



Volume Contents

Volume 49 (2019)

Issue 1

January 2019

*Review Article****Giardia*: an under-reported foodborne parasite**

U. Ryan, N. Hijjawi, Y. Feng, L. Xiao

1

*Original Research Articles***Deep amplicon sequencing as a powerful new tool to screen for sequence polymorphisms associated with anthelmintic resistance in parasitic nematode populations**

R.W. Avramenko, E.M. Redman, L. Melville, Y. Bartley, J. Wit, C. Queiroz, D.J. Bartley, J.S. Gilleard

13

Host associations and climate influence avian haemosporidian distributions in Benin

J.A. Harvey, G. Voelker

27

Climate impacts on blacklegged tick host-seeking behavior

M. McClure, M.A. Diuk-Wasser

37

Temperature and $p\text{CO}_2$ jointly affect the emergence and survival of cercariae from a snail host: implications for future parasitic infections in the Humboldt Current system

N.V. Leiva, P.H. Manríquez, V.M. Aguilera, M.T. González

49

Clonal and atypical *Toxoplasma* strain differences in virulence vary with mouse sub-species

M.A. Hassan, A.-A. Olijnik, E.-M. Frickel, J.P. Saeij

63

Ecological correlates and phylogenetic signal of host use in North American unionid mussels

T.L. Hewitt, C.L. Wood, D.Ó. Foighil

71

Aggregation patterns of helminth populations in the introduced fish, *Liza haematocheilus* (Teleostei: Mugilidae): disentangling host–parasite relationships

V. Sarabeev, J.A. Balbuena, S. Morand

83

Issue 2

February 2019

*Editorial***Inaugural meeting of the international babesiosis research community, 2018: A glimpse into the future of an emerging research field**

C. Ben Mamoun, D.R. Allred

93

*Original Research Articles***Evidence for transmission of the zoonotic apicomplexan parasite *Babesia duncani* by the tick *Dermacentor albipictus***

A. Swei, K.E. O'Connor, L.I. Couper, J. Thekkiniath, P.A. Conrad, K.A. Padgett, J. Burns, M.H. Yoshimizu, B. Gonzales, B. Munk, N. Shirkey, L. Konde, C. Ben Mamoun, R.S. Lane, A. Kjemtrup

95

Insights into the evolution and drug susceptibility of *Babesia duncani* from the sequence of its mitochondrial and apicoplast genomes

A.Z. Virji, J. Thekkiniath, W. Ma, L. Lawres, J. Knight, A. Swei, K.L. Roch, C.B. Mamoun

105

A library of recombinant *Babesia microti* cell surface and secreted proteins for diagnostics discovery and reverse vaccinology

C.M. Elton, M. Rodriguez, C. Ben Mamoun, C.A. Lobo, G.J. Wright

115

Up-regulated expression of spherical body protein 2 truncated copy 11 in *Babesia bovis* is associated with reduced cytoadhesion to vascular endothelial cells

G.M. Gallego-Lopez, A.O.T. Lau, R.M. O'Connor, M.W. Ueti, B.M. Cooke, J.M. Laughery, T. Graça, S.A. Madsen-Bouterse, D.P. Oldiges, D.R. Allred, C.E. Suarez

127

*Succinctus***Analysis of the *Babesia microti* proteome in infected red blood cells by a combination of nanotechnology and mass spectrometry**

R. Magni, A. Luchini, L. Liotta, R.E. Molestina 139

*Invited Reviews***Investigating disease severity in an animal model of concurrent babesiosis and Lyme disease**

P. Bhanot, N. Parveen 145

To kill a piroplasm: genetic technologies to advance drug discovery and target identification in *Babesia*

C.D. Keroack, B. Elsworth, M.T. Duraisingh 153

Human babesiosis

P.J. Krause 165

Vaccination against babesiosis using recombinant GPI-anchored proteins

S. Nathaly Wieser, L. Schnittger, M. Florin-Christensen, S. Delbecq, T. Schetters 175

Unravelling the cellular and molecular pathogenesis of bovine babesiosis: is the sky the limit?

