

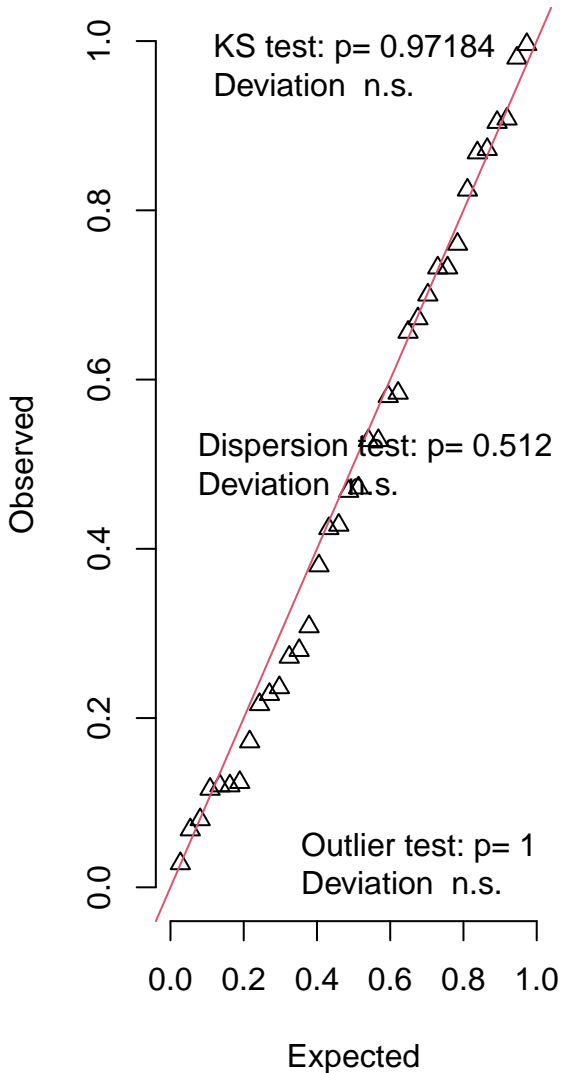
EGF

Bites in cyno

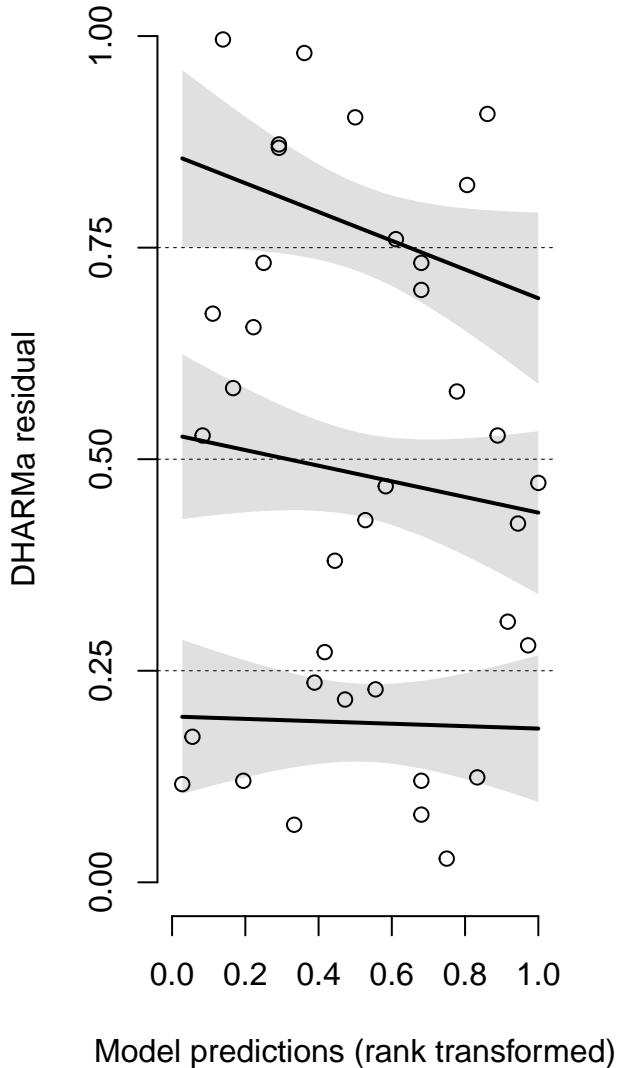
Nb excluded (LOD) : 0
Nb remaining: 36

DHARMA residual

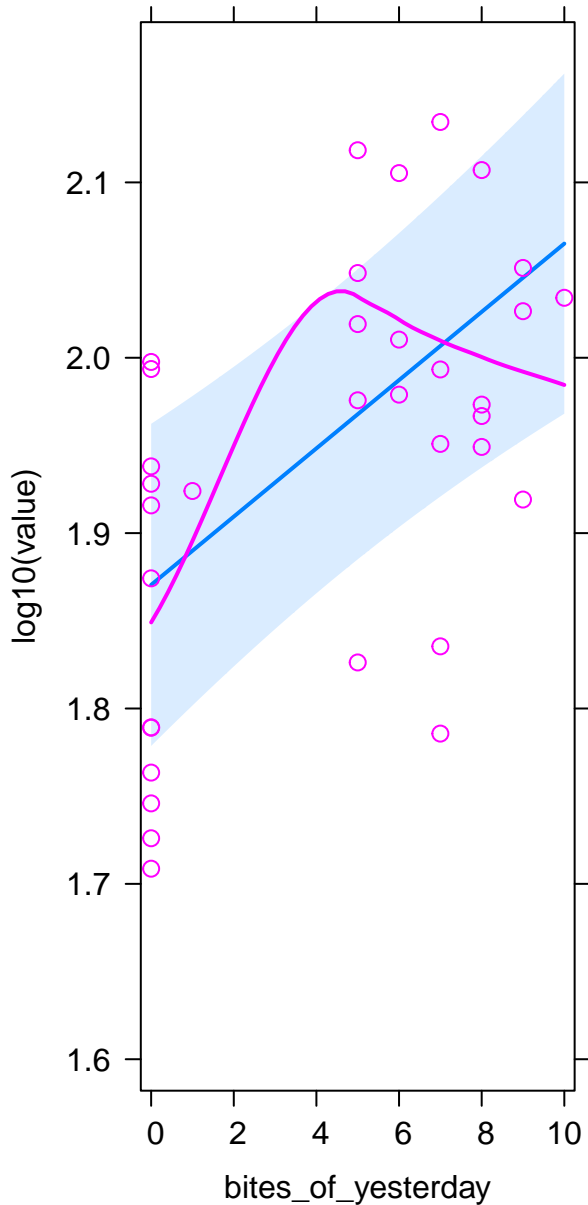
QQ plot residuals



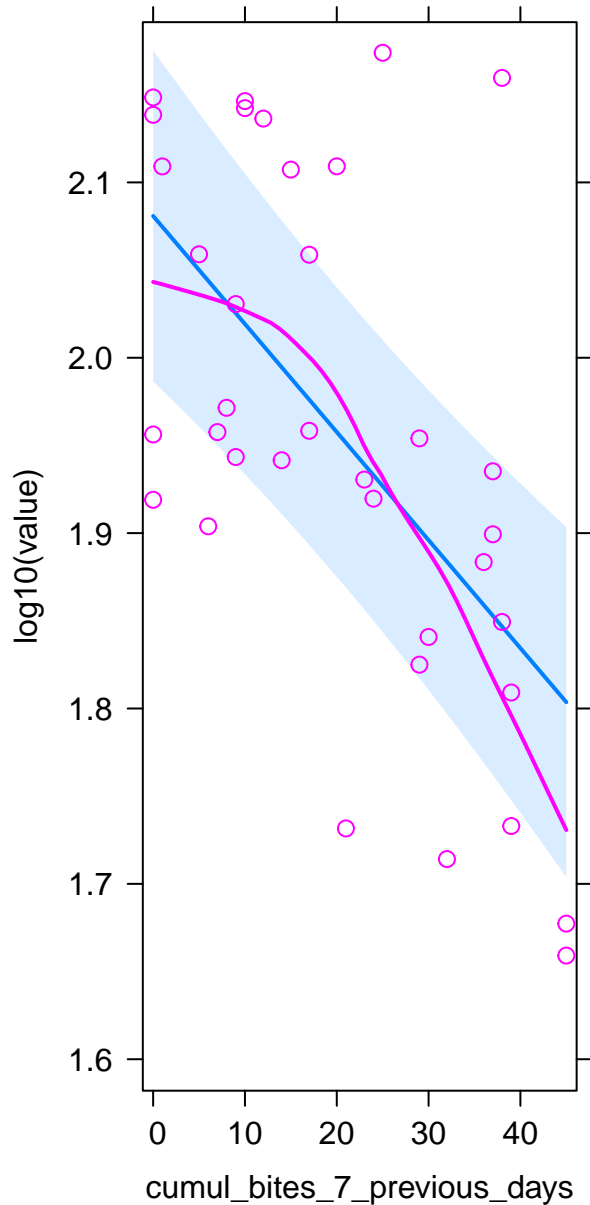
Residual vs. predicted No significant problems detected

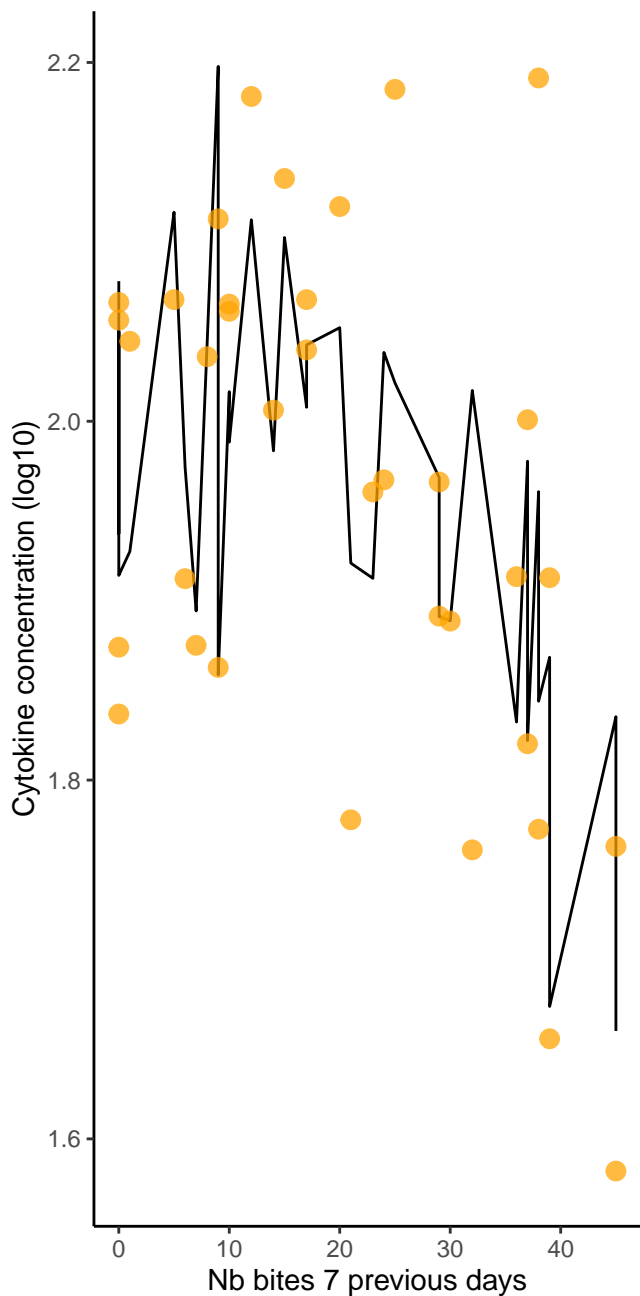
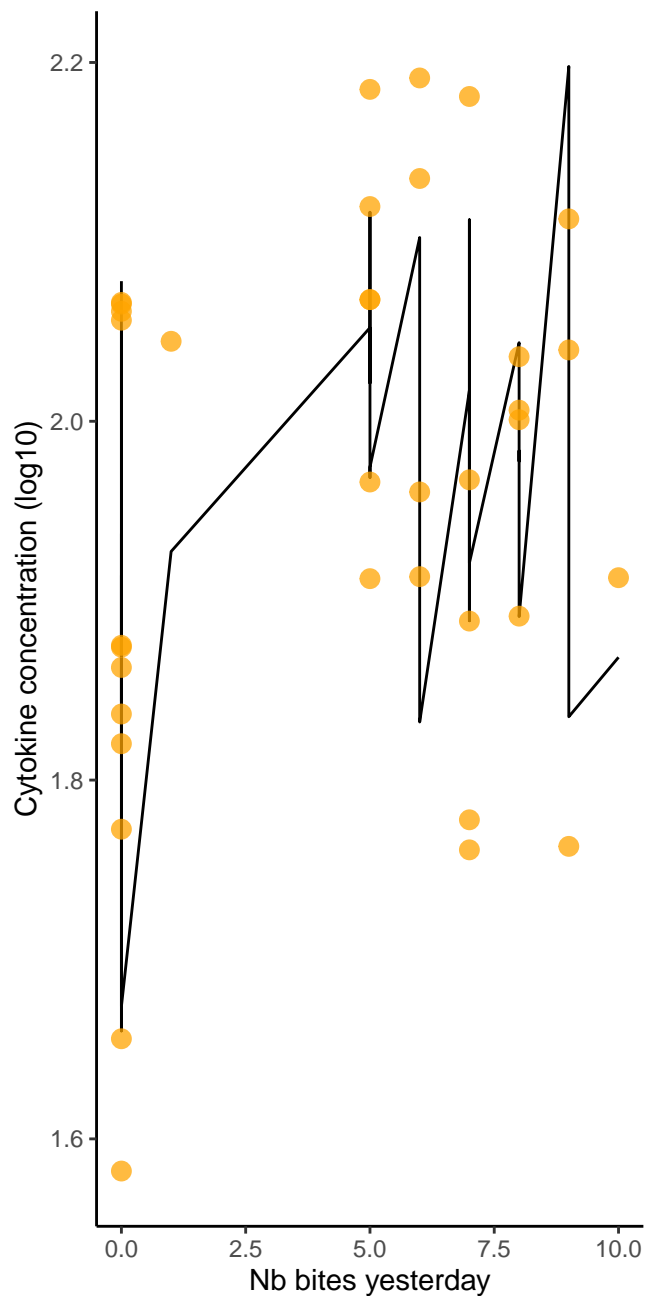


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.10 | [1.00, 3.69] | 1.05 | 0.91 | [0.27, 1.00] |
| cumul_bites_7_previous_days | 1.10 | [1.00, 3.69] | 1.05 | 0.91 | [0.27, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|-------|--------|----------|----------|
| -54.0 | -46.1 | 32.0 | -64.0 | 31 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|----------|-------------|----------|----------|
| ID | (Intercept) | 0.005709 | 0.07556 |
| Residual | | 0.007913 | 0.08896 |

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.00791

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|-------------|
| (Intercept) | 1.994908 | 0.047722 | 41.80 | < 2e-16 *** |
| bites_of_yesterday | 0.019460 | 0.004481 | 4.34 | 1.4e-05 *** |
| cumul_bites_7_previous_days | -0.006161 | 0.001111 | -5.55 | 2.9e-08 *** |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AICc [1] -51.99296

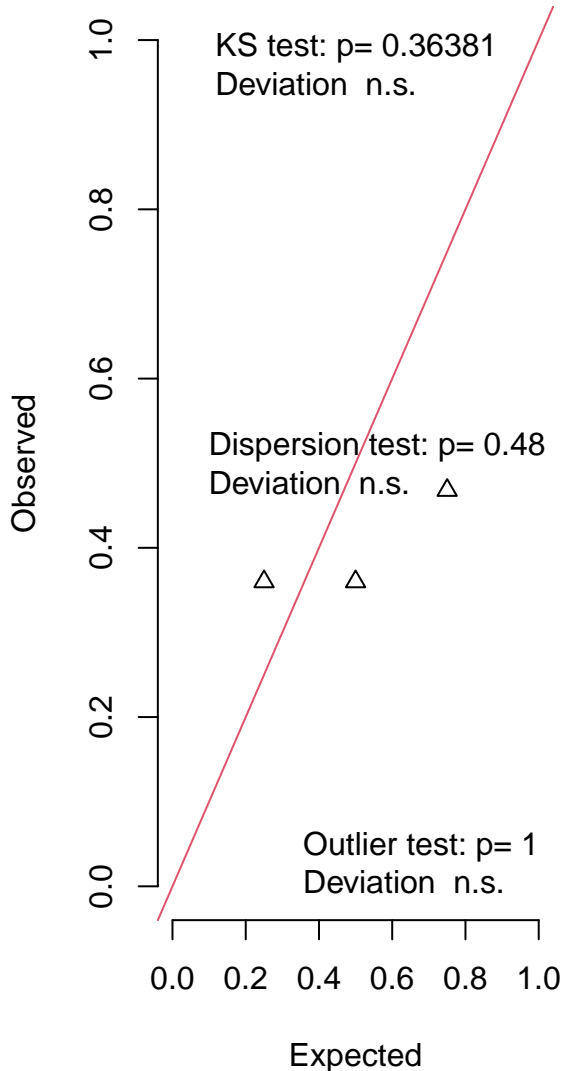
Bites in squirrel

Nb excluded (LOD) : 17

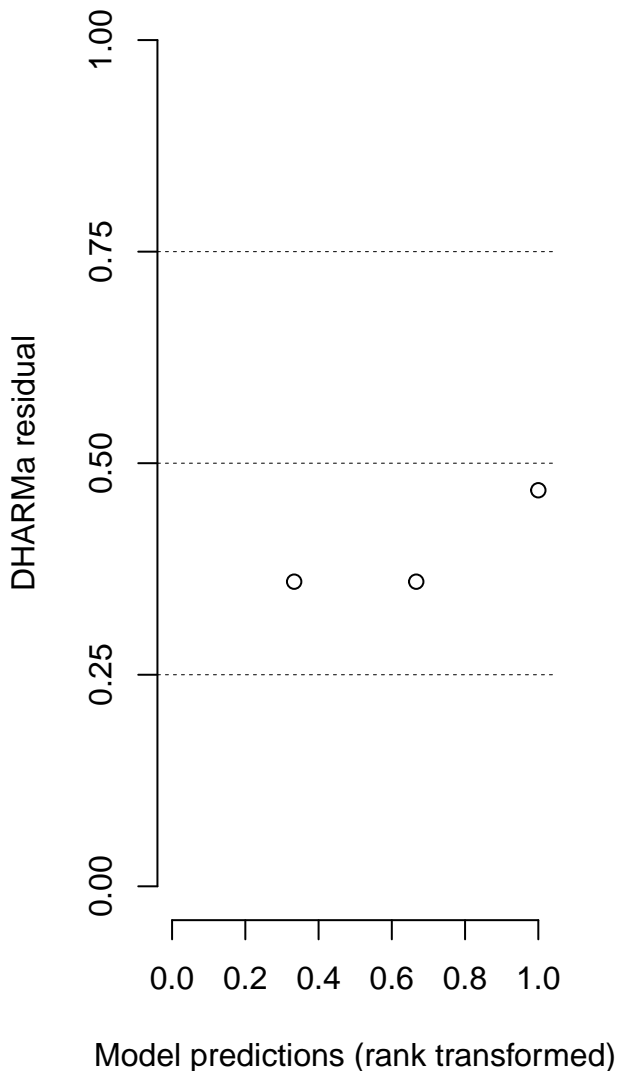
Nb remaining: 3

DHARMA residual

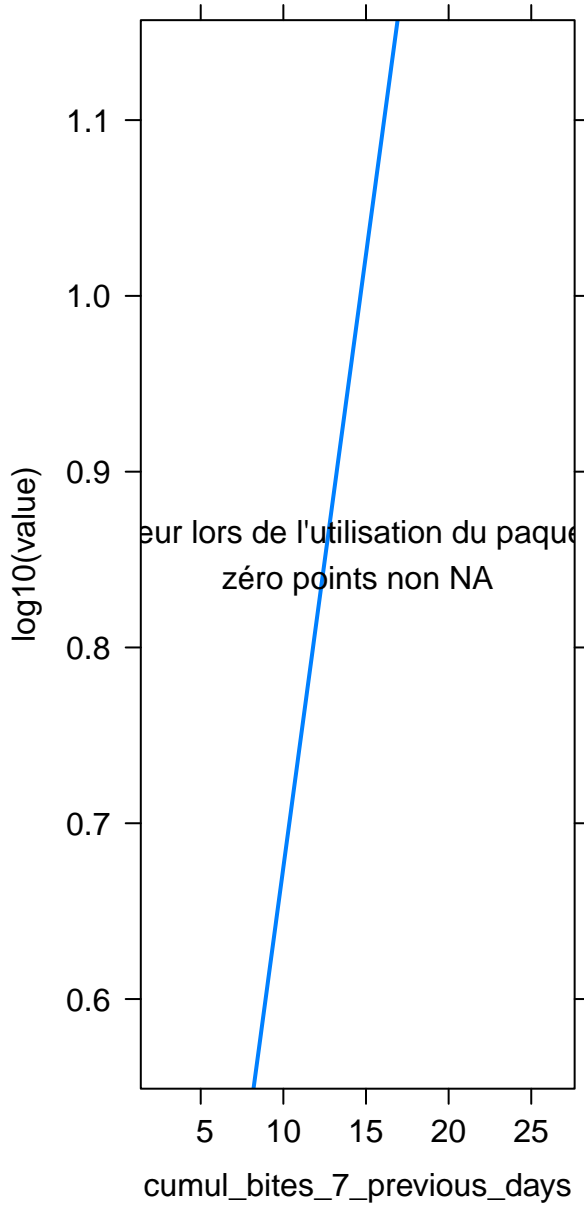
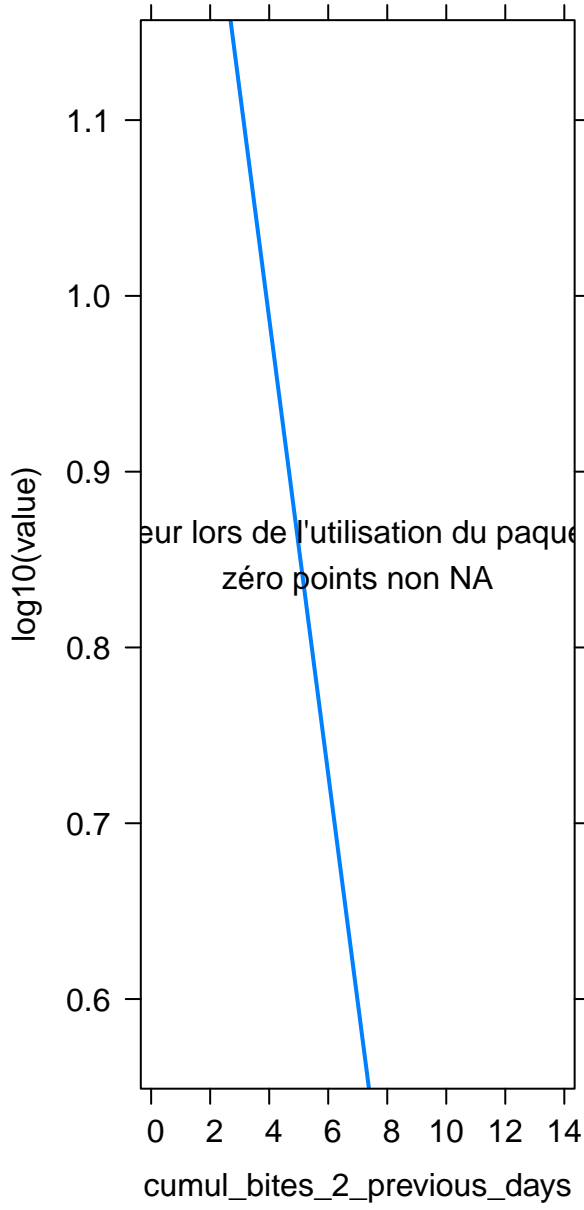
QQ plot residuals

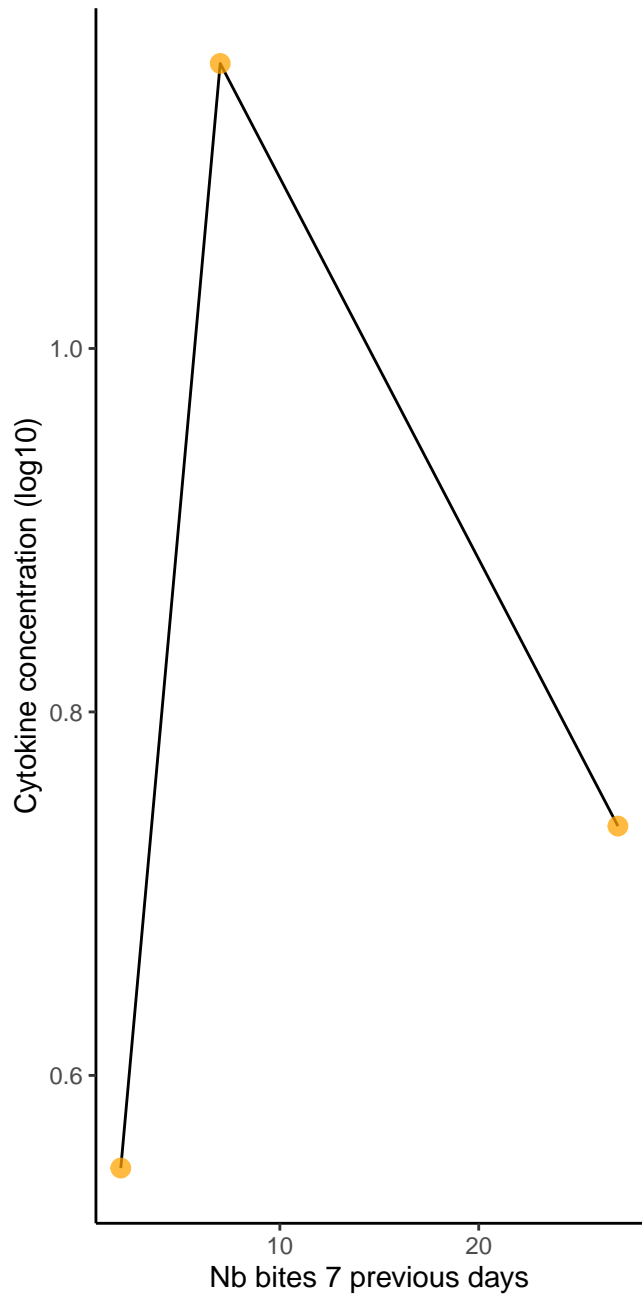
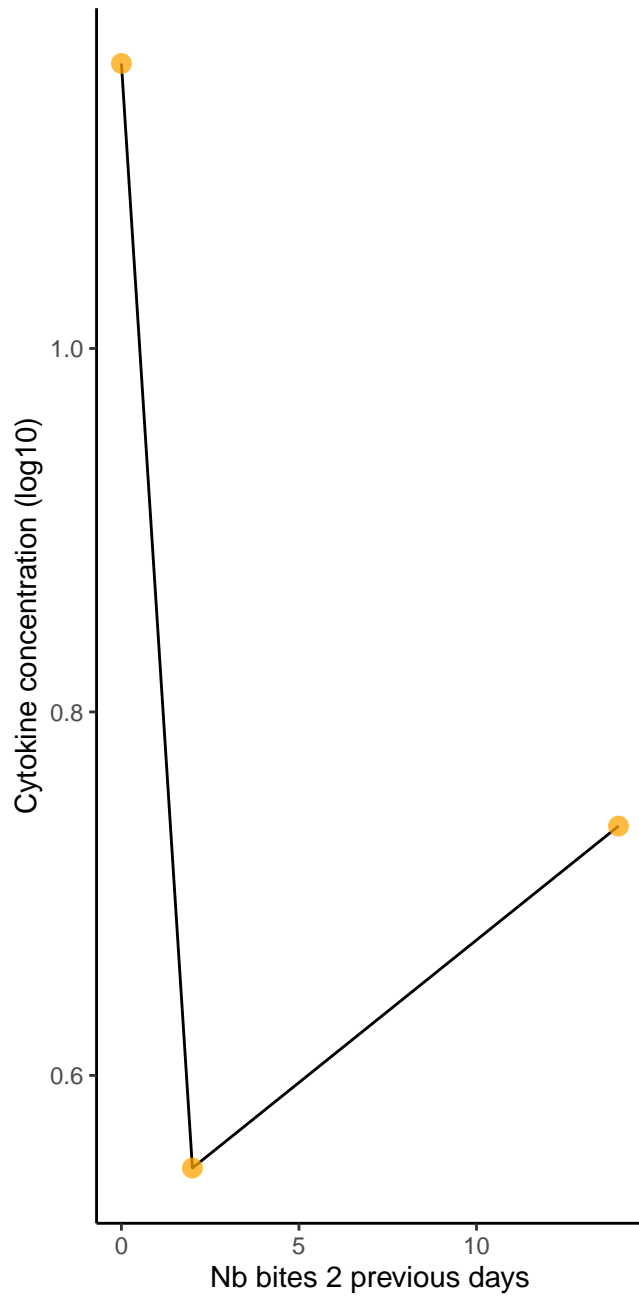


Residual vs. predicted No significant problems detected



cumul_bites_2_previous_days effect plot cumul_bites_7_previous_days effect plot





EGF ERROR : indice hors limites

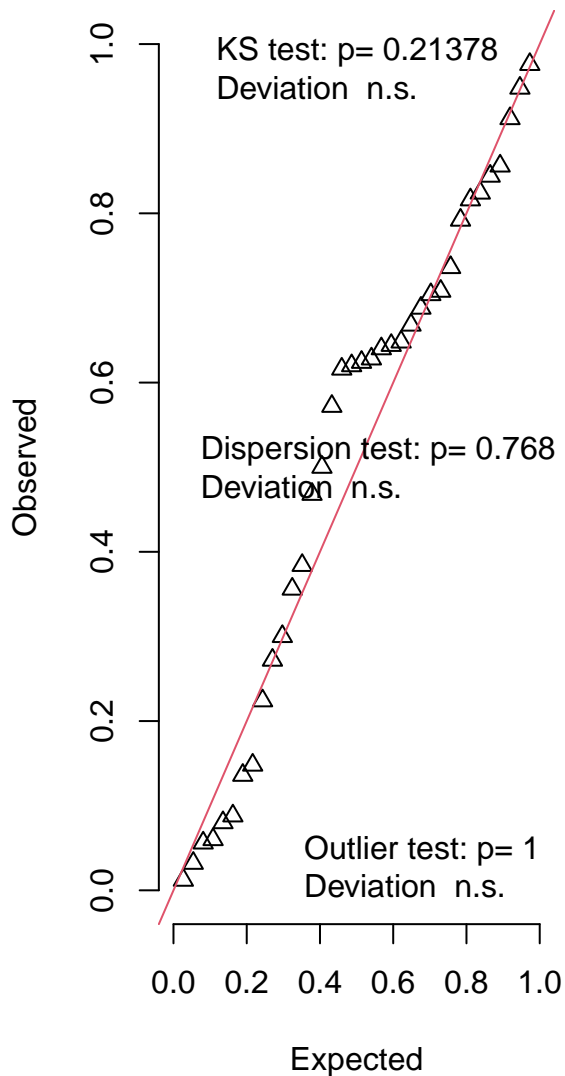
Eotaxin

Bites in cyno

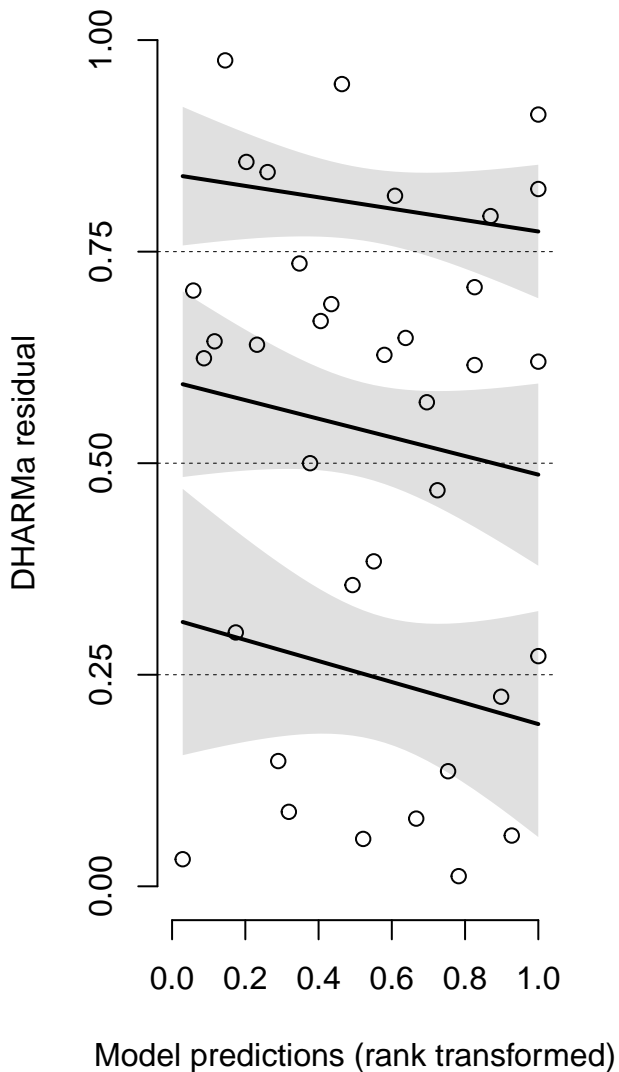
Nb excluded (LOD) : 0
Nb remaining: 36

DHARMA residual

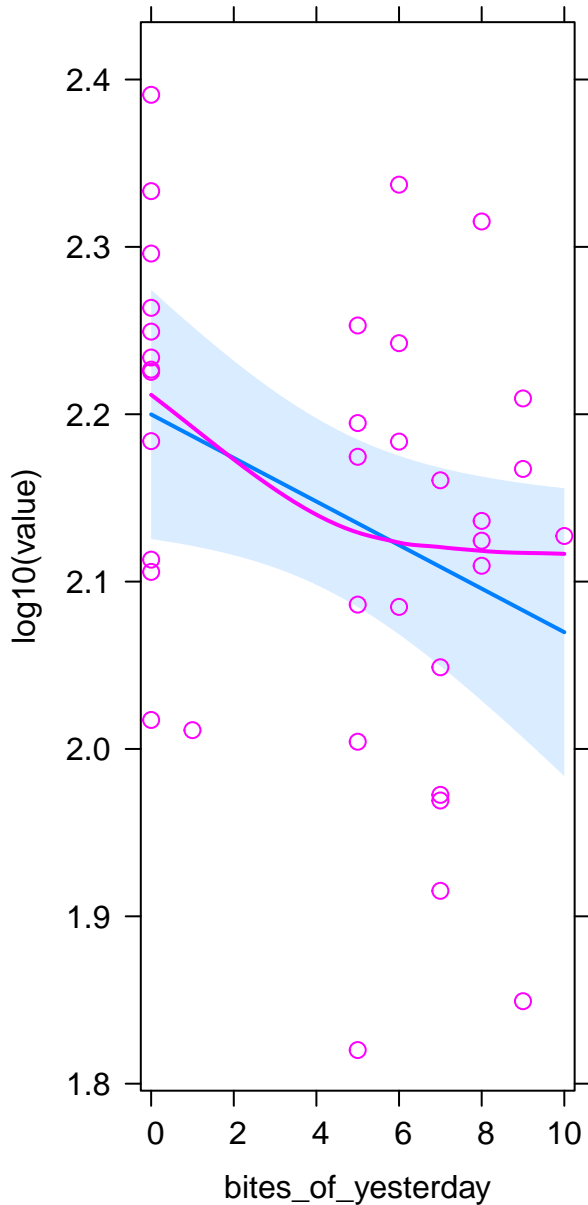
QQ plot residuals



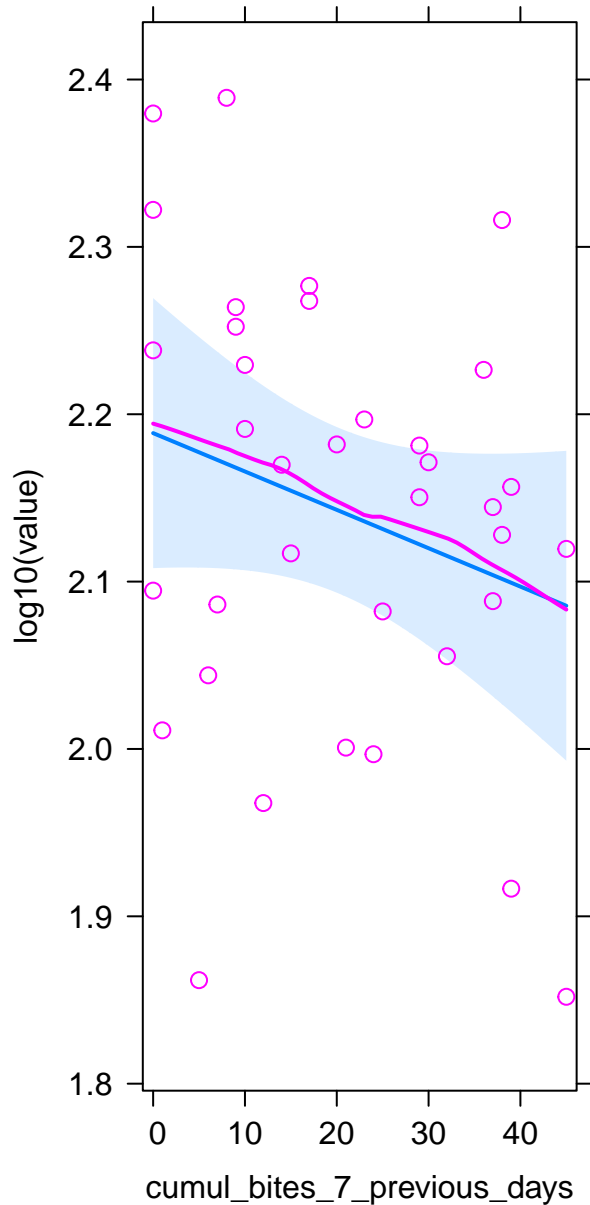
Residual vs. predicted No significant problems detected

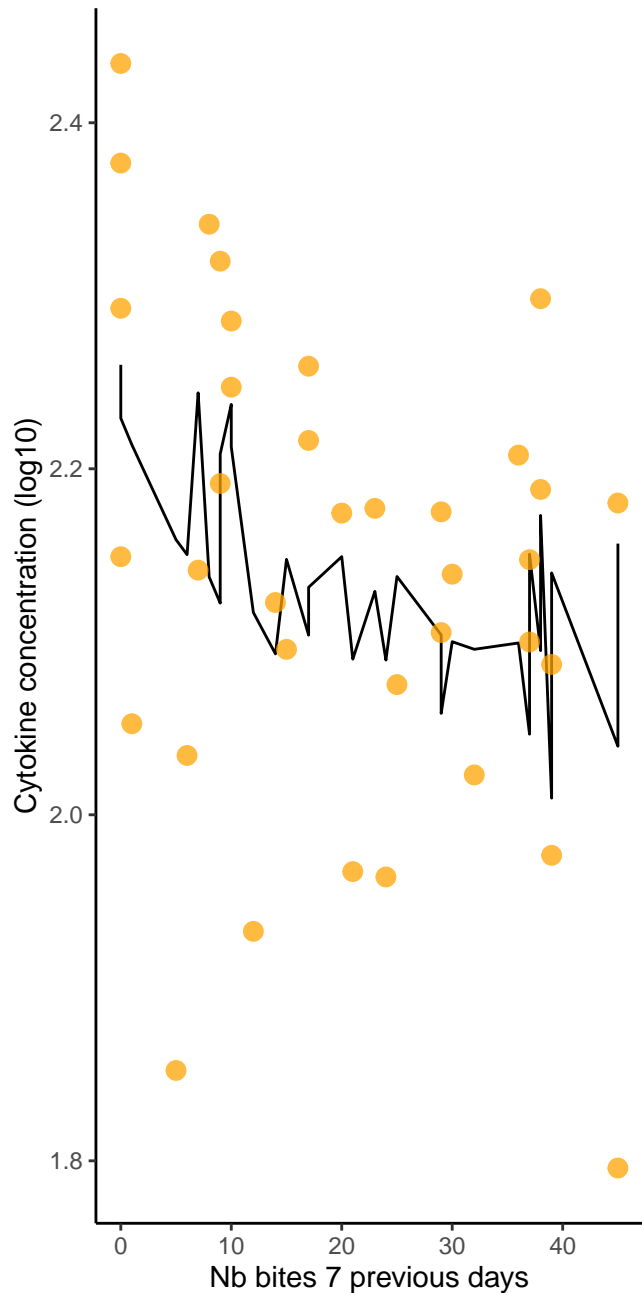
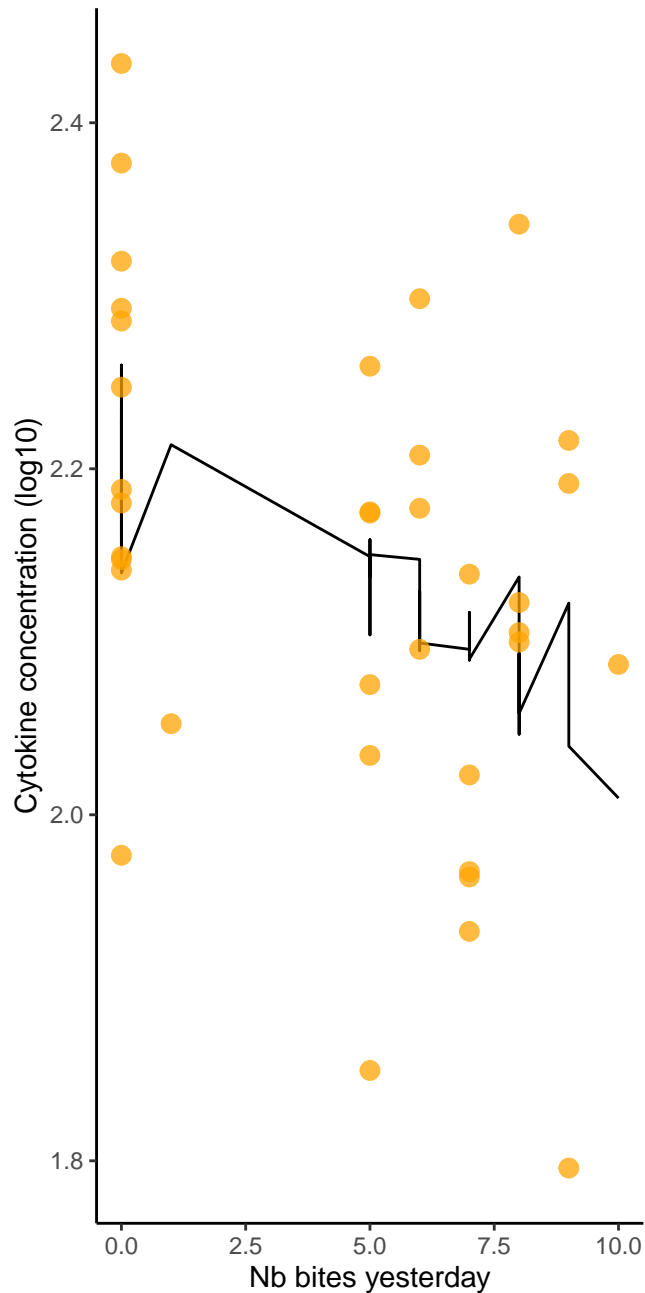


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.10 | [1.00, 3.77] | 1.05 | 0.91 | [0.26, 1.00] |
| cumul_bites_7_previous_days | 1.10 | [1.00, 3.77] | 1.05 | 0.91 | [0.26, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|-------|--------|----------|----------|
| -37.2 | -29.3 | 23.6 | -47.2 | 31 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|----------|-------------|-----------|----------|
| ID | (Intercept) | 0.0006812 | 0.0261 |
| Residual | | 0.0151788 | 0.1232 |

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0152

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|------------|
| (Intercept) | 2.246206 | 0.042597 | 52.73 | <2e-16 *** |
| bites_of_yesterday | -0.013015 | 0.006193 | -2.10 | 0.0356 * |
| cumul_bites_7_previous_days | -0.002293 | 0.001551 | -1.48 | 0.1393 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AICc [1] -35.2422

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

Eotaxin ERROR : Invalid grouping factor specification, ID

G . C S F

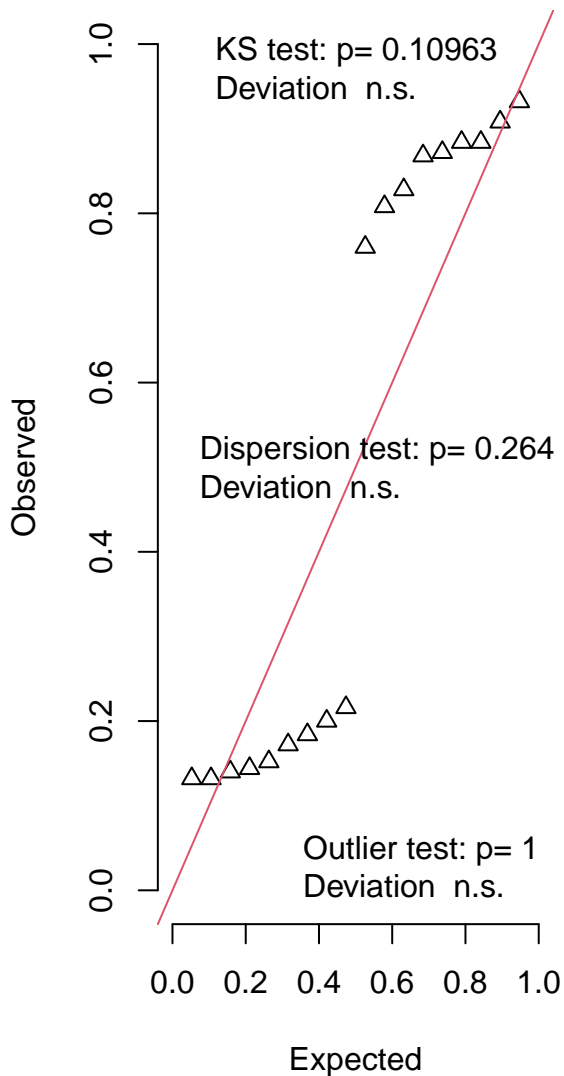
Bites in cyno

Nb excluded (LOD) : 18

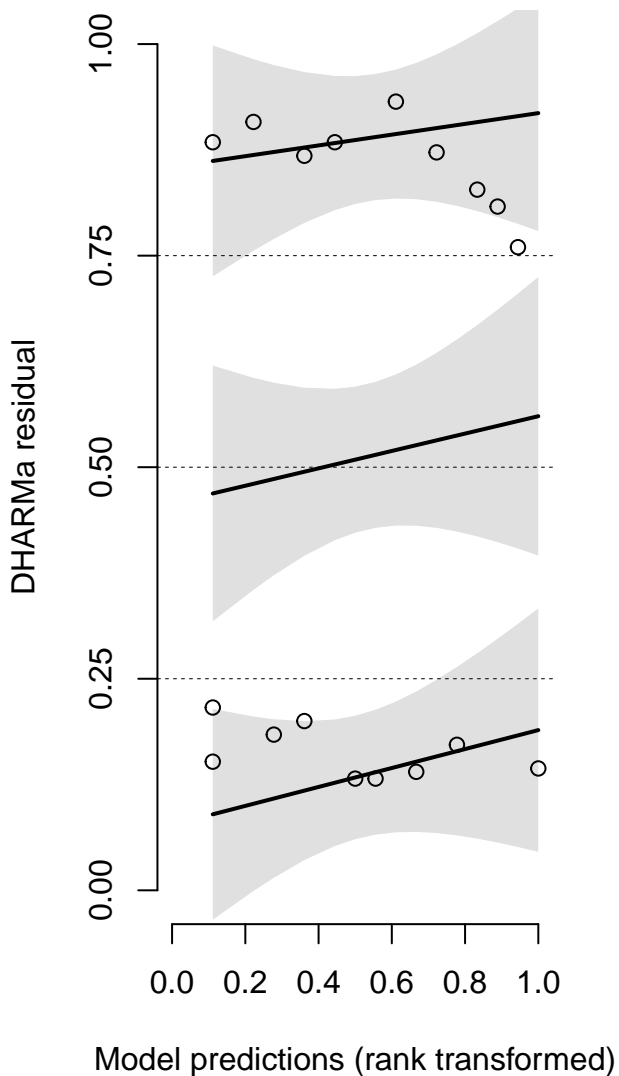
Nb remaining : 18

DHARMA residual

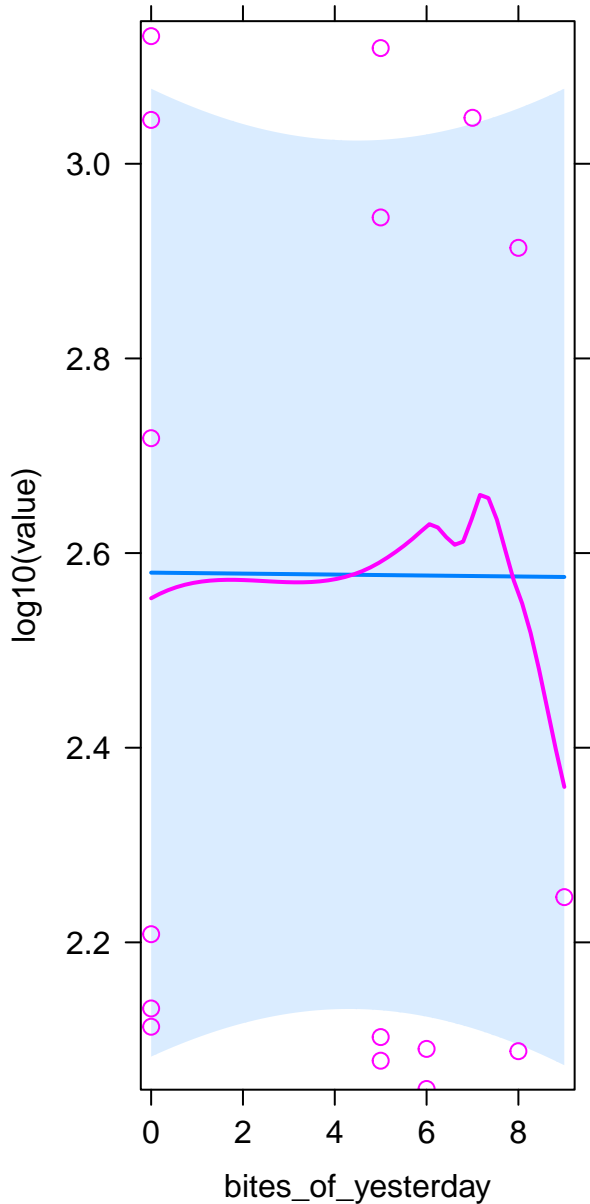
QQ plot residuals



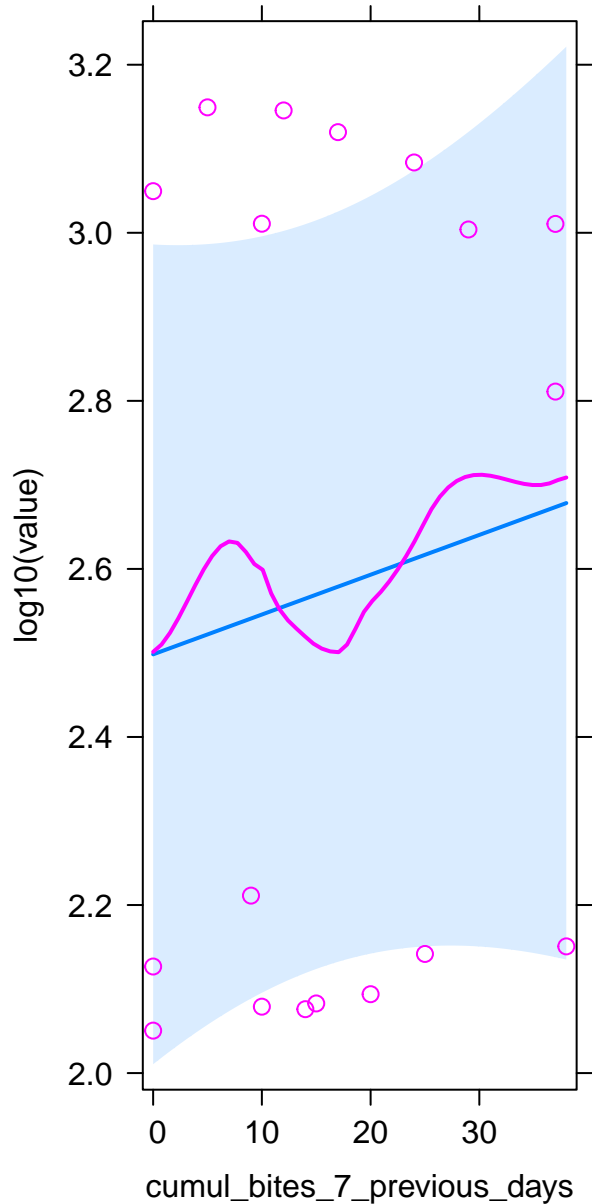
Residual vs. predicted No significant problems detected

