

VOLUME 12  
NUMBER 6

# The Whole



# Dog Journal™

A monthly guide to natural dog care and training

June 2009

\$5.95

## FEATURES

### 3 Like Cats and Dogs

*Five things to do if your dog chases or otherwise endangers your cat.*

### 4 Mixed Messages

*Can DNA tests really reveal the origin of your mixed-breed dog? We explore the technology, and put it to the test.*

### 10 Super-Socialized

*How to create a reliably social, friendly, take-anywhere dog.*

### 15 Have Ball, Will Fly

*An introduction to “flyball,” a sport for high-drive dogs of all breeds and sizes.*

### 20 Positive Power

*Pain- and fear-free training methods are effective and enjoyable.*



Five things to do  
to save this cat  
... page 3



Name that breed!  
page 4



Really loud relay races  
... page 15

## ALSO IN THIS ISSUE

- 2 Editor's Note
- 24 Product and Expert Resources

# Overdue Praise

*A place in our hearts for "indie" pet supply stores.*

BY NANCY KERNS

I have been meaning for some time to sing the praises of the independent pet supply store. There is a time and a place for big box stores, don't get me wrong. And I'm aware that some of the more responsible chains invest a fair amount in their employees' education and professional development. But nothing beats a well-stocked shop run by someone with a passion for dogs.

I'm lucky: In Northern California, there is a wealth of amazing stores owned and managed by highly educated people. They carry super-premium foods, and can tell you – accurately – why the foods are better. The lower-cost foods they do carry are the best products available at that price point; they don't carry the lowest-cost, worst-quality foods. They wouldn't dream of it.

The independent store owners I know travel to one or more of the gargantuan pet industry trade shows each year, looking for new and better toys, beds, treats, supplements, training gear, and more. They invest time and money in their education, and that of their employees, so they can make responsible, educated recommendations to dog owners who come into their stores.

Sometimes I go into big-box pet supply stores to look for and buy items that we do not recommend, so I can photograph and caption them: DO NOT BUY. It doesn't happen often, but I'm always impressed when an employee at one of these stores looks around furtively and asks, "Um, what are you going to do with these?" If they do, I'm honest and tell them that I'm buying them as examples of what dog owners should not buy. "Oh good!" one such employee told me recently. "I was worried for a minute. I would never give a dog those things!"



Usually, though, the employees don't say anything, or don't know to say something.

The thing is, a good independent store would never carry an item that they felt was not healthy for dogs in the first place.

A few months ago, I called one of my favorite indies looking for one of the devices that allows you to lead your dog on a bicycle. The clerk at the store told me that she was sorry, they didn't carry it, but could special order it for me if I wanted . . . but added that she, personally, felt they were unsafe. How was I planning on using it? Was I taking precautions to keep the dog safe? Her interest in my dog's well-being was impressive.

The same week, I traveled to another indie, about 40 miles away, where I had seen that product for sale a month before. When I got there, though, there wasn't one on the shelf. Disappointed, I asked the clerk about it; she called the owner out to the front to ask about it. While waiting, I tried on a baseball hat with the word, "Grrr" written on it. I was feeling like growling. "I'm sorry, we sent it back," the owner told me. "We haven't sold one for a year!"

"Shoot!" I said. "I saw one here last month, and made a special trip here to buy it. And I really needed it today." "Where did you drive from?" he asked. When I told him, he said, "I'm so sorry! You know what? Take that hat.

And call before you come next time and we can tell you if we have whatever it is you need. We want you to come back!"

That would never happen in a big box. And thanks for the hat, Bow Wow Meow, of San Carlos, California.

NK

## CORRECTION

We failed to credit Carol Robinson for her photo of a Basset Hound chewing some lovely red women's shoes, which appeared in the May issue. Our apologies.

## The Whole Dog Journal™

EDITOR-IN-CHIEF – Nancy Kerns  
 TRAINING EDITOR – Pat Miller  
 PUBLISHER – Timothy H. Cole  
 CIRCULATION DIRECTOR – Greg King

### EDITORIAL OFFICE

E-MAIL: WholeDogJ@aol.com  
 MAIL: PO Box 1349  
 Oroville, CA 95965  
 PACKAGES: 1655 Robinson Street  
 Oroville, CA 95965

### SUBSCRIPTION SERVICES

PHONE: (800) 829-9165  
 INTERNET: whole-dog-journal.com/cs  
 U.S. MAIL: PO Box 420235  
 Palm Coast, FL 32142-0235  
 CANADA: Box 7820 STN Main  
 London, Ontario N5Y 5W1

### BACK ISSUES, WEBSITE INQUIRIES

PHONE: (800) 424-7887  
 E-MAIL: customer\_service@belvoir.com  
 INTERNET: whole-dog-journal.com  
 U.S. MAIL: PO Box 5656  
 Norwalk, CT 06856-5656

### REPRINTS

For price quote, contact Jennifer Jimolka at  
 (203) 857-3144  
 Minimum order 1,000

### NEWSSTAND

Jocelyn Donnellon, (203) 857-3100

**WHOLE DOG JOURNAL  
 DOES NOT ACCEPT  
 COMMERCIAL ADVERTISING**



**THE WHOLE DOG JOURNAL** (ISSN #1097-5322) is published monthly by Belvoir Media Group, LLC, 800 Connecticut Avenue, Norwalk, CT 06854-1631. Robert Englander, Chairman and CEO; Timothy H. Cole, Executive Vice President, Editorial Director; Phillip L. Penny,

Chief Operating Officer; Greg King, Executive Vice President, Marketing Director; Marvin Cweibel, Senior Vice President, Marketing Operations; Ron Goldberg, Chief Financial Officer; Tom Canfield, Vice President, Circulation; Michael N. Pollet, Senior Vice President, General Counsel. Periodicals postage paid at Norwalk, CT and at additional mailing offices. Copyright ©2009, Belvoir Media Group, LLC. All rights reserved. Reproduction in whole or in part is strictly prohibited. Printed in U.S.A. Revenue Canada GST Account #128044658. Canada Publishing Agreement Number #40016479.

THE WHOLE DOG JOURNAL makes every effort to provide information on dog health, care, and treatment that is authoritative, reliable, and practical. It is not intended, however, to replace diagnosis or treatment from a veterinarian or other qualified dog professional. THE WHOLE DOG JOURNAL does not assume any legal responsibility. Readers should always consult qualified healthcare providers for specific diagnosis and treatment.

**Subscriptions:** \$39 annually (12 issues). Bulk rate subscriptions for organizations and educational institutions available upon request.

**Postmaster:** Please send address changes to THE WHOLE DOG JOURNAL, PO Box 420234, Palm Coast, FL 32142

THE WHOLE DOG JOURNAL, PO Box 39, Norwich, ON, N0J 1P0

# Like Cats and Dogs

*Five things to do when your dog . . . chases your cat!*

BY PAT MILLER

**D**ogs are a predatory species. While cats think of themselves as predators, dogs often think of cats as prey. Still, many canines and felines live together in happy harmony. If yours don't, here are some things to do when Fido chases Felix.

**1** Separate dog and cat when you're not there to supervise. You need to protect your cat from injury or possible death, and you want to prevent your dog from practicing the unwanted chasing behavior. Depending on the intensity of the chasing behavior, you may want your cat behind a solid door when you're away to ensure protection, or baby gates may be enough to give kitty safe zones to use as she chooses. When you are there to supervise, you still need to manage your dog so he doesn't get reinforced for chasing the cat. Having something run away when you

chase it is highly reinforcing to a dog with strong predatory behaviors.

**2** Counter-condition and desensitize. You can reprogram your dog's automatic response to chase a small moving creature. Have your dog on a leash when your cat enters the room. The instant your dog notices the cat, start feeding him bits of very high-value treat, such as boiled chicken. As long as the cat is in sight and moving, keep feeding. If kitty leaves the room or jumps up on a high piece of furniture you can stop feeding the bits of chicken to your dog – but keep him leashed!

Eventually your dog's response to arrival of the cat will be to swivel his head to you with a happy "Where's my chicken?" look. At some point, it'll work even off-leash. Note: You may also need to counter-condition your cat to be happier

and calmer about the presence of your dog! (For more on counter-conditioning your dog to cats, see "Cats and Dogs Living Together," WDJ June 2007.)

**3** Use a happy recall. If you yell at your dog when he takes off after the cat, the stress and intensity in your voice is likely to increase the intensity of his chasing behavior. If you've taught him a solid recall and done some counter-conditioning, your happy recall voice is more likely to succeed in calling him off the chase. If the recall isn't happening for you, teach an emergency "pause" cue such as "Stop!" or "Wait!" If you teach this as a fun game, with your cue meaning, "Hey, I've got chicken!" you can pause your dog long enough for the cat to escape through the baby gate to a safe room.

**4** Keep your cat indoors. Indoor living is safer for your cat all the way around, and especially if your dog likes to chase her. Many dogs who live peacefully with their indoor cat friends will still chase moving felines outside. I'm sure mine would. After all, it's expecting a lot to ask a dog to distinguish between a high-speed squirrel, bunny, or cat. If your cat insists on outdoor exposure, build her a screened-in enclosure, or attach the "Cat Fence-In" containment system (catfencein.com or 888-738-9099) to your fence and let her out in the yard only when your dog is securely contained indoors.

**5** Consider rehoming one of them. This is, obviously, a very last resort. Some dogs will never be trustworthy with cats. If you think your dog is really intent on killing your cat and the counter-conditioning doesn't change his mind, you have two options. Strict management so the two of them never meet (and management always has the risk of failure), or rehoming one of them so they both can live happily ever after in separate homes. 🐾



**This dog's tense, still body language speaks volumes: She'd love to chase and catch that kitty. This would be an excellent time to do some counter-conditioning, putting some over-the-top, delicious treats right in front of the dog's nose.**

# Mixed Messages

*Can DNA tests really reveal the origin of your mixed-breed dog?*

BY LISA RODIER

**T**he sequencing of the canine genome, accomplished as a public research project in 2004, opened the floodgates to endless possibilities for canine genetic testing. The holy grail for many scientists engaged in this work is the understanding of, and ultimately, the elimination of inherited canine diseases. For many dog owners, though, the most exciting outcome of this serious work is the possibility that they can learn exactly what breeds their mutts are made of.

Though there are already several commercial companies offering products that purport to be able to do just that, our assessment of the breed identification tests is that the results may be just as mixed as the dogs they seek to explain. The test results may be nearly as varied, interesting, and enjoyable as our mixed-breed friends, but it seems that, at least right now, they may not be able to absolutely satisfy the question of your mutt's parentage. The tests are getting better every day, though! And as the understanding of DNA, the size of the sample databases, and the power of computers grow, it's likely that the tests will, at some point, truly live up to the marketing hype currently being used to sell them.

## How it began

The first mixed-breed DNA test was born in the laboratory of Elaine A. Ostrander, Ph.D., and Leonid Krugylak, Ph.D., when they were with the Fred Hutchinson Cancer Research Center in Seattle. Drs. Ostrander and Krugylak were looking for genetic commonalities among purebred dogs recognized by the American Kennel Club (AKC). One goal was to discover the genes responsible for diseases common to both dogs and humans, including several types of cancer. They were also studying the relatedness of about 100 of the AKC-recognized breeds; this led to the discovery that the genetic variation *between* dog breeds is much greater than the variation



**He's got his Mama's tail and spotted tongue, Papa's ears, Grandpa's white chest, Grandma's red coat, Nana's "birdiness," Pop-Pop's mischievousness . . . How far can we really go with this? Well, actually, not that far! DNA analysis probably won't answer all your questions about your mixed-breed dog.**

*within* breeds. For comparison, genetic variation between human populations is about 5.4 percent; in dogs, they discovered, between-breed variation is estimated at 27.5 percent.

In 2005, Ostrander and Krugylak signed a commercialization agreement with Mars Veterinary™, a newly created division of the mighty Mars, Incorporated (yes, think candy, gum, pet food, and other foodstuffs), licensing the technology they developed for use in breed identification.

Mars Veterinary wasn't alone in the race to market a breed identification product. Scientists at MMI Genomics Inc. (MMIG) were also studying canine DNA. In fact, MMIG provided identity and parentage verification services for the AKC, United Kennel Club (UKC), Professional Kennel Club (PKC), and a number of other canine registries and breed clubs. MMIG was originally a division of Celera, and led the private effort to sequence the canine genome. It was also the first to commercially market a breed identification test, in March

2007. MMIG called its product the Canine Heritage™ Breed Test. When it made its commercial debut, the test was potentially able to identify only 38 breeds; today's test ("XL") was upgraded in mid-2008 to identify more than 100 breeds.

Mars Veterinary brought its test to market just a few months later, in September 2007, as the Mars Veterinary Wisdom Panel™ MX test.

