Supplementary Information: Table S1. Summary of 146 reviewed papers between 2000 and March 2020.

Year	Title	Location of Study	Study Design	Sample Analysed	Age	Diagnostic Method	Disease/ Pathogen	Path ogen	Summary of Result	Quality/ Bias	Reference
2020	Molecular Detection of Rabies Lyssaviruses from Dogs in Southeastern Nigeria: Evidence of Transboundary Transmission of Rabies in West Africa	Southeastern zone (Anambra, Ebonyi, and Enugu)	Random sampling (dog slaughter house for human consumption)	278 dog brain tissue	Not provided	Direct Fluorescent Antibody Test, RT-PCR	Rabies lyssavirus	Virus	Out of the 278 brain tissue specimens, 23 (8.3%) were positive for rabies lyssaviruses	Good	[139]
2020	Ectoparasitic infestations of cats and dogs in Izzi Local Government Area of Ebonyi State, Nigeria: brief communication for 'OneHealth' approach to control of potential zoonoses	Ebonyi state	Systematic random sampling technique	100 dogs/ 21 cats (combed out parasites/ skin scrapings)	Not provided	Morphologically and microscopically	Ectoparasite	Parasite	Out of the 100 dogs examined; 80 (80%)=*Rhipicephalus sanguineus*, 8(8%)=*Haemaphysalis longicornis*, 6(6%) = *Ctenocephalides canis*,2 (2%)= *Ctenocephalides felis* and 4 (4%) = *Sarcop Sarcoptes scabiei*.	Good	[41]
2020	Seroprevalence of Bru-	Benue state	Not indicated	102 sera (51= male,	1 to 10 Years	Rose Bengal plate test	Brucellosis	Bacteria	total prevalence = 1.96% (Out of 102 dogs)	Medium	[140]

	cellosis in Nigerian Breed of Dog in North Bank Area of Makurdi, Benue State Nigeria			51= female)		(RBPT) and Serum agglutination test (SAT)					
2020	Prevalence of Intestinal Helminth Infections of Stray Dogs of Public Health Significance in Lagos Metropolis, Nigeria	Lagos	Random sampling	96 stool samples	Not provided	Microscopically for ova (centrifugation flotation method)	Intestinal Helminth	Parasite	The overall prevalence = 61.4% (59/96): *Ancylostoma caninum* = 62.5%, *Toxocara canis* = 20.8%, *Dipylidium caninum* = 18.7% and *Strongyloides stercoralis* = 2.0%.	Good	[141]
2019	Ticks (Acari: Ixodidae) infesting dogs in Nigeria: epidemiological and public health implications	Bauchi, Benue, Borno, enugu, Kaduna, Kano, Ogun, Plateau, Taraba, Rivers states	Not indicated	Ticks were collected from 608 owned dogs (males= 196, females= 412	Adults (436) and puppies (172)	Stereoscope (80-fold magnification) and a light microscope (100–200-fold magnification)/Taxonomic descriptions and morphological keys	ixodid ticks	Parasite	1196 ticks belonging to three genera were identified. *Rhipicephalus* (including the subgenus Boophilus) ticks were collected from dogs = 95.2% of the ticks collected, *Haemaphysalis* (3.7%) and *Amblyomma* species (1.2%). The brown dog tick ,*Rhipicephalus sanguineus sensu lato* was the only tick identified in all the climatic zones of Nigeria	Medium	[142]
2019	Gastrointestinal parasites of dogs (*Canis familiaris*) in Maiduguri, Borno State, Northeastern	Borno state	A cross-sectional study (Convenience sampling)	200 dogs' rectal fecal samples	Young (<1 year) (71) and adult (>1 year)	saturated sodium chloride floatation technique/ Microscopy	Gastrointestinal parasites	Parasite	The prevalence = 31.5% (63/200): *Ancylostoma* spp (16%), *Toxocara* spp (7.0%)., *Dipylidium* spp (4.5%)., *Isospora* spp (2.5%), and *Taenia* spp (1.5%),	Good	[143]

	Nigeria: Risk factors and zoonotic implications for human health				(129)						
2019	Identification of *Trypanosoma brucei gambiense* in naturally infected dogs in Nigeria	Enugu state	Not indicated	Blood samples were collected on FTA cards from 19 dogs	6 months to 7 years	Subspecies-specific PCR tests	*Trypanosoma brucei gambiense*	Parasite	generic PCR test = subgenus Trypanozoon , Specific PCR test = *T. b. gambiense*.(in 2 dogs)	Good	[144]
2019	Epizootiology of zoonotic parasites of dogs in Abua area of Rivers State, Nigeria	Rivers state	Random sampling	400 stool samples	0-6 months , 7-12 months , 2-3 years, 4-6 years, ≥7 years	Formol-ether concentration	Parasites	Parasite	260 (65%) positive for parasites: *Ancylostoma caninum*, *Strongyloides stercoralis*, *Diphylidium caninum*, *Toxocara canis*, *Spirocerca lupi*, *Baylisascaris procyonis*, *Taenia* spp and *Trichuris* spp	Good	[145]
2019	Prevalence of Parasites among Dogs Undergoing Treatment at Polo Veterinary Clinic Jos, North Central Nigeria	Plateau state	Not indicated	639 dogs (blood and stool samples), physical examination and direct picking of ectoparasites	young (1-6 months old), adolescent (7 months – 1 year) and adult (1 year and above)	Microscopy/blood fim/wet mount	Parasites	Parasite	Infected= 82 (12.8%) Uninfected = 557 (87.2%). protozoans (canine babesiosis, piroplasmosis), Helminthes and arthropod groups. co-infections in some dogs	Medium	[146]
2019	Detection of	Taraba	Simple	150 dogs	136	direct fluo-	Rabies	Ra-	3 out of the 150 (2%) posi-	Good	[147]

	rabies virus antigen in brain tissue of dogs slaughtered for human consumption in Taraba State, Nigeria	state	random sampling	brain tissue (consisting of 82 males and 68 females)	adults and 14 puppies	rescent antibody test (DFAT)		bies	tive		
2019	Molecular detection of filarioid worms in dogs in Nigeria, West Africa	Akwa Ibom, Delta, Kaduna, Kwara, Plateau, Oyo and Rivers	Not indicated	197 blood samples (74 males, 108 females, 15 no sex information)	0 to >36 months	High Resolution Melt Real Time PCR and sequencing	Filarioid worms	Parasite	one (0.5%) was positive; 94% similar to *Acanthocheilonema reconditum*	Medium	[148]
2019	Occurrence of Gastrointestinal Parasitic Associated with Exotic Dogs in Commercial Breeding Mills in Jos Metropolis-Nigeria	Plateau state	cross-sectional study	150 feacal samples (68 males, 82 females)	0-3, 4-7, 8-11, 12-15 and > 16-months-old	formol ether and floatation concentration techniques	Parasites	Parasite	*Ancylostoma caninum* (28.0%) *Dipylidium caninum* (23.3%), *Toxocara canis* (14.0%), *Trichuris vulpis* (11.3%), *Taenia* sp. (5.33%) *Giardia* sp. (7.33%) and *Coccidia* sp. (5.33%)	Good	[149]
2019	Prevalence and risk factors associated with *Cryptosporidium* spp. infection in local breed of dogs in Enugu State, Nigeria	Enugu state	Simple random sampling	203 fresh fecal samples	Not provided	formol ether sedimentation method and modified Ziehl–Neelsen light microscopy	*Cryptosporidium* spp.	Parasite	74 (36.5%) dogs were infected with *Cryptosporidium* spp. oocysts	Good	[150]

2019	Prevalence of single and mixed parasitic infections of dogs in Egbeda communities, Ibadan, Oyo State, Nigeria	Ibadan, Oyo state	cross-sectional study	292 dogs and 241 dog owners were examined for parasites. Ectoparasites were collected from dog fur, stools from dogs and their owners	0-6, 6-12, >12 months	Microscopically and modified sucrose floatation technique	Intestinal parasites	Parasite	Ectoparasites were present on 199 (68.2%) dogs, while 239 (81.8%) had intestinal parasites. 6 ectoparasite species; *Ctenocephalides canis* (5.5%), *C. felis* (39.7%), *Rhipicephalus sanguineus* (51.3%), *Haemaphysalis leachii* (48.9), *Trichodectes canis* (2.1%) and *Linognathus* spp (1.7%). *Ascaris lumbricoides*, *Ancyclostoma* spp and *Trichuris* spp were identified in 99 (41.1%) of the dog owner. Gastrointestinal parasites identified in dogs were *Toxocara canis* (55.8%), *Ascaris* spp (36%), *Ancylostoma* spp (40.1%), *Trichuris* spp (7.5%), *Isospora* spp (14.4%) and *Toxascaris leonina* (15.1%).	Good	[82]
2019	Prevalence of Campylobacter Species in Dogs in Bassa, Plateau State, Nigeria	Plateau state	Not indicated	105 feacal samples (male =45, female= 60)	<1 year (77),>1 year (28)	Microbiological technique	Campylobacter Species	Bacteria	15(14.3%) positive for *Campylobacter* species	Medium	[151]
2019	Prevalence of Zoonotic Gastrointestinal Helminth Parasites (ZGIHP) of Dogs Presented to the Small Animal Clinic of the	Benue state	NA	97 fecal samples	0-11 months, 1-4 years and >4 years	Microscopically and simple floatation technique	Gastrointestinal helminthes	parasite	Overall prevalence =32 (32.99%) Single infection= 28(87.5%), mixed infections = 4(12.5%). The Helminth =*Ancylostoma caninum* 30(30.93%) and *Dipylidium caninum* 6 (6.12%). local breed= 43.18%, Cross breed=16.67%	Medium	[69]

	Veterinary Teaching Hospital, University of Agriculture, Makurdi, Benue State (October 2016-January 2017)							Exotic breed =25.53%.		
2019	Seasonal distribution and common management practices of ectoparasites of domestic dogs in Ilorin, Nigeria	Kwara state	cross sectional study	334 dogs. Ticks were removed using forceps. Fleas and lice removed by combing out hair. 164(48.9 %) male and 170(51.1 %) female	0-6 months, 7-11 months and ≥12 months	parasitological method	Ectoparasites	parasite	Overall prevalence= 52.0 % ticks : *Rhipicephalus sanguineus*=70.3 %, *Haemaphysalis leachii*= 29.4 % and *Amblyomma variegatum*= 4.5 %), Flea (*Ctenocephalides canis*, 63.7 %) and lice (*Heterodoxus spiniger*, 30.0 Seasonal distribution = more in the rainy season than the dry.	Good	[152]
2019	Serological and molecular surveillance for influenza A virus in dogs and their human contacts in Oyo State, Nigeria	Oyo state	not indicated	239 blood and nasal swaps form dogs (118 males, 121 females) and 39 human nasal swabs were used for this study	NA	Enzyme-linked immunosorbent assay (ELISA)/ Reverse transcriptase-Polymerase chain reaction (RT-PCR)	Influenza A	Virus	Serology; 4(1.7%) positive for IAV by ELISA. 1 (25.0%) of the 4 ELISA-positive sera was positive by HI for the Influenza virus H3N8 subtype with a titer of 1:128. All the nasal swabs were assayed for Influenza A virus RNA by RT-PCR were negative.	Medium	[153]
2019	The sero-prevalence of	Oyo state	Random sampling	blood from 384 dogs	0-3 months	ELISA (sera) and Micros-	Scabies	parasite	The prevalence = 67.45% (259/384) using the ELISA	Good	[154]

