

Questions and Answers

January 28, 2025

Summer Research Experiences in Drug Discovery

A Panel of NASEM Advancing Drug Discovery Webinar Series

1. Can you talk about the importance of Mathematical modeling like PKPD today's drug discovery and also the opportunity available in this field? siranjeevi gurumani

For AbbVie, PKPD modeling is used in a variety of ways, including to support in vivo and in vitro pre-clinical studies (for example, to predict human PK and DDI parameters of investigational small molecules and provide dose/DDI projections to facilitate their successful transition into first-in-human studies) and to support phase 1 clinical studies (for example, simulation to optimize dose selection and trial design). AbbVie offers a variety of positions where this modeling work is performed, such as Senior Scientist I roles and Clinical Pharmacologist roles. We also offer internships in these areas.

2. Can you comment on Quantitative systems pharmacology? career prospects and demand? siranjeevi gurumani

QSP aims to improve the drug development process by allowing scientists to simulate and predict how a drug will behave in the body, as well as how it will affect disease mechanisms, potentially leading to more effective therapies with fewer side effects. Quantitative Systems Pharmacology is set for growth and offers a multitude of career opportunities across various sectors of healthcare, pharmaceutical development, regulatory and academic.

3. Does Schrodinger have experimental scientists, or it is only computational? Stephannie

Schrödinger has experimental scientists at the Framingham, MA office location. This location houses all our equipment related to structural biology. And all of the other US offices comprise of computational scientists, software developers, amongst other types of scientists.

4. Is PhD a necessity for a job position in this space? Anonymous Attendee

No. There are positions for undergraduates, MS and graduates

For AbbVie, there are typically more opportunities available for those with graduate-level degrees, but we absolutely have opportunities for all degree levels.

5. How might executive orders and other orders aimed at limiting or banning Diversity, Equity, and Inclusion (DEI) programs impact recruitment practices within your organizations? Joey G

6. I have a question for Dr. Bay, I am very interested in the educational aspect and curriculum development positions, what would you say is the day in the life of someone working on education in industry compared to education in academia? jackie howells

Great question! As for many other roles, my job varies day-to-day depending on the business needs. I run the Teaching with Schrödinger program where I assist various professors and teachers across the globe learn and understand how to use our industry-grade software for teaching. This could be in the form of giving demos, scheduling in-class visits to train students, or through curation of various educational materials like lesson plans and worksheets that integrate

computational molecular modeling. Every day is different which keeps me on my toes and makes each day exciting!

7. Is there any website where I can find PhD fellowship where an industry sponsored PhD thesis is conducted? Anonymous Attendee

Ana Ferreras from NASEM – I don't think you ever going to find a website like that since getting a private sector sponsoring for your doctoral dissertation is done on individual cases. Often you start by doing a summer research experience or fellowship in a private sector company, and you ask for their endorsement after they know you, the quality of your work, and presenting your doctoral research to the company leadership. There is an evolution and a maturity process that you own and need navigate with your major professor assistance/guidance.

8. Question for Lauren Cotnoir: I recently applied for the In Vivo Pharmacology Neuroscience position: is this position still evaluating applicants? Alexander Suponya

Thanks for your interest in AbbVie! I would need the job # to confirm as this does not appear to be one of the positions my team manages.

9. I have observed that most of the internships offered are for US national. Any opportunities for international students? Anonymous Attendee

There are plenty of internships for students in the US regardless of their nationality.

For AbbVie, we consider candidates requiring future visa sponsorship on a case-by-case basis.

10. At abbvie most internships ask the student to go back for at least one semester. What is the best way to join Abbvie for a student who is graduating with MS chemistry in May 2025.

Qaisar Maqbool

Please review our [global job board](#) as all positions, including entry level roles, will be listed. You have the ability to filter by experience level and location to isolate positions of interest (select 'Students and Early Career' as the Experience Level). As an upcoming graduate, I would begin formally applying in late March/early April since the positions seek candidates with somewhat immediate availability.

11. Can an international 1st year PhD student can apply for these short research internships in USA? Anonymous Attendee

It's always wise to check each job description for what the requirements are. There may be opportunities for non-US citizens or permanent residents, but I would defer to each individual job description for details.

