

The Bottom Line on LUA Dals

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Last March 2007 I went to California to see first hand the ongoing research at UC Davis and the local breeding programs of the Low Uric Acid Dalmatians. Shamefully, I traveled with too many preconceived notions, misunderstandings and misinformation. After nearly six months of further study and reflection, it occurs to me that there was a single *bottom line* matter, a truly "Ah-Ha!" moment, that opened my eyes. I would like to share this with you now.

"The metabolic defect that leads to increased urinary uric acid is genetically fixed in the Dalmatian."

I have read those words (or similar statements) dozens of times as a breeder, owner and student of the Dalmatian. Unfortunately, the meaning of the words failed to communicate to me. It is quite possible that you are in the same boat.

"Genetically fixed" is a scientific term that geneticists (people who study genes and DNA) use to communicate amongst themselves about a specific trait, and the genetics that control that trait. What it means is that the trait and the gene(s) that code for that trait cannot be changed – ever, ever – with any number of breeding selections because the genetic material (the DNA) is **permanently of only one type**.

Here is an example that helped me to understand this. Suppose you breed a liver Dal to a liver Dal. What color spots do you get, liver or black? I hope that we are all on the same page here – liver, of course! Why? Because the trait for liver colored spots is genetically fixed in this gene pool. It is recessive in both parents. The only possible outcome is that the sire and the dam each contribute a recessive gene, and the pup can only express the recessive feature – liver!

And so it is with High Uric Acid (HUA) in our Dalmatians. We have known for nearly 100 years that the uric acid defect is genetically fixed. How? Breeder-Scientists long ago crossed the Dalmatian to a Collie and found that in just one generation the uric acid defect could be abolished.

Why? Let's think about spots again. Will you all agree with me that black spotting is dominant? What happens if you breed a "pure for black" Dalmatian to a liver? Hopefully we are all on the same page here, and you answer that we get a whole litter of black spotted puppies!

In the Dalmatian x Collie cross the same analysis applies. The Dalmatian is recessive for the High Uric Acid trait (like a liver) and the Collie is dominant (like a pure for black) for Low Uric Acid.

The only possible outcome of this cross is the dominant type – Low Uric Acid!

OK, so here is the bottom line. Every time we breed our beloved Dals we are doing a "liver to liver" kind of breeding when it comes to the uric acid defect. There can be, and will be, only one result: "liver" – a whole litter of Dals with the uric acid defect. The trait is genetically fixed.

What's my bottom line? "High tech" forensic DNA analysis has proven (again) what we have known for nearly a century: it is genetically impossible for us to breed the uric acid defect out of our Dalmatians.

Breeders who contend that we should preserve the Dalmatian as it was in antiquity will preserve the uric acid defect forever into the future, and as well the clinical syndromes (crystals, stones, urinary obstruction) that result from changes in diet, hydration, or maybe even stress in our Dals.

Breeders who adopt "high tech" methods of modern gene therapy will provide an option to reverse the genetically fixed defect. The backcross Dals offer that choice.

What is the final bottom line? You decide!

Purina Weight Circle Program

Regional Clubs are encouraged to collect weight circles from Purina dog food products. The circles can be collected by members of the club, friends, relatives and anyone who wants to help. Each club will automatically receive 25% of the proceeds of their weight circle collection. The club with the highest weight circle poundage will receive 50% of the proceeds of their collection based on membership (pounds per member). The balance of the proceeds will go to DCAF to help support DCAF's activities. Every club is invited to participate.

Send your weight circles to:

Laura Kiedaisch,
2905 Stone Quarry Road, Belvidere IL 61008

Include your name, address & email address (if any) and your regional club name. You **MUST** include the club name in order for the club to receive credit. You may find it easier to appoint a club member to collect circles for the program and send them in once a month.

Thank you for your participation!