



AVHTM Newsletter

Special Events of Interest:

VECCS Spring Symposium
Royalton Negril
Negril, Jamaica.
March 21-24, 2024.

ACVECC VetCOT Veterinary Trauma & Critical Care Symposium
Las Vegas, Nevada
April 12-14, 2024

- Held in conjunction with the Trauma, Critical Care & Acute Care Surgery Conference
April 15-17, 2024

Translational Summit on Coagulopathies across Species Graduate Hotel
Chapel Hill, North Carolina
April 24-25, 2024

- Running alongside the 11th Symposium on Hemostasis: Coagulation and Platelet Biology at the Intersection of Health and Disease
Carolina Inn
Chapel Hill, NC
April 25-27, 2024

A 501(c)(3) nonprofit professional association

Volume 8, Issue 1

Welcome to the Winter AVHTM Newsletter

Welcome to our latest AVHTM newsletter. We have included information regarding our appeal to help animals affected by the devastating wildfires in Maui and a round-up of our lectures at IVECCS. Pre-cursor-targeted immune mediated anemia can be a tricky disease to diagnose and treat, so a recent publication in the area is very welcome and our newsletter offers a nice summary from its first author. We also have a report on a study looking at enrolment of canine and feline donors into a blood bank. Thinking about studies, we will be having an AVHTM research meeting soon, so please do come and get involved. Finally, we have a round up of all the latest literature in the field. We hope you enjoy it. Happy holidays to all our wonderful members!

AVHTM research meeting - January 9th, 2024: 12 pm EST Led by Liz Rozanski

Research is more fun with a team. Let's talk about projects we can do as a group or ideas we want input on! We'll be sending a link for the meeting in the new year. If you have an idea you want to talk about, please forward it to Elizabeth.Rozanski@tufts.edu.

Join the Zoom call: <https://tufts.zoom.us/j/95536031261?pwd=VThqc3h4ckVxYTZkeWMvaHNMR1cwQT09>

Join us for our Annual SIG at the ACVIM Forum 2024

June 07 2024, 6:30 pm

Brit's Pub

1110 Nicollet Mall

Minneapolis Minnesota

Report from IVECCS 2023

Sarah Musulin

The 2023 International Veterinary Emergency and Critical Care Symposium (IVECCS) held in Colorado was a tremendous success with over 6000 attendees. Among a vast array of emergency and critical care lectures, the AVHTM sessions were well attended and received. AVHTM has been an IVECCS affiliate since 2016. The AVHTM lectures included:

- “What is New regarding Treatment and Prognosis of Feline Aortic Thromboembolism?”
Speaker – Julien Guillaumin, Docteur Veterinaire, DACVECC, DECVECC
- “Feline Transfusions: From In-house Donor Collection to Blood Product Administration”
Speaker – Amanda Cavanagh, DVM, DACVECC
- “Autotransfusion and Xenotransfusion: Life-saving Alternatives to Common Blood Products”
Speaker – Virginie Wurlod, DVM, MSs, DACVECC, DECVECC
- “Procoagulant Platelets: How Platelets Die to Resist Antiplatelet Drugs and Promote Coagulation”
Speaker – Ron Li, DVM, MVetMed, PhD, DACVECC
- “Immunothrombosis in IMHA: Why it Happens and How to Tackle It?”
Speaker – Avalene Tan, BVSc, PGcertSci, DACVECC
- “Advanced Cell Based Therapies: From Creation to Clinic”
Speaker – Tracy Webb, DVM, PhD

Participating in the AVHTM Google Group is a benefit of membership. Members whose memberships have lapsed have a 30-day grace period to renew their membership before they are removed from the group. Be sure to keep your membership active to continue participating in our interactive online discussions!

Click here to



[JOIN/RENEW](#)



SAVE THE DATE!

June 7, 2024

RSVP will OPEN soon at avhtm.org

Fundraising for Animal Victims of Maui wildfires

AVHTM is reaching out to you with a request of support for the animal victims who've been affected by the devastating wildfires in Maui. These fires have displaced countless numbers of animals from their homes; many are injured and in need of help. Click on the "Donate" button below if you'd like to help.

AVHTM is wanting to offer our support to relieve the suffering of animal victims and their caretakers on Maui and that is why we have chosen Maui Humane Society as the beneficiary of our fundraising campaign.

