



# SEPTEMBER 19 Q&A

## INDUSTRY R&D PANEL

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*Q. I see that most of the panelist have a degree either in non-plant science field. I am from plant science field and have a vast experience in plant molecular biology. Could i be considered for interview in an industry such as Biocon?*

A. As long as it is science it does not matter. We interviewed someone who was in cosmetics. Do you have the skills? If yes, we can look into it.

*Q. '@Dr Khadilkar and @Dr Rudra: Can you comment on the emergence (or opportunities) of Indian defense sector in providing R&D opportunities in traditional fields such as aerospace/mechanical? (asked by Punnag Chatterjee)*

A. Places like DRDO, ISRO etc have plenty of opportunities in this area, but keep in mind that the resulting career will be highly structured in terms of progression, seniority, responsibility, etc.

*Q. Please shed some light on the scope of jobs for mechanical engg PhD's in the medical device manufacturing sector, especially in companies like ThermoFischer, BD, Biocon etc. (asked by Sasidhar Potukuchi)*

A. Hello Sasidhar - I guess one opportunity could be in "Service and Application" division for Medical devices sector

*Q. Are there R & D job profiles for bioinformatics/computational biology in Indian industries/companies? (asked by Abhishek Subramanian)*

A. See TCS Research - life sciences research area for an example

*Q. Considering most of the candidate coming from research background/PhD.... I would like to know how much industrial jobs are research oriented*

A. All types are available - from research to innovation to technical management / development. Depends on the company.

*Q. '@Dr. Kavita Rao: What is the scientific background will Biocon look for in a candidate? I am more of a basic science person. Will I have opportunities? (asked by Suganya Sivagurunathan)*

A. Yes. you would. Basic sciences are important in discovery sciences/pharmacology/mol.bio definitely are important areas for any biopharmaceutical

*Q. Are there industrial internships in India that grad students/postdocs can avail of? (asked by Milind Singh)*

A. Yes. Most industrial labs will have these opportunities.

*Q. How do you get a visiting professor post in parallel to an industry job?*

A. TCS Research strongly encourages academic collaboration and involvement from a CSR perspective, so this was not a problem. On the academic side, there are more and more courses looking at applications rather than pure theory. It helps to have real-world experience in that case.

*Q. how does research in industry differ from research in academia? (asked by Suman Majumdar)*

A. Depending on the lab, the application focus of research will vary. Some industrial labs are very application focused. Others like TCS Research focuses on research that is between purely academic and purely application.

*Q. Many chemical companies relevant to my area don't seem to have research centers in India. I am an experimentalist. When recommending people to be open to different jobs, how much of a transition from my current skills is okay/acceptable to apply to? (assuming companies still want certain skills)*

A. If you have worked as experimentalist and say have a chemical engg degree....then you probably know a bit about reactor engineering, process design and may be data analytics....you may also have a background in instrumentation...think broadly about the skills that you may have

*Q. '@Kavita Rao - How strict are the requirements for specific domain expertise (such as immunology and oncology) that job postings ask for? (asked by Pavithra Aravamudhan)*

A. Depends on your the job description and the area where you are applying. Many JDs give you a wish list of skillsets, you may not meet 100% of requirements. So please apply based on what strengths you bring in

*Q. Is there any age limit for starting a career in Industry? Also, a long postdoctoral experience has any negative effect to get a job in industry?*

A. Not necessarily. It depends on the kind of relevant experience that you have and the role you are applying for

*Q. How are the prospects of a soft matter physicist if looking for a research-oriented position in industrial sector? (asked by Shrishti Arora)*

A. I guess in companies who are in FMCG sector may have opportunities....however if you also have skills in programming or say may be in mathematical modeling then the opportunities may lie elsewhere as well

*Q. What are the challenges seen in doing research when one comes back to India to work in industries? (asked by Munish Chhabra)*

A. Honestly it is mindset....you can turn the challenges into opportunities

*Q. '@Dr. Khadilkar, a follow-up qn to your previous answer. What is your take on the current private sector scenario for aerospace and mech engg PhDs in India? (asked by Shashidhar Potukuchi)*

A. There are some startups in this area, but there are not too many. If you combine core expertise with other skills like data science, it opens up a lot more opportunities.

*Q. '@ Thiya Mukherjee: its a more technical question: Its about writing a resume for applying to an industrial position. As a PhD, postdoc applying for academic position, we write CV. But I have heard there is a difference how to write your application for industrial position. Is it true? If so it will good to get some tips. (asked by Thiya Mukherjee)*

A. It depends on the job profile. More academic-focused labs can use your academic CV. Application-focused labs will care more about your real-world problem experience, deployment or experimental work, etc.

