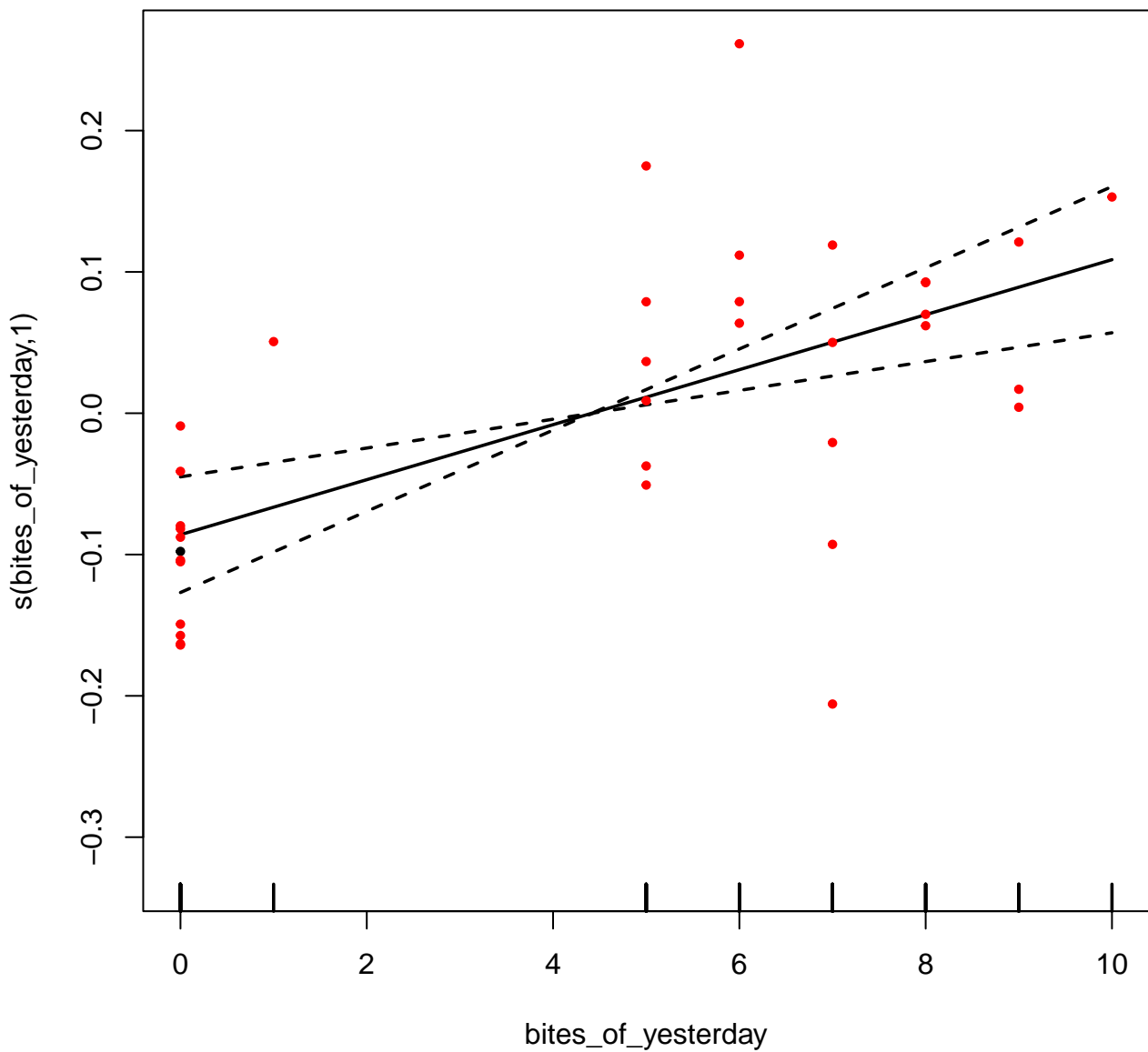
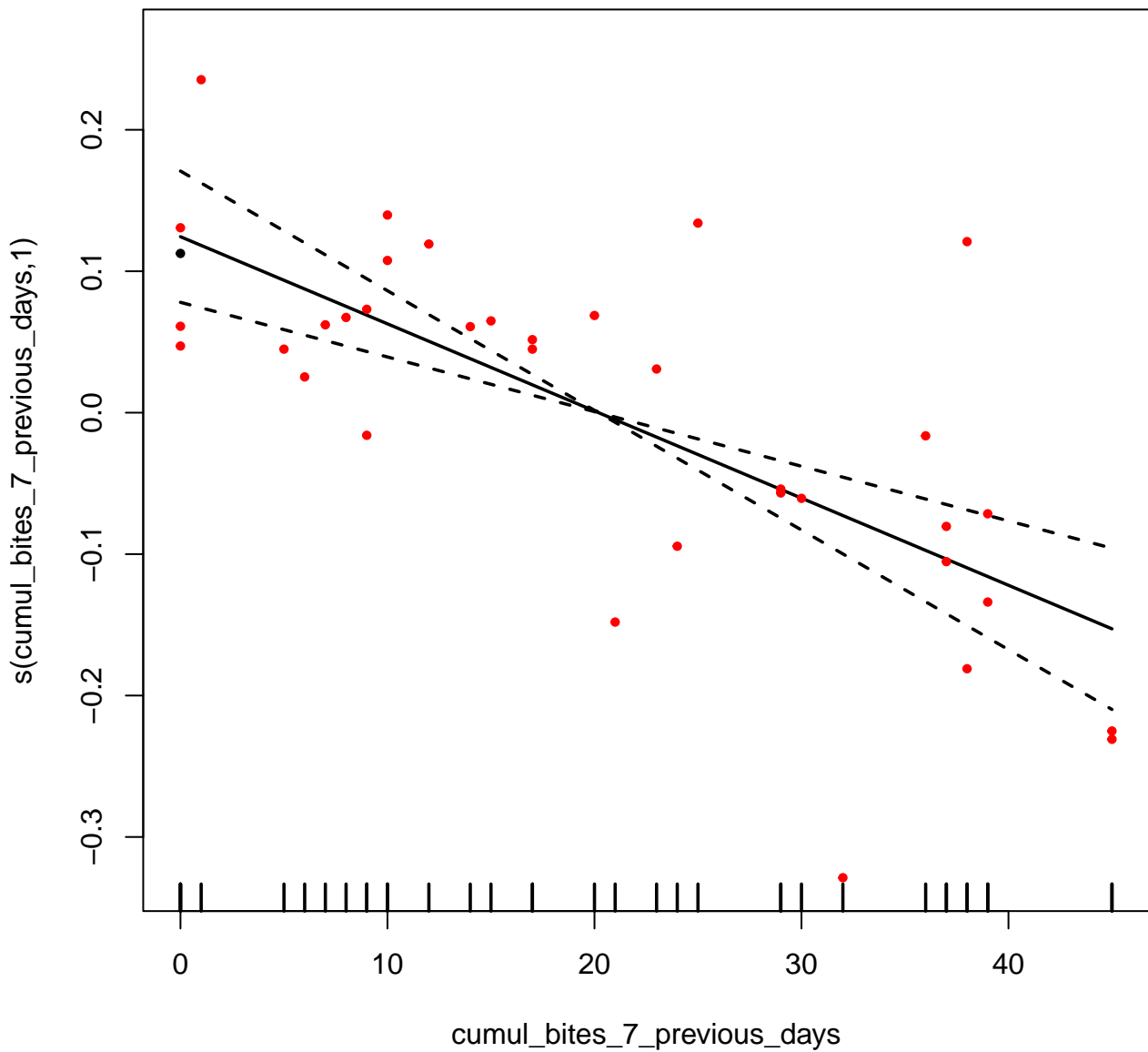


EGF

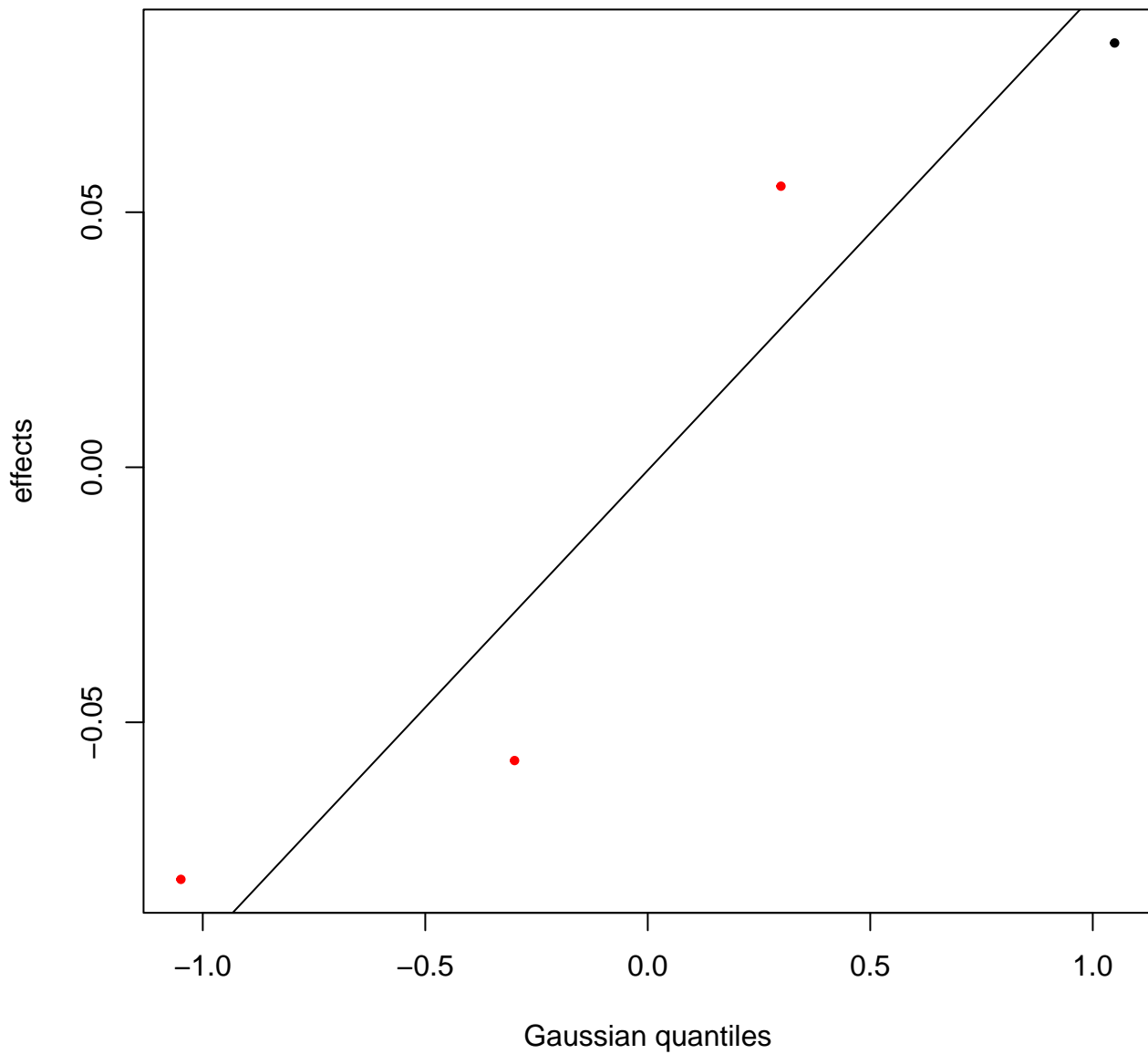
Bites in cyno

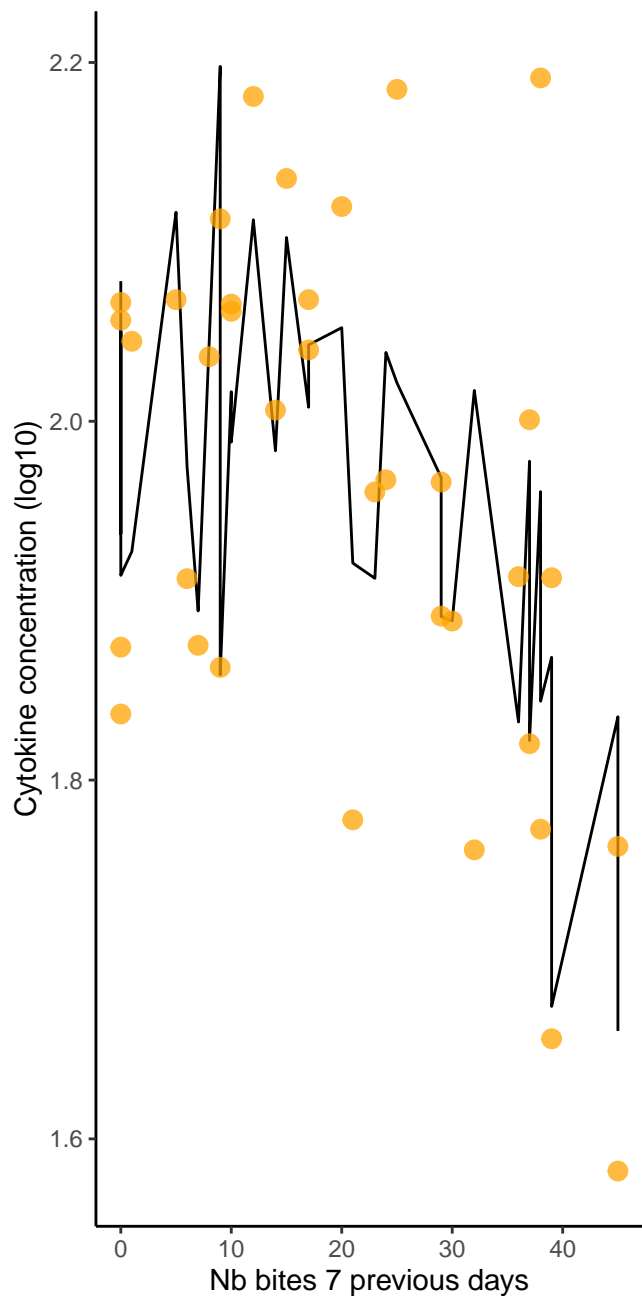
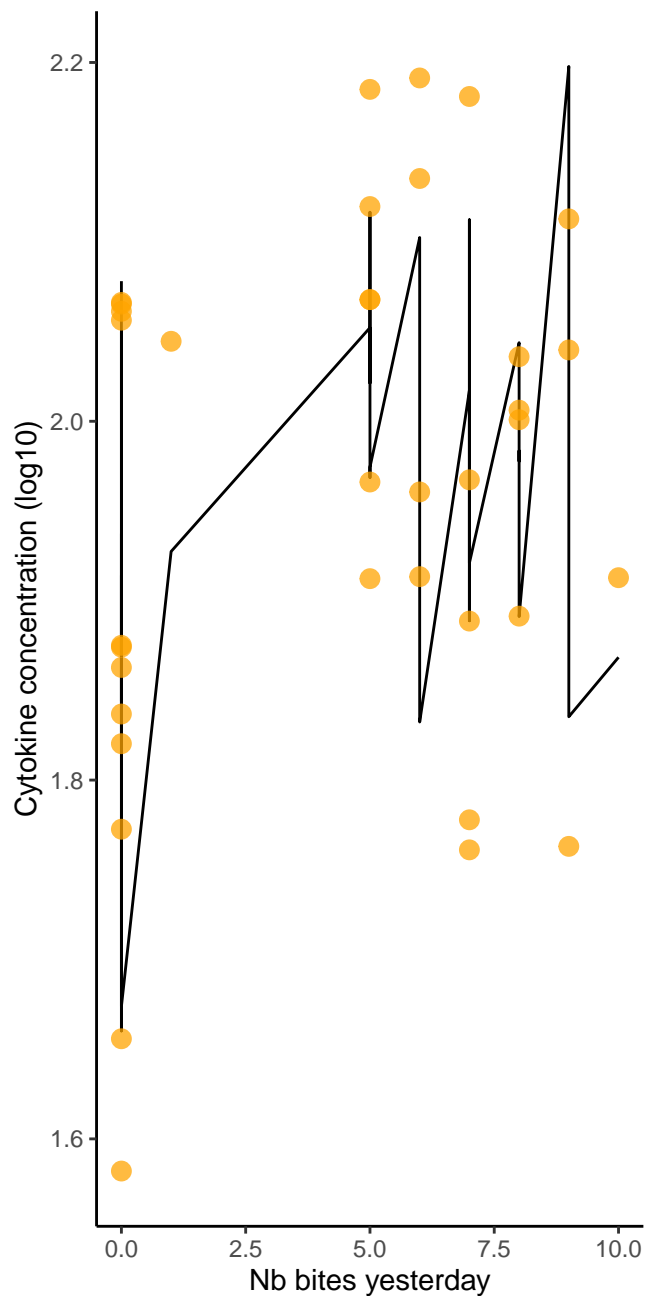
Nb excluded (LOD) : 0  
Nb remaining: 36

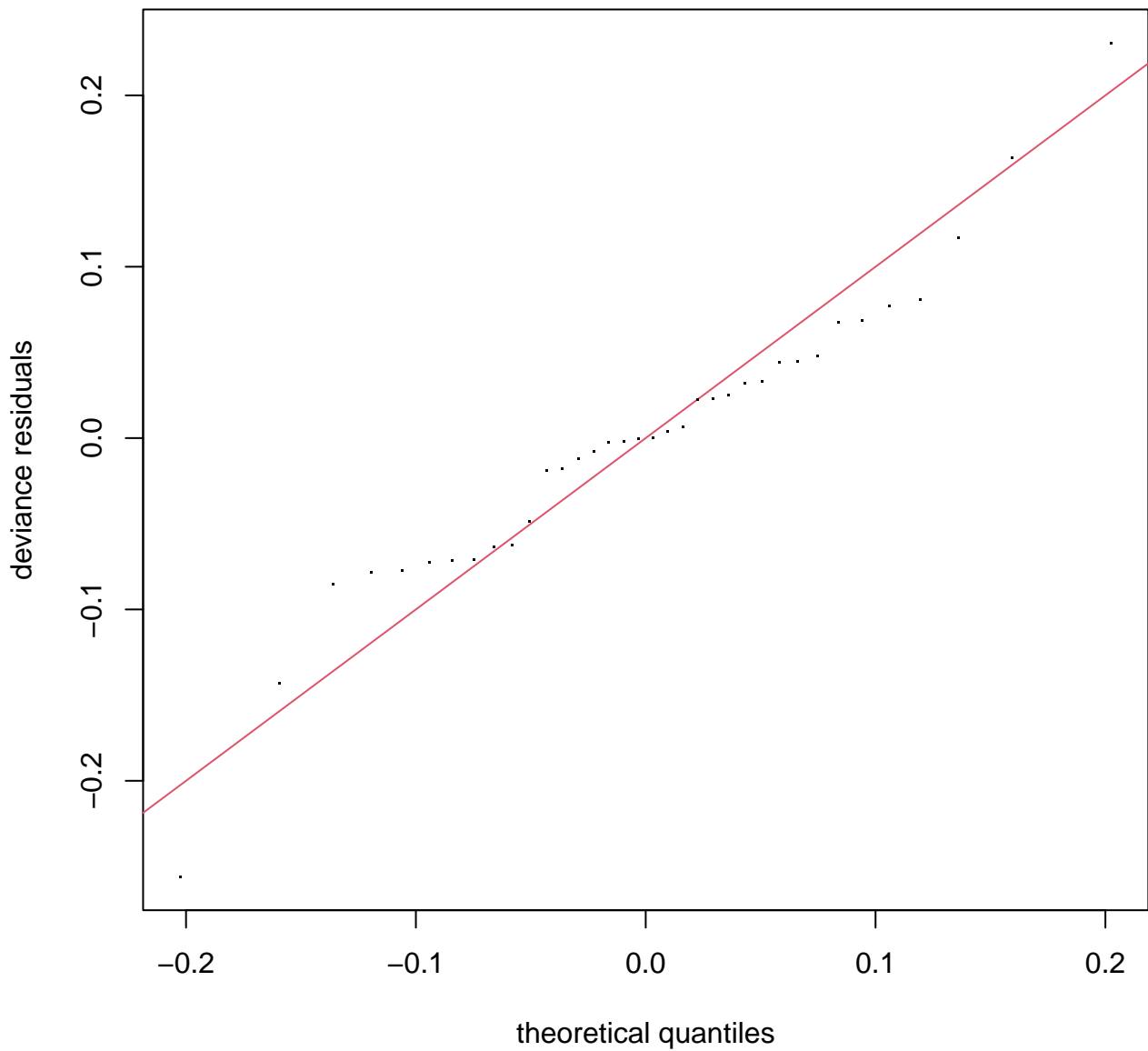




**s(ID,2.6)**

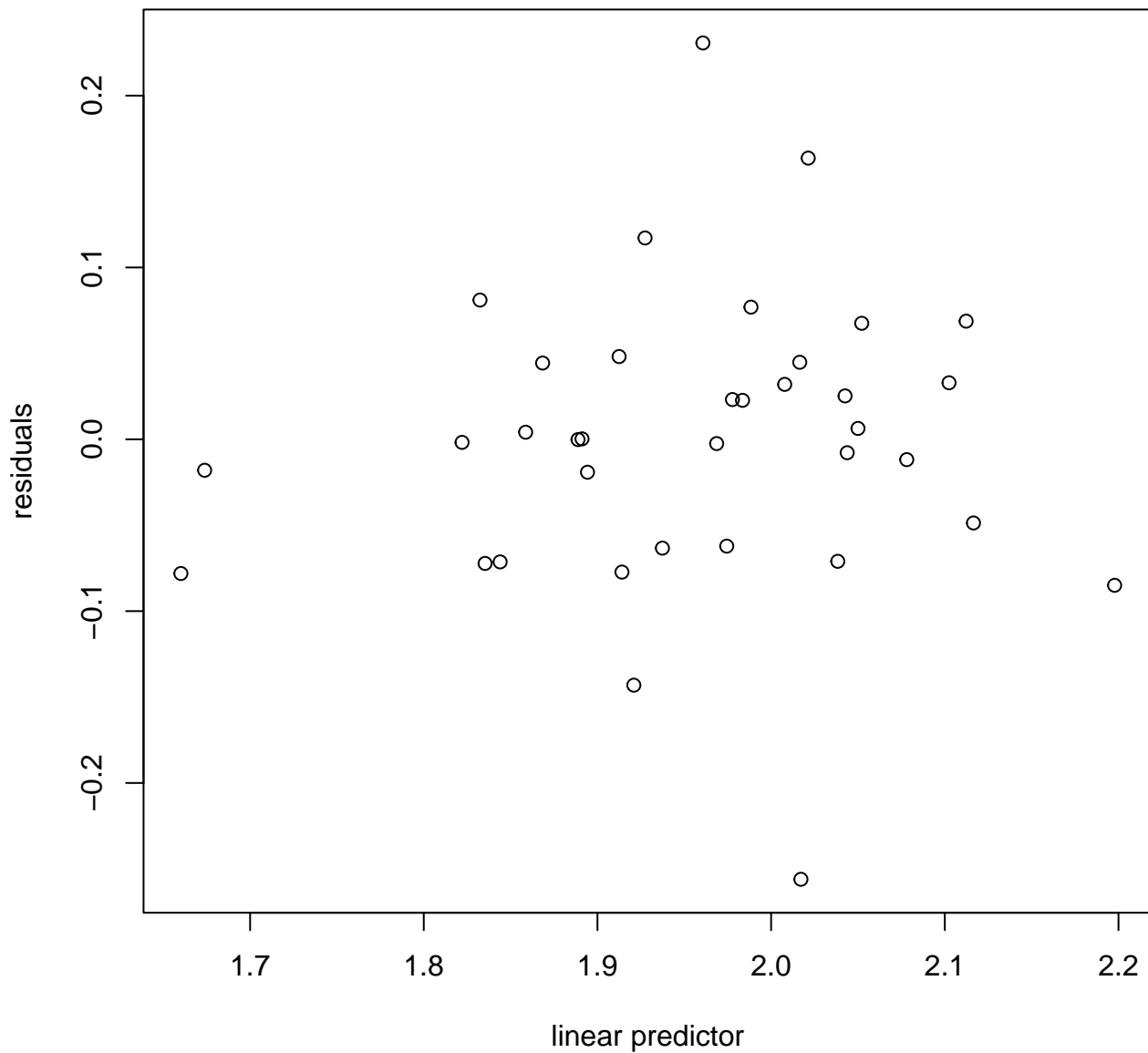




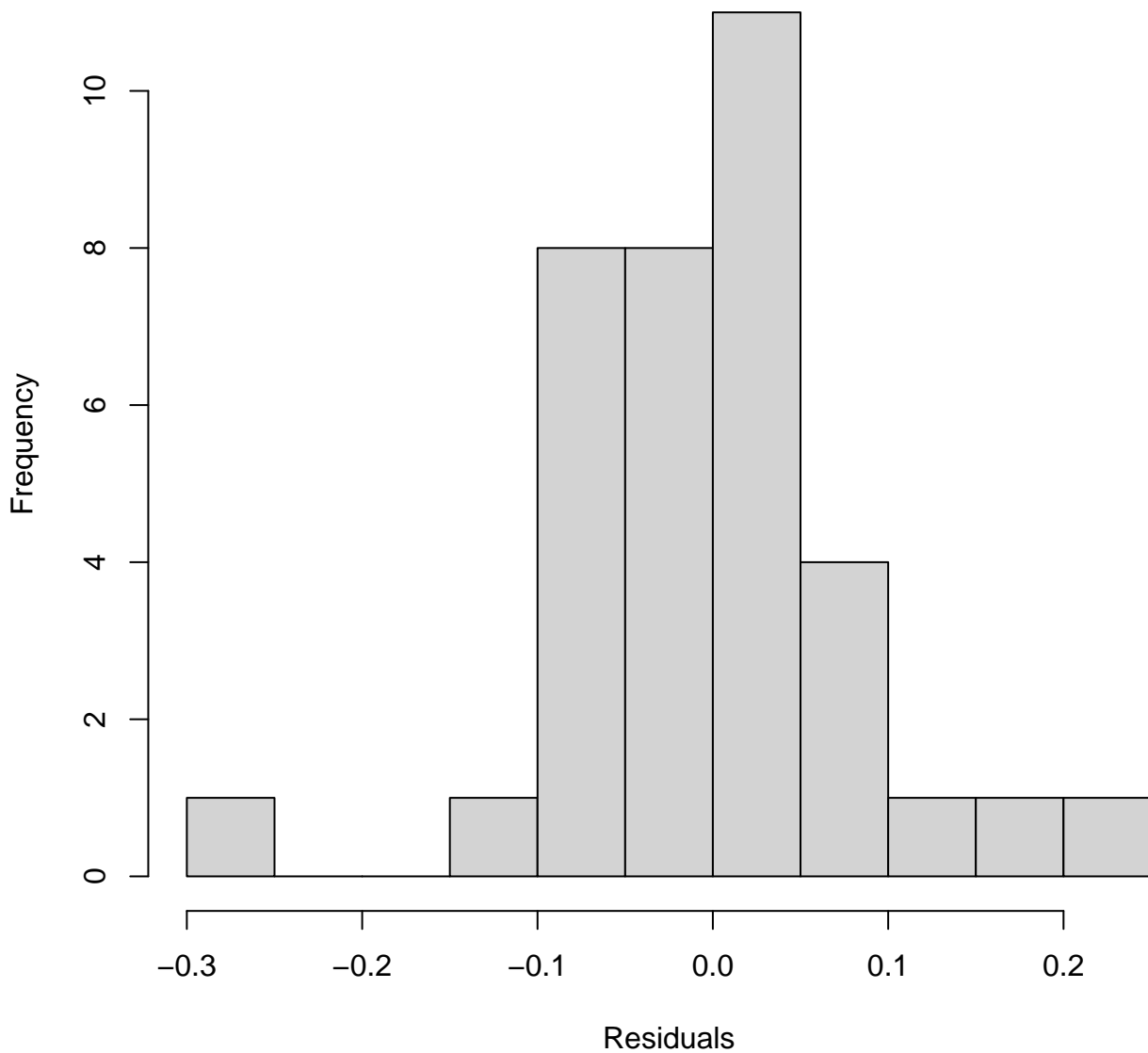




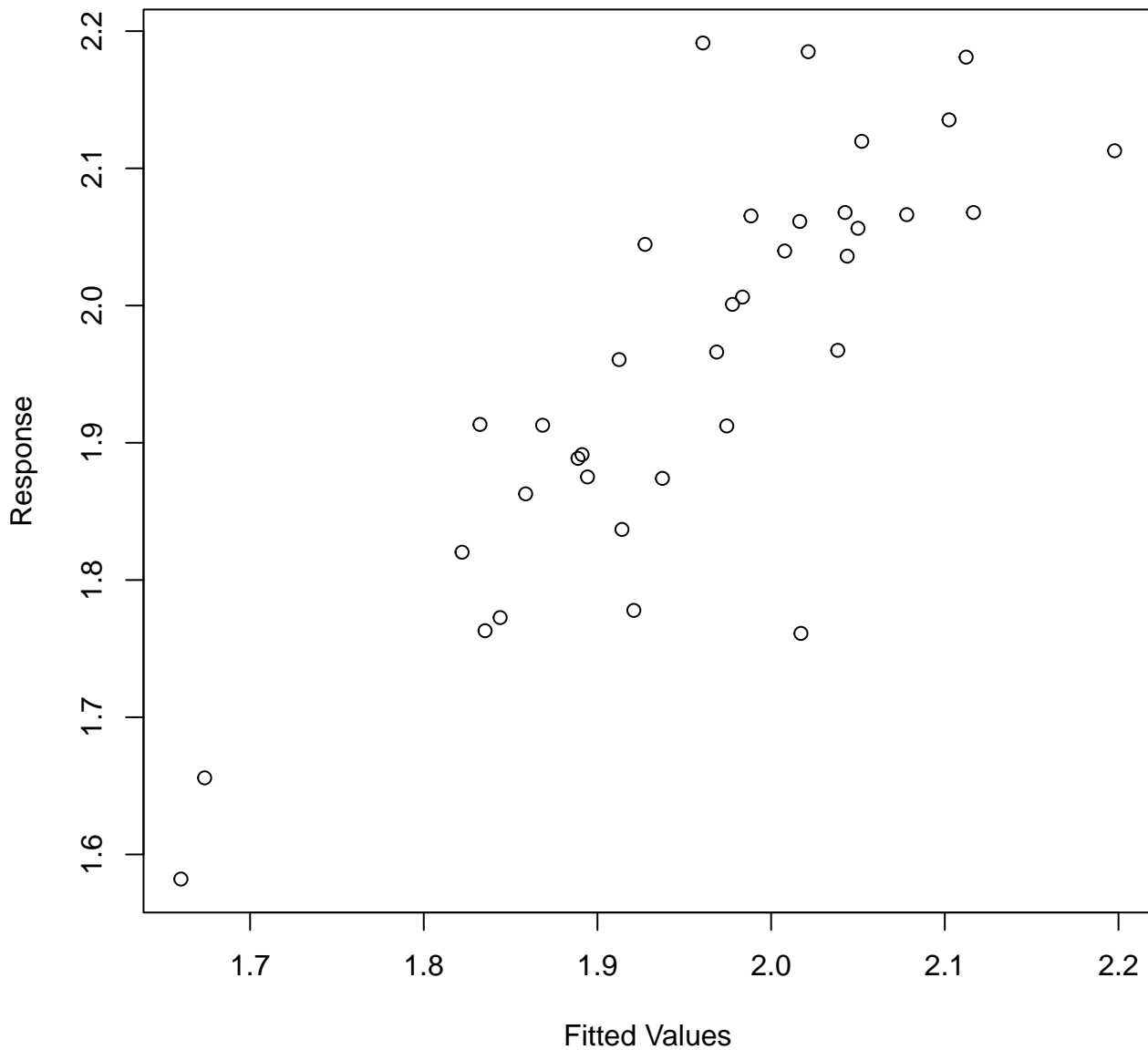
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 12 iterations.  
 Gradient range [-1.512783e-05,4.621316e-06]  
 (score -31.99646 & scale 0.008467418).  
 Hessian positive definite, eigenvalue range [4.134531e-06,18.18007].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.0	1.0	0.99	0.43
s(cumul_bites_7_previous_days)	3.0	1.0	1.26	0.91
s(ID)	4.0	2.6	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	
s(cumul_bites_7_previous_days, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.95643	0.04198	46.6	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1	17.650	0.000219 ***
s(cumul_bites_7_previous_days)	1.000	1	28.761	8.6e-06 ***
s(ID)	2.596	3	8.062	0.000166 ***

---

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

R-sq.(adj) = 0.619 Deviance explained = 66.9%  
-ML = -31.996 Scale est. = 0.0084674 n = 36

AICc [ 1 ] -57.969

Bites in squirrel



Nb excluded (LOD) : 17

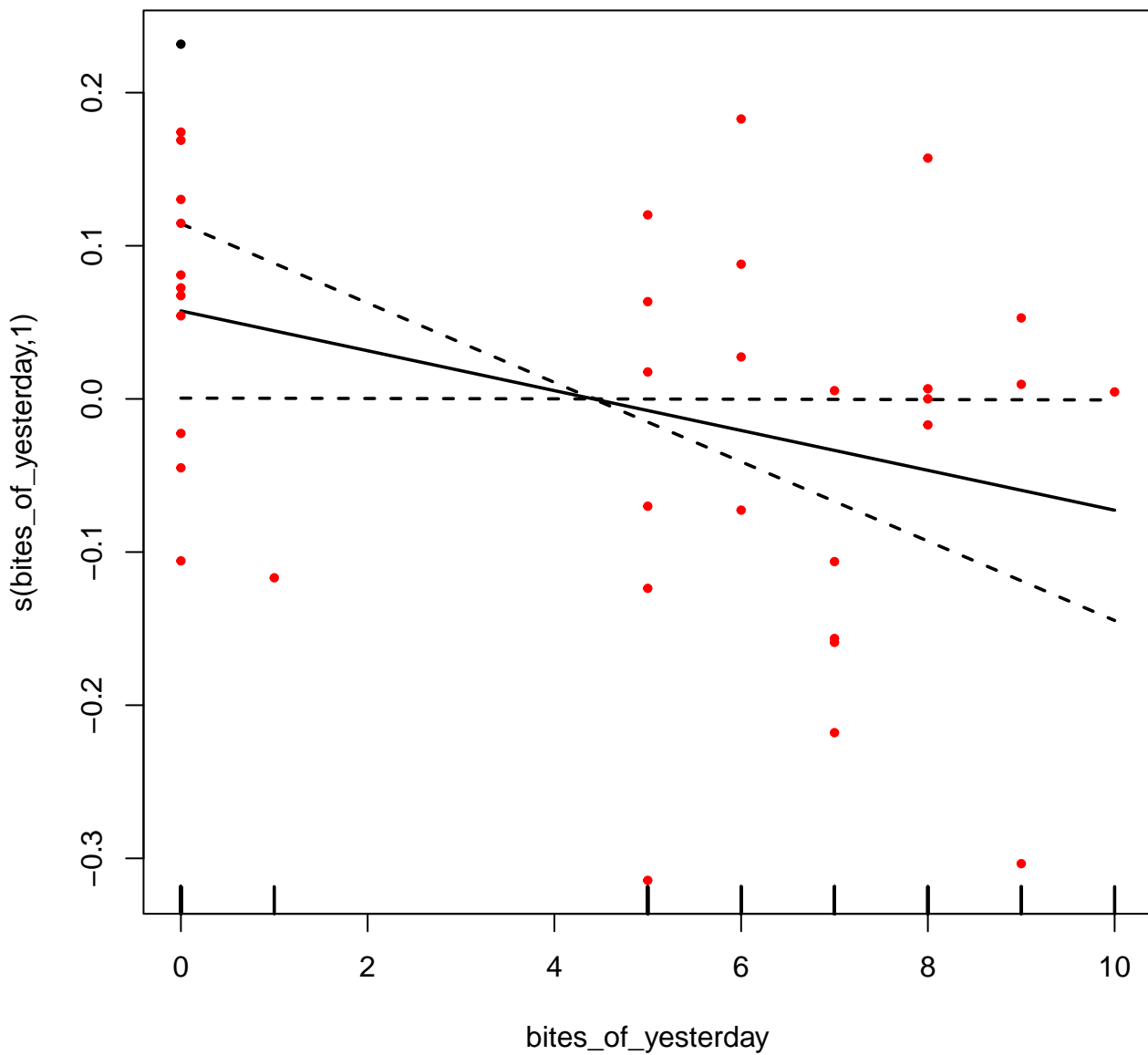
Nb remaining: 3

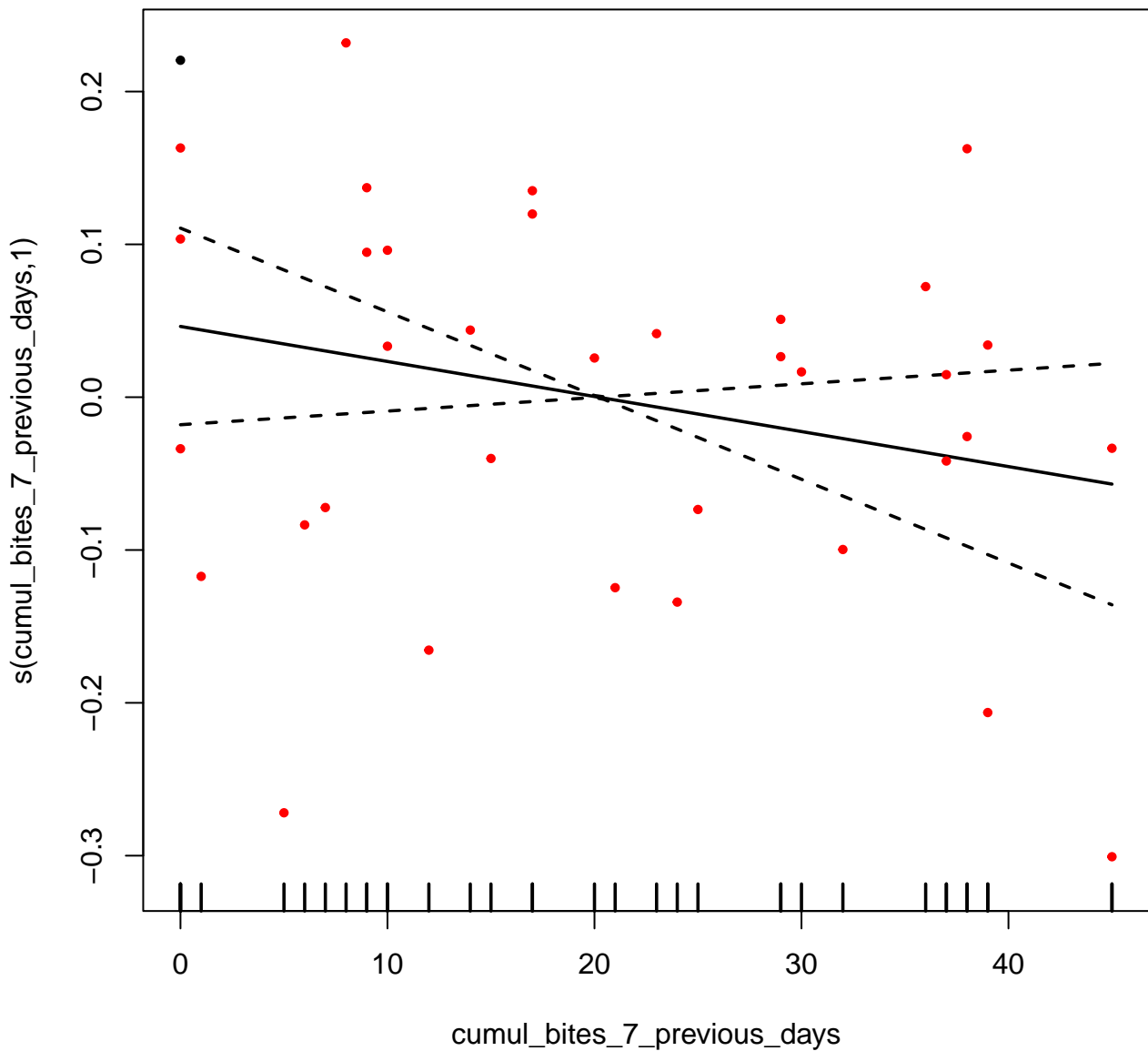
EGF ERROR : Un terme a moins de combinaisons de covariables uniques que le degré de liberté maximum spécifié

Eotaxin

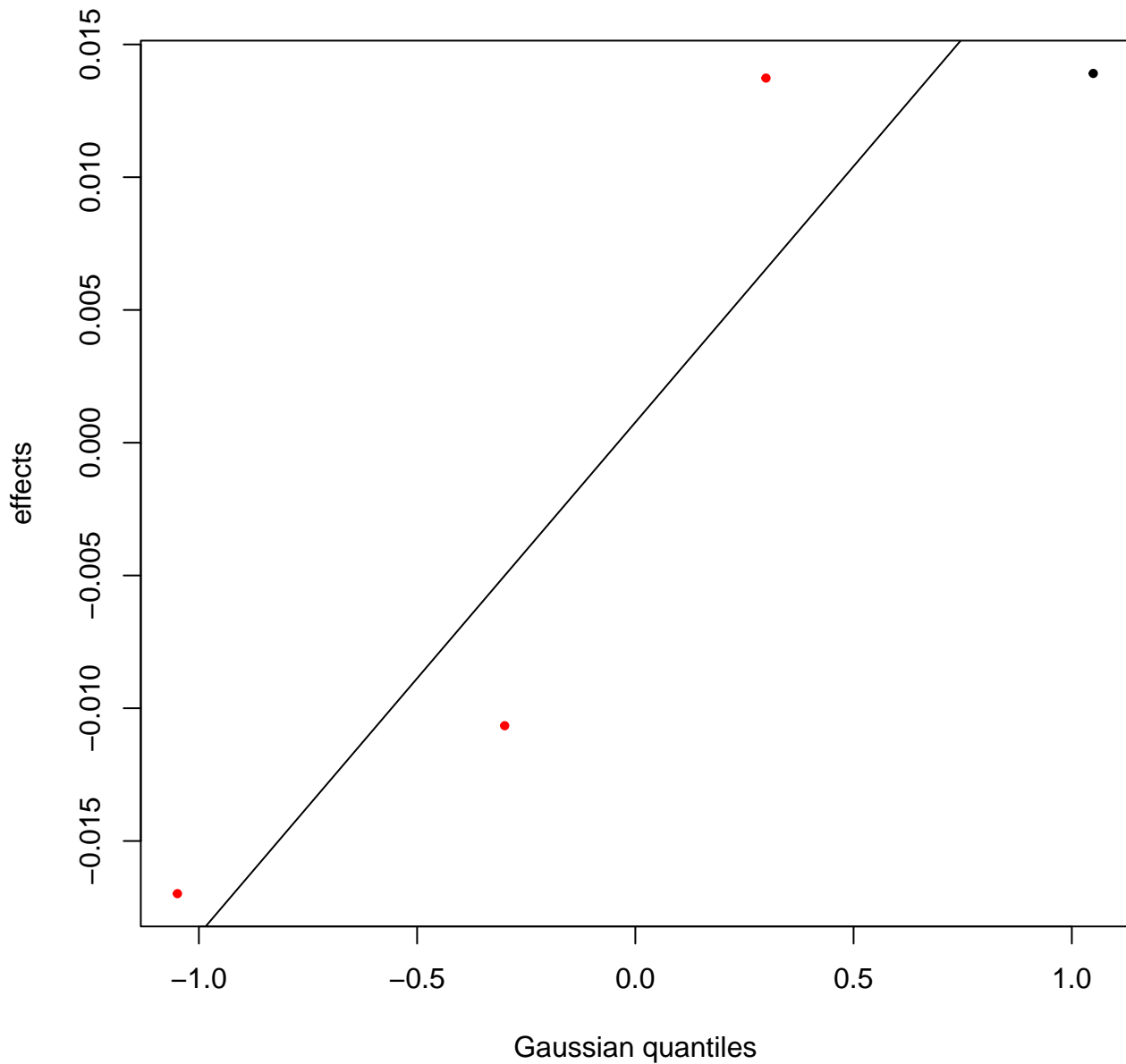
Bites in cyno

Nb excluded (LOD) : 0  
Nb remaining: 36

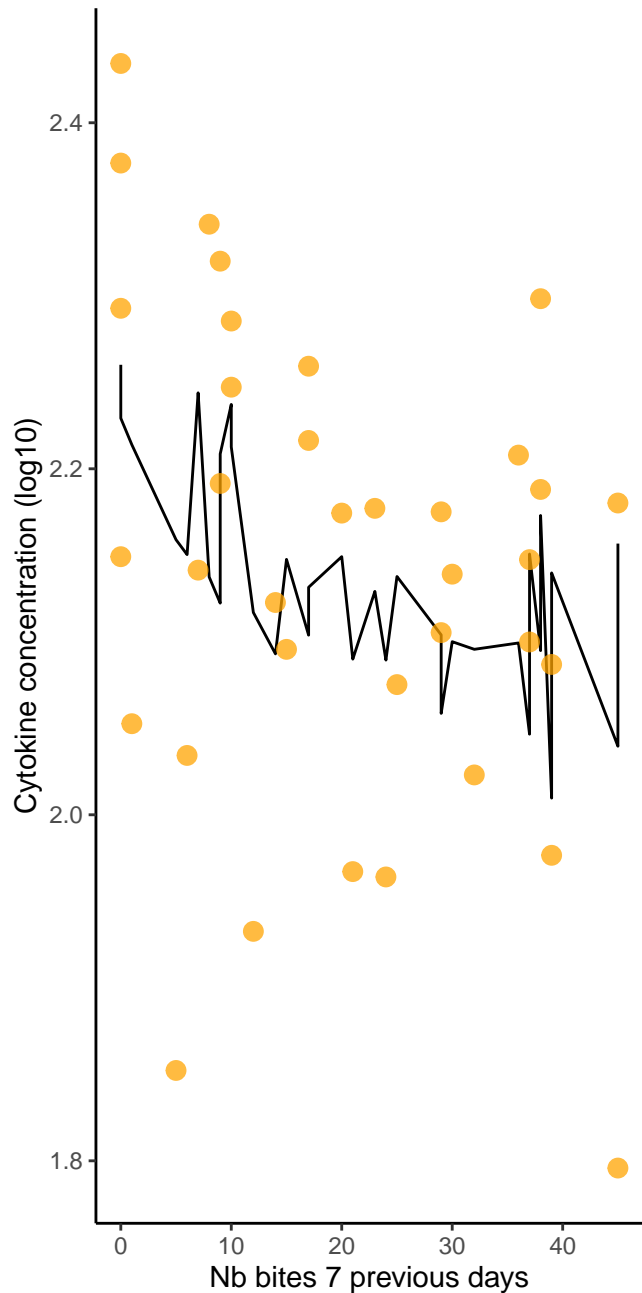
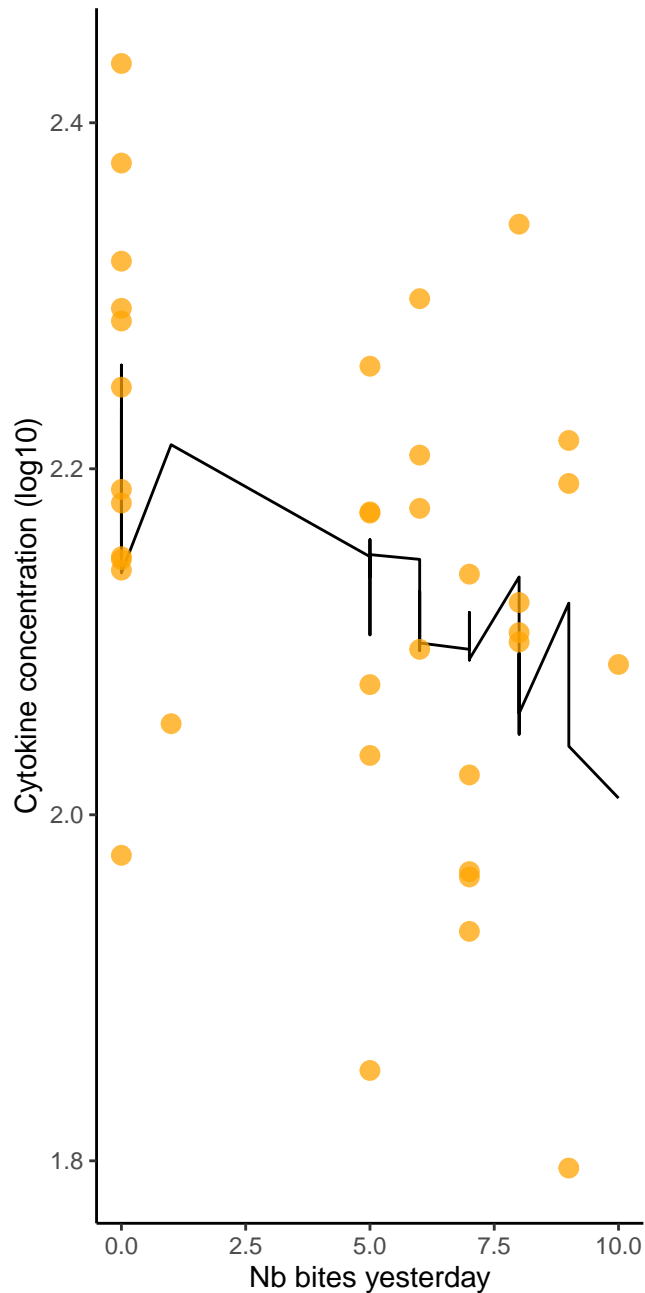


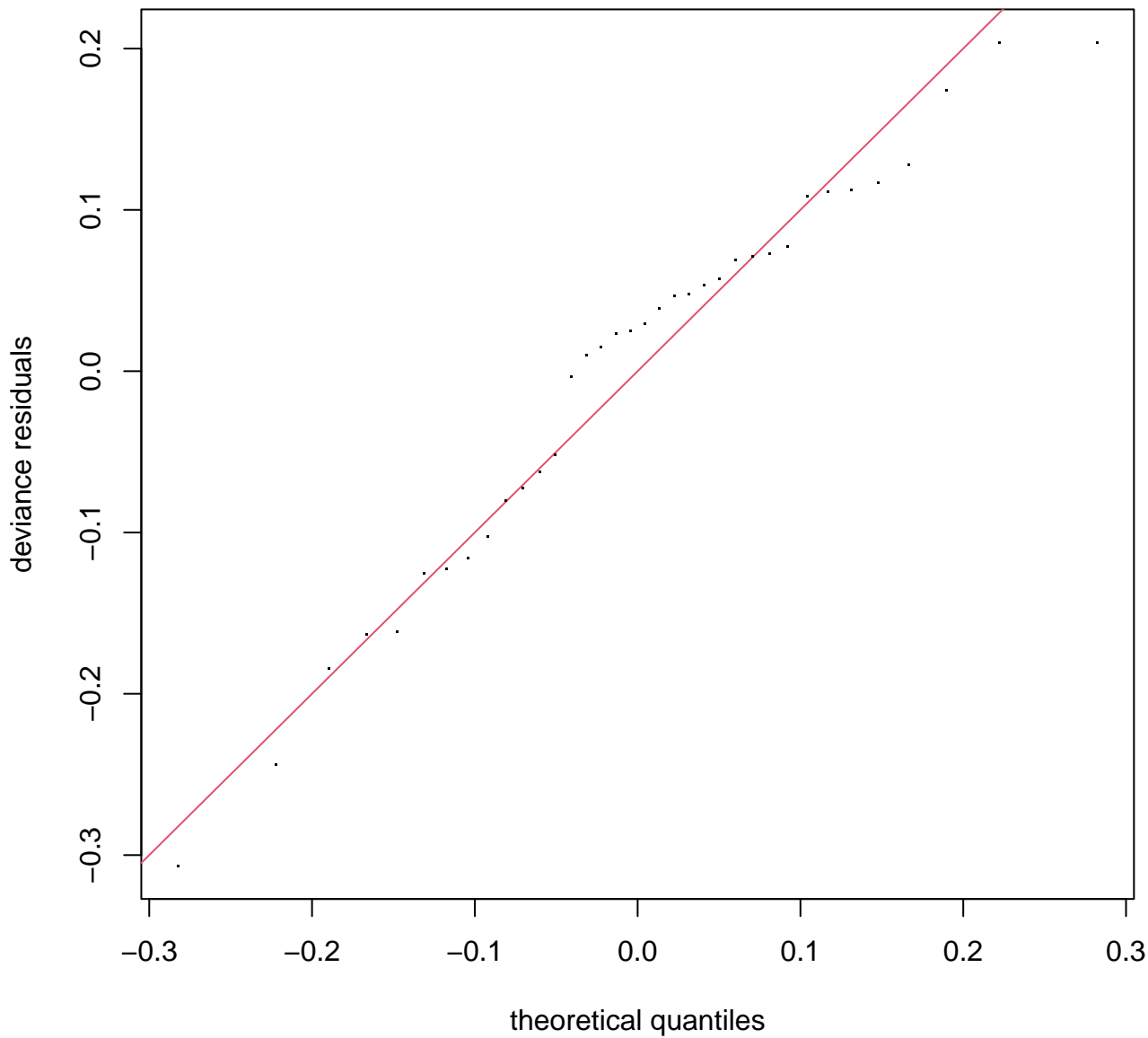


**s(ID,0.86)**

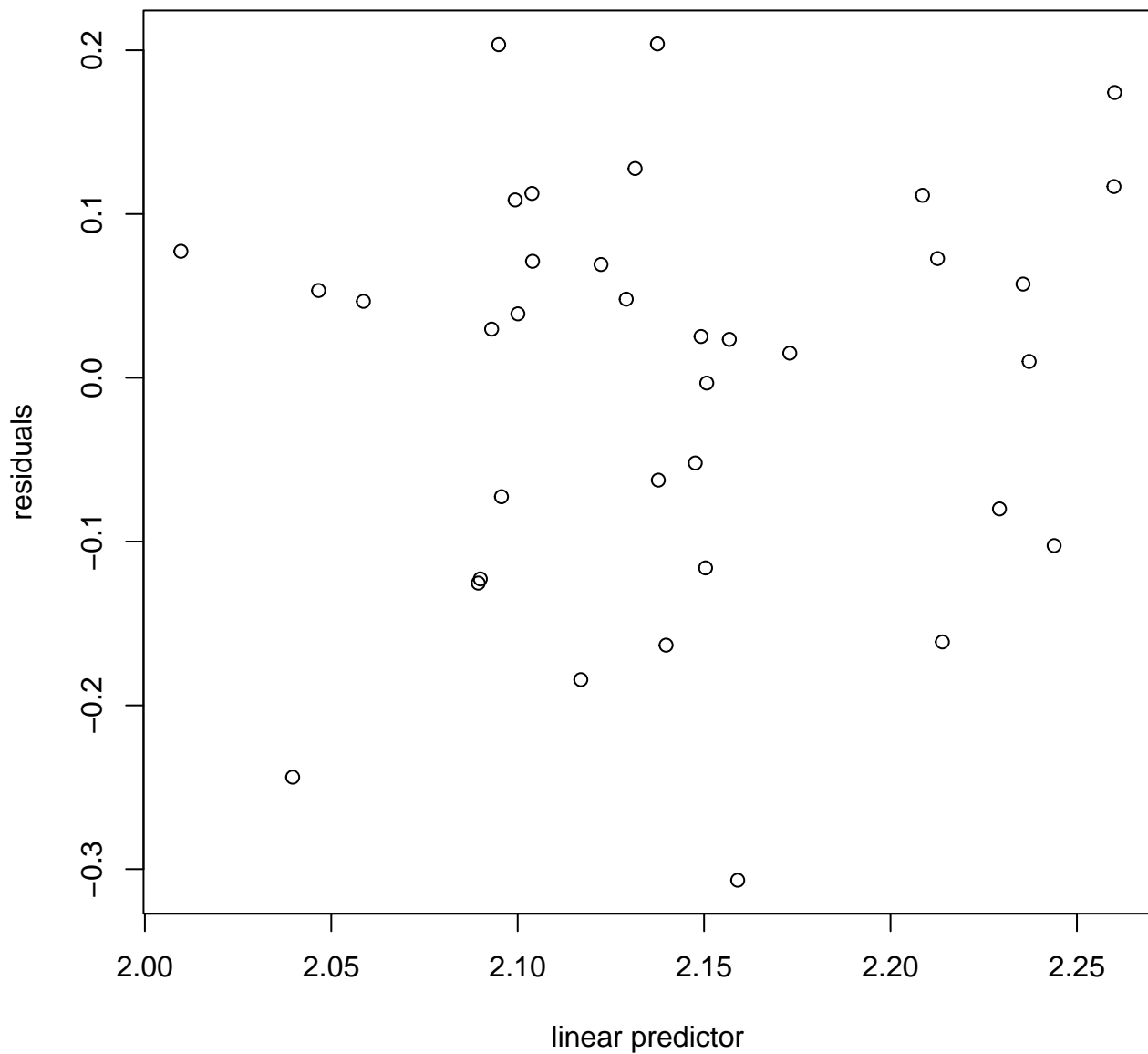




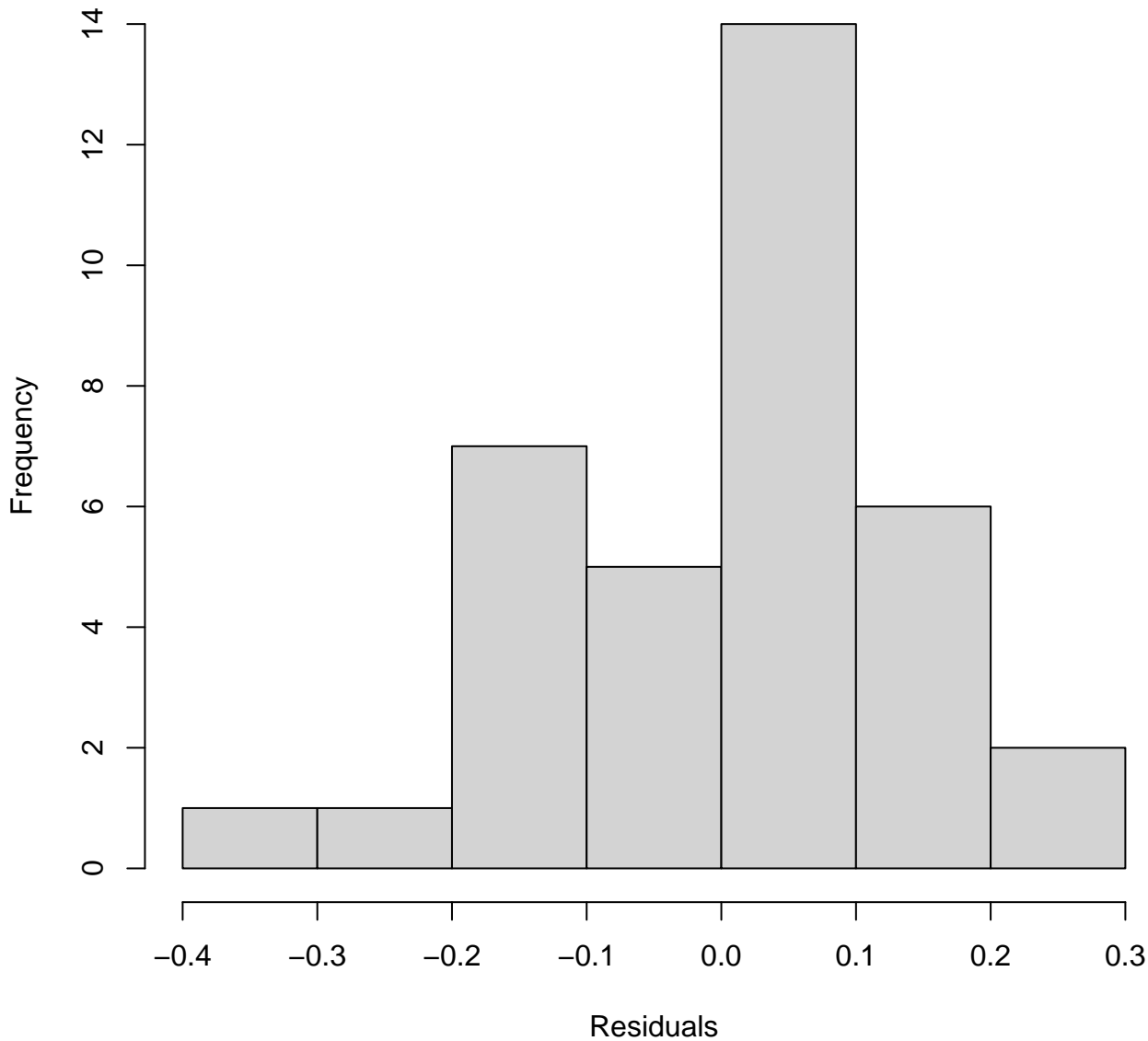




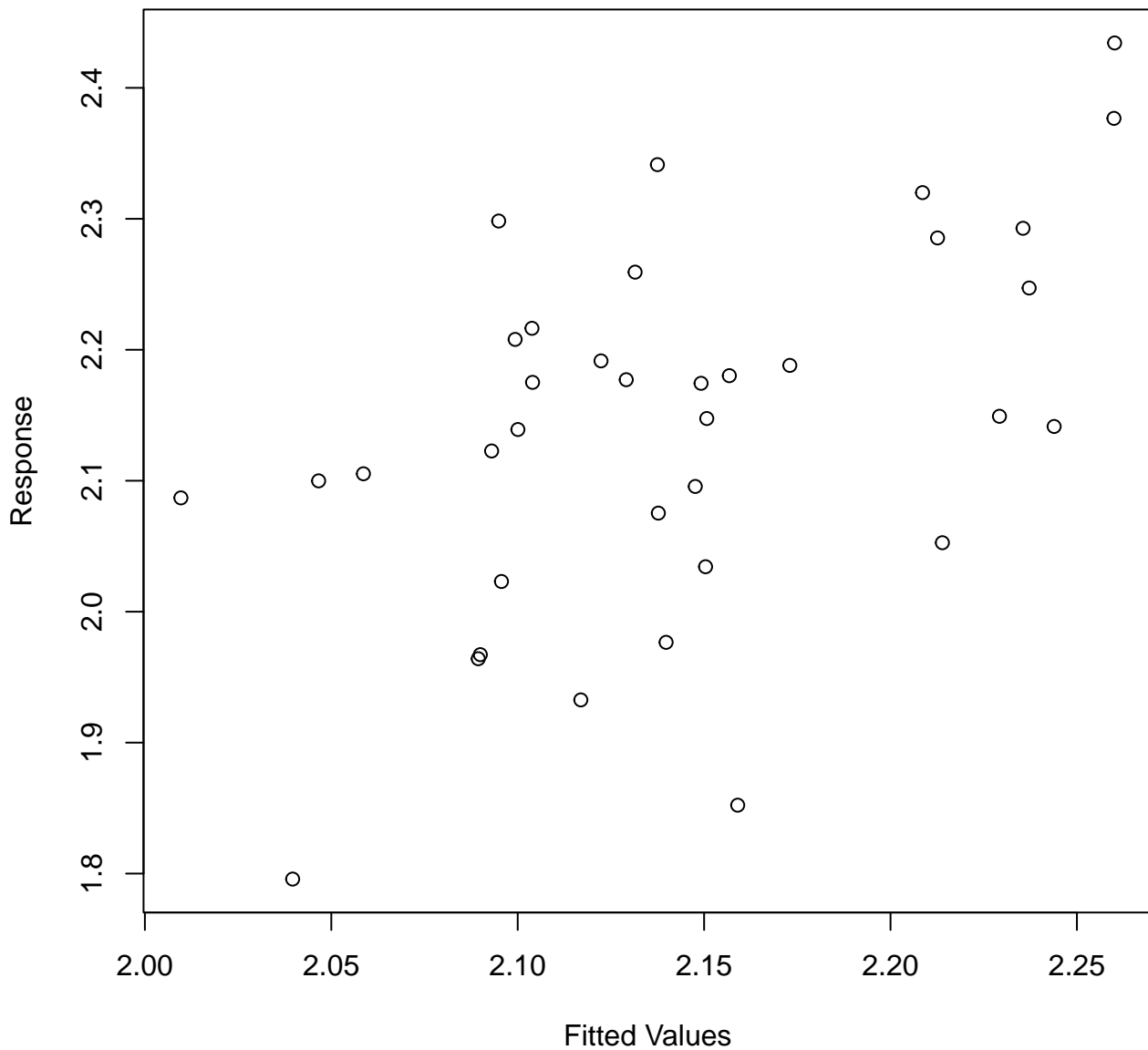
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



```

Method: ML   Optimizer: outer newton
full convergence after 10 iterations.
Gradient range [-5.488936e-06,6.609834e-07]
(score -23.6211 & scale 0.01645672).
Hessian positive definite, eigenvalue range [1.135394e-06,18.01854].
Model rank = 11 / 11

```

Basis dimension (k) checking results. Low p-value (k-index<1) may indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.000	1.000	1.08	0.655
s(cumul_bites_7_previous_days)	3.000	1.000	0.73	0.025 *
s(ID)	4.000	0.857	NA	NA

---

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

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	
s(cumul_bites_7_previous_days, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	2.14243	0.02533	84.57	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.0000	1	4.075	0.052 .
s(cumul_bites_7_previous_days)	1.0000	1	2.073	0.160
s(ID)	0.8571	3	0.494	0.181

---

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

R-sq.(adj) = 0.186 Deviance explained = 25.3%  
-ML = -23.621 Scale est. = 0.016457 n = 36



AICc [ 1 ] -36.43411

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

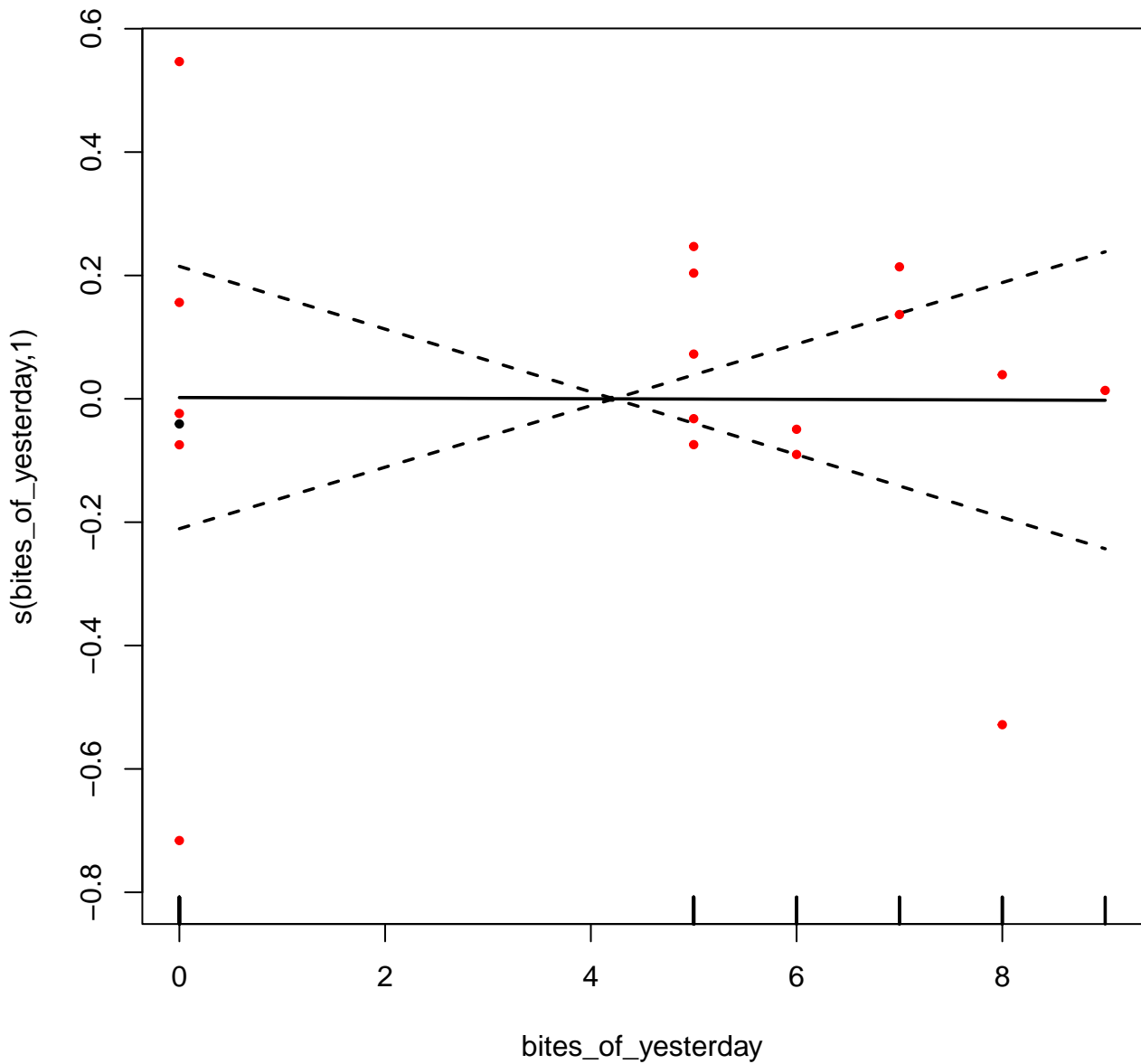
Eotaxin ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

G . CSF

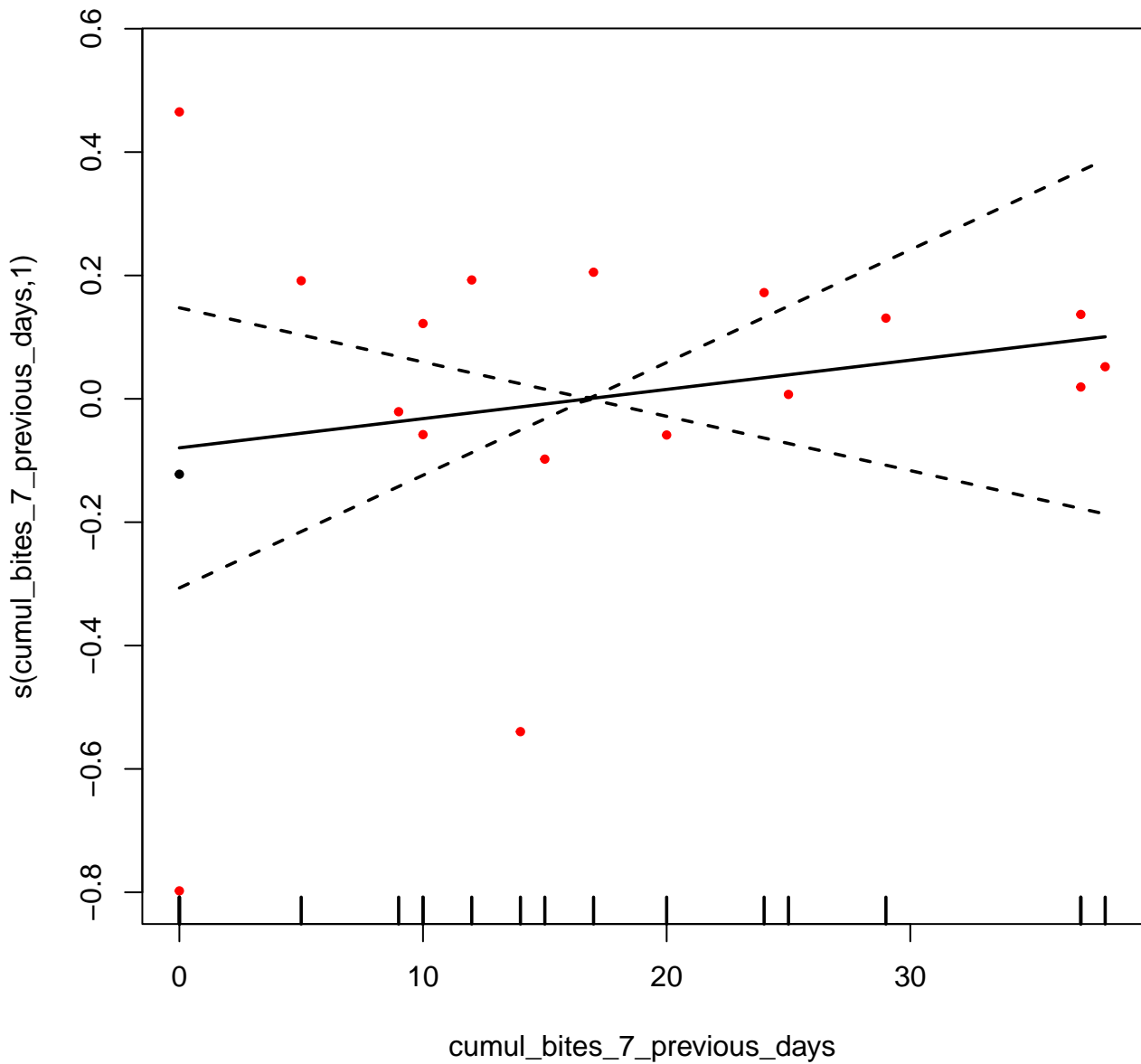
Bites in cyno

Nb excluded (LOD) : 18

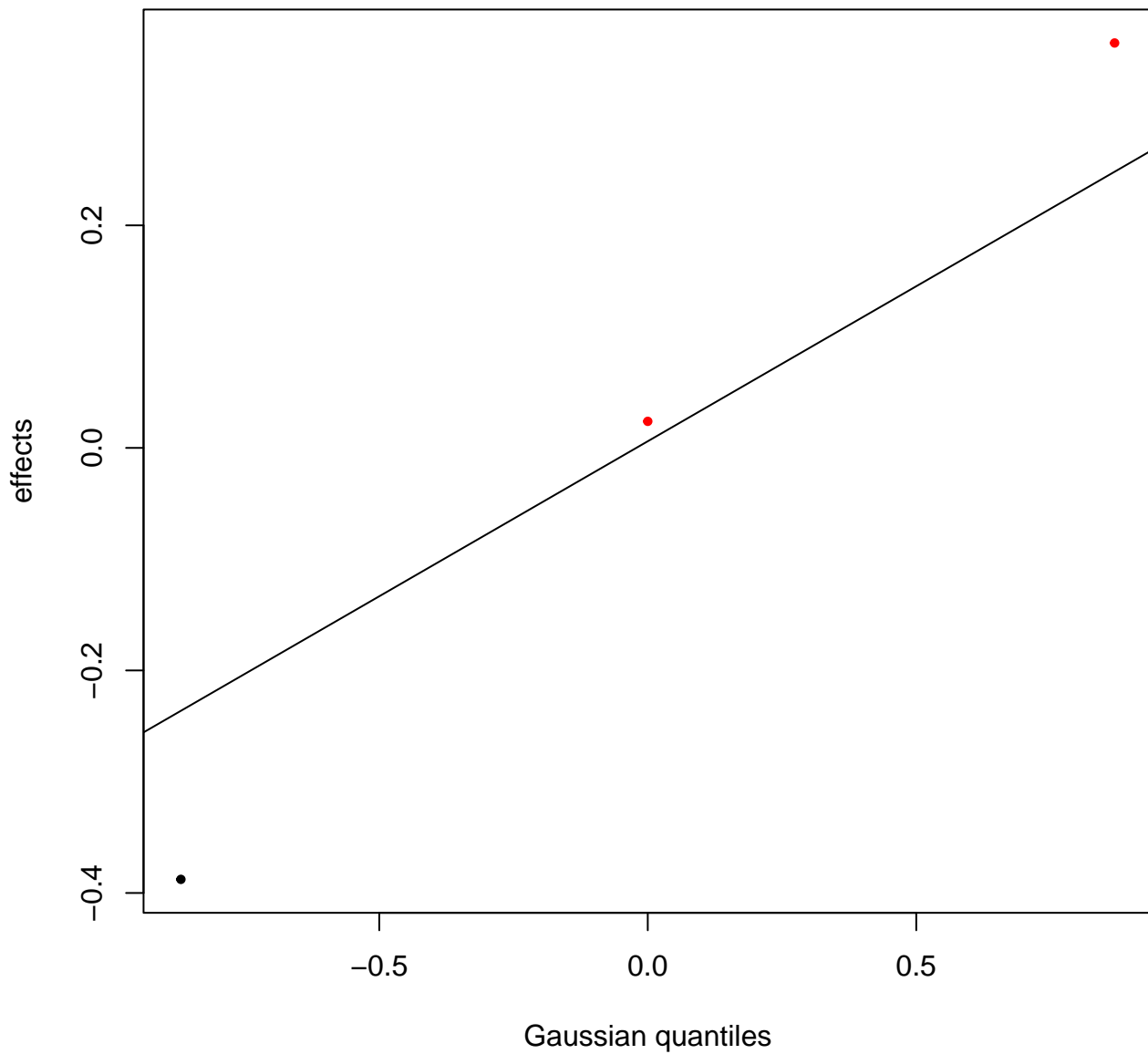
Nb remaining : 18

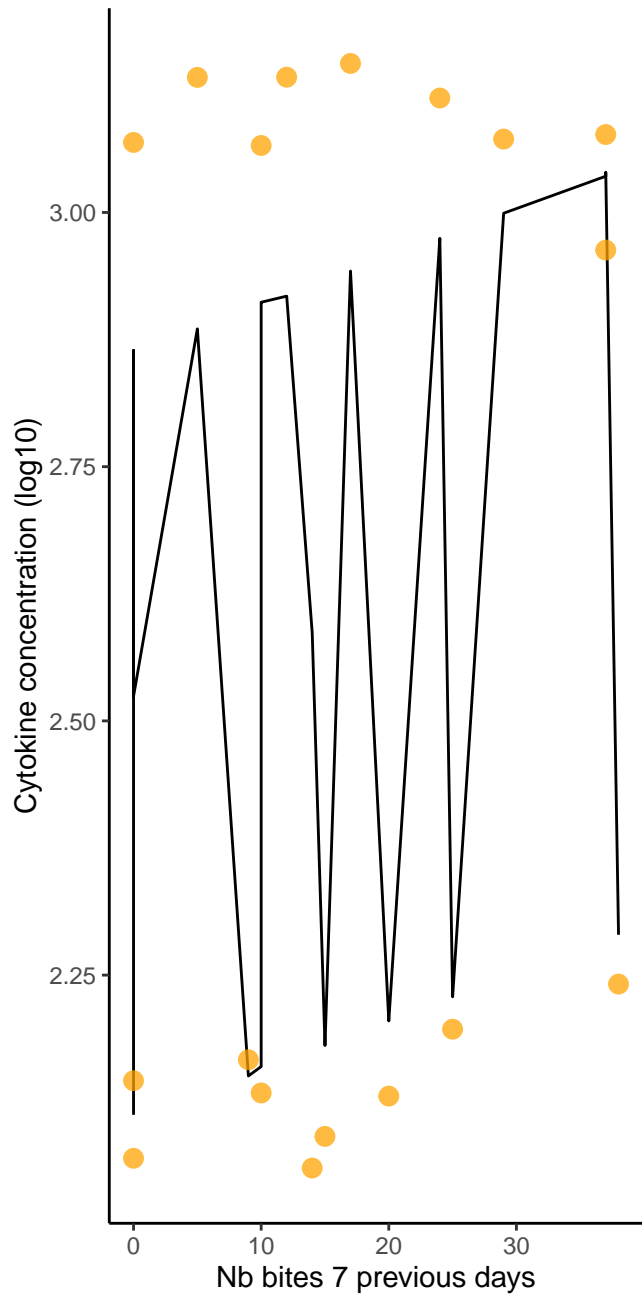
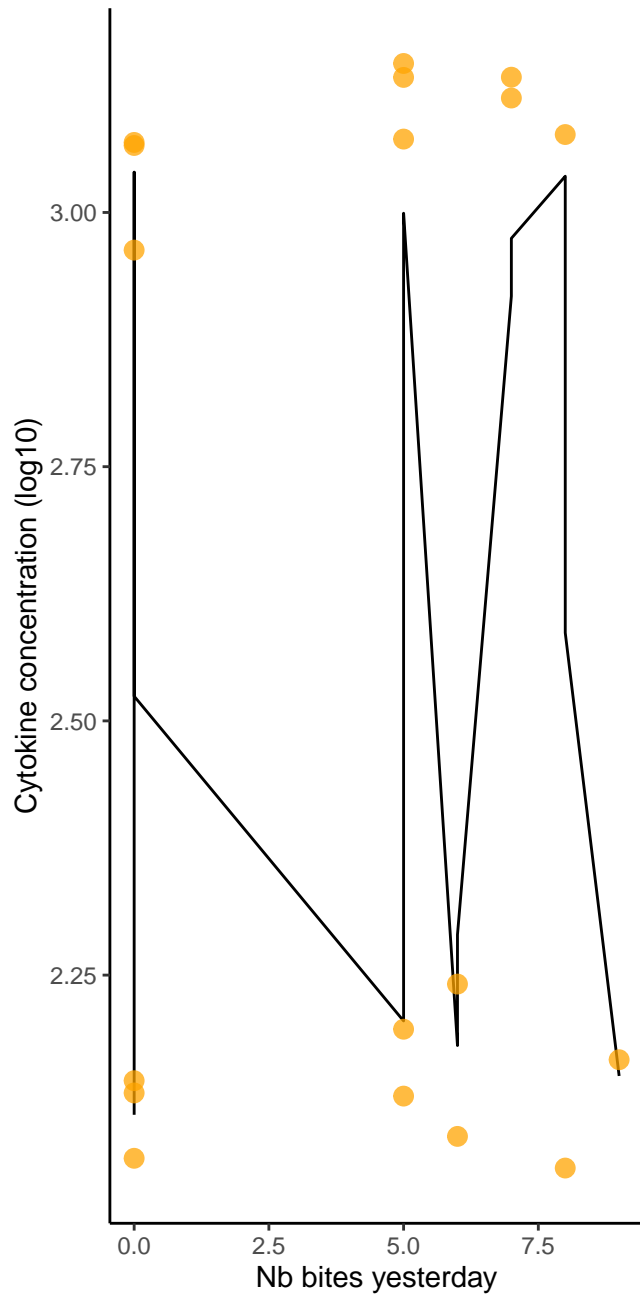


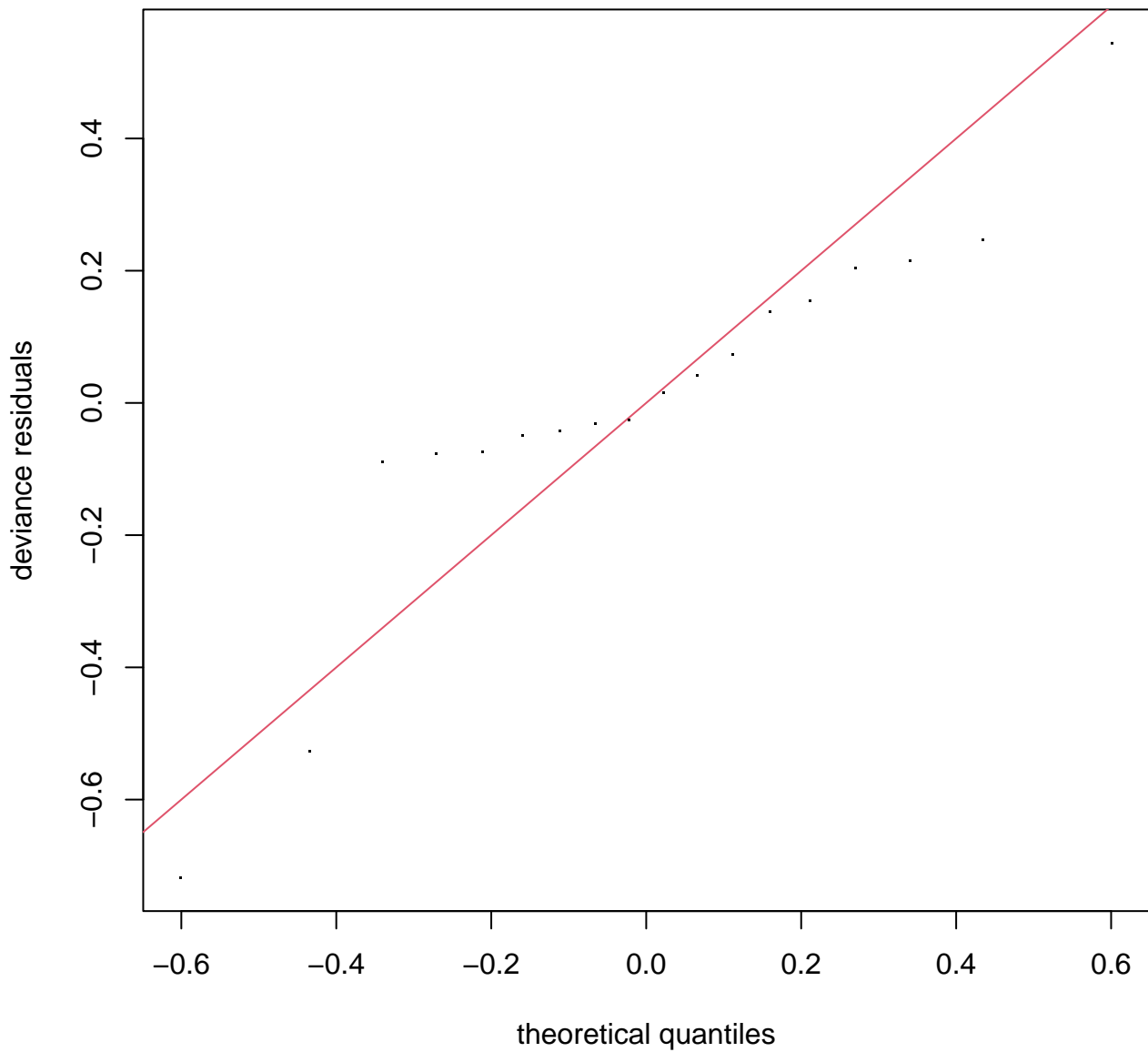




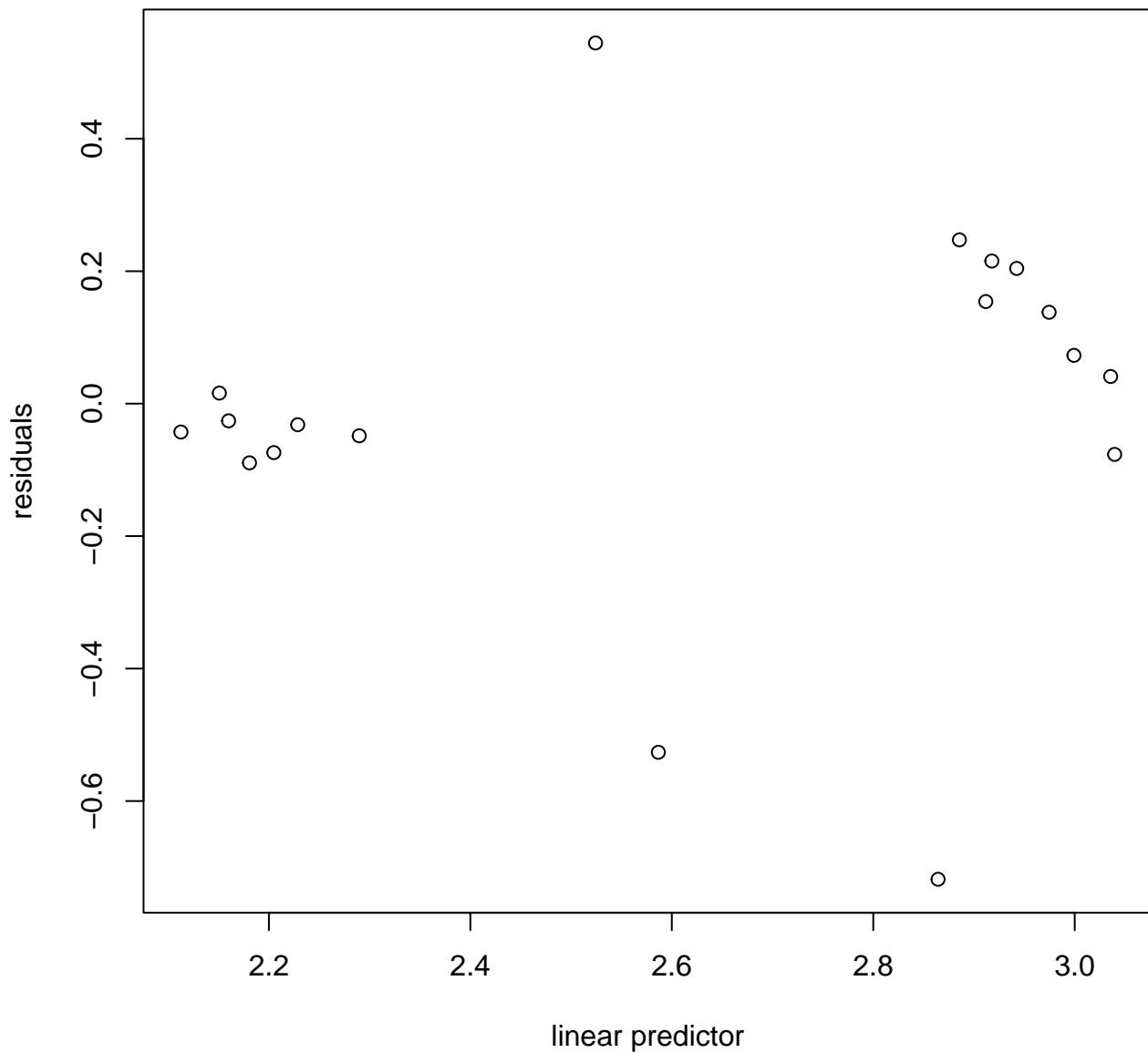
**s(ID,1.67)**



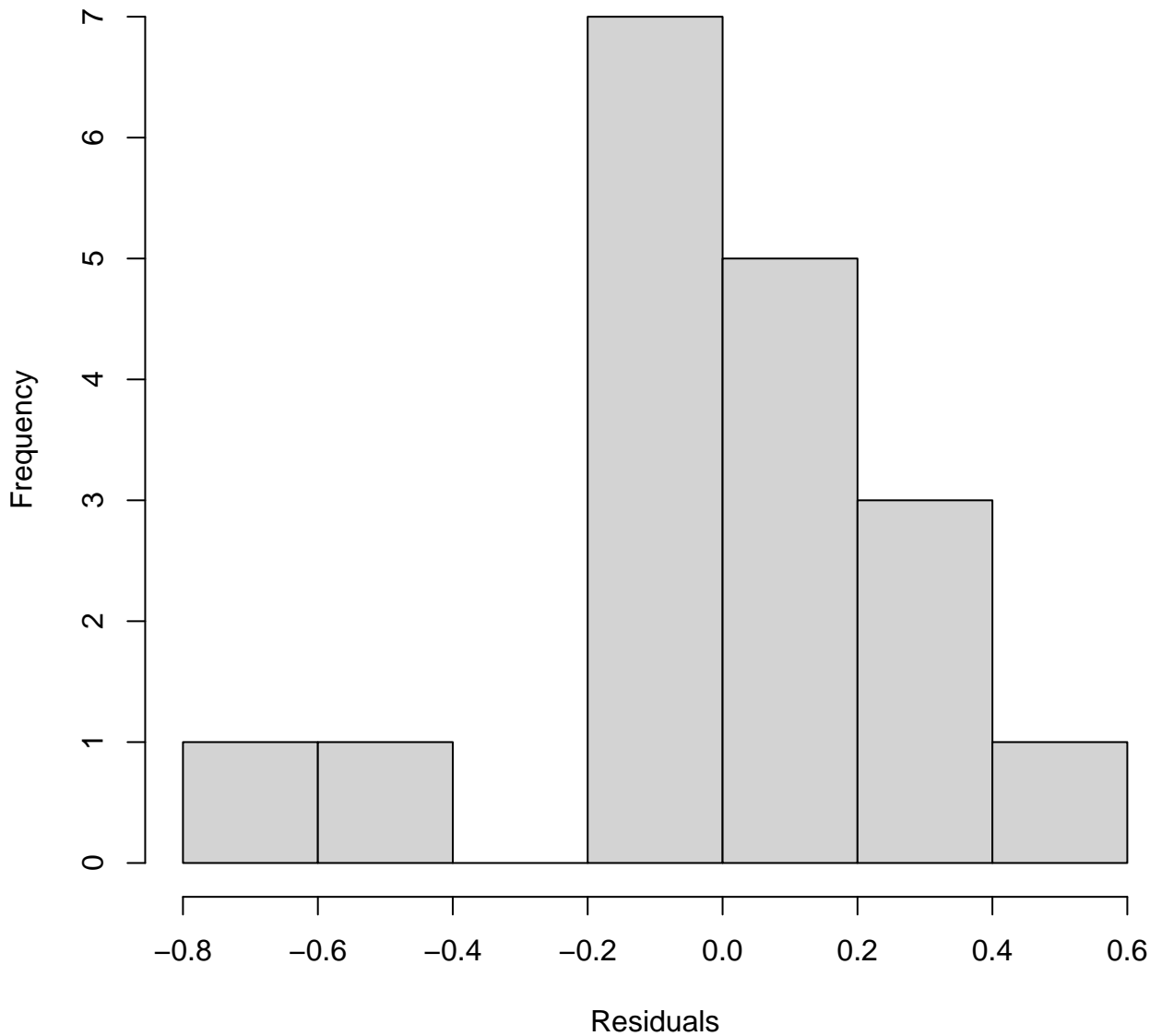




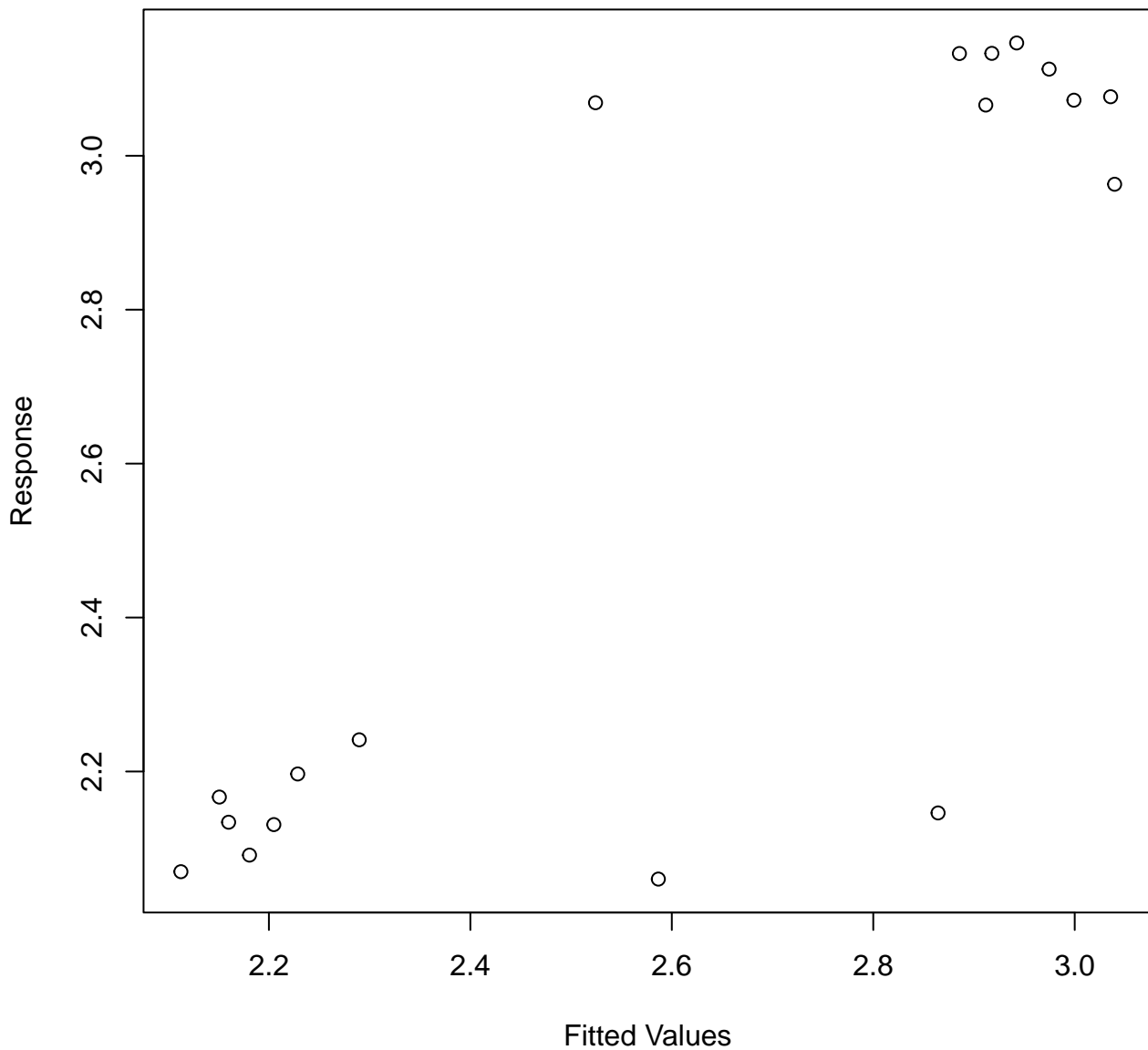
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 13 iterations.  
 Gradient range [-2.93116e-06,4.615248e-07]  
 (score 6.433436 & scale 0.09857692).  
 Hessian positive definite, eigenvalue range [1.959447e-06,9.203226].  
 Model rank = 10 / 10

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.00	1.16	0.64
s(cumul_bites_7_previous_days)	3.00	1.00	1.30	0.83
s(ID)	3.00	1.67	NA	NA



# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
	s(bites_of_yesterday, k = 4)	1.01	[1.00, Inf]	1.00	0.99	[0.00, 1.00]
	s(cumul_bites_7_previous_days, k = 4)	1.01	[1.00, Inf]	1.00	0.99	[0.00, 1.00]

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	2.5778	0.2254	11.43	2.88e-08 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1	0.00	0.984629
s(cumul_bites_7_previous_days)	1.000	1	0.49	0.496295
s(ID)	1.671	2	12.21	0.000489 ***

---

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

R-sq.(adj) = 0.591 Deviance explained = 67.9%  
-ML = 6.4334 Scale est. = 0.098577 n = 18

