



# AVHTM Newsletter

## Special Events of Interest:

- **ACVECC Post Graduate Review "Advances in Trauma" and Coagulation in Trauma"**  
March 24-25 2022  
Las Vegas NV
- **ACVECC VetCOT Veterinary Trauma & Critical Care Symposium**  
March 25-27 2022  
Las Vegas NV.  
The conference will be held in conjunction with the ACVECC PGR (see above) and the Trauma, Critical Care & Acute Care Surgery Conference (March 28-30, 2022)
- **VECCS Spring Symposium**  
March 24-27 2022  
Puerto Rico
- **ACVIM Hematology and Immunology: A Comprehensive Clinical Update Virtual and On-Demand**  
March 28-30, 2022
- **EVECC Congress 2022 with AVHTM stream**  
June 2-4, 2022  
Ghent Belgium
- **2022 ACVIM Forum Hybrid Event**  
June 22-25 with limited Livestream  
Austin TX

A 501(c)(3) nonprofit professional association

Volume 6, Issue 1

## Welcome to the Spring AVHTM Newsletter

Welcome to the Spring AVHTM Newsletter. We have details about the new VetLit initiative founded by Dr Simon Cook to help us all keep on top of the veterinary literature (which I have found so useful as a weekly check-in point). We also have a great overview from Dr Brainard of a study that he was involved with, looking at a question that many of us have pondered I am sure. We've got exciting things to look forward to, including the immune thrombocytopenia guidelines. And, to finish our newsletter off as always, Ken Yagi had compiled all the pertinent literature for you to peruse at your leisure.

### AVHTM Presentation Topics at ACVIM Forum 2022

- **Diagnosis and Management of Venous Thromboemboli - a Veterinary Perspective:** Marilyn Dunn (on demand)
- **Diagnosis and Management of Venous Thromboemboli - an MD's Perspective:** Stephan Moll (Friday, 24th June 1:30 pm)
- **Hunting for the Cause of a Novel Pancytopenia in Cats in the UK:** Karen Humm and Barbara Glanemann (on demand)
- **Discovery of a Novel Severe Fever and Thrombocytopenia Virus in Cats in Japan:** Claire Sharp (Friday, 24th June 2:45 pm)

#### AVHTM SIG June 24th 6:00 pm at Malaverde Restaurant, downtown Austin

Vexing viscoelastograms and tricky tranexamic tribulations  
John Thomason, Elizabeth Rozanski and Ian DeStefano

## Watch this space!

There is a lot to look forward to in terms of upcoming events, including the AVHTM SIG at ACVIM and the AVHTM streams at both ECVECC and ACVIM - more information to come in the next newsletter. Also, you may be aware of the 2021 AVHTM TRACS articles in JVECC looking at the definition, recognition and treatment of canine and feline transfusion reactions. We are hoping that protocols based on these articles will be available to buy soon for your ICU, we'll let you know when they are available.

## ACVIM Consensus Statement on Diagnosis and Treatment of Immune Thrombocytopenia in Dogs and Cats

There is a current initiative of over 40 veterinary specialists working on guidelines for the diagnosis and treatment of immune thrombocytopenia akin to the ACVIM guidelines for diagnosis and treatment of immune-mediated hemolytic anemia that were published in 2019. The consensus panel consists of Marjory Brooks, Oliver Garden, Rob Goggs, Linda Kidd, Barbara Kohn, Andrew Makin and our AVHTM president, Dana LeVine. The panel, along with over 30 task force volunteers, is systematically evaluating the veterinary literature to answer a series of PICO/PECO (P: patient population; I: intervention/ E: exposure; C: comparator; O: outcomes of interest) questions. The panel is very grateful to the task force members, several of whom are AVHTM members, for their willingness to volunteer their time and expertise. The findings of the consensus panel will be presented at the ACVIM Forum on June 23rd at 3 pm CT.



