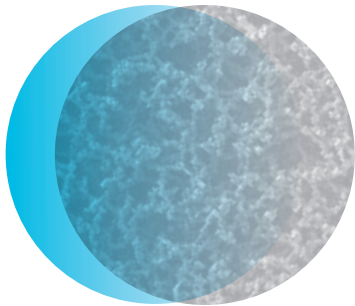


MERCK MILLIPORE

INDUSTRY PROBLEM STATEMENT

Merck Millipore is a world leader in the production of membrane for biopharmaceutical and industrial applications and is looking to develop new membrane technology. Currently, natural polymers such as nitrocellulose are used in the production of a number of membrane products. The large scale production of nitrocellulose membrane is technically challenging. New processing methodologies, advancements in materials understanding and availability of new material sources are key considerations that Merck Millipore wishes to address in continual partnership with CRANN.



CRANN VALUE ADD

In this project, CRANN researchers based in UCC and TCD used their expertise to develop a new membrane using a synthetic polymer, with comparable or superior performance to the current nitrocellulose membrane product, resulting in the generation of new intellectual property. CRANN researchers spent time working at the Merck Millipore manufacturing facility in Cork and at the company's research and development facility in the USA. Processing and development engineers worked in CRANN laboratories to gain new skills in materials characterisation and process optimisation. Following on from this success, a second project was co-funded to bring the product within Merck Millipore's specifications.

The success of this engagement clearly demonstrated the benefits of this type of collaborative partnership with Irish research institutes to Merck Millipore locally and at their global research headquarters. Merck Millipore is currently active with CRANN in the areas of new product development,

advanced characterisation methodologies and new materials design.

CRITICAL CRANN ENABLERS

- Materials knowledge and industrial manufacturing processing experience.
- Polymer characterisation and processing techniques.
- Air casting fabrication techniques.
- Surface chemistry and chemical functionalisation capabilities.
- Advanced Microscopy Laboratory.

ENGAGEMENT TYPE

Enterprise Ireland Innovation Partnership. The EI Innovation Partnership Programme can provide up to 80% of the cost of research work to develop new and improved products, processes or services, or generate new knowledge and know-how.

“Merck Millipore believes the materials expertise at CRANN, in partnership with our own in-house membrane knowledge, will enable and support new product development at the Merck Millipore site in Cork”

Liz Henderson, Senior Site Director, Merck Millipore, Cork



*Enterprise Ireland Innovation
Partnership Delivering Value and
Support to Industry in Ireland*
