Info shared by Pitbull SA.

Manjaro APBT kennel.

South Africa.

My Website www.pitbullsa.co.za

My E mail "manjaro@pitbullsa.co.za"

My Facebook "Gawie Manjaro"

My Facebook page "Manjaro Kennel"

My mobile +27827838280.

Zello.com "VoIP" – ask for info.

Colour research done on staffs.

Not pit bulls – just as a reference.

Richard Garcia

"Amy Greenwood Burford" {*see the article below*} ***is simply repeating "facts" that were collected by someone else and applying it to "APBT's"*** and if you think staffs and APBT are the same **you are wrong.**

You cannot broadly apply someone else's research on other dogs – other breeds and state them as facts.

Richard Garcia PS ... all those Red Boy dogs with red noses still produce black nosed dogs.

THE GENETICS OF BREED COLOR IN THE AMERICAN PIT BULL TERRIER
by ***Amy Greenwood Burford***

One of my responsibilities as a member of the staff of the American Dog Breeders Association is to be the 'color expert'.

I believe that my many years of experience in the breed, as well as the opportunity to have grown up in a true 'American Pit Bull Terrier' family has given me the exposure that it requires to know the descriptive terms to describe the many diverse colors in our APBT breed.
The color description that is placed on your ADBA registration papers does not in any way attempt to depict the genetic makeup (genotype) of the individual dog.
Instead it is a description of the dog's actual color that you see (phenotype).
This color description is used for identification only and does not predict what color combinations the individual dog will produce in its offspring.

1. The "blue colour" in the APBT in the past was very rare.
{See related article on history of the APBT and the colour "blue" on – don't get confused with the 'blue" in catch dogs – these blue catch dogs – also called Blue pits then mostly used as finishing hog dogs - specifically used for this task are mixed breeds with "some" APBT blood in them for catch bite hold shake and kill attributes – these hunter also use real APBT for this task.
The mixed breed dogs could then be any colour and diluted black or blue look alike "pit's" are frequently found with these hunters. Adverts of such breeder refer to them as Blue pits. – MK}

How are so many kennels now producing blues in such numbers?
2. It is possible to produce a puppy with a black nose, when both parents have red noses?

3. Where does the chocolate coloring come from?
4. How did I produce a brindle from a line that has never had brindle dogs?

In my review of the genetics of color in the purebred American Pit Bull Terrier, I will review a few of the principals of genetic inheritance in general and look at the research that has been done in the field of color genetics in our breed in an attempt to give readers a better understanding of color genetic as well as provide answers to the above questions.

GENETIC PRINCIPALS.

Each offspring inherits one half of their genetic make-up from their sire and one half from their dam.

All members of the genus canis, to which all dog breeds belong have 78 chromosomes. They appear in pairs and consist of chains of DNA material.

Small sections of these DNA chains make up genes, the genetic code for the production of certain proteins in the individual dog.

The genetic material for particular traits in the dog are located in certain regions on the chromosomes called loci (plural) or locus (singular).

The different assortment of genes that are possible are a particular locus are called alleles.

In many different breeds, through selective breeding, only one allele is found at a particular loci, leading to all members of the breed having the same trait.

This is why purebred dogs will breed true, for those characteristics that distinguish one breed from another.

Alleles exhibit a dominance relationship when paired with a different allele. When the alleles are different at the same loci, they are said to be heterozygous. When the alleles are alike at the same loci, they are said to be homozygous.

Dependent upon how many different alleles are possible there are multiple combinations of dominance.
The term epistatic (above), means more dominant and hypostatic (below) means less dominant.
Geneticists use an upper case letter: example (A), to signal a dominant allele, and a lower case letter: example (a) to denote a recessive allele.

The study of color genetic within a breed can be complex, as there are nine different locations (loci) on the chromosomes that effect the final color that you see in your dog.
At each loci are two or more alleles, or gene choices, that interact according to their dominance-recessive relationships.
At loci that have more than two alleles, the relative dominance in the series have been listed in order of their dominance. Genetic research into the genotypes of coat color has not been done with UKC or ADBA registered APBT.
The reason is this: throughout the history of our breed, dogs have not specifically been bred for color.
All colors were considered equal.
An individual dog was selected as breeding stock based upon a multitude of factors, usually none of them being color.
The canine genetic research into the genotype of color has been done solely in AKC registered breeds.
One of the breeds that has been studied is the American Staffordshire terrier (hence not the American Pitbull terrier).
As a matter of review, it is important to understand that every dog accepted into the AKC registry as an American Staffordshire terrier was also registered with the UKC or ADBA as an American Pit Bull Terrier.
The year was 1936, and the popularity of the Our Gang Comedy and show's mascot, Petey, prompted the AKC to open their stud book to the breed as long as the breed name could be changed to the American Staffordshire terrier.

No other breed has been crossed into the AKC American Staffordshire Terrier lines, so we are justified in examining the results of this research and applying it to ADBA registered dogs.
The researched results of the color genotypes possible in our breed, at the nine loci responsible for the determination of color are presented below: As/Ay/at, B/b, C, D/d, E/Ebr/e, g, m, S/si/sp/sw, t

Locus A Series:
Dark Pigment Pattern.
This locus has six different alleles possible in the canine population. Only three are present in the APBT breed.
(As) dominant Black (Ay) dominant Yellow (at) bicolored pattern (tan 'Doberman like' markings on a solid coat)
The A alleles are pattern factors that control the amount and area distribution of dark and light pigment.
They act within the hair follicle to switch pigment synthesis between light and dark. It is important to remember that alleles at this locus interact with Locus E alleles. (As) -
DOMINANT BLACK: This allele produces uniform coverage of dark pigment over the entire body.
Its action is expressed in all dogs with black or brown coats.
The (As) allele is almost completely dominant over others in the A series.
The black color ranges from pure black to a black with a brownish cast (seal). Geneticists are uncertain if the allele is incapable to produce pure black without additional help from another locus, or if the brown cast indicates a heterozygous allele.
(Ay) - DOMINANT YELLOW:
The (Ay) allele restricts dark pigment, producing yellow colors. When homozygous, the coat can be clear gold, but often has black tipped hairs, especially on the head and down the back. (at) -
BLACK AND TAN PATTERN (BICOLORED):

The typical tan points are above each eye, on each cheek, on the lips and lower jaw, extending under the throat, two spots on the chest, below the tail, and on the feet to the pasterns and hocks, extending up the inner sides of the legs.
These tan points can occur on black or seal, blue, chocolate or red solid colored dogs.
A great deal of variation can occur with these tan points, even within the depth of the pigment.
In some dogs the tan points are not always marked and the color contrast is not always distinct.

Locus B Series - Black/Brown Pigment (B) black pigment (b) brown pigment This locus contains only two alleles, the dominant (B) producing black skin and nose pigment and the (b) recessive allele, producing brown pigment.
In dogs that are red or buckskin, the Locus (B) alleles are expressed in skin color, most visible around the eyes and nose.
The black nose indicates the genotype is (BB) or (Bb), both which would be expressed as black nose because of the dominance of the (B) allele.
A light brown or red nose is (bb), or homozygous recessive.
Being homozygous recessive, both parents must contribute one recessive (b) gene to the offspring to produce the red nose.
When breeding two dogs with the (bb) genotype, the only resulting combination in the pups would be (bb) or red nose.