A. Please take off the full list of publications, seminars attended etc. Highlight your skill sets to a particular job in question. And refine your CV

*Q. '@Harshad Khadilkar. Regd - When applying for industry jobs in India, are new PhDs or Postdocs from the US at a disadvantage because we are not the most familiar with the current regulatory and industry landscape in India? I was speaking about fields in general but I am specifically interested in the biotech/biopharma field.*

A. Not sure - try to get one the folks with bio background to answer this.

*Q. I am in Infectious disease and immunology field. But hardly, I could not see any opportunities in Industries in India. Practically, it seems impossible to get any opportunities in India. (asked by Rajan Guha)*

A. Well, in Thermo Fisher Scientific and similar other companies dealing with biotech application work, there are Clinical Microbiology division and this is a big opportunity, try looking for such job options

*Q. What is the main lacking point found in a PhD when they are interviewed (especially related to mindset)? (asked by Aditya Parekh)*

A. Having very specific requirements in the job profile.

*Q. How do you build a network if you dont know a lot of people, personally? (asked by Aditya Parekh)*

A. Go to conferences. Most Indian labs publish frequently, and you will find people to talk to there.

*Q. How does one adapt to the shift to industry after being for so long in academia (PhD followed by post PhD time) and are Indian RnD support the rich talent that such people monetarily and otherwise? (Maybe focus on biomedical industries)*

A. As long as you have confidence in the work you have completed, I guess the shift is not an issue. I shifted after PhD from Germany and 2 post-docs (5 yrs) and all these actually helped me during my industry transition. I guess getting into a more application-based job in any biotech company will be of more interest than R&D as such...just my 2 cents

*Q. are any companies in India working or planning to work on aging?*

A. I assume your question is on skin ageing....in that case I know quite a few FMCG companies....not sure the level of R&D vs product development/formulation type of work

*Q. Are there any company in India focusing for alternative ways of fuel and utilizing enormous waste plastics? (asked by Saideep Singh)*

A. Companies in the Oil & Gas sector as well as chemical companies

*Q. Is there a benefit to pursuing industry R&D in India that maybe is not available elsewhere? (asked by Biren Parmar)*

A. yes, in many cases India offers high growth opportunities

*Q. How does a postdoc factor in while applying for an industry job? Would not having a postdoc experience bear positively or negatively? (asked by Tarun Mahajan)*

A. Postdoc counts as added experience

*Q. I am with Medicinal chemistry background almost 8 years of research experience. I have been applying to the various R&D labs in India but haven't received any response yet. What do u think is the best way to work this out?*

A. Find the right person to send your CV to.

*Q. Are expectations for PhDs/postdocs coming from outside India any different from PhDs/postdocs from India?*

A. No

*Q. How must one curate his/her CV so that your profile is more attractive to an industry. How important is it to have publications and key skills. (asked by Deepti Chaturvedi)*

A. Publications are very important - if you can combine this with real-world problem experience, perfect.

*Q. As a person from industry, what are the advantages you feel are in academia over industry (not industry over academia)?*

A. As a person from industry, what are the advantages you feel are in academia over industry (not industry over academia)?

A. More freedom to define research agenda

A. You are guided by the funding agencies to choose your research area and also you also can work on the same area for your whole career

*Q. What level of position one should expect back in India if someone is coming with a PhD and 2-3 years of US industrial experience? (asked by Himanshi Bhatia)*

A. Completely dependent on company

A. At level of assistant professor if applying in funding body.

*Q. How challenging it to enter an industry position after 3 years of career break? (asked by Suman Majumdar)*

A. Should not be a problem. I am sure you had a valid reason to take that break, explain that to the recruiter. One does not forget what they have learned:)

*Q. What is the hierarchy like working in industries after completing PhD and joining a biotech company in India? What are the growth prospects as you work in the company over the years if the hierarchy is vertical? (asked by Munish Chhabra)*

A. In my experience, I was able to join as a Senior Research Microbiologist position in Pune. However, I had been in US-based company so there were several divisions within the company, hence both Horizontal as well as Vertical movement opportunity....pls contact me if you need to discuss additional info...all the best

*Q. How does one start looking for jobs in industry? what is the application process? Can I apply to a company directly even if there is no advertisement floated? (asked by Sumanta Sarkar)*

A. Yes you can. Identify a company, find the right person to send your CV to. Typically, a lab head, not HR.

*Q. Do companies invest heavily in discovery research or prefer to function mostly as CROs in India? (asked by Soumik BasuRay)*

A. You have a broad range of companies which work in a broad range of sectors and topics.

*Q. What about job security in industry? Are there any contracts? And how easy is it to move between companies if one gets fired? (asked by Swarup Dey)*

A. Depends strongly on the field of research and the company. Generic skill sets will find it easy to find alternative jobs.

