



# AVHTM Newsletter

## Special Events of Interest:

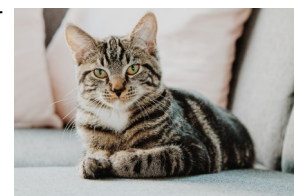
- **2021 Spring Symposium**  
Kauai Hawaii  
April 15-18: Theme Fluid therapy, ultrasound, communication and wellbeing in the ER and ICU with Dr. Linklater discussing autologous blood transfusion, component therapy and 'transfusion medicine: year in review'
- **Veterinary Trauma and Critical Care conference**  
Las Vegas Nevada  
April 9-11, 2021 (with the human The Mattox Trauma Critical Care and Acute Care Surgery conference April 12-14, 2021)
- **EVECC Annual Congress®**  
Porto, Portugal  
June 3-5, 2021  
Theme: Rising to the challenges in Emergency Medicine
- **Virtual 2021 ACVIM Forum**  
June 9-12

A 501(c)(3) nonprofit professional association

Volume 5, Issue 1

## What's in this issue?

Welcome to the Winter 2021 Edition of the AVHTM Newsletter. We hope you are all well and coping as best you can with the difficulties we are currently all facing all over the world. In this edition we have reports from two blood banks about how they have been coping with the effects of the COVID-19 pandemic on their working practices which we hope you find interesting. Likely related to COVID-19, many people have reported they are struggling to obtain the blood supplies they need for their practices and also shortages of specific blood banking materials such as 450ml Terumo blood collection bags. Please do use the list-serve to ask and discuss about these issues to see if others have ideas or solutions to help. We also have an article celebrating Dr. Jean Dodds' contribution to hematology and transfusion medicine and a call for collaboration from Dr. Umer Farooq as well as our usual round up of relevant literature and upcoming events. Happy reading!



## Happy birthday to a pioneer

We wanted to highlight the career of Jean Dodds, a previous recipient of the AVHTM lifetime achievement award in this issue of our newsletter as she has celebrated her 80th birthday in early 2021. As you read the review of her career below, you will see she has certainly packed a lot into those years and is an inspiration to us all!

W. Jean Dodds, DVM became a veterinarian in 1964 after graduating from the Ontario Veterinary College, and has spent more than five decades as a clinical research veterinarian. In 1965 she accepted a position with

the New York State Health Department in Albany and began comparative studies of animals with inherited and acquired bleeding diseases. Her position there began as a Research Scientist and culminated as Chief, Laboratory of Hematology, Wadsworth Center. In 1980 she also became Executive Director, New York State Council on Human Blood and Transfusion Services. This work continued full-time until 1986 when she moved to Southern California to establish Hemopet. From 1965 to 1986, she was a member of many national and international committees on hematology, ani-

mal models of human disease, veterinary medicine, and laboratory animal science. Dr. Dodds was a grantee of the National Heart, Lung, and Blood Institute (NIH).

Dr. Dodds' has over 150 research publications and her work on heritable coagulopathies includes documentation of some of the first cases of von Willebrand disease, hemophilia B and factor XI deficiency in dogs and von Willebrand disease, hemophilia A and hemophilia B in cats. Her influence in the area is clearly shown with one of her papers being cited in Nature!

## COVID Pandemic...a stress test for veterinary blood banks by Rui Ferreira DVM, PhD

**Animal Blood Bank CEO & Clinical Director**

COVID-19 has been the toughest challenge since the opening of the BSA – Animal Blood Bank 10 years ago. This pandemic is a true test of our perseverance and ability to adapt. During the first few weeks of COVID-19, Portugal reported far fewer cases than some countries, which allowed us to recognise the difficulties others faced. For instance, we witnessed distressing TV scenes directly from Italian hospitals, which portrayed the severity of COVID-19 and the critical situation we would face if we did not take appropriate action.



news/top-5-considerations-when-choosing-freezer-labels/

We made a plan based on risk assessment which incorporated 3 fundamental points:

**1. Ensure the safety of the BSA team.** To assure the safety of our staff, additional measures were put into place: installation of alcohol hand gel devices throughout the laboratory, restricting access to our facilities to only BSA staff members, suspension of face-to-face meetings, mandatory teleworking whenever possible, the use of FFP2 masks for all personnel, ensuring social distancing was abided by and allowing adequate space for ventilation. These changes were entirely accepted by all the team and strictly followed.

