The zoologist Jordi Casamitjana interviews Prof. Andrew Knight, a veterinary Professor from the University of Winchester who is an expert on vegan companion animal diets

Vegan FTA: I don’t share my life with a companion animal.

I did it when I was younger, but not now. Considering my current living arrangements and circumstances, I have concluded I would not be able to provide adequate care to any dog or cat now. I do love their company, though. Although I have never confessed to it, the thing I am looking forward to the most when meeting friends is meeting their non-human companions that often come along. Friendship of the four-legged kind has always been my favourite.

I have a cat friend, though, who is the companion of some human I have never met. For years now, this cat and I meet in my backyard two or three times a week and hang out with each other there. There is no food exchange, so I know that she likes me for who I am, not for what I can provide.

I don’t know what she eats, though. I see her stalking other creatures, but I have never seen her catch anybody — other than the reflection of my watch. I don’t know what her companion humans feed her. But she looks healthy, so I would not be surprised if she is on a plant-based diet.

Hold on, what did I just write? Do not people say that domestic cats are obligate carnivores? They do, but I have already debunked this myth in another article. I did it thanks to research, not just because I am an ethical vegan with some cognitive bias that makes me ignore “the facts” — as some who disagree with my conclusions could put it. I did it, precisely, because I did not ignore the facts, and I focused on those provided by powerful research conducted by reputable scientists. I did it because of Prof. Andrew Knight.
I have known Andrew for many years, so through his friendship, I have been privileged to have frontline access to all the relevant research he has been reviewing and conducting on this issue. Which issue? The feeding of plant-based food to dogs and cats. An issue full of controversy (even within the vegan movement) if you don’t simply look at the evidence available; evidence provided by a veterinarian like Andrew who is a leading expert on this subject.

Andrew is not only a vegan vet (which, for me, it’s the only coherent way to be a vet), but he is a vet who cares as much for the dogs and cats he treats as the pigs and cows “pet lovers” feed their animals with. A real friend of all the animals who knows you don’t have to sacrifice some to help the others. As you may not be as lucky as I am to have direct access to his expertise, I thought I would interview him for you.

The Vegan Journey Came First

![White-Tailed Deer (Odocoileus virginianus) Sniffs Behind Fawn’s Ears – captive animals](image)

I have written about vegan echo chambers and how important it is to improve our communication — especially online — by only using reliable sources and reputable experts. Therefore, if you are ever going to take Andrew’s advice and opinion seriously, I need to show you his credentials. Although originally from Australia, Andrew Knight is a veterinary Professor of Animal Welfare and Ethics, and Founding Director of the University of Winchester Centre for Animal Welfare, in the UK. He is also an Adjunct Professor in the School of Environment and Science at Griffith University, Queensland, EBVS European and RCVS Veterinary Specialist in Animal Welfare Science, Ethics and Law, American and New Zealand Veterinary Specialist in Animal Welfare, Fellow of the Royal College of Veterinary Surgeons, and Principal Fellow of Advance HE (formerly the Higher Education Academy). So, if you wonder how many letters he can add after his name, I have counted more than 60: BSc. (Vet. Biol.), BVMS, CertAW, MANZCVS, DipECAWBM (AWSEL), DipACAW, PhD, FRCVS, PFHEA.

Andrew has been very active over the years. By mid-2022 he had authored more than 150 academic publications (35 peer-reviewed), 80 popular publications, and 40 YouTube videos on animal welfare
issues, and had given around 200 presentations on animal welfare issues at various conferences and universities globally. He had received 14 awards and 20 grants for animal welfare and academic work. Ah, and he has been an ethical vegan for almost 30 years. I asked him, as I do to all my interviewees, how did his vegan journey go. It seems that veganism came first, and then the vet profession followed.

Andrew: “The whole journey began when I was about eight years old. I was given a book on baby animals by my parents, and I looked at the pictures of baby deer in forests. And I thought, ‘these animals are wonderful, and I don’t want to be eating animals.’ So, I marched up to my parents and I told them that. They smiled and thought ‘this will only last about a week, no problem.’ But, of course, it lasted until I was 18. I had a brief relapse and tried eating fish, and then I quit that and went back to being vegetarian. Then, in 1993, when I was 23, I became vegan. I went vegan, and my girlfriend went vegan at the same time because we were both trying to impress each other with how ethical we were. There was no plan and there was not much discussion. I was just sort of proudly informing my prospective date that I was vegan, and it must have worked because we’re still good friends many years later.

