

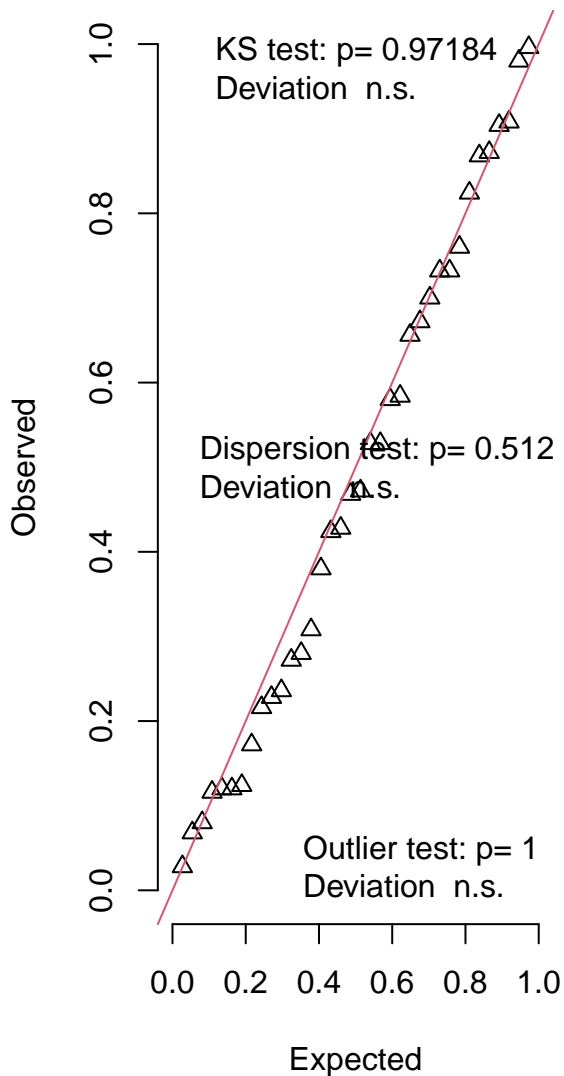
EGF

Bites in cyno

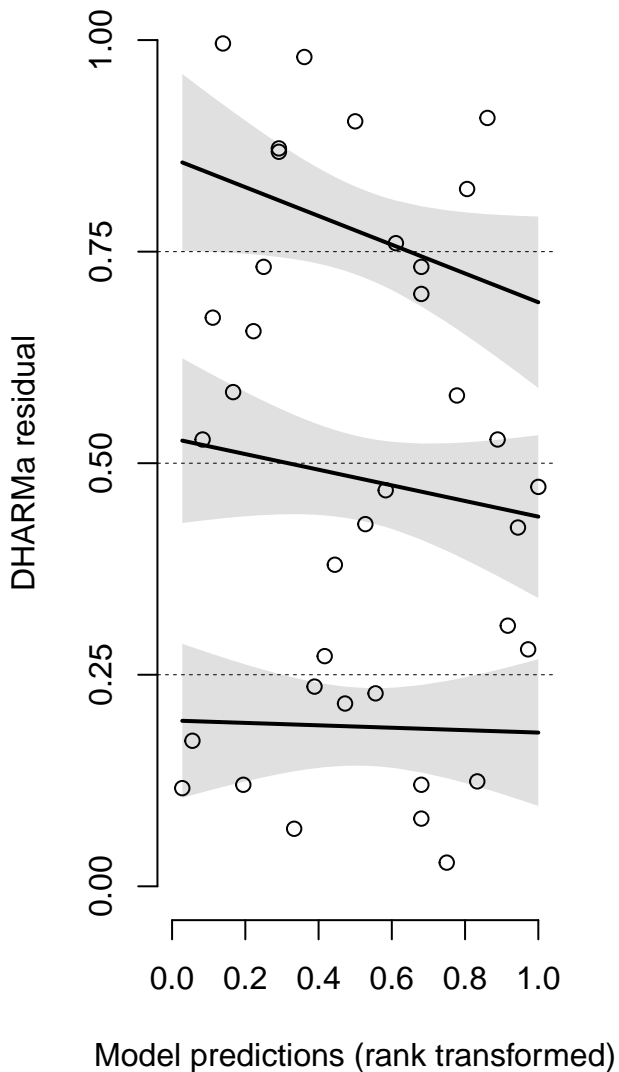
Nb obs : 36

# DHARMA residual

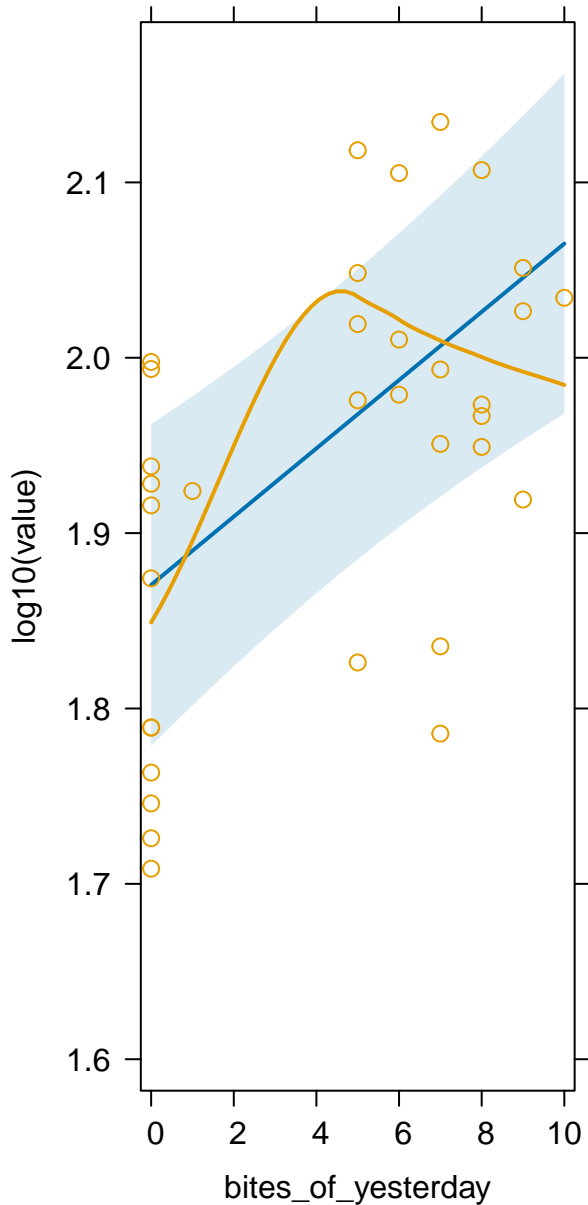
## QQ plot residuals



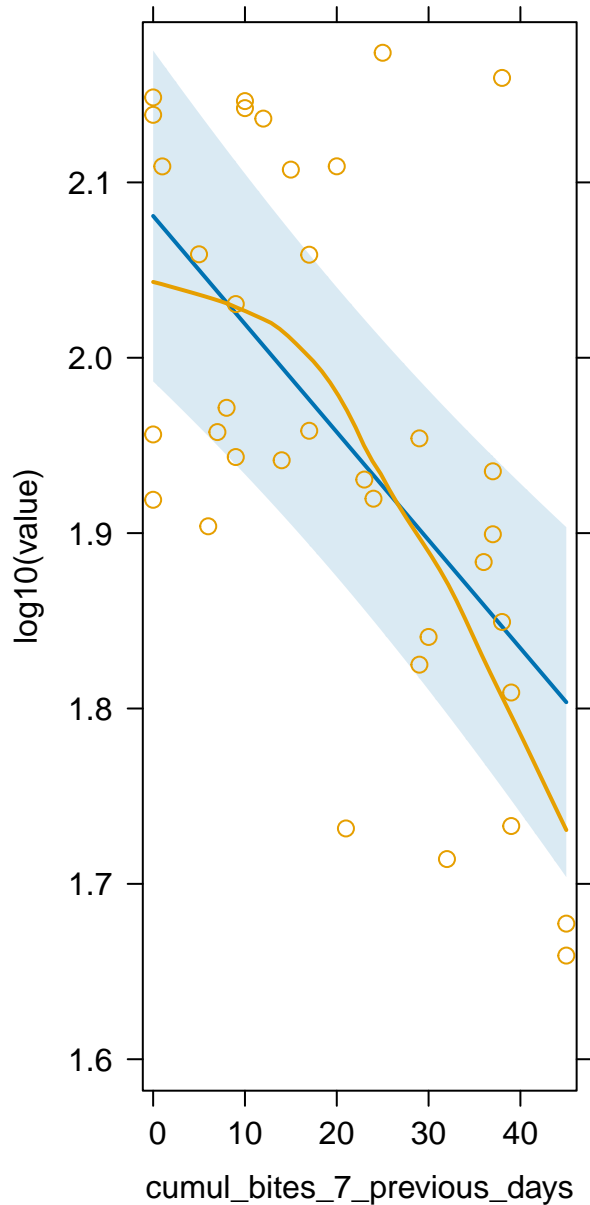
## Residual vs. predicted No significant problems detected

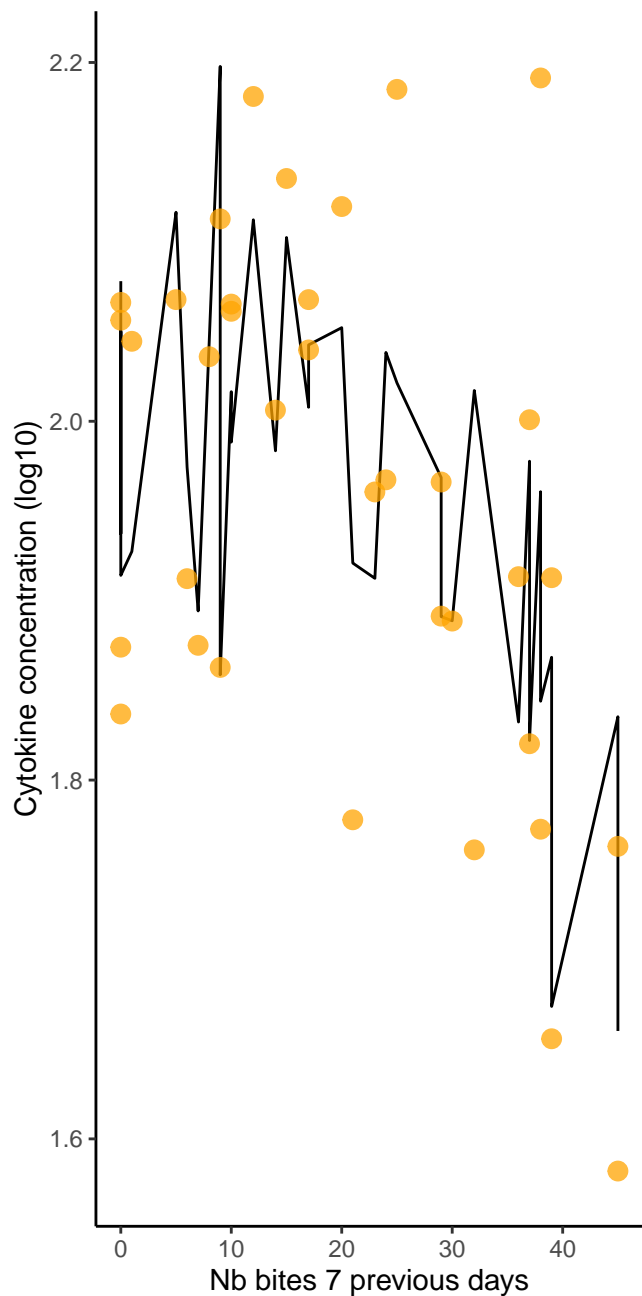
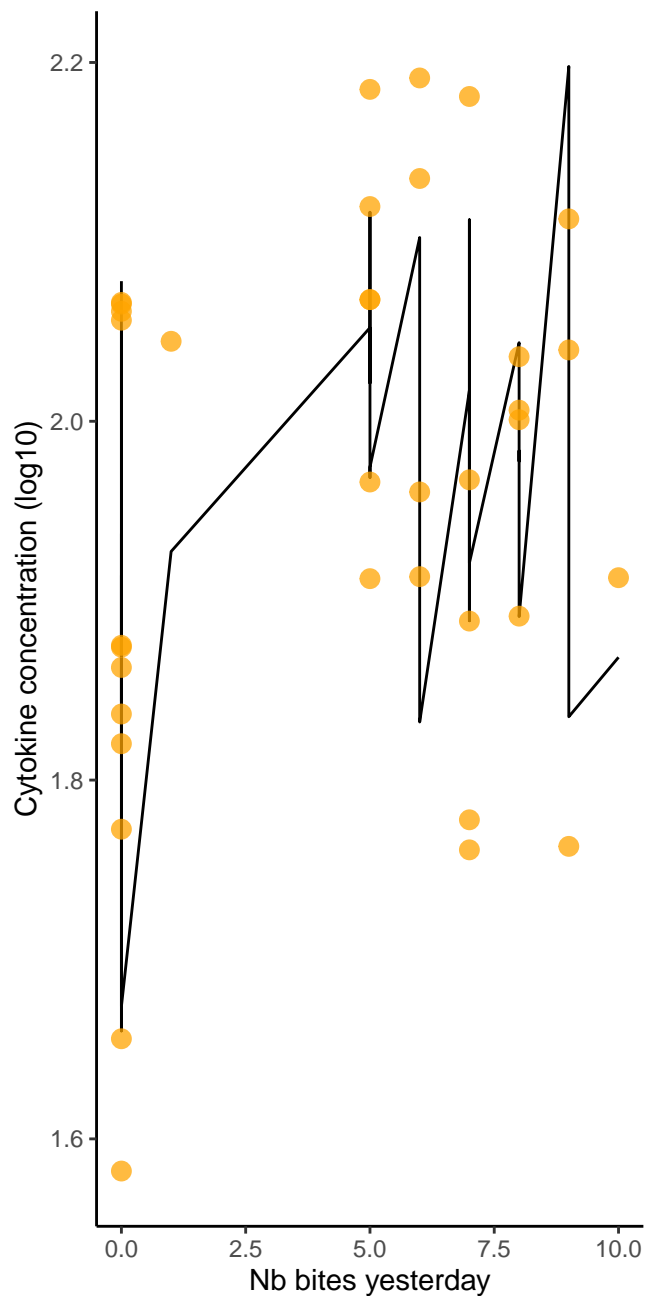


bites\_of\_yesterday effect plot



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



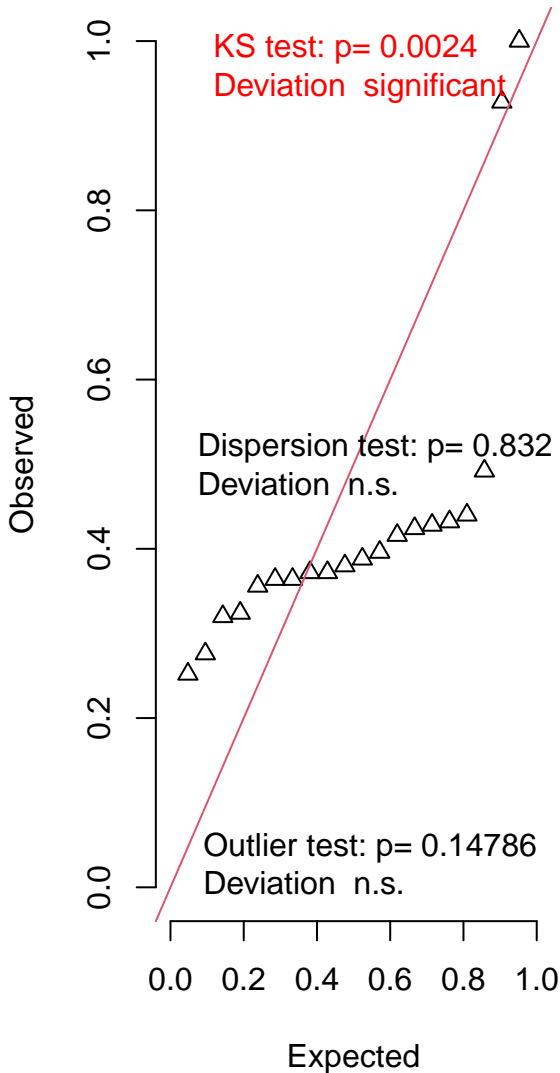
AICc [ 1 ] -51.99296

Bites in squirrel

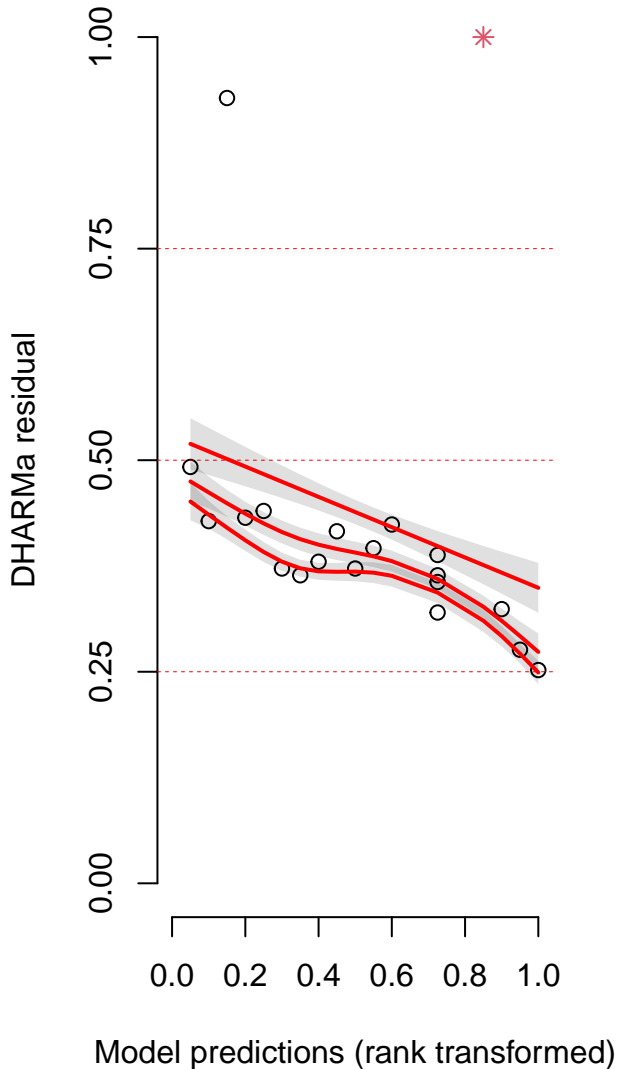
Nb obs : 20

## DHARMA residual

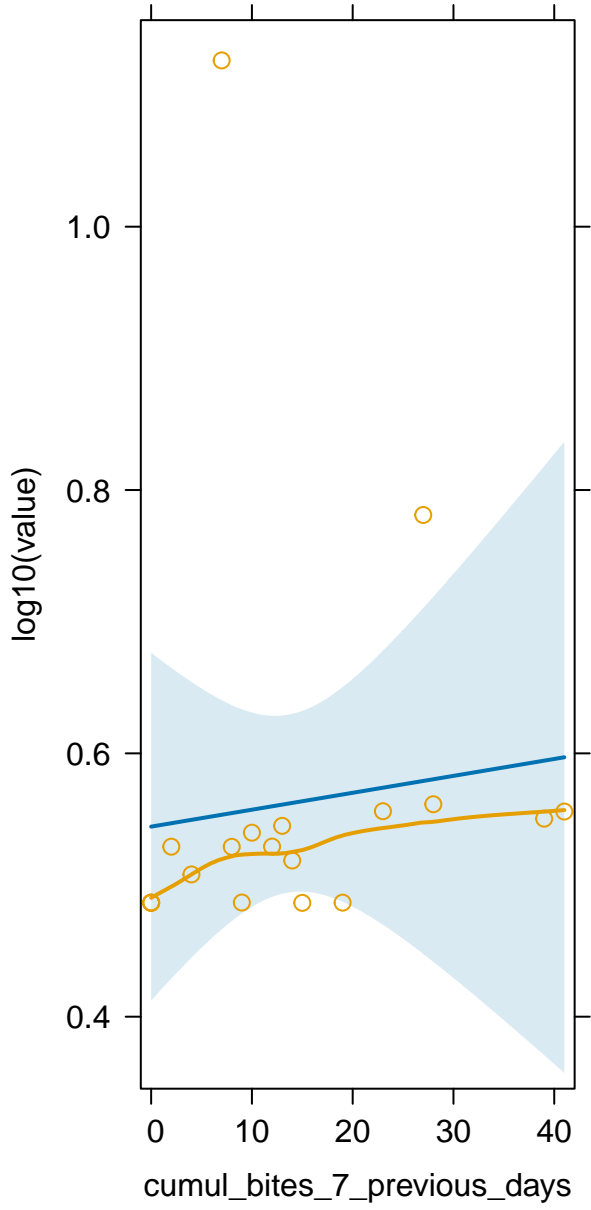
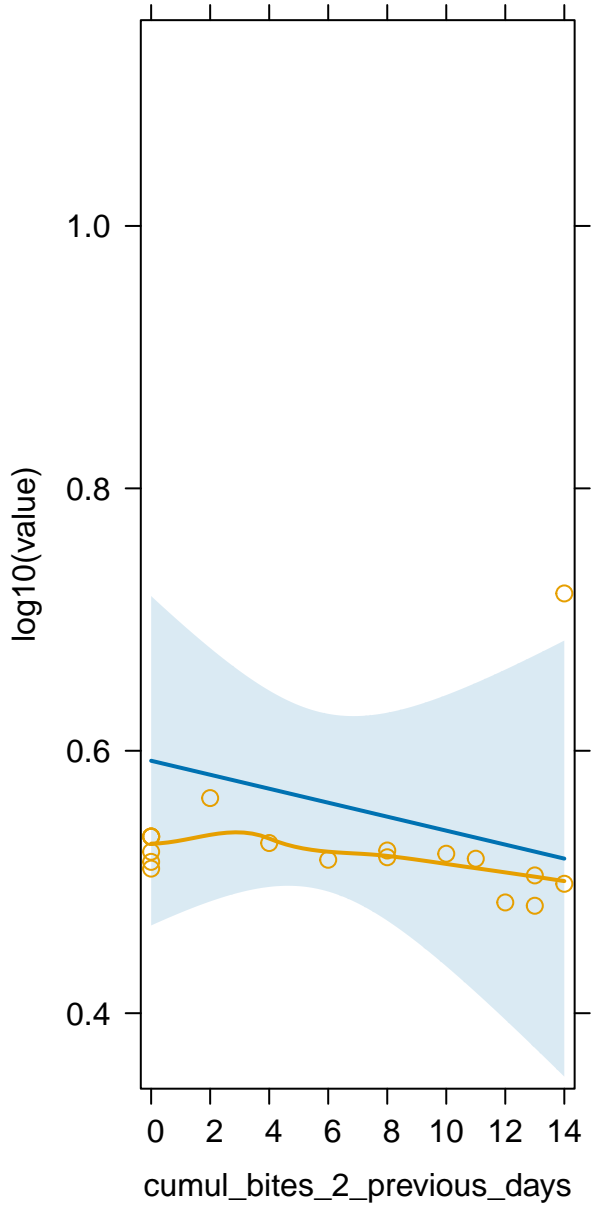
### QQ plot residuals

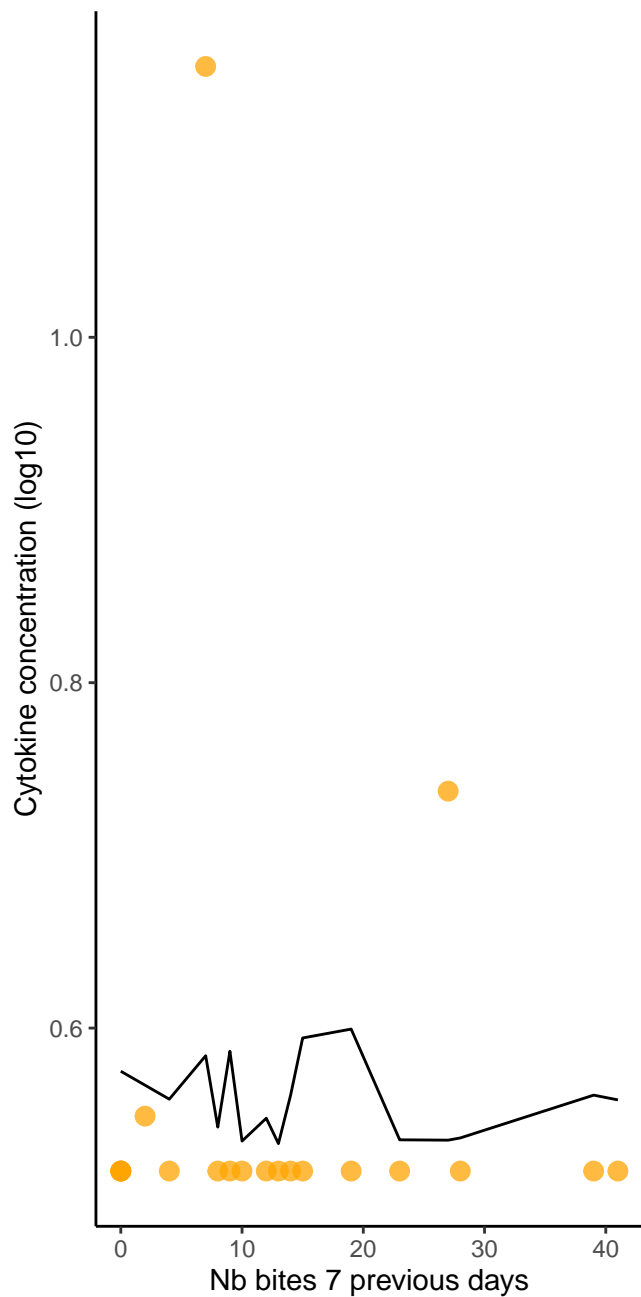
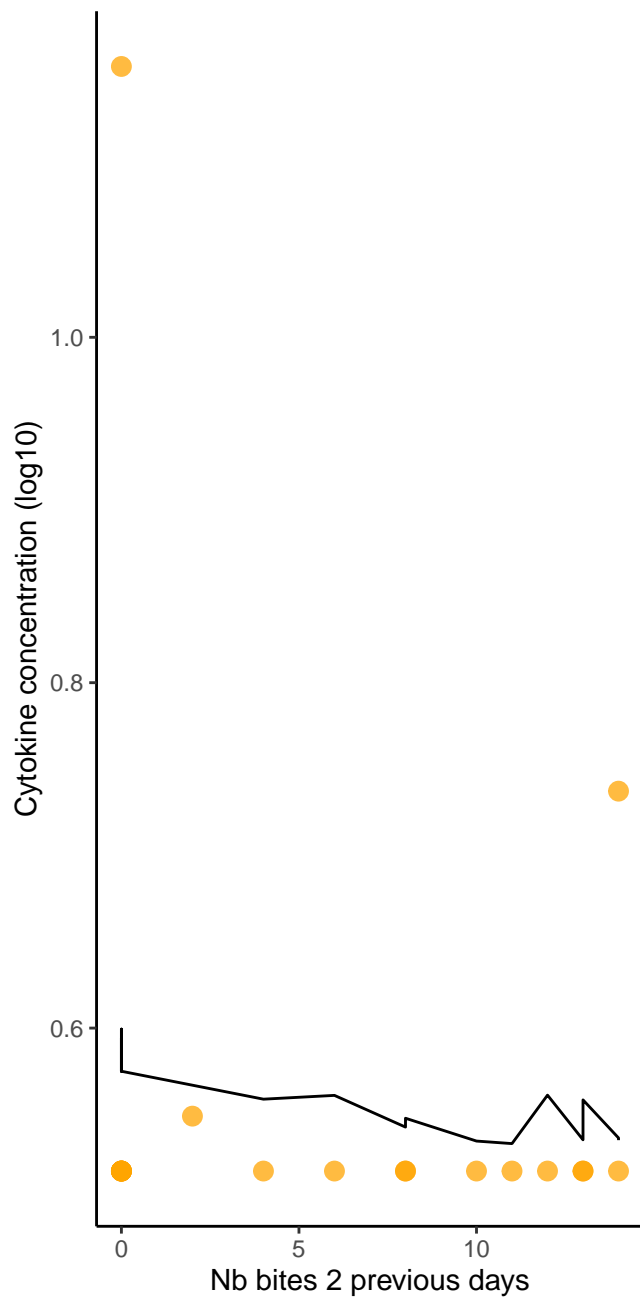


### Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test significant



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	2.29	[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
    -11.0     -6.0    10.5   -21.0       15

Random effects:

Conditional model:
Groups   Name      Variance Std.Dev.
ID      (Intercept) 6.706e-12 2.590e-06
Residual                2.052e-02 1.432e-01
Number of obs: 20, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0205

Conditional model:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)    0.574996   0.048834  11.774  <2e-16 ***
cumul_bites_2_previous_days -0.005327   0.008724  -0.611    0.541
cumul_bites_7_previous_days  0.001284   0.003971   0.323    0.746
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```



AICc [1] -6.687379

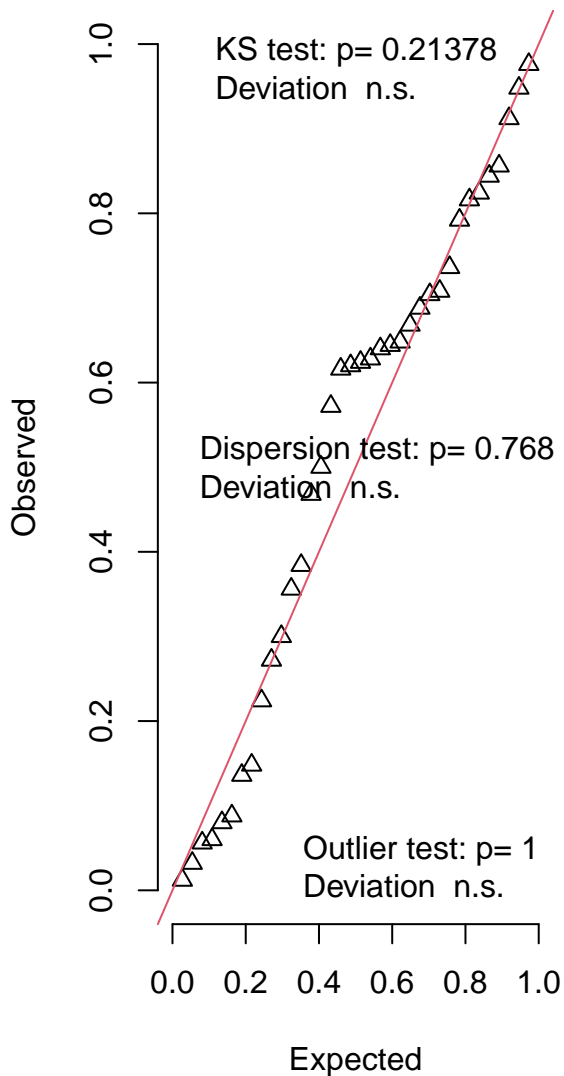
Eotaxin

Bites in cyno

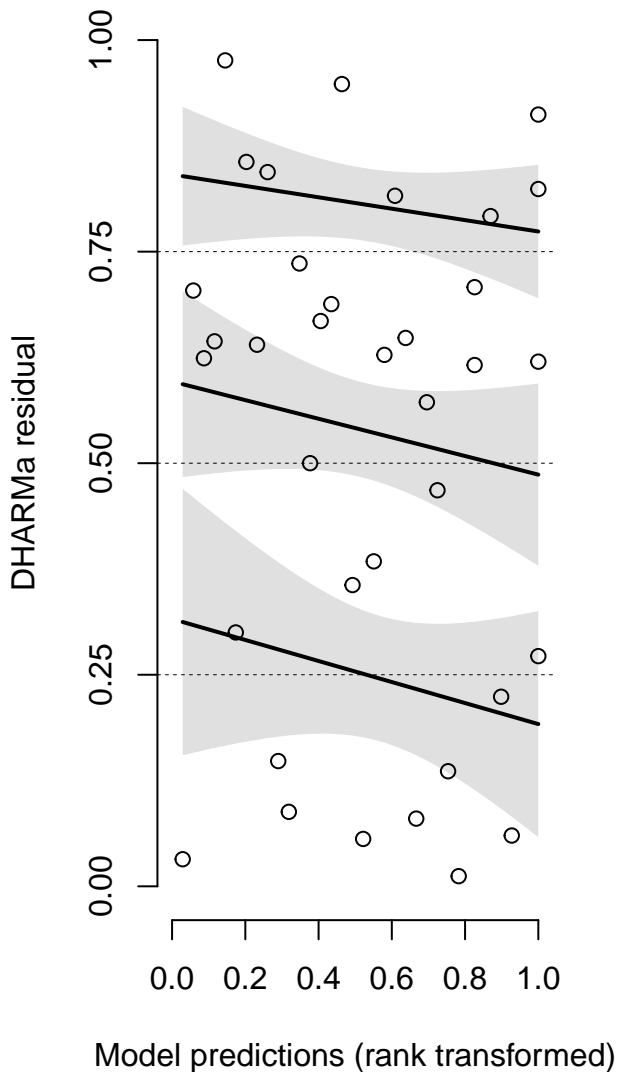
Nb obs : 36

## DHARMA residual

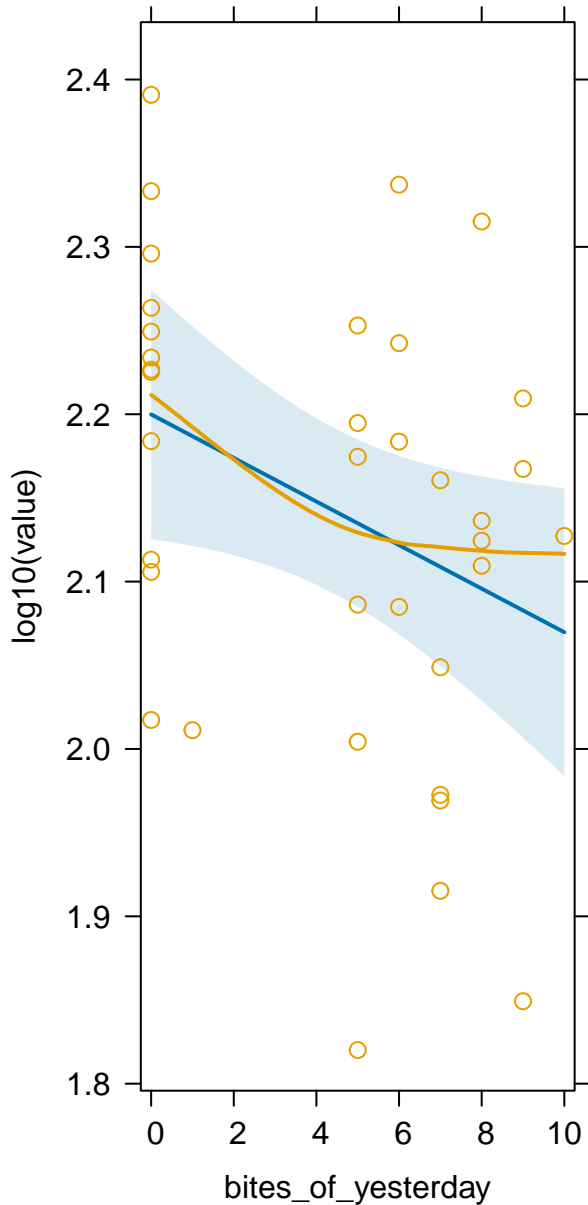
### QQ plot residuals



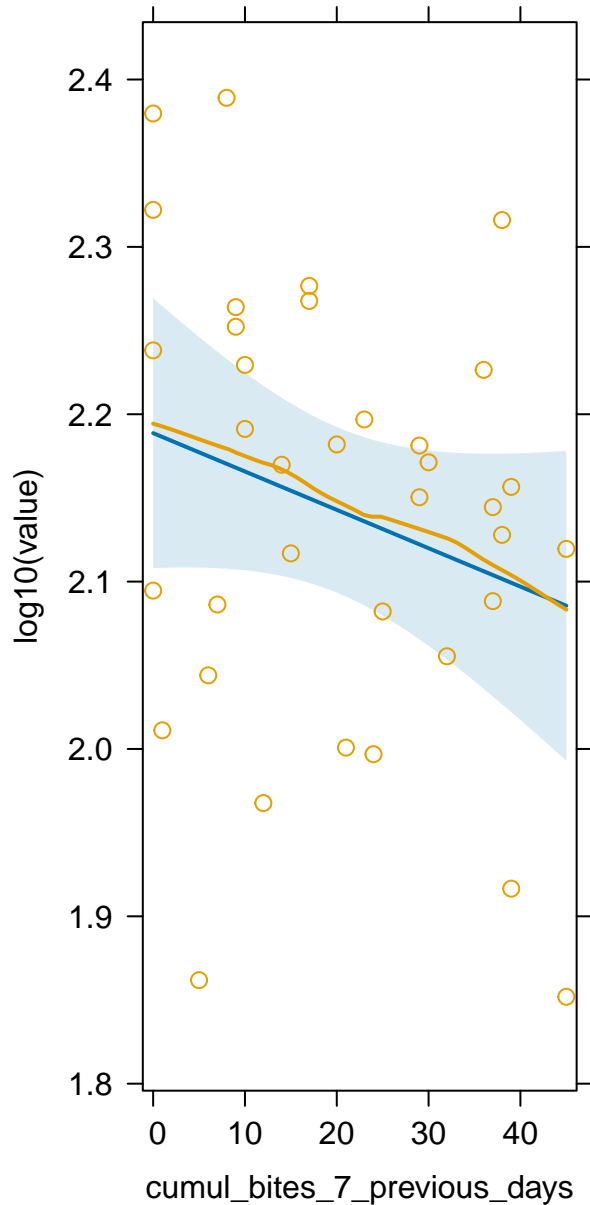
### Residual vs. predicted No significant problems detected

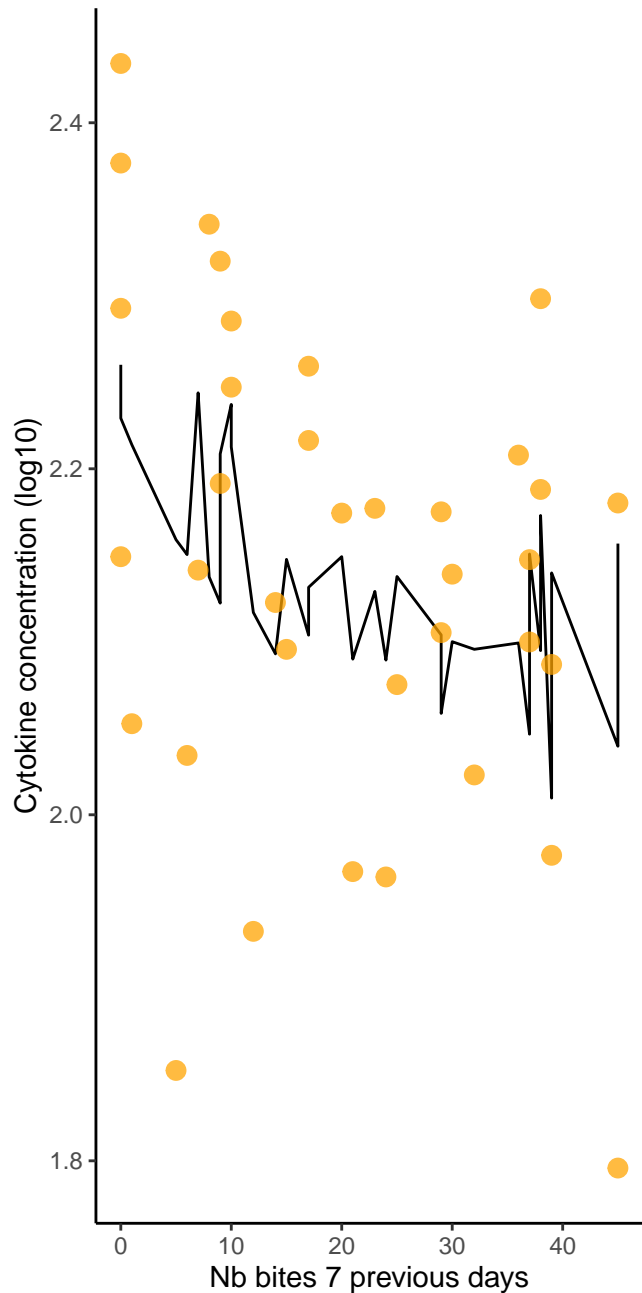
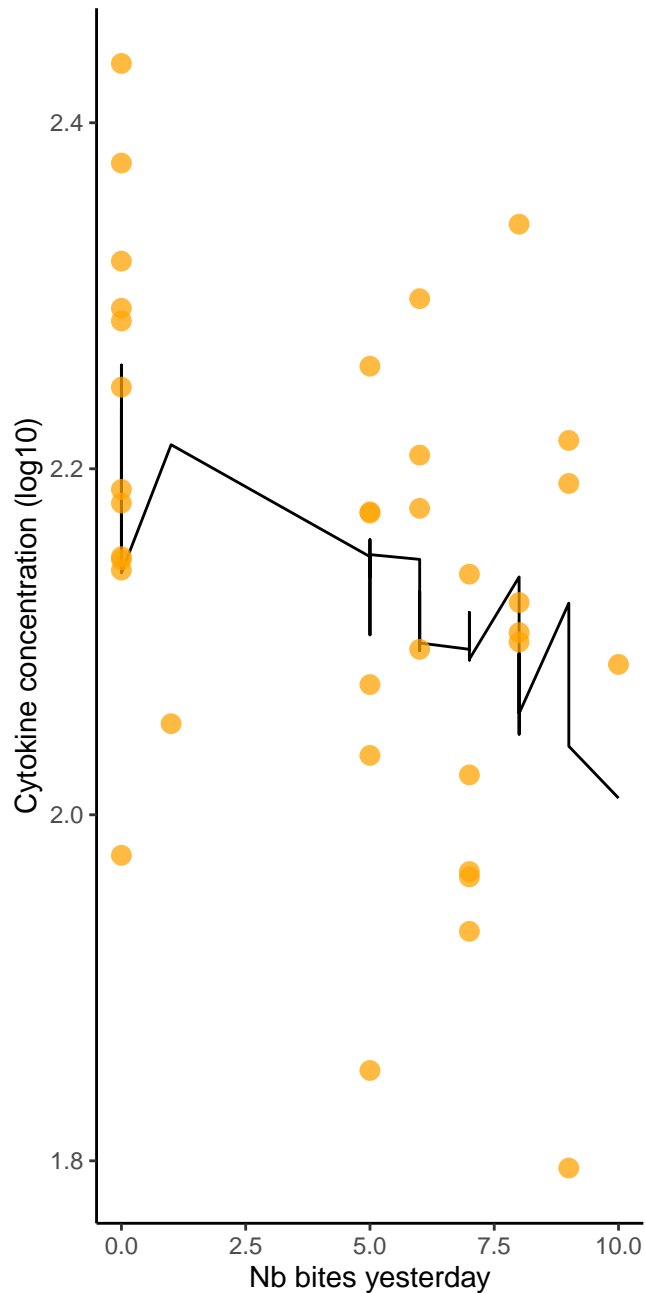


bites\_of\_yesterday effect plot



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

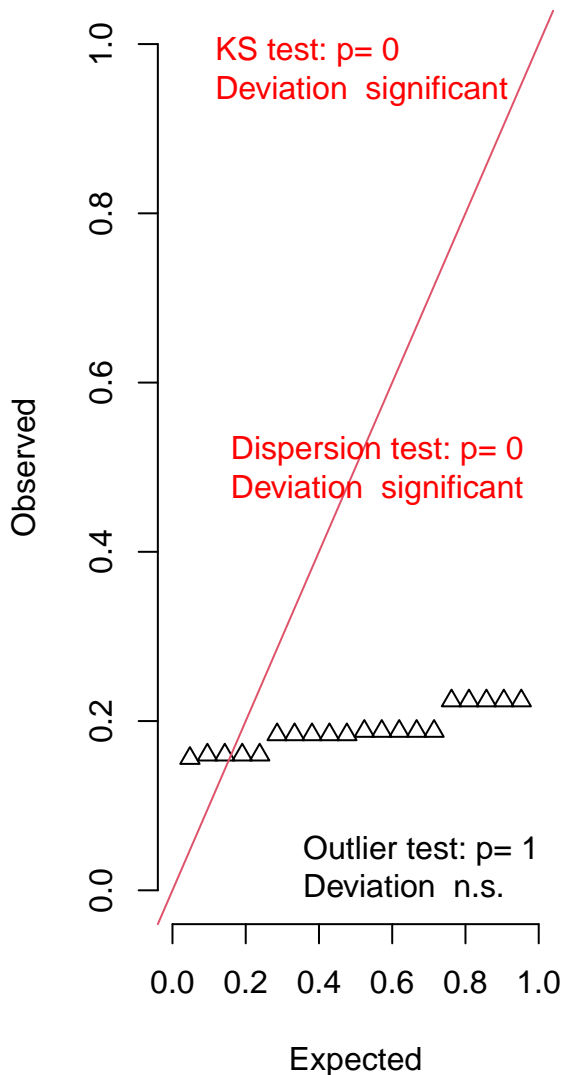
AICc [ 1 ] -35.2422

Bites in squirrel

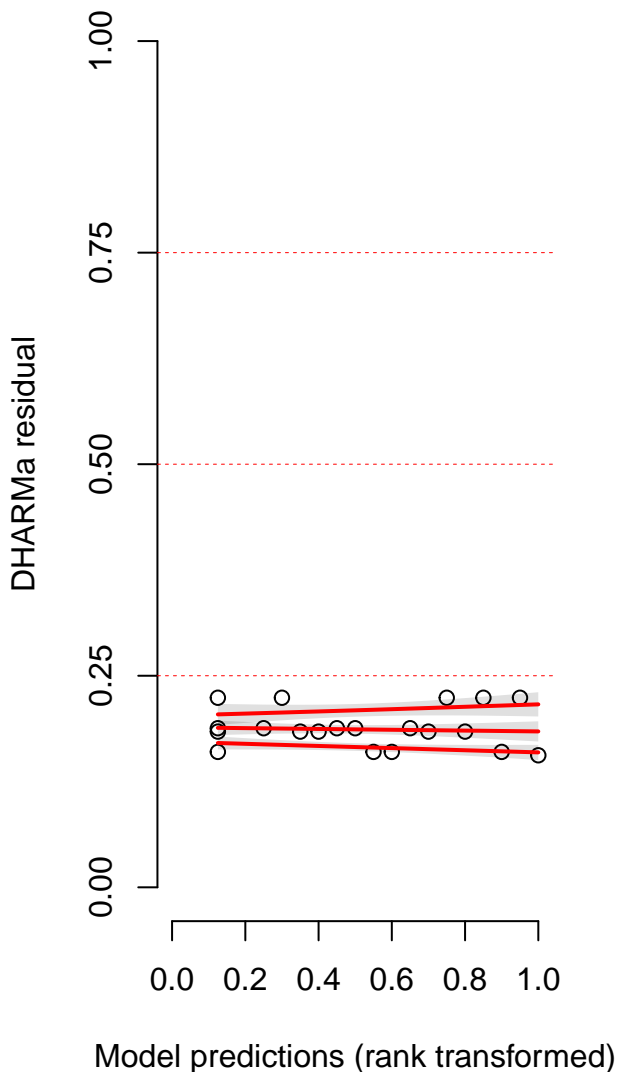
Nb obs : 20

# 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

log10(value)

cumul\_bites\_2\_previous\_days

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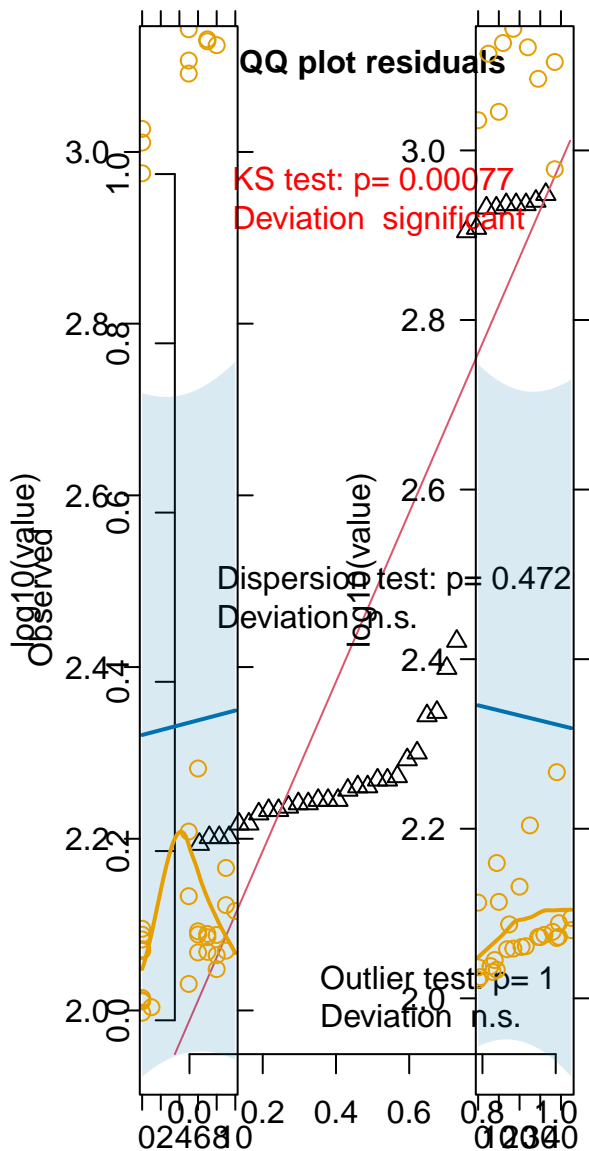


Bites in cyno

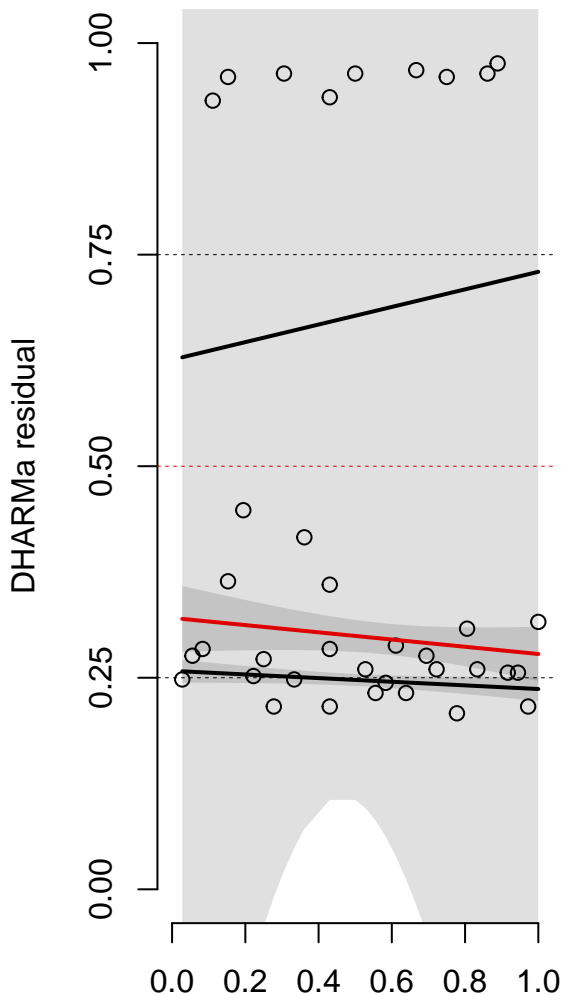
Nb obs : 36

# of yesterday bites 7 previous days effect plot

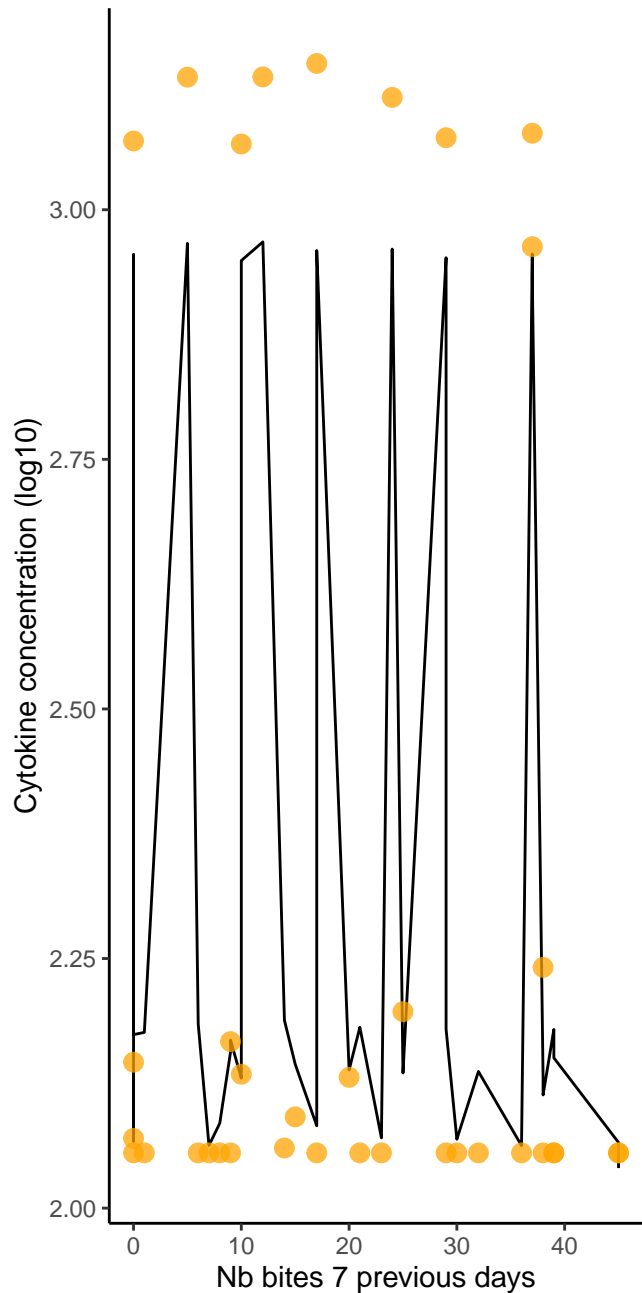
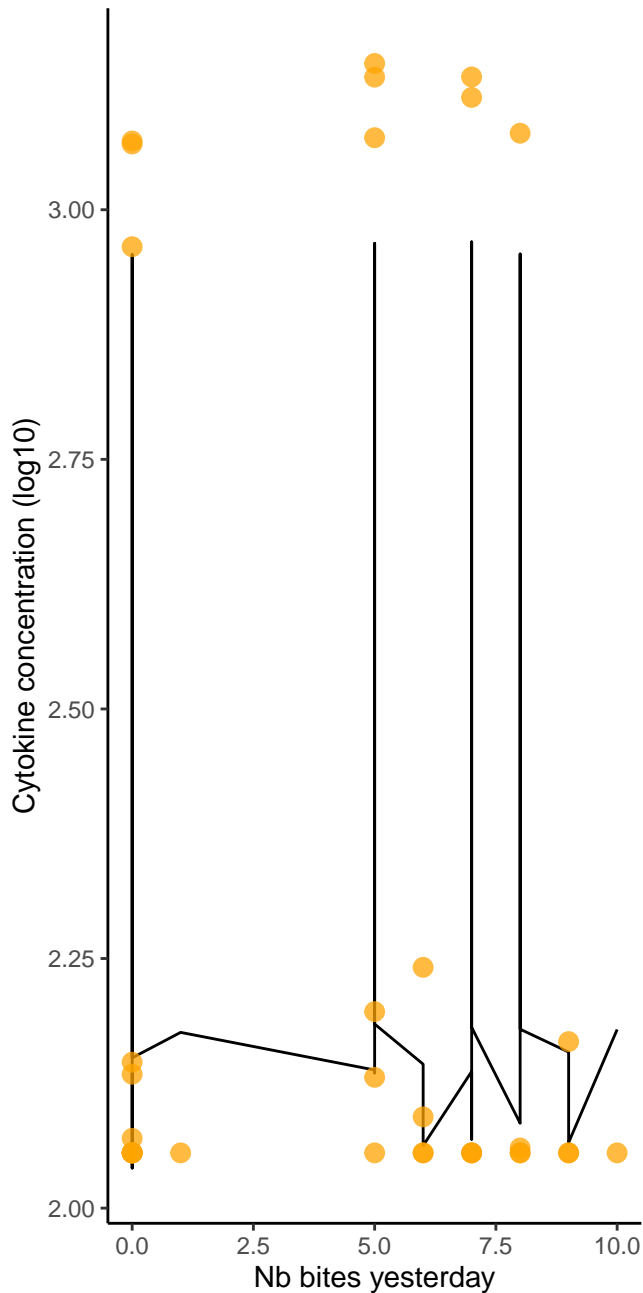
DHARMa residual



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



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	1.10	[1.00, 3.73]	1.05	0.91	[0.27, 1.00]
cumul_bites_7_previous_days	1.10	[1.00, 3.73]	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
20.2	28.2	-5.1	10.2	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.13629	0.3692
Residual		0.05484	0.2342

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0548

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	2.3329805	0.1999340	11.669	<2e-16 ***
bites_of_yesterday	0.0028446	0.0117917	0.241	0.809
cumul_bites_7_previous_days	-0.0005976	0.0029267	-0.204	0.838

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

```
AICc [1] 22.24877
```

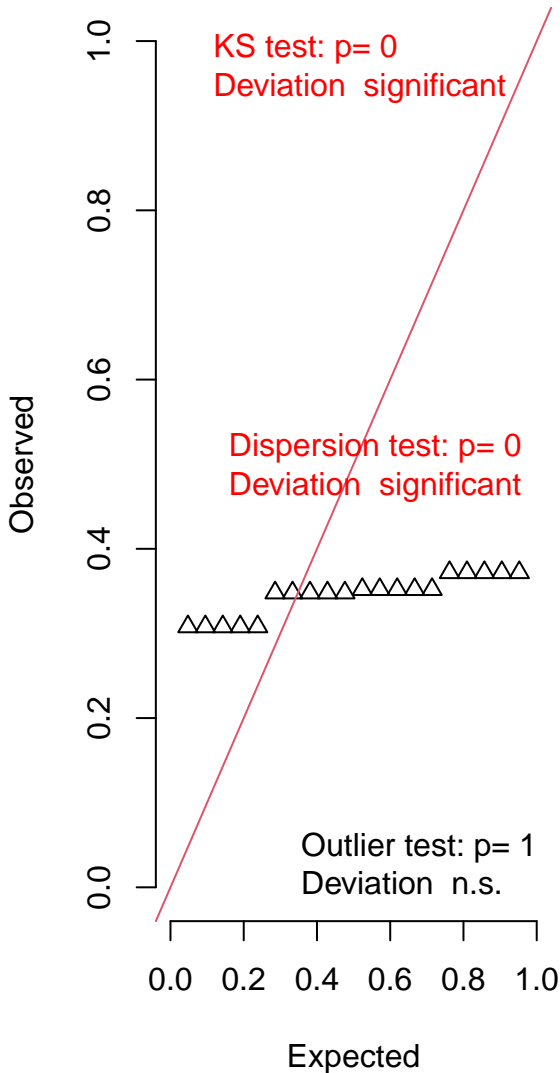
Bites in squirrel



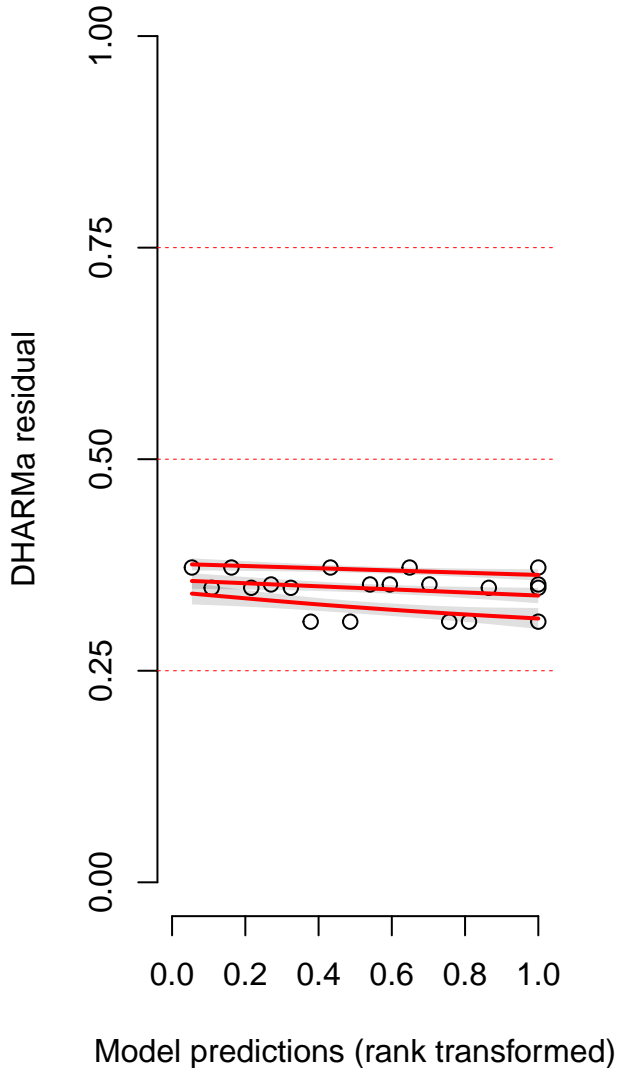
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days

