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A Trilateral Partnership for Supporting Research and Relationships

Killian Halpin, Kerri-Ann Jones, and Fabian Monds

THE U.S.-Ireland Research & Development (R&D) Partnership has developed over several years, and today it is a vibrant partnership among the United States, Northern Ireland, and Ireland. It is an excellent example of science and diplomacy working together in a unique trilateral partnership.

When the Good Friday Agreement (GFA, also sometimes referred to as the Belfast Agreement) was signed in 1998, the partners to that agreement and the world hoped that it could lead to peace, stability, and growth for Northern Ireland and Ireland. All the parties involved hoped that decades of conflict could come to an end. The North/South Ministerial Council was established at that time to bring together leaders from the Northern Ireland and Irish governments to "develop consultation, co-operation and action within the island of Ireland."¹ Today, the GFA is still in place and much progress has been made. Now, in its sixteenth year, it remains the guiding document for the peaceful relationships across the island of Ireland.

Killian Halpin is the former Ireland co-chair of the U.S.-Ireland R&D Partnership Steering Group.

Kerri-Ann Jones is the U.S. co-chair of the U.S.-Ireland R&D Partnership Steering Group.

Fabian Monds is the former Northern Ireland co-chair of the U.S.-Ireland R&D Partnership Steering Group.

The U.S.-Ireland R&D Partnership was developed based on the GFA's principles of "equality, partnership, and mutual respect."² In order to encourage collaboration and focus on common interests, the GFA promoted cross-border work on a variety of shared issues. Although the GFA did not specifically identify R&D as a potential area of cooperation, it did identify sectors such as health, environment, and agriculture. The importance of economic growth to both Northern Ireland and Ireland was emphasized in the GFA and further discussions led to the establishment of a new organization, InterTradeIreland, as a cross-border body to promote all-island economic linkages. InterTradeIreland is the only organization that has been given responsibility by both the Northern Ireland and Irish governments to boost economic cooperation for mutual benefit.

In 2006 the U.S.-Ireland R&D Partnership was officially launched. It had grown out of an earlier task force established at the U.S.-Ireland Business Summit in Washington, DC, in 2002. The stated purpose of the partnership is "to increase the level of collaborative R&D amongst researchers and industry professionals across the three jurisdictions."³ The governments recognized the strong link between high quality research environments and economic development. InterTradeIreland was identified to provide a coordinating role with Northern Ireland and Ireland for the new partnership.

The team developing the partnership recognized that building trust and working on areas of common interest were essential for success. Somewhat familiar with each other, each of the three jurisdictions still had much to learn about each other. Each had different funding protocols as well as very different national science enterprises, institutions, and communities. Moreover, working together collaboratively in a three-way partnership was an entirely new approach, which made it particularly challenging. The members of the partnership recognized that they were breaking new ground and needed to proceed slowly and thoughtfully. Building trust and understanding of each other's systems was the very first step.

While the development of the R&D partnership evolved from the GFA's confidence building, all-island objectives, the partnership created its own guiding principles that have been fundamental to its success. The first principle of the partnership is that any project must have significant research participation from each of the three jurisdictions. These must be well-balanced, collaborative research partnerships. The second ground rule for any joint project is simple and remains at the heart of the success of the partnership—quality matters. Only high quality research is funded. It was agreed from the beginning that the merit review systems of the U.S. National Science Foundation (NSF) and the U.S. National Institutes of Health (NIH) would be used to ensure that only quality proposals would be funded. The merit review systems of these two agencies were recognized as having worldwide respect, and it was agreed that these processes would be accepted by all. With a single merit review step conducted by the NSF or the NIH, as appropriate for any project proposal, the possibility of "double jeopardy" was avoided. The third principle is that each jurisdiction funds only the activities of their own

researchers. This is not a development program. It is a research partnership. This clear delineation of funding responsibilities from the very start avoided confusion and ensured each jurisdiction's commitment to and ownership of the projects in the selected areas of strategic relevance.

At its inception, the partnership also recognized that it needed to begin with a very focused list of priorities. The list needed to reflect topics of shared concern where there was established research strength in each jurisdiction. The initial four research priorities areas were diabetes, cystic fibrosis, sensor technology, and nanotechnology.

