

# Supporting Information: Field Deployable Diagnostic Assay for the Visual Detection of Misfolded Prions

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## Supplemental Results

**Supplementary Table 1. Metadata of Examined Wild White-Tailed Deer RPLN.** MNPRO = Minnesota Center for Prion Research and Outreach. RPLN = medial retropharyngeal lymph node. Official CWD test result indicates the RPLN was independently examined using ELISA and/or IHC testing at Colorado State University (see Schwabenlander et al. 2021, citation 26 in main text). ND=Not Detected.

| <b>Animal<br/>MNPRO ID</b> | <b>Age</b> | <b>Sex</b> | <b>Official<br/>CWD Test<br/>Result</b> | <b>RT-QuIC<br/>Result</b> | <b>MN-QuIC<br/>Results</b> |
|----------------------------|------------|------------|---|---------------------------|----------------------------|
| 166                        | Adult      | Female     | Positive                                | Positive                  | Positive                   |
| 250                        | Adult      | Male       | Positive                                | Positive                  | Positive                   |
| 360                        | Adult      | Female     | Positive                                | Positive                  | Positive                   |
| 508                        | Adult      | Male       | Positive                                | Positive                  | Positive                   |
| 922                        | Adult      | Female     | ND                                      | ND                        | ND                         |
| 924                        | Adult      | Female     | ND                                      | ND                        | ND                         |
| 925                        | Fawn       | Female     | ND                                      | ND                        | ND                         |
| 926                        | Fawn       | Female     | ND                                      | ND                        | ND                         |

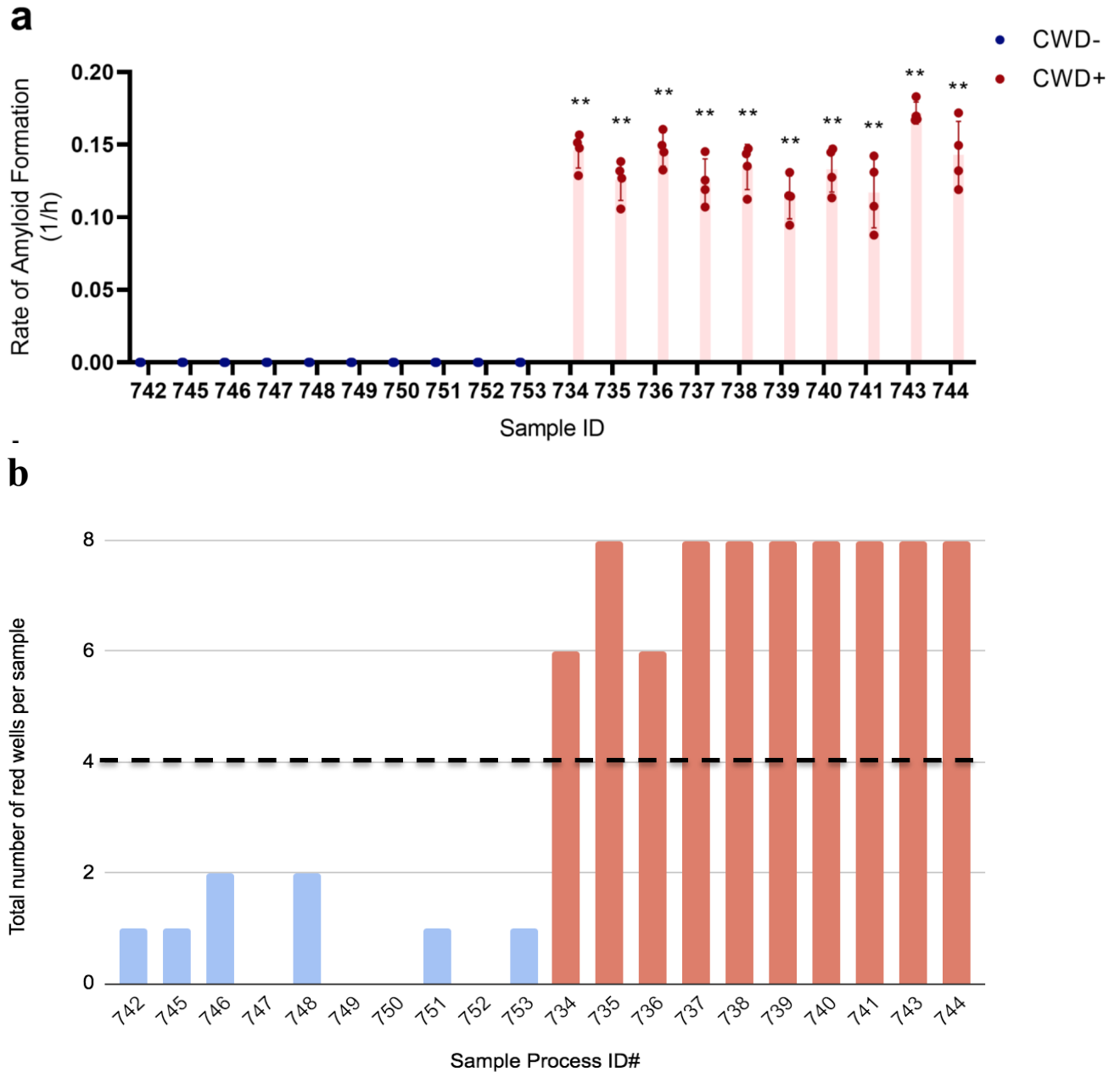
**Supplementary Table 2. Metadata of Examined Wild White-Tailed Deer in Field Test.**

