

Job Title	Research Translation Specialist- Bioprocess and Biotechnology
Reports to	Research Translation Manager
Institution	King Abdullah University of Science and Technology - KAUST

Position Summary

Reporting to the manager of research translation, the Research Translation Specialist will provide expert consultancy and engineering services to KAUST researchers. The specialist will be able to deploy technical skills broadly across a number of projects focused on research translation. The job holder will work with a team of engineers, researchers, designers, and stakeholders to drive the innovation, development, testing and deployment of innovative technologies at KAUST. The role will involve collaborative projects across different research groups within KAUST and other premier academic and industrial partner institutions that focus on impactful research and science-driven technology development.

Competencies

- Design, operation and maintenance of bioreactors, such as photobioreactors, fluidized bed bioreactors and electro-microbial bioreactors for production of fuels/specialty chemicals and products (bioplastics) from algae and waste streams.
- Biological manufacturing process equipment and supporting utility systems.
- Experience in the scale-up of biological processes from lab to commercial.
- Experience with bioprocess design and fermentation.
- Experience with experimental design and process optimization.
- Knowledge of the research and development value chain, including technology readiness level assessment
- Knowledge of intellectual property implications for scientific research projects.
- Strategic planning, organization, time management, analytical, and critical thinking skills with the ability to identify and solve problems, make decisions, and implement changes.
- Demonstrated ability to analyze workflows to streamline and improve business processes and workflows.
- Ability to work independently using own initiative, handle multiple and complex tasks and prioritize ongoing and new work assignments and deliver high-quality work against tight deadlines.
- Ability to work collaboratively and foster a cooperative work environment with multi-cultural research faculty, university research administrators, graduate students, colleagues, and others at all levels who are engaged in world-class research.
- Strong verbal and written communication skills in English. Strong Arabic communications skills is a plus.

Major Responsibilities

- Familiarity with development and commercialization of biological systems and products.
- Identifying, suggesting, recommending improvements, and implementing modifications to increase productivity and reduce costs.
- Develops protein purification/concentration processes of complex biological solutions.
- Translate research ideas and concepts into clearly defined new processes and new designs that capture both business and user requirements.
- Work as an integral part of the Research Translation team, interfacing with external fabricators/vendors to apply state of the art industry standards, tools and technologies.
- Recommend new design concepts and validate the concept feasibility using software packages, KAUST workshops and prototyping methods.
- Prepare design documentations and requirements specifications.
- Translate stakeholder input (e.g. from partners, technical team, end users, and industry representatives) into high level and low-level product requirements.
- Collaborate with a team of manufacturing professionals and engineers to evaluate product prototypes to determine production feasibility and costs.
- Collect and document feedback and identify necessary metrics to measure and optimize various product parameters against functional requirements.
- Assist in the development of technology roadmaps and perform gap analysis for technology maturation.
- Participate in project reviews, risk assessment and management.

Qualifications

Required Education and Experience

- A degree in Biology/Biotechnology/Biochemical/Chemical Engineering with industry experience of 10 years (For bachelor's degree), 8 years (For Master's degree) and 4 Years (For PhD degree)
- Demonstrated working knowledge in concept prototyping, skid mounted pilot plants and product development.

Required Qualifications

- Five or more years of relevant research/engineering experience in an industry setting.
- Execute technology transfer projects, resolve processing issues, and conduct technical assessments on process/product impact due to changes in equipment, scale, and raw materials.
- Experience analyzing engineering diagrams, specifications, related data, and drawings to determine design factors such as scale, shape, and arrangement of unit operations.
- Industry experience in design to ensure that designs are cost efficient, manufacturable, and reliable.
- Ability to review process design for compliance with engineering principles, company standards and customer contract requirements, and related specifications.
- Knowledge and experience of working with bioprocess design and manufacturing sources and component vendors is required.
- Demonstrate an advanced understanding of phase appropriate process/product development milestones and end user-centric focus that can facilitate translational research in accordance with technical and commercialization goals.

About KAUST

Located on the Red Sea 80 km north of Jeddah in Saudi Arabia, KAUST is an international graduate-level research university. KAUST offers state-of-the-art research facilities, including one of the fastest supercomputers in the world, and an attractive compensation package, including a tax-free salary, fully furnished on-campus housing, four weeks of paid annual leave (in addition to 15 national holidays), extensive health care coverage (medical and dental), relocation assistance, and free education at KAUST international schools for children. The initial appointment is for three years with options for renewal.