

# AVSAB

## Newsletter of the American Veterinary Society of Animal Behavior

SEPTEMBER 2001

Lynne Seibert DVM, MS, Editor

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### Newsletter Submissions

The deadline for submissions for the December newsletter is November 19.

### Officers 2000-2002

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## President's Message

Greetings,

Once again, a great meeting. It just keeps getting better and better. The membership is indebted to the committee members and their helpers who made it happen. We are also grateful to the corporate sponsors: **Premier Pet Products** for sponsoring the luncheon and co-sponsoring the Student Award, **Novartis** for providing the booth and pamphlets and co-sponsoring the Student Award, **Pfizer** for sponsoring the wine and cheese poster reception, **Iams** for underwriting the expenses for Dr. Mike Hennessy, a keynote speaker, and the **ASPCA** for sponsoring Dr. Gary Patronek's presentation.

Next year, it's Nashville! In order to get into the Journal of the AVMA pre-convention issue, we have to call for papers much earlier than usual. So, potential presenters—put on your running shoes and get ready. I urge our foreign members to try their best to come to this meeting. It's an opportunity to see part of the USA that most overseas visitors don't get to. Nashville is the center for County Western Music (sorry, Austin City Limits — and, I am smiling as I say that).

Shelbyville, the headquarters for the Tennessee Walking Horse Association, is nearby — as is the production site of a famous local product — Jack Daniels (in a "dry" county — go figure). A few hours away are the Smoky Mountains, part of the Appalachian Range. This area was heavily settled by Scotch-Irish people and the square dances, clogging, folk art, music and many customs are still of the era of the early immigrants — traditions that no longer exist in the homeland. There is also white water rafting and kayaking for those of you who like to ride an avalanche on one ski (well, that's how Ian Dunbar once described kayaking) and lots of bears!

For those of you who have lamented about the expense of attending annual meetings, have you considered staying at Youth Hostels or YMCAs and YWCAs? I've periodically stayed at these facilities in order to attend annual meetings. They're not the Hilton — but they are affordable.

Anyway, thank you everyone — those who put on the show, those who financed it, and those who came.

Sincerely,  
Victoria L Voith

## Call For Nominations of New AVSAB Officers

Nominations are being accepted for new AVSAB Executive Board positions. Newly elected individuals will be inducted at the Annual AVSAB Meeting on July 15, 2002 in Nashville, Tennessee. Please verify that the individual(s) you nominate is/are actually interested in serving on the Executive Board before sending your nominations. Send your nominations to Dr. Horwitz at [DebHdvm@aol.com](mailto:DebHdvm@aol.com). Deadline for nominations is January 1, 2002.

**President-Elect:** 6-year position: 2 years

as president-elect, 2 years as president, and 2 years as immediate past president. Responsible for editing the newsletter.

**Secretary/Treasurer:** 2 year position: keep membership records and manage financial matters.

**Recording Secretary:** 2 year position: record minutes from meetings and executive board listserv discussions.

**Members-at-large** (2 individuals will be selected): 2 year position: various duties assigned.

**REMINDER:** If you have 00-01 after your name we, have enclosed a pink renewal form again. The annual dues were due 8-1-01. Please note you will not receive your December newsletter unless you are current so please remit ASAP. Credit card payments via [www.paypal.com](http://www.paypal.com) are possible this year.

## Avsab Award For Student Excellence In Applied Animal Behavior Research

### Deadline March 1, 2002

Papers should be submitted to Dr. John Ciribassi at 154 North Gary Avenue, Carol Stream, Illinois 60188, 630-653-1000, 630-653-1013 (fax), drjdvms@msn.com The author must be a current veterinary student. Papers must meet the following criteria:

- The paper must be in the format for application to a scientific publication; it must include a cover page, an abstract, materials and methods section, discussion, and references.
- Research must have been completed while in veterinary school.
- The paper should not have been previously published, and not yet received final acceptance for publication in a journal prior to the submission deadline.

Three copies, double-spaced, and DEVOID OF ALL REFERENCES TO LOCATION AND AUTHOR, except for the cover page, should be sent to Dr. John Ciribassi by March 1, 2002.

The recipient must attend and present their paper at the AVSAB paper presentation session held in conjunction with the AVMA annual meeting on July 15, 2002 in Nashville, Tennessee.

The recipient will be awarded \$1500.00 after the presentation of the winning paper at the AVSAB meeting.

An abstract of the winning paper will be provided for the meeting attendees and printed in a subsequent issue of the AVSAB newsletter.

## Call For Papers and Posters

### Deadline For Preliminary Abstracts: December 1, 2001

Anyone interested in presenting a paper or poster at the AVSAB annual meeting is invited to submit a preliminary abstract for consideration. The 2002 meeting of the American Veterinary Society of Animal Behavior will be held on July 15, 2002 in Nashville, Tennessee in conjunction with the annual meeting of the American Veterinary Medical Association. The meeting format will include 20-minute paper presentations, question and answer sessions, lunch, and a poster session.

Send submissions to Dr. Margaret Duxbury, 1299 South Shore Drive, Amery, WI 54001, 715-268-9900, 715-268-2691 (fax), mduxbury1@yahoo.com

Deadline for submission of preliminary abstracts is **December 1, 2001**. Authors will be notified by January 15, 2002. Abstract should be submitted as a Word document via email attachment or hard copy with disk included. Indicate on the abstract whether you are submitting as a paper only, poster only, or either paper or poster. If a paper topic is submitted, indicate whether or not you would be willing to present your topic as a poster if it is not selected as a paper.

Submissions must include:

- Brief request to present a paper or poster
- Title and abstract (one-page maximum, 12 font, 1 inch margins)
- Confirmation that speaker can present material in 20 minutes
- If more time is desired, a request should be submitted

For the abstracts that are selected, a primary author must be able to attend and present the paper or poster at the meeting in Nashville, TN on July 15, 2002. Copies of the abstracts accepted for presentation will be provided to meeting attendees and included in a subsequent AVSAB newsletter.

# Upcoming Behavior Meetings

## National Meetings

### September 10-12, 2001

#### 2<sup>nd</sup> international Working Dog Breeding Conference

The Second International Working Dog Breeding Conference will be held September 10-12, 2001 in San Antonio, Texas. The focus of this meeting is three-fold: basic and applied research pertaining to the selective breeding, whelping, rearing, and assessment of working dogs; management of working dog breeding programs; and issues in veterinary care of working dog broodstock and their progeny. For more information, please contact 2001 IWDBC c/o DoD MWD Veterinary Ser-

vice, 1219 Knight Street, Lackland AFB, TX 78236-5519; FAX 01-210-671-2308, <http://www.iwdba.org>

### September 18 - 23, 2001

**American Association of Zoo Veterinarians, the Association of Reptilian and Amphibian Veterinarians, the American Association of Wildlife and the Nutrition Advisory Group Joint Conference:** Orlando, Florida

Contact [rfwack@ucdavis.edu](mailto:rfwack@ucdavis.edu) or Dr. Ray Wack, Sacramento Zoo, 3930 West Land Park Drive, Sacramento, California 95822-1123; phone 916-264-8808, FAX 916-264-5887

**September 20-23, 2001**

15<sup>th</sup> Annual Meeting of the European Society of Veterinary Neurology, Philadelphia, PA "Inherited Neurologic Disorders" 215-898-3344, 215-898-9937 FAX, [sas@vet.upenn.edu](mailto:sas@vet.upenn.edu), <http://www.vet.upenn.edu/hosted/esvn>

**September 26-30, 2001**

The Association of Pet Dog Trainers 8th Annual Educational Conference and Trade Show  
New York; contact [apdt@details2.com](mailto:apdt@details2.com); phone 916-443-3855

**October 3, 2001****Genetic Counseling, Haverhill, Massachusetts**

Based on Dr. Ackerman's book "The Genetic Connection," published by the American Animal Hospital Association Veterinary Healthcare Consultants, LLC Lowell Ackerman, DVM, Dipl. ACVD, MPA, MBA  
VHC Educational Center Historic Downtown Haverhill; 7:00 pm – 9:00 pm Tuition \$60.00  
For additional information, contact [vhcemail@aol.com](mailto:vhcemail@aol.com) or Thomas Lynch, 200 Merrimack St, Suite 301, Haverhill, Massachusetts 01830, United States; phone 978-372-7600, FAX 978-372-7644

**October 9-11, 2001****Atlantic Coast Veterinary Conference (ACVC)**

Atlantic City, New Jersey. Speakers: Drs. Debra Horwitz and Karen Overall. Contact [d-gdog@mediaone.net](mailto:d-gdog@mediaone.net) or 66 Morris Avenue, Suite 2A, Springfield, New Jersey 07081, United States; phone 973-379-1100, FAX 973-379-6507.

