About the Author

Dr. Farrington recently completed her pediatrics residency at the Children’s Hospital Medical Center of Akron in 2022. She is currently working as a pediatric hospitalist at the St. Louis Children’s Hospital–Washington University.

References


Address for correspondence: Scott F Pangonis, Children’s Medical Center of Akron, 1 Perkins Sq, Akron, OH 44321, USA; email: spangonis@akronchildrens.org

Rickettsia conorii Subspecies israelensis in Captive Baboons

Giovanni Sgroi, Roberta Iatta, Grazia Carelli, Annamaria Uva, Maria Alfonso Cavalera, Piero Laricchiuta, Domenico Otranto

Author affiliations: Experimental Zooprophylactic Institute of Southern Italy, Portici, Italy (G. Sgroi); University of Bari Aldo Moro, Bari, Italy (G. Sgroi, R. Iatta, G. Carelli, A. Uva, M.A. Cavalera, D. Otranto); Zoosafari Park Fasano, Brindisi, Italy (P. Laricchiuta); Bu-Ali Sina University, Hamedan, Iran (D. Otranto)

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Hamadryas baboons (Papio hamadryas) may transmit zoonotic vector-borne pathogens to visitors and workers frequenting zoological parks. We molecularly screened 33 baboons for vector-borne pathogens. Three (9.1%) of 33 animals tested positive for Rickettsia conorii subspecies israelensis. Clinicians should be aware of potential health risks from spatial overlapping between baboons and humans.
samples in Vacutainer K3-EDTA tubes. For biochemical analysis, we collected an additional 5 mL blood in Vacutainer clot activator serum tubes and centrifuged (15 min at 1,500 × g at room temperature), then delivered it to the University of Bari Department of Veterinary Medicine (Bari, Italy). We extracted DNA using QIAGEN QIAamp DNA Blood and Tissue kits (https://www.qiagen.com) and molecularly tested for vector-borne pathogens (Table 2–4). We purified and sequenced amplicons in both directions using a Big Dye Terminator v3.1 Cycle Sequencing Kit in an Applied Biosystems 3130 Genetic Analyzer (ThermoFisher, https://www.thermofisher.com), then edited and analyzed them using Geneious version 9.0 (https://www.geneious.com). We then compared resulting sequences with those in GenBank. We performed complete blood counts using CELL-DYN 3700 Hematology Analyzer (Abbott, https://www.abbott.com), biochemical profile using a KPM Analytics SAT 450 random access analyzer (https://www.kpmanalytics.com), and protein electrophoresis analyses using Sebia Hydrasys 2 Scan Focusing (https://www.sebia.com). We calculated 95% CIs for proportions and χ² and odds ratios (OR) to assess differences in prevalence and infection risk stratified by age and sex. We used t-tests to compare mean laboratory values between baboons positive and negative for vector-borne pathogens. We used ANOVA with a posteriori comparisons by the Bonferroni correction previously demonstrated only among asymptomatic dogs and cats from Portugal (5) and in severe cases among symptomatic humans from Italy (6). This survey confirms circulation of rickettsiae among baboons, also reported in 1 study of R. africae in P. cynocephalus yellow baboons from Zambia (1). Although we found adult and male baboons at higher risk for infection (OR 2.6), we found no significant difference by age or sex (p = 0.439). No baboon showed ectoparasitic infestation or clinical signs of vector-borne diseases, and all displayed good physical status (mean complete blood count 3, average bodyweight 17.5 kg). Hematologic and serum chemistry values were within normal ranges (Appendix Tables 1, 2, https://wwwnc.cdc.gov/EID/article/29/4/22-1176-App1.pdf) for both R. conorii-negative and –positive baboons (p >0.05).

We included 33 baboons: 21 male, 12 female; 13 juvenile, 16 adult, and 4 elderly. Blood samples from 3/33 (9.1%, 95% CI 3.1%–23.4%; 1 adult male, 1 adult female, 1 juvenile male) were positive for R. conorii subsp. israelensis by the gltA gene; all samples were negative by ompA and ompB genes. The only sequence negative by A and B genes. The only sequence

<table>
<thead>
<tr>
<th>Pathogen</th>
<th>PCR protocols used in study of vector-borne pathogens among baboons, Italy, 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Babesia/Theileria spp.</td>
<td>18S rRNA</td>
</tr>
<tr>
<td>Ehrlichia/Anaplasma spp.</td>
<td>16S rRNA</td>
</tr>
<tr>
<td>Rickettsia spp.</td>
<td>gltA</td>
</tr>
<tr>
<td>Spotted fever group Rickettsiae</td>
<td>ompA</td>
</tr>
<tr>
<td></td>
<td>ompB</td>
</tr>
<tr>
<td>Leishmania infantum</td>
<td>kDNA minicircle</td>
</tr>
</tbody>
</table>

(2)
differences in hematological and biochemical parameters between negative and positive animals indicate the asymptomatic features of infection and make clarifying the baboons’ role as a potential reservoir more urgent. Measures to control tick circulation should be established to reduce risk for transmission of *R. conorii* subsp. *israelensis* to zoopark visitors and workers.

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**About the Author**

Mr. Sgroi has a PhD in animal health and zoonosis from the University of Bari Aldo Moro. His main research activities focus on biology, epidemiology, and control of vector-borne pathogens of zoonotic concern.

**References**


**Prevention of *Thelazia callipaeda* Reinfecion among Humans**

Marija Trenkić, Suzana Tasić-Otašević, Marcos Antonio Bezerra-Santos, Marko Stalević, Aleksandar Petrović, Domenico Otranto

Author affiliations: Ophthalmology Clinic University Clinical Center, Niš, Serbia (M. Trenkić); University of Niš, Niš (M. Trenkić, S. Tasić-Otašević, M. Stalević, A. Petrović); Public Health Institute, Niš (S. Tasić-Otašević); University of Bari Aldo Moro, Bari, Italy (M.A. Bezerra-Santos, D. Otranto); Bu-Ali Sina University, Hamedan, Iran (D. Otranto)

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*Thelazia callipaeda* is a zoonotic vector-borne nematode that infects and causes eye disease among a wide range of domestic and wild mammals, including humans. We describe an unusual case of reinfection by this nematode in Serbia and call for a focus on preventive measures in endemic areas.

The genus *Thelazia* (order Spirurida, family Thelaziidae) comprises several species of nematode that cause ocular infections in different host mammals, including humans (1). Over the past 20 years, the *T. callipaeda* eyeworm has gained interest among...