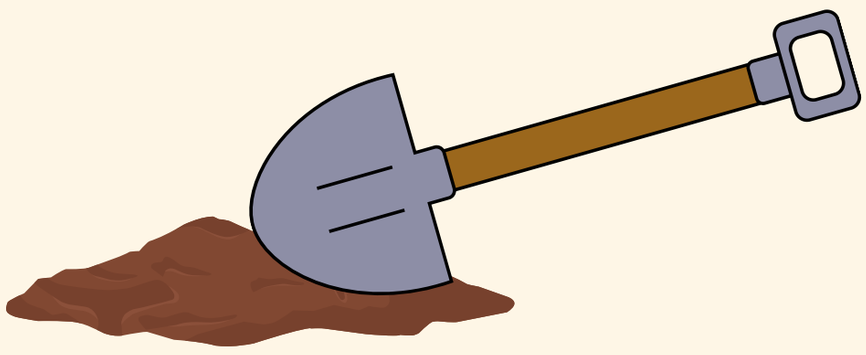
Saikat Chowdhury

"Unfortunately, in India, the scope for negotiating salary and rank is almost nonexistent in most cases."

While in the US, I could negotiate my salary, responsibilities, and even excuse myself from undergraduate teaching for a year, that is not possible in India. Whether you join a university, IIT, or IISER, there is a substantial teaching commitment.

On the other hand, you do have some scope of negotiating your startup funds, lab space and research infrastructure you need for successfully starting your independent research. In this context my present employer, CSIR-CCMB, has been extremely supportive and generous. Our director and senior colleagues have been extremely helpful and supportive to make sure that all young, recently recruited PIs get the maximum support from the institute.

If you join a government research institute, it falls under the direct oversight of specific organisations or administrative bodies within the Ministry of Science and Technology (India). Although there might be less teaching responsibility at these institutes, you would still need to dedicate some time to activities aligned with the agendas of the funding bodies or parent institutions. In these situations, there is probably less chance of negotiating.



Vasudharani Devanathan

It is quite variable. And there is quite a bit of trial and error, I would say. You can keep many negotiation points and see what works. For instance, you can ask for more start up funding in return for more teaching hours.

And let's say you would need an expensive equipment which the institute may or may not have. But with it, you are confident that you can generate a high yielding publication in about two years, then you should boldly negotiate for that.

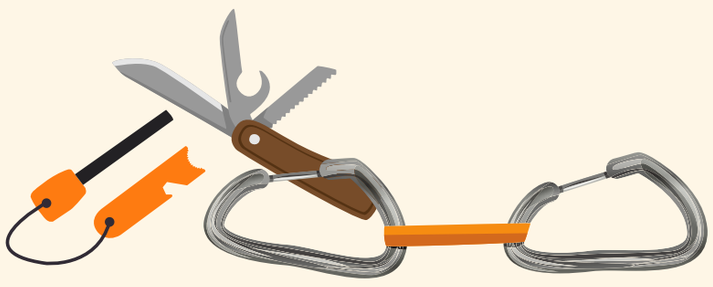
"Another negotiating point would be a postdoc position in your lab. With a postdoc in your lab, you can address challenging and exciting projects which might have high risk of failure, but if they work, would be high reward."

What is the 'success rate' of getting an offer (meaning how many applications lead to interviews, which in turn lead to offers) during the academic job search in India?

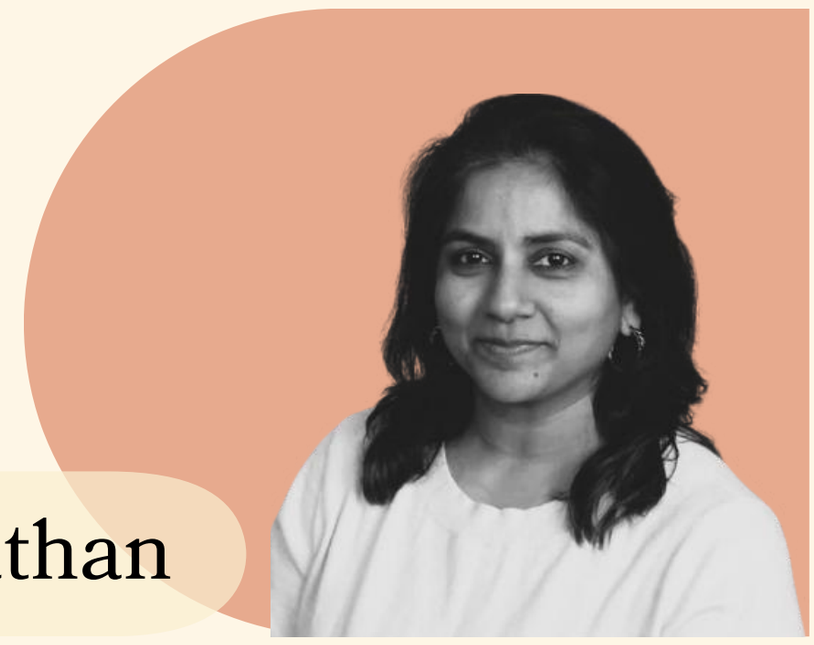
Poonam Thakur

"That is a very complicated calculation and I don't think it can be made."

There are a lot of variables involved.

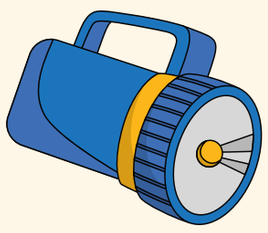


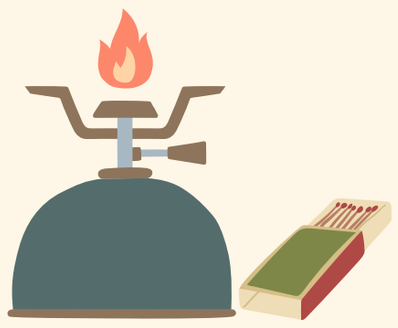
Vasudharani Devanathan



I think success rate is definitely dependent on where you are applying. You need to justify why your expertise or project idea would fit well into what the institute is looking for.

"The success rate of specific and targeted applications is much higher than random or generic ones."





4. Getting your gear

Building connections: The importance of networks and mentors

Focus: The how, why, and when of building professional networks for life scientists in India who have just embarked upon an independent position.

This whole ‘networking’ is new to me. I still don't see the need to spend time on deliberately building connections, when this should be organically grown. What are some important advantages of networking in science in India?

Poonam Thakur

Networking has definitely helped me.

“How else are you to find mentors who you can rely on and share confidential information with or find people who will have the time to go over your budgeting issues?”

Peer mentoring was very important in the early days of being a YI. I do not have family members or college friends who took this path, and networking was the only way to find support.

Sometimes when I'm in distress and need a friend for support, my network of friends in academia are the ones I rely on, since I live far away from my family. And even when I need some odd reagent or cell line for my work, I can always ask my larger network of people in academia since everything may not be available in my institute.

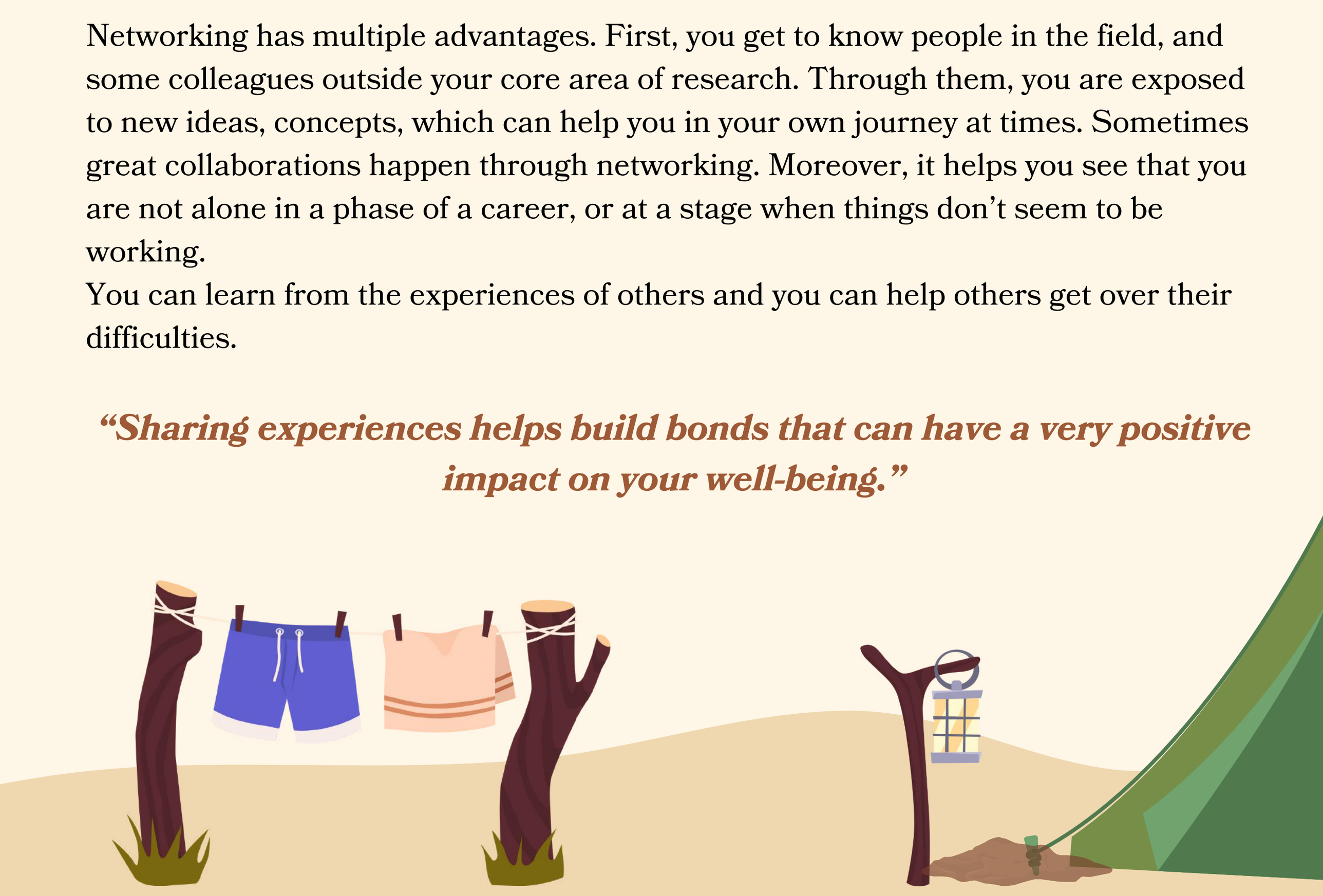
"And networking is not just important for ourselves, but also to give back to the community, especially to younger colleagues."

Here, I will touch upon X (*formerly Twitter)*, it has had a very positive presence in my life and a positive impact on my career. A lot of students reach out to me for guidance and a lot of postdocs have written to me saying they want to start applying and come back to India.

Anindita Bhadra

Networking has multiple advantages. First, you get to know people in the field, and some colleagues outside your core area of research. Through them, you are exposed to new ideas, concepts, which can help you in your own journey at times. Sometimes great collaborations happen through networking. Moreover, it helps you see that you are not alone in a phase of a career, or at a stage when things don't seem to be working.
You can learn from the experiences of others and you can help others get over their difficulties.

"Sharing experiences helps build bonds that can have a very positive impact on your well-being."



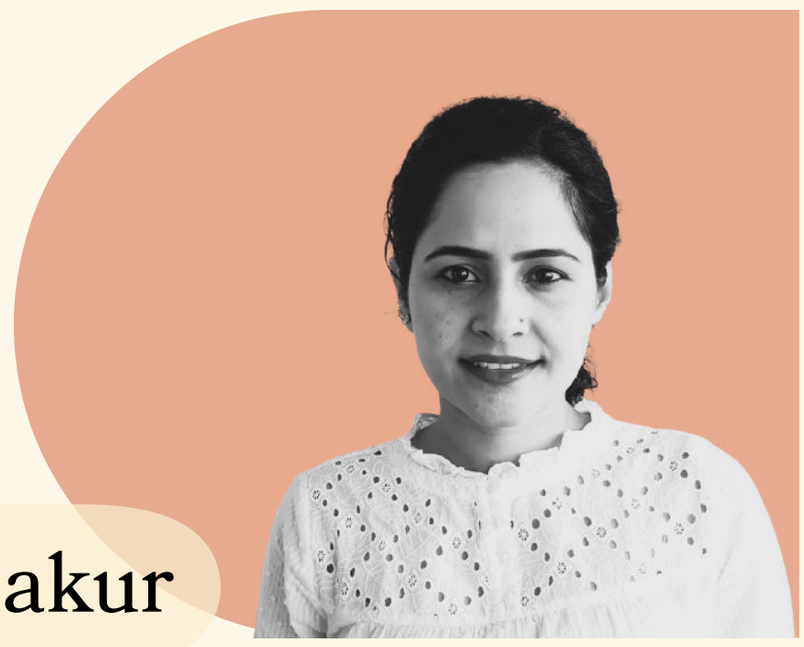
Abhijit Majumder

Networking is obviously important in science for various different reasons. I think the most important point is that to answer any scientific question, I can't do every part of it. I may not have the expertise. I may not have the reagents in my lab. I may not have the equipment and the infrastructure.

So it is very important to exchange ideas. To address your research question from different angles and to have all the components that are required, you need to have the support network.

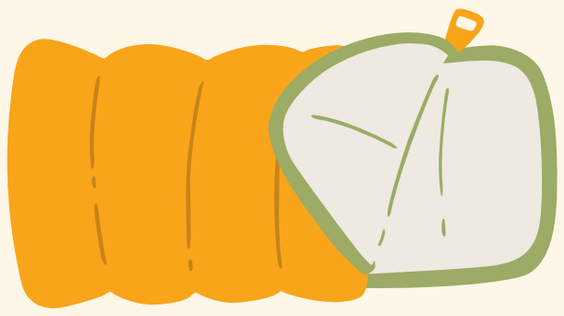
You might also get to know that someone has a good student who wants to move for some reason. And if your lab can host that person, you get good people in your team. When people graduate from your lab and are looking for positions, even at that point of time, your network can help.

I am reserved and introverted by nature, I find it hard to talk to people I don't know very well. Does this mean I am going to lose out on opportunities due to lack of networking? I am not very fluent in English. Will this hamper my opportunities to network?



Poonam Thakur

The extroversion is needed only once or twice a month or even less frequently, for the rest of the days, the work of a PI is mostly sitting in front of a screen and trying to finish the work you have at hand. As an extrovert, I find it very difficult to do this, so I think the challenges are on both sides.

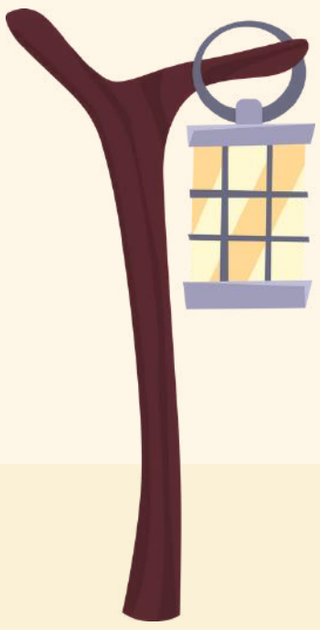


And in many social gatherings, I have heard people speak in regional languages as well. I don't think anyone is gauging your English speaking skills.

"We are a diverse country with all kinds of accents, and I have not seen English as a big barrier in being able to talk to people."

Anindita Bhadra

If you find it difficult to approach others and initiate conversations, social media might come to your rescue. Follow people, comment, ask questions through X (*formerly Twitter*), LinkedIn, Facebook, etc. X (*formerly Twitter*) is a great conversation starter for academics.

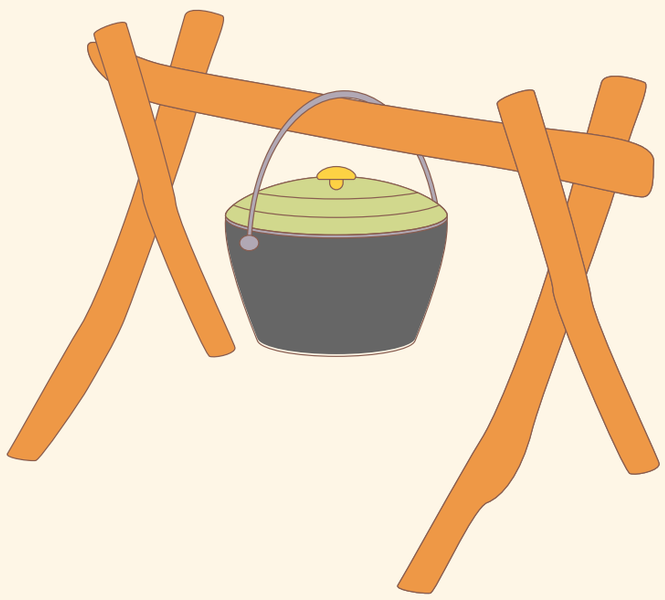


Abhijit Majumder

I am an introverted person. I find it awkward to go and talk to someone who I don't know already. And I don't know any other way to deal with this; other than to push yourself and go there, even if you feel uncomfortable.

"More than English fluency, clarity in your communication is important,"

to convey your ideas and absorb others' ideas. I don't think being very fluent in English is that important. But being able to hold a conversation is.



So far my network has heavily relied on connections and introductions made by my PhD advisor and supervisors. How might I go about building a network of my own?

Poonam Thakur

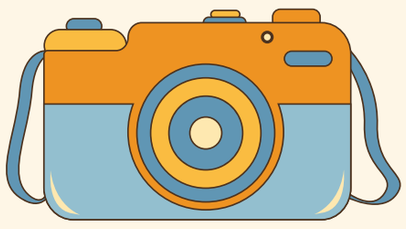
Attending conferences and events and building your own connections and identity is important. Three of my four academic mentors are retired, so if I had to ask for some help or real time guidance, I had to find other mentors. And this was only possible by putting myself out there.

Anindita Bhadra

Again, building your own network through social media is a good idea. Make connections with people outside your immediate field when you go for meetings. Meetings like the YIMs are a great platform for networking, make use of them.

Abhijit Majumder

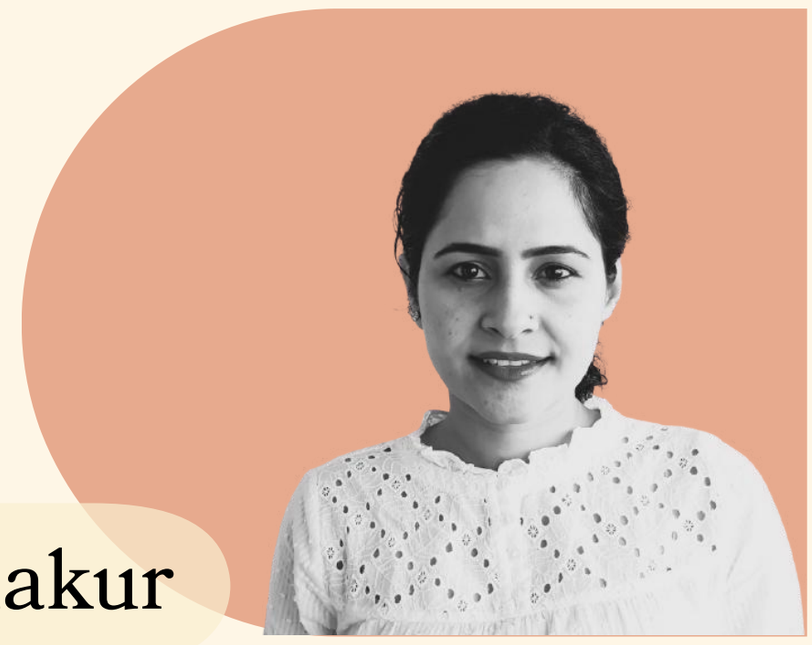
People do depend on their guides' and supervisors' network, yes, but that should be discouraged.