C.E. Suarez, H.F. Alzan, M.G. Silva, V. Rathinasamy, W.A. Poole, B.M. Cooke 183

Issues 3–4

March 2019

*Original Research Articles***Avian malaria on Madagascar: prevalence, biodiversity and specialization of haemosporidian parasites**

S. Musa, U. Mackenstedt, F. Woog, A. Dinkel 199

Identification and expression profiling of microRNAs in *Hymenolepis*

N. Macchiaroli, M. Cucher, L. Kamenetzky, C. Yones, L. Bugnon, M. Berriman, P.D. Olson, M.C. Rosenzvit 211

Local host-tick coextinction in neotropical forest fragments

H.J. Esser, E.A. Herre, R. Kays, Y. Liefting, P.A. Jansen 225

Parasites in space and time: a case study of haemosporidian spatiotemporal prevalence in urban birds

D. Santiago-Alarcon, I. MacGregor-Fors, I. Falfán, B. Lüdtke, G. Segelbacher, H.M. Schaefer, S. Renner 235

***Ascaris suum* infection was associated with a worm-independent reduction in microbial diversity and altered metabolic potential in the porcine gut microbiome**

Y. Wang, F. Liu, J.F. Urban Jr., O. Paerewijck, P. Geldhof, R.W. Li 247

The rational simplification of a recombinant cocktail vaccine to control the parasitic nematode *Teladorsagia circumcincta*

A.J. Nisbet, T.N. McNeilly, D.R.G. Price, E.M. Oliver, Y. Bartley, M. Mitchell, J. Palarea-Albaladejo, J.B. Matthews 257

Diversity of *Toxoplasma gondii* strains shaped by commensal communities of small mammals

L. Galal, G. Schares, C. Stragier, P. Vignoles, C. Brouat, T. Cuny, C. Dubois, T. Rohart, C. Glodas, M.-L. Dardé, M. Kane, Y. Niang, M. Diallo, 267

A. Sow, D. Aubert, A. Hamidović, D. Ajzenberg, A. Mercier

Identifying ‘firebreaks’ to fragment dispersal networks of a marine parasite

F. Samsing, I. Johnsen, E.A. Trembl, T. Dempster 277

The leucokinin-like peptide receptor from the cattle fever tick, *Rhipicephalus microplus*, is localized in the midgut periphery and receptor silencing with validated double-stranded RNAs causes a reproductive fitness cost

C.M. Brock, K.B. Temeyer, J. Tidwell, Y. Yang, M.A. Blandon, D. Carreón-Camacho, M.T. Longnecker, C. Almazán, A.A. Pérez de León, 287

P.V. Pietrantonio

Burden of Chagas disease in Brazil, 1990–2016: findings from the Global Burden of Disease Study 2016

F.R. Martins-Melo, M. Carneiro, A.L.P. Ribeiro, J.M.T. Bezerra, G.L. Werneck 301

Somatic proteome of *Haemonchus contortus*

T. Wang, G. Ma, C.-S. Ang, P.K. Korhonen, R. Xu, S. Nie, A.V. Koehler, R.J. Simpson, D.W. Greening, G.E. Reid, N.A. Williamson, R.B. Gasser 311

Issue 5

April 2019

*Original Research Articles***Out-of-Africa, human-mediated dispersal of the common cat flea, *Ctenocephalides felis*: The hitchhiker’s guide to world domination**

A.L. Lawrence, C.E. Webb, N.J. Clark, A. Halajian, A.D. Mihalca, J. Miret, G. D’Amico, G. Brown, B. Kumsa, D. Modrý, J. Šlapeta 321

A novel Kunitz protein with proposed dual function from *Eudiplozoon nipponicum* (Monogenea) impairs haemostasis and action of complement in vitro

L. Jedličková, J. Dvořák, I. Hrachovinová, L. Ulrychová, M. Kašný, L. Mikeš 337

Progenesis and facultative life cycle abbreviation in trematode parasites: Are there more constraints than costs?

