

ToxExpress® Program

A flexible, enabling program that brings the power of toxicity-based gene expression to lead optimization and drug safety studies: more information to support better informed drug development decisions

Gene Logic's ToxExpress® Program empowers pharmaceutical and biotechnology companies to enrich their internal knowledge of biological and molecular events induced by proprietary compounds using toxicogenomic analysis. Accessing Gene Logic's ToxExpress® Program subscription products, professional services, and customized applications helps researchers address critical issues in predictive, mechanistic, and investigational toxicology as well as safety marker discovery.

The ToxExpress® toxicogenomic product and service offering utilizes our world's largest collection of gene expression profiles of human and animal tissues and primary cells from toxicology studies that include time-course, dose, and clinical pathology information following in vivo and in vitro treatment with well characterized pharmaceuticals and chemicals.

Only Gene Logic can extend gene expression analyses across rat, canine, and normal and diseased human tissue samples. This provides:

- Better understanding of the impact a toxicant has across highly diversified, multifunctional gene sets and numerous pathways
- A greater level of compound characterization in a single experiment than ever before
- Ability to examine the species specificity of gene dysregulation and its relevance to human toxic response
- Possibility to find out which rat markers are good human candidate biomarkers by mapping selected biomarkers to different species-specific data sets, often within weeks.

Using any one or a combination of our toxicogenomics products and services can help to build the internal knowledge often sought by pharmaceutical companies.

Research and Development Area	Applications Supported by the ToxExpress® Program	Gene Logic Subscription Products	Gene Logic Professional Services
Investigative Toxicology	<ul style="list-style-type: none"> • Cross species analysis • Species specificity testing • Compound/gene/pathway benchmarking • Hypothesis testing 	<ul style="list-style-type: none"> • ToxExpress® System • ToxSuite™ Datasets 	<ul style="list-style-type: none"> • Custom Analysis
Predictive Toxicology	<ul style="list-style-type: none"> • Computational Predictive Models • Mechanistic Determinations 	<ul style="list-style-type: none"> • ToxExpress System • ToxSuite™ Datasets • ToxShield™ Suite 	<ul style="list-style-type: none"> • ToxScreen® Reports
Mechanistic Toxicology	<ul style="list-style-type: none"> • Biological mapping • Time and dose relationships • Pathway/gene dysregulation • End point pathology relationship to gene expression • Hypothesis testing 	<ul style="list-style-type: none"> • ToxExpress System • ToxSuite™ Datasets 	<ul style="list-style-type: none"> • Custom Analysis
Safety Marker Discovery	<ul style="list-style-type: none"> • Tissue specific • Species specific • Pathway specific • Compound specific • Hypothesis testing • Leading/Diagnostic 	<ul style="list-style-type: none"> • ToxExpress System • ToxSuite™ Datasets 	<ul style="list-style-type: none"> • Custom Analysis

Subscriptions	Description
<p>ToxExpress® System The foundation of Gene Logic's toxicogenomics capabilities</p> <p>Developed in collaboration with major pharmaceutical companies</p>	<ul style="list-style-type: none"> • Represents the largest database of its kind, comprised of over 14,000 transcript profiles from well characterized reference compounds tested in rat in vivo and rat, human, and canine in vitro systems • Provides compound selection, study protocols, and resulting in-life data that are stringently evaluated by a consortium of our customers • Results in consistent, robust data that serves as a premier reference source for both gene expression and related in-life toxicology data
<p>ToxSuite™ Dataset</p>	<ul style="list-style-type: none"> • Derived from the ToxExpress® System and includes data based on organ and /or cell type • Is customized by the client to align to key therapeutic and/or compound class research areas efforts • Results in robust data that serves as a reference source for both gene expression and related in-life toxicology data
<p>ToxShield™ Suite The newest product offering, available as a fully deployed server or web application</p> <p>Offered across <i>in vivo</i> liver And <i>in vivo</i> heart</p>	<ul style="list-style-type: none"> • Based on Gene Logic proprietary predictive toxicogenomic models and identified toxicity markers • Assesses and rank orders to prioritize candidate drug compounds based on their potential toxicity • Characterizes proprietary candidate compounds for predicted toxicity • Proposes likely-induced pathologies • Identifies reference compound matches from those residing in the ToxExpress® Reference Sets • Enables users to select markers for screening based on overall marker response to diverse compounds
Services	Description
<p>ToxScreen® Report</p> <p>Offered as a service across liver and heart</p>	<ul style="list-style-type: none"> • Based on Gene Logic proprietary predictive toxicogenomic models and identified toxicity markers • Represents compound-specific predictive toxicity reports • Utilizes Gene Logic's proprietary and validated predictive toxicogenomic models
<p>Custom Analysis</p> <p>Customized toxicogenomic analysis, fits specific client needs</p>	<ul style="list-style-type: none"> • Effectively examines time and dose responses across any number of parameters, as well as unique compound issues such as muscle toxicities • Provides cross-species analysis, safety marker identification, and species specificity testing • Is initiated with scientific discussion from our experts to yours • Results in a project proposal and definition of work • All along the way collaborative discussion and thorough understanding of the data is kept to the forefront



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