I knew about the problems going on with intensive farming and that was why I changed. I remember that, when I became vegan, I had to toss out my entire sweet collection because they contain gelatin. For many years I’ve been building this row of sweets in jars, like in a sweet shop. It was this spectacular collection that went up to about three levels high, but I had to toss the lot, so that was tragic. But it demonstrated my commitment to the cause.”

An Activist in Need of a Credible Profession

Vegan FTA: If for Andrew veganism came first, the vet profession did not come second, but third. Animal advocacy took the second position:
Andrew: “I was involved in helping to launch the Australian campaign against the live sheep trade in the mid-1990s, which was the biggest live sheep trade in the world, with the longest sea voyages and most severe animal welfare problems. And most of it was happening from my home city of Perth, in Western Australia. So, when I was 26 years old I spent a year as a volunteer working full-time on this issue and helping launch the Australian campaign. I hadn’t done anything like this before.

I was doing a lot of interviews, and invariably I’d be called into a radio interview, and I’d talk about the live sheep trade. And then the interviewer would ask, ‘okay, that’s all interesting, but what do you do for a living?’ and I would say, ‘well, I deliver pizzas, or I deliver newspapers, or I deliver patients.’ I realised that people were judging what I was saying about the issue based upon what I did for a living. I thought, ‘I need to fix this.’ So, I thought about getting a proper profession of some kind. I decided that being a vet would be the best.

I studied hard, went back to university, and managed to get into the veterinary course at west Australia’s Murdoch University (by the way, that’s got nothing to do with Rupert Murdoch!). I nearly failed the course because I got rapidly drawn sideways into a huge campaign to bring in humane teaching methods instead of harmful animal use within the veterinary curriculum. There were very invasive experiments occurring in physiology, biochemistry, and dissections of animals in anatomy, with a lot of animals being harmed and killed in these subjects each year. And there was surgery training, in which animals were used as models for students to practice surgical procedures before killing them with anaesthetic overdoses at the end of the procedure.

I rapidly got drawn into a campaign that ended up taking more time than my studies, but we did succeed in bringing humane teaching methods to the university. We did a number of really innovative things. We had a university-wide policy confirming that the students had the right to conscientiously object to teaching, or assessment activities, that conflicted with their profoundly held beliefs.

I was then asked by the Physicians Committee for Responsible Medicine to conduct a study looking at animal carcinogenicity studies. And then I carried on doing more studies, getting a PhD for that work in 2010, and in 2013 was recruited to go and teach at Ross University Veterinary School in the Caribbean — the second-largest vet school in the world — where I was the Director of the clinical and surgical skills training laboratory. In 2015, I took up my current post at the University of Winchester in the UK, and we’ve been doing some very exciting research, teaching and animal welfare advocacy here as well.”

Vegan Food for Companion Animals

Vegan FTA: Now that we have established Andrew’s credentials, commitment and knowledge of animal welfare issues, the question is how he became an expert on vegan food for companion animals, and what science has told us about it:

Andrew: “I had always been interested in vegan diets for dogs and cats, and the question of whether these animals could be healthy and happy on those diets. So, for years, I’ve been tracking the research in this field and have developed websites on this issue.

Very exciting things started to happen in 2021 when the first very large-scale study was published on health outcomes. It was published by Dodd and colleagues from Guelph veterinary school in Canada. They found that cats maintained on vegan diets were more likely to be rated as very healthy, and less likely to have gastrointestinal problems, liver problems, and body weight problems.”
Andrew Knight talking about companion animals food in 2012

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Additionally, I managed to get external research funding a couple of years ago, which enabled me to start seriously doing my own research into this field.”

I know some people look at this issue differently when they look at cats and dogs. It seems more people now recognise that dogs can thrive on a plant-based diet, but some have more doubts regarding cats. So, I wanted to find out what science tells us in each case. I started asking Andrew about how confident we are now about vegan food being perfectly fine for dogs.

