MAYO CLINIC
Mayo Medical Laboratories

LABORATORY SERVICE REPORT

1-800-533-1710

PATIENT NAME	PATIENT NUMBER	AGE	SEX	ACCESSION #
TESTING, 89401	L3MRNW4075935	58	F	W4075935

ORDERING PHYSICIAN	CLIENT ORDER #	ACCOUNT #
		LIAISONS

COLLECTION DATE TIME	RECEIVED DATE TIME	REPORT PRINTED DATE TIME	SPECIMEN INFORMATION
04/22/11 11:56 A	04/22/11 11:56 A	04/25/11 10:10 A	DATE OF BIRTH:

Test Client
Attn: Mayo Liaisons
200 First Street SW
Rochester, MN 55905
507-284-8202

TEST REQUESTED	HI LO		REF RANGE	PERFORM SITE *
Rapid DNA Extraction				**REPORTED: 04/22/11 12:12 P**
Comment		**Genomic DNA was extracted.**		**MCR**
CYP1A2 Genotype				**REPORTED: 04/22/11 12:32 P**
1A2 Phenotype				**MCR**
Interpretation				
		This individual is expected to be an extensive (normal) metabolizer unless induced, in which case increased metabolism to a range between extensive (normal) and ultrarapid metabolizer is possible. This individual has a polymorphism(s) which leads to increased inducibility when exposed to certain substances including tobacco smoke (see other inducers listed below). If CYP1A2 inducers are stopped or started, a change in phenotype is possible.		
1A2 -3860g>a		**G/G**		**MCR**
1A2 -2467tdel		**T/delT**		**MCR**
1A2 -729c>t		**C/C**		**MCR**
1A2 -163c>a		**C/A**		**MCR**
1A2 125c>g		**C/C**		**MCR**
1A2 558c>a		**C/C**		**MCR**
1A2 2385g>a		**G/G**		**MCR**
1A2 2473g>a		**G/G**		**MCR**
1A2 2499a>t		**A/A**		**MCR**
1A2 3497g>a		**G/G**		**MCR**
1A2 3533g>a		**G/G**		**MCR**
1A2 5090c>t		**C/C**		**MCR**
1A2 5166g>a		**G/G**		**MCR**
1A2 Reviewed by		**Loralie J. Langman, Ph.D.**		**MCR**
		This test was developed and its performance characteristics		

** Perform Site Legend on last page of report*

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TESTING, 89401	Final	04/22/11 11:56 A

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determined by Laboratory Medicine and Pathology, Mayo Clinic.
It has not been cleared or approved by the U.S. Food and Drug Administration.
Direct polymorphism analysis for -3860G>A, -2467T>del T, -729C>T, -163C>A, 125C>G, 558C>A, 2385G>A, 2473G>A, 2499A>T, 3497G>A, 3533G>A, 5090C>T, and 5166G>A is performed following PCR amplification. Direct DNA testing will not detect all the known mutations that result in decreased or inactive CYP1A2 alleles. This assay does not test for some known polymorphisms because those polymorphisms have not been associated with alterations in enzymatic activity. Rare or undescribed variants may not have been found during validation but will be sequence verified upon detection. See http://www.cypalleles.ki.se/cyp1a2.htm for a full description of CYP1A2 alleles. Absence of a detectable gene mutation or polymorphism does not rule out the possibility that a patient has a metabolizer status other than predicted above. The frequency of polymorphisms causing poor metabolism has not been fully characterized in various ethnic groups. Patients with an ultrarapid, extensive (normal), or intermediate genotype may have CYP1A2 enzyme activity inhibited or induced by a variety of substances, medications, or their metabolites. The following is a listing of substances known to affect CYP1A2 activity as of the date of this report.
Drugs and substances known to increase (induce) CYP1A2 activity include:
Broccoli, brussel sprouts, char-grilled meat, insulin, methylcholanthrene, modafinil, nafcillin, beta-naphthoflavone, omeprazole, and tobacco.

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Coadministration will increase the rate of metabolism of CYP1A2 metabolized drugs and may change the effectiveness of the drug.
Drugs and substances known to decrease CYP1A2 activity include:
Amiodarone, cimetidine, ciprofloxacin, fluoroquinolones, fluvoxamine, furafylline, interferon, methoxsalen, and mibefradil.
Coadministration will decrease the rate of metabolism of CYP1A2 metabolized drugs, increasing the possibility of toxicity.
Drugs and substances that undergo metabolism by CYP1A2 include:
Acetaminophen, amitriptyline, caffeine, clomipramine, clozapine,cyclobenzaprine, estradiol, fluvoxamine, haloperidol, imipramine, mexiletine, naproxen, olanzapine, ondansetron, phenacetin, propranolol, riluzole, ropivacaine, tacrine, theophylline, tizanidine, verapamil, (R)warfarin, zileuton, and zolmitriptan.
Coadministration may decrease the rate of elimination of other drugs metabolized by CYP1A2.

*** PERFORMING SITE**

MCR	Mayo Clinic Dpt of Lab Med & Pathology 200 First Street SW Rochester, MN 55905	Lab Director: Franklin R. Cockerill, III, M.D.