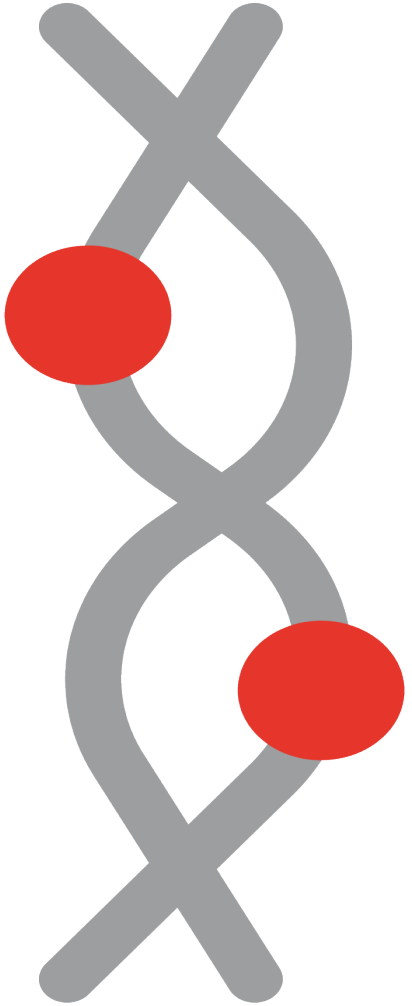
Fagron genomics



Gene Comprehensive Nutrigenomic Report

Accession Number: ##########
Specimen Collected: ##/##/####
Specimen Received: ##/##/####
Report Generated: November 17, 2022
Specimen Type: Buccal Swab
Provider: ######## ########
Patient Name: ###### ######
Patient DOB: ##/##/####
Patient Gender: Male

Do not make any decisions about your health solely based on the information contained in this report. Always consult with a licensed and experienced health practitioner when you receive this report.

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Lab | 4150 Freidrich Lane, Ste H | Austin, TX 78744
Laboratory Director: James W. Jacobson, Ph.D

– 36 – Male

(-/-) No clinical abnormality | (+/-) Heterozygous result | (+/+) Homozygous result

rsID	Gene	Genetic Result	Therapeutics Associated With Positive Result	Highly Recommended Therapeutics	Provider Discretion: As Needed Formula Recommendations	Lifestyle Recommendations	Laboratory Recommendations
Pre-Surgical							
Chemical Anestheia Detoxification							
rs1021737	CTH	-/-	N-Acetyl Cysteine (NAC), Glutathione				
rs819147	AHCY	-/-					
rs1056806	GSTM1	-/-	Glutathione		Glutathione IV, Glutathione Suppositories, Glutathione Ultra ™, Glutathione Plus Topical™		
rs7483	GSTM3	-/-					
rs1695	GSTP1 I105V	+/-					

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rsID	Gene	Genetic Result	Therapeutics Associated With Positive Result	Highly Recommended Therapeutics	Provider Discretion: As Needed Formula Recommendations	Lifestyle Recommendations	Laboratory Recommendations
Neurotransmitters / Pain Control							
rs4680	COMT V158M	+/-	Taurine, Choline, Trimethylglycine (TMG), Dimethylglycine (DMG), Methionine, SAMe, Inositol		Full Focus+™		
rs6323	MAO-A	-/NA	B2 (Riboflavin), Methyl Donors (Taurine, Choline, Trimethylglycine (TMG), Dimethylglycine (DMG), Inositol, Methionine	**Full Focus+™, Mood Plus™**			
rs1799836	MAO-B	+/NA	B2 (Riboflavin), Methyl Donors (Taurine, Choline, Trimethylglycine (TMG), Dimethylglycine (DMG), Inositol, L-Methionine				
rs769407	GAD1	-/-	Prescription Amantadine, Ketamine, Glycine, N-Acetyl-Cysteine (NAC), Zinc, Magnesium, Oxaloacetate, Elderberry, L-Theanine, Melatonin		Pro GAD Enhancer™, Melatonin, Calming Cream™, Prescription Amantadine, Ketamine		
rs3828275	GAD1	+/+					
rs1799971	OPRM1 A118G	-/-					
rs1045642	ABCB1 C3435T	+/-			Lower Doses of Opiates For Pain Control	Patient Should Need Lower Dose of Opioids For Pain Control	
rs6025	FACTOR V	-/-	Increased Risk of Thrombosis with Estrogen Therapy				
rs3211719	FACTOR X	+/-					

