

were sold on the concept that if some vaccines are good, more are better – for their patients and their bottom line. So it came to pass that for decades, vets followed the label recommendations directing that canine vaccines be administered annually. In the late 1970s, a deadly parvovirus epidemic killed thousands of dogs and wiped out whole litters of puppies, eventually halted by the mass administration of the parvovirus vaccine. This episode emphasized the important role of vaccinations in canine healthcare and labeled veterinarians who challenged the annual administration of vaccines as mutinous. And there was, in fact, a small population of insurgent veterinarians who had doubts about the necessity of frequent vaccination. Many holistic practitioners – who often see patients with complex, mystifying symptoms of poor health, patients who have not been helped or even diagnosed by conventionally trained veterinarians – suspected a link between vaccines and immune disorders. In their minds, it was easy to surmise that there might be a connection between agents that are designed to provoke an immune response and their patients' poor or inappropriate immune responses. But while drug companies are motivated to fund studies that can develop more vaccines they can sell for a profit, they are understandably disinclined to spend money on studies that may discover their products' potential for harm, or how few vaccines our companion animals really need for disease protection. As a result, only anecdotal evidence provided by "vaccine rebels" – owners and veterinarians who either do not vaccinate or vaccinate on a reduced schedule – seemed to suggest that dogs and cats might be better off receiving fewer vaccines. But until recently there was little scientific evidence that supported this idea, perhaps none that was accepted in the conventional university veterinarian research community. Then, in the early 1990s, laboratory researchers at the University of Pennsylvania noticed a connection between the marked increase in the number of sarcomas, or cancerous tumors, under the skin at the site of rabies vaccine administration in cats. Later, researchers at the University of California at Davis noted that feline leukemia vaccines seemed to cause the same results. Taken aback by the inflammatory nature of the animals' reaction to the vaccines, veterinary researchers began to suspect that immediate reactions to vaccinations, delayed reactions to vaccinations, or the combined effects of multiple vaccinations, could be risk factors for other ailments and chronic diseases in cats and dogs. As vaccines and their long-term effects became a (at least minor) topic of mainstream veterinary interest, one small but important fact came to light: there is no universally accepted "standard vaccination protocol" that has the approval of say, the American Veterinary Medical Association and/or the FDA's Center for Veterinary Medicine. The prevailing vaccination recommendations and schedules that most veterinarians and veterinary colleges recommend have been based on the research and suggestions of the manufacturers – not on independent scientific research. This point had long been recognized by the vaccine rebels, but disregarded by most conventional veterinarians.

#### Why more is not better

Jean Dodds, DVM, a highly respected veterinary hematologist, and founder and president of the nonprofit Hemopet, a California-based animal blood bank, pioneered the vaccine debate decades ago and is now considered one of the leading authorities on canine vaccine protocols. According to Dr. Dodds, many recent studies confirm that the vast majority of dogs, in most cases at least 95 percent of the subjects, retain immunity after vaccination for many years after the administration of a vaccine. She states that the "evidence implicating vaccines in triggering immune-mediated and other chronic disorders (vaccinosis) is compelling." Adverse reactions to conventional vaccines can be the same as reactions to any chemicals, drugs, or infectious agents. Immediate (or anaphylactic) reactions can occur in the 24–48 hours following exposure to the vaccine. Delayed reactions can occur 10–45 days after receiving vaccines. Symptoms