Synthetic Biology Automation

Ahead of the Curve.

Hudson Robotics can create the ideal workcell to meet your synthetic biology protocols – from DNA isolation, to gene construction and incorporation, through protein expression and protein-based assays.

Hudson's line of Synthetic Biology Workcells represents the perfect solution for your demanding needs. They are reliable, automated systems that run your protocols, with the flexibility to support frequent changes in your process.

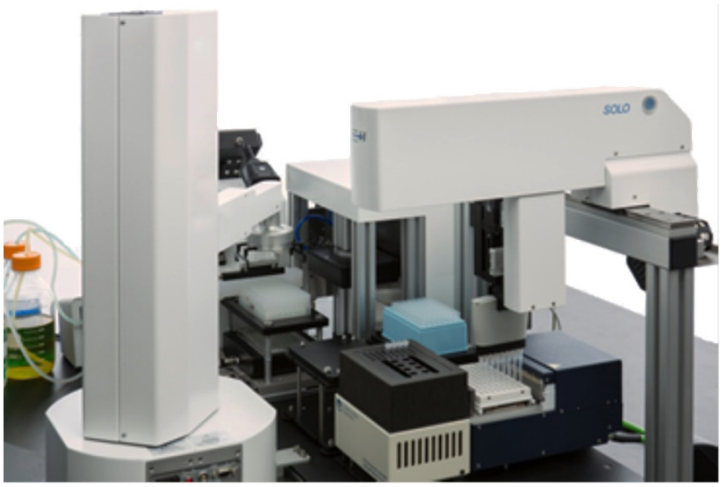
Our systems are supported by the acclaimed SoftLinx V automation control software system, allowing you to go beyond standard systems that are designed to run well-defined protocols. In contrast, our systems are perfect for designing protocol optimization studies: just select a final readout (eg. DNA absorbance), and SoftLinx will vary any number of experimental parameters to determine the optimal procedure.

Our unique combination of ease-of-use and flexibility is reflected in the system's user interface. Advanced users can create complex plug-ins that convert our workstations customized research tools. Alternatively, Hudson-developed software wizards use simple graphics to lead the neophyte through the setup and implementation of the system.

Synthetic Biology Automation

Although each Synthetic Biology Workcell can differ depending on the exact series of protocols being included, the following is true about each system:

- Handles any ANSI SLAS-standard microplate including 96, 384, as well as deep well blocks, spin filter plates and tip boxes, with and without lids.
- Supports a wide variety of DNA/RNA and protein extraction protocols from various bodily fluids, soils, plants and microbes.
- Filtration and separation by vacuum or pressure-based filtration, magnetic bead-based technology, and/or centrifugation.
- Colony Picking can be included to select successfully transformed cells. We offer multi-pin and single-pin pickers, plus pipette-based picking for semi-solid media applications.
- Supports a wide variety of automated incubators.
- Small enough to fit into a standard laboratory hood.
- Random access stackers available for RT incubation and kinetic assays
- All systems come with SoftLinx V Scheduling software. SoftLinx is an easy to use, drag and drop control program. Users can quickly and easily create automated methods.



Synthetic Biology
Automated Workcell

Hudson ROBOTICS, INC.

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Synthetic Biology

Applications

Our Synthetic Biology Workcells can be used to automate any and all stages of the typical process.

For example, we support all of the following protocols and can provide SoftLinx interfaces to all of the corresponding instrumentation:

- DNA, RNA and Protein Extraction
- PCR – as well as preparation and purification
- DNA Sequencing – preparation as well as direct interaction with the Oxford Nanopore systems
- DNA Synthesis – Oligonucleotide synthesis, both liquid handling-based, and using synthesizers, such as Bioautomation's MerMade
- DNA Sequence Insertion, including CRISPR
- Plasmid MiniPrep
- Transformation
- Colony Picking
- Protein Expression and Protein Purification

Gene Assembly Workcell

Create a Greater Impact with Your Research

Automating the tedious liquid handling associated with nucleic acid isolation, PCR and bacterial transformations will enhance your ability to produce the largest body of research. Our workcells will help you fully contribute to the hottest areas of research today:

- Antibody Engineering
- In Vivo Reporter Systems
- Regulation of Gene Expression
- CRISPR
- Gene Therapy
- Autoimmunity and Allograft Rejection
- Protein-Protein Interactions
- Epigenetics
- Understanding the Microbiome
- Discovery of new Antibiotics and other Medicines

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