Supplementary Table S1: Zoonotic pathogens associated with pet and feeder rodents identified through the global systematic literature review.

Study area	Species name	Zoonotic pathogen	Pathogen	Publication year	Host	Trade source	Study summary	References
USA	Not specified	*Streptobaccillus moniliformis*	Bacteria	2014	Pet rats	Pet owner	A 10-year-old boy died after being admitted to the hospital. He experienced rigors, fevers, vomiting, headaches, and leg pains. During post-mortem lung, liver, and epiglottis tissue were collected. The tissues tested positive for *S. moniliformis* DNA by PCR. His rat was also tested and its oropharyngeal tissue was positive for *S. moniliformis*.	1
France	Not specified	*S.treptobaccillus moniliformis*	Bacteria	2005	Pet rats	Pet owner	A child owning pet rats developed an eruptive fever with blisters, polyarthritis, and spectacular desquamation of the hands. *Streptobacillus moniliformis* was identified by culture using a child's blister fluid, while *S moniliformis* from rat was detected by molecular methods using trachea biopsy samples.	2
Germany	Not specified	Cowpox virus	Virus	2019	Pet rats	Pet shop	Two specimens were collected from a 13-year old boy and his pet rat; the boy presented with local skin lesions and his rat died with severe pulmonary symptoms. The virus was detected using molecular analysis	3
Germany	*Rattus norvegicus*	Cowpox virus	Virus	2009	Pet rats	Pet shop	Cowpox virus was confirmed from 6 cases using molecular and serological findings. The cases had direct contact with pet rats.	4
Germany	*Rattus norvegicus*	Cowpox virus	Virus	2009	Pet rats	Pet shop	Five human cases of the cowpox virus were reported. The cases were a result of direct contact with pet rats purchased from a pet shop. Various specimens (skin biopsies, crusts, oral swabs, serum, and whole blood) obtained from 5 patients and from rats were homogenized and inspected for typical OPV-like particles using electron microscopy. The virus was isolated using molecular methods	5
USA	Not specified	*Salmonella enterica*	Bacteria	2015	Feeder mice and rats	Breeding facility	A total of 35 human samples were tested, however, the number of rats and mice tested was not specified. The bacteria were confirmed by CDC and FDA laboratories using serotyping and PFGE subtyping. Thirty-five cases were confirmed, with some cases confirming exposure to pet reptiles and frozen feeder rodents.	6
USA	Not specified	*Streptobaccillus moniliformis*	Bacteria	2003	Pet rats	Pet shop	Two cases of *S. moniliformis* were confirmed from a woman who had previous contact with pet fancy rats in the pet store and at home. Pet shop cases involved biting by a rat on the index finger, while the other case involves direct contact with an ill pet rat. The case's blood samples were used and bacteria were identified using a media culture. The 16S rRNA gene sequence was also used and DNA was extracted from paraffin-embedded, formalin-fixed samples of the liver and kidney.	7
USA	*Not specified*	*Salmonella typhimurium*	Bacteria	2005	Feeder mice and rats	Pet shop	In August 2004, a 5-year-old boy had diarrhoea of 14 days duration, abdominal cramps, vomiting, and fever. A stool culture yielded *S. typhimurium*. The boy had physical contact with a pet mouse purchased from a retail pet store. The mouse died one week after purchase. The cultures of the mouse's lungs, pooled liver and spleen, and intestines yielded growth of *S. typhimurium*, with a pulsed-field gel electrophoresis (PFGE) pattern indistinguishable from the boy's isolate.	8

Study area	Species name	Zoonotic pathogen	Pathogen	Publication year	Host	Trade source	Study summary	References
