Keep happiness in motion

A supplement for daily joint care

Antinol®

RAPID EAB-277®

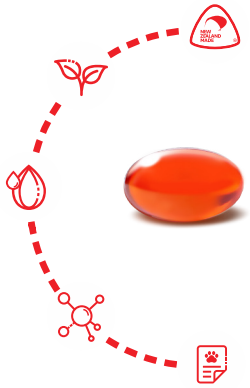
Antinol® RAPID

A supplement for daily joint care

Keep happiness in motion

Antinol® Rapid is a potent synergistic blend of 2 marine lipid extracts chosen for their unique enhancement formula called **EAB-277®**.
EAB-277® is the key active ingredient of this advanced formula formulated to promote optimal benefits through its synergistic efficacy contains > 90 free fatty acids full spectrum of Omega 3 including ETA, EPA, DHA as well as other key Polyunsaturated fatty acids (PUFAs) and antioxidants.

The excellency of Antinol® Rapid EAB-277®



NATURAL
Sourcing + Farming in New Zealand

PRODUCTION PROCESS
Proprietary CO2 Supercritical Extraction + Stabilization

ADVANCEMENT
of the Synergistic blend Potent + Patented formula

ENHANCED BIOAVAILABILITY
and Fast Action

EFFICACY PROVEN
by Scientific Researches both invitro and invivo

The two marine lipids used in Antinol® Rapid are proprietary and exclusively produced. The exact combination of 30mg lipid fractions from **Perna canaliculus (New Zealand green lipped mussel)** and 20mg **high phospholipid krill oil** is the result of years of research combining and isolating lipid groups and essential fatty acids to find the optimal nutrient synergy.
Our proprietary high phospholipid krill oil is high in polar lipid enrichment which enhances bioactivity "Potency" of this marine oil blend formula as a result of proven efficacy.
The Antinol® Rapid EAB-277® blend has been proven via laboratory tests to be **more effective than either of the individual lipids alone** in inhibiting inflammation markers such as nitric oxide, TNFα, and IL-6.

+ Perna canaliculus
(New Zealand)

+ High Phospholipid Krill Oil
(Antarctic)

Backed by science and extensive research

REVIEWED INTERNATIONALLY BY VETERINARIANS

RECOMMENDED BY VETERINARIANS GLOBALLY

SAFE TO USE + DOES NOT INTERACT WITH OTHER MEDICATIONS

TESTED FOR STABILITY + PURITY

THE LEADING JOINT AND MOBILITY SUPPORT PRODUCT IN JAPAN

- Suitable for long-term use for disorders or as a preventative + wellness supplement
- Patented and stabilized oil extracts
- 100% natural, free from Heavy metal such as Mercury, Cadmium etc. Clear from toxins
- No synthetic preservatives or fillers
- Fully tracable and sustainable
- No report of contraindications*
- According to safety study no known adverse effects have been reported.

*The safety of this product has not been tested in pregnant or lactating animals.
May contain a minute amount of tropomyosin protein

Antinol® Rapid Animal Clinical Studies:

1.

Study of the effectiveness of glucosamine and chondroitin sulfate, marine based fatty acid compounds (PCSO-524® and EAB-277®), and carprofen for the treatment of dogs with hip osteoarthritis:

A prospective, block-randomized, double-blinded, placebo-controlled clinical trial

Study Design:

There were 15 dogs per group under treatment over 6 weeks.

1. Dasuquin
2. Carprofen
3. PCSO-524®
4. EAB-277®
5. Placebo

This 75 dogs' study at Khon Kaen University, Thailand was investigating the effectiveness of these compounds for the treatment of dogs with degenerative osteoarthritis and also to demonstrate the significantly superior therapeutic effect of PCSO-524® and EAB-277® compared with a placebo.

The study used **objective force plate gait analysis, subjective orthopedic assessment scores, hematology and blood chemistry profile analysis and subjective owner assessment scores**.

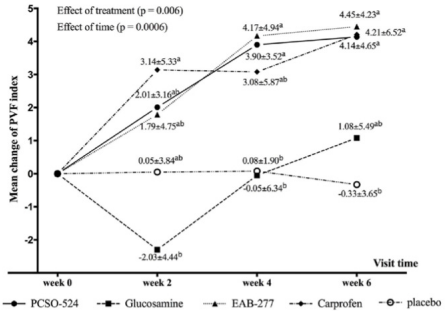


Figure 1

Graphic representation of the mean (± standard deviation) change from baseline in PVF for each group during the study period. Different superscripts (a, b) indicate significant differences between groups for change in PVF.