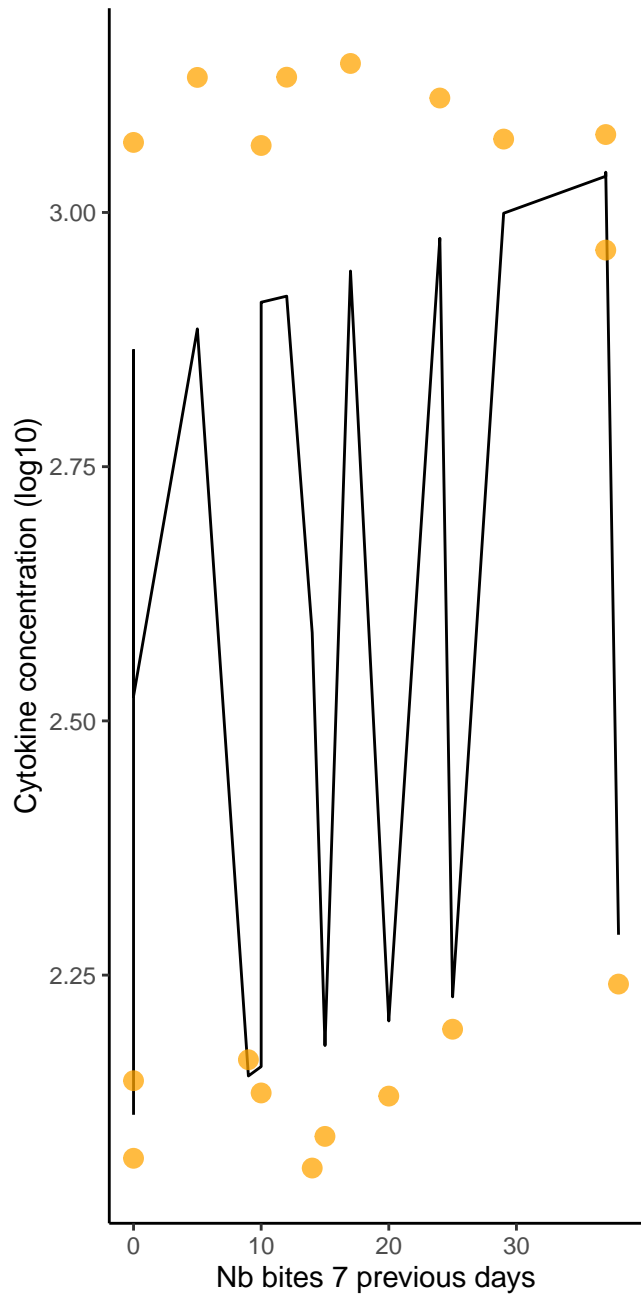
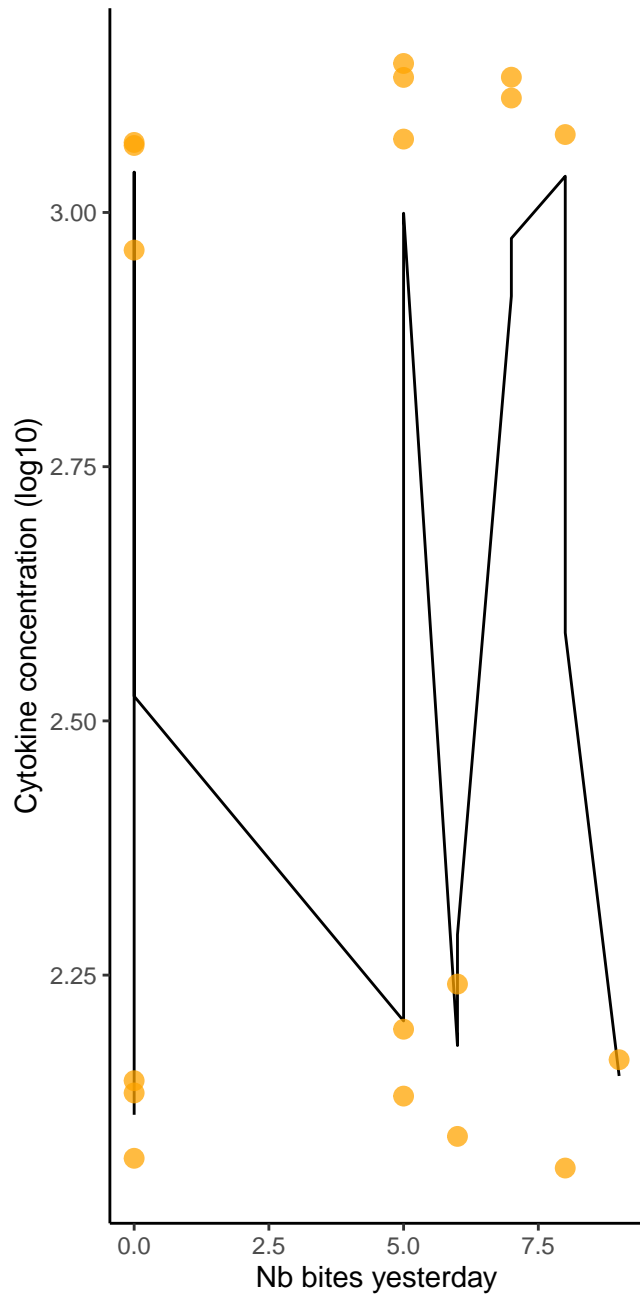


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.18 | [1.02, 2.89] | 1.08 | 0.85 | [0.35, 0.98] |
| cumul_bites_7_previous_days | 1.18 | [1.02, 2.89] | 1.08 | 0.85 | [0.35, 0.98] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|------|------|--------|----------|----------|
| 22.9 | 27.3 | -6.4 | 12.9 | 13 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|----------|-------------|----------|----------|
| ID | (Intercept) | 0.11126 | 0.3336 |
| Residual | | 0.08502 | 0.2916 |

Number of obs: 18, groups: ID, 3

Dispersion estimate for gaussian family (sigma^2): 0.085

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|------------|------------|---------|------------|
| (Intercept) | 2.5004138 | 0.2342894 | 10.672 | <2e-16 *** |
| bites_of_yesterday | -0.0004956 | 0.0234079 | -0.021 | 0.983 |
| cumul_bites_7_previous_days | 0.0047373 | 0.0062912 | 0.753 | 0.451 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```
AICc [1] 27.86686
```

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

G.CSF ERROR : Invalid grouping factor specification, ID

GM . CSF

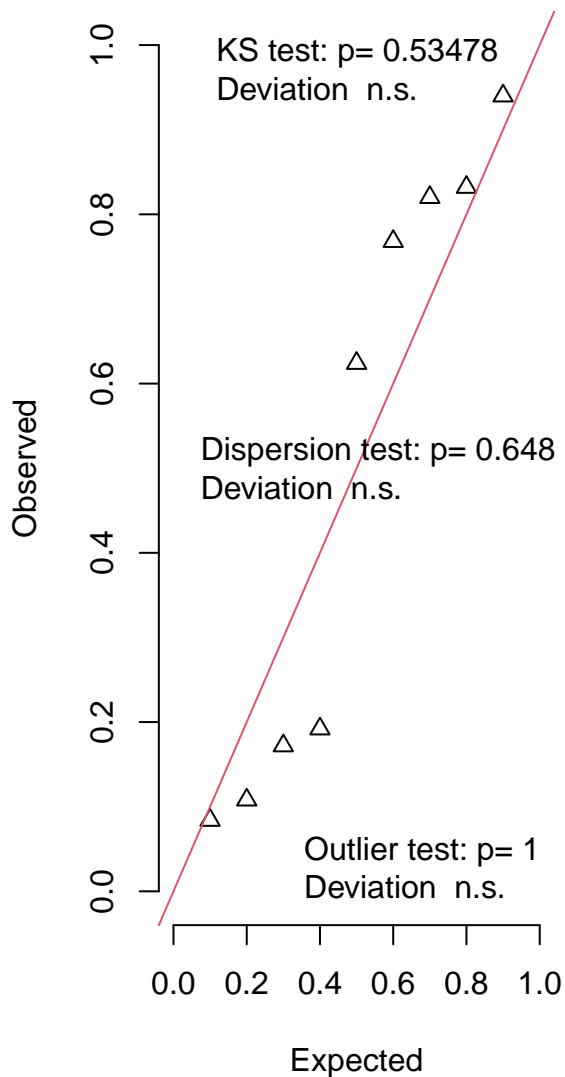
Bites in cyno

Nb excluded (LOD) : 27

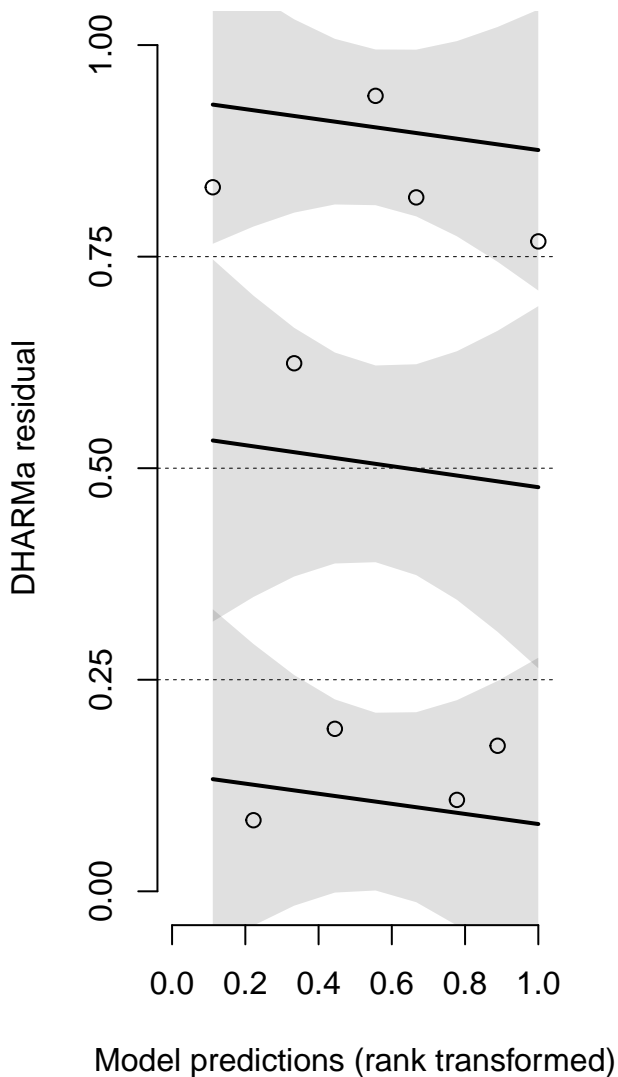
Nb remaining: 9

DHARMA residual

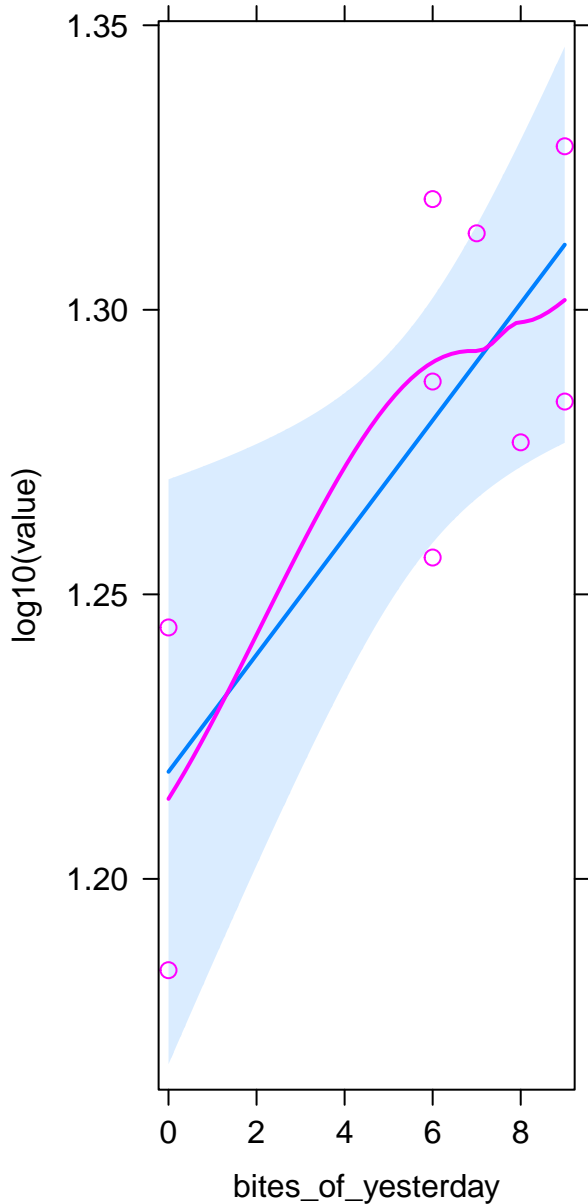
QQ plot residuals



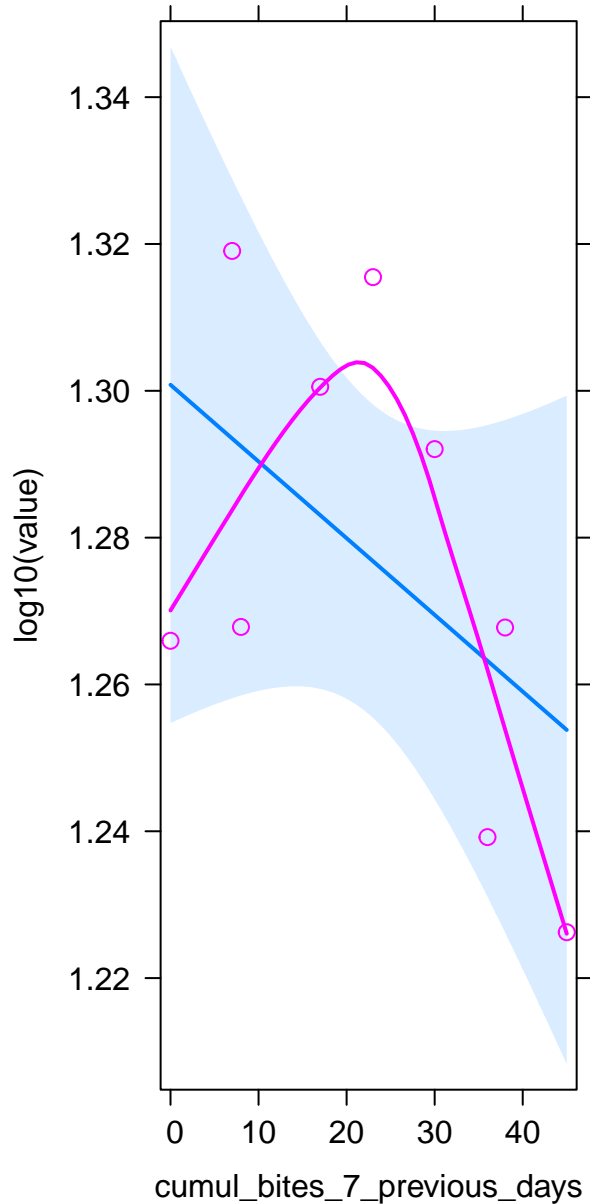
Residual vs. predicted No significant problems detected

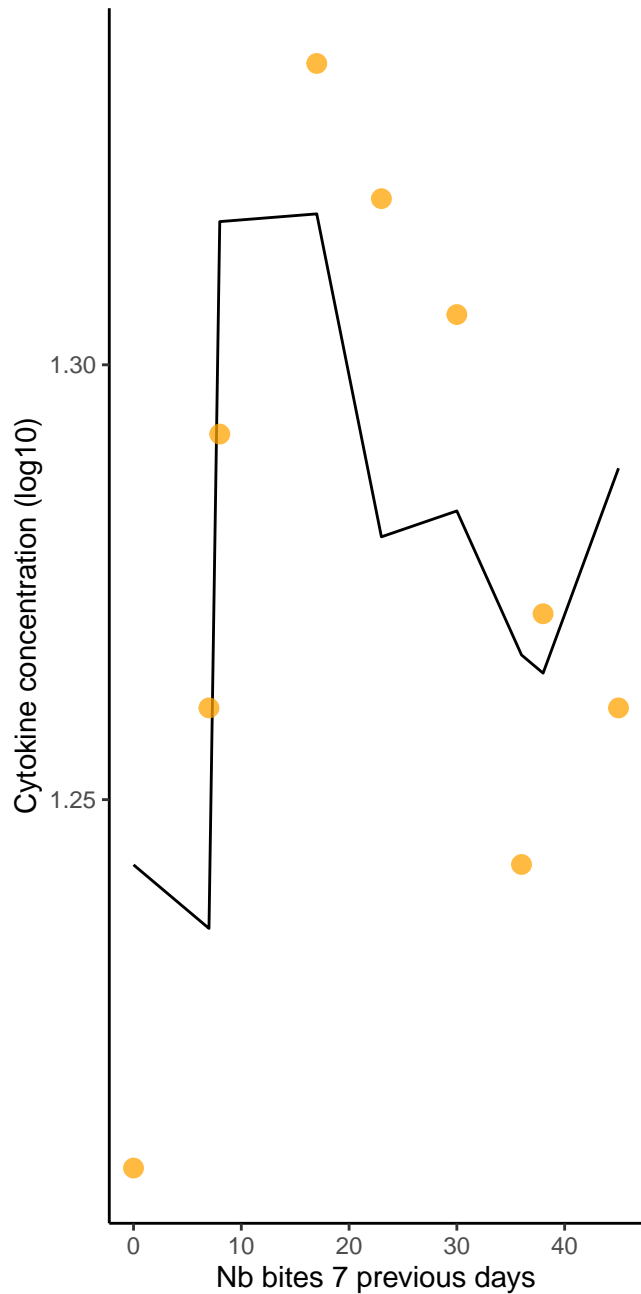
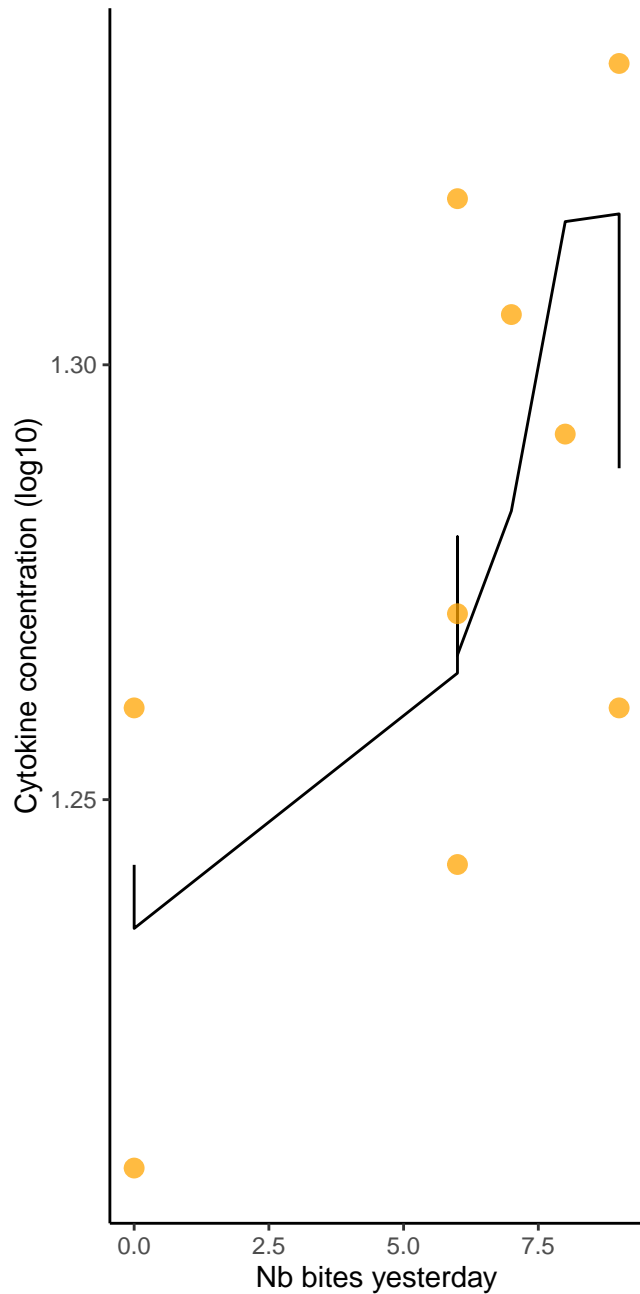


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.56 | [1.22, 2.46] | 1.25 | 0.64 | [0.41, 0.82] |
| cumul_bites_7_previous_days | 1.56 | [1.22, 2.46] | 1.25 | 0.64 | [0.41, 0.82] |

```

Family: gaussian ( identity )
Formula:      log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days +      (1 | ID)
Data: d_cyno

```

| AIC | BIC | logLik | deviance | df.resid |
|-----|-----|--------|----------|----------|
| -30 | -29 | 20 | -40 | 4 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|-----------|-----------|
| ID | (Intercept) | 2.809e-13 | 5.300e-07 |
| | Residual | 6.849e-04 | 2.617e-02 |

Number of obs: 9, groups: ID, 2

Dispersion estimate for gaussian family (sigma^2): 0.000685

Conditional model:

| | Estimate | Std. Error | z | value | Pr(> z) |
|-----------------------------|------------|------------|-------|---------|----------|
| (Intercept) | 1.2425032 | 0.0183710 | 67.63 | < 2e-16 | *** |
| bites_of_yesterday | 0.0102904 | 0.0033717 | 3.05 | 0.00227 | ** |
| cumul_bites_7_previous_days | -0.0010447 | 0.0007361 | -1.42 | 0.15587 | |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```
AICc [1] -10.03514
```


Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

GM.CSF ERROR : Invalid grouping factor specification, ID

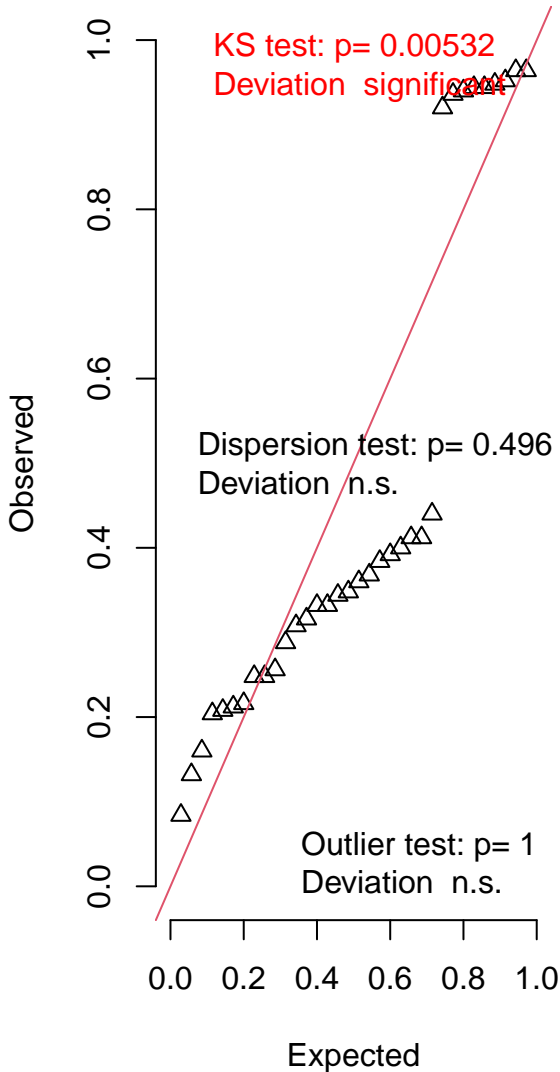
HGF

Bites in cyno

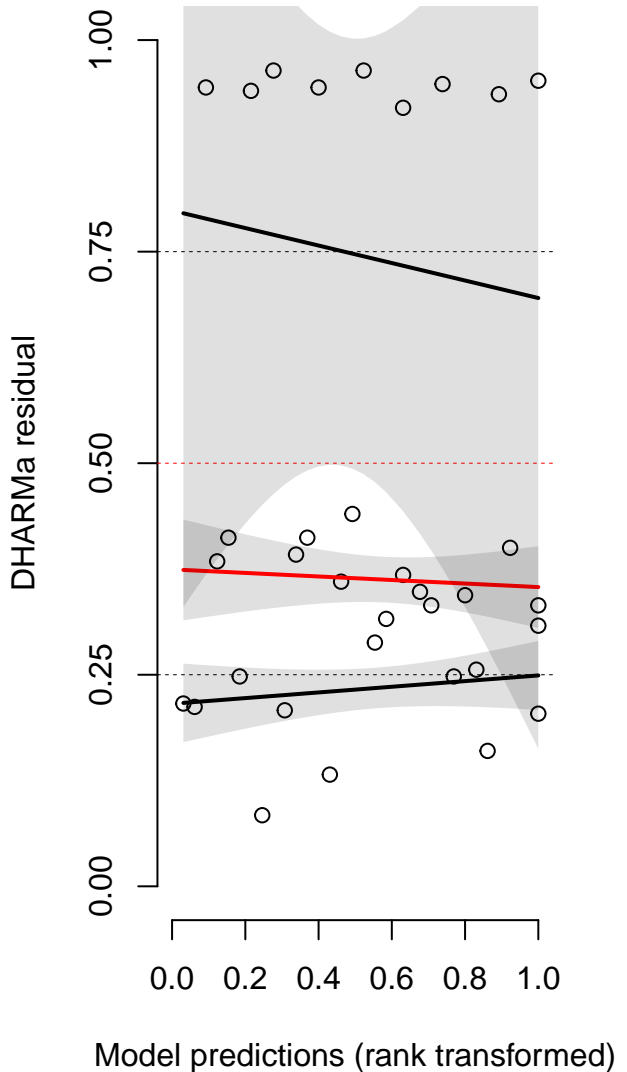
Nb excluded (LOD) : 2
Nb remaining: 34

DHARMA residual

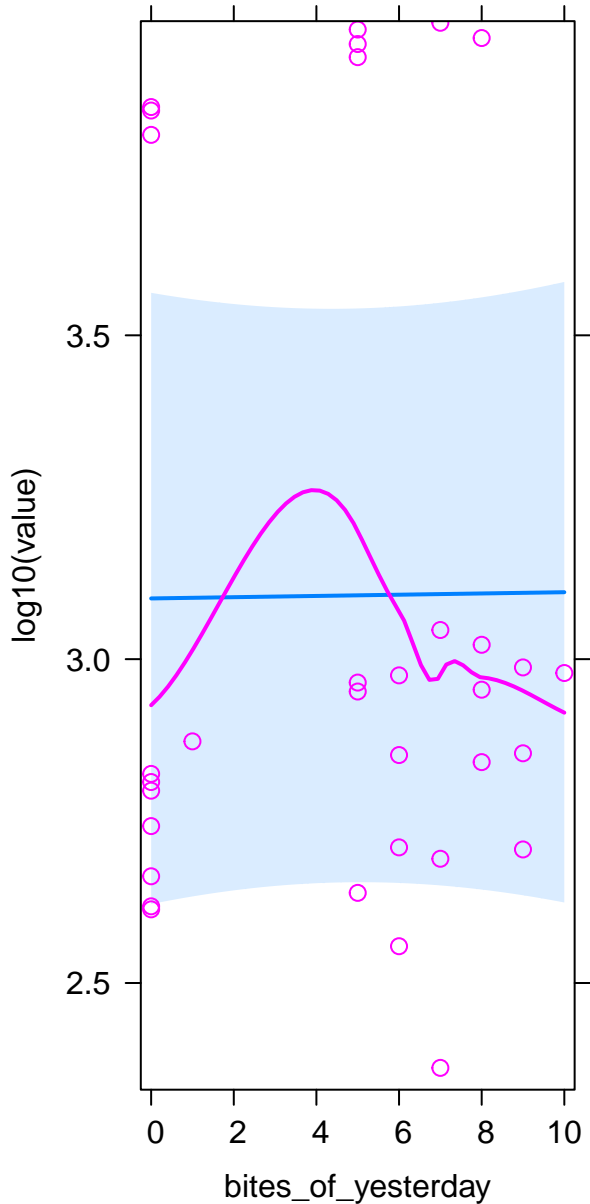
QQ plot residuals



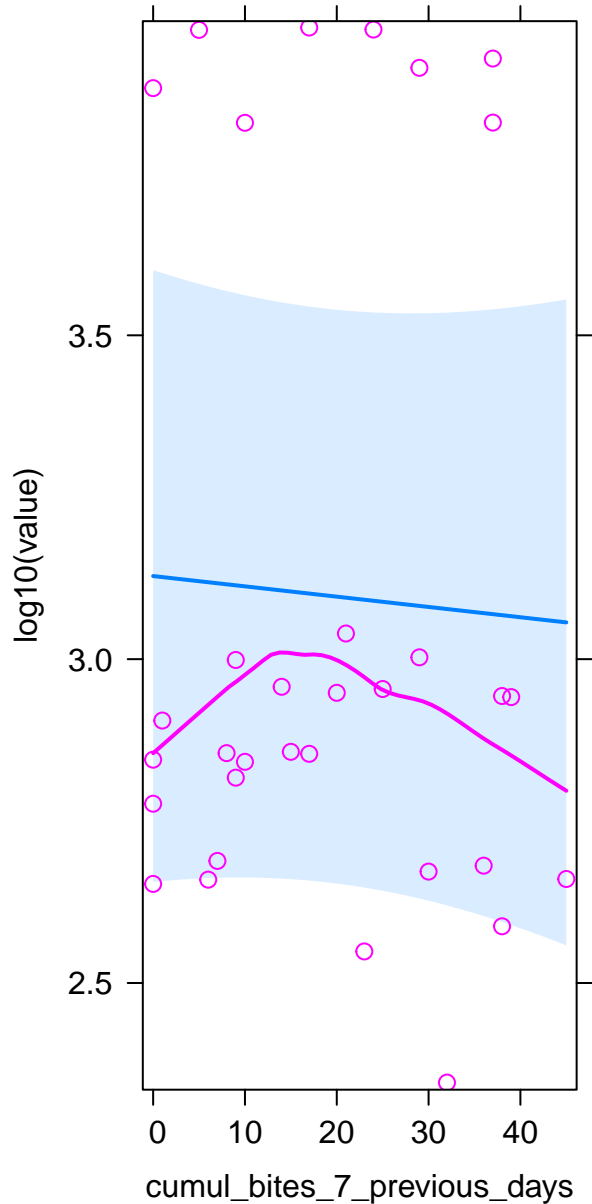
Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test significant

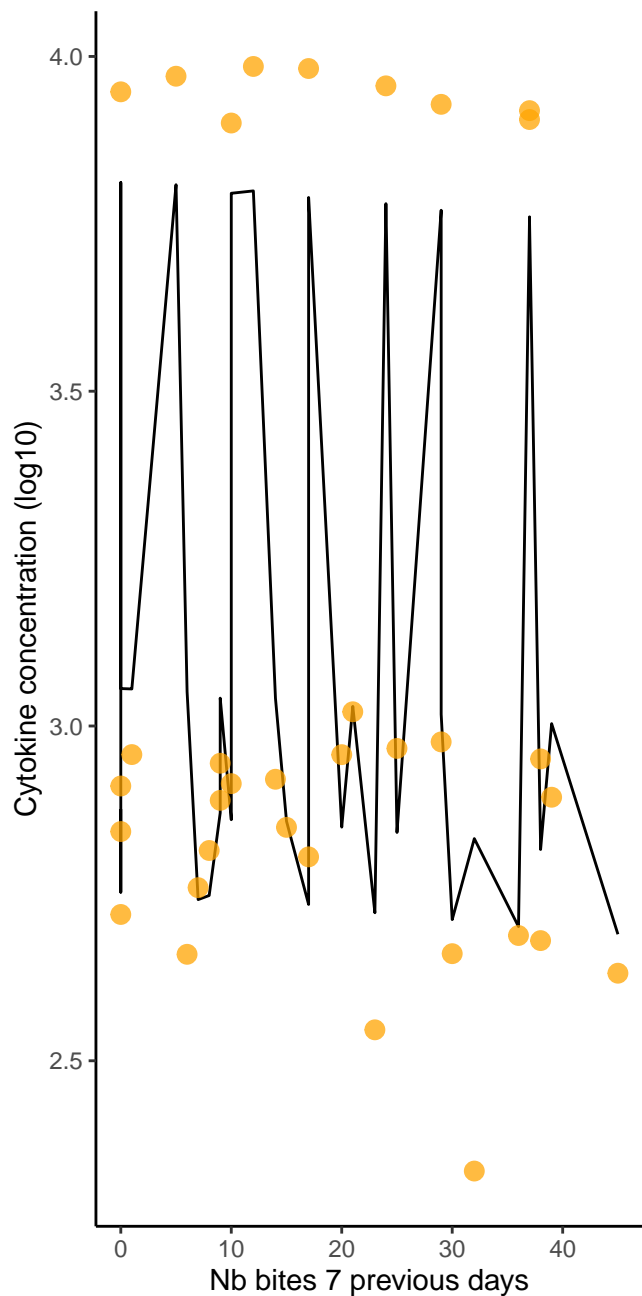
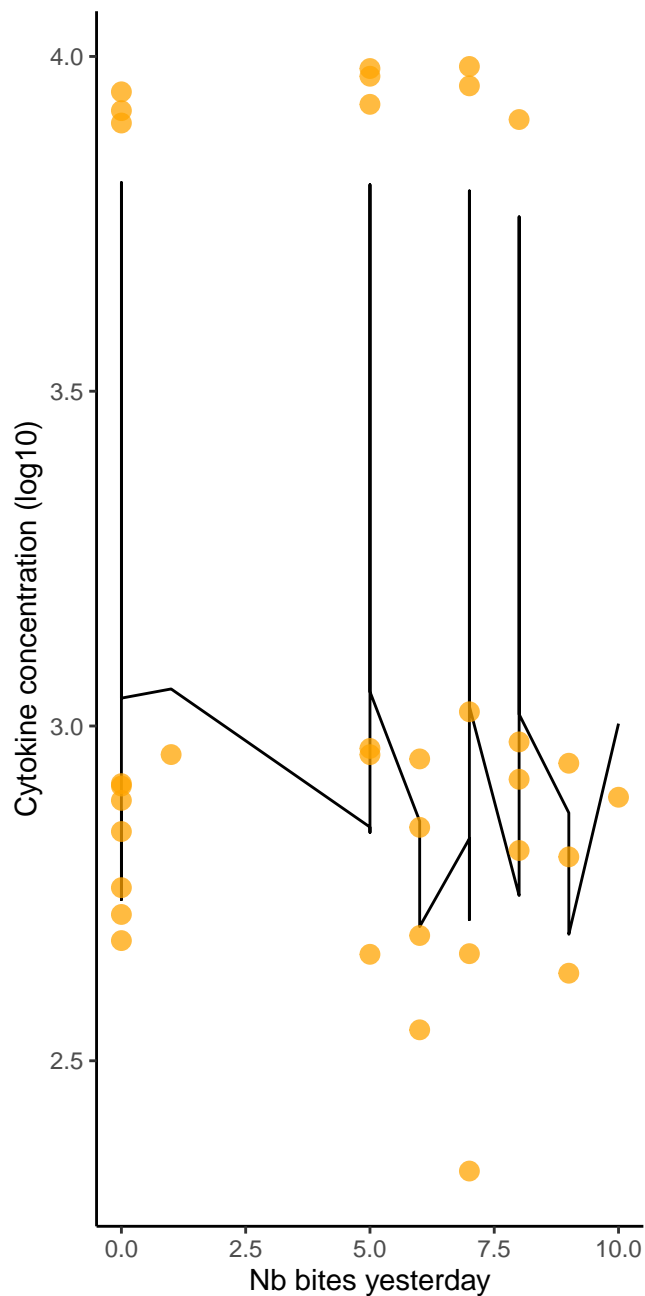


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.32 | [1.08, 2.31] | 1.15 | 0.76 | [0.43, 0.93] |
| cumul_bites_7_previous_days | 1.32 | [1.08, 2.31] | 1.15 | 0.76 | [0.43, 0.93] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|------|------|--------|----------|----------|
| 34.0 | 41.6 | -12.0 | 24.0 | 29 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|----------|----------|
| ID | (Intercept) | 0.17872 | 0.4228 |
| | Residual | 0.08373 | 0.2894 |

Number of obs: 34, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0837

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|------------|------------|---------|------------|
| (Intercept) | 3.1238108 | 0.2318199 | 13.475 | <2e-16 *** |
| bites_of_yesterday | 0.0009607 | 0.0169538 | 0.057 | 0.955 |
| cumul_bites_7_previous_days | -0.0015898 | 0.0042900 | -0.371 | 0.711 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```
AICc [1] 36.10523
```

Bites in squirrel

Nb excluded (LOD) : 20
Nb remaining: 0

HGF ERROR : Invalid grouping factor specification, ID

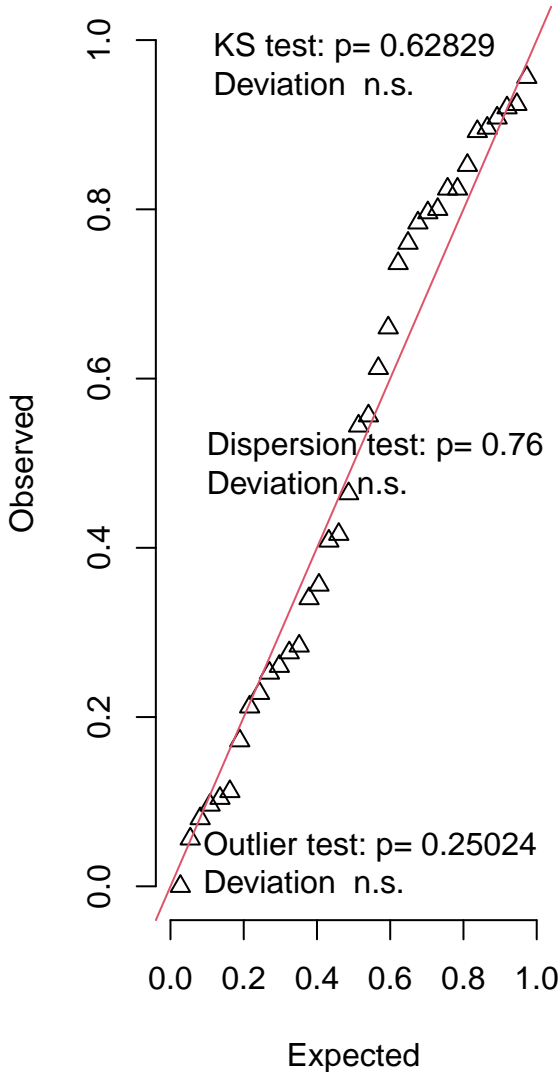
I . TAC

Bites in cyno

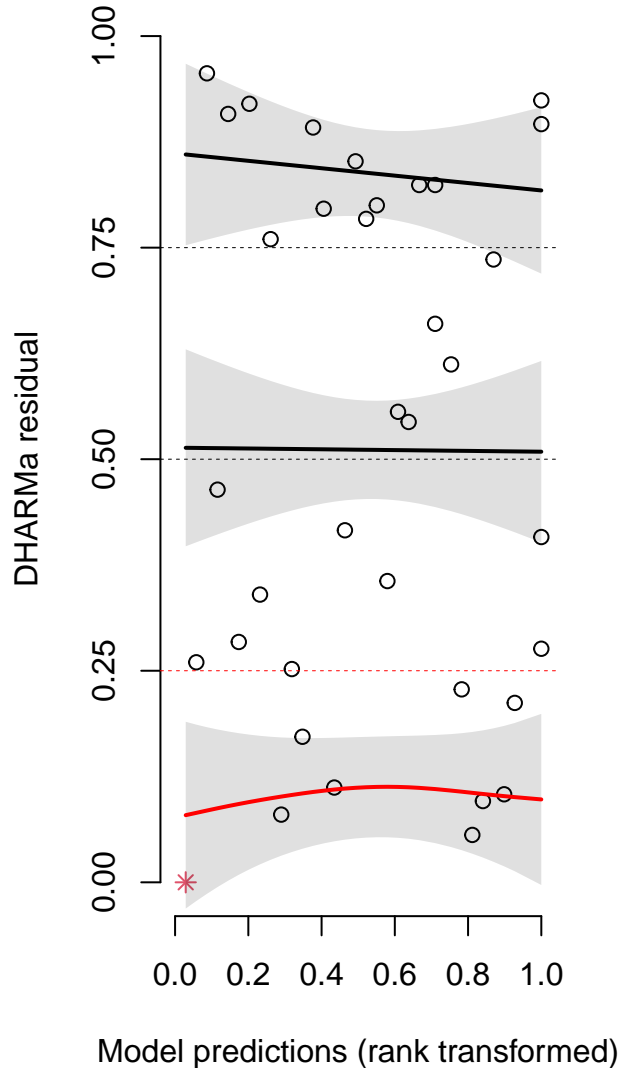
Nb excluded (LOD) : 0
Nb remaining: 36

DHARMA residual

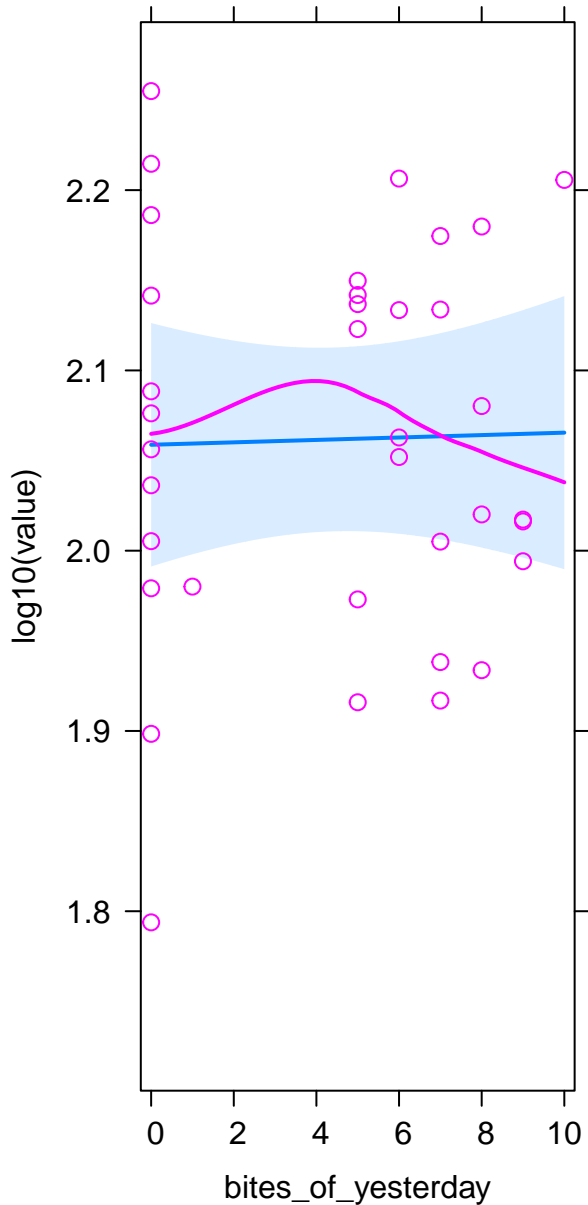
QQ plot residuals



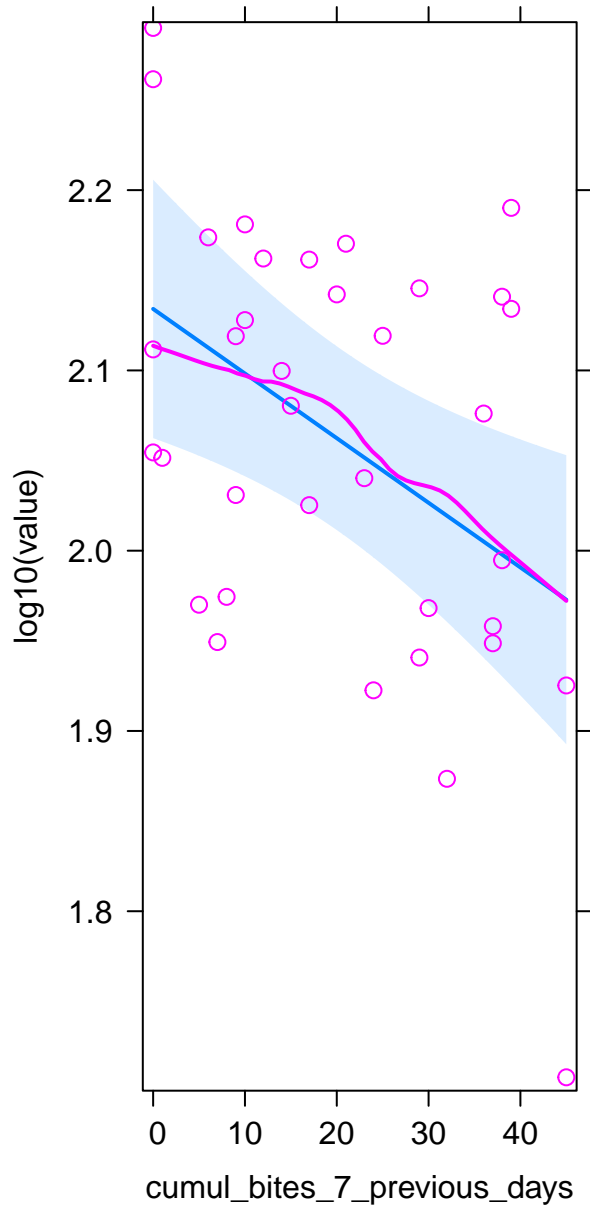
Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test significant

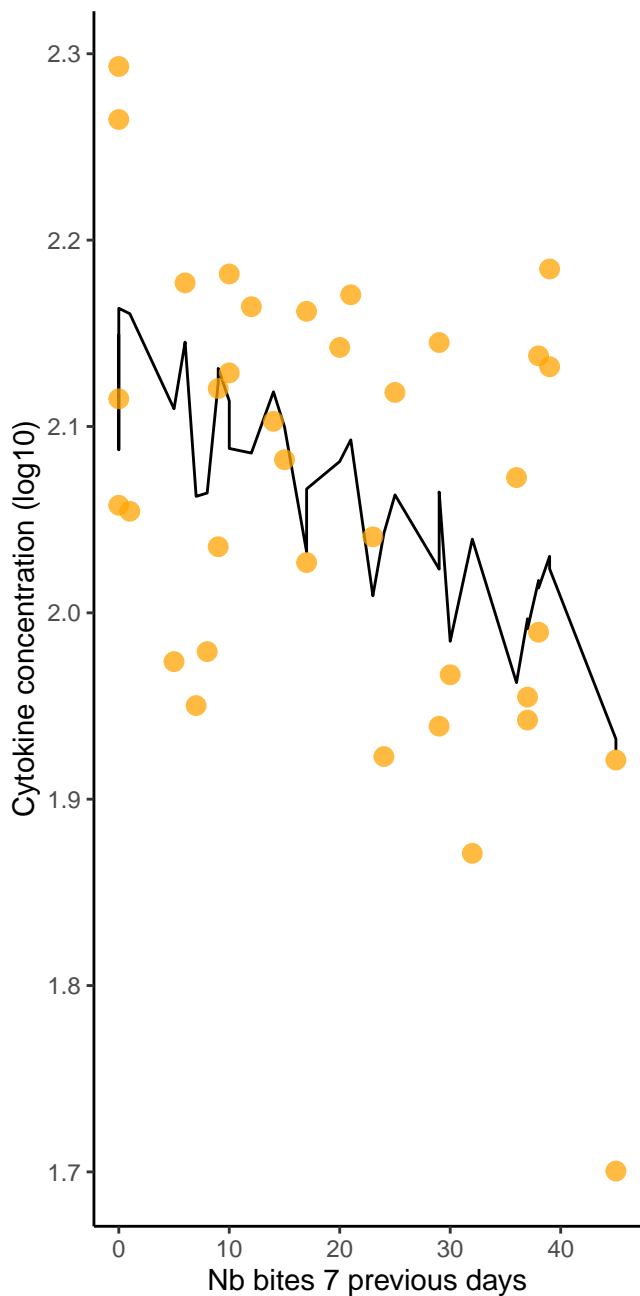
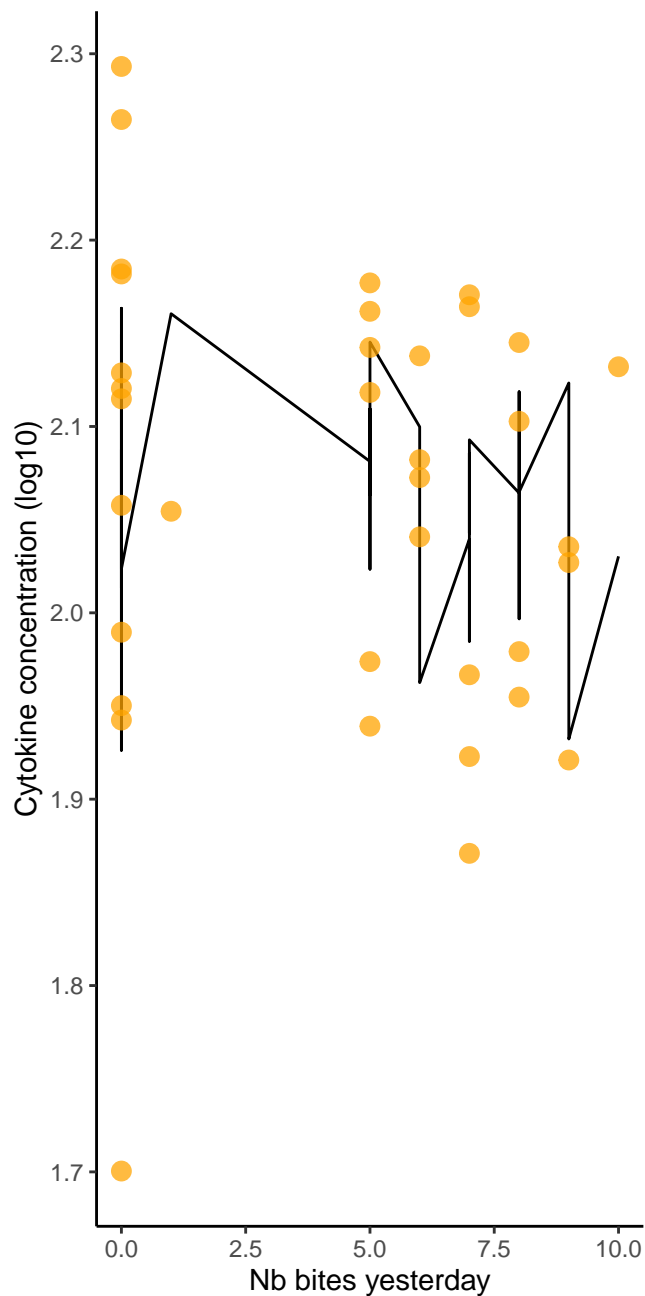


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.09 | [1.00, 3.84] | 1.05 | 0.91 | [0.26, 1.00] |
| cumul_bites_7_previous_days | 1.09 | [1.00, 3.84] | 1.05 | 0.91 | [0.26, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|-------|--------|----------|----------|
| -51.7 | -43.8 | 30.8 | -61.7 | 31 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|----------|----------|
| ID | (Intercept) | 0.001446 | 0.03802 |
| | Residual | 0.009598 | 0.09797 |

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0096

Conditional model:

| | Estimate | Std. Error | z | value | Pr(> z) |
|-----------------------------|------------|------------|-------|---------|----------|
| (Intercept) | 2.1311508 | 0.0374068 | 56.97 | < 2e-16 | *** |
| bites_of_yesterday | 0.0006719 | 0.0049310 | 0.14 | 0.89162 | |
| cumul_bites_7_previous_days | -0.0035852 | 0.0012269 | -2.92 | 0.00348 | ** |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

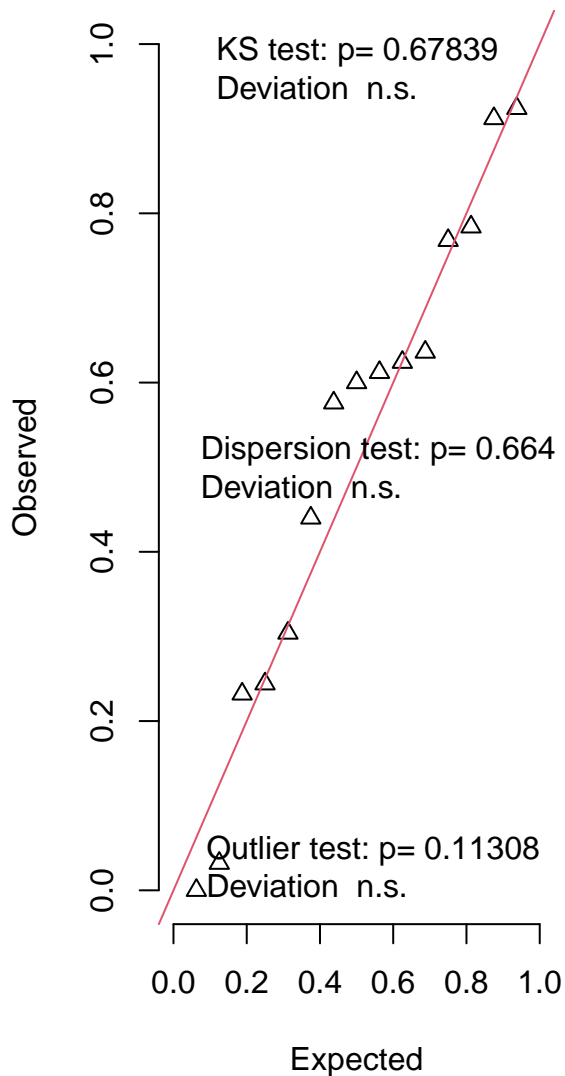
AICc [1] -49.67122

Bites in squirrel

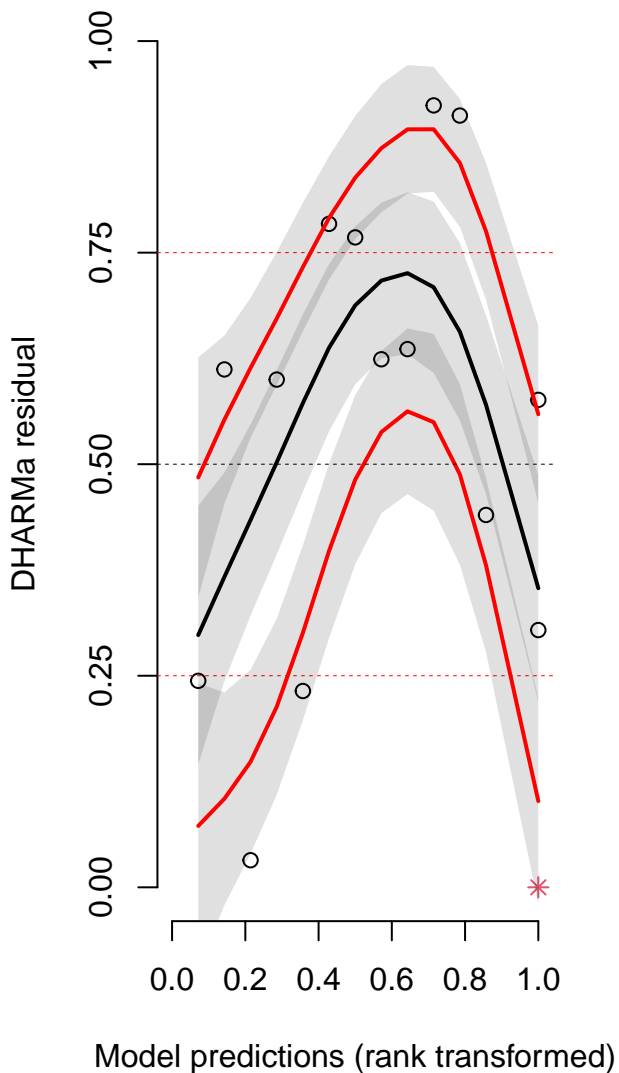
Nb excluded (LOD) : 5
Nb remaining: 15

DHARMA residual

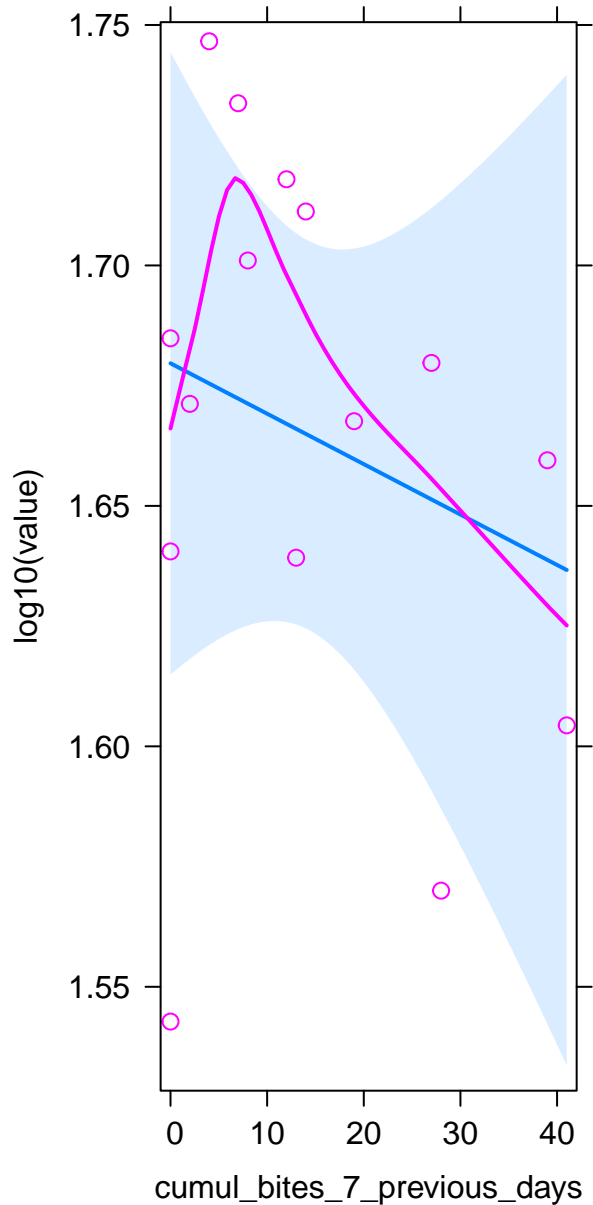
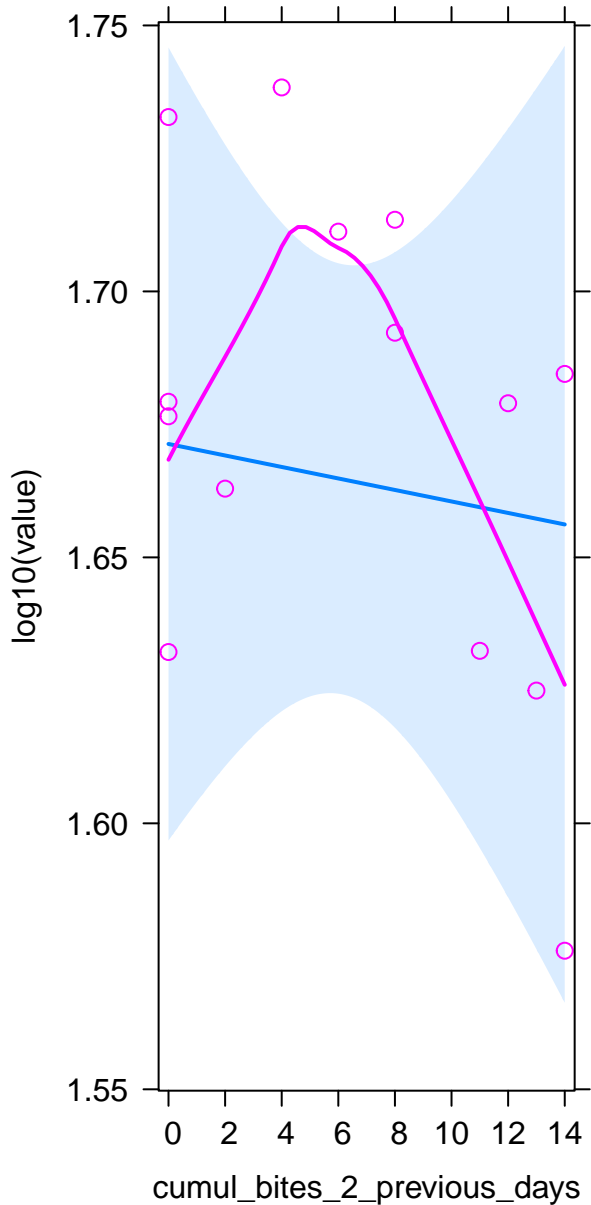
QQ plot residuals

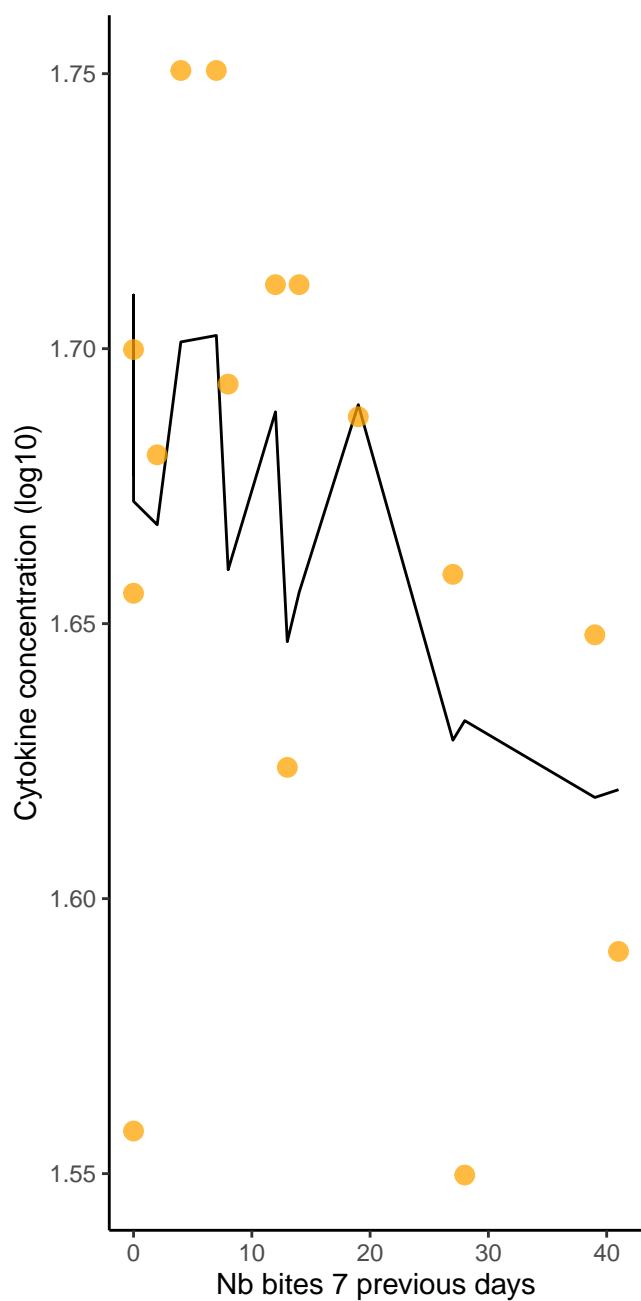
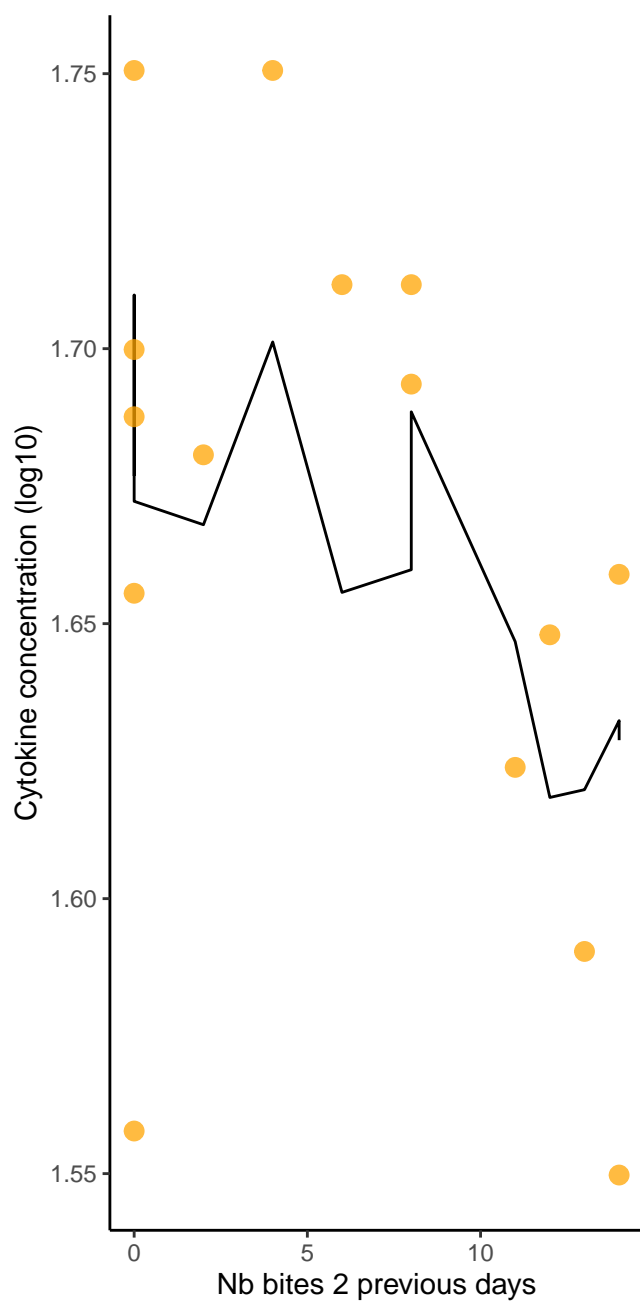


Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test significant



cumul_bites_2_previous_days effect plot cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| cumul_bites_2_previous_days | 2.38 | [1.59, 4.20] | 1.54 | 0.42 | [0.24, 0.63] |
| cumul_bites_7_previous_days | 2.38 | [1.59, 4.20] | 1.54 | 0.42 | [0.24, 0.63] |

