

# Article by Tamas Jakal, president of FCI.

THE BASICS OF USING GENETIC TESTS by Mendel's rules of inheritance.  
DNA TESTING IS A BLESSING WHEN IT'S BEING USED PROPERLY AND CLEVERLY, and a MALDICTION WHEN USED OTHERWISE!

Luckily many breeders started to use DNA tests in their breeding programs. BUT not all of them aware of how to use its result protecting quality without unnecessarily loosing gene pool and causing "bottle neck effect", that can be fatal in some other aspects, especially, when we want to use it to avoid OTHER problems than the one single genetic defect we are concentrating on!

My own rules:

1. Do NOT breed based only on papers and documents! Do not create a litter just because its expected parents are fitting to each other in their genetic profile!! TAKE the PRIORITY of overall QUALITY, CONFORMATION, BREEDTYPE, CHARACTER, HEALTH and FUNCTIONAL TEMPERAMENT , and THEN you choose the best amongst of them by their genetic tests in different subjects you are aware of!

2. ALWAYS give priority to those DNA test results related to the health, expected life span, quality of life, instead of features that has nothing to do with it, (like COLOUR f.e., especially if THAT colour is in the gene pool of the breed, does not affect health issues but the human made Standard does not accept it bc of some reason )!

3. Do NOT eliminate " carriers" with good quality related to 1 single gene failure out of many millions, because you will easily sacrifice all of those qualities. LEARN how to use carriers without producing even ONE SINGLE affected dog!

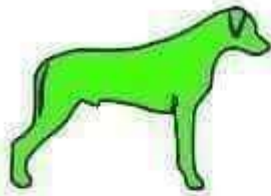
4. REMEMBER that these rules are only STATISTICS, the number of healthy or affected dogs can be different in any produced litter. Using 2 " carriers" can result all " clear" puppies in your litter with some luck, but has the risk to have all puppies affected, so it cannot be generally advised.

5. An " affected" dog of otherwise great qualities ( working ability, temperament or even being "clear" in some other serious illness that affects the breed) with a " clear" counter parents will NOT produce ANY sick puppies, but because all of them will be healthy carriers, hopefully carrying the great quality, the F2 generation MUST be planned and created using DNA test! If you give away puppies from such litter to only pet owners then better to neutralize them or not giving their documents away until the new owner follows the order of the breeder for possible further breeding.

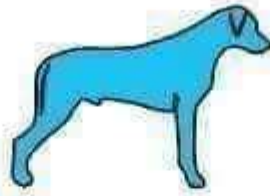
DNA TESTING IS THE WAY TO BREED NOWADAYS, USING THE EVER GROWING NUMBER OF THE SCIENCE'S RESEARCHES' RESULTS, BUT

You do NOT need to use unnecessary tests, just because it is available, if that failure does not exist in your breed or if it does not effect the overall quality, the life span, health, function or the quality of the dog's life!

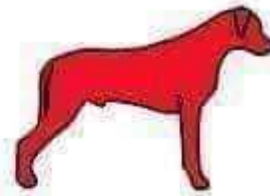
USE THE POSSIBILITIES and do NOT let yourself being MISLED by anybody with limited knowledge!



**CLEAR**



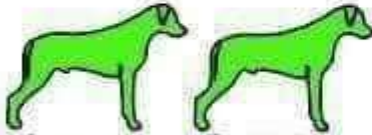
**CARRIER**



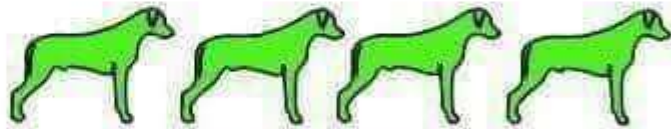
**AFFECTED**

**PARENTS**

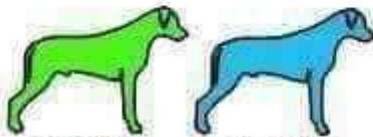
**STATISTICAL PREDISPOSITION**



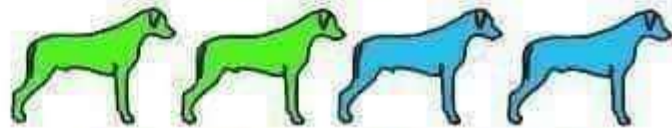
**CLEAR CLEAR**



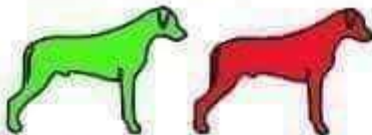
**100% CLEAR**



**CLEAR CARRIER**



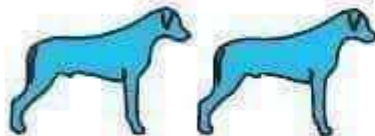
**50% CLEAR 50% CARRIER**



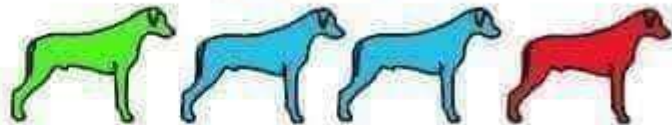
**CLEAR AFFECTED**



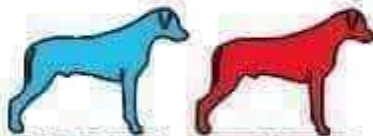
**100% CARRIER**



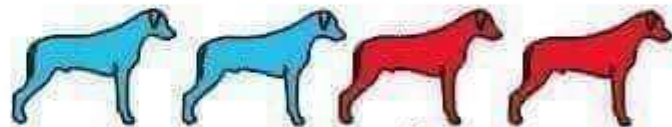
**CARRIER CARRIER**



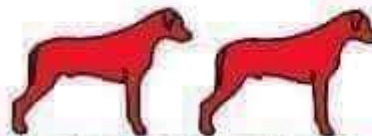
**25% CLEAR 50% CARRIER 25% AFFECTED**



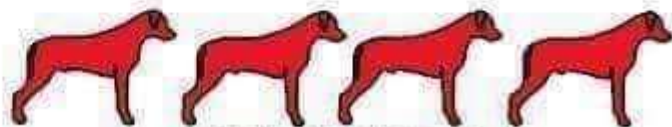
**CARRIER AFFECTED**



**50% CARRIER 50% AFFECTED**



**AFFECTED AFFECTED**



**100% AFFECTED**