Results;

Overall, the results of this study indicate that **there appear to be benefits of carprofen, PCSO-524®, and EAB-277® for the treatment of OA-pain in dogs based on the measurement of PVF.** Glucosamine/chondroitin and placebo (sunflower oil) did not appear to be associated with positive treatment effects based on the measurement of PVF.

At 4 and 6 weeks after treatment, **the change in PVF of both PCSO-524® and EAB-277® were similar to that of the carprofen group.** The PVF of placebo group remained unchanged (−0.33 ± 3.65) as expected after study completed (6 weeks).

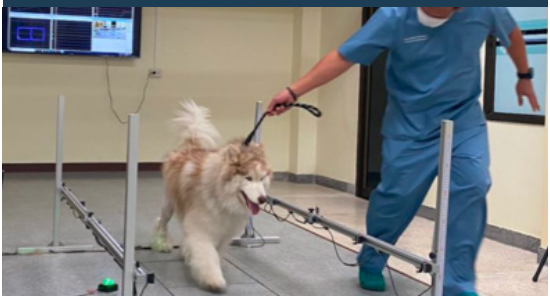
The changes in PVF (significant when compared to baseline) in this study with carprofen after 2, 4, and 6 weeks were 3.14 ±5.33, 3.08 ±5.87, and 4.21 ±6.52, respectively.

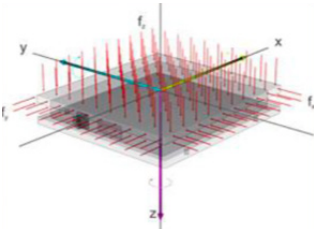
These values are similar to those of a recent study [28] which found an increase in PVF of 3.2 ±0.8 after 2 weeks treatment of carprofen. In that study, most enrolled dogs had hip OA, and the baseline PVF for index limb was similar in both studies (62.1 ±13.5 and 60.7 ±13.5).

Our result is also similar to another OA study [22] using the NSAID treatment firocoxib where the change in PVF of the index limb was reported to be 3.03 ±4.67 and 3.25 ±4.13 at 2 and 4 weeks. treatment, respectively.

Other Diagnostic Tools:

1) Gait analysis: Objective measurement
2) Provide quantitative weight bearing force
- Force plates
- Pressure sensitive mats





2.

Randomized placebo-controlled trial to evaluate the efficacy of Oil extract of the seed of Biota Orientalis (4CYTE™ Epiitalis® Forte) compared with: (i) placebo, (ii) NSAID: Meloxicam (Boehringer Ingelheim) and (iii) the marine based fatty acid compound, EAB-277® ("Antinol® Rapid") for the treatment of osteoarthritis in dogs.

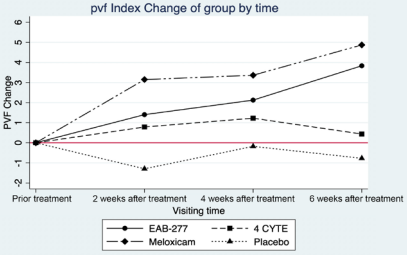
This 100 dogs' study at Khon Kaen University, Thailand is investigating **the effectiveness of these compounds for the treatment of dogs with degenerative osteoarthritis** and also to demonstrate the significantly superior therapeutic effect of EAB-277® compared with a placebo.

The study is using objective force plate gait analysis, subjective orthopedic assessment scores, hematology and blood chemistry profile analysis and subjective owner assessment scores.

Study Design:

There were 25 dogs per group were under treatment over 6 weeks.

1) Meloxicam
2) EAB-277®
3) 4 CYTE
4) Placebo



Results;

The peak vertical force (PVF); gait analysis between group over 6 weeks after treatment indicate that **the Carprofen and EAB-277 group showed scientifically significant increased (improvement)** compared between group with 4 Cyte and Placebo groups. In addition, the performances of 4 Cyte and Placebo groups showed no significant difference between group and also within group based on PVF mean change of each group. This could imply that the 4 CYTE performance is equal to Placebo.

Remarks: This short summary is aimed to brief on 4 Cyte study results. Limited data provided as it is unpublished data and the outcomes of this study is under the manuscript preparation process.

3.