	Sarcoptes scabiei var. canis and its associated risk factors in dogs in Ibadan, Southwest Nigeria			(149 males and 235 females)/ 56 skin scrapies from 56 dogs selected out of 384 dogs	, 4-6, 7-12, >12 months	copy (skin scrapies)			kit. The prevalence of skin scrapping with microscopy = mites in 12 out of 56 dogs		
2019	*Clostridium difficile* shedding by healthy dogs in Nigeria and Malawi	Nigeria (FCT, Abuja) and Malawi (Blantyre)	Not indicated	120 (Nigeria)/ 92 (Malawi) dog feacal samples	Not provided	Culture/ PCR/ Ribotyping	*Clostridium difficile*	Bacteria	Nigeria= 31/120 (26%) Overall, 22/42 (52%) isolates were toxigenic; 17/31 (55%) were from Nigeria All toxigenic isolates possessing tcdA and tcdB, and only one also possessed cdtA/B. Sixteen different ribotypes were found, ten (63%) of which were non-toxigenic	Medium	[40]
2019	Serological and Parasitological Survey of Canine *Dirofilaria immitis* Infection in Maiduguri, Borno state, North-Eastern Nigeria	Borno state	Not indicated	250 blood samples (135 males and 115 females)	young (<1 year), adult (>1 years)	parasitological (Buffy coat, wet mount, modified Knott's test) and serological (ELISA) technique	*Dirofilaria immitis*	parasite	12(4.8%) positive Young= 2(0.8%), Adult= 10(4.0%)	Medium	[155]
2018	Genotypic characterization of *Cryptosporidium* species in humans and peri-domestic	Ekiti and Oyo states	Not indicated	187 (humans= 120, animals= 67) fecal samples (only 1 from dog)	not provided	PCR	*Cryptosporidium* spp	parasite	16 of 187 = *Cryptosporidium* 18S PCR positive. 5 samples originating from HIV-positive patients, 5 from otherwise healthy children, 2 from chickens, 3 from goats, and 1 from a dog were positive for at	Medium	[156]

	animals in Ekiti and Oyo States, Nigeria							least 1 marker. The only dog sampled was positive for *Cryptosporidium canis*		
2018	Prevalence of ectoparasite infestations in owned dogs in Kwara State, Nigeria	Kwara state	Random sampling	333 dogs were screened, ectoparasites combed out	0-6, 7-11, ≥12 months	Microscopy	Ectoparasites	parasite	271 (81.4%) dogs were infested with at least one species of ectoparasite: ticks (*Rhipicephalus sanguineus sensu lato*, *Haemaphysalis leachii* and *Amblyomma variegatum*), fleas (*Ctenocephalides canis* and *C. felis*) Louse (*Heterodoxus spiniger*). *R. sanguineus* was the most prevalent (70.3%) followed by *C. felis* (42.1%) and *H. spiniger* (30.0%). Multiple infestations recorded	Good	[157]
2018	Antimicrobial usage and presence of extended-spectrum β-lactamase-producing Enterobacteriaceae in animal rearing households of selected rural and peri-urban communities	Ogun state	Not indicated	457 samples from animal and environmental sources within the households: Chickens= 41.6%, goats = 35.3%,, **dogs (108; 33.8%)** and sheep = 14.4%	Not provided	Culture/ commercial biochemical kit /MALDI-TOF MS	extended-spectrum β-lactamase-producing Enterobacteriaceae	Bacteria	Overall, the prevalence of ESBL-producing Enterobacteriaceae= 53 (11.6%): *Escherichia coli* (n = 49) and *Klebsiella pneumoniae* (n = 4). All ESBL-producing isolates demonstrated multidrug resistance to at least 3 different classes of antimicrobials.	Medium	[158]
2018	Detection and identifi-	Oyo state	Not indicated	116 dogs (male= 46,	2 days–16	Light Microscopy and	blood-borne infections	Parasite	LM overall prevalence = 14.7% (17/116): *Babesia canis*	Medium	[159]

	cation of blood-borne infections in dogs in Nigeria using light microscopy and the polymerase chain reaction			female= 67)	-years	broad-spectrum rRNA gene PCR-based assays			(3.5%), *Ehrlichia canis* (10.3%) and *Trypanosoma congolense* (0.9%) Single coinfection with *Babesia canis* and *Ehrlichia canis* (0.9%). PCR analysis = 89/116 (76.7%). multiple Infections occurred. Specifically, among the 89 PCR positive samples; *Babesia* spp.= 85.4%, *Ehrlichia* spp.= 46.1% and *hemoplasmas* (13.5%). Sequencing identified 1.7% that contained *Hepatozoon canis* DNA. Sequencing of hemoplasma positive samples identified '*Candidatus Mycoplasma haemobos*' in 0.8% of dogs. Using PCR, a 5-fold higher prevalence of blood-borne infections was found in the dogs (76.7%, 89/116) than with LM (14.7%, 17/116) alone. A total of 57.3% of infected dogs were anaemic		
2018	Detection of Antibodies to Non-Vaccinal *Leptospira* Serovars in Dogs in Jos North and Jos South Local Government Area	Plateau state	not indicated	200 blood samples	1 to 7 months	Microscopic Agglutination Test (MAT)	Leptospirosis	Bacteria	Total prevalence = 129 dogs	Medium	[160]
2018	Survey for	Gombe	Cross	347 dog	Adult/	Rose Bengal	*Brucella*	Bac-	The sero-prevalence =	Good	[161]

	Brucella antibodies in dogs in billiri local government area of Gombe state, Nigeria.	state	sectional study	sera (male= 218, female= 129)	puppy	Plate Test (RBPT) and competitive Enzyme Linked Immuno Sorbent Assay (c-ELISA).	antibodies	teria	RBPT (21.90%) and by c-ELISA (14.70%).		
2018	Haemoparasite fauna of domestic animals in Plateau State, North Central Nigeria	Plateau state	not indicated	1298 blood samples (501 cattle;252 sheep; 393 goats; 129 dogs and 23 horses)	Not provided	Giemsa stained thin blood film	Haemoparasites	Parasite	*Babesia canis* prevalence= 23.26 %, *Hepatozoon canis* prevalence= 13.18%	Medium	[162]
2018	Microbial association with suspected cutaneous leishmaniasis (cl) lesions on dogs in jos-south Plateau State North-central, Nigeria	Plateau state	not indicated	72 wound swab samples and lesion scrapings	Not provided	Giemsa stained technique, Micro-bacteriological and Mycological technique	Leishmania amastigotes and Other Microorganisms	Parasite	*Staphylococcus* spp, *Streptococcus* spp, *Bacillus* spp, *Enterobacter* spp, *Serratia* spp, *Alkalignes* spp, *Aspergillus* spp, *Microsporum* spp, *Trychophyton* spp, *Penicillium* spp, *Candida* spp, *Mucor* spp	Medium	[163]
2018	Molecular characterization of a rabies virus isolated from trade dogs in Plateau State, Nigeria	Plateau state	not indicated	532 brain samples	Not provided	Direct fluorescence antibody assay (DFAT)	Rabies	Virus	92 out of 532 (17.3%)	Medium	[164]
2018	Molecular detection of	Ibadan, Oyo state	Random sampling	203 fecal samples	Not pro-	Polymerase chain reac-	*Cryptosporidium* spp	Parasite	2.5% (5/203); *C. parvum* subtype Iic and *C. muris*	Good	[165]

	Cryptosporidium species in street-sampled dog faeces in Ibadan, Nigeria			vided	tion					
2018	Prevalence of gastrointestinal and haemo-parasites in hunting dogs in Zaria, Nigeria	Kaduna state	Convenience sampling	61 Blood and faecal samples (males =39 and females =22)	<1-year-old, 1-3 year-old, and >3-year-old,	Giemsa stained thin blood smear and simple flotation methods.	haemo- and gastrointestinal (GI) parasites	Parasite	*Babesia canis* (16.3%) *Ehrlichia canis* (1.64%), *Dirofilaria immitis* (1.64%) and mixed infections (1.64%) were identified. 19 dogs (31.5%) were infected with GI parasites including; *Taenia* spp (19.67%), *Toxocara canis* (8.20%), *Isospora* spp (1.64%), *Dipylidium caninum* (1.64%), *Ancyclostoma caninum* (1.64%) and mixed infection (1.64%)	Good	[166]
2018	Prevalence of ectoparasite infestations in owned dogs in Kwara State, Nigeria	Kwara state	Random sampling	333 (48.9% males and 51.1% females) combed out parasites/ skin scrappings	0-6 months ,7-11 months and ≥12 months	Microscopically	Ectoparasite	Parasite	Overall prevalence=81.4%t ; ticks (*Rhipicephalus sanguineus sensu lato*, *Haemaphysalis leachii* and *Amblyomma variegatum*), fleas (*Ctenocephalides canis* and *C. felis*) louse (*Heterodoxus spiniger*). *R. sanguineus* (70.3%), *C. felis* (42.1%) and *H. spiniger* (30.0%)	Good	[157]
2018	Prevalence Study of Gastrointestinal Helminth in Domestic	Plateau state	Random sampling	228 fecal samples	NA	post-mortem differential parasite count	Gastrointestinal Helminth	Parasite	Overall prevalence= 138 (60.53%): Cestodes =*Taenia pisiformis* (36.84%), *Dipylidium caninum* (12.72%) and *Echinococus granulosus* (1.75%).	Good	[49]

