



[www.biohealthcongress.com](http://www.biohealthcongress.com)

# Third International Congress on Biological and Health Sciences Abstract Book

ONLINE 14-15-16 April

ISBN: 978-605-71368-4-8





Third International Congress on  
Biological and Health Sciences

ONLINE 14-15-16 APRIL 2023

## **THIRD INTERNATIONAL CONGRESS ON BIOLOGICAL AND HEALTH SCIENCES ABSTRACT BOOK**

This work is subject to copyright and all rights reserved, whether the whole or part of the material is concerned. The right to publish this book belongs to Third International Congress on Biological and Health Sciences-2023. No part of this publication may be translated, reproduced, stored in a computerized system, or transmitted in any form or by any means, including, but not limited to electronic, mechanical, photocopying, recording without written permission from the publisher. This Abstract Book has been published as an electronic publication (e-book). The publisher is not responsible for possible damages, which may be a result of content derived from this electronic publication.

**All authors are responsible for the contents of their abstracts.**

**[https://www.biohealthcongress.com/\(biohealthcongress@gmail.com\)](https://www.biohealthcongress.com/(biohealthcongress@gmail.com))**

### **Editor**

Ulaş ACARÖZ

Published: 15.05.2023

ISBN:978-605-71368-4-8



## **Editor's Note**

The Third 'International Congress on Biological and Health Sciences' was organized online and free of charge. We are very happy and proud that various health science-related fields attended the congress. By this event, the distinguished and respected scientists came together to exchange ideas, develop and implement new researches and joint projects. There were 28 invited speakers from 15 different countries and also more than 200 submissions were accepted. More than 50 countries contributed to the congress. We would like to thank all participants and supporters. Hope to see you at our next congress.

Best wishes from Turkey

**Assoc. Prof. Dr. Ulaş ACARÖZ**



# Third International Congress on Biological and Health Sciences

ONLINE 14-15-16 APRIL 2023

## HONORARY BOARD

**Prof. Dr. Mehmet Karakaş**, President of Afyon Kocatepe University, Turkey. (Honorary President)

**Prof. Dr. Alpaslan Ceylan**, Krgyz-Turkish Manas University, Kyrgyzstan.

**Prof. Dr. Talat Naseer Pasha**, President of University of Education Lahore, Pakistan.

**Prof. Dr. İsmail Şen**, Krgyz-Turkish Manas University., Faculty of Veterinary Medicine, Kyrgyzstan.

**Prof. Dr. Turan Civelek**, Dean of Afyon Kocatepe University, Faculty of Veterinary Medicine, Turkey.



## ORGANIZING COMMITTEE

**Assoc. Prof. Dr. Ulaş Acaröz**, Afyon Kocatepe University, Turkey, President.

**Prof. Dr. Kálmán Imre**, Banat University of Agronomical Sciences and Veterinary Medicine, Romania, President

**Prof. Dr. Abdullah Eryavuz**, Afyon Kocatepe University, Turkey, Congress General Secretary.

**Prof. Dr. Kui Zhu**, China Agricultural University, China, Member of Committee.

**Prof. Dr. Halil Selçuk Biricik**, Afyon Kocatepe University, Turkey, Member of Committee.

**Prof. Dr. İsmail Küçükkurt**, Afyon Kocatepe University, Turkey, Member of Committee.

**Prof. Dr. İsmail Şen**, Kyrgyz-Turkish Manas University, Kyrgyzstan, Member of Committee.

**Prof. Dr. Sinan Ince**, Afyon Kocatepe University, Turkey, Member of Committee.

**Prof. Dr. Zeki Gürler**, Afyon Kocatepe University, Turkey, Member of Committee.

**Assoc. Prof. Dr. Halil Yalçın**, Burdur Mehmet Akif Ersoy University, Turkey, Member of Committee.

**Assoc. Prof. Dr. Damla Arslan Acaröz**, Afyon Kocatepe University, Turkey, Member of Committee.

**Assist. Prof. Dr. Tuncer Çakmak**, Van Yüzüncü Yıl University, Turkey, Member of Committee.

**Dr. Alexander Atanasoff**, Trakia University, Bulgaria, Member of Committee.

### Congress Secretary

**Nuri Taş**, Member of Congress Secretary.

### Congress Technical Support

**Osman Doğanay**, Member of Congress Technical Support.

**Veysel Delibaş**, Van Yüzüncü Yıl Üniversitesi, Turkey, Member of Congress Technical Support.



## SCIENTIFIC COMMITTEE

- Prof. Dr. Abdelhanine Ayad, University of Bejaia.
- Prof. Dr. Abdullah Eryavuz, Afyon Kocatepe University.
- Prof. Dr. Abdulridha T. Sarhan, Hilla University College.
- Prof. Dr. Abuzer Taş, Van Yüzüncü Yıl University, Kyrgyz-Turkish Manas University.
- Prof. Dr. Ales Gregorc, University of Maribor.
- Prof. Dr. Ali Rişvanlı, Fırat University, Kyrgyz-Turkish Manas University.
- Prof. Dr. Adriana Morar, Banat University of Agronomical Sciences and Veterinary Medicine.
- Prof. Dr. Ahmet Çakır, Ankara University.
- Prof. Dr. Ahmet Güner, Selçuk University.
- Prof. Dr. Ali Aydın, İstanbul University Cerrahpaşa.
- Prof. Dr. Ali Belge, Aydın Adnan Menderes University.
- Prof. Dr. Alptekin Tosun, Giresun University
- Prof. Dr. Aneela Zameer Durrani, University of Veterinary & Animal Sciences, Lahore-Pakistan.
- Prof. Dr. Armağan Çolak, Atatürk University.
- Prof. Dr. Ardo Sabir, Universitas Hasanuddin.
- Prof. Dr. Artay Yağcı, Muğla Sıtkı Koçman University.
- Prof. Dr. Aydın Vural, Dicle University.
- Prof. Dr. Ayhan Baştan, Ankara University.
- Prof. Dr. Ayhan Filazi, Ankara University.
- Prof. Dr. Aysun Çevik Demirkan, Afyon Kocatepe University.
- Prof. Dr. Badiâa Lyoussi, University Sidi Mohamed Ben Abdallah.
- Prof. Dr. Bahri Patır, Bingöl University.
- Prof. Dr. Begüm Yurdakök Dikmen, Ankara University.
- Prof. Dr. Belgin Sarımeahmetoğlu, Ankara University.
- Prof. Dr. Canan Hecer, Istanbul Esenyurt University.
- Prof. Dr. Cleofas R Cervancia, University of the Philippines Los Baños.
- Prof. Dr. Cumali Özkan, Van Yüzüncü Yıl University.
- Prof. Dr. Daniel Nicodemo, Universidade Estadual Paulista.
- Prof. Dr. Didem Pekmezci, Ondokuz Mayıs University.
- Prof. Dr. Dharam Pal Abrol, Sher-e-Kashmir University of Agricultural Sciences and Technology.
- Prof. Dr. El khasmi Mohammed, University Hassan II of Casablanca.





- Prof. Dr. El-Kazafy A. Taha, Kafrelsheikh University.
- Prof. Dr. Ender Yarsan, Ankara University.
- Prof. Dr. Ergün Ömer Göksoy, Aydın Adnan Menderes University.
- Prof. Dr. Erinda Lika, Agricultural University of Tirana.
- Prof. Dr. Ernest David, Thiruvalluvar University
- Prof. Dr. Ertan Emek Onuk, Ondokuz Mayıs University.
- Prof. Dr. Erwin Märtlbauer, Ludwig Maximilian University of Munich.
- Prof. Dr. Esmâ Kozan, Afyon Kocatepe University.
- Prof. Dr. Esra Akkol, Gazi University.
- Prof. Dr. Evgeniya Ivanova, University of Plovdiv "Paisii Hilendarski".
- Prof. Dr. Fatih Hatipoğlu, Selçuk University/Kyrgyz-Turkish Manas University.
- Prof. Dr. Fatih Mehmet Birdane, Afyon Kocatepe University.
- Prof. Dr. Fatih Mehmet Kandemir, Atatürk University.
- Prof. Dr. Fatma Seda Bilir, Ankara University.
- Prof. Dr. Figen Çetinkaya, Uludağ University.
- Prof. Dr. Gökhan Oto, Van Yüzüncü Yıl University.
- Prof. Dr. Gülden Zehra Omurtag, İstanbul Medipol University.
- Prof. Dr. Hakan Öner, Burdur Mehmet Akif Ersoy University.
- Prof. Dr. Hakan Öztürk, Ankara University.
- Prof. Dr. Hakan Yardımcı, Ankara University.
- Prof. Dr. Halil Selçuk Biricik, Afyon Kocatepe University.
- Prof. Dr. Hamid Mukhtar, GC University
- Prof. Dr. Hasan Hüseyin Hadimli, Selçuk University.
- Prof. Dr. Hatice Çiçek, Afyon Kocatepe University.
- Prof. Dr. Hesham R. El-Seedi, Uppsala University.
- Prof. Dr. Iahtasham khan, University of Veterinary & Animal Sciences, Lahore-Pakistan.
- Prof. Dr. İbrahim Demirkan, Afyon Kocatepe University.
- Prof. Dr. İbrahim Hakkı Ciğerci, Afyon Kocatepe University.
- Prof. Dr. İsa Özaydın, Kafkas University.
- Prof. Dr. İsmail Küçük Kurt, Afyon Kocatepe University.
- Prof. Dr. İsmail Şen, Kyrgyz-Turkish Manas University.
- Prof. Dr. İzzet Karahan, Balıkesir University.
- Prof. Dr. Jani Mavromati, Agricultural University of Tirana.