USA	Not specified	*Salmonella enterica*	Bacteria	2012	Feeder mice	Breeding facility	A total of 46 cases were reported in 22 states in the USA from August 29, 2011 to February 2, 2012. The cases had exposure to rodents sold as food for pet reptiles and amphibians	9
USA	Not specified	*Streptobaccillus moniliformis*	Bacteria	1998	Pet rats	Pet owner	*Streptobacillus moniliformis* was detected in the patient's blood cultures. The patient reported being scratched by her pet rat.	10
Netherlands	*Rattus norvegicus*	Seoul virus	Virus	2018	Pet and Feeder rat	Private owners/ pet shops/shelters	Lung tissues of 175 pet and feeder rats collected from private owners, ratteries, and breeders tested using a SEOV real-time RT-qPCR were positive for SEOV: 1/29 rats from private owners (3.6%), 2/56 rats from ratteries (3.4%) and 11/90 rats from commercial breeders (12.2%).	11
Italy	*Mus minutoides* and *Rattus norvegicus*	*Hymenolepis nana*	Parasite	2015	Pet mice and rats	Pet shop	Fresh faecal samples were collected from 172 pet rodents as follows: guinea pigs (*Cavia porcellus*; *n* = 60), squirrels (*Callosciurus finlaysonii*, *C. prevosti*, *Tamias striatus*, *T. sibiricus*, *Sciurus calorinensis*; *n* = 52), hamsters (*Phodopus campbelli*, *Mesocricetus auratus*; *n* = 30), chinchillas (*Chinchilla lanigera*; *n* = 13), rats (*Rattus norvegicus*; *n* = 10), and mice (*Mus minutoides*; *n* = 7). All fecal samples were processed using the FLOTAC pellet technique to assess the number of eggs per gram (EPG) of feces. Eggs of *H. nana* were found in 24 out of 172 (13.9 %; 95% confidence interval = 9.3–20.2 %) pet rodents. Of those rodents, 41.6 % (10/24) were rats (mean EPG = 55.7; range = 2–200), 29.2 % (7/24) mice (mean EPG = 64.5; range = 32–120), 25.0 % (6/24) were chinchillas (mean EPG = 25.5; range = 10–50), and 4.2 % (1/24) hamsters (*P. campbelli)* (EPG = 86.0).	12
Germany	*Mus musculus*	*Helicobacter species*	Bacteria	2011	Pet mice	Pet shop	House mice sold as pets or feed specimens were purchased from different pet shops and tested for a comprehensive panel of unwanted microorganisms. The following microorganisms were found, *Helicobacter* species (92.9%), mouse parvovirus (89.3%), mouse hepatitis virus (82.7%), *Pasteurella pneumotropica* (71.4%,) and *Syphacia* species (57.1 %). For bacteriological and fungal analyses, tissue samples, swabs and intestinal content of each animal were identified by culture on blood samples.	13
Togo	Not specified	*Acinetobacter spp* *Bacteroides* *Clostridium* *Escherichia* *Moraxella spp* *Pseudomonas spp* *Staphylococcus spp* *Stenotrophomonas*	Bacteria	2020	Feeder rats	Farm	Five mice were tested for bacterial prevalence. The bacteria belonging to the genera *Clostridium*, *Escherichia,moraxella*, and *Stenotrophomonas* were confirmed from the oral and rectal samples taken from five mice used to feed ball pythons. Molecular analysis was used to detect the bacterial prevalence.	14
Italy	*Rattus norvegicus*	*Microsporum spp*	Fungi	2014	Pet rats	Vertarinary clinic	A total of 655 medical records of exotic pet mammals were examined between 2011 and 2012. Of these, only 11 records were rats. The fungal zoonotic agent, *Microsporum* spp, was isolated from only one rat sample.	15

Study area	Species name	Zoonotic pathogen	Pathogen	Publication year	Host	Trade source	Study summary	References
UK	Not specified	*Streptobaccillus moniliformis*	Bacteria	2001	Pet rats	Pet shop	A 14-year-old boy was admitted to the hospital. A case of septic arthritis was reported. The boy had been bitten on a finger by the pet rat he bought from a pet shop. *Streptobaccillus moniliformis* was isolated from seropurulent material using special media culture.	16
