Rodent related zoonotic pathogens at the human-animal-environmental interface in Qatar: a systematic review and meta-analysis

Supplementary Table S3: The extracted data from the included articles

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Abbas *et al*., 2014 [1]	Cross-sectional, January 2009 to December 2010	Human: liver and stool of hepatic abscess patient	*Escherichia coli*					67/56	
			Entamoeba histolytica					67/11	
Abdelmaguid *et al*., 2019 [2]	January 2016 to January 2017	Human: CSF of acute meningitis patients	*Escherichia coli*					50/2	
Abu-Madi *et al*., 2016a [3]		Non-human: chicken carcass in the retail market	*Campylobacter jejuni*					400/188	*Campylobacter* contamination is associated with market management systems, especially during preparation, storage, and display.
			Campylobacter coli					400/1	
Abu-Madi *et al*., 2017 [4]	Cross-sectional, 2012-2014	Human: stool of newly arrived immigrants	*Entamoeba histolytica*		89/1	646/87		735/12	
			Giardia duodenalis		89/18	646/105		735/105	
Abu-Madi *et al*., 2011a [5]	Cross-sectional, June 1998 to April 1999	Non-human: stool of *Rattus norvegicus*	*Hymenolepis diminuta*					136/24	Adult rats had an overall higher prevalence than juvenile rats
Abu-Madi *et al*., 2005 [6]	Cross-sectional, February -April 2002 and 2003	Non-human: stool of *Rattus norvegicus*	*Hymenolepis diminuta*					179/64	The prevalence increases with age
Abu-Madi *et al*., 2007 [7]	Cross-sectional, January to October 2005	Non-human: stray cat stool	*Taenia* sp.					824/88	
			Toxascaris leonina					824/6	

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Abu-Madi *et al*., 2008a [8]	Cross-sectional, January-October, 2006	Non-human: stray cat stool	*Taenia taeniaeformis*					488/370	The cestode prevalence is higher among adult cats than youngs.
Abu-Madi *et al*., 2010a [9]	Cross-sectional, 2006-07	Non-human: feral cat stool (n=658)	*Taenia taeniaeformis*					658/485	
			Toxascaris leonina					658/1	
Abu-Madi *et al*., 2011b [10]	Cross-sectional, June-September 2009	Human: stool of residents	*Giardia duodenalis*		424/11	1114/23		1538/34	*Schistosoma* was in long-term resident workers, whereas other parasites were more frequent in newly arrived persons.
			Trichuris trichiura		424/11	1114/43		1538/54	
			Entamoeba histolytica/dispar					1538/12	
			Hymenolepis nana					1538/15	
			Taenia spp.					1538/8	
			Schistosoma spp.					1538/2	
Abu-Madi *et al*., 2016b [11]	Retrospective, 2005-2014	Human: stool of the residents	*Giardia duodenalis*	9357/67	5354/90		4240/42	29286/431	Male had a higher prevalence than females, and the Asian immigrants were more infected with *Giardia* and amoeba than the others and younger than adults.
			Cryptosporidium spp.					29286/15	
			Entamoeba histolytica/dispar	9357/4	5354/15		4240/5	29286/62	
Abu-Madi *et al*., 2016c [12]	Cross-sectional, 2012-2014	Human: stool of the residents	*Trichuris trichiura*		261/2	2225/32		2486/34	Parasite prevalence depends on the immigrants' origin. *Trichuris* and *Giardia* were more prevalent among the Asians than others, whereas other parasites were more among the African immigrants.
			Taenia spp.		261/1	2225/1		2486/2	
			Hymenolepis nana		261/2	2225/8		2486/10	
			Entamoeba histolytica/dispar		261/3	2225/20		2486/23	
			Giardia duodenalis		261/3	2225/56		2486/59	
	Retrospective, 2005-2014	Human: stool of the residents	*Trichuris trichiura*	9357/0	5354/3		4240/0	29286/97	*Schistosoma* spp., and *Taenia* spp. were rare infections. The
			Hymenolepis nana	9357/1	5354/10		4240/5	29286/43	

