

**Supplementary Table 9: Univariable and multivariable meta-regression analysis on the incidence of Rabies virus in humans, dogs, and other animal species in Africa.**

| Variables  | Bivariate Model |              |              |                      | Multivariate Model |               |                      |               |
|--|-----------------|--------------|--------------|----------------------|--------------------|---------------|----------------------|---------------|
|  | Estimate        | P-Value      | P-Value      | OR(95% CI)           | Estimate           | P-Value       | OR [95% CI]          | R2            |
| <b>Current contact-RABV suspected humans cases (5 Studies)</b> |                 |              |              |                      |                    |               |                      | <b>82,17%</b> |
| <b>Study Design</b>  |                 |              | <b>0,018</b> |                      |                    |               |                      |               |
| Cohort (Baseline data)   | 1               |              |              | 1                    |                    |               |                      |               |
| Cross sectional  | 0,566           | <b>0,018</b> |              | 1,76 [ 1,1 - 2,82 ]  |                    |               |                      |               |
| <b>Timing of data collection</b>                               |                 |              | 0,934        |                      |                    |               |                      |               |
| Prospectively  | 1               |              |              | 1                    |                    |               |                      |               |
| Retrospectively  | -0,019          | 0,934        |              | 0,98 [ 0,62 - 1,56 ] |                    |               |                      |               |
| <b>UNSD Region</b>   |                 |              | <b>0</b>     |                      |                    |               |                      |               |
| Central Africa   | 1               |              |              | 1                    | 1                  |               | 1                    |               |
| Eastern Africa   | 0,477           | <b>0,01</b>  |              | 1,61 [ 1,12 - 2,32 ] | 0,477              | <b>0,01</b>   | 1,61 [ 1,12 - 2,32 ] |               |
| West Africa  | 0,825           | <b>0</b>     |              | 2,28 [ 1,5 - 3,46 ]  | 0,825              | <b>0</b>      | 2,28 [ 1,5 - 3,46 ]  |               |
| <b>Sample types</b>  |                 |              | 0,967        |                      |                    |               |                      |               |
| Brain  | 1               |              |              | 1                    |                    |               |                      |               |
| Saliva, Skin biopsy  | -0,012          | 0,966        |              | 0,99 [ 0,57 - 1,71 ] |                    |               |                      |               |
| Skin biopsy, Brain, Cerebrospil fluid                          | 0,08            | 0,824        |              | 1,08 [ 0,53 - 2,19 ] |                    |               |                      |               |
| <b>Current contact-Owned dogs (8 Studies)</b>                  |                 |              |              |                      |                    |               |                      | <b>13,44%</b> |
| <b>Timing of data collection</b>                               |                 |              | <b>0,002</b> |                      |                    |               |                      |               |
| Prospectively  | 1               |              |              | 1                    | 1                  |               | 1                    |               |
| Retroprospectively   | -0,52           | <b>0,001</b> |              | 0,59 [ 0,44 - 0,8 ]  | -0,4678            | <b>0,0028</b> | 0,63 [ 0,46 - 0,85 ] |               |
| Retrospectively  | -0,006          | 0,946        |              | 0,99 [ 0,83 - 1,19 ] | -0,1052            | 0,2766        | 0,9 [ 0,74 - 1,09 ]  |               |
| <b>UNSD Region</b>   |                 |              | <b>0,005</b> |                      |                    |               |                      |               |
| Central Africa   | 1               |              |              | 1                    |                    |               | 1                    |               |
| Eastern Africa   | -0,318          | <b>0</b>     |              | 0,73 [ 0,61 - 0,87 ] | -0,2402            | <b>0,0116</b> | 0,79 [ 0,65 - 0,95 ] |               |
| Southern Africa  | -0,131          | 0,28         |              | 0,88 [ 0,69 - 1,11 ] | -0,2015            | 0,1309        | 0,82 [ 0,63 - 1,06 ] |               |
| West Africa  | -0,272          | <b>0,07</b>  |              | 0,76 [ 0,57 - 1,02 ] | -0,3428            | <b>0,0327</b> | 0,71 [ 0,52 - 0,97 ] |               |
| <b>Country</b>   |                 |              | <b>0</b>     |                      |                    |               |                      |               |
| Cameroon   | 1               |              |              | 1                    |                    |               |                      |               |
| Central African Republic                                       | 0,216           | <b>0,006</b> |              | 1,24 [ 1,07 - 1,44 ] |                    |               |                      |               |
| Kenya  | -0,564          | <b>0</b>     |              | 0,57 [ 0,46 - 0,7 ]  |                    |               |                      |               |
| Madagascar   | -0,156          | <b>0,016</b> |              | 0,86 [ 0,75 - 0,97 ] |                    |               |                      |               |
| Namibia  | -0,057          | 0,344        |              | 0,94 [ 0,84 - 1,06 ] |                    |               |                      |               |
| Nigeria  | -0,199          | <b>0,066</b> |              | 0,82 [ 0,66 - 1,01 ] |                    |               |                      |               |