Developing this new form of international research cooperation was a complex and lengthy task that relied on significant input and legal clearance from each of the participating funding agencies and departments in the three jurisdictions.⁴ It culminated in the signing of a memorandum of understanding between the NSF and the funding agencies and departments in Ireland and Northern Ireland.⁵ A guidance document was also prepared in collaboration with the NIH.⁶

The R&D partnership is guided by its steering group, which consists of high-level representatives from the three jurisdictions, with a co-chair from each. This high-level political support was important at the early stages of the partnership; it kept it on track and maintained momentum. In Northern Ireland, the co-chair and steering group members were appointed by the Northern Ireland government on an agreed nomination by the then minister for employment and learning, minister for enterprise, trade and investment, and minister for health. The Ireland co-chair and steering group members were appointed by the Irish government through the then minister for enterprise, trade and employment. In the United States, the partnership was championed by the George W. Bush administration and the first U.S. co-chair appointed was the deputy secretary from the Department of Health and Human Services. Today President Barack Obama's administration continues to champion this partnership and the importance of international collaborative research as a way to build relationships and solve problems. The partnership continues to be co-chaired by senior representatives from each of the jurisdictions. For the United States, the engagement of the Department of State underscores the significance of this partnership to foreign policy as well as the potential important scientific advances that the collaboration produces. The partnership is the subject of discussion at high-level meetings among leaders and is reviewed regularly by the North/South Ministerial Council.

In the years since the official launch, the R&D partnership has thrived. The research community has responded and continues to respond to the opportunities that the partnership provides. A total of fifteen funded tri-jurisdictional proposals have mobilized over \$33 million in support. These projects have brought together more than fifty principal and co-principal investigators from both universities in Northern Ireland, eight universities and institutes in Ireland, and nineteen U.S. institutions. The involvement of research students in the projects provides students

and staff with the opportunity for work exchanges with their colleagues in the partnership jurisdictions.

The partnership has achieved advances in all four of the priority areas. In the area of sensor technology, partnership projects cover a range of topics from the measurement of greenhouse gases absorbed by the ocean, to developing electronic field-based sensors to detect bovine respiratory disease. Another project relates to techniques for bridge safety assessment that can be deployed worldwide and on a wide range of bridge types. There are numerous projects in the nanotechnology area; one investigator is researching new materials that could pave the way for more energy efficient electronics.

The projects in the areas of diabetes and cystic fibrosis represent significant financial investment, as appropriate given their public health relevance. In one collaboration, scientists are investigating the genetic factors influencing the risk of diabetic nephropathy, one of the major complications of type 1 diabetes. Another set of researchers is investigating the role of anaerobic bacteria in the pathogenesis of cystic fibrosis.

The U.S.-Ireland R&D Partnership has made significant progress on one of its founding objectives: to facilitate more R&D cooperation between Northern Ireland and Ireland within the context of international cooperation. The partnership has promoted excellent cooperation between Ireland and Northern Ireland funding administration structures and the U.S. funding agencies. This was critical for the development of mechanisms to co-fund research proposals. A further significant output has been the decision by Science Foundation Ireland and Invest Northern Ireland to collaborate on partnership planning grants. In addition to its coordinating role, InterTradeIreland has been active in developing and supporting Ireland–Northern Ireland interactions and also in extending and facilitating the collaboration with the funding agencies in the United States.

A program must remain dynamic to ensure continued success, and in 2011 the steering group addressed the question of expanding the partnership research areas. It was important to respond to new priorities and draw on each partner's research strengths. The steering group members decided to expand the research topics to include telecommunications, energy and sustainability, and a broader view of health research. In addition to contributing to the development of a vibrant research environment on the island of Ireland and its contribution to economic development, the partnership is seeking to involve industry and to ensure that it has effective access to the outputs of the research and to the outstanding researchers involved in the projects.

The U.S.-Ireland R&D Partnership, in a short period of time, has built a strong and solid foundation based on quality research, funding clarity, and political commitment. The approaches and underlying principles described here have contributed to the success of this trilateral partnership for collaborative research funding. This mechanism benefits from three partners who each significantly

participated in and contributed funding to every project and a unified, agreed to process for merit review of projects. The future looks bright for this partnership's prospects for contributing to positive and peaceful international relationships as well as important research advances. The gathering momentum is due in a large part to the close international and cross-border cooperation and trust that have developed in relation to the partnership between government departments and agencies in Northern Ireland, Ireland, and the United States. **SD**

Endnotes

1. The Good Friday Agreement, Ireland-Northern Ireland-United Kingdom, April 10, 1998, <http://cain.ulst.ac.uk/events/peace/docs/agreement.htm>.
2. Ibid.
3. U.S.-Ireland Research & Development Steering Group: Terms of Reference and Membership, March 2005.
4. United States: National Science Foundation and National Institutes of Health
Ireland: Science Foundation Ireland and Health Research Board
Northern Ireland: Department for Employment & Learning, Health and Social Care R&D Office, and Invest Northern Ireland
5. U.S.-Ireland R&D Partnership Memorandum of Understanding, October 18, 2010, http://www.nsf.gov/eng/general/US_Ireland_MOU.pdf.
6. "Guidance for U.S.-Ireland-Northern Ireland Applications Under the U.S.-Ireland R&D Partnership United States (U.S.) Department of Health and Human Services (HHS), National Institutes of Health," U.S.-Ireland R&D Partnership, accessed March 26, 2014, http://www.usirelandresearch.com/docs/NIH_guidance.pdf.