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# TVC

November Digital Issue 2018

Digital magazine

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## Attention to Detail

McGregor Boulevard Veterinary Clinic  
blends a state-of-the-art facility with  
a family practice mindset



## How far does your patients' heartworm disease prevention go?

### Advantage Multi® (imidacloprid + moxidectin) pushes prevention forward\*

Advantage Multi® not only kills existing infection by working *backward* to kill heartworm larvae acquired in the previous month, it also takes a step *forward* to prevent future infection by killing newly acquired heartworm larvae all day, every day throughout the following month.



advantage multi®

(imidacloprid + moxidectin)

Pushing prevention *forward*.

\*Forward protection from heartworm infection means that after a single administration of Advantage Multi® for Dogs (imidacloprid + moxidectin) or four consecutive monthly administrations of Advantage Multi® for Cats (imidacloprid + moxidectin), blood levels of moxidectin are continuously at or above the concentration required to kill newly acquired heartworm larvae and are maintained between continued monthly administration of these products. Therefore, new exposure of the pet to infective heartworm larvae between monthly administrations of the product results in killing of the larvae and inhibiting successful establishment of a heartworm infection.

CAUTION: Federal (U.S.A.) law restricts Advantage Multi® for Dogs (imidacloprid + moxidectin) to use by or on the order of a licensed veterinarian. WARNING: **DO NOT ADMINISTER THIS PRODUCT ORALLY.** For the first 30 minutes after application ensure that dogs cannot lick the product from application sites on themselves or other treated animals. Children should not come in contact with the application sites for two (2) hours after application. (See Contraindications, Warnings, Human Warnings, and Adverse Reactions, for more information.) CONTRAINDICATIONS: Do not use this product on cats. CAUTION: Federal (U.S.A.) law restricts Advantage Multi® for Cats (imidacloprid + moxidectin) to use by or on the order of a licensed veterinarian. WARNINGS: Do not use on sick or debilitated cats or ferrets. Do not use on underweight cats. (see ADVERSE REACTIONS). Do not use on cats less than 9 weeks of age or less than 2 lbs body weight. Do not use on ferrets less than 2 lbs body weight. PRECAUTIONS: Avoid oral ingestion. HUMAN WARNINGS: Children should not come in contact with the application site for 30 minutes following application.

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# Going the Extra Mile

By Sidney Allen, Owner Success Advocate, [Sidney.Allen@tvc.coop](mailto:Sidney.Allen@tvc.coop)

**TVC has a small support staff, but we strive to make a big impact with TVC Co-op Owners at our nearly 3,500 locations.**

For instance, one TVC Co-op Owner recently had technical issues with his computer and internet provider in getting set up with TVC's website. Thankfully this doctor vocalized his frustrations with the system, so I was able to find a favorable resolution for the doctor and TVC. Over the phone, I guided him through step-by-step, on how to login and enter his information. We were able to successfully get him to login on his own, and by the end of the call, he was perusing the website on his own.

TVC clinics obviously care about healthy pets, happy pet parents, and ultimately sustaining a strong veterinary marketplace.

TVC hinges on the ability to navigate our emails, TVC's website and a host of other online services. Although it took some time – we didn't finish up until late in the evening – I have no doubt this doctor will be better able to utilize TVC in the long run. In fact, we've had several conversations following the initial phone call to help him become more familiar with our TVC University offerings.

In another example, one TVC Co-op Owner and practice manager were extremely short-staffed, and kept cancelling their scheduled calls. So, I dropped in during their lunch hour to do an in-person onboarding. Even though I knew it wasn't something I "had" to do, because I believe in what TVC does and know that doctors are busy, I was happy to do it. I hope they're able to take advantage of all that TVC has to offer.

Sometimes it's a phone call. Other times we'll make onsite visits. Whatever the case, our Owner Success Advocate team works to help our Co-op Owners connect with our vendors and ensure that they are getting the best rebates possible. TVC clinics obviously care about healthy pets, happy pet parents, and ultimately sustaining a strong veterinary marketplace. With the Owner Success Advocate team, we want TVC Co-op Owners to know that they will always have someone who will go that extra mile.

Have a question, or need help navigating TVC resources? Reach out for a 1-on-1 conversation by going to <http://www.calendly.com/tvc>

# Take a bite out of Lyme.

NexGard® (afoxolaner) is the **ONLY** chew that combines all of the following benefits into the one that dogs prefer<sup>1</sup>:

- ✓ Kills fleas
- ✓ Kills ticks — lone star ticks, brown dog ticks, American dog ticks, and black-legged (deer) ticks
- ✓ **And FDA-approved for the prevention** of *Borrelia burgdorferi* infections as a direct result of killing *Ixodes scapularis* vector ticks



<sup>1</sup>Data on file.

NexGard is a Merial product. Merial is now part of Boehringer Ingelheim.



NexGard® is a registered trademark, and FRONTLINE VET LABS™ is a trademark, of Merial. ©2018 Merial, Inc., Duluth, GA. All rights reserved. PET-0691-NEX0818.

**IMPORTANT SAFETY INFORMATION:** NexGard is for use in dogs only. The most frequently reported adverse reactions include vomiting, pruritus, lethargy, diarrhea and lack of appetite. The safe use of NexGard in pregnant, breeding, or lactating dogs has not been evaluated. Use with caution in dogs with a history of seizures or neurologic disorders. For more information, see the full prescribing information or visit [www.NexGardForDogs.com](http://www.NexGardForDogs.com).



### Vendor News

#### Vetsource Announcement

Great news, we are launching PayPal as a payment option! Our integration with this global leader in payment solutions will help pet parents seamlessly checkout, remember one less login, provide more flexibility for how they pay and drive more revenue for our partner practices. At checkout we will provide the option to link to an existing PayPal account as well as create a new one right from our site.

#### Employee Pet Health Insurance Benefit

Did you know that you can save up to 30 percent on [ASPCA Pet Health Insurance](#)? Veterinary practice employees can receive a 20 percent discount on their base plan premium for every pet they insure. That's in addition to the 10 percent multiple pet discount!\* [ASPCA Pet Health Insurance](#) also offers an employee benefit program, which could save your practice money when you use it in place of discounted services for employees. To learn more about our veterinary discount or employee benefit program, call the dedicated Veterinary Services Help Line at 877-738-2677. If you are participating in the [ASPCA Pet Health Insurance](#) rebate program, staff enrollments count towards your practice rebates! For information about the rebate program, contact Kathleen Kaiser at 234-231-1793.

\*Discounts on the base plan premium include 20 percent veterinary employee discount and 10 percent discount for eligible multiple pets. Discounts may vary and may not be available in all states.

