

## Supplementary Material

### Prevalence of free-living amoebas in swimming pools and recreational waters, a systematic review and meta-analysis

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**Table S1** Percentage of positive samples for each free-living amoebae genus

References	Country	Sample source (total)	Analyzed samples	Positive samples	Method	Identity	Positive samples
Scaglia et al. 1983	Italy	Thermal swimming pools and mud basin spa	30	7	Morphology, fluorescent-antibody technique	<i>Naegleria australiensis</i>	7
Scaglia et al. 1987	Italy	Thermal baths and mud-basins (34)	51	34	Morphology and pathogenicity test	<i>Naegleria</i> spp.	7
Scaglia et al. 1987	Italy	Thermal baths and mud-basins (34)	51	34	Morphology and pathogenicity test	<i>Acanthamoeba</i> spp.	6
Scaglia et al. 1987	Italy	Thermal baths and mud-basins (34)	51	34	Morphology and pathogenicity test	<i>Vahlkampfia</i> spp.	39
Scaglia et al. 1987	Italy	Thermal baths and mud-basins (34)	51	34	Morphology and pathogenicity test	<i>Hartmannella</i> spp	28
Hamadto et al. 1993	Egypt	Swimming pool (16)	16	12	Morphology and pathogenicity	<i>Naegleria</i> spp.	12
Hamadto et al. 1993	Egypt	Swimming pool (16)	16	4	Morphology and pathogenicity	<i>Acanthamoeba</i> spp.	4
Penas-Ares et al. 1994	Spain	Thermal spa water (12)	12	8	Morphology	<i>Vahlkampfia longicauda</i>	1
Penas-Ares et al. 1994	Spain	Thermal spa water (12)	12	8	Morphology	<i>Vahlkampfia salina</i>	1
Penas-Ares et al. 1994	Spain	Thermal spa water (12)	12	8	Morphology	<i>Vahlkampia baltica</i>	1
Penas-Ares et al. 1994	Spain	Thermal spa water (12)	12	8	Morphology	<i>Vahlkampfia</i> sp.	2
Penas-Ares et al. 1994	Spain	Thermal spa water (12)	12	8	Morphology	<i>Acanthamoeba polyphaga</i>	2
Penas-Ares et al. 1994	Spain	Thermal spa water (12)	12	8	Morphology	<i>Acanthamoeba lenticulata</i>	1
Penas-Ares et al. 1994	Spain	Thermal spa water (12)	12	8	Morphology	<i>Naegleria</i> spp.	2
Penas-Ares et al. 1994	Spain	Thermal spa water (12)	12	8	Morphology	<i>Lingulamoeba</i> spp.	1
Penas-Ares et al. 1994	Spain	Thermal spa water (12)	12	8	Morphology	<i>Flabellula</i> spp.	1
Penas-Ares et al. 1994	Spain	Thermal spa water (12)	12	8	Morphology	<i>Paramoeba aesturina</i>	1
Izumiyama et al. 2003	Japan	Whirlpool baths and hot spring spa (251)	549	197	Morphology and PCR	<i>Naegleria fowleri</i> , <i>Naegleria lovaniensis</i> and <i>Naegleria australiensis</i>	
Munoz et al. 2003	Chile	Swimming pool	8	5	Morphology and PCR	<i>Hartmanella vermiformes</i> , <i>Vanella</i> spp, <i>Naegleria</i> spp. and <i>Acanthamoeba</i> spp.	
Sheehan et al. 2003	USA	Hot Springs (22)	22	12	Morphology and PCR	<i>Naegleria australiensis</i>	5
Sheehan et al. 2003	USA	Hot Springs (22)	22	12	Morphology and PCR	<i>Naegleria dobsoni</i>	2
Sheehan et al. 2003	USA	Hot Springs (22)	22	12	Morphology and PCR	<i>Naegleria americana</i>	2
Sheehan et al. 2003	USA	Hot Springs (22)	22	12	Morphology and PCR	<i>Naegleria pagei</i>	1
Sheehan et al. 2003	USA	Hot Springs (22)	22	12	Morphology and PCR	<i>Naegleria polaris</i>	1
Sheehan et al. 2003	USA	Hot Springs (22)	22	12	Morphology and PCR	<i>Naegleria fultoni</i>	1

