

Staggering Challenges over multiple stages, such as a Theoretical Challenge followed by Reduction to Practice (RTP) Challenge, can have a number of benefits including helping to inform the viability and direction of the final solution requirements, incentivizing Solver participation by reducing risk, and allowing for more advanced deliverables. This is an approach AstraZeneca has employed twice in recent Challenges; both occasions involved a Theoretical Challenge, requiring Solvers to submit only a written proposal, followed by a RTP Challenge.

Challenges

Targeted Delivery of Oligonucleotides

- Here AstraZeneca was looking for a novel, platform technology to facilitate the selective delivery of short chain oligonucleotides – an emerging treatment option for various diseases.
- After receiving over 50 submissions from around the world, AstraZeneca ran a follow-on RTP Challenge for winning Solvers of the preceding Theoretical Challenge. This was run in two phases. The first required proof-of-concept test data in vitro and the second required in vitro validation of the delivery technology using clinically relevant oligonucleotides provided by the Seeker.
- The RTP Challenge is currently open.

Developing a Retrievable Device for Islet Transplantation

- Here AstraZeneca was looking for a simple device for the transplantation and subsequent retrieval of human islets, a procedure which could be used to regulate blood glucose levels in diabetics as an alternative to the self-administration of insulin.
- After receiving 25 submissions, AstraZeneca again ran a follow-on RTP Challenge to which the winning Solver was invited to participate.
- The RTP Challenge is currently open.

Since 2014, AstraZeneca has posted 18 Challenges with InnoCentive. From these Challenges, 15 winners have been awarded a total of \$268,000.

Public Challenges

InnoCentive's Challenge Driven Innovation™ methodology allows for Challenges to be run either anonymously or publically. Both options have their merits but for AstraZeneca, public was felt to be the right choice, as Rob Albert from AstraZeneca explains: "We have a strong reputation for delivering lifesaving medicines, and we want our name to inspire people to work with us and to help us solve our tough problems."

"Challenge Design is an area where partnering with InnoCentive makes a big difference, particular with complex problems such as this, crafting Challenges in such a way to make them as attractive to Solvers as possible."

Rob Albert, Collaboration Specialist at AstraZeneca