AICc [ 1 ] 23.0184

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

G.CSF ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

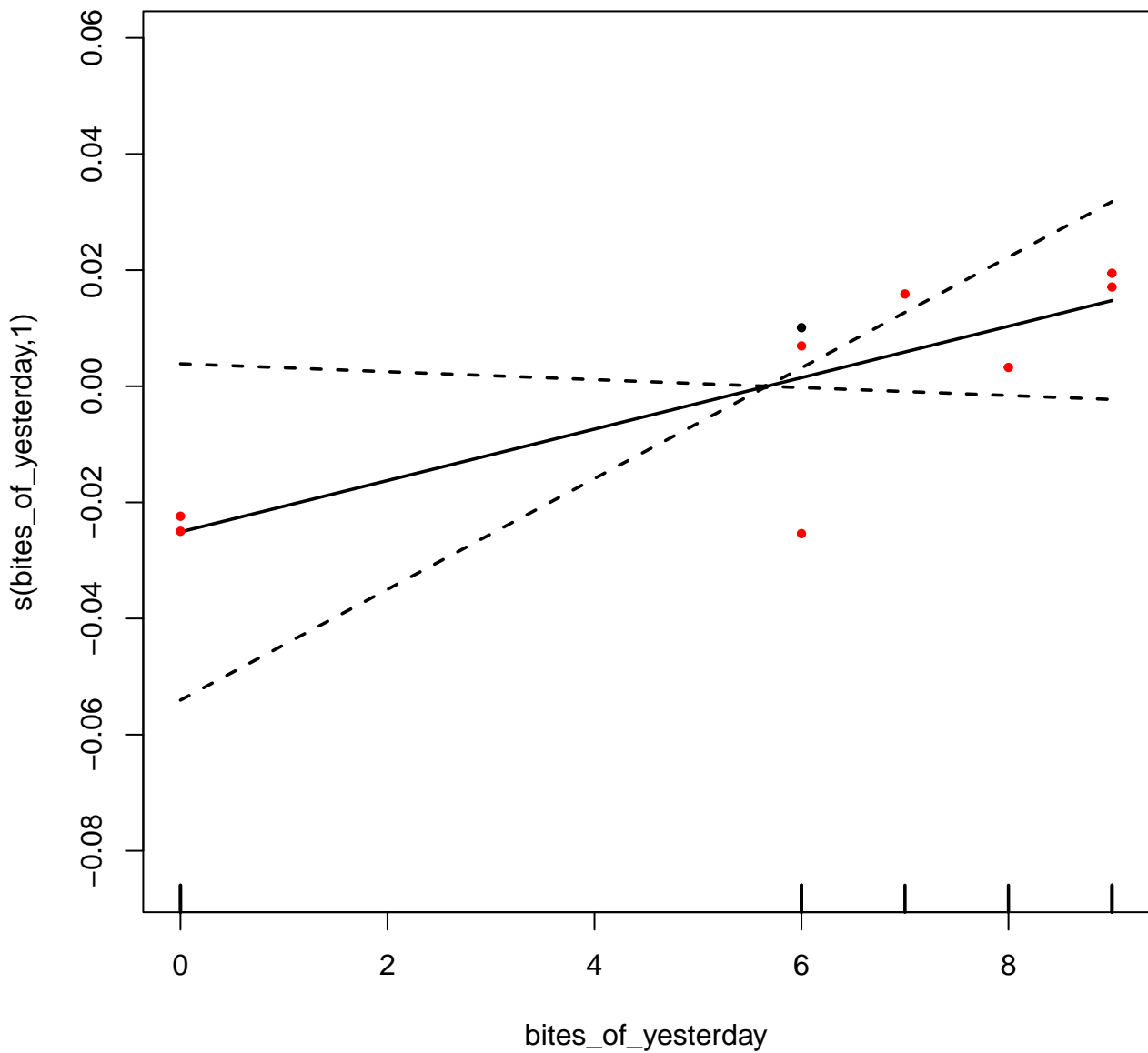
GM . CSF

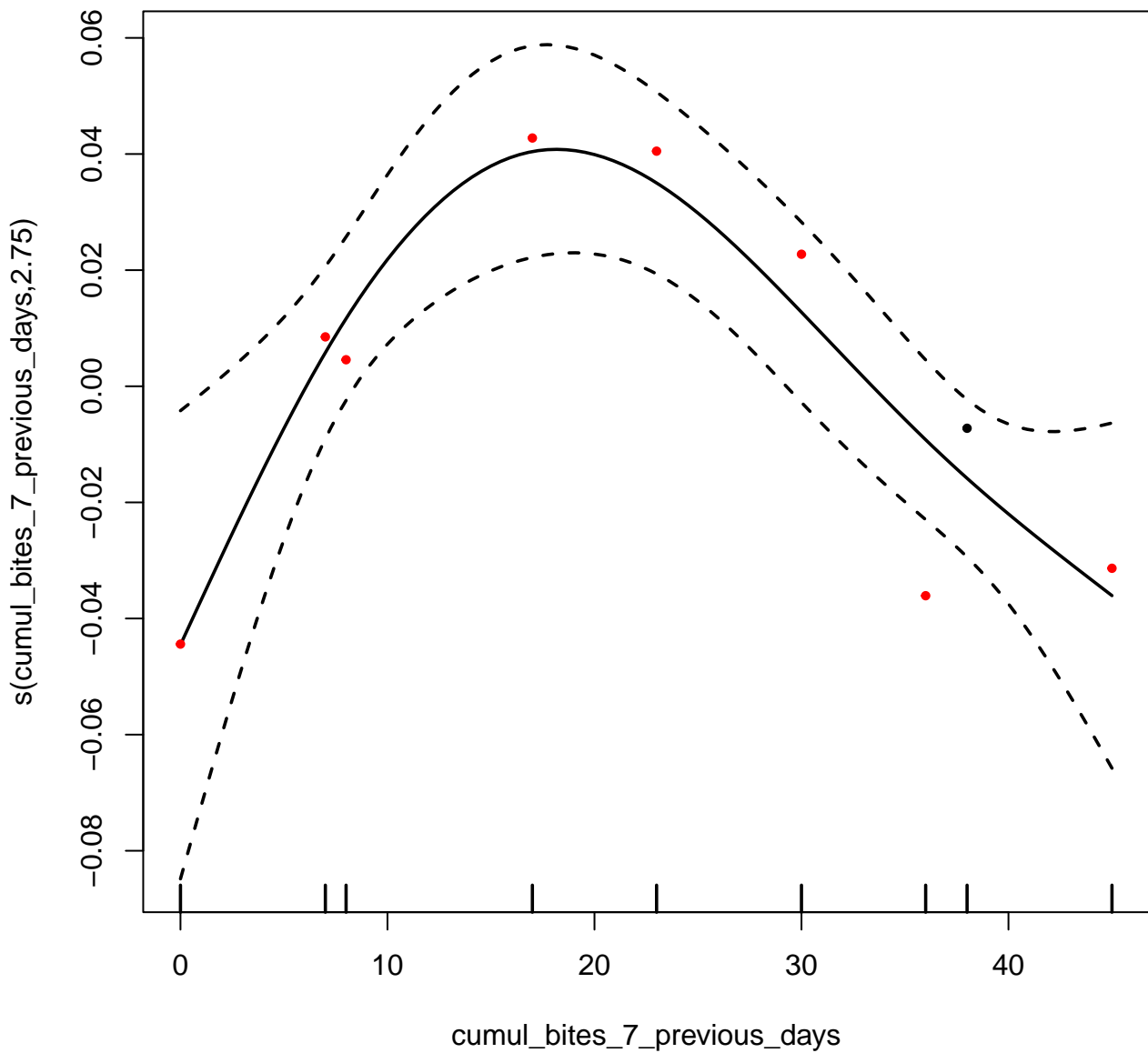
Bites in cyno



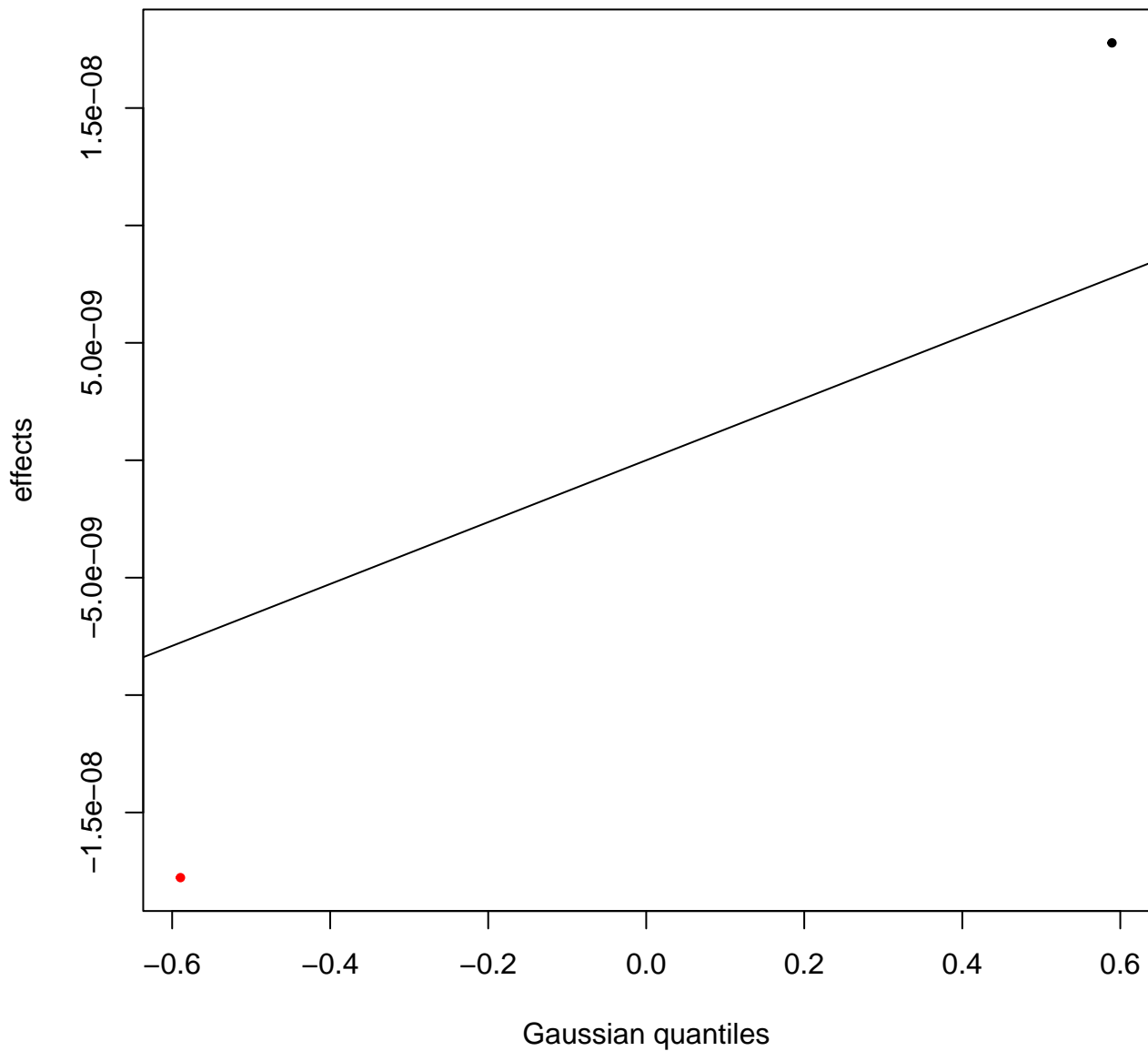
Nb excluded (LOD) : 27

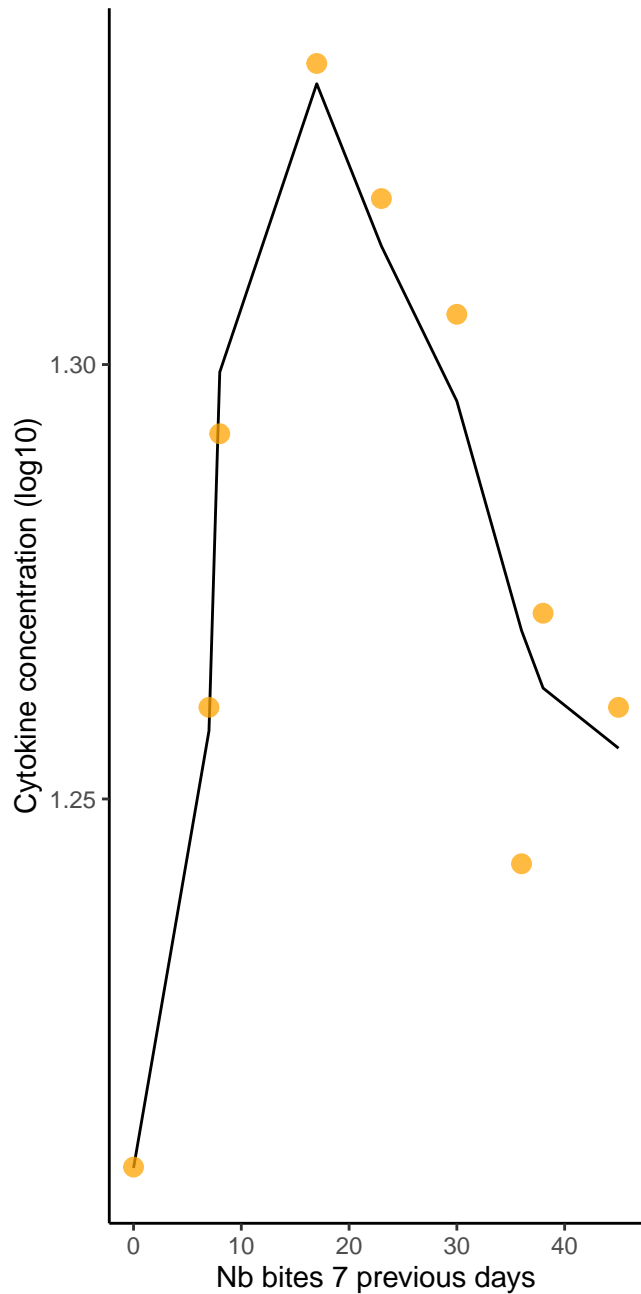
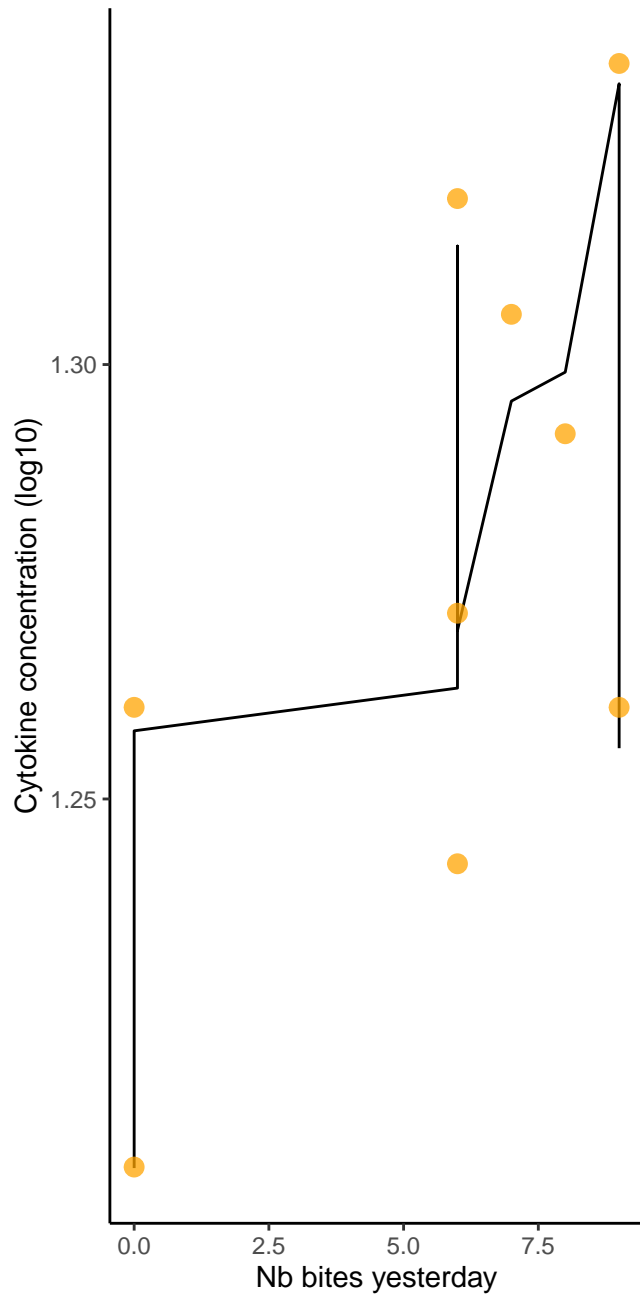
Nb remaining: 9

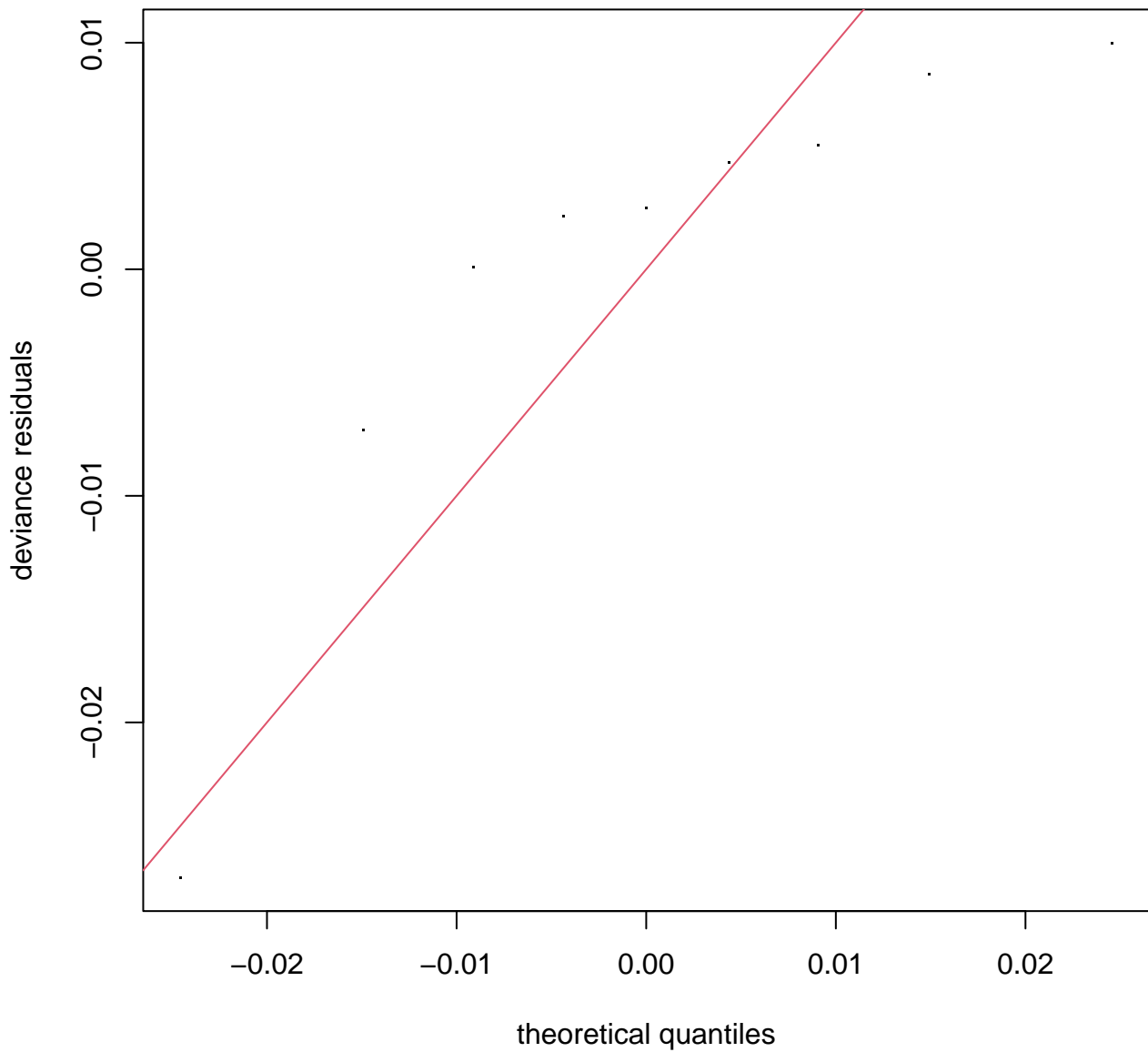




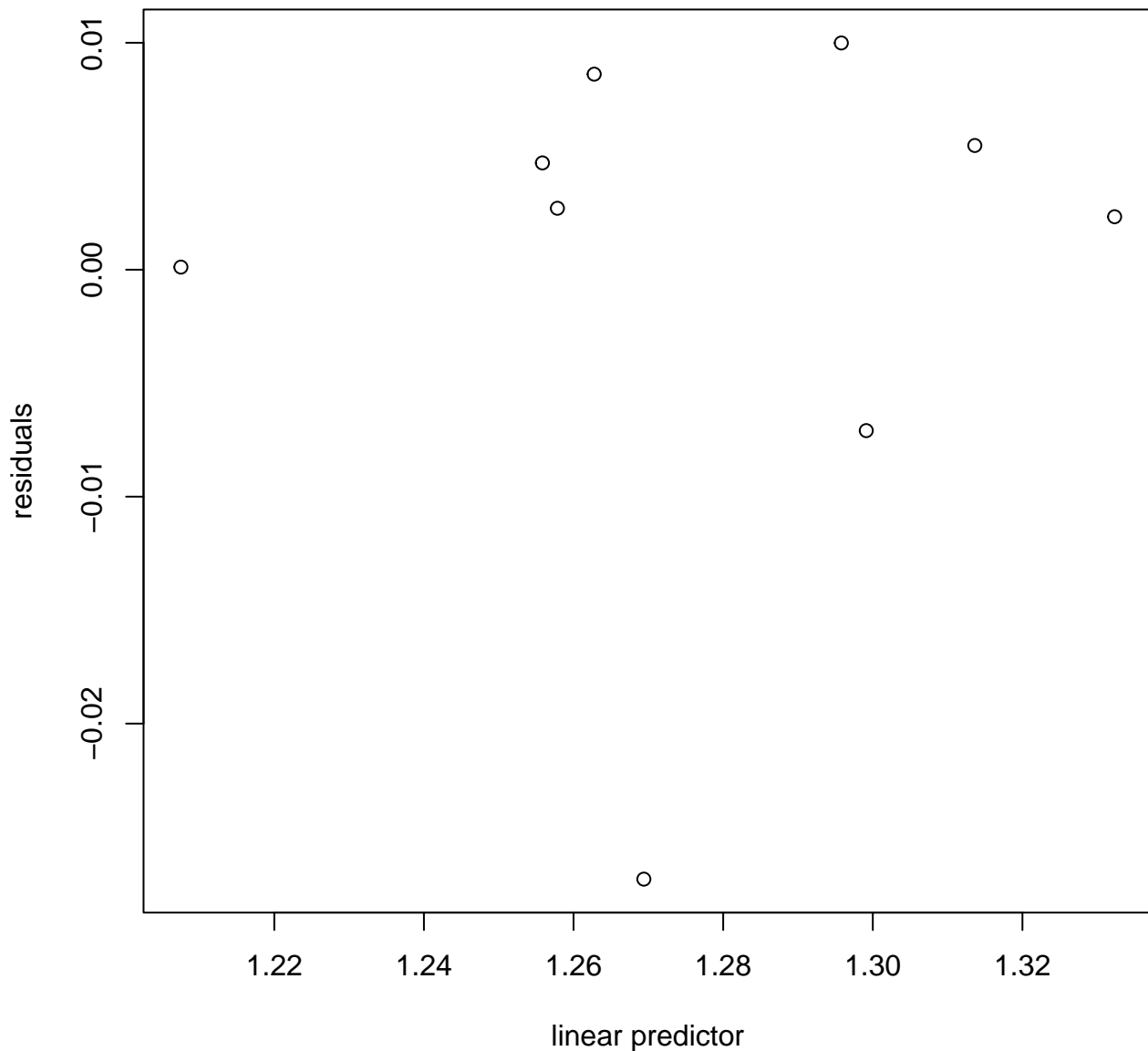
**s(ID,0)**



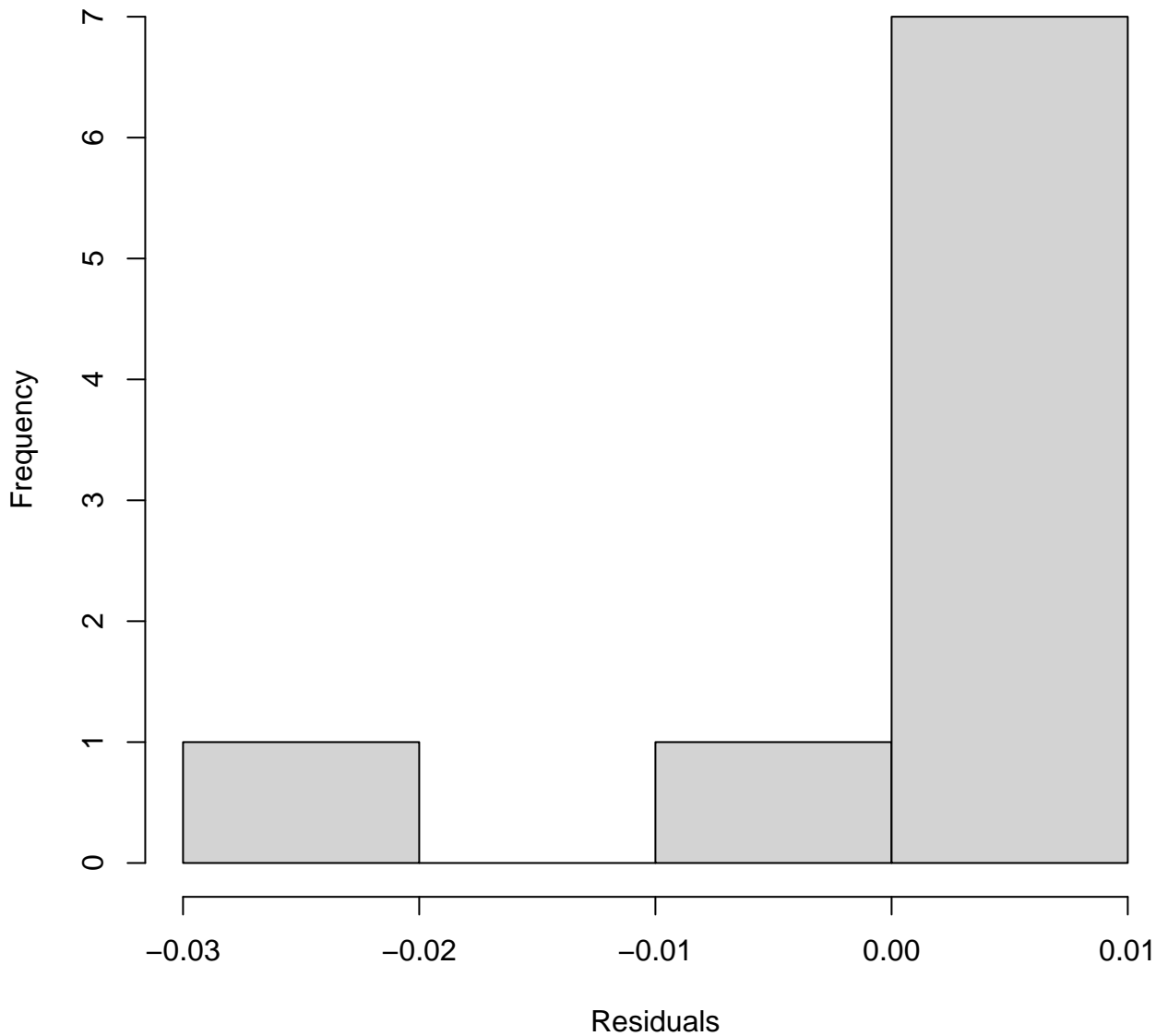




**Resids vs. linear pred.**

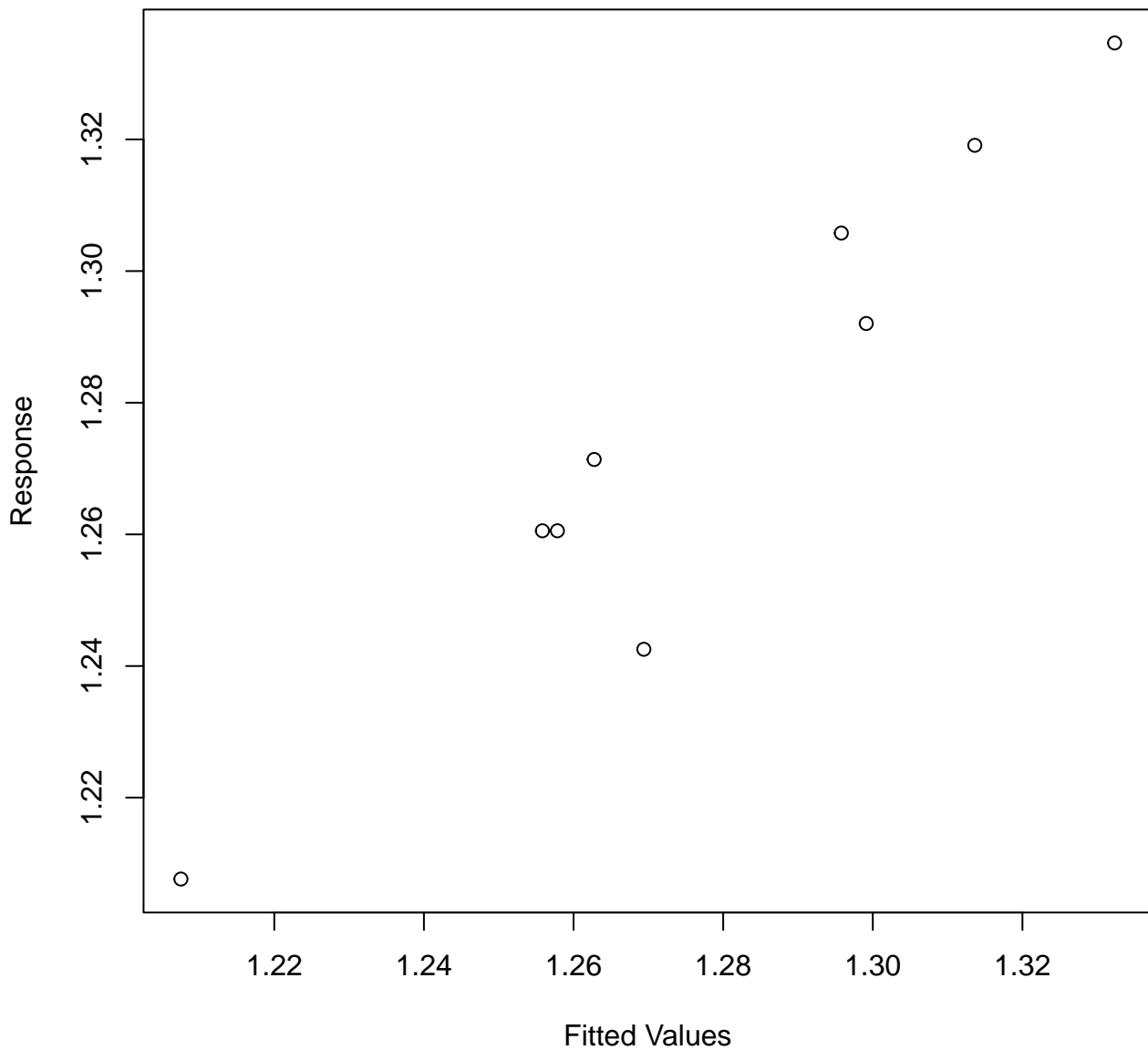


**Histogram of residuals**





**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 11 iterations.  
 Gradient range [-7.906385e-06,2.358463e-06]  
 (score -22.75527 & scale 0.0002376632).  
 Hessian positive definite, eigenvalue range [4.998246e-06,4.741355].  
 Model rank = 9 / 9

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00e+00	1.00e+00	1.58	0.95
s(cumul_bites_7_previous_days)	3.00e+00	2.75e+00	1.59	0.98
s(ID)	2.00e+00	2.93e-06	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
	s(bites_of_yesterday, k = 4)	1.29	[1.08, 2.15]	1.14	0.77	[0.46, 0.93]
	s(cumul_bites_7_previous_days, k = 4)	1.29	[1.08, 2.15]	1.14	0.77	[0.46, 0.93]

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.277136	0.005139	248.5	5.19e-10 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000e+00	1.00	3.003	0.1582
s(cumul_bites_7_previous_days)	2.749e+00	2.95	9.234	0.0306 *
s(ID)	2.934e-06	1.00	0.000	0.5430

---

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

R-sq.(adj) = 0.851 Deviance explained = 92.1%  
-ML = -22.755 Scale est. = 0.00023766 n = 9

AICc [ 1 ] -4.056483

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

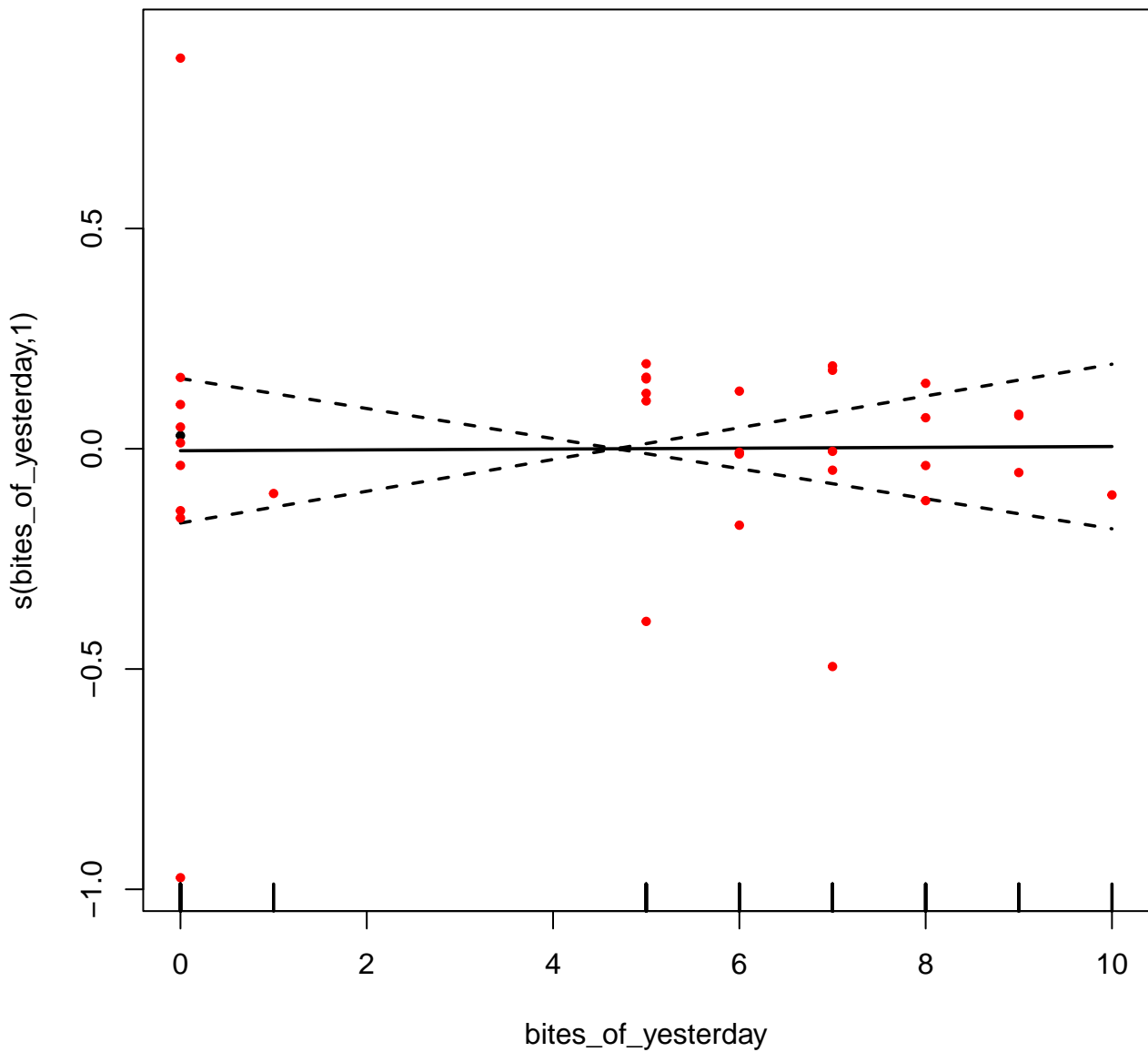
GM.CSF ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

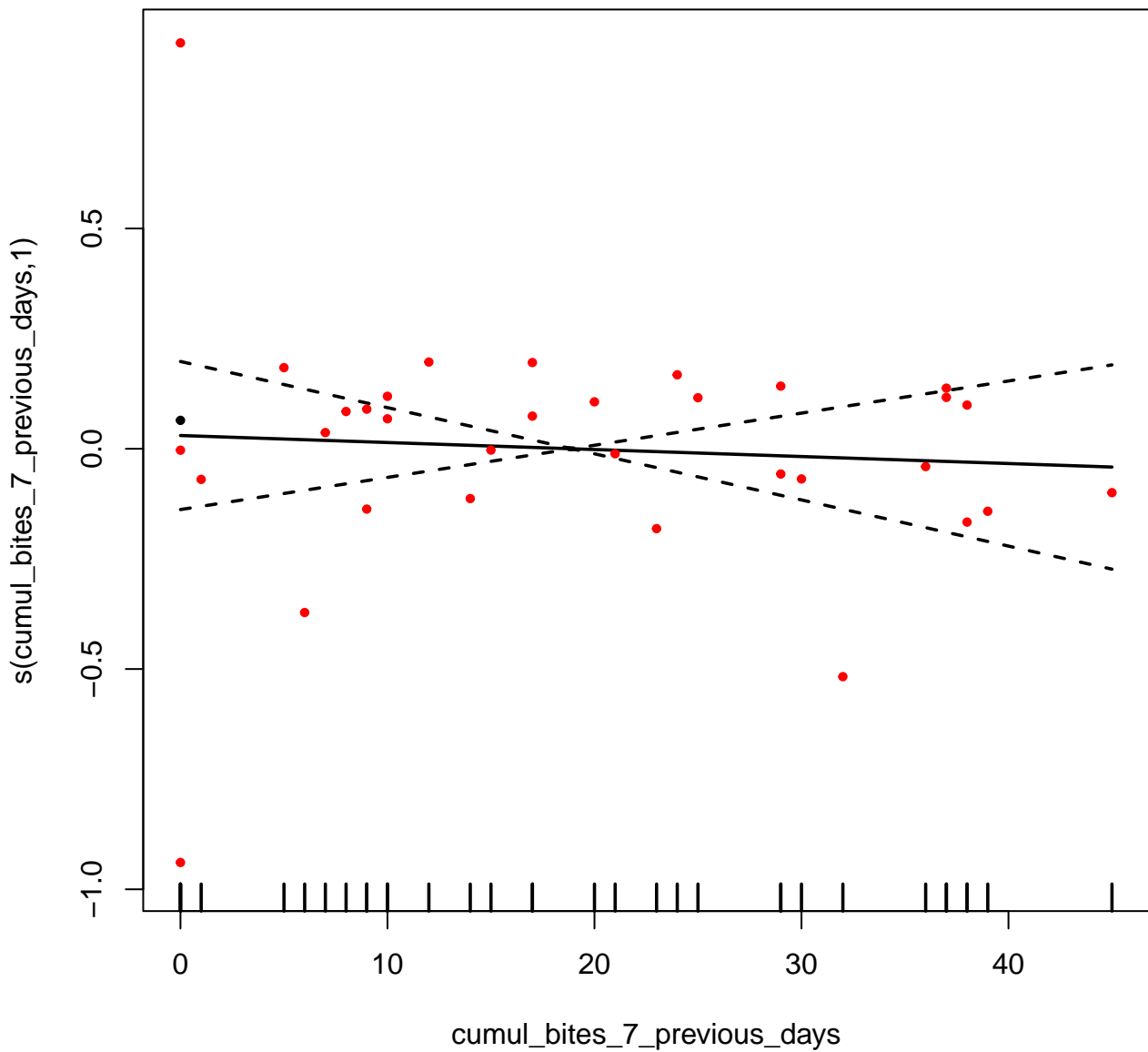


HGF

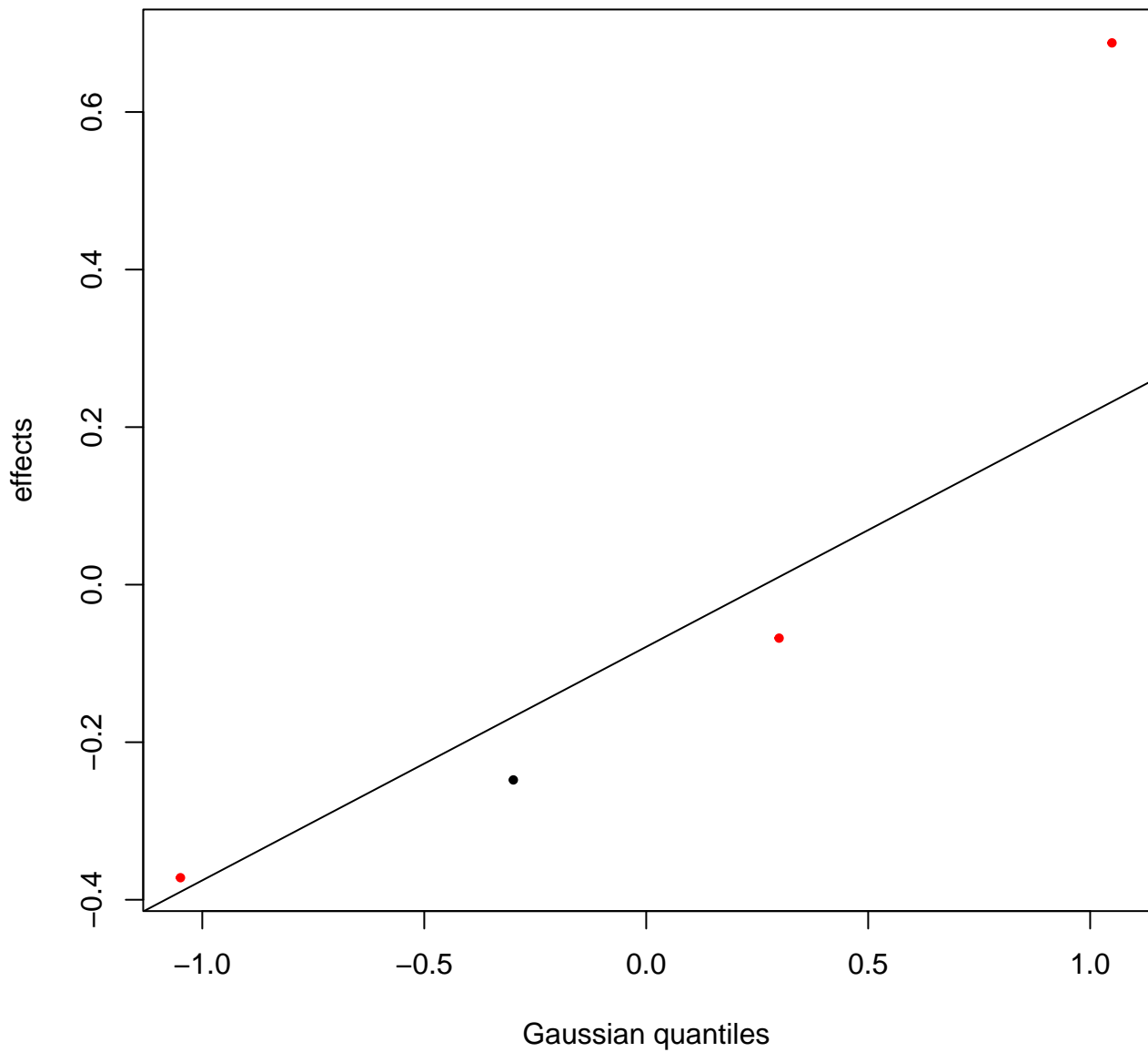
Bites in cyno

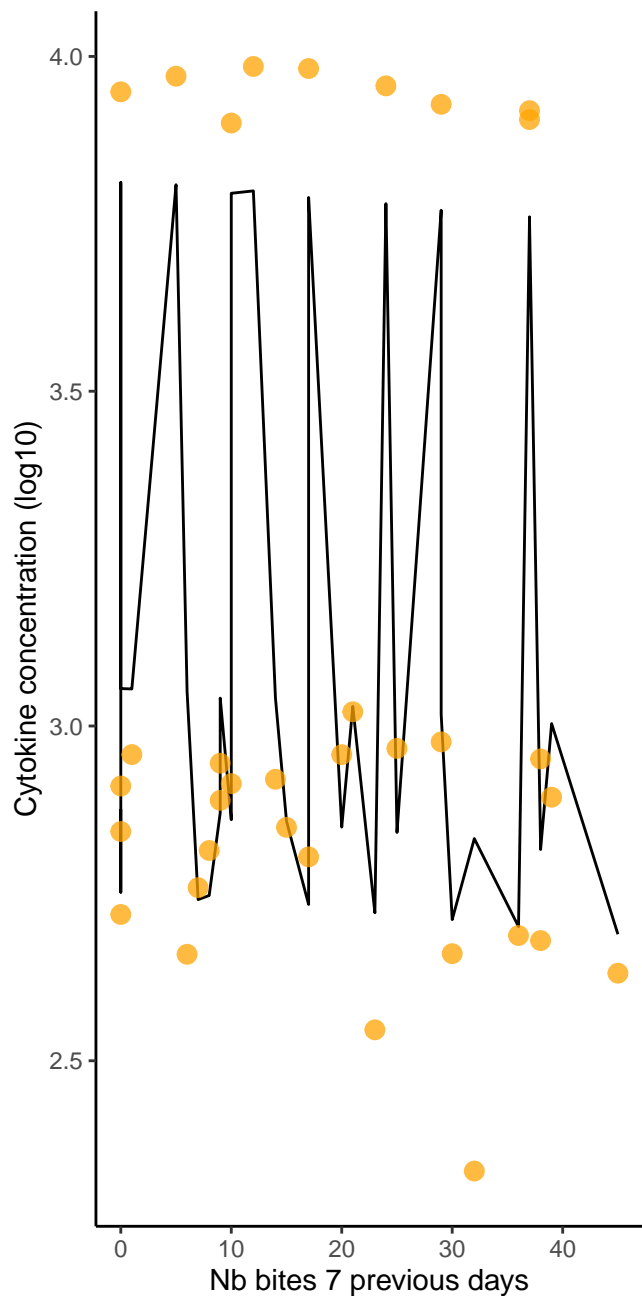
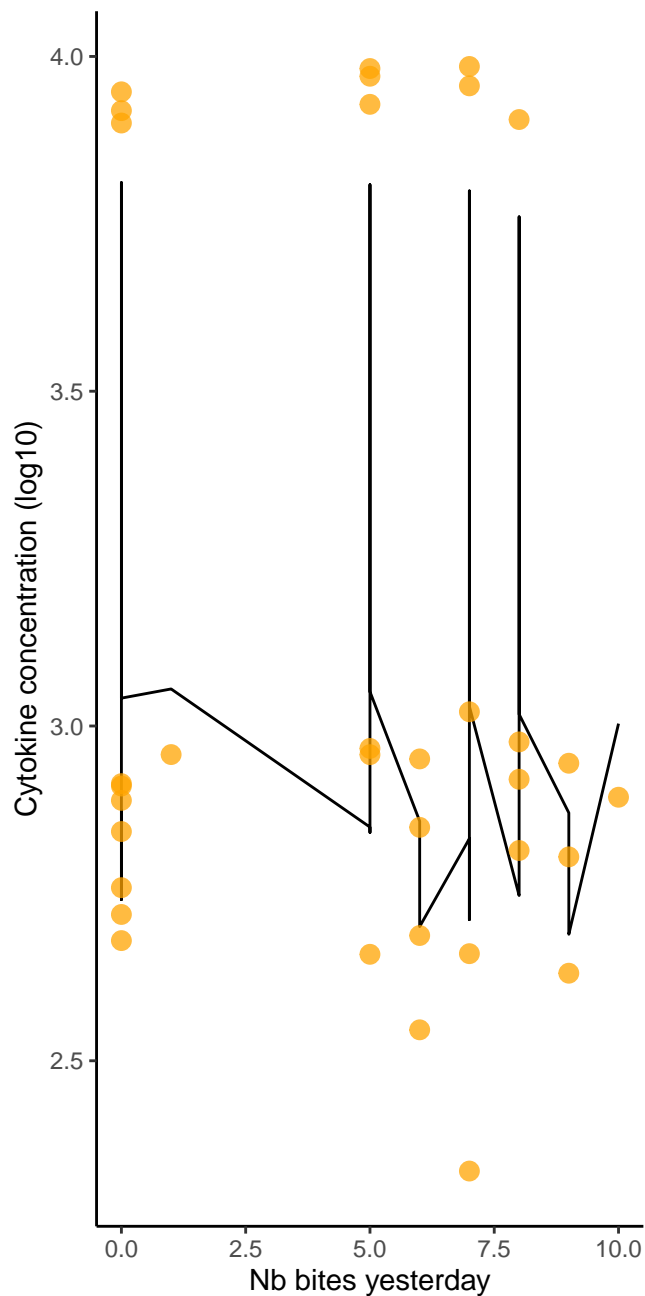
Nb excluded (LOD) : 2  
Nb remaining: 34

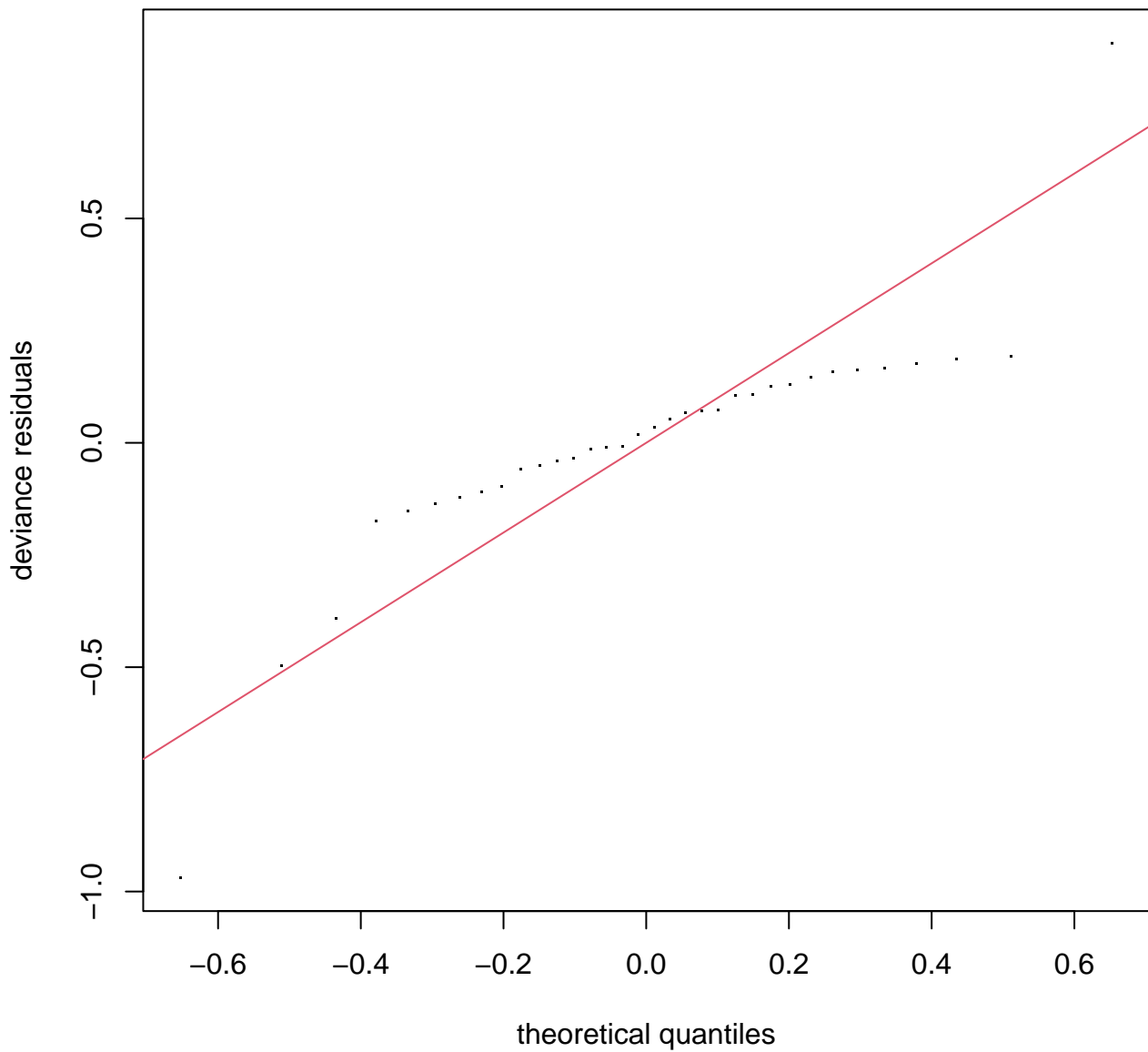




**s(ID,2.84)**

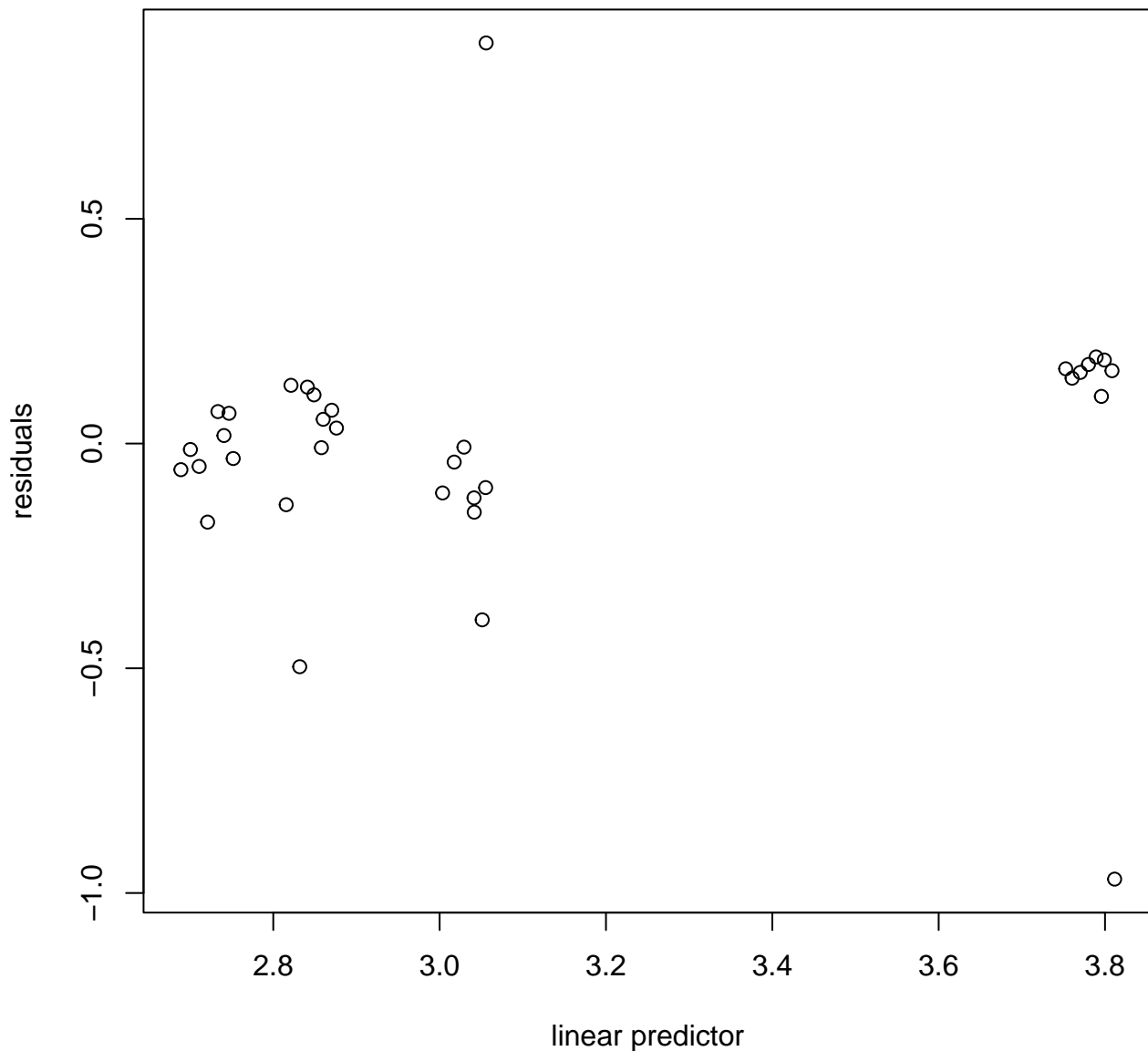




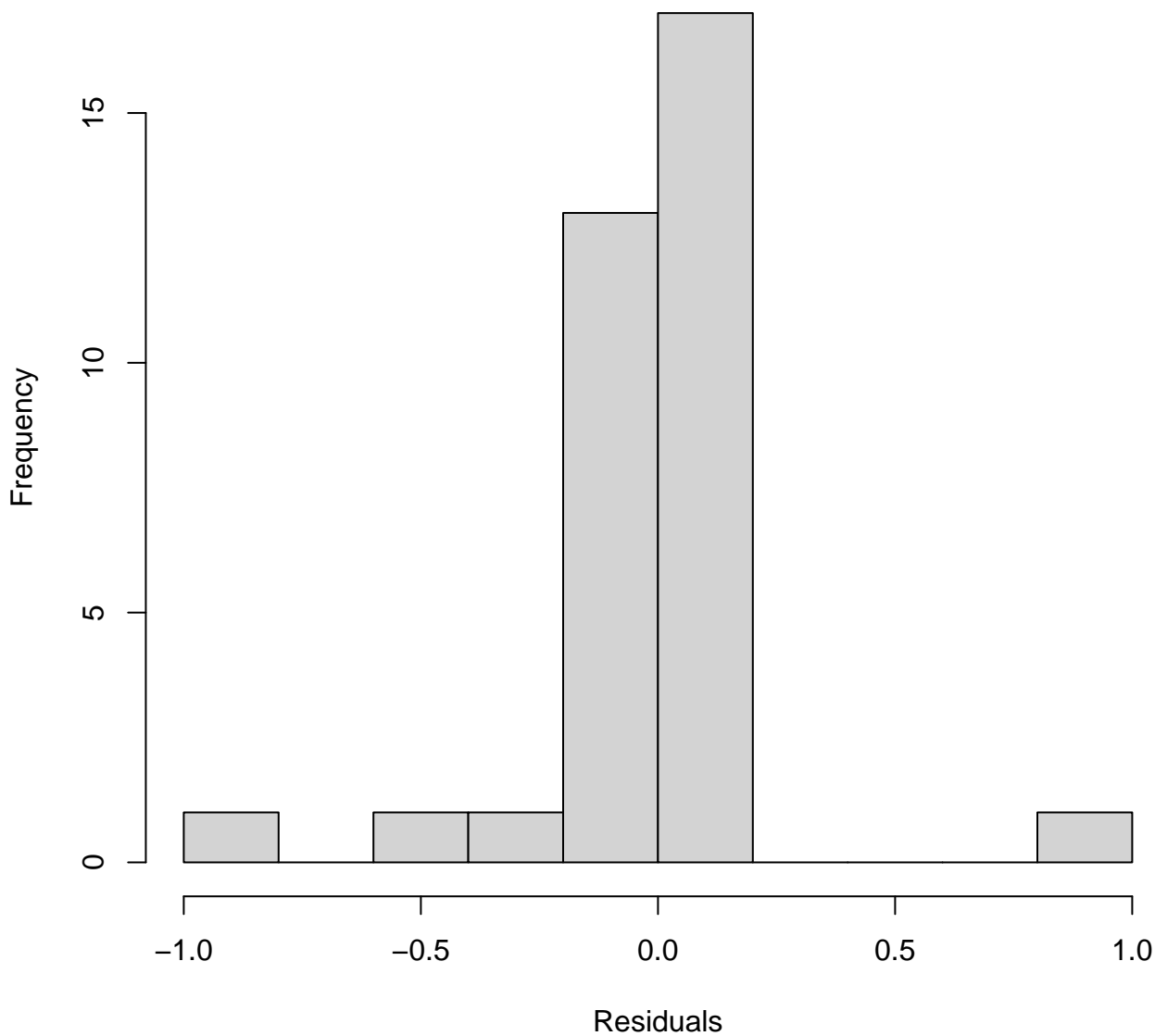




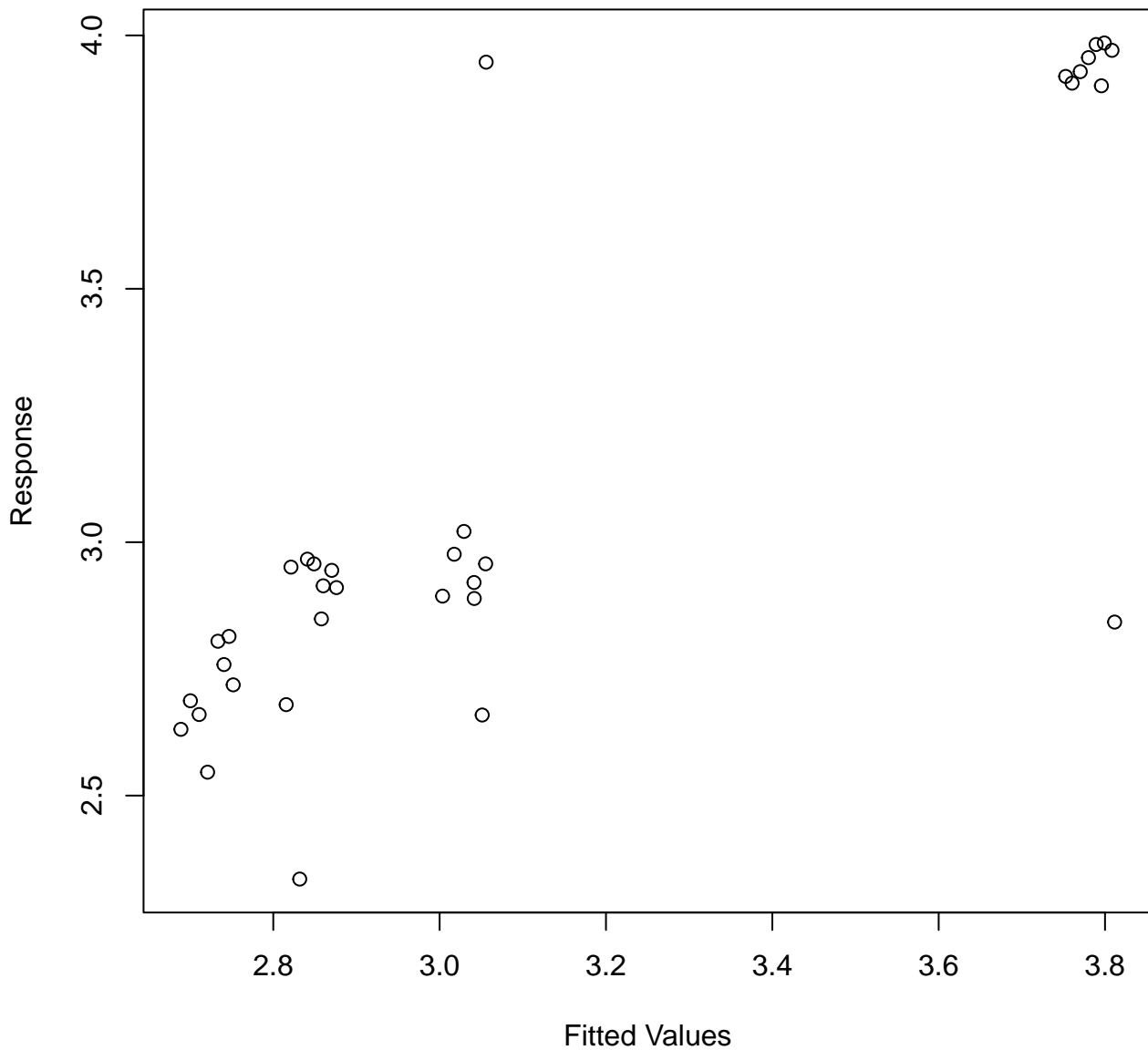
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 13 iterations.  
 Gradient range [-2.895414e-06,2.17796e-07]  
 (score 11.98119 & scale 0.08981482).  
 Hessian positive definite, eigenvalue range [2.308507e-06,17.23273].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.00	1.03	0.49
s(cumul_bites_7_previous_days)	3.00	1.00	1.39	0.98
s(ID)	4.00	2.84	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.11	[1.01, 3.23]	1.06	0.90	[0.31, 0.99]	
s(cumul_bites_7_previous_days, k = 4)	1.11	[1.01, 3.23]	1.06	0.90	[0.31, 0.99]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	3.0982	0.2249	13.78	4.87e-14 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1	0.003	0.957
s(cumul_bites_7_previous_days)	1.000	1	0.128	0.723
s(ID)	2.839	3	22.970	<2e-16 ***

---

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

R-sq.(adj) = 0.676 Deviance explained = 72.3%  
-ML = 11.981 Scale est. = 0.089815 n = 34

AICc [ 1 ] 26.3336

Bites in squirrel



Nb excluded (LOD) : 20

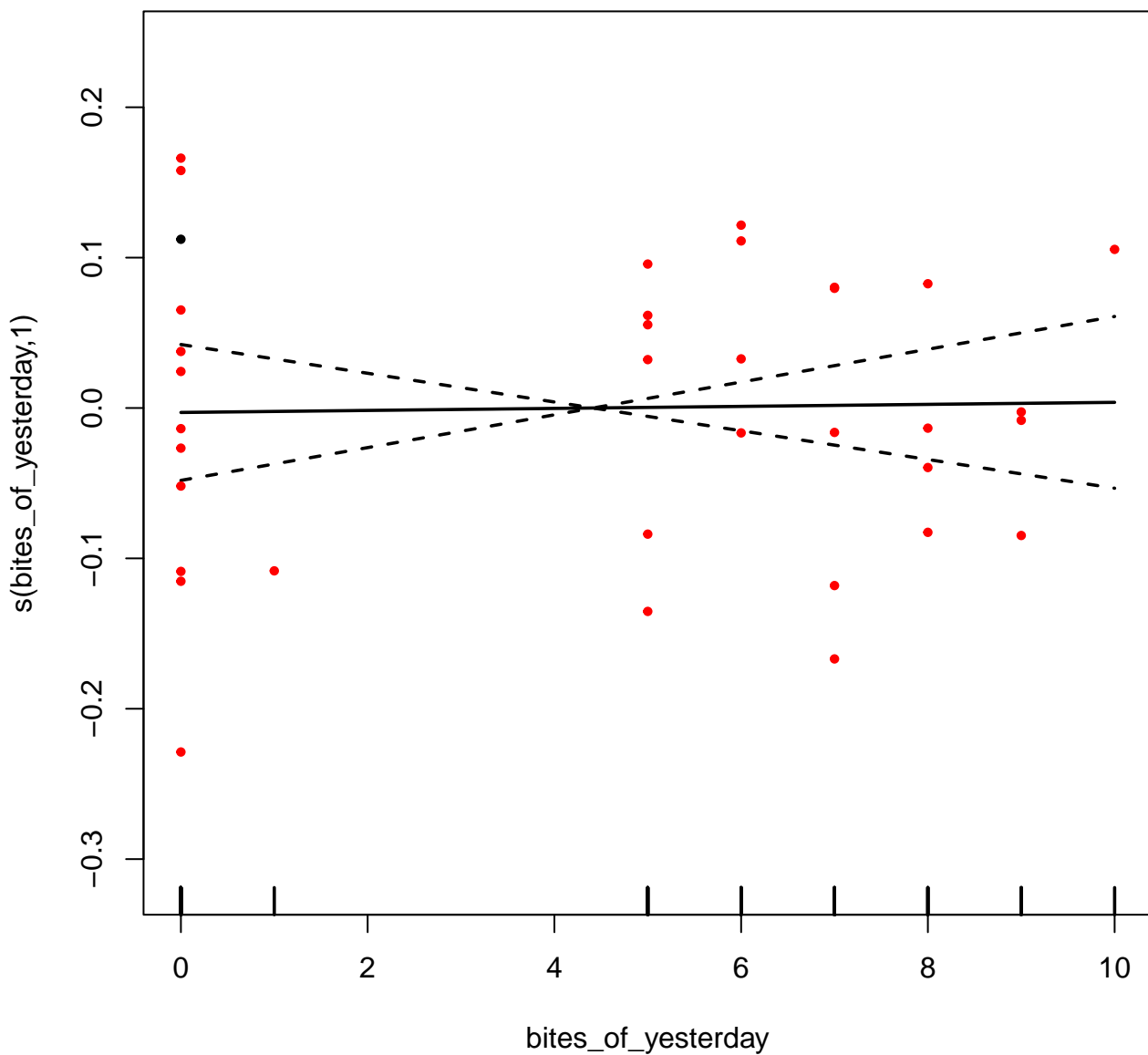
Nb remaining: 0

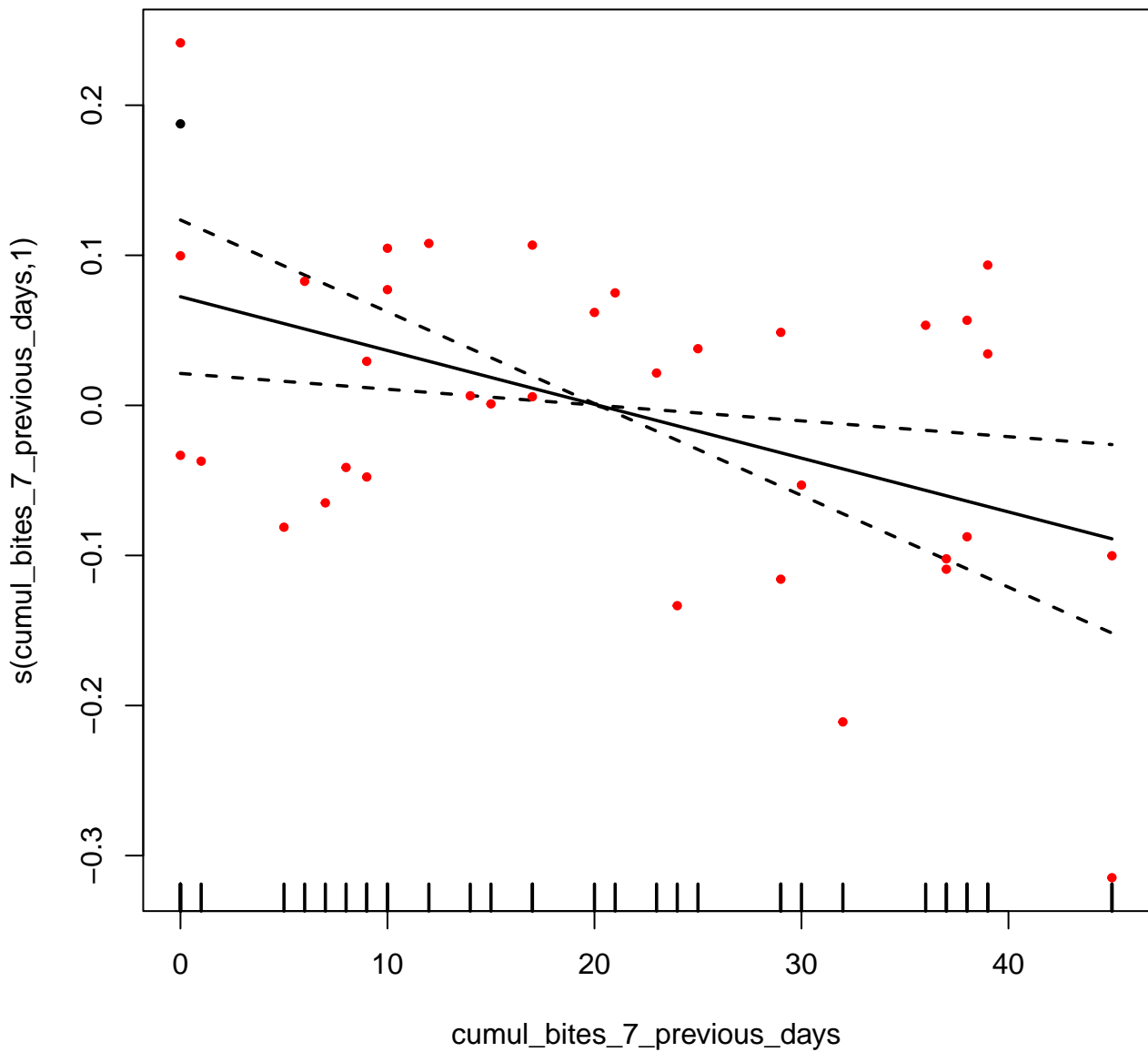
HGF ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

I . TAC

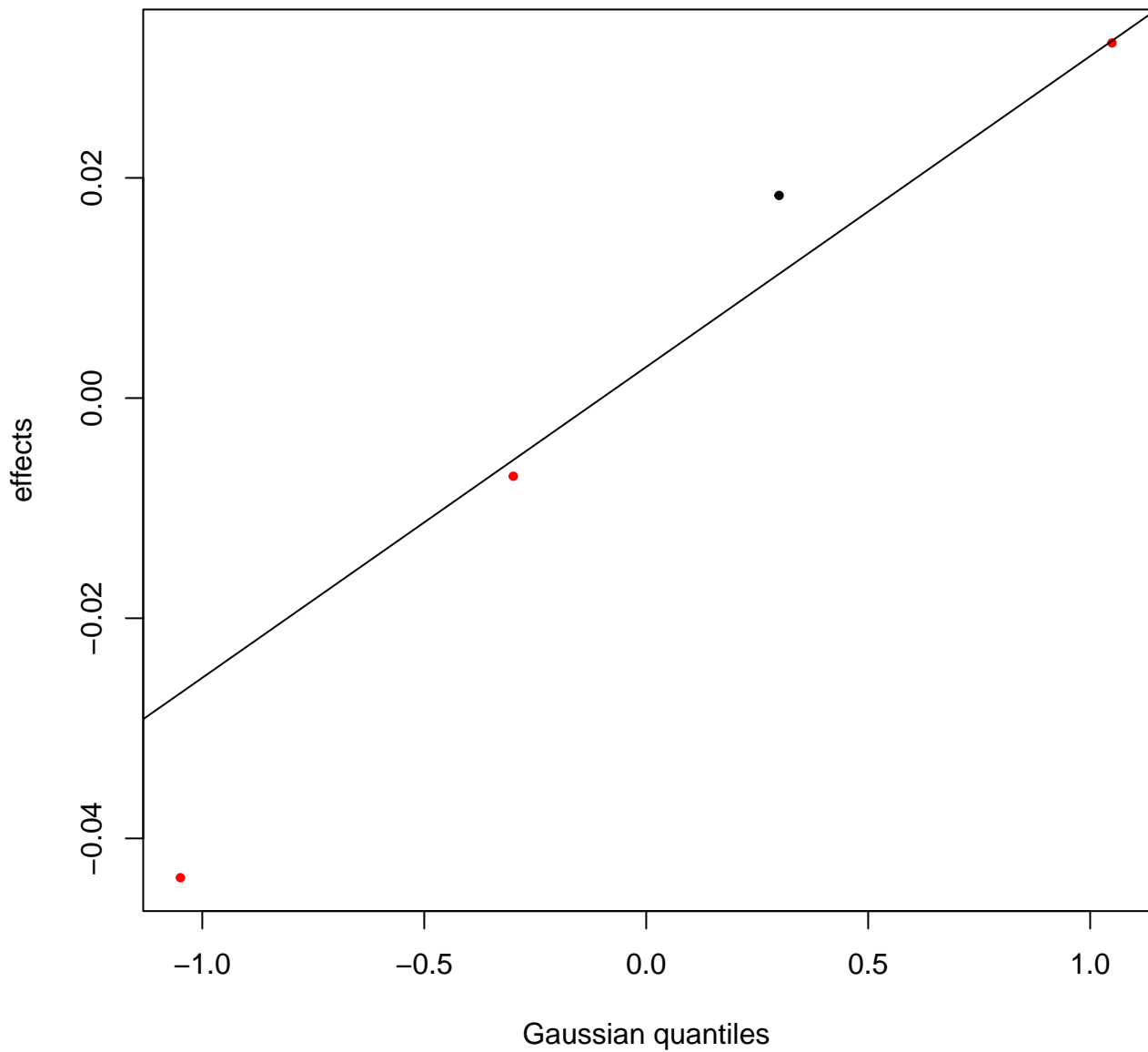
Bites in cyno

Nb excluded (LOD) : 0  
Nb remaining: 36

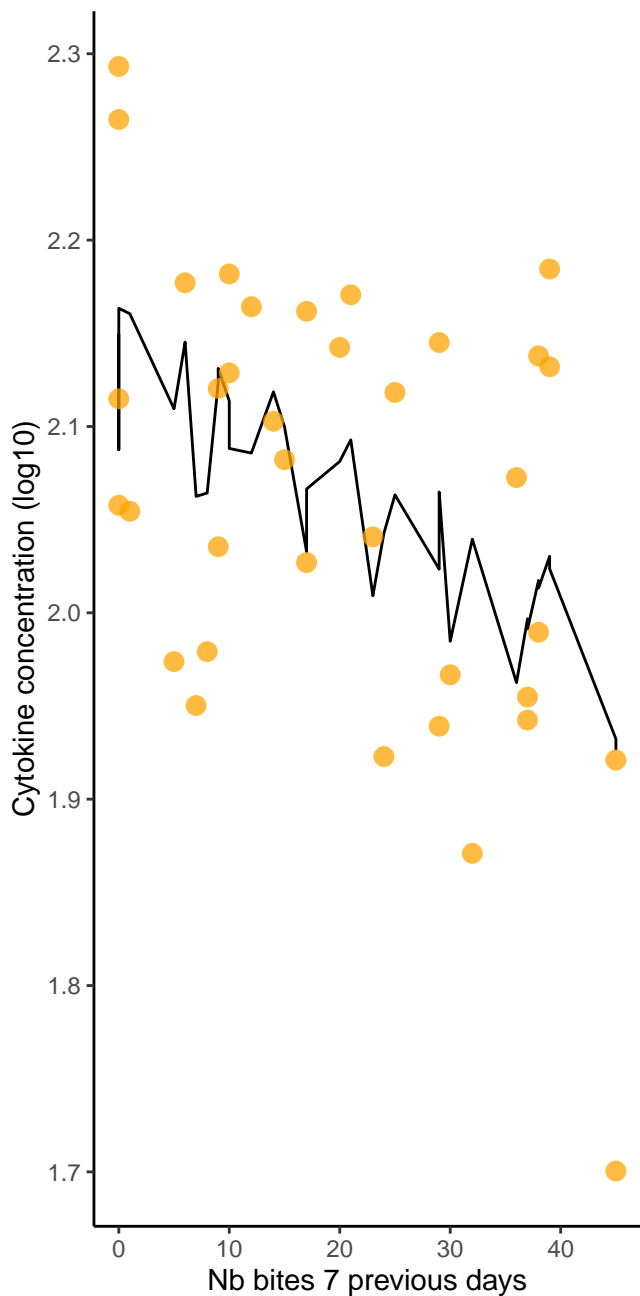
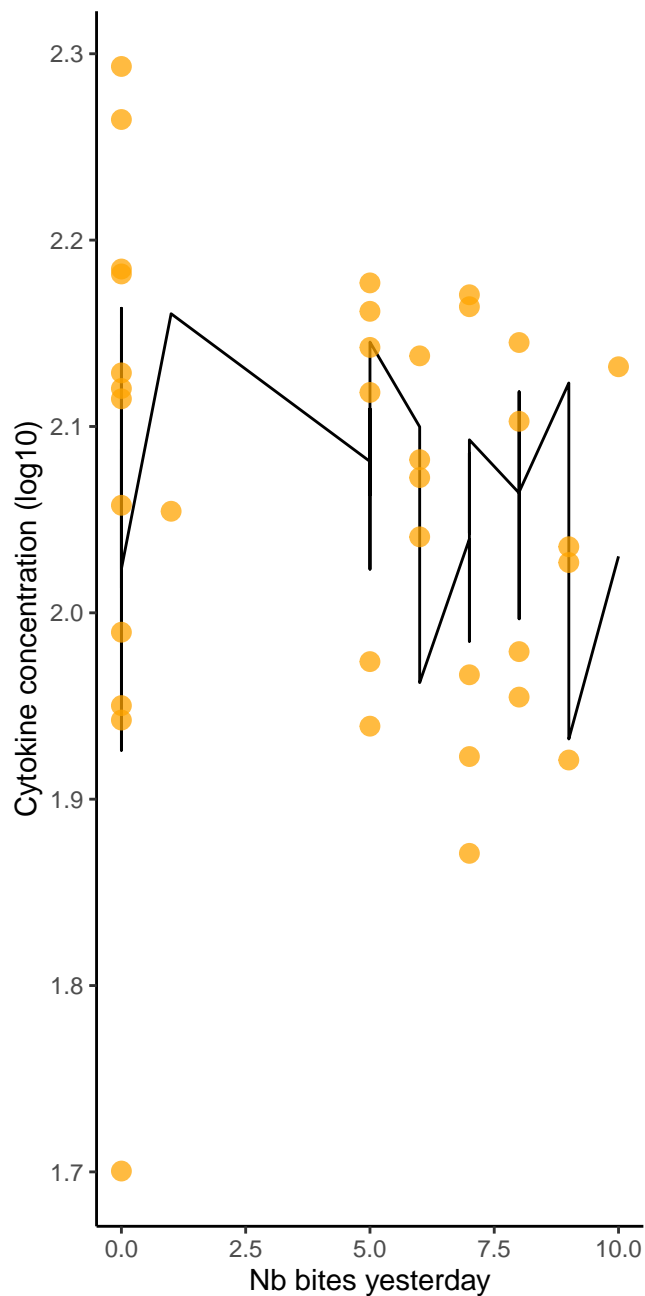


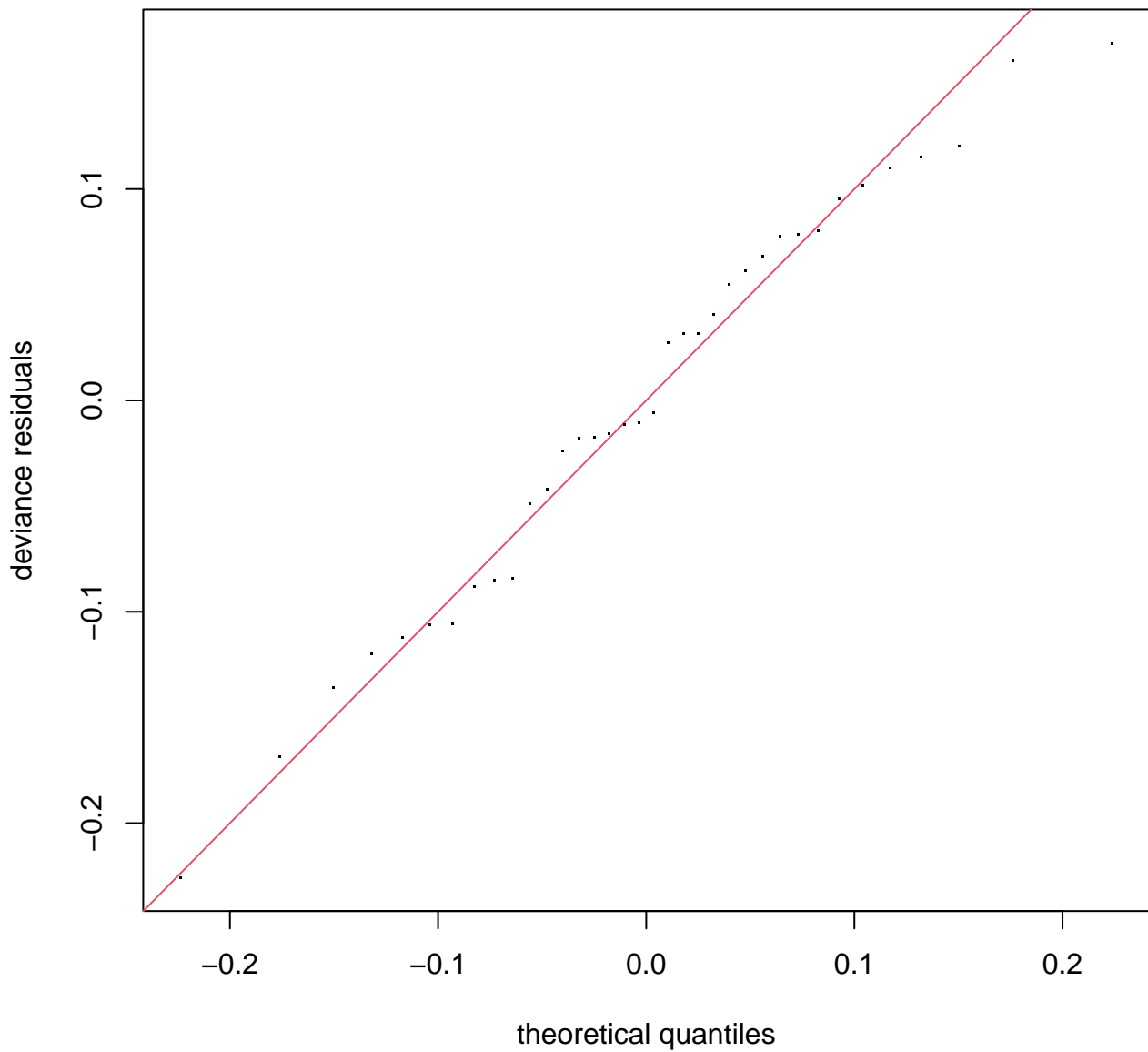


**s(ID,1.72)**

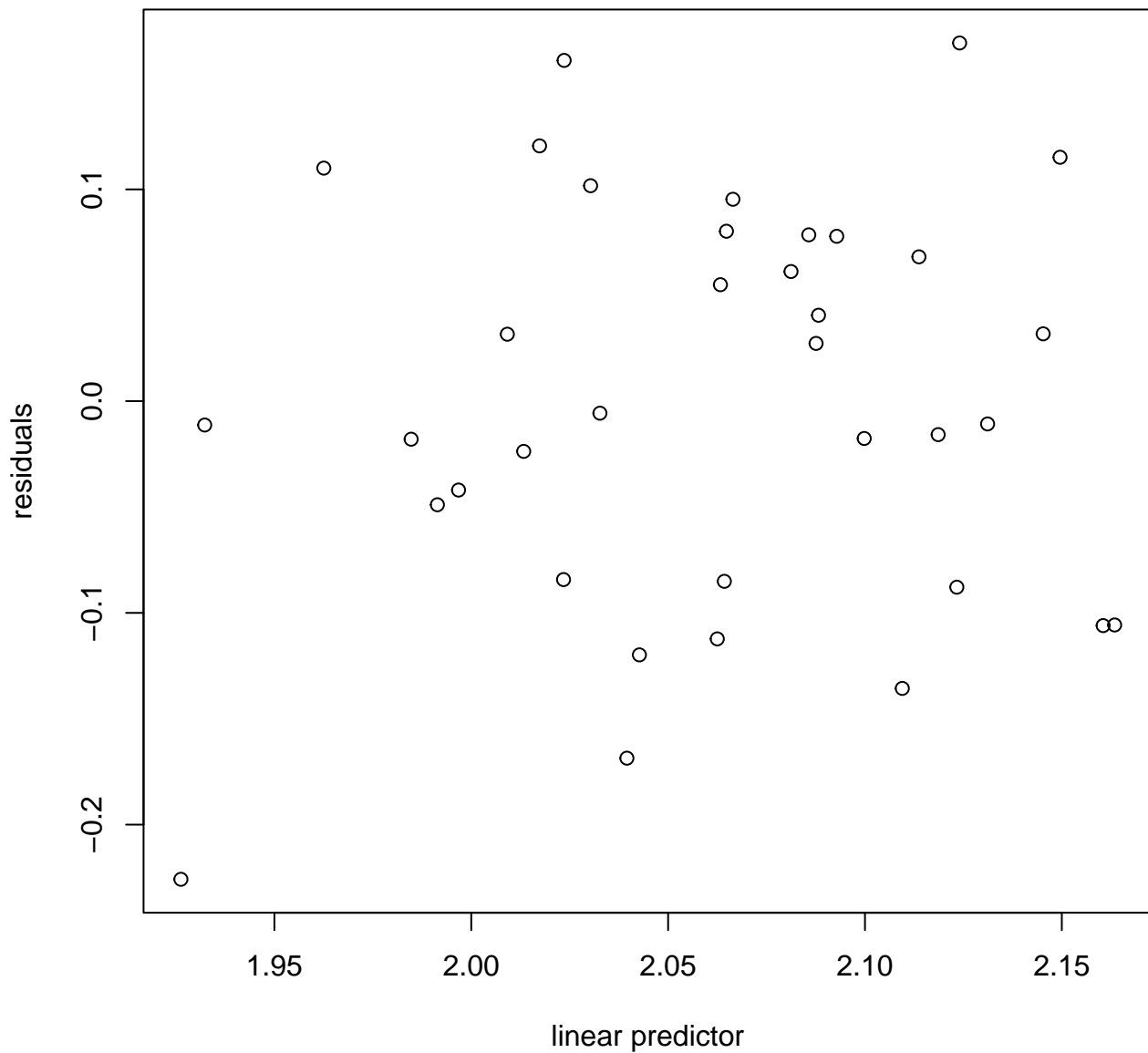




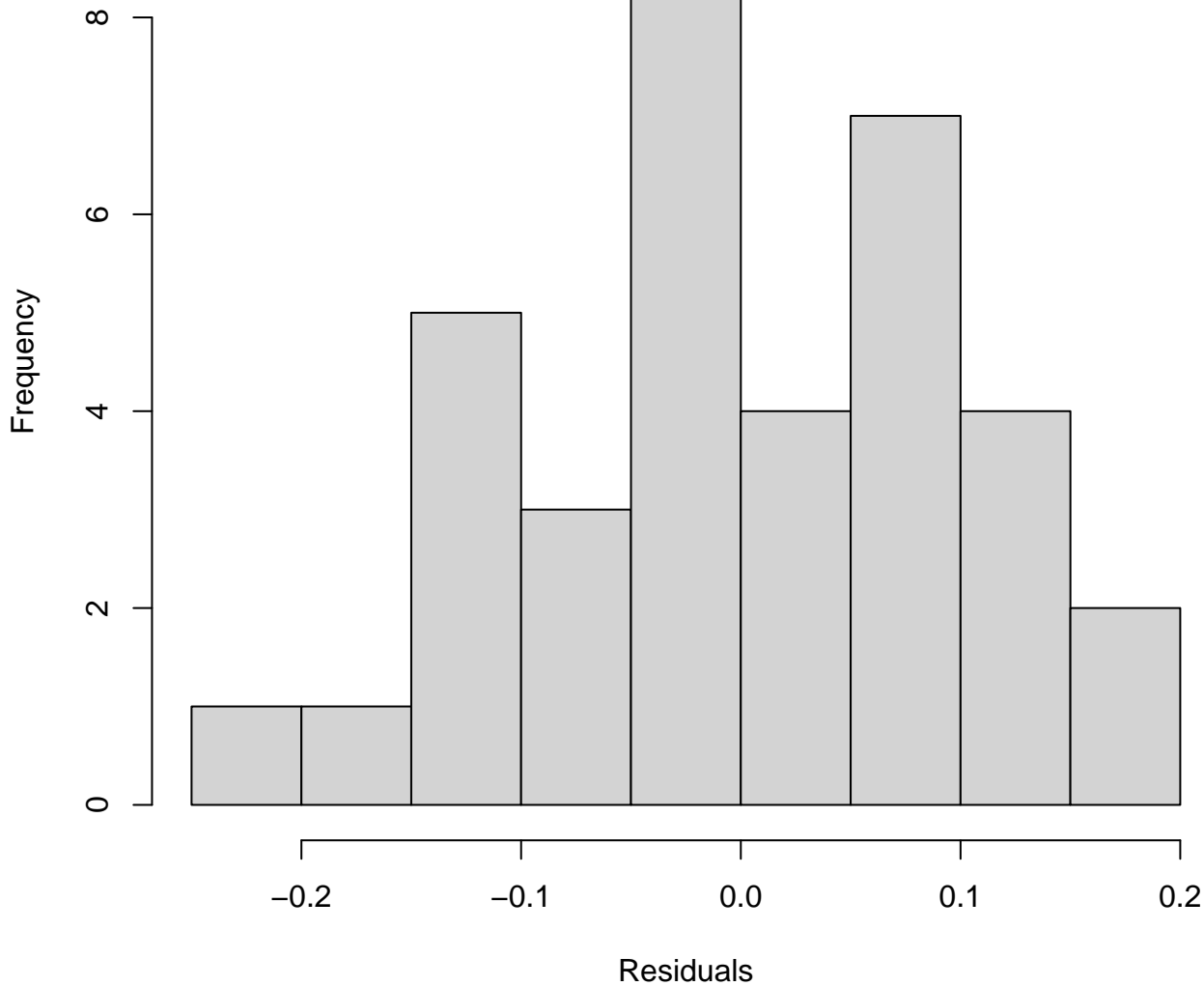




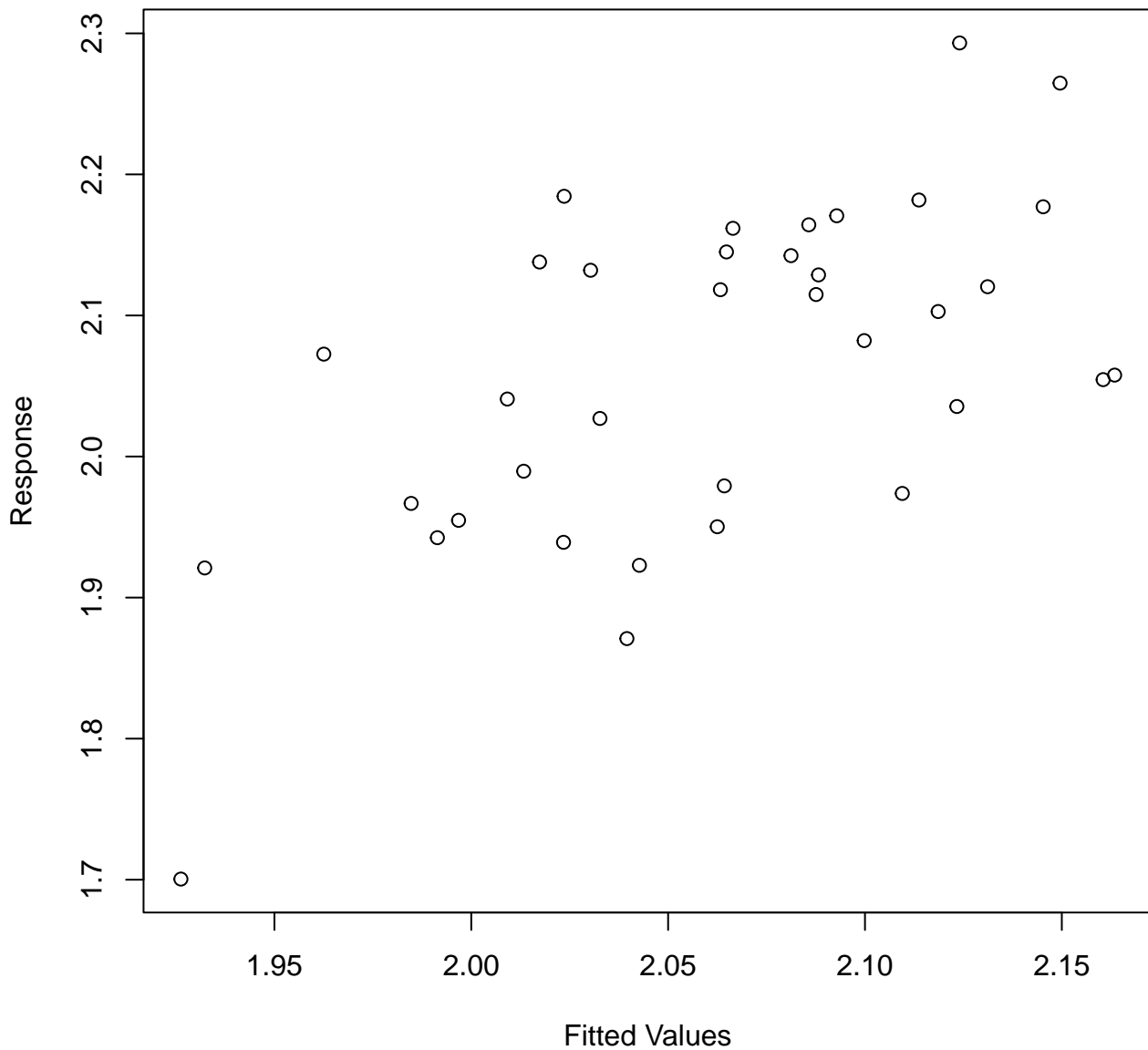
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 11 iterations.  
 Gradient range [-9.919645e-06,5.394079e-07]  
 (score -30.83559 & scale 0.01034001).  
 Hessian positive definite, eigenvalue range [4.613939e-06,18.07603].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.00	1.29	0.93
s(cumul_bites_7_previous_days)	3.00	1.00	0.90	0.23
s(ID)	4.00	1.72	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	
s(cumul_bites_7_previous_days, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	2.06172	0.02601	79.26	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1	0.017	0.89635
s(cumul_bites_7_previous_days)	1.000	1	8.022	0.00805 **
s(ID)	1.719	3	1.661	0.05069 .

