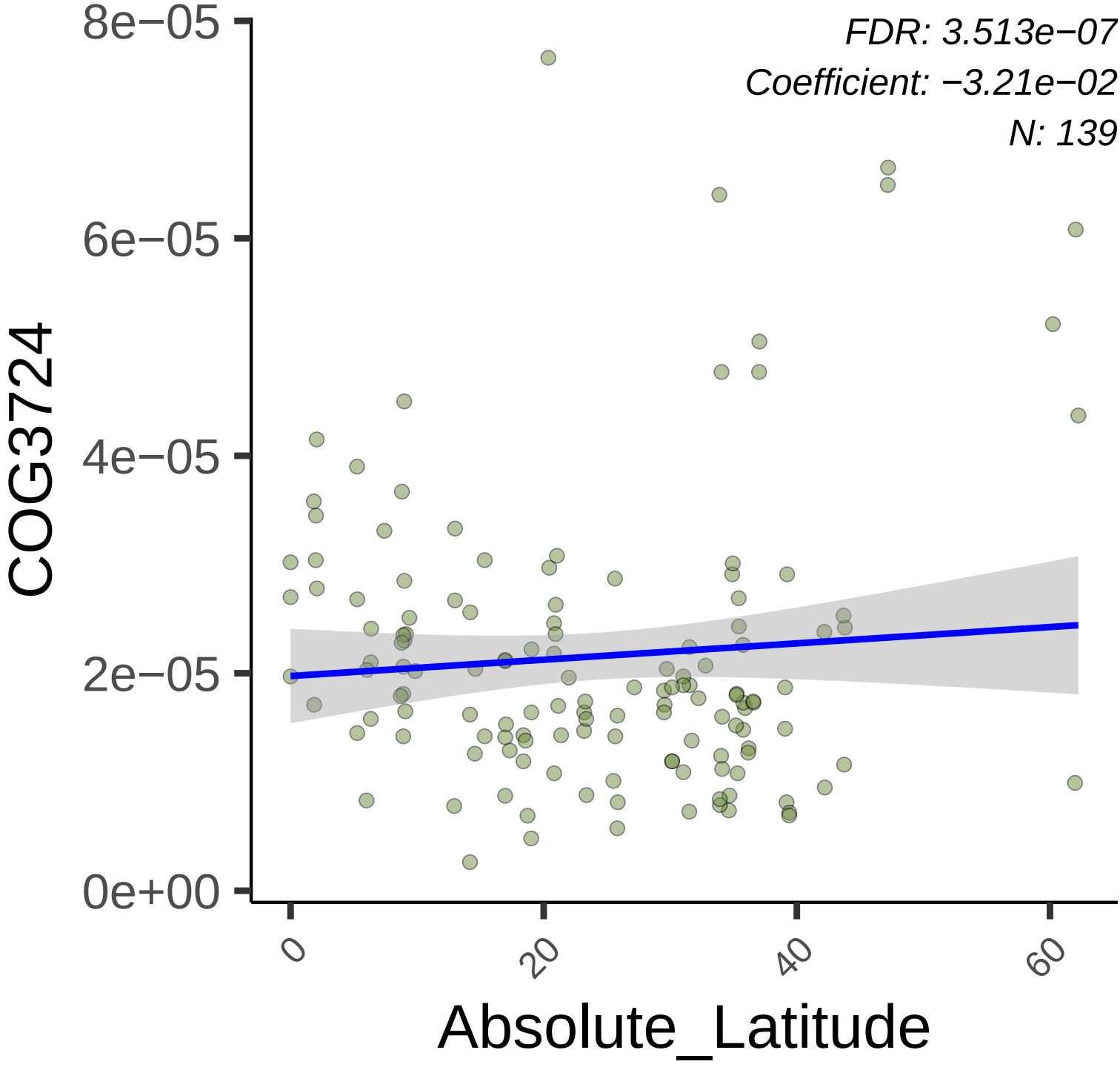
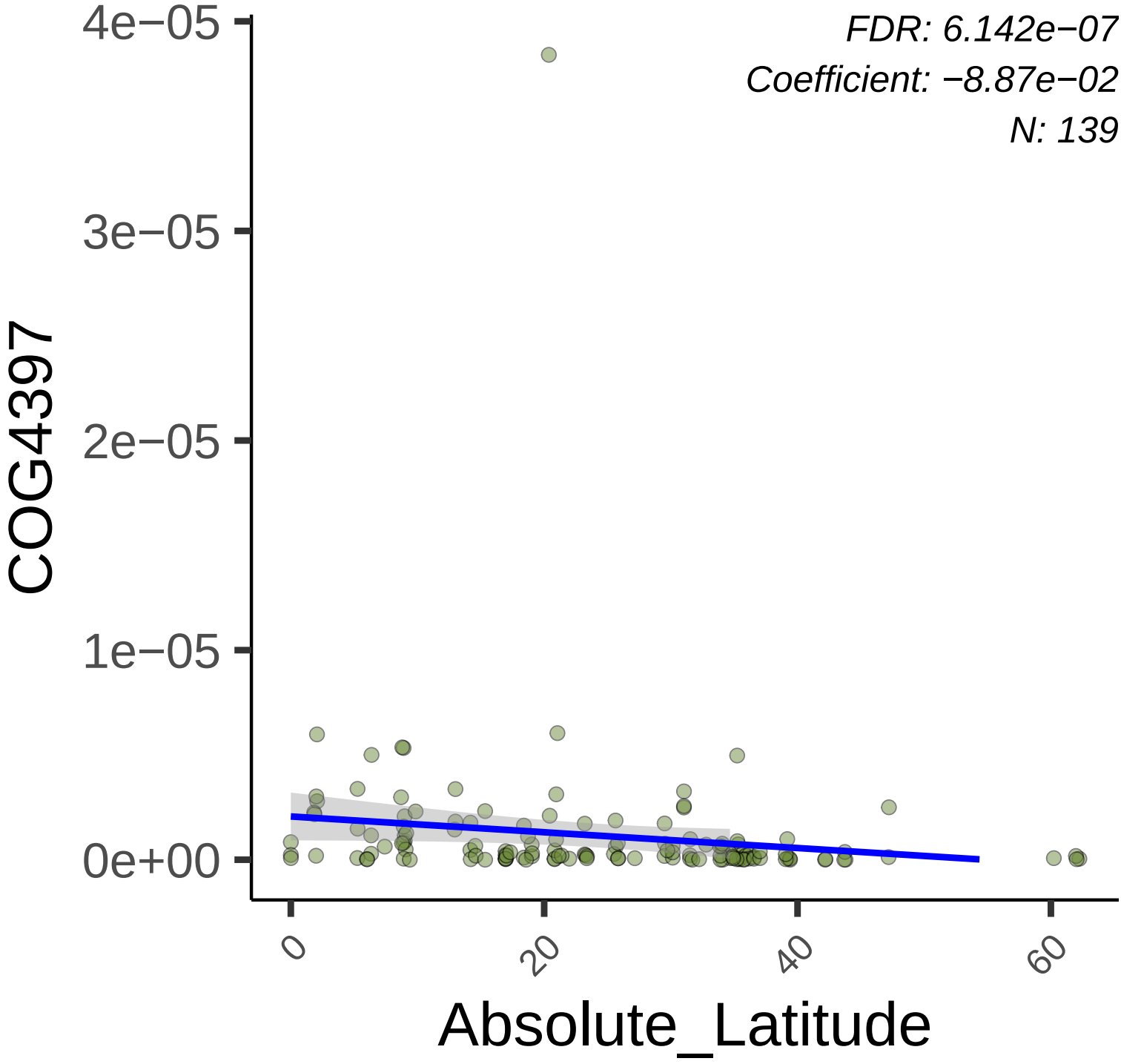
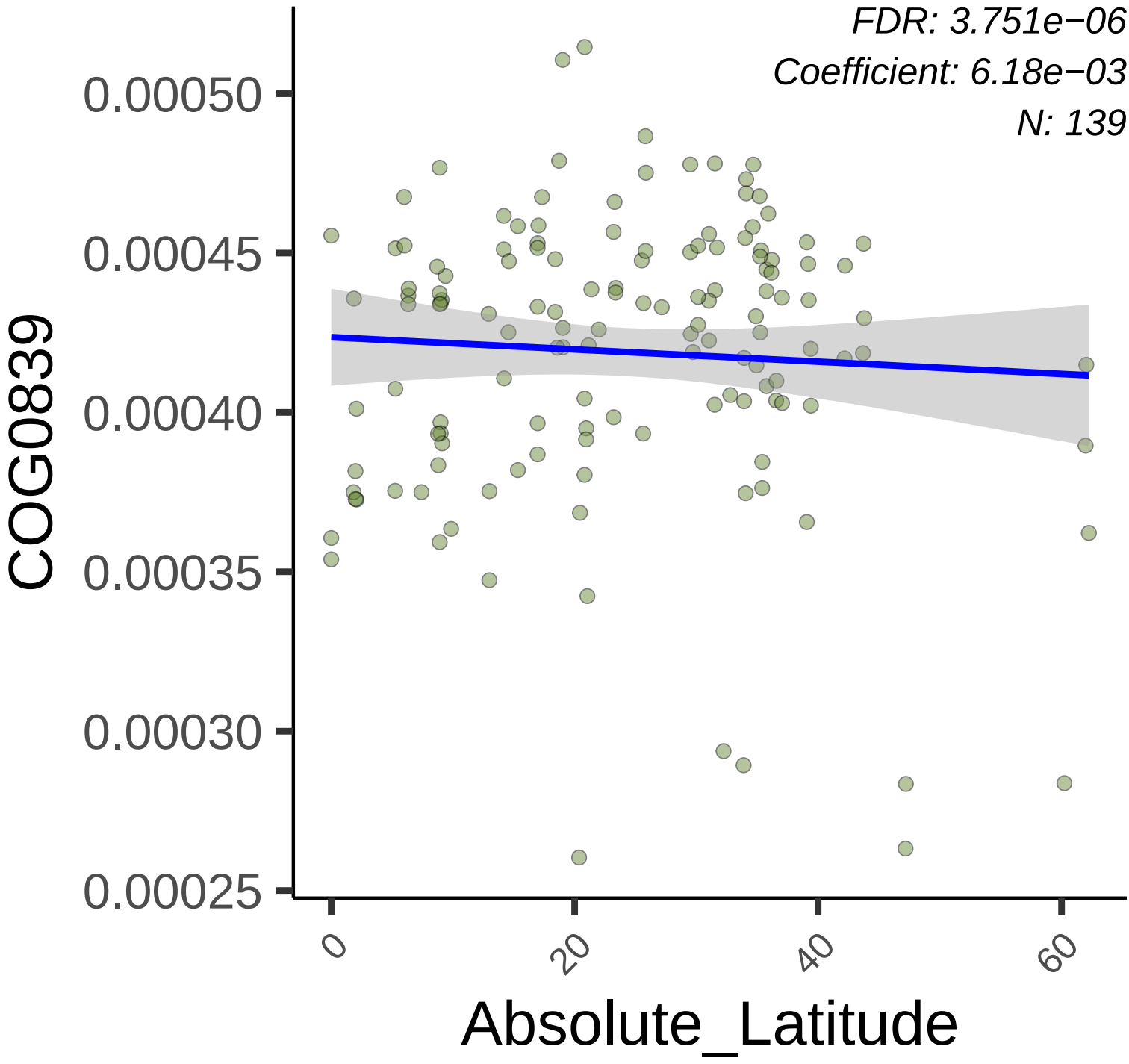
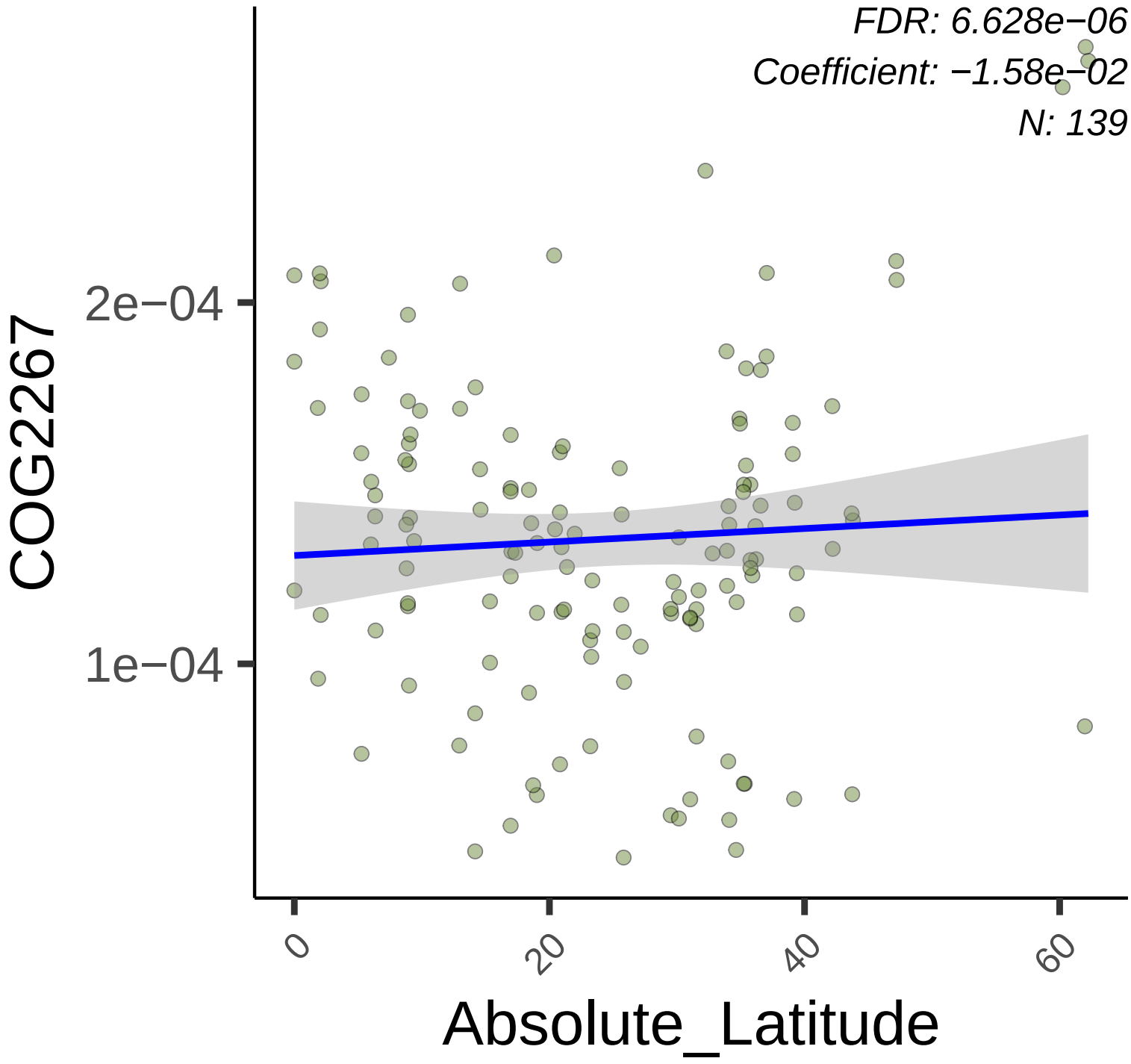
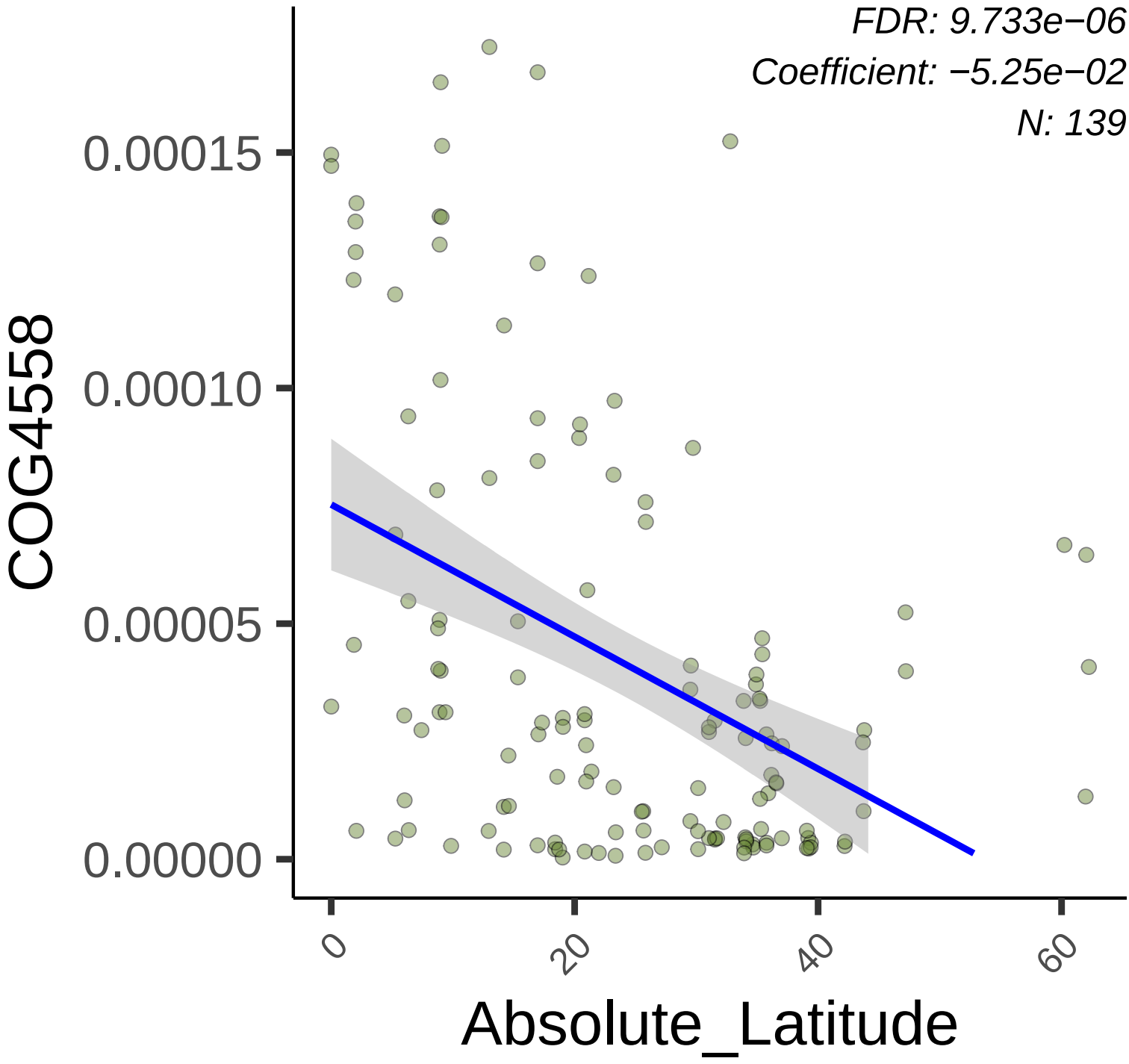
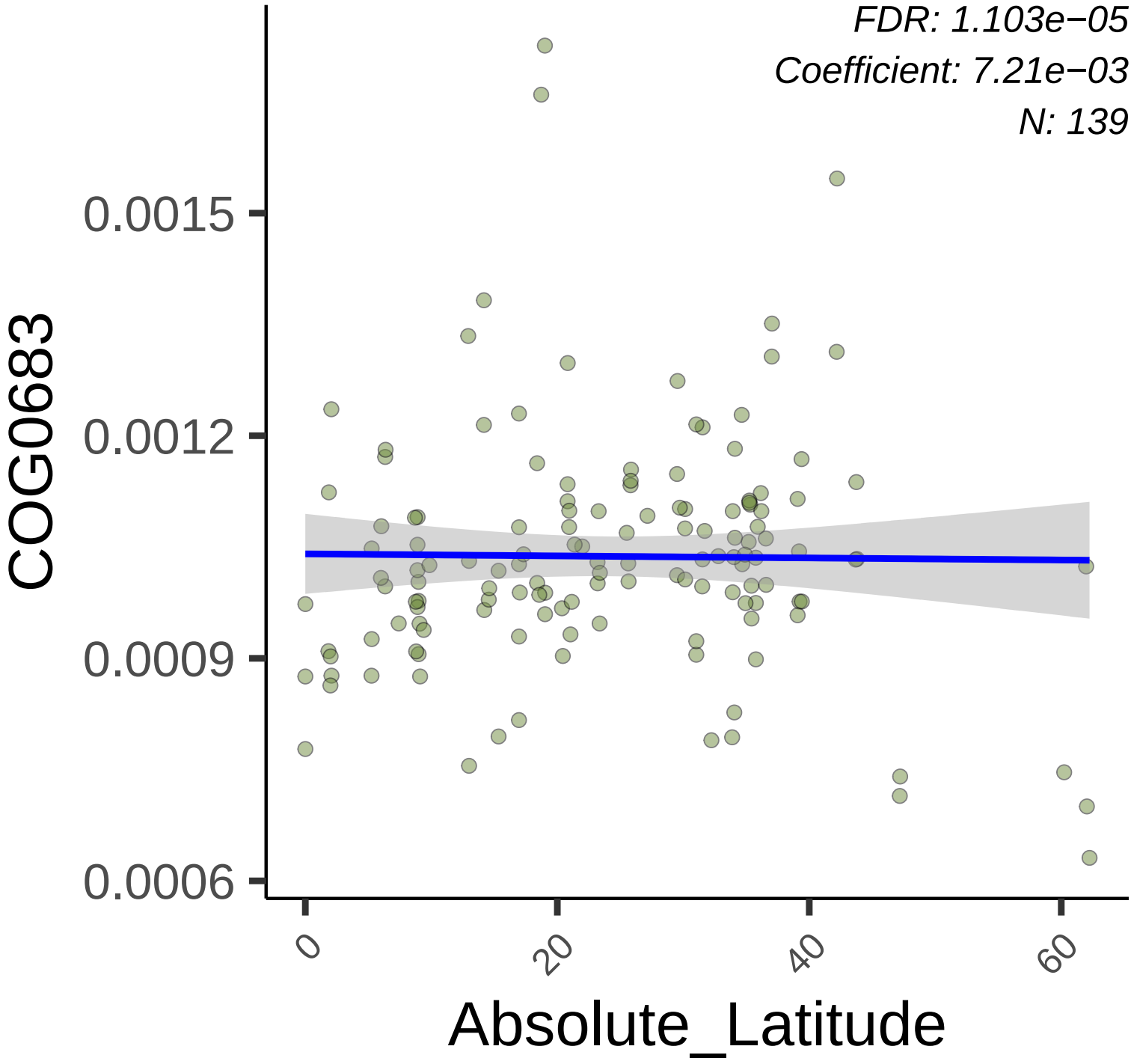

FDR: 3.513e−07
Coefficient: −3.21e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG3724
0
20
40
60
Absolute_Latitude

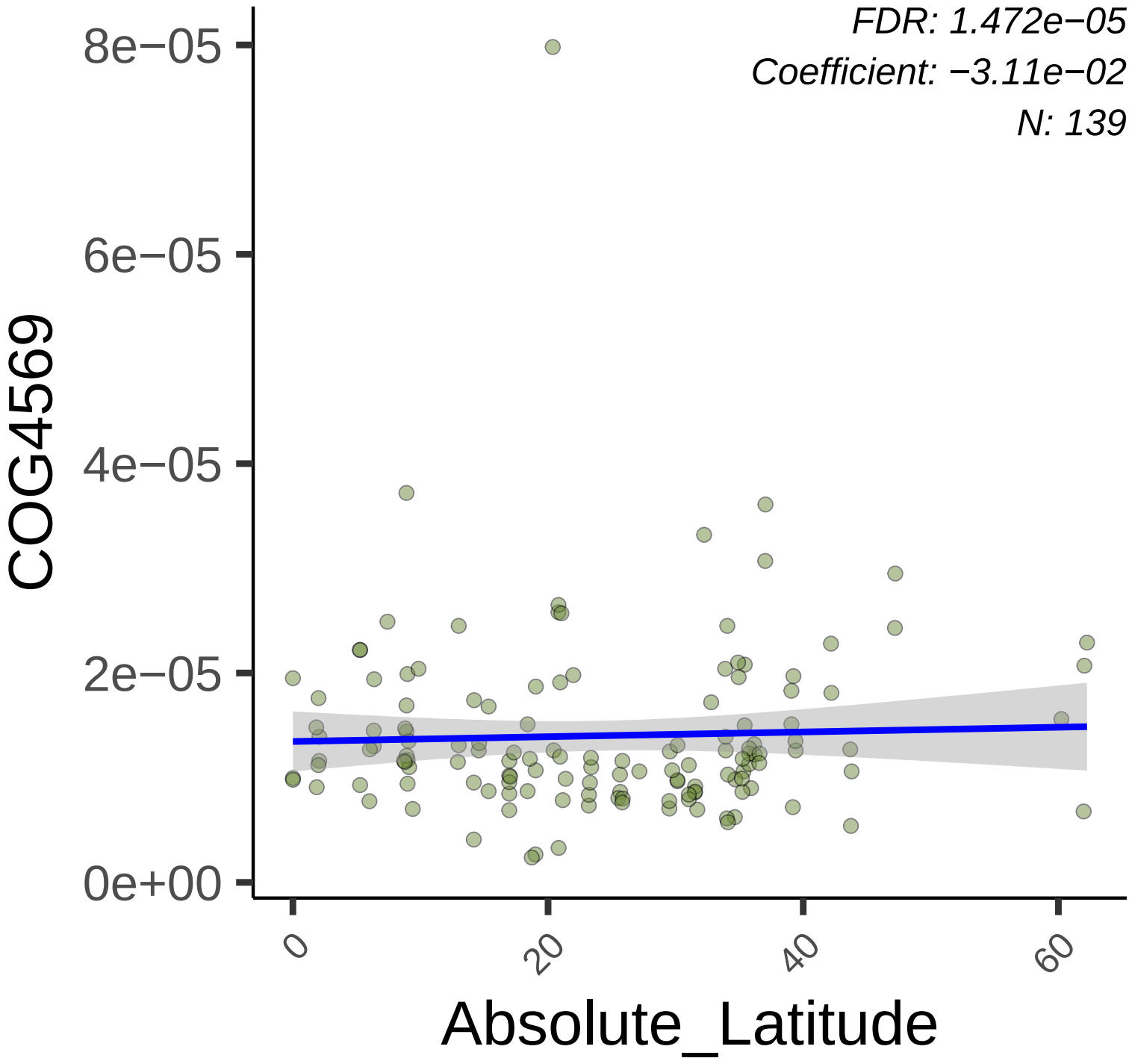

FDR: 6.142e−07
Coefficient: −8.87e−02
N: 139
COG4397
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

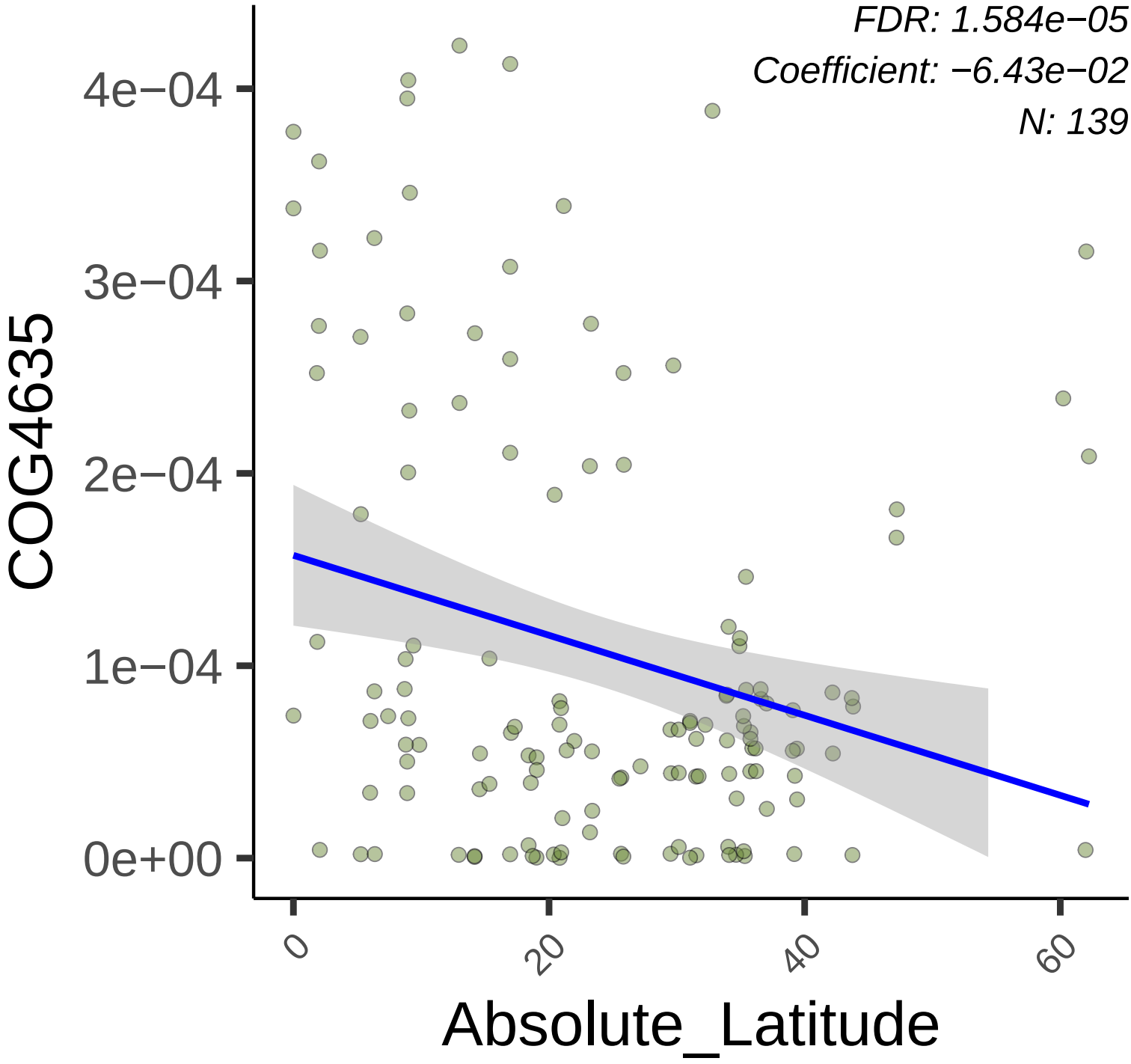

FDR: 3.751e−06
Coefficient: 6.18e−03
N: 139
COG0839
0.00050
0.00045
0.00040
0.00035
0.00030
0.00025
0
20
40
60
Absolute_Latitude

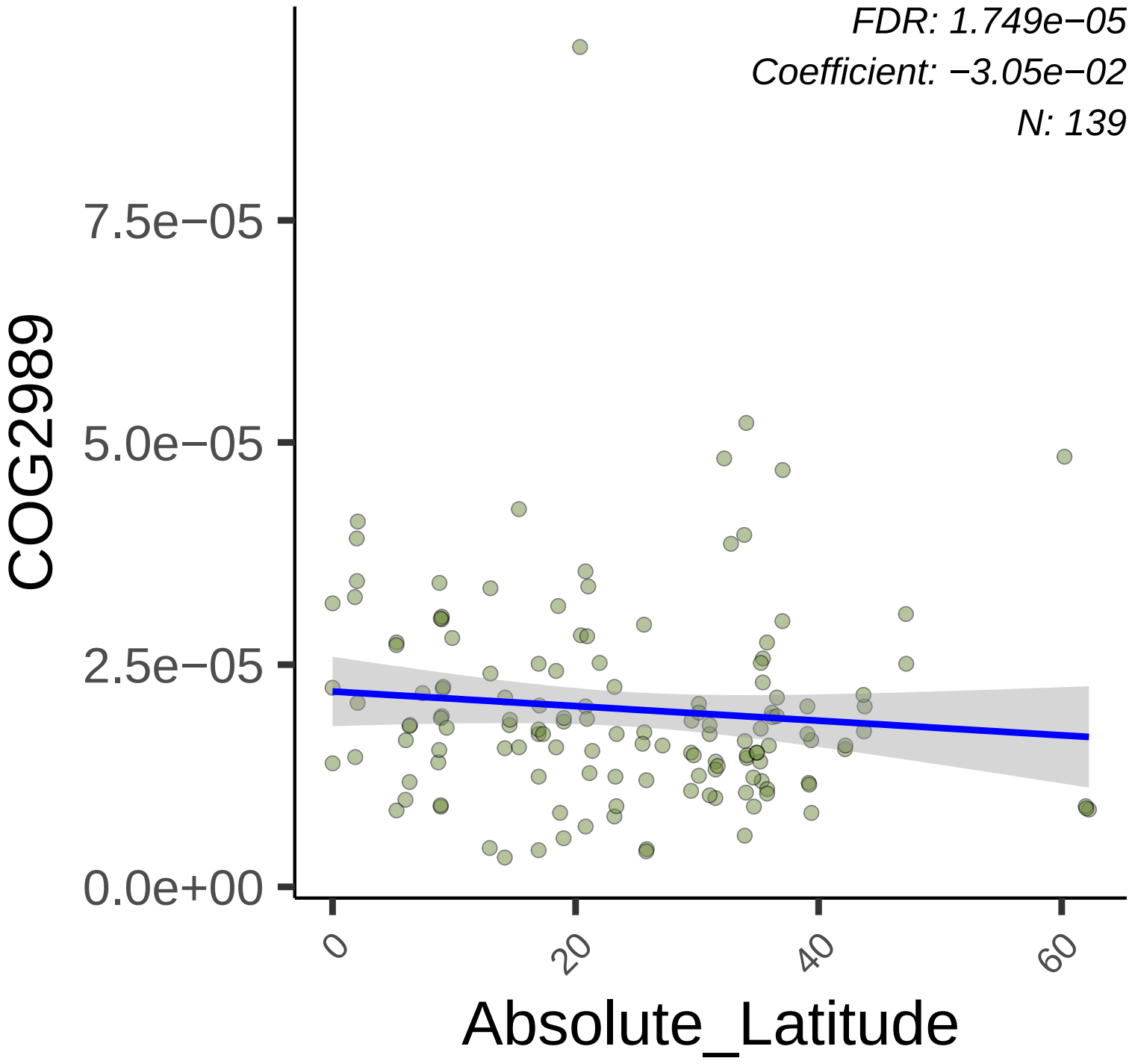

FDR: 6.628e−06
Coefficient: −1.58e−02
N: 139
COG2267
2e−04
1e−04
0
20
40
60
Absolute_Latitude

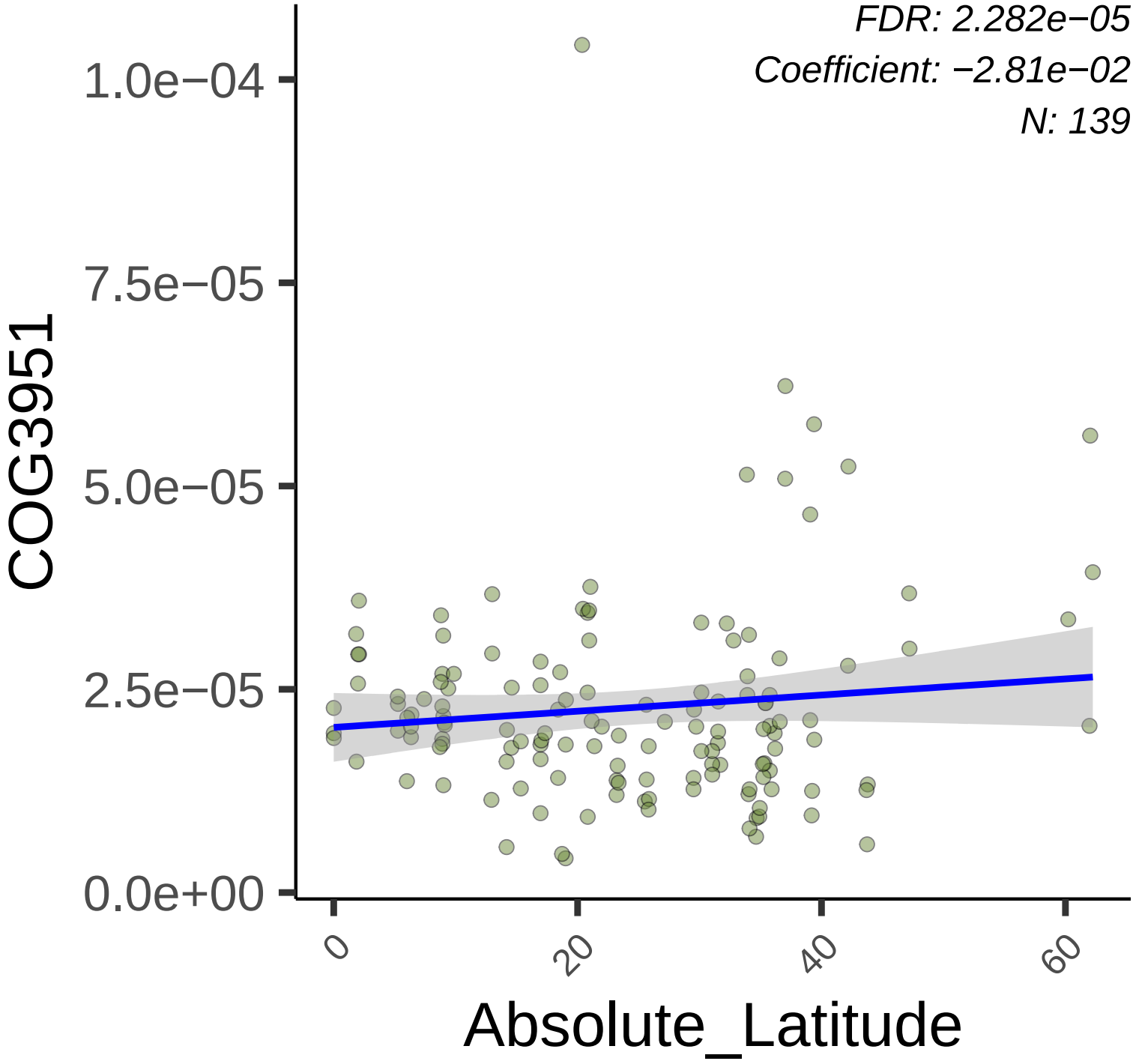

FDR: 9.733e−06
Coefficient: −5.25e−02
N: 139
COG4558
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