**2. Keep the owners motivated and ensure they trust us.** We sent communications highlighting the need to continue with donations and explaining the safety measures we were adopting. With cats, for example, we started to collect them directly from their homes for donations at our laboratory rather than their owners bringing them in. We also disinfected the carriers before transporting the cats back to our facilities and after delivery back to the donor's household. The essential point was to avoid close contact with owners, ensuring safe social distancing. This was crucial to ensure their commitment to the donation program.

**3. Efficient logistics to ship the units all over the world.** From the first moment, we were in close contact with our DHL representative to ensure the shipping routes were operational and that the destination addresses were not restricted in any way. We also used special cool boxes, which allowed us to keep the cold chain for 96h; this gave us peace of mind when transporting products to destinations where flight delays could occur. On certain occasions, where a specific region was blocked, we had to ship to an alternative veterinary hospital, outside the restricted area and ask a member of staff to pick up the units from the alternative address. We had to be creative, to find effective solutions all the time.

After Summer, with cases increasing in Portugal and Spain, we organized team bubbles, with no physical contact between teams. These teams have different working schedules, never share working spaces, and never meet for breakfast or lunch, etc. By doing this, we would avoid closing the blood bank for general quarantine if someone contracted COVID-19; as the positive person would not have been in contact with anyone else but their bubble colleagues. Inside some bubbles, for example personnel in the blood unit processing team, we were also able to organize rotations between the 3 technicians allowing them to work different schedules during the week, ensuring no contact with other colleagues. We have 7 full-time donations team bubbles in Porto, Lisbon and Barcelona. By doing this, despite some quarantine periods of some teams, we were able to keep the donation numbers stable (approximately 140 feline and 180 canine per week).

As Director of the blood bank, I believe we were able to face these adverse times, by keeping the BSA team safe and motivated, by ensuring owners trusted us, keeping them committed to the donor program, and by guaranteeing the shipment routes were functional to ensure easy access to blood products, even during circulation restrictions. I have no doubt that these difficulties made us stronger and more versatile...

Be responsible, Stay safe...

## Pet Blood Bank UK weathers the COVID



While the impact on Pet Blood Bank UK during the pandemic has been considerable, as it has been for us all, we have continued to run our service throughout. By making changes to the way we work and adapting to new ways of running, we have been able to create a system that prioritises safety for both humans and donors while following all government guidelines across different regions of the UK.

When the UK entered its first lockdown in March, the veterinary profession moved to an emergency only service. Being a crucial part of the pet emergency service, our organisation was deemed essential due to our role in protecting animal welfare. Initially, we provided blood for urgent cases only but as time went on and more was understood about the situation, we again began providing blood for all requirements.

Our service in the UK is a voluntary one. Our donors are loved pets who live with their owners. Normally, owners would stay with their dogs throughout the donation appointment and stopping this was one of the most significant changes we made during the crisis. This is the first time in the charity's history that all dogs have come into their appointments alone. Most dogs took this in their stride and continued to donate during the crisis. For others, it has been more challenging and they were unsettled without their owners; for these dogs we will invite them back once owners can come in again. As always, the welfare of our donors is our priority.

To enable our donors to continue donating while routine preventative healthcare for pets was paused, we extended our vaccination deadlines. Our pre-donation health check of donor dogs became even more important as it allowed for early detection of health issues while dogs were unable to see their usual vet.

We have focused strongly on our customers and supporting their needs, especially as blood stocks have been low at times. We paused our packaging recycling scheme to protect ourselves and customers from additional risk, however, this has come with increased running costs as we are using more materials.

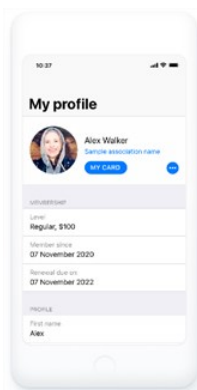
With in-person fundraising events cancelled, our supporters rallied behind us and moved their efforts online, maintaining our fundraising income. The support from our community of donor owners, fundraisers and charity supporters during this difficult time has been remarkable.

To protect our team, we moved more people to remote working, created team bubbles so the same people always work together, and made our offices COVID secure. The dedication to helping animals and the passion our team has for the cause means that we have really come together to get through this challenging period.

