

**Editor-in-Chief**

Dr. Siamak Salami, Director, Cellular and Molecular Research Center, Faculty of Medicine, Urmia University of Medical Sciences, Urmia, Iran

**Managing Editor**

Afshan Akbar, 1562, Ocean Avenue, Apt# 5D, Brooklyn, 11230-NY, USA

**Publishing Editor**

Faisal Mehmood, 16W-K, Khaleeq Road, Gulistan Colony 1, 38000-Faisalabad, Pakistan

**Regional Editor**

Dr. Nejdett Gultepe, Canakkale Onsekiz Mart University, Fisheries Faculty, Turkey

Dr. Ahmad Daryani, Associate Professor Parasitology and Mycology Department Sari Medical College, Mazandaran University of Medical Sciences, 18th Km of Khazar abad Road, Khazar Square, PC 48175-1665, Sari, Mazan, Iran

Prof. Armagan Hayirli, Department of Animal Nutrition and Nutritional Disorders, Faculty of Veterinary Medicine, Atatürk University, Erzurum 25700, Turkey

Dr. Belewu, M.A., University of Ilorin P.M.B. 1515, Ilorin, Nigeria

Dr. Tatiane Paixao, Coronel Joao Camara 95 31530650, Belo horizonte - MG, Brazil

Prof. Hari Mohan Saxena, Department of Veterinary Microbiology, College of Veterinary Science, GADVASU, India

Dr. Veerasamy Sejian, Scientist, Adaptation Physiology Laboratory, Division of Physiology and Biochemistry, Central Sheep and Wool Research Institute, Avikanagar, Rajasthan 304501, India

Prof. Ayman Goudah, 730 Riverview dr, Columbus, Ohio, 43202, USA. Cairo University, Faculty of Veterinary Medicine, Pharmacology Department, 12211, Giza, Egypt

Prof. Hossny Awad El\_Banna, Department of Pharmacology, Faculty of Veterinary Medicine, Cairo University, Giza, Egypt

Dr. R.S. Sethi, Department of Veterinary Anatomy, College of Veterinary Science, Guru Angad Dev Veterinary and Animal Sciences University, India

Dr. Aissi Adel, Surgery and Veterinary Imaging, Batna University, Algeria

Prof. Shakil Ahmad Wani, Div. Vet. Microbiology and Immunology, SKUAST-K, Shuhama(Alusteng), Srinagar-190006, India

Prof. Hussein AbdEl-Hay Kaoud, Department of Veterinary, Hygiene and Management, Faculty of Veterinary Medicine, Cairo University, Giza, Egypt

Prof. Mervat Mahmoud Kamel, Department of Veterinary, Hygiene and Management, Faculty of Veterinary Medicine, Cairo University, Egypt

Prof. Mohamed Taha El Keiey, Faculty of Veterinary Medicine, Cairo University, Giza, Egypt

Prof. Abdelmelik I. Khalafalla, Head, Camel Research and Development Program, The Arab Centre for the Studies on Arid Zones and Dry Lands (ACSAD), Syria

Dr. Saber Mohamed Abd-Allah, Associate Professor of Theriogenology, Faculty of Veterinary Medicine, Beni-Suef University, 62511 Beni-Suef, Egypt

Dr. Christopher Marlowe Caipang, Associate Professor, Faculty of Biosciences and Aquaculture, Bodoe University College, Bodoe, 8049, Norway

Prof. Ajai Kumar Srivastav, Professor, Department of Zoology, DDU Gorakhpur University, Gorakhpur 273 009, India

Dr. Leonel Avendaño-Reyes, Instituto de Ciencias Agrícolas (ICA), Universidad Autónoma de Baja California, (UABC), Mexico

Dr. Manoj K Tripathi, Division of Nutrition Feed Resource and Product Technology, Central Goat Research Institute (ICAR), Makhdoom, India

**Associate Editor**

Dr. Gert J. Venter, Chief Veterinary Researcher, Onderstepoort Veterinary Research Institute, Onderstepoort, South Africa