## How they work

Each company promotes its tests by saying they are a good way for the mixed breed dog owner to learn whether his or her dog might be susceptible to a particular genetically linked disease if the dog has breeds known to inherit certain conditions. They also say that the tests help with training, by giving the owner insight into the dog's behavior; the reason why the dog acts the way he does might be explained by his background. At the end of the day, however, company representatives admit that the majority of their customers buy the

tests simply out of curiosity and because it's fun to do.

The DNA tests we looked at draw their databases from the more than 160 breeds recognized by the AKC, and address only those breeds found in North America. Worldwide, it is estimated that there are more than 300 breeds of dogs.

The tests use genetic tools referred to as "markers" to define the concept of a dog breed. A genetic marker is a position in the genome where there is variability in the sequence that is inherited, following the rules of classical genetics. Two common kinds of markers are microsatellites and single nucleotide polymorphisms (SNPs).

Each company independently developed a set of markers that define the breeds in their databases and utilizes sophisticated computer algorithms to match a given mixed-breed dog's DNA to that in its database to come up with the best breed match(es) for him. The analysis determines how closely, and to what extent, the mixed breed dog's genetic patterns match those of purebreds.

There are two very significant players in the U.S. market (MMIG and Mars Veterinary) and a few that are trying to carve out a larger role. EDP BioTech Corp. is very new; a fourth company, DNA Diagnostics Center Veterinary, subcontracts its work to EDP BioTech Corp. There is at least one test (Viaguard DNAfirm™) offered by a Canadian company, Accu-Metrics Ltd., which we did not explore.

## Canine Heritage Breed Test

The Canine Heritage test was developed by looking for a unique set of DNA markers (SNPs) that could identify the breed of a purebred dog. MMIG started by testing more than 400 different markers on 108 AKC breeds to identify the unique combination of markers that describe each breed. After testing upward of 10,000 purebred dogs, scientists at the company developed a unique profile of DNA for each of the 108 breeds they focused on, and then created a smaller subset of markers that are used in the current test.

The final marker set was tested on thousands of AKC-certified, purebred dogs; the final test was able to successfully assign the correct breed 99 percent of the time when testing purebreds of the 108 breeds in their database. The company then developed a software program that would run algorithms (i.e., if this, then that) to look for a specific match in their database

## Happy Consumers of Mixed-Breed Tests

Ruby, named for her short red coat, was brought home to Rosalie and Leonard Sanchez of Riverside, California, by their 15-year-old grandson, who got her from a lady giving pups away from the back of a pickup truck. The lady told their grandson that the puppy was a St. Bernard-mix. Rosalie quickly dismissed his words, figuring that he made up that piece of the story, because Ruby looked nothing like a St. Bernard.



Early this year, she learned about the Canine Heritage test, and was curious to know more about Ruby's background. She and her husband guessed Ruby was part Boxer. Their veterinarian concurred, because of Ruby's large paws; his guess was Boxer/Great Dane or Boxer/Mastiff.

When the results came back, Rosalie was floored; her grandson was correct after all! The test showed Boxer and St. Bernard. Although she still can't get over how Ruby does not resemble a St. Bernard, Rosalie says, "A mixed breed dog is like a box of chocolates. You never know what's on the inside."



Dan McCarthy's girlfriend found Flora lying next to a bus stop, emaciated and covered in fleas. Their veterinarian thought Flora was a Labrador and Springer Spaniel-mix, yet she was on the small size, weighing 30 pounds at age two. Other people guessed Border Collie and Jack Russell Terrier.

Dan, a resident of Hollywood, California, wanted to know as much about Flora as he could. "I want to know who her mother and father were, where they are now, and show them Flora has grown up to be a great dog with a great life," he says. Last summer he ordered the Canine Heritage test. The results showed that Flora's parents were probably not purebreds – nothing listed in Primary category, just as Dan had suspected. The Secondary level, though, reported German Shepherd and Cocker Spaniel. Dan was amazed. "The Spaniel explains why she is so small, and the Shepherd explains why she is so smart!"

Kitty Cannon of Crystal Beach, Florida, and her husband had always played a guessing game about their dog's breed makeup. When they learned about DNA testing in 2008, Kitty thought, "Why not? Since we can't afford to have Fox cloned, maybe by knowing his breeds we can in the future look for another great dog with his traits." They guessed Fox was part Collie or Sheltie. When their Canine Heritage results came back, they were surprised to get Bernese Mountain Dog in the Secondary category, and Chow Chow "In the Mix." Only a higher being would know for sure whether the results are accurate, says Kitty, "but we do notice some similarities as to where he got his fur color, ear shape, and jowl line. We know they broke the mold with him and there will never be another."

Evelyn Orenbuch, a veterinarian from Philadelphia, ordered the Mars Veterinary Wisdom Panel MX for her rescue dog, Pia. "I wanted to know if Pia's behavior had anything to do with the breeds I thought she had in her. We guessed Border Collie, Whippet, and . . .?" The results matched at only the lowest levels, revealing German Shepherd and a couple of other breeds. Dr. Orenbuch was somewhat disappointed, as she had hoped to have more information about Pia's origin. Nonetheless, she says she would recommend the test to clients. "Knowing what breeds are in your dog helps you to understand his emotional *and* physical aspects. It may not change what you do with your dog or how you treat him, but it may help you to understand him."



## Some Owners Say It's Not Worth It

Laura Pescador of Denver, Colorado, ordered the Canine Heritage test for Misha, her “60-pound, black and tan, square-nosed, short-haired, big-eared, deep-chested, bi-eyed mystery mix” in May 2008. Laura felt the breed combination she was told when she adopted Misha was unlikely (Australian Shepherd/Labrador Retriever); she was also hoping to receive a piece of paper that said that Misha was not a pit bull-mix, “Not because I don't like them but because of my city's breed-specific legislation.” Laura was disappointed to receive an “apology letter” with results stating that the test was inconclusive! On her certificate, next to “Primary” was written “Untested Breed,” while the other two categories were blank.



Scamper, Monty, and Rainey are three mixed breed dogs belonging to veterinarian J.C. Burcham, of Olathe, Kansas. In early 2008, she submitted blood samples for each dog for the Wisdom Panel test. Dr. Burcham was pretty sure that Monty was “several generations of mutts breeding to mutts” and had few expectations



MONTY

for his results. She calls Scamper a Jack Russell/Basenji/Beagle mix, so was expecting to see something like that, or even some terrier breed. Rainey was found as a puppy in rural Virginia, starving to death with two littermates, all three of whom looked like Border Collies.

When the results came in, Dr. Burcham was disappointed. “I felt like it was a complete waste of money! Rainey is clearly part Border Collie, and that was about the only reliable result I saw.

Two of my three dogs were found to be “too complex” to identify. I could have told you that! That's why I paid for the test.” Rainey's results showed “some” Border Collie; however, she showed distant traces of Briard, Cairn Terrier, Great Dane, and Keeshond. Monty's test revealed distant traces of Alaskan Malamute, Beagle, Bearded Collie, Chow Chow, and Smooth Fox Terrier, while Scamper's showed trace amounts of Briard, Curly-Coated Retriever, and Shetland Sheepdog.

Dr. Burcham's primary disappointment was seeing Briard in two of her dogs, which was unlikely, in her opinion. She was also annoyed that Scamper and Monty were dubbed “extremely complex mixed breed dogs.” With just 10-15 percent of mixed breed dogs falling into that category (according to Mars Veterinary), how could she have two of them?

I shared Dr. Burcham's disappointment with Dr. Hughes, the Mars Veterinary consultant, and she offered to not just look at, but also re-run the three tests. In the year since Dr. Burcham submitted the samples, 23 additional breeds have been added to the Mars Veterinary database, and its algorithms have been modified. The company had found that the program was breaking down dogs into a lot of small pieces, “losing the forest through the trees,” resulting in some false positives. Results now are typically a smaller number of breeds and potentially in larger “amounts.”

When Rainey's test was run again, Briard and Cairn Terrier did not appear; they had most likely been false positives. Border Collie bumped up to the Significant (parent) level, and Great Dane and Keeshound showed up at the Intermediate (grandparent) level. Monty's results showed Beagle and Chow moving to the Intermediate (grandparent) level; the other breeds still were evident but could not be called with confidence, so they were likely false positives in the first test.

Scamper's new results still revealed a “very mixed dog.” Curly-Coated Retriever moved to the Intermediate (grandparent) level, and Golden Retriever showed up at the Minor level. Briard and Sheltie were potentially part of her distant history or false positives. Also detected were Anatolian Shepherd and Australian Cattle Dog, which Dr. Hughes felt were more likely than Briard and Sheltie.



SCAMPER

RAINEY

of 108 breeds. The software is designed to compare the DNA of the mixed breed to purebred profiles in their database, seeking the best match.

Results are reported in one of three categories: Primary, Secondary, and In the Mix. MMIG's literature suggests that a Primary match might indicate that the dog's DNA markers match 50 percent or more of those of a specific breed. Percentages are not given for the other categories. A listing of a breed in the “Secondary” category indicates the breed “makes up less than the majority of your dog's DNA.” A result listed under the “In the Mix” category indicates breeds with a low amount of matches in the dog's DNA. When pressed for percentages, company spokesperson Theresa Brady suggested that a breed listed under “Secondary” might indicate a 20 to 50 percent contribution in that dog's DNA. A match in the category “In the Mix”, she said, might fall in the 10 to 20 percent range.

The company does not state how far back in a dog's lineage it is able to trace breeds, explaining that it really depends on the “mix versus purebredness” of the parents. Says Brady, “Most dogs will not have breeds listed in every category. As a matter of fact, most mixed breeds will have nothing reported in the ‘Primary’ category unless one of its parents was a purebred. Some will receive results in only one category such as ‘In the Mix.’ It could mean that the dog is composed of one or more additional breeds that are not included in our validated breeds.

“In many cases, however, it simply means that your best friend is composed of so many different breeds, only low amounts of identifiable breeds can be detected. Dogs mixed over many generations who do not have a purebred in their recent ancestry (great-grandfather/mother), will not have a ‘Primary’ and in many cases, will not have a ‘Secondary’ either. Adding more of the hundreds of existing breeds into our database may change the results for some, but for most, the results would remain exactly the same.”

The Canine Heritage test utilizes a cheek swab to collect DNA. Most owners can collect the sample by themselves at home; those who want help can purchase the kit at PETCO, where the grooming staff has been trained to collect samples at no additional charge. A small brush is provided; the handler lifts the dog's lip, inserts the brush, and twirls the short bristles

against the inside of the dog's cheek. To ensure a quality sample, it is recommended that food is withheld at least an hour prior to taking the sample, and the dog's mouth inspected for "debris."

PETCO carries a "Standard" version of the Canine Heritage Breed Test that is supposed to be able to detect more than 50 breeds, and retails for \$70. The "XL" test, which is purported to detect more than 100 (we counted 105 on the company's website) can be ordered online direct from the company or purchased through PETCO, for \$120. Customers who ran the original 38-breed test can buy an upgrade from MMIG for \$55.

Test status can be checked online, but once the website indicates that your results are complete, you still have to wait to receive them in the mail. The entire process can take as much as six to eight weeks. (At press time, we were still waiting for our mailed results at the seven-week point, although we cheated and contacted the company for advance results so we could discuss them in this article.)

An owner can submit a digital photo of her dog through the Canine Heritage website, and when her test results are complete, the photo will be printed on the "Certificate of DNA Breed Analysis" that will be mailed to her.

MMIG's website for the Canine Heritage products contains a good amount of information about its tests, and the company representative with whom we spoke was very helpful. For more information, see [canineheritage.com](http://canineheritage.com), call (800) 362-3644, or look for the Canine Heritage test kit in your local PETCO store.

## Mars Veterinary Wisdom Panel™ MX

The Wisdom Panel MX is the only mixed-breed DNA test to require a blood sample. Initially available only through veterinarians, the test is now available online directly from Mars Veterinary, as well as from veterinarians and select pet supply retailers. It has a suggested retail of \$125, which includes free shipping if ordered direct from Mars Veterinary. Nevertheless, a trip to your dog's veterinarian is still necessitated for a blood draw, which means an extra cost for the vet office visit and procedure, and possible stress to your dog if he doesn't love the vet office.

The AKC recognizes 161 breeds; the Mars Veterinary database includes 153 AKC breeds in its database, plus four

breeds awaiting recognition from AKC, for a total of 157 breeds. To develop its database, Wisdom Panel typed more than 13,000 dogs during test development, completing more than 19 million genetic marker analyses. Mars Veterinary's database is the largest of any of the three companies we examined, but its test is also the most expensive.

After extracting DNA from the blood sample, single SNPs – or slight variations in DNA makeup – are identified. The test exams 321 points or markers where variations are found, looking to form breed-specific patterns. A proprietary algorithm is then run on the data.