```
Family: gaussian ( identity )
Formula:      log10(value) ~ cumul_bites_2_previous_days + cumul_bites_7_previous_days +      (1 | ID)
Data: d_sq

      AIC      BIC logLik deviance df.resid
    -35.2    -31.7   22.6    -45.2       10

Random effects:

Conditional model:
Groups   Name      Variance Std.Dev.
ID       (Intercept) 0.0005368 0.02317
Residual              0.0024840 0.04984
Number of obs: 15, groups:  ID, 3

Dispersion estimate for gaussian family (sigma^2): 0.00248

Conditional model:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)    1.686274   0.026339  64.02  <2e-16 ***
cumul_bites_2_previous_days -0.001081   0.004686  -0.23   0.818
cumul_bites_7_previous_days -0.001048   0.001626  -0.64   0.519
---
Signif. codes:  0 '***'... 0.001 '**'... 0.01 '*'... 0.05 '.'... 0.1 '...' 1
```

AICc [1] -28.53565

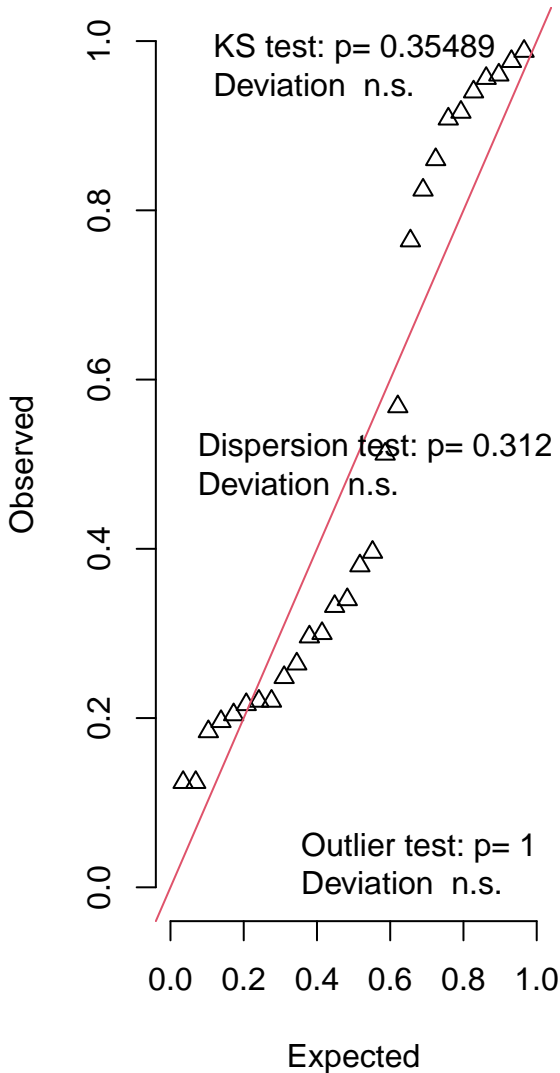
IFN.g

Bites in cyno

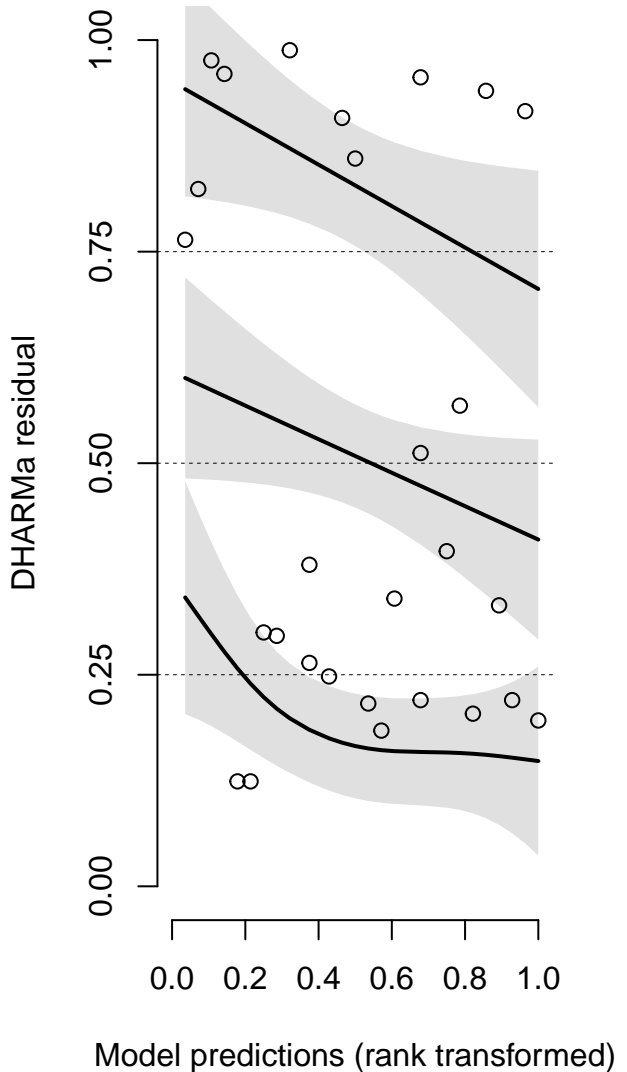
Nb excluded (LOD) : 8
Nb remaining: 28

DHARMA residual

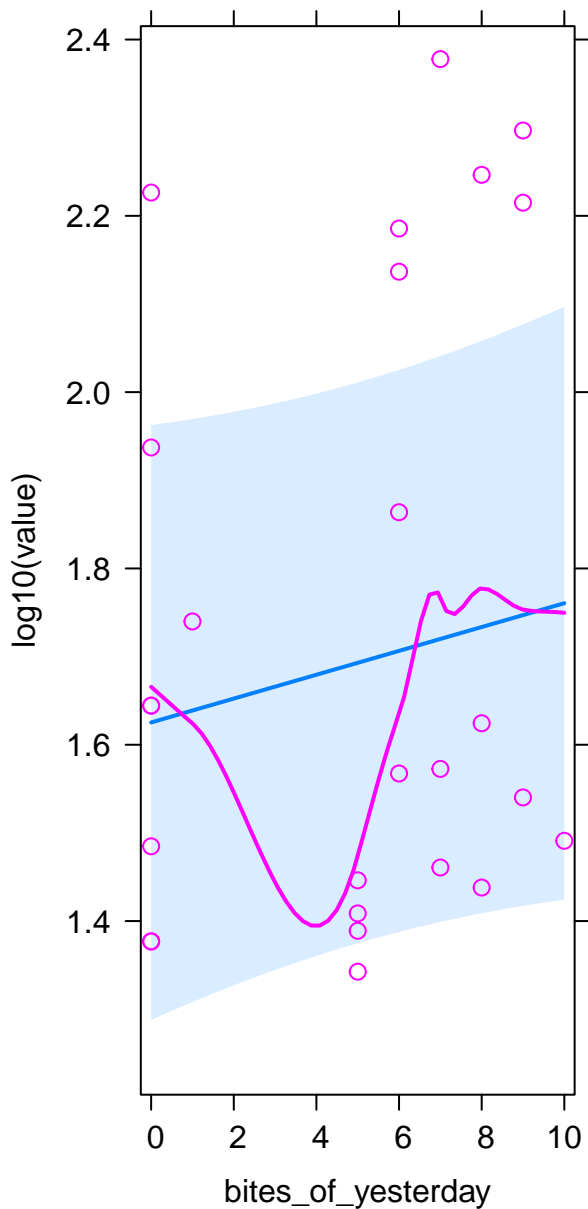
QQ plot residuals



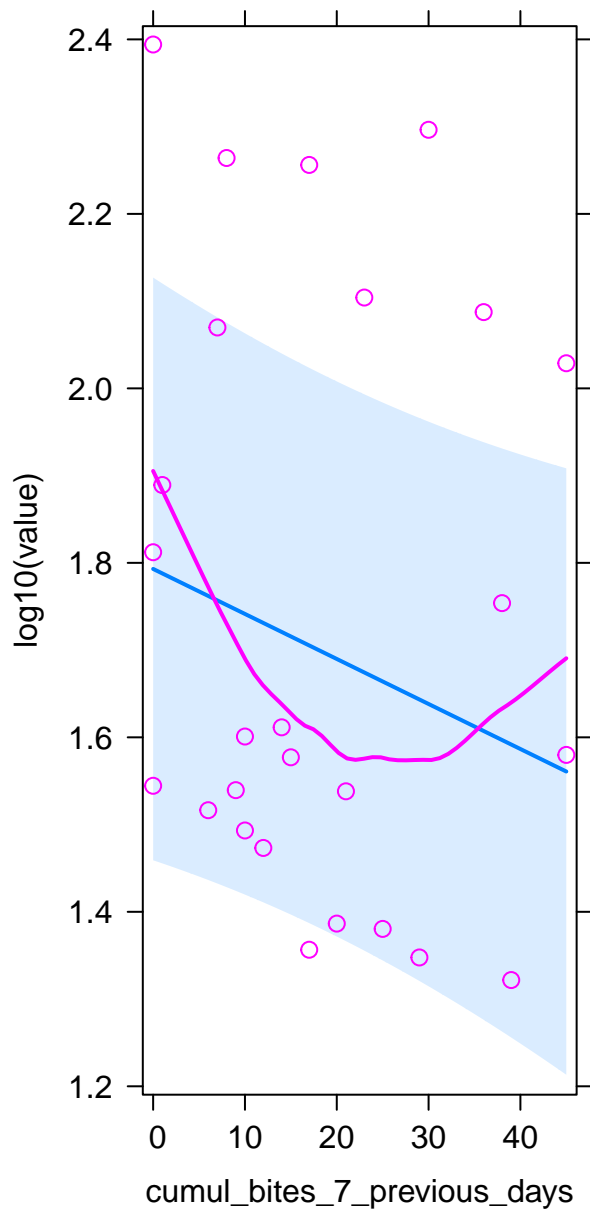
Residual vs. predicted No significant problems detected

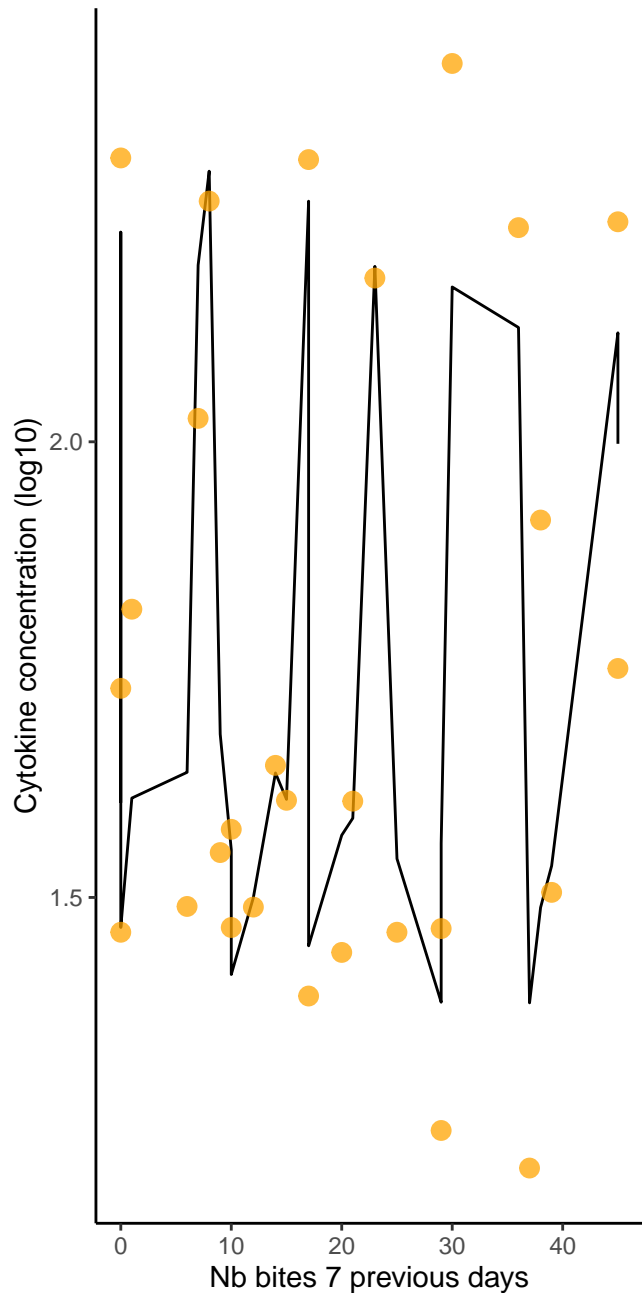
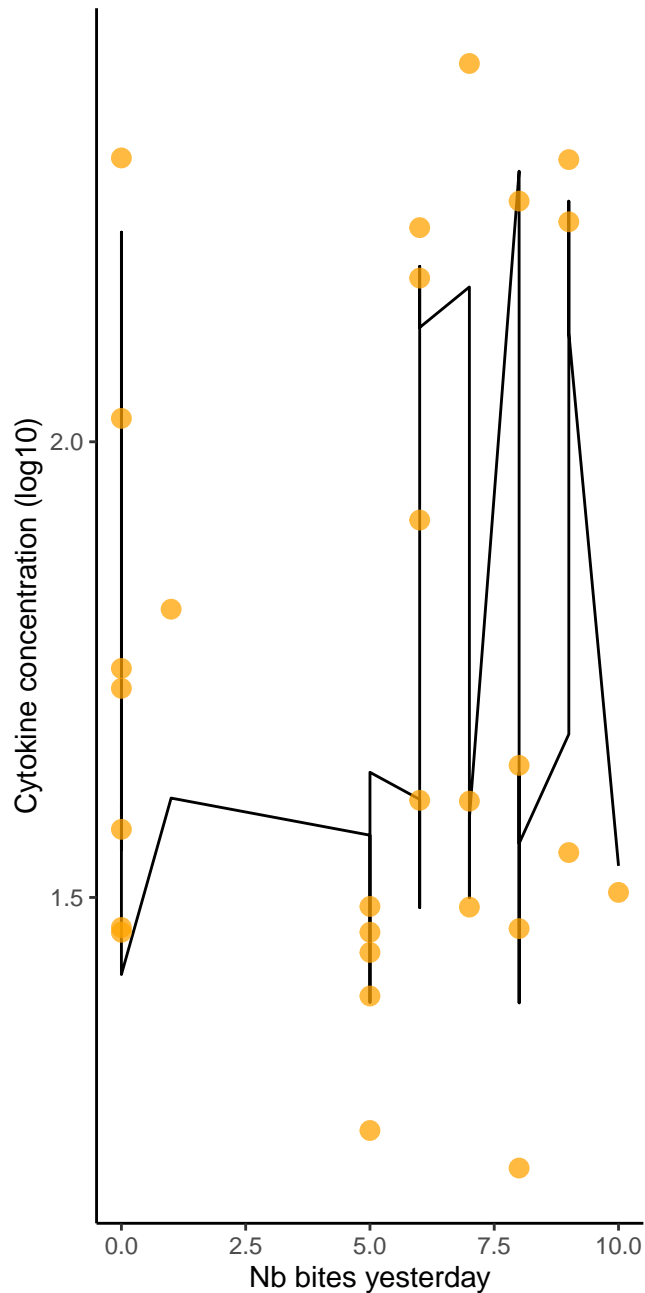


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.32 | [1.07, 2.41] | 1.15 | 0.76 | [0.41, 0.93] |
| cumul_bites_7_previous_days | 1.32 | [1.07, 2.41] | 1.15 | 0.76 | [0.41, 0.93] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-----|-----|--------|----------|----------|
| 0.2 | 6.9 | 4.9 | -9.8 | 23 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|----------|-------------|----------|----------|
| ID | (Intercept) | 0.09160 | 0.3027 |
| Residual | | 0.02605 | 0.1614 |

Number of obs: 28, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0261

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|------------|
| (Intercept) | 1.725387 | 0.163060 | 10.581 | <2e-16 *** |
| bites_of_yesterday | 0.013528 | 0.010776 | 1.255 | 0.2093 |
| cumul_bites_7_previous_days | -0.005161 | 0.002609 | -1.978 | 0.0479 * |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1


```
AICc [1] 2.974509
```

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IFN.g ERROR : Invalid grouping factor specification, ID

IL.10

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

IL.10 ERROR : Invalid grouping factor specification, ID

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.10 ERROR : Invalid grouping factor specification, ID

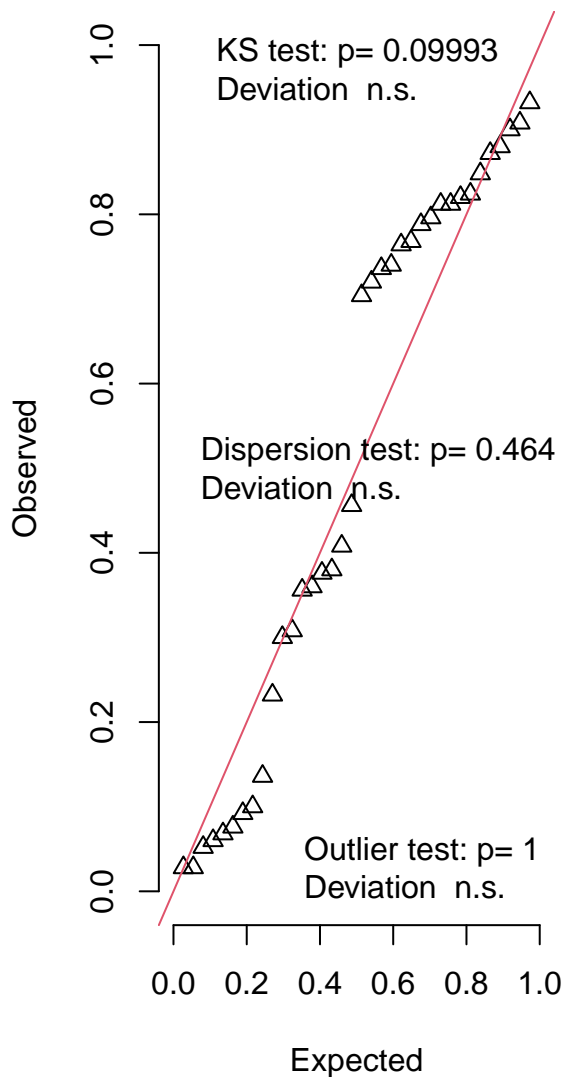
IL.12

Bites in cyno

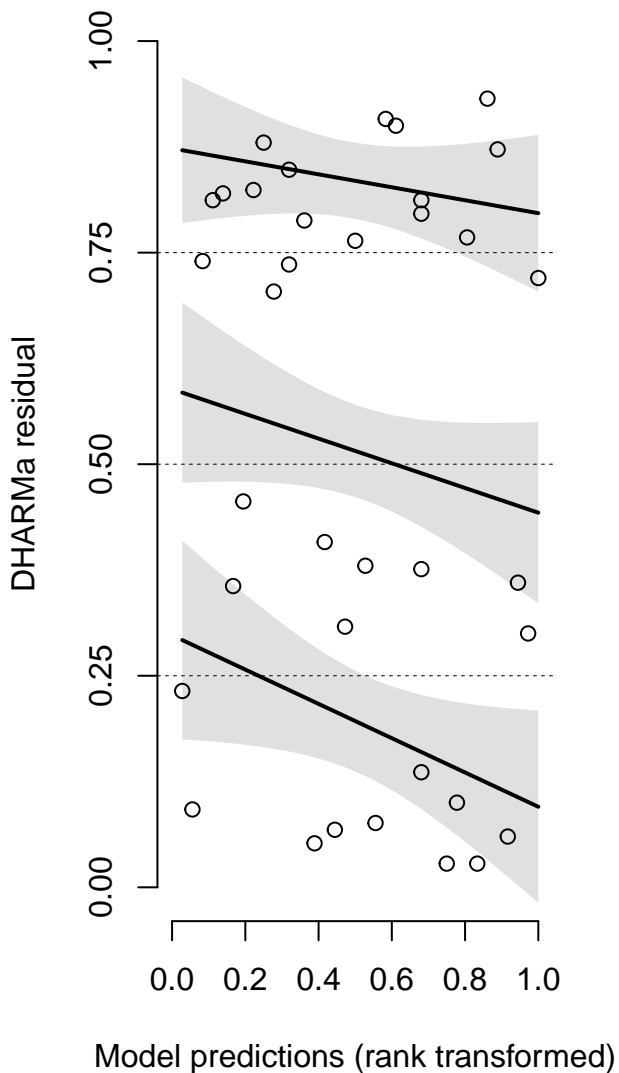
Nb excluded (LOD) : 0
Nb remaining: 36

DHARMA residual

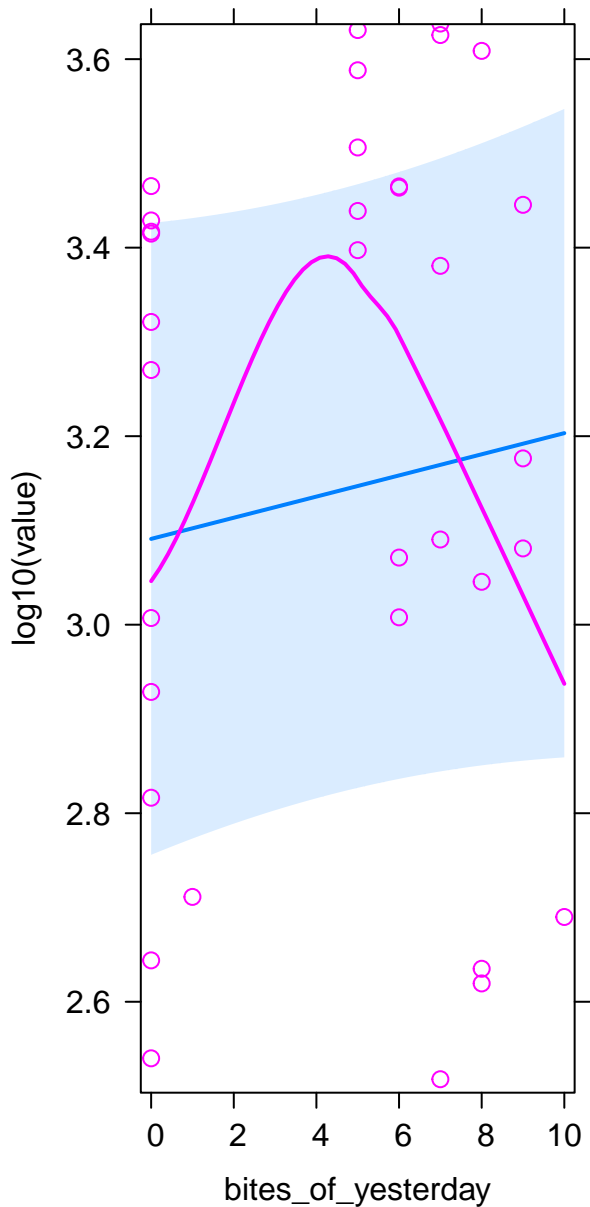
QQ plot residuals



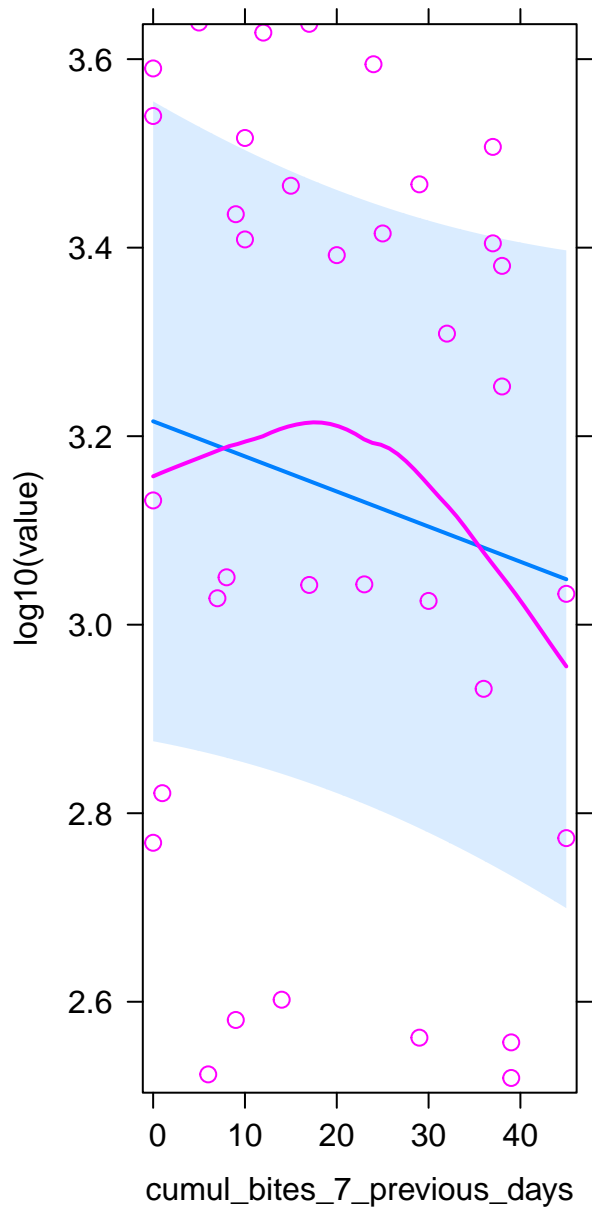
Residual vs. predicted No significant problems detected

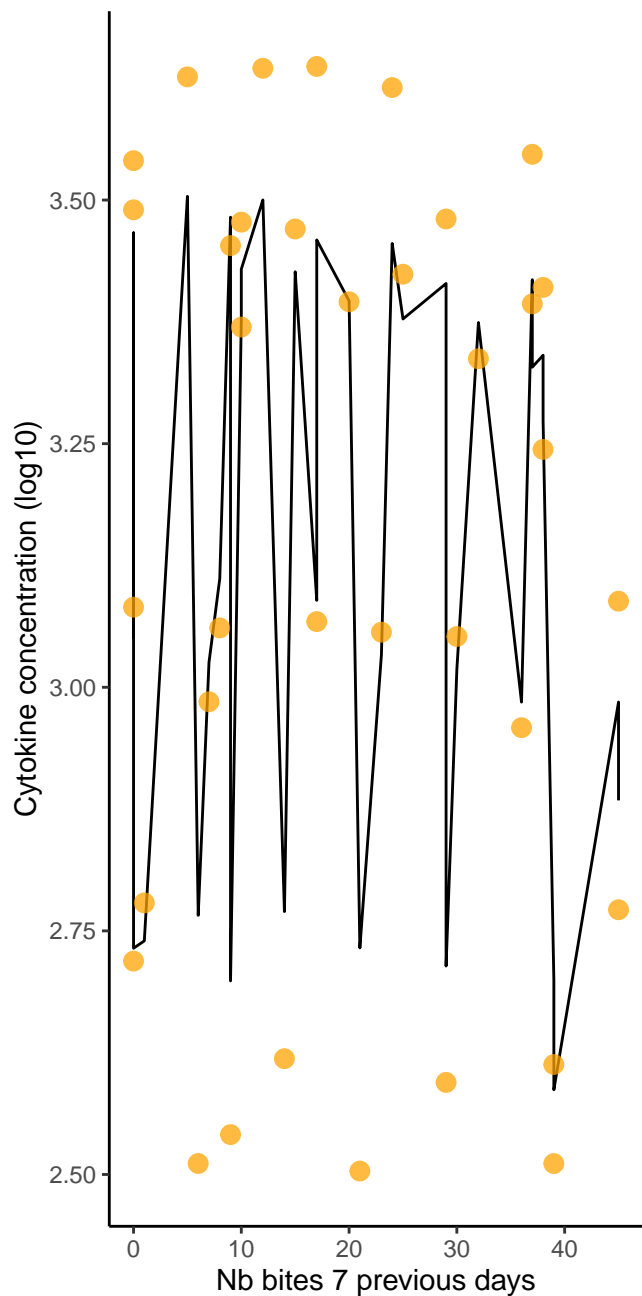
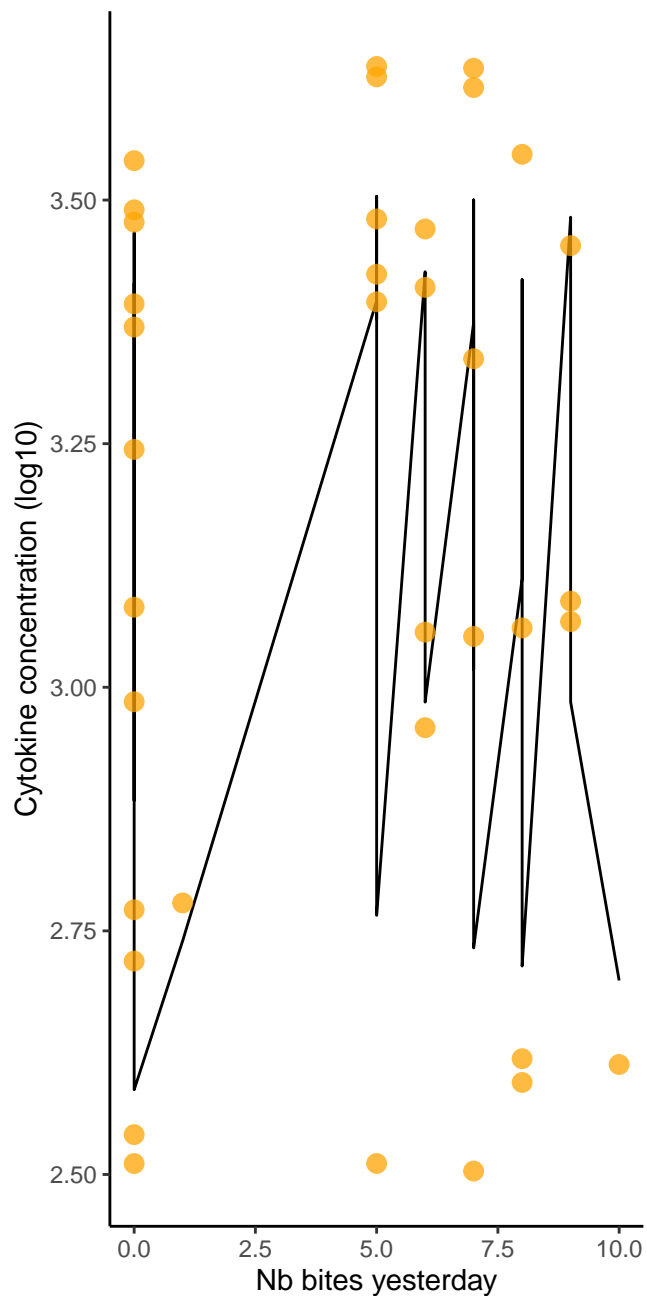


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.10 | [1.00, 3.71] | 1.05 | 0.91 | [0.27, 1.00] |
| cumul_bites_7_previous_days | 1.10 | [1.00, 3.71] | 1.05 | 0.91 | [0.27, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|------|------|--------|----------|----------|
| 15.1 | 23.0 | -2.5 | 5.1 | 31 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|----------|----------|
| ID | (Intercept) | 0.09349 | 0.3058 |
| | Residual | 0.04881 | 0.2209 |

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0488

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|------------|
| (Intercept) | 3.166258 | 0.169180 | 18.715 | <2e-16 *** |
| bites_of_yesterday | 0.011219 | 0.011126 | 1.008 | 0.313 |
| cumul_bites_7_previous_days | -0.003725 | 0.002761 | -1.349 | 0.177 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```
AICc [1] 17.06667
```

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.12 ERROR : Invalid grouping factor specification, ID

IL.15

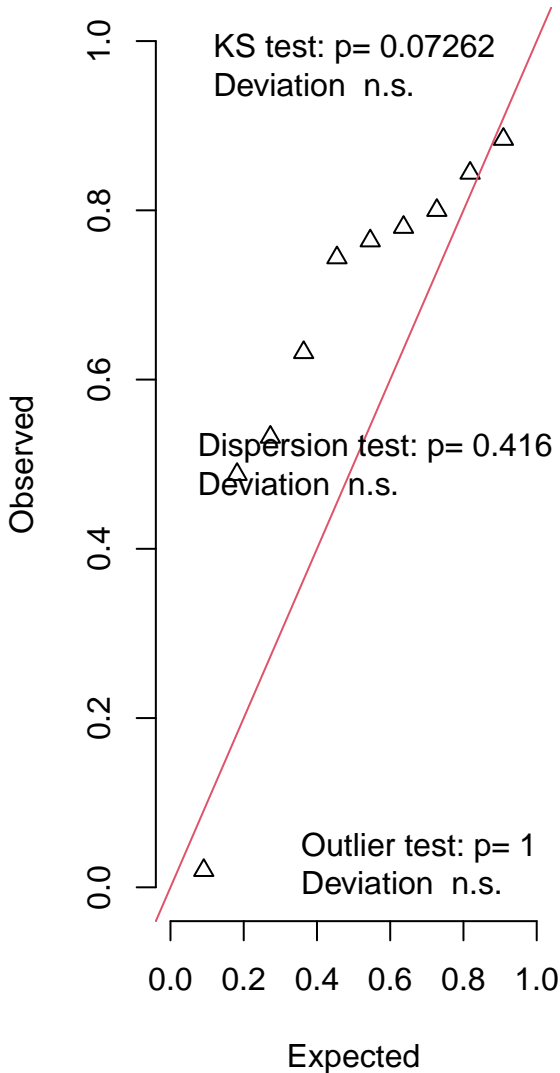
Bites in cyno

Nb excluded (LOD) : 26

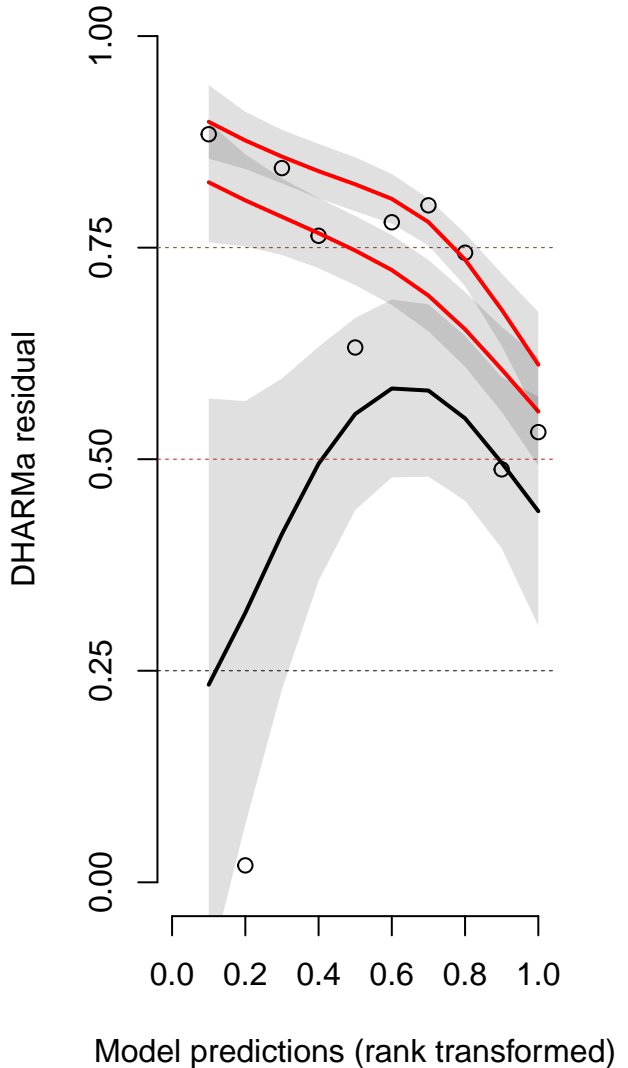
Nb remaining: 10

DHARMA residual

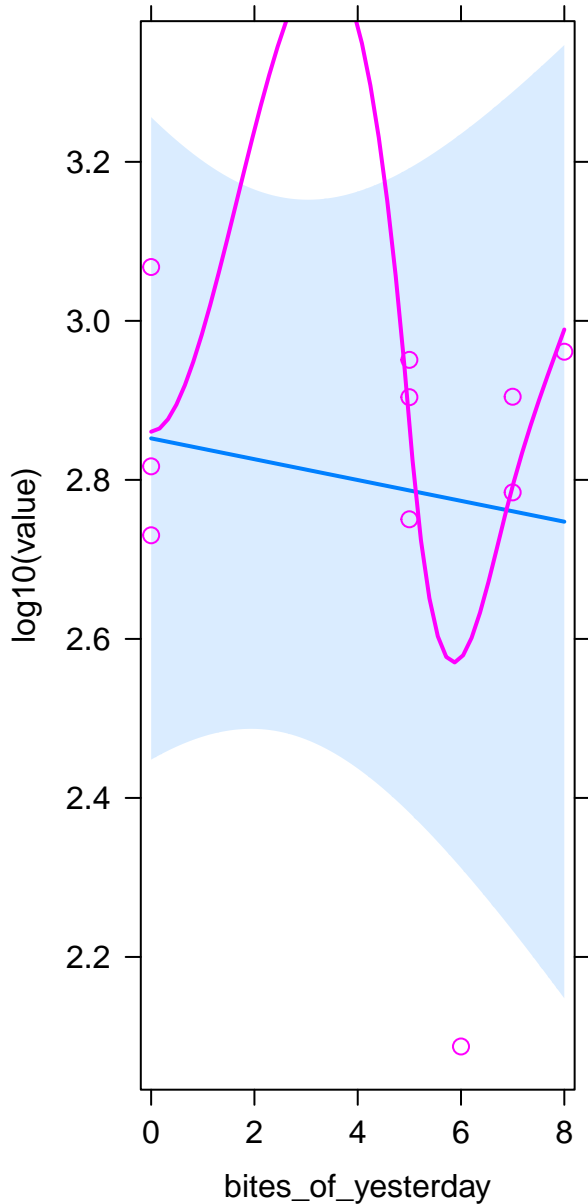
QQ plot residuals



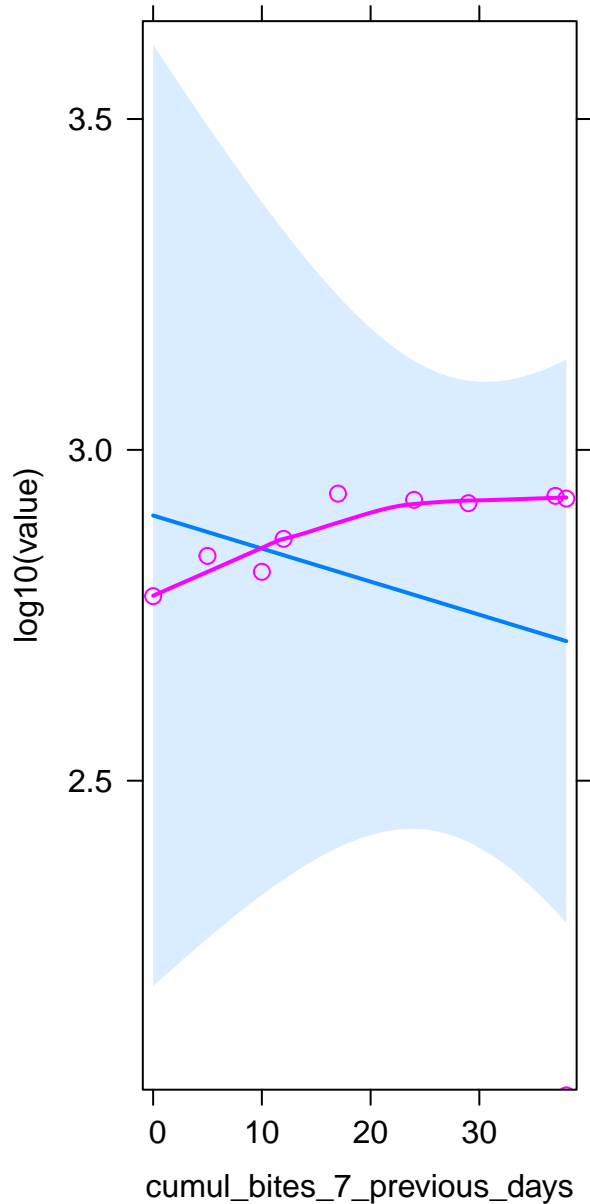
Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test significant

