

PRODUCT SPOTLIGHT

**SIMPLIFIED GENE EDITING**  
NEW ONLINE TOOLS MAKE SOPHISTICATED CRISPR GUIDE DESIGN FAST AND EASY FOR ALL RESEARCHERS

In mid-May of this year, Synthego, a leading provider of genome engineering solutions, announced online CRISPR tools that make accessible over 100,000 genomes for free, fast, and easy target design. The software consists of a guide designer and a design validator and addresses gaps in the CRISPR design process. It also allows both sophisticated and novice researchers to reduce the time it takes to create optimal designs from hours to minutes.



A well designed CRISPR guide is a critical factor in achieving high efficiency gene edits with minimal off-target effects, the company explains. However, to properly design a guide using today's tools requires a significant amount of effort and time. Current design tools are very limited in the number of genomes available, and require multiple time-consuming steps across a complex user experience. As a result, researchers often invest significant time into learning and setting up tools, understanding sophisticated methods for choosing CRISPR targets, and then manually curating CRISPR targets through multiple steps in a sub-optimal design process.

With Synthego's new CRISPR design tool, researchers are able to select a desired gene of interest from a curated list of more than 100,000 genomes, compared to the less than 100 provided by previous tools. The tool then uses several built-in algorithms to instantly generate guide designs and recommendations for the most efficient targets with low off-target effects and highest likelihood to knock out the function of a gene. Finally, the user experience has straightforward workflows for both advanced researchers as well as first-time CRISPR users.

**The new Synthego CRISPR tools are free to use and available at <http://design.synthego.com>**

**LAB AUTOMATION**

**Personal Pipetting Robots**

**OT-One S**

- Starting at \$3,000, the same price as the previous line-up of robots
- Allow users to execute experiments at two times the speed and cut the runtime of a protocol by 50%
- Can fill a 96 well-plate in less than 90 seconds
- Offers an affordable alternative to manually pipetting by hand and frees up scientists' time at the bench



Opentrons

<https://opentrons.com>

**Automated Blood Cell Washer**

**CW3 Cell Washer**

- Specifically designed to enable precise, thorough, reproducible, and rapid blood cell washing of up to 24 tubes in a three-minute run
- Engineered to combine the benefits of efficient performance with user-friendly design and safe operation
- Users can select one of the pre-set programs, allowing for time savings as well as ease of use and sample safety



Thermo Fisher Scientific

[thermofisher.com/cellwasher](http://thermofisher.com/cellwasher)

**LIFE SCIENCE**

**Human Apolipoprotein Panel**

**Bio-Plex Pro™**

- This 10-plex panel allows researchers to rapidly detect and quantify key human apolipoproteins associated with cardiovascular disease, especially within the statin pathway, as well as the widely used biomarker C-reactive protein
- Offers the largest number of apolipoproteins on the market
- Includes four targets (Apo C1, Apo D, Apo J, and Apo H) not found on other multiplex panels



Bio-Rad

[www.bio-rad.com](http://www.bio-rad.com)

**Flow Cytometer**

**ZE5 Cell Analyzer**

- The first expandable flow cytometer; comes with flexible configurations to meet a broad range of experimental complexities and throughput needs
- Can handle anything from low-complexity, two-parameter experiments to high-complexity, 28-parameter experiments
- Accessible for novice users yet powerful enough for the most experienced flow cytometry professionals
- Includes a fully integrated sample loader with the ability to handle tubes or plates without an instrument hardware change



Bio-Rad

[www.bio-rad.com](http://www.bio-rad.com)

**Advanced Flow Cytometry System**

**Aurora**

- Enables a 20+ color capability, using three excitation lasers and 50 channels
- An innovative system design allows for the implementation of more detection channels per laser than conventional flow cytometry systems
- Depending on the laser excitation wavelength, this design permits detection of any fluorescence emission in the 400-900nm range without having to change optical filters



Cytek Biosciences

[www.cytexbio.com](http://www.cytexbio.com)

**Micro-Catheter Pressure Transducers**

**FISO-LS**

- Designed as semi-disposable units for multi-use applications in the life sciences and small animal research
- More robust than disposable catheters in clinical applications
- Features a protected tip, and with proper use and care, the sensor can be used many times
- A complete system consists of a chassis, signal conditioner, and sensor



Harvard Apparatus

[www.harvardapparatus.com](http://www.harvardapparatus.com)