

# AVSAB

## Newsletter of the American Veterinary Society of Animal Behavior

SEPTEMBER 2000

Victoria Voith, DVM, DACVB, Editor

VOLUME 22, NO. 3

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## President's Message

Greetings,

As you may have heard, THE YEAR 2000 AVSAB Meeting was great. The accolades are still coming in. The quality of the presentations and posters, both content and format, were the best yet. And of course, the chance to mingle and informally exchange ideas is often the most fruitful outcome of attending a meeting. For many, but particularly clinicians practicing behavior in relative intellectual isolation, such a meeting is like a blood transfusion.

Putting on this event required a lot of work, particularly by Drs. Horwitz, Martin, Duxbury, and Reisner. The membership is indeed indebted to them.

A meeting of this quality also required financing. I know the membership and other attendees are sincerely grateful to the corporate sponsors who made it possible. Novartis provided, stored, and shipped the exhibit booth and financed the development and printing of the new brochures. Novartis and Premiere Pet Products sponsored the student award. Premiere Pet Products and Animal Behavior Systems paid for the lunches — provided you signed up in advance. Pfizer Animal Health hosted the wine and cheese poster session. We couldn't have had such a nice meeting without them. I hope they know how much we all appreciate their support. We thank you, corporate sponsors — as does the field of veterinary animal behavior as well as the owners and pets who will benefit from this meeting.

There was a great deal of discussion on the List-Serve (another benefit of AVSAB membership) concerning taping the presentations for distribution. The consensus of the executive board and mem-

bership attending the meeting was that because these presentations are often preliminary results of ongoing research and are usually accompanied by visual aids, that distribution of the presentations could be misleading. There was also a concern that mass distribution might be considered a form of publication that would prevent the presenters from publishing their material in a formal journal. Each speaker was asked if s/he would permit taping by members in the audience for those members' own use. Most speakers granted permission.

JAVMA has published guidelines (JAVMA Vol. 213, No 8, p.1091-2, 1999) re what constitutes a previously published paper that would disqualify it from publication in JAVMA. Essentially, printed abstracts of no more than 250 words that condense what has been presented at a scientific meeting should pose no problem. Concerned presenters are encouraged to contact the JAVMA editor, Janis Audin, if they have any questions.

SO, THE GOOD NEWS IS that next year, the abstracts of the meeting should contain real meat.. er.. nutrients. Yup, real nutrients. Facts. Results. This should help alleviate the depression of those who miss the annual meeting.

Don't have a heart attack, but we are thinking of moving the List-Serve to an egroup. We will be able to keep a directory on line, possibly have a chat-room, as well as talk by email. Don't call us. We'll let you know if, when, and how this will happen. Remember, only currently paid-up Active (veterinarians), Affiliate, and Veterinary Student AVSAB members are eligible for the List-Serve. And remember, the List-Serve is an exchange of ideas, opinions, and clinical impres-

sions. It is not peer reviewed for accuracy, reliability, or validity - academic or otherwise. Readers must exercise judgment and evaluate what they read. That said, I find it interesting (I'm a lurker.) and have picked up a few tidbits and much food for thought. I now have electronic folders for "cat deterrents", "disarming dogs", and "philosophy". Very Interesting.

Thank you, Dr. Laurie Martin. The contributions Laurie made over an unprecedented four years as Secretary-Treasurer and assistant editor of the newsletter are incalculable. Her "job-description" however filled 5 typed pages - single spaced. In addition to minutes, correspondence, membership data, dues, book-keeping, proofing and generating material for the newsletter, she put together the material for the annual meeting and made those cute name tags. She not only did all these things, but she did them WELL! For FOUR

years. And with a SMILE. She performed the equivalent of an executive director's job — without pay. I hope the membership knows how indebted we are to her. It's hard to pay someone back for such service - well we could, but we don't - perhaps as individual members when we see Laurie we could take an ex-secretary to lunch.

I hope the new Secretary-Treasurer, Steve Feldman, holds up as well. Good Luck Steve - and STAY HEALTHY.

On a final note, the membership should be aware of what an excellent job Dr. Debra Horwitz did as our president. She ramrodded the development of the new brochures, ushered in the poster sessions at the AVSAB meetings (I can still see her juggling Debra Horwitz-dwarfing-size posters through the hotel lobby in 1999), organized two excellent annual meetings, rose above and beyond the call of duty by putting together two ad-

ditional newsletter issues when the president-elect did not meet the challenge, jumped in with sane comments on the List-Serve, and represented us most articulately and professionally at meetings here and abroad. She's a hard act to follow. Especially since I know she could successfully moon-light as a stand-up comic. Thank you, Debby.

As you may have gleaned, AVSAB is getting bigger and better. With sufficient membership, we will qualify for a seat in the House of Delegates. Wouldn't that be something. A voice for behavior. Don't forget to renew your membership, take advantage of your benefits, and please consider volunteering for a "job" in the organization - committees and/or executive board. Four or five people can no longer do it all.

Sincerely,

Victoria Lea Voith

## **British Small Animal Veterinary Association Annual Congress April 5th-8th 2001, International Convention Centre Birmingham, England**

Dear Colleague,

As organizer of the Clinical Research Abstracts for the 2001 BSAVA Congress to be held in the International Convention Centre, Birmingham, England, I invite members of your Association to present a short, 15 minute paper(s) concerning their recent or current clinical research activities. The advanced programme for the main scientific sessions is now complete and research abstracts, a valued and integral part of the Congress, will run concurrently with the main programme on the 5th, 6th and 7th April 2001.

I enclose copies of the abstract forms. Abstracts must be sent to Miss H. A. Roberts, Congress Administrator at Woodrow House, no later than the 1st November 2000. I would be grateful if you could distribute these to your members who may be interested in presenting their clinical research. I should point out that the author presenting the paper will be entitled to free registration for the entire congress.

Please note that the instructions and abstract forms have been amended this year. Please follow the instructions carefully.

Please do not hesitate to contact me if you require further information concerning the submission of abstracts.

Yours sincerely,

Ed Hall MA VetMB PhD DECVIM-CA MRCVS  
Organizer of the Clinical Research Abstracts Congress  
2001

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# Call For Papers

## 3<sup>rd</sup> International Congress on Veterinary Behavioral Medicine

Vancouver, BC, Canada, 7-8 August 2001 – associated with WSAVA

The 3<sup>rd</sup> International Congress on Veterinary Behavioral Medicine will convene during the 2 days prior to the WSAVA to be held in **August 2001 in beautiful Vancouver, British Columbia**. We hope for a success that equals that of the first congresses in Birmingham England (1997) and Lyon France (1999).

