

Compound interest found outside company walls



InnoCentive helps Eli Lilly and Company speed R&D

A time and resource challenge

The situation faced by Eli Lilly and Company's Dr. Chris Schmid was typical of many R&D operations managers. Schmid's Chemical Process R&D group was working to synthesize a clinical candidate. The work was complex, and time and resource constraints placed additional pressure on the group.

Dr. Schmid's team saw an opportunity for a new starting material for synthesis. They found and purchased a raw material that would work, but there was a catch: The group had to chemically lop off a chunk of it before the rest could be used as an intermediate in the synthesis.

"It was kind of like buying an 8-foot piece of lumber and cutting it down to 5 feet, because no one sells 5-foot pieces. We thought it would be great if someone could make the intermediate directly, so that we could start the synthesis with the intermediate compound and save a tedious, time-consuming step," said Schmid.

But Schmid and his group were already too busy to take on the project of designing a new synthesis for the intermediate compound in the quantities they needed.

Enter InnoCentive

InnoCentive is the first online company that allows world-class scientists and science-based companies to collaborate in a global scientific community. *Seeker* companies post scientific problems as InnoCentive Challenges™ on the InnoCentive Web site, where *Solver* scientists worldwide register to solve them. The results are innovative solutions for these companies and financial awards for the Solvers with the best solutions.

Real results – fast

Schmid decided to post his team's synthesis problem on InnoCentive. "I figured we could at least put the problem out there and see what happened," he said. "If we received a solution, great. If not, we were no worse off than before."

Three months later, Schmid's team had its solution, and an InnoCentive Solver scientist received the \$25,000 Challenge award.

Uniquely prepared minds

The InnoCentive approach is based on the reality that scientific discoveries are often a matter of the right person being in the right place at the right time. As InnoCentive CEO Darren Carroll notes, "This is the democratization of science. Your research will be judged on its scientific merits, not where you went to school or where you live."

While the anonymity of Solver scientists is protected by InnoCentive, successful Solvers often choose to reveal their identities. That's how Chris Schmid learned that the scientist who made life easier for the Eli Lilly Chemical Process group was himself a retired chemist from a large R&D operation. He was a scientist with the right kind of preparation to solve the problem.

InnoCentive's Chief Scientific Officer, Dr. Jill Panetta, leads the InnoCentive Scientific Operations group, which serves as intermediary between Seekers and Solvers. She has seen the "prepared mind" concept play out repeatedly at InnoCentive – as was the case with Schmid's Challenge.

"The scientist went through three iterations, each building on the one before," Panetta recalled. "We showed our Seeker [Schmid] the three iterations to determine whether we had a solution that met the necessary criteria."



Dr. Chris Schmid, R&D Operations Manager, Eli Lilly and Company

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Schmid informed Panetta that the proposed solution was not quite adequate and described an additional step that the scientist could have taken.

"I explained to the Solver scientist that the solution did not meet the problem criteria. I also described what seemed to be missing. There was a pause, then he told me to look on the Web site," Panetta said. "He had already posted a fourth version of the solution that took the additional step we'd discussed and solved the problem."

"It was extremely interesting to see his thinking and the steps he took to arrive at this solution," Schmid said. Now that Schmid's group has optimized the Solver's chemistry and is considering it as a route of manufacture for drug development, he plans to include the Solver scientist's name as a co-author of a published paper about the experience.

A win inside and out

Eli Lilly has realized financial savings – "We could not have solved this problem in-house for \$25,000," Schmid notes – and time savings, both in terms of accelerating the project schedule and the months the Chemical Process R&D group did not have to spend solving the problem posted on the InnoCentive site.

InnoCentive also made the outsourced discovery process seamless. "InnoCentive required just a small fraction of the outsourcing commitment I'm used to in terms of communication, administration, and oversight," Schmid said. "The neat thing is that you 'set it and forget it.' You define a problem well, put it out there, and when solutions come in you evaluate them."

The solution's value has extended beyond the company's walls. As Schmid explains, "The Solver's approach uses a different chemistry than what has typically been employed in the past to make this raw material. With the InnoCentive solution, we can now approach a new group of chemical companies to see if they are

interested in supplying the raw material. The net result will be an increased number of suppliers, with the potential to lower the cost of the raw material through competitive pricing."

The Seeker – Solver connection

The benefits of using InnoCentive are mutual. The retired chemist who solved the Challenge clearly enjoyed the intellectual aspects of working on it, according to Dr. Panetta. The more than 70,000 scientists across more than 60 disciplines now registered as InnoCentive Solvers routinely cite intellectual challenge as their top reason for participating.

The financial incentive is also important, as well as the recognition that comes in such forms as the article Schmid plans to co-author. And the personal fulfillment of continuing to contribute in one's chosen endeavor is undeniable.

"Before he retired, the chemist who solved this problem was promoted to a level where he no longer worked in the lab doing what he enjoyed most," Dr. Panetta explained. "Now, in retirement, he is back to making a needed contribution in his chosen field."

Like Panetta, Schmid is impressed with the way InnoCentive has grown since his Challenge was solved, but not surprised. "It's a solid and proven way to improve R&D for problem-posers and a real financial benefit for problem-solvers." A clear sign of InnoCentive's success within Eli Lilly is that other scientists have continued to post Challenges themselves.

"InnoCentive follows a brightly conceived, innovative strategy, with a business model inherently set up to get results," he said. "We look at the results we achieved, and it was win-win-win all the way around."

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