Randomized placebo-controlled trial to evaluate the effects of PCSO-524® (Antinol®) and EAB-277® (Antinol® Rapid) on weight bearing in the treatment of canine osteoarthritis by comparison with the administration of the compounds:
(i) NSAID: Meloxicam (Metacam, Boehringer Ingelheim Animal Health), (ii) PCSO-524®, (iii) EAB-277®, (iv) a combination of PCSO-524® with Meloxicam and (v) placebo.

This clinical trial was conducted by Kasetsart University, Thailand, and supervised and co-authored by **Dr. Duncan X. Lascelles** in the USA. The study investigated the hypothesis that **the combination of PCSO-524® and Meloxicam would result in a superior therapy compared with the use of Meloxicam or PCSO-524® or EAB-277® alone.**

Study Design:

There were a total of 194 dogs enrolled on this study over 4 week period by splited into 5 treatment groups as follows;

1) Combined treatment: Meloxicam+PCSO-524®
2) Meloxicam
3) PCSO-524®
4) EAB-277®
5) Placebo

The study also investigated whether the administration of PCSO-524® and EAB-277® to dogs with osteoarthritis demonstrated a significantly superior therapeutic effect compared with a placebo and whether the combined administration of PCSO-524® with the NSAID, Meloxicam, **resulted in a significantly superior therapeutic effect than with Meloxicam alone.**

- The study used objective force plate gait analysis
- Hematology and blood chemistry profile analysis
- Subjective orthopedic assessment scores
- Owner assessment scores.

Results show overall that **the combination of PCSO-524® and Meloxicam was superior to all the other treatments.** The PVF within-group analysis showed a significant increase (improvement) in over 4 weeks, seen in the Combined treatment, PCSO-524® and EAB-277® group but in The Placebo group worst in performances with no significant improvement. As the outcomes of this study is under manuscript preparation process to submit peer review journal.

Remarks; Unpublished data

4.

A Randomized Placebo Controlled Trial - Preliminary Study of the effects of PCSO-524® and EAB-277® on Renal Protective Function in the case of long term NSAID use for osteoarthritis in dogs.

This study at Kasetsart University, Thailand is designed to **determine the potential efficacy of PCSO-524® on renal (kidney) protection in the long term (4 week) NSAID treatment of dogs.**
This clinical trial is being conducted on 100 owned client dogs divided into five groups: (i) NSAID: Meloxicam (Metacam, Boehringer Ingelheim Animal Health), (ii) PCSO-524®, (iii) EAB-277®, (iv) a combination of PCSO-524® with Meloxicam and (v) Placebo.
The full parameters of renal function evaluation will be conducted to monitor the renal function of the dogs in each group including the newly innovative biomarkers (SDMA test, Idexx) and the CRP inflammatory cytokine test. The study also will show the effects of EAB-277® on renal function.

Results;

The results showed that the combination of PCSO-524® with the various NSAID formulas **provided no negative effect to the dogs' kidneys** during their treatment with NSAIDs.
The results of this Renal study will include in the Meloxicam study manuscript which is under preparation process to submit Peer Review Journal.

Remarks; Unpublished data

5.

The Effect of EAB-277® on Heart Rate Variability (HRV) in Dogs with Tracheal Collapse.

This preliminary project funds veterinary students at Chiang Mai University, Thailand.
The hypothesis is **to study the effects of EAB-277® to see if it will help decrease HRV impairment due to systemic inflammatory processes** which could induce the dysfunction of the sympathetic nervous system as well as the parasympathetic nervous system.