---

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

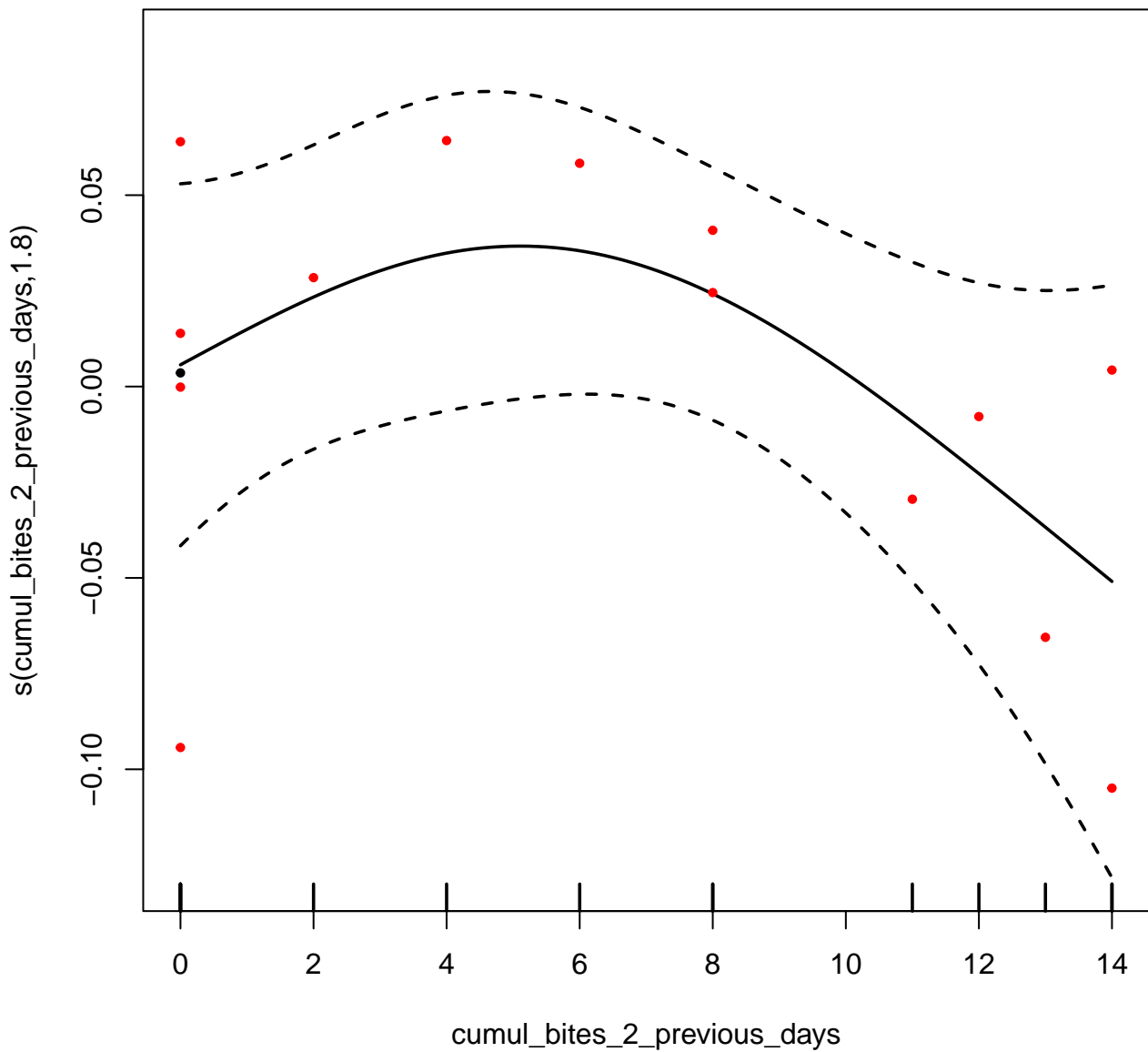
R-sq.(adj) = 0.277 Deviance explained = 35.4%  
-ML = -30.836 Scale est. = 0.01034 n = 36

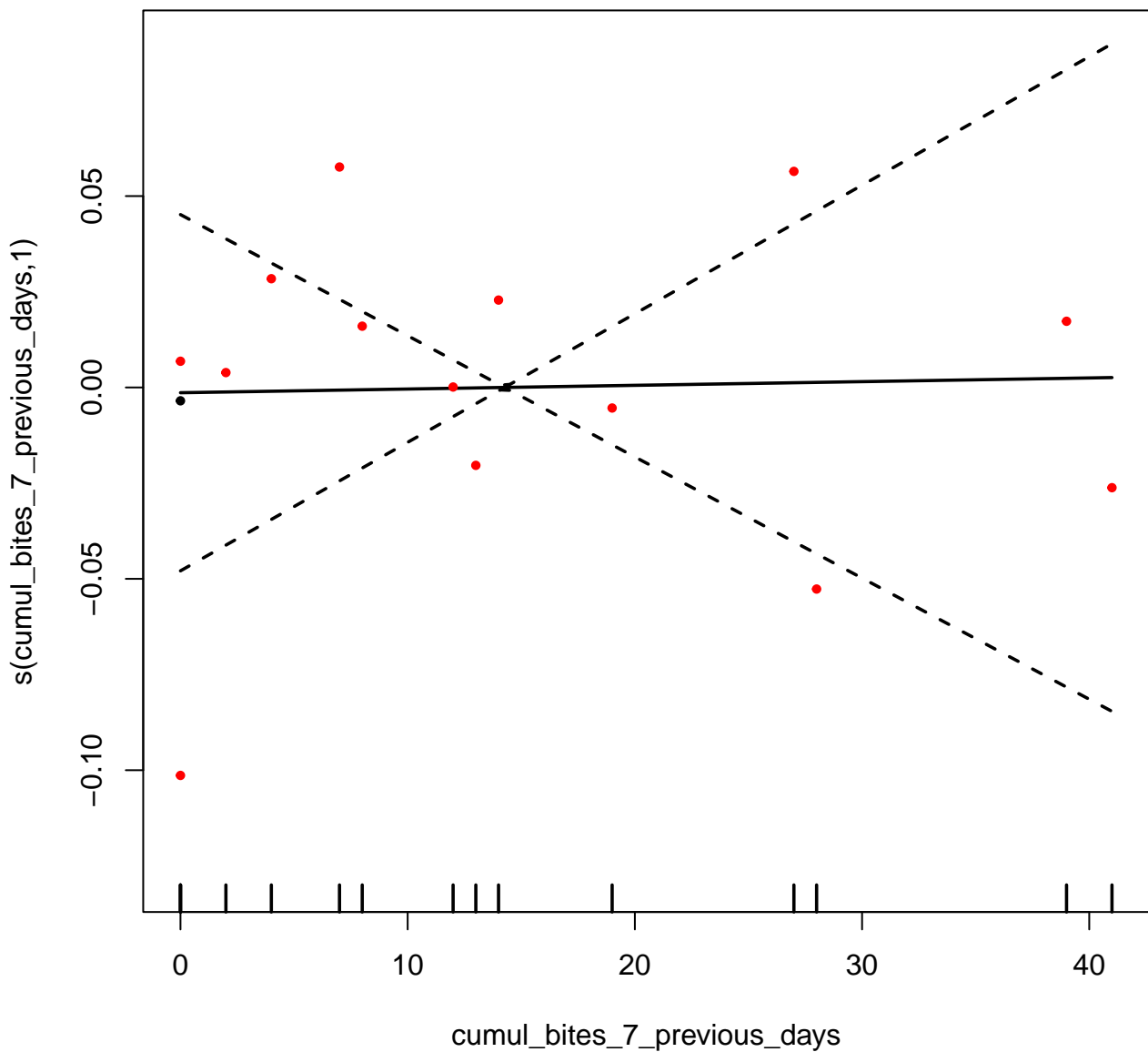


AICc [ 1 ] -51.20138

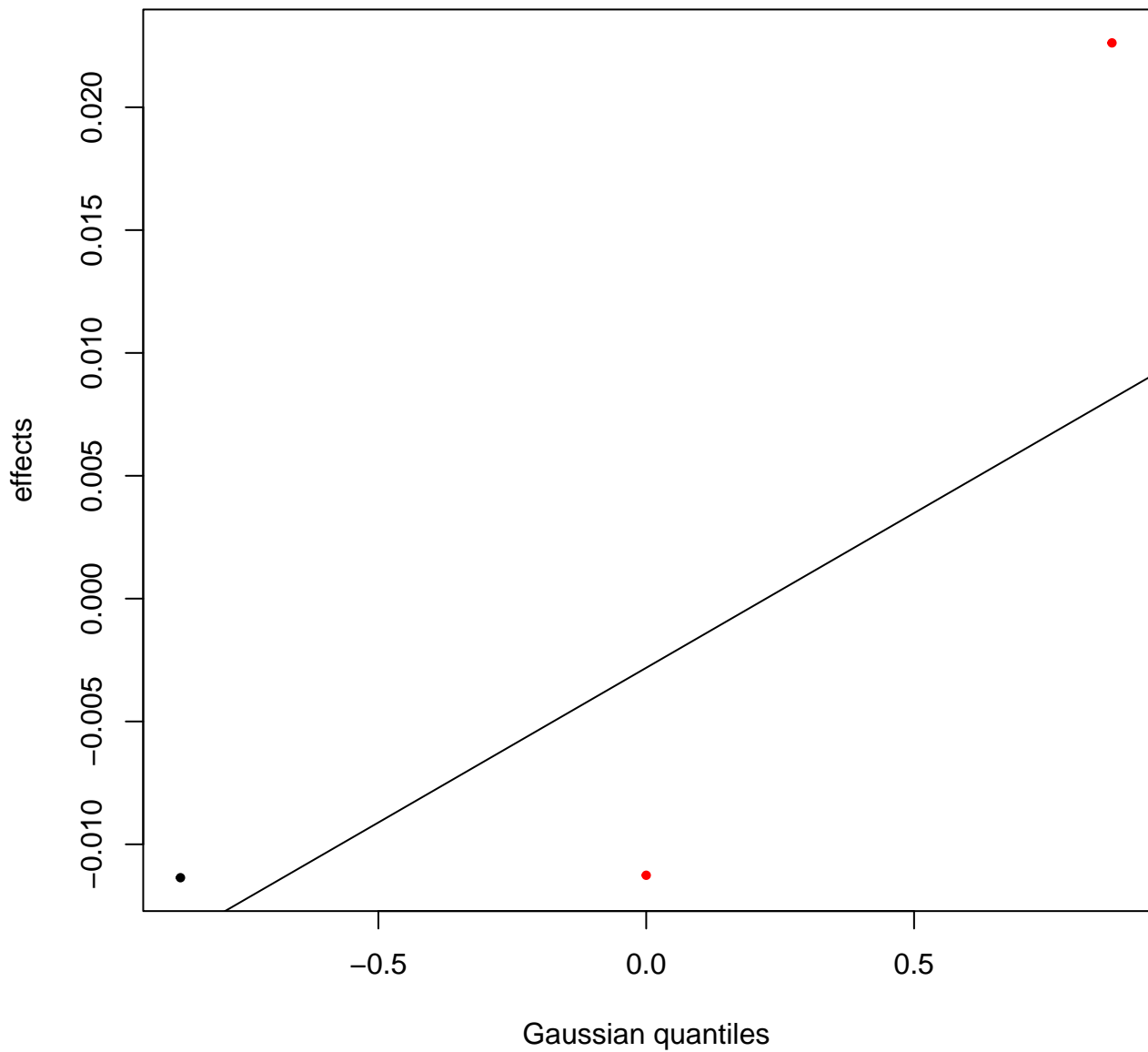
Bites in squirrel

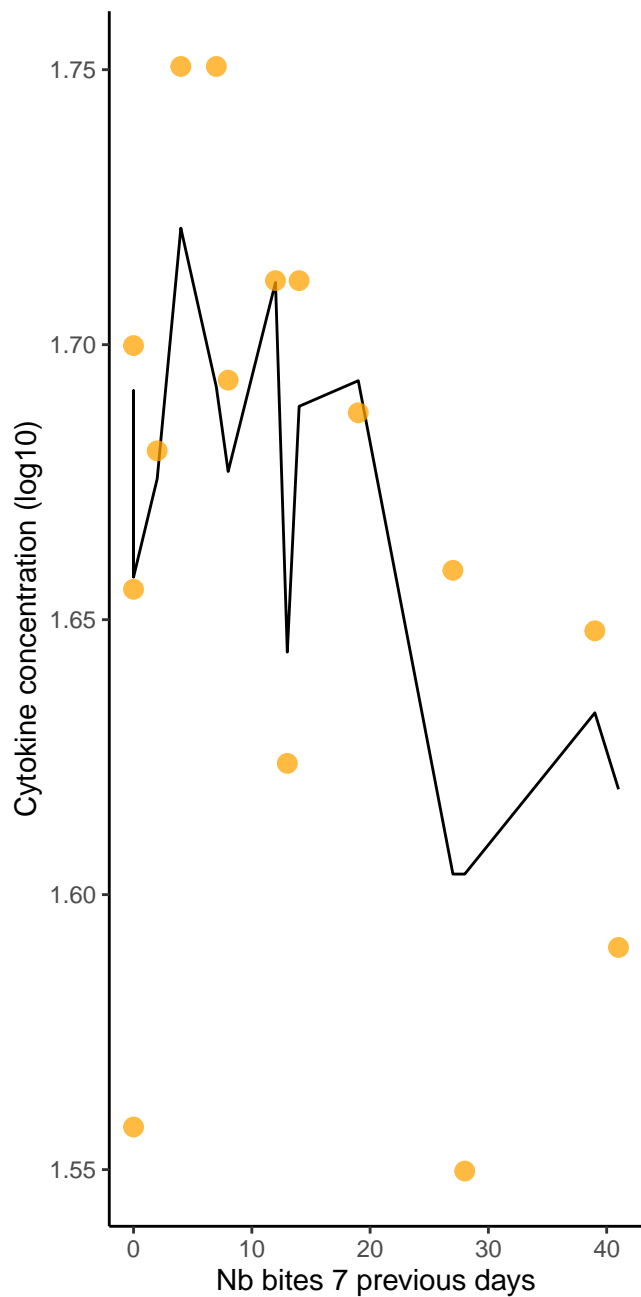
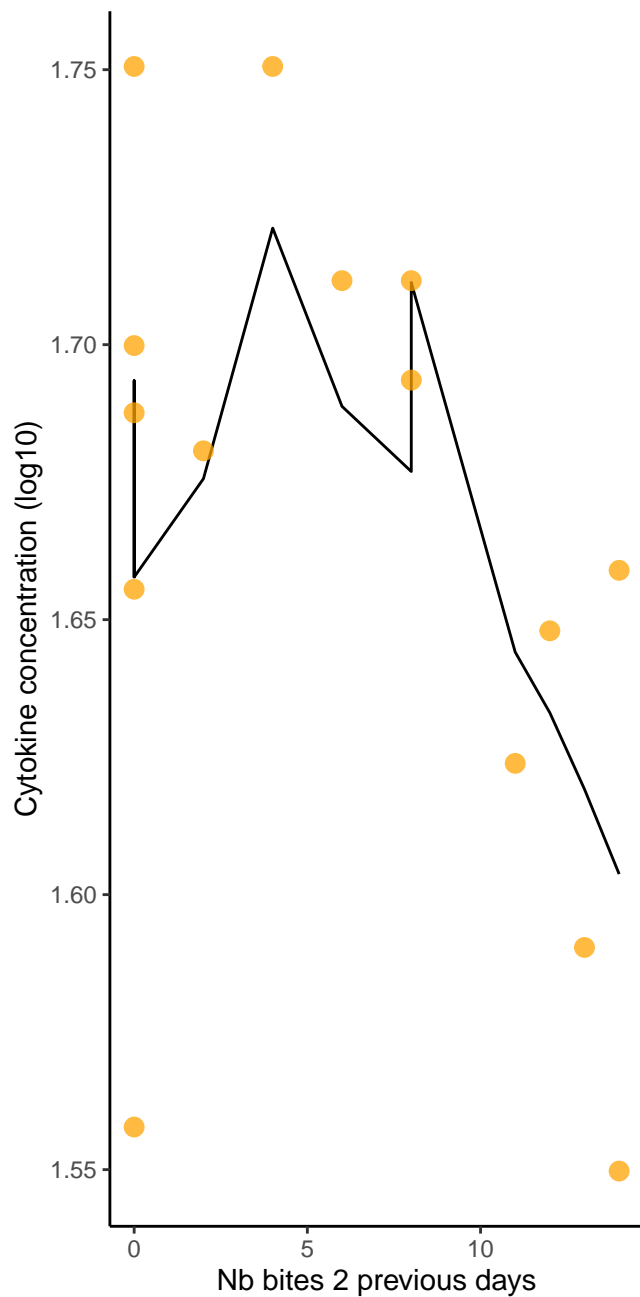
Nb excluded (LOD) : 5  
Nb remaining: 15

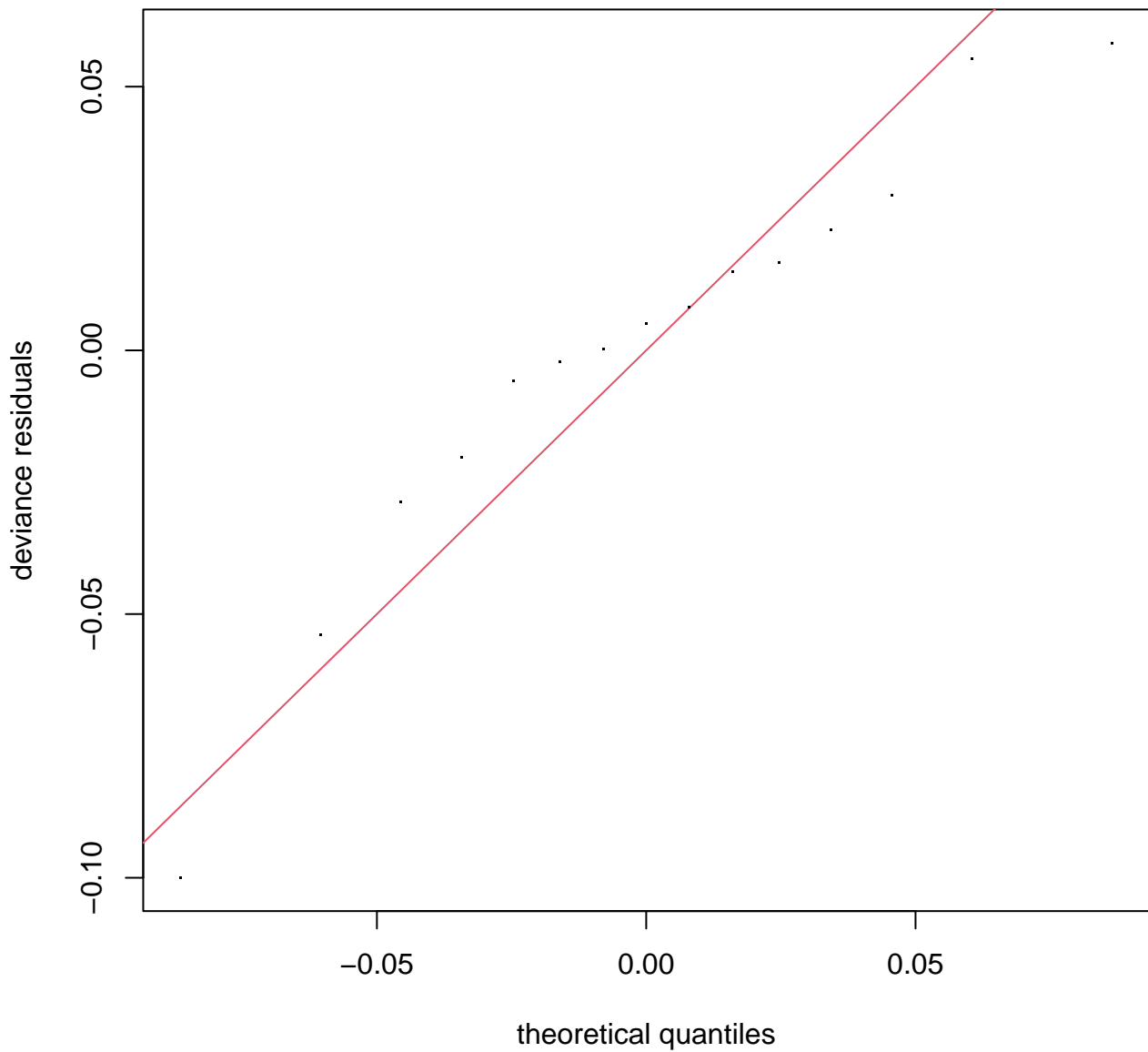




**s(ID,1.03)**

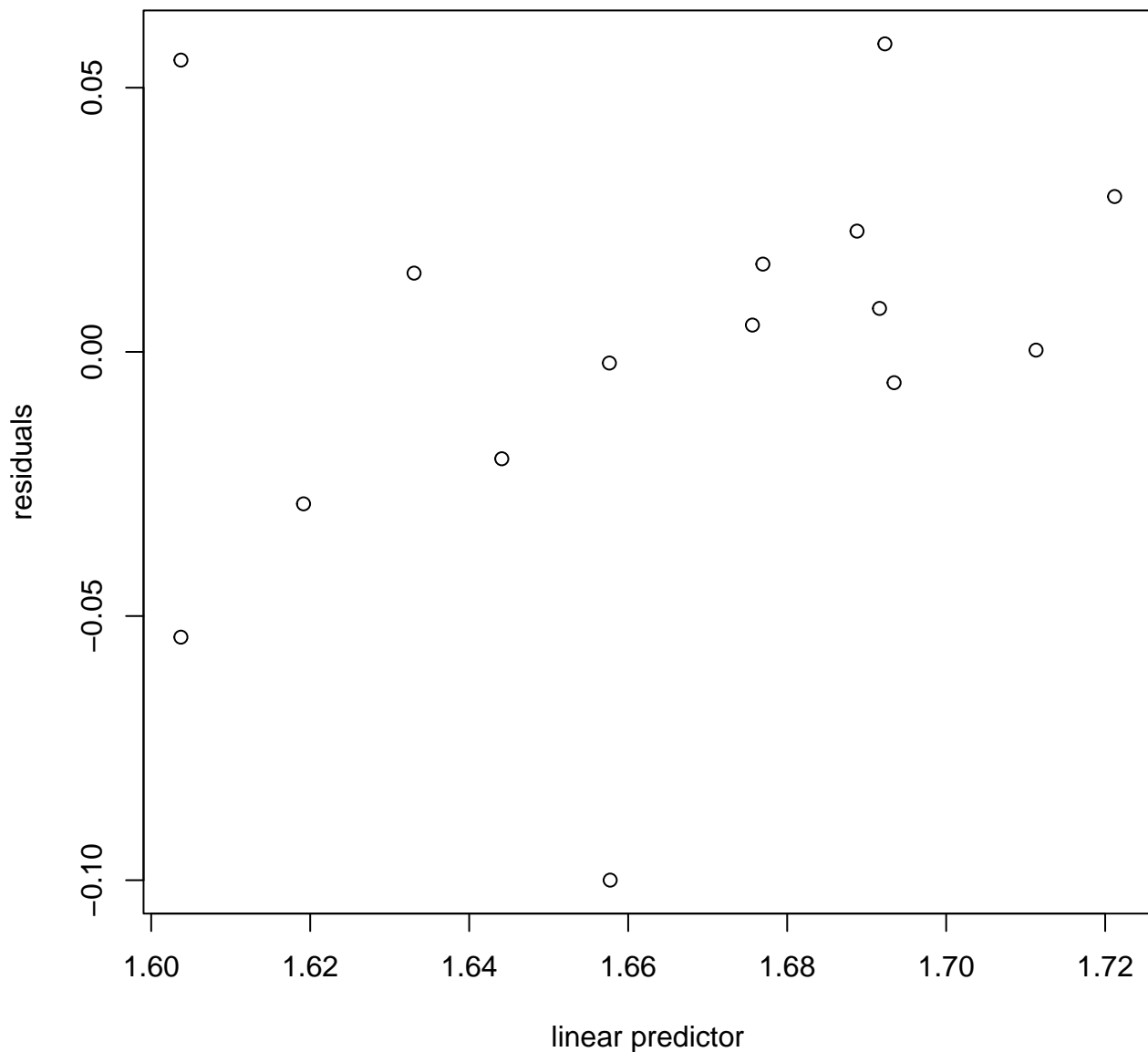




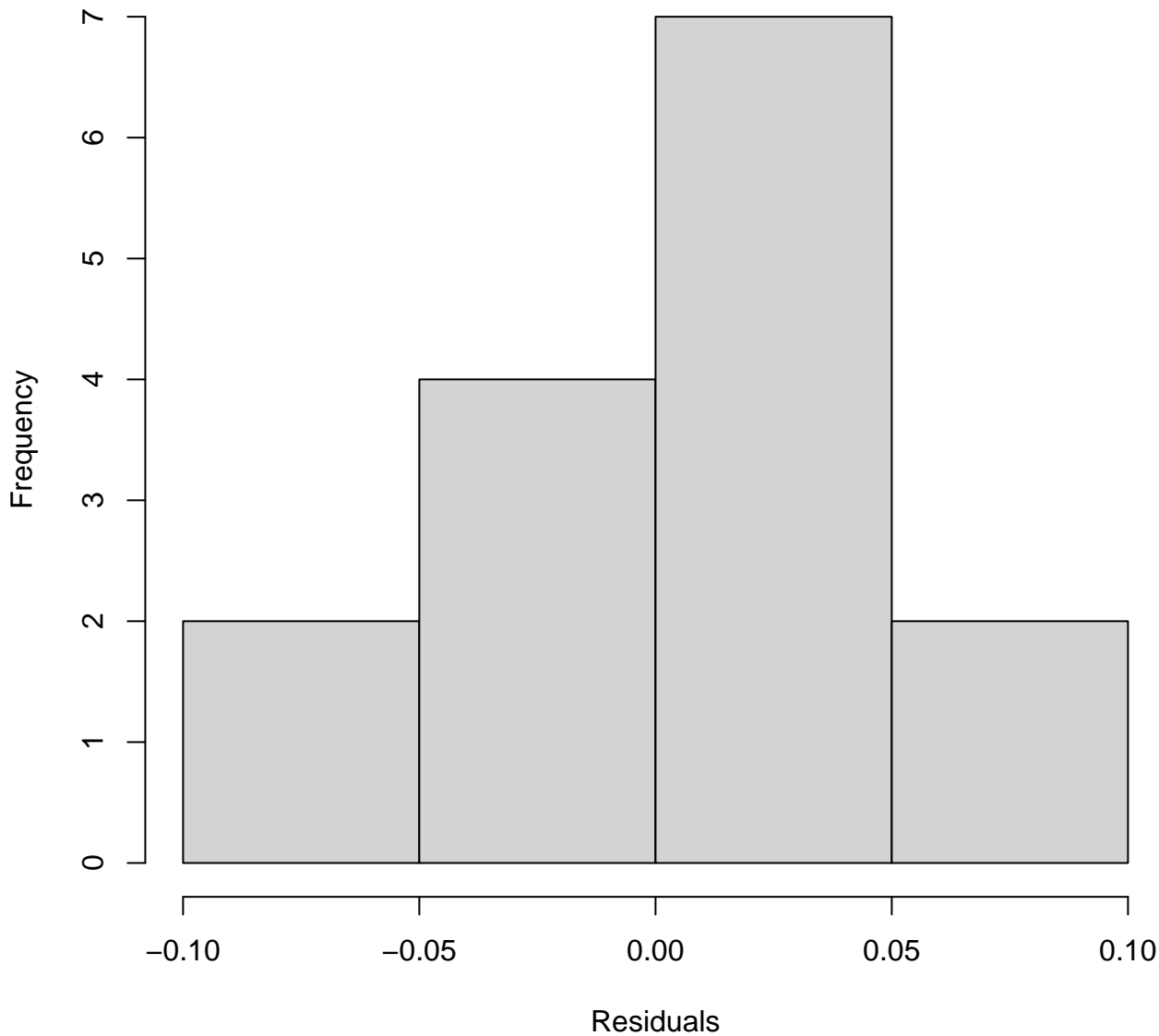




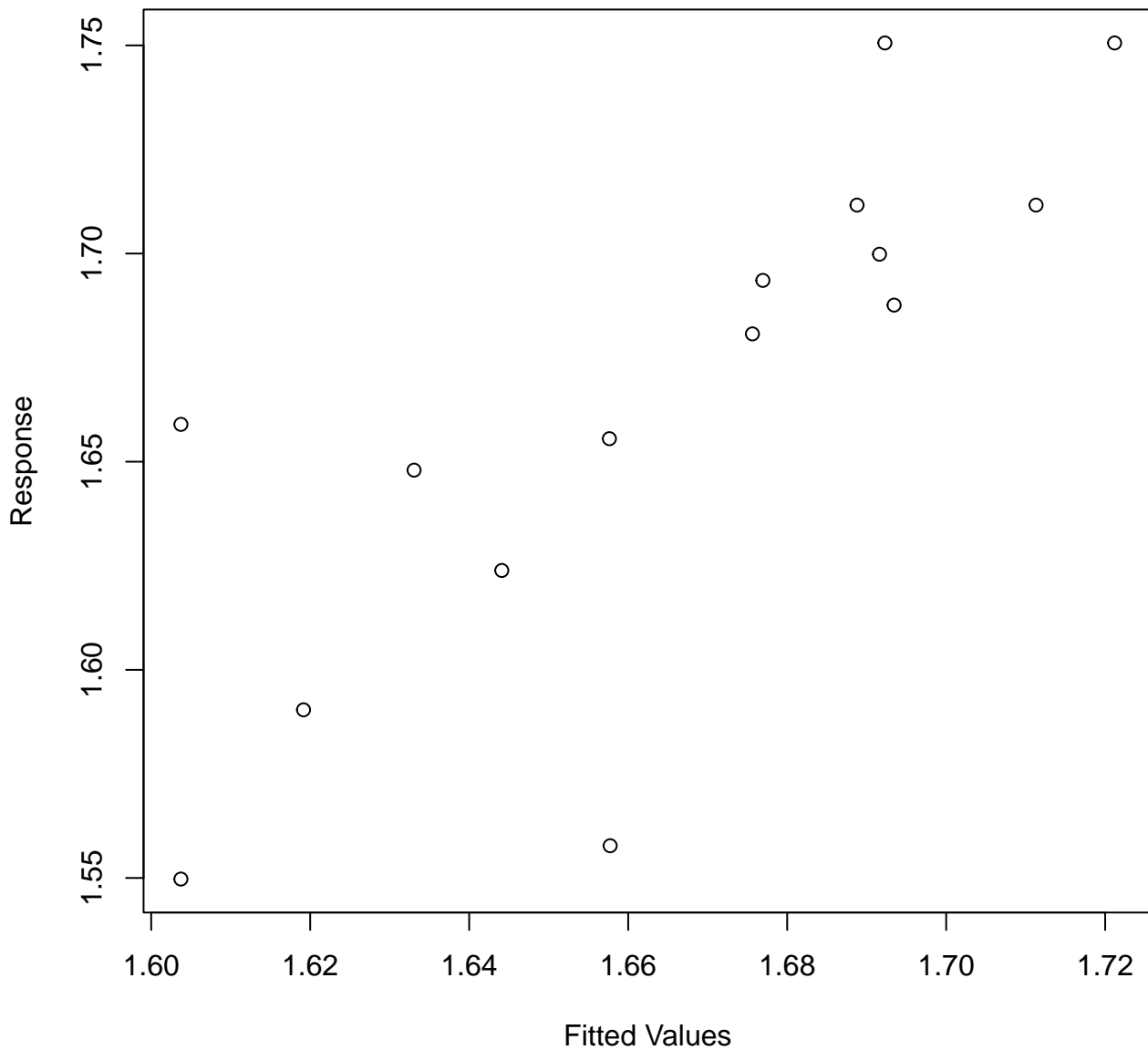
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 10 iterations.  
 Gradient range [-8.195889e-06,7.188003e-06]  
 (score -22.86397 & scale 0.002223217).  
 Hessian positive definite, eigenvalue range [8.195822e-06,7.671958].  
 Model rank = 10 / 10

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(cumul_bites_2_previous_days)	3.00	1.80	1.04	0.41
s(cumul_bites_7_previous_days)	3.00	1.00	1.22	0.69
s(ID)	3.00	1.03	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(cumul_bites_2_previous_days, k = 4)	6.79	[3.96, 12.33]	2.61	0.15	[0.08, 0.25]	

Moderate Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(cumul_bites_7_previous_days, k = 4)		1.40	[1.10, 2.61]	1.19	0.71	[0.38, 0.91]

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(cumul\_bites\_2\_previous\_days, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.66469	0.01826	91.14	3.75e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(cumul_bites_2_previous_days)	1.801	2.158	1.589	0.234
s(cumul_bites_7_previous_days)	1.000	1.000	0.004	0.954
s(ID)	1.027	2.000	1.324	0.123

R-sq.(adj) = 0.426 Deviance explained = 58.3%

-ML = -22.864 Scale est. = 0.0022232 n = 15

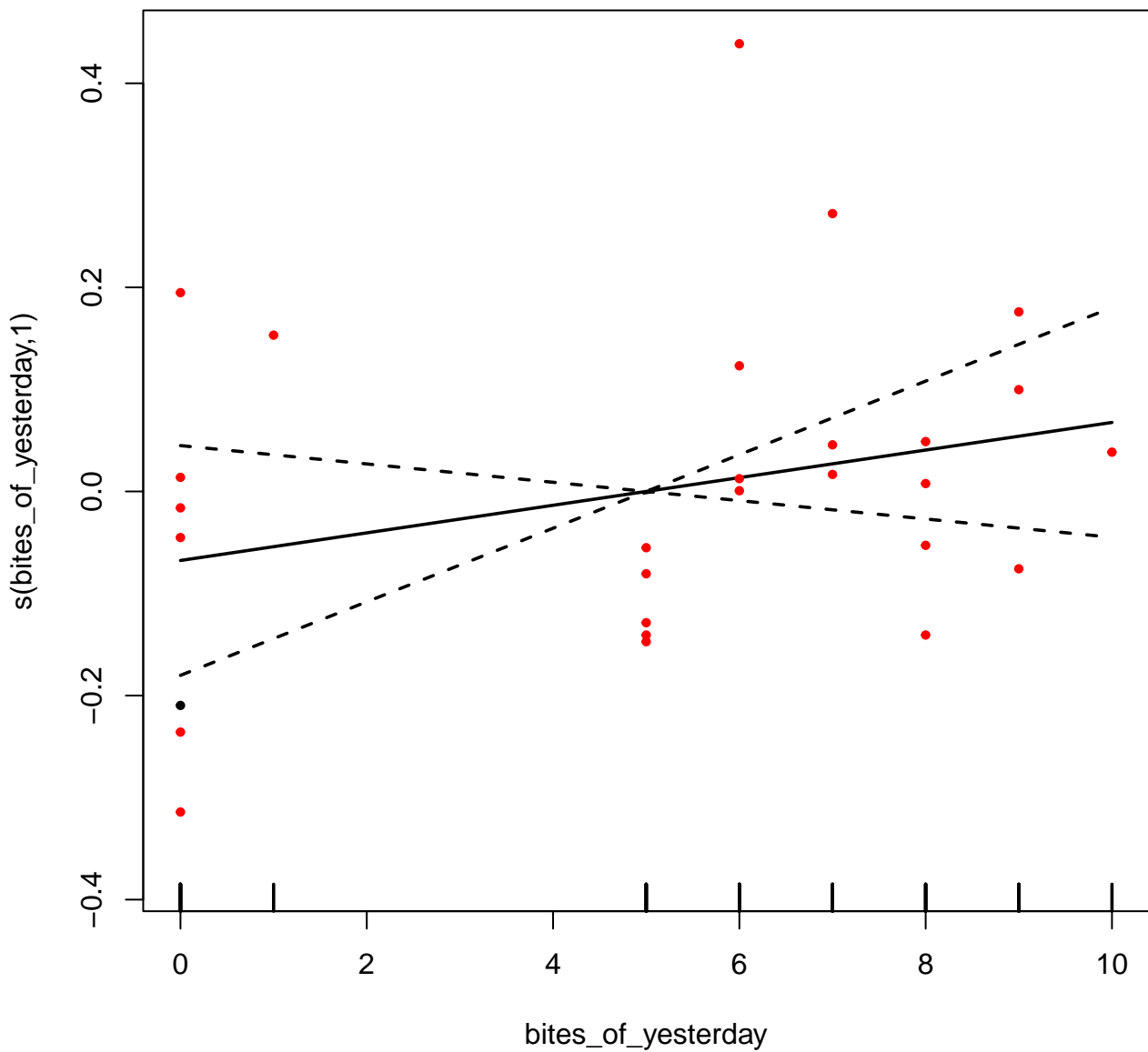
AICc [1] -27.53527

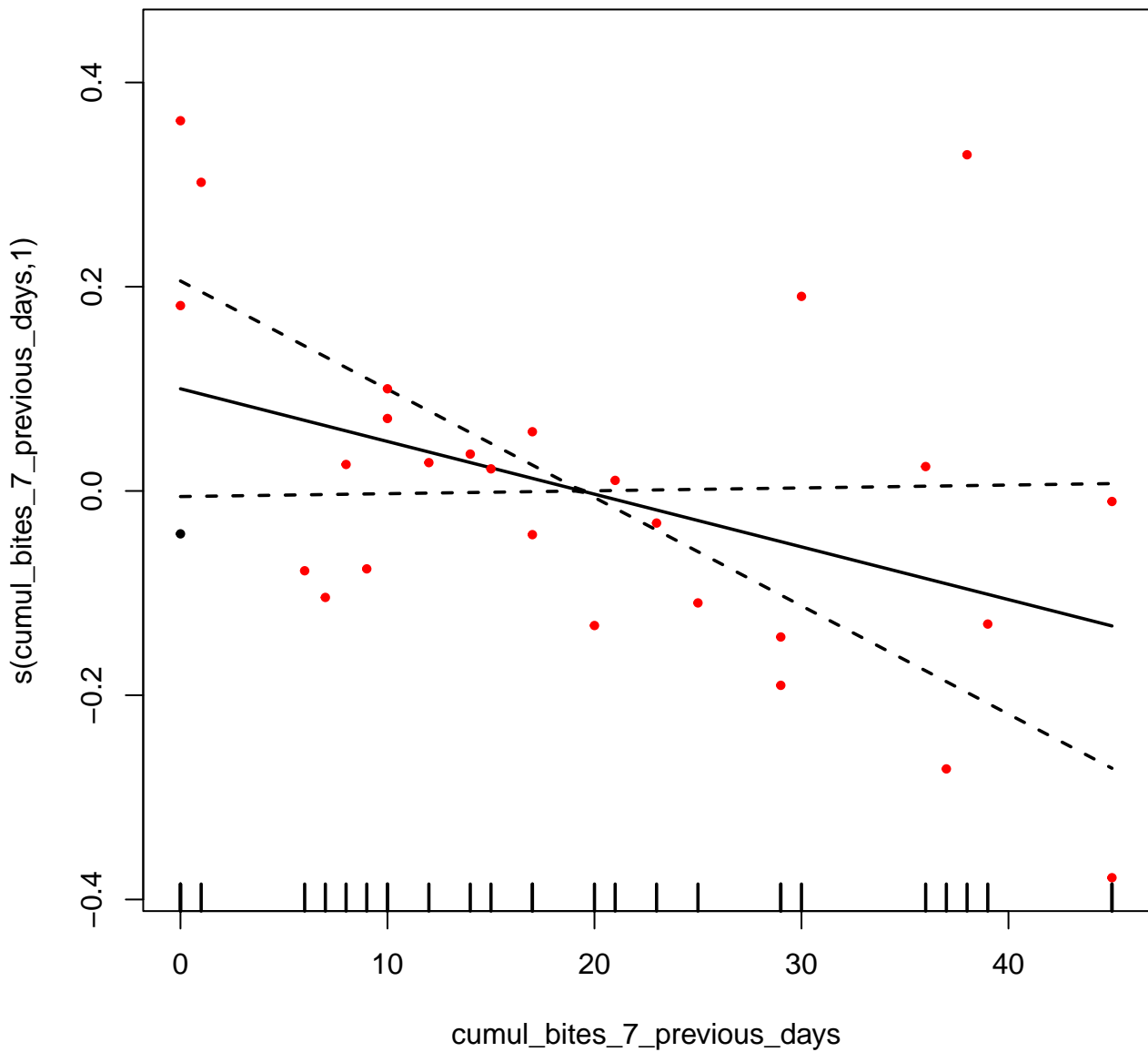
IFN.g



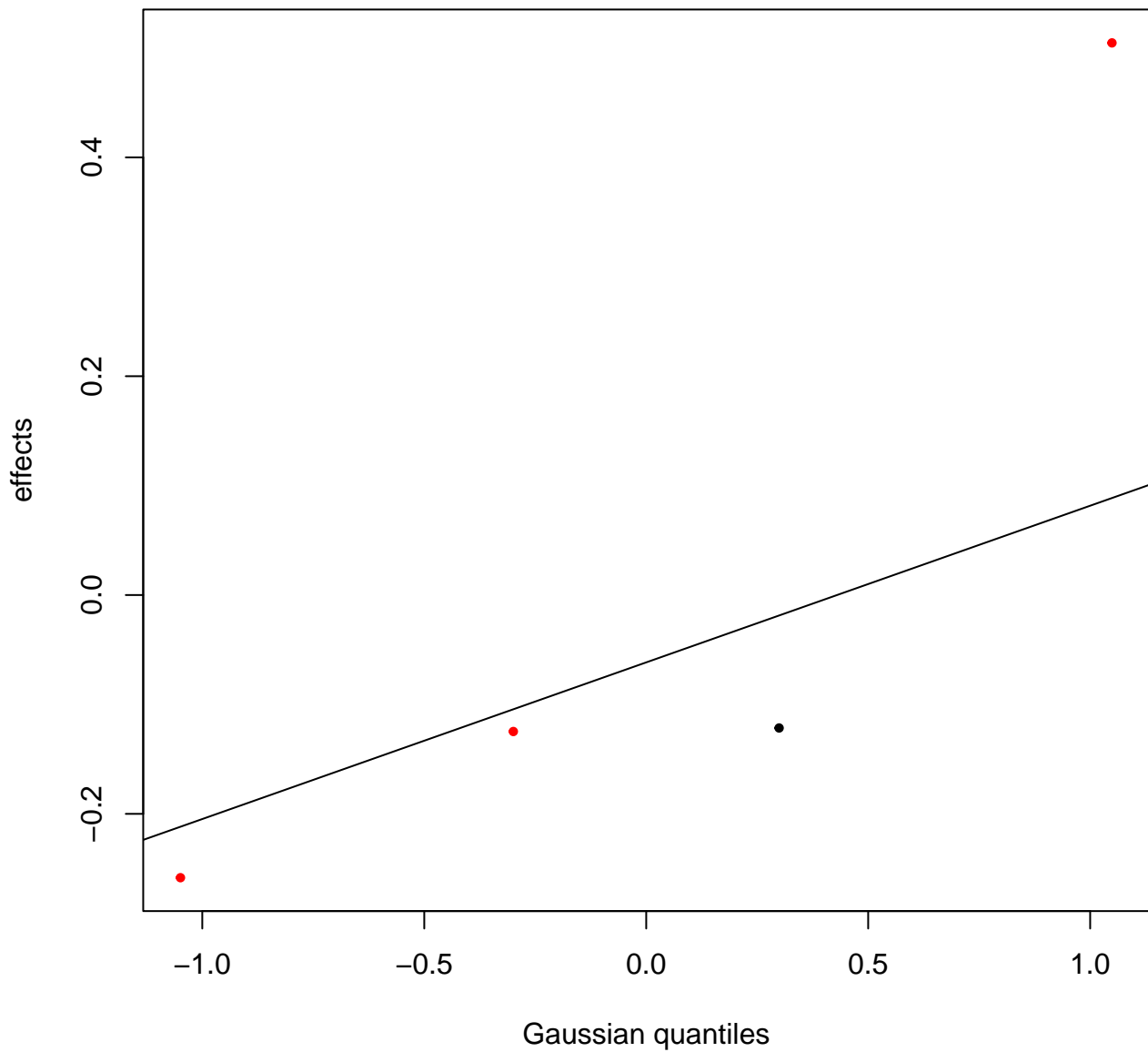
Bites in cyno

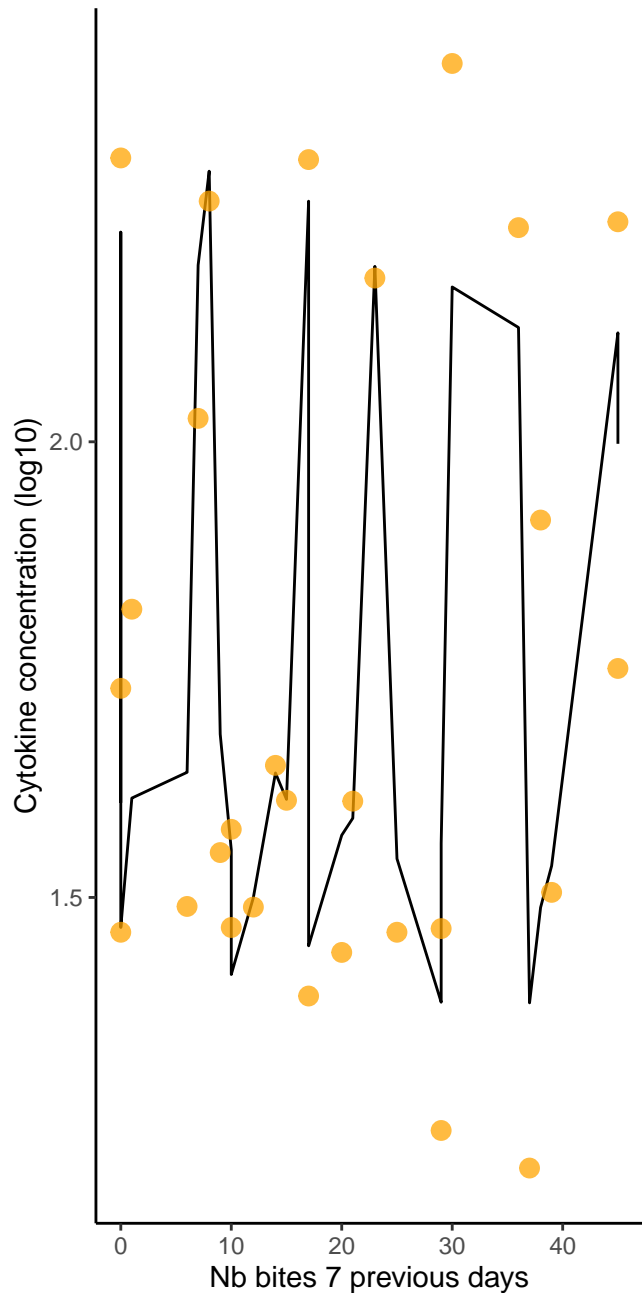
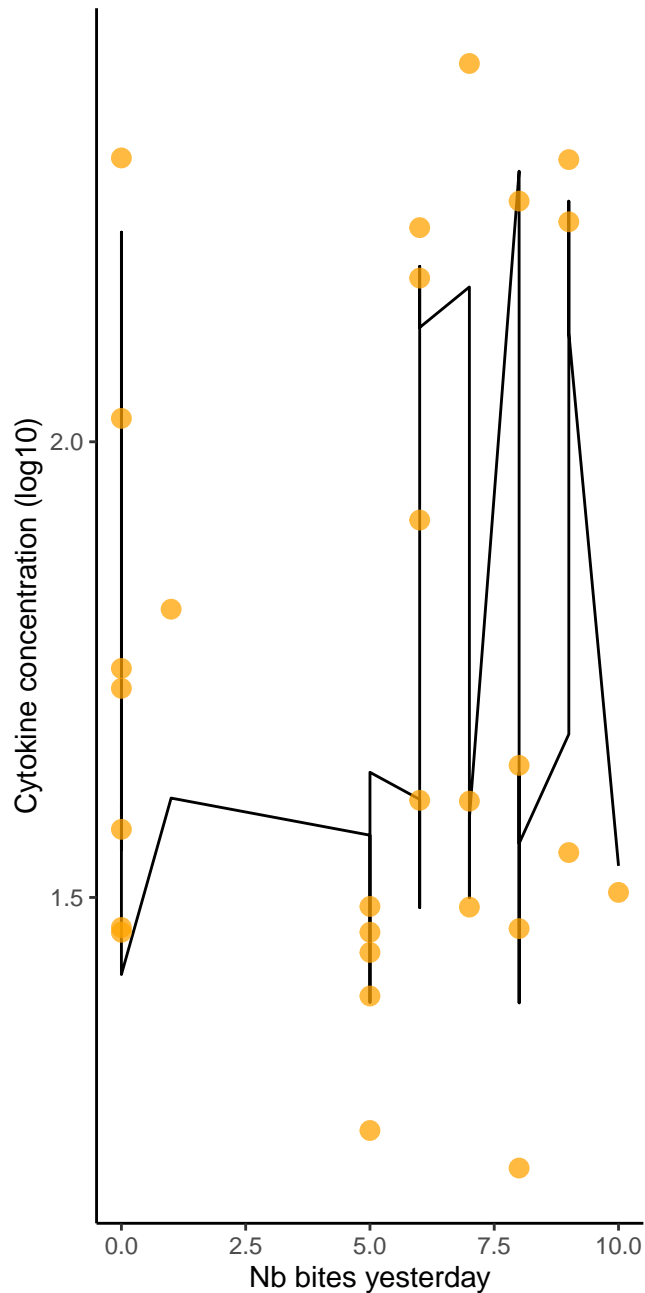
Nb excluded (LOD) : 8  
Nb remaining: 28

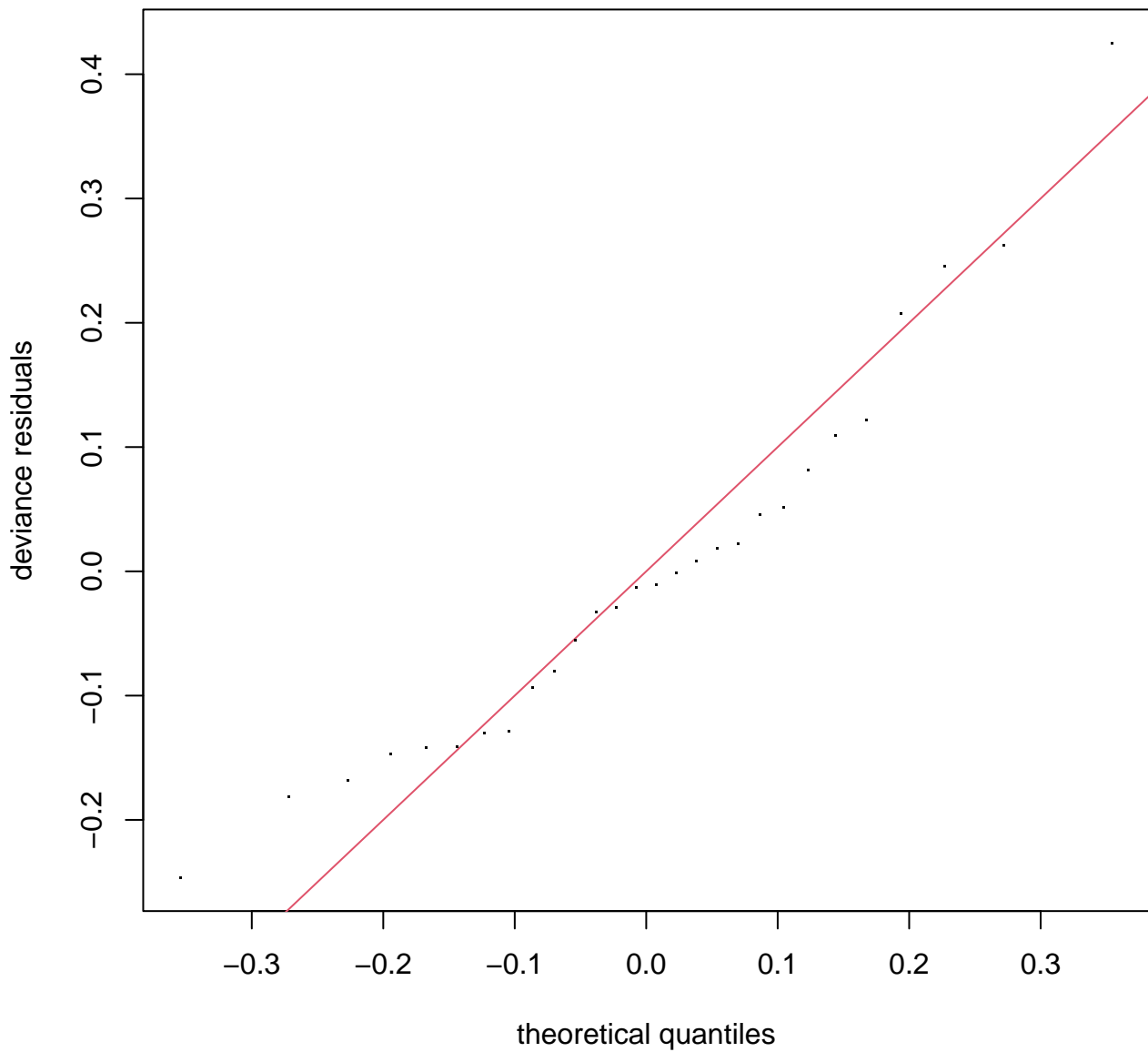




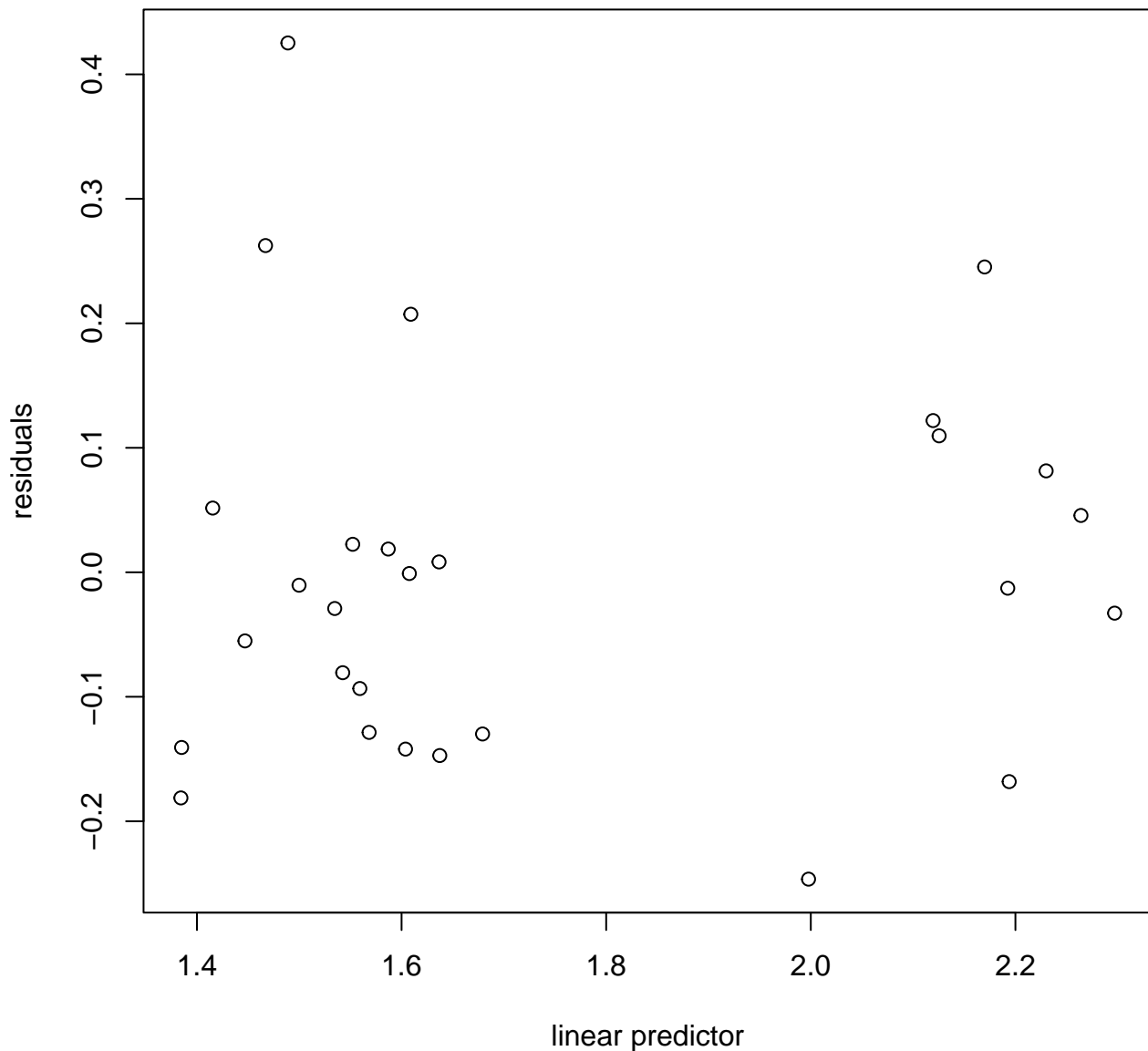
**s(ID,2.87)**





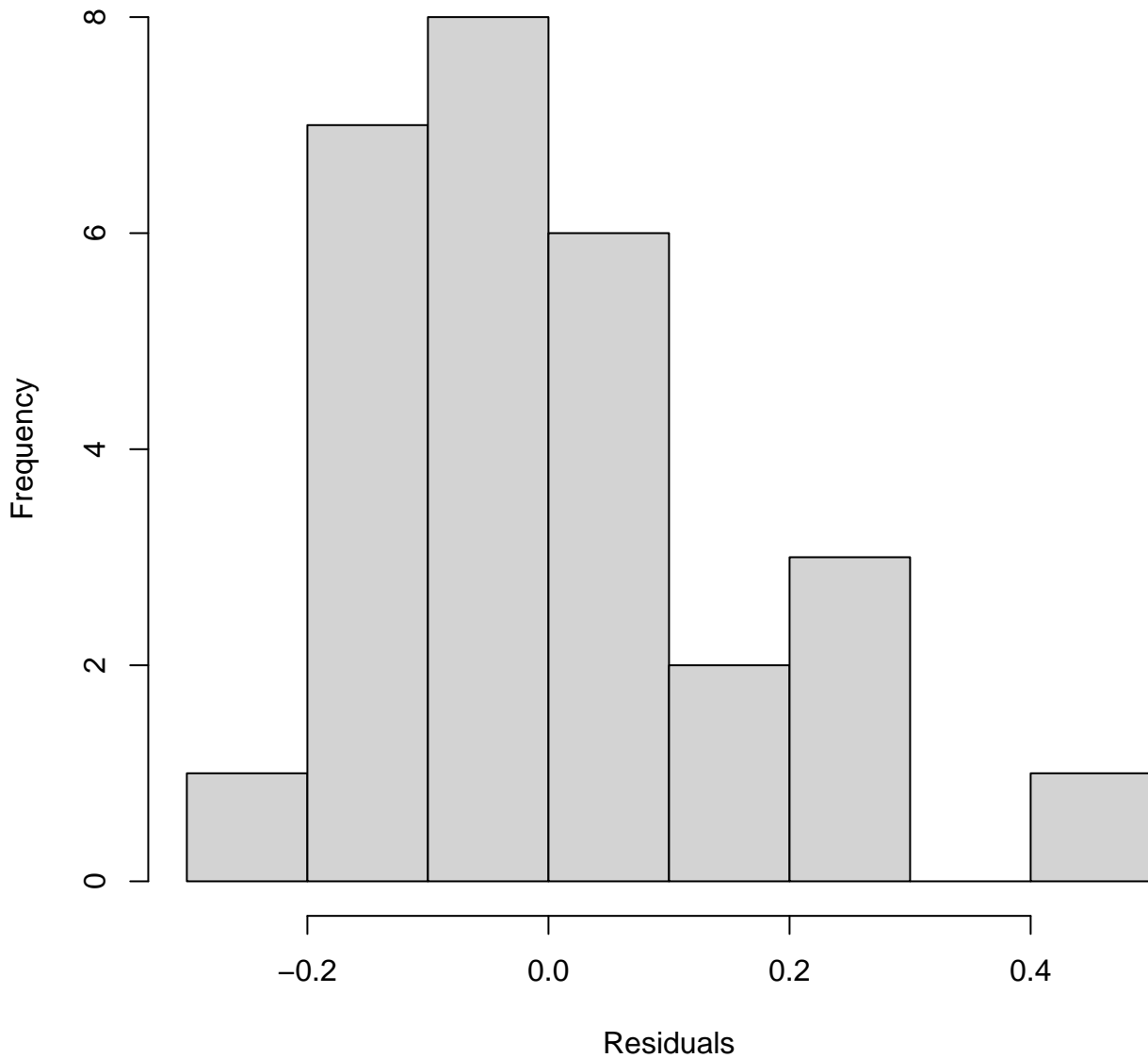


**Resids vs. linear pred.**

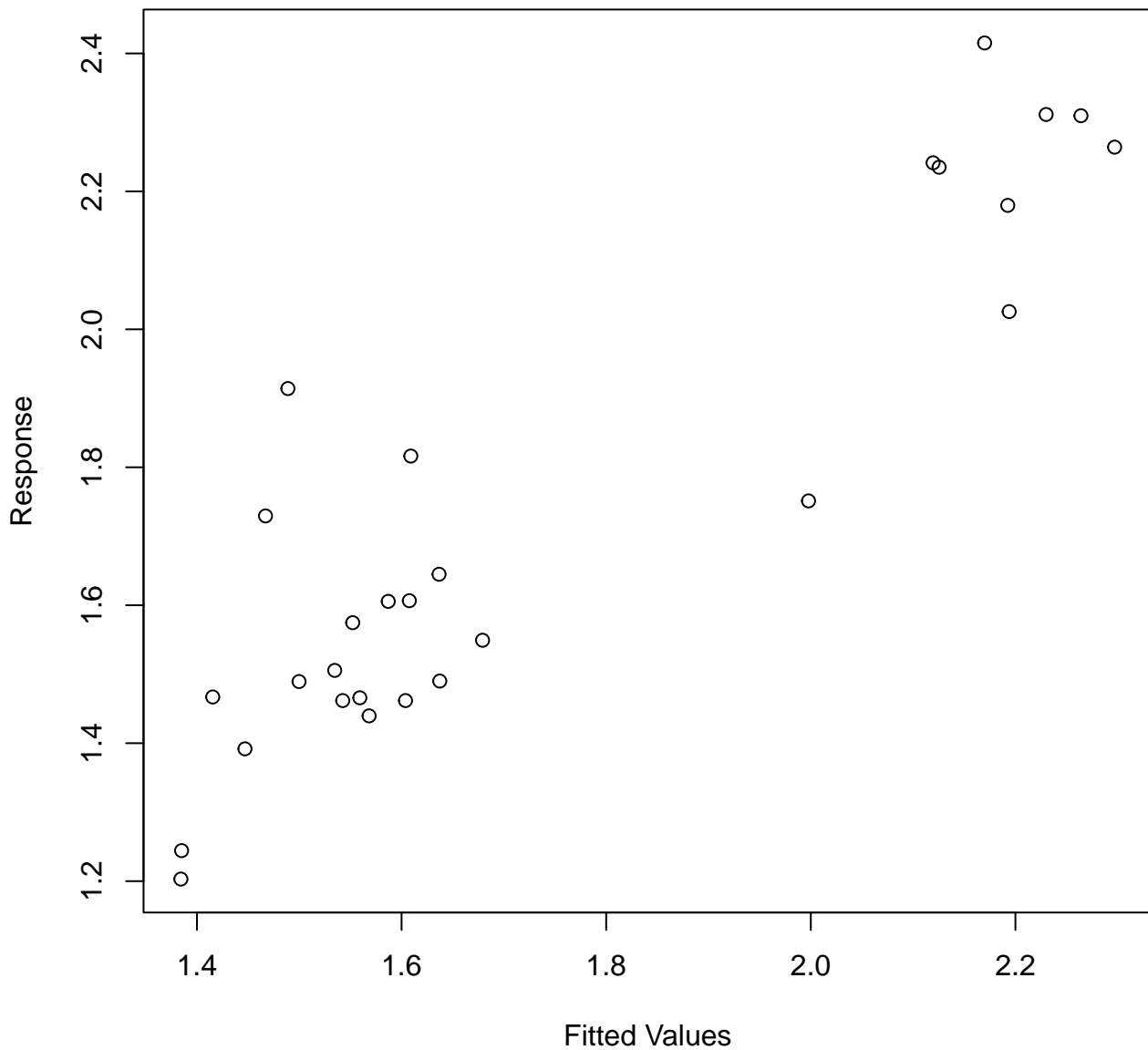




**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 13 iterations.  
 Gradient range [-2.80738e-06,3.640827e-07]  
 (score -4.876378 & scale 0.02844961).  
 Hessian positive definite, eigenvalue range [1.130909e-06,14.29635].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.00	0.97	0.39
s(cumul_bites_7_previous_days)	3.00	1.00	1.05	0.51
s(ID)	4.00	2.87	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.12	[1.01, 3.39]	1.06	0.89	[0.30, 0.99]	
s(cumul_bites_7_previous_days, k = 4)	1.12	[1.01, 3.39]	1.06	0.89	[0.30, 0.99]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.6929	0.1614	10.49	4.73e-10 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1	1.444	0.2423
s(cumul_bites_7_previous_days)	1.000	1	3.597	0.0711 .
s(ID)	2.875	3	32.666	<2e-16 ***

---

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

R-sq.(adj) = 0.782 Deviance explained = 82.2%  
-ML = -4.8764 Scale est. = 0.02845 n = 28

AICc [1] -7.328022

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0



IFN.g ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

IL.10

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

IL.10 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

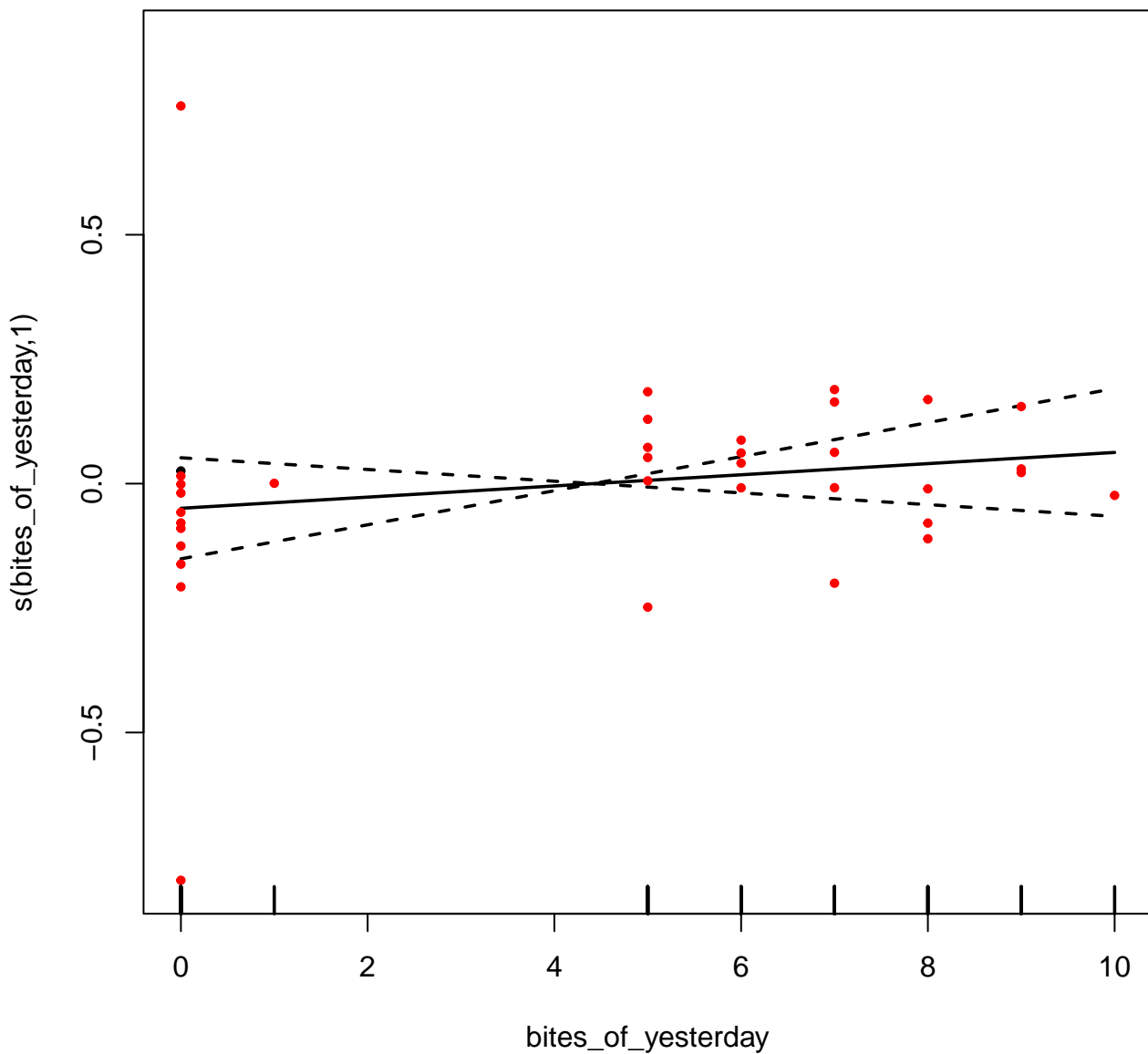
IL.10 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

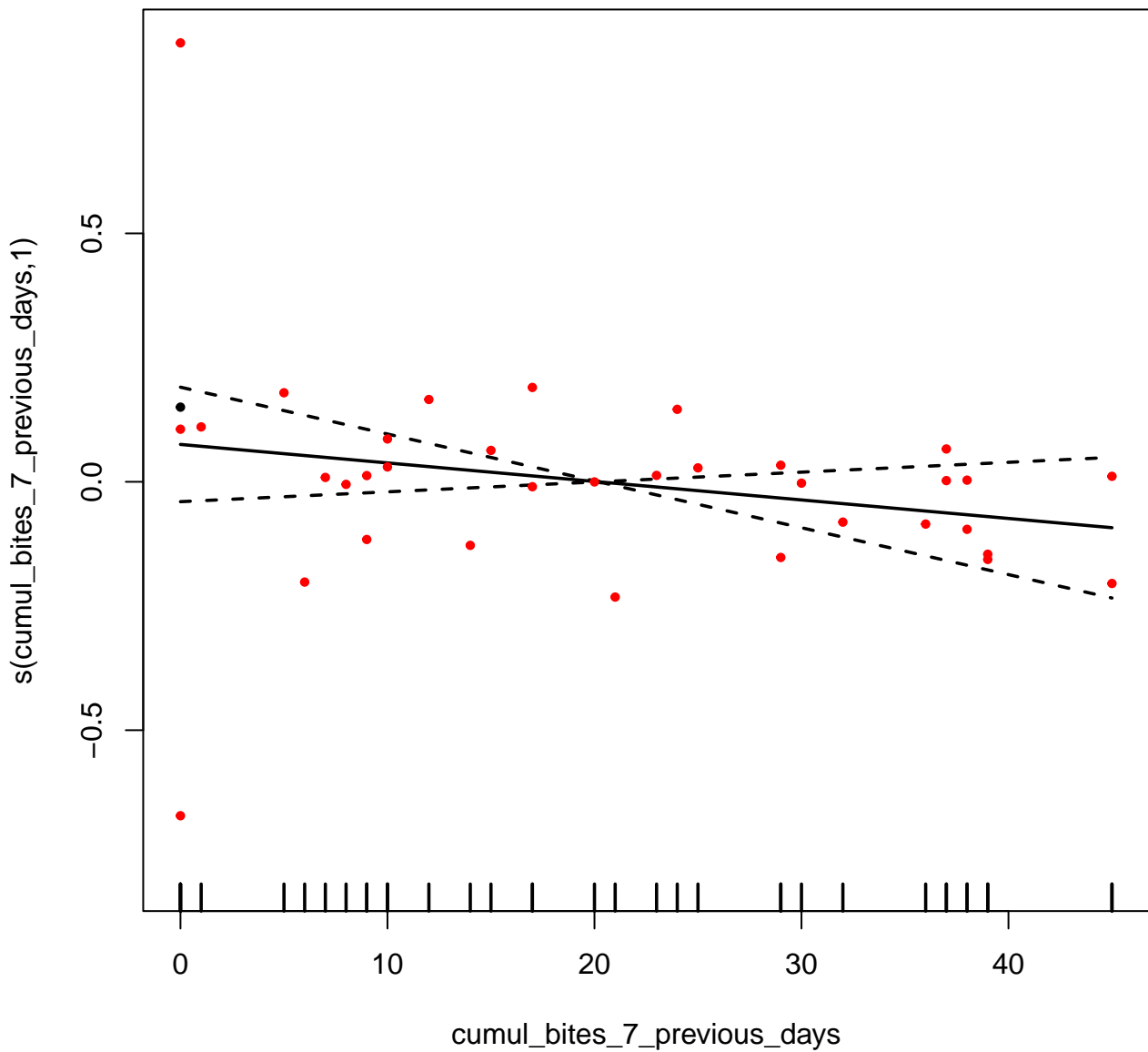


IL.12

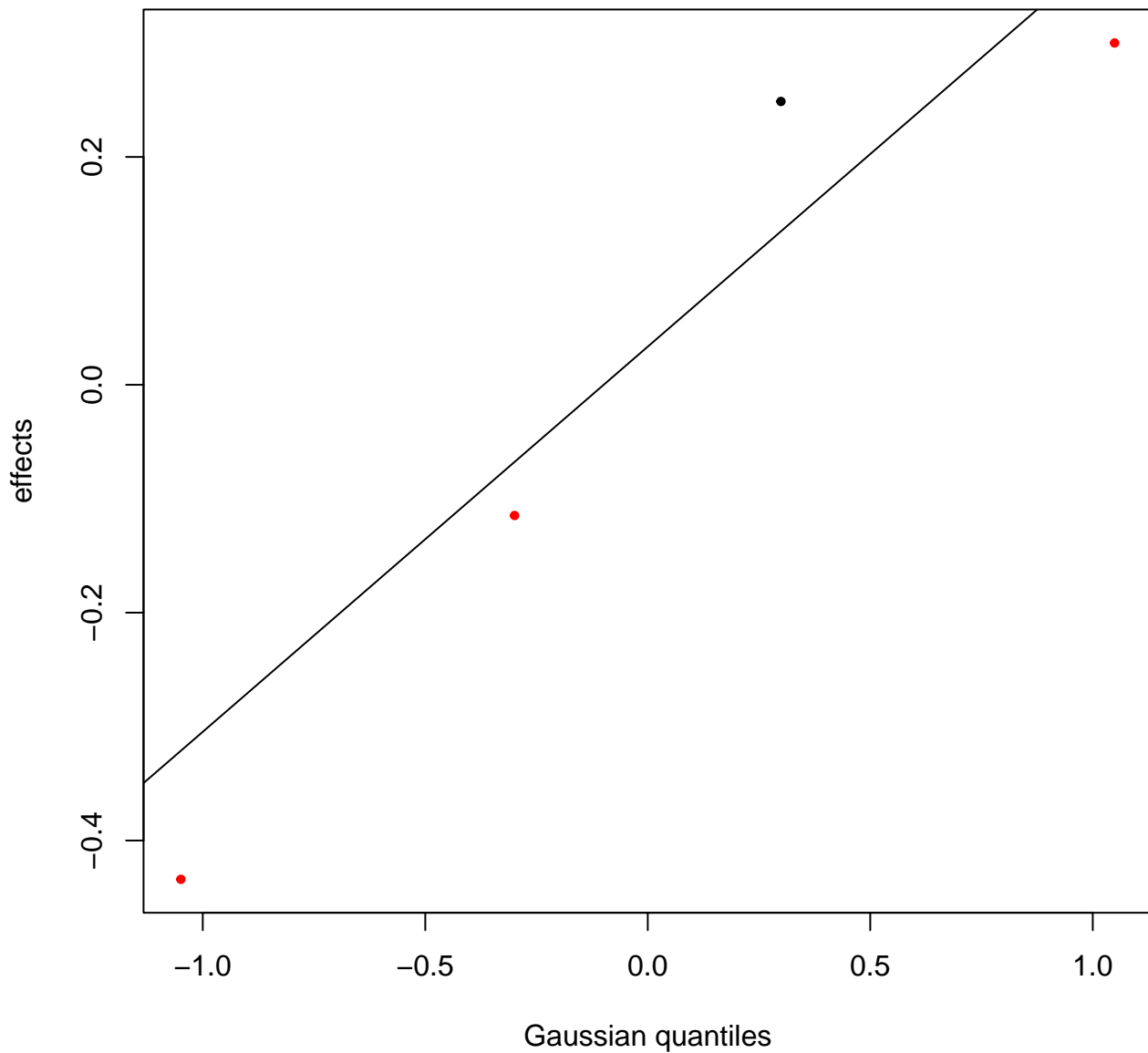
Bites in cyno

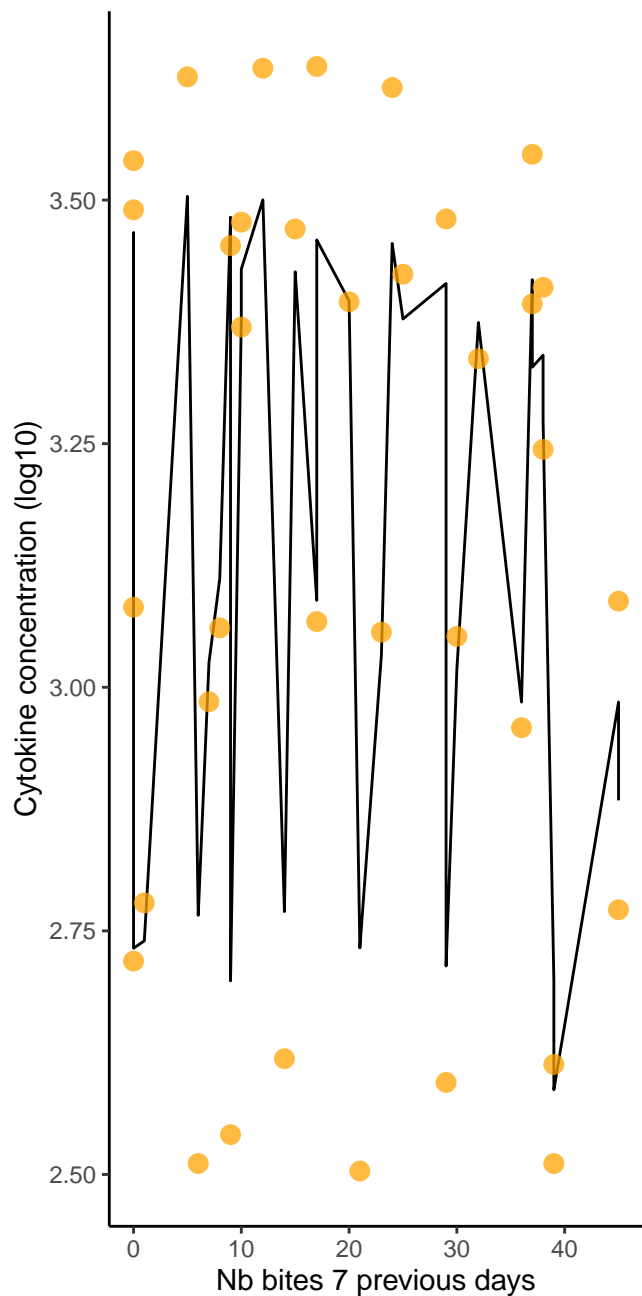
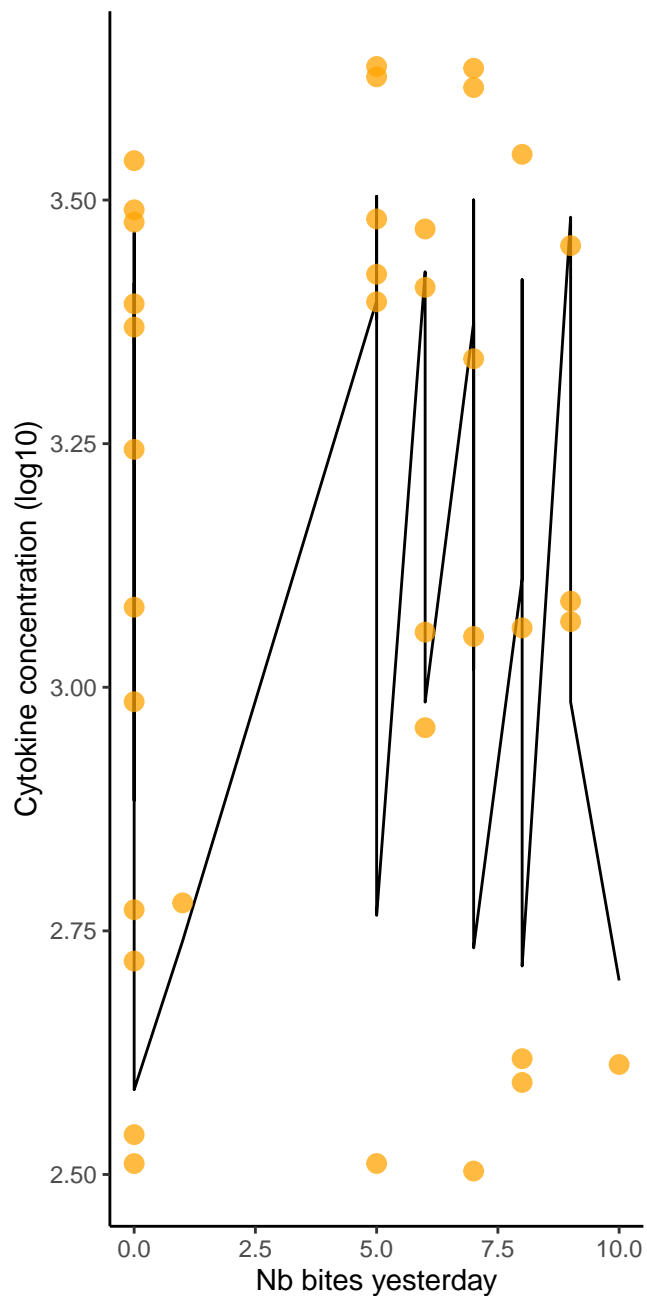
Nb excluded (LOD) : 0  
Nb remaining: 36

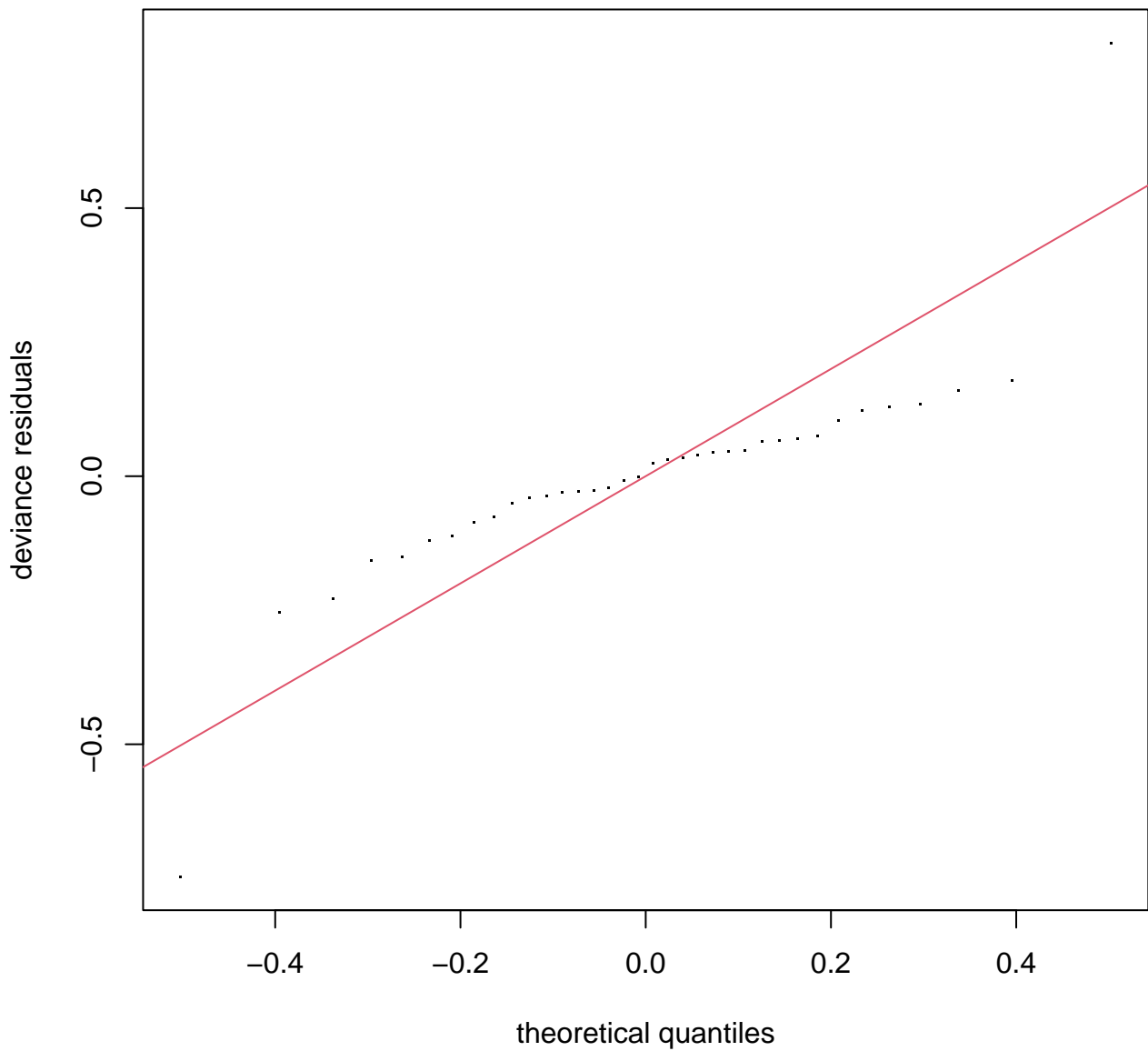




**s(ID,2.83)**

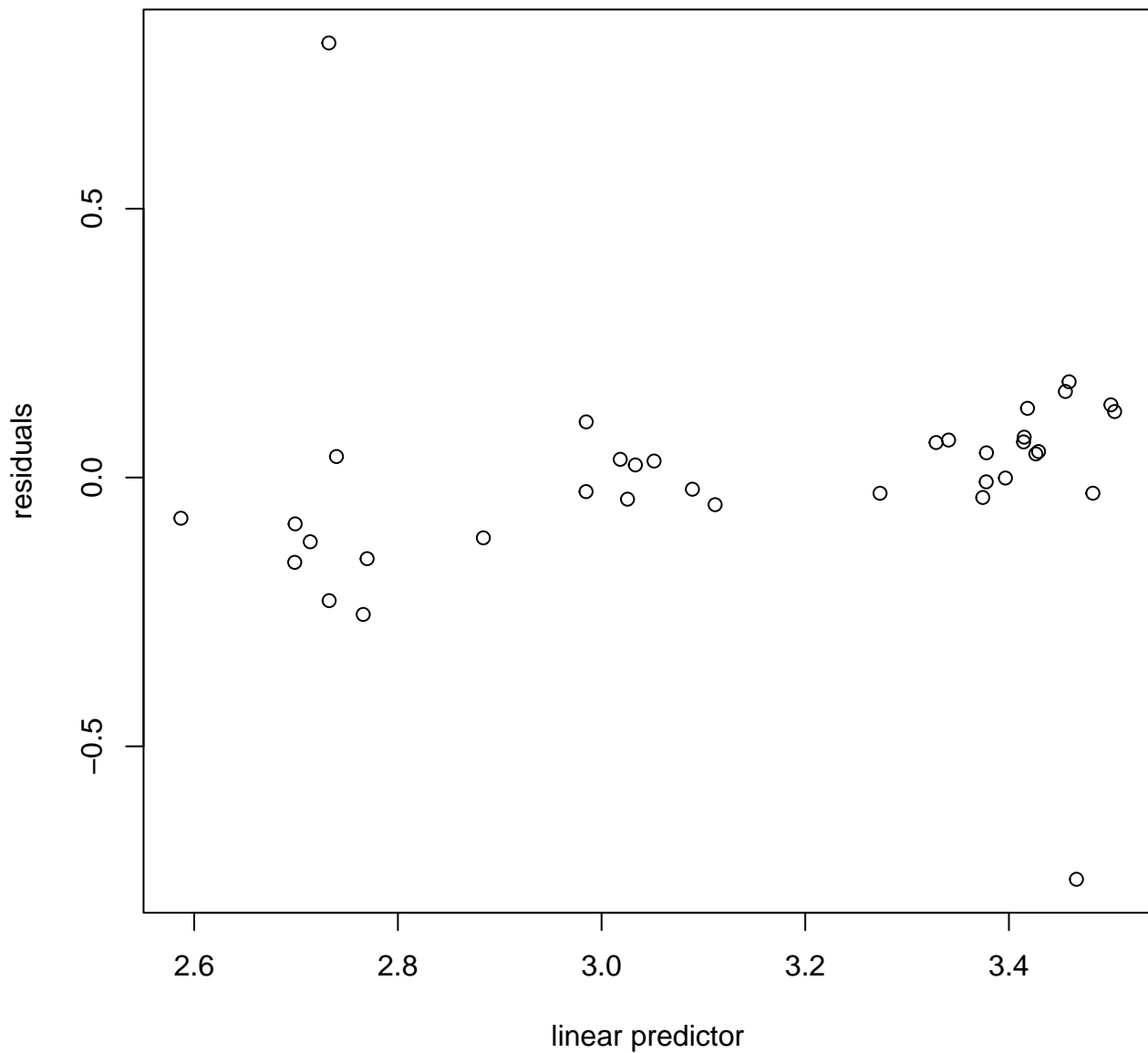




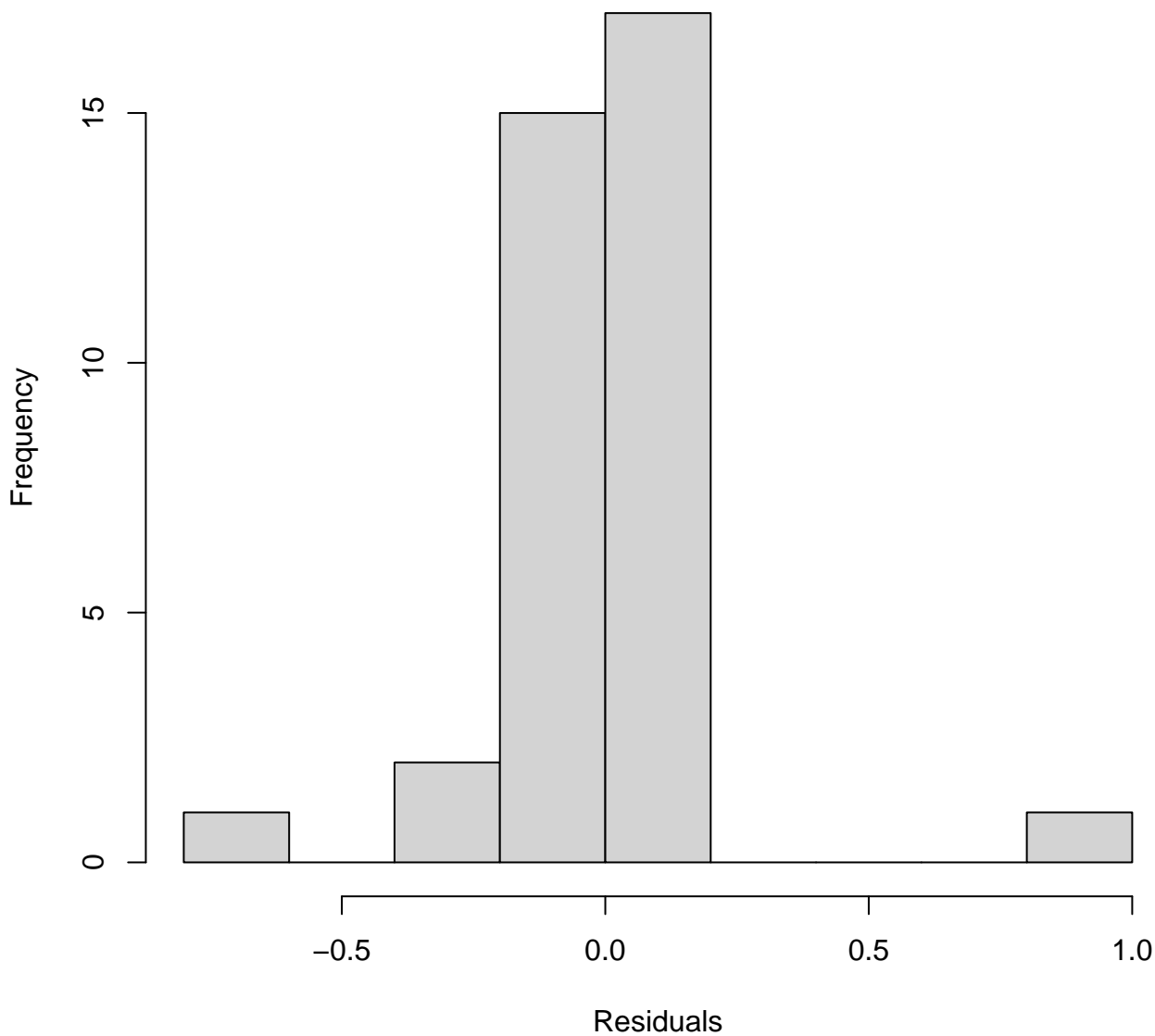




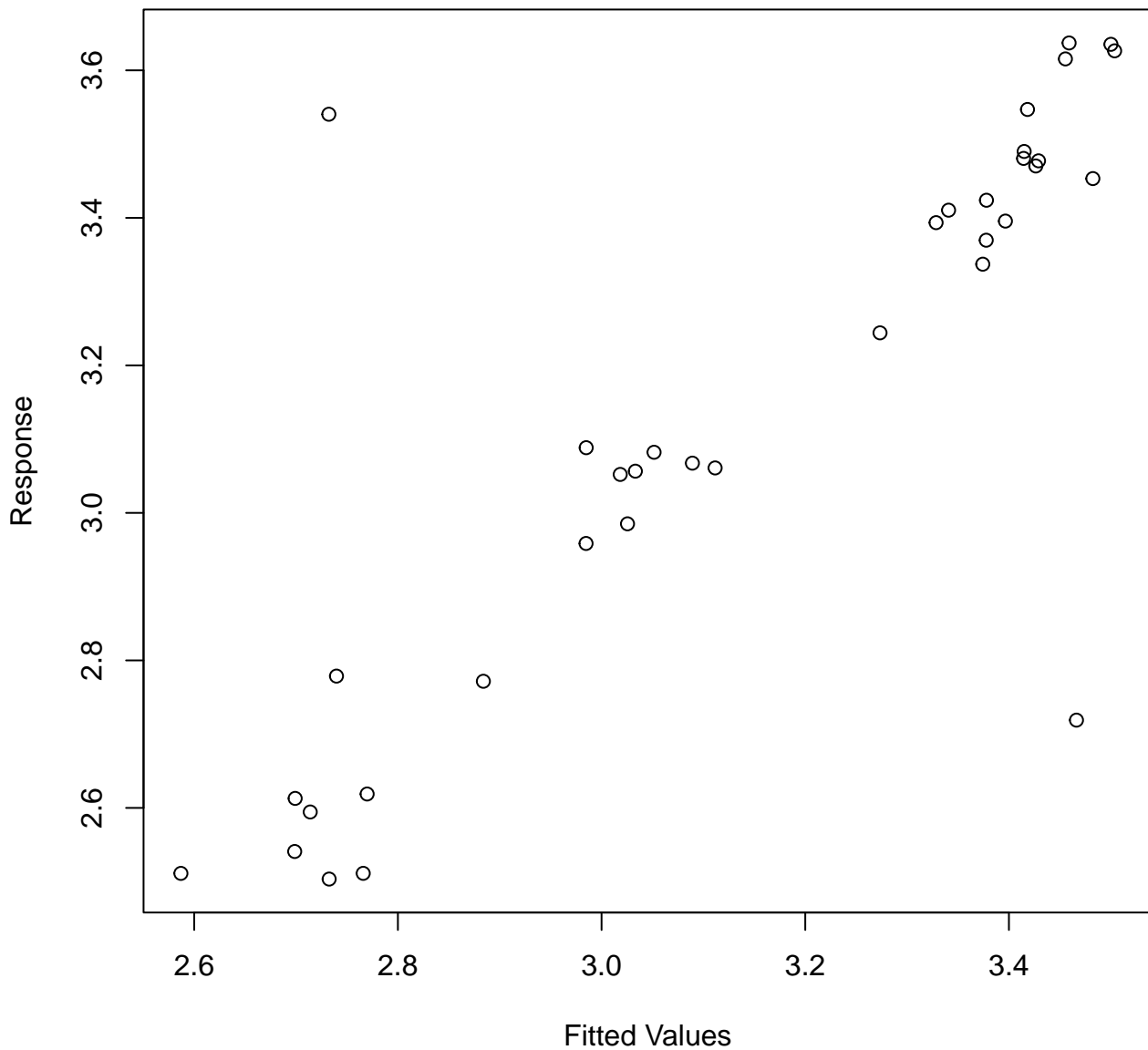
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 15 iterations.  
 Gradient range [-1.039541e-06,5.268573e-08]  
 (score 2.533338 & scale 0.05213652).  
 Hessian positive definite, eigenvalue range [7.566821e-07,18.21747].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.00	1.03	0.54
s(cumul_bites_7_previous_days)	3.00	1.00	1.44	0.95
s(ID)	4.00	2.83	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	
s(cumul_bites_7_previous_days, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	3.1406	0.1625	19.32	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1	0.952	0.337
s(cumul_bites_7_previous_days)	1.000	1	1.705	0.202
s(ID)	2.834	3	21.436	<2e-16 ***

---

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

R-sq.(adj) = 0.646 Deviance explained = 69.5%  
-ML = 2.5333 Scale est. = 0.052137 n = 36

```
AICc [1] 7.355133
```

