MDR-1 and Collies

You are probably aware that the Rough and Smooth Collie are one of a number of breeds that may be affected by the mutant MDR-1 gene. It is now widely accepted that the collie breeds (Rough Collies, Smooth Collies, Shelties and Border Collies) appear to be hypersensitive to certain drug compounds that even in minute doses can cause severe, sometimes lethal, toxicity.

I have had ______________________, tested and he/she is known to be unaffected/affected/a carrier (delete as appropriate)

I would be grateful if you could attach this information to his/her record for information as it indicates that there are currently no drug groups likely to cause problems.

Yours sincerely
| Class A | DO NOT USE in dogs with MDR1 defect (-/-)  
Affected dogs carry two mutant MDR1 genes and can therefore only pass on a mutant gene to their offspring. Affected dogs will experience drug toxicity following normal doses of certain drugs, listed here |
|---------|------------------------------------------------------------------------------------------------|
|         | **Anti-Parasitic Drugs**  
Ivermectine substances: Diapec®, Ecomectin®, Equimax®, Eqvalan®, Ivomec®, Noromectin®, Paramectin®, Qualimec®, Sumex® & Virbamec®  
Doramectine substances: Dectomax®  
Moxidectine substances: Cydectin® & Equest® (EU scientists commonly find residues of the above drugs in animal products - milk, cows, sheep, pigs & salmon).  
Loperamide substances: Immodium® [anti-diarrhoeal]  
Metronidazole substances: Flagyl |
| Class B | Interactions have been shown. Use only under close supervision of your vet |
|         | **Cytostatics:** (Cancer treatment) Vinblastine, Doxorubicine, Paclitaxel, Docetaxel, Methotrexat & Vincristine  
Glucocorticoids (Steroids commonly used to treat auto-immune diseases): Dexamethason  
Immuno-suppressives: Cyclosporine A  
Heart glycosides: Digoxine & Methyldigoxine  
Antiarrhythmics: Verapamil, Diltiazem & Chinidine [Heart problems]  
Pain control: Morphine & Butorphenol  
Anti-emetics: Metoclopramide, Ondansetron & Domperidon [sickness/vomiting]  
Antibiotics: Sparfloxacin, Grepafloxacin; Erythromycin  
Antihistamines: Ebastin  
Tranquillisers & pre-anaesthetic agents: Acepromazine |
<table>
<thead>
<tr>
<th>Analgesic &amp; pre-anaesthetic agent:</th>
<th>Butorphanol</th>
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<td>Other drugs:</td>
<td>Etoposide; Mitoxantrone; Ondansetron; Paclitaxel; Rifampicin.</td>
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**Class C**

- Can be used
- Stronghold®, Advocate® & Milbemax® can be used safely, but only in the recommended application form and dosage.

*In dogs with an MDR1 mutant gene [-], Acepromazine and Butorphanol tend to cause deeper and more prolonged sedation. Vets are recommended to reduce the dosage by 25% in MDR1 carriers [+/-] and by 30-50% in MDR1 affected dogs [-/-]"

Last updated – August 2010 (Smooth Collie Club of Great Britain)