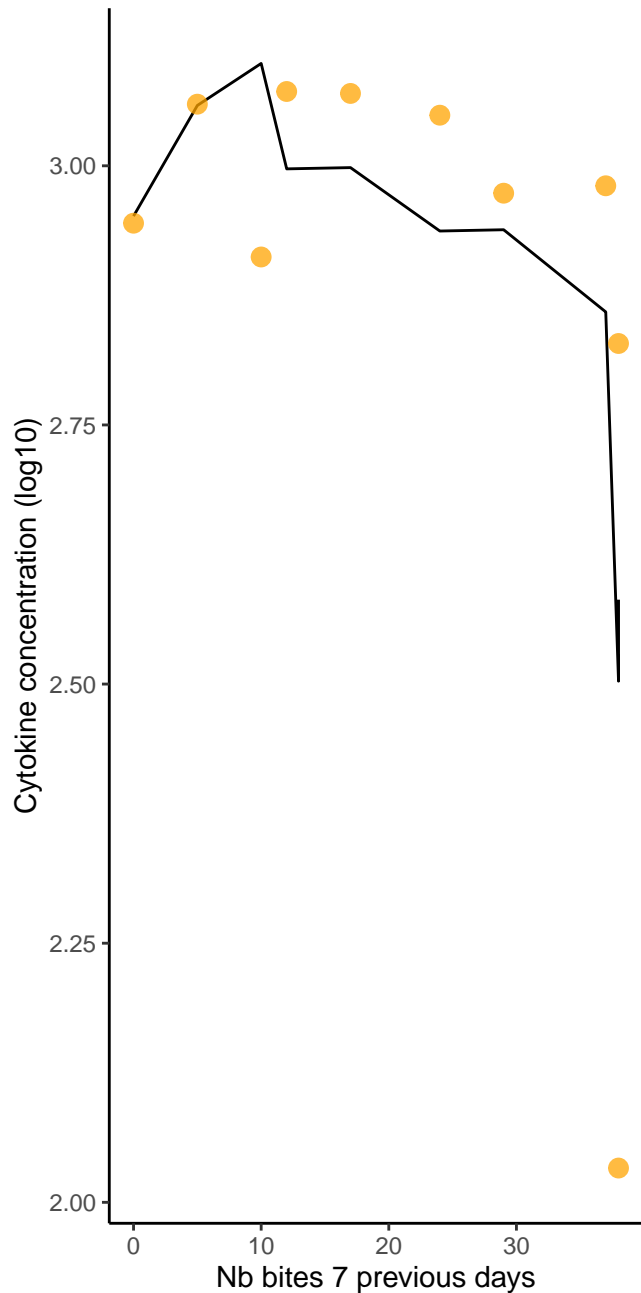
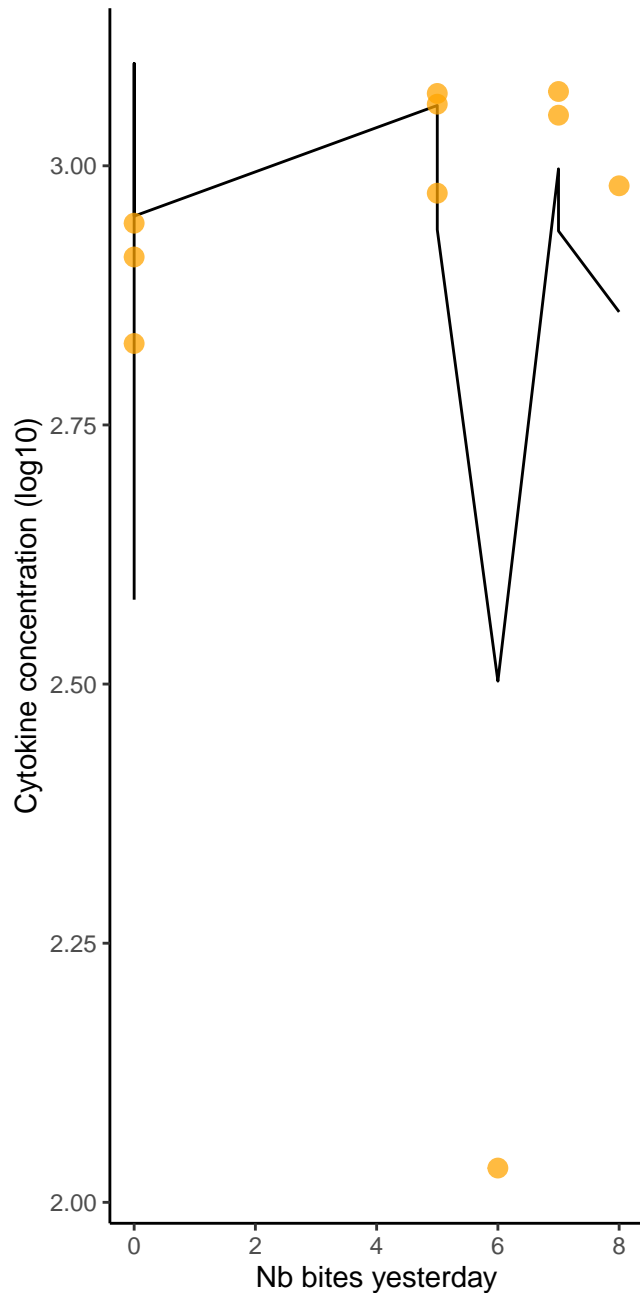


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 2.02 | [1.45, 3.31] | 1.42 | 0.49 | [0.30, 0.69] |
| cumul_bites_7_previous_days | 2.02 | [1.45, 3.31] | 1.42 | 0.49 | [0.30, 0.69] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|------|------|--------|----------|----------|
| 10.7 | 12.2 | -0.3 | 0.7 | 5 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|----------|-------------|----------|----------|
| ID | (Intercept) | 0.03684 | 0.1919 |
| Residual | | 0.04412 | 0.2101 |

Number of obs: 10, groups: ID, 3

Dispersion estimate for gaussian family (sigma^2): 0.0441

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|------------|
| (Intercept) | 2.957159 | 0.217799 | 13.577 | <2e-16 *** |
| bites_of_yesterday | -0.013100 | 0.038074 | -0.344 | 0.731 |
| cumul_bites_7_previous_days | -0.004997 | 0.009674 | -0.517 | 0.605 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```
AICc [1] 25.68405
```


Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.15 ERROR : Invalid grouping factor specification, ID

IL.17

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

IL.17 ERROR : Invalid grouping factor specification, ID

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.17 ERROR : Invalid grouping factor specification, ID

IL.1B

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

IL.1B ERROR : Invalid grouping factor specification, ID

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.1B ERROR : Invalid grouping factor specification, ID

IL. 2

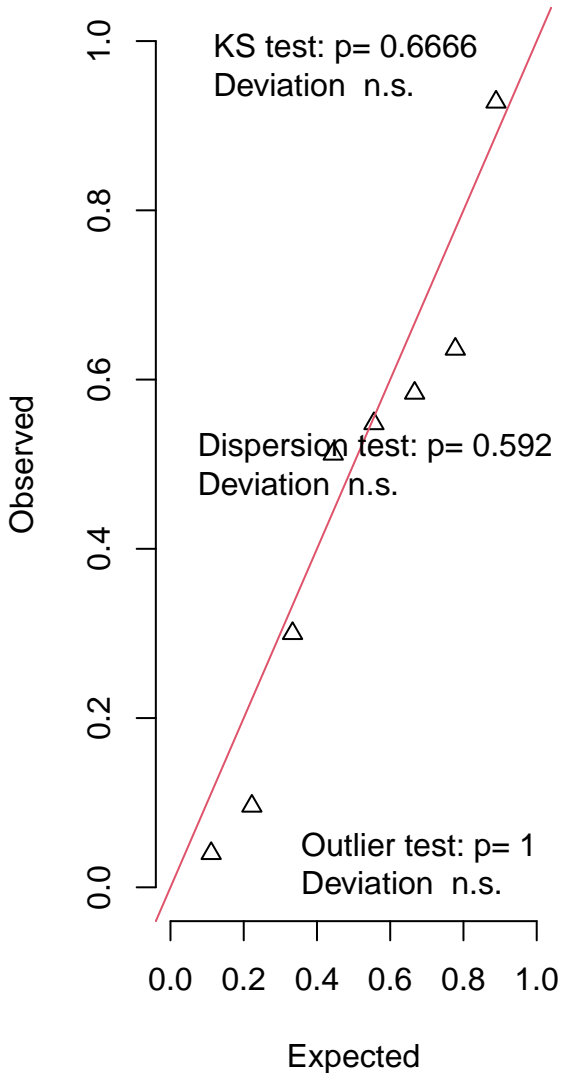
Bites in cyno

Nb excluded (LOD) : 28

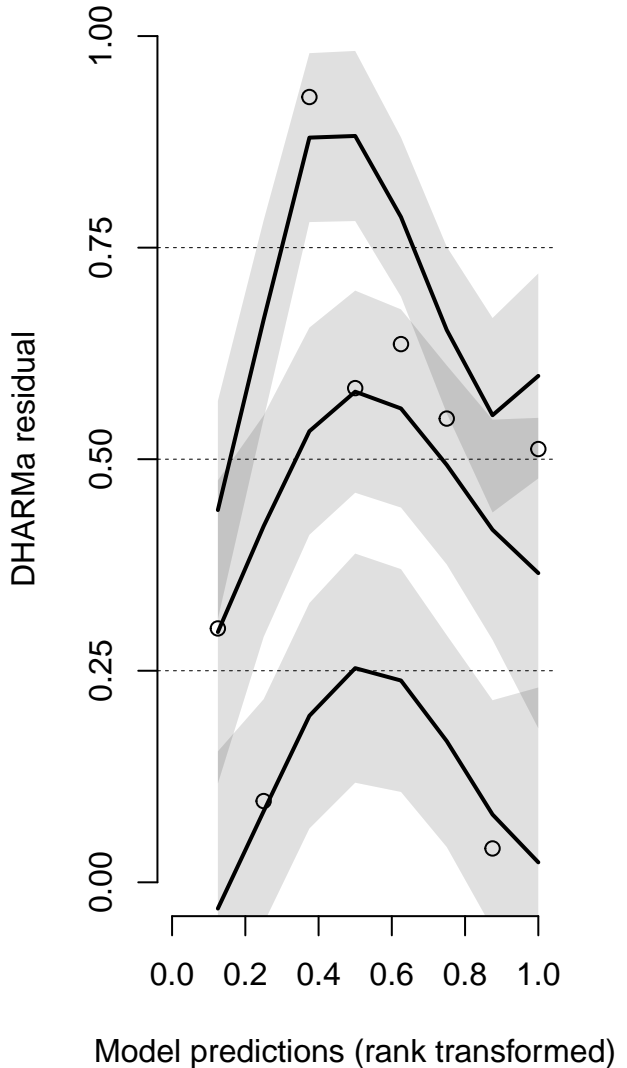
Nb remaining: 8

DHARMA residual

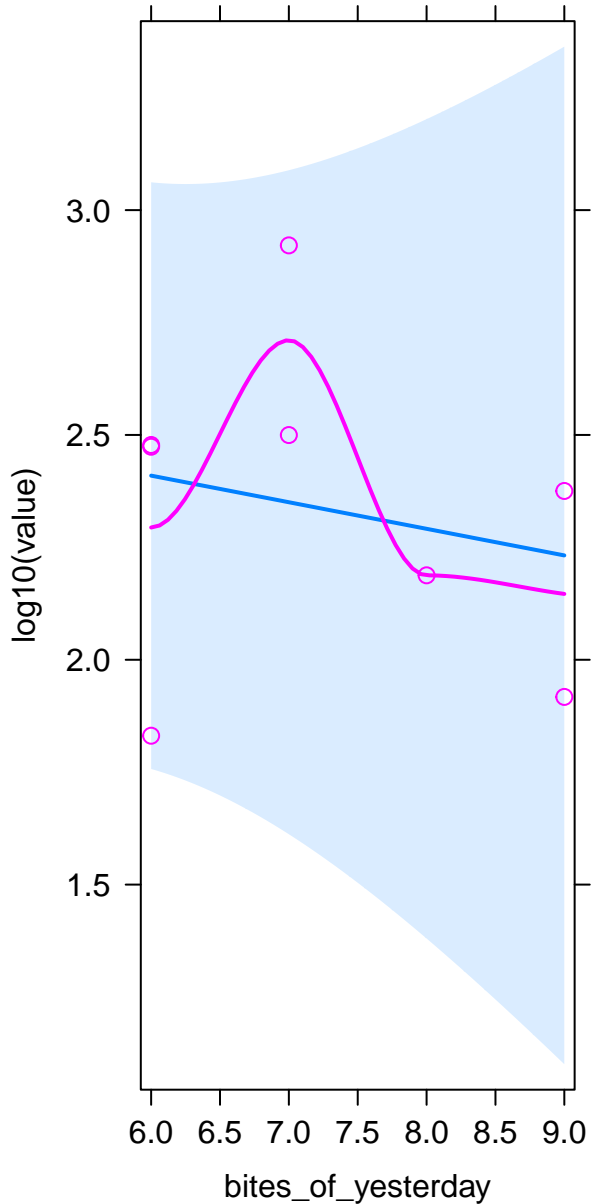
QQ plot residuals



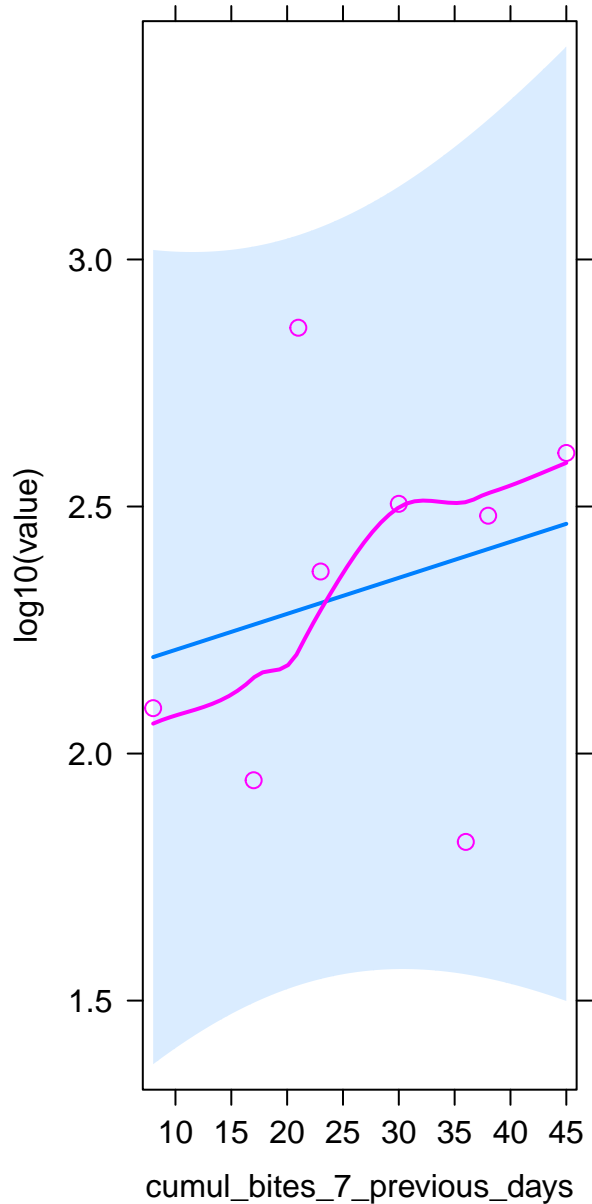
Residual vs. predicted No significant problems detected

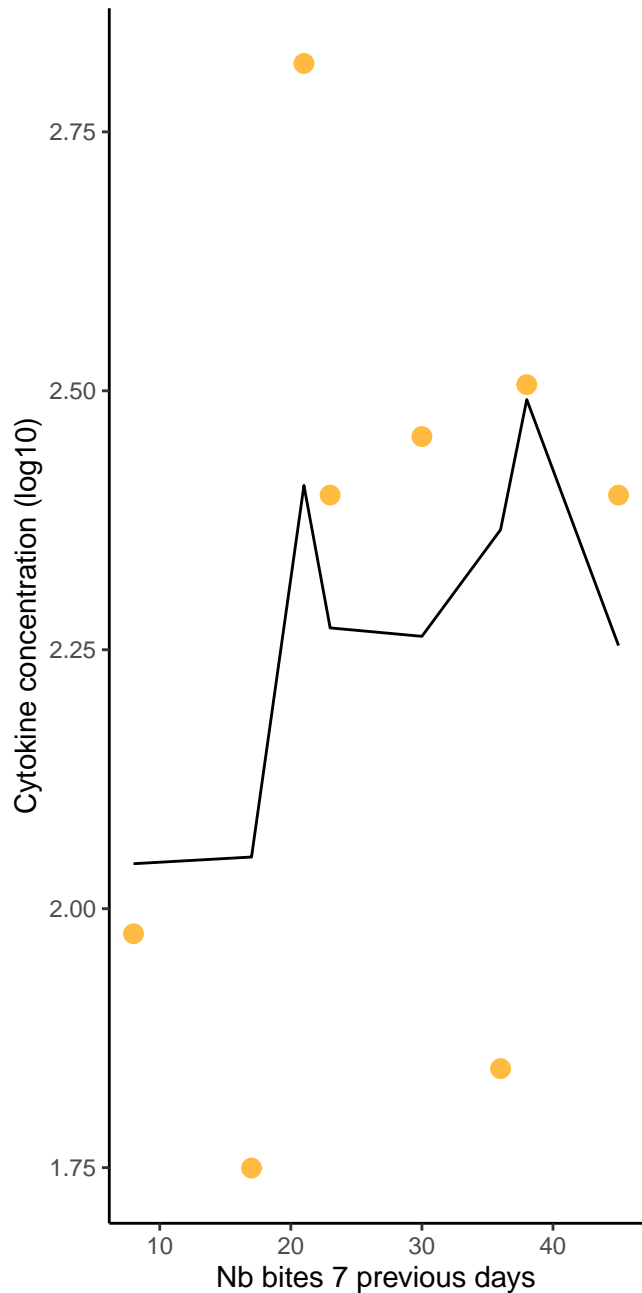
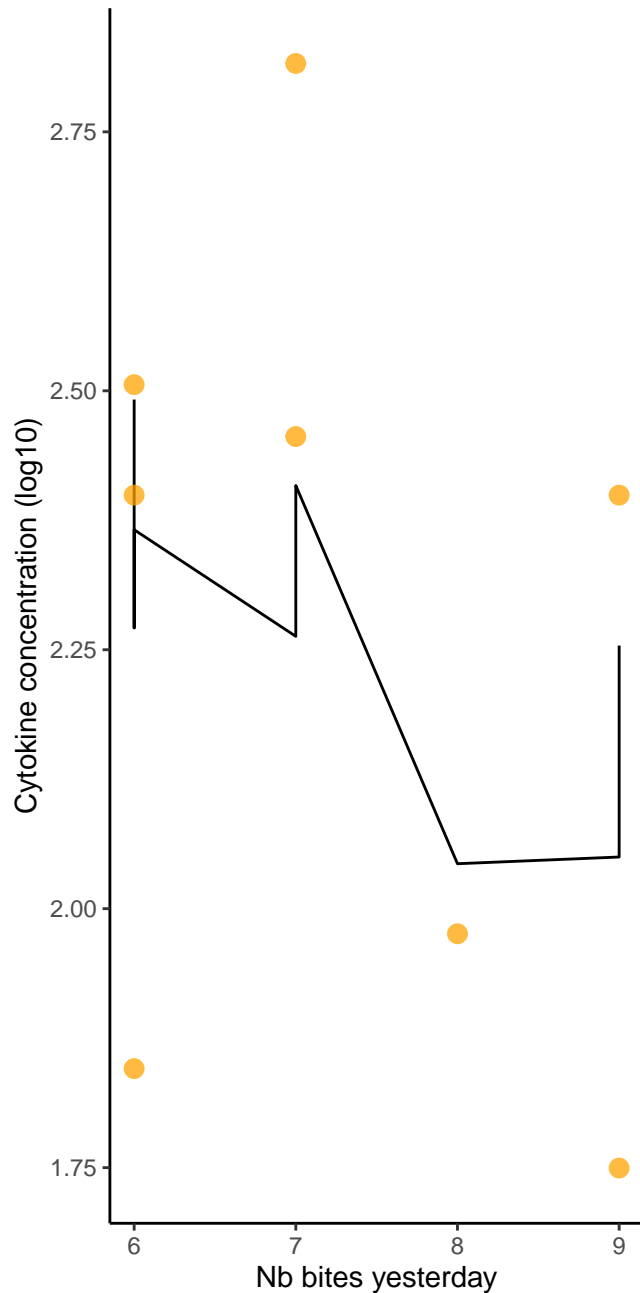


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.07 | [1.00, 3.38] | 1.04 | 0.93 | [0.30, 1.00] |
| cumul_bites_7_previous_days | 1.07 | [1.00, 3.38] | 1.04 | 0.93 | [0.30, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|------|------|--------|----------|----------|
| 14.5 | 14.9 | -2.3 | 4.5 | 3 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|----------|----------|
| ID | (Intercept) | 0.02210 | 0.1487 |
| | Residual | 0.08676 | 0.2945 |

Number of obs: 8, groups: ID, 3

Dispersion estimate for gaussian family (sigma^2): 0.0868

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|------------|
| (Intercept) | 2.565775 | 0.793671 | 3.233 | 0.00123 ** |
| bites_of_yesterday | -0.059151 | 0.111841 | -0.529 | 0.59688 |
| cumul_bites_7_previous_days | 0.007290 | 0.009648 | 0.756 | 0.44988 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```
AICc [1] 44.52735
```

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.2 ERROR : Invalid grouping factor specification, ID

IL. 4

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

IL.4 ERROR : Invalid grouping factor specification, ID

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.4 ERROR : Invalid grouping factor specification, ID

IL. 5

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

IL.5 ERROR : Invalid grouping factor specification, ID

Bites in squirrel

Nb excluded (LOD) : 20
Nb remaining: 0

IL.5 ERROR : Invalid grouping factor specification, ID

IL. 6

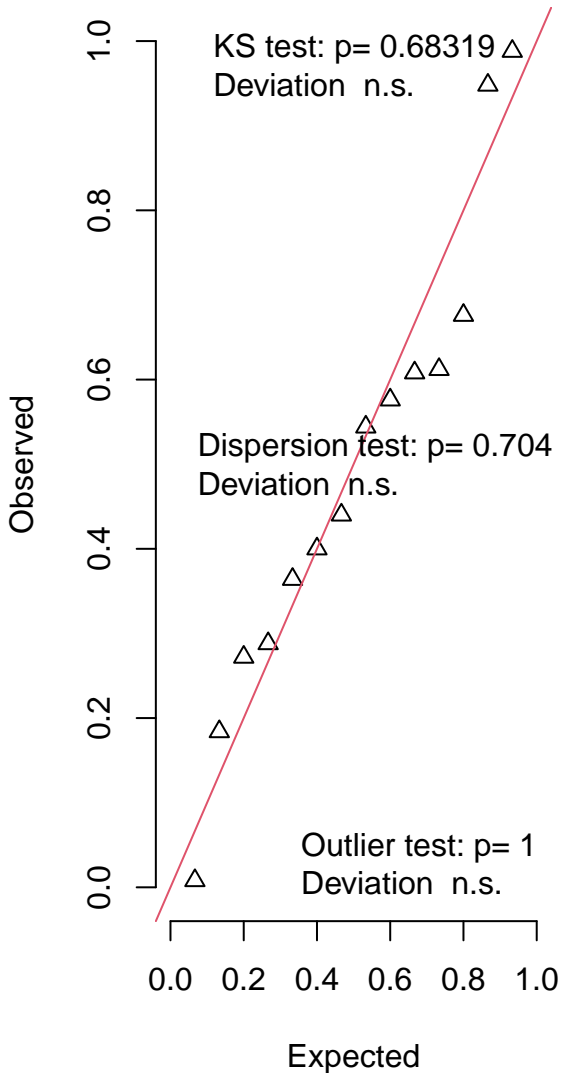
Bites in cyno

Nb excluded (LOD) : 22

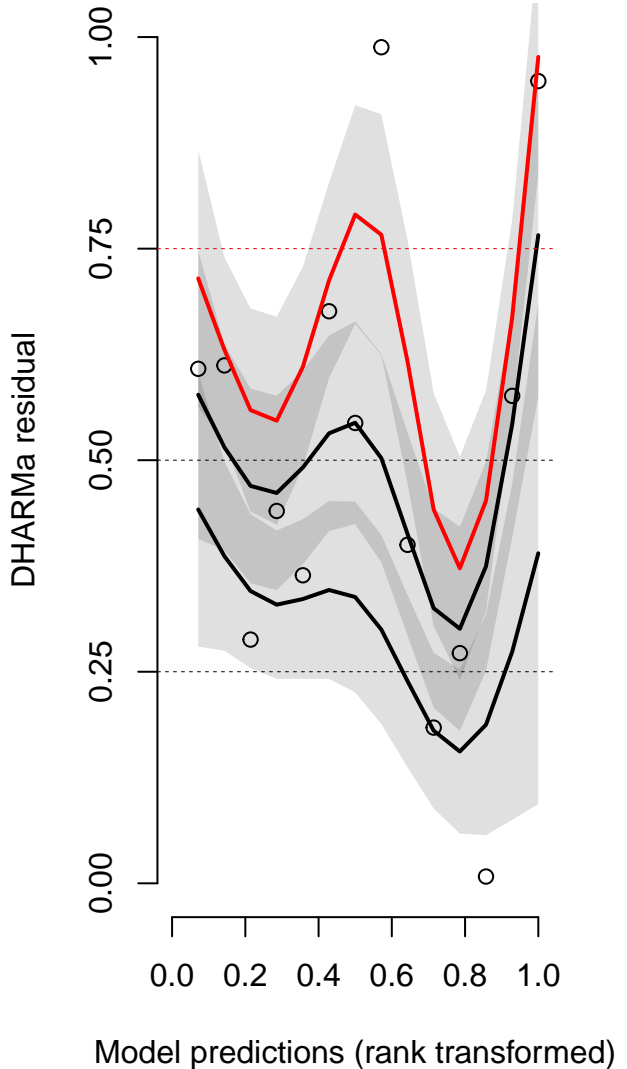
Nb remaining: 14

DHARMA residual

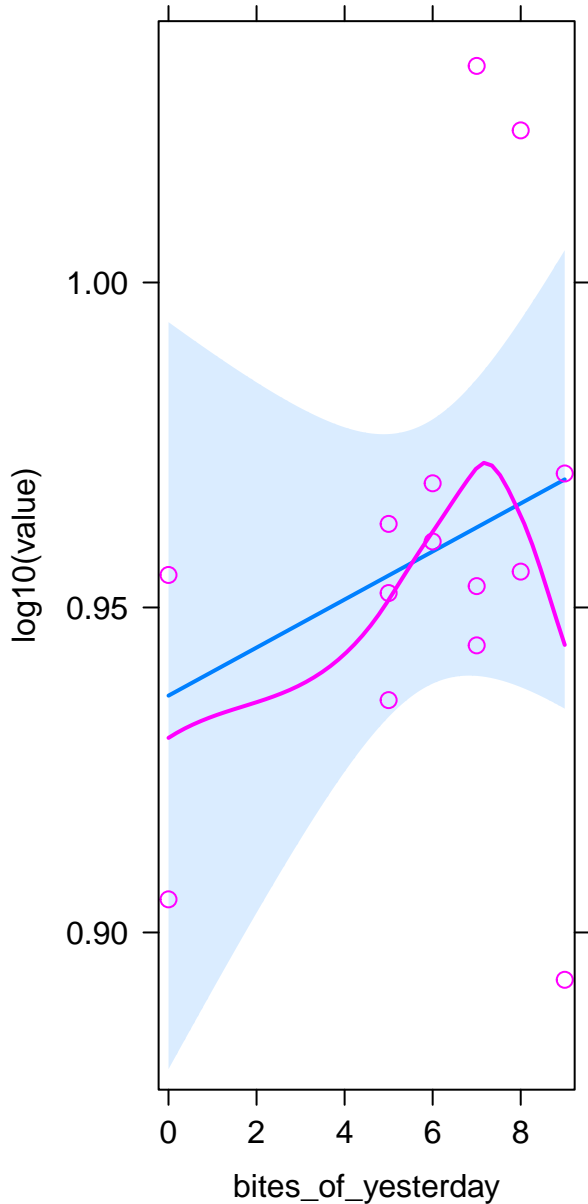
QQ plot residuals



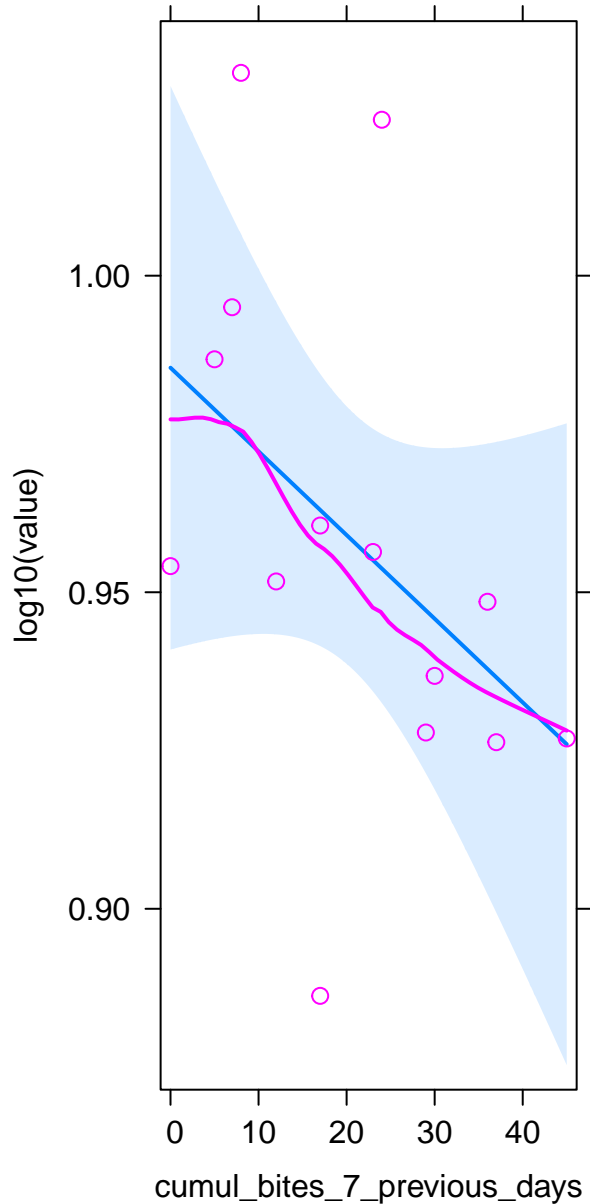
Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test n.s.

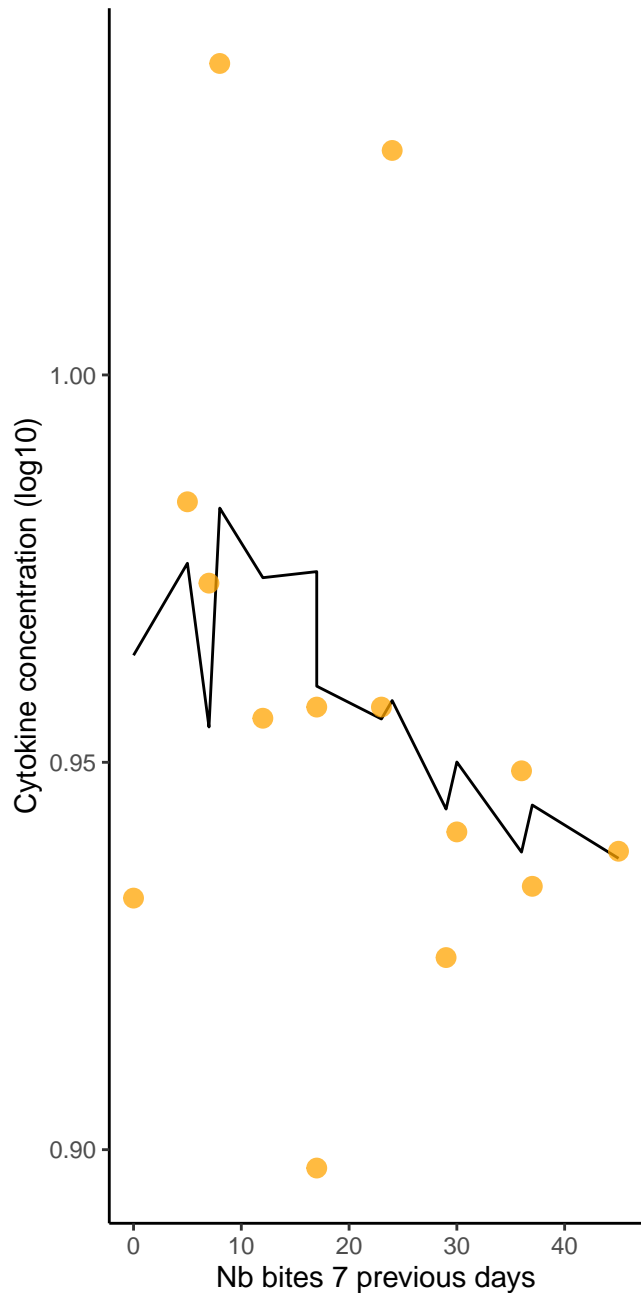
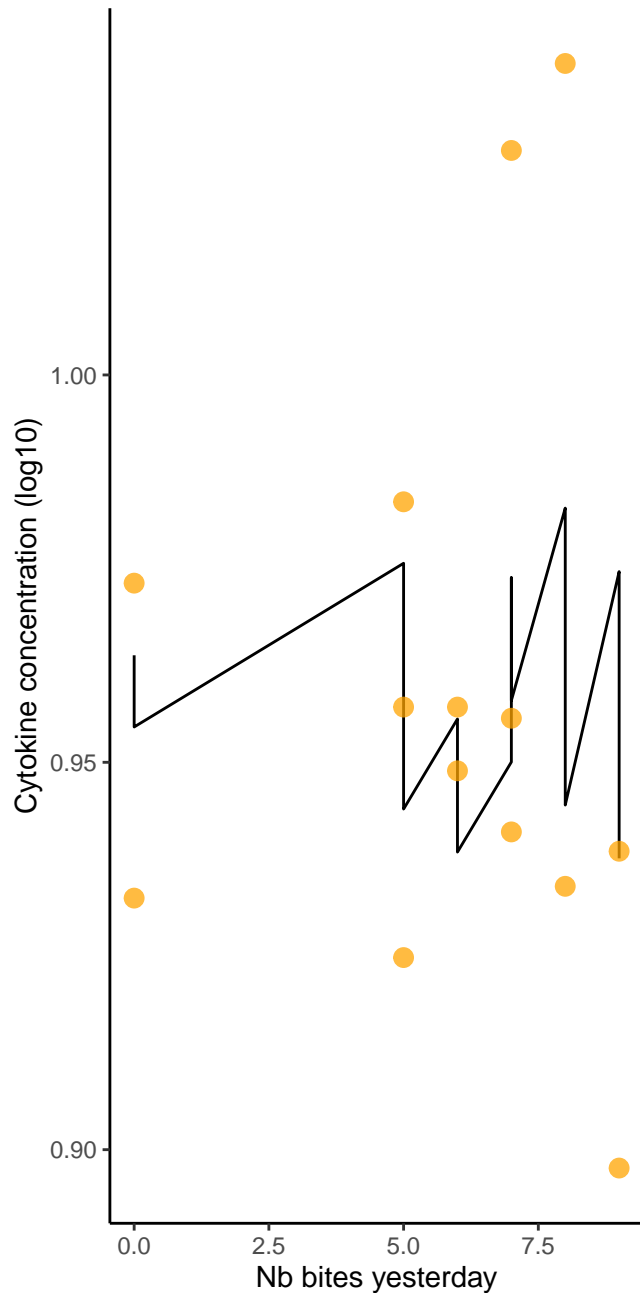


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.52 | [1.15, 2.72] | 1.23 | 0.66 | [0.37, 0.87] |
| cumul_bites_7_previous_days | 1.52 | [1.15, 2.72] | 1.23 | 0.66 | [0.37, 0.87] |

```

Family: gaussian ( identity )
Formula:      log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days +      (1 | ID)
Data: d_cyno

```

| AIC | BIC | logLik | deviance | df.resid |
|-------|-------|--------|----------|----------|
| -44.5 | -41.3 | 27.3 | -54.5 | 9 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|----------|-------------|-----------|-----------|
| ID | (Intercept) | 4.829e-13 | 6.949e-07 |
| Residual | | 1.190e-03 | 3.450e-02 |

Number of obs: 14, groups: ID, 2

Dispersion estimate for gaussian family (sigma^2): 0.00119

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|------------|------------|---------|------------|
| (Intercept) | 0.9638127 | 0.0221974 | 43.42 | <2e-16 *** |
| bites_of_yesterday | 0.0036966 | 0.0041711 | 0.89 | 0.375 |
| cumul_bites_7_previous_days | -0.0013217 | 0.0008691 | -1.52 | 0.128 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AICc [1] -37.0414

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.6 ERROR : Invalid grouping factor specification, ID

IL.8

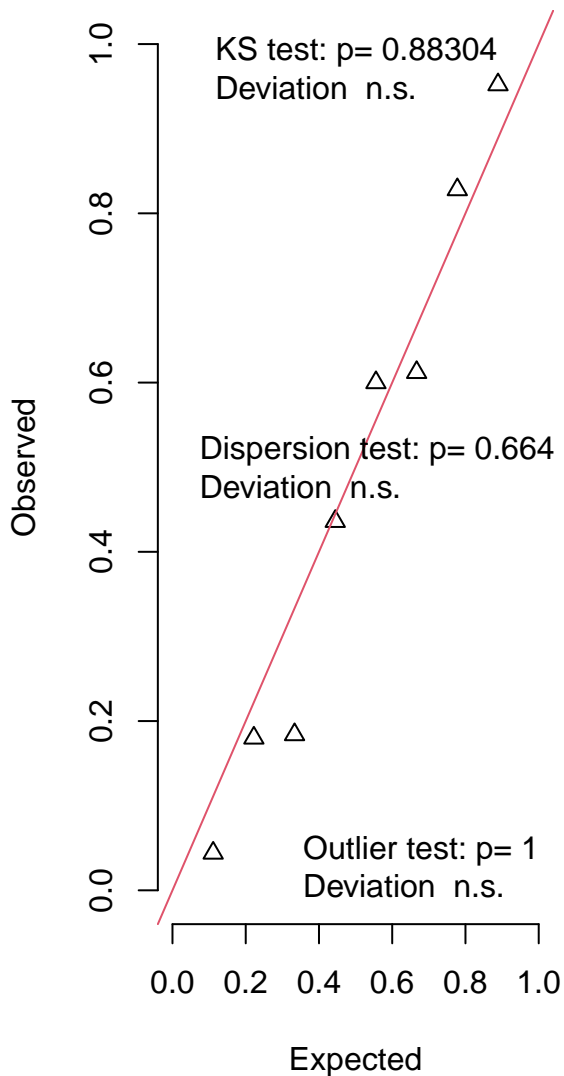
Bites in cyno

Nb excluded (LOD) : 28

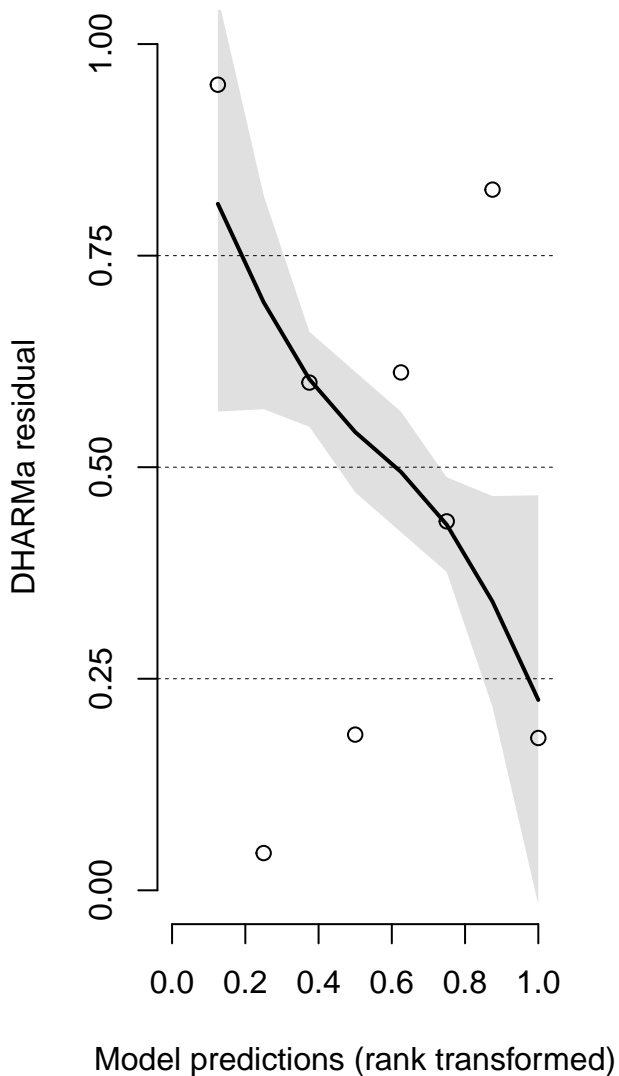
Nb remaining: 8

DHARMA residual

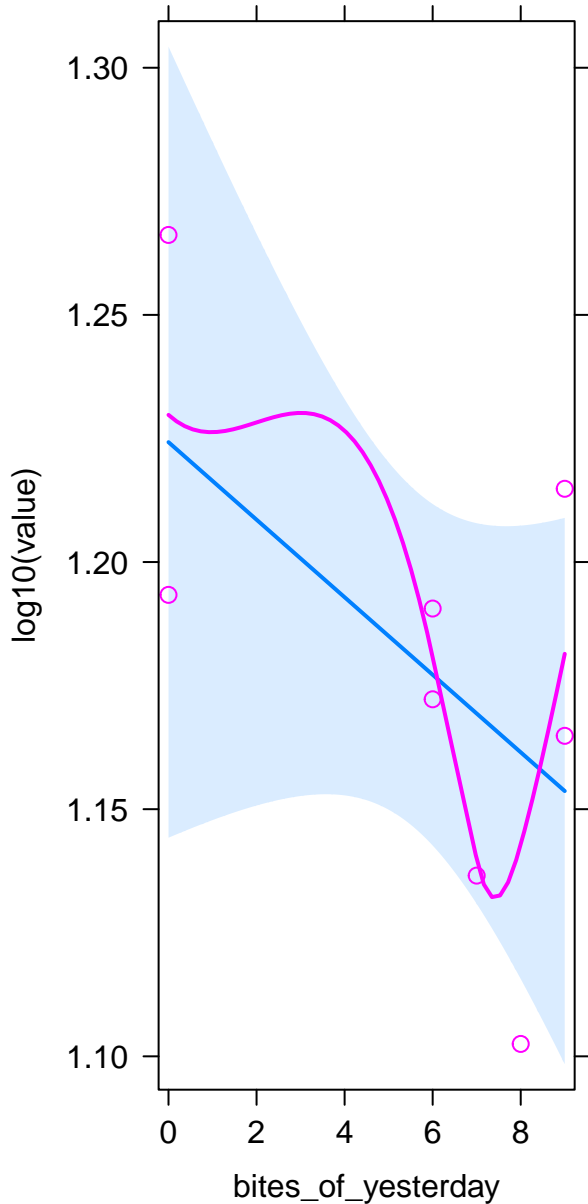
QQ plot residuals



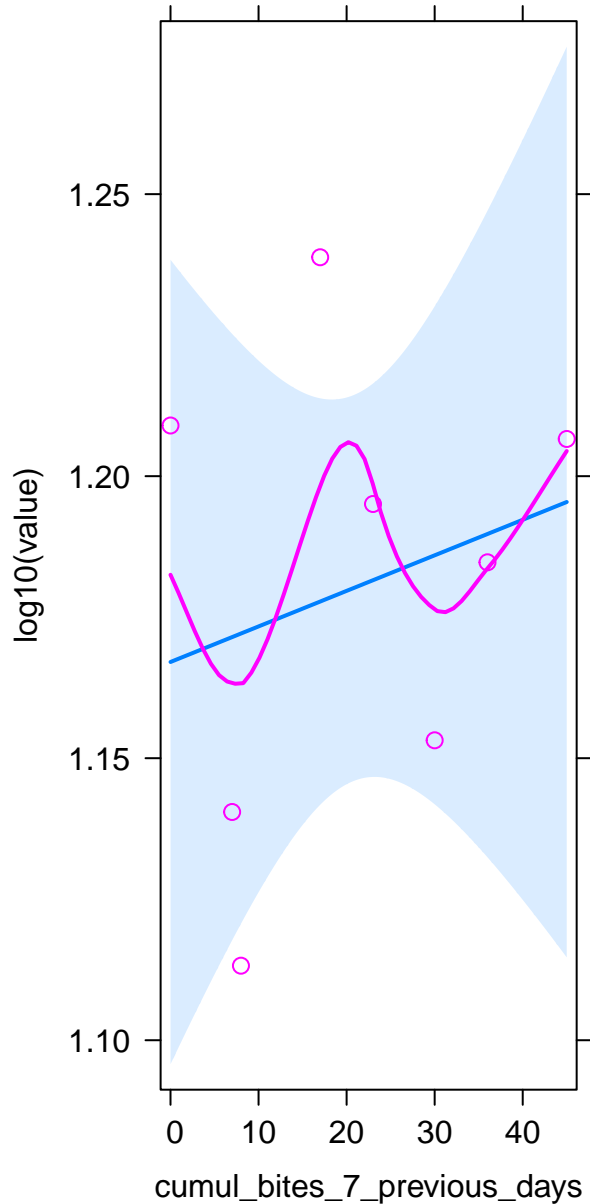
Residual vs. predicted No significant problems detected

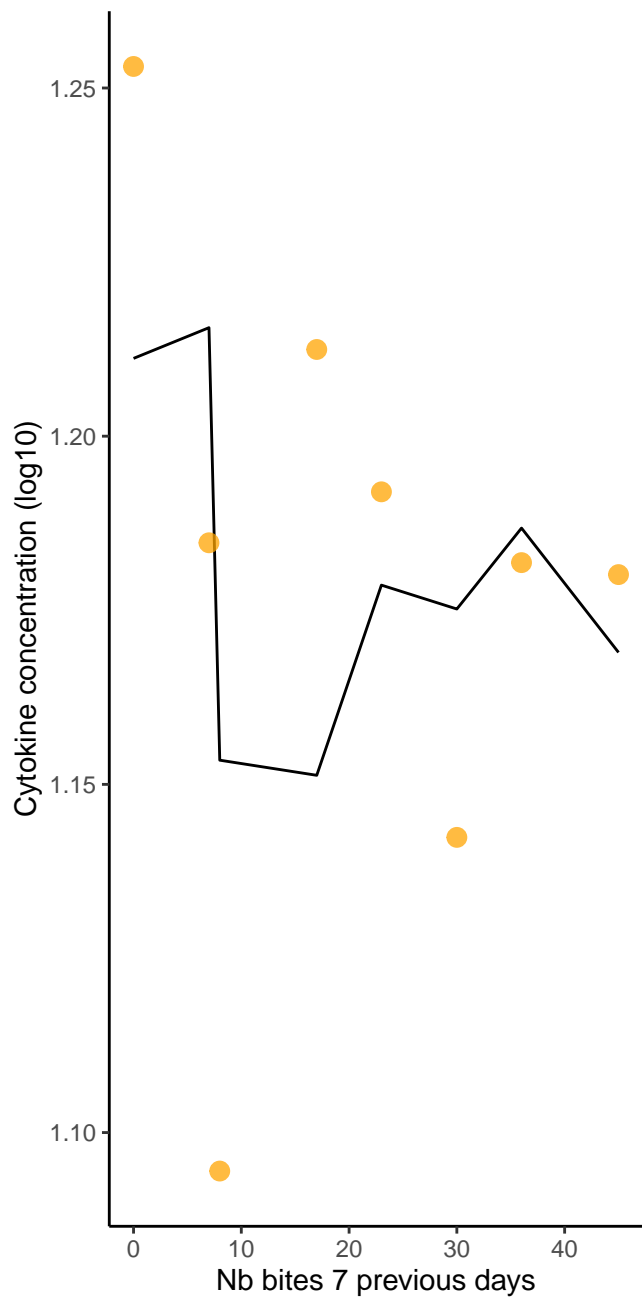
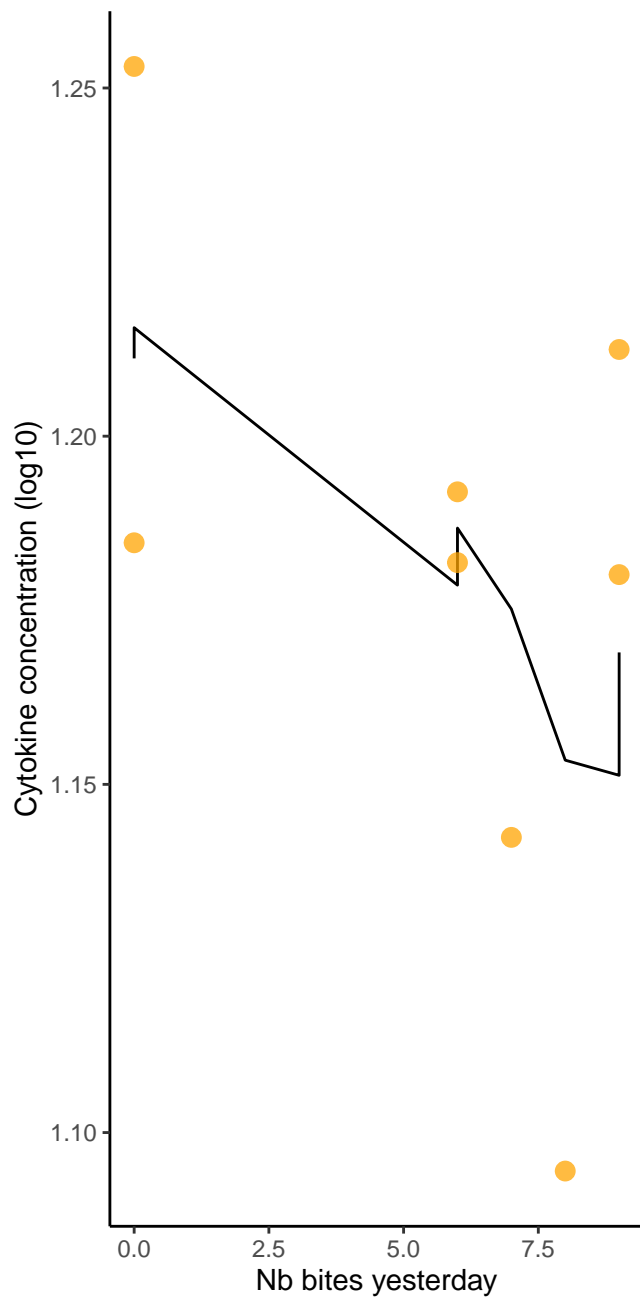