**October 10-14, 2001****Wild West Veterinary Conference: Reno, Nevada**

Contact Sharon Miller 6060 Sunrise Vista Drive, Suite 1110, Citrus Heights, CA 95610, [wildwestvc@aol.com](mailto:wildwestvc@aol.com); phone 877-846-9378, FAX 970-429-0485

**October 10 - 13, 2001****Tufts Animal Expo, Boston, Massachusetts, Hynes Convention Center**

The first veterinary led conference in the world designed to bring together all those who provide for the health and well-being of animals from vets and vet techs to groomers, breeders, trainers, pet sitters, human health professionals and retailers. Contact Ann Wilson, 676 Elm Street, Concord, Massachusetts 01742, phone 978-371-2200, FAX 978-371-2202

Over 600 hours of educational programming including 70 hours of hands on labs in Small and Large Animal Medicine, Technicians Program and Integrative Tracks; 4 days educational program, 3 days trade exhibition. Speakers include Dr. I. Pepperburg, Karen Pryor, Dr. N. Dodman, Dr. H. Power, Dr. R. Hamlin, Steve Lindsay, Dr. G. Ogilvie, Dr. E. Feldman, Dr. J. Hoskins, Dr. S. Cotter, and many more. Sponsors include Hills(R), Bide-A-Wee, SFSPCA, Friskies.

**October 13, 2001****The Pit Bull Dilemma; The Moral, Ethical and Practical Issues Created by Urban America's #1 Shelter Dog; Tufts Animal Expo**

Speakers: Dr. Amy Marder, Dr. Stephen Zawistowski, Dr. Lila Miller, Ms. Jacque Schultz, Mr. Carter Luke, Mr. Alan Borgal, Mr. Scott Giocoppo

**November 17-18, 2001****Psychopharmacology in Animal Behavior Disorders**

15 CE credits

Georgia Center for Continuing Education, University of Georgia Teaching Hospital

For information contact Dr. Bruce Hollett or Sandi Kilgo at 706-542-1451, [skilgo@vet.uga.edu](mailto:skilgo@vet.uga.edu), [www.gactr.uga.edu/conferences/index.html](http://www.gactr.uga.edu/conferences/index.html)

**Speakers:**

Dr. Sharon Crowell-Davis DVM, PhD, Diplomate ACVB, Director UGA Behavior Service  
Dr. Terry Marie Curtis DVM, UGA Behavior Resident  
Dr. Lynne Seibert DVM, MS, UGA Behavior Clinician  
Dr. Chris Kirijan DVM, laboratory animal medicine, Scripps, San Diego, CA  
Dr. Tom Murray PhD, Department Head, UGA Veterinary Physiology and Pharmacology

**Saturday November 17**

8:00-8:15 Introduction to Psychopharmacology  
8:15-10:00 GABA, Glutamate and the Benzodiazepines (Murray and Crowell-Davis)  
10:00-10:15 Break  
10:15-11:45 Serotonin (Murray)  
11:45-12:45 Lunch  
12:45-2:30 SSRI's and Azapirones (Crowell-Davis)  
2:30-2:45 Break  
2:45-4:15 Norepinephrine, Dopamine, Acetylcholine (Murray)  
4:15-4:45 MAOI's (Curtis)  
4:45-5:15 Antipsychotics (Seibert)

**Sunday November 18**

8:00-8:30 Continental Breakfast  
8:30-8:45 CNS Stimulants (Crowell-Davis)  
8:45-10:45 Tricyclic Antidepressants (Seibert)  
10:45-11:00 Break  
11:00-11:45 Peptides and Opiates (Murray and Crowell-Davis)  
11:45-12:30 Hormones (Murray and Crowell-Davis)  
12:30-1:30 Lunch  
1:30-2:15 Assessing behavioral effects of psychoactive medications in the laboratory (Kirijan)  
2:15-4:15 Case Presentations (Curtis and Seibert)

\*\*\* December 1, 2001 \*\*\*

Please note earlier deadline for submissions for AVSAB Paper/Poster presentations in Nashville in 2002 and plan ahead!

January 12 - 16, 2002

North American Veterinary Conference, Orlando, Florida

Contact phone 609-882-5600, FAX 609-882-6357

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### International Meetings

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#### September 13-15, 2001

9<sup>th</sup> International Conference on Human-Animal Interactions "People and Animals, a Global Perspective for the 21<sup>st</sup> Century" Rio de Janeiro, Brazil.

Contact conference secretariat at AFIRAC, 32 rue de Trevis, 75009 Paris, France; email: [rio2001@i-et-e.fr](mailto:rio2001@i-et-e.fr); [www.afirac.org](http://www.afirac.org) or [www.iahaio.org](http://www.iahaio.org); phone +33 1 56 03 12 00, FAX +33 1 56 03 13 60.

75009 Paris, France; email: [rio2001@i-et-e.fr](mailto:rio2001@i-et-e.fr); [www.afirac.org](http://www.afirac.org) or [www.iahaio.org](http://www.iahaio.org); phone +33 1 56 03 12 00, FAX +33 1 56 03 13 60.

#### September 17-21, 2001

International Conference on Canid Biology and Conservation, Wildlife Conservation Research Unit, Oxford University; plenary and poster sessions

Contact: Dr. Claudio Sillero, Wildlife Conservation Research Unit, Zoology Dept, South Parks Road, Oxford OX1 3PS, UK; email: [Claudio.sillero@zoo.ox.ac.uk](mailto:Claudio.sillero@zoo.ox.ac.uk).

#### October 4-7, 2001

British Veterinary Association (BVA) Congress

Guildhall, Winchester; BVA Congress Office, 7 Mansfield St., London W1G9NQ; phone +44-207-636-6541; FAX +44-207-436-2970, email [congress@bva.co.uk](mailto:congress@bva.co.uk).

# AVSAB Committees

Committee chairpersons and the executive board would like to encourage participation in the following committees. The individuals listed below can be contacted for information about joining. Thanks to those individuals who have already volunteered to serve as chairpersons or committee members.

**1. Program Committee:** responsible for selection and organization of paper and poster presentations for annual meeting in conjunction with AVMA meeting. Our thanks go to Dr. Petra Mertens for her dedication in making this year's meeting so educational and enjoyable.

**Chairperson:** Dr. Margaret Duxbury ([mduxbury1@yahoo.com](mailto:mduxbury1@yahoo.com))

**Members:** Drs. Terri Derr, Amy Marder, Karen Overall, Lorna Reichl, Valarie Tynes, and Victoria Voith

**2. Booth Committee:** responsible for arranging for booth space at meetings, scheduling AVSAB members to work at booth, and providing materials for the booth. Our appreciation goes to Dr. Amy Marder for her work with the booth this past year.

**Chairperson:** Dr. Rolan Tripp ([Rolan-Tripp@AnimalBehavior.Net](mailto:Rolan-Tripp@AnimalBehavior.Net))

**Members:** Dr. Lynne Seibert

**3. International Meeting Committee:** Our thanks go to Dr. Karen Overall for coordinating the activities of this committee the past year.

**Chairperson:** Dr. Debra Horwitz ([DebHdvm@aol.com](mailto:DebHdvm@aol.com))

**Current Members:** Drs. Diane Frank, Gary Landsberg, Karen Overall, and Ilana Reisner

**4. Student Award Committee:** responsible for publicizing and selecting the recipient of the AVSAB award for student excellence in behavior research to be awarded at the annual meeting. Our gratitude goes to Dr. Ilana Reisner for her work on this committee over the years.

**Chairperson:** Dr. John Ciribassi ([drjdvm@msn.com](mailto:drjdvm@msn.com))

**Members/Reviewers:** Drs. Melissa Bain, Scott Line, Karen Overall, and Lynne Seibert

**5. Student Chapters Committee:** responsible for providing guidelines for the development of new AVSAB student chapters, assisting current chapters and advisors, and keeping lists of current student members and officers.

**Chairperson:** Dr. Margaret Duxbury ([Mduxbury1@yahoo.com](mailto:Mduxbury1@yahoo.com))

**Members/Chapter Advisors:**

Dr. Julia Brannan - Colorado

Dr. Sharon L. Crowell-Davis - Georgia

Dr. JoAnn Eurell - Illinois

Dr. Donald Draper - Iowa

**6. Registration Committee:** responsible for organizing and assisting with registration for the annual meeting.

**Chairperson:** Dr. Steven Feldman ([avsabe@yahoo.com](mailto:avsabe@yahoo.com))

**Members:** Kathy Meyer, Jennifer Rommel

**7. Public Relations Committee:** (along with the Executive Board) responsible for public representation of our organization and its goals.