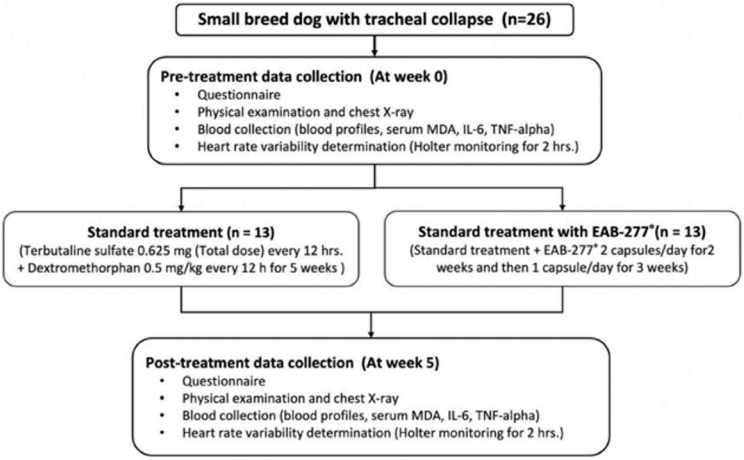


FIGURE 1 | Schematic representation of the study protocol. At pre-treatment, all dogs underwent chest X-ray, blood collection, Holter recording for 2-h. Then, dogs were divided into two groups to receive the standard treatment or standard treatment combined with polyunsaturated fatty acid EAB-277® from Green-Lipped Mussel blend for the 5 weeks. At post-treatment, all dogs underwent the re-assessment of chest X-ray, blood collection, Holter recording for 2-h to investigate cardiac sympathovagal balance, plasma oxidative stress, and inflammatory marker measurement. MDA, Malondialdehyde.

Ten small breed dogs will be used in this study and will be divided into two groups.

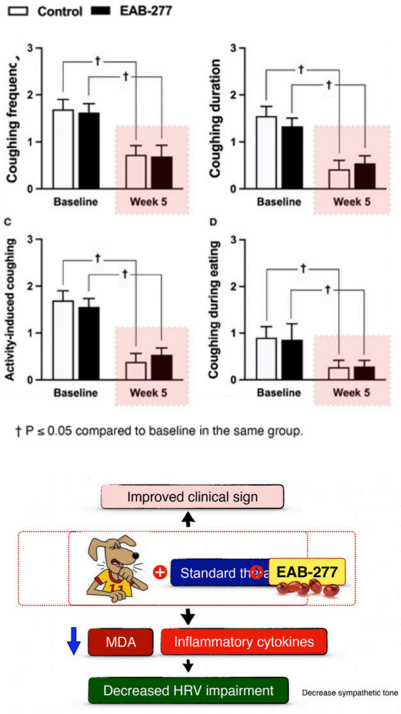
- The first group of five dogs comprises canine tracheal collapse patients given **standard treatment** for one month.
- The second group of five dogs comprises canine tracheal collapse patients given the **standard treatment plus EAB-277®** for one month.

Blood from all dogs will be collected for testing of morphology, blood chemistry and measurement of heart rate variability.

The project has been completed. However, since the results showed improvement in the EAB-277® group based on owner assessments, the study has been expanded to add objective inflammatory biomarker data which is expected to show the relation between clinical improvement and the reduction in the level of inflammation in the body based on scientific evidence developed in the study.
This expanded study was completed at the end of the third quarter of 2021 and has been published in Frontiers in Veterinary Science, a peer reviewed journal, in 2022.

This study demonstrated the beneficial effects of **EAB-277® supplementation combined with standard therapy on heart rate variability** in dogs with tracheal collapse.

Both standard treatment alone and standard treatment combined with EAB-277® **improved all clinical signs** as evaluated by the questionaire.



The major findings of this study are as follows.

- First, EAB-277® supplementation for 5 weeks **did not affect the physical examination results, radiographic findings, or blood profile parameters** in the tracheal collapse dogs.
- Second, EAB-277® supplementation for 5 weeks **decreased oxidative stress and inflammatory marker compared to standard therapy** as indicated by serum MDA, canine serum IL-6 and canine TNF-α in tracheal collapse dogs.
- Third, EAB-277® supplementation for 5 weeks attenuated sympathovagal imbalance by **increasing parasympathetic activity** in tracheal collapse dogs.
- Fourth, using a questionnaire or evaluating TD/TI by chest X-ray was not accurate in evaluating the improvement of tracheal collapse in dogs.

Regarding clinical signs evaluated by questionnaire, **this study found improvement in clinical signs in tracheal collapse dogs after treatment compared to pre-treatment in both groups**, including a decrease in the frequency and duration of coughing, coughing induced by activities such as exercise, and eating and drinking.

A limitation of the questionnaire used in this study was the wide range of response scores and had much personal information, which could affect the reliability of the results.

This suggests that a questionnaire might not be appropriate as a prognostic tool for routine follow-up and routine examination in tracheal collapse dogs.

Frontiers in Veterinary Science | www.frontiersin.org 8 July 2022 |

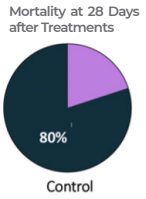
6.
Supplementary effect of EAB-277® in Combination with Prednisolone against Immune-Mediated Hemolytic Anemia in Dogs.

