

E-ISSN 1309 - 2251

# KAFKAS ÜNİVERSİTESİ VETERİNER FAKÜLTESİ DERGİSİ

Journal of the Faculty of Veterinary Medicine, Kafkas University

Published Bi-monthly

Volume: 30  
Issue: 6 (November - December)  
Year: 2024

**E-ISSN: 1309-2251**

This journal is published bi-monthly, by the Faculty of Veterinary Medicine, University of Kafkas, Kars - Turkey

**This journal is indexed and abstracted in:**

- Web of Science Core Collection: Science Citation Index Expanded (since 2007)
- Additional Web of Science Indexes: Essential Science Indicators - Zoological Record
- CABI - Veterinary Science Database
- DOAJ
- EBSCO - Academic Search Premier
- Elsevier - SCOPUS
- Elsevier - EMBASE
- SOBİAD Atıf Dizini
- TÜBİTAK/ULAKBİM TR-Dizin
- Türkiye Atıf Dizini

**ADDRESS FOR CORRESPONDENCE**

Kafkas Üniversitesi Veteriner Fakültesi Dergisi Editörlüğü 36040, Kars - TÜRKİYE  
Phone: +90 474 2426807-2426836/5228 Fax: +90 474 2426853 E-mail: [vetdergi@kafkas.edu.tr](mailto:vetdergi@kafkas.edu.tr)

**ELECTRONIC EDITION** <http://vetdergikafkas.org>

**ONLINE SUBMISSION** <http://submit.vetdergikafkas.org>

#### **OFFICIAL OWNER**

Dr. Mete CİHAN  
Dean of the Faculty of Veterinary Medicine, Kafkas University  
E-mail: [vetfak@kafkas.edu.tr](mailto:vetfak@kafkas.edu.tr); ORCID: 0000-0001-9883-2347

#### **EDITOR-IN-CHIEF**

Dr. İsa ÖZAYDIN  
Kafkas University, Faculty of Veterinary Medicine  
E-mail: [iozaydin@kafkas.edu.tr](mailto:iozaydin@kafkas.edu.tr); [aras\\_isa@hotmail.com](mailto:aras_isa@hotmail.com); ORCID: 0000-0003-4652-6377

#### **MANAGING EDITOR**

Dr. Özgür AKSOY  
Kafkas University, Faculty of Veterinary Medicine  
E-mail: [drozguraksoy@hotmail.com](mailto:drozguraksoy@hotmail.com); ORCID: 0000-0002-4800-6079

#### **LANGUAGE EDITOR**

Dr. Hasan ÖZEN  
Balıkesir University, Faculty of Veterinary Medicine  
E-mail: [hasanozen@hotmail.com](mailto:hasanozen@hotmail.com); ORCID: 0000-0002-6820-2536

#### **STATISTICS EDITOR**

Dr. İ. Safa GÜRCAN  
Ankara University, Faculty of Veterinary Medicine  
E-mail: [sgurcan@ankara.edu.tr](mailto:sgurcan@ankara.edu.tr); ORCID: 0000-0002-0738-1518

#### **ASSOCIATE EDITORS**

Dr. Fatih BÜYÜK  
Kafkas University, Faculty of Veterinary Medicine  
E-mail: [fatihbyk08@hotmail.com](mailto:fatihbyk08@hotmail.com); ORCID: 0000-0003-3278-4834

Dr. Erol AYDIN  
Kafkas University, Faculty of Veterinary Medicine  
E-mail: [dr-erolaydin@hotmail.com](mailto:dr-erolaydin@hotmail.com); ORCID: 0000-0001-8427-5658

Dr. Ali YİĞİT  
Dokuz Eylül University, Faculty of Veterinary Medicine  
E-mail: [aliyig@gmail.com](mailto:aliyig@gmail.com); ORCID: 0000-0002-1180-3517

Dr. Serap KORAL TAŞÇI  
Kafkas University, Faculty of Veterinary Medicine  
E-mail: [serapkoralt@hotmail.com](mailto:serapkoralt@hotmail.com); ORCID: 0000-0001-8025-7137

Dr. Ekin Emre ERKİLİÇ  
Kafkas University, Faculty of Veterinary Medicine  
E-mail: [ekin\\_emre\\_24@hotmail.com](mailto:ekin_emre_24@hotmail.com); ORCID: 0000-0003-2461-5598

#### **ASSOCIATE MANAGING EDITOR**

Dr. Semine DALGA  
Kafkas University, Faculty of Veterinary Medicine  
E-mail: [sdalga91@gmail.com](mailto:sdalga91@gmail.com); ORCID: 0000-0001-7227-2513