M. Villa, C. Lagrue 347

14-3-3 protein and ubiquitin C acting as SjIAP interaction partners facilitate tegumental integrity in *Schistosoma japonicum*

J. Liu, B.R. Giri, Y. Chen, G. Cheng 355

Neither *Diplectanum* nor specific: a dramatic twist to the taxonomic framework of *Diplectanum* (Monogenea: Diplectanidae)

M. Villar-Torres, A. Repullés-Albelda, F.E. Montero, J.A. Raga, I. Blasco-Costa 365

Next generation sequencing from *Hepatozoon canis* (Apicomplexa: Coccidia: Adeleorina): Complete apicoplast genome and multiple mitochondrion-associated sequences

A.N. Léveillé, G. Baneth, J.R. Barta 375

| | |
|--|-----------|
| Risk factors for infection with soil-transmitted helminths during an integrated community level water, sanitation, and hygiene and deworming intervention in Timor-Leste | |
| S. Vaz Nery, N.E. Clarke, A. Richardson, R. Traub, J.S. McCarthy, D.J. Gray, A.J. Vallyely, G.M. Williams, R.M. Andrews, S.J. Campbell, A.C.A. Clements | 389 |
| Isolation and characterization of a naturally occurring multidrug-resistant strain of the canine hookworm, <i>Ancylostoma caninum</i> | |
| S. Kitchen, R. Ratnappan, S. Han, C. Leasure, E. Grill, Z. Iqbal, O. Granger, D.M. O'Halloran, J.M. Hawdon | 397 |
| Chance or choice? Understanding parasite selection and infection in multi-host communities | |
| P.T.J. Johnson, D.M. Calhoun, T.B. Riepe, J. Koprivnikar | 407 |
| Reviewer Thank You | |
| | I |
| Issue 6 | May 2019 |
| <i>Succincta</i> | |
| Laboratory transmission of an Asian strain of <i>Leishmania tropica</i> by the bite of the southern European sand fly <i>Phlebotomus perniciosus</i> | |
| G. Bongiorno, T. Di Muccio, R. Bianchi, M. Gramiccia, L. Gradoni | 417 |
| <i>Original Research Articles</i> | |
| Intracellular iron availability modulates the requirement for <i>Leishmania</i> Iron Regulator 1 (LIR1) during macrophage infections | |
| A. Sarkar, N.W. Andrews, M.F. Laranjeira-Silva | 423 |
| Taxonomic and geographic bias in the genetic study of helminth parasites | |
| R. Poulin, E. Hay, F. Jorge | 429 |
| Ecology, not distance, explains community composition in parasites of sky-island Audubon's Warblers | |
| J.L. Williamson, C.J. Wolf, L.N. Barrow, M.J. Baumann, S.C. Galen, C.J. Schmitt, D.C. Schmitt, A.S. Winter, C.C. Witt | 437 |
| Shedding of feline lungworm larvae and their infectivity to snail intermediate hosts after anthelmintic treatment | |
| M.A. Cavallera, V. Colella, E. Napoli, F. Arfuso, R. Panarese, E. Brianti, D. Otranto | 449 |
| Highly heterogeneous residual malaria risk in western Thailand | |
| W. Nguitrageol, S. Karl, M. White, C. Koepfli, I. Felger, P. Singhasivanon, I. Mueller, J. Sattabongkot | 455 |
| Unequal distribution of genes and chromosomes refers to nuclear diversification in the binucleated <i>Giardia intestinalis</i> | |
