

PATIENT INFORMATION

NAME: Leland Mcmillan
DOB: 17/Jun/1959
SEX AT BIRTH: Male

SPECIMEN DETAILS

BARCODE: 0004671
SAMPLE ID: SP0004671
TYPE: Swab
COLLECTED: 25/Nov/2022

ORDERED BY

provider name
GENERATED: 15/Dec/2022

Genetic Translation and Interpretation

Summary of Markers

Gene	Allele Result	Phenotype Result
CYP2D6	*1/*10	Normal Metabolizer
CYP2C9	*1/*1	Normal Metabolizer
CYP2C19	*2/*17	Intermediate Metabolizer
SLCO1B1	*1/*1	Normal Function
CYP2B6	*1/*1	Normal Metabolizer
CYP3A4	*1B/*1B	Normal Metabolizer
CYP3A5	*1/*1	Normal Metabolizer

Additional results available in the full pharmacogenetic interpretation report: Single nucleotide polymorphisms (SNPs) used, by reference SNP ID number: rs429358 , rs7412 , rs4680 , rs12720461 , rs2069514 , rs2069526 , rs35694136 , rs762551 , rs28399499 , rs3211371 , rs34223104 , rs12248560 , rs28399504 , rs41291556 , rs4244285 , rs4986893 , rs72552267 , rs17884712 , rs56337013 , rs6413438 , rs72558186 , rs1057910 , rs1799853 , rs28371685 , rs28371686 , rs9332131 , rs56165452 , rs1065852 , rs1135840 , rs16947 , rs28371706 , rs28371725 , rs35742686 , rs3892097 , rs5030655 , rs5030656 , rs5030867 , rs59421388 , rs5030862 , rs5030865 , rs12721629 , rs2740574 , rs35599367 , rs4986910 , rs4987161 , rs55785340 , rs10264272 , rs41303343 , rs776746 , rs28365083 , rs28383468 , rs28383479 , rs55817950 , rs1799963 , rs6025 , rs1801131 , rs1801133 , rs4149056 , rs9923231

This is a short summary of the full pharmacogenetic interpretation. The patient’s results are now accessible within the clinical decision support software, TreatGx and ReviewGx, and can be used with other clinical information to enable precision prescribing and medication management.

Methods:

The results meet stringent quality control metrics for DNA isolation and genotyping. SNPs are processed in an OpenArray platform. Each call has an estimated quality value >95%, based on the autocaller algorithm in the TaqMan® Genotyper software (ThermoFisher Scientific). Copy number calls are accepted when confidence values are >95%.

Limitations:

The annotations and interpretations provided in this report are based on scientific literature and do not take into account drug-drug interactions, medical conditions or other clinical factors that may affect medication response. This test will not detect all the known alleles that result in altered or inactive tested genes. This test does not account for all individual variations in the individual tested. The test includes alleles of proteins involved in the metabolism of many medications. In rare cases, a variant that is not covered may be typed as *1 or other variants. In the case of pseudogenes and mutations in the untranslated regions of genes, incorrect allele typing may occur despite proper SNP detection. Preferential amplification of one allele over another present in the sample may also lead to incorrect genotyping.

Absence of a detectable gene mutation does not rule out the possibility that a patient has different phenotypes due to the presence of an undetected polymorphism or due to other factors such as drug-drug interactions, comorbidities and lifestyle habits. Gene-drug interactions are ranked according to guidelines, level of evidence and clinical utility. SRx Health Solutions reports and TreatGx Clinical Decision Support are regularly updated. Current predicted phenotype and allele functionality may change in the future depending on new evidence. Genetic test results and interpretation may be inaccurate for individuals who have undergone or are receiving non-autologous blood transfusion, tissue, or organ transplant therapies.

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Liability Disclaimer:

This test was developed and its performance characteristics determined by SRx Health Solutions and Diagnostics and GenXys Healthcare Systems. This is a Laboratory Developed Test that has undergone extensive verification by SRx Health Solutions and Diagnostics but which has not been cleared or approved by Health Canada or US Food and Drug Administration.