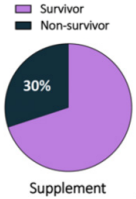
This preliminary project funds veterinary students at Chiang Mai University, Thailand to determine the effects of EAB-277® in combination with Prednisolone against immune-mediated hemolytic anemia in dogs. Ten dogs will be separated into two groups (five dogs in each group).

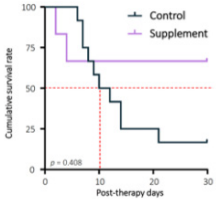
- *The first group of dogs* with immune-mediated hemolytic anemia will be treated with **Prednisolone.**
- *The second group of dogs* with immune-mediated hemolytic anemia will be treated with **EAB-277® as the adjunctive treatment combined with the standard therapy.**

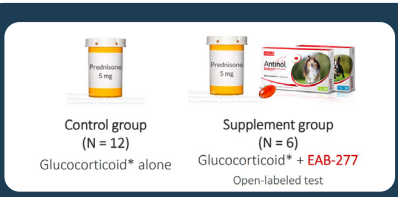
The results are expected to result in the reduction of the Prednisolone dosage in immune-mediated hemolytic anemia cases.

The results demonstrate that The mortality rate of dogs in the control group (80%) was higher than the supplement group (30%) (Figure 1a,b).









Immune-mediated hemolytic anemia (IMHA) is a common autoimmune disorder in dogs with a high fatality rate and it remains a therapeutic challenge.
The marine lipid extract, EAB-277®, is a natural anti-inflammatory nutraceutical product. However, the effects of EAB-277® in IMHA dogs has rarely been investigated.

The objective of this study is to assess the clinical effects of EAB-277® and prednisolone dose-tapering for supplemental therapy in IMHA dogs.

Prednisolone was given to 18 anemic IMHA dogs according to a standard regimen.
Six dogs were supplementally treated with EAB-277® for 28 days and the remaining twelve dogs were a control group of untreated supplementations.

The Kaplan–Meier curve was used to demonstrate the survival time from a certain date to the time of IMHA dog death(Figure 1c).
The results show that the killing ability of IMHA was time-dependent.
In the control group, the survival time was 11 post-therapeutic days and the survival rate markedly declined to 16.7 ± 10.7% at 28-day post-therapeutic observation, whereas the survival rate of dogs in the supplement group was 66.7 ± 19.2% throughout the study period (log-rank test, p = 0.408).

When compared to pre-therapy,
the supplement group's blood profiles improved (p < 0.05). The EAB-277® treated group showed a moderate decrease in the incidence rate (4.20 times) of prednisolone tapering compared to the control group.
The dosage reduction of prednisolone in supplement group was more than that in the control group (p < 0.0001).
Our results suggest that
EAB-277® supplementation may enhance clinical outcomes and lessen prednisolone dose-tapering in canine IMHA therapy.

7.
Tracheal Collapse Study in Small Dogs.

These 40 small dog studies at the Mahidol Research Centre of the Mahidol Veterinary School, Thailand is designed to evaluate the efficacy of EAB-277® (Antinol® Rapid) in reducing inflammation in tracheal collapse cases which is very common in small dog breeds causing the dog to have difficulty in breathing.

At present the common treatments prescribed for canine tracheal collapse are cough depressants, bronchodilators and steroids to control inflammation.

The objective of this study is to prove the anti-inflammatory efficacy of Antinol® Rapid as an adjunctive supplement to the standard treatments in tracheal collapse cases to demonstrate Antinol's superior therapeutic effects, including increased exercise tolerance and less coughing.

Study Design:

There were 40 client owned dogs enrolled over 8 weeks in this study by splited into 2 treatment groups as followed

- Control Group:
Standard treatment + Placebo

- Treatment group:
Standard treatment + EAB-277® supplementing

Results;

The treatment group showed improvement in respiratory effort and appetite compared to the placebo group after received the supplement on day 28 compared to day 14 (P=0.017 and 0.021). Fluoroscopically, comparisons of diameter changing of tracheal height within groups showed a significant improvement in the treatment group at thoracic inlet region (P =0.047) when compared the changing diameter on day 14 to day 0.