“I would say we’re very confident. We are not absolutely certain, but that’s true of most research. But what we have is very large-scale studies which give us a higher degree of statistical reliability, and confer a high degree of scientific confidence in our results. And in the study that we published in *PLoS One* recently — which is the world’s leading open access general science journal — we looked at more than 2,500 dogs in three dietary groups: raw meat, conventional meat, and vegan. And after looking at health outcomes and dietary hazards, we concluded that the healthiest and least hazardous diets for dogs were nutritionally sound vegan diets.
We looked not just at the opinions of dog guardians, but at a range of more objective data as well, such as whether the dogs were on any kind of medication or not, or whether they visited a vet an unusually high number of times in the last year. We also asked about the assessments of the health of the dogs by the veterinarians, and we also looked at the 22 most common health disorders in dogs and how prevalent these were across the different dietary groups. That particular study gives us a high degree of confidence.

On top of that, another one has just been published within the last month — again by Dodd and colleagues from Guelph veterinary school. Theirs was another very large study of health outcomes in dogs — more than a thousand dogs. They found that previously owned dogs lived an average of one and a half years longer if they were on a vegan diet. And they also found that the vegan dogs in the main part of the study were more likely to be rated as very healthy, and less likely to have liver, gastrointestinal problems or ocular problems.

There have now been eight studies looking at health outcomes in dogs. Seven of them are supportive of vegetarian or vegan diets, and one of them is not. The one that is not, is the smallest study. It had a total sample size of eight, of which four were on meat-based and four on plant-based diets. The exercise protocol was very far removed from the reality of normal dogs. They were required to rest for six weeks followed by two weeks of enforced exercise — daily running at 12 km/hour, for three hours, on a treadmill. The plant-based dogs had lower circulating cholesterol, which seems to protect against red blood cell breakdown, and they ended up with anaemia in this study. However, the exercise regime they were subjected to was extreme, and not related to the reality of dogs in the real world. Furthermore, there was a study of sprint racing Siberian huskies in a better journal in 2009, who also undertook extreme levels of exercise, which found no such problems — and it was a slightly larger study.

On top of that, there are some reasons that would explain some of these results. I am seeing clusters of benefits: we know that the vegan diets are not going to include animal-sourced allergens such as beef, pork, lamb, and chicken, and we are seeing lower rates of gastrointestinal problems, skin problems, and ear problems. All of those are associated with dietary intolerances and allergens.

The other cluster of benefits relates to body weight. There have been various studies showing that both vegan and meat-based diets are sometimes formulated with nutritional errors and deficiencies, and I think one of the hazards of meat-based diets is that they may be more prone to excessive calories. Being overweight is one of the most common problems suffered by dogs and cats today. Vegan dogs seem to have more ideal body weights. They seem to have fewer mobility and musculoskeletal disorders, possibly because the hazard of overnutrition is less prevalent with vegan diets.”

What About Cats?

Vegan FTA: That is the question that I think most vegans would be anxious to have an answer to (either because they are feeding their cats plant-based food and want to be sure this is OK, or because they decided to still feed them animal-based food and do not want to be proven wrong). This is what Andrew said about whether we should treat dogs and cats differently on this issue.

Andrew: “The fundamental biological principle is not different. It’s the same, which is that the diet needs to provide all the nutrients required by the species, whether it’s a cat or a dog. It needs to be adequately bioavailable — that’s primarily digestible — and it needs to be sufficiently palatable to ensure the animals are happy to eat it. And if you formulate a diet that provides all those things, the animal should thrive on that diet. The large-scale studies of health outcomes in cats are demonstrating that this is indeed the case.
The study published in 2021 by Dodd and colleagues in one of the world’s top veterinary journals was a very large-scale study of cats. It showed that not only were they just as healthy on a vegan diet, but they were healthier with respect to gastrointestinal, liver, and body weight status. And their guardians were more likely to report them as being in very good health. That is obviously very exciting because it flies in the face of traditionally accepted wisdom that cats are obligate carnivores and couldn’t possibly be healthy on a vegan diet. But clearly, when you look at very large numbers of them, it’s obvious that they are as healthy, or healthier, on average.
We also have an even larger scale study of the health outcomes in cats which has also demonstrated that in most respects they are as healthier, and in some respects, even more healthy than cats maintained in meat-based diets. That study is under review by a major scientific journal at the moment.

It is of course essential that the diets are formulated to be nutritionally sound, and this applies as much to meat-based as to plant-based diets. People often cite taurine as an amino acid that cats in particular need, which is not naturally available from plant sources. What they forget is that the taurine in meat-based diets is heavily degraded by processing. The high temperatures, pressures and chemical treatments unravel amino acids like taurine, and degrade fragile vitamins, and the taurine needs to be supplemented from a synthetic source in the meat-based diets after processing. The same synthetic sources are used in vegan pet food as well, along with other nutrients that are required.