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Abu-Madi *et al*., 2016d [13]			*Schistosoma* spp.					29286/18	prevalence was seven times higher in males than females.
			Taenia spp.					29286/9	
Abu-Madi *et al*., 2008b [14]	Retrospective, 2005-2007	Human: hospital bases serosurvey	*Toxoplasma gondii*		304/45	511/153	810/280	1625/484	Overall, the prevalence increases with age after >45 years (41%).
Abu-Madi *et al*., 2010b [15]	Longitudinal, 2005-2008	Human: TORCH* patients' blood serum	*Toxoplasma gondii*		309/129	608/182	901/247	1857/572	About 22.9% of the infants were seropositive indicates that toxoplasmosis has congenital transmission; the seroprevalence increases with age.
Abu-Madi *et al*., 2010c [16]	Retrospective, 2005-2008	Human: stool of long-term residents	*Giardia duodenalis*	3310/34	1299/16	3214/34	1385/95	9208/179	Children were more susceptible to *G. duodenalis*.
			Entamoeba histolytica/diapar	3310/4	1299/7	3214/15	1385/1	9208/27	
			Trichuris trichiura	3310/0	1299/1	3214/44	1385/0	9208/45	
			Hymenolepis nana	3310/0	1299/3	3214/5	1385/1	9208/9	
Abu-Madi *et al*., 2013 [17]	Retrospective, 2005 to 2011	Human: stool of long-term residents	*Giardia duodenalis*					18563/316	
			Trichuris trichiura	6413/0	2998/3		2650/0	18563/84	
			Hymenolepis nana	6413/0	2998/8		2650/16	18563/43	
Abu-Madi *et al*., 2008c [18]	Cross-sectional, 2005-2006	Human: stool of food handlers and housemaids	*Trichuris trichiura*		258/12	1479/122		1737/134	Females were more infected than males with these parasites. *Giardia duodenalis* is a synonym of *Giardia lamblia*
			Entamoeba histolytica/dispar		258/2	1479/23		1737/25	
			Giardia duodenalis		258/13	1479/74		1737/87	
Ahmed *et al*., 2016 [19]	Prospective, November 2012 to October 2013	Human: ICU patients' blood, respiratory, urine, and body fluids	*Escherichia coli* (ESBL producing)					629/38	*E. coli* was one of the critical ESBL producing enterobacters isolated from the ICU patients samples.

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Ahmedullah *et al*., 2018 [20]	Retrospective, 2005-2012	Human: blood and stool of adult patients with typhoid fever	*Salmonella enterica* serotype Typhi	-/12		-/326		-/354	Out of the 354 patients, 83.6% were males. Most of the patients (96.9%) traveled to the Indian subcontinent (93%) before they got infected.
Al Alousi *et al*., 2012 [21]	Retrospective, January 2002-December 2008	Human: sputum of pulmonary TB patients	*Mycobacterium tuberculosis*					-/687	A sputum culture can be a sample of choice for acid-fast bacilli detection.
Al-Aani *et al*., 2014 [22]	Retrospective, January 2000 to December 2013	Human	*Echinococcus granulosus*	-/3				-/32	Hydatid disease was confirmed patients mainly were (90.6%) non-Qatari, 25-34 years old, and predominantly (63%) male.
Al Jama, 2012 [23]	Retrospective, January 1998 to December 2007	Human: surgical wound	*Escherichia coli*					107/18	*E. coli* can be a significant cause of infection after lower segment cesarean section
Al Marri *et al*., 2006 [24]	Retrospective, 1993-2000	Human: expatriate who seek Qatari residence	*Mycobacterium tuberculosis*					32134/200	
Al Marri et al., 2000 [25]	Retrospective, 1980-1988	Human: women with breast TB	*Mycobacterium tuberculosis*					300/2	Breast TB cases were more among the young multiparous women.
Al Marri et al., 2002 [26]	Retrospective, January 1992-December 1996	Human: different pediatric TB patients	*Mycobacterium tuberculosis*	-/34				-/66	
Al Marri, 2012 [27]	Retrospective, January-December 1998	Human: pulmonary TB patients	*Mycobacterium tuberculosis*	-/59				-/306	False tuberculin negative results can be a cause to spread TB in Qatar.
Al Soub, *et al*., 2016 [28]	Case report	Human: blood from a senior male American citizen	*Babesia* sp.					-/1	The first human babesiosis case in Qatar.

