DNAdose
Multi-gene Pharmacogenomic Test Report
Prepared by GenesFX Health Pty Ltd

PATIENT INFORMATION

Reference No: 11-1234567

Patient: Test, Tester
DOB: 01/10/55
Address: 8 Somewhere, Brighton, VIC 3186
Ordered by: Dr Michael Barry

Copy to: Dr Jon Williams
Collected: 02/01/2011
Reported by GenesFX: 04/01/2011

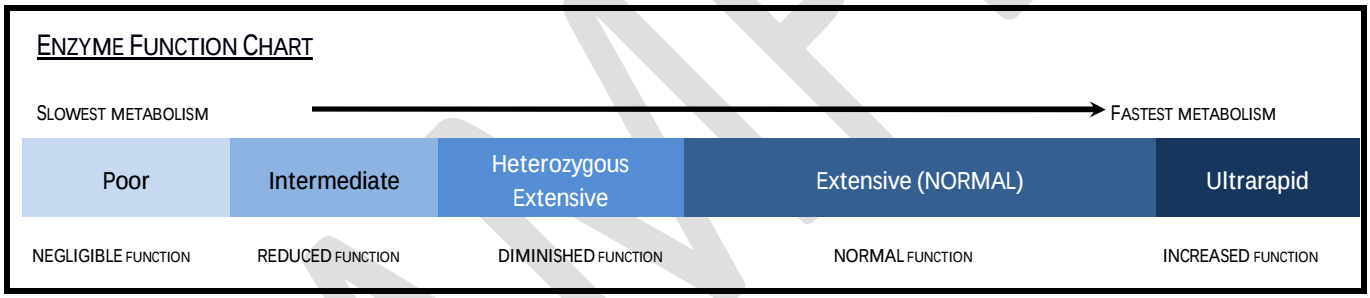
INFORMATION PROVIDED FROM THE REQUEST FORM

Current Medications: Efexor. Previously on Cymbalta.
Clinical Notes: Side effects to both Cymbalta and Efexor. Sweating and elevated LFTs.

TEST RESULTS & SUMMARY INTERPRETATION

Pathology Provider: Healthscope Advanced Pathology
Genotyping Results:

	Genotype	Phenotype Interpretation
CYP2D6	*4/*9	**REDUCED** Function (Intermediate Metaboliser)
CYP2C19	*1/*2	**REDUCED** Function (Intermediate Metaboliser)
CYP2C9	*1/*2	**REDUCED** Function (Intermediate Metaboliser)
VKORC1	GG	**NORMAL** Sensitivity to Warfarin



RECOMMENDATIONS BASED ON METABOLISM

Most antidepressants are metabolised by the CYP2D6 and CYP2C19 enzymes. Tricyclic antidepressants (TCAs) are metabolised by both. This individual has significantly reduced CYP2D6, CYP2C19 and reduced CYP2C9 enzyme function. This is a significant finding that may explain the reported side effects on Cymbalta and Efexor experienced by the patient.

The CYP2D6 enzyme is responsible for the metabolism of Cymbalta and Efexor for which this individual has significantly reduced enzyme function. This results in higher blood levels of both medications and an increased risk of side effects. Cymbalta is known to cause elevated LFTs as a side effect. This side effect is more pronounced with significantly increased blood levels. Efexor at higher blood levels can result in the side effect of increased sweating. Furthermore, sweating is also a common symptom of serotonin toxicity, for which this individual is at an increased risk of developing, with this reduced CYP2D6 enzyme status. The higher venlafaxine (Efexor) blood levels increase the synaptic serotonin concentration, hyperstimulating the serotonin receptors and resulting in serotonin toxicity.

Considering this individual has significantly reduced CYP2D6 and CYP2C19 enzyme function, consider the use of antidepressants not dependent on either CYP2D6 or CYP2C19 enzymes for their metabolism. These may include: desvenlafaxine (Pristiq) or reboxetine (Edronax), if clinically applicable, as alternative antidepressant treatments.

It is best to avoid CYP2D6, CYP2C19 and CYP2C9-dependent medications as the risk of side effects from these treatments is increased. For a complete list of CYP2D6, CYP2C19 and CYP2C9-dependent medications, please visit our website **www.genesfx.com**

DRUG INTERPRETATION

CYP2D6 **REDUCED function** **(One reduced function allele and one non-functional allele)**

Cymbalta and Efexor

Higher blood levels of both Efexor and Cymbalta and an increased risk of side effects for both medications.

CYP2C19 **REDUCED function** **(One normal allele and one non-functional allele)**

Higher blood levels of CYP2D6 dependent medications and an increased risk of side effects.

CYP2C9 **REDUCED function** **(One normal allele and one reduced function allele)**

Higher blood levels of CYP2C9 dependent medications and an increased risk of side effects is expected.

OTHER FACTORS

Drug-Drug Interactions:

Not applicable - only one current medication was listed.

Future Medication Considerations:

This individual is an **intermediate** metaboliser for **CYP2D6, CYP2C19 and CYP2C9**. Dose adjustments may be required for **CYP2D6, CYP2C19 and CYP2C9** dependent medications taken in the future. (See **www.genesfx.com**for a list of these medications).

REPORT PREPARED BY:

Signed
Clinical Geneticist
FRACP

Signed
Consultant Pharmacist
BPharm, MPS

Disclaimer:
The pharmacogenomic test result in this report is just one factor that the prescribing doctor will take into consideration when determining a patient's appropriate medication and dose**.** These interpretations are being provided to the prescribing doctor as a tool to assist in the prescription of medication. Patients are advised not to alter the dose or stop any medications unless instructed by the doctor.

The interpretation and clinical recommendations are based on the above results as reported by Healthscope Advanced Pathology and also uses information provided to GenesFX by the referring doctor. This report also assumes correct labelling of sample tubes and that the sample is from the above patient.