## EDITORIAL BOARD

- Prof. Dr. Harun AKSU, İstanbul University-Cerrahpaşa, TÜRKİYE  
Prof. Dr. M. Sinan AKTAŞ, Atatürk University, TÜRKİYE  
Prof. Dr. Feray ALKAN, Ankara University, TÜRKİYE  
Prof. Dr. Kemal ALTUNATMAZ, VetAmerican Animal Hospital, TÜRKİYE  
Prof. Dr. Divakar AMBROSE, University of Alberta, CANADA  
Prof. Dr. Mustafa ARICAN, Selçuk University, TÜRKİYE  
Prof. Dr. Selim ASLAN, Near East University, NORTHERN CYPRUS  
Prof. Dr. Sevil ATALAY VURAL, Ankara University, TÜRKİYE  
Prof. Dr. Tamer ATAĞLU, İstinye University, TÜRKİYE  
Prof. Dr. Levent AYDIN, Bursa Uludağ University, TÜRKİYE  
Prof. Dr. Les BAILLIE, Cardiff School of Pharmacy & Pharmaceutical Sciences, UK  
Prof. Dr. Urban BESENFELDER, University of Veterinary Sciences, AUSTRIA  
Prof. Dr. Kemal BÜYÜKGÜZEL, Zonguldak Bülent Ecevit University, TÜRKİYE  
Prof. Dr. K. Paige CARMICHAEL, The University of Georgia, USA  
Assoc. Prof. Dr. Om Prakash CHOUDHARY, Guru Angad Dev Veterinary and Animal Sciences University, INDIA  
Prof. Dr. Burhan ÇETİNKAYA, Fırat University, TÜRKİYE  
Prof. Dr. Recep ÇİBIK, Bursa Uludağ University, TÜRKİYE  
Prof. Dr. Ali DAŞKIN, Ankara University, TÜRKİYE  
Prof. Dr. Ömer Orkun DEMİRAL, Erciyes University, TÜRKİYE  
Prof. Dr. İbrahim DEMİRKAN, Afyon Kocatepe University, TÜRKİYE  
Prof. Dr. Hasan Hüseyin DÖNMEZ, Selçuk University, TÜRKİYE  
Prof. Dr. Emrullah EKEN, Selçuk University, TÜRKİYE  
Prof. Dr. Marcia I. ENDRES, University of Minnesota, St. Paul, MN, USA  
Prof. Dr. Ayhan FİLAZİ, Ankara University, TÜRKİYE  
Prof. Dr. Bahadır GÖNENÇ, Ankara University, TÜRKİYE  
Prof. Dr. Aytekin GÜNLÜ, Selçuk University, TÜRKİYE  
Prof. Dr. İ. Safa GÜRCAN, Ankara University, TÜRKİYE  
Prof. Dr. Hasan Hüseyin HADİMLİ, Selçuk Üniversitesi, KONYA  
Prof. Dr. Johannes HANDLER, Freie Universität Berlin, GERMANY  
Prof. Dr. Riaz HUSSAIN, Islamia University of Bahawalpur, PAKISTAN  
Prof. Dr. Ali İŞMEN, Çanakkale Onsekiz Mart University, TÜRKİYE  
Prof. Dr. Fatih Mehmet KANDEMİR, Aksaray University, TÜRKİYE  
Prof. Dr. Mehmet Çağrı KARAKURUM, Burdur Mehmet Akif Ersoy University, TÜRKİYE  
Prof. Dr. Muhamed KATICA, University of Sarajevo, BOSNIA and HERZEGOWINA  
Prof. Dr. Mürkerem KAYA, Atatürk University, TÜRKİYE  
Prof. Dr. Servet KILIÇ, Tekirdağ Namık Kemal University, TÜRKİYE  
Prof. Dr. Ömür KOÇAK, İstanbul University-Cerrahpaşa, TÜRKİYE  
Prof. Dr. Marycz KRZYSZTOF, European Institute of Technology, POLAND  
Prof. Dr. Ercan KURAR, Necmettin Erbakan University, TÜRKİYE  
Prof. Dr. Hasan Rüştü KUTLU, Çukurova University, TÜRKİYE  
Prof. Dr. Erdoğan KÜÇÜKÖNER, Süleyman Demirel University, TÜRKİYE  
Prof. Dr. Levan MAKARADZE, Georgian State Agrarian University, GEORGIA  
Prof. Dr. Erdal MATUR, İstanbul University-Cerrahpaşa, TÜRKİYE  
Prof. Dr. Muhammad Aamer MEHMOOD, Government College University Faisalabad, PAKISTAN  
Prof. Dr. Erdoğan MEMİLİ, Prairie View A&M University, USA  
Prof. Dr. Nora MIMOUNE, National High School of Veterinary Medicine, ALGERIA  
Prof. Dr. Cevat NİSBET, Ondokuz Mayıs University, TÜRKİYE  
Prof. Dr. Vedat ONAR, İstanbul University-Cerrahpaşa, TÜRKİYE  
Prof. Dr. Abdullah ÖZEN, Fırat University, TÜRKİYE  
Prof. Dr. Zeynep PEKCAN, Kırıkkale University, TÜRKİYE  
Prof. Dr. Alessandra PELAGALLI, University of Naples Federico II, ITALY  
Prof. Dr. Abdul Qayyum RAO, Centre of Excellence in Molecular Biology University of the Punjab, PAKISTAN  
Prof. Dr. Muhammad Asif RAZA, MNS University of Agriculture, PAKISTAN  
Prof. Dr. Michael RÖCKEN, Justus-Liebig University, GERMANY  
Prof. Dr. Sabine SCHÄFER-SOMI, University of Veterinary Medicine Vienna, AUSTRIA  
Prof. Dr. Çiğdem TAKMA, Ege University, TÜRKİYE  
Prof. Dr. Fotina TAYANA, Sumy National Agrarian University, UKRAINE  
Prof. Dr. Zafer ULUTAŞ, Ondokuz Mayıs University, TÜRKİYE  
Prof. Dr. Cemal ÜN, Ege University, TÜRKİYE  
Prof. Dr. Oya ÜSTÜNER AYDAL, İstanbul University-Cerrahpaşa, TÜRKİYE  
Prof. Dr. Axel WEHREND, Justus-Liebig-Universität Gießen, GERMANY  
Prof. Dr. Thomas WITTEK, Vetmeduni Vienna, AUSTRIA  
Prof. Dr. Rifat VURAL, Ankara University, TÜRKİYE  
Prof. Dr. Cenk YARDIMCI, Ondokuz Mayıs University, TÜRKİYE  
Prof. Dr. Alparslan YILDIRIM, Erciyes University, TÜRKİYE  
Prof. Dr. Hüseyin YILMAZ, İstanbul University-Cerrahpaşa, TÜRKİYE  
Prof. Dr. Zeki YILMAZ, Bursa Uludağ University, TÜRKİYE