Bites in squirrel



Nb excluded (LOD) : 20

Nb remaining: 0

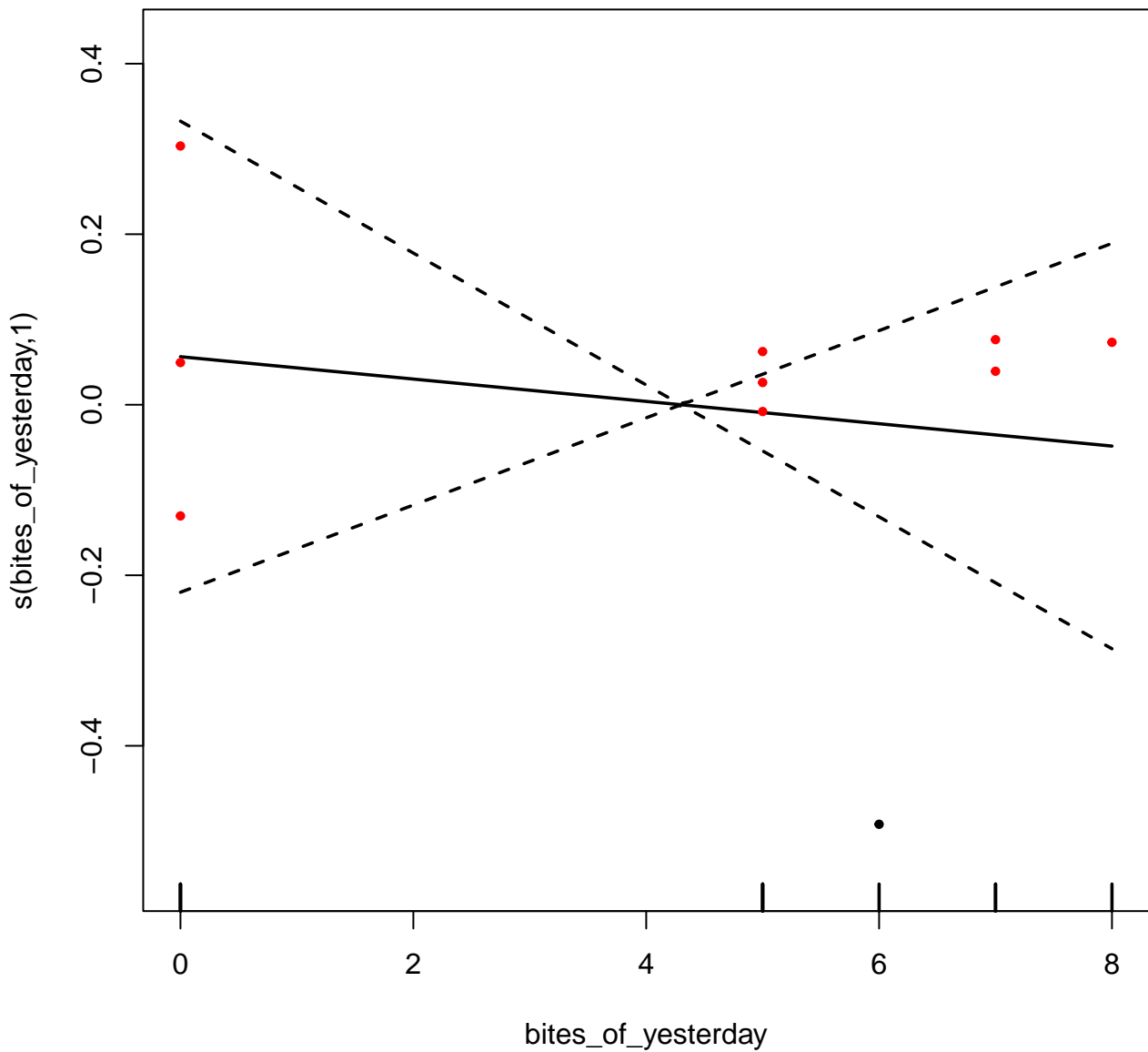
IL.12 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

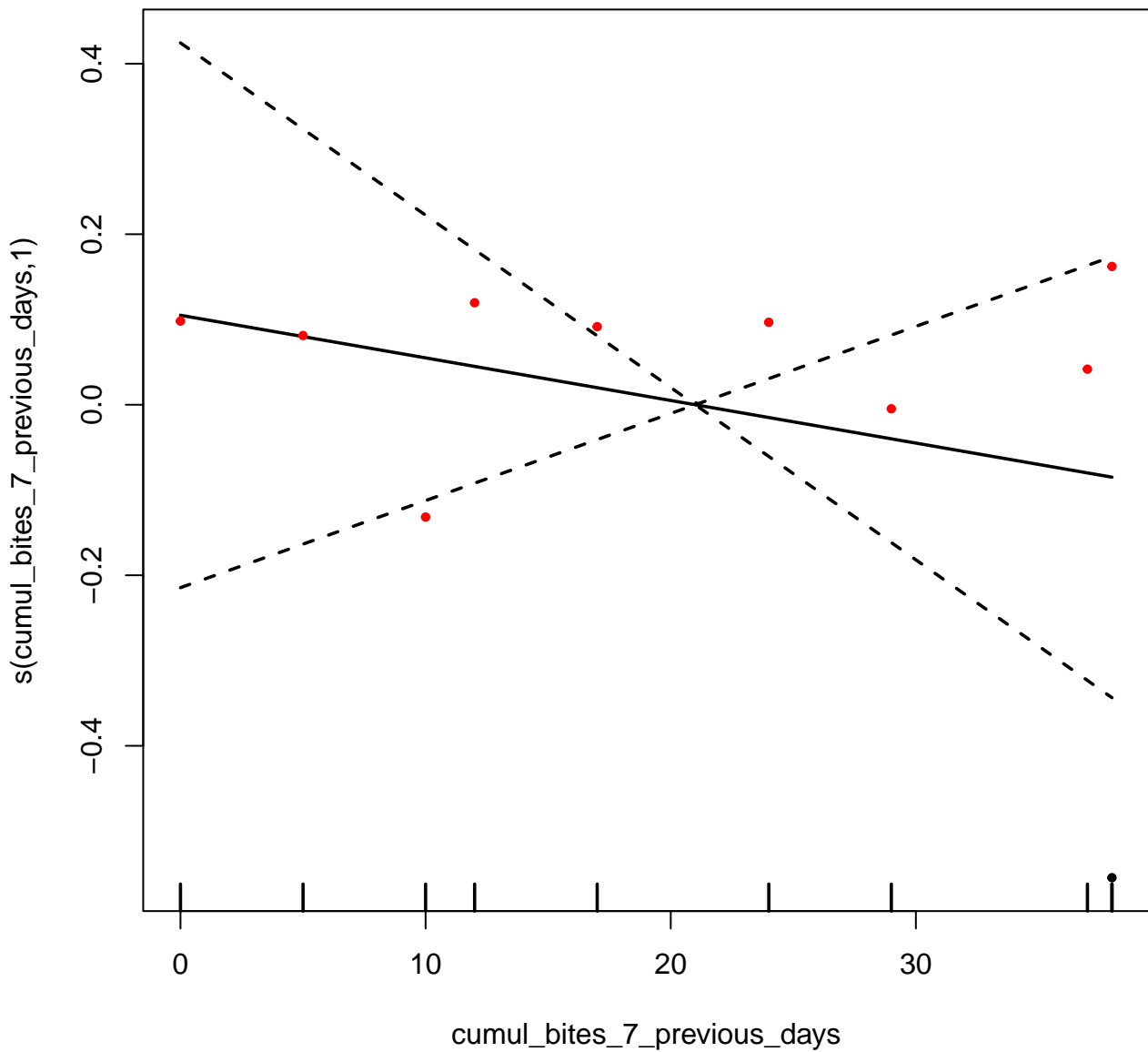
IL.15

Bites in cyno

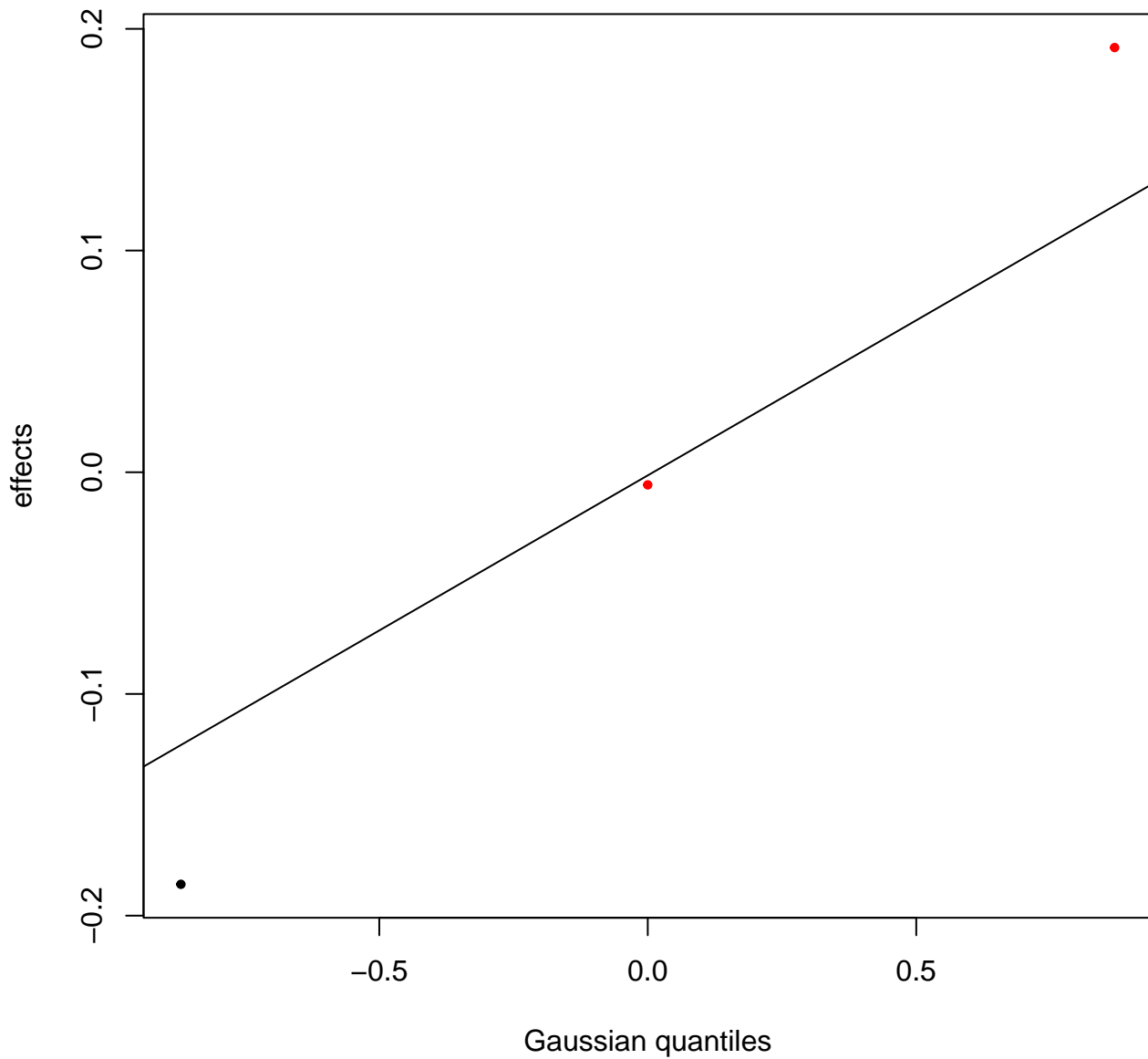
Nb excluded (LOD) : 26

Nb remaining: 10

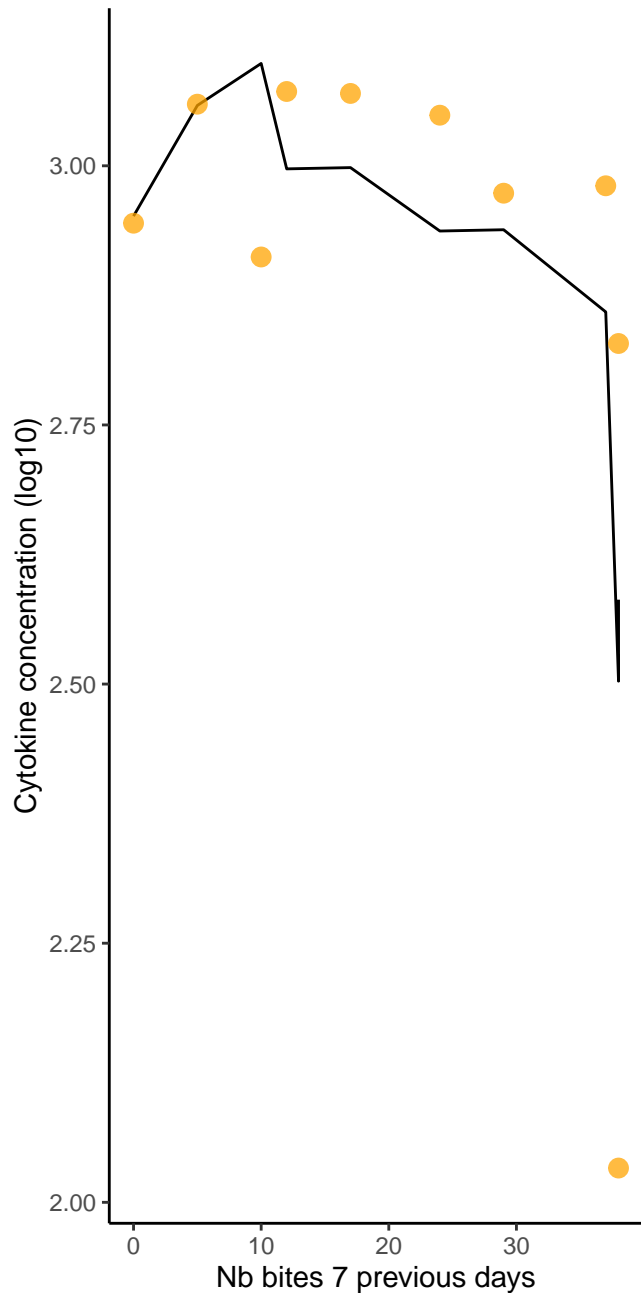
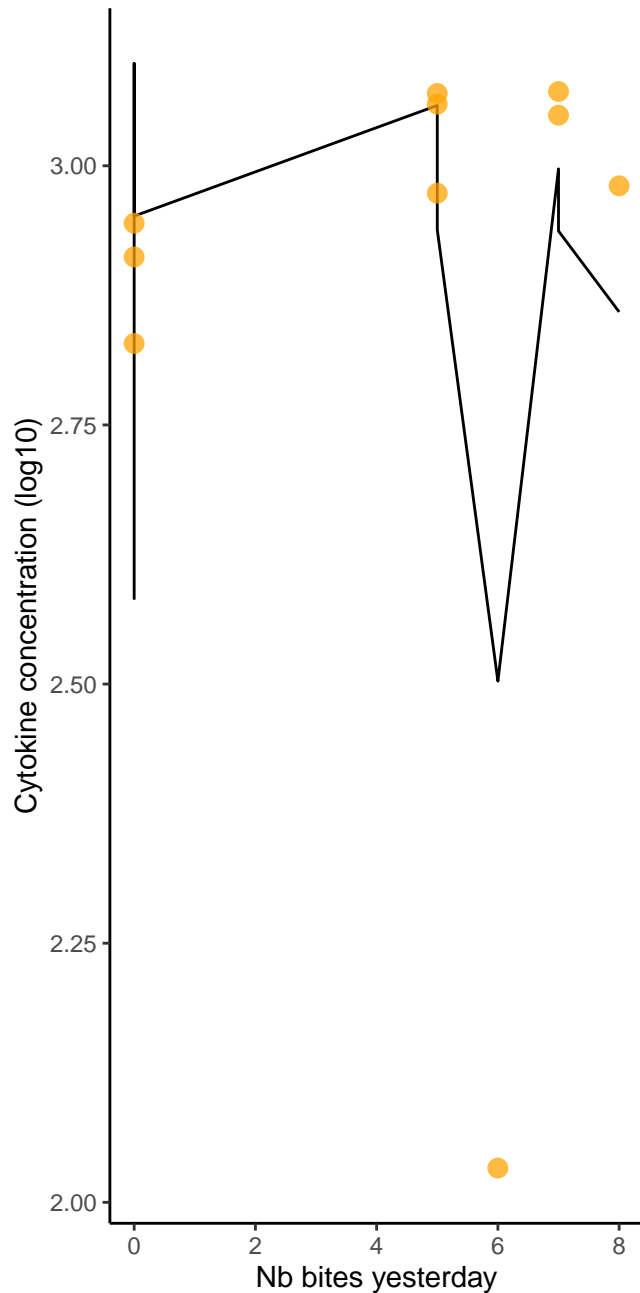


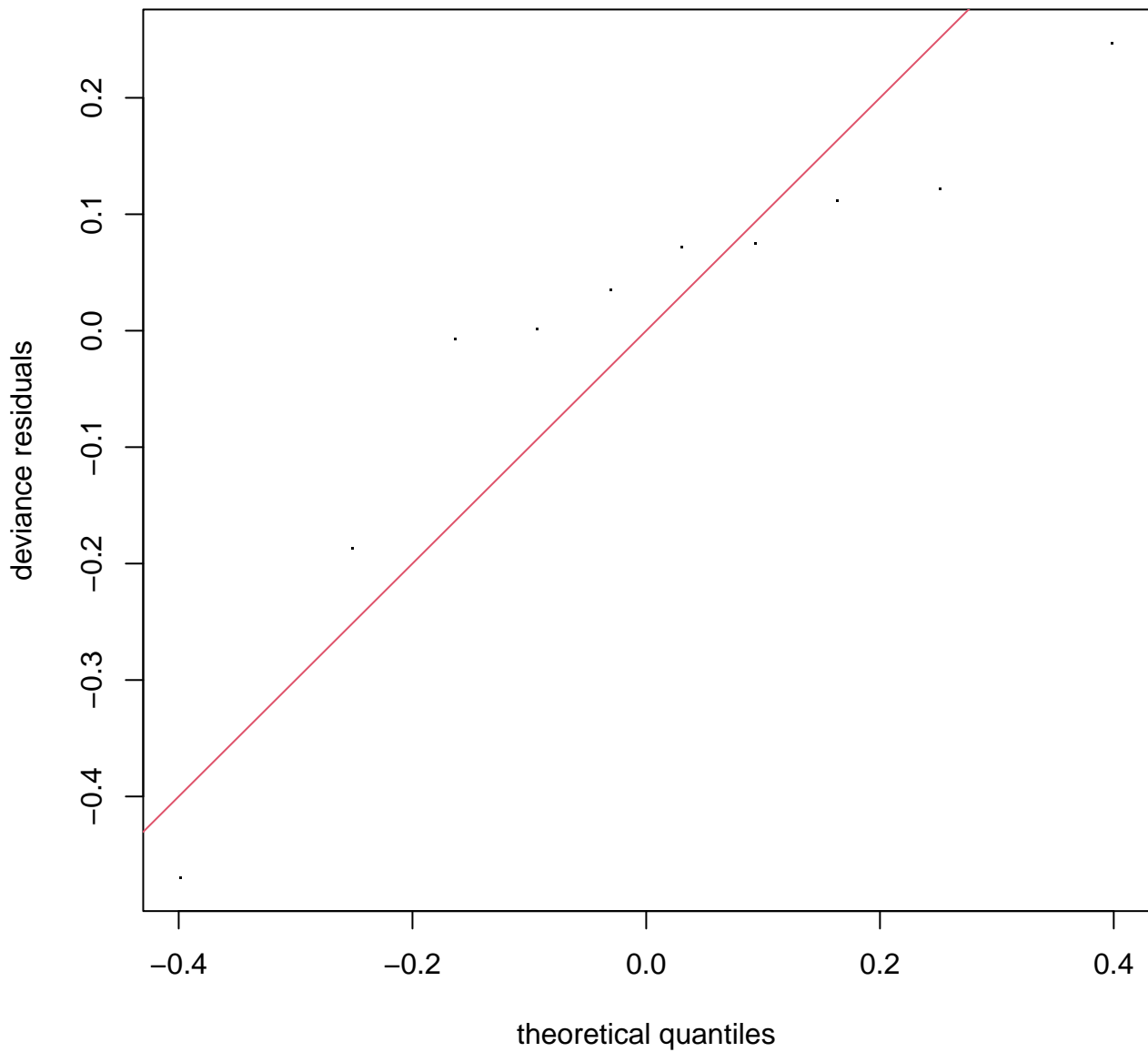


**s(ID,0.94)**

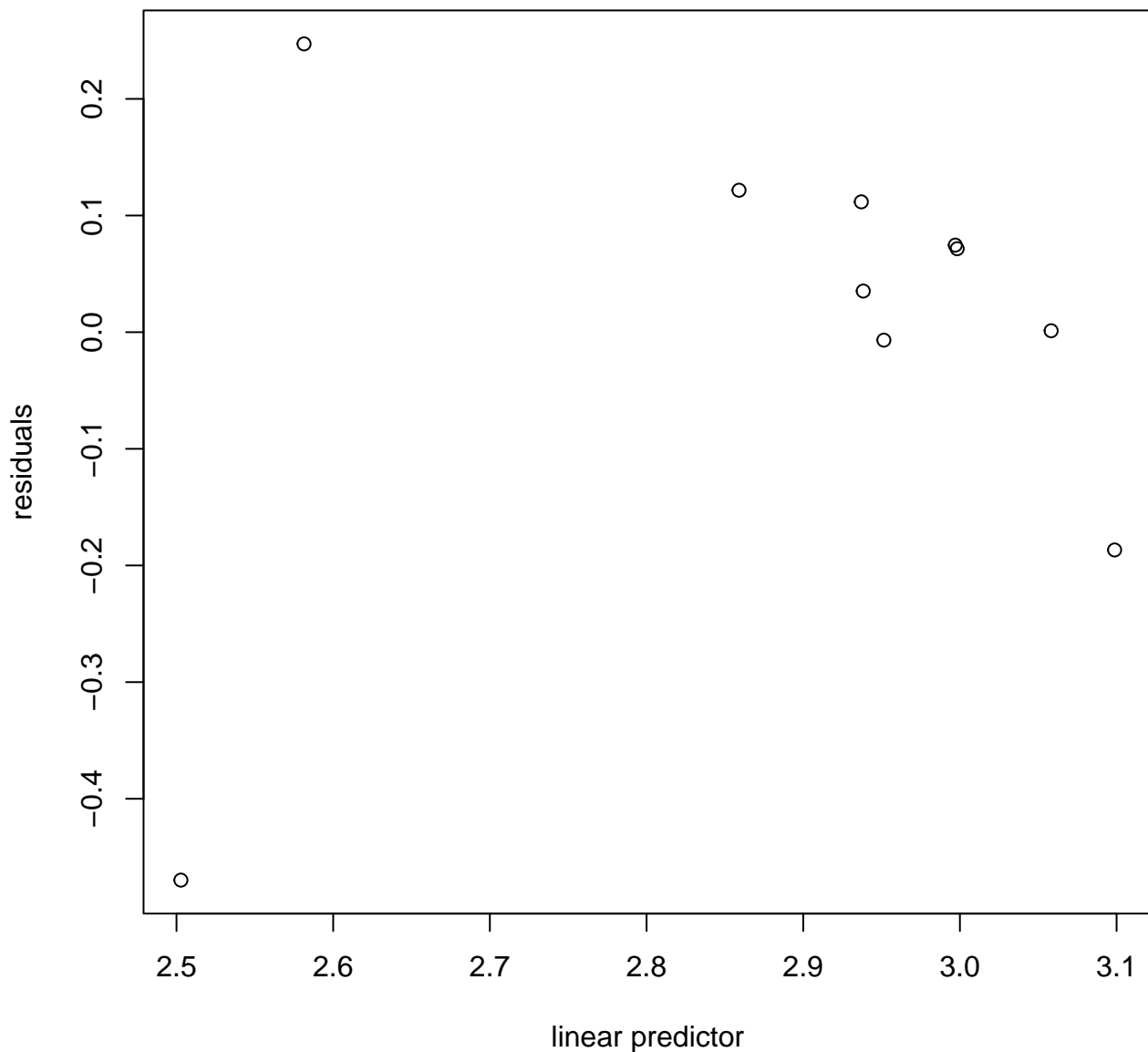




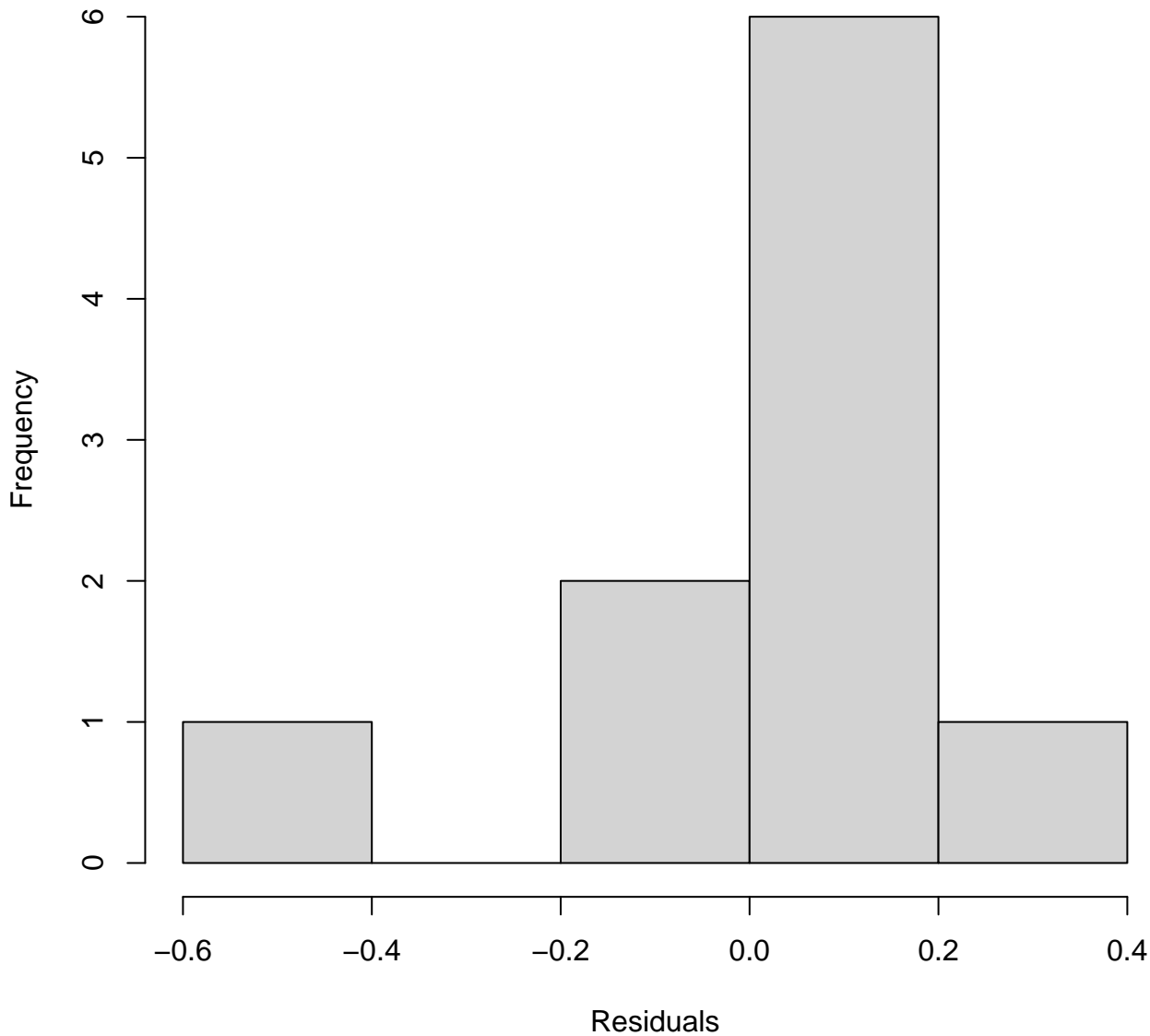




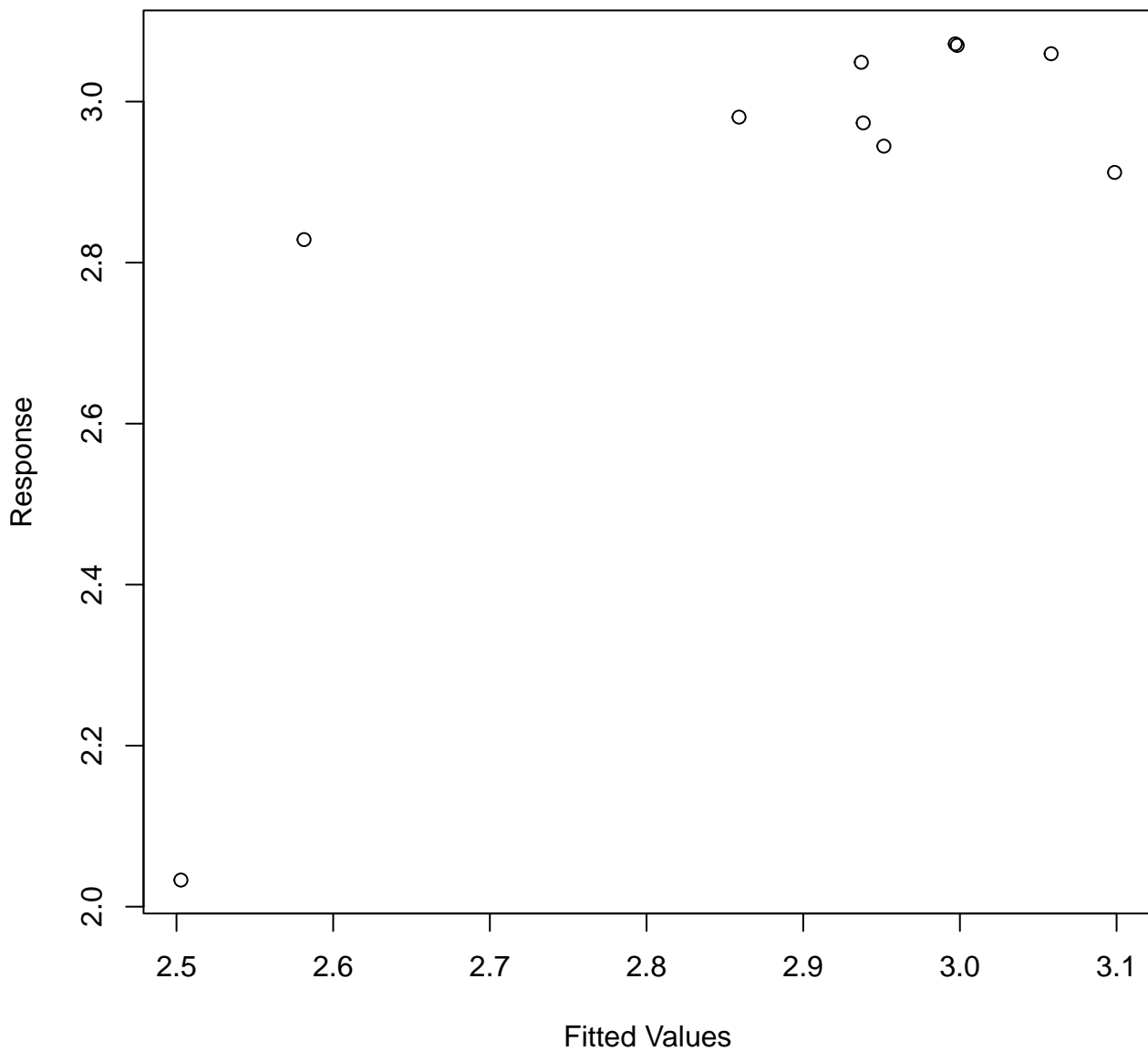
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 13 iterations.  
 Gradient range [-8.278141e-07,2.155729e-07]  
 (score 0.3420244 & scale 0.05869235).  
 Hessian positive definite, eigenvalue range [2.785524e-07,5.195765].  
 Model rank = 10 / 10

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.000	1.000	1.22	0.58
s(cumul_bites_7_previous_days)	3.000	1.000	1.53	0.91
s(ID)	3.000	0.936	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.14	[1.01, 2.75]	1.07	0.88	[0.36, 0.99]	
s(cumul_bites_7_previous_days, k = 4)	1.14	[1.01, 2.75]	1.07	0.88	[0.36, 0.99]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	2.7959	0.1622	17.24	2.21e-06 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.0000	1	0.166	0.6976
s(cumul_bites_7_previous_days)	1.0000	1	0.432	0.5356
s(ID)	0.9363	2	1.719	0.0916 .

---

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

R-sq.(adj) = 0.397 Deviance explained = 59.4%  
-ML = 0.34202 Scale est. = 0.058692 n = 10



AICc [ 1 ] 24.9539

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.15 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

IL.17

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

IL.17 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile



Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.17 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

IL.1B

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

IL.1B ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

Bites in squirrel



Nb excluded (LOD) : 20

Nb remaining: 0

IL.1B ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

IL . 2

Bites in cyno

Nb excluded (LOD) : 28

Nb remaining: 8

IL.2 ERROR : Le modèle a plus de coefficients que le nombre de données

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0



IL.2 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

IL . 4<sub>1</sub>

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

IL.4 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.4 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile



IL. 5

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

IL.5 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

IL.5 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

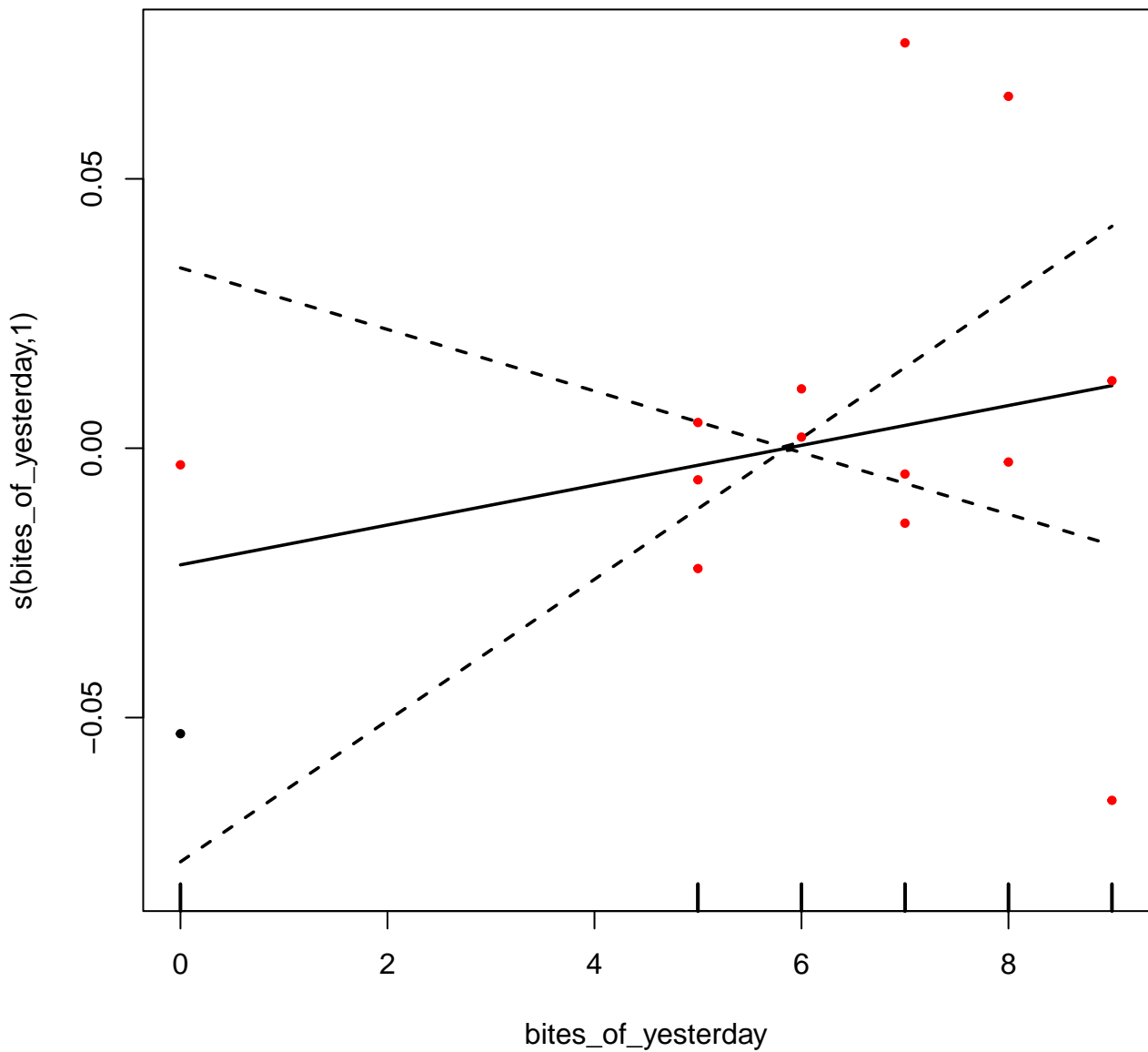
IL. 6

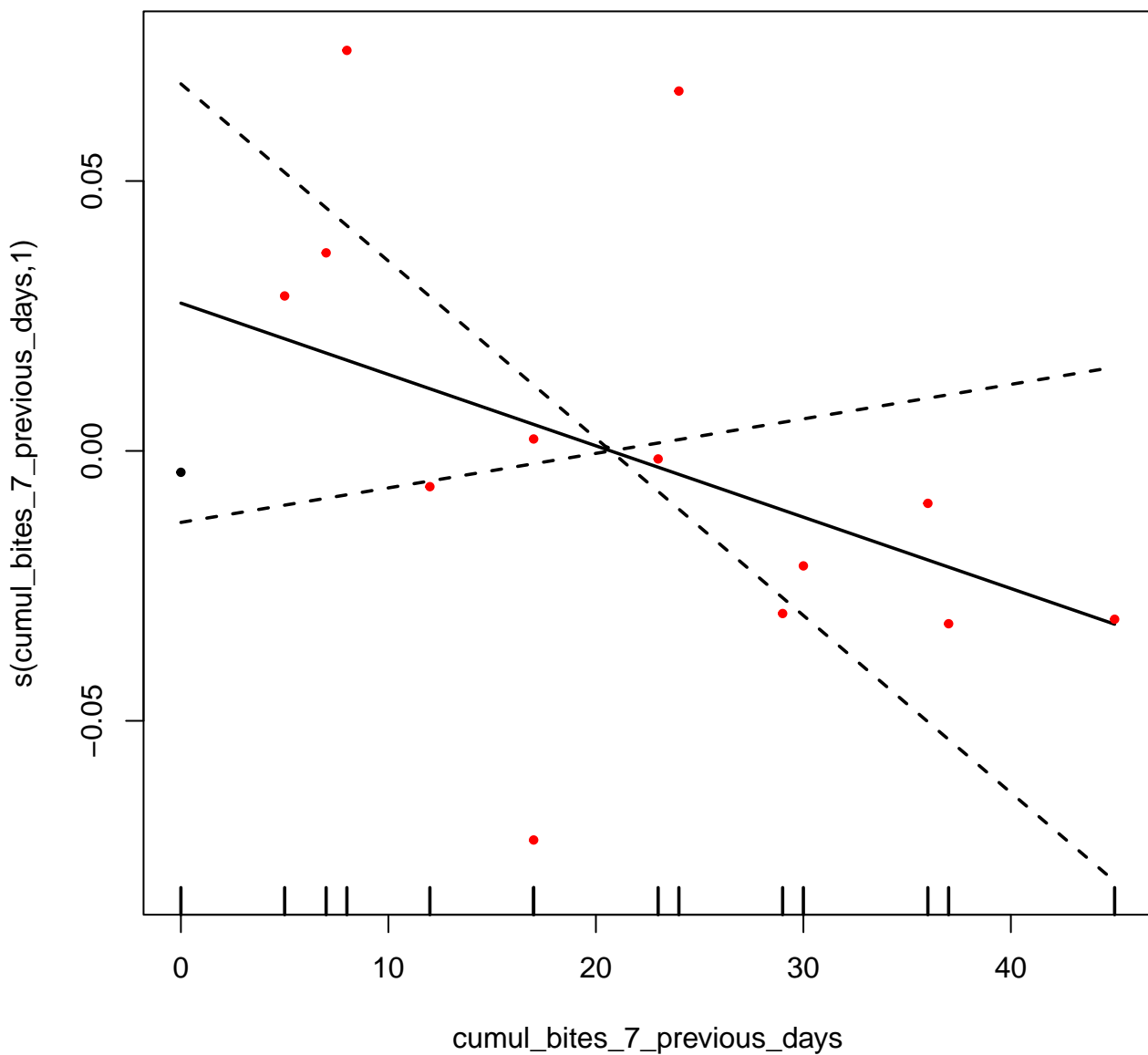


Bites in cyno

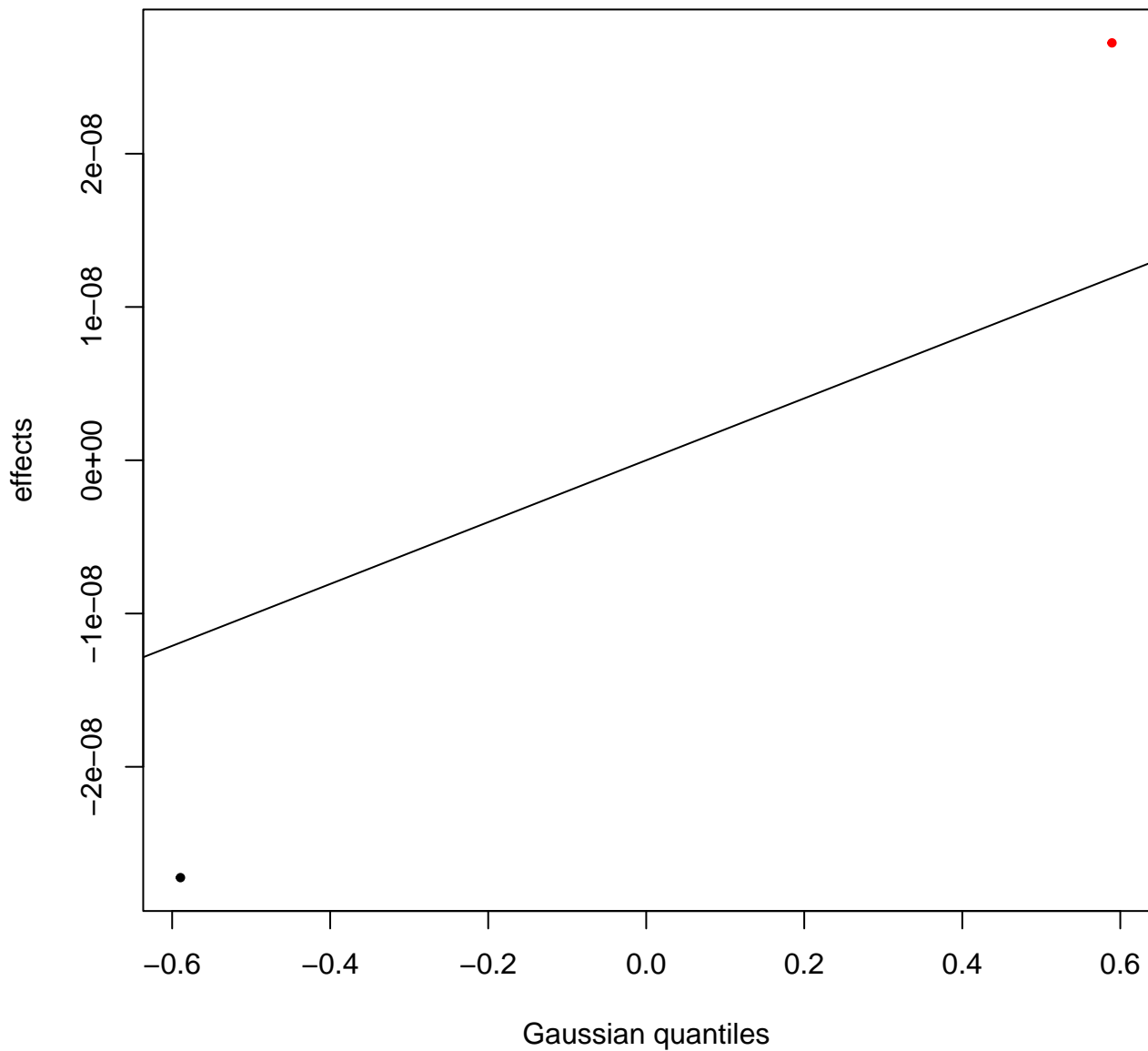
Nb excluded (LOD) : 22

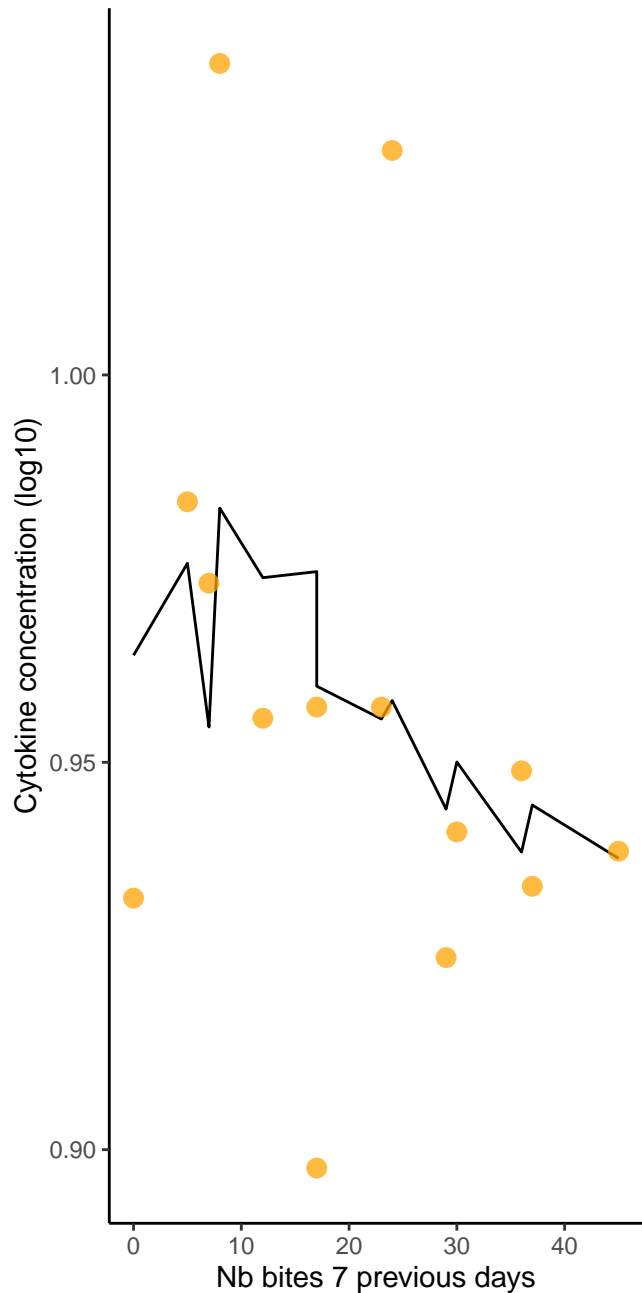
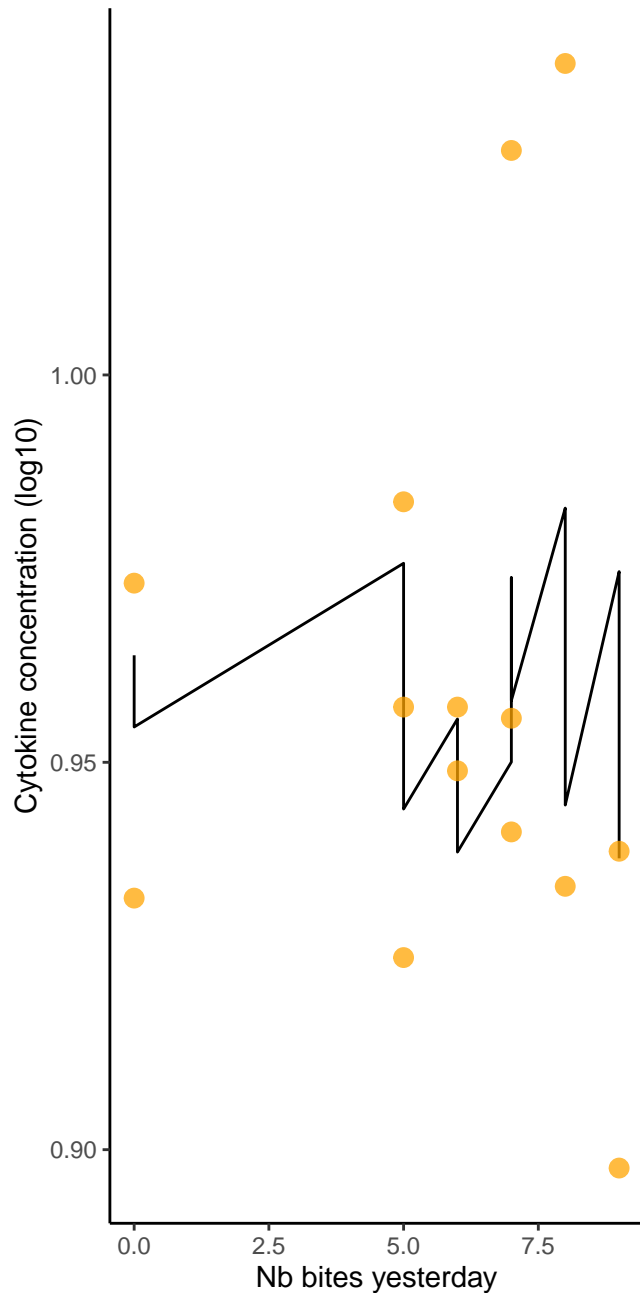
Nb remaining: 14

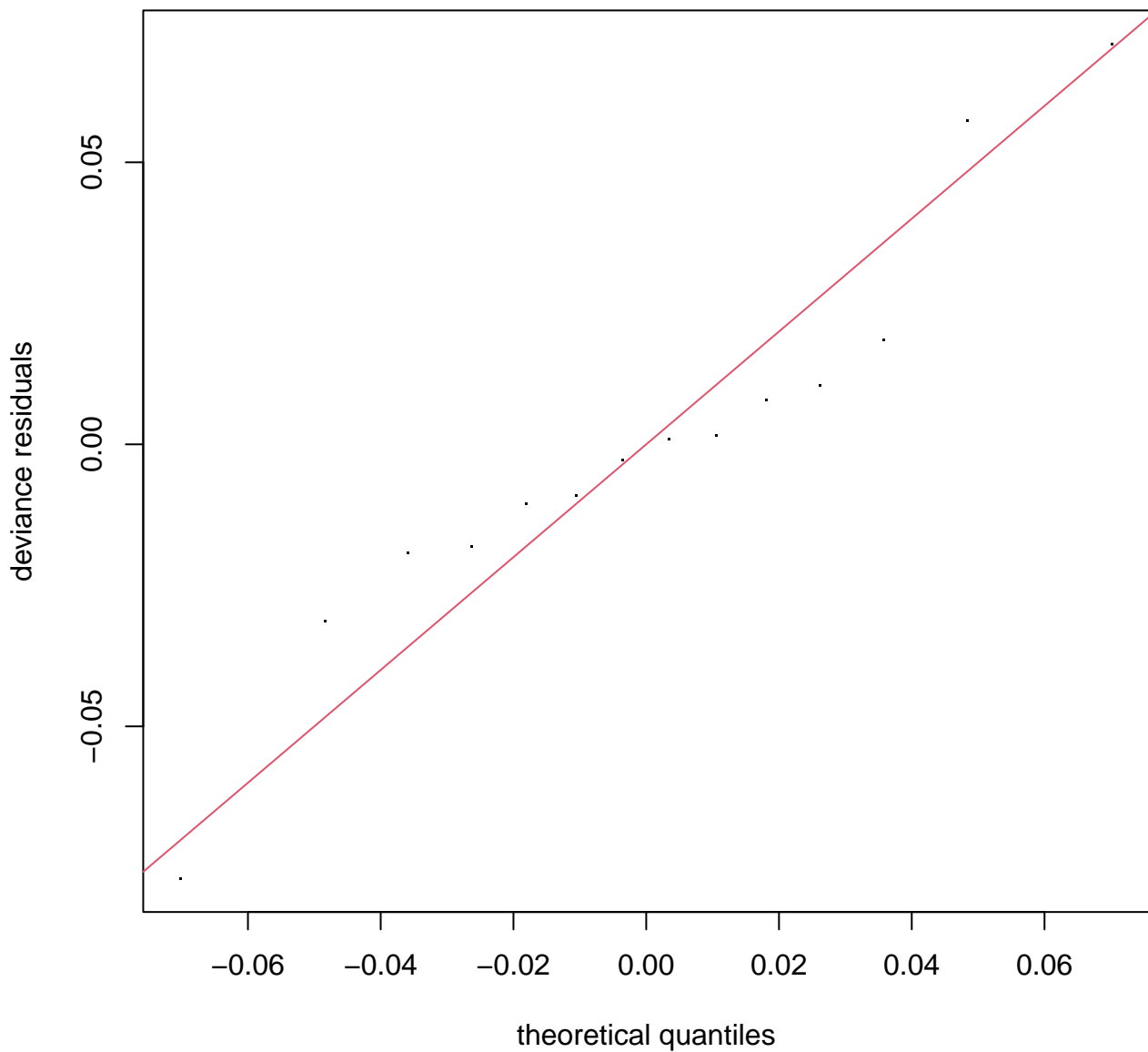




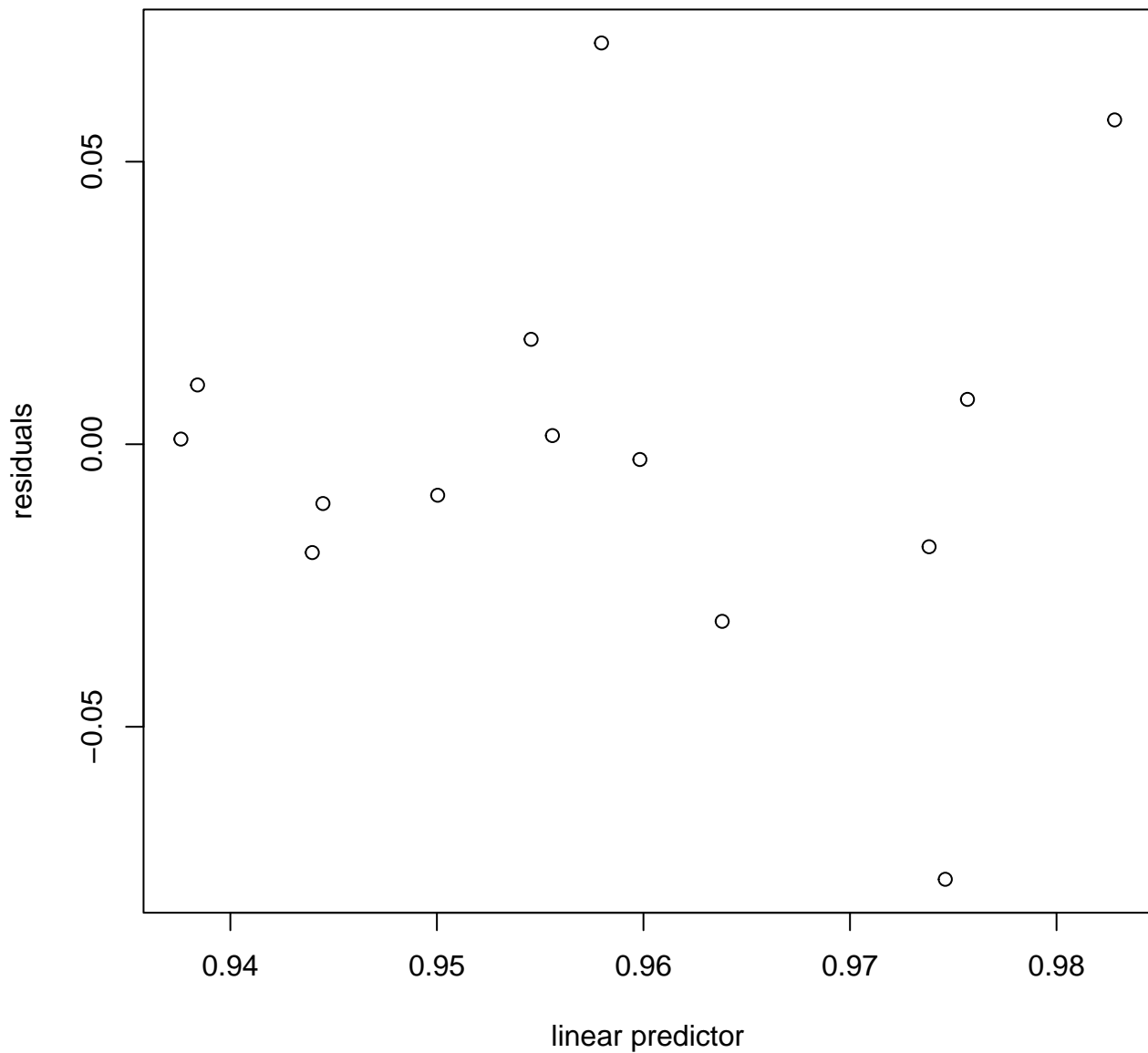
**s(ID,0)**





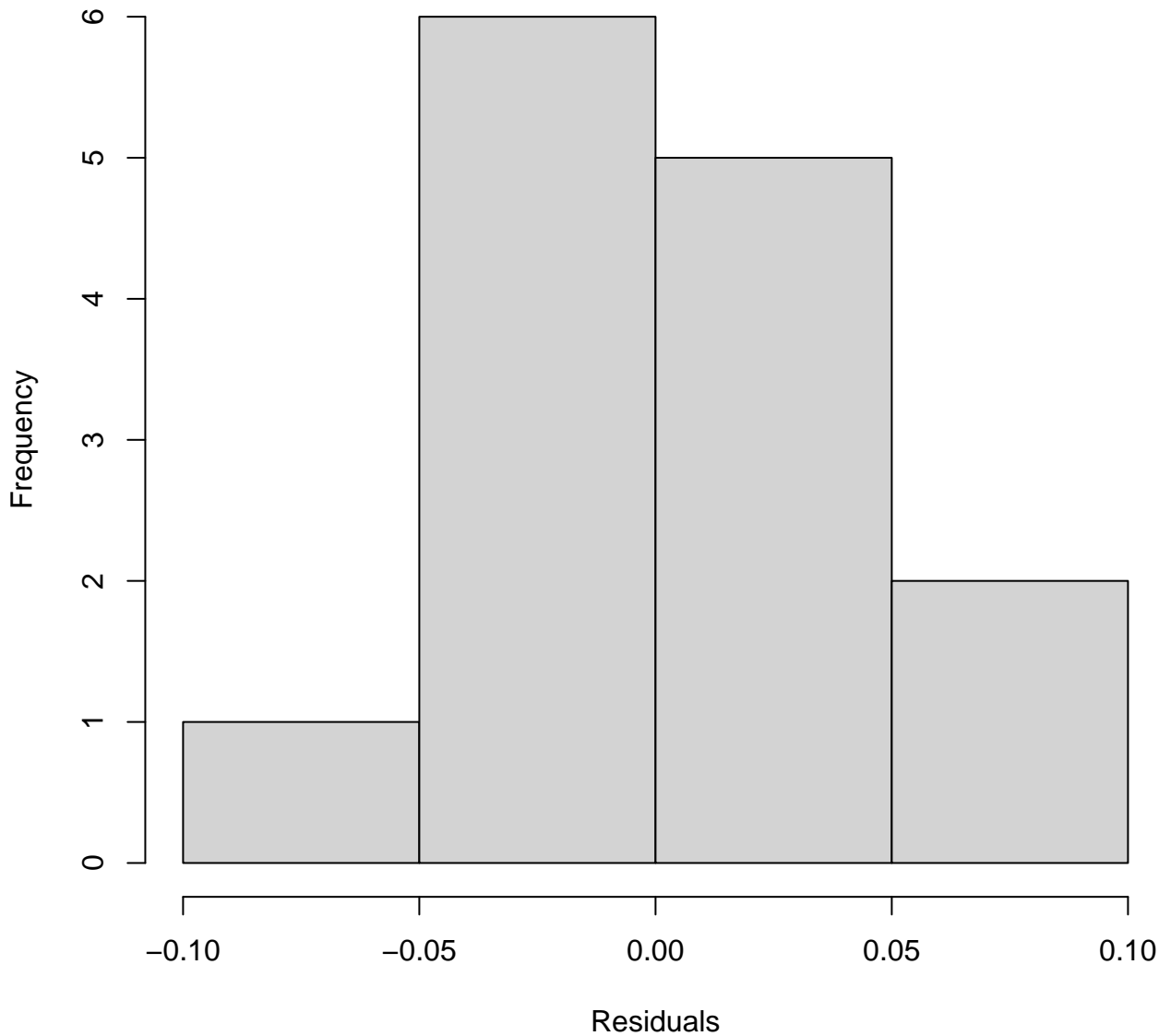


**Resids vs. linear pred.**

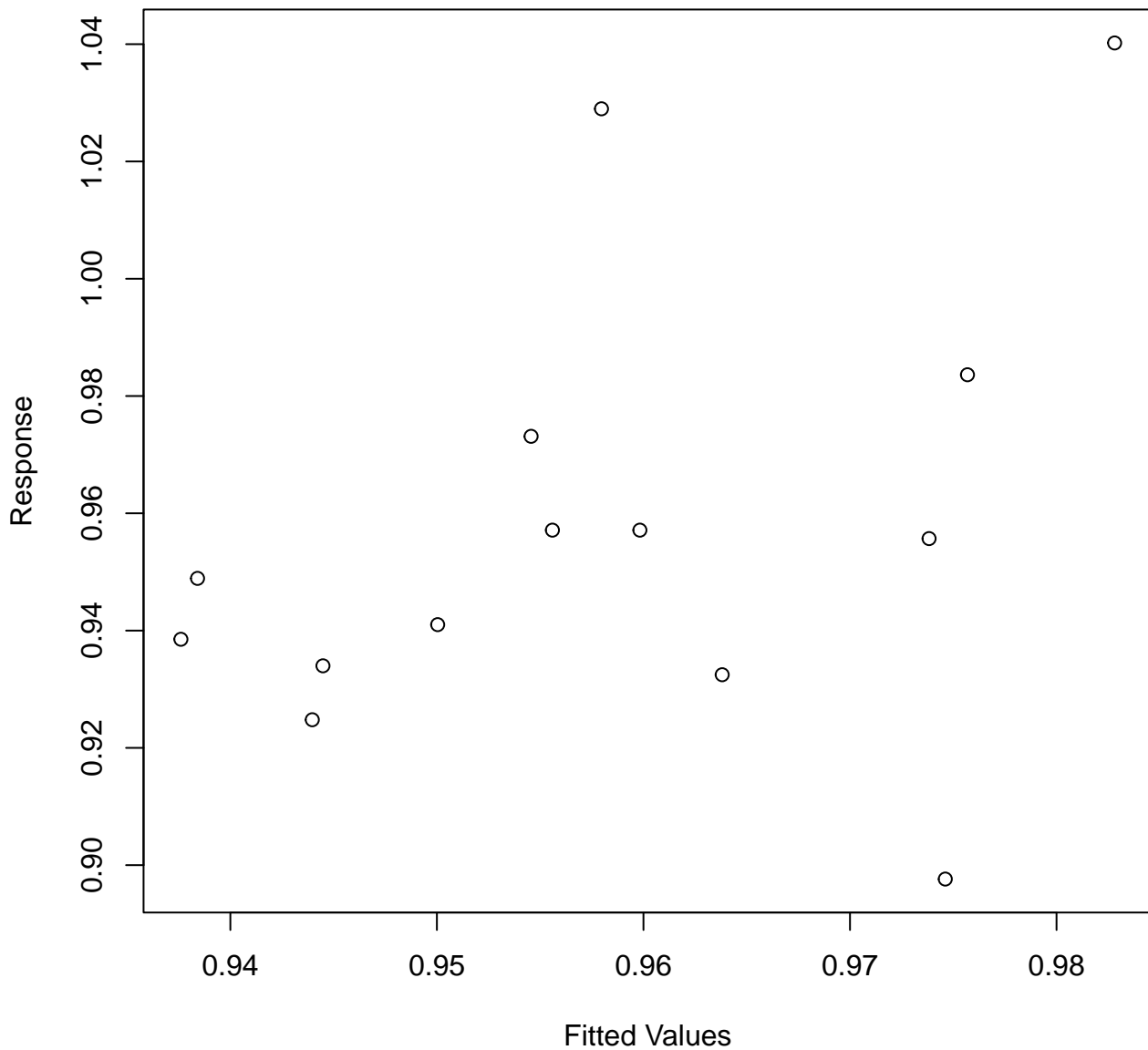




**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 13 iterations.  
 Gradient range [-6.049137e-06,7.161568e-07]  
 (score -27.27069 & scale 0.001514714).  
 Hessian positive definite, eigenvalue range [1.077795e-07,6.999999].  
 Model rank = 9 / 9

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00e+00	1.00e+00	0.88	0.21
s(cumul_bites_7_previous_days)	3.00e+00	1.00e+00	1.03	0.50
s(ID)	2.00e+00	6.46e-06	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)		1.15	[1.01, 3.14]	1.07	0.87	[0.32, 0.99]
s(cumul_bites_7_previous_days, k = 4)		1.15	[1.01, 3.14]	1.07	0.87	[0.32, 0.99]

Family: gaussian  
Link function: identity

Formula:

$\log_{10}(\text{value}) \sim s(\text{bites\_of\_yesterday}, k = 4) + s(\text{cumul\_bites\_7\_previous\_days},$   
 $k = 4) + s(\text{ID}, \text{bs} = "re", k = 2)$

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.9581	0.0104	92.11	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000e+00	1	0.617	0.449
s(cumul_bites_7_previous_days)	1.000e+00	1	1.817	0.205
s(ID)	6.463e-06	1	0.000	0.698

R-sq.(adj) = -0.0143 Deviance explained = 14.2%

-ML = -27.271 Scale est. = 0.0015147 n = 14

AICc [ 1 ] -42.09688

Bites in squirrel

Nb excluded (LOD) : 20  
Nb remaining: 0



IL.6 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

IL.8

Bites in cyno

Nb excluded (LOD) : 28

Nb remaining: 8

IL.8 ERROR : les contrastes ne peuvent être appliqués qu'aux facteurs ayant au moins deux niveaux

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

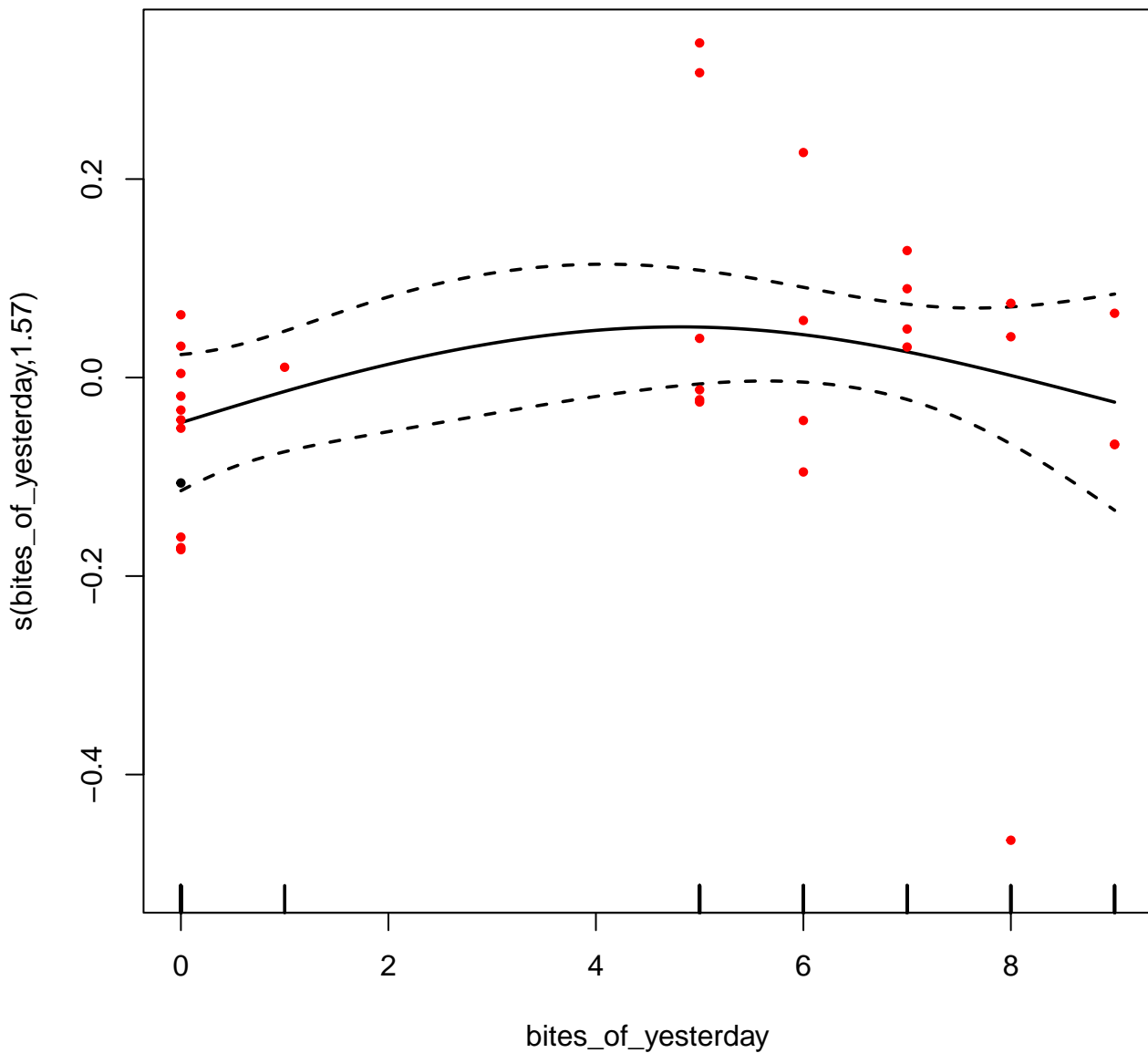
IL.8 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

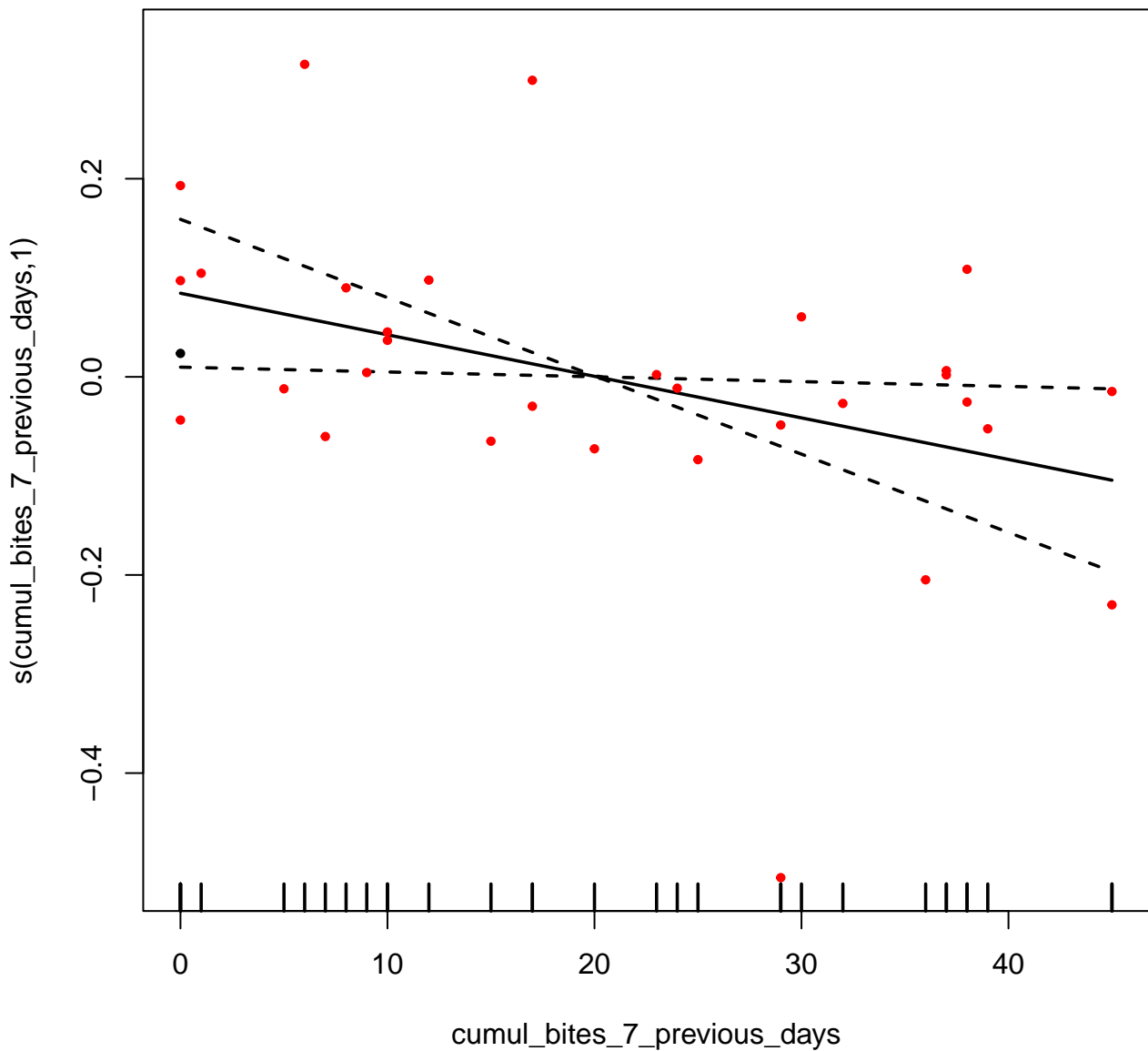


IL . RA

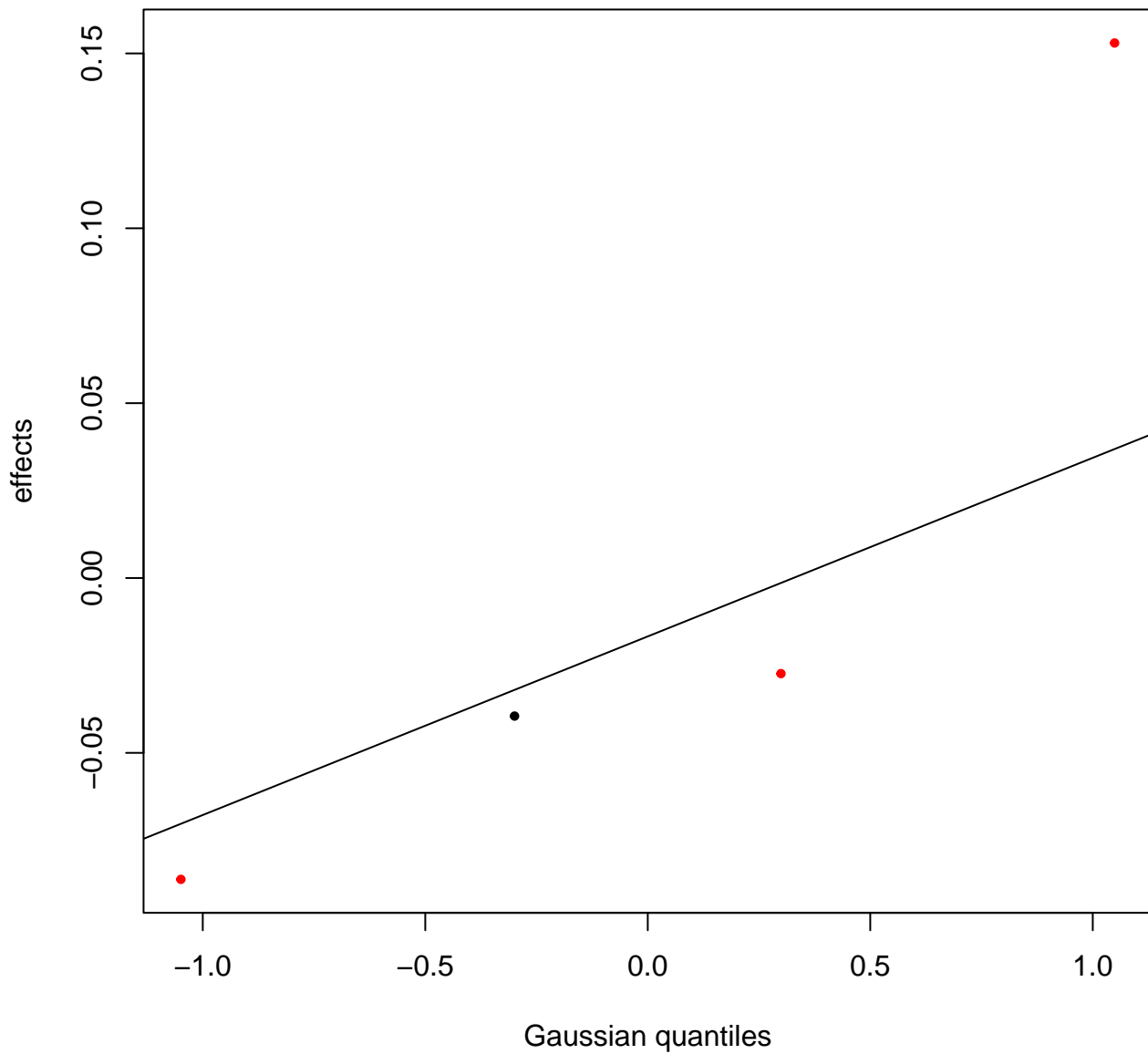
Bites in cyno

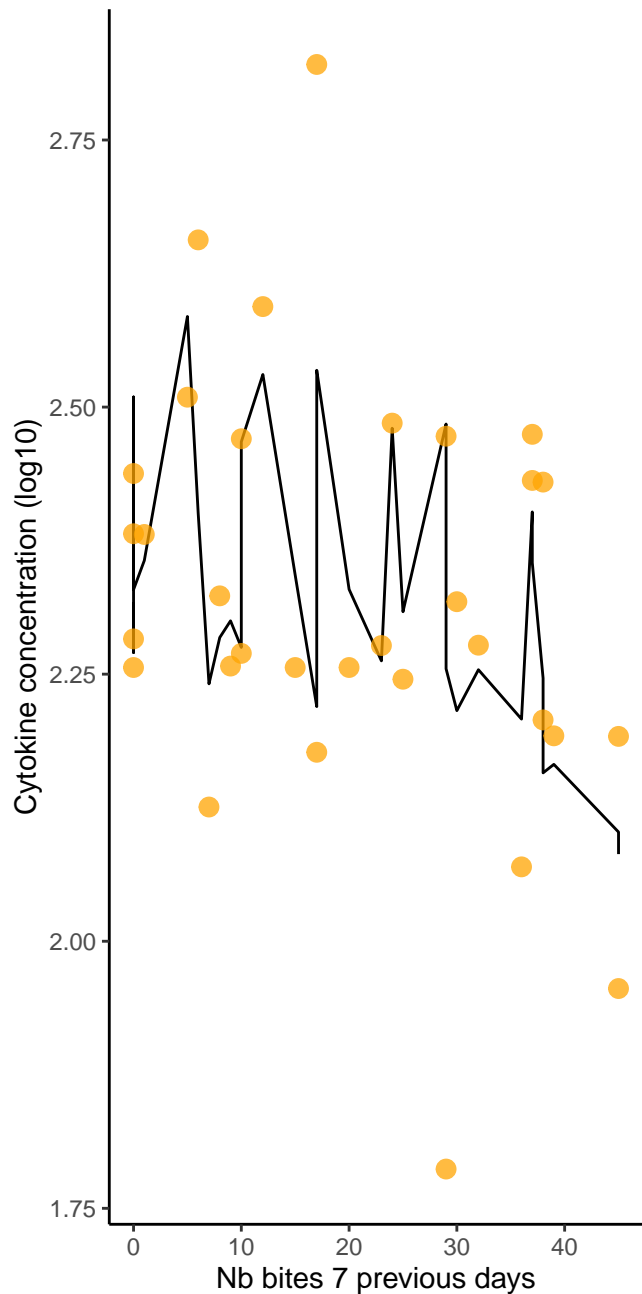
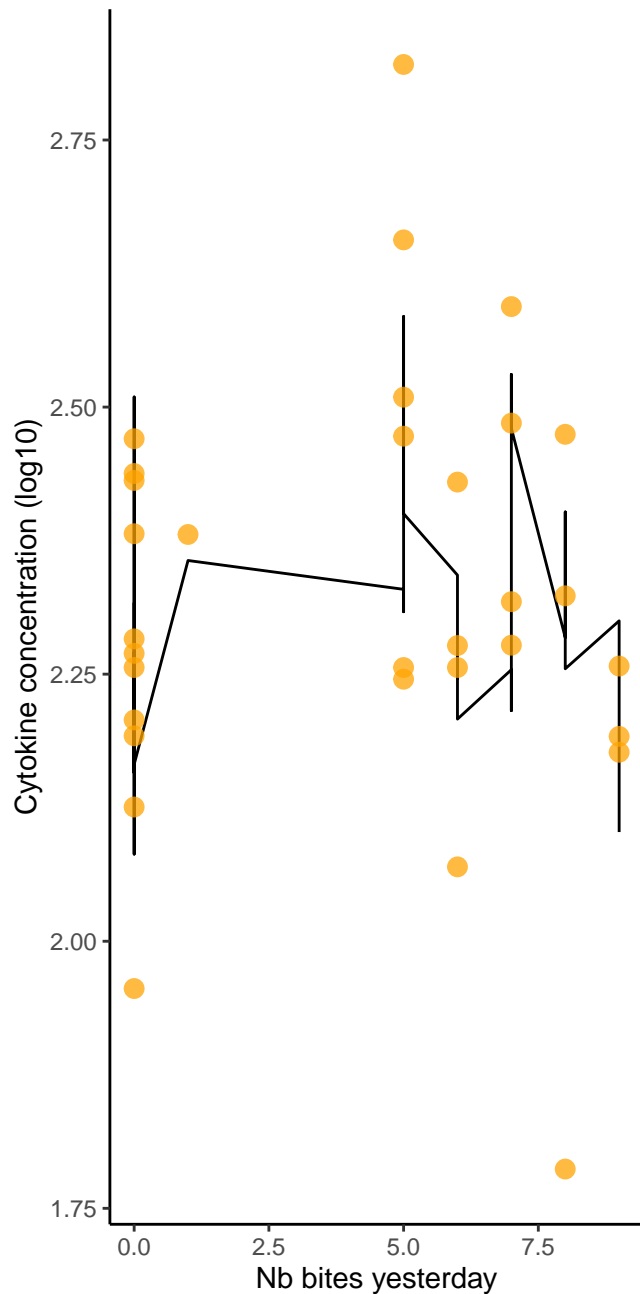
Nb excluded (LOD) : 4  
Nb remaining: 32

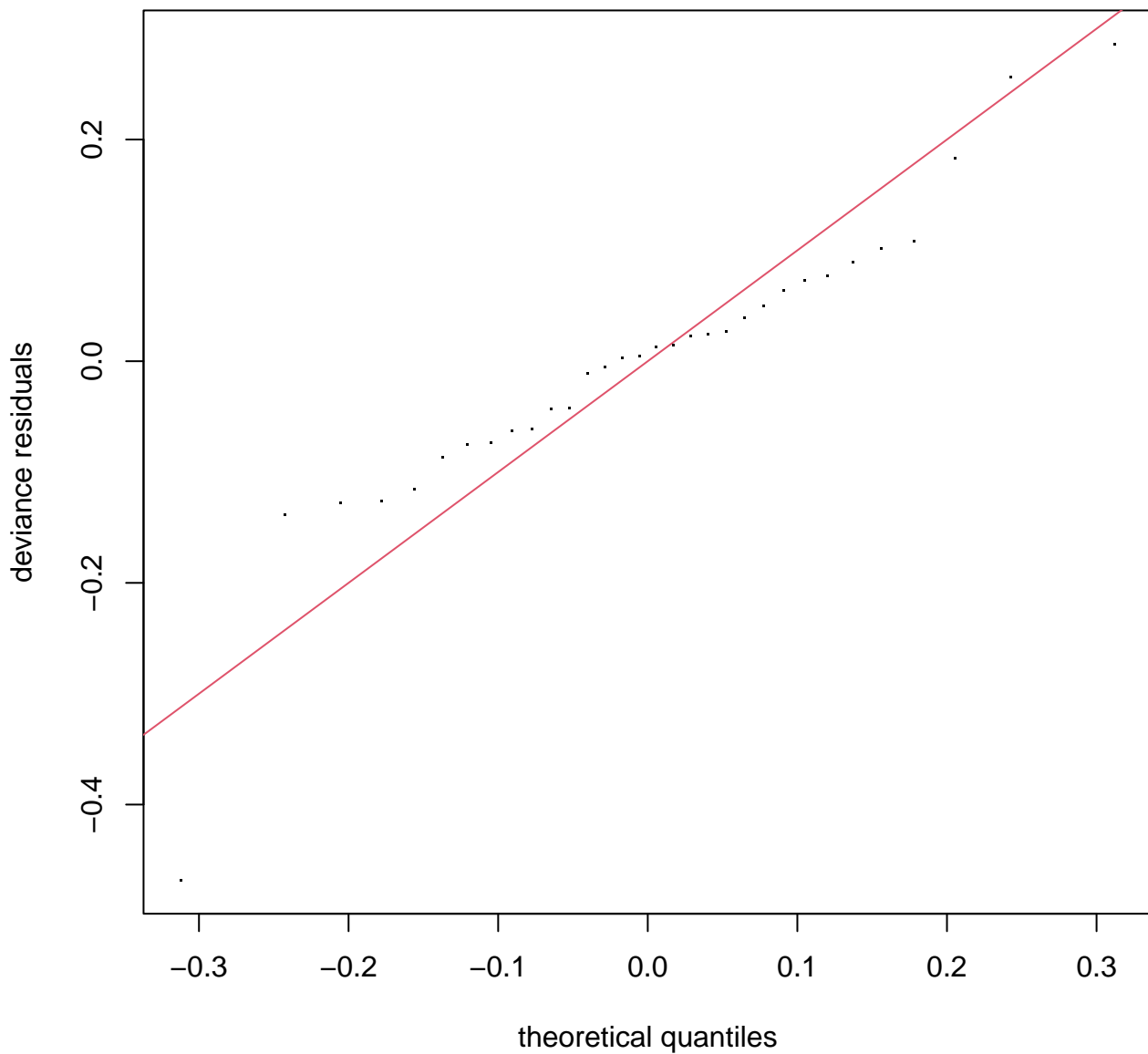




**s(ID,2.38)**

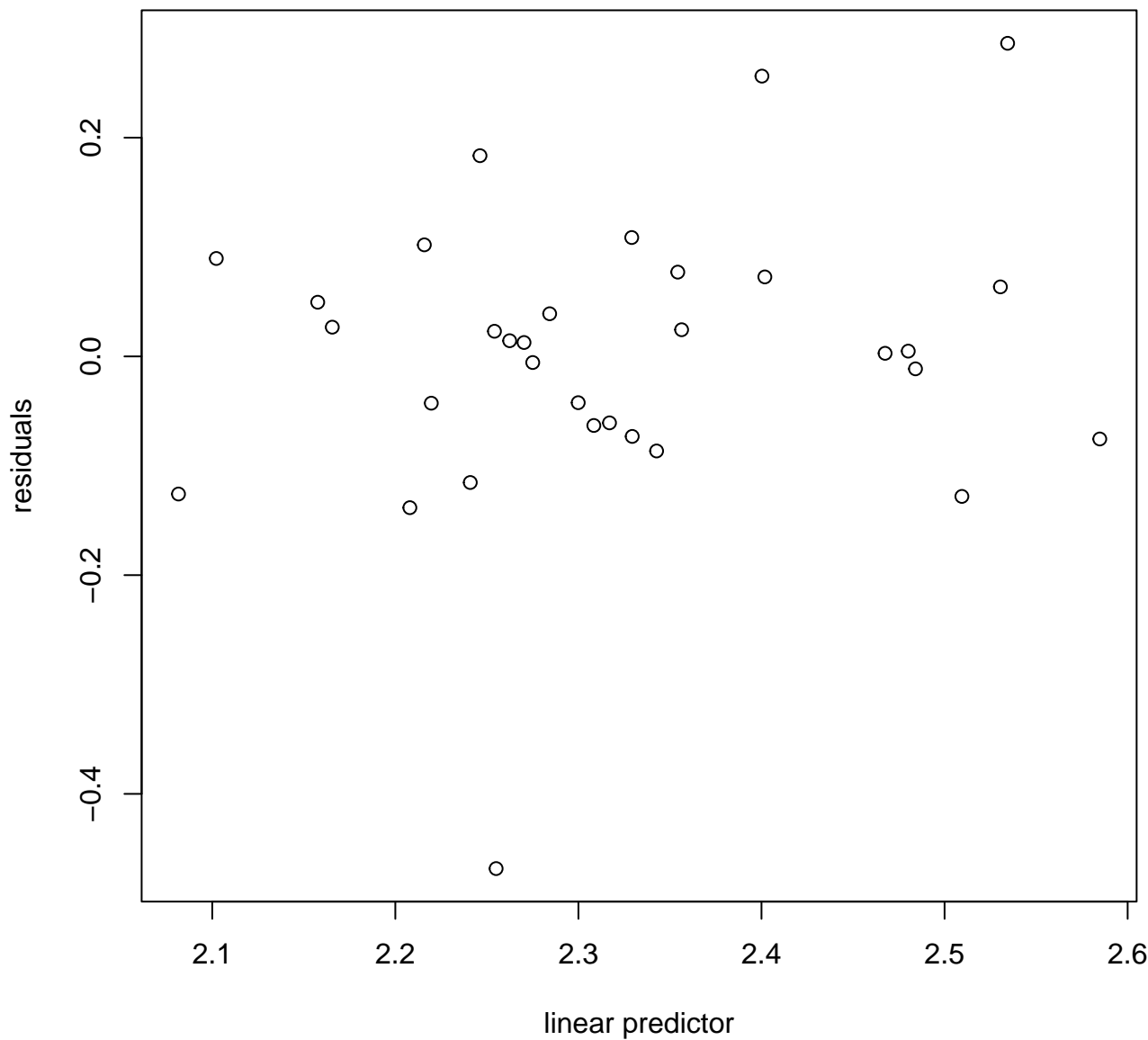




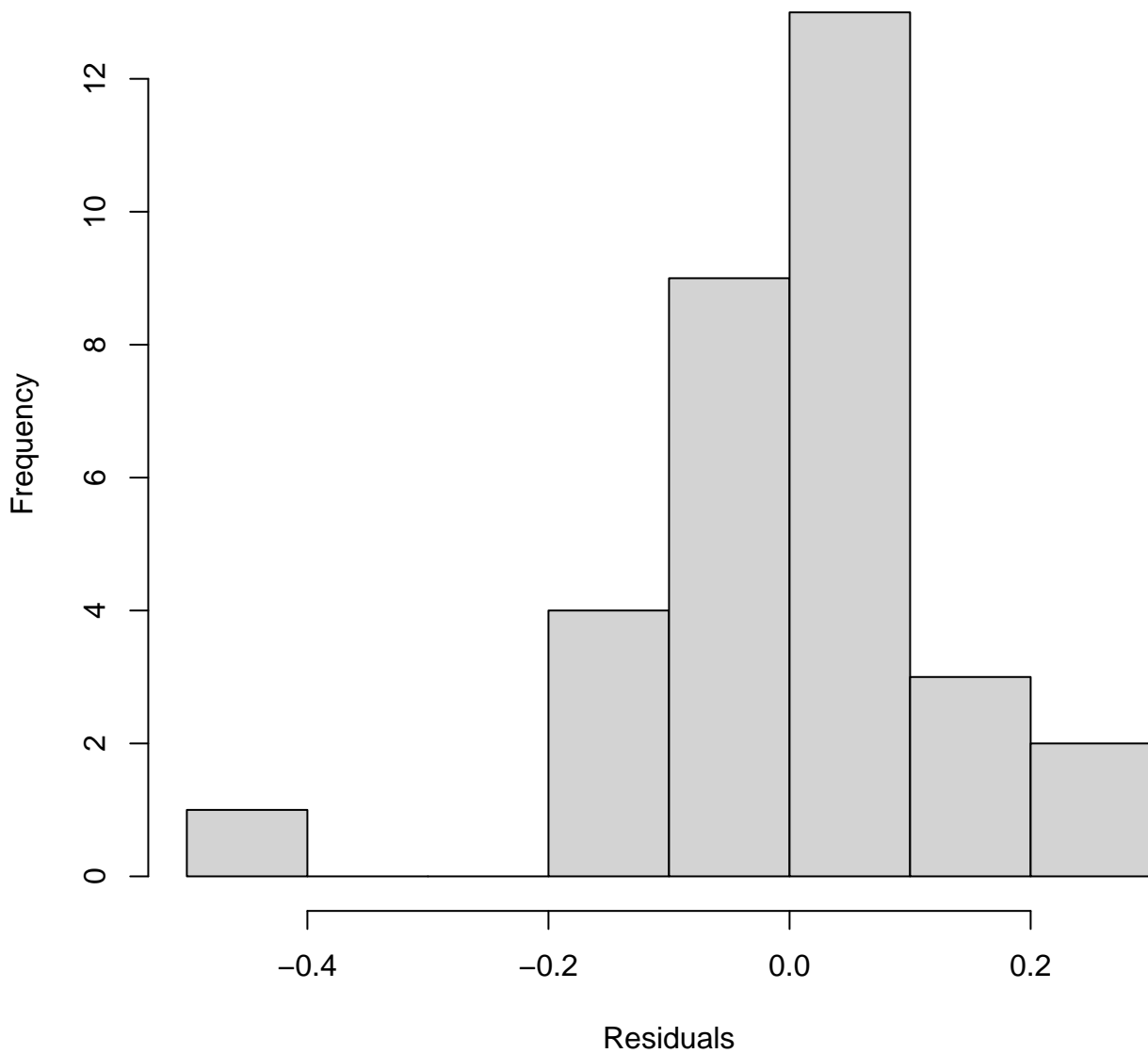




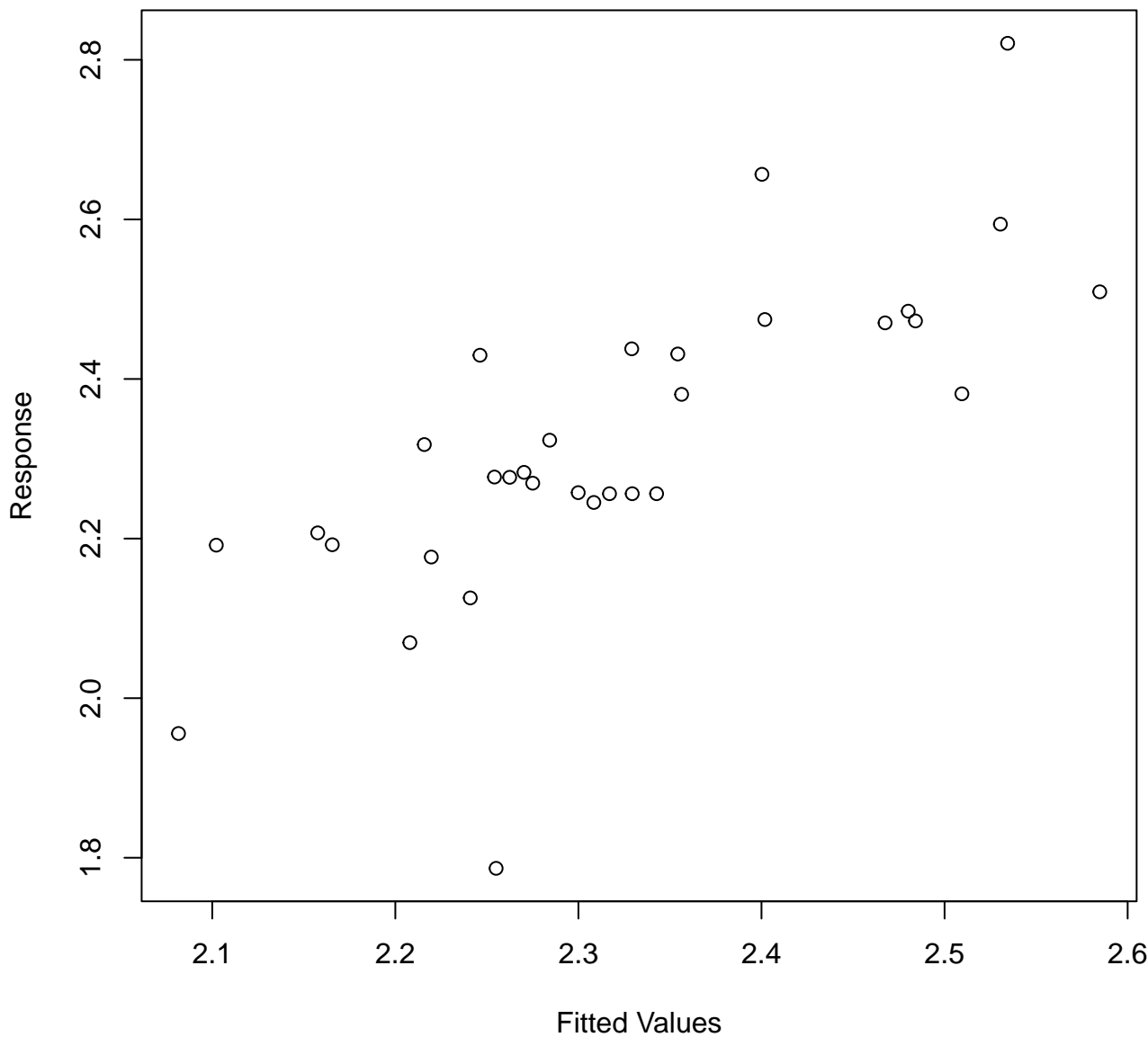
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 12 iterations.  
 Gradient range [-9.643338e-06,6.772071e-07]  
 (score -12.81548 & scale 0.02099282).  
 Hessian positive definite, eigenvalue range [9.643188e-06,16.19811].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.57	1.06	0.57
s(cumul_bites_7_previous_days)	3.00	1.00	1.27	0.91
s(ID)	4.00	2.38	NA	NA

```
# Check for Multicollinearity
```

```
Low Correlation
```