	Dogs (*Canis familiaris*) Slaughtered in Selected Abattoirs in Plateau State, Nigeria								Nematodes = *Ancylostoma caninum* (3.51%), *Toxocara canis* (4.83%) and *Trichuris vulpis* (0.88%)		
2018	Prevalence of ticks on indigenous breed of hunting dogs in Ogun State, Nigeria	Ogun state	not indicated	Hand-picked ticks from 109 hunting dogs(males = 30, females= 79)	young (80) and adults (29)	Microscopically	Ticks	Parasite	The overall prevalence = 56%, Of the 352 ticks harvested from the hunting dogs, *Rhipicepalus sanguineus* = 68.2%, *Haemaphysalis leachi leachi*=30.6%; *Ambylomma variegatum*= 1.21%.	Medium	[167]
2018	*Salmonella* infection in clinically healthy dogs in Makurdi, Benue State, North-central Nigeria: A potential source of infection to humans	Benue state	not indicated	Rectal swabs from 200 dogs (males= 145, female= 55)	0-2 years, >2<4 years, >4<6 years and >6 years	Microbiologically	*Salmonella* species	Bacteria	Positive= 11 (5.5%)	Medium	[168]
2018	Detection and molecular characterisation of *Ehrlichia canis* in naturally infected dogs in South West Nigeria.	Ogun state	Not indicated	blood samples from 205 dogs (male= 102, females= 103)	(≤ 1 year) and adult (≥ 1 year)	microscopy and nested PCR/sequencing	*Ehrlichia canis*	Parasite	Microscopy prevalence= 1.5% PCR test = 22.9% positive	Medium	[169]
2018	Pathological and molecular diagnosis	Abuja, FCT	Case report	Blood sample from the	1 year	Blood film/ Giemsa stained/ PCR	Canine babesiosis	Parasite	Ticks were identified as *Rhipicephalus sanguineus*. Giemsa stained thin blood	Good	[170]

	of canine babesiosis in Nigeria: A case report			dog		analysis			smear = none of either Babesia or Ehrlichia organisms. GenBank sequencing query confirmed *Babesia vogeli*		
2018	In search of the vector(s) of *Babesia rossi* in Nigeria: molecular detection of *B. rossi Ixodidae*) ticks collected from dogs, circumstantial evidence worth exploring.	Plateau state	Not indicated	66 ticks collected from 31 dogs	Not provided	Nested PCR and sequence analysis	*Babesia rossi*	Parasite	Out of a total of 66 tick samples, 12%= *R. sanguineus*, Sequencing results = other *B. rossi* isolates None of the ticks harbored the DNA of *B. vogeli* or *B. canis*.	Medium	[171]
2018	Rabies in a set of eight-week old puppies in Nigeria: the need for review of current dog antirabies vaccination schedule	Akwa Ibom state	case report	Brain tissue from 2 puppies	8 weeks old puppies	Direct fluorescent antibody test (DFAT), the direct rapid immunohistochemically test (DRIT), and RT-PCR.	Rabies virus	Virus	it was positive for all tests used	Good	[172]
2017	Genetic diversity among *Babesia rossi* detected in naturally infected dogs in Abeokuta, Nigeria,	Ogun state	Random sampling	Blood from 209 dogs	From 4 months to7 years	Microscopy and PCR/Sequencing	*Babesia* species	Parasite	Microscopy= 16 (7.7%) Electrophoresed PCR products from 39 (18.66%) dogs displayed homology of 99.74% (387/388) with partial sequences of 18S rRNA gene of *Babesia rossi* in the GeneBank. Of the two sequences, one was =	Good	[173]

	based on 18S rRNA gene sequences							*T. annulata* and the second = *T. ovis*. A significantly ($p<0.05$) higher prevalence of *B. rossi* was detected by PCR compared to microscopy.		
2017	Comparative Study of Ectoparasites of Exotic and Locally Bred Dogs in Ikot Ekpene Local Government Area, Niger-Delta Region of Nigeria	Akwa Ibom State	not indicated	60 dogs	12-24, 25-36, 37-48, >48 months	Microscopically	Ectoparasite	Parasite	Ticks= 107 , 94.6% of ticks identified as *Rhipicephalus sanguineus*	Good	[174]
2017	Prevalence of ectoparasites of dogs and cats in Ijero and Moba LGAs, Ekiti State, Nigeria	Ekiti state	cross-sectional study	parasites manually removed from 200 dogs (female= 125, male= 75) and 200 cats	<6, 6-24, >24 months	light Microscopy	Ectoparasite	Parasite	Prevalence in dogs= 170 (85%), fleas (*Ctenocephalidesfelis*, and *C. canis*), Mites (*Sarcoptes scabiei*, and *Otodectescynotis*) and Ticks (*Rhipicephalus sanguineus* and *Haemophysa lisleachi*).	Good	[175]
2017	Prevalence and Antibiogram of Generic Extended-Spectrum β-Lactam-Resistant Enterobacteria in Healthy Dogs	Enugu state	cross-sectional study	100 rectal swabs	Not provided	Microbiological methods	Extended-spectrum β-lactam-resistant Enterobacteria	Bacteria	27 ESBL-resistant enterobacterial isolated: 40.7% = E coli, 37% = *Klebsiella* spp, 18.5%= *Salmonella* spp, while 3.7%= *Proteus* spp. All the isolates were resistant to ceftazidime and cefotaxime. Resistance to more than 3 classes of antibacterial agents : *E.coli*= 81.8% , *Klebsiella*= 70% *Salmonella* = 100%	Good	[176]

2017	Prevalence of Gastrointestinal Parasites and their impact in Domestic Animals in Vom, Nigeria	Plateau state	not indicated	204 dogs (out of 1,508 fecal samples from various breeds of domestic animals)	NA	Microscopic Examination using direct normal saline and iodine method. And Formal Ether Sedimentation Technique	Gastrointestinal parasites	Parasite	*Ancylostoma braziliense* = 52(12.8%), and *Isospora* spp (6.4%), *Taenia* spp (0.5%), *Troglotrema salmincolo* (0.5%), *Toxocara canis* (2%), *Demodex canis* (0.5%) *Sarcoptic mites* (1.5%), *Sarcocystis* spp (5.4%).	Medium	[177]
2017	Antibiotic resistance profiling and microbiota of the upper respiratory tract of apparently healthy dogs in Ibadan, SouthWest Nigeria	Oyo state	not indicated	173 dog swabs	Not provided	Culture/biochemical tests/Kirby-Bauer disk diffusion method.	Microbiota	Bacteria	222 bacterial isolates: 10 potentially pathogenic: *E coli* (18.5%), *Proteus* spp (17.1%), *S aureus* (14.0%), *Klebsiella* spp (9.0%), *Acinetobacter* spp (9.0%), coagulase negative *Staphylococcus* species (7.7%), *Pseudomonas* spp (6.8%), *Actinobacter* spp (6.8%), *Citrobacter* spp (5.9%) and *Streptococcus* spp (5.4%). Overall, Gram negative resistance= ciprofloxacin (9.3%), sparfloxacin (16.0%),perfloxacin (17.3%), ofloxacin (21.6%), chloramphenicol (34..6%), gentamycin (36.4%), streptomycin (37.%), septrin (49.4%), amoxillin (59.3%), augmentin (62.3%) while Gram positive bacteria resistance= ciprofloxacin (3.3%), perfloxacin (6.7%), erythromycin (13.3%), streptomycin (21.7%), rocephin (28.3%),septrin (28.3%), gentamycin (36.7%), zinnacef (68.3%), ampiclox (81.7%) and amoxillin (85.0%).	Medium	[178]

									Multi-drug resistance (MDR) to three or more antimicrobials		
2017	Prevalence of *Babesia* species in hunting dogs in Ogun State South West Nigeria	Ogun state	not indicated	109 dogs blood samples (males= 30 and females= 79)	<1 to >6 years	Microscopy and Polymerase Chain Reaction (PCR)	*Babesia* species	Parasite	Microscopy = 24 (22%) PCR assay= 52 (47.7%)	Medium	[179]
2017	Investigations on the Haemoprotozoan Parasites of Nigerian Local Breed of Dogs in Gwagwalada Federal Capital Territory (FCT) Nigeria	Abuja, FCT	Random selection	109 dog blood samples (male= 60, female= 49)	0-5 months to 109-120 months	Microscopy	Haemoprotozoan	Parasite	Overall 84 (77.1%). Haemoparasites include; *Babesia* sp. 48 (57.1%), *Hepatozoon* sp. 33 (39.3%) and *Trypanosoma* sp. 3 (3.6%). Ticks collected = genus *Rhipicephalus*.	Good	[180]
2016	Canine Trypanosomosis in the University of Nigeria Veterinary Teaching Hospital (UNVTH), Enugu State, Nigeria,Sub-Saharan Africa	Enugu state	Not indicated	55 dogs blood samples	Not provided	wet blood films, thin films and microhaematocrit centrifugation technique	Canine Trypanosomosis	Parasite	15 (27.27%) were confirmed infected; *Trypanososma congelense*= 1, *Trypanosoma brucei*= 14	Medium	[181]
2016	Analysis of risk factors and preva-	Plateau state	not indicated	246 dogs blood samples (male-	2 to 9 years	Canine haemoplasma spe-	Haemoplasma infection	Bacteria	The species-specific qPCR assays =18 (7.3%), and Candidatus *Mycoplasma*	Medium	[182]

	lence of haemoplasma infection in dogs			103, female =142)		cies-specific and generic haemoplasma qPCR assays			*haematoparvum* (CMhp) infection in only one dog (0.4%). Generic haemoplasma qPCR assays = 44 (17.9%) Discordant = 25 Non-haemoplasma species= 2 *Anaplasma phagocytophilum*,= 1 *Anaplasma ovis*= 1 *Serratia marcescens* and *Aerococcus* spp.= 1	
2016	Prevalence and Risk Factors Associated with Faecal Shedding of Cryptosporidium Oocysts in Dogs in the Federal Capital Territory, Abuja, Nigeria	Abuja, FCT	Convenience sampling	276 dog faecal samples	<3, >3-9, >9 months	Modified Acid Fast (MAF) technique and Enzyme Linked Immunosorbent Assay (ELISA).	*Cryptosporidium* oocysts	Parasite	Modified Acid Fast (MAF) staining, = 15 (5.4%) positive for *Cryptosporidium* oocysts, while 51 (18.5%) = for *Cryptosporidium coproantigens* using Enzyme Linked Immunosorbent Assay (ELISA).	Good	[183]
2016	Prevalence of potentially zoonotic gastrointestinal parasites in canine faeces in Ibadan, Nigeria	Oyo state	Random selection	203 feacal samples	NA	flotation technique/modified McMaster technique	Zoonotic gastrointestinal parasites	Parasite	Prevalence = 43.3% (88/203). Single infection= 69(78.4%) and multiple infections= 19 (21.6%). Parasites; *Ancylostoma* sp.= 24.6% (50/88), *Isospora* sp.=14.2% (29/88), *Toxocara* sp.= 9.8% (20/88), *Uncinaria* sp. =2.5% (5/88) and *Strongyloides* sp, = 3.9% (8/88).	Good	[46]
2016	The prevalence, pathogenesis and control of canine and	Oyo state	not indicated	fecal/blood samples from 564 dogs/blood samples	<3 years (dogs)/ <11 years	Clinical examination/flotation technique/modifi	*Toxocara canis*	Parasite	Group prevalence = 64.9% by the flotation method: *Ancylostoma caninum* (54.8%) and *Dipylidium caninum* (16.7%) while	Medium	[83]

