

SSPC PhD industry placement programme:

A case study with MSD



MSD, a current Tier 1 member of SSPC, the Science Foundation Ireland Research Centre for Pharmaceuticals have been partnering with SSPC since 2009 and through this partnership have advanced knowledge and 'know how' on site particularly in the area of Crystallisation. Membership with SSPC has helped to strengthen the Irish manufacturing operations as it positions itself to continue to move up the value chain and compete globally for R&D projects.

SSPC's success is defined through its unique collaboration abilities and building R&D excellence in one of Ireland's largest industries. The role that industry members play within the SSPC is a multi-faceted one that is successful in both responding current needs of the sector and anticipating the skills and training necessary to mentor future research leaders.

A key impact of SSPC is the creation of a unique talent pipeline with the transition rate of SSPC researchers to industry currently standing at 70%. One of the key drivers facilitating the high number of transitions to industry is the SSPC PhD industry placement programme, which brings students into the industrial environment for a three-month placement aligned with their research area. This exposes researchers to the realities of industrial processing while simultaneously providing industry with an insight into current research innovations.

MSD has hosted six SSPC PhD students to date and the placement programme has proven very beneficial to all parties facilitating knowledge exchange and upskilling between both student and staff. The exposure to cooperative mentoring by industrial members provides students with experience in project management, problem-solving and develops the skills needed to communicate research to various audiences. The supplementary training that SSPC students receive during their placements ensure that our graduates have industrially-relevant skills to support the pharmaceutical and biopharmaceutical industry.

The Student Placement Story

SSPC PhD student Barry Long, was placed at MSD Ballydine in 2019 and after his time in MSD his opinion on industry has completely changed. He looks forward to graduating next year and, hopefully, being able to return to industry.

Read about his experience:

"In 2017, MSD invested €40 million in a new spray drying facility at Ballydine. As my PhD involves spray drying, it was great to be able to work in a company that had recently invested in a spray dryer as I was able to learn at the perfect pace. Before my placement, I had some experience in a supplier quality and regulatory compliance role which made me think industry, consisted of paperwork only!

The majority of my time at MSD was spent working on the spray dryer but I was lucky enough to have the opportunity to witness the other operations that took place on site, from API manufacture to tableting to physical characterisation of materials. This provided me with a good idea of how life in the pharmaceutical industry typically goes from day to day. I was delighted that I was able to complete work that was relevant to my PhD as well as understand new processes, helping expand my experience.

The major differences I found between industry and academia involved the level of planning and understanding. Unlike academia, it is not possible to be able to decide what your plan is at the start of each day and, instead, weeks if not months of planning is required for each bit of work undertaken. The time I spent in MSD has completely changed my perspective and as I get closer to graduation, I look forward to making the move to industry and who knows maybe even back to MSD."

"MSD has hired a number of PhD graduates from SSPC and intends to hire more in the future. Many of the PhD students in the SSPC who have been exposed to the innovative and applied research projects with industry along with the new technologies at the SSPC are well positioned to take up these positions in companies like MSD."

Tom O'Ceallaigh, Director of Engineering, MSD