Angela Hughes, DVM, a veterinary geneticist and consultant for Mars Veterinary, explains it by saying the computer then "says" as it looks at the DNA of a particular dog, "If I have to make her one thing, what would be the best match? If two, what would she match, then three, then so on, up to eight. The result is then a statistical score to each 'tree' the program builds as to how that dog best matches." Eight is the magic number as Mars Veterinary's confidence level is to go back three generations (eight great-grandparents).

The company claims that the test determines breed composition with 90 percent accuracy, defining that as validation testing that has resulted in an average accuracy of 90 percent in *first generation cross-bred dogs of known parentage* (our emphasis).

As with the competing Canine Heritage test, the Wisdom Panel results are reported in three categories, only Mars Veterinary calls them Significant, Intermediate, and Minor breeds, roughly translating to parent, grandparent, and great-grandparent. For a breed to be listed as Significant, at least 50 percent of the dog's DNA must have come from that breed (i.e., one of the parents was a purebred or possibly both grandparents were of the same breed); Intermediate, at least 25 percent; and Minor, at least 12.5 percent.

Mars Veterinary expects that if your dog shows a Significant breed, that he will likely display some physical and behavior traits from that breed, unless some of the genes are recessive. For Intermediate, you "may" see some physical and behavior traits of that breed in your dog, and for Minor, it is unlikely that the breed's physical traits are visually represented in the dog unless some of the genes are dominant.

The company quotes a two to three-week turnaround on test results; test status

can be tracked online – and results, when ready, will be mailed to the client but are available online sooner. The only contact information for the company that is offered on the website is an e-mail address; as unhelpful as that is, the website itself offers tons of information.

When we did find a phone number to reach the company, the representative who answered was moderately helpful, although he was more prepared to deal with someone calling to discuss their dog's test results than with someone looking for in-depth information about the company and its products.

See [wisdompanel.com](http://wisdompanel.com) or call Mars Veterinary at (301) 444-7900.

## New on the block

The latest entrant into the market is the DNA Breed ID Test offered by BioPet Vet Lab, a division of EDP Biotech Corp. BioPet Vet Lab itself was created in late 2007; its canine DNA test was launched in early 2008 through online resellers. In addition to the breed ID test, BioPet also offers DNA proof-of-parentage testing, DNA pet ID, and the very interesting PooPrints™ program ("match the mess through DNA").

The company's goal is to offer a sound, affordable test. It hopes to accomplish this by limiting the number of breeds in its database to 63 – which the company claims represents "about 93 percent of the dog DNA that is in the U.S. according to historical trends in breed popularity" – and pricing the test at \$60. Adding additional breeds requires adding more markers, which increases cost; BioPet suggests that it will most likely top out its database at 65 to 70 breeds. This test, too, uses a cheek swab to collect a dog's DNA.

The company sells its tests through PetSmart, Pet Supermarket, other retailers, and online retailers. Turnaround for results is roughly two weeks, and it does not appear that the company has online tracking capability for test status. They will re-run a test upon request, acknowledging the possibility of human error, but company spokesperson Meg Retinger reported that even in the ones they've re-run, they have never seen a test result that was completely different on the second run. The BioPet website has a moderate amount of information, and the company spokesperson was helpful.

For more information, see [biopetvetlab.com](http://biopetvetlab.com) or call (866) 883-7389.

## Criticism and limitations

The Wisdom Panel (Mars Veterinary product) has been criticized because it requires a trip to a veterinarian and a blood draw. This increases the cost of testing, and could stress vet-averse dogs. Critics also suggest that blood samples can be damaged in transit to the lab.

Mars Veterinary defends its decision to use blood by explaining that DNA from a blood sample is the “gold standard” as the quality and quantity of DNA derived is better than from a buccal (cheek) swab. Mars Veterinary’s Dr. Hughes says that the DNA in blood is actually very hardy, and, in fact, the lab has to raise the temperature of the DNA to near boiling repeatedly during the SNP analyses. The company also uses specially designed plastic tubes to protect the blood tube in transit.

Cheek swab tests receive their own criticism. Buccal swabs have a higher failure rate due to variation in owner sampling, such as not collecting enough cells. Also, because of bacteria in dogs’ mouths, there is a potential for bacterial growth if the samples aren’t handled correctly.

Then there are criticisms from consumers. One recurrent theme of unhappy clients is that results of a DNA test failed to find a preponderance of any particular breed in their “very mixed mixed-breed” dogs. (See “Some Owners Say It’s Not Worth It,” page 6, and “Tell Me Something I Didn’t Know,” page 8.)

Another has to do with the fact that some dogs don’t look anything like the breeds that their tests detected. It’s difficult to feel good about a result that doesn’t confirm or explain anything about the

dog’s physical appearance or behavior – and the companies’ explanations for this phenomenon may be unsatisfying.

The Wisdom Panel website says, “Many parts of the canine genome are likely to be unobservable or hidden with regard to trait determination. This can happen for any number of trait-determining genes. Simply put, a mixed-breed dog could be a mix of three or four breeds but have few traits evident from one or more of these breeds.”

MMIG’s explains: “Canine Heritage Breed Test only works for the breeds that have been validated. If your pet’s breed composition contains non-validated breed(s) the test may identify breed(s) earlier in your dog’s ancestry. This may cause identification of apparent unlikely breeds for your pet’s composition.”

## Common Consumer Questions and Issues

Canine mixed breed tests seem to be a very emotional topic. Those who have used the tests and have gotten the results they expected tend to be proponents, while those who received weak results or results that didn’t seem to square with the dog’s appearance tend to regret the purchase. But does that mean the tests don’t work? Here’s a stab at trying to explain some of what might be going on.

### Results are reported in levels; why am I only getting “minor” or “trace” results and no strong hits?

Dr. Hughes explained that most likely the dog’s parents and grandparents were themselves mixed breed, and a portion of the dog’s ancestry can be mixed beyond three generations which, for Mars Veterinary, is the extent of the company’s confidence. There is also the possibility that a breed is not covered in the database (for example, none of the tests’ databases include Rat Terrier) so the test will look for the most closely related breed.

### My dog looks like X, but the test says she’s Y . . .

Dr. Hughes explains that we want to associate a particular trait with one breed, but in actuality, it could be coming from a number of breeds. And when we move across breeds, combinations of genes can create very unusual outcomes.

One way she looks at the issue is first looking at a dog’s traits, defining what genes are necessary to get those traits, and then asking whether we can get those genes in a particular breed? For example, the merle color pattern, very common in Australian Shepherds, comes from a single gene, and a dog need only have one copy of that gene to exhibit that color pattern. And guess what? Dachshunds, Chihuahuas, and Great Danes can all provide that gene.

Black and tan coats are commonly associated with Rottweilers and Dobermans. But Chihuahuas, Cocker Spaniels, Dachshunds, and Poodles all carry this gene mutation. But in this case, it is recessive, so two copies must come together for

us to actually see that color pattern.

Meg Retinger of BioPet also points out that in some very mixed dogs, you might only see very subtle traits, such as the shape of the ear or the eyes. Her son’s dog tested as showing Beagle, yet she looks very much like a Labrador. When she howls, however, she sounds like pure Beagle!

### My dog is a Labradoodle (Labrador Retriever-Poodle cross), so why doesn’t the test say she’s a 50/50 mix?

We let Theresa Brady of MMIG address this, as she herself owns a Labradoodle. When she tested her dog using the Canine Heritage test, the results showed that Poodle was a Secondary breed, with Labrador Retriever “In the Mix.”

She explains, “You should know that my dog came from a breeder who claimed that the dog was seventh generation Labradoodle, which means that neither of her parents was a purebred (purebred Poodle or Retriever) and neither of their parents were purebred and so on. It makes sense, then, that she had nothing show up in Primary.” When I asked why the Poodle was Secondary, but not the Retriever, her guess was that the breeder probably crossed back more Poodle, looking for a more hypoallergenic coat. Dr. Hughes adds, “When breeding Labradoodle to Labradoodle, the ‘amount’ of Lab or Poodle genes passed down is random chance (think of a Pachinko machine). Testing the dog’s littermates may show very different proportions of each of these breeds. That being said, some ‘Labradoodle’ breeders are back-crossing Labradoodles to Poodles to change the size or coat of the dogs. I have seen some really strange looking Labradoodles!”

### How can the tests get better?

Increasing the size of the database, increasing the number of markers, and overall innovations in technology will see the tests become better tools. Also, as research continues on canine genetics, a better understanding of genes and how they relate to various breed traits will play a role in making a better test.



## How valid are the results?

To get some perspective from an independent expert on canine DNA, we interviewed Beth Wictum, director of the Veterinary Genetics Laboratory at the University of California-Davis School of Veterinary Medicine. Wictum has been with the university for 30 years. She has participated in and witnessed the evolution of the science that makes it possible to identify an animal through the study of its tissue; during her tenure, “state of the art” has gone from blood typing to sequencing the genome.

Asked to comment on mixed-breed ID tests, Wictum emphasized that the tests are only as good as each company’s database; that is, if a breed is not represented in a company’s database, then the test will identify the next closest match. She explains by saying that purebred dogs, especially registered purebreds, have been intensively managed and have a limited genetic pool.

“Most breeds have been created through intense selection over the last few hundred years, so there has not been enough time for them to diverge through mutations,” she says. The differences between breeds lie in the selective breeding by breeders for morphology (structure) or behavior. Therefore, the ideal breed test would be one that looks at those traits that characterize each breed and makes them unique.

“The field of canine genetics is still young; the dog genome was only sequenced about five years ago,” she says. “We are just starting to identify the genes responsible for various traits.”

Like many scientists in this field, Wictum is excited about the potential for identifying the genetic basis for various diseases. She says the Veterinary Genetics Laboratory at UC Davis and the Bannasch Laboratory (also at UC Davis) “are identifying the genetic basis of various diseases, which can then be offered as tests to the public. If you know what diseases may occur, you will be able to have your pet tested to see if he carries the mutation.”

Her advice concerning the mixed-breed DNA tests? “While these tests may indicate breeds that contributed to your pet’s genetic makeup, you must realize that they aren’t 100 percent accurate – and I don’t think they claim to be. If you have the money to spend and want to do it just for fun, then absolutely go ahead and do it.” 🐾

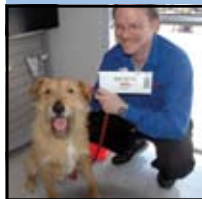
*Lisa Rodier lives in Alpharetta, Georgia, with her husband and two Bouviers.*

## Tell Me Something I Didn’t Know!

BY NANCY KERNS

Of course when author Lisa Rodier proposed the idea of writing an article about the mixed-breed identification tests, I wanted to have my mixed-breed dog, Otto, tested – you know, just for journalism’s sake! But which test should we order, from which company? We quickly decided to order the most extensive product from each of the two industry leading companies and compare the results.

Otto had a vet appointment coming up, which I used as an opportunity to have his blood drawn for the Mars Veterinary Wisdom Panel. We followed the normal protocol: I paid the vet for the blood draw and the test; his staff sent the sample to the lab, and gave me a test ID number so I could check on the progress of the test using the Wisdom Panel website.



Otto takes a needle for WDJ.

The following day, I brought Otto with me to PETCO to buy a test kit for MMIG’s Canine Heritage “XL” test. PETCO’s grooming department staff have been trained by MMIG to collect cheek swabs. Following the trip to the vet the previous day, Otto was nervous, so I collected the cheek swab myself (but asked a PETCO staff member to pose with the sample and its mailing envelope, you know, for science).

## Suspense

Waiting for results was excruciating – especially since Canine Heritage sent me an e-mail the day after I mailed the cheek swab, confirming its receipt in its Davis, California laboratory (I live about 70 miles from Davis). This gave me the idea that I might receive results *soon* – but it took a full *seven weeks* to receive them in the mail! (MMIG says results should arrive in six to eight weeks; it was just the anticipation that made this wait seem interminable. Plus the fact that you can’t get the results online.) I checked the website for the Wisdom Panel results every day. Just three weeks after Otto had his blood drawn, I saw that the results were complete, and I could download the Adobe Acrobat file that contained them.

So? What is he?

The Wisdom Panel results said, “The analysis revealed that Otto is a fairly mixed dog and we have not found evidence of a purebred parent or grandparent.” (I think I knew that!) There were no results at the “Significant” or “Intermediate” level. However, at the “Minor” level, these four breeds appeared: German Shepherd Dog, \*Basenji, \*Chow Chow, and \*Border Collie. The asterisks indicated “Minor amount detected at low confidence. These results are not included in accuracy calculations.” (Me: “Basenji?!”)

The Canine Heritage results showed nothing in the “Primary” category, Chow Chow in the “Secondary” category, and Poodle and Border Collie “In the Mix.” (Me: “POODLE?!”)

