

# Pharmacogenetics (PGx) Panel



## Blue Ridge Laboratories' Comprehensive PGx Panel

Blue Ridge Laboratories' 44 gene Pharmacogenetic (PGx) Panel tests a patient's individual genetic metabolism of all classes of medications. Pharmacogenetics testing allows providers to personalize medical treatments to individual patients, thereby, preventing trial-and-error prescribing, adverse drug reactions, and ultimately improving efficacy of the tailored treatments. PGx offers a novel approach to medical prescribing that will reduce medical costs while improving patient safety and medication success. The PGx Comprehensive Panel includes genes associated with drug metabolism with high-level evidence and clinically actionable guidelines, in addition to genes with PharmGKB evidence of 2 or higher.

### What can testing tell us?

PGx testing can reveal if a person is a fast, normal, or slow metabolizer. A person's metabolism changes the way their body responds to medication, including:

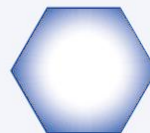
- **Toxicity** - Excessive amounts of the drug accumulate in the bloodstream, resulting in ADRs.
- **Lack of Efficacy** - The bloodstream cannot absorb enough of the drug to achieve a therapeutic effect.
- **Hypersensitivity** - Normal amounts of the drug enter the bloodstream, but even this is enough to trigger severe reactions in people with hypersensitivity to the medication.



### Adverse Drug Reactions (ADRs)\*:

- Leading cause of morbidity and mortality in healthcare
- Over 2.2 million serious ADRs in hospitalized patients annually
- Over 100,000 deaths due to ADRs annually
- Over 350,000 ADRs annually in nursing homes/assisted living facilities
- Rate of ADRs increases exponentially when a patient is on 4 or more drugs

\* <https://www.fda.gov/drugs/drug-interactions-labeling/preventable-adverse-drug-reactions-focus-drug-interactions>



### What are the potential benefits?

- Identify which drug may be most effective before treatment starts
- Reduce the risk of adverse events related to certain drugs
- Adjust and optimize the dose of current medications
- Improved patient safety

Blue Ridge Laboratories is a minority-owned, full-service, high-complexity CLIA and COLA-accredited laboratory located in Asheville, NC that is solely focused on providing accurate, affordable, and timely test results to assist providers in serving their patients with the highest level of care.