2003					PCR		
Tsvetkova et al. 2004	Bulgaria	Outdoor swimming pools (6)	7	6	Morphology and PCR	<i>Acanthamoeba</i> spp. and <i>Hartmannella</i> spp.	
Tsvetkova et al. 2004	Bulgaria	Indoor swimming pools (19)	24	9	Morphology and PCR	<i>Acanthamoeba</i> spp. and <i>Hartmannella</i> spp.	
Sukthana et al. 2005	Thailand	Hot spring	57	15	Morphology	<i>Naegleria</i> spp.	15
Sukthana et al. 2005	Thailand	Hot spring	57	9	Morphology	<i>Acanthamoeba</i> spp.	9
Rezaeian et al. 2008	Iran	Swimming pool	2	2	Morphology	<i>Acanthamoeba</i> spp.	2
Caumo et al. 2009	Brazil	Swimming pools	65	13	Morphology and PCR	<i>Acanthamoeba</i> spp.	13
Gianinazzi et al. 2009	Switzerland	Indoor hot swimming pools	1	1	Morphology and PCR	<i>Acanthamoeba lenticulata</i>	1
Hsu et al. 2009	Taiwan	Recreational hot springs	55	9	PCR	<i>Acanthamoeba griffin</i>	7
Hsu et al. 2009	Taiwan	Recreational hot springs	55	9	PCR	<i>Acanthamoeba jacobsi</i>	2
Hsu et al. 2009a	Taiwan	Mud recreation area water	34	20	Morphology and PCR	<i>Acanthamoeba</i> spp.	3
Hsu et al. 2009a	Taiwan	Mud recreation area water	34	20	Morphology and PCR	<i>Hartmannella</i> spp.	12
Hsu et al. 2009a	Taiwan	Mud recreation area water	34	20	Morphology and PCR	<i>Naegleria</i> spp.	5
Gianinazzi et al. 2010	Sweden	Hot springs (4)	31	9	Morphology and PCR	<i>Acanthamoeba healyi</i>	5
Gianinazzi et al. 2010	Sweden	Hot springs (4)	31	9	Morphology and PCR	<i>Stenoamoeba</i> sp.	1
Gianinazzi et al. 2010	Sweden	Hot springs (4)	31	9	Morphology and PCR	<i>Hartmannella vermiformis</i>	1
Gianinazzi et al. 2010	Sweden	Hot springs (4)	31	9	Morphology and PCR	<i>Echinamoeba exundans</i>	2
Huang and Hsu 2010	Taiwan	Hot springs and waste water in recreation areas	52	11	PCR	<i>Acanthamoeba</i> T1	1
Huang and Hsu 2010	Taiwan	Hot springs and waste water in recreation areas	52	11	PCR	<i>Acanthamoeba</i> T2	1
Huang and Hsu 2010	Taiwan	Hot springs and waste water in recreation areas	52	11	PCR	<i>Acanthamoeba</i> T3	1
Huang and Hsu 2010	Taiwan	Hot springs and waste water in recreation areas	52	11	PCR	<i>Acanthamoeba</i> T4	1
Huang and Hsu 2010	Taiwan	Hot springs and waste water in recreation areas	52	11	PCR	<i>Acanthamoeba</i> T5	2
Huang and Hsu, 2010	Taiwan	Hot springs and waste water in recreation areas	52	11	PCR	<i>Acanthamoeba</i> T6	3
Huang and Hsu, 2010	Taiwan	Hot springs and waste water in recreation areas	52	11	PCR	<i>Acanthamoeba</i> T15	4
Huang and Hsu, 2010a	Taiwan	Hot springs and hot spring facilities	106	15	Morphology and PCR	<i>Naegleria lovaniensis</i>	6
Huang and Hsu, 2010a	Taiwan	Hot springs and hot spring facilities	106	15	Morphology and PCR	<i>Naegleria australiensis</i>	5
Huang and Hsu, 2010a	Taiwan	Hot springs and hot spring facilities	106	15	Morphology and PCR	<i>Naegleria clarki</i>	2
Huang and Hsu, 2010a	Taiwan	Hot springs and hot spring facilities	106	15	Morphology and PCR	<i>Naegleria americana</i>	1
Huang and Hsu, 2010a	Taiwan	Hot springs and hot spring facilities	106	15	Morphology and PCR	<i>Naegleria pagei</i>	1

Lares-Villa et al. 2010	Mexico	Natural Recreational water (2)	24	24	PCR	Thermophilic amoebae	24
Lares-Villa et al. 2010	Mexico	Natural Recreational water (2)	24	24	PCR	<i>Naegleria</i> spp.	14
Lares-Villa et al. 2010	Mexico	Natural Recreational water (2)	24	24	PCR	<i>Naegleria fowleri</i>	6
Badirzadeh et al. 2011	Iran	Recreational hot springs	28	12	Morphology and PCR	<i>Vahlkampfiia</i> spp.	11
Huang and Hsu, 2011	Taiwan	Recreational waters	107	19	PCR	<i>Naegleria</i> spp.	19
Ithoi et al. 2011	Malaysia	Recreational pools, lakes and streams	33	33	Morphology and PCR	<i>Naegleria</i> spp.	33
Nazar et al. 2011	Iran	Water in recreation areas	50	16	Morphology and PCR	<i>Acanthamoeba</i> T4	14
Nazar et al. 2011	Iran	Water in recreation areas	50	16	Morphology and PCR	<i>Acanthamoeba</i> T5	2
Alves et al. 2012	Brazil	Public swimming pools (7)	7	7	Morphology and PCR	<i>Acanthamoeba</i> spp.	7
Kao et al. 2012	Taiwan	Recreation and drinking water sources (2)	211	13	PCR	<i>Naegleria philippinensis</i>	3
Kao et al. 2012	Taiwan	Recreation and drinking water sources (2)	211	13	PCR	<i>Naegleria clarki</i>	2
Kao et al. 2012	Taiwan	Recreation and drinking water sources (2)	211	13	PCR	<i>Naegleria galica</i>	2
Kao et al. 2012	Taiwan	Recreation and drinking water sources (2)	211	13	PCR	<i>Naegleria americana</i>	2
Kao et al. 2012	Taiwan	Recreation and drinking water sources (2)	211	13	PCR	<i>Naegleria australiensis</i>	1
Kao et al. 2012	Taiwan	Recreation and drinking water sources (2)	211	13	PCR	<i>Naegleria dobsoni</i>	1
Kao et al. 2012	Taiwan	Recreation and drinking water sources (2)	211	13	PCR	<i>Naegleria gruberi</i>	1
Kao et al. 2012	Taiwan	Recreation and drinking water sources (2)	211	13	PCR	<i>Naegleria schusteri</i>	1
Kao et al. 2012a	Taiwan	Recreational hot springs (4)	60	9	Morphology and PCR	<i>Acanthamoeba</i> T15	4
Kao et al. 2012a	Taiwan	Recreational hot springs (4)	60	9	Morphology and PCR	<i>Acanthamoeba</i> T4	3
Kao et al. 2012a	Taiwan	Recreational hot springs (4)	60	9	Morphology and PCR	<i>Acanthamoeba</i> T2	1
Kao et al. 2012a	Taiwan	Recreational hot springs (4)	60	9	Morphology and PCR	<i>Acanthamoeba</i> spp.	1
Kao et al. 2012b	Taiwan	Hot springs	60	26	Morphology and PCR	<i>Naegleria australiensis</i>	20
Kao et al. 2012b	Taiwan	Hot springs	60	26	Morphology and PCR	<i>Naegleria lovaniensis</i>	4
Kao et al. 2012b	Taiwan	Hot springs	60	26	Morphology and PCR	<i>Naegleria mexicana</i>	1
Kao et al. 2012b	Taiwan	Hot springs	60	26	Morphology and PCR	<i>Naegleria gruberi</i>	1
Nazar et al. 2012	Iran	Recreational waters (22)	50	8	Morphology and PCR	<i>Hartmannella vermiformis</i>	6
Nazar et al. 2012	Iran	Recreational waters (22)	50	8	Morphology and PCR	<i>Vannella persistens</i>	2
Niyyati et al. 2012	Iran	River recreation areas (10)	55	15	Morphology and PCR	<i>Acanthamoeba</i> T4	12
Niyyati et al. 2012	Iran	River recreation areas (10)	55	15	Morphology and PCR	<i>Naegleria pagei</i>	1
Niyyati et al. 2012	Iran	River recreation areas	55	15	Morphology and PCR	<i>Naegleria fultoni</i>	1

