Introduction:

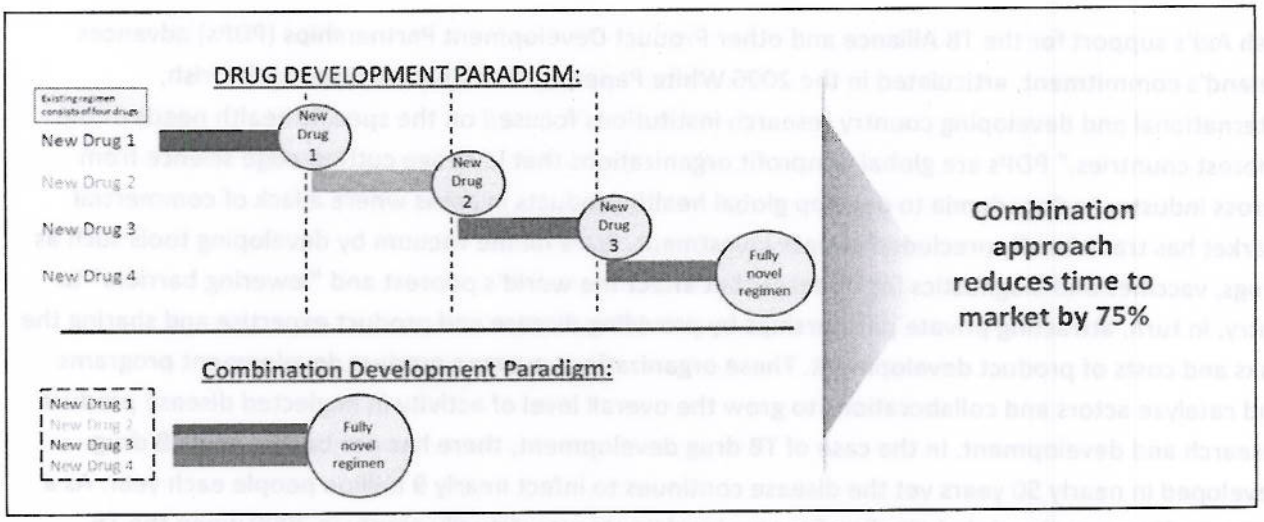
Irish Aid has become a leader in development assistance by leveraging its investments in programs, populations, and regions to maximize impact. Aid has increased more than tenfold since 1992, from $70 million USD to $904 million USD in 2011 and, along with this growth, Irish Aid has maintained its leadership in development assistance. Irish Aid currently ranks 9th among OECD countries for official development assistance (ODA) per gross national income (GNI). In line with supporting efficient, high-impact development strategies in target countries, Ireland has taken the role as a visionary supporter of new global health and development innovations. This exercise, of reassessing Irish Aid's priorities, is itself a demonstration of the rigorous standards to which the agency adheres.

As the Irish government reassesses its aid priorities, it should consider the merits of maintaining and expanding support for global health assistance. Much work remains to be done to address the burden of infectious disease on the developing world. Diseases such as HIV/AIDS, tuberculosis (TB), and malaria all continue to plague resource-limited countries and not only impair health, but economic development. Ireland's reexamination of its development assistance programs should consider the value of both promoting the more effective delivery of existing technologies, as well as the development of new tools that will transform the management of diseases of poverty.

Continued support for organizations that are developing new tools to diagnose, prevent, and treat these deadly diseases will be instrumental in making lasting gains against further unnecessary suffering. In fact, the support given thus far has been enormously valuable in bringing the pipeline of new global health technologies to where it is today.

One such example is the support given to the Global Alliance for TB Drug Development (TB Alliance), a not-for-profit product development partnership (PDP) founded in 2000 to meet the need for better, faster acting TB treatments. A critical component of the TB Alliance mission is to ensure that novel TB treatment regimens, once developed, are available, accessible and easy to adopt in countries with a high TB burden. Irish Aid's support of the TB Alliance's work has enabled us to advance one of the first new treatments for TB in 50 years into late stage clinical development while simultaneously building the foundation on which the next generation of novel regimens can be developed. This work has transformed the landscape for new TB technologies, creating near-term promise for new and better treatments as well as a sustainable pipeline which can further improve and keep pace with management of this global pandemic.

Since the beginning of our relationship with Irish Aid (2005-2006), we have significantly strengthened our R&D portfolio, which houses the majority of global TB drug research programs around the world, and is carried out through an extensive and prestigious network of international partners. We have also implemented an innovative way to expedite the development of new regimens – a paradigm that shortens the time needed to develop novel treatments by as much as 75% while significantly reducing development costs. This paradigm is now rapidly emerging as the gold standard of TB drug development.



TB treatment will always require a cocktail of drugs to prevent the emergence of resistance. Previously, drug trials focused on replacing one element of the current regimen, and could take six or more years to complete. This lead to important, but incremental, advances in treatment. Using this approach, it could take nearly a quarter of a century to develop a fully novel treatment, which could treat both drug-sensitive and drug-resistant disease and have potential to drastically improve treatment.

The TB Alliance's regimen development paradigm, drawing on the global pipeline of available TB drugs, shifts the unit of development from the single drug to multi-drug combination, and in the process, dramatically shortens the time to introduce innovative regimens. Importantly, novel TB treatments are subject to little or no pre-existing drug-resistance, enabling both TB and multidrug-resistant TB (MDR-TB) to be treated with a single regimen. New combinations in currently undergoing development have the potential to cut the time needed to treat MDR-TB by 80% and the cost of treating the disease by as much as 90%. This is especially critical because the current cost and complexity of MDR-TB treatment preclude many health systems in the developing world from being able to provide MDR-TB treatment, leaving those infected to further spread the diseases.