Your donation will directly support:

- Emergency and ongoing medical care and rehabilitation from the fires
- Temporary shelter and food
- Rescue and rehabilitation allowing animals a chance to recover



You can help by making a donation of any amount and by spreading the word with your friends, family, colleagues, and social networks.

Thank you for your generosity, compassion, and commitment to make the world a better place for all beings. With sincere gratitude, AVHTM Board of Directors thanks you for any contribution you can make.

Clinical findings, treatment and outcome in cats diagnosed with precursor-targeted immune-mediated anaemia in the UK: 30 cases (2010–2021)

Alba Maldonado-Moreno, Mayank Seth, Paola Monti, Rachel Miller

Precursor-targeted immune-mediated anaemia (PIMA) is an uncommon disease characterised by persistent non-regenerative anaemia secondary to immune-mediated destruction of the erythroid precursors. Although some research has been made in dogs over recent years, the current literature for feline PIMA is very scarce, with only a previous retrospective study published including 15 feline cases. With such a limited data, it is currently difficult to determine the clinical outcomes and prognosis of cats diagnosed with this condition.

On preliminary search of our laboratory data, a non-regenerative anaemia was found to be the main reason for bone marrow sampling in our feline population (37/77 cats over 11 years). Of those anaemic cats, PIMA was found to be the most common diagnosis (30/37 cats). Given the high prevalence of the disease within our population, we designed the current retrospective study aiming to investigate on the clinical findings, survival, treatments, and outcomes of cats diagnosed with PIMA.

The study included a total of 30 cats, of which 19 were females and 11 were males. The majority of cats (25/30) presented with an haematocrit below 0.15 L/L (reference range 0.29 – 0.46), and concurrent cytopenias were frequently found (18/30 cats). Of 30 cats, bone marrow analysis was compatible with erythroid hyperplasia in 24 (80%) cats, erythroid hypoplasia in four (13%) cats and pure red cell aplasia in two (6%) cats.

Most cats received blood products (26/30 cats): either one transfusion (14/30 cats), two transfusions (11/30) or three transfusions (1/30 cats). Initial immunosuppressive treatments included prednisolone alone (26/30 cats) or prednisolone in combination with cyclosporine (3/30 cats).

The majority of cats (26/30 cats) survived to discharge, and 23/30 cats were alive 30 days after diagnosis. A total of 18/30 cats (60%) responded to treatment and reached a normal haematocrit at a mean of 28 days from diagnosis. The haematocrit at presentation and the presence of concurrent cytopenias were not found to be statistically different between responders and non-responders, and therefore our data did not suggest a worse prognosis based on those parameters.

Clinical findings, treatment and outcome in cats diagnosed with precursor-targeted immune-mediated anaemia in the UK: 30 cases (2010–2021)

Alba Maldonado-Moreno, Mayank Seth, Paola Monti, Rachel Miller

The median survival time was 140 days, however long survival times were reported (up to 3930 days). Ten cats were still alive at the end of the study period and had a median follow-up time of 1271 days. Relapses occurred frequently within the responding cats (14 of the 18 responding cats), however most of the relapsing cats responded to treatment modification (10/14 cats responded). Treatments modifications at the time of relapse included prednisolone alone (9/14 cats) and prednisolone combined with either ciclosporin (1/14 cats), chlorambucil (1/14 cats) or mycophenolate (2/14 cats).

As a summary, our study showed that the majority (60%) of cats diagnosed with PIMA responded to immunosuppressive treatment and could achieve long survival times (1-3930 days). Although relapses are frequent (77%), most relapsing cats will respond to treatment modification (76%) and therefore ongoing treatment can be justified at those points. We hope that the data presented within this study helps providing further information regarding this uncommon condition in cats.

Why some canine and feline blood donors do not make the cut: A cohort study – Marjanne Descamps and Karen Humm

Report by Karen Humm

This retrospective study was based on data from the canine and feline blood bank at the small animal referral hospital of the Royal Veterinary College (RVC) in the UK. All our donors are pets living with their owners, some of whom work for the RVC and many of whom don't. I often spoke with our transfusion medicine service nurses about how hard it could be to tell a donor owner that the pet they proudly bought in to be a donor was not suitable. This could be for 2 reasons, either due to the fact their temperament just wasn't right, or because they had a health condition that the owner was unaware of that was discovered through the routine tests we performed. Although I thought the former was not very important, the nurses told me that some owners found it quite hard to deal with, feeling that their pet was deemed poorly behaved and viewed negatively. And obviously the latter could be very hard for owners to come to terms with. Marjanne Descamps (a final year vet student at the time) and I therefore decided to investigate how frequently this happened.