#### TVC Annual Meeting 2019

Registration is open for the required TVC 2019 Annual Meeting scheduled for January 19, 2019 held in conjunction with VMX (formerly NAVC) in Orlando.

Attendance is required, either in-person or virtually, since we'll be voting on different items and our bylaws require that we meet a quorum. [Click here for a link to our Annual Meeting page](#)

We hope you'll join us in person in Orlando. Here's why:

- Meet and greet TVC vendors and staff during our catered Happy Hour immediately following the meeting
- Meet other TVC Co-op Owners
- Enter in the Happy Hour raffle to win prizes from our vendors
- Get an in-depth report on TVC's financials
- Help elect the new Board slate
- Hear about the latest trends in the industry

Enjoy significant savings from VMX if you register early **(also see the TVC promo code below!)**:

#### VMX Pricing

Print Excel CSV Copy

REGISTRATION TYPE	10/6 - 11/30	12/1 - ON SITE
Veterinarian	\$700.00	\$825.00

For other registration pricing categories (such as Practice Manager, Vet Tech, etc.), [click here](#)

Plus, as a TVC Co-op Owner, you can **save an additional 10 percent when you enter the code DISCOUNTTVC** on your VMX registration. Just be sure to click the "apply discount" button on the review page once you enter the code.

Here are the details:

- TVC 2019 Annual Meeting
- Saturday January 19, 2019; 3:30-6:00 p.m., Eastern Standard Time
- Meeting will last approximately 1 hour, followed immediately by a 1 ½ hour cocktail party
- The Executive Ballroom (new room this year; right across from the Junior Ballroom) in the Rosen Centre Hotel, 9840 International Drive Orlando, FL 32189

[Click here to RSVP for in-person or virtual attendance](#)

# LOVE at one dose

Try Claro®. The one and only FDA-approved canine otitis externa treatment featuring:

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**CLARO®**

(florfenicol, terbinafine, mometasone furoate)  
Otic Solution

Claro® Otic Solution is approved for the treatment of ear infections in dogs caused by susceptible strains of yeast (*Malassezia pachydermatis*) and bacteria (*Staphylococcus pseudintermedius*). CAUTION: Federal (U.S.A.) law restricts this drug to use by or on the order of a licensed veterinarian. CONTRAINDICATIONS: Claro® should not be used in dogs known or suspected to be allergic to Claro® or any of its ingredients.

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## Webinars



[Register](#)

**Tips That Work: Managing Obesity in Dogs & Cats**  
**December 11 | 9 AM & 1 PM (CST)**

**Presenter:** Dr. Ainsley Bone  
**Number of credits:** 1.5 hours

Obesity is a common problem, affecting 1 in 3 adult dogs and cats. Obesity is an excess of body fat sufficient to result in impairment of health or body function, often estimated to occur at 20-25 percent above ideal body weight. Overweight and obese dogs and cats face a greater risk for earlier morbidity and a shortened lifespan. Numerous factors contribute to obesity, including inactivity and excess food consumption. Successful management of obesity in pets begins with the recognition of the condition by both veterinarian and client, followed by the development of a tailored program to meet the needs of both the patient and client. Treats and exercise are important components of most weight management programs, as well as controlled feeding of low-calorie foods. Increased dietary protein provides a unique advantage by stimulating metabolism, promoting fat loss, and helping preserve lean body mass during weight loss.



[Register](#)

**TVC University Live Webinar: Beating the Winter Blues with Nutraceuticals**  
**November 27 | 9 am & 1 pm (CST)**

For those who attend the TVC University Live webinar, Ceva will be giving away a 60 count tub of TRP-Tri-COX® to each attendee. If you have never purchased TRP-Tri-COX® before, there will also be a new user offer of a Buy 1, Get 1 Free on TRP-Tri-COX®.

During the colder winter months, just as the cold may begin to have adverse effects on your joints, it does the very same for our canine companions. The underlying causes of this exist year-round; however, this can be a particularly painful time due to the changing seasons.

This is also a time of year during which sales may slow in the clinic. Allow us to help traverse the landscape of nutraceuticals and increase your revenue through the sale of nutraceuticals by helping you to educate your clients on their benefits. Ceva will also be sharing a message from Dr. Todd McCracken, who will be speaking about the medical advantages of Ceva's Nutraceutical line.



[Register](#)

**TVC Central: 2019 Chicagoland Veterinary Conference**  
**May 12 - 16 | Chicago, IL**

Chicagoland Veterinary Conference is a great place to expand your knowledge and grow your network. TVC will be sponsoring a fantastic lineup of speakers and lecture topics you won't want to miss out on. **TVC Co-op Owners can receive 10 percent off of their registration with promo code: TVC2019.**

[Click here](#) for more information on the conference.

**Hope to see you at this great event!**

**Alfaxan<sup>®</sup>  
Multidose**

Registered for induction and  
maintenance of anesthesia

# Anesthesia Can Create Stress...

28

Now FDA registered  
for 28 days of use  
after broaching

## Manage it with **NEW** **Alfaxan<sup>®</sup> Multidose**

- The fastest-growing injectable anesthetic
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- The choice for all procedures, including C-sections, Sighthounds and juvenile patients



10 mL

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**Alfaxan<sup>®</sup> Multidose**  
(alfaxalone 10 mg/mL injectable anesthetic)

1. Pasloske K et al. The bioequivalence of a single intravenous administration of the anesthetic alfaxalone in cyclodextrin versus alfaxalone in cyclodextrin plus preservatives in cats. J Vet Pharmacol Ther 2018;41(3):437-446. For complete Alfaxan reference information contact Jurox Customer Service at 1-844-253-2926 and request a copy of the Alfaxan Resource Guide.

