



AVHTM Newsletter

A 501(c)(3) nonprofit professional association

Volume 9, Issue 1

Upcoming Events:

VECCS Spring Symposiums

Hilton Head, South Carolina
March 20 - 23, 2025

Monte Carlo, Monaco
April 3 - 6, 2025

ACVECC VetCOT Veterinary Trauma & Critical Care Symposium

Las Vegas, Nevada
April 11 - 13, 2025

EVECC Congress
Dubrovnik, Croatia
June 5 - 7, 2025

ACVIM Forum with AVHTM Special Interest Group (SIG) dinner on June 20 (see p. 2)
Louisville, Kentucky
June 19 - 21, 2025

IVECC Symposium
San Diego, California
September 2 - 8, 2025

Welcome to the Spring 2025 AVHTM Newsletter

This newsletter has information on our ACVIM lectures and Special Interest Group (SIG) meeting associated with the conference. We would love to see you there, so please do register to join us! Included in this issue we also have articles from the authors of two recent exciting papers. Most importantly, we have a piece celebrating the life of Suzanne Reese of DMS Laboratories, Inc. Many may have had the good fortune of benefiting from her expertise and advice in immunohematology. Sadly, Suzanne lost her battle with cancer this December.

Suzanne M. Reese **January 30, 1956 -** **December 21, 2024**

It is with much sadness, we inform you that Suzanne M. Reese of Phoenix, Arizona passed away on December 21, 2024 after a battle with ovarian cancer. Suzanne was raised in New Jersey and worked in the legal profession until 1994 when she and her family relocated to Arizona, where she pursued her interest in veterinary medicine. She began working with Vetazyme Corporation to develop innovative products for in-clinic diagnostic use, and became its President in 2010. Vetazyme is the manufacturing affiliate of DMS Laboratories, Inc., and Suzanne worked for many years with its founder, Nicholas A. Gallo, and a dedicated team to develop a line of hematologic testing products under the RapidVet® label. She was elected Vice President of Technical and Manufacturing Operations for DMS in 2011, and became its President in 2023, following the death of Mr. Gallo. Suzanne inspired and continued to lead her colleagues and staff in their pursuit of excellence in serving the global veterinary profession. She will be dearly missed.



Suzanne is survived by her loving husband of 48 years, Barry; their daughter, Alison (William); granddaughters, Sophie and Hannah; mother, Nancy, and many other family members.

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AVHTM at the ACVIM Forum — Save the date!

We have the following lectures in our AVHTM stream:

Lectures will be in-person on **Saturday, June 21st**. Please note the Saturday schedule – it was AVHTM’s turn to get slotted on the last day of ACVIM. Please plan to stay for all of ACVIM and attend!

- 1) Anemia and transfusions on a budget: Spectrum of Care approach to blood loss. Emily McCobb, DVM, MS, DACVAA (Endowed Chair in Accessible Veterinary Care, UC Davis) and Liz Rozanski, DVM, DACVIM (SAIM), DACVECC (Associate Professor of Emergency and Critical Care, Tufts University)
- 2) The changing landscape of antithrombotic medications in veterinary medicine: updates from CURATIVE. Ben Brainard, VMD, DACVAA, DACVECC (Director of Clinical Research, Gunst Professor in Small Animal Critical Care, University of Georgia)
- 3) A JAK’ed up hematocrit: updates on erythrocytosis in companion animals. Ann Hohenhaus, DVM, DACVIM (Senior Veterinarian and Director of Pet Health Information, Schwarzman Animal Medical Center)
- 4) Individualized approach to anemia in feline chronic kidney disease. Jessica Quimby, DVM, PhD, DACVIM (Professor of Small Animal Internal Medicine and Vice Chair of Research, The Ohio State University)

Our SIG meeting features Dr. Georgina Hall MA VetMB PGCert MVetMed DACVECC MRCVS (in-person), Consultant in Emergency and Critical Care at DWR Veterinary Referrals and Dr. Karen Humm MA VetMB CertVA DACVECC DECVECC FHEA MRCVS (virtual), Professor in Transfusion, Emergency and Critical Care Medicine at the Royal Veterinary College talking about **‘Do we need to change TRACS? Questions generated by application of the consensus statement to a prospective patient population’**.