		(10)			PCR		
Niyyati et al. 2012	Iran	River recreation areas (10)	55	15	Morphology and PCR	<i>Naegleria clarki</i>	1
Rahdar et al. 2012	Iran	Swimming pool (4)	4	2	Morphology and PCR	<i>Acanthamoeba</i> T4	2
Solgi et al. 2012	Iran	Hot springs	30	8	Morphology and PCR	<i>Hartmannella vermiformis</i>	5
Solgi et al. 2012	Iran	Hot springs	30	8	Morphology and PCR	<i>Naegleria carteri</i>	1
Solgi et al. 2012	Iran	Hot springs	30	8	Morphology and PCR	<i>Naegleria</i> spp	2
Solgi et al. 2012a	Iran	Therapeutic hot springs	60	12	Morphology and PCR	<i>Acanthamoeba</i> T4	2
Solgi et al. 2012a	Iran	Therapeutic hot springs	60	12	Morphology and PCR	<i>Acanthamoeba</i> T3	10
Kao et al. 2013	China	Thermal spring water	48	4	PCR	<i>Naegleria</i> spp.	4
Moussa et al. 2013	France	Recreational geothermal waters (6)	73	35	PCR	<i>Naegleria fowleri</i>	28
Moussa et al. 2013	France	Recreational geothermal waters (6)	73	35	PCR	<i>Naegleria lovaniensis</i>	7
Tung et al. 2013	Taiwan	Hot spring (1)	25	13	Morphology and PCR	<i>Naegleria australiensis</i>	6
Tung et al. 2013	Taiwan	Hot spring (1)	25	13	Morphology and PCR	<i>Naegleria lovaniensis</i>	1
Tung et al. 2013	Taiwan	Hot spring (1)	25	13	Morphology and PCR	<i>Naegleria fowleri</i>	1
Tung et al. 2013	Taiwan	Hot spring (1)	25	13	Morphology and PCR	<i>Acanthamoeba jacobsi</i>	5
Al-Herrawy et al. 2014	Egypt	Swimming pools (10)	120	59	Morphology and PCR	<i>Acanthamoeba</i> spp.	59
Ji et al. 2014	Taiwan	Hot springs	61	29	Morphology and PCR	<i>Acanthamoeba</i> spp.	29
Ji et al. 2014	Taiwan	Hot springs	61	17	Morphology and PCR	<i>Naegleria</i> spp.	17
Ji et al. 2014	Taiwan	Hot springs	61	11	Morphology and PCR	<i>Vermamoeba vermiformis</i>	11
Kao et al. 2013a	China	Thermal spring	48	5	PCR	<i>Acanthamoeba</i> spp.	5
Kiss et al. 2014	Hungary	Swimming pools (20)	164	68	Morphology and PCR	<i>Acanthamoeba</i> spp.	68
Onichandran et al. 2014	Philippines	Recreational rivers (4)	10	4	Morphology and PCR	<i>Acanthamoeba</i> spp.	3
Onichandran et al. 2014	Philippines	Recreational rivers (4)	10	4	Morphology and PCR	<i>Naegleria</i> spp.	1
Onichandran et al. 2014	Philippines	Swimming pool (3)	3	2	Morphology and PCR	<i>Acanthamoeba</i> spp.	2
Onichandran et al. 2014	Philippines	Recreational pond (2)	4	2	Morphology and PCR	<i>Acanthamoeba</i> spp.	2
Onichandran et al. 2014	Philippines	Recreational natural lakes	6	4	Morphology and PCR	<i>Acanthamoeba</i> spp.	2
Onichandran et al. 2014	Philippines	Recreational natural lakes	6	4	Morphology and PCR	<i>Naegleria</i> spp.	2
Sifuentes et al. 2014	USA	Recreational water (33)	103	18	PCR	Thermophilic amoebas	20
Sifuentes et al. 2014	USA	Recreational water (33)	103	18	PCR	<i>Naegleria fowleri</i>	14
Behniafar et al. 2015	Iran	Recreational water (Cold and hot springs, and river)	40	7	Morphology and PCR	<i>Acanthamoeba</i> spp.	7
Evyapan et al. 2015	Turkey	Swimming pools and hot springs	50	21	Morphology and PCR	<i>Acanthamoeba griffini</i>	1