- Prof. Dr. Joana S. Amaral, Instituto Polit3cnico de Bragan7a.
- Prof. Dr. Jos3 Maria Fresno, University of Le3n.
- Prof. Dr. Jos3 Eduardo Serr3o, Universidade Federal de Vi7osa.
- Prof. Dr. K3lm3n Imre, Banat University of Agronomical Sciences and Veterinary Medicine.
- Prof. Dr. Katerina Blagoevska, Ss. Cyril and Methodius University in Skopje.
- Prof. Dr. Koula Doukani, University of Ibn Khaldoun – Tiaret.
- Prof. Dr. Korhan Altunbař, Afyon Kocatepe University.
- Prof. Dr. Kui Zhu, China Agricultural University.
- Prof. Dr. Leila Bendifallah, University M’Hamed Bougara of Boumerdes.
- Prof. Dr. Lesław Juszcza, Uniwersytet Rolniczy w Krakowie, Poland.
- Prof. Dr. Leticia M Estevinho, Polytechnic Institute of Bragan7a, Portugal.
- Prof. Dr. Levent Altıntař, Ankara University.
- Prof. Dr. Lođman Aslan, Van Yüzüncü Yıl University.
- Prof. Dr. Maria G. Campos, University of Coimbra.
- Prof. Dr. Masood Akhtar, Bahauddin Zakariya University.
- Prof. Dr. Mehmet Elmalı, Hatay Mustafa Kemal University.
- Prof. Dr. Mehmet Emin Erkan, Dicle University.
- Prof. Dr. Mehmmet 7alıcıođlu, Fırat University.
- Prof. Dr. Mircea Oroian, Stefan Cel Mare University of Suceava, Romania
- Prof. Dr. Mitat řahin, Kafkas University, Kyrgyz-Turkish Manas University.
- Prof. Dr. Miyase 7ınar, Kırıkkale University.
- Prof. Dr. Mohammad Amjad Kamal, Sichuan University, King Abdulaziz University, Daffodil International University, Novel Global Community Educational Foundation.
- Prof. Dr. Muhammad Ovais Omer, University of Veterinary & Animal Sciences, Lahore-Pakistan.
- Prof. Dr. Murat 7etin Rađbetli, Karamanođlu Mehmetbey University.
- Prof. Dr. Murat Kanbur, Erciyes University.
- Prof. Dr. Murat Yıldırım, Kırıkkale University.
- Prof. Dr. Mustafa Ardı7, Aksaray University.
- Prof. Dr. Mustafa Karakaya, Sel7uk University.
- Prof. Dr. Mustafa Nizamlıođlu, Geliřim University.
- Prof. Dr. Mustafa Numan Bucak, Sel7uk University.
- Prof. Dr. Mustafa Yıldız, Afyon Kocatepe University.
- Prof. Dr. Naim Deniz Ayaz, Kırıkkale University.
- Prof. Dr. Nalan Bayřu S3zbilir, Afyon Kocatepe University.





- Prof. Dr. Nebahat Bilge Oral, Kafkas University.
- Prof. Dr. Nihad Fezjic, University of Sarajevo.
- Prof. Dr. Niraldo Paulino, Universidade Bandeirante de São Paulo (UNIBAN).
- Prof. Dr. Ofélia Anjos, Universidade Lisboa, Portugal
- Prof. Dr. Oğuz Sarımeahmetođlu, Ankara University.
- Prof. Dr. Oscar Herrera Calderon, Universidad Nacional Mayor de San Marcos.
- Prof. Dr. Osman Sađdıç, Yıldız Technical University.
- Prof. Dr. Otilia Bobis, USAMV Cluj-Napoca.
- Prof. Dr. Ömer Çetin, İstanbul Rumeli University.
- Prof. Dr. Özer Ergün, İstanbul Sađlık ve Teknoloji University.
- Prof. Dr. Özgür Kaynar, Kastamonu Univesity.
- Prof. Dr. Patricia Vit, Universidad de Los Andes.
- Prof. Dr. Pavel Krasochko, Vitebsk Stata Academy of Veterinary Medicine.
- Prof. Dr. Petr Krasochko, Vitebsk Stata Academy of Veterinary Medicine.
- Prof. Dr. Recep Keşli, Selçuk University.
- Prof. Dr. Ricardo de Oliveira Orsi, – São Paulo State University.
- Prof. Dr. Rosa Peñalver, University of Murcia.
- Prof. Dr. Selim Sekkin, Aydın Adnan Menderes University.
- Prof. Dr. Semra Kayaardı, Celal Bayar University.
- Prof. Dr. Seyfullah Halilođlu, Selçuk University.
- Prof. Dr. Shailesh Singh, Morehouse School of Medicine.
- Prof. Dr. Silvia Patruica, Banat University of Agronomical Sciences and Veterinary Medicine.
- Prof. Dr. Sinan İnce, Afyon Kocatepe University.
- Prof. Dr. Syed Ghulam Musharraf, University of Karachi.
- Prof. Dr. Tamer Dodurka, İstanbul Rumeli University.
- Prof. Dr. Taoufiq Benali Cadi Ayyad University
- Prof. Dr. Tülay Büyükođlu, Burdur Mehmet Akif Ersoy University.
- Prof. Dr. Uđur Günşen, Bandırma Onyedi Eylül University.
- Prof. Dr. Ümit Gürbüz, Selçuk University.
- Prof. Dr. Vedat Sađmalıgil, Near East University.
- Prof. Dr. Venkataramgowda Sivaram, Bangalore University.
- Prof. Dr. Yahya Kuyucuođlu, Selçuk University.
- Prof. Dr. Yakup Can Sancak, Van Yüzüncü Yıl University.



- Prof. Dr. Yavuz Osman Birdane, Afyon Kocatepe University.
- Prof. Dr. Yun Kang, Arizona State University.
- Prof. Dr. Zafer Gönülalan, Erciyes University / Yozgat Bozok University.
- Prof. Dr. Zafer Pekmezci, Ondokuz Mayıs University.
- Prof. Dr. Zehra Hajrulai-Musliu, Ss. Cyril and Methodius University in Skopje.
- Prof. Dr. Zeki Gürler, Afyon Kocatepe University.
- Prof. Dr. Zulqarnain Baloch, Kunming University of Science and Technology
- Prof. Dr. Basel Al Ramadi, College of Medicine and Health Sciences
- Prof. Dr. Koula Doukani, University of Ibn Khaldoun – Tiaret.
- Prof. Dr. Sokol Duro, Agricultural University of Tirana.
- Prof. Dr. Umah Rani Kuppusamy, Malaya University
- Assoc. Prof. Dr. Saima Muzammil, Government College University
- Assoc. Prof. Dr. Ali Evren Haydardedeoğlu, Aksaray University.
- Assoc. Prof. Dr. Ahmad Elmoll, Lebanese University.
- Assoc. Prof. Dr. Andrea Armani, Pisa University.
- Assoc. Prof. Dr. Aneta A Ptasińska, Maria Curie-Skłodowska University
- Assoc. Prof. Dr. Aleksandar Ž Kostić, University of Belgrade, Zemun.
- Assoc. Prof. Adriana Nowak, Lodz University of Technology.
- Assoc. Prof. Dr. Ayşe Güneş Bayır, Bezmialem Vakıf University.
- Assoc. Prof. Dr. Behnam Rostami, University of Zanjan.
- Assoc. Prof. Dr. Bekir Oğuz, Van Yüzüncü Yıl University.
- Assoc. Prof. Dr. Bojan Blagojevic, University of Novi Sad.
- Assoc. Prof. Dr. Camelia Tulcan, Banat University of Agricultural Sciences and Veterinary Medicine.
- Assoc. Prof. Dr. Corina Mariana Pascu, Banat University of Agricultural Sciences and Veterinary Medicine  
"King Michael I of Romania" from Timisoara
- Assoc. Prof. Dr. Damla Arslan Acaröz, Afyon Kocatepe University.
- Assoc. Prof. Dr. Deyan Stratev, Trakia University.
- Assoc. Prof. Dr. Doğukan Özen, Ankara University.
- Assoc. Prof. Dr. Dzmitry Barysavets, Institute of Experimental Veterinary Medicine named of S.N. Vysheslesky.
- Assoc. Prof. Dr. Ekin Emre Erkılıç, Kafkas University.
- Assoc. Prof. Dr. Eray Alçıgır, Kırıkkale University.
- Assoc. Prof. Dr. Esra Özgül, Afyonkarahisar Health Sciences University.
- Assoc. Prof. Dr. Gamze Çakmak, Van Yüzüncü Yıl University.
- Assoc. Prof. Dr. Halil Yalçın, Burdur Mehmet Akif Ersoy University.



- Assoc. Prof. Dr. Hüsamettin Ekici, Kırıkkale University.
- Assoc. Prof. Dr. İbrahim Küçükcaslan, Dicle University.
- Assoc. Prof. Dr. İlhan Aydın, Republic of Turkey Ministry of Agriculture and Forestry General Directorate of Agricultural Research and Policies.
- Assoc. Prof. Dr. İsmail Yıldız, Van Yüzüncü Yıl University
- Assoc. Prof. Dr. Javaid Iqbal, King Saud University.
- Assoc. Prof. Dr. Kai Wang, Chinese Academy of Agricultural Sciences.
- Assoc. Prof. Dr. Kaliman Kasımaliyeva, Kyrgyz-Turkish Manas University.
- Assoc. Prof. Dr. Leyla Mis, Van Yüzüncü Yıl University.
- Assoc. Prof. Dr. M. Graça Miguel, Universidade do Algarve.
- Assoc. Prof. Dr. Mahir Murat Cengiz, Atatürk University.
- Assoc. Prof. Dr. Mehmet Cengiz, Muğla Sıtkı Koçman University.
- Assoc. Prof. Dr. Mehmet Nuri Konya, Afyonkarahisar Health Sciences University.
- Assoc. Prof. Dr. Mehmet Sağlam, Aksaray University.
- Assoc. Prof. Dr. Mian Muhammed Awais, Bahauddin Zakariya University.
- Assoc. Prof. Dr. Mohamed Gamal Shehata, Arid Lands Cultivation Research Institute (ALCRI).
- Assoc. Prof. Dr. Mohammad Rabbani Khorasgani, University of Isfahan.
- Assoc. Prof. Dr. Mohamed Shebl, Suez Canal University.
- Assoc. Prof. Dr. Mohd Adnan, University of Ha'il.
- Assoc. Prof. Dr. Mohd Fadzelly Abu Bakar, Universiti Tun Hussein Onn Malaysia (UTHM).
- Assoc. Prof. Dr. Mokhtar Benhanifia, University Mustapha Stambouli.
- Assoc. Prof. Dr. Mustafa Yipel, Hatay Mustafa Kemal University.
- Assoc. Prof. Dr. Nizamettin Koçkara, Erzincan Binali Yıldırım University.
- Assoc. Prof. Dr. Nuray Varol, Gazi University.
- Assoc. Prof. Dr. Okan Ekim, Ankara University.
- Assoc. Prof. Dr. Ömer Hazman, Afyon Kocatepe University.
- Assoc. Prof. Dr. Özge Sızmaz, Ankara University.
- Assoc. Prof. Dr. Özgül Küçükcaslan, Dicle University.
- Assoc. Prof. Dr. Özgür Albuz, Dr. Abdurrahman Yurtaslan Ankara Onkoloji Eğitim ve Araştırma Hastanesi.
- Assoc. Prof. Dr. Ricardo de Oliveira Orsi, São Paulo State University.
- Assoc. Prof. Dr. Saadet Belhan, Van Yüzüncü Yıl University.
- Assoc. Prof. Dr. Sandip Chattopadhyay, Vidyasaagar University.
- Assoc. Prof. Dr. Segueni Narimane, University of Constantine.
- Assoc. Prof. Dr. Seyda Cengiz, Muğla Sıtkı Koçman University.