**Chairperson:** Dr. Debra Horwitz ([DebHdvm@aol.com](mailto:DebHdvm@aol.com))

**Members:** Dr. Laurie Bergman

# Abstracts 2001



16 JULY 2001 • BOSTON, MASSACHUSETTS

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## **Human Interaction and Diet Affect Neuroendocrine Stress Responses and Behavior of Dogs in a Public Animal Shelter**

Michael B. Hennessy PhD, Department of Psychology, Wright State University, Dayton, OH 45435

Dogs confined in an animal shelter are exposed to various psychological stressors, including novelty, unpredictability, loss of control, and separation from attachment objects. Recent studies in our laboratory have attempted to describe behavioral and endocrine stress responses to the shelter and to explore means to minimize the shelter's impact. In these studies, we have focused on the response of the hypothalamic-pituitary-adrenal (HPA) axis, the body's primary stress-related neuroendocrine system. The HPA system is sensitive to psychogenic stressors, and in humans, abnormal elevations or reductions in HPA hormone levels occur during various forms of psychopathology.

We have found that dogs exhibit circulating levels of the adrenal hormone cortisol during their first three days in the shelter that are significantly higher than those of dogs confined for longer periods, or of companion dogs living in their owners' homes. Other results indicate that when cortisol levels do begin to fall, levels of the pituitary hormone ACTH remain elevated. Thus even the three day elevation of cortisol levels may greatly underestimate the duration of HPA responsiveness at the level of the pituitary. If dogs are exposed to additional stressors (e.g., venipuncture) further HPA activation occurs.

In attempts to moderate HPA responsiveness in the shelter, we have found that a form of soothing petting reduced the immediate HPA response to venipuncture. Moreover, a regular program of human interaction reduced HPA responses to exposure to threatening situations in the shelter at a later time. In addition, dietary factors influenced the rate of HPA adaptation to the shelter itself. The program of human interaction and diet also affected the behavior of shelter dogs, with the maximum benefit appearing to accrue from both human interaction and a diet with enhanced levels of specific nutrients and calories. These results suggest that both human interaction and diet can moderate HPA and behavioral responses, and may help provide a practical means for addressing the well-being of dogs housed in shelters.

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## **Behavior Problems After Adoption**

Dr. Amy Marder, New England Veterinary Behavior Associates, 8a Camellia Place, Lexington, MA, 781-862-5060, armvmd@aol.com

Animals adopted from shelters have the reputation of

having serious behavior problems. As a result, many people avoid shelters when looking for a pet. In an effort to dispel this negative image, 61 consecutive dogs, 4 months and older, adopted from the ASPCA in New York City were followed up through telephone questionnaires. The 60 item questionnaire was administered to owners at 1 week, 1 month, 2 months and 3 months after adoption. Owners were asked questions pertaining to the significance, incidence and severity of aggression, fears, housesoiling, and vocalization. General questions relating to obedience, play and friendliness were also included. The results indicated that housesoiling was the most common problem described by owners, followed by destruction and vocalization. All of these problems declined significantly over time.

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## **Chemical communication and attachment in the goat. Interest of a comparison between mothers with normal or abnormal behaviour.**

Dr. Patrick Pageat, pherosynthese@wanadoo.fr

Evidence of sophisticated pheromones for chemical communication in goats and sheep has been developed by several authors. The published data focuses on the function of adoption pheromones which are available on the skin of newborn baby goats (kids). Our study was interested in the chemical messengers produced by the mother.

The medial surface of the rear limb is very close to the mammary glands and is covered by a wet secretion which appears to be modified during the milking period. Observations show that the kids, like foals, lambs, and calves try to approach this area when they are frightened by a stimulus. This is the area from which samples were taken.

In the area where we work there is a goat breeder who produces goat-cheese. He maintains a population of 120 female goats according to the "bio-product" rules. This group contains mothers that refuse to nurse their babies and well as good nursing mothers. Samples of skin secretions were taken every 12 hours and the social interactions with kids (other than their own) and adults were observed two times a week and their nursing behaviour was also observed.

Secretions of the good-nursing mothers show the same structure as in the other species: oleic+palmitic+linoleic acids and three fatty acids constituting the specific structure. We named these secretions Goat Appeasing Pheromone (G.A.P). In the non-nursing females (that attack the kids when they try to initiate contact) two of the major components appear to be missing or secreted at a lower level. This abnormal secretion does not stabilize the heat rate when the kid is exposed to a stressful situation.

Another part of the study looked at production of the pheromone's secretion when the mother was separated from her baby.

Because this was a milking herd, the milk production was maintained after separation from the kids. The secretion of the pheromone in 15 good nursing mothers was compared before and after separation and evaluated for a relationship between milk-production and pheromone production. Skin secretions were obtained every 12 hours. In all 15 goats, production of oleic and linoleic acid decreased quickly after the separation. Two days later, using GC/MS methods, it was impossible to detect any secretions of these acids. Between 2.5 and 3 days after the separation, the complete G.A.P. secretion had disappeared.

This study did not show any relationship between secretion of G.A.P. and milk production. The relationship between the mother and kid appears to be the main stimulus able to enhance the production of the pheromone.

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#### **Treatment of storm phobia with a combination of clomipramine, alprazolam, and behavior modification: a prospective open trial.**

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Crowell-Davis, SL, Seibert, L, Sung, W, Curtis, T, and Parthasarathy, V., Dept. of Anatomy and Radiology, College of Veterinary Medicine, University of Georgia, Athens, GA 30602

Many sections of the southeastern United States are excellent locations to study stormphobia because of the prevalence of storms. In north Georgia and surrounding areas, thunderstorms occur throughout the year, and are common during a spring storm season which extends from March through June. Tornadoes are also regular occurrences in north Georgia during this season, while hurricanes present in the coastal areas during late summer and early fall. The response of thirty healthy, adult dogs with storm phobia to a treatment combination of clomipramine (2mg/kg b.i.d.), alprazolam (0.02mg/kg prn, up to four times a day), and behavior modification is being assessed in an open clinical trial. Dogs are scheduled for an initial visit if they are between 10 and 100 pounds, healthy, and have exhibited fear responses to at least three recent weather events. At an initial visit, the dog receives a complete physical exam, urinalysis, CBC, and blood chemistry panel. A complete behavioral history is taken and the dog's specific responses to storm-related stimuli are identified. In addition, the dog is videotaped (1) with no supplemental noises after it has habituated to the exam room (2) during six minutes of play of various storm sounds and (3) subsequent to cessation of the storm sounds.

The owners then keep a daily diary of weather and the dog's behavior for two weeks. Upon return for a second visit, the owner is instructed in desensitization and counter-conditioning using CD's of rain and storms. Dogs that exhibit fear responses to the sound of rain begin desensitization with these sounds and proceed to thunder sounds later. Dogs which only exhibit fears to thunder sounds and do not exhibit fear to rain sounds begin with those sounds. Owners are also instructed to not "comfort" the dogs during storms. Treatment with alprazolam and clomipramine for 90 days is

initiated at this time. At 90 days, a four week "weaning off" period is initiated, consisting of two weeks at 1mg/kg clomipramine b.i.d., followed by two weeks at 0.5mg/kg clomipramine. Alprazolam is continued as needed. The dogs' general and specific response to treatment is evaluated by owner interview at 30, 60, 90 and 120 days. At 120 days, the dogs are again videotaped, physically examined, and evaluated via behavioral history, urinalysis, CBC, and blood chemistry. The response of twenty of the dogs to the CD's is also videotaped at 60 days. After exiting from the treatment protocol of the study at 120 days, dogs are taken off treatment unless the owners wish to continue some phase of the treatment. Some dogs continue on alprazolam as needed. The pre and post-treatment videotapes of the dogs' behaviors in the exam room (e.g. trembling, panting, pacing) before, during and after the playing of storm noises will be measured using the Observer Video Analysis System® by a researcher who is naïve as to whether the tape being studied is pre or post-treatment.

Data that will be presented include:

- (1) The specific storm-related stimuli that the dogs respond to with fear upon entry into the study.
- (2) The owner's global assessment of the dogs' response to treatment.
- (3) Changes over time (if any) in the dogs' response to specific storms as recorded in the owners' diaries.
- (4) Changes in behavioral response during videotaping while a storm CD is being played.
- (5) Side-effects

Six additional cases that had separation anxiety in conjunction with storm phobia will also be discussed.

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#### **Effectiveness and comparison of both a citronella and scentless spray bark collar for the control of barking in a veterinary hospital setting**

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Kelly Moffat DVM, 2744 N. Sea Pines, Mesa, AZ 85215, Gary Landsberg DVM, DACVB

Barking of dogs within a veterinary facility or animal shelter can be disruptive and stressful to the staff, clients and other hospitalized patients or kennel animals. This study was devised to evaluate the efficacy of a citronella bark collar and a new, scentless spray bark collar in a veterinary hospital/kennel environment.

The subjects for the study included healthy dogs greater than 6 kg that were presented to 2 different veterinary facilities for either a routine neuter procedure or boarding. The dogs were included in the study if they subjectively barked intense enough that they interfered with the staff or instigated barking within the kennel. The dogs were familiarized with the kennel for at least 30 minutes before being considered for inclusion. For each case, the patient was rated both subjectively (the attitude and anxiety exhibited by the dog) and objectively (number of barks per minute).