Marjanne performed the data collection, looking at all donors enrolled on our programme between 2014 and 2019. During that period 307 dogs and 125 cats were presented as prospective donors of which 16 dogs (5.2%) and 26 cats (20.8%) were rejected at the initial sign-up appointment. 12/16 dogs were rejected for temperament reasons and 4/16 for medical reasons, whereas 8/26 cats were rejected for temperament reasons and 18/26 for medical reasons. The medical reasons varied, with no marked theme in dogs, but the most common in cats were hypertrophic cardiomyopathy (9/18), positive *Candidatus mycoplasma haemominutum* PCR titre (3/18) and feline leukaemia virus antigen positivity (3/18).

We would have liked to have determined what percentage of cats and dogs left the donor program prior to retirement age. However, this wasn't possible as we did not have a sufficiently long time span of records. We did look at the donors that left the donor programme early though (114 dogs and 48 cats over the study period) and found that the most common reason for this was temperament (49/114 (42%) dogs and 18/48 (37.5%) cats).

Why some canine and feline blood donors do not make the cut: A cohort study – Marjanne Descamps and Karen Humm

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However, 'owner reasons' were responsible for 36/114 (31.6%) dogs and 17/48 (35.4%) cats leaving early. These 'owner reasons' were generally moving from the area or lack of response to repeated invitations to attend a donation appointment.

We have been able to use this data to inform prospective donor owners that we may discover a disease in their pet when they enrol and how likely this is. We can also tell them about the fairly high frequency of pets not having a compatible temperament for donation. This means owners can come to their first appointment informed about any negative outcomes that could occur. Going forward, we want to look at whether there is a way to decrease the likelihood of losing donors through owners not responding to invitations to donate. The subjectivity of a temperament assessment means this aspect may differ between blood banks, and infectious diseases will likely differ between areas and countries too. However, we hope this study is useful to other blood banks, to help with planning donor numbers and communicating with owners pre-screening.

Upcoming Events

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**AVHTM's RSVP will open soon
for our annual SIG on June 7.**