*Q. When applying for industry jobs in India, are new PhDs or Postdocs from the US at a disadvantage because we are not the most familiar with the current regulatory and industry landscape in India? I am specifically interested in the biotech/biopharma field.*

A. Read more about Indian landscape, what is the vision of the company. What is the company doing, what is its growth. How does it project itself from where it is now? Look at their websites. Lot of biotech industries in India do have plans to go to regulated markets such as US and EU

*Q. Is it only publications that defines you or help you get a job in industry? What about the developed skill set? I am a medicinal chemist and sometimes it is difficult to get a publication. Could you please share your thoughts on these?*

A. None read my papers in my company before hiring me:) I had 12. all that mattered was how I did my interview. and how I will fit in the role

*Q. Many times in our postdoc or PhD we are more aware of requirements by academia. This also makes us a bit more inclined towards academic jobs as compared to industry jobs. Apart from personal constraints, what is the motivation to choose industry over academia? With respect to skills, job satisfaction, what would be the addition to our personality that industry would give? Sorry for asking such a generic question. Still figuring out what should one choose after a postdoc*

A. Motivation: Seeing your work go into a real application, higher pay, no administrative load to go with your research, and the chance for faster career progression. Job satisfaction depends on what you are looking for. If you only care about publications, the number of jobs available is small. If you generalize and look for 'broader impact' - whether academic, business, or social - you will find job satisfaction easily.

A. Industry is often the place where you may be able to see your research being made into a product and marketed.....in case you prefer R&D career you may expect to have a much more diverse areas of work as you typically end up working on multiple projects

*Q. What is the Pay Scale for various company jobs in India?*

A. Very specific to industry and company

*Q. Hi! How much diversity in problems do you think does industry offer compared to academia where one can constantly keep up with latest research while mentoring students under him/her? (asked by Saransh Gupta)*

A. Extremely high. In industry, we always have our ear to the ground with clients, plus latest research publications both. Academia doesn't have the first option.

*Q. How is the R&D job market affected in India currently because of the pandemic? Do you expect job market freezes for a while? (asked by Pavithra Aravamudhan)*

A. Not in pharma. I believe thats one industry that is still hiring at least in India in few pharma/biotech companies that are big here

*Q. what are the best sources for finding engineering research companies hiring PhDs in India? if you can list a few that you found useful. (asked by Amit Behera)*

A. Find the company, and the research lab. Contact the lab director/team lead.

*Q. How should I look for an R&D job in India? For example, I want to search jobs in computational chemistry/material science.*

A. Look for companies like Momentive Performance Materials/3M/DuPont, Pidilite. Who deal with material sciences background.

*Q. '@Kavita Rao*

*I am from Infectious disease, Immunology, vaccine research. Does Biocon have any wing, where I can be a fit? (asked by Rajan Guha)*

A. Biocon works in Immunoncology space. Skills are very much needed for this space

*Q. Many bioinformatics industries/companies ask for individuals with many sets of skills or expertise. Many times it is very tough to have all those skills. Maybe there is a 80-90% match. As people from academia we think that we might not be appropriate for the role during application. How to find if we are a good fit for a job? How should we broaden our scope?*

A. one never matches a job description 100%. please apply.

*Q. Its often said that managerial posts pay you better compared to R&D. Is it true? Also, can I occupy both the position at the same time?*

A. :) In Shell well engineers get the best pay....

*Q. How well do companies take failures in research, because majority of the research is product driven? What if a project fails?*

A. Like any other research, a lot of industrial research also fails. This is a part of the deal - companies do not mind.

*Q. Can you name some of the active companies in the Oil&Gas sector as well as in chemical sector? (asked by Saideep Singh)*

A. Chemicals- Dow, Solvay, Tata Chemicals, BASF, Momentive....  
Energy Sector- Shell, Exxon, UOP Honeywell, Reliance....

*Q. Does having industry experience, outside India, after PhD give a boost to one's profile while applying for a role in India? or is it important? (asked by Saumya Gulati)*



A. It counts as years of experience - doesn't matter where the experience was gathered (geographically). It matters if the company you worked for has a good reputation.

