THE GLOBE

Newsletter of the
International Society of Veterinary Ophthalmology
Spring 2007

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Editorial

Pursuing the ISVO mission.
This is a special issue mainly dedicated to the ACVO Conference to be held October 22-27 2007 in beautiful Hawaii. Why ISVO is supporting this meeting? Just because our society is dedicated to all veterinary ophthalmologists in the world and has a goal, perhaps a dream, to give each person the occasion to expand his competence, to be exposed to the main scientific events, to do the next step of his cultural growth.
Being spread in all geographic areas of the world we are conditioned by different environments, educations, traditions, religions but we have the common need to know more for the progress of our profession. Our life is moulded by experiences not comparable among themselves, simple terms like freedom, family, love, education for some of us may have divergent meanings. Though these differences most of us share the same interest for peace, cooperation, progress, human and animal welfare.
ISVO' mission is to link all of us, members of National and International Veterinary Ophthalmology Organizations, to overcome political, economical, cultural barriers and conditionings.
The best way to reach this goal is to favour direct contacts on occasion of the main International Congresses, a good reason to go to Hawaii next October!! So please visit the ACVO website at www.acvo.org

Claudio Peruccio

Letter from the ISVO President

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Dear ISVO members,

The last ISVO/ECVO/ESVO/SOVI meeting in Genova just closed. It was a real great success with so many speakers and attendants. We had the chance to listen to very high standard lectures and presentations. We enjoyed a wonderful gala evening with entertainment provided by the Spanish dancers-ophthalmologists team presenting a graceful sevillanas program and the Italian singers-ophthalmologists with a brilliant opera program. The local organizers (Alberto Crotti, Claudio Peruccio, Adolfo Guandalini and their team) can be happy with the result. The success of this congress is again proof of the increasing vitality of local, national , continental different veterinary ophthalmology societies and colleges around the world. But our world is becoming more and more a large city in which we feel a need to connect each others. This is the role of the ISVO. We are especially grateful to Kristina Narfström and Claudio Peruccio for the effort of maintaining the publication of "The Globe" which is an essential link for all of us. I invite you to send to Claudio information from all your local activities to strengthen our relation to the world of veterinary ophthalmology community.
Thanks to Kristina who accepted an invitation to present the Magrane Memorial Lecture in Genova after the sad news of the sudden death of George Duncan. We all again express our grief to his family. I will end this letter by a pleasant task: thanking Jose Laus who transferred the presidency to me for the work done for the society during the two past years. We will have the pleasure to go on working with him since the 2009 ISVO meeting will be held in Brazil in conjunction with the CLOVE and WSAVA. Dates will soon be known. After the wonderful Italian atmosphere of Genova, you are invited to come to Brazil and appreciate the wonderful atmosphere of Sao Paulo.

Maurice Roze

Coming Events

2007 ACVO Conference
Kona, Hawaii—October 22-27, 2007
Hilton Waikoloa Village®

Meeting Contact Information

Conference Registration & Meeting Coordination
Stacee Daniel
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Hilton Waikoloa Village®
Rates and Reservations—Ph: (808) 886-1234 or (800) HILTONS.
Go to www.acvo.org for up to date information and alternate hotels.
VOTS meeting registration (Technicians)
Contact person—Katie Cicotte
(949) 733-8271 (Tu-Fr)
(714) 771-5851 (home)
seakot@dslextreme.com

Secure, online registration!
Register online on the secure registration page and receive instant confirmation! The ACVO offers convenient, secure online attendee and exhibitor registration at www.acvo.org. Save time and sign up today !
(Abstracts must be submitted separately)

$$$ Help Save Yourself Money

The hotel industry operates to make a profit and they will earn it from conference attendees one way or another. If you would like to help hold meeting registration fees down and help the ACVO avoid penalties, please try to reserve your hotel room at the Hilton Waikoloa Village (or publicized alternative location) and attend the Friday night dinner whenever possible.
If you are holding rooms at this facility and choose not to use them please release them as soon as possible.

Hilton Waikoloa Village®
A resort like no other, the Hilton Waikoloa Village® is a destination in itself. Cruise on mahogany canal boats along tranquil waterways. Explore the ocean front hotel resort by air-conditioned trams or take a leisurely stroll along flagstone walkways flanked by Polynesian and Asian artwork. Located on the Kohala Coast of Hawaii's Big Island, the Hilton Waikoloa Village® lets you experience breathtaking tropical gardens, abundant wildlife, award-winning dining, world-class shopping, art and culture, and an array of activities ranging from golf and tennis to an interactive dolphin program and the Kohala Sports Club & Spa. With so much to do, you may never want to leave.

Hawaii's Big Island isn't just big, it's still growing . . .
The Island of Hawaii is the largest island in the Hawaiian chain, with an area twice as big as all the other Hawaiian Islands combined, and is consequently known as "The Big Island." It is as diverse as it is large, with unique natural wonders. Not the least of these is Mauna Loa, the world's largest active volcano. Eleven different climate zones generate everything from lush rain forests to arid deserts, black sand beaches to snow-capped mountaintops. The Big Island is Hawaii's biggest playground.

What can I do on Hawaii's Big Island?