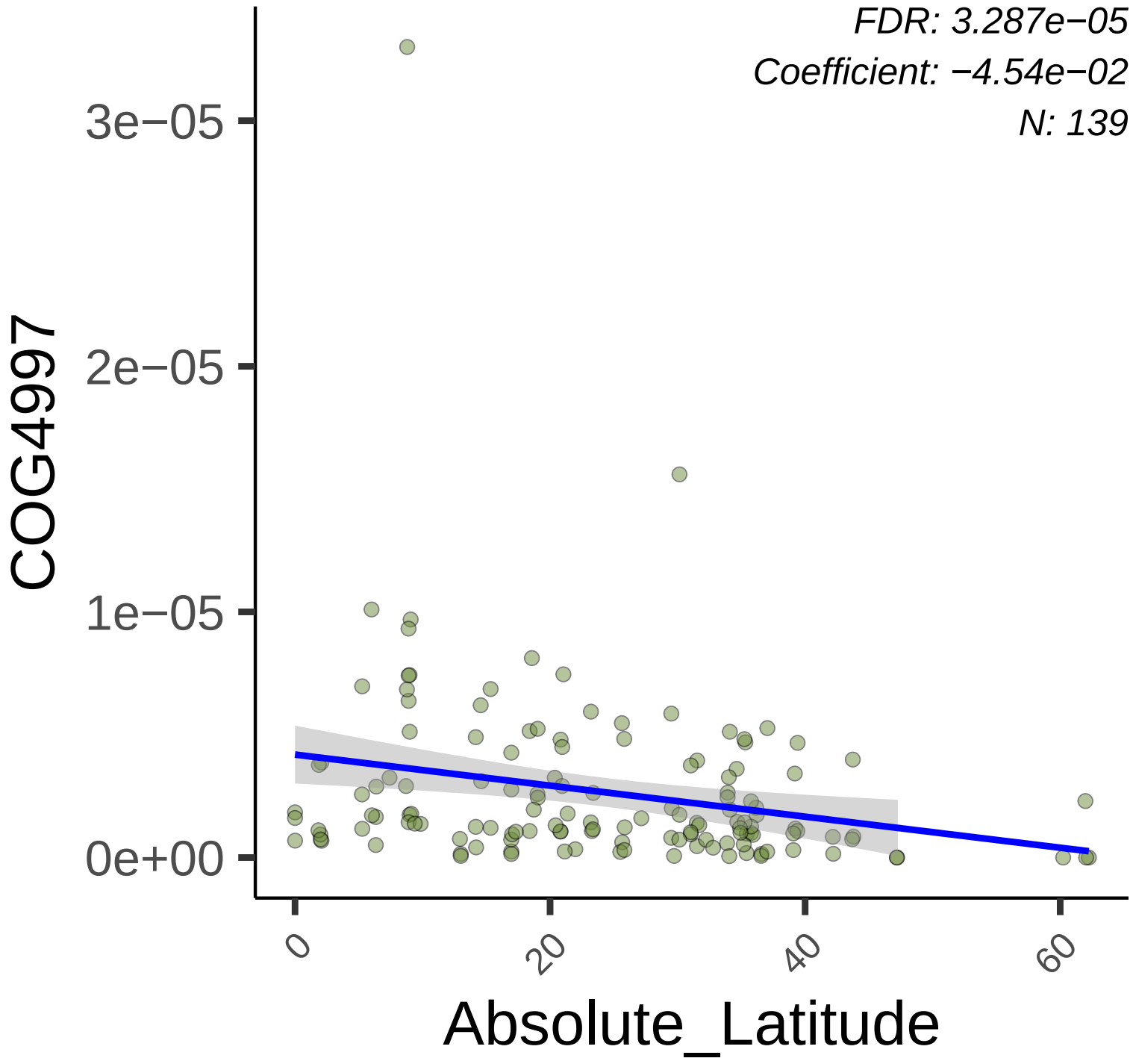

FDR: 1.103e−05
Coefficient: 7.21e−03
N: 139
COG0683
0.0015
0.0012
0.0009
0.0006
0
20
40
60
Absolute_Latitude

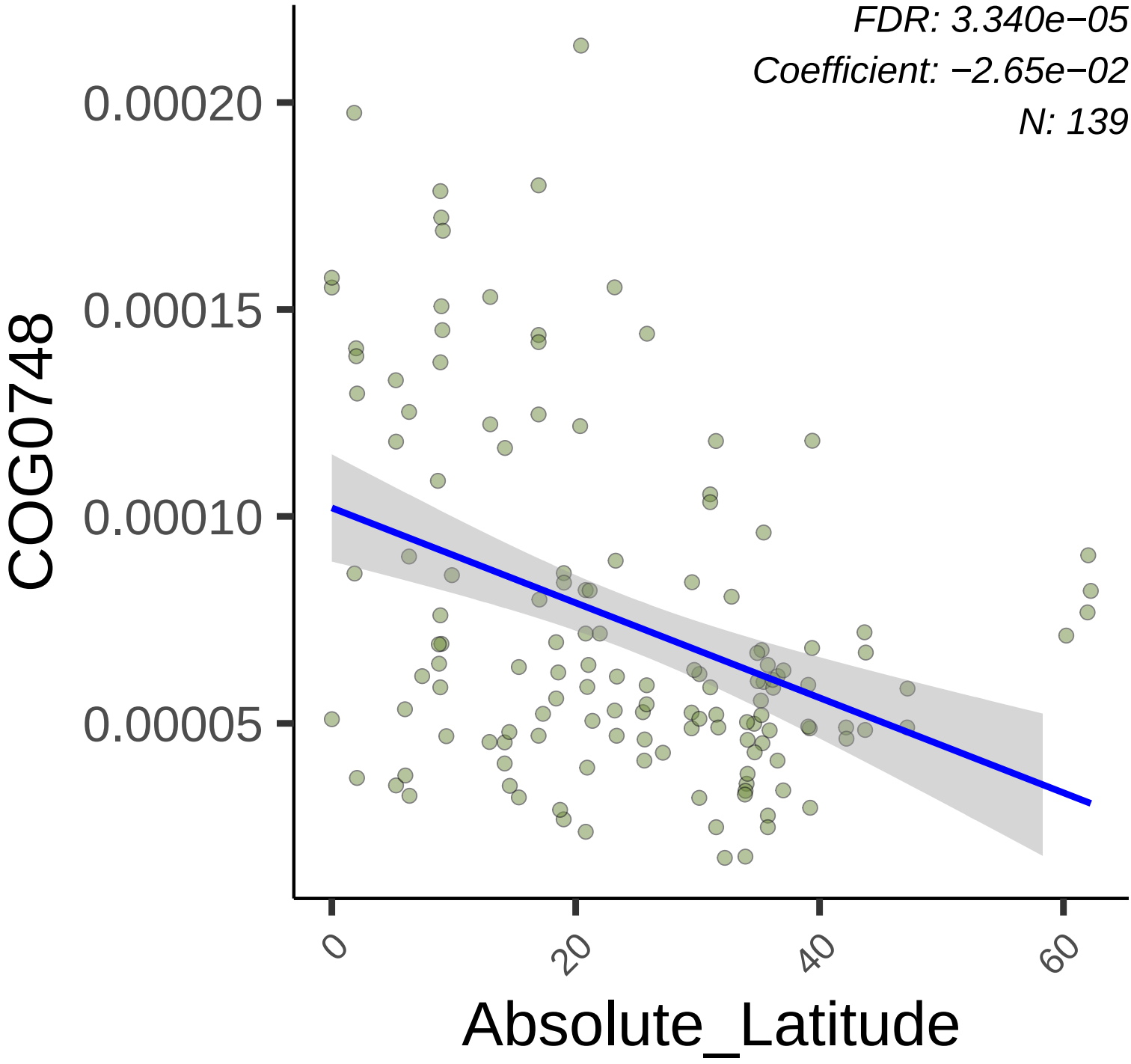

FDR: 1.472e−05
Coefficient: −3.11e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG4569
0
20
40
60
Absolute_Latitude

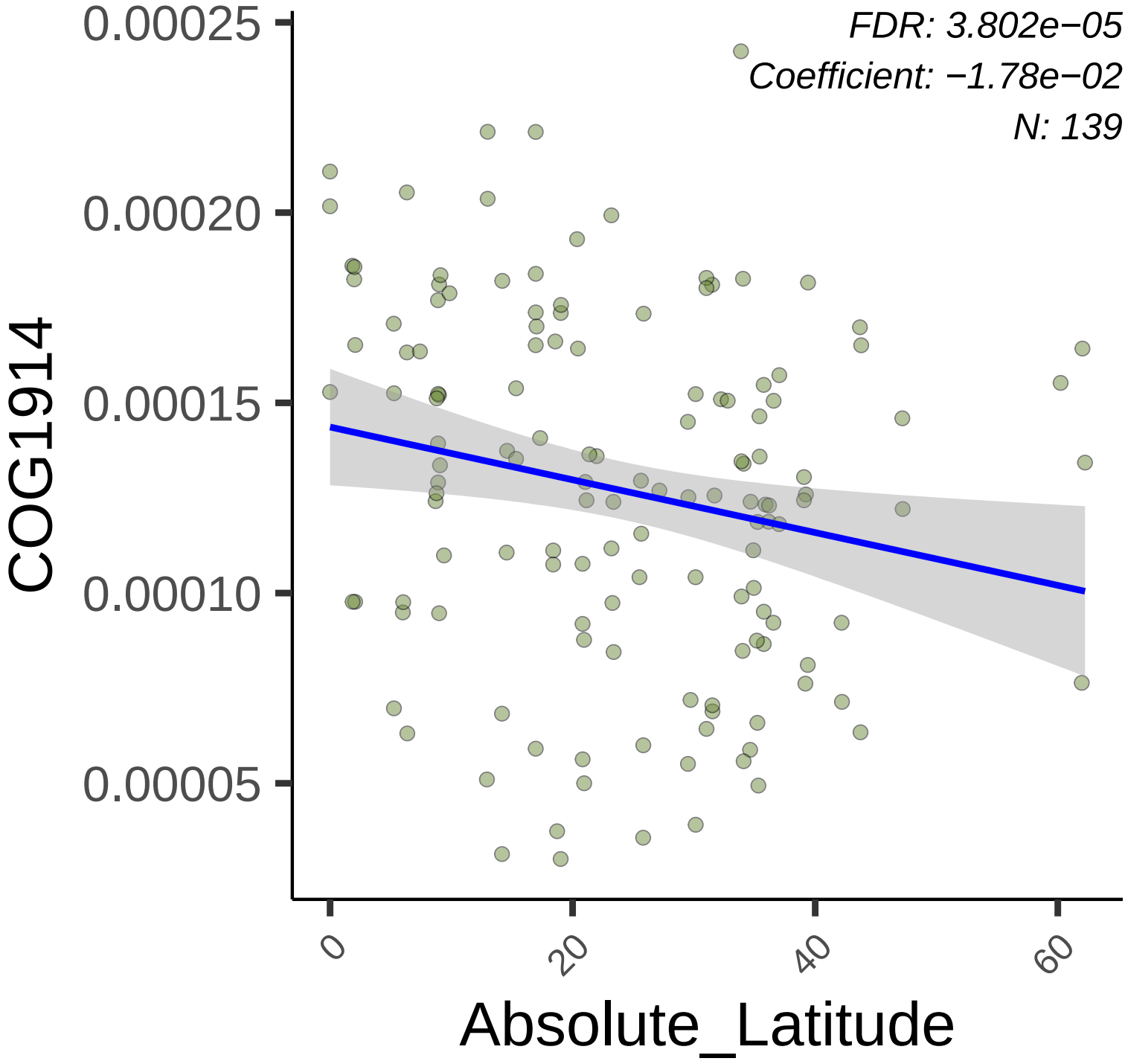

FDR: 1.584e−05
Coefficient: −6.43e−02
N: 139
COG4635
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

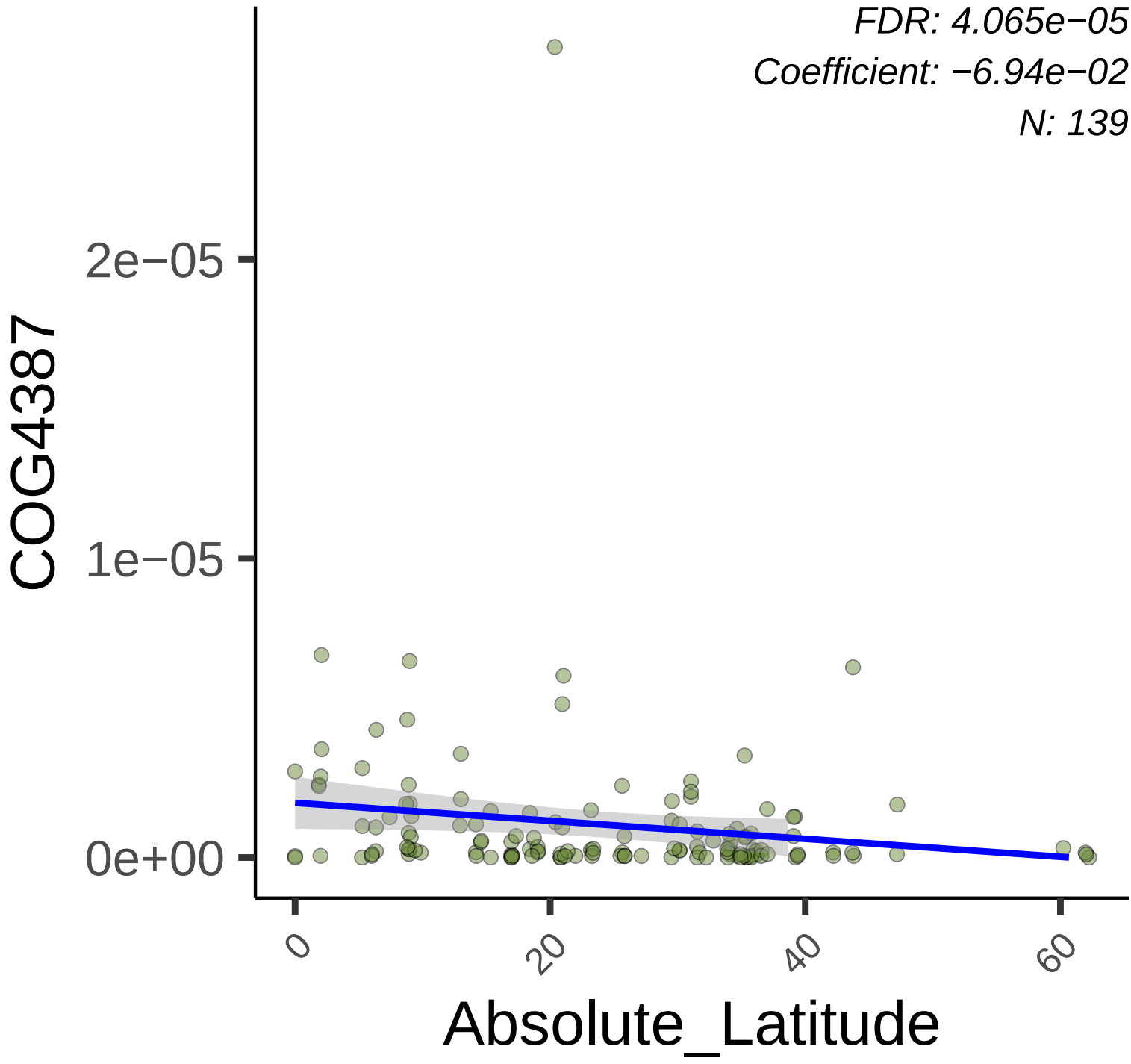

FDR: 1.749e−05
Coefficient: −3.05e−02
N: 139
COG2989
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

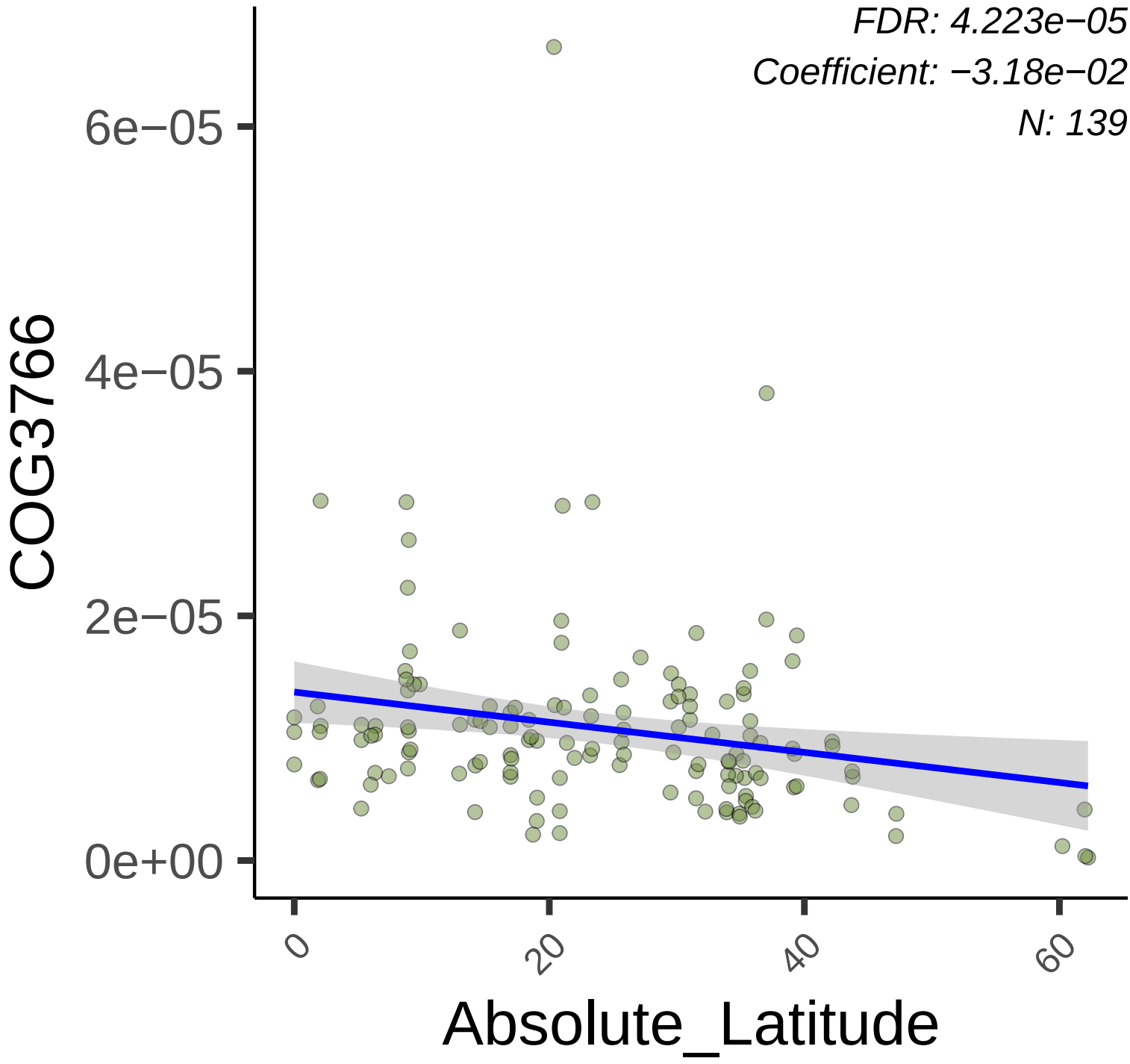

FDR: 2.282e−05
Coefficient: −2.81e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3951
0
20
40
60
Absolute_Latitude

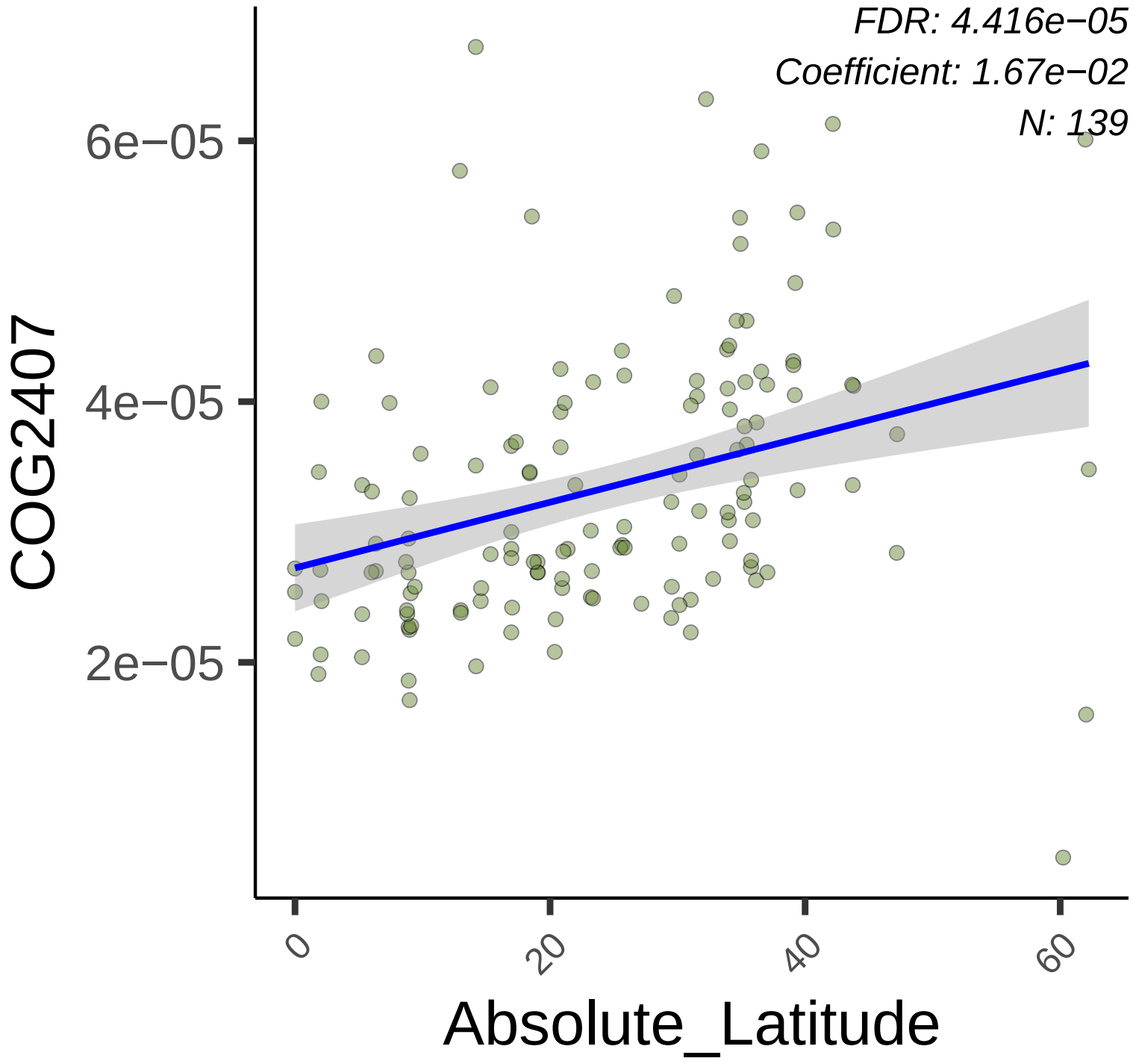

FDR: 3.287e−05
Coefficient: −4.54e−02
N: 139
COG4997
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

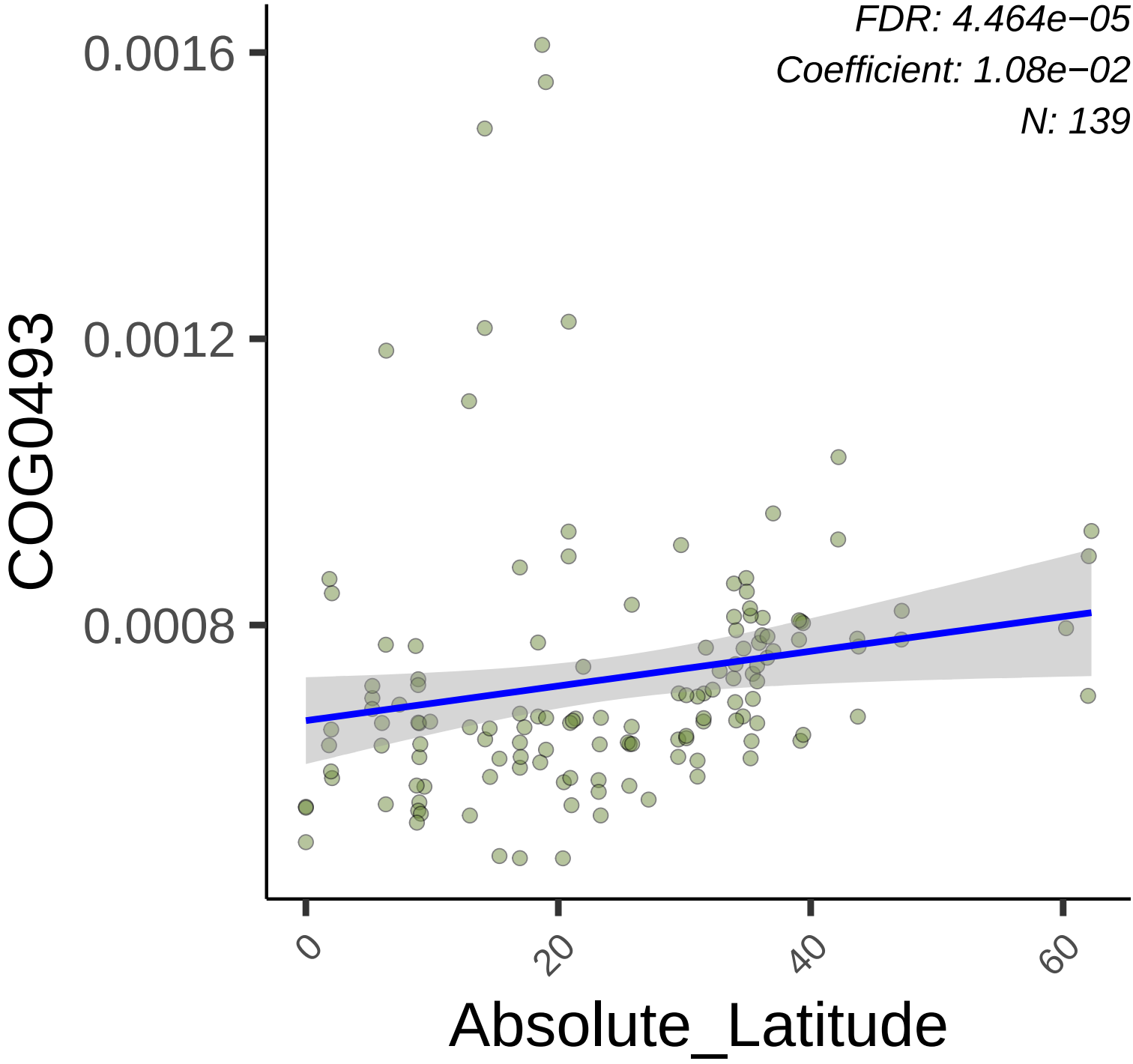

FDR: 3.340e−05
Coefficient: −2.65e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG0748
0
20
40
60
Absolute_Latitude

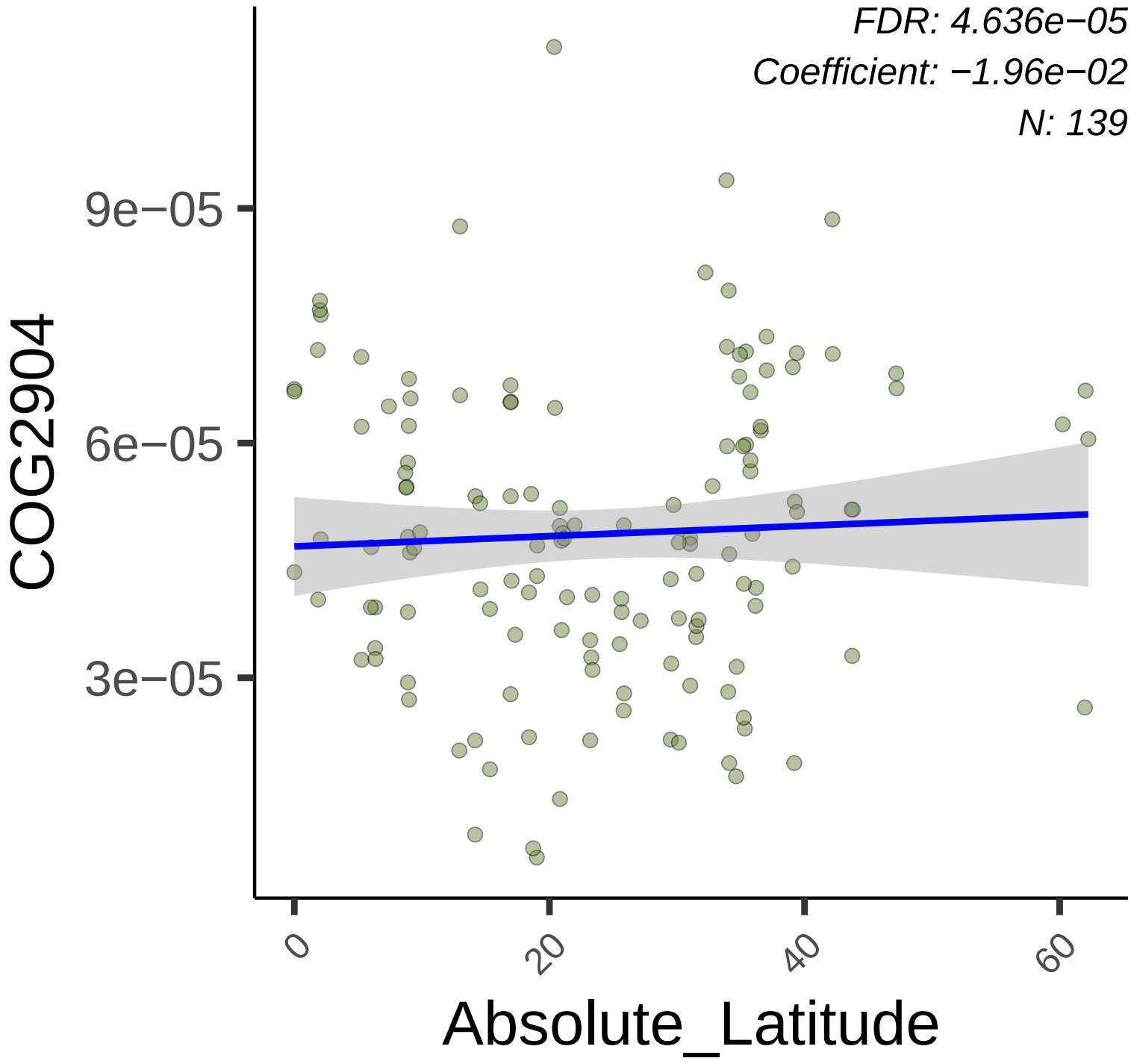

FDR: 3.802e−05
Coefficient: −1.78e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG1914
0
20
40
60
Absolute_Latitude

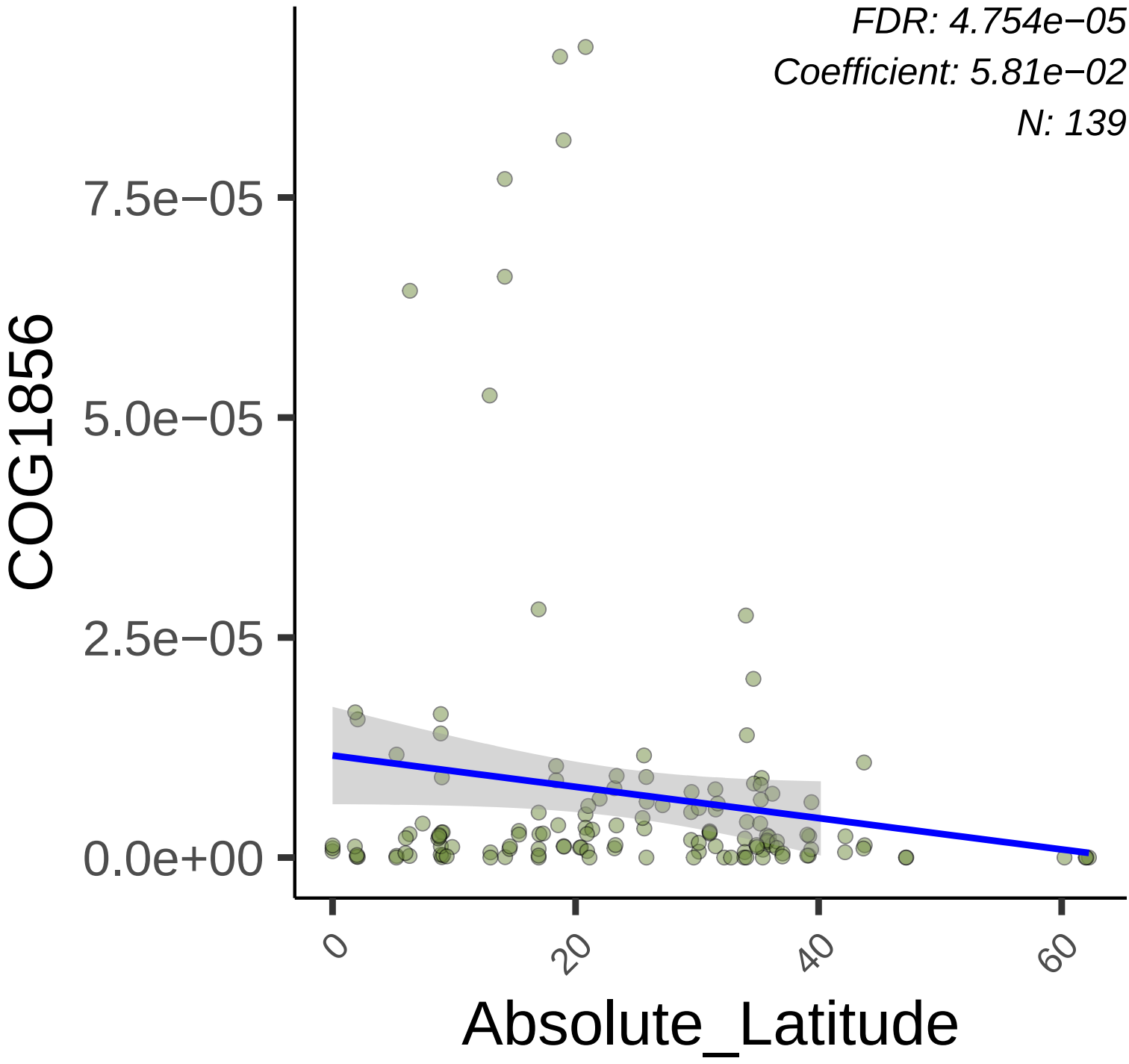

FDR: 4.065e−05
Coefficient: −6.94e−02
N: 139
COG4387
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

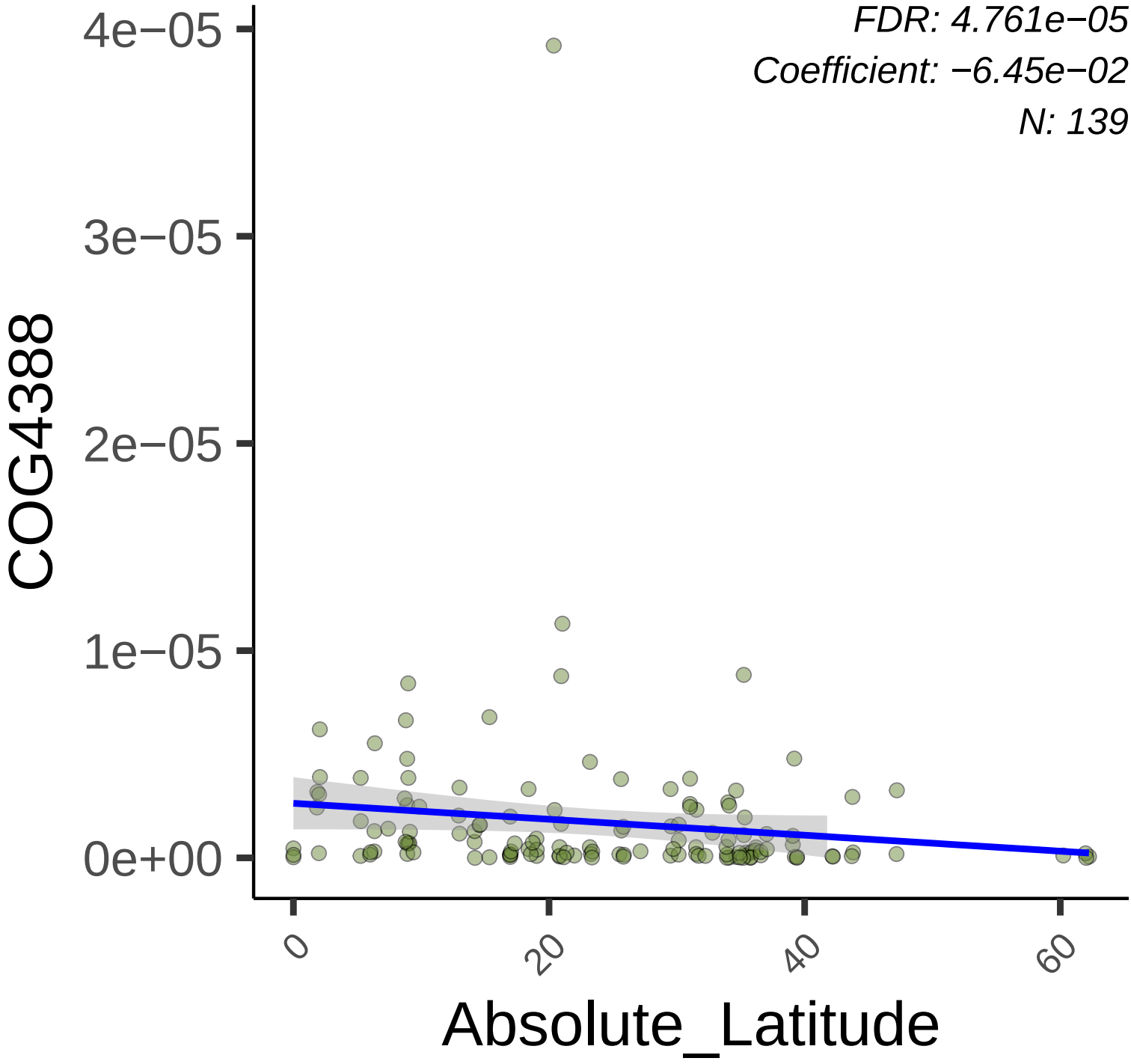

FDR: 4.223e−05
Coefficient: −3.18e−02
N: 139
COG3766
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