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	7.75	[4.70, 13.32]	2.78	0.13	[0.08, 0.21]	

```
Moderate Correlation
```

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(cumul_bites_7_previous_days, k = 4)	2.68	[1.81, 4.48]	1.64	0.37	[0.22, 0.55]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	2.31749	0.05862	39.53	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.569	1.853	2.070	0.21776
s(cumul_bites_7_previous_days)	1.000	1.000	5.118	0.03227 *
s(ID)	2.377	3.000	5.536	0.00129 **

---

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

R-sq.(adj) = 0.471 Deviance explained = 55.5%  
-ML = -12.815 Scale est. = 0.020993 n = 32

AICc [ 1 ] -18.1934

Bites in squirrel



Nb excluded (LOD) : 20

Nb remaining: 0

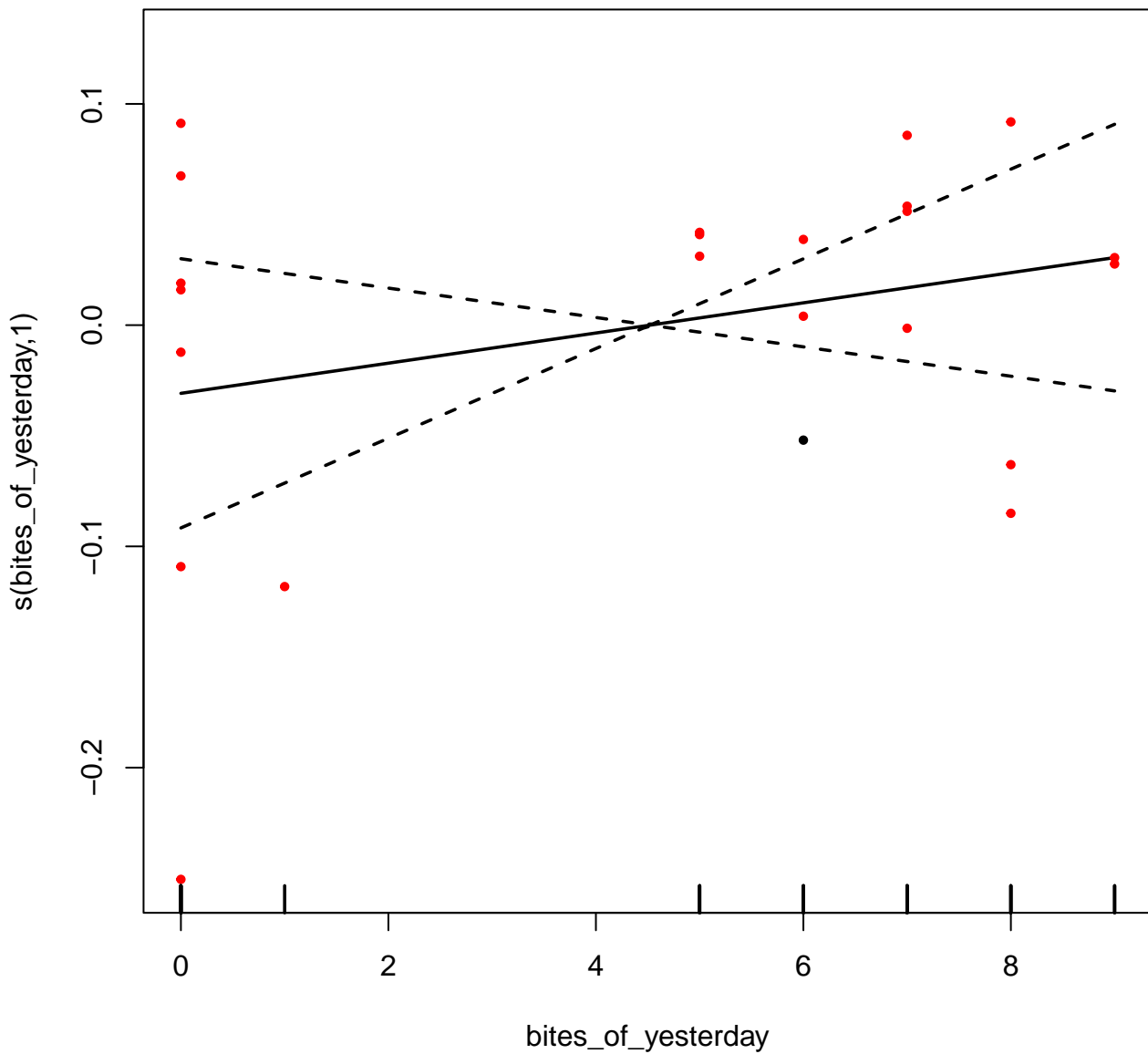
IL.RA ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

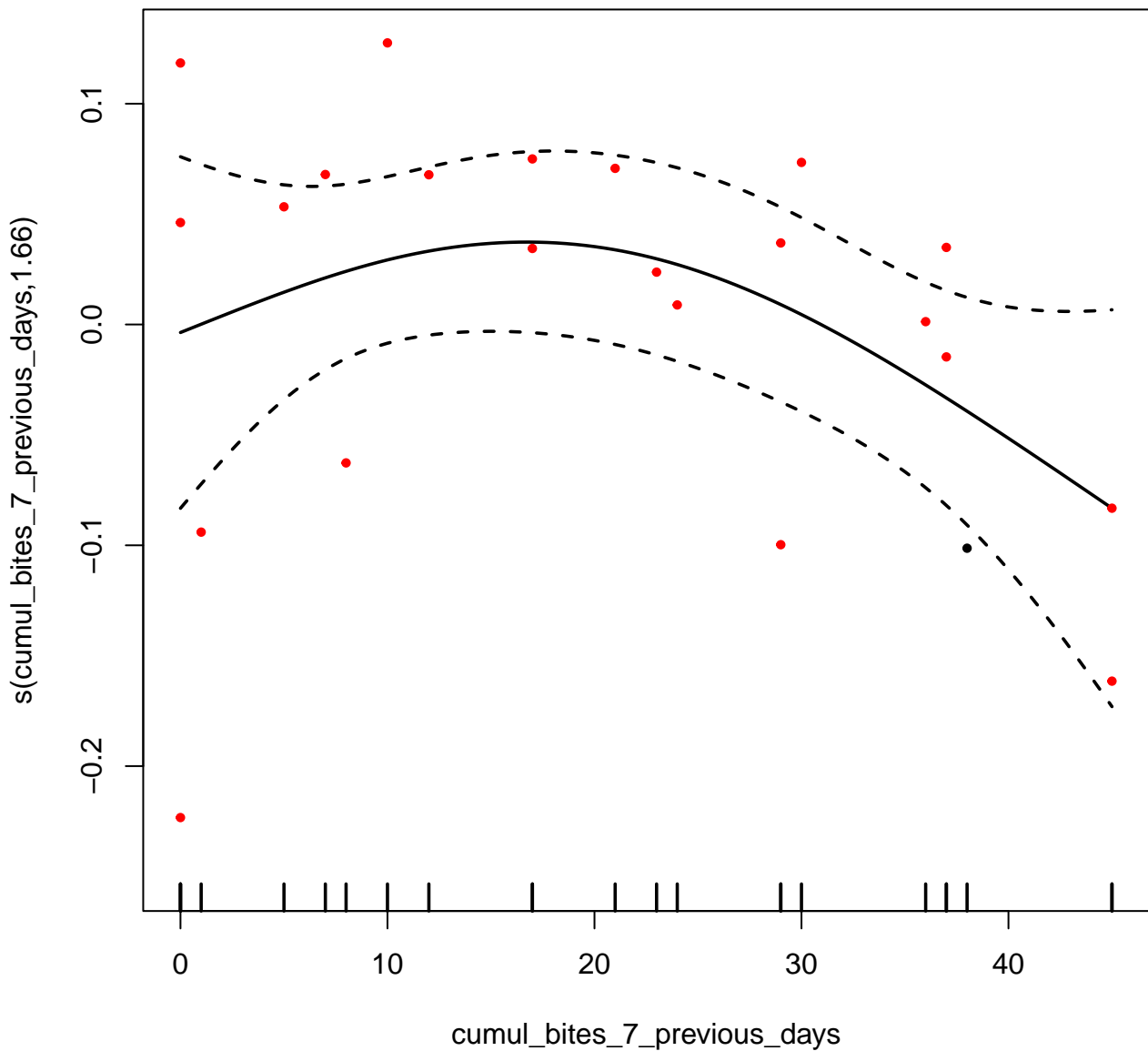
IP.10

Bites in cyno

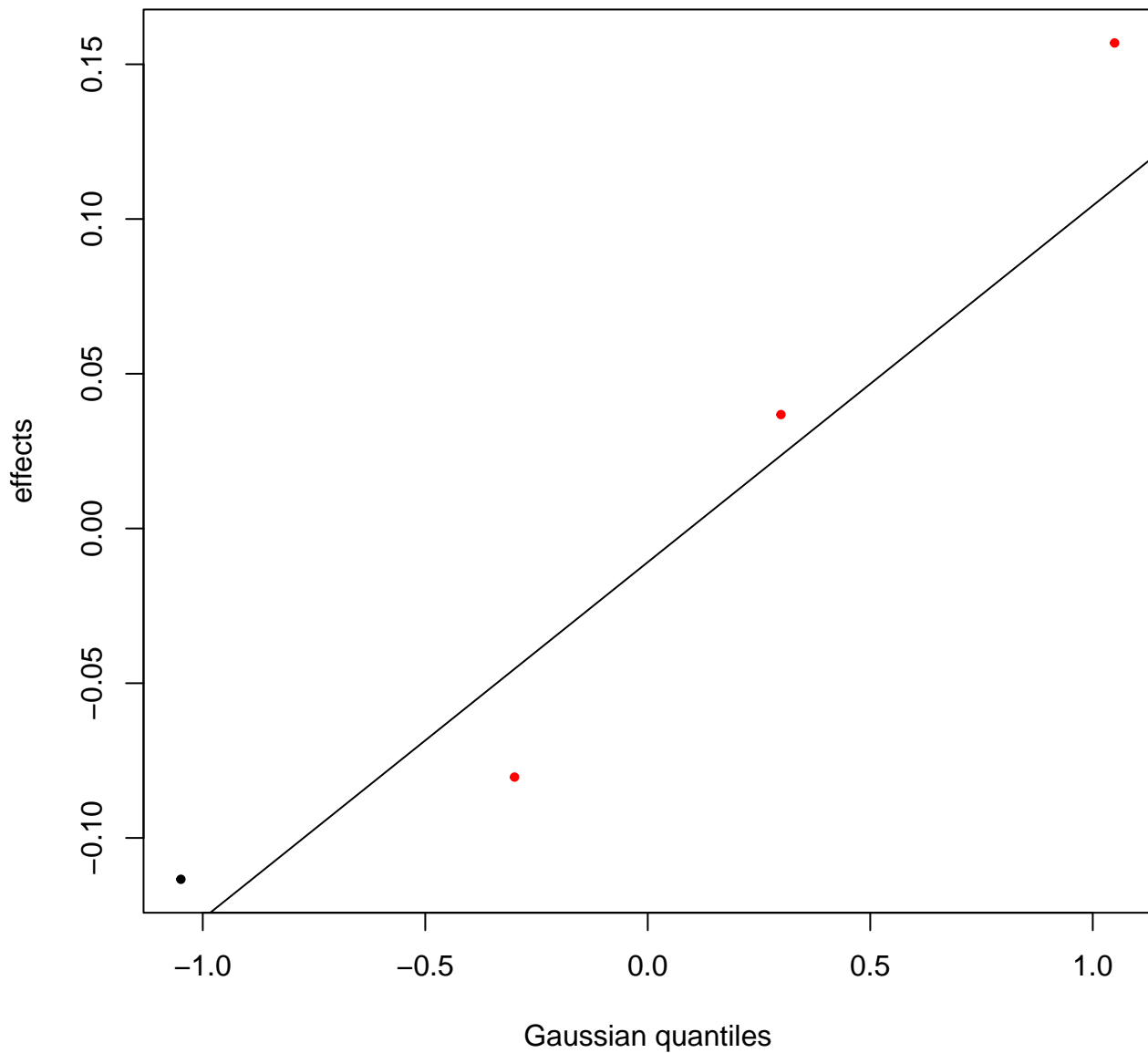
Nb excluded (LOD) : 13

Nb remaining: 23

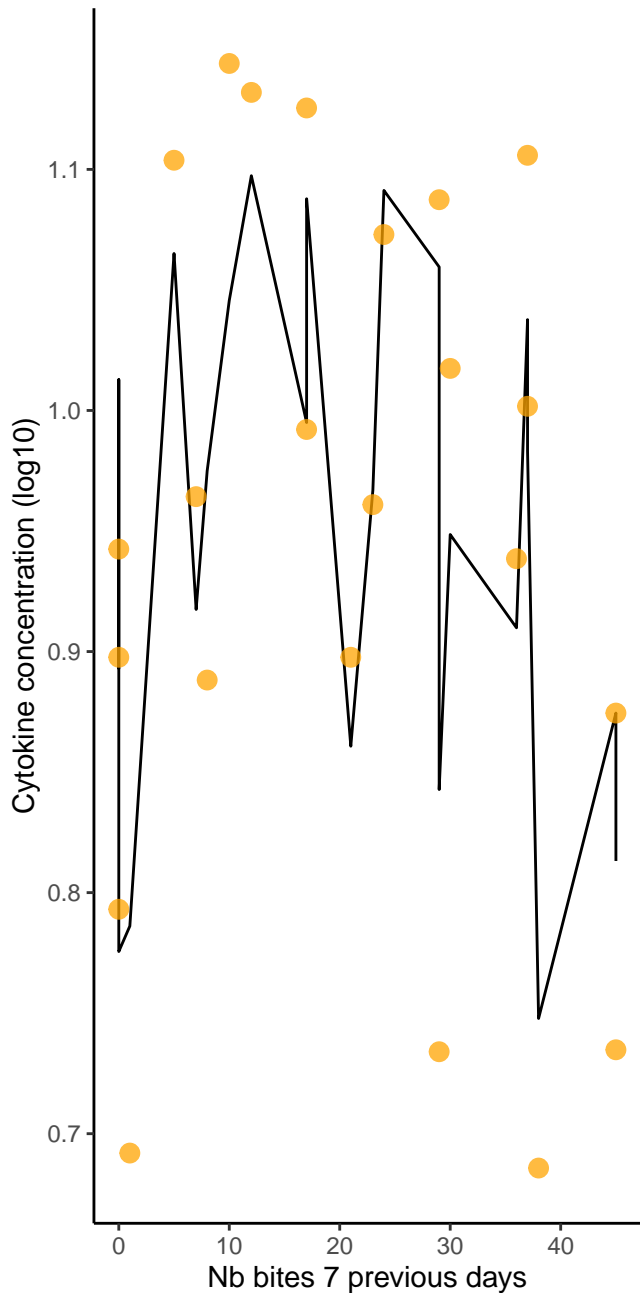
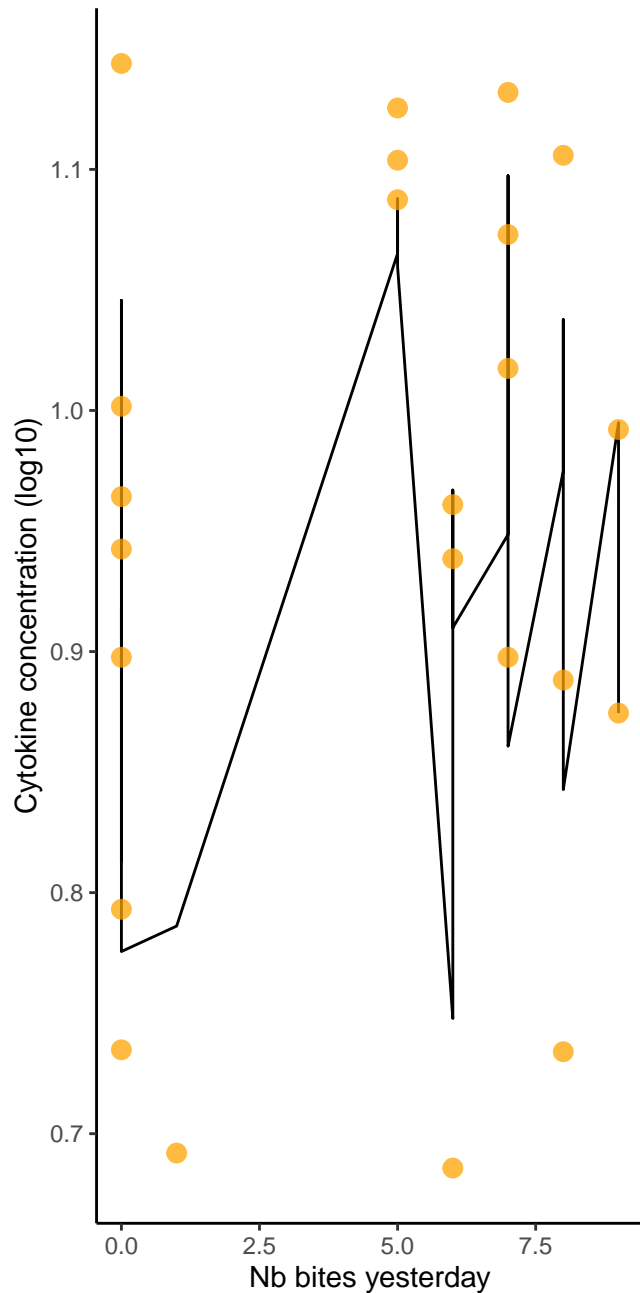


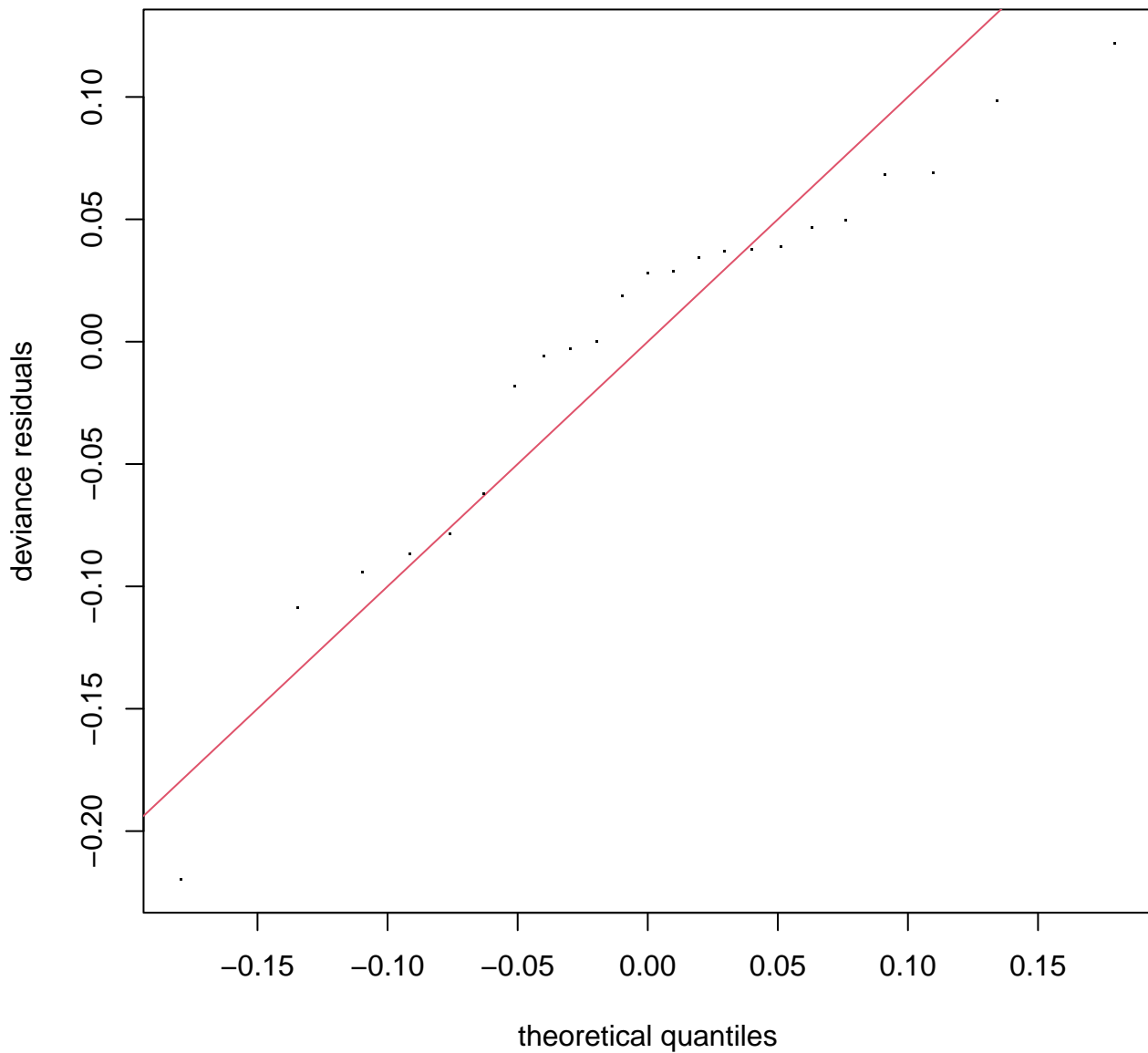


**s(ID,2.51)**

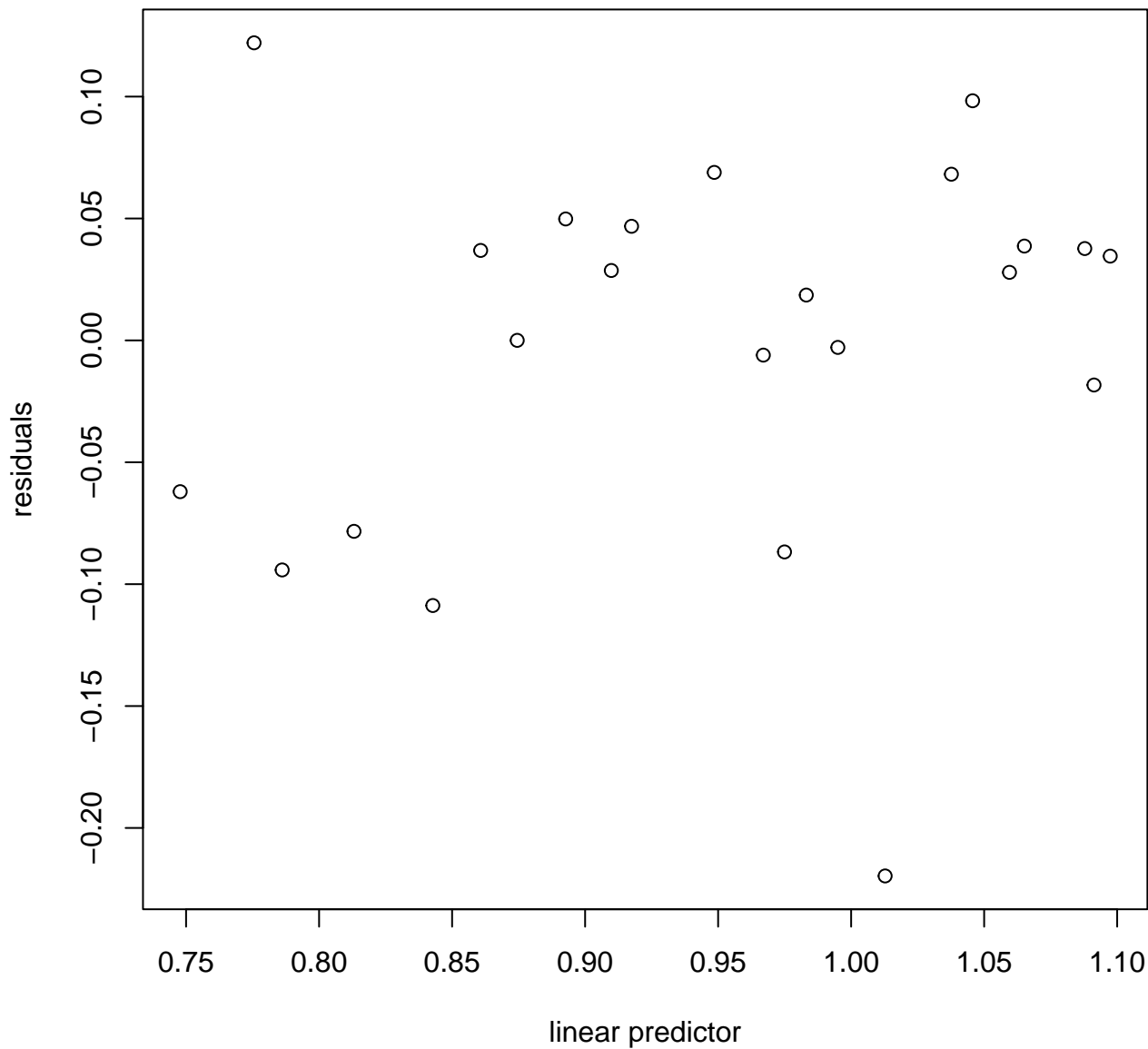




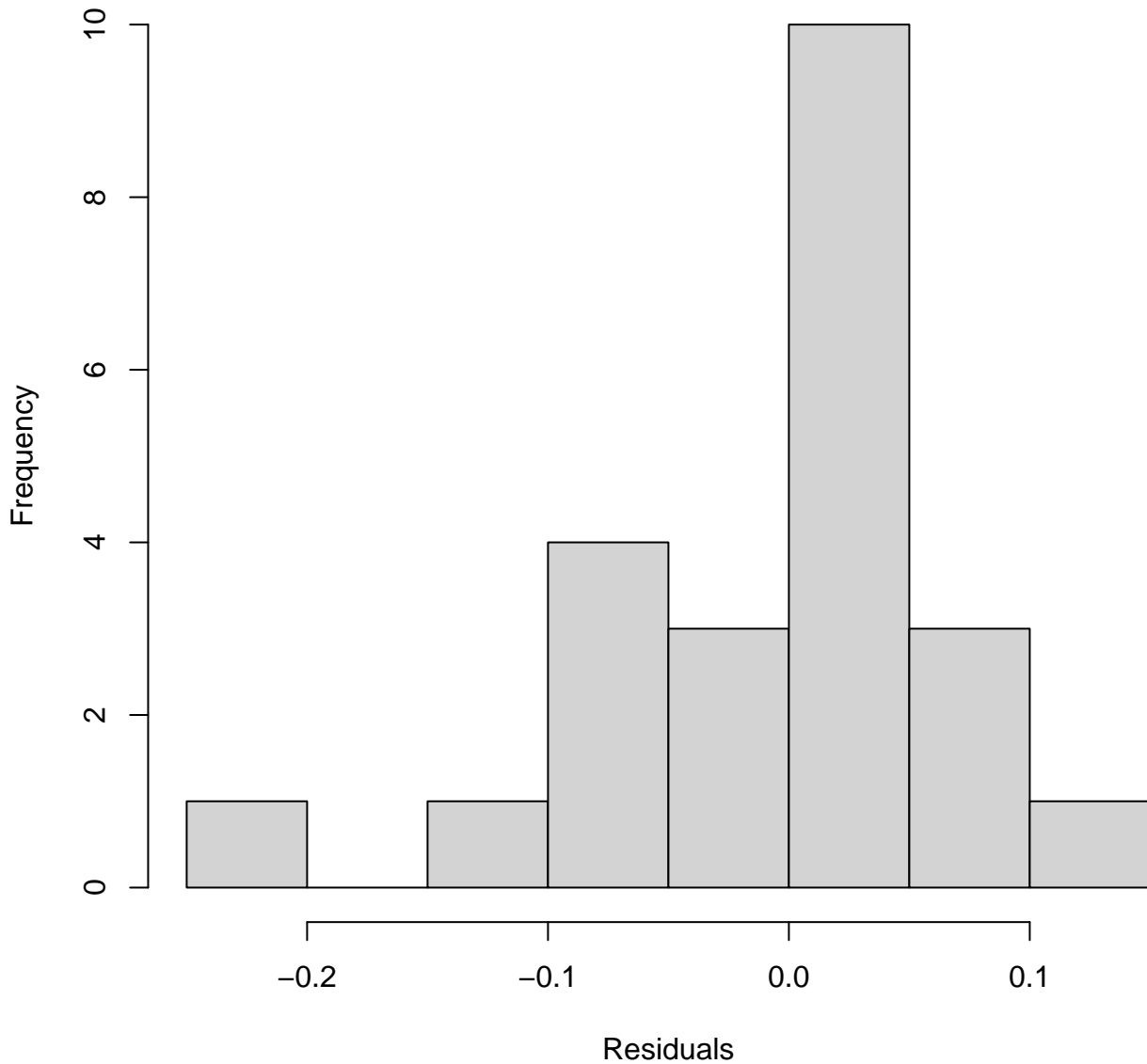




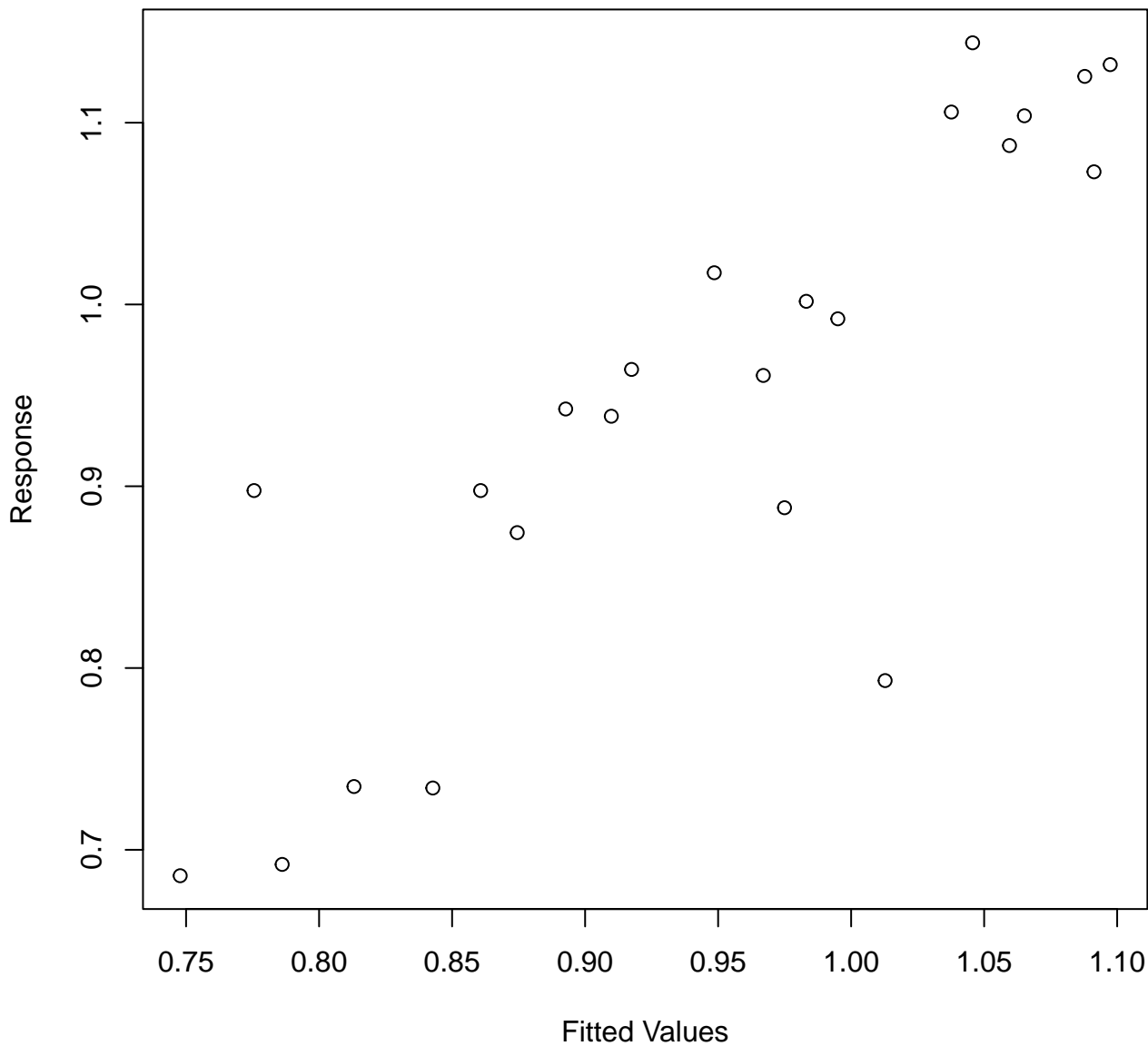
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 11 iterations.  
 Gradient range [-5.207316e-06,4.428552e-07]  
 (score -18.18234 & scale 0.007897933).  
 Hessian positive definite, eigenvalue range [5.207272e-06,11.81994].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.00	1.26	0.86
s(cumul_bites_7_previous_days)	3.00	1.66	1.53	1.00
s(ID)	4.00	2.51	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.48	[1.14, 2.64]	1.21	0.68	[0.38, 0.88]	
s(cumul_bites_7_previous_days, k = 4)	1.48	[1.14, 2.64]	1.21	0.68	[0.38, 0.88]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	0.89035	0.06511	13.68	1.53e-10 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1.000	1.027	0.325105
s(cumul_bites_7_previous_days)	1.661	2.037	2.149	0.152398
s(ID)	2.512	3.000	9.061	0.000322 ***

---

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

R-sq.(adj) = 0.624 Deviance explained = 71.2%  
-ML = -18.182 Scale est. = 0.0078979 n = 23



AICc [ 1 ] -27.41519

Bites in squirrel

Nb excluded (LOD) : 20

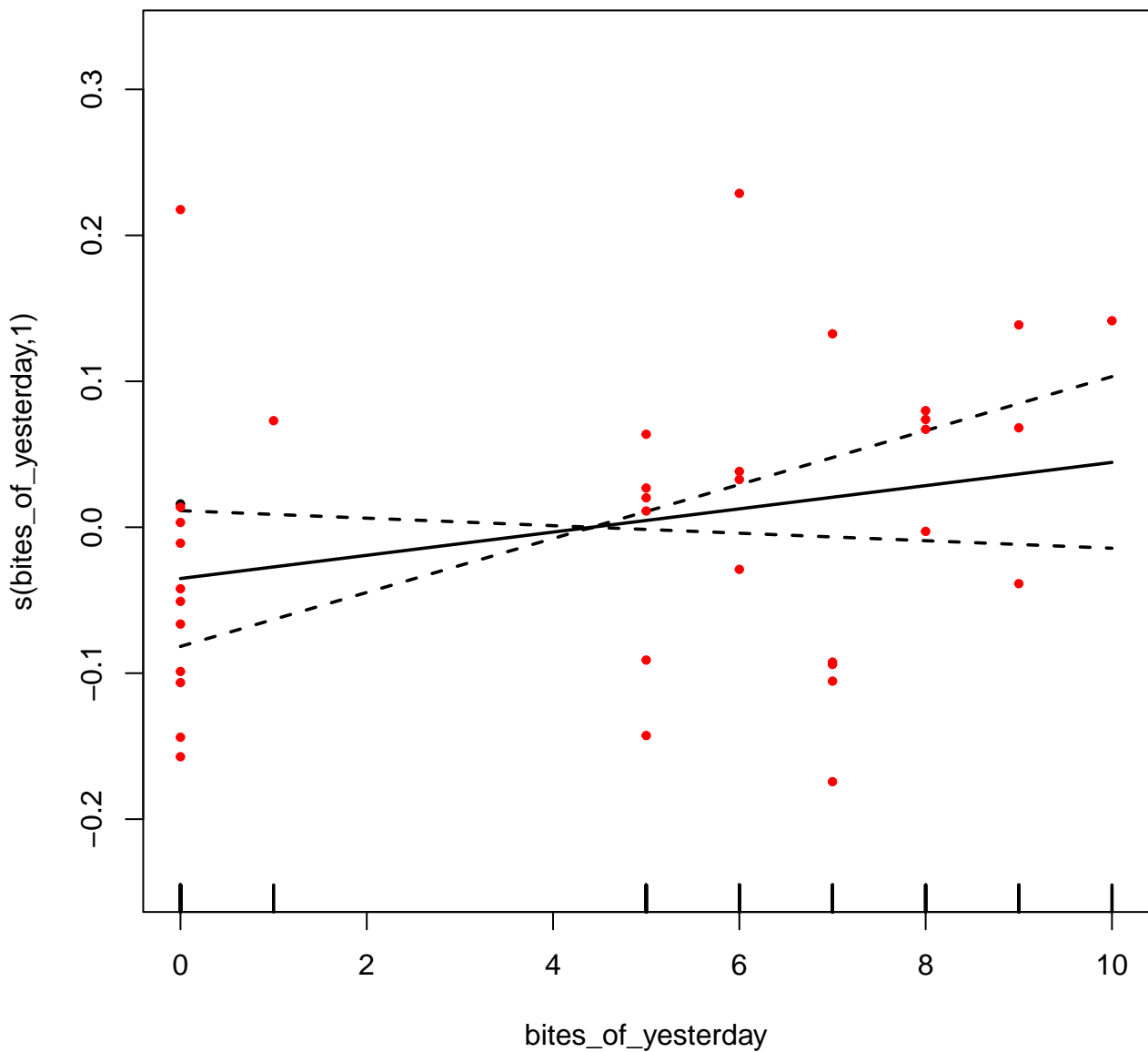
Nb remaining: 0

IP.10 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

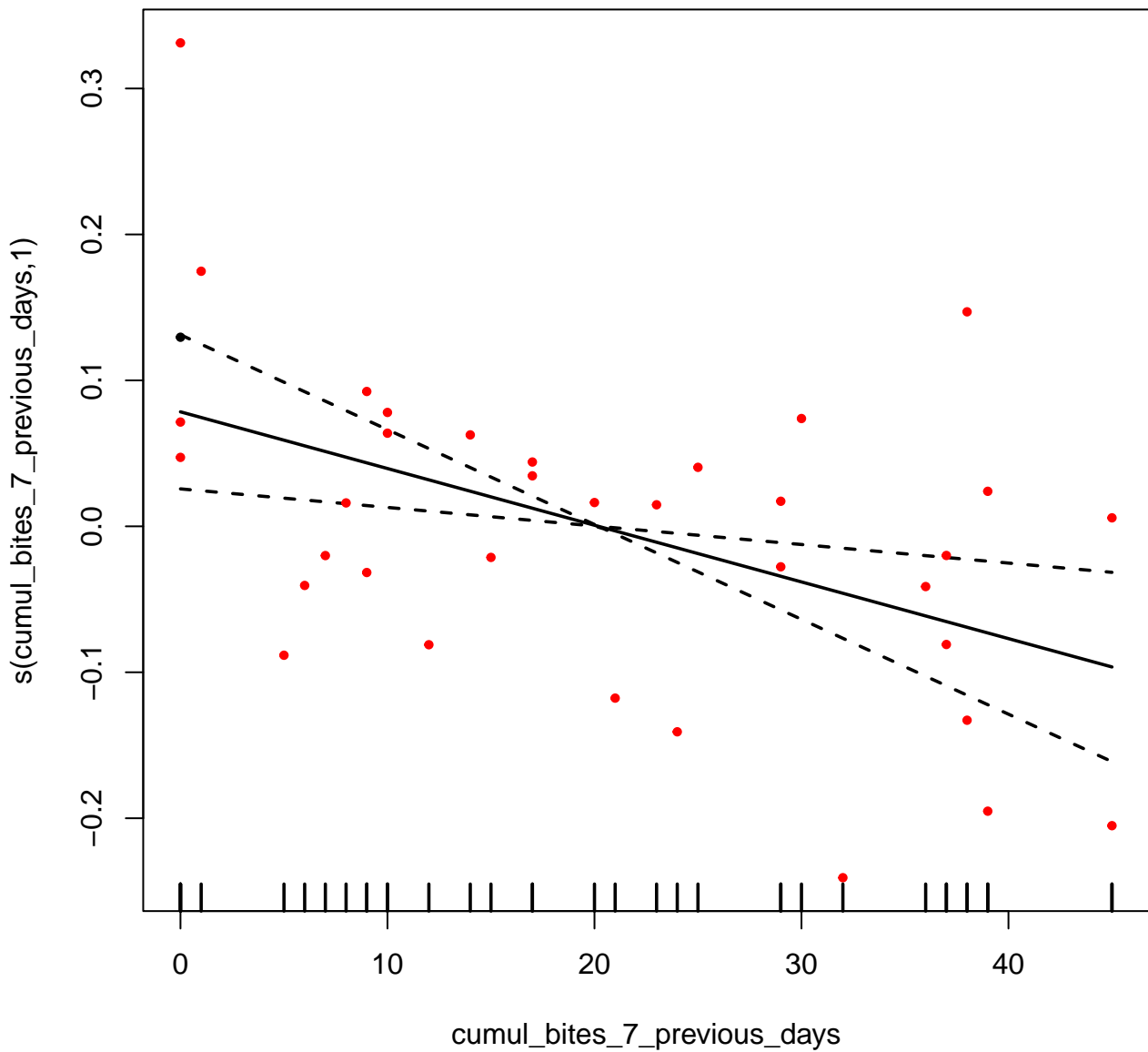
MCP . 1

Bites in cyno

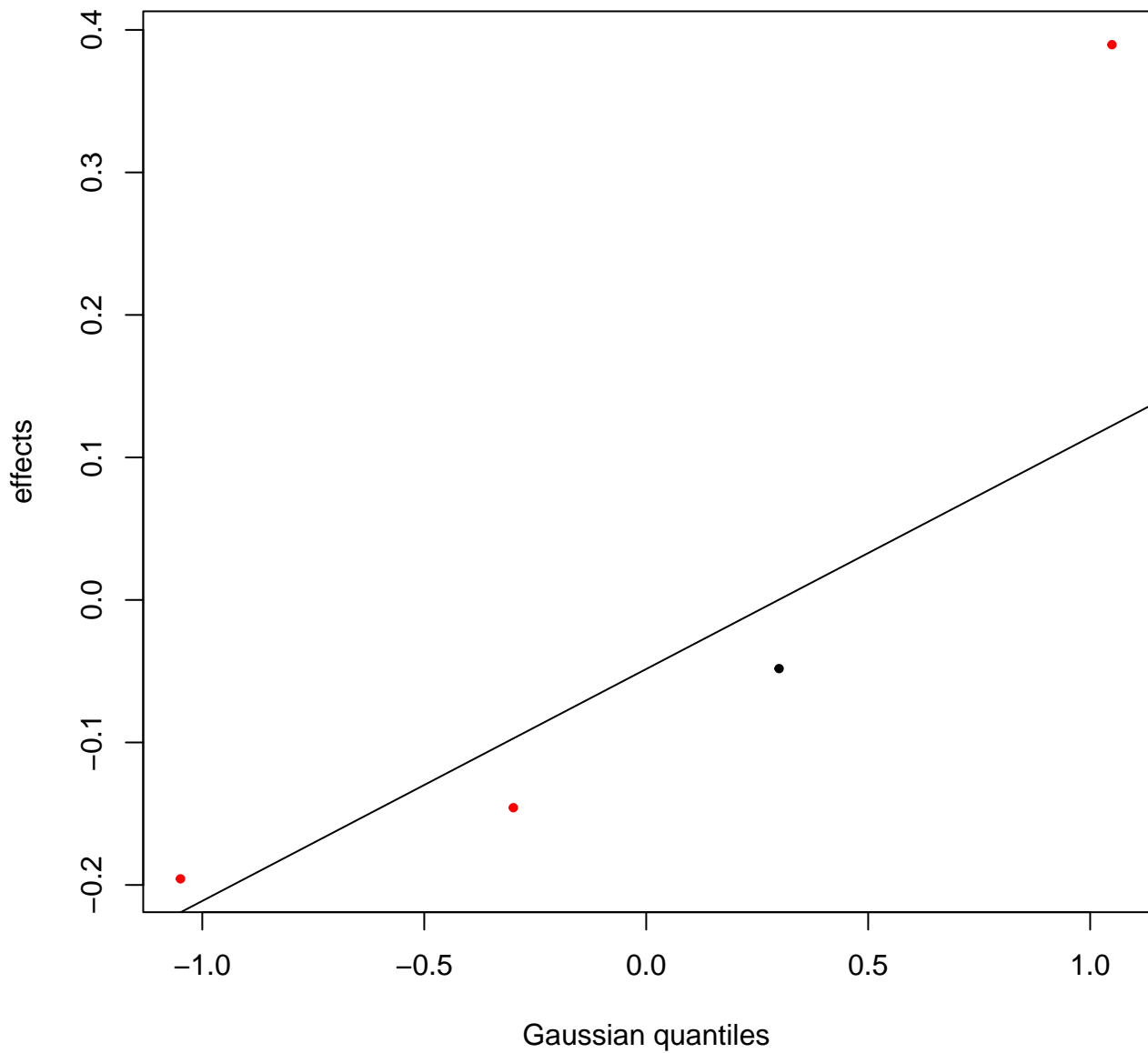
Nb excluded (LOD) : 0  
Nb remaining: 36

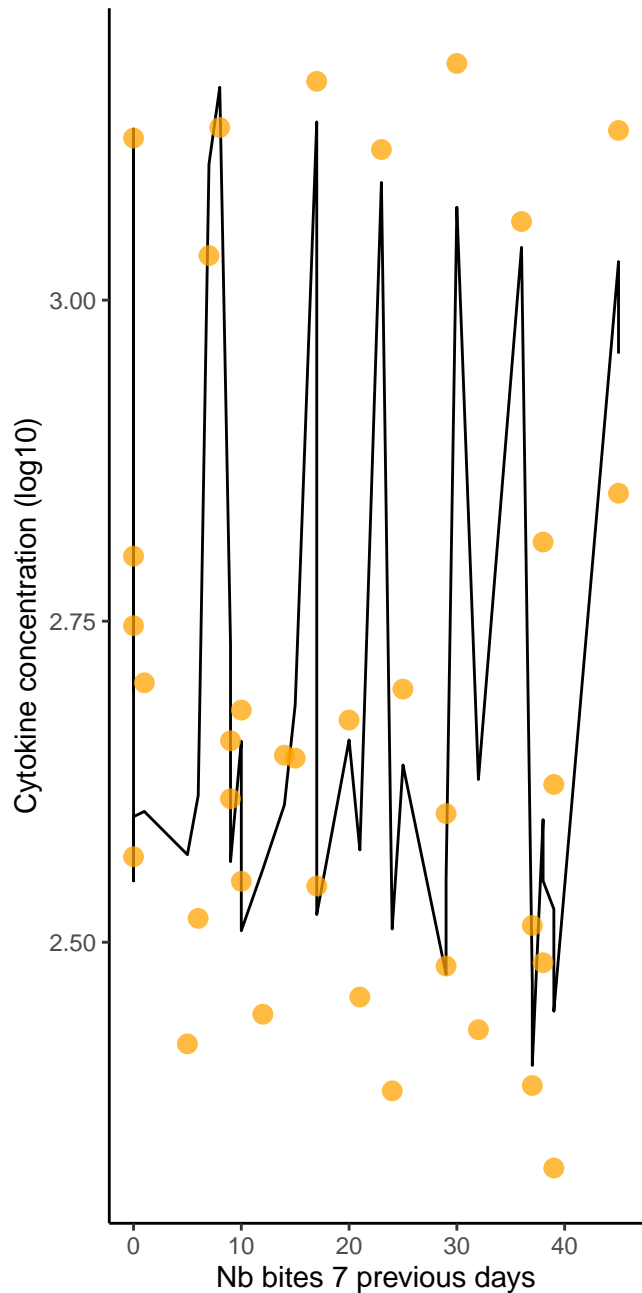
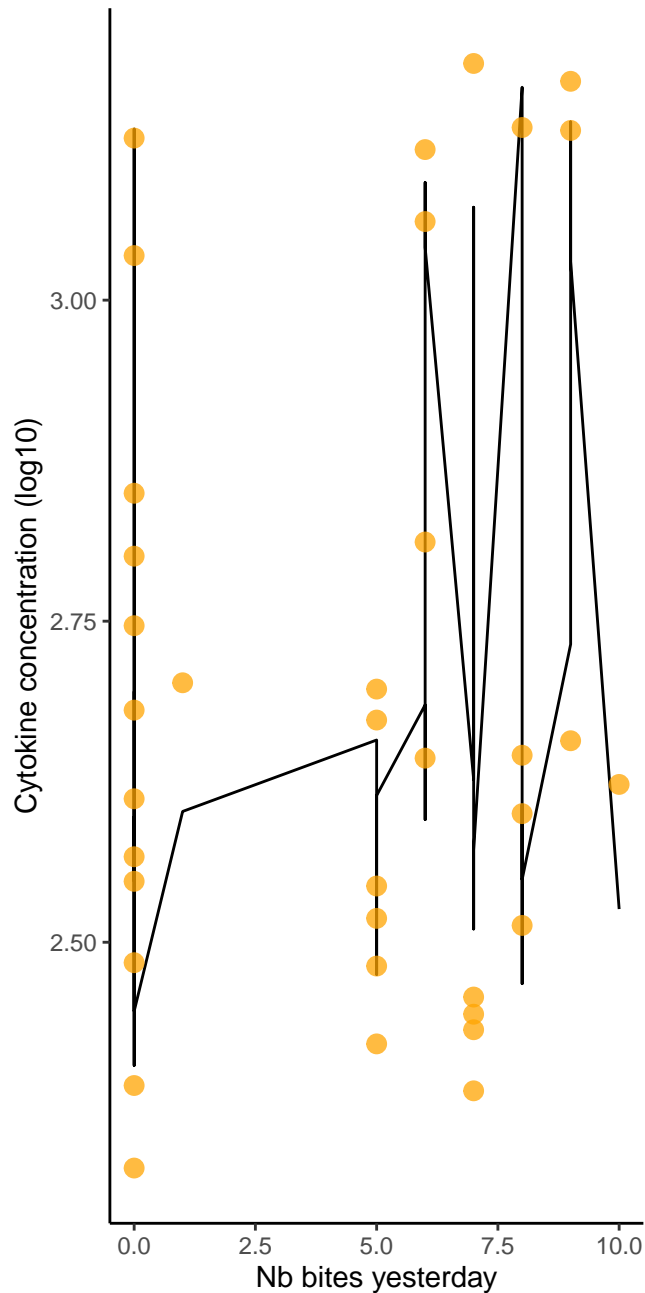


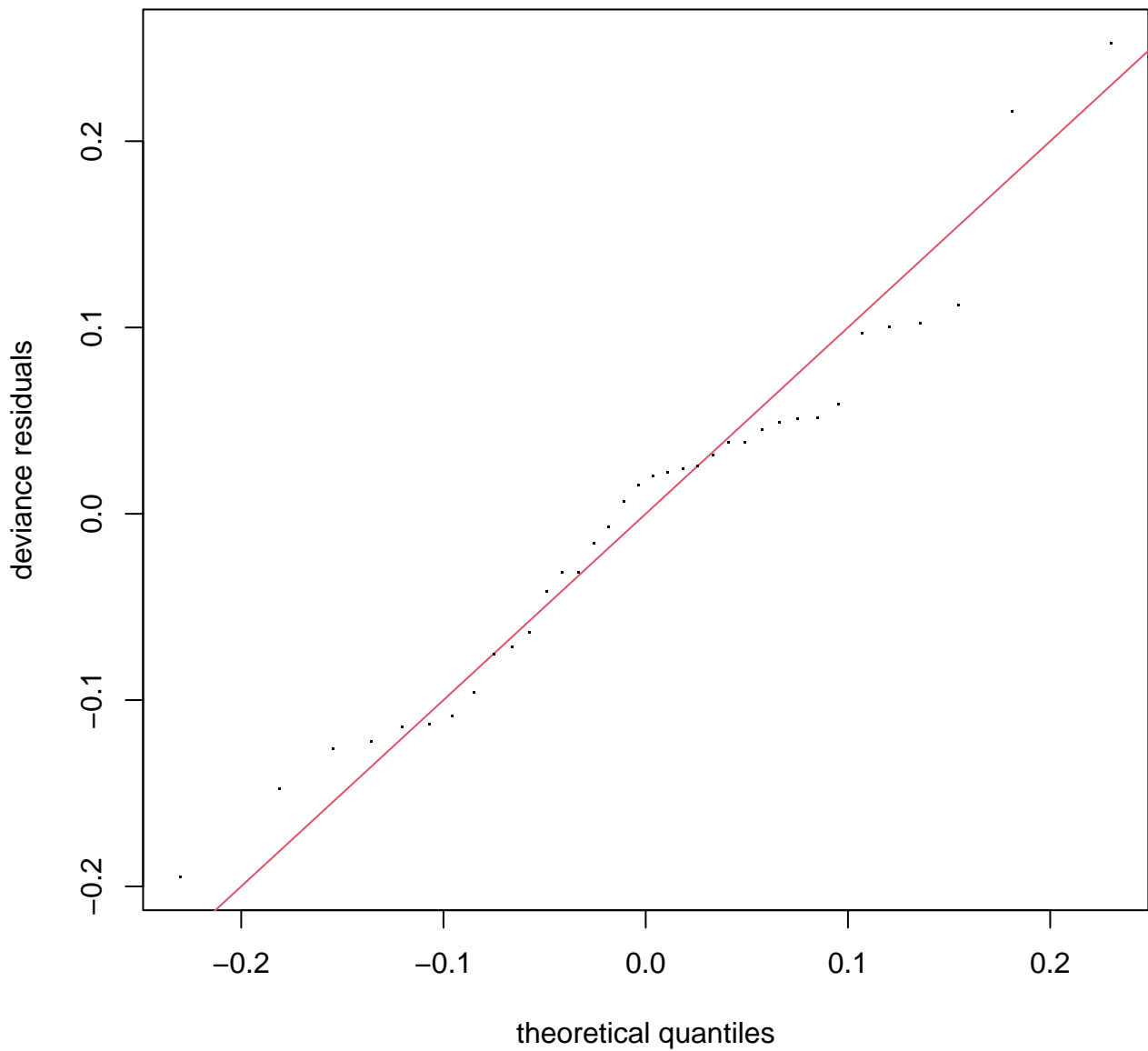




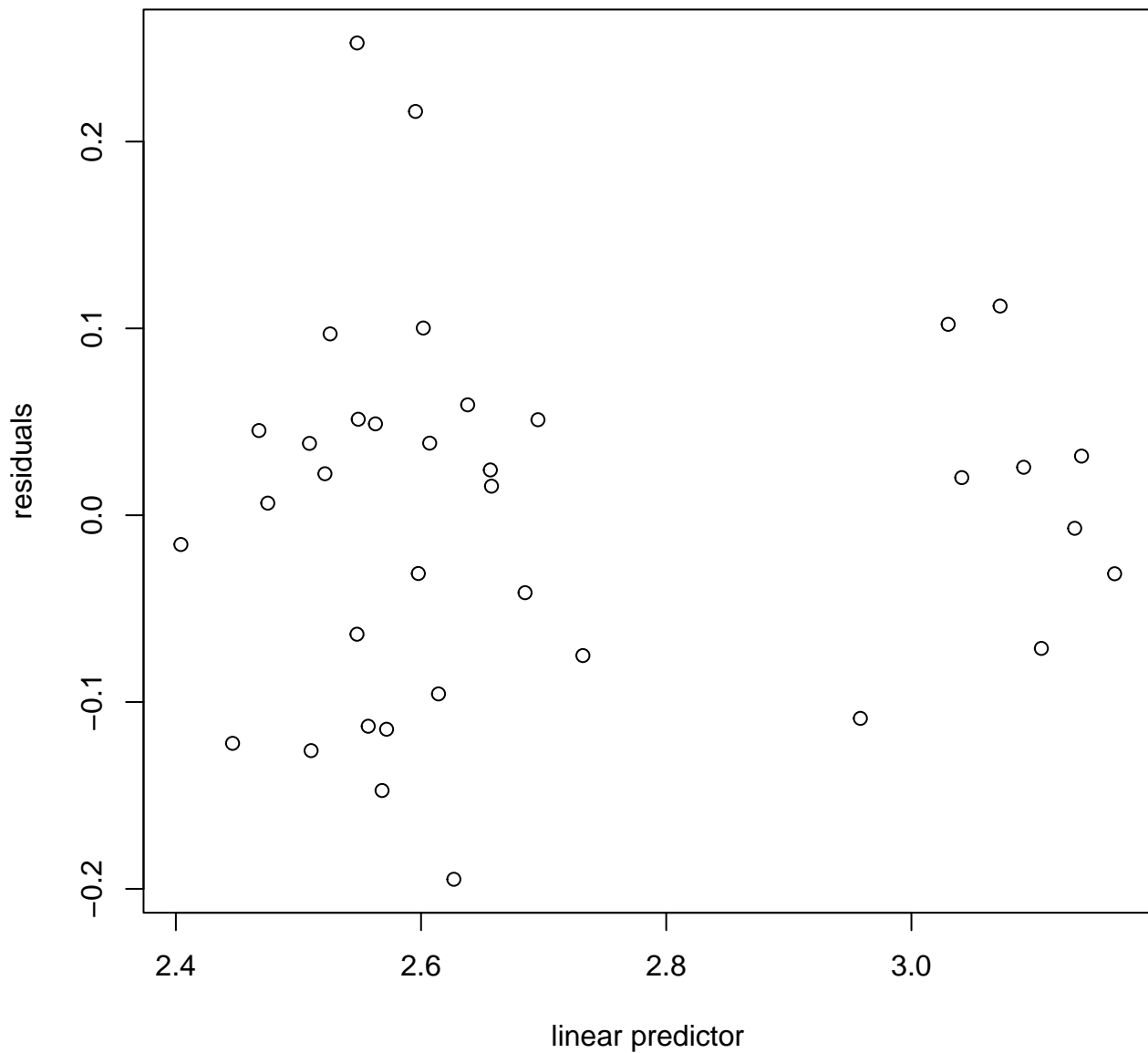
**s(ID,2.94)**



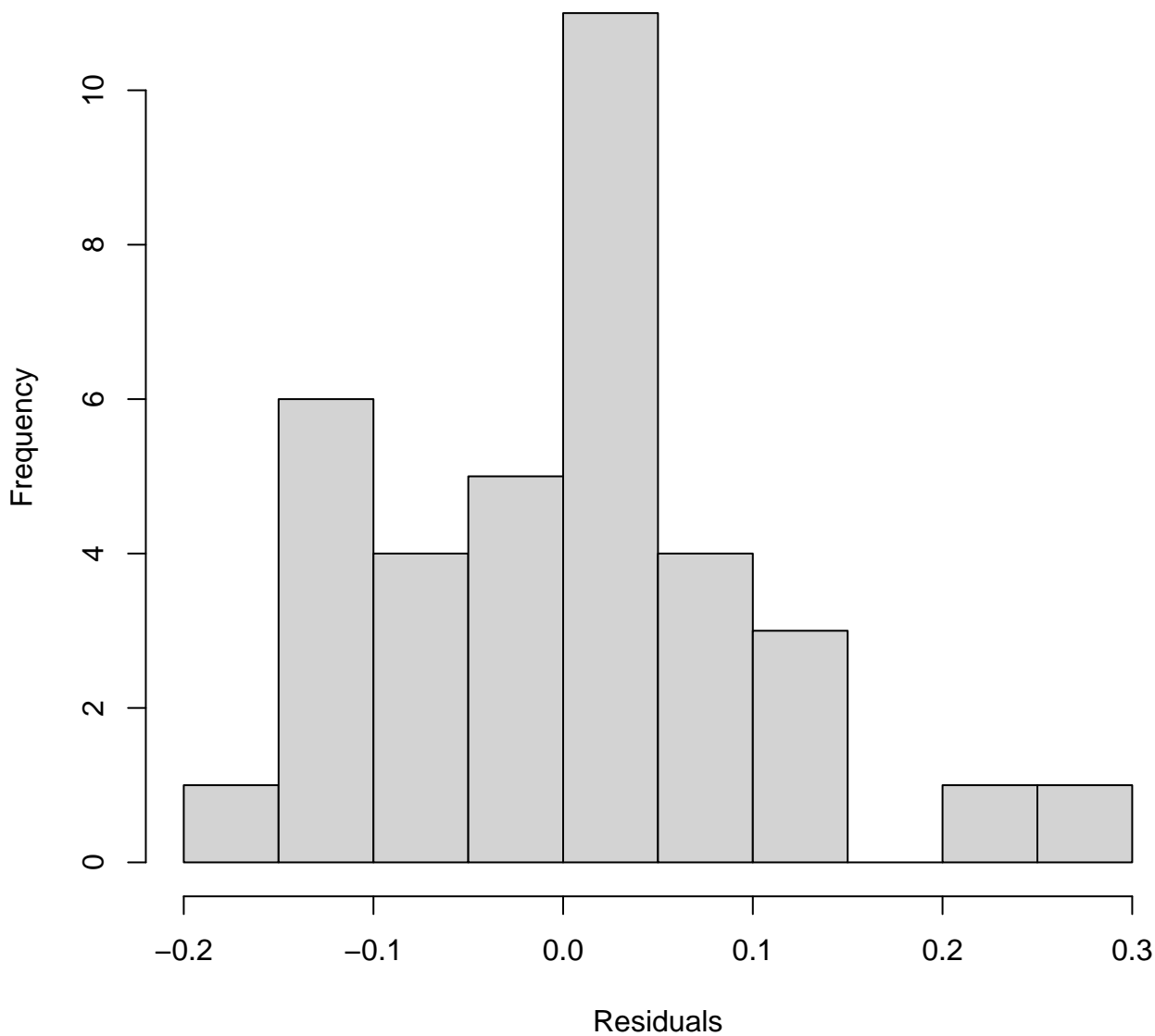




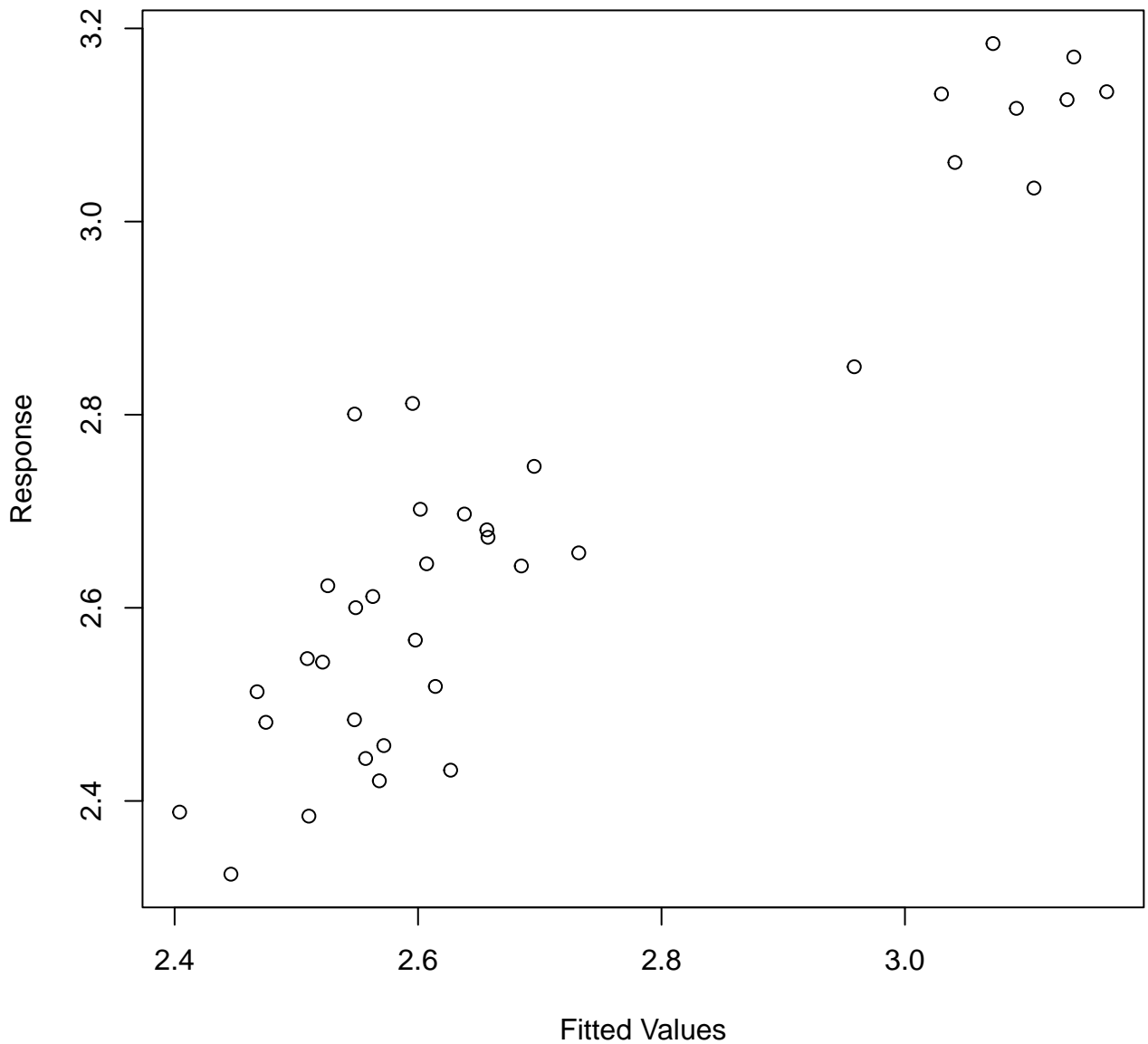
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 11 iterations.  
 Gradient range [-8.925834e-06,4.157709e-06]  
 (score -23.5931 & scale 0.01093505).  
 Hessian positive definite, eigenvalue range [5.947848e-06,18.2352].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.00	1.12	0.66
s(cumul_bites_7_previous_days)	3.00	1.00	1.34	0.98
s(ID)	4.00	2.94	NA	NA



# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	
s(cumul_bites_7_previous_days, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	2.7002	0.1219	22.16	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1	2.283	0.14123
s(cumul_bites_7_previous_days)	1.000	1	8.834	0.00578 **
s(ID)	2.938	3	58.486	< 2e-16 ***

---

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

R-sq.(adj) = 0.837 Deviance explained = 86%  
-ML = -23.593 Scale est. = 0.010935 n = 36

AICc [ 1 ] -48.92649

Bites in squirrel

Nb excluded (LOD) : 19

Nb remaining: 1

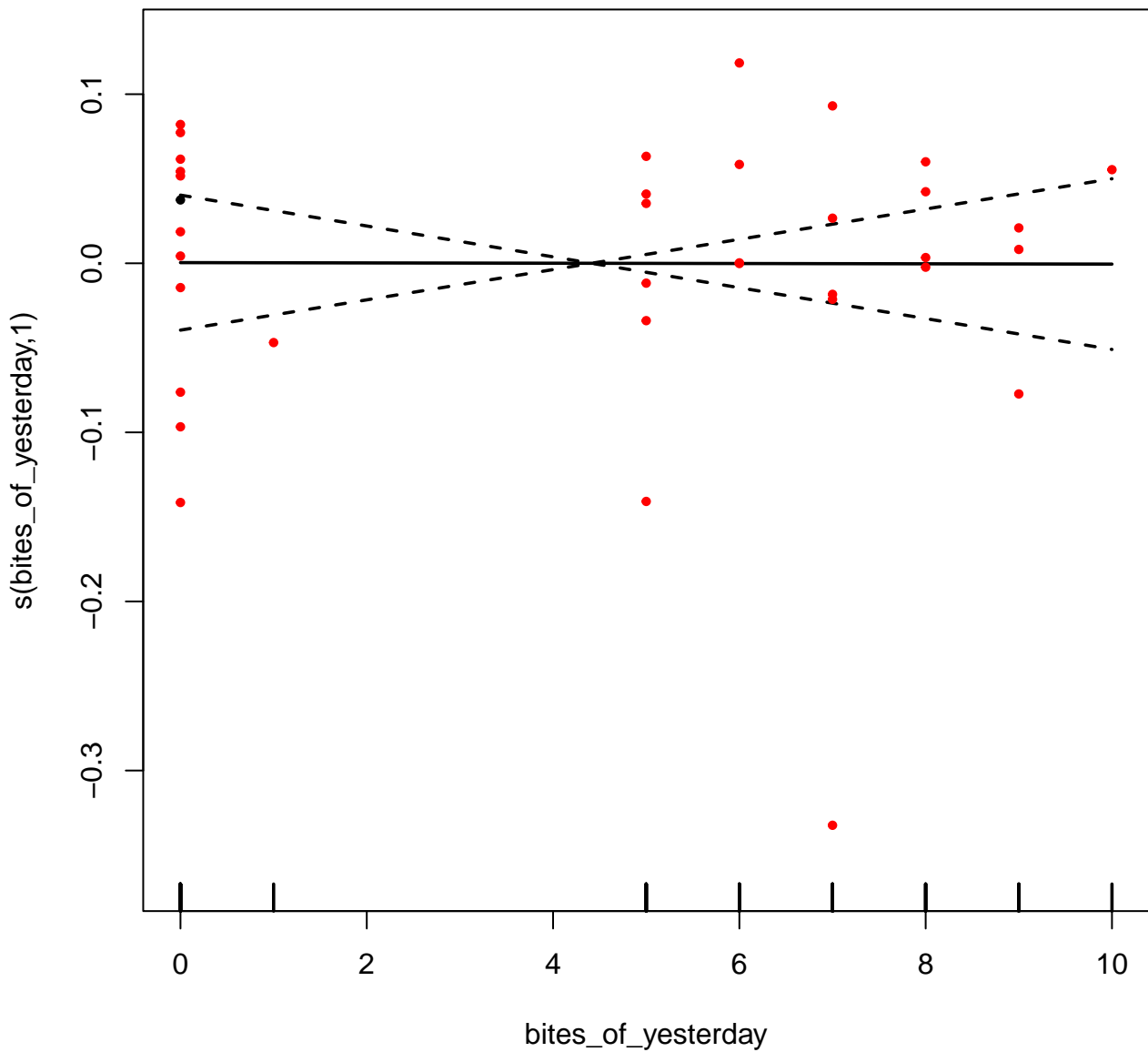
MCP.1 ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

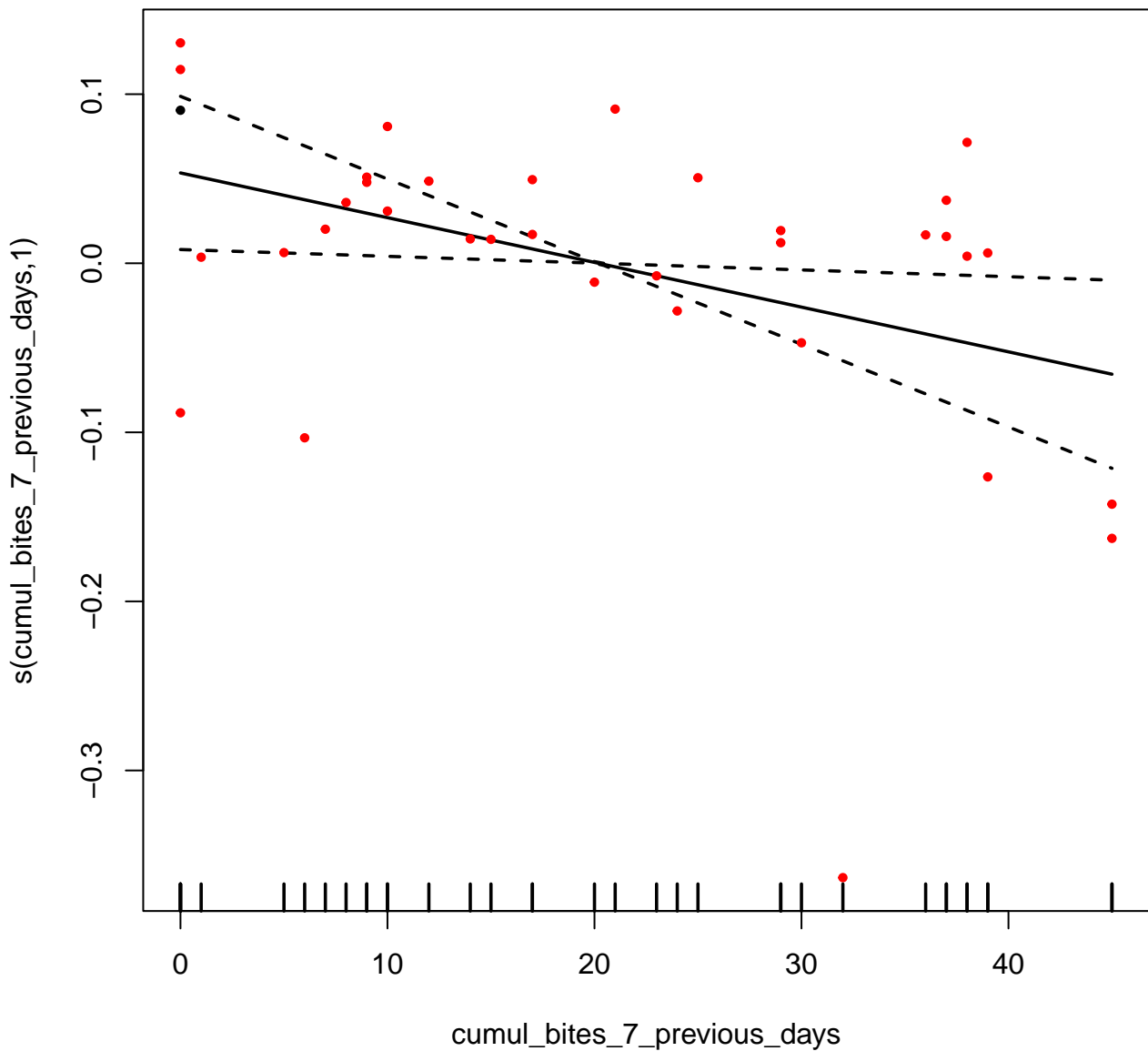
MDC

Bites in cyno

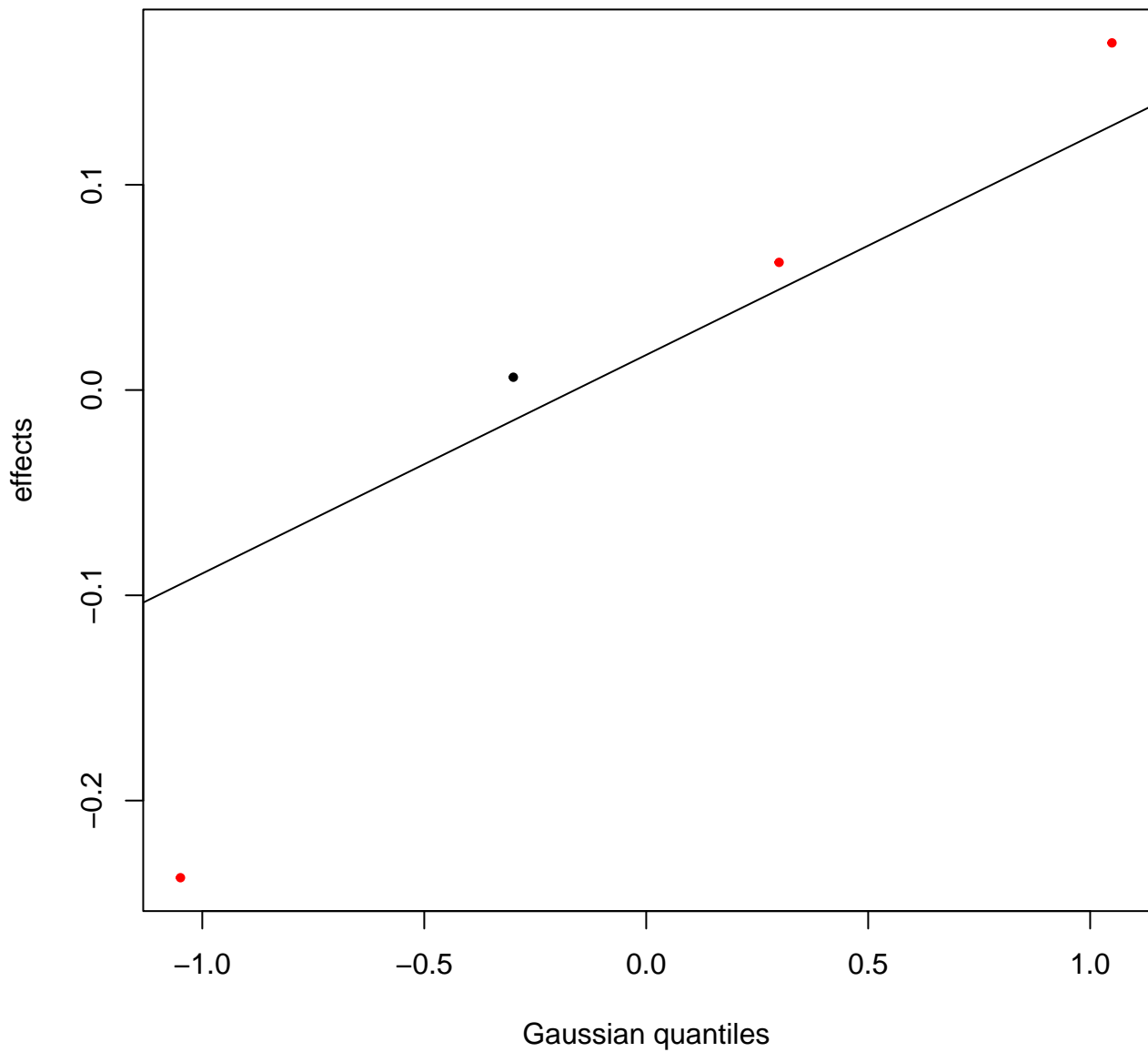


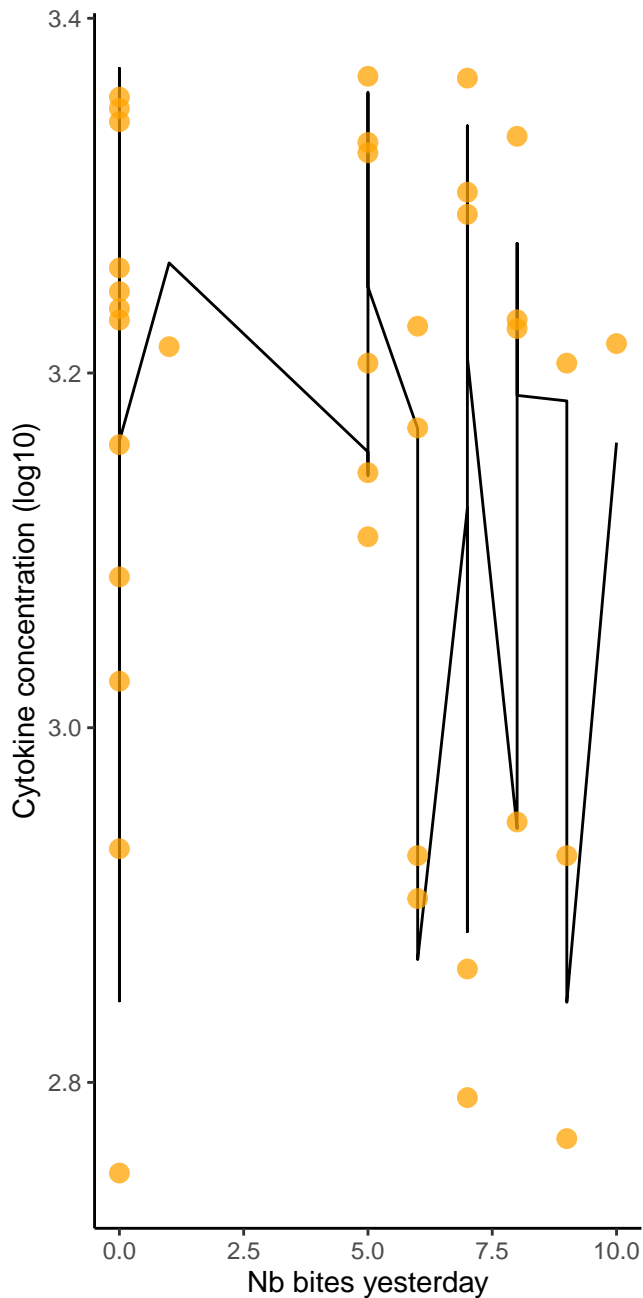
Nb excluded (LOD) : 0  
Nb remaining: 36

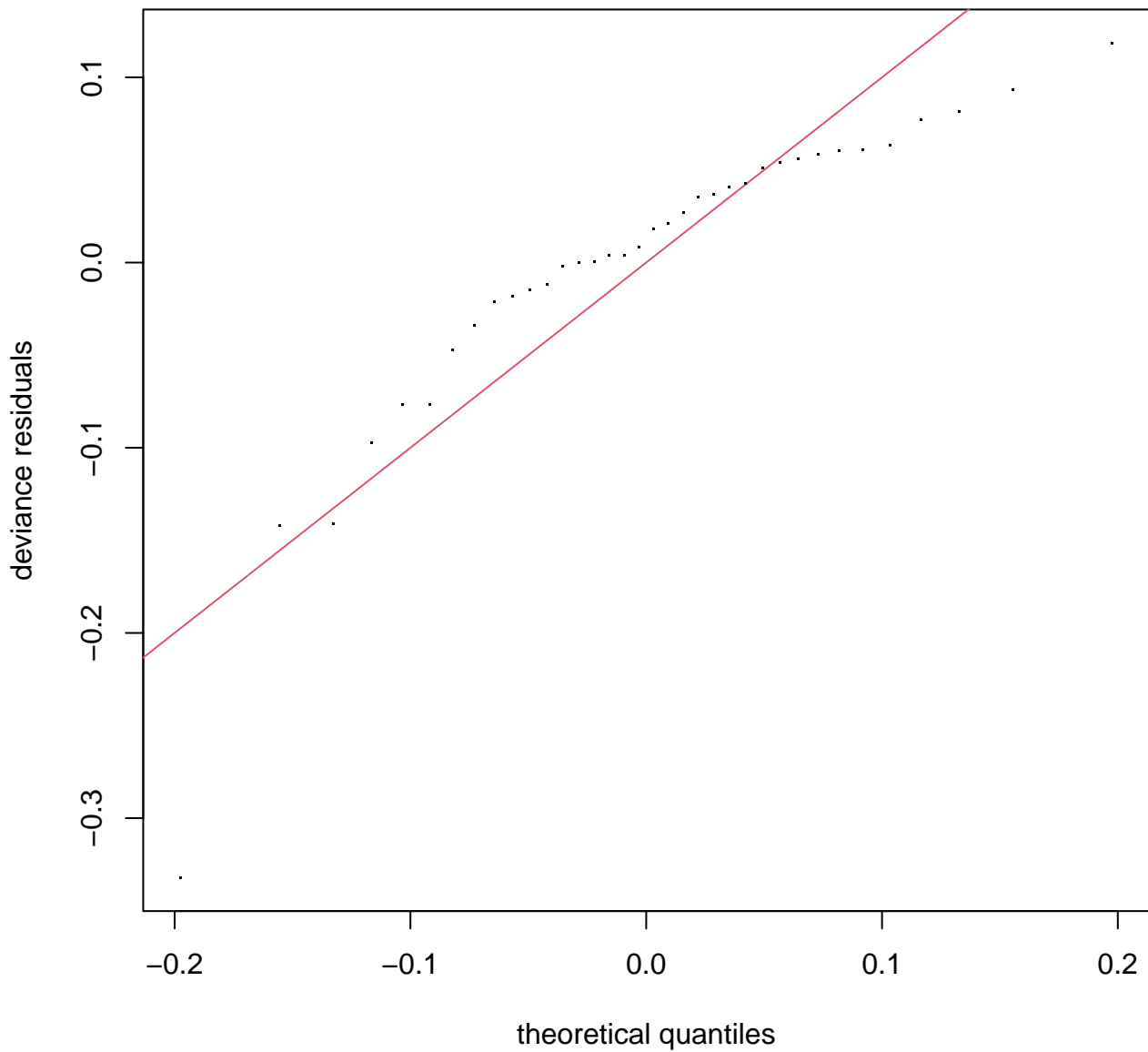




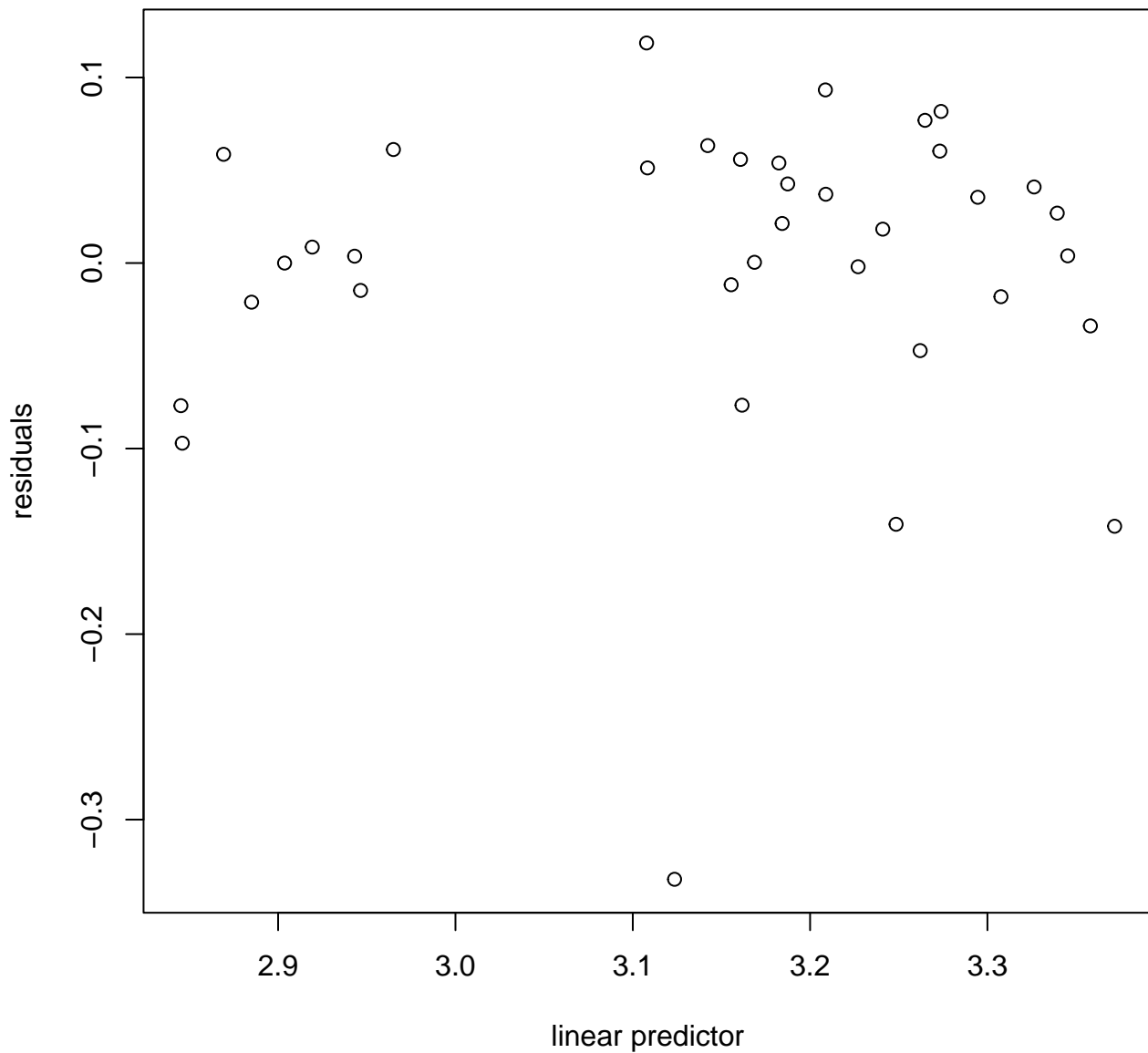
**s(ID,2.89)**



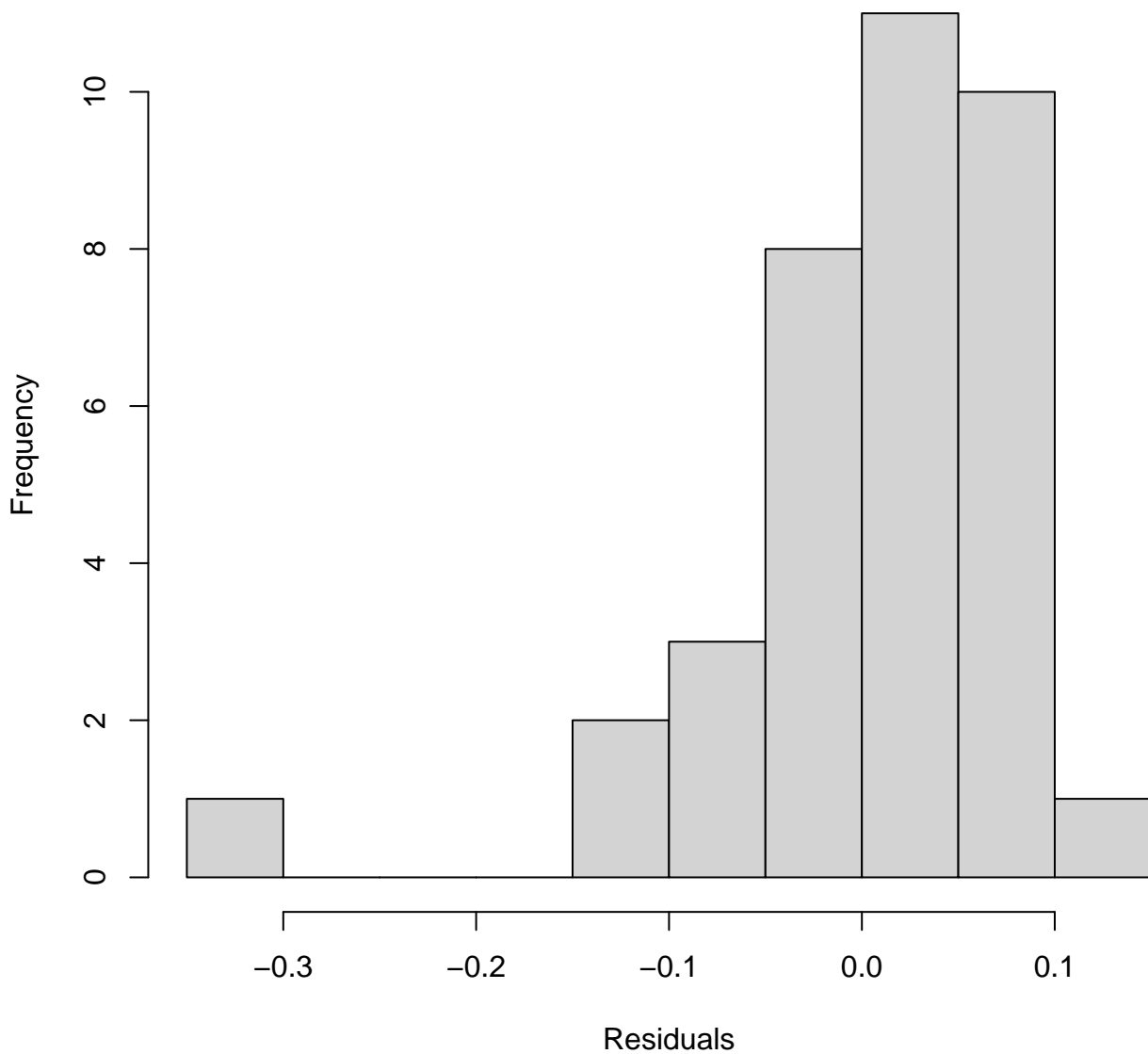




**Resids vs. linear pred.**

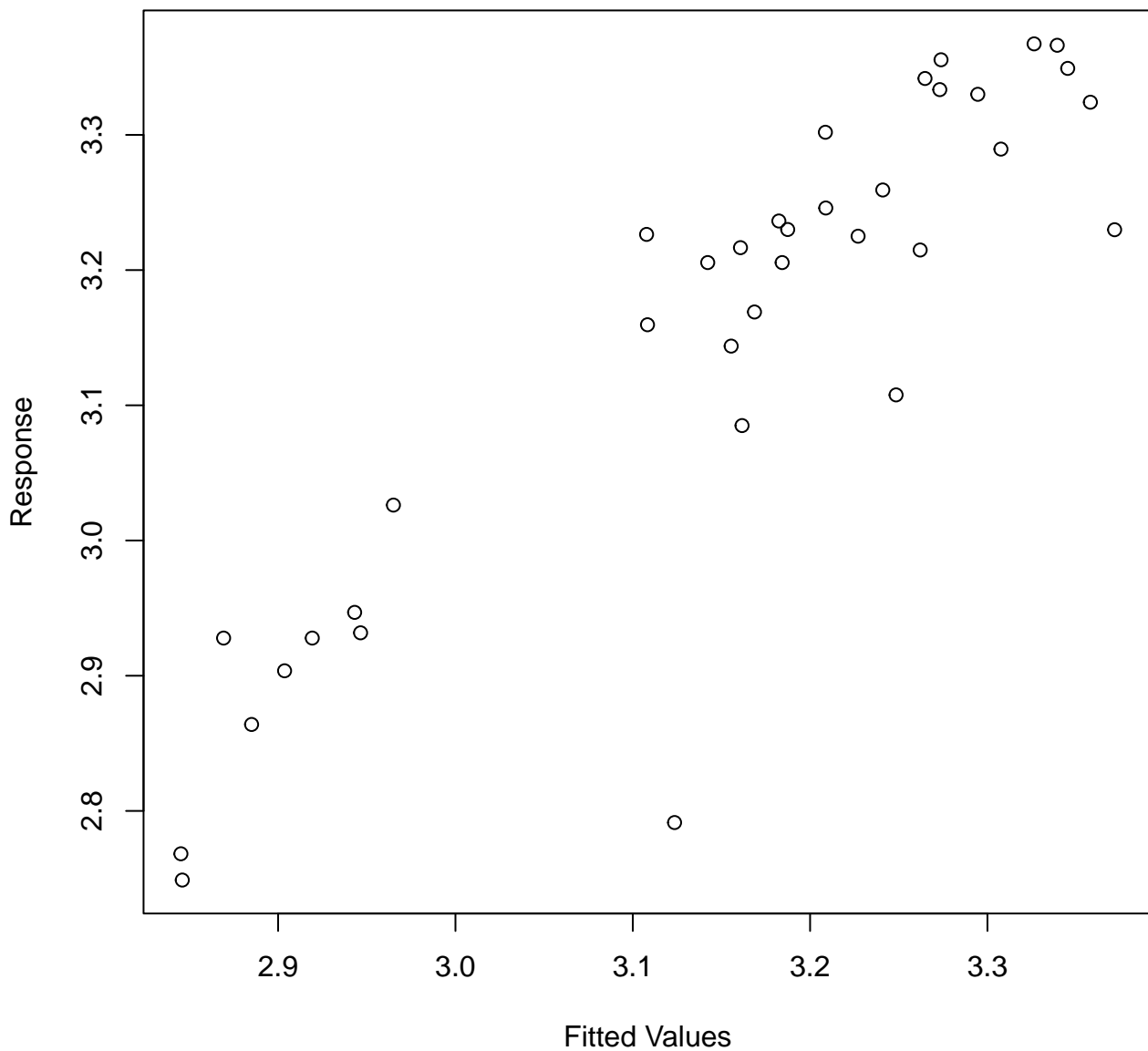


**Histogram of residuals**





**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 11 iterations.  
 Gradient range [-1.138384e-05,1.971193e-06]  
 (score -30.17698 & scale 0.008057609).  
 Hessian positive definite, eigenvalue range [8.925835e-06,18.22751].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.00	0.99	0.36
s(cumul_bites_7_previous_days)	3.00	1.00	0.95	0.32
s(ID)	4.00	2.89	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	
s(cumul_bites_7_previous_days, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	3.14878	0.07984	39.44	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1	0.000	0.9848
s(cumul_bites_7_previous_days)	1.000	1	5.562	0.0251 *
s(ID)	2.894	3	33.618	<2e-16 ***

---

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

R-sq.(adj) = 0.766 Deviance explained = 79.9%  
-ML = -30.177 Scale est. = 0.0080576 n = 36

