

# Rex and Burmese Cat Fancier of South Australia Inc. Newsletter

February 2013

## Feline infectious peritonitis (FIP)



Feline infectious peritonitis (FIP) is a fatal disease of cats, caused by a feline coronavirus. Infection with coronavirus is actually very common in cats but most of the time it does not cause any problems, other than maybe mild self-limiting diarrhoea. Uncommonly, the virus mutates (changes) within an infected cat, and it is this mutated form that causes the disease of FIP.

### How do cats get coronavirus?

Coronavirus is ubiquitous among cats and infection with the virus is particularly common where large numbers of cats are kept together. It is estimated that 25 to 40 per cent of household pet cats are infected. This infection rate increases to 80 to 100 per cent of cats kept in multi-cat households, rescue and breeding colonies. The virus is spread by the faecal-oral route, that is, the virus is shed in faeces into the environment and cats become infected following ingestion when grooming or eating. Most infected cats shed the virus in faeces for a variable period of time and then stop. The cat can then become re-infected from another cat and start shedding virus again. In contrast, some cats shed virus continuously. Although coronavirus is the cause of FIP, infection with coronavirus does not mean that the cat will go on to develop FIP. In comparison to the number of cats infected with the virus, the number that develop FIP is very small. It is only when the virus mutates that FIP may develop.



Next Issue a great article on "Scooter"

**Sometimes particular lines of a breed have a high rate of developing FIP.**

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The disease is usually rapidly progressive and ultimately fatal

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There is no specific diagnostic test for FIP

## FIP Continued .....

### What causes the virus to mutate?

While the precise cause of the viral mutation is unknown, several factors are likely to play a role. The majority of cases of FIP develop in younger cats. A poorer immune response together with other stress factors such as rehoming, neutering, vaccination or other concurrent disease



Acities in the anterior chamber of the eye

factors are not always evident. Genetics may also play a role in some

may make younger cats more vulnerable to FIP. FIP can, however, develop in any age of cat and predisposing factors or risk

cases as purebred cats appear to be at a greater risk. Sometimes particular lines of a breed have a high rate of developing FIP.

### What are the clinical signs of FIP?

FIP has very diverse clinical manifestations, but there are no clinical signs associated that are unique for the disease. The classic form of the disease, often termed 'wet' FIP, is characterised by a build up of yellow fluid within the abdomen (resulting in abdominal

distension) and/or chest (resulting in breathing difficulties). However, the presence of this fluid is not diagnostic for FIP, and in addition a large number of FIP cases will not have any visible fluid build up. Initial clinical signs are often very vague, consisting of lethargy and loss

of appetite. In some forms of the disease inflammatory lesions in the eye and nervous system can occur, resulting in visual disturbances and abnormal behaviour, a wobbly gait or tremors. The disease is usually rapidly progressive and ultimately fatal.

Fluid drained from the abdomen of a FIP Positive cat.



There is no specific diagnostic test for FIP. Tissue biopsies can confirm a diagnosis, but often the cat is too sick for these procedures to be undertaken and so in many cases a definitive test is only made on post mortem

### How can FIP be diagnosed?

examination. If FIP is suspected, the veterinary surgeon will perform a thorough clinical examination, including examination of the eyes and neurological assessment. The more findings that are present that are consistent with FIP, the more likely the cat does have

FIP. If any fluid is present within either the chest, abdomen or both, analysis of this fluid is one of the most useful tests that can be performed. X-rays of the chest and abdomen, and ultrasound examination of the abdomen are very useful to detect very small

# Show Results

## Leewood Silken Solitaire aka Lucy

R1 judge Kathryn Hill, best Burmese kitten, best group 3 kitten,  
Ring 2 judge Fiona Hawkins, reserve Burmese kitten, 3rd group  
3 kitten.