### What is VetLit?

**VetLit ([vetlit.org](http://vetlit.org)) is free online resource that keeps all veterinary literature together in one place.** It continuously updates with new publications from a large number of peer-reviewed journals (including the Journal of Small Animal Practice, the Journal of Veterinary Internal Medicine and the Journal of Veterinary Emergency and Critical Care) and is organised by specialty including ECC, internal medicine, neurology, pathology...



VetLit was originally designed for those undertaking post graduate specialist training, who have to stay up to date with recent literature for certification and teaching purposes. Historically, many veterinary journals have required institutional access or paid subscriptions. However, more and more are now becoming 'open access' meaning that they are free to view, and these are also included on VetLit.



Whether you have access to articles or not, seeing what is being published and reading the abstracts is still of great value - you may choose to follow a particular page based on your own interests.

VetLit was made by RVC Lecturer in Emergency and Critical Care, Simon Cook, an ACVECC and EVECC diplomate. He says "Promotion of, and improving access to, veterinary literature are the main goals, helping us all to practice evidence-based medicine." A monthly newsletter featuring interesting and important articles can be signed up to at the website homepage, or articles can be found via updates on social media, including Twitter ([@vetlit\\_articles](https://twitter.com/vetlit_articles)). The website is always evolving in response to feedback so do get in touch if you have any thoughts.

**save  
the date!**

You are invited to a  
**SPECIAL INTEREST GROUP**

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June **24** 2022

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6:00 PM  
Malverde Restaurant  
400b West 2nd Street, Austin, Texas



# Unlock New Possibilities

Introducing the only company dedicated to supporting Veterinary Transfusion Medicine. Our TT-VET Apheresis Device streamlines the collection process from a wide range of mammals so you can focus on saving lives.

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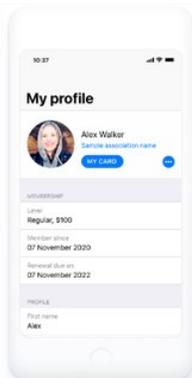
Join us for our Annual SIG, June 24, 6:00 pm

Malverde Restaurant  
400b W 2nd St, Austin TX

**RSVP directly when you register with ACVIM**

### An app to help you stay connected

Staying in touch has been difficult for all of us during this pandemic. Download the AVHTM's Members app and sign in with the same email



This app helps you:

- Interact with fellow members anywhere from your mobile device
- Update your member profile, including your address, phone and email
- View your membership card



Scan the QR code with your mobile device or click on the icon to download the app from the iTunes or Google Play app stores.

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## Platelet Number and Function in Response to a Single Intravenous Dose of Vincristine

Erin C Allen, Jaime L Tarigo, Dana N LeVine, Jamie P Barber and Benjamin M Brainard

JVIM 2021 35(4) 1754-62

With this study, we wanted to address the oft-cited belief that platelets released through the actions of vincristine were either hypo- or non-functional. We primarily wanted to provide evidence for or against the rationale of vincristine therapy in patients with immune mediated thrombocytopenia. We focused on flow cytometric analysis of platelets in a group of healthy purpose-bred dogs who received either vincristine (0.02 mg/kg, IV once) or saline. Initial power analysis from a pilot dog (who in retrospect showed an extraordinarily robust response to vincristine) indicated that we would only require 2 control dogs. Unfortunately, we never again found a dog who responded as robustly to vincristine, and likely more control dogs would have strengthened our conclusions. Platelet activation in this study was evaluated through platelet CD62P expression before and after a thrombin stimulus. Additionally, using thiazole orange (TO) as a marker for reticulated platelets (presumably released through the action of vincristine), we attempted to look at activation characteristics of the total platelet population and also just the TO+ population to investigate the activity level of the newly-released platelets. We found that, relative to saline, vincristine increased platelet count from day 0 to day 7 ( $225 \pm 58$  to  $273 \pm 65 \times 10^3 / \mu\text{L}$ , vs  $299 \pm 76.4$  to  $214 \pm 20 \times 10^3 / \mu\text{L}$ ,  $P = .01$ ) and that the percentage of reticulated platelets in the vincristine group increased from day 0 to day 5 ( $3.9 \pm 1.5\%$  to  $6.1 \pm 1.6\%$ ,  $P = .02$ ). Interestingly, on all days, reticulated platelets across both groups had greater resting expression of CD62P than mature platelets ( $49.6 \pm 4\%$  vs  $10.2 \pm 1\%$ ,  $P \leq .001$ ). Both reticulated platelets and mature platelets had equivalent robust responses in CD62P expression following thrombin stimulation. Our conclusion from this initial work is that reticulated platelets released following administration of vincristine function similarly to mature platelets. We found it interesting that the reticulated platelets seemed to circulate at a higher activation state (based on CD62P expression) than mature platelets, but further investigation is necessary to better define the receptor profile on these platelets. Ideally, we would like to apply these findings and this protocol to clinical patients with immune mediated thrombocytopenia. We opted to investigate healthy dogs first because we anticipated some difficulty in flow cytometric identification of platelet membrane antigens (e.g. CD41) in clinical patients and wanted to verify our techniques before starting this next study.