RPLN=medial retropharyngeal lymph node. Official CWD test result indicates the RPLN was independently examined using ELISA and/or IHC testing at Colorado State University (see Schwabenlander et al. 2021, citation 26 in main text). ND=Not Detected

| <b>Animal ID</b> | <b>Age</b> | <b>Sex</b> | <b>Official CWD Test Results for RPLN</b> | <b>MN-QuIC Results</b> |
|------------------|------------|------------|---|------------------------|
| 197190           | Female     | Yearling   | Positive                                  | Positive               |
| 197270           | Female     | Fawn       | ND  | ND                     |
| 197273           | Female     | Adult      | ND  | ND                     |
| 197264           | Female     | Adult      | ND  | ND                     |
| 197266           | Female     | Adult      | ND  | ND                     |
| 197265           | Female     | Adult      | ND  | ND                     |
| 197267           | Male       | Fawn       | ND  | ND                     |
| 197268           | Female     | Fawn       | ND  | ND                     |
| 197269           | Female     | Adult      | ND  | ND                     |
| 197271           | Female     | Adult      | ND  | ND                     |
| 197272           | Male       | Fawn       | ND  | ND                     |
| 197225           | Male       | Yearling   | Positive                                  | Positive               |
| 197065           | Male       | Adult      | Positive                                  | Positive               |

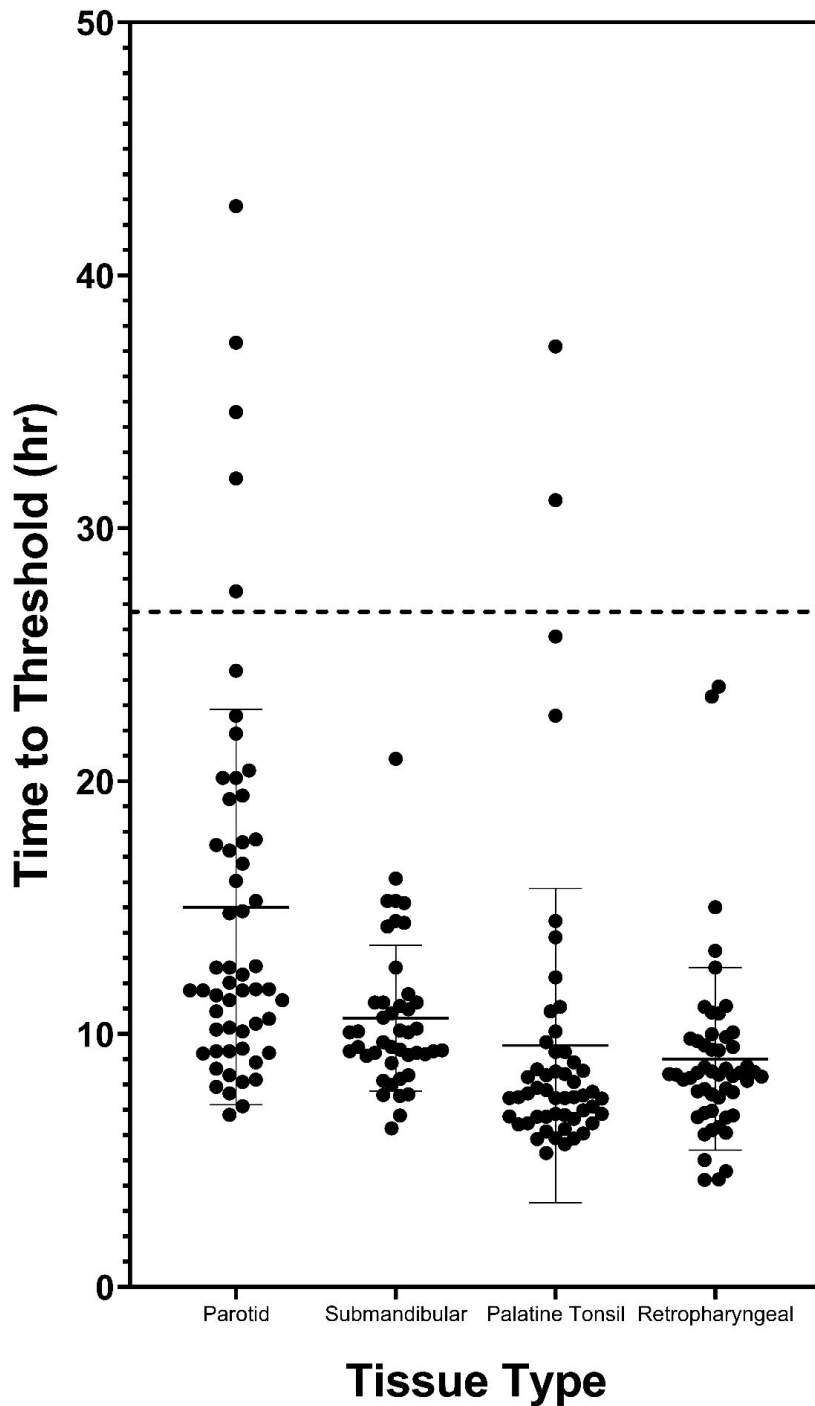
**Supplementary Table 3. Metadata of Examined Wild White-Tailed Deer Tonsils.** MNPRO = Minnesota Center for Prion Research and Outreach. RPLN=medial retropharyngeal lymph node. Official CWD test result indicates the RPLN was independently examined using ELISA and/or IHC testing at Colorado State University (see Schwabenlander et al. 2021, citation 26 in main text). ND=Not Detected