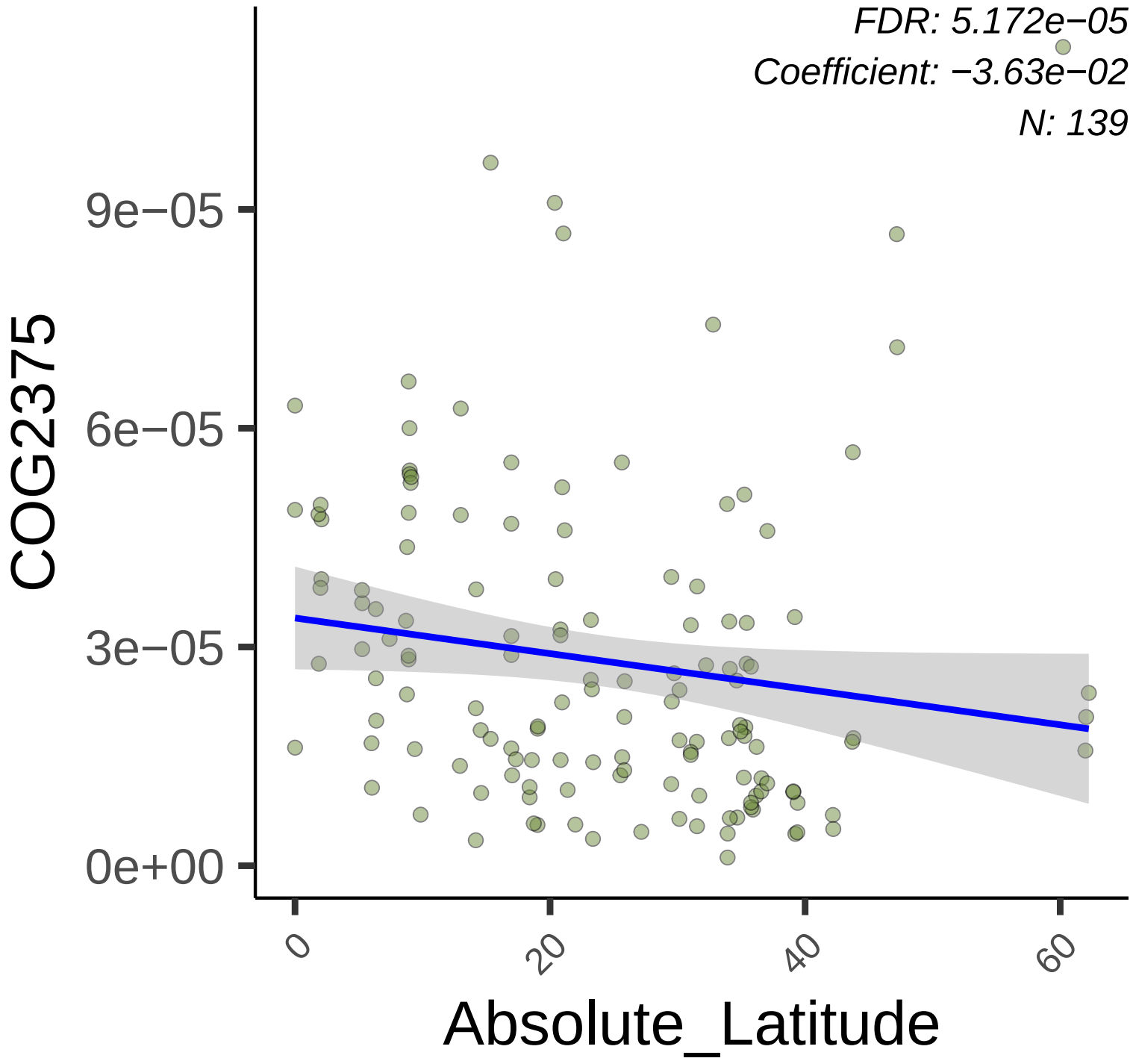

FDR: 4.416e−05
Coefficient: 1.67e−02
N: 139
6e−05
4e−05
2e−05
COG2407
0
20
40
60
Absolute_Latitude

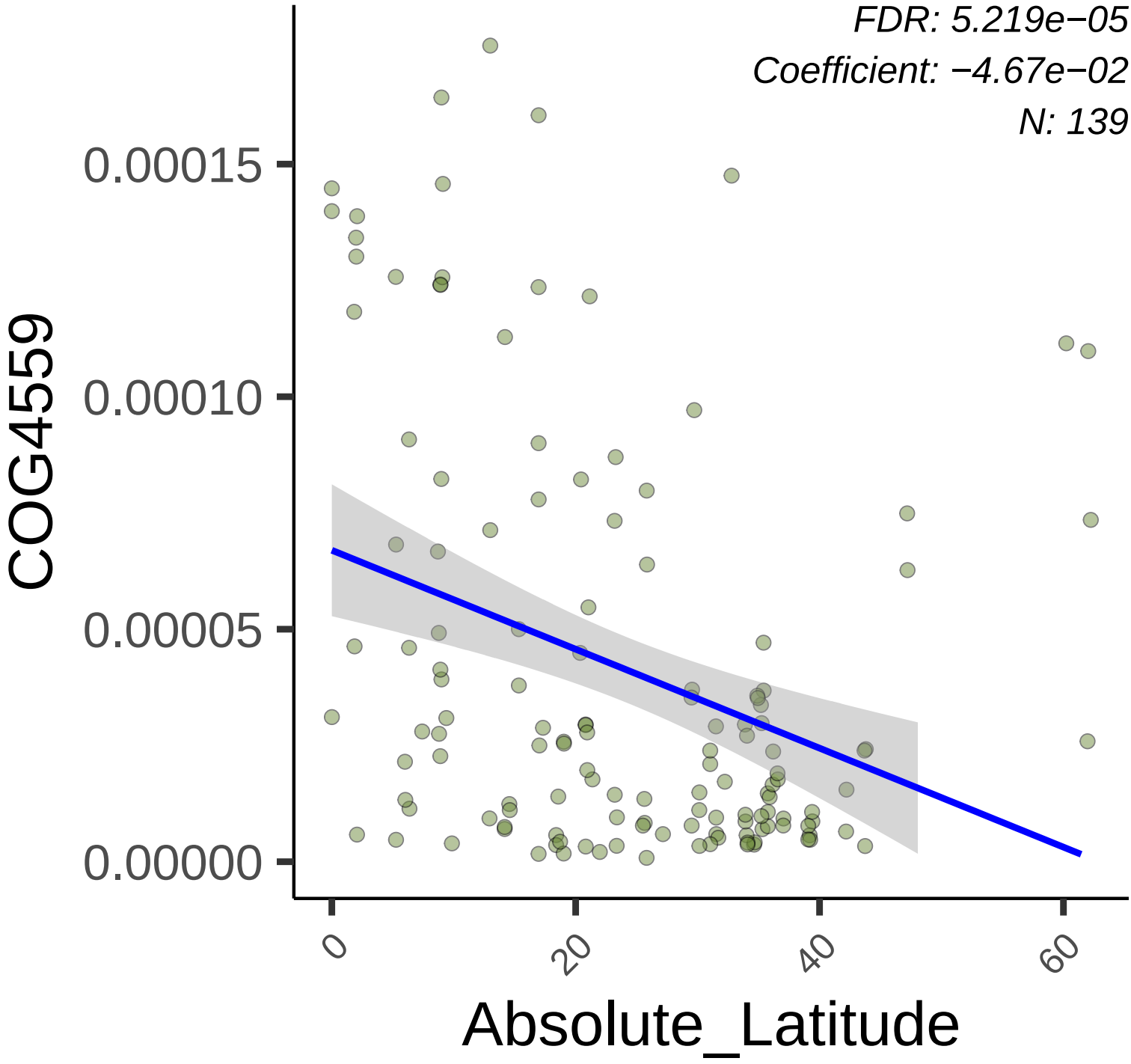

FDR: 4.464e−05
Coefficient: 1.08e−02
N: 139
0.0016
0.0012
0.0008
COG0493
0
20
40
60
Absolute_Latitude

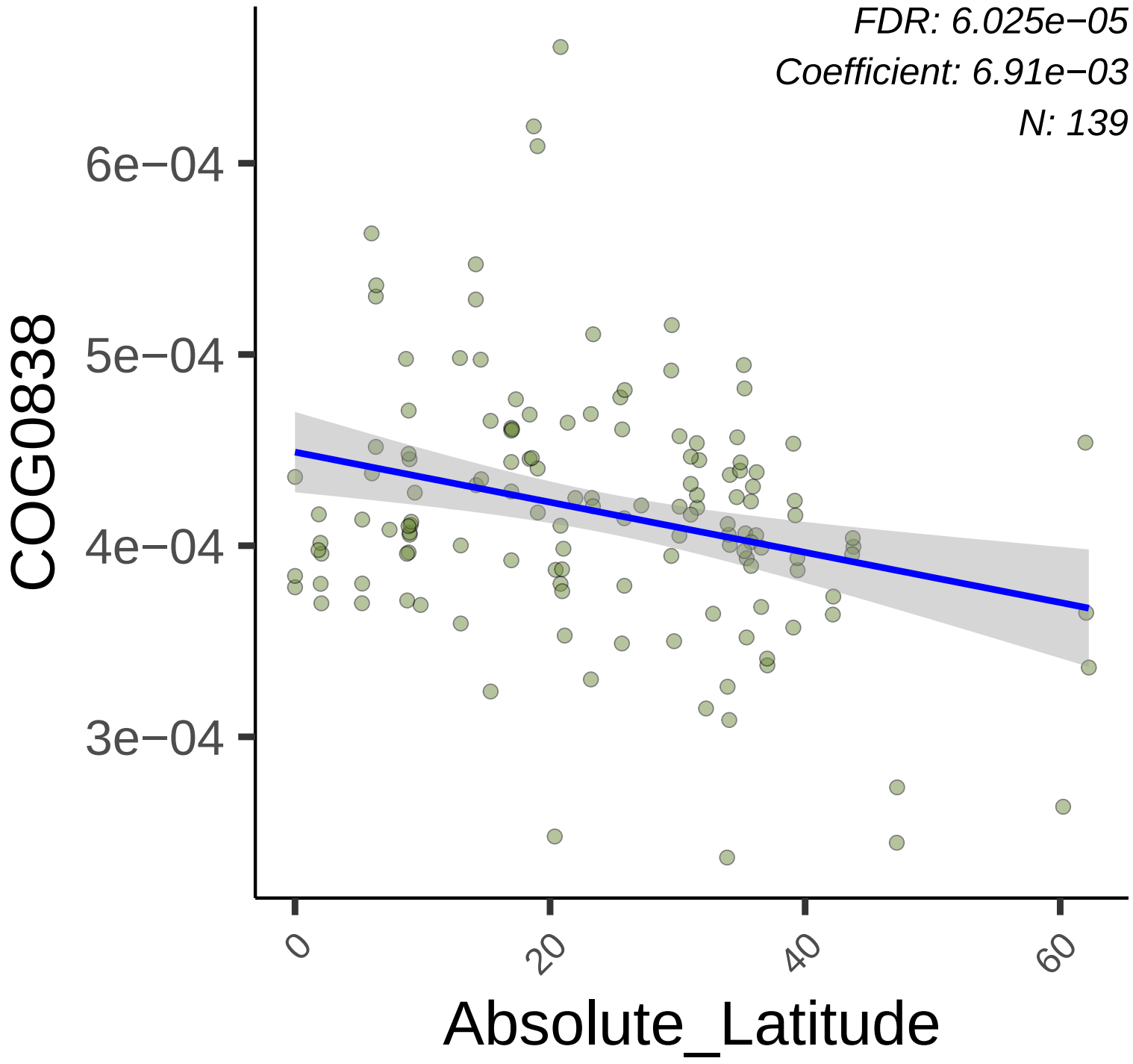

FDR: 4.636e−05
Coefficient: −1.96e−02
N: 139
9e−05
6e−05
3e−05
COG2904
0
20
40
60
Absolute_Latitude

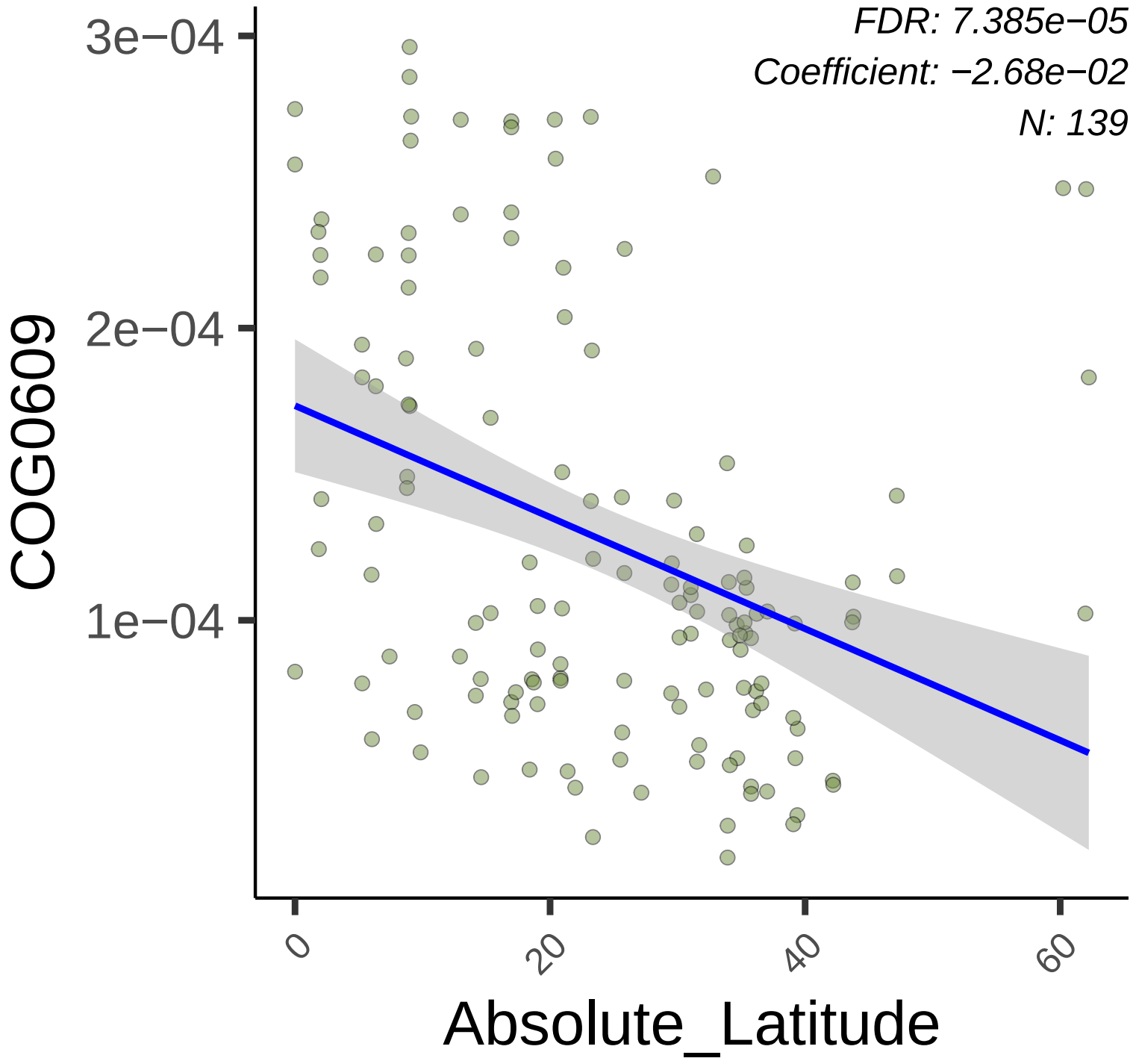

FDR: 4.754e−05
Coefficient: 5.81e−02
N: 139
COG1856
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

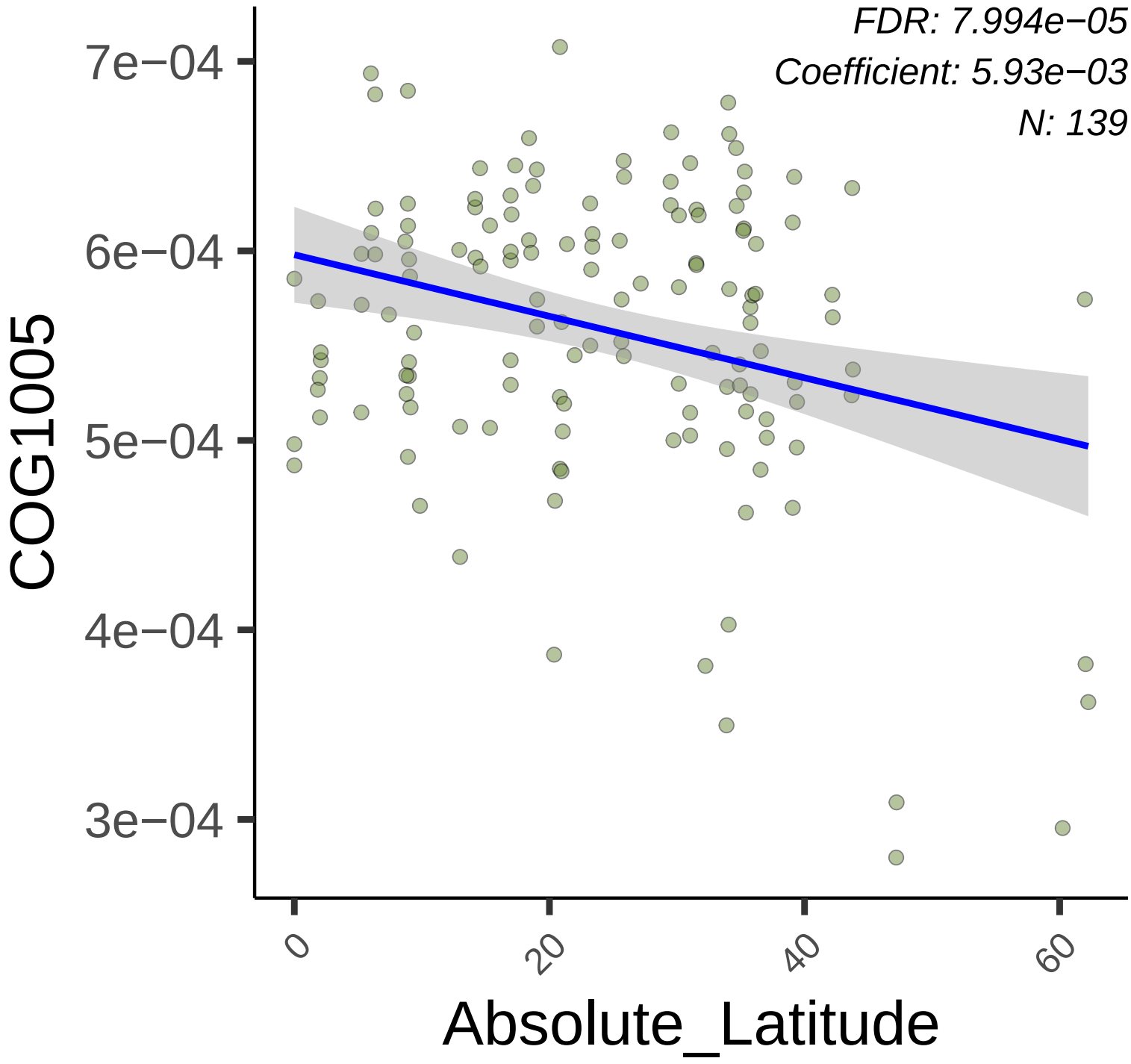

FDR: 4.761e−05
Coefficient: −6.45e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG4388
0
20
40
60
Absolute_Latitude

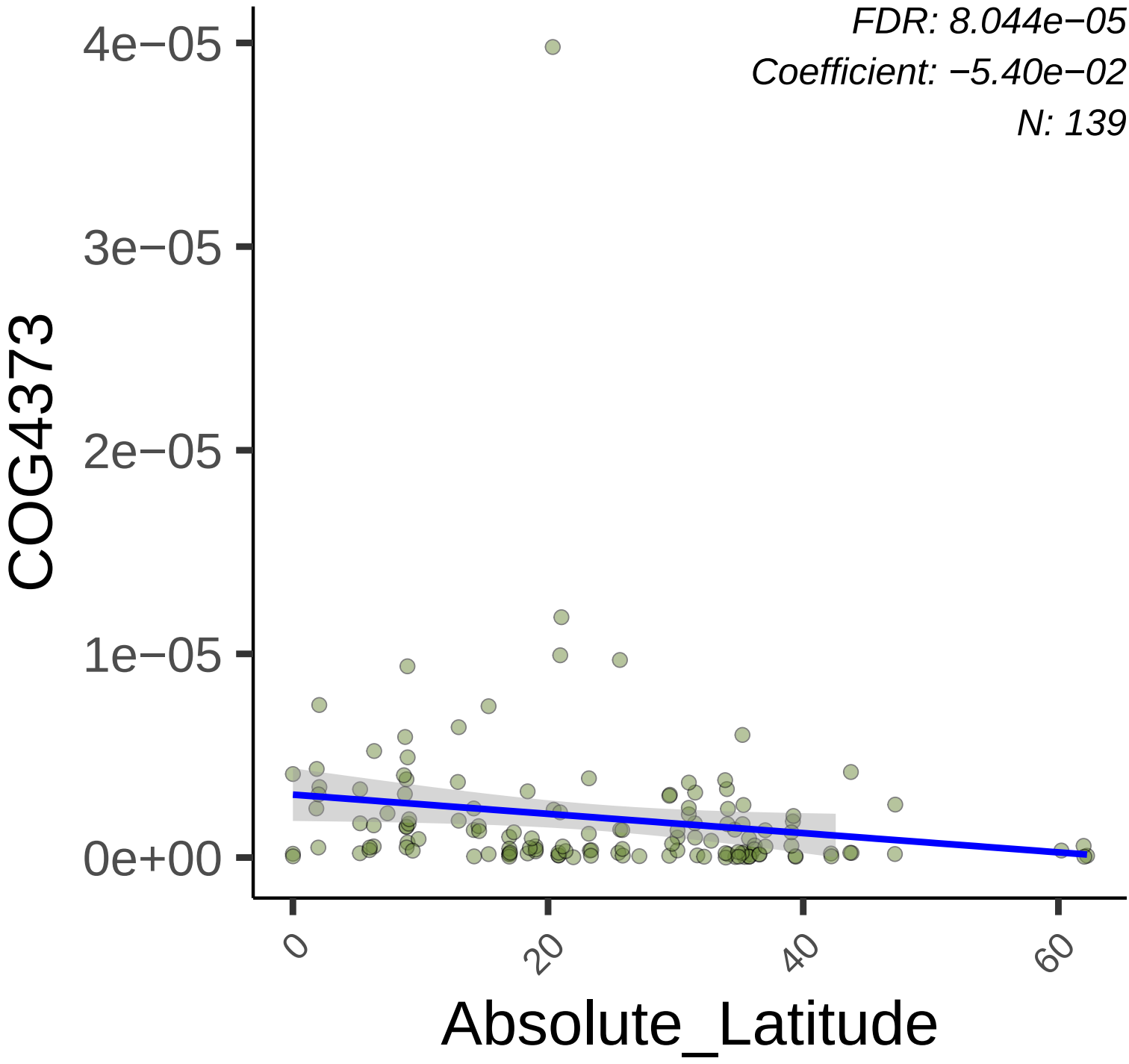

FDR: 5.172e−05
Coefficient: −3.63e−02
N: 139
COG2375
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

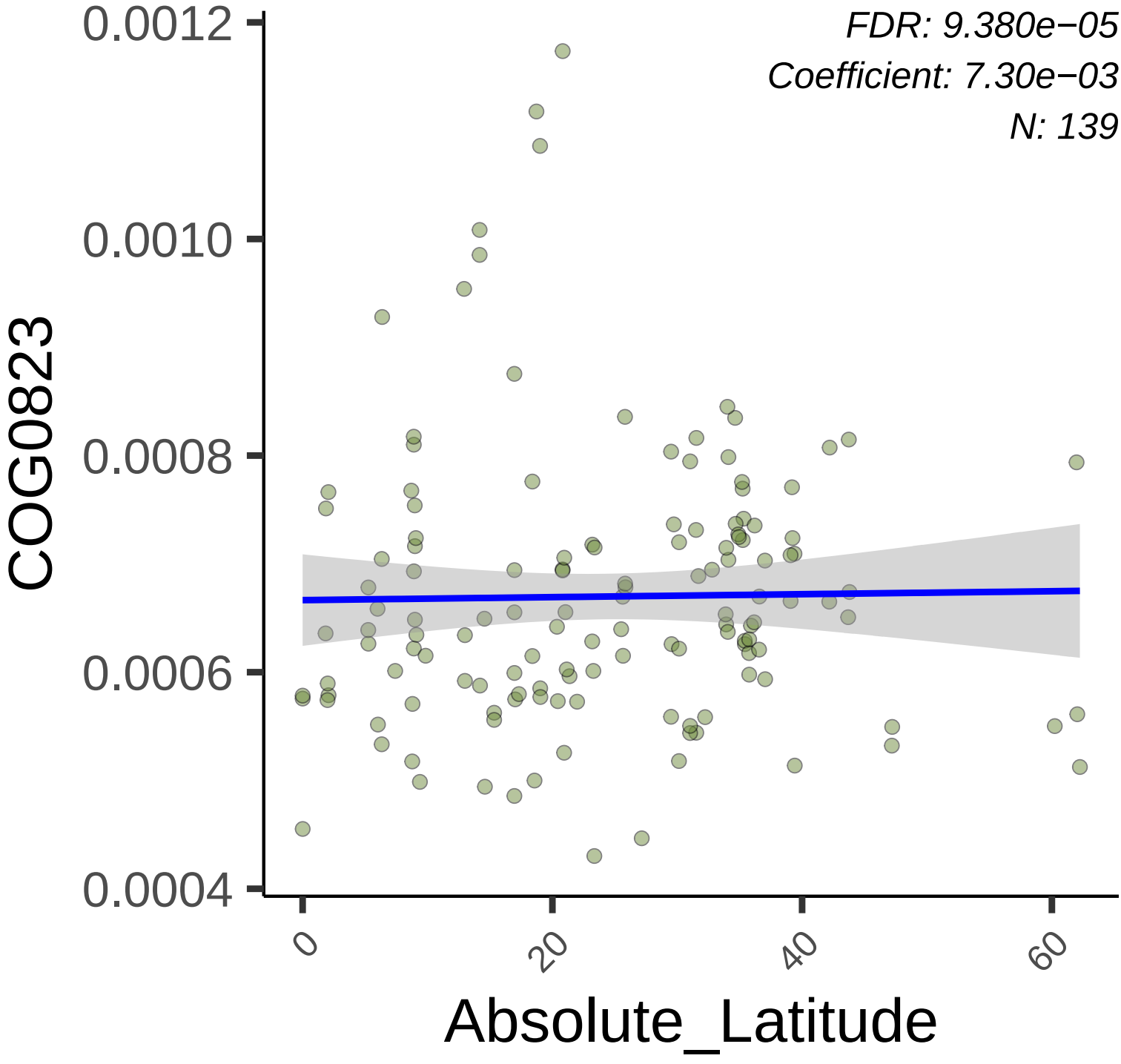

FDR: 5.219e−05
Coefficient: −4.67e−02
N: 139
COG4559
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

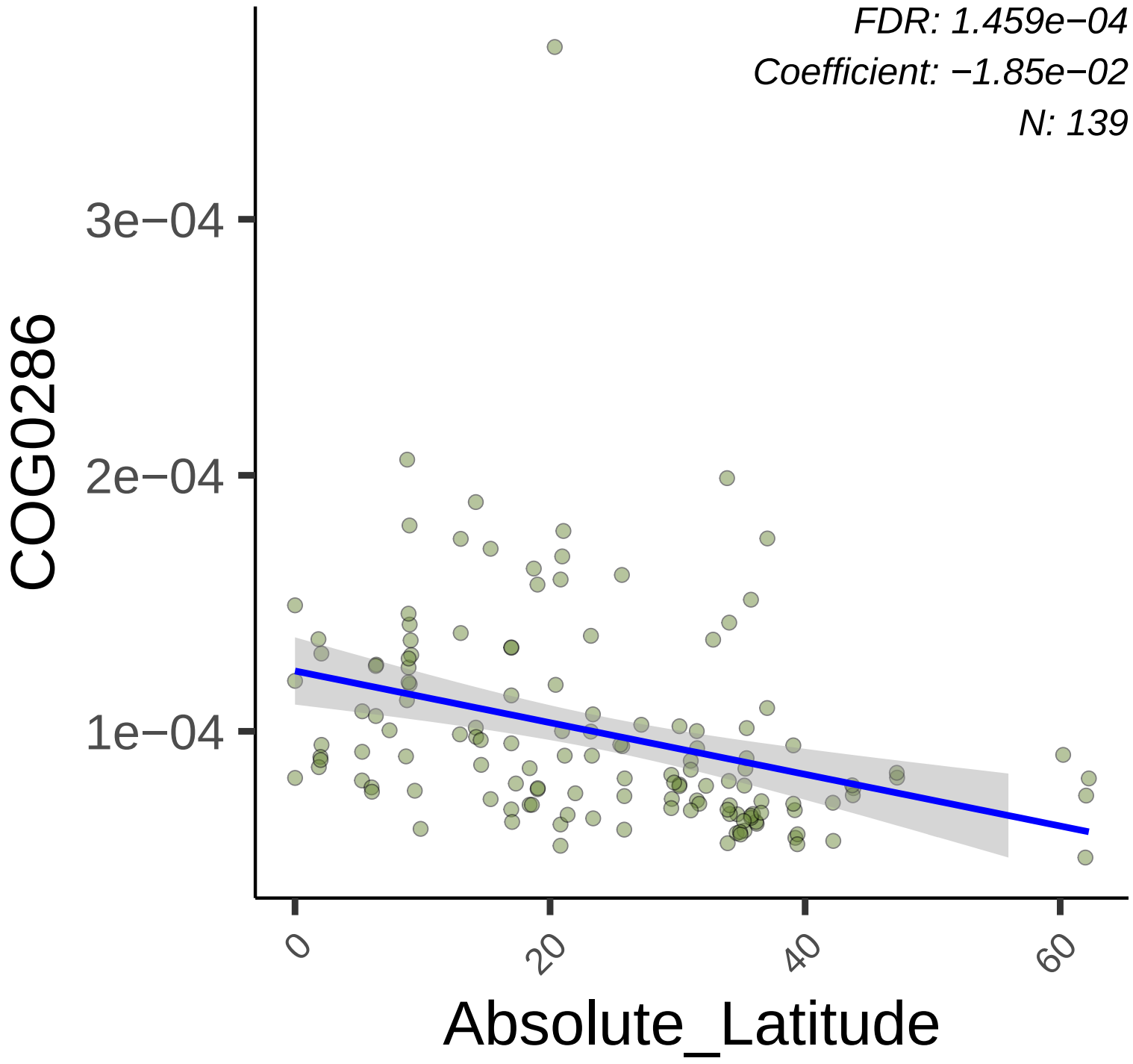

FDR: 6.025e−05
Coefficient: 6.91e−03
N: 139
COG0838
6e−04
5e−04
4e−04
3e−04
0
20
40
60
Absolute_Latitude

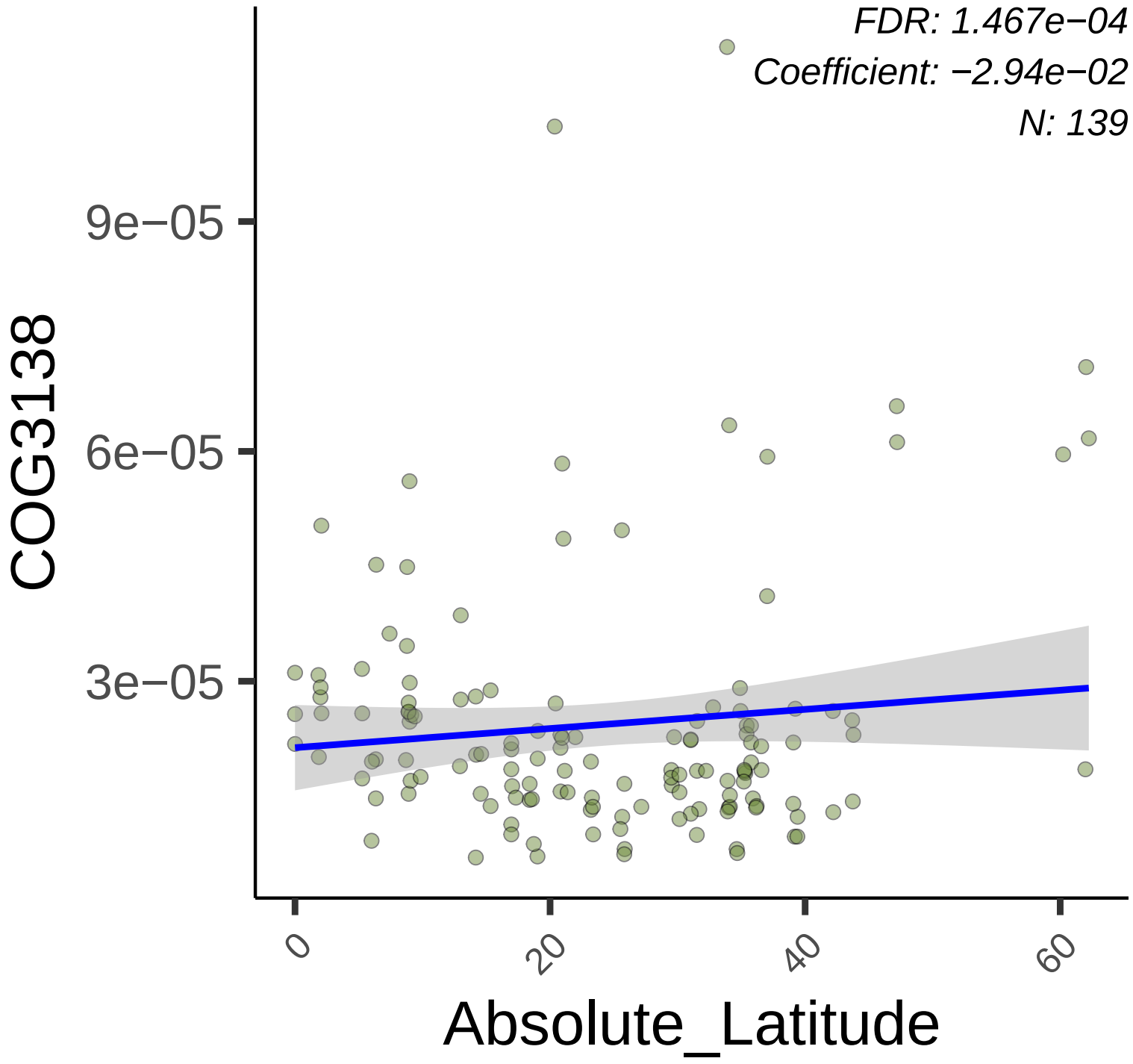

FDR: 7.385e−05
Coefficient: −2.68e−02
N: 139
3e−04
2e−04
1e−04
COG0609
0
20
40
60
Absolute_Latitude

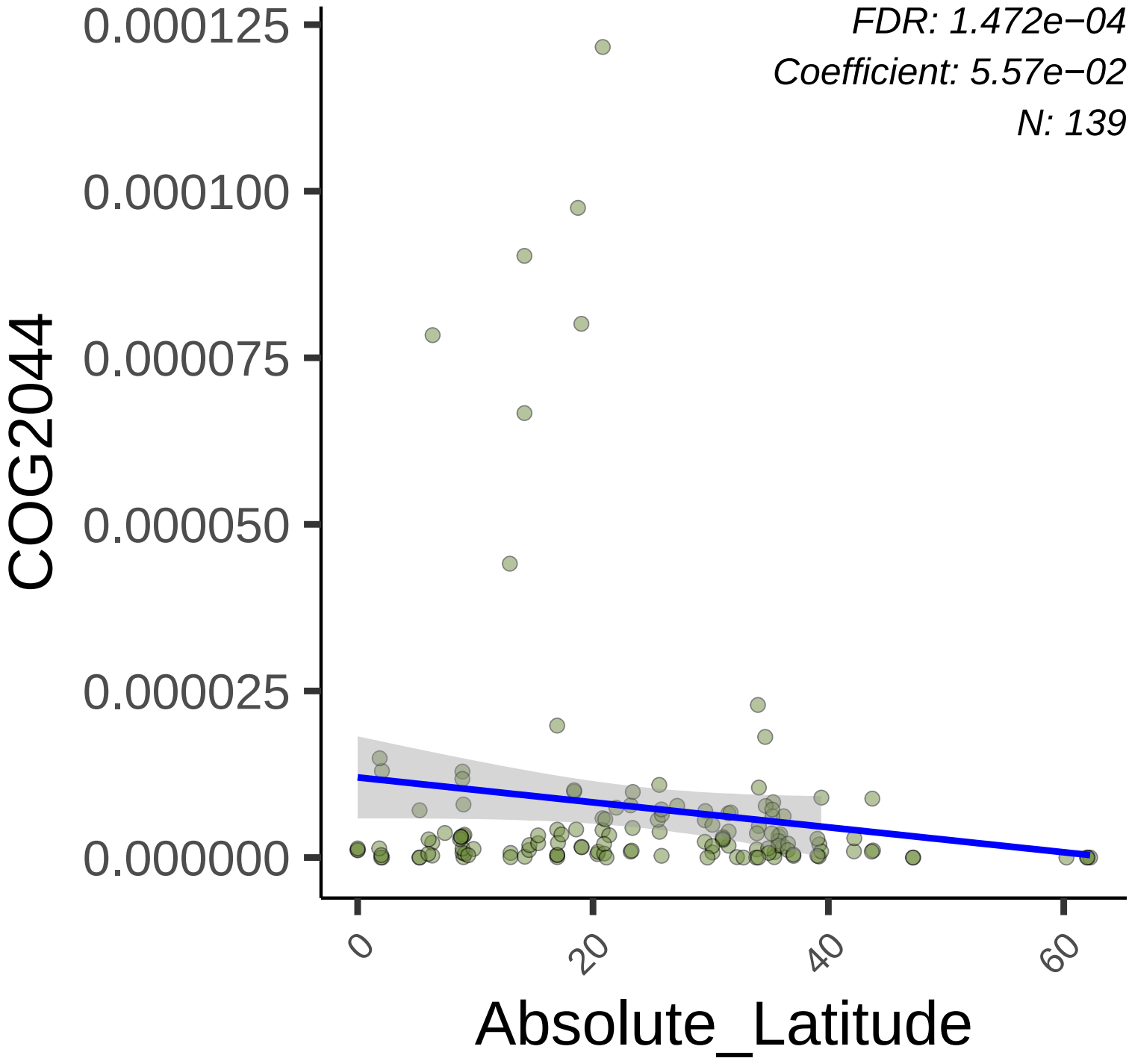

FDR: 7.994e−05
Coefficient: 5.93e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG1005
0
20
40
60
Absolute_Latitude

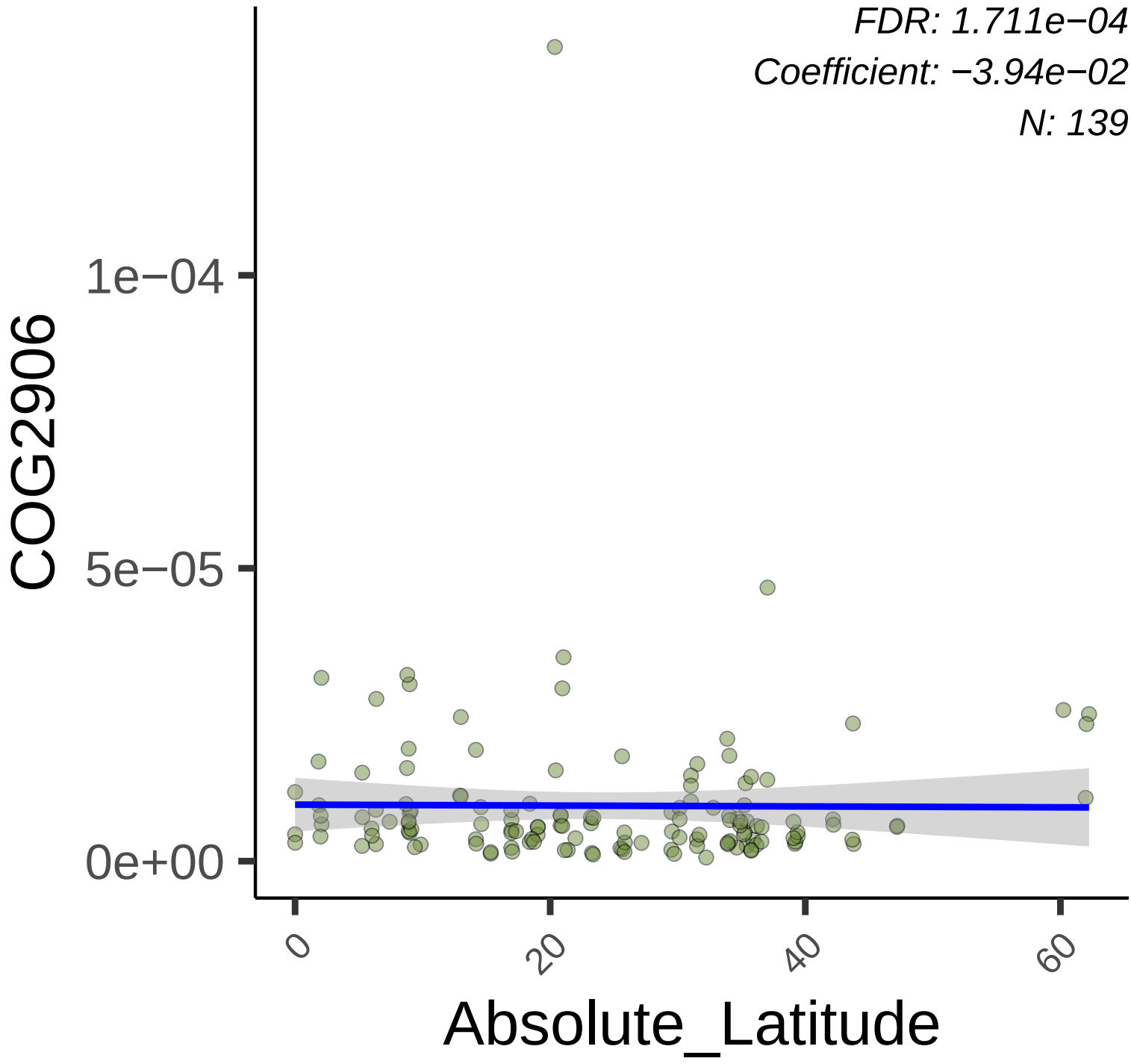

FDR: 8.044e−05
Coefficient: −5.40e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG4373
0
20
40
60
Absolute_Latitude