[www.jurox.com/us](http://www.jurox.com/us)

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## Promotions

**ASPCA Pet Health Insurance:** Veterinary practice employees can save up to 30 percent on ASPCA Pet Health Insurance! And if you're participating in the ASPCA Pet Health Insurance Rebate Program, staff enrollments count toward your practice rebates! [Click here for details](#)

**Bayer: Profender:** For every 20 units purchased, get \$50 in Consumer Rebates (10- \$5 rebates); Variety Pack counts as 40 – get \$100 in Consumer Rebates. October 15 – November 30. [Click here for details](#)

**BI:** Save up to an additional 10 percent on Oravet, Antinol, Previcox, and more through November 30. [Click here for details](#)

**BI: Centragard:** Buy a 3-dose carton, get a 1-dose carton FREE through December 31. [Click here for details](#)

**Ceva: Q4 Promo:** All types of “Buy This, Get That Free” on Pheromones; Clenz-A-Dent; Douxo; Pain and Mobility; Vectra; Vectra 3D; and Catego. [Click here for details](#)

**Hill's:** Get 10 percent off Post-Surgical Prescription Diets, and receive “Get Well” materials for your hospital. Plus, get a \$25 Amazon gift card, October 1 – November 30, 2018. [Click here for details](#)

**Human Interest:** New vendor of 401(k) plans tailored for the small business market. They have waived their \$499 set up fee exclusively for TVC owners. [Click here for details](#)

**KVP Custom Orthotics:** KVP has Custom Orthotics has just launched an exclusive rebate program with TVC. They are offering an \$85 rebate on each KVP Custom Orthotics brace! [Click here for details](#)

**Label Value:** Labels for vet offices (and everything else!). Save 10 percent off your order in addition to your 8 percent TVC discount with promo code TVC10. [Click here for details](#)

**Merck Holiday PurrrchasePoints™ Special:** November 1 – December 15. Fantastic opportunity to earn between 5,000 to 10,000 PurrrchasePoints™ and qualify for 30 to 90 days delayed billing on all companion animal purchases! Plus Nobivac syringe bonus and Bravecto pet parent bonus! [Click here for details](#)

**Merck Bravecto Client Offer:** Pet parents can receive a \$15 rebate for two doses; Mix, Match, and save when you purchase any Bravecto product! [Click here for details](#)

**One Place Capital:** The “NO Loan” Simple Interest Loan with NO prepayment penalties, NO blanket liens, and NO hidden fees just got even better – now there are NO payments until 2019! [Click here for details](#)

**Provecta:** Free Amazon Gift Card with purchase of Provecta for cats. October 1 – December 1, 2018. Refer to banner ad. [Click here for details](#)

**RapidBac Vet:** Exclusively for TVC owners: 25 percent off the only rapid test for the detection of Gram-negative and Gram-positive bacteria in urine. [Click here for details](#)

**Stratford Rx:** Protect your clinic from internet pharmacies with your own private label quality products at special TVC pricing, complete with marketing support. Special Starter Pack offer. [Click here for details](#)

**VetOne:** Switch to VetOne and enjoy 11 percent to 111 percent savings on scores of everyday items for your clinic! [Click here for details](#)

**Vetsource:** New Q4 Perk: Tired of hearing your clients saying how they can get every product you recommend for less online? If you have a Vetsource online pharmacy, you can offer your clients 20 percent off their first Home Delivery order through December 31. Even better – the 20 percent off promo is combinable with other manufacturer promotions! [Click here for details](#)

# EASE STRESS FOR MORE SUCCESS.

**97% SUCCESSFUL  
PILL ADMINISTRATION\***



**Soft texture** easy to mold and shape around most pills

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**Adapted energy** content with vitamins and prebiotics

## INCREASE COMPLIANCE BY OFFERING YOUR CLIENTS EASY HOME DELIVERY.



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Automatic refill  
reminders and  
expired notifications

# Attention to Detail

McGregor Boulevard Veterinary Clinic  
blends a state-of-the-art facility with  
a family practice mindset



## When it comes to first impressions, pet owners can't help but come away impressed with Fort Meyers, Florida-based McGregor Boulevard Veterinary Clinic. And that's before they even walk through the door.

Lura Jones, DVM, owner of McGregor Boulevard Veterinary Clinic, and her husband, Matthew Horton designed the 9,000-square-foot, two-story, open-concept clinic. In 2017, the practice won the National Hospital Design Award from DVM 360. It's a state-of-the-art facility providing the latest in veterinary medicine.

"Our clients may come to a beautiful facility, but we are a family practice," says Dr. Jones, a TVC Co-op Owner. "Our clients and patients are treated as family members. Our clinic has an open door policy. We welcome and entertain tours daily. We enjoy showing off our facility, letting clients meet my wonderful staff, our pet campers, and even visit our sick patients."

That said, veterinarians and staff try to make the client's experience a positive one by providing a personalized touch, even with the "wow" factor that comes from the facility's design.

"At my practice, we perform most day-to-day procedures in the exam room in front of our clients," says Dr. Jones. "The pets are more comfortable not being taken away from their owner, and owners get to watch how we treat their pet. This also provides time to socialize with the client and get to know them better."

### Keeping an eye on allergies

That includes diagnosing illnesses and ailments big and small. While the veterinary clinic is equipped to handle advanced procedures, often it's the ability to help alleviate the everyday scratching and discomfort of pets that can have the greatest impact with patients and clients.

At her South Florida practice, Dr. Jones says they see yeast infections of the ears and feet daily, anywhere from 2-10 per day. "Currently, due to the high pollen count and algae bloom from the red tide, we have seen an increase of pruritic dogs and cats," she says. "While being pruritic is uncomfortable in itself, it often leads to secondary staph and yeast infections."

Owners always want to know why their pet is itchy and how their pet got a yeast or staph infection. Dr. Jones and her staff spend time educating the clients on flea, food, and environmental allergies as the primary cause of the pruritis. The scratching behavior breaks the skin barrier, leading to concurrent skin infections.

Fortunately, allergies and yeast infections have gotten easier to treat over the last five to ten years. A big part of that is due to the products introduced into the market that make it easier on the pet, owner and veterinary practice.

"For yeast infections of the ears, we typically use [Claro](#) due to the ease of a one-time application," says Dr. Jones. "Some dogs may require an oral antifungal like fluconazole



as well if the infection is deep, really bad, or reoccurring. For those itchy dogs, injectable therapies have become convenient for both the veterinarian as well as the client with the use of CYTOPOINT for the pruritis, and CONVENIA if they have a secondary staph pyoderma."

In regard to [Claro](#), Dr. Jones says there are two main benefits. One, it is applied in the hospital as a one-time application. And the second? "It works great!" she says. "Clients are always grateful that they do not have to treat the ears at home."

It's just another way the veterinarians and staff can provide a healthy dose of friendliness and professionalism from first impression to a client who comes back for regular care. ■

**Editor's note:** For more on McGregor Boulevard Veterinary Clinic's National Hospital Design Award, visit <http://veterinaryhospitaldesign.dvm360.com/2017-general-practice-hospital-year-let-sunshine>



# The Word on Yeast Infections

**Yeast infections can arise from** the presence of underlying allergy conditions such as atopic dermatitis. The protective barrier function of the skin is important to prevent the development and spread of these infections. Any compromise in this skin barrier can ultimately lead to the development of atopic dermatitis. Additionally, the condition can be worsened as the animal scratches the affected areas in an effort to relieve the discomfort, further damaging the barrier (Hong *et al.*, 2011; Egawa and Kabashima, 2017). This breakdown of the skin barrier may allow for organisms, such as yeast, to penetrate and infect areas they would not normally have access to.