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.66 | [1.30, 2.44] | 1.29 | 0.60 | [0.41, 0.77] |
| cumul_bites_7_previous_days | 1.66 | [1.30, 2.44] | 1.29 | 0.60 | [0.41, 0.77] |

```

Family: gaussian ( identity )
Formula:      log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days +      (1 | ID)
Data: d_cyno

      AIC      BIC  logLik deviance df.resid
    -19.8    -19.4    14.9   -29.8        3

Random effects:

Conditional model:
Groups   Name      Variance Std.Dev.
ID      (Intercept) 6.240e-13 7.899e-07
Residual                1.417e-03 3.764e-02
Number of obs: 8, groups: ID, 1

Dispersion estimate for gaussian family (sigma^2): 0.00142

Conditional model:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)    1.2111722   0.0264288   45.83  <2e-16 ***
bites_of_yesterday -0.0078426   0.0050033   -1.57   0.117
cumul_bites_7_previous_days 0.0006302   0.0011731    0.54   0.591
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

```
AICc [1] 10.22998
```


Bites in squirrel

Nb excluded (LOD) : 20
Nb remaining: 0

IL.8 ERROR : Invalid grouping factor specification, ID

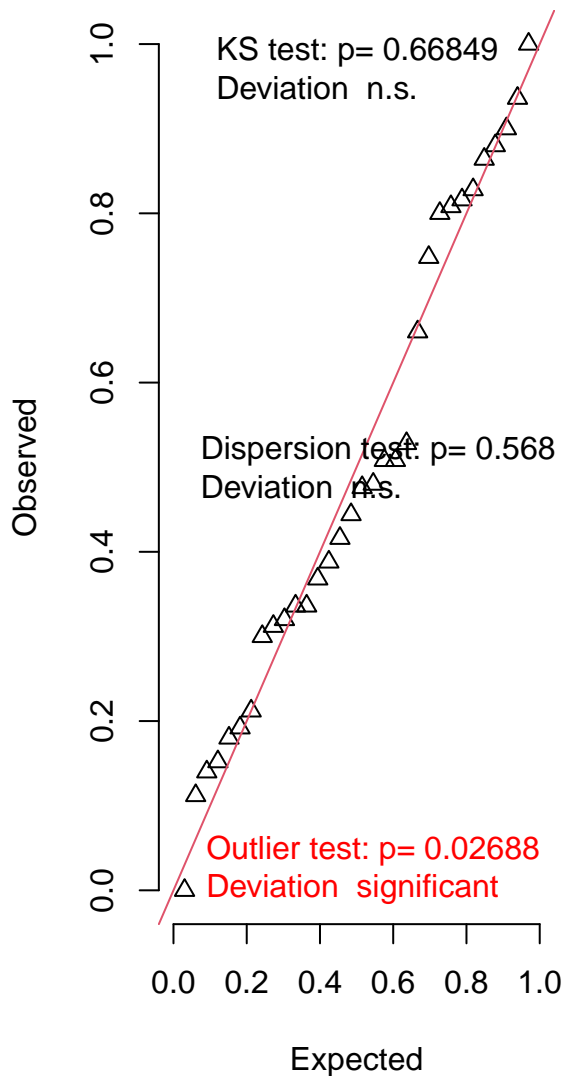
IL.RA

Bites in cyno

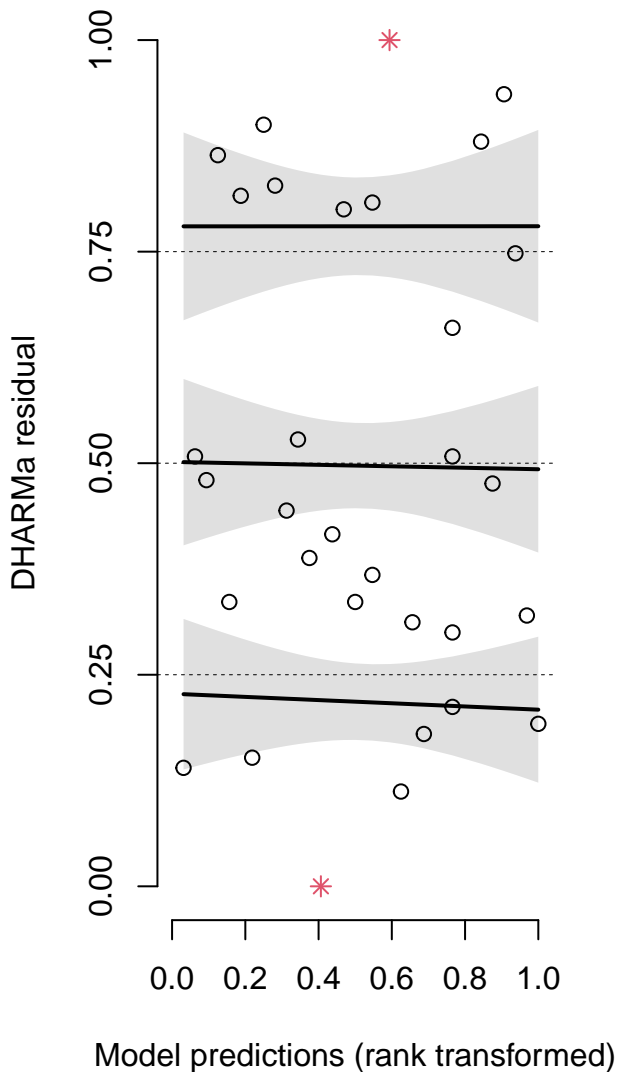
Nb excluded (LOD) : 4
Nb remaining: 32

DHARMA residual

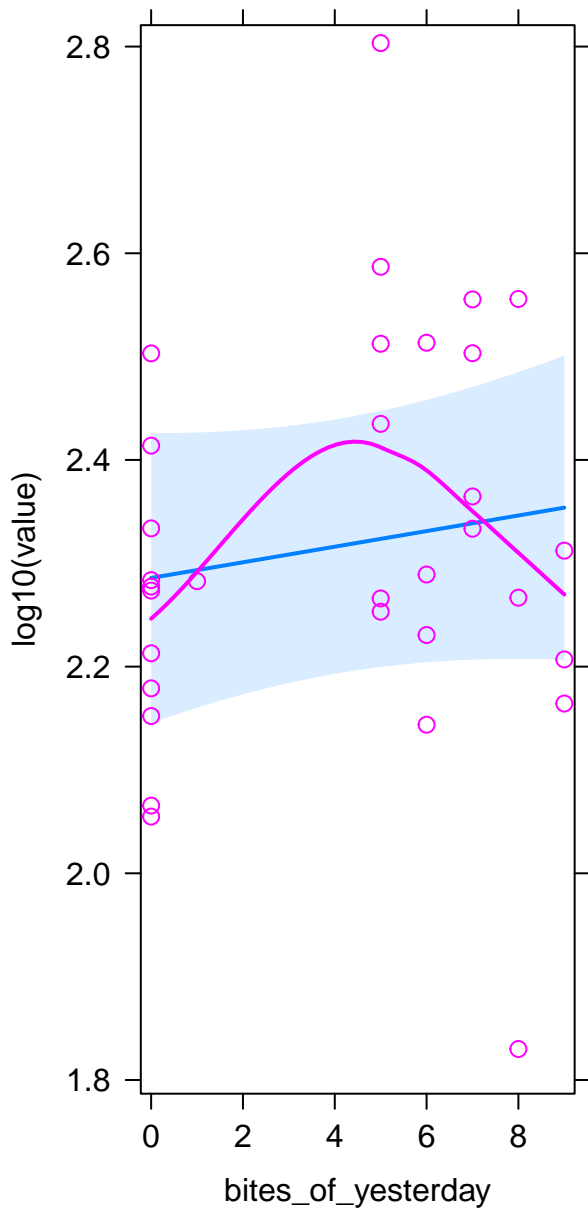
QQ plot residuals



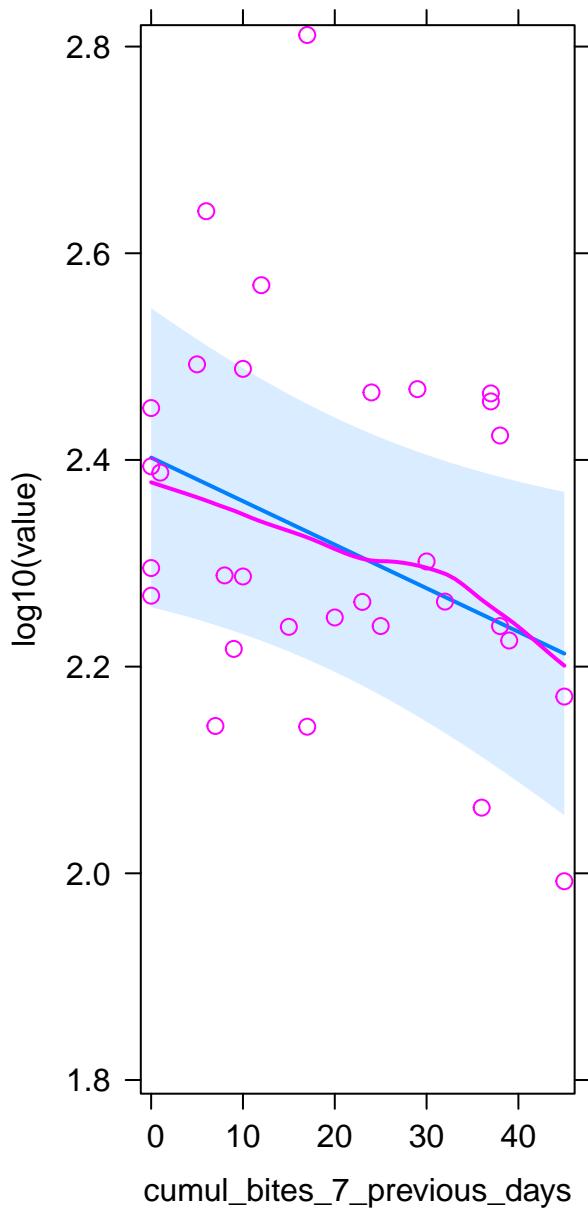
Residual vs. predicted No significant problems detected

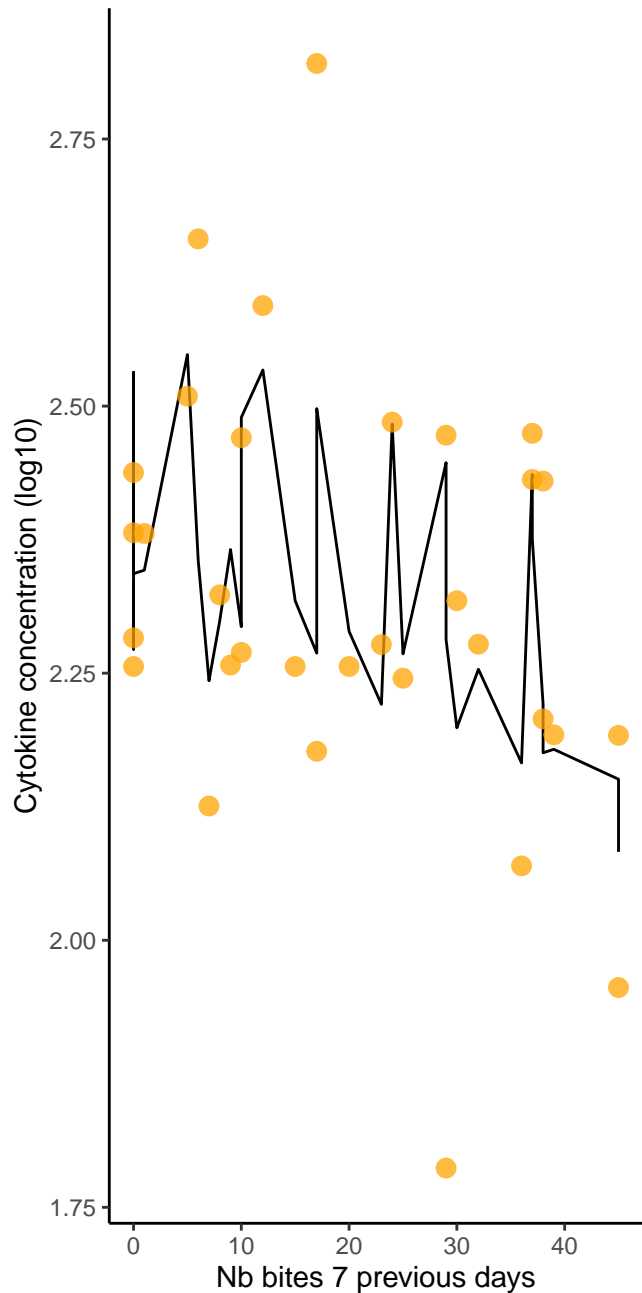
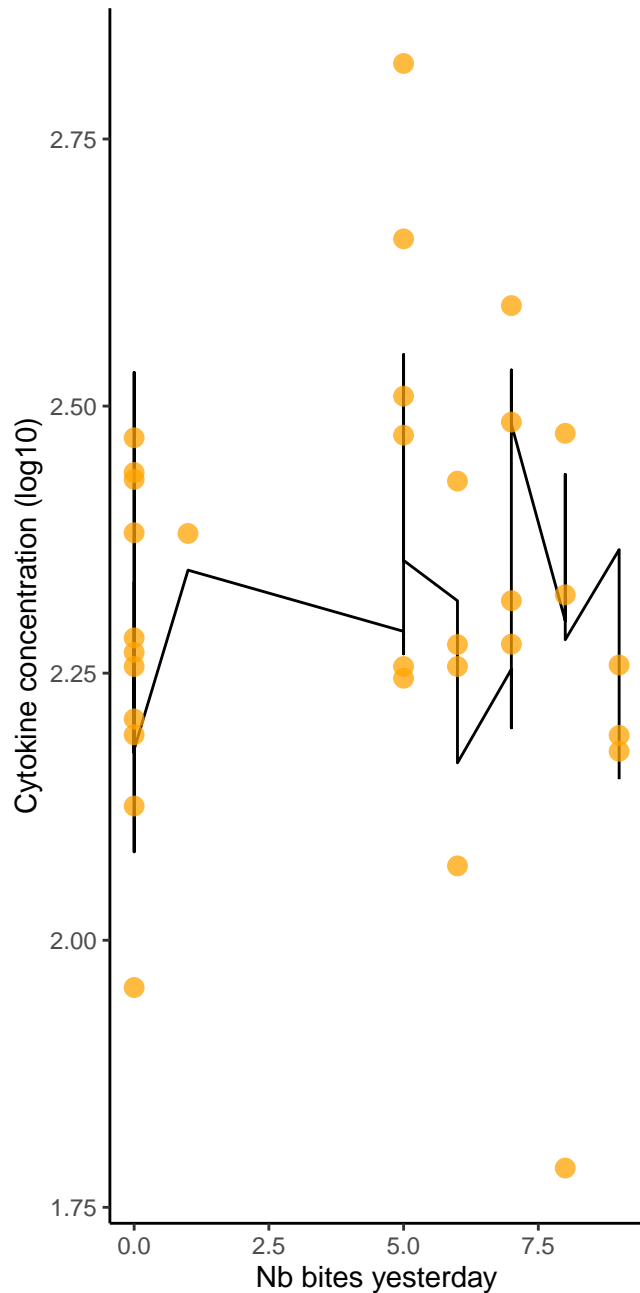


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|---------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.06 | [1.00, 13.48] | 1.03 | 0.95 | [0.07, 1.00] |
| cumul_bites_7_previous_days | 1.06 | [1.00, 13.48] | 1.03 | 0.95 | [0.07, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|------|--------|----------|----------|
| -15.4 | -8.1 | 12.7 | -25.4 | 27 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|----------|-------------|----------|----------|
| ID | (Intercept) | 0.01165 | 0.1079 |
| Residual | | 0.02153 | 0.1467 |

Number of obs: 32, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0215

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|------------|
| (Intercept) | 2.370655 | 0.074126 | 31.98 | <2e-16 *** |
| bites_of_yesterday | 0.007552 | 0.008039 | 0.94 | 0.3475 |
| cumul_bites_7_previous_days | -0.004214 | 0.001877 | -2.25 | 0.0248 * |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AICc [1] -13.08771

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.RA ERROR : Invalid grouping factor specification, ID

IP.10

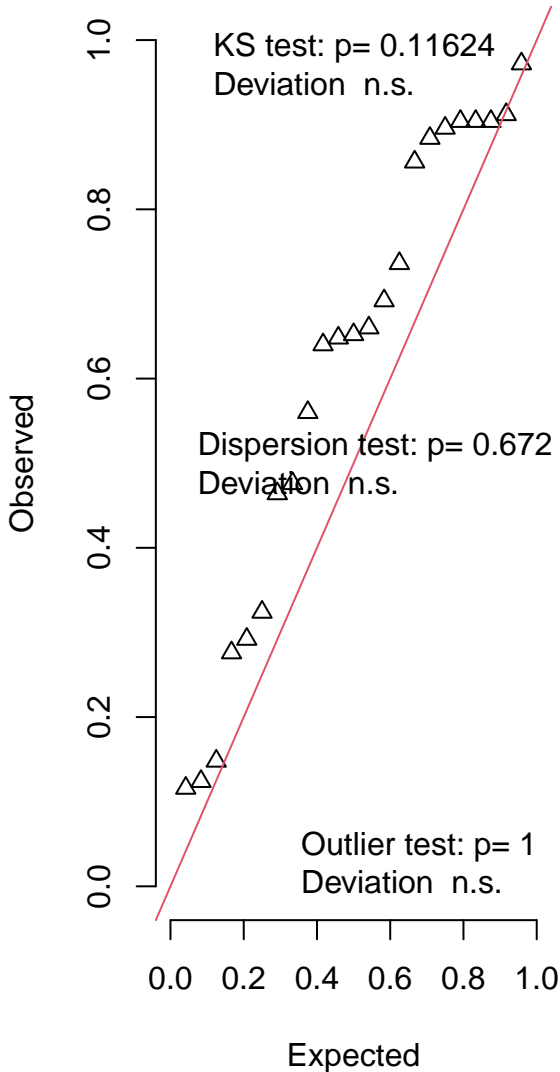
Bites in cyno

Nb excluded (LOD) : 13

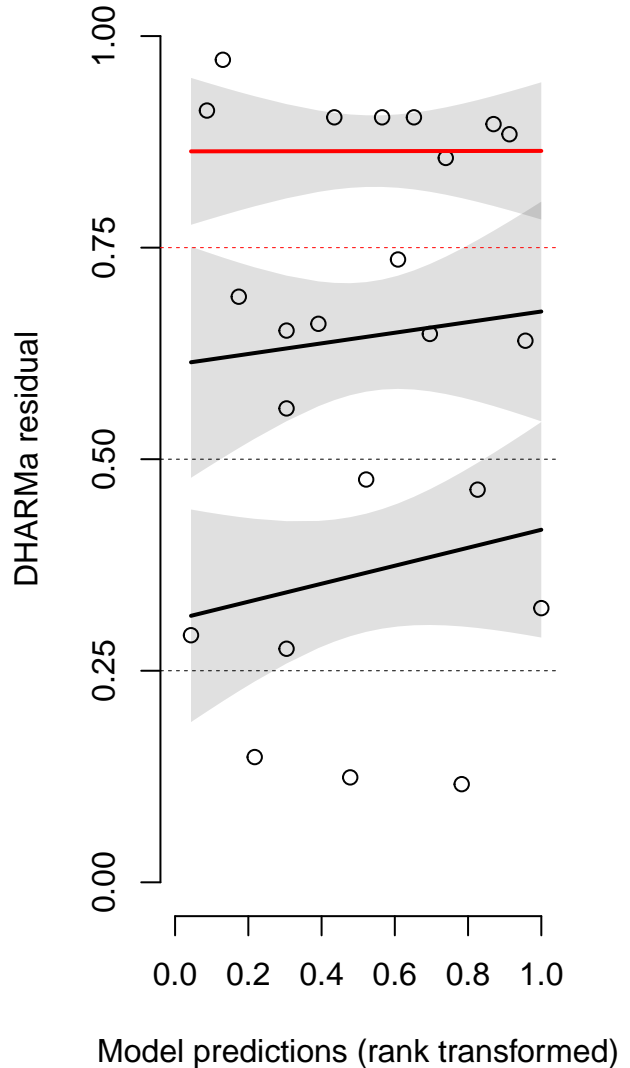
Nb remaining: 23

DHARMA residual

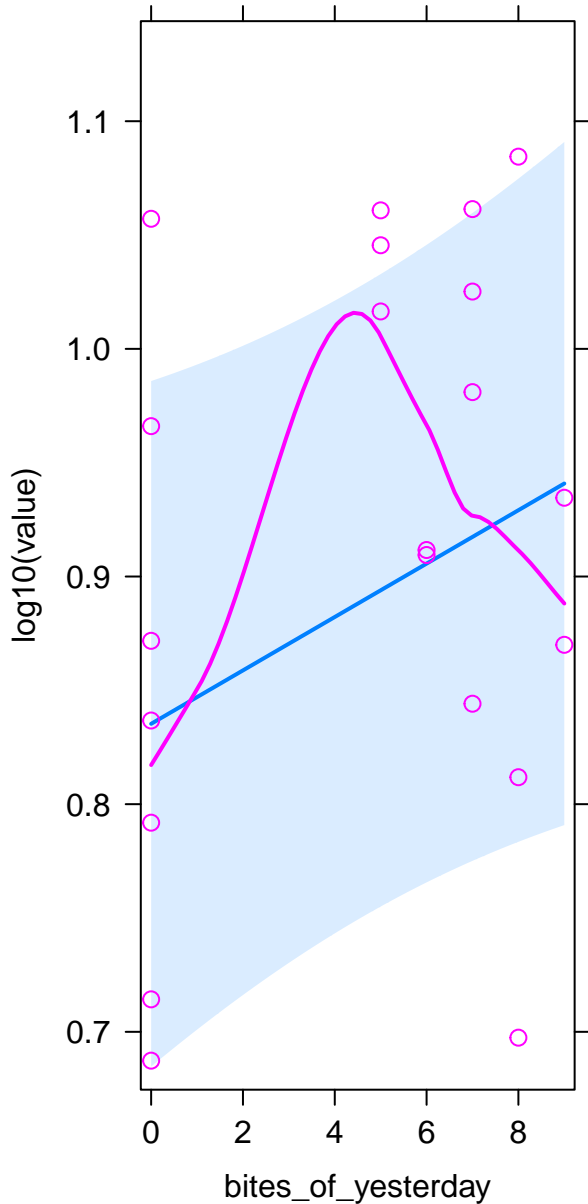
QQ plot residuals



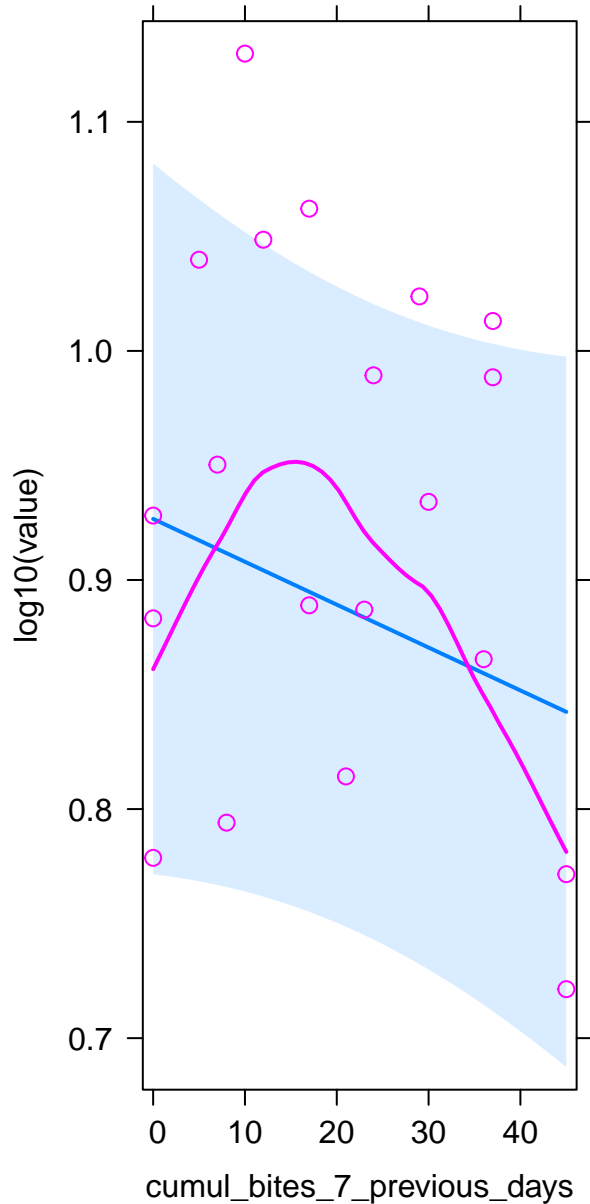
Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test significant

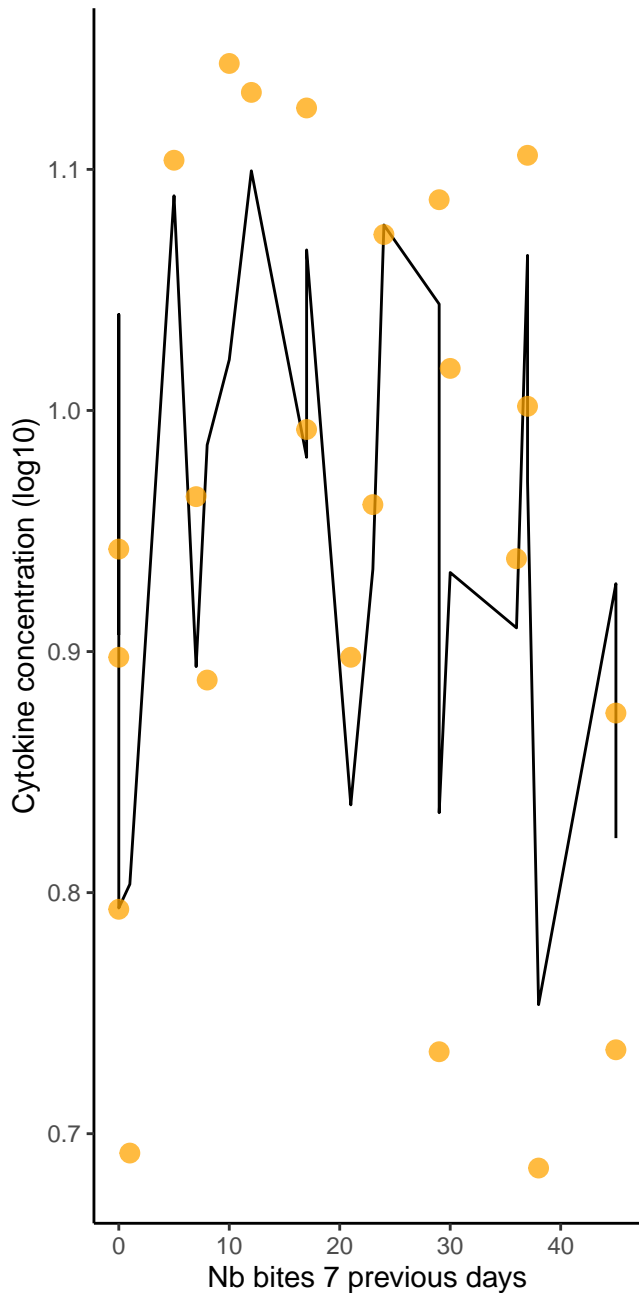
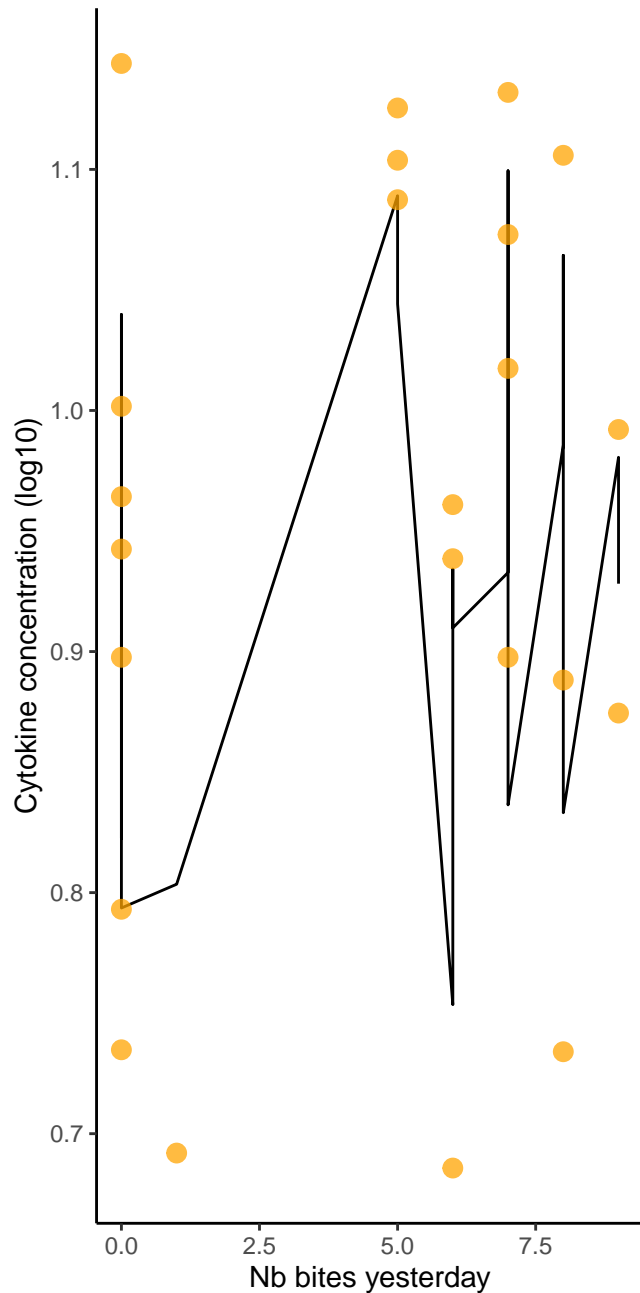


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.18 | [1.02, 2.77] | 1.08 | 0.85 | [0.36, 0.98] |
| cumul_bites_7_previous_days | 1.18 | [1.02, 2.77] | 1.08 | 0.85 | [0.36, 0.98] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|-------|--------|----------|----------|
| -26.3 | -20.6 | 18.2 | -36.3 | 18 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|----------|-------------|----------|----------|
| ID | (Intercept) | 0.014538 | 0.12057 |
| Residual | | 0.008258 | 0.09087 |

Number of obs: 23, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.00826

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|------------|
| (Intercept) | 0.873646 | 0.075231 | 11.613 | <2e-16 *** |
| bites_of_yesterday | 0.011727 | 0.006146 | 1.908 | 0.0564 . |
| cumul_bites_7_previous_days | -0.001872 | 0.001481 | -1.264 | 0.2061 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AICc [1] -22.77227

Bites in squirrel

Nb excluded (LOD) : 20
Nb remaining: 0

IP.10 ERROR : Invalid grouping factor specification, ID

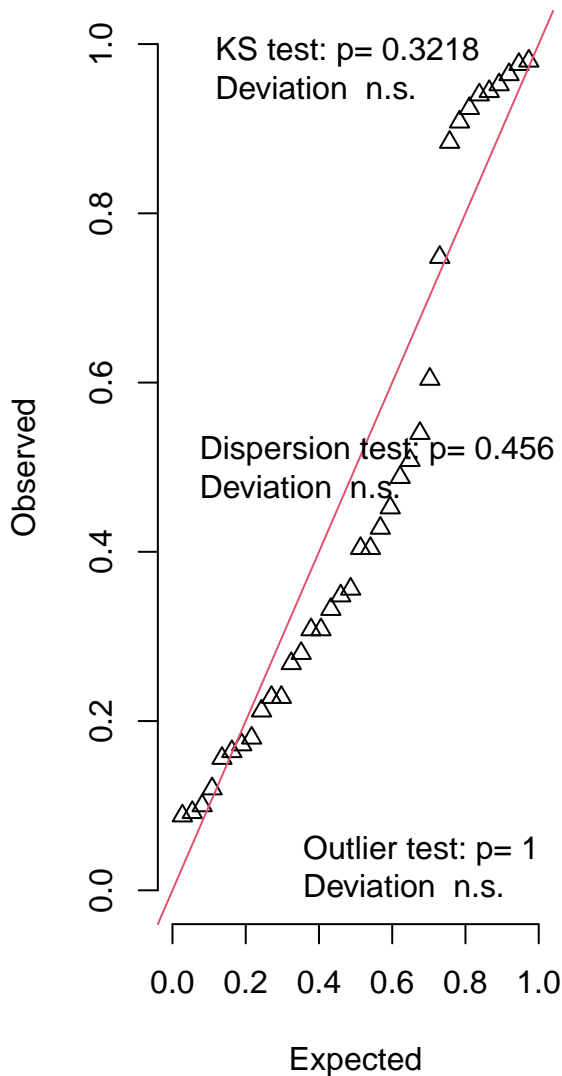
MCP . 1

Bites in cyno

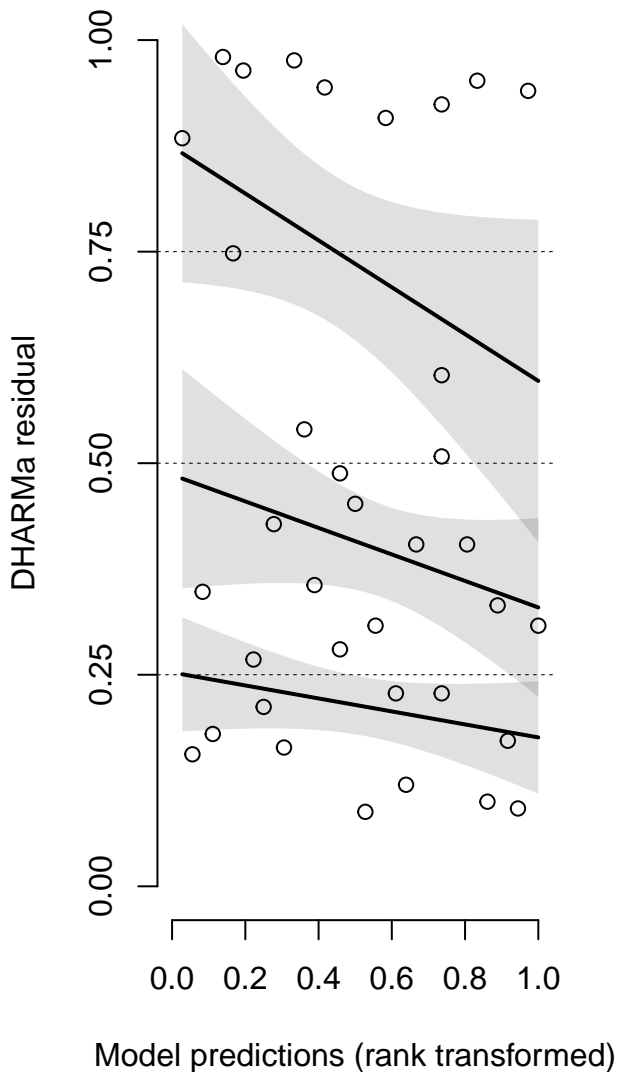
Nb excluded (LOD) : 0
Nb remaining: 36

DHARMA residual

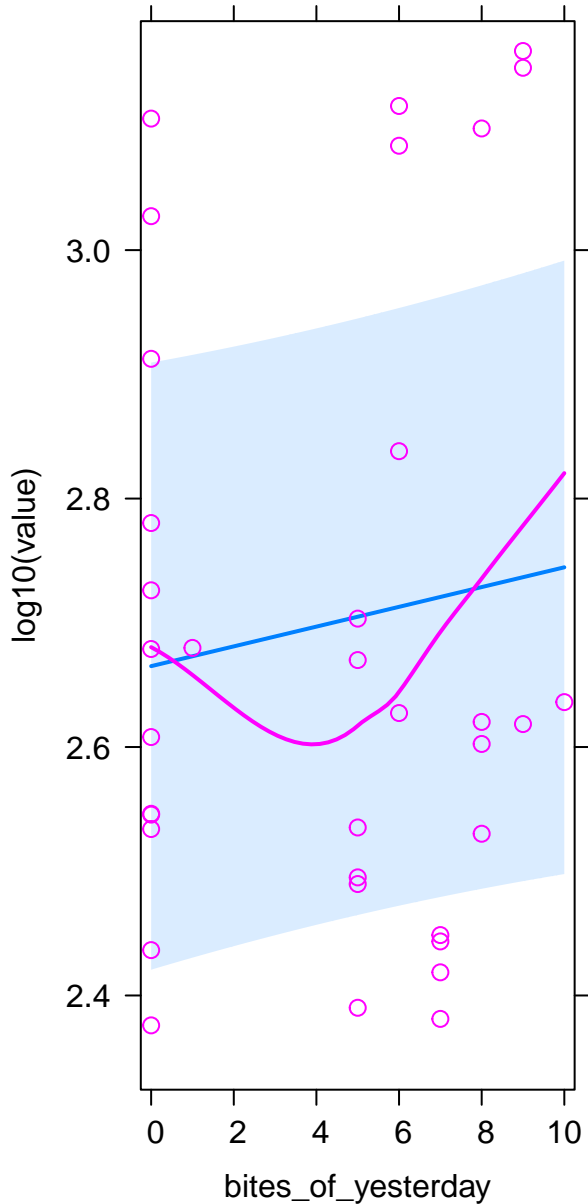
QQ plot residuals



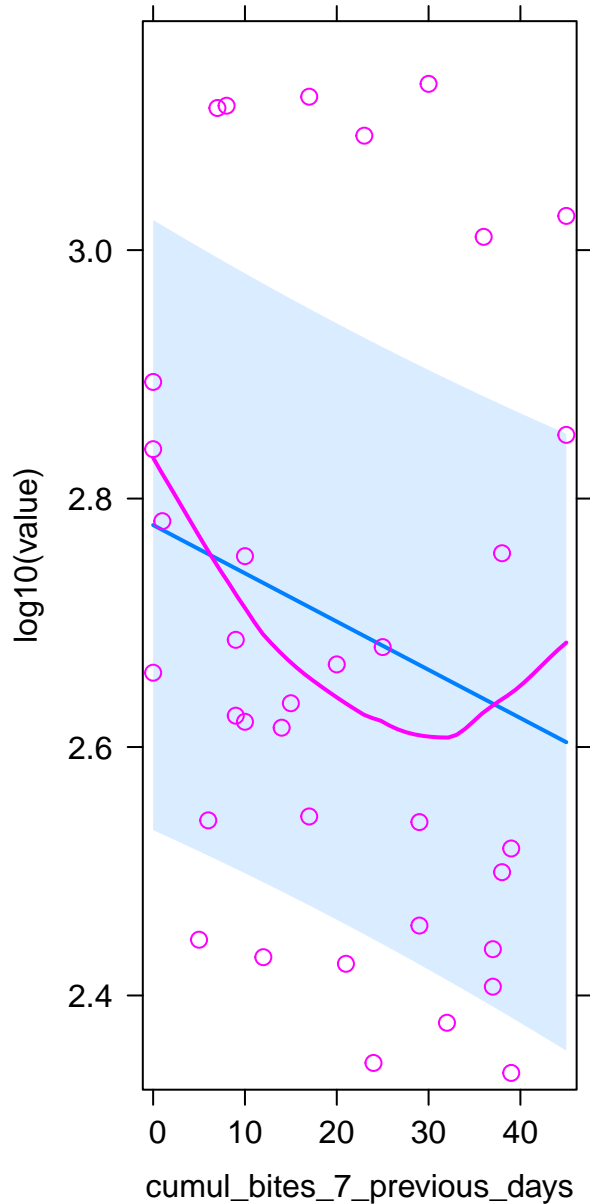
Residual vs. predicted No significant problems detected

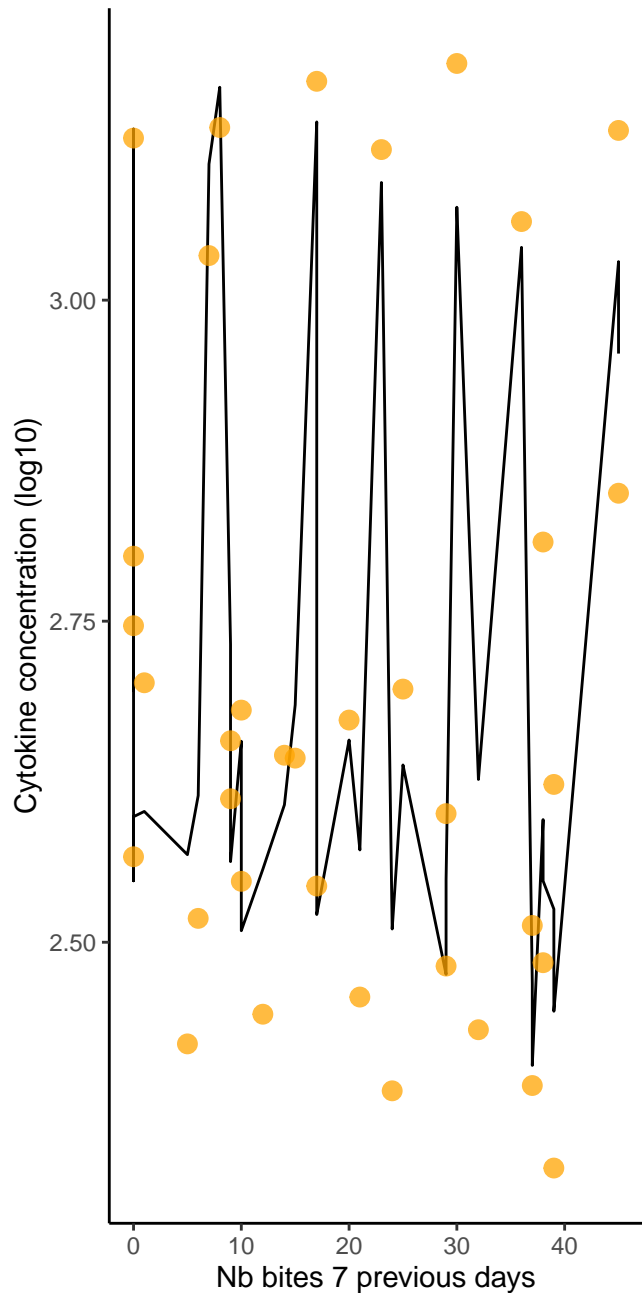
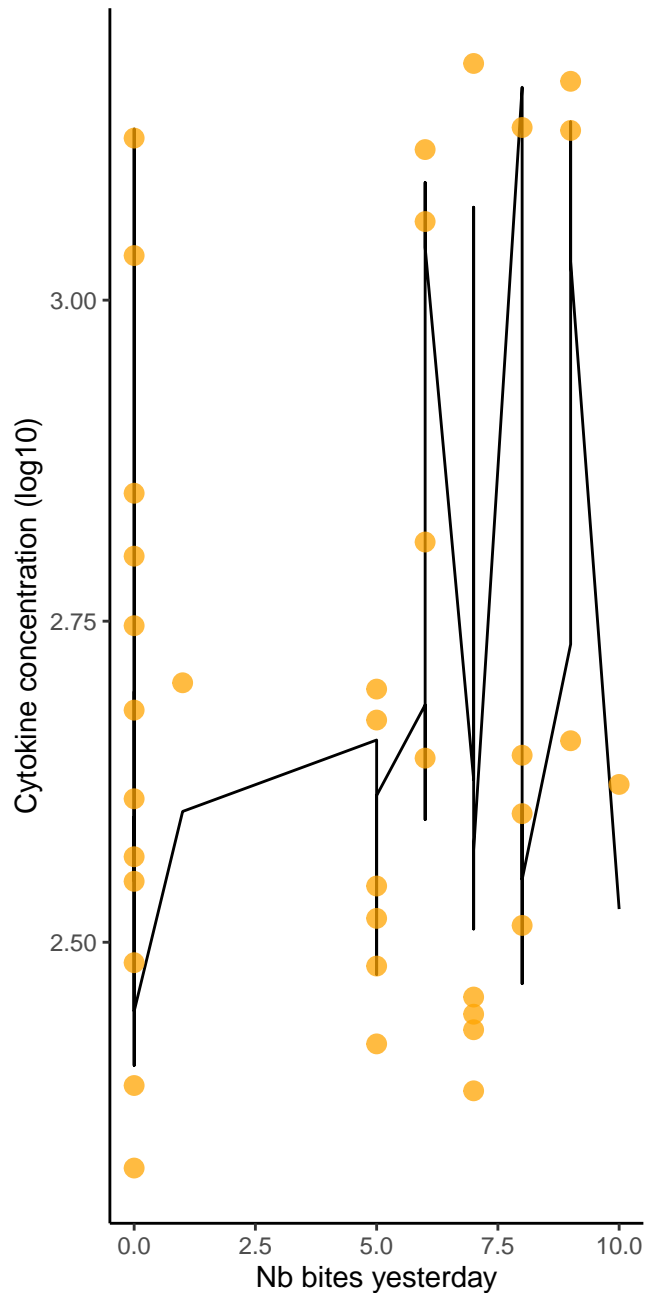


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.10 | [1.00, 3.74] | 1.05 | 0.91 | [0.27, 1.00] |