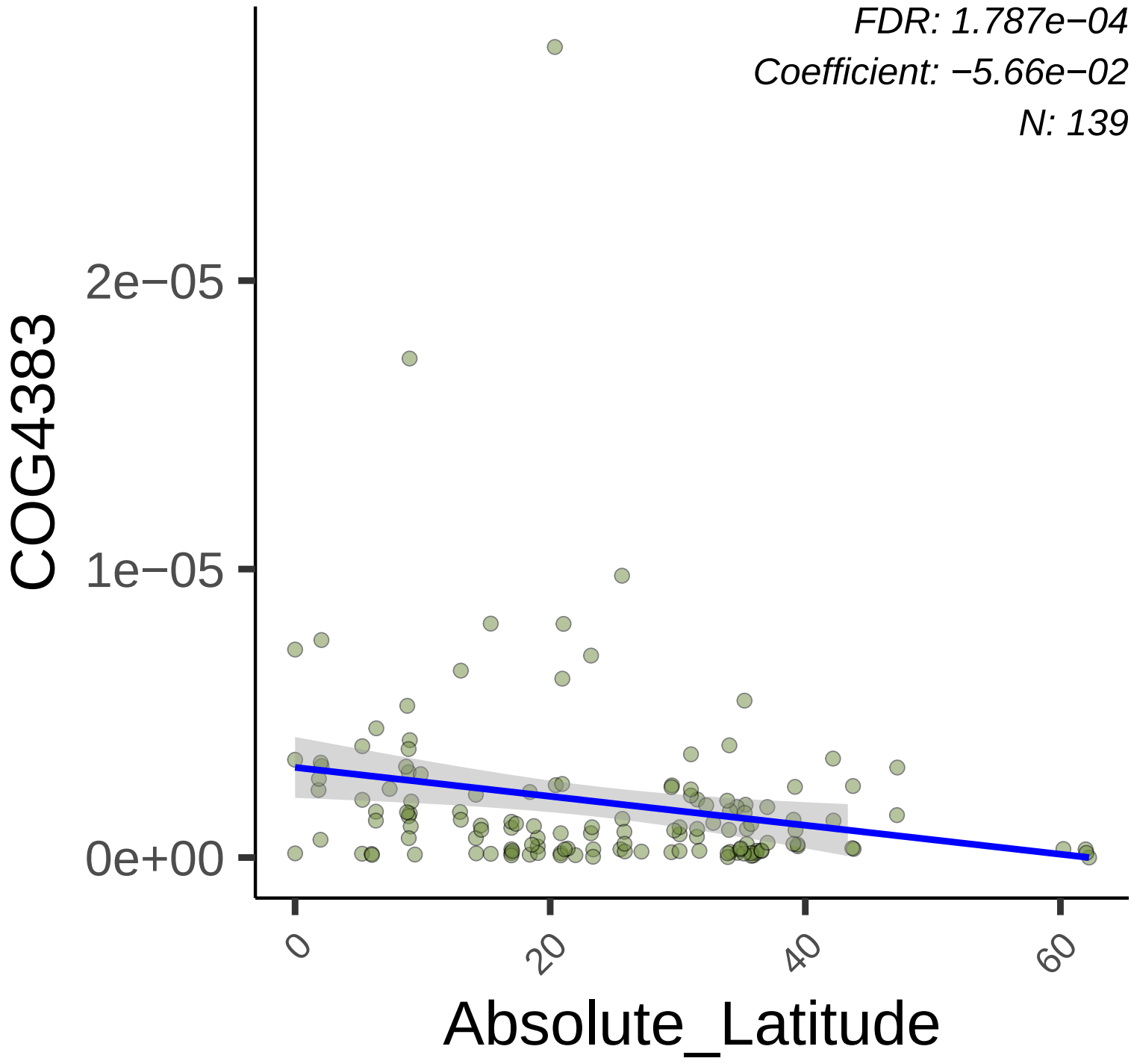

FDR: 9.380e−05
Coefficient: 7.30e−03
N: 139
0.0012
0.0010
0.0008
0.0006
0.0004
COG0823
0
20
40
60
Absolute_Latitude

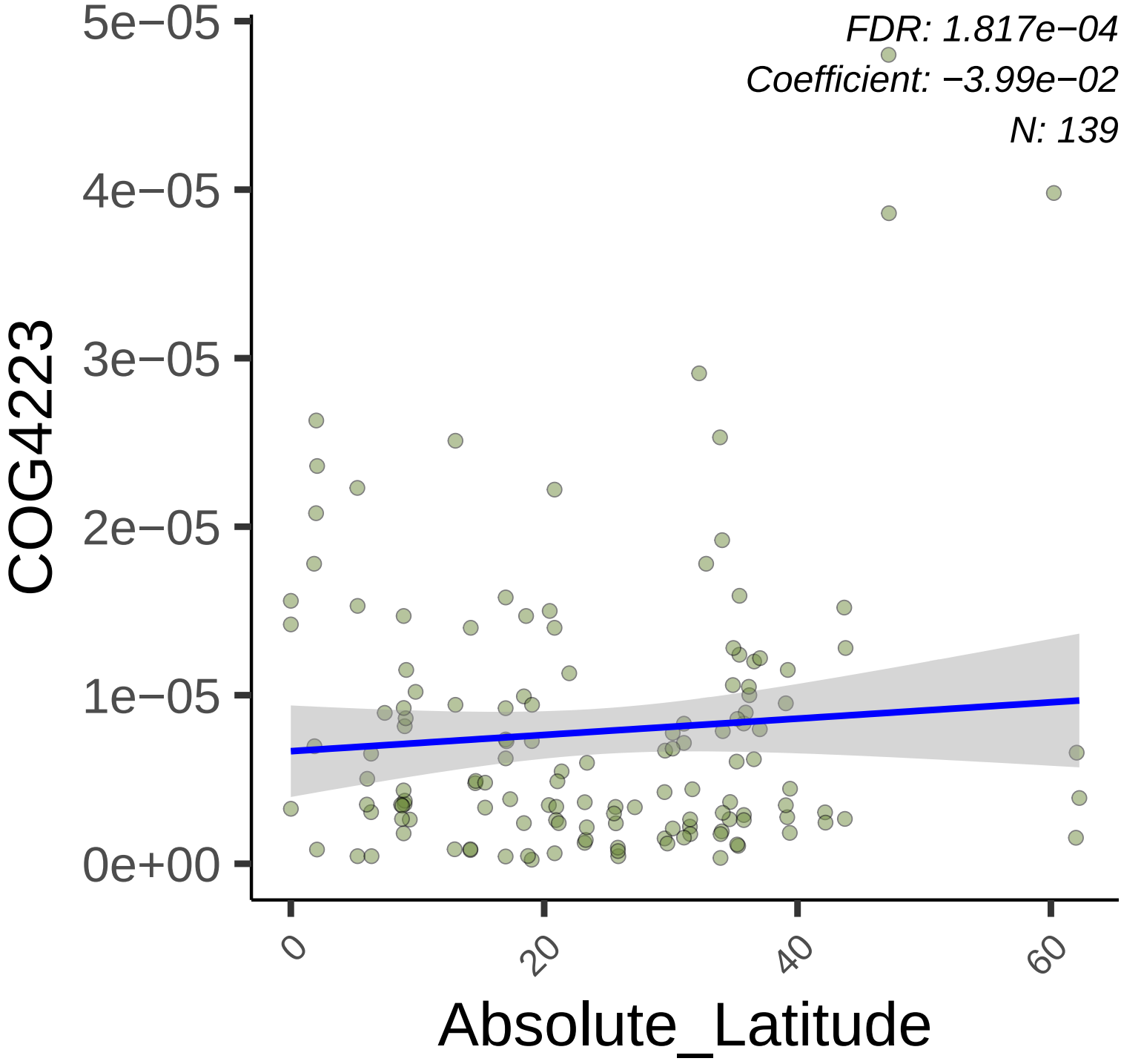

FDR: 1.459e−04
Coefficient: −1.85e−02
N: 139
3e−04
2e−04
1e−04
COG0286
0
20
40
60
Absolute_Latitude

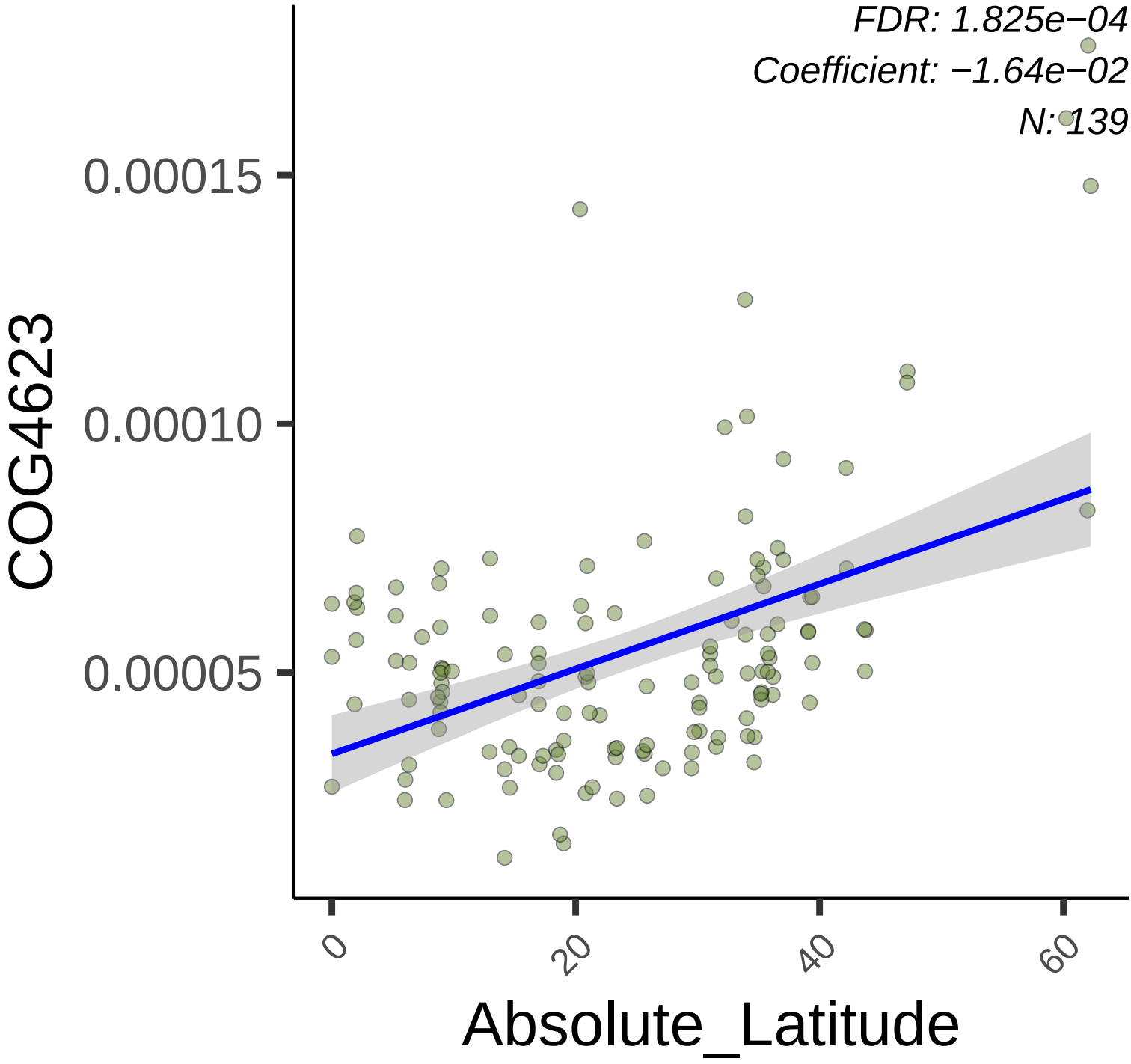

FDR: 1.467e−04
Coefficient: −2.94e−02
N: 139
COG3138
9e−05
6e−05
3e−05
0
20
40
60
Absolute_Latitude

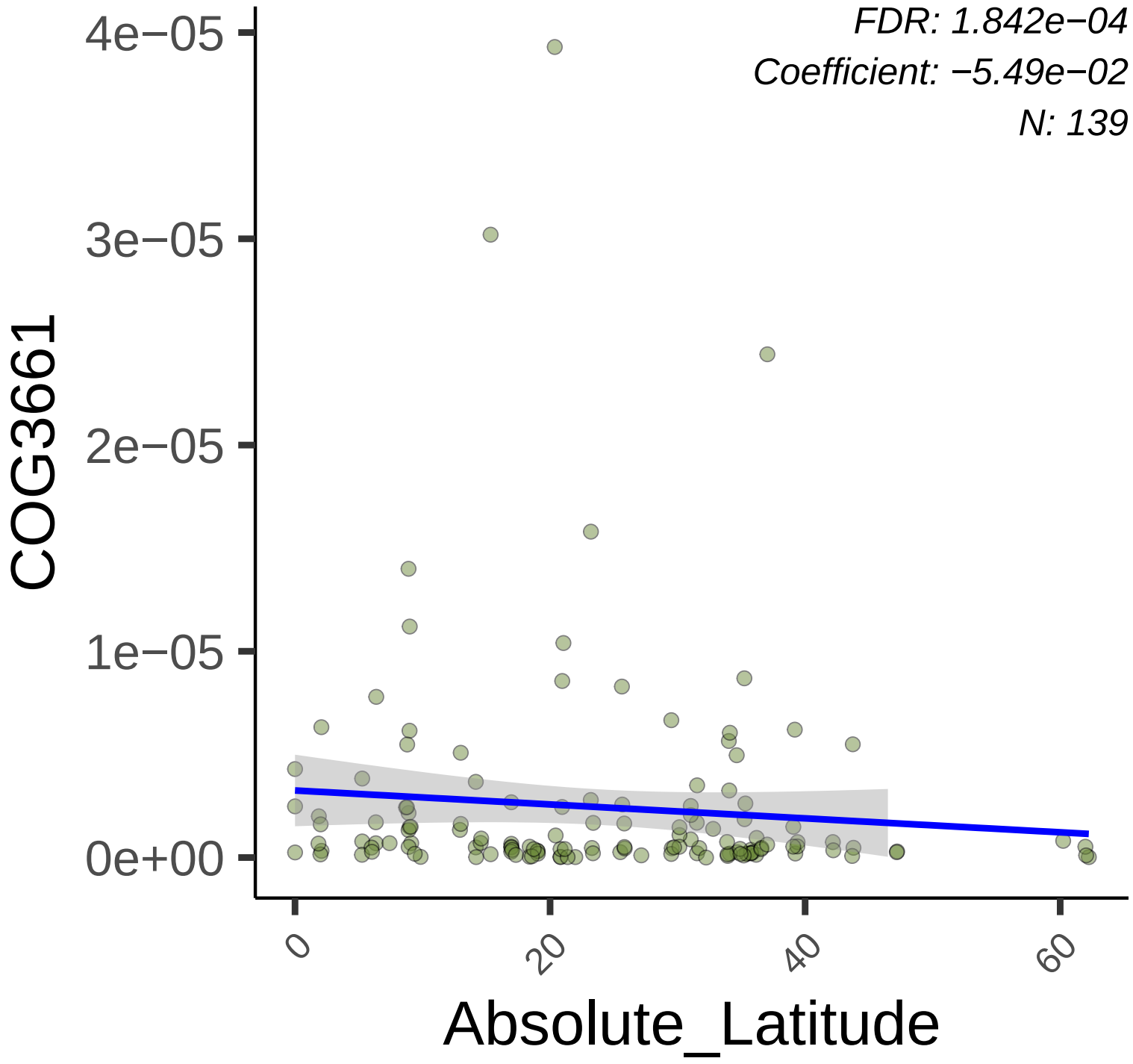

FDR: 1.472e−04
Coefficient: 5.57e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
0.000000
COG2044
0
20
40
60
Absolute_Latitude

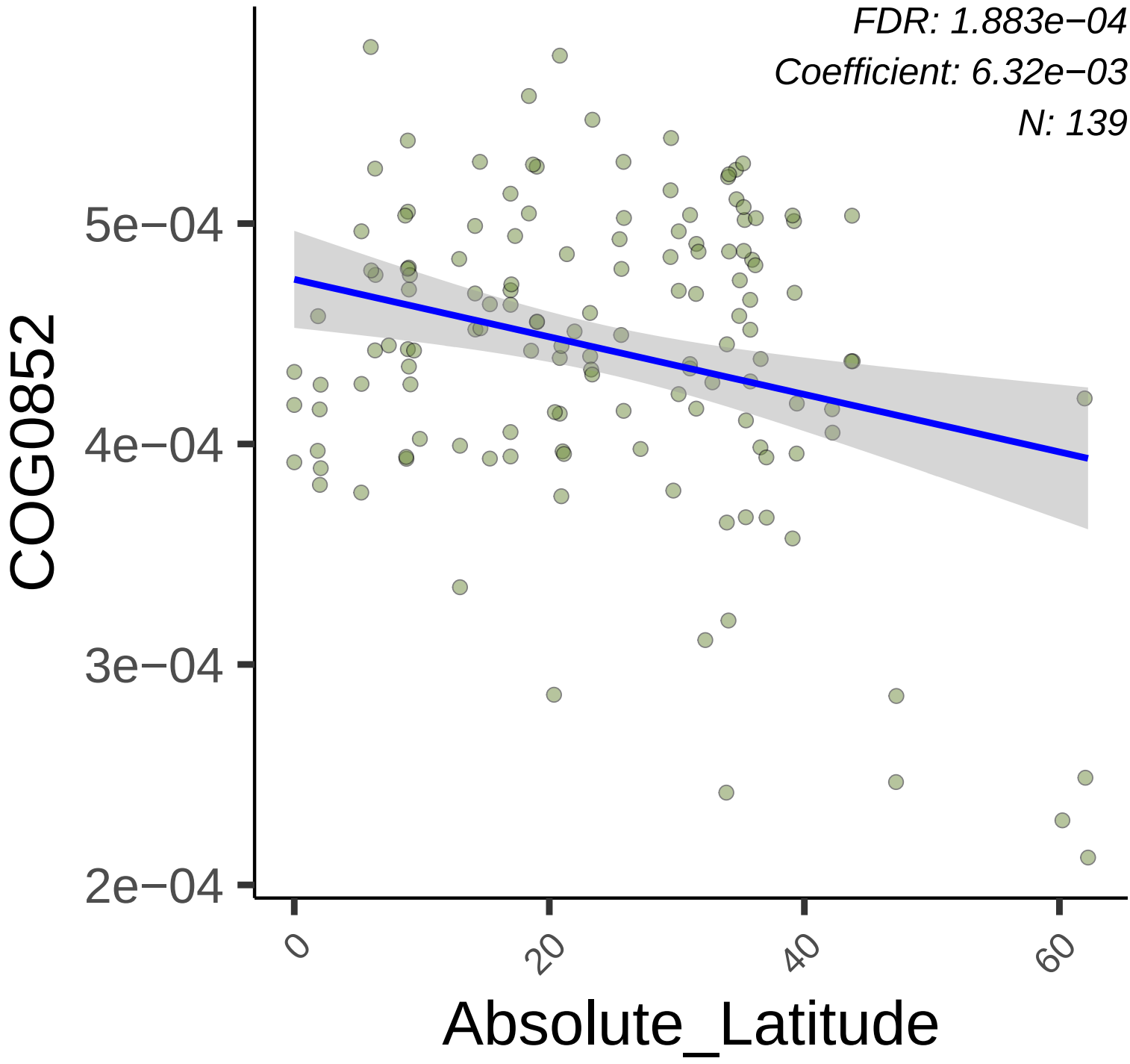

FDR: 1.711e−04
Coefficient: −3.94e−02
N: 139
COG2906
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

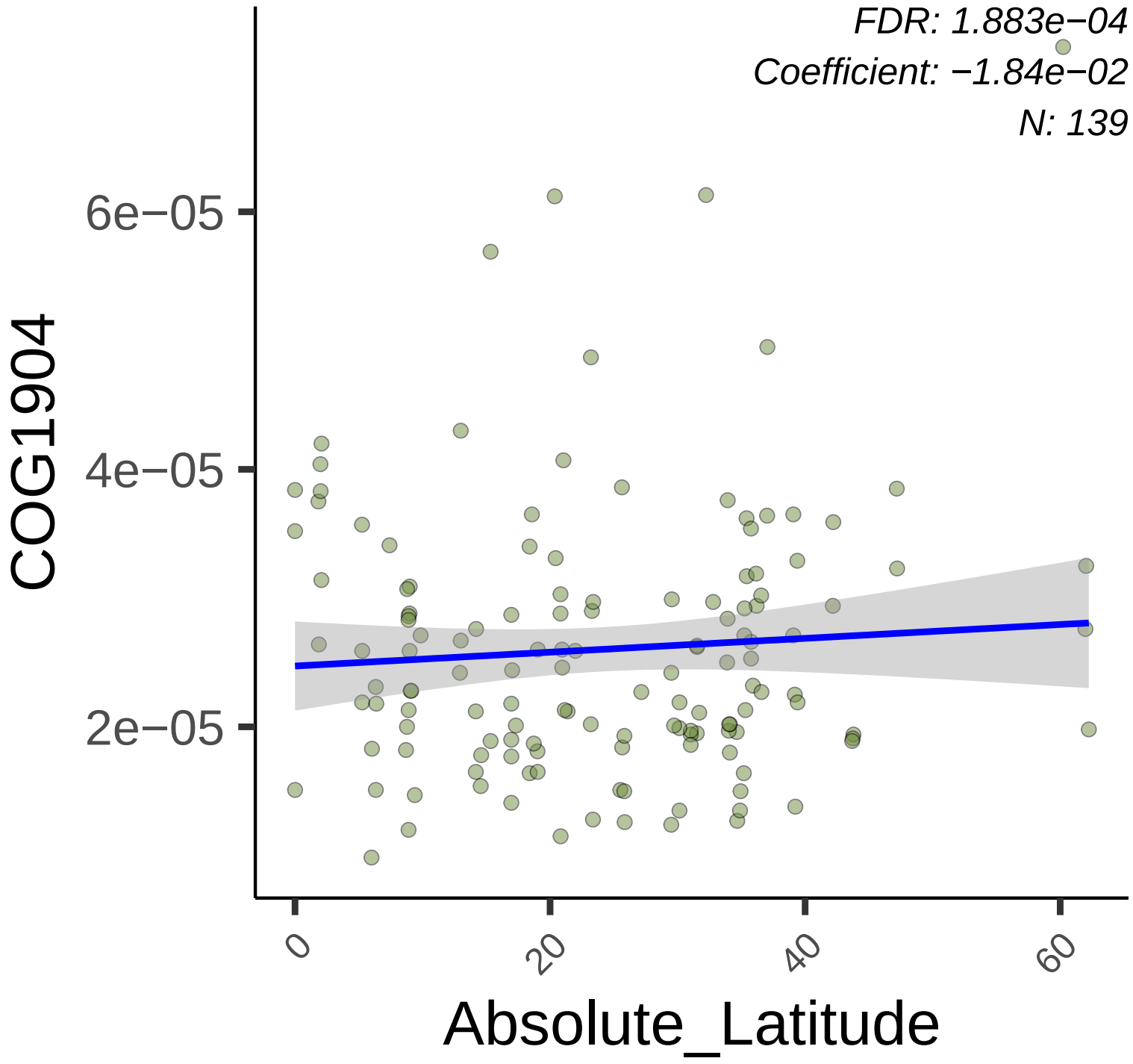

FDR: 1.787e−04
Coefficient: −5.66e−02
N: 139
COG4383
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

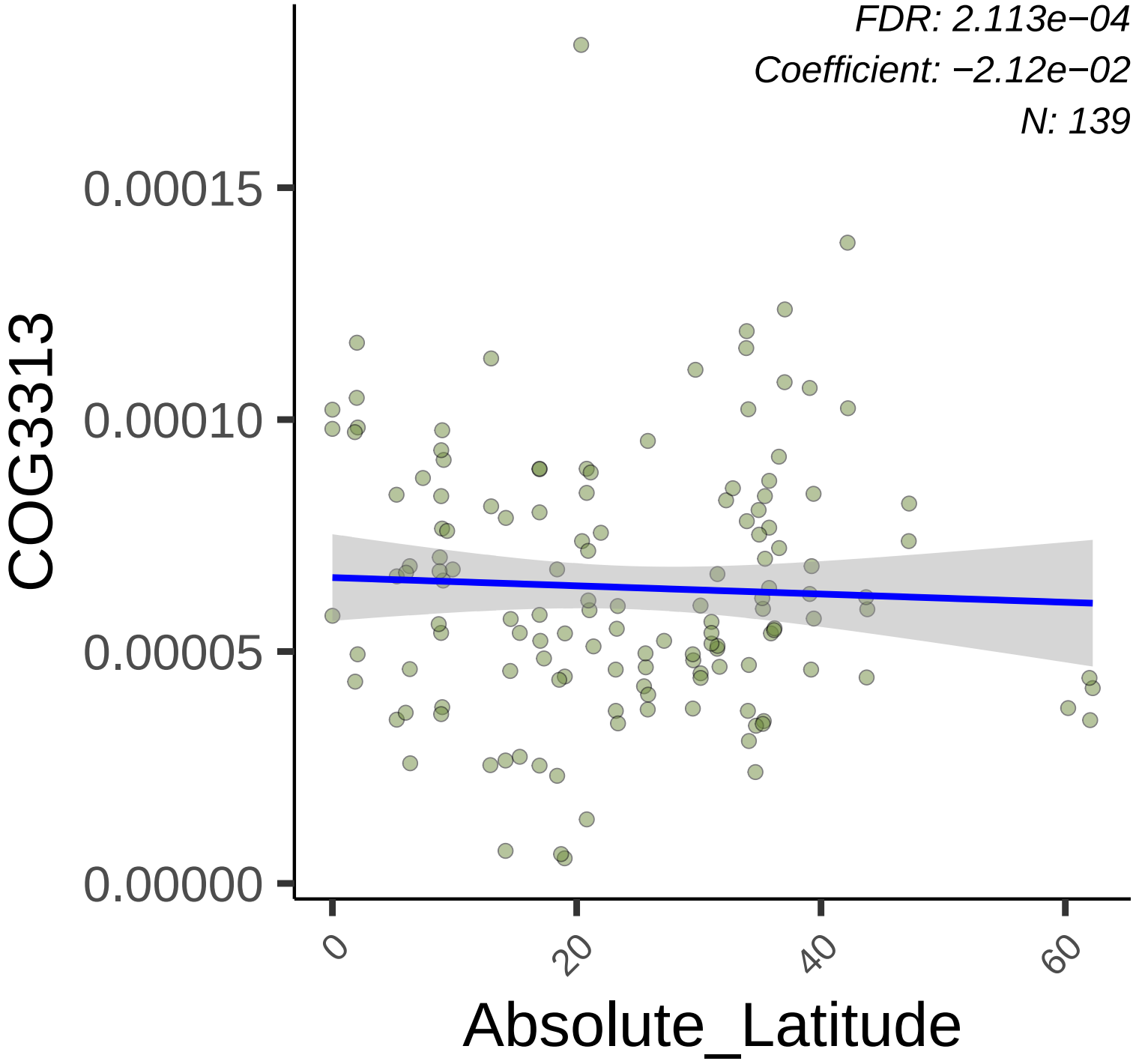

FDR: 1.817e−04
Coefficient: −3.99e−02
N: 139
COG4223
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

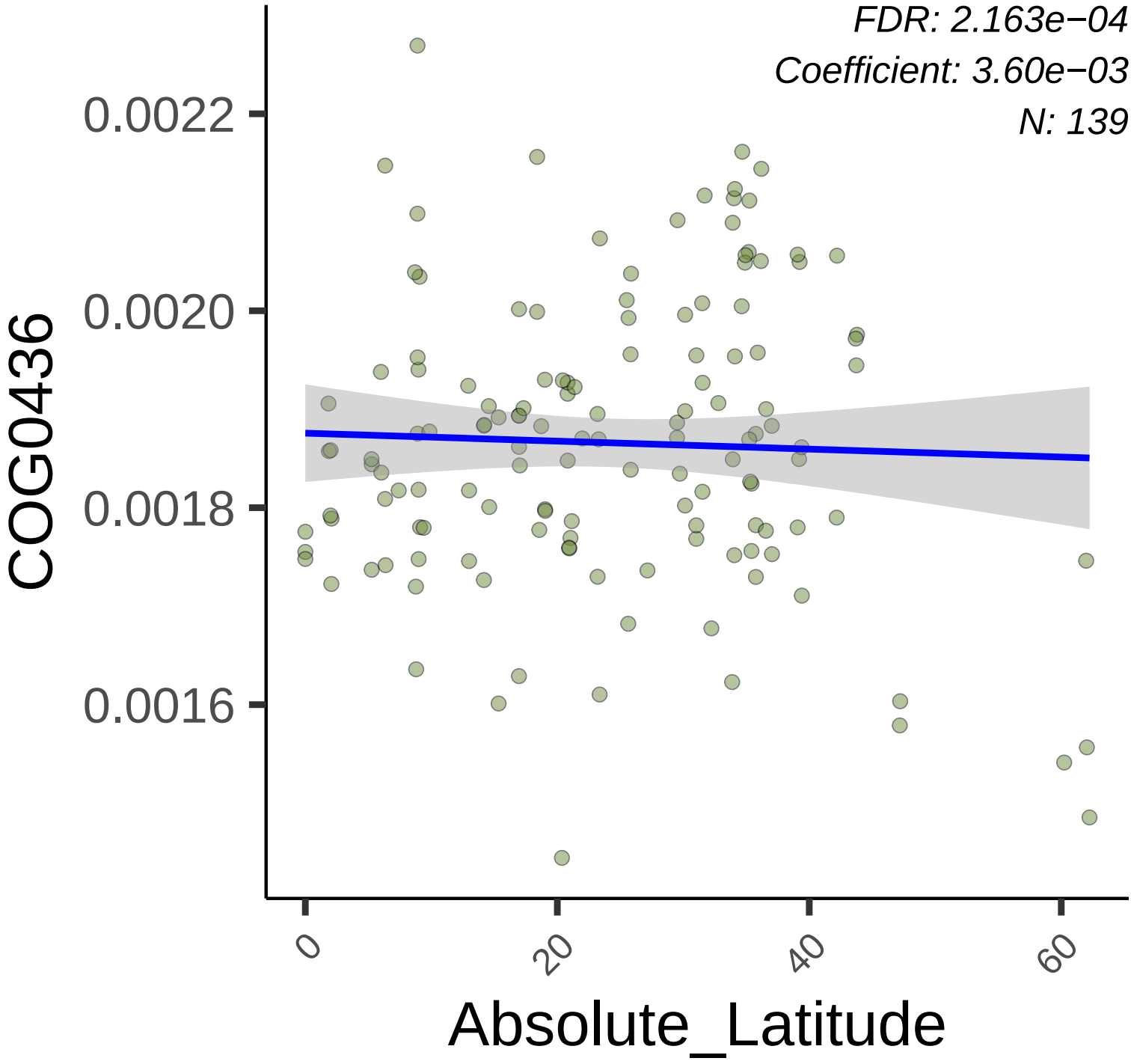

FDR: 1.825e−04
Coefficient: −1.64e−02
N: 139
0.00015
0.00010
0.00005
COG4623
0
20
40
60
Absolute_Latitude

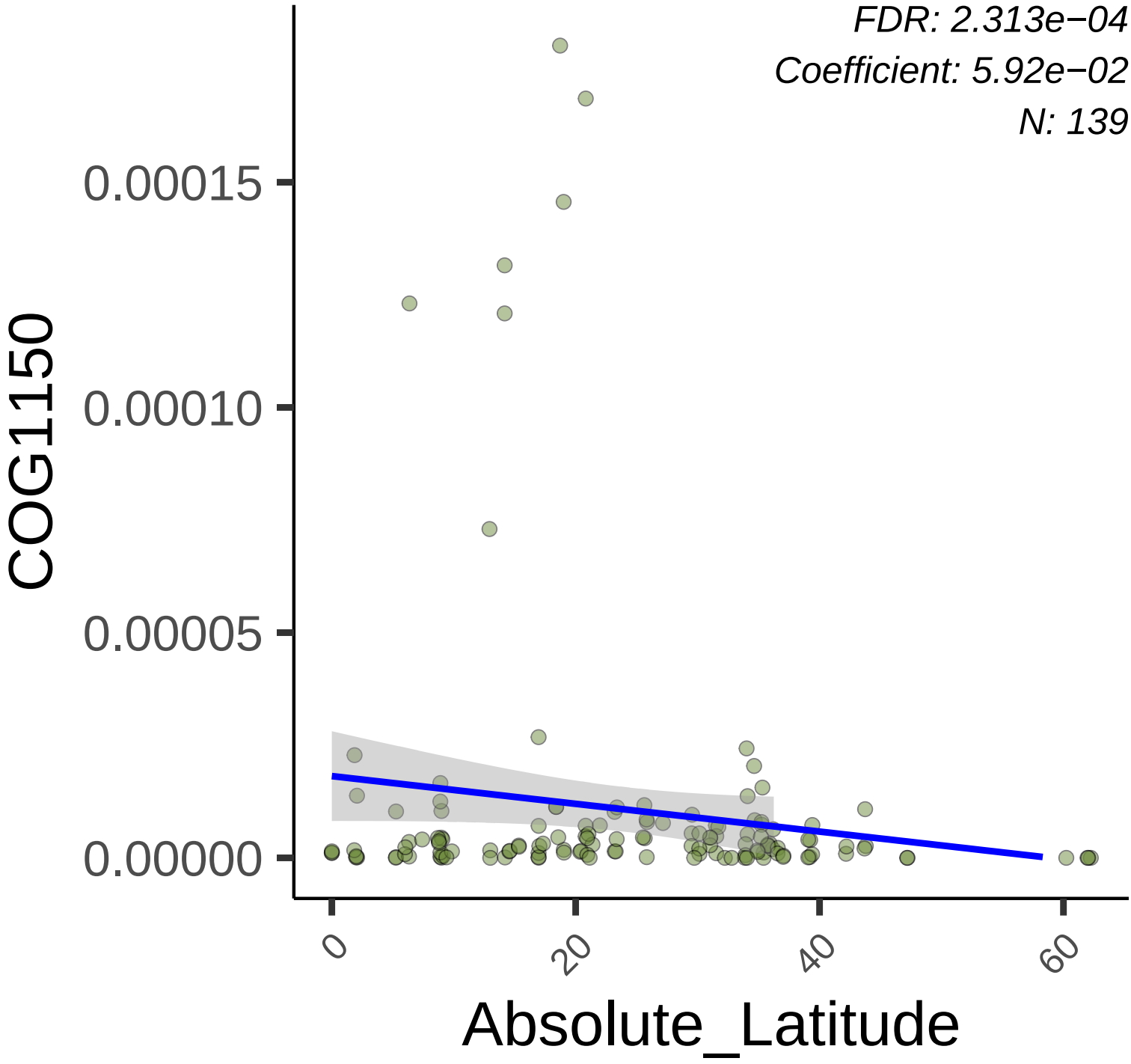

FDR: 1.842e−04
Coefficient: −5.49e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG3661
0
20
40
60
Absolute_Latitude

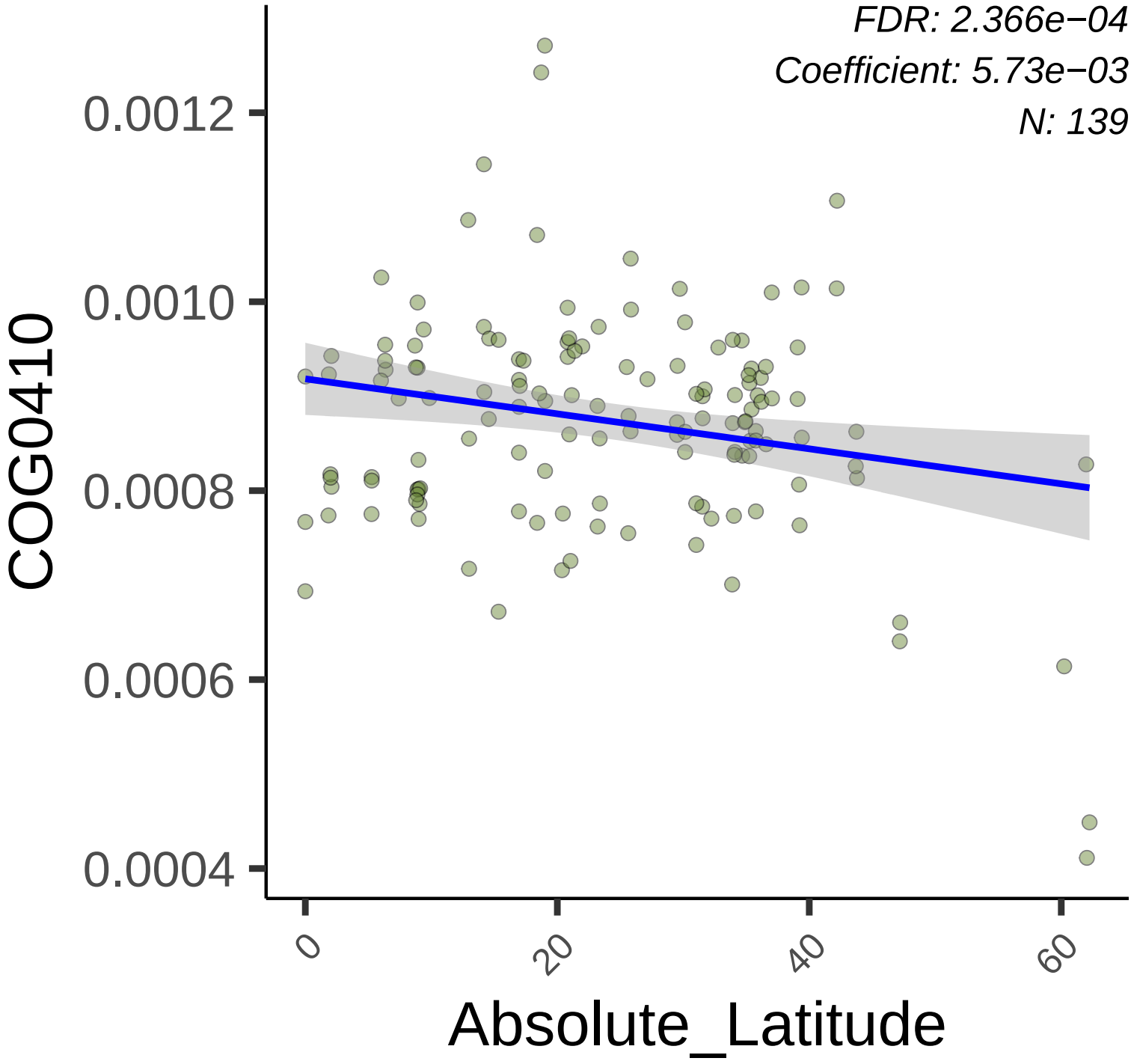

FDR: 1.883e−04
Coefficient: 6.32e−03
N: 139
COG0852
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