There are several species of yeast known to cause infections; the two more common are: *Malassezia pachydermatis* and *Candida albicans*. Although both species are normally present on the pets' body, when the skin barrier is compromised, these microorganisms can overgrow and lead to infection.

*Candida albicans* is found in the digestive tract and on warm, moist areas of the skin such as the groin or in folds of skin. Under normal conditions, the presence of *Candida albicans* is harmless, but it can cause a variety of infections under the right conditions such as urinary tract infection, candidiasis or candidemia in immune-compromised patients. *Malassezia pachydermatis* is another species of yeast that lives on the skin of animals. If allowed to initially penetrate past the skin barrier, it accentuates the disease process by releasing enzymes that damage cell membranes, allowing it to spread (Achkar and Fries, 2010). Skin harbors countless microorganisms, such as bacteria and fungi, which normally do not present any problems. However, once they are able to penetrate areas they are not normally present in, infections can set in.

As previously mentioned, atopic dermatitis is a common allergic skin disease that is characterized by dry,



# ERASE RABIES

## ONE VACCINE AT A TIME

More than 59,000 people die from rabies every year<sup>1</sup>— a rate of one person every 9 minutes.<sup>2</sup> That's why we are committed to supplying 100% of the need for rabies vaccines to programs such as Rabies Free Africa, Mission Rabies, and Afya Serengeti. When you choose Nobivac<sup>®</sup> vaccines for your patients, you are part of the program by supporting our ability to donate rabies vaccines to areas in need.

**Together, we can Erase Rabies!**

Contact your Merck Animal Health representative to learn more about how you can help



References: 1. World Health Organization, 10 Facts on Rabies. Accessed June 23, 2017 at <http://www.who.int/features/factfiles/rabies/en/>.  
2. Centers for Disease Control and Prevention. Accessed June 18, 2018 at <https://www.cdc.gov/media/releases/2015/p0928-rabies.html>.

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inflamed, and pruritic skin. Infections often appear as a result of the loss of skin barrier integrity due to decreased hydration as well as excessive scratching of the affected areas in an effort to relieve the discomfort (Hong *et al.*, 2011). There are several treatments available for atopic dermatitis to aid in the relief of the pruritic condition, including steroids and itch-suppressive therapeutics such

## The most effective way to address the atopic dermatitis is to treat the root cause of the condition, the allergy. Allergy testing is a proven diagnostic assay that identifies potentially problematic allergens.

as Apoquel® and Cytopoint™. The anti-pruritic therapeutics Apoquel® and Cytopoint™ may reduce the risk of secondary yeast infection by preventing the scratching that is so damaging to the skin, but the underlying cause of the pruritis is not addressed. Although steroids also reduce the itch, they may actually increase the risk of infection due to their anti-inflammatory and immunosuppressive properties (DeBoer & Marsella, 2001).

### Addressing atopic dermatitis

The most effective way to address the atopic dermatitis is to treat the root cause of the condition, the allergy. Allergy testing is a proven diagnostic assay that identifies potentially problematic allergens.

There are two main types of allergy tests, intradermal and serum testing. Intradermal, or skin-prick testing, relies on injecting specific allergens into the pet's skin and observing whether or not a reaction occurs in the form of a red, raised wheal. Positive reactions often occur instantaneously, but others may take days to appear. The pet also has to be off steroids prior to testing.

Serum allergy testing is performed by drawing a small amount of the pet's blood and quantifying the amount of allergen-specific IgE in the pet's serum. There is often a correlation between the amount of allergen-specific IgE and the pet's reaction to that allergen. An advantage of this method is that it is less uncomfortable to the pet and they do not have to be off of steroids prior to testing.

### Next steps

Regardless of the test method used to identify the offending allergens, the next step is to proceed with allergen-specific immunotherapy. This is a treatment where, based on the results of the previous allergy test, a mixture of the problematic allergens is injected subcutaneously (or sublingually, in the form of a spray) in an effort to desensitize the animal to the allergens. This is a long-term treatment but has been shown to be very effective in reducing symptoms, regardless of which type of allergy test was used (Mueller, *et al.*, 2016; Park *et al.*, 2000). In the event of existing yeast infections during the immunotherapy process, the problem can be addressed with topical solutions, shampoos, sprays, and/or with oral medications. ■

### References

- Egawa G, Kabashima K. (2018) Barrier dysfunction in the skin allergy. *Allergol Int*, 67:3-11
- Achkar JM, Fries BC. (2010). Candida infections of the genitourinary tract. *Clin Microbiol Rev*, 23:253-73.
- Mueller RS, Janda J, Jensen Jarolim E, Rhyner C, Marti E. (2016). Allergens in veterinary medicine. *Allergy*, 71: 27-35.
- Hong J, Buddenkotte J, Berger TG, Steinhoff M. Management of itch in atopic dermatitis. *Semin Cutan Med Surg*. 2011;30:71–86.
- DeBoer DJ, Marsella R. (2001) The ACVD task force on canine atopic dermatitis (XII): the relationship of cutaneous infections to the pathogenesis and clinical course of canine atopic dermatitis. *Vet Immunol Immunop*, 81: 239-49
- Park S-J, Ohya F, Yamashita K, Nishifuji K, Iwasaki T. (2000) Comparison of response to immunotherapy by intradermal skin test and antigen-specific IgE in canine atopy. *J Vet Med Sci*, 62: 983-8.

# TRUST.

<sup>1</sup> Data on file at Merial.

<sup>2</sup> Freedom of Information: NADA140-971 (January 15, 1993).

**HEARTGARD Plus is a Merial product. Merial is now part of Boehringer Ingelheim.**



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- ✓ PREVENTS HEARTWORM DISEASE
- ✓ TREATS AND CONTROLS 3 SPECIES OF HOOKWORMS
- ✓ TREATS AND CONTROLS 2 SPECIES OF ROUNDWORMS
- ✓ OWNERS PREFER IT<sup>1</sup> AND DOGS LOVE IT<sup>2</sup>



**IMPORTANT SAFETY INFORMATION:** HEARTGARD® Plus (ivermectin/pyrantel) is well tolerated. All dogs should be tested for heartworm infection before starting a preventive program. Following the use of HEARTGARD Plus, digestive and neurological side effects have rarely been reported. For more information, please visit [www.HEARTGARD.com](http://www.HEARTGARD.com).

