## Springer, Y.P. and Johnson, P.T.J. Large-scale health disparities associated with Lyme disease and human monocytic ehrlichiosis in the United States, 2007–2013

S3 Table. Results of county-level analyses using general linear mixed modeling to quantify associations between the incidence of Lyme disease with six racial/ethnic and socioeconomic variables (socioeconomic variables) and two ecological variables.

|   | Univariable models |         |                                      | Multivariable model |         | Multivariable model with ecology |         |
|---|--------------------|---------|--------------------------------------|---------------------|---------|----------------------------------|---------|
| Variable  | Coefficient, SE    | P value | <b>R</b> <sup>2</sup> value of model | Coefficient, SE     | P value | Coefficient, SE                  | P value |
| Percent of housing units vacant                         | 0.1766, 0.0279     | <0.0001 | 0.8379                               | 0.2246, 0.0287      | <0.0001 | 0.2040, 0.0291                   | <0.0001 |
| Percent of population living below the poverty line     | -0.1701, 0.0386    | <0.0001 | 0.8293                               |                     |         |                                  |         |
| Percent of population classified as white non-Hispanic  | 0.2318, 0.0404     | <0.0001 | 0.8372                               | 0.2371, 0.0405      | <0.0001 | 0.1694, 0.0420                   | <0.0001 |
| Percent of population with a bachelors degree or higher | 0.1749, 0.0286     | <0.0001 | 0.8269                               | 0.2557, 0.0287      | <0.0001 | 0.2622, 0.0283                   | <0.0001 |
| Percent of population unemployed                        | -0.0614, 0.0478    | 0.1990  | 0.8343                               |                     |         |                                  |         |
| Per capita number of property crimes                    | -0.0999, 0.0333    | 0.0027  | 0.8362                               |                     |         |                                  |         |
| Density of white-tailed deer                            |                    |         |                                      |                     |         | 0.2087, 0.0365                   | <0.0001 |
| Percent cover of forests                                |                    |         |                                      |                     |         | 0.1978, 0.0452                   | <0.0001 |
| Conditional estimated R <sup>2</sup> value of model     |                    |         |                                      | 0.8302              |         | 0.8364                           |         |



Not included in model

Included but not significant in final (reduced) model