Dr. Carl A. Osborne is associated with the Department of Veterinary Sciences, College of Veterinary Medicine at the University of Minnesota, where he specializes in veterinary urology.

TR: Lhasa Apso breeders have been interested for some time in solving the problem we usually call "the kidney problem," or "water drinkers." Some of the clubs have raised money for research. What would it take in the way of finances and resources to do the necessary research on the problem.

OSBORNE: The total cost would depend on how sophisticated the research would be, and whether short or long term, and whether of not it would include breeding studies. It would also be governed by what you expect to accomplish, and how fats.

We would probably hire a resident graduate student, and fees are variable according to their experience. But it would be about twelve to fifteen thousand per year. The university would take on the project for specific training in a given field, such as urology, and a specific program, or research project, would be undertaken. An additional problem we would have to solve would be funds to house any dogs used in the project, as well as the cost of clinical pathology. A detailed proposal would be needed outline projected expenses.

TR: Is there any chance of getting a National Institute of Health grant?

OSBORNE: It would be necessary to do a pilot study to get a grant. You have to show that you have a good project backed up with data. Then you prepare a hypothesis, such as, whether the disease is inherited, or is it caused, such as an enzymatic defect or such. So, you have to convince the NIH that you are able to do the work, and that you have to work, and that you have a sound proposal. It would also contain a projected time limit on which to base the grant.

TR: Can you give any idea of how many affected animals you would need to begin a breeding colony?

OSBORNE: It would depend on what you are trying to accomplish. If you are just trying to characterize the pathology of the disease, you work only with the animals who are brought into the clinic. But if you are trying to set up a breeding colony, so that you can control, then it can take a lot -- I can't say just how many. But as a rule of thumb, the more data you can gain the better. An observation of a hundred dogs is more valuable than one or two dogs. Usually, you do a pilot study, evaluate the data, and then decided on the numbers you need to be valid statistically. So you can't predict the number of dogs you need until the project is started.

TR: I hear that the dogs in the research project at Davis have high blood pressure? Have you encountered this?

OSBORNE: First, high blood pressure is very commonly associated with renal disease in people. On the other hand, high blood pressure can cause renal disease. You have to know what you are doing before you make an assumption on which came first. Until recently, there has been no easy way of measuring blood pressure in dogs, so many studies do not include this information. At this time, it does not seem that high blood pressure and renal disease is as significant in dogs as it is with people.

TR: Did you work on the study of renal disease in Norwegian Elkhounds with Dr. Finco?

OSBORNE: Only unofficially, and Dr. Finco has carried the project with him from Minnesota to Georgia. To my knowledge, nobody can say for sure whether the disease in Lhasa Apsos is the same as that in Norwegian Elkhounds. At this time, Dr. Finco and I are collaborating on some work, and are considering putting together the data we have obtained on the Lhasa Apso. But we have not finalized it into a specific project. What we have done so far is to obtain data from the dogs we have seen in the clinics, and from other veterinarians throughout the country, and people who are closest to Dr. Finco send their dogs to him, or if they are closer to me, he will refer them to me. We have wide open communication on this project. But back to the Norwegian Elkhounds. There are many similarities in the pathology, but we can't say at this time that the cause is the same.
OSBORNE: Well, it looks as though it is inherited, but what went wrong to cause it to be inherited? What is the basis of this inheritance? At this point, people can tell you what it is not, but not what it is. We must attack this by the process of elimination. Still, the underlying cause will not have any affect on the pathology of the disease, because once the kidneys fail then you get a state of uremia -- vomiting, diarrhea, dehydration, weight loss, decalcification of bones.

TR: Can this be detected in puppies, say before the usual age of sale?

OSBORNE: Well, you can live without three quarters of your kidneys, so it would be hard for a breeder to determine the onset of the disease. Usually signs of failure do not develop until there is three fourths failure. Now if I were to set up the type of study I think would be required by the Lhasa breeders, I would need a breeding colony. Then the genetic mode of inheritance of the disease could be mapped out. Then we could look at such things as the time of onset of the disease, look at the pathology and the enzymes and so on, to establish the cause.

TR: Our Lhasas are all so related that wouldn't it be difficult to determine a good or bad breeding by looking at pedigrees?

OSBORNE: It would be more valid to look at the cause of the disease for the answer. It could be inherited, but it may be a very complicated mode of inheritance, and from what breeders have told me, it apparently is not a simple dominant or recessive type at all. If it had been a simple recessive, the breeders would have identified it very rapidly if they had known anything about genetics at all. It may not be many genes. They have things called incomplete penetrants. From what we have looked at -- which is not very much yet, it appears it is not a sex linked gene, but we don't have enough data to say for sure.

TR: Even if we managed to finance research to the maximum, how long do you think it would take to come up with some answers?

OSBORNE: The answers would not come in months, or even a year. It's not that simple from what I know about the disease.

TR: One thing that various clubs and individuals are concerned about in funding study on this problem is paying for duplication of effort.

OSBORNE: I would like to make two points. One, with limited resources, you are right in not wanting to duplicate effort. But then there certainly isn't anything wrong with people duplicating efforts, to be sure they are right. That's trying to verify an observation. The test of an observation is "can you reproduce this?" If other investigators cannot reproduce another person's answers then it cannot be accepted. If anything is done right then it should be able to be reproduced. This can be a very good way of eliminating personal biases and misinterpretations. It keeps people honest.

My second point is that it is not important who gets the research funds. There is already cooperation between universities, If I was asked to solve a problem and knew someone else could do a better job, I would tell you. This is a very small profession and we share our ideas. If you generate ideas and don't share, what was the good in doing it? Most people involved in this work are the best of friends and communicate a lot; it's not like two teams fighting to see who wins. The researchers are not doing their work for fame and fortune. There are certainly no fortunes to be made working at universities! They work because they love the animals and want to learn and share their knowledge for the good of all.

TR: Do you think this is a regional problem?

OSBORNE: The problem is great all over the country; West, East, Midwest, all over, we have verified cases of renal disease in Lhasa Apsos.

TR: Do you think you can get the cooperation from the breeds:

OSBORNE: I was here tow or three years ago and talked to a group of people. I had the feeling that they were very cautious, and I can understand why. They have a lot of time and money invested in their dogs, and they don't want a lot of adverse publicity against their breed. But the problem is, that if it is ignored, it's going to get worse. The thing is to reverse it as soon as possible.
It will take some key individuals and leaders to push and get everyone to follow, to submit affected animals and collect the necessary funds.

TR: A lot of breeders are understandably concerned that pedigrees will be published along with any findings and their stock will be condemned.

OSBORNE: I can understand their concern. But this would not happen. Pedigrees published to substantiate findings are always coded -- no names are shown -- ever. And nobody could tell who the animals were that were used.

TR: If someone had a bitch who had, say three healthy litters, and then had a litter of water drinkers, would you recommend that bitch not be bred again?

OSBORNE: I would recommend that that particular breeding not be done again, but as to whether or not to breed the bitch again, I can't answer that at this time. If the bitch had, say, three healthy litters by stud A and then a bad litter by stud B, you can look to stud B for the answer as this is the one thing you did differently. The thing would be to minimize the problem and to breed her only to stud A. I don't know at this point whether one could condemn either dam or sire. That is why you need colonies under very carefully controlled circumstances so that you can test these things out and reproduce the results.

TR: How do we proceed now, as breeders, in controlling this problem?

OSBORNE: You have already proceeded by taking this step forward and recognizing the problem. After step one, you know better where to place steps two, and on down the line. People must be stimulated and interest must be generated to come up with the facts, until things finally begin to make sense. The secret is to take that first step.