We continue to navigate the challenges of COVID on a daily basis. We change and adapt as needed and are so proud to have such a supportive community behind us as we do.

## 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 address and password for your account.



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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## Teamwork Divides the Tasks and Multiplies the Success

Dr. Umer Farooq

### Mission Statement

The mission of the Department of Physiology is to provide international teaching and research in all aspects of physiology to provide a better understanding of disease.

### Vision Statement

The vision of the department is to be a Centre of Excellence in Physiology in Pakistan and beyond.

### Introduction

The Department has been an integral part of the Faculty of Veterinary & Animal Sciences since 2006 at The Islamia University of Bahawalpur- A prestigious university of Pakistan. The dynamic and foreign qualified faculty of the department are actively involved in teaching Medical Physiology to undergraduate and postgraduate students.

Regarding research, we are focused on ascertaining reference hematological indices of various livestock species being reared under nomadic pastoralism in the Cholistan Desert of Pakistan. Presently, we have directed our research towards validation of various hematological attributes through manual methods, and human / veterinary analyzers for the desert livestock in order to attain cost-effective, reliable and patient-side hematological tests. We appreciate any positive input towards the said research area and would be glad for extended collaboration.

The details of our department may be viewed at:

<https://www.iub.edu.pk/departments-of-physiology>



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## Recently Published Articles

- **Update on Albumin Therapy in Critical Illness.** Mazzaferro EM, Edwards T. *Vet Clin North Am Small Anim Pract.* 2020 Nov;50(6):1289-1305. doi: 10.1016/j.cvsm.2020.07.005. Epub 2020 Aug 21. PMID: 32839002 Review.
- **Use of Thromboelastography in Clinical Practice.** Burton AG, Jandrey KE. *Vet Clin North Am Small Anim Pract.* 2020 Nov;50(6):1397-1409. doi: 10.1016/j.cvsm.2020.08.001. PMID: 32981595 Review.
- **Small Animal Transfusion Medicine.** Kuo KW, McMichael M. *Vet Clin North Am Small Anim Pract.* 2020 Nov;50(6):1203-1214. doi: 10.1016/j.cvsm.2020.07.001. Epub 2020 Aug 14. PMID: 32807588 Review.
- **Genetics of equine bleeding disorders.** Dahlgren AR, Tablin F, Finno CJ. *Equine Vet J.* 2021 Jan;53(1):30-37. doi: 10.1111/evj.13290. Epub 2020 Jun 23. PMID: 32463964 Review.
- **Red blood cell osmotic fragility in healthy loggerhead and green sea turtles.** Radisic R, Owens SD, Manire CA, Montgomery N, Mader D, Zirkelbach B, Stacy NI. *J Vet Diagn Invest.* 2020 Nov;32(6):908-911. doi: 10.1177/1040638720957117. Epub 2020 Sep 30. PMID: 32996405