For AbbVie, we consider candidates requiring future visa sponsorship on a case-by-case basis, so we do recommend applying if you find a role of interest. With that said, most of our internships at the PhD level typically have a preference for students who have already completed 2-3 years of their program.

12. To Lauren: What if a student is neurodivergent and smiling is not something that they can do easily or feel very uncomfortable doing, how else can they show their enthusiasm? Lisa Kozlowski

Great question! Asking thoughtful questions of the interview team and coming prepared (i.e. knowing your Why's – Why the company, Why the role, why am I a fit, etc.) – will also demonstrate enthusiasm.

13. I have a question for Dr. Cotnoir, if you recently received a PhD (within the last year) can you still apply for internships? jackie howells

At Merck, internships and coops are for students.

<https://jobs.merck.com/us/en/student-opportunities>

At AbbVie, in order to qualify for an internship or co-op, you must be actively enrolled as a student during the internship period. We do offer postdoctoral positions for recent PhD graduates, though. We will kick off recruitment for the 2025 program in mid-April.

14. Hello all, thanks for the information today. I wanted to ask what the best way to approach recruiters/talent acquisition is in regard to open positions? I'm not quite sure how to go about this especially if we do not have a network in common. Kevin Blanco

An introduction with what your qualifications are and how you could benefit the team in a short, succinct LinkedIn DM can do the trick. Don't be discouraged if you don't receive a reply right away – keep trying and the right opportunity will come around!

In addition, I recommend seeking out opportunities to speak with employers when they visit your campus. This is a great way to introduce yourself and gain a relevant connection that could assist you in the application process.

15. Are these opportunities to open to non-U.S. citizens? Meghana Murthy

Check on each company for the requirement for different opportunities. If you are in the US with a student visa there are multiple opportunities.

For AbbVie, we consider candidates requiring future visa sponsorship on a case-by-case basis.

17. At what stage of a PhD program should one pursue an internship over working on their degree-bound projects? Sander Cohen-Janes

I think keeping an open communication line between you and your PI is always the best action plan. If you want to pursue an internship within your PhD, tell your PI as soon as possible so they can best support you and plan your research around this.

18. I had the privilege of participating in the co-op program at Merck in August 2023 and truly appreciated the opportunity to be part of the Merck family! Ekta Kapoor

Thank you Ekta! Check in Careers page of Merck.com for employee opportunities

19. Nice talks are going on.....I am working as faculty of chemistry... having keen interest in molecular modeling .. may i get a scholarship or PDF position in a project CADD remotely

Dr Lokesh K Agarwal IN.

Check in the career page of each company, check on LinkedIn, and other job sites.

20. How to we write the resume and CV perfectly? Anonymous Attendee

I suggest connecting with your career center for helpful guidance, templates, etc. Attending a resume review session with an employer volunteer (often offered through the career center) is also a great way to have your document reviewed.

21. Do you recommend having a summary section on the resume? If yes, what information should be mentioned on this section? Hemshankar Laugi

For me personally, I like seeing a summary section on the CV/resume as I am easily able to identify certain skills/techniques/software etc. that the candidate possesses that are relevant to the position. With that said, please ensure you are listing skills where you have somewhat robust exposure (or be specific about your level of expertise/exposure).

22. What do you all advice that a second year PhD student do to prepare for these internships?

A B B I E i

Networking at conferences, virtually through LinkedIn, and introducing yourself to external speakers that give talks at your university/institution is always a great start to building your professional network.

23. Can a PhD student from UK apply to these programs? Anonymous Attendee

Might be easier to apply at internship opportunities in the country you are studying.

For AbbVie, students must be authorized to work in the U.S. to qualify for internships.

24. (All panelists) How soon is too early to apply for a full-time position when wrapping up a PhD?

Cooper Kimbrough

Starting to investigate open positions during your final year of your PhD isn't too early. As soon as you feel like you have marketable skills and are comfortable giving a research talk that highlights your skills that could contribute to another team, it doesn't hurt to start applying for jobs within that final PhD year.

Generally, AbbVie considers PhD students up to 6 months prior to their intended degree completion.

25. Is there any remote options for the internship trainings or only in-person? In case PI require me to work part time in the lab at the same time of the internship? Anonymous Attendee

Most internships I know are in person; check the sites, there might be some.

For AbbVie, all internships and co-ops are on-site.