We are expecting a lively and productive discussion!

Join us for dinner and drinks at the AVHTM SIG during the ACVIM Forum

June 20, 2025, Louisville, Kentucky.

The venue is Porch Kitchen & Bar, 331 S 3rd St, Louisville KY 40202 on Friday, June 20, 2025, 18:30 - 21:30 pm CT. We are thankful to [Alvedia Laboratories](#), and [HemoSolutions](#) for their generous support of the evening.

This SIG is exclusively available for AVHTM members and includes dinner and drinks. There are still some spaces left so book quickly. There is a charge of \$47 (or \$12 for trainees), but attendance will mean that your AVHTM membership renewal cost (current or future depending on your membership status) is decreased by the same amount, essentially meaning a free dinner with excellent company and CE!

Register at: www.avhtm.org/acvim-sig/



Feline Blood Donation: Description and adverse reactions from 29201 donation events between 2019 and 2023

Feline blood donation can be lifesaving, but in some countries (such as the United Kingdom) availability of blood is very limited, undoubtedly affecting clinical outcomes. However, blood banks in other countries have extensive experience of collecting feline donations. We wanted to analyse the large amount of data collected by the BSA Blood Bank in Portugal to look at the frequency and type of adverse reactions they encountered when collecting blood from cats, and identify any associated factors, to improve donor safety.

We identified a large number of donations thanks to the great record keeping at the blood bank and enlisted a fabulous biostatistician from Surrey University to tackle the data. Our key findings included the low number of adverse events (0.29%), most of which were caregiver-reported (so occurring once home within the 5 days after donation and mainly behavioural or lethargy). Acute adverse effects were most commonly cardiorespiratory (likely vasovagal) and resolved with supportive care (fluid therapy most commonly). Importantly, the only parameter that significantly increased the risk of an adverse reaction was conscious donation, suggesting that sedation is preferable for feline blood donation. The data did suggest that lighter cats when sedated for donation could be at increased risk of adverse reaction, but the association was not significant.



Take home messages are that adverse reactions to donation in cats are rare, sedation may reduce risk of adverse reaction and limiting donation volume in lighter cats is recommended. Additionally, reducing donor stress with cat-friendly handling is vital for donor mental wellbeing. Informing owners how to reintroduce cats only once the donor has settled and acquired the home scent profile may reduce behavioural issues post-donation.

Evaluation of the effect of fresh-frozen plasma transfusion on circulating hyaluronic acid concentration in critically ill dogs: a pilot study

The endothelial glycocalyx (EG) has a key role in maintaining homeostasis in the body. Its degradation is believed to contribute to the progression of organ dysfunction in conditions such as sepsis and hemorrhagic shock. Intravenous fluid therapy with crystalloids has also been suggested as a cause of EG degradation. Consequently, liberal crystalloid fluid therapy can lead to interstitial edema, hypoperfusion, coagulopathy, and dysregulated systemic inflammation. Fluid strategies that both optimize macrohemodynamic parameters and support the EG and microcirculation are needed. Experimental studies and human clinical trials have shown that fresh frozen plasma (FFP) can have a protective and restorative effect on the EG but data in veterinary patients is lacking.

This prospective observational study used hyaluronic acid (HA), one of the EG glycosaminoglycans, as a biomarker of EG degradation. Degradation of the EG leads to HA shedding causing increased plasma

Evaluation of the effect of fresh-frozen plasma transfusion on circulating hyaluronic acid concentration in critically ill dogs: a pilot study

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HA concentration. Since HA has a short half-life in circulation, resolution of EG degradation is expected to result in a quick decrease in plasma HA concentration. Plasma HA concentration was measured in critically ill dogs before and after an FFP transfusion, following the hypothesis that HA concentration would decrease following the transfusion if FFP prevented EG degradation. Plasma HA concentration was measured within 1 hour before starting the FFP transfusion (T0), at 10 minutes post-transfusion (T10), and at 90 minutes post-transfusion (T90). The concentration of HA in the FFP unit was also measured, after validating the use of a commercial ELISA kit for measurement of HA concentration in plasma samples anticoagulated with citrate-phosphate-dextrose (CPD).