G.CSF ERROR : 'yscale' incorrect dans la vue

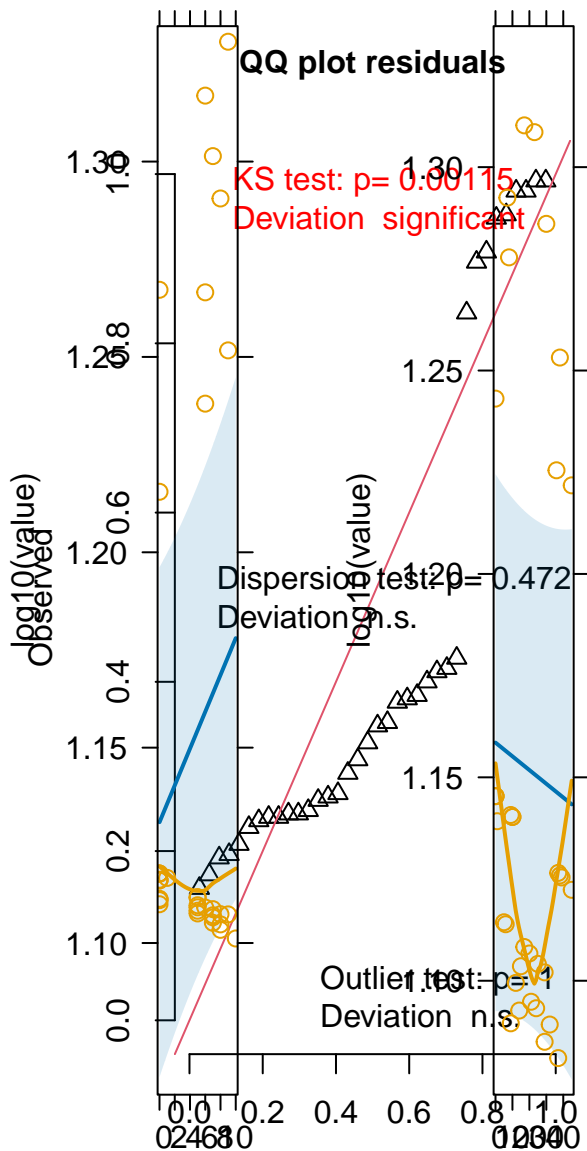
GM . CSF

Bites in cyno

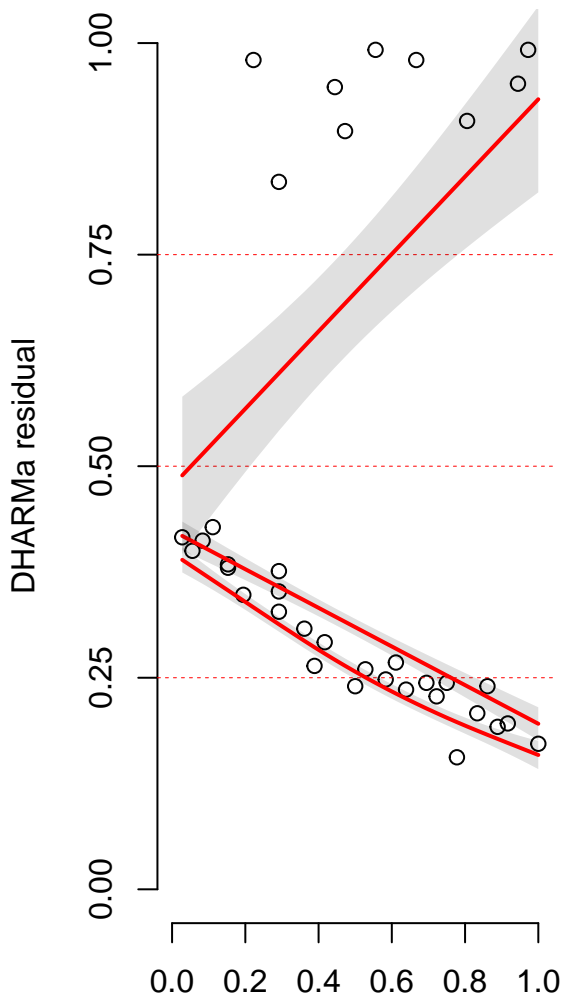
Nb obs : 36

# of yesterday bites\_7\_previous\_days effect plot

DHARMA residual

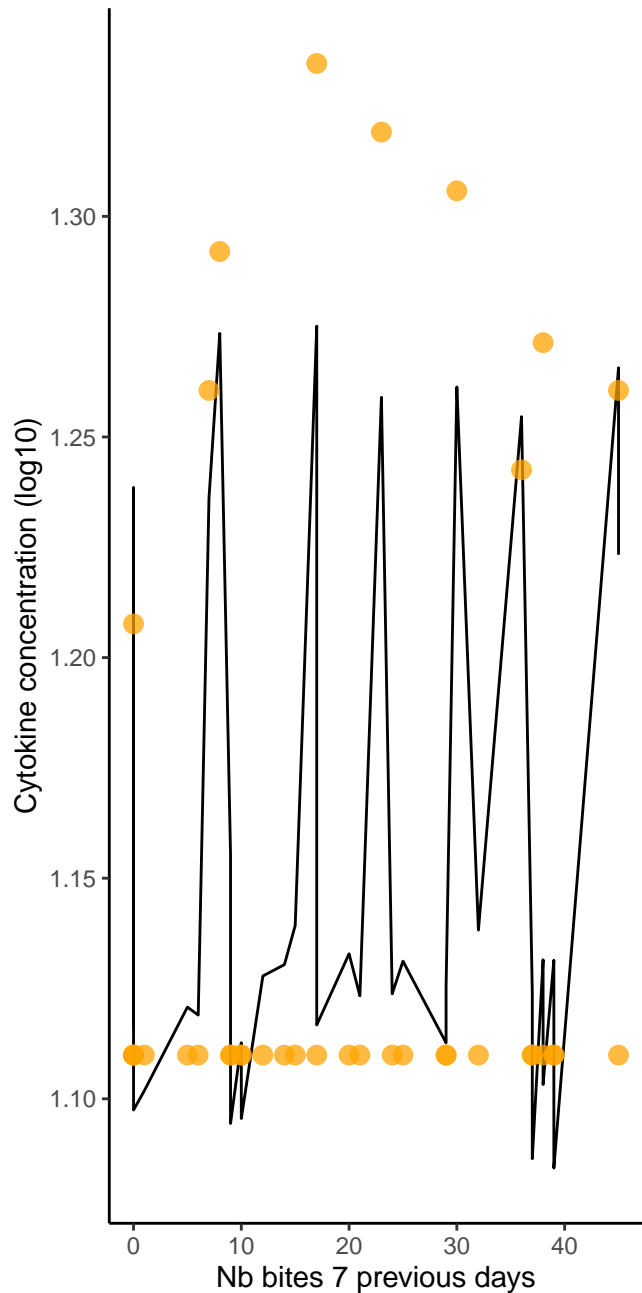
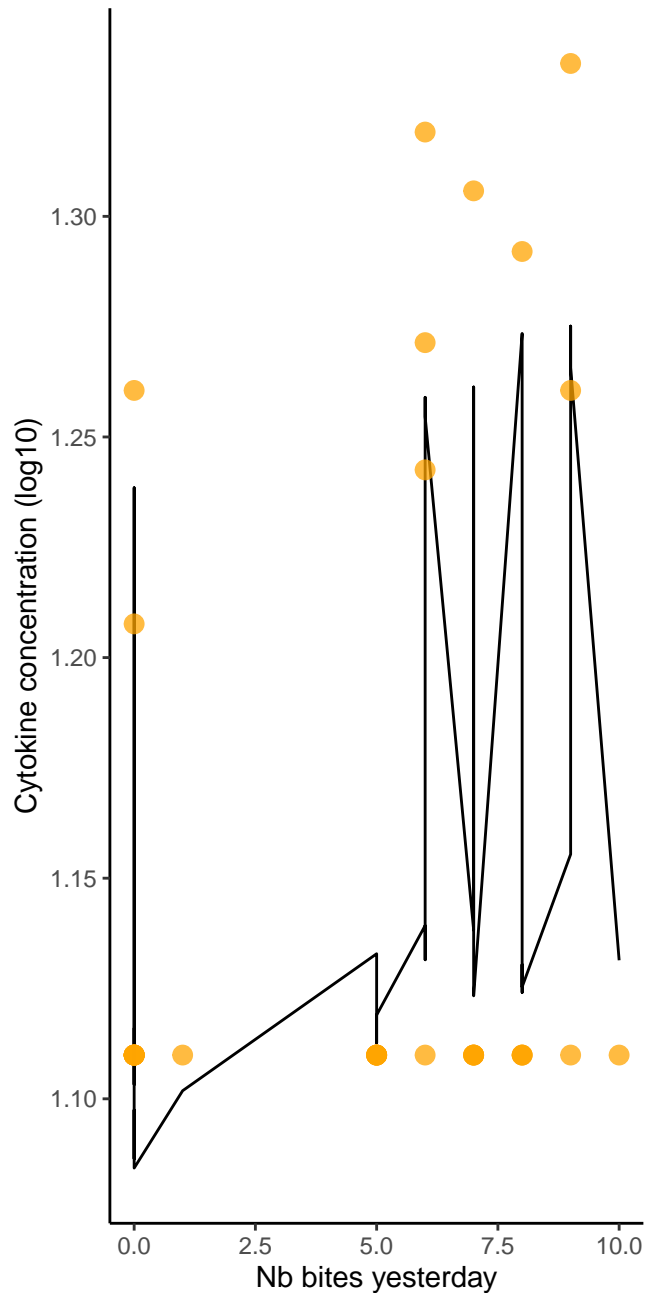


**Residual vs. predicted**  
Quantile deviations detected (red curves)  
Combined adjusted quantile test significant



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	1.10	[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
-106.6	-98.7	58.3	-116.6	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.003610	0.06008
	Residual	0.001637	0.04046

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.00164

Conditional model:

	Estimate	Std. Error	z	value	Pr(> z )
(Intercept)	1.1377346	0.0328470	34.64	<2e-16	***
bites_of_yesterday	0.0047092	0.0020372	2.31	0.0208	*
cumul_bites_7_previous_days	-0.0003373	0.0005059	-0.67	0.5049	

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

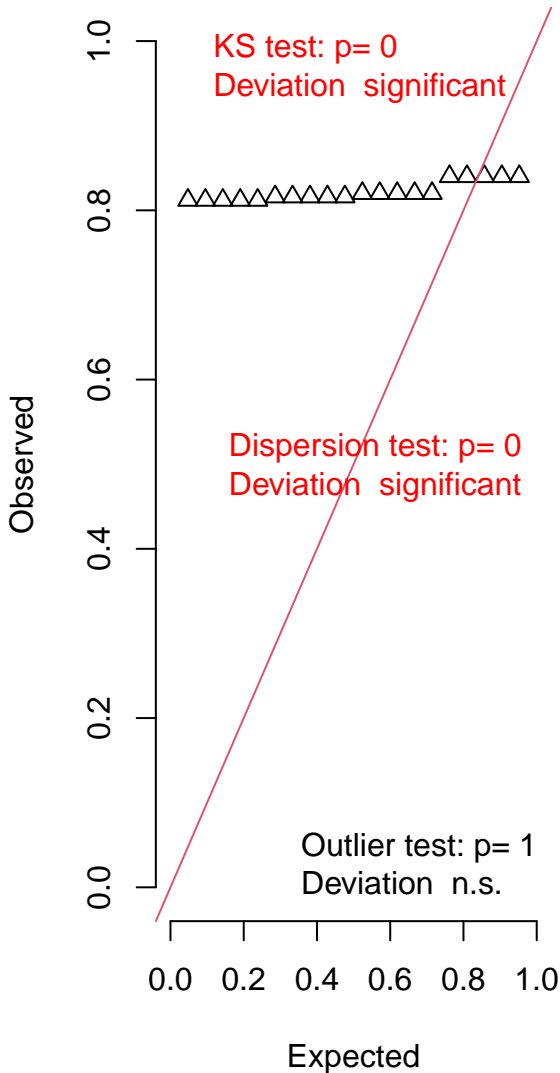
AICc [1] -104.6299

Bites in squirrel

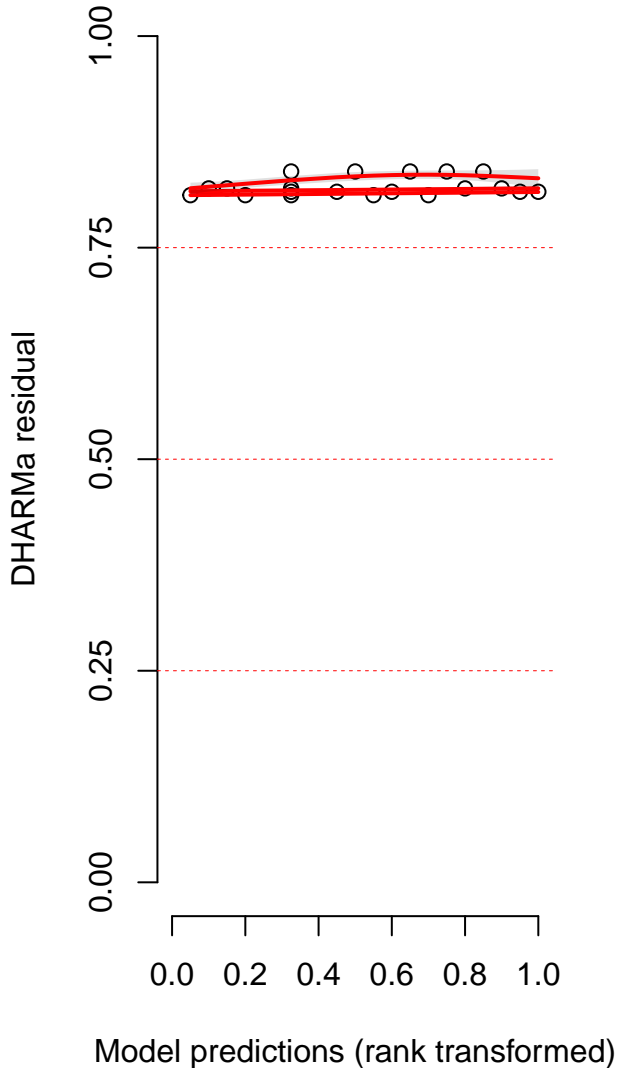
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days



GM.CSF ERROR : 'yscale' incorrect dans la vue

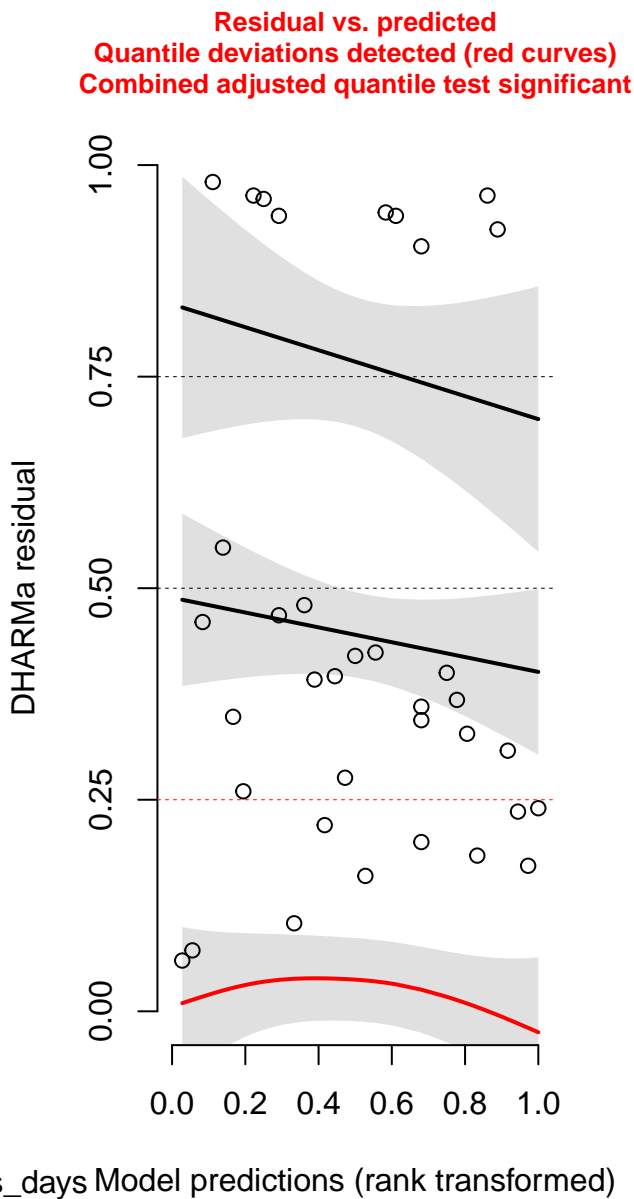
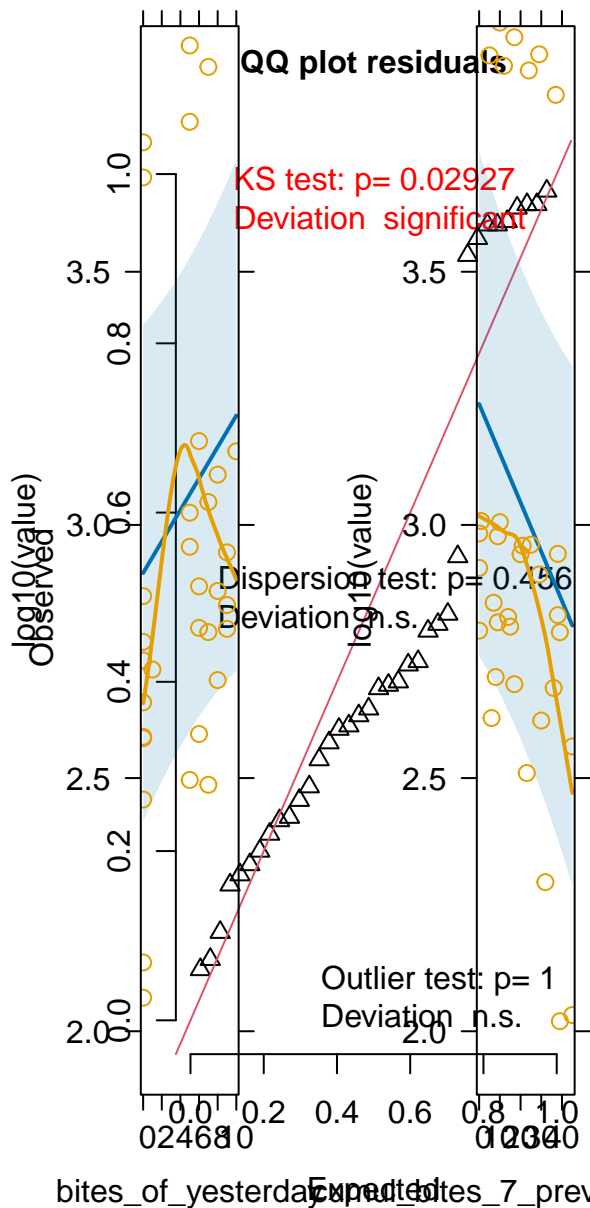
HGF

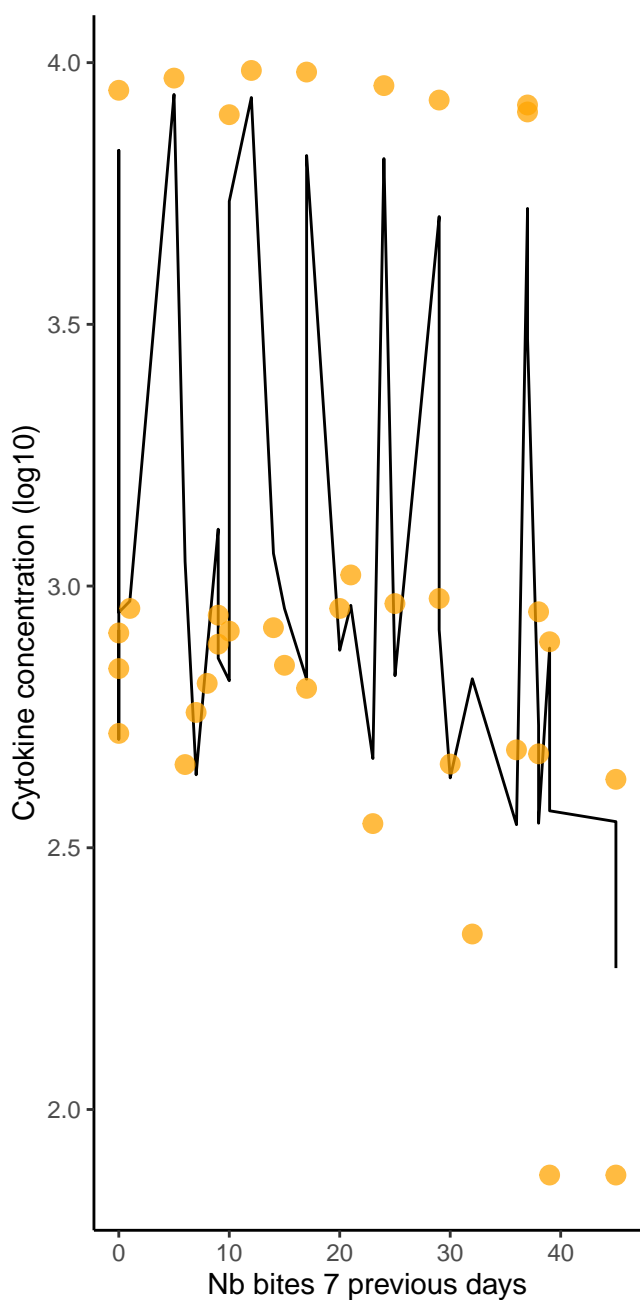
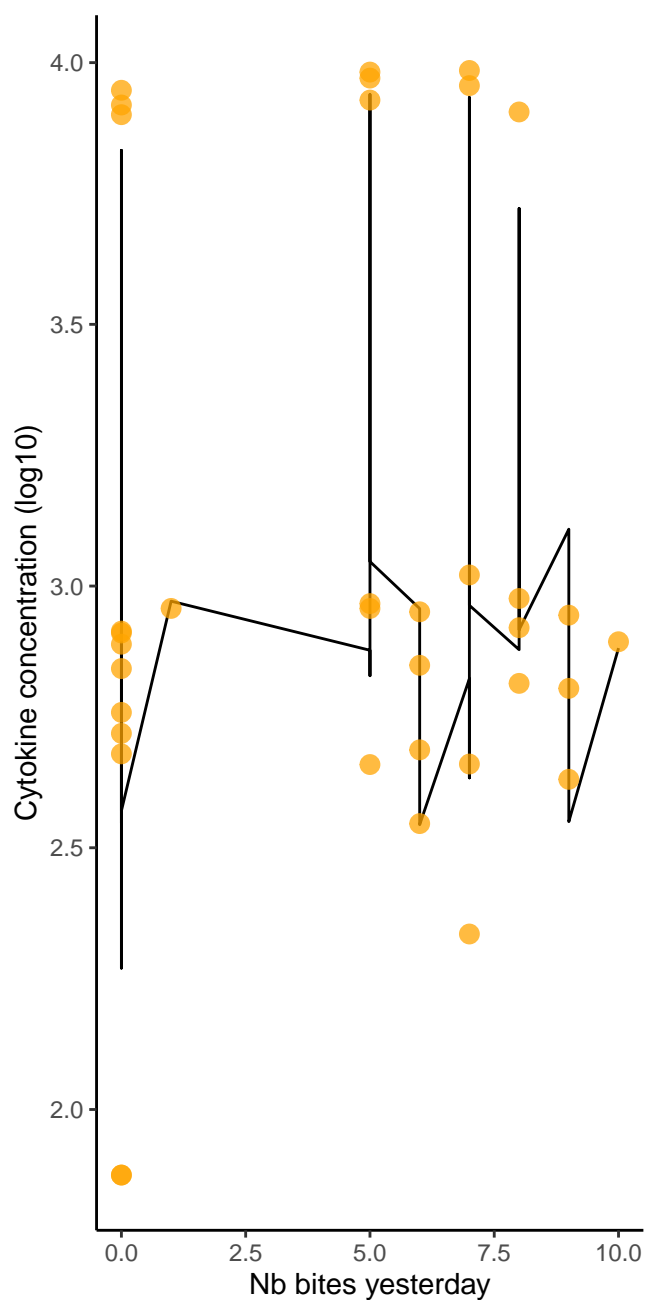
Bites in cyno

Nb obs : 36

# of yesterday bites 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, 3.73]	1.05	0.91	[0.27, 1.00]
cumul_bites_7_previous_days	1.10	[1.00, 3.73]	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
44.5	52.4	-17.2	34.5	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.1983	0.4453
	Residual	0.1114	0.3337

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.111

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	3.101485	0.248137	12.499	<2e-16 ***
bites_of_yesterday	0.031085	0.016805	1.850	0.0644 .
cumul_bites_7_previous_days	-0.009720	0.004171	-2.331	0.0198 *

---

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



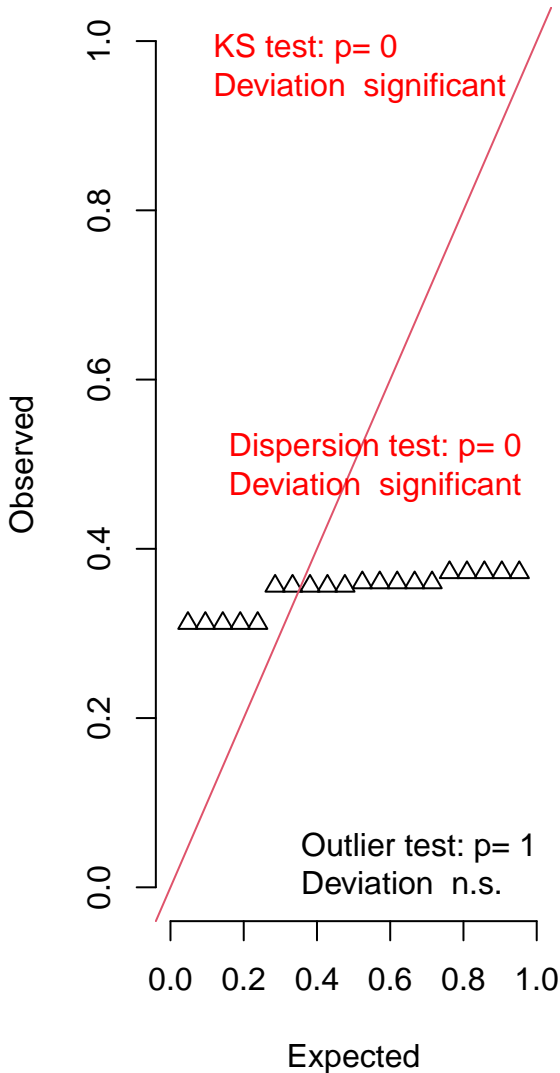
```
AICc [1] 46.48997
```

Bites in squirrel

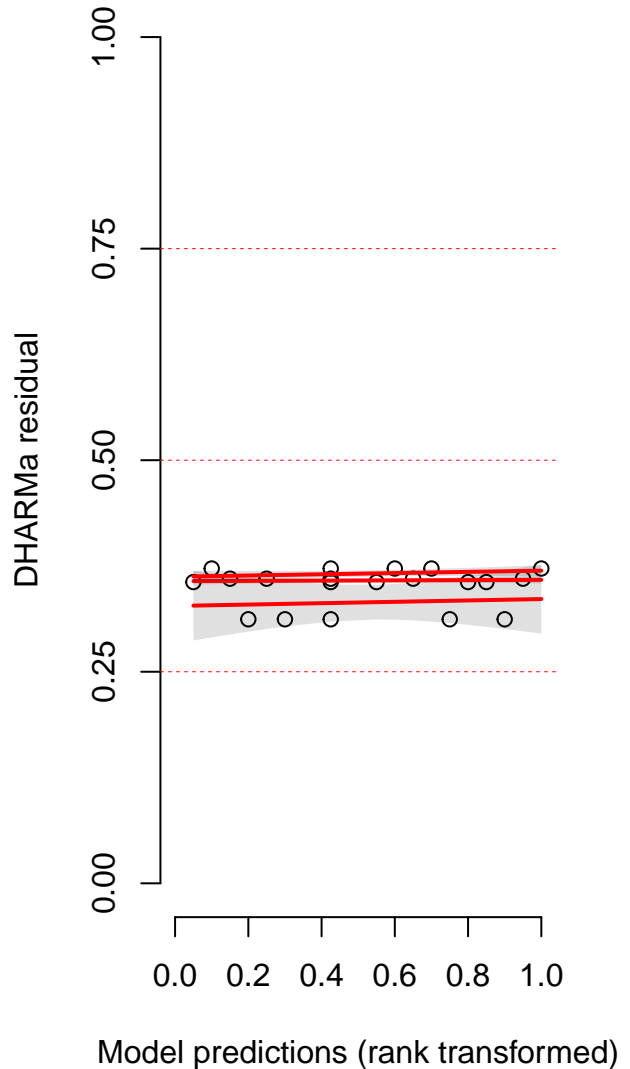
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days

HGF ERROR : 'yscale' incorrect dans la vue

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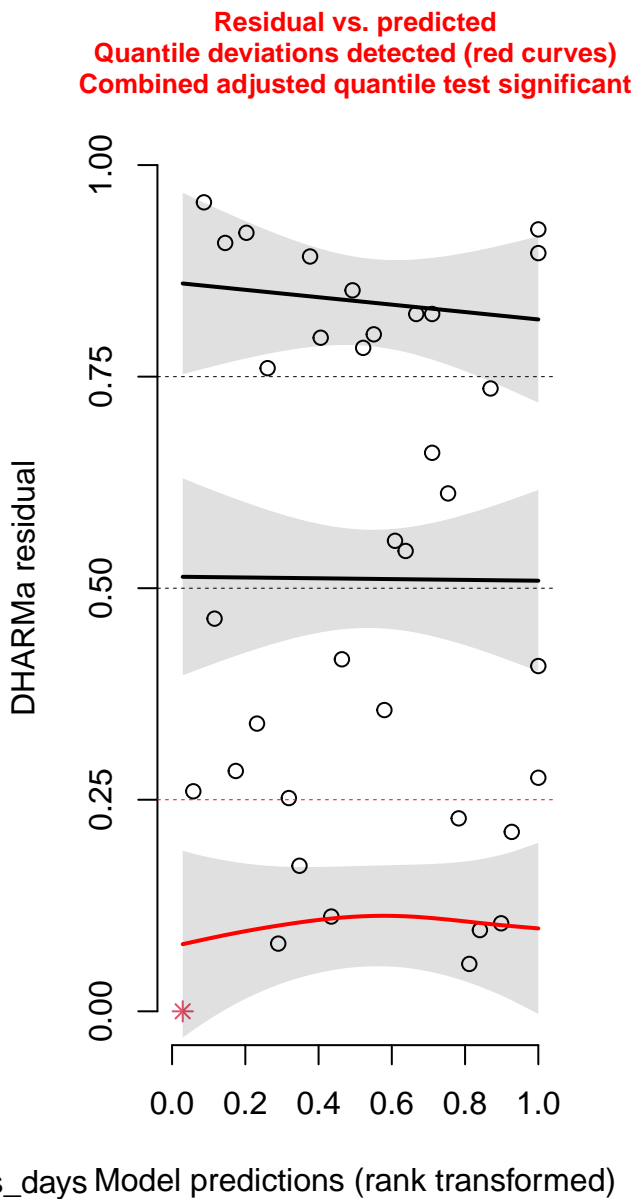
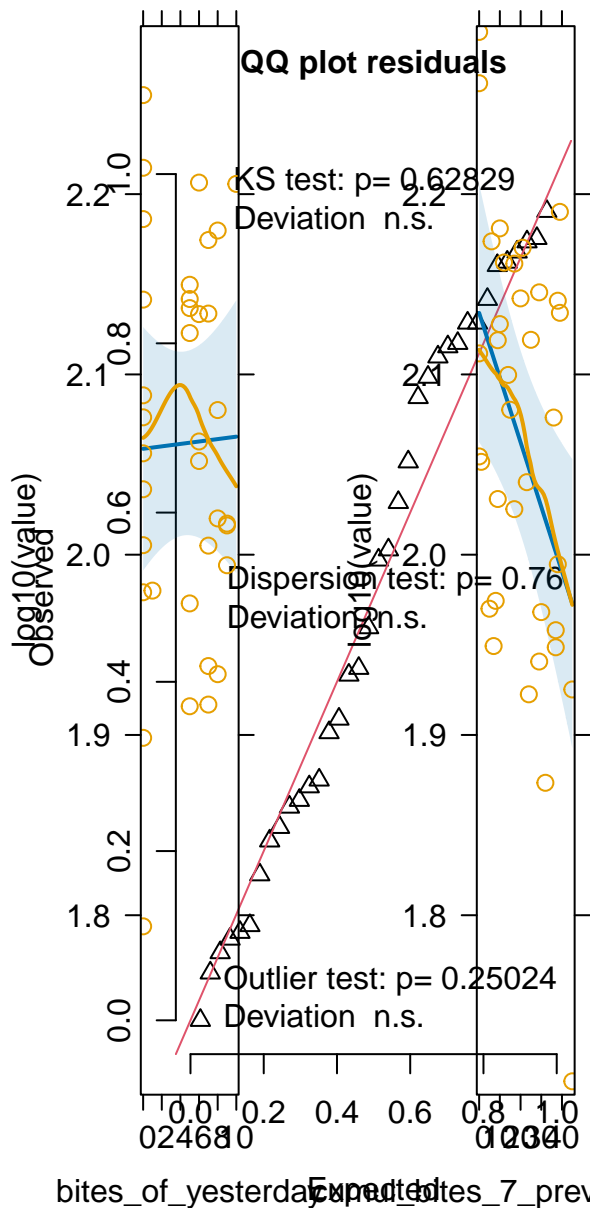
Bites in cyno

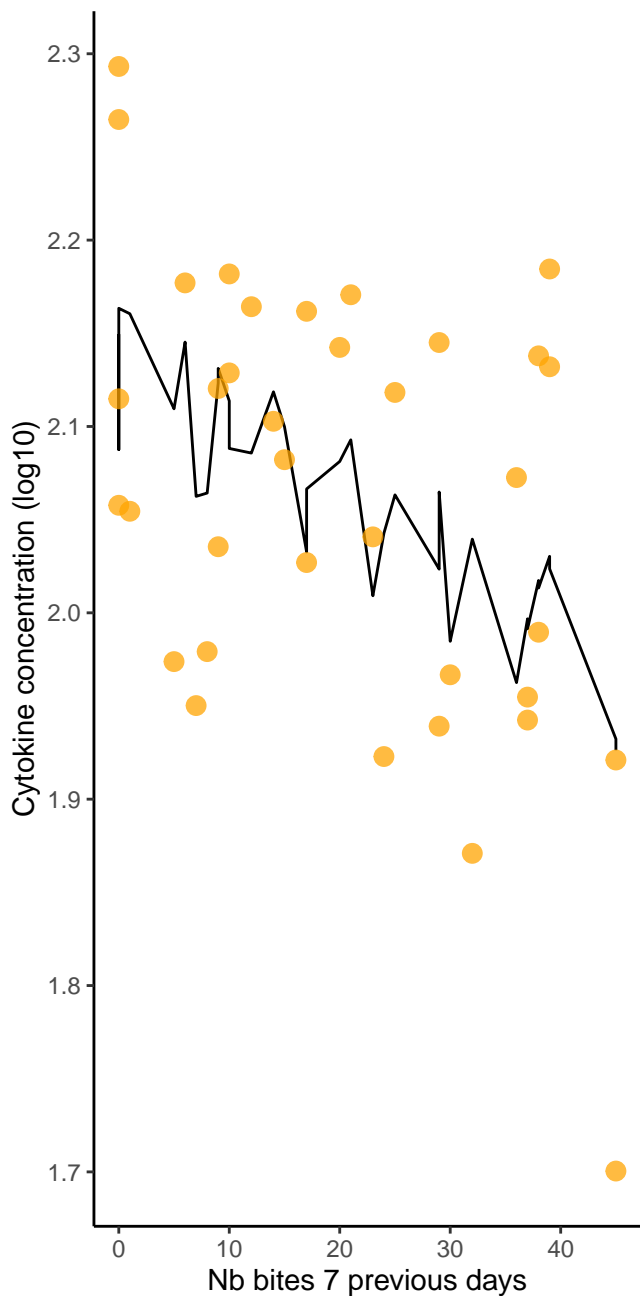
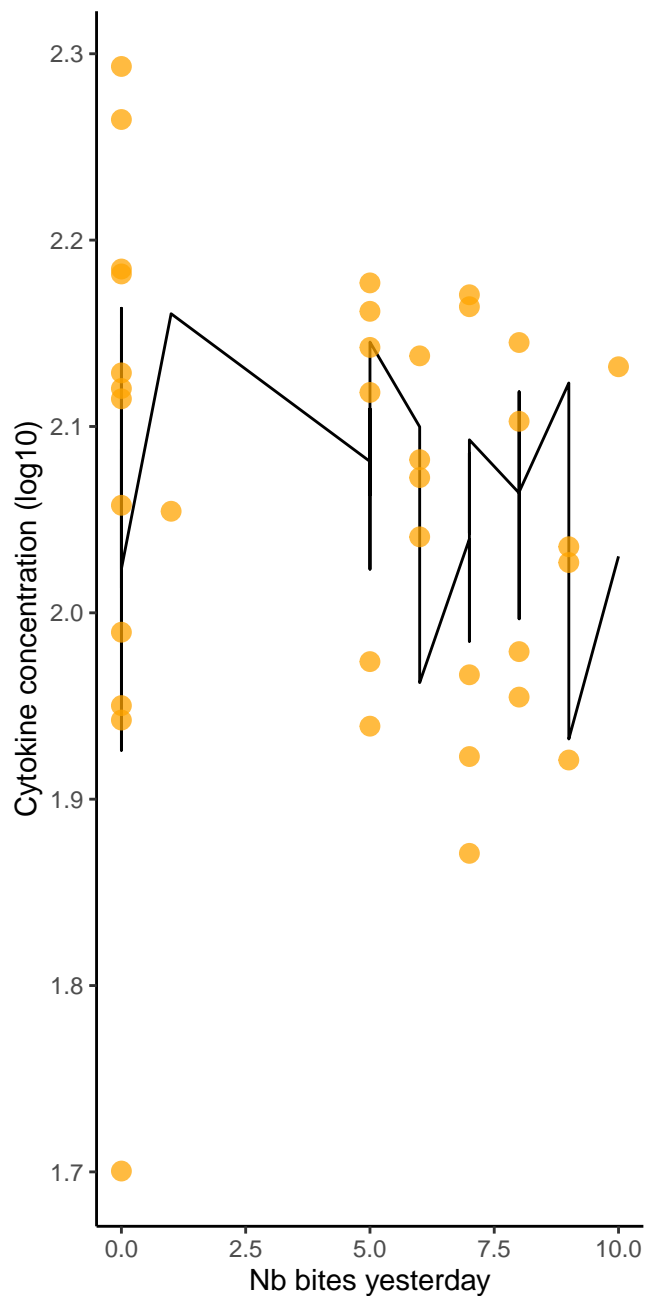


Nb obs : 36

# bites\_of\_yesterday\_effect plot

## DHARMA residual





# 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

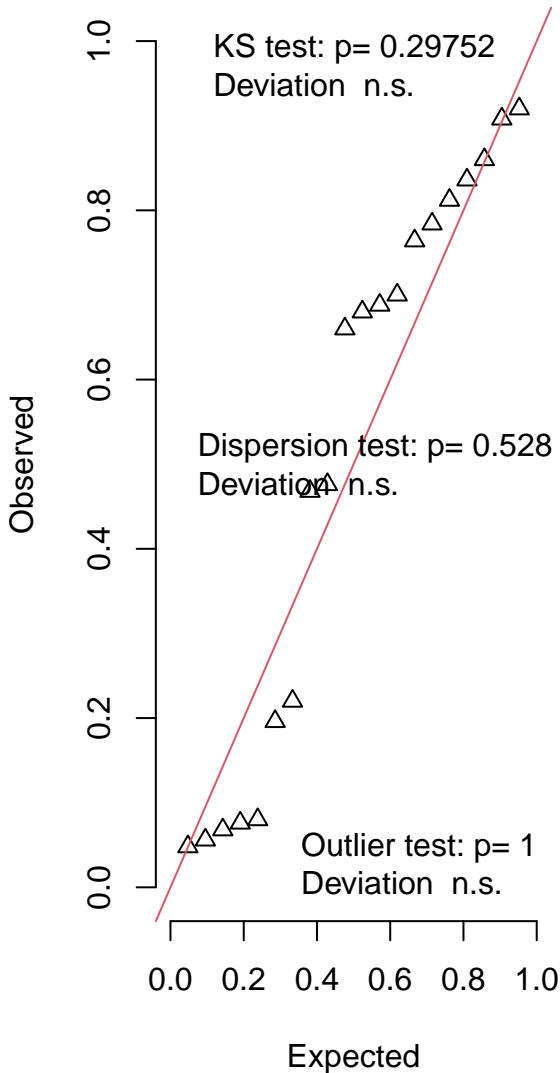
Bites in squirrel

Nb obs : 20

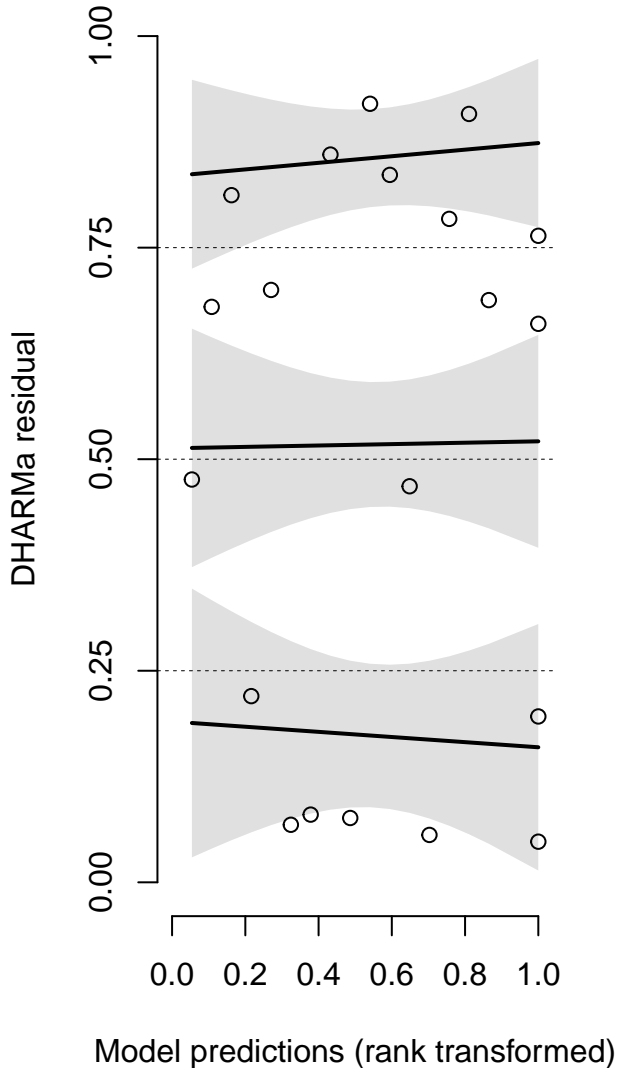


# DHARMA residual

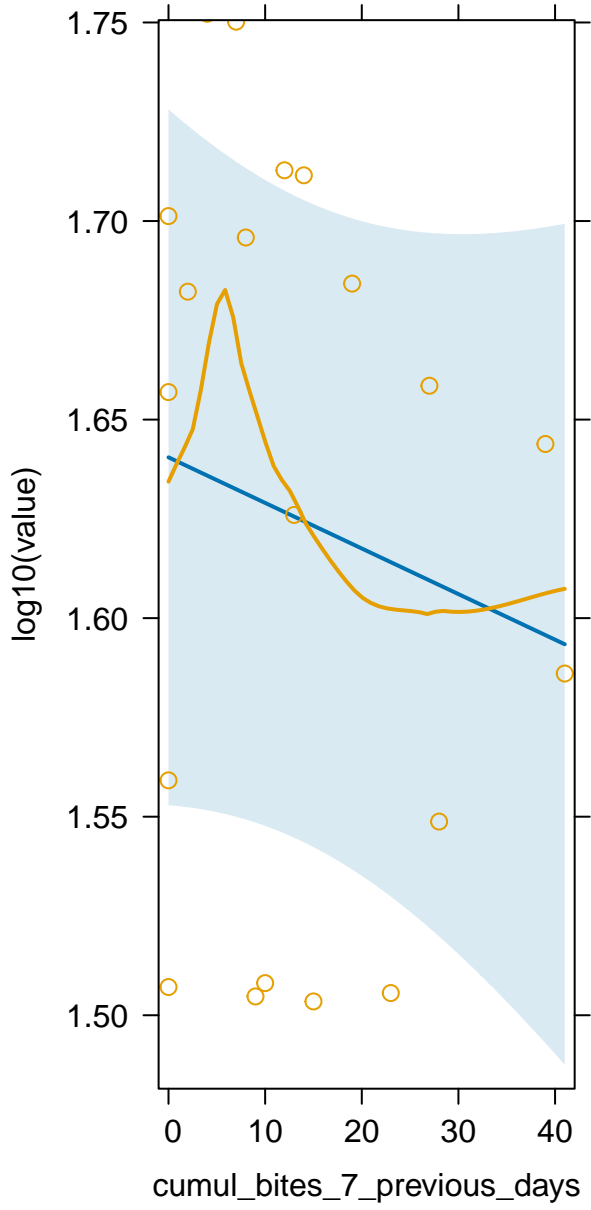
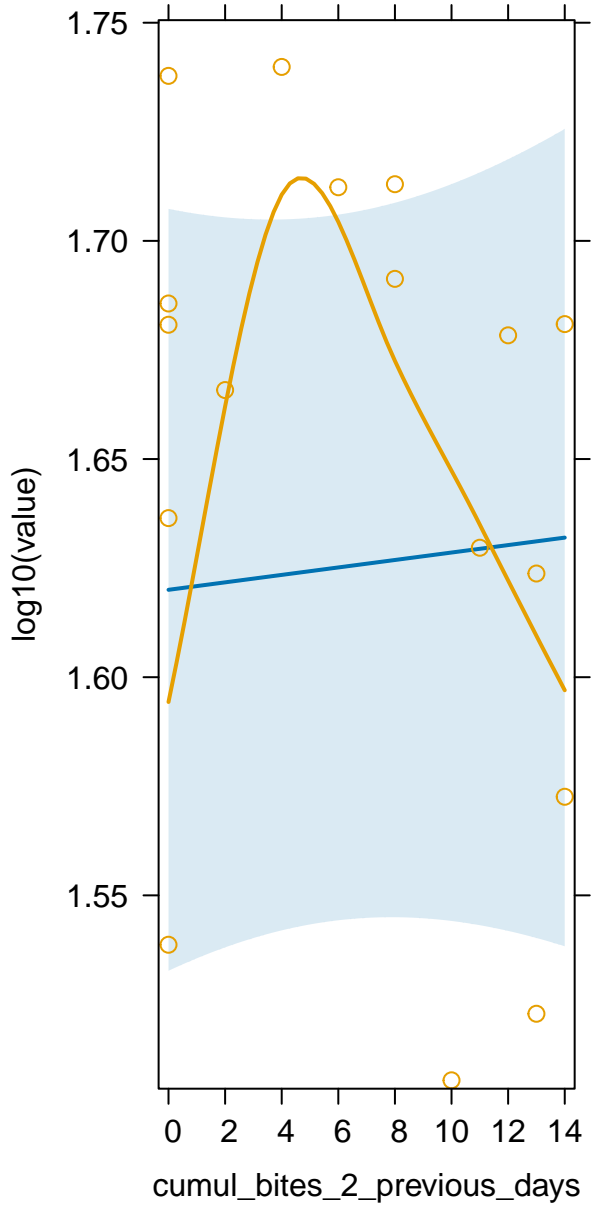
## QQ plot residuals

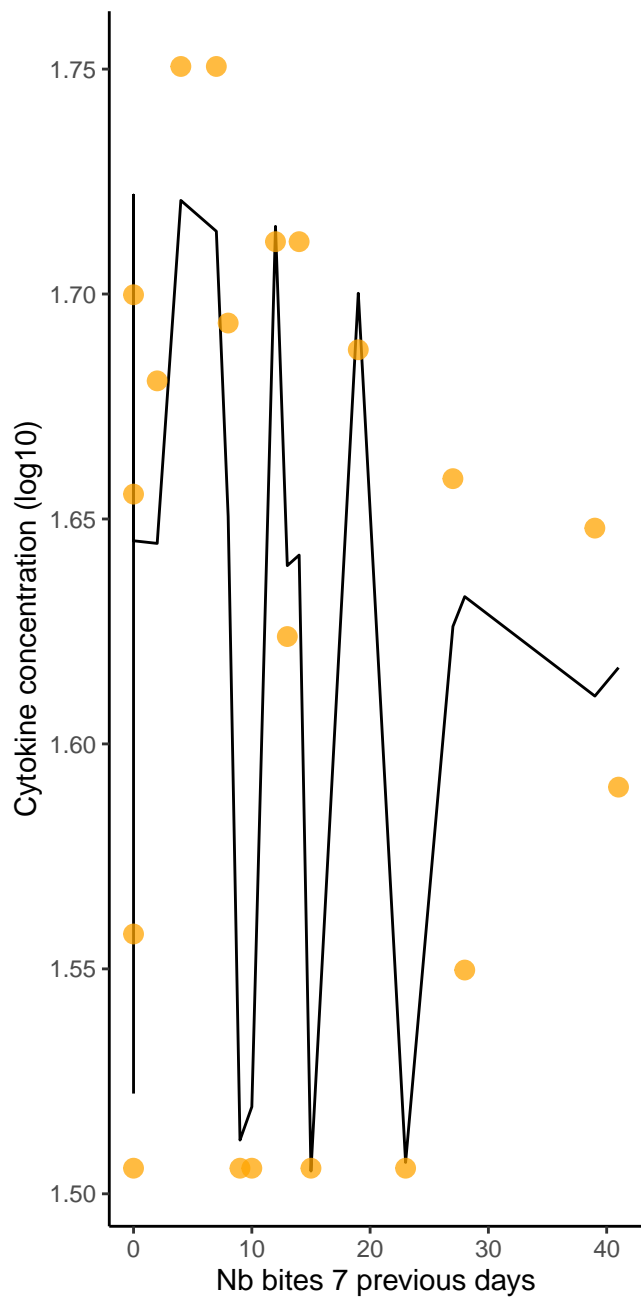
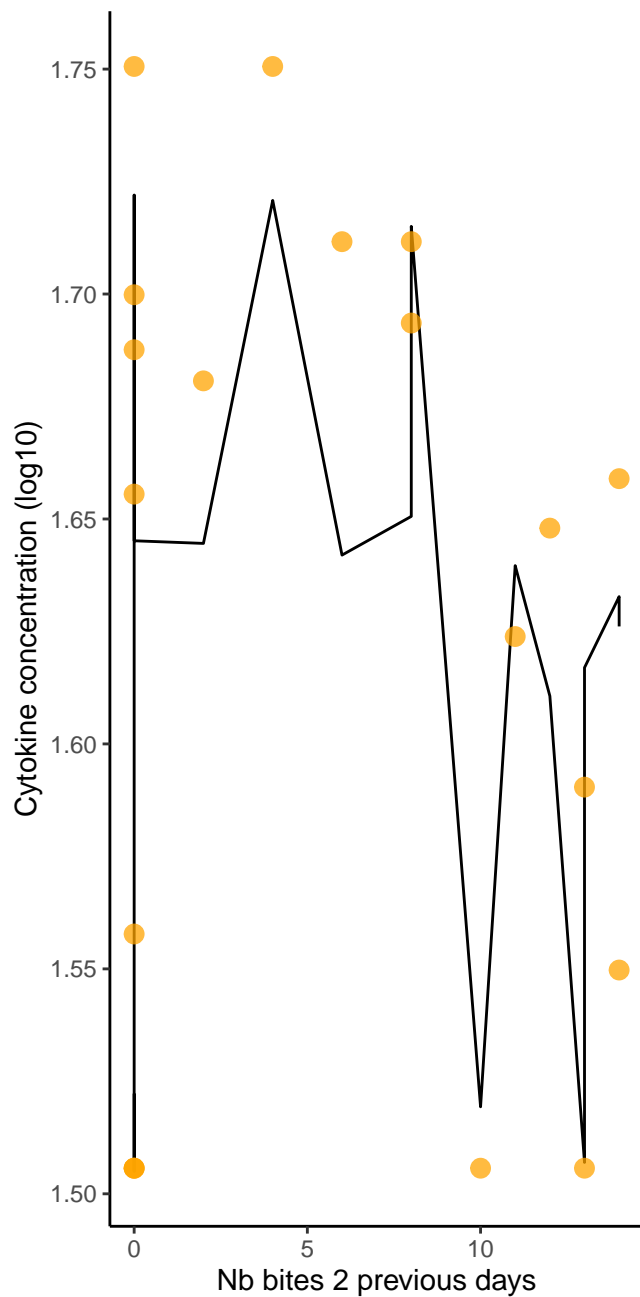


## Residual vs. predicted No significant problems detected



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	2.08	[1.44, 3.66]	1.44	0.48	[0.27, 0.69]
cumul_bites_7_previous_days	2.08	[1.44, 3.66]	1.44	0.48	[0.27, 0.69]

```
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
-48.4    -43.4    29.2   -58.4      15

Random effects:

Conditional model:
Groups   Name      Variance Std.Dev.
ID      (Intercept) 0.005513 0.07425
Residual                0.001807 0.04251
Number of obs: 20, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.00181

Conditional model:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)    1.6355860  0.0401007   40.79  <2e-16 ***
cumul_bites_2_previous_days  0.0008543  0.0027158    0.31   0.753
cumul_bites_7_previous_days -0.0011481  0.0011811   -0.97   0.331
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

AICc [ 1 ] -44.12369

IFN.g

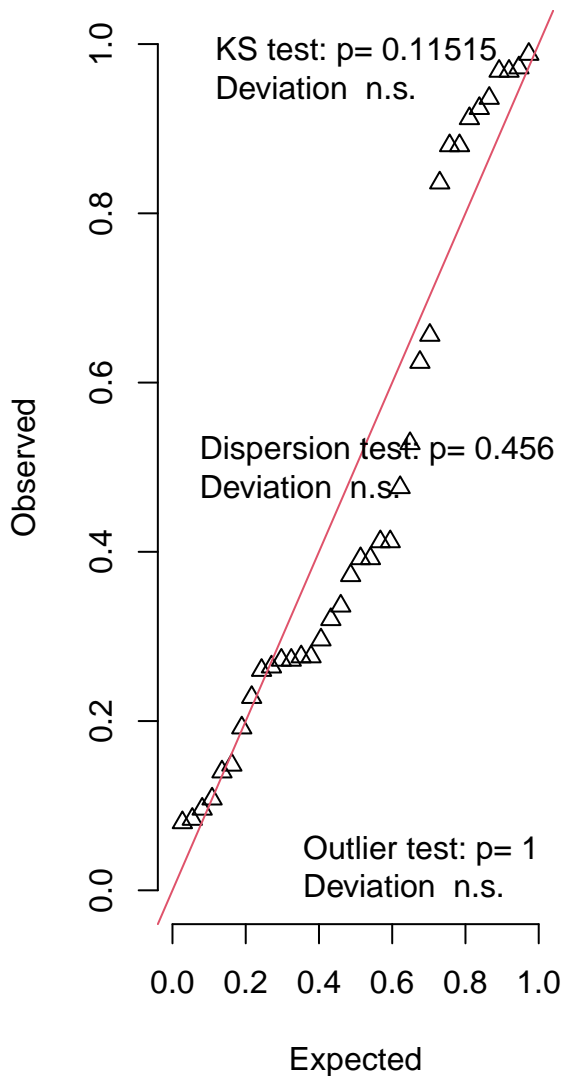
Bites in cyno



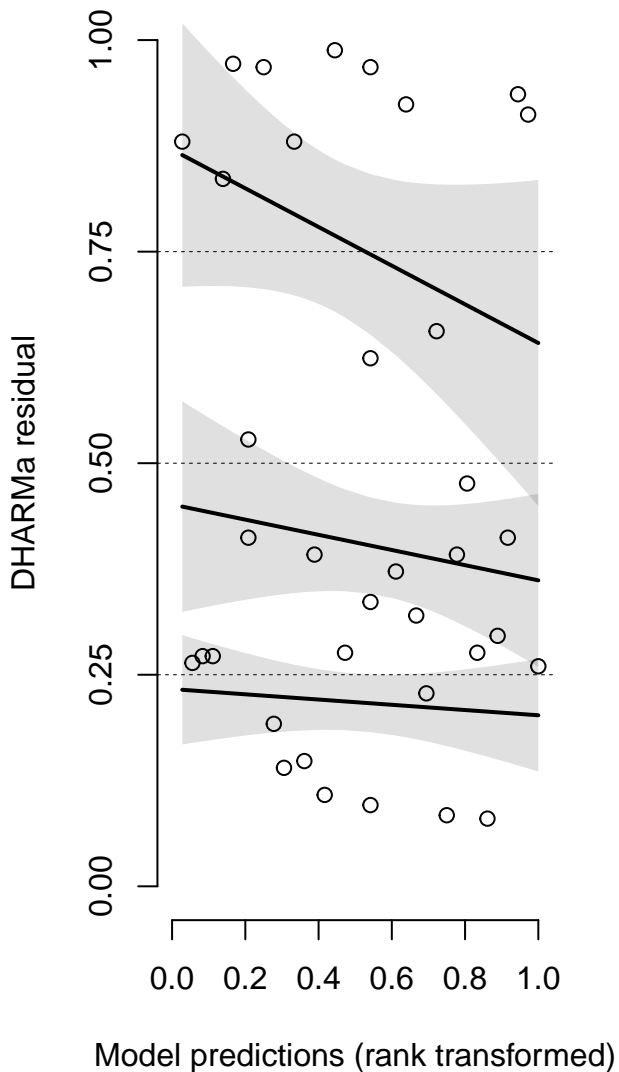
Nb obs : 36

# DHARMA residual

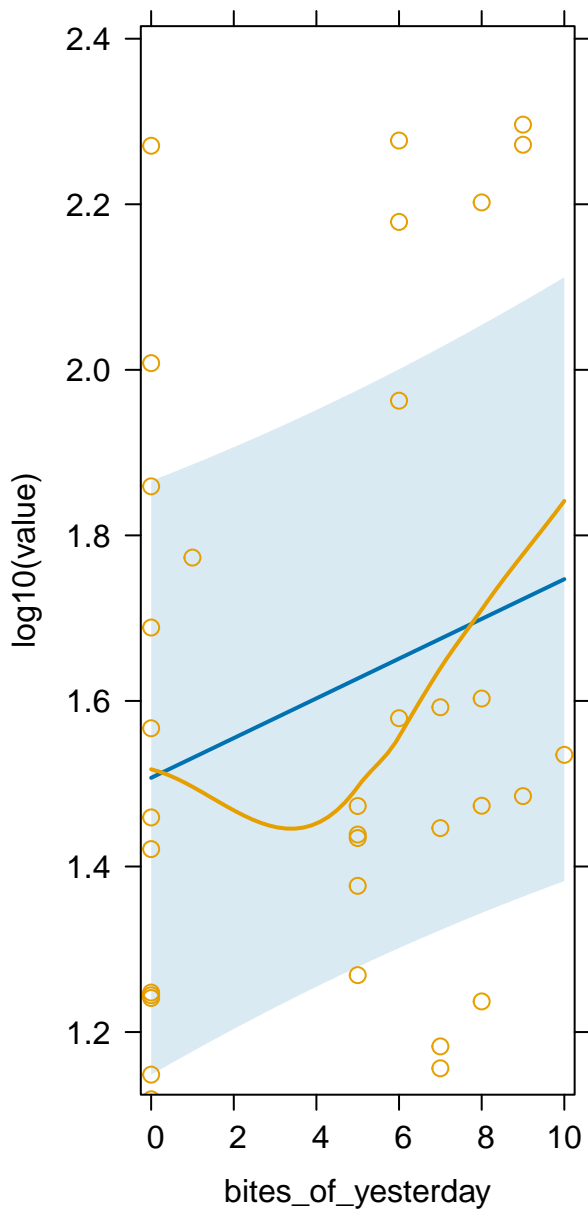
## QQ plot residuals



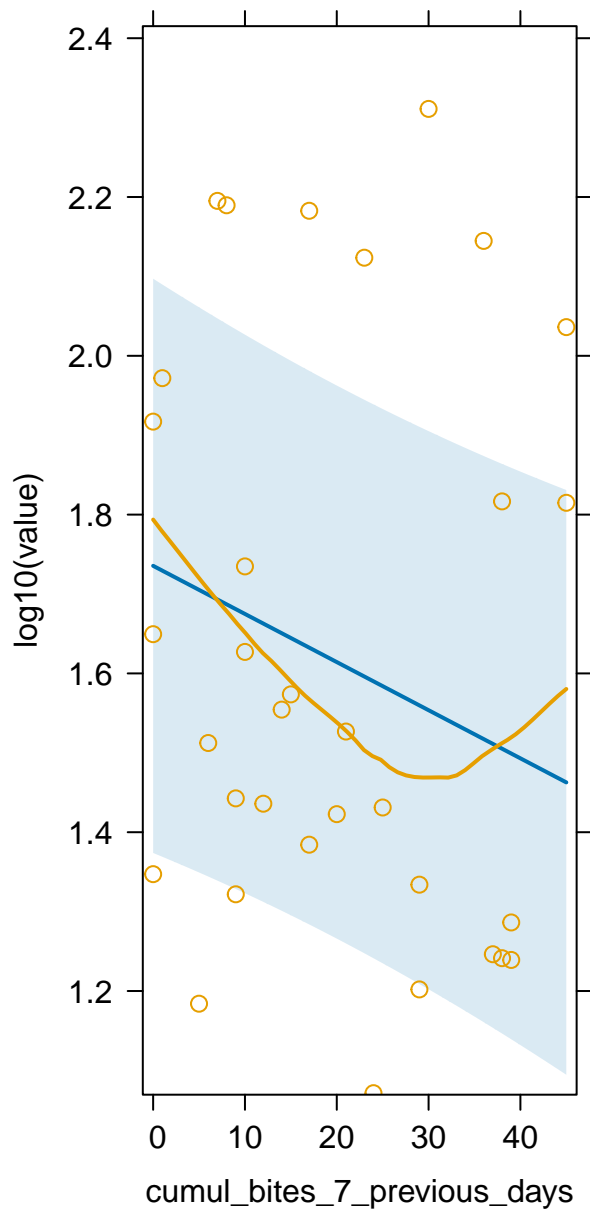
## Residual vs. predicted No significant problems detected

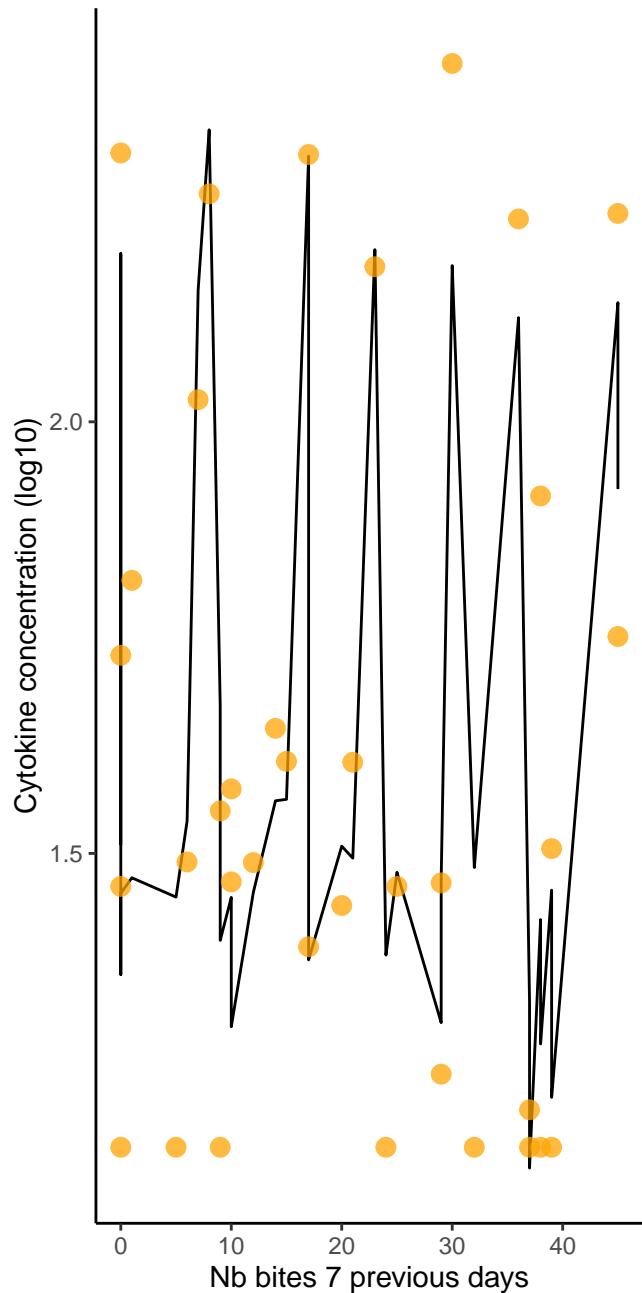
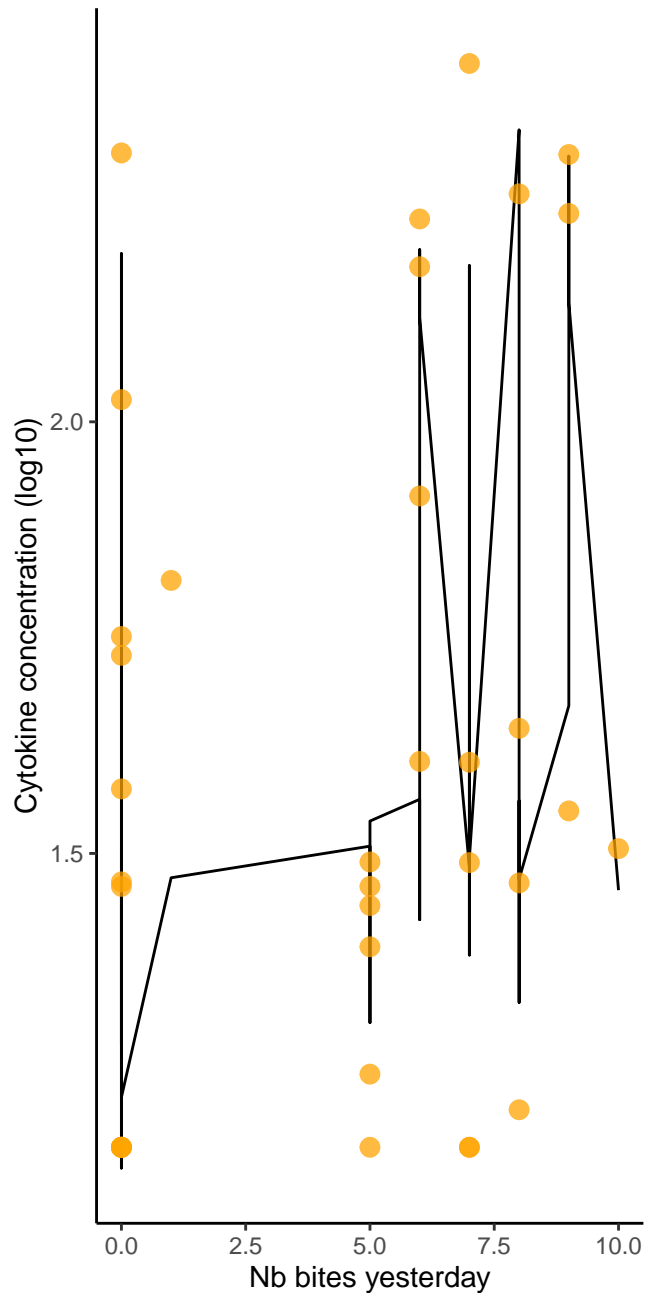


bites\_of\_yesterday effect plot



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, 3.75]	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
5.9	13.8	2.1	-4.1	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.11325	0.3365
	Residual	0.03588	0.1894

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0359

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	1.629518	0.179384	9.084	<2e-16 ***
bites_of_yesterday	0.023996	0.009539	2.516	0.0119 *
cumul_bites_7_previous_days	-0.006061	0.002368	-2.559	0.0105 *

---

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