| Zambia   | -0,144          | <b>0,016</b> |              | 0,87 [ 0,77 - 0,97 ] |                    |               |                      |               |
| <b>Recrutment setting</b>                                      |                 |              | <b>0,007</b> |                      |                    |               |                      |               |
| Rural  | 1               |              |              | 1                    |                    |               |                      |               |
| Urban  | 0,561           | <b>0,003</b> |              | 1,75 [ 1,21 - 2,54 ] |                    |               |                      |               |

|   |        |              |              |                      |        |               |                     |               |
|---|--------|--------------|--------------|----------------------|--------|---------------|---------------------|---------------|
| Urban/rural                                   | 0,57   | <b>0,004</b> |              | 1,77 [ 1,2 - 2,6 ]   |        |               |                     |               |
| <b>Current contact-Stray dogs (7 Studies)</b> |        |              |              |                      |        |               |                     | <b>83,52%</b> |
| <b>Study Design</b>                           |        |              | <b>0,04</b>  |                      |        |               |                     |               |
| Community outbreak                            | 1      |              |              | 1                    | 1      |               | 1                   |               |
| Cross sectional                               | 0,32   | <b>0,04</b>  |              | 1,38 [ 1,02 - 1,87 ] | 0,1791 | <b>0,0368</b> | 1,2 [ 1,01 - 1,42 ] |               |
| <b>Sampling</b>                               |        |              | 0,447        |                      |        |               |                     |               |
| Non probabilistic                             | 1      |              |              | 1                    |        |               |                     |               |
| Probabilistic                                 | -0,129 | 0,447        |              | 0,88 [ 0,63 - 1,23 ] |        |               |                     |               |
| <b>Timing of data collection</b>              |        |              | <b>0,035</b> |                      |        |               |                     |               |
| Prospectively                                 | 1      |              |              | 1                    | 1      |               | 1                   |               |
| Retrospectively                               | 0,185  | <b>0,035</b> |              | 1,2 [ 1,01 - 1,43 ]  | 0,1488 | <b>0,0123</b> | 1,16 [ 1,03 - 1,3 ] |               |
| <b>Country</b>                                |        |              | 0,767        |                      |        |               |                     |               |
| Ghana   | 1      |              |              | 1                    |        |               |                     |               |
| Nigeria                                       | -0,054 | 0,767        |              | 0,95 [ 0,66 - 1,36 ] |        |               |                     |               |
| <b>Past contact-Owned dogs (10 Studies)</b>   |        |              |              |                      |        |               |                     |               |
| <b>Study Design</b>                           |        |              | 0,728        |                      |        |               |                     |               |
| Community outbreak                            | 1      |              |              | 1                    |        |               |                     |               |
| Cross sectional                               | 0,079  | 0,728        |              | 1,08 [ 0,69 - 1,7 ]  |        |               |                     |               |
| <b>Sampling</b>                               |        |              | 0,975        |                      |        |               |                     |               |
| Non probabilistic                             | 1      |              |              | 1                    |        |               |                     |               |
| Probabilistic                                 | -0,005 | 0,975        |              | 1 [ 0,73 - 1,35 ]    |        |               |                     |               |
| <b>Timing of data collection</b>              |        |              | 0,387        |                      |        |               |                     |               |
| Prospectively                                 | 1      |              |              | 1                    |        |               |                     |               |
| Retroprospectively                            | -0,194 | 0,387        |              | 0,82 [ 0,53 - 1,28 ] |        |               |                     |               |
| <b>UNSD Region</b>                            |        |              | 0,914        |                      |        |               |                     |               |
| Eastern Africa                                | 1      |              |              | 1                    |        |               |                     |               |
| Southern Africa                               | 0,105  | 0,672        |              | 1,11 [ 0,68 - 1,81 ] |        |               |                     |               |
| West Africa                                   | 0,015  | 0,926        |              | 1,02 [ 0,74 - 1,39 ] |        |               |                     |               |
| <b>Country</b>                                |        |              | 0,34         |                      |        |               |                     |               |
| Ethiopia                                      | 1      |              |              | 1                    |        |               |                     |               |
| Kenya   | -0,758 | <b>0,052</b> |              | 0,47 [ 0,22 - 1,01 ] |        |               |                     |               |