"Students and PhD scholars should be encouraged to make their own network from the very beginning."

Whenever research scholars from my laboratory go for a conference, I ask them to go and talk to people. In fact, it has happened multiple times that they actually made the connection that expanded my network!

What are the platforms (virtual and in-person) via which I can network? How can I leverage IndiaBioscience for networking and seeking mentors in science in India?



Poonam Thakur

The YIM really helped me in identifying potential mentors and in building connections. Attending other conferences and having in-person discussions is also important. I also found some peers and potential advisors in the skill building workshops I took during my postdoc tenure.

Anindita Bhadra

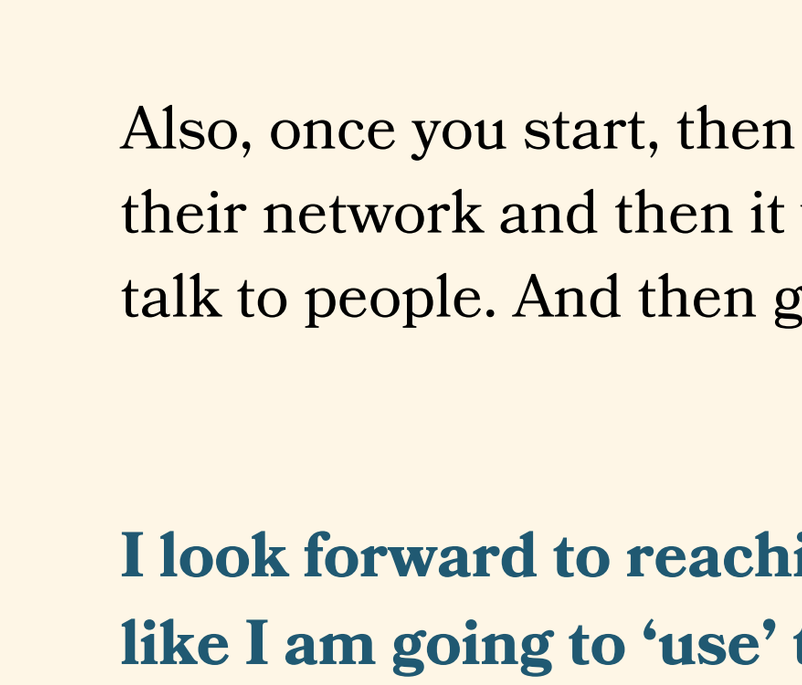
"Attend a YIM or Regional YIM, write for IndiaBioscience, connect through X (formerly Twitter), attend the online events like YI huddle, you will be able to find mentors and others to talk to."

Abhijit Majumder

Conferences and social media. I think these two are the ‘absolute-must’ places to make your own network.

Also, once you start, then you will make a few good friends, they will help you with their network and then it will continue. The starting point is go to conferences and talk to people. And then get on social media and build the connection further.

I look forward to reaching out to colleagues in India, but don't want to seem like I am going to ‘use’ them or that I am ‘needy’. How might I foster these connections so that they are mutually beneficial and rooted in genuine intent?



Poonam Thakur

I think cold emailing someone who you don’t know may or may not work — I haven’t tried that. But, physical presence and discussions are certainly a great way to enhance genuine connections and potential collaborations. For this reason, attending conferences and events is important because that’s where many of these discussions take place.

Anindita Bhadra

Often, social media connections are quite safe. You can follow someone, comment on their posts, tag relevant people, and start networking. You can also ask for advice on social media by tagging people and sharing your work and small achievements.

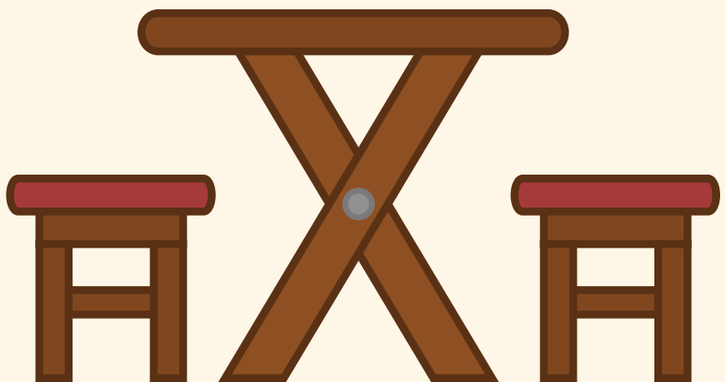
If you are connecting with someone in person, you can begin by discussing your work and build your connections from there. A genuine person who is simply chatting with a fellow academic does not appear needy or as if they are trying to get something out of the connection.

Abhijit Majumder

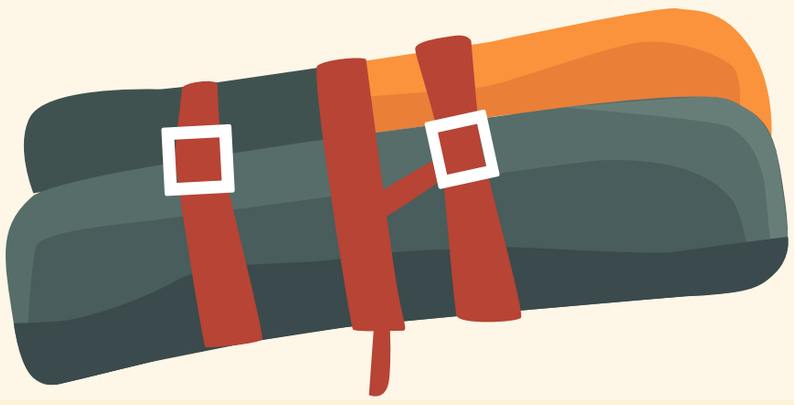
“To be very honest, I'm not able to resonate with this question. I don’t see why any academic connection would appear to be not genuine.”

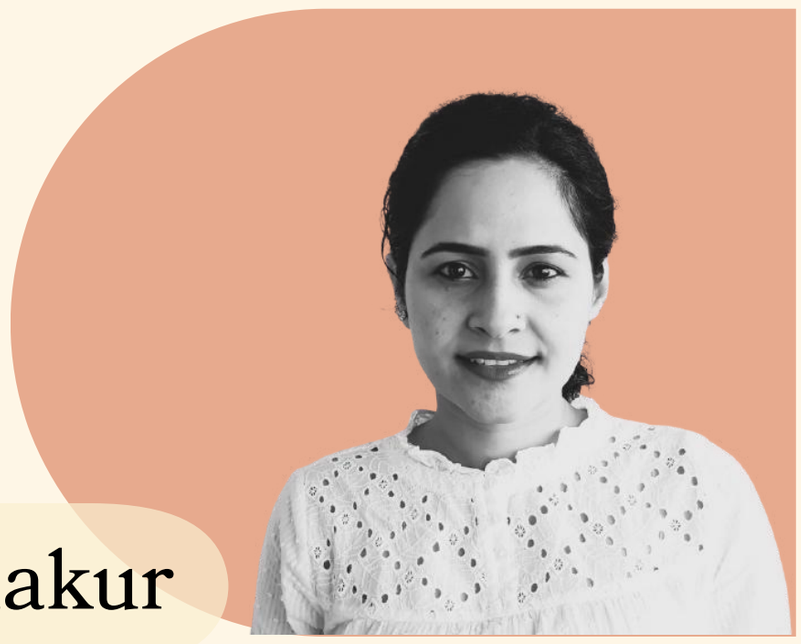
If you go to someone for a research collaboration, and tell them that you don’t have a certain expertise and want to collaborate, that is a very genuine approach.

And in another perspective, if you seek advice from someone about faculty positions and applications, asking them if your profile will fit the institute; you’re just asking for information. And I think this is absolutely professional. You’re not asking that person to push your application, or to campaign for you. You’re simply asking for their opinion and that’s absolutely fine.



What are some basic tips and tools to start getting active on science X (*formerly Twitter*) in India? Any handles to follow? Any do's and don'ts?





Poonam Thakur

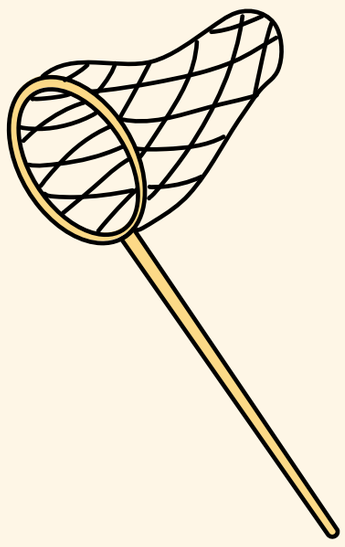
The way I started was that I had been to a conference and there were people who were live tweeting about the conference sessions. I was in one parallel session, but was learning about the others through these tweets. So I started following the people who were attending those sessions. They were in the same conference as me, so belonged to the same field. And whoever was tweeting with the conference hashtags, I followed them too.

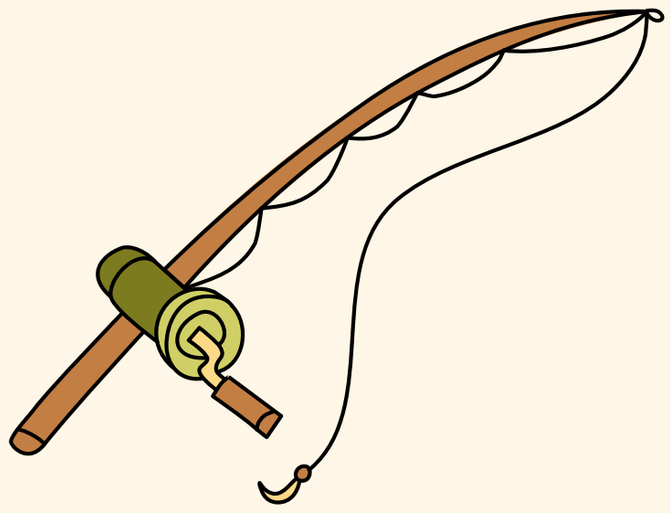
I started being very active on Twitter once I moved back to India. At that point, I started following any scientist who I met or anyone whose papers or talks I was reading or listening to. Over time, through your primary X (*formerly Twitter*) network, you find people whose tweets they are liking and you could follow them. X (*formerly Twitter*) also gives you suggestions of similar people to follow.

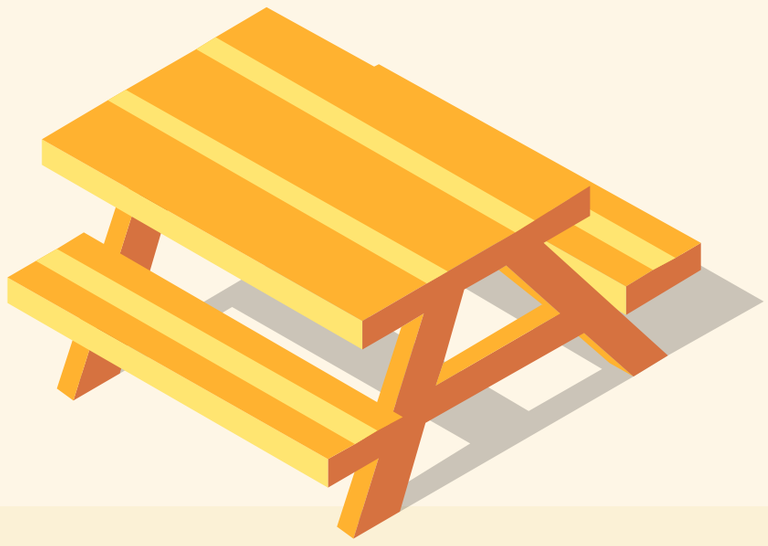
For me, the pandemic time was when I started finding a community on X (*formerly Twitter*). There are also some popular hashtags which I followed, like #NeuroTwitter and #BeingaPI.

You don't have to build your X (*formerly Twitter*) account in one or two days or even weeks. You can take it slow and over time. Because being overwhelmed by social media is also a phenomenon. In fact, once in a while, you should consider giving yourself a break from social media.

"One shouldn't feel compelled to tweet daily or on a regular basis. It is not an obligation and if you are feeling overwhelmed, it is perfectly okay to take a break and get back when you feel like it."







Anindita Bhadra

One thing is to try and find people that you can follow. Don't just post what you want to advertise or showcase but also like and share posts from other people so that your network increases.

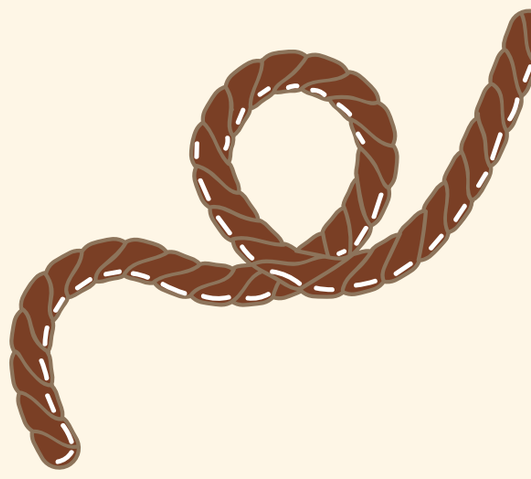
Abhijit Majumder

Don’t get into unnecessary political and other volatile issues on X (*formerly Twitter*). I don't think that X (*formerly Twitter*) is a platform where any conclusion can be achieved on these inflammatory issues. Particularly for a YI, I think that's just wasting of your time and energy, and unnecessarily creating bad blood without achieving anything. So, that will be my don'ts.

“In terms of the do's, genuinely try to contribute towards the community.”

If you see someone has posted an advertisement that they are looking for a postdoc or a JRF, retweet that. If someone is looking for some grant call or proposal call, retweet it.

If anyone in your network or community published something or achieved something and you think that that publication should be talked about, again, retweet it. These are the do’s for not just social media but also academic life in general.



Mayuri Rege

I think the face of X (*formerly Twitter*) has changed quite a bit recently. I used to use it very frequently, and the kind of conversations that would happen there would be much more enriching.

That's not the case anymore. I feel like social media right now has become this flashpoint where any attempt at an honest conversation can turn into a toxic discussion and unnecessary distraction from the main point.

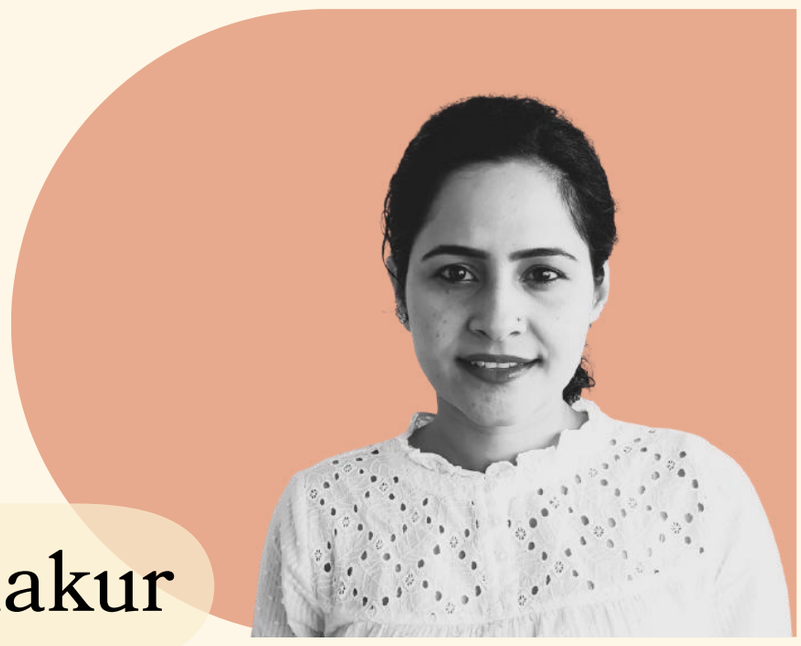
That does not work for me at all, because I would much rather talk to people one-on-one and in a safe space. I don't have to know someone personally, but it is still not as likely to get thrown out of context as something on social media.

“I would put a note of caution of using social media, because if you are getting into it without knowing what you're getting into, you might be ‘cancelled’ without even realising what you're saying.”

I do think it has a positive purpose, for example, for advertising positions, recruiting and for general outreach. There's no doubt about that. But I think one of the things that made X (*formerly Twitter*) accessible was the ability that you could follow somebody who you are not ‘friends’ with. And you still get updates from them. But if people just stop posting that kind of content, then there's just ads. And it turns into a bad user experience.

I'm not unfortunately as well versed in Instagram. I'm learning it, but it's not my thing because it's a pictures or videos ‘game’. And I'm more of a text person. So that doesn't really work for me. But I do enjoy it. A lot of my students are on it. It's a nice way to stay connected with them.

How should interactions and networking in the scientific community avoid the 'echo chamber' phenomenon, in which sounds reverberate in a hollow enclosure or a 'bubble' that is divorced from the broader reality? Is this a special worry with networking on social media?



Poonam Thakur

Only a small fraction of the academic community uses X (*formerly Twitter*). To stay grounded, it is important to speak with the larger fraction are not on social media, in person or in real life.

"Not everything is suitable for discussion on social media; more nuanced conversations can be had in person. It's important to have these in person discussion alongside your social media interactions."

Even though social media and academia in general can be an echo chamber at times, for me, engaging on X (f*ormerly Twitter*) has helped in other ways too. I go over comments quite often and it has made me understand how the same thing can be interpreted very differently by a PI and by a student. It has helped me in evolving my opinions and stay in touch with students' reality.

Anindita Bhadra

Having a network which is not just limited to your immediate field but a larger community will actually help you to get out of this.

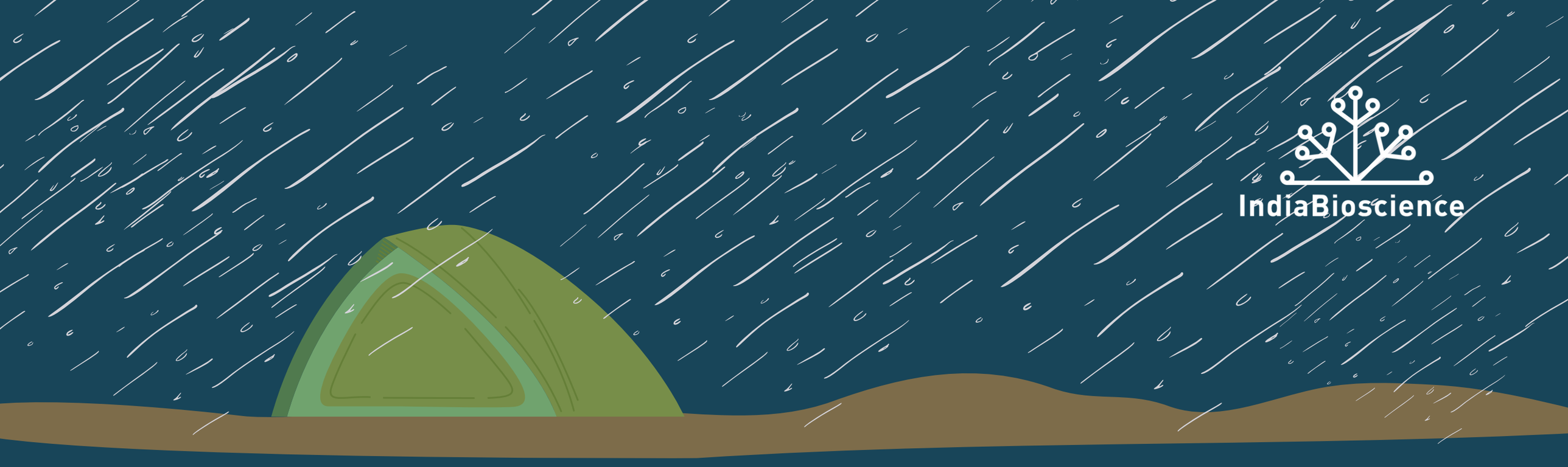
The other thing is sometimes, if you really want to be heard or you want to say something which will reach beyond your small network then you will probably need to do a little more work, and not just comment and reply on social media.