Dr. Gilberto Lopez Valencia, Profesor-Investigador Titular nivel C, TC definitivo, IICV-UABC, Registro SARH: 02-0322  
Dr. Eleonora Nistor, Assistant Professor Animal Breeding and Nutrition, Banat's University of Agricultural Sciences, Timisoara, Romania  
Dr. Nasrollah Pirany, Head of the Animal Science Department, Faculty of Agriculture, Tabriz University, Iran  
Dr. Li Cui, The Royal Veterinary College, University of London, United Kingdom  
Dr. Ahamefule, Francis Ahamefule, Department of Animal Production and Livestock Management, Michael Okpara University of Agriculture, Umudike, P.M.B. 7267, Nigeria  
Dr. Kadir Karakus, University of Yuzuncu Yil, Gevas Vocational High School, Department of Animal Science Gevas, Van, Turkey  
Dr. Ömer Terzioğlu, University of Yuzuncu Yil, Agricultural Faculty Van, Turkey  
Dr. Lee Seong Wei, Department of Fishery Science and Aquaculture, Faculty of Agrotechnology and Food Science, Universiti Malaysia Terengganu, 21030, Kuala Terengganu, Malaysia  
Dr. seyed Ali Ghorashi, The University of Melbourne, 250 Princes Highway, Werribee 3030, VIC, Australia  
Dr. Ahmet Tekeli, Animal Science Department, Agriculture Faculty, Yuzuncu Yil University, Van, Turkey  
Dr. Mohammed Danlami Salihu, Veterinary Public Health Department, Usmanu Danfodiyo University, Sokoto, Nigeria  
Dr. Nitin Kurkure, Nagpur Veterinary College, Seminary Hills, India  
Dr. Samuel Majalija, Section of Microbiology, Department of Parasitology and Microbiology, Makerere University, P.O. Box 7062 Kampala, Uganda  
Dr. Lee M. Koma, C/o School of Veterinary Medicine, Faculty of Medical Sciences, The University of the West Indies, St Augustine, Trinidad and Tobago  
Dr. S.M. Lutful Kabir, B4-403, Imperial Kansai, Airport, 2-7-29, Kasamatsu, Izumisano, Osaka, 598-0044, Japan  
Prof. Kader Yildiz, Department of Parasitology, Faculty of Veterinary Medicine, Kirikkale University, Kampus, Turkey  
Prof. Mehran Torki, Animal Science Department, Agricultural Faculty, Razi University, Iran  
Prof. Suthindhiran, Asst Professor, School of Biosciences and Technology, VIT University, Vellore, India  
Dr. Durali Danabas, Aquaculture Department, Fisheries Faculty, Tunceli University, Turkey  
Dr. Babalola Theophilus Olayiwola Oluremi, Fish Nutrition, National Institute for Freshwater, Fisheries Research, Nigeria

#### **Technical Editor**

Dr. Silvia Siso, Department of Pathology VLA Lasswade, United Kingdom  
Dr. Ecevit Eydurhan, Department of Biometry Genetics Unit, Faculty of Agriculture Animal Science, University of Yüzüncü Yil, Turkey  
Dr. Muhanguzi Dennis, Department of Veterinary Medicine, Faculty of Veterinary Medicine, Makerere University, P.O. Box 7062, Kampala-uganda, (East Africa), Uganda  
Dr. Mohammed Aminu Umaru, Department of Veterinary Medicine, Surgery and Theriogenology, Usmanu Danfodiyo University, Sokoto, Nigeria  
Dr. (Mrs) Onu, Patience Nnenna, Department of Animal Science, Ebonyi State University, P.M.B 053, Abakaliki, Ebonyi State, Nigeria

#### **Reviewers**

Miss Bárbara Laurice Araújo Verçosa, Universidade Federal do Piauí, UFPI Brasil  
Mr. Kabore Adama, 06 BP 9682 Ouagadougou 06, Burkina Faso  
Mr. Okonko Iheanyi Omezurike, Department of Virology, Faculty of Basic Medical Sciences, College of Medicine, University of Ibadan, University College Hospital, Ibadan, Nigeria  
Dr. Keshab Chandra Dhara, Assistant Director (Farms), W. B. University of Animal and Fishery Sciences, 68, K.B. Sarani, Belgachia, Kolkata-700037, West Bengal, India  
Mr. Madhusudan Chaturvedi, Research Scholar, Cell Biology Laboratory, Institute of Pathology, Indian Council of Medical Research(ICMR), Safdarjang hospital campus, New Delhi - 110029, India  
Dr. Munyaradzi Christopher Marufu, Department of Agriculture, Private Bag X2044, Fort Beaufort, 5720, South Africa

Dr. Eyarefe O. David, Department of Veterinary, Surgery and Reproduction, Faculty of Veterinary Medicine, University of Ibadan, Nigeria  
Mr. Manoj Singh, Department of Marine and Coastal Studies, Madurai Kamaraj University, Madurai-21, India  
Dr. Sunil Kumar Singh, Department of Zoology, DDU Gorakhpur University, Gorakhpur - 273 009 (U.P.), India  
Dr. Akinyemi Olaposi Fajinmi, Niderian Institute for Trypanosomiasis Research, No.1 Surami Road, U/Rimi GRA, P.M.B. 2077, Kaduna State, Nigeria  
Mr. Aseer Manilal, Department of Microbiology, Bharathidasan University, Tiruchirappalli 620024, India