| Namibia                                       | -0,493 | 0,209        |              | 0,61 [ 0,28 - 1,32 ] |        |               |                     |               |
| Nigeria                                       | -0,584 | <b>0,077</b> |              | 0,56 [ 0,29 - 1,07 ] |        |               |                     |               |
| Tanzania                                      | -0,549 | <b>0,112</b> |              | 0,58 [ 0,29 - 1,14 ] |        |               |                     |               |
| Uganda  | -0,611 | <b>0,119</b> |              | 0,54 [ 0,25 - 1,17 ] |        |               |                     |               |
| Zambia  | -0,986 | <b>0,013</b> |              | 0,37 [ 0,17 - 0,82 ] |        |               |                     |               |
| <b>Recruitment setting</b>                    |        |              | 0,815        |                      |        |               |                     |               |
| Rural   | 1      |              |              | 1                    |        |               |                     |               |
| Urban/rural                                   | -0,063 | 0,815        |              | 0,94 [ 0,56 - 1,59 ] |        |               |                     |               |

|   |        |       |       |                      |       |   |                     |                |
|---|--------|-------|-------|----------------------|-------|---|---------------------|----------------|
| <b>Past contact-Stray dogs (4 Studies)</b>        |        |       |       |                      |       |   |                     |                |
| <b>Sampling</b>                                   |        |       | 0,657 |                      |       |   |                     |                |
| Non probabilistic                                 | 1      |       |       | 1                    |       |   |                     |                |
| Probabilistic                                     | -0,149 | 0,657 |       | 0,86 [ 0,45 - 1,66 ] |       |   |                     |                |
| <b>Past contact-Wild dogs (3 Studies)</b>         |        |       |       |                      |       |   |                     | <b>100,00%</b> |
| <b>UNSD Region</b>                                |        |       | 0     |                      |       |   |                     |                |
| Eastern Africa                                    | 1      |       |       | 1                    | 1     |   |                     |                |
| West Africa                                       | 0,407  | 0     |       | 1,5 [ 1,23 - 1,84 ]  | 0,407 | 0 | 1,5 [ 1,23 - 1,84 ] |                |
| <b>Current contact-Perissodactyla (7 Studies)</b> |        |       |       |                      |       |   |                     |                |
| <b>Timing of data collection</b>                  |        |       | 0,988 |                      |       |   |                     |                |
| Prospectively                                     | 1      |       |       | 1                    |       |   |                     |                |
| Retrospectively                                   | -0,005 | 0,988 |       | 1 [ 0,52 - 1,91 ]    |       |   |                     |                |
| <b>UNSD Region</b>                                |        |       | 0,941 |                      |       |   |                     |                |
| Eastern Africa                                    | 1      |       |       | 1                    |       |   |                     |                |
| Northern Africa                                   | 0,06   | 0,879 |       | 1,06 [ 0,49 - 2,31 ] |       |   |                     |                |
| Southern Africa                                   | -0,078 | 0,858 |       | 0,92 [ 0,39 - 2,17 ] |       |   |                     |                |
| <b>Country</b>                                    |        |       | 0,941 |                      |       |   |                     |                |
| Egypt   | 1      |       |       | 1                    |       |   |                     |                |
| Ethiopia  | -0,06  | 0,879 |       | 0,94 [ 0,43 - 2,05 ] |       |   |                     |                |
| Namibia   | -0,138 | 0,727 |       | 0,87 [ 0,4 - 1,89 ]  |       |   |                     |                |
| <b>Sample types</b>                               |        |       | 0,865 |                      |       |   |                     |                |
| Brain   | 1      |       |       | 1                    |       |   |                     |                |
| Serum   | 0,06   | 0,865 |       | 1,06 [ 0,53 - 2,12 ] |       |   |                     |                |
| <b>Current contact-Artiodactyla (18 Studies)</b>  |        |       |       |                      |       |   |                     | <b>48,48%</b>  |
| <b>Sampling</b>                                   |        |       | 0,205 |                      |       |   |                     |                |
| Non probabilistic                                 | 1      |       |       | 1                    |       |   |                     |                |
| Probabilistic                                     | 0,241  | 0,205 |       | 1,27 [ 0,88 - 1,85 ] |       |   |                     |                |
| <b>Timing of data collection</b>                  |        |       | 0,009 |                      |       |   |                     |                |
| Prospectively                                     | 1      |       |       | 1                    |       |   |                     |                |
| Retroprospectively                                | -0,452 | 0,003 |       | 0,64 [ 0,47 - 0,86 ] |       |   |                     |                |
| Retrospectively                                   | -0,001 | 0,994 |       | 1 [ 0,8 - 1,25 ]     |       |   |                     |                |
| <b>UNSD Region</b>                                |        |       | 0,617 |                      |       |   |                     |                |
| Eastern Africa                                    | 1      |       |       | 1                    |       |   |                     |                |