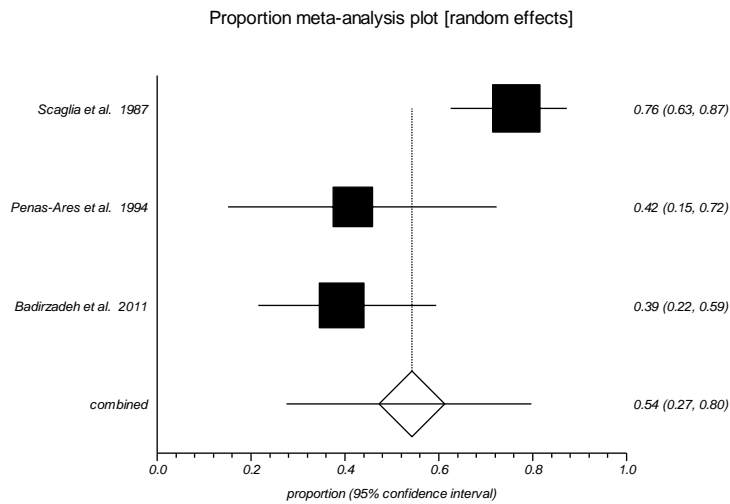
Evyapan et al. 2015	Turkey	Swimming pools and hot springs	50	21	Morphology and PCR	<i>Acanthamoeba castellanii</i>	19
Evyapan et al. 2015	Turkey	Swimming pools and hot springs	50	21	Morphology and PCR	<i>Acanthamoeba jacobsi</i>	1
Niyyati et al. 2015	Iran	Recreational water (lakes, pools and streams)	60	9	Morphology and PCR	<i>Naegleria australiensis</i>	7
Niyyati et al. 2015	Iran	Recreational water (lakes, pools and streams)	60	9	Morphology and PCR	<i>Naegleria pagei</i>	2
Niyyati et al. 2015a	Iran	Recreational waters	50	15	Morphology and PCR	<i>Acanthamoeba castellanii</i>	15
Todd et al. 2015	Jamaica	Recreational waters	83	42	Morphology and PCR	<i>Acanthamoeba</i> T4	20
Todd et al. 2015	Jamaica	Recreational waters	83	42	Morphology and PCR	<i>Acanthamoeba</i> T5	4
Todd et al. 2015	Jamaica	Recreational waters	83	42	Morphology and PCR	<i>Acanthamoeba</i> T10	1
Todd et al. 2015	Jamaica	Recreational waters	83	42	Morphology and PCR	<i>Acanthamoeba</i> T11	2
Al-Herrawy et al. 2016	Egypt	Swimming pools (1)	48	30	Morphology and PCR	<i>Acanthamoeba</i> spp.	29
Al-Herrawy et al. 2016	Egypt	Swimming pools (1)	48	30	Morphology and PCR	<i>Naegleria</i> spp.	7
Al-Herrawy et al. 2016	Egypt	Swimming pools (1)	48	30	Morphology and PCR	<i>Hartmannella</i> spp.	8
Armand et al. 2016	Iran	Swimming pool	17	12	Morphology and PCR	<i>Vermamoeba</i> spp.	10
Armand et al. 2016	Iran	Swimming pool	17	12	Morphology and PCR	<i>Acanthamoeba</i> T4	5
Armand et al. 2016	Iran	Swimming pool	17	12	Morphology and PCR	<i>Acanthamoeba lenticulata</i>	2
Azlan et al. 2016	Malaysia	Recreational lake	7	7	Morphology	<i>Acanthamoeba</i> spp.	7
Fabres et al. 2016	Brazil	Hot tubs and thermal pools	72	20	Morphology and PCR	<i>Acanthamoeba</i> T3	1
Fabres et al. 2016	Brazil	Hot tubs and thermal pools	72	20	Morphology and PCR	<i>Acanthamoeba</i> T4	2
Fabres et al. 2016	Brazil	Hot tubs and thermal pools	72	20	Morphology and PCR	<i>Acanthamoeba</i> T5	1
Fabres et al. 2016	Brazil	Hot tubs and thermal pools	72	20	Morphology and PCR	<i>Acanthamoeba</i> T15	4
Latifi et al. 2016	Iran	Hot springs	66	2	Morphology and PCR	<i>Balamuthia mandrillaris</i>	2
Niyyati et al. 2016	Iran	Recreational and therapeutic geothermal water sources	40	20	PCR	<i>Acanthamoeba</i> T2	1
Niyyati et al. 2016	Iran	Recreational and therapeutic geothermal water sources	40	20	PCR	<i>Acanthamoeba</i> T4	19
Al-Herrawy et al. 2017	Egypt	Swimming pool (2)	144	37	Morphology and PCR	<i>Acanthamoeba</i> spp.	32
Al-Herrawy et al. 2017	Egypt	Swimming pool (2)	144	37	Morphology and PCR	<i>Naegleria</i> spp.	10
Di Filippo et al. 2017	Italy	Geothermal springs	36	26	Morphology and PCR	<i>Naegleria australiensis</i>	18
Di Filippo et al. 2017	Italy	Geothermal springs	36	26	Morphology and PCR	<i>Naegleria itálica</i>	2
Di Filippo et al. 2017	Italy	Geothermal springs	36	26	Morphology and PCR	<i>Naegleria lovaniensis</i>	5
Di Filippo et al. 2017	Italy	Geothermal springs	36	26	Morphology and PCR	<i>Naegleria</i> spp.	1