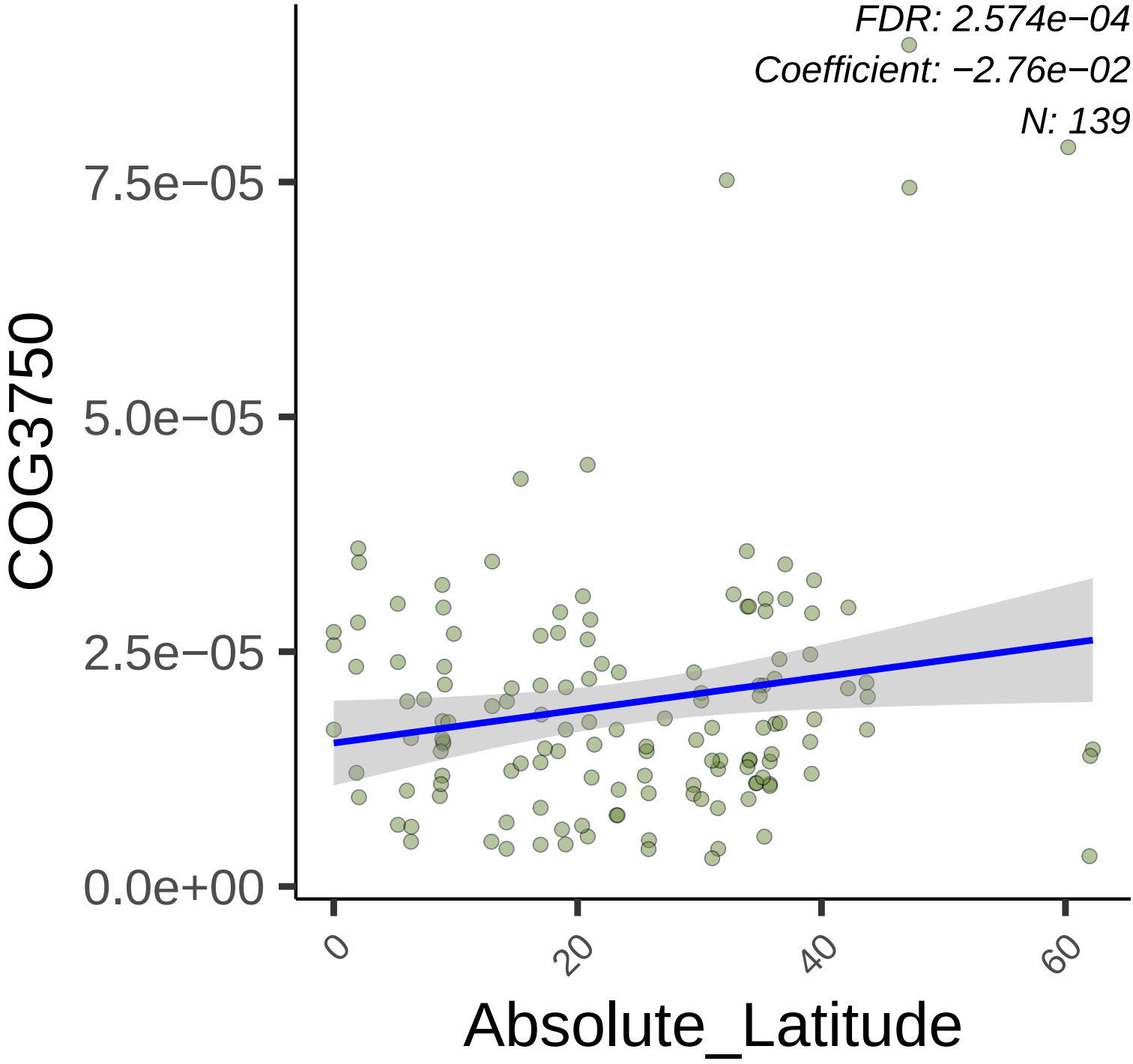

FDR: 1.883e−04
Coefficient: −1.84e−02
N: 139
6e−05
4e−05
2e−05
COG1904
0
20
40
60
Absolute_Latitude

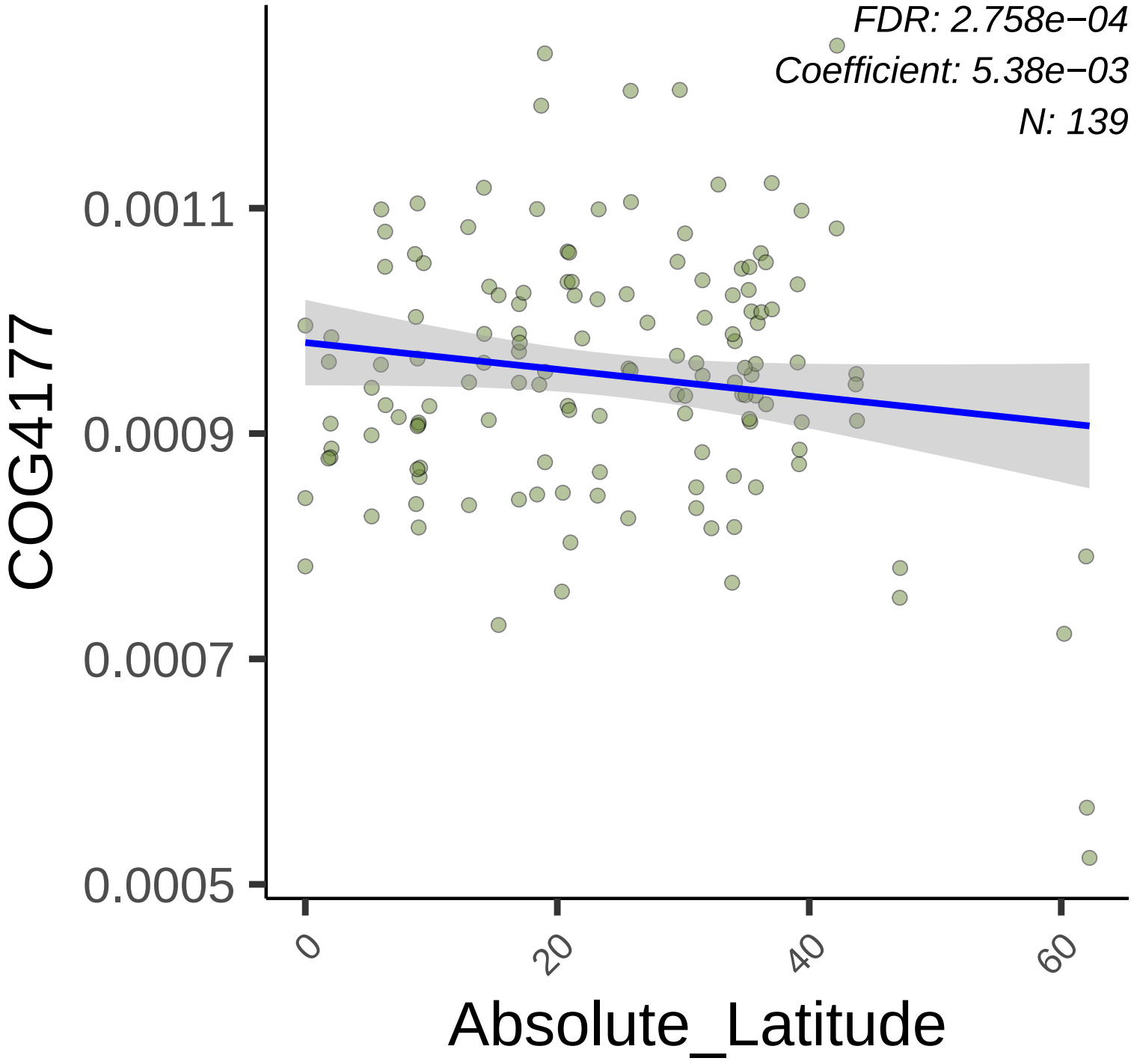

FDR: 2.113e−04
Coefficient: −2.12e−02
N: 139
COG3313
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

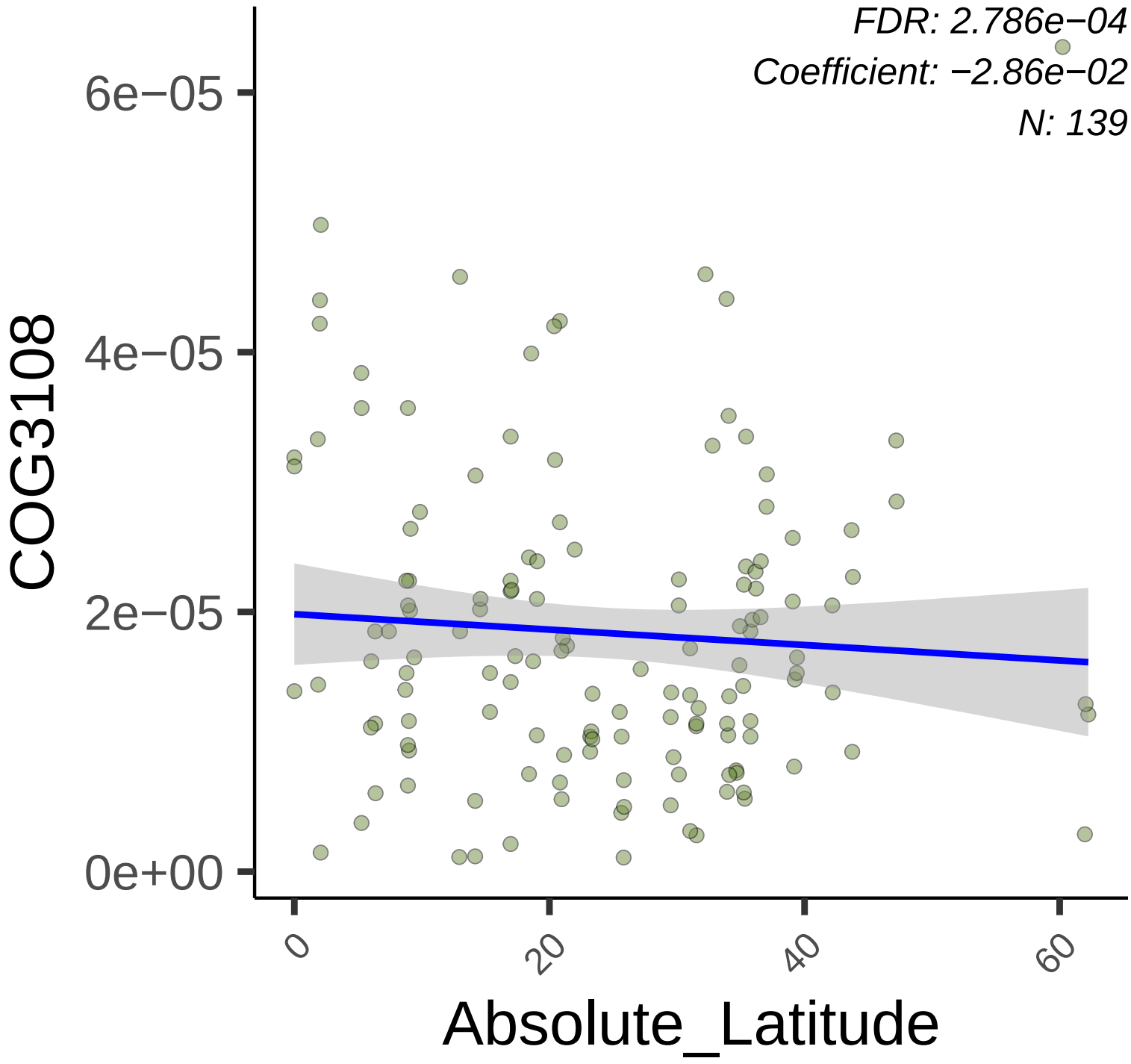

FDR: 2.163e−04
Coefficient: 3.60e−03
N: 139
0.0022
0.0020
0.0018
0.0016
COG0436
0
20
40
60
Absolute_Latitude

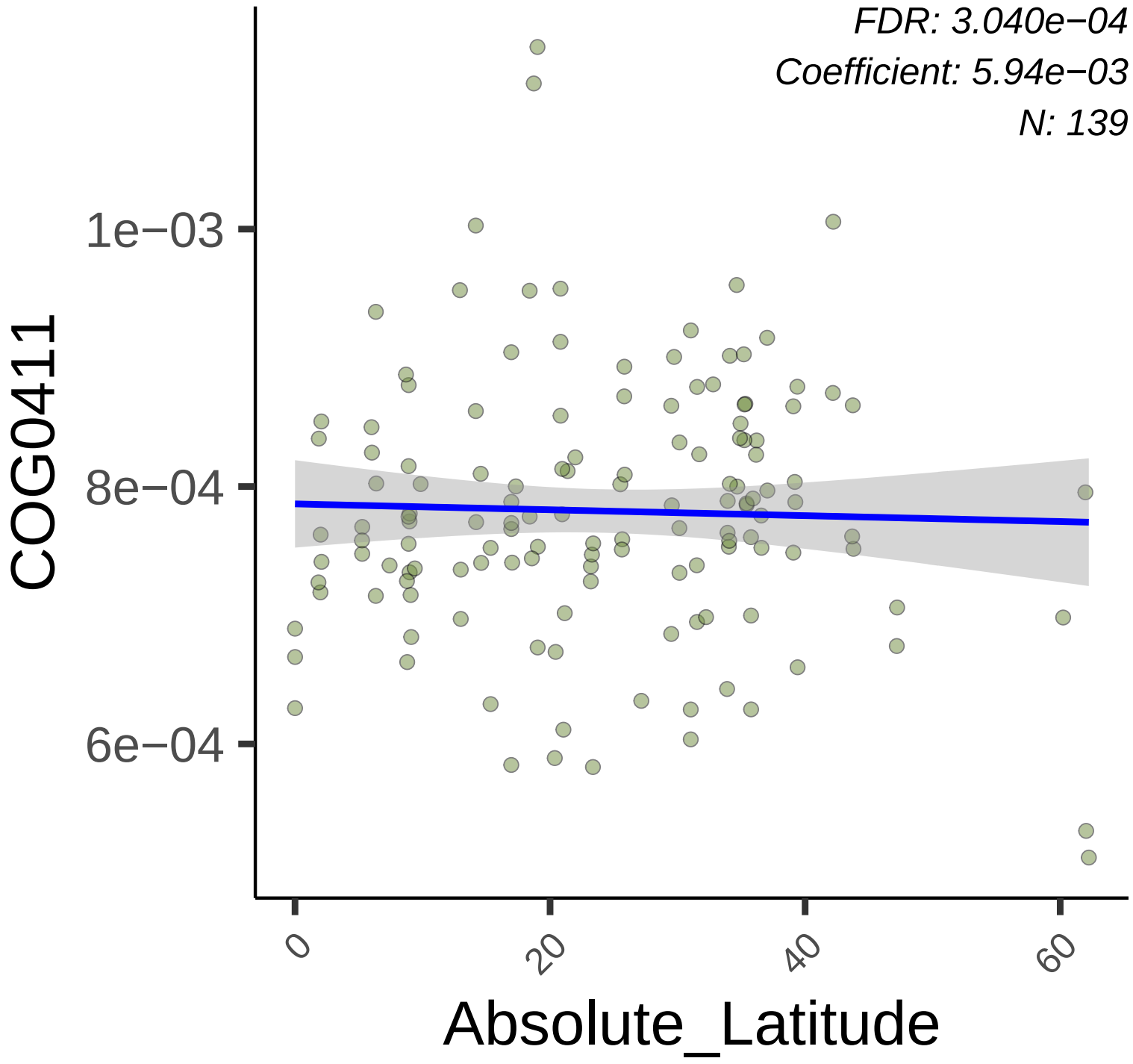

FDR: 2.313e−04
Coefficient: 5.92e−02
N: 139
COG1150
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

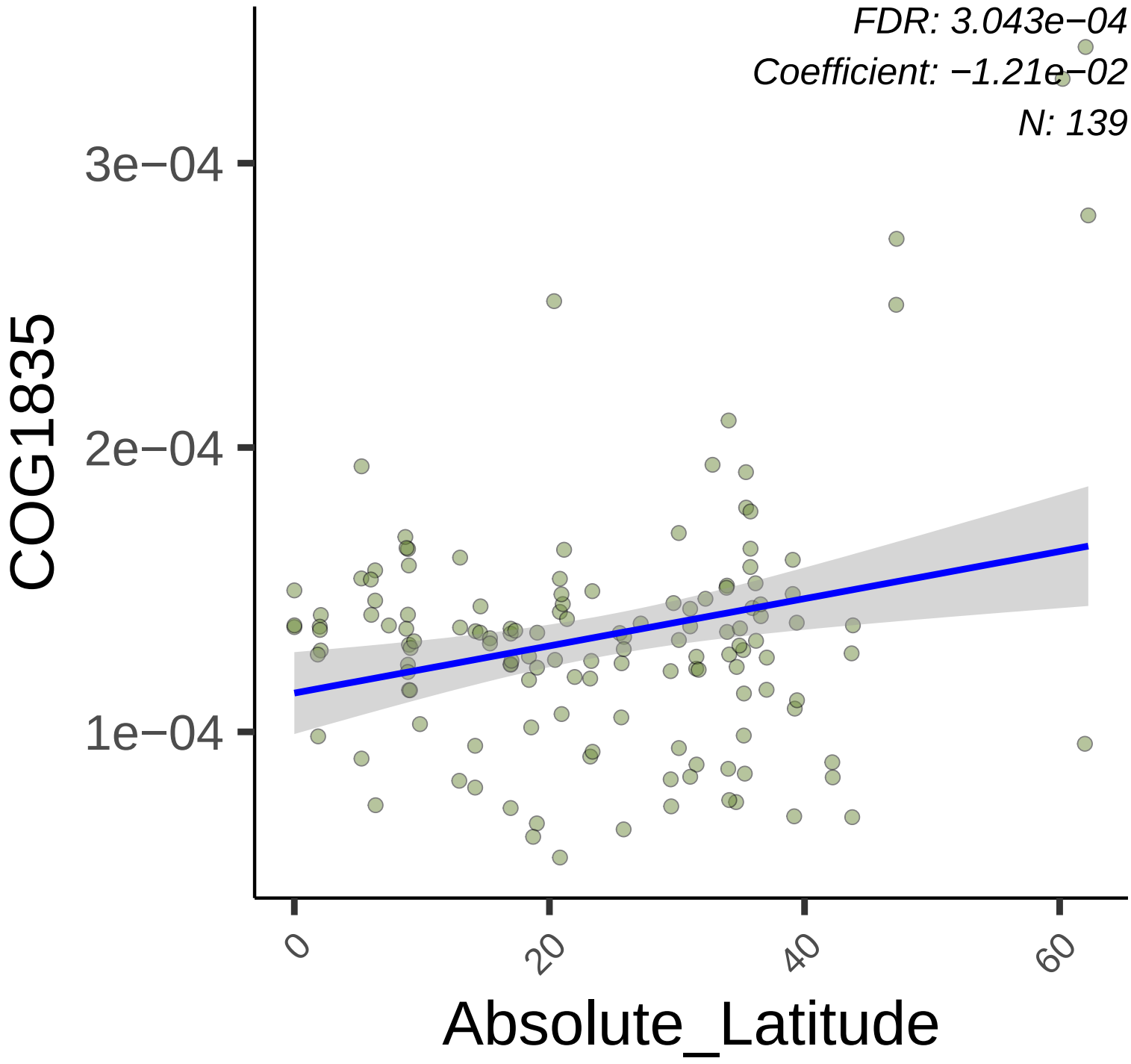

FDR: 2.366e−04
Coefficient: 5.73e−03
N: 139
COG0410
0.0012
0.0010
0.0008
0.0006
0.0004
0
20
40
60
Absolute_Latitude

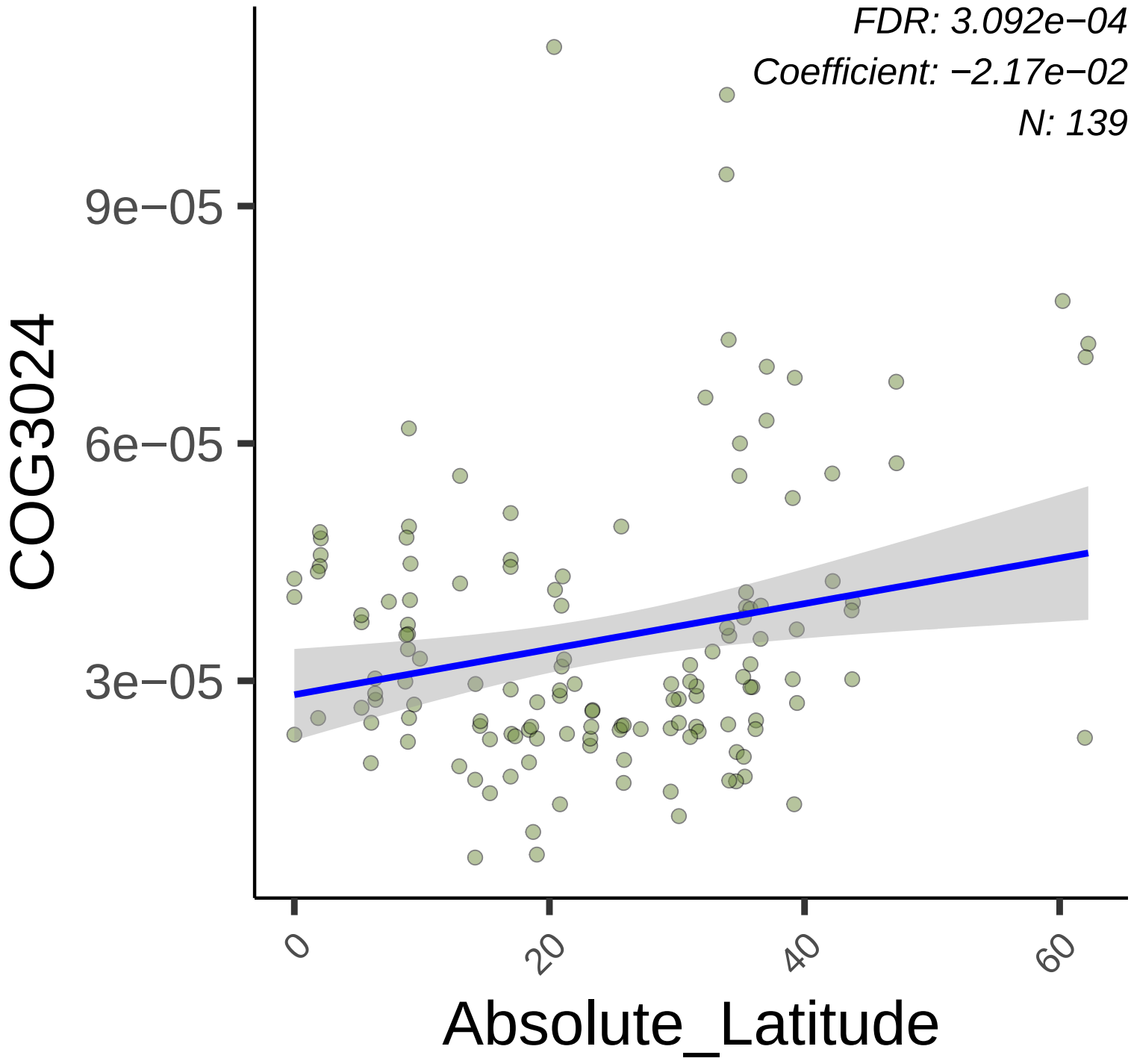

FDR: 2.574e−04
Coefficient: −2.76e−02
N: 139
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3750
0
20
40
60
Absolute_Latitude

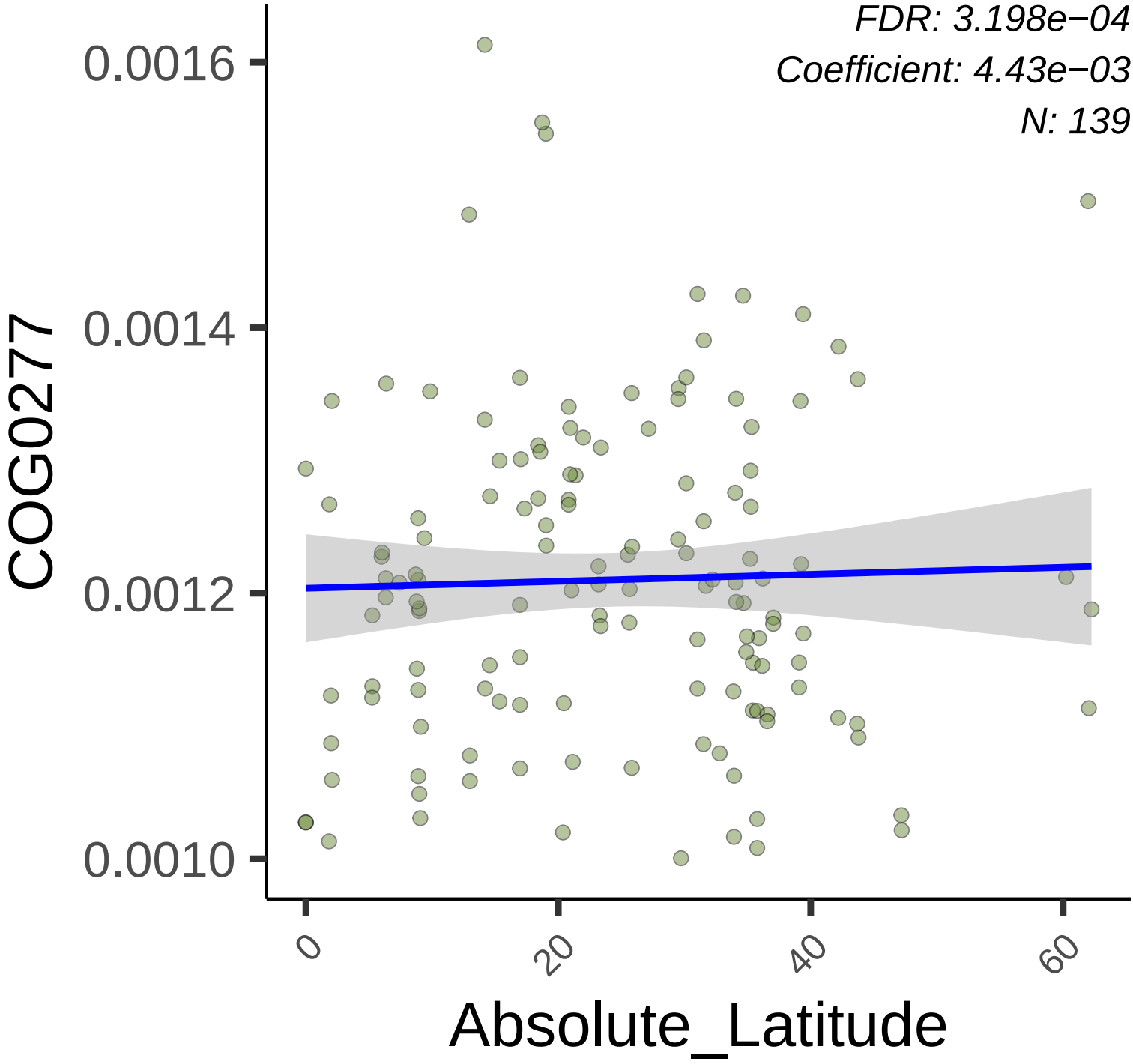

FDR: 2.758e−04
Coefficient: 5.38e−03
N: 139
0.0011
0.0009
0.0007
0.0005
COG4177
0
20
40
60
Absolute_Latitude

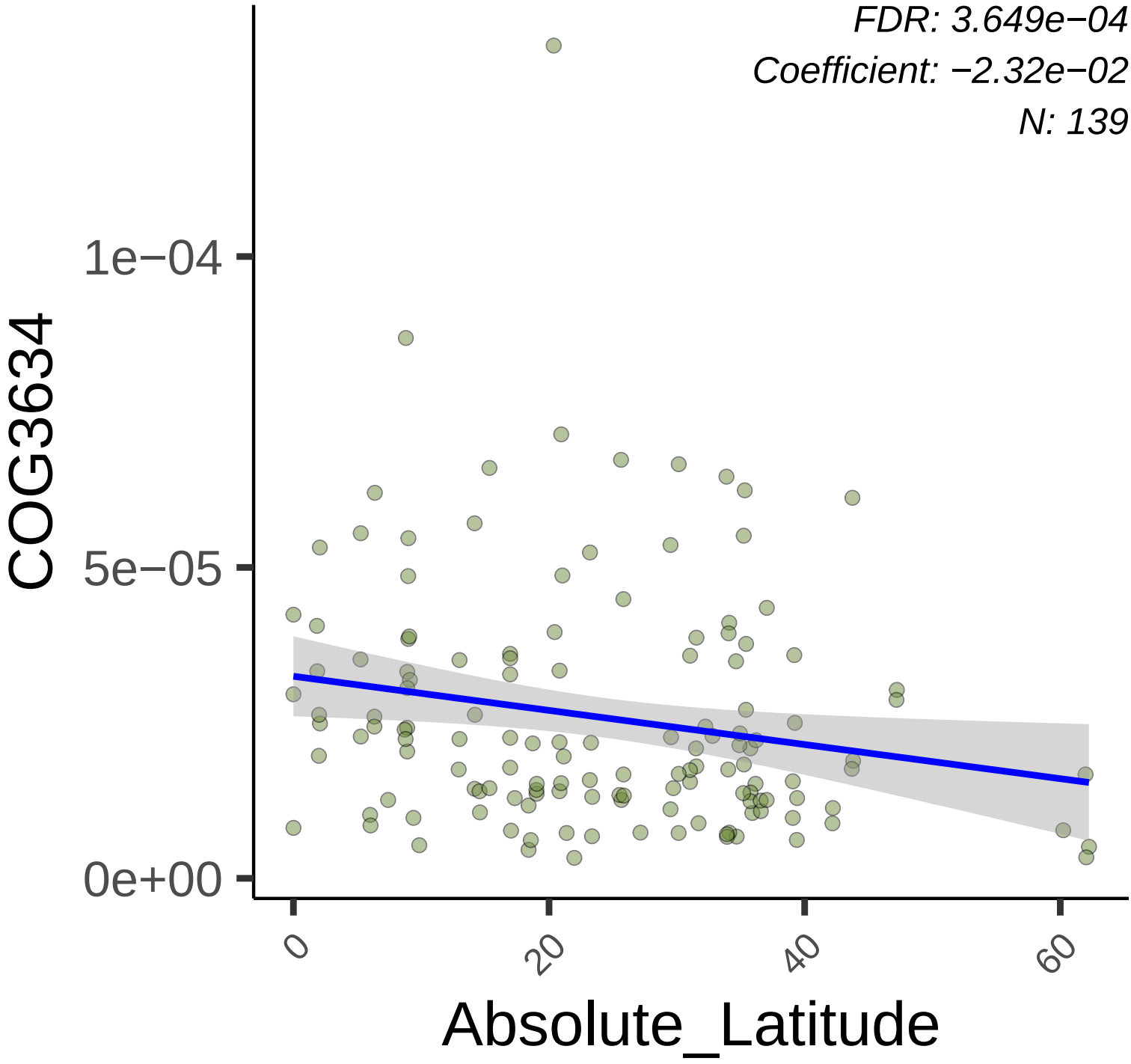

FDR: 2.786e−04
Coefficient: −2.86e−02
N: 139
COG3108
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

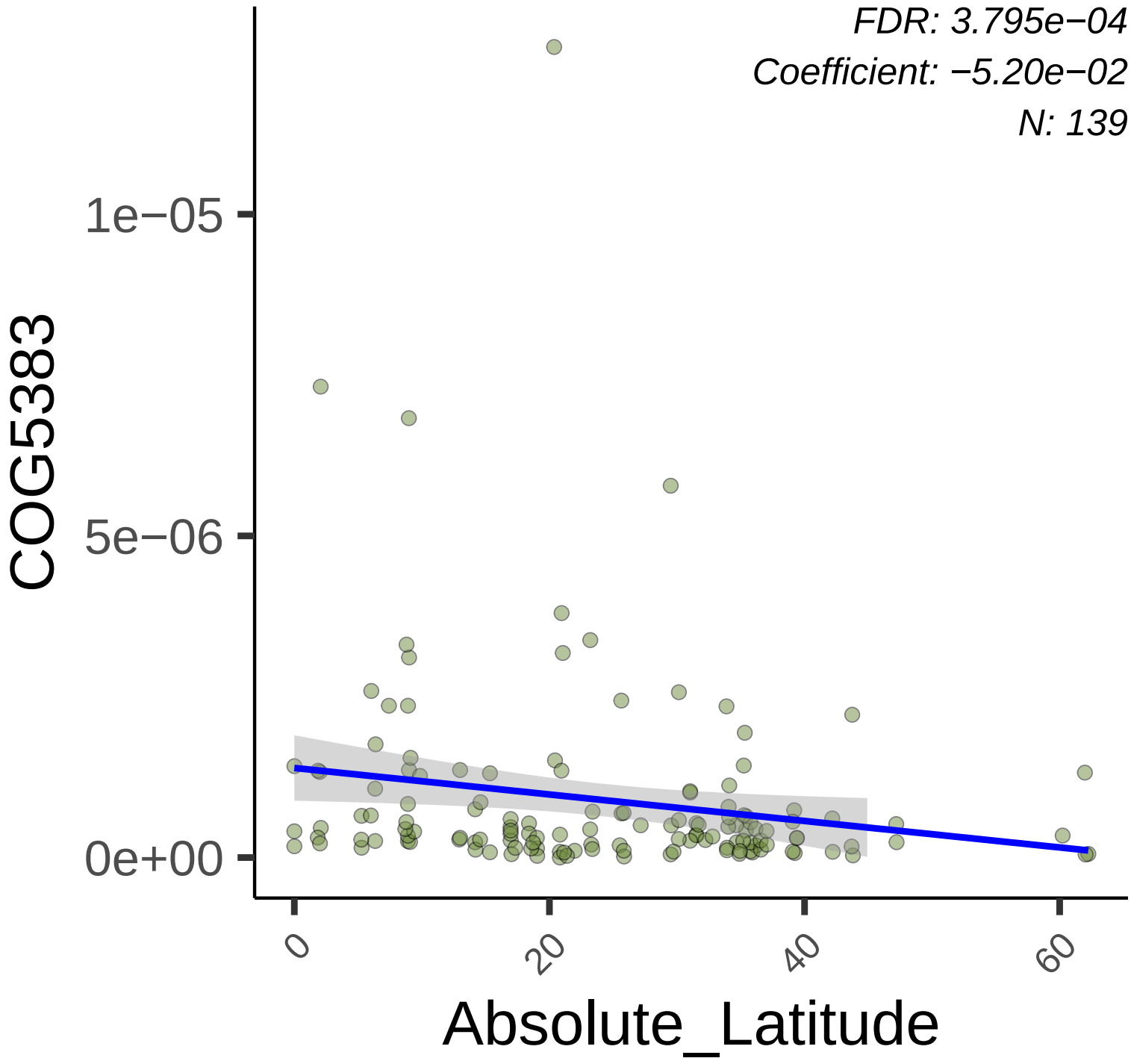

FDR: 3.040e−04
Coefficient: 5.94e−03
N: 139
1e−03
8e−04
6e−04
COG0411
0
20
40
60
Absolute_Latitude

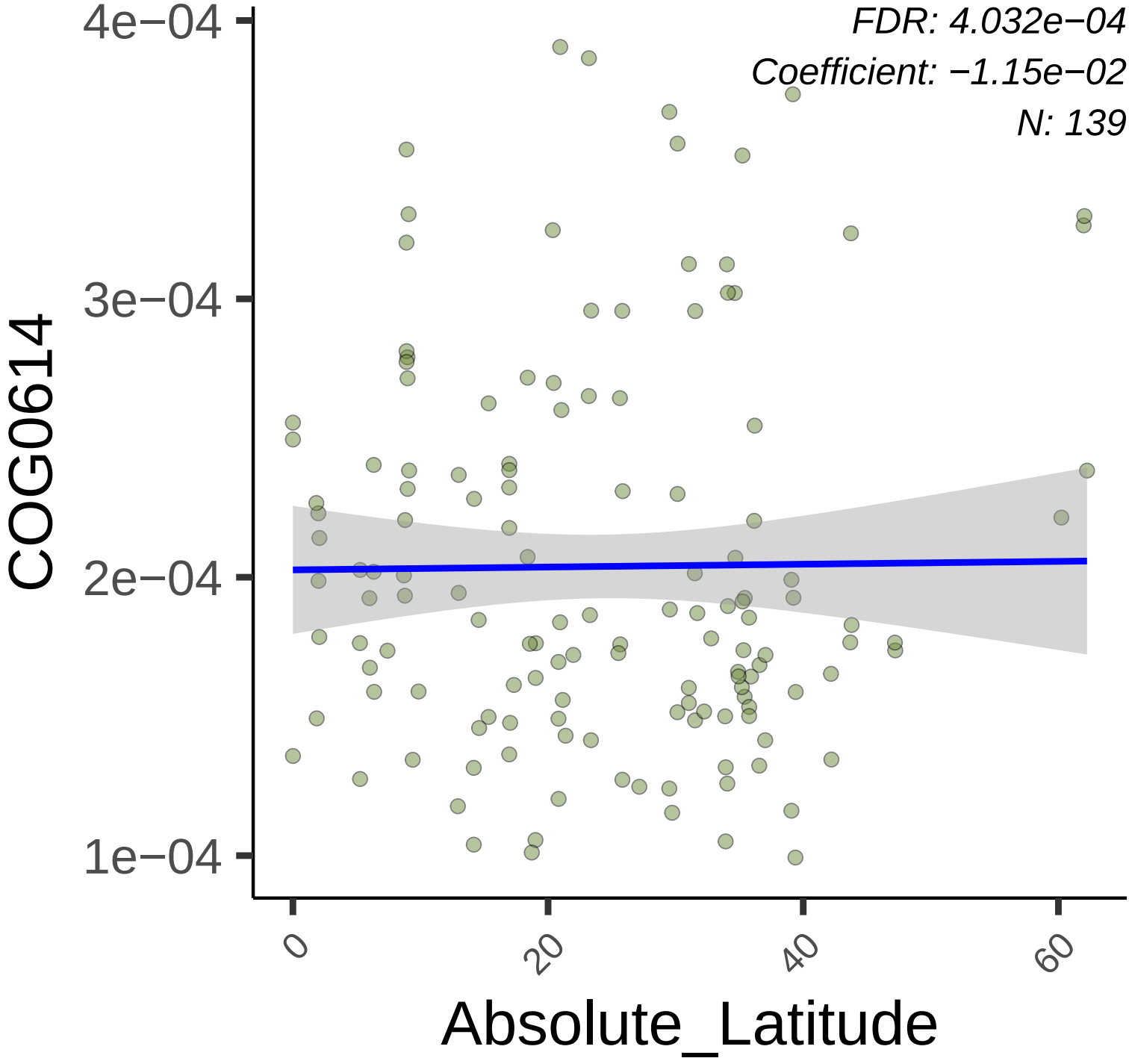

FDR: 3.043e−04
Coefficient: −1.21e−02
N: 139
3e−04
2e−04
1e−04
COG1835
0
20
40
60
Absolute_Latitude

