GSK Chemistry 2023 Recruitment

Job Description Packet

GSK Chemistry: Who We Are

GSK's Chemistry Community is a large international community broadly encompassing Medicinal Chemistry, Process Chemistry, Computational Chemistry, Chemical Biology, Biocatalysis, and DNA-Encoded Library Chemistry Technologies. GSK Chemistry Research and Development is located at four major research sites around the world: Upper Providence, Pennsylvania (Hub), Stevenage, England (Hub), Cambridge, Massachusetts, and Tres Cantos, Spain. Collectively, we strive to deliver a portfolio of first in class, transformational medicines underpinned by innovative and cutting-edge technologies designed to drive efficiency and success in all our programs at all stages. Representing a variety of diverse cultures, backgrounds, interests, and expertise, GSK Chemistry is actively recruiting passionate, high-energy chemists looking to grow their career, contribute to a variety of programs and help drive our success in delivering world class medicines to patients. *Subject to approval of reasonable request, GSK is a modern employer and offers flexible working hours and conditions.*

Where We Are

GSK's US R&D Hub is located in Upper Providence, PA in the Philadelphia suburbs. Just 35 miles from Philadelphia International Airport, the Upper Providence site is home to over 3,000 of our R&D staff. With the concentration of a large number of scientists you will find a culture that inspires innovation and collaboration, emphasizes professional development, and maintains a strong focus on the patients that are at the end of everything we do. Our location benefits from excellent facilities on site and in the surrounding area as well as shuttle services that make the campus accessible *via* public transportation via SEPTA. GSK enjoys the proximity to renowned educational and medical research institutions in Philadelphia, recently dubbed "Cellicon Valley" for the emergence in the medical research and biotech sector with the city and surrounding areas. Recognized in 2019 by National Geographic as one of America's Top Cities, Philadelphia offers a revolutionary opportunity for you to live, work, and play within a short commute from GSK.

GSK also has a site in Cambridge, Massachusetts which is home to approximately 85 R&D staff, including 25 chemists in our DNA-Encoded Library Technology Group. The focused nature of the group, coupled with the small size of the site, offers chemists at this location the feel of a biotech company with the resources that come with being part of a larger organization.

Why You

Success in GSK thrives on strong interpersonal skills and practical chemistry skills combined with a curious, inquisitive nature and a passion for science. You are equally passionate about developing yourself, developing new scientific methodologies, pushing the limits of innovation, and learning something new every day. You are an excellent team player, able to work with others either in the lab or in the office as well as within cross-functional teams. You are independent and able to plan and execute your own workload and deliver results. Your science is conducted with integrity, safety, and the highest standards. You pride yourself in your chemistry and enjoy science as much as we do.

Why GSK

GSK leads with a portfolio of vaccines and specialty medicines as well as R&D based on immune system and genetics science. With new ambition comes new purpose. For GSK, this is to unite science, talent, and

technology to get ahead of disease together – all with the clear ambition of delivering human health impact; stronger and more sustainable shareholder returns; and as a GSK where outstanding people thrive.

Getting ahead means preventing disease as well as treating it. How we do all this is through our people and our culture. A culture that is **ambitious for patients** – so we deliver what matters better and faster; **accountable for impact** – with clear ownership of goals and support to succeed; and **where we do the right thing**. So, if you are ready to improve the lives of billions, join us at this exciting moment in our journey. Join our challenge to get Ahead Together.

As a company driven by our values of Patient focus, Transparency, Respect, and Integrity, we know inclusion and diversity are essential for us to be able to succeed. We want all our colleagues to thrive at GSK bringing their unique experiences, ensuring they feel good and to keep growing their careers. As a candidate for a role, we want you to feel the same way.

As an Equal Opportunity Employer, we are open to all talent. In the US, we also adhere to Affirmative Action principles. This ensures that all qualified applicants will receive equal consideration for employment without regard to race/ethnicity, colour, national origin, religion, gender, pregnancy, marital status, sexual orientation, gender identity/expression, age, disability, genetic information, military service, covered/protected veteran status or any other federal, state or local protected class*(*US only).

Important Information

All applicants are asked to provide at minimum a CV (Curriculum Vitae) and research summary to be considered for a virtual recruitment interview with GSK. Final interview time slots will be communicated with due time to make changes; information on how to address those exceptions will be communicated when schedules are announced. During your time slot, please come prepared with a summary presentation of your research of approximately 15 minutes. Successful summaries will highlight not only accomplishments but also feature particular challenges and problem-solving situations.

If you require an accommodation or other assistance to participate in recruitment for GSK, please contact your university recruitment coordinator who will relay the type of support needed for the seminar and interview process. The university coordinator will communicate these accommodations only after selections for interview are made. In the event that GSK cannot accommodate any last-minute adjustments, the candidate will be invited to attend an assessment at a later agreed upon date.

