



## Quest Diagnostics Introduces Comprehensive Opioid Therapy Genetic Test Based on CYP450 Biomarker License with Transgenomic

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**Believed to be first clinical test to identify variants of four enzymes that mediate drug metabolism, providing greater insights for guiding treatment for the more than 100 million Americans with chronic pain**

MADISON, N.J., Aug. 8, 2013 /PRNewswire/ -- Quest Diagnostics (NYSE: DGX), the world's leading provider of diagnostic information services, today announced the availability of a new lab-developed genetic test to aid the delivery of personalized opioid pain-relieving treatment. It is believed to be the first clinical lab to offer testing for variants in all cytochrome P450 (CYP450) genes known to influence the CYP450 enzyme system, which affects metabolism of opioids and other medications.

(Logo: <http://photos.prnewswire.com/prnh/20130717/NY48934LOGO>)

The test is based in part on gene variants owned by Transgenomic, Inc. (OTCBB: TBIO) through a non-exclusive licensing agreement between the two companies. Quest Diagnostics developed, validated and now offers the test service through its advanced Nichols Institute facility in San Juan Capistrano, Calif. Additional terms were not disclosed.

More than 100 million Americans in the United States suffer from chronic pain. Opioids, which include oxycodone and methadone, are widely used in the management of moderate to severe pain. While opioids are the most widely prescribed class of medications in the United States, they are also implicated in high rates of drug addiction and overdose.

Research demonstrates that genetic testing to identify gene variants that mediate the CYP450 enzyme system can help physicians predict the rate of opioid drug metabolism. With this information, physicians can decide to adjust doses or administer other therapies in order to improve the prospect for effective pain relief and reduce the likelihood of drug toxicity, drug interactions and other adverse outcomes.

"Genetic testing to personalize the use of pain-alleviating drug therapies is an exciting new clinical field with tremendous potential to promote favorable outcomes for the many millions of individuals struggling with pain," said Charles (Buck) Strom, MD, PhD, senior medical director, Genetics, Quest Diagnostics. "Opioids can be very effective pain-alleviating medications, but they are also powerful and potentially dangerous drugs carrying a high risk of addiction, toxicity and other adverse effects. The inclusion of Transgenomic's gene discoveries into our genetic testing services will provide physicians with greater insights for safely and effectively administering opioid treatment."

"The vast majority of differences in liver enzyme activity are due to genetic variation between individuals, differences that can cause a drug or metabolite to leave the body too rapidly or remain in the body too long," said Craig Tuttle, chief executive officer of Transgenomic. "Quest Diagnostics' strong record of innovation in genetic testing and relationships with physicians makes them well suited to maximize the value of our gene discoveries as new clinical tests for advancing the field of pain management."

Quest Diagnostics is a leader in clinical and workplace drug toxicology test services. The company's services aid the clinical management of patients prescribed opioids, narcotics and other medications as well as employer screening for workplace drug misuse. The company also produces original research on prescription drug trends as part of its series of Quest Diagnostics Health Trends reports, which provide insights into critical health issues based on the company's national testing data. For more visit [www.QuestDiagnostics.com/HealthTrends](http://www.QuestDiagnostics.com/HealthTrends).

### About Quest Diagnostics

Quest Diagnostics is the world's leading provider of diagnostic information services that patients and doctors need to make better healthcare decisions. The company offers the broadest access to diagnostic information services through its network of laboratories and patient service centers, and provides interpretive consultation through its extensive medical and scientific staff. Quest Diagnostics is a pioneer in developing innovative diagnostic tests and advanced healthcare information technology solutions that help improve patient care. Additional company information is available at [QuestDiagnostics.com](http://QuestDiagnostics.com). Follow us at [Facebook.com/QuestDiagnostics](https://Facebook.com/QuestDiagnostics) and [Twitter.com/QuestDX](https://Twitter.com/QuestDX).

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### About Transgenomic, Inc.

Transgenomic, Inc. ([www.transgenomic.com](http://www.transgenomic.com)) is a global biotechnology company advancing personalized medicine in cardiology, oncology, and inherited diseases through its proprietary molecular technologies and world-class clinical and research services. The Company is a global leader in cardiac genetic testing with a family of innovative products, including its C-GAAP test, designed to detect gene mutations which indicate cardiac disorders, or which can lead to serious adverse events. Transgenomic has three complementary business divisions: Transgenomic Clinical Laboratories, which specializes in molecular diagnostics for cardiology, oncology, neurology and mitochondrial disorders; Transgenomic Pharmacogenomic Services, a contract research laboratory that specializes in supporting all phases of pre-clinical and clinical trials for oncology drugs in development; and Transgenomic Diagnostic Tools, which produces equipment, reagents and other consumables that empower clinical and research applications in molecular testing and cytogenetics. Transgenomic believes there is significant opportunity for continued growth across all three businesses by leveraging their synergistic capabilities, technologies and expertise. The Company actively develops and acquires new technology and other intellectual property that strengthens its leadership in personalized medicine.

### Forward-Looking Statements

*Certain statements in this press release constitute "forward-looking statements" of Transgenomic within the meaning of the Private Securities Litigation Reform Act of 1995, which involve known and unknown risks, uncertainties and other factors that may cause actual results to be materially different from any future results, performance or achievements expressed or implied by such statements. Forward-looking statements include, but are not limited to, those with respect to management's current views and estimates of future economic circumstances, industry conditions, company*

*performance and financial results, including the ability of the Company to grow its involvement in the diagnostic products and services markets. The known risks, uncertainties and other factors affecting these forward-looking statements are described from time to time in Transgenomic's filings with the Securities and Exchange Commission. Any change in such factors, risks and uncertainties may cause the actual results, events and performance to differ materially from those referred to in such statements. Accordingly, the Company claims the protection of the safe harbor for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995 with respect to all statements contained in this press release. All information in this press release is as of the date of the release and Transgenomic does not undertake any duty to update this information, including any forward-looking statements, unless required by law.*

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