



VetAgro Sup

Campus Vétérinaire de Lyon

Golden-Sunshine in Siberian cats

Research project at the National Veterinary School of Lyon (VetAgro Sup, FRANCE)
Dr Marie Abitbol

A few years ago, a new modification of the tabby pattern, called Golden-Sunshine or Sunshine, appeared in Siberian cats.

At birth, Siberian sunshine resembles the early stages of the amber (*e/e*) colour modification found in Norwegian Forest Cats. But Siberian sunshine cats have been tested negative for the amber gene (*Extension-MC1R*).

Golden-sunshine in Siberian cats is a tabby pattern (not tipped). Sunshine cats show the typical pattern of the agouti cats (blotched, mackerel, ticked or spotted) and the sunshine coloration looks darker at birth getting clearer afterwards.

The sunshine modification is probably inherited with an autosomal recessive pattern.

A similar colour modification has been described in Kurilian Bobtail cats too. These cats are called Golden or Amber. But they do not carry the amber mutation.

Finally, an extreme-golden pattern has been identified recently in British Shorthair cats.

We don't know if these three colour modifications are related.

At the Lyon School of Veterinary Medicine (VetAgro Sup, France), we conduct a research program to better characterize the Golden-Sunshine modification in Siberian cats and search the causative mutation.

We need pedigree data, cheek-swab samples (DNA) and some hairs from cats from the following breeds and patterns:

- "Sunshine" Siberian cats
- "Golden-amber" Kurilian bobtails
- "Extreme-golden" British Shorthair cats

Conditions of the study: this study is performed by Dr Marie Abitbol and veterinary students at the National Veterinary School of Lyon (VetAgro Sup, France).

Any nominative information sent to us will remain strictly confidential. All genetic information will be collected anonymously and will be the subject of an anonymous statistical analysis, in order to improve the characterization of the sunshine colour modification.

You will not receive any result concerning your cat.

No financial contribution is required to participate in this study.

All the Research team thank you in advance for your participation.

Dr Marie Abitbol

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For each cat:

- Fill in the questionnaire.
- Join a copy of the pedigree if available (and a **photo** of the cat **for coat-colour projects**).
- Join a blood sample (5ml blood in EDTA tube (purple cap), kept and sent at room temperature, in a protected envelope as a simple letter or little package) - or **3 cheek cell samples (which can be performed by yourself and sent as a simple letter, cytobrushes or cotton buds)**.
- Please add **some hairs** (guard hairs) from the cat for coat-colour projects.

All veterinaries as well as all the members of the CAT project are engaged to **keep a complete confidentiality on all received information**.

In case of questions or doubts please feel free to contact Dr. Marie Abitbol on +33(0)-4-78-87-25-66 or by email to: marie.abitbol@vetagro-sup.fr.

Cats Identity:

Name: _____ Birth date: _____

Sex: male female Identification number: _____

Breed: _____ Coat color: _____

Additional information about the cat or his/her breeding-line?

Your name and postal address:

Email address:

I agree to the use of my cats DNA as described above (blood sample or cheek swabs) for genetic research in the cat.

Date

Signature

Please send the questionnaire together with the pedigree and the blood sample (or cheek swabs) to:

Dr Marie ABITBOL
Génétique
VetAgro Sup, Campus vétérinaire de Lyon
1 Avenue Bourgelat
F-69280 Marcy l'Etoile
FRANCE

Instructions for use of cheek swabs



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IMPORTANT: sample cats when no food particles are present in the mouth. In the morning before eating is ideal. Otherwise, wait for at least 30 minutes after eating for the food particles to clear out of the mouth.

Labelling

Label the paper backing of each brush package with the full cat's name.

Sampling

Remove the brush from the package. Use the two brushes for each cat sampled. Hold the brush handle between your thumb and forefinger. Roll the inner surface of the upper lip to the outside by inserting a finger in the corner of the mouth and pulling the lip upwards. Place the bristles of the brush on the inner surface of the lip (Figure 1).

Release the lip, leaving the brush inside the mouth. Move the brush back and forth for a short distance in the space between the lip and gum, twirling the brush around with your thumb and forefinger as it is moved back and forth (Figure 2). Continue for 20-30 seconds using the same pressure you would use to brush your teeth.

Repeat sampling on the other side of the mouth using the remaining brush.

Sending

Let the brush air dry in a clean place for a few minutes. Replace the brush back into the package without sealing it. Kept and sent the swabs at room temperature as a simple letter.

Figure 1



Figure 2



DNA collection with Cotton swabs

IMPORTANT: sample cats when no food particles are present in the mouth. In the morning before eating is ideal. Otherwise, wait for at least 30 minutes after eating for the food particles to clear out of the mouth.

1) Visit your local pharmacy or drug store to purchase a package of cotton swabs – the brand or type does not matter. **You will need 3 cotton swabs per cat.**

2) When removing the swab from a package, grasp only the stem and pull the swab out; avoid touching the cottony tip of the swab.

Using sharp scissors, cut the swab to remove the cotton tip at one end. You will need 3 swabs for each cat.



3) Open the cat's mouth and **rub the inside of the cheek vigorously** with the cotton swab to collect the cheek cells, **not just saliva. Repeat**, using the other 2 swabs.



4) Set the swabs that have DNA on them on a paper towel **to dry**. Do not allow the swabs to touch one another.
Put the dried swab into a **paper envelope**, cotton tip side down. Seal the envelope.



If you plan to collect from more than one cat, wash your hands between cats to prevent any cross-contamination. Repeat the above procedure, using a clean paper towel for each set of swabs. **Use a separate paper envelope for each set of swabs, each with the cat information stapled to it.**

NEVER place any of the samples in plastic bags or plastic tubes. The samples should be air dried and placed in paper envelopes and NEVER in any sort of culture media.

5) Place the sample envelopes, with the Sample Form of each cat, in a second envelope.
Send the swabs at room temperature **as a simple letter:**

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