| P. Tůmová, J. Dluhošová, F. Weisz, E. Nohýnková | 463 |
| Long-term prevalence data reveals spillover dynamics in a multi-host (<i>Artemia</i>), multi-parasite (Microsporidia) community | |
| E.J.P. Lievens, N.O. Rode, J. Landes, A. Segard, R. Jabbour-Zahab, Y. Michalakis, T. Lenormand | 471 |
| Effects of maternal and grandmaternal flea infestation on offspring quality and quantity in a desert rodent: evidence for parasite-mediated transgenerational phenotypic plasticity | |
| E.M. Warburton, I.S. Khokhlova, L. van der Mescht, C.J. Downs, E.M. Dlugosz, B.R. Krasnov | 481 |
| Removal of adult cyathostomins alters faecal microbiota and promotes an inflammatory phenotype in horses | |
| N. Walshe, V. Duggan, R. Cabrera-Rubio, F. Crispie, P. Cotter, O. Feehan, G. Mulcahy | 489 |
| Issue 7 | June 2019 |
| <i>Original Research Articles</i> | |
| Transcriptome and histone epigenome of <i>Plasmodium vivax</i> salivary-gland sporozoites point to tight regulatory control and mechanisms for liver-stage differentiation in relapsing malaria | |
| Vivax Sporozoite Consortium, I. Muller, A.R. Jex, S.H.I. Kappe, S.A. Mikolajczak, J. Sattabongkot, R. Patrapuvich, S. Lindner, E.L. Flannery, C. Koepfli, B. Ansell, A. Lerch, S.J. Emery-Corbin, S. Charnaud, J. Smith, N. Merrienne, K.E. Swearingen, R.L. Moritz, M. Petter, M.F. Duffy, V. Chuenchob | 501 |
| The relationship between the presence of antibodies and direct detection of <i>Toxoplasma gondii</i> in slaughtered calves and cattle in four European countries | |
| M. Opsteegh, F. Spano, D. Aubert, A. Balea, A. Burrells, S. Cherchi, J.B.W.J. Cornelissen, C. Dam-Deisz, J. Guitain, A. Györke, E.A. Innes, F. Katzer, G. Limon, A. Possenti, E. Pozio, G. Schares, I. Villena, H.J. Wisselink, J.W.B. van der Giessen | 515 |
| Phylogeny of Myxobolidae (Myxozoa) and the evolution of myxospore appendages in the <i>Myxobolus</i> clade | |
| Y. Liu, A. Lövy, Z. Gu, I. Fiala | 523 |
| Mating barriers between genetically divergent strains of the parasitic nematode <i>Haemonchus contortus</i> suggest incipient speciation | |
| N.D. Sargison, E. Redman, A.A. Morrison, D.J. Bartley, F. Jackson, E. Hoberg, J.S. Gilleard | 531 |
| Systematic review of exposure to albendazole or mebendazole during pregnancy and effects on maternal and child outcomes, with particular reference to exposure in the first trimester | |
| T.W. Gyorkos, K. St-Denis | 541 |
| A novel multilocus sequence typing scheme identifying genetic diversity amongst <i>Leishmania donovani</i> isolates from a genetically homogeneous population in the Indian subcontinent | |
| S.S. Banu, W. Meyer, K. Ferreira-Paim, Q. Wang, K. Kuhls, E. Cupolillo, G. Schönian, R. Lee | 555 |