	human toxocariosis in Ibadan, Nigeria			from 128 children	(children)	ed McMaster technique/Toxocara-Elisa assay for VLM			Viscera Larva Migrans (VLM) = 87.5% by ELISA.	
2016	The Prevalence of Gastrointestinal Helminths (GIH) Infection of Dogs in Makurdi Metropolis	Benue state	cross sectional	400 dog feacal samples (male=215 and female=185),	(0-6 months = 114) and adult (> 6months= 286),	macroscopic, simple floatation and centrifugal sedimentation techniques	Gastrointestinal helminths	Parasite	Prevalence= 73.3% *Ancylostoma caninum* 41.5%, *Toxocara canis* 23% , *Dipylidium caninum* 14.8%, *Strongyloides stercoralis* 6% , *Trichuris vulpis* 4.8%, *Necator americanus* 3% , *Fasciola* species 1.5%), *Echinococcus* species 1.3% , *N. americanus* and *Fasciola* species are first report in dogs in Makurdi	Good	[184]
2016	Seroprevalence of canine leishmaniasis in Kwara, Oyo and Ogun states of Nigeria	Kwara, Oyo and Ogun states	not indicated	273 Canine sera (152 females and 121 males).	young (<1 year) and adult (>1 year)	ELISA	Leishmania antibodies	Parasite	Total prevalence = 4.40 % (12/273).	Medium	[185]
2016	Prevalence and risk factors associated with *Dirofilaria immitis* infection in dogs in Makurdi, Benue State, Nigeria	Benue state	not indicated	186 blood samples (82 males, 104 females)	≤ 1year, >1 year	wet mount, Buffy coat and modified Knott's techniques	*Dirofilaria immitis*	Parasite	Microfilaria = 4 (2.15%). Out of the 4 positive cases, 3 (1.61%) were microfilaria and 1 (0.54%) was unidentified motile parasite.	Medium	[186]
2016	Isolation and PCR Characterisation of Thermophilic	Plateau state	randomized cross sectional	341 fecal sample from 146 (42.8%)	Adult (268)/puppy (73)	multiplex PCR	*Campylobacter* spp	Bacteria	Overall= 81(23.8 %.) PCR identified *C jejuni* in 41(50.6%), *C. coli* in 31 (38.3%) and mixed infec-	Good	[92]

	Campylobacter Species in Dogs Presented to Selected Veterinary Clinics in Jos, Nigeria		study	male and 195 (57.2%) female dogs					tions in 9 (11.1%) of the 81 positive samples. Overall species -based infection rates = 12.0%, 9.1% and 2.6% respectively.	
2016	Parasites and Pathogens of Ticks (Rhipicephalus species Acari: Ixodidae) among Dogs in Edo State, Nigeria	Edo state	not indicated	Ticks removed with forceps from 157 dogs	between 4 months and 4 yrs.	morphological keys/microscopically/bacteriological methods (culturing)	Ticks	Parasite	Total ticks = 489: *Rhipicephalus sanguineus* (53.57%) (Latreille), *Rh. Pulchellus* (42.33%) (Gerstäcker) and *Rh. Decoloratus* (7.36%) Koch. Bacteria= *Bacillus cereus*, *Citrobacter freundi, E. coli, P. aeruginosa, P. mirabilis* and *Streptococcus aureus*). Fungi (*Aspergillus niger, Fusarium* spp., *Penicillum* spp. and *Saccharomyces cerevisiae*) and parasites (*Acanthamoeba* spp., *Ascaris lumbricoides*, *Entamoeba coli*, hookworm and *Schistosoma haematobium*) were isolated from ticks.	Medium	[187]
2016	Isolation and Characterization of *Candida albicans* Associated with Canine Conjunctivitis	Abuja, FCT	Convenient sampling	50 Ocular swabs	Not provided	Microbiological methods (culture/Gram stain/ biochemical tests)	*Candida albicans*	Bacteria	10 samples swabs (20%) positive for *C. albicans*	Medium	[188]
2016	Prevalence of Gastrointestinal Para-	Borno state	Simple random sampling	250 dog feacal samples	young (<1 year=8	formol ether and floatation concen-	Gastrointestinal parasites	Parasite	An overall prevalence of= 38% *Ancylostoma* spp = 52(54.8%), *Toxocara* spp =	Good	[189]

	sites of Hunting Dogs in Maiduguri, Borno State, Nigeria			(males= 103, females= 147)	1), adult (>1 year= 169)	tration methods			14(14.7%), *Diphylidium* spp= 12(12.6%), *Isospora* spp = 10(10.5%) and *Taenia* spp =7(7.3%).		
2016	Incidence of *Dirofilaria immitis* in dogs presented at University of Nigeria, Nsukka Veterinary Teaching Hospital using wet smear and buffy coat technique	Enugu state	not indicated	Blood from 119 dogs		Wet mount and buffy coat techniques.	*Dirofilaria immitis*	Parasite	Prevalence = 3.36%.(4 dogs) for *D. immitis* microfilaria	Medium	[190]
2016	Phenotypic and genotypic detection of methicillin-resistant *Staphylococcus aureus* in hunting dogs in Maiduguri metropolitan, Borno State, Nigeria	Borno state	not indicated	416 swab samples from the nasal and perianal region of dogs	Not provided	Microscopy/culture/Biochemical test/PCR	Methicillin-resistant *S.aureus* (MRSA)	Bacteria	Prevalence= 79.5,)where 2.5% of the isolates = MRSA Isolates sensitive to gentamicin and ciprofloxacin Resistant to cefoxitin and oxacillin.	Medium	[[191]
2016	Sero-epidemiological survey and risk factors associated with	Lagos and Ogun states	cross-sectional study	728 dog sera	<3 years, >3 years	rapid slide agglutination test (RSA) and Rose Bengal test	Brucellosis	Bacteria	RSA positive= 81 (11.13%) RBT positive = 94 (12.91%) SAT = 4.9 %(4/81; 4.94%) and cELISA= 1.1% (1/94; 1.06%),	Good	[192]

	Brucellosis in dogs in south-western Nigeria				(RBT)/serum agglutination test (SAT) and competitive enzyme-linked immunosorbent assay (cELISA)					
2015	Presence of *Trypanosome* species and anemic status of dogs in Zuru, Nigeria	Kebbi state	not indicated	567 dog out of which 192 (33.7%) were randomly examined (blood samples)	Not provided	wet blood films, thin films and microhaematocrit centrifugation technique wet blood films,thin films and microhaematocrit centrifugation technique w	*Trypanosome* spp	parasite	4 (2.08%) All positive samples= *Trypanosoma brucei* group	Medium	[193]
2015	Zoonotic gastrointestinal parasite burden of local dogs in Zaria,Northern Nigeria: Implications for human health	Kaduna state	Random sampling (residential areas)	224 samples (residential= 101, small animal clinic=100, GIT content= 23)	NA	Simple flotation, sedimentation, and GIT processing methods.	Zoonotic gastrointestinal parasite	Parasite	Overall= 76(33.9%) Streets and residential quarters of ABU, Zaria; *Isospora* spp. 12(11.9%), *Taenia* spp. 6(5.9%), then *Toxocara canis* (5.0%), *Ancylostoma caninum* (4.0%), and *Dipylidium caninum* (1.0%). Small animal: clinic: *Isospora* spp. (19.0%), *T. canis* (8.0%), *A. caninum* (8.0%) and *Taenia* spp. (5.0%). . Gastrointestinal contents from "dog slaughtered houses: T. canis (17.3%), *Isospora* spp. (13.1%) and *A.*	Good	[70]

								caninum (4.3%)		
2015	A Case Of Canine Trypanosomosis With Epistaxis In A Two-Year Old Alsatian Dog	Oyo state	Case report	1 case study (blood sample)	2-year-old	microscopic or parasitological examination	Canine Trypanosomosis	Parasite	trypanosome parasites observed On blood smear evaluation	Good	[194]
2015	A case of Dipylidiasis and Babesiosis in a 2-year old mongrel (bitch)	Abuja, FCT	Case report	blood/feacal samples	2years old	Details not provided	Dipylidiasis and Babesiosis	Parasite	*Dipylidium caninum* and *Babesia canis* identified on a thin blood smear.	Good	[195]
2015	A survey of rabies virus antibodies in confined, hunting and roaming dogs in Ogun and Oyo States, Southwestern Nigeria	Ogun and Oyo states	Not indicated	sera from 230 (80 confined, 92 hunting and 58 roaming) dogs. Males= 77, females= 153	Not provided	Indirect ELISA	Rabies virus	Virus	Overall vaccinated confined dogs in Oyo state =, 13 (5.7%) had optimal RABV antibody tires. confined dog sera in Ogun state= negative.	Medium	[196]
2015	Comparison of gastrointestinal helminthes in dogs and awareness of zoonotic infection among dog owners in calabar, South Eastern Nigeria	Cross river state	not indicated	1263 faecal samples from dogs attending veterinary clinic and 310 from household dogs (male= 722, female=541)	puppies (752), young (283), adults (228)	Formol-ether concentration techniques	Gastrointestinal helminthes	Parasite	Prevalence: *Ancylostoma caninum* 49.51% and 35.71%, *Diplylidium caninum* 36.0% and 28.57%, *Toxocara canis* 7.83% and 18.75%, *Ascaris* species 3.33%, and 10.71% *Taenia* canis 0.98% and 0.00%, *Coccidia* oocyst 1.57% and 0.00% and *Trichuris vulpis* 0.78% and 6.25% respectively.	Medium	[197]

2015	Risk factors and level of awareness of canine Brucellosis in Jos, Plateau state, Nigeria.	Plateau state	not indicated	350 sera samples	Not provided	Rose Bengal plate test (RBPT)	Canine Brucellosis	Bacteria	Overall Seropositivity = 113 (32.3%). indoors= 13.9%, managed outdoors= 37.1%	Medium	[198]
2015	Seroprevalence of *Toxoplasma gondii* in dogs slaughtered for food in Southwestern Nigeria and assessment of knowledge and behavior consumer's	Ondo and Ekiti states	not indicated	278 dogs sera (male= 190, female= 88)	young and adult	Modified agglutination test (MAT)	*Toxoplasma gondii*	Parasite	Overall= 55 (19.8%)	Medium	[199]
2014	Occurrence of tick-transmitted pathogens in dogs in Jos, Plateau State, Nigeria	Plateau state	not indicated	100 dogs' blood specimens (55 females and 43 males; in 2 cases the gender/age were not recorded)	<18 months, adults	PCR and Reverse Line Blot (RLB) assays	tick-transmitted pathogens	Parasite	On RLB = 72%. Of the positive specimens, 38 (53%) = *B. rossi*; 9 (13%) = *Theileria* sp. (sable); 5 (7%) with either *Ehrlichia canis* or *Anaplasma* sp. *Omatjenne*, respectively; 3 (4%) = *Theileria equi*; and 1 (1%) = *B. vogeli* and E.ruminantium, respectively. Co-infections = 13 (18%) Total ticks= 146 identified: *Rhipicephalus sanguineus* 107 (73%), *Haemaphysalis leachi* (sensu stricto) 27 (18%), *R. turanicus* 3 (2%), and *Amblyomma variegatum*, *H. elliptica*, *R. lunulatus*, *R.*	Medium	[200]