## Expectations

I would have guessed that Otto had some German Shepherd Dog in him, and I was even expecting some Chow Chow. He definitely has a GSD-sort of tail and his ears are very Chow. When he’s soaking wet and his hair is slicked down, his body shape looks a little like a Golden Retriever. And I was certain there had to be some terrier breed in him. How else do you explain that fuzz-face?

The shelter that I adopted him from guessed he was Airedale and Border Terrier. (I give them a break; he was only about five months and little when they got him.) Though this breed does not appear in either the Canine Heritage or Wisdom

Continued on page 22

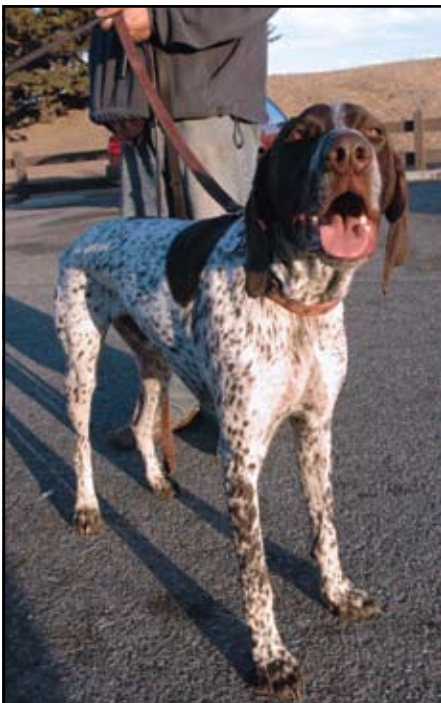
# Super-Socialized

*How to create a reliably social, friendly, confident dog.*

BY PAT MILLER

There was once a time when you rarely encountered the word “socialization” in dog circles. Today it’s the new training buzzword; if you haven’t heard it at least three dozen times by the time your dog is a dozen weeks old, you and your puppy must be living in a cave.

A half-century ago, no one talked about canine socialization because they didn’t need to. For the most part dogs wandered freely in their neighborhoods, accompanied kids to the school bus stop, hung out with canine pals all day, and became naturally socialized to their world and the people, dogs, and things they encountered in their daily travels. Sure, they got into occasional scuffles amongst themselves, but they sorted it out. Yes, a kid was bitten every now and then, but it was no big deal.



**We’d all like to have a friendly, social, confident dog. To create one, deliberately and thoroughly socialize your puppy as early as possible.**

Dogs got hit by cars from time to time, but that was part of life – sad, but one could always find another dog, preferably one who would be smart enough to stay out of the road.

Today a large segment of our pet-owning population is made up of more responsible canine guardians and caretakers. A nationwide paradigm shift has changed our attitudes about our dogs. No longer just “pets,” many of our beloved four-legged family members are kept inside our homes and in safely fenced yards, supervised closely when around children, and only encounter other dogs under controlled conditions – at training class, maybe during a brief on-leash greeting, during scheduled play dates, and perhaps at the dog park. The thought of our beloved dogs running free in the streets gives us heart palpitations, and we grieve terribly whenever we lose one.

On the plus side, this means our dogs live longer, physically healthier lives. On the minus side, it means they no longer benefit from the natural socialization process that occurred when they were allowed to explore their world and figure out how things work on their own. As a result, we’ve spawned a whole new behavior problem: undersocialization.

## Building a social dog

Socialization is really *classical conditioning* – creating an association between two stimuli. Behavioral scientists have identified the period from 4 to 14 weeks as the most important window of time for a puppy’s social development. After the age of 14 weeks that window starts to close, and it closes pretty quickly. If a pup is super-socialized during this important developmental period he’ll most likely believe the world is a safe and happy place. If he’s not well-socialized, he’s likely to be *neophobic*, which means fearful of new things. This is a common condition in dogs rescued from puppy mills and hoarder situ-

## What you can do . . .

- Make a commitment to super-socialize your puppy, and then do it – early. Don’t procrastinate; you don’t have much time!
- Stay aware of your pup’s body language and help him out of trouble if he looks stressed. Be prepared to take prompt remedial action if your pup has a negative experience during your socialization program.
- Sign up – as soon as possible – for a well-run positive puppy class, where both of you can socialize and have a good time.



ations. It is challenging to own and train a dog who is afraid of everything new he encounters; worse, the neophobic canine is also a strong candidate for developing fear-related aggression. (For more about fearful dogs, see “Fear Itself,” WDJ April 2007.)

*Lack* of exposure to new things is one cause of undersocialization; *inappropriate* exposure is another. If you’re not careful during your socialization efforts you may inadvertently set your pup up to create *negative* associations with parts of the world around him. In that case you can actually *sensitize* your pup to the things you’re introducing him to – that is, you can make him afraid of them – the exact opposite outcome of the one you want.

Think of the well-meaning soccer mom who takes the family’s brand-new nine-week old pup to watch her son’s team practice. The entire team suddenly spies

the adorable fluffball and charges toward the pup to oogle over him. The terrified puppy screams, pees, and tries to run away when he sees a dozen giant human creatures coming toward him at a dead run. He can't escape; he's trapped by the leash, which panics him even more.

Mom sees the pup flailing at the end of the leash and scoops him up in her arms to calm him so the boys can pet him. Now he's even *more* trapped! One boy reaches to pat him on the head, and the pup, thinking he may be about to die, as a last resort snaps at the lowering hand that appears poised to grab him. The boy yanks his hand away, and mom smacks the puppy for being "bad."

How much worse could it get? This puppy now has an extreme fear of children, especially boys, thanks to at least three negative classical associations in rapid succession:

1. Boys/children are scary; they run toward you in large packs.
2. Boys/children are scary; they try to grab your head.
3. Boys/children make bad things happen – when they are nearby, mom becomes violent.

The pup may also have developed negative associations with the collar and leash, wide open fields, being picked up, and mom. In addition, he learned one important *operant* lesson – snapping is a successful behavioral strategy for making scary hands go away. None of these things are the lessons we want a young pup to learn! And now the puppy is labeled as "not good with children" and a "fear-biter."

We often talk about how long it can take dogs to generalize operantly conditioned behaviors (if I do "x" I can make "y" happen). In contrast, dogs tend to form classically conditioned associations, especially those that produce strong emotions, *very* quickly.

The good news is that at nine weeks this pup's socialization window is still wide open, and if his owner is smart she has time to repair the damage. Unfortunately, most owners don't realize the importance of taking immediate steps to change a pup's association if he has a bad experience at a young age.

Socialization is the process of giving a puppy *positive* associations with the

## Places NOT to Take Your Pup

As important as socialization is, it's equally important to avoid places where there's a high risk of endangering your baby dog's health or safety, or giving him a negative association with his world. Here are just a few of the places you *shouldn't* try to socialize your pup:

- Off-leash dog parks, until he is fully vaccinated.
- Any place where he is likely to encounter stray dogs.
- Any place where he is likely to encounter sick dogs.
- Any place where he is likely to encounter aggressive dogs.
- Any place where he is likely to encounter aggressive/rowdy/drunk humans.
- Places where there is an accumulation of feces from unknown dogs.
- Any place he is not welcome.
- Any place where he would have to be left unattended, or in a hot car (no tying up outside the grocery store!).
- Any place where he will be uncomfortable or frightened (sitting in the full sun while you watch your son's Little League game, at a July 4th fireworks display, at a motorcycle rally, etc.).
- Any place where you won't be able to devote enough attention to him to ensure his safety, security, and well-being.



**How about a bike race? This pup is increasingly anxious about the bicyclists whizzing past and the cheering, cowbell-ringing spectators – and her owner's lack of attention.**

people, places, and things in his world. You need to be sure he's having a great time, playing fun games, getting good stuff, and protected from scary stuff while you're teaching him that the world is a safe and happy place.

### Early days

If you bring your new pup home when he's 8 weeks old, 4 of his 10 prime socialization weeks are already gone. Since a quarter to a half or more of a pup's most important socialization time has passed by the time he leaves his mother and moves into his forever home, it's vitally important that breeders invest time and energy into socializing their litters.

This includes having the pups walk and play on different substrates (grass, gravel, concrete, carpeting, and vinyl); inviting lots of different kinds of people over to

play with and handle the pups; exposing them to household objects and sounds (microwave, telephone, television, vacuum cleaner); and making sure the baby dogs have *positive* associations with all these things.

Sadly, a small minority of breeders do a really good job of it, which contributes significantly to the population of under-socialized dogs in our world. If the breeder of your pup did her part, then your pup is already well-started on his super-socialization program. Now it's your responsibility to keep it up.

If your pup comes to you from a socially impoverished environment, you'll already see the signs of neophobia. You have no time to lose, and you may never be able to make up all the ground he's lost, but you can make him better than he'd be otherwise. Trainers talk about giving pups

“100 new (positive) exposures in the first 100 days.” If your pup is already showing signs of timidity or fear, triple that to 300 exposures in 100 days. And get busy!

## Puppy classes

A well-run puppy class is one of the best places to find lots of positive socialization opportunities. Unfortunately, because of their fear of disease transmission, some veterinarians still caution their clients with puppies to keep their young canines safely at home until fully vaccinated, or at the very least until they have received a minimum of two shots, usually by the age of 12 weeks. Twelve weeks leaves only two weeks of critical socialization time – assuming there’s a class starting up immediately after the pup receives his second shot. Not good enough!

We asked longtime positive trainer Gail Fisher of All Dogs Gym & Inn, located in Manchester, New Hampshire, to share her experiences with and thoughts on puppy classes. Here’s her response:

“Regarding the question of puppy socialization versus risk of illness: We have been running puppy classes and play sessions for puppies as young as eight weeks since 1976 (which, incidentally, was before parvo!) In all this time, we have had a total of three puppies in our classes who were diagnosed with parvo (or anything worse than canine cough – a mild upper respiratory infection similar to the common cold).

“The first was a five-month-old Rottweiler (a breed known for having immunological issues – and beyond the age of a typical ‘puppy’ class). The second was a puppy from a breeder that had been in its new home for two weeks and who had received two shots, and the third was a pet shop puppy who had been purchased two days before starting class.

“More importantly, however, is the fact that *no other* puppies in any of those classes got sick. As soon as we heard from the owners of the sick puppies, we immediately contacted every other puppy owner to tell them to check with their veterinarian for advice on whether to have an additional inoculation. Some did, some didn’t – but no one else got sick.



**In a well-run puppy class, puppies learn how to focus on their owners in a distracting environment, and gain confidence in leaps and bounds.**

“So if you’re looking for ‘odds’ – in 33 years, figure (conservatively) 100 puppies a year, more than 3,000 puppies – the odds of a puppy getting sick from a well-run training class is virtually nil (less than 1/100th percent). The risks of illness are, in my opinion, negligible, while on the other hand, the advantages to socialization are unmeasurable.

“I hope this helps in your decision to take your puppy to training class!”

## Playing in the gene pool

Of course, your dog’s genetics also influence his behavior and social tendencies. Behavior is *always* a combination of genetics and environment. Nature *and* nurture. Always.

Genes dictate how easily reinforced a dog is for the things the environment tosses at him during his lifetime. Hence a dog who is genetically programmed to be reinforced by chasing things that move becomes a good herding dog, fox hound, or ratter. The difference is the herding dog is (hopefully) not programmed to be reinforced by killing the things he chases, while the hound and the terrier are.

Pups who are genetically programmed to be reinforced for the consequences of acting behaviorally bold are naturally easier to socialize, even if their first few weeks lacked stimulation, than ones who are genetically programmed to be reinforced for the results of acting timid or fearful. How do you know which behavioral genes your pup has for social behavior? You really don’t.

It’s useful to see your pup’s parents

– at least the mother, if at all possible. If Mom is timid or aggressive there’s a good chance her pups will be, too. The pups’ behavior still can’t be attributed solely to genes; pups can *learn* fearful or aggressive behavior by *watching* their mother’s response to humans and other environmental stimuli, a behavioral phenomenon known as *social facilitation*. If you’ve been paying attention you’ll remember that genes and environment *both* play a role in behavior – always.

Don’t despair if you adopted your pup from a shelter or rescue group. It’s true that if you never see Mom or Dad, you won’t get any hints about their

behavior. So how do you know how much socialization your pup needs to overcome any genetic weakness in temperament? You don’t. But you don’t need to. The answer to the genetic mystery is to super-socialize every single puppy, regardless of what you think you know, or don’t know, about his genetics. If you do that, you’re guaranteed to help your pup be everything he can be, socially speaking.