A. Not necessarily...ofcourse it depends on your career interest

*Q. Usually people in academia network through twitter. Do people in RnD postions in industry usually rely on LinkedIn for the same? (asked by Milind Singh)*

A. yes and also on conferences where industry R&D people meet and discuss work on non-confidential manner

*Q. Hello, How to get list of R&D or other companies which look for PhDs/PostDocs in India for any subject? I mean, is there any standard way/data base or just ask to google and see? (asked by Shankar Pidishety)*

A. Take the publication route - find published papers, trace their authors and contact them

*Q. Are there any biopharma R&Ds in U.P.? Asking as a recent returnee to India.*

A. not to my knowledge

*Q. '@Kavita Rao: Agree that nobody can fit 100% for an advertised job, but does the same would be considered by selection panel members? (asked by Shankar Pidishety)*

A. Yes of course! Just write your cover letter/email, very precisely. And highlight the skills you match over the skills that you dont.

*Q. '@Kavita and @Indranil: When companies like Biocon and Thermo that receive thousands of applications for a single opening, do our CVs go through a primary computerized screening? In that case, does not having maximum matches to the posted requirements lead to rejection of CVs? (asked by Ayantika Sen Gupta)*

A. I am not sure about the CVs that are uploaded on company's portal. But find someone in the company who can help forward your CV internally or to HR of that company. That is how I normally receive CVs for evaluation

*Q. '@Dr. Khadilkar: Are there any biosector R&Ds in TCS? (asked by Debarati Bandyopadhyay)*

A. Yes. We have a large Life Sciences research group. Find publications by Sharmila Mande (head of the research group) to start with.

*Q. What are some good conferences to meet and network with industry R&D people in people especially in soft matter/ chemical engineering?*

A. AIChE

*Q. '@Harshad Khadilkar - Sorry for the previous message. It was regarding the Pay Scale - What is the Pay scale for a new joinee in TCS Research for a Post Doc from the US. Thank you.*

A. Handled on a case-to-case basis

*Q. How is the relationship between startup and industries in terms of mutual R&D projects, funding and IP? (Asked by Swapnil Bawage)*

A. See the website for TCS CoIN (co-innovation network) for a start

*Q. Is a long Postdoc (more than six years total) a disadvantage as an applicant? For people between 45 yrs or older, in what ways might the job search & getting the job different/more challenging? What can these people do to turn this around in their favor?*

A. It depends on what you were doing in the postdoc. If it generated good work and publications, then it is not a disadvantage.

*Q. '@Harshad Khadilkar - Are there opportunities for PhDs from biological sciences to make a contribution at TCS Research - I am thinking about some kind of liaison roles? (asked by Pavithra Aravamudhan)*

A. We have a large Life Sciences research group. What do you mean by liaison roles?

*Q. Thanks, I will look into opportunities with in the Life Science research group. Liaison - I meant bridging technology and basic life sciences areas (asked by Pavithra Aravamudhan)*

A. Yes, that is very much what the group does

*Q. How is pay structure in different industries if you join as PhDs*

A. Very rough estimate: 25%-33% of your expected USD salary, in absolute terms

*Q. Is industry at India really hiring during this COVID era? How bad it affected the hiring?*

A. Depends on the field. Industries like healthcare and to some extent IT are not badly affected.

*Q. Please tell what is the best way to reach hiring manager/other in company for any job openings? Online application seems a black hole and most of the time hard to find people contact information to reach them directly (Linkdein message did not work too)*

A. Most HRs have some presence in LinkedIn. If not, look up some articles written by eminent people from the company and send them an email directly. Most articles carry a email address where you can write. It has worked for me in the past. Try reaching out to scientists in the company as well. I believe more than HR such people actually help in pushing your CV

*Q. What is the work-life balance scenario in India? (asked by Punnag Chatterjee)*

A. Like anywhere else, this is very role and company specific

*Q. '@Indranil*

*Could you please suggest me some private industries whose R&D focuses on infectious diseases like Tuberculosis? Antibiotics research is not a very sought-after field due to increasing antibiotic resistance.*

A. Please contact me, I will try to guide you accordingly - my email:  
[indranil.chatterjee@thermofisher.com](mailto:indranil.chatterjee@thermofisher.com)

*Q. A general question for you all. Are u happy in India?*

A. for sure :)

A. yes

A. Yes

A. Yes, very much :)