```
AICc [1] 7.897849
```

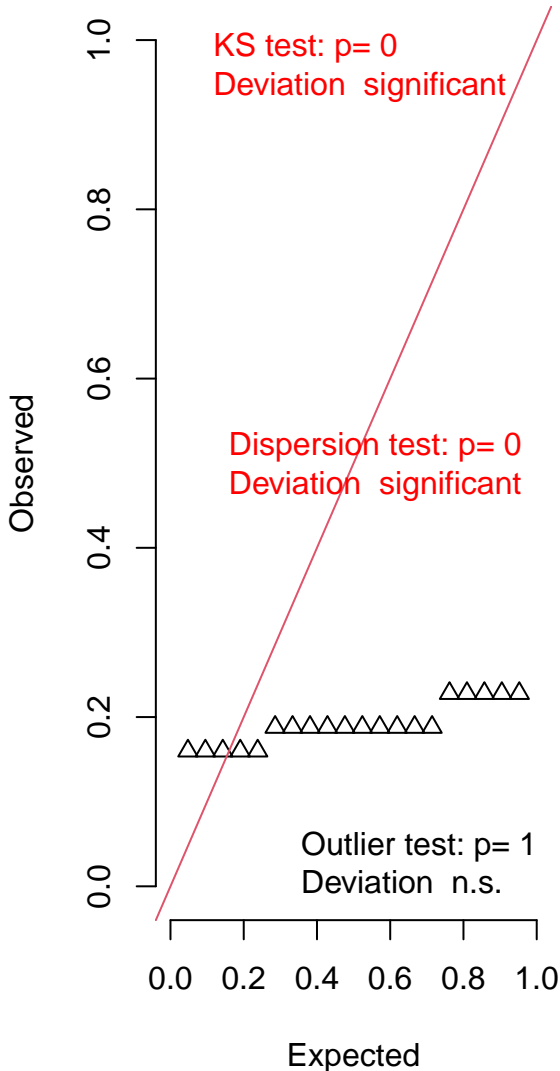
Bites in squirrel



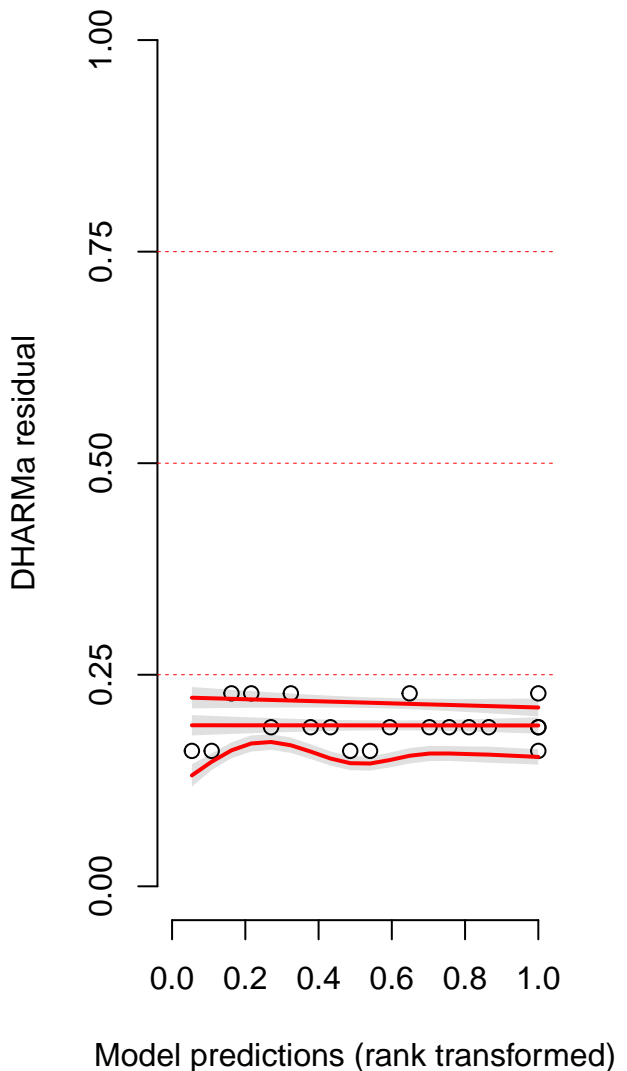
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days

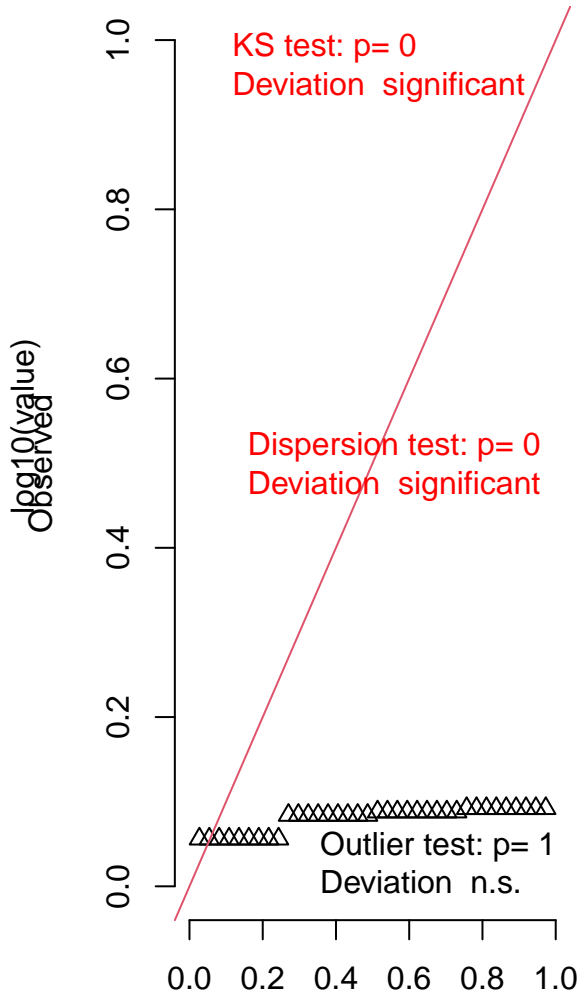
IFN.g ERROR : 'yscale' incorrect dans la vue

IL.10

Bites in cyno

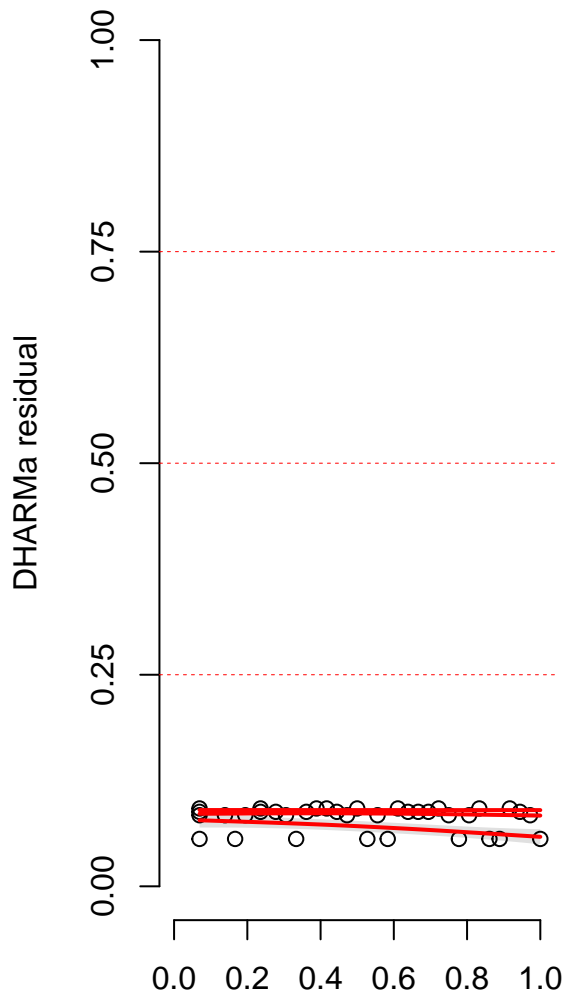
Nb obs : 36

QQ plot residuals



bites\_of\_yesterday Expected

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



Model predictions (rank transformed)



IL.10 ERROR : 'yscale' incorrect dans la vue

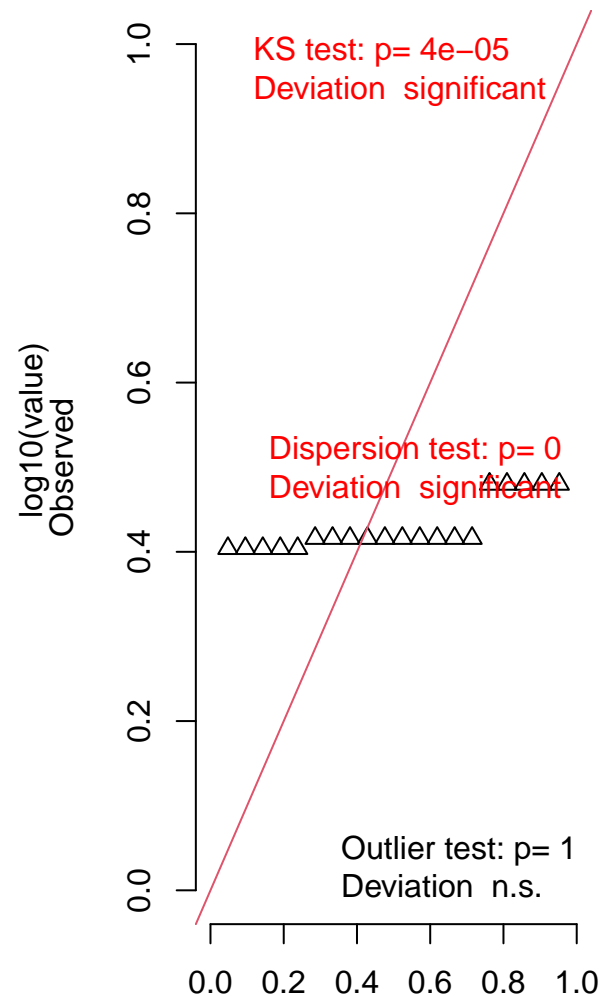
Bites in squirrel

Nb obs : 20

previous\_days effect plot

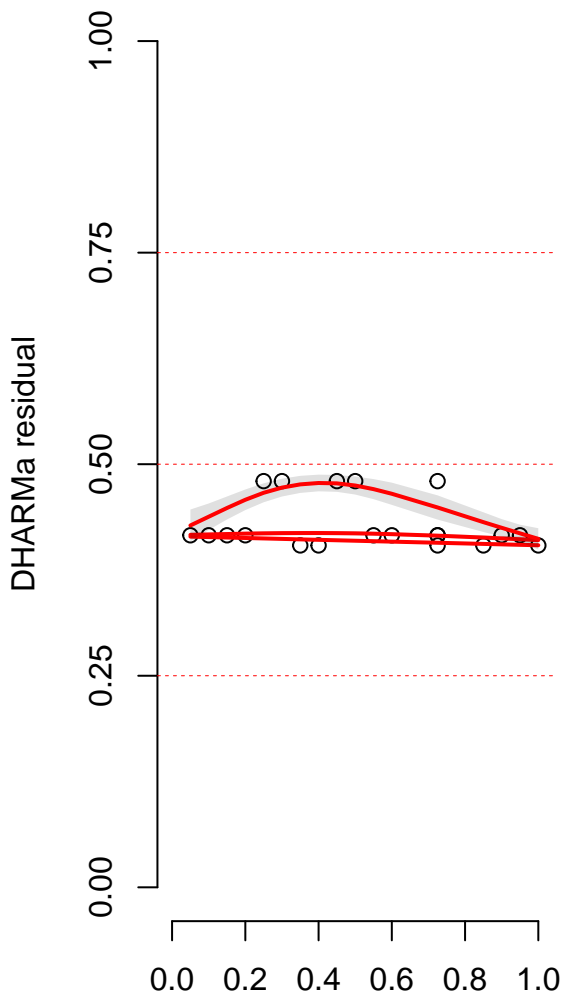
DHARMA residual

### QQ plot residuals



0ites\_2\_previous\_days Expected

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



Model predictions (rank transformed)

IL.10 ERROR : 'yscale' incorrect dans la vue

IL.12

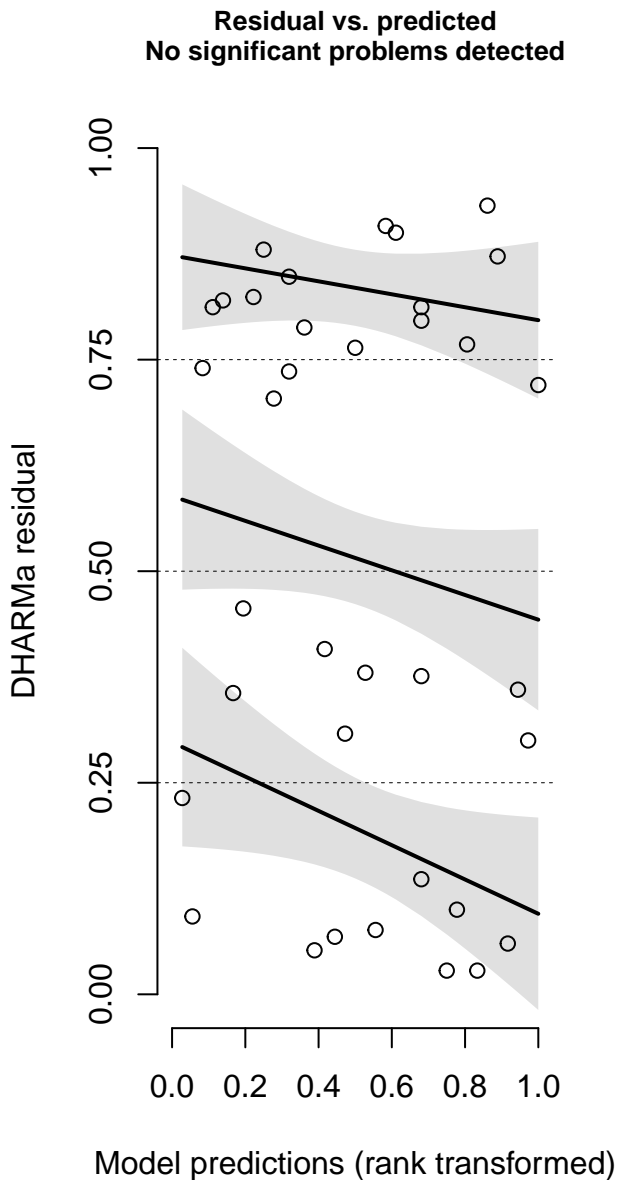
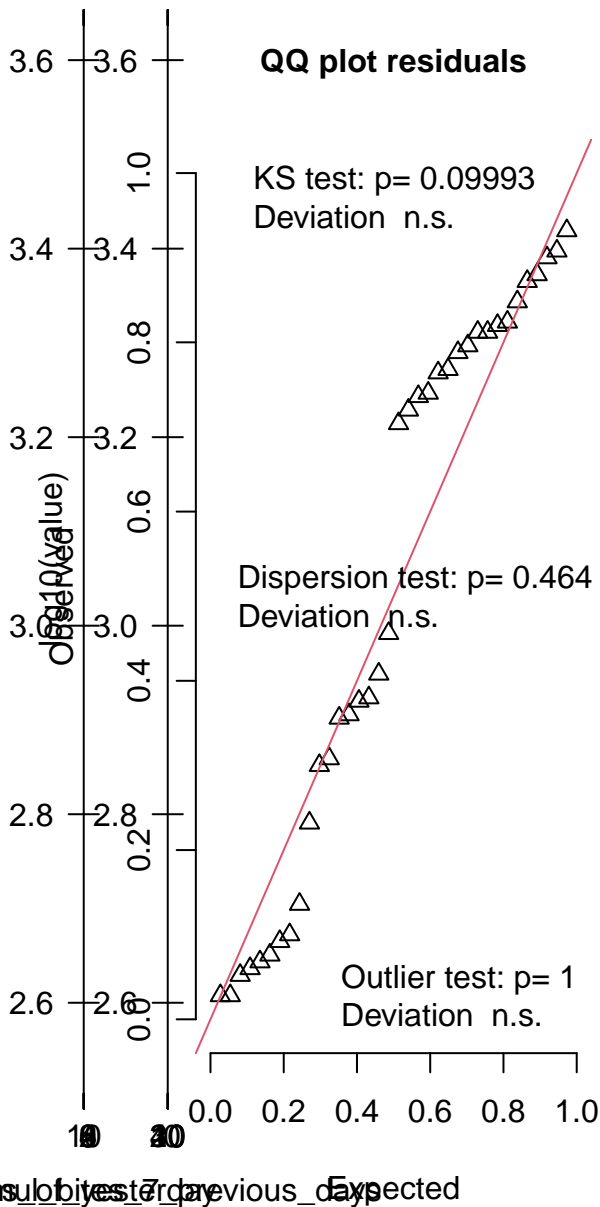
Bites in cyno

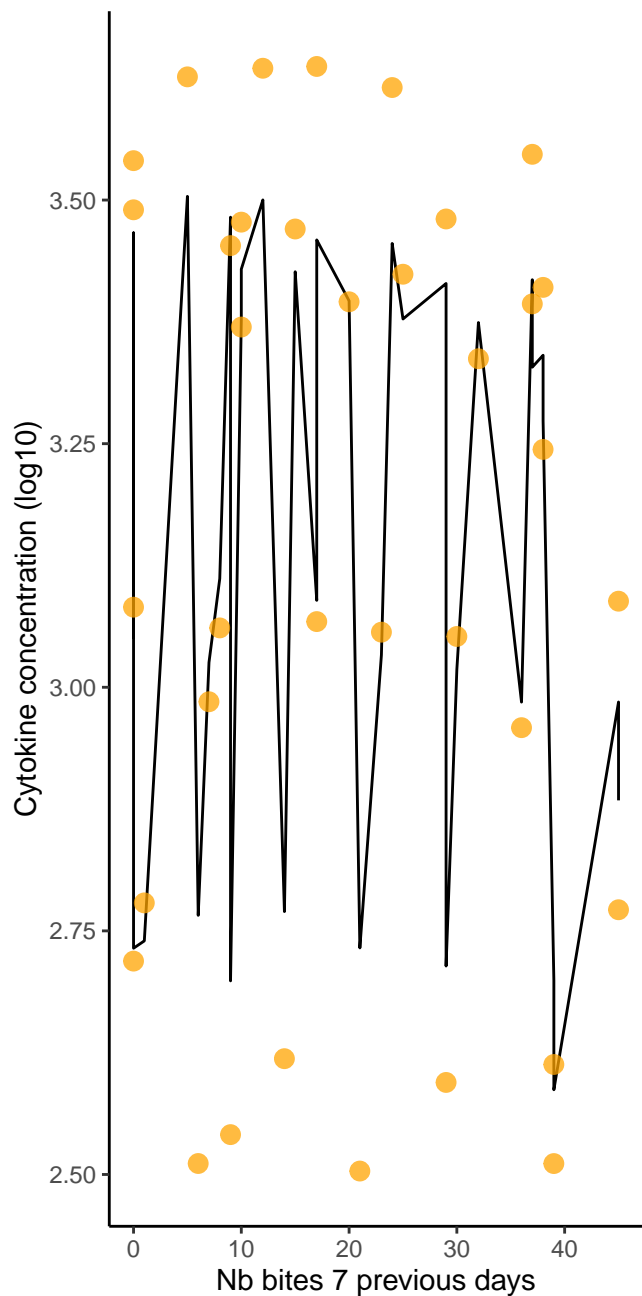
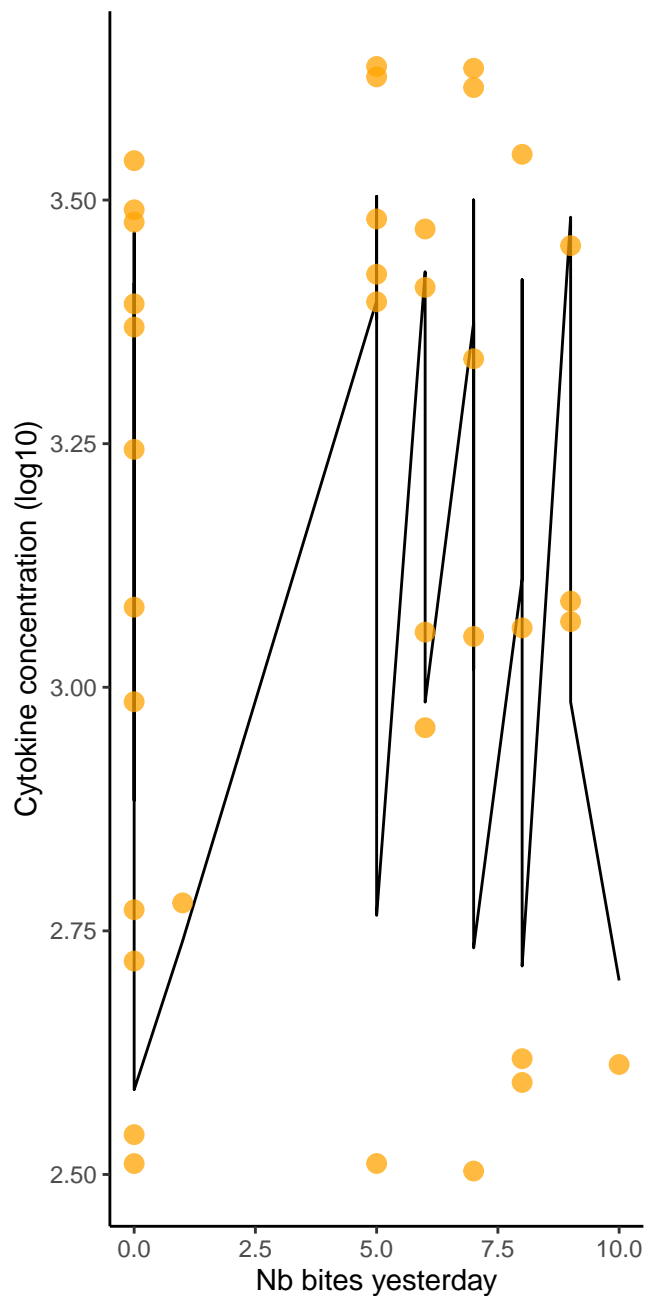
Nb obs : 36



# 7 day 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, 3.71]	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

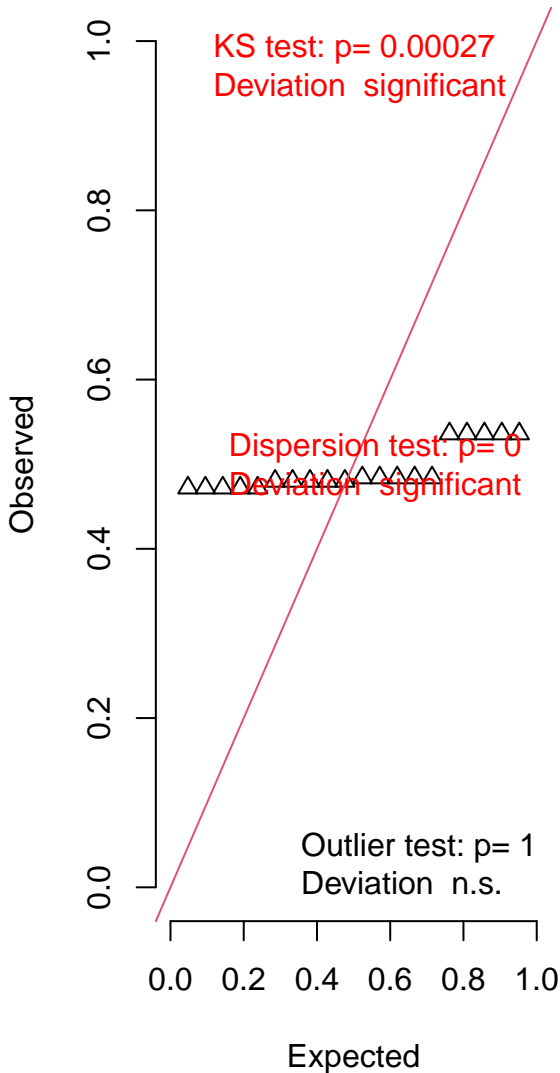
```
AICc [1] 17.06667
```

Bites in squirrel

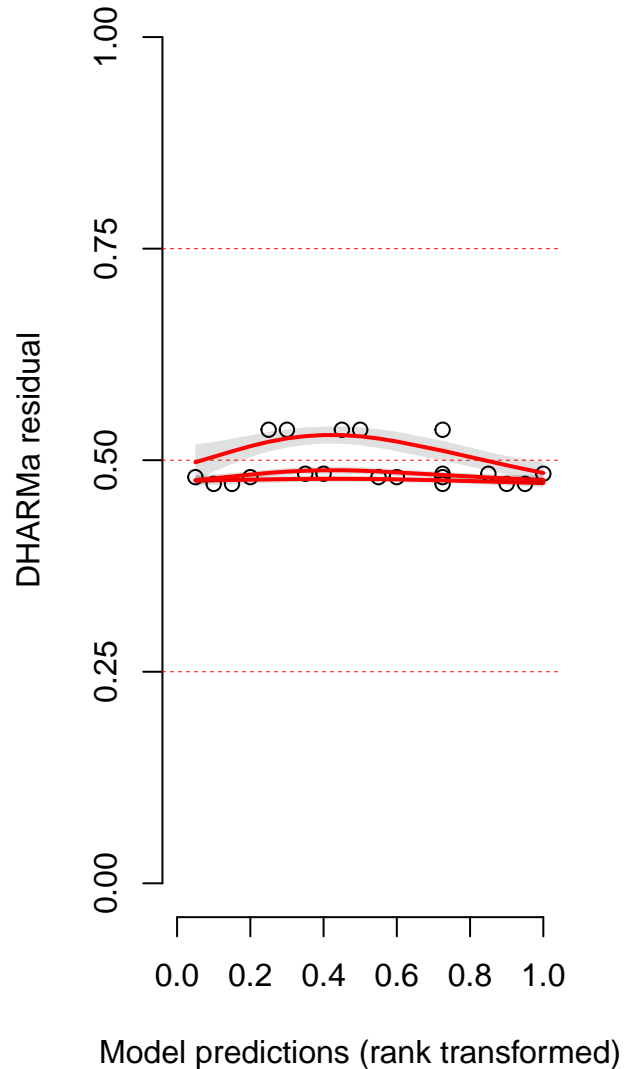
Nb obs : 20

## 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

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

cumul\_bites\_2\_previous\_days

IL.12 ERROR : 'yscale' incorrect dans la vue

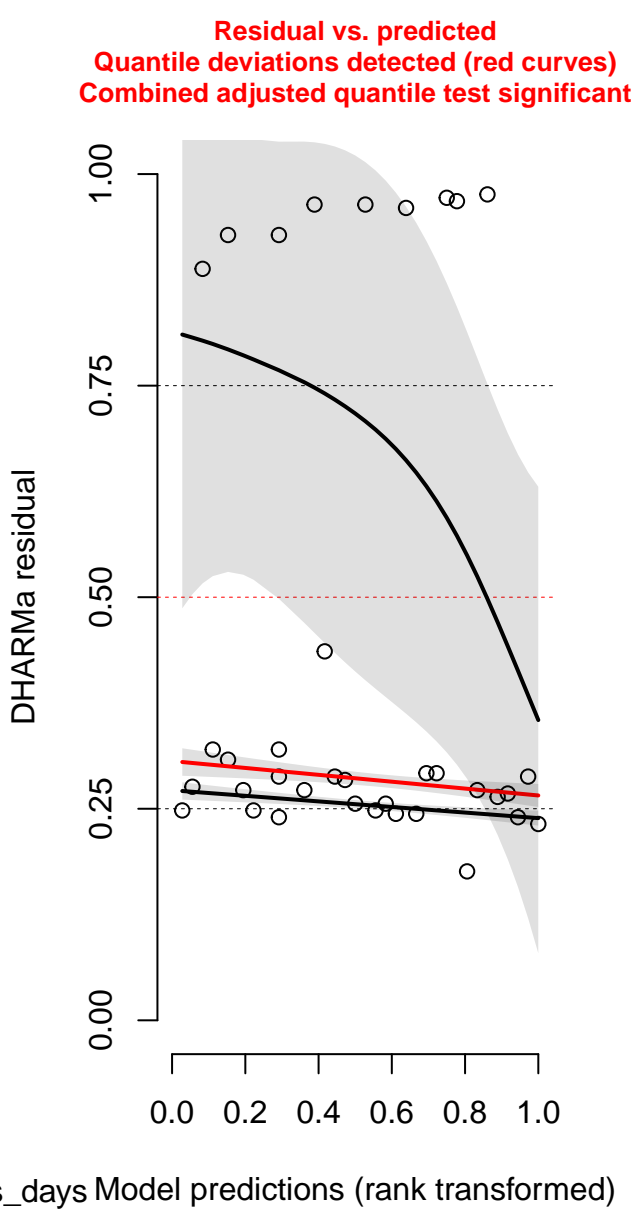
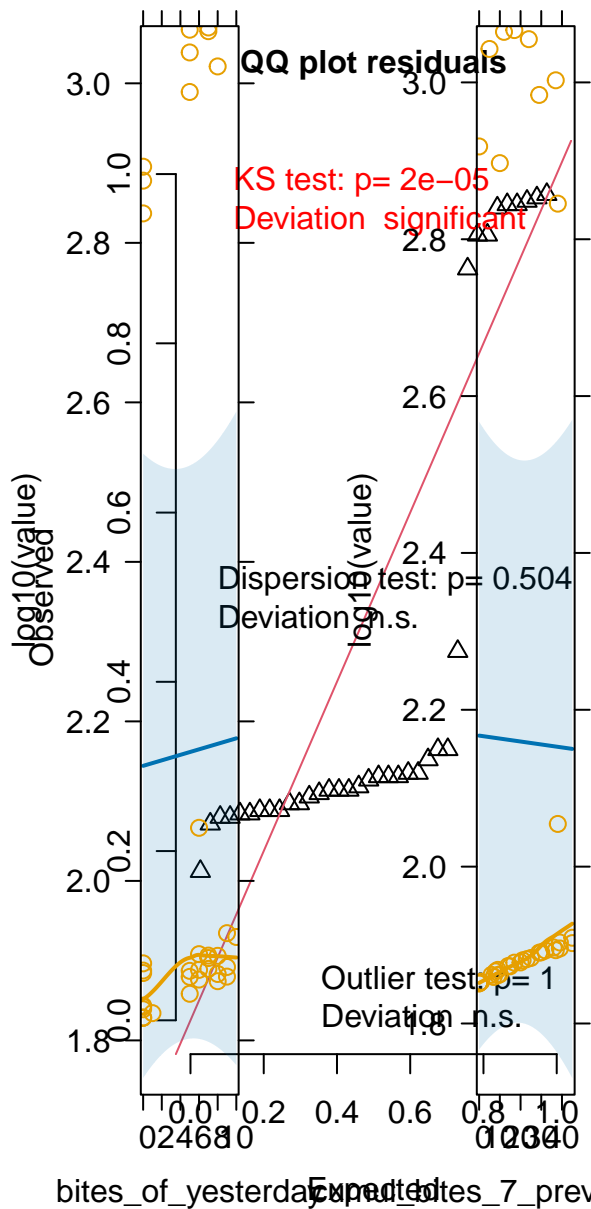
IL.15

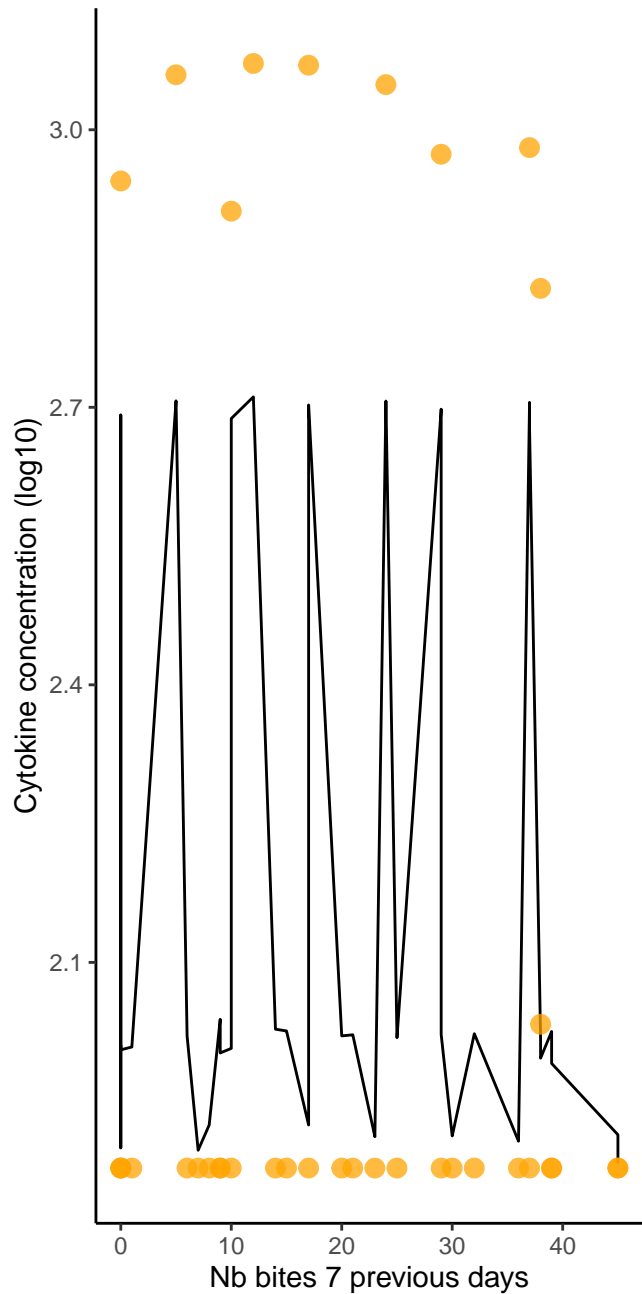
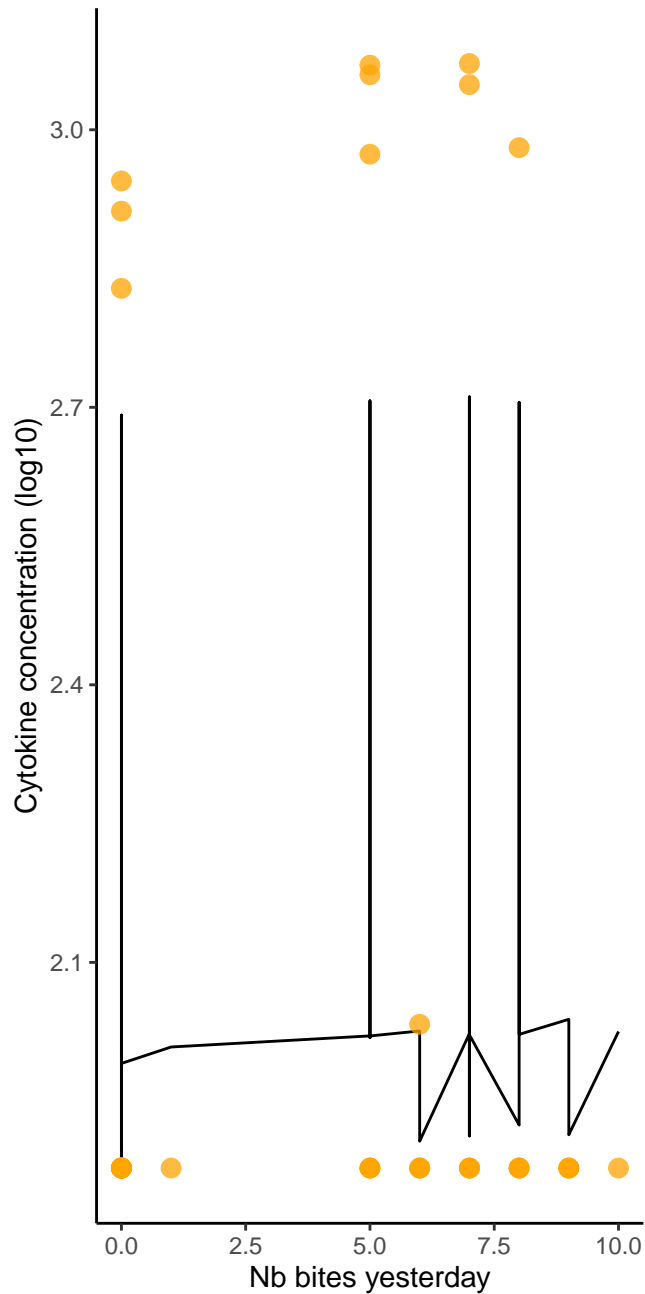
Bites in cyno

Nb obs : 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, 3.73]	1.05	0.91	[0.27, 1.00]
cumul_bites_7_previous_days	1.10	[1.00, 3.73]	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
44.8	52.7	-17.4	34.8	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.111	0.3332
	Residual	0.120	0.3464

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.12

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	2.1518542	0.2016282	10.672	<2e-16 ***
bites_of_yesterday	0.0034509	0.0174406	0.198	0.843
cumul_bites_7_previous_days	-0.0003768	0.0043268	-0.087	0.931

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

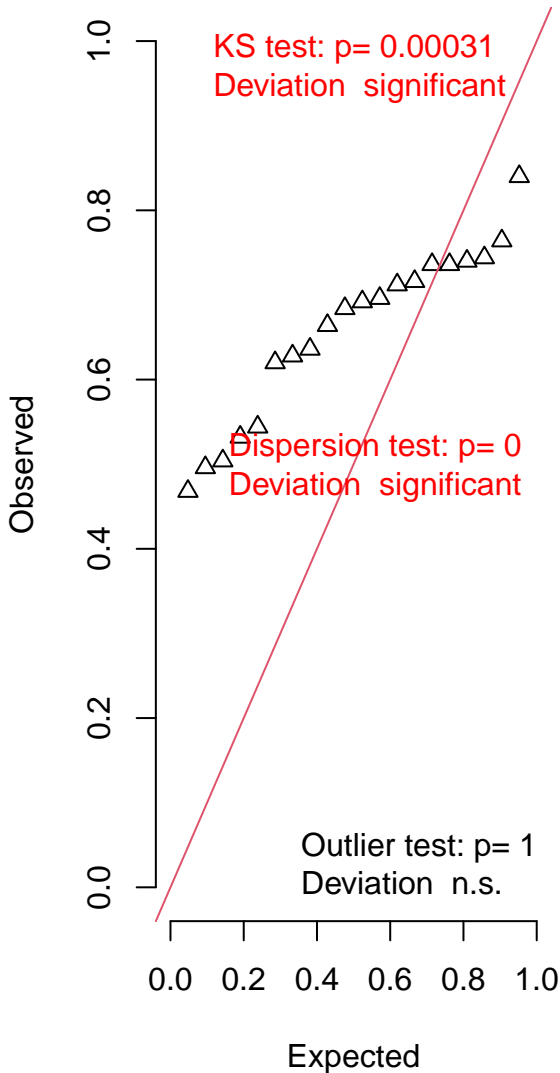
AICc [ 1 ] 46.7568

Bites in squirrel

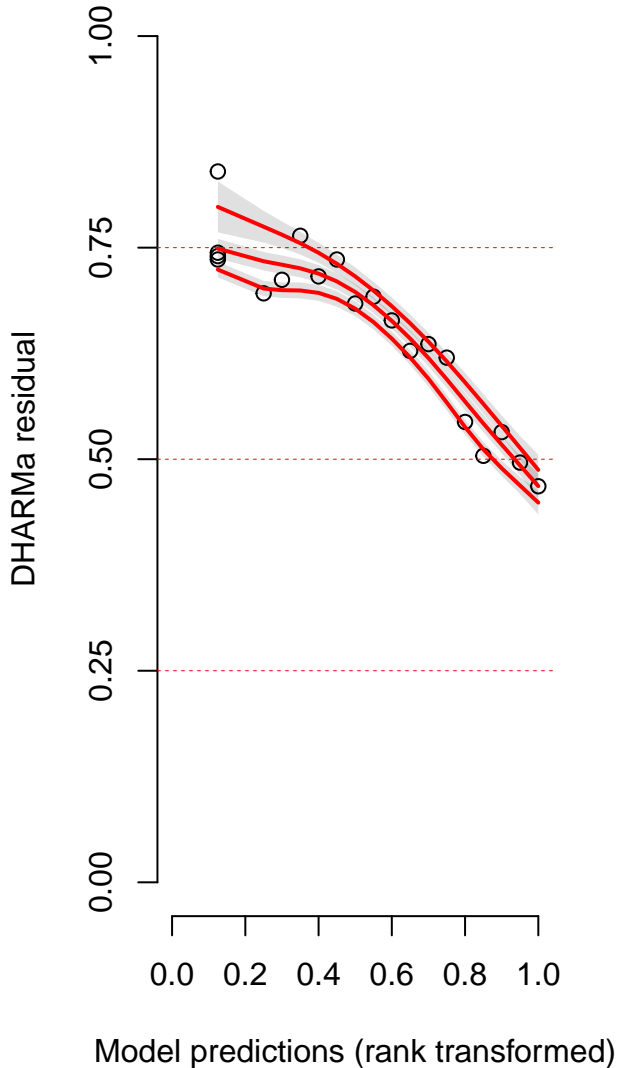
Nb obs : 20

## 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

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

cumul\_bites\_2\_previous\_days

IL.15 ERROR : 'yscale' incorrect dans la vue

IL.17



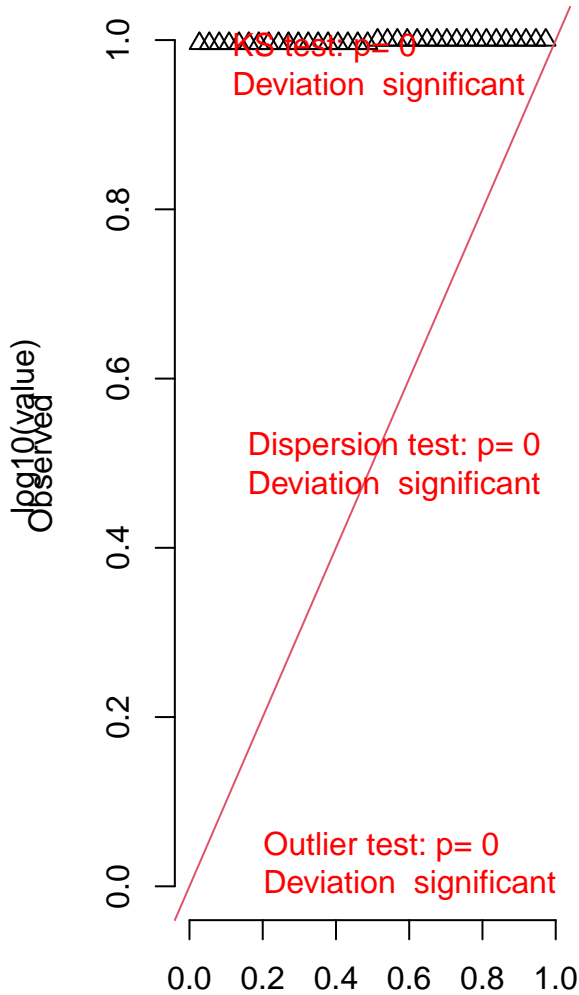
Bites in cyno

Nb obs : 36

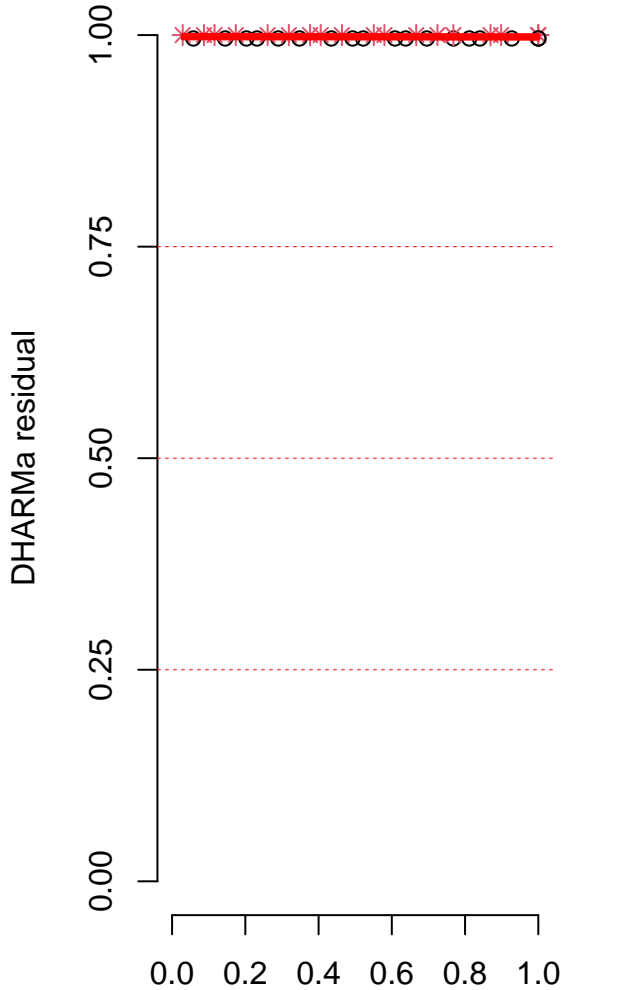
bites\_of\_yesterday effect plot

DHARMA residual

QQ plot residuals



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



IL.17 ERROR : 'yscale' incorrect dans la vue

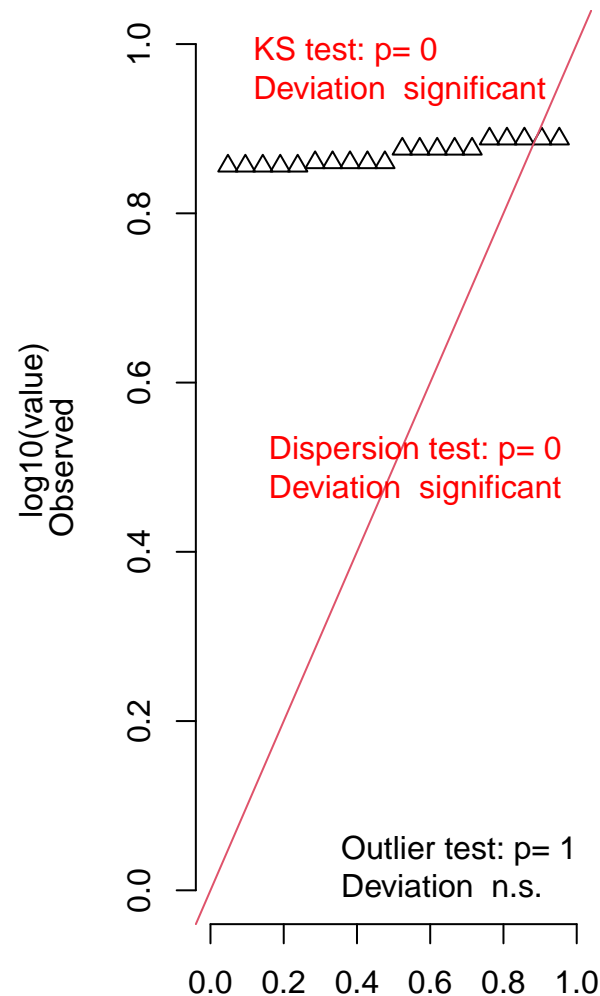
Bites in squirrel

Nb obs : 20

previous\_days effect plot

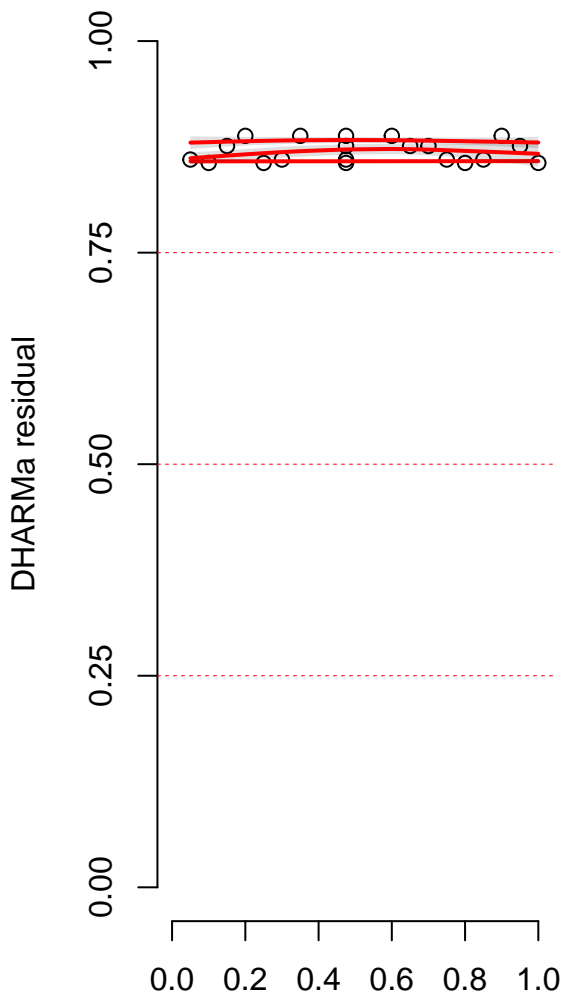
DHARMA residual

QQ plot residuals



0ites\_2\_previous\_days Expected

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



Model predictions (rank transformed)

IL.17 ERROR : 'yscale' incorrect dans la vue



IL.1B

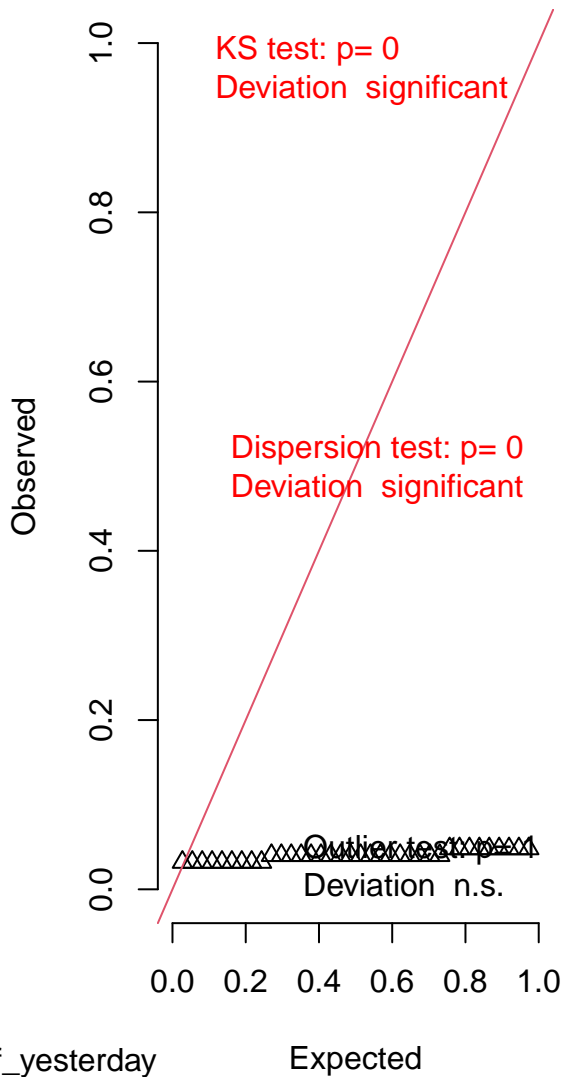
Bites in cyno

Nb obs : 36

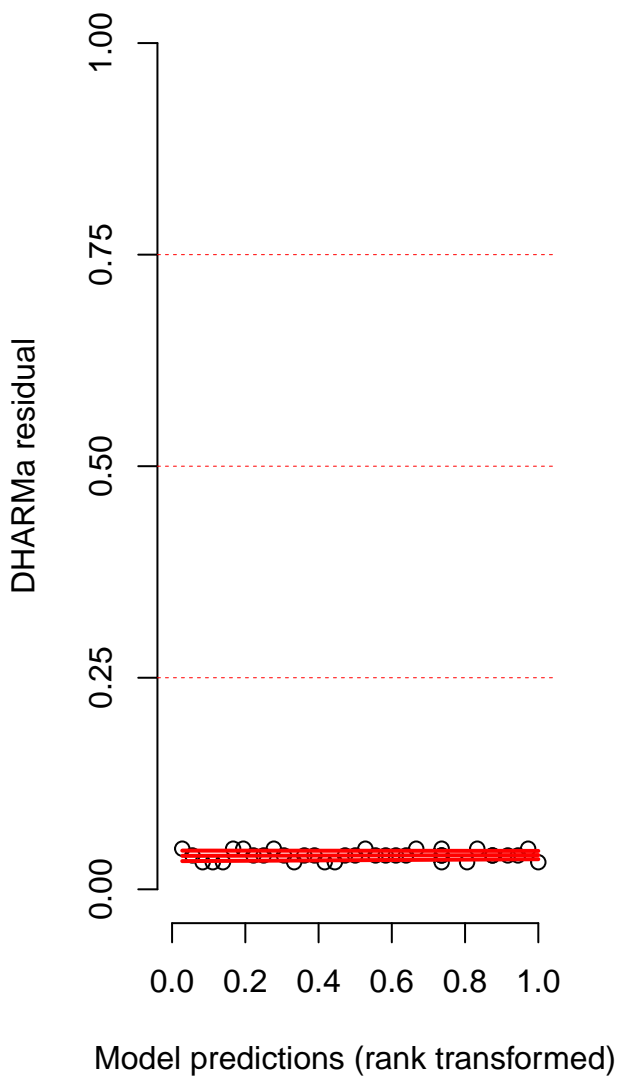
# Yesterday effect plot

DHARMA residual

## QQ plot residuals



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

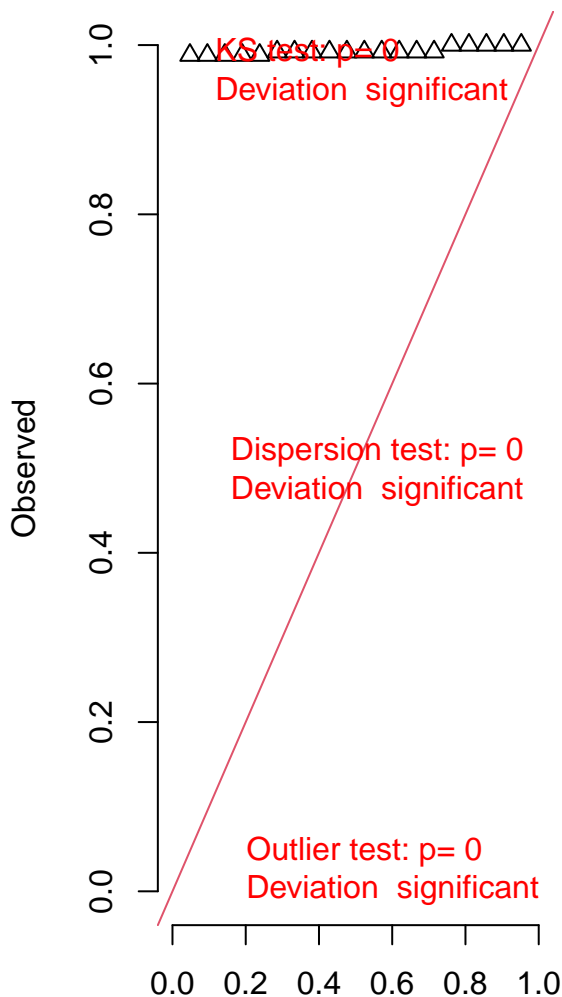


IL.1B ERROR : 'yscale' incorrect dans la vue

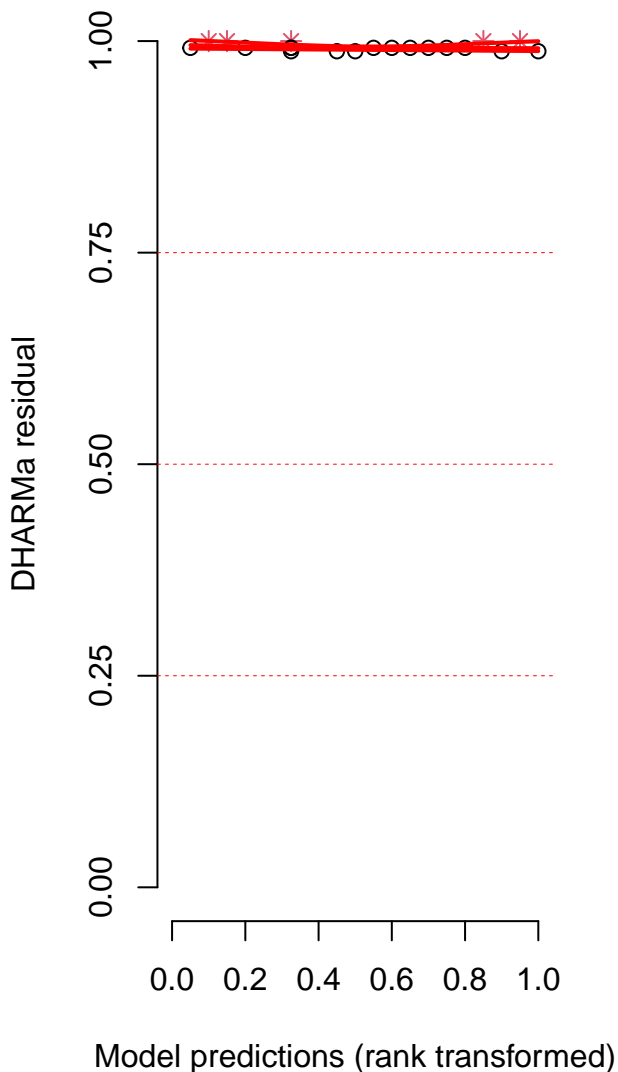
Bites in squirrel

Nb obs : 20

QQ plot residuals



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





IL.1B ERROR : 'yscale' incorrect dans la vue

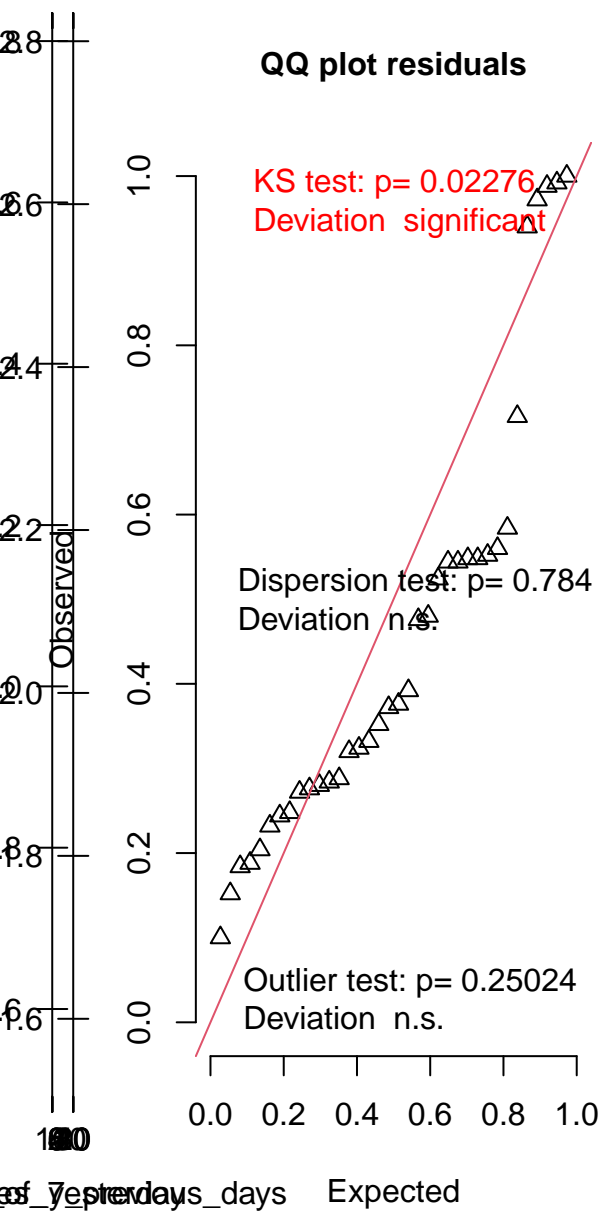
IL. 2

Bites in cyno

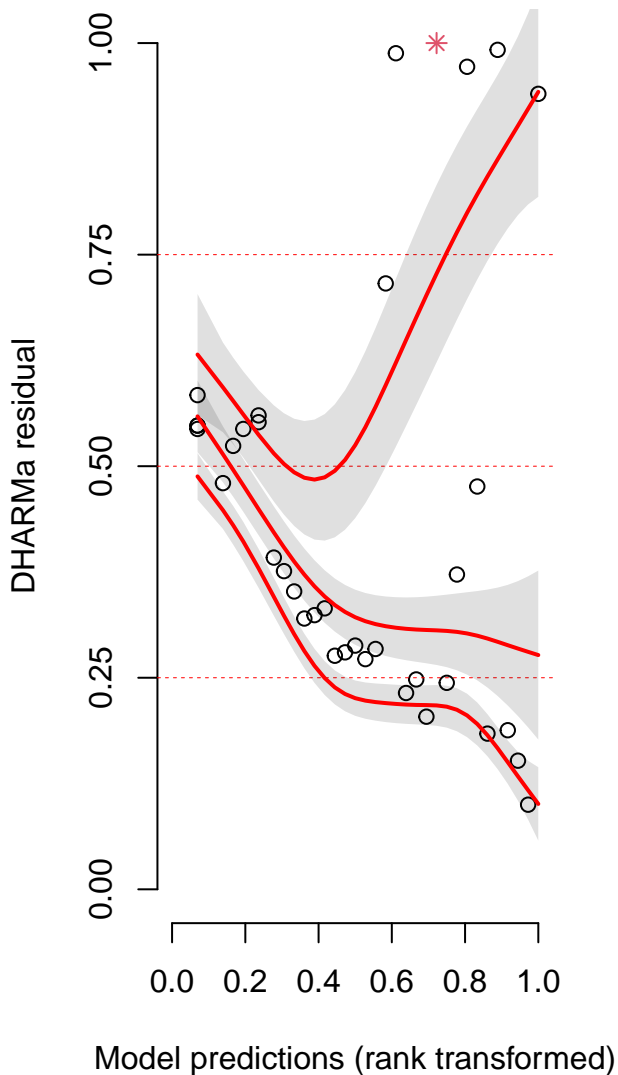
Nb obs : 36

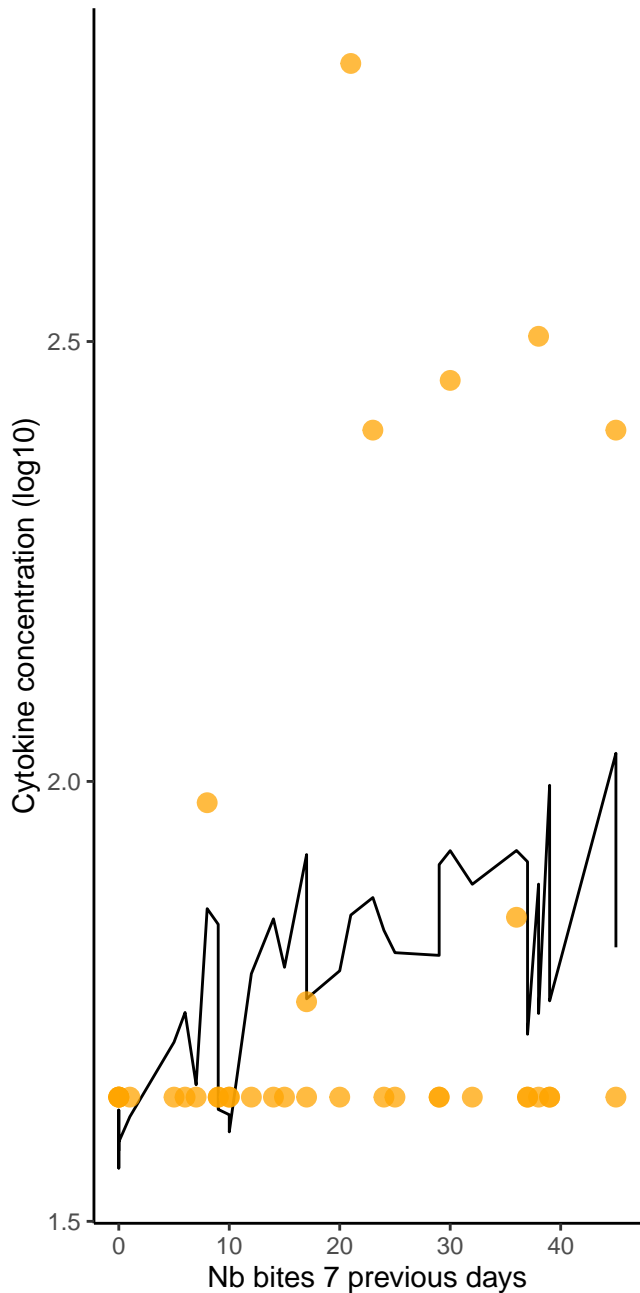
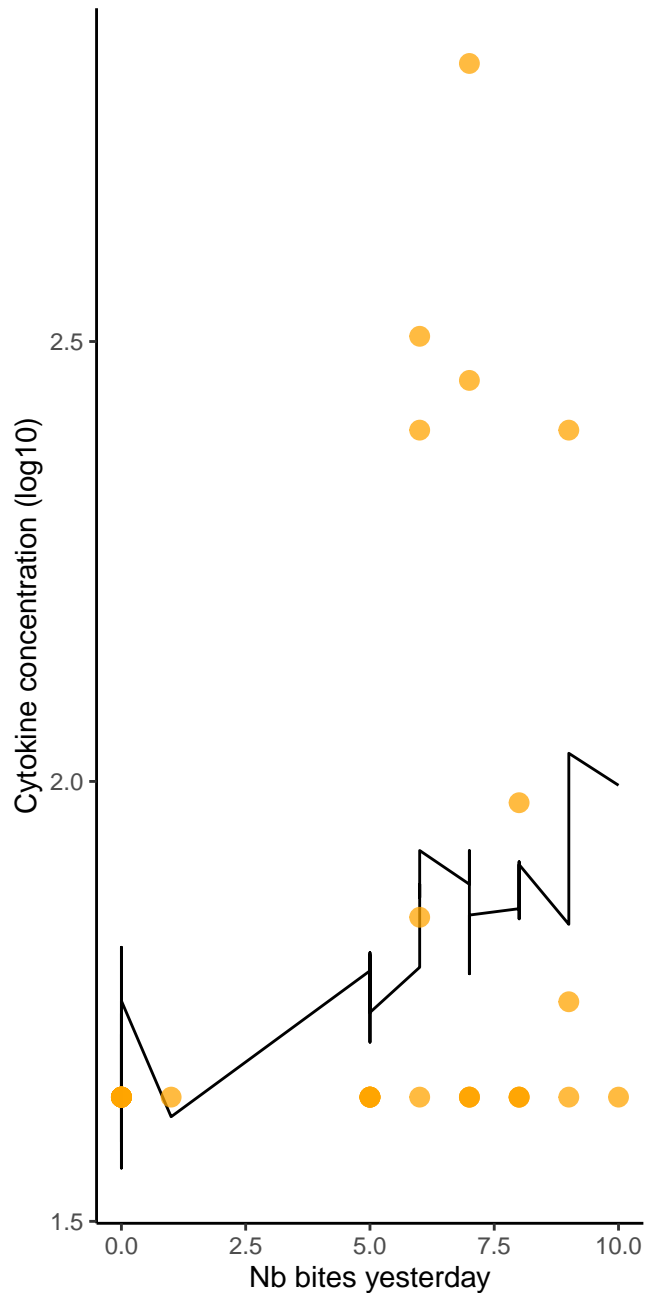
days\_effect plot

DHARMA residual



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





# Check for Multicollinearity

Low Correlation

Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
bites_of_yesterday	1.09	[1.00, 4.04]	1.04	0.92	[0.25, 1.00]
cumul_bites_7_previous_days	1.09	[1.00, 4.04]	1.04	0.92	[0.25, 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
21.2	29.2	-5.6	11.2	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.00253	0.0503
Residual		0.07775	0.2788

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0778

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	1.589316	0.095229	16.689	<2e-16 ***
bites_of_yesterday	0.024503	0.014068	1.742	0.0815 .
cumul_bites_7_previous_days	0.004111	0.003481	1.181	0.2375

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



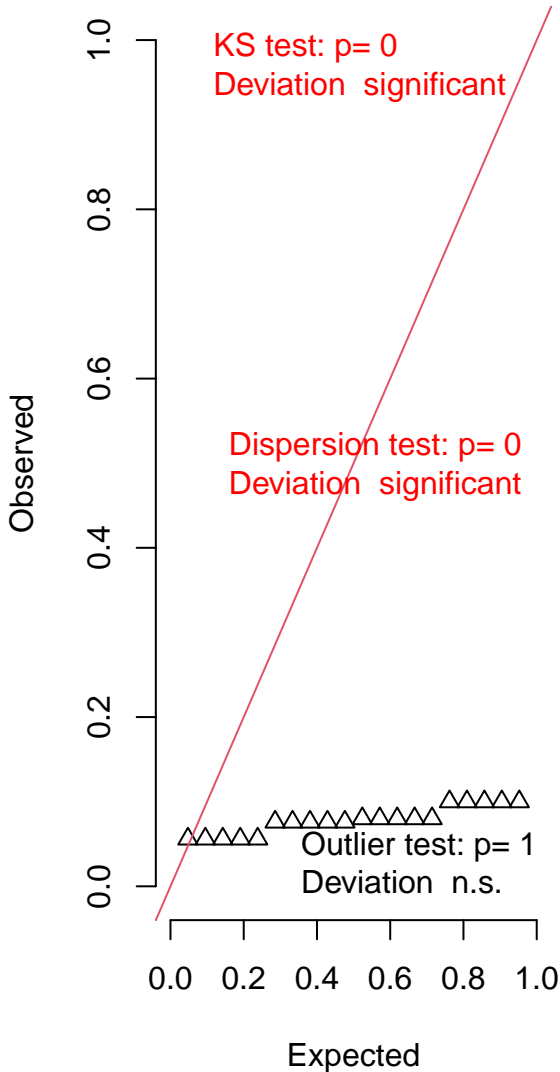
```
AICc [1] 23.23781
```

Bites in squirrel

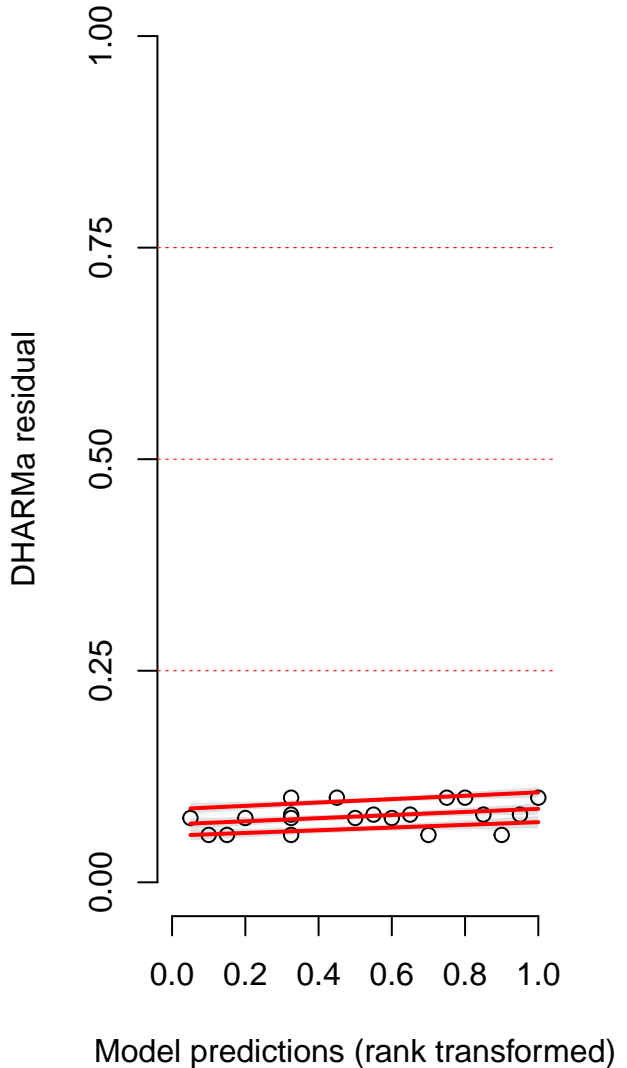
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days

IL.2 ERROR : 'yscale' incorrect dans la vue

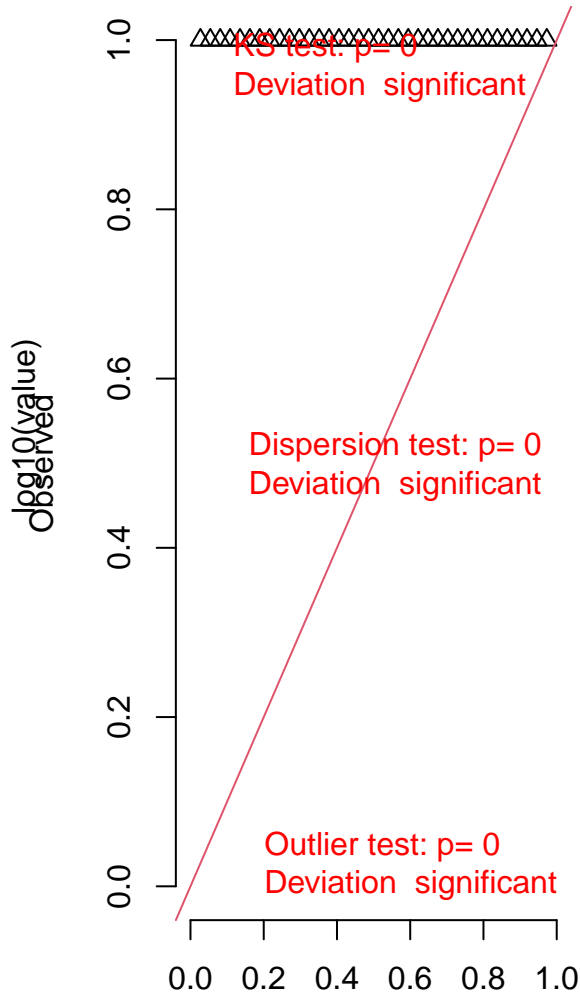
IL . 4<sub>1</sub>

Bites in cyno



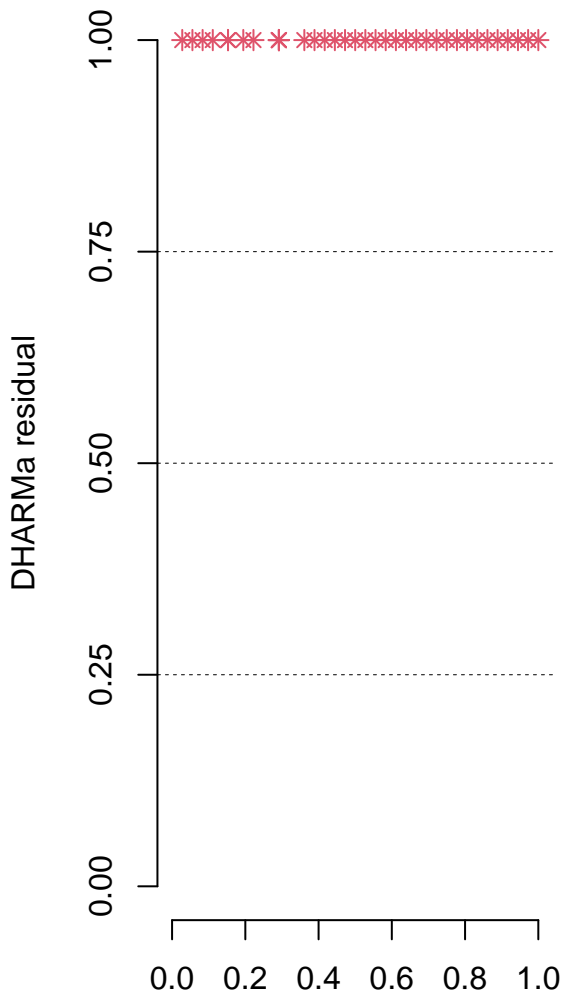
Nb obs : 36

QQ plot residuals



bites\_of\_yesterday Expected

Residual vs. predicted  
No significant problems detected



Model predictions (rank transformed)

IL.4 ERROR : 'yscale' incorrect dans la vue

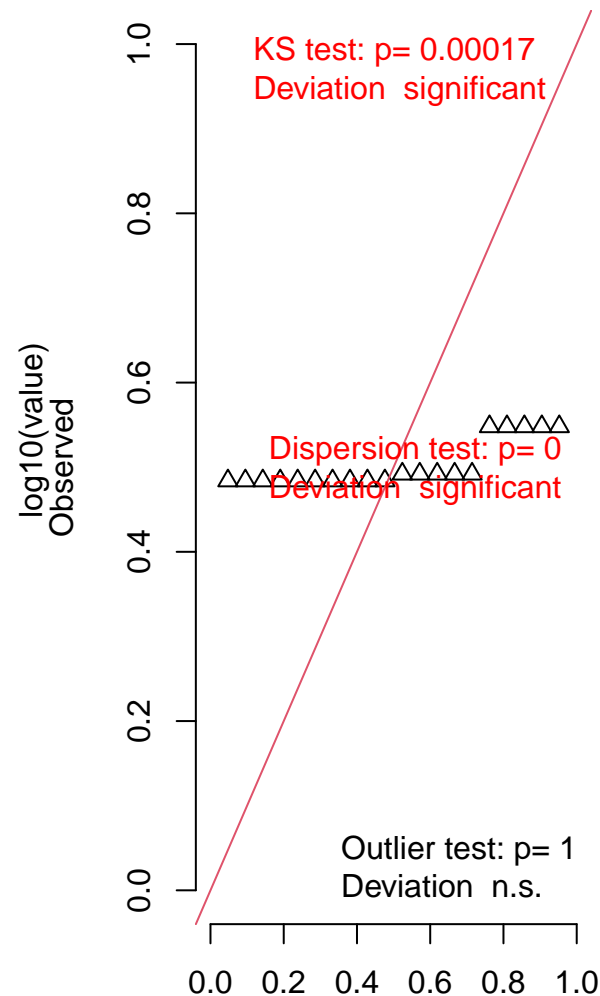
Bites in squirrel