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Al-Aani *et al*., 2009 [29]	Case report	Human: meningitis	*Salmonella paratyphi*					-/1	The patient was coinfected with *Salmonella* in the meninges along with Hepatitis B
Al-Absi *et al*., 2018 [30]	Cross-sectional, June 2013 to June 2016	Human: routine serosurvey of the blood of donors	Hepatitis E virus					1049/156	Hepatitis E seroprevalence is higher in males than females and 25 to 45 age among the blood donors.
Al-Baker, et al., 2018 [31]	Retrospective, March 2007 to February 2011	Human: uveitis patients	*Mycobacterium tuberculosis*					310/45	
			Toxoplasma sp.					310/16	
Al-Dahshan *et al*., 2019 [32]	Cross-sectional, 2017	Human: stool and blood from pediatric (infant) salmonellosis cases	*Salmonella* (Type B, C, D, and E)	-/15	-/15	-/18		-/89	The identified *Salmonella* were type B 50%, C 14%, D 18%, and E 1%. Formula food can be the source of *Salmonella* infection among infants in Qatar.
Alho *et al*., 2017 [33]	March to July 2016	Non-human: pet dog stool	*Anaplasma platys*					64/1	Among the dogs, 18.8% were positive for at least one parasite, whereas 20.6% (n=7) of cats were positive for at least one parasite. Co-infection with more than one parasite was also detected.
			Babesia gibsoni					64/1	
			Babesia vogeli					64/2	
		Non-human: pet cat stool	*Babesia vogeli*					34/1	
Ali *et al*., 2019 [34]	Case report	Human: tuberculous pancreatitis	*Mycobacterium tuberculosis*					-/1	The first case of pancreatic TB was recorded in an Indian migrant.
Al-Jedah and Robinson, 2002 [35]	Cross-sectional	Mixed fresh fruit Juice from local restaurants	*Escherichia coli*					10/6	The isolated *E. coli* total bacterial counts were above the Gulf countries' standard.

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Al-Khal et al., 2005 [36]	Retrospective, October 2001-2003	Human: garments workers, tuberculin test	*Mycobacterium tuberculosis*			2774/1193		2774/1193	The positive garment workers were mostly Indians (12.9%), Bangladeshi (38%), Nepali (46.6%), Sri Lankan (2%), and Pakistani (0.4%)
Al-Marri, 2001a [37]	Retrospective, 1983-1996	Human: pediatric tuberculosis	*Mycobacterium tuberculosis*					-/144	The annual caseload was 5-10% from 1983 to 1996. The policy of BCG vaccination would be helpful for TB control among children.
Al-Marri, 2001b [38]	Retrospective, January 1996-December 1998	Human: pulmonary TB	*Mycobacterium tuberculosis*	-/65	-/17	-/275	-/35	-/406	
Al-Marri and Kirkpatrick, 1999 [39]	Retrospective, 1983-1996	Human: pediatric tuberculous patients	*Mycobacterium tuberculosis*					-/144	
Al-Mulla *et al*., 2014 [40]	Retrospective, 2004-2011	Human: blood from pediatric hematology/oncology cases	*Escherichia coli*					185/7	
			Salmonella spp.					185/3	
Al-Nesf *et al*., 2019 [41]	Retrospective, January 1997 to December 2007	Human: patient with hemoptysis	*Mycobacterium tuberculosis*					102/5	
Al-Shaer *et al*., 2017 [42]	Retrospective cohort, December 2012-November 2014	Human: sputum from pulmonary TB	*Mycobacterium tuberculosis*					-/148	Tuberculous patients were mainly male (85.8%) and from Asia (87%).

