ISSN 1300 - 6045
e-ISSN 1309 - 2251

KAFKAS ÜNİVERSİTESİ VETERİNER FAKÜLTESİ DERGİSİ

Journal of the Faculty of Veterinary Medicine, Kafkas University

Published Bi-monthly

http://vetdergi.kafkas.edu.tr
Online Submission: http://vetdergikafkas.org

Volume : 23 Number : 5 SEPTEMBER-OCTOBER Year : 2017

ISSN: 1300-6045
e-ISSN: 1309-2251

KAFKAS ÜNİVERSİTESİ VETERİNER FAKÜLTESİ DERGİSİ

JOURNAL OF THE FACULTY OF VETERINARY MEDICINE, KAFKAS UNIVERSITY

(SEPTEMBER - OCTOBER)

Volume: 23 Number: 5 Year: 2017

This journal is indexed and abstracted by Thomson Reuters Services beginning with Volume 13 (1) 2007 in the followings:

- **Science Citation Index Expanded (also known as SciSearch®)**
- **Journal Citation Reports/Science Edition**

This journal is also indexed and abstracted in:

- **THOMSON REUTERS - ZOOLOGICAL RECORD**
- **ELSEVIER - SCOPUS**
- **CAB Abstracts**
- **DOAJ**
- **TÜRKİYE ATIF DİZİNİ**
- **TÜBİTAK - ULAKBİM Yaşam Bilimleri Veri Tabanı**
- **EBSCO**

YAZIŞMA ADRESİ (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

ELEKTRONİK BASKI (ELECTRONIC EDITION)
http://vetdergikafkas.org

ONLINE MAKALE GÖNDERME (ONLINE SUBMISSION)
http://submit.vetdergikafkas.org

Bu dergi Kafkas Üniversitesi Veteriner Fakültesi tarafından iki ayda bir yayımlanır
This journal is published bi-monthly, by the Faculty of Veterinary Medicine, University of Kafkas

Kafkas Üniversitesi Veteriner Fakültesi Adına Sahibi (Owner)

Prof.Dr. Hasan ÖZEN
Dekan (Dean)

EDİTÖR (Editor-in-Chief)

Prof.Dr. İsa ÖZAYDIN

EDİTÖR YARDIMCILARI
(Associate Editors)

Prof.Dr. Özgür AKSOY
Doç.Dr. Duygu KAYA
Doç.Dr. Erol AYDIN
Doç.Dr. Ali YİĞİT

YABANCI DİL EDİTÖRÜ
(English Editor)

Prof.Dr. Hasan ÖZEN

İSTATİSTİK EDİTÖRÜ
(Statistics Editor)

Prof.Dr. Gül ERGÜN

SAYFA TASARIMI
(Design)

Dr. Erol AYDIN

WEB TASARIMI
(WEB Design)

Dr. Ali YİĞİT

SEKRETER
(Secretary)

Fahri ALTUN

BASKI (Print)
ESER OFSET MATBAACILIK Tel: +90 442 2334667 ERZURUM

EDİTÖRLER KURULU
(Editorial Board)

Prof. Dr. Kemal AK	İstanbul University, TURKEY
Prof. Dr. Harun AKSU	İstanbul University, TURKEY
Prof. Dr. Mustafa ALİŞARLI	Ondokuz Mayıs University, TURKEY
Prof. Dr. Feray ALKAN	Ankara University, TURKEY
Prof. Dr. Çiğdem ALTINSAAT	Ankara University, TURKEY
Prof. Dr. Kemal ALTUNATMAZ	İstanbul University, TURKEY
Prof. Dr. Divakar AMBROSE	University of Alberta, CANADA
Prof. Dr. Mustafa ARICAN	Selçuk University, TURKEY
Prof. Dr. Mustafa ATASEVER	Atatürk University, TURKEY
Prof. Dr. Sırrı AVKİ	Mehmet Akif Ersoy University, TURKEY
Prof. Dr. Levent AYDIN	Uludağ University, TURKEY
Prof. Dr. Les BAILLIE	Cardiff School of Pharmacy & Pharmaceutical Sciences, UK
Prof. Dr. Metin BAYRAKTAR	Fırat University, TURKEY
Prof. Dr. Alois BOOS	University of Zurich, SWITZERLAND
Prof. Dr. K. Paige CARMICHAEL	The University of Georgia, USA
Prof. Dr. Burhan ÇETİNKAYA	Fırat University, TURKEY
Prof. Dr. Recep ÇIBIK	Uludağ University, TURKEY
Prof. Dr. İbrahim DEMİRKAN	Afyon Kocatepe University, TURKEY
Prof. Dr. Hasan Hüseyin DÖNMEZ	Selçuk University, TURKEY
Prof. Dr. Nazir DUMANLI	Fırat University, TURKEY
Prof. Dr. Emrullah EKEN	Selçuk University, TURKEY
Prof. Dr. Marcia I. ENDRES	University of Minnesota, CFANS, USA
Prof. Dr. Ayhan FİLAZİ	Ankara University, TURKEY
Prof. Dr. Aytekin GÜNLÜ	Selçuk University, TURKEY
Prof. Dr. Ekrem GÜREL	Abant İzzet Baysal University, TURKEY
Prof. Dr. Tolga GÜVENÇ	Ondokuz Mayıs University, TURKEY
Prof. Dr. Johannes HANDLER	Freie Universität Berlin, GERMANY
Prof. Dr. Armağan HAYIRLI	Atatürk University, TURKEY
Prof. Dr. Ali İŞMEN	Çanakkale Onsekiz Mart University, TURKEY
Prof. Dr. Zafer KARAER	Ankara University, TURKEY
Prof. Dr. Marycz KRZYSZTOF	European Institute of Technology, POLAND
Prof. Dr. Arif KURTDEDE	Ankara University, TURKEY
Prof. Dr. Erdoğan KÜÇÜKÖNER	Süleyman Demirel University, TURKEY
Prof. Dr. Mehmet MADEN	Selçuk University, TURKEY
Prof. Dr. Levan MAKARADZE	Georgian State Agrarian University, GEORGIA
Prof. Dr. Vedat ONAR	İstanbul University, TURKEY
Prof. Dr. Berrin SALMANOĞLU	Ankara University, TURKEY
Prof. Dr. Sabine SCHÄFER-SOMI	University of Veterinary Medicine Vienna, AUSTRIA
Prof. Dr. Fotina TAYANA	Sumy National Agrarian University, UKRAINE
Prof. Dr. Ayşe TOPAL	Uludağ University, TURKEY
Prof. Dr. Cevdet UĞUZ	Afyon Kocatepe University, TURKEY
Prof. Dr. Zafer ULUTAŞ	Ömer Halisdemir University, TURKEY
Prof. Dr. Thomas WITTEK	University of Veterinary Medicine Vienna, AUSTRIA
Prof. Dr. Rıfat VURAL	Ankara University, TURKEY
Prof. Dr. Halis YERLİKAYA	Fırat University, TURKEY