Nb obs : 20

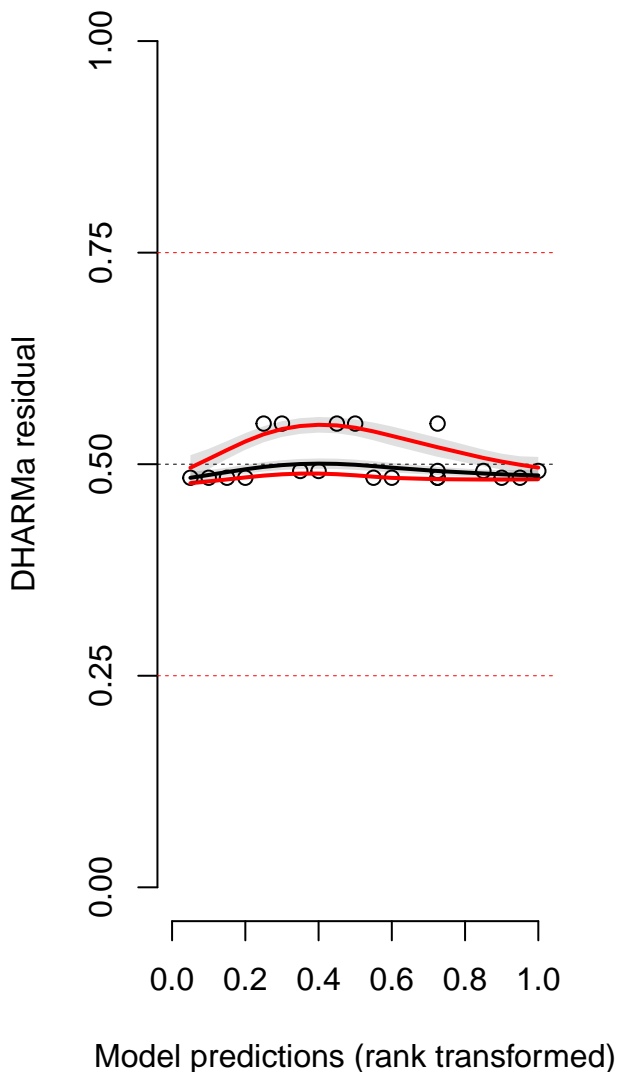
previous\_days effect plot

DHARMA residual

QQ plot residuals



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



IL.4 ERROR : 'yscale' incorrect dans la vue

IL. 5



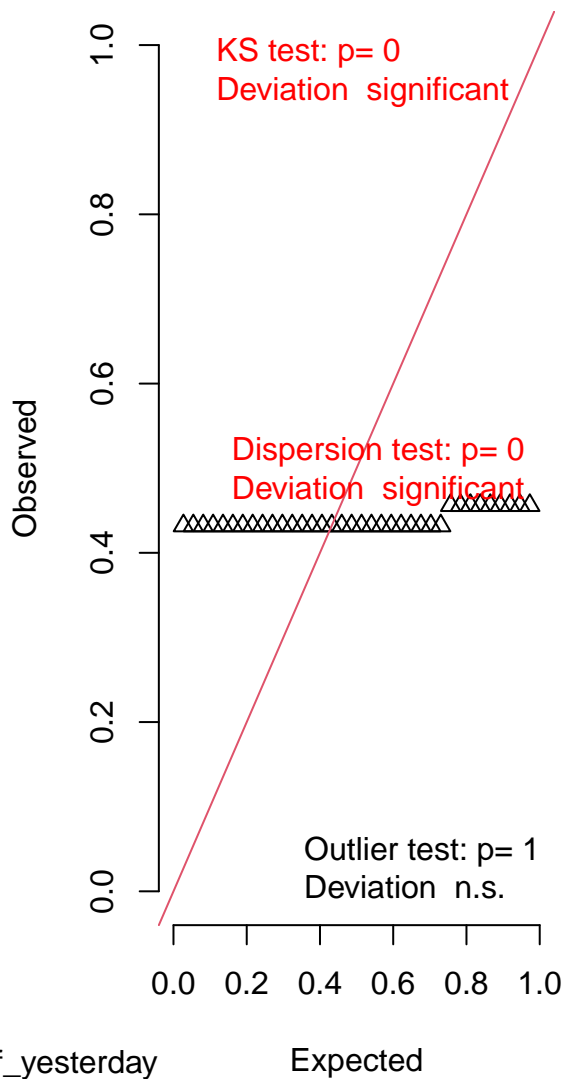
Bites in cyno

Nb obs : 36

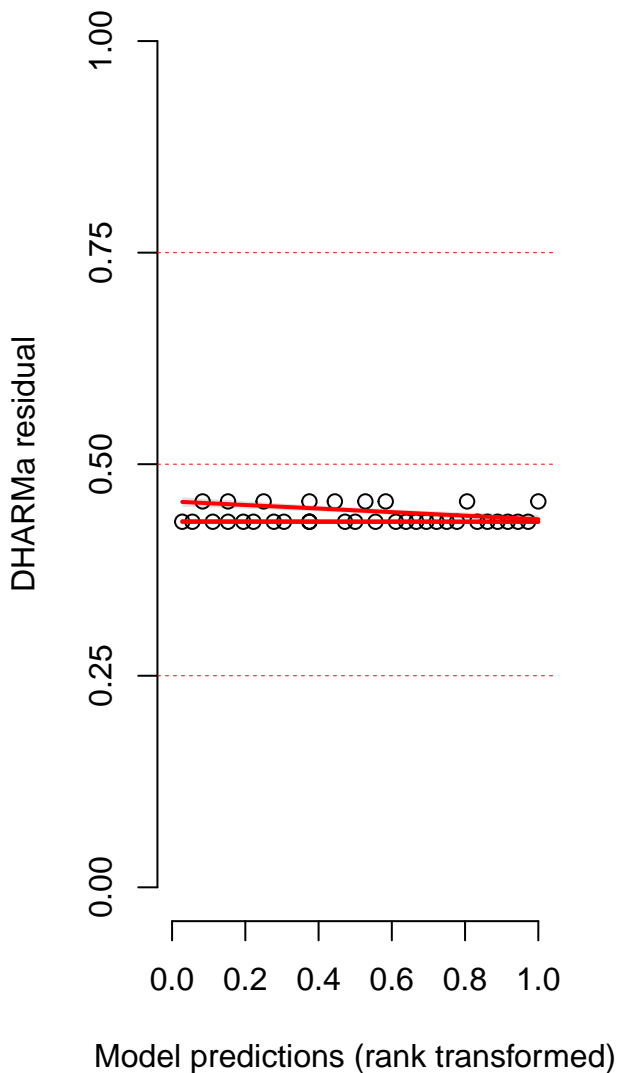
# terday effect plot

DHARMA residual

QQ plot residuals



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

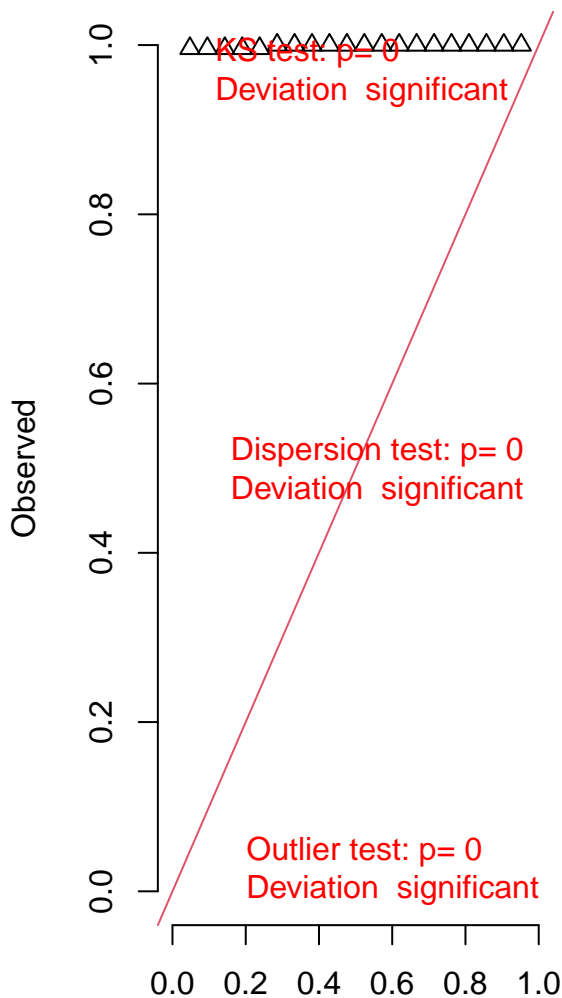


IL.5 ERROR : 'yscale' incorrect dans la vue

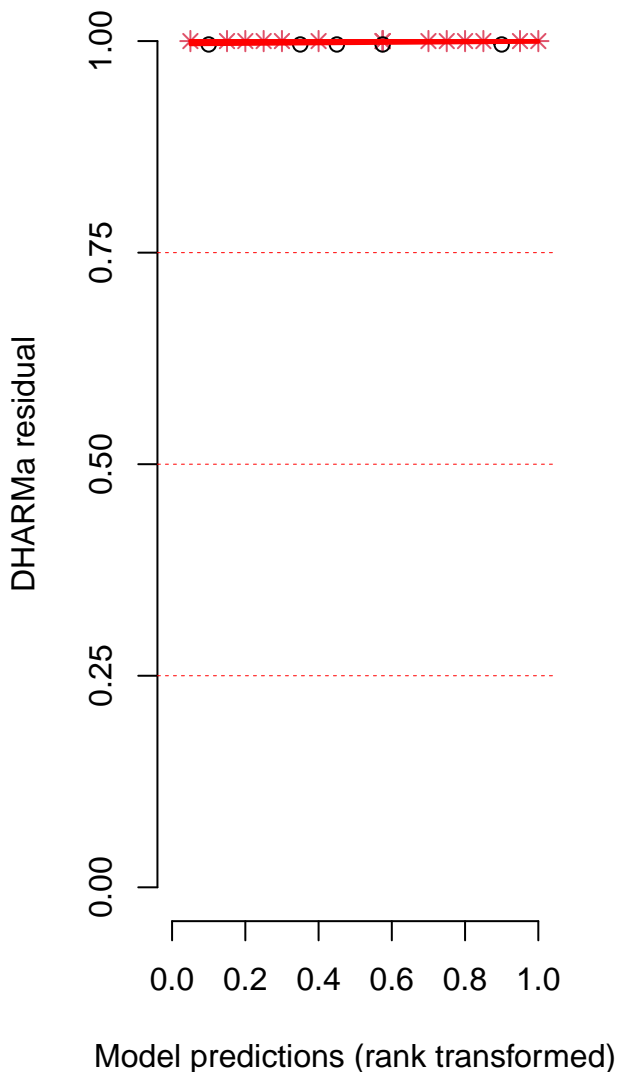
Bites in squirrel

Nb obs : 20

QQ plot residuals



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



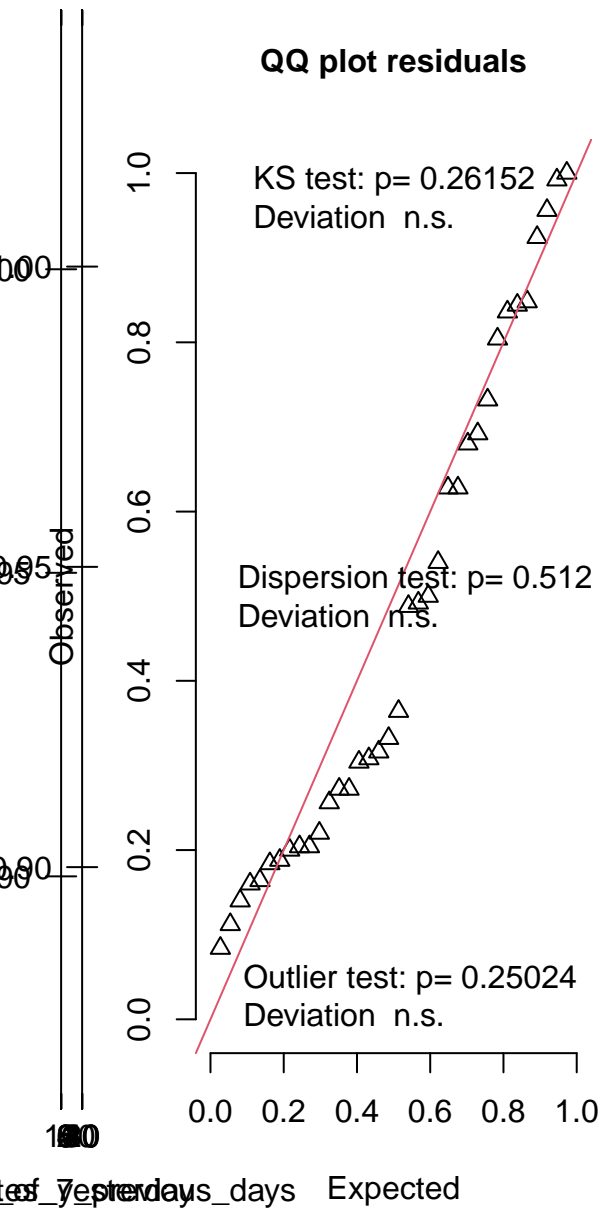
IL.5 ERROR : 'yscale' incorrect dans la vue



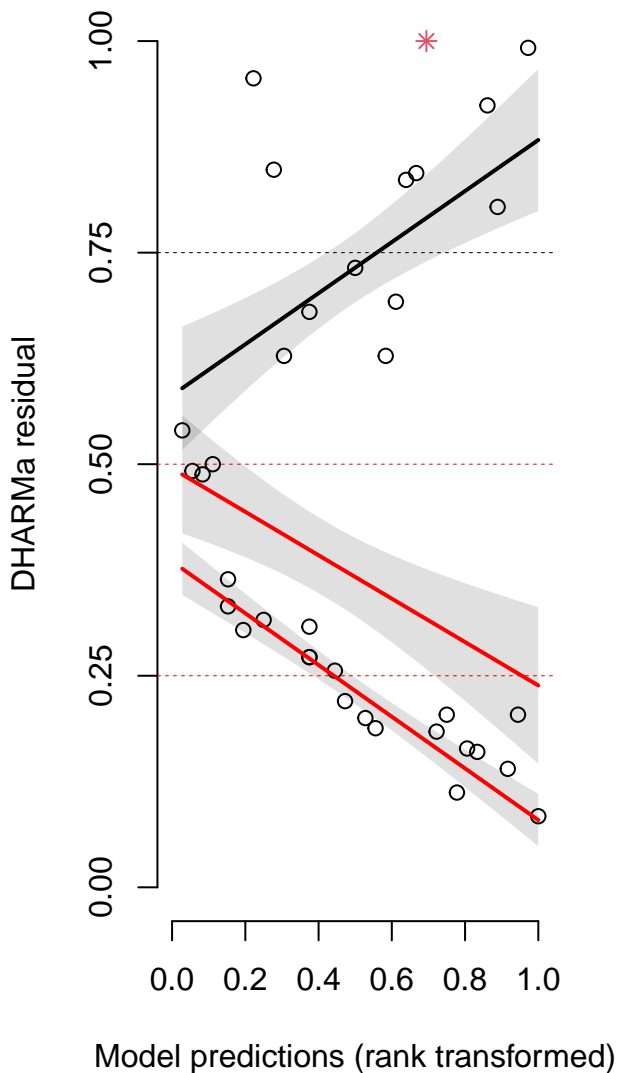
IL. 6

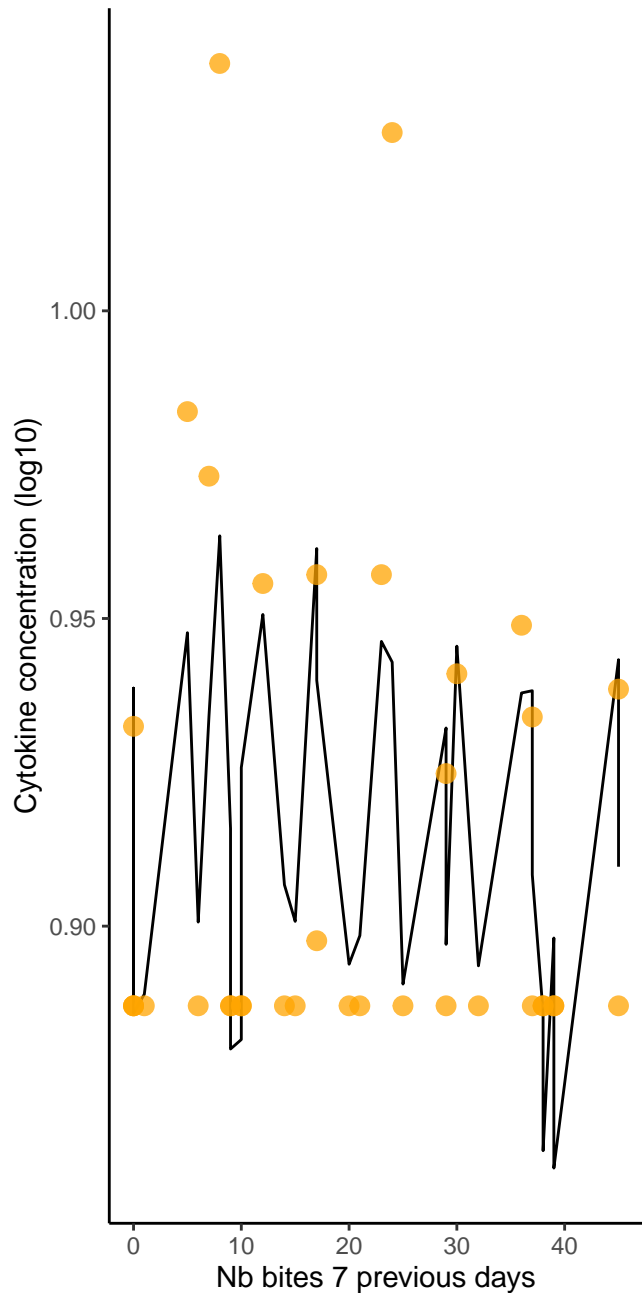
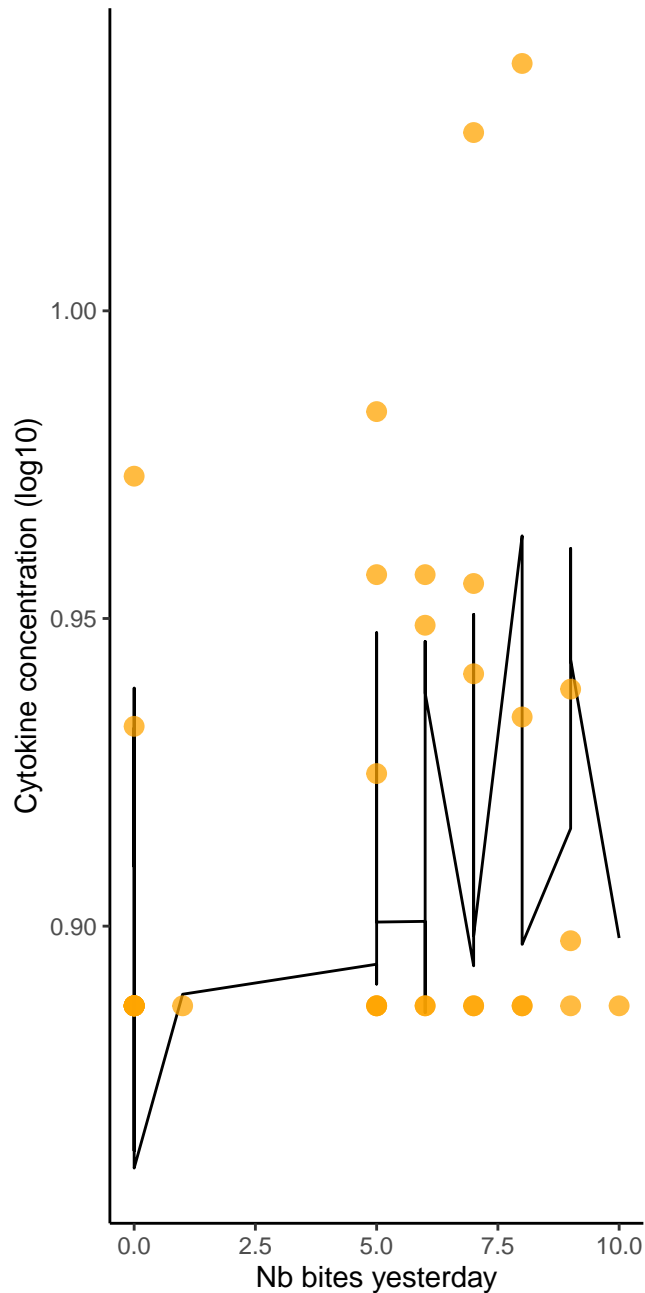
Bites in cyno

Nb obs : 36



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





# Check for Multicollinearity

Low Correlation

Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
bites_of_yesterday	1.10	[1.00, 3.72]	1.05	0.91	[0.27, 1.00]
cumul_bites_7_previous_days	1.10	[1.00, 3.72]	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
-132.6	-124.7	71.3	-142.6	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.0006803	0.02608
	Residual	0.0008851	0.02975

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.000885

Conditional model:

	Estimate	Std. Error	z	value	Pr(> z )
(Intercept)	0.9111890	0.0162878	55.94	<2e-16	***
bites_of_yesterday	0.0037390	0.0014977	2.50	0.0125	*
cumul_bites_7_previous_days	-0.0006450	0.0003718	-1.73	0.0827	.

---

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

AICc [ 1 ] -130.6339

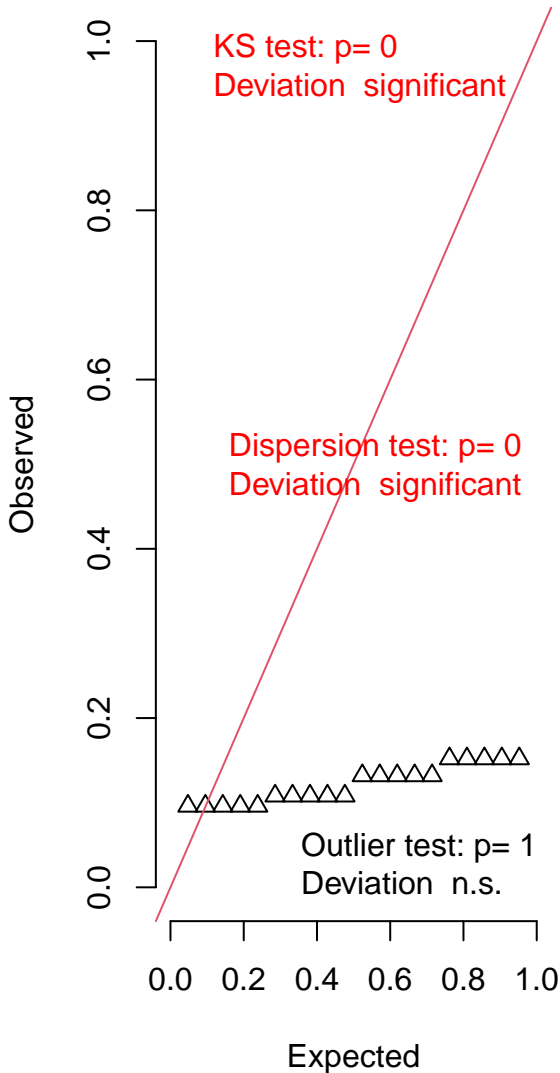


Bites in squirrel

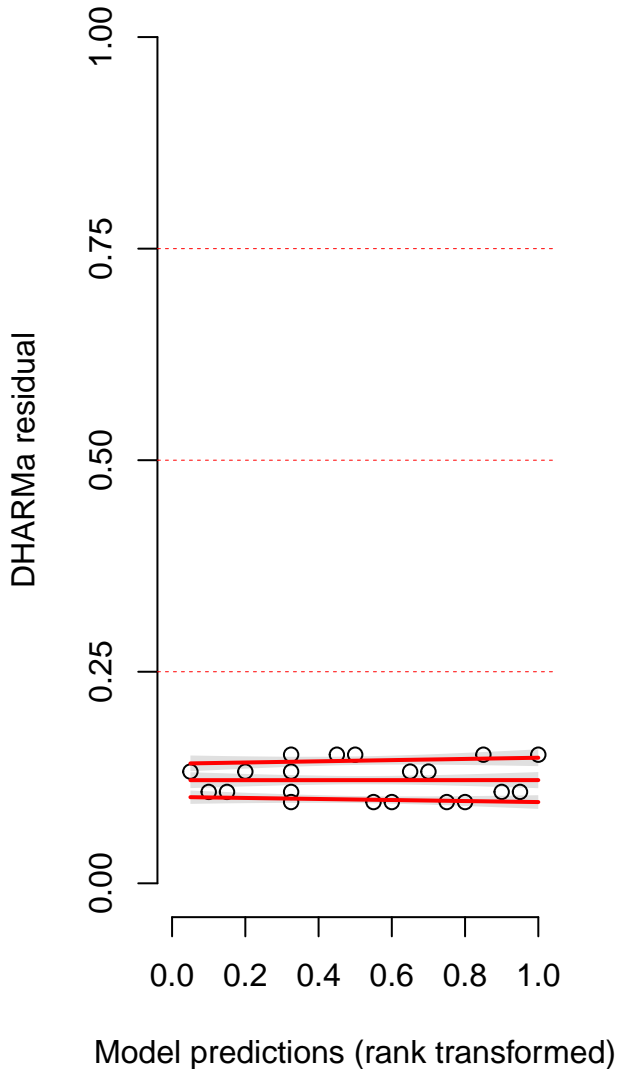
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days

IL.6 ERROR : 'yscale' incorrect dans la vue

IL.8

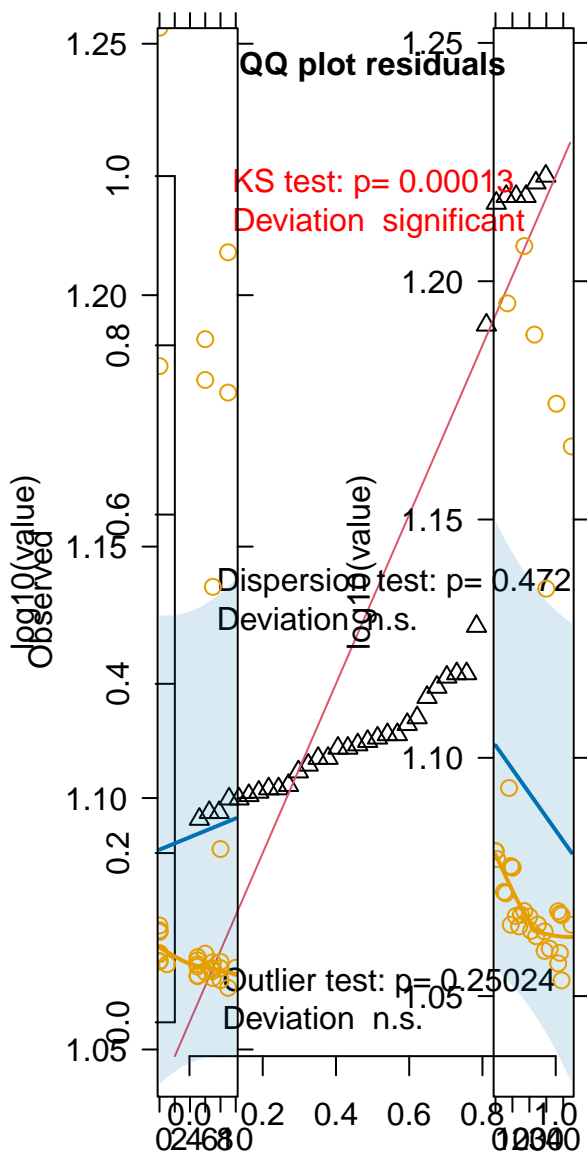
Bites in cyno

Nb obs : 36

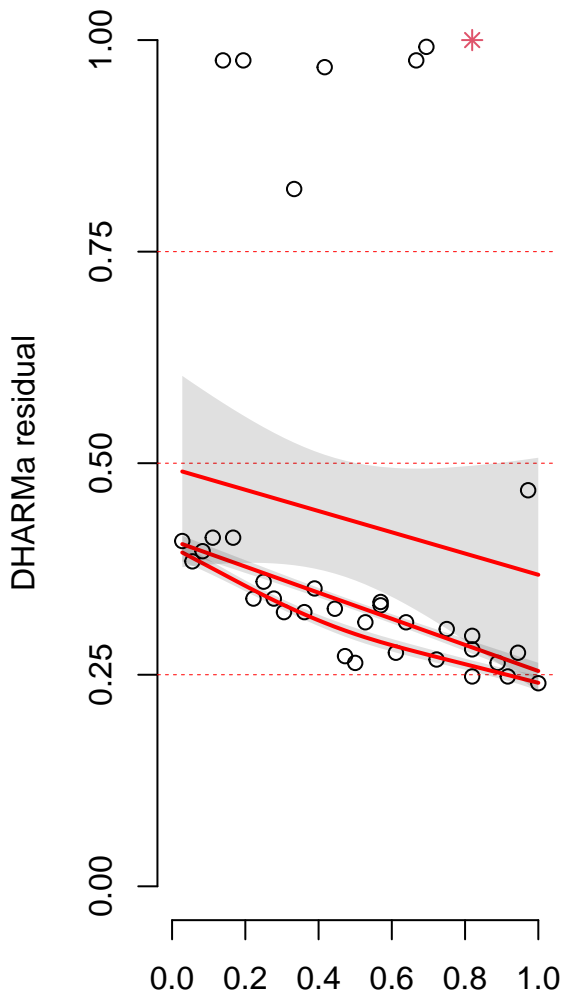


# of yesterday bites 7 previous days effect plot

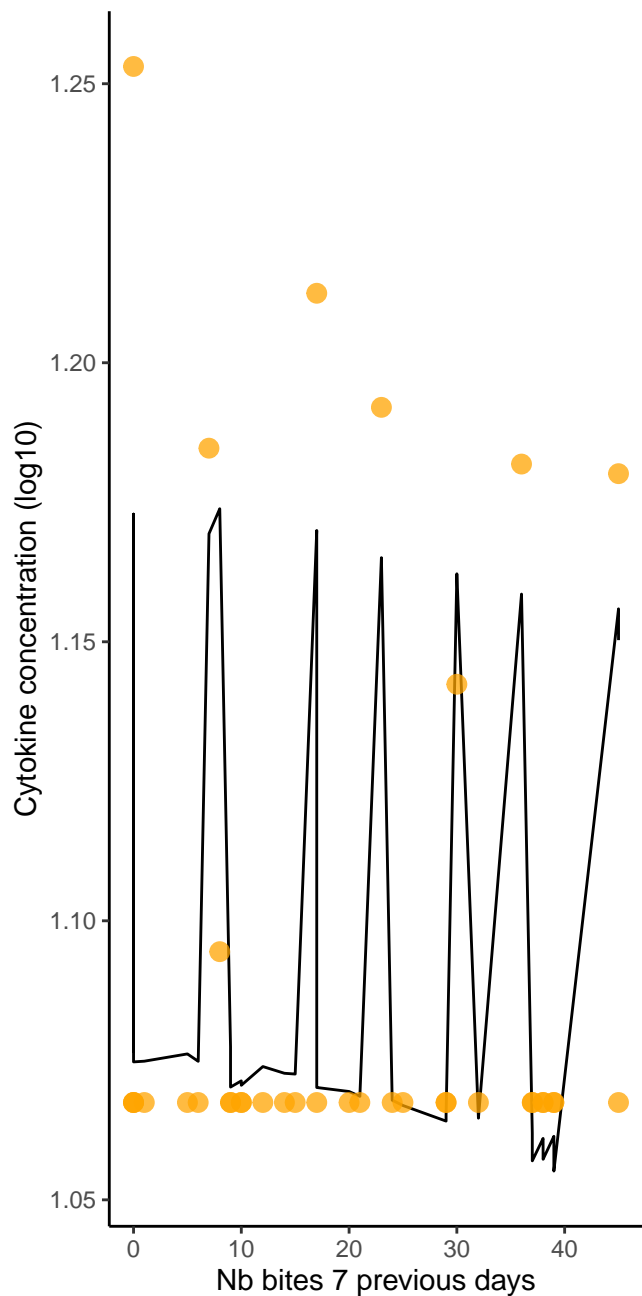
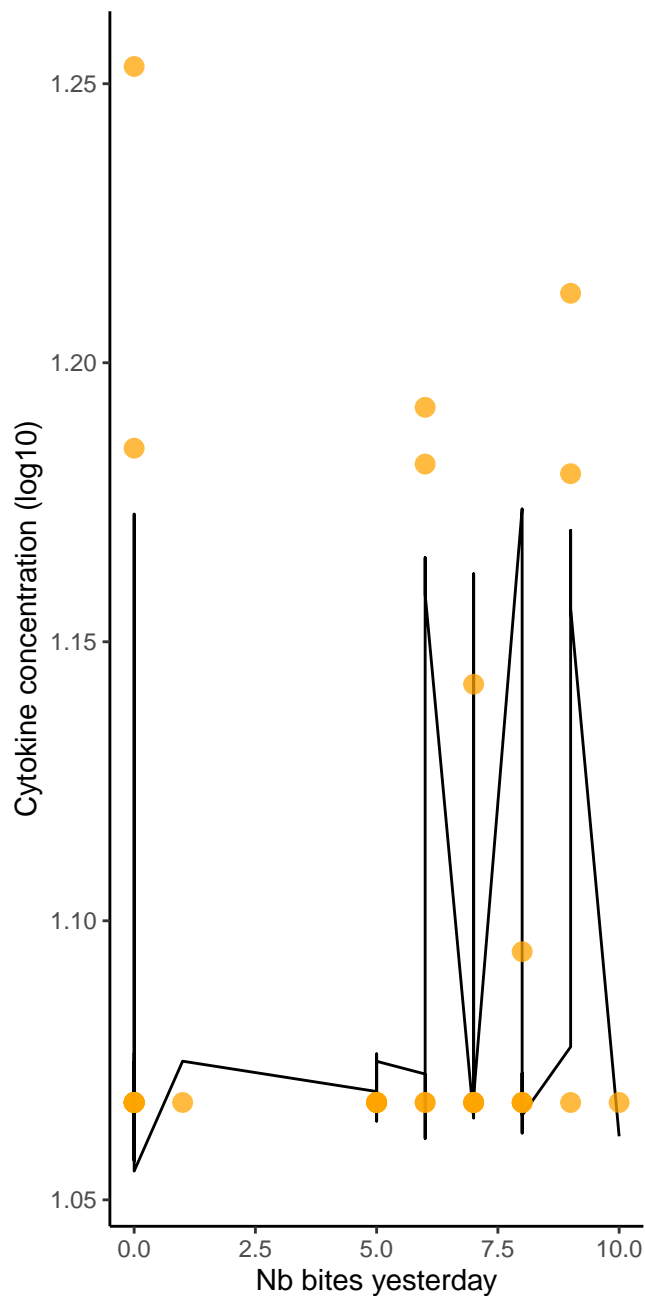
DHARMA residual



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



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	1.10	[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
-133.1	-125.2	71.6	-143.1	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.0018594	0.04312
	Residual	0.0007772	0.02788

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.000777

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	1.0998673	0.0234221	46.96	<2e-16 ***
bites_of_yesterday	0.0006224	0.0014039	0.44	0.658
cumul_bites_7_previous_days	-0.0005017	0.0003486	-1.44	0.150

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

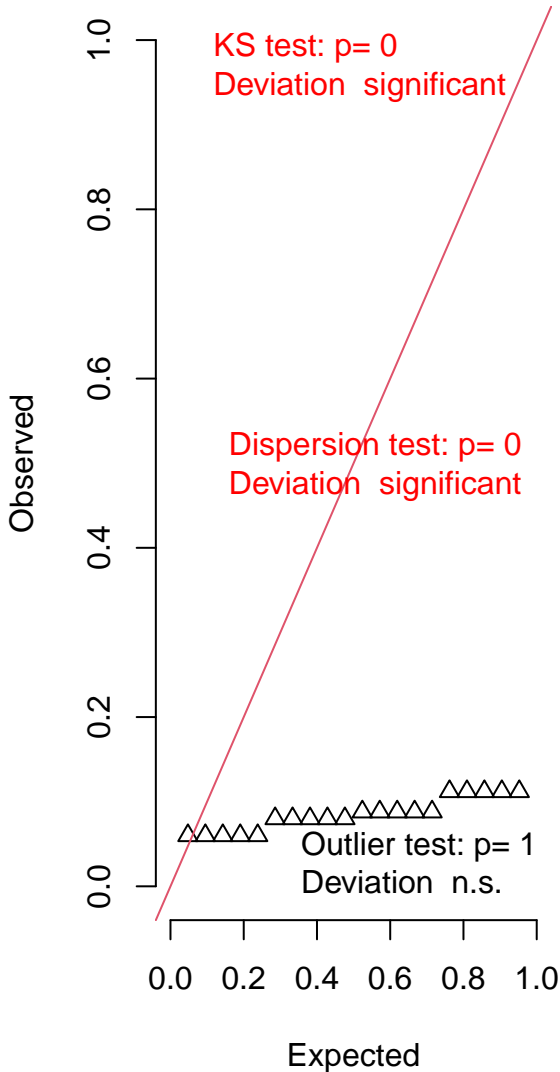
AICc [ 1 ] -131.1314

Bites in squirrel

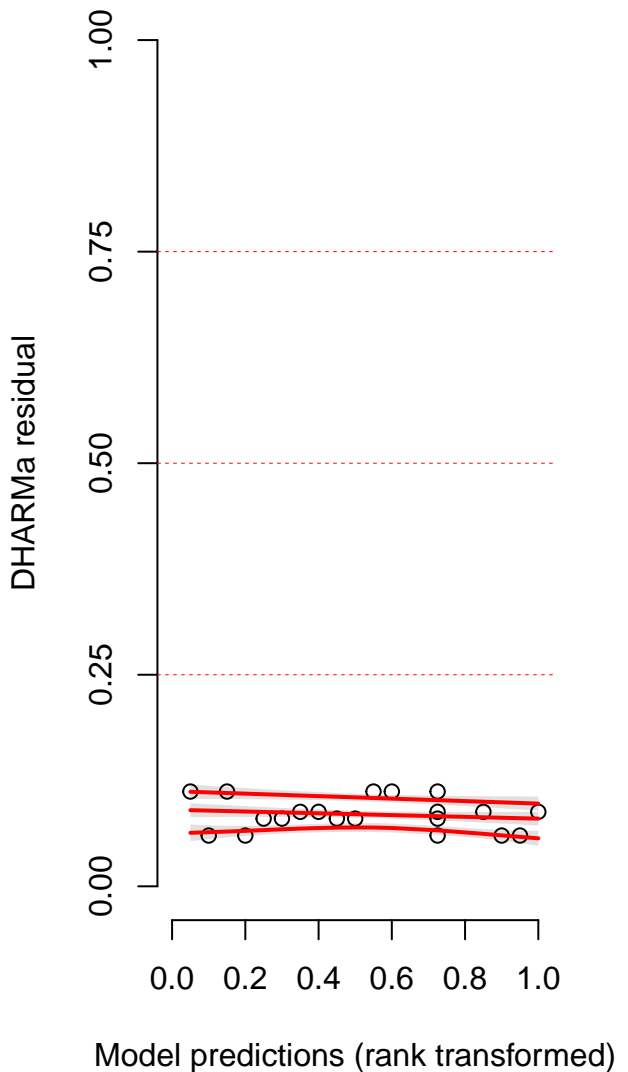
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days

IL.8 ERROR : 'yscale' incorrect dans la vue

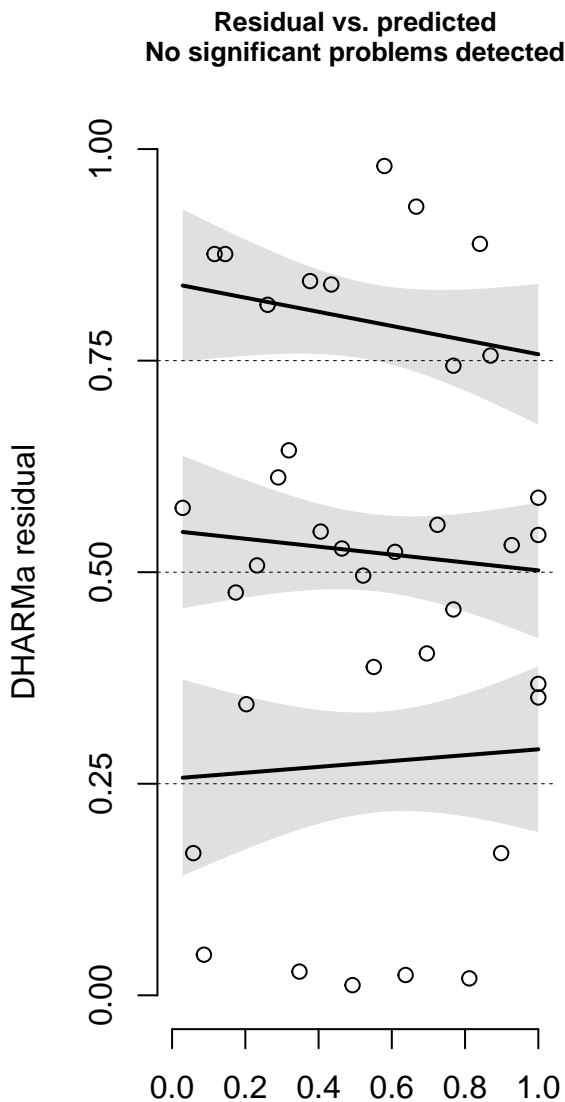
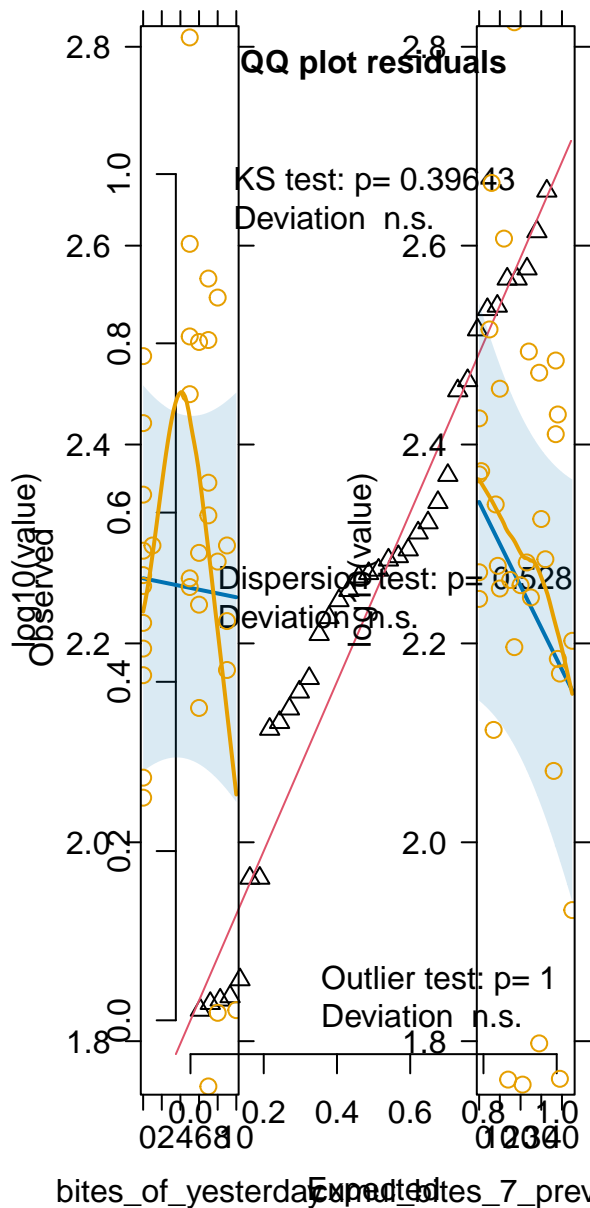
IL . RA

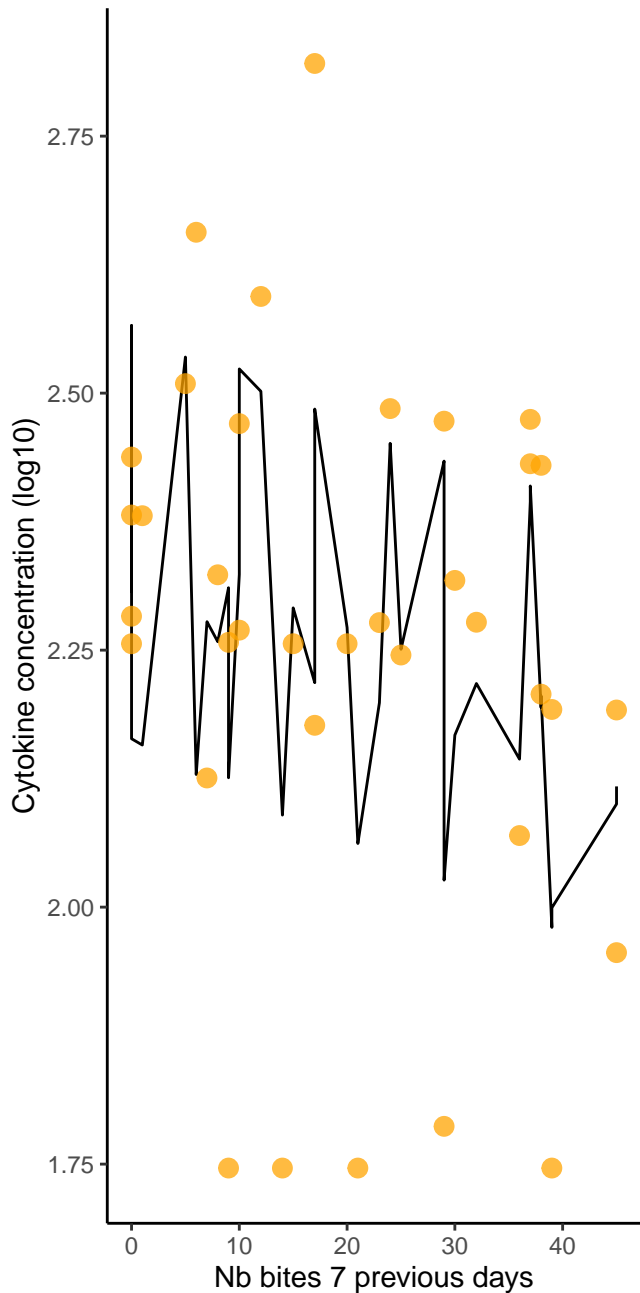
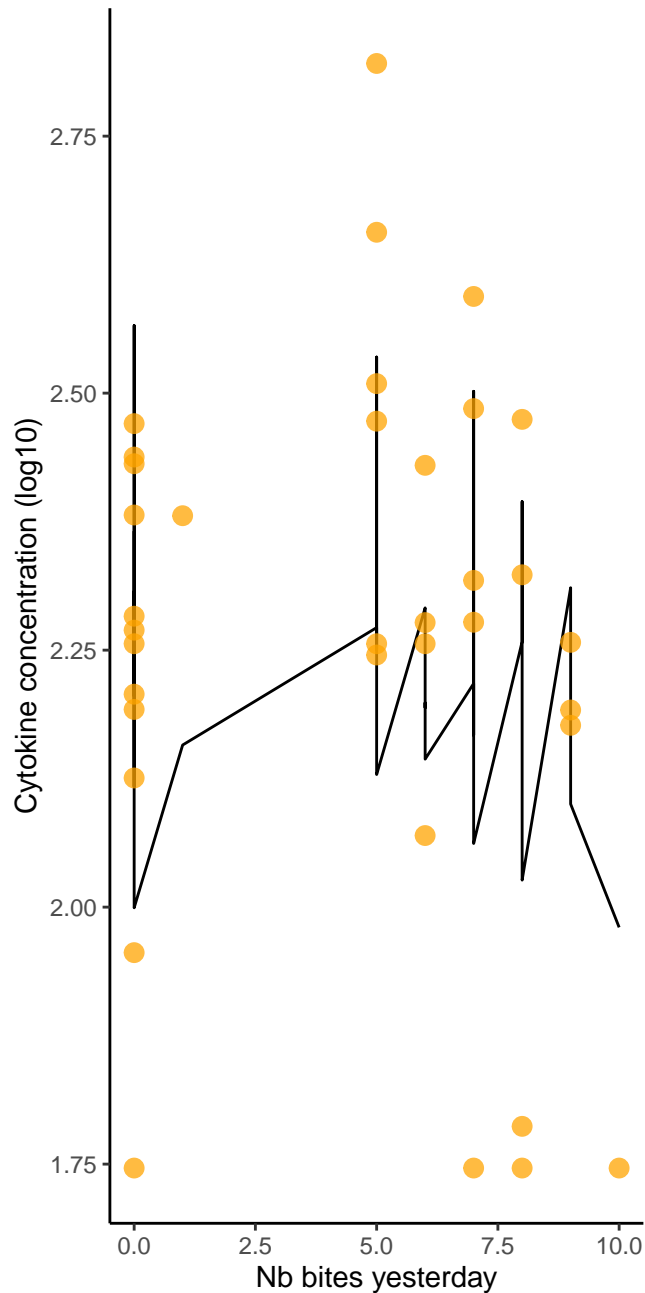
Bites in cyno

Nb obs : 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, 3.68]	1.05	0.91	[0.27, 1.00]
cumul_bites_7_previous_days	1.10	[1.00, 3.68]	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
2.6	10.6	3.7	-7.4	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.02447	0.1564
	Residual	0.03864	0.1966

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0386

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	2.350631	0.101327	23.198	<2e-16 ***
bites_of_yesterday	-0.001906	0.009898	-0.193	0.8473
cumul_bites_7_previous_days	-0.004217	0.002454	-1.718	0.0857 .

---

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

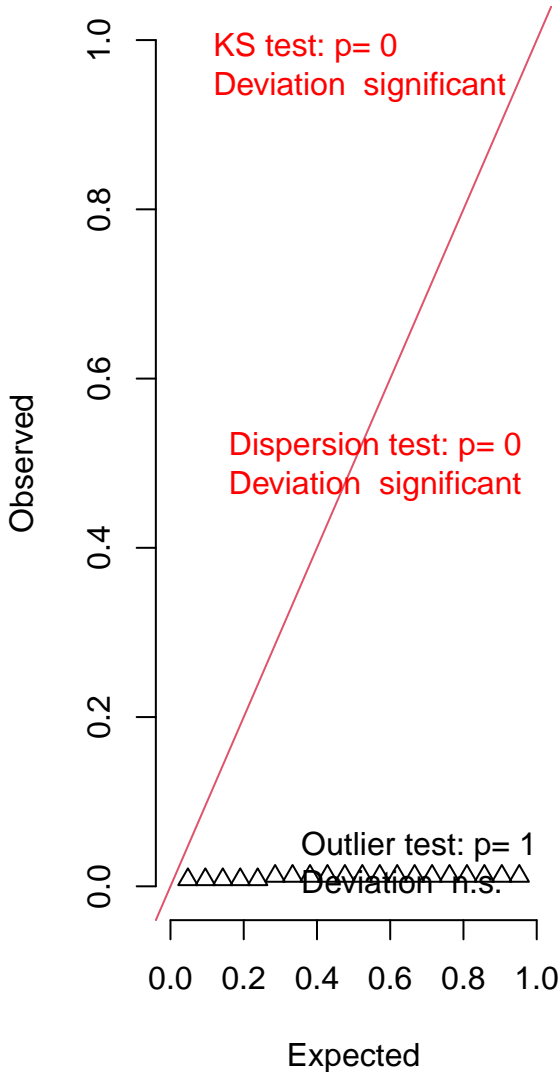
```
AICc [1] 4.649317
```

Bites in squirrel

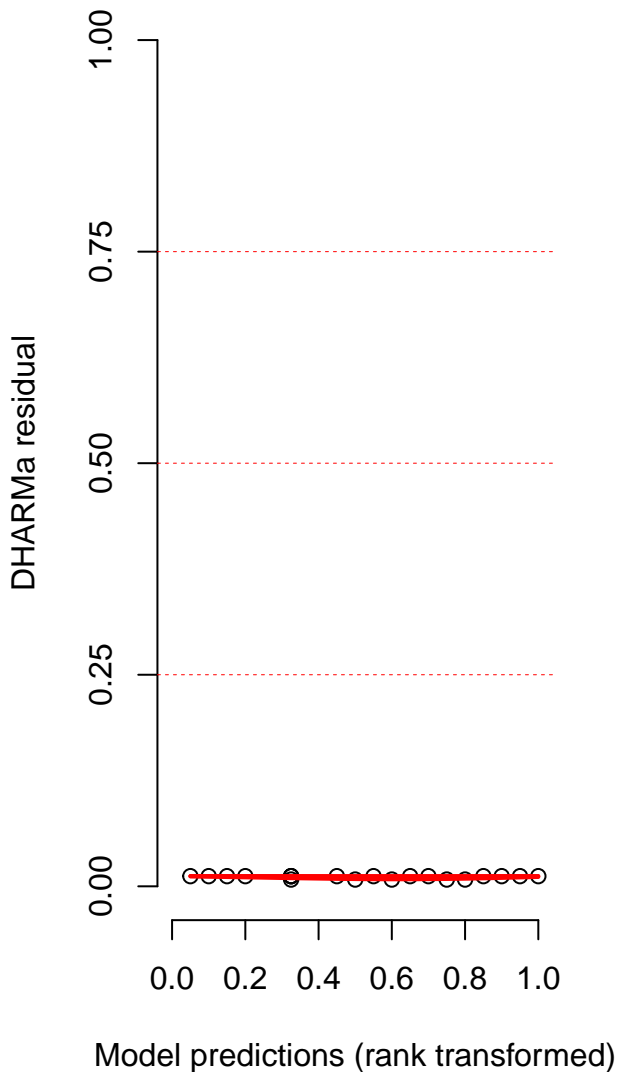
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days

IL.RA ERROR : 'yscale' incorrect dans la vue

IP.10

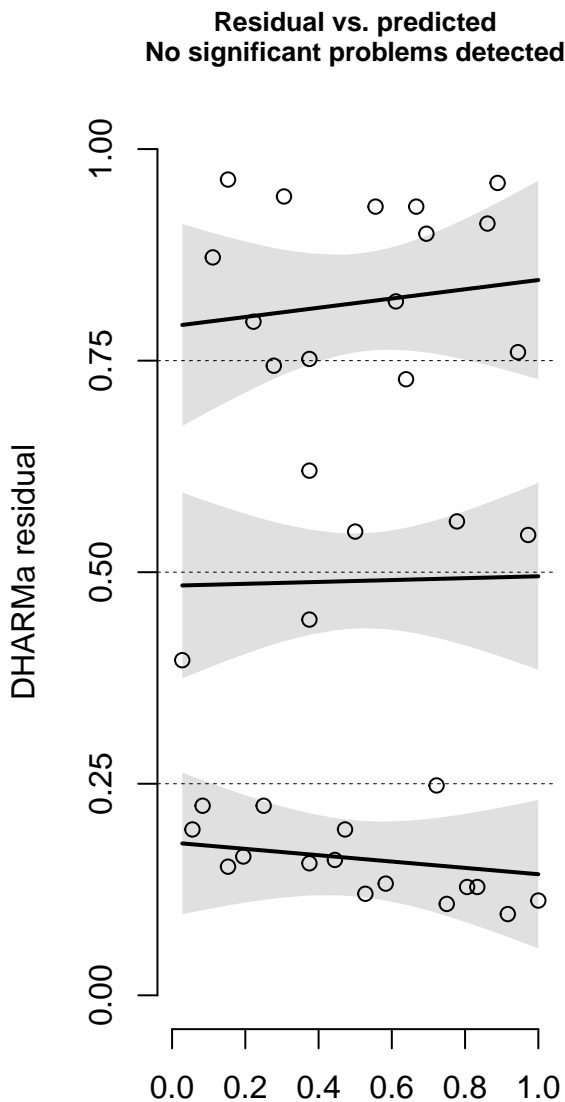
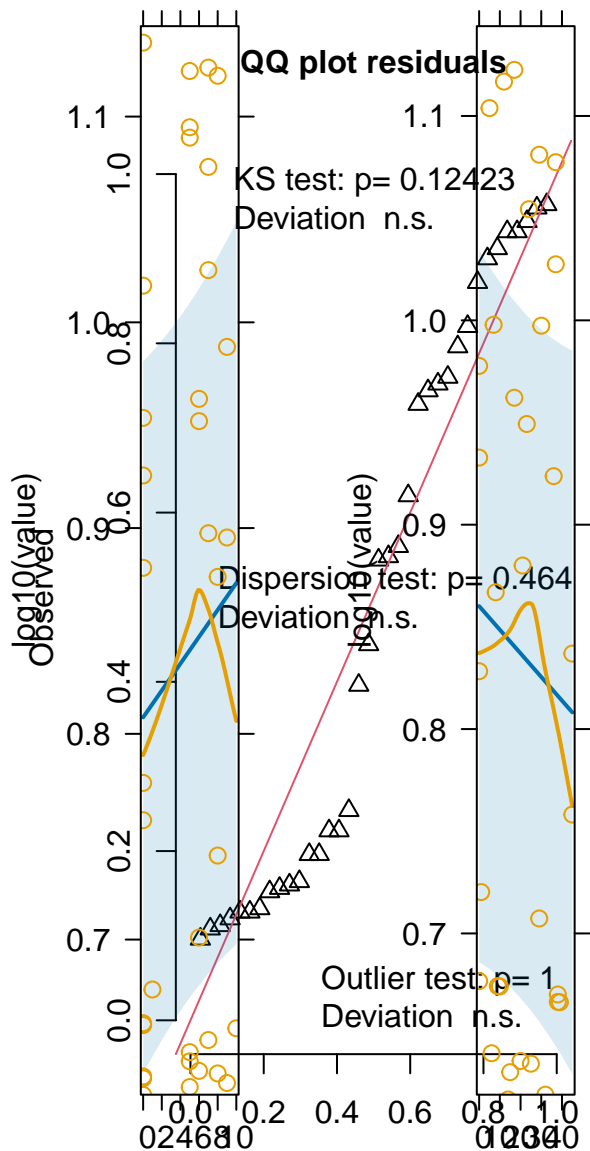


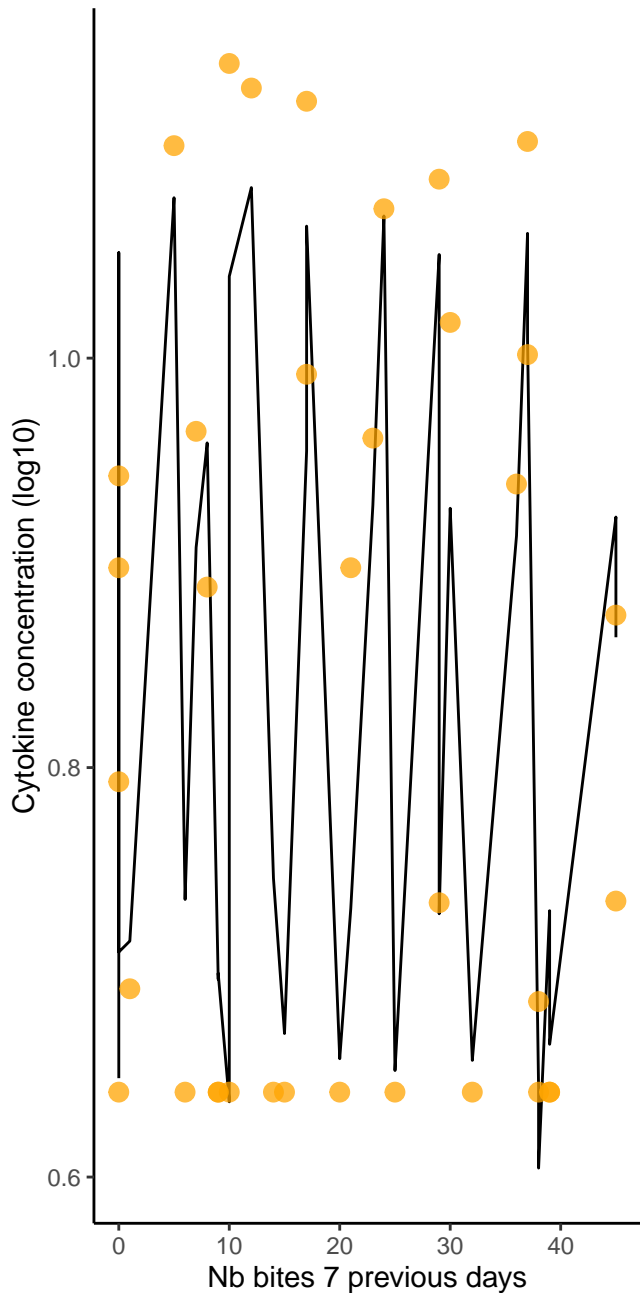
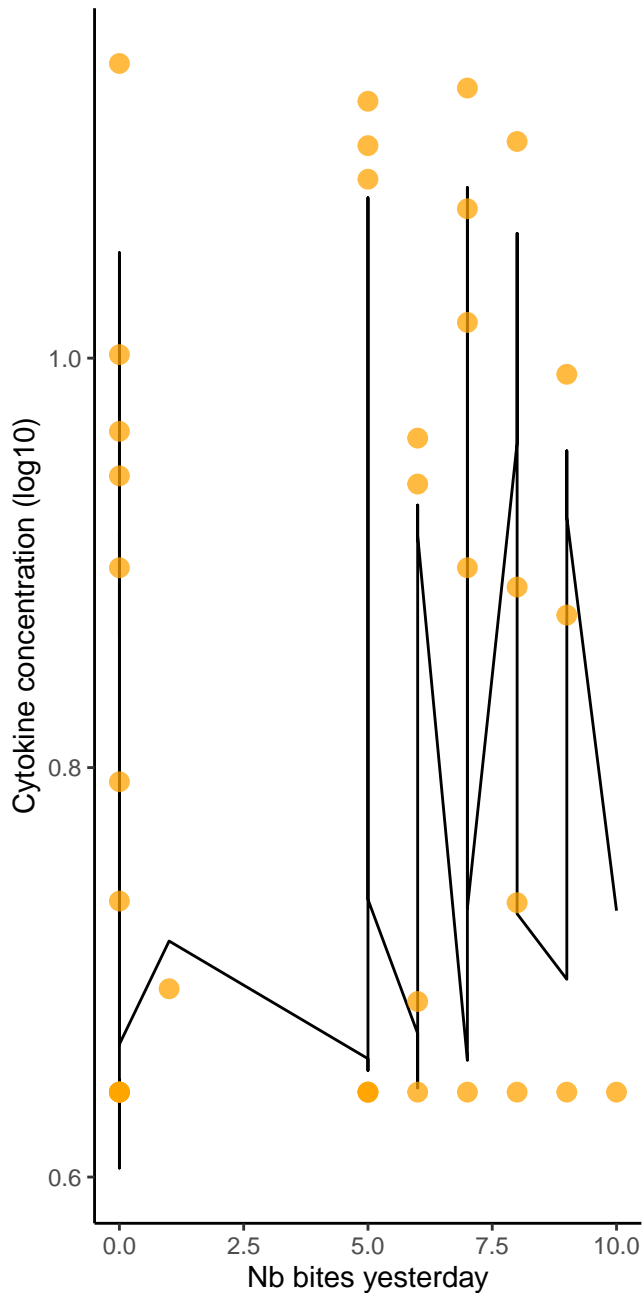
Bites in cyno

Nb obs : 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, 3.72]	1.05	0.91	[0.27, 1.00]
cumul_bites_7_previous_days	1.10	[1.00, 3.72]	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
-51.5	-43.6	30.8	-61.5	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.02673	0.16349
Residual		0.00715	0.08456

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.00715

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	0.831338	0.086324	9.630	<2e-16 ***
bites_of_yesterday	0.006525	0.004258	1.532	0.125
cumul_bites_7_previous_days	-0.001155	0.001057	-1.093	0.274

---

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

AICc [ 1 ] -49.51994

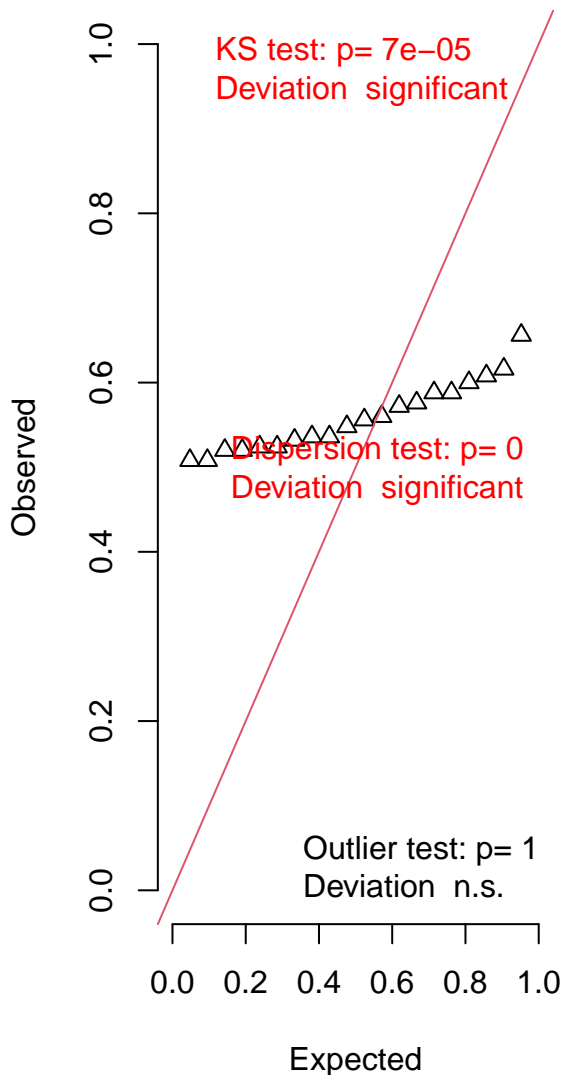
Bites in squirrel



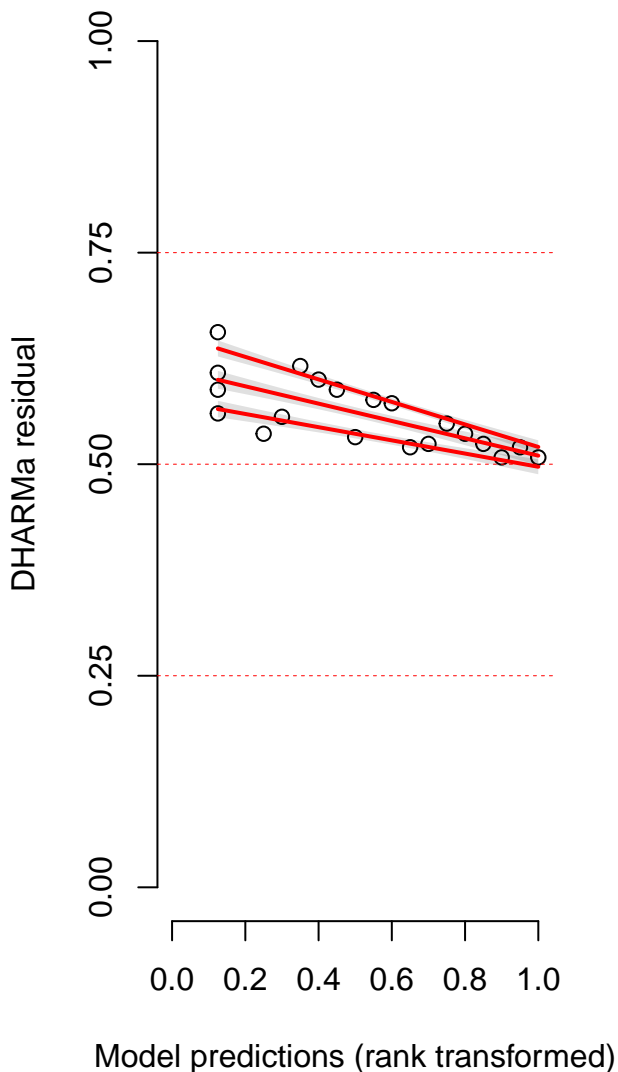
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days

IP.10 ERROR : 'yscale' incorrect dans la vue

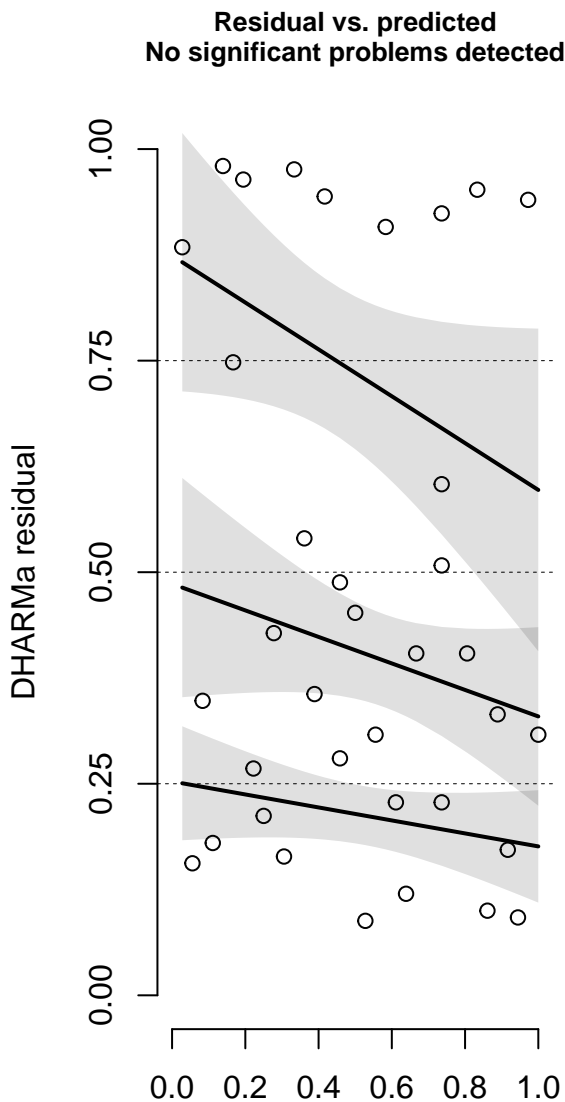
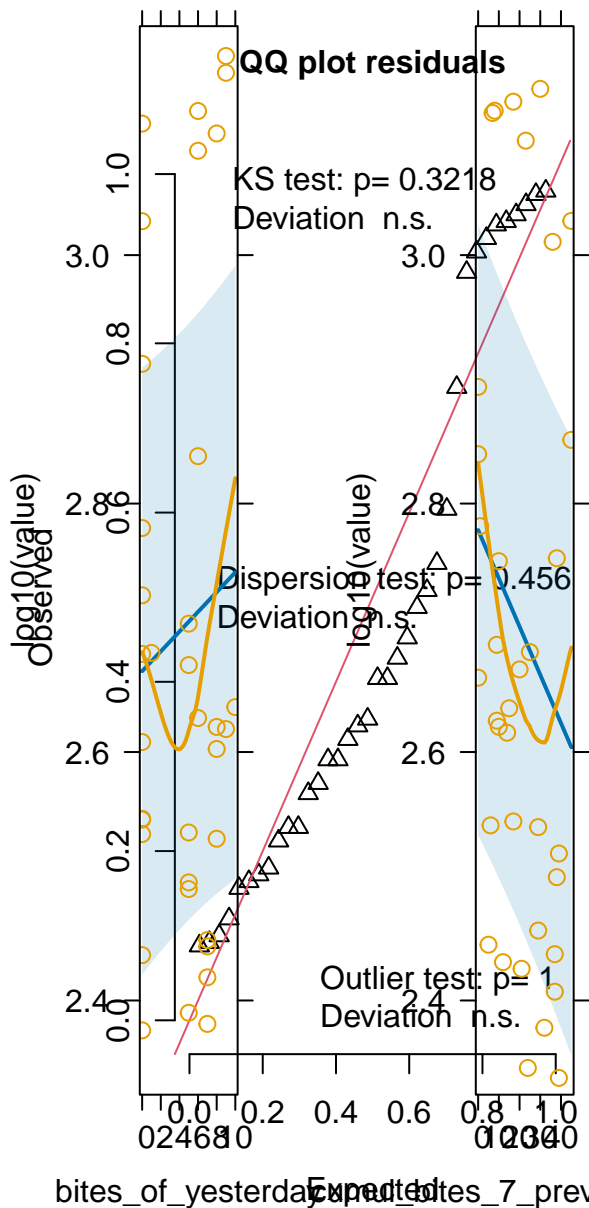
MCP . 1

Bites in cyno

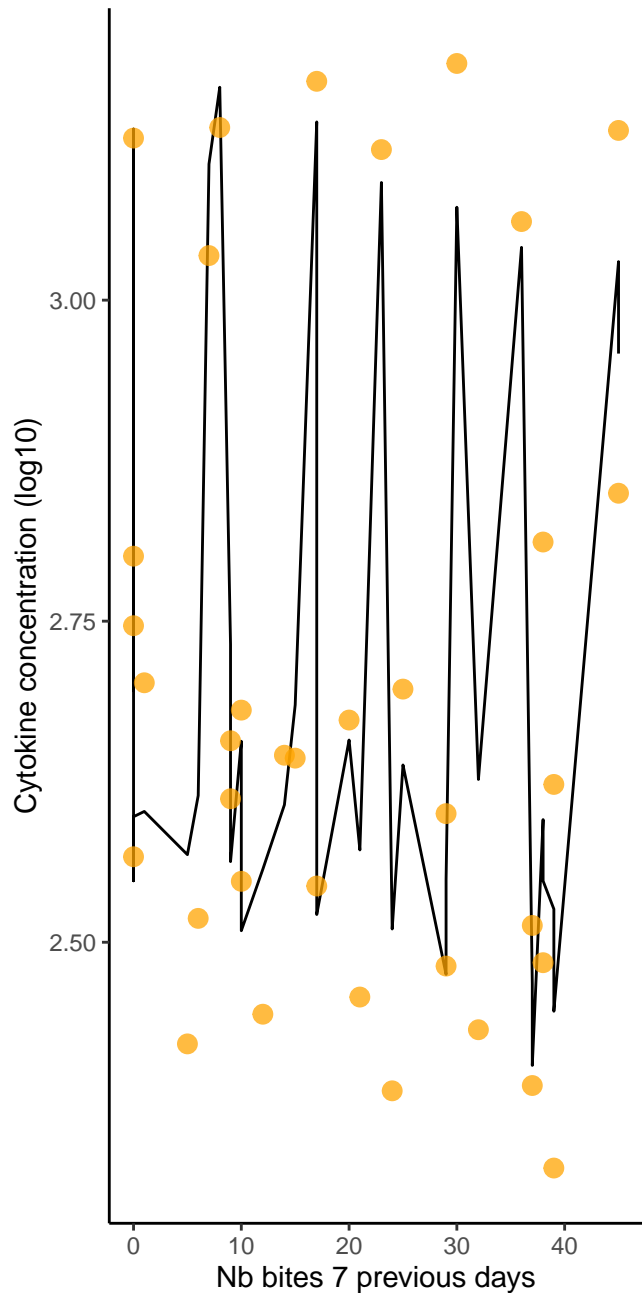
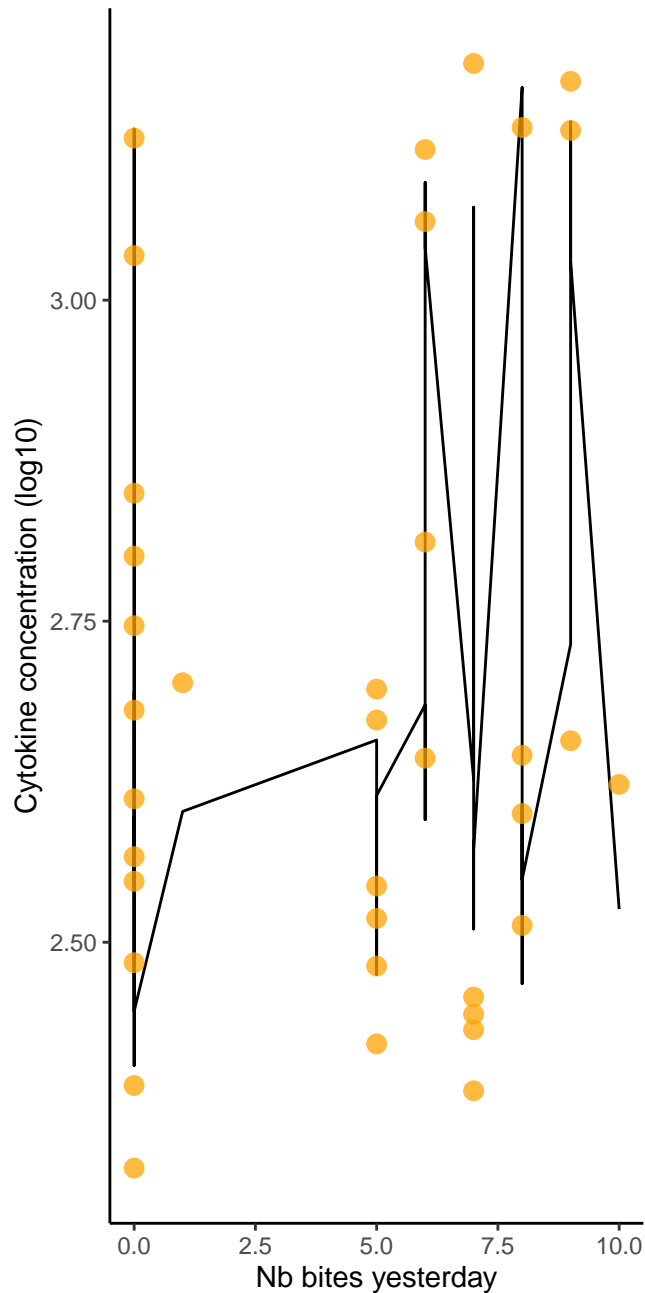
Nb obs : 36

# 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, 3.74]	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
```