Do blogs, do outreach, do talks which will reach more people. But social media also has this power as things get randomly picked up and can go viral.

Mayuri Rege

That's a real problem. You need to use it, but not rely solely on social media. There are better avenues to connect and network.

“Going to meetings, conferences, events, those are maybe more established and genuine ways to understand what a person is saying and thinking.”



5. Base camp life

Starting out as a YI in India

Focus: This section focuses on what to expect when starting out as a YI in India, and aims to bring forth some of the pressing and immediate challenges.

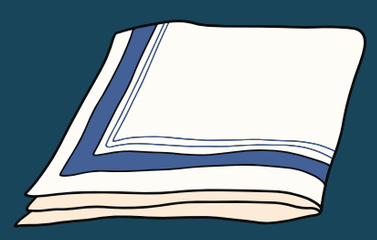
I returned to India with commitment and motivation to contribute to science in my country. Now that I am a YI, I feel like the reality of the decision, and the challenges in the road ahead, have hit. I am questioning my decision. How have others overcome this?

Saikat Chowdhury

Once you arrive in India, there's often no turning back. Be mentally prepared for that. Come with a full heart and soul, embracing this place with love and dedication. Plan to contribute meaningfully and derive value from your experience here. Over time, you will shape and define your workplace, turning your dreams and aspirations into reality.

Understand that you are likely to be here for a significant period. Design your lab to suit your preferences and pursue your goals within the available systems and frameworks. Utilise all resources effectively and build a team of like-minded peers who can assist with lab setup, order placements, and grant management.
The situation in India has dramatically improved.

The time it takes to obtain reagents here is now comparable to that in the US, with delays usually ranging from a week to a month at most. Whatever I could order in the US, I can now obtain here as well.



Achieving success, no matter how small, feels immensely rewarding when done independently in our home country. There is a unique joy in achieving something that is globally appreciated, from work performed by your students in your lab in India. Hurdles and challenges are inevitable everywhere. It is up to us to face them, and I believe that a lot can be achieved. I can already see that from the productivity of my peers and researchers in several institutes in India.

Sushmita Jha

Yes, one does second guess the decision to come back. I've seen lots of people say “what was I thinking?” And that's completely normal. And I don't think it's just about returning to India. I’ve also seen colleagues of mine who became faculty in the US also question their decision.
In the beginning, everything is new. Everything needs to be set up, and there are many more challenges than there are rewards.

“You might feel like you are the only one who doesn’t know the ropes and is making mistakes. But I think everybody feels that at some point.”

I think you should be comfortable with the idea of not knowing something. And it’s also important to know that it’s okay to make mistakes. In fact, not just the beginning, at every single stage, there'll be something you don't know.

When you do question the decision, it's good to reflect and look at the reasons you moved back, look at your plans, and then talk to people. And if it still doesn't feel right, then it's also fine to say, you know what, it's not working out.

Deepa Agashe

I think there are two parts of the question, the decision of running a lab independently and the other one is the return to India.

And I don't think those are necessarily connected and should not be confounded.

So of course, there will be challenges and you do sometimes ask yourself, have you taken the right decision in terms of coming back to India? But I suspect the answer is going to vary for different people.

It also depends a lot on your particular circumstance, where you are setting up, what kind of challenges you're facing and so on. About the decision of coming back to India, based on interactions I've had with several people, once in a while, one does question it and that is fairly normal.

My suggestion would be, if you're having those questions, look into why you're having them. Sometimes we pick up questions from other people around us, our peers. Whereas we ourselves on our own may not have those thoughts. And because there is inherently some need to conform to what the general conversation is about, one may participate in that without necessarily having a strong opinion about it.

So, examine that first. And then if you feel that, this really is something that is important for you, then go about figuring out, why is this seeming to be a challenge?

I have understood that teething troubles are inevitable as a YI in India. But there are times I feel I spend all my time handling funds, manpower, procurements, and do less of the science. Will this get better?

Sushmita Jha

Yes, it does get better.
Initially, all of the processes are new, you learn and you realise how much time each one of them takes, so you can plan ahead of time. You can also build your own systems, such as hiring staff for additional help as you get more funding.

Deepa Agashe

It depends on where you find yourself setting up. For example, people who are amongst the first to join a new institution or when setting up a new department in an existing institution, will need to do much more administrative work.

That wasn’t the case where I joined. Things were already in place. And on top of it, my institute's management had a policy that we must protect the new faculty from as much institutional administration as possible. So that helped.

But of course, you do get better at dealing with it, especially if you invest some time and effort into figuring out how to do it and learn from others who have gone ahead just before you. Also periodically evaluating, sitting yourself down and asking, how was this past year? That helps.

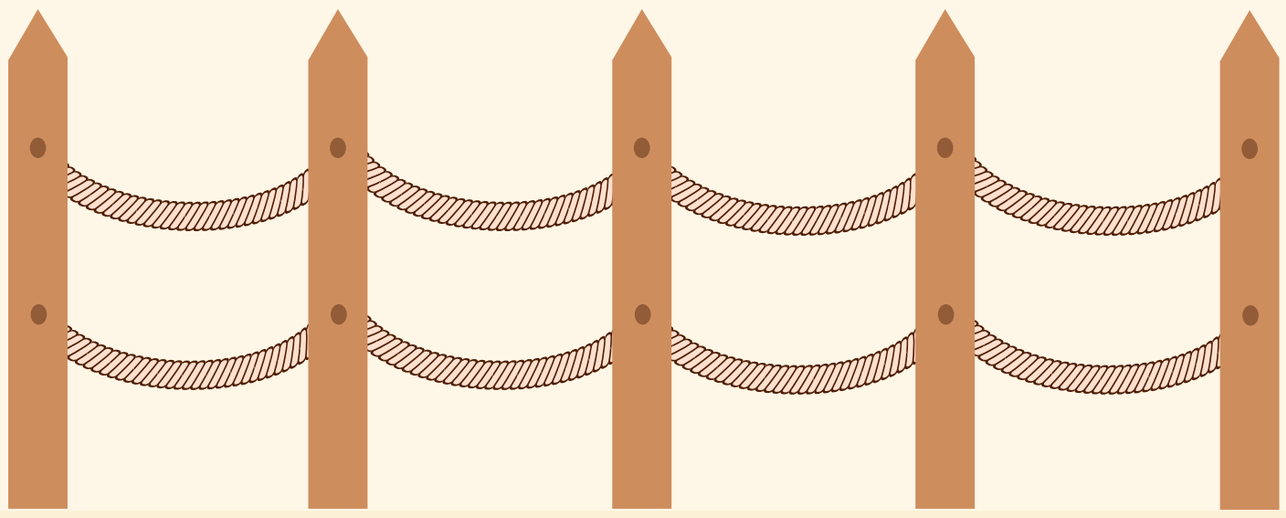
What are some of the major challenges to expect in the first year as a YI?

Saikat Chowdhury

My biggest challenge was setting up the lab. Procurement is a significant hurdle in India right now, and some time was lost in the first year as I re-established my lab. However, this was expected, and I was mentally prepared for it.
I did my best to acquire everything needed for the lab setup as quickly as possible. I researched the procurement process, understanding the relevant rules and regulations. This involved consulting with the purchase officer, the institute director, and senior or mid-career colleagues who navigated this phase before. Since procurement rules change every six months, staying updated is crucial. It's important to prioritise bulk procurement as soon as funds are available.

“To expedite the process, I took a proactive approach, which many of my colleagues felt was extreme—I literally ran with files from pillar to post within the CCMB campus. Ultimately, to get research going in the lab, I had to ensure everything was in place. ”

Next big challenge is recognising that not all students are the same, just like the fingers of your palm. Every student comes from a different background, and has different mindsets and expectations, and comes from different levels of knowledge and expertise. One has to be aware of the fact that once a student joins a lab, it is a big responsibility.

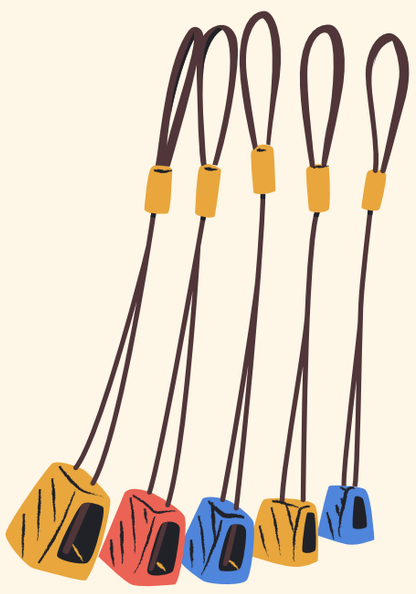


Sushmita Jha

I didn't anticipate having so many administrative responsibilities. In a mature system, you wouldn't need to do much. But in a newer institute, you would need to make sure that things got done faster or better, or you're able to set up systems that are more efficient. For me, it ended up being a blessing in disguise, because it meant that I could fast track processes, not just for myself, but for everybody else too.
Also dealing with the differences in the way people work. I would expect things to be done or everybody to keep track of their own time and make sure that their jobs were done. But often, I had to remind people.
I was also interacting with the purchase section on a day-to-day basis at that point of time.

“Someone asked me, why do you need to buy a pipette? There is already one pipette that was purchased last month.”

There were only three biologists in the campus back then. And so I told them, think about it like a pen and everybody needs their own pen!



Deepa Agashe

For me, the biggest challenge was finding the right set of people who I felt were ideal for my lab.

“And I think a common mistake is, we often start off by looking for images of ourselves in the students that we hire.”

But of course, you're not going to find clones of yourself in terms of the students or the postdocs you will hire.

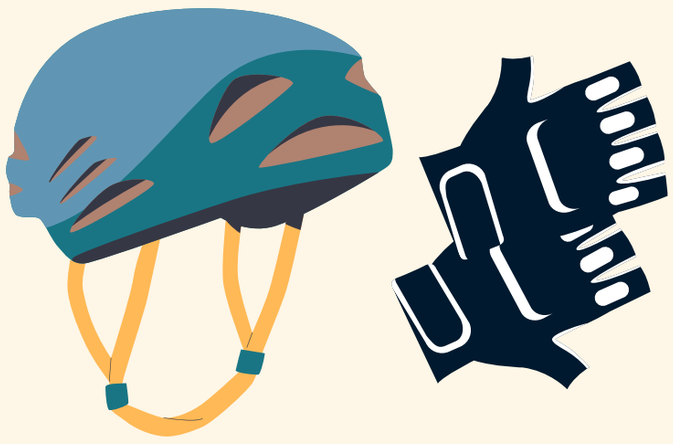
And so figuring out what are the most critical set of skills for the work that you want to pursue in your lab, and what are the set of personality traits that are critical to be able to have a good relationship in the lab and have a good lab atmosphere. That took some time to sort out. And that was the biggest challenge for me.

I have a five year position, but I am not sure of what next. How should I maximise this time so that even if I have to re-apply for a position, I would be a competitive candidate?

Sushmita Jha

You need to use that time to understand what the requirements for that department (or institute) are. While you’re there, you’ll realise where there are gaps that need to be filled.
Spend time making sure that the requirements for your application for a permanent position are fulfilled during the five years.

It might be getting your own funding, or the first set of preliminary data; it might be getting the teaching done or volunteering and setting up a research lab. Use those five years very wisely to cater to the requirements of your targeted position.



Deepa Agashe

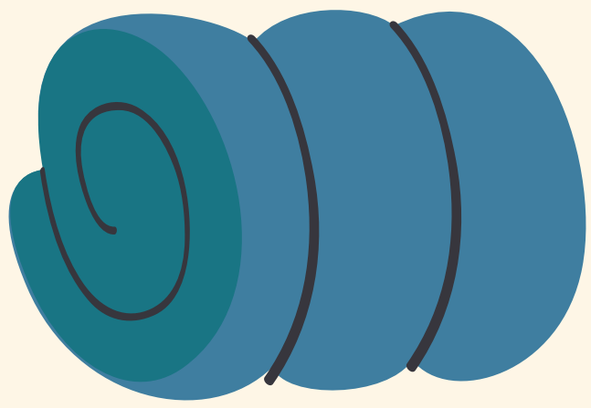
You clearly need to show that you're able to start a project and complete it in the time frame that you have, three to five years. You can't start off with something that is so risky or so new to you or your lab members that you cannot possibly make serious progress. And yet it cannot be repetitive like doing something very similar to what you've done in your postdoc.

That's not going to be innovative enough to convince somebody that this person is really capable of creative thinking and doing something different and new that's going to advance the field. So the judgment of what is that in-between ground is important.

Mayuri Rege

You need to understand the institute that you are at. What is their expectation of what you should have achieved at the end of five years? So whether it's number of publications, number of students that have graduated, it might be a good idea to look at some of the previous people who have gone through a similar cycle. Most often the standards are going to improve, which is a good thing.

And I think if you have achieved that, then you have a fighting chance of transitioning to a permanent position.



But there's also another aspect where they may not have permanent positions. This is often a challenge in colleges, they don't have permanent positions opening up because the government hasn't sanctioned the hiring for those posts. So the college has their hands tied.

If you like being in a place where you are, then you're going to try and stick it out and see if something works out in the next few years. And that is the unfortunate truth of why a lot of committed teachers, especially, are stuck in non-permanent contractual positions.

Many institutes have some sort of positions being advertised on a rolling basis. You need to figure out when that is and put your applications in at the right time.

But in other institutions, there may just not be any positions. Are you willing to, at that point, hang around or move somewhere else? I think this is a decision that is very hard and needs to be made.

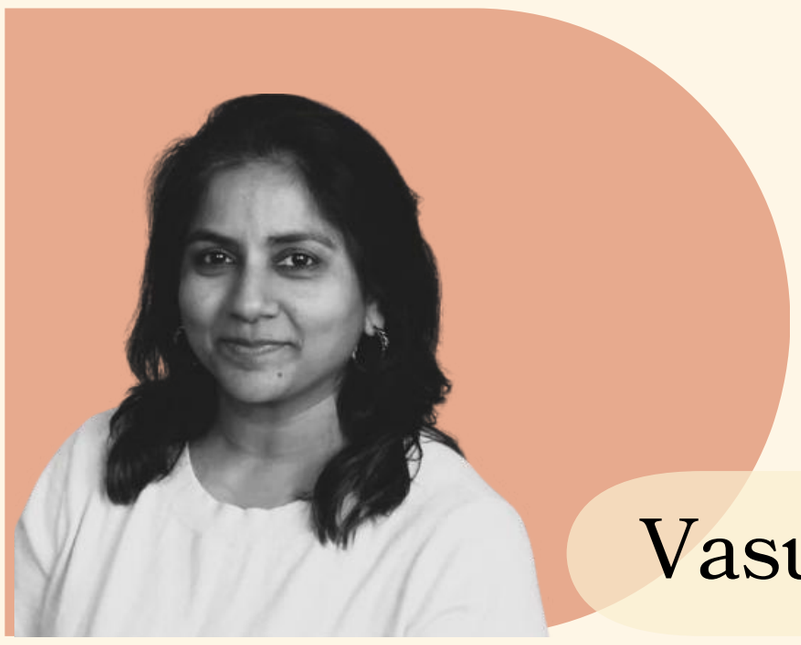
How can I leverage resources and opportunities at IndiaBioscience to grow my career and group as a YI?

Sushmita Jha

I think IndiaBioscience is a very unique resource. It is incredible that we have a platform that keeps reminding the community about existing opportunities and deadlines.

I tell my students to take as many of the workshops that are available from IndiaBioscience.

Workshops help you experience the different kind of opportunities that are there. And they also help to understand that, there are other people in the ecosystem that are going through the same experiences.



Vasudharani Devanathan

IndiaBioscience is a very good forum. Their workshops meetings, and the specific huddle sessions organised by them are all very useful.

"I did not do PhD in India, and I felt completely lost in the beginning. But now, over eight years, thanks to some of these forums, in particular IndiaBioscience, I built a network, and wherever I go, I feel supported."

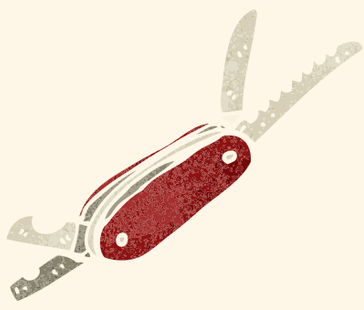
How do I keep my research theme novel, interesting and cutting-edge, and yet make it fit into the Indian/my institution's scientific ecosystem - especially if I have done both my PhD and postdoc out of India?

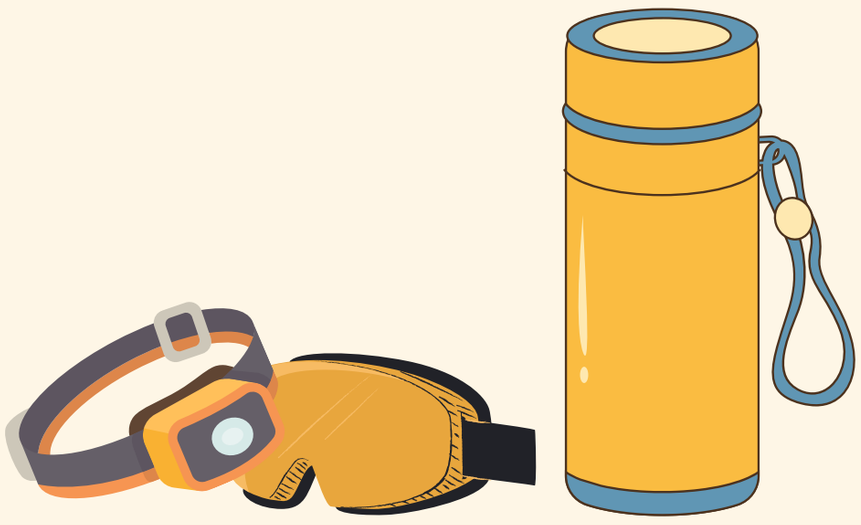
Saikat Chowdhury

As far as I am concerned or many of my peers are concerned or even some of the senior faculties in CCMB, I do not think most of them have had to change what was at the core of their research; nobody has interfered with their research topic.

It is true that at the end of the day, we use tax payers' money for research, so we have a social responsibility to give back, we should be cognisant of that.

Even if we are doing basic science, it will contribute to the country's progress in science. Another way to do that is primarily in collaboration with others. Basic science researchers can use their expertise in helping out other people who have projects which are related to translation or some form of therapeutics or drug discovery or product development.