- Discover the underwater world while snorkeling or scuba diving (averaging 100-150 feet visibility)
- Try out your sea legs by skiing, deep-sea fishing, windsurfing, or sailing
- Get your game on with a round tennis, or golf on one of several championship courses.
- See molten lava flow at Kilauea volcano in Hawaii Volcanoes National Park
- Play in the snow atop Mauna Kea, the world's tallest mountain (measured from the ocean floor)
- Hike through Waipio Valley, the "Valley of the Kings"
- Explore Puukohola Heiau, the largest restored ancient Hawaiian religious temple
- Enjoy the entertainment, culture, and cuisine in Hilo and Kailua-Kona

If that's not enough, there is much more to experience on the Big Island of Hawaii. See the Hawaii Convention and Visitors' Bureau for more information www.gohawaii.com/big_island.

Hotel Information
The Hilton Waikoloa Village® is the host hotel. For reservations call 808-886-1234 or 800-HILTONS. The original room block is full. You can reserve rooms at the current rack rate, then call the hotel in August/September to see if cancellations have opened up availability for lower block rates ($220 garden, $240 partial ocean, $260 full ocean). We believe that many attendees are holding extra rooms for family and these tend to be cancelled a month or two prior to the conference.

Alternate Hotel Information
"Next door" is the Waikoloa Beach Marriott Resort & Spa. They are willing to offer ACVO attendees the same rate as the last block at the Hilton ($220 garden, $240 partial ocean, $260 full ocean), on a space available basis. To make reservations call 877-359-3696 or go online at www.waikoloabeachmarriott.com and indicate the group code of ACVACVA for garden, ACVACVB for pool, ACVACVC for ocean as well as affiliation with the ACVO. The group rate may be arranged for pre and post extensions, up to a maximum of 3 days on an availability basis. Please note that even though this hotel is "next door" and is the closest option within walking distance, it takes approximately 15 minutes to walk to the conference facilities at the Hilton.

Airport
The only airport servicing the area is the Kona International Airport, approximately 18 miles from the Hilton Waikoloa Village. Some airlines fly direct to Kona, others fly direct to Oahu, then you can purchase an inexpensive 'island hopper' to Kona through Aloha or Hawaiian airlines.

2007 Tentative General Conference Schedule

(tentative as of May 21, 2007)

Sunday, October 21

8am—5pm	Exam Committee
4pm—7pm	Board of Regents

Monday, October 22

8am—5pm	Exam Committee
8am—5pm	Board of Regents
8am—5pm	Genetics Committee
9am—Noon	Residency Committee
9am—1pm	Governance Committee
9am—5pm	Credentials Committee
5pm—11pm	Ad Hoc Committee
6pm—8pm	Registration
6pm—8pm	Opening Reception (outdoor lagoon)

Tuesday, October 23

7am—12:30pm	Registration
7am—8am	Posters Set Up
8am—5pm	Posters
8am—12:30pm	Residents' Forum
12:30pm	Lunch and remaining day on your own
12:30—2:30pm	Practice Management
12:30pm—2pm	Journal Editorial Board Lunch
1:30pm—6pm	Digital Ophthalmic Imaging (optional course)
1:30pm—3:30pm	Vitreous Society
1:30pm—3:30pm	Prospective Residents/Mentors
3:30pm—4:30pm	Mentors & Chairs Meeting
Evening TBA	Foundation Golf Fundraiser

Wednesday, October 24

Morning TBA	Group Dive
8am—Noon	*Digital Imaging lab #1*
8am—Noon	Exhibits Set Up
Noon—5:30pm	Exhibits Open
1pm—6pm	Registration
1pm—6pm	Scientific Session
1pm—7:00pm	Posters
5:30pm—7:30pm	Exhibit Reception
7:30pm	Posters Teardown

Thursday, October 25

7am	Registration
7am—1:30pm	Exhibits Open
8am—1pm	Scientific Meeting & Memorial Lecture
2pm—6pm	*Digital Imaging lab #2*
Evening TBA	Group Dive

Friday, October 26

6:30am	Fun Run/Walk (tickets required, refreshments)
8am—Noon	International Equine Ophthalmology Consortium
11am	Registration
11:30am—2:30pm	Exhibits Open
11am—Noon	New Diplomates Lunch (invite only)
Noon-2pm	Scientific Session
2:30pm—4:30pm	Business Meeting
2:30pm—4:30pm	Residents' Workshop
6pm—6:45pm	Reception by pool
7pm—9pm	Dinner by pool overlooking ocean

Saturday, October 27

7am	Registration
8am—1pm	Scientific Session
8am—5pm	General Practitioners Course (tentative)
7am—3:30pm	Exhibits Open
3:30pm—5pm	Exhibits Break Down

Ophthalmic Digital Imaging Workshop

Course Description
Digital photography has the potential to enable photographic competency for almost any one in a way that rarely happened in the days of film. The ability to obtain instant feedback using digital cameras makes it much easier to develop a feel for what settings work to obtain images of ophthalmic or other subjects.
This course will concentrate on how to photograph and work with images primarily using readily available and affordable consumer digital cameras, lenses and flash sources. The basic concepts of digital image acquisition, organization, storage and manipulation will be introduced. Simple approaches for obtaining ophthalmic images particularly of the anterior segment of the eye will be emphasized. Other new digital technologies available for imaging both the anterior and posterior segments will be illustrated and discussed.