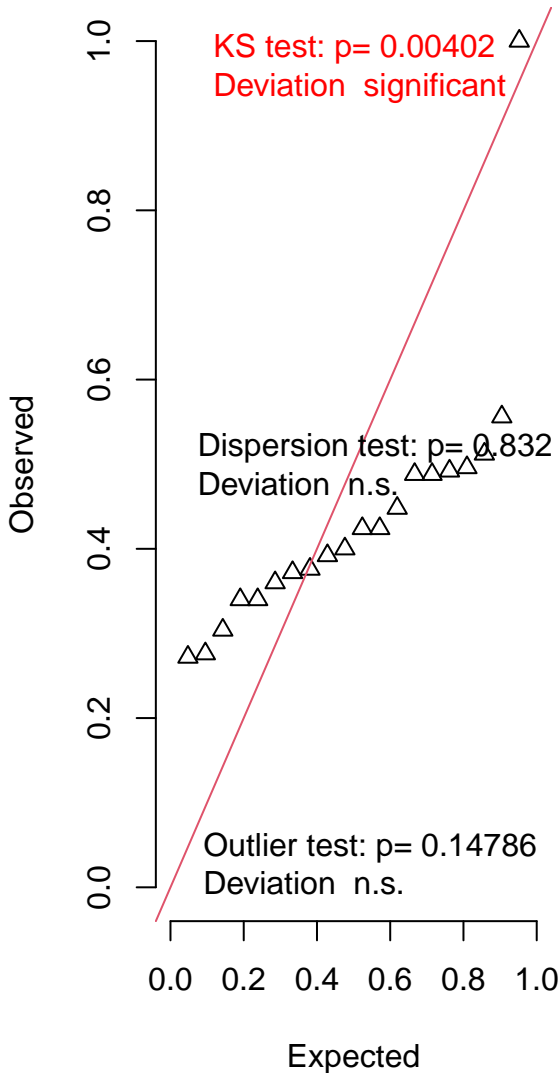
AICc [ 1 ] -35.18623

Bites in squirrel

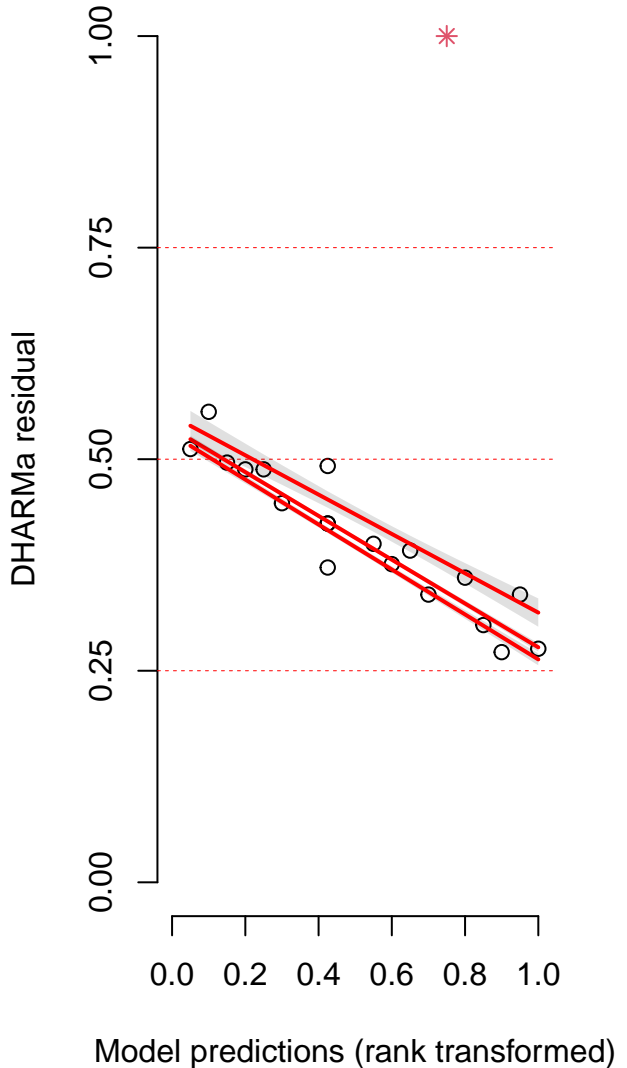
Nb obs : 20

# DHARMA residual

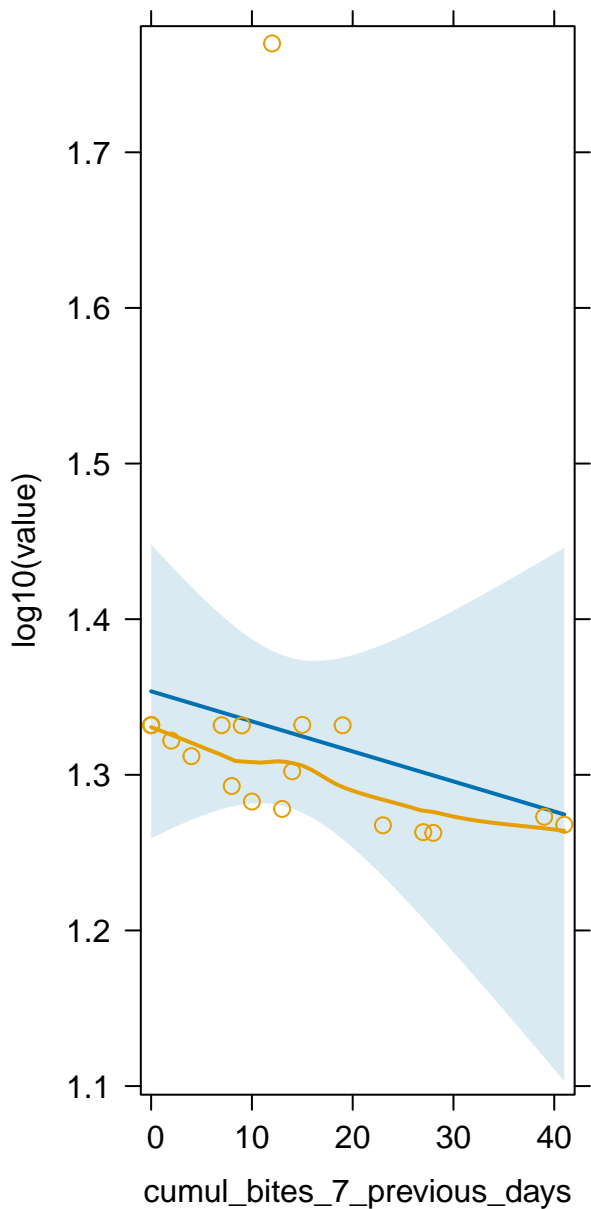
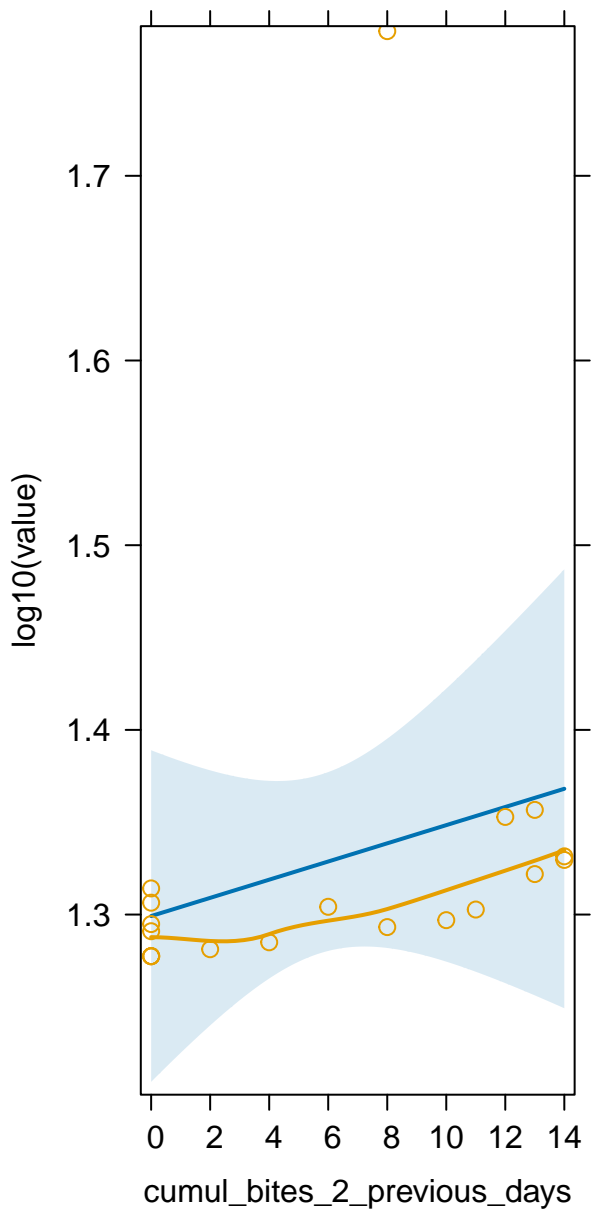
## QQ plot residuals



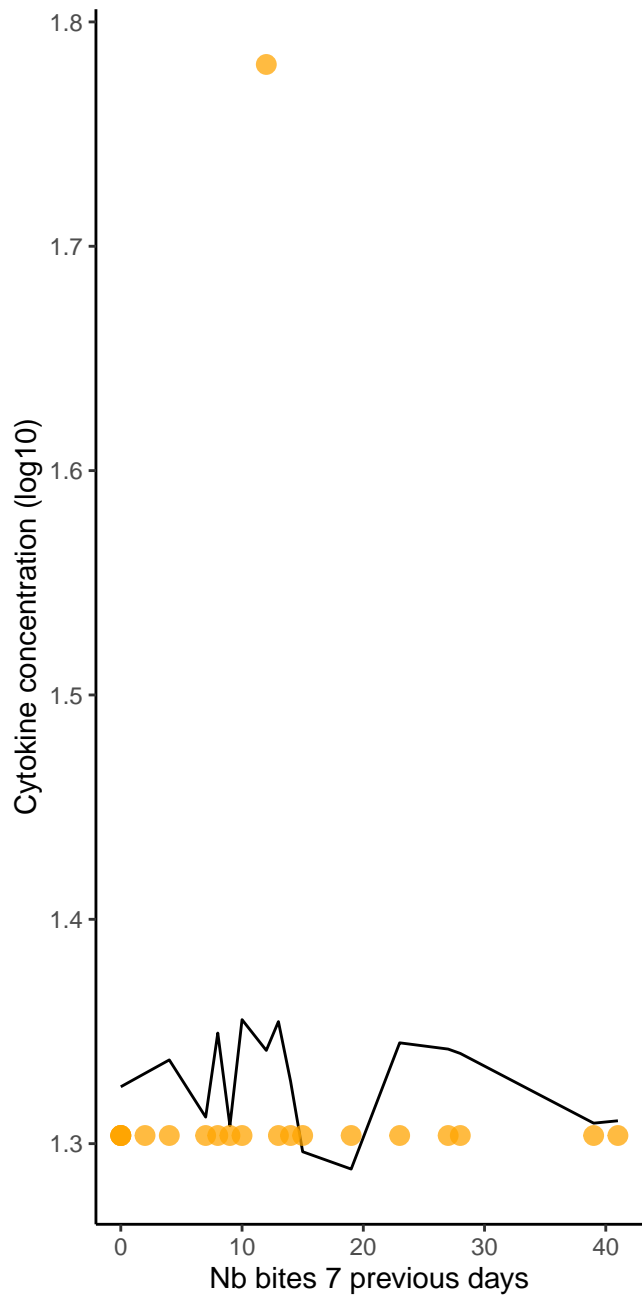
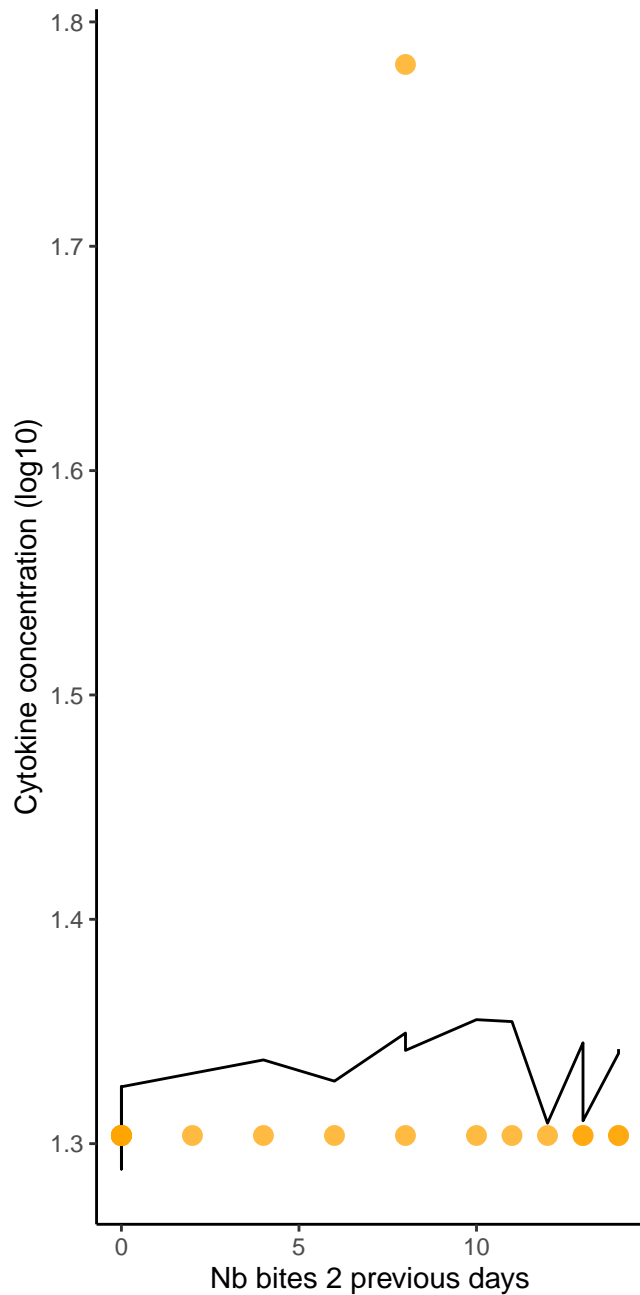
## Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test significant



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	2.29	[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
-24.4    -19.4    17.2   -34.4      15

Random effects:

Conditional model:
Groups   Name      Variance Std.Dev.
ID      (Intercept) 9.338e-11 9.664e-06
Residual                1.049e-02 1.024e-01
Number of obs: 20, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0105

Conditional model:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)    1.325353   0.034920   37.95 <2e-16 ***
cumul_bites_2_previous_days 0.004923   0.006238    0.79  0.430
cumul_bites_7_previous_days -0.001931   0.002840   -0.68  0.497
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

AICc [1] -20.10272

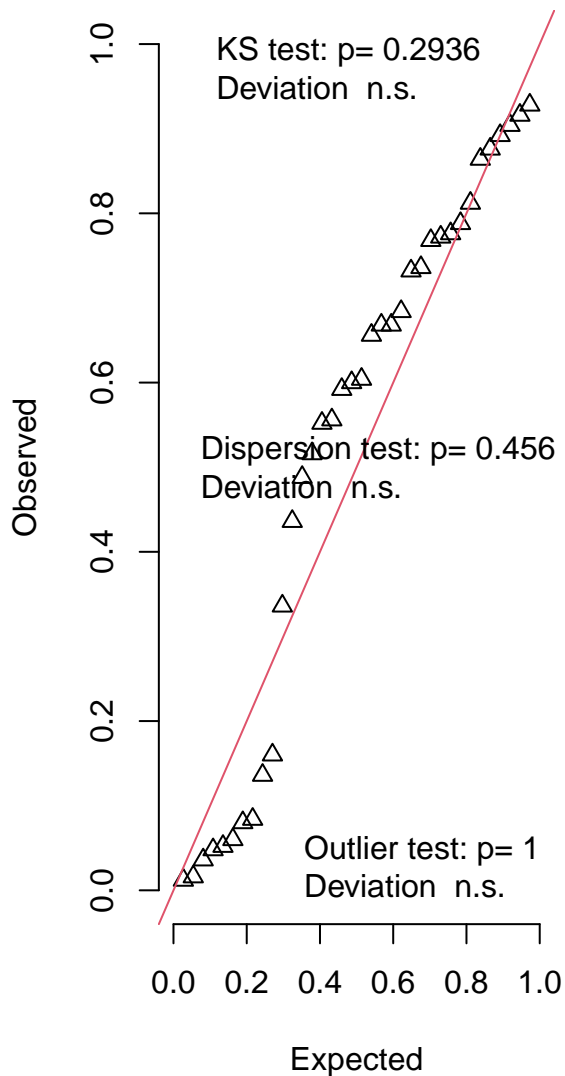
MDC

Bites in cyno

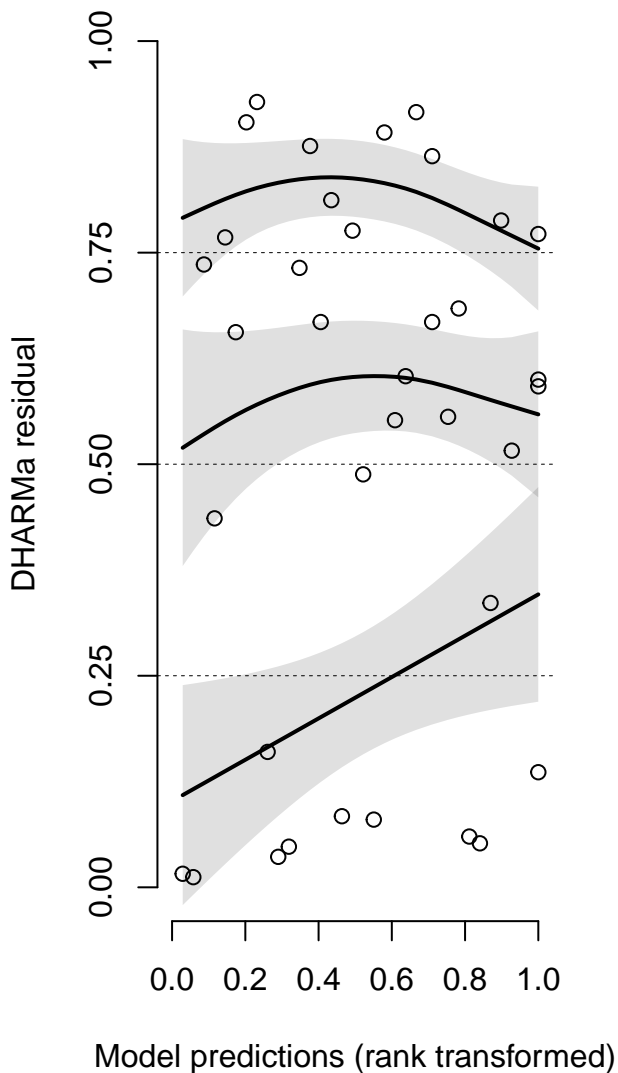
Nb obs : 36

## DHARMA residual

### QQ plot residuals

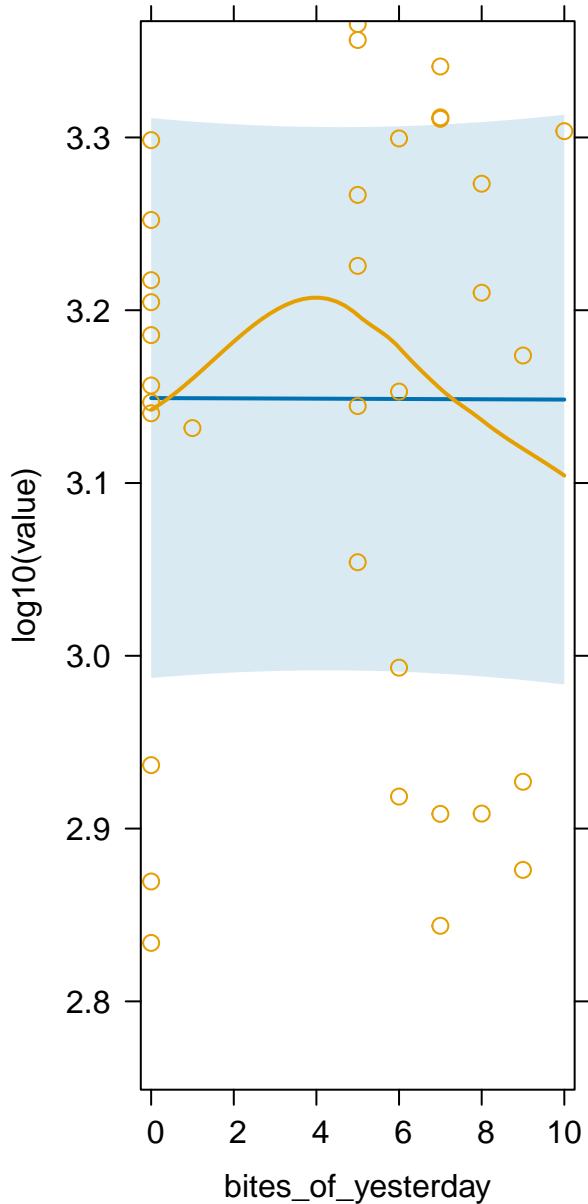


### Residual vs. predicted No significant problems detected

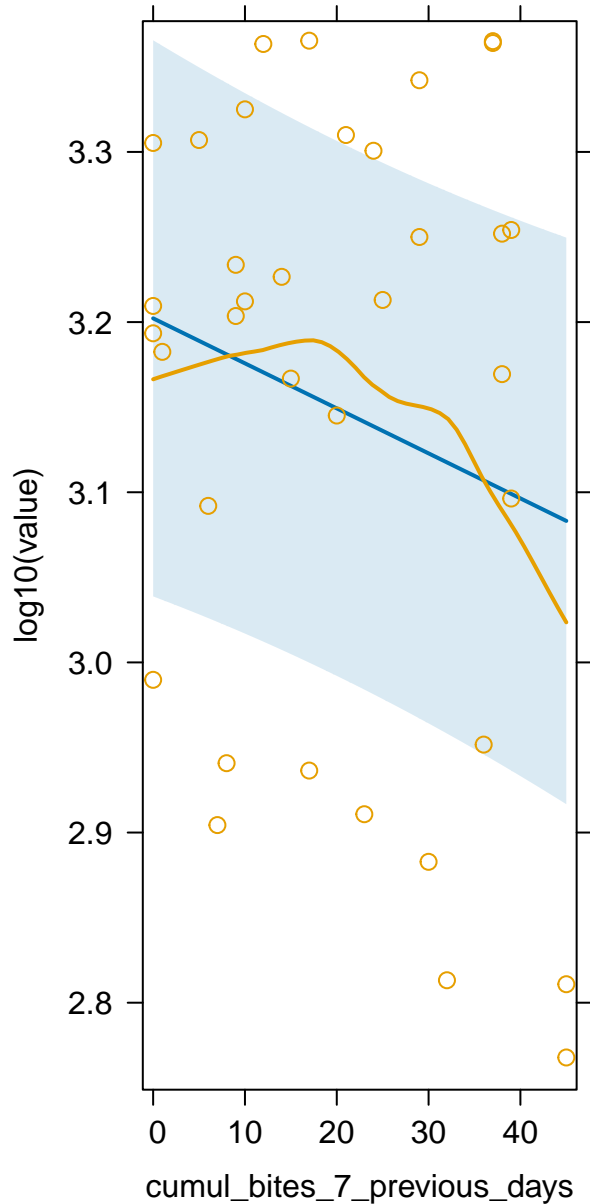


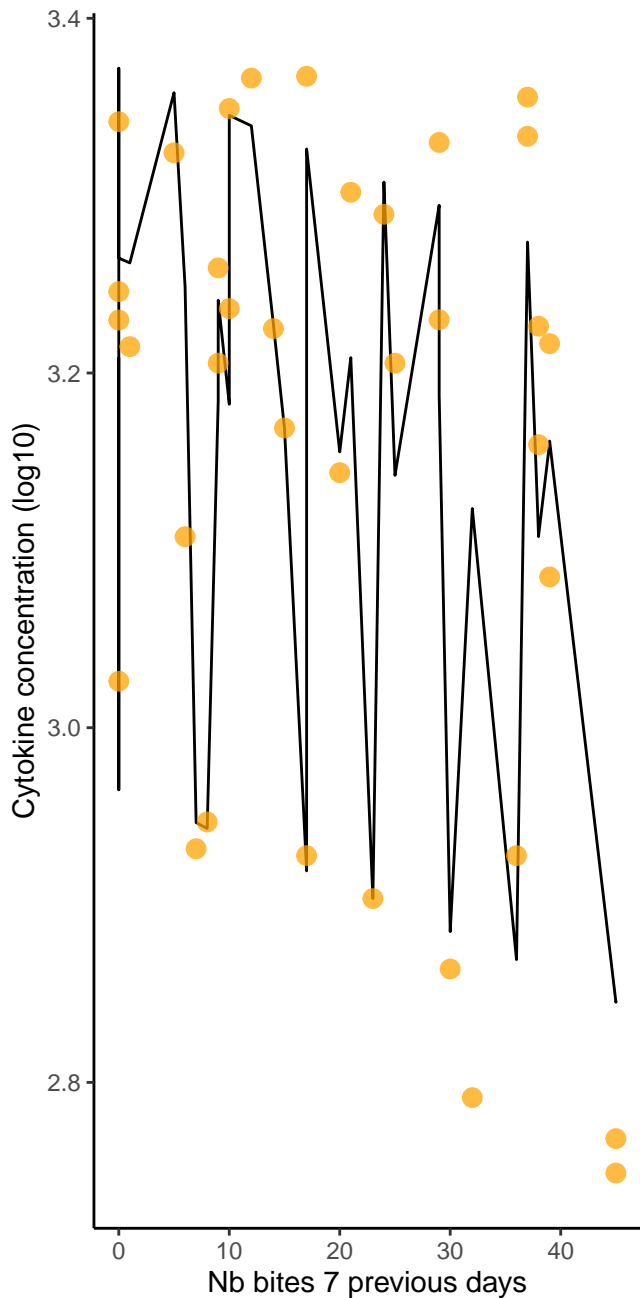
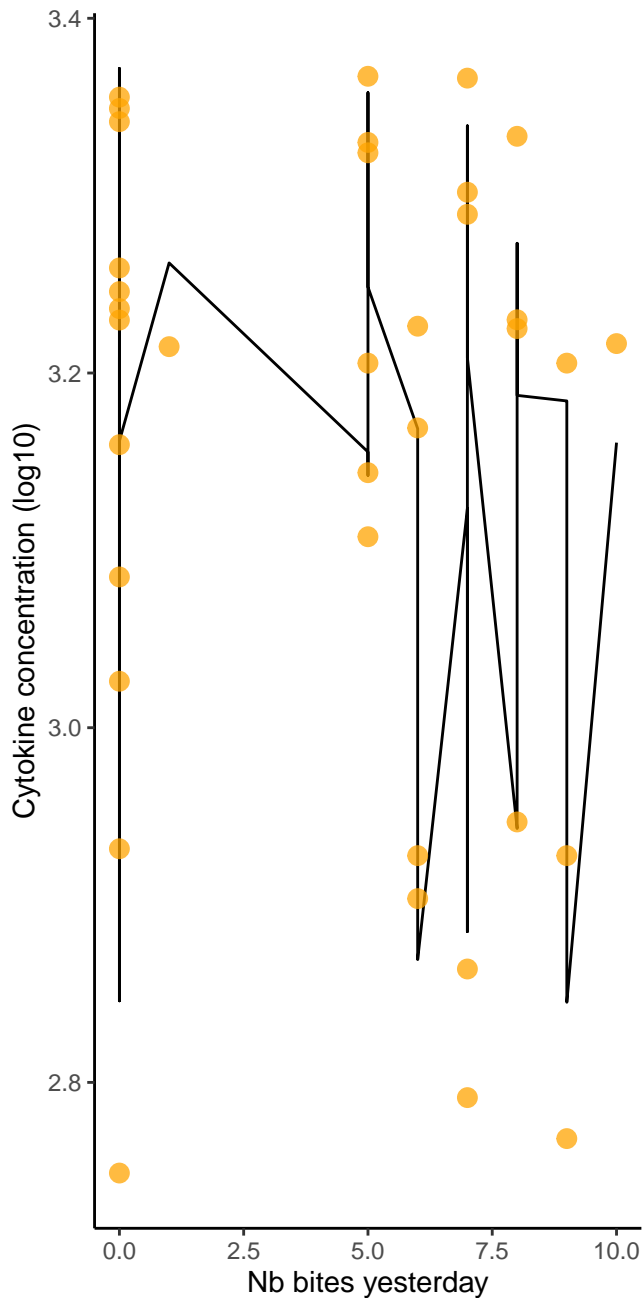


bites\_of\_yesterday effect plot



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, 3.75]	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