**Heartgard®**  
*(ivermectin/pyrantel)* **Plus**

# Industry NEWS



## **Research firm: Pet insurance market will double by 2022**

Market research firm Packaged Facts forecasts that the U.S. pet health insurance industry, estimated at slightly over \$1 billion in 2017, will nearly double to reach \$2 billion by 2022, according to a release. Packaged Facts' findings were featured in the recently published report *Pet Insurance in the U.S., 6th Edition*. The pet insurance market will grow over 14% per year, supported by a number of trends in both this emerging market and competitive ones, according to company experts. Most notably, increased consumer awareness will be crucial to growth.

## **AAHA supports Veterinary Nurse Initiative**

AAHA announced it is lending its voice in support of the Veterinary Nurse Initiative. The AAHA Board of Directors voted to support the initiative during their fall meeting. AAHA staff, which is 40 percent made up of veterinary technicians, recommended the initiative be supported by the AAHA Board of Directors. "At AAHA, we are all about standardization and excellence," said AAHA Chief Executive Officer Michael Cavanaugh, DVM, DABVP (Emeritus). "By standardizing the term 'veterinary nurse', we increase consistency throughout the profession while also growing professional recognition and relevancy among pet owners. Ultimately, this makes our profession stronger."

## **Pet food companies favoring Instagram as go-to social media hub**

*Petfood Industry* recently highlighted that pet food companies' use of Facebook to interact publicly with pet owners on social media declined between April 2017 and June 2018, while Instagram grew in popularity, according to Gartner L2 analysts in the report "Digital IQ Index: Pet Care U.S. 2018."

The pet food industry's trend away from public Facebook posts mirrors that of the wider consumer packaged goods world, wrote Gartner analysts. Pet care brands' total interactions on Facebook dropped by 79 percent over the past five quarters. As pet food brands' public Facebook use declined, those brands' usage of Instagram increased. Pet food company's interactions on Instagram nearly tripled between April 2017 and June 2018. Likewise, more pet food brands have created Instagram accounts. Now, 83 percent of all pet food brands have Instagram accounts compared to 76 percent a year ago.

## **AVMA and RCVS partner to tackle veterinary mental health issues**

The American Veterinary Medical Association (AVMA) and the Royal College of Veterinary Surgeons (RCVS) have joined forces to promote improved mental health and wellbeing across the veterinary team. Building on the RCVS Mind Matters Initiative brand in the UK and the AVMA's Wellbeing and Peer Assistance Initiative, the two organizations will work together on joint projects to advocate positive behavior and support around mental health, collaborate on developing evidence-based programs and share best practices around interventions. The AVMA and RCVS issued a joint statement affirming the importance that both organizations place on a healthy and sustainable profession. It states: "We believe that for veterinary professionals to realize their full potential and the global veterinary profession to remain sustainable, maintaining high levels of mental health and wellbeing for all members of the veterinary team is a priority. Improving veterinary mental health and wellbeing has a positive impact on individuals, the profession at large and, ultimately, animal health and welfare, and public health."

# NexGard® (afoxolaner) Chewables

**CAUTION:** Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

**Description:**

NexGard® (afoxolaner) is available in four sizes of beef-flavored, soft chewables for oral administration to dogs and puppies according to their weight. Each chewable is formulated to provide a minimum afoxolaner dosage of 1.14 mg/lb (2.5 mg/kg). Afoxolaner has the chemical composition 1-Naphthalenecarboxamide, 4-[5-[3-chloro-5-(trifluoromethyl)-phenyl]-4, 5-dihydro-5-(trifluoromethyl)-3-isoxazolyl]-N-[2-(2-oxo-2-(2,2,2-trifluoroethyl)amino)ethyl].

**Indications:**

NexGard kills adult fleas and is indicated for the treatment and prevention of flea infestations (*Ctenocephalides felis*), and the treatment and control of Black-legged tick (*Ixodes scapularis*), American Dog tick (*Dermacentor variabilis*), Lone Star tick (*Amblyomma americanum*), and Brown dog tick (*Rhipicephalus sanguineus*) infestations in dogs and puppies 8 weeks of age and older, weighing 4 pounds of body weight or greater, for one month. NexGard is indicated for the prevention of *Borrelia burgdorferi* infections as a direct result of killing *Ixodes scapularis* vector ticks.

**Dosage and Administration:**

NexGard is given orally once a month, at the minimum dosage of 1.14 mg/lb (2.5 mg/kg).

**Dosing Schedule:**

Body Weight	Afoxolaner Per Chewable (mg)	Chewables Administered
4.0 to 10.0 lbs.	11.3	One
10.1 to 24.0 lbs.	28.3	One
24.1 to 60.0 lbs.	68	One
60.1 to 121.0 lbs.	136	One
Over 121.0 lbs.	Administer the appropriate combination of chewables	

NexGard can be administered with or without food. Care should be taken that the dog consumes the complete dose, and treated animals should be observed for a few minutes to ensure that part of the dose is not lost or refused. If it is suspected that any of the dose has been lost or if vomiting occurs within two hours of administration, redose with another full dose. If a dose is missed, administer NexGard and resume a monthly dosing schedule.

**Flea Treatment and Prevention:**

Treatment with NexGard may begin at any time of the year. In areas where fleas are common year-round, monthly treatment with NexGard should continue the entire year without interruption. To minimize the likelihood of flea reinfestation, it is important to treat all animals within a household with an approved flea control product.

**Tick Treatment and Control:**

Treatment with NexGard may begin at any time of the year (see **Effectiveness**).

**Contraindications:**

There are no known contraindications for the use of NexGard.

**Warnings:**

Not for use in humans. Keep this and all drugs out of the reach of children. In case of accidental ingestion, contact a physician immediately.

**Precautions:**

Afoxolaner is a member of the isoxazoline class. This class has been associated with neurologic adverse reactions including tremors, ataxia, and seizures. Seizures have been reported in dogs receiving isoxazoline class drugs, even in dogs without a history of seizures. Use with caution in dogs with a history of seizures or neurologic disorders (see **Adverse Reactions and Post-Approval Experience**).

The safe use of NexGard in breeding, pregnant or lactating dogs has not been evaluated.

**Adverse Reactions:**

In a well-controlled US field study, which included a total of 333 households and 615 treated dogs (415 administered afoxolaner; 200 administered active control), no serious adverse reactions were observed with NexGard.

Over the 90-day study period, all observations of potential adverse reactions were recorded. The most frequent reactions reported at an incidence of > 1% within any of the three months of observations are presented in the following table. The most frequently reported adverse reaction was vomiting. The occurrence of vomiting was generally self-limiting and of short duration and tended to decrease with subsequent doses in both groups. Five treated dogs experienced anorexia during the study, and two of those dogs experienced anorexia with the first dose but not subsequent doses.