It’s just like with human beings, really. Vegan people that don’t supplement with essential supplements, such as B12 and omega-3, may eventually suffer health consequences in the very long term, and the same could be expected with animals. But if you provide those necessary supplements within commercial diets, we have every reason to expect health outcomes as good or better than those from animals that are consuming meat-based diets — which may provide all the nutrients necessary, but also include a range of dietary hazards, which are absent from vegan diets.

The other factor of importance is palatability. Are the cats or dogs going to be as happy on these diets? We studied that as well on a very large scale, 2,300+ dogs and 1,100+ cats, looking at all the behavioural indicators of palatability on different diets. That was also published in PloS One in 2021. We found that the animals seemed to be enjoying the vegan diets just as much as meat-based ones, as far as you could tell from an exhaustive analysis of the behaviour of really large numbers of animals.

They seem to be as happy, they seem to be as healthy or healthier, and we know that there are clear environmental benefits associated with these diets, and benefits for the welfare of farmed animals. But what about the quality of the diets? We studied that as well. In another study published in 2021, we looked at all the steps involved in initial design, ingredient sourcing, manufacturing, quality control thereafter, transportation and shipping protocols. We looked at ten companies producing vegetarian, vegan, or almost vegan diets, and 19 producing meat-based pet foods. We found that all had generally good standards at most stages of the process, but the plant-based ones were slightly better.

When you lay out the evidence, most people are rational and they do accept the evidence, and then the skepticism goes away. If on those rare occasions people stick to an entrenched position in complete defiance of the overwhelming weight of evidence on this issue, then, as with all examples of social arguments on various issues, your time is better spent elsewhere dealing with those who have a more open mind.”

What The Future Holds

Vegan FTA: Although Andrew and other scientists have already made a solid case for vegan diets for both dogs and cats (and his advocacy has also made a case for humans becoming vegan), he has not finished researching and compiling even more evidence. I asked him what he is working on and what else are we going to see in the future from him.
“There are two projects I am working on. One is our forthcoming *Routledge Handbook of Animal Welfare.* We hope that this will become something of a bible for the animal advocacy movement because it includes relatively succinct — approx. 5,000 words — summaries of most animal welfare issues. These provide very thorough summaries that are still readable by those with limited time. Chapters are very evidence-based with many scientific references, but also make real calls for change. Previously, textbooks in this field have fallen into two main groups: humanities-based textbooks which have often had the courage to make strong calls for change but have been relatively weak in scientific evidence — which are unfortunately then dismissed by policymakers and stakeholders, and animal welfare science textbooks, which have been strong on the biological science but have not made strong calls for change. In this forthcoming textbook, we’ve combined those two approaches, using a very strong scientific evidence base to support strong calls for change.”
The other thing I’m excited about is our forthcoming research on vegan and alternative diets. What we’ve done so far is identified the top five concerns of consumers. Many people are interested in having more sustainable lifestyles but don’t want to choose vegan pet food because of key concerns. From our survey of more than 4,000 companion animal guardians, we’ve identified the top five concerns. We have addressed four out of five: pet health, diet nutritional soundness and quality, and dietary palatability. The fifth one is environmental sustainability, and that’s what I’m working on now. Nobody has quantified what the benefits would be if the world’s cats and dogs went vegan in terms of food energy savings. I’m in the process of calculating all of that.”

**Vegan FTA:** I am looking forward to these two projects becoming available to everyone. If you have read up to here, you may think this was a very long article, but I thought it was worth giving Andrew the space to lay out all that we know about vegan diets for dogs and cats, because there is a lot, and often most of it is missed in short interviews and headlines. But believe me, I was planning to write a lot more about him. As I have known him personally for more than ten years, there is a lot more about him I wanted the world to know. I wanted to talk about politics and why he has been the candidate for the Animal Welfare Party in some UK elections. I wanted to talk about his physical adventures running marathons and climbing mountains. I wanted to talk about his historical insight into Jack the Ripper. I wanted to talk about his sarcastic sense of humour, including really looking for the European Yeti and doing extreme ironing.

In the end, I decided to stick to his professional dimension, as there is a limited digital space for me to fill — well, there isn’t, but you know what I mean.

Next time I meet my feline friend in my backyard, I will tell her about Andrew.

A vet who is truly a friend of all the animals.