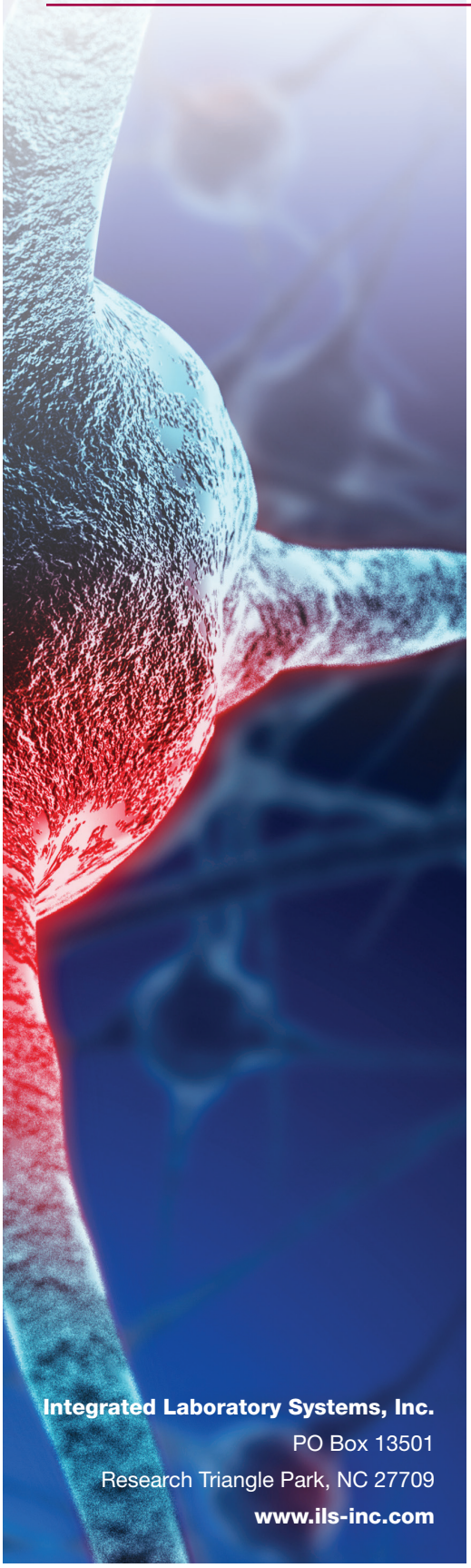
ILS
Advancing Science, Improving Lives

Molecular Biology



Overview

- GLP-compliant molecular biology facility
- Well defined SOPs and proficiency training
- Extraction methodologies for a broad range of tissues and species, including whole blood, PBMCs, fresh or frozen cell lines/tissues, and FFPE samples
- Segregated pipettes and reagents and areas/rooms for RNA extractions
- Expertise in designing assays for use with degraded or limited samples
- Expertise in designing complex PCR assays for genes with significant homology to other genes or pseudogenes

Next Generation Sequencing Technology

- Capable of conducting a full range of genomic analysis
- Targeted RNA analysis and whole transcriptome sequencing
- Targeted amplicon resequencing
- State-of-the-art Illumina NextSeq 500 and NeoPrep Library Prep Systems

Toxicogenomics

- Integration of traditional *in vivo* and *in vitro* toxicology studies with genomic profiling
- Examine mechanisms of action (MoA)
- Identify common response pathways and gene signatures
- Determine quantitative relationships between dose and response for use in risk assessments

Gene Expression/DNA Detection via PCR

- Nucleic acid extraction and quantitation
- Quantitative Real-Time PCR
- Detection and quantitation of specific mRNA and lncRNA species
- TaqMan® and SYBR® Green chemistries
- ViiA™ 7 Real-Time PCR System

Protein Characterization

- Protein extraction
- Western blotting
- Enzyme assays (e.g., CYP450 enzymes)

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