Benjamin Brainard VMD DACVAA DACVECC



## Recently Published Articles

- **Wild Felids Blood Group System.** Silvestre-Ferreira A, Pastor J. *Animals*. 2021 Dec 11;11(12):3533. **Free PMC article.**
- **Feline Blood Groups: A Systematic Review of Phylogenetic and Geographical Origin.** Gavazza A, Rossi G, Antognoni MT, Cerquetella M, Miglio A, Mangiaterra S. *Animals (Basel)*. 2021 Nov 23;11(12):3339. **Free PMC article.**
- **Whole blood platelet impedance aggregometry with the ROTEM platelet device: comparison of 2 anticoagulants and storage times for the establishment of canine reference intervals.** Heimgartner LM, Stirn M, Kutter APN, Sigrist NE, Jud Schefer R. *J Vet Diagn Invest*. 2022 Jan;34(1):15-22.
- **Effect of washing units of canine red blood cells on storage lesions.** Coll AC, Ross MK, Williams ML, Wills RW, Mackin AJ, Thomason JM. *J Vet Intern Med*. 2022 Jan;36(1):66-77. **Free PMC article.**
- **Amikacin prevents platelet aggregation in feline venous blood samples.** Engelmann AM, Veleda PA, Mello CBE, Dutra LS, Mann TR, Bueno A, Krause A, de Andrade CM. *Vet Clin Pathol*. 2022 Feb 9.
- **Immunoglobulin G and phosphatidylserine in regenerative and nonregenerative immune-mediated anemias of dogs.** Lucidi CA, Gerlach JA, Jutkowitz A, Scott MA. *J Vet Intern Med*. 2021 Nov;35(6):2713-2721. **Free PMC article.**
- **Awareness, Motivation, and Fear towards Canine Blood Donation-A Survey of Dog Owners in Lithuania.** Zakarevičiūtė B, Juodžentė D, Karvelienė B, Riškevičienė V. *Animals (Basel)*. 2021 Nov 12;11(11):3229. **Free PMC article.**
- **Collection and administration of blood products in horses: Transfusion indications, materials, methods, complications, donor selection, and blood testing.** Radcliffe RM, Bookbinder LC, Liu SY, Tomlinson JE, Cook VL, Hurcombe SDA, Divers TJ. *J Vet Emerg Crit Care (San Antonio)*. 2022 Jan;32(S1):108-122.
- **Calculating and selecting fluid therapy and blood product replacements for horses with acute hemorrhage.** Divers TJ, Radcliffe RM, Cook VL, Bookbinder LC, Hurcombe SDA. *J Vet Emerg Crit Care (San Antonio)*. 2022 Jan;32(S1):97-107.
- **Platelet function in dogs with chronic liver disease.** Wilkinson A, Panciera D, DeMonaco S, Boes K, Leib M, Clapp K, Ruth J, Cecere T, McClen-don D. *J Small Anim Pract*. 2022 Feb;63(2):120-127.
- **The importance of manual white blood cell differential counts and platelet estimates in elephant hematology: blood film review is essential.** Weisbrod TC, Isaza R, Cray C, Adler L, Stacy NI. *Vet Q*. 2021 Dec;41(1):30-35. **Free PMC article.**
- **The influence of leukoreduction on the acute transfusion-related complication rate in 455 dogs receiving 730 packed RBCs: 2014-2017.** Davidow EB, Montgomery H, Mensing M. *J Vet Emerg Crit Care (San Antonio)*. 2022 Jan 19. Online ahead of print.