Who Should Attend?
This course should appeal to anyone interested in acquiring digital images of eyes and adnexa, whether for incorporation in medical records in clinical practice or as data for research and publishing. We anticipate a wide range of knowledge and skill levels among the participants. During the hands-on part of the course, participants will have the opportunity to practice photographic techniques as well as share experiences and tips to make ophthalmic digital imaging more successful.

Nationally Recognized Speakers
Speakers for the Ophthalmic Digital Imaging Workshop will include nationally recognized experts on human ophthalmic imaging, Mark Maio and Dr. Ben Szirth as well as ACVO Diplomates, Drs. Nick Millichamp and David Ramsey.

Topics
- Principles of digital imaging
- Macro – eyelids, orbit, cornea and some anterior segment (cataract)
- Slit lamp and other means of photographing the anterior segment
- Fundus imaging; specialized adaptations to small eyes
- Specialized and emerging technologies.

The course will include 4.5 hours of lecture and 4 hours of hands on experience with digital fundus, slit lamp and macro cameras. The lecture and labs will be held on separate days (lecture: Tues, lab: Wed/Thurs). Please view topic details and speaker biographies at www.acvo.org .
Labs will be limited to two sections of 50, divided into two classes of 25 attendees.

Course Fee
$300 for lecture and lab $200 for lecture portion only. Fee includes lecture, (lab when appropriate), notes, continental breakfast and/or breaks when appropriate.

Proposed Schedule (tentative)
Tuesday, October 23
1:30pm—1:45pm Welcome and Descriptions
1:45pm—2:45pm Principles of digital imaging
Resolution File types for output (JPEG vs,TIFF, etc…)
Storage and organization of files camera types, particularly for principles of Macro imaging
(point and shoot vs. SLR) flash selection
(ring flash, side by side macro flash)
2:45pm—3:30pm Macro – eyelids, orbit, cornea and some anterior segment (cataract)
3:30pm—3:45pm Break with Exhibitors
3:45pm—4:15pm slit lamp and other means of photographing the anterior segment (use of 3 mirror lens in glaucoma or tumors using a macro lens or portable slit lamp)
4:15pm—4:45pm fundus imaging from the nearly affordable (<$15-20K) to the "gee whiz"
4:45pm—5:15pm specialized adaptations to small eyes, including laboratory animals research tools if time….
5:15pm—5:45pm specialized and emerging technologies application of digital imaging to areas other than clinical documentation of lesions fluorescein angiography OCT etc.

Lab Assignments
The hands on portion of the course to be held on Wednesday morning 8am—12pm (group 1) and Thursday afternoon 2pm—6pm (group 2). Please indicate your preferred section in the space provided on the registration form, but be aware that sections will be assigned on a first-come, first-served basis.

Course Staff
Dr. Nick Millichamp DACVO
Dr. David Ramsey DACVO
Mr. Mark Maio
Dr. Ben Szirth

Practice Management: "Taking Your Practice to the Next Level: Developing Best Practices in Practice Operations"

Speaker
Tom Dorr, Director, Small Business Development Center Western Washington University

Course Fee
A fee of $110 will include the course, luncheon, notes, and one-on-one sessions on a space available basis.

Schedule and One-on-One Sessions
Mr. Dorr will speak from 12:30pm—2:30pm and will be available to meet one on one with doctors afterwards until 4:30pm. These meetings will be scheduled in ½ hour blocks starting at 2:45pm. This would be no charge and as a service to helping doctors improve their practices. Contact information and details will be provided in your confirmation letter if you register for the course.

Session objectives:

- Increase the profitability of your practice
- Understand where the money goes in your practice
- Demystify financial statements
- Develop key performance indicators for your practice
- Understand the process of succession planning / exit strategy
- Developing practice support systems and industry standards

Agenda

I. How to demystify your financial statements and really understand what is important to monitor in your practice
- A. The importance of financial reports
  - 1.) Timely , accurate and understandable
- B. What should I be monitoring?
  - 1.) Key areas of concern
    - a.) Labor costs
    - b.) Doctor compensation
    - c.) Prescription costs
    - d.) Other operating costs
- C. How do I know if I am doing well or not?
- D. Developing Key Performance Indicators
  - 1.) Break even analysis
  - 2.) Labor to sales ratio
  - 3.) Average sales per customer
  - 4.) Profit margins

II. How do I sell my practice- What is your exit strategy ?
- A. Valuation
- B. Plan of action for selling
- C. When should I start planning to exit?