**THE REFEREES LIST OF THIS ISSUE (in alphabetical order)**

Abdul GHAYAS	The Islamia University of Bahawalpur, Pakistan
Akın KOÇHAN	Dicle Üniversitesi Veteriner Fakültesi
Ali ALAŞ	Necmettin Erbakan Üniversitesi Ahmet Keleşoğlu Eğitim Fakültesi
Aynur ŞİMŞEK	Dicle Üniversitesi Veteriner Fakültesi
Bekir OĞUZ	Van Yüzüncü Yıl Üniversitesi Veteriner Fakültesi
Bülent ÖZSOY	Aydın Adnan Menderes Üniversitesi Veteriner Fakültesi
Büşra KİBAR KURT	Aydın Adnan Menderes Üniversitesi Veteriner Fakültesi
Cihat ÇELİK	Zonguldak Bülent Ecevit Üniversitesi Çaycuma Gıda ve Tarım MYO
Dilem Gülece ERMUTLU	Kafkas Üniversitesi Veteriner Fakültesi
Ekin Emre ERKILIÇ	Kafkas Üniversitesi Veteriner Fakültesi
Emine ÇATALKAYA	Dicle Üniversitesi Veteriner Fakültesi
Emre ÖZAN	Ondokuz Mayıs Üniversitesi Veteriner Fakültesi
Emre YILMAZ	Atatürk Üniversitesi Veteriner Fakültesi
Fırat DOĞAN	Hatay Mustafa Kemal Üniversitesi Veteriner Fakültesi
Fikret BEKTAŞOĞLU	Kafkas Üniversitesi Veteriner Fakültesi
Hebert LORIENT	Laboratory for Animal Health Normandy Site, France
Mehmet YARDIMCI	Tekirdağ Namık Kemal Üniversitesi Veteriner Fakültesi
Mehtapgül ALTAŞ	Yakın Doğu Üniversitesi Veteriner Fakültesi, KKTC
Mükremin Özkan ARSLAN	Kafkas Üniversitesi Tıp Fakültesi
Öznur ASLAN	Erciyes Üniversitesi Veteriner Fakültesi
Radhwane SAIDI	Laghouat University, Faculty of Sciences, Algeria
Rahşan ÖZEN	Fırat Üniversitesi Veteriner Fakültesi
Safdar IMRAN	The Islamia University of Bahawalpur, Pakistan
Serap İLHAN AKSU	Kafkas Üniversitesi Veteriner Fakültesi
Sobhy ABDELSHAFY	National Research Center, Egypt
Veli Yılgör ÇIRAK	Bursa Uludağ Üniversitesi Veteriner Fakültesi
Yaşar ERGÜN	Hatay Mustafa Kemal Üniversitesi Veteriner Fakültesi
Yusuf Sinan ŞİRİN	Burdur Mehmet Akif Ersoy Üniversitesi Veteriner Fakültesi