As a control, each dog had a dummy collar placed first, and was evaluated for 5 minutes prior to either the scentless or citronella collar being placed. The dog was removed if the control collar led to a reduction in barking. A crossover study was then performed, with one half of the dogs having the

citronella collar placed first, or one half having the scentless collars placed first. The collars were left on for 5 minutes and each dog was assessed subjectively and objectively as described above. The collars were removed and if the barking resumed, then the opposite collar was placed and the dog re-evaluated.

The dogs were grouped according to response to the collars. These categories include:

- 1) completely ceased barking with collar on
- 2) ceased barking but occasional reoccurrence that was controlled by collar
- 3) improved (% improved was recorded as either a) 11-49% b) 50-75% and c) 76-99%
- 4) no change (within 10% of baseline)
- 5) worse (intensity/volume, frequency)

The dogs were also evaluated objectively and subjectively once the collars were removed at the conclusion of the study.

#### Results:

36 dogs have been evaluated at time of publication. 3 dogs were removed after the control collar inhibited further barking. 27 dogs were evaluated with the citronella collar. Of these, 16 or 59% were controlled (defined as only an occasional bark inhibited by the collar) while wearing the collar and 4 (19%) were improved by greater than 50% in their frequency of barking. 4 (15%) dogs had no change and 2 (7%) dogs were worse.

By comparison, 26 dogs were evaluated with the scentless collar, 11 (42%) dogs were controlled by wearing the collar, 4 (15%) were improved, 9 (15%) had no change and one (4%) dog was worse.

In total, 78% of the citronella collar dogs were controlled or improved while wearing the collar whereas 57% were controlled or improved while wearing the scentless collar.

In 19 cases, both collars were used in the crossover design. In comparison, the citronella was effective in 4 cases where the scentless was not, and 2 cases were improved over the use of the scentless. In 2 cases the scentless collar was more effective than the citronella.

Both the citronella and scentless bark collar has shown to be beneficial in a hospital kennel situation for control or improvement in barking of boarding patients. Since the occasional dog can become more anxious after the collar is applied, the dogs should be watched closely immediately after they are placed so they may be removed if necessary.

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### Effect of Diet on the Hunting Performance of English Pointers

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A two-year study was conducted in collaboration with Pineland Plantation of Newton, Georgia to evaluate the influence of diet on hunting performance of English Pointers during the quail-hunting season in southwest Georgia. During year 1, Eukanuba® Premium Performance Formula and Diamond® Premium Adult Dog Food were evaluated using 23 adult dogs from the hunting kennel. In year two, 22 dogs were used to evaluate Eukanuba® Premium Performance

Formula and Purina Pro Plan® Chicken & Rice Dog Performance Formula. The protein and fat content of each diet, determined by laboratory analysis, were 31.2% and 21.4%; 26.1% and 17.2%; and 31.9% and 21.3% for Eukanuba, Diamond and Pro Plan, respectively. These diets were fed exclusively during each 15-week hunting season and for a 2-month training and conditioning period that preceded the start of the hunting season. Two professional handlers, blinded to the dietary treatments, recorded the date and total time hunted for each dog, and the number of finds during each hunting session. Overall hunting performance was calculated for each dog by determining the total number of finds per hunting session and total hours hunted. Licensed veterinarians, who were also blinded to the dietary treatments, collected blood samples and conducted physical examinations at the initiation and termination of the hunting season to assess the health status of each dog.

The results of year 1 showed that all dogs remained healthy and consumed typical amounts of food throughout the hunting season. Dogs fed Eukanuba maintained or gained weight and body condition during the season while dogs fed Diamond lost weight and condition ( $P < .05$ ). Dogs fed Eukanuba demonstrated superior hunting performance ( $P < .05$ ) based on total finds per hunt and the number of birds located per hour of hunting. For the season, dogs fed Eukanuba had 55% more finds, which was equivalent to one more find per hour of hunting compared with those fed Diamond. This improvement in hunting performance was not due to increased hunting frequency or longer hunting duration, as they were similar for both groups during the season. The superior hunting performance of dogs fed Eukanuba was also maintained during periods of mild to severe heat stress.

During year 2, dogs fed Pro Plan required 11% more food than dogs fed Eukanuba to maintain body weight and condition over the season. Although dogs on both diets had an equal opportunity to hunt, the performance results showed that dogs fed Eukanuba had 33% more finds during the season than dogs fed Pro Plan. Over the entire hunting season, the dogs fed Eukanuba averaged 3.0 finds per hunt compared with 2.2 finds per hunt for dogs fed Pro Plan. All dogs remained healthy throughout the season based on physical examinations, chemical profile and CBC results.

The results of this study imply that the food selected for dogs trained for endurance events, such as quail hunting, can have a direct impact on their overall performance and working ability.

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### Feline Onychectomy – Assessing claims of short and long term complications

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**ABSTRACT:** Data from a variety of sources are very consistent, indicating that approximately 25% of owned cats in the US are declawed. A plethora of potential short and long term complications have been attributed to this surgery. The most common early post-operative complications are pain and hemorrhage. Later complications that have been noted, at least historically, include claw regrowth, chronic draining

tracts, radial nerve paralysis secondary to tourniquet use, infection, wound dehiscence or incomplete healing, protrusion and/or loss of the second phalanx, tissue necrosis from improper bandage placement, development of palmigrade stance, persistent lameness, and even cystitis, asthma, and skin disorders. It is frequently maintained that declawed cats are more likely to develop behavioral problems such as increased aggression, biting and house soiling.

Despite the length of the list of complications attributed to onychectomy, the frequency that these adverse outcomes occur is not well documented, and much appears to be perpetuated anecdotally. Onychectomy is an emotional issue. Some believe onychectomy is inhumane because of the associated pain and post-operative discomfort, and condemn it on ethical grounds as a needless mutilation performed strictly for the convenience of owners. Others see it as a potentially life-saving procedure that allows many cats to successfully co-exist with their human caretakers. These conflicting opinions and emotional and polarized claims can leave practitioners in a quandary when counseling clients or making decisions about whether to offer onychectomy as an elective surgery. Therefore, a review of the existing literature was performed to determine the extent to which beliefs about adverse or positive outcomes were supported by data. A total of 19 papers that provided data on some aspect of medical complications or behavioral problem associated with feline onychectomy were identified.

Using the combined data, persistent lameness was noted in 5/682 (0.73%) cats for which data were reported. The underlying pathology to explain persistent or intermittent lameness was not investigated further, sometimes due to client refusal. Given the great variability in surgical techniques in these studies, and that at least three of these five surgeries in which lameness was documented were performed by veterinary students, it is not appropriate to extrapolate this data to estimate the frequency of lameness in onychectomies performed in private practice settings.

The evidence for behavioral sequelae is somewhat more provocative, albeit equally inconclusive. In the retrospective studies, biting and housesoiling frequencies following onychectomy varied tremendously, from 17% to less than 1%. The study with the highest frequency of reported behavior problems post surgery (33%) did not report sufficient data to determine the complication rate for onychectomy alone vs. tendonectomy, so it is possible that this proportion is somewhat inflated. Although the small sample size and the fact that surgeries were performed by DVM students limits generalizing from this study, even with some bias, a frequency of 33% is still worrisome and begs further examination. A common maxim in interpreting the clinical literature is that "absence of evidence is not evidence of absence". Thus, adverse behavioral sequelae to onychectomy remain as hard to dismiss as they are to quantify.

Studies to evaluate long-term behavioral outcomes in a population of client-owned animals declawed by experienced surgeons using the best surgical and analgesic protocols are desperately needed. Standardized medical and behavioral evaluations, consistent definitions, repeatable and meaningful quantitative measures for a wide variety of clinically relevant outcomes, exam-based in addition to owner-

reported evaluations, and complete follow-up of cases are needed to overcome the limitations of existing data. When behavioral problems in individual cats are alleged to have developed following onychectomy, a complete workup should be performed to identify any physical explanations for discomfort such as osteoarthritis, bony degenerative changes, or neuroma. To date, there are no reports of such findings in the literature. It seems unthinkable that an elective surgery performed on a quarter of owned cats could lack definitive evaluation, but that appears to be the case. At present, there is precious little to guide us. Until more definitive data are available, practitioners will have no choice but to continue dodging opposing claims and balancing potential harms and benefits, using their own ethic and clinical impressions as the yardstick.

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### Effect of owner compliance on the treatment of dominance-related aggression in dogs

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**Objective** — To determine the effect of self-reported owner compliance with two aspects of a behavioral modification plan on successful reduction in aggression levels in the treatment of dominance-related aggression in dogs, and the effect owner attachment may have on outcome success and compliance.