Sushmita Jha

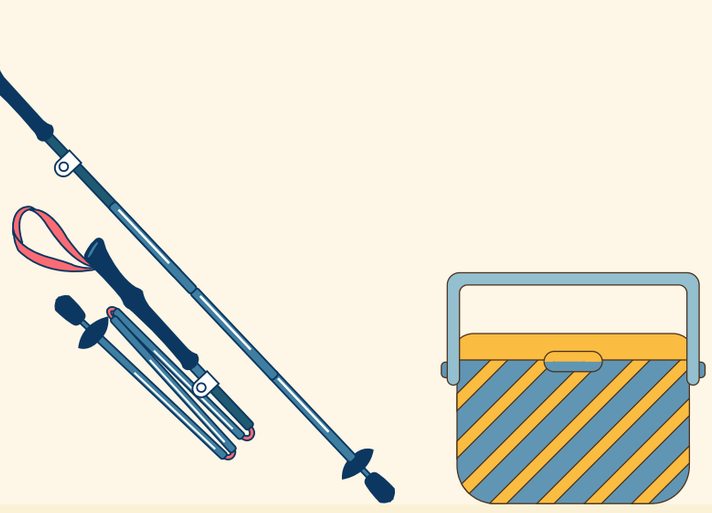
This is a tough one, because it requires a lot of thinking at the individual level, and also understanding the strengths and weaknesses of your group. As well as the opportunities and obstacles of your ecosystem.

I was trained as a mouse biologist. And I did a lot of work with knockout mice and setting up facilities during my PhD and postdoc. But when I moved back to India, I moved to a place that didn't have a mouse facility. And for the first five years, we were in a temporary campus, there was no way that we could have a mouse facility. So I could not wait forever for those things to be available.

I had to pivot and learn to leverage the ecosystem. I connected with colleagues from nearby institutions and started working on human samples. Over the years, our work has completely moved to human samples.

And we've generated patient-derived organoids, and we are working on organoids for precision medicine. I realised that the strength of our group are the molecular analyses that we were doing and the questions that we were asking.

I was able to connect with some of our colleagues across the country. My students travelled to other institutes to learn techniques and bring them back. We learned and adapted.



Deepa Agashe

I can't speak from my own experience. The institute that I'm in, places no mandates on us beyond saying that you have to do fundamental research.

I can say something based on what I have observed in other people and learned through conversations with other people who do work in institutions where they might be expected to do a certain kind of work.

One thing that does seem clear is if you're able to get your own grant money or separate grant money for a project that you really care about, then that does give you some degree of additional freedom, which you may not get otherwise.

When you're interviewing in places, that is the right time to actually talk to your peers at various levels of hierarchy in the system to figure out how much of their work is driven by mandates or other constraints, and how much is driven by what they truly want to do. And sometimes, of course, there's a happy overlap between that.

What you want to do could perfectly fit with the mandate. But if what you want to do is very different from what your institute mandates, then you probably are not in the correct place. And even with mandates in place, I believe there is a fair bit of room to do innovative work in that area.

I find that I have less time and resources for travelling for conferences, and to build in-person collaborations than during my postdoc years - how do I continue networking, meeting other scientists and expanding my research agenda?

Sushmita Jha

I think networking is essential to be an effective PI. It allows us to communicate our ideas, vet some of the ideas that we are thinking about and learn from others. I think it also prevents us from making the same mistakes that other people have. To be a scientist anywhere in the world, you just have to make time to network.
That might be deciding on online meetings, if you're constrained by travel, which I was for many years. And so I would attend meetings online or give talks online or just connect with people online or via phone.
That's fine.

"But I think not networking is not an option."

Deepa Agashe

After the COVID pandemic, we are in a position where online networking opportunities are much, much higher than what they were before. There are several conferences which have an online component. So that has become easier, for sure.

As part of a society, you could start initiatives for online workshops, that's one way to try and network without having to physically travel all the time. Another way that I found really helpful to network, was to organise things yourself. People who you think are top-notch in the field or who you would love to learn from, bring them here for a workshop, or a school, or a conference in India.

And, of course, whatever opportunities you can find to travel abroad and attend some important conferences in your field, use those. I would certainly suggest, try not to attend terribly large conferences in the early days, simply because it's very easy to get lost in those, and it's harder to get time to discuss at length or depth with other peers or experts in the field. I have found it useful to be at meetings where there are maybe no more than 100 people or so.

Another suggestion would be to try and combine conferences or meetings in a single trip. For example, if you’re going somewhere in the US for a conference and you’ve manage to find the funding for it. See if you can add a few days before or after that to go and meet other people in the area. This applies to travel within India too. You can also offer to host student exchange with other labs; it helps in growing your network.

As your lab grows a little bit older, you will have some alumni from your lab, JRFs or interns who have left and have gone somewhere else. In the pandemic, we started doing online sessions where I invited a bunch of alumni from the lab, who are now PhD students or postdocs in various places, to give talks in the lab.

“We may think that networking with people who are earlier in their career stage may not be as useful to us, but I think we're wrong in that thinking. I think it can be extremely important and useful.”

Because those students are now going to tell somebody else that they met their former advisor, and here's what's going on in the lab, and so on. And networking through younger colleagues is a lot of fun. So if you get an opportunity to speak to a set of students or postdocs, as a new PI, take that opportunity every single time if you can, because it helps you grow as well.

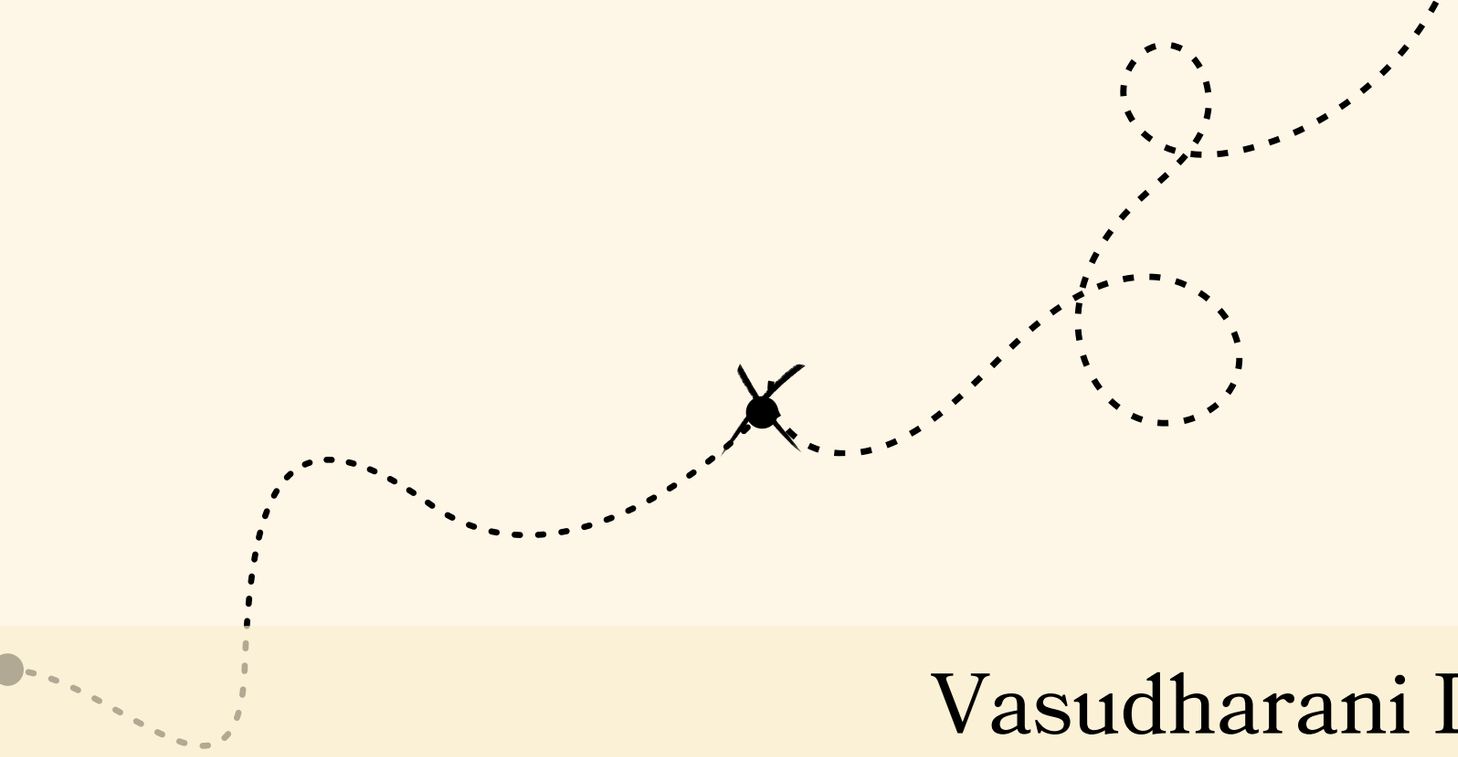
I have heard that it is difficult to balance starting an independent research group and starting a family/having young children. Beginning a research group seems to necessitate working long hours - post working hours and on weekends. Is this the general work culture/something I should keep in mind?

Sushmita Jha

I am a vehement supporter of work-life balance, I don't think life can happen without balance.

"You need to have something that you do in addition to your science. Science is a creative process. It is not drudgery. You cannot force somebody to be chained to the bench or the lab or the computer."

I really like the flexibility of the academic system. When my son was little, I could plan my class at eight o'clock in the morning. And I could spend the rest of my day with my group doing my work, which is typically writing and some administrative work.
And I don't think that you need to be in on Saturdays and Sundays in the lab as a rule.



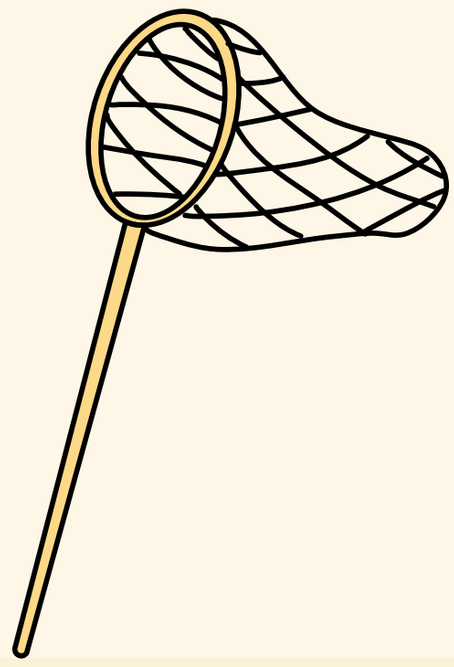
Vasudharani Devanathan

Most YI's juggle setting up their research work and setting up systems and as a result, they may have to work longer hours at home. So there is some compromise one has to make. I don't deny that at all.

"In the ecosystem, what I think might work, is to develop a strong postdoc program. If a YI can get a good postdoc, it can really expedite the process of setting up the lab."

This is a key difference between the set up in India and the ones in the West.

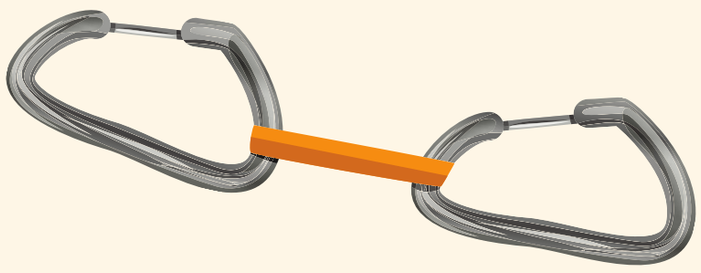
There seems to be an unhealthy amount of gossip and politics at play in my institute. How do I steer clear of this and keep my engagement professional?



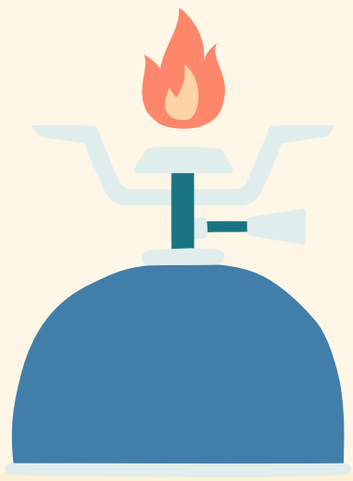
Saikat Chowdhury

Politics exist everywhere, in every institute around the world. No place is immune to this. The best approach is to focus on your primary objectives: why are you here? For me, the reasons are twofold. First, to conduct research and fulfill my job responsibilities effectively. Second, to guide and support the students and trainees who depend on me as they navigate their PhD, postdoc, or other training programs.

Stay focused on your goals and, if necessary, keep a low profile while doing so. The later is essential to avoid any unwanted attention and distractions that can harm one's progress.



“It is best to stay away from toxic culture, gossip, and politics. While navigating through these situations or environments, it's crucial to keep the interests of yourself and your lab in mind.”



Sushmita Jha

Workspace gossiping and politics exists everywhere. I wouldn't say just in the Indian ecosystem, I would say wherever human beings exist, you will have people having opinions about you and about how you do things.

“And the more different you are, or the more you're trying to build something new, the more opinions there are about how you're doing things or why you should not be doing it this way.”

So the mature way of dealing with it would be to try to address it if it gets to a certain point. People make assumptions about you. But when somebody says something, which is not you, but it is based on something that they have assumed you to be, you should promptly correct it.

But in some cases, it's just ridiculous and you can’t address it. I've heard all kinds of things about me. But my day is really packed. I want to give as much time as possible to my son, my lab and my team. So I don't have time for gossip. And I get to decide that.

I have a disagreement with X,Y,Z or my working relationship with Z,Y,Z in my institution is strained, and it is impacting my science and running of my lab. How do I work through such a situation?

Saikat Chowdhury

People often disagree, but it's essential to find common ground, whether in

scientific understanding or intellectual output. Strive to avoid conflicts and hostile situations by showing respect to everyone—colleagues, lab support staff, technical personnel, and students.

"Mutual respect allows for civil disagreements."

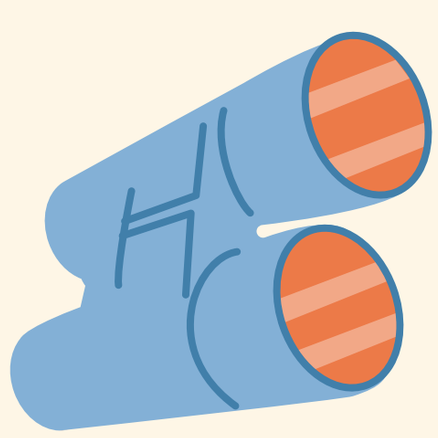
To navigate these situations, try to understand the other person's perspective and respond empathetically. It is critical to remember that not much can be achieved by hostile, disrespectful behavior and respect can only be earned by giving respect to others, and not through fear and bullying. Also, clear communication is critical for avoiding any misunderstandings or misinterpretations. Therefore, improving effective communication skills is not only important for disseminating scientific knowledge, but also for avoiding confrontations.

Sushmita Jha

It depends on what kind of a problem it is and what kind of a structure you're working in.

And it is it is easy to think that you've been slighted or something was done intentionally. But you can communicate directly and if it doesn't work out, then you need to think about other ways that it can be sorted. Most of the times, you need to communicate effectively, either directly or through a mediator if there is a framework in place.

Is it frowned upon if I continue to collaborate with my postdoc supervisor?



Saikat Chowdhury

There's a range of perspectives on this matter.

Personally, when I embarked on my independent career, my advisor during my postdoc phase was also in the early stages of his own career. To prevent any conflicts of interest, I made a deliberate shift in my research focus, steering clear of overlapping research areas. It was a decisive move, one that many might hesitate to make—roughly eighty percent, I'd estimate. So far, I haven't faced any setbacks from this decision. If anything, it's reduced potential competition and maintained harmony with my mentor.

I prioritise independence in my work, even though I maintain a positive relationship with my former postdoc advisor. Whether or not to collaborate with one’s postdoc lab hinges on the nature of one's research. Personally, I lean towards autonomy, valuing the freedom it affords. Moreover, I aim to instill this sense of independence in my students and mentees, showing them that they can thrive on their own after leaving my guidance or completing their PhD. However, I'm always available to provide support to them when needed or when approached by them.

Vasudharani Devanathan

It depends on what you are collaborating for. The Indian system is looking at you to create a niche area for yourself. What is our national priority? What is it that would add to our system here? This is quite important.

“Once you create conceptual and thematic questions that are specific to you, and if you're technically collaborating with your postdoc supervisor, I don't think it should be a problem.”

So conceptually, if the idea is yours, I think people won't frown on that. However, you can't stop people from frowning on these things. I think as long as you're doing good science and you are able to publish well and get some outcome for the nation, I think everything is great.

IndiaBioscience

6. Fastening the ropes

Building a research group and steering your independent research

Focus: This section focuses on the considerations and challenges in building a young research group and ensuring a balance between work output and team culture.

For the first time in my career, I have people working for me. I have to lay down instructions and expectations. How do I do this without being bossy or heavy-handed?

Saikat Chowdhury

I quickly recognised a shift in my role as a PI. Now, it's my responsibility to mentor and support the next generation of researchers. From what I've observed, many PhD candidates face challenges due to a lack of discipline. That's why I emphasise the importance of diligence to my students. While setbacks are inevitable in research, I encourage them to follow the best lab practices and stay prepared for experiments to minimise time wastage.

Rather than micromanaging, my goal is to cultivate a sense of responsibility in my students. I urge them to develop meticulous record-keeping habits and maintain data integrity. These practices not only facilitate troubleshooting but also expedite manuscript preparation.

Anindita Bhadra

I think every person has a different way of managing people. For me it has always been like this, it's your work and you have to own it, and then how you manage your time and keep a work-life balance and still get the work done should be your call rather than mine.

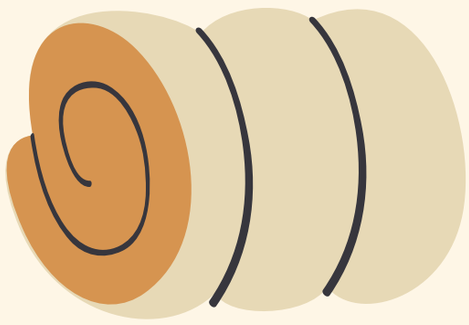
But then I can understand that depending on the kind of work you are doing, some labs need to have a routine. The way I would go about it is that when I have a team, I first make them understand that we are indeed a team and the project that we are working on is ours and each of us has a role to play in it. So there would be certain responsibilities which might be time bound, for example, if there's a machine which needs to be switched on and switched off at a certain time.

There might be a duty roster or there might be certain things which run beyond working hours because an experiment runs like that. People have to take turns, people have to take responsibility and people have to work as a team. As long as one can make the team members understand that we are a team and we go together and the project is ours, I think it works fine.

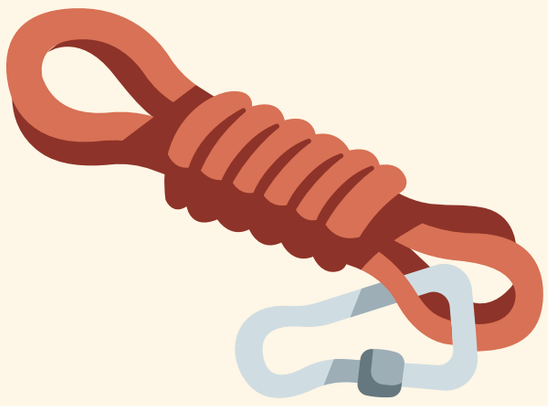
Abhijit Majumder

I think clarity is the main thing here. **You do not need to be bossy, but you have to be clear in terms of what you expect from them.**

You have to be very clear about things cannot be compromised on and rest are flexible. And once you tell them that these are the conditions, I think the rest falls into place.



We are a young group, and I want to keep the organisational structure as flat and non-hierarchical as possible. Will this compromise the work, given that most academic labs in India are not like this?



