to enter into agreements with the company. "They're in control until the very end. If they don't want to work with us that's their prerogative," Palkowitz says. Three already have opted to do so, however, including groups at the University of Notre Dame in South Bend, Indiana, the University of California, Irvine, and an unnamed European university.

For Lilly, the incremental cost of setting up and running the program was minimal, as it had already invested in the supporting infrastructure. Only a small team is needed to manage the additional workload. "It's far less than one percent of our discovery workforce," Palkowitz says. Its manageability stems from its many-to-one flow of information—Lilly is not planning the reverse, that is, the opening up of its internally generated chemistry to third parties. "We didn't pursue that because it's more complex by orders of magnitude," Palkowitz says.

The WIPO Re:Search consortium is doing just that, however. Its members are making available extensive IP assets and compound libraries to third parties. "We've licensed the entirety of our IP estate, with the exception of IP that describes specific clinical programs," Maraganore says. In total, the company has over 1,800 patents or active patent applications concerning different aspects of RNA interference technology. "There were concerns, but they were the concerns that often come out of the mouths of lawyers who typically say 'do nothing' because of a 0.001% probability of something bad happening," he says. Alnylam's contribution is at the level of tools, technologies and know-how that will likely be used in assays. Because of cost constraints in the target countries, the Re:Search initiative will focus on developing small-molecule drugs rather than biologics or RNA interference therapies.

Given the lead times associated with drug discovery and development, it will take several years to judge whether any of the present initiatives are successful. But what will be apparent by then is whether open innovation and precompetitive collaborations and consortia, as applied to drug discovery, are just a passing fad or an alternative (and perhaps better) way of structuring and managing pharmaceutical R&D.

"The myriad 'open' initiatives are only going to be impactful if they make our innovation system more efficient and equitable," says one of the early proponents of open-source biology, Richard Anderson, director of the Initiative for Open Innovation at Queensland University of Technology, in Brisbane, Australia. "To do this they have to be transparent and inclusive, and we have a very long ways to go." For Evotec's Lanthaler, products will the ultimate arbiter of success. "Don't judge it from the input, judge it from the output," he says.

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Around the world in a month