Slots are available over the 2 day meeting for up to 16 spoken presentations and up to 25 posters. Presented talks will be 20 minutes each in length, and will be grouped in triads by general topic to allow for questions after each session. Posters are restricted to the standard poster size and will have a formal viewing at the end of the first day at a formal poster session where presenters will be expected to be available to answer questions.

In addition, the afternoon of the second day will be devoted to an international presentation and discussion on controversies, risk assessment, and laws / policies regarding aggressive / dangerous dogs and breed restrictions. Individuals wishing to present their countries policies and data in this special session should contact the conference organizers, Drs. Frank and Overall, and make their interest known. This session will be organized separately from those involving presented papers and posters. It's intent is to develop a consensus policy statement.

If you wish to submit an abstract for consideration for a paper or post please do so according to the following instructions:

- All abstracts **must** be in English.
- All abstracts must be **no longer** than 1 standard manuscript page (A-4 or 8.5 x 11 inches).
- All abstracts must use font **no smaller** than 12 point.
- All abstracts **MUST** include the following information on a **separate cover page** for the abstract:
  - All author's names
  - Full addresses of all authors
  - Full telephone #s of all authors
  - Full fax #s of all authors
  - Full e-mail addresses of all authors
  - Title presentation
  - Source of funding, if any, for study

- Information on preferred format
- Presented paper, only
- Poster, only
- Either
- All abstracts **MUST** include the following information on participating membership organization
  - AVSAB
  - ACVB
  - CABSTG
  - ESCVE
  - None
  - Other (specify) \_\_\_\_\_
- 3 hard copies must be faxed, mailed, or sent as an e-mail attached document no later than 1 December.
- No abstracts in other formats will be accepted.
- No anonymous abstracts will be accepted.
- Participants will be notified by 1 January 2001 of the selections.
- Short manuscripts will then be due no later than 15 March 2001. Details will be included with notification.

Applicants whose abstracts are selected for talks or posters will receive complimentary registration to the 3<sup>rd</sup> International Congress on Veterinary Behavioral Medicine. Other registrants will be able to attend this 2 day meeting for a fee that covers the cost of notes, attendance, coffee and tea breaks, lunch, and libations and food at the poster session. Fees are not yet determined.

Send abstracts to:

Karen L. Overall, MA, VMD, PhD, DACVB  
Or  
Diane Frank, DVM, DACVB  
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# MINUTES OF THE AVSAB GENERAL MEMBERSHIP MEETING

## SALT LAKE CITY, 7-24-00

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### OPENING REMARKS:

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The meeting was called to order at 12:30 PM. Dr. Horwitz expressed appreciation to Novartis for providing the AVSAB booth and new brochures, to Novartis and Premier Pet Products for sponsoring this year's Student Award, to Animal Behavior Systems and Premier Pet Products for sponsorship the luncheon, and to Pfizer for hosting the poster session. The Friskies/AAHA Award for Behavior Excellence this year went to Dr. Gary Landsberg. A plaque was presented to Dr. Martin for four years as Secretary-treasurer.

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### OLD BUSINESS:

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Dr. Martin read last year's minutes and the motion to approve was **passed**. The Treasurer's report summary given by Dr. Martin stated that the Total Disbursements were \$16,817.76; the Total Income was \$22,915.39; and the Net Change In Cash At End of Year was \$6,097.63. The Cash At End of Year, which balances, is \$26,354.27. Dr. Horwitz made the motion to approve; it was seconded by Dr. C. Schaffer; and **passed**. Dr. Beaver reported that the AVMA Executive Board Task Force on Dog Bites issued a report detailing a model program for the prevention of dog bites that will be in JAVMA and other journals.

### DR. BEAVER'S COLLEGE REPORT:

There are three new ACVB Diplomates: Drs. Frank, Seksel, & Schwartz. Six people will sit for the fall boards. Dr. Beaver said there was much interest in applications for conforming and non-conforming programs and she offered packets at the meeting that were free for AVSAB members. The deadline to apply for the board exam is now Feb. 1, but programs must be approved first.

### DR. TYNES' REPORT ON THE BOOTH:

The AVSAB booth was exhibited at The AVMA & The North American Veterinary Conference both last year & this. Dr. Tynes thanked Novartis for the brochures and for storing & transporting the booth. She said we appear to get ten to twenty new members after a conference because of the booth. Dr. Horwitz asked for a volunteer to coordinate the

booth as Dr. Tynes was stepping down.

### THE AVSAB BROCHURES:

Dr. Horwitz thanked Dr. Ciribassi for all his work producing the brochure. He said twenty thousand were printed and encouraged members to distribute them.

### DISCUSSION OF THE LISTSERVE:

Dr. Horwitz said there were presently one hundred and six members on the listserv and members were observing proper etiquette. Dr. Anderson thanked Dr. Horwitz for her direction on the listserv.

### PROGRAM COMMITTEE REPORT:

Dr. Duxbury said there were thirty submissions for papers this year with great quality of papers & posters. She said we need three volunteers to take over this committee for the coming year and Drs. Merten, Marder, Derr, and Mr. Wolfe volunteered.

### STUDENT PAPERS:

Dr. Reisner thanked the nine students that submitted papers this year and the three reviewers that helped her. The deadline was extended because the papers were slow to come in and she encouraged earlier submission. Dr. Reisner would be glad to chair again next year but called for reviewers to help her. Drs. Line, Overall, Luescher, & Duxbury volunteered to help her. Dr. Reisner had Ms. Stephanie Shanahan, the winner of the student paper this year, stand up and be recognized. Dr. Horwitz remarked that all papers and posters were chosen in a blinded manner.

### CONSTITUTION AND BY-LAWS:

Dr. Bonnie Beaver recommended that AVSAB be incorporated in Illinois and to consult with the AVMA on how to do this. As long as Dr. Beaver is a Texas resident, AVSAB can remain incorporated in Texas. Dr. Voith said she would contact the AVMA and find out how to incorporate AVSAB in Illinois. Redundant wording and typographical errors in the constitution as printed in the AVSAB Newsletter Vol. 21, No. 5, 2000 were corrected. A discussion ensued re what constituted a majority of votes. It was clarified that when a vote

was taken, all members present who are eligible to vote constitute the voting body. Abstentions are also votes. Therefore, all matters voted on require assessing votes for, votes against, and abstentions.

**The following changes to the Constitution and By-Laws that was printed in the AVSAB newsletter, Vol 21 No 5, 2000 were made:**

All references to the state of Illinois will be changed to the state of Texas.