There’s no such thing as overkill when it comes to properly done socialization. You can’t do too much. Pups who are super-socialized tend to assume that new things they meet later in life are safe and good until proven otherwise. Dogs who are very well-socialized as pups are least likely to develop aggressive behaviors in their lifetimes. Pups who aren’t well-socialized tend to be suspicious and fearful of new things they meet throughout their lives, and are most likely to eventually bite someone. You’d better get out there and get started! 🐾

*Pat Miller, CPDT, is WDJ’s Training Editor. Miller lives in Hagerstown, Maryland, site of her Peaceable Paws training center. Pat is also author of The Power of Positive Dog Training; Positive Perspectives: Love Your Dog, Train Your Dog; Positive Perspectives II: Know Your Dog, Train Your Dog; and Play with Your Dog. See page 24 for contact and/or book purchasing information.*

*Gail Fisher is the owner of All Dogs Gym & Inn in Manchester, New Hampshire. See page 24 for contact information.*

# 100 Positive Exposures in 100 Days

BY NANCY KERNS

WDJ's Training Editor Pat Miller has long advocated the concept of engineering 100 positive, novel experiences for a puppy in his first 100 days with his owner. The idea is to consciously, deliberately expose him to all sorts of sights, sounds, smells, and other beings in such a way that he comes away from each experience thinking, "That was cool!"

But given the uncontrollable nature of the real world, it's no small task to devise these encounters so that they can't help but have a positive outcome. Fire trucks may suddenly appear with sirens wailing. A passing dog may suddenly explode into a fit of barking and barely controlled aggression. And *people* are unpredictable! You never know when someone will take it upon themselves to do something stupid or scary to your dog, like grab his cheeks and pull him close for what is meant to be an affectionate kiss (but which terrifies your shy puppy).

While it's clearly impossible to control *every* aspect of your outings, a certain amount of planning will prevent many overwhelming experiences. Avoid taking your sound-sensitive youngster to neighborhoods that are home to a fire station or hospital. If you see, coming toward you and your pup down the sidewalk, a dog straining at the end of his leash, or appearing to be overly alert, eyes fixed on your puppy, do a snappy about-face. Jog away with your pup with a cheerful, "Yay! Let's go!" and cross the street as soon as you can.

Most important, though, is to communicate proactively with the people that you allow to approach or pet your dog. You can usually tell when a person might be interested in meeting your dog, and when they don't care for dogs. If a person makes eye contact with me in a friendly fashion, or is looking at my dog and smiling, I always say, "Hello, how are you?" If it appears that she would like to pet or greet my dog, I try



**Be alert for situations that could frighten or hurt your dog – or cause him to bite someone in a panic. In this case, the owner should be leading his dog away, or stepping gently between the dog and the toddler, who appears ready to grab two handfuls of fur, or even fall on the dog.**

to subtly prevent her from actually touching my dog (by slowing my pace, or stepping slightly between my dog and the person) until I can say, "He's a little shy; would you mind giving him a treat?" and I hand her a treat. Given that information, most people will move slowly and greet the dog gently.

(Note: Miller recommends that owners *not* allow strangers to feed treats to a shy dog until the owner has done a ton of counter-conditioning to the sight of strangers. That way, the dog already has a positive emotional response to strangers, and will accept treats from a stranger safely, with minimal stress.)

No matter how well or poorly they follow instructions, though, I always praise my dog and give him a treat or pet him right after the encounter. When I got him at the age of seven months, he was shy with strangers; now his tail starts wagging in anticipation whenever he sees someone coming toward us. The sight of a stranger has become a predictable indicator that praise and a treat are on the way.

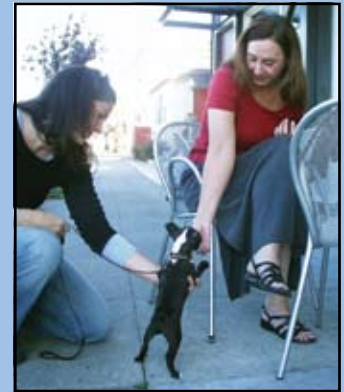
## Start close to home and branch out

You'll find many opportunities in your own neighborhood for 100 new, positive exposures, including the mail delivery person, FedEx driver, kids on bikes, a skateboarding teenager, a passing bus, and an elderly neighbor. Go out of your way to approach people who appear unique (to your pup) in some way: their size (extra large, extra small); skin color; mode of transportation (wheelchair, crutches, skateboard, bicycle); and manner of dress (trench coat, hat, beard, backpack, skirt, shorts, pants).

You'll also want to get into the habit of taking your pup with you to as many other *safe* places as possible, where he'll have more opportunities to enhance his socialization. In a local park, for example, he might have further opportunities to encounter baby strollers, kites, flying Frisbees, and people enjoying picnics. A cafe with tables on the sidewalk might offer a great place for your dog to meet a high volume of people with disparate appearances.

As your pup gains experience and confidence, you can start taking him with you when you run errands at businesses that allow dogs (hardware store, pet supply store, copy shop) or offer walk-up service (bank ATM, post office, or ice cream stand).

Miller suggests that dog owners keep an actual written list of their pup's socialization exposures, to help ensure that they attain (and, we hope, exceed) the goal of a minimum of one new exposure per day in the first 100 days they spend together. If you put a little effort into it, we're betting that you'll get there well before 100 days are up – more likely in half that time!



**Don't be afraid to give people direction. Ask if they would give your dog a treat, and hand them one. Praise your dog – and thank the person!**

# DON'T PINE FOR A LOST ISSUE!

Back issues of  
Whole Dog Journal  
are available

Order back issues in one of  
TWO convenient ways:

Mail this order form, along with  
a check or money order, to:

The Whole Dog Journal, P.O. Box 5656, Norwalk, CT 06856-5656

Or log on to [whole-dog-journal.com](http://whole-dog-journal.com)  
and click on "back articles" to  
purchase articles and immediately  
download them to your computer

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li><input type="checkbox"/> 5/09 Prevent Chewed Shoes • Interview With Victoria Stilwell • Find the Right Rawhide • Fence Sense • Earthdog</li> <li><input type="checkbox"/> 4/09 Selecting a New Dog • Canine Health Insurance • Teach Your Dog to Swim • Wait Versus Stay</li> <li><input type="checkbox"/> 3/09 Happy Nail Trimming • Bike With Your Dog • Social Matters • EPI • Acupressure for Injuries</li> <li><input type="checkbox"/> 2/09 Annual Dry Food Review • Teach Your Kids to Train the Dog • Run With Your Dog • Hand Signals</li> <li><input type="checkbox"/> 1/09 Gear of the Year • Top Wet Foods • Homemade Low-Fat Diets • Shelters, Good and Bad</li> <li><input type="checkbox"/> 12/08 Sharing Your New Dog With Your Partner • Teaching the Recall • Canine Cognitive Dysfunction Syndrome • More Novel Foods • Healthy Low Fat Diets</li> <li><input type="checkbox"/> 11/08 Unconventional Foods • What to Do if Your Dog Goes Missing • Positive Trainer Interviewed • Causes, Treatment of Pancreatitis</li> <li><input type="checkbox"/> 10/08 Case History: Agility for a Reactive Dog • Generalization • Kennel Cough • A Nocturnal Dog? • Help for Dogs With OCD</li> <li><input type="checkbox"/> 9/08 Finding a Healthcare Team, a Healthy Food, and Stress Relief • Grass-Fed Meats • Tug of War • Pet Food Politics • Build a Powerful, Positive Partnership</li> <li><input type="checkbox"/> 8/08 Use Play to Train Your Dog • Journal of a New Dog • Socializing a Shy Dog • Vaccinations 101 • Build a Digging Box • "Leave It!"</li> <li><input type="checkbox"/> 7/08 Improve Your Dental Acuity • (Peace) Fully Equipped: Training Gear • Benefits of Green Tripe • Separation Anxiety</li> <li><input type="checkbox"/> 6/08 Commercial Raw Frozen Diets Review • Calming Acupressure • Make Training Fun • Puzzles for Dogs</li> <li><input type="checkbox"/> 5/08 Vestibular Disease • Stop Jumping Up • Shockwave Therapy for Arthritis • "Constructional Aggression Treatment"</li> <li><input type="checkbox"/> 4/08 New Dog, Now What? • Calendula: Herb of the Year • Why Vinyl Stinks • Mixed-Age Dog Pack</li> </ul> | <ul style="list-style-type: none"> <li><input type="checkbox"/> 3/08 Tales of the Lost Appetite • Teaching Your Dog to be Calm • Grain-Free Dog Foods • Chiropractic and the Conditions It Cures</li> <li><input type="checkbox"/> 2/08 Dry Dog Food Review • Behavior Myths • Acupressure for Vitality • Energy Med, Pt 5 (Color Therapy, Body Tapping, Directed Energy)</li> <li><input type="checkbox"/> 1/08 Dog-Dog Introductions • Antibiotic-Resistant <i>Staph</i> • Nighttime Visibility Products • Energy Med, Pt 4 (Crystals, Energy Balancing)</li> <li><input type="checkbox"/> 12/07 No Play Like Snow Play • Training Senior Dogs • The Best Warm, Dry Coats • Energy Med, Pt 3 (Homeopathy)</li> <li><input type="checkbox"/> 11/07 Core Conditioning • Training for Reliability • Top Treats • Energy Med, Pt 2 (Flower Essences, Kinesiology, Animal Communication)</li> <li><input type="checkbox"/> 10/07 Resource-Guarding • Training for Reliability • Build a Healthy Hound • Holistic Healthcare Basics • Intro to Energy Medicine</li> <li><input type="checkbox"/> 9/07 Home-Prepared Diets, Final Notes and Answers • Importance of Puppy Kindergarten • Pet Food Executives Speak • Honey</li> </ul> |
|---|--|
- To find more past topics, see [www.whole-dog-journal.com/search](http://www.whole-dog-journal.com/search)

NAME _____	
ADDRESS _____	
CITY _____	
STATE _____	ZIP _____
# _____ BACK ISSUES @ \$7.50 EA.	\$ _____
POSTAGE & HANDLING	\$ 2.00
TOTAL AMOUNT ENCLOSED	\$ _____

# Have Ball, Will Fly

*High-energy dogs have a blast in “flyball,” a fast, loud sport.*

BY TERRY LONG

**R**EADY? R-E-A-D-Y? GO! Woof, yap, scream, yodel, bark, yip. “Go, go, go!” Dogs on the sidelines and in crates and exercise pens barking at the top of their lungs. Dogs tugging and growling, tugging and growling. Handlers yelling over the din to their teammates. Handlers recalling their dogs over jumps, “H-e-r-e!” Event officials blowing whistles and announcing the next race over bullhorns or speaker systems, and start-line lights and passing lights flashing on and off.

Flyball is a cacophony of sights and sounds. It is exhilarating, over the top, adrenalized hyperstimulation. This is not a sport for the introverted, timid, or sound-sensitive dog or handler. The adrenaline level is off the charts and you can hear that from hundreds of yards away.

The first time I experienced flyball was as a spectator at an obedience trial held at a park. Suddenly, shattering the decorum, was an ear-piercing scream followed by rabid barking. Certain that an obedience dog had left the ring and treed a critter, I raced over to watch. No critter. No mayhem. Just flyball. The teams had just set up for their first race and the dogs were ready. I had never seen dogs so keen to get going.

## The game

There are four hurdles in a row with the flyball box at the end of the 51-foot lane. The jump height for each team is determined by the height of the shortest dog on the team. These dogs are referred to as the “height dog.” Each team tries to attract someone with a fast, short dog so their team has the advantage of low jump heights. That’s why it’s common to see teams with very short dogs as well as larger dogs.

Each team has four dogs. Two teams race at the same time, 20 feet away from each other. Each team lines up their dogs, ready to release them quickly, exactly when the previous dog clears the last jump. Dogs are taught to pass each other very



PHOTO BY TODD MINNELLA

**Anna is a Danish/Swedish Farmdog and the only dog to hold U-FLI’s “Top Flight” Champion title. This photo captures her just past the mid-point of her “swimmer’s turn.” She has already raced down the lane (jumping jumps on the way); hit the box, releasing the ball; grabbed the ball; and is pushing off to race to the finish.**

close to gain a time advantage.

Each handler restrains her dog at the start line, careful not to cause a false start by letting go too early. The typical flyball start-line restraint technique is to hold the dogs in front of their hind legs, crouching behind the dogs.

When the dog gets to the flyball box, he is trained to hit the box with his front feet, grab the ejected ball (most dogs just place their mouths over the opening where the ball comes out), push off the box with his rear legs, and race back.

A member of the team stands at the box to load balls (small dogs might need a small tennis ball) and encourage the dogs to get to the box fast (more screaming). The handler of the dog currently racing stands back, beyond the finish line, usually with a long tug toy, and encourages the dog to race back to the handler, quickly, over the finish line (with more screaming!).

## History

In the late 1960s and early ’70s a group of trainers in Southern California created a game that required their dogs to jump over some hurdles and pick out a dumbbell with their handler’s scent. They called it scent hurdling. To reward the dogs for taking the hurdles, someone threw a tennis ball at the end of the straight row of hurdles.

