

CONTENTS

Poultry Production

- EYDURAN, E., SER, G., CINLI, H., TIRINK, C., YAKAR, Y., DURU, M., JAVED, Y. AND TARIQ, M.M. Analysis of random intercept and slope model (RISM) for data of repeated measures from Hy-Line white laying hens 1219

Physiology

- KARABULUT-BULAN, O., BOLKENT, S., KIZIR, A. AND YANARDAG, R. Protective effects of vitamin E and selenium administration on small intestinal damage prior to abdominal radiation 1225
- MASUD, F., SHAKOORI, T.A., KHAWAJA, K.I., ALI, M. AND AMEER, F. Changes in body weight and lipid profile of mice treated with sodium butyrate and metformin 1343
- KOCYIGIT, R., AYDIN, R., YANAR, M., DILER, A., AVCI, M. AND OZYUREK, S. The effect of direct-fed microbials plus exogenous feed enzyme supplements on the growth, feed efficiency ratio and some behavioural traits of Brown Swiss x Eastern Anatolian red F₁ calves 1389
- KHAN, I., QURESHI, M.S., AHMAD, S., AKHTAR, S., KHAN, H. AND GHUFRANULLAH. Effect of lactation and breed on reproductive cyclicity under various states of oxidative stress in dairy cattle breeds . 1431
- RASHID, N., IRFAN, M., NADEEM, M.S. AND SHABBIR, A. Comparative seasonal haematology of two bat species, *Scotophilus heathii* and *Pipistrellus pipistrellus*, in a subtropical area of Pakistan 1503

Entomology

- IFTIKHAR, R., ULLAH, I., DIFFIE, S. AND ASHFAQ, M. Deciphering Thysanoptera: A comprehensive study on the distribution and diversity of thrips fauna in Pakistan 1233
- EL-HAWAGRY, M.S.A. AND AL DHAFER, H.M. *Parageron raydahensis*, new species and the first record of subfamily Usiinae (Bombyliidae: Diptera) from Saudi Arabia 1307
- SAEED, K., KHATTAK, M.N.K., KHAN, F., NAZ, F. AND AKHTAR, N. Morphological characteristics of ladybird beetles (Coccinellidae: Coleoptera) of District Buner, Khyber Pakhtunkhwa, Pakistan 1367
- UDDIN, M.K., YIN, X.-W. AND ZHANG, L. Courtship and mating behavior of the Chinese chive fly, *Bradysia odoriphaga* (Diptera:

- Sciaridae) and evidence of female sex pheromone1543
- KHAN, K., WAHID, S., SHAH, A. AND ALI, N. First report of sand fly (Diptera: Psychodidae: Phlebotomine) immature males and various reproductive stages of females in upper and lower Dir Districts, Khyber Pakhtunkhwa Pakistan (S.C.)1581

Microbiology

- QAYYUM, S., KHAN, I., MAQBOOL, F., ZHAO, Y., GU, Q. AND PENG, C. Isolation and characterization of heavy metal resistant fungal isolates from industrial soil in China1241
- KHALID, M., RASUL, S., HUSSAIN, J., AHMAD, R., ZIA, A., BILAL, M., PERVEZ, A. AND NAQVI, T.A. Biodegradation of organophosphorus insecticides, Chlorpyrifos, by *Pseudomonas putida* CP-11453
- AFTAB, U., QURESHI, Z.A. AND SAJID, I. *In-vitro* antitumor activity and metabolic finger printing of the actinomycetes isolated from various ecological niches in Pakistan1291
- MAJEED, H.S., IRFAN, M., SHAKIR, H.A. AND QAZI, J.I. Filter paper activity producing potential of *Aeromonas* species isolated from the gut of *Labeo rohita*1317
- MOHAMED, W.S. AND EL-DEEN, A.M.E. Inhibition of *Escherichia coli* 0157:H7 growth by gamma radiation improves the hygienic quality of chilled fresh beef meat1373
- GONDAL, A.J., HANNAN, A., SALEEM, S. AND ARSHAD, M.U. Comparative evaluation of broth and agar dilution techniques for antimicrobial susceptibility testing against multidrug resistant *Pseudomonas aeruginosa* ..1517
- JAVED, N., ABBAS, Z., TAHIR, R. AND AFZAL, N. Isolates of *Staphylococcus aureus* induce selected metabolites in human polymorphonuclear leucocytes (S.C.)1563