This first new generation of novel TB treatments are already in the clinic, and with more than 80 drug combinations already tested in preclinical models, the next, even more promising combinations will be entering development in the coming months. Harmonization of treatments for drug sensitive and drug resistant TB can greatly simplify TB therapy and facilitate rapid treatment scale-up.

TB Alliance donors, such as Irish Aid, who have supported this new regimen-based development paradigm effort from the very beginning have played a critical role in the evolution of TB drug development, not only through their financial support, but as champions of innovative approaches capable of producing a lasting, transformative impact on the global TB burden.

Progress made:

Irish Aid's support for the TB Alliance and other Product Development Partnerships (PDPs) advances Ireland's commitment, articulated in the 2006 White Paper, to "fund health research by Irish, international and developing country research institutions focused on the specific health needs of the poorest countries." PDPs are global nonprofit organizations that leverage cutting-edge science from across industry and academia to develop global health products in areas where a lack of commercial market has traditionally precluded private investment. PDPs fill the vacuum by developing tools such as drugs, vaccines and diagnostics for diseases that affect the world's poorest and "lowering barriers" to entry, in turn, attracting private partnerships by providing disease and product expertise and sharing the risks and costs of product development. These organizations oversee product development programs and catalyze actors and collaborations to grow the overall level of activity in neglected disease product research and development. In the case of TB drug development, there has not been a new TB drug developed in nearly 50 years yet the disease continues to infect nearly 9 million people each year. As a disease of poverty the global pipeline for new treatments was virtually empty in 2000 when the TB Alliance was founded. Today, as a credit to the dual role as product developers and catalyzers of the field, the global pipeline boasts more than 30 programs, including 10 clinical stage new TB drug/regimen candidates.

The PDP operating model exemplifies a commitment to Irish Aid's key principles by utilizing partnerships, conducting work efficiently and operating transparently. By harnessing expertise and funding from across sectors, PDPs are able to mitigate donor risk and leverage contributions from both public and private funding sources. Furthermore, this emphasis on partnership allows for the development of new technologies more quickly. Many PDPs use a virtual research & development model that allows them to minimize overhead costs and increase their spending on R&D. Furthermore, using contributions from industry and partnerships with academic institutions, PDPs, including the TB Alliance, often attain contributions in kind that match or exceed donor funding. The TB Alliance provides donors a 1:1 return on their investment in terms of services rendered, when in-kind contributions from its partners are considered. Further, The TB Alliance uses an independent Scientific Advisory Board to identify scientific milestones and convenes a Portfolio Review Committee to make decisions on whether to bring products into the next phase of development. This milestone-driven product development is objective and transparent, ensuring the organization remains accountable to its mission and concentrates its resources on projects with the greatest potential.

One example of the power of PDPs to convene partnerships is the Critical Path to New TB Drug Regimens (CPTR), which was established to address the broad, global scientific, regulatory, and resource challenges facing the development of new TB drug regimens. Co-founded by the TB Alliance, Bill & Melinda Gates Foundation, and the Critical Path institute, CPTR brings together the world's leading pharmaceutical and non-profit drug developers, global regulatory agencies, and civil society organizations to support the advances needed to facilitate the development and availability of new TB drug treatments. Recently, CPTR brokered a six-way information partnership among developers of TB

Changing context:

As Ireland reassesses its aid priorities it is important to note the changing context for development assistance, and global health more specifically. Most notably, the momentum achieved in increasing global health investment has waned considerably since the publication of the White Paper in 2006. Cuts in aid resulting from the global economic downturn have disproportionately impacted global health programs; funding levels for R&D are now dramatically reduced and the cultivation of new donors has never been more difficult, making the continued support of those already invested that much more critical. Along with the shrinking aid budgets, the broad enthusiasm of PEPFAR and the Global Fund to Fight AIDS, Tuberculosis and Malaria has faded. Many countries such as Italy, Spain and Sweden have scaled back commitments to the Global Fund and other countries have curbed support for PDPs. In this environment, it's even more important for donors to view investment in the development of new technologies as a sensible and sustainable long term approach to improving global health because of the need to more efficiently treat populations with fewer resources.

Innovation has remained a focus for donors, as it often gives way to more efficient and impactful strategies, products, and interventions. However, the timing of the global economic crisis has unfortunately coincided with the maturation of many global health technology portfolios. This puts not only the technologies themselves, but the return of previous investment in such programs, at risk.

Late stage clinical development, the stages of clinical testing closest to the market where many PDPs now have products, is the most expensive phase of the process. Clinical development involves testing these technologies broadly in the populations where they will be used and is crucial to ensure their success. But, without the investments needed to take the earlier research into registration trials many programs will languish. This means that the investments made in global health R&D will be for naught if there is not additional support given to bring these technologies through to registration and delivery. Not completing this research for lack of political will would be a tragic squandering of taxpayers money already collected and result in unnecessary suffering of people who desperately need new tools to combat their illnesses.

Key Issues:

Sixty years after the discovery of the first effective antibiotic against tuberculosis (TB), the disease remains a major infectious cause of death worldwide, second only to HIV/AIDS. In 2010, TB claimed nearly 1.5 million lives and there were an estimated 9 million active cases.[iv] Existing therapy has serious shortcomings that limit its ability to adequately address the disease. The standard World Health Organization (WHO)-recommended treatment of drug-sensitive TB is six to nine months long, complex, hinders patient adherence, and thereby fuels drug resistance. Further, it places an enormous burden on already resource-constrained health systems.