Anindita Bhadra

When somebody's starting off, the age gap between them and their students is less. So

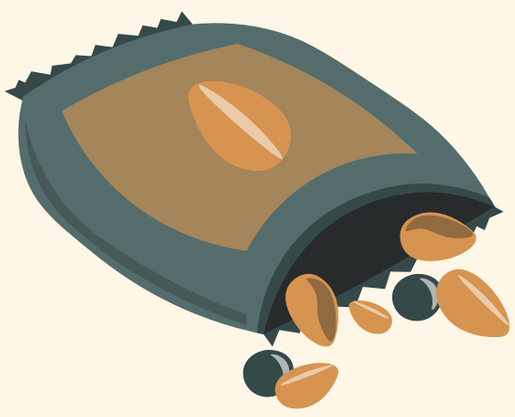
“it's good to have a level of friendship with your team but at the same time there should also be this understanding that at the end of the day the supervisor is the more responsible individual.”

When it comes to asking for an opinion or taking feedback on the science, everybody should have a say but there has to be this understanding that when there is, for example, a dispute between two people or if there is a conflict of interest then the PI has to take the call because finally, the work is their responsibility. And that has to be clarified very clearly but not rudely to the team members.

Abhijit Majumder

When you join, the age difference is not much. You are also very young, so you can actually connect with them.
I will say that with my first four students, those connections were effortless. But one thing I told them is that

“I am friendly, but I am not your friend.”



We need to maintain this distinction. So we go for tea or coffee and if there is an occasion, we go out to dinner and celebrate.
But at the same time, I don't think they have ever showed me any disrespect. It helped us understand each other.

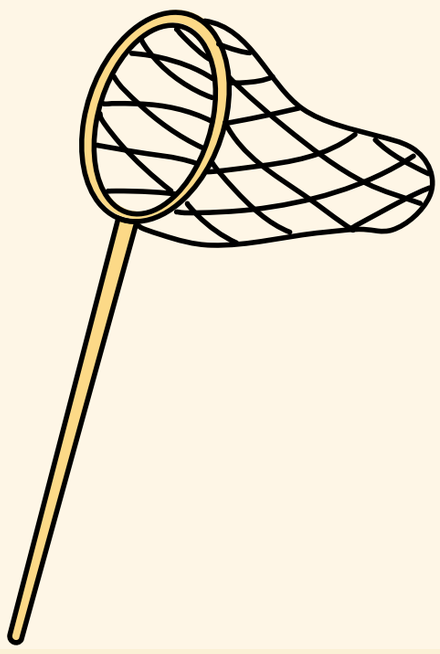
How transparent should I be with my group when it comes to grants and funds?

Anindita Bhadra

My take would be completely.

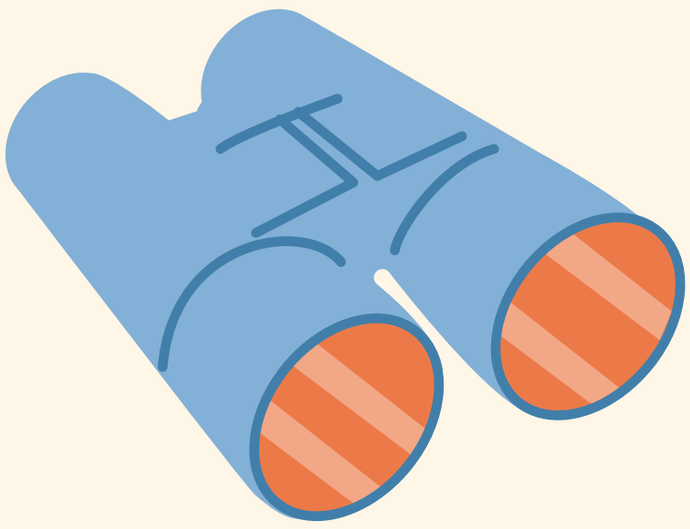
"It is very important to let your team know about the funds you have, and the constraints",

where you need to cut down, where you can have more funds to spend, because only then they have this ownership of the lab and the project.
And it is also part of their training when they, in turn, start up their labs, they will need to know how to handle funds.



Abhijit Majumder

"What I do is give them a bigger picture of where we stand this year or if we aanticipate a delay in receiving the next fund release."



For example, if we are in a tight situation and for next six months, the team will need to plan their experiments in a cautious way. Or if I'm going to write a proposal and if that goes through we will be in a good shape. I discuss these kinds of general scenarios with them.
Also the depth of the discussion and interaction varies from one research scholar to another because people have different kinds of professional maturity.

I want to ask deep, exploratory questions, but I also need to start publishing for the next set of grants. How does one strike a balance between these two?

Anindita Bhadra

Depending on the questions the lab is going to address or the project that they have taken up, sometimes it could be a very novel thing, sometimes it is work in an ongoing field where things are happening very fast and you need to publish, otherwise you run out of the competition.

"So a good strategy is to have two 'kinds of things' running in the lab."

One part which will eventually lead to publications at a faster rate, not compromising on the quality. Short-term experiments which can be published albeit not in great journals will still give you a set of decent publications. Concurrently, you can pursue your dream project at a slower pace, allowing you to gather more information before you start writing the paper.

Abhijit Majumder

Have a few projects which are low-hanging fruits that will give you publications.

Also, you may have one or two collaborations which may show that you are productive.
You may also want to write one or two review papers. And then you have bigger questions on which you move more slowly.

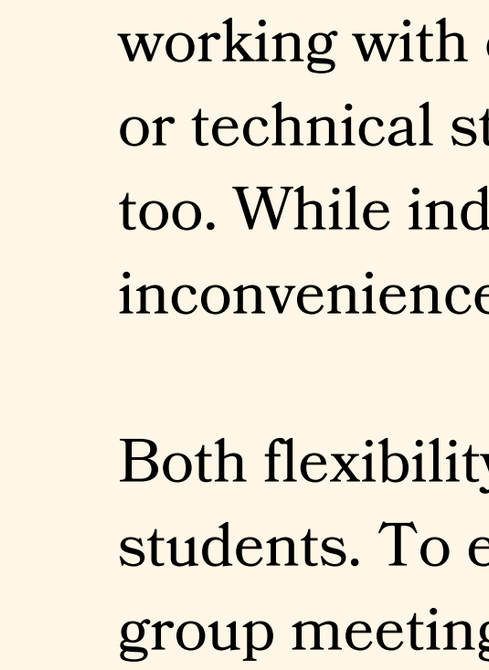
While I am all for flexibility, I don't think a young group can afford lack of productivity or efficiency at this stage. How can I foster flexible work hours, while still ensuring that things get done?

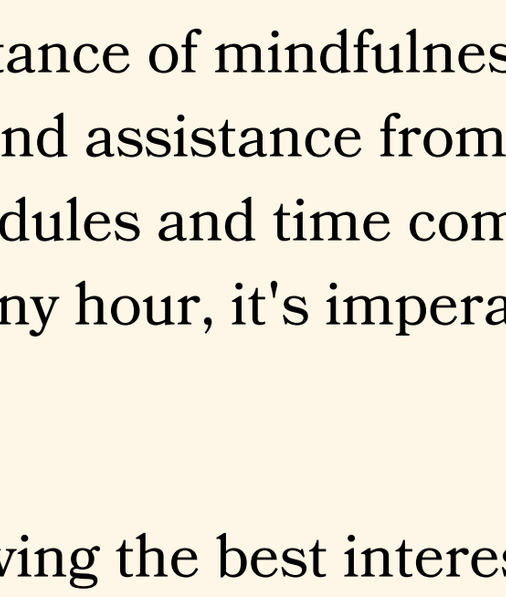
Saikat Chowdhury

"I wholeheartedly endorse the concept of flexible working hours. As long as progress remains steady and productivity stays high, flexibility is not only acceptable but encouraged. "

However, I do emphasise to my students the importance of mindfulness when working with others, particularly if they need help and assistance from facility staff or technical staff. It's essential to respect their schedules and time commitments too. While independent work can be conducted at any hour, it's imperative not to inconvenience others.

Both flexibility and productivity are paramount, serving the best interests of students. To ensure students stay on track, regular one-on-one meetings, and group meetings with research progress presentations are invaluable for monitoring progress.

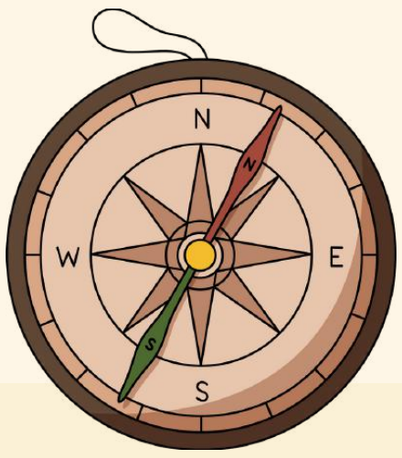




Anindita Bhadra

Once people start owning a project, they will do it themselves. If you give the freedom to the students to choose and adjust, they will take the initiative to see how they can work best.

Some people might be larks and some people might be owls and they can work in different shifts. But if you become very structured and you say, okay ‘these are the office hours and everyone has to be there’, you are also going to get some rebels who won’t like that.



Abhijit Majumder

Flexibility and the productivity are not exclusive to each other.

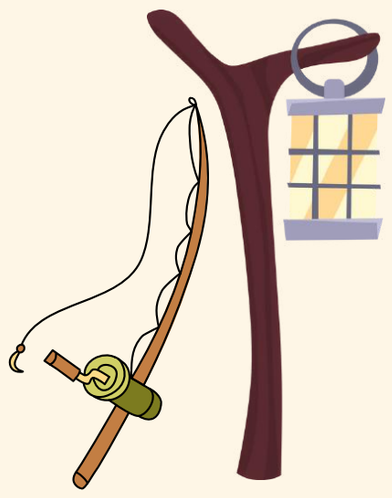
“One can be flexible as well as productive. In fact, flexibility increases productivity.”

Some people work in the mornings, some late-night, some even want to work during the weekend when there are less number of people so they can concentrate. And then they take a break during the weekdays. While some people want their Saturdays and Sundays absolutely untouched. All of this is okay.
You need to tell your lab members very clearly that they can have flexible work hours.

“But at the same time, they should have sufficient overlapping time so that they can discuss common lab issues with each other.”

How do I build an atmosphere where all members of the group feel like stakeholders, and not like they work for me?

Saikat Chowdhury



In my lab, we foster a culture of equality. I make it clear that my students aren't working for me; they're investing in their own growth and future.
Since the beginning I have discouraged students calling me "sir", as is the common practice in most of the places in India. Although a small gesture, these promote a more relaxed and open atmosphere in the lab.

Independence is key.

"I encourage my students to develop their own research ideas within the lab's broader scope and that becomes their 'baby'."

And failure is not only accepted but expected—it's part of the scientific process. As a new PI, I've entrusted my students with significant responsibilities. They've had a hand in designing and organising the lab, and their input is crucial in selecting new members. After all, they're not just looking for colleagues; they're shaping the future of the lab alongside me. Their success is our success, and their voice matters.

Anindita Bhadra

"One thing that works very well I think is regular group meetings where everyone gives updates on their work and everyone is allowed to give feedback and ask questions."

It is not like setting up challenges for them but having an atmosphere of camaraderie where everybody is involved in everyone's work progress.

Abhijit Majumder

This, for me, is non-negotiable. Every member in the lab, starting from interns to my collaborative student whom I am co-guiding are stakeholders. You have to be a stakeholder even if you are coming to the lab for 3 months as an intern. Your stake will be low but you have to be a stakeholder.

And I think a PI can build that atmosphere by giving their team responsibilities, by showing them respect, by giving importance to each one of them and they will know that they are valued here.

Another point that I give as a strict instruction to my group is that no one can be disrespectful to others. Even when someone makes a mistake and is junior to you, you can correct them but you cannot be disrespectful. I think that also gives people the feeling that they are valued and are equal; that helps.

How do I strike a balance between my career goals and the goals of the group?

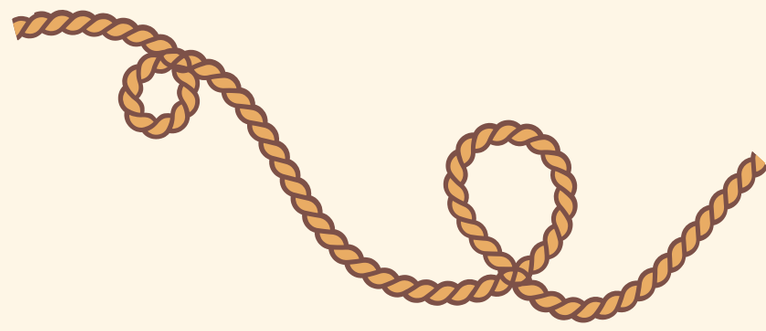
Anindita Bhadra

A lot of times, the goals align. A PhD student finishing within five years is a good idea for both the PI and the student because if every student stays on longer in the lab that doesn't give out a very good signal about the lab.

Now sometimes a student might have started a project and you really want to continue working on it but there's no one to take it over. You can ask the student if they can stay on but maybe as a postdoc. They can submit their thesis and while looking for positions maybe hang on for some time. As a PI, you try and find the money so that the student can be supported, then it's a win-win for you both because the student also gets a publication out of it.

Never force the student to stay. And if a student wants to leave soon, they must have their reasons. So, try and understand why the student wants to leave soon and never try to hold them back by force because eventually that's not going to be productive.

Abhijit Majumder



In a research lab if a PI gets name and fame, the students get name and fame automatically. And vice-versa. Even if one lab member gets some award, that actually helps the other lab members too, because the reputation of the lab improves.

“So I think there's a very peculiar situation in the research lab that all of our growth is so interconnected.”

I think our group is doing well, but there is really no benchmark to compare or quantify our growth or progress. How do I know where we stand in terms of progress?

Saikat Chowdhury

Evaluating the progress of our research group is indeed a multifaceted challenge, but there are several key indicators we can consider.
Firstly, effective communication of our research findings is crucial. The reception of our publications is a significant measure of success. Rather than focusing solely on traditional metrics like impact factor or h-index, we should consider the broader influence of our work. For instance, are our papers being cited by other researchers in our field? Are we receiving feedback or inquiries through social media or email about our research? These can indicate that our work is making an impact and being valued by the scientific community.

"Success can be measured by how well our students are being prepared for their future careers."

Are they securing good positions after leaving the lab? Are they generating their own research ideas and pursuing innovative paths? The ability of our students to thrive and contribute independently reflects the quality of mentorship and the research environment we provide.

Anindita Bhadra

"Publications are, of course, a parameter to go by. The other could be a lot of interested students wanting to join your lab."

It could be internship requests, dissertation requests or PhD position requests. That means people think that you are doing well. That would be a very good measure for how well a lab is performing. Also what the students graduating from the lab are doing after that, is another way to understand how the lab is doing.

"I also consider it to be a very good marker when my students who have left the lab still want to be in touch, write back for recommendation letters, and keep in touch on social media. Because that tells me that I have done something good for them."

So there are two ways. The academic or more quantitative performance of a research group in terms of the field and competition. But also, as a PI one should see whether the students are happy to keep coming back and be in touch. Because they will eventually tell others that your lab is a place to go to. That, I think, is very important.

Abhijit Majumder

The regular parameter is to see how you are publishing, and if it is in good journals, not necessarily high impact ones, but ones which have a good reputation. And when your mentees go to different conferences, you can gauge based on how their work is being received.

"I think finally it boils down to what expectation or bar you set for yourself. Every PI has their own bar and they measure against that."

How should I convey to a group member that their performance is less than satisfactory, and that they should put in more towards their project, in a manner that does not discourage or scare them?

Anindita Bhadra

Regular discussions with every student helps.

When a student is not performing at par or as per expectations, the PI should be able to tell them that okay don't you think you could have done this a little better? Or are you having some issues? Or do you need more time? Try to understand if there is some issue that the student is facing.

"Sometimes what I do is, I give an intern to the student who is not being very active. Now they are in a leadership role. They have to train the intern and take charge and that works like magic. They immediately say, okay, I have a junior to handle and I should set a good example and that works."

But different people respond to different things. One has to try things out and really be a good judge of character to understand what will work.

Abhijit Majumder

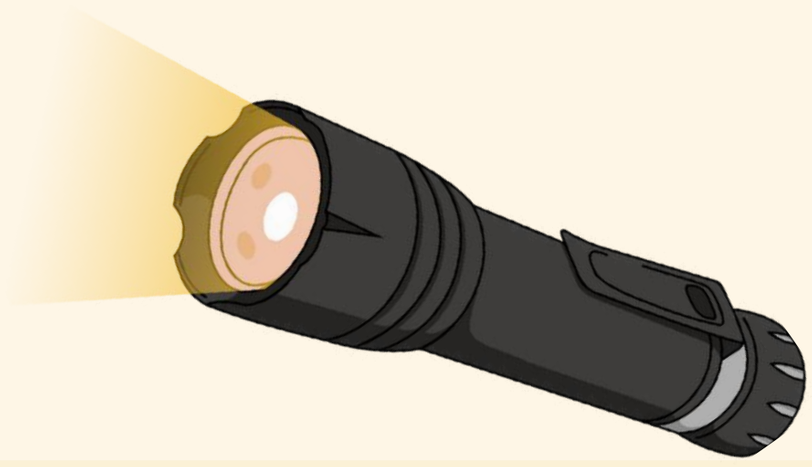
I have a very clear strategy which helps. I meet each of my students formally once a week.

"So if I have a meeting with one of my PhD scholars this evening, they have to send me a slide deck the previous evening. And that is not expected to be fancy, but it should have just the points that they may have done and their plan for the coming week."

I don't give the plan. They come up with their own plans.
Then in our meeting, we sit with the data or whatever they have done and we discuss, troubleshoot, analyse, and then we go through the next week's plan. And from the very starting of their PhD tenure in the lab, they send the PPT by email. So, it is a single thread. Basically the whole five year journey, and what they have done in their own words. That's a record. And we can always go back and look at how things have progressed.

If I see a pattern that someone is going through a lull period for a long time, or if I see their performance having a downward trend for three to four weeks, I address that in that one-on-one meeting, I ask them to keep the results aside and tell me about any problem they might have.

Without a formal tenure structure, how do I know that my group is meeting institutional expectations?



Saikat Chowdhury

"Each institution has its own way of evaluation. At CSIR-CCMB, we complete annual performance evaluations. While the format and questions might seem a bit outdated, the system allows us to document our lab's achievements comprehensively."

I make sure to fill it out in detail, highlighting all significant accomplishments so that the administrators have a clear understanding of our progress.

Beyond the annual evaluations, our progress is assessed by independent committees, such as the institute's research council. Their feedback is crucial as it provides an objective measure of our lab's advancements and helps us identify areas for improvement.
Another effective way to gauge our lab's progress is through the performance of our students in institutional scientific events, like research seminar series.

Anindita Bhadra

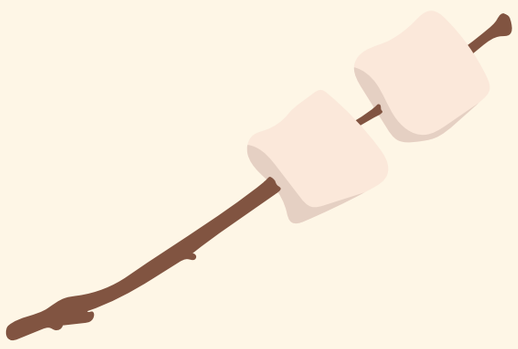
Every institution should have a research progress committee or equivalent where a student can make presentations at least once a year or maybe twice a year and the committee should be able to give feedback. There also can be a 'go-to' set of people for the faculty and students to approach for resolutions.