III. Developing support system to continually improve your practice
- A. Roundtables
- B. Quarterly financial analysis services
- C. One on One meetings
- D. Questions and evaluations

Specialty Day of Ophthalmology for General Practitioners

The American College of Veterinary Ophthalmologists invites you to attend its second annual "Specialty Day of Ophthalmology for General Practitioners". *Topics and speakers are outlined below.*

Tentative Schedule *(current as of February 28,2007)*
Speaker Time Topic
7am—8am Registration
7am—8am Continental Breakfast
Dr. Paul Miller 8am—9am "Glaucoma: New Approaches to an Old Disease"
Dr. Mary Belle Glaze 9am—10:30am "Ocular Manifestations of Systemic Diseases"
10:30am—10:45am Break with Exhibits
Dr. Ralph Hamor 10:45am—12:15pm "A Little Bit of Knowledge and the Right Instruments Go a Long Way: Medical and Surgical Management of Corneal Disease"
12:15pm—1:30pm Lunch with exhibitors (Lunch will be provided.)
Dr. David Wilkie 1:30pm—3:30pm "Retina: Why You Should Look, What You Will See, What Does it Mean? Unlocking the Mystery of the Fundus"
3:30pm—3:45pm Break with Exhibits
Dr. David Maggs 3:45pm—5:45pm "Herpes is Forever: Diagnosing and Treating Cats with Feline Herpesvirus"

Who Should Attend?
General practice DVMs, residents/interns, veterinary students and technicians are welcome to attend, but education will be targeted toward veterinary general practitioners. Enrolment will be based on a first-come, first-served basis. You do not have to register for the general conference in order to attend, but why not enjoy the entire conference?

Course Fee
Receive eight and one half (8.5) hours of continuing education, course proceedings, lunch, contact with ophthalmic product vendors, breaks, and a reduced rate for the general conference if you wish to attend. All this f or only $200!

$$$ Save Money!
Receive eight and one half (8.5) credits of targeted continuing education, in your "back yard". Eliminate excessive travel expenses by attending this world class education so close to home. Also receive a reduced rate for the general conference, if you wish to attend the ACVO conference.

Speakers
Speaker and topic information in order of presentation. All speakers are board certified veterinary ophthalmologists.
Expanded biographical information is available at www.acvo.org.

Dr. Paul Miller
Lecture Topic
"Glaucoma: New Approaches to an Old Disease"
Brief Description
In this case-based session we will discuss current thoughts on the mechanisms which result in glaucoma in dogs and cats and cover how a better understanding of these causes allows us to make a well-informed therapeutic choice tailored for each patient. The session will also discuss when and how to use the plethora of anti-glaucoma drugs that are on the market today.

Dr. MaryBelle Glaze
Lecture Topic
"Ocular Manifestations of Systemic Diseases"
Brief Description
The eye has been described as the window to the soul. See what clues it can also provide to your canine and feline patients' systemic health.

Specialty Day of Ophthalmology for General Practitioners

Dr. Ralph Hamor
Lecture Topic
"A Little Bit of Knowledge and the Right Instruments Go a Long Way: Medical and Surgical Management of Corneal Disease"
Brief Description
The focus of this talk will be to provide participants with a knowledge base and skill set to more accurately and effectively diagnose and treat corneal disease. The talk will provide practical information on both medical and surgical management of corneal disease. Participants should be able to implement information taught here when they return to their practice to provide better care to their patients.

Dr. David Wilkie
Lecture Topic
"Retina: Why You Should Look, What You Will See, What Does it Mean? Unlocking the Mystery of the Fundus"
Brief Description
Fundic examination is a tremendously important, but under utilized portion of the physical examination. Methods of examination, normal variations within and between species and interpretation of abnormalities including congenital, inflammatory, hypertensive and degenerative retinal diseases will be presented. When this lecture is done the attendee will be able to interpret changes and understand why things appear the way they do.

Dr. David Maggs
Lecture Topic
"Herpes is Forever: Diagnosing and Treating Cats with Feline Herpesvirus"
Brief Description
Although we know that cats can become infected with feline herpesvirus (FHV-1) for life, we are getting better at treating those that have chronic or recurrent corneal and conjunctival disease as a result of this infection. This lecture will emphasize the very latest information on new topical and systemic drugs for treating cats with FHV-1. Does lysine help? What about Famvir? Are there any new topical antiviral drugs? What is the best test for FHV-1?

Memorial Lecture—Dr. Steve Arshinoff

"Ophthalmic Viscosurgical Devices, and techniques to use them to their full potential."

Dr. Arshinoff's lecture will deal with Ophthalmic Viscosurgical Devices (OVDs, viscoelastics), and techniques to use them. As his veterinary experience is minimal, he will discuss their use in humans. He will explain their origin, how they work and what they can be expected to do. He will also explain differences among the OVDs sold, and how they can be classified. He will demonstrate some techniques to use them to partition the anterior chamber to better help deal with injuries and other problems.
He will also discuss complications due to OVDs and how to avoid them. He will show what he believes to be the simplest and most effective techniques to achieve optimal surgical results using OVDs.

Residents' Workshop: Grant Writing & Manuscript Development

ACVO Diplomates, Drs. Carmen Colitz and Brian Gilger, have generously offered to organize this year's Residents' Workshop on Grant Writing and Manuscript Development. Presentations will be made by ACVO Diplomates who have a plethora of experience in these areas. Learn how to more poignantly organize your information and write to achieve your goals, whether that be to publish research in an industry publication or to be awarded a grant for your research.
All attendees are welcome to attend this workshop but it is targeted toward Residents and non-Diplomate veterinarians.
(Diplomates are invited to attend the annual business meeting during the same time slot.)
If you have suggestions on materials you would like covered, please email them to Dr. Carmen Colitz or the ACVO office.