- Assoc. Prof. Dr. Seyda Şahin, Sivas Cumhuriyet University.
- Assoc. Prof. Dr. Şebnem Tosun, Giresun University
- Assoc. Prof. Dr. Suriana Sabri, Universiti Putra Malaysia, Malaysia.
- Assoc. Prof. Dr. Tanveer Hussain, Virtual University of Pakistan.
- Assoc. Prof. Dr. Turhan Turan, Sivas Cumhuriyet University.
- Assoc. Prof. Dr. Ulaş Acaröz, Afyon Kocatepe University.
- Assoc. Prof. Dr. Usman H. Dukku, Abubakar Tafawa Balewa University.
- Assoc. Prof. Dr. Yasin Demiraslan, Burdur Mehmet Akif Ersoy University.
- Assoc. Prof. Dr. Zeynep Karapınar, Balıkesir University.
- Assoc. Prof. Recep Kara, Afyon Kocatepe University.
- Assist Prof. Dr. Aamir Iqbal, Gomal University.
- Assist Prof. Dr. Abraham Peele Karlapudi, Vignan's Foundation for Science and Technology
- Assist Prof. Dr. Ahmad Ali, University of Mumbai.
- Assist Prof. Dr. Ali Ekber Ün, Ankara Yıldırım Beyazıt University.
- Assist Prof. Dr. Ali Emrah Bıyıklı, Alanya Alaaddin Keykubat University.
- Assist Prof. Dr. Ali Soleimanzadeh, Urmia University.
- Assist. Prof. Dr. Abderrahmen Merghni University of Tunis El Manar.
- Assist. Prof. Dr. Abdur Rahman Sial, University of Veterinary & Animal Sciences, Lahore-Pakistan.
- Assist. Prof. Dr. Asim Faraz, Bahauddin Zakariya University.
- Assist. Prof. Dr. Atul Kumar Gupta, Himachal Pradesh Agricultural University.
- Assist. Prof. Dr. Azim Şimşek, Isparta Uygulamalı Bilimler University.
- Assist. Prof. Dr. Bora Özarslan, Kırıkkale University.
- Assist. Prof. Dr. Burcu Güçyetmez Topal, Afyonkarahisar Health Sciences University.
- Assist. Prof. Dr. Cafer Yıldırım, Ankara University.
- Assist. Prof. Dr. Cihat Öztürk, Kırşehir Ahi Evran University.
- Assist. Prof. Dr. Çiğdem Ürkü Atanasov, İstanbul University.
- Assist. Prof. Dr. Cristina Almeida-Aguiar, University of Minho.
- Assist. Prof. Dr. Ejaz Ahmad, Bahauddin Zakariya University.
- Assist. Prof. Dr. Engin Berber, University of Tennessee.
- Assist. Prof. Dr. Eren Kuter, Burdur Mehmet Akif Ersoy University.
- Assist. Prof. Dr. Ezgi Topbaş Bıyıklı, Alanya Alaaddin Keykubat University.
- Assist. Prof. Dr. Fahriye Zemheri Navruz, Bartın University.
- Assist. Prof. Dr. Farnaz Malekifard, Urmia University.

- Assist. Prof. Dr. Fatih Ramazan İstanbullugil, Kyrgyz-Turkish Manas University.
- Assist. Prof. Dr. Firas Alalı, Kerbala University.
- Assist. Prof. Dr. Gözde Ede, Çankırı Karatekin University.
- Assist. Prof. Dr. Hamide Nur Çevik Özdemir, Afyonkarahisar Health Sciences University.
- Assist. Prof. Dr. Hande Sultan Şahiner, Aydın Adnan Menderes University.
- Assist. Prof. Dr. Hasan Hüseyin Demirel, Afyon Kocatepe University.
- Assist. Prof. Dr. Hasan Ufuk Çelebioğlu, Bartın University.
- Assist. Prof. Dr. Hayri Demirbaş, Afyonkarahisar Health Sciences University.
- Assist. Prof. Dr. İbrahim Durmuş, Afyon Kocatepe University.
- Assist. Prof. Dr. İbrahim Sözdutmaz, Erciyes University.
- Assist. Prof. Dr. Kamala Badalova, Azerbaijan Medical University.
- Assist. Prof. Dr. Krešimir Matanović, University of Zagreb.
- Assist. Prof. Dr. Mahendra Singh Tomar, Sri Venkateswara Veterinary University.
- Assist. Prof. Dr. Mehmet Cemal Adıgüzel, Atatürk University.
- Assist. Prof. Dr. Mentor Alishani, University of Prishtina.
- Assist. Prof. Dr. Merve Keskin, Bilecik Şeyh Edebali University.
- Assist. Prof. Dr. Muhammet Yasin Tekeli, Erciyet University.
- Assist. Prof. Dr. Muharrem Satılmış, Bakırçay University.
- Assist. Prof. Dr. Muhsin Öztürk, İstanbul Sağlık ve Teknoloji University..
- Assist. Prof. Dr. Murat Yeşil, Afyonkarahisar Health Sciences University.
- Assist. Prof. Dr. Mustafa Eser, Anadolu University.
- Assist. Prof. Dr. Nariste Kadıralieva, Kyrgyz-Turkish Manas University.
- Assist. Prof. Dr. Olgun Topal, Afyonkarahisar Health Sciences University.
- Assist. Prof. Dr. Ömer Çakmak, İstanbul Esenyurt University.
- Assist. Prof. Dr. Pakize Özyürek, Afyonkarahisar Health Sciences University.
- Assist. Prof. Dr. Rabia Mehtap Tuncay, Van Yüzüncü Yıl University.
- Assist. Prof. Dr. Raul Pascalau, Banat's University of Agricultural Sciences and Veterinary Medicine " King Michael I of Romania" from Timisoara
- Assist. Prof. Dr. Rishi Paliwal, Department of Pharmacy, IGNTU
- Assist. Prof. Dr. Risto Uzunov, Ss. Cyril and Methodius University in Skopje.
- Assist. Prof. Dr. Rüştü Taştan, Kocaeli University.
- Assist. Prof. Dr. Selahattin Konak, Afyon Kocatepe University.
- Assist. Prof. Dr. Shah Nawaz Sial, Riphah College of Veterinary Sciences.
- Assist. Prof. Dr. Sibel Doğan, İstanbul Rumeli University.





- Assist. Prof. Dr. Şükrü Önalın, Van Yüzüncü Yıl University.
- Assist. Prof. Dr. Selma İnfal Kesim, Selçuk University.
- Assist. Prof. Dr. Tuncer Çakmak, Van Yüzüncü Yıl University.
- Dr. Aleksander Pavlov Atanasov, Trakia University.
- Dr. Alessandra Durazzo, CREA-Research Centre for Food and Nutrition, Italy.
- Dr. Ali Soyucok, Burdur Mehmet Akif Ersoy University.
- Dr. Anna Kurek-Gorecka, Medical University of Silesia in Katowice.
- Dr. Awatef Béjaoui, Institut Pasteur de Tunis.
- Dr. Aytaç Ünsal Adaca, Ankara University.
- Dr. Carlos Aurelio Medina Flores, Universidad Autónoma de Zacatecas, México.
- Dr. Cemil Şahiner, Aydın Adnan Menderes University.
- Dr. Cooper Nat Schouten, Southern Cross University.
- Dr. Christopher L. Mayack, Sabanci University, Turkey.
- Dr. Delka Salkova, Bulgarian Academy of Sciences.
- Dr. Dilara Fayetörbay Kaynar, Kastamonu University.
- Dr. Dmitry Morozov, Vitebsk Stata Academy of Veterinary Medicine/ FAO National Coordinator of Belarus
- Dr. Erdem Danyer, Republic of Turkey Ministry of Agriculture and Forestry, Veterinary Control Central Research Institute.
- Dr. Esin Keleş Arslan, Republic of Turkey Ministry of Agriculture and Forestry, International Center For Livestock Research and Training.
- Dr. Fahriye Kan, Afyon Kocatepe University,
- Dr. Franco Mutinelli, National Reference Center for Beekeeping, Legnaro.
- Dr. Halil Ozancan Arslan, Republic of Turkey Ministry of Agriculture and Forestry, International Center For Livestock Research and Training.
- Dr. Iago Dillion Lima Cavalcanti, Instituto Keizo-Asami (iLIKA)/UFPE
- Dr. Jelena Ćirić, University of Belgrade.
- Dr. Kush Shrivastava, School of Animal Biotechnology, NDVSU Jabalpur.
- Dr. Lara Tinacci, Pisa University.
- Dr. Lakshmanan Muthulakshmi, Madurai Kamaraj University.
- Dr. Manel Merradi, Univeristy of Batna2.
- Dr. Mehmet Akalan, Afyon Kocatepe University.
- Dr. Nahid Shokri Bousjein, Kharazmi University.
- Dr. Natasha Schvezov, Instituto de Biología Subtropical (CONICET-UNaM).
- Dr. Neelam Hazoor Zaidi, University of Fiji.
- Dr. Norhasnida Zawawi, Universiti Putra Malaysia.



## Third International Congress on Biological and Health Sciences

ONLINE 14-15-16 APRIL 2023

Dr. Ömer Barış İnce, Pamukkale University.

Dr. Pablo D. Revainera, Universidad Nacional de Mar del Plata.

