

Research Fellow / Engineer
Singapore Institute of Technology

Direct Link: <https://www.AcademicKeys.com/r?job=248628>

Downloaded On: Nov. 23, 2024 8:47am

Posted Nov. 11, 2024, set to expire Jul. 5, 2025

Job Title Research Fellow / Engineer

Department Food, Chemical and Biotechnology

Institution Singapore Institute of Technology
Singapore, , Singapore

Date Posted Nov. 11, 2024

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Research Scientist/Associate

Academic Field(s) Polymer Science
Engineering Physics
Chemical/Petroleum
Bioengineering (all Bio-related fields)

Job Website <https://careers.singaporetech.edu.sg/cw/en/job/498802/research-fellow-engineer-pharmaceutical-innovation-programme-singapore-pips-azn4>

Apply By Email

Job Description

Research Fellow / Engineer (Pharmaceutical Innovation Programme Singapore (PIPS)) - AZN4

Job no: 498802

Department: Food, Chemical and Biotechnology

Contract type: Contract

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As a University of Applied Learning, SIT works closely with industry in our research pursuits. Our research staff will have the opportunity to be equipped with applied research skill sets that are relevant to industry demands while working on research projects in SIT.

The primary responsibility of this role is to deliver on a Pharmaceutical Innovation Programme Singapore research project where you will be part of a collaborative team exploring innovative ways of understanding extrusion processing for pharmaceutical drug materials and products using rheological measurements.

Key Responsibilities

In this role, you will characterize mixtures of pharmaceutical excipients and drug materials to develop methodologies for screening hot-melt extrusion formulations and selecting optimal operating conditions using rheology, with the objective of producing amorphous-solid-dispersions. You will validate the developed processing space and operating conditions for extruded pharmaceutical formulations using a lab-scale extruder. In collaboration with researchers at the Singapore-MIT Alliance for Research and Technology (SMART), you will characterize the physical properties and performance of intermediate pharmaceutical drug products. The created methods will be transferred to the industrial partner to enhance their product development process using rheological characterization.

More specific responsibilities include:

- Participate in and manage the research project with Principal Investigator (PI), and the research team members to ensure all project deliverables are met.
- Undertake characterization of pharmaceutical active ingredients, polymeric excipients, and plasticizers for producing amorphous-solid-dispersions.
- Perform lab-scale hot-melt extrusion of pharmaceutical materials to validate predicted processing conditions and product outcomes.
- Collaborate with broader pharmaceutical research team at SMART.
- Design, execute, and interpret experiments independently.
- Author papers in high-quality journals in areas that are related to the research.

- Prepare and deliver reports and presentations for industrial partners
- Carry out Risk Assessment, and ensure compliance with Work, Safety and Health Regulations.
- Coordinate procurement and liaise with vendors/suppliers.
- Work independently, as well as within a team.



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Job Requirements

- Have deep hands-on experience with at least one of the areas of polymer rheology, extrusion processing, pharmaceutical engineering with small molecules.
- Relevant competence in the areas of wet lab work, analytical instrumentation, material science and formulation
- Have an advanced degree in chemical engineering, mechanical engineering, materials science and engineering, or a related field.
- Knowledge of any of the following will be advantageous: rheology, physical characterisation, crystallisation, polymer melts, extrusion, material physics.

Key Competencies

- Able to build and maintain strong working relationships with people within and external to the university.
- Self-directed learner who believes in continuous learning and development.
- Proficient in communicating via technical writing and presentations.
- Possess strong analytical and critical thinking skills.
- Show strong initiative and take ownership of work.

Advertised: 11 Nov 2024 Singapore Standard Time

Applications close: 30 Jun 2025 Singapore Standard Time

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Singapore