SOCIAL PROGRAM

Group Activities

- **Fun Run and Walk**
- **"Dive with Diplomates" - Group Diving Activity**
- **Friday Evening Dinner & Entertainment**
- **Foundation Night Golf Fundraiser**

Check www.acvo.org for more information and updates.

2007 ACVO Instructions: Abstract Preparation, Submission, and Presentation

For any information concerning Abstract format and submission or Posters presentation guidelines please check www.acvo.org or contact office07@acvo.org .

Important Deadlines—2007

July 13th—Last day to submit abstracts
August 10th—Notification of abstract acceptance
August 17th—Last day for 'early bird' registration
August 31st—Last day for 90% refunds
September 1st—Last day to register for Fun Run
September 7th—Abstracts listed on website
September 20th—Hotel reduced rate cut off
September 21st—Last day for mail/fax registrations
September 22nd—Last day for 50% registration refunds
October 5th—Last day for Pre-registration
October 5th—Last day for Friday dinner refunds

From the Congresses

From the ECVO-ESVO-ISVO-SOVI CONGRESS
Genova (Italy) May 30th – June 3rd

Someone said "*.. the best ECVO-ESVO meeting ever held..*" we like to say "*…a successful meeting with an audience of 284 registered people exposed to a very friendly atmosphere…"* The joining of the ISVO and SOVI meetings made the difference, attracting delegates from 5 continents anxious to learn and to better know each other.
The Scientific Program included a State of the Art Lecture on "*Fish Ophthalmology*" by **Ellen Bjerkas** and the "Magrane Memorial Lecture" sponsored by ISVO with **Kristina Narfstrom** as the speaker of "*Light at the end of the tunnel: advancement in treatment modalities for retinal degenerative disease*".
The Social Program has been particularly appreciated: at the ECVO-ESVO-ISVO-SOVI Meeting Point 2 DVDs players have shown all day long photo-shows of the last few years' Congresses and of the Members' non Professional Interests; dozens of pictures divided in 5 posters exhibited the members' and family members' hobbies; several paintings and bronze and wood sculptures were admired by the attendance.
A "Get together party" at the Genova Aquarium having dinner under the Sharks ' tanks added interest and enthusiasm.
At the Gala Dinner the dance performance of the Spanish group and the Three Tenors première of the Italian members made that evening memorable and unforgettable also thanks to **Peter Bedford**'s direction, a very special Master of Ceremony.
To let our readers have a taste the Scientific Content of the meeting, a few selected abstracts from the Proceedings Book have been included in this issue of The Globe.

OCULAR FINDINGS IN 46 DOGS WITH ANEMIA AND/OR THROMBOCYTOPENIA. A PROSPECTIVE STUDY

Michal Shelah, Y Bruchim, I Aroch and R Ofri
Veterinary Teaching Hospital, Koret School of Veterinary Medicine, Hebrew University of Jerusalem, Israel

Purpose: Anemia and thrombocytopenia are extremely common canine hematological abnormalities and have been listed in several veterinary ophthalmology textbooks as potential causes of retinal hemorrhage. However, a thorough literature search has failed to find any study on the prevalence of retinal hemorrhage in anemic and thrombocytopenic dogs. Therefore, we conducted a prospective study with the aim of documenting the prevalence and character of ocular abnormalities in anemic and thrombocytopenic dogs.
Methods: Dogs were selected from patients received by the Emergency and Critical Care Unit, Hebrew university Teaching Hospital (HUVTH). The inclusion criteria were presence of anemia (packed cell volume [PCV] $\leq$ 20%) and/or thrombocytopenia (platelets < $150x10^3/mm^3$). Forty-six dogs met the inclusion criteria and were segregated into 3 study groups, in order to differentiate the findings associated with either hematological disorder. Group I (n=15) included dogs presenting with both anemia and thrombocytopenia. Group II (n=13) included dogs presenting with anemia and a normal platelet count. Group III (n=18) included dogs presenting with thrombocytopenia and PCV > 20%.
Results: In Group I, single, unilateral retinal petechiae were noted in 2 dogs. Significant hemorrhage was noted in either the anterior chamber or fundus of 3 other dogs in this group; hemorrhagic or serotic retinal detachments were also noted in these 3 dogs. In group II, one case (PCV=8%) of retinal petechia and one case (PCV=15%) of a focal, serotic retinal detachment were noted. In group III, we noted subconjunctival hemorrhage (n=2), hyphema (n=2), retinal petechiae (n=1) and retinal hemorrhage (n=1). Additional sporadic findings, in all groups, included pale or icteric conjunctiva and narrowed retinal vessels.
Conclusions: Ocular abnormalities were present in both anemic and thrombocytopenic dogs. The number of eyes (2/26) with noteworthy lesions in Group II tended to be significantly lower (P=0.06, Pearson's chi-squared test) than the number of affected eyes in group I (8/30) and group II (9/36). While additional dogs should be screened to establish statistical significance, it seems that in our study most of the noteworthy ocular lesions were caused by thrombocytopenia rather than by anemia.