| Southern Africa                                   | 0,058  | 0,617 |       | 1,06 [ 0,84 - 1,33 ] |       |   |                     |                |
| <b>Country</b>                                    |        |       | 0     |                      |       |   |                     |                |
| Ethiopia  | 1      |       |       | 1                    |       |   |                     |                |
| Kenya   | -1,007 | 0     |       | 0,37 [ 0,25 - 0,54 ] |       |   |                     |                |
| Madagascar  | -0,085 | 0,72  |       | 0,92 [ 0,58 - 1,46 ] |       |   |                     |                |



|  |        |              |              |                      |      |          |                      |
|--|--------|--------------|--------------|----------------------|------|----------|----------------------|
| <b>Sampling</b>                            |        |              | <b>0</b>     |                      |      |          |                      |
| Non probabilistic                          | 1      |              |              | 1                    | 1    |          | 1                    |
| Probabilistic                              | 0,31   | <b>0</b>     |              | 1,36 [ 1,22 - 1,53 ] | 0,31 | <b>0</b> | 1,36 [ 1,22 - 1,53 ] |
| <b>UNSD Region</b>                         |        |              | <b>0,083</b> |                      |      |          |                      |
| Central Africa                             | 1      |              |              | 1                    |      |          |                      |
| Eastern Africa                             | -0,018 | 0,776        |              | 0,98 [ 0,87 - 1,11 ] |      |          |                      |
| Southern Africa                            | 0,001  | 0,988        |              | 1 [ 0,87 - 1,16 ]    |      |          |                      |
| West Africa                                | 0,106  | <b>0,134</b> |              | 1,11 [ 0,97 - 1,28 ] |      |          |                      |
| <b>Country</b>                             |        |              | <b>0,083</b> |                      |      |          |                      |
| Democratic Republic of the Congo           | 1      |              |              | 1                    |      |          |                      |
| Madagascar                                 | -0,018 | 0,776        |              | 0,98 [ 0,87 - 1,11 ] |      |          |                      |
| Nigeria                                    | 0,106  | <b>0,134</b> |              | 1,11 [ 0,97 - 1,28 ] |      |          |                      |
| South Africa                               | 0,001  | 0,988        |              | 1 [ 0,87 - 1,16 ]    |      |          |                      |
| <b>Sample types</b>                        |        |              | 0,328        |                      |      |          |                      |
| Brain                                      | 1      |              |              | 1                    |      |          |                      |
| Oral swabs                                 | -0,024 | 0,628        |              | 0,98 [ 0,89 - 1,08 ] |      |          |                      |
| Serum                                      | 0,051  | 0,283        |              | 1,05 [ 0,96 - 1,15 ] |      |          |                      |
| <b>Past contact-Carnivora (6 Studies)</b>  |        |              |              |                      |      |          |                      |
| <b>Timing of data collection</b>           |        |              | 0,466        |                      |      |          |                      |
| Prospectively                              | 1      |              |              | 1                    |      |          |                      |
| Retroprospectively                         | -0,354 | 0,237        |              | 0,7 [ 0,39 - 1,26 ]  |      |          |                      |
| Retrospectively                            | -0,186 | 0,546        |              | 0,83 [ 0,45 - 1,52 ] |      |          |                      |
| <b>Country</b>                             |        |              | 0,431        |                      |      |          |                      |
| Ethiopia                                   | 1      |              |              | 1                    |      |          |                      |
| Kenya                                      | -0,306 | 0,225        |              | 0,74 [ 0,45 - 1,21 ] |      |          |                      |
| Zambia                                     | -0,065 | 0,801        |              | 0,94 [ 0,57 - 1,55 ] |      |          |                      |
| <b>Sample types</b>                        |        |              | 0,475        |                      |      |          |                      |
| Brain                                      | 1      |              |              | 1                    |      |          |                      |
| Serum                                      | -0,203 | 0,475        |              | 0,82 [ 0,47 - 1,43 ] |      |          |                      |
| <b>Past contact-Chiroptera (3 Studies)</b> |        |              |              |                      |      |          |                      |
| <b>UNSD Region</b>                         |        |              | 0,539        |                      |      |          |                      |
| Southern Africa                            | 1      |              |              | 1                    |      |          |                      |
| West Africa                                | 0,081  | 0,539        |              | 1,08 [ 0,84 - 1,4 ]  |      |          |                      |
| <b>Country</b>                             |        |              | 0,539        |                      |      |          |                      |
| Nigeria                                    | 1      |              |              | 1                    |      |          |                      |
| South Africa                               | -0,081 | 0,539        |              | 0,92 [ 0,71 - 1,19 ] |      |          |                      |