### **RE THE CONSTITUTION:**

Article I, Sect. 2: There was a motion by Dr. Reisner and seconded by Dr. Horwitz that if AVSAB ever dissolves, all monies go to the American College of Veterinary Behaviorists instead of the ACVB. **Passed.**

Article VI: Dr. Horwitz moved to delete the words “student or” and leave sentences to read “student organization”. This was seconded by Dr. C. Schaffer. **Passed.**

### **RE THE BY-LAWS:**

#### **Article III-2:**

There was a motion by Dr. Horwitz to add “Should a meeting be called, the officers of AVSAB are required to attend the meeting and minutes documenting the meeting shall be taken by the Secretary-Treasurer.”. The motion by Dr. Horwitz was seconded by Dr. Line. **Passed.**

#### **Article III-5:**

It was moved and seconded to change the wording to: “Any action to be taken at a meeting of the members shall require a majority of the total numbers of eligible members present. For such purposes ballots received from active voting members shall be considered and included in the numbers of members present.” **Passed.**

#### **Article X-1:**

Moved by Dr. Horwitz and seconded by Dr. Duxbury to read: “Annual dues of members shall be determined at the annual meeting. Any action taken shall require a 2/3 majority of the number of members present who are eligible to vote. For such purposes, ballots received from eligible voting members shall be considered and included in the number of members present.”. **Passed.**

It was moved by Dr. Horwitz and seconded by Dr. Duxbury to accept the Constitution and By-Laws as printed in the AVSAB Newsletter, Vol. 21, No 5, 2000 and as amended here today. **Passed.**

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## **NEW BUSINESS:**

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### **KUDOS:**

Dr. Horwitz thanked Dr. Reisner for all her service to AVSAB as immediate past president and for her efforts with paper presentation sessions. Thanks were given to Dr. Martin for her service as Secretary-Treasurer. Thanks were given to Dr. Schaffer for service as member-at-large. Dr. Voith was installed as the as new President; Dr. Lynne Seibert as the new President-Elect; Sr. Steve Feldman as the new Secretary-treasurer; and Dr. Margaret Duxbury as the new Member-At-Large. Dr. Voith commended Dr. Horwitz for her service.

### **AVSAB 2001 MEETING:**

Dr. Horwitz proposed to change the format for *next year only* to have a smaller number of papers at the AVSAB meeting in Boston and have a CE speaker for two hours because the Vancouver meeting is the following month. Drs. Landsberg & Beaver suggested we keep the paper presentations as a prominent feature of our meeting next year. The consensus was that we keep our usual format for the AVSAB meeting in Boston and possibly give longer duration to papers if few are submitted. If members want to submit papers to both meetings, Boston and Vancouver, they may.

### **AAHA MEETING:**

Dr. Horwitz said AAHA wants to know whether we will hold the AVSAB meeting in conjunction with their meeting Dr. Horwitz said that we will not consider AAHA next year since we are keeping our AVMA meeting as usual.

### **EXECUTIVE SECRETARY ISSUE:**

Dr. Voith stated that the Executive Board decided not to hire an executive secretary at this time but agreed to give more money to the Secretary-Treasurer to hire clerical help if needed.

### **FULL PROCEEDINGS FOR AVSAB PRESENTATIONS ISSUES:**

Dr. Voith reported that the AVMA editor said as long as we keep our published abstracts under 250 words there should be no problem in the JAVMA publishing full length manuscripts by the presenters. Therefore in the future the abstracts in our September newsletter may have data in them, unlike the preliminary abstracts that are submitted to AVSAB for consideration before the annual meeting.

### **AUDIO TAPING OF AVSAB PAPER PRESENTATION FOR REDISTRIBUTION:**

There was no discussion of this topic when announced although there had been an extensive listserv discussion.

### REDUCED DUES FOR NEW GRADUATES:

There was a motion by Dr. Horwitz to offer a one-time \$20 membership to new veterinary school graduates. This was seconded by Dr. Martin. **Passed.** Dr. Horwitz stated that we lose about one hundred members each year and gain about the same so we need to encourage new graduates to join.

### THE AVSAB BOOTH:

Since we may be charged by the AVMA for booth space next year. Dr. Beaver moved to let the Executive Board decide whether to allocate funds for this purpose: seconded by Dr. Andersen. **Passed.**

### THE WEBSITE:

Dr. Ciribassi asked for comments on the website. Dr. Martin thought there were a significant number of inquiries originating from the website. A members-only section would involve more costs since an administrator would need to grant password access and we would require a new hosting company according to Dr. Ciribassi. The consensus was to keep the website on the AVMA server for now. Dr. Beaver said the ACVB College has no website.

### THE BOOTH:

Dr. Tynes called for volunteers to take over the booth but nobody came forth at the meeting.

### LIABILITY INSURANCE:

Dr. Feldman explained the need for liability insurance as an organization as well as the need for a Director's & Officer's Liability policy and a publications-related liability policy. Dr.

Landsberg motioned for the Executive Board to spend up to \$2000/year for a policy; seconded by Dr. Horwitz. **Passed.**

### PUPPY BOOKLET:

Dr. Andersen said if people want copies of the Puppy Class booklet they are at the Premier booth or anyone can buy them from Premier later.

### THE THIRD INTERNATIONAL CONGRESS ON VETERINARY BEHAVIORAL MEDICINE—IN VANCOUVER 8-7-01 to 8-8-01 PRECEDING THE WSAVA:

Dr. Overall distributed the first call for papers, along with the proposed speaking guidelines and budget. Plans were for fifteen paper presentations and up to forty poster presentations. They may have a roundtable discussion concerning the dog breeds that are at risk of being banned in Europe. AVSAB can have a position paper on this subject. Dr. Horwitz said AVSAB was not financially supporting this meeting right now but we are encouraging participation.

### EMAIL ADDRESS:

Dr. Feldman explained that the new AVSAB business email address is [avsabe@yahoo.com](mailto:avsabe@yahoo.com). At approximately 2:00 PM a motion to adjourn was made and seconded. **Passed.**

Respectfully submitted,

Steven Feldman, DVM  
Secretary-Treasurer

## Advertising AVSAB Membership: Bylaw Regulations

It has come to the attention of the executive board that reference to membership in AVSAB has been used in ways that are inconsistent with our bylaws. Most likely this is due to the unfamiliarity with the bylaws which govern our organization. With the establishment of the college, it becomes even more critical that the guidelines established at the formation of this society be strictly followed. This is because confusion exists, even among veterinarians, as to what being a member of AVSAB means. Advertising that you are a member of AVSAB can be misinterpreted to suggest that you are a board

certified behavior specialist. Lay people and even colleagues may easily make this mistake.

It was brought up in discussion that the general membership is probably unaware that the AVSAB name **MAY NOT** be used in any advertising copy. To make sure that all members are informed, the pertinent section of the bylaws follows:

Article 11, Section 4 of the bylaws states:

“The Board of Directors, by majority vote, may suspend or expel any member who uses the corporation in ad-

vertising. Included would be the use of the corporation name on letterheads, business forms, business cards and advertising copy.”