This study was designed as a pilot study and included a total of 12 dogs, who received FFP for various indications (5 dogs with hemorrhagic shock, 5 dogs with hypovolemic shock and hypoproteinemia, and 2 dogs with coagulopathy). The median \pm IQR volume of FFP transfused was 9.3 ± 2.2 mL/kg. There was no statistically significant difference between HA concentrations at T0 and T10, between T0 and T90, and between T10 and T90. There was no statistically significant effect of the volume of FFP transfused, the cumulative volume of other intravenous fluids, or the HA concentration in the FFP unit on the HA change following FFP transfusion.

This study demonstrated the feasibility of measuring HA before and after FFP transfusion to investigate the effects of FFP on the EG. It also validated the use of a commercial ELISA to measure HA in FFP units. As a pilot study, it did not demonstrate an effect of FFP on EG degradation and there is not currently enough evidence to recommend the use of FFP in patients at risk of EG degradation. Several confounding factors (such as the volume and duration of the FFP transfusions, the underlying disease processes, the administration of other intravenous fluids and medications, and comorbidities) could have influenced the results. Controlled studies investigating the effect of FFP transfusion on EG degradation in a larger population of dogs are needed to help guide FFP transfusion strategies in critically ill patients.

Recently Published Articles

- **Coagulation status of immune-mediated polyarthritis in dogs.** Packham LAF, Black V. *J Small Anim Pract.* 2025 Feb 25. doi: 10.1111/jsap.13838. Online ahead of print. PMID: 39995340
- **Cytological and histopathological bone marrow findings in dogs with natural *Babesia rossi* infection.** Bumby MM, Clift SJ, Hooijberg EH, Leisewitz AL. *J S Afr Vet Assoc.* 2024 Oct 29. doi: 10.36303/JSAVA.626. Online ahead of print. PMID: 39995030
- **Case report: Suspected propofol associated Heinz body anemia in five mechanically ventilated dogs: a historical case series.** Ireland EM, Sharp CR, Leister EM, Boyd S. *Front Vet Sci.* 2025 Feb 3;12:1500464. doi: 10.3389/fvets.2025.1500464. eCollection 2025. PMID: 39963275 **Free PMC article.**
- **Unveiling the Interplay Between Dendritic Cells and Natural Killer Cells as Key Players in *Leishmania* Infection.** Valério-Bolas A, Meunier M, Rodrigues A, Palma-Marques J, Ferreira R, Cardoso I, Lobo L, Monteiro M, Nunes T, Armada A, Antunes WT, Alexandre-Pires G, da Fonseca IP, Santos-Gomes G. *J Immunol Res.* 2025 Feb 10;2025:3176927. doi: 10.1155/jimr/3176927. eCollection 2025. PMID: 39963187 **Free PMC article.**

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Recently Published Articles - continued