AICc [ 1 ] -59.89258

Bites in squirrel

Nb excluded (LOD) : 18

Nb remaining: 2

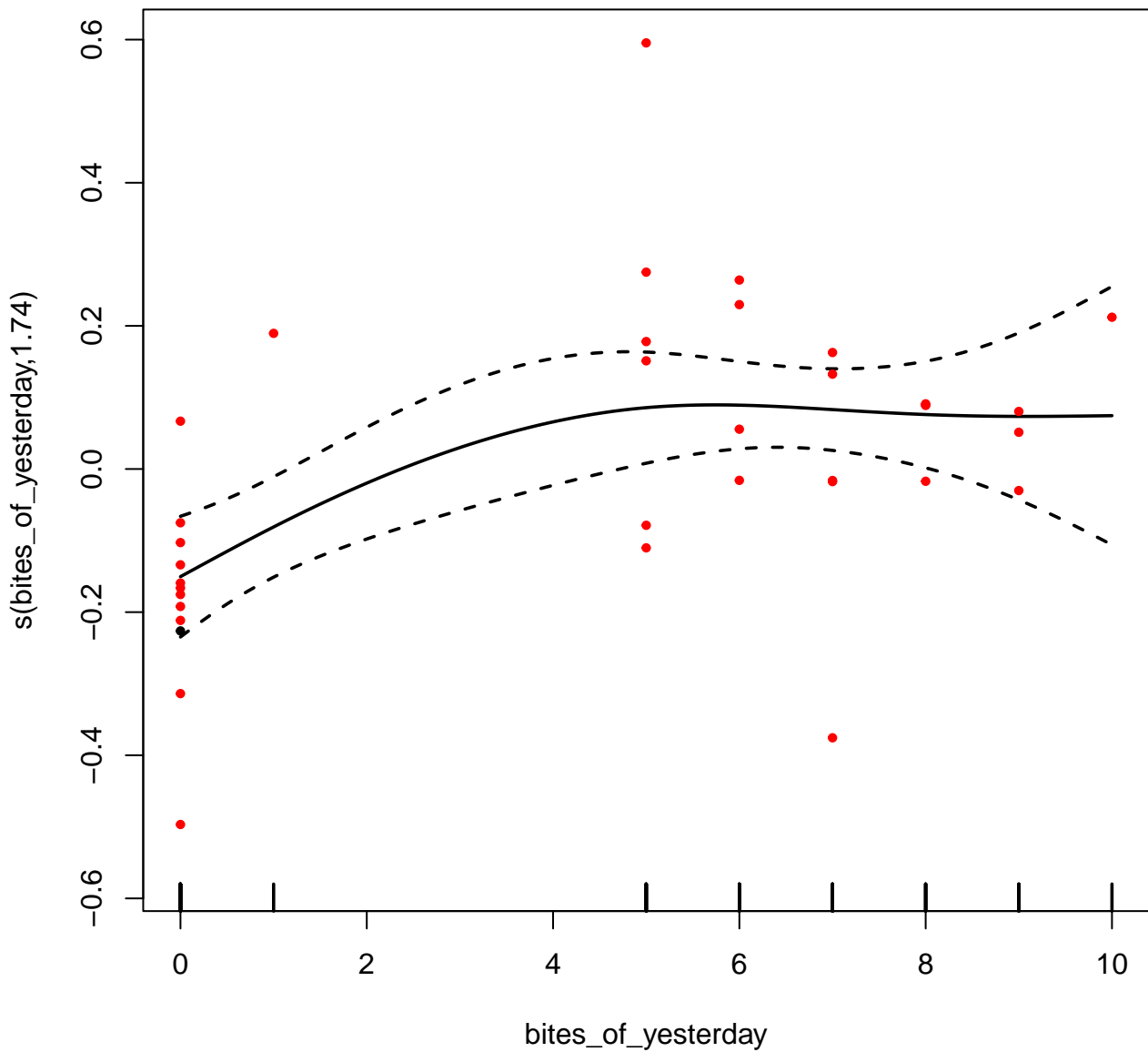
MDC ERROR : Un terme a moins de combinaisons de covariables uniques que le degré de liberté maximum spécifié

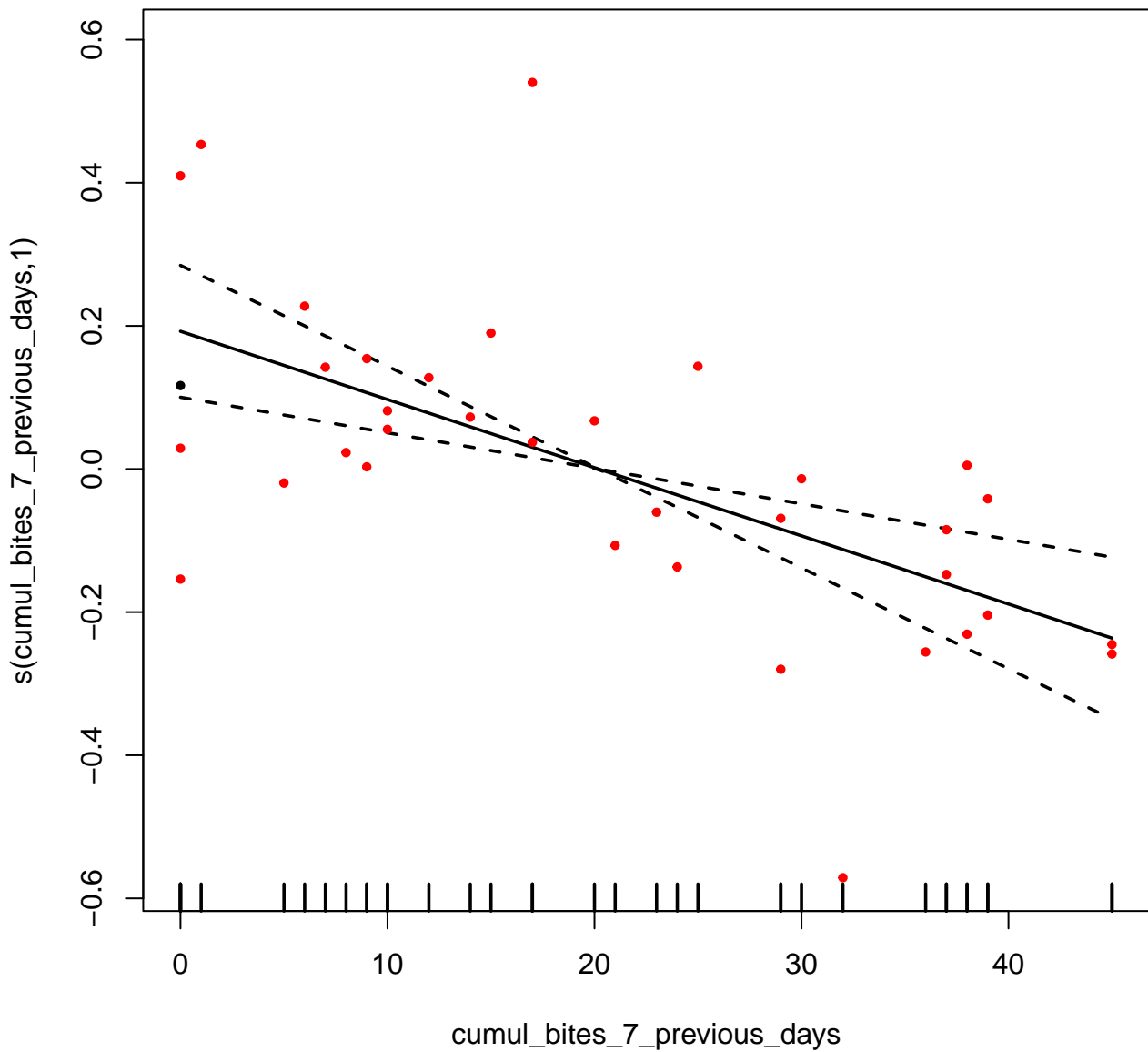


MIF

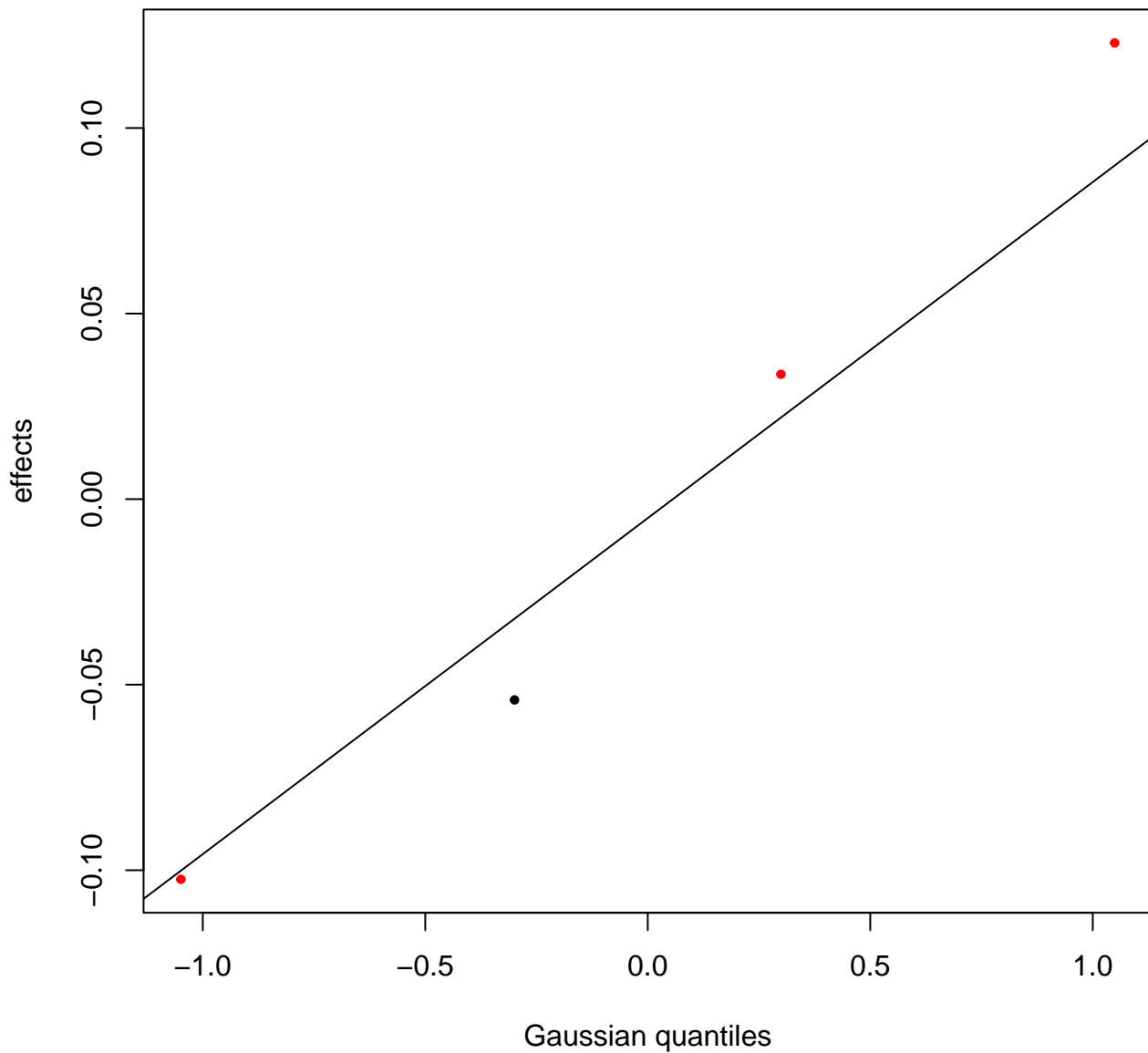
Bites in cyno

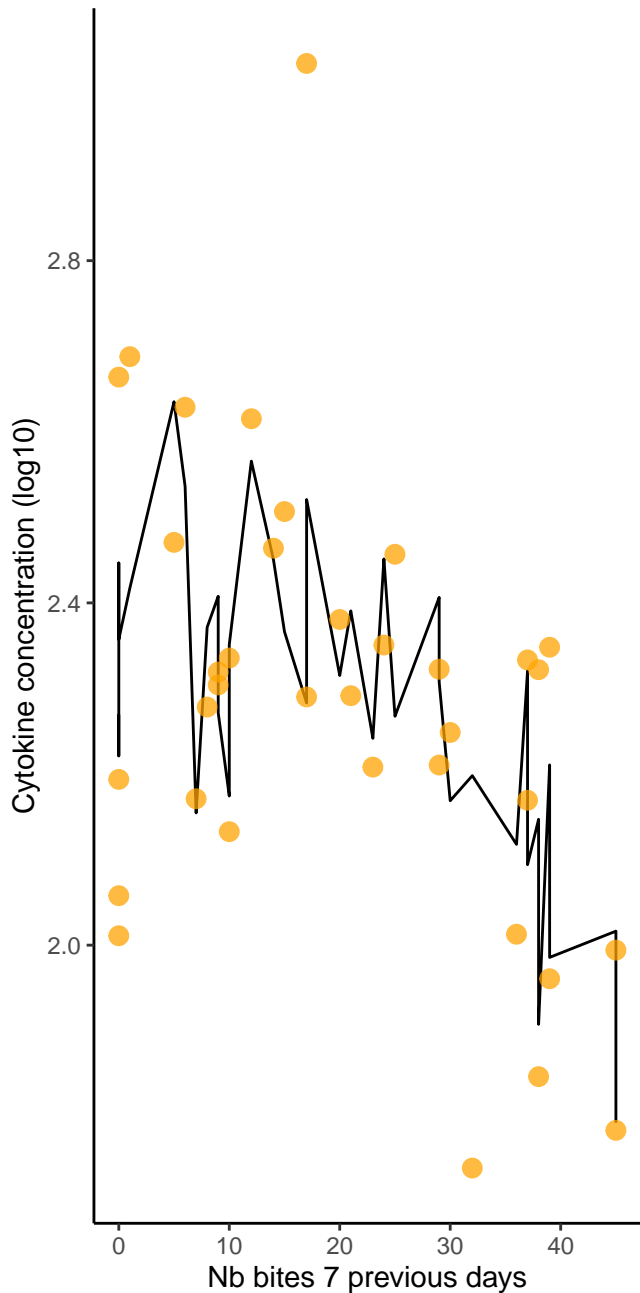
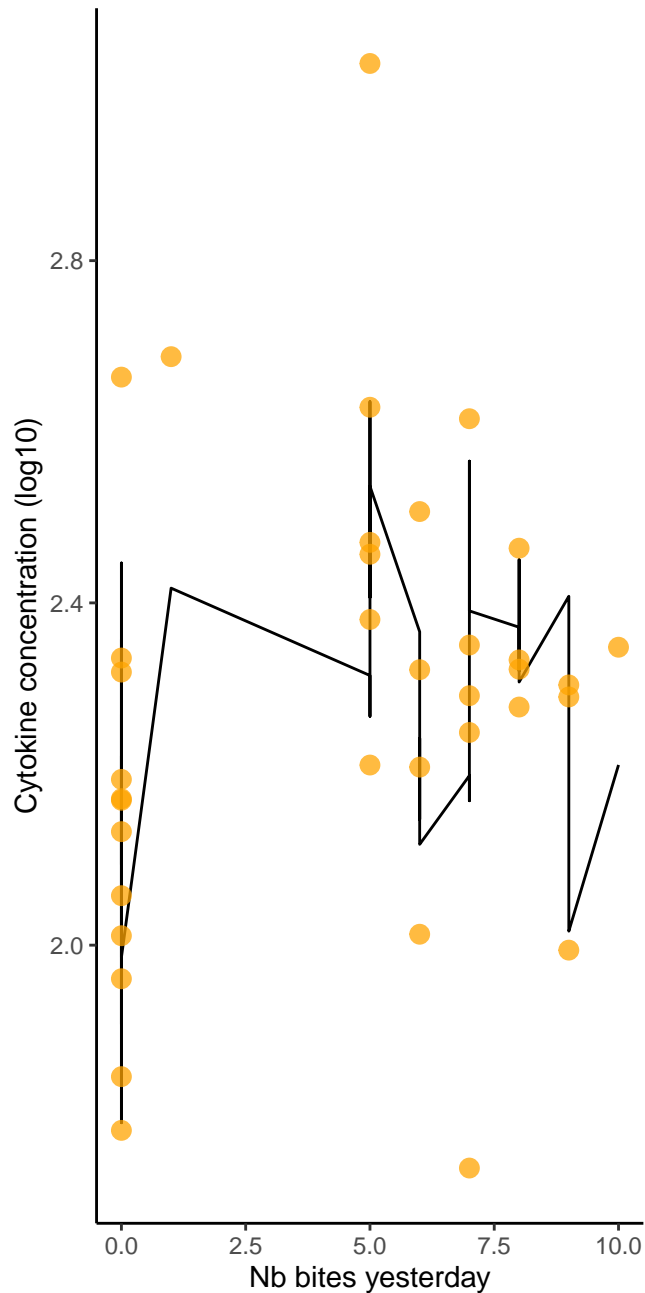
Nb excluded (LOD) : 0  
Nb remaining: 36

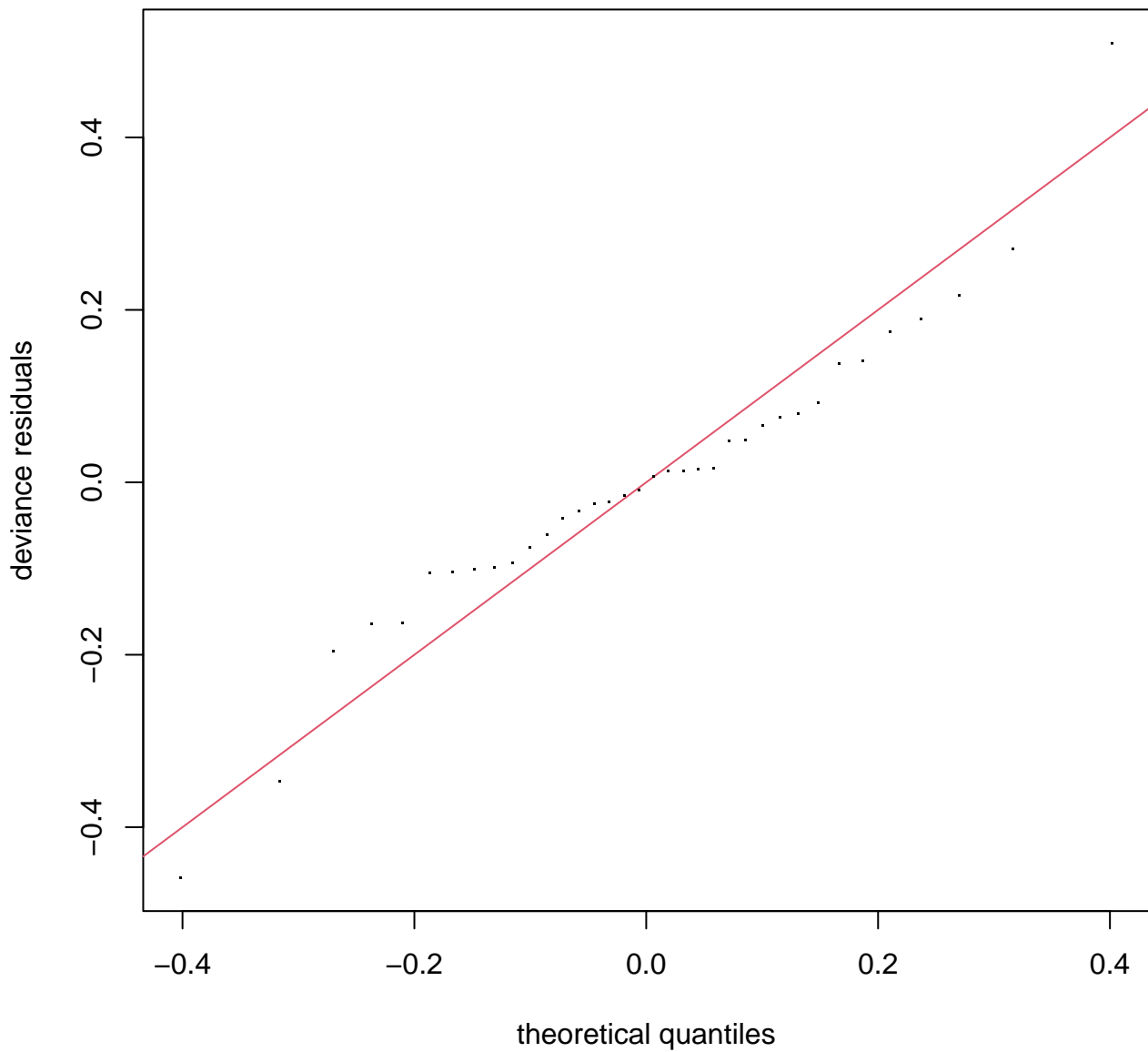




**s(ID,2.2)**

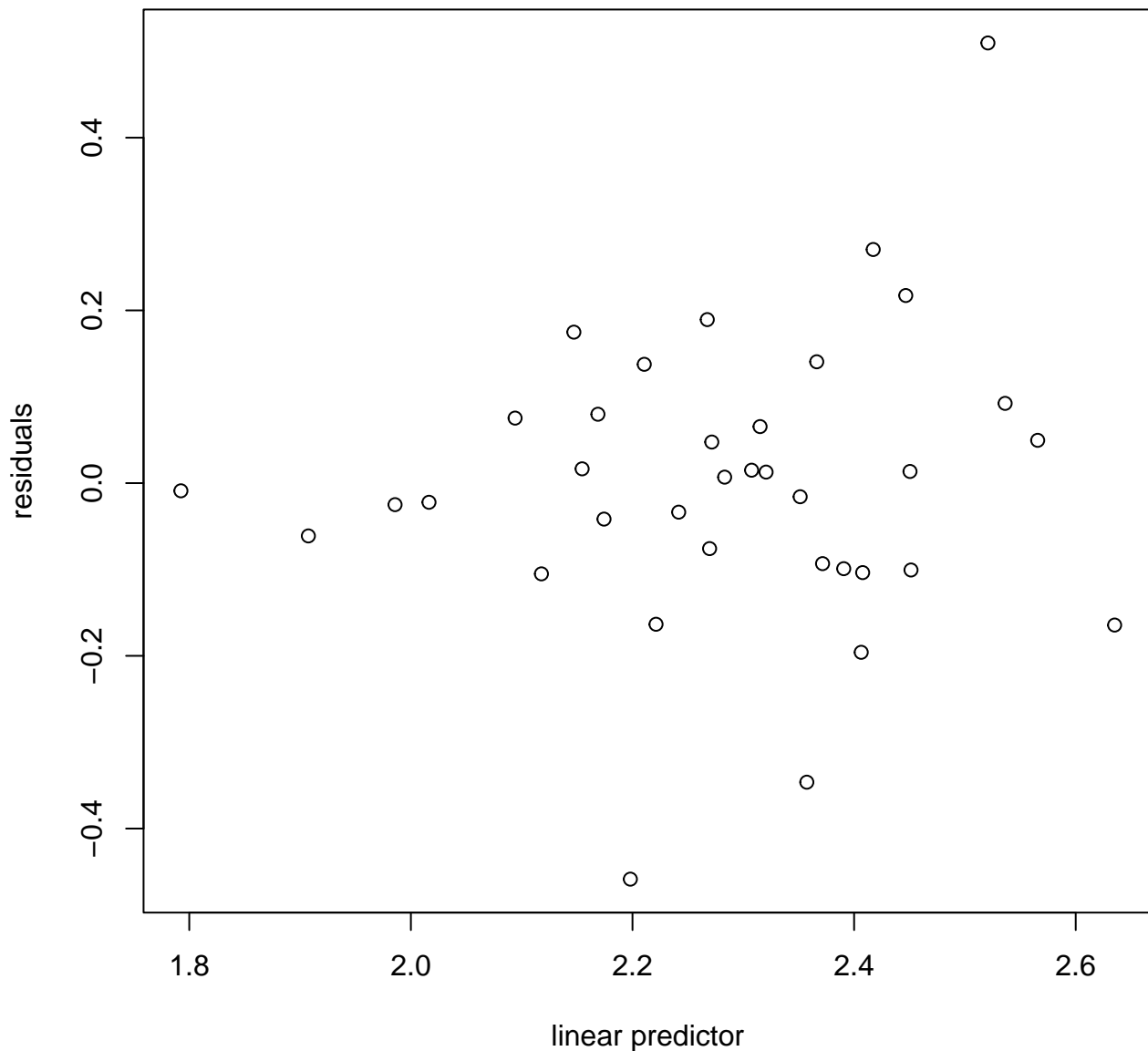




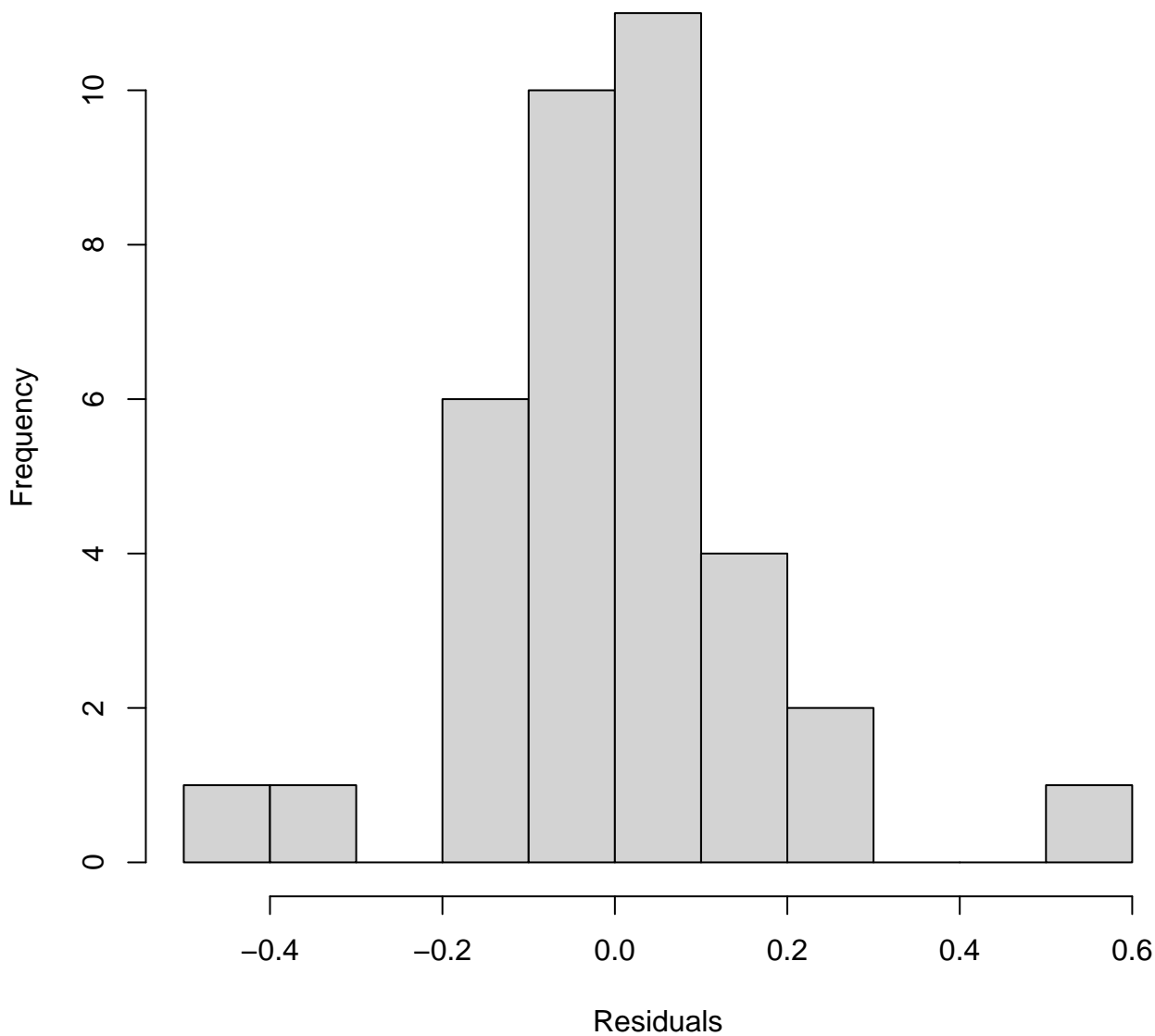




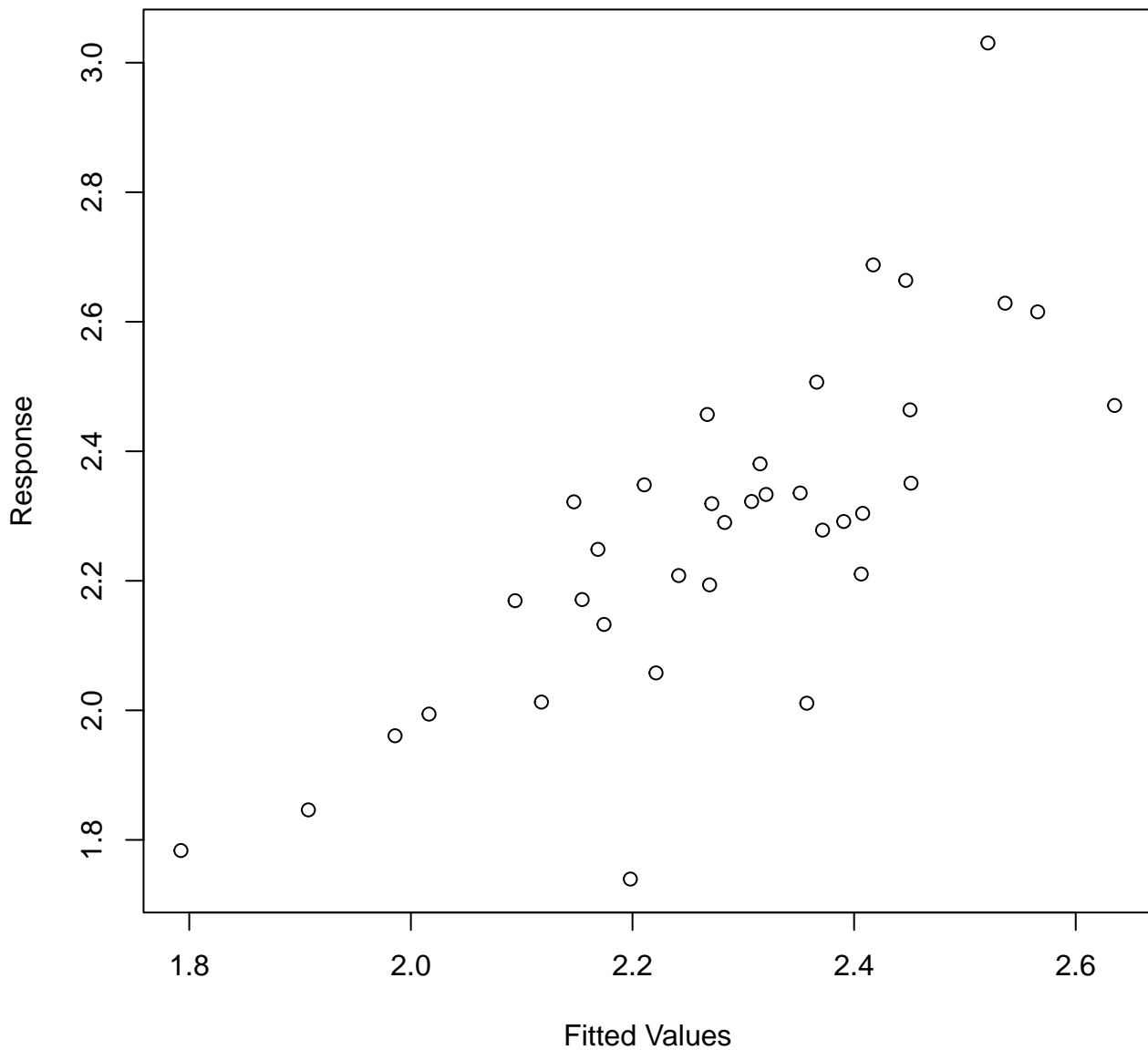
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
full convergence after 13 iterations.  
Gradient range [-5.379547e-06,8.8966e-07]  
(score -6.750531 & scale 0.03333811).  
Hessian positive definite, eigenvalue range [5.379494e-06,18.1585].  
Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.74	1.21	0.86
s(cumul_bites_7_previous_days)	3.00	1.00	1.30	0.94
s(ID)	4.00	2.20	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)		7.01	[4.35, 11.80]	2.65	0.14	[0.08, 0.23]

Moderate Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(cumul_bites_7_previous_days, k = 4)	2.42	[1.68, 3.95]	1.56	0.41	[0.25, 0.59]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	2.28167	0.05973	38.2	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.736	2.052	6.168	0.004766 **
s(cumul_bites_7_previous_days)	1.000	1.000	17.447	0.000235 ***
s(ID)	2.202	3.000	3.533	0.007181 **

---

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

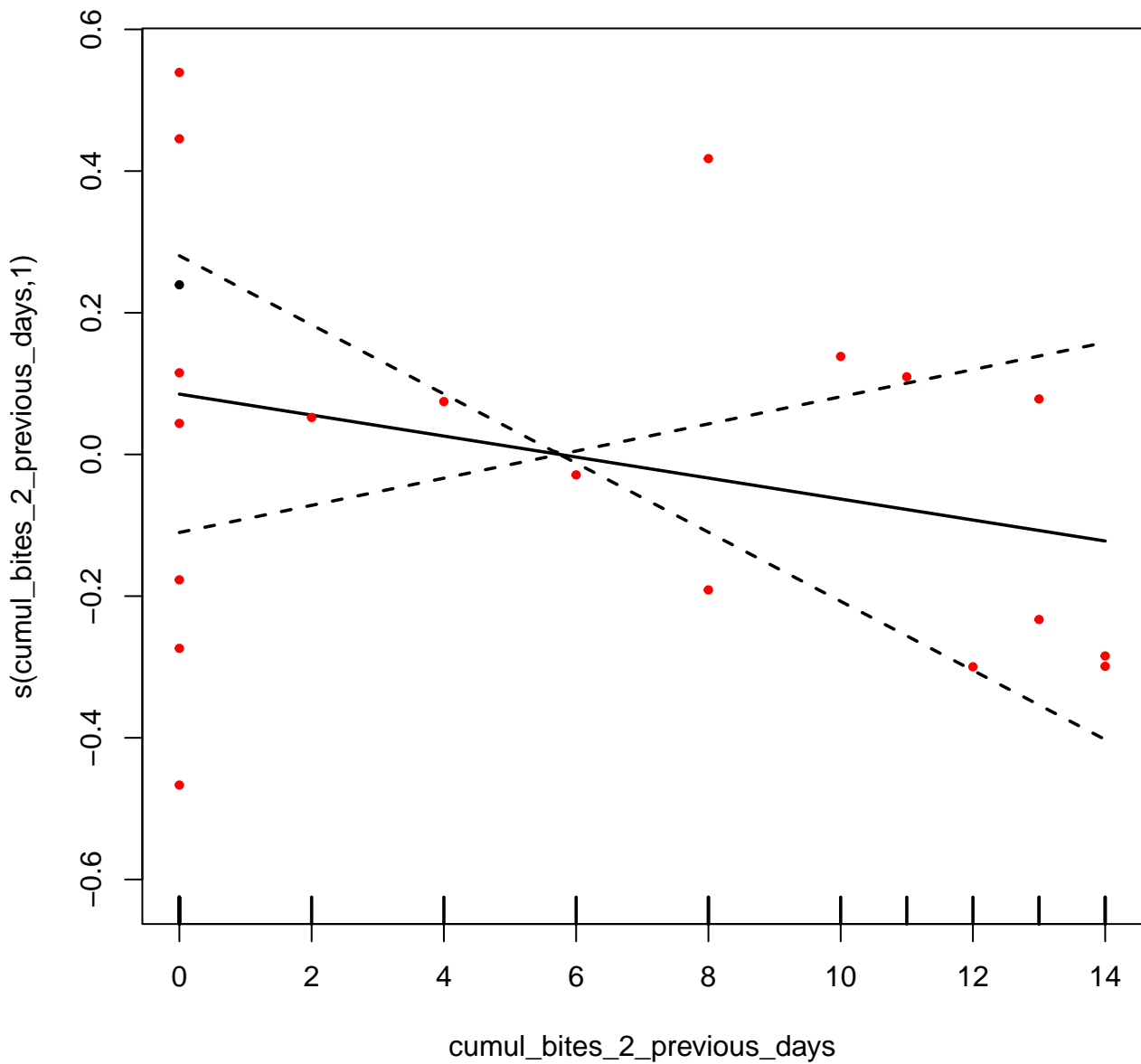
R-sq.(adj) = 0.526 Deviance explained = 59.3%  
-ML = -6.7505 Scale est. = 0.033338 n = 36

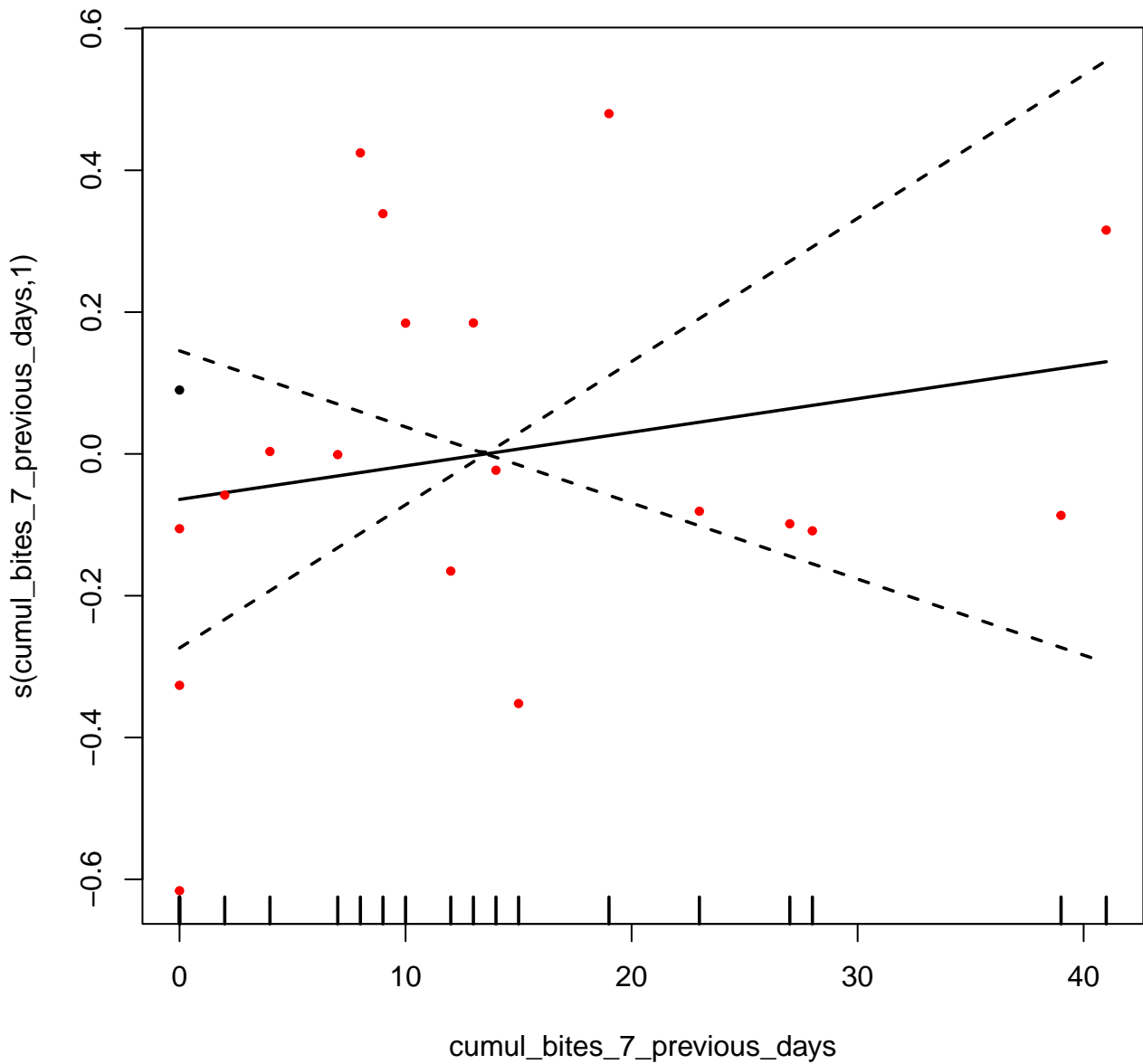
AICc [ 1 ] -5.998823

Bites in squirrel

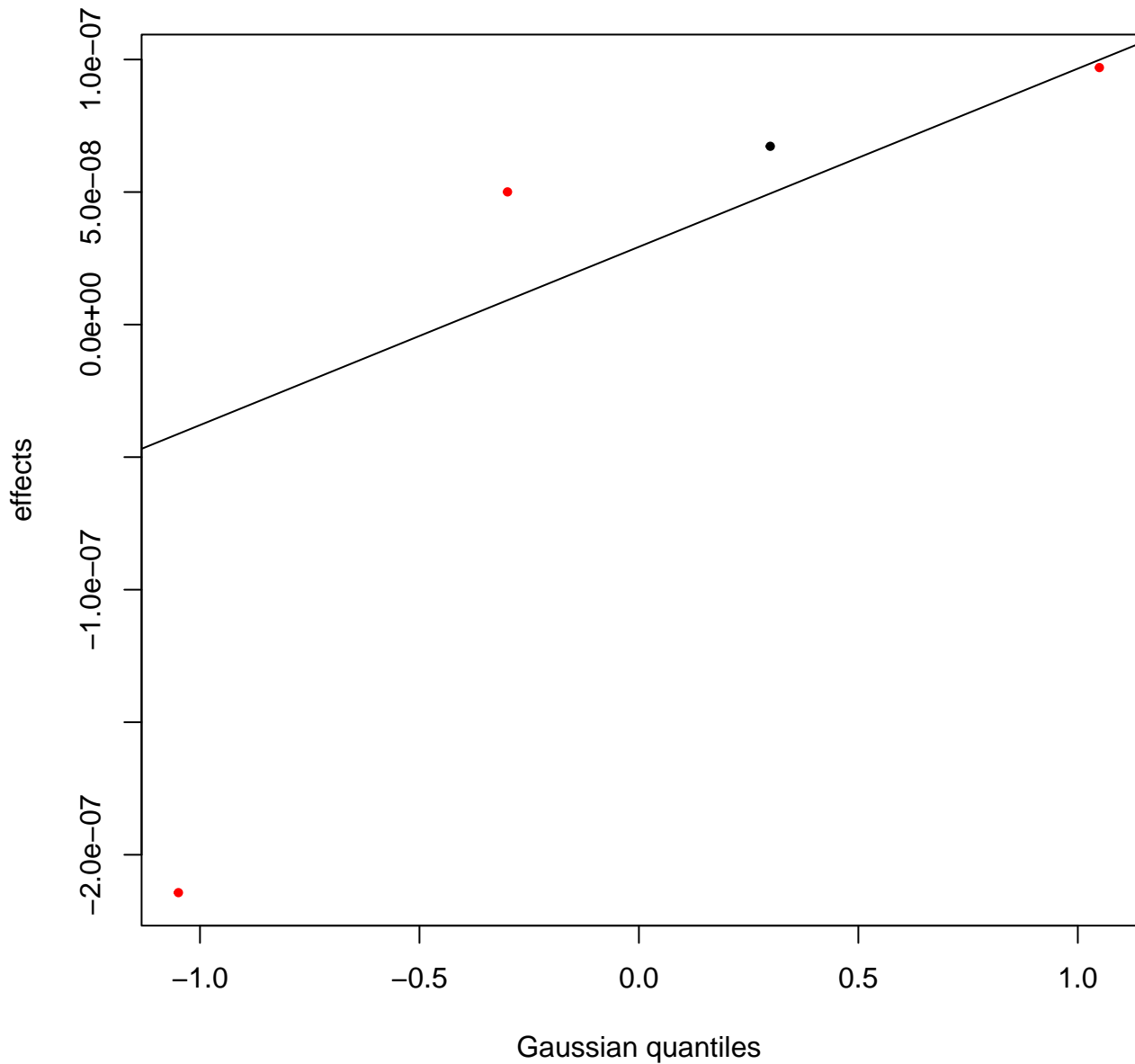


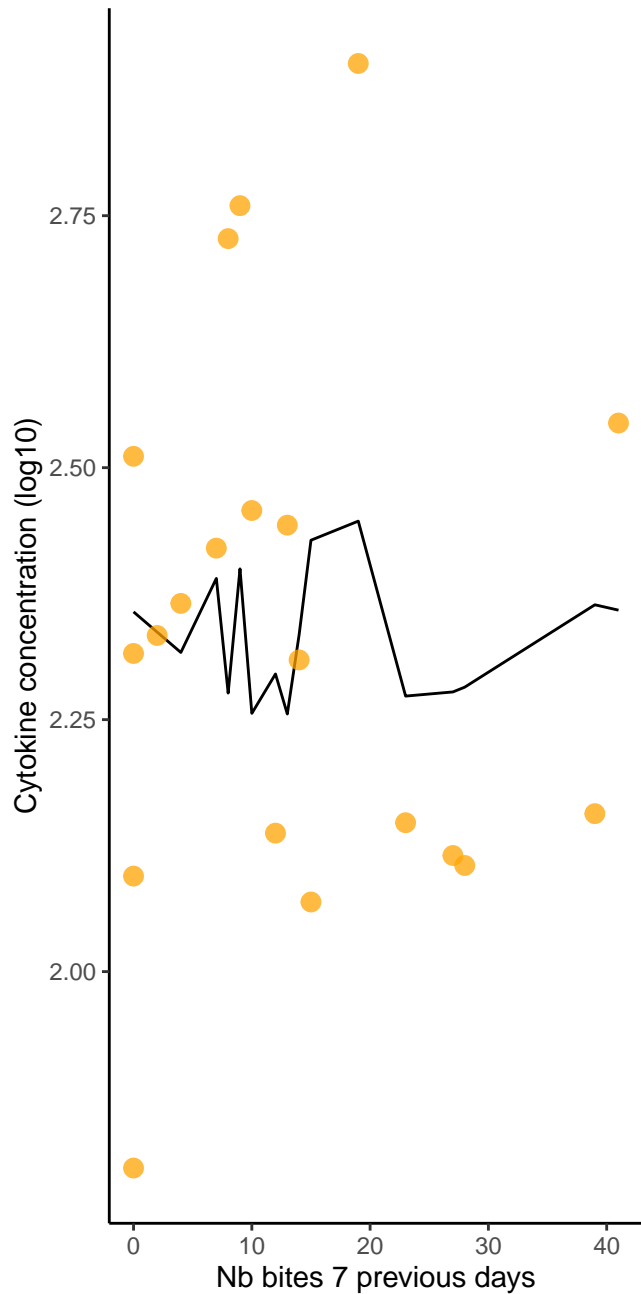
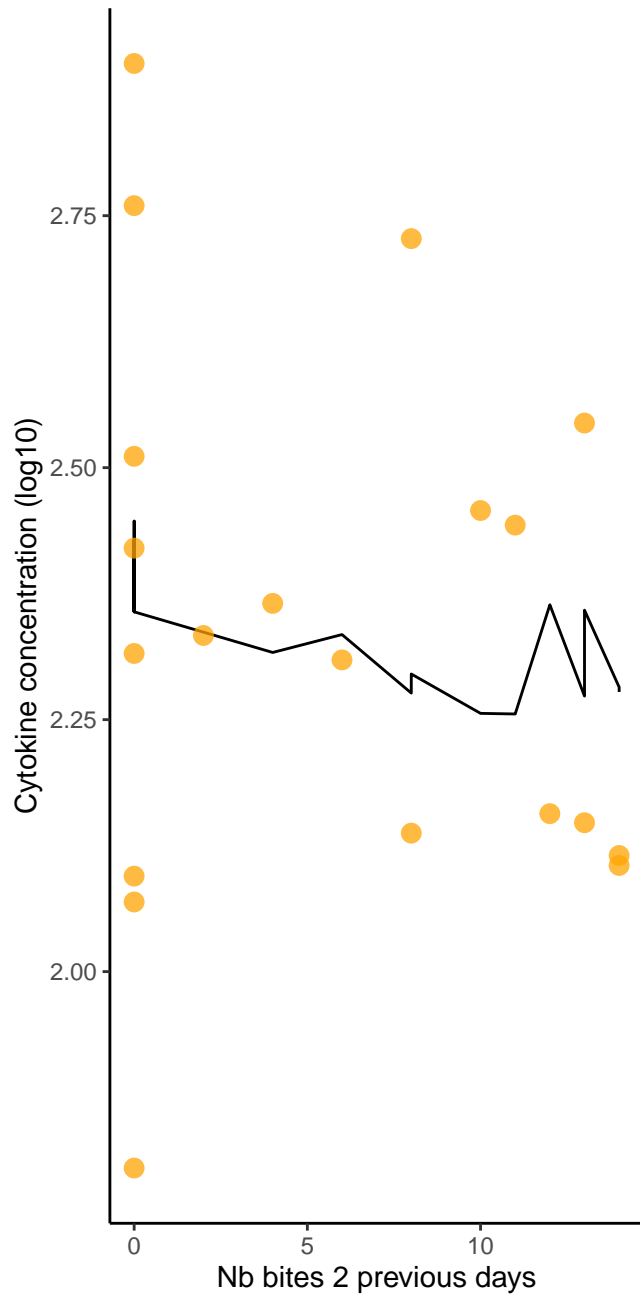
Nb excluded (LOD) : 0  
Nb remaining: 20

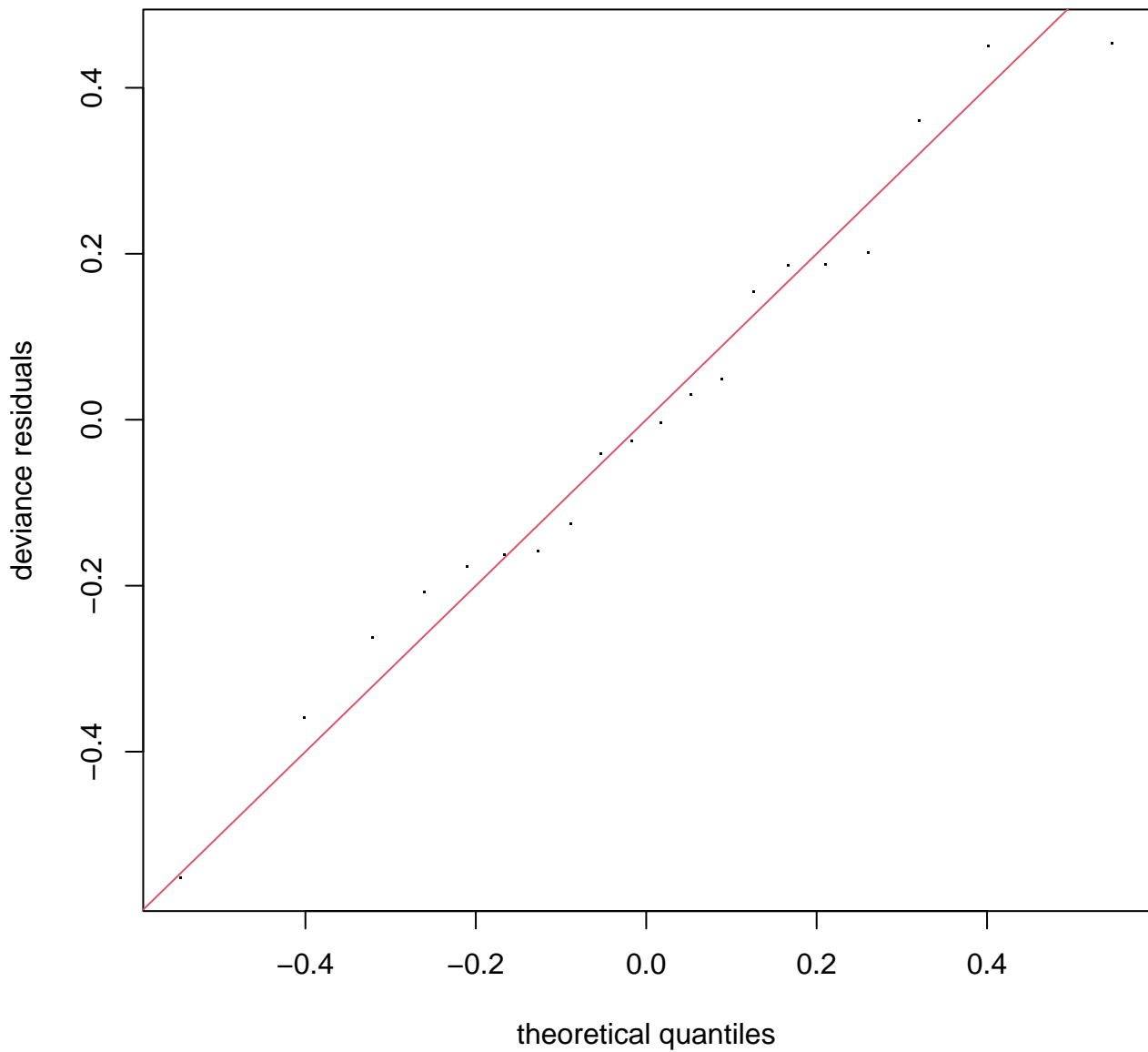




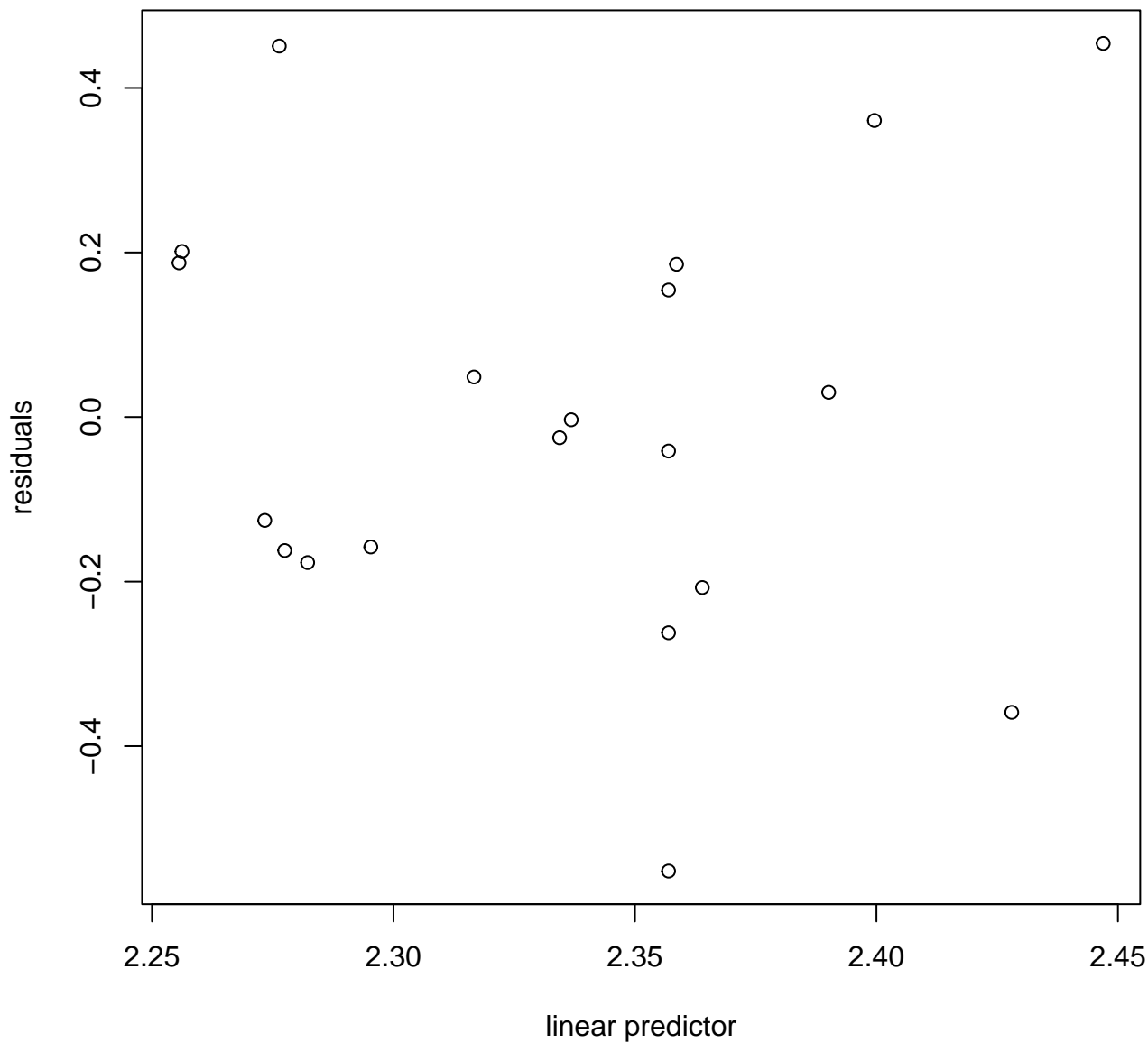
**s(ID,0)**



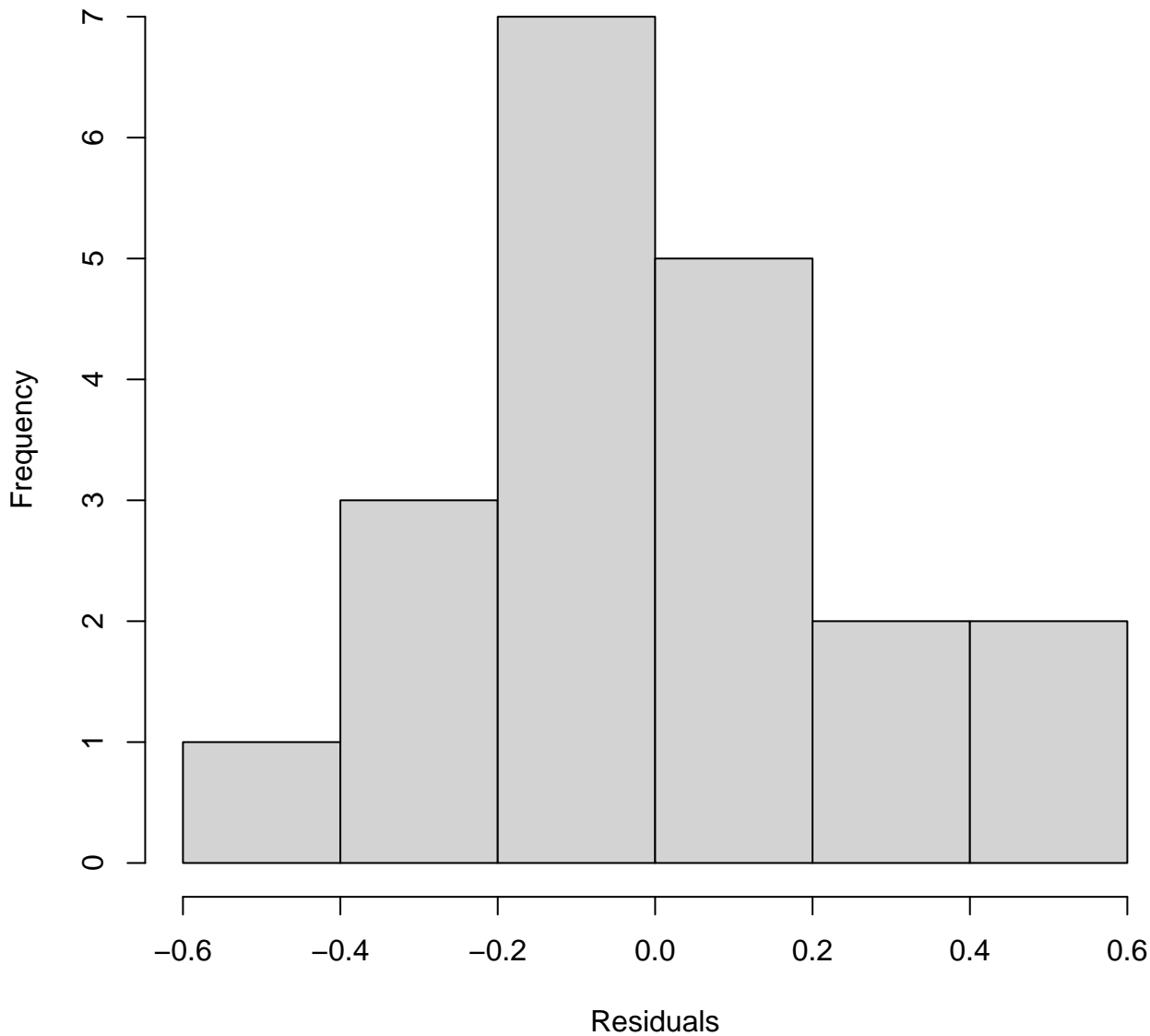




**Resids vs. linear pred.**

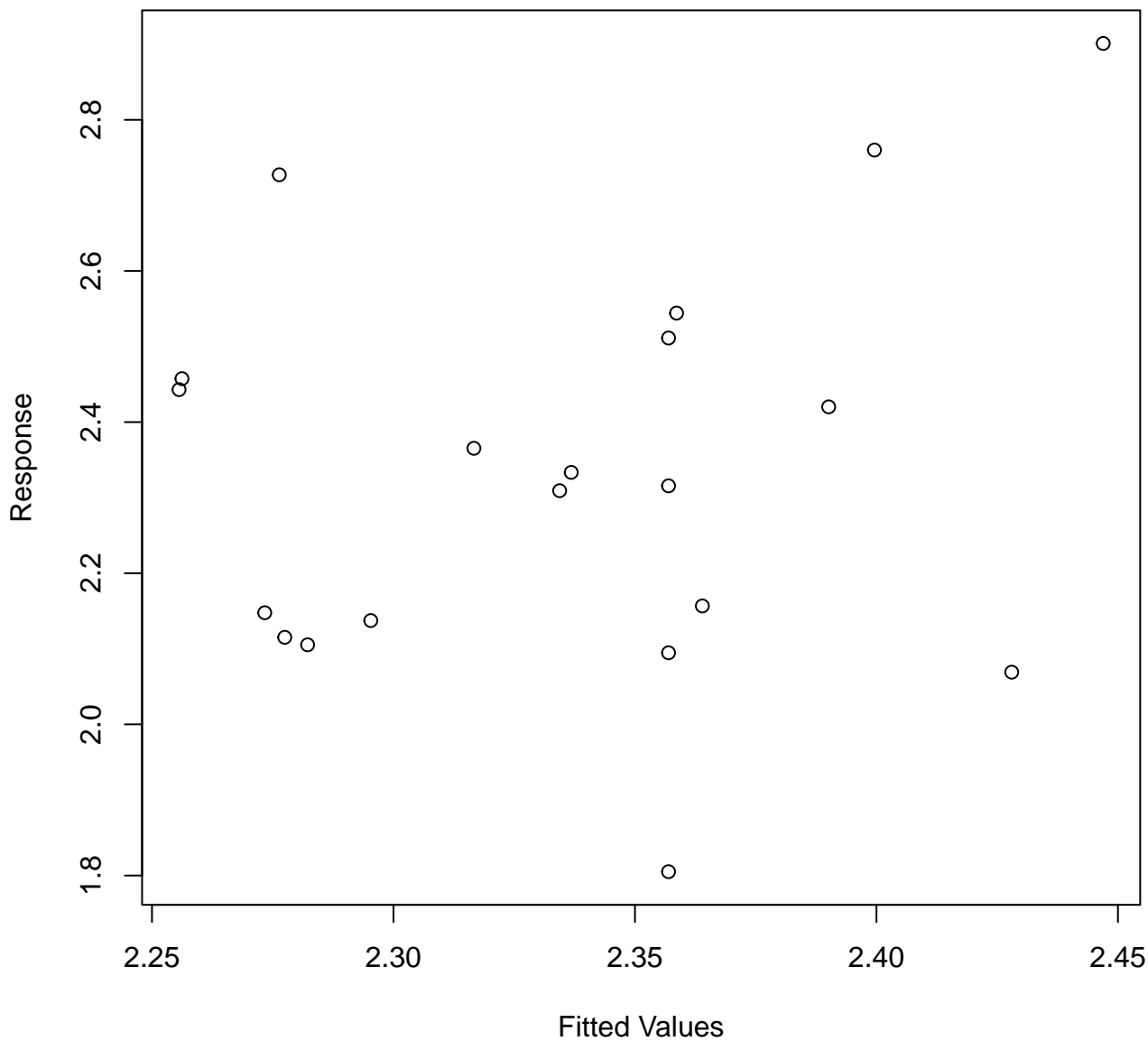


**Histogram of residuals**





**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 15 iterations.  
 Gradient range [-1.283981e-06,2.041458e-06]  
 (score 1.215388 & scale 0.07778399).  
 Hessian positive definite, eigenvalue range [3.105068e-07,9.999998].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(cumul_bites_2_previous_days)	3.00e+00	1.00e+00	1.29	0.84
s(cumul_bites_7_previous_days)	3.00e+00	1.00e+00	1.02	0.43
s(ID)	4.00e+00	4.09e-06	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(cumul_bites_2_previous_days, k = 4)	1.06	[1.00, 15.02]	1.03	0.94	[0.07, 1.00]	
s(cumul_bites_7_previous_days, k = 4)	1.06	[1.00, 15.02]	1.03	0.94	[0.07, 1.00]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(cumul\_bites\_2\_previous\_days, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	2.33597	0.06236	37.46	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(cumul_bites_2_previous_days)	1.000e+00	1	0.760	0.395
s(cumul_bites_7_previous_days)	1.000e+00	1	0.375	0.548
s(ID)	4.086e-06	3	0.000	0.578

R-sq.(adj) = -0.0696    Deviance explained = 4.3%  
-ML = 1.2154    Scale est. = 0.077784    n = 20

```
AICc [1] 13.09746
```

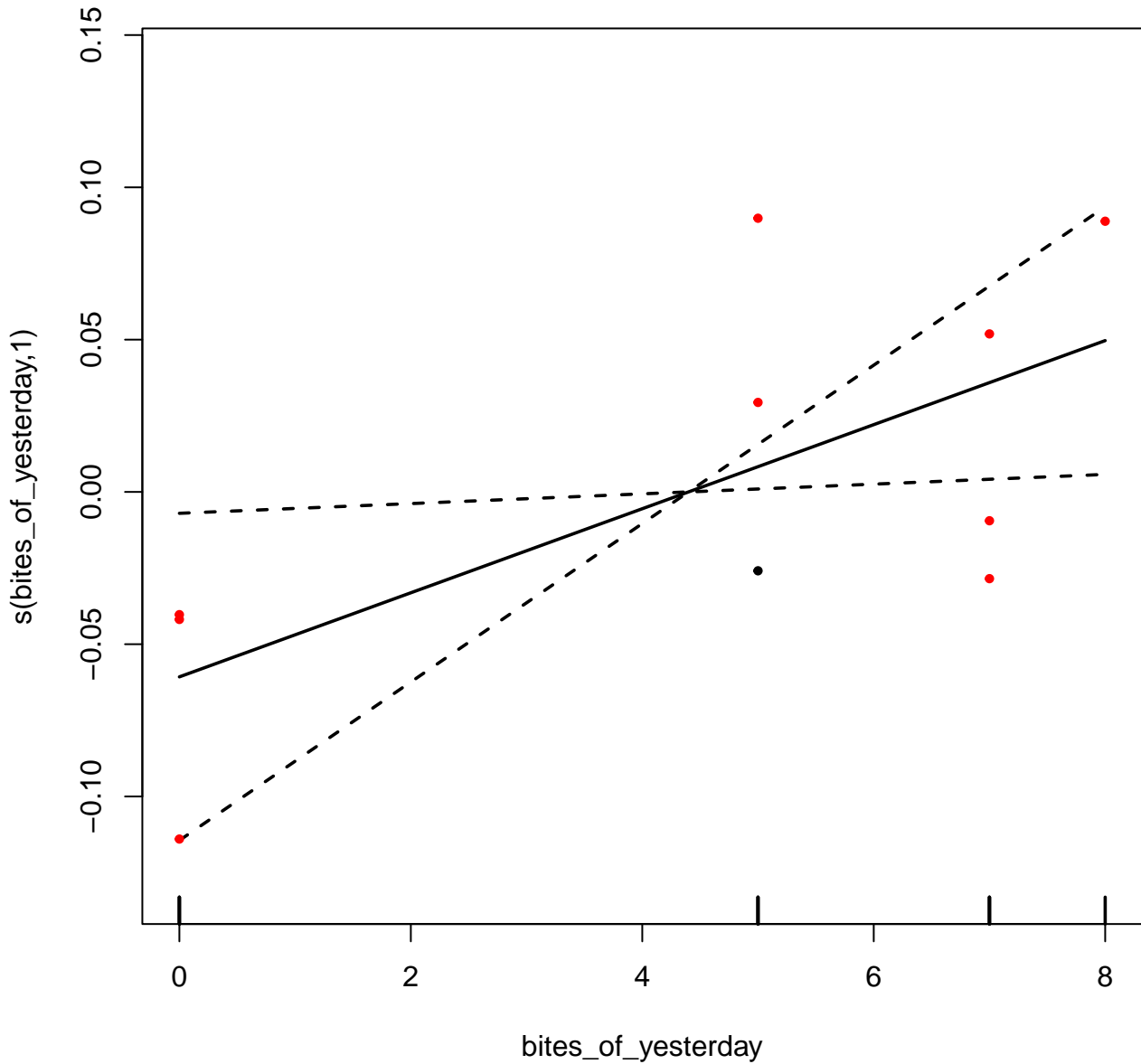
MIG

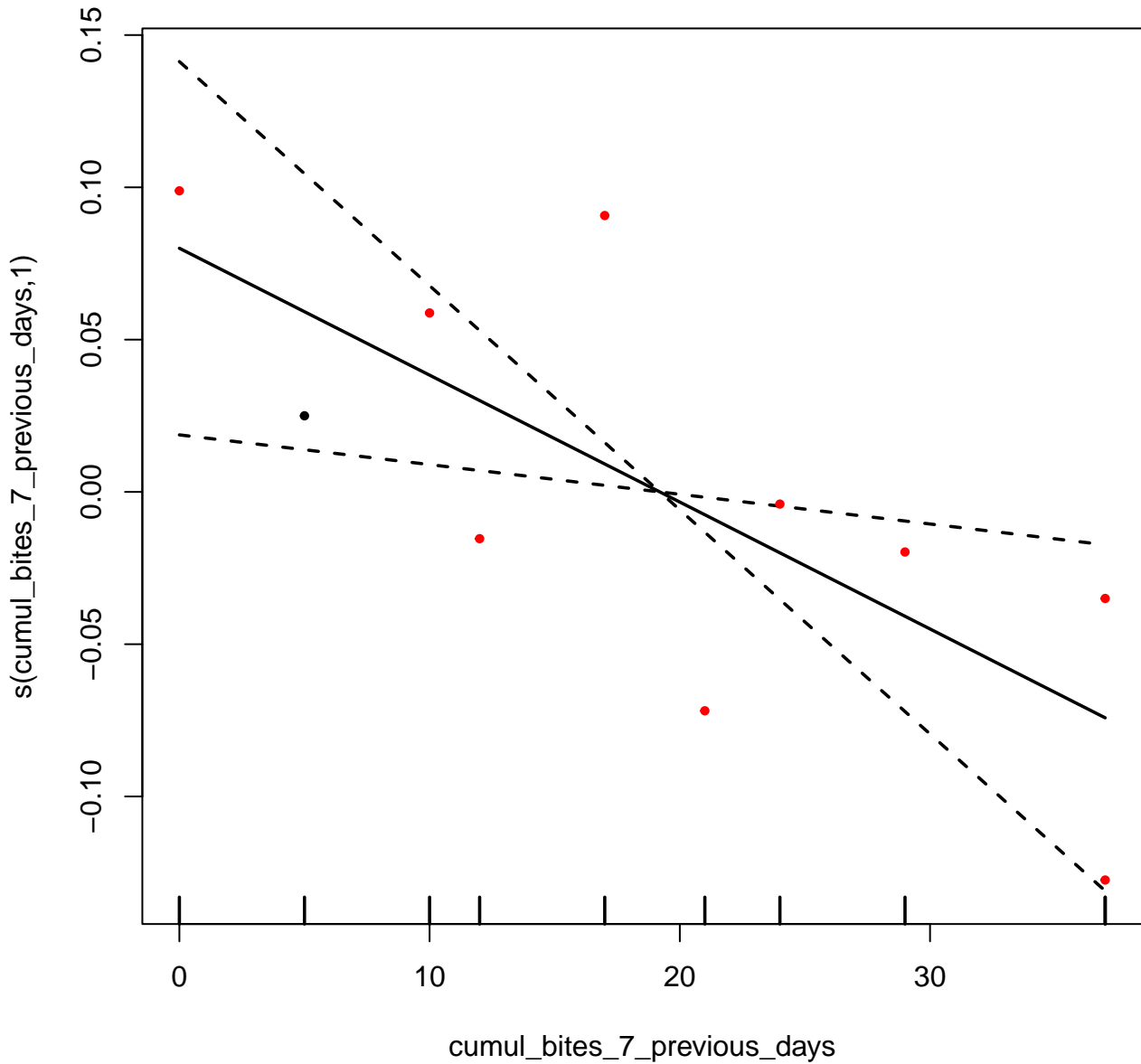
Bites in cyno

Nb excluded (LOD) : 26

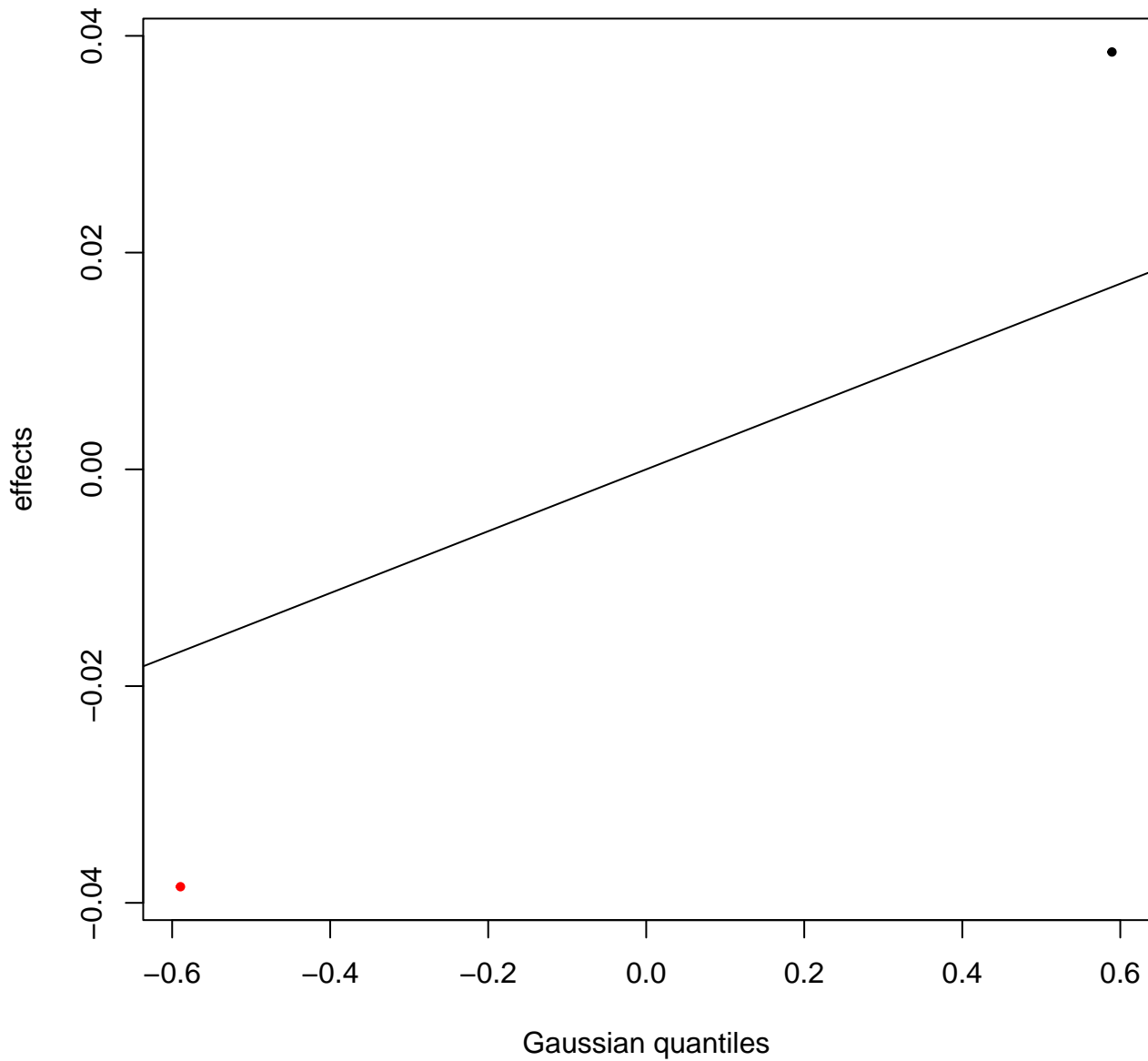
Nb remaining: 10

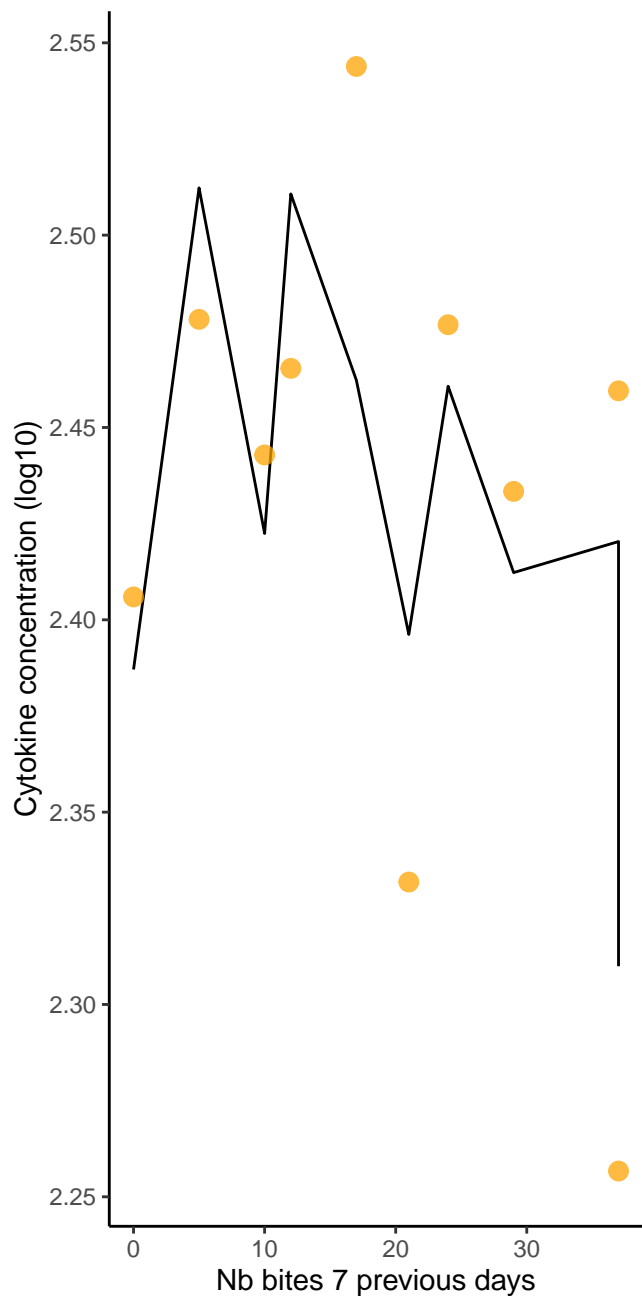
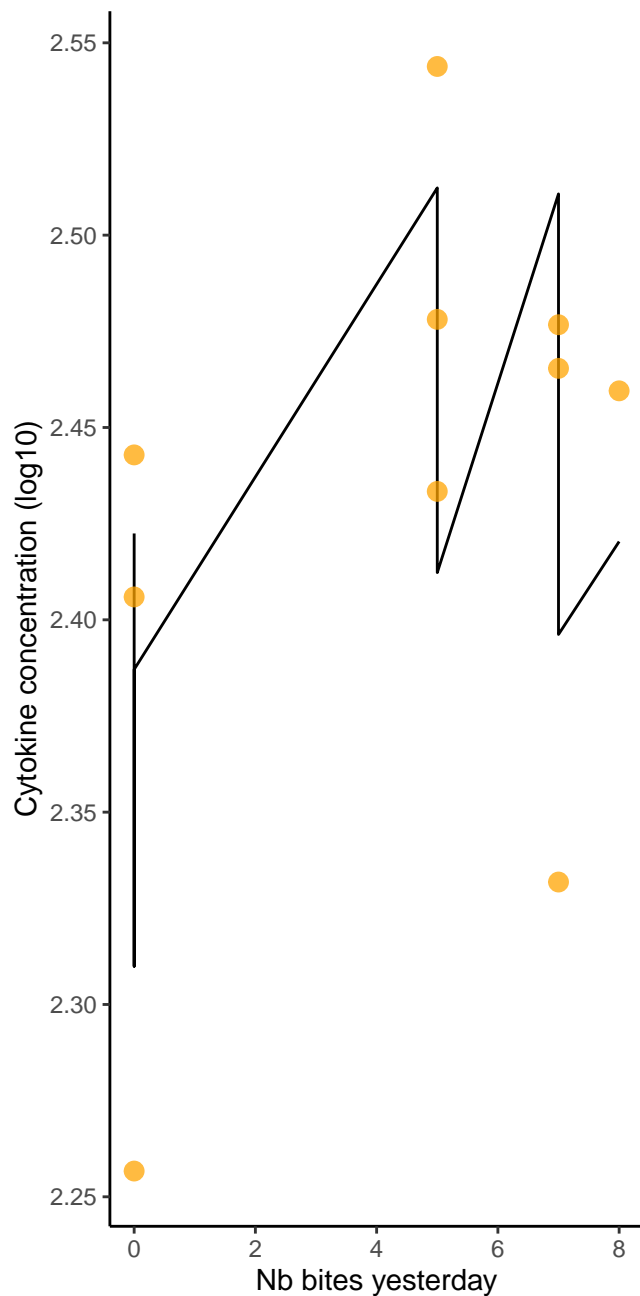


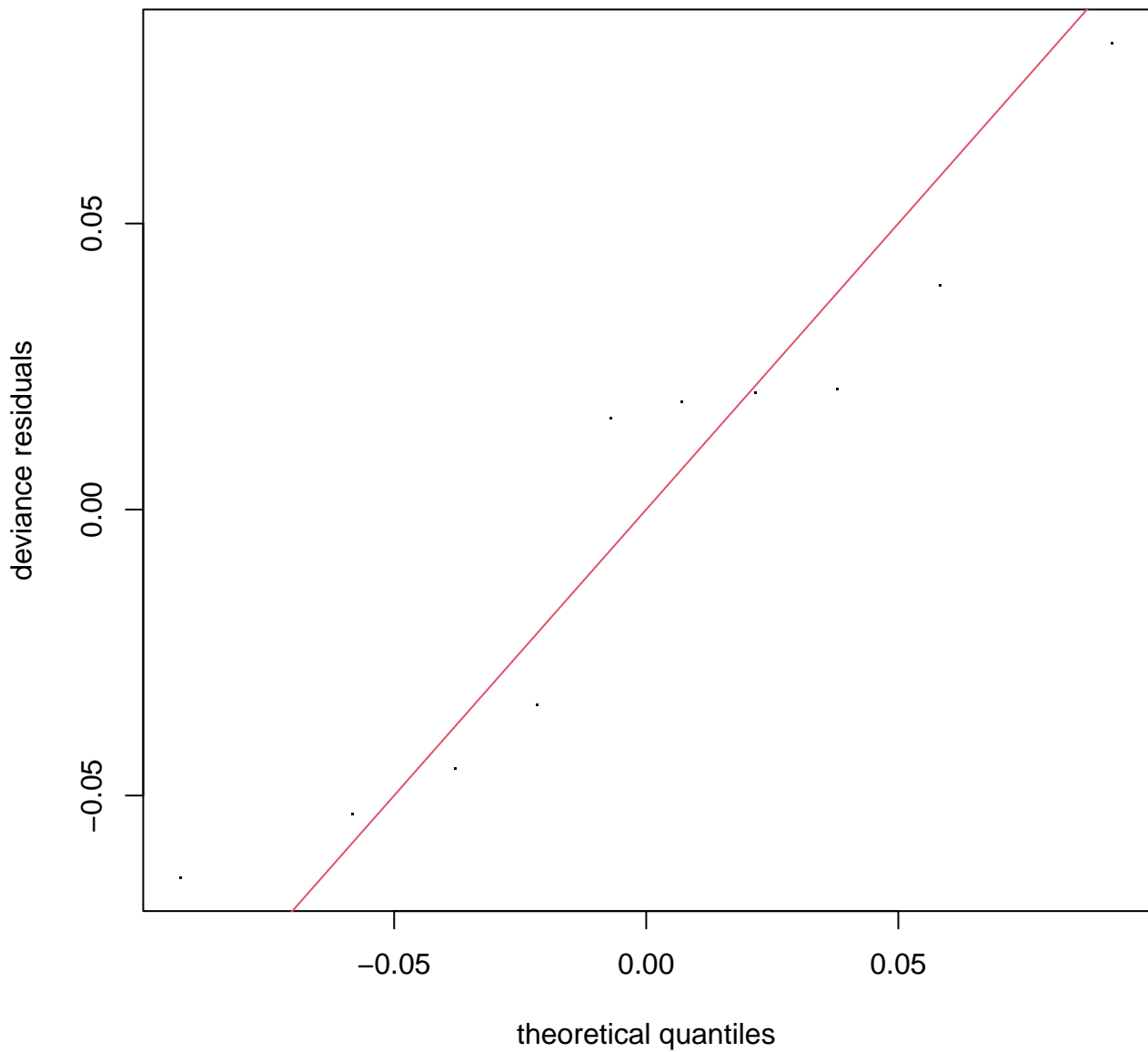




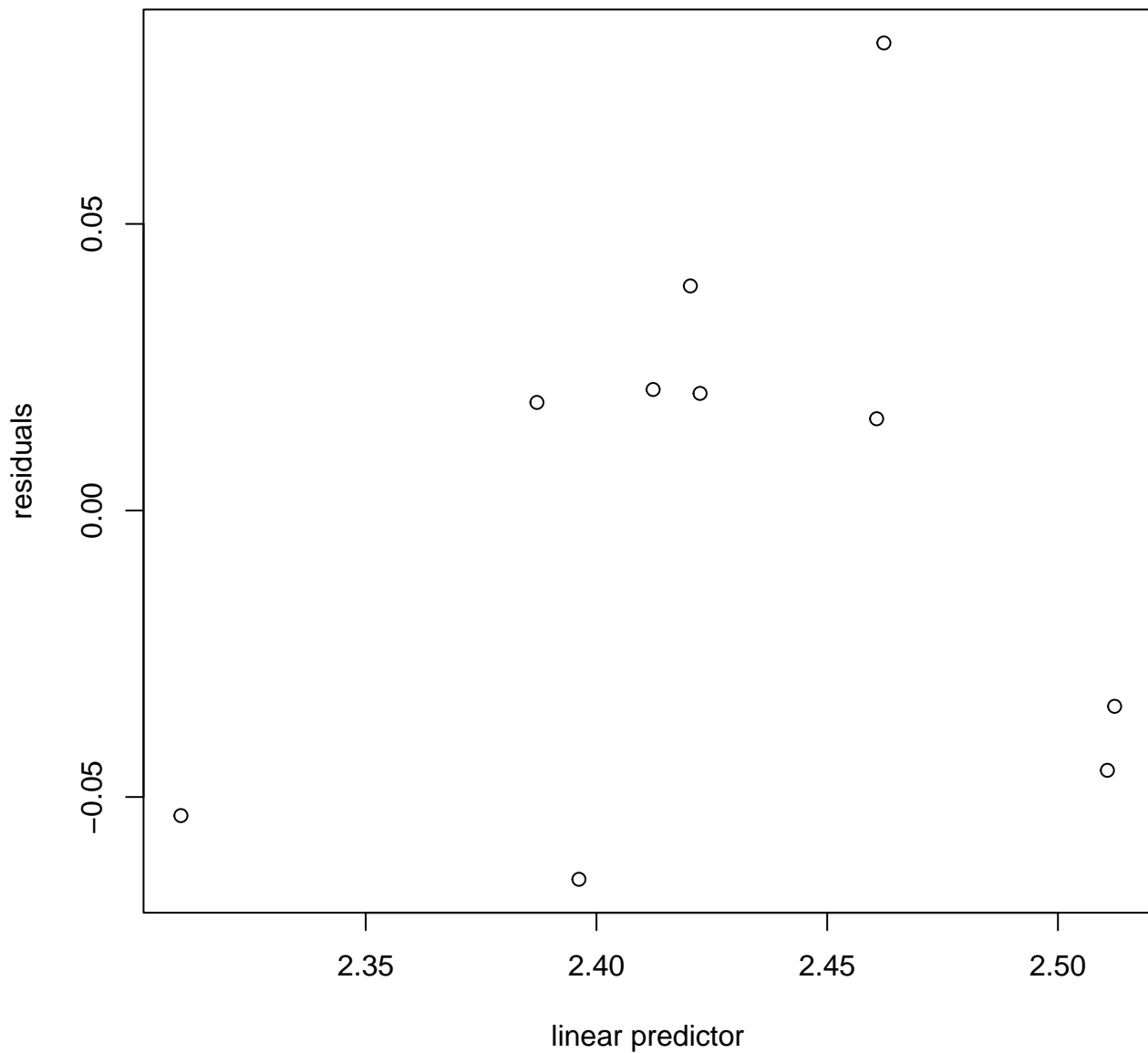
**s(ID,0.7)**



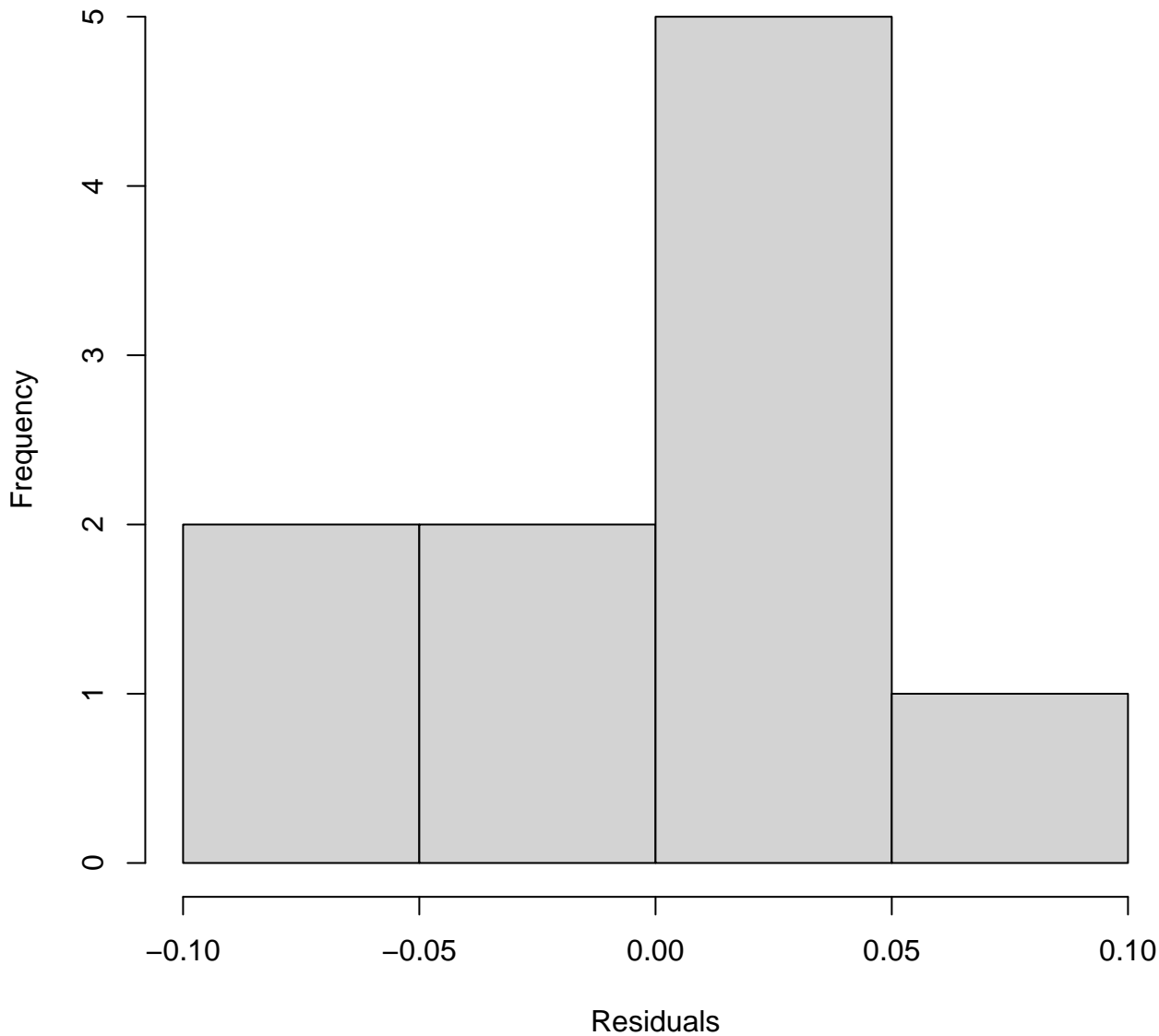




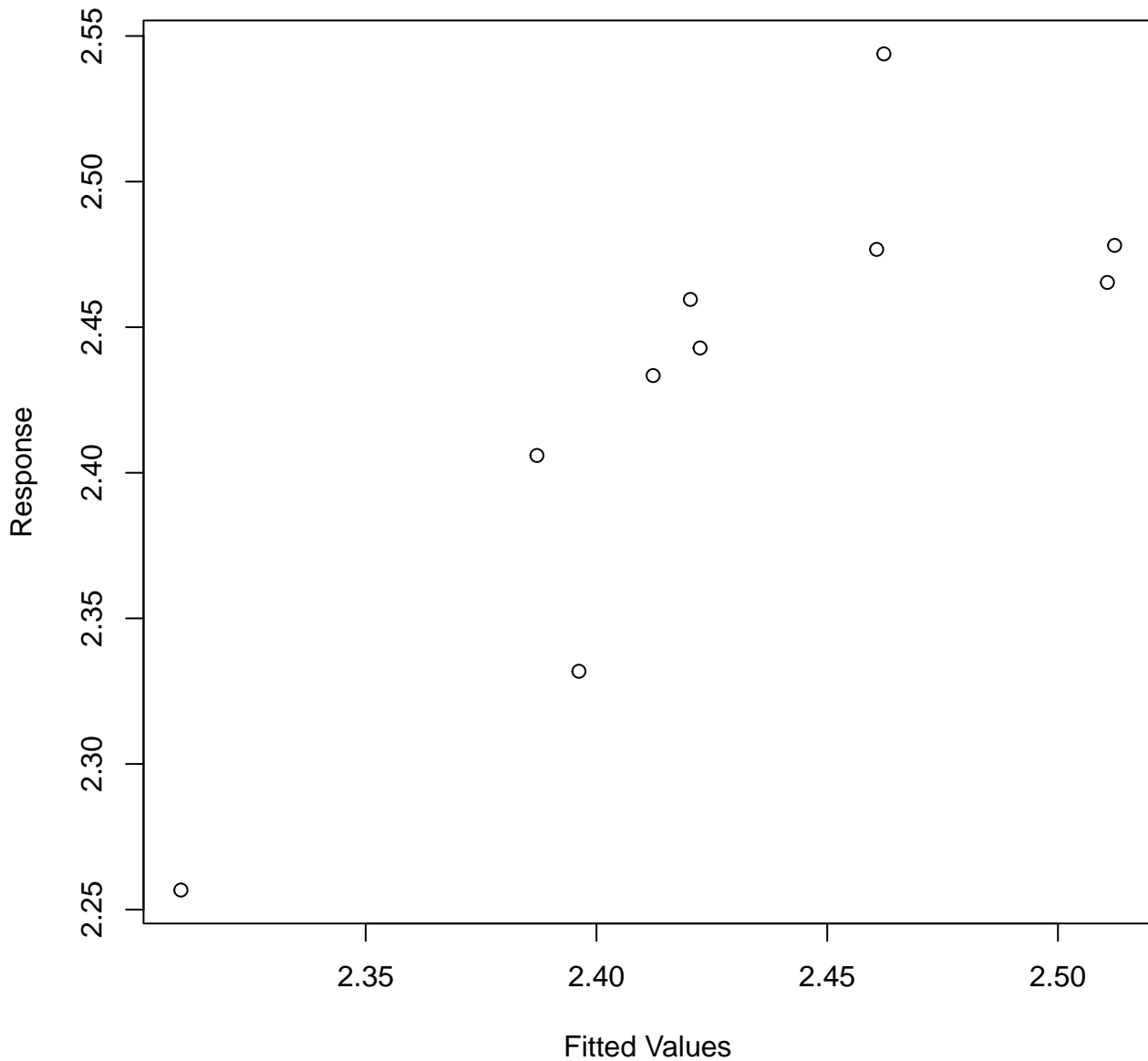
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**





Method: ML    Optimizer: outer newton  
 full convergence after 12 iterations.  
 Gradient range [-4.171852e-06,3.468629e-07]  
 (score -14.58438 & scale 0.003154247).  
 Hessian positive definite, eigenvalue range [2.711971e-06,5.121056].  
 Model rank = 9 / 9

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.000	1.000	1.56	0.95
s(cumul_bites_7_previous_days)	3.000	1.000	1.76	0.97
s(ID)	2.000	0.702	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.57	[1.21, 2.60]	1.25	0.64	[0.39, 0.83]	
s(cumul_bites_7_previous_days, k = 4)	1.57	[1.21, 2.60]	1.25	0.64	[0.39, 0.83]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	2.40632	0.04235	56.83	8.89e-10 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.0000	1	5.114	0.0644 .
s(cumul_bites_7_previous_days)	1.0000	1	6.817	0.0401 *
s(ID)	0.7017	1	3.726	0.0607 .

