



SSPC Impact Report

2008-2025

From Molecules to Medicines:
Our Impact on Ireland's (Bio)pharmaceutical Sector



Director's Foreword

It is with great pride that I introduce the SSPC Impact Report, a document showcasing our proven success and the foundations we are laying for Ireland's future as a global leader in (bio)pharmaceutical innovation.

While Ireland has long been a global powerhouse in advanced manufacturing, our national imperative is now to move decisively up the value chain. We must become a world-leading innovator by co-locating global R&D alongside our manufacturing excellence. This strategy will secure Ireland's leadership across the entire development lifecycle, from initial concept to patient delivery.

SSPC's strength lies in its role as a strategic national investment with a multiplier effect. While individual researchers deliver brilliant science, a true Centre delivers national impact. We provide the framework to tackle systemic challenges at a scale no single institution could; by uniting our individual excellence into a powerful national current, we create the conditions to attract world-class foreign direct investment while simultaneously growing a powerful indigenous enterprise base.

Ultimately, our greatest impact is our world-class research, which acts as a magnet for global talent and creates a powerful 'brain gain' for Ireland. Our exceptional alumni are catalysts for growth, strengthening the national skills base and driving innovation across industry, academia, and public policy. This comprehensive impact reinforces the bedrock of the Irish economy and secures our global competitiveness.

I invite you to explore our story.



Professor Damien Thompson
SSPC Scientific Director

Delivering Scientific Excellence at Scale

At the heart of our distinctive ecosystem is a critical mass of interdisciplinary expertise. Our Centre unites **81 scientific leaders from 10 of Ireland's leading research organisations**, creating a powerful engine for **world-class (bio)pharmaceutical innovation**. It is this collaborative power that enables us to pioneer new science and forge the strategic partnerships that **elevate Ireland's global reputation** in (bio)pharmaceutical research and development.

WORLD'S TOP
2%
SCIENTISTS

Setting the international benchmark for excellence, **25 SSPC researchers** are recognised in the prestigious Stanford University ranking of **the world's top 2% of scientists** - a clear measure of our team's calibre on the global stage.

1,539

Scientific papers published, with **42,949** citations

148

Scientific papers co-authored with industry

2,000+

International Co-Authors in **54** countries across **6** continents, **357** International Universities

283

Global research partners

SSPC's strong international collaborations are enhancing Ireland's reputation in international research.

 Top Institute Collaborations Globally  Top 25 World University Collaboration



SSPC

SSPC, hosted by University of Limerick, is a world leading, interdisciplinary centre of excellence driving (bio)pharmaceutical research and innovation. Our unique position, built upon scientific excellence, strong industry partnerships, and a robust talent pipeline, enables us to tackle complex industry and societal challenges. We achieve this through fundamental science enriched by a diverse knowledge base shared across our SSPC community and our wider network of sector stakeholders. SSPC fosters a dynamic ecosystem that effectively connects academia, industry, and the public, ensuring our research translates into meaningful and impactful solutions for society.