Dr. Pelin Koçak Kızanlık, Aydın Adnan Menderes University.

Dr. R. Logesh, JSS College of Pharmacy.

Dr. Radosław Balwierz, University of Opole, Poland.

Dr. Rodolfo Torres-deLosSantos, University of Tamaulipas.

Dr. Rustem Ilyasov, Ufa Federal Research Center.

Dr. Sandra Jakšić, Veterinary Institute „Novi Sad“.

Dr. Sana Alibi, Analyzes and Applied Processes to the Environment Research Unit.

Dr. Serol Korkmaz, Republic of Turkey Ministry of Agriculture and Forestry Pendik Veterinary Control Institute.

Dr. Surbhi Bhadauria, Neonatal Care Hospital, Vijayawada.

Dr. Stefan Stangaciu, Romanian Apitherapy Society.

Dr. Wassan Nori, Mustansiriyah University.

## CONTENTS

Preface	
Honorary Board	3
Organizing Committee	4
Congress Secretary	4
Congress Technical Support	4
Scientific Committee	5
Contents	15
<b>ORAL PRESENTATIONS</b>	
Prevalence of Antibodies to Bovine alphaherpesvirus 1 in Sheep and Goats in Türkiye <u>Murat Sevik</u>	29
Coprological diagnosis of Trichostrongylus axei infection in cats: comparison of a novel LAMP assay and novel real time PCR with previously described LAMP, real-time PCR and conventional PCR <u>Joanna Dabrowska, Caroline F. Frey</u>	30
Cytotoxic potential of postbiotics against cancer cell lines: An in vitro study <u>Adriana Nowak, Małgorzata Zakłos-Szyda, Justyna Rosicka-Kaczmarek</u>	31
Analysis of biochemical and antimicrobial properties of bioactive molecules of Argemone mexicana <u>Jyotsna Jaiswal, Nikhat J. Siddiqi, and Bechan Sharma</u>	32
Pathogenicity of African Swine Fever – veterinary diagnosis aspects <u>Marek Walczak</u>	33
Acrylamide Influences Cell Viability, Promotes Reactive Oxygen Species Generation, Causes DNA Damage, and Apoptosis in Human Colon Adenocarcinoma Cell Line Caco-2 <u>Agnieszka Maher, Adriana Nowak</u>	34
Effect of Vitamin A and E administrations on plasma and brain concentrations of ivermectin in mice <u>Bünyamin Traş, Kamil Üney, Tuğba Melike Parlak, Öznur Tufan</u>	35
Prevalence of Eucolus aerophilus in animals originating from different geographical locations worldwide: A systematic review and meta-analysis <u>Małgorzata Samorek-Pieróg, Jacek Karamon, Emilia Łabuć, Małgorzata Pac-Sosińska, Mateusz Pieróg, Tomasz Cencek</u>	36
Investigation of ESBL and Colistin Resistance in Escherichia coli Strains Isolated from Cats and Dogs <u>Taner Arslan, Ece Aytekin, Muhammed Furkan Kaplan, Cihan Oz, Seyda Cengiz, Mehmet Cemal Adiguzel</u>	37
Evaluation of UVA - Supported Hand Hygiene Training Given to Nurses Working in Intensive Care Units (ICU) According to the Kirkpatrick Model <u>Hülya Yılmaz, Dilan Ayhan, Dilek Yılmaz, Yılmaz Özen</u>	38
Genetic profiles of Brucella canis Isolates in Turkey <u>Kadir Akar, Gülseren Yıldız Öz</u>	39
Microbiological Perspective of Kokoreç, as a RTE-Street Food <u>Cemil Sahiner, Pelin Koçak Kızanlık, Ergün Ömer Göksoy</u>	40

The Effect of Stress and Melatonin on Redox Status in Cancer <u>Sabiha Fatima, Mariam S. Alharbi, Naheed Banu</u>	41
Effect of Yeast Cell Wall Components on Broiler Performance <u>Özge Sızmaz, Pınar Saçaklı, Maghlagha Pirphani</u>	42
Descriptive Epidemiology of Stray Dog Bite Injuries Presented to Dog Bite Center in Lahore, Pakistan <u>Muhammad Haris Khan, Muhammad Hassan Mushtaq, Furqan Awan, Ubaid-Ur-Rehman Zia, Muhammad Nawaz</u>	43
As an Ethnic Food, Investigation of the Microbiological Quality of Camel Sucuk <u>Fadime Acar, Ergün Ömer Göksoy</u>	44
Effects of a Commercial Probiotic (Pro-Aqua™) on the Growth and Feeding Performance of Rainbow Trout (Oncorhynchus mykiss) Larvae <u>Uğur Cansın Ödün, Yusuf Yıldız, Boran Karatas</u>	45
Preliminary Results On The Recovery Of Coenzyme Q10 From Vegetable And Animal Waste <u>Andersina Simina Podar, Cristina Anamaria Semeniuc, Floricuța Ranga, Maria-Ioana Socaciu, Melinda Fogarasi, Anca Corina Fărcaș, Dan Cristian Vodnar, Simona Raluca Ionescu, Sonia Ancuța Socaci</u>	46
Investigation of Protective Effect of Resveratrol and Coenzyme Q10 against Cyclophosphamide-Induced Lipid Peroxidation, Oxidative Stress and DNA Damage in Rats <u>Erten Akbel, İsmail Küçükkurt, Sinan İnce, Hasan Hüseyin Demirel, Damla Arslan Acaröz, Fahriye Zemheri-Navruz, Fahrive Kan</u>	47
Comparison of the Efficiency of Different Education Methods in the Basic Medical Sciences Laboratory <u>Umut Kökbaş, Pelin Özmen, Özlem Bozkurt, Işınso Alkan</u>	48
Determination of Some Fertility Parameters of Karacabey Merino Sheep Breeding in Balıkesir Conditions and Growth Performance of Lambs <u>Muharrem Satılmış, Murat Er, İrfan Güngör</u>	49
Bibliometric Profile of Master's Thesis on Child Health and Diseases Nursing <u>Hamide Nur Çevik Özdemir, Arif Kolay</u>	50
Comparison of Ectoparasites infestation for fresh and saltwater Fishes from Euphrates, and Razzaza Lake, Iraq <u>Marwa Jawad, Firas Alali, Mohammed B. Shaheed Al-Khateeb, Asaad Sh. M. Alhesnawi</u>	51
Polybrominated diphenyl ethers levels in feed and feed materials <u>Wojciech Pietroń, Malgorzata Warenik-Bany</u>	52
Where Does The Veterinary Medicine Legislation Take Place In The One Health Approach? <u>Ece İzzür Terci</u>	53
Evaluation of the anti-herpesviral activity of Geranium robertianum L. <u>Jakub Režmer, Inga Wasilewska, Łukasz Świątek, Anastazja Boguszewska, Agnieszka Grzegorzczak, Barbara Rajtar</u>	54
Screening and identification of key miRNAs and targeted genes in myeloid neoplasms progression# <u>Yalda Hekmatshoar</u>	55
Occurrence of Alaria alata in wild boars (Sus scrofa) in Poland between 2018-2022 <u>Aneta Belcik, Ewa Bilaska-Zajac, Weronika-Korpysa-Dzirba, Aneta Gontarczyk, Ewelina Antolak, Dagmara Lisowska, Tomasz Cencek</u>	56
Sarcocystis spp. in Wild Boars – Current Situation in Europe Including Preliminary Results From Poland <u>Weronika Korpysa-Dzirba, Ewa Bilaska-Zajac, Aneta Belcik, Aneta Gontarczyk, Ewelina Antolak, Dagmara Lisowska, Tomasz Cencek</u>	57
Trich-tracker a practical tool to trace inbred parasite outbreaks <u>Ewa Bilaska-Zajac, Benjamin Rosenthal, Peter Thompson</u>	58
Bibliographic Analysis of Postgraduate Theses in Nursing on Non-Drug Methods Used to Relieve Pain During Blood Collection in Children in Turkey <u>Hamide Nur Çevik Özdemir, Ebru Yavuz, Reyhan Ündere</u>	59
The Effects of Malva Neglecta on The Probiotic Bacterium L. rhamnosus GG <u>Buse Nur Derebasi, Sena Davran, Hasan Ufuk Celebioglu</u>	60
Evaluation Of Different Brands Of Indian Honey Based On Their Physicochemical And Antioxidant Properties <u>Sahana. K, Ayesha Noor</u>	61
Contribution of viruses in dog diarrhea <u>Hakan İşıdan, Turhan Turan, Mustafa Ozan Atasoy, Murat Karahan</u>	62

