



Discovery Fast Track Challenge



The world is eager for new medicines. This is your chance to join GSK scientists—helping to put your novel drug discovery concept on the fast track.

Are you an academic researcher in Europe or North America? Do you have a drug discovery concept you're eager to explore?

The Discovery Fast Track Challenge could be just what you need.

Tell us about your idea. Our expert judges will select up to 12 researchers to win a collaboration with GSK. You'll work side-by-side with GSK scientists, discovering active compounds using our high-throughput screening capabilities and extensive compound libraries.

Is the Discovery Fast Track Challenge right for you?

- Do you have a clear therapeutic hypothesis?**
We are looking for a coherent and supportable hypothesis for the development of a medicine that would provide therapeutic benefit to particular groups of patients.
- Do you have a defined target and/or pathway?**
You should have identified a specific drug target linked to disease and can propose ways of modulating this to provide an effective and safe therapy.
- Do you have enabling expertise?**
The Discovery Fast Track Challenge is a partnership. You should have generated data which provides proof of concept for your proposal and, ideally, already developed key reagents and assays.

If you answered “yes” to the above questions, then this is a great opportunity for you.

Get the details at gsk.com/discoveryfasttrack



Enter the Discovery Fast Track Challenge for a chance to collaborate with GSK.

Submit your novel drug discovery concept and you could find yourself on the fast track. Winners from Europe and North America will gain access to the experience and resources of GSK.

GSK partnerships provide world-class knowledge in lead discovery and access to our unique compound collections of highly diverse chemistry. Using our expertise in drug discovery, we will provide high-quality probes to address your biological questions.

Reagents and Assays

Reagents and assays are customized to identify quality chemical probes. A wide range of biochemical, biophysical, cellular and phenotypic assays can be exploited and scaled to meet lead discovery needs.

HTS

High Throughput Screening (HTS) enables the testing of millions of pure compounds using a diverse set of technologies in biochemical and cellular assays of different complexity. The GSK HTS chemical library consists of around 2 million compounds selected to enhance the success in finding high-quality molecules for lead optimization programs. The infrastructure in miniaturization, robotics and data analysis—together with years' of experience—make HTS a fast and high-quality process. Results are analyzed with sophisticated chemical probe selection algorithms that include robust statistics, chemical clustering, data mining and physicochemical properties.



Hit Qualification Support

Selecting the optimal tool compound(s) from the hundreds or thousands of raw screening hits typically requires the use of a range of assays (e.g., biochemical, biophysical, cell-based), along with computational chemistry approaches to identify emergent structure-activity relationships. To accomplish this, GSK operates a fully integrated environment, and takes a holistic computation and experimental approach. We provide both the relevant measurements and the interpretational guidance, ensuring the selected compounds possess the best chemical properties and interact with the target via a desired modality.



Encoded Library Technology (ELT)

ELT is an affinity-based selection methodology for hit identification. This technology is based on the synthesis and screening of a highly diverse collection of DNA-encoded small molecules. In a simple affinity selection experiment, libraries containing billions of compounds are exposed to the target. Bound molecules are then recovered and de-convoluted using next-generation sequencing. This technology has minimal target requirements and has been successfully applied to a range of enzyme, protein-protein and receptor targets, including protein isolated from patients.

For details on how you can take advantage of this opportunity, visit gsk.com/discoveryfasttrack