| | |
|--|----------------|
| Outbreak of cryptosporidiosis due to <i>Cryptosporidium parvum</i> subtype IIdA19G1 in neonatal calves on a dairy farm in China | |
| N. Li, R. Wang, M. Cai, W. Jiang, Y. Feng, L. Xiao | 570 |
| Resistance and tolerance to mixed nematode infections in chicken genotypes with extremely different growth rates | |
| M. Stehr, J. Zentek, W. Vahjen, R. Zitnan, A. Tuchscherer, M. Gauly, C.C. Metges, G. Daş | 579 |
| Issue 8 | July 2019 |
| <i>Succincta</i> | |
| <i>Schistosoma mansoni</i> venom allergen-like proteins: phylogenetic relationships, stage-specific transcription and tissue localization as predictors of immunological cross-reactivity | |
| L.P. Farias, I.W. Chalmers, S. Perally, H.K. Rofatto, C.J. Jackson, M. Brown, M.I. Khouri, M.M.F. Barbosa, P.J. Hensbergen, C.H. Hokke, L.C.C. Leite, K.F. Hoffmann | 593 |
| Evolutionary sex allocation theory explains sex ratios in natural <i>Plasmodium falciparum</i> infections | |
| P. Schneider, H.A. Babiker, A.A.H. Gadalla, S.E. Reece | 601 |
| <i>Original Research Articles</i> | |
| Trypanosomatid parasites infecting managed honeybees and wild solitary bees | |
| V. Strobl, O. Yañez, L. Straub, M. Albrecht, P. Neumann | 605 |
| Identification of a new panel of reference genes to study pairing-dependent gene expression in <i>Schistosoma mansoni</i> | |
| S. Haerberlein, A. Angrisano, T. Quack, Z. Lu, J. Kellershohn, A. Blohm, C.G. Grevelding, S.R. Hahnel | 615 |
| Major determinants of the occurrence of a globally invasive parasite in riverine fish over large-scale environmental gradients | |
| A. Maceda-Veiga, R. Mac Nally, A.J. Green, R. Poulin, A. de Sostoa | 625 |
| An innovative approach in the detection of <i>Toxocara canis</i> excretory/secretory antigens using specific nanobodies | |
| F.J. Morales-Yanez, I. Sariego, C. Vincke, G. Hassanzadeh-Ghassabeh, K. Polman, S. Muyldermans | 635 |
| <i>Schistosoma mansoni</i> does not and cannot oxidise fatty acids, but these are used for biosynthetic purposes instead | |
| M.L. Bexkens, M.M. Mebius, M. Houweling, J.F. Brouwers, A.G.M. Tielens, J.J. van Hellemond | 647 |
| The levels of natural <i>Nosema</i> spp. infection in <i>Apis mellifera iberiensis</i> brood stages | |
| A. Urbietta-Magro, M. Higes, A. Meana, T. Gómez-Moracho, C. Rodríguez-García, L. Barrios, R. Martín-Hernández | 657 |
| Issue 9 | August 2019 |
| <i>Original Research Articles</i> | |
| Drivers of parasite community structure in fishes of the continental shelf of the Western Mediterranean: the importance of host phylogeny and autecological traits | |
| M. Carrassón, S. Dallarés, J.E. Cartes, M. Constenla, A. Pérez-del-Olmo, L. Zucca, A. Kostadinova | 669 |
| <i>Plasmodium berghei</i> serine/threonine protein phosphatase PP5 plays a critical role in male gamete fertility | |
| X. Zhu, L. Sun, Y. He, H. Wei, M. Hong, F. Liu, Q. Liu, Y. Cao, L. Cui | 685 |
| Increased intracellular Cl⁻ concentration mediates <i>Trichomonas vaginalis</i>-induced inflammation in the human vaginal epithelium | |
| J.-B. Xu, Y.-L. Zhang, J. Huang, S.-J. Lu, Q. Sun, P.-X. Chen, P. Jiang, Z.-E. Qiu, F.-N. Jiang, Y.-X. Zhu, D.-H. Lai, W.-D. Zhong, Z.-R. Lun, W.-L. Zhou | 697 |
| Generation and functional characterisation of <i>Plasmodium yoelii</i> csp deletion mutants using a microhomology-based CRISPR/Cas9 method | |
| R. Xu, Y. Liu, R. Fan, R. Liang, L. Yue, S. Liu, X.-z. Su, J. Li | 705 |
| Life history and functional capacity of the microbiome are altered in beta-cypermethrin-resistant cockroaches | |
| F. Zhang, R. Yang | 715 |
| Rhoptry neck protein 11 has crucial roles during malaria parasite sporozoite invasion of salivary glands and hepatocytes | |
| S. Bantuchai, M. Nozaki, A. Thongkukiatkul, N. Lorsuwannarat, M. Tachibana, M. Baba, K. Matsuoka, T. Tsuboi, M. Torii, T. Ishino | 725 |
| Preferential infectivity of entomopathogenic nematodes in an envenomed host | |
| G.N. Mbata, D.I. Shapiro-Ilan, H.T. Alborn, M.R. Strand | 737 |
| Issue 10 | September 2019 |
| <i>Review Article</i> | |
| Failure of in vitro-cultured schistosomes to produce eggs: how does the parasite meet its needs for host-derived cytokines such as TGF-β? | |
| M.J. Doenhoff, J. Modha, A.J. Walker | 747 |
| <i>Original Research Articles</i> | |
| Dose-independent virulence in phoretic mites that parasitize burying beetles | |
| V. Nehring, H. Teubner, S. König | 759 |
| Metagenomics for broad and improved parasite detection: a proof-of-concept study using swine faecal samples | |
| C. Wylezich, A. Belka, D. Hanke, M. Beer, S. Blome, D. Höper | 769 |
| Changes in host densities and co-feeding pattern efficiently predict tick-borne encephalitis hazard in an endemic focus in northern Italy | |
| R. Rosà, V. Tagliapietra, M. Manica, D. Arnoldi, H.C. Hauffe, C. Rossi, F. Rosso, H. Henttonen, A. Rizzoli | 779 |