Contributions of Veterinarians to Human and Animal Health Following an Earthquake Disaster <u>Aytaç Ünsal Adaca</u>	63
Effect of Different Essential Oils on <i>Melissacoccus plutonius</i> # <u>Fatma Nur Cifcioglu</u> , Ece Aytek, Emrah Ozakar, Cihan Oz, Rukiye Sevinc Ozakar, Muhammed Furkan Kaplan, Mehmet Cemal Adiguzel	64
In vitro Antimicrobial Activity of Bee Bread and Pollen Samples Collected by Yığılca Ecotype Against Various Pathogenic Bacteria <u>Emine Sönmez</u> , Meral Kekeçoğlu, Arif Bozdeveci, Şengül Alpay Karaoğlu	65
In sight on nutrition patterns and attitudes regarding coronary heart disease patients in Misurata <u>Ayman Balla Mustafa</u> , Abdalla Elgenaidi, Salem Elwahaishi, Salem Mohamed Embiriekah	66
Effect of Aqueous Extract Plant Mixture on Lipid Profile Hepatotoxicity of Broiler Chicks <u>Aamir Iqbal</u> , Zulfiqar Hussain Kuthu, Obaid Ullah, Ismail Bayram	67
The Effect of Fullerene C60 Nanoparticle against Kidney Tissue Injury on COX-2, IL-1 $\alpha$ , HO-1 and NF- $\kappa$ B Gene Expressions <u>Seda Bevaz</u> , Abdullah Aslan, Can Ali Ağa, Ibrahim Hanifi Ozercan, Ersin Demir	68
The Effect of Olive Cake on Milk Fatty Acids and Atherogenic Index in the Dairy Buffaloes <u>Taherah Mohammadabadi</u>	69
Clustering Areas of Bovine Tuberculosis Outbreaks in Türkiye <u>Şahin Çakır</u>	70
Protective Effect of Celery (Apium graveolens) Leaf Essential Oil on Temperature and Oxygen-Induced Fish Oil Oxidation <u>Osman Sabri Kesbic</u>	71
Investigation of the effect of microwave assisted extraction of broccoli ( <i>Brassica oleracea L. var italica</i> ) on quality criteria <u>Mehmet Yetisen</u> , Rabia Tartici, Cem Baltacıoğlu, Hasan Uslu	72
Effects of Echinacoside on Apoptosis, Lectins and Antioxidants in Experimental Diabetes Induced Rats <u>Hasan Aksit</u> , Dilek Aksit, Eren Altun	73
Comparison of Carcass Weight and Characteristics in Some Cattle Breeds <u>Okan Oyan</u> , <u>Hasan Hüseyin Şenyüz</u> , Cem Çağdaş Arköse	74
Effects of Post-Activation Potentiation (PAP) Interventions at Different Loads on Muscle Electrophysiology and Performance (Preliminary Study Findings) <u>Sümeyye Genç</u> , Çağdaş Güdücü, Egemen MançI, Erkan Günay	75
Barcoding and Phylogeny of Some Ethmia (Hübner 1819) (Ethmiinae, Lepidoptera) Species from Turkey <u>Sibel Kızıldağ</u>	76
A Novel Temperature Responsive Nano In Situ Gel For The Ocular Delivery Of Flurbiprofen <u>Mudavath Hanuma Naik</u> , Sharmila Alladi, Syed Meraj Sultana, Thullimilli Sravani	77
Anti-Paw Edema of Ephedra alata Decne and its Protective effect Against Pirimicarb Induced Cytotoxicity of Neutrophils <u>Latifa Khattabi</u> , Laid Bahri, Rania Derguine, Aziez Chettoum	78
Antidiabetic Effect of Herbal Formulation (SMNSCC) on Alloxan Induced Diabetic Rats <u>Tahira Almas</u> , Sajida Batool	79
LC-MS/MS Phytochemical Profiling, Antioxidant Activity and Cytotoxicity of Three Kinds of Dragon Fruits <u>Sevgi Gezici</u> , Nazim Sekeroglu	80
Stereological and Immunohistochemical Investigation of Botox-Applied Gastrocnemius Muscle in Adult Male Rats <u>Mehmet Uğur Delibaş</u> , <u>Gamze Çakmak</u>	81
Protective Effect of Taurine on Oxidative Stress Induced by Pyraclostrobin in Rats# <u>Ibrahim Serim</u> , Hasan Huseyin Demirel, Fahriye Zemheri-Navruz, <u>Sinan Ince</u>	82
A Qualitative Research On The Experiences Of Pediatric Emergency Service Professionals With Refugee Patients <u>Mukaddes Demir Acar</u> , <u>Gülmelek Yılmaz</u> , Selda Yüzer Alsaç	83
Chemometric Analysis of Different Cake Additives on Chemical Composition of Cake <u>Cem Baltacıoğlu</u>	84
Magnesium Levels in Cancer Patients <u>Adem Keskin</u> , Murat Arı, Recai Aci	85



Determining the Attitudes of Nursing Students Towards Child Love and Child Rights: A Cross-Sectional, Comparative Study <u>Abdullah Sarman, Suat Tuncay</u>	86
Determining the types and quality levels of some important foods with machine learning <u>Emre Yavuzer, Aslı Şan</u>	87
Analgesic Action and Possible Pathways Involvement of Lavandula Stoches in Swiss Albino Mice <u>Muhammad Muzammil Nazir, Nimrah Zafar, Farkhanda Asad, Saima Zafar, Asma Ashraf</u>	88
Undifferentiated Embryonal Rhabdomyosarcoma in a German Shepherd Dog: Macroscopic, Histopathologic and Immunohistochemical Features <u>Fatih Hatipoğlu, Abuzer Taş, Mehmet Fatih Bozkurt, Ayperi Aitmyrza Kyzy, Nariste Kadiralieva</u>	89
Determination of Virtual Risk Perception Status of Students Studying in Sports High School <u>Semra Köse, Gülsün Ayran</u>	90
Investigation of ABO Blood Group and Some Biochemistry Tests in Patients with Gestational Diabetes Mellitus <u>Murat Arı, Adem Keskin, Recai Aci</u>	91
In Vitro anthelmintic Effects of Calotropis procera and Acacia nilotica Against Gastrointestinal Nematodes of Mouflon Sheep <u>Azhar Rafique, Muhammad Shahid Mehmood</u>	92
Impact of Different Extraction Method and Solvent on Extractive Value, Total phenolics, Flavonoid Content and Antioxidant Activity of Some Important Medicinal Plants <u>Aziz Ahmed, Mohd Shuaib</u>	93
Comparison of Accumulation of Clenbuterol, Salbutamol and Terbutaline Residues in Biological Matrices from Broilers and Their Influence on Yield <u>Defrim Veseli</u>	94
A Case of Liposarcoma in a Guinea Pig <u>Fatih Hatipoğlu, Abuzer Taş, Ali Rişvanlı, İsmail Şen, Aiperi Aitmyrza kyzy</u>	95
A Case of Acquired Hernia Diaphragmatica in a Cat <u>Abuzer Taş, Ali Rişvanlı, İsmail Şen, Fatih Hatipoğlu, Aiturgan Duyshobaveva</u>	96
Chips Made from Apple Pomace <u>Hande Baltacıoğlu, İrem Akan, Döndü Gevrek, Rümeyza Esen</u>	97
Valorization of Camelus dromedarius natural products as a novel source of antibacterial properties: New Strategies to Fight Antibiotic Resistance <u>Ressmi Amina, Raqraq Habiba, Aniba Rafik, Dihmane Asmaa, Barguigua Abouddihaj, Soraa Nabila</u>	98
Preservation of Goat Lungs by Comparative Plastination Techniques: A Morphometric Study <u>Roop Kiran, Neelam Bansal, R.S. Sethi, Varinder Uppal, Anuradha Gupta</u>	99
A Case of Seminoma in an 8-Year-Old Poodle Dog <u>Ali Rişvanlı, Fatih Hatipoğlu, Abuzer Taş, İsmail Şen, Aiturgan Duyshobaveva</u>	100
Attitudes and Behaviours of Intensive Care Nurses Towards End of Life Care and Death <u>Özkan Sir, Ebubekir Kaplan, Aylin Özakgöl, Seçil Eden Melikoğlu</u>	101
Microbiological Analysis of Food Contact Surfaces at A Food Production Facility# <u>Gul Ece Soyutemiz, Figen Cetinkaya, Tulay Elal Mus</u>	102
Evaluation of The Phenolic Content of Multifloral Honey From Şanhurfa, Türkiye <u>Serap Kılıç Altun, Nilgün Paksoy</u>	103
Effect of Boric acid on Leptin Levels in the Prescapular Adipose tissue of Rats <u>Mehmet Başeğmez, Muhammed Fatih Doğan</u>	104
Histological Staining Technics for Identifying Various Structures for Histological Assessment of Bone and Cartilage Healing <u>Tavfun Dikmen</u>	105
Liver Effects of Allium Schoenoprasum L. (Sirmo) Against Acrylamide Toxicity# <u>Semih Yaşar</u>	106
Evaluation of Malnutrition Status with Different Screening Tools and Association with Sarcopenia and Frailty in Elderly People Living in the Community# <u>Ferda Koç, Büşra Ay, Kübra Siyasal, Nazlı Bengü İlter, Özge Mengi Çelik</u>	107

Anaplasmosis Treatment in a British Short Hair Cat and Supportive Therapy with Traditional Chinese Herbal Medicine Fufang E' Jiao Jiang <b>Pramita Rabiulfa, Palagan Senopati Sewoyo, Made Santi Purwitasari, I Gede Soma3, I Gusti Made Krisna Erawan</b>	108
Epidemiological Investigation of Betanodavirus Prevalence in Sea Bass Hatcheries For All Production Stages in Türkiye# <b>Murat Kaplan, Mehmet Taner Karaoğlu</b>	109
Association of J Wave with Prognosis in Dogs with Congestive Heart Failure <b>Basar Ulaş Savilkan, Yücel Meral, Duygu Dalgın</b>	110
Determination of Antifungal and Antibacterial Activity of Cream Formulation Containing Red Pitahaya Methanol Extract <b>Meltem Asan-Ozusaglam, Irem Celik</b>	111
Fabrication, Characterization and Toxicity Evaluation of Chemically Cross-linked Polymeric Material: A Proof of Concept <b>Meghraj Suryawanshi, Birendra Shrivastava</b>	112
Assessment of Groundwater Quality in Samastipur region, Bihar, India <b>Maya Jha, Shahla Yasmin</b>	113
Investigation of Antimicrobial Activity of Fruit Extracts from Citrus medica L. var. sarcodactylis Against Food-borne Pathogens <b>Hilal Tasbasi, Meltem Asan-Ozusaglam</b>	114
Potential Antimicrobial Activity of Aronia Water Extract Against Candida albicans ATCC 10231 and Aeromonas hydrophila ATCC 19570 Strains <b>Ali Saglam, Meltem Asan-Ozusaglam</b>	115
Comparison of Dermestes maculatus and Maceration Methods in Preparation of Osteological Materials <b>Sedef Selviler-Sizer, Semih Kurt, Betül Kanik</b>	116
In vitro Toxicity Evaluation of Cadmium and Lithium Using Human Peripheral Leukocytes as A Model System <b>Priva Sundarrajan, Nandini Kasarpalkar</b>	117
Antimicrobial, Anti-Quorum Sensing and Anti-Biofilm Activities of Elaeagnus umbellata Methanol Extracts <b>Ülkü Zeynep Üreyen Esertas, Merve Cora, Neslihan Akarsu, Ali Osman Kiliç</b>	118
Iron (II) catalyzed Selective hydroxylation of unsaturated hydrocarbons to secondary alcohol derivatives as pharmaceutical intermediates <b>Ahmed M. Senan, Senem Akkoç</b>	119
Evaluation of the Relationship between the Amount and Type of Carbohydrate Consumed After the Evening Meal and Sleep Quality <b>Ziya Erokay Metin, Hatice Aybüke Çalışkan</b>	120
Endoparasitic Prevalence, Bioaccumulation of Heavy Metals and Genotoxicity in Captive Pavo cristatus at Different Geographic Sites of the Punjab, Pakistan <b>Shabana Naz, Sania Satti, Alina Razzaq, Aniqa Qaisar, Sajida Arooj, Asma Ashraf, Rifat Ullah Khan</b>	121
Potential Use of Cornelian Cherry Fruit Extracts as an Alternative to Synthetic Preservatives <b>Meltem Asan-Ozusaglam, Sidarhan Yatci</b>	122
Examination of branches of arteria carotis externa in a Anatolian wild goat <b>Gülseren Kırbaş Doğan</b>	123
Determination of Microbial Quality of Frozen Swordfish <b>Halil Yalçın</b>	124
Evaluation of the Effects of 5-Fluorouracil (5-FU) on Some Surface Markers in Endothelial and Fibroblast Cells <b>Dilşad Özerkan</b>	125
Gelatin Production from Waste Rainbow Trout (Oncorhynchus mykiss) Skins and Determination of Its Technological Properties <b>Sefik Tekle, Fatih Bozkurt, Osman Sagdic</b>	126