- **The Stryker Regenkit PRP Kit Does Not Concentrate Canine Platelets.** Chernob B, Alvarez L, Lamb KE, Canapp S. *Front Vet Sci.* 2020 Oct 22;7:555909. doi: 10.3389/fvets.2020.555909. eCollection 2020. PMID: 33195528 Free PMC article.
- **Platelet function in cats with hyperthyroidism.** Hiebert EC, Panciera DL, Boes KM, Bartl L. *J Feline Med Surg.* 2020 Dec;22(12):1214-1218. doi: 10.1177/1098612X20920585. Epub 2020 May 21. PMID: 32436801
- **Evaluation of platelet function in cats with and without kidney disease: a pilot study.** Benson KK, Quimby JM, Shropshire SB, Summers SC, Dowers KL. *J Feline Med Surg.* 2020 Nov 16:1098612X20972069. doi: 10.1177/1098612X20972069. Online ahead of print. PMID: 33196335
- **Current fluid and blood product availability in veterinary setting: a survey of UK small animal practices.** Beeston D, Charnock J, Cook S. *J Small Anim Pract.* 2020 Dec;61(12):738-743. doi: 10.1111/jsap.13242. Epub 2020 Oct 16. PMID: 33064320
- **Transfusion transmissible pathogens are prevalent in healthy cats eligible to become blood donors.** Mesa-Sanchez I, Ferreira RRF, Cardoso I, Morais M, Flaminio M, Vieira S, de Gopegui RR, de Matos AJF. *J Small Anim Pract.* 2020 Dec 10. doi: 10.1111/jsap.13257. Online ahead of print. PMID: 33305378
- **Comparison of a closed system and an open system for blood collection in feline donors.** Binvel M, Fairbrother JH, Lévesque V, Blais MC. *J Feline Med Surg.* 2020 Dec;22(12):1121-1128. doi: 10.1177/1098612X20907171. Epub 2020 Mar 6. PMID: 32141375
- **The Effects of Pre-Storage Leukoreduction on the Conservation of Bovine Whole Blood in Plastic Bags.** Vinholte BP, Sousa RDS, Assis FFV, Nunes Neto OG, Portela JM, Pinto GAS, Ortolani EL, Benesi FJ, Barrêto Júnior RA, Minervino AHH. *Biology (Basel).* 2020 Dec 4;9(12):444. doi: 10.3390/biology9120444. PMID: 33291543 Free PMC article.
- **The effect of time on packed cell volume following packed red blood cell transfusion in anemic dogs.** Morris JL, Bloch CP, Brabson TL. *J Vet Emerg Crit Care (San Antonio).* 2020 Oct 29. doi: 10.1111/vec.13027. Online ahead of print. PMID: 33118669
- **Lyophilized platelets versus cryopreserved platelets for management of bleeding in thrombocytopenic dogs: A multicenter randomized clinical trial.** Goggs R, Brainard BM, LeVine DN, Calabro J, Harrell K, Mills T, Stone R, Davidson B, Iacovetta C, Harris L, Gicking J, Aslanian M, Ziegler A, Fulcher B, Lightfoot T, Miller M, Loftus J, Walton R, Blong A, Kishbaugh J, Hale AS. *J Vet Intern Med.* 2020 Nov;34(6):2384-2397. doi: 10.1111/jvim.15922. Epub 2020 Oct 5. PMID: 33016527 Free PMC article.
- **Rokhsar JL, Canino J, Raj K, Yuhnke S, Slutsky J, Giger U. Web resource on available DNA variant tests for hereditary diseases and genetic predispositions in dogs and cats: An Update.** *Hum Genet.* 2021 Feb 6. doi: 10.1007/s00439-021-02256-5. Epub ahead of print. PMID: 33547946.

