

AEROGEN

INDUSTRY PROBLEM STATEMENT

Aerogen is a specialty medical device company dedicated to improving therapeutic options and to reducing the cost of care for patients with respiratory disorders and lung cancer in critical care settings. Aerogen's Research and Development team are continuously looking to evaluate and acquire new technology, open new markets and complement the company's future business by linking with technologies that advance their Nebulisation technology.

www.aerogen.com



CRANN VALUE ADD

A team of CRANN researchers from TCD's schools of Physics and Medicine and researchers from UCC's School of Pharmacology have developed new magnetic core shell anti-cancer drug loaded nanoparticles, which are compatible with Aerogen's nebulizer technology. In vitro and in vivo validation of nanoparticles and drug release systems show excellent biocompatibility of the nanoparticulate systems which are targeting various theranostic [combined therapeutic and diagnostic] applications.

CRITICAL CRANN ENABLERS

- Strong collaboration via a multidisciplinary research team.
- Synthesis, targeted functionalisation and vectorisation of nanoparticles.
- High content biological screening and in vitro diagnostics.
- Biocompatible polymer and composite formation.
- Cell biology and Immunology.

ENGAGEMENT TYPE

CCAN Project (Collaborative Centre for Applied Nanotechnology)

CRANN co-hosts CCAN with the Tyndall National Institute. This centre was established to support Irish-based companies accelerate commercialisation of nano-enabled products. CCAN coordinates industry-led projects incorporating research expertise from across the island of Ireland. This project, spearheaded by CRANN, involved collaborations with DCU, Tyndall and UCC's School of Pharmacy. The CCAN network offers nanoscience and nanotechnology expertise to assist companies like Aerogen with short to near-term process or product development. CCAN is supported by its members companies, IDA Ireland and Enterprise Ireland. More information on CCAN can be found at www.ccan.ie.

“The innovative nanocarrier product will generate a range of opportunities with a view to establishing new partnerships and collaborations between Aerogen and relevant pharmaceutical, medical device and commercial product companies.”

Alan Hynes, CCAN Executive Director