								muhsamae and *R. senegalensis* 1 (1%), respectively.		
2014	Assessment of Knowledge, Attitude and Practice of Dog Owners to Canine Rabies in Wukari Metropolis, Taraba State Nigeria	Taraba state	Cross sectional study	188 brain samples from slaughtered dogs (Males= 120, females= 68)	1-12 months (57), >24 months (131)	Direct fluorescent antibody test	Rabies	Virus	15 (7.89%) had rabies antigen	Good	[201]
2014	Seroprevalence of Canine Brucellosis in Jos, Plateau State, Nigeria	Plateau state	Cluster sampling	350 sera samples (male= 132, female= 218)	0-6 months, 6-11 months, >11 months	Rose Bengal Plate Test (RBPT)/ Competitive ELISA (c-ELISA)	Canine Brucellosis	Bacteria	RBPT = 113(32.3%) positive Of these RBPT positives, c-ELISA., = 33(29.2%)	Good	[202]
2014	Methicillin-resistant coagulase-negative staphylococci from healthy dogs in Nsukka, Nigeria	Enugu state	not indicated	groin swabs of 109 clinically healthy dogs	Not provided	Culture /biochemical test/ PCR/Sequencing	Methicillin-resistant coagulase-negative Staphylococci (MRCoNS)	Bacteria	16 MRCoNS, all harboring the mecA gene = 14 (12.8%): *S. sciuri* subspecies *rodentium*, *S.lentus*, *S. haemolyticus*, and *S. simulans* with *S. sciuri* subspecies *rodentium* (62.5%) 81.3% of the MRCoNS were resistant to tetracycline while 75% and 62.5%were resistant to kanamycin and trimthoprimsulphamethoxazole respectively. MRCoNS were multi-drug resistance (MDR).	Medium	[116]
2014	*Linguatula serrata* (Porocepha-	Taraba state	not indicated	777 dogs (male= 471, female=	1-10, 11-20 weeks	buccal (sublingual) examination	*Linguatula serrata* (Poroce-	Parasite	An overall prevalence of 37.45% was recorded.	Medium	[203]

	lida: Linguatulidae) Infection among Client-Owned Dogs in Jalingo, North Eastern Nigeria: Prevalence and Public Health Implications			306)			phalida: Linguatulidae)				
2014	Prevalence of *Salmonella* Infection in Dogs in Maiduguri, Northeastern Nigeria	Borno state	not indicated	119 (male= 70, female= 49)	<3 months to >2 years	Bacteriological methods	Salmonella/ antibiotic susceptibility	Bacteria	*Salmonella* =52 (43.7%).	Medium	[34]
2014	Prevalence, intensity and associated risk factors for *Toxocara canis* in Nigeria dogs	Ondo state	Cross sectional study	474 dog faecal samples (male= 243, female= 231)	0-6, 1-12, 13-18, 19-2, 25-30 and ≥31 months	Kato-Katz technique/light microscopy	*Toxocara canis*	Parasite	Overall prevalence= 34.6%. Stray =42.4% Domicliated = 20.6%	Good	[204]
2014	Echinococcus *granulosus* Prevalence in Dogs in Southwest Nigeria	Southwestern region (Ekiti, Lagos, Oyo, Ogun, Ondo, Osun)	Purposive sampling	273 canine sera; male= 122, female= 151 (207 rural hunting and 66 urban companion dogs).	young: <1 year, adult: ≥1 year	Direct enzyme linked immunosorbent assay (ELISA)	*Echinococcus granulosus*	Parasite	Total prevalence= 12.45% (34/273). Hunting =15.94% Companion =1.52%.	Good	[205]
2014	Serological	Oyo state	not indi-	Sera from	Not	Heamagglu-	canine	Virus	Anti-CIV H3N8 antibodies	Medium	[206]

	survey for emerging canine H3N8 and H3N2 influenza viruses in pet and village dogs in Nigeria		cated	185 dogs (96 pet dogs, and 89 village hunting dogs)	pro-vided	tination inhibition (HI) assay	Influenza virus (CIV) of equine (H3N8) and avian (H3N2)		in pet dogs =51 (53.1%) and village dogs= 24 (27.0%). Overall, positive for CIV H3N8 antibodies= 40.5% (75/185) while none contained anti-CIV H3N2 antibodies		
2014	Canine Echinococcosis in Hunting and Companion Dogs in Oyo State, Nigeria: The Public Health Significance	Oyo state	not indicated	155 canine sera (male=81, female= 74)	Young (< 1year) and adult (1 year).	Direct enzyme linked immunosorbent assay (ELISA)	Canine Echinococcosis	Parasite	Total prevalence = 9.68%	Medium	[207]
2014	Infection of dogs with *Babesia canis* in Gwagwalada metropolis of Federal Capital Territory, Abuja, Nigeria	Abuja, FCT	Random sampling	101 Blood samples (male= 59, female= 42)	Adult(>6mnths); Puppy (<6mnths)	Blood film (Giemsa stain)	*Babesia canis*	Parasite	Infection rate of 9/101 (8.9%).	Good	[208]
2014	Isolation of pathogenic bacteria and antibiotic susceptibility testing of dogs with otitis externa in Aba, Abia state, Nigeria	Abia state	not indicated	48 dog ear swaps	1-11 months, 1-4years, >6years	Bacteriological examination (morphology, cultural and biochemical characteristics)	Pathogenic bacteria	Bacteria	Positive isolates= 42(87.5%); *Pseudomonas* spp. = 18 (42.9%), *Staphylococcus* spp. = 12(28.7%), E coli = 6(14.3%), *Streptococcus* spp. = 3 (7.1%), *Proteus* spp. = 2(4.2%) and *Enterococcus* spp. = 1 (2.4%).	Medium	[209]

2014	Prevalence of intestinal protozoan parasites in stray and domicile dogs in Ilorin, North Central, Nigeria	Kwara state	Random sampling	108 stool specimen (males= 63, females =45)	1-4 years	Formal-ether sedimentation method.	Protozoan parasites	Parasite	Overall prevalence = 64(59.3%).; *Anchylostoma* sp, *Cryptosporidium* sp and *Isospora* sp.	Good	[210]
2014	Multidrug resistant verocytotoxin-producing *Escherichia coli* O157:H7 in the faeces of diarrhoeic and non diarrhoeic dogs in Abeokuta, Nigeria	Ogun state	not indicated	feces of diarrhoeic (31) and non-diarrhoeic (63) dog	puppies, adults	Culture/ slide agglutination test/ Kirby-Bauer disk diffusion method/ reverse passive latex agglutination test	Verocytotoxin-producing *Escherichia coli* (VTEC) O157:H7	Bacteria	*Escherichia coli* O157:H7 isolated = 22 (23.4%) Diarrhoeic = 5 (16.1%) Non-diarrhoeic =17 (26.9% Verocytotoxin 1 (VT1) = 10 (45.5%) out of 22 isolates, VT2= 8 (36.4%), while both toxin types = 4 (18.2%) 16 (72.7%) out of 22 isolates= resistant to at least three antimicrobials from different classes,	Medium	[35]
2014	Antimicrobial resistance in aerobic bacteria isolated from oral cavities of hunting dogs in rural areas of Ogun State, Nigeria	Ogun state	not indicated	62 oral swaps from hunting dogs	6months and above	Colonial morphology, microscopy (following Gram's staining) and biochemical characterization/ Kirby-Bauer disk diffusion.	Aerobic bacteria	Bacteria	Aerobic bacterial isolates=101 *Bacillus* spp 41(40.6%), *Staphylococcus* spp 19(18.8%), *Pseudomonas* spp 8(7.9%), *Burkholderia* spp 8(7.9%), *Streptococcus* spp 7(6.9%), *Escherichia* spp 5(5%), Aeromonas spp 3(3%), *Shewanella* spp 3(3%), *Citrobacter* spp 2(1.9%), *Pasteurella* spp 2(1.9%), *Vibrio* spp 2(1.9%) and *Enterobacter* spp 1(1%).	Medium	[211]
2014	Potential Risks for Rabies	Bauchi state	not indicated	202 heads of dog; Male=	<1, 1-5, >5 years	Fluorescent antibody test	Rabies virus	Virus	46 (22.8%) of the brain samples tested were positive for rabies	Medium	[212]

	Spill-Over from Apparently Healthy Dogs to Wildlife in Bauchi State, Nigeria			62.5%, female= 37.5%						
2014	Assessment of Risk of Possible Exposure to Rabies among Processors and Consumers of Dog Meat in Zaria and Kafanchan, Kaduna State, Nigeria	Kaduna state	Cross-sectional study	154 brain samples from slaughtered dogs (74 from Zaria and 80 from Kafanchan)	Not provided	Direct fluorescent antibody test	Rabies virus	Virus	6 (3.9%) Zaria= 4 (5.4%) Kafanchan = 2(2.5%)	Good	[33]
2013	First detection and molecular characterization of *Ehrlichia canis* from dogs in Nigeria	Plateau state	not indicated	100 dog blood samples	Not provided	PCR and sequence analysis	*Ehrlichia canis*	Parasite	11 positive in nested PCR for *E. canis*.	Medium	[213]
2013	Molecular detection and characterization of tick-borne pathogens in dogs and ticks from Nigeria.	Plateau, Kaduna, Kwara, and Rivers states	not indicated	Blood and ticks collected from 181 dogs (males= 66 (36.5%), females= 102 (56.4%). No infor-	0–6 months, 32%; 7–12 months, 30.9%; 13–24 months, 19.9%; 25–36	PCR and sequencing	Tick-borne Pathogens	Parasite	*Rhipicephalus sanguineus*, *Rhipicephalus turanicus* and *Heamaphysalis leachi* Blood= DNA of *Hepatozoon canis* (41.4%), *Ehrlichia canis* (12.7%), *Rickettsia* spp. (8.8%), *Babesia* rossi (6.6%), *Anaplasma platys* (6.6%), *Babesia vogeli* (0.6 In ticks= . DNA of *E. canis*	Medium	[214]

				mation on sex was available for 13 (7.2%)).	months , 3.9%; .36 months , 5%, while no information on age was available for 15 (8.3%) dogs.			(23.7%), *H. canis* (21.1%), *Rickettsia* spp. (10.5%), *Candidatus Neoehrlichia mikurensis* (5.3%) and A.platys (1.9%) Co- infections =37% Co-infected with 3 pathogens= 1 dog DNA of R*ickettsia conorii israelensis* = 1 dog and *Rhipicephalus sanguineus* tick. DNA of human pathogen, Candidatus N. mikurensis = *Rhipicephalus sanguineus* and *Heamaphysalis leachi* ticks, first description of *Candidatus* N. *mikurensis* in Africa. The *Theileria* sp. DNA detected in a local dog had 98% sequence identity to *Theileria ovis* from sheep.		
2013	Prevalence of *Babesia canis* and *Hepatozoon canis* in Zaria, Nigeria	Kaduna state	not indicated	Blood samples collected from 150 dogs. Males= 84 (56%), females= 66 (44%)	>1 year and <1 year	Giemsa stained thin blood smear/ microscopically	*Babesia canis* and *Hepatozoon canis*	Parasite	Overall= 26(17.3%): B. canis= 10(38.5%) and H. canis= 12(46.2%) Mixed infection= 4(15.4%) All infected dogs = tick vector *Rhipicephalus sanguineus*	Medium	[215]
2013	Prevalence of zoonotic gastrointestinal helminth in dogs and knowledge of risk of infection by dog	Oyo state	Random sampling	Fecal samples from 104 (61 males, 43 females)	0-6 months ,6-2 months , 1-3 years, 3-6 years, >6years	saturated salt solution method	Zoonotic Gastrointestinal parasites	Parasite	Overall= 26 (25%) *Ancylostoma caninum*= 16.35%, *Toxocara canis*= 3.85% and mixed = 4.81% Rural= 73.1% Urban= 26.9%	Good	[216]

