REPORT CALLS FOR INCREASED EXPOSURE TO STEM SUBJECTS IN SCHOOLS TO ENSURE NECESSARY TALENT PIPELINE

- Inadequate selection of STEM subjects available at post-primary level particularly physics and chemistry
- Concern that Irish students entering third level education lack mathematical preparedness
- Supply of STEM graduates vital to the future of the economy, particularly key pharma and biopharma sectors
- Partnership approach needed to overcome negative perception of STEM amongst parents, girls and other school-goers
- Multi-stakeholder analysis identifies 10 recommendations to improve Irish student engagement in science and science-related careers

A multi-stakeholder report, *STEM Paths – Steering Students to Success* has examined the barriers to engagement in science-related subjects amongst Irish students and is urging for solutions to be put in place to improve Irish student engagement in science and science related careers. The report explores the negative impact this trend could have on Ireland's talent pipeline, particularly in key pharma and biopharma sectors.

Among the recommendations in the report is that all science, technology, engineering and maths (STEM) subjects should be available for Leaving Cert students in all schools in Ireland. It also suggests that more should be done to highlight role models working in STEM and the diversity of career opportunities available across the sector.

Despite numerous initiatives already in place to promote STEM, research shows that many Irish students are not choosing to study these subjects at third level. This is largely due to the persisting negative perceptions of science.

According to the most recent Science Foundation Ireland (SFI) Science in Ireland Barometer: *An analysis of the Irish publics perceptions and awareness of STEM,* 70% of those surveyed believe STEM is too specialised for them, but 52% of respondents were deterred from studying science and maths at third level, largely due to the way in which these subjects were taught at primary and secondary level.

Ireland may be a global biopharma powerhouse producing innovative, life-changing products positively impacting millions of people around the world but the report concludes young people have very low awareness of this activity. As a result, they are not considering extremely positive career paths that could be available to them.

The ***STEM Paths – Steering Students to Success*** report was developed in the wake of a meeting hosted by the global biopharmaceutical company AbbVie in partnership with *The Irish Times*. The roundtable analysis aimed to explore how companies, educators, professional bodies, and other interested stakeholders could work together with the common goal of ensuring a consistent pipeline of STEM-educated employees for this key Irish industrial sector.

The report also investigates the role of women in STEM. A 2015 Accenture report, surveying 1,500 girls aged between 11 and 18 and 2,500 women aged 19 to 23 from Ireland and Britain showed that almost 30% felt STEM subjects were better 'fitted' to boys' brains, personalities and hobbies.

The report has two functions. It provides a snapshot of current efforts to encourage participation in STEM subjects in school whilst also offering concrete suggestions on developing and enhancing these efforts to attract more young people into science-related careers.

AbbVie supported the initiative because the company wished to explore why females, students and young people continue to avoid STEM subjects in school despite there being a diverse array of high quality opportunities with Irish-based companies in this vibrant sector.

The round table event, which was chaired by Dick Ahlstrom, former Science Editor of *The Irish Times*, included representatives from BioPharmaChem Ireland; Engineers Ireland; IDA Ireland; Pharmacists in Industry, Education and Regulatory (PIER) and Science Foundation Ireland. Also present were Dr Helena Kelly, Senior Lecturer in the School of Pharmacy at the RCSI; Professor Anne Marie Healy Head of School, School of Pharmacy and Pharmaceutical Sciences, TCD; and Dr Patricia Kieran, Associate Professor at the UCD School of Chemical and Bioprocess Engineering.

The 20 page report produced by the group suggests more needs to be done to encourage female participation in science. It states that exposure to the biopharma industry for those studying science and pharmacy degrees need to match student exposure to other potential careers including opportunities in accountancy and consulting.

The *STEM Paths* document outlines ten actions to increase interest and engagement in STEM education and careers. The key recommendations include:

- Creating a closer working relationship with media to highlight young role models, especially females, working within STEM disciplines
- Providing greater exposure to the biopharma industry through Transition Year programmes
- Improved and targeted interaction with third and fourth level students to encourage them to think beyond academia to consider industry career opportunities

Caroline McClafferty, HR Director with AbbVie, participated in the initiative. She said: "Our aspiration is to help Irish students better see the potential that undoubtedly exists for successful, fulfilling careers utilising STEM disciplines in Ireland, with locally-based companies such as AbbVie. As a research-driven innovative company, we believe it is important for us to be proactive on this matter so we can ensure a talent pipeline is in place for all companies active in STEM areas.

"A key objective for AbbVie across Ireland is to help transform, promote and support STEM-related projects and activities and we are already interacting with schools, colleges and industry partners to achieve this ambition. However, the recommendations of this round table certainly provide new approaches to help companies like ours improve long-term engagement in science and we will certainly look at how we can incorporate this guidance into our activities."

Margie McCarthy, Head of Education and Public Engagement with Science Foundation Ireland, re-emphasised the importance of collaboration. "The report identifies how partnership is required to effect real change in STEM career uptake, in particular amongst young girls. Demonstrating commitment to this effort AbbVie has joined forces with over 200 partners in the national Smart Futures programme. Only through these partners is www.smartfutures.ie able to provide young people and their parents' access to STEM role models, real people with exciting career stories."

The STEM Paths report, and a number of STEM-related videos, is available from www.abbvie.ie/STEM

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About AbbVie

AbbVie is a global research-based biopharmaceutical company formed in 2013 following separation from Abbott. It employs almost 600 people at five manufacturing and commercial sites across Ireland. The company's commercial headquarters is based in Dublin as is a separate international manufacturing and engineering services centre. AbbVie has two manufacturing plants in Sligo and one in Cork. The company's mission is to use its expertise, dedicated people and unique approach to innovation to develop and market advanced therapies that address some of the world's most complex and serious diseases. Together with its wholly-owned subsidiary, Pharmacyclics, AbbVie employs more than 29,000 people worldwide and markets medicines in more than 170 countries.

For further information on the company and its people, portfolio and commitments, please visit www.abbvie.com. Follow @abbvie on Twitter or view careers on our Facebook or LinkedIn page.