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- **Evaluation of the prevalence of the dog erythrocyte antigen 1 blood type in dogs of Sydney.** Reynolds RM, Cooper JL, Eurell TE. *Aust Vet J.* 2025 Feb 1.
- **Abdominal fluid score as a predictor of transfusion needs and outcome in cats following trauma.** Langlois TJ, Mastrocco A, Prittie JE, Weltman JG. *J Vet Emerg Crit Care.* 2025 Jan-Feb;35(1):28-33. Epub 2025 Jan 22.
- **Comparison of tissue factor-activated versus citrated native thromboelastography in dogs with suspected hemostatic abnormalities.** Keith MT, Chalifoux NV, Buriko Y. *J Vet Diagn Invest.* 2025 Jan;37(1):55-62.
- **Antibacterial Effect of Canine Leucocyte Platelet-Rich Plasma (L-PRP) and Canine Platelet-Poor Plasma (PPP) Against Methicillin-Sensitive and Methicillin-Resistant *Staphylococcus pseudintermedius*.** Perego R, Meroni G, Martino PA, Spada E, Baggiani L, Proverbio D. *Vet Sci.* 2024 Dec 20;11(12):670.
- **High-Yield Preparation and Characterization of Feline Albumin with Antioxidant Properties and In Vivo Safety.** Deng M, Wu Q, Yang N, Teng D, Wang Y, Hao Y, Lu H, Mao R, Wang J. *Int J Mol Sci.* 2024 Dec 5;25(23):13095. (<https://doi.org/10.3390/ijms252313095>)
- **Washing machine-induced trauma and coagulopathy in a kitten.** Lee EL, Bailin HG. *Can Vet J.* 2024 Dec;65(12):1222-1227.
- **Acid-base and electrolyte changes in dogs after packed red blood cell transfusion.** Bou P, Mesa I, Ferreira RF, Torrente C, Manzanilla EG, Bosch L. *Vet Clin Pathol.* 2024 Dec;53(4):392-398. (<https://doi.org/10.1111/vcp.13379>)
- **Evaluation of the Trauma-Associated Severe Hemorrhage score as a predictor of transfusion in traumatized dogs.** Delgado A, Prittie J, Mastrocco A, Weltman J. *J Vet Emerg Crit Care.* 2024 Nov-Dec;34(6):610-615.
- **European EHBP1L1 Genotyping Survey of Dyserythropoietic Anemia and Myopathy Syndrome in English Springer Spaniels.** Østergård Jensen, S.; Kehl, A.; Giger, U. *Vet. Sci.* 2024, 11, 596.
- **Biliverdinuria Caused by Exonic BLVRA Deletions in Two Dogs with Green Urine.** Furrow, E.; Peralta, J.A.; Moore, A.R.; Minor, K.M.; Guerrero, C.; Hemmila, C.R.; DiCiccio, V.; Cullen, J.N.; Friedenber, S.G.; Giger, U. *Genes* 2024, 15, 1561.
- **Comparison of viscoelastic coagulation parameters, blood loss and surgical time between asymptomatic heartworm antigen-positive and negative dogs presented for elective gonadectomy.** Newmans BK, Fudge JM, Clarkin-Breslin R, Silverstein DC, Verocai GG. *J Small Anim Pract.* 2025 Feb 13. doi: 10.1111/jsap.13834. Online ahead of print. PMID: 39945119
- **Evaluation of different cross-matching techniques in comparison to the tube agglutination method in dogs.** Herter L, Weingart C, Merten N, Bock N, Kohn B. *Schweiz Arch Tierheilkd.* 2025 Feb;167(2):109-119. doi: 10.17236/sat00345. PMID: 39943852 **German.**
- **Urine Neutrophil Gelatinase-Associated Lipocalin in Non-Associative Immune Mediated Hemolytic Anemia: A Prospective Controlled Study in 22 Dogs.** Lantzaki V, Fulton EA, McLaughlin M, Bennet ED, Conway EA, Ridyard AE. *J Vet Intern Med.* 2025 Mar-Apr;39(2):e70002. doi: 10.1111/jvim.70002. PMID: 39871050
- **Determination of hematologic reference intervals for free-living King vultures (*Sarcoramphus papa*).** Basso E, Chulla DR, Tubelli E, Wicks S, Flatt E, Beirne C, Whitworth A. *Vet Clin Pathol.* 2025 Feb 2. doi: 10.1111/vcp.13415. Online ahead of print. PMID: 39894936
- **Development of criteria to optimize manual smear review of automated complete blood counts using a machine learning model.** Hayes JM, Hayes MR, Friedrichs KR, Simmons HA. *Vet Clin Pathol.* 2024 Dec 5. doi: 10.1111/vcp.13400. Online ahead of print. PMID: 39638966
- **A clinical and hematologic approach to basophilia in dogs, cats, and horses.** Mau A, Keller SM, Kol A. *Vet Clin Pathol.* 2024 Dec 1. doi: 10.1111/vcp.13404. Online ahead of print. PMID: 39617948
- **Harnessing artificial intelligence for enhanced veterinary diagnostics: A look to quality assurance, Part I Model development.** Pacholec C, Flatland B, Xie H, Zimmerman K. *Vet Clin Pathol.* 2024 Dec 5. doi: 10.1111/vcp.13401. Online ahead of print. PMID: 39638756
- **Harnessing artificial intelligence for enhanced veterinary diagnostics: A look to quality assurance, Part II External validation.** Pacholec C, Flatland B, Xie H, Zimmerman K. *Vet Clin Pathol.* 2025 Jan 22. doi: 10.1111/vcp.13407. Online ahead of print. PMID: 39843399



We're on the web!

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AVHTM

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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!

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!

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JOIN/RENEW

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!