**Design** — Retrospective study.

**Animals** — 41 dogs from a referral veterinary behavior clinic.

**Procedure** — Owners whose dogs had been diagnosed with dominance-related aggression were interviewed by phone and questioned as to their compliance with avoiding triggering their dogs aggression in specific situations and with performing an affection control plan, as well as their level of attachment to their dog. Thirty-three of the responses could be analyzed for this study.

**Results** — There was no significant difference found between compliers and non-compliers in the number of dogs that had a >50% decrease in their aggression levels for either avoidance or affection control ( $p>0.1$ ). Additionally neither a correlation between owner attachment and compliance nor owner attachment and a reduction in aggression were found ( $p>0.1$ ).

**Conclusions and Clinical Implications** — Although this retrospective study provides an important first step in elucidating the importance of owner compliance on behavioral modifications plans, prospective studies are needed to accurately gauge owner compliance and its effect on successful treatment of dominance-related aggression in dogs.

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### Fluoxetine Hydrochloride For Urine Marking In Cats: A Double-blind, Placebo-controlled Clinical Trial

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The purpose of this study was to examine the efficacy of fluoxetine in reducing indoor urine marking. Cats were recruited through newspaper advertisement and letters to veterinarians. Enrolled cats completed 2 weeks of baseline observation with daily recording of all vertical marks. Cats who continued to mark 3 or more times per week in the 2 weeks of baseline were eligible for the drug treatment phase, receiving either placebo or fluoxetine for 8 weeks. Twenty cats (10 in each group) were assigned to receive either drug or placebo. One cat from the drug group and 2 from the placebo group were excluded leaving data from 17 cats to be analyzed. The difference in marking rate between the drug and placebo group was significant from weeks 2-8. For the drug group, there was a mean ( $\pm$  SE) of 8.6 ( $\pm$  2.0) marks per week during baseline that declined to 1.4 ( $\pm$  0.4). Marking rates for the placebo group reduced slightly, then returned to the baseline rate. Urine marks were recorded for 4 weeks after discontinuing the drug or placebo administration. This study, as the only double-blind, placebo-controlled study for the treatment of urine marking, showed a higher percentage of response than open-labeled studies on diazepam and buspirone which may reflect effectiveness of the drug.

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### **Pearl vs. Clumping: Litter preference in a population of shelter cats**

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Dr. Jacqui Neilson, Animal Behavior Clinic, 809 SE Powell Blvd., Portland, OR 97202. 503-236-7833 (phone) 503-252-6481 (fax)

**Abstract:** Elimination disorders are the most common feline behavioral problem. The elimination problem can have a very negative impact on the human-animal bond. Often inappropriate elimination results in banishment of the cat from the house, abandonment, euthanasia or relinquishment to a shelter. There are several different motivations for inappropriate elimination, one of them being a substrate aversion. Recently, a new litter substrate became available on the market. It consists of small absorbent beads, similar in appearance to pearls, thus called "pearl litter". In an attempt to identify general feline acceptability of this new litter substrate, a prospective study was conducted to compare the preference of clumping-type litter versus pearl-type litter in a population of shelter cats. Fifty-four shelter cats were given the two litter options, clumping litter and pearl litter, for a 12-hour overnight period. Use of each type of litter for defecation and urination was recorded at the end of the 12-hour period. A total of 74 uses were recorded, 58 (36 urination/22 defecation) of those were in the clumping litter, 13 (11 urination/2 defecation) were in the pearl litter and 3 (1 urination/2 defecation) of those were out of the litterboxes. Variables such as age, sex, hair-length and declaw status were evaluated in relation to litter preference.

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### **An Investigation of the Incidence of Clinical Signs of Cognitive Dysfunction Syndrome (CDS) in Cats**

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Cognitive dysfunction has been proposed to exist in the cat population, though no studies to date have been concluded. This particular study was designed to identify the

prevalence of clinical signs associated with cognitive dysfunction in a feline population presented to a private veterinary hospital. Because other medical conditions can contribute to behavioral signs in a geriatric individual, results from an owner-answered questionnaire, physical exam and blood work were examined and evaluated concurrently. CT scans and CSF taps were offered to those cases that had behavioral signs that could not be attributed to changes discovered in the exam or blood work.

Cats eleven years of age and older that were presented for routine care to a private veterinary hospital were asked to complete a questionnaire on the medical and behavioral signs of their cats, including the duration of the problem. The behavioral questions were extrapolated from both human and canine studies, as well as preliminary research into feline cognitive dysfunction. The questions targeted changes in spatial and social relationships, recognition and activity, sleep/wake cycle, memory and learning and anxiety/irritability. Cats exhibiting one or more behavioral signs in one of these categories had complete blood work including a CBC, chemistry panel, urinalysis, FELV/FIV and T4 performed. A physical and neurological exam were also performed and evaluated with the owner history and lab findings.

Long term data on all cats will include 12 month follow-up on questionnaires and where allowed by owners, brain histopathology upon death of that animal. At the time of publication, 152 cats had been evaluated. 66 (43%) of the cats 11 years and older demonstrated signs consistent with cognitive dysfunction. Eliminating those cats with compounding medical conditions left 45 or 30% of cats eleven years or older demonstrating signs.

When the population was narrowed to compare cats 11-14 years to those 15 years and older, a greater proportion of the older cats (38%) versus 28% of the younger cats demonstrated a potential diagnosis of cognitive dysfunction. Cats in the older population also demonstrated more signs (2.4 signs) of cognitive dysfunction per cat than those 11-14 years (1.8 signs/cat).

The study seems to indicate that cognitive dysfunction appears to have a similar prevalence of that in dogs but that the age of onset is older possibly reflecting the longer life span of the feline population.

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### **Demographic Differences In Owner-directed Fear and Dominance Aggression In Pet Dogs**

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Aggression of dogs towards their owners is the most common type of canine aggression seen in behavior practices. Most studies on canine aggression report dominance-related aggression to be the most prevalent type of owner-directed aggression. This study reports descriptive statistics on the types of canine aggression in general, and owner-directed aggression specifically, seen at the University of Georgia Animal Behavior Service, College of Veterinary Medicine. In addition, this study examined the relationships among type

of aggression, gender of the dog, gender of the owner(s) aggressed against, and incidence and severity of the aggression. Finally, this study compared the proportion of dominance-related and fear-related aggression cases seen over the past 3 years to cases seen 10 years ago. Results and implications of those results to diagnosing and treating canine behavior problems will be discussed.

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### **The Use of Novel Stimuli as an Indicator of Aggression in Dogs**

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When a patient is presented for a behavior consultation, prognosis and treatment are often partially based on potential risk factors within the household as well as diagnosis and past and present known history. In some cases, the history is either incomplete or unknown. The question to be answered was is there was a way to predict future problems or potential problems within the confines of an examination room during a behavior consultation, or even earlier, in a shelter situation before the dog is placed up for adoption.

Two novel stimuli were used to test 100 dogs presenting for a variety of complaints to the Animal Behavior Clinic at Cornell University. During their behavior consultations, all of the dogs were tested with a life sized toddler doll, and a life like rubber hand. The doll was walked in front of them, attempted to pet them on top of the head, ran away from them, and was jostled and dropped in front of them. The hand was used to attempt to pet them on top of the head, on their abdomens, and on their hindquarters. The dogs were assessed for reaction to each stimuli and ranked into one of four categories: 1) normal reaction - non aggressive, 2) fearful, 3) fearfully aggressive, or 4) aggressive. Each of these categories was defined by objective criteria such as ear, mouth, and tail position, body posturing, attempt to flee or lunge at stimuli, auditory responses such as barking, growling, or snarling, and attempt to bite the stimuli. The dogs were videotaped, and then reviewed using the defined criteria for each category. The video was watched separately by myself and four others that were not present at the consultations to help insure that there was no investigator's bias, as I knew the cases, and their histories, and did not want that to influence ranking the dogs. Four out of five reviewers had to agree on the category to rank the dog. If this criteria was not met, then each investigator was asked to explain their reason for the category assigned to the dog. There were only six dogs that this happened in, and in all cases, something was missed that changed the category to which the dog was placed. In this way, all 100 dogs were able to be ranked with at least four investigators in agreement. After the dogs were ranked, their clinical diagnosis, and their history with children were noted.

Using chi square analysis, we looked to see if there were significant correlations between a clinical diagnosis of dominance aggression or fear aggression with the reactions to the hand and doll. We also looked for a correlation between the reaction to the doll and the history of the dogs with children. The hypothesis was that if there was a positive correlation,

then there would be prognostic value in testing dogs before there was a history with children or a known diagnosis of fear or dominance aggression. This would be one step in helping shelters determine the suitability of a given dog to a certain household environment.