But not every institution has this. So I would recommend that if some person thinks that they need to assess the progress of their students, maybe take the initiative to set up a research progress committee for your student.
Ask colleagues who would comply with this request and set up a three- or four-member committee so that the student makes a presentation and gets feedback. And that will actually be like a peer review for their work on a regular basis.

Abhijit Majumder

Institutional expectations can be understood. Because although there might not be a tenure structure, you know the average performance in your institute or your department. You know what is expected and what kind of journals they value, and whether they value numbers or quality. So you can evaluate on that basis.

As a PI, how do I ensure that the lab has a positive atmosphere and conditions that support physical and mental well-being?



Anindita Bhadra

"Ensure that your students are not under a lot of pressure, and are not competing for your attention or to show that they are the most performing student in the lab."

Also having more informal discussions from time to time, stopping by for a chat with the students, going out for tea with your lab and having sometime during the lab meeting for jokes to be shared; things like that can be done.

Abhijit Majumder

I think my goal is to make the work environment so positive and so energetic that

they do not feel stressed to do their work.

Mayuri Rege

Communication is the key. Where I have been, I was in a college, and the tendency used to be that if I've asked somebody to do an experiment, and the experiment doesn't work, they would not come and tell me that it hasn't worked. They would just try to repeat it.

The ‘coming with a failed experiment’ attitude is completely absent in undergraduate and postgraduate level institutions. So I shared examples where I told them that I have made 10 times more expensive mistakes, so on and so forth. That it's fine. I think sharing personal examples is one way to level the ground, so to speak. And making it explicitly clear that you need to communicate whatever it is, and that is a two way thing.

“You often may have to act as a moderator between some fights and misunderstanding in the group. And that can get very ugly and unpleasant. But ignoring that entirely is a terrible idea.”

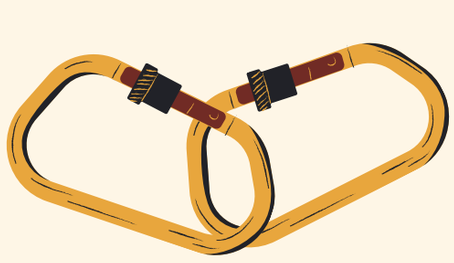
This is something that I had seen some of my previous mentors do and things just festered. And that was not leading to a very positive environment in the lab. What I try to do in such situations is to first talk to the individual agreed parties separately, try to understand the issues and then try and have a roundtable discussion with all of them present so that I can mediate the issues and try and figure out how we can manage the situation.

As a PI, should I, and if so how do I openly support work-life balance?

Saikat Chowdhury

“I do agree with the idea of having a work-life balance. Having said that, my own work-life balance is skewed.”

But I do encourage my students to maintain discipline so that they get time to follow their other passions. For example if they like music or sports, they should be able to spend some time on those, it provides a much needed mental refreshment.



Anindita Bhadra

You definitely should and you must. If you have a student who needs to spend more time at home for whatever reasons, could be ailing parents, could be a child, could be a partner or their own health, you have to understand this. Tell them to take it easy, go take rest, and be with their family.

Abhijit Majumder

I don’t quite like the phrase ‘work-life balance’.

I think in our set-up, work and life are too intertwined. And as I said before, my goal is to make the lab environment very positive so nobody feels stressed. You also need to interact with your students and be in touch. It helps you see who may need a push to actually take some time off. One of my students was falling sick a lot, and I had to make sure he visits a hospital and gets medical attention.

"Another student of mine had been in the lab for an year and had not visited any tourist spots nearby. I asked him to take a break and go see around. So you have to keep an eye on these things."

7. Preparing for altitude

Learning how to be a mentor

Focus: This section focuses on building mentorship skills to support students and researchers in the group.

How do I make my research group an attractive, open and easy space for young students and postdocs aspiring to have a career in academia?

Meghna Krishnadas

I think, first and foremost, would be to be an approachable person.

"What helps a lot is to not have a hierarchical mindset. From day one, try and set up a lab where you have an open and transparent culture of communication , and working as a team."

Be open about your expectations. For example, if you like to run a really tight ship, then I think you should be self-aware and express that to the student who's joining that these are the conditions that you will have to work in. And is this okay? In effect, give people an ability to exercise their option.

Deepa Agashe

I think that's hard. But I think it's also about what you truly believe in. There's no point in faking something that your group does, if you don't actually do it.

"And so I would say, don't worry about what will make your group attractive, worry about how do you want it to function? And what do you think is the best way to function? And then be upfront about it."

Whatever is your set of core guiding principles, I think it is important that they are conveyed openly and clearly to the people who are joining the lab, or who are thinking of joining the lab. You need to be very clear and upfront about what you expect.

In the early days, whenever somebody is joining my lab, I share a write up about what I expect and how things are. My thoughts on topics like mental health, and what I expect or vacation time is all in there. And that's a document that others in lab have also had a chance to add and write about what their experience has been.

Anybody who is joining the lab longer term, has access to it, can edit the document, write their own thoughts, but then they also know what I think.

And also if one wants to make the lab a good place to be, at times, they may need to have shared experiences as a group. And that may involve, going for an outing once in a while as a lab group or attending mini-workshops together.

How do I reach out to my group members to offer mentorship?

Meghna Krishnadas

Stay in constant touch. What I try to do is have regular meetings and check-ins. And in these meetings, leave time to listen to and pay attention to what your student seems to be thinking and feeling.

And at some point, you have to just spend some time talking about things other than the work. Sometimes a meeting maybe to check in and ask questions like 'what's going on? Are you having any trouble? What do you want to do?'
It's about regular and open communication. And being mindful.

Deepa Agashe

"Having a set meeting schedule with everybody in the lab really helps. Whether that meeting schedule should be a daily thing, a weekly thing, or a monthly thing, really depends on the situation."

I initially wanted to enforce sort of uniform rules about a meeting schedule with everybody. And at some point I realised that's not optimal or required. And so now, how often I meet a given person in the lab is not consistent across everybody.

Very new people in the lab, I will maybe meet with them once every two weeks or so. But I'll informally check in on them in-passing regarding how things are going. So they know that they can approach me anytime.

But as the work starts on a particular project and things are really starting to get going, I will meet with people more frequently, like once a week. And there's a set schedule for that.

What should I keep in mind when having difficult and tough conversations as a mentor?

Meghna Krishnadas

Patience is important. You have to maintain a balance between the obligations or responsibilities that you have to a project or a funder versus what you have to the person who is working with you. I think people matter before the work.

"It is complicated though. Navigating as a young PI, balancing your obligation to give people the time and space they need to do their best can clash with the external impositions of what you are required to deliver on."

I don't have a straight answer for how one can deal with that. You have to make your choices there. I think I will not want to put a prescription.
From my side, I try to make it clear to my team that this is a two-way street, that we are in a collaboration here, and what it means to have that.

Vasudharani Devanathan

Not to hurt their self-respect and self-esteem. I think these are two things as a human being, everyone needs to really remember.

"Just because I am a PI, doesn't give me any right to disrespect my students."

And maybe the student is really at fault. In spite of you telling them several times, the correction may not be made. But we should not lose our temper. We definitely have no right to use derogatory remarks or yell at them.

Mayuri Rege

At the outset, you need to tell students up front where it is that you draw the line. And for me, that is when somebody tries to fake data or something of that sort, I will completely lose trust and faith.

I've had one situation where there was somebody who was working in the lab for about 3-4 months. I had to forego that project entirely because at that point it was not clear to me which part is true and which is somewhat made up. I had to have a tough discussion with the student.

"And it was hard because they were expecting a recommendation letter from me. But I cannot, in good conscience, give them a glowing letter."

But because I had laid down what I expect from the beginning, this is almost like a 'voiding of contract' of sorts. And in that case, I was willing to give them an experience letter, but I had to say that they would be better off not getting a recommendation letter from me in this particular situation.

Is being a good mentor only restricted to navigating the immediate scientific goals of my group members? Or, should I also support their diverse career aspirations, and career growth both within and beyond the tenure in my lab?

Meghna Krishnadas

As a mentor, a person's outlook should not be just the immediate scientific goals of the lab members, but beyond that, like supporting their career aspirations and their career at large.

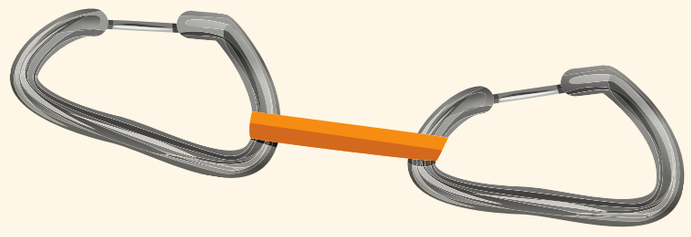
"It is your responsibility to be engaged with the well-being and development of your students and your mentees."

I think it is your duty to tell them or guide them through the skills that are needed.
You should try and help people understand what their strengths are, what they need to be working on in terms of skills, and what they need to be doing to meet their proposed career goals or ambitions.

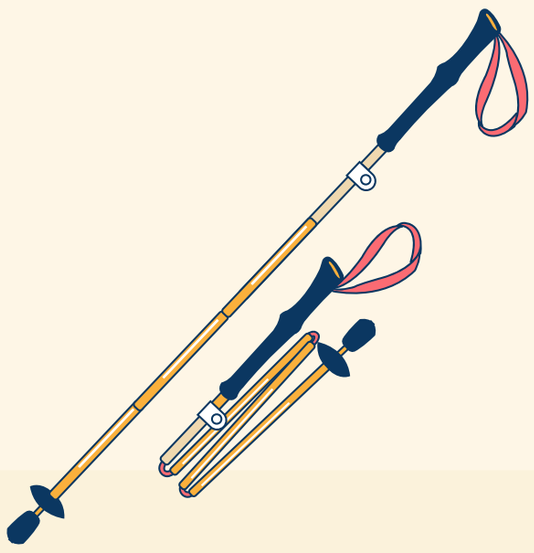
Vasudharani Devanathan

When I newly joined a faculty position in India, and having not done PhD from here, I did not know much of the system. And it was very difficult to navigate around for a lot of things. And it turned out to be very easy for several people who had done a PhD in India.

So I think when a PI takes a PhD student, it is important to mentor them beyond the specific area. I do this for my PhD students. I also suggest what they can do next. I inform them about the different awards as well as the constraints in the system so that they can plan accordingly.



How do I help my lab members develop the essential non-scientific skills (e.g. networking, management, public speaking and communication) for a successful academic career?



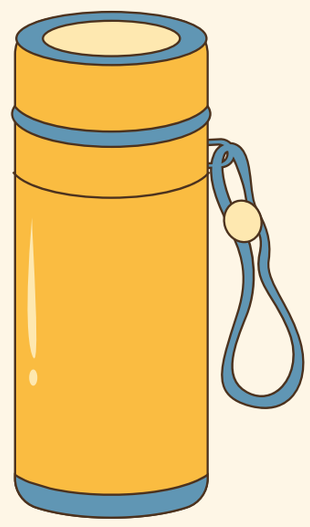
Meghna Krishnadas

I keep sending my students emails, sharing with them articles and opinion pieces about what skills are important. Like writing, or making an effective poster, or how to read a scientific article. I make sure to constantly highlight to them that these skills are crucial to learn.

As a PI, one can try and get the lab folks to attend sessions or workshops outside for these kinds of skills. The other way is to have sessions in the lab itself.

"For instance, if one of my students has a presentation coming up, then we make sure that they present in the lab at least twice, where people are giving feedback."

You could read a book about good science writing and discuss that in a lab meeting. And when you attend a conference, go over presentations and talk with your team about what do they think worked. What do they think didn't. If they saw a really good presentation, then maybe discuss why do they think it was good. Have that kind of dialogue and constant conversation.



Deepa Agashe

If I read something really nice or useful, then I will send it to the lab. Specifically for scientific writing or scientific presentation, we deal with them on a regular basis in our weekly lab meetings.

People take turns to present and we spend a lot of time giving suggestions on how to do a better job of doing the presentation. If they're going to speak anywhere outside the lab meeting, they will do a practice talk in lab meetings and get feedback. So there's a lot of that training happening continuously.

"Once in a while, I do a lab workshop during the lab meeting. I talk about how data should be organised, how data should be curated, what are the lab policies, and how it should be stored."

And more recently I've started doing this where I have dedicated a day every month for organising the lab and the data. So instead of lab meeting, that day, everybody has to sit and work on organising their notebooks, their data, and their bench.

A PhD student wants to give up a career in science and wants to invest more time in developing the required skills, but it might also offset the set goals of my lab. How do I manage such situations without becoming a hindrance to his/her/their career aspirations beyond academics?

Meghna Krishnadas

I think here, again, communication is really important.

"Without judging them, and without taking offense to what their life decisions and priorities are, you just have to discuss. You can let them know that certain work responsibilities are necessary to fill in."

Vasudharani Devanathan

It is the freedom of the student to choose what they actually want to do. Because everyone may not like academics or industry. I wouldn't also say everyone is not ‘made for’ academia. Because I may be made for something, but I consciously don't want to take it.

I have these situations in my lab. A PI has to balance both. Give freedom to the interest of the student.

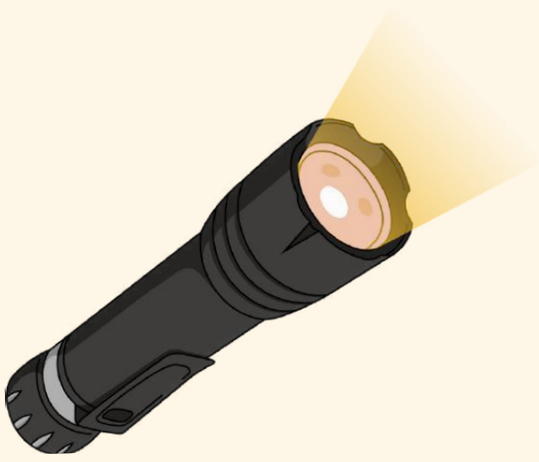
“But if the student is going beyond the limited time frame, it's also the responsibility of the PI to tell them, maybe it's good for you to finish your current goal and then there's space for the next one.”

A PhD student/ postdoc wants to get married or have a child. How can I best support them, while ensuring their career goals are on track?

Meghna Krishnadas

Timely, regular, and open communication.

“As a PI, you have chosen to prioritise one thing over the other. And just because someone is working with you, in your lab, or on your project, doesn't mean that their choices or priorities are the same.”



Anindita Bhadra

If somebody is going to get married or going to have a baby, you need to be positive about it. You need to be happy about it rather than ‘Oh My God, what's going to happen to this piece of work now?’

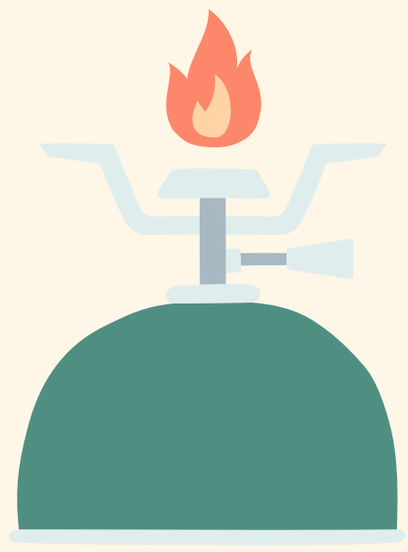
Deepa Agashe

It's important to have open lines of communication about these things. If somebody takes a month off to go get married and have a vacation associated with it., that's fine, because we've been talking about it over time. We've planned for it. The work has been structured in such a way that it doesn't break. And a proper time-off can be taken for the life event without work interfering in that either.

“And this is something that I make clear in the document that I share with lab members when they join. I tell them that these things are going to happen in your life. But if you think ahead and plan ahead and keep me in the loop, it's going to be much easier.”

Don't suddenly say today that you're going to get married tomorrow and will be gone for three weeks. That is a bad idea. Hardly anybody ever gets married suddenly like that. So whatever is in your control, you should be able to plan ahead.

How do I make sure that my PhD students submit their thesis within their 5-year tenure? Should I, as a rule, think of straightforward backup projects for each PhD student in case their primary project doesn't work out as expected?



Meghna Krishnadas

"The short answer is yes, you should think of backup projects. But I would also want to invoke a student's independence into this. They should think about it too and the student and PI can come to a mutually agreeable decision."

I think that we should try our best to ensure that our students finish within the stipulated time, but science can be risky and things may not work. And if it is beyond our control, despite doing our best, then it's okay, we should think of a plan B.

As an early career PI, what helps is knowing how things are progressing, and keeping that balance between giving your students the independence to do things on their own and at their own pace and also keeping a tab of the work.

Because I think that when people do things on their own, that's when they're also learning the most, rather than you dictating things or them just tagging along with whatever is happening. But also knowing when you want to pull them back and say that, hey, you know, this is great, but things have not quite gone as we had hoped. And maybe it's time that we should reconsider our strategy.

Vasudharani Devanathan

When the students are in their first two years of the PhD, I tell them that they should focus on some of the experiments they're standardising or establishing. So that, in the first two years, they may be able to write a semi-theory paper or a short experimental protocol paper. Two years is a good time to have a small paper.

And I have seen my students who had those papers feel very motivated. Or if they see this light at the end of the tunnel, they feel like they're doing well, and want to do more.

Second point is to have a plan A and a plan B project. One project, which you know for sure will work, which could also be a collaboration project. And the second one is very ambitious project.

"So there's a 'bread and butter' project and there is a high score, ambitious project."

The third point I always tell them is, high collaboration within the group is required. Everyone should learn all the techniques, but each person should be an expert in one technique. If there is somebody doing something very special, that person can do the experiment for others too. Therefore, they collaborate and get co-author papers as well.

So overall, there will be a short paper, co-author papers, and the core papers.

8. Making the summit bid

Leadership in science in India

Focus: This section discusses how YIs in the life sciences in India can take on leadership roles beyond their research group.

What constitutes 'leadership in science' in the context of Indian ecosystem of research and education?

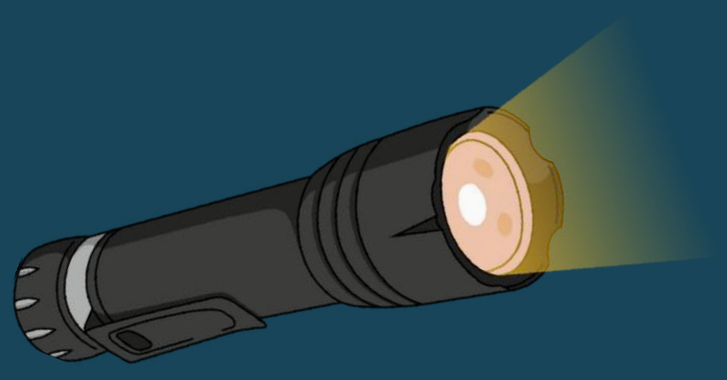
Anindita Bhadra

In the Indian ecosystem people consider you to be a leader if you have already graduated a large number of students, you're sitting in committees, or you are a full professor, etc.

Personally I think even a person who's starting off in their career can be a leader because if your students are following you, if they look up to you, and consider you as a good role model, then you already are a leader.

And in terms of being accepted as a leader,

"I don't think it's a matter of age, or the number of ideas you have, but it's more about how people consider you. Whether they look up to you, whether they think that what you are doing is something to emulate, then you are a leader."



Vasudharani Devanathan

From the setup, I have noticed there are two kinds. One is you leading your lab as a PI. That is the leadership that you are hired for. So, there is no compromise on that. You have to perform your best.