Javanmard et al. 2017	Iran	Public swimming, natural pool and hot springs	33	6	Morphology and PCR	<i>Naegleria pagei</i>	1
Javanmard et al. 2017	Iran	Public swimming, natural pool and hot springs	33	6	Morphology and PCR	<i>Vermamoeba vermiformis</i>	3
Javanmard et al. 2017	Iran	Public swimming, natural pool and hot springs	33	6	Morphology and PCR	<i>Naegleria gruberi</i>	2
Latifi et al. 2017	Iran	Recreation hot springs	22	12	Morphology and PCR	<i>Naegleria australiensis</i>	5
Latifi et al. 2017	Iran	Recreation hot springs	22	12	Morphology and PCR	<i>Naegleria americana</i>	2
Latifi et al. 2017	Iran	Recreation hot springs	22	12	Morphology and PCR	<i>Naegleria dobsoni</i>	2
Latifi et al. 2017	Iran	Recreation hot springs	22	12	Morphology and PCR	<i>Naegleria pagei</i>	1
Latifi et al. 2017	Iran	Recreation hot springs	22	12	Morphology and PCR	<i>Naegleria polaris</i>	1
Latifi et al. 2017	Iran	Recreation hot springs	22	12	Morphology and PCR	<i>Naegleria fultoni</i>	1
Reyes-Batlle et al. 2017	Spain	Recreational waters (10)	10	1	Morphology and PCR	<i>Naegleria</i> spp.	1
Toula and Elahl 2017	Saudi Arabia	Swimming pool (6)	16	6	Morphology	<i>Acanthamoeba</i> spp.	4
Toula and Elahl 2017	Saudi Arabia	Swimming pool (6)	16	6	Morphology	<i>Naegleria</i> spp.	2
Dodangeh et al. 2018	Iran	Recreational hot springs	24	11	Morphology and PCR	<i>Acanthamoeba castellanii</i>	11
Ghaderifar et al. 2018	Iran	Parks pond water (13)	90	31	Morphology and PCR	<i>Acanthamoeba</i> T4	31
Hikal et al. 2018	Egypt	Swimming pool (5)	100	79	Morphology and PCR	<i>Naegleria</i> spp.	56
Hikal et al. 2018	Egypt	Swimming pool (5)	100	24	Morphology and PCR	<i>Naegleria fowleri</i>	24
Lares-Jiménez et al. 2018	Mexico	Hot springs (1)	8	8	Morphology and PCR	<i>Naegleria lovaniensis</i>	7
Lares-Jiménez et al. 2018	Mexico	Hot springs (1)	8	8	Morphology and PCR	<i>Acanthamoeba jacobsi</i>	3
Lares-Jiménez et al. 2018	Mexico	Hot springs (1)	8	8	Morphology and PCR	<i>Stenamoeba</i> spp.	2
Lares-Jiménez et al. 2018	Mexico	Hot springs (1)	8	8	Morphology and PCR	<i>Vermamoeba vermiformis</i>	1
Poor et al. 2018	Iran	Swimming pools and hot tubs (10)	40	8	Morphology and PCR	<i>Acanthamoeba</i> T3	2
Poor et al. 2018	Iran	Swimming pools and hot tubs (10)	40	8	Morphology and PCR	<i>Acanthamoeba</i> T4	6
Xue et al. 2018	USA	lake recreation areas (10)	160	56	PCR	<i>Naegleria fowleri</i>	56
Gabriel et al. 2019	Malaysia	Recreational places	57	40	Morphology and PCR	<i>Acanthamoeba</i> spp.	40
Gabriel et al. 2019	Malaysia	Recreational places	57	40	Morphology and PCR	<i>Naegleria</i> spp.	38
Haddad et al. 2019	Iran	Hot springs	54	15	Morphology and PCR	<i>Acanthamoeba castellanii</i>	12
Haddad et al. 2019	Iran	Hot springs	54	15	Morphology and PCR	<i>Vermamoeba vermiformis</i>	4
Haddad et al. 2019	Iran	Hot springs	54	15	Morphology and PCR	<i>Naegleria australiensis</i>	2
Haddad et al. 2019	Iran	Hot springs	54	15	Morphology and PCR	<i>Naegleria pageii</i>	2
Haddad et al. 2019	Iran	Hot springs	54	15	Morphology and PCR	<i>Naegleria gruberi</i>	1