- **Effects of leukoreduction on N-methylhistamine concentration in stored units of canine whole blood.** Frank MJ, Khattab MR, Wills RW, Archer TM, Mackin AJ, Suchodolski JS, Lidbury JA, Steiner JM, Sullivan AM, Thomason JM. *Am J Vet Res*. 2021 Nov;82(11):890-896.
- **In vitro compatibility testing of canine and rabbit blood.** Cutler SM, Richardson J, Eatwell K, Llewellyn EA. *J Vet Emerg Crit Care (San Antonio)*. 2021 Nov;31(6):742-748.
- **Comparison of healthy blood donor Greyhounds and non-Greyhounds using a novel point-of-care viscoelastic coagulometer.** Chang J, Jandrey KE, Burges JW, Kent MS. *J Vet Emerg Crit Care (San Antonio)*. 2021 Nov;31(6):766-772.
- **Suspected human intravenous immunoglobulin-induced acute haemolytic anaemia in a dog.** Koo Y, Yun T, Chae Y, Lee D, Choi D, Oh J, Kim J, Kim H, Yang MP, Kang BT. *J Small Anim Pract*. 2021 Dec 7. Online ahead of print.
- **Resuscitation Patterns and Massive Transfusion for the Critical Bleeding Dog-A Multicentric Retrospective Study of 69 Cases (2007-2013).** Tucker C, Winner A, Reeves R, Cooper ES, Hall K, Schildt J, Brown D, Guillaumin J. *Front Vet Sci*. 2022 Jan 5;8:788226. **Free PMC article.**
- **Quantitative assessment of infusion pump-mediated haemolysis in feline packed red blood cell transfusions.** Blasi-Brugué C, Sanchez IM, Ferreira RR, de Matos AJ, Ruiz de Gopegui R. *J Feline Med Surg*. 2021 Dec;23(12):1149-1154.
- **Hemolytic anemia blunts the cytokine response to transfusion of older red blood cells in mice and dogs.** Callan MB, Thawley VJ, Marrayott KA, Shabro A, Fernando S, Kahn S, Hudson KE, Hod EA. *Transfusion*. 2021 Dec;61(12):3309-3319.
- **Editorial: Blood Groups in Companion Animals.** Davidow EB, Spada E, Proverbio D. *Front Vet Sci*. 2021 Nov 30;8:792720. **Free PMC article.**
- **The use of high-dose immunoglobulin M-enriched human immunoglobulin in dogs with immune-mediated hemolytic anemia.** Bestwick JP, Sharman M, Whitley NT, Kisielewicz C, Skelly BJ, Tappin S, Kellett-Gregory L, Seth M. *J Vet Intern Med*. 2022 Jan;36(1):78-85. **Free PMC article.**
- **Effect of microaggregate filter passage on feline whole blood stored for 35 days.** Morse SA, Mooney ET. *J Feline Med Surg*. 2022 Feb;24(2):116-122.
- **Assessment of hemostasis in dogs with gastric-dilation-volvulus, during resuscitation with hydroxyethyl starch (130/0.4) or hypertonic saline (7.5%).** Borrelli A, Giunti M, Calipa S, Botto A, Mengozzi G, Lisa G, Maurella C, Bruno B. *J Vet Emerg Crit Care (San Antonio)*. 2021 Nov;31(6):698-707.



**We're on the web!**

**[www.avhtm.org](http://www.avhtm.org)**

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.

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## MEMBERSHIP BENEFITS

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

- Reduced IVECCS registration fee (veterinarians save \$100 and technicians save \$25!)
- Access to 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
  - o AVHTM Members App
- 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!*