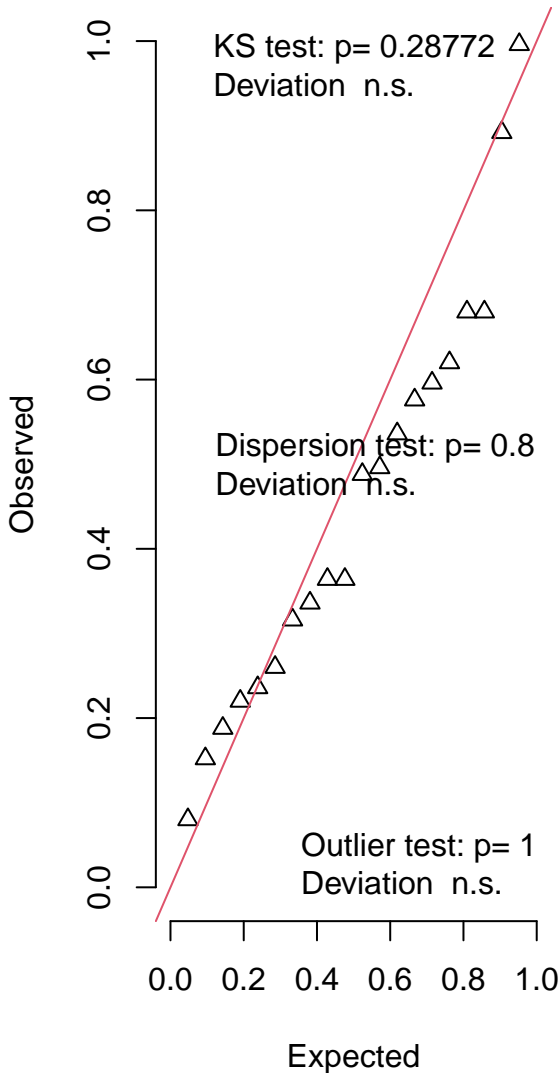
AICc [ 1 ] -48.354

Bites in squirrel

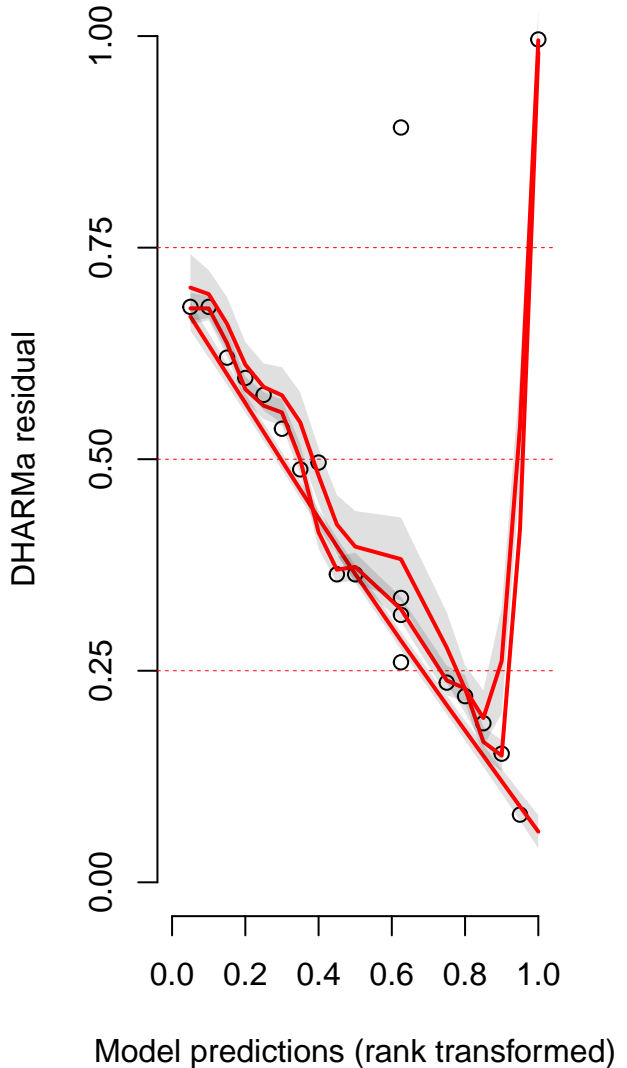
Nb obs : 20

## DHARMA residual

### QQ plot residuals

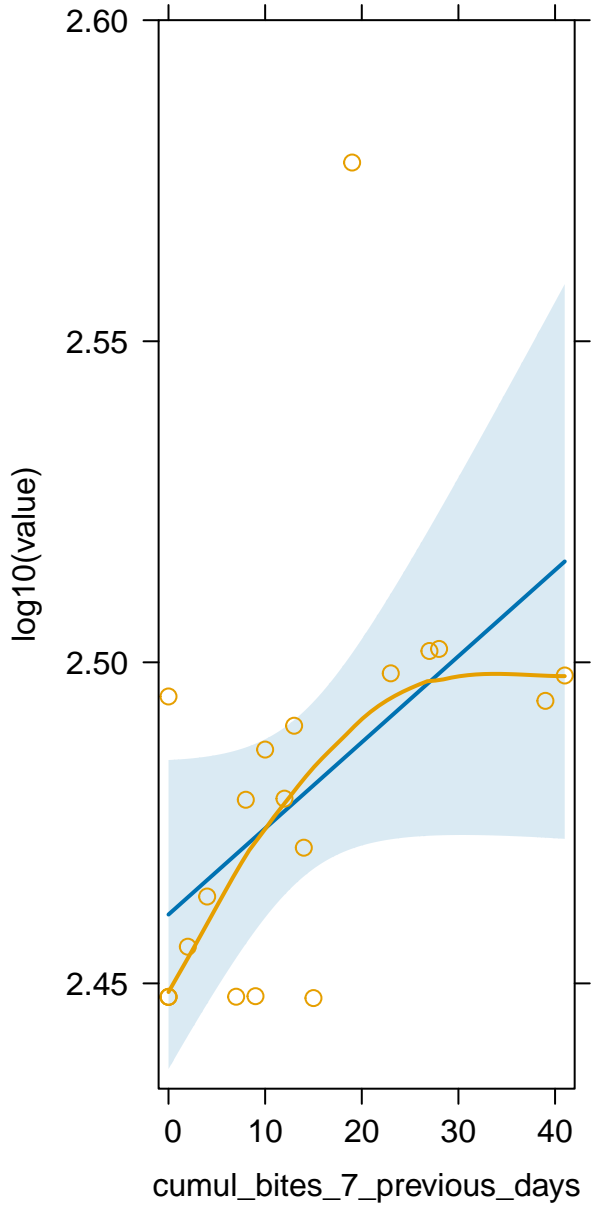
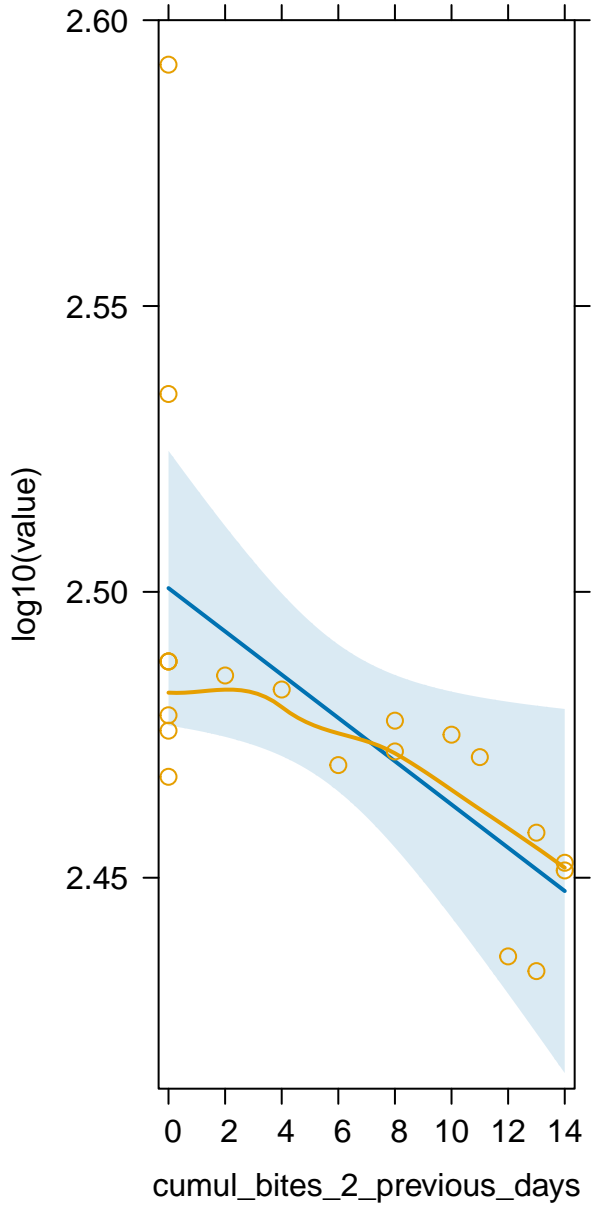


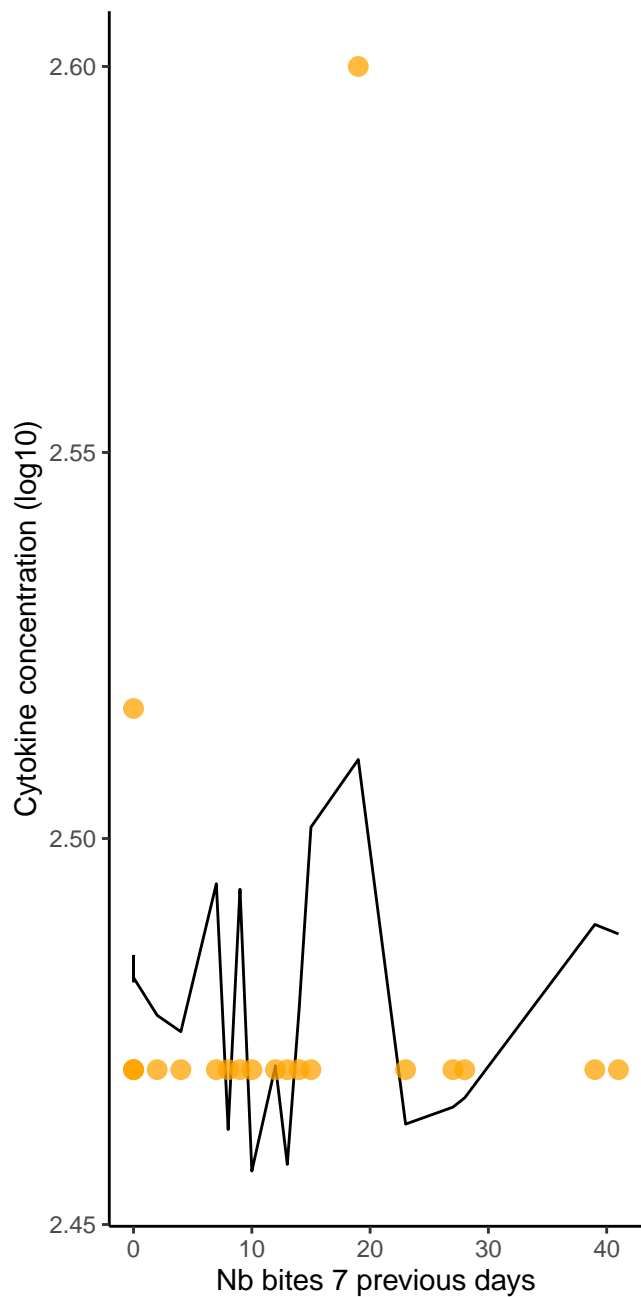
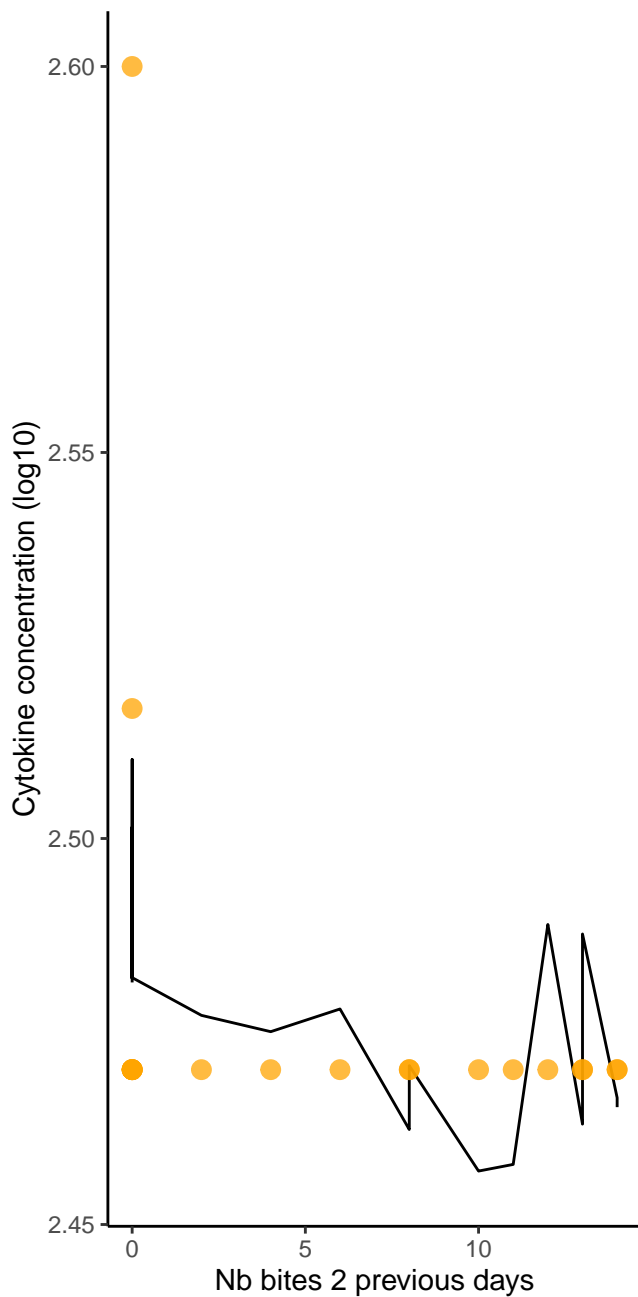
### Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test significant





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	2.05	[1.42, 3.60]	1.43	0.49	[0.28, 0.70]
cumul_bites_7_previous_days	2.05	[1.42, 3.60]	1.43	0.49	[0.28, 0.70]

```
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
-79.3    -74.3    44.6    -89.3        15

Random effects:

Conditional model:
Groups   Name      Variance Std.Dev.
ID       (Intercept) 1.617e-05 0.004021
Residual                6.583e-04 0.025658
Number of obs: 20, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.000658

Conditional model:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)    2.4824840  0.0094785  261.91  <2e-16 ***
cumul_bites_2_previous_days -0.0037845  0.0016750   -2.26  0.0239 *
cumul_bites_7_previous_days  0.0013410  0.0007122    1.88  0.0597 .
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

AICc [1] -75.00961

MIF

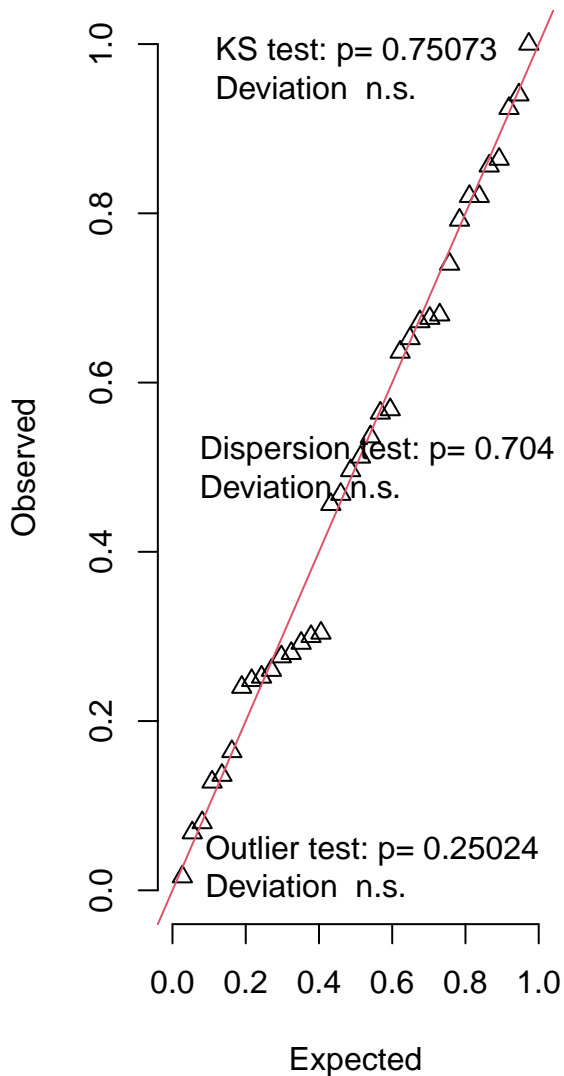
Bites in cyno

Nb obs : 36

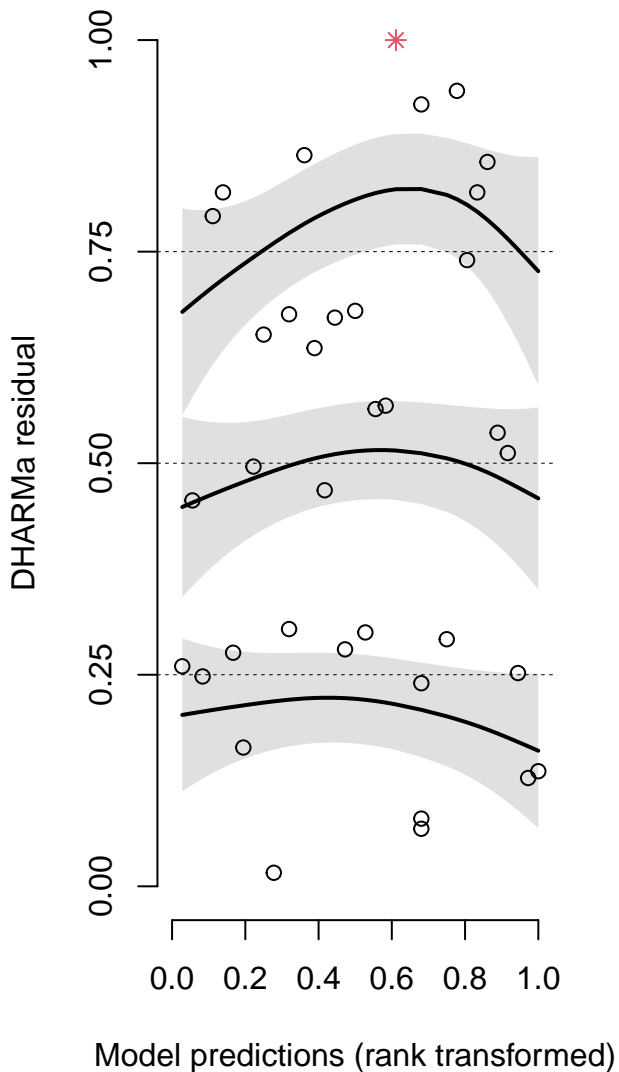


## DHARMA residual

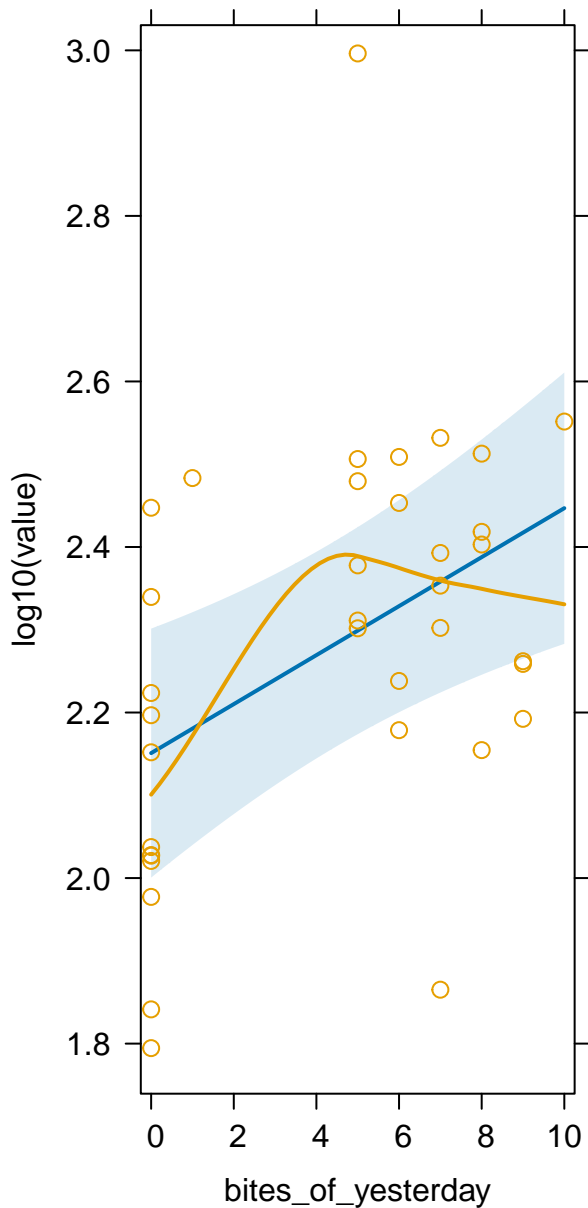
### QQ plot residuals



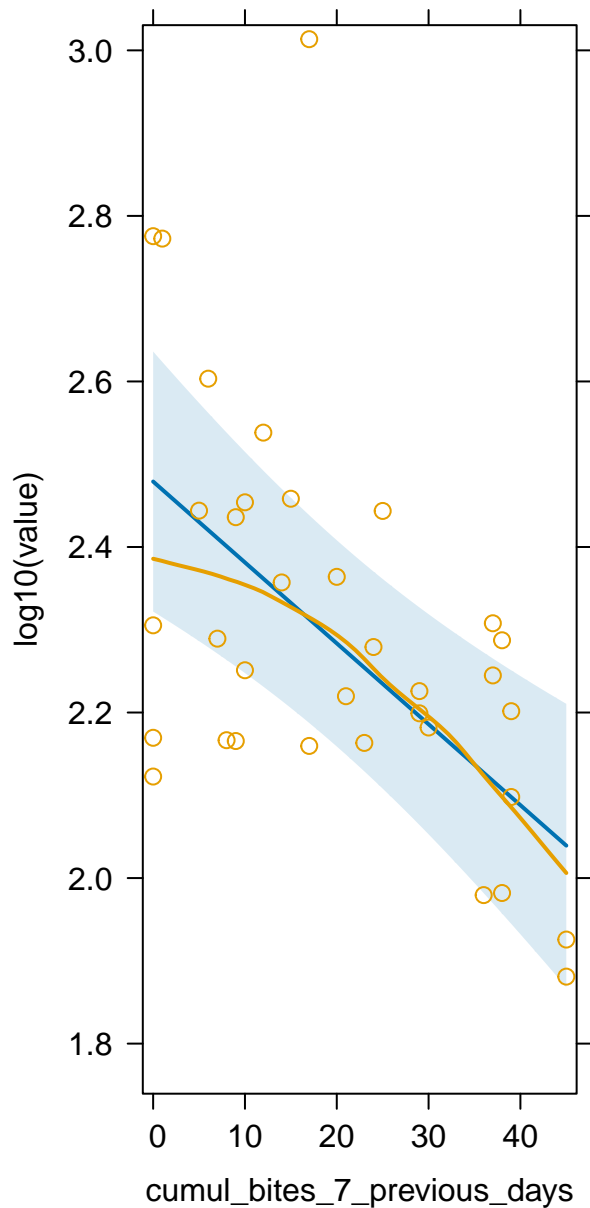
### Residual vs. predicted No significant problems detected

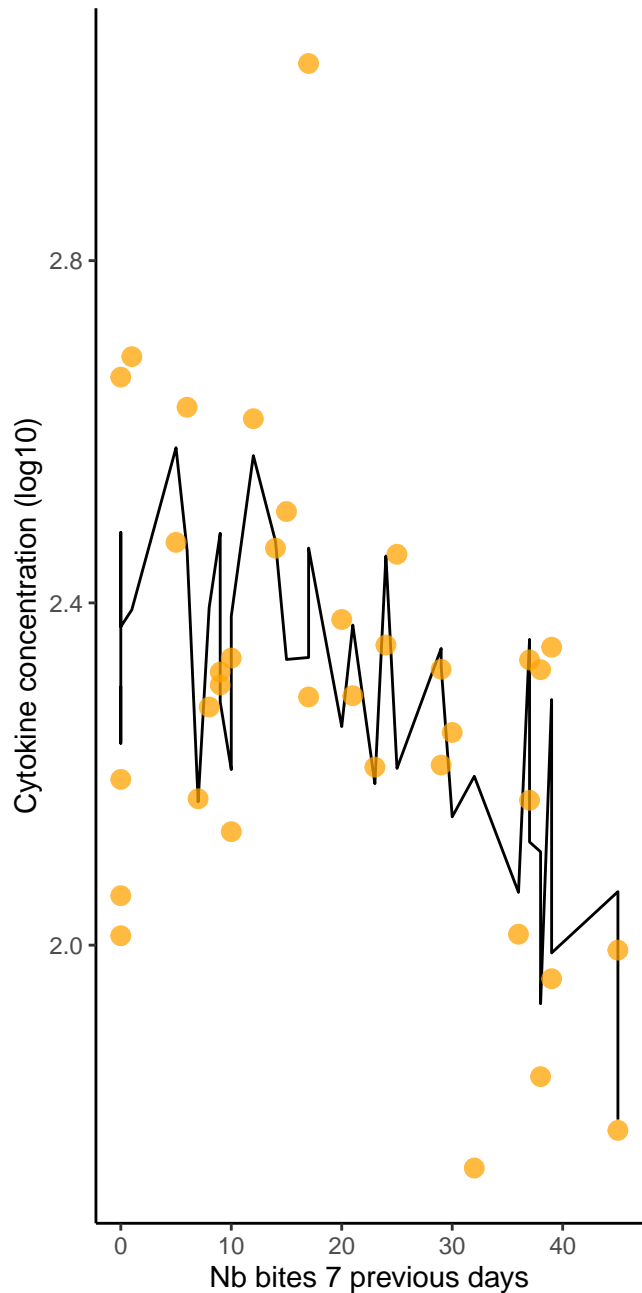
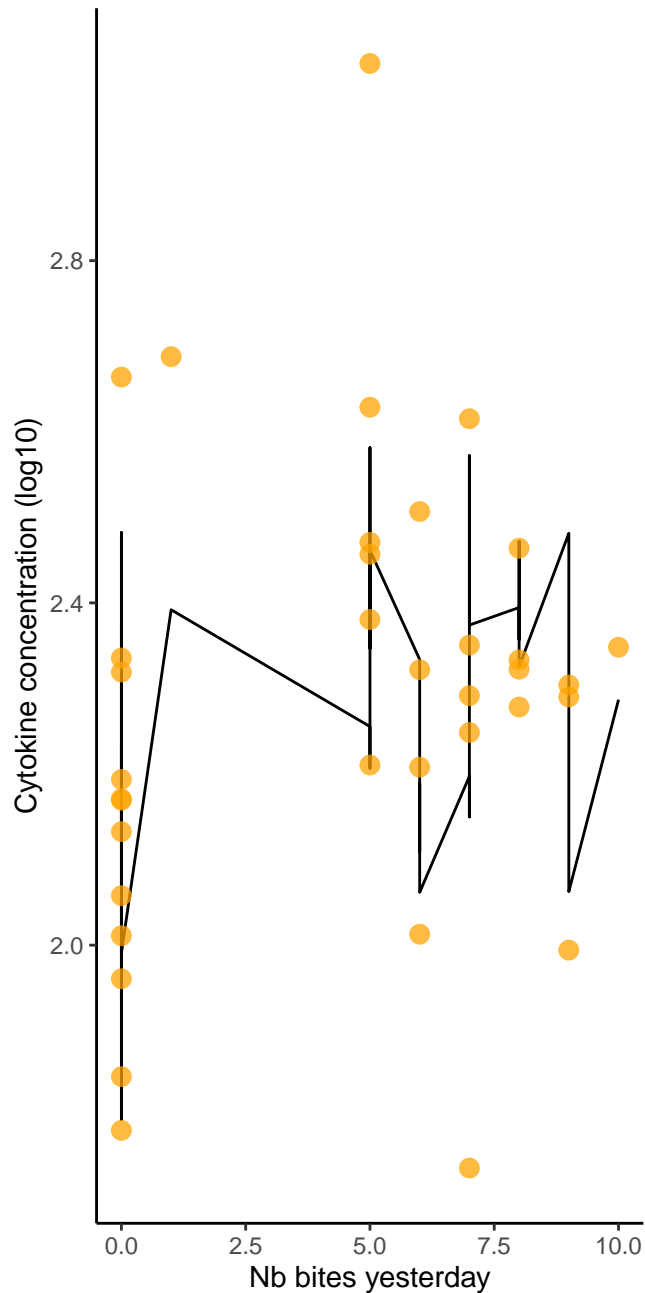


bites\_of\_yesterday effect plot



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, 3.80]	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

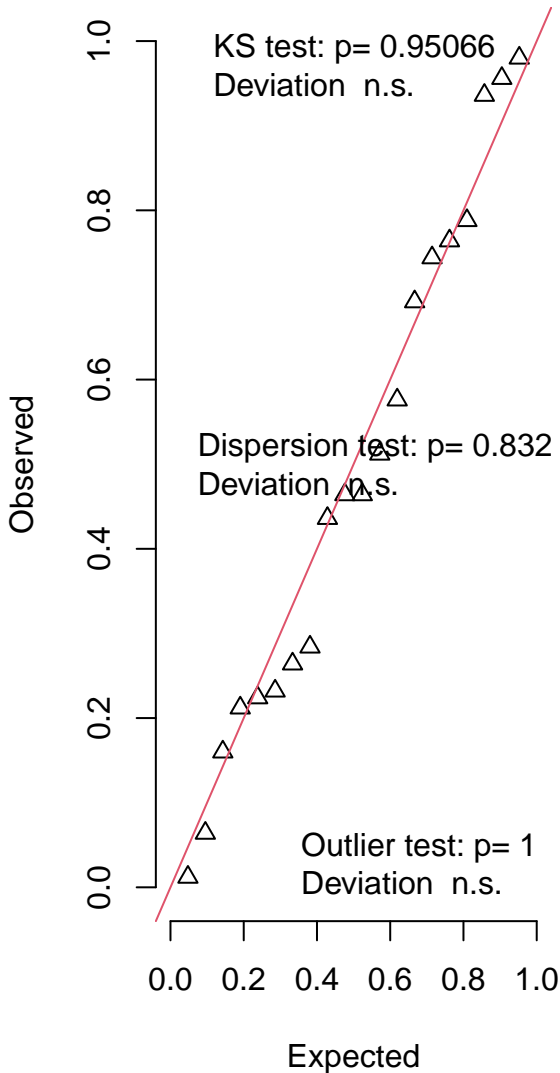
Bites in squirrel

Nb obs : 20

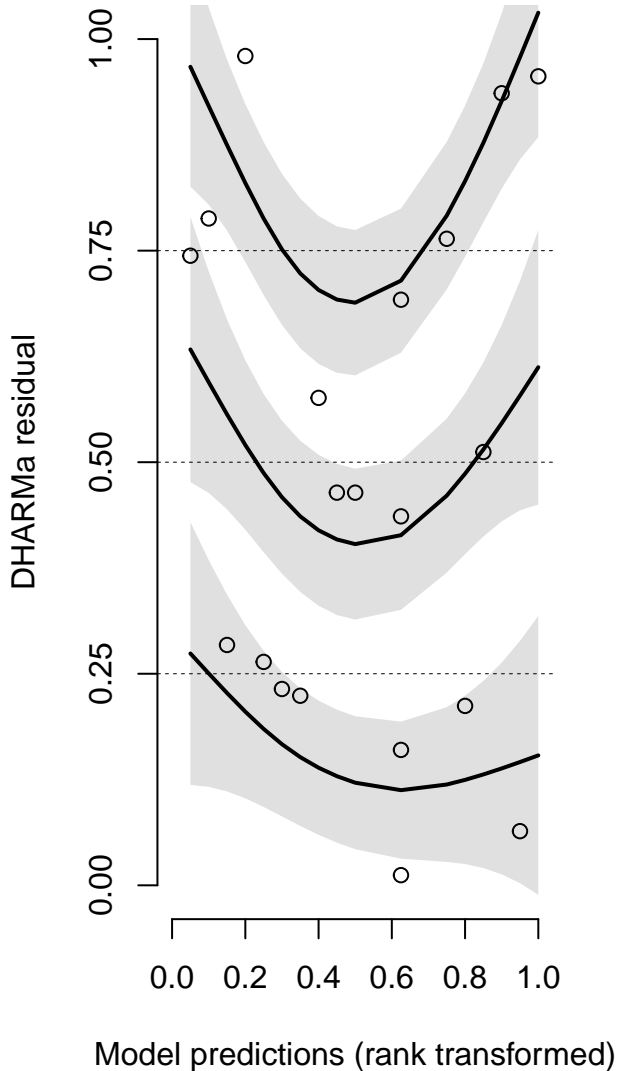


# DHARMA residual

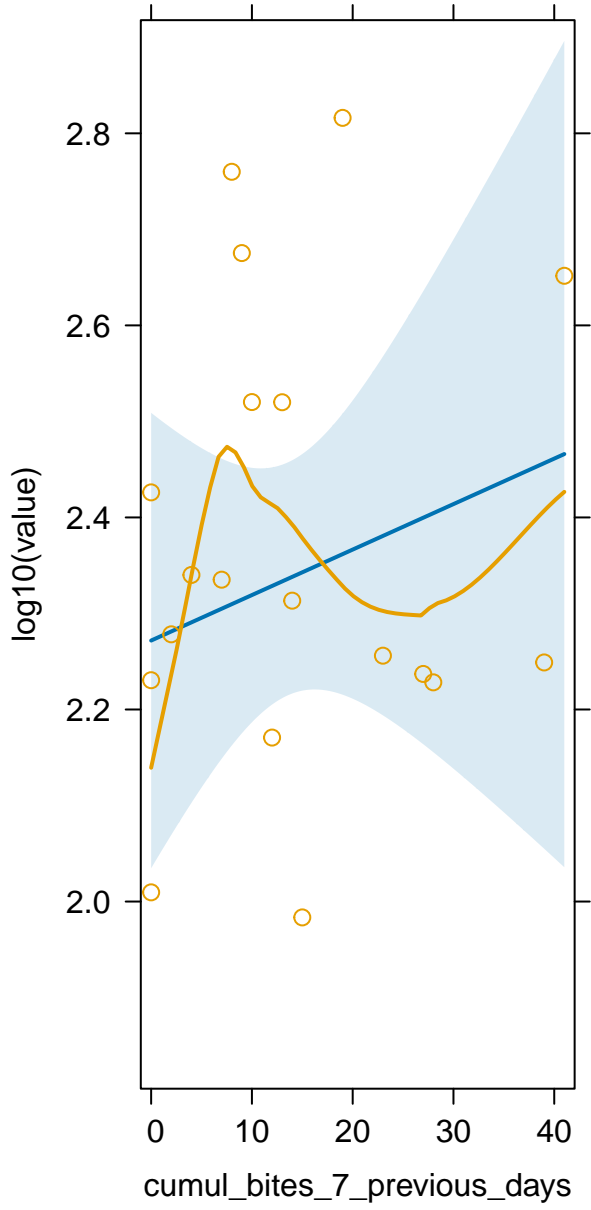
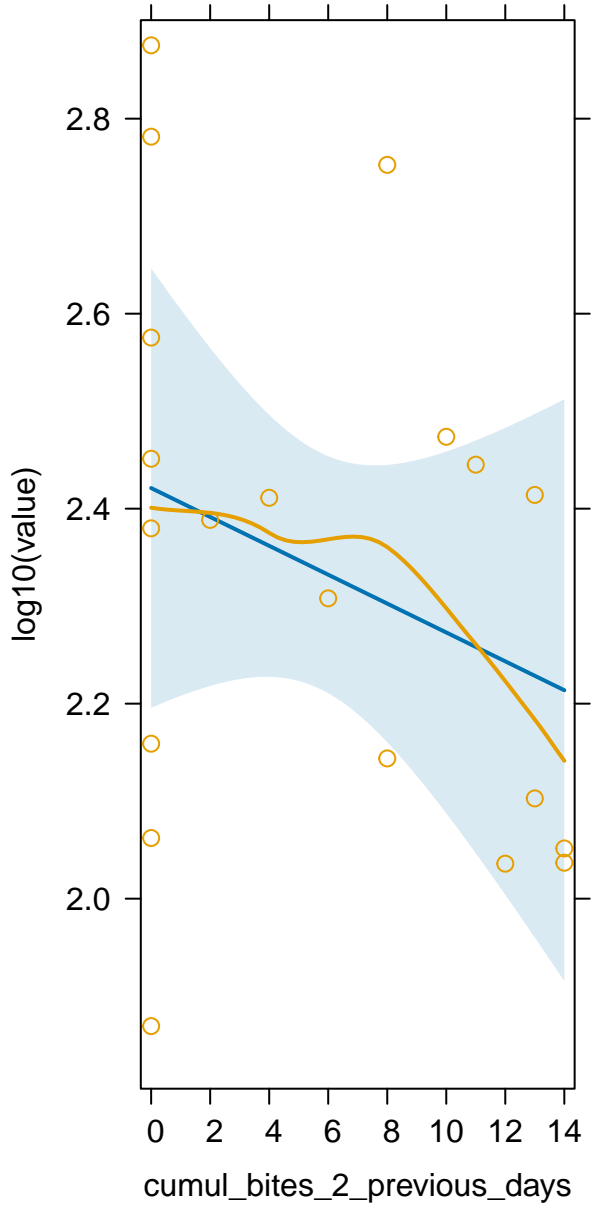
## QQ plot residuals

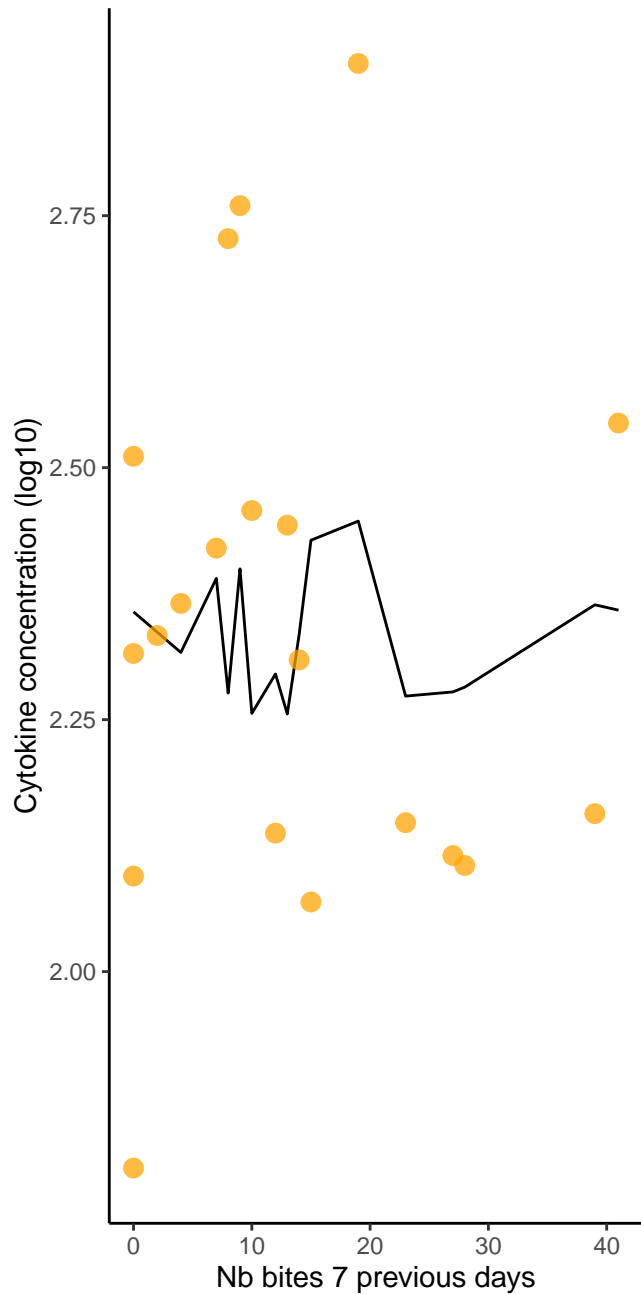
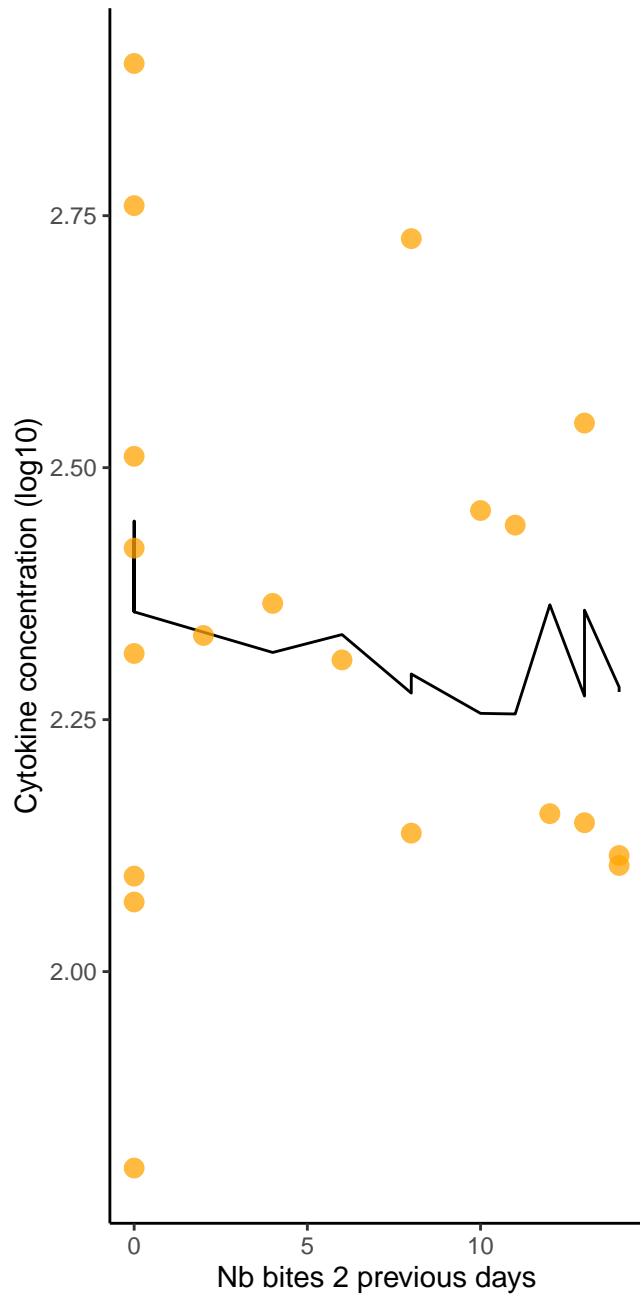


## Residual vs. predicted No significant problems detected



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

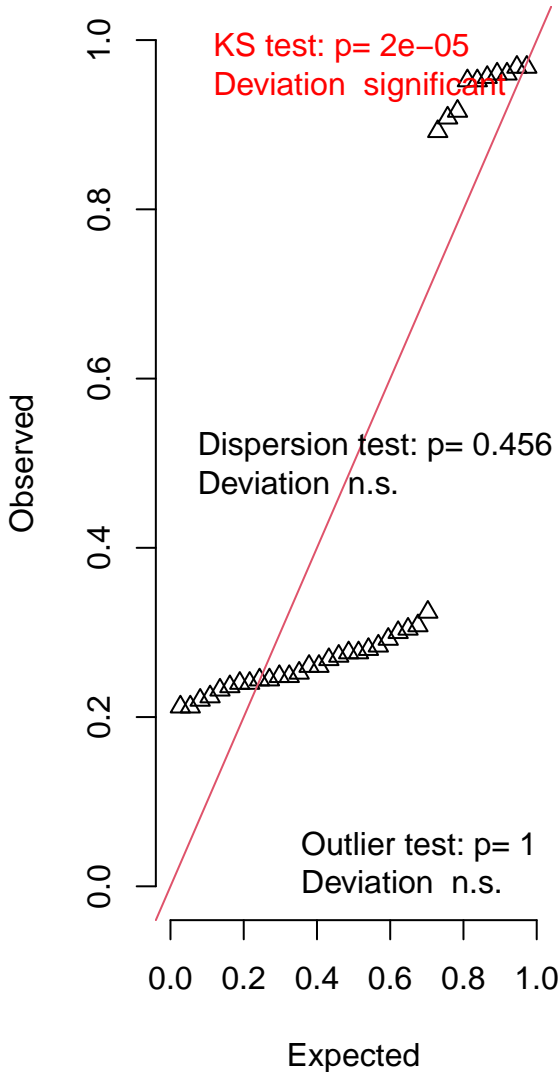
Bites in cyno



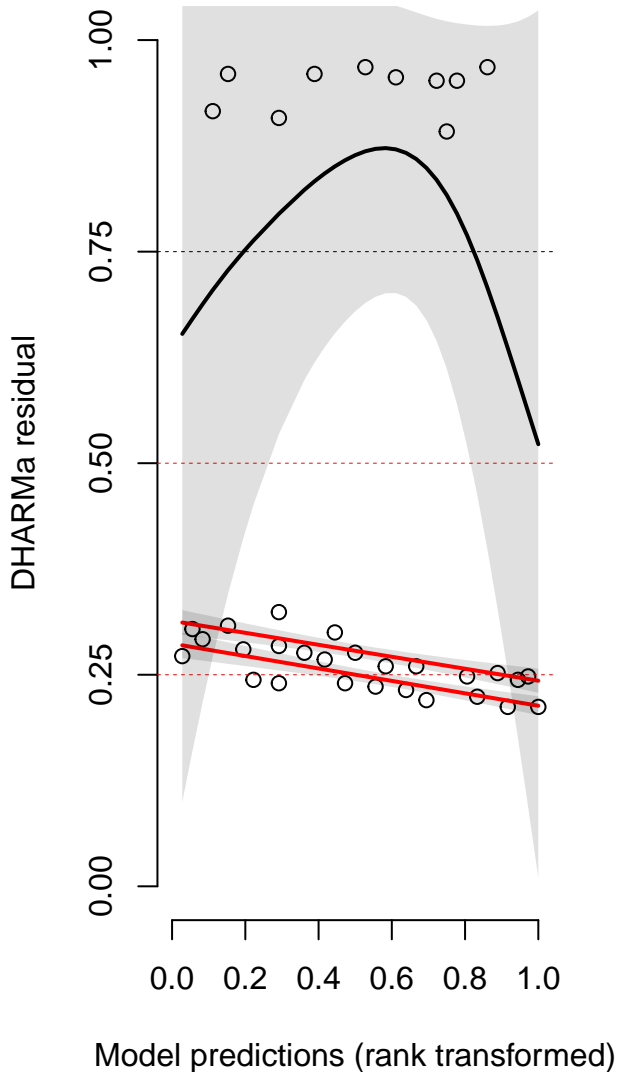
Nb obs : 36

# DHARMA residual

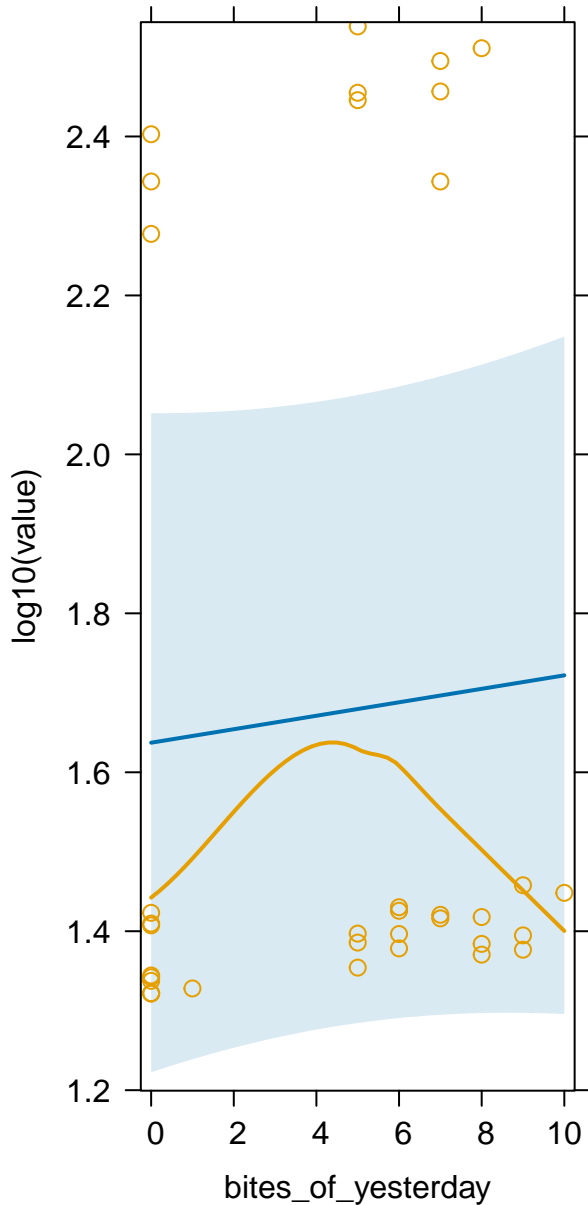
## QQ plot residuals



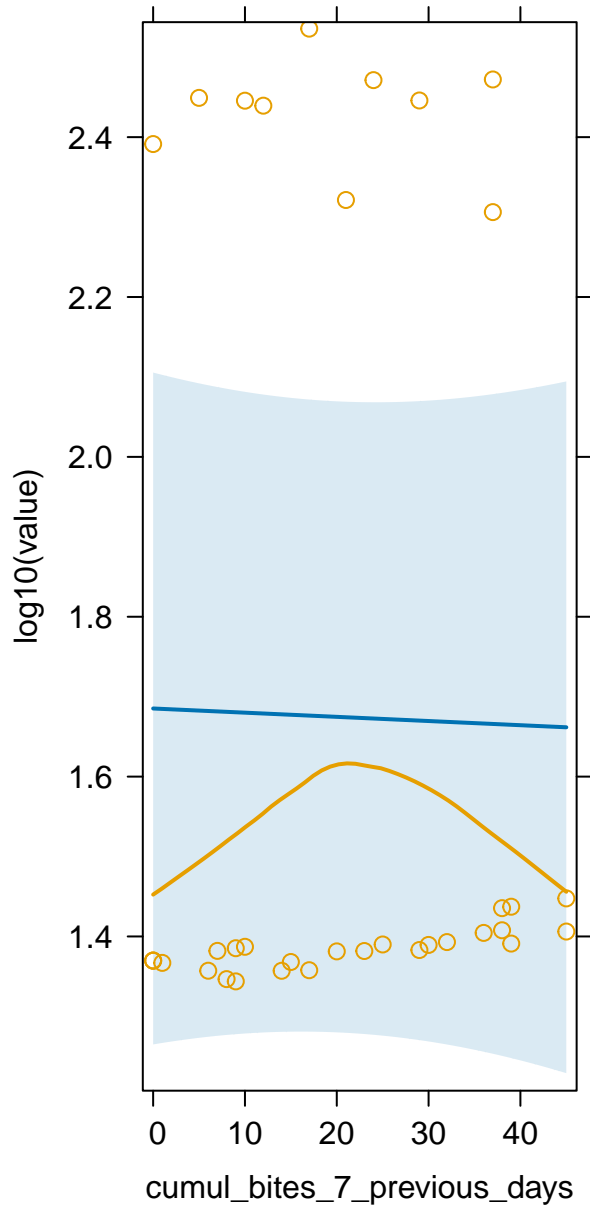
## Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test significant

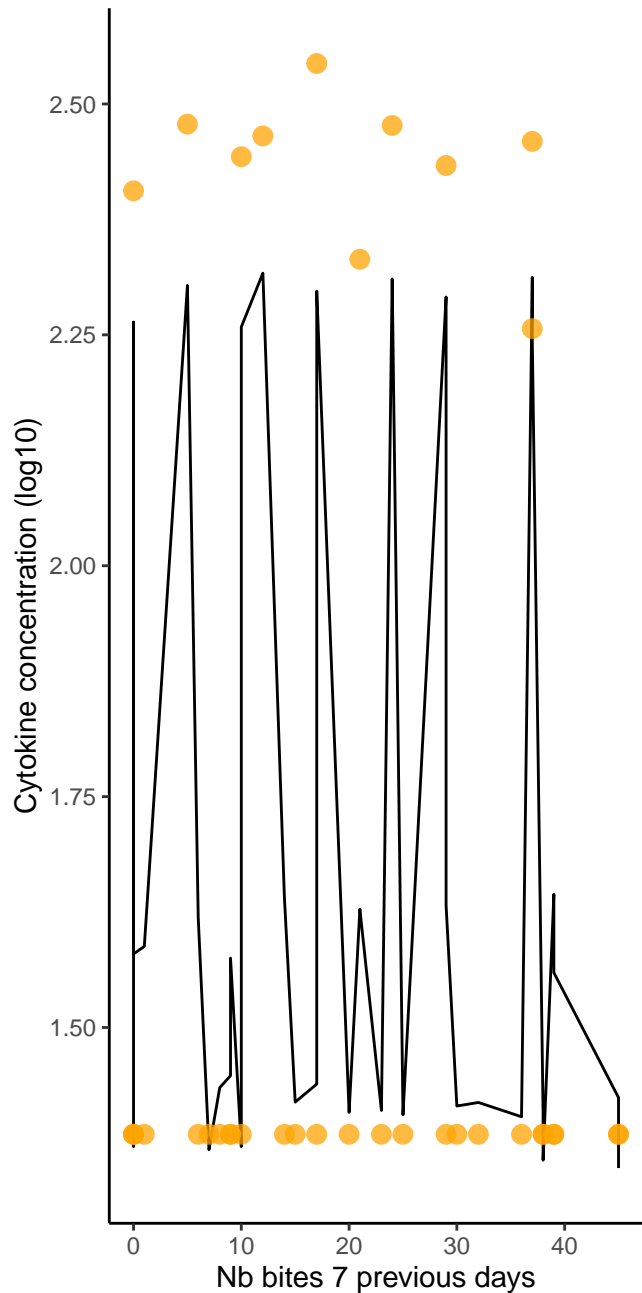
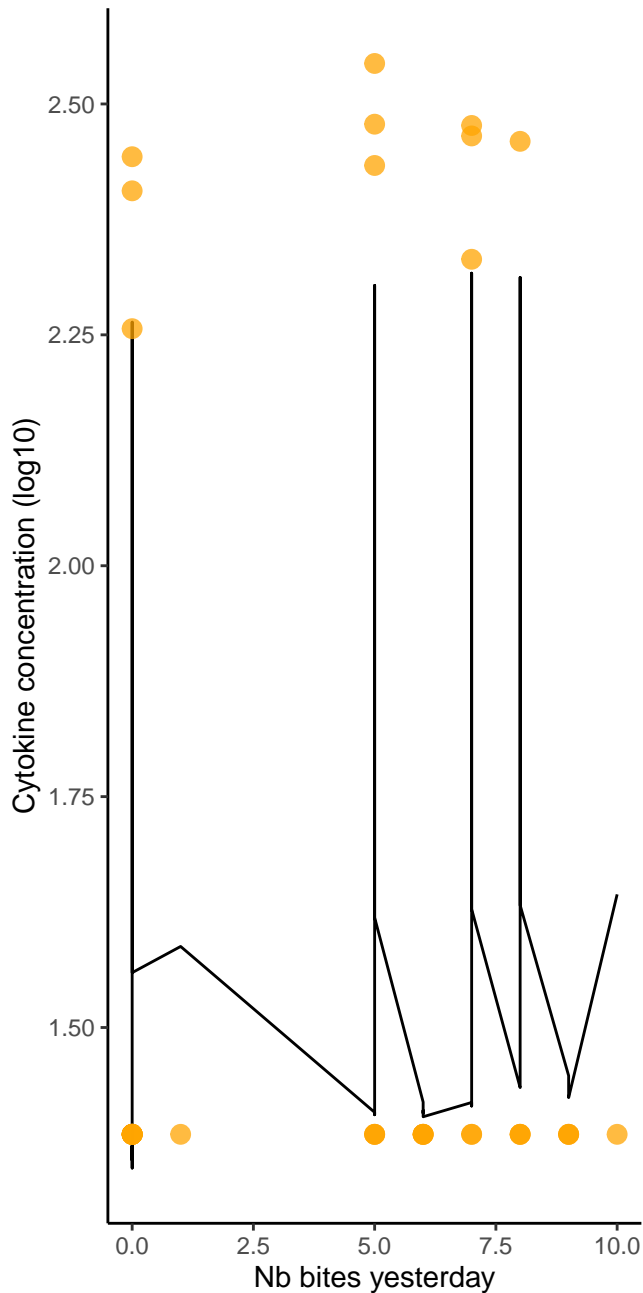


bites\_of\_yesterday effect plot



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	1.10	[1.00, 3.73]	1.05	0.91	[0.27, 1.00]
cumul_bites_7_previous_days	1.10	[1.00, 3.73]	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
32.1	40.1	-11.1	22.1	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.14181	0.3766
	Residual	0.07899	0.2810

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.079

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	1.6477762	0.2096503	7.860	3.85e-15 ***
bites_of_yesterday	0.0084751	0.0141511	0.599	0.549
cumul_bites_7_previous_days	-0.0005227	0.0035124	-0.149	0.882

---

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

