

**ValitaCell**  
Analytics Reimagined

# ChemStress<sup>®</sup>

## Clone & Media Robustness Screening

Functional performance data for cell line selection  
and process development

# ChemStress® technology

## Clone & Media Robustness screening

### CLONE & MEDIA ROBUSTNESS ASSAY

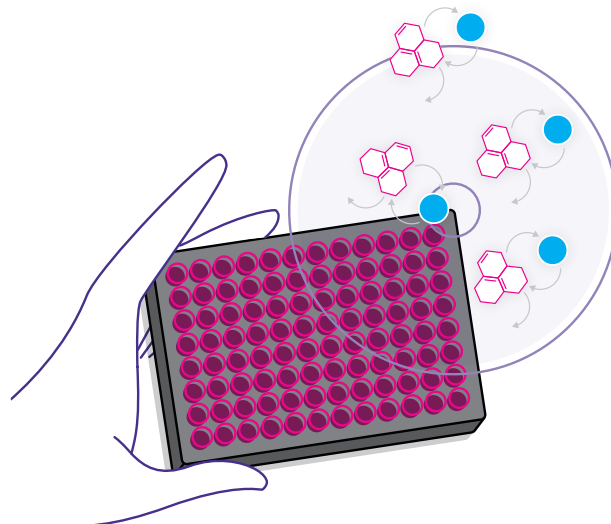
Standard cell viability and titer measurements are performed in optimal conditions.

However, this approach is not representative of real-world bioprocessing environments.

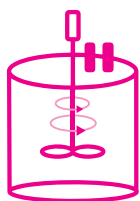
**ChemStress® CHO Robustness** is a functional, data rich, multi-well plate-based assay that powers robustness ranking.

### INDUSTRY RELEVANT BIOPROCESS STRESSES

Cells are exposed to 21 small molecules that challenge key production pathways and mimic the stresses that cells are likely to experience in production.



#### Bioreactor Stressors



Cell Cycle Inhibitors



Apoptosis Modulators



Nutrient Depletion



Oxidative Stresses



Osmosis Variations



Metabolic Stressors



Genetic Stressors

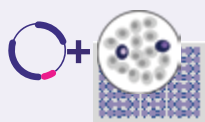


### APPLICATIONS

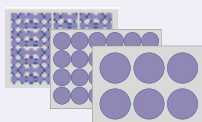
Clone and media selection from robustness ranking in a quick and efficient way.

- Cell Engineering
- Cell Line Development
- QC Release Tests
- Process Characterization
- Process Optimization

#### Transfection & Pool Selection



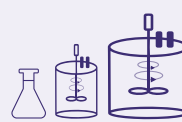
#### Cell Line Development



#### Process Development



#### Scale-up



#### Production



# ChemStress<sup>®</sup> technology

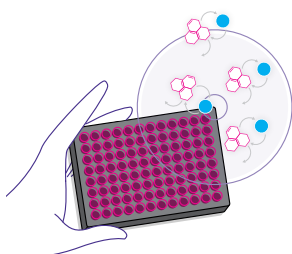
## Clone & Media Robustness screening



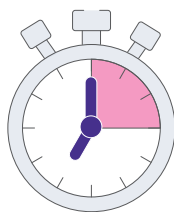
### WORKFLOW

#### ADVANCED DATA ANALYSIS

Incubate your cells and/or media with ChemStress<sup>®</sup> and simply use a standard plate reader to measure cell viability and/or titer to generate rich data on performance in a small-scale production bioreactor environment.



**EXPOSE CELLS**  
to chemicals stressors



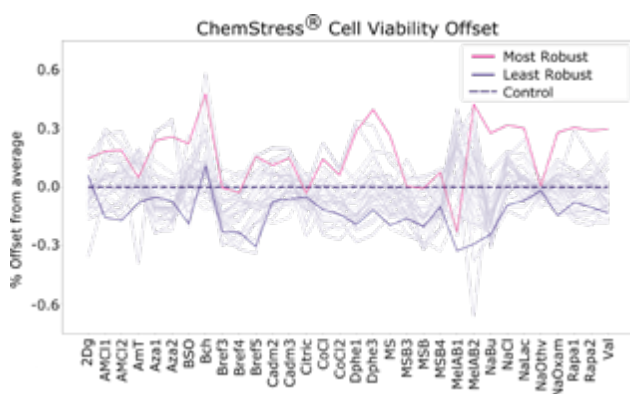
**INCUBATE**  
for 72 hours



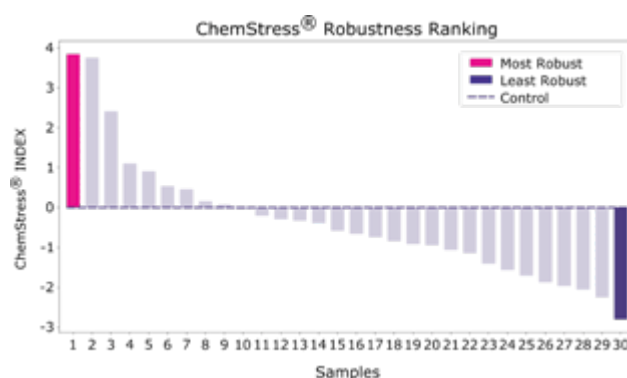
#### MEASURE BIOLOGICAL READOUT

- Cell viability: Resazurin based dye
- Cell productivity: Valita<sup>®</sup>Titer plates

### CASE STUDY



Drive your clone and media selection with rich functional performance information and advanced data analysis. ChemStress<sup>®</sup> CHO Robustness ranking offers an innovative and actionable index to streamline your clone and media ranking selection process.



Maximize the value of your bio-manufacturing by de-risking the process with ChemStress<sup>®</sup>.



# CHEMSTRESS® SERVICES

## OUTSOURCING SERVICE

Ship your media or clone to our lab and get results



Run ChemStress® in ValitaCell's fully optimized automated platform.

## IN-HOUSE SERVICE

Get lab and data analysis consultancy service in-house for your lab



Run ChemStress® in your lab with ValitaCell scientists' consultancy.

**Get in touch with us today:**



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