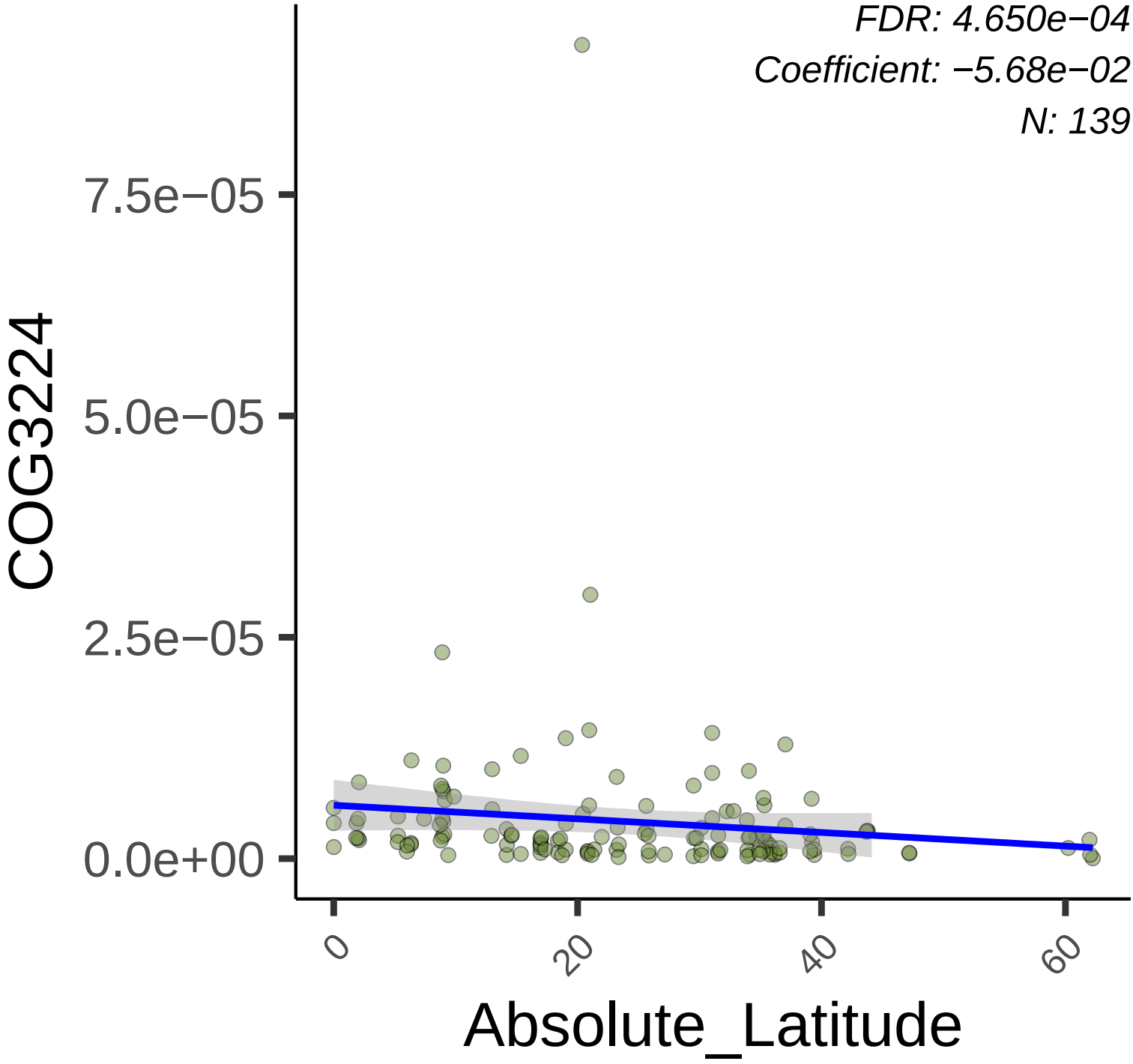

FDR: 3.092e−04
Coefficient: −2.17e−02
N: 139
COG3024
9e−05
6e−05
3e−05
0
20
40
60
Absolute_Latitude

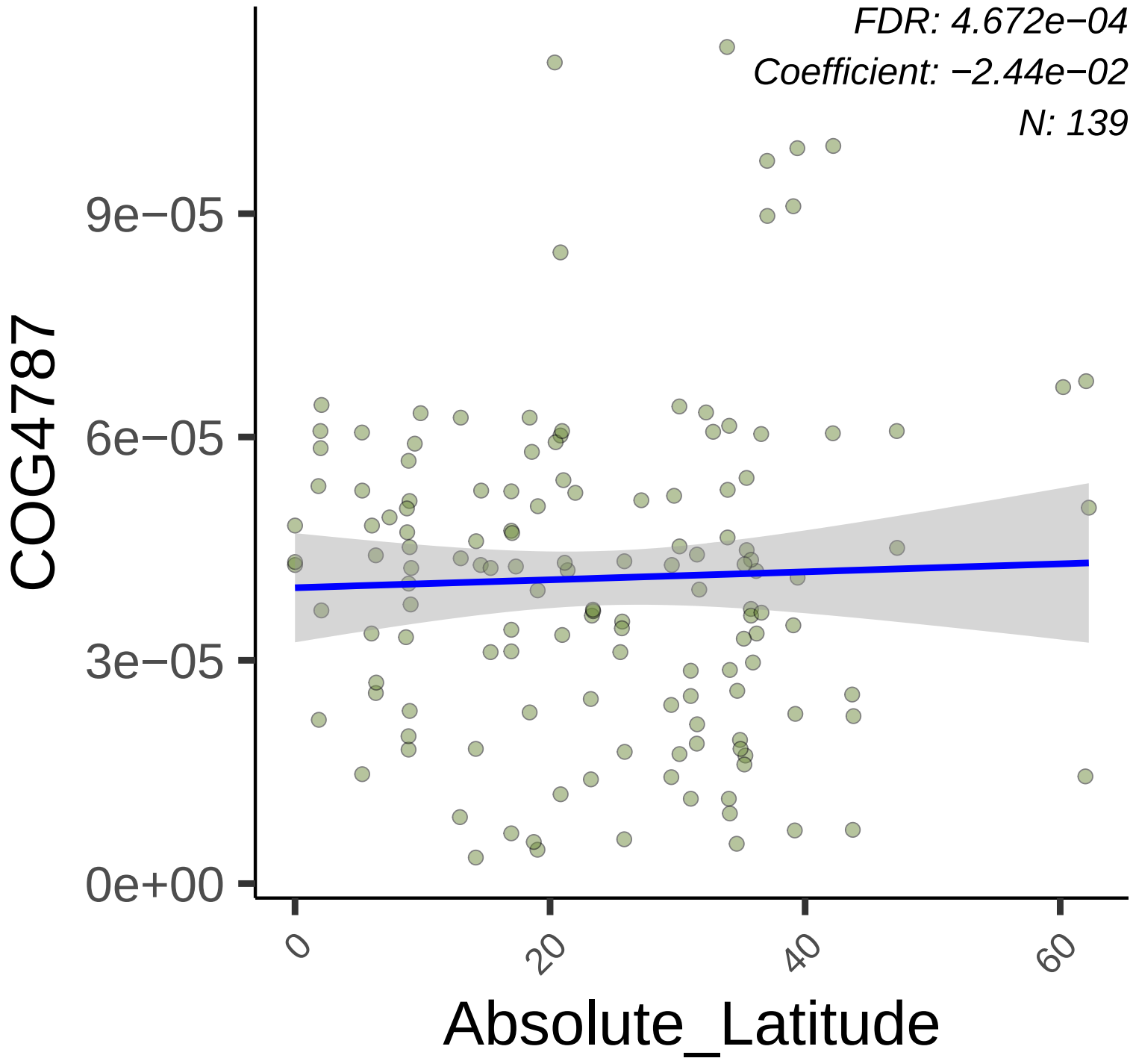

FDR: 3.198e−04
Coefficient: 4.43e−03
N: 139
0.0016
0.0014
0.0012
0.0010
COG0277
0
20
40
60
Absolute_Latitude

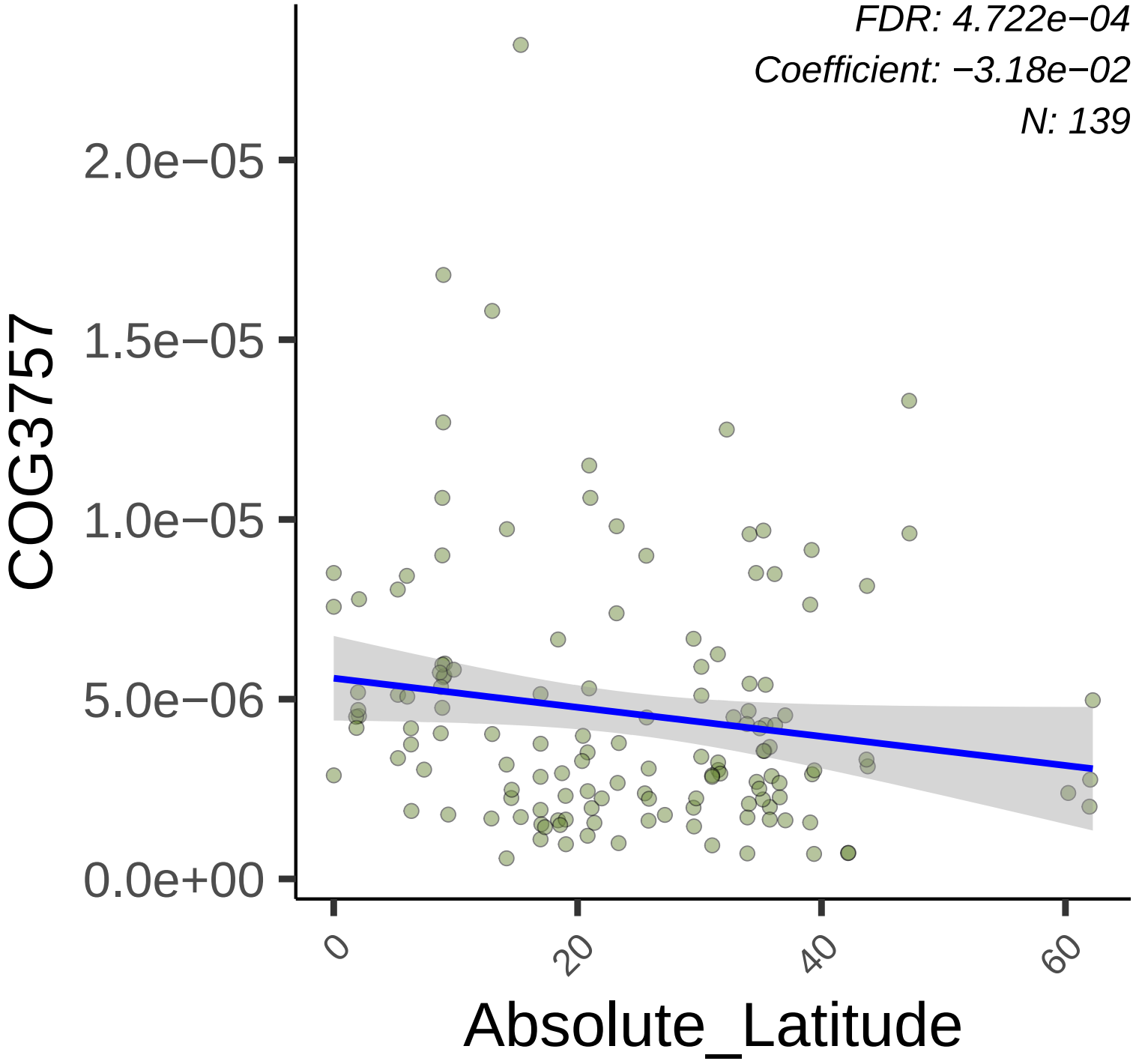

FDR: 3.649e−04
Coefficient: −2.32e−02
N: 139
COG3634
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

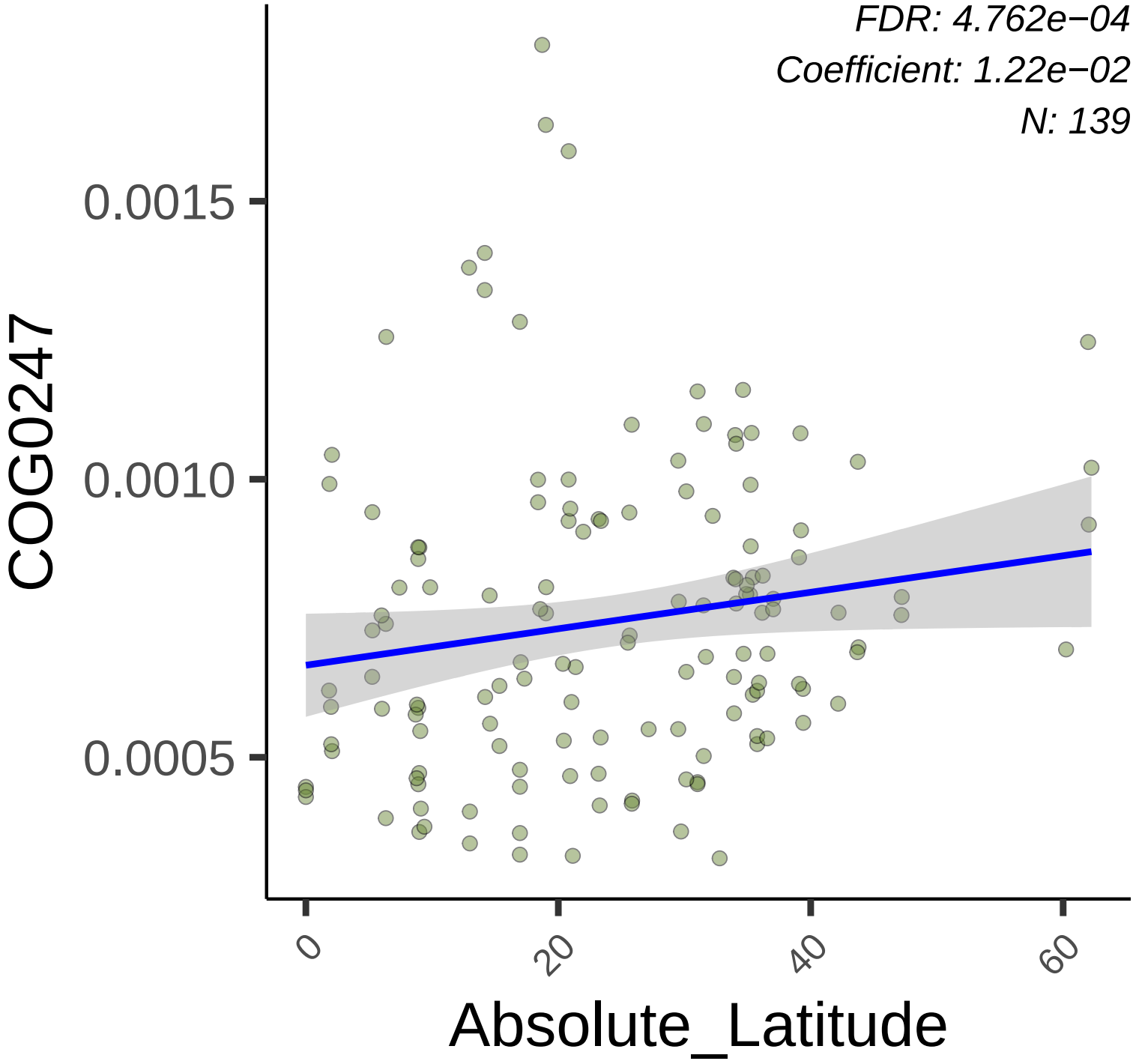

FDR: 3.795e−04
Coefficient: −5.20e−02
N: 139
COG5383
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

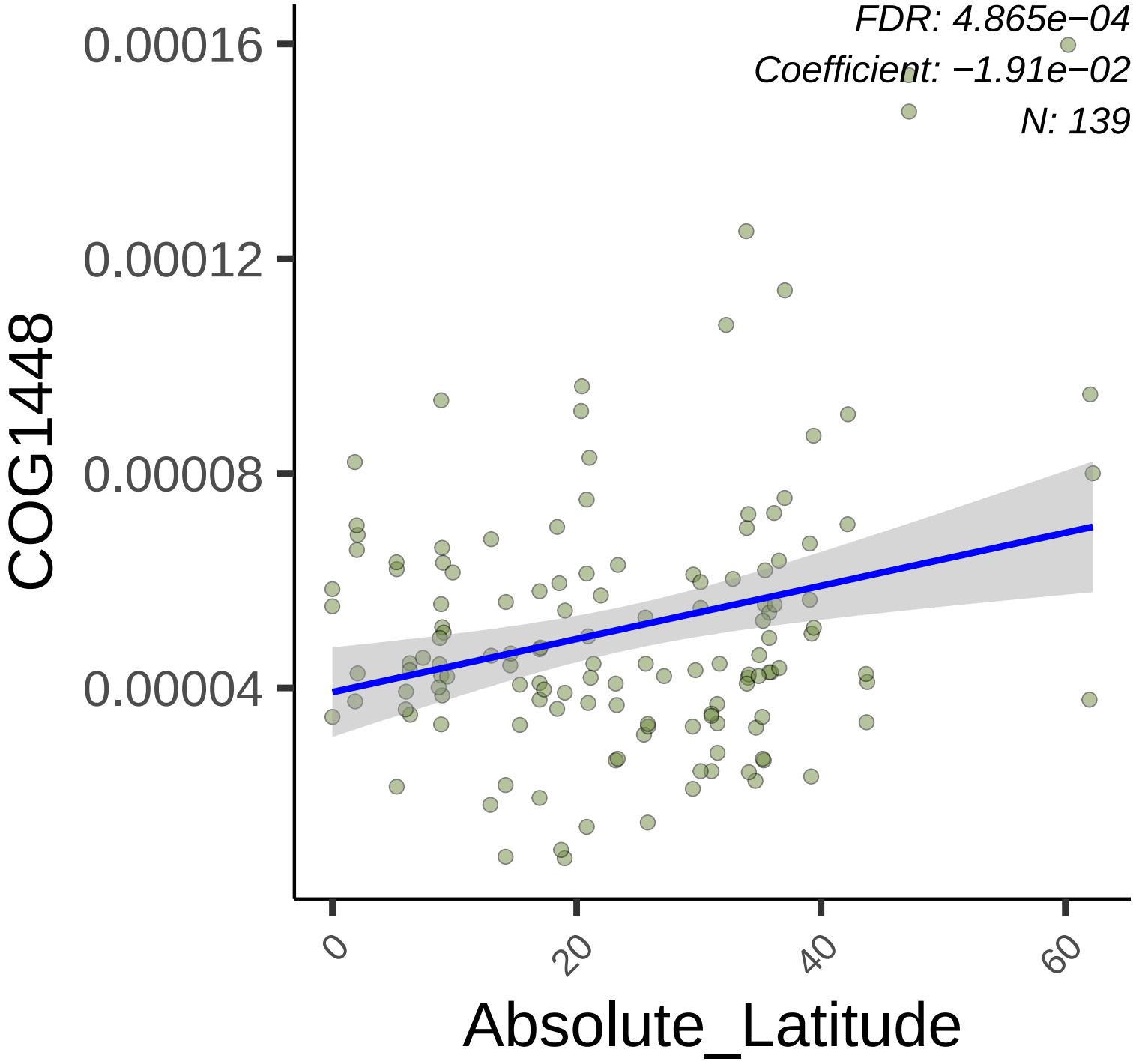

FDR: 4.032e−04
Coefficient: −1.15e−02
N: 139
4e−04
3e−04
2e−04
1e−04
COG0614
0
20
40
60
Absolute_Latitude

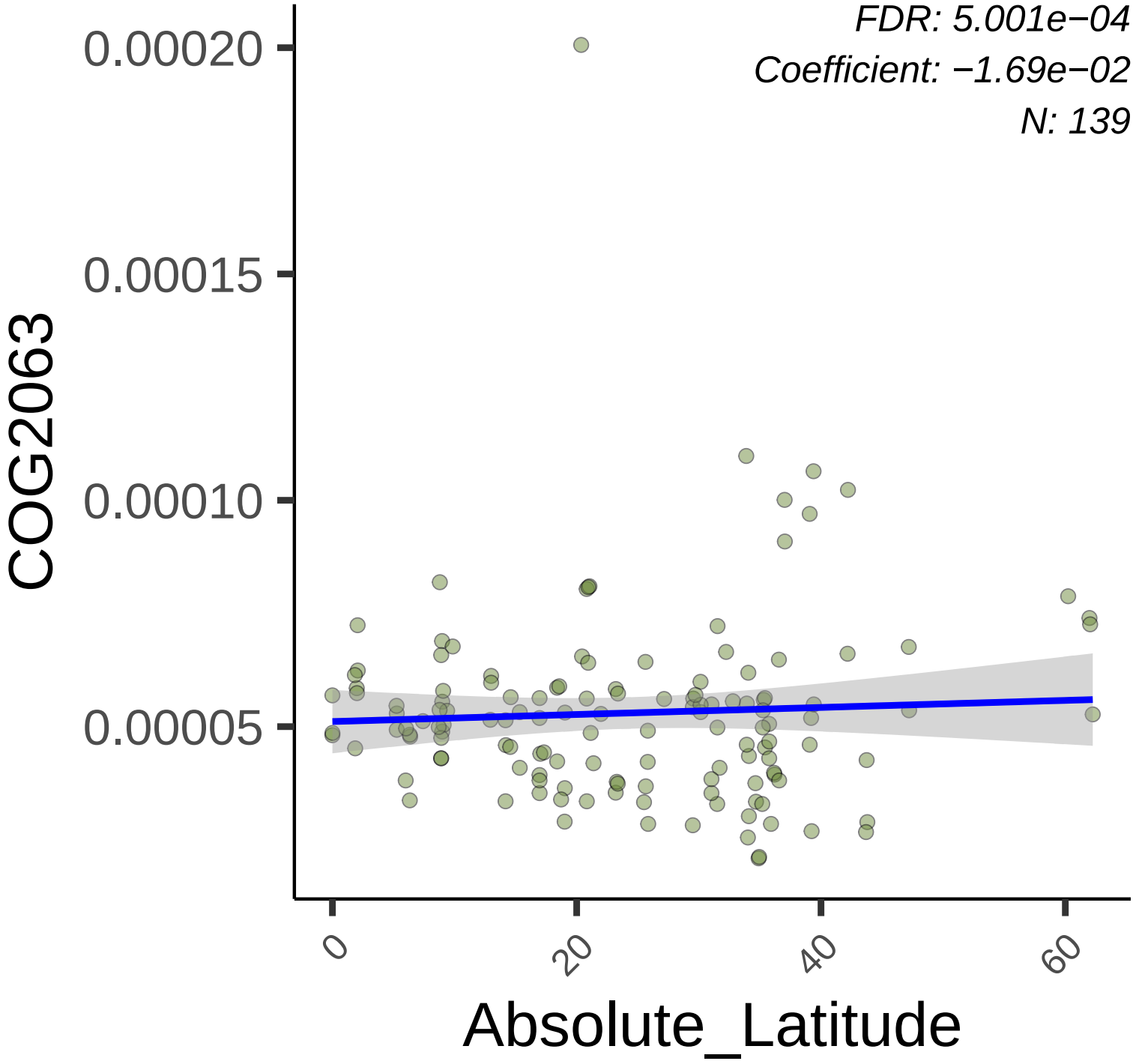

FDR: 4.650e−04
Coefficient: −5.68e−02
N: 139
COG3224
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

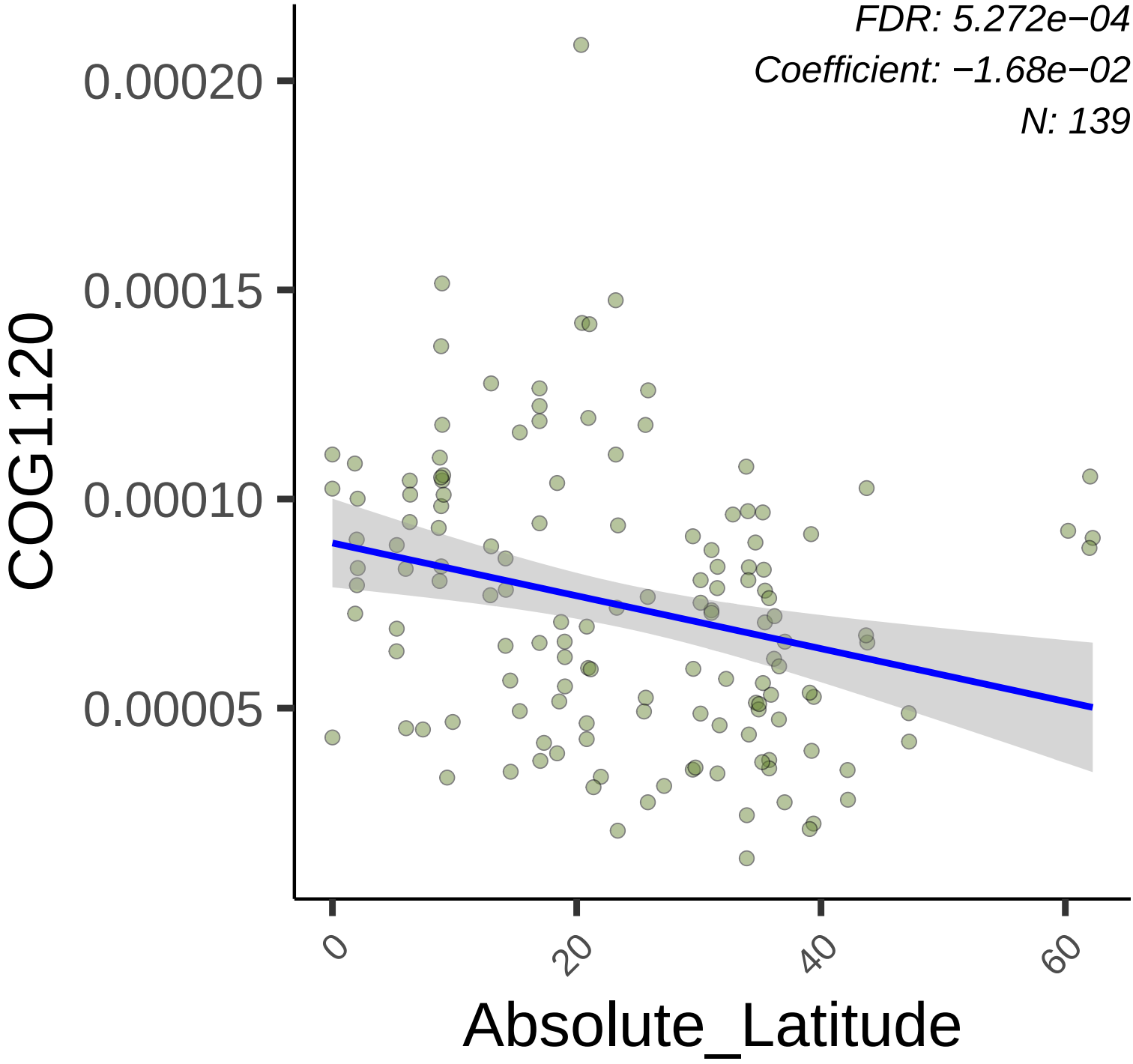

FDR: 4.672e−04
Coefficient: −2.44e−02
N: 139
COG4787
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

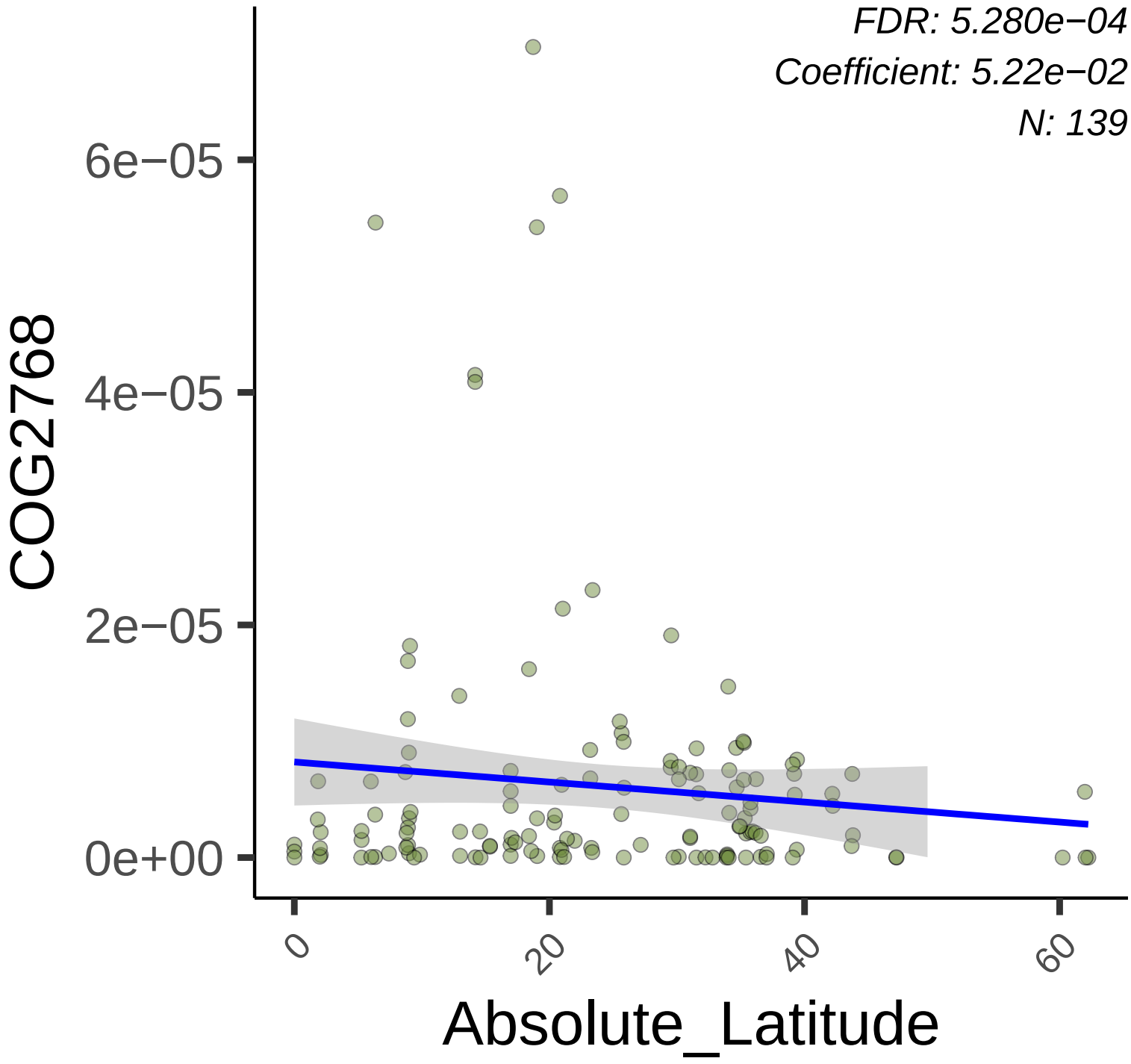

FDR: 4.722e−04
Coefficient: −3.18e−02
N: 139
COG3757
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

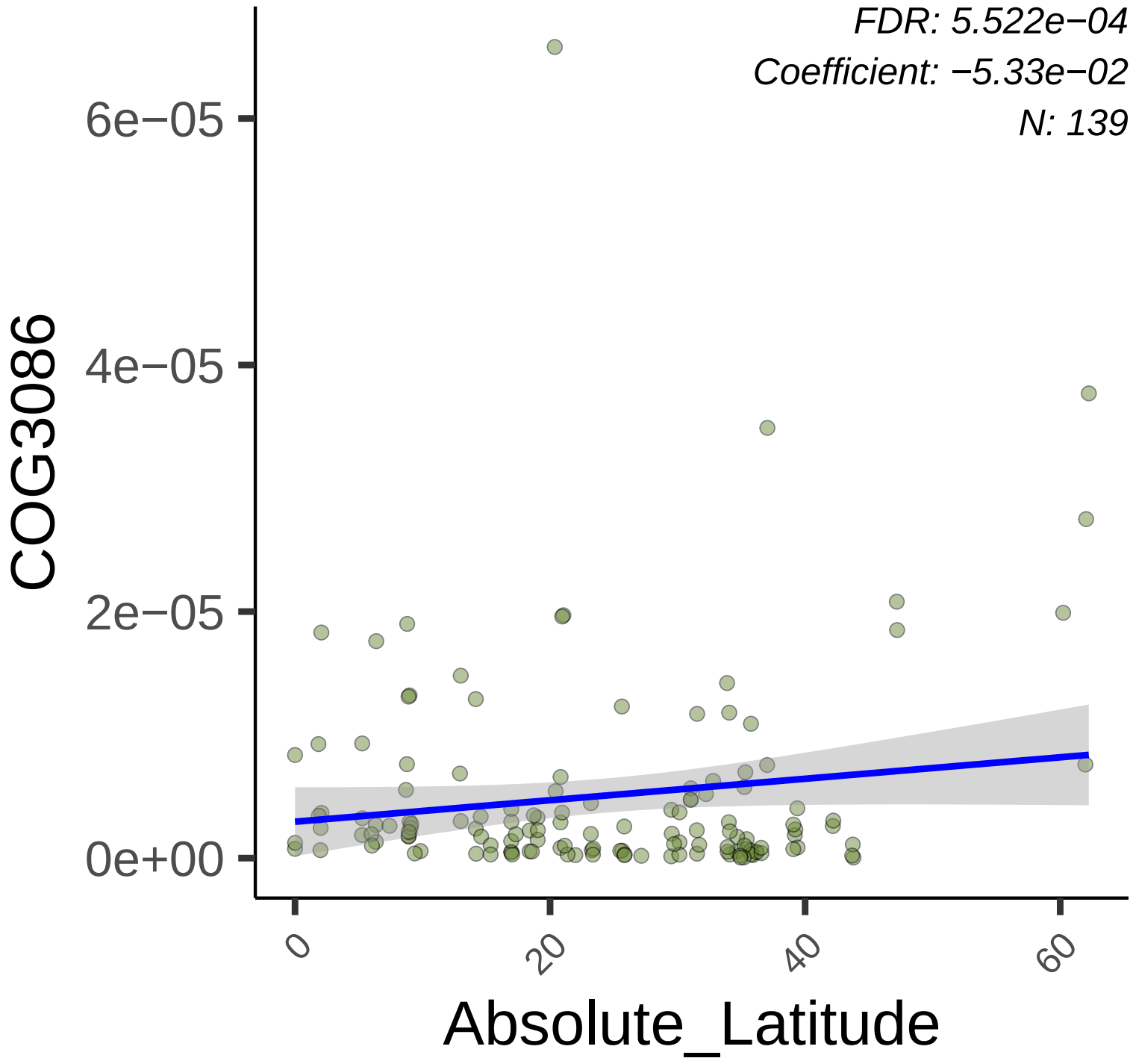

FDR: 4.762e−04
Coefficient: 1.22e−02
N: 139
0.0015
0.0010
0.0005
COG0247
0
20
40
60
Absolute_Latitude

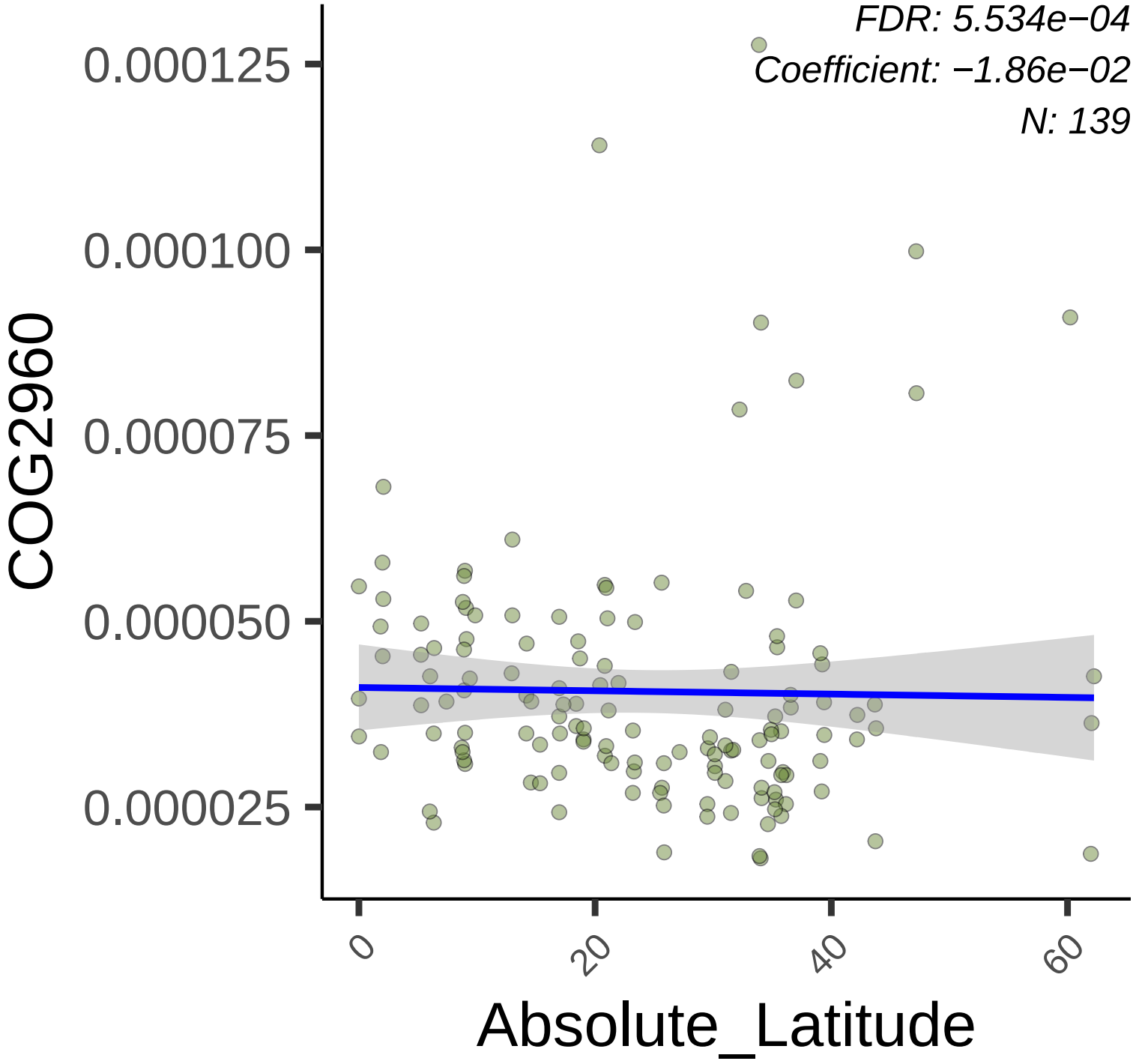

FDR: 4.865e−04
Coefficient: −1.91e−02
N: 139
0.00016
0.00012
0.00008
0.00004
COG1448
0
20
40
60
Absolute_Latitude