A separate but related issue is that some subscribers have advertised that they are *members* of AVSAB. Subscribers and members are distinctly separate categories. It is a misrepresentation for a subscriber to say that they are a member and a violation of the bylaws to advertise such fact.

We hope that this will clarify any misunderstanding as to AVSAB policy.

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# AVSAB 2000 ANNUAL MEETING PAPER AND POSTER SESSION

MONDAY, JULY 24, 2000

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## Paper Presentations

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### Developing a Model of Sociality for the Free-ranging Domestic Cat

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**Wolfe, R.** (E-mail: wolfe@wcuvox1.wcu.edu)  
and **Crowell-Davis, S.**

A model of sociality of free-ranging domestic cats was developed from a group of intact animals at a dairy farm in Northeast Georgia. The model predicted that some cats would associate with each other more than expected and that those associations would last over time. To test the model, a separate study was conducted on 8 neutered and 13 spayed free-ranging cats at a private residence, approximately 48 km from the original site. Weekly, 15 minute focal samples were made on each cat, one during each of 4 different daily time periods. Data was collected for 20 non-consecutive weeks from July through December 1999. At the onset of each focal sample, and each 2 minutes during the focal sample, a scan sample was made to determine proximity of other cats. To test the stability of the associative relationships the associates of the first half of the study were compared to the second half of the study. A test for quasi-independence indicated that there were differences in associations  $\chi^2(341) = 1822.29, p < 0.001$ . Chi square values for each focal cat, except for two males, were significant at  $p < 0.001$  indicating that there were differences in associations. One male's chi square value was significant at  $p < 0.01$  and the value for the other was not significant. Of the cats significantly associating with one another during the first half of the study 28.65 % were also preferred associates the second half of the study. This indicates that the relationships last over time. We had anticipated associations would have been more stable than indicated and looked for explanations. One male had joined the colony 8 weeks after the study had started. Comparisons of the seven weeks prior to his arrival, seven weeks after arrival and last six weeks of the study were made for aggression ( $F_{(59)} = 4.531, p < 0.05$ ) indicating more aggression after his arrival; affiliating behavior (allorub and allogroom) decreased after his arrival ( $F_{(59)} = 10.00, p < 0.001$ ); play did not change ( $F_{(59)} = 1.76, p > 0.05$ ); touching was less after his arrival ( $\chi^2(3) = 27.88, p < 0.001$ ); comparison of the number of cats visible from the core area of the site before and after indicated that fewer cats were visible after his arrival ( $t_{(20)} = 74.19, p < 0.001$ ). Associations between some cats

were long lasting even after the arrival and apparent subsequent disruption of the colony by the new male. Evidence from this study indicates that cat sociality is due to social rather than reproductive factors. Also, that the persistence of social relationships may be somewhat affected by changes in the social fabric of the colony.

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### Assessing and Verifying Performance in U.S. Department of Defense Substance Detection Dogs

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**Stewart Hilliard, PhD**  
**United States Department of Defense**  
**Military Working Dog Veterinary Service**  
**Lackland Air Force Base, Texas**  
**E-mail: stewart.hilliard@lackland.af.mil**

Military Working Dogs and other service dogs are currently used to detect a large number of different substances, including narcotics, explosives, and fire accelerants. The high degree of proficiency and economy with which well-trained dogs can detect these substances has prompted interest in whether they can also be used to find newer and less conventional threats to the security of the United States, including weapons of mass destruction.

Assessment of the olfactory accuracy and sensitivity of detection dogs for a novel substance is essentially a difficult problem in psychophysics, yet conventional laboratory evaluations of the olfactory sense are extremely laborious and results derived from these studies are difficult to extrapolate to actual working dog tasks.

When designing tasks that more closely resemble real work situations in which to evaluate the olfactory performance of working dogs, several problems usually obviated in the carefully controlled laboratory setting become obvious. In actual use, dogs are usually mobile and sample a number of areas sequentially, so at least one operational test allows the dogs to move from point to point to sample possible substance-containing locations. However, sequential sampling often produces a position bias that must be dealt with during training and testing.

Special procedures must be used to assure that the ob-

served performance of the dogs is not based on non-olfactory cues, nor on olfactory cues that are confounded with the substance of interest. Systematic testing must, therefore, be used to evaluate generalization of learning from the target substances to potential confounding odors. In order to be valid and interpretable, this generalization testing must be conducted at least partly in extinction (without rewards), and with careful attention to possible rival interpretations of detector dog performance.

In clinical behavioral medicine the power of place learning and an animal's use of non-task related cues often produces unexpected outcomes in a behavioral management plan.

Systematic application of non-continuous schedules of reinforcement is a powerful behavioral tool, but not one routinely used in clinical behavioral medicine. Likewise, assessing a patient's ability or inability to discriminate between different sets of stimuli can be useful in clinical behavioral cases as well.

The results of applied psychophysical studies of detection dog performance will be discussed as examples of problems and solutions with application to clinical behavioral medicine settings. The examples will be studies that evaluated canine ability to detect two novel threat substances—a non-conventional explosive that is easy to make, difficult to handle and to detect and has been used by terrorists, and a licensed veterinary drug that was used as a model or surrogate for chemical warfare nerve agents.

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## Behavioral Indicators of Abuse in Dogs

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**Amy Marder, VMD**

**Vice President Behavioral Medicine**

**Director ASPCA Center for Behavioral Therapy**

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Are there any reliable indicators of abuse in dogs? Behavioral evaluations, consisting of responses to a variety of stimuli were performed on 20 dogs: 10 of which had been removed by the ASPCA humane law enforcement from situations of abuse or neglect and 10 which were relinquished to the ASPCA by owners for rehoming showing no signs of physical abuse. All tests were videotaped and compared. Although owners commonly attribute a variety of behaviors to past abuse of their dogs, we found few significant differences between the two groups.

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## The Equine Appeasing Pheromone (E.A.P.) : Interest and Use in Fearful Situations

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**Patrick Pageat, DVM, PhD**

**Pherosynthèse s.n.c. Le rieu Neuf – F84490 Saint Saturnin d'Apt (E-mail: pherosynthese@wanadoo.fr)**

Using phéromone in the treatment of anxiety begins to be classical in cats and pigs. In these species, it appears that the clinical effects of the phéromonal treatment has a high efficacy and no side effects. In horses, fear reactions are very common and can be very dangerous for the horse and for the rider. Some very classical situations like transporting horses and the veterinary examination are very difficult and it is very dangerous with some horses to train them to stay quiet in such situations.

We have studied the effects of E.A.P in horses that were not trained to go into a van. This study was comparing the behaviour of the horse and the heart frequency during this exercise. It was a crossing study each animal being its own reference.