	owners in Ibadan, Nigeria									
2013	Detection of rabies antigen in the saliva and brains of apparently healthy dogs human consumption and its public health implications in Abia state, Nigeria.	Abia state	Convenient random sampling	100 samples each of saliva and brain (males= 36%, females= 64 %)	Not provided	Saliva= Rapid immune-chromatographic test (RICT) while Brain samples= direct fluorescent antibody test (DFAT)	Rabies virus	Virus	5% tested positive for rabies antigen with the use of both tests;	Good	[131]
2013	Prevalence of intestinal helminths of dog (*canis familaris*) in some new layouts of Sokoto metropolis	Sokoto state	Not indicated	150 feacal samples (72 males, 78 females)	<6 months, 6mn-1 yr, 1-2 yrs, >2 yrs	floatation technique	Helminth	Parasite	Overall= 128 *Ancylostoma* sp (48.4%), *Dipylidium caninum* (27.3%), *Echinococcus/Teania* (3.9%), *Toxoscaris* (1.6%), *Diphylobothrium latum* (0.8%).	Medium	[131]
2013	Rabies in a Vaccinated 9-Month-Old German Shepherd Dog, Akure, 2010: A Case Report	Ondo state	Case report	brain specimen from 1 German shepherd; female	9 months	Fluorescent antibody technique (seller's method)	Rabies	Virus	positive FAT confirms rabies	Good	[217]
2013	Detection of rabies antigen in the brain tissues of apparently	Cross river state	Cross sectional studies	177 brain stem samples from slaughter (males;	1-24 months, >24 months	Fluorescent antibody technique	Rabies	Virus	6(3.39%) were positive for rabies antigen	Good	[218]

	healthy dogs slaughtered in Ogo-ja-Cross Riv-er State, Ni-geria.			98(55.4%), females; 76 (96.2%)							
2013	Antimicrobi-al resistance of Gram-negati ve aerobic bacteria iso-lates from the faeces of diarrhoeic and non-diarrhoe ic dogs in Abeokuta, Nigeria	Ogun state	Not in-dicated	diarrhoeic dogs (31), non-diarrh oeic dogs (63)	Not pro-vided	Kirby-Bauer disk diffu-sion method	Resistant Gram-nega tive aerobic bacteria	Bac-teria	Overall= 33 isolates diarrhoeic dogs = *E. coli* (12), *Citrobacter* spp. (3), *Proteus* spp. (3), *Klebsiella* spp. (9) and *Morganella morganii* (6)). Non-diarrhoeic dogs= *E. coli* (44), *Citrobacter* spp. (5), *Proteus* spp. (9), *Klebsiella* spp. (14), *Morganella mor-ganii* (1), *Burkholderia* spp. (3), *Actinobacillus* spp. (2), *Aeromonas* spp. (2), *Yersinia* spp. (2), *Enterobacter* spp. (5), *Haffinia* spp. (1) and *Serratia* spp. (6)	Medium	[219]
2012	Molecular identification of *Cordylobia anthropophaga* Blanchard (Diptera: Calliphori-dae) larvae collected from dogs (*Canis famil-iaris*) in Jos South, Plat-eau State, Nigeria.	Plateau state	Not in-dicated	Myia-sis-causing larvae were extracted from dogs	Dif-ferent stages of lar-vae (N = 200) picked from dermal layer of the skin of 50 dogs	PCR/ clon-ing/sequenci ng	*Cordylobia anthro-pophaga* Blanchard (Diptera: Calliphor-idae)	Para-site	All larvae were confirmed as *Cordylobia anthropophaga Blanchard* (Diptera: Calli-phoridae)	Medium	[220]
2012	Prevalence of	Sokoto	not indi-	Faecal	NA	Concentra-	Intestinal	Para-	Overall= 29 (72.5%:	Medium	[221]

	intestinal parasites of dogs slaughtered at Mami market area, Sokoto, Nigeria	state	cated	samples of 40 different local dogs		tion techniques; sedimentation (formal-ether) and floatation (sucrose)	parasites	site	Nematodes= *Ancylostoma* spp, *Uncinaria* spp, *Trichostrongylus* spp,*Toxocara* spp, *Gongylonema pulchrum*, *Trichuris vulpis*,*Graphidium strigosum* and *Toxascaris leonina*. Cestodes = *Diphylidium caninum*, *Diphyllobotrium latum*, *Taenia* spp and *Diphylidium caninum*. Trematodes = *Nanophytus salmincola*. Protozoa= *Giardia* spp, *Isospora belli*		
2012	Prevalence of ecto-, endo- and haemoparasites in slaughtered dogs in Maiduguri, Nigeria	Borno state	cross sectional study	543 samples from 181 randomly selected dogs (118 males and 63 females). Blood samples/picked out ecto and endo parasites/fecal samples	107 were adults whereas 74 were young dogs.	Giemsa stain/ light microscope/McMaster technique	ecto-, endo- and haemoparasites	Parasite	Slaughtered dogs= 47.0% (Ectoparasites) , 13.8% (intestinal helminths); 5.5% (haemoparasites.) Coinfections = 10.5%. Ectoparasites = *Rhipicephalus sanguineus* (24.3%) , *Boophilus* spp. (13.3%) and *Amblyomma* spp. (9.4%), Endoparasites= Toxocara canis (5.0%), *Dipylidium caninum* (2.8%) and *Ancylostoma caninum* (6.1%) and blood parasites= *Ehrlichia canis* and *Babesia canis*	Good	[222]
2012	Pathogenic bacteria associated with cutaneous canine myiasis due to *Cordylobia anthropophaga*	Plateau state	not indicated	133 myiasis wound swabs and *Cordylobia anthropophaga* larvae were collected from infested dogs	1 to 100 weeks	Microscopic, cultural and biochemical methods.	Pathogenic bacteria	Bacteria	*S. aureus* 75 (56.4%), *Streptococcus* spp. 16 (12%) and *E. coli* 7 (5.3%). Others = *Staphylococcus epidermidis* and *Corynebacteria* spps. Pure bacteria isolates = 94.7% (126), while mixed infection= 5.3% (7).	Medium	[223]]

2012	Molecular identification of tick-borne pathogens in Nigerian ticks	Plateau and Nassarawa states	NA	A total of 218 tick samples, *Amblyomma variegatum* (N = 153), *Rhipicephalus* (*Boophilus*) *decoloratus* (N = 45), and *Rhipicephalus sanguineus* (N = 20) were sampled.	NA	PCR, cloning and sequencing or reverse line blot techniques	tick-borne pathogens	Parasite	Pathogens identified in ticks = piroplasmids (*Babesia* spp., *Babesia bigemina* and *Babesia divergens*), *Anaplasma marginale* and *Rickettsia africae*. *A. variegatum* = *Piroplasmids*, in *R. decoloratus* =*A. marginale* All ticks= R. africae 33 (15.1%) of total ticks= pathogen DNA, (B. divergens and R. africae)	Medium	[224]
2012	Survey of zoonotic gastrointestinal parasites of dogs (*Canis familiaris*) slaughtered at Zuru area, Kebbi state, Nigeria	Kebbi state	Convenience sampling	52 fecal samples (33 males and 19 females)	Not provided	Zinc sulfate floatation technique/ microscopy	zoonotic gastrointestinal parasites	Parasite	Overall prevalence = 41(78.85%).Nematode= *Uncinaria stenocephala* 21(32.31%), *Ancylostoma* spp. 10(15.38%), *Toxocara canis* 7(10.77%), *Strongyloides* stercoralis 5(7.69%) and *Toxocara leonina* 2(3.07%), Cestode:- *Dipylidium caninum* 5(7.69%), *Taenia* spp. 5(7.69%), Trematode:- *Alaria* spp. 4(6.15%) and Protozoan:- *Isospora* spp. 6(9.23%), ,	Good	[68]
2012	Multi-drug resistant bacteria isolated from dogs presented with otitis externa in a Veterinary Teach-	Oyo state	not indicated	ear swabs from 4 dogs	Not provided	Bacteriological examination/in-vitro antibiotic sensitivity test	Multi-drug resistant bacteria	Bacteria	*Crynebacterium diphtheriae*, *E. coli*, *S. aureus*, *Pseudomonas diminuta* and *Proteus miriabilis* All= multi-drug resistant to 6-11 different combinations of aminoglycosides, flouoroquinolones and cephalosporins group of drugs;	Medium	[225]

	ing Hospital in Nigeria									
2011	Seroprevalence of *Brucella abortus* and *B. canis* in household dogs in southwestern Nigeria: A preliminary report	Lagos and Oyo states	not indicated	366 dogs blood samples (males= 204; females = 162)	Puppy (day old to <6 months = 17); young adult (6 months to <1 year= 65); adults (>1 year= 284)	rose bengal test (RBT) and the rapid slide agglutination (RSA) test	*Brucella abortus* and *B. canis*	Bacteria	Seropositive to B. abortus = 5.46 % (20/366) and B. canis= 0.27 % (1/366). RBT positive= 11 (30.6 %)	Medium	[226]
2011	Prevalence of Avian Origin H5 and H7 Influenza Virus Antibodies in Dogs in Ibadan and Sagamu, Southwestern Nigeria	Oyo and Osun states	not indicated	162 dogs sera (85 exotic breeds and 77 Nigerian village dogs)	between 4 months and 8 years	Heamagglutination inhibition (HI) test	H5 and H7 influenza virus antibodies	Virus	2 (2.6%) of the village dogs were positive for H7 antibodies at a titer of 1:32.	Medium	[227]
2011	Emergence of Zoonotic Myiasis in Vom and Bukuru Metropolis, Jos South LGA, Plateau State, Nigeria	Plateau state	not indicated	6 individuals (3 males and 3 females). 510 dogs examined	1-12months, 2-3 years, >4 years	Microscopy	Zoonotic Myiasis	Parasite	Overall= 47(9.2%) had larvae in their cutaneous tissues. The larvae extracted from humans and dogs were all identified to be of *Cordylobia anthropophaga*	Medium	[86]
2011	Prevalence of	Kaduna	not indi-	Intestines	Adult	Microscop-	Helminth	Para-	Overall= 63	Medium	[228]