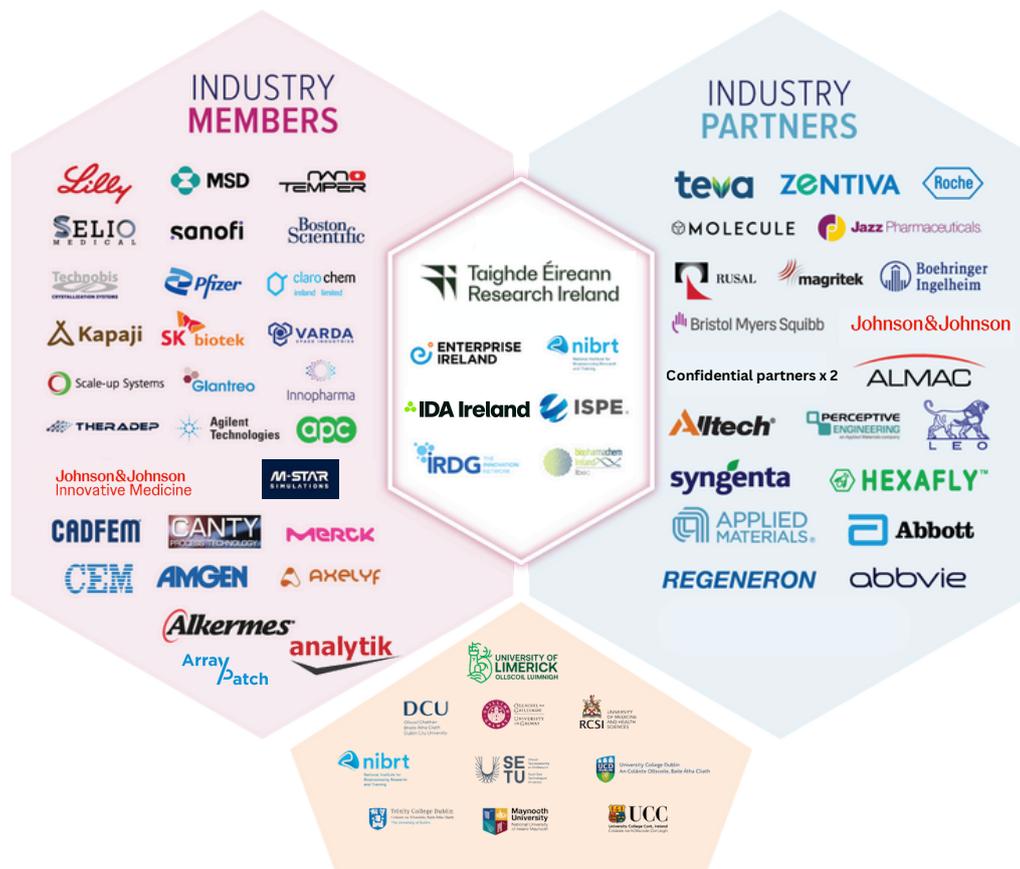
Powering National Prosperity

€1.3 Billion in Economic Impact since 2008
A **26x return** on core investment

Since 2008, for every €1 of public & industry funding SSPC has generated a **further €5.27 for the Irish economy**

397+ Highly skilled **Alumni: 70%** employed in Ireland

SSPC has attracted **211 researchers from 24 countries**, resulting in **57% retained in employment in Ireland** post SSPC, turning global talent into a national asset



Growing the Talent Pipeline - Attract, Train and Retain

The high-calibre talent developed at SSPC is critical to future-proofing Ireland's (bio)pharmaceutical sector. Our proven strategy to attract, train, and retain the best global researchers creates a pipeline of alumni who have a far-reaching impact on the sector, driving innovation in Ireland and worldwide. To date, 65% of SSPC PhD alumni from our first decade (2008-2018) transitioned directly into the sector, a powerful trend our current cohort is set to continue.



Ireland's (bio)pharma sector is a national success story, having generated 100,000 jobs. The recent 'Skills for Biopharma' (2024) report projects 21,000 new jobs for the sector in five years. Currently, 25% of all Irish PhDs working in industry are in this sector, and continued investment is needed to safeguard this highly-skilled workforce.

SSPC Alumni	397+	221	Delivering impact in Industry
		128	Researching in Academia



From SSPC Alumnus to Industry Leader
Dr Clifford Ó Ciardha, Director Proc Development, RCMF, Pfizer

The impact of our talent pipeline is personified by alumni like Dr Clifford Ó Ciardha, now an Operations Director at Pfizer, Ireland. Pfizer has continued to invest in Ireland, with recent major investment into Pfizer's Ringaskiddy site, creating a new, state-of-the-art facility to manufacture compounds for global clinical trials (Ringaskiddy Clinical Manufacture Facility - RCMF).

This strategic move, which co-locates R&D with advanced manufacturing, directly expands Ireland's role in the crucial early stages of drug development, moving our nation decisively up the value chain. It is a powerful, real-world example of how SSPC-trained leaders are future-proofing the sector from within, proving the immense value of strategically investing in the creation of talent.

"SSPC has been a cornerstone of our global competitiveness. By establishing a unique platform for sector-wide research collaboration and building a world-class talent pipeline, they have been instrumental in moving Ireland up the value chain and forging a more resilient knowledge economy."

Dr Sinead Keogh, Director of BioPharmaChem Ireland (BPCI)



Our Alumni - Industry's Leaders



Dr Michelle Hennigan
API Manufacturing Manager, AbbVie, Ireland



Dr Melba Simon
Innovation Programme Manager, APC Ltd., Ireland

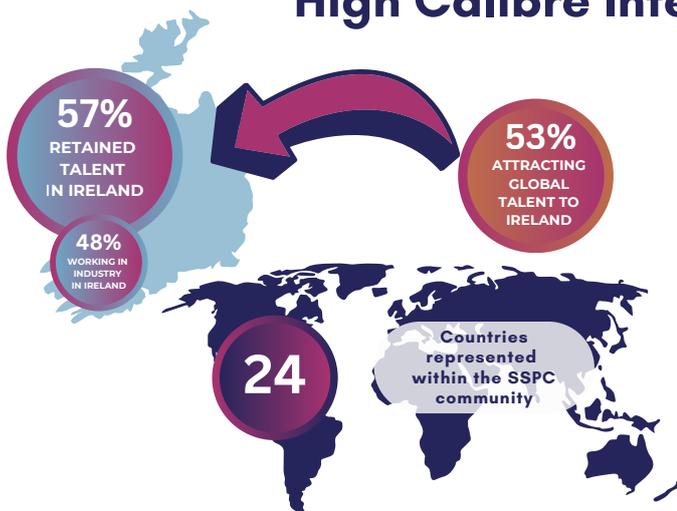


Dr Michael Carroll
Advisor, Eli Lilly & Company, APC Ltd., Ireland



Dr Denise Croker
Director Biotech, Regeneron, Ireland

High Calibre International Talent



SSPC has attracted and trained researchers from 24 different countries, with 53% of alumni representing a foreign nationality.