Soon, scent hurdling morphed into flyball. The first flyball tournament, however, didn’t take place until 1983. Soon thereafter, 12 flyballs clubs from Michigan and Ontario, Canada, developed guidelines for the sport, and in 1984 the North American Flyball Association, Inc. (NAFA) was born. The first flyball rule book was written in 1985 by Mike Randall, then executive director of NAFA.

In 2002, the United Flyball League International (U-FLI) was founded. NAFA and U-FLI are currently the only two organiza-

tions that sanction tournaments. Their rules and philosophies differ somewhat, but all breeds and mixes are welcome.

The popularity of the sport has grown over the years, with tournaments taking place in North America, Europe, Australia, and other countries. The NAFA website claims 700 registered clubs and more than 16,000 registered dogs.

### Attributes of a flyball dog

Flyball is a strenuous, pressure-cooker game. Dogs are rewarded for intense bursts of activity. Racing down a row of jumps, slamming into the box that holds the ball, turning on a dime, and racing back down the row of jumps to their handlers against a backdrop of another teams' dogs a mere 20 feet away requires a dog to be incredibly focused, physically resilient to the rigors of training, and insane about the tennis ball.

The repetitive nature of some of the training is physically demanding, and a dog

must have the temperament to withstand the performance stressors inherent in the game. These include barking and lunging dogs, screaming people, and intense performance pressure from his handler.

Nikki Myers, CPDT, who in 1995 cofounded Woof Gang, a Southern California flyball team, has been competing and training in the sport for 14 years. Her now 16-year-old Silky Terrier is still ranked as the #1 Silky in NAFA, and her newest Silky, Charm, is currently the fastest Silky in flyball. Her Australian terrier, Maggie, is ranked second for her breed in both U-FLI and NAFA. Myers is familiar with many of the dog sports, competing in agility for 15 years and in earthdog for 10 years, and has been a professional dog trainer for the past 9 years. Myers notes that owners should assess the physical, as well as the behavioral, demands of a sport before deciding whether it is appropriate for their dogs.

“The physical demands on a flyball dog are quite high. Running-jumping-stopping-turning-running can be hard on a body. Larger dogs need to build the muscle to control their added kinetic energy to be able to stop themselves safely. Extra weight on any size dog can increase the chance of injury. Joints get a lot of punishment, so hip and elbow dysplasia or patella luxation, etc., will affect a dog's performance. As with any sport, a dog should be cleared by his vet if he hasn't had a very active life so far. A couch potato at five years of age may have some aches and pains if they suddenly start a new sport,” says Myers.

The variety of mixes and breeds that participate in flyball is a testament to the draw of this sport for a broad cross section of dogs. Everything from Airedales and American Bulldogs to the typical slew of herding breeds and terriers are in evidence. There are Chinese Cresteds, Danish/Swed-

## Snapshot of the Sport: Flyball

■ **What is this sport?** Flyball is a team relay. Two teams, each comprised of four dogs and four handlers, release one dog after another to race over four jumps toward a box that contains a spring-loaded tennis ball; the competing team races alongside, in a separate lane. Each dog runs down the lane (jumping jumps along the way), hits the front of a box that releases a tennis ball, grabs the ball, and races back over the jumps. As he clears the last jump, the next dog on his team is released, until all four dogs have run the course.

■ **Prior training required?** Moderate. The dog needs to be able to come when called in the face of *many* distractions. He must also be well-socialized. Prior confidence-building exercises are recommended.

■ **Physical demands?** For dogs, high. For the handler, mild to moderate.

■ **Best-suited structure?** Physically fit small, medium, and large dogs. Giant breeds may find this sport difficult.

■ **Best-suited temperament?** Confident, extroverted, high-energy.

■ **Cost?** Moderate.

■ **Training complexity?** High.

■ **Mental stimulation?** High.

■ **Physical stimulation value?** High.

■ **Recreational opportunities?** Low.

■ **Competition opportunities and venues?** Many in some states, very few or none in others.

■ **For further information, see the following:**

**United Flyball League International (U-FLI)**  
Contact Terri May, (509) 696-9176; u-flt.com

**North American Flyball Association, Inc. (NAFA)**  
(800) 318-6312; flyball.org

**On Your Mark, by Mike Randall.** This book thoroughly covers the sport of flyball . . . and it's available (for free) only online. See [flyballdogs.com/on\\_mark.html](http://flyballdogs.com/on_mark.html)

For an entertaining, informative video, go to YouTube.com and look for a six minute clip, “What is Flyball,” by “cadiletta.”



**A flyball event can be set up in a relatively small level space. Grass is preferred; indoors, long mats are rolled out to provide traction in each lane.**



ish Farmdogs, Deerhounds, Irish Red and White Setters, a Plott Hound, and even a Black Mouth Cur listed on U-FLI's website (see [u-fli.com/dogbreedreport.php](http://u-fli.com/dogbreedreport.php) for the complete report).

If you have a high-energy, outgoing, confident dog who loves to retrieve balls, this might be his sport. If your dog is a *bit* reserved, the sport could help him build more confidence. However, according to Myers, "Flyball can help a shy dog get some confidence, but if the dog is *truly* fearful of new places, noises, etc., he should learn flyball only as a backyard activity. The dogs who do best in flyball are those with a very high drive. The perpetual-motion kind of dog that can focus on the task of flyball will do very well."

## Handler attributes

In addition to the commitment to training and attending team practices, handlers exert a fair amount of physical effort participating in this sport. In addition to helping set up equipment for practices and lugging all your personal training supplies and dog from your car to the field, flyball can be physically strenuous.

"The physical demands on the handler are varied," explains Myers. "A certain amount of bending and squatting are encountered. After a long weekend of racing, I feel like I've done a hundred lunges. My thighs burn and my back aches. Once your dog is really worked up about racing, he also tends to pull hard on the leash around the grounds. (It can be hard to maintain your loose-leash walking criterion!)"

"There is also a certain amount of running for the handlers. Think of wind sprints and you'll get the idea. It really depends on the dog you are running. I run and tug and spend a lot more energy running a Boston Terrier than I do handling a teammate's Australian Shepherd."

## Equipment and supplies

The equipment needed to practice flyball is not extensive, but it can be expensive, due to one specialized item (the flyball box).

■ **Hurdles.** There are four hurdles, or jumps. These are relatively light-weight, narrow panel jumps. They can be made by handy team members with a Skill saw and white paint or ordered ready-made. Hurdles are pretty inexpensive compared to the box.

■ **The box.** The spring-loaded box that



**Nikki Myers holds Milo, a Boston Terrier, waiting their turn to race. She has a long tug toy ready to lure and excite Milo to further speed on his return.**

ejects the tennis ball is *the* major expense for a flyball team. Specifications are set by the sanctioning organization. Many clubs make their own, but the boxes are available for purchase. Plan on spending at least \$600 and as much as \$1,200.

■ **Tennis balls and tug toys.** Standard-size tennis balls are used in great quantity so it helps to know someone who belongs to a tennis club. Small tennis balls are used for the small dogs and can be purchased from pet stores and online. Lengthy tug toys, usually about 24 to 36 inches long, are used to incite the dog to run back to the handler with the tennis ball. Often, a tennis ball has been woven into the tug toy, as well.

## Expenses

In addition to the costs of supplies listed above, there are other expenses. If you can find a public class such as the one Myers offers through a city entity, costs are modest and, in most cases, move you quickly toward joining a team where members practice together at no cost.

There are also modest team dues, and members share in the purchase and repair of equipment. Tournament entry fees are split by the team members and vary throughout the country, but average about \$90. The cost of travel and lodging is often

a flyball handler's biggest expense. As with many different sports, it is the ancillary costs that mount. These include canopies to protect you and your dog from the elements, treats, toys, crates, blankets, and the list goes on.

## Training

Myers, a professional trainer with years of experience teaching with positive reinforcement methods, teaches public classes for the city of Garden Grove, California. Those classes serve as a pipeline for new teammates for local flyball teams.

Although many teams are willing to train people and their dogs from the ground up, it helps if you and your dog have a general training history already established. Clicker training, which focuses on encouraging dogs to "offer" behaviors, can accelerate the training process because dogs learn to see training as a problem-solving game.

Myers simplifies the complexities of training flyball by breaking it down into separate behaviors and then "chaining" them together.

"Flyball is one long 'behavior chain,'" explains Myers. "There are several links in the chain: run, jump, trigger the box, grab the ball, turn, run-jump-run (now with a ball in your mouth). We teach this chain in pieces. Running down the lane of jumps to have fun with Mama is one of the easiest to teach. Triggering the box to retrieve the ball safely and swiftly is the most difficult. Rarely do we need to teach a dog to retrieve a ball, though there are some dogs that need to learn a retrieve before they start with flyball."

You can do some training at home that will benefit you and your dog whether you choose to join a team or not.

■ **Toy motivation.** Tugging is a great motivator and helps focus your dog on you. If your dog is not toy-motivated, play games that get your dog chasing *you* for fun and reinforcement. Get a long tug toy and drag it along the ground and encourage your dog to "get it, get it, get it," and make a big fuss over him when he expresses any interest in it. Gradually, reward only more and more interest in the toy until he is biting at it and then holding on to it.

■ **Restrained recalls.** Flyball dogs must come when called in the face of huge distractions (the park, other dogs, high levels of arousal of other dogs and people, etc.).

A speedy return to the handler over the finish line is essentially a recall. Start with one person holding your dog back while you run away, waving a toy. The person restraining your dog delays your dog's release just a second or two at a time, waiting to feel the dog pulling to get away.

According to Myers, "When you can get your dog to stop barking at a squirrel in the backyard and run to you for a toy or play, you've gone a long way in ensuring a solid recall during competition."

■ **Jumping.** If you have space in your backyard, a line of jumps is a simple, inexpensive training tool. Encourage your dog to take the first jump and throw your toy ahead. Once your dog is confident and fast with one jump, add another one. Gradually, add others until you have four in a row.

Practicing at home is important, but flyball is essentially a team sport. If you are a loner and do not enjoy group dynamics, this may not be the best sport for you. Some teams practice an hour or two once a week, while others get together three to four times a week.

Myers notes, "Most of the competitors in flyball are members of a team. When a club enters its team in a particular tournament, the members train together and learn to compete together. When a change has to be made at the last minute, it can do anything from simply change the lineup to causing the team to drop from the competition.

"With the addition of the United Flyball League, however, the opportunity has increased for single dogs or just pairs of dogs to race."

## Levels of competition

Flyball dogs earn individual points in each tournament based on their dog's racing

## Hang On to That Ball!

BY NIKKI MYERS

A lot of training is involved to get some dogs to complete a successful flyball race. Each dog earns points toward his individual title, as well as contributes toward a team's standings in its division. One can cheer separately for the dog and the team!

Each dog must go down the lane, taking all four jumps in the direction of the box, trigger the box, and bring back the ball that was loaded in the box, racing back down all four jumps in the lane to return to his handler. If he leaves the ball behind, it is a "foul" and the dog must rerun at the end of the team's lineup. If he doesn't, the heat is not considered completed and the team gets no points or time. Another foul is scored if the dog goes around a jump, on the way there or back, or if he "steals" the ball instead of triggering the box. Any manner of things can happen in that race down the lane, and it is still a clean run, albeit a slow one.

One of our team dogs used to "chomp" the ball all the way back down the lane. Halfway down the lane, as she chomped, the ball popped out of her mouth and flew out of the ring into the spectators. She left the lane, left the ring, to get her ball. She returned to the lane right where she left it and took the remaining two jumps. It wasn't a fast run, but it was legal – and we all had a good laugh.



**A dog's teammate is released when his predecessor jumps the last jump. The dogs pass each other at high speed, and must hold the ball until the finish.**

times. Remember, each dog travels 51 feet over four hurdles, hits the box, grabs the ball, and races back over the hurdles across the finish line. This is considered one "heat" of a race, and there can be four to five races in a day. Since a race is made up of three to five heats, your dog may run that 102-foot lane 20 times or more in a day. Now you see why high-energy dogs do well in this sport.

NAFA and U-FLI award different points in their respective systems for each heat. For example, U-FLI awards 30 points to dogs who run that distance under 20 seconds, 25 points for under 25 seconds, 15 points for under 30, and 10 points for under 35. Your dog gets an additional 5 points if your team wins the tournament race. A dog running on a well-trained, consistent team could earn 75-125 points for each

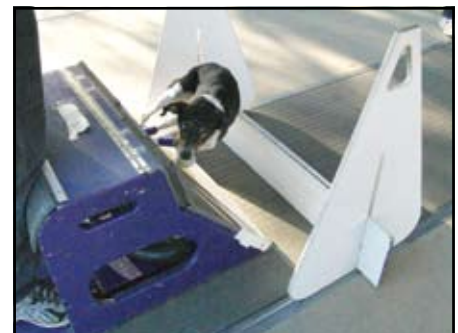
PHOTOS BY SALLY FRANKEL



**The dog in the competition photo on page 15 at practice: She flies to the box, mouth open, ready to receive the ball.**



**Anna grabs the ball. A jump has been placed in front of the box to encourage her to hit the box high.**



**Ball firmly held in her mouth, Anna is coiling her body so she can push off the box and race back to her owner.**

race. Multiply that times the number of races in a day and your dog can rack up quite a few points toward titles in a single tournament.