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### **Predicting dominance aggression. Is it possible and are there benefits?**

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A proportion of homing attempts of dogs from animal welfare centres fail and many are returned, re-homed or euthanised. These events are obviously distressing for both the dog and owner. It may be possible to prevent this outcome if behaviour problems could be identified prior to homing and if problems in a potential new home could be predicted. Aggressive behaviour is particularly unacceptable in pet dogs. A previously validated temperament test was performed on 201 dogs at Scottish Society for the Prevention of Cruelty to Animal centres. Data from this test was manipulated to calculate a 'Potential for Dominance' (PD) score for each dog in attempt to predict future 'dominance' aggression. Those dogs with high PD scores (n=51) were included in the study group; half were controls, receiving only the usual verbal advice on leaving the centre and the remaining dogs were homed with advice leaflets dealing with dominance. Dogs not considered 'potentially dominant', were included to allow comparisons with the study group. 150 questionnaires were posted out one month after homing and 66% were completed and returned. PD scores correlated with mean questionnaire aggression (Spearman Rank Correlation  $P < 0.001$ ), although most aggression was inter-dog. High PD scores were gained by mostly male dogs (Mann-Whitney (W),  $P = 0.0001$ ), those that were sexually intact, (W,  $P = 0.036$ ) and by those that 'mounted' (i.e. showed sexual behaviour) in the home environment (W,  $P = 0.02$ ). No effect of providing leaflets was observed although sample size was very small. 72% of owners indicated a desire for more information to be provided at the time of homing. Overall, the temperament test had potential for predicting only general aggression within the home environment. Limitations such as this should be acknowledged but benefits of these types of temperament tests have yet to be fully explored.

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### **Normal grooming behavior in captive African grey parrots (*Psittacus erithacus*)**

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Authors: Bao CL, Seibert LM, Crowell-Davis SL, Dept. of Anatomy and Radiology, College of Veterinary Medicine, University of Georgia, Athens, GA 30602

Abstract: The purposes of grooming behavior in birds include preening feathers and feather maintenance. In many captive birds, this preening may become exaggerated and lead to feather picking and chewing. This study investigated normal preening patterns in captive companion African grey parrots to determine the amount of time per day spent preening, as well as the number, composition, and duration of grooming bouts. Results can be used as a baseline for as-

sessing preening behavior in self-mutilating parrots.

Six individually-housed African grey parrots (three males and three females) were videotaped on time-lapse recorders for twelve-hour intervals. Birds were recruited from private owners. The physiological and behavioral health of each bird was confirmed using detailed behavioral histories and medical records. Data analysis was performed using SPSS statistical software. A total of 72 hours of videotape were analyzed per bird. Recorded behaviors included: enlargement of plumage (PG), rubbing of beak on substrate (RB), scratching head with claw (SH), and preening of breast (BR), leg and claw (LF), back (BA), inner wing (IW), outer wing (OW), and dorsal base of tail (BT). Preening codes were used to qualify large body regions in order to achieve consistent data despite occasional unclear video quality and awkward viewing angles.

Within a 12-hour period, the subjects engaged in some form of preening behavior an average of 395.2 times, with a low of 149.0 and a high of 960. All nine preening patterns were seen consistently in each of the 6 subjects. The average duration of a preening behavior was 9.7 seconds, with a low of 5.7 seconds and a high of 15.6 seconds. Overall, the subjects spent an average of 70.7 minutes preening during a 12-hour period. Data collected on non-feather picking subjects can be used as an initial standard to assess whether an avian patient presented for excessive preening is within normal limits.

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### Acute Reactions in Cats: Discussion of Three Cases

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Fatjó, J; Ruiz-de-la-Torre, JL; Manteca, X, Departament de Biologia Cel.lular, de Fisiologia i d'Immunologia, Unitat de Fisiologia Animal, Facultat de Veterinària, Universitat Autònoma de Barcelona, Edifici V, Campus de la UAB. 08193 Bellaterra (SPAIN), Jaume.Fatjo@uab.es

Fear and anxiety are responsible for a great percentage of behavior problems in cats. Symptoms of fear and anxiety in cats are diverse and include decreased activity, anorexia, aggressive behavior, and altered grooming patterns. Intense fear reactions can appear in a very acute manner and as a result of a single exposure to the aversive stimulus.

This poster describes three cases of extreme and acute fear responses. Physical examination and laboratory tests were unremarkable. Extensive behavioral evaluations identified eliciting stimuli for the fear responses in two of the cats. Phobic responses in cats can appear suddenly and sometimes the eliciting stimuli can be very difficult to identify. The treatment of the cats included behavior and environmental modification and the use of anti-anxiety medication.

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### Epidemiology of Small Animal Behavior Problems in Spain

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Most studies about the prevalence of behavior problems are based on data from veterinary behaviorists. Also the epidemiology of behavior problems could be influenced by lo-

cal environmental variables, like breed distribution, proportion of pets neutered and their owners' attitudes. To our knowledge no studies about the prevalence of small animal behavior problems have been conducted in Spain. A study was design to estimate different aspects of canine and feline behavior problems in Spain from the general practice veterinarian perspective.

A questionnaire was sent by mail to the 3000 small animal veterinary clinics listed in Spain. As a result 433 questionnaires were obtained during a 6 months period. Questions ranged from those that test veterinarian's attitude when facing a behavior problem to those that estimate the most frequent behavior problems seen by spanish veterinarians and the general ways they use to treat them.

The vast majority of veterinarians referred behavior cases; 45.3% did to a veterinary behaviorist and 12% to a dog trainer. A significant 34.5% of the inquired vets never referred behavior cases.

The 92% of veterinarians thought that no more than 2 of every 10 canine and feline euthanasias were done because of a behavior problem.

Destructiveness was the most frequent complain about dog behavior, followed closely by aggression and housesoiling. Housesoiling was clearly considered the main behavior complain in cats, followed by furniture scratching and excessive vocalization. Veterinarians considered behavior modification as the most valuable treatment option in dog cases, followed by drugs and castration. In feline behavior the most useful treatment was castration, and drug therapy and behavior modification were ranked in the second and the third position.

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### Development of a fear eliciting test for horses

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pherosynthese@wanadoo.fr

Horses are used in various contexts: sports, leisure activities, and as companions. In those situations there are many contacts between humans and horses. The control of the fearfulness of the horse is very important to explore because behavioural fear responses are dangerous for both humans and horses themselves. Such control will improve both human-animal relationships and welfare of horses. However, the development of a fear eliciting test is a preliminary condition. The aim of this study is to elaborate such a test and to define a standardized situation. This test must be simple, sensitive, specific, reliable, and take into account behavioral and biological data.

The fear eliciting situation consists of an obstacle (a cover) the horse must go through to return to its penmates.

The design of the test defines six sections:

1. Cardiac frequency will be quantified by the use of a heart rate monitor (Polar Horse Trainer Advanced™) placed on the horse by a halter. This equipment is prepared when the horse is in his box.
2. Then, the horse is led to a neutral point <<A>> of the stable for two minutes.
3. The horse is then led outside, to a place <<B>> located nearly 20 meters from the obstacle.
4. The horse stays at <<B>> for two minutes.

5. The horse is led through the obstacle by the owner. After 150 unsuccessful seconds, a helper intervenes with a long whip. If more needed, the cover is folded away. After 240 seconds, time limit is reached, and the test is called off.
6. The horse stays quiet for another two minutes.

Sections from 2 to 6 are video-taped.

The first parameter is the time needed to go through the cover. A fear score can be assessed by scoring the time needed to enter, taking into account the need to help the horse and the exceeding time-limit. This fear score can afterwards be correlated with cardiac data and behavioural reactions of fear.

This study takes place in three sites in France. 38, 14 and 15 horses enter the test.

Each time, results are quite the same (reliability) and show good dispersion (normal distribution) of the data (sensitivity) and each behavioural reaction can easily be interpreted in term of fear (specificity).

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### **Attachment Behaviors in Dogs With and Without Separation Anxiety: The Continuing Saga**

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Attachment behaviors allow individuals to maintain physical closeness to other important individuals (attachment figures). At last year's meeting, we presented preliminary data on attachment behavior differences in dogs with and without separation anxiety that participated in a standardized attachment test. The test took place in a novel room, and consisted of periods of time when either the dogs' owners or a stranger were present or absent from the room.

No difference was found between groups in the time dogs spent near their owners or near the door when the owner was absent. However, there was a positive correlation between the dogs' separation anxiety scale score and the amount of time spent whining and/or howling while the owner was absent.

This poster provides updated information from the study, with an emphasis on different diagnostic criteria that may be used to determine the degree of separation anxiety in pet dogs.

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### **Ethogram of post-anesthetic recovery behaviors in healthy horses: comparison of pre- and post-anesthetic behaviors**

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Authors: Seibert LM, Parthasarathy V, Crowell-Davis SL, Trim CM, Dept. of Anatomy and Radiology, College of Veterinary Medicine, University of Georgia, Athens, GA 30602

Abstract: Reliable post-operative assessment of comfort is an important concern for veterinarians. Historically, the measurement of pain in animal patients has been problematic, making it difficult to assess the efficacy of analgesic protocols. Human pain scales used in animals rely on the observer's subjective assessment of the level of discomfort and do not typically correlate with physiological measures of pain.