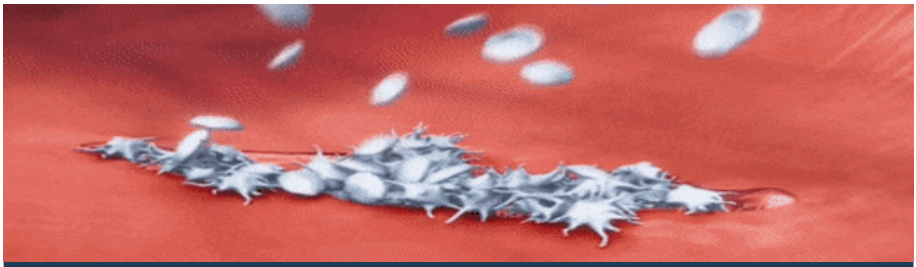
Conclusion and clinical importance;

EAB-277®, the additional supplement for manage tracheal collapse in dogs can improve the quality of life and decrease percent change obtained from fluoroscopy.

Remarks; Unpublished data

8.
Effects of marine based fatty acid compound EAB-277® on coagulopathy in dogs.

This preliminary project funds veterinary students at Kasetsart University, Thailand to investigate **whether long term supplementation of the marine based fatty acid compound EAB-277® affects blood coagulation.** If there is an effect, the study seeks to learn how long the canine patient needs to be withdrawn from the supplementation of EAB-277® prior to a surgical operation to reduce the risk of bleeding during the operation.



This preliminary study is being conducted by veterinary students on **nine dogs with a recommended dose** based on lean body weight and will **continue for three months.**

Blood samples will be collected to record

- The base line of hematology coagulation parameters
- Activated prothrombin time (apTT)
- Prothrombin time (PT)
- Thrombin time (TT)
- Collagen-epinephrine closure time (CEPI-CT)
- Collagen-ADP closure time (CADP-CT)

before prescribing EAB-277® at the outset and one, two and three months after treatment.

If there is no coagulopathy effect shown, all dogs will continue with EAB-277® and will be monitored for the above parameters on a weekly basis.
If coagulopathy is shown, then from that point EAB-277® will be withdrawn and the dogs will be followed on a weekly basis until their coagulation parameters have returned to normal.

Results;

The study demonstrated that **consumption of EAB-277® at 20 mg per kg (4 times of loading dose) continuously for 3 months did not prolong coagulation.** Although some dogs showed the higher collagen-epinephrine closuretime (CEPI-CT) than Human reference range, it can not conclude that EAB-277® prolong coagulation in dogs as there is no report of Canine CEPI-CT morover the delayed coagulation was interpreted based on > 300 sec. However the normal reference range for dogs and cats should be defined by studing in larger samples sizes.

Remarks; Unpublished data

9.
Safety Study of EAB-277® (Antinol® Rapid) in Dogs.

This study at Chulalongkorn University, Thailand was proposed to evaluate the safety of EAB-277® in dogs which is required for veterinary product registration purposes. Initially a total of 40 mature beagles of 8 months in age or older were divided equally into four groups:
(i) placebo, (ii) recommended loading dose of two capsules per day, (iii) administration of six capsules once per day and (iv) administration of twenty capsules once per day

10.
Safety Study of EAB-277® (Antinol® Rapid) in Cats.

This study at Chulalongkorn University, Thailand has been proposed to evaluate the safety of EAB-277® in cats which is required for veterinary product registration purposes. A total of 36 cats of 8 months in age or older were divided equally into four groups: (i) placebo, (ii) recommended dose of 1 capsule per day, (iii) administration of 3 capsules once per day and (iv) administration of 10 capsules once per day.

Results;

Animals used in the current study composed of **twenty healthy mature beagle dogs** (12 female and 8 male), body weight 9.50+0.75 kg and twelve healthy mature domestic cats (8 female and 4 male), body weight 3.25+0.50 kg. All animals had the body condition scores of 2 to 3 (on a 5-point scale) at the beginning of study.
Physical examination of all studied population composing of body temperature (38.4-38.,8oC), capillary refill time (CRT, 1 or 2 second) and fecal score (2.5 to 3.5) (on a 5-point scale) were all normal. No animals had neither constipation nor diarrhea.
Studied dogs and cats maintained their initial body condition without significant weight loss or gain. No abnormalities and illness sign of any system (ocular, nervous, musculoskeletal and integumentary systems) were observed. Blood parasite was not found for both dogs and cats.
Both dogs and cats of all four treatment groups preferred consumption of the PUFAs supplement capsules even the empty ones. No association was detected between the dose treatments and the dependent variables including blood hematology, blood chemistry, blood clotting factors, and PLI values.

Remarks; Unpublished data

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