Overall 57% of SSPC international alumni remained in employment in Ireland after their time with SSPC. 48% of these work in industry, meeting Ireland's critical skills gap.

Building a Mature and Collaborative Ecosystem

The Irish Biopharmaceutical Sector by Numbers:

- €100Bn+ Annual Exports
- 67% of all Irish exports
- 90+ Companies
- 13 of the Global Top 15 Companies
- 67% of all Irish exports
- Excellent Regulatory Compliance Record
- 100,000 direct & indirect employees & 25% of PhDs in Irish Industry

"SSPC plays a significant role in this ecosystem and they do that through three different ways, number one partnering with enterprise and meeting enterprise needs, two is in terms of the research that they undertake, in terms of understanding what's required from an enterprise base and three is also in terms of talent generation, both in terms of today's talent but more importantly in terms of future talent needs."

Michael Lohan, CEO IDA



€3.7Bn+

In foreign direct investment secured for Ireland, where SSPC world-class research and talent have been a key influencer in decision making.

201

Collaborative Research Projects with Industry since 2008 from global MNCs to international & indigenous SMEs & startups.

APC and VLE - global leaders born from SSPC

The journey of APC-VLE Ltd. showcases our impact. From a 2-person start-up in 2011, co-founded by **SSPC alumnus**



Dr Mark Barrett and SSPC co-founder Professor Brian Glennon, APC VLE has become a global leader and the largest R&D site in Ireland. Their team of over 260 is a testament to our talent focus, with 90% holding PhDs. With a recently announced €100m 'Medicine Accelerator' investment, the company is poised to add another 300 employees, continuing its remarkable growth.

"A key aspect for APC and VLE in advancing our technology development and research capability is working with the brightest and best minds. We are extremely proud to be the largest employer of graduates from SSPC. For us as an industry partner, our support into the Centre research focus, education development programs, and talent development is simply essential to our future and sustained growth."

Mark Barrett,
CEO & Co-Founder, The Medicine Accelerator
(APC and VLE Therapeutics)



sanofi SSPC designed a process improvement which saved one year's supply of a medicine for 93 patients & €3.6M.

"The efficiencies gained through the process improvements will ensure that lifesaving biologic drug products make it to patients, and are not wasted due to traditional status quo methods and technologies."

Dikshitkumar Khamar,
Head of Scientific Excellence & SSPC alumnus

Alkermes SSPC created and integrated a platform modelling approach to streamline commercial product development across their global R&D sites.

"The collaborative research project that SSPC carried out with Alkermes has given us new capabilities that inform and streamline early development activities and enable us to predict future commercial performance."

Stephen Sheehen,
Director of External Development & Manufacturing



SSPC developed the novel DeSouza Process, named after SSPC alumni Dr Brian DeSouza, which yielded significant economic benefits through smarter manufacturing processes.

"DeSouza Process" redesigned crystallization for a key Pfizer API, reducing solvent use by 50% as well as reducing solvent recovery processing costs.

Since 2008, SSPC has created **510 direct jobs**, which in turn, has created **862 additional jobs** across the Irish economy.

Education & Public Engagement: Driving Societal Impact

At SSPC, our team actively informs and influences policy and practice, with many researchers holding leadership positions within key national organisations. Through our comprehensive research programmes and strategic initiatives, we are committed to making complex scientific concepts accessible to participants and stakeholders. Our internationally recognised Education & Public Engagement (EPE) team tackles critical societal challenges, building improved understanding of medicines and scientific literacy, while fostering greater participation in STEMM among underrepresented groups.

€
€1.2 m

in competitive
funding won for
EPE research

6 Collaborative EU projects
with **42** international
partners across **18** countries

Direct Engagement

255,000+

people reached

EPE Activities **2,000+**



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**Diversity in Science Towards Social Inclusion:
Pioneering a Blueprint for Inclusive STEMM Education**

The potential of EPE lies in its ability to empower people to become socio-scientific citizens, cultivating a society where people are part of the scientific narrative.

SSPC works closely with a network of local community organisations both in Limerick and nationally. These community consortia are established in partnership with a wide range of stakeholder groups, representing residents, schools, adult education, community and voluntary groups and local business/industry interests. These partnerships provide an innovative co-created infrastructure to advance engagement in STEMM and SSPC research, particularly amongst under-represented groups and hard to reach communities.

Systemic barriers in education mean that talented young people from diverse backgrounds are being left behind. The challenges are complex and often overlapping, where factors like social background, gender, cultural background, language and ethnicity combine to create unique obstacles. To break this cycle, SSPC has pioneered a research-led, partnership-based approach, enabling us to bridge the gap between research and practice. Our peer-reviewed research reveals hands-on, context-based science better enables students to access STEMM, enhances career-aspirations in STEMM, and builds science capital. This understanding is the heart of our proven, foundational blueprint for effective engagement—a model that now informs national strategy. By pioneering how to engage, we are helping to construct a more equitable foundation for the next generation of innovators in Ireland!



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SSPC∞

Research Ireland Centre for Pharmaceuticals



HOST INSTITUTION



PARTNER INSTITUTIONS