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Al-Shaer *et al*., 2018 [43]	Retrospective cohort, December 2012 to December 2015	Human: sputum from pulmonary TB	*Mycobacterium tuberculosis*					-/103	
Alsoub and Al Alousi, 2001 [44]	Retrospective, January 1992-December 1998	Human: miliary nodules by radiograph	*Mycobacterium tuberculosis*	-/3		-/26		-/32	Miliary TB is prevalent among the Indian origin patients
Al-Thani *et al*., 2013 [45]	Cross-sectional, June 2009-November 2009	Human: stool from acute gastroenteritis patients	*Campylobacter* sp.					288/3	These bacterial infections were associated with viral infections such as norovirus, rotavirus, adenovirus, and astrovirus.
			Escherichia coli					288/6	
			Salmonella sp.					288/23	
Ben Abid and Al Soub, 2018 [46]	Case report	Human: Indian origin resident	*Mycobacterium tuberculosis*					-/1	The woman got tuberculous mastitis, who had a family history of TB
Boughattas *et al*., 2017a [47]	Cross-sectional, March 2015 to March 2016	Human: stool from pediatric diarrheal patients	*Giardia duodenalis*					580/10	Generally, the prevalence was highest among Qatari, older children (5+ years), female children, and during the winter. *G. duodenalis* was highest among Asian children.
			Cryptosporidium parvum					580/85	
			Cryptosporidium hominis					580/5	
			Cryptosporidium meleagridis					580/2	
			Entamoeba histolytica					580/1	
Boughattas *et al*., 2017b [48]		Non-human: feral cats' blood serum	*Toxoplasma gondii*					495/406	Seroprevalence was higher in summer (84.5%) than winter (72.3%).
Boughattas *et al*., 2019 [49]	Cross-sectional survey, 2012–2014	Human: newly arrived immigrants' stool	*Cryptosporidium parvum* *Cryptosporidium hominis* *Cryptosporidium meleagridis*		52/34	787/37		839/38	The positive cases were newly arrived residents. Poor education and pit latrines users (in the country of origin) were significantly highly positive.

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Chang *et al*., 2016 [50]	Repeat cross-sectional, 2011	Human: stool	*Salmonella enterica*					-/69	There is a zoonotic transmission of *S. enterica* between humans and animals in Qatar.
		Non-human: Cattle feces and bedding						-/8	
		Non-human: Camel carcass						-/1	
Derbala *et al*., 2015 [51]	Retrospective, January 2006 to April 2014	Human: Serology	*Schistosoma mansoni*					383/128	Anti-schistosomal antibody was detected among the adults who took treatment for Hepatitis C.
Dousa *et al*., 2019 [52]	Retrospective, January 2011-January 2015	Human: Sputum culture and stain from pulmonary TB patients	*Mycobacterium tuberculosis*					-/134	Persons with diabetes mellitus have an increased risk of getting TB
Dubey *et al*., 2010 [53]		Non-human: Sand cat, wild cat, and big cat (Chittah) tissue and serum	*Toxoplasma gondii*					27/21	
Ehlayel et al., 2013. [54]	Retrospective, 1998-2012	Human: Children with primary immunodeficiency	*Salmonella* spp.					131/16	*Salmonella* recurrent infection is one of the common causes of primary immunodeficiency
El-Nemr *et al*., 2019 [55]	Cross-sectional	Human and Non-human: Fresh product, hand swab, environment, and surface sample from the wholesale market	*Corynebacterium* spp.					105/4	The research showed that these two bacteria could spread from the wholesale market to entire Qatar.
			Escherichia/Shigella/Enterobacter spp.					105/8	
Eltai *et al*., 2020a [56]	Cross-sectional, December 2016 to July 2017	Non-human: sheep feces	*Escherichia coli*					171/144	