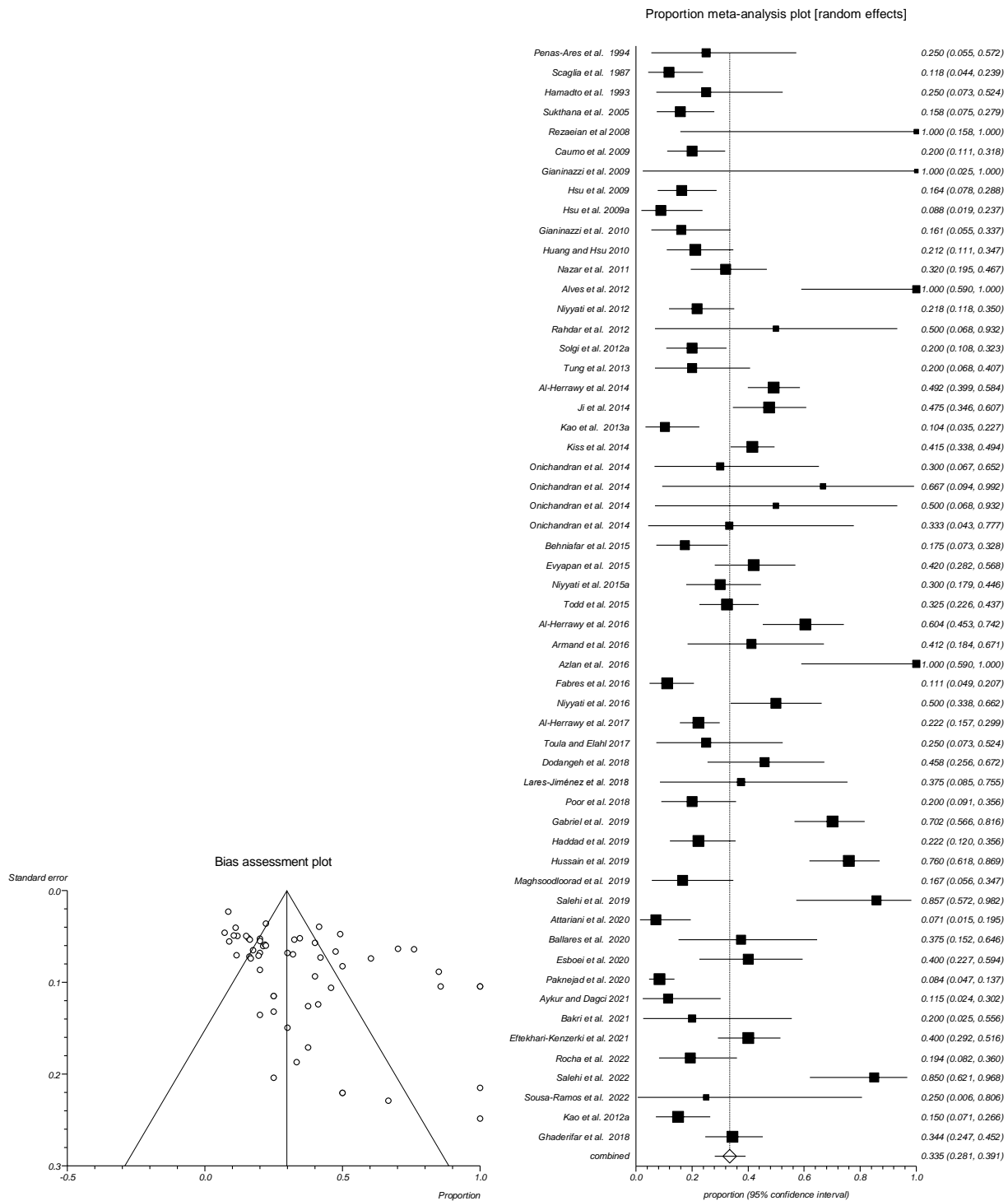
Hussain et al. 2019	Malaysia	Recreational hot springs (5)	50	38	Morphology and PCR	<i>Acanthamoeba</i> T3	2
Hussain et al. 2019	Malaysia	Recreational hot springs (5)	50	38	Morphology and PCR	<i>Acanthamoeba</i> T4	24
Hussain et al. 2019	Malaysia	Recreational hot springs (5)	50	38	Morphology and PCR	<i>Acanthamoeba</i> T5	1
Hussain et al. 2019	Malaysia	Recreational hot springs (5)	50	38	Morphology and PCR	<i>Acanthamoeba</i> T11	1
Hussain et al. 2019	Malaysia	Recreational hot springs (5)	50	38	Morphology and PCR	<i>Acanthamoeba</i> T15	9
Hussain et al. 2019	Malaysia	Recreational hot springs (5)	50	38	Morphology and PCR	<i>Acanthamoeba</i> T17	1
Maghsoodloorad et al. 2019	Iran	Recreational park water	30	8	Morphology and PCR	<i>Acanthamoeba</i> spp. T4	4
Maghsoodloorad et al. 2019	Iran	Recreational park water	30	8	Morphology and PCR	<i>Acanthamoeba</i> spp. T15	1
Salehi et al. 2019	Iran	Park pools and Swimming pool	14	12	Morphology and PCR	<i>Acanthamoeba</i> spp.	12
Attariani et al. 2020	Iran	Swimming pools	42	3	Morphology and PCR	<i>Acanthamoeba</i> spp.	3
Ballares et al. 2020	Philippines	Recreational waters (6)	16	6	Morphology and PCR	<i>Acanthamoeba</i> T4	2
Ballares et al. 2020	Philippines	Recreational waters (6)	16	6	Morphology and PCR	<i>Acanthamoeba</i> T5	2
Ballares et al. 2020	Philippines	Recreational waters (6)	16	6	Morphology and PCR	<i>Acanthamoeba</i> T9	2
Bonilla-Lemus et al. 2020	Mexico	Recreational waters (9)	9	9	Morphology and PCR	<i>Naegleria australiensis</i>	3
Bonilla-Lemus et al. 2020	Mexico	Recreational waters (9)	9	9	Morphology and PCR	<i>Naegleria gruberi</i>	2
Bonilla-Lemus et al. 2020	Mexico	Recreational waters (9)	9	9	Morphology and PCR	<i>Naegleria fowleri</i>	2
Bonilla-Lemus et al. 2020	Mexico	Recreational waters (9)	9	9	Morphology and PCR	<i>Naegleria clarki</i>	2
Bonilla-Lemus et al. 2020	Mexico	Recreational waters (9)	9	9	Morphology and PCR	<i>Naegleria pagei</i>	2
El-Badry et al. 2020	Egypt	Swimming pool (7)	28	0	Morphology and PCR		
Esboei et al. 2020	Iran	Swimming pools	30	12	Morphology and PCR	<i>Acanthamoeba</i> T4	4
Paknejad et al. 2020	Iran	Water from swimming pools and bathtubs	166	31	Morphology and PCR	<i>Acanthamoeba</i> T3	8
Paknejad et al. 2020	Iran	Water from swimming pools and bathtubs	166	31	Morphology and PCR	<i>Acanthamoeba</i> T4	3
Paknejad et al. 2020	Iran	Water from swimming pools and bathtubs	166	31	Morphology and PCR	<i>Acanthamoeba</i> T11	1
Paknejad et al. 2020	Iran	Water from swimming pools and bathtubs	166	31	Morphology and PCR	<i>Protacanthamoeba bohemica</i>	6
Paknejad et al. 2020	Iran	Water from swimming pools and bathtubs	166	31	Morphology and PCR	<i>Naegleria lovaniensis</i>	2
Zeybek and Türkmen 2020	Turkey	Swimming pool	25	7	Morphology and FISH		
Aykur and Dagci 2021	Turkey	Swimming pools	26	3	PCR	<i>Acanthamoeba</i> T2	1
Aykur and Dagci 2021	Turkey	Swimming pools	26	3	PCR	<i>Acanthamoeba</i> T4	1
Aykur and Dagci 2021	Turkey	Swimming pools	26	3	PCR	<i>Acanthamoeba</i> T5	1
Bakri et al. 2021	Saudi	Swimming pool	10	4	Morphology and	<i>Acanthamoeba</i> spp.	2