Toxicology

- SAEED, S., NAQQASH, M.N. AND JALEEL, W. Toxicological studies on some important chemicals against *Dysdercus koenigii* Fabr (Hemiptera: Pyrrhocoridae)1249
- EL-RAHMAN, N.A.A., EL-DEIN, E.M.K. EL-HADY, A.M.A. AND SOLIMAN, S.M. Effect of hesperidin on γ -radiation- and/ paraquat herbicide-induced biochemical, hematological and histopathological changes in rats1407
- ANJUM, F., SHAKOORI, F.R. AL-GHANIM, K.A. AND SHAKOORI, A.R. Effect of

inorganic mercury on drug metabolizing enzymes of promethazine-pretreated and phenobarbitone-pretreated male rabbit 1485
 EL-DEIN, E.M.K., ANEES, L.M. AND ALY, S.M.E. Effects of α -lipoic acid on γ -radiation- and lindane-induced heart toxicity in rats 1523

Molecular Biology / Molecular Genetics

ZHANG, Y., WANG, Y., QU, C., HUANG, H., LI, H., LI, Y., CUI, Y. AND ZOU, W. The expression and role of caveolin-1 in different development periods of *Drosophila melanogaster* 1255
 ZHAO, Z.-H., LI, H., YI, H.-J. AND PENG, B.-X. The correlation between polymorphisms of the *MSTN* gene and slaughter traits in Sansui ducks 1283
 KMIEĆ, M. AND MAJEWSKA, A.M. Single nucleotide polymorphism of melanocortin-4 receptor gene in American mink (*Neovison vison*)..... 1325
 WANG, Z., LIU, C., NIU, J., YANG, F., WU, X. AND QI, J. Transcription of dynein heavy chain 9 (*DNAH9*) in *Paralichthys olivaceus*: insights into the evolution of the *DNAH9* gene 1331
 ZHANG, Y.-Y., LI, W.-G. AND WANG, D.-D. An novel SNP in *LPL* gene Exon 8 associated with meat quality traits in ducks 1459
 ALI, A., BABAR, M.E., AWAN, A.R., TAYYAB, M., SHEHZAD, W. AND IMRAN, M. A genetic variant (S4338N) in *Apolipoprotein B* Gene in hypercholesterolemic families from Pakistan 1423
 TANG, J., FENG, G., SUN, Y., WANG, C., KHAN, M.R., BUKHARI, I. AND ZHU, J. Genetic screening of neonates for 20 most common mutations in deafness associated genes in Anhui Province of China (S.C.) 1573

Fish Biology

MATEEN, A., GHAFAR, A., ABBAS, G., FERRANDO, S. AND GALLUS, L. Body composition and fatty acid profile of carps under the influence of rice polish and pond fertilization 1263
 TANEKHY, M., KHALIL, R., HOFI, H. AND HASHISH, E. The biochemical, pathological and immunological effectiveness of commercial probiotics in Nile tilapia, *Oreochromis niloticus* 1269
 HUANG, Y. AND ZENG, Y. Sexual dimorphism in the Chinese white fish *Hemiculter leucisculus* (S.C.) 1595

Pest & Pest Control

MAQSOOD, S., AFZAL, M., AQEEL, A., RAZA, A.B.M. AND WAKIL, W. Influence of weather factors on population dynamics of armyworm, *Spodoptera litura* F. on

cauliflower, *Brassica oleracea* in Punjab1311
 ALI, Q., HASAN, M.U., MASON, L.J., SAGHEER, M. AND JAVED, N. Biological activity of insect growth regulators, pyriproxyfen, lufenuron and methoxyfenozide against *Tribolium castaneum* (Herbst)1337
 FAROOQ, M. AND FREED, S. Combined effects of *Beauveria bassiana* (Hypocreales: Clavicipitaceae) and insecticide mixtures on biological parameters of *Musca domestica* (Diptera: Muscidae)1465
 ALI, M., ASHFAQ, M., GHAFAR, A., BAHTTI, A.U., ALI, A. AND MUBASHAR, U. Role of physio-morphic characters of different genotypes of eggplant, *Solanum melongena* L. and its association with the fluctuation of jassid, *Amrasca biguttula biguttula* (Ishida) population1511
 ALI, M.Y., AMIN, I., AKHTAR, S. AND MANSOOR, S. Study of secondary endosymbionts of whiteflies collected from cotton growing districts of Punjab, Pakistan1549
 AHMAD, S., SALEEM, Z., JABEEN, F., KHAN, H.A., YAQUB, S., SAMIULLAH, K., MUBARIK, S., IRFAN, M. AND SHAHEEN, T. Effectiveness of methylantranilate and anthraquinone as repellent against house crows (*Corvus splendens*) on wheat seeds and seedlings in captivity (S.C.)1591