France	*Rattus norvegicus*	Cowpox virus	Virus	2013	Pet rats	Pet shop	Four human cases of cowpox virus infection were reported in France in 2011. The patients had contact with imported pet rats. Cowpox virus was detected using molecular testing of the patient's ion samples using 14-kDa protein gene–targeting real-time PCR for Orthopoxvirus detection	17
UK	*Rattus norvegicus*	Hantaan virus Seoul hantavirus	Virus	2017	Pet rats	Breeder/private owner	A total of 844 individual blood samples were collected. Of these, 79 samples were from those who had exposure to pet rats. Hantavirus seroprevalence amongst the pet fancy rat owner group was 34.1% (95% CI 23·9–45·7%), and 2·4% (95% CI 0·6–5·9) for those with occupational exposure to pet fancy rats. Blood samples were processed and serum was analysed using a hantavirus-specific IFA.	18
France	Not specified	Cowpox virus	Virus	2011	Pet rats	Pet shop	The case was admitted with an acute inflammatory lesion of the left ear lobe. The swab samples of the left ear lobe were taken and the Cowpox virus was detected using molecular analysis based on PCR. The case reported physical contact with two pet rats purchased from a local pet shop. The rats became sick, with respiratory and haemorrhagic disorders, and died 2 and 6 days later.	19
USA	Not specified	*Escherichia coli*	Bacteria	2019	Pet mice and rats	Pet owner	A total of 65 animals, including mice, rats, rabbits, guinea pigs, and hedgehogs, were screened. Twenty-six *E. coli* isolates were obtained from 24 animals. Twelve of the 26 isolates (46.2%) were PCR-positive for the pks genes clbA and clbQ. Two isolates (7.7 %) were PCR-positive for cnf. Nine *E. coli* isolates were cultured from 36 guinea pigs (25%), Seven *E. coli* isolates were cultured from nine rats (77.8%), one *E. coli* isolate was cultured from 12 rabbits (8.3%), three *E. coli* isolates were cultured from four hamsters (75%), two E. coli isolates were cultured from two mice (100%), and two *E. coli* isolates were cultured from two hedgehogs (100%).	20
USA	Not specified	Seoul virus	Virus	2017	Pet rats	Pet owner	An outbreak of Seoul virus infection was identified among rat breeders and owners in Wisconsin and Illinois, USA in January 2017. The cases were related to exposure to pet rats. Rats owned by one patient were linked to the confirmed Seoul virus of infected pet rats. The virus was detected from blood specimens by immunoglobulin M and immunoglobulin G by enzyme-linked immunosorbent assay and reverse transcription PCR.	21
USA	Not specified	*Leptospira ballum*	Bacteria	1973	Pet mice	Pet shop	The investigation revealed the patient's pet mice as the source of *L. ballum*. It was detected from the case's blood at a dilution of 1:800. The pet mice were killed	22
USA	Not specified	*Salmonella typhimurium*	Bacteria	2008	Feeder mice and rats	Breeding facility	Out of 49 environmental swabs, seven were *Salmonella*-positive and out of 88 frozen feeder rodents, one adult mouse was *Salmonella*-positive. All samples were positive by culture. The pulsed-field gel electrophoresis (PFGE) subtype patterns of S. Typhimurium isolates from feeder rodent and environment samples were not separable from the outbreak strain isolated from humans. A follow-up investigation was conducted on other identified feeder rodent facilities in Texas, USA and out of 100	23

Study area	Species name	Zoonotic pathogen	Pathogen	Publication year	Host	Trade source	Study summary	References
							rodent samples, seven were *Salmonella*-positive in one of the four facilities investigated.	
