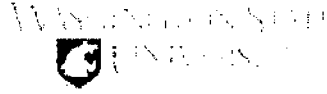


Subject: MDR-1 GENOTYPE RESULTS
From: "Johnson, Judy" <vcpl.judy@vetmed.wsu.edu>
Date: Fri, 8 Jan 2010 10:43:18 -0800
To: "sydney@rio.com" <sydney@rio.com>



MDR1* GENOTYPING RESULTS

1/8/2010

MDR1- 16082
Reference Number-N/A

Sydney Taylor
Springfield, OR

MDR1 TEST RESULTS FOR:

Dog Name: Surefire Copen Hagen of Parsons
Dog Breed: German Shepherd-White
Test Result: **NORMAL/NORMAL**

Explanation of test results:

Normal/Normal- These dogs do not carry the mutation, and will not pass on the mutation to their offspring. These dogs would not be expected to experience unexpected adverse drug reactions to normal doses of ivermectin, loperamide (Imodium®), and some anticancer drugs.

Mutant/Mutant- These dogs carry the mutation and can not pass on a normal gene to their offspring. These dogs would be expected to experience toxicity after normal doses of loperamide (Imodium®), some anticancer drugs, and high doses of ivermectin (greater than 50 micrograms per kilogram).

Mutant/Normal- These dogs carry the mutation and may pass on the mutant gene to their offspring. These dogs may experience toxicity after normal doses of loperamide (Imodium®), some anticancer drugs, and high doses of ivermectin (greater than 50 micrograms per kilogram).

A current list of problem drugs for dogs with the MDR1 mutation may be found at this web address:
<http://www.vetmed.wsu.edu/VCPL>

Jonathan Minch

Jonathan Minch
Veterinary Clinical Pharmacology Laboratory Manager

* PCR for this service is performed pursuant to an agreement with Roche Molecular Systems, Inc. US Patent Number US 6,790,621 B2. Foreign patents pending for MDR1 testing.

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