## Recently Published Articles

- **The dog erythrocyte antigen 1 blood group in nondomesticated canids and compatibility testing between domestic dog and nondomesticated canid blood.** Charpentier T, Petit T, Guidetti M, Goy-Thollot I. *J Vet Intern Med.* 2020 Nov;34(6):2365-2373. doi: 10.1111/jvim.15950. Epub 2020 Nov 3. PMID: 33140893 Free PMC article.
- **Accuracy of point-of-care crossmatching methods and crossmatch incompatibility in critically ill dogs.** Marshall H, Blois SL, Abrams-Ogg ACG, Bersenas AM, Ruotsalo K, Monteith G. *J Vet Intern Med.* 2020 Dec 18. doi: 10.1111/jvim.15983. Online ahead of print. PMID: 33336866
- **Therapeutic plasma exchange as adjunct therapy in 3 dogs with myasthenia gravis and myasthenia-like syndrome.** Vitalo A, Buckley G, Londoño L. *J Vet Emerg Crit Care (San Antonio).* 2020 Nov 20. doi: 10.1111/vec.13022. Online ahead of print. PMID: 33217167
- **Left heart dimensions in anemic cats and dogs before and after blood transfusion.** Donaldson RE, Seo J, Fuentes VL, Humm K. *J Vet Intern Med.* 2020 Dec 7. doi: 10.1111/jvim.15969. Online ahead of print. PMID: 33284468
- **Identification of 5 novel feline erythrocyte antigens based on the presence of naturally occurring alloantibodies.** Binvel M, Arsenault J, Depré B, Blais MC. *J Vet Intern Med.* 2020 Dec 18. doi: 10.1111/jvim.16010. Online ahead of print. PMID: 33336860
- **Impact of blood storage duration on hematologic, blood gas, biochemical, and oxidative stress variables in sheep undergoing allogeneic blood transfusions.** Sousa RS, Minervino AHH, Oliveira FLC, Araújo CASC, Rodrigues FAML, Zaminhan JLR, Vale RG, Tavares MD, Mori CS, de Paula VV, Ortolani EL, Barrêto Júnior RA. *Vet Clin Pathol.* 2020 Dec 5. doi: 10.1111/vcp.12917. Online ahead of print. PMID: 33277948
- **RNA sequencing of whole blood in dogs with primary immune-mediated hemolytic anemia (IMHA) reveals novel insights into disease pathogenesis.** Borchert C, Herman A, Roth M, Brooks AC, Friedenberg SG. *PLoS One.* 2020 Oct 22;15(10):e0240975. doi: 10.1371/journal.pone.0240975. eCollection 2020. PMID: 33091028 Free PMC article.
- **In vitro iatrogenic hemolysis of canine packed red blood cells during various rapid transfusion techniques.** Weeks JM, Motsinger-Reif AA, Reems MM. *J Vet Emerg Crit Care (San Antonio).* 2020 Nov 3. doi: 10.1111/vec.13020. Online ahead of print. PMID: 33142048
- **Romiplostim as Adjunctive Treatment of Refractory Amegakaryocytic Immune Thrombocytopenia in a Dog.** Polydoros T, Ioannidi OM, Korsavvidis I, Stefanidis S, Antoniadis T, Mylonakis ME. *Top Companion Anim Med.* 2020 Oct 25;42:100488. doi: 10.1016/j.tcam.2020.100488. Online ahead of print. PMID: 33115689
- **The effects of additive solutions on the development of storage lesions in stored canine platelet concentrates.** Haines JM, Hwang JK, Wardrop KJ. *J Vet Emerg Crit Care (San Antonio).* 2020 Dec 11. doi: 10.1111/vec.13031. Online ahead of print. PMID: 33305521
- **Frequency of Blood Types A, B and AB in a Population of Non-Pedigree Domestic Cats from Central Italy.** Tommaso MD, Miglio A, Crisi PE, Boari A, Rocconi F, Antognoni MT, Luciani A. *Animals (Basel).* 2020 Oct 21;10(10):1937. doi: 10.3390/ani10101937. PMID: 33096858 Free PMC article.
- **Dal-induced red blood cell incompatibilities in a Doberman Pinscher with von Willebrand factor deficiency and ehrlichiosis.** Conti-Patara A, Ngwenyama TR, Martin LG, Wardrop KJ. *J Vet Emerg Crit Care (San Antonio).* 2020 Oct 29. doi: 10.1111/vec.13015. Online ahead of print. PMID: 33119193
- **Transfusion practice in Australia: an internet-based survey.** Poh D, Claus M, Smart L, Sharp CR. *Aust Vet J.* 2021 Jan 13. doi: 10.1111/avj.13049. Online ahead of print. PMID: 33442882
- **Hematology, Plasma Biochemistry and Plasma Protein Electrophoresis Reference Intervals for Blue Iguanas (*Cyclura Lewis*) from Grand Cayman Island.** Rainwater KL, McClave C, Raphael BL, Cray C, Franklin AD, Powell DM, Burton FJ, Calle PP. *J Zoo Wildl Med.* 2021 Jan;51(4):933-947. doi: 10.1638/2020-0094. PMID: 33480574



**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.

Visit us online to learn more about AVHTM!

#### Happy Birthday

Continued from page 1

She started Hemopet in 1986, the first nonprofit national animal blood bank. Today, Hemopet's range of nonprofit services and educational activities include: providing canine blood components and related services; adopting retired Greyhound blood donors as companions; and the Hemolife diagnostic division focused on hematology and blood banking, immunology, endocrinology, nutrition and holistic medicine. Dr. Dodds is also Co-Trustee of the Rabies Challenge Fund, a nonprofit project that assessed the duration of immunity and safety of current rabies vaccines for animals.

Amongst many awards it's worth noting that in 1974 Dr. Dodds was selected as the AVMA Outstanding Woman Veterinarian of the Year, in 1984 she was awarded the Centennial Medal from the University of Pennsylvania School of Veterinary Medicine, in 1987 she was elected a distinguished Practitioner of the National Academy of Practice in Veterinary Medicine and in 1994 she was given the Holistic Veterinarian of the Year Award from the American Holistic Veterinary Medical Association. She is an active member of numerous professional societies. We congratulate Dr. Dodds on her recent birthday and we thank her for her dedication to hematology and transfusion medicine.

#### 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
  - 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!*