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Eltai *et al*., 2018a [57]	Cross-sectional, August 2017-January 2018	Non-human: chicken feces	*Escherichia coli*					172/90	
Eltai *et al*., 2018b [58]	Cross-sectional, February-June 2017	Human: children with lower UTI	*Escherichia coli*					727/201	
Eltai *et al*., 2018c [59]	Cross-sectional, January 2015-December 2016	Human: stool of healthy food handling workers	*Escherichia coli*					78/456	
Eltai *et al*., 2020b [60]	Cross-sectional, August 2017 to January 2018	Human: stool of children with acute gastroenteritis	*Escherichia coli* (EPEC and EAEC)	76/33				175/76	
Farag *et al*., 2016 [61]	Retrospective descriptive, 2004-2012	Human: salmonellosis cases	*Salmonella* spp. (Type B, C1, C2, D, E, and non-classified)	-/94	-/28	-/100	-/47	-/338	
Garcell *et al*., 2014 [62]	Descriptive, August 2012 to May 2013	Human: health care worker	*Mycobacterium tuberculosis*					202/14	No active TB, but latent TB was detected.
Garcell *et al*., 2017 [63]	Longitudinal, January 2013 to December 2015	Human: surgical site infection	*Escherichia coli*					603/13	
Ghunaim *et al*., 2015 [64]	Cross-sectional, 2005-2006	Human: stool of patients with severe diarrhea	*Campylobacter* sp.					26140/497	
			Escherichia coli					26140/732	
			Salmonella sp.					26140/2248	
			Yersinia sp.					26140/732	
Howady *et al*., 2003 [65]	Retrospective, 1992-1998	Human: spinal TB cases	*Mycobacterium tuberculosis*	-/7		-/25	-/3	-/35	
			Campylobacter spp.					126/9	

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Humphrey *et al*., 2016 [66]	Prospective, 2015-2016	Human: stool of migrant workers with infectious diarrhea	*Escherichia coli*					126/81	
			Salmonella spp.					128/28	
			Giardia duodenalis					128/12	*Giardia duodenalis* is a synonym of *Giardia lamblia*
Humphrey *et al*., 2019 [67]	Retrospective cross-sectional, June 2013 to June 2016	Human: Blood donors serum	Chikungunya virus	200/7	977/13	519/46	296/16	1992/82	
Ibrahim *et al*., 2005a [68]	Retrospective cross-sectional, June 2013 to June 2016	Human: transbronchial biopsy patients	*Mycobacterium tuberculosis*					71/16	
Ibrahim *et al*., 2009 [69]	Prospective observational, July 2005 to June 2006	Human: serology of Hepatitis cases of Nepali immigrants	Hepatitis E virus					-/86	Hepatitis E is an imported disease in Qatar.
Ibrahim *et al*., 2005b [70]	Retrospective, January 1996 to December 2002	Human: pulmonary TB	*Mycobacterium tuberculosis*					39/13	Younger people are particularly affected with pleural TB.
Ibrahim *et al*., 2016 [71]	Cross-sectional, December 2015 to January 2017 .	Human: pulmonary TB	*Mycobacterium tuberculosis*	-/5		-/79	-/21	-/100	
Imam *et al*., 2015 [72]	Retrospective, January 2006 to December 2012	Human: tuberculous meningitis	*Mycobacterium tuberculosis*	-/2		-/67	-/8	-/80	Tuberculous meningitis is an imported disease. The majority of the tuberculous meningitis patients were originated from the Indian subcontinent, such as Nepal, India, Bangladesh, Pakistan, Sri Lanka.

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Khan *et al*., 2010 [73]	Prospective from July 2007 to June 2008	Human: patients with bacteremia	*Escherichia coli* (ESBL and Non-ESBL)					452/97	
			Salmonella enterica serotype Typhi					452/39	
			Salmonella spp.					452/13	
Khan *et al*., 2012 [74]	Retrospective observational, 2005-2009	Human: peritoneal TB	*Mycobacterium tuberculosis*					54/45	
Khan *et al*., 2013a [75]	A hospital-based retrospective, January 2006-December 2011	Human: adult patient with arthritis	*Escherichia coli*					171/6	
			Mycobacterium tuberculosis					171/3	
Khan *et al*., 2013b [76]	Observational, perspective and case-control; June 2009 – May 2010	Human: pleural TB	*Mycobacterium tuberculosis*					103/72	
Khan *et al*., 2017a [77]	Retrospective, January 2009 to December 2013	Human: meningitis	*Escherichia coli*					110/4	
			Salmonella group B					-/3	
			Listeria monocytogenes					-/1	
Khan, 2017b [78]	Prospective descriptive, January 2004 - January 2005	Human: tuberculous adenitis	*Mycobacterium tuberculosis*	-/5		-/15		-/35	
Minisha *et al*., 2020 [79]	Retrospective, June 2012 to March 2013	Human: UTI of pregnant women	*Escherichia coli*					1588/65	
Mobayedh *et al*., 2002 [80]	Retrospective, July 1997-June 2000	Human: pulmonary TB	*Mycobacterium tuberculosis*					193/58	

