Evidence of Rat Hepatitis E Virus Circulation through Wastewater Surveillance, Central Argentina

Florence Abravanel, Clément Castille, Nicolas Marter, Jean Luc Guerin, Sébastien Lhomme, Jacques Izopet

Author affiliations: CHU Toulouse Purpan, INSERM UMR1291, CNRS UMR5051, Université de Toulouse, Toulouse, France (F. Abravanel, S. Lhomme, J. Izopet); ENVT, Université de Toulouse, INRAE, IHAP, Toulouse (C. Castille, J.L. Guerin); Eau de Toulouse Métropole, Toulouse (N. Marter).

DOI: https://doi.org/10.3201/eid3205.260304

To the Editor: A recently published dispatch about rat hepatitis E virus (rHEV) detected high levels of rHEV in wastewater samples from Argentina (67.7%) (*1*). The study authors claimed their findings supported further investigation of the virus in animal reservoirs and humans, with a focus on hepatitis cases of unknown etiology.

rHEV is genetically distinct from conventional human-infecting hepatitis E virus (HEV; *Paslahepevirus balayani*) and is not detected by the PCRs that detect HEV RNA. A recent study in Spain detected an rHEV frequency of 1.4% among patients with hepatitis of unknown etiology (*2*). The rHEV spillover mechanism to humans is unclear.

We analyzed rHEV in wastewater samples from Toulouse, France, where HEV is endemic (HEV IgG seroprevalence 47.8%) (*3*). We collected 49 wastewater samples weekly during 2025 and detected rHEV in all by using a previously published protocol (*4*). However, we could not sequence the genomes because of low viral concentration. During 2023–2025, we tested 484 immunocompetent patients with a positive HEV IgM result by using Liaison (Diasorin, https://us.diasorin.com), to detect HEV IgM in patients with rHEV infection (*5*), and 578 immunocompromised patients living in the same area. We collected the samples at infection onset when the liver enzymes were elevated and AltoStar HEV PCR Kit (Altona Diagnostics, https://altona-diagnostics.com) results were negative. None of the samples were positive for rHEV RNA.

The high detection rate of rHEV in wastewater reflecting high circulation in urban rodents contrasts with the rarity of human cases. This contrast could be linked to low exposure of humans to contaminated sources, low human infection capability of rHEV, or cross protection because of immunity conferred by HEV in Toulouse, where the seroprevalence is higher than in Spain, where rHEV human cases are more frequent (2). Future studies to evaluate rHEV-specific serologic response could be useful.

References

1. Filoni B, Lucero ME, Di Cola G, Fantilli A, Roccia A, Sicilia P, et al. Evidence of rat hepatitis E virus circulation through wastewater surveillance, central Argentina. Emerg Infect Dis. 2026;32:133–6. https://doi.org/10.3201/eid3201.251218
2. Caballero-Gómez J, Casares-Jiménez M, Gallo-Marín M, Pereira-Pardo S, Beato-Benítez A, Poyato A, et al.; GEHEP-014 Study Group. Rat hepatitis E virus as an aetiological agent of acute hepatitis of unknown origin. J Hepatol. 2025;83:662–9. https://doi.org/10.1016/j.jhep.2025.02.027
3. Dimeglio C, El Rakaawi M, Boineau J, De Smet C, Abravanel F, Lhomme S, et al. Increase in HEV IgG seroprevalence during the past years in southern France. J Med Virol. 2025;97:e70483. https://doi.org/10.1002/jmv.70483
4. Parraud D, Lhomme S, Péron JM, Da Silva I, Tavitian S, Kamar N, et al. Rat hepatitis E virus: presence in humans in south-western France? Front Med (Lausanne). 2021;8:726363. https://doi.org/10.3389/fmed.2021.726363
5. Fourgeaud J, Veyrenche N, Laloum I, Jais J-P, Roger C, Rabant M, et al. Occult rat hepatitis E virus infection as a cause of cirrhosis and posttransplant recurrence: insights into the role of metagenomics. Am J Transplant. 2026; S1600-6135(26):00007-9.