Summary for Pre-Surgical

Highly Recommended Therapeutics

- Full Focus+ ™
- Mood Plus™

Provider Discretion: As Needed Formula Recommendations

- Glutathione IV
- Glutathione Suppositories
- Glutathione Ultra™
- Glutathione Plus Topical™
- Pro GAD Enhancer™
- Melatonin
- Calming Cream™
- Prescription Amantadine
- Ketamine
- Lower Doses of Opiates For Pain Control

Lifestyle Recommendations

- Patient Should Need Lower Dose of Opioids For Pain Control

Laboratory Recommendations

Gene Information Key

rsID	Gene	"-" variant	"+" variant
rs1045642	ABCB1 C3435T	G	A
rs819147	AHCY	T	C
rs4680	COMT V158M	G	A
rs1021737	CTH	G	T
rs6025	FACTOR V	C	T
rs3211719	FACTOR X	A	G
rs3828275	GAD1	C	T
rs769407	GAD1	G	C
rs1056806	GSTM1	C	T
rs7483	GSTM3	C	T
rs1695	GSTP1:I105V	A	G
rs6323	MAO-A	T	G
rs1799836	MAO-B	T	C
rs1799971	OPRM1 A118G	A	G

Definitions

CLOT RISK	The SNPs in this category define some areas of potential concern in the clotting mechanisms of the body. Polymorphisms in these proteins may need to be considered during pregnancy, surgery, trauma and/or certain forms of birth control
Factor V	A single nucleotide polymoprhism in the F5 gene (rs6025) leads to a mutant Factor V protein. This mutant protein is associated with increased clotting, especially in the veins.
Factor X	The F10 gene encodes a protein, Factor X, involved in coagulation and wound healing. Mutations in the F10 gene predict for clot risk and anticoagulant drug sensitivity.
DETOXIFICATION	Detoxification enzymes are responsible for clearing environmental chemicals and metabolites from our body. Accumulation of these chemicals and by-products can damage intracellular biochemical functions. Alterations in these systems can have a significant negative effect on the nervous system and immune systems functions. These polymorphisms can result in decreased "quality of life" and even decreased "life-span".
AHCY	Adenosylhomocysteinase (AHCY) is an enzyme that breaks down S-adenosylhomocysteine (SAH) to homocysteine and adenosine. Polymorphisms in this gene will lead to lower levels of homocysteine and glutathione.
CTH	Glutathione production is dependent on the function of the enzyme cystathionine gamma-lyase (CTH). CTH converts cystathionine to cysteine. Individuals with mutations in the CTH gene are predicted to have decreased glutathione-mediated detoxification.
GSTM1	Glutathione S-transferase M1 (GSTM1) is an important enzyme in the body's detoxification pathway. GSTM1 conjugates glutathione to molecules (drugs, environmental toxins, carcinogens etc.) bound for excretion. GSTM1 is mainly responsible for binding toxins in joints and for binding carcinogens.
GSTM3	Glutathione S-transferase mu 3 is an enzyme that detoxifies drugs, environmental toxins, and carcinogens by conjugating toxins to glutathione and subsequent excretion by the kidneys. Mutations in GSTM3 are associated with decreased clearance of toxins, anesthetics and drugs from the nervous system.
GSTP1	Glutathione S-transferases (GSTs) are a family of enzymes that play an important role in detoxification. The glutathione S-transferase pi gene (GSTP1) functions in chemical clearance and anti-inflammatory properities. High concentration of GST-p are found in the skin, lungs, sinuses, bladder and the intestinal tract. Polymorphisms of this enzyme allow for increased inflammatory activity in these areas that include eczema, asthma, chronic sinusitis, IBS, "leaky" gut and interstitial cystitis.
DEVELOPMENTAL	The SNPs in this category have been identified as potential areas of weakness in the recovery of developmental disorders.
ABCB1:C3435T	The ABCB1 gene encodes the multidrug resistance (MDR) protein, a membrane pump that effluxes drugs from the cytoplasm to the extracellular fluid. MDR is enormously important in formation of brain and gut barriers, drug and nutrient excretion, and normal development. Mutations in the ABCB1 gene are associated with a host of perturbations in an individual's response to drugs and nutrients.
NEUROTRANSMITTER	Neurotransmitters are chemicals that are used to produce specific effects in the nervous system. These specific neurotransmitter genomics assess a person's risk for anxiety, depression and dysphoria.
COMT V158M	Catechol-O-methyltransferase (COMT) is one of several enzymes that degrade catecholamine neurotransmitters such as dopamine, epinephrine, and norepinephrine. COMT's main function is to inactivate neurotransmitters (dopamine, epinephrine, and norepinephrine) by the addition of a methyl group to the catecholamine. Normal COMT function allows people to rapidly reverse feelings of anxiety or depression. COMT (+/-) patients have sluggish ability to alter anxiety or depression episodes. COMT (+/+) patients are more prone to prolonged episodes of anxiety, depression and OCD.
GAD1 rs3828275	Glutamic Acid Decarboxylase (GAD 1) is the enzyme responsible for conversion of glutamic acid (a stimulant neurotransmitter) to GABA (a calming neurotransmitter). Deficiency of GABA from polymorphisms in this enzyme are associated with sleep disorders, "half glass empty" syndrome, dysphoria, and spasticity.
MAOA	Monoamine oxidase A (MAOA) is one of the classic neurotransmitter degradation enzymes. By degrading serotonin, dopamine, epinephrine, and norepinephrine, MAO-A ends neuronal signaling induced by those neurotransmitters. Mutations in the MAO-A gene leads to decreased degradation of these neurotransmitters and can be associated with increased aggression, mood disorders and drug addiction.
MAOB	Monoamine Oxidase B (MAO B) catalyzes the neuroactive amines, such as dopamine, epinephrine, norepinephrine, and plays a role in the stability of mood in the central nervous system,. MAO B's primary purpose is to degrade dopamine. Patients who possess polymorphisms of MAO B have a higher risk of clinical depression and mood disorders.
OPRM1:A118G	The OPRM1 (mu opioid receptor) is involved in pain sensitization. Polymorphisms in this gene typically are more sensitive to chronic pain and require higher doses of opioids for pain control.