Contact

For questions about these descriptions or general information about GSK or its chemistry departments, please reach out to

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Investigator, Drug Substance Development (Upper Providence, PA)

GSK is seeking a proactive chemist to join Drug Substance Development at our US R&D Hub located in Upper Providence, PA. Our Drug Substance Development group supports the small molecule portfolio in GSK Pharma R&D with an inter-disciplinary team of **process chemists, chemical engineers, materials scientists, and synthetic biochemists** by developing the synthetic routes and associated manufacturing processes that turn those molecules into medicines. Through our network of 86 manufacturing sites, each year we produce nearly 4 billion packs of medicine, and we are committed to widening access to our products so that more people may benefit. A successful applicant will have an excellent practical and theoretical understanding of synthetic organic chemistry or a relevant technology and can design and execute high quality, thoughtful experimentation, while making significant contributions both independently and as a member of a team.

Basic qualifications

Scientific:

- Ph.D. in Chemistry or equivalent industrial experience
- Expertise in state-of-the art synthetic organic chemistry
- Excellent problem-solving skills
- Scientific record demonstrating excellence in chemistry (e.g., publications, patents, or presentations)
- Experience in independent planning and execution of experiments
- Experience in independent interpretation of data from experiments and using it to make meaningful conclusions/decisions regarding the direction of future experimentation

Values and Expectations:

- Has the courage to take on ambitious goals and move forward at pace.
- Takes accountability by holding self and others to the commitments that have been made.
- Ability to learn and grow through challenging work and is willing to give and receive constructive feedback as part of an effort to continuously improve.

Preferred qualifications (in addition to basic qualifications):

- Experience in multistep synthesis of complex organic molecules
- Experience in High Throughput Experimentation for reaction optimization and process development activities
- Experience in Design of Experiments (DoE)
- Experience complex data processing and visualization using state-of-the-art platforms (i.e. Spotfire, JMP, etc).
- Experience in implementation of basic kinetic characterization of organic reactions
- Experience in one or more of the following areas: cheminformatics, computational chemistry, and machine-learning
- Experience in programming languages as applied to synthetic chemistry workflows (Python, etc.)

Key Responsibilities include, but are not limited to:

- Designing and performing experiments in a laboratory setting to meet project timelines and objectives.
- Thinking creatively to generate new ideas for new synthetic routes and simplifying process problems.
- Ensuring that experimental work is communicated effectively at internal R&D meetings.
- Participating in technology transfer activities as appropriate to our manufacturing partners Pharma Supply Chain (PSC), other parts of R&D, and partner Contract Manufacturing Organizations (CMOs).
- Authoring or contributing to regulatory submissions, patents, scientific papers and other internal documentation relevant to the role.
- Complying with applicable Data Integrity, Quality, cGMP and regulatory requirements in all aspects of work.

About You

As a member of Drug Substance Development, you will use your chemistry knowledge and expertise to develop new chemistry routes for primary manufacture and contribute to the development and deployment of state-of-the-art processes and technologies to enable the delivery of our medicines. This is a highly practical role where you will be working in the R&D laboratories to generate new synthetic routes and process understanding that underpins the successful scale-up and commercial industrialization of GSK's future manufacturing processes. Your focus will be to combine the information generated in laboratory studies with your strong knowledge of synthetic organic chemistry to develop sustainable pharmaceutical manufacturing routes and processes.

As projects advance through development, pilot plant support may also be required across scales, culminating in the transfer of projects to our commercial manufacturing facilities around the globe. The role is highly technical and dynamic as you will be working in a number of multi-disciplinary project teams. You will thrive in this environment if you are able to effectively manage multiple priorities, communicate your recommendations clearly, and enjoy working in teams.

If you require an accommodation or other assistance to apply for a job at GSK, please contact the GSK Service Centre at 1-877-694-7547 (US Toll Free) or +1 801 567 5155 (outside US).

Important notice to Employment businesses/ Agencies

GSK does not accept referrals from employment businesses and/or employment agencies in respect of the vacancies posted on this site. All employment businesses/agencies are required to contact GSK's commercial and general procurement/human resources department to obtain prior written authorization before referring any candidates to GSK. The obtaining of prior written authorization is a condition precedent to any agreement (verbal or written) between the employment business/ agency and GSK. In the absence of such written authorization being obtained any actions undertaken by the employment business/agency shall be deemed to have been performed without the consent or contractual agreement of GSK. GSK shall therefore not be liable for any fees arising from such actions or any fees arising from any referrals by employment businesses/agencies in respect of the vacancies posted on this site.