U-FLI titles are awarded based on your dog's cumulative points. "Top flight" requires 100 points, "top flight executive" requires 2,500 points, and so on until the top U-FLI title of "top flight extreme" with 54,500 points.

Wondering how fast is fast? The NAFA record is 15.22 seconds and was set in 2005 by Spring Loaded, a team with members from Illinois, Michigan, and Ontario, Canada. The U-FLI record of 15.023 seconds was attained by Touch n Go, a team from Las Vegas, Nevada. This means that each dog ran the 102-foot distance in under four seconds. Wow!

Teams compete in "divisions," which are established to ensure that teams compete against other teams of similar abilities. NAFA and U-FLI each have their rule books on their respective websites.

## How to get started

If you want to compete, make sure you can commit to this team endeavor. Myers recommends, "Look for a local team that teaches. Start asking questions and going to tournaments. Teams want to see that you are interested in the commitment and not just out for the summer."

If you want to try it out before committing, look for those public classes (which can be few and far between) and for a willing and qualified instructor. Myers has taught people who knew they wanted to compete, as well as those who were just looking for something to entertain their dogs.

"I had one couple who brought their two dogs. The dogs were not all that crazy about tennis balls, but they loved their stuffy toys. We ended up with the stuffy



**Five-year-old Anna, owned by Sally Frankel, competes on the Lickety Splits Flyball Racing Team in San Diego.**

toy at the box instead of the balls. Both dogs learned to come down the lane, get the stuffed toy, and return over all four jumps. That couple really enjoyed their dogs' version of flyball!

"Another couple started out in the public class, and then started practicing with Woof Gang. Their shepherd-mix has been competing for a year now. Since then, they rescued another shepherd-mix and taught him to play as well. They recently bought an RV to take to tournaments, and both dogs will be competing together on teams very soon."

## Is this sport for you?

Since flyball is a team sport, whether this sport is for you or not may depend upon where you live. Some areas of the country have no teams and no competitions, while others have many. If this sport appeals to you, go to the websites listed in this article and see if there is a team near you. Contact them and find out when they practice and ask to come and watch. How do they treat the dogs? Are they positive with each other as well as with their dogs? How well do they support new people?

If you have a family that might want to get involved, check out U-FLI. They have a program specifically designed to encourage and support families with children. Find a team that competes in U-FLI and then check out how well that team emulates U-FLI's philosophy.

Each team is a culture unto itself. Some are inviting of new people and others are not. Some are extremely competitive and put a lot of pressure on members to attend multiple practices and compete at every opportunity while others are happy to build the skills of all members and invite everyone to practice and compete regardless of skill level.

Because flyball is a team sport, the human dynamics of a particular team are critical in deciding which team to join. Many flyball handlers consider their flyball team like a second family. Unlike with your biological family, you have some choice in choosing this one.

As usual, have fun, train positively, and revel in the relationship with your dog, not the ribbons on the wall. 🐾

*Terry Long, CPDT, is a writer, agility instructor, and behavior counselor in Long Beach, California. She is addicted to agility and animal behavior. See "Resources," page 24, for contact information.*

## WHOLE DOG JOURNAL READER SERVICE:

### TO VIEW OUR WEBSITE:

Visit us at  
whole-dog-journal.com

### FOR BACK ISSUES, ARTICLES:

Visit us at  
whole-dog-journal.com/backissues

### TO CHANGE YOUR MAILING OR E-MAIL ADDRESS, RENEW YOUR SUBSCRIPTION, CHECK PAYMENT STATUS, OR ASK QUESTIONS ABOUT YOUR ACCOUNT:

Visit us at  
whole-dog-journal.com/cs

Call (800) 829-9165

To change your address by mail, attach your present mailing label to this form (or a copy of this form), enter your new address below, and mail it to:

THE WHOLE DOG JOURNAL  
P.O. BOX 420235  
PALM COAST, FL 32142

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_ Zip \_\_\_\_\_

E-mail \_\_\_\_\_

To order or renew a subscription, enter your name and address above and check the subscription term you prefer:

2 years (24 issues) – \$54

1 year (12 issues) – \$29

In Canada, 1 year \$39 CDN, 2 years \$72 CDN. All other countries, 1 year \$47 US, 2 years \$94 US.

Check enclosed  AmEx

MasterCard  Visa

Card # \_\_\_\_\_

Expiration \_\_\_\_\_

Signature \_\_\_\_\_

### YOUR RENEWAL IS JUST A CLICK AWAY!

whole-dog-journal.com/cs

# Positive Power

*Pain- and fear-free training methods are effective and enjoyable.*

BY NANCY KERNS

Last month I mentioned how our daily “off” practice paid off when Otto first noticed my friend Leonora’s goats. Otto is fascinated by these animals, which puff up like cats, rear up like horses, and make very weird, scary directed eye contact – very undoglike. As riveted as he was by the goats, every time I said, “Otto, off!” he immediately turned away from the goats and looked at me. Of course, I delivered a bit of hot dog – his favorite treat – right to his lips, each time he so much as glanced at or stepped toward me. It was a calm, drama-free event; no goats or dogs were harmed in the making of that particular scene.

It was a great testimonial for the effectiveness of positive training in general, and specifically for an all-positive method of training a dog to exert self-control. I wasn’t yelling at Otto, scaring him (and any other creature around), or threatening his general well-being if he made the wrong move. It wasn’t fear of punishment – or fear of me – or some sort of amorphous “respect” that

he had for me, or his “recognition” of my “leadership” that led him to resist his desire to chase or otherwise engage the goats. It was simply another step along a deliberately built, assiduously practiced, behavior modification program. “How did you teach him that?” Leonora wondered.

She was particularly curious because she worries every spring and summer about her dogs getting bitten by rattlesnakes (they are very common in this part of Northern California) and the only methods of so-called “snake-proofing” that she had been able to find involved shock collars – which, fortunately, she hadn’t liked the idea of, without really knowing why. I hastened to assure her that shock collars and every other type of punishing aversive were not only unnecessary, but also potentially damaging to her relationship with her dogs. And that the positive approach had many more daily applications than snake-proofing.

I tried to explain how it was an extension of a basic “Don’t touch!” exercise,

## What you can do . . .

- Practice working with your dog daily! Even if it’s just for a minute or two. The time adds up.
- Make sure that the rewards you give him are enjoyable to him; if they aren’t more enjoyable than the alternative, he’ll take the alternative. This isn’t “disobedience” or “stubbornness,” it’s just math!
- Mix up your rewards; if they are too predictable or boring, your dog will start choosing more interesting alternatives.



**Sandi Thompson, a positive trainer from Berkeley, California, practices “Off!” with one of her client’s dogs. The exercise has lifelong applications.**

but the more that I’ve thought about it, the more I realize that it is also emblematic of the relationship-building power of positive training in general.

## Choices

First, as a dog owner, you have to realize that a dog is a dog; he possesses natural desires – genetically programmed, most-likely responses to many types of stimuli. You are not trying to teach him about “right” and “wrong” nor about “obeying” you. You are simply trying to modify his natural responses to make them more convenient to you. Positive training not only accomplishes this goal, but *also* has the side effect of giving the dog a strong desire to do the things you’d like him to do, increasing the odds that he’ll change his behavior in just the way you would like him to. Think of it as team-building!

In a thoughtful positive training pro-

gram – which is what I strive to employ with Otto – the goal is to teach the dog some basic, all-purpose responses that can be applied in progressively more and more challenging environments, with tiny successes at each level leading to a greater likelihood of success at each and every level of difficulty.

Using the procedure described in detail by Pat Miller in “Request For Leave” (WDJ August 2008), I started teaching Otto the “Off!” or “Don’t touch!” exercise by putting a delicious treat in my closed fist, and holding the fist right under Otto’s nose. He could smell the treat, and licked and nosed my hand to try and get it. The moment he looked away or moved away from my hand (and the treat), I’d mark the moment by saying “Yes!” (Miller uses the click! of a clicker) and give him a treat *from my other hand*.

Otto quickly learned that the only way to get a treat was to ignore the one right in front of him. As soon as it was clear he got the concept of the exercise, I added a verbal cue: “Off!” (Some people prefer “Leave it!” or “Don’t touch!”) The next step was to open my hand so he could see the treat in addition to smelling it – quickly closing my hand on the treat if it seemed like he was about to grab it. I’d also place a treat on the ground and say, “Off!” If he tried to get it, I could slide one of my feet over the treat to keep him from getting it. And the *moment* he looked away from the treat, I’d give him a different treat.

Such a simple exercise – with such powerful applications. In learning this exercise, a dog learns to resist his first instinct (grab the treat) and delay his gratification – not a particularly dog-like thing to do! He also learns that you are highly likely to deliver a more delicious treat, or more of them, if he resists his urge to take the seemingly more accessible one.

I’m fascinated by the fact that, when denied access to the easy treat, most dogs will naturally look at their handler’s face, looking for a clue as to when their reward *will* come. This glance grows into a gaze, and, when it’s frequently reinforced with meaningful rewards, the gaze itself becomes a default behavior for the dog that precludes him from doing things you don’t want him to do, such as see (and then chase) a squirrel, or see (and engage with) another dog.

Otto and I practice “Off” every day we are together. We practice in highly controlled conditions, such as feeding time,

when I don’t put his bowl of food on the floor until he offers a sit and looks at me, and then holds that sit (and gaze) until I put the bowl down and release him to eat. A few times a day, I formally practice and reinforce the puppy kindergarten-level “Off!” exercise, with a treat in my hand. But I also try to train informally throughout the day. For example, when making myself a sandwich

for lunch, I might “accidentally” drop a piece of roast beef and say “Off!” as he’s reaching for it. I’m careful to position myself to be able to quickly block his access to it with my foot or leg, so he doesn’t get reinforced for diving for the food anyway. (He does ultimately get that piece of beef, and more, when he looks away from the fallen piece.)

I say “Off!” when he hears someone walking down the sidewalk in front of our house, and instead of barking, he looks at me. If I don’t have a treat in my pocket, I make sure to raise him and take the time to give him a few moments of scratching his favorite itchy places. I say “Off!” when he looks at the cat as she scratches her favorite scratching post in the backyard; Otto and I both know that she often follows up a scratching session with a wild-kitty dash across the yard, so the “Off” in this case is a proactive preventative.

I also practice the “Off” exercise when we play fetch and tug, and when Otto comes to nudge my elbow as I’m working at the computer. I might tell him “Off” when we are greeting someone on the street, if it seems to me that his proximity is making someone nervous. And I use it a *lot* on our walks and bike rides. When I see him see something like a feral cat, a squirrel on a wire, a robin hopping along the ground, or an aroused-looking dog running along a fence, I say “Off” and reward, reward him when he looks away from the thing and looks back at me.

## Rewards

Does that mean I’m always wearing a bait bag full of treats? In our first year together, yes, I *always* wore a bag full of delicious treats when I took Otto out for a walk or bike ride, or brought him to a friend’s house. We’re celebrating our first anniversary together at the end of this year. The



**Otto *always* looks at me when I call his name, no matter what he’s busy doing. Reward-based training did that.**

bait bag is staying at least a while longer, because if I wasn’t a reliable supplier of rewards that are more valuable to him than whatever else it is that he wants, I’m sure he’d eventually “do the math” and realize that chasing the squirrels or whatever was far more rewarding than my

praise alone. When he resists something that’s high on his personal fun scale, I try to reward him accordingly, with a jackpot of treats and perhaps a quick game of tug of war with the leash. At home, in the yard, praise and petting rank high on the Otto satisfaction scale. Out in the world, they aren’t worth as much. It’s like taking dollars to Europe!

I also try to mix it up. Sometimes he wins a piece of hot dog; sometimes I reach past the hot dog to a piece of cheese. Sometimes there are sardines in the bag – wow! Sometimes he gets one piece; every so often I’ll dump the entire contents of the bait bag onto the ground! He’s won the lottery! I think of it like that TV show, Let’s Make a Deal. If someone always knew what was behind Door Number One, it would take the fun out of choosing that option.

This sounds like a lot of work. Added up over our first year together, it is, and yet the daily average is probably less than 10 minutes a day. We’ve had days where I trained, off and on, for hours. And other days when I’ve maybe asked him to do one simple thing all day.