## CONTENTS

REVIEW	Page
<b>The Use of Computer Assisted Sperm Analysis (CASA) in Domestic Animal Reproduction: A Review</b> BELALA R, BOURAHMOUNE D, MIMOUNE N (DOI: 10.9775/KVFD.2024.32819)	741
<b>Role of Probiotics in Increasing Meat and Egg Production in Poultry: A Review</b> RAZA A, ABBAS RZ, KARADAĞOĞLU Ö, RAHEEM A, KHAN AMA, KHALIL MZ, MAHEEN N, QUDDUS A, HUSSAIN A, KANCHEV KP (DOI: 10.9775/KVFD.2024.32861)	753
RESEARCH ARTICLES	
<b>Cardiac Troponin I Activity Compared with Other Cardiac Markers in the Dry Period, Early, and Peak Lactation in Dairy Cattle</b> HAJIMOHAMMADI A, BARMAKI M, BABAZADEH D, NAZIFI S, RAZAVI SA, DANESHI M (DOI: 10.9775/kvfd.2024.31413)	761
<b>Suspicion of Feline Infectious Peritonitis in Cats with Uveitis: Diagnostic Value of Coronavirus Antibodies and Blood Parameters</b> ERGIN İ, SAINKAPLAN S, SAYIM AA, ŞENEL OO (DOI: 10.9775/kvfd.2024.32144)	769
<b>lncRNA NONRAT021477.2 Interference Aggravates H<sub>2</sub>O<sub>2</sub>-Induced Oxidative Stress in BRL Cells</b> JI H, HUA Y, LIU CW, SHAO ZY, ZHANG JJ, YU SQ (DOI: 10.9775/KVFD.2024.32247)	779
<b>Seroprevalence and Risk Factors Associated with <i>Anaplasma phagocytophilum</i> Infection in Horses in Egypt</b> MARZOK M, GATTAN HS, ALBOKHADAIM I, ALRUHAILI MH, SALEM M, SELIM A (DOI: 10.9775/kvfd.2024.32527)	787
<b>Assessment of Age-Related Morphological Changes in the Testes of Mali Pig of Tripura, India</b> SARKAR R, KALITA PC, KALITA A, DOLEY PJ, CHOUDHARY OP (DOI: 10.9775/KVFD.2024.32597)	793
<b>Evaluating <i>Linum usitatissimum</i> Seeds Extract as Potential Alternative Biochemical and Therapeutic Agent Against Induced Coccidiosis in Broiler Chicken</b> HUSSAIN K, ABBAS A, REHMAN A, WAQAS MU, AHMAD B, MUGHAL MAS, ABBAS RZ, ZAMAN MA, KHAN JA, RAZA MA (DOI: 10.9775/kvfd.2024.32618)	803
<b>Molecular and Pathological Detection of Jaagsiekte Sheep Retrovirus in Lung Tissues of Sheep</b> COSKUN N, YILMAZ V, KARAKURT E, BEYTUT E, NUHOGLU H, TIMURKAN MO (DOI: 10.9775/kvfd.2024.32702)	809
SHORT COMMUNICATION	
<b>Association of Two ISSR Markers with the Growth Traits of Saburai Does (<i>Capra hircus</i>)</b> DESTOMO A, PUTRA WPB, HARTATI H, HANDIWIRAWAN E, MARIYONO M, ELIESER S, KARIM NA, RAMADHAN MG, DAKHLAN A, KURNIAWATI D, HASBI H (DOI: 10.9775/kvfd.2024.32730)	815
CASE REPORT	
<b>Topical Xenogeneic Exosome Therapy in a Dog with Toxic Epidermal Necrolysis</b> YILMAZ Z, VARLIK T, LEVENT KARABARUT P, ÜNLÜİŞLER Ş, CANIKYAN S (10.9775/kvfd.2024.32935)	821
LETTER TO EDITOR	
<b>New Information About Godlewsky's Contributions to Turkish Veterinary Medicine History Extracted from a Document</b> GENÇ SV, TAN S (10.9775/kvfd.2024.32870)	827

