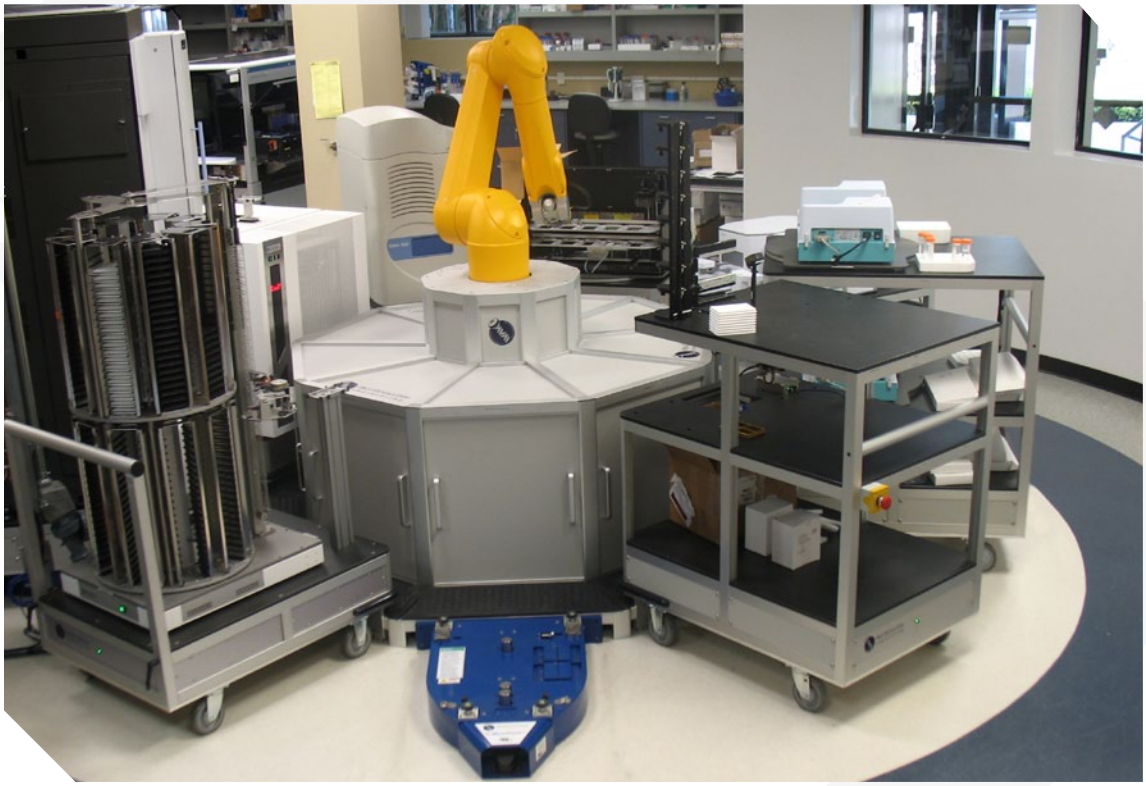
HighRes biosolutions

BURNHAM INSTITUTE for MEDICAL RESEARCH

System
Case Study

Burnham Institute
San Diego Center for Chemical Genomics



HighRes Biosolutions
299 Washington Street
Woburn, MA 01801
Tel 781.932.1912
Fax 781.938.0813
www.highresbio.com

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Burnham Institute for Medical Research is one of the fastest growing research institutes in the United States. Its mission is to identify the fundamental molecular causes of disease and devise innovative therapies to address them effectively. Burnham utilizes a unique, collaborative approach to medical research and has established major research programs in cancer, neurodegeneration, diabetes and infectious, inflammatory and childhood diseases. The Institute is known for its world-class capabilities in stem cell research and drug discovery technologies.

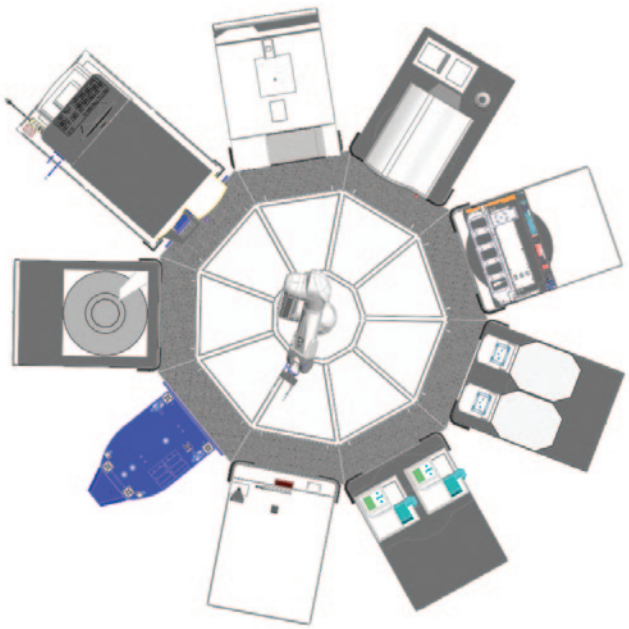
In 2007, Burnham selected **HighRes Biosolutions** to design and supply a nine-sided MicroStar™ for its San Diego Center for Chemical Genomics group, dedicated to screening enzyme assays, cell-based assays and protein-protein interactions. In its first year, High Res' robotic system produced 2.5 million data points, with information on chemical structures and their biological activities. All of this data is now uploaded to the PubChem database, allowing for universal access.

Key Components:

- **HighRes MicroPin™ pin tool** technology allows for the direct transfer of low volumes of compound in DMSO to assay plates
- **Liconic STX220 environmentally controlled incubator** stores assay plates during cell-based screens
- **Labcyte Echo®** allows for direct transfer of compounds, cherry picking, or dose-response creation
- **Thermo Multidrop Combi dispensers** can add a wide variety of assay reagents
- **Perkin Elmer Viewlux™ imager** measures fluorescent and luminescent outputs to determine compound effects on biological targets

Burnham Institute Device List

Device	Quantity	Docked
Barcode Scanner	1	No
Big Bear Shaker	1	No
HighRes Deioniser	1	No
HighRes MicroPin	1	No
Labcyte Echo	1	No
Liconic LPX440	1	No
Liconic STX220	1	Yes
Lid Hotel	1	No
Perkin Elmer Viewlux	1	Yes
Stäubli Robot	1	No
Thermo Multidrop Combi	4	No
Velocity11 Vspin	2	No



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System Advantages: *Burnham researchers, familiar with the unique advantages of HighRes technology, have this to say:*

Flexible

"For academia, docking stations are particularly helpful as they provide a cost effective way to add instrumentation to the system from around the lab."

STEVE VASILE, *Director High Throughput Screening*

Sustainable

"The docking stations will allow us to increase the life span of the system because we'll be able to swap in new technologies as they are developed."

STEVE VASILE, *Director High Throughput Screening*

Economical

"It's valuable to have the MicroPin on a turntable because we can easily access it in standalone mode to do assay development. The same instrument is then used for automated runs on the HighRes system."

CARLTON GASIOR, *HTS Specialist*

Efficient:

"Cellario is an efficient tool because of the drag and drop functionality in the Protocol Designer, allowing me to generate methods very easily. I also find it valuable to be able to simulate methods in advance of starting a run so I can adjust pacing time and know my overall run time in advance."

CARLTON GASIOR, *HTS Specialist*

The Building Blocks for Discovery.

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