**Table 1: Dogs With Adverse Reactions.**

	Treatment Group			
	Afoxolaner		Oral active control	
	N <sup>1</sup>	% (n=415)	N <sup>2</sup>	% (n=200)
Vomiting (with and without blood)	17	4.1	25	12.5
Dry/Flaky Skin	13	3.1	2	1.0
Diarrhea (with and without blood)	13	3.1	7	3.5
Lethargy	7	1.7	4	2.0
Anorexia	5	1.2	9	4.5

<sup>1</sup>Number of dogs in the afoxolaner treatment group with the identified abnormality.

<sup>2</sup>Number of dogs in the control group with the identified abnormality.

In the US field study, one dog with a history of seizures experienced a seizure on the same day after receiving the first dose and on the same day after receiving the second dose of NexGard.

This dog experienced a third seizure one week after receiving the third dose. The dog remained enrolled and completed the study. Another dog with a history of seizures had a seizure 19 days after the third dose of NexGard. The dog remained enrolled and completed the study. A third dog with a history of seizures received NexGard and experienced no seizures throughout the study.

**Post-Approval Experience (July 2018):**

The following adverse events are based on post-approval adverse drug experience reporting. Not all adverse events are reported to FDA/CVM. It is not always possible to reliably estimate the adverse event frequency or establish a causal relationship to product exposure using these data. The following adverse events reported for dogs are listed in decreasing order of reporting frequency for NexGard:

Vomiting, pruritus, lethargy, diarrhea (with and without blood), anorexia, seizure, hyperactivity/restlessness, panting, erythema, ataxia, dermatitis (including rash, papules), allergic reactions (including hives, swelling), and tremors.

**Contact Information:**

For a copy of the Safety Data Sheet (SDS) or to report suspected adverse drug events, contact Merial at 1-888-637-4251 or [www.nexgardfordogs.com](http://www.nexgardfordogs.com).

For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at <http://www.fda.gov/AnimalVeterinary/SafetyHealth>.

**Mode of Action:**

Afoxolaner is a member of the isoxazoline family, shown to bind at a binding site to inhibit insect and acarine ligand-gated chloride channels, in particular those gated by the neurotransmitter gamma-aminobutyric acid (GABA), thereby blocking pre- and post-synaptic transfer of chloride ions across cell membranes. Prolonged afoxolaner-induced hyperexcitation results in uncontrolled activity of the central nervous system and death of insects and acarines. The selective toxicity of afoxolaner between insects and acarines and mammals may be inferred by the differential sensitivity of the insects and acarines' GABA receptors versus mammalian GABA receptors.

**Effectiveness:**

In a well-controlled laboratory study, NexGard began to kill fleas four hours after initial administration and demonstrated >99% effectiveness at eight hours. In a separate well-controlled laboratory study, NexGard demonstrated 100% effectiveness against adult fleas 24 hours post-infestation for 35 days, and was >93% effective at 12 hours post-infestation through Day 21, and on Day 35. On Day 28, NexGard was 81.1% effective 12 hours post-infestation. Dogs in both the treated and control groups that were infested with fleas on Day -1 generated flea eggs at 12- and 24-hours post-treatment (0-11 eggs and 1-17 eggs in the NexGard treated dogs, and 4-90 eggs and 0-118 eggs in the control dogs, at 12- and 24-hours, respectively). At subsequent evaluations post-infestation, fleas from dogs in the treated group were essentially unable to produce any eggs (0-1 eggs) while fleas from dogs in the control group continued to produce eggs (1-141 eggs).

In a 90-day US field study conducted in households with existing flea infestations of varying severity, the effectiveness of NexGard against fleas on the Day 30, 60 and 90 visits compared with baseline was 98.0%, 99.7%, and 99.9%, respectively.

Collectively, the data from the three studies (two laboratory and one field) demonstrate that NexGard kills fleas before they can lay eggs, thus preventing subsequent flea infestations after the start of treatment of existing flea infestations.

In well-controlled laboratory studies, NexGard demonstrated >97% effectiveness against *Dermacentor variabilis*, >94% effectiveness against *Ixodes scapularis*, and >93% effectiveness against *Rhipicephalus sanguineus*, 48 hours post-infestation for 30 days. At 72 hours post-infestation, NexGard demonstrated >97% effectiveness against *Amblyomma americanum* for 30 days. In two separate, well-controlled laboratory studies, NexGard was effective at preventing *Borrelia burgdorferi* infections after dogs were infested with *Ixodes scapularis* vector ticks 28 days post-treatment.

**Animal Safety:**

In a margin of safety study, NexGard was administered orally to 8 to 9-week-old Beagle puppies at 1, 3, and 5 times the maximum exposure dose (6.3 mg/kg) for three treatments every 28 days, followed by three treatments every 14 days, for a total of six treatments. Dogs in the control group were sham-dosed. There were no clinically-relevant effects related to treatment on physical examination, body weight, food consumption, clinical pathology (hematology, clinical chemistries, or coagulation tests), gross pathology, histopathology or organ weights. Vomiting occurred throughout the study, with a similar incidence in the treated and control groups, including one dog in the 5x group that vomited four hours after treatment.

In a well-controlled field study, NexGard was used concomitantly with other medications, such as vaccines, anthelmintics, antibiotics (including topicals), steroids, NSAIDs, anesthetics, and antihistamines. No adverse reactions were observed from the concomitant use of NexGard with other medications.

**Storage Information:**

Store at or below 30°C (86°F) with excursions permitted up to 40°C (104°F).

**How Supplied:**

NexGard is available in four sizes of beef-flavored soft chewables: 11.3, 28.3, 68 or 136 mg afoxolaner. Each chewable size is available in color-coded packages of 1, 3 or 6 beef-flavored chewables.

NADA 141-406, Approved by FDA

Marketed by: Frontline Vet Labs™, a Division of Merial, Inc.

Duluth, GA 30096-4640 USA

Made in Brazil.

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## Advantage Multi® for Dogs and for Cats (imidacloprid + moxidectin)

**BRIEF SUMMARY:** Before using Advantage Multi® for Dogs (imidacloprid+moxidectin) or Advantage Multi® for Cats (imidacloprid+moxidectin), please consult the product insert, a summary of which follows:

**CAUTION:** Federal (U.S.A.) Law restricts this drug to use by or on the order of a licensed veterinarian.

### Advantage Multi for Dogs:

**WARNING**

- **DO NOT ADMINISTER THIS PRODUCT ORALLY.**
- For the first 30 minutes after application ensure that dogs cannot lick the product from application sites on themselves or other treated animals.
- Children should not come in contact with the application sites for two (2) hours after application.