Please note that if you are a US Licensed Healthcare Professional or Healthcare Professional as defined by the laws of the state issuing your license, GSK may be required to capture and report expenses GSK incurs, on your behalf, in the event you are afforded an interview for employment. This capture of applicable transfers of value is necessary to ensure GSK's compliance to all federal and state US Transparency requirements. For more information, please visit GSK's Transparency Reporting For the Record site.

Investigator, Biocatalysis (Upper Providence, PA)

GSK is a world leading research-based pharmaceutical company that combines both individual talent & technical resources to create a platform for the delivery of strong growth in a rapidly changing healthcare market. Our mission is to improve the quality of human life by enabling people to do more, feel better, & live longer.

An exciting opportunity has arisen in GSK's Enzyme Evolution and Biocatalysis group. The primary focus of this role is to support the discovery and implementation of novel enzyme-based chemistry at GSK. This role is fast-paced and dynamic, you will thrive in this environment if you are able to effectively manage multiple priorities, communicate your recommendations clearly, and enjoy working in teams.

Key responsibilities:

- Identify new opportunities to apply biocatalysis across GSK's portfolio. Creative thinking is highly encouraged!
- Support our enzyme discovery and directed evolution platform.
- Work in a matrix team of medicinal chemists, process chemists, and engineers to develop novel biocatalytic solutions.
- Develop appropriate surrogates for process conditions in order to authentically replicate target process conditions in high throughput.
- Express, test, and rank enzyme variants in both microtiter plate and preparative scales.
- Work as part of a diverse team of scientists, including molecular biologists, bioinformaticians, and process chemists, to deliver evolved enzymes.
- Manipulate large-scale datasets using MS Excel, TIBCO Spotfire, and bespoke software tools.
- Liaise with scientists & external collaborators at all levels

Basic qualifications:

- Ph.D. in Chemistry, Biochemistry, Chemical Biology, or related field with 1-2 years relevant experience.
- Experience in the discovery and development of organic and biocatalytic reactions.
- Experience in enzyme characterization including a background in mechanistic and kinetic studies of enzymatic reactions (V_{max}, K_m, product inhibition, substrate inhibition, cofactors, redox chemistry).
- Demonstrated ability to work in multi-disciplinary teams, with excellent interpersonal, organizational, and communication skills.

Preferred qualifications:

- Significant experience in the discovery, development, and scale-up of enzyme catalyzed reactions.
- Experience with nucleic acid chemistry (e.g. solid phase synthesis, liquid phase synthesis, synthesis of unnatural nucleosides).
- Experience with parallel experimentation, high throughput assay development, and Design of Experiments.
- Experience in the development of miniaturized biochemical assays to drive enzyme evolution toward conditions relevant to industrial manufacturing.
- Understanding of protein engineering/expression tools and techniques.
- Familiarity with or interest in learning automation equipment.

Investigator, Molecular Design (Upper Providence, PA)

Key responsibilities:

- Collaborate with experimental groups to drive compound design and improve models using structure-based drug design, ligand-based design, including docking, free energy perturbation, QSAR modeling, conformational analysis, and QM modeling.
- Work with biology team members to assimilate data from experiments, optimize those experiments and integrate that data into compound design.
- De novo design and multi-objective optimization of tool compounds and target specific medicines
- Strong organizational and communication skills (both written and oral), with the ability to liaise and communicate computational procedures and outcomes with scientists and collaborators
- Partner with other Computational Science colleagues to develop and embed computational methods in visualization packages to enable experimental multi-variate analysis and data-driven decision-making
- Collaborate with team members to further develop computational methods to enhance our internal compound design and synthesis

Basic Qualifications:

- PhD or MS in Computational Chemistry, Cheminformatics, Physics, Biophysics, Chemistry or related field
- 0-5+ years industry experience
- Demonstrated scientific contributions documented with publications and/or presentations
- Experience in more or more of the following: Virtual screening, structure-based and ligand-based approaches to design small molecules, physicochemical property and ADMET optimization with QSAR models.
- Expertise working in a Linux/Unix environment
- Ability to write code in one or more scripting languages (e.g., Python)

Preferred Qualifications:

- Knowledge of the drug discovery process, for example medicinal chemistry, toxicology, DMPK, and/or screening data analysis
- Expertise with molecular simulation, enhanced sampling and/or statistical analysis
- Ability to present data in team meetings and participate in writing abstracts and publications
- Independently review and appraise scientific literature
- Experience using bioinformatics methods for protein structure prediction and design
- Strong knowledge of chemical and protein structure
- Interact with multi-disciplinary matrix teams to address key goals, exhibiting excellent interpersonal skills
- Experience generating/applying machine learning in QSAR and other chemo-centric predictive models