

# The High-Throughput Screening Center at Southern Research

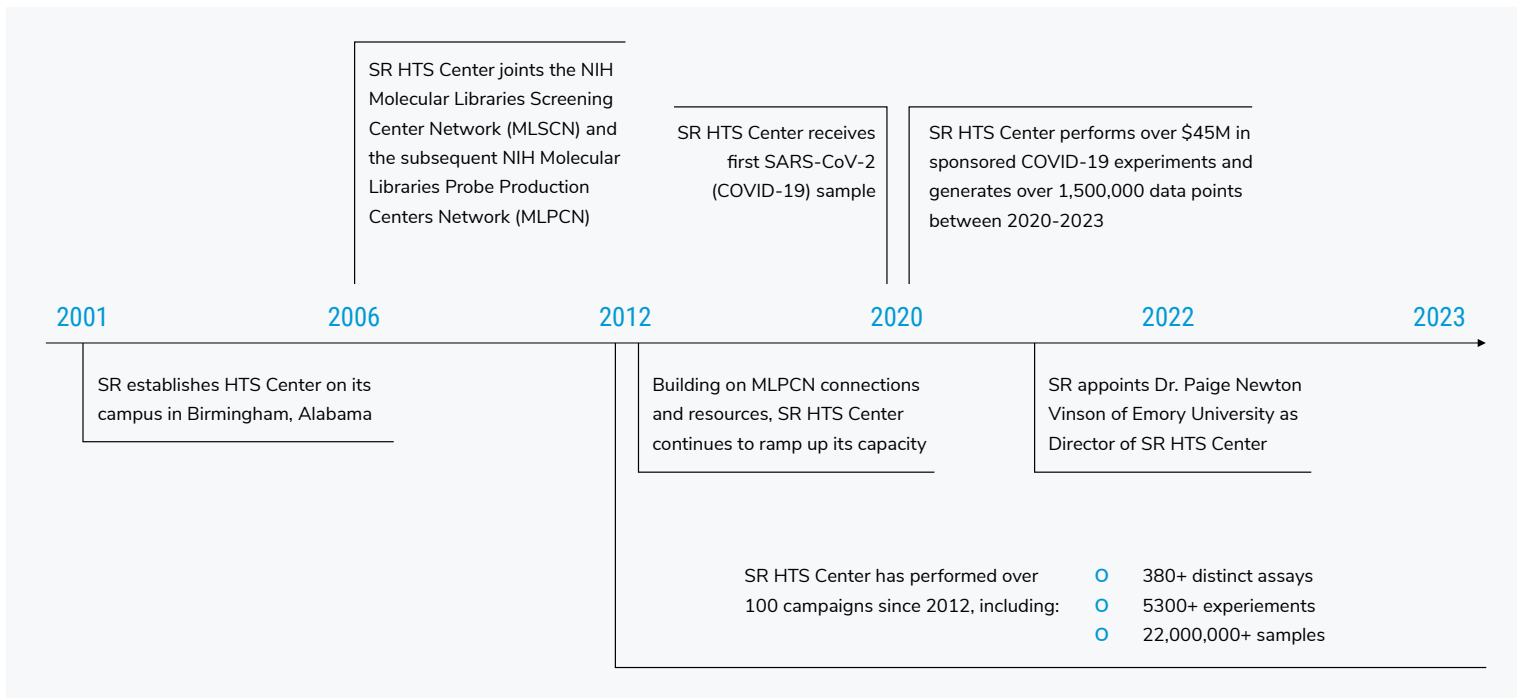
## SOUTHERN RESEARCH HTS CENTER

The High-Throughput Screening (HTS) Center at Southern Research (SR) has been a key contributor to internal and external collaborative projects by providing assay development, hit identification, and support during hit-to-lead and lead optimization stages. We have established a powerful platform to assist early and advanced antiviral programs, consisting of cell-based assays in 384-well format and multiple modes of detection, including cytopathic effect (CPE), immunofluorescence (IF), AlphaScreen (Alpha), and reporter viruses.

**100 years** Combined experience of over 100 years in assay development

**800,000+** Compound Collection

- Diverse drug-like structures
- Synthetic & naturally derived



## SOUTHERN RESEARCH QUICK FACTS



\$445M in NIH Funding since 1985



Use of BSL-2 & BSL-3 containment facilities



20 FDA-approved drugs tested



## ASSAYS

We have established a platform consisting of cell-based assays in 384-well format and multiple modes of detection, including:

- Cytopathic effect (CPE)
- Immunofluorescence (IF)
- AlphaScreen (Alpha)
- Reporter viruses

Assays have been developed and are available for rapid turnaround of results for different virus strains within the families including:

- Coronavirus
- Influenza
- Alphavirus
- Flavivirus
- Pneumovirus

## ASSAY DEVELOPMENT

01. Selection of appropriate cell lines
02. Selection of detection modes (e.g. CPE, IF, Alpha, or reporter read-out)
03. Determination of optimal virus addition
04. Consideration of any proposed mechanism of action of the test agents

The optimized assays exhibit robust performance and have been confirmed relevant by measuring the activity of known active reference small molecules or antibodies. The assays' performance justifies application in either single concentration hit-identification screens or potency measurements to determine structure-activity relationships. When required, correlation of results to other established assays have been obtained to validate the high-throughput approach. The methodology also facilitates more complex designs such as combination experiments testing the existence of synergy between two compounds.