## Leewood La Vie En Rose aka Koala

Ring 2 Fiona Hawkins Best Burmese Neuter,  
Best Group 3 neuter

## Anne Kirkland Results

Ningning

Ring 1 Best Abby neuter, 3rd  
in group

Ring 2 Best abby neuter, 3rd  
in group

Kathmandu

Best abby entire, 3rd in Group

Smooth Operator

Best Entire, 3rd in Group

Osiris Talk to me Softly AKA  
Toome

Ring 1 and 2

Best Abby kitten and 4th in  
group

CCCA.Ch; Aust.Nat.Pr: Aust.Nat.Show Ch; Imperial,  
Jade DGPR REBUSS SIR WALTER THOMAS



At last weekend's FASA Summer Show he was Best In Breed  
under both Judges - Fiona Hawkins and Kathryn Hill.  
Congratulations Judith Jordan , what a gorgeous boy!

amounts of fluid when obvious signs of fluid build up are lacking. This fluid can then be sampled via ultrasound guidance. The fluid is most often (but not always) thick and straw-coloured in appearance, and on analysis has a very high protein content and low cell count. The presence of fluid in the abdomen does not confirm a diagnosis of FIP as some other diseases can also lead to the build up of similar fluid. If the fluid is present within both the chest and abdominal cavity, then FIP is even more likely. Routine blood tests (haematology and biochemistry) are very helpful firstly in trying to exclude other causes for the clinical signs, and secondly to look for changes which may support a suspicion of FIP. Frequently the numbers of one type of white blood cell (lymphocytes) are low, there may be a mild anaemia, blood protein levels are usually very high, and sometimes blood bilirubin (pigment from old red blood cells) levels are high. All these changes are very non-specific and do not make a diagnosis of FIP, but help to increase suspicion of the disease. Many of these abnormalities may not be present in the early stages of the disease, but may become evident as the disease progresses. Thus some tests that give normal results may have to be repeated later. Cats can be tested to see if they have been exposed to coronavirus by checking for the presence of specific antibodies. However, such a coronavirus serology test is of very limited use in diagnosing FIP. This test does not distinguish between the coronavirus encountered commonly with few

associated problems, and the mutated form that causes FIP. So, as many cats are infected with coronavirus, many cats will be positive with this test. It does not give any information as to whether that cat has or may develop FIP. Furthermore, some cats with confirmed FIP are actually negative for antibodies, so it also cannot be used to exclude FIP. In cats with neurological signs without any other abnormalities, an MRI scan of the brain and analysis of cerebrospinal fluid can also be useful.



FIP is just one of the threats that endanger cats living in crowded, multicat environments.

### Can FIP be treated?

Once clinical signs of FIP develop, it is generally an incurable and fatal disease. Treatment is given to relieve symptoms and may include anti-inflammatories and appetite stimulants. While there are a handful of anecdotal reports suggesting some success with newer antiviral drugs, studies have yet to show a proven benefit of any such treatments. In most cases euthanasia is the most humane course of action to avoid suffering.



### Is there a vaccine for FIP?

A commercial vaccine is available in the USA and some European countries (but not the UK). However, The American Association of Feline Practitioners (AAFP) and the European Advisory Board on Cat Diseases (ABCD) — both cat specialist boards — do not recommend the use of this vaccine. This vaccine is NOT available in Australia.

## How can FIP be prevented and controlled?

### Household pets

FIP is least common in household pets. The risk can be minimised by obtaining cats from a source with relatively few cats and by keeping cats in small stable groups (less than five cats in a household). Minimising 'stress factors', such as rehoming, worming, vaccination and neutering happening all at once, or while the cat is suffering from another illness, may also help minimise the risk of the disease.

### Breeding catteries with endemic FIP

Total eradication of coronavirus infection from catteries is extremely difficult as the virus is so ubiquitous, and it is unsuitable in most cattery situations to attempt this. A more practical approach is to consider elimination of coronavirus infection in newly born kittens, providing the opportunity of re-homing kittens free of coronavirus. If pregnant queens are isolated one to two weeks before they are due to kitten, and then the queen is kept isolated with her kittens (whilst employing good hygiene procedures to prevent environmental spread of infection to the kittens), a substantial number of these kittens will remain negative for coronavirus. Following weaning, the queen can be removed and the kittens still kept isolated and tested at 12 to 16 weeks of age for coronavirus antibodies. If they are negative, the isolation procedure has been successful. This procedure sometimes fails if the queen is shedding the virus and passes it on to her kittens. It is thought that this is less likely in queens over two years of age, and can be helped by early weaning of the kittens (at five to six weeks of age when maternally derived antibodies are still protective) and removing the queen from the environment. Good hygiene is also an important part of the control of spread of the virus to kittens in these situations. Although these procedures are successful, they require considerable commitment from breeders, and there are some concerns about the behavioural development of kittens when they are reared in isolation up to the age of four months. Often it is more appropriate to accept that there is endemic coronavirus infection and institute measures to try and minimise its impact. Considering that the virus is spread by the faecal-oral route, practical control measures that can be used include:

- Having at least one litter box for every two cats, located in easy to clean/disinfect areas
- Litterboxes should be kept away from food and water bowls to prevent cross contamination
- Faeces should be removed from litterboxes at least once daily, and litter should be completely changed as often as possible accompanied by disinfection of the trays
- Cats should be kept in small stable groups of four or less – minimising cross-contamination within a household
- Breeding programmes with more than eight to 10 cats (including kittens) should not be undertaken in a normal household. Larger numbers require some purpose built facilities to enable proper hygiene and care to be maintained
- Regular brushing of the coat, particularly of longhaired cats, is desirable to reduce contamination with faeces and litter
- Isolation of queens and their kittens can be recommended as a means of controlling spread of



## Membership fees

Single: Non Breeder \$10.00

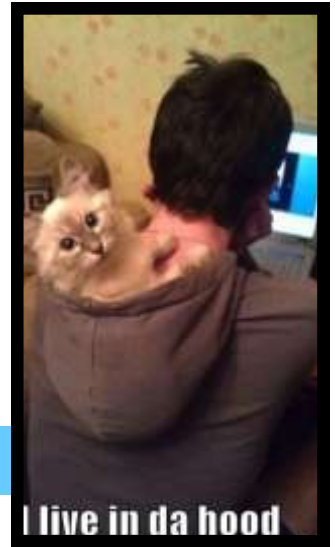
Single: Breeder \$20.00

Family: Non Breeder \$15.00 (married,de- facto,partners)

Family: Breeder \$25.00 (married,de- facto,partners)

*Note: Family membership fees = 1 vote*

If you would like to join, please let Julie know and she can send you a membership form



An American show cage....what do we think? To much???

How would you like to show your cats like this?



## Committee Members

### Rex and Burmese of Cat Fanciers of South Australia Inc.

President : Jenny Simmons contact: [astracan85@yahoo.com.au](mailto:astracan85@yahoo.com.au) 0447 660 0148

Vice President : Michelle Delaine contact: [leewoodburmese@y7mail.com](mailto:leewoodburmese@y7mail.com) 0437 191 295

Treasurer: Sue Ashby contact: [desueburmese@icloud.com](mailto:desueburmese@icloud.com) 0409 677 610

Secretary: Julie Lawrence contact : [juliebluejordie@hotmail.com](mailto:juliebluejordie@hotmail.com) 0434 499571

#### Committee Members:

Lauren Westbrook, contact: [adabelbengals@gmail.com](mailto:adabelbengals@gmail.com) 0415 553 778

Anne Kirkland, contact: [anne@charlburycats.com](mailto:anne@charlburycats.com) 8284 4447

Pam Denham, contact: [bobdenham@hotmail.com](mailto:bobdenham@hotmail.com) 8285 9995

Website Officer: Cary Plessnig, Contact: <http://rex-fanciers.weebly.com/webmaster.html>

Kitten Enquiry Officer( non Breeder): Pam Denham

Public Officer: Jenny Simmons

GCCFSA Representative: Jenny Simmons

GCCFSA Representative: Michelle DeLaine

GCCFSA Representative: Sue Ashby

GCCFSA Proxy: Darryl Smith

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GCCFSA Programming Committee Delegate: Jenny Simmons

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[rex-fanciers.weebly.com](http://rex-fanciers.weebly.com)*

*Newsletter Editor  
Julie Lawrence  
[juliebluejordie@hotmail.com](mailto:juliebluejordie@hotmail.com)*

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