---

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

R-sq.(adj) = 0.527 Deviance explained = 66.9%  
-ML = -14.584 Scale est. = 0.0031542 n = 10

AICc [ 1 ] -9.813471

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

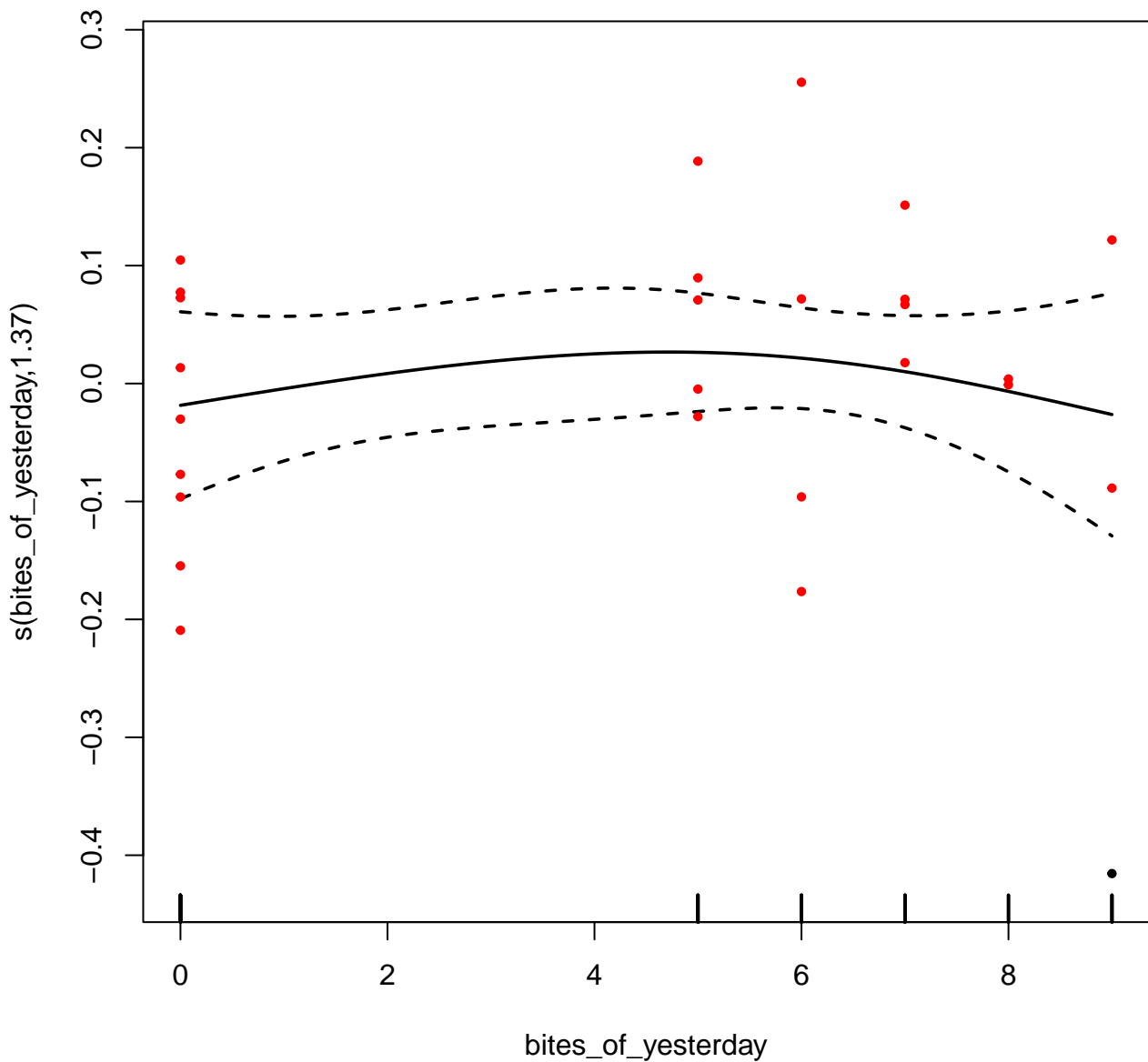
MIG ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

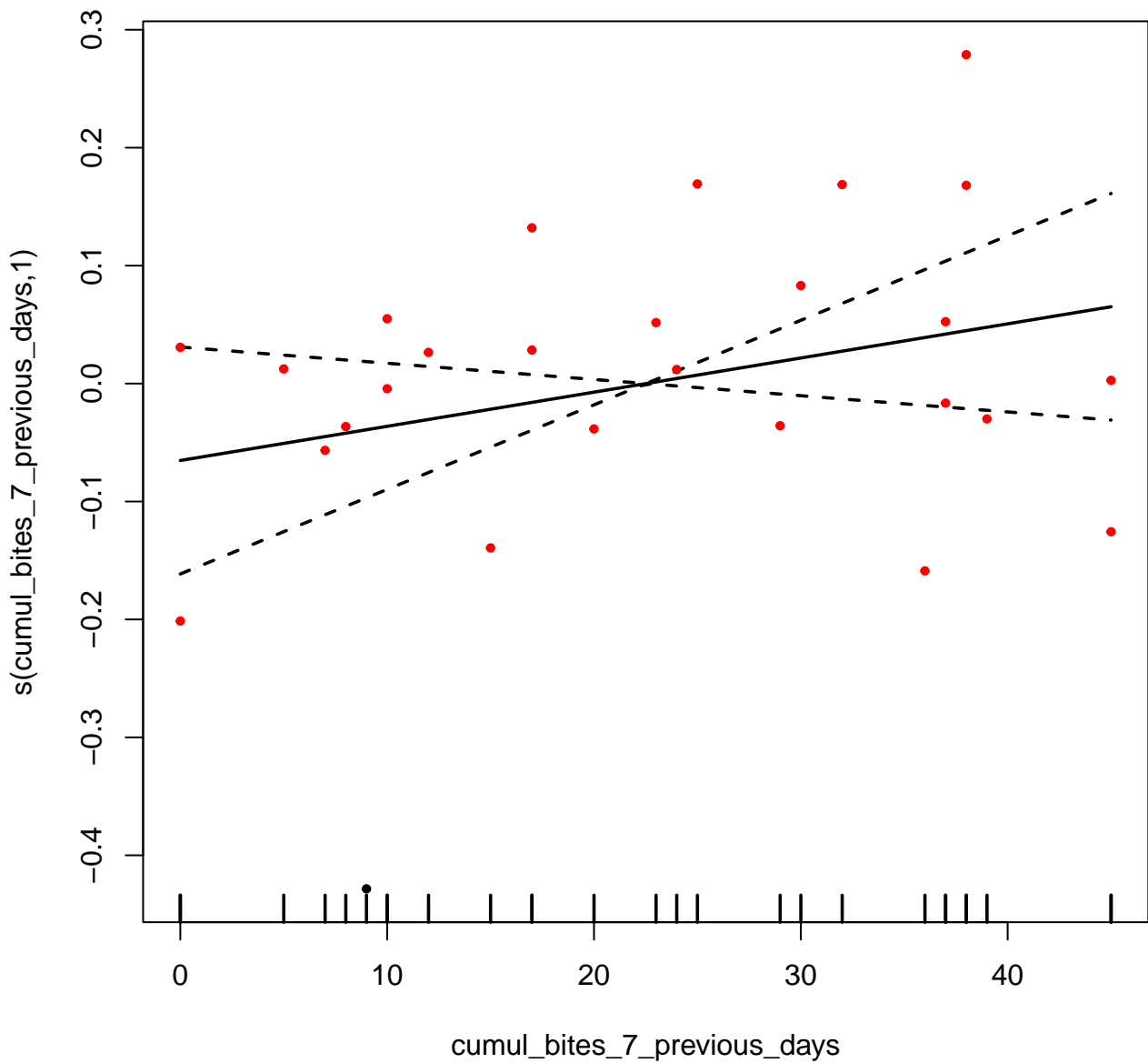
MIP.1a



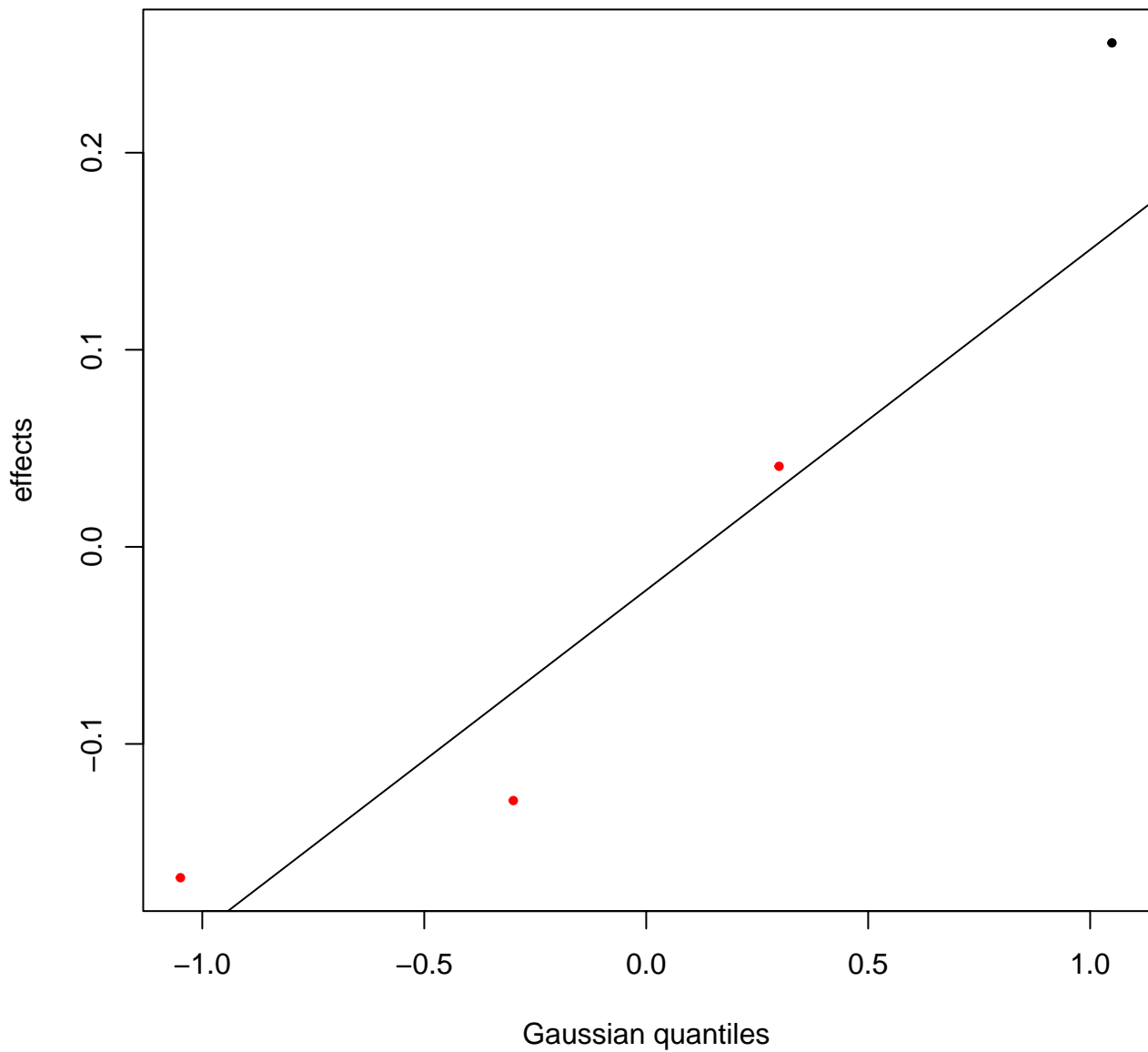
Bites in cyno

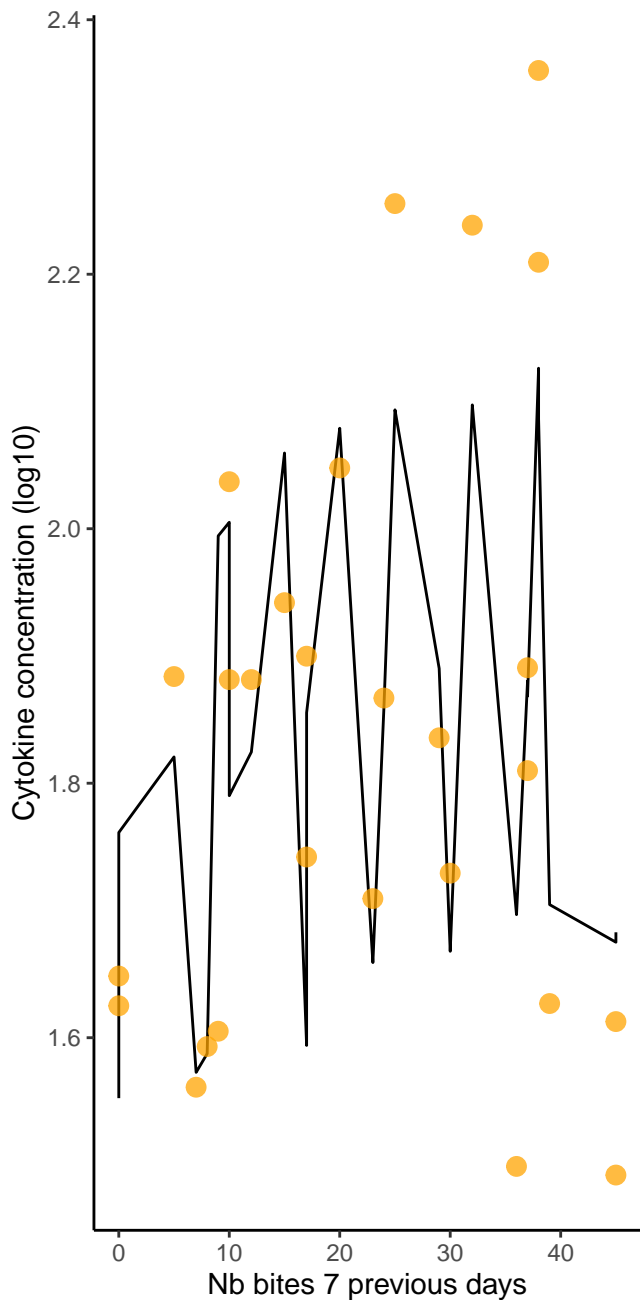
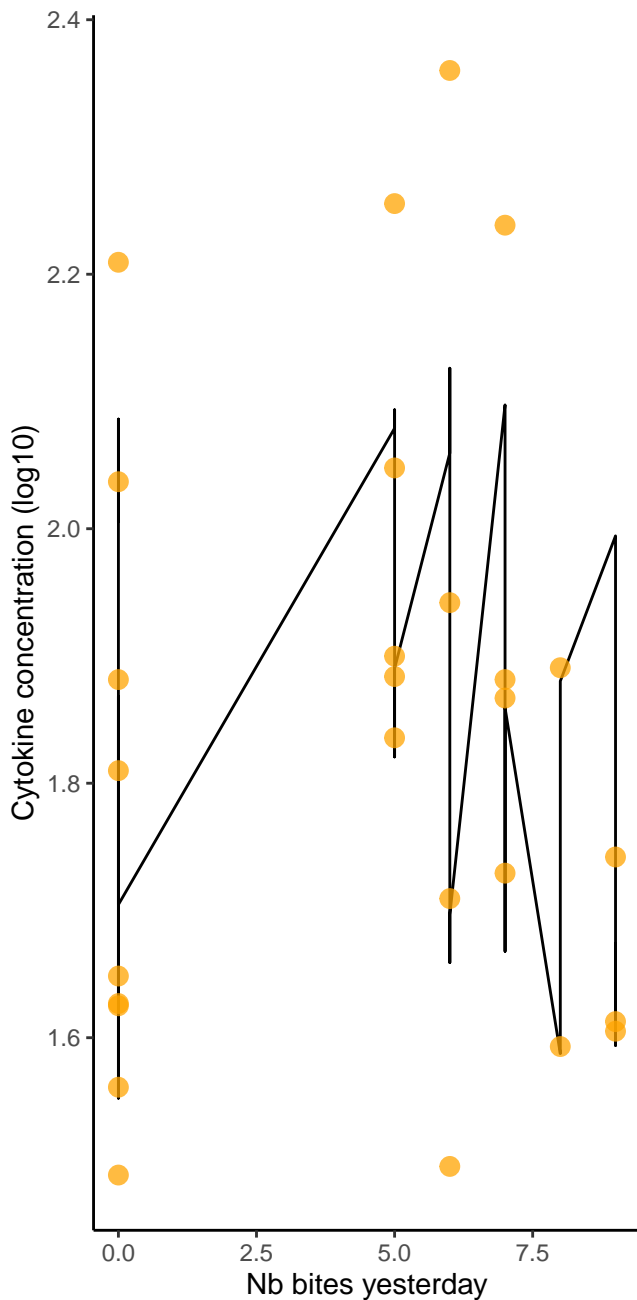
Nb excluded (LOD) : 9  
Nb remaining: 27

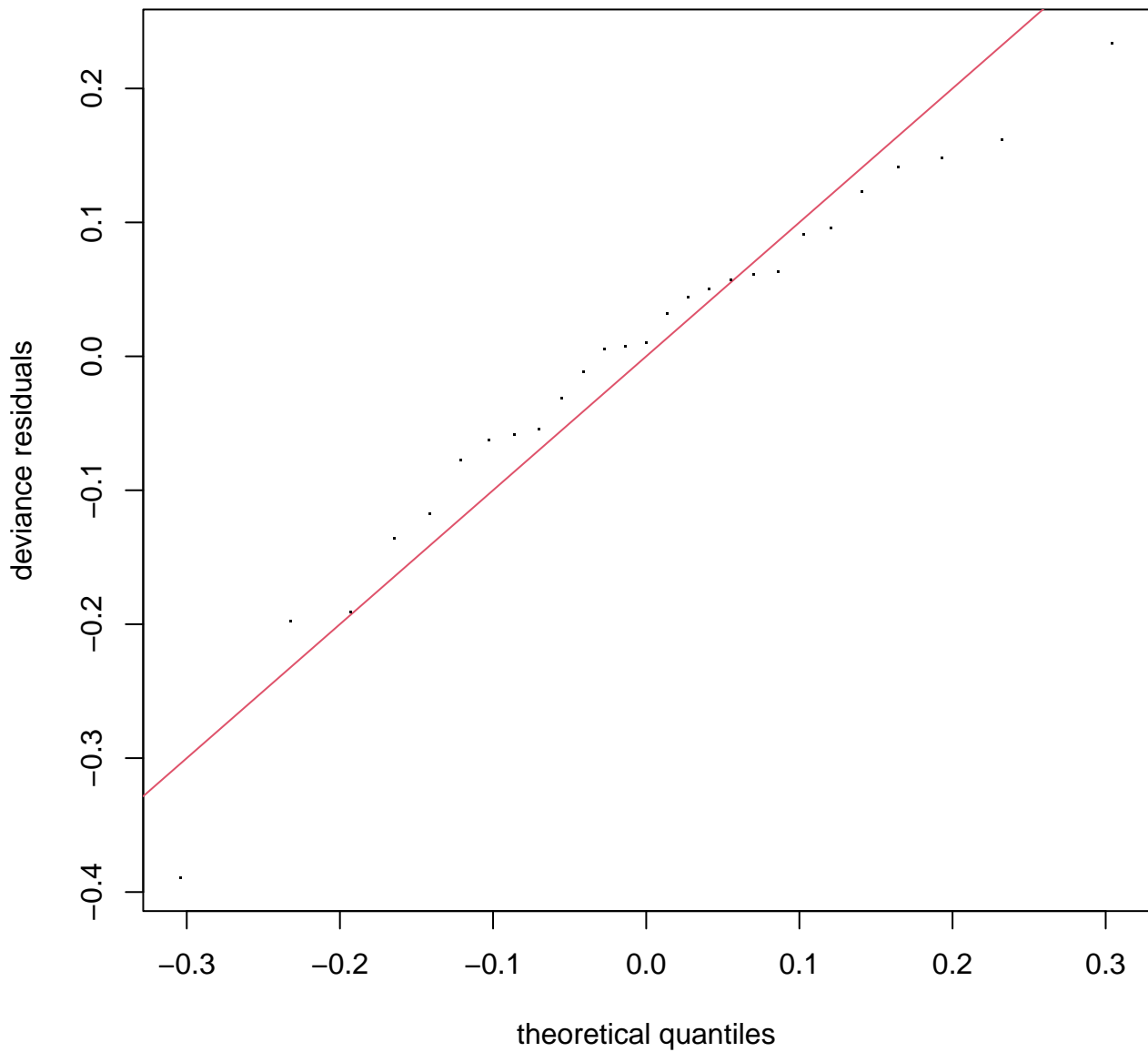




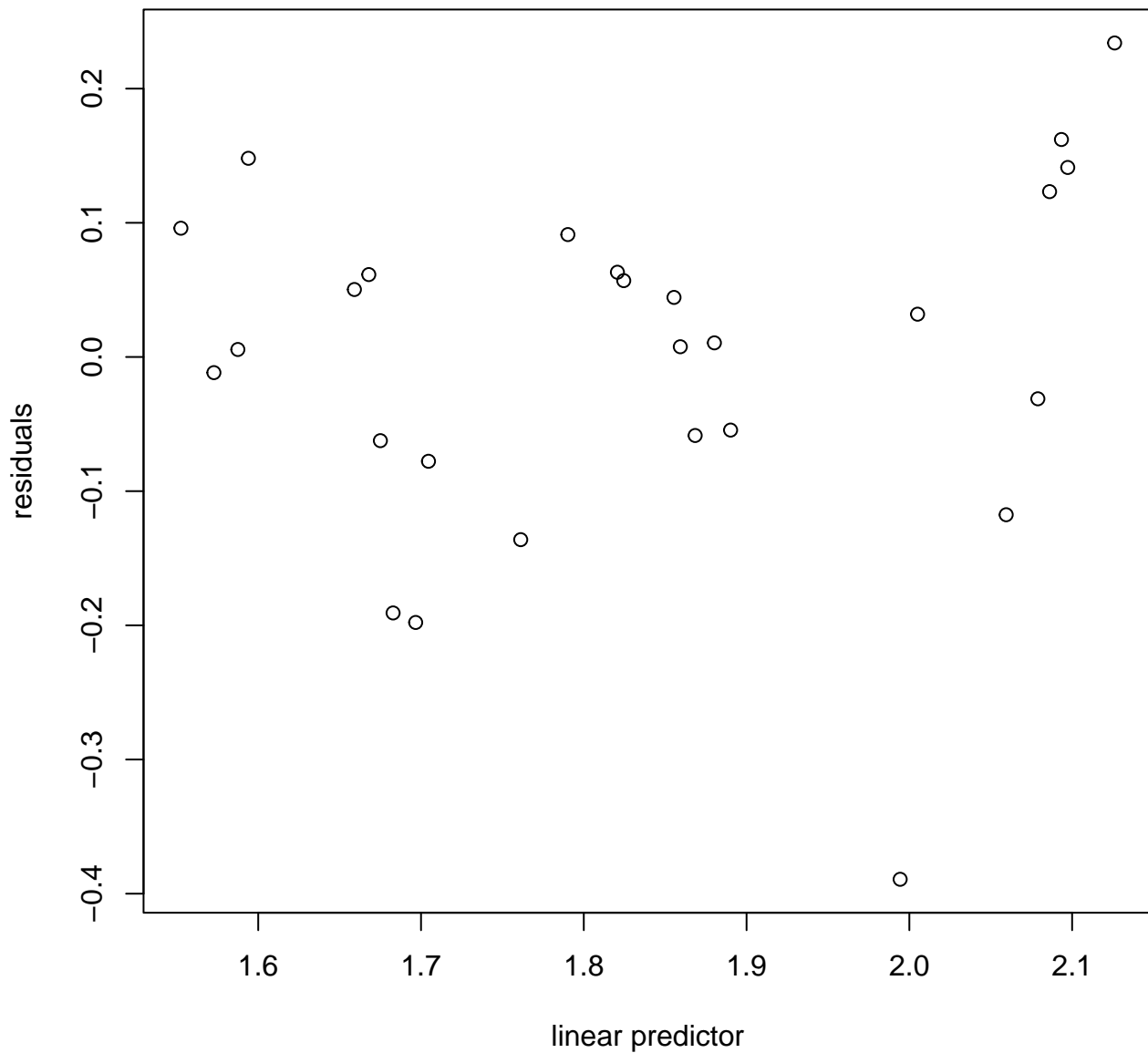
**s(ID,2.51)**





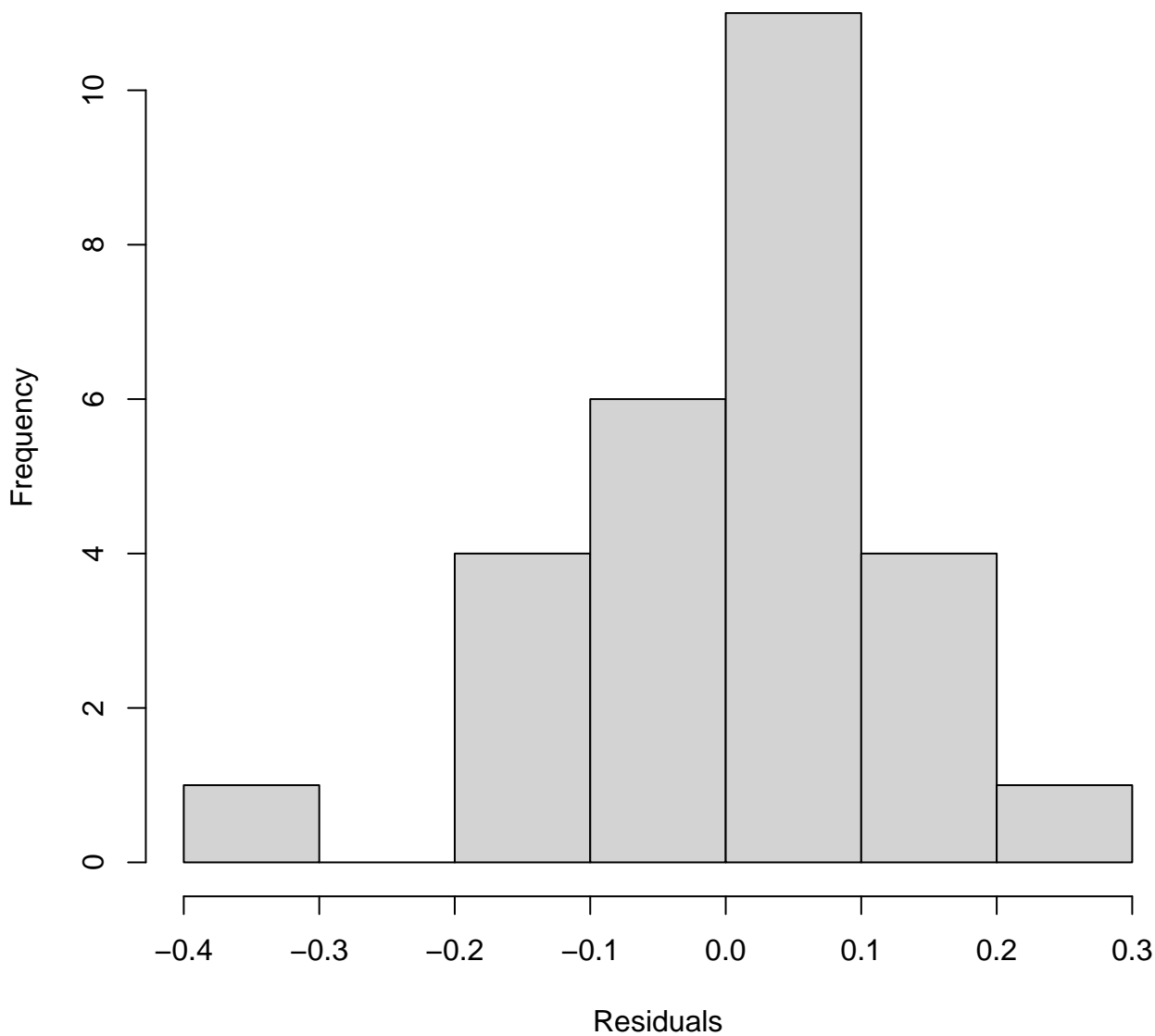


**Resids vs. linear pred.**

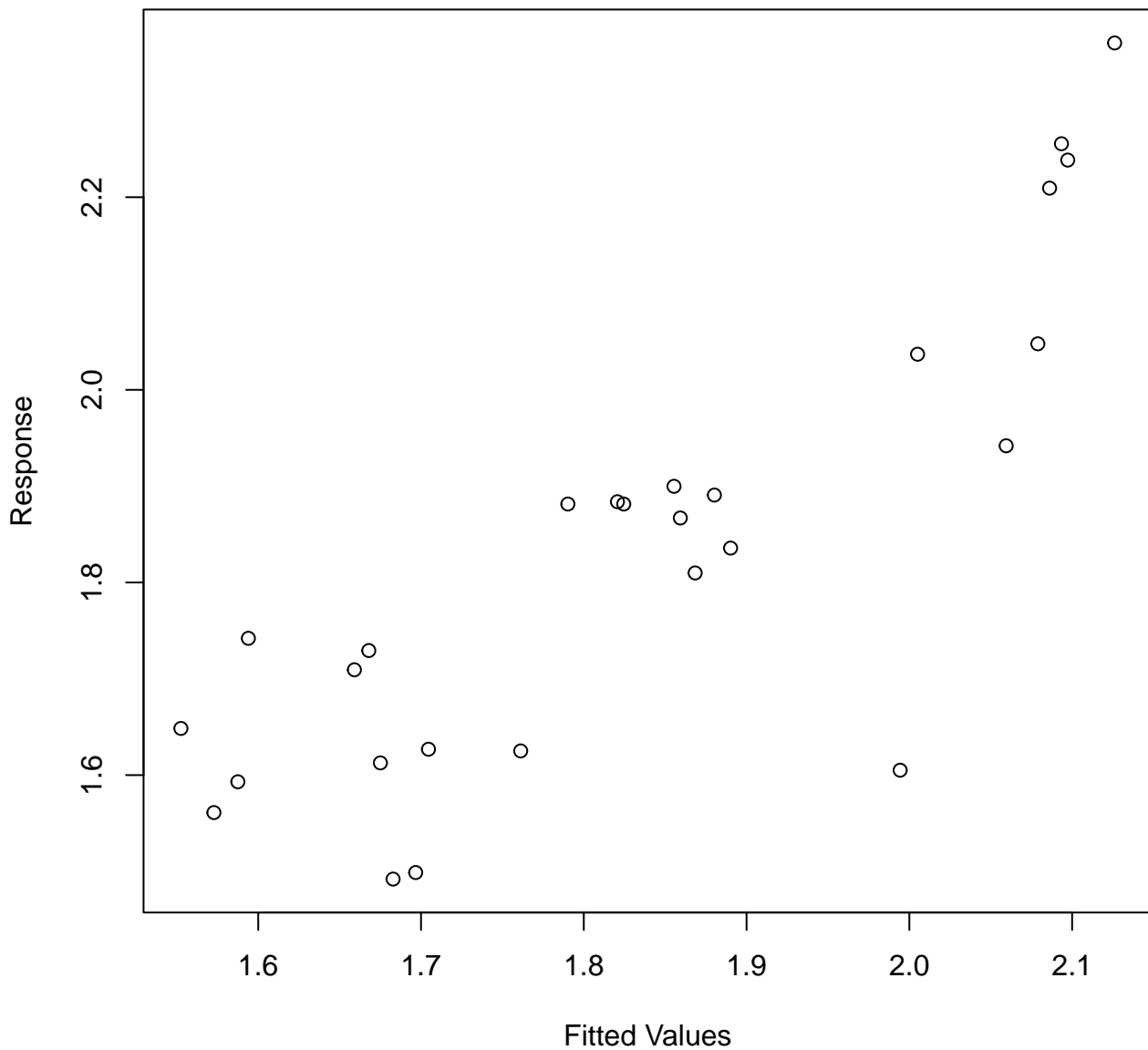




**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
full convergence after 11 iterations.  
Gradient range [-5.325851e-06,3.727163e-06]  
(score -9.457523 & scale 0.02126638).  
Hessian positive definite, eigenvalue range [5.325747e-06,13.7521].  
Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.37	1.19	0.81
s(cumul_bites_7_previous_days)	3.00	1.00	1.12	0.63
s(ID)	4.00	2.51	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.91	[1.37, 3.26]	1.38	0.52	[0.31, 0.73]	
s(cumul_bites_7_previous_days, k = 4)	1.29	[1.06, 2.42]	1.14	0.77	[0.41, 0.94]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.8041	0.1017	17.73	3.64e-14 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.366	1.614	0.379	0.595
s(cumul_bites_7_previous_days)	1.000	1.000	1.838	0.190
s(ID)	2.511	3.000	12.974	1.61e-05 ***

---

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

R-sq.(adj) = 0.63 Deviance explained = 69.9%  
-ML = -9.4575 Scale est. = 0.021266 n = 27

AICc [1] -12.1736

Bites in squirrel

Nb excluded (LOD) : 19

Nb remaining: 1

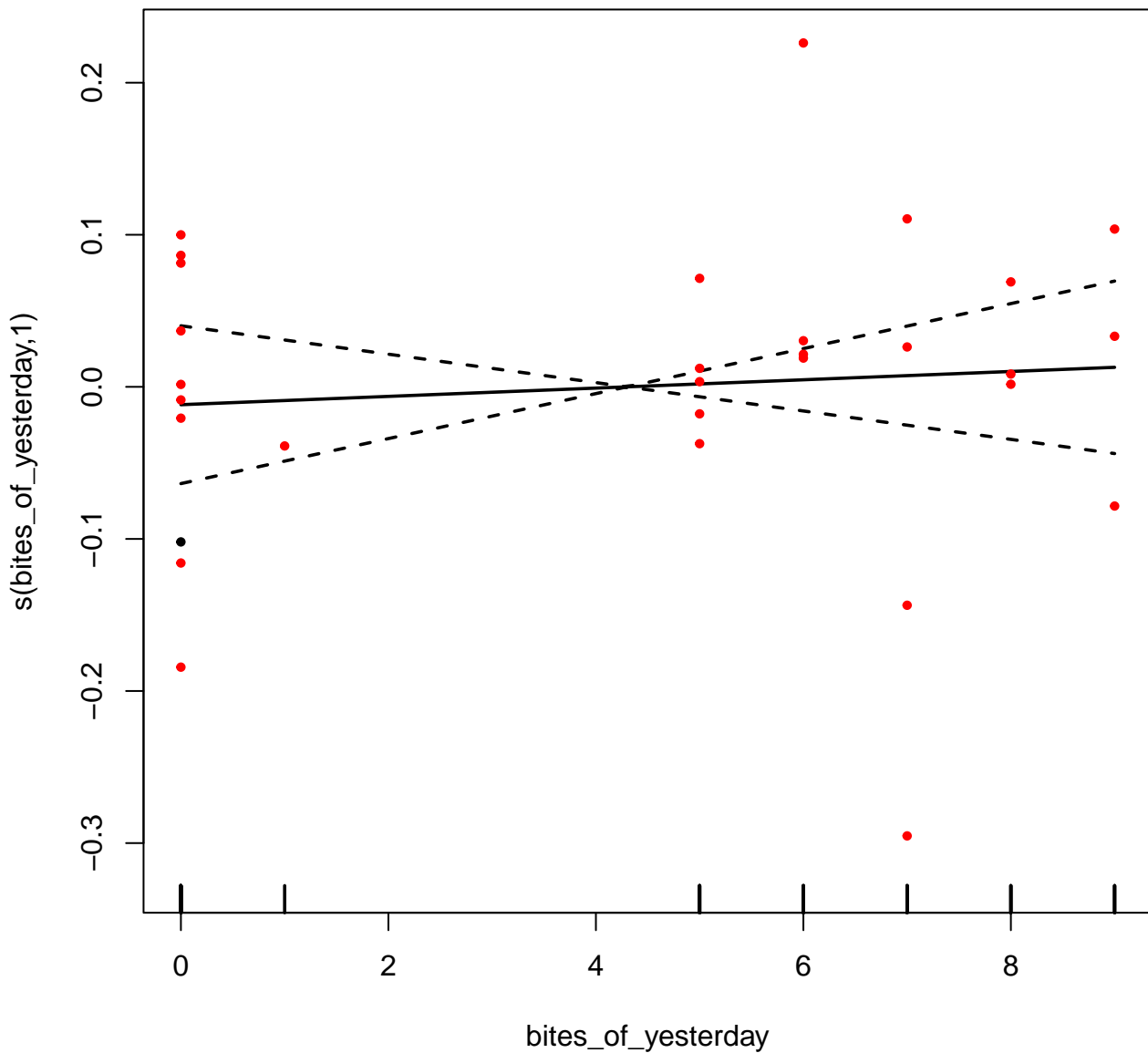


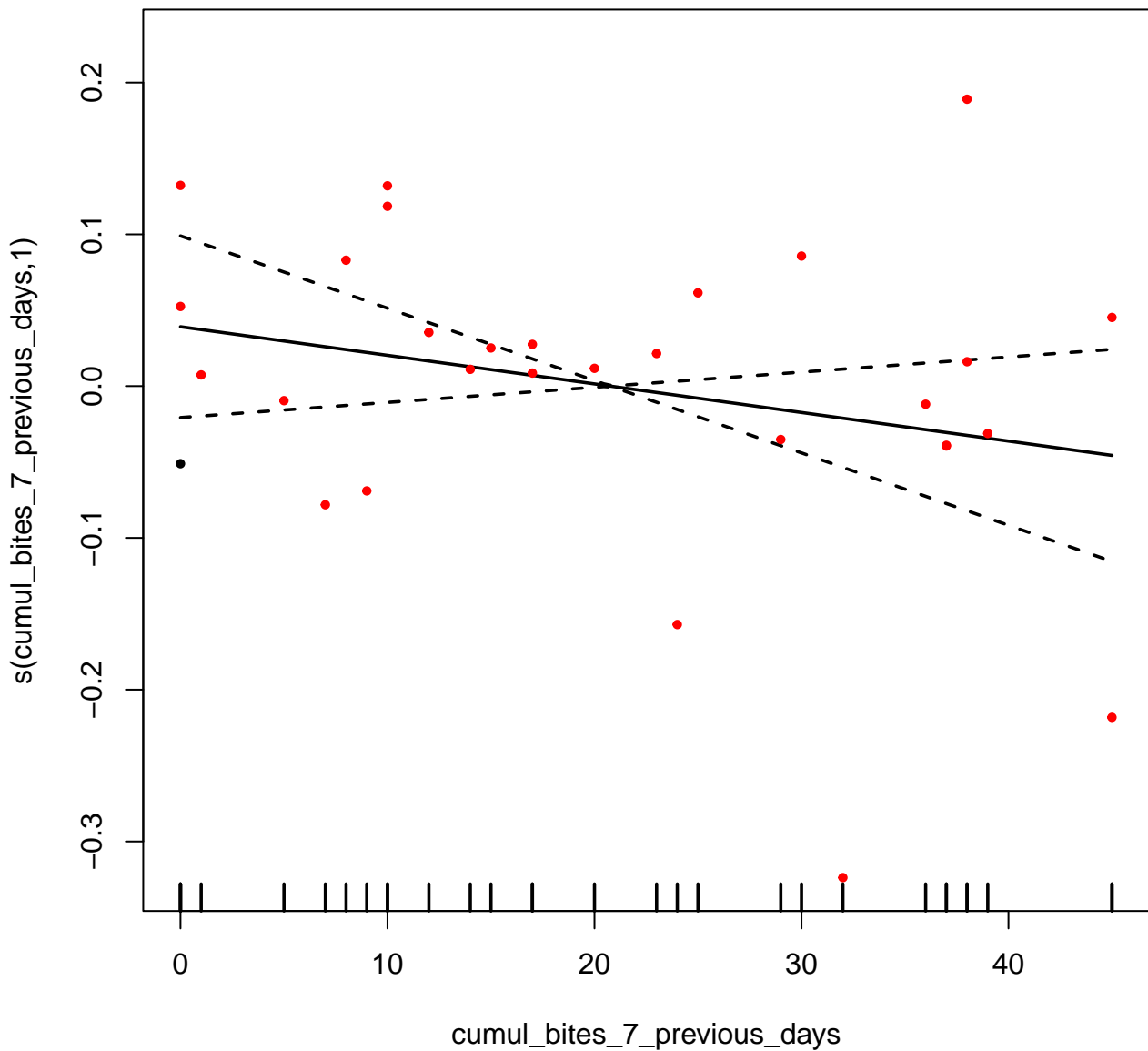
MIP.1a ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

MIP.1B

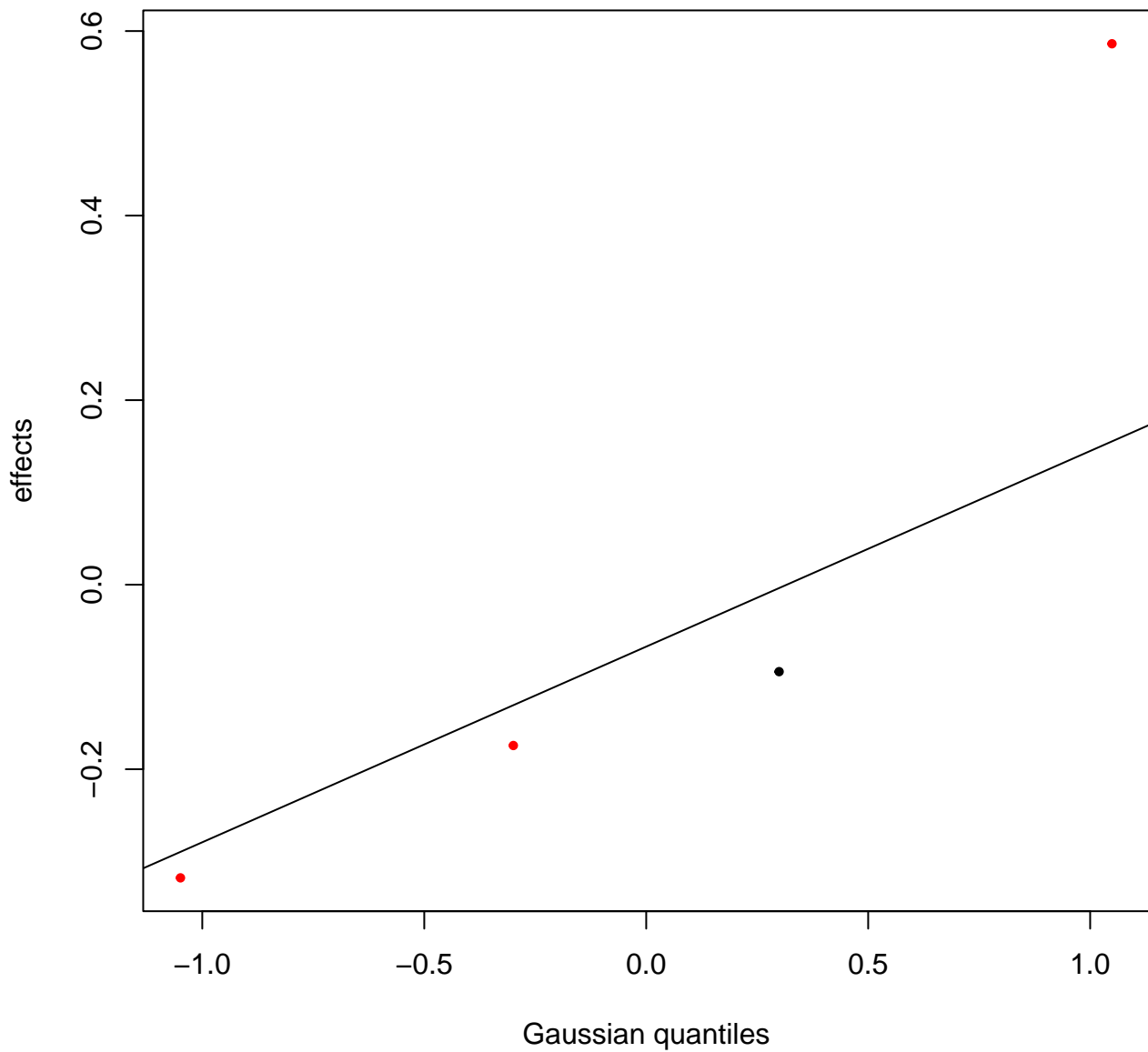
Bites in cyno

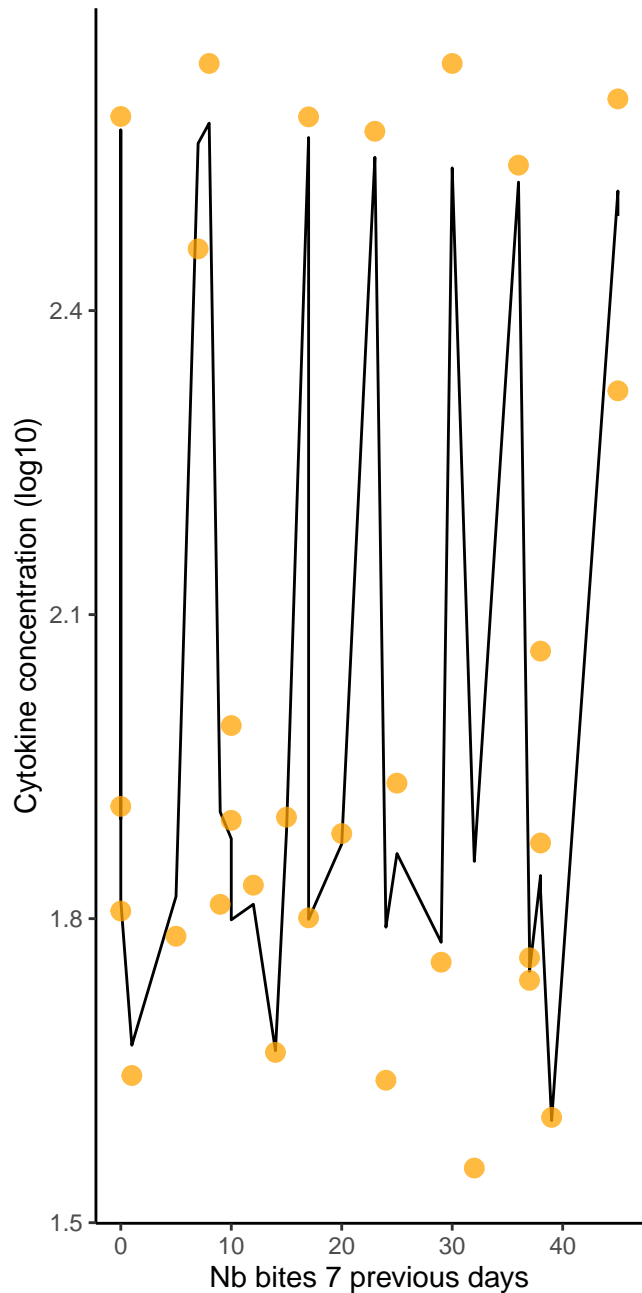
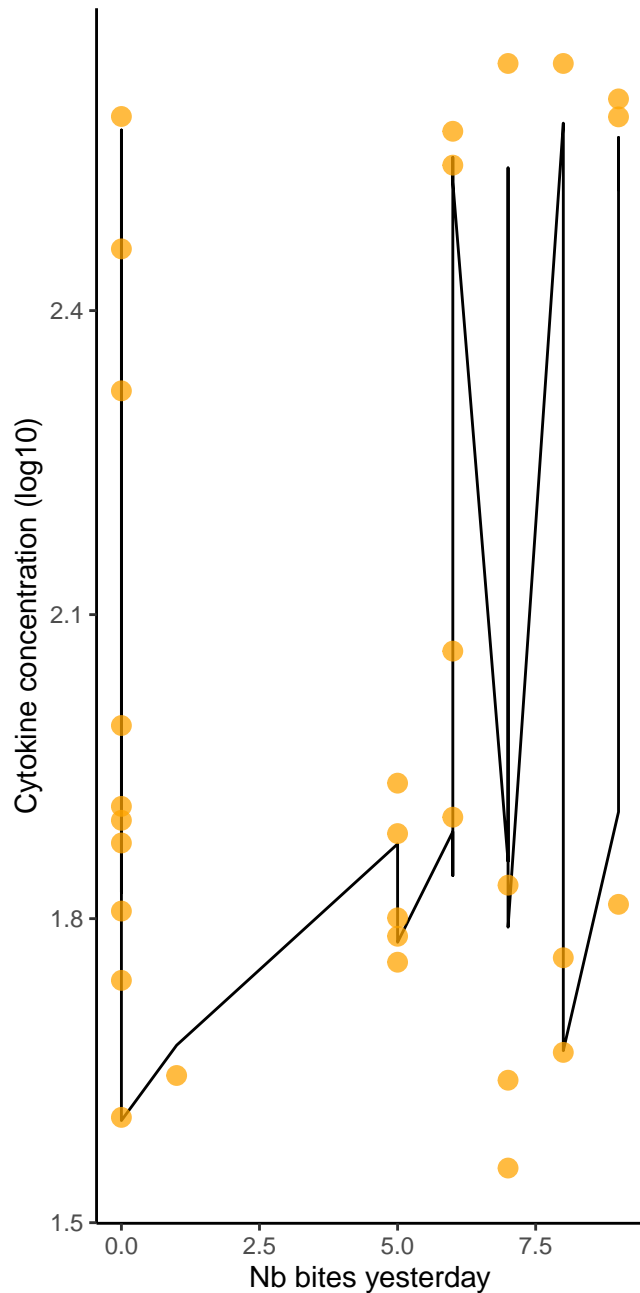
Nb excluded (LOD) : 6  
Nb remaining: 30



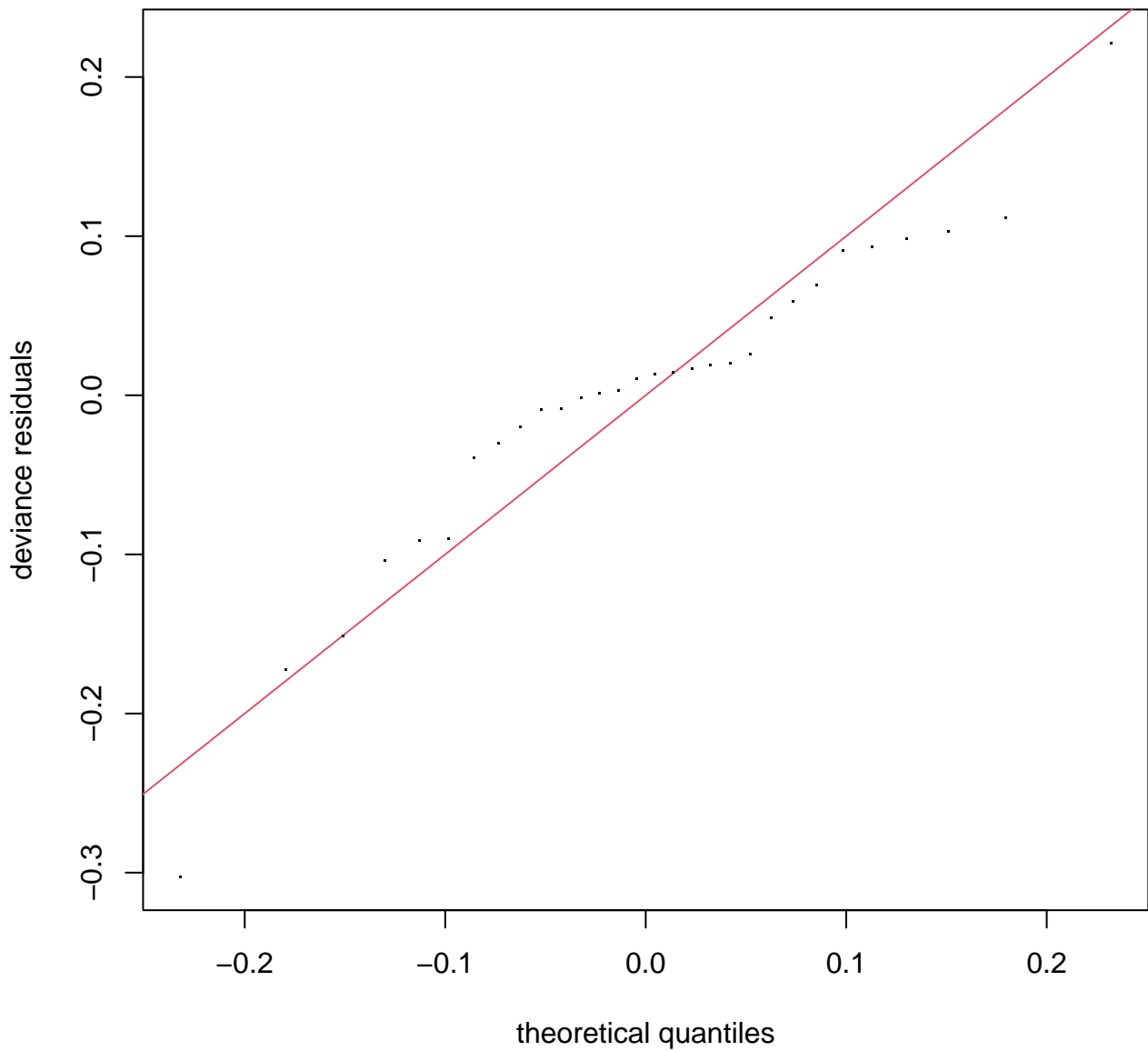


**s(ID,2.96)**

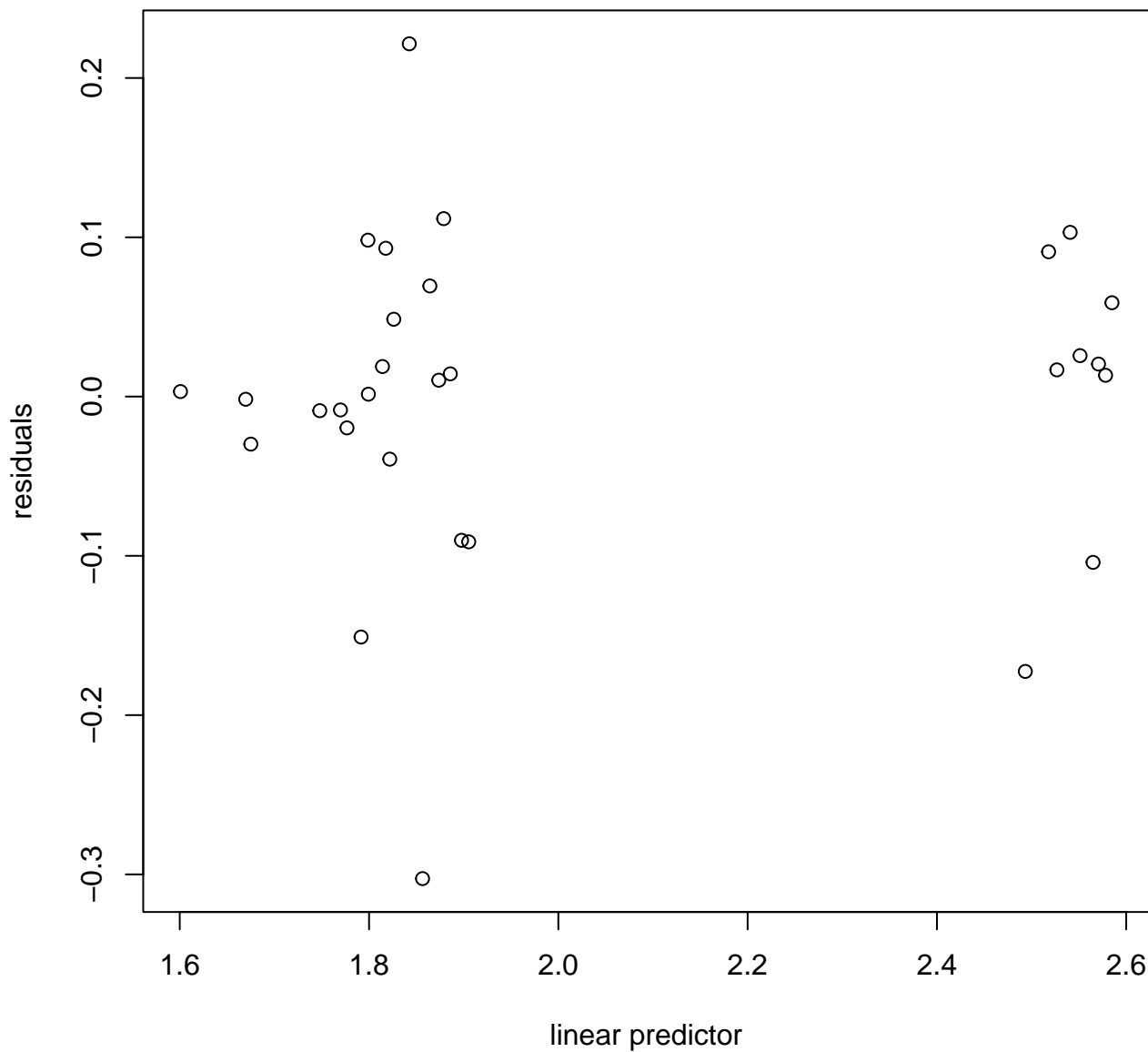




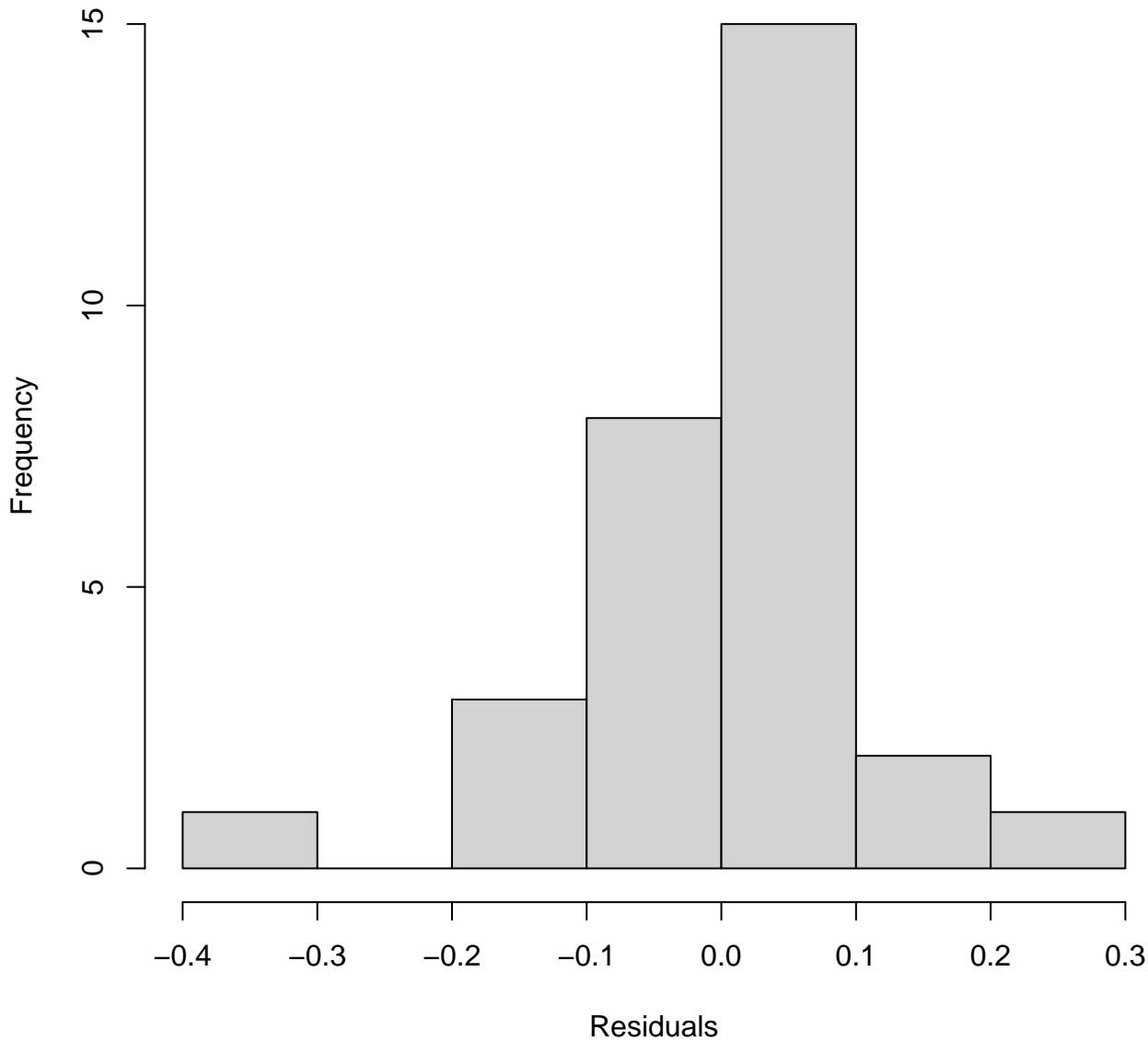




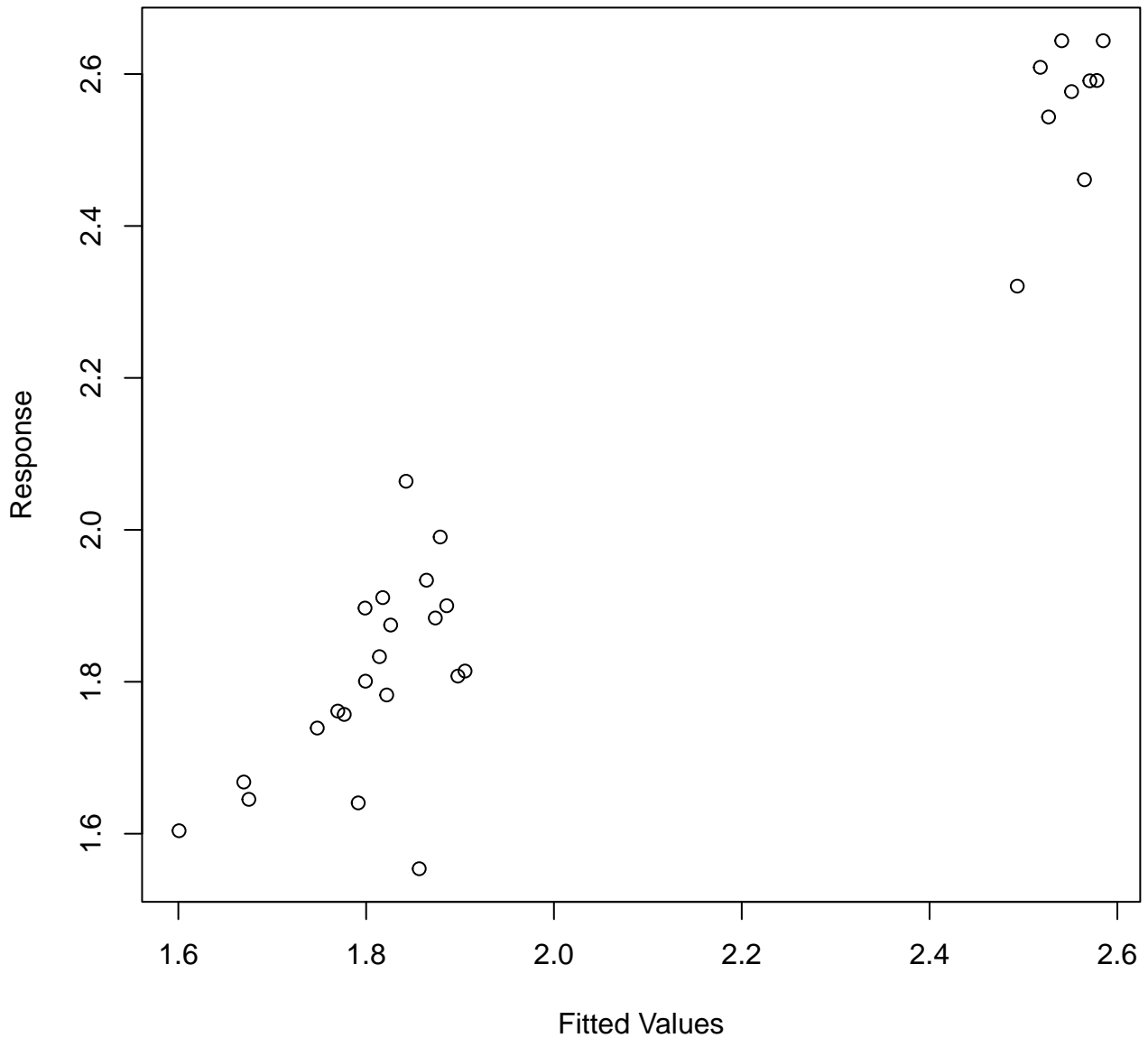
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 11 iterations.  
 Gradient range [-5.243059e-06,9.613701e-08]  
 (score -16.40787 & scale 0.01189612).  
 Hessian positive definite, eigenvalue range [1.388128e-06,15.29097].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.00	1.13	0.73
s(cumul_bites_7_previous_days)	3.00	1.00	1.21	0.77
s(ID)	4.00	2.96	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.44	[1.13, 2.48]	1.20	0.70	[0.40, 0.89]	
s(cumul_bites_7_previous_days, k = 4)	1.44	[1.13, 2.48]	1.20	0.70	[0.40, 0.89]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.9646	0.1837	10.69	1.28e-10 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1	0.205	0.655
s(cumul_bites_7_previous_days)	1.000	1	1.709	0.204
s(ID)	2.955	3	99.461	<2e-16 ***

---

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

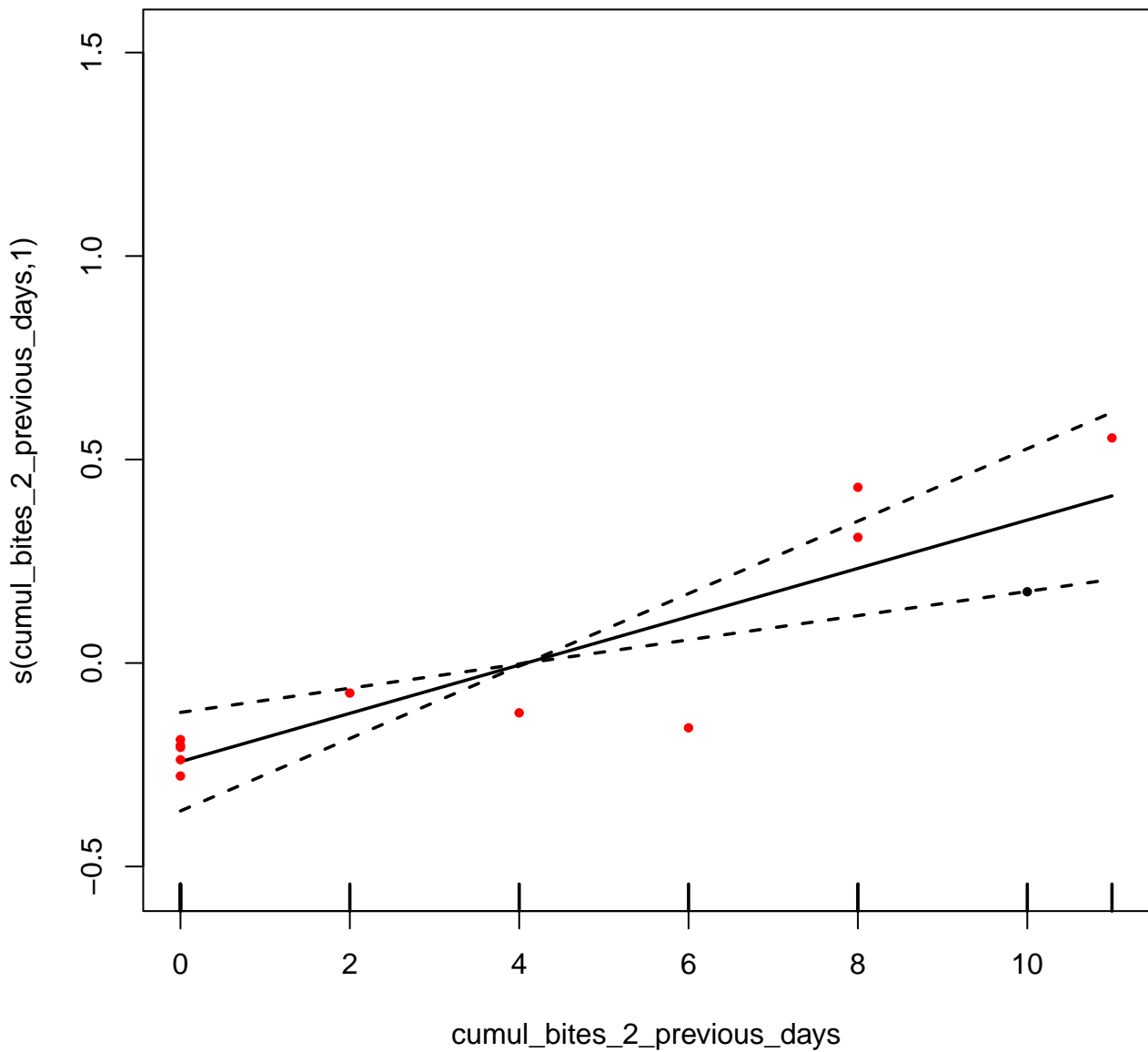
R-sq.(adj) = 0.913 Deviance explained = 92.8%  
-ML = -16.408 Scale est. = 0.011896 n = 30

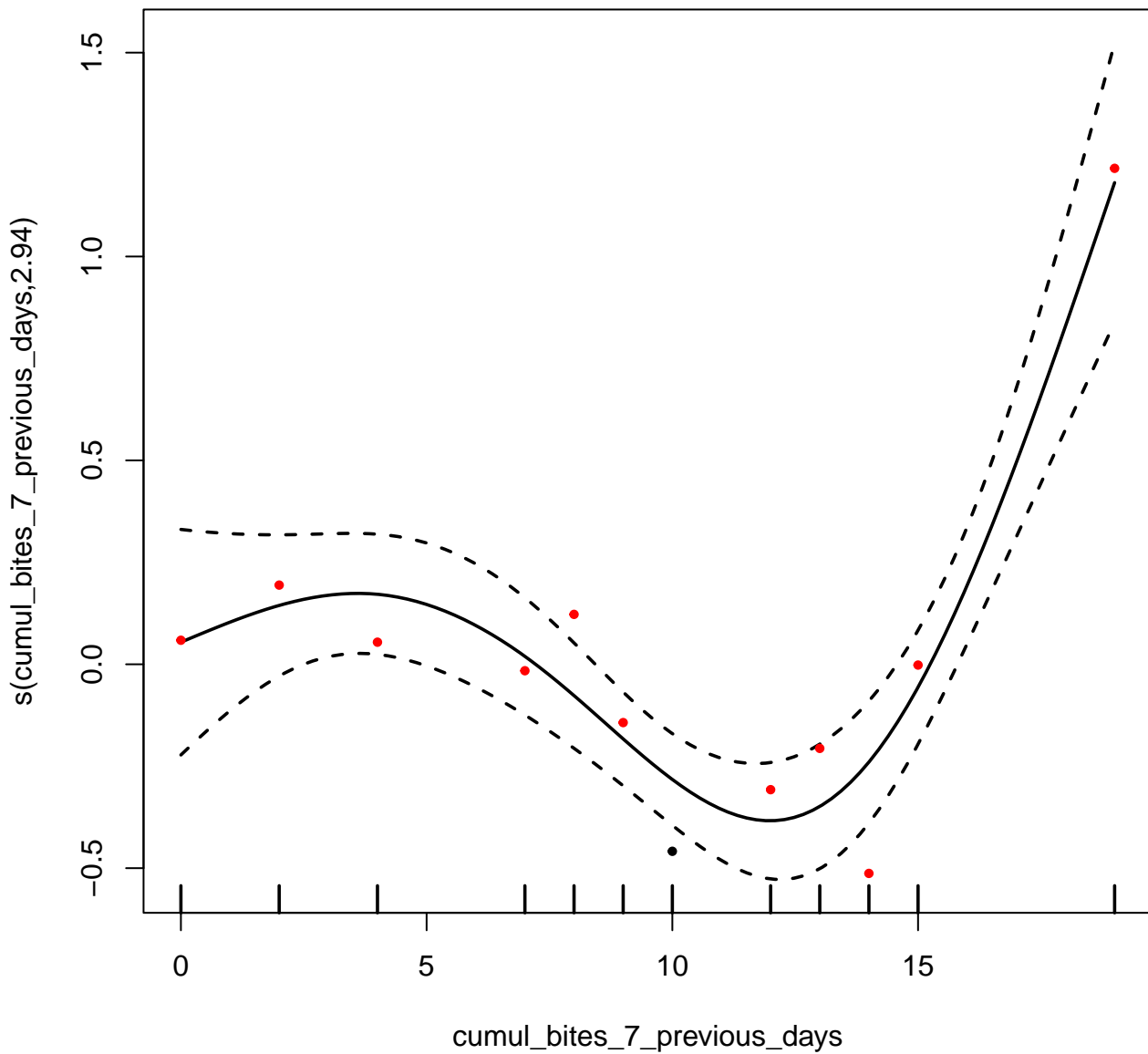
AICc [1] -35.37677



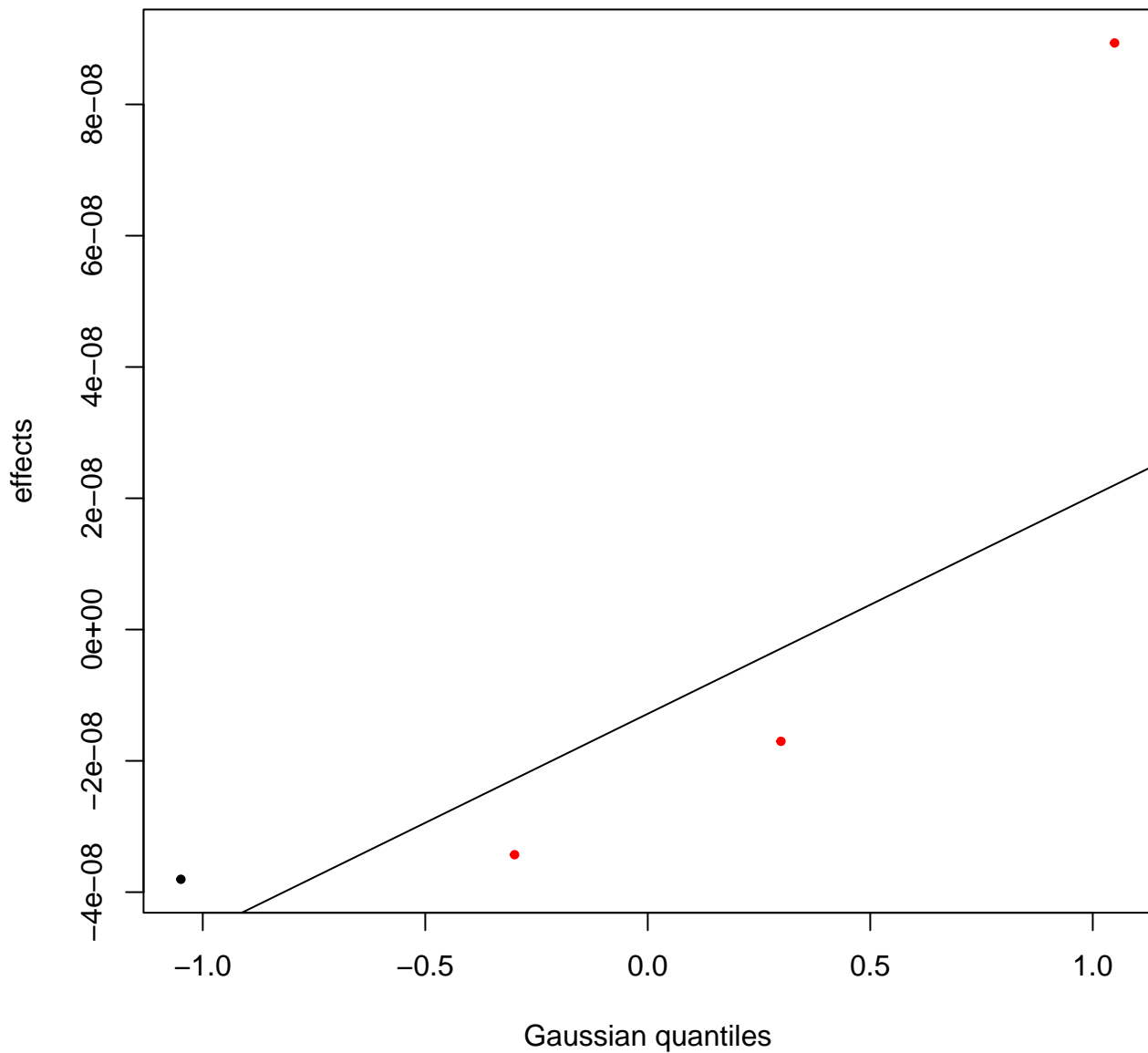
Bites in squirrel

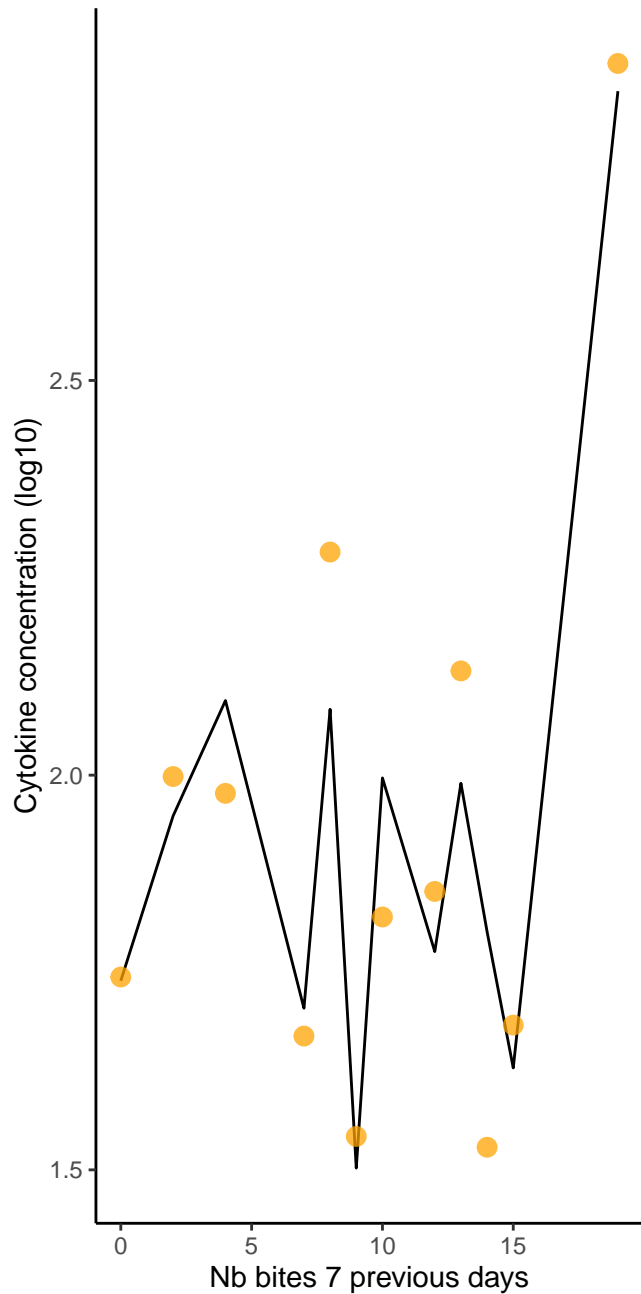
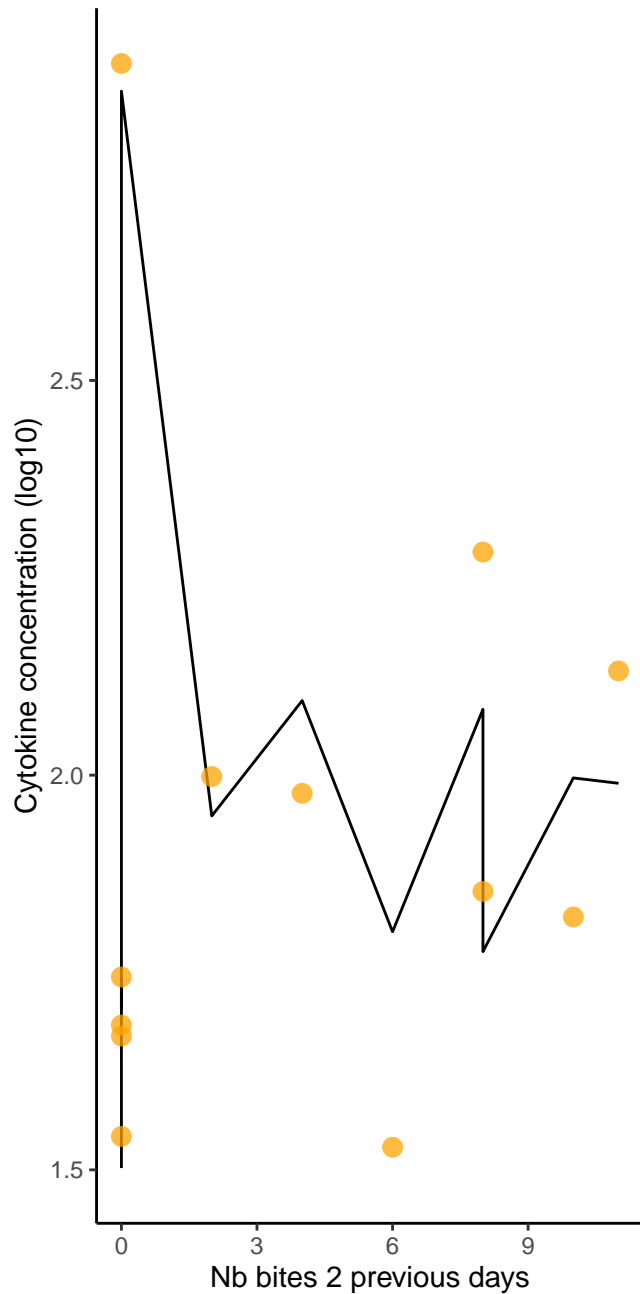
Nb excluded (LOD) : 8  
Nb remaining: 12

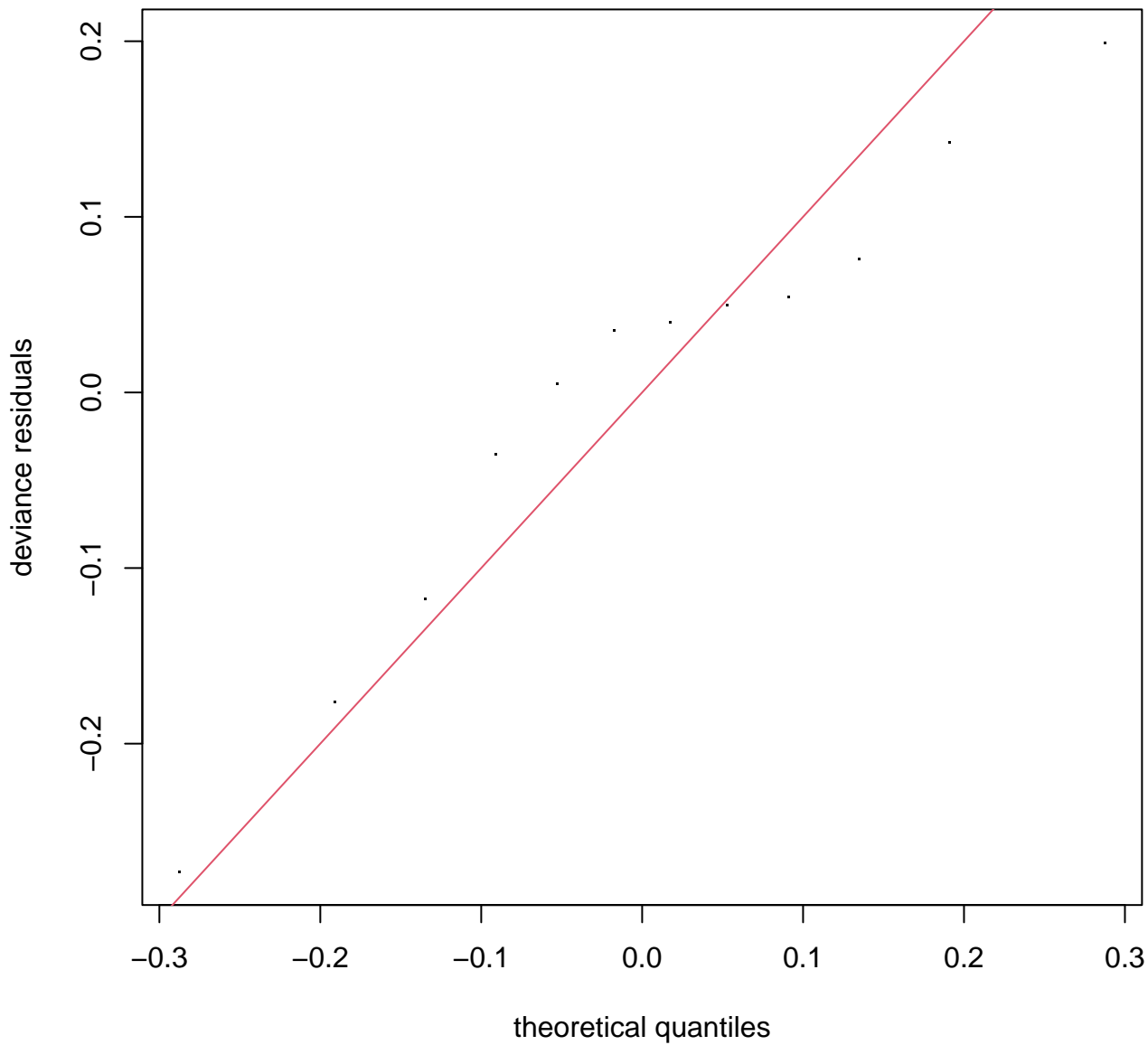




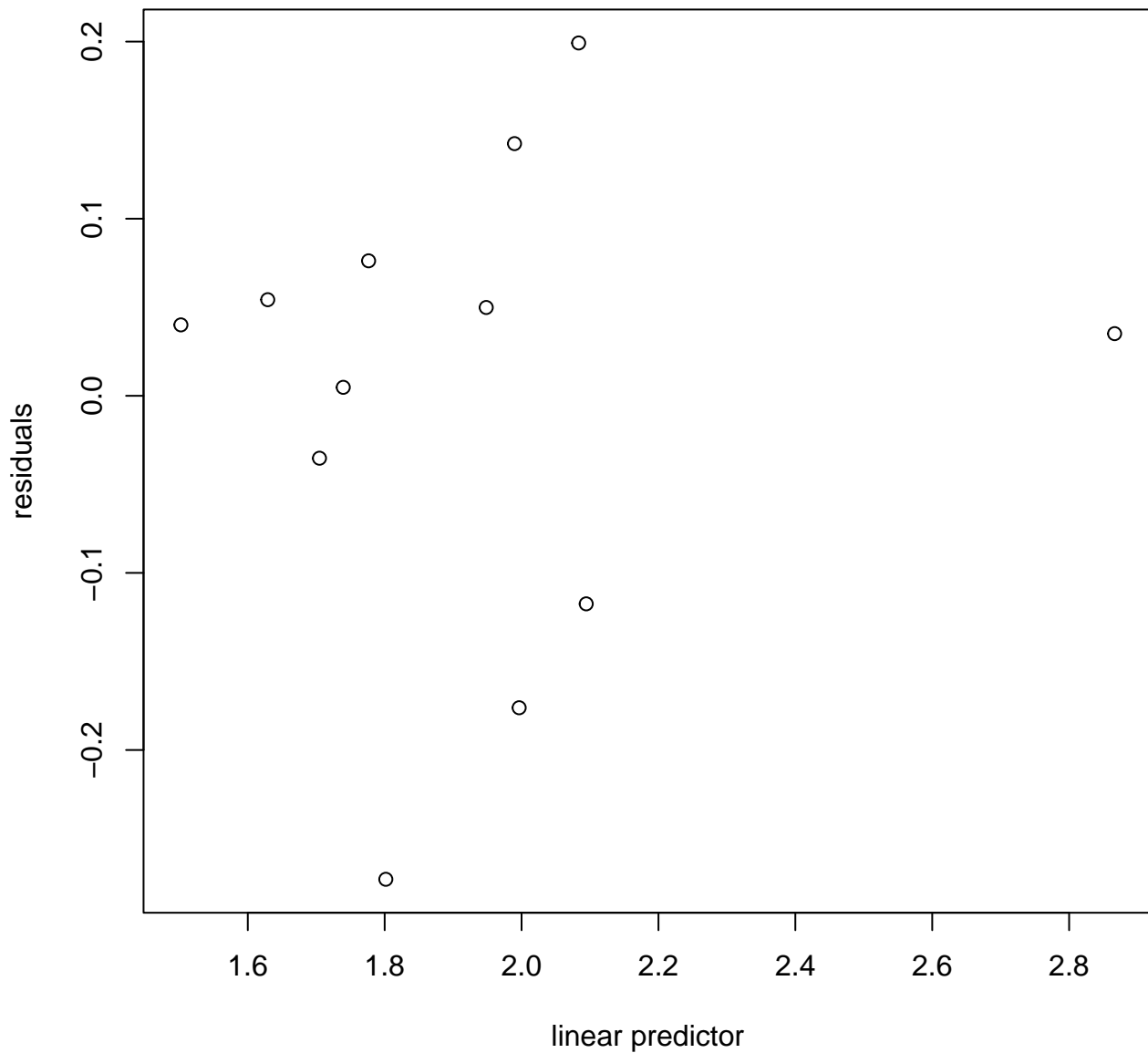
**s(ID,0)**





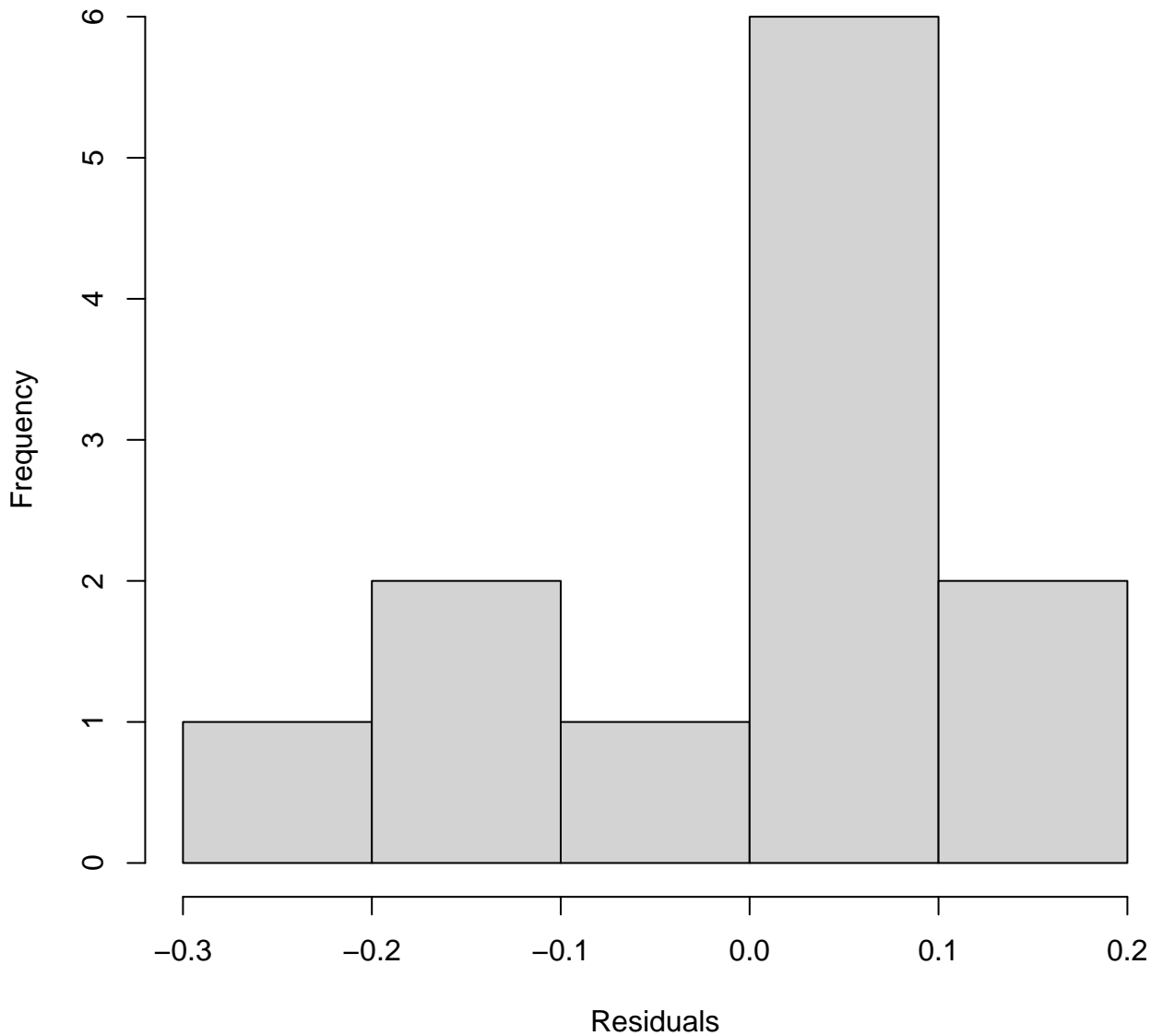


**Resids vs. linear pred.**

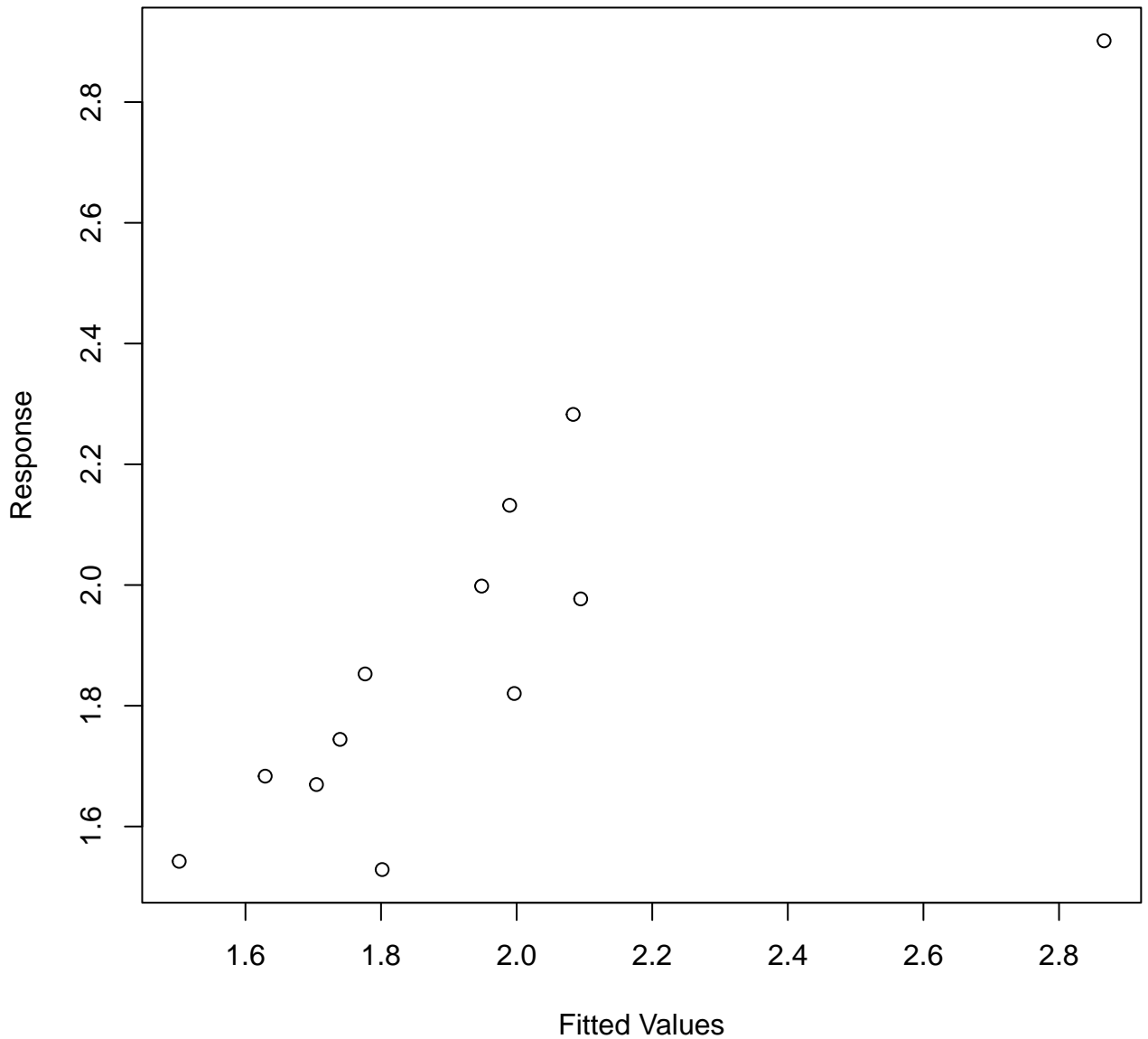




**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 14 iterations.  
 Gradient range [-1.93942e-06,6.756941e-07]  
 (score -1.110181 & scale 0.02758297).  
 Hessian positive definite, eigenvalue range [1.063015e-07,6.187841].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(cumul_bites_2_previous_days)	3.00e+00	1.00e+00	1.30	0.76
s(cumul_bites_7_previous_days)	3.00e+00	2.94e+00	1.43	0.90
s(ID)	4.00e+00	3.01e-06	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(cumul_bites_2_previous_days, k = 4)	1.06	[1.00, 12.75]	1.03	0.94	[0.08, 1.00]	
s(cumul_bites_7_previous_days, k = 4)	1.06	[1.00, 12.75]	1.03	0.94	[0.08, 1.00]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(cumul\_bites\_2\_previous\_days, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.92773	0.04794	40.21	1.35e-09 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(cumul_bites_2_previous_days)	1.000e+00	1.000	16.05	0.00514 **
s(cumul_bites_7_previous_days)	2.943e+00	2.998	16.34	0.00148 **
s(ID)	3.012e-06	3.000	0.00	0.83051