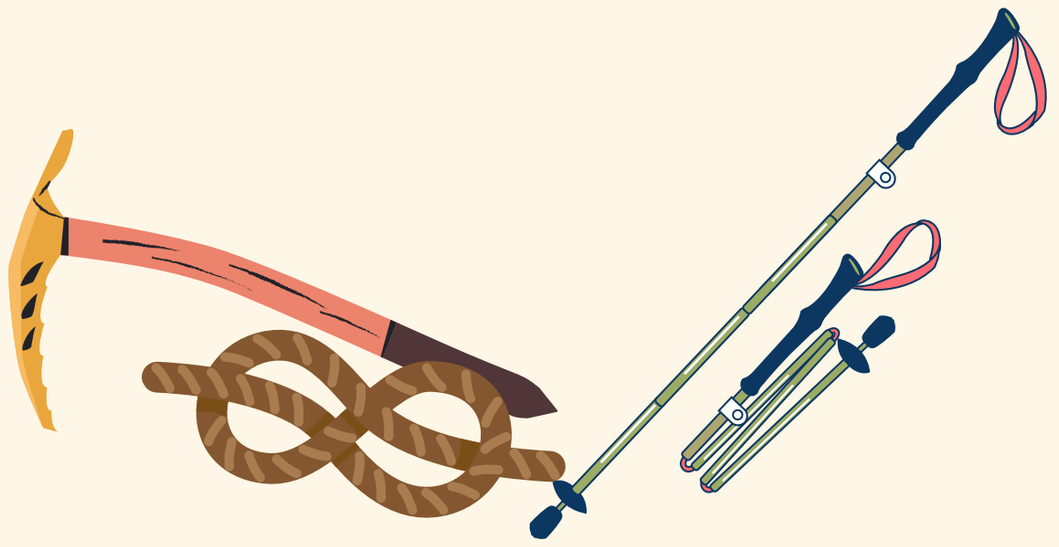
The second leadership is the administrative leadership that you take in a career path. And both of them are intertwined because if you take these administrative leadership, you compromise time for your lab.

But the second kind of leadership is also important for two reasons. Not only for the PI's personal growth, but also your growth is going to impact your lab.
So,

“you have to take the leadership of your group for sure. But you need to also focus on administrative leadership and going beyond your research. Both are important.”

And leadership does not mean just being a Dean or Associate Dean. It also means something completely new that you're initiating in your institute or department.

How should new YIs perceive leadership challenges? Is it not too early for me to get involved in a leadership role?



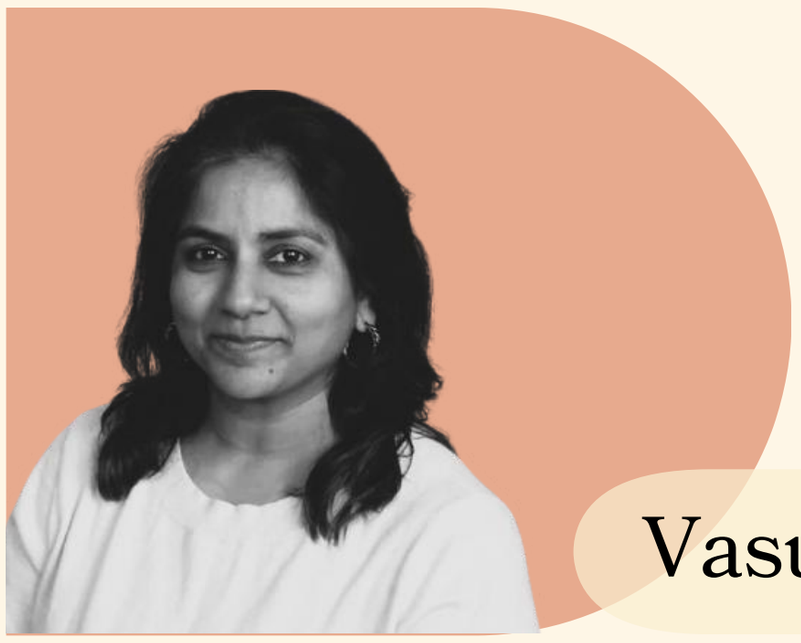
Anindita Bhadra

If you don't do it from day one you will never do it unless it's forced on you.

Sometimes you'll be asked to be on a committee or lead a committee for your institute, it might be a thankless job but it's part of being a leader. Even though you might think that it's too early in your career, it's never too early to start on leadership.

Abhijit Majumder

Leadership has various different aspects. Maybe at the beginning, you may decide to take leadership roles in smaller aspects, for which the time commitment might not be too much. And then you slowly grow.



Vasudharani Devanathan

As a young PI, both lab and administrative leadership should be taken care of. When a new person joins, often because of our papers and grants, it's very normal to be apprehensive about taking these extra jobs. But these extra jobs are also important because it expands your professional repertoire. You learn a lot of things working with others, especially with senior members.

Do leadership roles in committees and policy making appear as being 'less serious' about my research?

Anindita Bhadra

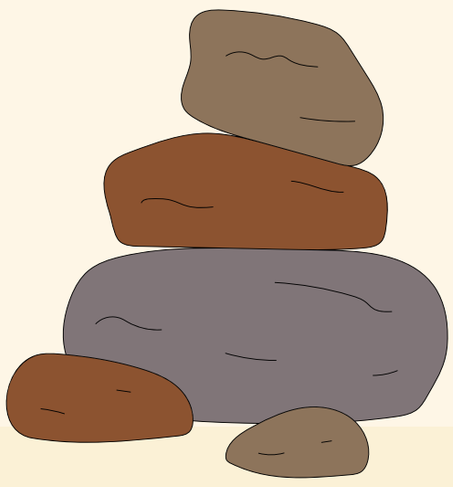
I have heard this myself a lot of times that you ‘don't have enough research to do, that's why you are doing all of these other things’. But it doesn't matter, if that's something that you like doing, just go ahead and do it.

Vasudharani Devanathan

Yes, it is true that it can be perceived that way. Because our reward system is also based mostly on research. And that is why people also feel that they do not want to take any of this extra work.

But we know an institute would not run without administrative roles. For example, there's the Dean for academics, the Dean for student affairs, or the Dean of international affairs. These positions are crucial, which is why they are created.

How do I identify key challenges that need leadership and how do I get involved in leading initiatives beyond my immediate research goals?



Anindita Bhadra

One of the things that one can do is look out for opportunities where one can volunteer or apply for by becoming part of a team.

For example I would recommend every young PI to apply for INYAS memberships in India and the Global Young Academy (GYA) memberships abroad.

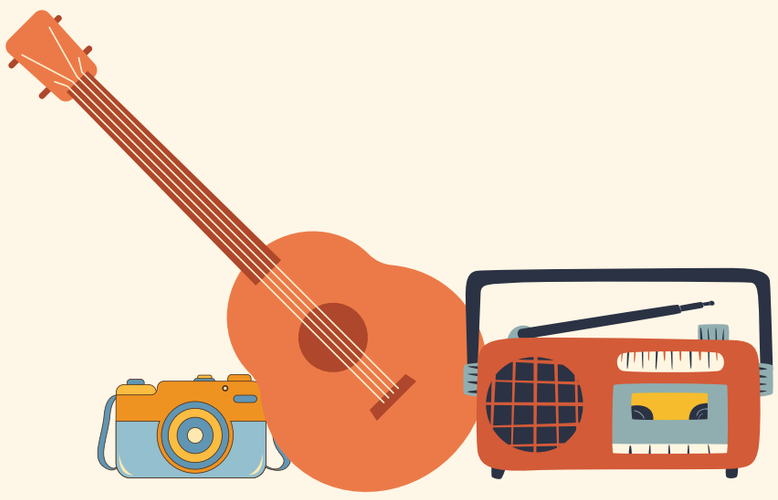
You get to be in a position where you can be a leader, you can get involved in many activities and you are at the forefront of doing things. Not everybody will be selected for these academies but then there are many other channels as well.

For example, you could do a lot of outreach, or train your students to get involved in these kind of events and do a lot of good for society. Maybe you are not a very publicly engaging person but you can contribute by writing and engage with a larger network.

Abhijit Majumder

You can take up something that is close to your heart. And different people have different things that they are passionate about.

If someone is passionate about diversity and inclusion, maybe you can start looking into your department in a small scale and see how things can be improved. If someone is passionate about undergraduate teaching, think of organising a workshop on pedagogy.



Vasudharani Devanathan

It depends on where the PI is. For people who are in new institutes, new institutes meaning which are 10-20 years old, there's always hope for creating things.

For this, the young PI probably wants to look up to similar institutions across the country and see what's happening elsewhere. And maybe there is something that their institute is not yet doing and that can be an opportunity for a leadership.

On the other hand, if the Director or anybody in the institute says that they would like someone to take care of some responsibility, one can grab that opportunity. Even if you may not like that role, let's say that role is for one year or so, you can still take it up because you want to learn something new out of it.

"Unless you move out of your comfort zone, you may not be able to identify areas for leadership."

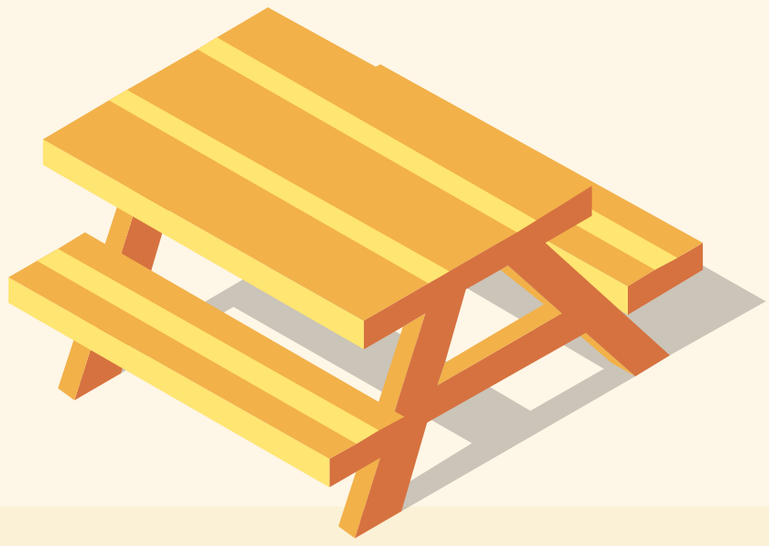
I have heard that the best time to assume leadership roles is after securing tenure or promotion. Should I wait that long to get involved?

Anindita Bhadra

"You can be a leader from day one. It doesn't have to be dependent on tenure."

Abhijit Majumder

I don't think one needs to wait.
You can start by making small efforts and eventually it will grow.



Vasudharani Devanathan

I think one should check the promotion policy of their institute. There might be a mandate on what are things are considered and what is their weightage. Some institutes might actually value leadership or administrative contributions.

Are there professional workshops or courses that can help me formally honing my leadership skills?

Anindita Bhadra

For the people in biology, YIM is a great platform where one can actually engage. And even if you're not in biology, there are many of these events that IndiaBioscience is doing. For example, the YI Huddles and the other online events that they conduct on a regular basis.

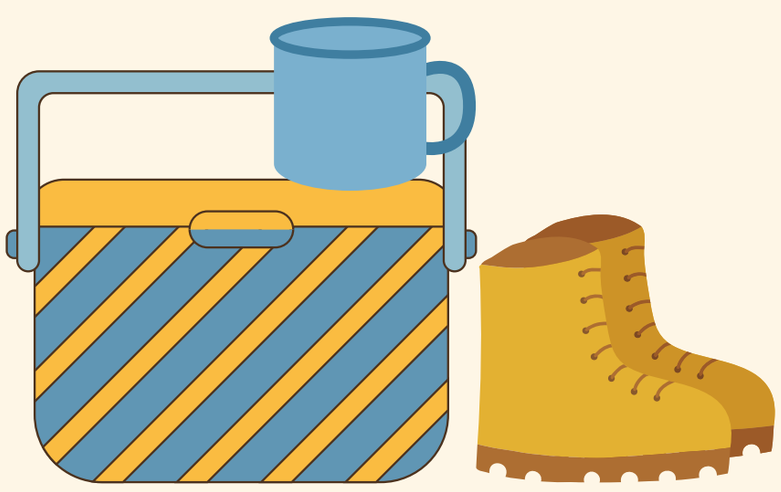
Abhijit Majumder

I have attended two such workshops and courses. They were useful, even though I did not implement everything I learned there.

"More than workshops, something I do regularly is read."

Whether it comes to mentorship, teaching, leadership, any aspect, even writing, presentation, outreach, there are multiple fantastic articles and books are now available on the internet. Particularly from people who have worked in that area for a long time.

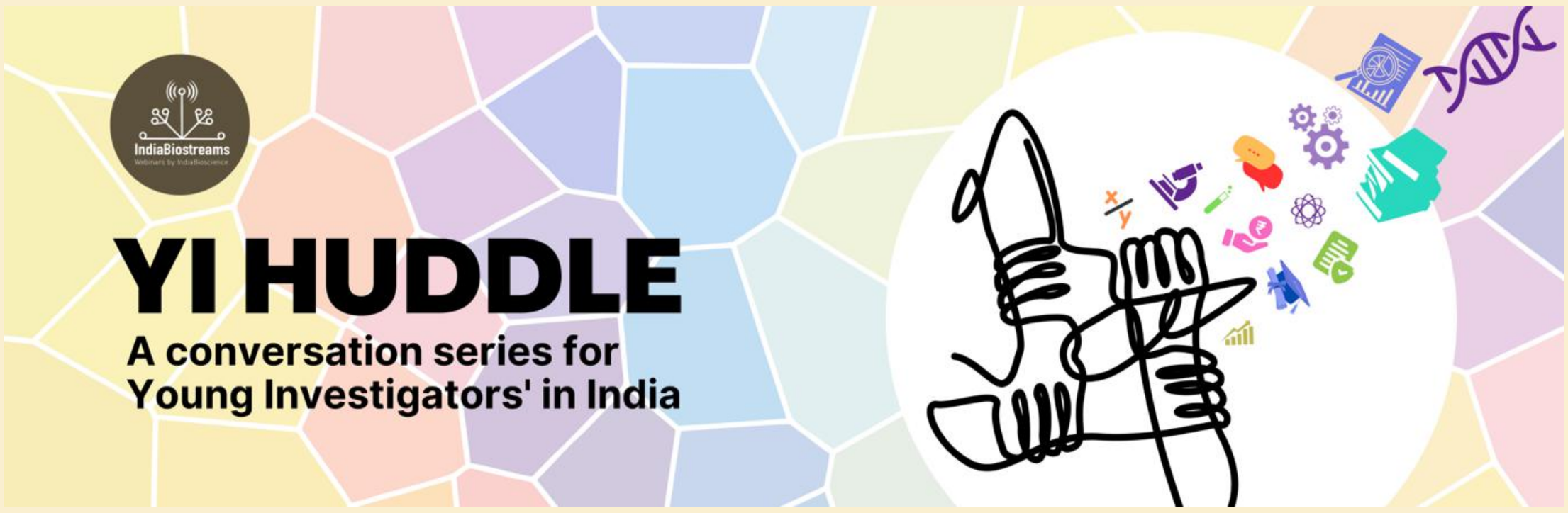
So I read those articles, those books regularly, and I feel that that is helpful.



Vasudharani Devanathan

IndiaBioscience does some mentorship workshops and their meetings are also useful. The Confederation of Indian Industry (CII) also does some events.

The YI Huddle series



YI Huddle: A conversation series for Young Investigators' in India

As part of its mission and mandate, IndiaBioscience aims to keep conversations with Young Investigators' in India ongoing via online and in-person platforms for networking, mentorship, discussion and exchange.

With this in mind, IndiaBioscience initiated a webinar series **'YI Huddle: A conversation series for Young Investigators' in India'** across 2023-2024.

YI Huddle was structured to take a YI on a journey that starts with initiating a research program, understanding grants and financials in the life sciences in India, research documentation, and academic publishing, and then gradually moving on to topics beyond the standard academic structure such as industry partnerships, clinical collaborations, and leveraging incubation parks, and finally, expand the YIs view of doing science in India via discussions on science policy and citizen science.

Importantly, **the series was conducted by YIs (as interlocutors) in conversation with scientists, faculty, entrepreneurs, public engagement professionals, policy scientists, and science leaders, in an engaging and conversational style.**

YI Huddle

<u>YI Huddle 1:</u> Starting out: Going from research project to research program

In this session, interlocutor Rohan Khadilkar (ACTREC, Mumbai) and guests Anindita Bhadra (IISER Kolkata) and Durba Sengupta (CSIR-NCL, Pune) discussed defining and expanding focus areas, seeking collaborations, hiring and recruitment, building a strategy for publications, planning purchases, equipment, and field work, and navigating administrative and teaching roles.

<u>YI Huddle 2:</u> Beyond the sanction order: Understanding research grants and diverse funding sources

In this session, interlocutor Karishma Kaushik (IndiaBioscience) and guest Vandana Gambhir discussed understanding a grant, what to know when working with an RDO or Grants Office, philanthropic and CSR funds, and foreign funding rules in India.

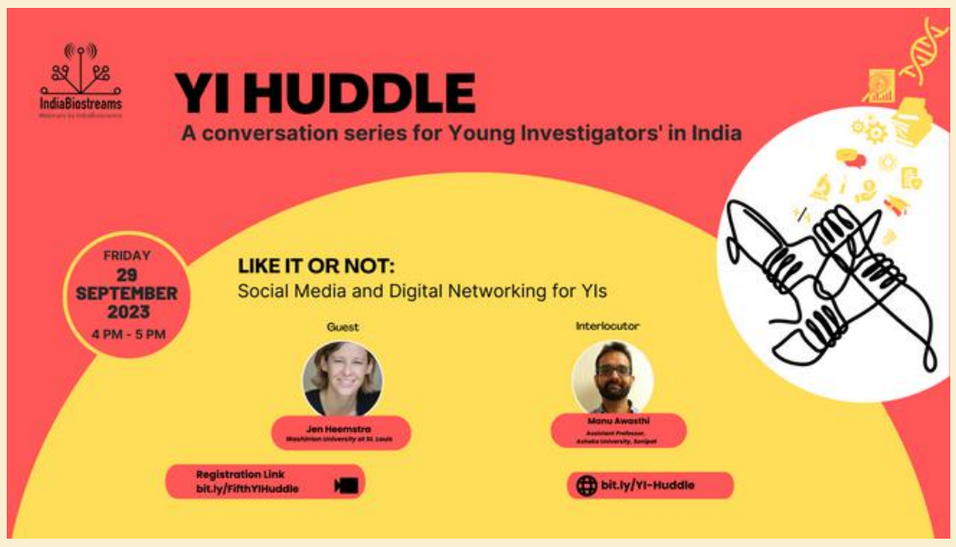
<u>YI Huddle 3:</u> To be noted: Research documentation and reproducibility for YIs

In this engaging webinar, interlocutor Divya Kumar (JSS Medical College, Mysuru) and guest Bernd Pulverer (EMBO) discussed scientific reproducibility frameworks, data organisation, management, and file naming, challenges of integrating reproducible research practices in life science laboratories, best practices to follow for lab notebooks, data storage, and back up of data and research ethics.