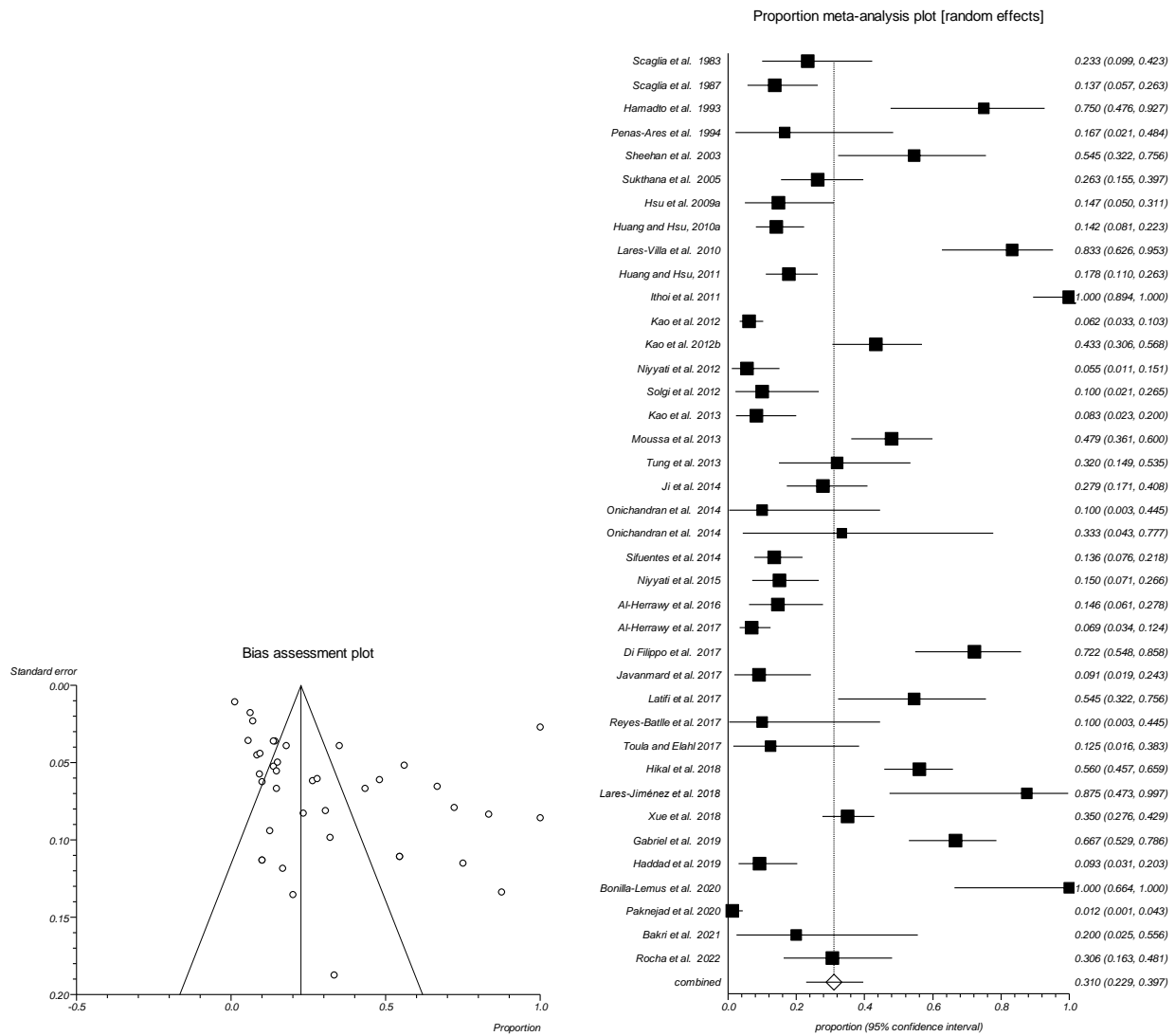
	Arabia				PCR		
Bakri et al. 2021	Saudi Arabia	Swimming pool	10	4	Morphology and PCR	<i>Naegleria</i> spp.	2
Eftekhari-Kenzerki et al. 2021	Iran	Indoor public swimming pools (20)	80	32	Morphology and PCR	<i>Acanthamoeba</i> spp.	32
Nageeb et al. 2022	Egypt	swimming pool (2)	8	0	Morphology, PCR		
Rocha et al. 2022	Brazil	Swimming pool (9)	36	15	Morphology	<i>Acanthamoeba</i> spp.	7
Rocha et al. 2022	Brazil	Swimming pool (9)	36	15	Morphology	<i>Naegleria</i> spp.	11
Salehi et al. 2022	Iran	Swimming pools and Park pools	20	17	Morphology and PCR	<i>Acanthamoeba</i> spp.	17
Sousa-Ramos et al. 2022	Cape Verde	Recreational fountain and Swimming pool	4	2	Morphology and PCR	<i>Acanthamoeba</i> spp. T4	1
Sousa-Ramos et al. 2022	Cape Verde	Recreational fountain and Swimming pool	4	2	Morphology and PCR	<i>Vannella</i> spp.	1