Green Sythesis of Waste Walnut ( <i>Juglans regia</i> L.) Inner Shell Based Silver Nanoparticles <u>Merve Can, Merve Keskin</u>	127
A Cross-Sectional Survey Among Herdsmen to Explore Goat Milk Production in The Outskirts of Lahore, Pakistan <u>Mahwish Khan, Muhammad Haris Khan</u>	128
Evaluation of the Resistance Profile of Fungal Infections <u>Derya Doğanay, İbrahim Serkan Avşar, Müzeyyen Aydın</u>	129
Mutidrug resistance and biofilm formation of <i>Pseudomonas aeruginosa</i> strains in the university hospital of Batna, Noertheast Algeria <u>Manel Merradi, Leyla Benammar, Nouzha Heleili</u>	130
Evaluation of the fatty acid composition in <i>Quercus pyrenaica</i> acorns: influence of the development stage <u>Kheira M. Mouffok, Bchira Ben Youssef, José I. Alonso-Esteban, Lillian Barros, Miguel Vilas-Boas, Soraia I. Falcão</u>	131
Molecular docking analysis of LOX with dieckol <u>Nagihan Faydalı, Damla Kırıcı</u>	132
External Bacterial Flora of Domestic Cockroaches and Their Antibiotic Resistance <u>Leyla Benammar, Manel Merradi, Hassane Benseghir, Sana Aouachria, Taha Menasria</u>	133
Social Service After Disaster <u>Azize Serap Tunçer</u>	134
Taxonomic study and antioxidant evaluation of an <i>Opuntia</i> plant grown in Algeria <u>Walid Zeghibib, Fares Boudjouan, Asma Ourabah</u>	135
Effect of Essential Oils Blend on Growth Performance, Carcass Characteristics and Total Bacterial Count in Broiler <u>Abdur Rahman</u>	136
Vimentin Immunoexpression in Cyclic Corpus Luteum of Indian Buffalo <u>Kritima Kapoor, Opinder Singh, Devendra Pathak</u>	137
Dough-leavening capacity of individually inoculated dry rye sourdough isolates <u>Azhar Makambai kyzy, Aichurok Mazhitova, Aylin Korkut Altıntaş, Hakan Kuleasan</u>	138
Instant Mixed Herbal Tea Production with Spray Drying <u>Hande Baltacıoğlu, Katibe Sinem Coruk, Beyza Ölçer, Seda Ororak, Sümeyye Berber</u>	139
Rodents as reservoirs of <i>Coxiella burnetii</i> <u>Derya Karataş Yeni</u>	140
A Complicated Humeral Fracture in a Mountain Gazelle ( <i>Gazella gazella</i> ) Calf in Kyrgyzstan <u>Abuzer Taş, Ali Rişvanli, İsmail ŞEN, Fatih Hatipoğlu, Nur Abdymanap Uulu</u>	141
Investigation of the Effects of a Benzimidazole Compound on Prostate Cancer Cell Line <u>Senem Akkoc, İrem Bavar</u>	142
Evaluation of Diabetes Risk of Teachers Working at Suleyman Demirel University Faculty of Health Sciences <u>Recep Turan, Siddika Ersoy, Özkan Sir</u>	143
Unraveling the Interactions between Paclitaxel and Graphene Nanocarriers with Antidote Nanoholes <u>Sahila Jabrayilova, Handan Emisoglu-Kulahli, Mehdi Meran</u>	144
Serological and Virological Investigation of Border Disease Infection in Sheep in Denizli Province <u>Ömer Barış İnce, Ahmet Sait</u>	145
Antioxidant Potential of <i>Cladostephus spongiosum</i> Brown Macroalgae <u>Hatice Banu Keskinaya, Ebru Deveci, Emine Şükran Okudan</u>	146

Screening of <i>Dunaliella salina</i> moieties for Myocardial Infarction: A Computational Study <u>H R Sameera</u> , Govardhan K R, Golla Sireesha, Soundarya R, Shannon D Almeida, J Anbu, Damodar Nayak A, Parasuraman Pavadai	147
Identification of Potential Lead for Aldose Reductase Enzyme in the treatment of Cataract: A Computational and Experimental Approach <u>Srinivas G</u> , Jeevitha Lokesh, Harish Kumar D R, Damodar Nayak A, Parasuraman Pavadai	148
Are Eating Behaviors Associated with the Premenstrual Syndrome Among Students of the Health Sciences Faculty? <u>Fatma Tavhan</u> , Gözde Ede	149
Exploring the possible mechanism of Capsaicin in the treatment of Breast Cancer: A Computational Approach <u>Govardhan K R</u> , Shannon D Almeida, H R Sameera, Golla Sireesha, Soundarya R, Damodar Nayak A, Parasuraman Pavadai	150
Evaluation Biochemical Parameters in Cattle Vaccinated with Foot and Mouth Disease Vaccine and Lumpy Skin Disease Vaccine <u>Halil Yavuz</u> , Ömer Barış İnce, Alparslan Ayaz	151
Evaluation of antiurolithiatic activity of <i>Illicium verum</i> HOOK. F. fruit by in-vitro methods <u>Chethan S</u> , Pruthvi Nayak V	152
Isolation and identification of <i>Listeria</i> spp. from brain tissue samples of slaughtered cattle in Afyonkarahisar <u>Selahattin Konak</u> , Hasan Hüseyin Demirel	153
Evaluation of Enzyme Inhibition and Antioxidant Properties of the Samples of Propolis Collected from Bayburt Region <u>Efe Kurtdede</u> , Ahmet Mahmut Alperen, Abdulkadir Doğan	154
Horse Evaluation Form to Be Used in Hippotherapy Applications # <u>Ali Ekber Ün</u> , Cafer Yıldırım	155
Examination Of Longeing Areas in Horse Training and Health # <u>Ali Ekber Ün</u> , Cafer Yıldırım, Bahar Özsoy	156
Can Stem Bromelain, a Pineapple Waste Product, Be Used As a Drug Alternative? A Mechanistic Insight Into Protein-Protein Interactions <u>Samima Khatunab</u> , Anamika Sindhua and Pannuru Venkatesua	157
Protective Effect of Magnolin on Oxidative Stress in Rats Caused by Acute Cyclophosphamide Exposure # <u>Sinan Ince</u> , Hasan Huseyin Demirel, Ezgi Nur Demirkapi, İsmail Kucukkurt, Abdullah Eryavuz, Damla Arslan-Acaroz, Ulas Acaroz, Ali Tureyen	158
The Investigation of Potential Protective Effect of Resveratrol Against Dichlorophenoxyacetic Acid Herbicide (2,4 D)-Induced Rats <u>Hasan Hüseyin Demirel</u> , Sinan Ince, İsmail Küçük Kurt, Damla Arslan Acaröz	159
Comparative study of Vertebral Column of Emu and Domestic Fowl <u>Anuradha Gupta</u> , Neelam Bansal, Varinder Uppal	160
Multiresidue analysis of anabolic hormones in urine with method LC-MS/MS <u>Valbona R. Azizi</u> , Zehra Hajrullai Musliu	161
Sero-prevalence and Risk Factors of Toxocariasis in Nomadic Communities of Multan-Pakistan Mian Muhammad Awais, Seemab Zahoor, <u>Abdul Sammad Ali Khan Shirwany</u> , Muhammad Irfan Anwar, Masood Akhtar, Muhammad Amjad Ali	162
POSTER PRESENTATION	163
Antibacterial activity of essential oils of <i>Thymus vulgaris</i> and <i>Syzygium aromaticum</i> on the digestive carriage of <i>Escherichia coli</i> producing extended spectrum $\beta$ -lactamases and multi-resistant in poultry in Algeria. <u>Akkari Hafsa</u> , Merradi Manel, Ayachi Ammar, Heleili Nouzha	164

