

# Detection of Zoonotic Pathogens and Characterization of Novel Viruses Carried by Commensal *Rattus norvegicus* in New York City

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## IMPORTANCE

The observation that most emerging infectious diseases of humans originate in animal reservoirs has led to wide-scale microbial surveillance and discovery programs in wildlife, particularly in the developing world. Strikingly, less attention has been focused on commensal animals like rats, despite their abundance in urban centers and close proximity to human populations. To begin to explore the zoonotic disease risk posed by urban rat populations, we trapped and surveyed Norway rats collected in New York City over a 1-year period. This analysis revealed a striking diversity of known pathogens and novel viruses in our study population, including multiple agents associated with acute gastroenteritis or febrile illnesses in people. Our findings indicate that urban rats are reservoirs for a vast diversity of microbes that may affect human health and indicate a need for increased surveillance and awareness of the disease risks associated with urban rodent infestation.

## Footnotes

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