```
AICc [1] 34.14871
```

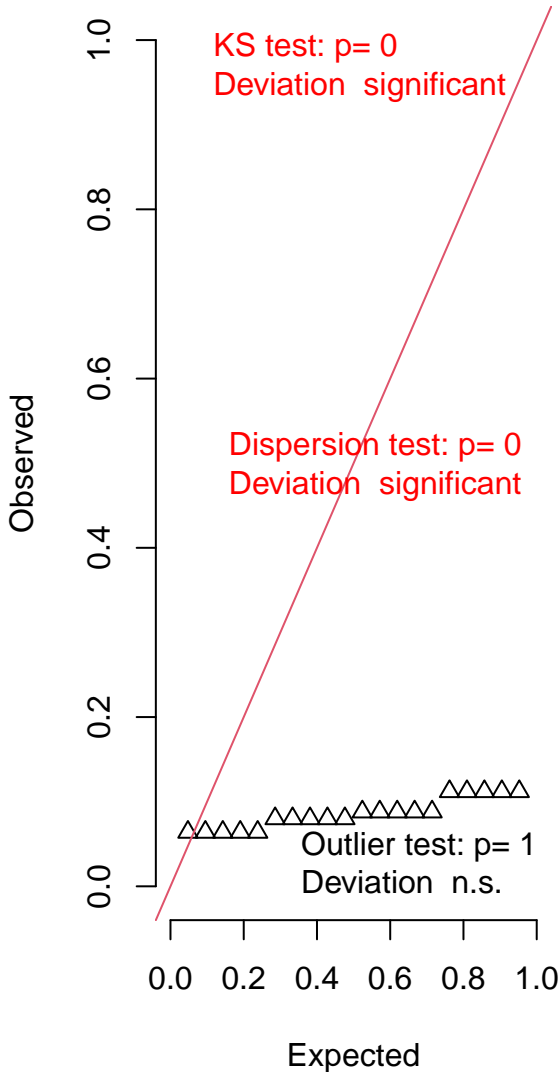
Bites in squirrel



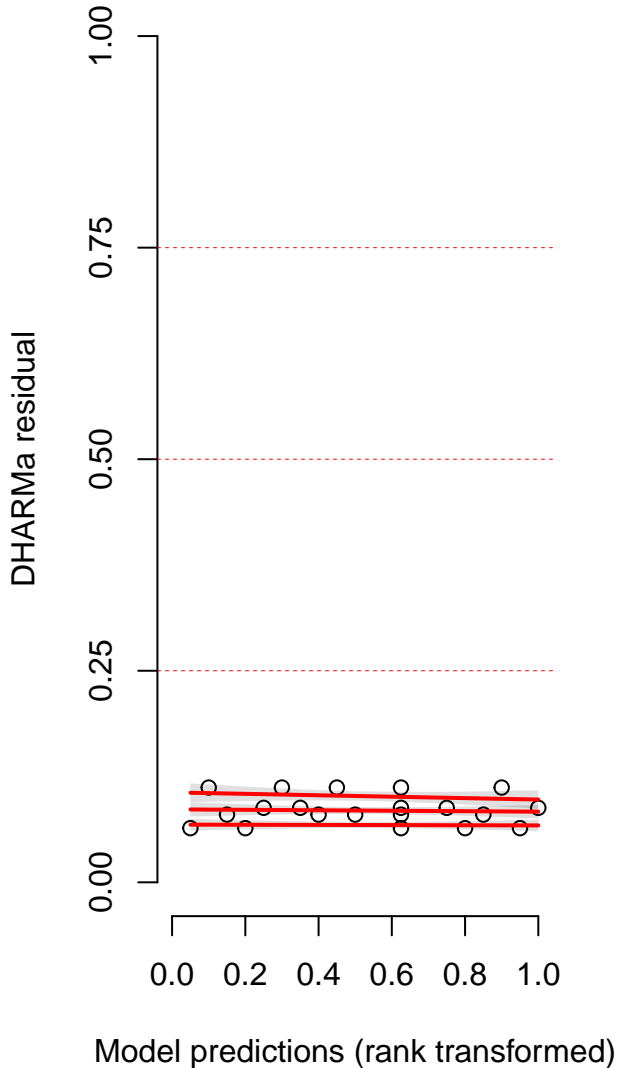
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days

MIG ERROR : 'yscale' incorrect dans la vue

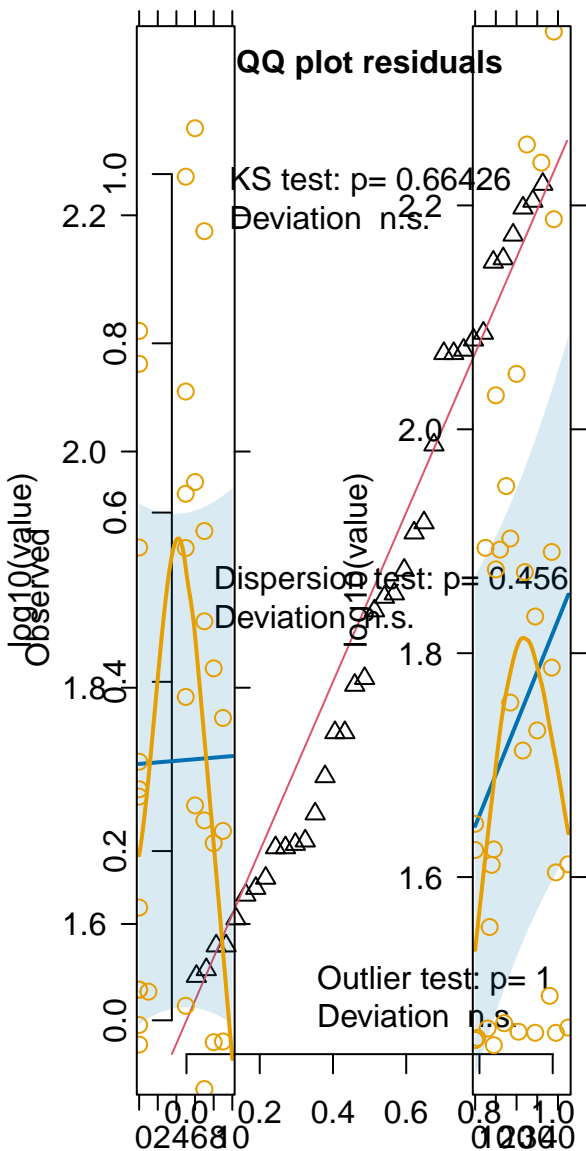
MIP.1a

Bites in cyno

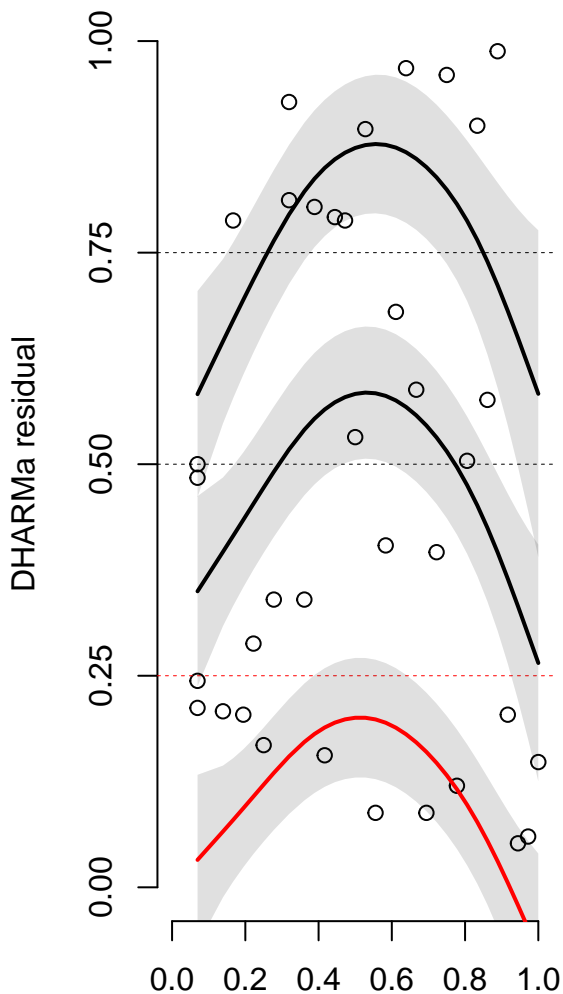
Nb obs : 36

# of yesterday bites 7 previous days effect plot

DHARMA residual

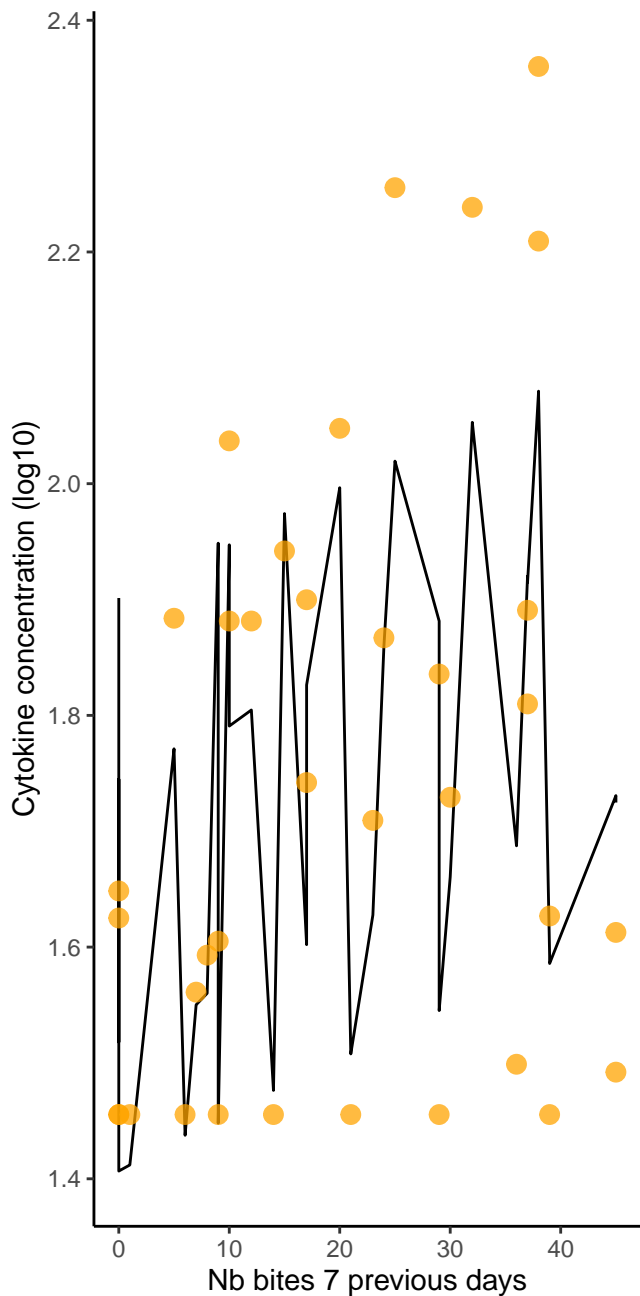
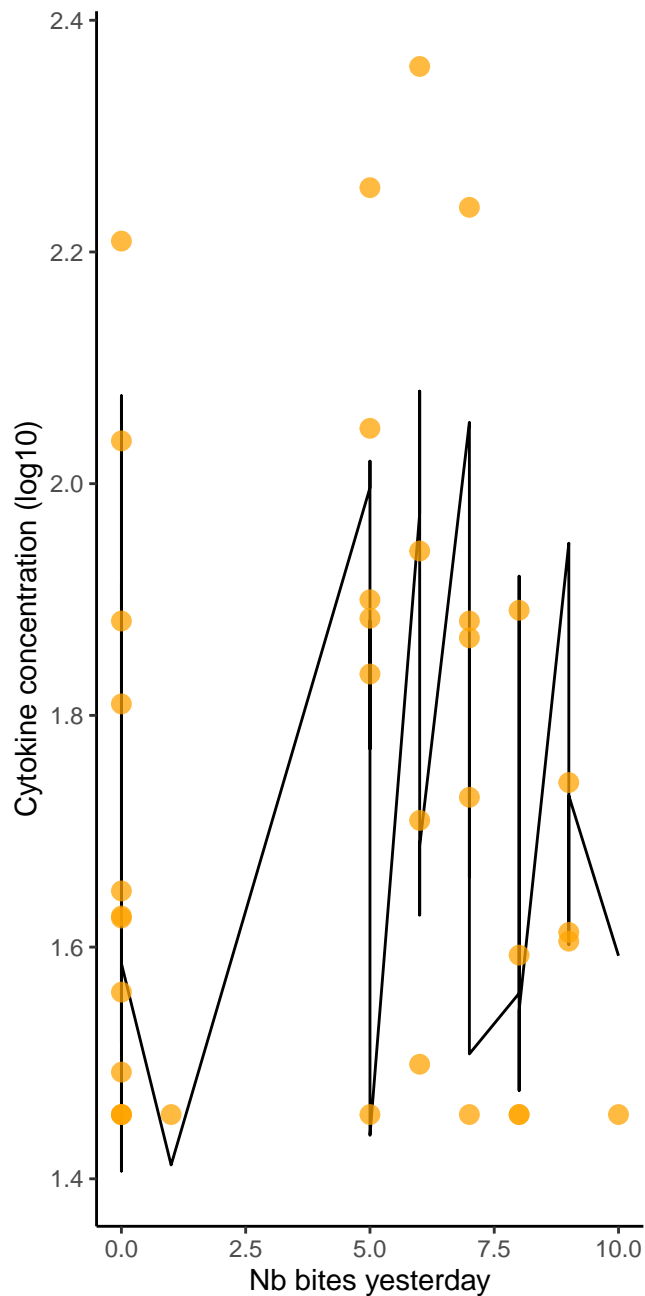


**Residual vs. predicted**  
**Quantile deviations detected (red curves)**  
**Combined adjusted quantile test significant**



bites\_of\_yesterday expected\_bites\_7\_previous\_days





# Check for Multicollinearity

Low Correlation

Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
bites_of_yesterday	1.10	[1.00, 3.70]	1.05	0.91	[0.27, 1.00]
cumul_bites_7_previous_days	1.10	[1.00, 3.70]	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
-11.4	-3.5	10.7	-21.4	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.03961	0.199
Residual		0.02372	0.154

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0237

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	1.6427120	0.1115914	14.721	<2e-16 ***
bites_of_yesterday	0.0006644	0.0077553	0.086	0.932
cumul_bites_7_previous_days	0.0045940	0.0019242	2.387	0.017 *

---

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

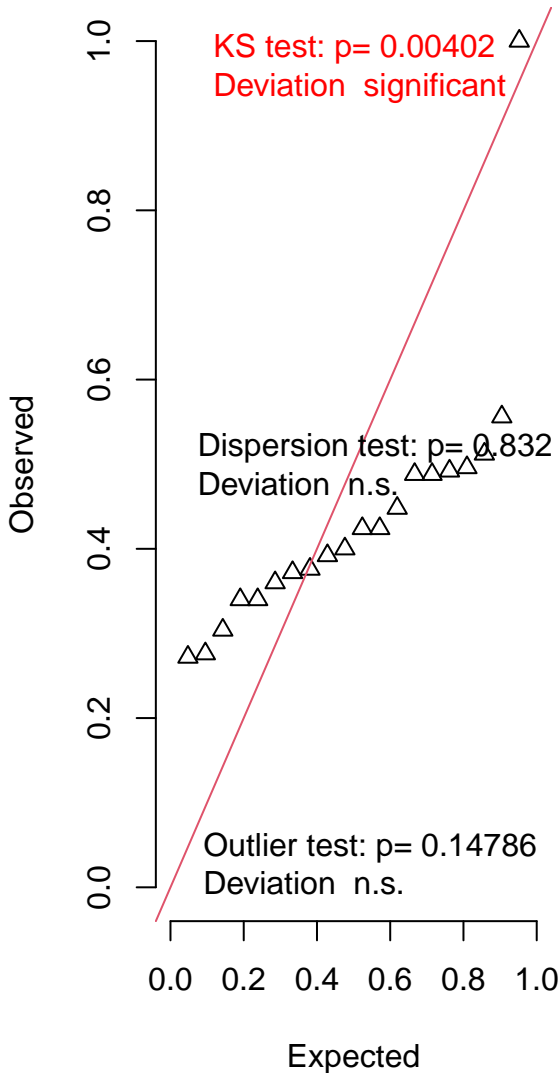
AICc [1] -9.436695

Bites in squirrel

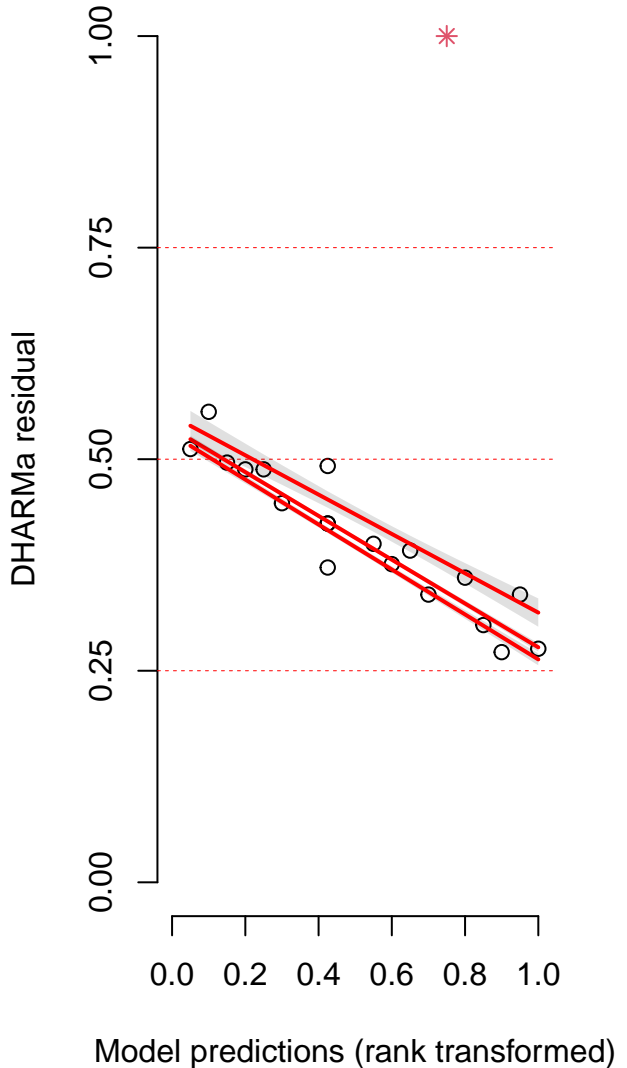
Nb obs : 20

# DHARMA residual

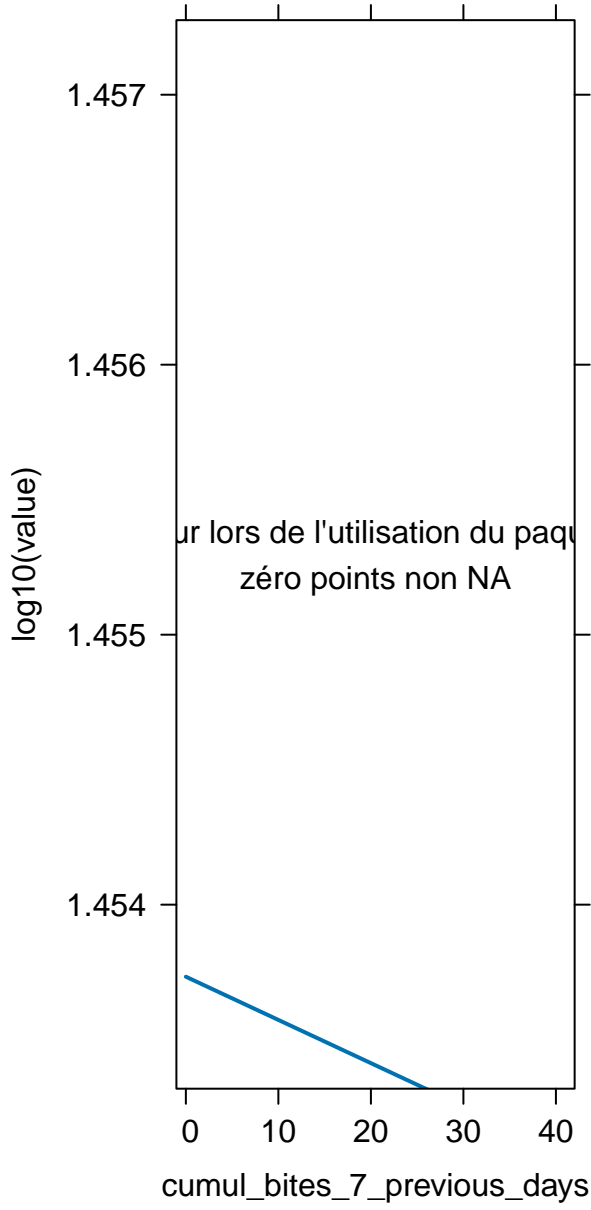
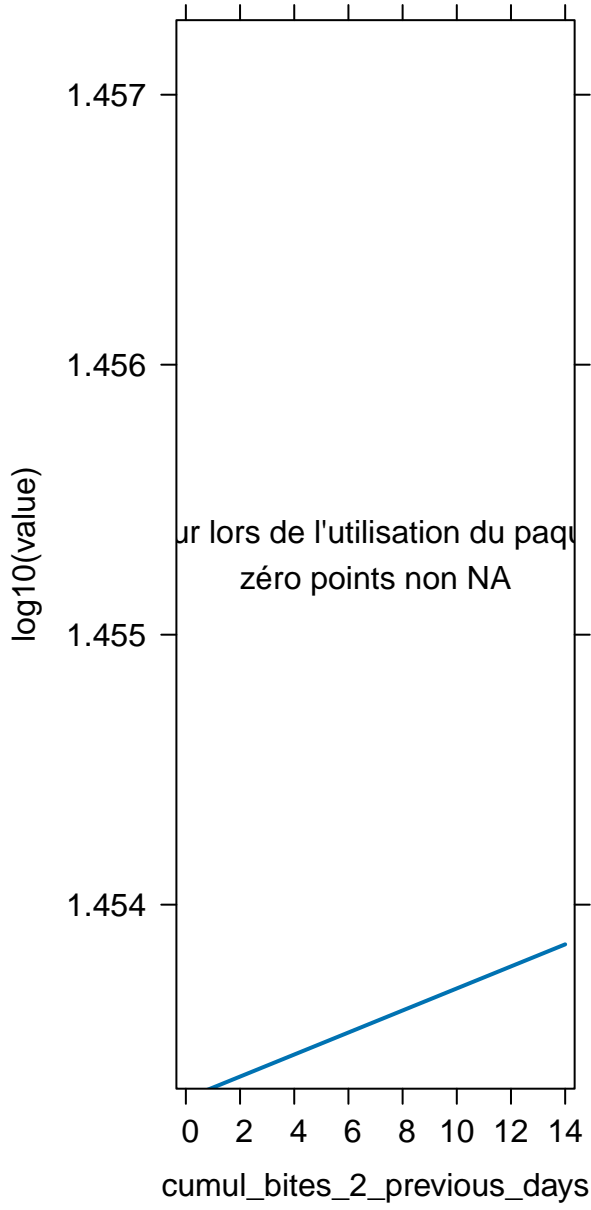
## QQ plot residuals



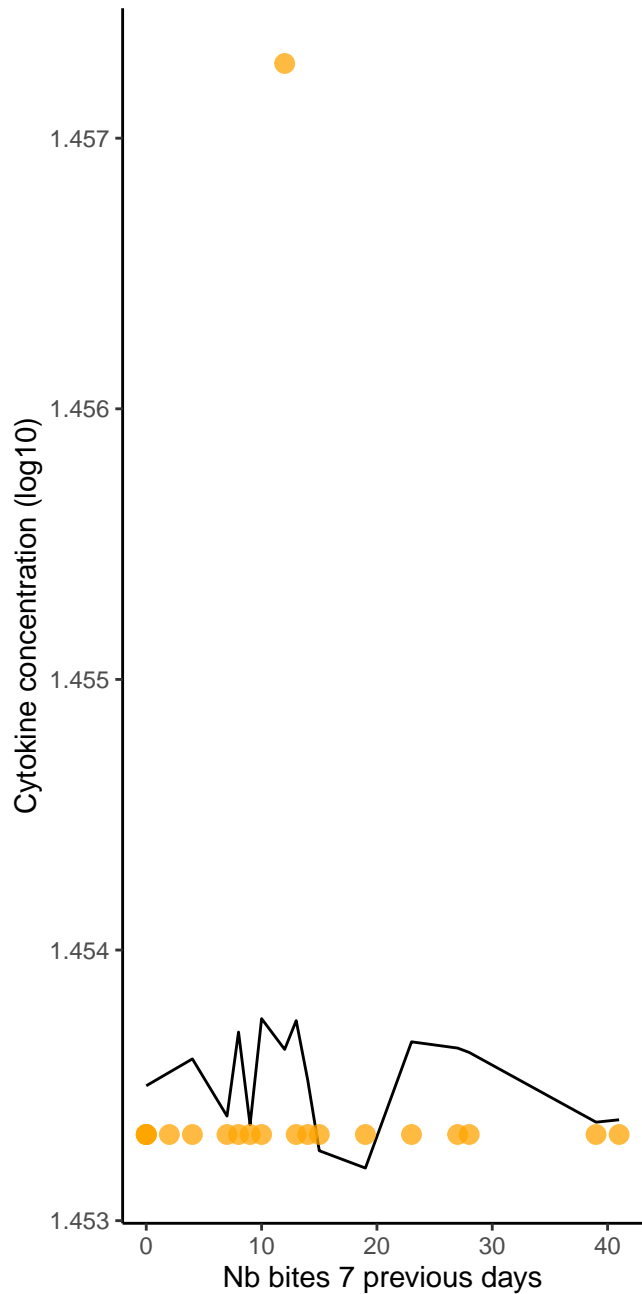
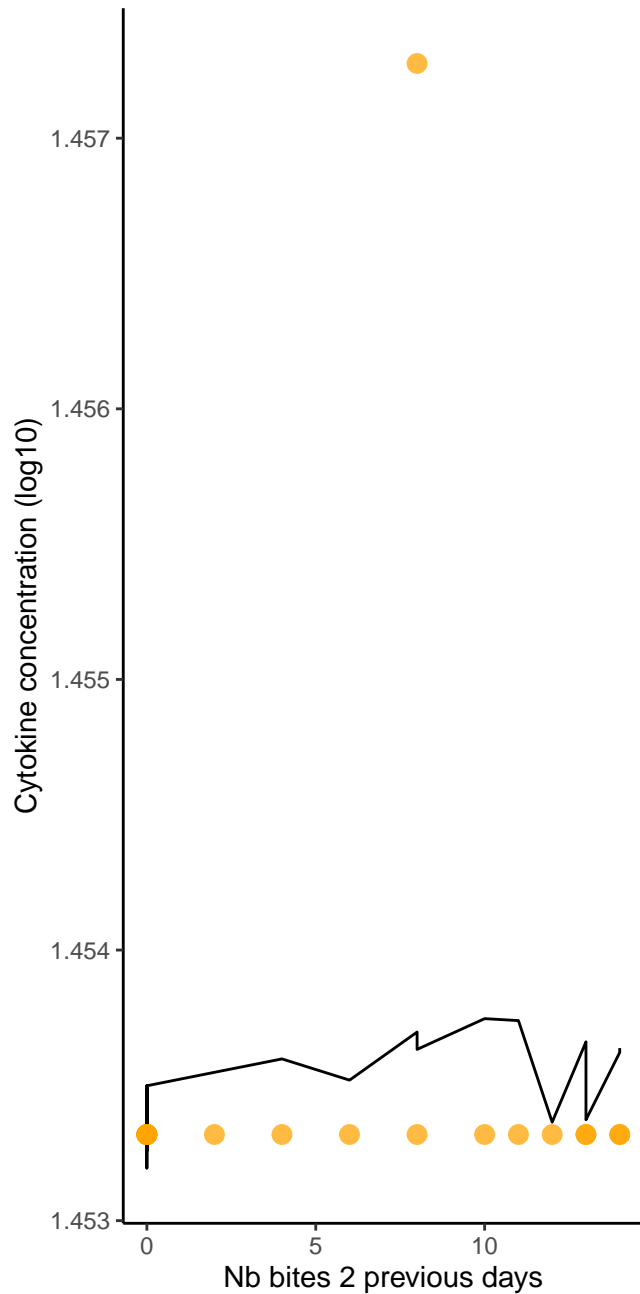
## Residual vs. predicted Quantile deviations detected (red curves) Combined adjusted quantile test significant



cumul\_bites\_2\_previous\_days effect plot cumul\_bites\_7\_previous\_days effect plot







MIP.1a ERROR : indice hors limites

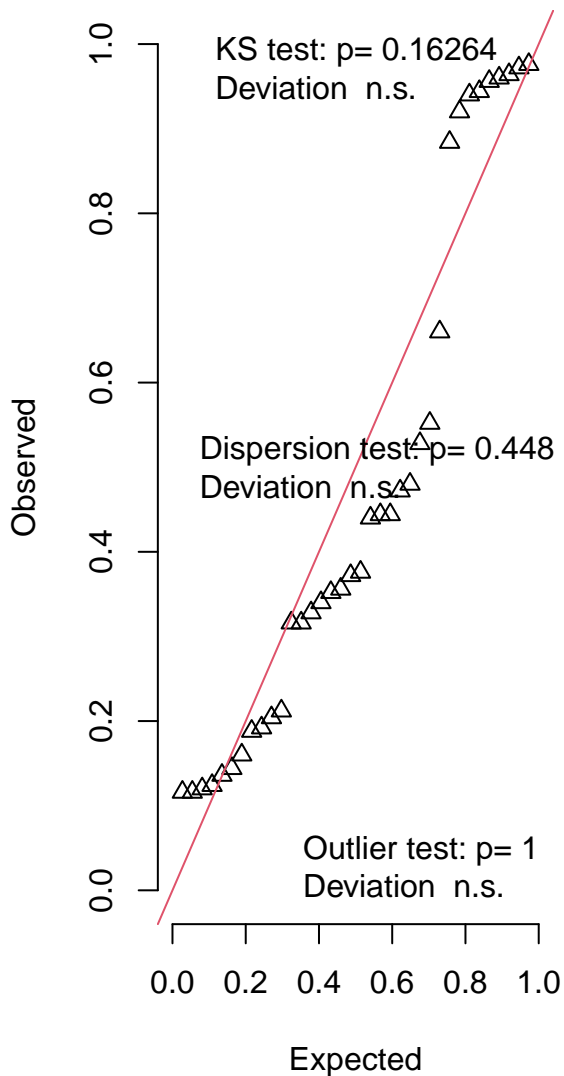
MIP.1B

Bites in cyno

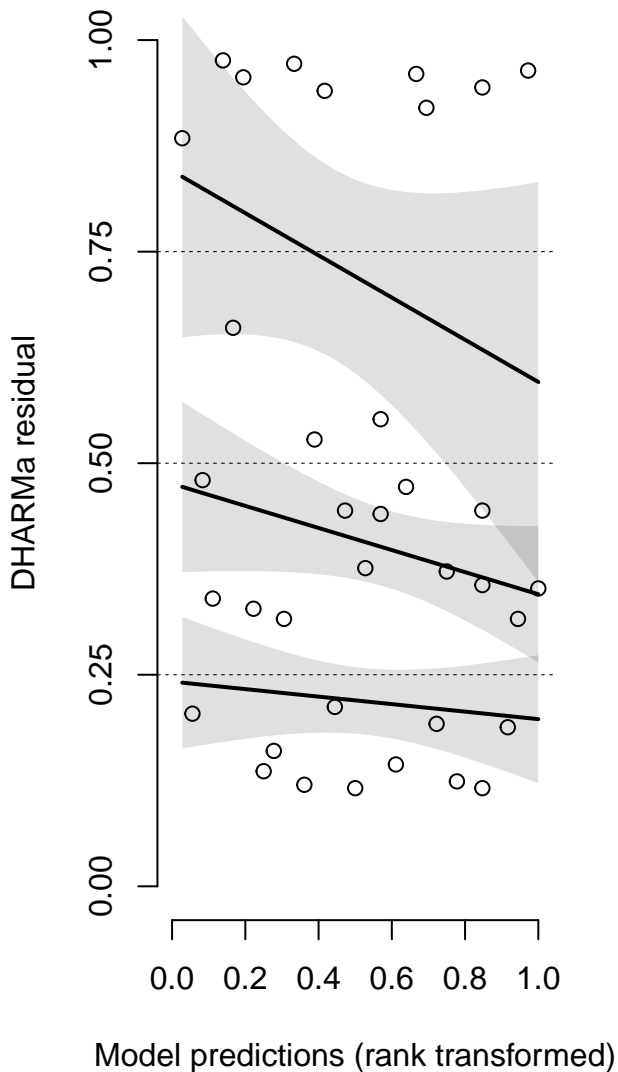
Nb obs : 36

# DHARMA residual

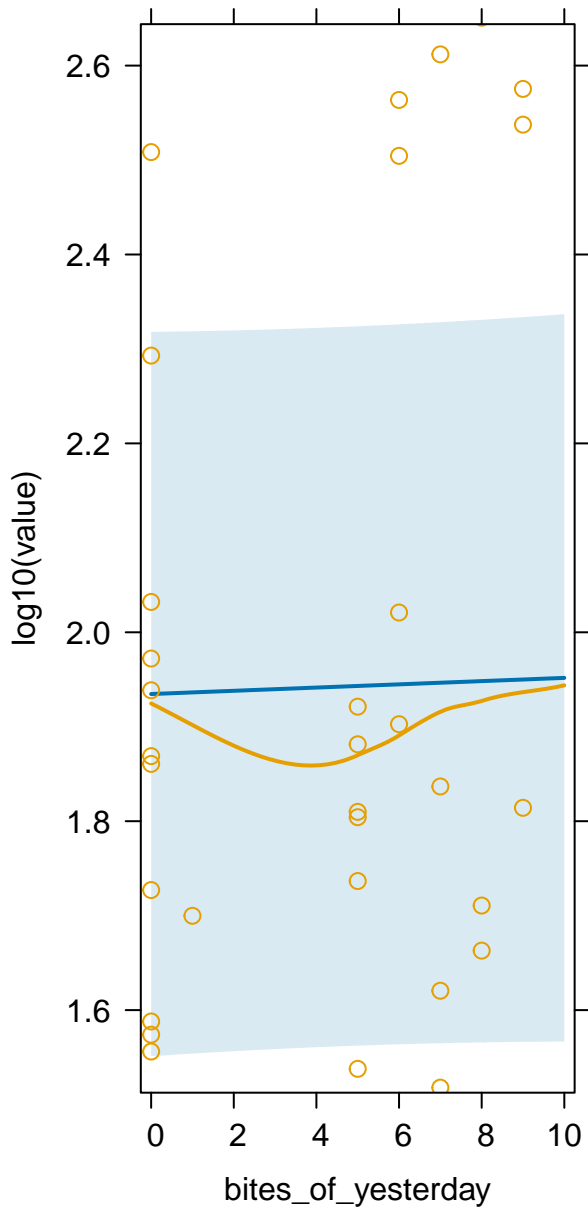
## QQ plot residuals



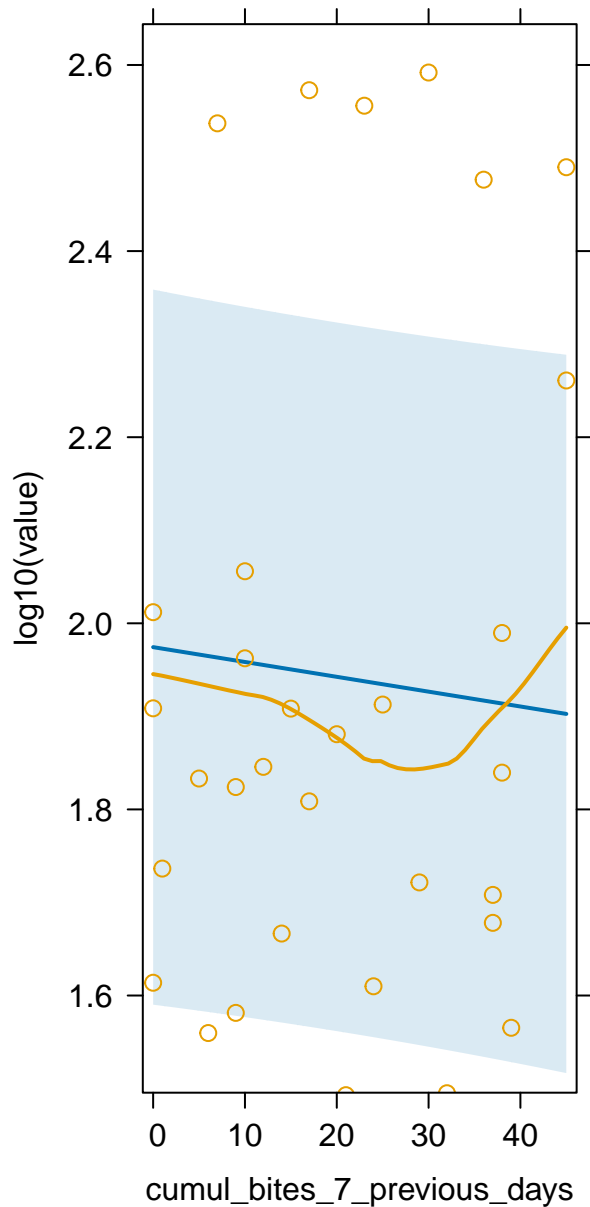
## Residual vs. predicted No significant problems detected

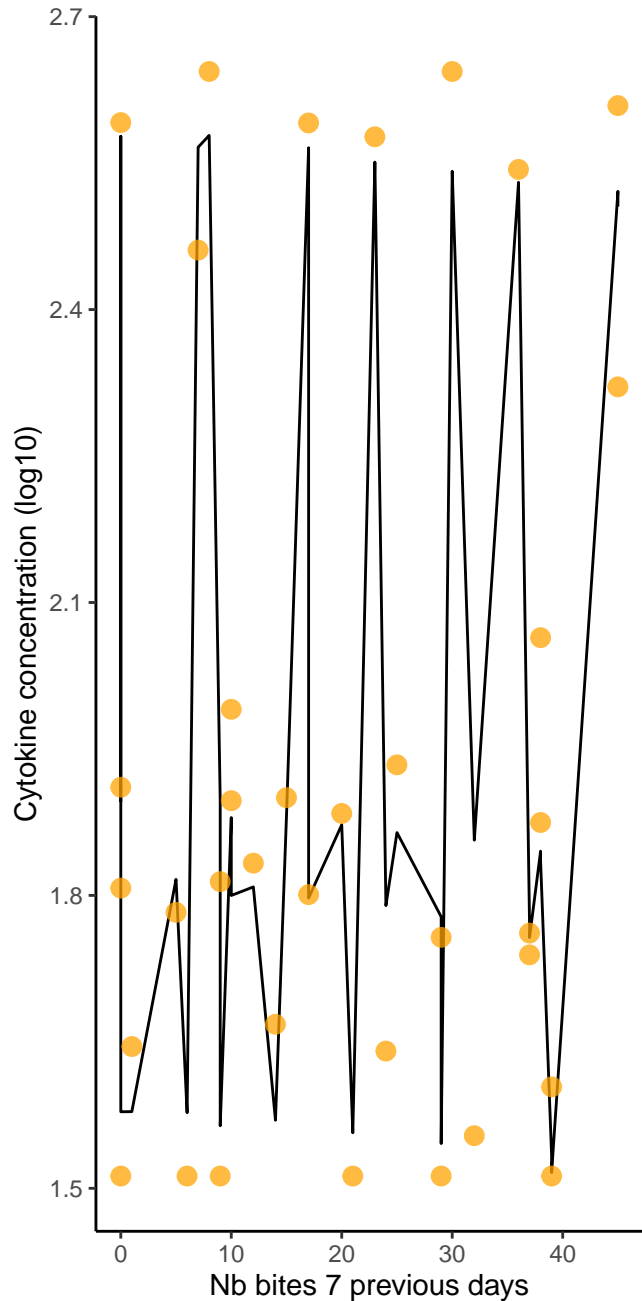
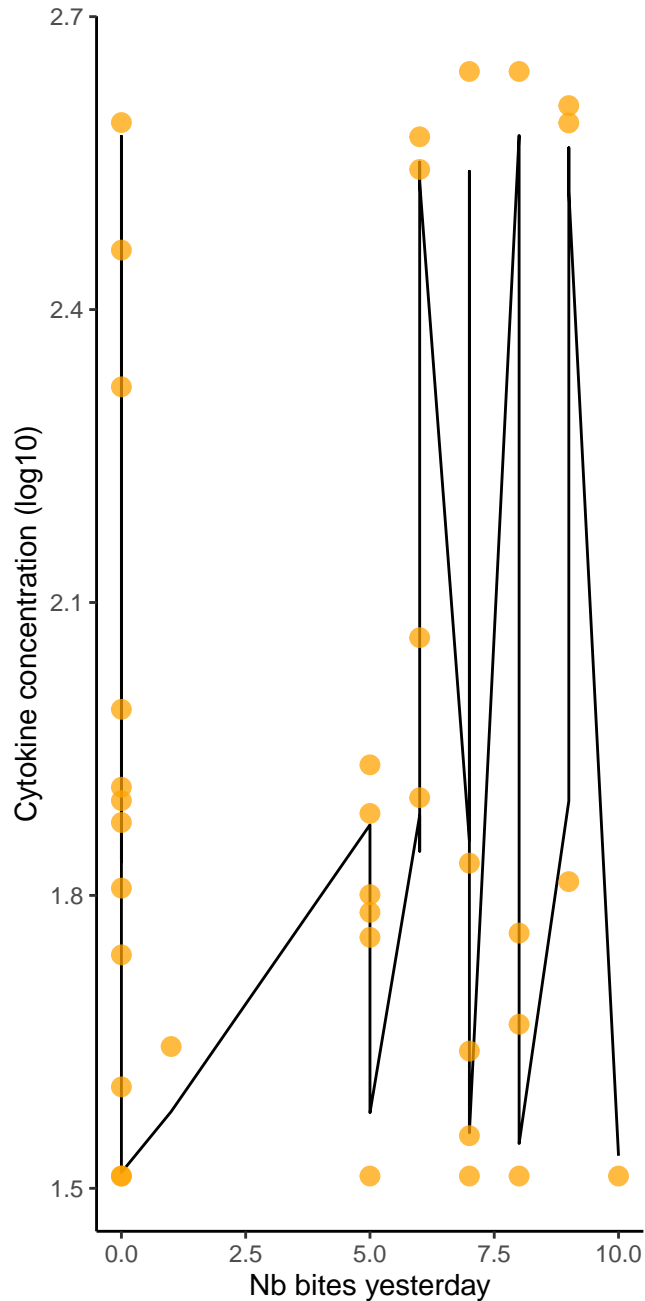


bites\_of\_yesterday effect plot



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, 3.73]	1.05	0.91	[0.27, 1.00]
cumul_bites_7_previous_days	1.10	[1.00, 3.73]	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
-34.1	-26.2	22.0	-44.1	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.13899	0.3728
	Residual	0.01006	0.1003

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0101

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	1.966838	0.189294	10.390	<2e-16 ***
bites_of_yesterday	0.001708	0.005051	0.338	0.735
cumul_bites_7_previous_days	-0.001595	0.001254	-1.271	0.204

---

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

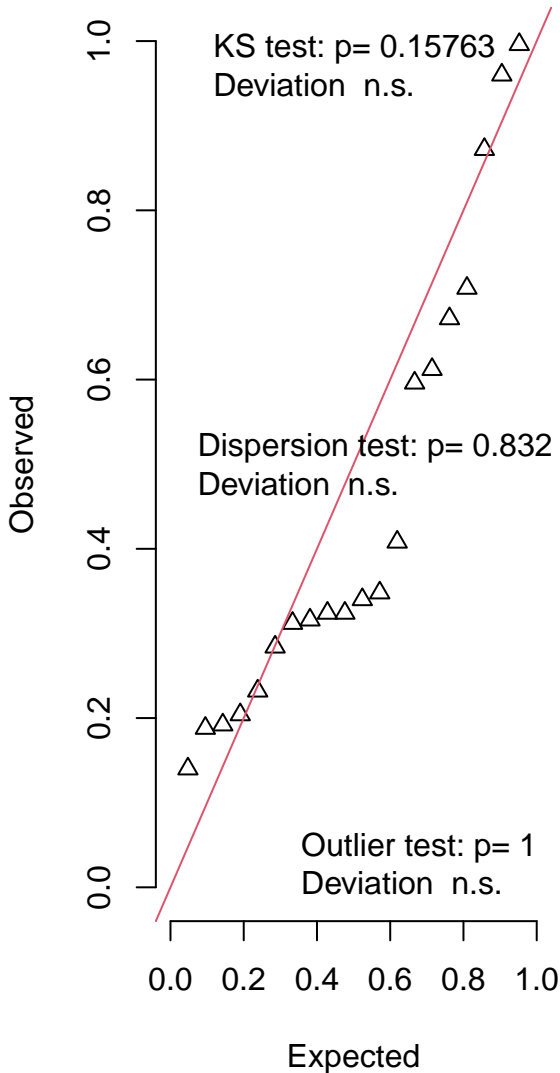
AICc [1] -32.07456

Bites in squirrel

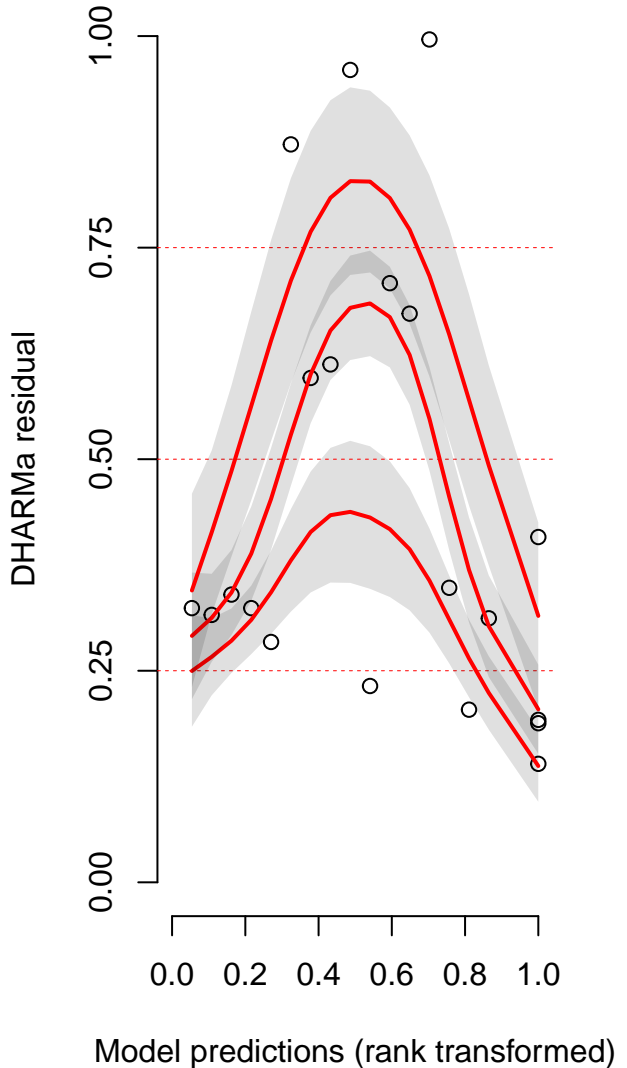
Nb obs : 20

## DHARMA residual

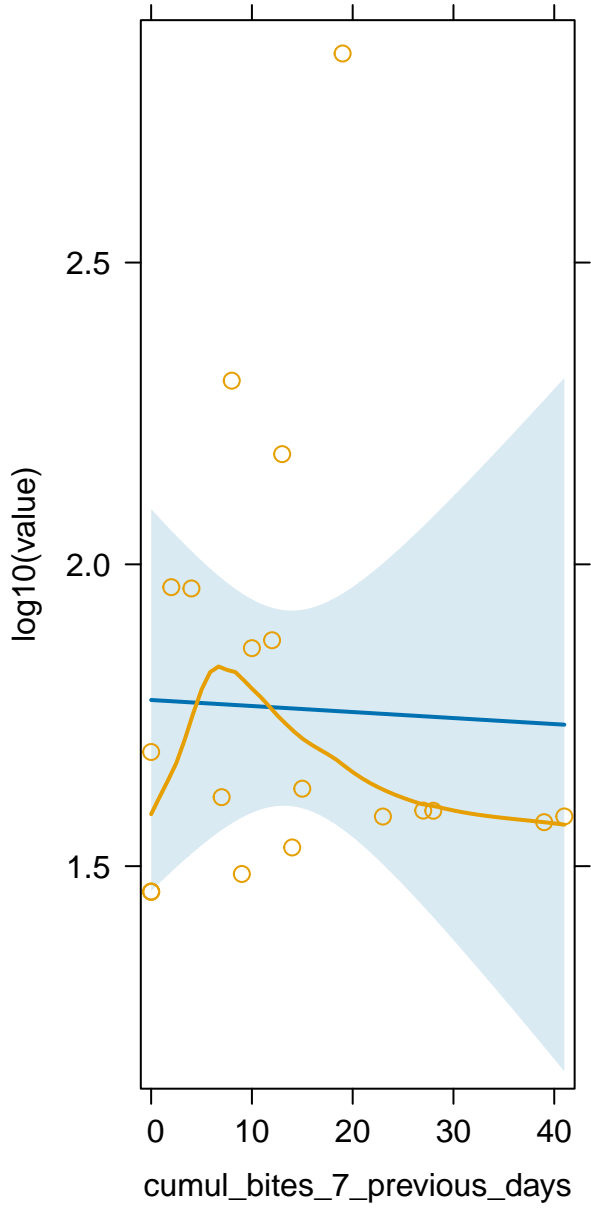
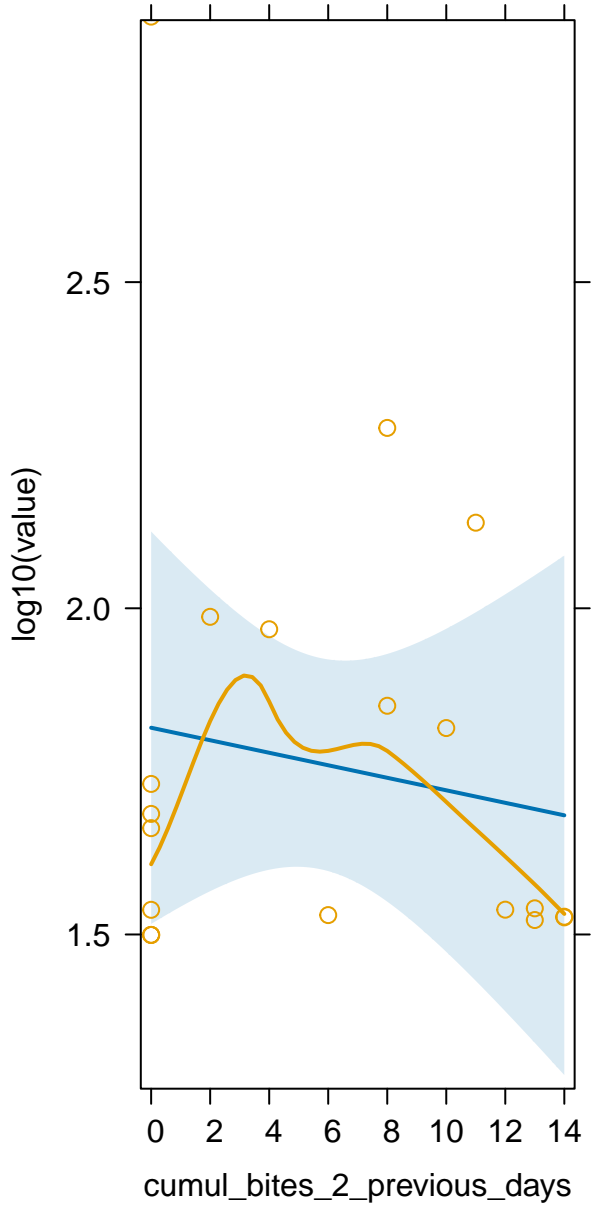
### QQ plot residuals

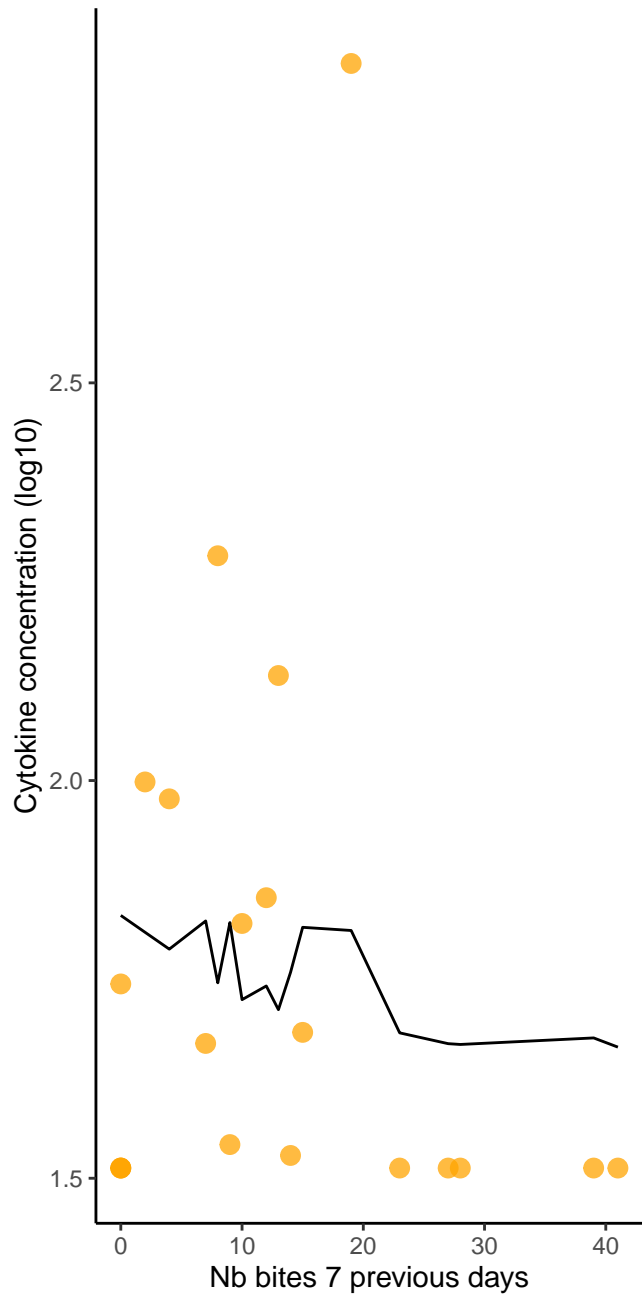
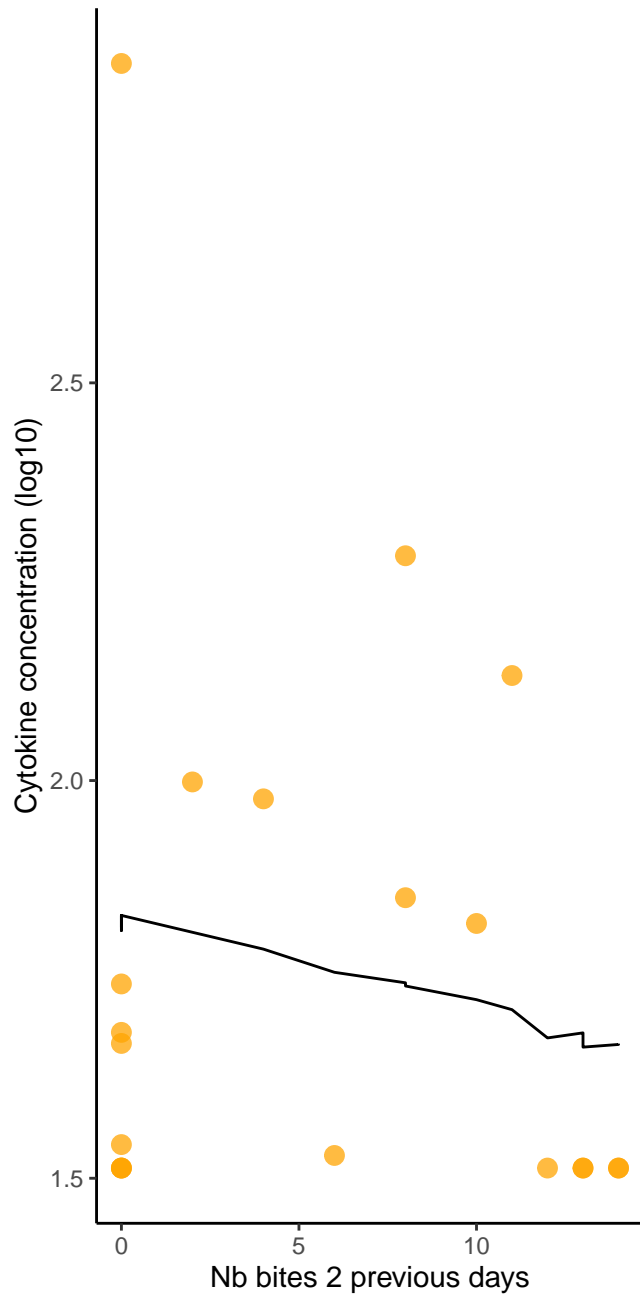


**Residual vs. predicted**  
**Quantile deviations detected (red curves)**  
**Combined adjusted quantile test significant**



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	2.29	[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
      24      29      -7      14      15

Random effects:

Conditional model:
Groups   Name      Variance Std.Dev.
ID       (Intercept) 6.215e-11 7.884e-06
Residual                1.178e-01 3.432e-01
Number of obs: 20, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.118

Conditional model:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)   1.8304344  0.1170035  15.644  <2e-16 ***
cumul_bites_2_previous_days -0.0095924  0.0209013  -0.459   0.646
cumul_bites_7_previous_days -0.0009973  0.0095148  -0.105   0.917
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

