**AbbVie Post-doctoral Process Spectroscopist and Chemometrician**

At AbbVie, our vision is to be recognized as a biopharmaceutical company delivering a consistent stream of innovative medicines that solve serious health issues and have a remarkable impact on people’s lives.

To be successful, we need outstanding individuals willing to challenge themselves to find the best solutions for our patients. The AbbVie Postdoc program is one way we are doing just that. Participants in the Postdoc program play an integral part in our continued success and will help us to grow as a leader in our industry.

Through our Postdoc program, we are providing a unique opportunity for participants to build a solid career foundation in the pharmaceutical industry while building the AbbVie brand as an employer of choice for scientific talent.

The program offers a balance of structured learning and work experience, with accessibility to high-level knowledge building across the drug development continuum to help participants understand how everything fits together and is put into practice. It also provides them with a chance to establish working relationships with some of the world’s most respected scientists and leaders in the industry.

In a collaborative, resource-rich environment, you will be key and recognized contributor in a sustained and focused effort of developing, integrating, and supporting in situ spectroscopic and chemometric solutions in support of pharmaceutical process development. This exceptional Postdoctoral opportunity is in our Development Sciences Process R&D Group, which is based in North Chicago, IL. In addition to working daily with a skilled group of development chemists and engineers on important and challenging scientific pursuits, you will have the opportunity to represent AbbVie in cutting-edge collaborations with scientists at academic institutions and research consortia, such as the Synthesis and Solid State Pharmaceutical Centre (SSPC).

The term Process Analytical Chemistry (aka PAT) applies to a collection of enabling technologies that are critical to providing necessary efficiencies in drug substance development and manufacture. Due to their real-time nature and facile interfacing to development processes at many scales, optical spectroscopies (FTIR, NIR, Raman) and multivariate analysis tools (chemometrics) are key tools in the modern synthetic laboratory. We seek the curiosity-driven innovative scientist with an entrepreneurial spirit who can build collaborative relationships to deliver results that impact drug substance development programs across our project portfolio.

**Key responsibilities:**

- **Develop and deploy novel multivariate approaches to understand and characterize reaction systems under development.** Through the use of these tools, demonstrate improvement over the status quo in terms of reaction yield, selectivity, throughput and safety.
- **Collaborate cross-functionally with colleagues from organic chemistry, chemical engineering, and process analytical chemistry to successfully drive the use of optical spectroscopy and multivariate analysis methods as routine tools in AbbVie’s process development organization.** Where practical, develop procedures and templates to systematize these operations for organizational efficiency.
- **Document, both internally and externally, how the use of these enabling technologies provide efficiencies at various scales, including small volume work in early development, intermediate scale in laboratories, and in commercial equipment at pilot and production scale.** Publish/present research in prestigious peer-reviewed literature and present in major internal and external forums (e.g. AIChE, Cross Functional Modeling Forum, and the Pharmaceutical Process Analytical Roundtable).
- **Partner with automation and manufacturing colleagues to incorporate these tools into real-time data acquisition systems and as inputs to control loops.**
- **Interact with top academic groups working in this area and with instrument vendors to access state of the art spectroscopic tools and chemometric algorithms to ensure seamless integration of these into the AbbVie development organization.**
Basic:
- PhD in Analytical or Physical Chemistry or Chemical Engineering. Broad spectrum of expertise in modern analytical technologies, particularly optical spectroscopy methods (Infrared, near infrared, Raman, ultraviolet).
- Extensive, hands on experience with commercial spectroscopic instrumentation and operating systems, and with commercial multivariate analysis programs.
- Record of Publication in a prestigious journal(s).
- Graduate of accredited and nationally ranked university.
- Provide a narrative on why your academic training would qualify you for this position and why you have a sustained interest in this program.
- Provide three letters of recommendation, one at least from your PI, and preferably, one from another member of your thesis committee.
- Must be authorized to work in the U.S.

Preferred:
- Excellent problem-solving, communication, leadership, and project management skills.
- Experience with procedures for monitoring and modeling reaction kinetics.
- Familiarity with pharmaceutical scale-up and typical processing unit operations.
- Proven track record of teamwork, adaptability, innovation, initiative, and integrity.
- Global mindset to thrive in a diverse culture and environment.

Key AbbVie Competencies:
- Builds strong relationships with peers and cross functionally with partners outside of the team to enable higher performance.
- Learns fast, grasps the “essence” and can change the course quickly where indicated.
- Raises the bar and is never satisfied with the status quo. Challenges colleagues and strives for excellence.
- Creates a learning environment, open to suggestions and experimentation for improvement.
- Embraces the ideas of others, nurtures innovation and manages innovation to reality.