	intestinal helminthes of dogs that have been disposed off at non-descript abattoirs in Zaria, Nigeria	state	cated	from seventy (70) dogs (male= 41, female= 29)		ic/macroscopic features	parasites	site	(90.00%)positive Cestodes: Dipylidium caninum= 35 (50.00%), Taenia spp= 20 (28.57%), Nematodes: *Ancylostoma caninum*= 25 (35.71%) and *Toxocara canis*= 4(5.71%). Single infection= 61.40%, Double infection = 27.40% Triple infection= 1.40%.		
2011	Parasitic Causes of anaemia in Dogs in Vom, Nigeria	Plateau state	not indicated	114 blood and 84 fecal samples from dogs	Not provided	Giemsa-stained thin blood smears / simple floatation, using saturated sodium chloride and formol ether concentration methods	Parasites causing Anaemia	Parasite	Overall prevalence = 42% (haemoparasites) and 31% (helminths). *Babesia canis* sensu lato (27%) and *Toxoxcara canis* (12%). Either haemo- or intestinal parasites or both= 37%	Medium	[229]
2011	Dermatophytoses in domesticated animals	Enugu, Anambra, Ebonyi, Abia, Imo, Kogi and Delta states	not indicated	Skin scrapings, hair and scales from 538 animals (55 cows, 40 sheep, 40 pigs, 105 dogs, 77 cats, 130 goats, 25 horses, 18 rabbits, 66 chickens and 22 ducks.)	Not provided	Culture/macro- and micro morphological examination/ rDNA internal transcribed spacer region 2 (ITS 2) sequencing	Dermatophytes	Fungi	Overall= 52 (49.5%) *M. canis*= 39 (75%) *T. mentagrophytes*= 9(17.3%), *M. gypseum*= 3 (5.8%) and *M. persicolor*= 1 (1.9%).	Medium	[230]

2011	Prevalence of antibody against rabies among confined. Free-roaming and stray dogs in a transit city of Nigeria	Kwara state	Stratified randomization	Sera from 190 dogs (106 males and 84 females)	<1, 1-2.9, 3-5.9,6-8.9, ≥9 years	Indirect ELISA	Rabies virus	Virus	Overall= 81 (42.6%). Consisting of 57 confined (49.1%), 23 free-roaming (37.7%) and 1 stray (7.7%),	Good	[231]
2011	Epidemiology of intestinal helminth parasites in stray dogs from markets in south-eastern Nigeria	Enugu and Anambra states	not indicated	413 dog feacal samples	pup (<6 months), sub-adult (6–24months) and adult (>24 months).	Kato–Katz technique.	Intestinal helminth	Parasite	Overall= 217 (52.6%) *Toxocara* spp., *Dipylidium caninum*, *Ancylostoma caninum*, *Taenia* spp. and *Trichuris vulpis*	Medium	[232]
2010	Survey of thermolphilic *Campylobacter* Species In cats and dogs in north-western Nigeria	North-western Nigeria (Sokoto state?)	Random sampling	141 dogs Faecal swabs (104 cats). Males= 87; females= 54	young (≤12 months) and adult (>12 months)	Bacteriological method (culture)	Thermophilic *Campylobacter* speces	Bacteria	Overall= 39 (27.7%) *C upsaliensis*= 74.4% *C jejuni*= 23.1%	Good	[95]
2010	Ticks infestation of domestic dogs (*canis familiaris lupus*) in Uyo, Akwa Ibom state, Nigeria	Akwa ibom	not indicated	Physical examination and picking out from 208 domestic dogs (109 males: 99 females)	from 1 month to 6	Not described	tick infestation	Parasite	Prevalence = 115 (55.3%); *Rhypicephalus sanquineus* (30.8%), *Dermacentor andersoni* (19.2%), *Ixodes scapularis* (16.8%), and *Haemaphysalia leachii* (7.4%). *R. sanquineus* the commonest tick species collected, (531/1150; 46.2%).	Medium	[233]
2010	Serosurvey	Borno	Random	168 dogs	6	Latex	*Toxoplasma*	Para-	Overall= 42 (25%)	Good	[36]

	for *Toxoplasma gondii* in dogs in Maiduguri, Borno State, Nigeria	state	sampling	blood samples (females= 108, males=60)	months - 1 year, >1≤3 years, >3 years	Aagglutination Test (LAT).	*gondii* antibodies	site			
2010	*Babesia canis* and *Babesia rossi* co-infection in an untraveled Nigerian dog	Plateau state	Case report	1 case study	6 months old	PCR and DNA sequencing	*Babesia canis* and *Babesia rossi*	Parasite	co-infection with B.canis and B. rossi	Good	[234]
2010	Studies on dog population in Makurdi, Nigeria (ii): a survey of ectoparasite infestation and its public health implications.	Benue state	not indicated	425 dogs (body brushed and hand-picked parasites)	0-1 year, 2-3, 4-5, 6-7, >8 years	Microscopically	Ectoparasites	Parasite	Total ectoparasites= 379 Ticks = 93.4%, lice= 5.5% and fleas= 1.1%. Ticks= *Rhipicephalus* species (53.5%), *Boophilus* (31.4%) and *Amblyomma* (8.4%). Lice; *Linognathus* spp (5.5%) and Fleas; *Ctenocephalis* spp (1.1%)	Medium	[235]
2010	Prevalence of gastrointestinal parasites in dogs from Umuahia City of Abia state	Abia state	cross sectional design	210 fecal samples from	puppies (≤6 months) and adults (>3 years)	fecal floatation and sedimentation technique	Gastrointestinal parasites	Parasite	*Toxocara canis* (95%); *Uncinaria stenocephala* (95%); *Dipylidium caninum* (90%); *Ancylostoma braziliense* (90%) *Spirocerca lupi* (36%); *Diphyllobothrium latum* (40%); *Troglotrema salmincola* (64%);*Linguatula serrata* (36%) and *Filaroides osleri* (57%).	Good	[236]
2010	Tick infestation of dogs in Makurdi metropolis,	Benue state	Random selection	130 dogs examined	Not provided	stereoscopic observation and standard taxonomic	Ticks	Parasite	Overall= 72 (55.38%) dogs were infested. 533 Nymphs and adult ticks were identified with	Good	[237]

	Benue State-Nigeria					key			distribution as follows: *Rhipicephalus sanguineus*= 429 (80.5%), *Boophilus annulatus* = 78 (14.6%) and *Hyalomma truncatum* = 26 (4.9%).		
2010	Serological Surveillance for Non-Rabies Lyssaviruses among Apparently Healthy Dogs in Zaria, Nigeria	Kaduna state	Convenient sampling	189 sera samples	Not provided	Rapid fluorescent focus inhibition test (RFFIT).	lyssavirus genotypes	Virus	Overall= 6 (3.7%) neutralized the Lagos bat virus, and 2 (1.1%) of these additionally show a neutralizing activity against Mokola virus.	Good	[238]
2010	Prevalence of intestinal protozoan parasites of dogs in Ibadan, south-western Nigeria	Oyo state	not indicated	Fecal samples from 324 dogs	≥ 3 months	Formol-ether concentration method/ modified Ziehl - Neelsen technique/ sodium chloride flotation methods	Protozoan parasites	Parasite	Overall= 189(58.2%) *Entamoeba histolytica*, *Isospora* spp, *Sarcocystis* spp and *Cryptosporidium* spp	Medium	[239]
2009	The prevalence and intensity of gastrointestinal parasites of dogs in Ile-Ife, Nigeria	Osun state	Random sampling	269 dogs faecal samples (male=139, female=130)	0–6,7–12, 13–18,19–24,25–36,37–48,>48 months	modified Kato–Katz procedure/ Microscopy	Gastrointestinal parasites	Parasite	The overall prevalence= 55.0%. Nematodes; *Toxocara canis* (33.8%), *Ancylostoma* sp. (34.6%), *Toxascaris leonina* (3.3 %,), *Trichuris vulpis* (3.7%), and *Uncinaria stenocephala* (0.7%), Cestodes= *Dipylidium caninum* (4.1%) and *Taenia* sp. (1.1%).	Good	[240]
2009	*Salmonella* Typhimuri-	oyo state	not indicated	458 rectal swabs (	Not pro-	Bacteriological analysis	*Salmonella* Typhi-	Bacteria	Overall= 17 (3.7%) All isolates serotyped as *Sal-*	Medium	[241]

	um infection in diarrhoeic and non-diarrhoiec dogs in Ibadan, Nigeria			diarrhoeic =126; and non-diarrhoeic = 332 dogs)	vided		murium		*monella* Typhimurium.		
2009	Intestinal Helminthoses in Dogs in Kaduna Metropolis, Kaduna State, Nigeria	Kaduna state	Cross sectional study	160 gastrointestinal tracts of dogs killed for meat (male= 90, female= 70)	NA	Microscopy	Intestinal Helminthes	Parasite	Overall= 93.8% Cestodes**:** *Dipylidium caninum* (75.0%), *Taenia hydatigena* (43.8%), *Diphyllobothrium latum* (6.3%), Nematodes**;** *Ancylostoma caninum* (6.3%) and *Toxocara canis* (6.3%).	Good	[242]
2009	Berenil- resistant *Trypanosoma brucei brucei* infection in dog in Nsukka area of Enugu State, Nigeria	Enugu state	NA (case report)	1 dog blood sample (female)	13 months	Giemsa-stained thin blood film/haematocrit centrifugation and animal inoculation techniques	*Trypanosoma brucei brucei*	Parasite	*Trypanosoma brucei brucei* which was berenil-resistant	Good	[243]
2009	Seroprevalence of Leptospiral serovars other than Canicola and Icterohaemorrhagiae in dogs in the Southwestern Nigeria	Oyo/Lagos/Kwara states	A prospective serological survey	52 blood/urine dog (male=37, female=15)	12-36 months ,10-30 months , 12-25 months	improved microtechnique for the leptospiral MAT/microscopic sediment examination was done on a dark field microscope	*Leptospira*	Bacteria	Highest Grippotyphosa antibody= 11 (64.7%) Mixed serovars of Grippotyphosa, Bratislava and Pomona = 27 (52.0%)	Good	[244]
2008	Ectoparasites of Domestic Dogs in Some Ijebu	Ogun state	not indicated	202 dogs (males=90, females=112)	Not provided	Not fully described	Ectoparasites	Parasite	Over all= 199(98.5%). *Rhipicephalus sanguineus* = 89.6%, *Haemophysalis leachii* = 78.7%, *Ctenocephalides*	Poor	[245]