Disclaimers

TESTING:

Testing Performed By: TY

METHODOLOGY AND LIMITATIONS:

Testing for genetic variation/mutation on listed genes was performed using ProFlex PCR and Real-Time PCR with TaqMan® allele-specific probes on the QuantStudio 12K Flex. All genetic testing is performed by GX Sciences, 4150 Freidrich Lane, Ste H, Austin, TX. 78744. 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. Test results do not rule out the possibility that this individual could be a carrier of other mutations/variations not detected by this gene mutation/variation panel. Rare mutations surrounding these alleles may also affect our detection of genetic variations. Thus, the interpretation is given as a probability. Therefore, this genetic information shall be interpreted in conjunction with other clinical findings and familial history for the administration of specific nutrients. Patients should receive appropriate genetic counseling to explain the implications of these test results. Details of assay performance and algorithms leading to clinical recommendations are available upon request. The analytical and performance characteristics of this laboratory developed test (LDT) were determined by GX Sciences' laboratory pursuant to Clinical Laboratory Improvement Amendments (CLIA) requirements.
CLIA #: 45D2144988 Laboratory Director: James Jacobson, PhD

DISCLAIMER:

This test was developed and its performance characteristics determined by GX Sciences. It has not been cleared or approved by the FDA. The laboratory is regulated under CLIA and qualified to perform high-complexity testing. This test is used for clinical purposes. It should not be regarded as investigational or for research. rsIDs for the alleles being tested were obtained from the dbSNP database (Build 142).

DISCLAIMER:

UND Result: If you have received the result Variant undetermined (UND) this indicates that we were not able to determine your carrier status based on your raw data. Please refer to the GX Sciences genetic knowledge database for more information: https://www.gxsciences.com/kb_results.asp

DISCLAIMER:

Report contents and report recommendations are created and approved by GX Sciences. Sole responsibility for the proper use of the information on the GX Sciences report rests with the user, or those professionals with whom the user may consult. Nutrigenomic Testing and Dietary Supplements are not "Designated Health Services" covered by Medicare or Medicaid and may not be reimbursed under any state or Federal health care program.

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These products are not approved by the Food and Drug Administration and are not intended to diagnose, treat, cure or prevent disease. These recommendations are for report purposes only and an individual is not required to use such products. These are recommendations only and do not replace the advisement of your own healthcare practitioner.

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NEUROTRANSMITTER SNP References

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