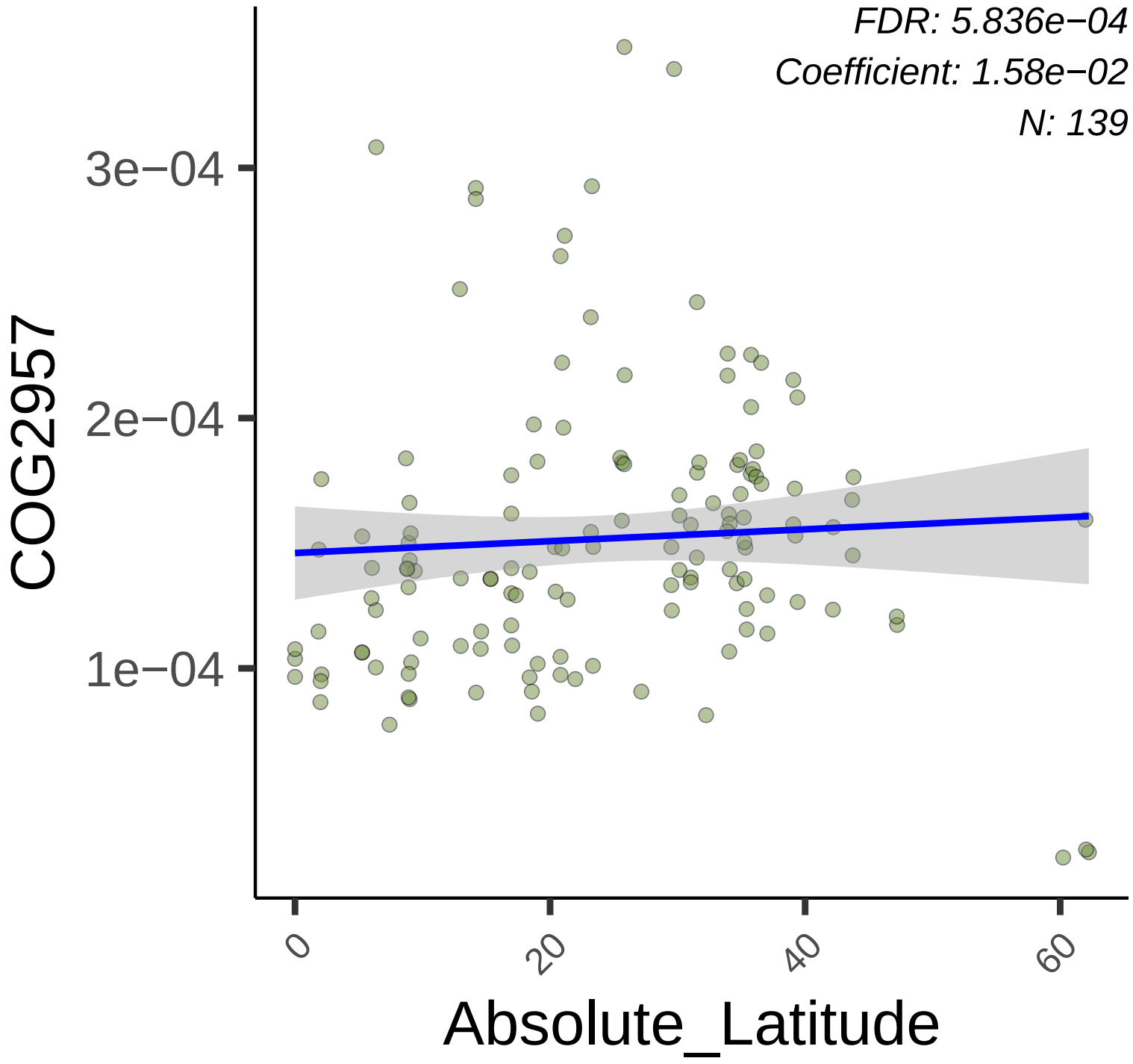

FDR: 5.001e−04
Coefficient: −1.69e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG2063
0
20
40
60
Absolute_Latitude

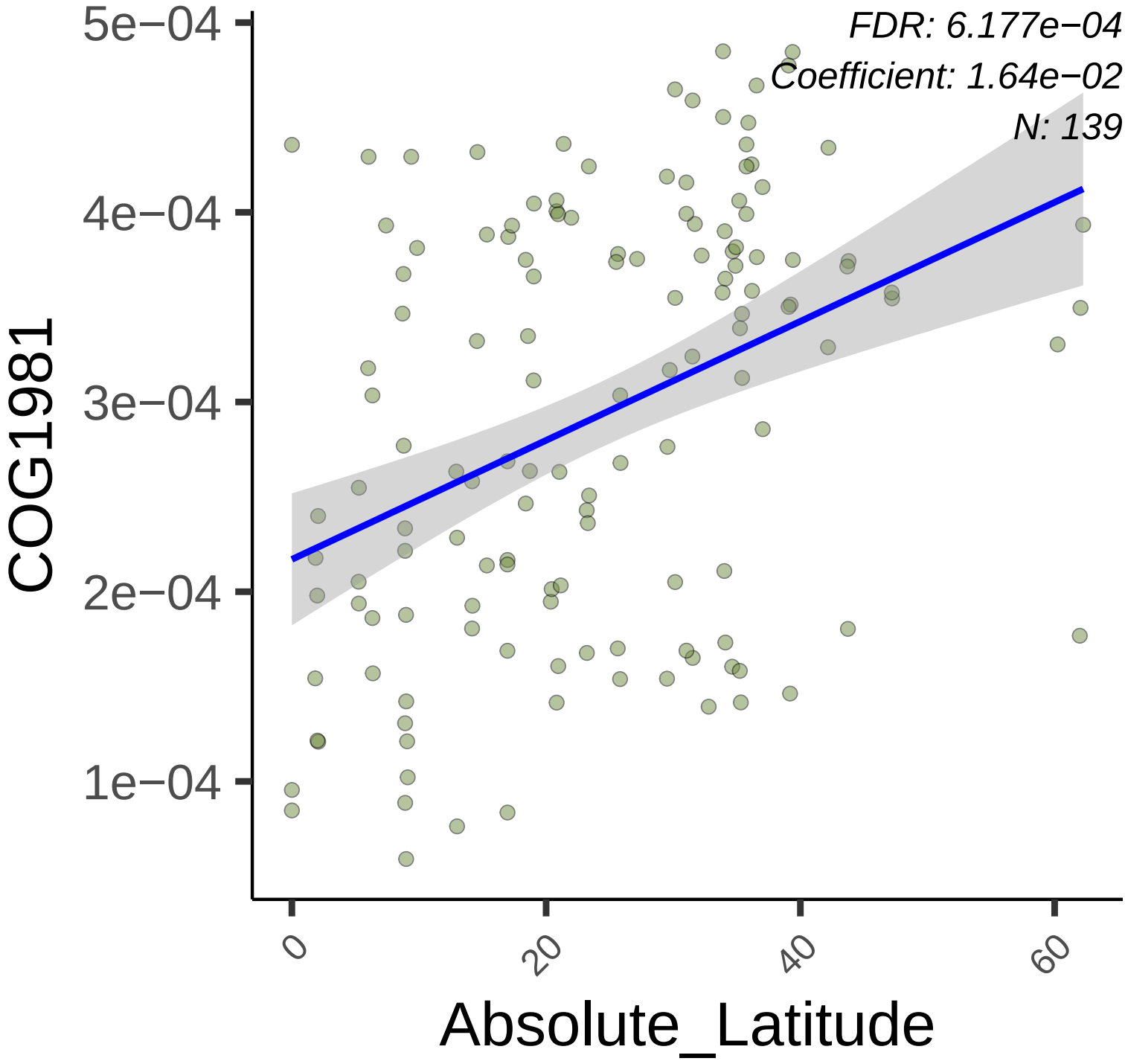

FDR: 5.272e−04
Coefficient: −1.68e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG1120
0
20
40
60
Absolute_Latitude

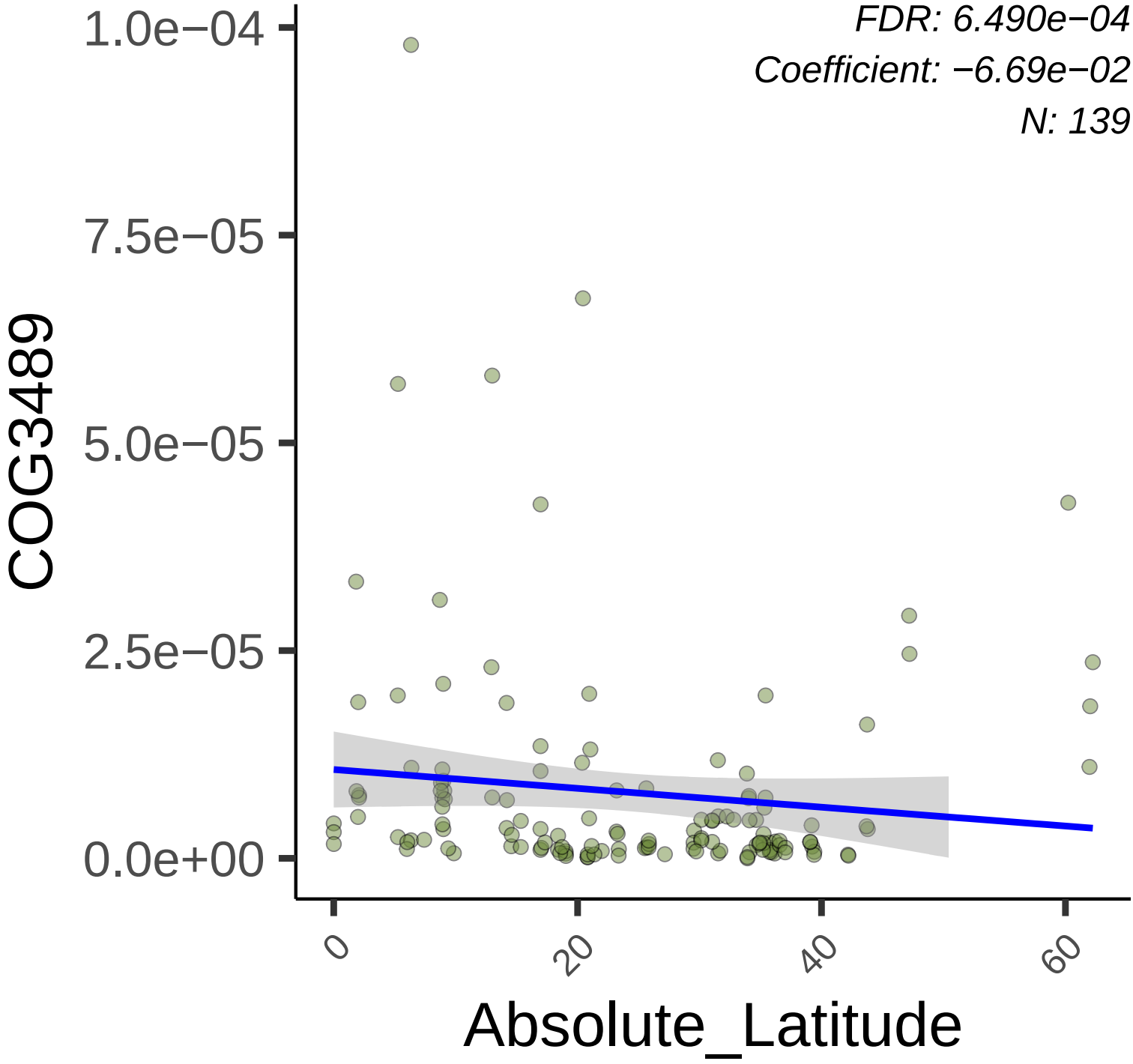

FDR: 5.280e−04
Coefficient: 5.22e−02
N: 139
COG2768
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

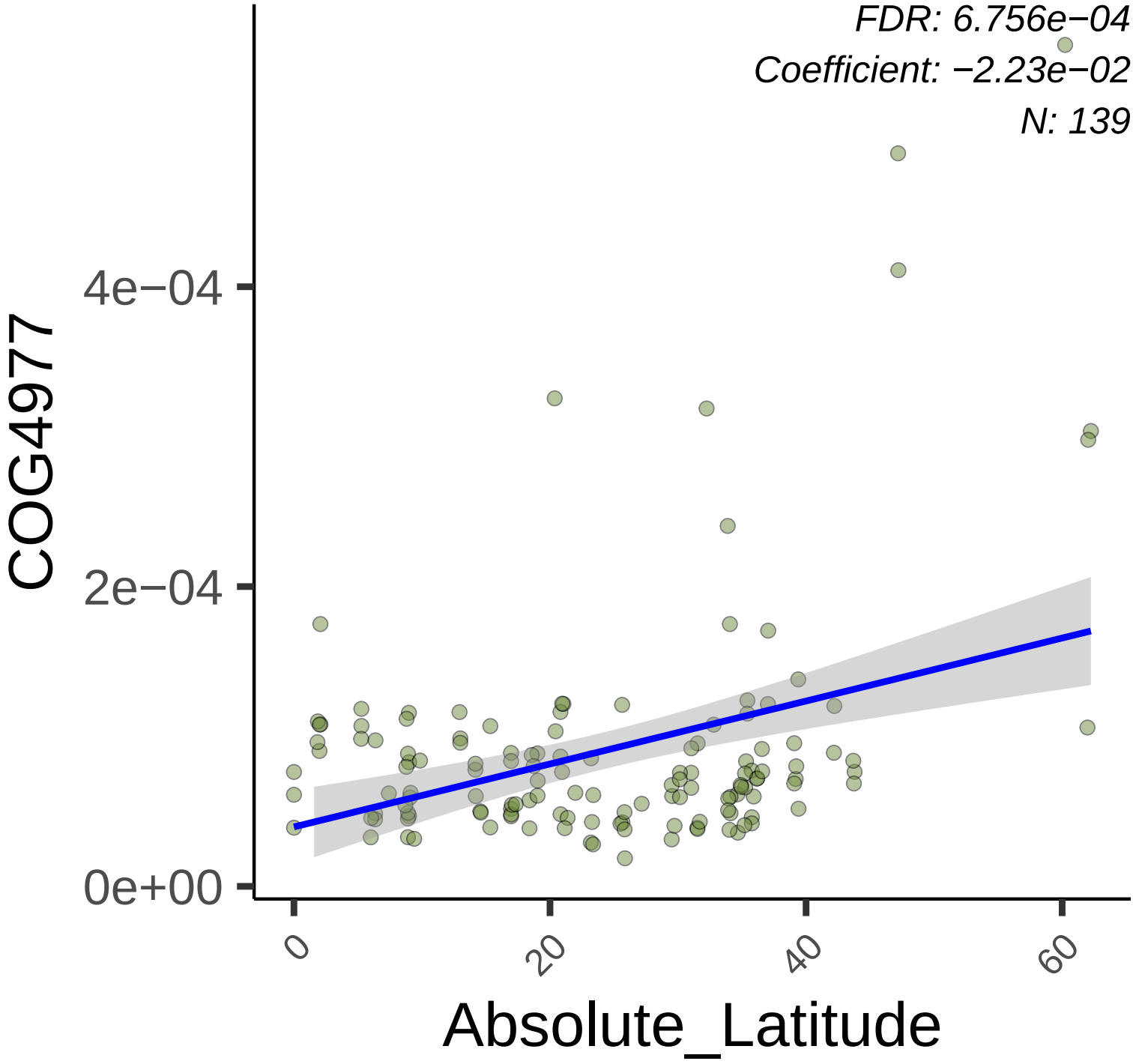

FDR: 5.522e−04
Coefficient: −5.33e−02
N: 139
COG3086
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

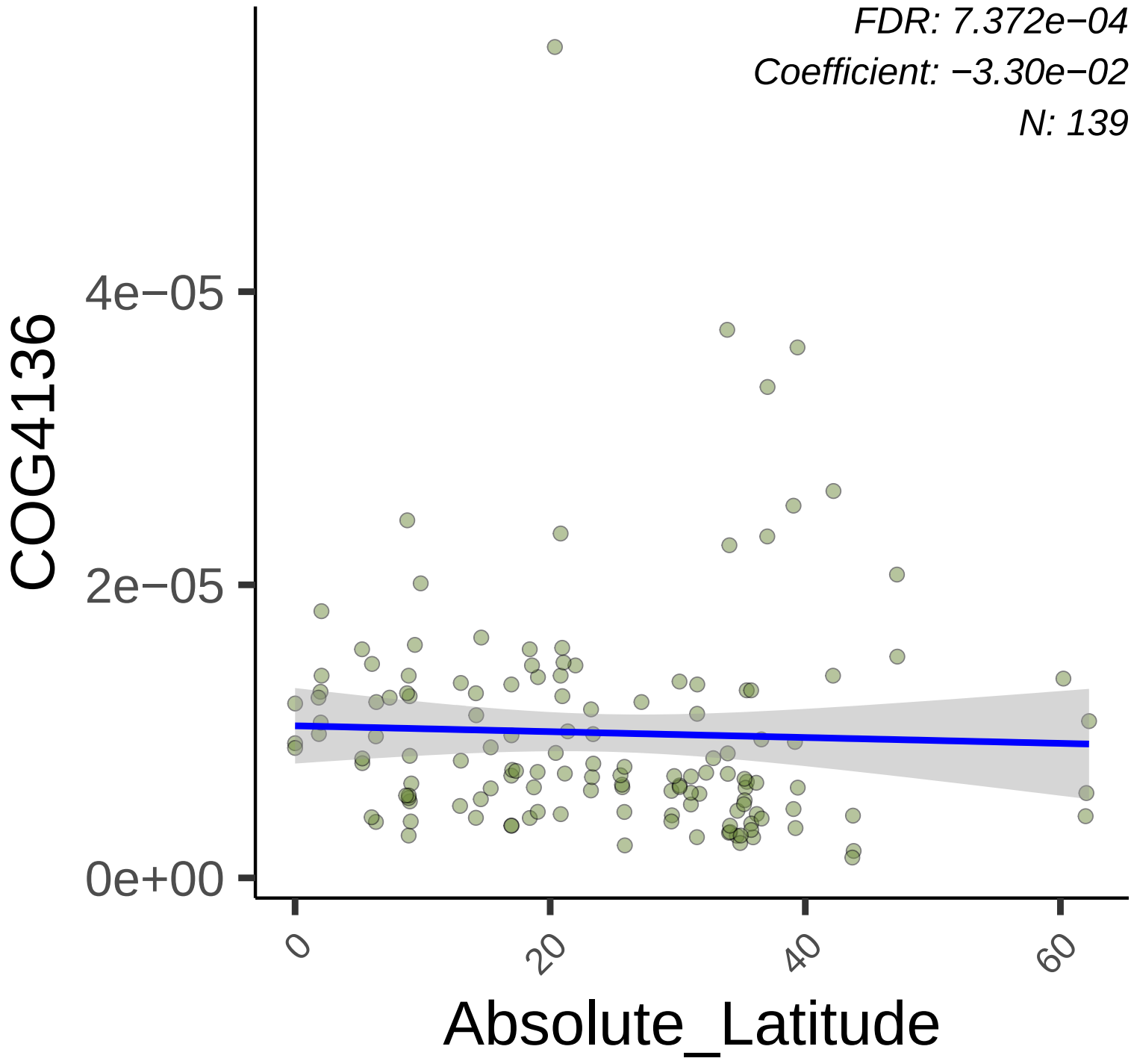

FDR: 5.534e−04
Coefficient: −1.86e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
COG2960
0
20
40
60
Absolute_Latitude

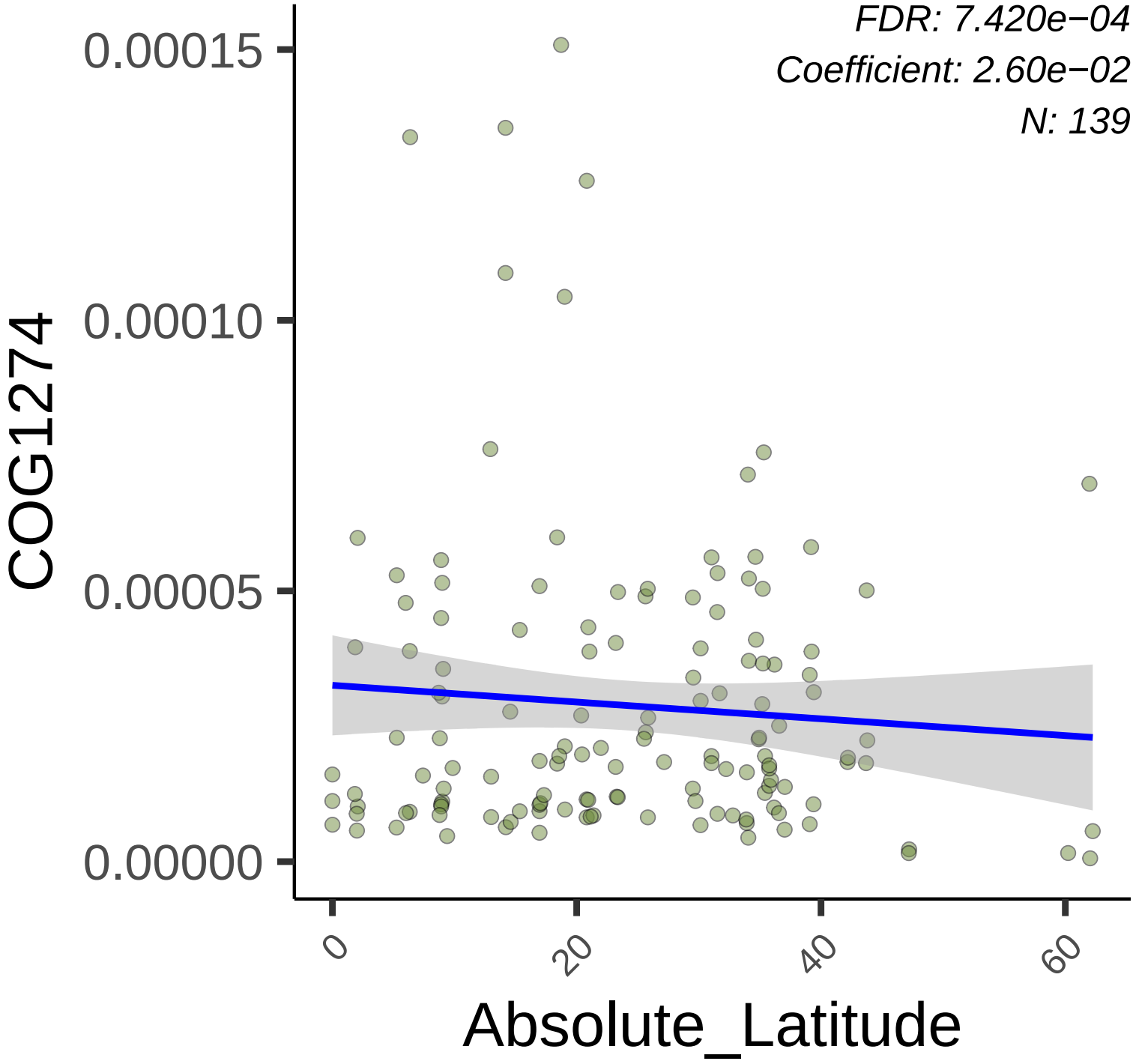

FDR: 5.836e−04
Coefficient: 1.58e−02
N: 139
3e−04
2e−04
1e−04
COG2957
0
20
40
60
Absolute_Latitude

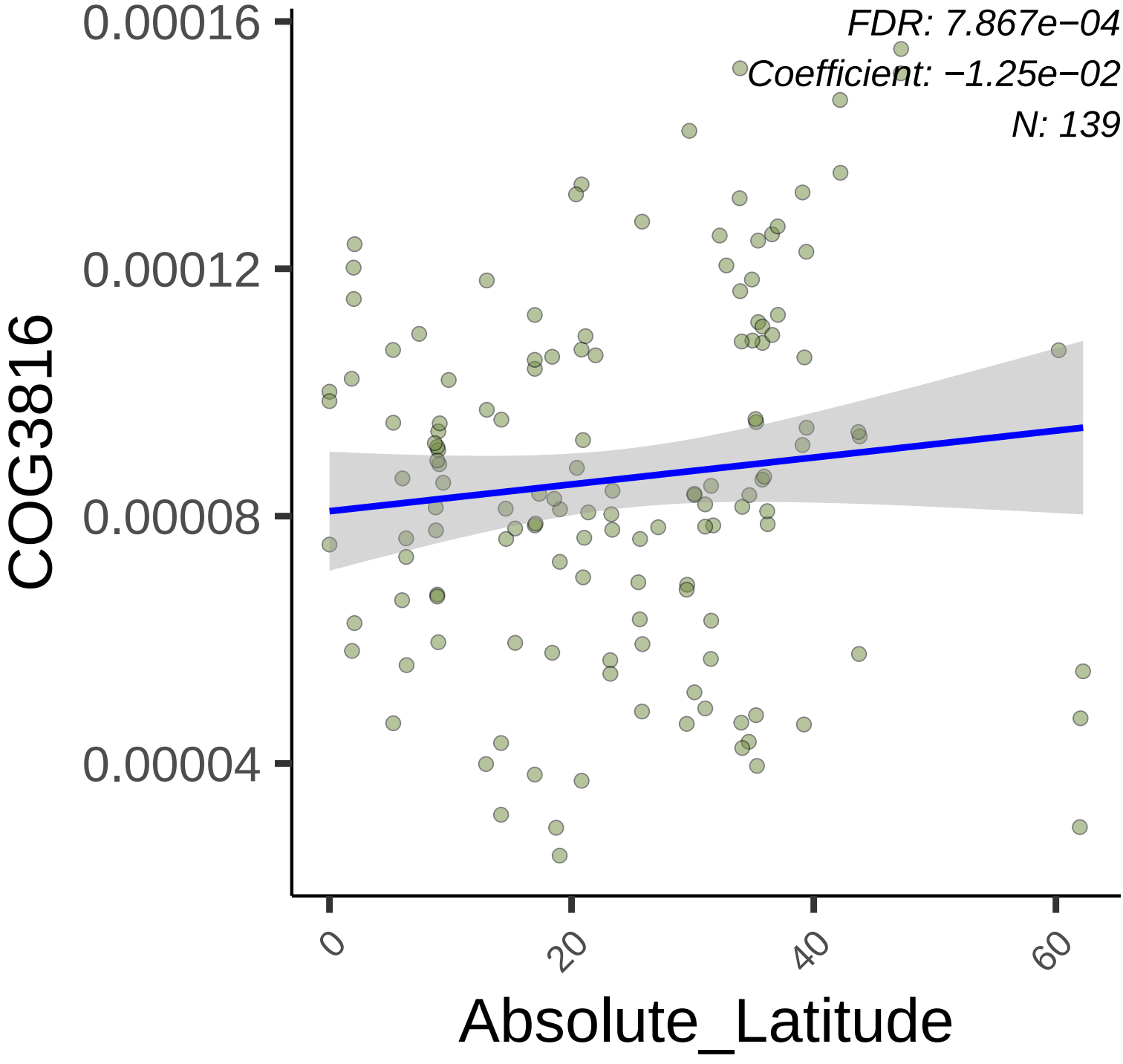

FDR: 6.177e−04
Coefficient: 1.64e−02
N: 139
5e−04
4e−04
3e−04
2e−04
1e−04
COG1981
0
20
40
60
Absolute_Latitude

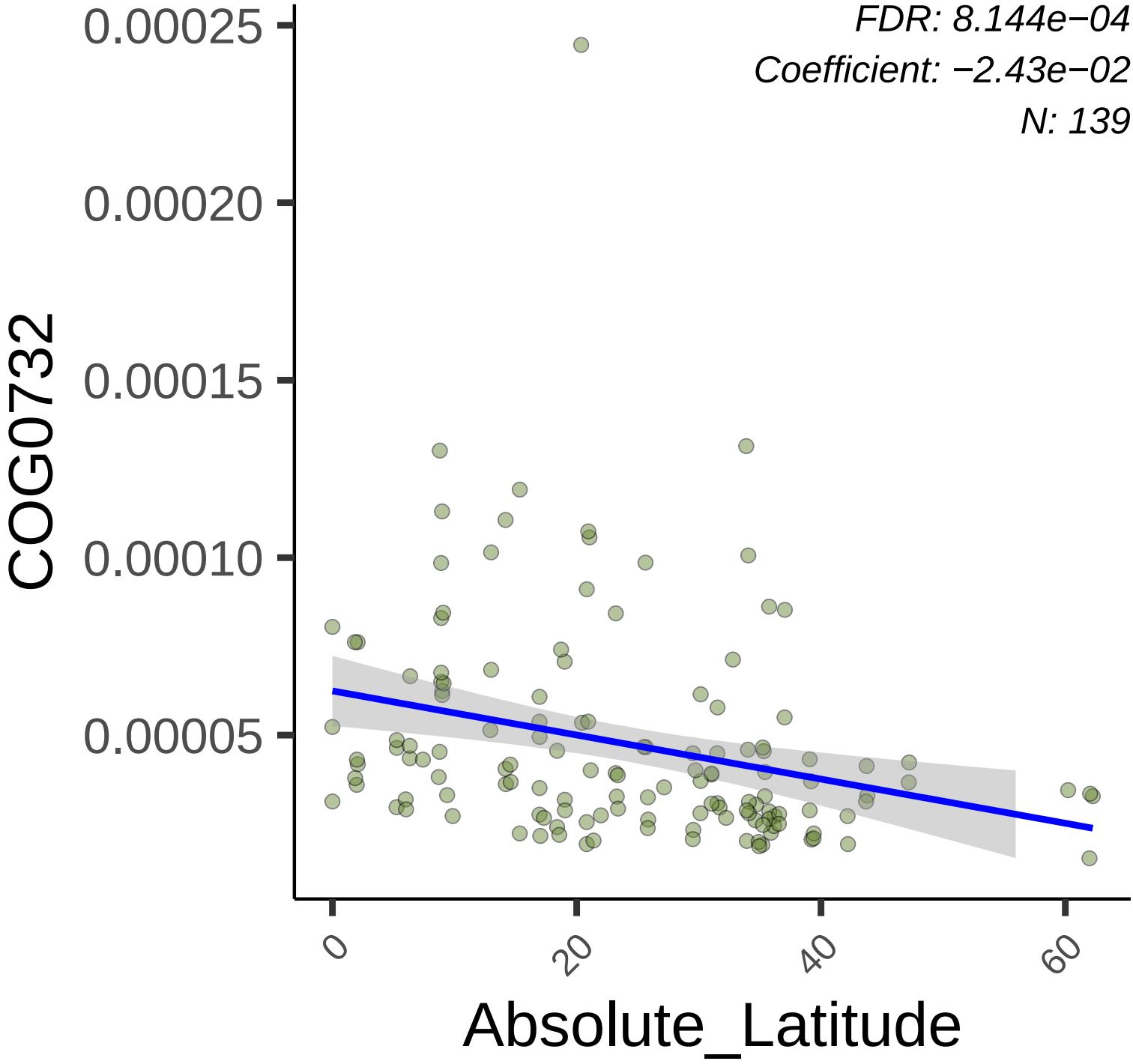

FDR: 6.490e−04
Coefficient: −6.69e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3489
0
20
40
60
Absolute_Latitude

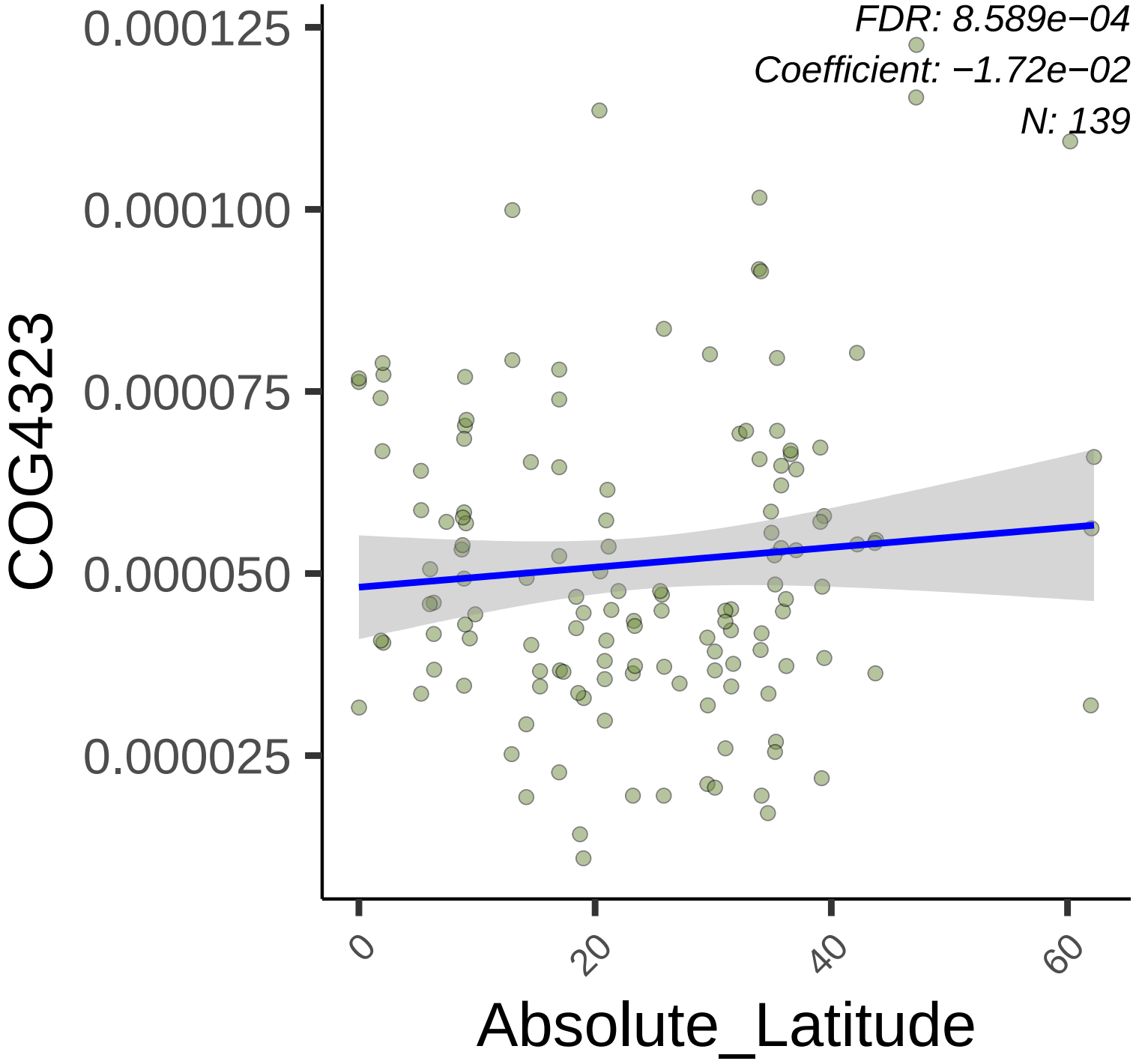

FDR: 6.756e−04
Coefficient: −2.23e−02
N: 139
COG4977
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

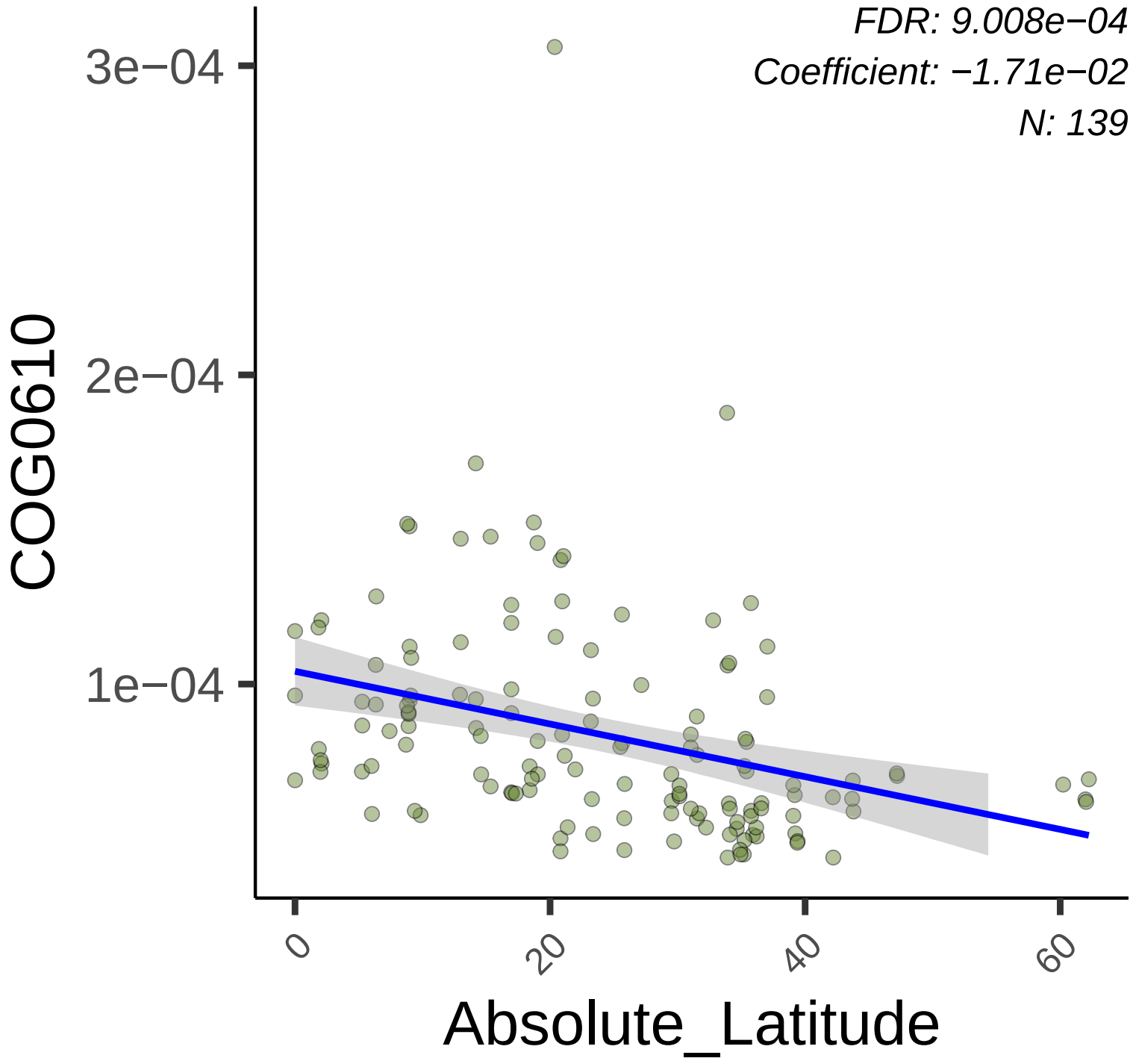

FDR: 7.372e−04
Coefficient: −3.30e−02
N: 139
COG4136
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