	Communities, Southwest Nigeria								*canis* = 13.4% and D*amalina* sp. =1.5%. *R. sanguineus* =abundant species (848/1358,)		
2008	Survey of intestinal helminth parasites of puppies in Ile-Ife,Nigeria	Osun state	NA	50 Puppies (25 males and 25 females)	all <18 weeks	postmortem technique	Helminth parasites	Parasite	Overall= 42 (84%) *Toxocara canis* (80%), *Ancylostoma caninum* (70%), *Dipylidium caninum* (12%) and *Spirocerca lupi* (2%).	Medium	[246]
2008	Epidemiology of intestinal helminth parasites of dogs in Ibadan, Nigeria	Oyo state	not indicated	Fecal samples collected from 959 dogs. (males= 493, and female= 466)	0-6, 7-12, 13-18, 19-24, 25-36, 37-48, >48 months	Modified Kato–Katz technique	Helminth parasites	Parasite	Overall= 237 (24.7%) *Toxocara canis* 9.0%, *Ancylostoma spp*. 17.9%, *Toxascaris leonina* 0.6%, *Trichuris vulpis* 0.5%, *Uncinaria stenocephala* 0.4% and *Dipylidium caninum* 0.2%. Single parasite infections= 85.7% Mixed infections 3.5%.	Medium	[67]
2008	Parasites of importance for human health in Nigerian dogs: high prevalence and limited knowledge of pet owners	Kwara state	Random sampling	ectoparasites screening and feacal samples of 396 dogs (180 (45.5%) males and 216 (54.5%) females)	0–6, 7-11, ≥ 12 months	Kato-Katz technique/light microscopy	parasites with zoonotic potential	Parasite	Overall prevalence = ectoparasites (60.4%), intestinal helminths (68.4%) fleas (*Ctenocephalides canis*, *Pulex irritans*, *Tunga penetrans*), mites (*Demodex canis*, *Otodectes* sp., *Sarcoptes scabiei var. canis*), ticks (*Rhipicephalus sanguineus*, *Ixodes* sp.), and lice (*Trichodectes canis*); *Toxocara canis*, *Ancylostoma* sp., *Trichuris vulpis*, *Dipylidium caninum*, *Taenidae* and *Strongyloides* sp.	Good	[247]
2008	Epidemiological studies of the incidence of	Lagos state	not indicated	Rectal swab from 200 animals (pup-	Puppies	Culture/ Biochemical tests	*Campylobacter* spp	Bacteria	Pig, 2 (7.1%); chicken, 7 (25%); sheep, 2 (7.1%); puppies, 0 (0.0%), and guinea	Medium	[248]

	pathogenic *Campylobacter* spp. amongst animals in Lagos metropolis			pies= 20 among other animals)					fowl, 17 (60.7).	
2008	Presence and pattern of isolation of zoonotic bacteria in oral cavities of dogs in peri-urban areas of Makurdi, Nigeria	Benue state	Random sampling	Oral swabs from 213 local dogs. 80 males and 133 females	1 month and above	Culture/ Biochemical tests	Bacterial pathogens	Bacteria	Overall= 160 (75.1%) Multiple= 153 (95.6%) Total isolates =448 *E. coli*, 110 (51.6%), *Staph. aureus*, 93 (46.0%), *Proteus mirabilis*, 56(26.3), *Enterobacter aerogenes*, 44 (20.7%), *Corynebacterium renale*, 42 (19.7%), *Klebsiella pneumoniae*, 25 (11.7%), *Enterococcus faecalis*, 17 (8.0), *Listeria moncytogenes*, 16 (7.5%), *Pseudomoonas aeruginosa*, 16 (7.5%), *Streptococcus canis*, 13 (6.1%), *Bacillus cereus*, 13 (6.1%), and *Pasteurella multocida*, 3 (1.4%).	Medium	[249]
2007	Environmental surveillance of canine babesiosis as an early alert system on emerging human babesiosis	Anambra state	Random selection	190 dogs (sera). males= 116, females= 74	≤11,12-23,24-35, 36-47, ≥48 months	Microscopy (thick blood films stained with Giemsa solution and thin blood films stained with Leishman stain)	*Babesia canis*	Parasite	All were infested with varying numbers of the dog tick, *Rhipicephalus sanguineus* (*Acari*: *Ixodidae*). Overall prevalence canine babesiosis = 102 (53.7%): Asymptomatic carrier= 55 (53.9%).	Good	[250]
2007	Epidemiological survey of canine babesiosis in Makurdi,	Benue state	not indicated	108 dogs (blood) were screened for Babesia	Not provided	Microscopy	*Babesia canis* and their tck vectors	Parasite	*Babesia canis* = 10.2 % Ticks infestation= 75.9 % *Rhipicephalus*, *Boophilus* and *Amblyomma* species	Medium	[251]

	Nigeria			canis and 208 dogs examined for tick							
2007	Prevalence and intensity of *Toxocara canis* (Werner, 1782) in dogs and its potential public health significance in Ile-Ife, Nigeria	Osun state	not indicated	269 dog faecal samples(male= 139, female= 130)	0–6,7–12, 13–18,19–24,25–36,37–48,>48 months	modified Kato–Katz procedure/ Microscopy	*Toxocara canis*	Parasite	The prevalence = 33.8%.	Medium	[252]
2007	Molecular Survey of *Babesia canis* in Dogs in Nigeria	Not specified	Random sampling	400 blood samples (Male= 169,Female = 227,No data (ND) =4)	0–3, 4–7,≥ 8 years, ND	Nested PCR and sequence analysis	*Babesia canis*	Parasite	Nested PCR = 9 (2.3%). Sequence analysis = 8 (2.0%) as B. canis rossi and the 9th (0.3%) as B. canis vogeli.	Good	[39]
2007	Antibiotic resistance patterns of *Escherichia coli* isolates from human,pet, livestock and poultry living in close contact	Ogun state	not indicated	130 feacal samples in total (out of which 20 were from dogs)	NA	Culture/ Biochemical tests	*Escherichia coli*	Bacteria	40(32.3%) Of all, human (92.3%) and dogs (58.3%) showed resistance to co-trimozaxole. More than 58.3% resistance to other antibiotics	Medium	[253]
2007	Seroprevalence of antibodies to *Toxoplasma gondii* in some food	Oyo and Lagos state	not indicated	820 dogs blood samples (among other food and com-	2-4.5 years	modified agglutination test (MAT)	*Toxoplasma gondii* antibodies	Parasite	Overall= , 35.0 %	Medium	[254]

	and companion animals in the Southwestern Nigeria			panion animal)						
2007	Parasitology and urban livestock farming in Nigeria: Prevalence of ova in faecal and soil samples and animal ectoparasites in Makurdi	Benue state	not indicated	150 soil samples, 180 fecal samples (cattle 41,sheep 45, goats 53, dogs 41), Ectoparasites collected from 221 domestic animals viz; 44 dogs,45 goats, 45 sheep, 44 pigs and 43 cattle	Not provided	Test tube flotation technique/Microscopy/hand-picking and body brushing methods	Parasites	Parasite	Overall= 107 (59.4 %) From dogs; *Toxocara canis* = 23(56.1%), with *Trichuris* spp= 1(2.4%). Ectoparasites = 1908 (Ticks: 32.80 %; lice: 22.43 %; fleas: 22.06%and mites: 22.69 %). Ticks: *Amblyomma* (40.10%), while *Linognathus* (43.90 %), *Ctenocephalides* (97.38 %) and *Sarcoptes* (58.89 %)	Medium	[255]
2007	A case of Craniothoracopagus (*monocephalus thoracopagus tetrabrachius*) in a dog.	Ondo state	Case report	Physical expression of swellings on 3 pigs, 3 dogs	NA	Physical examination	*Cordylobia anthropophaga*	Parasite	Cordylobia larvae = from 2 out of the 3 dogs, a pig and the boy	Medium	[256]
2007	Mokola Virus Antibodies in Humans,Dogs, Cats, Cattle, Sheep, and Goats in	Oyo,Osun, Ogun, Ondo, Ekiti, and Lagos states	not indicated	blood samples from humans (100), dogs (560), cats (25), sheep (500) and	not provided	Enzyme Linked Immunosorbent Assay (ELISA)	Mokola virus	Virus	Positive for Mokola virus antibodies = 59 dogs (10.54%) tested.	Medium	[257]

	Nigeria			goats (500)						
2006	Bacteriological examination of normal upper respiratory tract of puppies with particular reference to staphylococci	oyo state	not indicated	60 dogs deep nasal swabs	not provided	Culture/staining/biochemical characteristics	*Staphylococci*	Bacteria	106 bacterial isolates; coagulase-negative *Staphylococcus epidermidis* =8.5%, *Staph intermedius* = 9.4%, *Bacillus* sp= 9.4%. *Corynebacteriun xerosis* = 4.7%, and *E coli*= 2.8%.	Medium	[258]
2005	Prevalence of Intestinal Helminth Parasites of Dogs in Lagos, Nigeria	Lagos state	not indicated	Fecal samples from 310 dogs (164 males and 146 females)	< 6 months, 6months -2 years, >2 years	test tube floatation method	Intestinal Helminth parasites	Parasite	Strayed-dogs (77.8%), pet dogs (12.0%). Strayed-dogs = *Toxocara canis* (47.6%), *Ancylostoma caninum* (41.9%), *Dipylidium caninum* (37.9%) and *Trichuris vulpis* (20.9%). care-receiving dogs: *Toxocara canis* (5.8%), *Ancylostoma caninum* (3.2%) and *Dipylidium caninum* (2.1%).	Medium	[259]
2004	*Brucella Abortus* agglutinins in dogs in Zaria, Nigeria	Kaduna state	not indicated	200 (males= 99, females= 101)	<1, 1-5, >5 years	Rose Bengal Plate test(RBPT) and Serum Agglutination Test (SAT)	*Brucella abortus*	Bacteria	By RBPT = 43 (21.5%), and by SAT = 15 (7.5%).	Medium	[260]
2004	Aspects of intestinal helminth parasites of dogs in world bank-assisted housing estate, new Owerri, Ni-	Imo state	not indicated	554 faecal specimens (males= =304, females= 250)	0-36, ≥37 months	Direct and concentration methods	Intestinal helminths	Parasite	Overall= 454 (81.9%) Nemaodes (Hookworm= 22.2%, *Strongyloides* sp = 12.9%, *Toxocara canis*= 14.8%, *Trichuris vulpis*= 15.4%) and 2 Cestodes (*Diphylidium caninum* = 15.2% and Taeniid eggs= 19.4% .	Medium	[261]

	geria									
2002	Fungi isolated from skins and pens of healthy animals in Nigeria	Oyo state	not indicated	220 skin scrapings, hair, nail samples and pens'' materials (including cows, sheep, goats, rabbits, pigs and **dogs)**	Not provided	Soil plate technique/microscopy	Fungi	Fungi	Fungi =: *Chrysosporium* spp. which included *C. keratinophilum*, *C. tropicum*, *C. indicum*, *C. queenslandicum*; dermatophytes= *Microsporum gypseum*, *Trichophyton rubrum*, *T. terrestre*, *T. mentagrophytes* and nonkeratinophilic fungi= *Aspergillus* spp., *Penicillium* spp. *Mucor* sp. *Fusarium* spp., *Geotrichum* spp., *Pithomyces* sp. and *Alternaria* sp.	Medium	[262]