Address for correspondence: Florence Abravanel, CHU Toulouse Purpan, 330 Avenue de Grande Bretagne, 31059 Toulouse CEDEX 9, France; email: abravanel.f@chu-toulouse.fr

Evidence Lacking for Endemic Chagas Disease in the United States

Paul T. Cantey, Marisa Hast, Rebecca J. Chancey, Susan P. Mongomery

Author affiliation: Centers for Disease Control and Prevention, Atlanta, Georgia, USA

DOI: https://doi.org/10.3201/eid3205.251840

To the Editor: The Centers for Disease Control and Prevention Parasitic Diseases Branch (National Center for Emerging and Zoonotic Infectious Diseases, Division of Parasitic Diseases and Malaria)

wishes to comment on the Perspective from Beatty et al. (*1*), published last fall. The authors describe infections in the Americas, the presence of multiple vector triatomine insects and *Trypanosoma cruzi* infection in animals in the United States, and the history of locally acquired human cases. Although this article provides supportive information for classifying this pathogen as endemic to the United States, we would like to highlight that human disease caused locally by the pathogen is sporadic, not endemic.

Fewer than 100 locally acquired, vectorborne human *T. cruzi* infections in the country have been documented (*2*). Other documented routes of infection include vertical, transplant-derived, transfusion-derived (before 2007), and occupational exposure-related transmission (*2*,*3*). This number of infections is small compared with the estimated 288,000 persons currently infected in the country (*4*) who acquired the infection elsewhere.

As indicated by the authors, triatomines were identified in the United States in the 1800s and *T. cruzi* was identified in 1916. Data suggest that triatomine species in the United States are primarily sylvatic but occasionally invade homes (*2*). Although high numbers of infected triatomines and mammalian reservoirs have been found in some focal areas, reported human cases do not demonstrate that Chagas disease is emerging in the United States. A combination of triatomine and human factors likely reduces risk. Declaring human Chagas disease endemic could result in universal patient testing that would lead to overtesting of populations with no major risk and the associated costs of false-positive results (for example, healthcare costs, impacts on organ transplantation processes, and unnecessary anxiety for individual patients).

However, continued effort is needed to identify and treat the 288,000 persons with Chagas disease in the United States, including educating healthcare providers to identify high-risk persons and manage the disease. If state partners wish to make Chagas disease nationally notifiable, the Centers for Disease Control and Prevention welcomes the opportunity to work with them to track cases of Chagas disease in the United States. In the meantime, states could voluntarily report Chagas cases using standardized surveillance definitions (https://ndc.services.cdc.gov/case-definitions/chagas).

References

1. Beatty NL, Hamer GL, Moreno-Peniche B, Mayes B, Hamer SA. Chagas disease, an endemic disease in the United States. Emerg Infect Dis. 2025;31:1691–7. https://doi.org/10.3201/eid3109.241700
2. Bern C, Messenger LA, Whitman JD, Maguire JH. Chagas disease in the United States: a public health approach. Clin Microbiol Rev. 2019;33:e00023–19. https://doi.org/10.1128/CMR.00023-19
3. Herwaldt BL. Protozoa and helminths.. In: Wooley DP, Byers KB, editors. Biological safety: practices and principles, 5th edition. Washington: ASM Press; 2017. p. 105–45.
4. Irish A, Whitman JD, Clark EH, Marcus R, Bern C. Updated estimates and mapping for prevalence of Chagas disease among adults, United States. Emerg Infect Dis. 2022;28:1313–20. https://doi.org/10.3201/eid2807.212221

Address for correspondence: Paul T. Cantey, Centers for Disease Control and Prevention, 1600 Clifton Rd NE, Mailstop H16-4, Atlanta, GA 30329-4018, USA; email: gdn9@cdc.gov

Norman L. Beatty, Gabriel L. Hamer, Bernardo Moreno-Peniche, Bonny Mayes, Sarah A. Hamer[1]

Author affiliations: University of Florida College of Medicine, Gainesville, Florida, USA (N.L. Beatty); Emerging Pathogens Institute, University of Florida, Gainesville (N.L. Beatty); Texas A&M University, College Station, Texas, USA (G.L. Hamer); University of California, Berkeley, California, USA (B. Moreno-Peniche); Texas Department of State Health Services, Austin, Texas, USA (B. Mayes); Texas A&M University College of Veterinary Medicine and Biomedical Sciences, College Station (S.A. Hamer)

DOI: https://doi.org/10.3201/eid3205.260617

In Response: We thank Cantey et al. (*1*) for their work and acknowledge our shared perspective that awareness for Chagas disease in the United States must be raised.

References

1. Cantey PT, Hast M, Chancey RJ, Mongomery SP. Potential endemicity of Chagas disease in the United States. Emerg Infect Dis. 2026;32:829–830.

Address for correspondence: Sarah A. Hamer, Department of Veterinary Integrative Biosciences, 667 Raymond Stotzer Ave, Texas A&M University, College Station, TX 77843, USA; email: shamer@cvm.tamu.edu