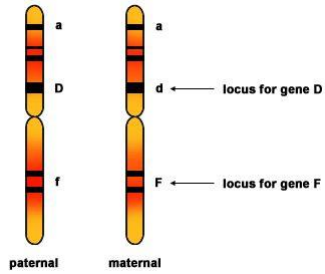



INTRO TO CAT GENETICS LAB

- **Locus (loci, plural)** –
 - a specific, fixed position on a chromosome where a particular gene or genetic marker is located



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CAT GENETICS LAB: BACKGROUND INFORMATION

In cats there are about seven (7) major loci or genes that determine coat color, and one gene that determines color pattern. Several additional genes have smaller effects on color and pattern. And, still other genes control hair length, presence of a tail, form of ears, etc. Eye color is under genetic control and is sometimes affected by genes that determine coat color.

In this lab, we will examine five (5) major loci or genes and four (4) other loci or genes of cat coat color. This is a base analysis. There are MANY genes that code for cat coat color! But, you will be able to determine basic cat coat color phenotypes from genotypes and genotypes from phenotypes by the end of the lab.

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CAT GENETICS LAB: FOUR LOCI OR GENES, 1 OF 2

- **The C Locus**

C = permits color CC or Cc

cc = albino
(with pink eyes and nose, all white fur)



- **The W Locus**

W = white fur WW or Ww
(blue, yellow or odd eyes)

ww = normal pigment



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CAT GENETICS LAB: FOUR LOCI OR GENES, 2 OF 2

- **The A Locus**

A = Agouti AA or Aa
(banded color on each hair)

aa = solid color expressed
(on each hair)



- **The Tabby Locus**

T = Tabby/Tiger TT or Tt^b
(stripes, only expressed if A present)

t^bt^b = mackerel tabby
(stripes in whorled pattern)



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