Unexpected cross-reaction with Hombergiella-like DNA in a PCR for detection of bovine Trichostrongylus axei <u>Joanna Dabrowska</u>	165
Lethal and sublethal doses of imidacloprid alter the expression of genes related to circadian rhythm in Apis mellifera <u>Isabella Cristina De Castro Lippi</u> , Yan de Souza Lima, Jaïne da Luz Scheffer, Marcus Vinícius Niz Alvarez, Samir de Moura Kadri, Ricardo de Oliveira Orsi	166
Expression of the catalase gene in honey bees exposed to sublethal doses of the insecticide fipronil <u>Iloran do Rosário Corrêa Moreira</u> , Jaïne da Luz Scheffer, Isabella de Castro Lippi, Yan Souza Lima, Samir Moura Kadri, Marcus Vinícius Niz Alvarez, Ricardo de Oliveira Orsi	167
A Sublethal Dose of the Insecticide Fipronil Affects Olfactory Genes of Africanized Honey Bee <u>Yan Souza Lima</u> , Isabella Cristina de Castro Lippi, Jaïne da Luz Scheffer, Samir de Moura Kadri, Marcus Vinícius Niz Alvarez, Ricardo de Oliveira Orsi	168
Obtaining the Extracts from Schisandra chinensis Fruits from Different Geographical Locations in China and Poland <u>Lili Fu</u> , Adriana Nowak	169
Standards of Honey Quality in Serbian Legislation <u>Jelena Ćirić</u> , Tatjana Baltić, Brankica Lakićević, Milenko Babić, Radivoj Petronijević, Boris Mrdović	170
Varicocele and Infertility <u>Saadet Belhan</u>	171
Phenolic compounds in honey: A review <u>Tatjana Baltić</u> , Ivana Branković Lazić, Sara Rajić, Čaba Siladi, Jelena Ćirić, Branko Velebit, Jelena Jovanović	172
Propolis: physico-chemical characteristics, biological activity and galenic formulation <u>Amina Soltani</u> , Soumia Taha, Amel Bouslama	173
Some Enzymes and Oxidative Stress Markers Used in the Diagnosis of Mastitis in Ruminants <u>Şefika Musabeseoglu</u> , Yavuz Musabeseoglu, Tülay Buyukoglu	174
Can marine microorganisms help us fight the influenza virus? – review <u>Jakub Rezmer</u> , Inga Wasilewska, Łukasz Świątek	175
Evaluation of the use of marine-derived compounds in the development of drugs against SARS-CoV-2 <u>Inga Wasilewska</u> , Jakub Rezmer, Łukasz Świątek	176
Breastfeeding Practice of Saudi Women Attending Primary Health Care Centres <u>Afnan Abdullah Alsalamah</u> , Juliana Linnette D'Sa	177
The occurrence of potentially zoonotic lungworm infections of Eucoleus aerophilus in red foxes in selected regions of Poland – preliminary study# <u>Małgorzata Samorek-Pieróg</u> , Jacek Karamon, Tomasz Cencek	178
Powerful Plant Antioxidant: Rosmarinic Acid Emine Nakilcioğlu, <u>Eda Nurko</u> , Selen Seyhan	179
The World's Super Grain: Fonio Emine Nakilcioğlu, <u>Selen Seyhan</u> , Eda Nurko	180
The Effects of Malva Neglecta on The Probiotic Bacterium L. rhamnosus GG Buse Nur Derebası1, Sena Davran, <u>Hasan Ufuk Celebioglu</u>	181
Nurses' Perception of Clinical Handover: A Descriptive Survey <u>Juliana Linnette D'Sa</u> , Norah Abdullah Alanazi	182
Application of by-products agroindustries for the production of vinegar <u>Natalia Miranda do Nascimento</u> , João Vitor Lacerda dos Santos, Ana Claudia Barana	183



Effects of Subinhibitory Vancomycin and Gentamycin Concentrations on Biofilm Formation by Staphylococcus Aureus <u>Aniba Rafik</u> , Barguigua Abouddihaj, Dihmane Asmaa, Raqrqa Habiba, Ressai Amina, Nayme Kaotar, Timinouni Mohammed	184
First Detection of Mycobacteroides abscessus from Discus Fish (Symphysodon aequifasciatus) in Samsun, Turkey# <u>İlker Hancı</u> , Ertan Emek Onuk	185
Monitoring of sheep oak's poisoning in North-east area of Albania. <u>Jani Mavromati</u>	186
Computer 3D modeling of articulation genus in Wistar albino rat <u>Sefa Yekeler</u> , Semih Kurt, Burcu Onuk	187
Effect of Vegan Diet on Health, Evaluation of Animal Protein and Plant Protein <u>Didem Demir</u>	188
Molecular Identification of Anisakis pegreffii (Nematoda: Anisakidae) in the European Anchovy (Engraulis encrasicolus) from the Aegean Sea <u>Ünver Oğuzhan Tekay</u> , Cansu Aktaş, Volkan Kaydu, Esra Demirbaş, Gökmen Zafer Pekmezci	189
Effect of Peganum harmala total alkaloid extract on sexual behavior and sperm parameters in male mice Derbak Hanane, <u>Ayad Abdelhanine</u>	190
Parasite infections in rainbow trout (Oncorhynchus mykiss) farm from the Rize Province of Turkey <u>Meltem Özer</u> , Gökmen Zafer Pekmezci	191
Chaya reduces the damage caused by exposure to Arsenic <u>Eduardo Lozano Guzmán</u> , Julieta Grajales Conesa, José Alfonso López García, Ángel Antonio Vértiz Hernández, Adolfo Padilla Mendiola, Sergio Uriel Escobar Gutierrez, Maribel Cervantes Flores	192
A Comprehensive Review on Therapeutic Potential of Prebiotics and Probiotics in Various Diseases and Disorders Including COVID -19 <u>Aziz Ahmed</u> , Mohd Shuaib	193
An Overview of Anatomical, Histological and Stereological Studies on the Nervous System in Poultry <u>Gamze Çakmak</u> , Zafer Soygüder, Eyyüp Aytaç, Veysel Delibaş	194
Comparative osteometric study of metapodial bones in roe deer (Capreolus capreolus), sheep (Ovis aries), and goat (Capra hircus) Sedef Selviler Sizer, <u>Fatmanur Sila Keskin</u> , Bedirhan Çamoğlu, Semih Kurt, Burcu Onuk, Murat Kabak	195
The morphologic study of the sternum in red fox (Vulpes vulpes) <u>Duygu Küçük Ağaç</u> , Sedef Selviler Sizer, Burcu Onuk	196
Determination of Zeralenone in liver by LC-MS/MS Method, in the Republic of Albania. <u>Suela Teqja</u> , Jani Mavromati	197
The Effect of Allium Schoenoprasum L. (Sirmo) on Caspase Levels Against Acrylamide Toxicity <u>Semih Yaşar</u> , Leyla Mis	198
Fluorosis: causes and effects on human health <u>Shahla Yasmin</u>	199
An Uncommon Interaction Between Dermatomyssus gallinae (De Geer, 1778) (Mesostigmata: Dermatomyssidae) and Domestic Cat (Felis catus) <u>Gökhan Eren</u>	200
Effects of Milk Fat and Carbohydrate Composition on Nutrition and Health <u>Rabia Melda Karaağaç</u> , Çağla Pınarlı	201
The Immune System: Role of Vitamin E <u>Çağla Pınarlı</u> , Rabia Melda Karaağaç	202

Quality nutritional stability, bioactive compounds and antioxidant activity of apple jam: impact of storage time and temperature <u>Ouarda Djaoudene</u> , Mostapha Bachir bey, Sabrina Djebari	203
Chitosan–Sodium Alginate Particles Containing Rosmarinus Officinalis Essential Oil: Formulation, Optimisation and Characterization <u>Lamia.Taouzinet</u> , Sofiane. Fatmi, Mokrane.Iguer-Ouada	204
Aurones As an Important Scaffold For Anticancer Research - A Computational Approach <u>Sunil Kumar B</u> , Mahesh Ar	205
Novel Identification of Kinase Inhibitors Targeting PI3Ka Against Non-Small Cell Lung Cancer: A Computational Study <u>Mahasin khan</u> , Devaraj uppar	206
The Wound That Won't Quit;Acral Lick Dermatitis In A Dog <u>Saba Raouf</u> , Büşra Uzun,Çağatay Esin, Duygu Dalgın	207
Investigation of phenolic, flavonoid, ascorbic acid, tannin, total antioxidant levels in different colored Hawthorn (Crataegus) fruits# <u>İrem Celebi</u> , Gülay Çiftci	208
Evaluation of a Methyl cellulose-based Hydrogel Matrix as a Potential Insulin Carrier <u>Aneta Ostróżka-Cieślík</u> , Barbara Dolińska	209
Mixture of bee bread with honey - nutritional and microbiological characterization <u>Adriana Fortes</u> , Andreia Tomás, Paula Rodrigues, Miguel Vilas-Boas, Vitor Martins	210
Ethanol extract of Polish propolis as a cariostatic agent - a preliminary study <u>Małgorzata Klósek</u> , Elżbieta Bobela, Zenon P. Czuba, Anna Kurek-Górecka, Paweł Olczyk	211
Novel Molecule Identification For UNC-51 LIKE KINASE 1 (ULK -1) role In Heart Regeneration Via Autophagy - Computational Study <u>Devaraj uppar</u>	212
Effects of Recreational Horse Assisted Activities to Overcome Animal-Fear on People with Special Needs # <u>Cafer Yıldırım</u> , <u>İbrahim Serdar Koçar</u> , Şükrü Torun, Elif Nur Şogen, Onur Yılmaz	213
Outbreak of Foot-and-Mouth Disease (FMD) Serotype South African Territories 2 (SAT2) in Turkey <u>Kerem Dabur</u> , Sibel Şurak, Furkan Garip, Zeynep Akkutay-Yoldar	214
Sustainable Nutrition and Its Importance in Reaching Sustainable Development Goals <u>Sevinç Yücecın</u> , Çağla Pınarlı	215
Contribution of the Sidi M'Hamed Ben Taïba "SMBT" dam to irrigation and drinking water supply in the Wilaya of Ain Defla (Algeria) <u>Khadidja Attou</u> , Aek Mekhanag, Meriem Chafaa, Leila Soudani, Meriem Bouzroua, Rania Amedjekouh	216
Optimization of phenolic compounds recovery and antioxidant evaluation from prickly pears using response surface methodology <u>Fares Boudjouan</u> , <u>Walid Zeghib</u> , Asma Ourabah	217
Evaluation of the Synergistic Potential of Mixtures of Yerba Mate and Cocoa Husk Extracts with Antioxidant Power <u>Alejandra González Hurtado</u> , <u>Diego Yamul</u> , Alba Navarro	218
Pollen as a Novel Ingredient for Functional Foods: Characterization and Antioxidant Properties <u>Gildardo Moreno Galvis</u> , <u>Diego Yamul</u> , <u>Alba Navarro</u>	219
Effects of defenses on the preservation and rehabilitation of medicinal plants in the Algerian steppe (case of the Wilaya of Djelfa). <u>Amedjekouh Rania</u> , Soudani Leila, Chafaa Meriem, Attou Khadidja, Bouzeroura Meriem	220
Prevention of Individuals Mental Health Problems and The Effects on Mental Health Through Hippotherapy. # <u>Cafer Yıldırım</u> , <u>İbrahim Serdar Koçar</u> , Şükrü Torun, Elif Nur Şogen, Onur Yılmaz	221