In the current pilot study, specific post-operative behav-

ioral responses were measured in normal horses that were maintained with inhalant anesthesia for 2 hours, but did not undergo any surgical procedures. Subjects used were donated horses with no orthopedic defects. Prior to anesthesia, focal sampling was done on all horses to establish baseline physiological parameters and behavior frequencies. Behavioral measures included head turns, tail swishes, ear position, angle of neck, weight shifts, and ambulation.

Physiological measures included heart rate, respiratory rate, and temperature. In the recovery stall, data were collected continuously from the time of extubation to standing. Focal sampling was repeated post-operatively after the horses were removed from the recovery stall and returned to their own stalls.

Video data were analyzed using the Noldus Observer® Video Analysis System. Results from these subjects can serve as a normal control when assessing the post-operative behaviors of equine patients undergoing potentially painful surgical procedures.

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### **Olfactory enrichment of captive tigers (*Pantera tigris*) and lions (*Pantera leo*), using a synthetic analogue of feline facial pheromone**

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Few environmental enrichment studies have involved the use of communicative odiferous substances. This study applies synthetic analogue of the domestic feline facial pheromone (Feliway, Cevavet, France) to enclosures of captive tigers and lions, in order to increase natural positive behaviours, decrease abnormal behaviours and determine a possible social function of the substance by comparing differential responses between tigers and lions.

Eighteen subjects were observed for three periods: pre-treatment, treatment and post-treatment, with each period lasting 2 days. One ml of Feliway was sprayed at 10 pre-selected locations per enclosure each day of the treatment period. The frequency of 26 behaviours, 3 types of activity and subjects' location were recorded.

Non-parametric statistics were used as analysis found that the data was not normally distributed. In tigers, a significant decrease in spray-marking (Friedman:  $S=8.0$ ;  $N=9$ ;  $P<0.02$ ) and head rubbing (Friedman:  $S=6.0$ ;  $N=9$ ;  $P<0.05$ ) was observed in both the treatment and post-treatment compared to pre-treatment periods. In lions, a significant increase in pacing was observed in the post compared to treatment period (Friedman:  $S=6.9$ ;  $N=9$ ;  $P<0.03$ ), although this change in behaviour was apparently correlated with the weather (Correlation:  $r=-0.468$ ;  $N=9$ ;  $P<0.0001$ ). Lions and tigers differed significantly in head rubbing response (Mann-Whitney:  $U=63.0$ ;  $N1=9$ ;  $N2=9$ ;  $P<0.02$ ).

It was concluded that although results did not reflect a classic enrichment response, modification of scent-related behaviours upon treatment suggests that Feliway may have communicative properties in even large cat species, although lion and tiger pheromones may not be analogous with those of the domestic cat.

# Minutes Of The AVSAB General Membership Meeting

July 16, 2001 Westin Copley Place, Boston, Massachusetts

The meeting was called to order at approximately 12:00 PM by Dr. Victoria Voith. A motion was made by Dr. Rolan Tripp to approve last year's minutes as submitted. **Passed.**

The Treasurer's report was read by Dr. Steve Feldman. Total revenues: \$44,538.17. Total expenses: \$12,355.17. Net Income: \$32,183.00. There was a motion to approve the treasurer's report by John Ciribassi. **Passed.**

## Announcements

Dr. Karen Overall will be affiliated with the University of Illinois, Dr. Ilana Reisner with the University of Pennsylvania, and Dr. Diane Frank with the University of Montreal. Dr. Walter Burghardt announced the upcoming working dog conference in Texas.

## Old Business

American College of Veterinary Behaviorists Report: Dr. Bonnie Beaver said three new diplomates joined the College, Drs. Burghardt, Melese, and Virga. Five individuals have qualified to take the boards this October. After eight years, the College has gained full recognition from the AVMA Board of Veterinary Specialties. Dr. Beaver offered free ACVB application packets at the meeting to AVSAB members.

## Committee Reports

**Program committee:** Dr. Petra Mertens said there were 26 papers submitted this year. They were reviewed by Dr. Mertens, Dr. Terri Derr, Dr. Amy Marder, and Dr. Victoria Voith. Eleven papers were accepted, and one was withdrawn after acceptance. Twelve posters were accepted, three were withdrawn after acceptance, and an additional three did not appear at the meeting—*at a high cost to us*. Drs. Mertens and Voith expressed concern about preventing these withdrawals for future meetings. This year's meeting included two invited speakers: Drs. Hennessy and Patronek.

**Booth committee:** Amy Marder thanked Novartis for transporting the booth. Dr. Marder found it difficult to recruit members to work at the booth. The AVMA

meeting is the only meeting where the booth was set-up this year.

**Student Chapter committee:** Dr. Margaret Duxbury reported that there are currently four student chapters: University of Georgia, University of Illinois, Iowa State University, and Colorado State University. The letter of intent was combined with the main application to eliminate a step in the application process. The dues deadline was changed to December 1.

**Student Award committee:** Dr. Ilana Reisner said that there were five applicants this year, and that Dr. Karen Sueda, the winner, would be presenting today.

**Registration committee:** Steve Feldman thanked the Executive Board and Dr. Kathy Meyer for helping with registration this year.

**Listserve/Egroup committee:** Steve Feldman reported the features of the YahooGroup that are available on the [www.yahogroups.com](http://www.yahogroups.com) website in addition to the email messages that members receive. There are now 295 members, twice that of the former Listerv. Dr. Feldman thanked Dr. Ione Smith for helping to transition to the new venue.

**International meeting committee:** Dr. Karen Overall reported that there are about 190 people signed up for the meeting in Vancouver and about 30 openings remaining. She thanked Eli Lilly, Novartis, and Hills for their sponsorship. She also thanked AVSAB for the \$1000 donation and for agreeing to buy 50 copies of the proceedings that will be offered for resale.

## Newsletter Report

Dr. Lynne Seibert thanked members for sending in submissions by the deadlines that are published in every issue and on the YahooGroup. She invited comments, both good and bad. She also mentioned that the newsletter was increasing in size.

A Liability insurance policy obtained by Dr. Feldman is now in force.

Dr. Voith announced we are still working on re-incorporation in Illinois, but first we want to finish completing changes to the constitution and Bylaws.

## Membership Dues

There was a motion (Debra Horwitz) that foreign members who download their newsletter via website pay the same membership dues as North American members. Seconded, Passed, unanimous. There was a motion (Debra Horwitz, seconded by Valarie Tynes) that reduced membership dues, one-half that of regular membership for new (first year after graduation) veterinary graduates be extended through the year 2004. Passed, unanimous. There was a motion (Margaret Duxbury, seconded by Rolan Tripp) that annual membership dues be payable by January 1 of each year beginning with January 2003. There was discussion about possible loss of revenue the first year. Passed.

There was a motion (Bonnie Beaver, seconded by Barbara Simpson) to allow the Executive Board to decide the manner in which dues are figured for the transition period of the new due date for membership. Passed, unanimous.

## New Business

### New Committee Appointments

**Program committee:** Margaret Duxbury, Chair. Volunteers will be Terri Derr, Lorna Reichl, Amy Marder, Karen Overall, and Valarie Tynes.

**Booth committee:** Lynne Seibert, Chair  
**Student Chapter committee:** Margaret Duxbury, Chair

**Student Award committee:** John Ciribassi, Chair. The liaison to the Executive Board will be Lynne Seibert.

**Listserve/Egroup committee:** Steve Feldman, Chair

**Registration committee:** Steve Feldman, Chair

**International meeting committee:** (2 year appointment) Debra Horwitz, Chair

**Public Relations committee:** Debra Horwitz, Chair. The committee may respond to public inquiries on issues after consulting with the Executive Board, but more importantly the committee will publicize AVSAB to increase membership. Dr. Feldman asked Dr. Beaver how ACVB responds to public issues. She re-

sponds personally or with no comment if AVMA published policy statements are available for a given issue.

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## Historian Position

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Dr. Voith announced formation of a position for an individual who can keep records (meeting information, photos, etc.) for a period of 10 years in a central location.

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## Financial Matters

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There was a motion (Ilana Reisner, seconded by L. Taliaferro) that the executive board members' dues be waived while they are in service. **Passed**, unanimous.

There was a motion (Gary Landsberg, seconded by Debra Horwitz) that AVSAB continue to donate \$1000.00 to the International Congress on Veterinary Behavioral Medicine in the years that it is held as long as we are financially able to do this. **Passed**, unanimous.