(See Contraindications, Warnings, Human Warnings, and Adverse Reactions for more information.)

### INDICATIONS:

**Advantage Multi for Dogs** is indicated for the prevention of heartworm disease caused by *Dirofilaria immitis* and the treatment of *Dirofilaria immitis* circulating microfilariae in heartworm-positive dogs. Advantage Multi for Dogs kills adult fleas and is indicated for the treatment of flea infestations (*Ctenocephalides felis*). Advantage Multi for Dogs is indicated for the treatment and control of sarcoptic mange caused by *Sarcoptes scabiei var. canis*. Advantage Multi for Dogs is also indicated for the treatment and control of the following intestinal parasites species: Hookworms (*Ancylostoma caninum*) (*Uncinaria stenocephala*), Roundworms (*Toxocara canis*) (*Toxascaris leonina*) and Whipworms (*Trichuris vulpis*).

**Advantage Multi for Cats** is indicated for the prevention of heartworm disease caused by *Dirofilaria immitis*. Advantage Multi for Cats kills adult fleas (*Ctenocephalides felis*) and is indicated for the treatment and control of ear mite (*Otodectes cynotis*) infestations and the intestinal parasites species Hookworm (*Ancylostoma tubaeforme*) and Roundworm (*Toxocara cati*). **Ferrets:** Advantage Multi for Cats is indicated for the prevention of heartworm disease in ferrets caused by *Dirofilaria immitis*. Advantage Multi for Cats kills adult fleas (*Ctenocephalides felis*) and is indicated for the treatment of flea infestations in ferrets.

**CONTRAINDICATIONS:** Do not administer this product orally. (See WARNINGS.) Do not use the Dog product (containing 2.5% moxidectin) on Cats.

### WARNINGS:

**Advantage Multi for Dogs:** For the first 30 minutes after application: Ensure that dogs cannot lick the product from application sites on themselves or other treated dogs, and separate treated dogs from one another and from other pets to reduce the risk of accidental ingestion. Ingestion of this product by dogs may cause serious adverse reactions including depression, salivation, dilated pupils, incoordination, panting, and generalized muscle tremors. In avermectin sensitive dogs<sup>a</sup>, the signs may be more severe and may include coma and death<sup>b</sup>.

<sup>a</sup>Some dogs are more sensitive to avermectins due to a mutation in the MDRI gene. Dogs with this mutation may develop signs of severe avermectin toxicity if they ingest this product. The most common breeds associated with this mutation include Collies and Collie crosses.

<sup>b</sup>Although there is no specific antagonist for avermectin toxicity, even severely affected dogs have completely recovered from avermectin toxicity with intensive veterinary supportive care.

**Advantage Multi for Cats:** Do not use on sick, debilitated, or underweight cats. Do not use on cats less than 9 weeks of age or less than 2 lbs. body weight. Do not use on sick or debilitated ferrets. **HUMAN WARNINGS:** Not for human use. Keep out of the reach of children. Dogs: Children should not come in contact with the application sites for two (2) hours after application. Cats: Children should not come in contact with the application site for 30 minutes after application.

Causes eye irritation. Harmful if swallowed. Do not get in eyes or on clothing. Avoid contact with skin. Wash hands thoroughly with soap and warm water after handling. If contact with eyes occurs, hold eyelids open and flush with copious amounts of water for 15 minutes. If eye irritation develops or persists, contact a physician. If swallowed, call poison control center or physician immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or physician. People with known hypersensitivity to benzyl alcohol, imidacloprid, or moxidectin should administer the product with caution. In case of allergic reaction, contact a physician. If contact with skin or clothing occurs, take off contaminated clothing. Wash skin immediately with plenty of soap and water. Call a poison control center or physician for treatment advice. The Safety Data Sheet (SDS) provides additional occupational safety information. For a copy of the Safety Data Sheet (SDS) or to report adverse reactions call Bayer Veterinary Services at 1-800-422-9874. For consumer questions call 1-800-255-8826.

**PRECAUTIONS:** Do not dispense dose applicator tubes without complete safety and administration information. Use with caution in sick, debilitated or underweight animals. The safety of Advantage Multi for Dogs has not been established in breeding, pregnant, or lactating dogs. The safe use of Advantage Multi for Dogs has not been established in puppies and dogs less than 7 weeks of age or less than 3 lbs. body weight. Advantage Multi for Dogs has not been evaluated in heartworm-positive dogs with Class 4 heartworm disease.

Cats may experience hypersalivation, tremors, vomiting and decreased appetite if Advantage Multi for Cats is inadvertently administered orally or through grooming/licking of the application site. The safety of Advantage Multi for Cats has not been established in breeding, pregnant, or lactating cats. The effectiveness of Advantage Multi for Cats against heartworm infections (*D. immitis*) after bathing has not been evaluated in cats. Use of this product in geriatric cats with subclinical conditions has not been adequately studied. **Ferrets:** The safety of Advantage Multi for Cats has not been established in breeding, pregnant, and lactating ferrets. Treatment of ferrets weighing less than 2.0 lbs. (0.9kg) should be based on a risk-benefit assessment. The effectiveness of Advantage Multi for Cats in ferrets weighing over 4.4 lbs. (2.0 kg) has not been established.

**ADVERSE REACTIONS: Heartworm Negative Dogs:** The most common adverse reactions observed during field studies were pruritus, residue, medicinal odor, lethargy, inappetence and hyperactivity. **Heartworm Positive Dogs:** The most common adverse reactions observed during field studies were cough, lethargy, vomiting, diarrhea (including hemorrhagic), and inappetence. **Cats:** The most common adverse reactions observed during field studies were lethargy, behavioral changes, discomfort, hypersalivation, polydipsia and coughing and gagging. **Ferrets:** The most common adverse reactions observed during field studies were pruritus/scratching, scabbing, redness, wounds and inflammation at the treatment site, lethargy, and chemical odor.

For a copy of the Safety Data Sheet (SDS) or to report adverse reactions call Bayer Veterinary Services at 1-800-422-9874. For consumer questions call 1-800-255-8826.

Advantage Multi is protected by one or more of the following U.S. patents: 6,232,328 and 6,001,858.

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Made in Germany.



