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## Commentary

# New technologies for neglected diseases: Can tax credits help biotechnology companies advance global health?

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### THE PROBLEM

Biotechnology companies can play an important role in advancing technologies for global health. Initiatives such as Genzyme's Humanitarian Assistance for Neglected Diseases and Alnylam's Intellectual Property (IP) contributions to the Pool for Open Innovation against Neglected Tropical Diseases show a commitment to helping produce badly needed health technologies, but unmet needs for new drugs, vaccines and diagnostics for diseases affecting developing countries remain. Controlling malaria, visceral leishmaniasis and other infectious diseases that cause significant morbidity and mortality requires new and improved technological tools. Biotechnology companies' expertise in biologics, point-of-care diagnostics and preclinical drug development is invaluable in this field, which is short of innovators.

Most firms, however, face disincentives in conducting R&D for global health since product markets are small and uncertain, the scientific problems are tough to solve, and few existing financing or policy mechanisms compensate for the risk. Product Development Partnerships and other non-profit initiatives have taken on much of the work in this area through grant financing and have often partnered with industry, but biotechnology firms could play a greater role. New policy and financing mechanisms that can balance the investment equation and encourage biotechnology and pharmaceutical firms to include global health diseases in their R&D portfolios could unleash important advances in global health technologies.

### TAX CREDITS – THE SOLUTION?

To help incentivize the private sector, some have proposed R&D tax credits for global health that reduce a company's tax liability to offset costs associated with R&D for priority diseases. This sounds like a promising tool to help companies cover some losses associated with low or non-profit work, but how effective would it be? Would it succeed in creating more and better technologies for people in developing countries? A recently released report by the Center for Global Health R&D Policy Assessment examines the merits of tax credits for global health, drawing from HR 3156, a proposal for a 50% non-clinical neglected diseases research tax credit, which was referred to the House Ways and Means Committee in 2009.<sup>1</sup>

One advantage of tax credits over other untested policy mechanisms is that they are easy to use and familiar to governments and firms alike. Unlike other forms of direct funding (such

as grants), tax credits let the government encourage R&D without dictating strict guidelines for projects or hand picking eligible companies – this allows firms to make investments aligned with their technical strengths. This is a popular approach for R&D with easily estimated market potential; in fact, in the US firms across sectors take advantage of the incremental Research and Experimentation credit for general R&D, amounting to billions of dollars in claims a year.

Tax credits are not without risks. All tax credits have the potential to pay for projects that may have been undertaken anyway. This is certainly a justified concern, but given the low level of global health work that is currently underway in the private sector, the potential gains may outweigh this risk.

Another downside of general tax credits is that they mostly benefit large, profitable companies. Claiming these tax credits requires having cash-in-hand to cover the costs of R&D and having sufficient taxable income to benefit from the claim. A refundable credit, which offsets the costs of R&D even when the costs are greater than total tax liabilities, could help smaller, less-established companies with access to some funds or external financing to initiate R&D projects (HR 3156, as currently designed, is not refundable).

A refundable credit for global health with minimal restrictions on expenditure and IP may draw in new firms to develop products for dual markets. Diseases such as Chagas and TB affect patients across income levels in developing countries, and some diseases, like HIV/AIDS, have patient populations in both developed and developing countries. R&D for these so-called ‘Type II’ diseases could lead to modest profits from both donor driven and private sales. The key to breaking into these markets is better analyses of global health diseases that uncover that diseases and products have dual markets.

## **TAX CREDITS – EXPERIENCE FROM PRACTICE**

Despite the promise of a tax credit for Type II diseases, experience from other programs such as the UK’s Vaccine Research Relief Program or the Qualifying Therapeutic Discovery Research Project suggests that a stand-alone tax credit should be approached with caution. In the UK’s case, the government provides a flexible credit for drug and vaccine research on HIV/AIDS, TB and Malaria, three diseases which do pose dual markets, but few companies claim the credit and the government has reduced its value twice. Many biotechnology companies in the United States applied for funding from the Qualifying Therapeutic Discovery Research Project, which intended to strengthen health technologies available domestically, but firms preferred the grant component of the program to the tax credits.

These experiences suggest that a tax credit on its own will not solve the problem of limited private sector engagement in R&D for global health even for Type II diseases. They are certainly even less likely to shift investment decisions for product classes that lack any paying market such as technologies for schistosomiasis.

## **CONCLUSION**

Developing new health technologies for neglected diseases is a difficult business strategy to pursue. Markets are small and the technological barriers can be significant. Despite these challenges, innovative financing policies can help firms break even if their goal is to make a social contribution on a no loss basis, or if designed carefully, such policies could help firms to earn modest profits. But, a tax credit almost certainly cannot do this alone.

Such a credit, however, could be one element in a larger package of policies aimed at tapping into the expertise of biotechnology firms in creating new drugs, vaccines and diagnostics for global health. Similar to the Orphan Drug Legislation, a combination of measures that includes a well-targeted tax credit with other incentives such as end and milestone prizes, grants and

public sector guarantees to purchase neglected disease products could successfully encourage biotechnology and pharmaceutical firms to make more R&D investments in global health, particularly around Type II diseases. It is important that these measures are only adopted after first being vetted to ensure that they overcome specific policy and financing barriers facing firms pursuing neglected diseases research. As existing programs show, even a measure as simple as a tax credit presents tradeoffs and complications in practice.

More must be done to test and implement these packages of incentives. Biotechnology firms can help by weighing in on the discussions that are taking place within the global health policy community around new ideas for advancing health technologies. To support these discussions, studies that quantify the size of potential product markets for neglected and Type II diseases and continued analysis of the expected impact of policies that governments and private funders can sponsor to promote R&D for global health need to be carried out.

## REFERENCE

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