26. Are these opportunities available for international grad students in the US?

Anonymous Attendee

Yes

For AbbVie, we consider candidates requiring future visa sponsorship on a case-by-case basis.

27. Is it easy to get an entry-level job in research without having a PhD? (if all of them can respond?)

Anonymous Attendee

At Merck we hired college graduates, master graduates, PhD graduates as entry level. Check in the position under **Education Minimum Requirements**.

At AbbVie, we do offer research roles for Bachelor's graduates – the title would be Associate Scientist.

28. Could anyone offer advice as to what to do if you had no professional development opportunities in graduate school, and thus no advisor support directly, especially if inclusion and equity are a large part of the mission of the companies? I know many are interested in internships like this but cannot access due to lack of intuitional support (usually diverse students who are in need of these positions)? jackie howells

Please, use career sites, LinkedIn to inform yourself on opportunities.

Seek out your career center and see if they have any opportunities for engaging with employers. Most universities also use Handshake (or similar platforms) for promoting opportunities available with their employer partners, so be sure to check this out as well. I also recommend creating an account with an organization called Way Up – they help build a bridge between employers seeking early career talent and students seeking meaningful internship and professional opportunities.

29. Are summer internship and postdoc positions open to international students as well?

For Merck, opportunities may differ by company.

<https://jobs.merck.com/us/en/postdoctoral-research-fellow-program>

<https://jobs.merck.com/us/en/student-opportunities>

For AbbVie, we consider candidates requiring future visa sponsorship on a case-by-case basis.

30. Can we apply without previous experience in an internship as an undergraduate student?

Anonymous Attendee

Yes, there are internships for undergraduate students.

For AbbVie, we will include preferred qualifications but will ultimately consider students with both no direct experience and related experience.

31. what's the possibility of international students (non-US/ outside the US) being selected for the internship if they apply and are qualified Jesse

For AbbVie, we consider candidates requiring future visa sponsorship on a case-by-case basis.

32. Any openings for international students? any visa sponsored internships??

Anonymous Attendee

For AbbVie, we consider candidates requiring future visa sponsorship on a case-by-case basis.

33. For all panelists, I'm an undergrad interested in internships for computational applications to drug discovery but find that most openings are for graduate students. What are some things I can do get an internship in that area as undergrad? Anonymous Attendee

Continue looking!!

34. For the post-doctoral programs and internships for someone who will graduate from a PhD program between December 2025 and March 2026, do these positions lead to a full time position after the postdoctoral program? Augustine's iPhone

It depends on the company. In general postdoc are an opportunity to conduct science in the company, get a recommendation but most will need to apply to get a full-time position.

For AbbVie, while we cannot guarantee a full-time job offer at the end of the postdoc position, we do our best to ensure postdocs are made aware of available positions and help support them in the process.

35. Are there any competitions or research opportunities that provide monetary rewards or exposure to support academic development? Jesse James

Ana Ferreras from NASEM – search for student paper competitions, student prizes and awards, and travel fellowships to share your research in meetings. The travel plus a monetary award might be granted if you get selected. Check professional society opportunities and also experiential learning opportunities.

36. I come from a biotechnology background and am currently working on my thesis in computational biology. I've applied for a couple of internships related to computational biology, but haven't had much luck so far. Do companies typically look for students with advanced coding skills in computational biology? What key skills or expectations are prioritized for such roles? Manasa Nagesh Hegde

The level of coding skills really depends on what type of job you're looking for – there isn't a one-size fits all for every company. If strong coding skills are required for the job, it should be listed in the job description. You can always clarify this with your recruiter.

37. Question for Dr. Gabelli: How would you recommend approaching an application for a position where one meets only 60–70% of the qualifications listed in the job description but has a genuine interest and curiosity to learn more? Anshul Rana

Don't rule yourself out! It will depend on the other applicants and not only on your application. Be truthful to our strengths.

38. How important are referrals for internships and permanent positions in your applications? Anonymous Attendee

True referrals are never extra. People that know you and put details of the experience.

At AbbVie, we value employee referrals but consider all qualified candidates regardless of referral status.

39. How much experience is required for a student to be considered for internship? for example, is publication considered. Anonymous Attendee

For AbbVie, we look for candidates that meet the minimum qualifications set in the job posting, but we do have a preference for students who also possess some of our preferred qualifications/experience. Publications tend to be very advantageous but are not a requirement.