```
AICc [1] 28.26341
```

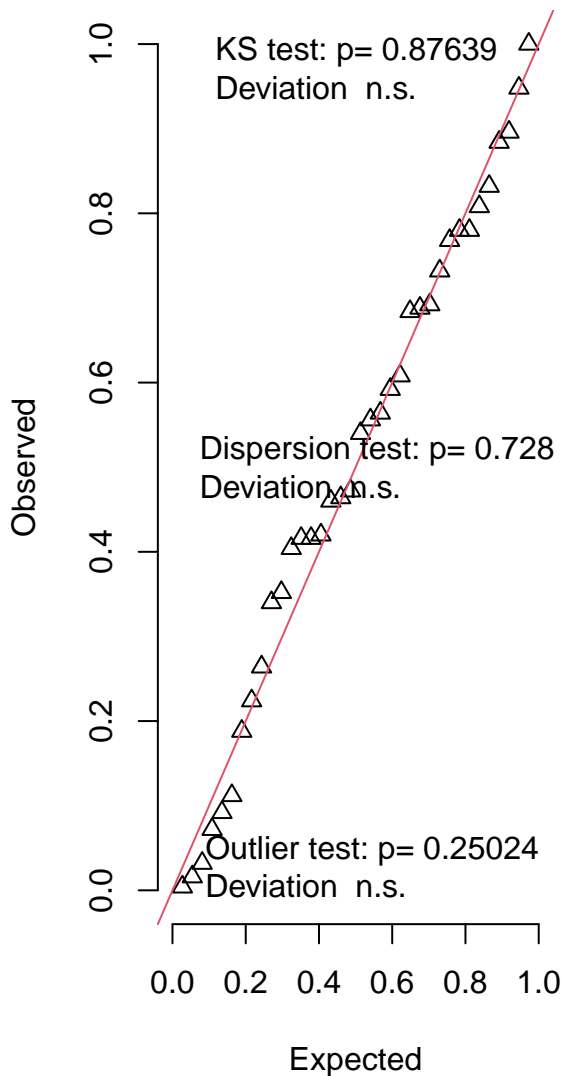
RANTES

Bites in cyno

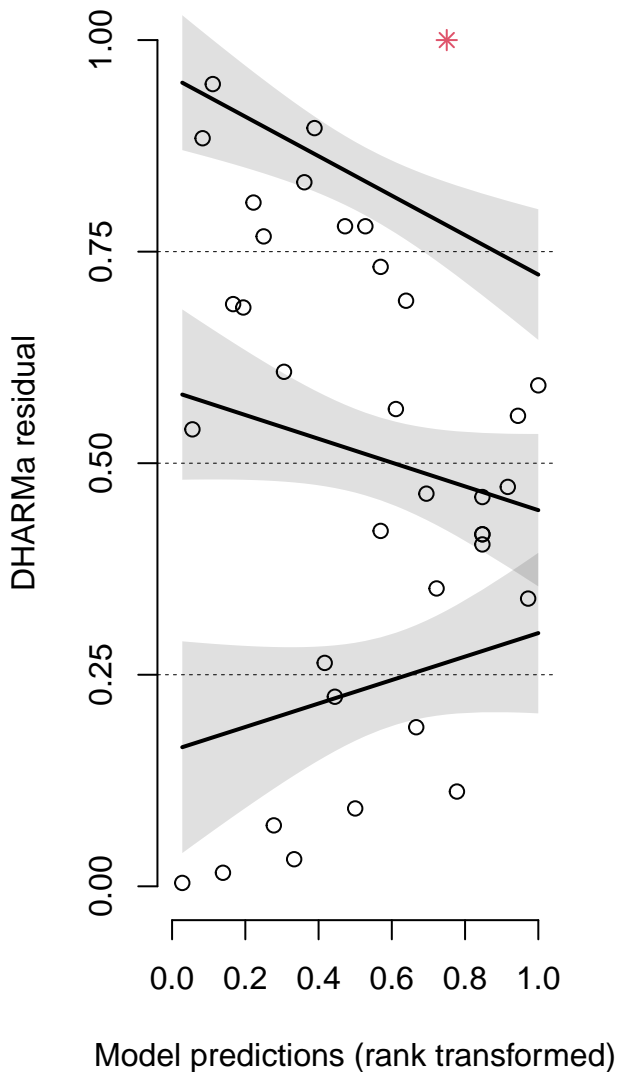
Nb obs : 36

# DHARMA residual

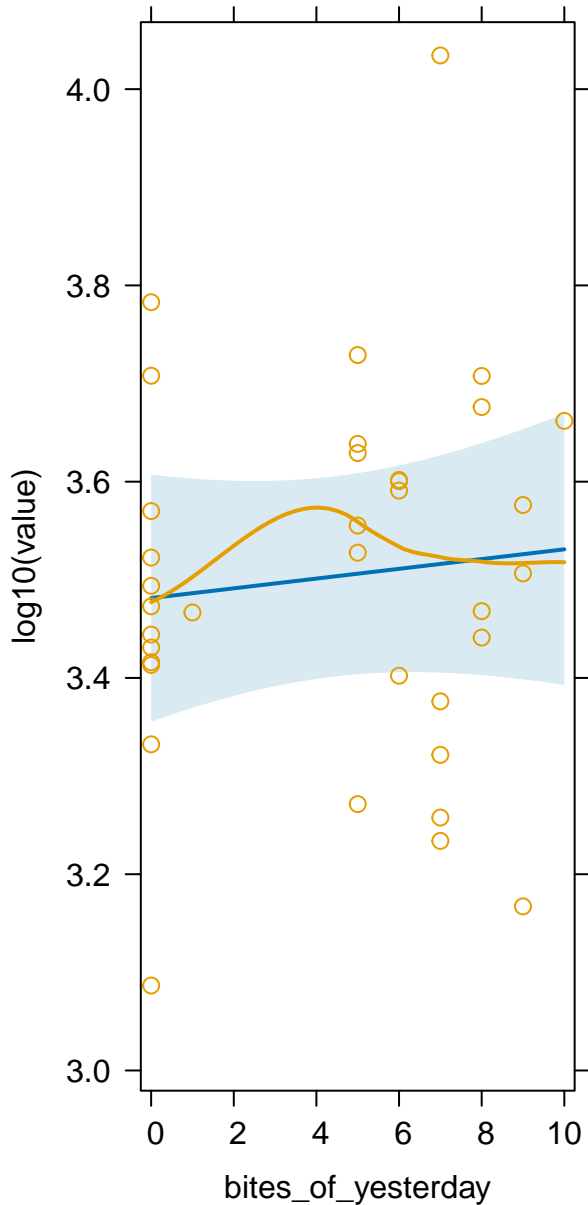
## QQ plot residuals



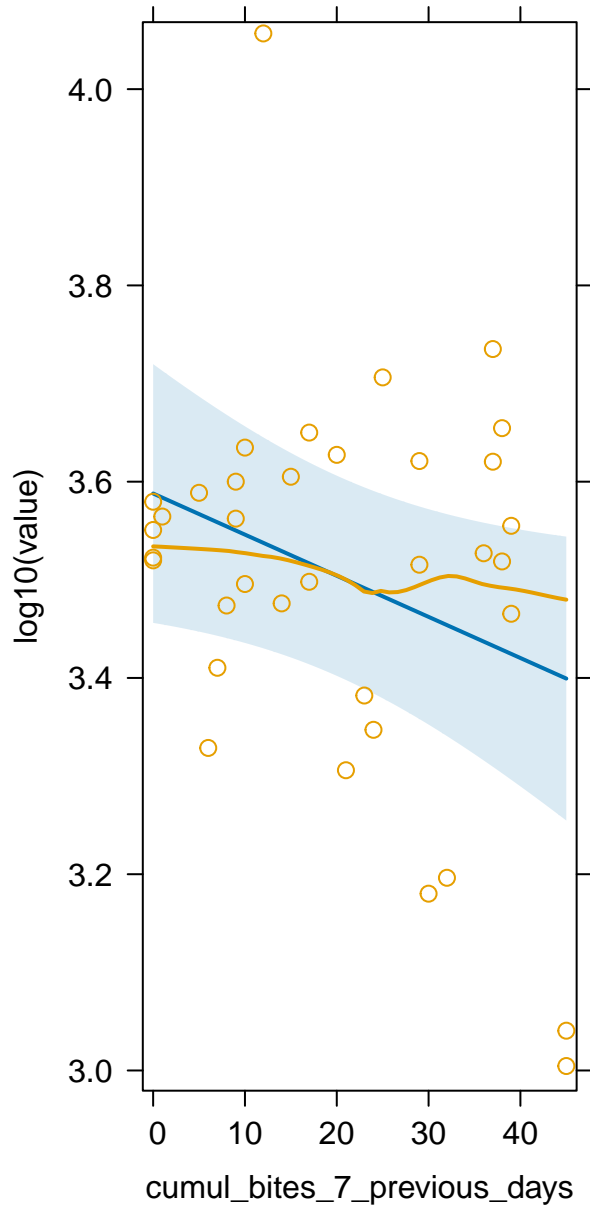
## Residual vs. predicted No significant problems detected



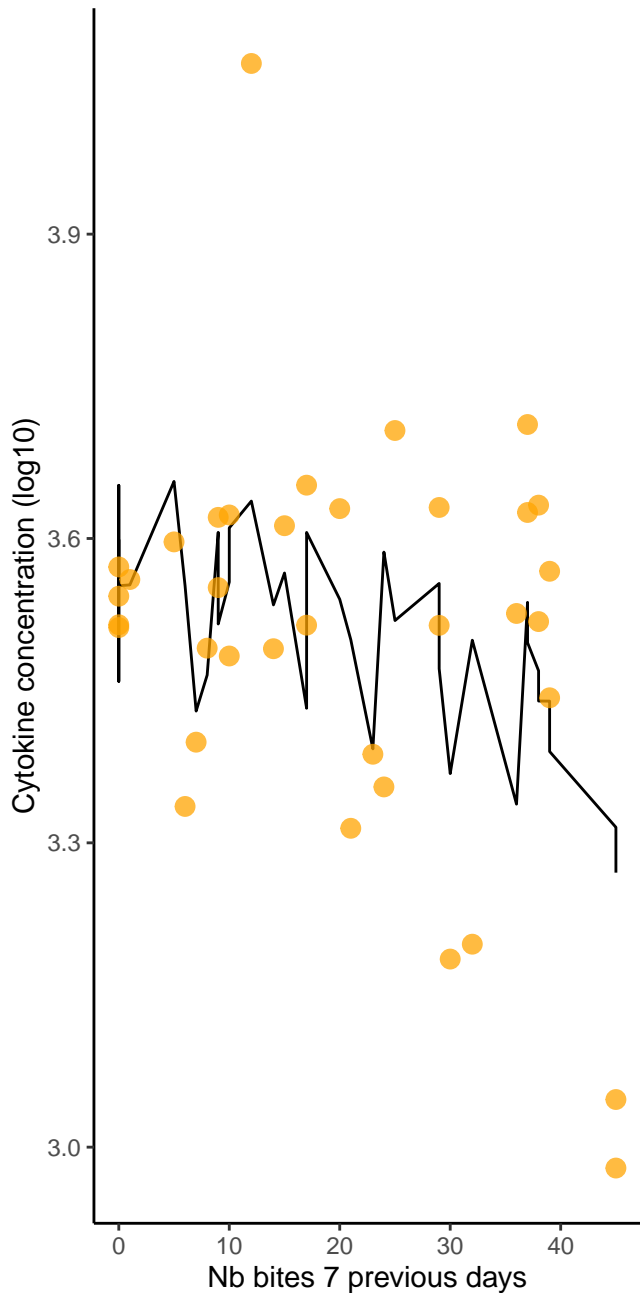
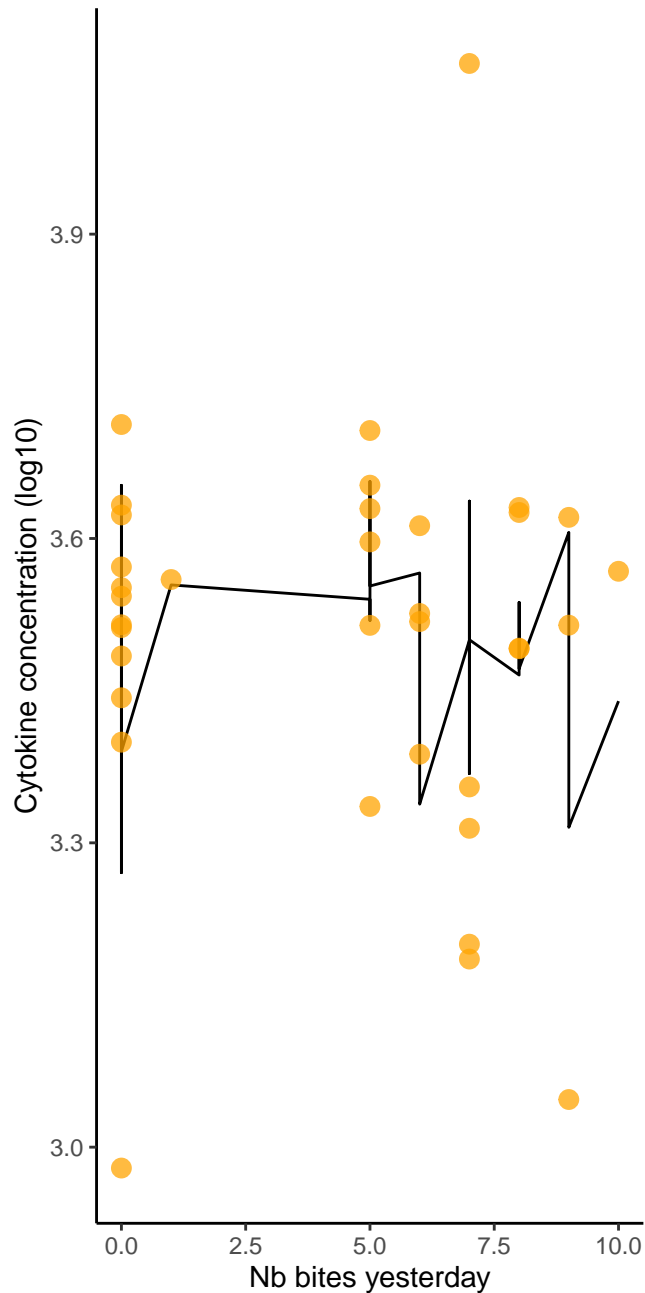
bites\_of\_yesterday effect plot



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 *

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

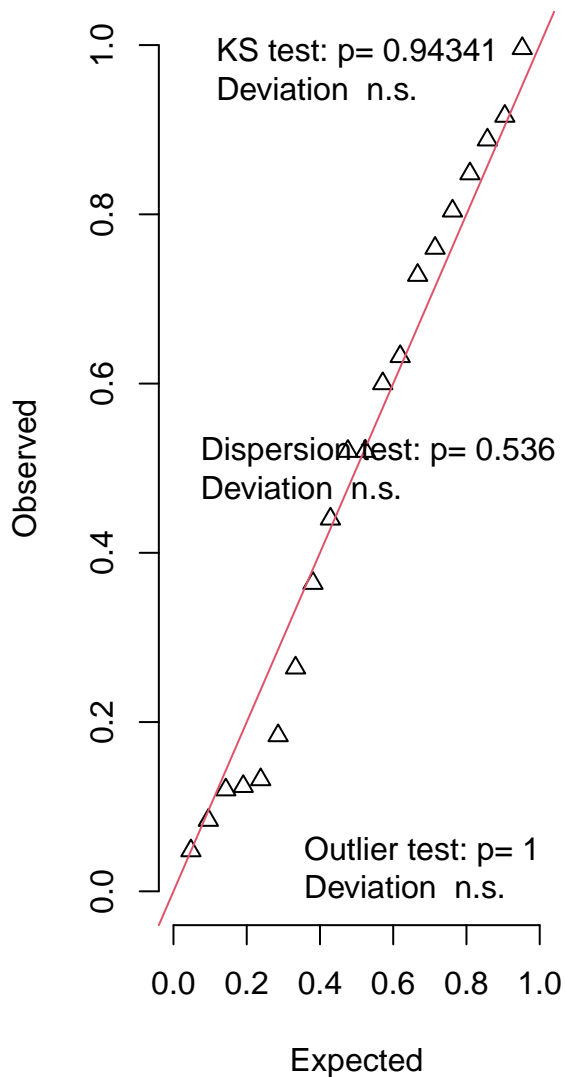
AICc [ 1 ] -11.62673

Bites in squirrel

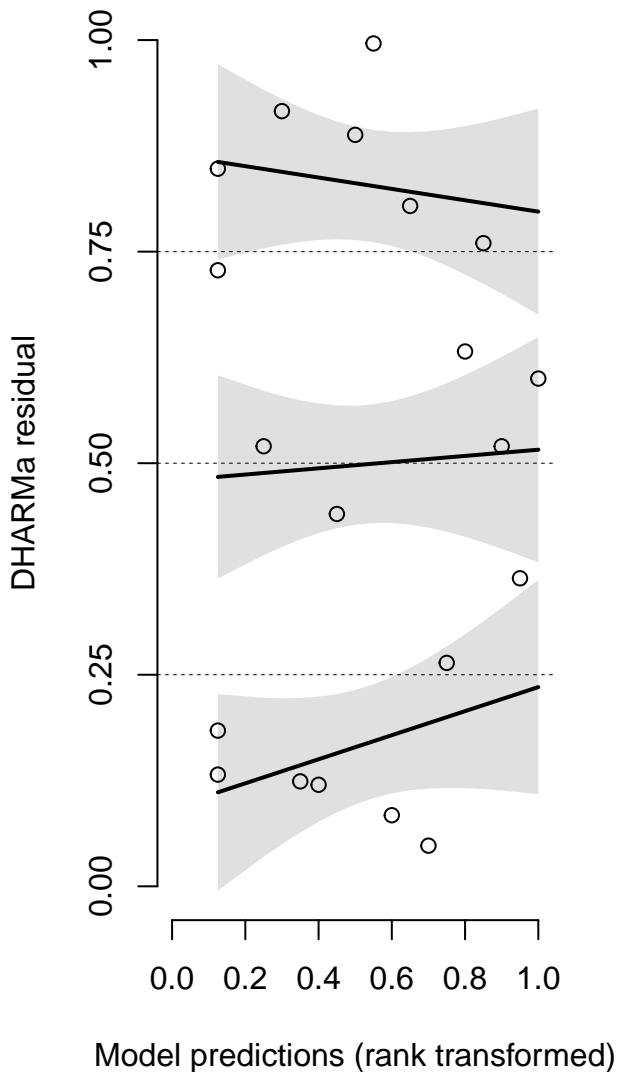
Nb obs : 20

# DHARMA residual

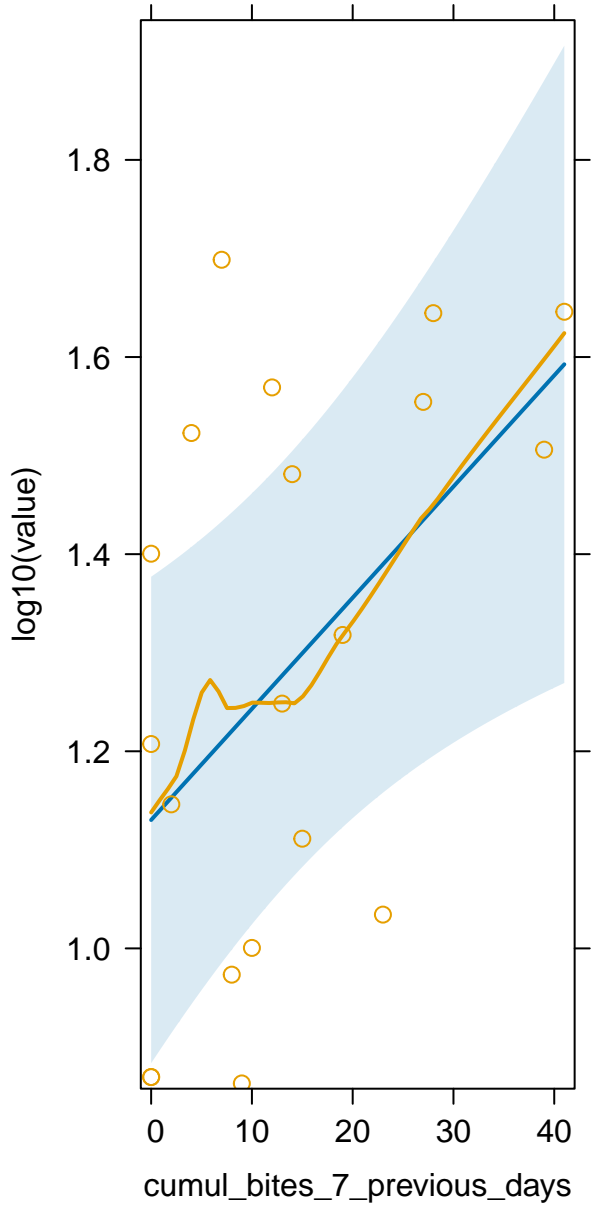
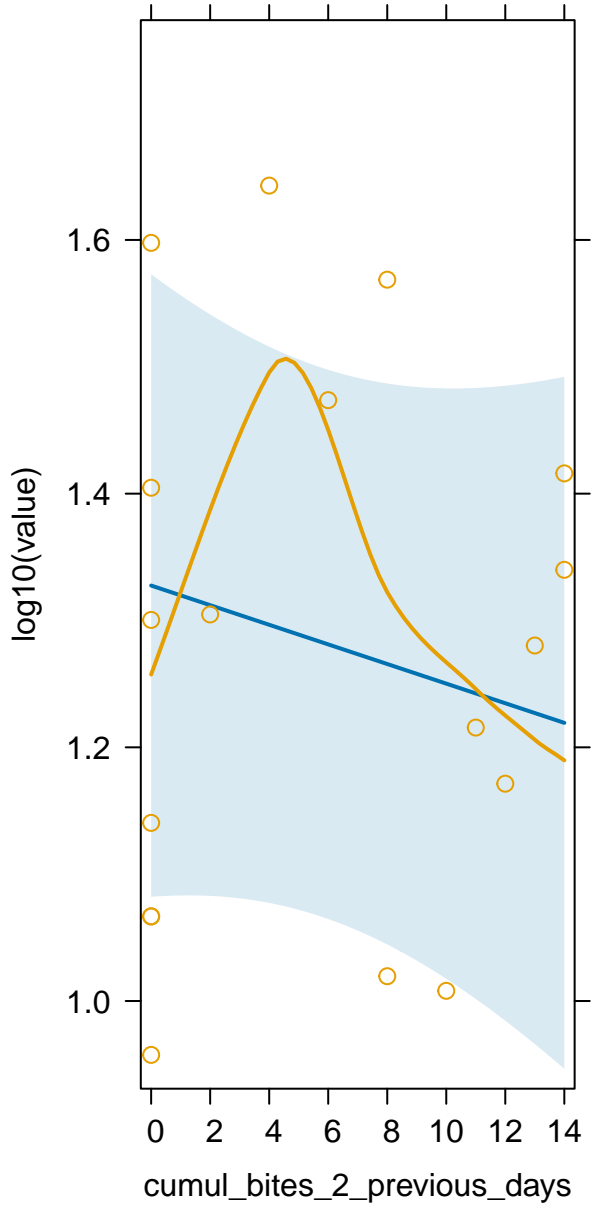
## QQ plot residuals



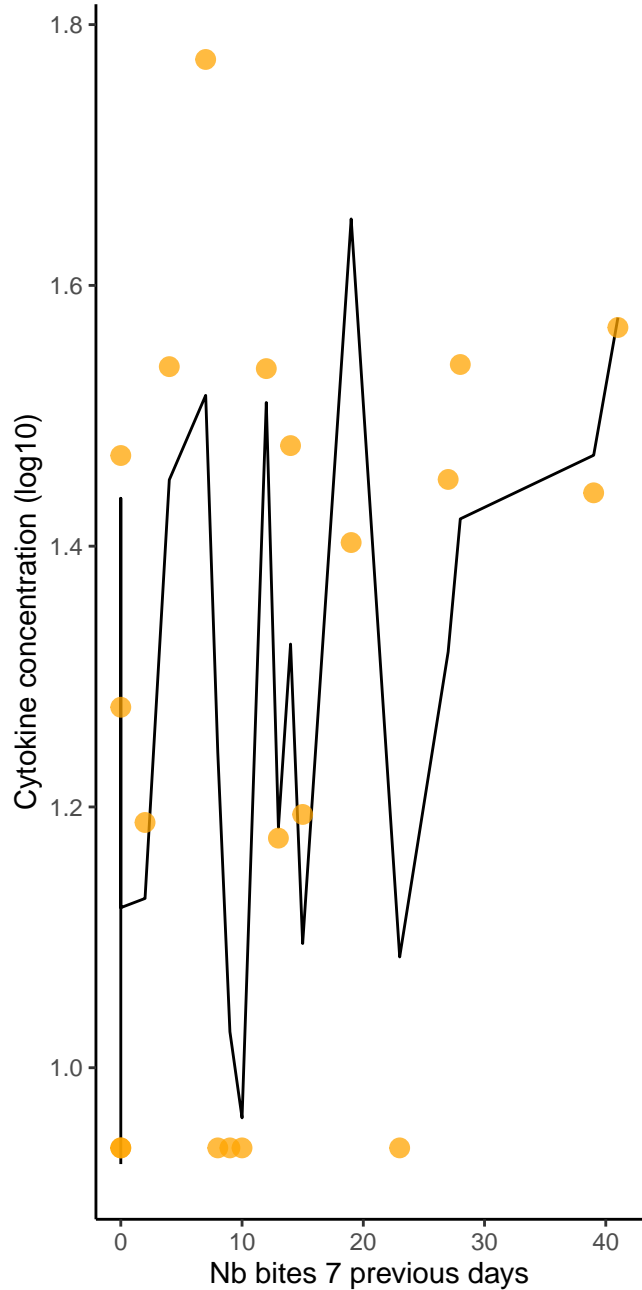
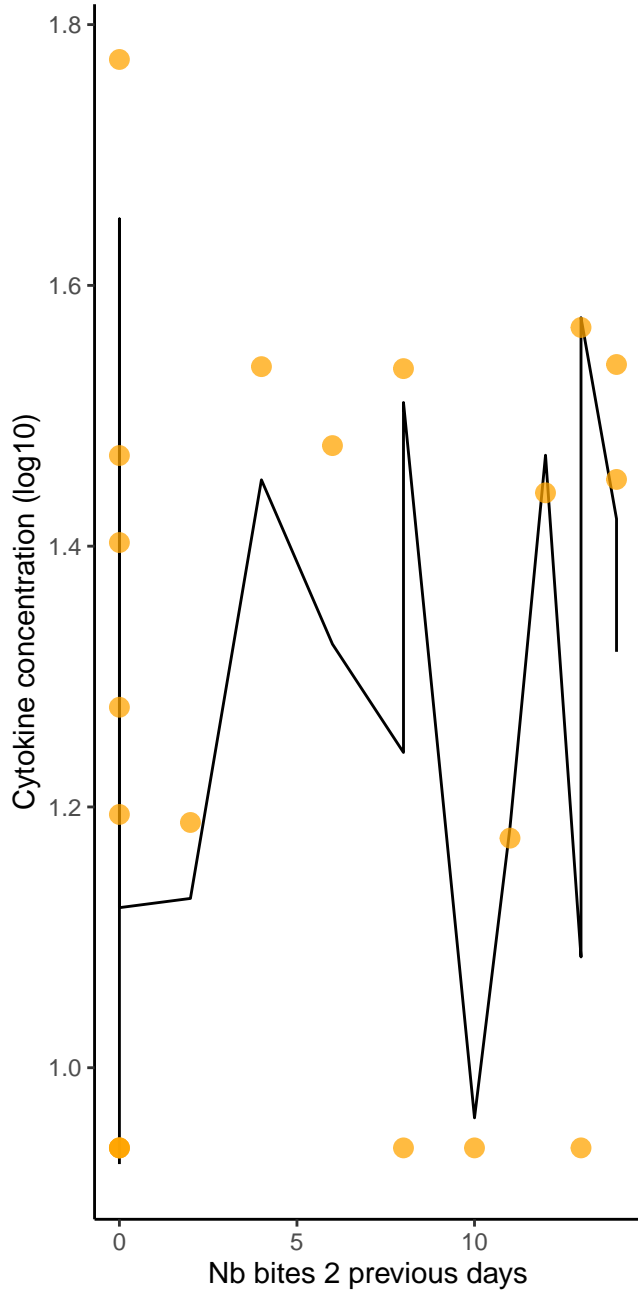
## Residual vs. predicted No significant problems detected



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	2.09	[1.45, 3.67]	1.45	0.48	[0.27, 0.69]
cumul_bites_7_previous_days	2.09	[1.45, 3.67]	1.45	0.48	[0.27, 0.69]

```

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
    -0.3      4.6      5.2     -10.3       15

Random effects:

Conditional model:
  Groups   Name      Variance Std.Dev.
  ID      (Intercept) 0.03765  0.1940
  Residual                0.02229  0.1493
Number of obs: 20, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.0223

Conditional model:
              Estimate Std. Error z value Pr(>|z|)
(Intercept)    1.174751   0.110632  10.619 < 2e-16 ***
cumul_bites_2_previous_days -0.007732   0.009534  -0.811  0.41741
cumul_bites_7_previous_days  0.011276   0.004148   2.719  0.00656 **
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

```

```
AICc [1] 3.949897
```

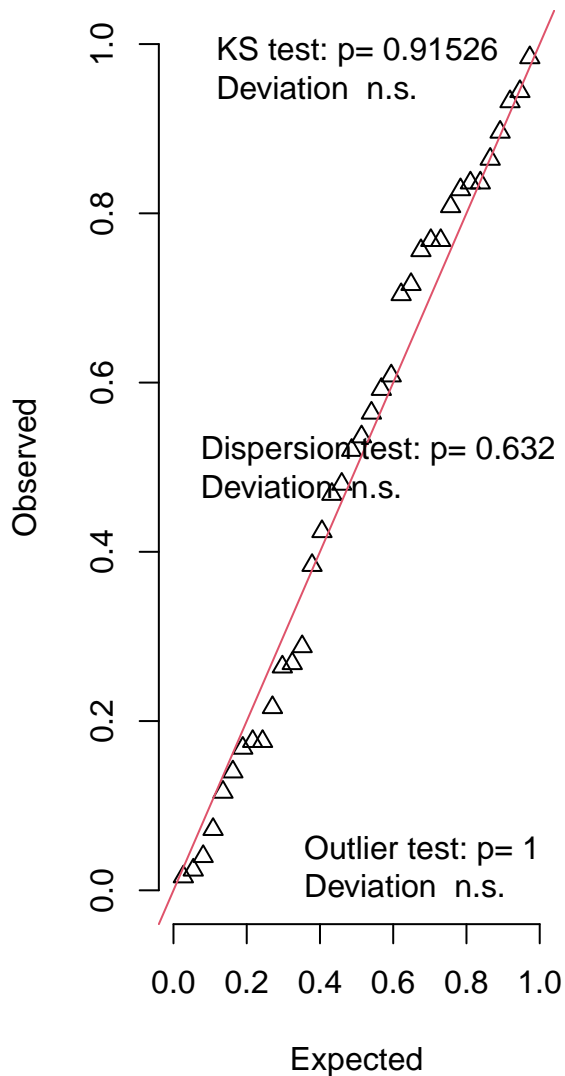
TGFbeta

Bites in cyno

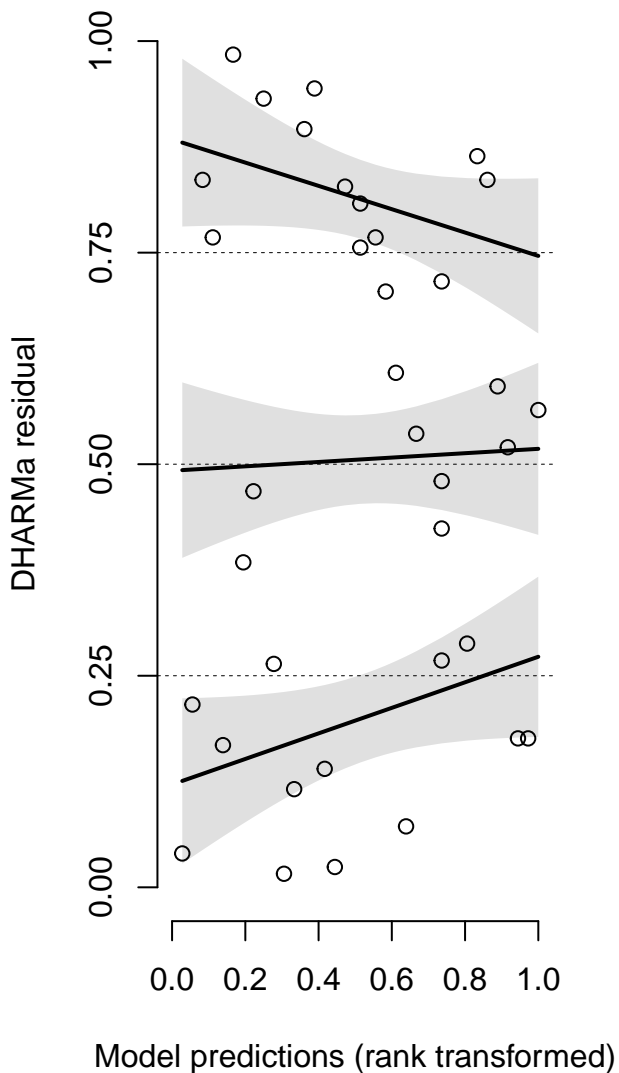
Nb obs : 36

## DHARMA residual

### QQ plot residuals

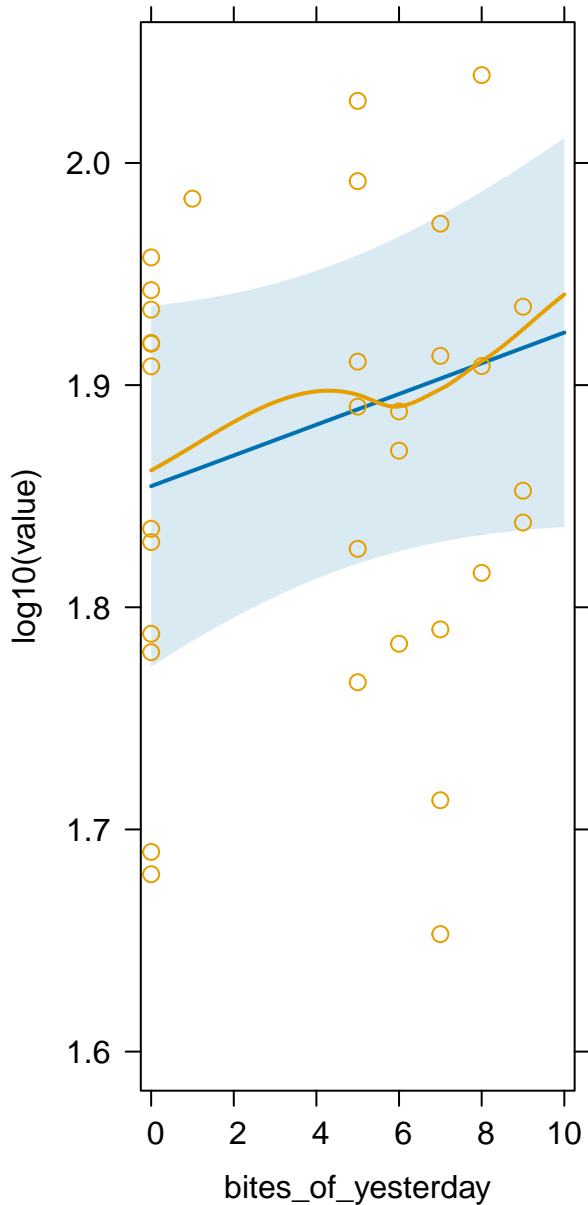


### Residual vs. predicted No significant problems detected

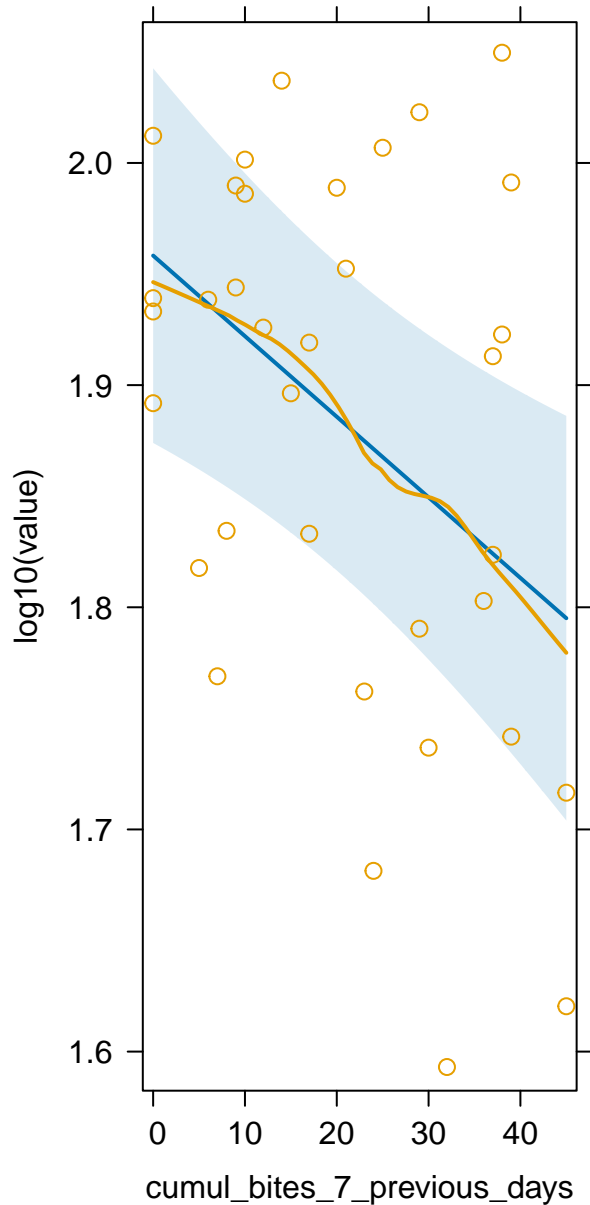


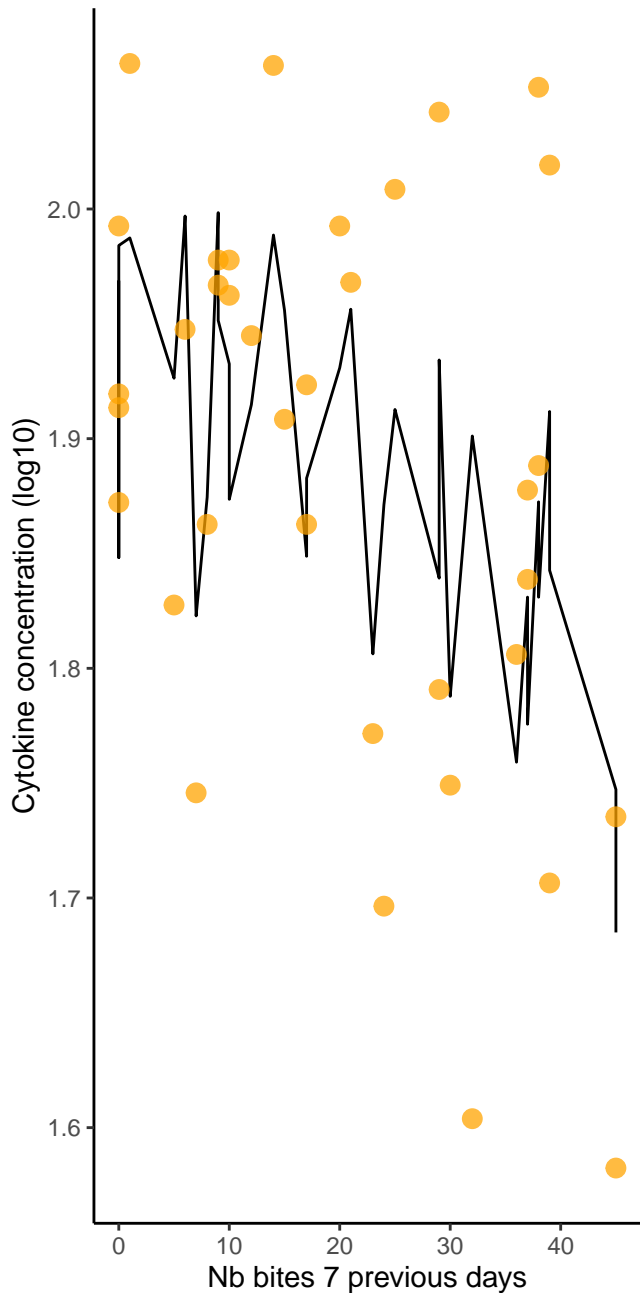
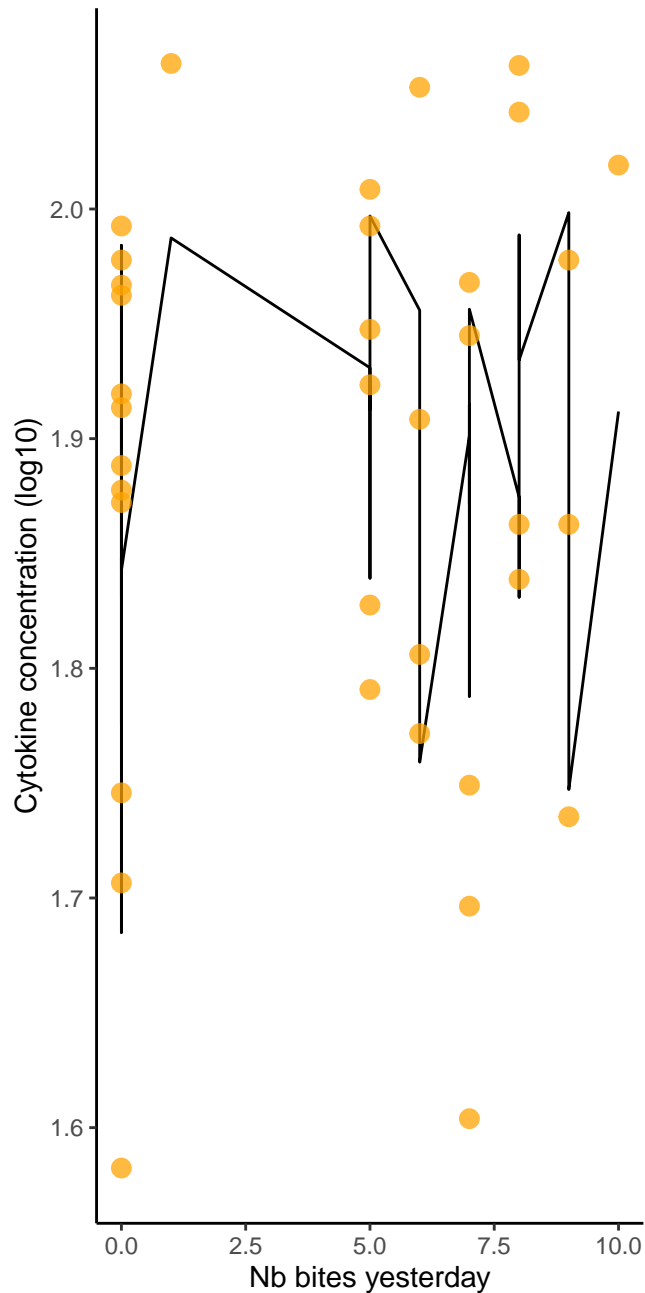


bites\_of\_yesterday effect plot



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 **

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

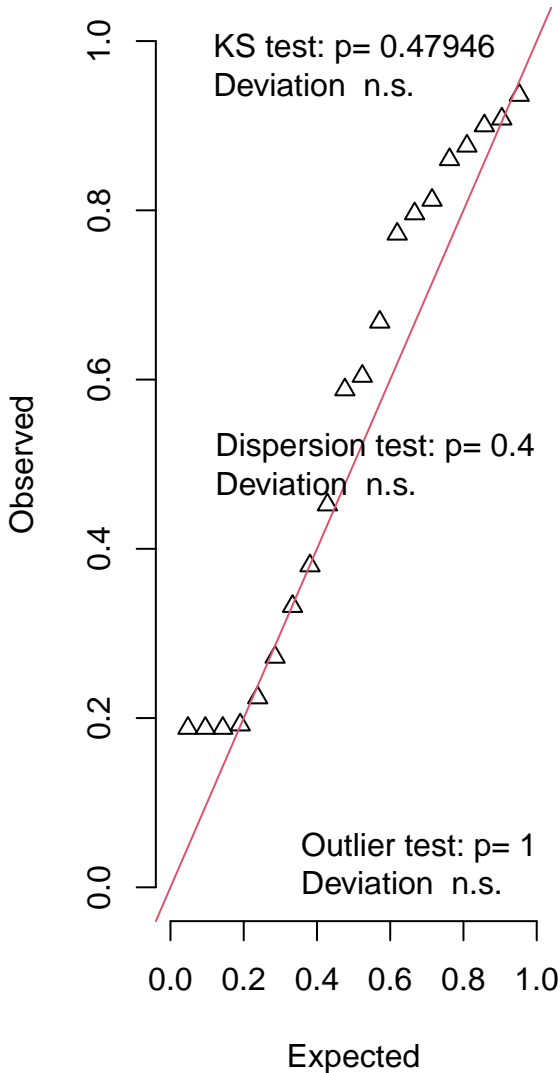
AICc [ 1 ] -49.97958

Bites in squirrel

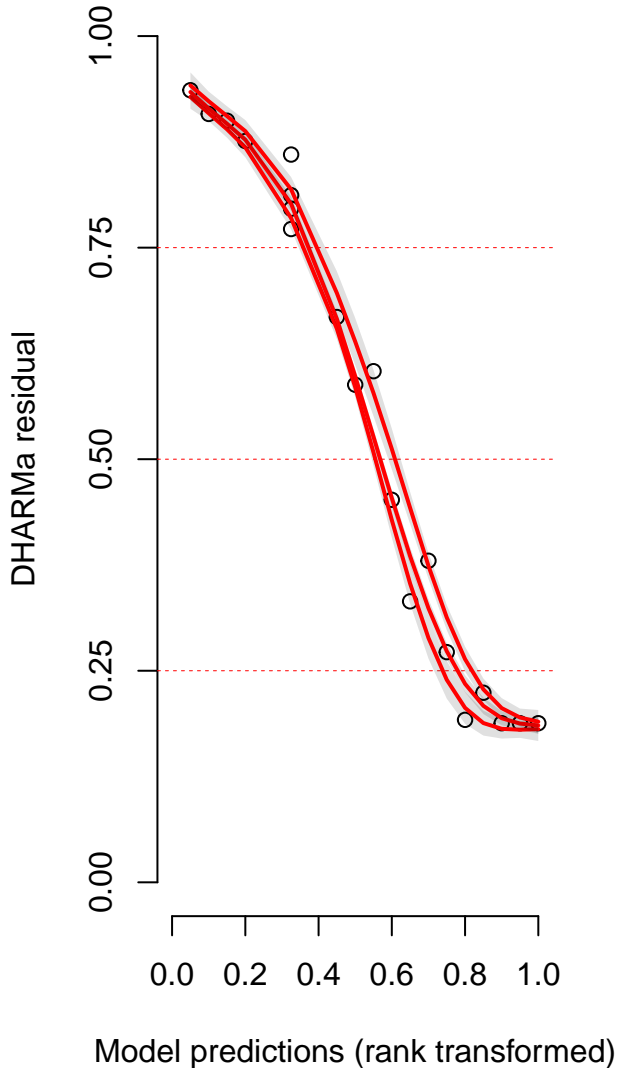
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days

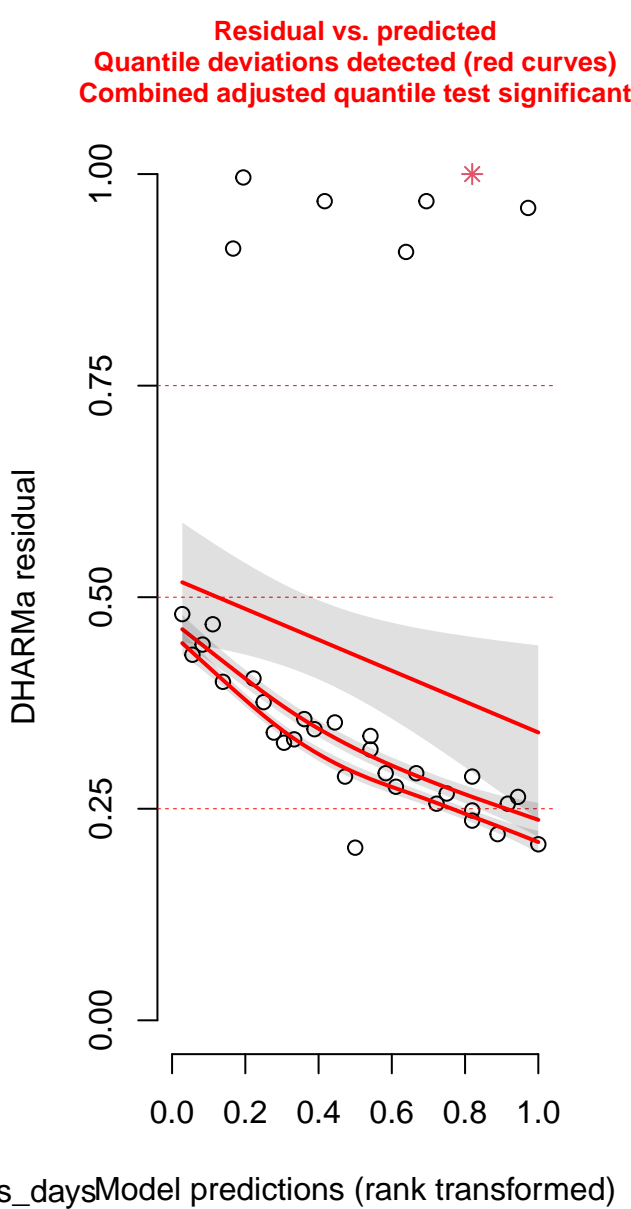
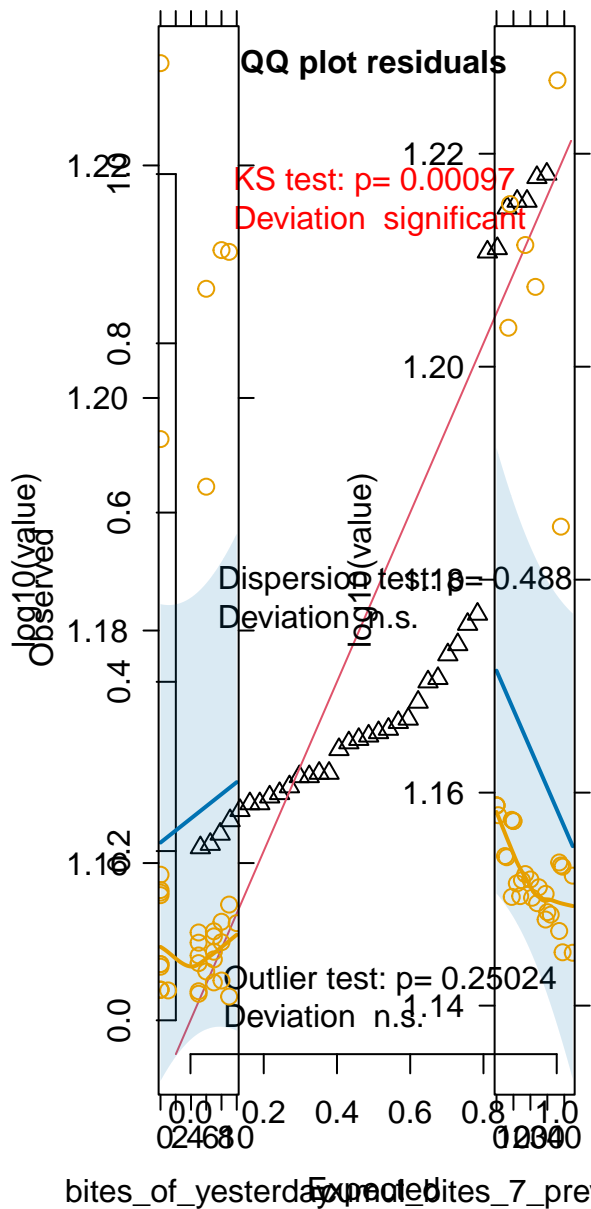
TGFbeta ERROR : 'yscale' incorrect dans la vue

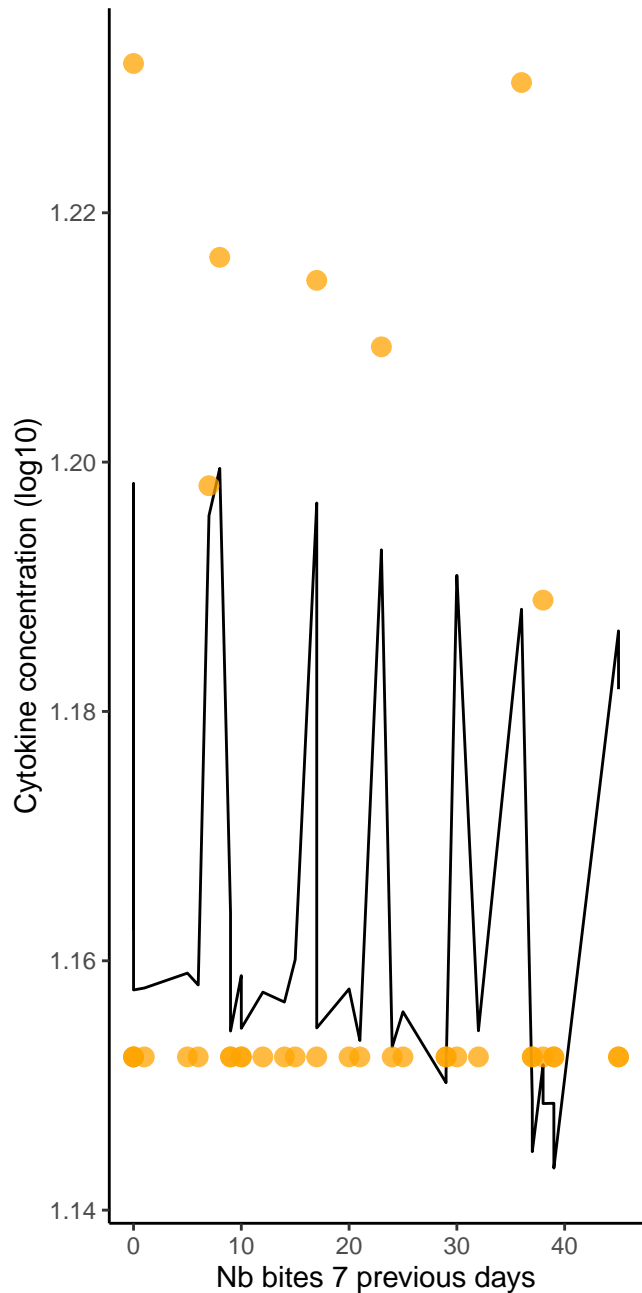
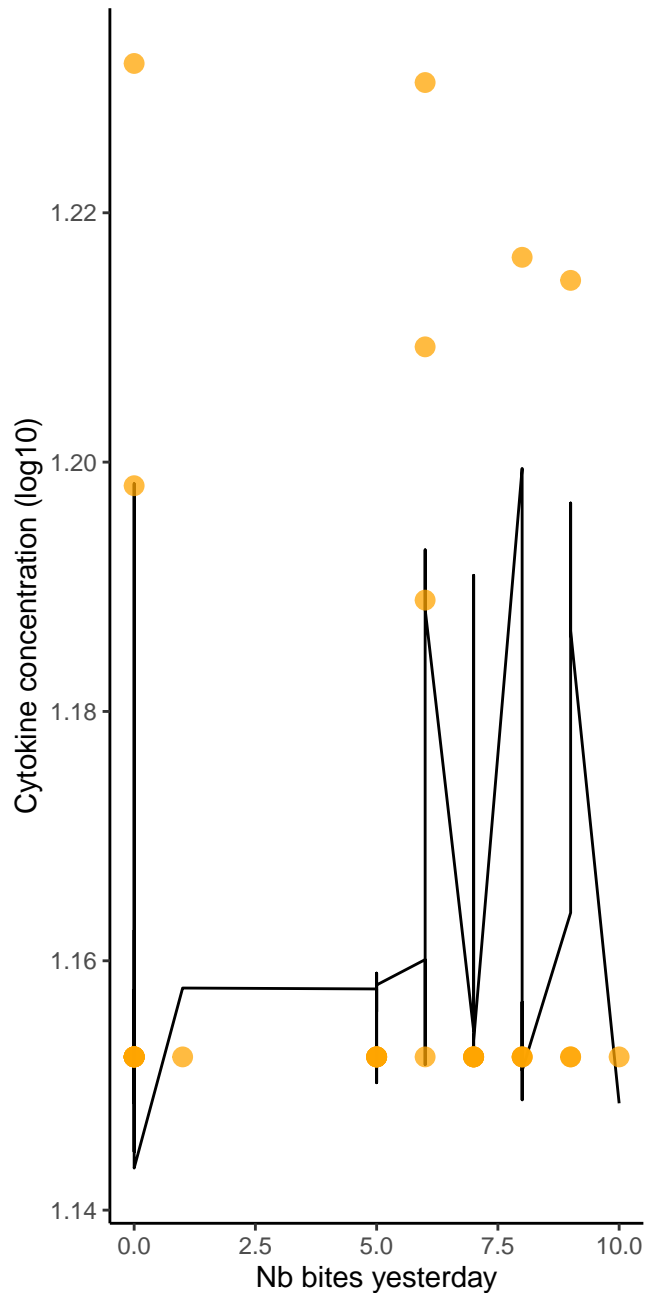
TNF.alpha

Bites in cyno

Nb obs : 36

# of yesterday 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
-171.1	-163.2	90.6	-181.1	31

Random effects:

Conditional model:

Groups	Name	Variance	Std.Dev.
ID	(Intercept)	0.0003155	0.01776
	Residual	0.0002942	0.01715

Number of obs: 36, groups: ID, 4

Dispersion estimate for gaussian family (sigma^2): 0.000294

Conditional model:

	Estimate	Std. Error	z value	Pr(> z )
(Intercept)	1.1691613	0.0105171	111.17	<2e-16 ***
bites_of_yesterday	0.0005195	0.0008637	0.60	0.5475
cumul_bites_7_previous_days	-0.0003663	0.0002145	-1.71	0.0877 .

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

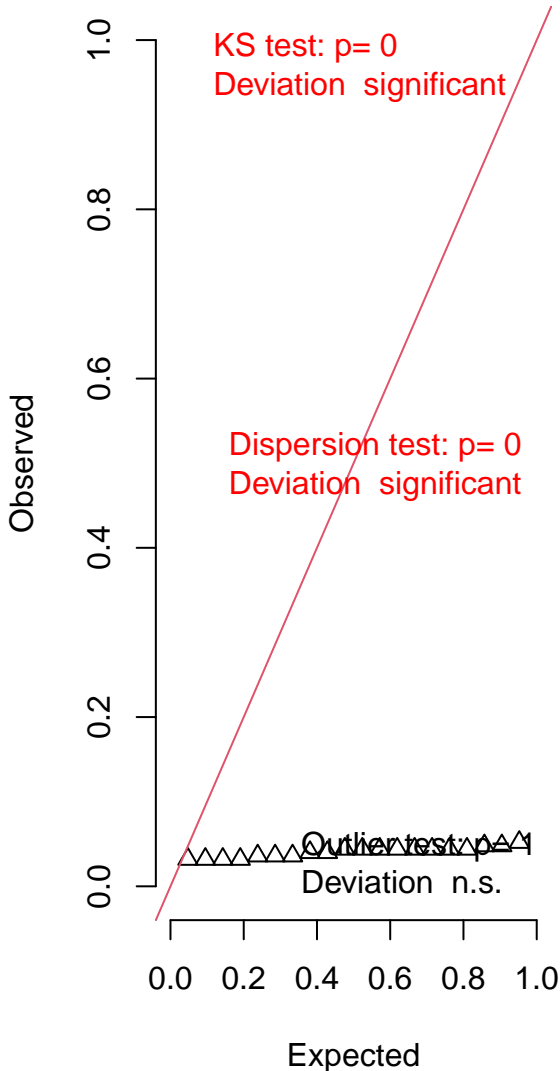
AICc [1] -169.102

Bites in squirrel

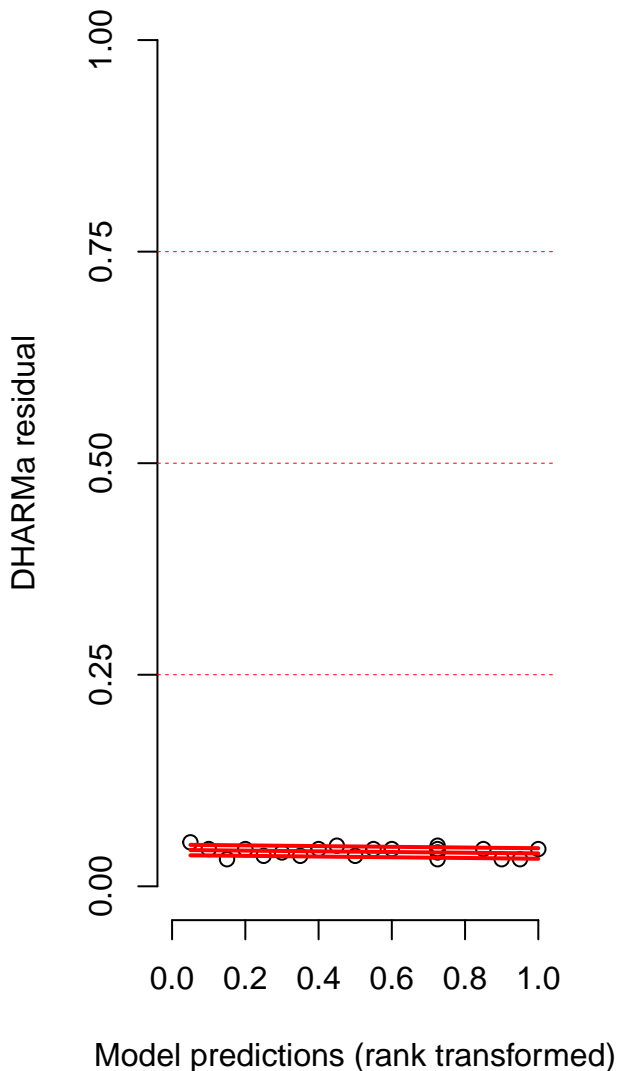
Nb obs : 20

# 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

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

cumul\_bites\_2\_previous\_days

TNF.alpha ERROR : 'yscale' incorrect dans la vue

VEGF



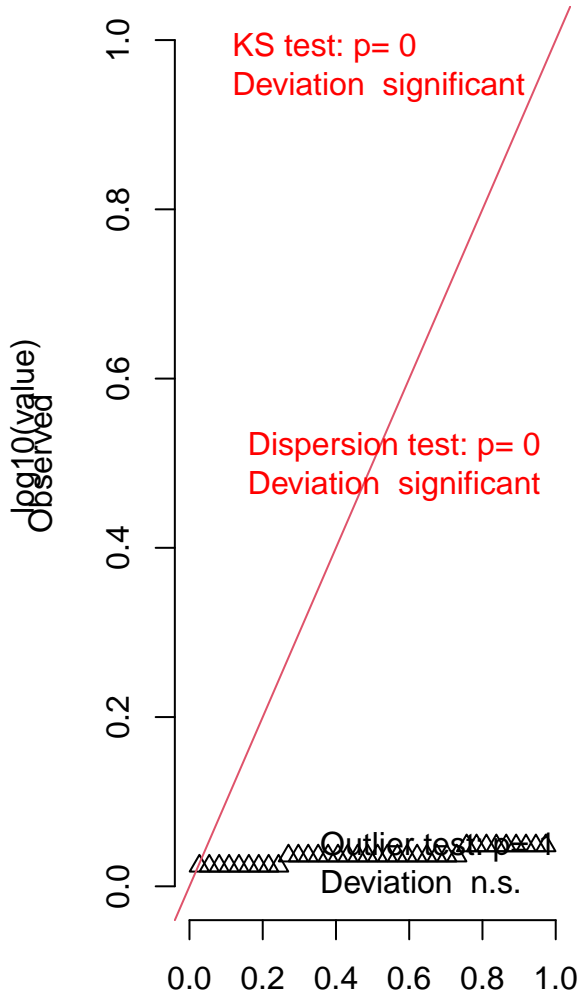
Bites in cyno

Nb obs : 36

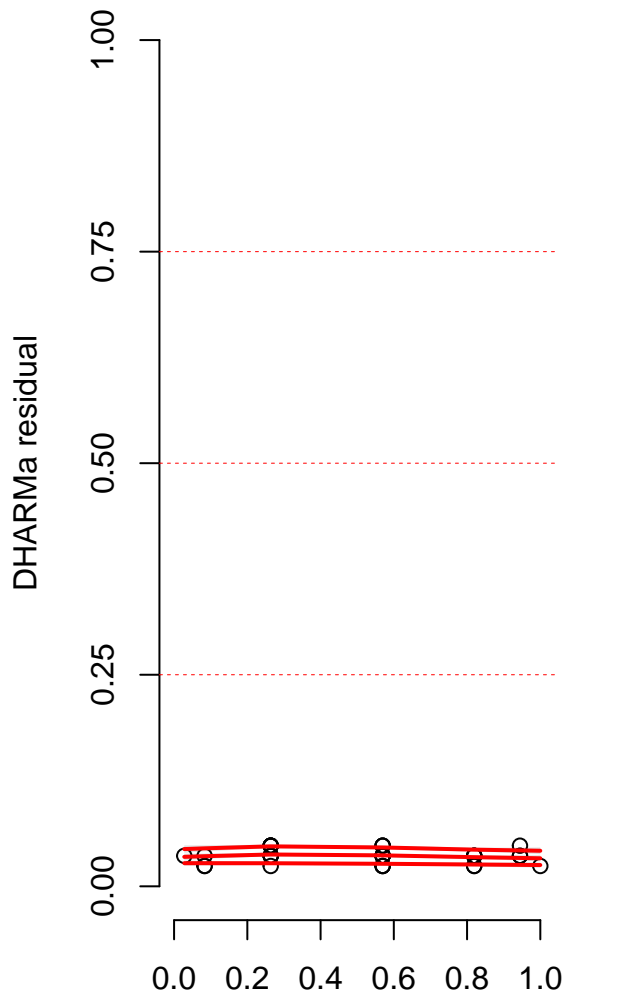
bites\_of\_yesterday effect plot

DHARMA residual

QQ plot residuals



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



VEGF ERROR : 'yscale' incorrect dans la vue

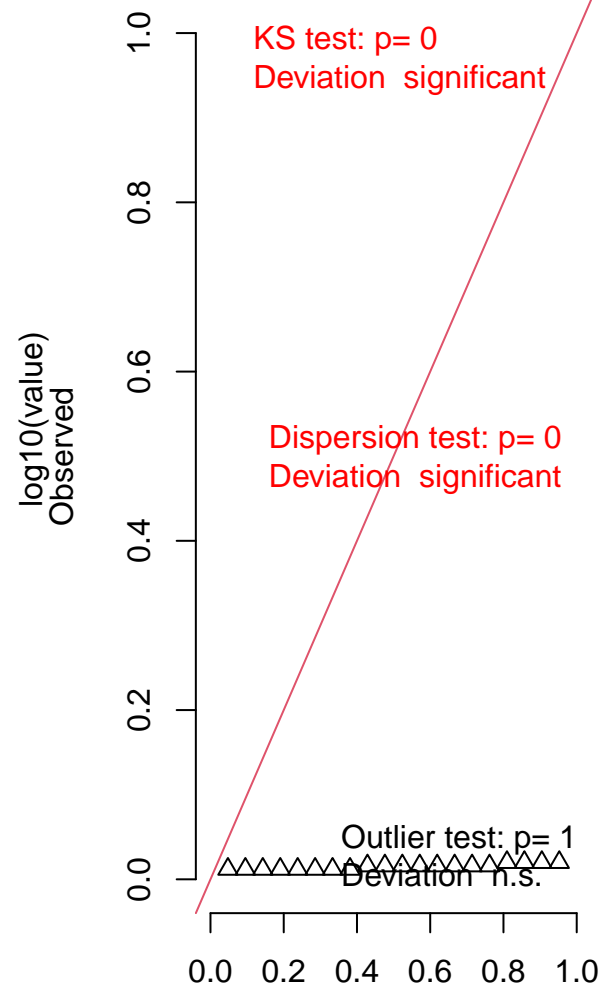
Bites in squirrel

Nb obs : 20

previous\_days effect plot

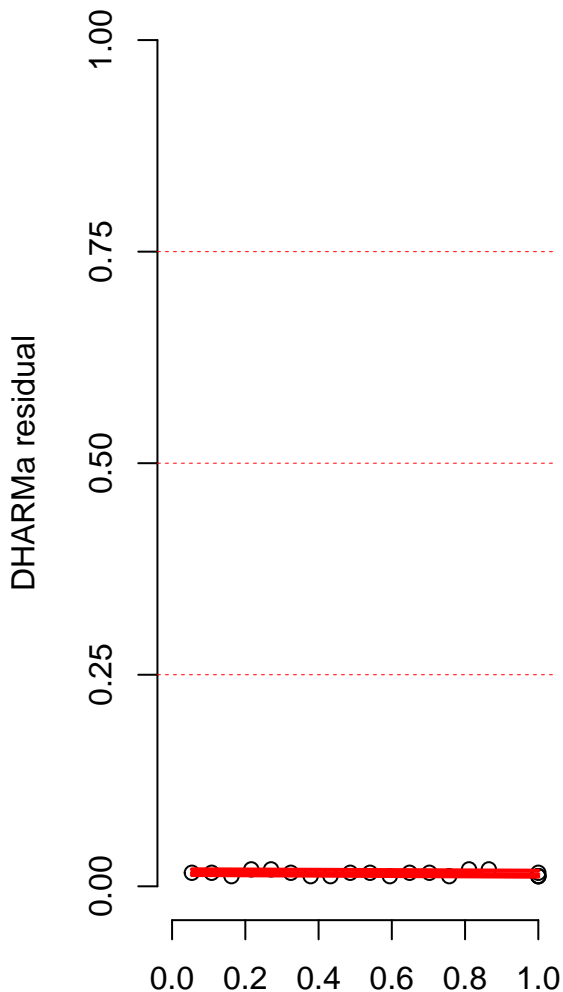
DHARMA residual

QQ plot residuals



0ites\_2\_previous\_days Expected

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



Model predictions (rank transformed)

VEGF ERROR : 'yscale' incorrect dans la vue