

## **SUPPLEMENTAL TABLES AND FIGURES**

### **TABLES**

**Supplemental Table 1**

**Three Ranges of Expected Maintenance for COUMADIN Daily Doses Based upon CYP2C9 and VKORC1 Genotypes**

VKORC1	CYP2C9					
	*1/*1	*1/*2	*1/*3	*2/*2	*2/*3	*3/*3
GG	5-7 mg	5-7 mg	3-4 mg	3-4 mg	3-4 mg	0.5 – 2 mg
AG	5-7 mg	3-4 mg	3-4 mg	3-4 mg	0.5 – 2 mg	0.5 – 2 mg
AA	3-4 mg	3-4 mg	0.5 – 2 mg	0.5 – 2 mg	0.5 – 2 mg	0.5 – 2 mg

Recommended daily warfarin doses required to achieve therapeutic INR based on CYP2C9 and VKORC1 genotypes of patients, reproduced from FDA-approved product labeling for warfarin (Bristol-Meyers, Squibb, Princeton, NJ) (Bristol-Meyers Squibb. Coumadin Product Insert. [Online].

Available: [http://packageinserts.bms.com/pi/pi\\_coumadin.pdf](http://packageinserts.bms.com/pi/pi_coumadin.pdf). Accessed July 8 2013)

**Supplemental Table 2**

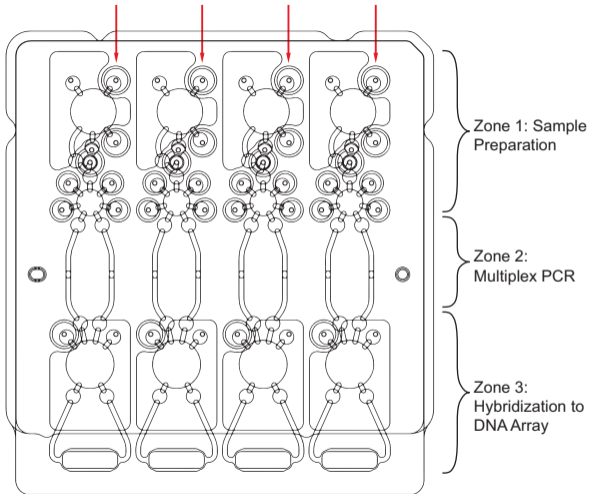
**Primers Used to Generate Amplicons for Bi-directional Sequencing**

Target	Sequence	Amplicon size (bp)
CYP2C9*2	GGG CAG AGC TTG GCC CAT CC	283
	AGT CCA GTA AGG TCA GTG ATA TG	
CYP2C9*3	AGG ACT TAC CCA TGC CCC TTT GT	834
	CCC TGC CAG AAA TTC CAG CCC A	
VKORC1	GCT GTA GTG TGT AGA AGA TGC AAC CG	354
	AAA GCA GGG CCT ACG GAG TAG CCA	

Primers used to generate amplicons for bi-directional sequencing are displayed in the 5' to 3' direction.

## **Supplemental Figure 1**

Each individual CARD is able to process up to four individual specimens. Once the samples are loaded in the sample ports (red arrows) and cells are lysed, DNA is extracted and purified in Zone 1. Once purified, the DNA from each individual sample is metered into each of two separate polymerase chain reaction (PCR) chambers where amplification optimized for the CYP2C9 alleles and the VKORC1 alleles, respectively, are performed. After amplification, the biotinylated amplicons are combined from both PCR reaction chambers and processed in Zone 3 for hybridization to the immobilized probes.



## **Supplemental Figure 2**

Representative example of report generated by the automated molecular detection system, showing the genotypes at the CYP2C9 and VKORC1 loci of samples evaluated.

LABORATORY	Rheonix® Warfarin PGx™ Assay
Name of Laboratory	EncompassMDx Instrument
Department Name	Rheonix, Inc.
Address	22 Thornwood Dr.
City, State, ZIP	Ithaca, NY 14850
Phone Number	607 257 1242

Run Initiated:	May 2, 2013 2:43 pm
Run Completed:	May 2, 2013 03:22 pm
Operator:	C. Smith
Instrument S/N:	C110025
Molecular PGx™ Buffer Pack Lot:	WH1102a
PGx™ Buffer Pack Lot:	WL1102a

PATIENT ID	CYP2C9	VKORC1	CARD INFO	POS
RPC-1012A	PASS	PASS	W1104-90105	1
62216748135468	*1/*2	G/A	W1104-90105	2
62785524984561	*1/*1	G/G	W1104-90105	3
62156874465684	*1/*1	G/A	W1104-90105	4
62854159846355	*1/*1	G/G	W1104-90140	1
62196846851688	*1/*1	G/G	W1104-90140	2
62478761851268	*1/*1	G/G	W1104-90140	3
62887645626260	*1/*3	G/G	W1104-90140	4
RNC-1012	PASS	PASS	W1104-90112	1
62068468795612	*1/*1	A/A	W1104-90112	2
62089897890456	*1/*2	G/G	W1104-90112	3
62065498228740	*3/*3	G/G	W1104-90112	4
62840984098709	*1/*1	G/A	W1104-90093	1
62987089492745	*1/*1	G/A	W1104-90093	2
62684089428156	*2/*3	G/G	W1104-90093	3
62089408974220	*1/*1	G/G	W1104-90093	4

NOTES:  
Valid run