The pheromone was included in a biodegradable granula looking resina. These granula were presented in a hay-basket tied up under the nose of the horse. Each horse was previously equipped with a heart rate meter system.

Comparison of the results with and without pheromones shows that the heart rate of a horse treated with pheromone doesn't increase until the horse is jumps into the van. The horse appeared to learn more easily with the pheromone, maybe because there was no emotional reaction.

To study the reactions during the veterinary examination is a double blind study concerning horses who were examined for orthopaedic problems. The pheromone was used as a spray with a concentration of 0,1%.

All these studies have shown that EAP was able to decrease fear reactions and was helpful in the learning process. The horses treated with the pheromone were more easily trained to go into the van.

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## Age-related Cognitive Changes in Cats: A Comparison With Dogs

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**Benjamin L. Hart, DVM, PhD**

The purpose of this study is to determine the incidence of various types of behavioral changes in a randomly selected group of geriatric cats and to compare the changes with elderly dogs. The focus is on the decline in cognitive function and there is a direct comparison between dogs and cats, adjusting for species differences. The study was carried out by telephone interview of owners of cats that have visited the UC Davis Veterinary Medical Teaching Hospital. Questions dealt with changes such as disturbances in the sleep/wake cycle, disorientation, and house soiling unrelated to medical problems. Questions were also asked related to visual impairment, loss of hearing, arthritis, and dental disease. The first phase, final results of which are reported here, examines the prevalence of age-related behavioral changes of cats at various ages. The second phase, comprising a longitudinal analysis of the same cats, will be undertaken 12 months after the initial interview.

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## Usefulness of Methylphenidate In Hyperactivity Testing and In Therapy

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### Introduction

Is the methylphenidate test useful, and is the definition of hyperactivity epistemological?

### Hypothesis

Methylphenidate (M) has been used to differentiate the rare state of hyperactivity (hyperkinesis) from overactivity in the American veterinary behavior school [1, 2]. One may question the interest of this differentiation, for its prognostic and therapeutic usefulness. Several questions could be asked: are M positive dogs so rare? Is the differentiation useful? Is there any relationship between hypersensitivity-hyperactivity (HSHA) disorder [4], frequently diagnosed in the French school, and hyperactivity? Is the M test useful to prescribe successful treatments?

### Results

I gave the M test to 27 dogs. 24 of these dogs showed a problematic increase in their activity level. 21 of these overactive dogs were diagnosed as HSHA. The diagnostic of HSHA [4] is based on (1) lack of control of the bite, (2) incapacity to stop a behavioural sequence after the operant unit, and re-appearance of the start up unit, as if there was no refractory period, (3) hypervigilance and lack of habituation, (4) no feeding satiety (hyperphagia), (5) reduction of sleep duration (less than 8 hours a day) without alteration of the sleep cycle. There are two levels: level one is characterized by symptoms 1 to 3, level two by symptoms 1 to 5.

12 (55%) of HSHA dogs were M positive (M+). 7 (58%) are HSHA-1, 5 (42%) are HSHA-2. So the M test is not a good predictor of the degree of the pathology, as predicted by the French diagnosis. Overactivity is often accompanied by other symptoms, such as Impulsiveness: 22 dogs, 14 (64%) being correlated M+, Anxiety: 8 dogs, 4 (50%) being M+, Aggression to dogs: 4 dogs, 2 (50%) being M+, Aggression to the owner: 11 dogs, 4 (36%) being M+, Hyperphagia: 8 dogs, 4 (50%) being M+, Lack of obedience: 14 dogs, 8 (57%) being M+. This list can go on and on. The diagnostic differentiation by the M test does not seem conclusive.

Another difficulty arises with the 3 not-overactive dogs in the sample, 1 being M+. This dog cannot possibly be diagnosed as hyperactive.

The tested dogs were treated with medication: 16 with fluvoxamine, all improving, 8 (50%) M+ ; 4 with selegiline, 3 with improvement, 2 (50%) M+, both (67%) improved; 5 with sertraline, 2 (40%) improved, 2 M+, 1 (50%) M+ improved; etc. The results are not yet conclusive because of the low numbers for the selegiline and sertraline treatments.

## Discussion and conclusion

M+ and M- are not differentiable groups except by the M test response. Science being (partly) defined as prediction of a configuration [3], the only scientific interest I could find in this study is that the M test is useful to predict a treatment with ... methylphenidate, the rest being too uncertain.

Behavior science is an example of the science of the vague and imprecise and every definition has its meaning, even if it seems arbitrary [3]. It would be more epistemological to (1) have valid and practical definitions, and (2) to invent new vocabulary. I have epistemological problems with the use of a common word such as hyperactivity, which has been given such a specific definition.

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## Co-Occurrence of Noise and Thunderstorm Phobias and Other Anxieties

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Co-morbidity of anxiety disorders is common in human psychiatry. Early retrospective studies in the Behavior Clinic at the Veterinary Hospital of the University of Pennsylvania (VHUP) suggest that separation anxiety and thunderstorm and noise phobia may not be independent. In this clinic population if the canine patient has noise phobia, the probability of having concomitant separation anxiety is 0.40 or 40%. However, the probability that a patient has concomitant noise phobia if they have separation anxiety is only 0.08 or 8%. This disparity strongly suggests that the development of these conditions may not be independent and that a closer look at the incidence of specific clinical signs, age of onset, duration of the condition, and primacy of the diagnosis or clinical signs – if ascertainable – is warranted. We retrospectively examined all cases within the past year in which either or both conditions occurred and analyzed co-morbidity with respect to age, age of onset, other diagnoses, treatment, and number and duration of signs with the intent of learning what aspects of these conditions are most important for prospective studies that could lead to early diagnosis and intervention.

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## A Psychometric Analysis of the Construct of “Canine Anxiety” and Its Correlation With Behaviour Problems

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The term anxiety refers to a trait along which individuals in a given population can be expected to vary. Individuals suffering from an anxiety disorder, may be expected to be at one extreme of this dimension, whilst healthy animals are more widely distributed. The aim of this study was to use a standard psychometric procedure to evaluate the correlates and underlying structure of the term as used to describe the behaviour tendencies of the pet dog. A 30 item frequency score questionnaire was constructed from a review of the literature relating to proposed signs of anxiety and anxiety related disorders in the dog. Following a pilot study and revision, 100 dog owners, who were the primary carer for the pet, completed the self-administration questionnaire, which also asked for some background information about the dog in question, including the presence or not of any behaviour problems.