A GENEALOGIC SURVEY OF SUPERFICIAL PUNCTATE KERATITIS IN THE POPULATION OF DANISH LONGHAIRED DACHSHUNDS

Claus Bundgaard Nielsen
Aarhus Animal Hospital, Denmark
Purpose: To collect genealogic data from Danish dachshunds with superficial punctate keratitis (SPK) in order to suggest a possible heritability of the disease.
Methods: A review of the literature was made to describe the disease and its possible heritable nature. Data were collected from 56 dogs diagnosed with SPK in the period 1990-2004. The dogs were put in pedigrees and grouped in families. Different theories for heritability were tested.
Results: The disease has been described as a breed related disease in longhaired dachshunds in Europe and USA. In USA a disease with similar clinical appearance is found in the Shetland sheepdog. The pathogenesis of the disease is grossly unknown, but it has been described as an immune mediated disease.
54 of 56 affected dogs were longhaired dachshunds. 28 males and 28 females were affected. The age at diagnosis ranged from 14 to 132 months with a meridian of 52 months (4,3 years). The average litter size was 4,03 with 56,5% male and 43,5% female puppies in 39 litters with affected dogs. In 45 dogs genealogic data were available and simplified pedigrees were made. The pedigrees showed that 39 dogs could be grouped in 5 families with up to 5 generations. With the assumption that parents with unknown status were unaffected, an autosomal recessive mode of inheritance was tested. There were no cases of affected to affected mating.
Conclusions: The results of this survey indicate that SPK in the Danish dachshund population is a heritable disease. A suggestion of an autosomal recessive mode of inheritance is made.
Support: The Danish dachshund association hs made financial support to this study

INTRAOCULAR PENETRATION OF INTRAVENOUSLY ADMINISTERED MARBOFLOXACIN IN A MODEL OF ENDOTOXIN-INDUCED ENDOPHTHALMITIS

Alain Regnier[1], M Schneider[2], D Concordet[1] and PL Toutain[1]

[1]UMR 181 Physiopathologie et Toxicologie Expérimentales INRA, ENVT, Ecole Nationale Vétérinaire, 23 chemin des Capelles, B.P. 87614, 31076 Toulouse Cedex 3, France [2]Laboratoire Vétoquinol, 70204 Lure, France.

Purpose: To determine the penetration of intravenously administered marbofloxacin into the aqueous humor (HA) and vitreous body of inflamed eyes, compared to healthy eyes, using a

standardized rabbit model of acute endophthalmitis.

Methods: Adults pigmented rabbits (n = 35) weighing 2-3 kg were used. They were anesthetized with ketamine hydrochloride (50 mg/kg; IM), and intraocular inflammation was induced by intravitreal injection of 1µg of *E. coli* LPS into the right eye. The intact left eyes were used as controls. Twenty-four hours after intravitreal injection of *E. coli* endotoxin, the uveitic response was assessed by slit lamp examination and a dose of 4 mg/kg of marbofloxacin was intravenously administered to each rabbit. Groups of rabbits (n = 5) then were sacrificed at 0.5, 1, 2, 4, 6, 10 and 18 hours after marbofloxacin administration. Samples of blood and ocular fluids (aqueous humor and vitreous) from both eyes were retrieved at the time of killing. Marbofloxacin concentrations were determined in specimens by a reverse-phase HPLC, and pharmacokinetic parameters were estimated by a noncompartmental method.

Results: Penetration of marbofloxacin into HA was 65% and 33% for the inflamed and control eyes respectively (P<0.001), while vitreous penetration was 47% and 34% for the inflamed and control eyes respectively (P<0.001). Likewise, values of marbofloxacin peak concentrations and areas under concentration-time curves (AUCs) in AH and vitreous were significantly higher in inflamed eyes compared to controls.

Conclusions: The pharmacokinetic findings show that relatively high ocular fluid levels of marbofloxacin can be achieved after intravenous administration. The better penetration that occurs in endophthalmitic eyes may improve the efficacy of this fluoroquinolone antibiotic in the treatment of intraocular infections.

PROGRESSIVE RETINAL ATROPHY IN THE MINIATURE DACHSHUND: A CLINICAL AND GENETICA STUDY

Keith C Barnett[1], CS Mellersh[2], NG Holmes[2], C Busse[1], K Miyadera[3] and DR Sargan[3]

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Purpose: A generalised form of Progressive Retinal Atrophy (PRA) was first recorded in the Miniature Long-haired Dachshund (MLHD) by Curtis and Barnett in 1993.This hereditary retinopathy was later shown, by electrophysiological and pathological examinations, to be a cone-rod dystrophy and termed cone-rod degeneration1 (cord1).Genetically it proved to be a simple recessive condition, with affected animals homozygous for a mutation in the RPGRIP1 gene. The wide variation of age incidence of this PRA, all confirmed by DNA analysis homozygous for the identical RPGRIP1 mutation, differed from the situation with other forms of PRA in other breeds.