Parasitology

KHAN, S.A., JAVED, N., ANWAR, S.A., HAQ, I.U., NAVEED, K., ULLAH, Z. AND SAFDAR, A. Survival of entomopathogenic nematodes in sterilized vs non-sterilized soil1349
 KHAN, A. AND SHAUKAT, S.S. Plant nematodes associated with almond seedlings in Kalat District, Balochistan (S.C.)1579
 MUSHTAQ, S., SHAFIQUE, S. AND KHATOON, Z. *Micippion asymmetricus*: An entoniscid parasite of the coral crab, *Charybdis feriatus* (Linnaeus, 1758) (S.C.)1607

Wildlife

DIN, M.S.U., MINHAS, R.A., KHAN, M., ALI, U., BIBI, S.S., AHMED, B. AND AWAN, M.S. Conservation status of Ladakh urial (*Ovis vignei vignei* Blyth, 1841) in Gilgit Baltistan, Pakistan1353

Herbal Medicine

MINHAS, M.A., BEGUM, A., HAMID, S., BABAR, M., ILYAS, R., ALI, S., LATIF, F. AND ANDLEEB, S. Evaluation of antibiotic and antioxidant activity of *Morus nigra* (Black Mulberry) extracts against soil borne, food borne and clinical human pathogens1381
 ZHANG, X., LU, P., XUE, W., WU, D., WEN, C., DING, L. AND ZHOU, Y. Effect of *Ginkgo*

biloba leaf powder on growth performance, meat quality and antioxidant activity of muscle in growing-finishing pigs 1555

Freshwater Biology

ALIÇLI, B.T. AND SARIHAN, E. Seasonal changes of zooplankton species and groups composition in Iskenderun Bay (North East Levantine, Mediterranean Sea) 1395

Forensic Science

YAPRAKCI, M.V., CIĞERCI, I.H., ALI, M.M. AND KABU, M. DNA damage, total antioxidant and oxidant status in gunshot wounded wild falcons 1417

Virology

UMAR, S., KHAN, M.I., YOUNUS, M., NISA, Q.U., KHAN, A.U., YAQOUB, M. AND SHAH, M.A.A. Comparative antiviral efficacy of zanamivir and amantadine against tunisian isolate of avian influenza virus (H9N2)..... 1443

GUMUSOVA, S.O. AND MEMIS, Y.S. Caprine arthritis encephalitis and bluetongue virus infections in maltese, saanen and hair goat breeds (S.C.) 1567

Animal and Human Diseases

FAZAL, S., CHEEMA, K.J., MANZOOR, F. AND MAQBOOL, A. Experimental transmission of canine scabies to domestic rabbits, *Oryctolagus cuniculus* 1449

EL-SHAHAWY, I.S. Coproscopic study on enteric protozoan parasites of goats (*Capra hircus* L., 1758) in upper Egypt 1477

SAQIB, M., ABBAS, G., KHAN, I., MUGHAL, M.N., SIAL, A.U.R., IJAZ, M. AND AVAIS, M. Hemato-biochemical analysis and treatment response to enrofloxacin in cats affected with feline hemotropic mycoplasma

(S.C.).....1569

HAFEEZ M.H., AHMED, M.N., FAROOQI, M.M., BUTT, N.U.A. AND RAUF, A. Lead and cadmium concentration in the human blood samples of Muzaffarabad, AJK, Pakistan (S.C.).....1599

CENESIZ, M., CIFTCI, G., DALGIN, D., KILIC, Y., YARIM, G.F. AND CENESIZ, S. Evaluation of oxidant and antioxidant capacity in paratuberculosis positive cattle (S.C.)1603

Environmental Biotechnology / Biotechnology

MUNEER, B., IQBAL, M.J., SHAKOORI, F.R. AND SHAKOORI, A.R. Isolation, identification and cadmium processing of *Pseudomonas aeruginosa* (EP-Cd1) isolated from soil contaminated with electroplating industrial wastewater1495

SAEED, S., HASHMI, A.S., HAQ, I.U., TAYYAB, M., AWAN, A.R., ANJUM, A.A. AND FIRYAL, S. Hyperproduction of alginate by mutated strain of *Azotobacter vinelandii* through submerged fermentation (S.C.)1585

Marine Biology

AFZAAL, Z., KALHORO, M.A., BUZDAR, M.A., NADEEM, A., SAEED, F., HAROON, A. AND AHMED, I. Stock assessment of blue swimming crab *Portunus pelagicus* (Linnaeus, 1758) from Pakistani waters (Northern, Arabian Sea).....1531

Continued on page 1613

[Covered by ISI Web of Knowledge, Abstracted and indexed in *Biological Abstracts*, *Chemical Abstracts*, *Zoological Records*, *Information Retrieval Limited*, London, *Service Central De Documentation De L'ORSTOM*, Paris and *National Inquiry Services Centre*, South Africa, Contents accessible via EBSCO host™].

Website: www.zsp.com.pk
Impact Factor = 0.478