UK	Not specified	*Leptospira interrogans serogroup icterohaemorrhagiae*	Bacteria	2008	Pet rats	Pet shop	The case developed a 'flu-like' illness, which progressed to hepatorenal failure over a 48-hour period. The illness was confirmed serologically as Weil's disease using an in-house IgM ELISA (positive at 1:320) and the microscopic agglutination test (mat) for IgG and IgM (positive at 1:640). The agent was serogrouped as *L icterohaemorrhagiae*. The case is linked to close contact with pet rats. Blood taken from pet rats was strongly seropositive (1:400 and 1:1600) for *L icterohaemorrhagiae* by mat, and pathogenic leptospiral DNA was subsequently detected by PCR in kidney tissue from one rat.	24
Germany	*Rattus norvegicus*	*Leptospira Interrogans*	Bacteria	2008	Pet rats	Pet owner	Using a combination of bacteriological, serological, histological and molecular methods white fancy pet rats were identified as the potential infection source for acute leptospirosis in a human immunodeficiency virus (HIV)-positive patient.	25
UK	Not specified	*Salmonella typhimurium*	Bacteria	2010	Feeder mice	Internet/breeding facility	Human cases of *S. typhimurium* were associated with ownership or contact with reptiles, and frozen feeder mice. Phage-typing is an established method of detecting outbreaks of salmonellosis. All *S typhimurium* were isolated by Phage-typing method.	26
Japan	*Mus musculus*	*Aspiculuris tetraptera* *Hymenolepis nana* *Syphacia obvelata*	Parasite	2015	Pet mice	Pet shop	A total of 25 mice from 5 pet shops were investigated for 17 viruses, 22 bacteria and fungi, 10 parasites using culture tests, serology, PCR, and microscopy. Of interest, zoonotic pathogens isolated were *A. tetraptera*, *Syphacia obvelata* (8 mice each; 28.5%) and *Hymenolepis nana*, in 7 mice (25%).	27
Canada	Not specified	*Streptobaccillus moniliformis*	Bacteria	2019	Pet rats	Pet owner	A total of 11 cases of RBF were identified. *Streptobaccillus moniliformis* was identified by culture, and molecular analysis targeting the 16S RNA gene. Five cases had been bitten or scratched by pet rats.	28
Slovakia	*Mus musculus* and *Rattus norvegicus*	*Hymenolepis nana*	Parasite	2020	Pet mice and rats	Pet shop	Pooled faecal samples from 119 boxes with 228 mice, 191 rats, 124 hamsters and 25 Mongolian gerbils were collected from 12 pet shops and 3 breeding clubs. *Hymenolepis nana* eggs were detected in 25 (21.0%) boxes. Animals from pet shops were infected more frequently (24.6% positive boxes) than those from breeding clubs (17.2%), without statistical significance. The highest prevalence was recorded in rats from pet shops, where 41.7% of boxes contained parasite eggs. Hamsters and mice in pet shops were also frequently infected; in 23.8% and 25% of boxes, respectively, *H. nana* eggs were observed. Prevalence in rats and hamsters from breeding clubs was lower, but in mice surpassed 40%. Nine samples with positive PCR products in any of the four DNA regions, mitochondrial cox1 and nuclear pmy, ITS1 and ITS2 targets, gave profiles characteristic of *H. nana.*	29

Study area	Species name	Zoonotic pathogen	Pathogen	Publication year	Host	Trade source	Study summary	References
Slovakia	*Mus musculus* and *Rattus norvegicus*	*Aspiculuris tetraptera* *Syphacia muris* *Syphacia obvelata*	Parasite	2020	Pet mice and rats	Pet shop	Four species of oxyurid nematodes, *S. muris*, *S. obvelata*, *A. tetraptera,* and *P. uncinata* were detected. *Aspiculuris tetraptera* was found in the faecal samples of all rodent species included in this survey. The number of positive boxes varied from 5.4% in hamsters to 70.0% in mice. The prevalence of *S. muris* was highest in Mongolian gerbils where up to 75.0% boxes were positive; *S. obvelata* was found in 26.7% of boxes with mice, 25.0% of boxes with Mongolian gerbils and 3.2% of boxes with rats. The high prevalence of *Syphacia* spp. in all animal species points out the infection risk for humans.	30
UK	Not specified	*Salmonella enteritidis*	Bacteria	2018	Feeder mice	Pet shop	Exposure to pet reptiles and feeder mice were the risk factors. About 40% of the cases were aged less than 11 years old.	31