Dr. Voith asked for a motion that the Executive Board be authorized to spend up to 20% of the treasury on unbudgeted items without membership approval. Dr. Beaver recommended that a budget report be issued first and then the Executive Board make specific recommendations to the membership. **The motion was tabled.**

Dr. Voith asked for a motion that the following be incorporated in the Constitution: The Executive Board shall propose an annual operating budget covering all activities of the corporation, which shall be subject to the approval of the active members at the annual meeting preceding the beginning of the fiscal year. The budget shall provide the financial direction for the organization except that upon a shortfall in income, the expenditures shall be appropriately reduced so as to avoid any year-end negative balance. There was a discussion as to how "appropriate" was defined, and the motion was tabled pending rewording. A straw vote indicated that the membership was in favor of such an amendment.

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## LISTSERV

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The Executive Board recommended against storing individual's handouts, publications, etc. in the Files section and against links to personal or commercial web sites. Dr. Voith explained that it would be difficult to manage

these member submissions.

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## Annual Meeting

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The Executive Board recommended keeping the poster session on the same day as the scientific meeting and hold it between 4:00 – 6:00 PM allow members to attend AVMA family night.

The Executive Board recommended an amendment to the constitution that would allow the organization the flexibility to periodically hold the annual business and scientific meeting at times other than in conjunction with the annual AVMA meeting, with the provision that we would hold the meeting in conjunction with the AVMA at least every other year. John Ciribassi amended this motion to state that at least 2/3 of the members at the annual meeting must be in favor of holding the AVSAB meeting separate from the AVMA meeting for a given year. **Passed.**

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## Amendments

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The following proposed amendments to the Constitution of the American Veterinary Society of Animal Behavior that appeared in the June 2001 newsletter were approved:

Article V- Officers (motion by Bonnie Beaver).

Section 1- Number

There shall be seven officers: the immediate past-president, president, president-elect, secretary-treasurer, recording secretary, and two members-at-large. These seven officers shall constitute the Executive Board. Officers shall be elected prior to the annual meeting of the Society.

Section 4 - Other Officers Election and Term

The terms of the secretary-treasurer, recording secretary, and members-at-large, and any such other officers as the Bylaws may specify, shall commence following the completion of the presentation of old business and shall terminate at the annual meeting two years following.

Proposed Amendments to the American Veterinary Society Of Animal Behavior Bylaws Article IV- (motion by Bonnie Beaver, seconded by Debra Horwitz, **Passed**).

1. Change first sentence to read: The officers of the corporation (Executive Board) shall be the president, president-elect, secretary-treasurer, recording sec-

retary, two members-at-large, immediate past-president, and any other officers that may be elected in accordance with the provisions of this article.

7. Delete the phrase "keep the minutes of the meetings" as part of the secretary-treasurer's duties.

8. Change number of this section to 9.

9. Add a new number 8 that describes the recording secretary's duties. The recording secretary shall keep the minutes of the meetings and record executive board decisions made between the annual meetings. The president may, from time to time, assign other duties to the recording secretary.

**The following proposed amendments to the ByLaws of the American Veterinary Society of Animal Behavior that appeared in the June 2001 newsletter were approved:**

Article III- (Motion by Bonnie Beaver, seconded by Debra Horwitz, passed).

Section 1. The phrase "prior to the business meeting" be deleted pertaining to when the scientific papers are presented at the annual meeting. The phrase "the subject of" be deleted as superfluous so that the last sentence reads "Scientific papers related to Veterinary Ethology and Behavioral Medicine will be presented at the meeting."

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## Nominations

A call for nominations for the next Executive Board was made by Dr. Voith. Contact anyone on the current executive board regarding nominations.

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## Legal Counsel

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John Thomas, Esq. was introduced to the group.

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## Membership Categories

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Dr. Voith reported that AVSAB was adhering to the Constitution and Bylaws regarding requirements for membership. Persons renewing or applying for affiliate status are being asked to submit current Curriculum Vitae. Regular members are being asked to provide the name of the veterinary school from which they graduated and the year of graduation.

There was discussion about whether we might get academy status eventually with the AVMA.

Dr. Voith led a discussion regarding the

release of names and contact information of members to the public seeking help with behavior cases. There is no assumption of liability by the Association for giving out member information, if there is no suggestion or implication of an endorsement of the individual's skills as an expert on animal behavior. With the exception of holding office, affiliates have the same rights as veterinary members including the option of having their names and contact information released to the inquiring public. AVSAB is not in violation of any practice acts by providing such information to the public. Some members questioned whether we were morally and ethically responsible for providing the public with names of individuals. A suggestion was made that we state that some of these individuals on the list that is provided are not veterinarians.

## Affiliate Memberships

There was a discussion that qualifications for affiliate status be that of a Ph.D., and that current affiliate members with Master's degrees only be allowed to retain affiliate membership until the year 2005 unless a Ph.D. degree is obtained.

Dr. Overall motioned to table the meeting at 1:30PM and resume before the poster session.

## Resumption of Meeting:

Dr. Voith explained the wide variance of educational backgrounds of applicants with Master's degrees and other aspects of affiliate membership. There was a question as to how many people were involved as affiliates, and Dr. Horwitz said there were about 15 affiliate members. She suggested that the new standards should not be applied to present affiliates. Dr. Overall thought we could improve definitions of requirements and raise the standards for affiliate membership. Dr. Voith predicted that there would be an increase in the number of individuals with a wide variety and quality of Master's degrees applying for membership. Dr. Crowell-Davis stated that AVSAB relying on ABS certification of an individual would not necessarily be a reliable standard. Dr. Ciribassi discussed the possibility of eliminating all non-DVM's from AVSAB. Drs. Simpson, Line, and Flannigan all said Ph.D.'s have much to offer. Dr. Virga asked if nonmembers could present papers at our meeting and was told that they could. Dr. Horwitz suggested we collect more data on the number of new

affiliate applicants and the qualifications they have.

A straw vote called by Dr. Voith revealed that a majority of members present desired to **retain Master's degreed affiliates that are already members and require new ones to have PhD degrees.**

Dr. Voith called for a vote concerning AVSAB providing the service of releasing names of members to the public who ask for information regarding members who see behavior cases. **The majority of members favored retaining this service.**

The Veterinary Technician Animal Behavior Society has requested help and support achieving academy status through the North American Veterinary Technician Association. The Executive Board believes **this is outside the scope of AVSAB's resources and mission** and referred the matter to the American College of Veterinary Behaviorists.

At 5:37PM a motion to adjourn was made by Dr. Kroll, and seconded, **Passed.**

Respectfully submitted,  
Steven Feldman, DVM  
Secretary-Treasurer

# Welcome New Members!

## Regular Members

Dr. Tracy Carreiro  
New Bedford, MA

Dr. Fon Chang  
Davis, CA

Dr. Duncan Davidson  
Mitcham Surrey U.K.

Dr. Jean DeLong  
Indianapolis, IN

Dr. Pamela Hand  
Vadnais Heights, MN

Dr. Karin Hinkle  
San Antonio, TX

Dr. Scott Huggins  
Matthews, NC

Dr. John Hurley  
Natick, MA

Dr. Takefumi Kikusui  
Medford, MA

Dr. Martha Lindsay  
Lexington, MA

Dr. Jennifer Link  
Frisco, TX

Dr. Andrea Morden  
Moore Champaign, IL

Dr. Ulrike Reinisch  
Davis, CA

Dr. Carol Robertson-Ploch  
Greenfield, IN

Dr. Jennifer Rommel  
Stevensville, MD

Dr. Tiffany Rule  
Buzzards Bay, MA

Dr. Corinne Thomas  
Horsham, PA

## Student Members

Ms. Lori Freije  
Manhattan, KS

Ms. Andrea Lee  
Ithaca, NY

Ms. Michelle Lee  
North Grafton, MA

Ms. Caroline Melloy  
Gainesville, FL

Ms. Diane Ott  
Columbus, OH

Mr. Adam Parker  
Grafton, MA

Ms. Stephanie Pierce  
Columbia, MO

Ms. Lisa Scroggs  
Athens, GA

## Subscribers

Ms. Claire Arrowsmith  
Thurso Caithness  
Scotland

Mr. Rob Aukerman  
Indianapolis, IN

Ms. Roseann Baars  
Tinton Falls, NJ

Ms. Camille Belpedio  
Lyons, CO

Dr. Gary Davenport  
Lewisburg, OH

Ms. Susan DeBoer  
Groton, CT

Ms. Melissa Dottle  
Carbondale, PA

Ms. Donna Dyer  
Richmond, VA

Mr. Jim Mansfield  
Gaithersburg, MD

Ms. Pam Mercer  
Bethesda, MD

Ms. Ginny Price  
St.Petersburg, FL

Ms. Sharon Sheffield  
Gainesville, FL

Ms. Jeran Staudt  
Temple, TX

Mr. James Stephens  
Amarillo, TX

Dr. Steven Feldman  
9414 Brandywine Rd.  
Clinton, MD 20735

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