| | |
|--|---------------|
| Adaptations and phenotypic plasticity in developmental traits of <i>Marshallagia marshalli</i> | |
| O.A. Aleuy, E.P. Hoberg, C. Paquette, K.E. Ruckstuhl, S. Kutz | 789 |
| Identification of the amino acids in the Major Histocompatibility Complex class II region of Scottish Blackface sheep that are associated with resistance to nematode infection | |
| A. Stear, A.O.A. Ali, G.N. Brujeni, J. Buitkamp, K. Donskow-Łysoniewska, K. Fairlie-Clarke, D. Groth, N.M.M. Isa, M.J. Stear | 797 |
| High food quality increases infection of <i>Gammarus pulex</i> (Crustacea: Amphipoda) by the acanthocephalan parasite <i>Pomphorhynchus laevis</i> | |
| K. Sanchez-Thirion, M. Danger, A. Bec, E. Billoir, S. Labaude, T. Rigaud, J.-N. Beisel, V. Felten | 805 |
| Homoplasy or plesiomorphy? Reconstruction of the evolutionary history of mitochondrial gene order rearrangements in the subphylum Neodermata | |
| D. Zhang, W.X. Li, H. Zou, S.G. Wu, M. Li, I. Jakovlić, J. Zhang, R. Chen, G. Wang | 819 |
| Issue 11 | October 2019 |
| <i>Succincta</i> | |
| Experimental infection of <i>Phlebotomus perniciosus</i> and <i>Phlebotomus tobbi</i> with different <i>Leishmania tropica</i> strains | |
| S. Vaselek, P. Volf | 831 |
| Transcriptional signatures of invasiveness in <i>Meloidogyne incognita</i> populations from sub-Saharan Africa | |
| D. Cox, B. Reilly, N.D. Warnock, S. Dyer, M. Sturrock, L. Cortada, D. Coyne, A.G. Maule, J.J. Dalzell | 837 |
| Snorkel sea-cage technology decreases salmon louse infestation by 75% in a full-cycle commercial test | |
| L. Geitung, F. Oppedal, L.H. Stien, T. Dempster, E. Karlsbakk, V. Nola, D.W. Wright | 843 |
| <i>Original Research Articles</i> | |
| The confounding effects of high genetic diversity on the determination and interpretation of differential gene expression analysis in the parasitic nematode <i>Haemonchus contortus</i> | |
| A.M. Rezansoff, R. Laing, A. Martinelli, S. Stasiuk, E. Redman, D. Bartley, N. Holroyd, E. Devaney, N.D. Sargison, S. Doyle, J.A. Cotton, J.S. Gilleard | 847 |
| Molecular identification targeting <i>cox1</i> and 18S genes confirms the high prevalence of <i>Sarcocystis</i> spp. in cattle in the Netherlands | |
| B.J.A. Hoeve-Bakker, J.W.B. van der Giessen, F.F.J. Franssen | 859 |
| Evaluation of losses in carcasses of cattle naturally infected with <i>Fasciola hepatica</i>: effects on weight by age range and on carcass quality parameters | |
| R.A. da Costa, L.G. Corbellini, E. Castro-Janer, F. Riet-Correa | 867 |
| Disentangling the effect of host genetics and gut microbiota on resistance to an intestinal parasite | |
| B. Faivre, J. Bellenger, A. Rieu, E. Guivier, M. Galan, A. Ollivier, L. Poloni, G. Sorci | 873 |
| Pixel by pixel: real-time observation and quantification of passive flotation speeds of three common equine endoparasite egg types | |
| J.K. Norris, P. Slusarewicz, M.K. Nielsen | 885 |
| One-year follow-up of anti-<i>Leishmania</i> antibody concentrations in serum and saliva from experimentally infected dogs | |
| A. Cantos-Barreda, D. Escribano, A. Egui, M.C. Thomas, M.C. López, F. Tecles, L.J. Bernal, J.J. Cerón, S. Martínez-Subiela | 893 |
| Issue 12 | November 2019 |
| <i>Original Research Articles</i> | |
| Reduced egg shedding in nematode-resistant ewes and projected epidemiological benefits under climate change | |
| H. Rose Vineer, P. Baber, T. White, E.R. Morgan | 901 |
| <i>De novo</i> genome sequencing and comparative stage-specific transcriptomic analysis of <i>Dirofilaria repens</i> | |
| C. Cafarelli, G. Russo, A. Mathis, C. Silaghi | 911 |
| Proteomic identification of galectin-11 and -14 ligands from <i>Fasciola hepatica</i> | |
| J. Swan, D. Sakthivel, T.C. Cameron, P. Faou, R. Downs, H. Rajapaksha, D. Piedrafita, T. Beddoe | 921 |
| Genome-wide analysis of <i>Anisakis simplex sensu lato</i>: the role of carbohydrate metabolism genes in the parasite's development | |
| E. Łopieńska-Biernat, Ł. Paukszto, J.P. Jastrzębski, K. Myszczyński, I. Polak, R. Stryński | 933 |
| An identity crisis in the Indo-Pacific: molecular exploration of the genus <i>Koseiria</i> (Digenea: Enenteridae) | |
| D.C. Huston, S.C. Cutmore, T.H. Cribb | 945 |
| Inhibition of <i>Opisthorchis felineus</i> glutathione-dependent prostaglandin synthase by resveratrol correlates with attenuation of cholangiocyte neoplasia in a hamster model of opisthorchiasis | |
| M.Y. Pakharukova, O.G. Zapparina, A.V. Kovner, V.A. Mordvinov | 963 |
| Experimental characterization of the complete life cycle of <i>Haemoproteus columbae</i>, with a description of a natural host-parasite system used to study this infection | |
| A.S. Cepeda, I.A. Lotta-Arévalo, D.F. Pinto-Osorio, J. Macías-Zacipa, G. Valkiūnas, P. Barato, N.E. Matta | 975 |
| First description of genetic diversity for the genus <i>Metagonimus</i> using the complete <i>cox1</i> gene sequence | |
| Y.V. Tatonova, V.V. Besprozvanykh, P.G. Shumenko, H.M. Nguyen, D.A. Solodovnik | 985 |