USA and Canada	*Rattus norvegicus*	Seoul virus	Virus	2018	Pet rats	Breeding facility	Human Seoul virus infections were confirmed by detection of Seoul virus-specific immunoglobulin M (IgM) and/or immunoglobulin G (IgG) antibodies by enzyme-linked immunosorbent assay (ELISA). Seoul virus infections in rats were confirmed through detection of viral RNA by reverse transcription–polymerase chain reaction (RT-PCR) and/or IgG ELISA at CDC, or by CDC-validated commercial IgG testing. In the USA, a total of 31 facilities in 11 states with human and/or rat Seoul virus infections reported exchanging rats with Canadian ratteries. The source of human infection was traced to a rattery and mode of transmission was contact.	32
USA	Not specified	Seoul virus	Virus	2020	Pet rats	Private owners	Direct contact with pet rats. A total of 17 people tested positive for SEOV IgM, with seven reporting symptoms and three hospitalized.	33
USA	*Mus musculus* and *Rattus norvegicus*	Lymphocytic choriomeningitis virus (LCMV)	Virus	2014	Feeder mice and rats	Pet shop	Direct contact with feeder mice. Of 97 employees tested, 31 (32%) tested positive for IgM and/or IgG to LCMV, and four employees were diagnosed with aseptic meningitis. Molecular analysis was used	34
USA	Not specified	*Salmonella typhimurium*	Bacteria	2008	Feeder mice and rats	Internet/breeding facility	A total of 21 human *S. typhimurium* isolates with indistinguishable PFGE patterns were identified in the USA. These cases had exposure to pet snakes and feeder rodents	35
Norway	Not specified	*Streptobaccillus moniliformis*	Bacteria	2020	Pet rats	Pet owner	Blood cultures of a previously healthy young woman were tested and came back positive for *S. moniliformis*. The case had contact with several pet rats and was scratched by one the rats that eventually died due to illness.	36
Sweden	Not specified	Seoul hantavirus	Virus	2013	Pet rats	Imported/breeder	During late spring, three rat owners initially brought their pet rats to be tested by the National Veterinary Institute (SVA), and among the three respective rats tested, one was found to be SEOV infected.	37

Study area	Species name	Zoonotic pathogen	Pathogen	Publication year	Host	Trade source	Study summary	References
Netherlands	*Rattus norvegicus*	Seoul virus	Virus	2019	Feeder rats	Breeding facility	A total of 19 adult and 11 juvenile feeder rats were screened for SEOV using rRT-PCR and SEOV RNA. All adult rats were positive for SEOV specific antibodies and viral RNA in their tissues. One juvenile rat was seropositive. In addition, organs of the 19 adult rats were also positive, with SEOV RNA detected in all lungs, followed by kidney (79%) and liver (74%).	38
UK	Not specified	*Salmonella enteritidis*	Bacteria	2018	Feeder mice	Private owners	A total of 295 frozen feeder mice were tested (60 pinkies, 60 fuzzies, 60 small, 60 large, and 55 extra-large). At least 28.8% (*n* = 17) of the 59 batches tested, were *Salmonella enteritidis* PT8 and PT13-positive by media culture.	39
UK	*Rattus norvegicus*	Seoul hantavirus	Virus	2017	Pet rats	Breeder/private owner	A total of 24 rats were screened for hantavirus. Seoul hantavirus (SEOV) RNA was detected in the heart, kidney, lung, salivary gland and spleen of a rat suspected of being the source of SEOV.	40
France	Not specified	*Streptobaccillus moniliformis*	Bacteria	2007	Pet rats	Pet shop	Pet-rat bite fever is a relatively rare disease following a rat bite or scratch. The authors reported a case of septic arthritis following a pet rat bite. *Streptobacillus moniliformis* was identified in the knee synovial fluid and identified by 16S rRNA sequencing. This is a rapid and efficient tool for the identification of fastidious bacterium. The patient was cured by an amoxicillin treatment	41
Belgium and France	*Not specified*	*Leptospira borgpetersenii Serogroup Sejroe* *Leptospira Interrogans* *Leptospira borgpetersenii sg Ballum*	Bacteria	2017	Pet mice and rats	Pet shop	Six human cases of leptospirosis were associated with direct contact with pet mice or rats. *Leptospir*a spp. was identified in the DNA of the kidneys of owners' pet animals, suggesting that the excretion of leptospirosis in urine was the mode of transmission.	42
France	*Rattus norvegicus*	Cowpox virus	Virus	2009	Pet rats	Pet shop	Four human cases of cowpox virus were reported in northern France. The cases were as a result of direct contact with infected pet rats. Biopsy samples were used for molecular diagnosis using PCR targeting the cowpox hemagglutinin gene.	43