| cumul_bites_7_previous_days | 1.10 | [1.00, 3.74] | 1.05 | 0.91 | [0.27, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|-------|--------|----------|----------|
| -37.2 | -29.3 | 23.6 | -47.2 | 31 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|----------|----------|
| ID | (Intercept) | 0.05454 | 0.2335 |
| | Residual | 0.01025 | 0.1012 |

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0102

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|-------------|
| (Intercept) | 2.743543 | 0.121401 | 22.599 | < 2e-16 *** |
| bites_of_yesterday | 0.007957 | 0.005097 | 1.561 | 0.11854 |
| cumul_bites_7_previous_days | -0.003885 | 0.001266 | -3.069 | 0.00215 ** |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AICc [1] -35.18623

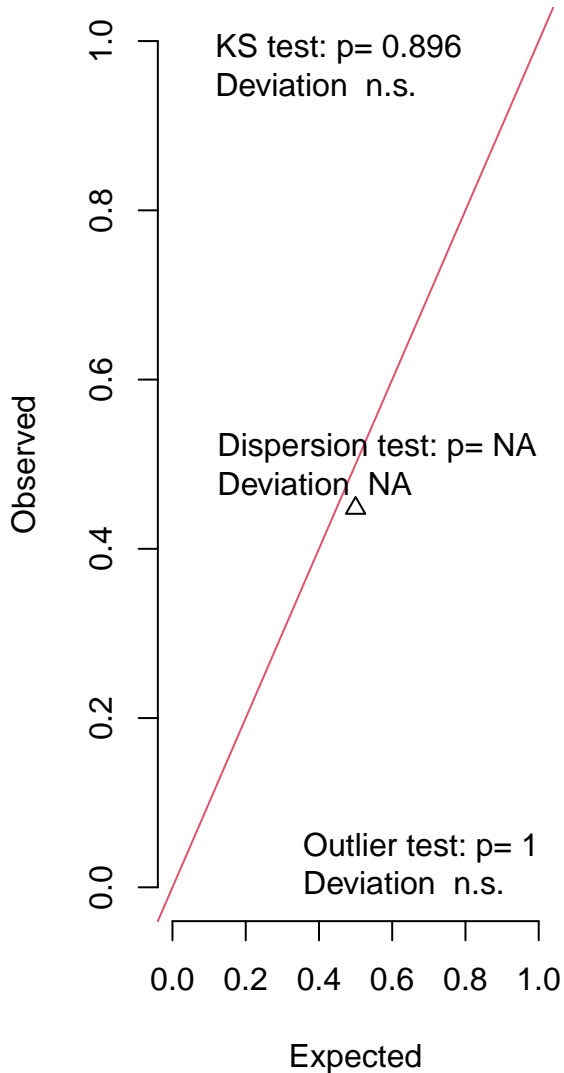
Bites in squirrel

Nb excluded (LOD) : 19

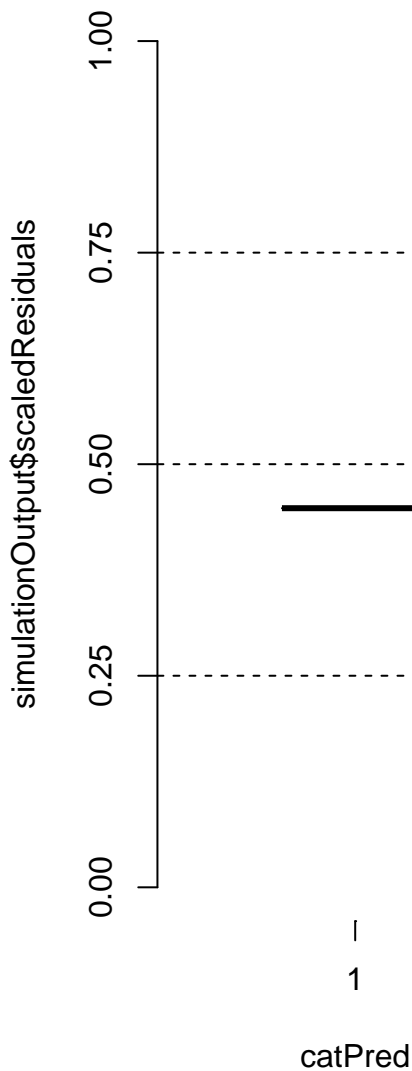
Nb remaining: 1

DHARMA residual

QQ plot residuals



Within-group deviation from uniformity n.s.



cumul_bites_2_previous_days effect plot

log10(value)

cumul_bites_2_previous_days

MCP.1 ERROR : 'xscale' incorrect dans la vue

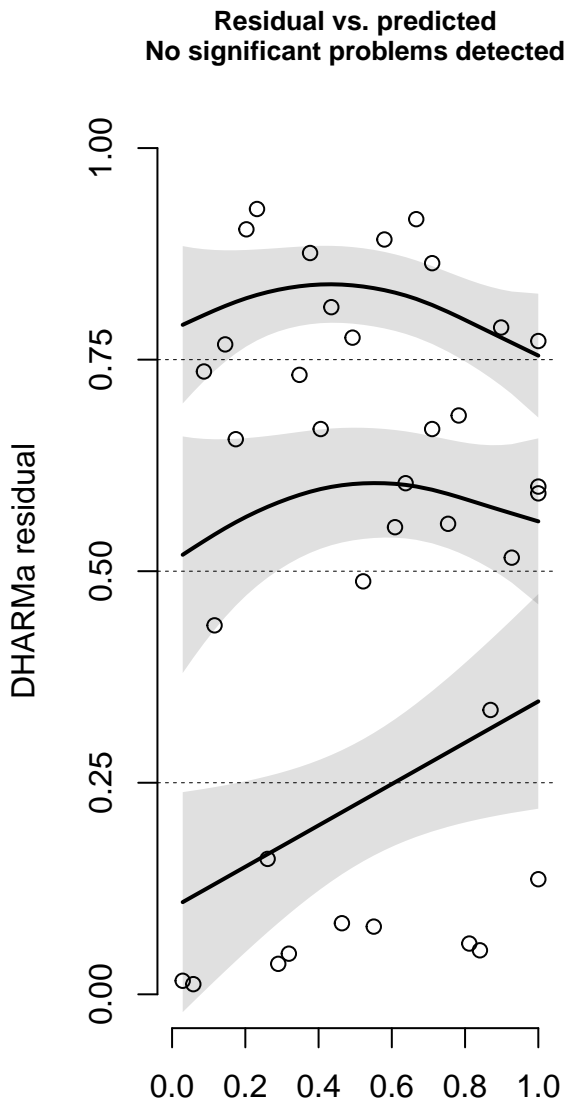
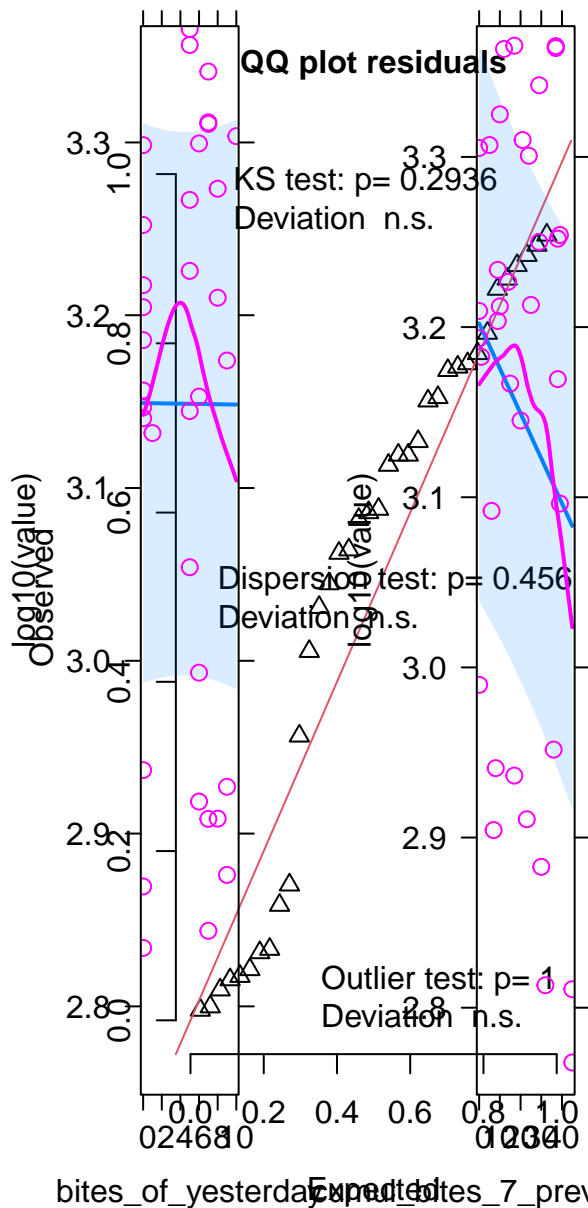
MDC

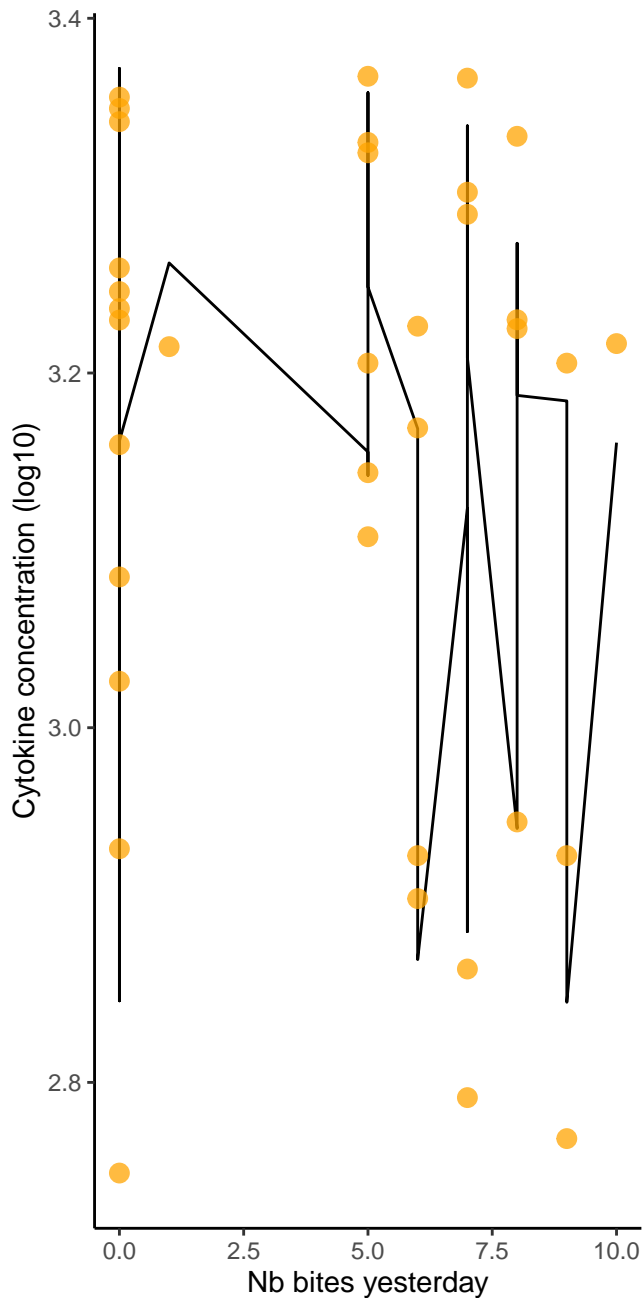
Bites in cyno

Nb excluded (LOD) : 0
Nb remaining: 36

of yesterday bites 7 previous days effect plot

DHARMA residual





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.10 | [1.00, 3.75] | 1.05 | 0.91 | [0.27, 1.00] |
| cumul_bites_7_previous_days | 1.10 | [1.00, 3.75] | 1.05 | 0.91 | [0.27, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|-------|--------|----------|----------|
| -50.4 | -42.4 | 30.2 | -60.4 | 31 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|----------|----------|
| ID | (Intercept) | 0.023047 | 0.15181 |
| | Residual | 0.007548 | 0.08688 |

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.00755

Conditional model:

| | Estimate | Std. Error | z | value | Pr(> z) |
|-----------------------------|------------|------------|-------|--------|----------|
| (Intercept) | 3.203e+00 | 8.109e-02 | 39.50 | <2e-16 | *** |
| bites_of_yesterday | -8.757e-05 | 4.375e-03 | -0.02 | 0.9840 | |
| cumul_bites_7_previous_days | -2.646e-03 | 1.086e-03 | -2.44 | 0.0149 | * |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AICc [1] -48.354

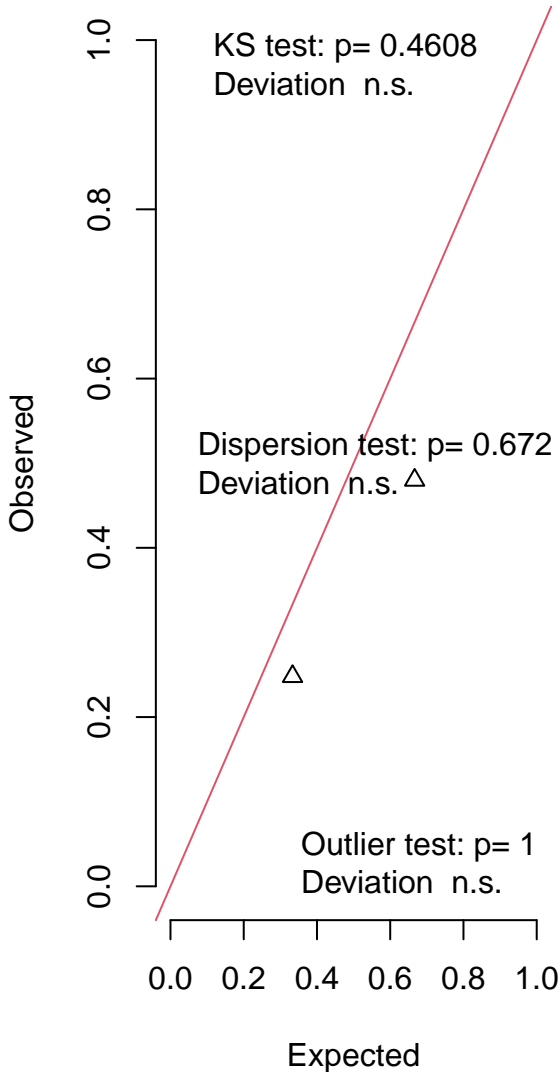
Bites in squirrel

Nb excluded (LOD) : 18

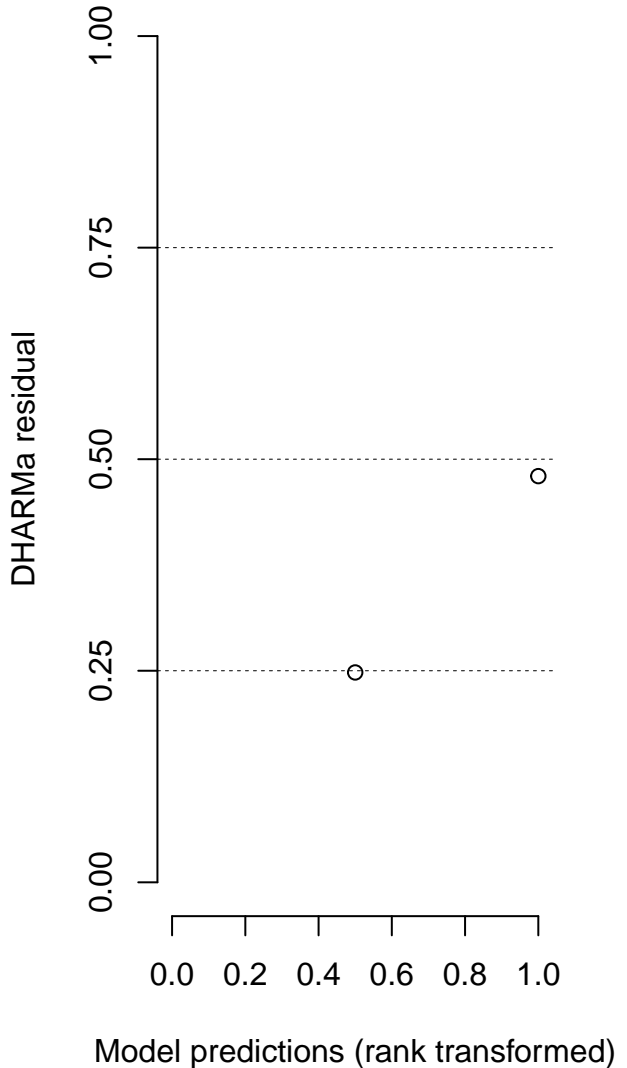
Nb remaining: 2

DHARMA residual

QQ plot residuals



Residual vs. predicted No significant problems detected



cumul_bites_2_previous_days effect plot

log10(value)

cumul_bites_2_previous_days

MDC ERROR : 'xscale' incorrect dans la vue

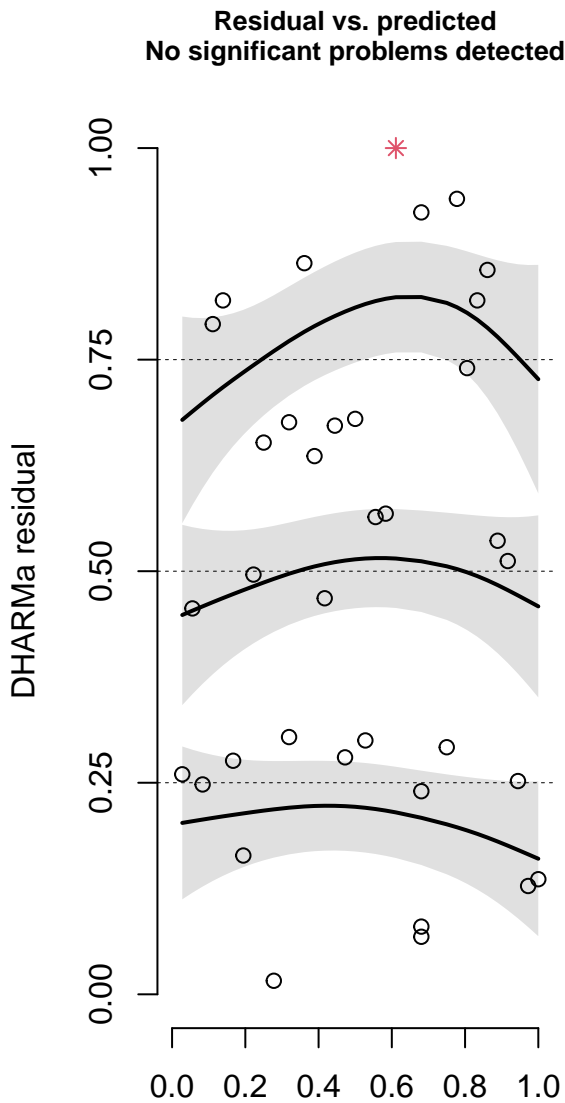
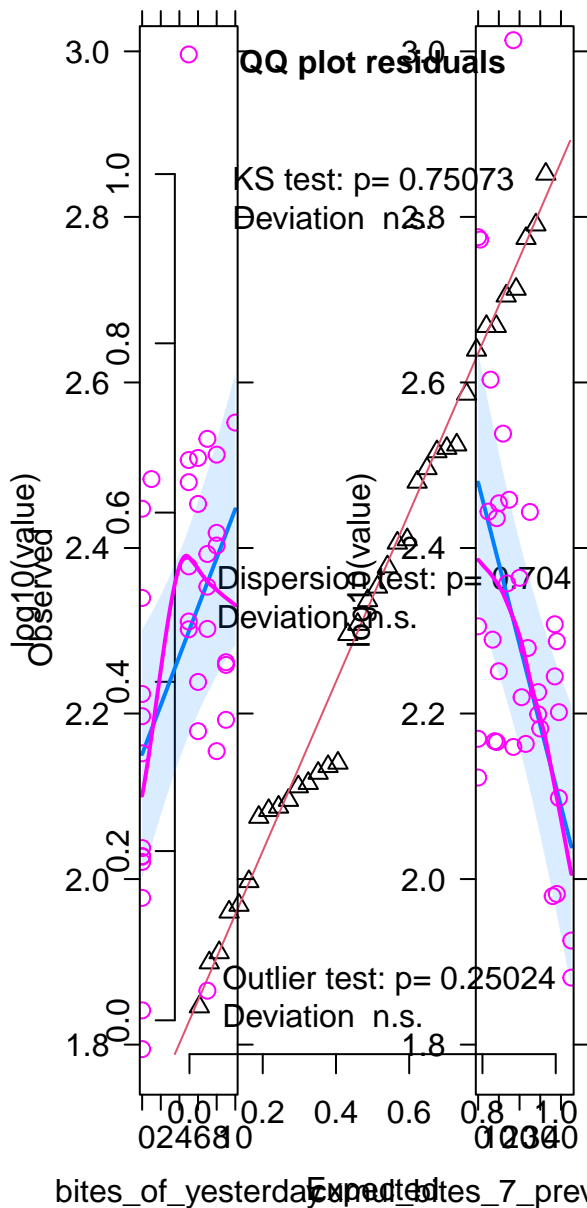
MIF

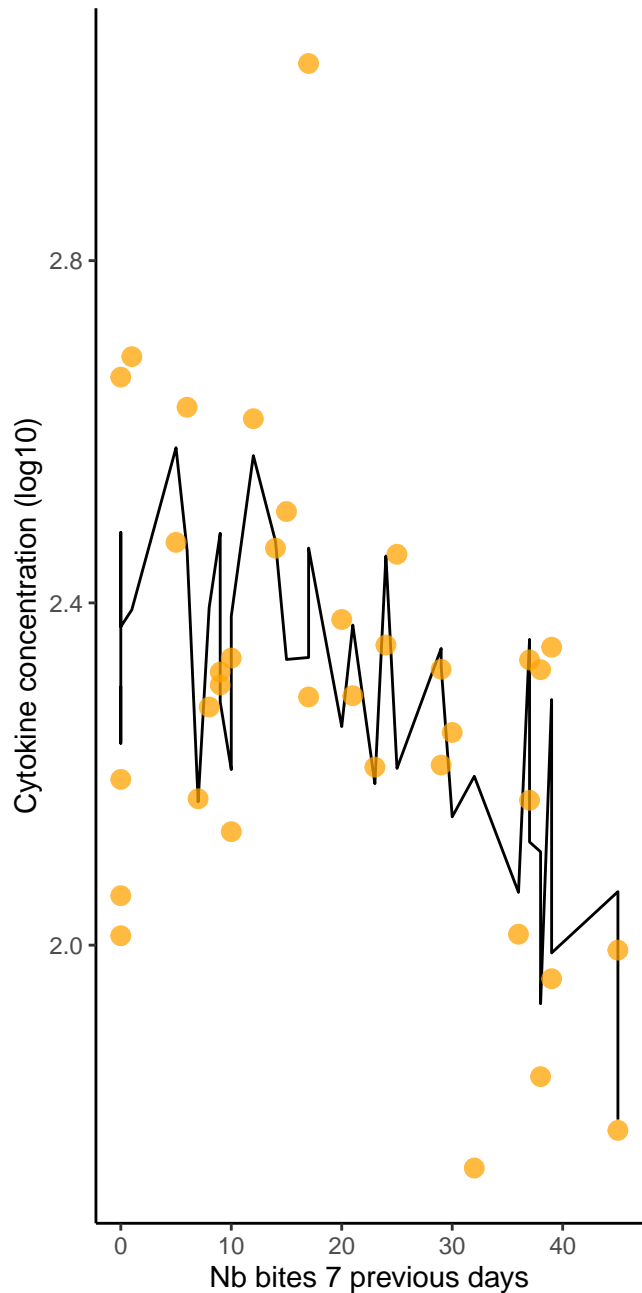
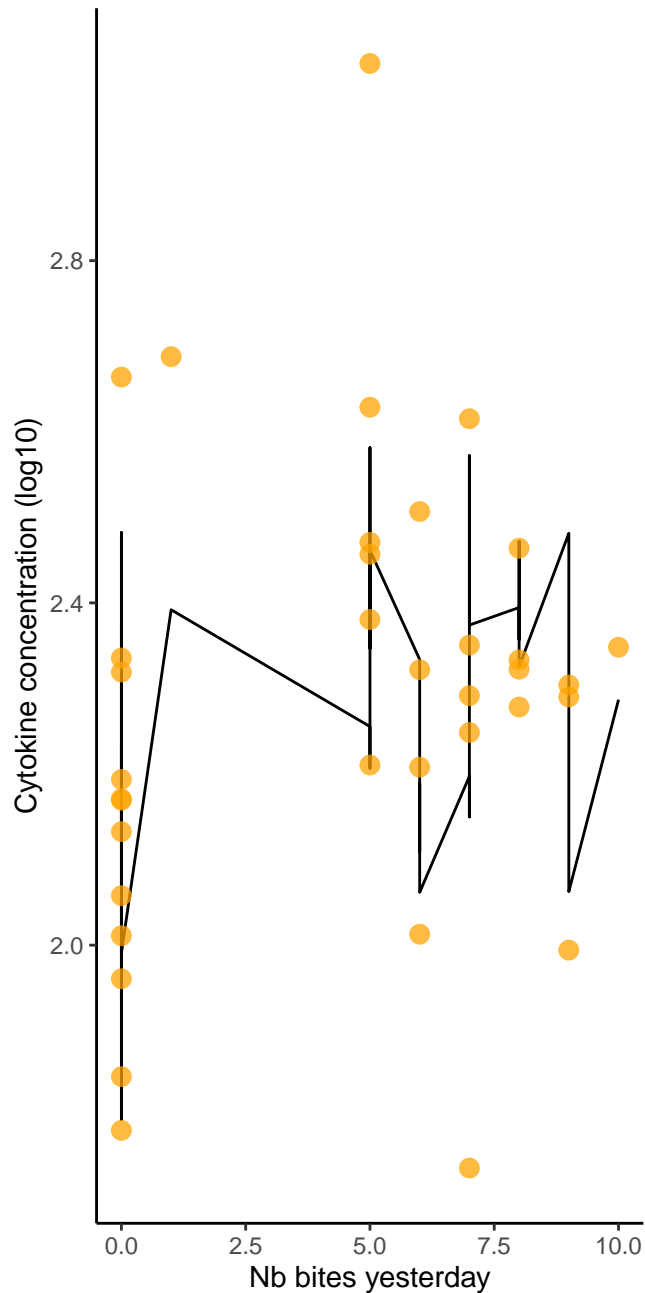
Bites in cyno

Nb excluded (LOD) : 0
Nb remaining: 36

of yesterday bites 7 previous days effect plot

DHARMA residual





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.10 | [1.00, 3.80] | 1.05 | 0.91 | [0.26, 1.00] |
| cumul_bites_7_previous_days | 1.10 | [1.00, 3.80] | 1.05 | 0.91 | [0.26, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|------|-----|--------|----------|----------|
| -3.4 | 4.5 | 6.7 | -13.4 | 31 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|----------|----------|
| ID | (Intercept) | 0.01116 | 0.1056 |
| | Residual | 0.03467 | 0.1862 |

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0347

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|-------------|
| (Intercept) | 2.348359 | 0.080809 | 29.060 | < 2e-16 *** |
| bites_of_yesterday | 0.029594 | 0.009375 | 3.157 | 0.0016 ** |
| cumul_bites_7_previous_days | -0.009775 | 0.002329 | -4.198 | 2.7e-05 *** |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

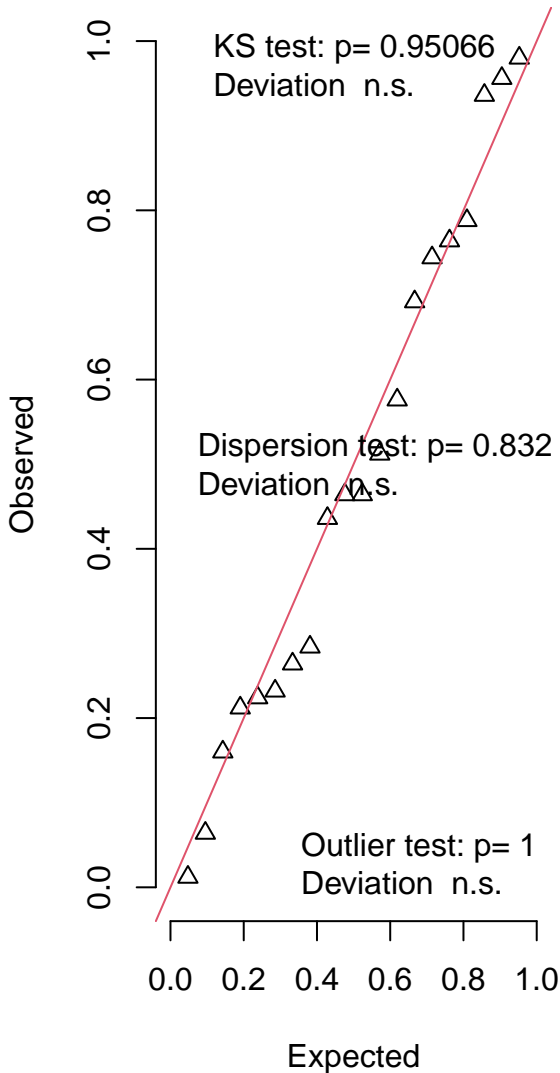
AICc [1] -1.426414

Bites in squirrel

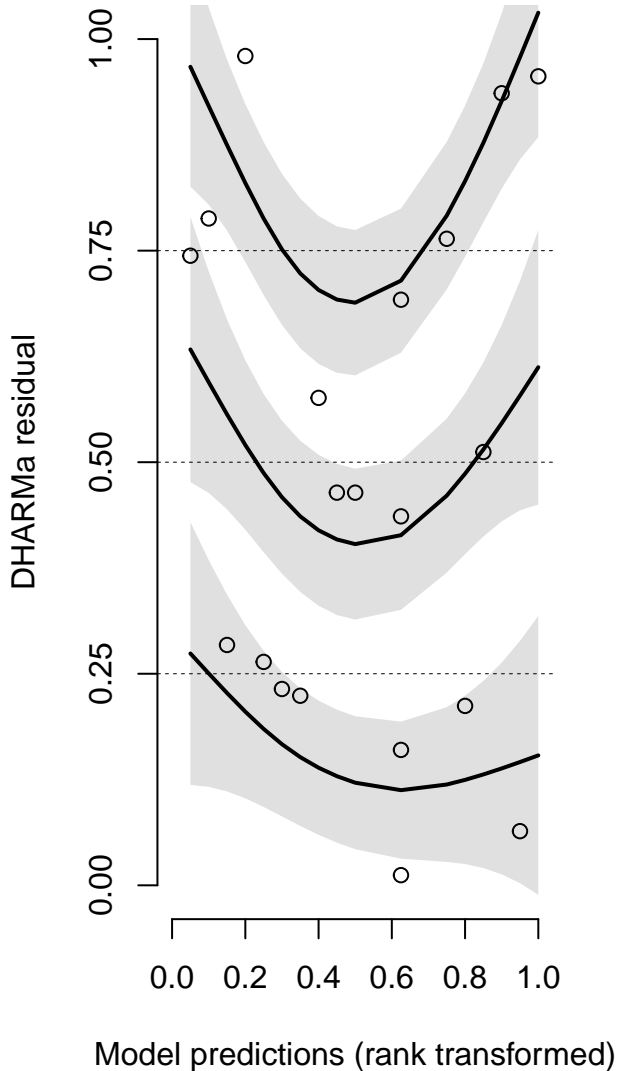
Nb excluded (LOD) : 0
Nb remaining: 20

DHARMA residual

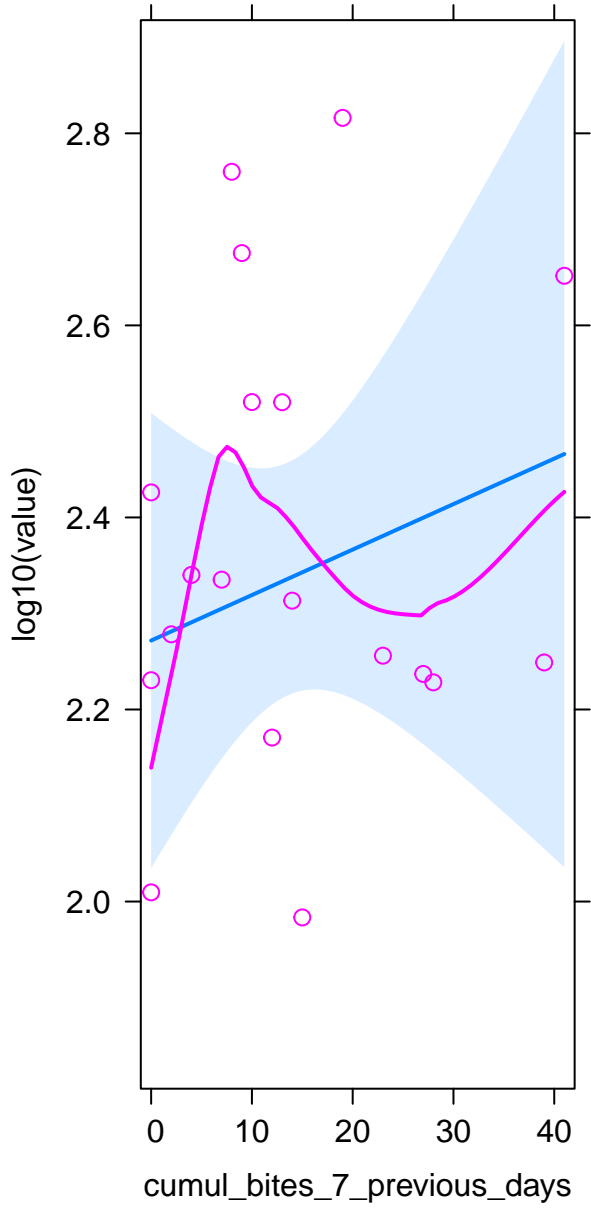
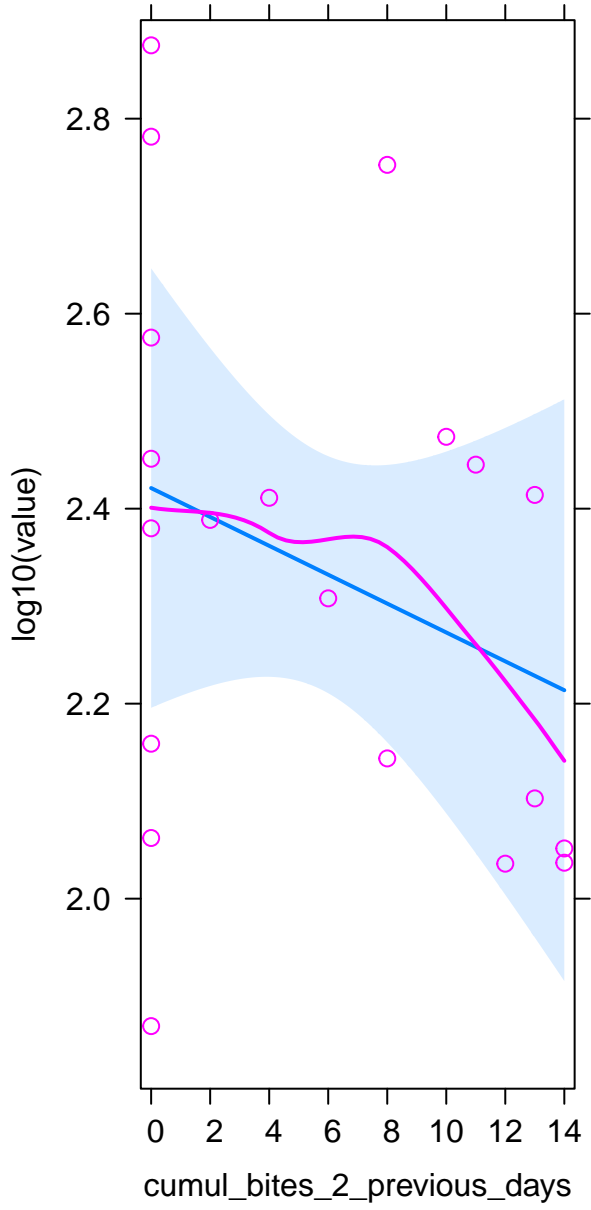
QQ plot residuals

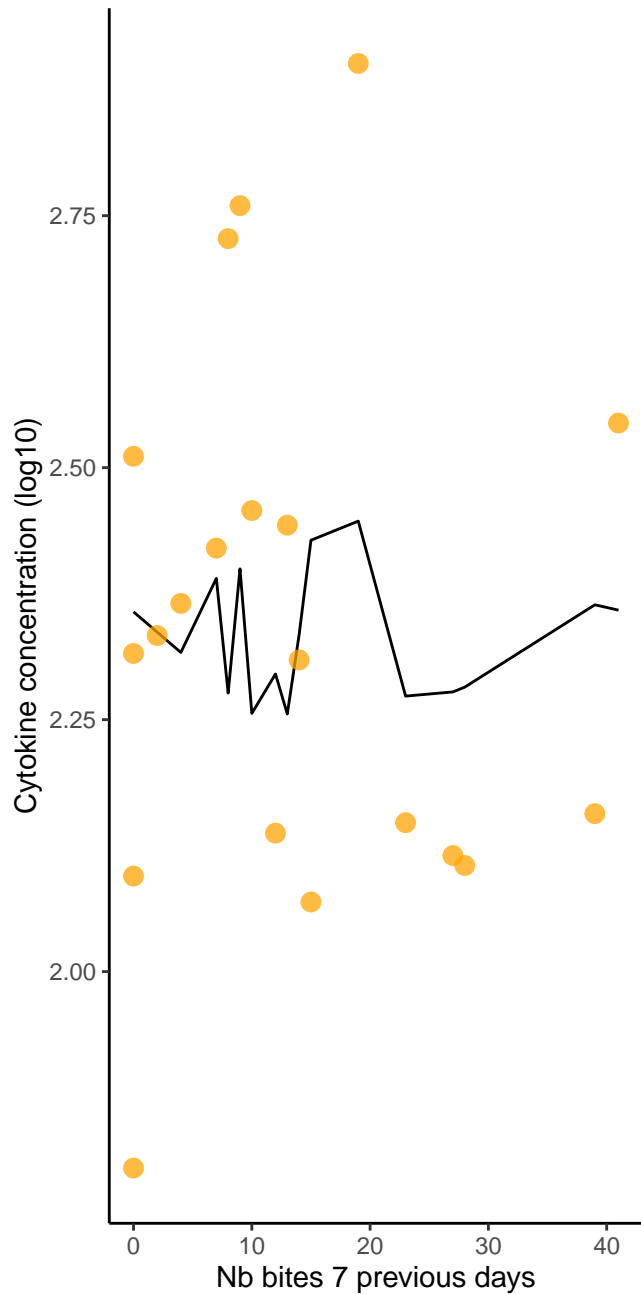
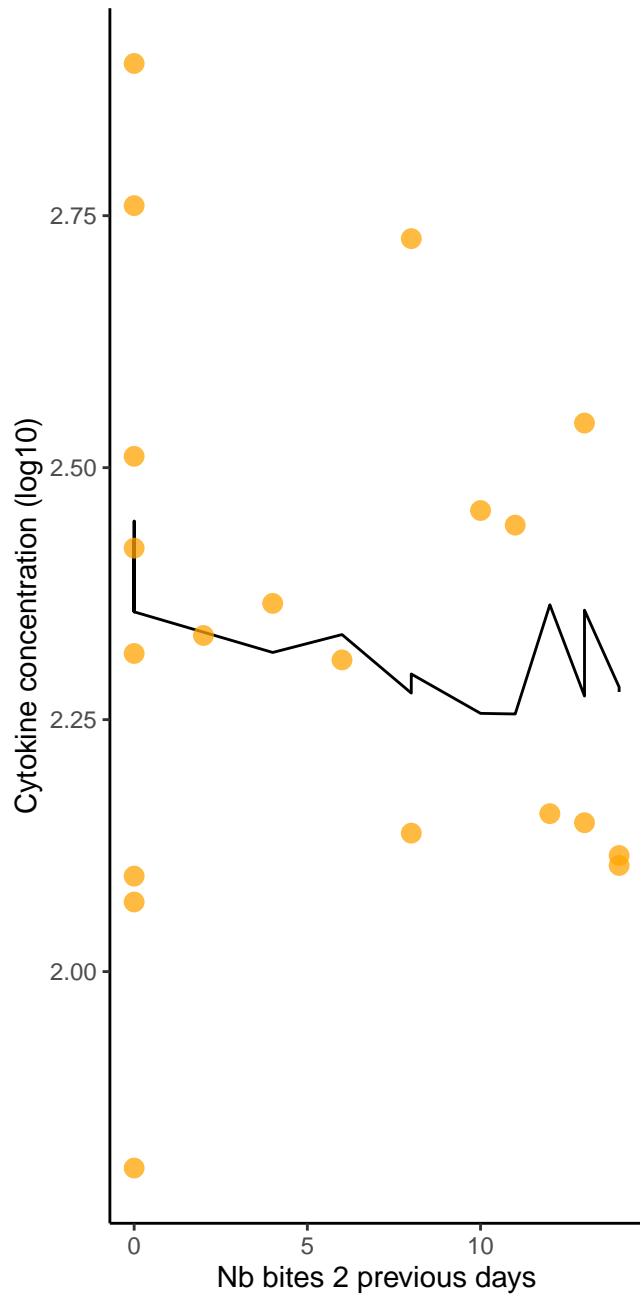


Residual vs. predicted No significant problems detected



cumul_bites_2_previous_days effect plot cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| cumul_bites_2_previous_days | 2.29 | [1.55, 4.03] | 1.51 | 0.44 | [0.25, 0.64] |
| cumul_bites_7_previous_days | 2.29 | [1.55, 4.03] | 1.51 | 0.44 | [0.25, 0.64] |