Methods and Results: The original colony was markedly inbred and all affected animals showed the earliest ophthalmoscopic signs at approximately six months of age, with rapid progression to severely defective vision from between one and two years of age. Samples from over 1,600 MLHDs from a wide geographical distribution have been genotyped for the RPGRIP1 mutation. The overall frequency was 0.38. Unlike the original colony evidence from breeders and veterinary surgeons indicated the age of initial identification of clinical signs could be as late as 10-12 years. We speculate the most likely explanation for this variation is the presence of an additional mutation within a gene that modifies the progress of the disease. Alternatively, the RPGRIP1 mutation, comprising a 42 base pair insertion including a polynucleotide stretch of 27 A nucleotides, differs between individuals, probably in the number of inserted A's, and that this variation is responsible for the variation in age of onset and rate of progression. This variation in the age incidence is unlike the situation in other breeds with other forms of PRA and makes clinical diagnosis more difficult. However, the presence of this mutant gene confirms that cases are hereditary PRA. Another example of DNA analysis being the ultimate diagnosis and of assistance in clinical diagnosis. Evidence will be presented that the same RPGRIP1 mutation causes PRA in the UK in the Miniature Smooth-haired variety of Dachshund.

Conclusions: To record an autosomal recessive form of generalised PRA due to a cone-rod dystrophy in both the Miniature Long-haired and Miniature Short-haired Dachshund. All these cases carry two copies of an identical mutation, unlike the situation in the Irish Setter, which exhibits early and late forms of PRA caused by different mutations.

Support: The kennel Club Charitable Trust

CANINE RETINAL MACROPHAGES IMMUNOPHENOTYPE: A COMPARATIVE STUDY IN GLAUCOMATOUS EYES

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Purpose: Retinal macrophages (microglia and perivascular cells) were previously identified in normal canine retina. The purpose of this study was to evaluate the immunophenotype changes of these cell populations during glaucomatous conditions.

Methods: Retinal tissues were obtained from canine non-pathological donor eyes and from eviscerated and/or enucleated glaucomatous eyes. All samples were derived from Veterinary Teaching Hospital of the Autonomous University of Barcelona. Retinas were processed for immunofluorescence (IF) as whole-mount, using mouse anti canine monoclonal antibodies direct against CD45 (expressed by all lymphocyte population), CD11b (expressed by macrophages), CD11c (myeloid marker) and MHC class II (molecule related to antigen presentation). Samples were analyzed by bichannel confocal images. Image combining and processing were done with Leica confocal software (Leica Microsystems Heidelberg GmbH, Mannheim, Germany).

Results: An elevated number of CD45 cells were observed on samples derived from glaucomatous eyes. This group also presented an over expression of CD11b and MHC class II in relation with donor eyes. CD11c positive cells were only found in few cells of some of the glaucomatous retinas.

Conclusion: Glaucomatous retina showed increased immunostained cells concentration as well as over expression of CD11b and MHC class II. These differences in immunophenotype could be related to the activation status.

Discussion: As a macrophage like cell they could phagocytize death cells in attempt to restore tissue homeostasis, or as CNS derived microglias, could secrete TNFalpha, nitric oxide and neurotoxins that play an important role perpetuating ganglionar cell death. A functional study must be performed in attempt to identify the exact role of these cells in glaucomatous injury.

Support: Doctoral funding from Ministerio de Educaçaao do Brasil (CAPES)

FUNCTIONAL EVALUATION OF THE NEUROPROTECTIVE EFFECT OF GLATIRAMER-ACETATE (COPAXONE) ON THE RAT INNER RETINA DURING MATURATION AND AGING

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Purpose: In humans, inner retinal function undergoes age-related developmental and maturation changes, peaking at puberty and declining thereafter. In a previous study we demonstrated that similar age-related changes in inner retinal function take place in the rat. We further demonstrated that the neuroprotective drug, Copaxone (glatiramer-acetate, Teva LTD; Kfar-Saba, Israel), preserves inner retinal function after elevation of intraocular pressure in the rat glaucoma model. The aim of this study was to assess the neuroprotective effect of Copaxone treatment on inner retinal function during maturation and aging in the rat.

Methods: Three litters totaling 17 Lewis rat puppies were raised from birth in normal laboratory conditions (12hr light/dark regime). All rats were treated with Copaxone, SQ, at ages 1, 4, 7 and 11 weeks (33-100 µg, adjusted for body weight). Pattern electroretinogram (PERG) responses of both eyes were recorded during maturation and aging of the rats at 5, 7, 11, 14, 18, 22, 25, 29 and 33 weeks of age. Stimulus was a series of 5 shifting (6.1 Hz) checkerboard patterns of decreasing spatial frequency (0.368-0.023 cycles per degree, cpd), projected on the animal's fundus using a specially-modified direct ophthalmoscope. For recordings, rats were anesthetized with an intramuscular injection of ketamine (85 mg/kg) and xylazine (3 mg/kg).

Results: We observed a consistent and significant ($P<0.001$) increase of PERG amplitudes between 5 and 29 weeks of age, in response to all gratings. This is in marked contrast to the untreated control rats, where PERG responses peak at 11 weeks of age and thereafter begin an age-related decline.

Conclusions: The age-related decline in PERG amplitudes (inner retinal function) seen in control animals was not observed in rats treated with Copaxone. It seems that the injections of Copaxone had a beneficial effect on retinal function in the maturing rat, and the activity of the retina continues to increase instead of declining. Such treatment may therefore be used to delay age-related deterioration in visual function. Further studies should be performed to investigate the mechanism of protection.

