

*A Strategic and Innovative Bioprocessing Solutions Alliance*



# BioProcessing Solutions

powered by  **RUCDR**  
INFINITE BIOLOGICS

## Genotyping Capabilities and Technologies

**Bioprocessing Solutions is an integrated, state-of-the-art scientific approach and technology infrastructure for the delivery of advanced sample bioprocessing and biobanking services. These solutions are offered through an innovative, strategic alliance between BioStorage Technologies, Inc. and RUCDR Infinite Biologics.**

**Low Throughput Genotyping** – Genotyping solutions for tens of samples for tens of targets.

## Capabilities:

- Automated DNA extraction (small, medium, large scale)
- Integrated sample and data QC
- Automated liquid-handling for PCR reaction setup
- Variety of chemistries available: Taqman™, SNPtype™, Somatic Mutation
- Assay design and wet bench validation at no additional cost
- Genotyping reports included

## Technologies:

- Allelic Discrimination, SNPtype and Amplification Refractory Mutation chemistries utilized for genotype and somatic mutation analysis. All reactions are setup using sophisticated liquid handling instruments to minimize variation and ensure high quality data.
- ABI 7900HT - This Fast Real-Time PCR System combines 96- and 384-well formats with fully automated robotic loading and fast real-time PCR capability.
- ViaVII Instruments - This high performance instrument, delivers exceptional reproducibility with minimal well-to-well and instrument-to-instrument variation for high-productivity real-time PCR processing.



**BioStorage Technologies, Inc.**  
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**Medium Throughput Genotyping** – Genotyping solutions for hundreds of samples for hundreds to thousands of targets.

## Capabilities:

- Automated DNA extraction (small, medium, large scale)
- Integrated sample and data QC
- Automated liquid-handling for PCR reaction setup
- Variety of chemistries available: Taqman™, SNPtype™, Somatic Mutation
- Assay design and wet bench validation at no additional cost
- Custom assay designs and catalogue array formats for BioMark™ and WaferGen™ systems
- Automated genotyping calling and performance metrics for all platforms
- Genotyping reports included

## Technologies: Automated Allelic Discrimination

Automated high-throughput, small-volume PCR technologies are provided by the Bioprocessing Solutions Alliance team to support medium throughput SNP genotyping and copy number variation analyses. Automated reaction preparation protects against sample contamination and ensures robust and reproducible data generation.

- ABI 7900HT or Via7II Instruments
- Fluidigm BioMark™ System using 96.96 and 48.48 Dynamic Arrays – capable of 9,200 genotypes in picoliter volumes in 90 min.
- WaferGen™ SmartChip Catalogue and MyDesign™ Arrays – capable of 5000+ genotypes in any sample or assay format desired.
- Beckman Coulter GenomeLab SNPstream™ Genotyping System - capable of performing from 4,600 to over 3,000,000 SNP genotypes per day.



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**High Throughput Genotyping:** Genotyping for thousands of samples for hundreds/thousands of targets and/or whole genome analyses.

## Capabilities:

- Automated DNA extraction (small, medium, large scale)
- Integrated sample and data QC
- Automated liquid handling for PCR reaction set up
- Taqman™ Array, SmartChip™ and BioMark™ array design and validation
- Assay design and wet bench validation included at no additional cost
- Custom designed assay panels for Ion Torrent Personal Genome Machine and Illumina MiSeq NextGen sequencing (including variant calls)
- Automated genotyping calling and performance metrics for all platforms
- Automated microarray sample processing and array development
- Automated library prep for NextGen sequencing based genotyping
- Genotyping reports included

**Technologies:** The Bioprocessing Solutions Alliance team offers high throughput genotyping technologies for PCR, microarray and NextGen sequencing. All sample preparation protocols are fully automated to ensure contaminant free, robust genotyping analysis across platforms. Integrated sample management, nucleic acid extraction and genotyping service bundles are available.

- Taqman Arrays using ViaVII Instruments
- Affymetrix GeneChip and GeneTitan Systems for all Affymetrix Genotyping products
- Illumina iScan Systems for all Illumina Genotyping products
- Ion Torrent PGM targeted sequencing panels
- Illumina MiSeq targeted sequencing panels



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## Sample Storage and Management Capabilities:

- Mechanical: -70°C, -80°C, -20°C, 5°C
- Automated: -80°C
- Liquid Nitrogen: -190°C (liquid and vapor phase storage)
- Bulk or non-bulk: 15°C – 27°C



**BioStorage Technologies, Inc. is the leading global provider of comprehensive sample management solutions to the bioscience industry and RUCDR Infinite Biologics is a global leader in the bioprocessing, biobanking and testing of samples for genetic, gene and cell-based research.**

Through the BioProcessing Solutions Alliance, comprehensive sample management is provided to meet your research needs from study design, implementation to execution. Our sample bioprocessing solutions maximize the discovery process and protect precious biomaterial resources for future analyses allowing stakeholders to optimize the value of biological assets. Innovative workflows, cutting edge analytical approaches, and robust biomaterial storage processes enhance the value of any collection.



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