PhD Scientist - Campus Opening
Research & Development - Indianapolis, IN, US
Req ID: RES00004557

Description
Corteva Agriscience is currently seeking curious, bold innovators who want to grow their careers and be part of a winning team. Those who thrive in a diverse, inclusive work environment and are eager to bring the initiative and fresh ideas that will drive our business into the future and earn us our place as an industry leader.

The following positions are designed for recent or soon-to-be PhD graduates. We encourage you to read the various job openings for Synthetic Chemists, Analytical Scientists and Formulations Science and Technology Associates and apply!

Discovery Chemistry
The Discovery Chemistry R&D Team is responsible for design and synthesis of novel organic compounds for crop protection and vegetation management. The primary objective of this position is to work as part of a multidisciplinary team to discover and exploit hits, Actives and Leads as part of our Crop Protection Discovery effort.

Duties and Responsibilities:
• Interface with biologists, biochemists and computational chemists to generate and exploit opportunities
• Generate and execute ideas based on a sound biological hypothesis
• Design and synthesis of novel molecules to meet project needs
• Analysis of biological data to drive structure activity relationship (SAR)
• Generate sound data, document, communicate, and provide clear interpretation and new directions based on analysis
• Establish and deliver long-term technical leadership in synthetic organic chemistry and SAR

Process Chemistry
The Process Chemistry R&D Team is responsible for the invention and development of new synthetic chemical routes to support the advancement of new agrochemicals in our discovery and development pipeline. The primary objective of this position is to work as part of a multidisciplinary team to develop and optimize scalable synthetic routes to that are safe, robust, low cost and sustainable and supply material for biological evaluation.

Duties and Responsibilities:
• Design and develop synthetic routes and chemical processes to key molecules and intermediates
• Partner with synthetic chemists, analytical scientists and chemical engineers to solve problems and deliver new technology
• Provide synthetic expertise and problem solving in support of developing novel synthetic routes to target molecules
• Conduct and evaluate experiments using appropriate safety guidelines consistent with safety practices
• Generate sound data, document and communicate research results and capture new intellectual property for chemical processes
Analytical Sciences
The Analytical R&D Team is responsible for analytical activities in the areas of formulations and process chemistry research. The group contributes to the discovery, process development, registration, and commercialization of new active ingredients and formulated products.

Duties and Responsibilities:
• Provide analytical support and problem solving to contribute to development of agro chemical formulations within R&D
• Provide analytical support for process chemistry route scoping, optimization and development within R&D
• Develop validation-ready analytical methods for formulated products, active ingredients, and impurities
• Facilitate transfer of analytical methods to manufacturing quality control laboratories
• Identify new analytical technologies and optimize existing methodologies
• Lead cross-functional projects and represent analytical and provide expertise on cross-functional project teams with personnel from different functions and disciplines
• Communicate and document the progress of projects to diverse team members and stakeholders

Formulations Science and Technology
The Formulation Science and Technology R&D Team is responsible for the design, development, scale-up, launch and post-launch support of novel formulated products. The primary objective of this position is to work as part of a multi-disciplinary team to provide formulation subject matter expertise for product development, technology transfer, product registration, field trial planning and customer training.

Duties and Responsibilities:
• Exploration, proof of concept, and development of novel formulation and delivery system technologies for new and registered active ingredients
• Staying abreast of new discoveries and technologies in formulation technology (e.g., colloidal sciences, rheology, polymer chemistry, etc.)
• Partnering with Technology Center engineers and operations colleagues to plan and support process demonstration trials and start-ups of new formulations
• Developing and validating test protocols for the evaluation of new formulations in application equipment.
• Data analysis, interpretation, report-writing, and delivering presentations with sound and timely recommendations.
• Understanding customer needs through discussion with sales and marketing groups and developing creative solutions towards meeting the needs.
• Developing an understanding of key competitive technologies. Using knowledge of the strengths and weaknesses of competitive products to identify opportunities for differentiated product positioning.
• Participating and representing Corteva™ in university collaborations, industry wide organizations, trade shows etc.
Process Development Engineering
The Process Development Engineering Team is responsible for research and process development for new products in the developmental pipeline. The primary objective of this position is defining chemical steps and engineering conditions to produce quality products reliably and cost effectively, by designing a set of unit operations into a manufacturing process. The activities of the discipline also may be focused on development of new process technology, development of cost estimation models, improvements of existing manufacturing processes or quick scale up of samples for applications development.

Duties and Responsibilities:
- Generate data from process research efforts and the production of developmental quantities to help set final manufacturing specifications.
- Work closely on product development, commercial implementation, and manufacturing to ensure that new products are supplied on time and within customer expectations.
- Co-Development of manufacturing processes and unit operations with process research chemists to meet project needs and timelines utilizing knowledge of separation, mixing, and reaction engineering fundamentals.
- Develop safe operating procedures for experimental programs which includes Reactive Chemicals (RC)/ Process Hazard Analysis (PHA) reviews, pre-start up reviews and addressing all EH&S issues.
- Supply of R&D developmental quantities (Kg) of new product candidates with desired purity, quantity, and within specified project timeline.
- Plan and Safely run all the unit operations for Technology demonstration and data generation.
- Understand hazard evaluations and risk mitigation techniques for hazardous operation identification.
- Effectively communicate and document results in timely fashion and lead and facilitate meetings and reviews.

Qualifications (Ph.D. Level)
- PhD in a science discipline, preferably chemistry, and chemical engineering or material science.
- Track record of effectively utilizing organizational networking to influence decision making.
- Demonstrated expertise and coach for application of scientific principles, theory and experimental design to solve novel experimental needs across numerous disciplines (e.g. design of experiment).
- Examples of creative solutions outside of specific role.
- A track record of technical publications, highly effective communication (written and verbal), interpersonal skills, teamwork, and demonstrated leadership is essential for success.
- Ability to work safely, in full observance of Company safety and environmental plans and policies, and fostering a strong commitment to safety and overall environmental responsibility.

Corteva Agriscience™ serves to enrich the lives of those who produce and those who consume, ensuring progress for generations to come. Our employees fulfill this purpose everyday by building/participating in an inclusive culture where we encourage each other to stay curious, think differently, act boldly and do what’s right for our customers, our co-workers, our partners and our planet. With over 20,000 team members from 130 countries, innovating in 140 world class R&D facilities, we have the resources, leadership heritage and partner ecosystem to make a meaningful impact now and into the future.

#GrowWhatMatters