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Mohammed *et al*., 2015 [81]	Cross-sectional	Non-human: Sheep, cattle and camel feces; cattle and camel milk; Cattle udder; sheep, cattle, camel and chicken carcass; Cattle bedding; feed and water trough; chicken abattoir	*Campylobacter coli* *Campylobacter jejuni*					1158/1101	
			Escherichia coli (O157: H7, O26, O45, O103, and O111, STEC)					1158/465	
Nahman and Hammoude, 2003 [82]	Retrospective January 1996 to December 2002	Human: synovial fluid	*Salmonella* sp.					24/1	
Nasrallah *et al*., 2017 [83]	Cross-sectional June 2013 to June 2016	Human: routine serology of blood of the donors	Hepatitis E virus	1138/133	1138/458	1002/207	1851/319	5854/1263	
Oude Munnink et al., 2020 [84]	Case report	Human	Rabies virus					2	The human cases were imported from Nepal, whereas the animal cases were native Qatari cases
		Fox						1	
		Camel						1	
Royal *et al*., 2013 [85]	Cross-sectional 2005	Human: Serology among US army personnel	*Coxiella burnetii*					304/26	
Shigidi *et al*., 2010 [86]	January 2003 to December 2007	Human: peritonitis cases	*Escherichia coli*					241/2	
			Mycobacterium tuberculosis					241/2	

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Szmiegielski *et al*., 1998 [87]	Retrospective, 1987-1995	Human: abdominal TB	*Mycobacterium tuberculosis*					78/59	
Thandassery *et al*., 2014 [88]	Case report	Human: case reports of enteric fever	*Salmonella enterica* serotype Typhi			-/3		-/3	All three cases were imported from Nepal
Thomas *et al*., 2017 [89]	Retrospective, 2008-2015	Human: pleural effusion cases	*Mycobacterium tuberculosis*					401/344	
Thomas, and AlGherbawe, 2014 [90]	Case report	Human: acute myeloid leukemia with pulmonary TB	*Mycobacterium tuberculosis*					-/1	
Uwaydah *et al*., 1991 [91]	Retrospective, 1 October 1989 to 30 September 1990	Human: *Salmonella* bacteremia	*Salmonella enterica* Serotype Typhi	-/3		-/25	-/1	-/100	
Weam *et al*., 2016 [92]	Retrospective, August 2009 to December 2012	Human: stool of gastroenteritis cases	*Campylobacter coli* *Campylobacter fetus* *Campylobacter jejuni* *Campylobacter laridis* *Campylobacter upsaliensis*					423/106	
			Escherichia coli (EPEC 2, EPEC 3, and EPEC 4)					423/208	
			Salmonella spp. (Type B, CI, C2, and D)					423/109	
Zaqout *et al*., 2019 [93]	Case report	Human: Cerebral schistosomiasis	*Schistosoma mansoni*					-/3	All three cases were imported from the Philipines

Authors and References	Study type and period	Study subjects	Pathogens name	Sample details (Total sample/Total positive)					Additional information
				Qatari	African	South-East Asian	West Asian	Grand Total	
Zowawi *et al*., 2014 [94]	Cross-sectional July 2011-January 2013	Human sample	*Escherichia coli* OXA-48					-/16	

* The authors considered Bangladesh, India, and Sri Lanka from West Asia. We considered these countries as part of South Asia.

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