

Pharmacogenetics (PGx)

A General Practitioner's Guide

Pharmacogenetics (PGx), an important part of precision medicine, is the study of how genetic variability influences drug treatment outcomes. Recommended by Guidelines, pharmacotherapeutic genotyping is one of multiple pieces of information that clinicians should consider when making their therapeutic choice for each patient.

Pharmacogenetic (PGx) Testing with Clinical Labs

Clinical Labs' **Comprehensive PGx Gene Panel** provides clinicians and healthcare providers with comprehensive information to help determine the most appropriate treatment for each individual, particularly in areas such as mental health, pain management, cardiology and oncology. For example, *CYP2D6*, *CYP2C19*, *CYP2C9*, and *SLCO1B1* variants are responsible for the metabolism of a large number of commonly prescribed medications, including warfarin, analgesics, clopidogrel, codeine, tamoxifen, some antidepressants, statins, proton pump inhibitors (PPIs) and anti-emetics. Our Comprehensive PGx Gene Panel can detect polymorphisms in genes coding for drug metabolising enzymes that predispose individuals to metabolising drugs inadequately. *To view our full pharmacogenetics offering, scan the QR code below.*

Genes included in our Comprehensive PGx Panel	
<i>CYP2D6</i>	<i>CYP2C9</i>
<i>CYP2C19</i>	<i>CYP3A4</i>
<i>CYP3A5</i>	<i>CYP1A2</i>
<i>SLCO1B1</i>	<i>VKORC1</i>

To view a listing of the genes tested and examples of drugs metabolised as part of our Comprehensive PGx Gene Panel, please see the reverse of this flyer.

Your Comprehensive Report

With our Comprehensive PGx Gene Panel, you will receive a comprehensive report that will indicate the genotype and the predicted phenotypes, such as the metaboliser status, along with potential drug-gene interactions and Guidelines' recommendations. Please specify any medications of interest if you want them to be included in the report. The genes can be ordered separately or together - for individual genes, only genotyping/phenotyping will be reported.

When to order

Physicians may order pharmacogenetic testing at the time of drug prescribing and dispensing for patients with genotypes that require action, such as dose reductions. The preemptive use of testing could significantly optimise drug outcomes and be particularly useful for patients undergoing multiple treatments or experiencing poor drug responses.

How to order our Comprehensive PGx Gene Panel

- **What to put on the request form:** Fill out our routine Clinical Labs request form, list the gene required or group of genes and prescribed medications if available.
- **Turnaround time:** Results available 2-3 weeks after the sample receipt date.
- **Specimen details:** 2x EDTA blood samples.
- **Test cost:** An out-of-pocket fee applies. For more information, including pricing, scan the QR code or visit clinicallabs.com.au/pharmacogenetictesting



Comprehensive Pharmacogenetic (PGx) Testing Gene Panel

Examples of drugs metabolised and genes tested

About the author:



Assoc. Prof. Mirette Saad

MBBS (HONS) MD (HONS) MAACB FRCPA PHD

**National Director of Molecular Genetics
Australian Clinical Labs**

Lab: Clayton (Vic)

Speciality: Chemical Pathology

Areas of Interest: Molecular genetics, precision

medicine, cancer genetics, antenatal screening, NIPT, endocrine, fertility testing and research, medical teaching

Phone: (03) 9538 6777

Email: mirette.saad@clinicallabs.com.au