A correlation matrix of the individual item scores and total scores was prepared and four items showing poor correlation with the overall score were rejected. These related to the intensity of greeting received when the owner returned, drinking behaviour, tendency to tire and interest in food. The matrix was then reconstructed using the remaining 26 items and their suitability for further analysis confirmed. Individual item correlation within the questionnaire was generally  $-0.5 < r < 0.5$  suggesting good independence of the items. However, difficulty with control correlated negatively with obedience, ease of scaring with nervous character, attempts to prevent the owner from leaving with attempts to gain access to areas or articles associated with an absent owner more strongly than this.

Data were then subjected to a principal component analysis in order to examine their structure further. Five principal components explaining 37.5% of the variance were suggested from examination of the scree plot. The first factor appeared to describe general nervousness, weighting most heavily on the items describing a tendency to tremble, ease of startling, difficulty of control, restlessness and nervous character. The second factor appeared to describe resistance to being left alone, weighting most heavily on tendency to follow owner, attempts to block the owner's departure, destructiveness towards exits when left alone and attempts to gain access to items or articles associated with the owner in their absence. The third factor weighted heavily on nervousness and obedience, the fourth on frequency of retching behaviour and constipation at one extreme and destruction of furnishing when absent at the other and the fifth on rest-

lessness and loose faeces.

These results suggest that level of attachment may be an important dimension of the popular construct of anxiety but the symptoms most often related with separation anxiety of elimination, salivation, vocalization and destructiveness when left alone may not exist as a dimension of this construct.

Since anxiety may contribute to a range of problems, the data relating to the study population were divided into two samples on the basis of the presence of a non-obedience problem (n=24) or not (n=76). Total questionnaire scores were then compared by means of a 2-sample t-test. This suggested that the mean score of the problem dog population was significantly higher than that of those with no reported problem (p=0.0087). This global anxiety rating may therefore help identify individuals at a higher risk of a range of behaviour problems. The scale may also have prognostic value, but this awaits further study.

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## The Real Motivation for Canine Household Aggression: Results of a Case-Control Survey

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According to traditional diagnostic criteria, aggression related to dominance is the most common reason for the presentation of dogs to veterinary behaviourists. This diagnosis has been derived from an analogy to wolf behaviour, assuming that dogs are challenging their owners for the “alpha” position in the social hierarchy of the household. A number of dogs, however, display ambivalent behaviour which is inconsistent with the highly ritualized and relatively harmless interactions seen in wolves. The most common form of aggression in domestic dogs may be more representative of anxiety secondary to conflicting motivations. From a detailed phone survey comparing the behaviour of both biting and non-biting dogs in the household setting, we have determined that there may be more involved than social status in the motivation behind what has commonly been called dominance aggression. Most significantly, dogs with a history of having expressed aggression in situations that are typically used to diagnose a problem as “dominance” were also concurrently afraid of more stimuli (human and inanimate) and were more likely to be described as generally fearful by their owners. These findings refute the argument that most problems with canine aggression are linked to a dominant

social position of the dog among household members, and they support the use of non-confrontational behaviour modification strategies which encourage desirable behaviour through systematic desensitization, counter-conditioning, and response substitution.

## *AVSAB Student Award for Excellence In Applied Animal Behavior Research*

### **Loading Stress in the Horse: Behavioural and Physiological Measurement of the Effectiveness of Non- aversive Training (TTEAM) for Horses with Trailer Loading Resistance**

**Stephanie Shanahan**  
Ontario Veterinary College, Class of 2002

Resistance to trailer loading in the horse is a common source of stress and injury to horses and their handlers. The objective of this study was to determine whether non-aversive training based on Tellington-Touch Equine Awareness Method (TTEAM) would decrease loading time and reduce stress during loading for horses with a history of reluctance to load.

Ten horses described by their owners as 'problem loaders' were subjected to pre-training and post-training assessments of loading. Each assessment involved two seven minute loading assessments during which heart rate and salivary cortisol were measured. The training consisted of six 30 minute sessions over a two-week period during which horse and owner participated in basic loading exercises with obstacles simulating aspects of trailering. Heart rate and saliva cortisol were also shown to increase significantly during loading as compared to baseline ( $P < 0.001$  and  $P < 0.05$ , respectively). Re-assessment after training showed a decrease in loading time ( $P = 0.01$ ) and reduced heart rate during loading ( $P = 0.001$ ). Seven good loaders were also subject to loading assessment for physiological comparison. Increases in heart rate during loading were significantly higher in the good loaders. ( $P < 0.001$ ). Non-aversive training simulating aspects of loading may effectively reduce loading time and stress during loading for horses with history of resistance to loading.

### **The Feeding Behaviour In the Dog: Functional Relationships with Dominance Problems**

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Dominance problems seem to be some of the most common behaviour problems in dogs. During the last 20 years, a lot of papers have been published concerning the descrip-

tion, the diagnosis and the treatments of dominance problems. According with a lot of authors in Europe as well as in the U.S.A., we think that a lot of so called « dominance problem » are not really in relationship with dominance. The question is it possible to find some precise diagnosis criteria to identify a dominant dog.

The ethologists seem to consider that the dominants in animal societies, could be identified by their privileges concerning the food, the sexual activity, the social contacts and the control of the territory. According with this point of view, we have tried to study the feeding behaviour in a population of pet dogs which could be considered as dogs with dominance problems, a population of pet dogs without any behaviour problem and a population of dogs trained for deer-hunting.

We were particularly interested in knowing "who is eating first? (dog or owners)", "is he eating slowly, quickly, with or without interruption", "is it necessary for the owners to be there when he is eating?", "is he aggressive or not when someone approaches during he is eating?", "is he asking for the owners' food?"

A statistical approach using factorial analysis has been used to analyze the observations on 256 dogs. This approach shows that the feeding behaviour is very interesting to identify the dominant dogs and is very helpful for the clinicians to improve their diagnosis.

### **Serotonin and 5-Hydroxyindolacetic Acid in Cerebrospinal Fluid, Serum, and Plasma in Dominant-Aggressive Dogs and Non-Aggressive Dogs**

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Canine dominance-related aggression is one of the most frequently encountered problems in animal behaviour practice. Since this behaviour results in serious problems for the owners of dominant-aggressive dogs, such animals suffer a higher statistical risk of euthanasia. An important role regarding the modulation of aggressive behaviour is attributed to the neurotransmitter serotonin based on research mainly conducted in humans and non-human primates.

The aim of this study was to answer the following questions: 1. Is there a correlation between decreased central or peripheral serotonin concentrations and dominant-aggressive behaviour in the dog? 2. Are there relationships between the concentrations of serotonin (5-HT) or its main metabolite 5-hydroxyindolacetic acid (5-HIAA) in CSF, serum and plasma? In addition, data was collected regarding the circadian rhythm of 5-HT in dogs, age and gender differences as well as the unsuccessful attempt to measure 5-HT and 5-

HIAA concentrations in canine saliva.