The information presented on this document is provided as general educational health information. The content is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Only a physician, pharmacist or other healthcare professional should advise a patient on the use of the medications prescribed. The pharmacogenetic assay involves use of documenting software and genotype-phenotype associations performed by GenXys and SRx Health Solutions and Diagnostics. The software has not been evaluated by the Food and Drug Administration. The software, and the document generated by the software, is not intended to diagnose, treat, cure, or prevent any disease. A laboratory professional within the lab uses GenXys to generate and subsequently review the document. The pharmacogenetic document is one of multiple pieces of information that clinicians should consider in guiding their therapeutic choice for each patient. It remains the responsibility of the health-care provider to determine the best course of treatment for a patient. The current medications list highlighted in this document should be checked for accuracy and completeness. Adherence to dose guidelines does not necessarily assure a successful medical outcome. Specific genotype and phenotype results are used to aid dose optimization and to reduce side effects but not to predict clinical outcomes of a disease state or medication. The medication brand names are not an exhaustive list and do not include combination therapies. Not all medications in this document are included in the TreatGx application. The information provided in this document is not a diagnostic test, and TreatGx is not a prescribing system.



Dr. Tony Mazzulli, Laboratory Director,
MD, FRCPC, FACP

15/Dec/2022

Date of Signature

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	1 Mild or no known interaction	2 Moderate gene-drug interaction					3 Medication with serious gene-drug interaction should be evaluated carefully and alternative medications should be given
		 Consider alternative medications	 May require an increased dose	 May require a reduced dose	 Efficacy may be affected by genetics	 Increased risk of adverse events	 See TreatGx for dose calculations
Analgesia	Carisoprodol Celecoxib Codeine Flurbiprofen Hydrocodone Ibuprofen Imipramine Meloxicam Piroxicam Tenoxicam Tramadol						
Autoimmune	Cevimeline Siponimod		Tacrolimus		Cyclosporine Tacrolimus		
Cancer	Erdafitinib Tamoxifen						
Cardiovascular	Atorvastatin Carvedilol Flecainide Fluvastatin Lovastatin Metoprolol Nebivolol Pitavastatin Pravastatin					Warfarin	Clopidogrel

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	Propafenone Propranolol Rosuvastatin Simvastatin						
Gastroenterology	Dronabinol Metoclopramide Ondansetron			Dexlansoprazole Lansoprazole Omeprazole Pantoprazole	Dexlansoprazole Lansoprazole Omeprazole Pantoprazole		
Infection	Efavirenz Voriconazole						
Mental Health	Alprazolam Amitriptyline Amoxapine Amphetamine Aripiprazole Aripiprazole lauroxil Atomoxetine Brexipiprazole Bromazepam Chlordiazepoxide Citalopram Clonazepam Clomipramine Clonazepam Clorazepate Clozapine						

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<p>1</p> <p>Mild or no known interaction</p>	<p>2</p> <p>Moderate gene-drug interaction</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="541 386 779 516"> <p> Consider alternative medications</p> </div> <div data-bbox="793 386 978 516"> <p> May require an increased dose</p> </div> <div data-bbox="993 386 1178 516"> <p> May require a reduced dose</p> </div> <div data-bbox="1192 386 1377 532"> <p> Efficacy may be affected by genetics</p> </div> <div data-bbox="1392 386 1577 532"> <p> Increased risk of adverse events</p> </div> <div data-bbox="1591 386 1776 532"> <p> See TreatGx for dose calculations</p> </div> </div>						<p>3</p> <p>Medication with serious gene-drug interaction should be evaluated carefully and alternative medications should be given</p>
<ul style="list-style-type: none"> Desipramine Diazepam Donepezil Doxepin Escitalopram Flurazepam Fluvoxamine Iloperidone Imipramine Lorazepam Nitrazepam Nortriptyline Oxazepam Paroxetine Perphenazine Pimozide Protriptyline Risperidone Sertraline Temazepam Thioridazine Triazolam Trimipramine Venlafaxine Vortioxetine Zuclophenthixol 							
<p>Neurology</p> <ul style="list-style-type: none"> Amitriptyline Brivaracetam Clobazam Clonazepam 							

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	Desipramine Deutetrabenazine Diazepam Donepezil Galantamine Nortriptyline Tetrabenazine Valbenazine Venlafaxine						
Other	Avatrombopag Drospirenone-ethinyl estradiol Elagolix Eliglustat Eltrombopag Flibanserin Lofexidine Meclizine Norelgestromin-ethinyl estradiol						
Rheumatology	Celecoxib Flurbiprofen Ibuprofen Meloxicam Piroxicam Tenoxicam						
Urology							

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Darifenacin Fesoterodine Mirabegron Tamsulosin Tolterodine							