Denmark	Not specified	*Leptospira Interrogans*	Bacteria	2019	Pet mice	Pet owner	Upon admission to the hospital, the case presented a 1-week history of fever, headache, myalgia, vomiting, diarrhoea, and dark urine. *Leptospira interrogans* serovar sejroe was detected using microagglutination test. The patient a direct contact with pet mice, and one of the mice had fallen ill with conjunctivitis 1.5 months prior to the onset of the patient's symptoms.	44
Mexico	*Mus musculus* and *Rattus norvegicus*	*Aspiculuris tetraptera* *Hymenolepis nana/ Rodentolepis nana*	Parasite	2017	Pet mice and rats	Pet shop	A total 98 rodents were purchased from six pet shops and one black market: 46 mice, 28 hamsters (*Mesocricetus auratus*), 23 rats and one gerbil (*Meriones unguiculatus*). The overall prevalence of helminths in rodents was 61.2% (60/98). Six species of helminths were identified: *Rodentolepis nana* found in two mice, *Syphacia obvelata* in 36 mice, *Syphacia muris* in four rats and *Aspiculuris tetraptera* in 28 mice.	45

Study area	Species name	Zoonotic pathogen	Pathogen	Publication year	Host	Trade source	Study summary	References
		Syphacia muris *Syphacia obvelata*						
Canada	Not specified	*Salmonella enteritidis*	Bacteria	2022	Feeder mice	Pet shop/breeding facility	Five individuals with *S. enteritidis* infections were identified in the province of British Columbia (BC), Canada. These infections are suspected to have occurred from contact with surfaces at the mice facility contaminated with the bacteria. Isolates were sent to the National Microbiology Laboratory (NML) for WGS which is conducted by extracting genomic DNA from pure culture using the EZ1 DNA tissue kit and EZ1.	46
Thailand	*Mus musculus*	*Salmonella enterica*	Bacteria	2012	Feeder mice	Breeding facility	Pulsed-field gel electrophoresis (PFGE) was used to analyse serovars common to both human beings and snakes or snake and feeds. The prevalence of *Salmonella* spp. was 100.0% in cobras, 91.6% in feeder frozen frogs, and 50.0% in mice. Three of the eight human samples were found positive for *Salmonella* spp	47
USA	*Mus musculus*	*Liponyssoides sanguineus* *Ornithonyssus bacoti*	Parasite	2005	Feeder mice	Pet shop	Fifteen frozen mice were purchased from 15 pet shops and examined for ectoparasites using a microscope. Two species of the zoonotic pathogen were identified, with *L sanguineus* found in one mouse and *O. bacoti* also found in one mouse.	48
France	*Rattus norvegicus*	Seoul virus	Virus	2017	Pet rats	Pet owner	Seoul virus was detected in three patients. Hantavirus was also detected in 434 patients. Hantavirus IgM and IgG were detected in an admission serum sample by using commercial ELISAs. SEOV was detected using, molecular techniques. One of the patient's pet rat was considered the source of the virus. The animal was euthanized after the consent of the patient was obtained. An identical partial SEOV small RNA sequence was obtained from the liver of the animal.	49
USA	*Mus musculus*	*Enterococcus faecium* *Aspiculuris tetraptera* *Hymenolepis nana/ Rodentolepis nana* *Syphacia obvelata*	Bacteria Parasite	2012	Pet mice	Pet shop	The survey investigated the prevalence of ectoparasites and endoparasites, including viral, bacterial, and fungal agents carried mice. A total of 18 pet mice from six pet shops were investigated, Three mice were positive for *E. faecium* by culture, while direct examination of intestines revealed *Syphacia obvelata* in seven mice, *Aspiculuris tetraptera* in one mouse and *R. nana* in nine mice.	50
Germany	Not specified	*Leptospira spp*	Bacteria	2008	Pet rats	Pet shop	The patient fell ill with acute undifferentiated fever after being bitten by a pet rat. A serum sample was examined by a more sensitive MAT and an ELISA, and showed a significant increase for *L. interrogans* serovar. Leptospira DNA was also detected by a novel qPCR from the kidney of the biting pet rat.	51
Norway	Not specified	*Streptobaccillus moniliformis*	Bacteria	1992	Pet rats	Pet owner	*Streptobacillus moniliformis* was detected from the blood cultures of a 5-year old patient. The patient had been playing with her grandmother's pet rats, which had later died from an unknown disease.	52