EFFECTS OF TOPICAL ADMINISTRATION OF 1% BRINZOLAMIDE ON INTRAOCULAR PRESSURE IN CLINICALLY NORMAL HORSES

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Purpose: To evaluate the effect of topical administration of 1% brinzolamide on intraocular pressure (IOP) in clinically normal horses.
Methods: Twenty healthy adult horses (16 stallions, 4 mares) with normal ocular findings were included in the study population. The IOP was measured 5 times daily (7 AM, 11 AM, 3 PM, 7 PM and 11 PM) over 10 days. On days 1 and 2 baseline values were established. On days 3 to 5 one eye of each horse was treated with 1% brinzolamide (Azopt®, Alcon Pharmaceuticals Ltd., Hunenberg, Switzerland) every 24 hours immediately following the 7 AM measurement. On days 6 to 8 the same eye was treated with 1% brinzolamide every 12 hours (7 AM and 7 PM). The contralateral eye remained untreated and served as a control. All IOP measurements were accomplished with rebound tonometry using the Tonovet® tonometer (Tiolat Ltd., Helsinki, Finland) according to specifications of the manufacturer. Statistical analysis of the data was performed using linear regression, repeated measures analysis, as well as descriptive statistics for determination of confidence intervals.
Results: A significant decrease in IOP compared to baseline values was noted in both, the 24-hour dosing period as well as during the 12-hour dosing period.
Conclusions: 1% brinzolamide significantly decreased IOP in a once daily and a twice daily treatment protocol in normotensive eyes. These findings suggest that 1% brinzolamide may be a valuable drug for treatment of equine glaucoma.
Support: Alcon Pharmaceuticals Ltd., Hunenberg, Switzerland; Provet AG, Lyssach

News in Short

June 16 2007 Kristina Narfstrom, coeditor of "The Globe", will receive a Prize for Outstanding Scientific Achievement at a black tie event in Beverly Hills, LA, together with about 1000 participants, mainly from the celebrity world ! The organizer of this event is Helen Harris, a blind painter/artist, the founder of Retinitis Pigmentosa International.

The Vision Awards·

Sight is a sense that is both physical and mental. Each year the "Vision Awards" will concentrate its appreciation on a different organization or industry where the members have used their sight, foresight and insight to further the development of a product or service for the benefit and the advancement of humankind.

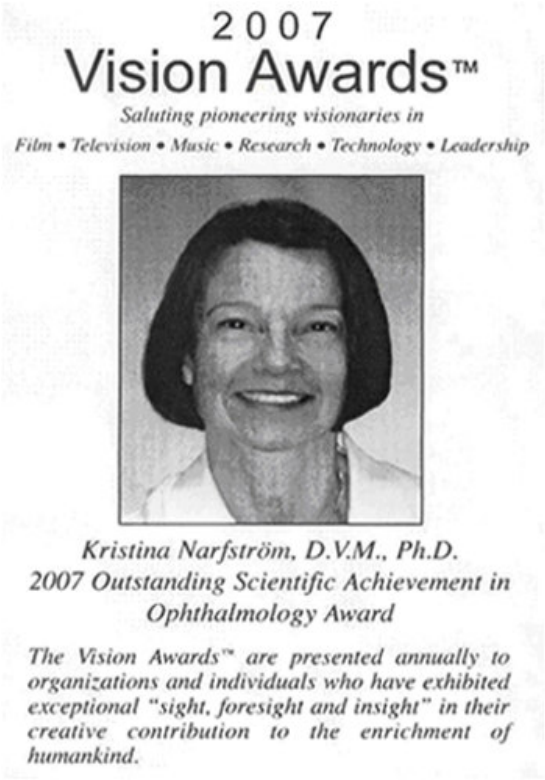
We intend to spotlight People of Vision, ones who have focused on dreams with passion and commitment, and subsequently nurtured them into reality.

The celebration of movies, television and music is something we all do every day. However, most of us don't take the time to appreciate how much these media both enrich and influence us in our daily lives.

Those who have been blinded by eye disease are aware of the "gifts" of movies, television, music, research, technology, leadership, and what they have meant to the world. In their honor, we have created the "Vision Awards."

For of all sad words of tongue or pen,
The saddest are these: "It might have been."
JOHN GREENLEAF WHITTIER

Cover painting by blind artist Helen Harris.



Useful Addresses

American College of Veterinary Ophthalmologists (ACVO): **www.acvo.org**

American Society of Veterinary Ophthalmology (ASVO): **www.asvo.org**

European College of Veterinary Ophthalmologists (ECVO): **www.ecvo.org**

European Society of Veterinary Opthalmology (ESVO): **www.esvo.org**

Japanese College of Veterinary Ophthalmologists (JCVO): **www.jscvo.jp**

British Association of Veterinary Ophthalmologists (BrAVO): **www.bravo.org.uk**

European School for Advanced Veterinary Studies: **www.esavs.net**

Continuing Education Courses in the United Kingdom: **www.bsava.com**

International Veterinary Information Service (IVIS): **www.ivis.org**

LatinoAmerican College of Veterinary Opthalmologists: **www.clov.org**

Nice home page in German: **www.augentierarzt.at**

ISVO will continue to e.mail TheGlobe for free twice - three times a year. If you don't want to receive it, if you like to change e.mail address or add more addresses, please e.mail a note to info@retvetcorp.com