



Türkiye Klinikleri

# Enzymes in Poultry Nutrition

## Kanatlı Beslemede Enzimler

**Editor / Editör:** Prof. Dr. Pınar SAÇAKLI

All rights are reserved by Ortadoğu Reklam Tanıtım Yayıncılık Turizm Eğitim İnşaat Sanayi ve Ticaret A.Ş. The questions, writings, pictures, tables, graphics, and figures published in this book cannot be printed or reproduced in whole or in part by electronic or mechanic ways without the written consent of the publisher. Summarizing and citation for scientific purposes (by specifying the reference) is allowed.

*Kitabın her türlü yayın hakkı Ortadoğu Reklam Tanıtım Yayıncılık Turizm Eğitim İnşaat Sanayi ve Ticaret A.Ş.'ye aittir. Kitaptaki soru, yazı, resim, tablo, grafik ve şekiller kısmen de olsa yaymcının yazılı izni alınmadan, elektronik veya mekanik yöntemlerle basılamaz, çoğaltılamaz. Yalnızca bilimsel amaçlarla (kaynak göstermek kaydıyla) özetleme ve alıntı yapılabilir.*

E-ISBN: 978-625-395-274-7

© 2024 Ortadoğu Reklam Tanıtım Yayıncılık Turizm Eğitim İnşaat Sanayi ve Ticaret A.Ş.

Türkiye Klinikleri Publication Serial Number - Türkiye Klinikleri Yayın Seri No: 1633

1<sup>st</sup> Edition (1. Baskı), May (Mayıs), Ankara-Türkiye



Türkiye Klinikleri

PUBLISHER - YAYIMCI

Ortadoğu Reklam Tanıtım Yayıncılık Turizm Eğitim İnşaat Sanayi ve Ticaret A.Ş. (Türkiye Klinikleri)

Türkçe Cad. No:30 06520 Balgat/Ankara/Türkiye

Phone/Tel : +90 312 286 56 56

Fax/Faks : +90 312 220 04 70

e-mail/e-posta : info@turkiyeklinikleri.com

web : www.turkiyeklinikleri.com

Certificate No/Sertifika No : 48768

# Enzymes in Poultry Nutrition

## Kanatlı Beslemede Enzimler

### EDITOR / EDİTÖR

Prof. Dr. Pınar SAÇAKLI, Ankara University Faculty of Veterinary Medicine,  
Department of Animal Nutrition and Nutritional Diseases, Ankara, Türkiye

### AUTHORS / YAZARLAR

Assoc. Prof. Dr. Umair AHSAN, Burdur Mehmet Akif Ersoy University Burdur Vocational School of Food, Agriculture and Livestock,  
Department of Plant and Animal Production, Burdur, Türkiye

Assist. Prof. Dr. Cem ALBAYRAK, Bezmiâlem Vakıf University Beykoz Institute of Life Sciences and Biotechnologies,  
Department of Biotechnology, İstanbul, Türkiye

Assoc. Prof. Dr. Ahmet CEYLAN, Ankara University Faculty of Veterinary Medicine,  
Department of Histology and Embryology, Ankara, Türkiye

Assoc. Prof. Dr. Ali ÇALIK, Ankara University Faculty of Veterinary Medicine,  
Department of Animal Nutrition and Nutritional Diseases, Ankara, Türkiye

Prof. Dr. Gülcen DEMİREL, İstanbul University-Cerrahpaşa Faculty of Veterinary Medicine,  
Department of Animal Nutrition and Nutritional Diseases, İstanbul, Türkiye

Assist. Prof. Dr. Veysel DOĞAN, Kastamonu University Faculty of Veterinary Medicine,  
Department of Animal Nutrition and Nutritional Diseases, Kastamonu, Türkiye

Prof. Dr. Armağan HAYIRLI, Atatürk University Faculty of Veterinary Medicine,  
Department of Animal Nutrition and Nutritional Disorders, Erzurum, Türkiye

Prof. Dr. Bekir Hakan KÖKSAL, Aydin Adnan Menderes University Faculty of Veterinary Medicine,  
Department of Animal Nutrition and Nutritional Diseases, Aydin, Türkiye

Assoc. Prof. Dr. Eren KUTER, Burdur Mehmet Akif Ersoy University Faculty of Veterinary Medicine,  
Department of Animal Nutrition and Nutritional Diseases, Burdur, Türkiye

Assoc. Prof. Dr. Habip MURUZ, Ondokuz Mayıs University Faculty of Veterinary Medicine,  
Department of Animal Nutrition and Nutritional Diseases, Samsun, Türkiye

Prof. Dr. Cemal Georg ORHAN, Firat University Faculty of Veterinary Medicine,  
Department of Animal Nutrition and Nutritional Diseases, Elazığ, Türkiye

Spec. Veterinarian Onur ÖRTLEK, *Aydın Adnan Menderes University Faculty of Veterinary Medicine,*

*Department of Animal Nutrition and Nutritional Diseases, Aydın, Türkiye*

Prof. Dr. Ahmet Yavuz PEKEL, *İstanbul University-Cerrahpaşa, Faculty of Veterinary Medicine,*

*Department of Animal Nutrition and Nutritional Diseases, İstanbul, Türkiye*

Assist. Prof. Dr. Muhammad Shazaib RAMAY, *Ankara University Faculty of Veterinary Medicine,*

*Department of Animal Nutrition and Nutritional Diseases, Ankara, Türkiye*

Prof. Dr. Pınar SAÇAKLI, *Ankara University Faculty of Veterinary Medicine,*

*Department of Animal Nutrition and Nutritional Diseases, Ankara, Türkiye*

Prof. Dr. Zehra SELÇUK, *Ondokuz Mayıs University Faculty of Veterinary Medicine,*

*Department of Animal Nutrition and Nutritional Diseases, Samsun, Türkiye*

Assist. Prof. Dr. Emre ŞAHİN, *Bingöl University Faculty of Veterinary Medicine,*

*Department of Animal Nutrition and Nutritional Diseases, Bingöl, Türkiye*

Prof. Dr. Kazim ŞAHİN, *Fırat University Faculty of Veterinary Medicine,*

*Department of Animal Nutrition and Nutritional Diseases, Elazığ, Türkiye*

Prof. Dr. Derya YEŞİLBAĞ, *Bursa Uludağ University Veterinary Faculty,*

*Department of Animal Nutrition and Nutritional Diseases, Bursa, Türkiye*