HPLC-EC-technique was used to measure 5-HT and 5-HIAA in plasma, serum and CSF of nine dominant-aggressive dogs and 20 control dogs (Beagles). The inter- and intraassay coefficients of variation were 4,01%/3,51% für serotonin and 5,16%/4,65% for 5-HIAA, respectively. The diagnosis of dominant-aggressive behaviour was based on the behavioural history. Other diseases which may cause aggressive behaviour were excluded by a complete clinical and neurological examination, laboratory examination (9/9), CSF examination (8/9) and CT scan (2/9). Statistical comparison were done describing the data by box-plots and with the Wilcoxon rank sum test.

Results showed no biologically relevant and no significant difference in 5-HT and 5-HIAA concentrations between dominant-aggressive dogs and control dogs with regard to the three biological mediums. A central-peripheral correlation was not found for 5-HT or 5-HIAA. There was no correlation between 5-HT and 5-HIAA concentrations in serum, plasma or CSF.

It was concluded that serotonin and 5-HT are unsuitable as markers for a tendency towards dominance aggression or for laboratory confirmation of this behavioural diagnosis in the dog.

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## Aggression In Dogs Revisited

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Aggressive behaviour in dogs can be considered normal, species-specific behaviour, and is a function of a number of components including the health of the animal. Like all behaviours, the occurrence and the intensity of aggressive behaviour is a result of the reactivity of the animal and the eliciting stimulus, reactivity being dependant on timidity and fear as well as the physiological state of the dog.

At present, in behavioural cases, aggressive behaviour is usually either defined by the stimulus that triggers the behaviour or according to the object against which it is directed. Consequently, there is a high degree of overlap in the current set of definitions, leading to confusion simply because the same type of behaviour is at the root of a number of apparently different definitions.

By taking an ethological approach it is possible to formulate a cohesive model which allows aggression to be considered in the context of the underlying cause rather than according to the stimulus or the object at which it is directed.

In addition to aggression due to organic causes, the following basic forms of aggression can be identified:

- **Resource related aggression**, caused by the protection of

single items, territory, a potential mating partner or the position in the hierarchy,

- **Fear related aggression**, defensive behaviour resulting from a lack of experiences or negative experiences,
- **Maternal aggression**,
- **Redirected aggression**.

In canids in general and dogs in particular, aggressive behaviour is, to a large extent, influenced by learning. Because of the principles of learning the human reaction to aggressive behaviour in dogs, be it display or attack, is of utmost importance. Unfortunately, ordinary human behaviour and typical human reactions are inclined to re-inforce the undesirable behaviour.

Furthermore, as the aggressive and/or fearful behaviour often achieves the desired result (withdrawal of the “threat”), either as a direct consequence or by accident (e.g. postman leaving again, or somebody passing the garden) the behaviour is reinforced by the situation. Consequently, depending on the past experiences of the dog, aggressive behaviour can be stimulated under any circumstances, in any situation and by any possible stimulus in any individual.

An ethological approach opens opportunities for replacing emotionally charged expressions such as dominance aggression with neutral scientific terms. This, in turn, could lead to a change in the perception of aggression in dogs, promoting a more emotionally relaxed approach to dog aggression with the promise of a more successful way of dealing with it.

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## Hierarchy Related Behavior Disorders Without Aggressiveness

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Is dominance bound with aggressiveness in behavior disorders?

Reviewing different approaches in Anglo-Saxon and Latin authors, we'll try to find the differences and the similarities.

In France and through the Latin School we call “sociopathy” any kind of hierarchy disorder with or without aggressiveness. To have a sure diagnosis we need one necessary criterion and at least two signs picked up in a list.

### **Obligatory sign:**

At least one prerogative of dominance i.e. to eat before people, to sleep in a place with a high hierarchical status (bedroom, corridors, halls, etc.), to be the one who initiates and/or regulates the contacts.

### **Secondary signs:**

- territory, irritation and hierarchy aggression

- increase of food intake when somebody is looking at the dog
- hierarchy micturitions
- pseudo pregnancy with maternal aggression (around the substitution object)
- appropriation of children with maternal aggression against the mother
- aggression against owner's children
- destruction of furniture around doors and windows when people leave the dog alone

According to this and through many cases, we can see that hierarchy challenge can be the principle of the disorder without any kind of aggression.

An ethology-based collection of data is the way to discover such affections. There is often confusion in owner's mind between attachment and hierarchy and it is very important to give them the right keys to understand their dog's behavior.

In this kind of affections, sometimes drug therapy is not necessary. When we have to use it, it is more to help the dog dealing with his anxiety. It can be, in a strategic way and in very few cases when there is no danger, to enhance during a short time the aggressive manifestations of the dog to make clear in owner's mind that maybe there is a hidden challenge

Behavior modifications are useful and totally bounded with the diagnosis.

New kinds of treatment or tests to assess the diagnosis, involving pheromones will be evoked.

## Relevance of Owner's Attitude in the Exacerbation of Canine Dominance Aggression

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According to some authors, dogs are social animals that perceive the world according to their wants and needs. The logical extension of this is that canine dominance aggression should be assessed from a hierarchical standpoint. If we are to assume that dominance aggression is an extension of "dominance", it would be logical that "dominant" and dominant aggressive dogs should react in the same fashion for a given situation (access to food, sex partners, space, influence on the group) with the latter doing it with a little more "tooth". Amongst the many factors (genetic, environmental) that affect the manifestation of this behaviour is the nature of the interactions between the dog and his adoptive family. We compared three groups of dogs: "submissive", "dominant", and dominant aggressive, and asked to what extent, if any, were certain "owner's attitudes" contributing to the development of dominance aggression in their dog. Thirty-four adult dogs (14 males, 20 females) were observed interacting with their owner in the comfort of their own home. Information was gathered with the aid of a questionnaire and by direct observation.

## Poster Presentations

### Responses of Shy, Anxious, and Fearful Dogs to the Lactate Test: Assessment of the Test as Provocative Index and Application in Mechanistic Diagnoses

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The standard for evaluation of panic disorder in human patients is the lactate-sensitivity test for the provocation of panic. This test has not previously been evaluated analogous or homologous natural canine model. Our work evaluates this test in a group of dogs that have been characterized as "nervous" or "shy", and for whom this phenotype is heritable.

Nineteen related dogs for whom a genetic pattern for

fearfulness has been identified were evaluated behaviorally and physiologically using the lactate test. Affected dogs (NBC affected) display an idiopathic fear and panic response when presented with unfamiliar humans. Responses include shrinking, assumption of sphinx-like posture, salivation, lacrimation, nasal discharge, and urination. Some of these dogs become rigid. Physiological responses include pupil dilation, tachypnea, and often tachycardia. Full-siblings of these dogs can be unaffected (NBC unaffected).