<u>YI Huddle 4:</u> Publish, but don't perish: Navigating academic publishing for YIs

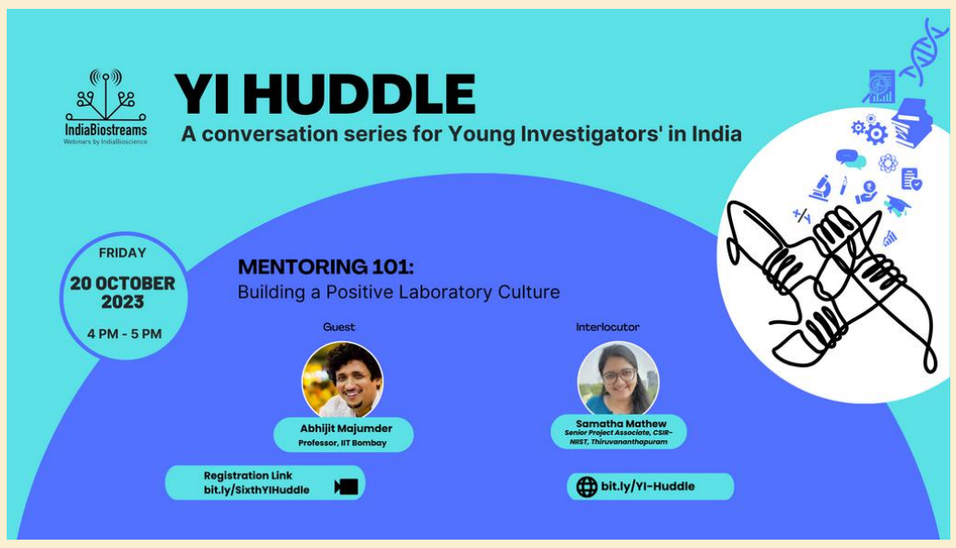
In this meeting, interlocutor Tapasya (Delhi University) and guests Vinita Gowda (IISER Bhopal) and Moumita Koley (DST-CPR, IISc Bangalore) shared thoughts on navigating the current model, APCs from India, APC waivers, Preprints, Plan S, as well as paper mills and citation cartels, predatory journals, and the broader concept of open science.

<u>YI Huddle 5:</u> Like it or not: social media and digital networking for YIs



In this meeting, interlocutor Manu Awasthi (Ashoka University) and guest Jen Heemstra (Washington University, St. Louis) had an engaging discussion on social media for scientists, the types of platforms, rules and hazards of engagement, how to leverage social media presence to engage with the larger science ecosystem.

<u>YI Huddle 6:</u> Mentoring 101: Building a positive lab culture



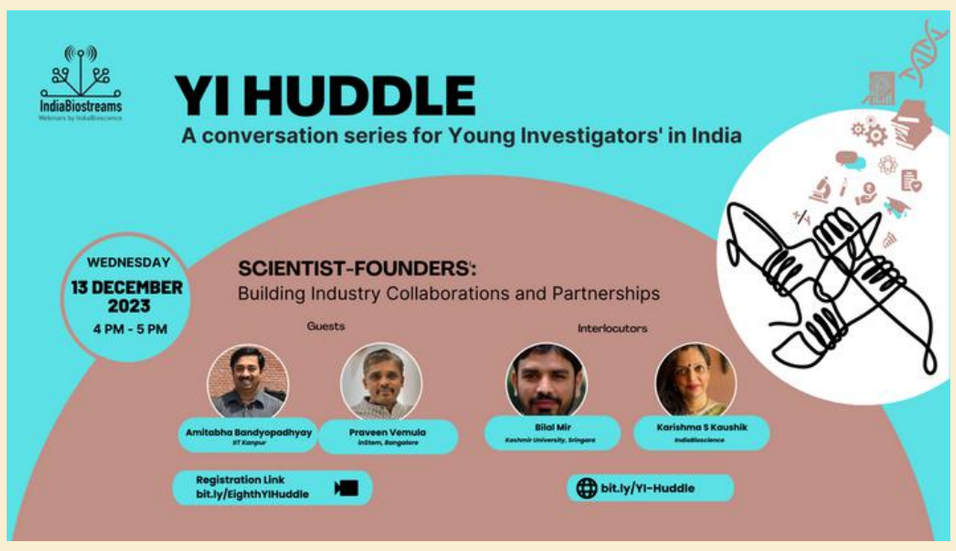
In this meeting, interlocutor Samatha Mathew (CSIR-IGIB, New Delhi) and guest Abhijit Majumder (IIT Bombay) discussed mentoring basics, challenges and difficult conversations, active listening, work-life boundaries, and fostering DEI in lab environments.

<u>YI Huddle</u>

<u>YI Huddle 7:</u> A lab beyond the lab: How can YIs leverage common research infrastructure and incubation parks in India?

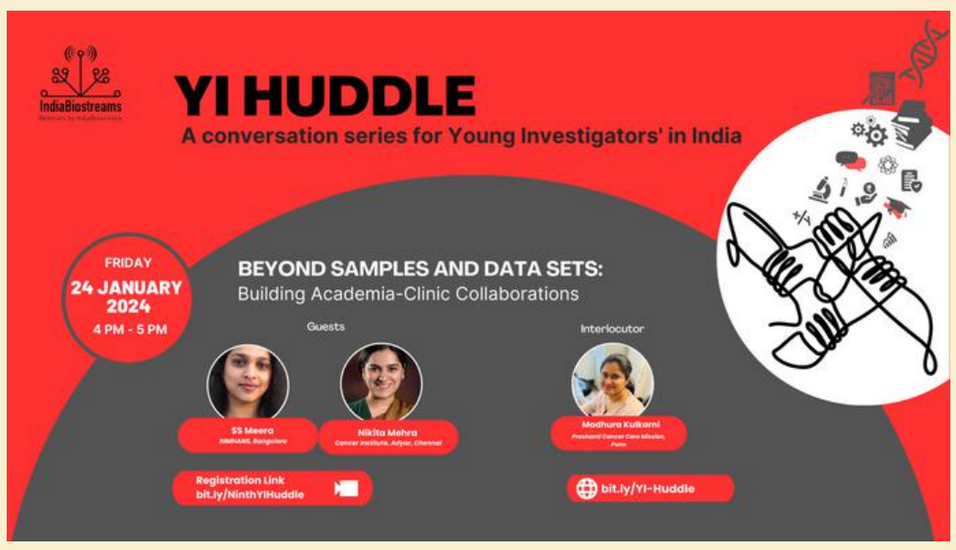
In this engaging webinar, interlocutor Vishal Bhardwaj (C-CAMP, Bangalore) and guest V. Premnath (NCL-Innovation Park) discussed common research infrastructures in India, how can academic YIs leverage incubation parks, and how we can build or design open and sustainable infrastructure for life-sciences in India.

<u>YI Huddle 8:</u> Scientist-founders: Building industry or market collaborations and partnerships



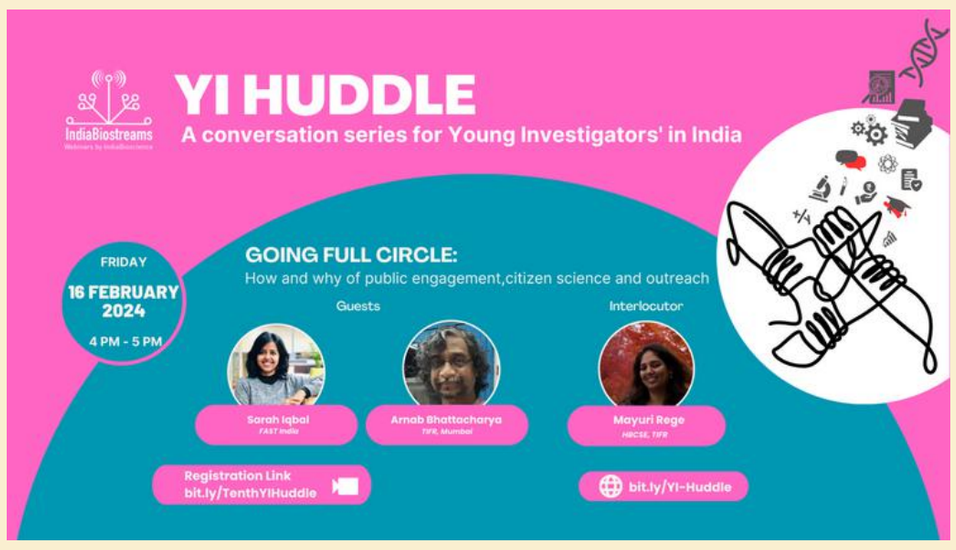
In this meeting, interlocutors Bilal Mir (University of Kashmir) and Karishma Kaushik (IndiaBioscience) and guests Amitabha Bandyopadhay (IIT Kanpur) and Praveen Vemula (inStem, Bangalore) discussed industrial collaborations, how to seek funding from industry, academia-industry grants, steps towards starting a venture, and bridging academia and entrepreneurship.

<u>YI Huddle 9:</u> Academia-clinical collaborations: More than samples and datasets



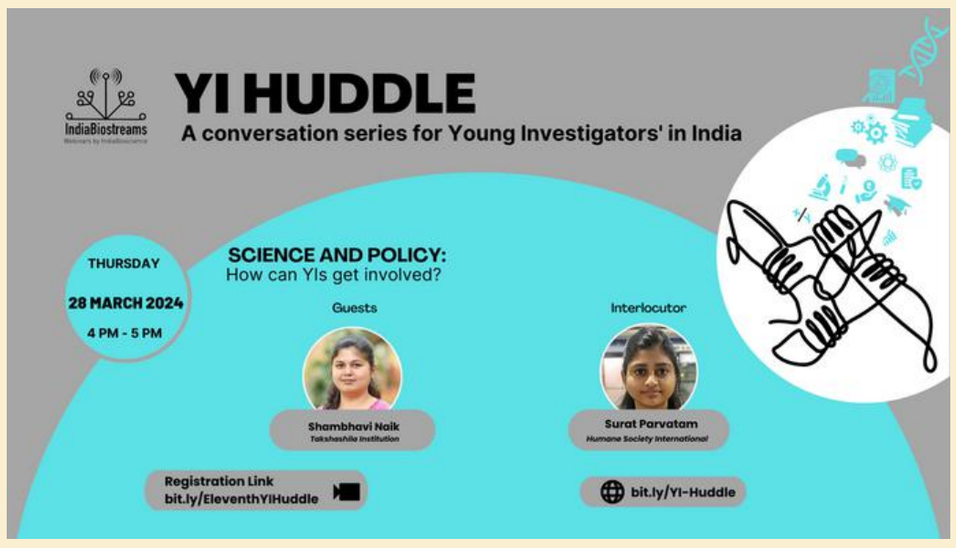
In this webinar, guests SS Meera (NIMHANS, Bangalore) and Nikita Mehra (Adyar Cancer Institute) discussed academic-clinic partnerships with interlocutor Madhura Kulkarni (Prashanti Cancer Care, Pune). The discussions centred on what should clinical collaborations look like, how can they be leveraged to impact patient outcomes, building academia-clinical collaborations to be two way approaches, seeking funding for clinical collaborations, and scientific and medical ethics in academia-clinical collaborations.

YI Huddle 10: Going full circle: The why and how of public engagement, citizen science and outreach



In this engaging webinar, interlocutor Mayuri Rege (HBCSE-TIFR, Mumbai) and guests Arnab Bhattacharya (HBSCE-TIFR, Mumbai) and Sarah Iqbal (FAST India) discussed
the impact of scientist-driven outreach in India stand as of now, taking public science engagement in India to the next level, scientific social responsibility and how outreach make one a better scientist.

YI Huddle 11: Science and policy: How can and why should YIs get involved?



In this meeting, interlocutor Surat Parvatam (Humane Society International) and guest Shambhavi Naik (Takshashila Institution) discussed why YIs should be involved in science policy, how can scientific research be bridged with policy, how YIs can contribute to national policy discussions and conversations, science policy forums and discussions in India, and STIP 2020 and what it can mean for the life sciences.

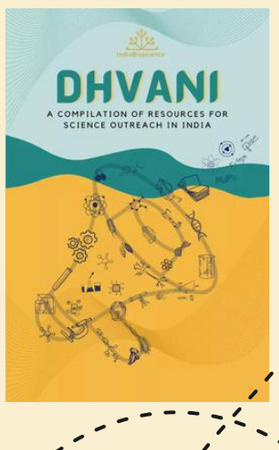
You can watch and listen to all the YI Huddles for more insights into any of these topics! Have ideas for new discussions? Write to us at hello@indiabioscience.org.

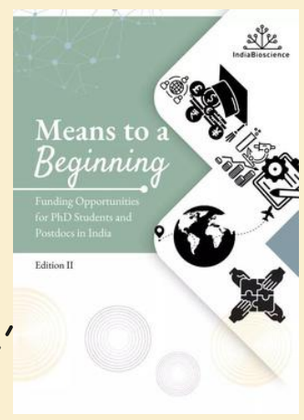
YI Huddle

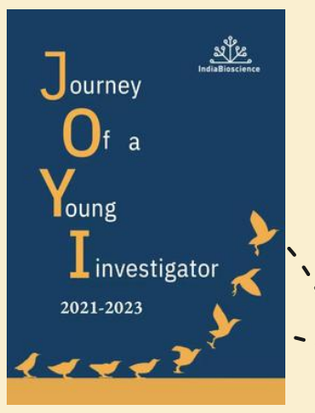
Other compendia from IndiaBioscience

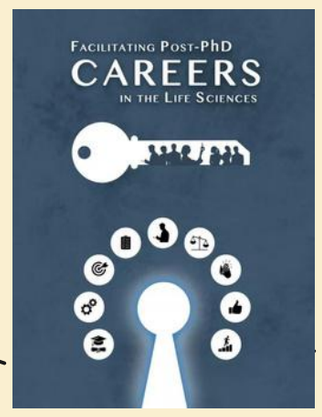
(2017-2024)

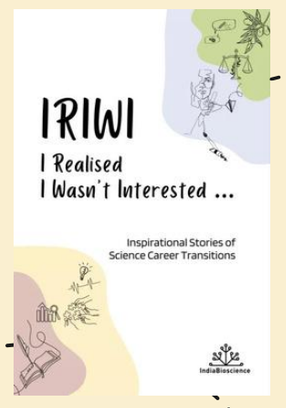
IndiaBioreads

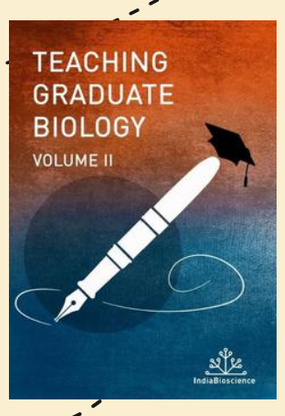


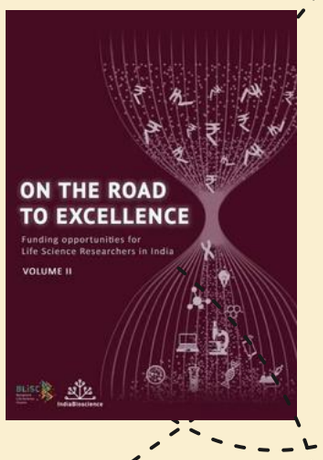


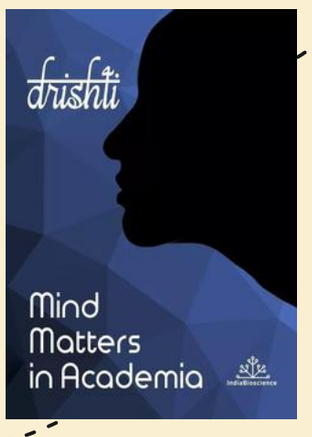


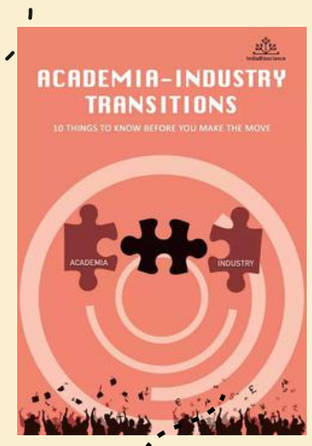


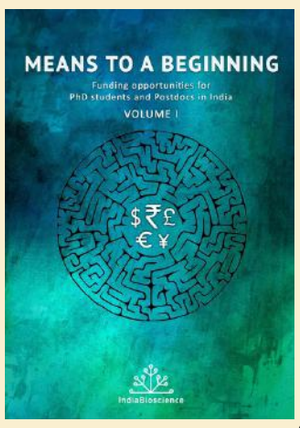


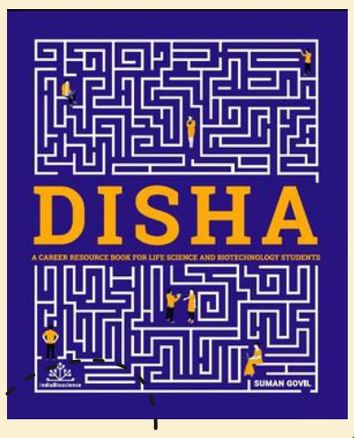


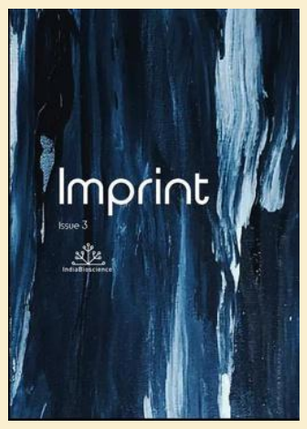


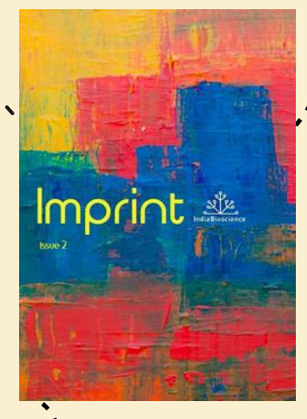


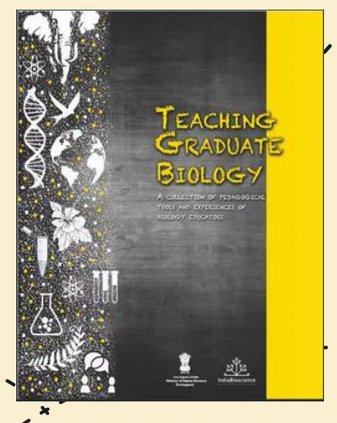


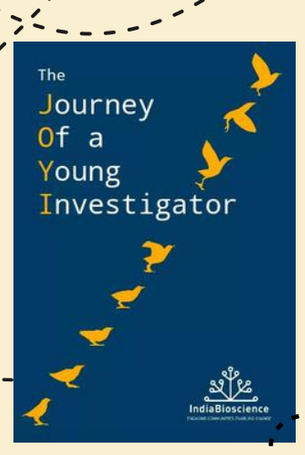


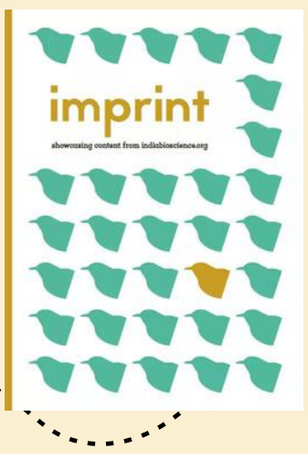


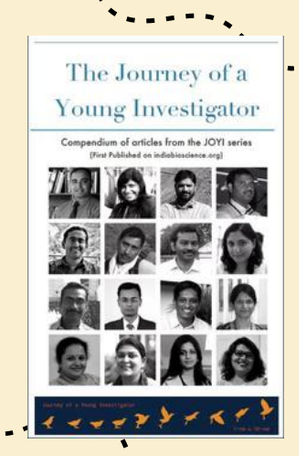












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