<b>Histological description of the gonads in smooth scallops (<i>Flexopecten glaber</i>) caught in Black Sea waters near Cape Shabla</b> <b>Nelko Yordanov, Galin Nikolov, Elitsa Petrova-Pavlova, <u>Çiğdem Ürkü</u></b>	222
<b>The effect of <i>Lactobacillus acidophilus</i> probiotic administration on amyloid protein and TNF-<math>\alpha</math> levels in testicular tissue in rats fed a high-fat diet #</b> <b>Gülşay Çiftci, <u>Furkan Ümit</u>, Pınar Kar</b>	223
<b><i>Glugea</i> sp. infecting <i>Sardinella aurita</i> in Algeria</b> <b><u>Souhila Ramdani</u>, Zouhir Ramdane, Claudio H. Slamovits, Jean-Paul Trilles</b>	224
<b>Ethnobotanical Study of Medicinal Plants In The Tiaret Region (Algeria)</b> <b><u>Leila Soudani</u>, Meriem Chafaa, Rania Amedjekouh , Meriem Bouzeroura, Khadidja Attou</b>	225
<b>Detection of Co-Infection in Diseased Guppy (<i>Poecilia reticulata</i>)</b> <b><u>Mustafa Kemal Meydan</u>, Çiğdem Ürkü</b>	226
<b>Study Of The Physico-Chemical Characteristics Of Raw And Purified Wastewater From The Sewage Treatment Plant Of The City Of M'sila</b> <b><u>Meriem Bouzroua</u>, Nour eddine Merniz, Leila Soudani, Meriem Chafaa, khadidja Attou, Rania Amedjekouh</b>	227
<b>Parasitofauna of red mullet <i>Mullus barbatus</i> (L, 1758) caught in the Gulf of Bejaia, Algeria.</b> <b><u>Asma Bensaada</u>, Souhila Ramdani, Zouhir Ramdane, Hafsa Kadji- Djoudad</b>	228
<b>Exploring the possible mechanism of a cystine moiety in the treatment of Parkinson's Disease – A Computational Approach</b> <b><u>Shannon D Almeida</u>, H R Sameera, Govardhan K R, Golla Sireesha, Soundarya R, Damodar Nayak A, Parasuraman Pavadai</b>	229
<b>Physiological And Molecular Responses of Strawberries Plants to Abiotic Stress</b> <b>Syed Mubarak Shah, Noor ul saba, <u>Aysel Kekillioğlu</u></b>	230
<b>Identification of Carbonic Anhydrase IX Selective inhibitors: An AI based Computational approach</b> <b><u>Golla Sireesha</u>, Soundarya R, H R Sameera, Govardhan K R, Shannon D Almeida, Damodar Nayak A, Parasuraman Pavadai</b>	231
<b>Identification of Poly Adp-Ribose Polymerase-1 (PARP-1) inhibitors: An AI based Computational approach</b> <b><u>Soundarya R</u>, Shannon D Almeida, H R Sameera, Govardan, Golla Sireesha, Damodar Nayak A, Parasuraman Pavadai</b>	232
<b>Antioxidant And Anti-hemolytic Activities Of <i>Lavatera cretica</i></b> <b><u>Asma Ourabah-Boudjouan</u>, Farah Yous, Walid Zeghib, Sara Benrais, Chanez Belaid, Zineb Ouasli, Chahrazad Medjdoub, Fares Boudjouan</b>	233
<b>Aggression Toward Reflective Surfaces in a Dog</b> <b><u>Umut Burak Agan</u>, Fulya Sevin, Tolga Karaali, Duygu Dalgin</b>	234
<b>Liraglutide Treatment in an Obese Male Cat</b> <b><u>Fulya Sevin</u>, Umut Burak Agan, Tolga Karaali, Yücel Meral</b>	235
<b>Isolation of Obligate Intracellular Bacteria in vivo Conditions</b> <b><u>Cihan Oz</u>, Mehmet Cemal Adıguzel, Seyda Cengiz</b>	236
<b>Estimation Of Stray Dog Population in One Health Context as A Baseline for Rabies Control in Lahore, Pakistan</b> <b><u>Muhammad Haris Khan</u>, Muhammad Hassan Mushtaq, Furqan Awan, Ubaid-Ur-Rehman Zia, Muhammad Nawaz</b>	237
<b>Pulmonary Radiologic Monitoring in Post COVID (Long COVID) Syndrome</b> <b><u>Erdem Yüzüak</u>, Hakan Yüzüak</b>	238
<b>Nutrition of Stray Animals from Past to Present</b> <b><u>Ali Ersin Gümüş</u>, Esad Sami Polat</b>	239
<b>Cinnamon; A Nutraceutical Supplement for Heart Health</b> <b><u>Taherah Mohammadabadi</u></b>	240

A Study On Clinical Outcome Of Septic Patients Receiving Intravenous Vitamin C <u>Afaaf Arif</u> , Juveria Almas	241
Study of the antimicrobial activity of <i>Salvia officinalis</i> L. from the Tiaret region (Algeria) <u>Chafaa Meriem</u> , Soudani Leila	242
Assessment of the Functional Potential of Two Autochthonous Lactic Strains of Lactobacilli Isolated from Algerian Dairy Products <u>Koula Doukani</u> , Abdelkader El Amine Dahou, Hafida Tahlaiti, Hasna Bouhenni, Amin Bekihal, Bounouaa Lahcen Doubbi	243
Review on <i>Toxoplasma gondii</i> Manal AL-Hajj, Aysel Kekillioğlu	244
<i>Nigella Sativa</i> : A Natural Weapon Against Oral Infections <u>Zubair Shaikh</u> , Patel Bilal	245
<b>INVITED ORAL PRESENTATION</b>	246
Antibiotic Resistance Threat <u>Ali Aydın</u>	247
Potential for Application of Encapsulation Technology in the Meat Industry to Improve Effectiveness of Polyphosphates on Quality and Safety of Ready to Eat Meat Products <u>Birol Kılıç</u>	248
Pollen spectra in propolis and geopropolis from Mexican stingless bees <u>Elia Ramírez-Arriaga</u>	249
Effects of different thickening agents on the colour and texture characteristics of jelly kelle paça (khash) Sabire Büşra Dağar, <u>Mustafa Karakaya</u> , Ali Samet Babaoğlu	250
Bioactive potential of aromatic and medicinal plants traditionally used in Algeria. <u>Salah Akkal</u>	251
The effect of starvation and its role in aquaculture Alexander Atanasoff	252
Microplastics in fishery products: sources, fate and impact on health Luca Nalbone, Martina Genovese, Filippo Giarratana	253
Application of Enzymes in Meat Industry Hedayat Hosseini	254
The current status of zoonotic <i>Anisakis</i> parasites in marine fish from Turkish marine coasts Gokmen Zafer Pekmezci	255
The Immunomodulatory Properties of Honey Ahmad Ali	256
Potential role of flavonoids in COVID-19 prevention and treatment Lukasz Świątek Lukasz Świątek	257
Caseinate based encapsulation of polyphenols of <i>Myristica fragrans</i> and <i>Cordyline terminalis</i> : Development, stability, bio-accessibility and biological activities Ayesha Noor	258
Immunochemical Studies of Low-density Lipoprotein (ldl): Role of Ellagic Acid, A New Anti-glycating Agent in Inhibition of Glycation and Diabetes Mellitus” Saheem Ahmad, Mohd. Yasir Khan	259

<b>Role of WOAHA in harmonisation of veterinary and para-veterinary education in Member countries</b> Dmitry Morozov	260
<b>Innovative molecular techniques to be applied on seafood identification, specifically NGS-based techniques</b> Alice Giusti	261
<b>Heterocyclic scaffolds in the design and development of novel chemotherapeutic agents</b> Afzal Basha Shaik	262
<b>Endocrine disrupting chemicals in foods of animal origin</b> Begum YURDAKOK-DIKMEN	263
<b>Unravelling the beehive air volatiles profile as analysed via solid-phase micro-extraction (SPME) and chemometrics and its role in combating Asthma</b> El-Seedi H.R, Shaden A. M. Khalifa, Aida Abd El-Wahed	264
<b>Alternative uses of stingless bee products in agriculture: honey and propolis</b> Grajales-Conesa Julieta, López-García Alfonso, Albores-Flores Víctor	265
<b>The Hive: a source of healthy products</b> Miguel Vilas-Boas	266
<b>The Starmerella yeast in bee nest materials and food science needs microbiome and metabolomics approaches</b> Patricia Vit	267
<b>Therapeutic Nano-sized delivery systems for the Management of Experimental Arthritis</b> Rehan Khan* Md. Meraj Ansari, Anas Ahmad	268



## **Histological Staining Technics for Identifying Various Structures for Histological Assessment of Bone and Cartilage Healing**

Tayfun Dikmen

Istanbul Health and technology University, Faculty of Medicine, Dept. of Histology and Embryology

Corresponding author: [tayfundikmen@hotmail.com.tr](mailto:tayfundikmen@hotmail.com.tr)

### **Abstract:**

Bone and cartilage regeneration are challenging topics which the scientists are constantly looking for new approaches to eliminate current limitations of the traditional therapeutic methods which are being used. Cellular therapy and use of biomaterials for that purpose is providing encouraging results, especially in cases like osteoarthritis and bone healing. In such studies, the histological assessment of the healing of corresponding tissues are vital to determine to see if the developed method is indeed resulted with positive outcomes or not. Each tissue has some different distinctive structures that must be investigated during the healing process. There are several histological staining technics being used for the evaluation of the healing of bone and cartilage tissues by identifying the structures of interest. Among them, hematoxylin eosin staining comes forward as the most applied technic. However, it is not suitable to identify each and every important histological structure, and some specific staining technics are necessary to identify such structures like new bone formation areas, mineralized bone areas, glycosaminoglycan aggregates, collagen fiber formation, etc; regarding the aim of the research. In this study, bone and articular cartilage samples were taken and stained with Alcian blue staining, Picro-sirius red staining, Masson-Goldner's trichrome staining, Movat's pentachrome staining, von Kossa staining technics to identify different structures in bone and cartilage. The outcomes might help researchers to determine the appropriate staining technics to be used in their studies to fully demonstrate their findings.

**Keywords:** histological assessment, histological staining, bone healing, cartilage healing.