In addition, a second colony of dogs derived from the original NIH "nervous" pointers and used to study deafness was evaluated, as was a group of dogs who were outcrossed with these as part of another study was evaluated (DP dogs). Finally patients with separation anxiety (SA), noise or thunder phobia/reactivity (NT), and unaffected "normal" control (NR) dogs were also evaluated.

The lactate test allows separation of these dogs, but the direction of the response is intriguing and may allow us to proposed hypotheses about different mechanisms leading to the different manifestations of anxiety in these conditions.

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## Behavioral Response to Early Pre-pubertal Castration in the Horse

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Early prepubertal castration (EPC) potentially may provide a less stressful method of castration in the horse. Recovery time for EPCs may be shorter than that of yearling or older castrates. This study is the first in a series to assess the behavioral responses to and recovery from this type of castration. For each procedure, the castrate was paired with a control agemate. Each animal was then anesthetized, tied, and if a treatment animal, castrated. Each animal was observed for one hour immediately post-castration as well as one hour on the day prior to castration and one hour on the two days following castration. A GLM procedure was run to assess any difference between the treatment groups as well as the expression of these behaviors. No differences were found between the castrates and controls in the percentage of sample spent in the following behaviors: walking, grazing, nursing, lateral rest, and sternal rest. There was no difference in the recovery behavior of the EPCs and their agemates. Hence, the castrates suffered no adverse behavioral effects from the procedure. Further research will assess the behavioral differences in the recovery between EPCs and yearling castrates.

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## Attachment of Dogs to Their Owners — The Preliminary Results of a Modified Ainsworth Strange Situation Test

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In recent years, as the need for understanding companion animal behavior has increased, so does the need to understand the relationships between humans and those animals. While studies have examined the attachment of humans to their pets, few have looked at the reverse perspective. This study used a modified version of the Ainsworth Strange Situation Test (used to assess attachment of human children to their parents) to study the attachment between dogs and their owners. Cluster analysis was used to determine whether repetitive patterns of behavior, or attachment types, emerged. Results will be discussed.

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## Gender Differences in Play in Kittens (*Felis Catus*)

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The play behavior of four litters of Siberian kittens (*Felis catus*) at a cattery was observed from age two weeks through nine weeks. Each litter was housed with the mother in a large indoor pen with access to toys. Each kitten was videotaped for 30 minutes in the morning and 30 minutes in the afternoon each week. Specific play behaviors were analyzed using the Observer computer program (Noldus<sup>®</sup>). It was hypothesized that males would engage in more social play and object play than females. It was also predicted that females would play more with female littermates than with male littermates. Results are pending.

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## Effects of Harem Size on the Testosterone Level in Misaki Feral Horses

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We collected fecal samples from 14 young and sexual mature feral stallions, 3 to 14 years old in Misaki Island, Japan. In this study, we examined the monthly testosterone hormone patterns and its relationship to behavior, and to investigate the effect of the number of mares (harem size) on the level of testosterone and its effect on the differences between the breeding season and non-breeding season. Among the Misaki stallions the testosterone concentration starts to increase from late March and the peak in April and early May. The differences of the testosterone level between breeding and non-breeding season increase when the harem size increases. Moreover, the testosterone level of the stallions that had a harem size of the same number of mares was nearly the same in spite of stallion's differences in age. It was concluded that plasma testosterone may depend on the number of mares inside the harem (harem size).

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## The Distribution of Canine Behavior Cases at a Behavior Only Practice in Japan

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In Japan the field of behavior problem in veterinary medicine is very young and growing. There are about 3 private prac-

tices in Tokyo and Osaka area, the first and second big cities, and 2 clinics at veterinary teaching hospital so far.

Behavior practice requires more time and energy than general practice, however, no specialized system is established in clinical veterinary medicine in Japan.

It may affect the speed of increase for the behavior practice.

In this study 168 canine behavior cases (involving 126 dogs) seen at my practice in Osaka for the first 22 months. Though there are no referral system in Japan, many cases were referred from local veterinarians voluntarily. All cases were treated by house call. If a laboratory test or other physical examination were necessary, returned the case to a local veterinarian. If a problem was caused by physical disorder, it was excluded from this study.

108 purebred dogs (44 small breeds, 64 other breeds), 18 mixed-breed dogs were involved and they were 80 males (Intact 59: castrated 21) and 46 females (Intact 25: spayed 21). The mean age of all the dogs was 2.6 years (range 2 month to

13.6 years). 86 dogs were kept totally indoors. Dogs came from pet shop (55.6%), breeder (19.8%), friend (15.1%) and others i.e. newspaper( 9.5%).

Distribution of behavior problems were aggression 95 cases (36 dominance, 26 territorial, 17 fearful and 16 interdog), fears and anxiety 13 cases (6 separation anxiety, 1 thunder phobia and 6 fear without aggression), attention seeking 5 cases, elimination problem 15 (7 inappropriate elimination and 8 urine marking) 6 stereotypy, 2 cognitive dysfunction, 33 unruliness and 9 puppy cases which were younger than 4 months.

Only 21 dogs of all had been trained or given advice by trainers or staffs of veterinary hospital about the problems. While 114 out of 126 dogs were reprimanded or disciplined physically by the owners or family members.

12 out of 126 dogs didn't get any physical punishment and there were no aggression problems showed by 11 dogs in this group.

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## Position Available

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The Behavior Medicine and Military Working Dog Studies Section of the US Department of Defense Military Working Dog Veterinary Service, Lackland Air Force Base (San Antonio), Texas has an opening for a Post-doctoral Fellow.

The position is a 1 year renewable opportunity to become involved in a dynamic team that is highly active in applied research and development activities involving military working dogs. Primary responsibilities will involve management of a project involving the use of dogs to detect a novel substance of interest to the Department of Defense. However, the successful candidate will be expected to become involved in other ongoing projects as well as in clinical behavioral medicine. Publication of work accomplished is expected.

Other projects at Lackland include an evaluation of selective breeding using a quantitative genetics model to produce a reliable supply of very high quality working dogs. We are also active in the evaluation and treatment of performance failure and CCD in aged working dogs (including the use of a novel electrodiagnostic evaluation), and the diagnosis and treatment of repetitive and disruptive behaviors in military working dogs. Additional opportunities are available for both prospective and retrospective work

in behavioral medicine and canine performance evaluation (psychometrics) development.

Candidates should have completed requirements for a PhD in Psychology or related discipline involving applied animal behavior, and/or have a doctorate in Veterinary Medicine. Advanced degrees and research experience for veterinarian candidates will be weighted heavily in consideration.

Interested individuals should submit a letter of interest and needs along with a CV. These may be sent electronically, FAXed, or posted to the address listed below. Consideration and selection will continue until the position is filled.

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