But I’m happy to do the work. I enjoy working with him and seeing his enjoyment at working with me. I love watching his face as he tries to puzzle out what I’ve asked and what he has to do to “win” a reward of food, petting or just my momentary attention. And I’m happy to do the work because I’m highly motivated to help him become a dog that I can take anywhere with ease and comfort, secure in the knowledge that he won’t cause problems for anyone. I plan on having this dog for decade and more, and I consider the time I spend training now to be an investment in our future together. 🐾

*Nancy Kerns is Editor of WDJ. She adopted Otto on June 13, 2008.*

## Tell Me Something I Didn't Know, continued from page 9

Panel database, author Lisa Rodier was rooting for a Picardy Shepherd (Berger Picard) result; she thinks he's a ringer for the Winn-Dixie dog.

*Nobody* guessed Border Collie, Poodle, or Basenji.

### Say again?

How can the two companies have such different results for Otto?

We asked Theresa Brady, spokeswoman for MMIG, to address this question. She replied, "Each company developed its test independently, so there are a number of factors that can result in different breeds recognized in a particular dog. During the research phase, each company must identify a set of DNA markers that characterize differences from breed to breed. Then these markers must be characterized in a set of dogs representing the pure breeds.

"Not only are these markers different across companies, but the number and source of the purebred dogs are different. No company can test every purebred dog representing a breed, and every company will have developed software that is used to compare these genetic markers across breeds.

"Some breeds, however, are closely related because they were developed from the crossing of older, more established breeds. For example, Boston Terriers were developed from the crossing of the English Bulldog and English White Terrier. So, depending on the software program, the markers established for the purebreds and the population of breeds in each company's database, the same dog may test 'Boston Terrier' with one company and 'English Bulldog' with another.

"Some breeds are related because they arose from a common lineage, such as many of those breeds developed from Asia. Early on, we (MMIG) recognized that the

Chow Chow, the Akita, the Siberian Husky, the Chinese Shar-Pei, and even the Shih-Tzu can cluster together as one general breed type so we developed an enhanced program and analysis procedure to split these apart. Thus it is not surprising that the companies may report slightly different results, especially for the breeds that have just a small representation in the mixed breed pet."

Addressing any results that appear in the "Secondary" section of a report (where they detected Chow Chow in Otto), the MMIG (Canine Heritage) results packet says, "This category reports breeds that might be easily recognizable within your dog. While these breeds may or may not have a strong influence on your pet, each breed listed makes up less than the majority of your dog's DNA."

Addressing results that appear in the



**"Who am I? I still don't know." Relax, Otto, don't fret; the truth is out there.**

"In the Mix" section of a report (where they detected Poodle and Border Collie in Otto), the Canine Heritage packet says, "This final category identifies breeds that have the least amount of influence on your pet's composition. They still appear, at low and measurable amounts, in your pet's DNA. If your pet's results only identify

breeds in this category, it is possible your pet is composed of so many breeds only small influences from each breed can be detected."

The Mars Veterinary (Wisdom Panel) results packet explains, "Because of the complexity of genetics and the passing on of dominant and recessive genes from the breeds we found may not always be visually apparent. It is important to spend time closely observing Otto's appearance and personality. Think about which of Otto's traits may reflect a combination of the breeds detected, and which seem to reflect just one of the individual breeds."

### Opinion time

I have to say that I found the whole exercise very interesting, but not necessarily worth the cost. Given that the results for my very mixed-breed dog were so weak, the idea that they might help me anticipate certain health or behavior problems linked to the breeds found is not very compelling. But I doubt that's why most people order the tests; I think most of us are just curious.

Having spent so much time examining and admiring the technological achievements that went into the development of these DNA tests, (main article author) Lisa Rodier was afraid I would pooh-pooh the science behind these tests because I was so skeptical of the breeds detected in Otto's lineage. It's not that; I trust the science. I believe there *are* traces of these breeds (and many others) in Otto. It's just that I already knew he was a very mixed dog, just from a (free!) look at him. And if he wasn't such a mixed bag – if he looked a *lot* like one particular breed, I'd probably be satisfied with the idea that he was mostly that breed; I wouldn't spend \$100-plus to confirm it.

That said, I must admit I will be interested to see how the results might change in a few years, after these companies put thousands and thousands more dogs into their databases. Which breeds will "fall off" of Otto's results as meaningless "background noise"? Will the Picardy Shepherd be added? It could still develop that Otto is a limp-eared Picardy who fell out of a French tourist's car somewhere in the Northern California wine country . . . We'll check back with these companies in a few years, and let you know. 🐾

– Nancy Kerns

#### A Word to Our Readers: Whole Dog Journal's Mailing List Policy

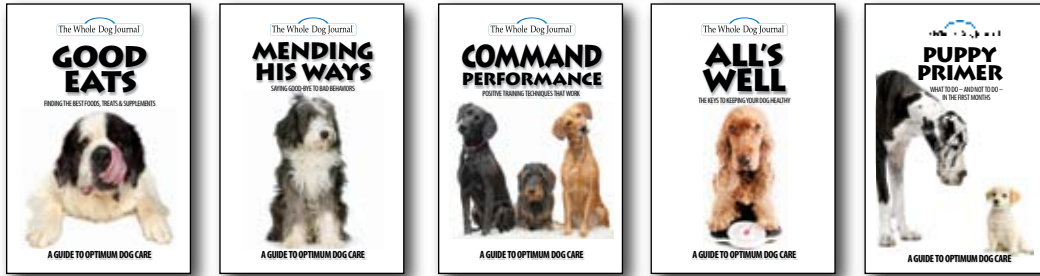
Like many other publishers, we make portions of our customer list available to carefully screened companies that offer products and services we believe you may enjoy. Indeed, in all likelihood, we were able to first reach you only because another company graciously permitted us access to its customer list.

If, when we make our list available, you do not wish to receive these offers and/or information, please let us know by contacting us at:

Whole Dog Journal Opt-Out Program  
800 Connecticut Avenue, Norwalk, CT 06856-1631  
Please include your current mailing label.

# Shouldn't you have the answers before the questions arise?

Take the confusion and hesitation out of your dog's care! Be fully ready for anything—and everything! Accept this risk-free invitation and discover...



- 🐾 Positive solutions to your most stubborn training challenges.
- 🐾 Smart decisions for safe, natural, and nutritious feeding.
- 🐾 Meaningful measures to strengthen good health and reinforce resistance to illness.
- 🐾 Essential fundamentals to starting your puppy off right.
- 🐾 Proven techniques to end problem behaviors.

## YOU WANT THE BEST FOR YOUR DOG!

*Five brand-new books from Whole Dog Journal will show you how to provide the vigilant care you want to give—and your dog deserves!*

Because foresight is far better than hindsight when it comes to your dog's health and training, nothing beats having a solid game plan. **Whole Dog Journal's Guides are playbooks for winning and effective dog care.** It is a series everyone who has a dog should own!

### Good Eats: Finding the Best Foods, Treats and Supplements

- Basic Food Selection • Canned Foods • Dry Foods • Weight Control • Treats
- Food Disasters • Diet and the Older Dog • Special Needs Diets • Home-Prepared Diets
- Pica and Coprophagia

### All's Well: The Keys to Keeping Your Dog Healthy

- Exercise and Injury Prevention • Selecting a Holistic Vet • Old dogs • Anesthesia
- Dental Health • Creating a Healthy Home • Vaccinations • NSAIDs • First Aid
- Preventing Heat Stroke

### Command Performance: Positive Training Techniques that Work

- Positive Training Basics • Leash Manners • Getting a Sit • Encouraging Self-Control
- The "Come" Command • Greeting • Tricks and Games • Park Behavior
- Teaching Wait and Stay

### Puppy Primer: What To Do—And Not To Do—In The First Months

- Pre-Puppy Prep • Housetraining • Crate Training • Vaccinations • Grooming
- Bite Inhibition • New Dog Do's and Don'ts • Socialization • Building Good Manners

### Mending His Ways: Saying Good-Bye To Bad Behaviors

- Dealing with Anxious Dogs • Remedial Housetraining • Crating Problems
- Destructive Chewing • Escape Artists • Reactive Behaviors • Growling • Barking
- Multi-Dog Households

**30-Day Risk-Free Examination Privileges for Whole Dog Journal Readers when you order now, your satisfaction is assured with our 100% money-back guarantee. If you are not completely satisfied, you may return your Guides within 30 days for a full and unquestioned refund.**

## A WEALTH OF INFORMATION— AT MONEY SAVING PRICES!

- 🐾 **Save \$5.00 on each Guide!**
- 🐾 **Buy 4 and get the fifth guide free!**

## Three convenient ways to order...

1. Call 1-800-571-1555
2. Online at [www.whole-dog-journal.com/dogcare](http://www.whole-dog-journal.com/dogcare)
3. Mail this coupon

## Whole Dog Journal's GUIDES TO OPTIMUM DOG CARE

### YES send me the following Guides

- Good Eats
- All's Well
- Command Performance
- Puppy Primer
- Mending His Ways

\_\_\_ Guides @ \$14.95 = \$ \_\_\_\_\_

Add Postage & Handling \$ 2.95

TOTAL AMOUNT \$ \_\_\_\_\_

Check enclosed (payable to WDJ)

Postage & Handling \$2.95

Charge to:  Amex  VISA  MC

Account No. \_\_\_\_\_ Exp Date \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Mail to: **Whole Dog Journal Books**

**PO Box 22449, Beachwood OH 44122-2449**

**Just \$14.95 each—  
\$5 off the cover price!  
Buy 4 Guides  
and get the 5th Guide FREE!**

**BEST VALUE**

All 5 Guides for \$62.75  
including p&h!

## RESOURCES

### BOOKS

WDJ Training Editor Pat Miller is author of *The Power of Positive Dog Training*; *Positive Perspectives: Love Your Dog, Train Your Dog*; *Positive Perspectives II: Know Your Dog, Train Your Dog*; and *Play with Your Dog*. All of these books are available from DogWise, (800) 776-2665 or dogwise.com

### HOLISTIC VETERINARIANS

**American Holistic Veterinary Medical Association (AHVMA)**, 2214 Old Emmorton Road, Bel Air, MD 21015. (410) 569-0795. Send a self-addressed, stamped envelope for a list of holistic veterinarians in your area, or search ahvma.org

### TRAINING AND INSTRUCTION

**Pat Miller**, CPDT, Peaceable Paws Dog and Puppy Training, Hagerstown, MD. Train with modern, dog-friendly positive methods. Group and private training, Rally, behavior modification, workshops, intern and apprentice programs. (301) 582-9420; peaceablepaws.com

**Gail Fisher**, owner, All Dogs Gym & Inn, Manchester, New Hampshire. (603) 669-4644; alldogsgym.com

**Terry Long**, CPDT, DogPact, Long Beach, CA, is a writer, agility instructor, and behavior counselor. She provides pre-adoption counseling, behavior modification, and group classes in pet manners and agility. (562) 423-0793 or dogpact.com

The **Association of Pet Dog Trainers (APDT)** has references to member trainers in your area. Not all members employ similar training methods, nor does APDT set standards of skill or competence. Please note that APDT encourages (but does not require) its members to use training methods that use reinforcement and rewards, not punishment. See the article, "How to Choose a Dog Trainer" on the APDT website: apdt.com. (800) 738-3647

### DNA TESTS

**Genetics of Coat Color and Type in Dogs:** homepage.usask.ca/~schmutz/dogcolors.html

"Genetics and the Shape of Dogs," by Elaine A. Ostrander, *American Scientist*, September/October 2007 (can be found online)

*The Genetics of the Dog*, by A. Ruvinsky and J. Sampson, Cabi Publishing, 2001

### PLEASE NOTE:

**Unauthorized copying or distribution of WDJ is not permitted**

This publication is supported by sales of subscriptions and back issues. The fact that we are NOT supported by advertising sales gives us the editorial independence necessary to present a subjective and critical view.

If you would like to share material from WDJ with a group, please contact our Reprint Manager, Jocelyn Donnellon, at (203) 857-3100

Thanks!



## WHAT'S AHEAD

### Action Plan

*Five things to do if your dog darts out your front door.*

### Herbal Prebiotics

*What they are and how your dog would benefit from some.*

### Demanding Behaviors

*Does your dog know exactly how to get you to give him what he wants? Learn how to extinguish your dog's insistence and encourage his "say please" good manners.*

### Good Sports

*Our new series on canine sports examines dock diving, the activity of choice for high-drive water-loving dogs of all sizes and breeds.*

### Canine Intervertebral Disc Disease

*The most effective treatments for this potentially crippling disease.*

### Is Your Dog Ready For a Baby?

*Not a canine baby, a human baby? Here's how to prepare your dog to accept your new family member with aplomb.*