



## The Right Drug at the Right Dose

Pharmacogenomics (PGx), also called pharmacogenetics or simply drug-gene testing, is the study of how genes affect the body's response to medications. The word "pharmacogenomics" is combined from the words pharmacology (the study of the uses and effects of medications) and genomics (the study of genes and their functions).

Each person's body has thousands of genes that were inherited from their parents. Genes determine familiar characteristics, such as hair color, eye color, gender, and blood type. But genes are also responsible for how the body processes and responds to medications. Pharmacogenomic tests look for changes or variants in these genes that may determine whether a medication could be an effective treatment for an individual or whether they could have side effects to a specific medication.

## Polymerase Chain Reaction (PCR)

GRI uses Polymerase Chain Reaction (PCR) to analyze the DNA in small samples of saliva. PCR is called "molecular photocopying" and is a fast and inexpensive method to "amplify" or copy small segments of DNA for analysis. PCR revolutionized the study of DNA, and enables a range of genetic testing. The results of this analysis can help determine:

- Whether a medication may be an effective treatment
- How well a patient can metabolize a medication
- How to decrease the likelihood of serious side effects

GRI Labs looks for changes or variants in one or more genes that can affect a patient's response to certain medications. The results of our analysis are presented in an easy-to-read report.

Efficient, Reliable, and Friendly Clinical Testing

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