(florfenicol, terbinafine, mometasone furoate)

## Otic Solution

Antibacterial, antifungal, and anti-inflammatory

For Otic Use in Dogs Only

**CAUTION:** Federal (U.S.A.) Law restricts this drug to use by or on the order of a licensed veterinarian.

### DESCRIPTION:

CLARO® contains 16.6 mg/mL florfenicol, 14.8 mg/mL terbinafine (equivalent to 16.6 mg/mL terbinafine hydrochloride) and 2.2 mg/mL mometasone furoate. Inactive ingredients include purified water, propylene carbonate, propylene glycol, ethyl alcohol, and polyethylene glycol.

### INDICATIONS:

CLARO® is indicated for the treatment of otitis externa in dogs associated with susceptible strains of yeast (*Malassezia pachydermatis*) and bacteria (*Staphylococcus pseudintermedius*).

### DOSAGE AND ADMINISTRATION:

Shake before use.

**CLARO® should be administered by veterinary personnel.**

Administer one dose (1 dropperful) per affected ear. The duration of effect should last 30 days.

1. Clean and dry the external ear canal before administering the product.
2. Verify the tympanic membrane is intact prior to administration.
3. Remove single dose dropperette from the package.
4. While holding the dropperette in an upright position, remove the cap from the dropperette.
5. Turn the cap over and push the other end of the cap onto the tip of the dropperette.
6. Twist the cap to break the seal and then remove cap from the dropperette.
7. Screw the applicator nozzle onto the dropperette.
8. Insert the tapered tip of the dropperette into the affected external ear canal and squeeze to instill the entire contents (1 mL) into the affected ear.
9. Gently massage the base of the ear to allow distribution of the solution.
10. Repeat with other ear as prescribed.

Cleaning the ear after dosing may affect product effectiveness.

### CONTRAINDICATIONS:

Do not use in dogs with known tympanic membrane perforation (see PRECAUTIONS).

CLARO® is contraindicated in dogs with known or suspected hypersensitivity to florfenicol, terbinafine hydrochloride, or mometasone furoate.

### WARNINGS:

**Human Warnings:** Not for use in humans. Keep this and all drugs out of reach of children. In case of accidental ingestion by humans, contact a physician immediately. In case of accidental skin contact, wash area thoroughly with water. Avoid contact with eyes. Humans with known hypersensitivity to florfenicol, terbinafine hydrochloride, or mometasone furoate should not handle this product.

### PRECAUTIONS:

Do not administer orally.

The use of CLARO® in dogs with perforated tympanic membranes has not been evaluated. The integrity of the tympanic membrane should be confirmed before administering the product. Reevaluate the dog if hearing loss or signs of vestibular dysfunction are observed during treatment.

Use of topical otic corticosteroids has been associated with adrenocortical suppression and iatrogenic hyperadrenocorticism in dogs (see ANIMAL SAFETY).

Use with caution in dogs with impaired hepatic function (see ANIMAL SAFETY).

The safe use of CLARO® in dogs used for breeding purposes, during pregnancy, or in lactating bitches has not been evaluated.

### ADVERSE REACTIONS:

In a field study conducted in the United States (see EFFECTIVENESS), there were no directly attributable adverse reactions in 146 dogs administered CLARO®.

To report suspected adverse drug events and/or obtain a copy of the Safety Data Sheet (SDS) or for technical assistance, contact Bayer HealthCare at 1-800-422-9874.

For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at <http://www.fda.gov/AnimalVeterinary/SafetyHealth>.

### PHARMACOLOGY:

CLARO® Otic Solution is a fixed combination of three active substances: florfenicol (antibacterial), terbinafine (antifungal), and mometasone furoate (steroidal anti-inflammatory). Florfenicol is a bacteriostatic antibiotic which acts by inhibiting protein synthesis. Terbinafine is an antifungal which selectively inhibits the early synthesis of ergosterol. Mometasone furoate is a glucocorticosteroid with anti-inflammatory activity.

### MICROBIOLOGY:

The compatibility and additive effect of each of the components in CLARO® solution was demonstrated in a component effectiveness and non-interference study. An *in vitro* study of organisms collected from clinical cases of otitis externa in dogs enrolled in the clinical effectiveness study determined that florfenicol and terbinafine hydrochloride inhibit the growth of bacteria and yeast commonly associated with otitis externa in dogs. No consistent synergistic or antagonistic effect of the two antimicrobials was demonstrated. The addition of mometasone furoate to the combination did not impair antimicrobial activity to any clinically significant extent.

In a field study (see EFFECTIVENESS), at least 10 isolates from successfully treated cases were obtained for *S. pseudintermedius* and *M. pachydermatis*.

### EFFECTIVENESS:

In a well-controlled, double-masked field study, CLARO® was evaluated against a vehicle control in 221 dogs with otitis externa. One hundred and forty six dogs were treated with CLARO® and 75 dogs were treated with the vehicle control. All dogs were evaluated for safety. Treatment (1 mL) was administered once on Day 0 to the affected ear(s). Prior to treatment, the ear(s) was cleaned with saline. The dogs were evaluated on Days 0, 7, 14, and 30. Blood work and urinalysis were obtained on Day 0 pre-treatment and Day 30 at study completion. Four clinical signs associated with otitis externa were evaluated: erythema, exudate, swelling, and ulceration. Success was based on clinical improvement at Day 30. Of the 183 dogs included in the effectiveness evaluation, 72.5% of dogs administered CLARO® solution were successfully treated, compared to 11.1% of the dogs in the vehicle-control group (p=0.0001).

### ANIMAL SAFETY:

In a target animal safety study, CLARO® was administered orally to 12-week-old Beagle puppies (4 dogs/sex/group) at 0X, 1X, 3X, and 5X the recommended dose once every 2 weeks for a total dosing period of 28 days (3 times the treatment duration). No clinically relevant treatment-related findings were noted in hearing tests, body weight, weight gain, or food consumption. CLARO® administration was associated with post-treatment ear wetness or clear aural exudate, increased absolute neutrophil count, decreased absolute lymphocyte and eosinophil counts, suppression of the adrenal cortical response to ACTH-stimulation, decreased adrenal weight and atrophy of the adrenal cortex, increased liver weight with hepatocellular enlargement/cytoplasmic change, and decreased thymus weight. Other potentially treatment-related effects included mild changes to AST, total protein, inorganic phosphorus, creatinine, and calcium.

### STORAGE INFORMATION:

Store between 20°C-25°C (68°F-77°F), excursions permitted 15°C-30°C (59°F-86°F).

### HOW SUPPLIED:

CLARO® solution is supplied in a single-use dropperette in a blister. Each dropperette contains one 1 mL dose.

CLARO® is available in cartons of two, ten, or twenty dropperettes.

NADA 141-440, Approved by FDA.

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