Succincta

| | |
|---|------|
| Host <i>miR-148</i> regulates a macrophage-mediated immune response during <i>Schistosoma japonicum</i> infection B.R. Giri, G. Cheng | 993 |
| <i>Ethylene Response Factor (ERF)</i> genes modulate plant root exudate composition and the attraction of plant parasitic nematodes S. Dyer, R. Weir, D. Cox, X. Cheseto, B. Torto, J.J. Dalzell | 999 |
| <i>Original Research Articles</i> | |
| Experimental study of micro-habitat selection by ixodid ticks feeding on avian hosts G. Fracasso, E. Matthysen, A.A. Dhondt, D. Heylen | 1005 |
| Complex and interactive effects of ocean acidification and warming on the life span of a marine trematode parasite V.A. Franzova, C.D. MacLeod, T. Wang, C.D.G. Harley | 1015 |
| Prevalence and species richness of trematode parasites only partially recovers after the 2011 Tohoku, Japan, earthquake tsunami O. Miura, G. Kanaya, S. Nakai, H. Itoh, S. Chiba | 1023 |
| Extracellular vesicles derived from <i>Echinococcus granulosus</i> hydatid cyst fluid from patients: isolation, characterization and evaluation of immunomodulatory functions on T cells X. Zhou, W. Wang, F. Cui, C. Shi, Y. Ma, Y. Yu, W. Zhao, J. Zhao | 1029 |
| No barrier breakdown between human and cattle schistosome species in the Senegal River Basin in the face of hybridisation N.A.M. Boon, M. Mbow, L. Paredis, P. Moris, I. Sy, T. Maes, B.L. Webster, M. Sacko, F.A.M. Volckaert, K. Polman, T. Huyse | 1039 |
| Proteomic, metabolic and immunological changes in <i>Biomphalaria glabrata</i> infected with <i>Schistosoma mansoni</i> T.M.F. Mendes, E. Carrilho, A.J.P.F.S. Afonso, C.A. Galinaro, F.J. Cabral, S.M. Allegretti | 1049 |
| <i>Meloidogyne incognita</i> (Nematoda: Meloidogynidae) sterol-binding protein Mi-SBP-1 as a target for its management T.N. Shivakumara, V.S. Somvanshi, V. Phani, S. Chaudhary, A. Hada, R. Budhwar, R.N. Shukla, U. Rao | 1061 |
| Insect trypanosomatids in Papua New Guinea: high endemism and diversity J. Králová, A. Grybchuk-Ieremenko, J. Votýpka, V. Novotný, P. Kment, J. Lukeš, V. Yurchenko, A.Y. Kostygov | 1075 |

| | |
|------------------------|-----|
| Volume Contents | I |
| Author Index | VII |
| Keyword Index | XI |