---

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

R-sq.(adj) = 0.811 Deviance explained = 87.9%

-ML = -1.1102 Scale est. = 0.027583 n = 12

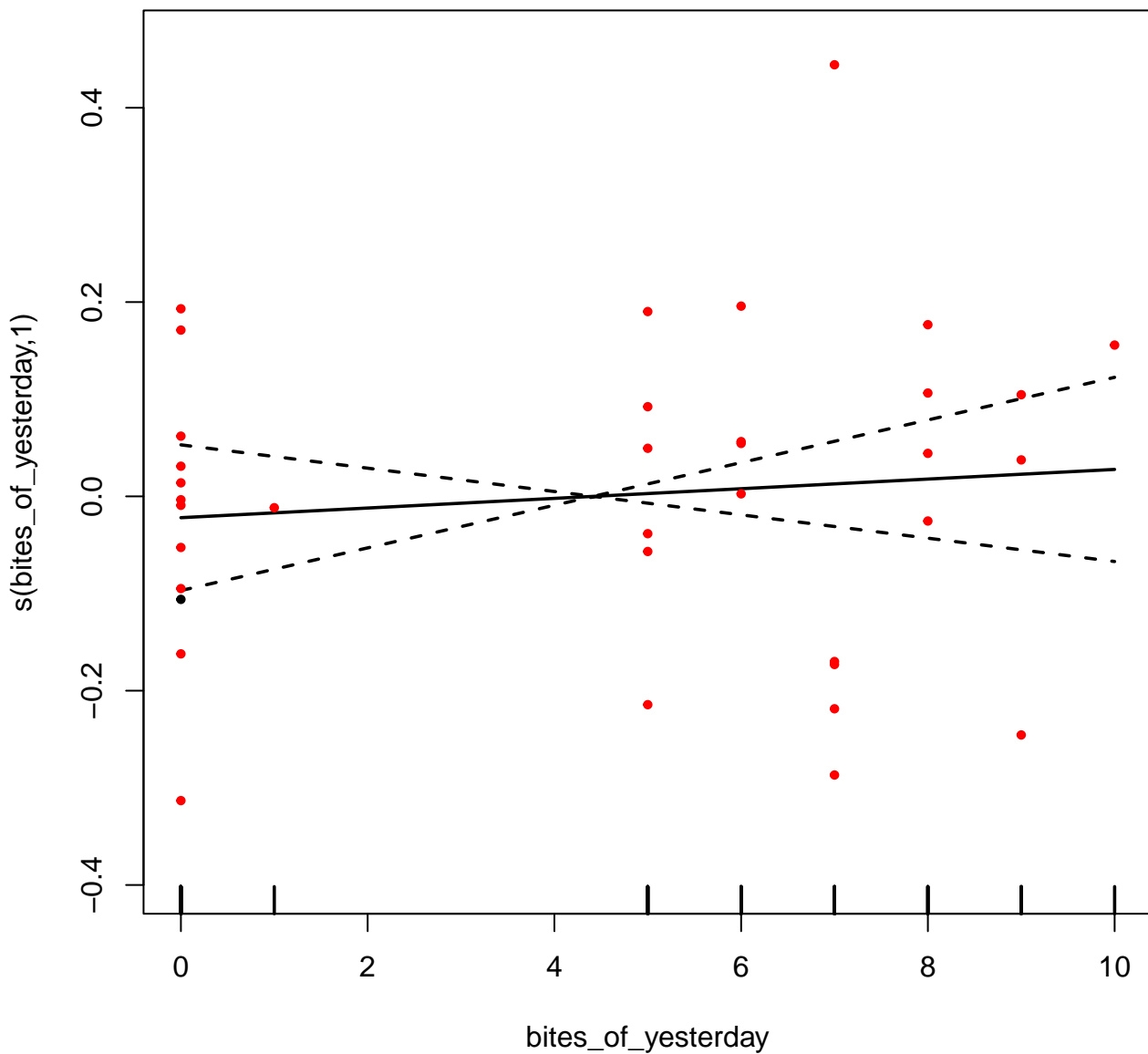
```
AICc [1] 13.37184
```

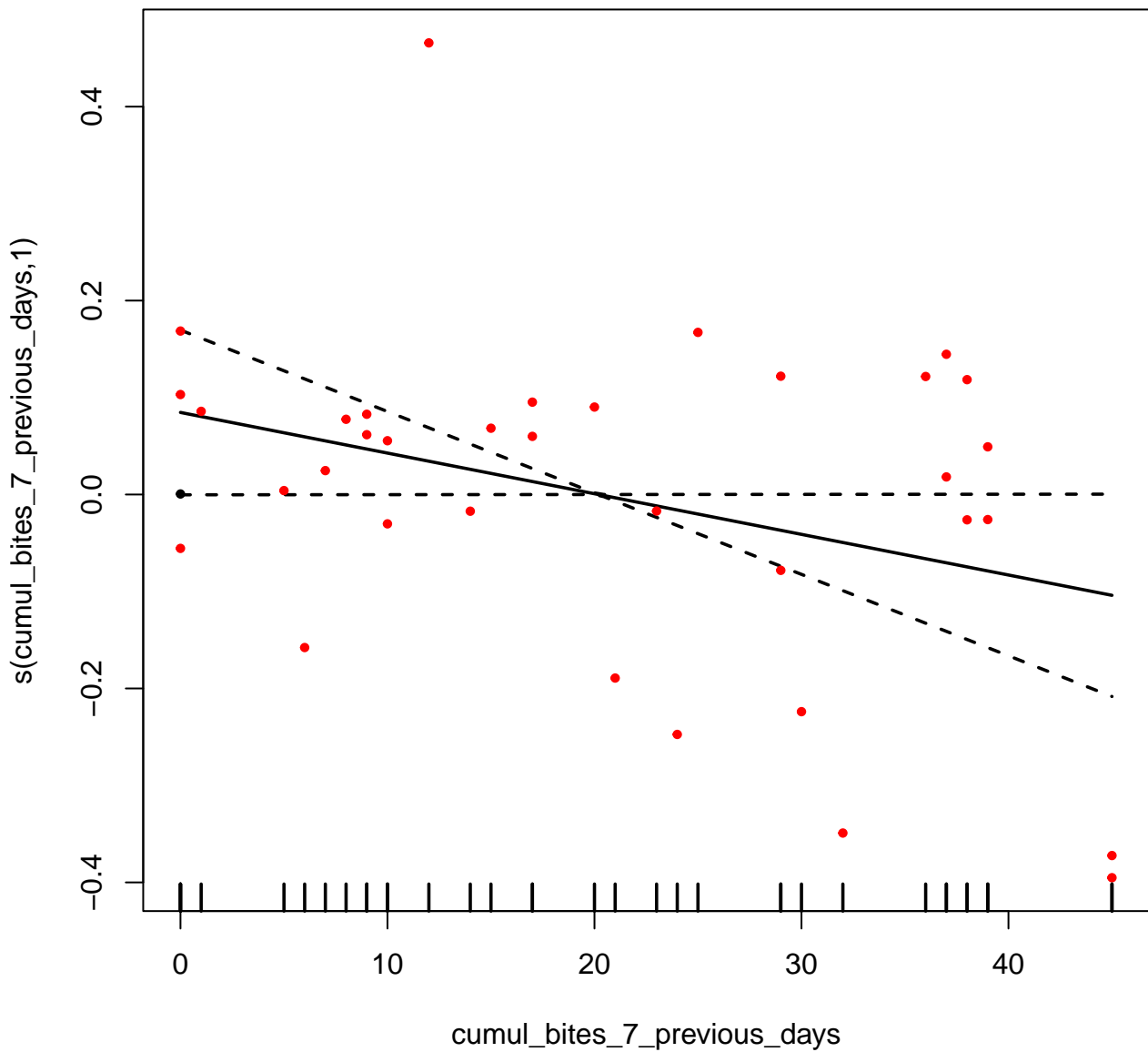
RANTES

Bites in cyno

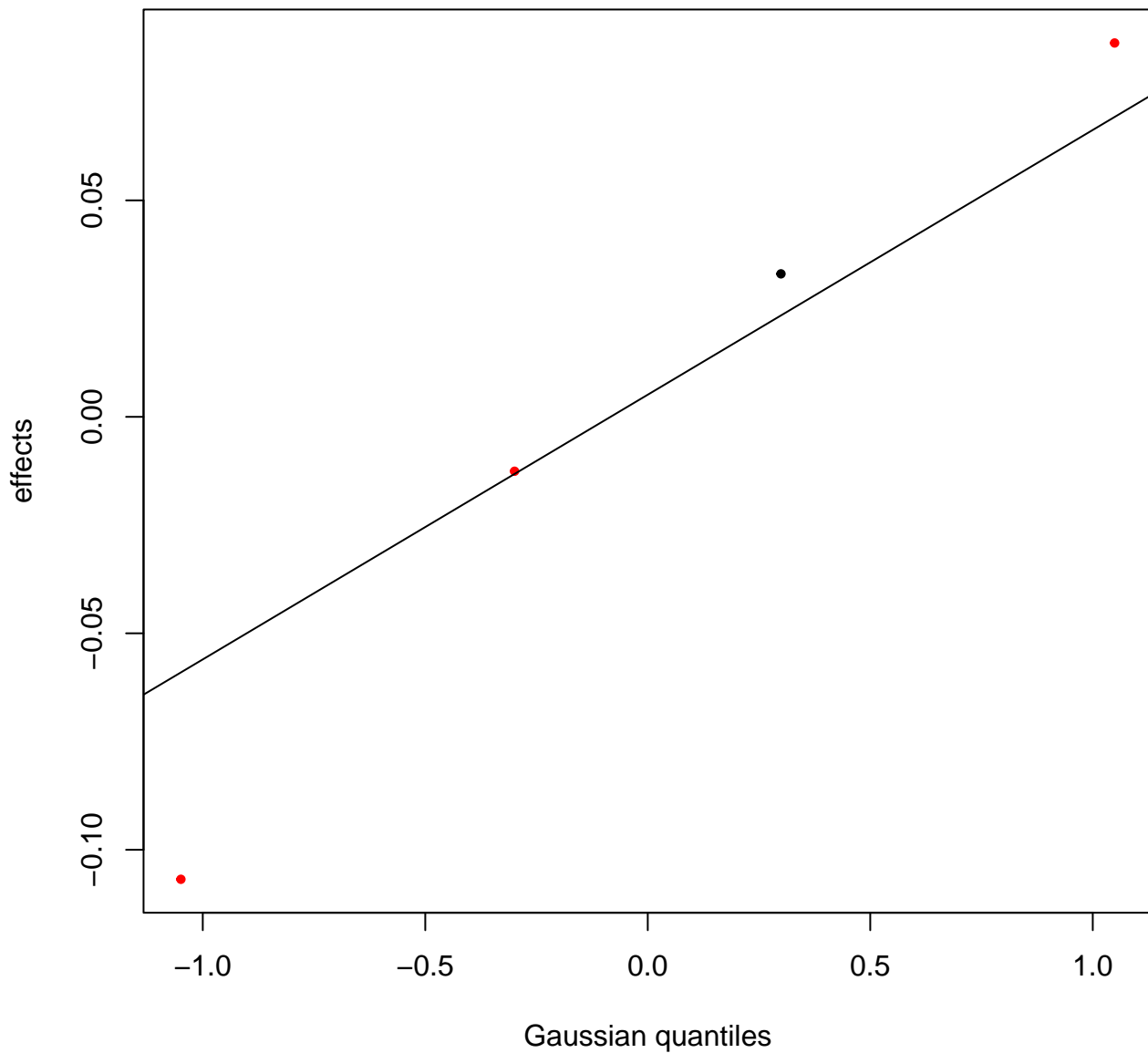


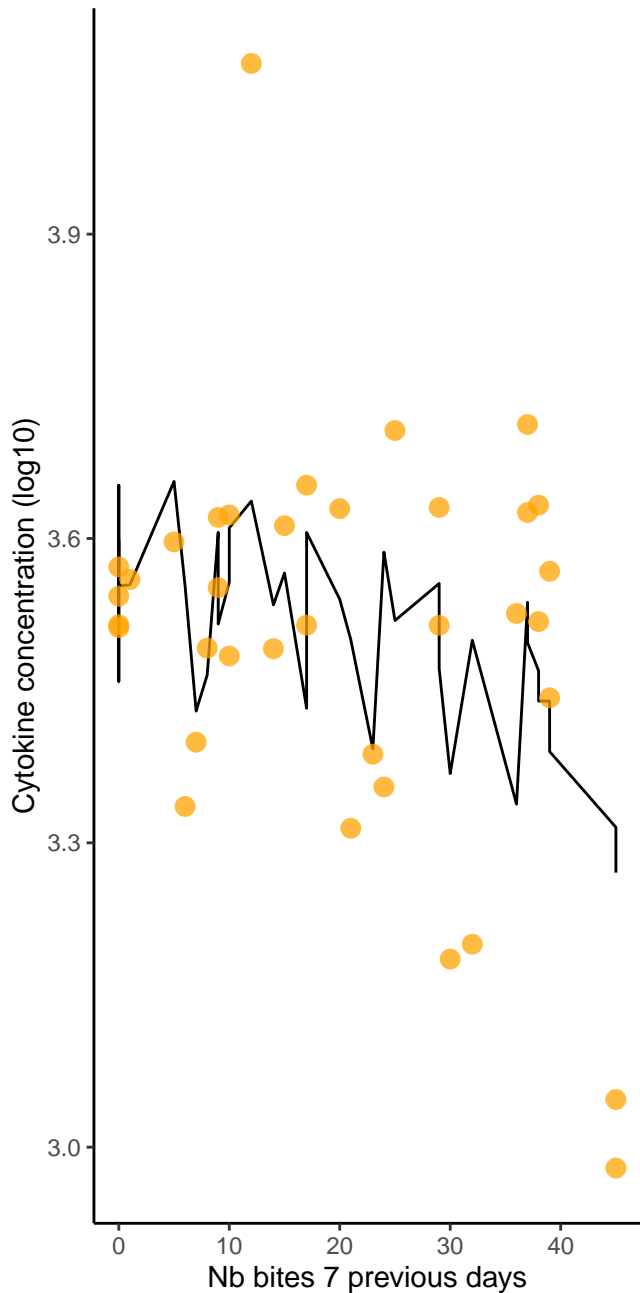
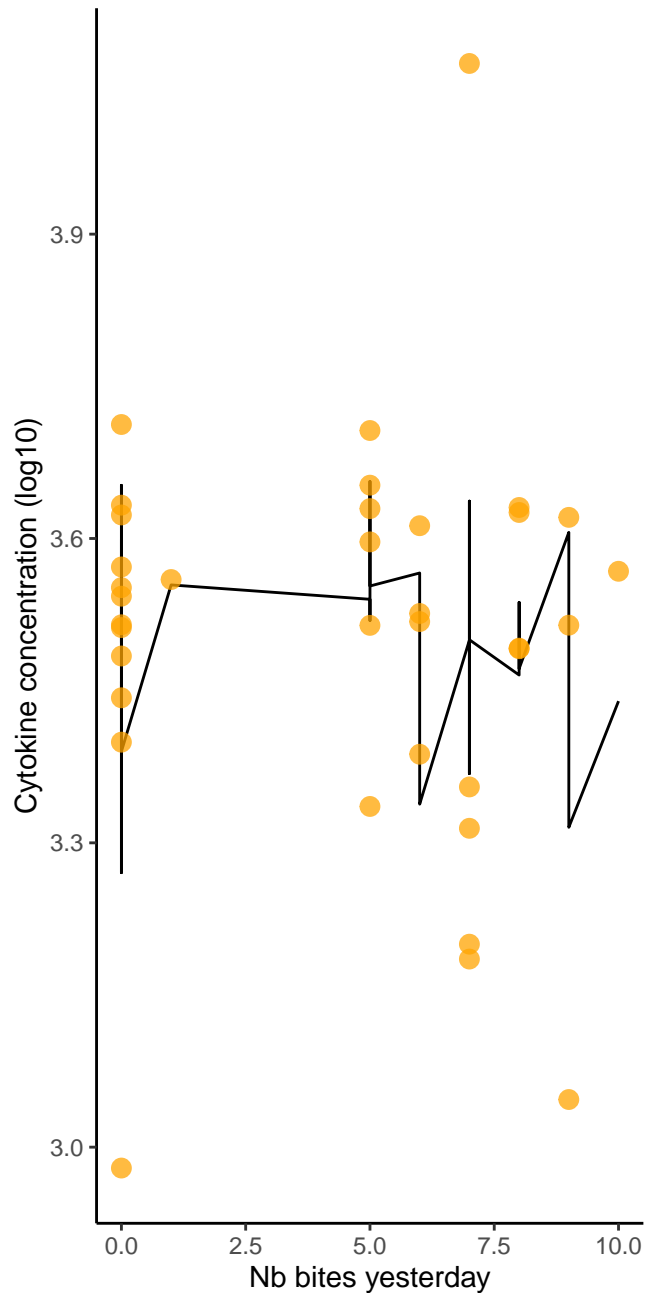
Nb excluded (LOD) : 0  
Nb remaining: 36

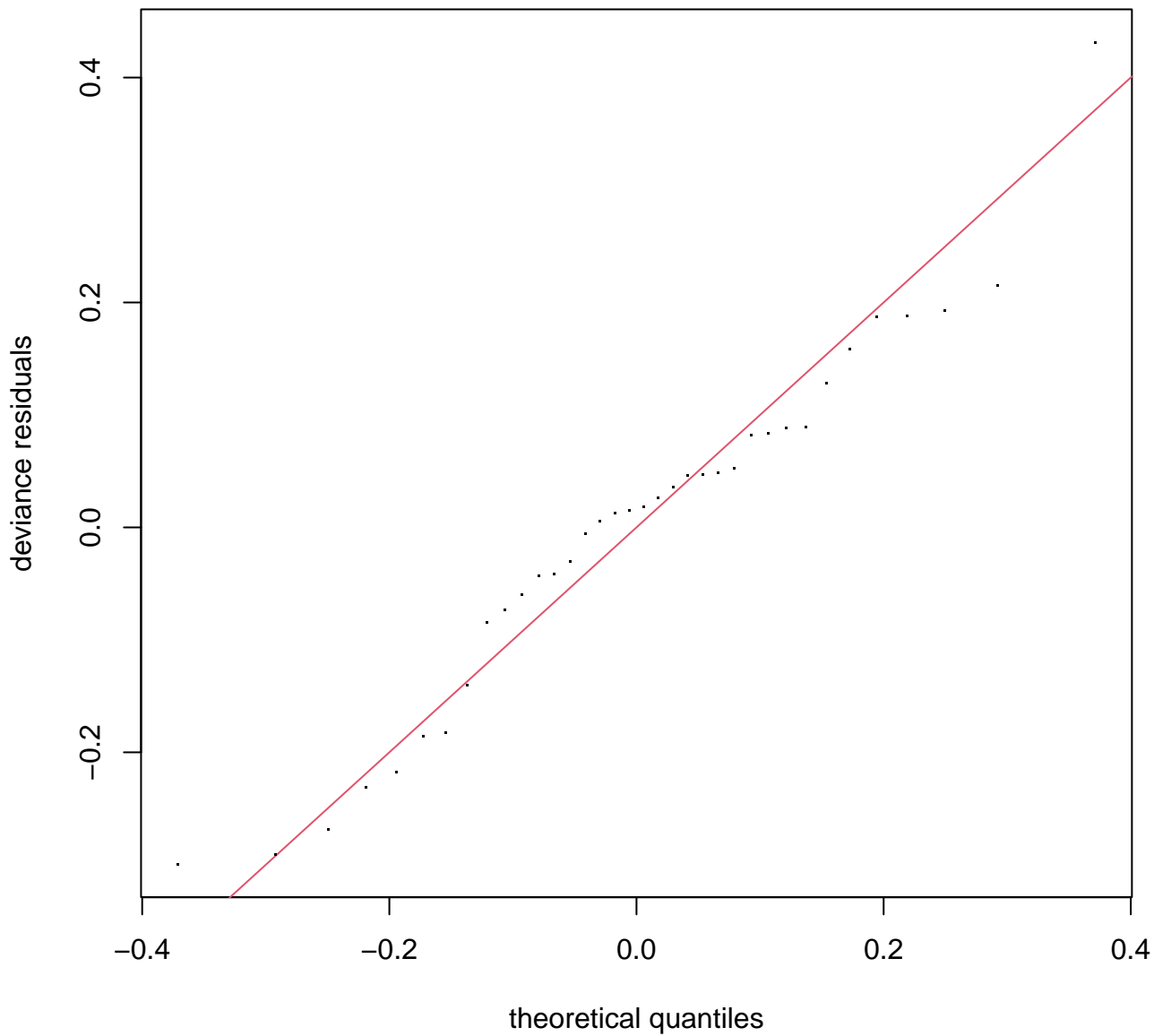




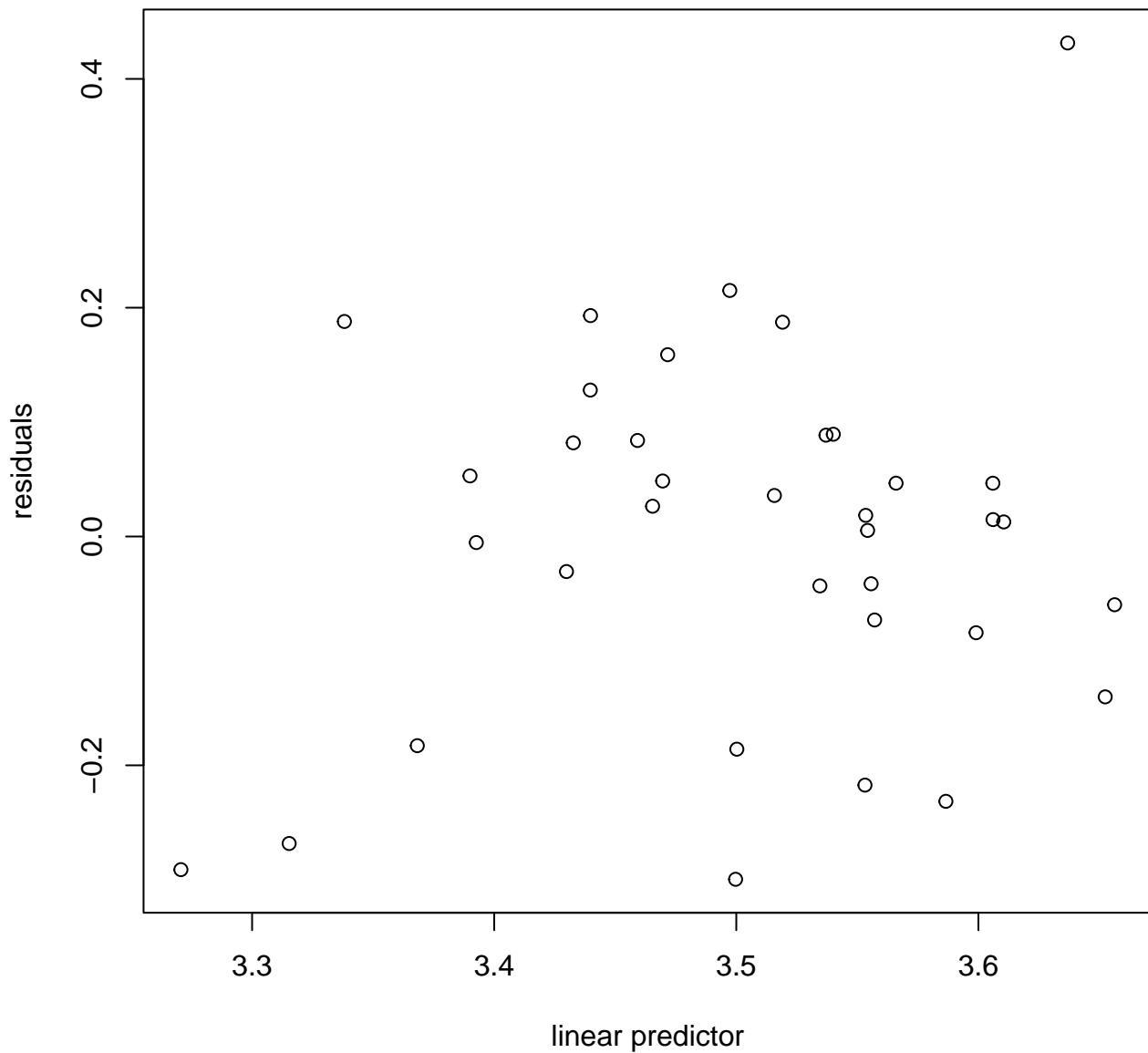
**s(ID,2.12)**



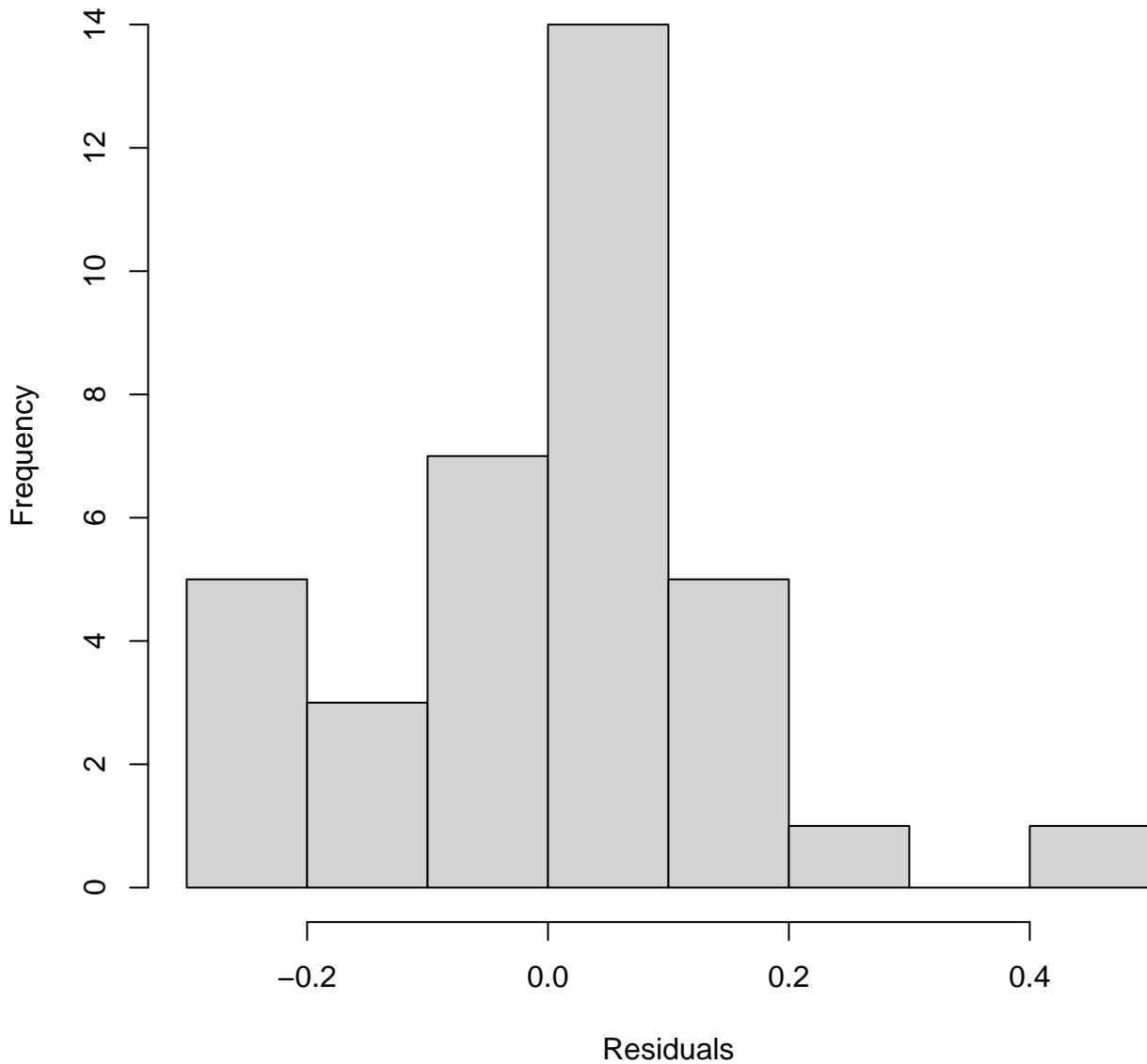




**Resids vs. linear pred.**

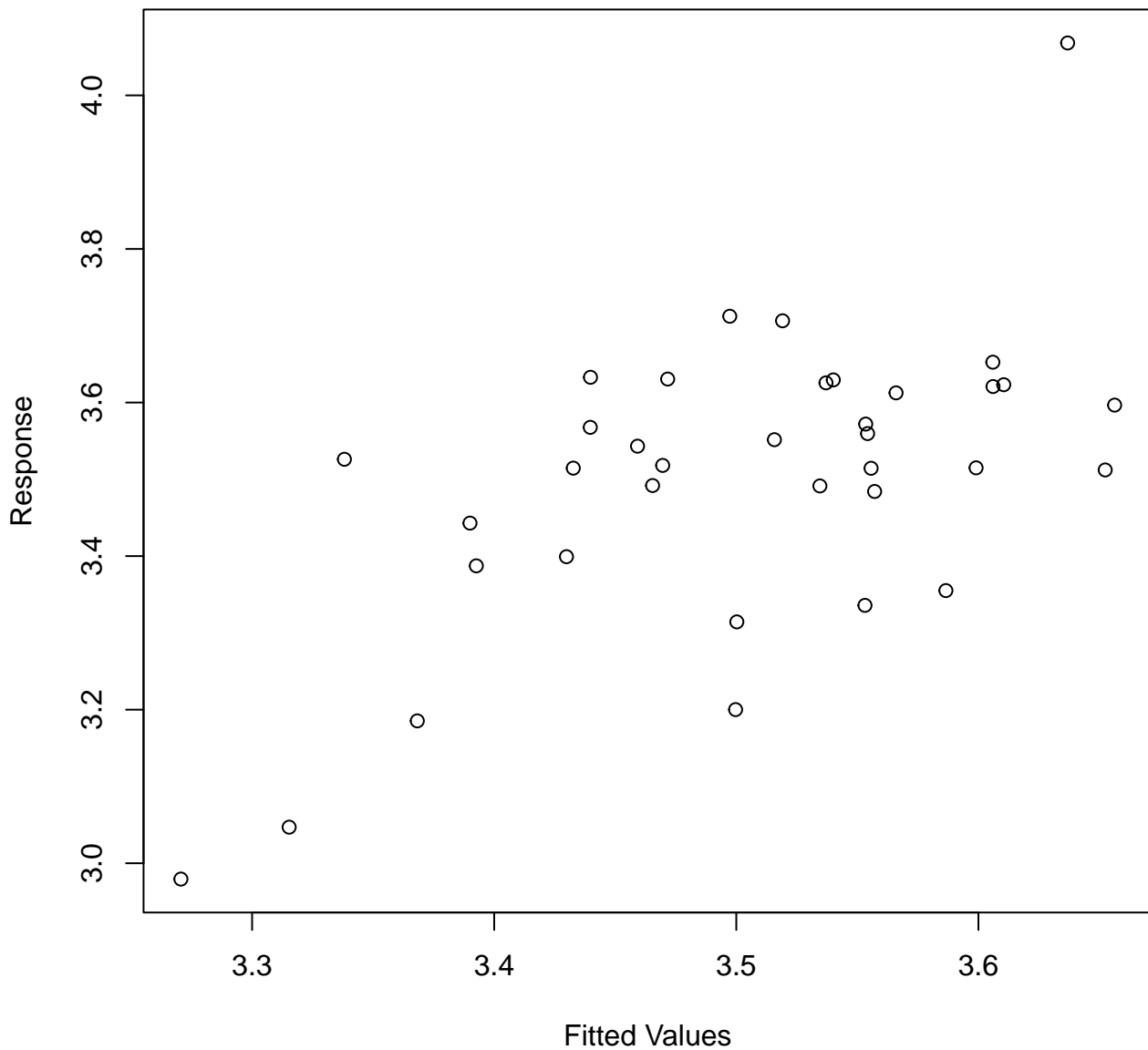


**Histogram of residuals**





**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 13 iterations.  
 Gradient range [-3.764127e-06,6.881425e-07]  
 (score -11.81336 & scale 0.02846092).  
 Hessian positive definite, eigenvalue range [1.894229e-06,18.11682].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.00	1.18	0.84
s(cumul_bites_7_previous_days)	3.00	1.00	0.93	0.31
s(ID)	4.00	2.12	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	
s(cumul_bites_7_previous_days, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	3.50332	0.05196	67.42	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1	0.343	0.5626
s(cumul_bites_7_previous_days)	1.000	1	3.972	0.0551 .
s(ID)	2.115	3	2.968	0.0131 *

---

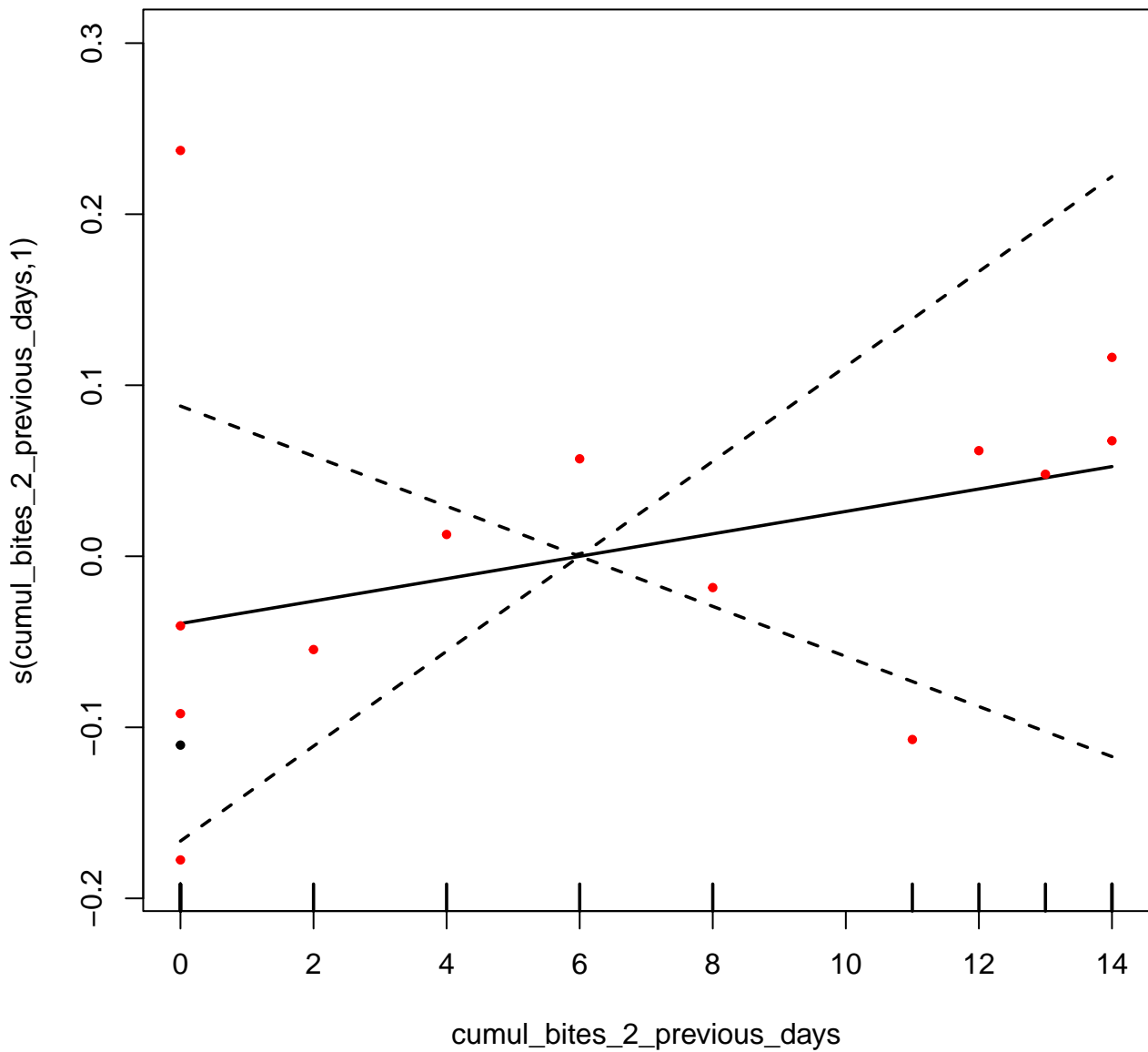
Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

R-sq.(adj) = 0.26 Deviance explained = 34.7%  
-ML = -11.813 Scale est. = 0.028461 n = 36

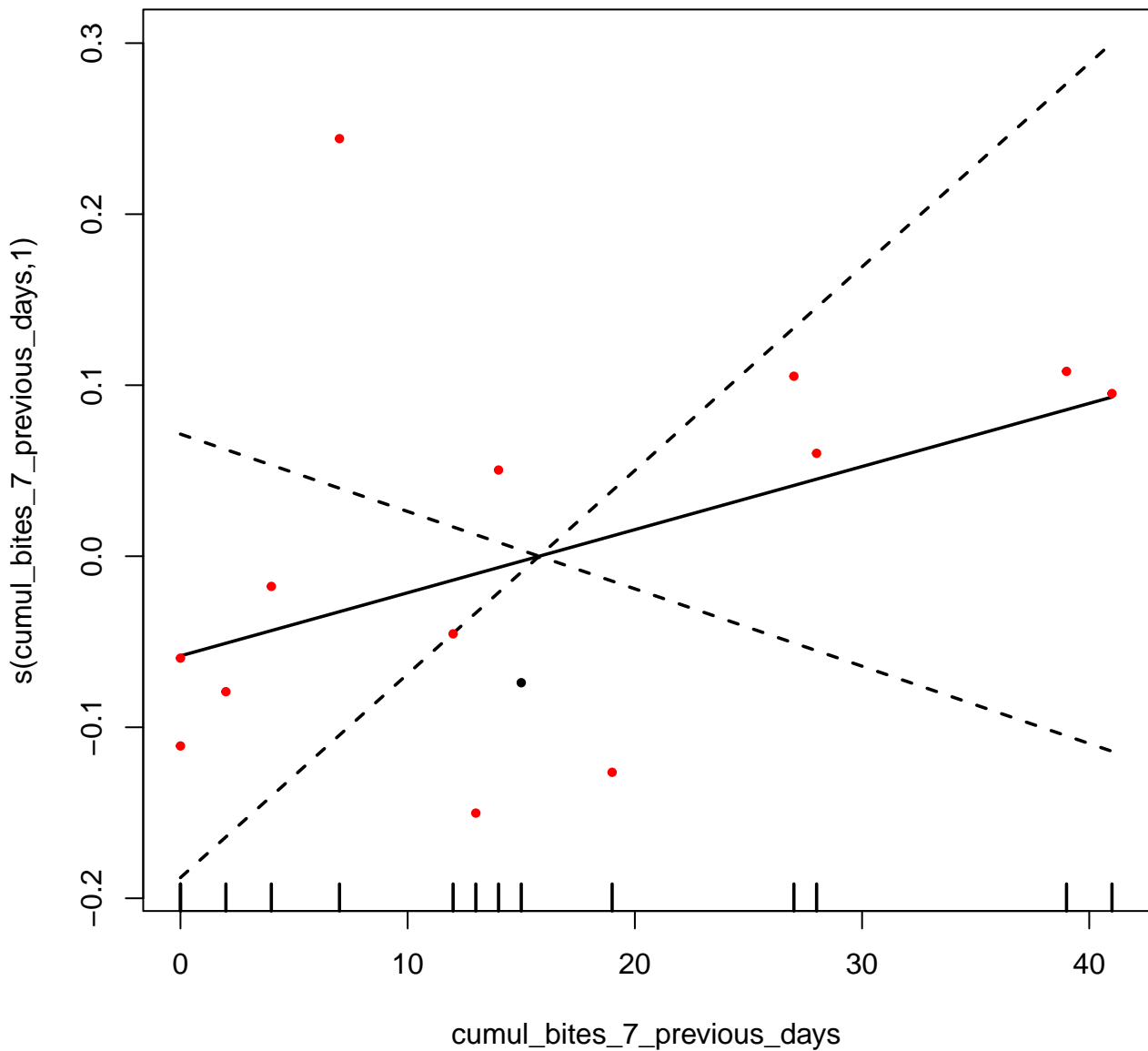
AICc [ 1 ] -14.31658

Bites in squirrel

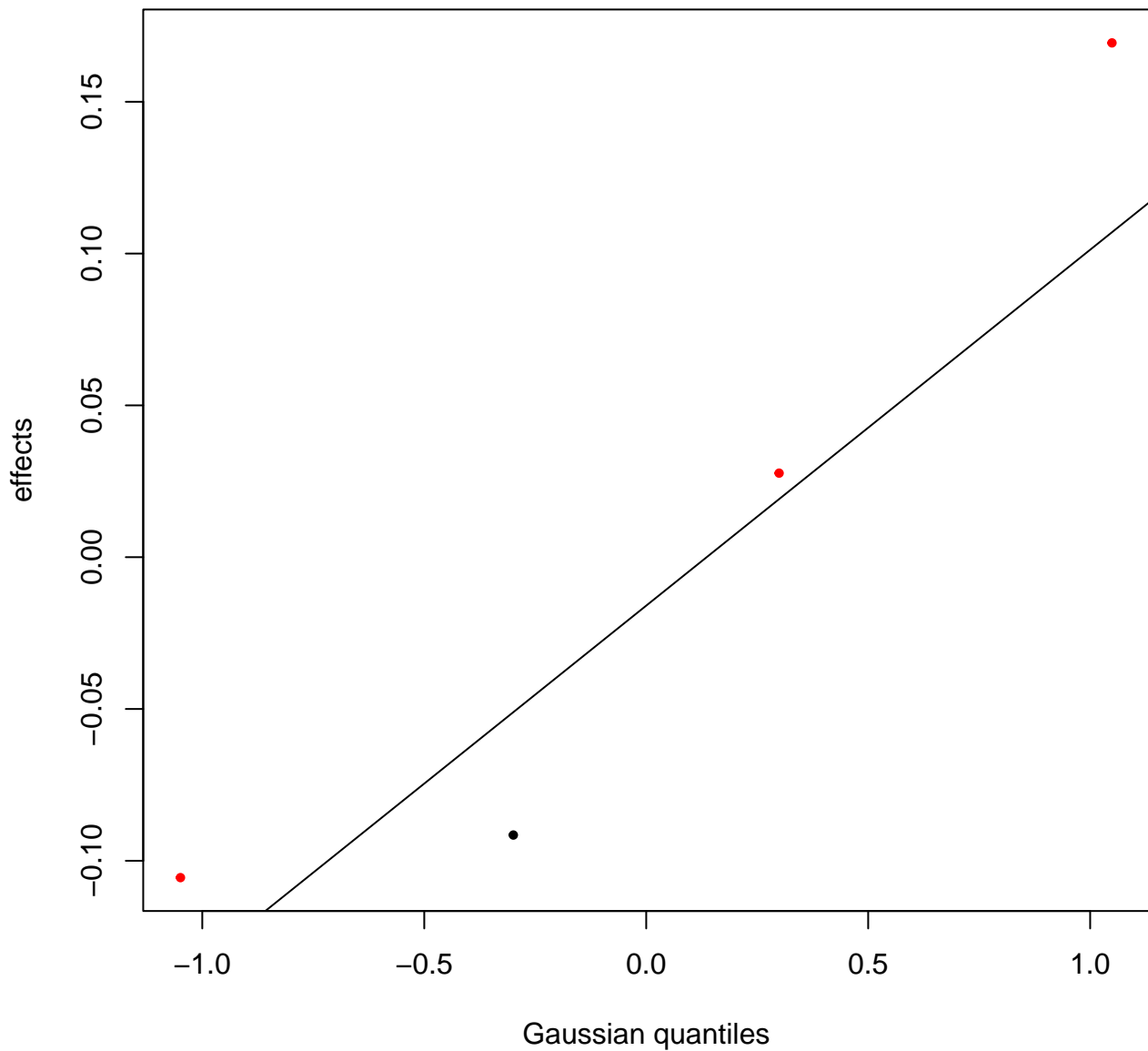
Nb excluded (LOD) : 6  
Nb remaining: 14

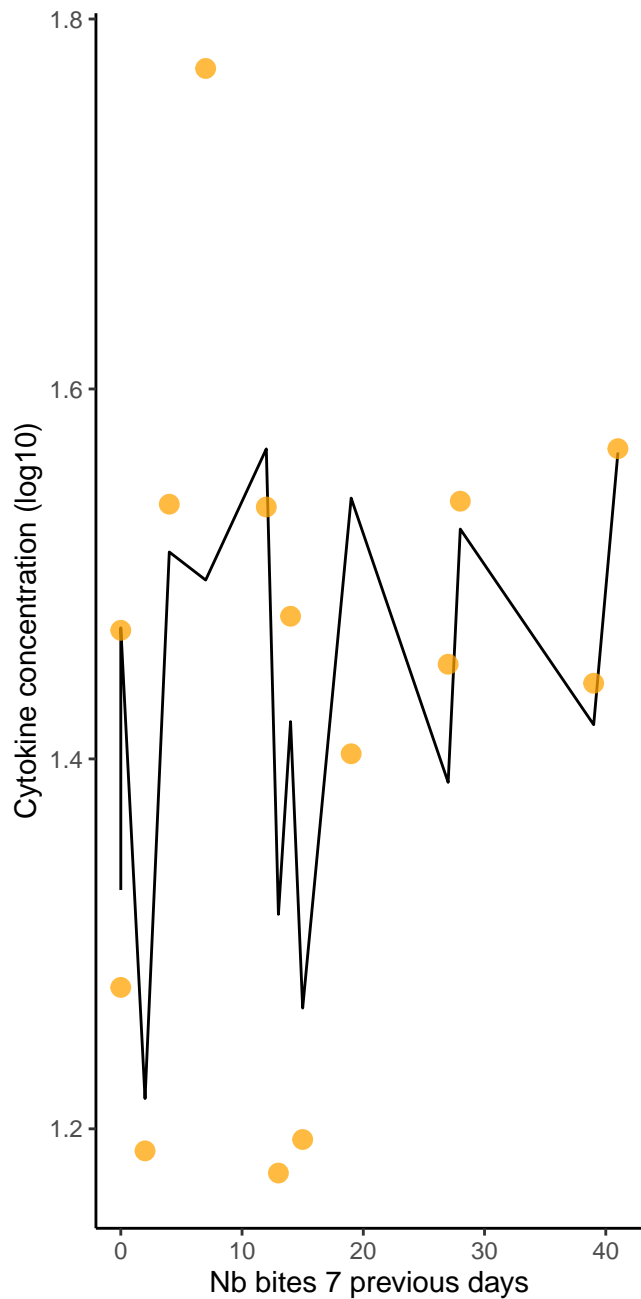
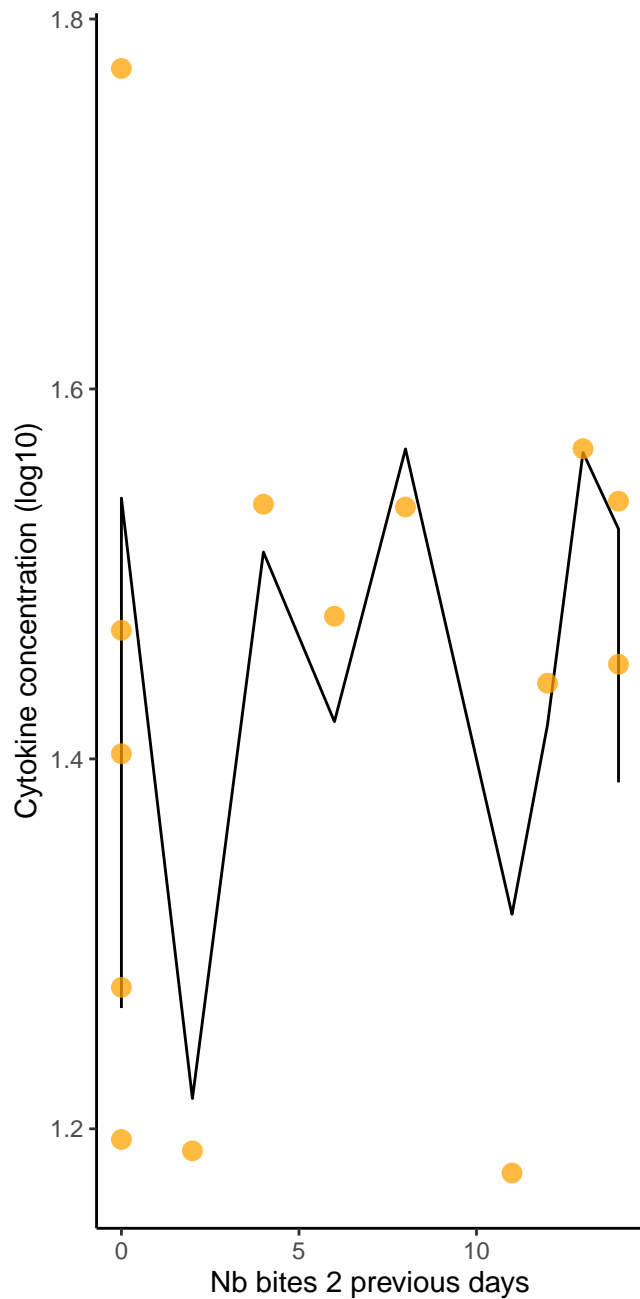


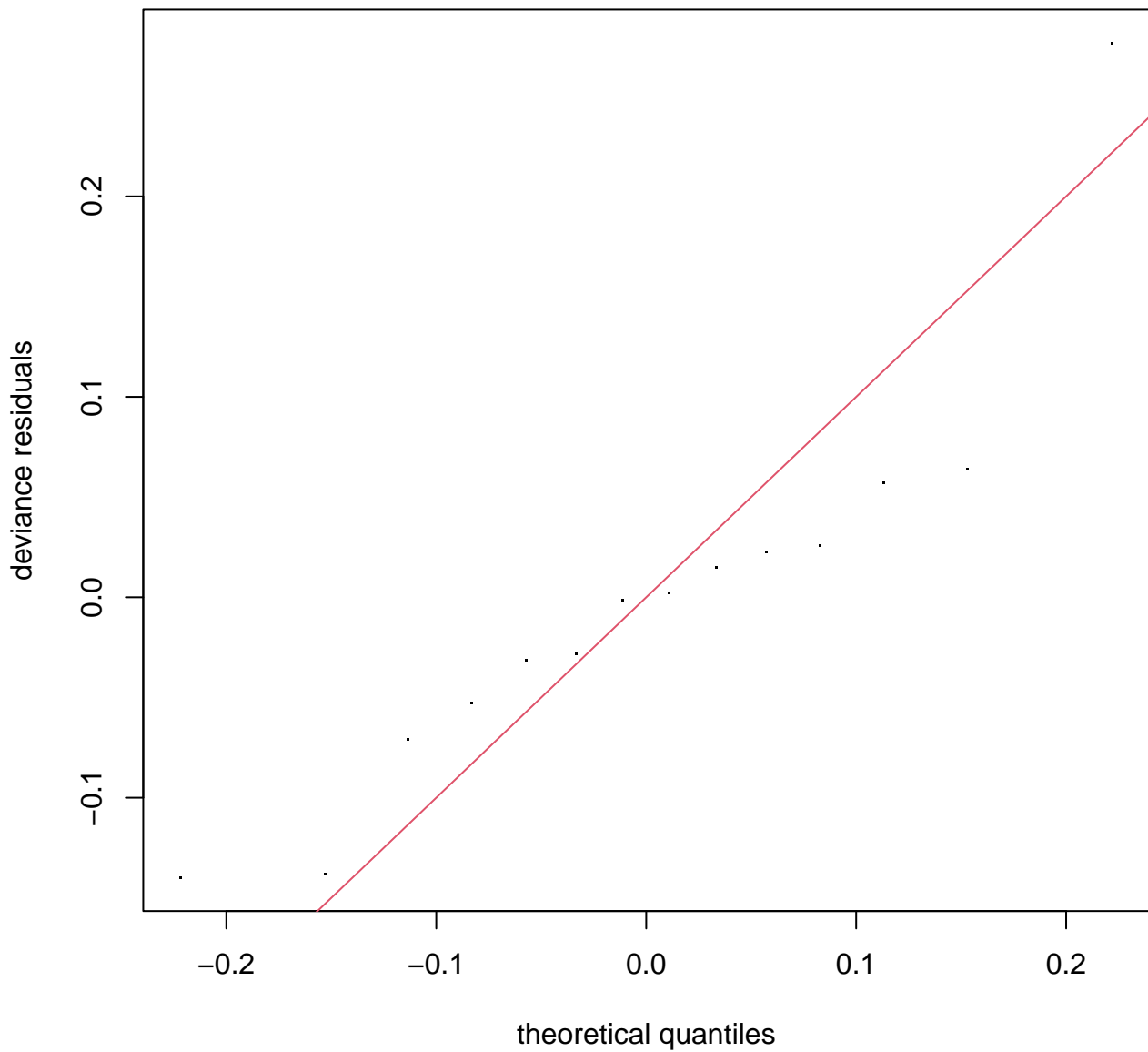




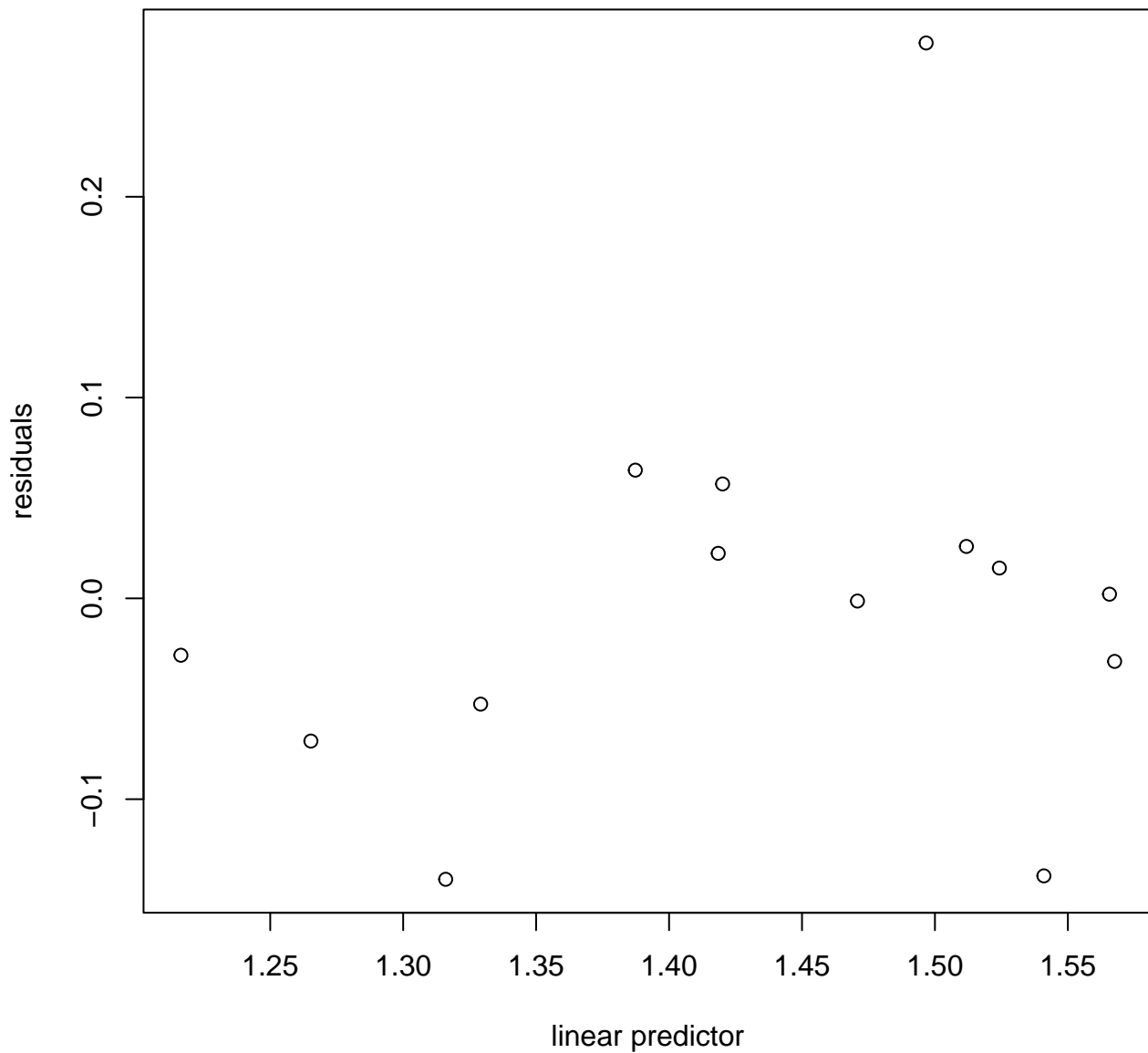
**s(ID,2.18)**



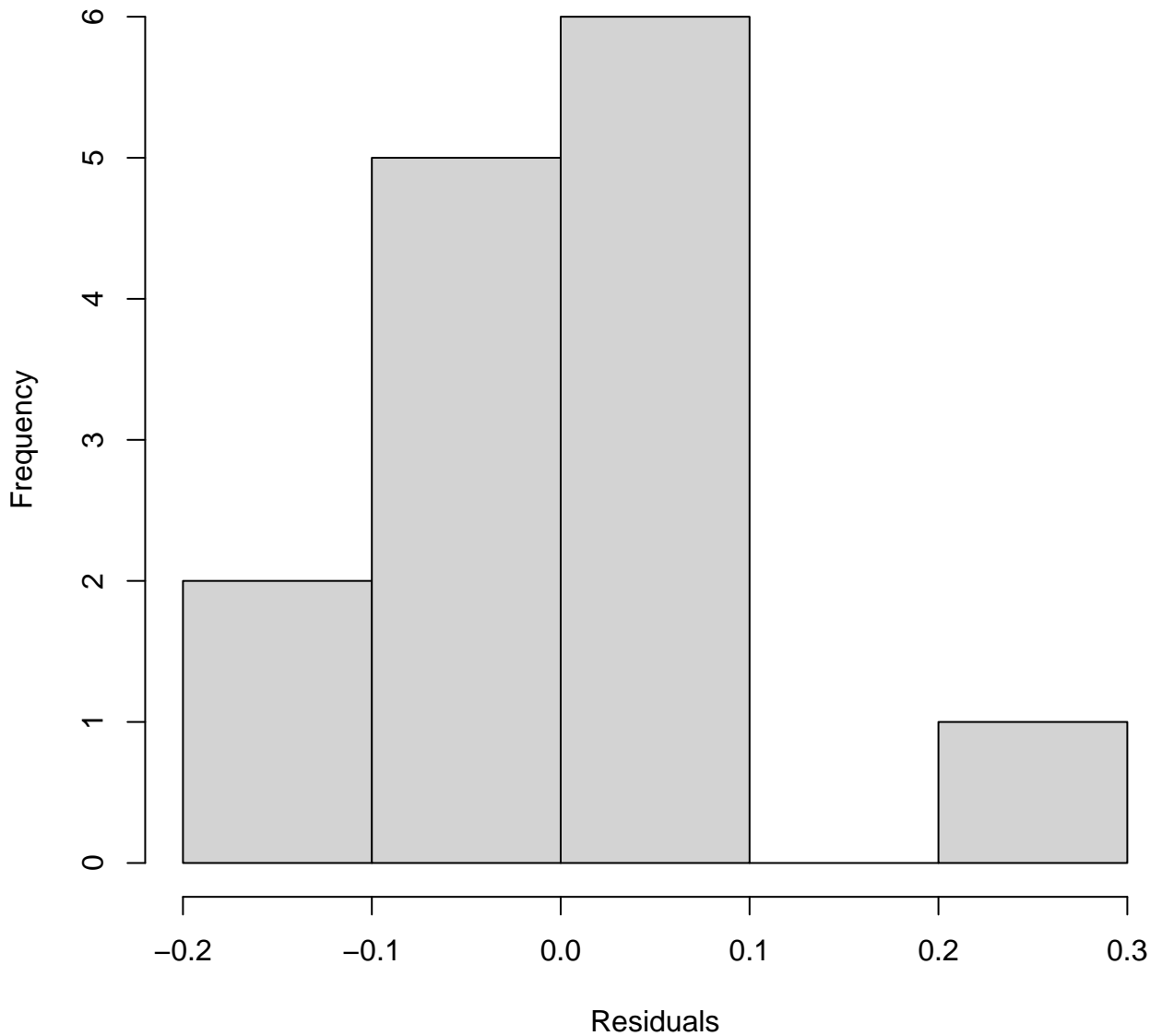




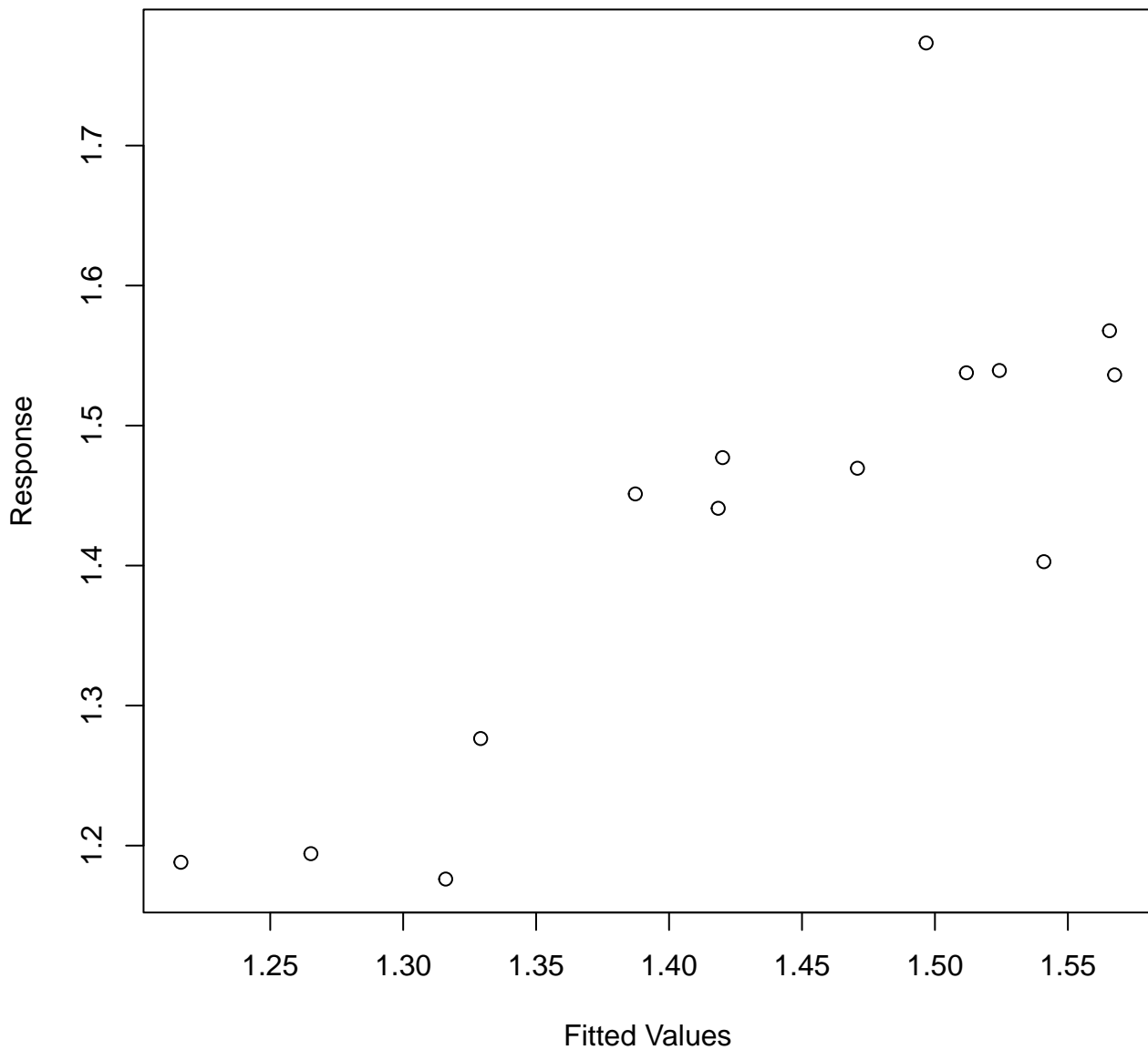
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
full convergence after 14 iterations.  
Gradient range [-1.507615e-06,2.332719e-07]  
(score -7.714901 & scale 0.01514088).  
Hessian positive definite, eigenvalue range [1.212386e-06,7.38932].  
Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(cumul_bites_2_previous_days)	3.00	1.00	1.28	0.77
s(cumul_bites_7_previous_days)	3.00	1.00	1.13	0.65
s(ID)	4.00	2.18	NA	NA



# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(cumul_bites_2_previous_days, k = 4)	1.02	[1.00, 3.51e+06]	1.01	0.98	[0.00, 1.00]	
s(cumul_bites_7_previous_days, k = 4)	1.02	[1.00, 3.52e+06]	1.01	0.98	[0.00, 1.00]	

Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(cumul\_bites\_2\_previous\_days, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.39904	0.07951	17.6	3.58e-08 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(cumul_bites_2_previous_days)	1.000	1	0.383	0.5515
s(cumul_bites_7_previous_days)	1.000	1	0.807	0.3923
s(ID)	2.182	3	4.176	0.0183 *

---

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

R-sq.(adj) = 0.48 Deviance explained = 64.8%

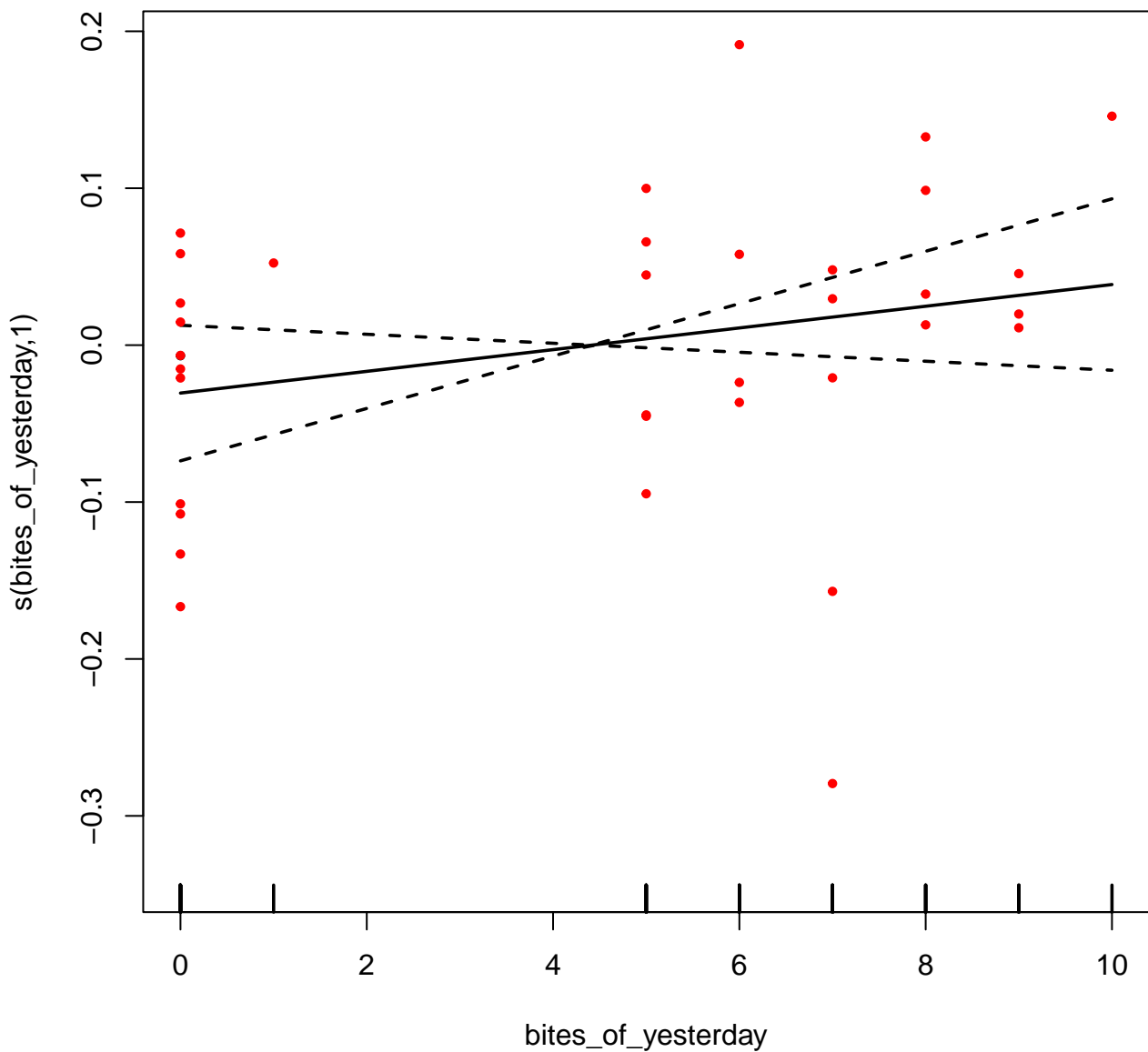
-ML = -7.7149 Scale est. = 0.015141 n = 14

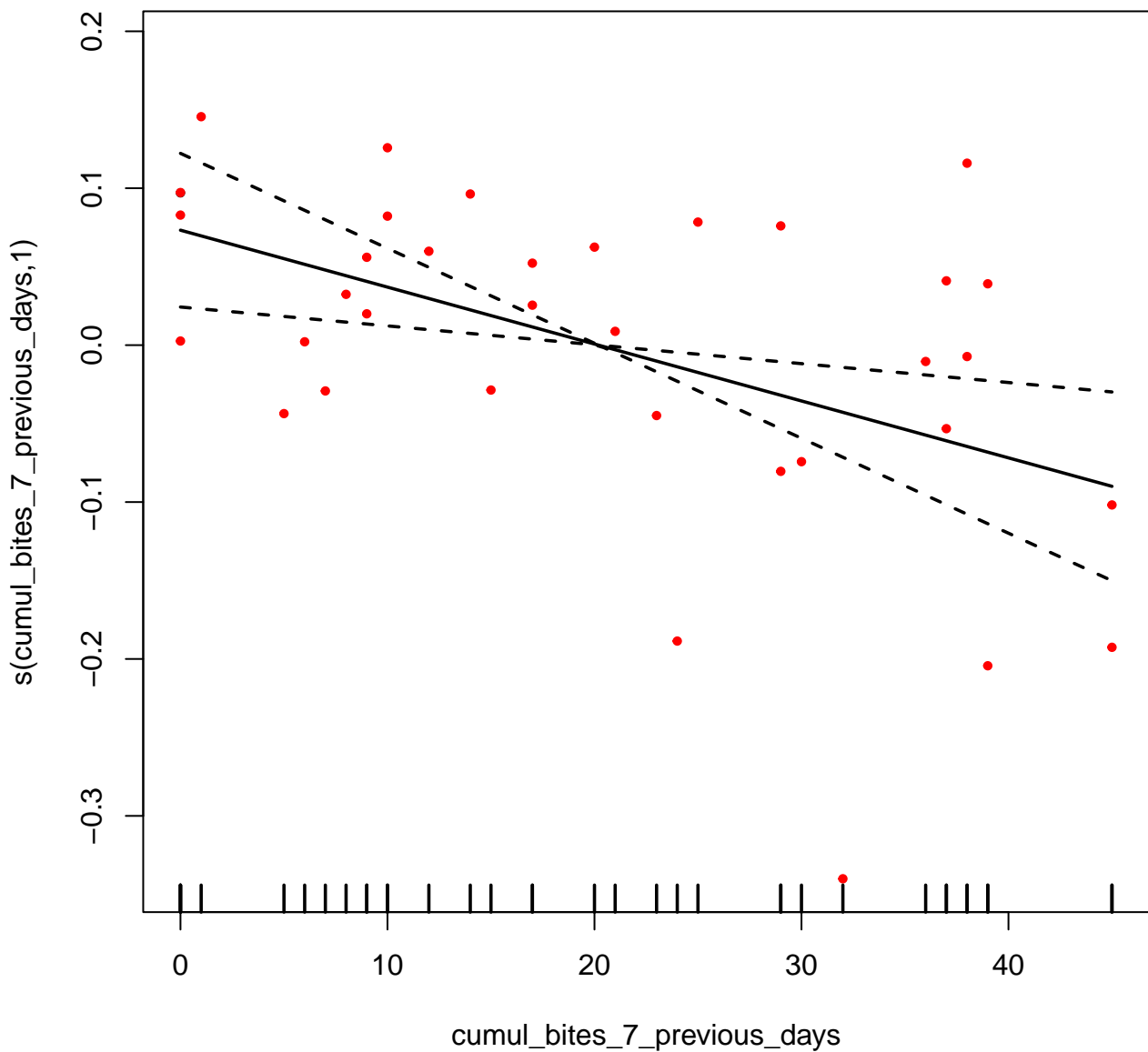
```
AICc [1] 4.580474
```

TGFbeta

Bites in cyno

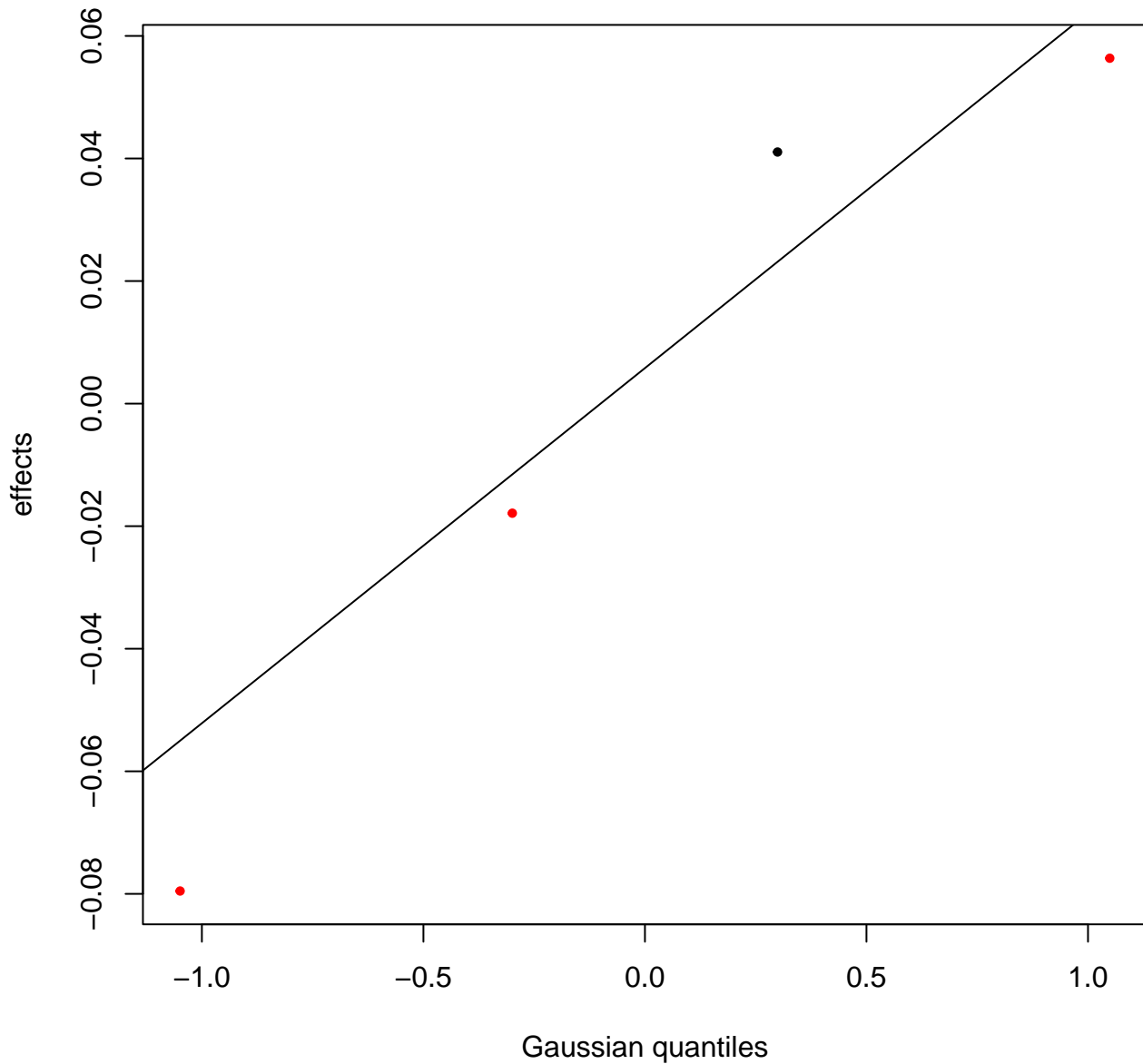
Nb excluded (LOD) : 0  
Nb remaining: 36

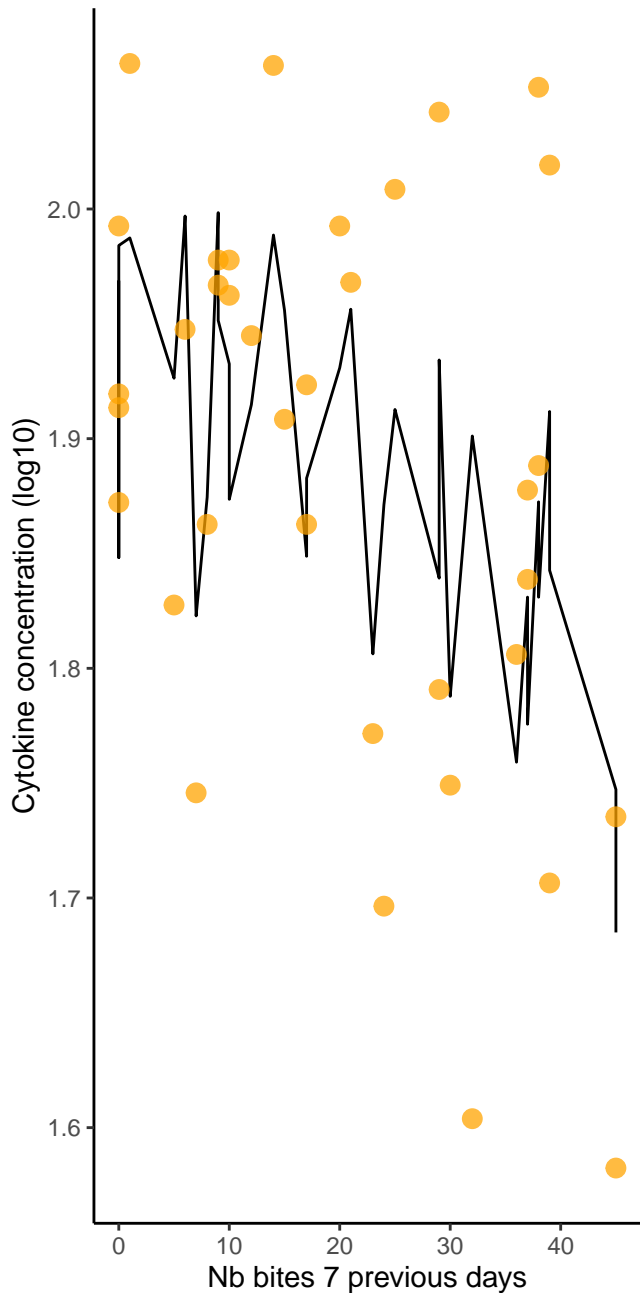
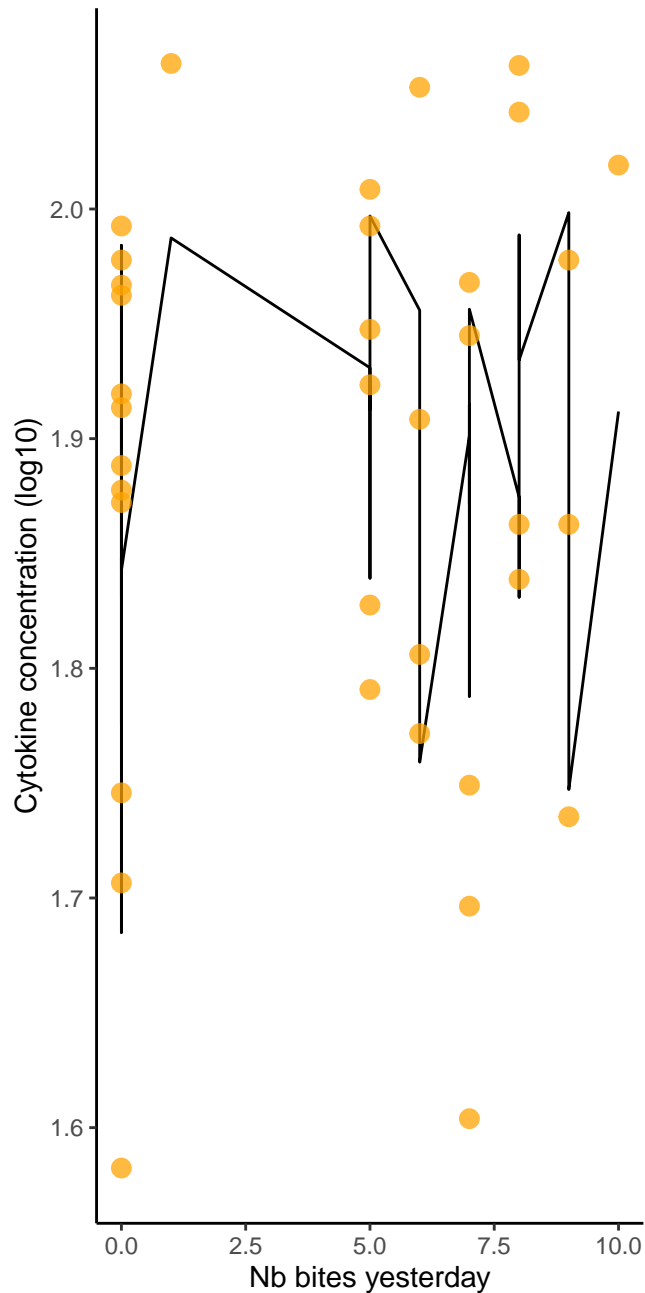


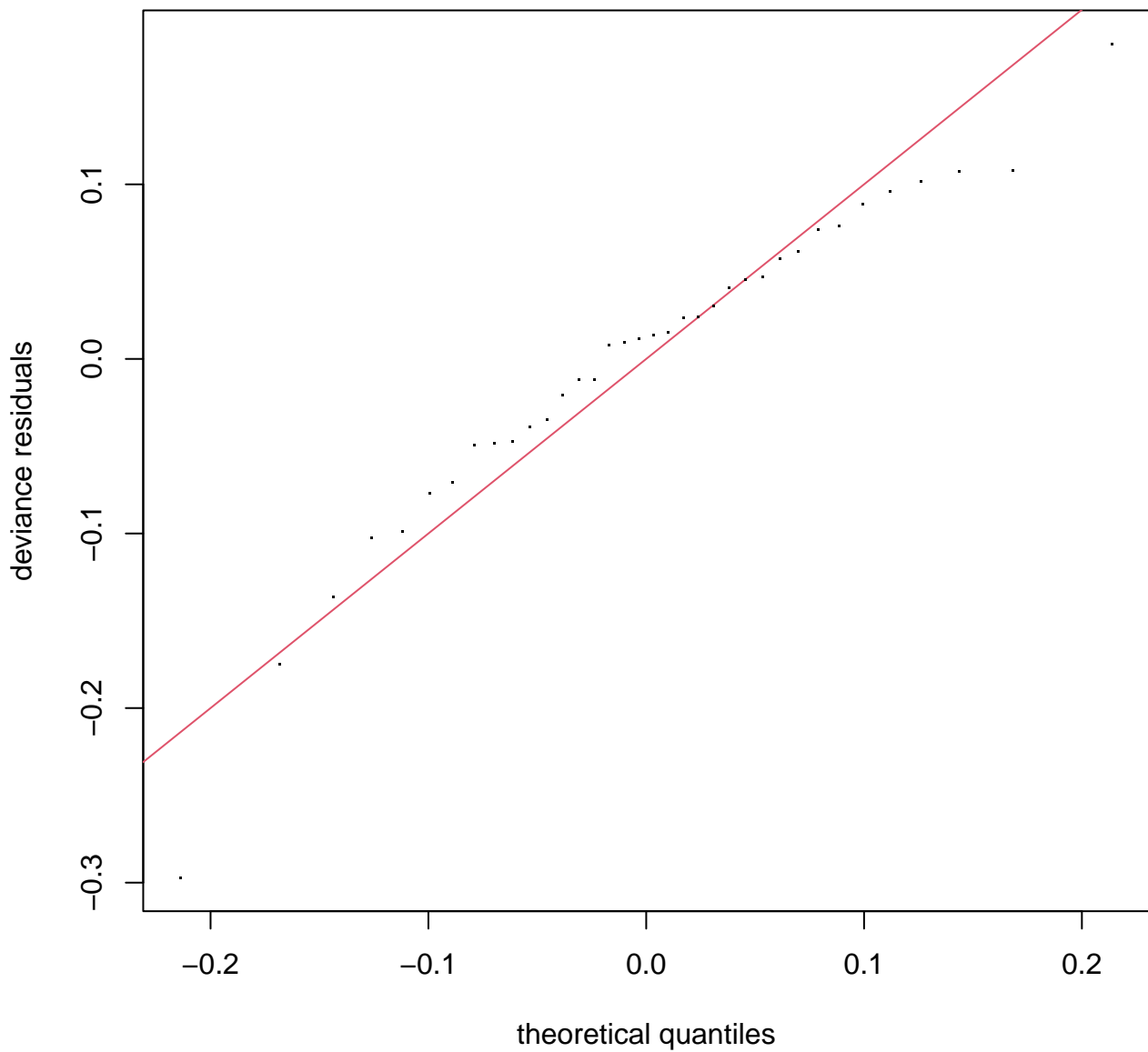




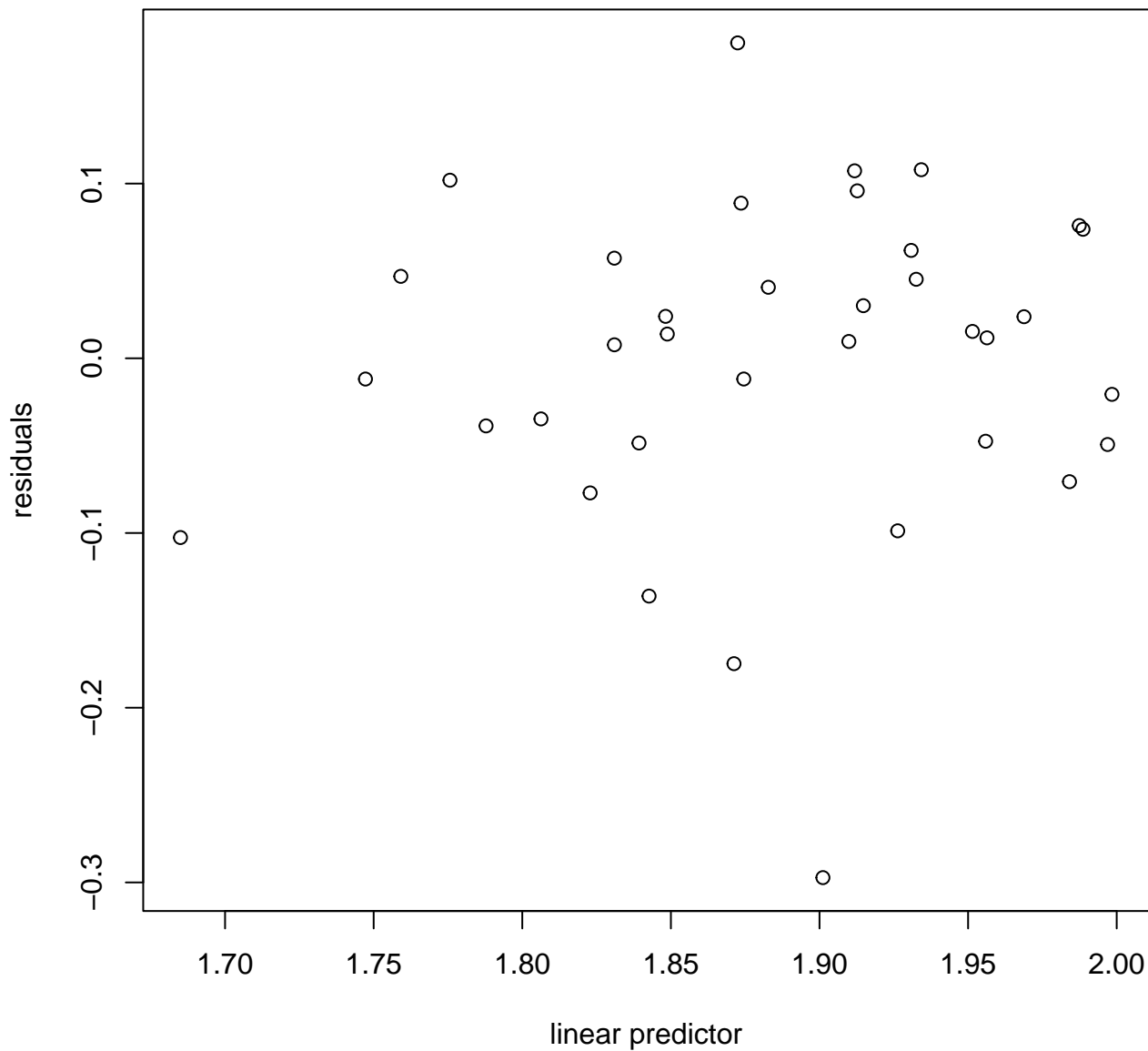
**s(ID,2.36)**



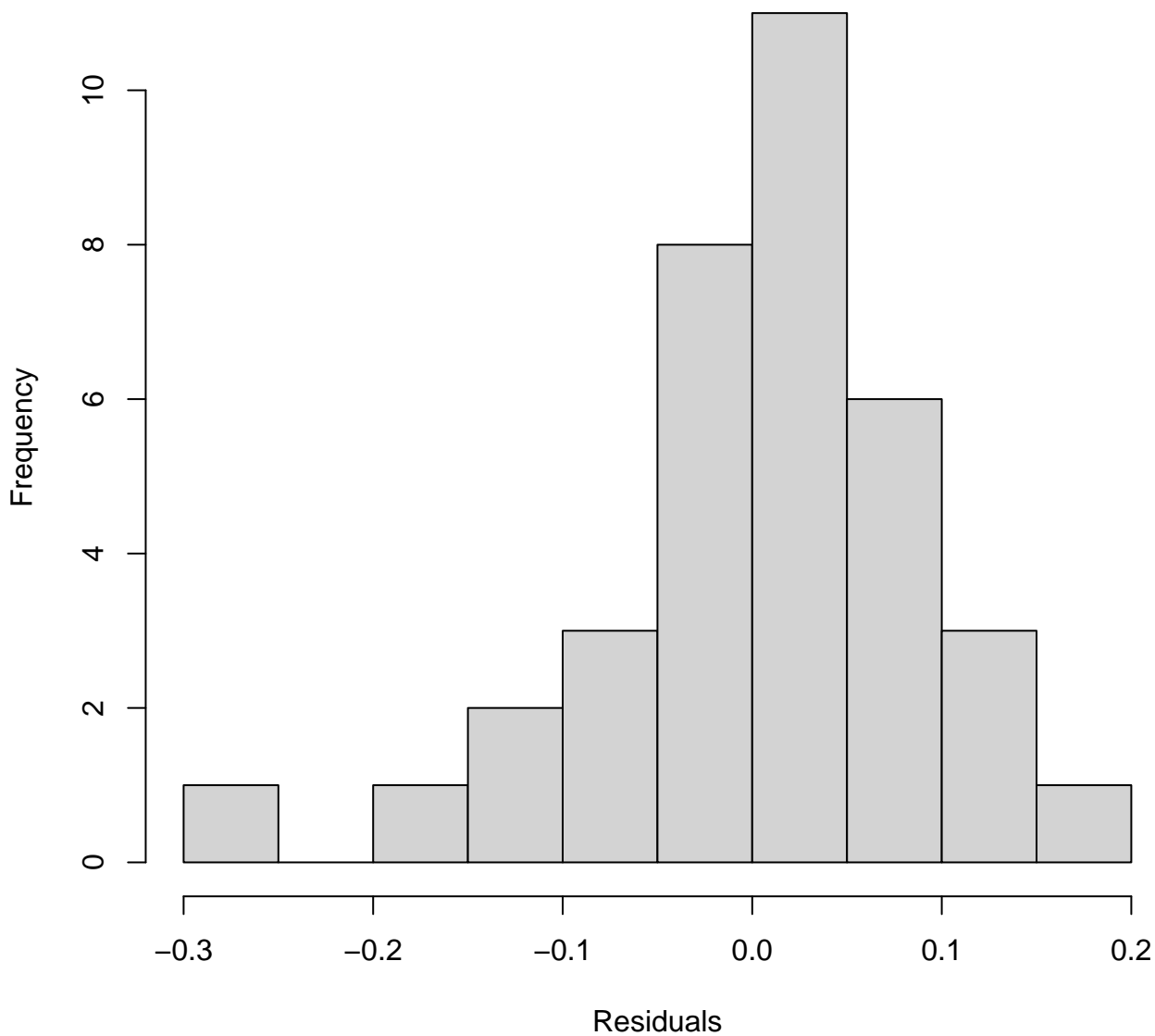




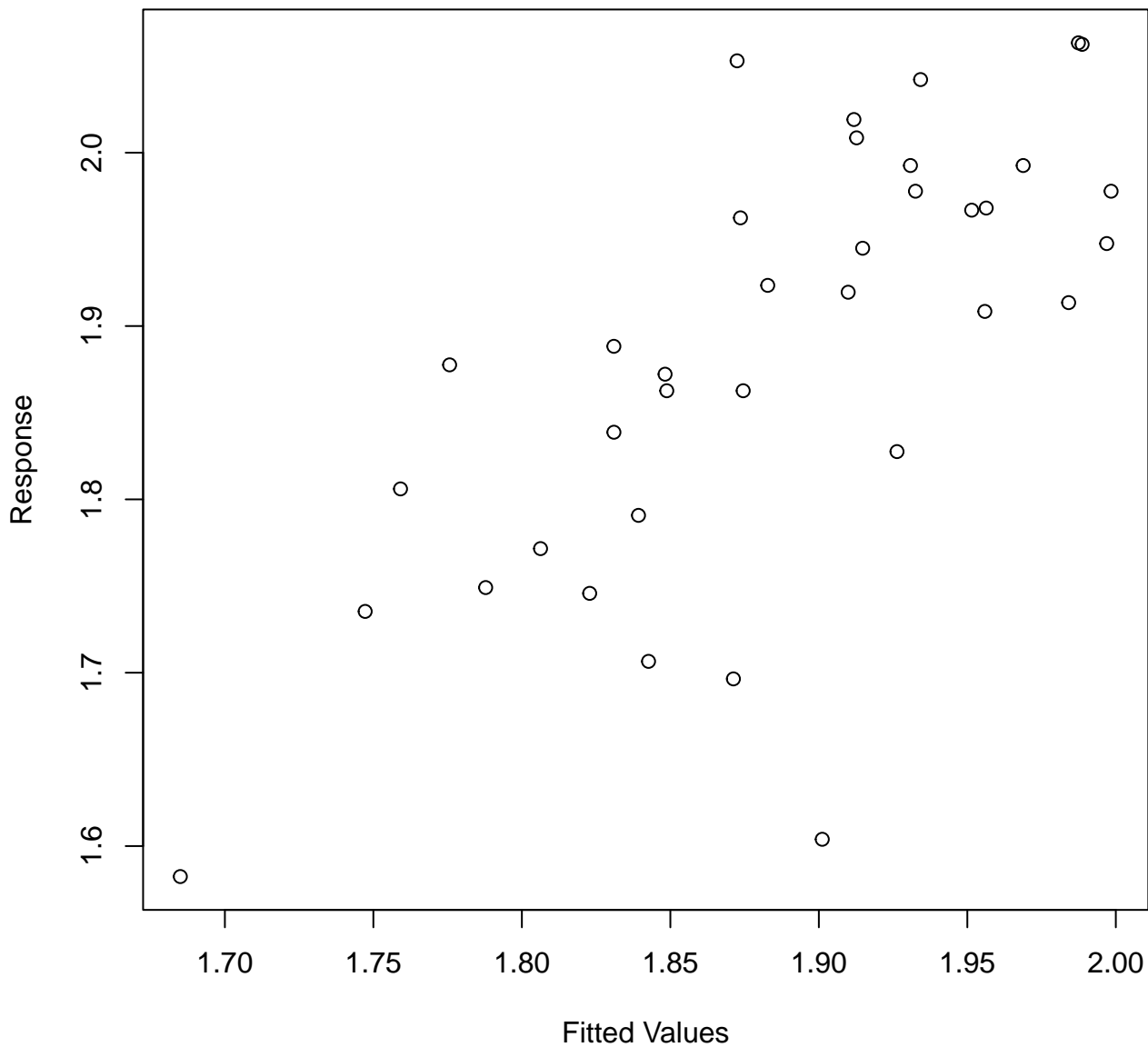
**Resids vs. linear pred.**



**Histogram of residuals**



**Response vs. Fitted Values**



Method: ML    Optimizer: outer newton  
 full convergence after 12 iterations.  
 Gradient range [-6.829766e-06,4.496022e-07]  
 (score -30.98978 & scale 0.009441773).  
 Hessian positive definite, eigenvalue range [3.872079e-06,18.14705].  
 Model rank = 11 / 11

Basis dimension (k) checking results. Low p-value (k-index<1) may  
 indicate that k is too low, especially if edf is close to k'.

	k'	edf	k-index	p-value
s(bites_of_yesterday)	3.00	1.00	1.09	0.58
s(cumul_bites_7_previous_days)	3.00	1.00	1.00	0.36
s(ID)	4.00	2.36	NA	NA

# Check for Multicollinearity

Low Correlation

	Term	VIF	VIF 95% CI	Increased SE	Tolerance	Tolerance 95% CI
s(bites_of_yesterday, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	
s(cumul_bites_7_previous_days, k = 4)	1.11	[1.00, 3.31]	1.05	0.90	[0.30, 1.00]	



Family: gaussian  
Link function: identity

Formula:  
log10(value) ~ s(bites\_of\_yesterday, k = 4) + s(cumul\_bites\_7\_previous\_days,  
k = 4) + s(ID, bs = "re", k = 2)

Parametric coefficients:

	Estimate	Std. Error	t value	Pr(> t )
(Intercept)	1.88505	0.03522	53.53	<2e-16 ***

---

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

Approximate significance of smooth terms:

	edf	Ref.df	F	p-value
s(bites_of_yesterday)	1.000	1	2.000	0.16727
s(cumul_bites_7_previous_days)	1.000	1	8.954	0.00539 **
s(ID)	2.361	3	4.580	0.00282 **

---

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

R-sq.(adj) = 0.403 Deviance explained = 47.8%  
-ML = -30.99 Scale est. = 0.0094418 n = 36

AICc [ 1 ] -53.93073

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

TGFbeta ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

TNF.alpha

Bites in cyno

Nb excluded (LOD) : 29

Nb remaining: 7



TNF.alpha ERROR : Le modèle a plus de coefficients que le nombre de données

Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

TNF.alpha ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile

VEGF

Bites in cyno

Nb excluded (LOD) : 36

Nb remaining: 0

VEGF ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile



Bites in squirrel

Nb excluded (LOD) : 20

Nb remaining: 0

VEGF ERROR : Pas assez de données (non-NA) pour faire quoi que ce soit d'utile