Why Patients Need You
Pfizer’s purpose is to deliver breakthroughs that change patients’ lives. Research and Development is at the heart of fulfilling Pfizer’s purpose as we work to translate advanced science and technologies into the therapies and vaccines that matter most. Whether you are in the discovery sciences, ensuring drug safety and efficacy or supporting clinical trials, you will apply cutting edge design and process development capabilities to accelerate and bring the best in class medicines to patients around the world.

ROLE SUMMARY
We are seeking a chemical engineer to join the Chemical Research and Development (CRD) team in Groton. The successful candidate will join a diverse team responsible for developing robust scalable processes for use at pilot-plant and commercial scale. They will apply chemical engineering principles, computational modeling approaches, and lab-scale experimental techniques to gain process understanding and to optimize the processes for safety, efficiency, and robustness.

CRD, as part of Worldwide R&D in Pharmaceutical Sciences, is responsible for the development of process technology to manufacture active pharmaceutical ingredient’s (API). CRD scientists engage in all facets of development from small-scale synthesis in support of medicinal chemistry programs, to the development of the commercial synthetic route. CRD chemists and engineers collaborate with manufacturing specialists for API production in kilo-lab and pilot plant facilities, as well as provide support for technology transfer to Pfizer manufacturing sites and third-party facilities.

The successful candidate, working closely with chemists and analysts, will lead the engineering activities to help identify optimal technology (batch, semi-batch, continuous) and process operating conditions. They will support technology transfer and scale up of the developed process in our pilot plant and commercial manufacturing facilities. Given the dynamic team environment and fast-paced project timelines, strong interpersonal and communication skills are essential. The candidate will also advance both computational tools and experimental techniques to enhance the group’s efficiency for developing future projects while gaining additional process insights.

ROLE RESPONSIBILITIES
- Apply chemical engineering principles, computational modeling tools, and experimental skills using data-rich laboratory instrumentation to develop robust unit operations, improve process understanding, and optimize manufacturing processes.
- Apply an understanding of large-scale manufacturing equipment capabilities and operations to assess scalability and robustness for API processes.
- Support technology transfer of processes to internal Pfizer Global Supply (PGS) API manufacturing facilities and external suppliers.
- Prepare internal research reports and technical presentations summarizing API process development activities to capture process knowledge and transfer process understanding to PGS.
- Champion the development of novel laboratory instrumentation and computational modeling tools to improve process understanding. Support the development and implementation of new and existing workflows and methodologies.
- Working with team members with expertise in process modelling and in statistics, design and execute Design of Experiments (DoE) methodology using automated lab reactor systems. Use data from these experiments to understand reaction mechanisms, to build reaction kinetic models, and to understand the kinetic and thermodynamic factors impacting various separation unit operations such as extraction, distillation, crystallization, and drying.
**Qualifications**

**Must-Have**
- MS in Chemical Engineering or BS in Chemical Engineering with 2+ years of experience.
- Strong knowledge of chemical engineering principles including reaction kinetics, reactor design, chemical thermodynamics, heat and mass transport, engineering statistics, process modeling and simulation.
- Excellent interpersonal, teamwork, and communication skills

**Nice-to-Have**
- Working knowledge of reaction modeling, property prediction, and simulation computational tools including: DynoChem, VisiMix, Aspen, M-Star, and COSMOtherm
- Working knowledge of programing, including Python and/or Matlab
- Working knowledge of analytical techniques such as HPLC/UPLC, PXRD, DSC, TGA, and NMR
- Experience in automating laboratory equipment and processes including use of LabView
- Experience using automated lab reactor systems
- Working knowledge of application of in-situ analysis tools to process understanding including: FTIR, Raman, FBRM, UV/Vis
- A good foundational understanding of organic chemistry

**PHYSICAL/MENTAL REQUIREMENTS**
Ability to work in a laboratory environment performing experiments in a laboratory fume hood. Ability to perform complex data analysis.

**NON-STANDARD WORK SCHEDULE, TRAVEL OR ENVIRONMENT REQUIREMENTS**
Some international travel associated with technology transfer to CRD pilot-plant and PGS new product launch site may be required.

**OTHER JOB DETAILS**
- Eligible for Employee Referral Bonus
- Relocation Support Available