| <b>Process ID</b> | <b>Animal MNPRO ID</b> | <b>Age</b> | <b>Sex</b> | <b>Official CWD Test Results for RPLN</b> | <b>RT-QuIC Results for Tonsil</b> | <b>MN-QuIC Results</b> |
|-------------------|------------------------|------------|------------|---|-----------------------------------|------------------------|
| 000734            | 000166                 | Adult      | Female     | Positive                                  | Positive                          | Positive               |
| 000735            | 000197                 | Yearling   | Male       | Positive                                  | Positive                          | Positive               |
| 000736            | 000250                 | Adult      | Male       | Positive                                  | Positive                          | Positive               |
| 000737            | 000333                 | Adult      | Female     | Positive                                  | Positive                          | Positive               |
| 000738            | 000360                 | Adult      | Female     | Positive                                  | Positive                          | Positive               |
| 000739            | 000363                 | Adult      | Female     | Positive                                  | Positive                          | Positive               |
| 000740            | 000376                 | Adult      | Female     | Positive                                  | Positive                          | Positive               |
| 000741            | 000384                 | Adult      | Female     | Positive                                  | Positive                          | Positive               |
| 000742            | 000498                 | Yearling   | Male       | ND  | ND                                | ND                     |
| 000743            | 000508                 | Adult      | Male       | Positive                                  | Positive                          | Positive               |
| 000744            | 000735                 | Adult      | Female     | Positive                                  | Positive                          | Positive               |
| 000745            | 000065                 | Adult      | Female     | ND  | ND                                | ND                     |
| 000746            | 000067                 | Adult      | Female     | ND  | ND                                | ND                     |
| 000747            | 000091                 | Adult      | Female     | ND  | ND                                | ND                     |
| 000748            | 000093                 | Adult      | Female     | ND  | ND                                | ND                     |
| 000749            | 000230                 | Fawn       | Female     | ND  | ND                                | ND                     |
| 000750            | 000232                 | Adult      | Female     | ND  | ND                                | ND                     |
| 000751            | 000283                 | Fawn       | Male       | ND  | ND                                | ND                     |
| 000752            | 000415                 | Fawn       | Female     | ND  | ND                                | ND                     |
| 000753            | 000431                 | Adult      | Male       | ND  | ND                                | ND                     |



**Supplementary Figure 1:** a.) RT-QuIC data and b.) MN-QuIC data for tonsil samples used in this study. Number of red wells out of the 8 replicates for each animal tested. Following published RT-QuIC protocols (see main text Methods) 50% or more of MN-QuIC red wells is identified as CWD positive and less than 50% of MN-QuIC red wells as CWD not detected or negative (dashed line). \*\*p<.01, error bars show standard deviation. (see Supplementary Table 2).

## Time to Threshold for 4 Types of Lymph Nodes



**Supplementary Figure 2:** Prion seeding activity as shown by time (in hours) to Thioflavin-T fluorescence threshold via RT-QuIC reactions for various CWD positive white-tailed deer lymph tissues. Dashed line identifies a 24hr threshold used for MN-QuIC analyses of retropharyngeal lymph nodes.