```

Family: gaussian ( identity )
Formula:      log10(value) ~ cumul_bites_2_previous_days + cumul_bites_7_previous_days +      (1 | ID)
Data: d_sq

      AIC      BIC  logLik deviance df.resid
    12.4     17.4    -1.2      2.4      15

Random effects:

Conditional model:
Groups  Name      Variance Std.Dev.
ID      (Intercept) 1.410e-12 1.187e-06
Residual              6.612e-02 2.571e-01
Number of obs: 20, groups:  ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0661

Conditional model:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)    2.356955   0.087666  26.886  <2e-16 ***
cumul_bites_2_previous_days -0.014812   0.015660  -0.946   0.344
cumul_bites_7_previous_days  0.004737   0.007129   0.664   0.506
---
Signif. codes:  0 '***'... 0.001 '**'... 0.01 '*'... 0.05 '.'... 0.1 '...' 1

```

```
AICc [1] 16.71649
```

MIG

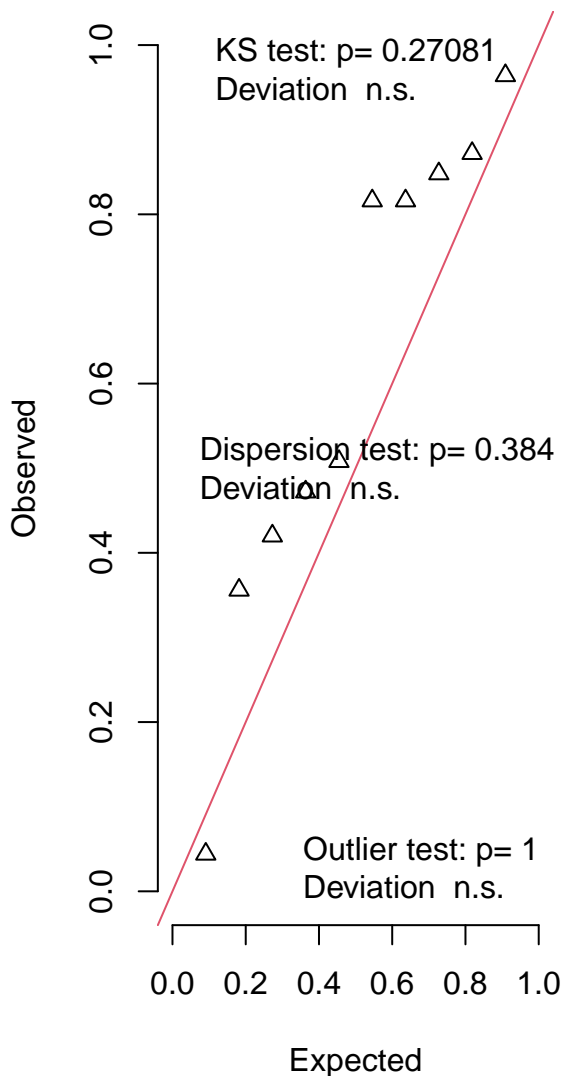
Bites in cyno

Nb excluded (LOD) : 26

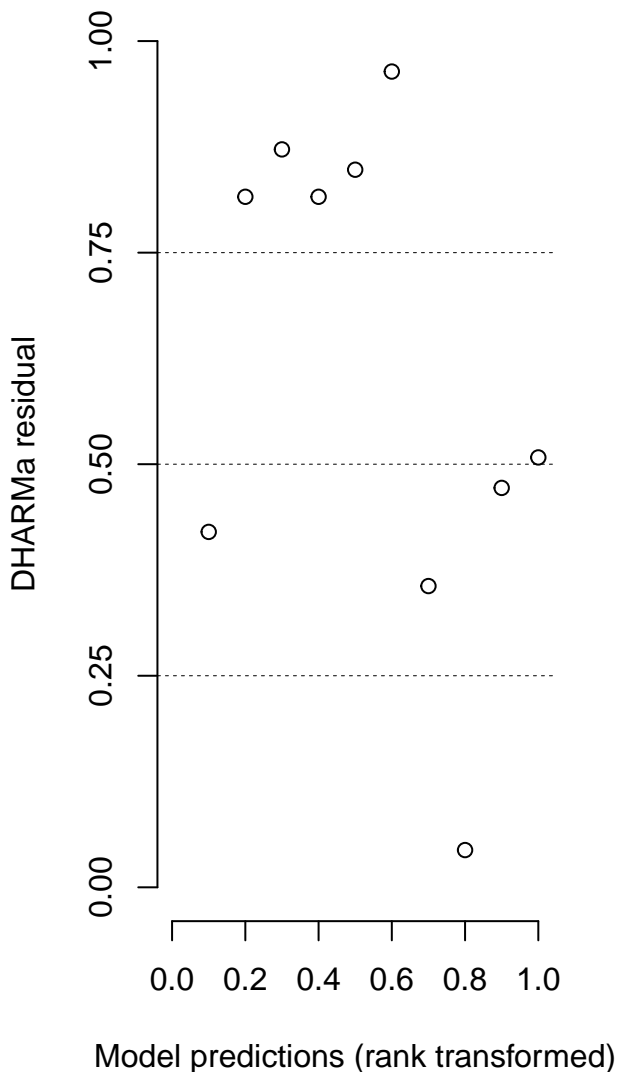
Nb remaining: 10

DHARMA residual

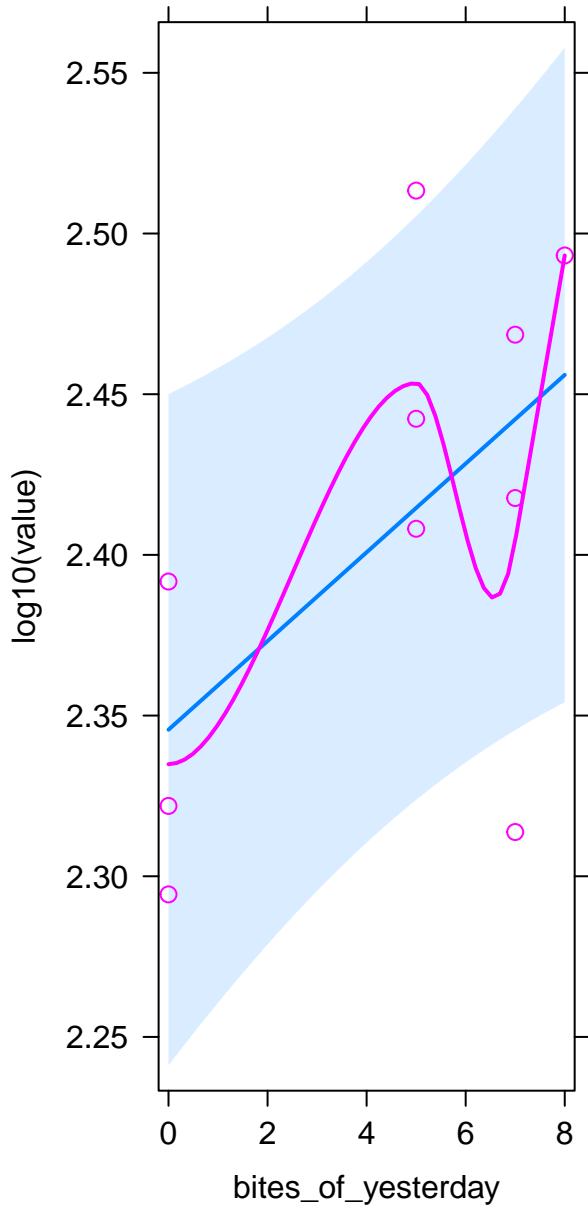
QQ plot residuals



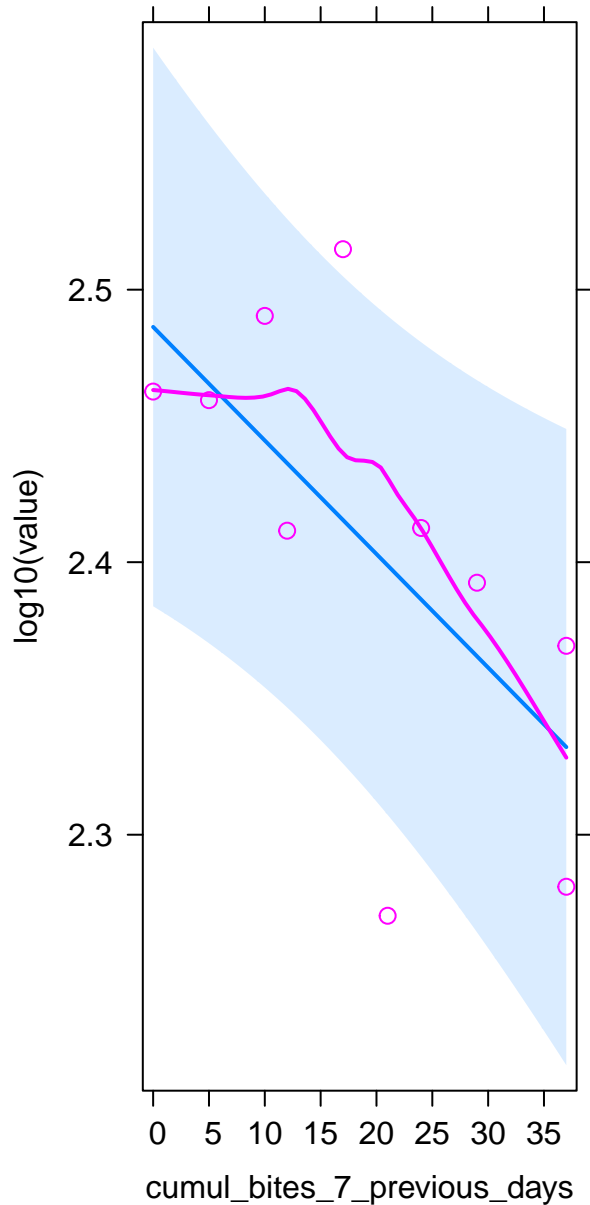
Residual vs. predicted No significant problems detected

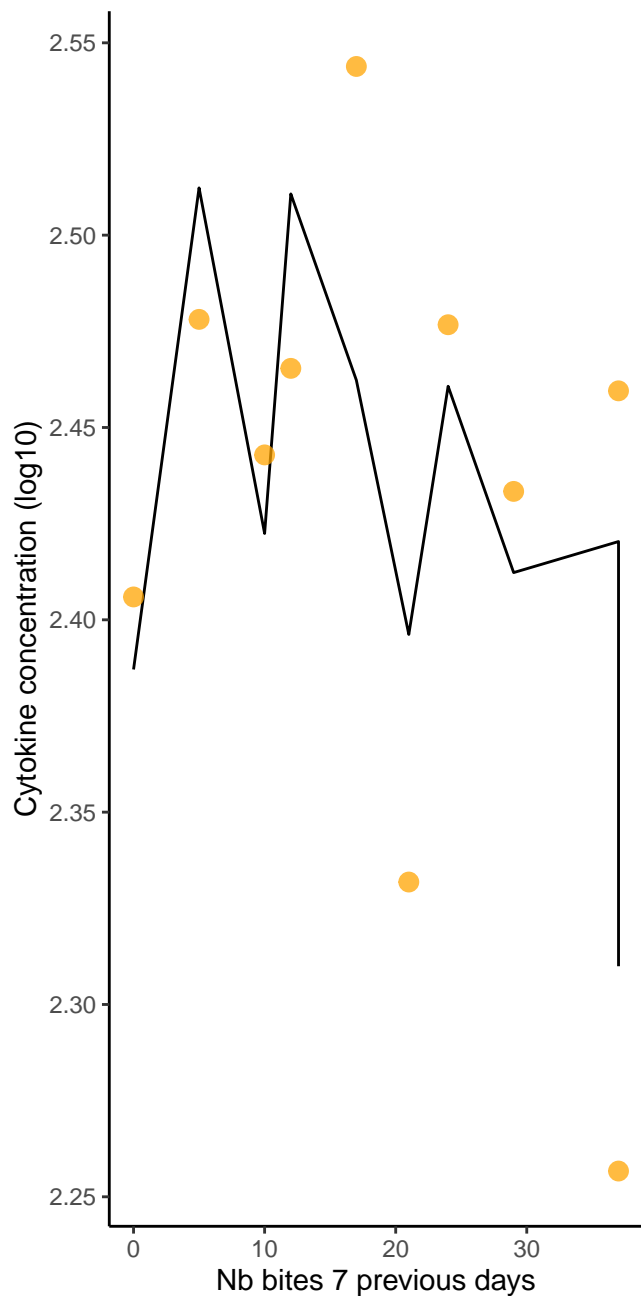
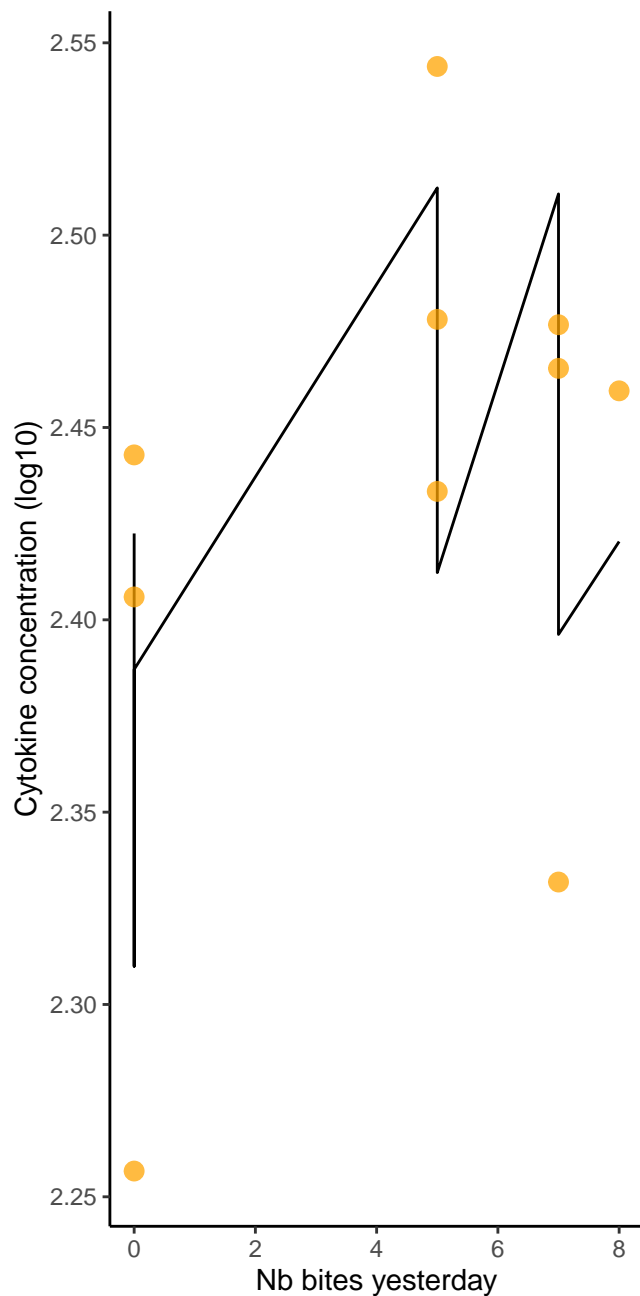


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|---------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.06 | [1.00, 11.88] | 1.03 | 0.94 | [0.08, 1.00] |
| cumul_bites_7_previous_days | 1.06 | [1.00, 11.88] | 1.03 | 0.94 | [0.08, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|-------|--------|----------|----------|
| -19.2 | -17.7 | 14.6 | -29.2 | 5 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|----------|----------|
| ID | (Intercept) | 0.001978 | 0.04447 |
| | Residual | 0.002337 | 0.04834 |

Number of obs: 10, groups: ID, 2

Dispersion estimate for gaussian family (sigma^2): 0.00234

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|-------------|
| (Intercept) | 2.425605 | 0.045483 | 53.33 | < 2e-16 *** |
| bites_of_yesterday | 0.013800 | 0.005259 | 2.62 | 0.00868 ** |
| cumul_bites_7_previous_days | -0.004167 | 0.001441 | -2.89 | 0.00383 ** |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AICc [1] -4.168768

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

MIG ERROR : Invalid grouping factor specification, ID

MIP.1a

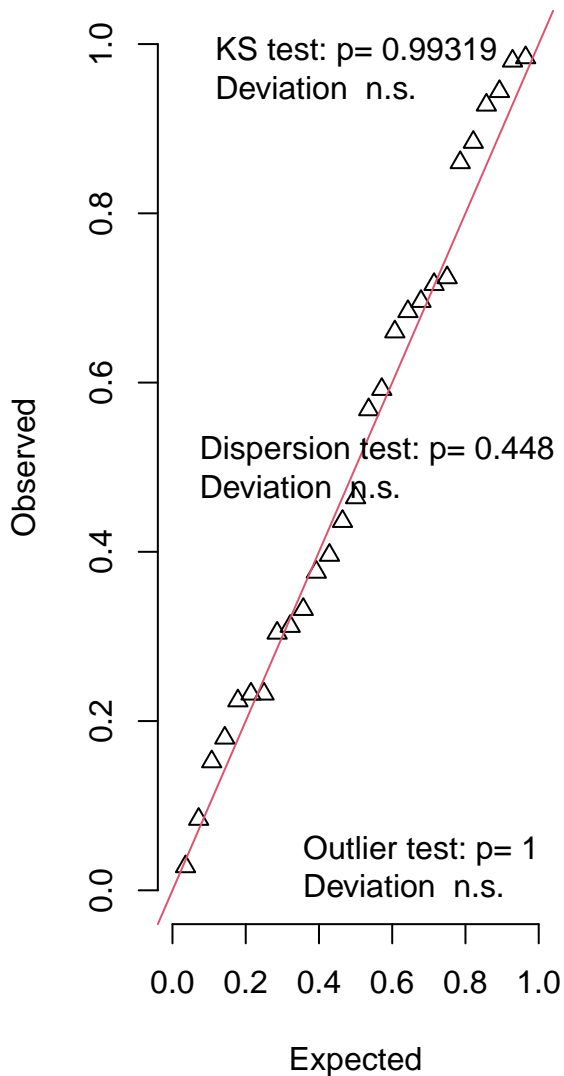
Bites in cyno

Nb excluded (LOD) : 9

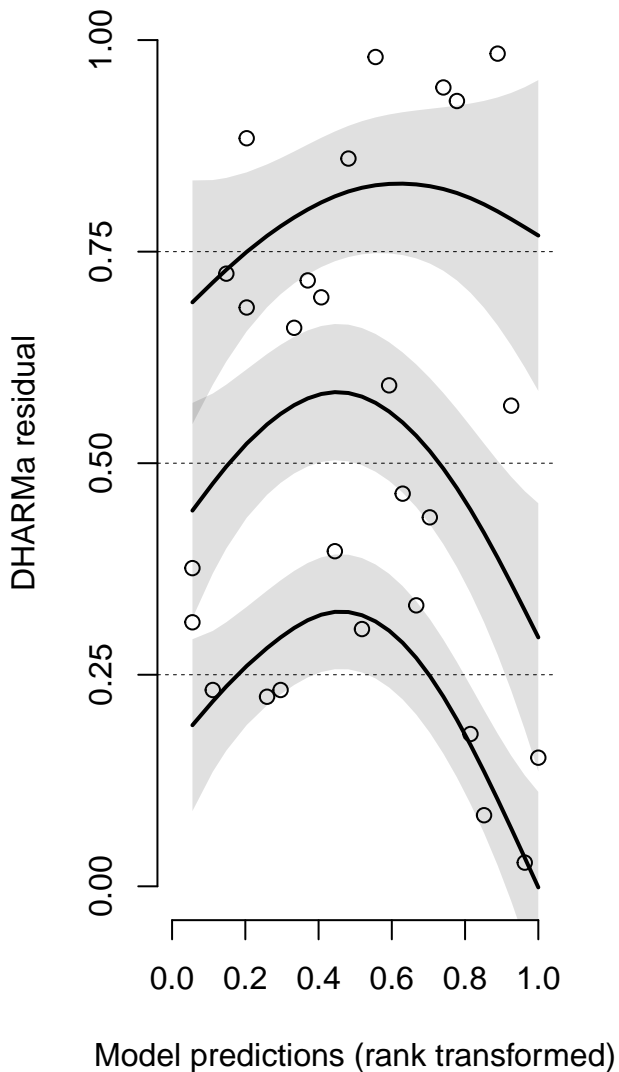
Nb remaining: 27

DHARMA residual

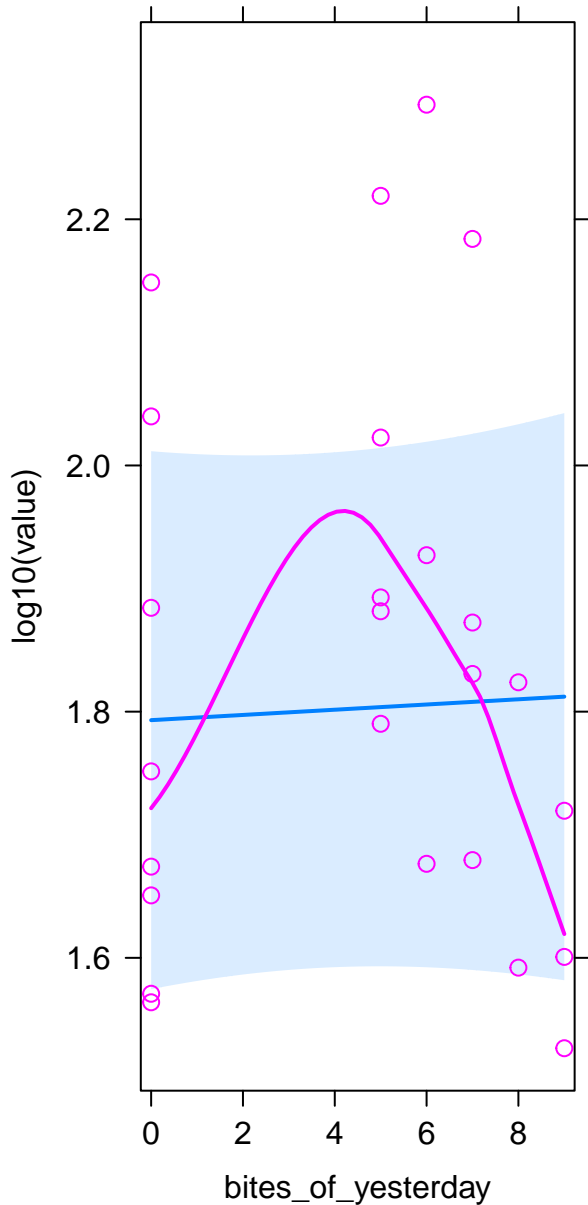
QQ plot residuals



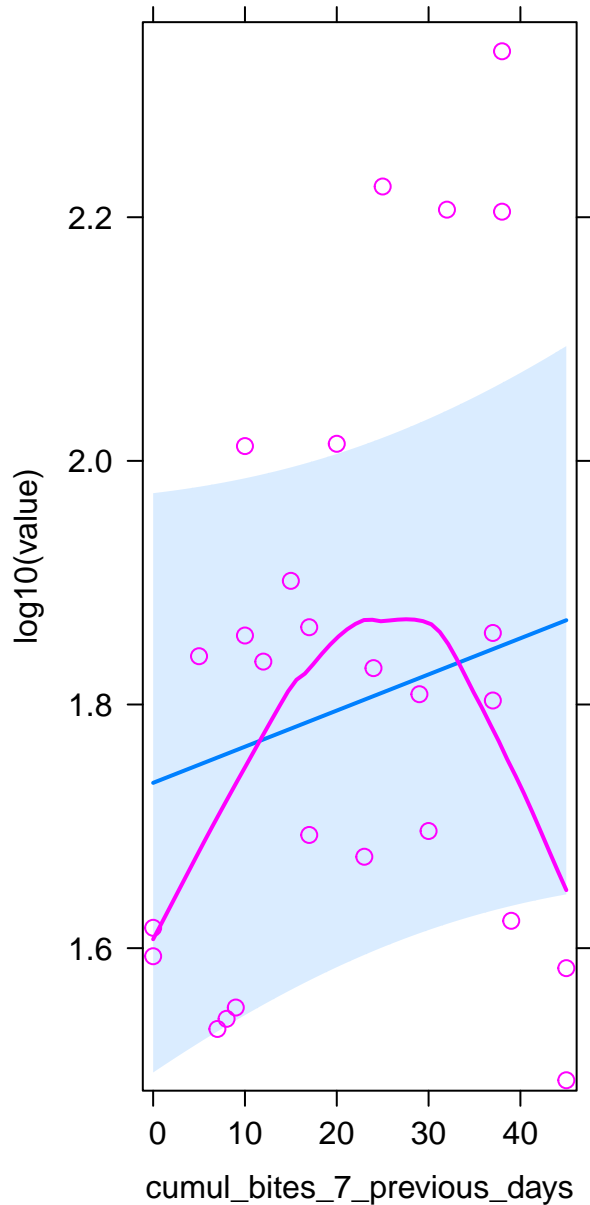
Residual vs. predicted No significant problems detected

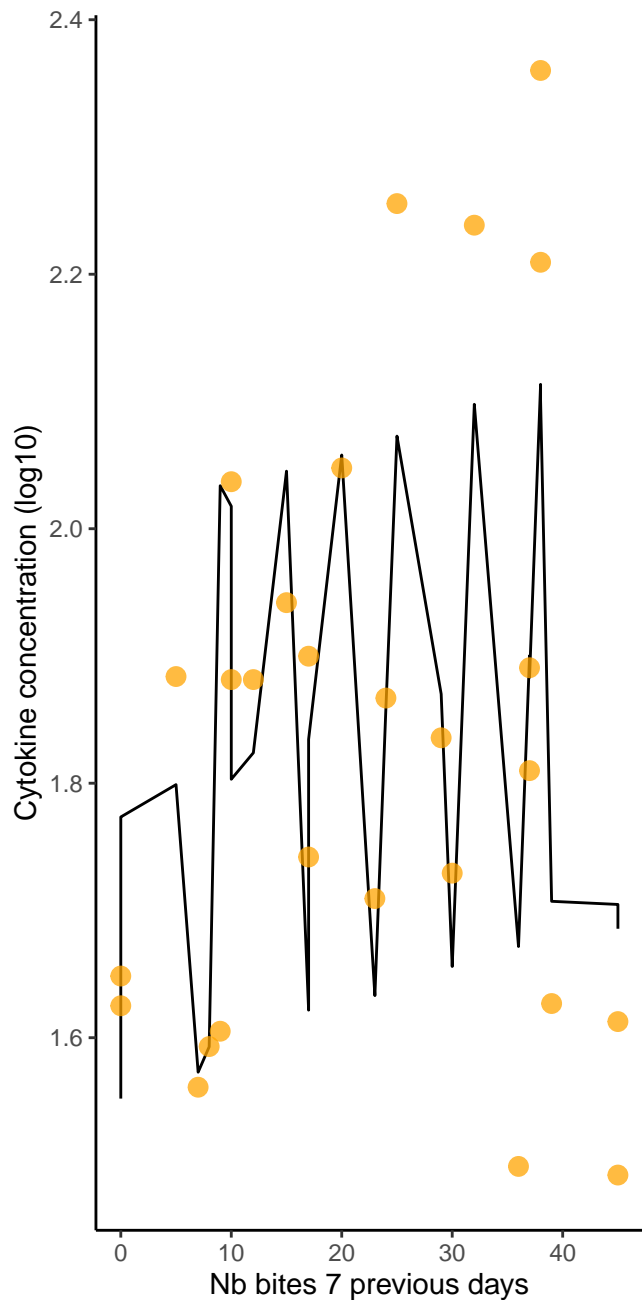
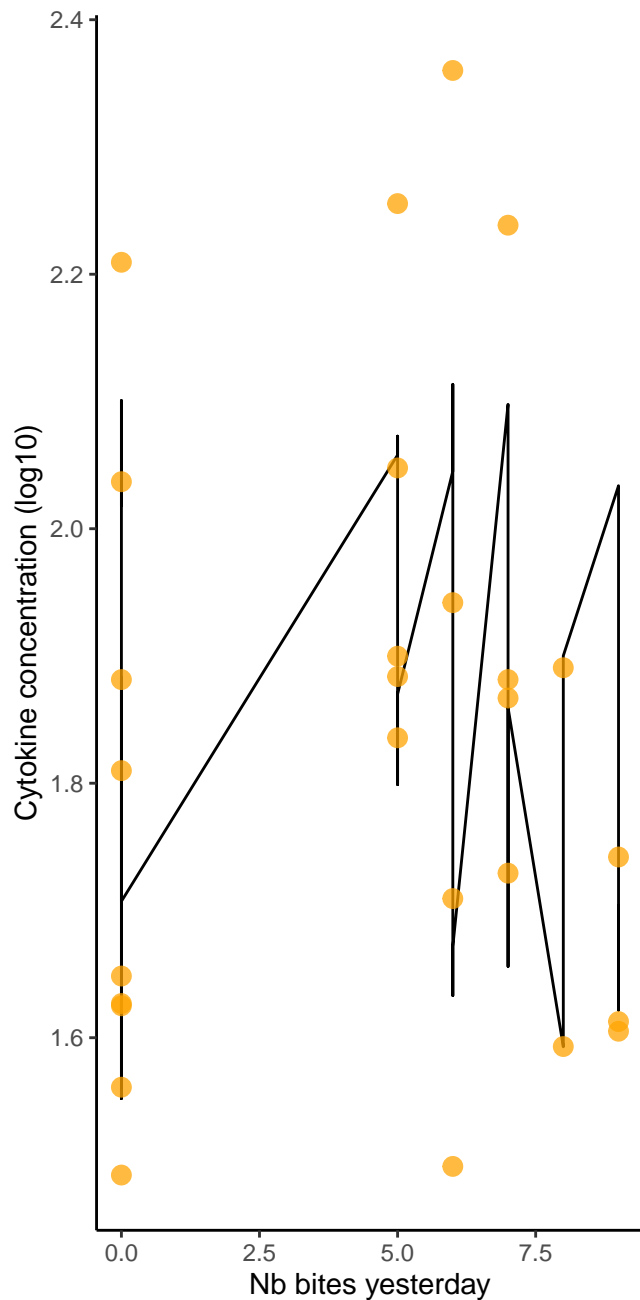


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|-----------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.02 | [1.00, 9941.29] | 1.01 | 0.98 | [0.00, 1.00] |
| cumul_bites_7_previous_days | 1.02 | [1.00, 9941.29] | 1.01 | 0.98 | [0.00, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|------|------|--------|----------|----------|
| -8.9 | -2.4 | 9.4 | -18.9 | 22 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|----------|----------|
| ID | (Intercept) | 0.03472 | 0.1863 |
| | Residual | 0.02070 | 0.1439 |

Number of obs: 27, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0207

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|----------|------------|---------|------------|
| (Intercept) | 1.726278 | 0.116690 | 14.794 | <2e-16 *** |
| bites_of_yesterday | 0.002121 | 0.008647 | 0.245 | 0.806 |
| cumul_bites_7_previous_days | 0.002966 | 0.002117 | 1.401 | 0.161 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AICc [1] -6.007012

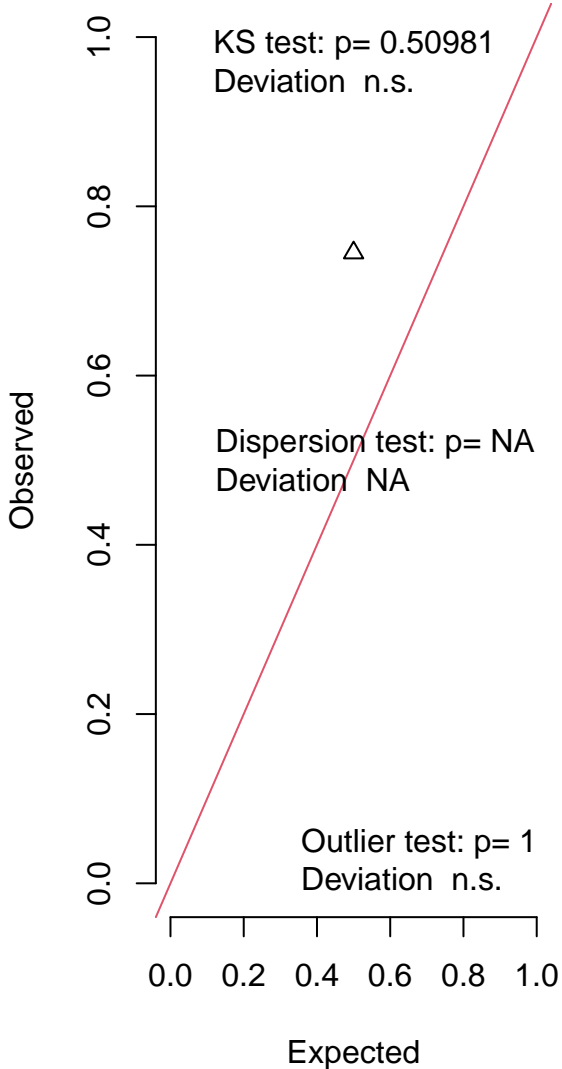
Bites in squirrel

Nb excluded (LOD) : 19

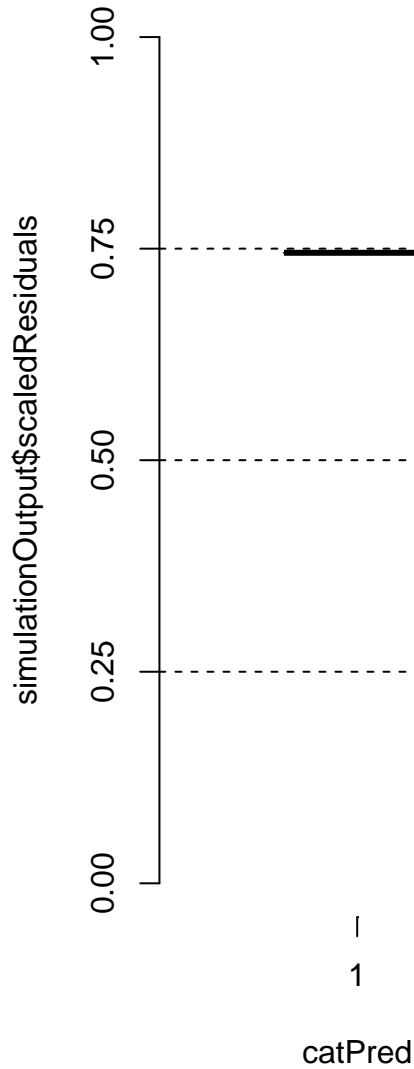
Nb remaining: 1

DHARMA residual

QQ plot residuals



Within-group deviation from uniformity n.s.



cumul_bites_2_previous_days effect plot

$\log_{10}(\text{value})$

cumul_bites_2_previous_days

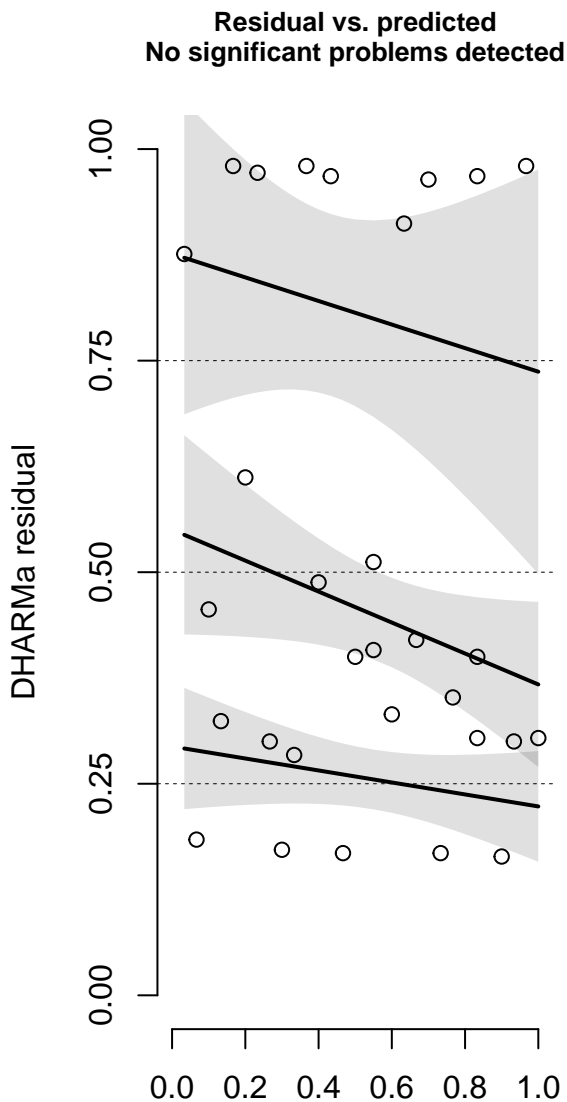
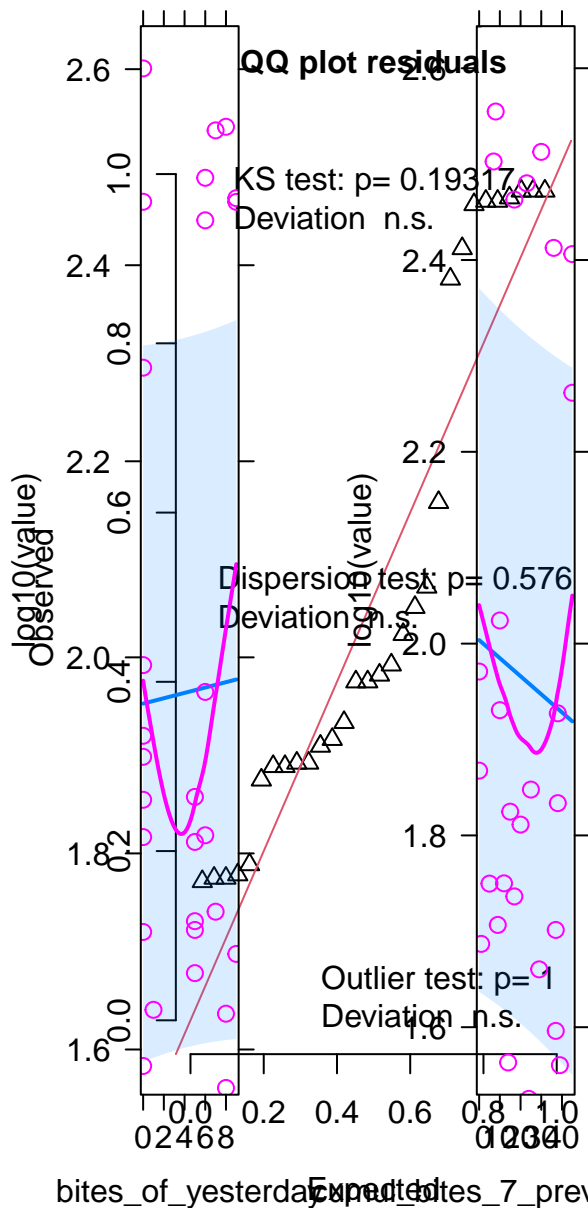
MIP.1a ERROR : 'xscale' incorrect dans la vue

MIP.1B

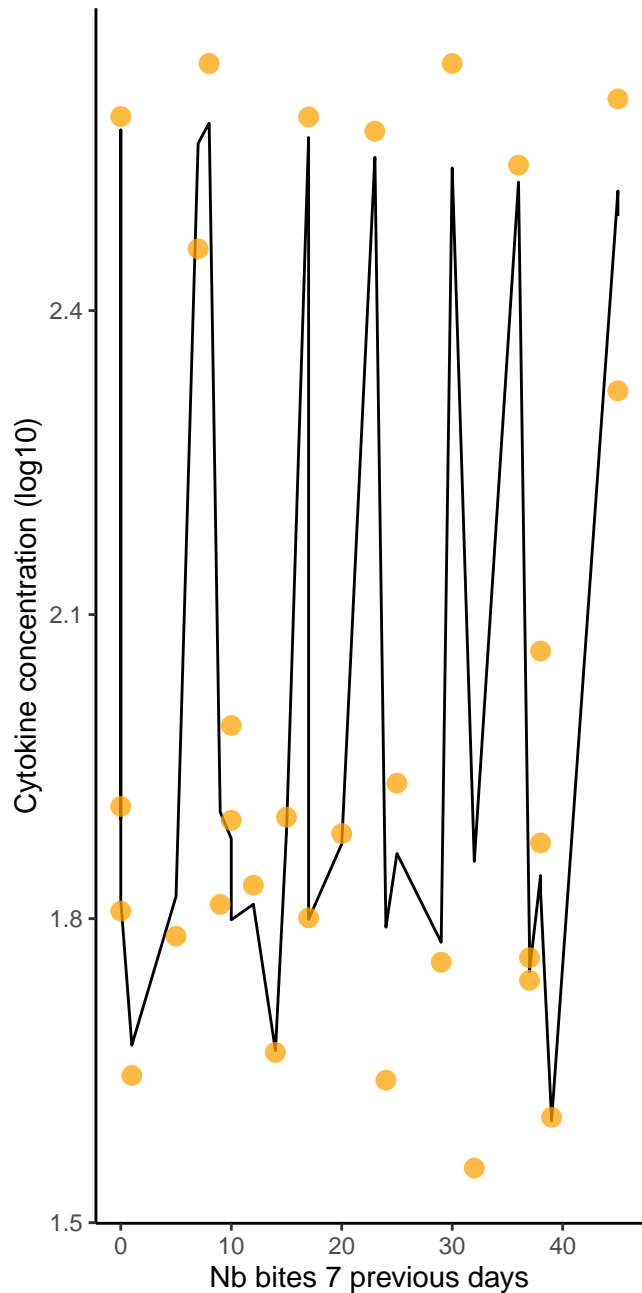
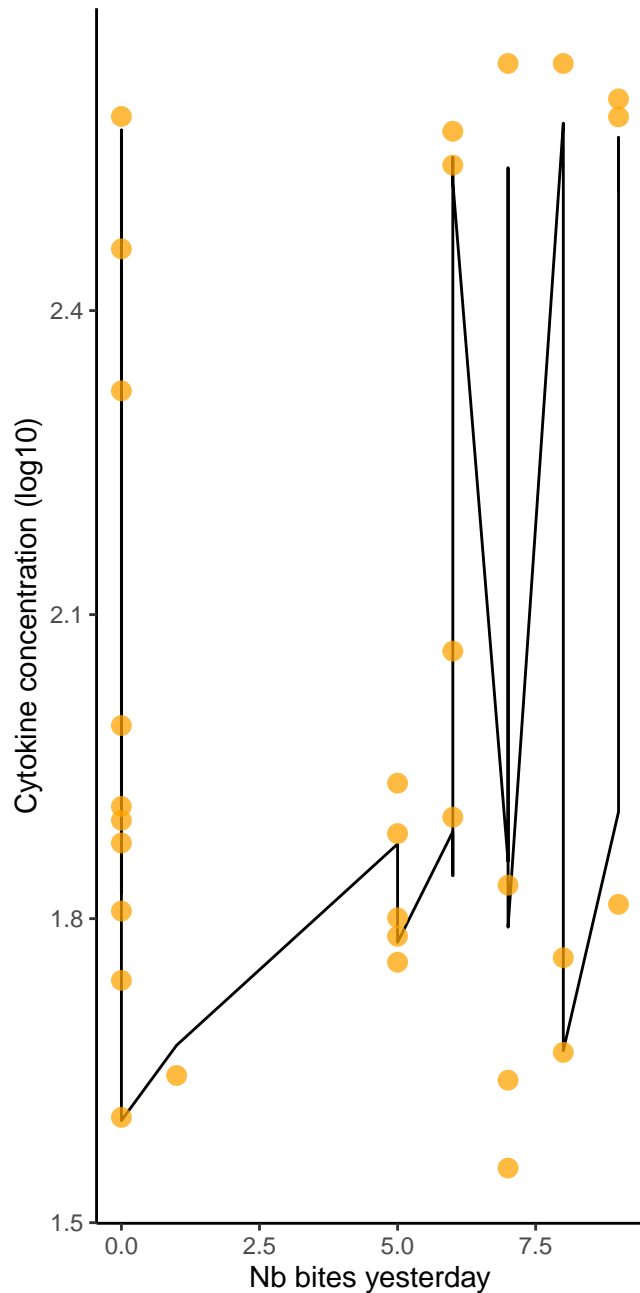
Bites in cyno

Nb excluded (LOD) : 6
Nb remaining: 30

of_yesterday_effect_top_previous_days_effect_plot



bites_of_yesterday Expected bites_7_previous_days Model predictions (rank transformed)



Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|----------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.03 | [1.00, 717.36] | 1.01 | 0.97 | [0.00, 1.00] |
| cumul_bites_7_previous_days | 1.03 | [1.00, 717.36] | 1.01 | 0.97 | [0.00, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|-------|--------|----------|----------|
| -22.8 | -15.8 | 16.4 | -32.8 | 25 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|----------|----------|
| ID | (Intercept) | 0.12276 | 0.3504 |
| | Residual | 0.01098 | 0.1048 |

Number of obs: 30, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.011

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|------------|
| (Intercept) | 1.991951 | 0.179640 | 11.089 | <2e-16 *** |
| bites_of_yesterday | 0.002730 | 0.005798 | 0.471 | 0.638 |
| cumul_bites_7_previous_days | -0.001884 | 0.001385 | -1.361 | 0.174 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

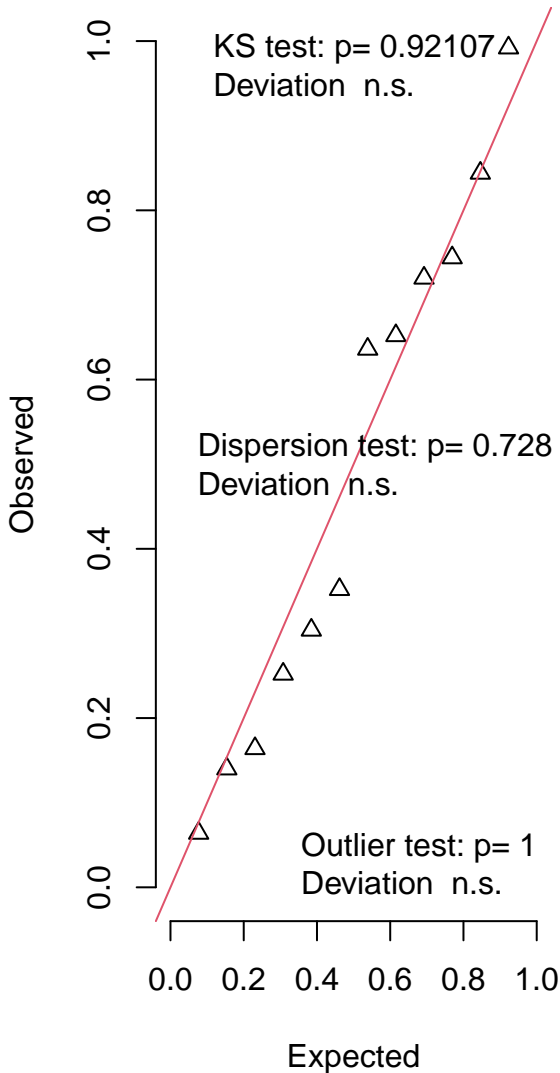
AICc [1] -20.31575

Bites in squirrel

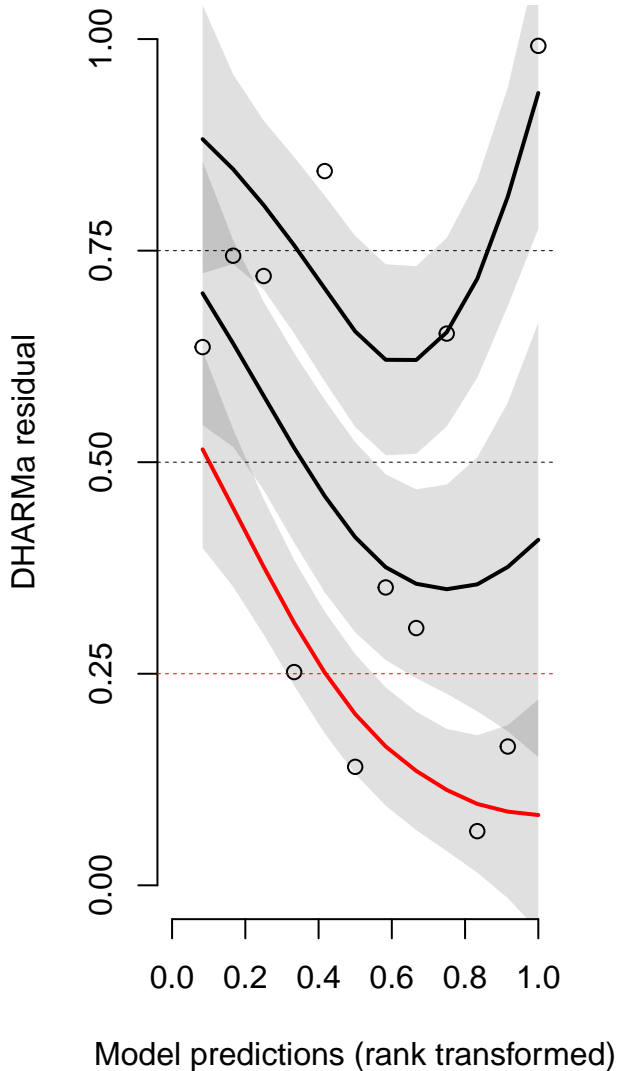
Nb excluded (LOD) : 8
Nb remaining: 12

DHARMA residual

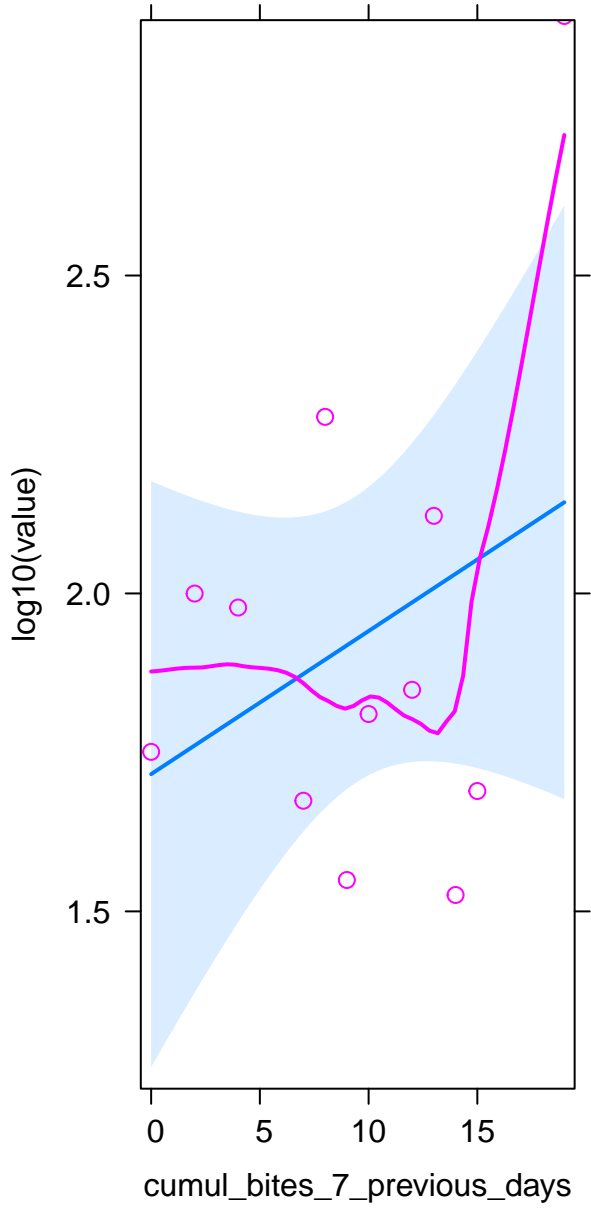
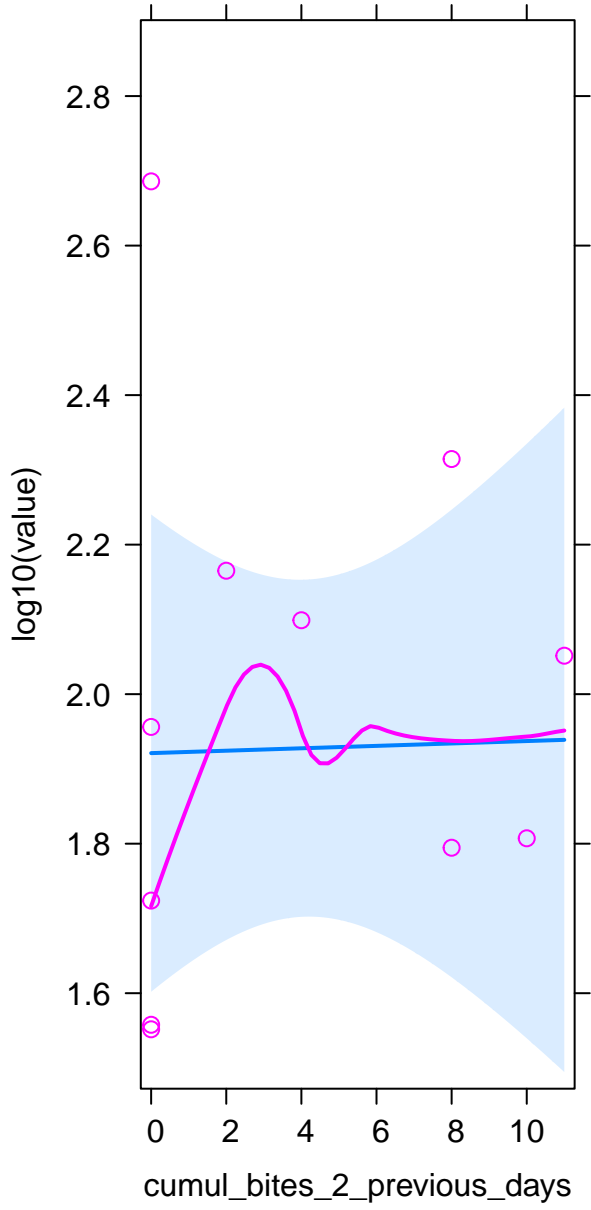
QQ plot residuals

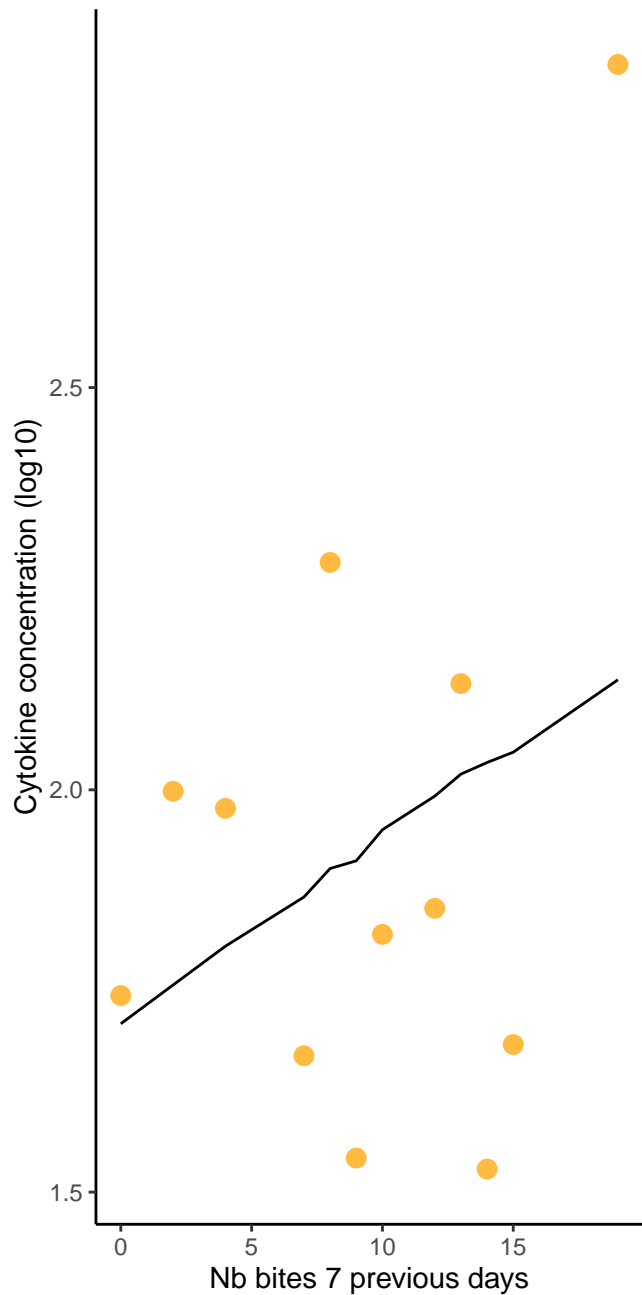
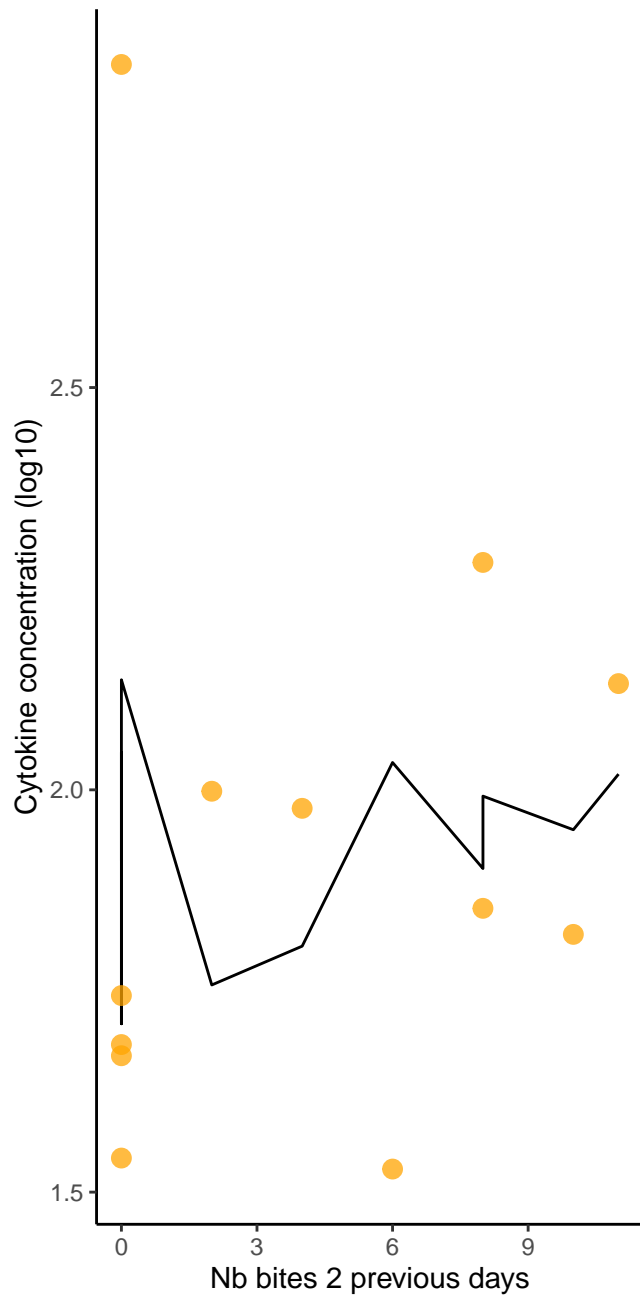


Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test n.s.



cumul_bites_2_previous_days effect plot cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|----------------|--------------|-----------|------------------|
| cumul_bites_2_previous_days | 1.03 | [1.00, 969.55] | 1.02 | 0.97 | [0.00, 1.00] |
| cumul_bites_7_previous_days | 1.03 | [1.00, 969.55] | 1.02 | 0.97 | [0.00, 1.00] |

```
Family: gaussian ( identity )
Formula:          log10(value) ~ cumul_bites_2_previous_days + cumul_bites_7_previous_days +      (1 | ID)
Data: d_sq

      AIC      BIC  logLik deviance df.resid
    18.5     21.0    -4.3      8.5        7

Random effects:

Conditional model:
Groups  Name      Variance Std.Dev.
ID      (Intercept) 1.141e-10 1.068e-05
Residual              1.192e-01 3.452e-01
Number of obs: 12, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.119

Conditional model:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)    1.709254    0.213059   8.022 1.04e-15 ***
cumul_bites_2_previous_days 0.001615    0.024477   0.066   0.947
cumul_bites_7_previous_days 0.022501    0.018867   1.193   0.233
---
Signif. codes:  0 '***'... 0.001 '**'... 0.01 '*'... 0.05 '.'... 0.1 '...' 1
```

