The mindful leader elevating the veterinary profession through innovation, education, and advocacy of integrative medicine. 
*The Leader, The Voice, The Resource.*

**From The Literature**

10. . . . The Serological Response in Dogs Inoculated with Canine Distemper Virus Vaccine at the Acupuncture Point Governing Vessel-14: A Randomized Controlled Trial
Summary by W. Jean Dodds, DVM

11. . . . Self-amplifying RNA Vaccines for Venezuelan Equine Encephalitis Virus Induce Robust Protective Immunogenicity in Mice
Summary by W. Jean Dodds, DVM

Summary by Carla Salido, DVM

13. . . . Antioxidative Effects of Olive Polyphenols Compared to Vitamin E in Piglets Fed a Diet Rich in N-3 PUFA
Summary by Ann Swartz, DVM

14. . . . Per- and Polyfluoroalkyl Substances in Northern California Cats: Temporal Comparison and a Possible Link to Cat Hyperthyroidism
Higher PBDE Serum Concentrations May Be Associated with Feline Hyperthyroidism in Swedish Cats
Summaries by W. Jean Dodds, DVM
# Table of Contents

## Perspectives

16 . . . Heavy Metals in Vaccines
   W. Jean Dodds, DVM; Kristy Herman, BS, LVT

19 . . . From Mineral Oil and Multiple Sclerosis to Plastics, Nanoparticles, Public, Animal, and Environmental Health
   Michael W. Fox, BVetMed, PhD, DSc

## Case Report

22 . . . Control of Discomfort and Anxiety Using Essential Oils Following Melarsomine Injections in a Dog
   Jared Mitchell, DVM

## Reviews

30 . . . Natural Product Ingestions by Pets
   Tina Wismer, DVM, MS

40 . . . Milk Thistle (*Silybum marianum*): Herbal Organ Support as a Gentle Method for Detoxification
   Kris August, DVM

### Erratum

The Editorial Committee apologizes for the omission of the funding acknowledgement section from the article titled “The Effect of Intramuscular Polysulfated Glycosaminoglycan Injections on Urine Glycosaminoglycan Concentrations in Dogs,” by Dr. MW Wood. The article first appeared in Volume 53, Winter Issue 2018.

### Acknowledgement

We would like to acknowledge the Morris Animal Foundation for their support of this study (D12CA-321).

## also in this issue

6 . . . Editor’s Introduction

8 . . . President’s Letter

43 . . AHVMA Membership Form

45 . . President’s Acceptance Speech

46 . . AHVMA 2019 Conference Highlights

50 . . Call for Nominations

50 . . AHVMF Silent Auction

51 . . Council of Elders Update

52 . . VBMA Eco-Tour

53 . . VBMA Herb Walk Highlights

54 . . Conference Program Committee Update

55 . . AHVMA 2020 Save the Date

56 . . ACVBM Update

57 . . AVH Update

58 . . Standard Abbreviations

60 . . Classifieds

62 . . 2019 Scientific Reports

63 . . AHVMA Conference Sponsors