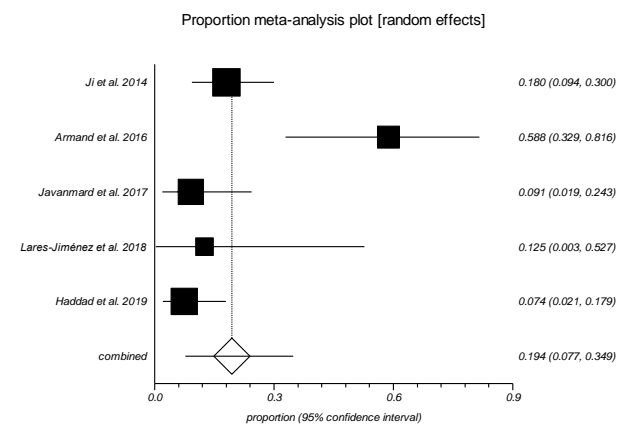
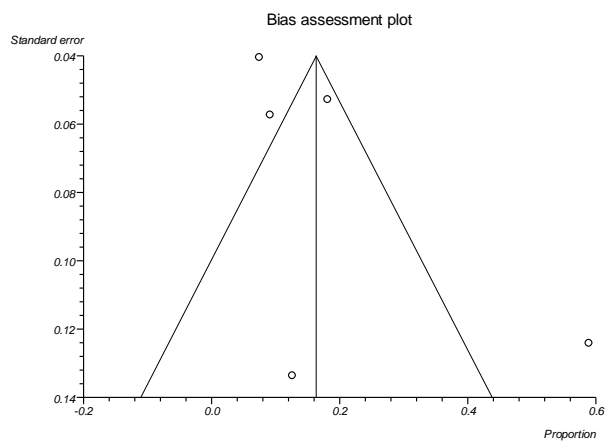
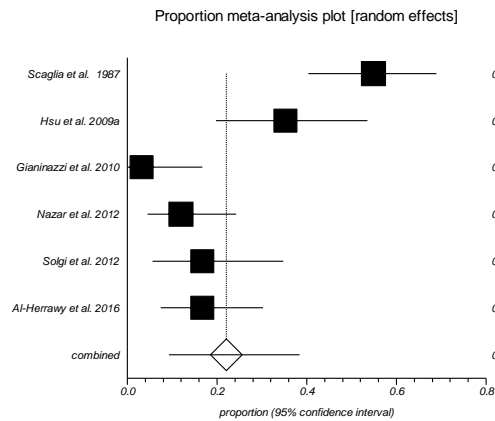
**Fig. S1** Results of Egger's regression test and the forest plot of the worldwide prevalence of *Vahlkampfia* spp.



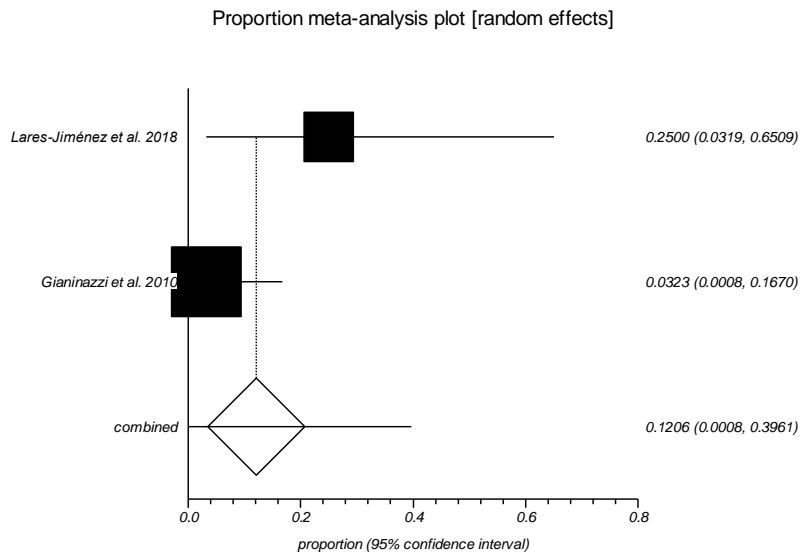
**Fig. S2** Results of Egger's regression test and the forest plot of the worldwide prevalence of *Acanthamoeba* spp.



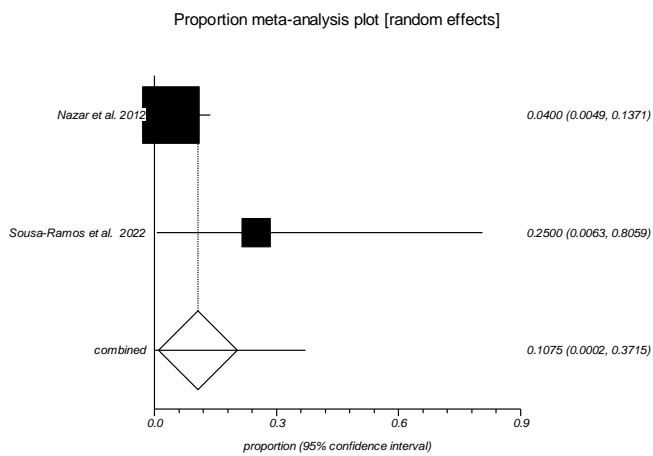
**Fig. S3** Results of Egger's regression test and the forest plot of the worldwide prevalence of *Naegleria* spp.



**Fig. S4** Results of Egger's regression test and the forest plot of the worldwide prevalence of *Hartmannella* spp. / *Vermamoeba* spp.



**Fig. S5** Results of Egger's regression test and the forest plot of the worldwide prevalence of *Stenamoeba* spp.



**Fig. S6** Results of Egger's regression test and the forest plot of the worldwide prevalence of *Vannella* spp.

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