```
AICc [1] 28.52745
```

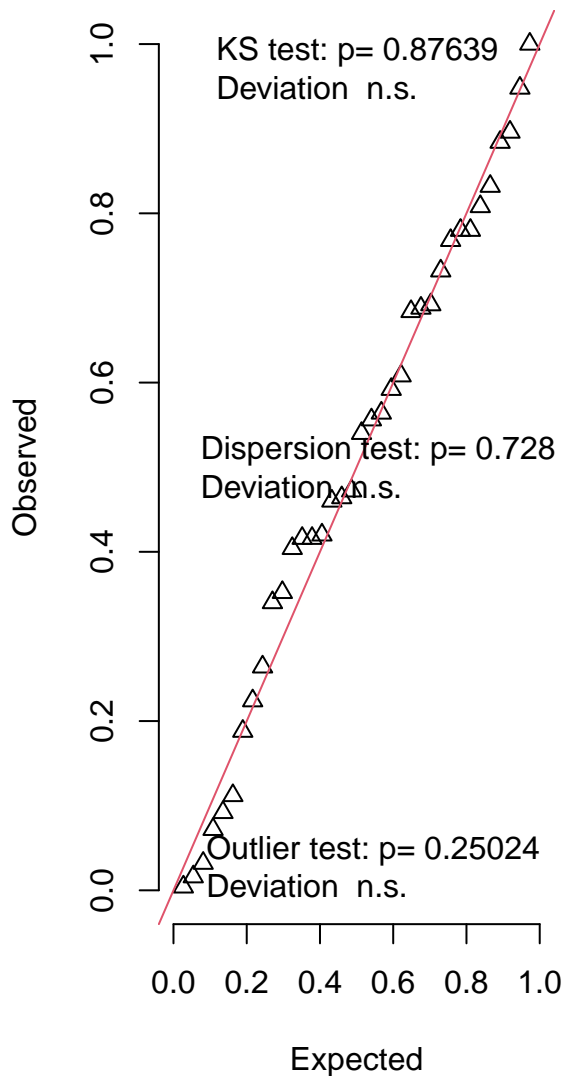

RANTES

Bites in cyno

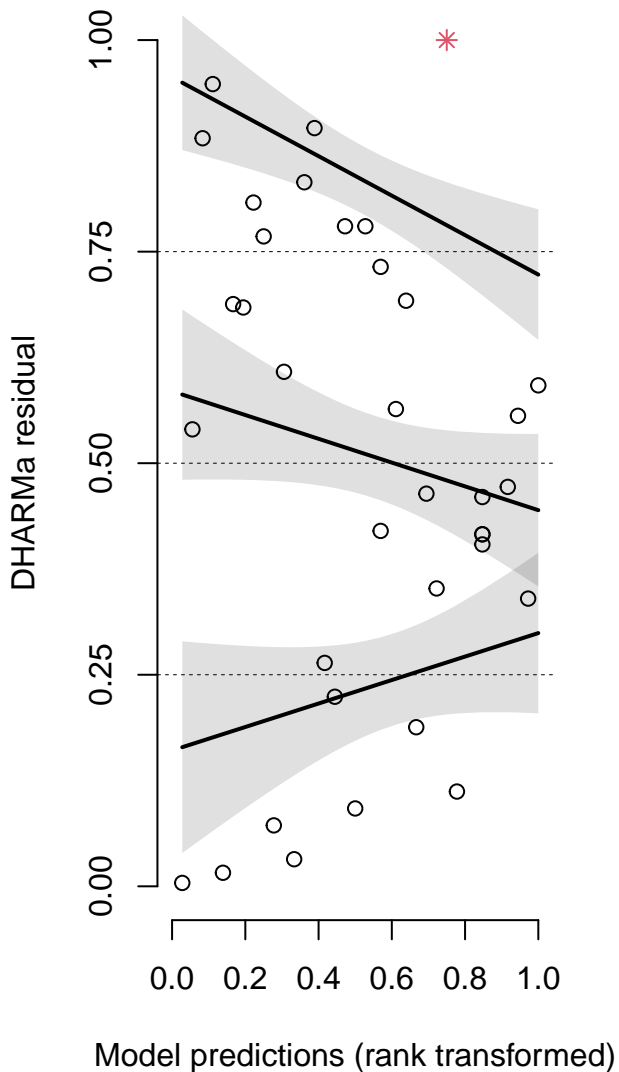
Nb excluded (LOD) : 0
Nb remaining: 36

DHARMA residual

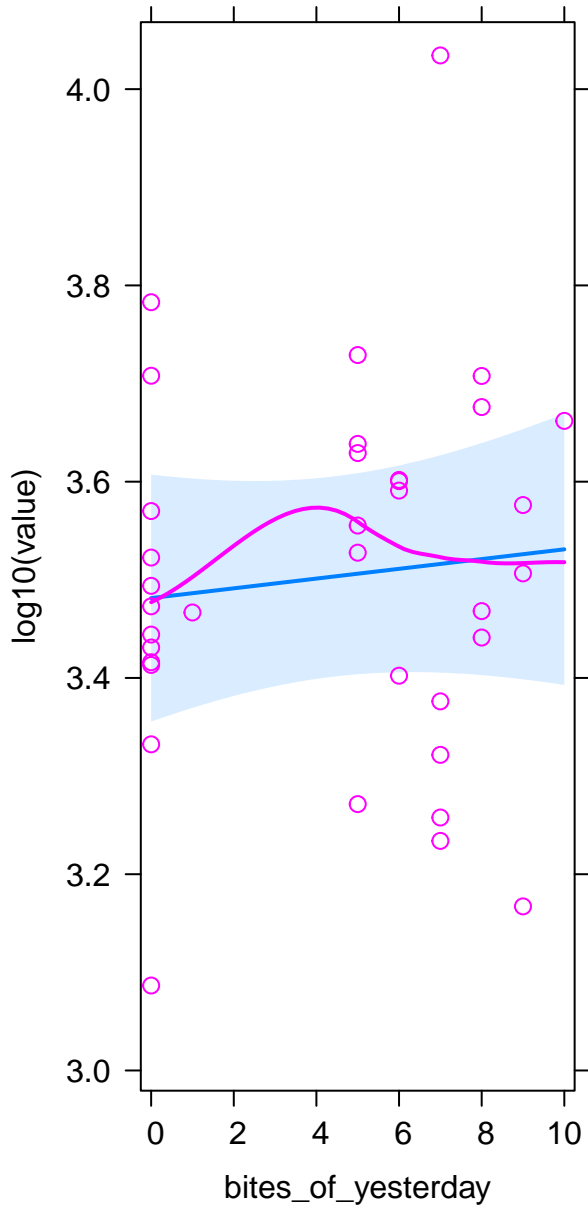
QQ plot residuals



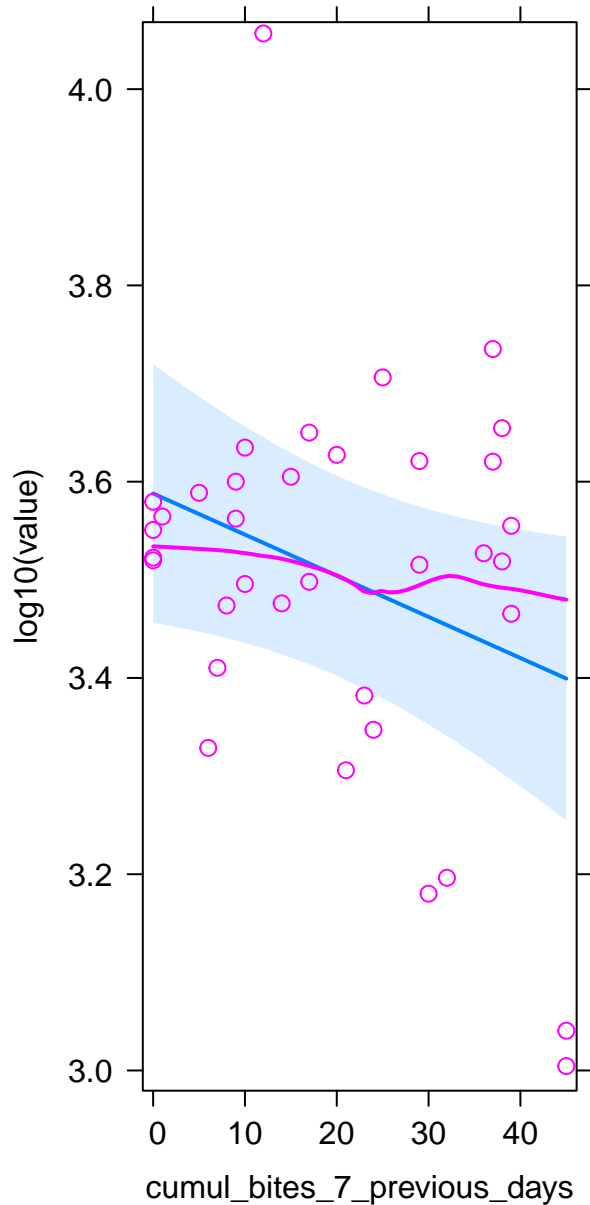
Residual vs. predicted No significant problems detected

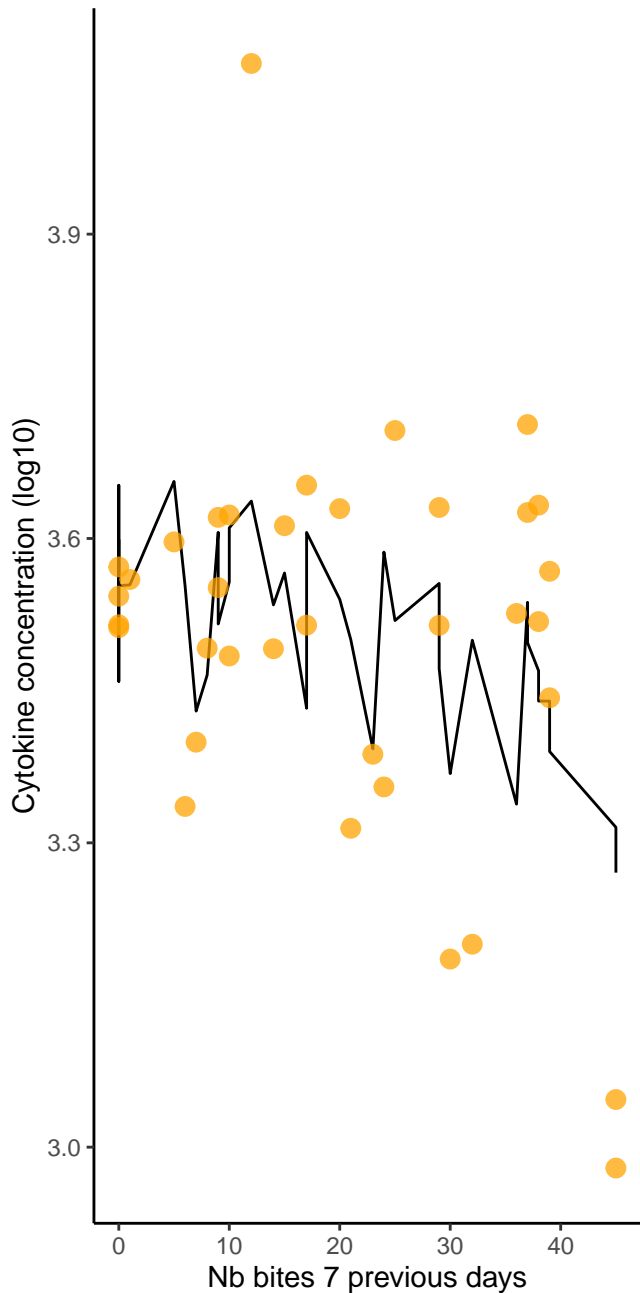
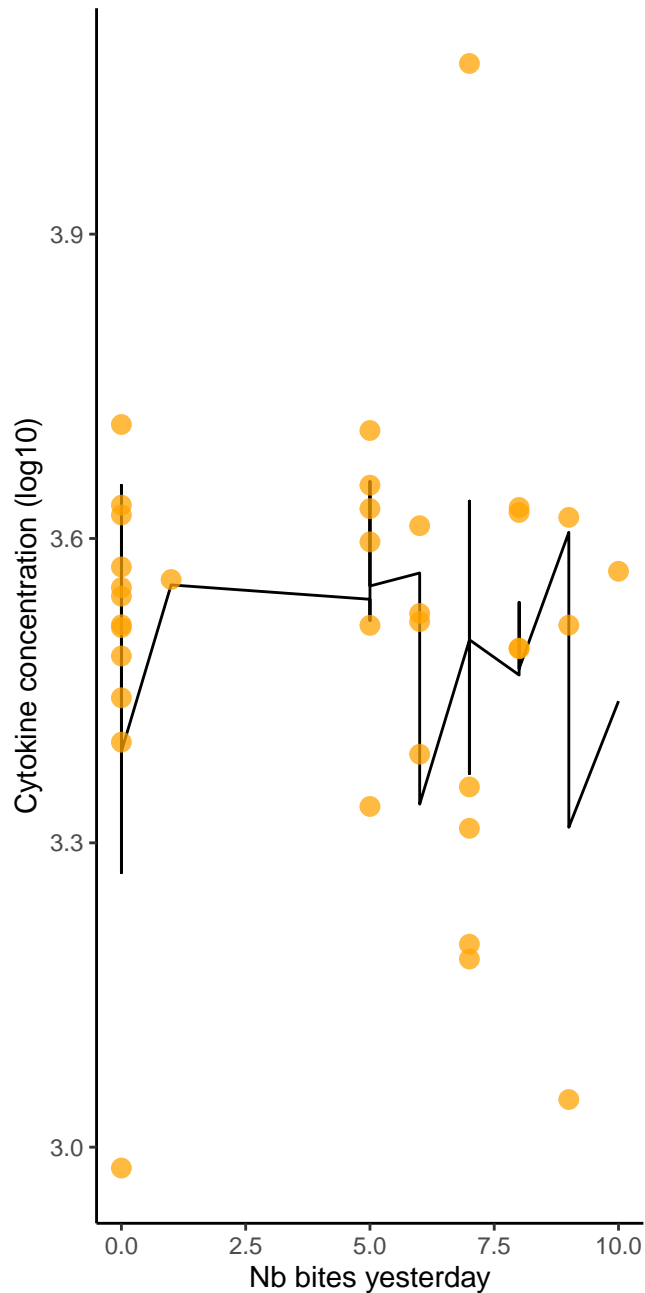


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.09 | [1.00, 3.82] | 1.05 | 0.91 | [0.26, 1.00] |
| cumul_bites_7_previous_days | 1.09 | [1.00, 3.82] | 1.05 | 0.91 | [0.26, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|------|--------|----------|----------|
| -13.6 | -5.7 | 11.8 | -23.6 | 31 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|----------|----------|
| ID | (Intercept) | 0.007111 | 0.08433 |
| | Residual | 0.026499 | 0.16279 |

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0265

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|------------|
| (Intercept) | 3.566014 | 0.068092 | 52.37 | <2e-16 *** |
| bites_of_yesterday | 0.004968 | 0.008204 | 0.61 | 0.5448 |
| cumul_bites_7_previous_days | -0.004191 | 0.002033 | -2.06 | 0.0392 * |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

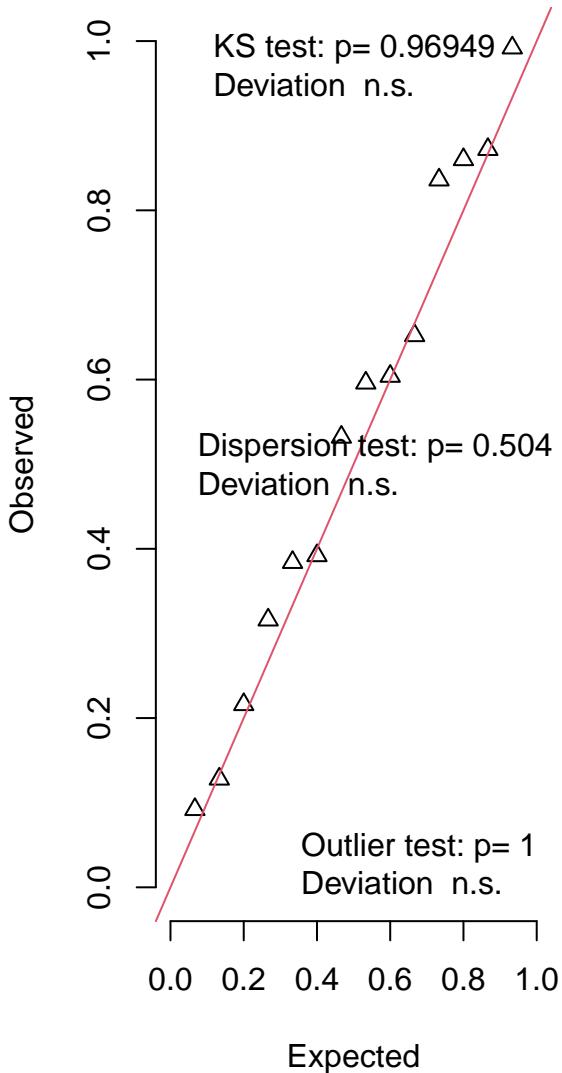
AICc [1] -11.62673

Bites in squirrel

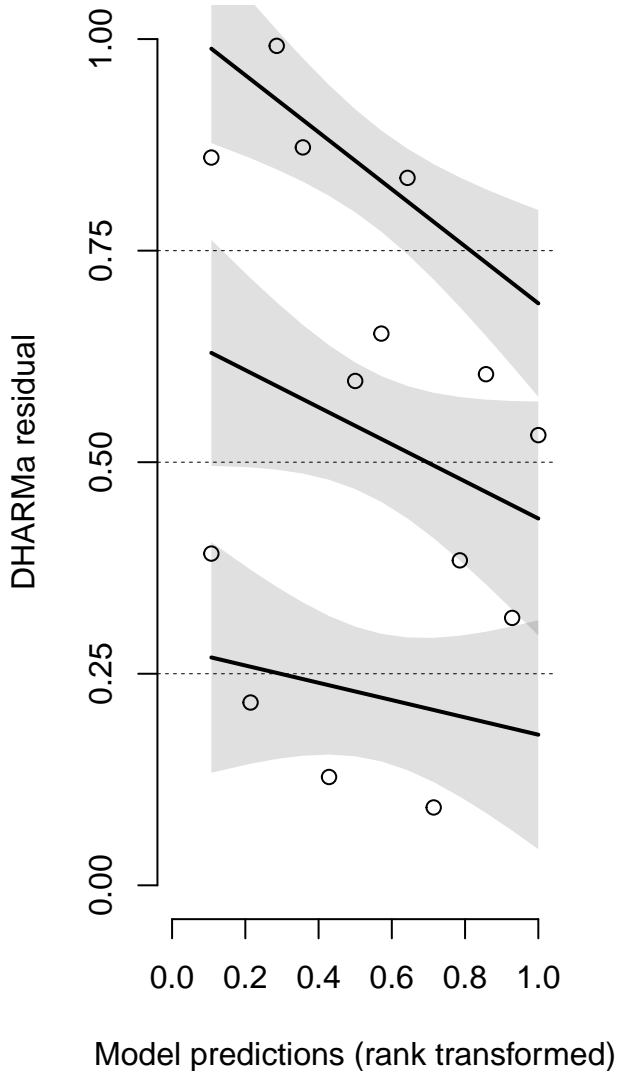
Nb excluded (LOD) : 6
Nb remaining: 14

DHARMA residual

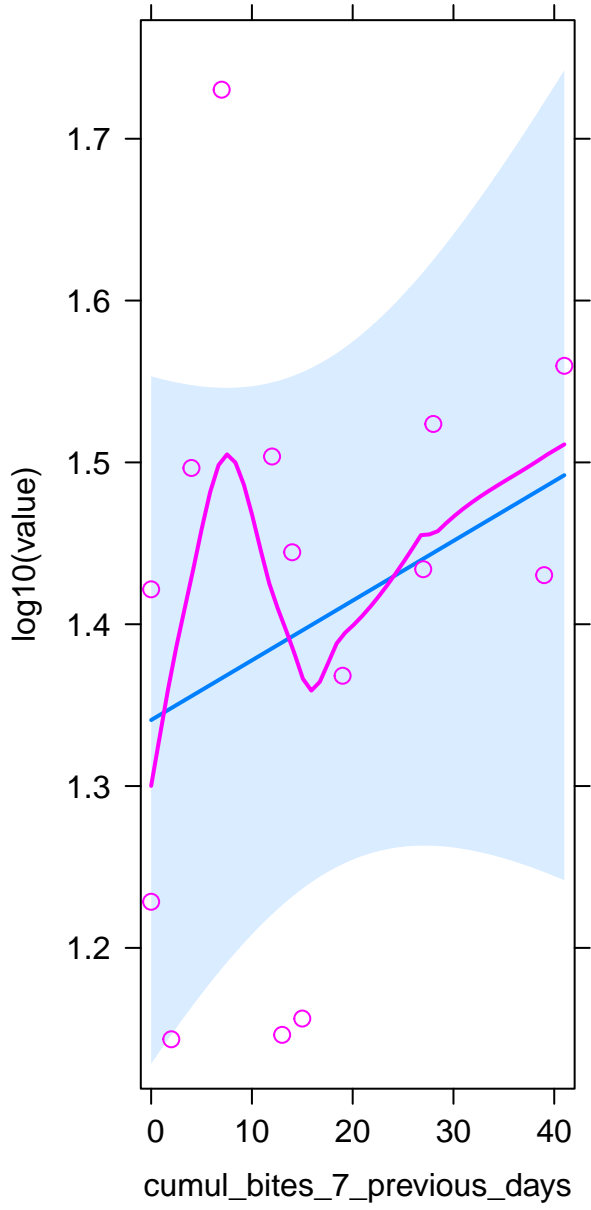
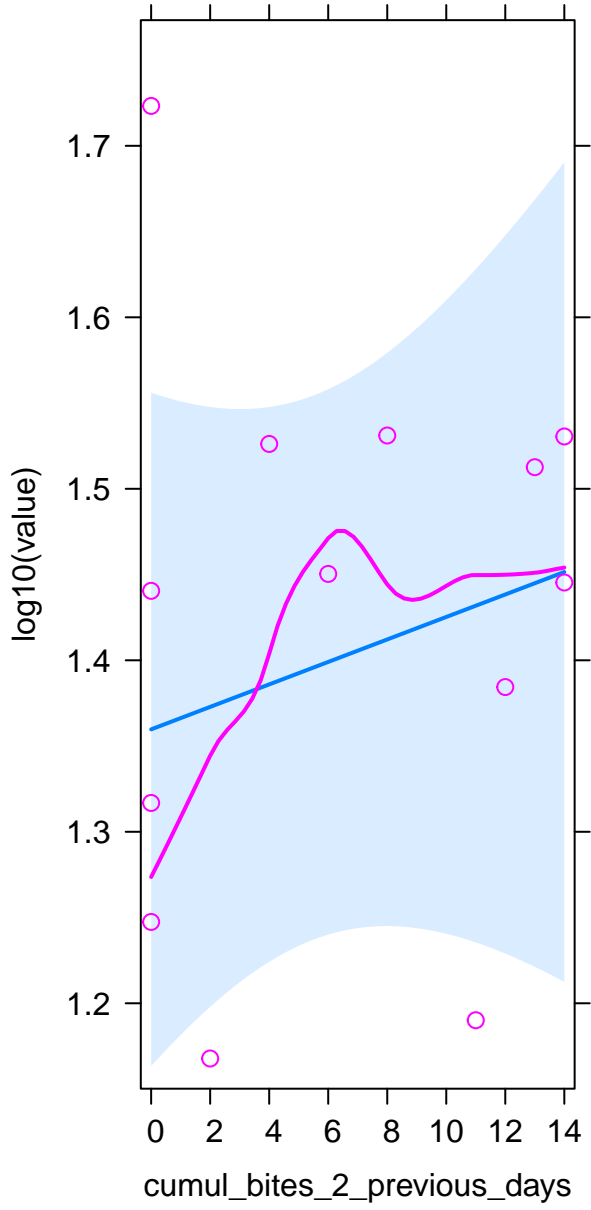
QQ plot residuals

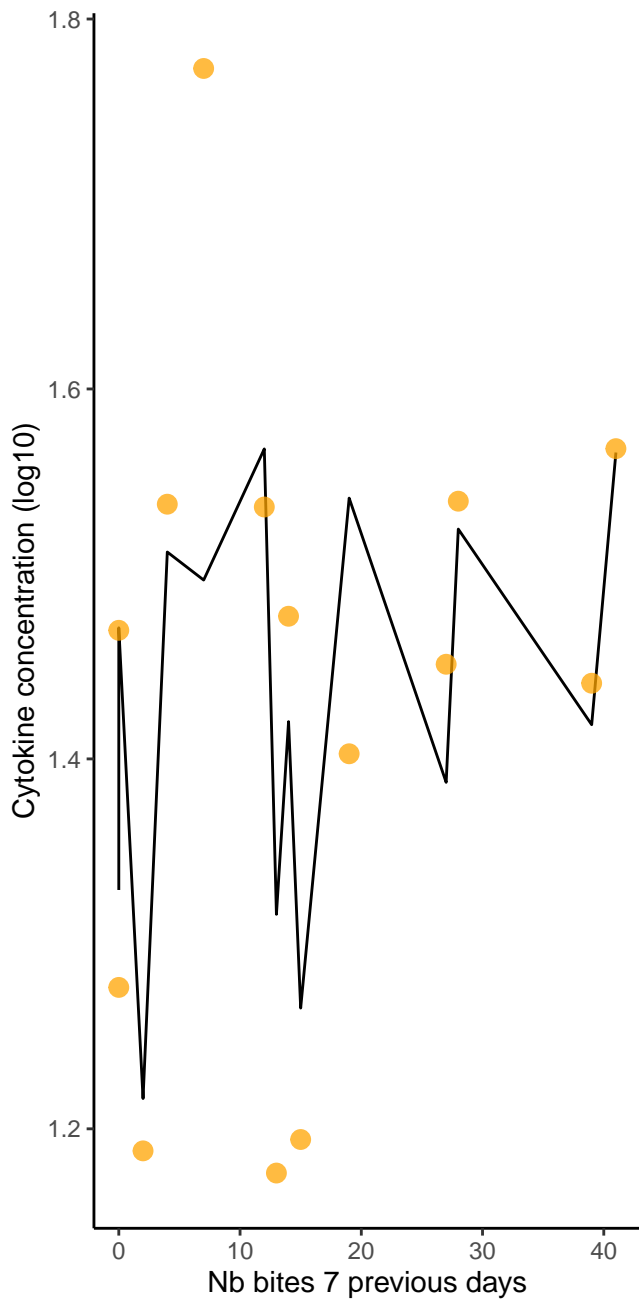
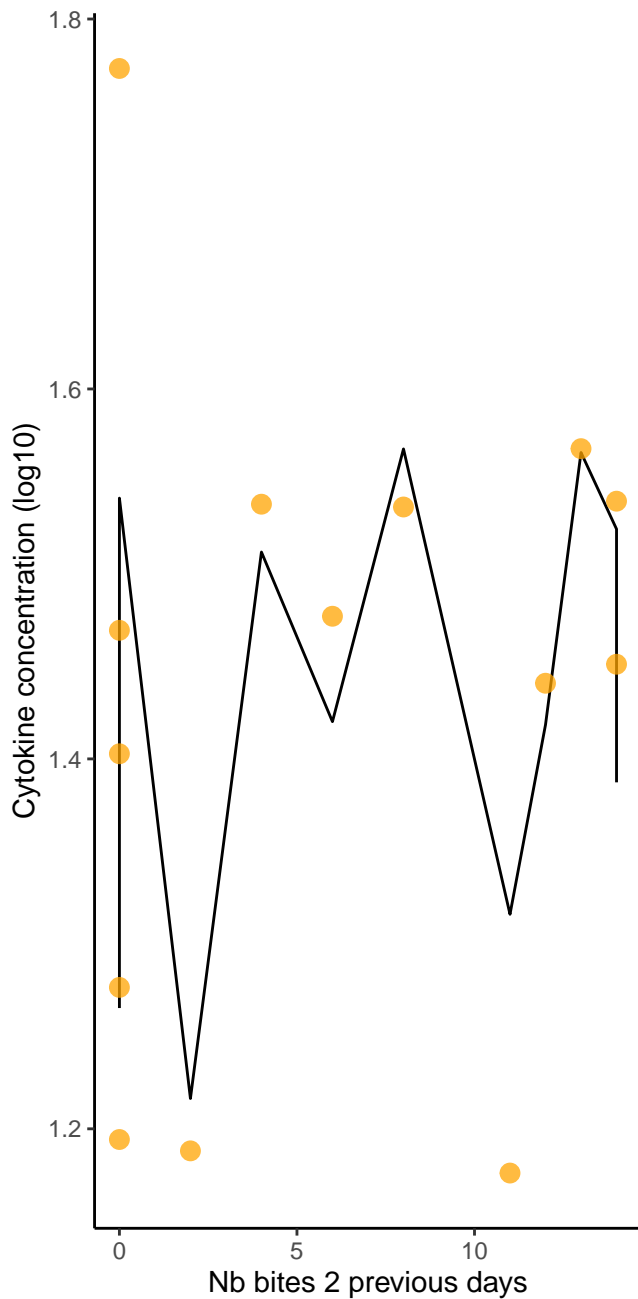


Residual vs. predicted No significant problems detected



cumul_bites_2_previous_days effect plot cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| cumul_bites_2_previous_days | 2.15 | [1.48, 3.77] | 1.47 | 0.47 | [0.27, 0.68] |
| cumul_bites_7_previous_days | 2.15 | [1.48, 3.77] | 1.47 | 0.47 | [0.27, 0.68] |

```
Family: gaussian ( identity )
Formula:          log10(value) ~ cumul_bites_2_previous_days + cumul_bites_7_previous_days +      (1 | ID)
Data: d_sq

      AIC      BIC  logLik deviance df.resid
    -5.4     -2.2    7.7    -15.4      9

Random effects:

Conditional model:
Groups   Name              Variance Std.Dev.
ID       (Intercept)  0.01578  0.1256
Residual                  0.01225  0.1107
Number of obs: 14, groups:  ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0123

Conditional model:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)    1.301463    0.084511  15.400  <2e-16 ***
cumul_bites_2_previous_days  0.006555    0.009553   0.686    0.493
cumul_bites_7_previous_days  0.003690    0.003714   0.994    0.320
---
Signif. codes:  0 '***'... 0.001 '**'... 0.01 '*'... 0.05 '...' 0.1 '.' ... 1
```



```
AICc [1] 2.070193
```

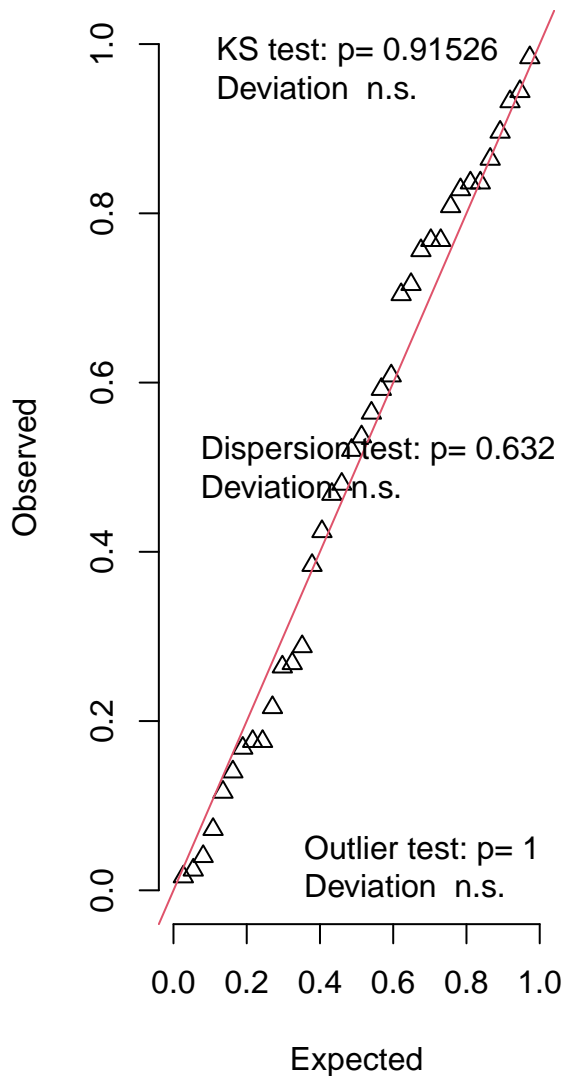
TGFbeta

Bites in cyno

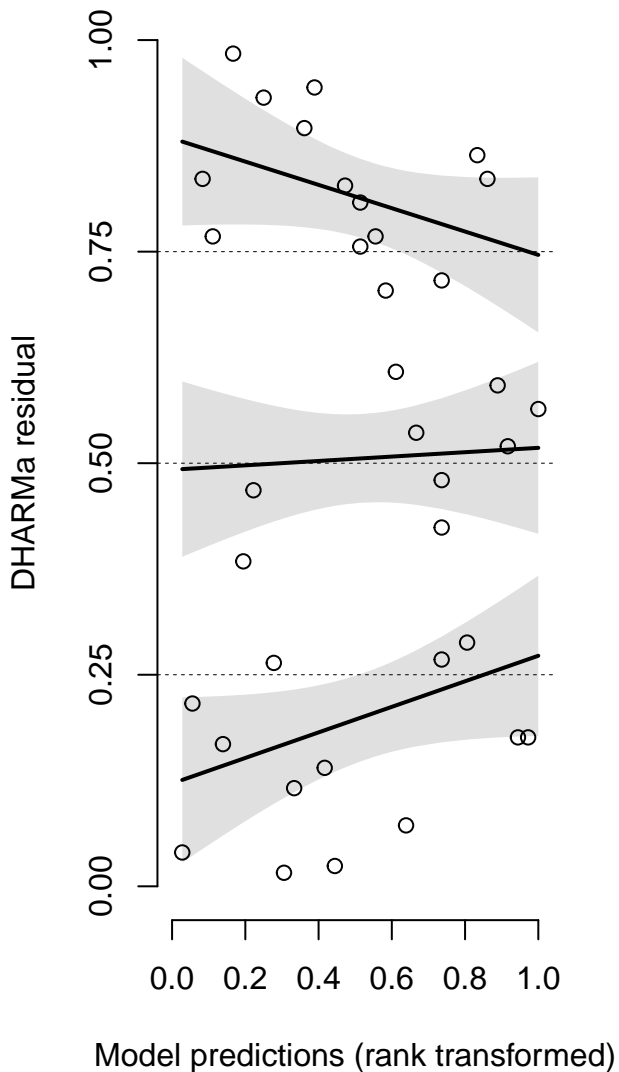
Nb excluded (LOD) : 0
Nb remaining: 36

DHARMA residual

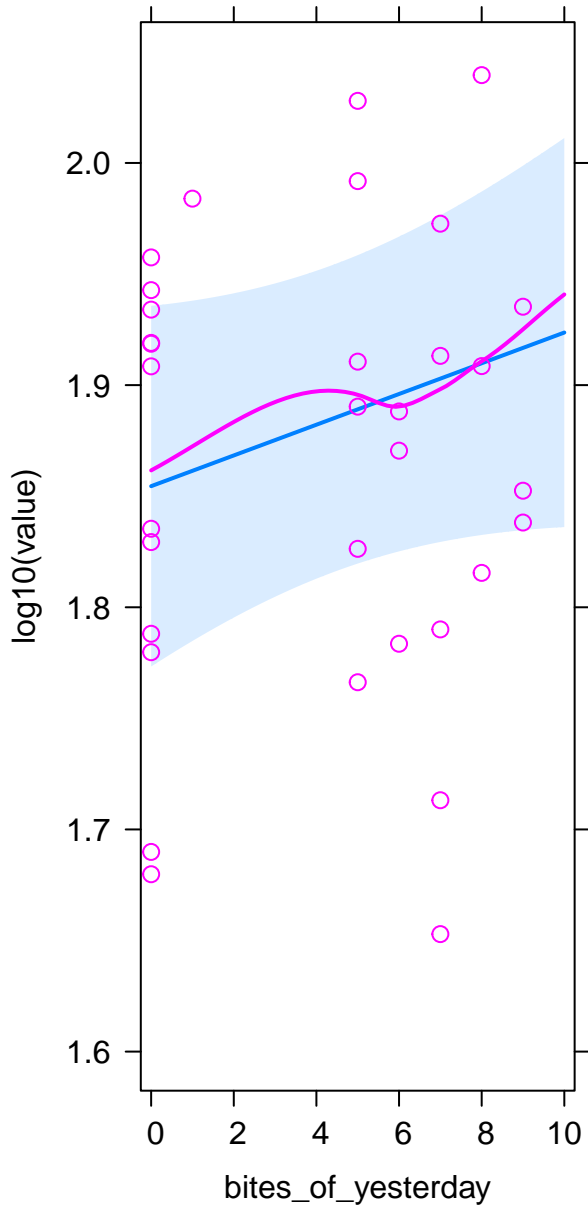
QQ plot residuals



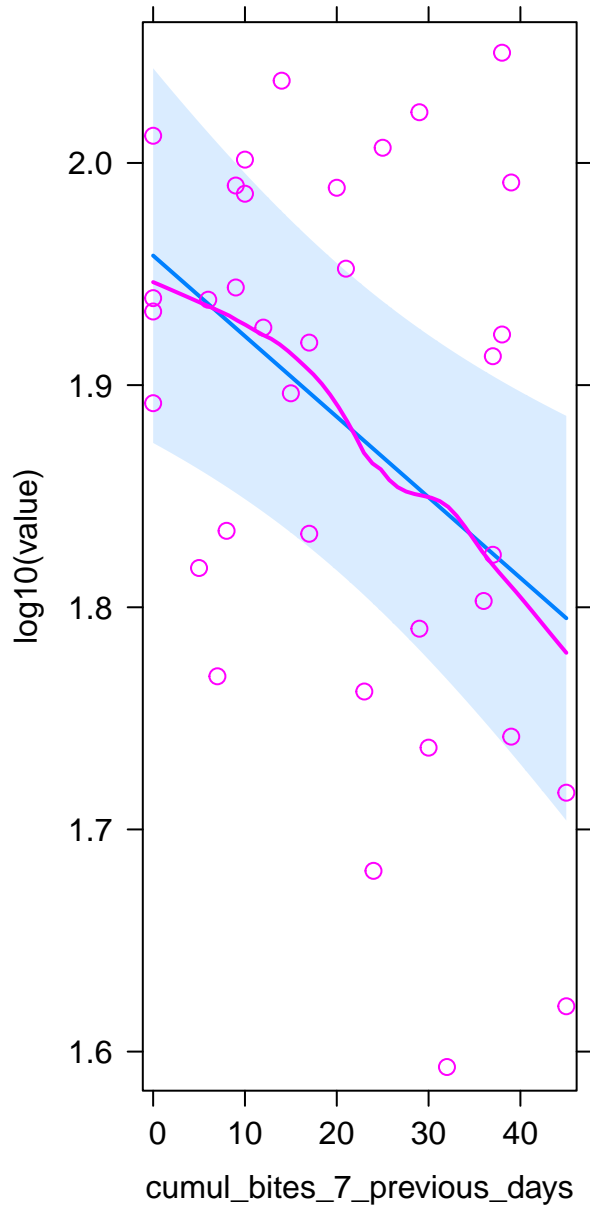
Residual vs. predicted No significant problems detected

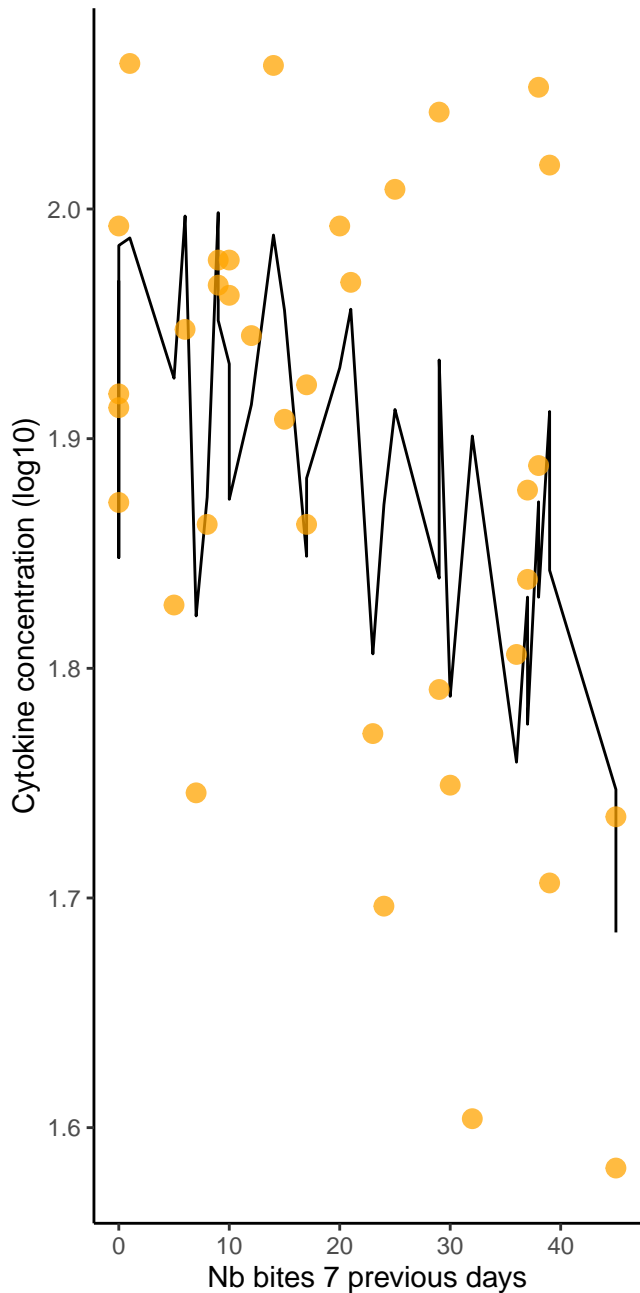
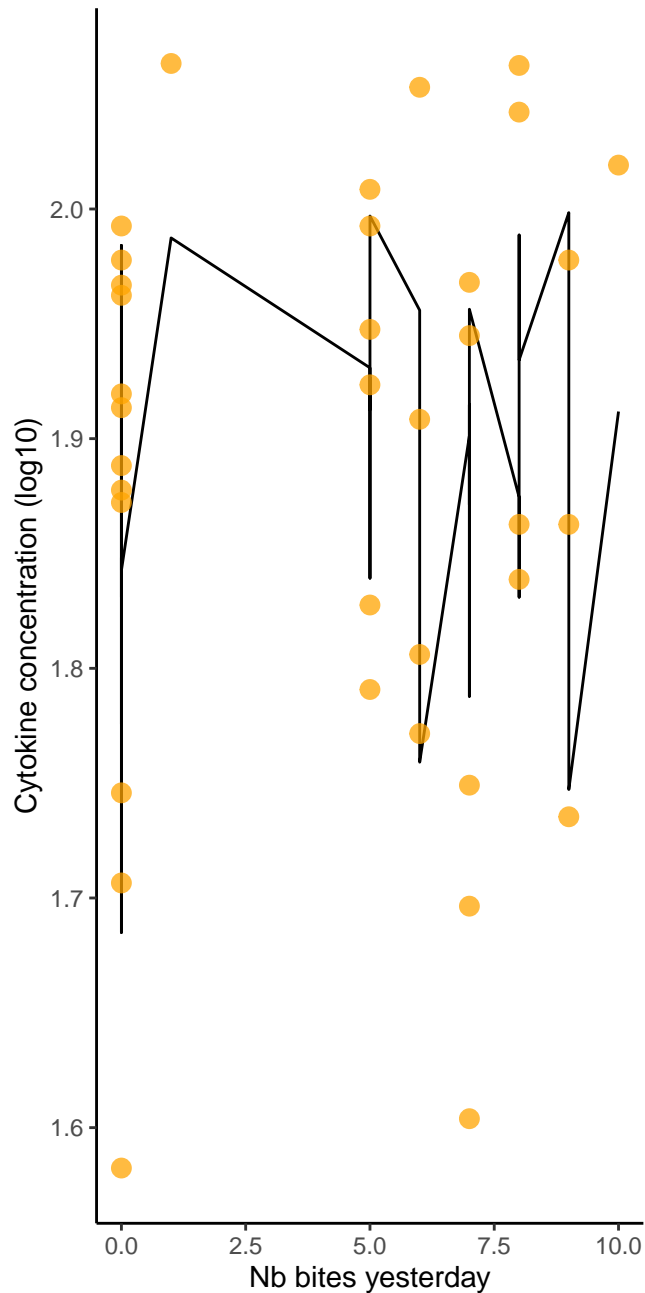


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.10 | [1.00, 3.78] | 1.05 | 0.91 | [0.26, 1.00] |
| cumul_bites_7_previous_days | 1.10 | [1.00, 3.78] | 1.05 | 0.91 | [0.26, 1.00] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|-------|--------|----------|----------|
| -52.0 | -44.1 | 31.0 | -62.0 | 31 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|----------|-------------|----------|----------|
| ID | (Intercept) | 0.003649 | 0.06040 |
| Residual | | 0.008808 | 0.09385 |

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.00881

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|-----------|------------|---------|------------|
| (Intercept) | 1.927755 | 0.043149 | 44.68 | <2e-16 *** |
| bites_of_yesterday | 0.006916 | 0.004725 | 1.46 | 0.143 |
| cumul_bites_7_previous_days | -0.003627 | 0.001174 | -3.09 | 0.002 ** |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

AICc [1] -49.97958

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

TGFbeta ERROR : Invalid grouping factor specification, ID

TNF. *alpha*

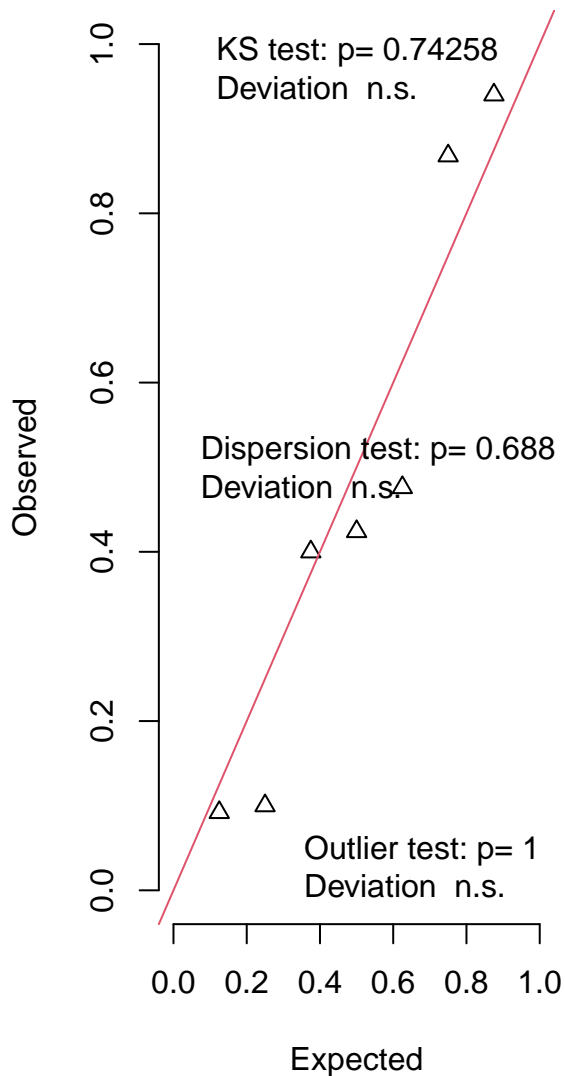
Bites in cyno

Nb excluded (LOD) : 29

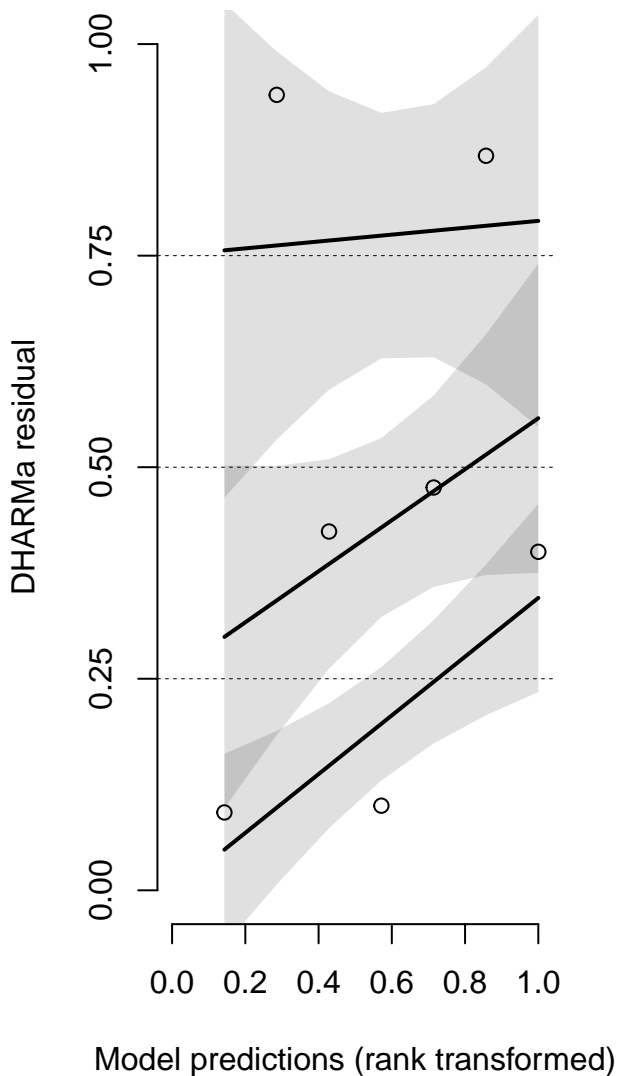
Nb remaining: 7

DHARMA residual

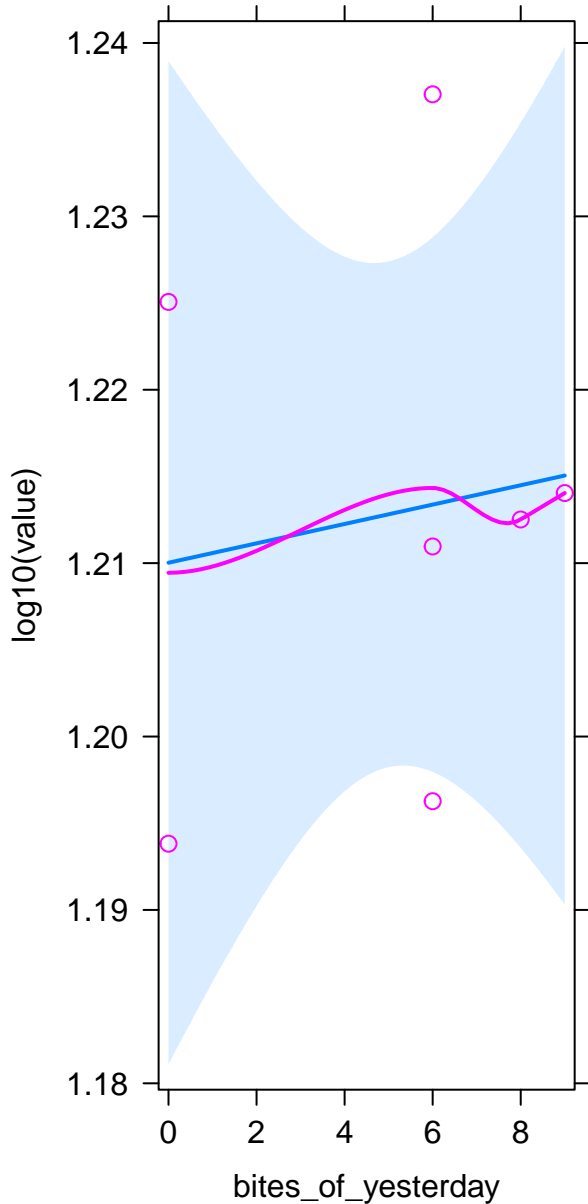
QQ plot residuals



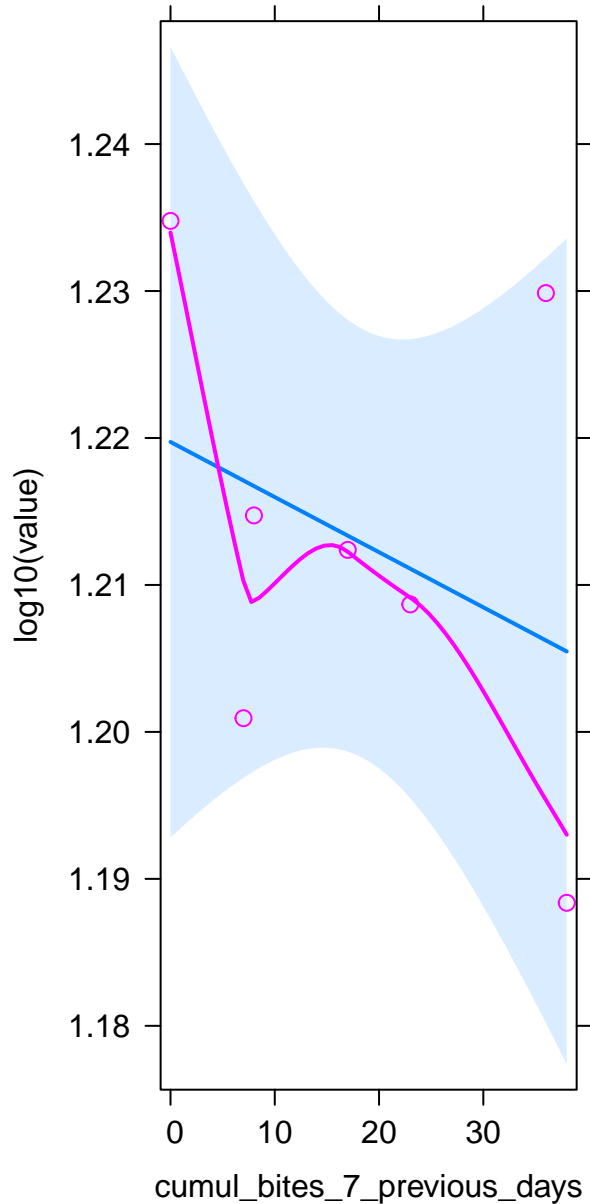
Residual vs. predicted No significant problems detected

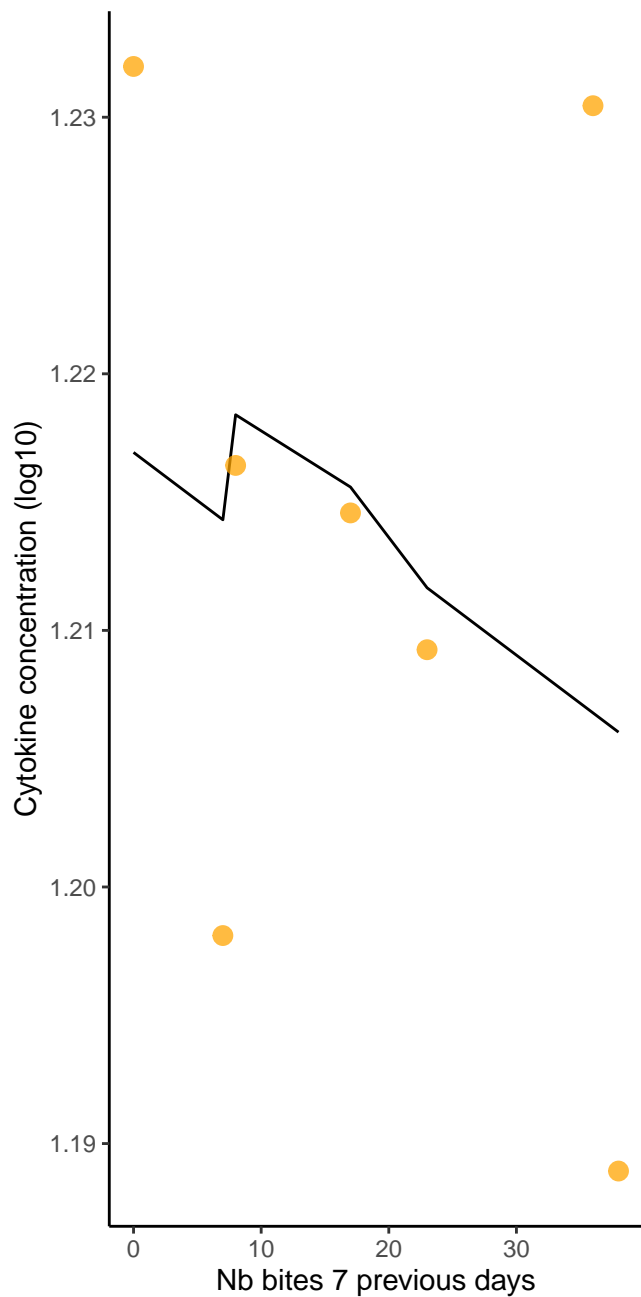
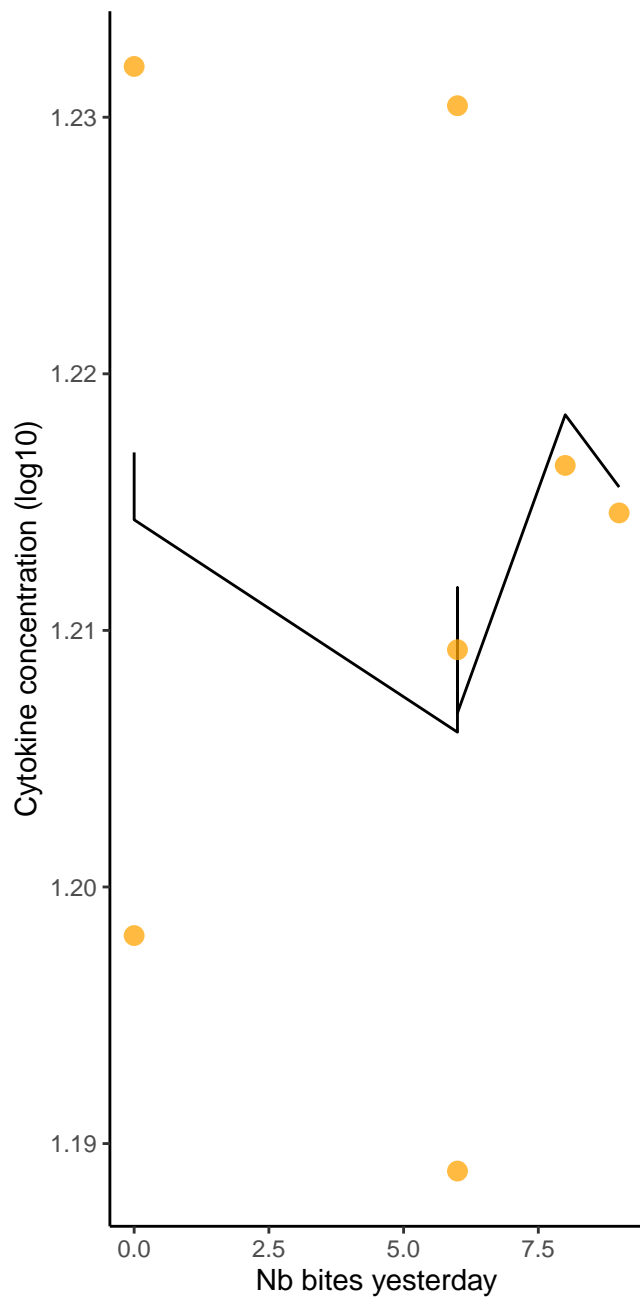


bites_of_yesterday effect plot



cumul_bites_7_previous_days effect plot





Check for Multicollinearity

Low Correlation

| Term | VIF | VIF 95% CI | Increased SE | Tolerance | Tolerance 95% CI |
|-----------------------------|------|--------------|--------------|-----------|------------------|
| bites_of_yesterday | 1.31 | [1.12, 1.79] | 1.14 | 0.76 | [0.56, 0.89] |
| cumul_bites_7_previous_days | 1.31 | [1.12, 1.79] | 1.14 | 0.76 | [0.56, 0.89] |

Family: gaussian (identity)
Formula: log10(value) ~ bites_of_yesterday + cumul_bites_7_previous_days + (1 | ID)
Data: d_cyno

| AIC | BIC | logLik | deviance | df.resid |
|-------|-------|--------|----------|----------|
| -30.0 | -30.3 | 20.0 | -40.0 | 2 |

Random effects:

Conditional model:

| Groups | Name | Variance | Std.Dev. |
|--------|-------------|-----------|-----------|
| ID | (Intercept) | 1.625e-09 | 4.031e-05 |
| | Residual | 1.932e-04 | 1.390e-02 |

Number of obs: 7, groups: ID, 2

Dispersion estimate for gaussian family (sigma^2): 0.000193

Conditional model:

| | Estimate | Std. Error | z value | Pr(> z) |
|-----------------------------|------------|------------|---------|------------|
| (Intercept) | 1.2169366 | 0.0101884 | 119.44 | <2e-16 *** |
| bites_of_yesterday | 0.0005585 | 0.0017993 | 0.31 | 0.756 |
| cumul_bites_7_previous_days | -0.0003751 | 0.0004418 | -0.85 | 0.396 |

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```
AICc [1] 30.00163
```

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

TNF.alpha ERROR : Invalid grouping factor specification, ID

VEGF

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

VEGF ERROR : Invalid grouping factor specification, ID

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

VEGF ERROR : Invalid grouping factor specification, ID