Recently Published Articles

- **Equine Platelet-Rich Plasma.** McCarrel TM. Vet Clin North Am Equine Pract. 2023 Dec;39(3):429-442. doi: 10.1016/j.cveq.2023.06.007. Aug 5. PMID: 37550126
- **Future prospects for the clinical transfusion of pig red blood cells.** Chornenkyy Y, Yamamoto T, Hara H, Stowell SR, Ghiran I, Robson SC, Cooper DKC. Blood Rev. 2023 Sep;61:101113. doi: 10.1016/j.blre.2023.101113. PMID: 37474379
- **Clinical Assessment of Primary Hemostasis: A Review.** Haginoya S, Thomovsky EJ, Johnson PA, Brooks AC. Top Companion Anim Med. 2023 Sep 9;56-57:100818. doi: 10.1016/j.tcam.2023.100818. PMID: 37673175
- **Coagulation Disorders, Testing, and Treatment in Exotic Animal Critical Care.** Perrin KL. Vet Clin North Am Exot Anim Pract. 2023 Sep;26(3):751-769. doi: 10.1016/j.cvex.2023.05.006. PMID: 37321935
- **Blood product usage and factors associated with transfusions in cats with hemoperitoneum: 33 cases (2018-2022).** Bunnell N, Blong A, Kundu D, Mochel JP, Walton R. Front Vet Sci. 2023 Jul 13;10:1204864. doi: 10.3389/fvets.2023.1204864. eCollection 2023. PMID: 37520000
- **Why some canine and feline blood donors do not make the cut: A cohort study.** Descamps M, Humm K. Vet Rec. 2023 Jul 22;193(2):e2993. doi: 10.1002/vetr.2993. Epub 2023 May 14.
- **Investigation of Platelet Function Analyzer 200 platelet function measurements in healthy cats and cats receiving clopidogrel.** Kornya MR, Abrams-Ogg ACG, Blois SL, Wood RD. J Vet Diagn Invest. 2023 Aug 30;10406387231197440. doi: 10.1177/10406387231197440. Online ahead of print. PMID: 37646490
- **Transfusion-associated hyperkalaemia in an anaesthetized dog following infusion of packed red blood cells.** Felisberto R, Tayari H. Vet Anaesth Analg. 2023 Sep 16:S1467-2987(23)00146-0. doi: 10.1016/j.vaa.2023.09.001. PMID: 37838580
- **The effect of two platelet-rich plasma aspiration techniques on plasma cellular concentrations using a double syringe gravitational centrifugation system.** Jones RL, Frederick SW, Cross AR. Vet Surg. 2023 Jul 21. doi: 10.1111/vsu.14003. PMID: 37482928
- **Lower centrifugation speed and time are positively associated with platelet concentration in a canine autologous conditioned plasma system.** Goodale MB, Phelps HA, Barnhard JA, Shoben AB, Brunke MW. J Am Vet Med Assoc. 2023 Aug 4:1-6. doi: 10.2460/javma.23.04.0218. PMID: 37541674
- **Retrospective evaluation of indications, transfusion protocols, and acute transfusion reactions associated with the administration of lyophilized canine albumin: 53 cases (2009-2020).** Terradas Crespo E, Martin LG, Davidow EB. J Vet Emerg Crit Care (San Antonio). 2023 Sep-Oct;33(5):567-576. doi: 10.1111/vec.13316. Epub 2023 Aug 2. PMID: 37528743
- **Evaluation of leukocyte depletion of packed red blood cell units and impact on clinically observed transfusion reactions.** Steblaj B, Galli J, Torgerson P, Kutter A. Front Vet Sci. 2023 Sep 28;10:1217575. doi: 10.3389/fvets.2023.1217575. eCollection 2023. PMID: 37841457
- **Assessment of the quality of the healing process in experimentally induced skin lesions treated with autologous platelet concentrate associated or unassociated with allogeneic mesenchymal stem cells: preliminary results in a large animal model.** Iacopetti I, Perazzi A, Patrino M, Contiero B, Carolo A, Martinello T, Melotti L. Front Vet Sci. 2023 Jul 25;10:1219833. doi: 10.3389/fvets.2023.1219833. eCollection 2023. PMID: 37559892
- **Extended sample storage for platelet function testing in healthy dogs.** Dickinson M, Abrams-Ogg A, Blois SL, Wood RD, Monteith G. Vet Clin Pathol. 2023 Sep;52(3):402-411. doi: 10.1111/vcp.13226. Epub 2023 Jun 29. PMID: 37385948
- **Determination of Coagulation Parameters by Whole Blood Dynamic Viscoelastic Coagulometry in Strigiformes.** Leclerc LA, Vergneau-Grosset C, Fitzgerald G, Brandão J, Gara-Boivin C. J Avian Med Surg. 2023 Sep;37(2):99-107. doi: 10.1647/22-00046. PMID: 37733449
- **Frequency of *Dirofilaria immitis* infection in blood donor dogs of the Rio de Janeiro state.** Gonçalves GP, Xavier SG, Lima NDC, Bendas AJR. Braz J Vet Med. 2023 Oct 11;45:e002223. doi: 10.29374/2527-2179.bjvm002223. eCollection 2023. PMID: 37868091



We're on the web!

www.avhtm.org

AVHTM

PO Box 1234

Sahuarita AZ 85629-1004

AVHTM is an IRS approved 501(c)(3) nonprofit professional association composed of veterinarians, hematologists, academics, veterinary technicians, blood bankers, and interested public who desire to further scientific advances in transfusion medicine and veterinary hematology.

We engage in veterinary research, promote industry standards, develop guidelines for canine and feline blood collection and processing, and publish scientific research in peer-reviewed publications.

Visit us online to learn more about AVHTM!

MEMBERSHIP BENEFITS

As an AVHTM member, you are eligible for the following:

- Reduced IVECCS registration fee (veterinarians save \$100 and technicians save \$25!)
- Access the a "Members Only" section of the AVHTM website, which includes access to:
 - o Other AVHTM profiles
 - o PubMed articles
 - o Forum for posting questions, cases, and research
- Ability to ask and answer questions posted to the AVHTM members-only Google group.

Please feel welcome to share this newsletter with interested colleagues and encourage them to become an AVHTM member!