Study area	Species name	Zoonotic pathogen	Pathogen	Publication year	Host	Trade source	Study summary	References
UK	*Rattus norvegicus*	Seoul orthohantavirus	Virus	2021	Pet rats	Breeder	A woman tested positive for SEOV and direct contact with rats was the main transmission mode.	53
USA	Not specified	*Streptobaccillus moniliformis*	Bacteria	2004	Pet rats	Pet shop	A pet shop employee contracted the disease after a minor finger wound from a contaminated rat cage. The bacteria were identified using a blood culture.	54
USA	Not specified	*Hymenolepis nana* *Syphacia obvelata*	Parasite	1996	Pet mice	Pet shop	A total of 260 mice and 85 hamsters were examined. These rodents were purchased from pet shops, commercial suppliers, and university department stores. The total number of mice from commercial dealers and Syracuse University animal room infected with *H. nana* was 43, *S. obvelata* was 152, and *A. tetraptera* was 61. The total number of mice from pet shops, department stores, classrooms infected with *H. nana* was 58, *S. obvelata* was 31, and *A. tetraptera* was 36.	55
USA	Not specified	*Aspiculuris tetraptera*	Parasite	1996	Pet mice	Pet shop	A total of 260 mice and 85 hamsters were examined. These rodents were purchased from pet shops, commercial suppliers, and university department stores. The total number of mice from commercial dealers and Syracuse University animal room infected with *H. nana* was 43, *S. obvelata* was 152, and *A. tetraptera* was 61. The total number of mice from pet shops, department stores, classrooms, infected with *H. nana* was 58, *S. obvelata* was 31, and *A. tetraptera* was 36.	55
Japan	Not specified	*Streptobaccillus moniliformis*	Bacteria	2017	Pet rats	Pet shop	A pet shop employee who sustained a bite from one of the store's rats developed fever and arthritis. *Streptobacillus moniliformis* was detected from the employee's blood culture.	56
Netherlands	Not specified	Seoul virus	Virus	2018	Feeder rats	Breeding facility	An autochthonous human case of SEOV infection was detected in the Netherlands. This case was exposed to feeder rats and a feeder rat farm. The virus was identified using a hantavirus genus-specific real-time reverse transcription PCR (rRT-PCR) and antibodies in rat serum were detected by using a human SEOV ELISA.	57
USA	Not specified	*Salmonella enterica*	Bacteria	2007	Pet and Feeder rat	Pet shop/breeding facility	*Salmonella enterica* serotype Typhimurium was isolated from 28 patients in whom the onset of illness occurred between December 2003 and September 2004. A total of 22 patients were interviewed. Of these, 13 reported exposures to pet hamsters, mice, or rats, and two had secondary infections. The outbreak strain of *S. enterica* serotype Typhimurium was cultured from pet mice and hamsters purchased from pet stores.	58
UK	*Rattus norvegicus*	Seoul hantavirus	Virus	2013	Pet rats	Pet owner	Seoul hantavirus RNA was detected by RT-PCR1 in blood taken from two pet rats and from seven of the larger group.	59
Germany	Not specified	Cowpox virus	Virus	2012	Pet rats	Pet shop	Eight patients from the Munich area in Germany who had purchased infected pet rats from a local supplier were diagnosed with Cowpox virus infection. The virus was detected using PCR.	60
Canada	Not specified	*Salmonella typhimurium*	Bacteria	2018	Feeder mice and rats	Private owners/ pet shops/breeding facility	A total of 134 cases who had direct contact with feeder rodents and pet reptiles were identified.	61

Study area	Species name	Zoonotic pathogen	Pathogen	Publication year	Host	Trade source	Study summary	References
China	*Rattus norvegicus*	*Enterocytozoon bieneusi*	Parasite	2020	Pet rats	Pet shop	A total of 325 faecal samples were collected from 152 pet fancy rats and 173 pet guinea pigs purchased from pet shops in Henan and Shandong provinces in China. The prevalence of *E bieneusi* was 11.2% (17/152) in pet fancy rats and 20.2% (35/173) in pet guinea pigs. Genotypes D (n = 12), Peru11 (n = 3), S7 (n = 1) and SCC-2 (n = 1) were identified in pet fancy rats, and genotype S7 (n = 30) and a novel genotype PGP (n = 5) were identified in pet guinea pigs. *Enterocytozoon bieneus*i was examined by nested PCR targeting a ~390-bp fragment of the ITS region.	62