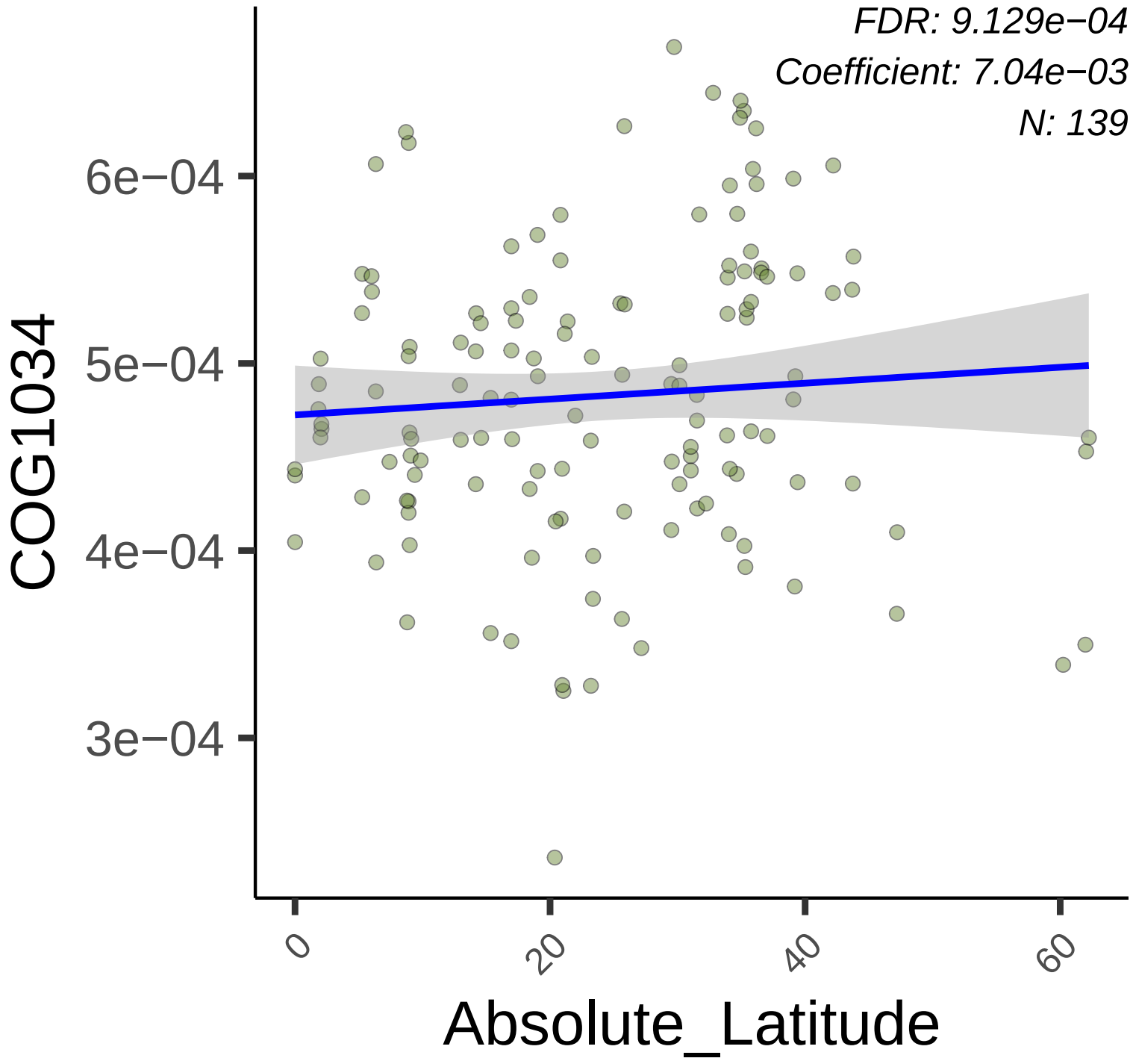

FDR: 7.420e−04
Coefficient: 2.60e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG1274
0
20
40
60
Absolute_Latitude

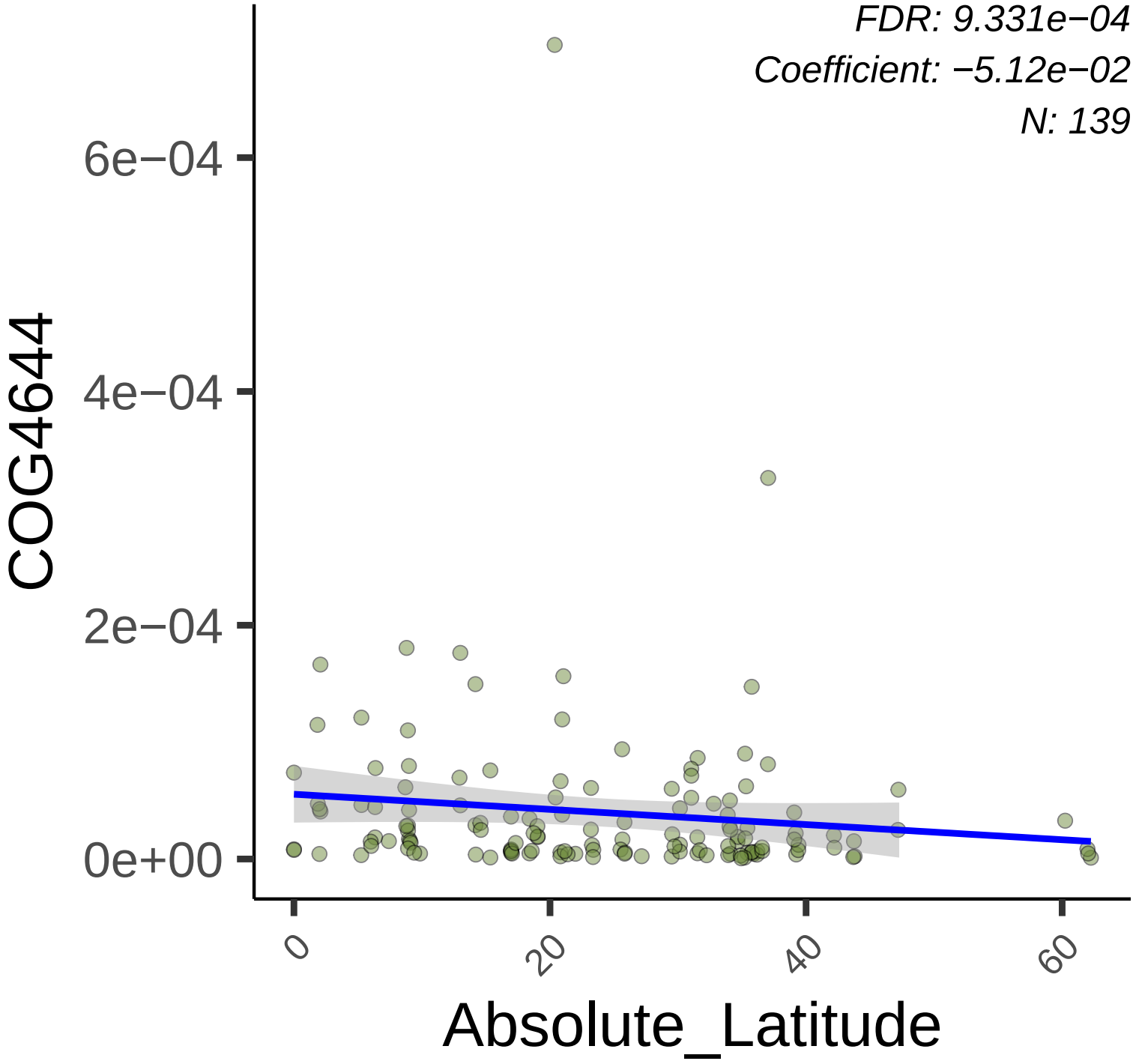

FDR: 7.867e−04
Coefficient: −1.25e−02
N: 139
0.00016
0.00012
0.00008
0.00004
COG3816
0
20
40
60
Absolute_Latitude

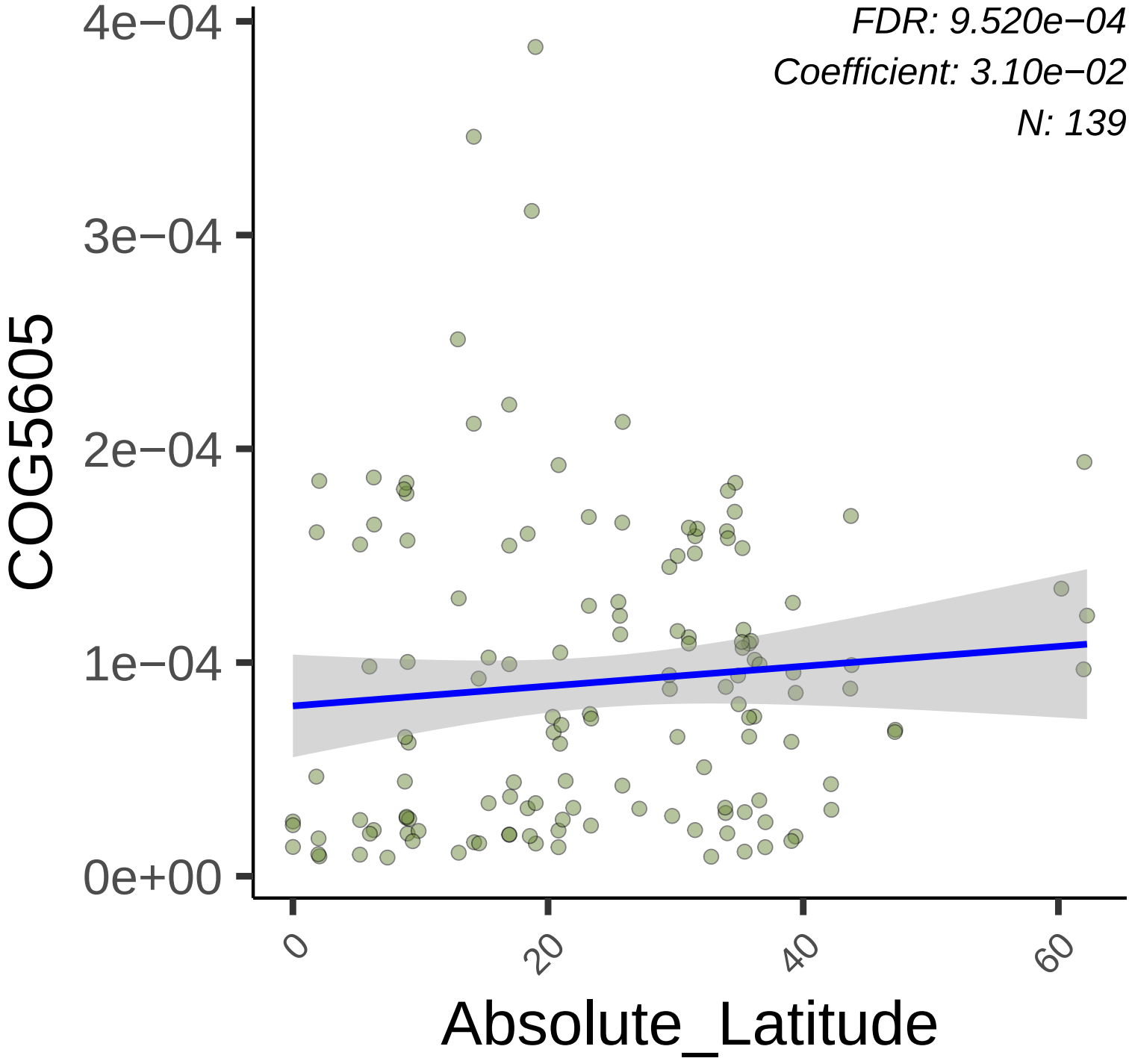

FDR: 8.144e−04
Coefficient: −2.43e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG0732
0
20
40
60
Absolute_Latitude

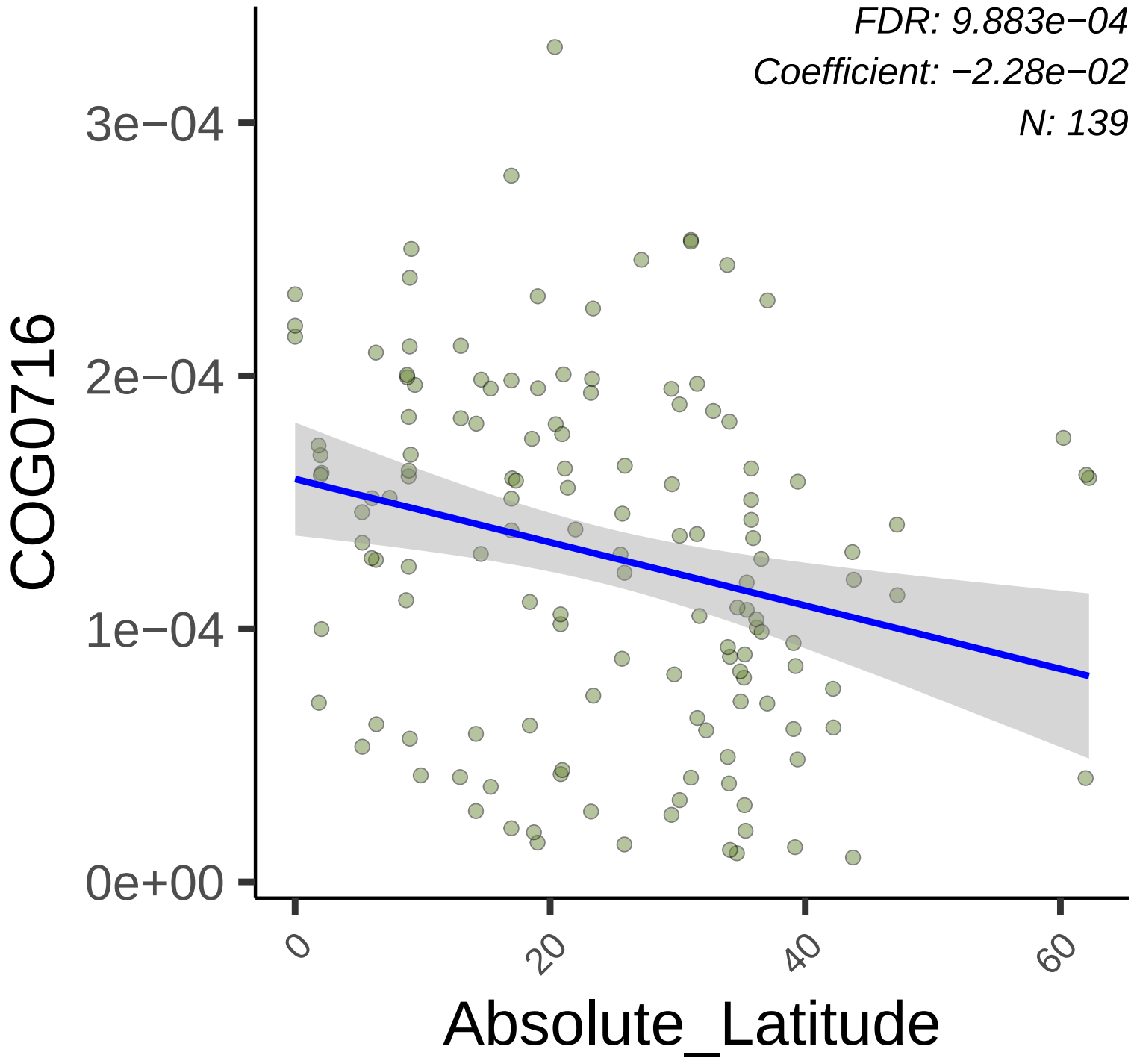

FDR: 8.589e−04
Coefficient: −1.72e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
COG4323
0
20
40
60
Absolute_Latitude

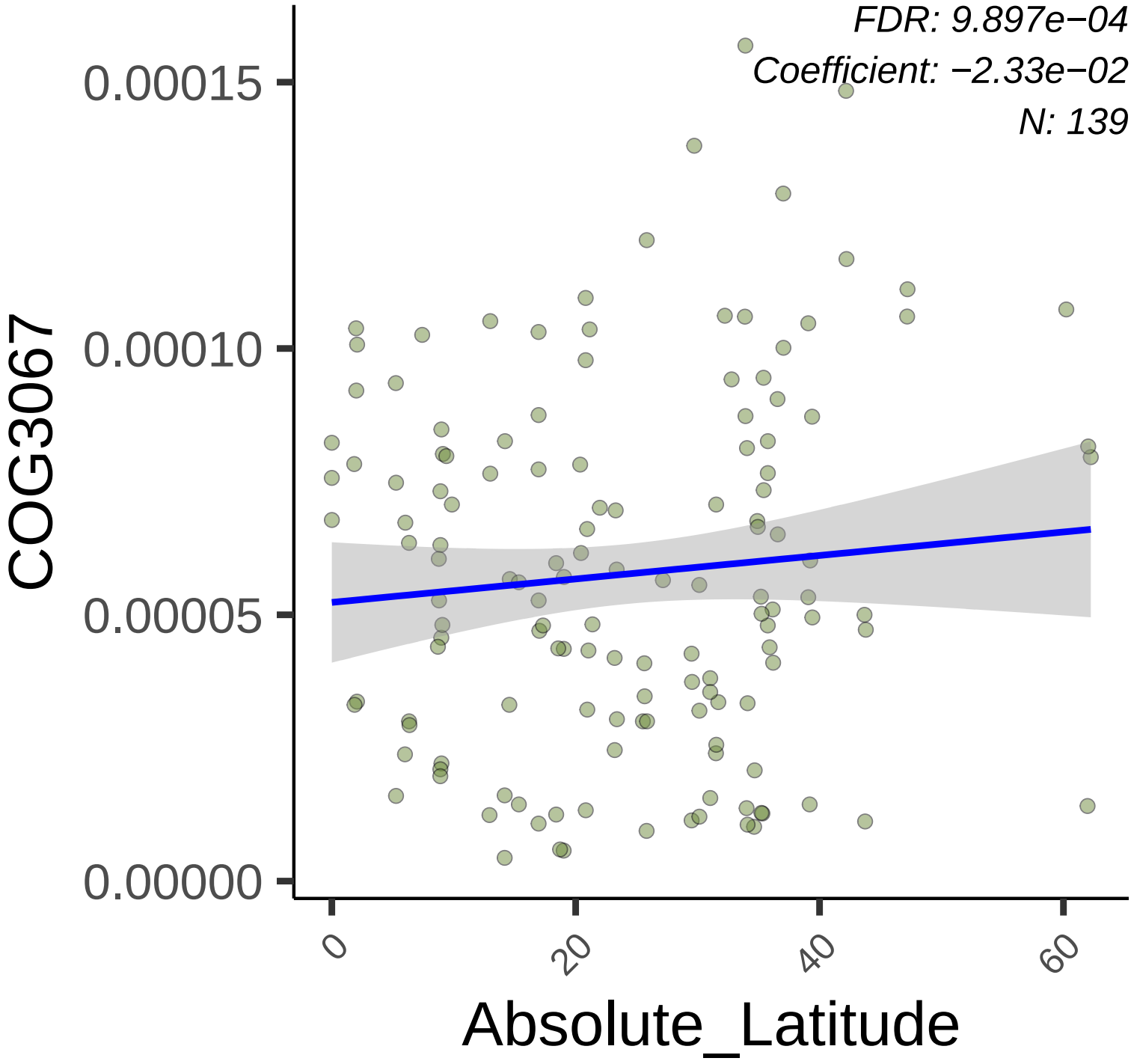

FDR: 9.008e−04
Coefficient: −1.71e−02
N: 139
3e−04
2e−04
1e−04
COG0610
0
20
40
60
Absolute_Latitude

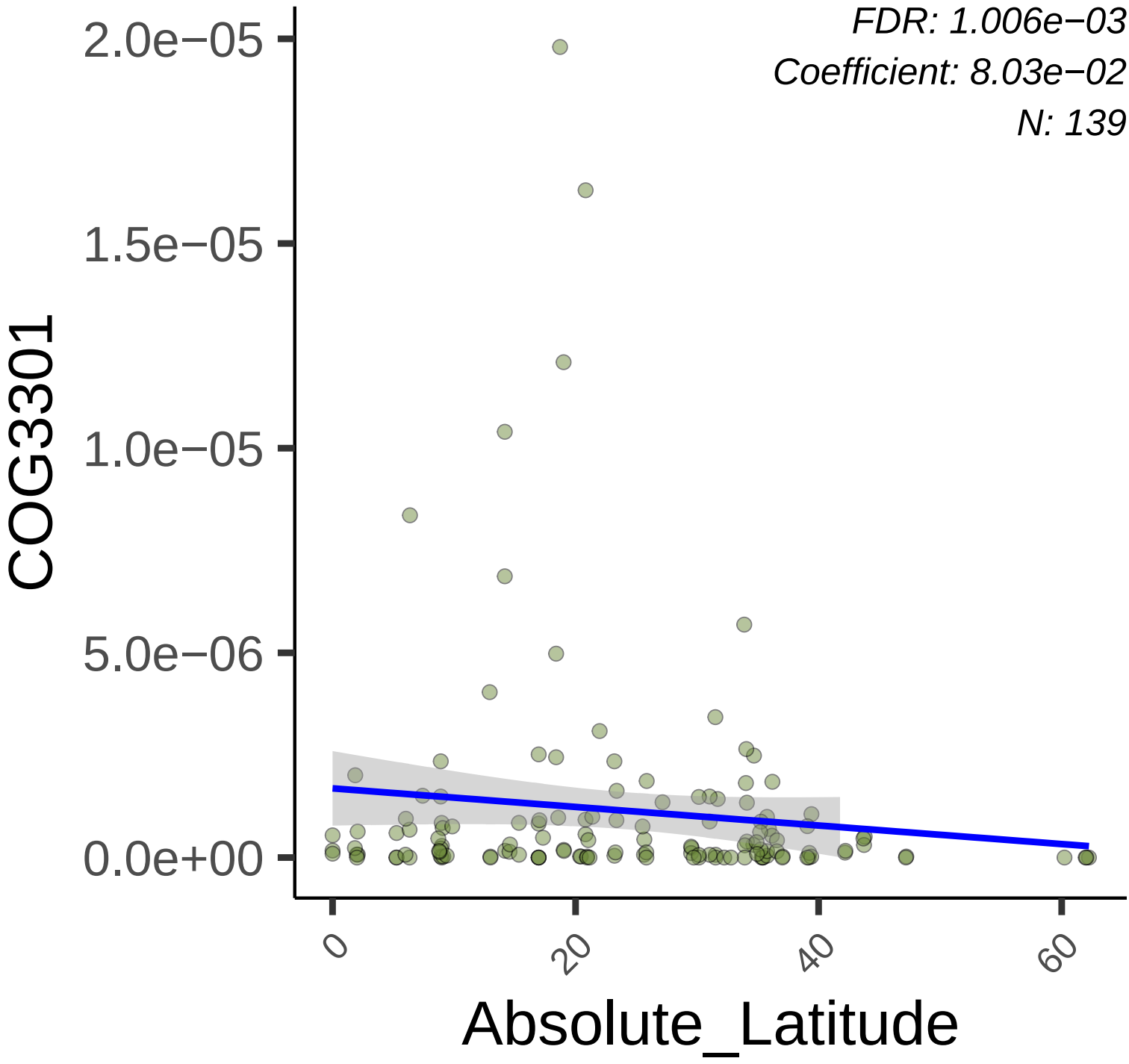

FDR: 9.129e−04
Coefficient: 7.04e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG1034
0
20
40
60
Absolute_Latitude

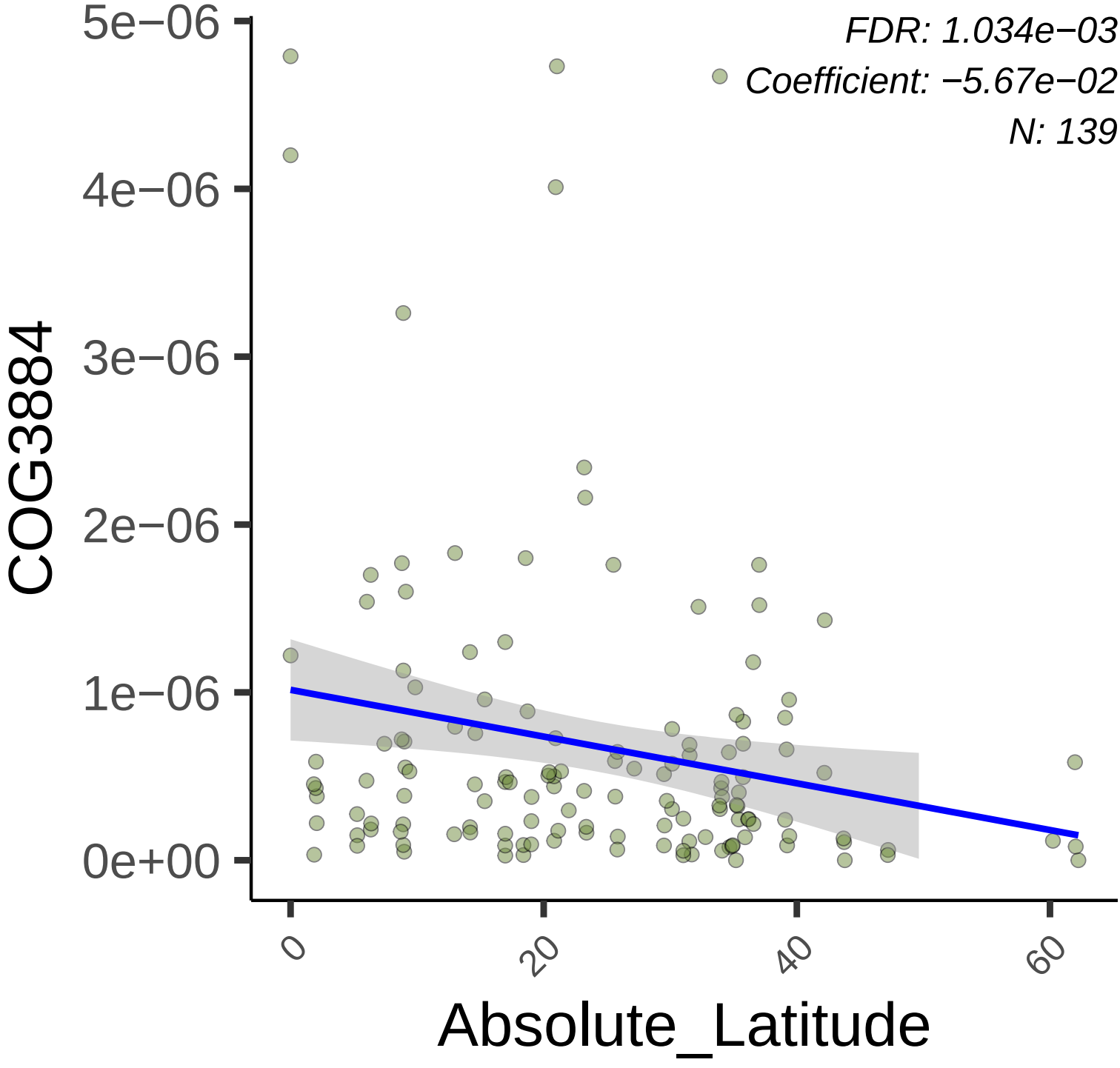

FDR: 9.331e−04
Coefficient: −5.12e−02
N: 139
COG4644
6e−04
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

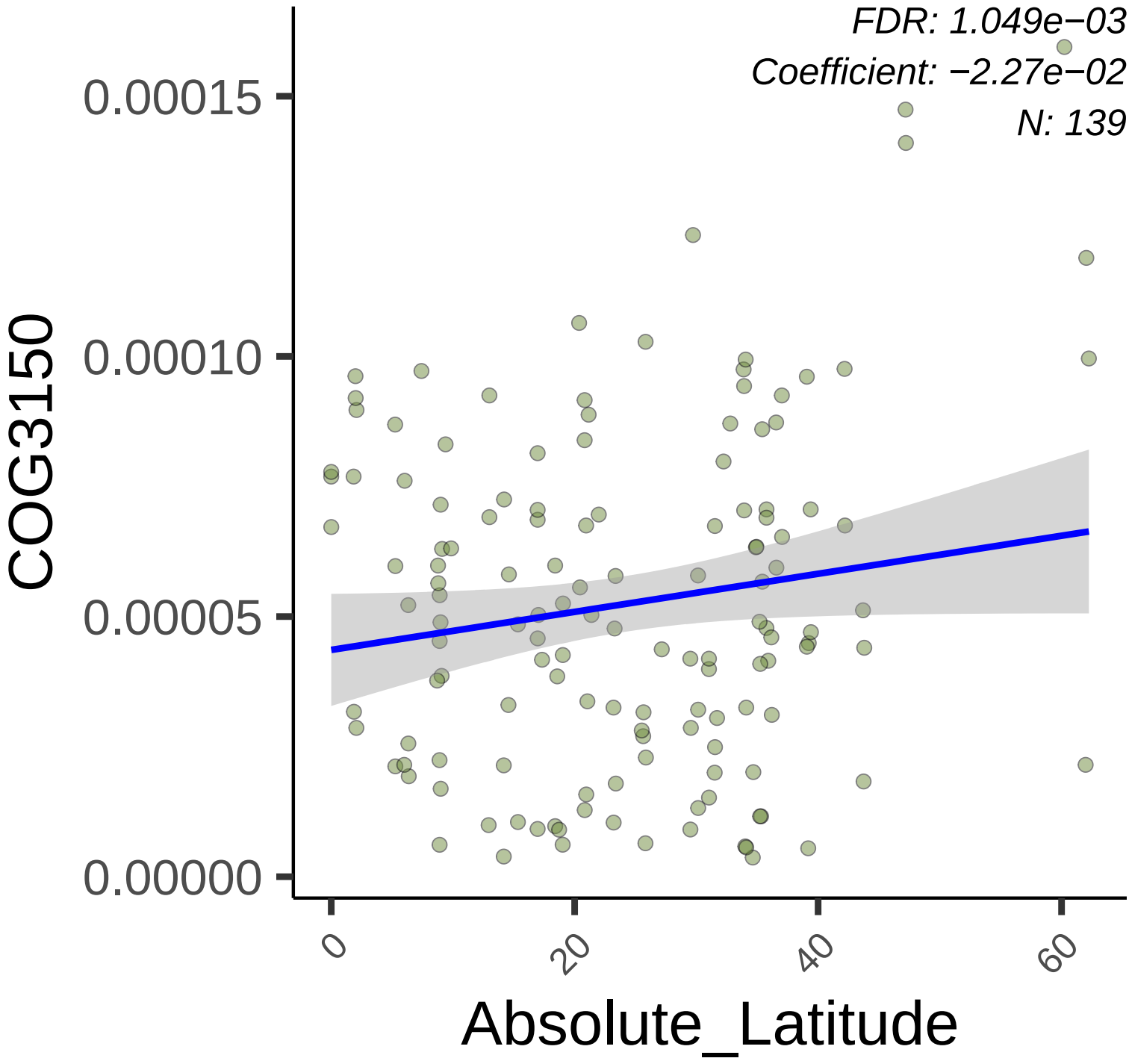

FDR: 9.520e−04
Coefficient: 3.10e−02
N: 139
COG5605
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

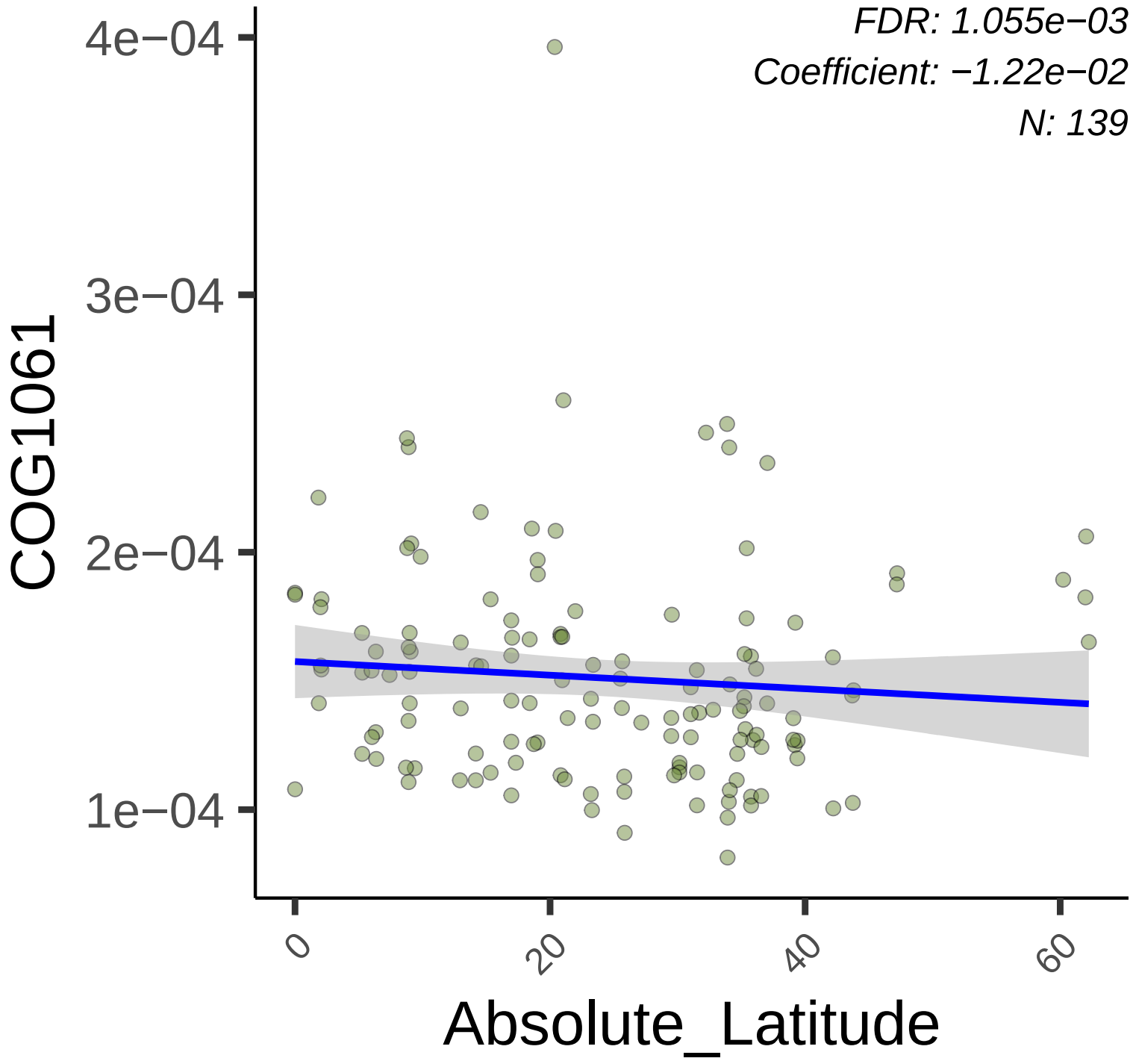

FDR: 9.883e−04
Coefficient: −2.28e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG0716
0
20
40
60
Absolute_Latitude

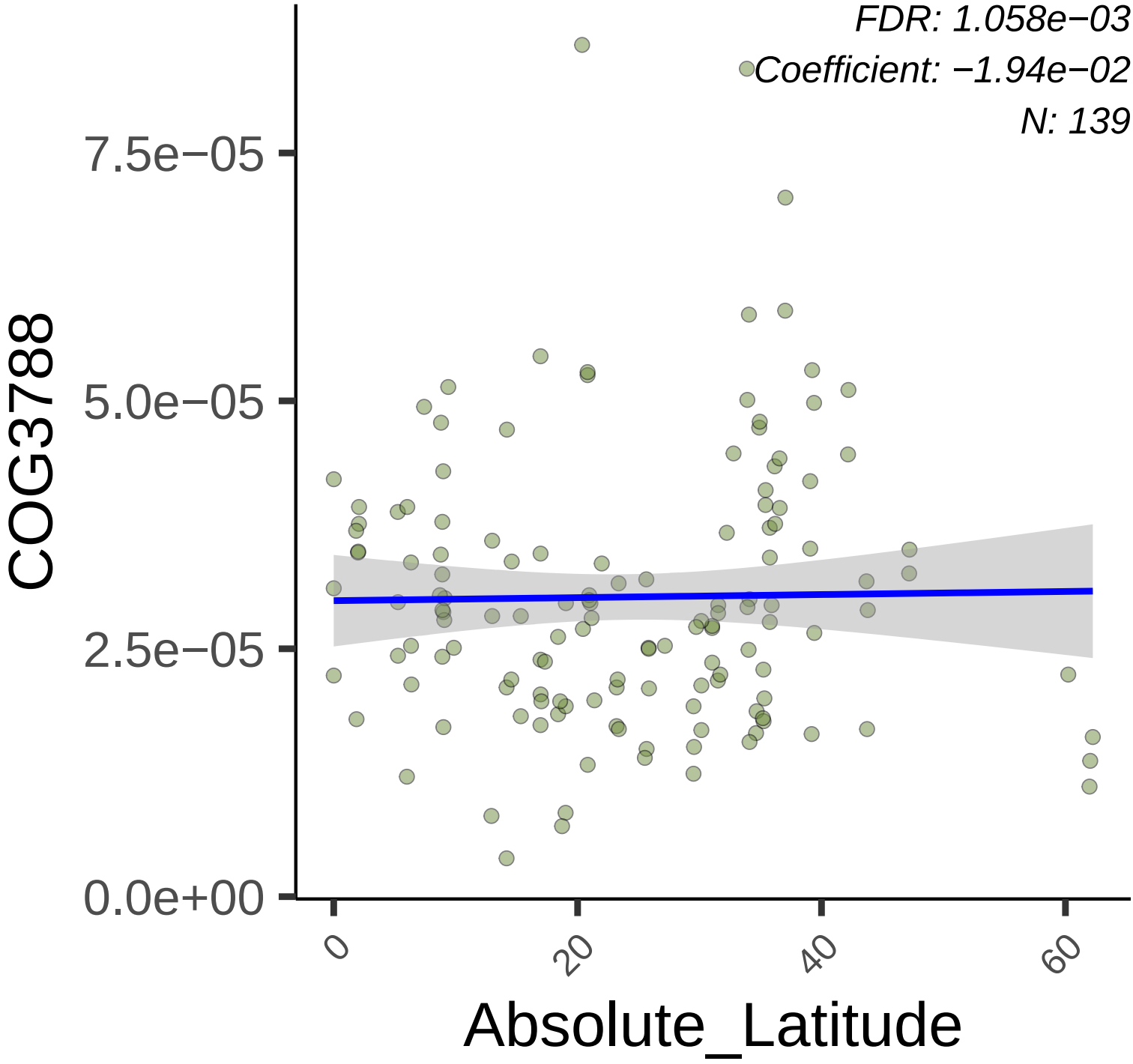

FDR: 9.897e−04
Coefficient: −2.33e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG3067
0
20
40
60
Absolute_Latitude

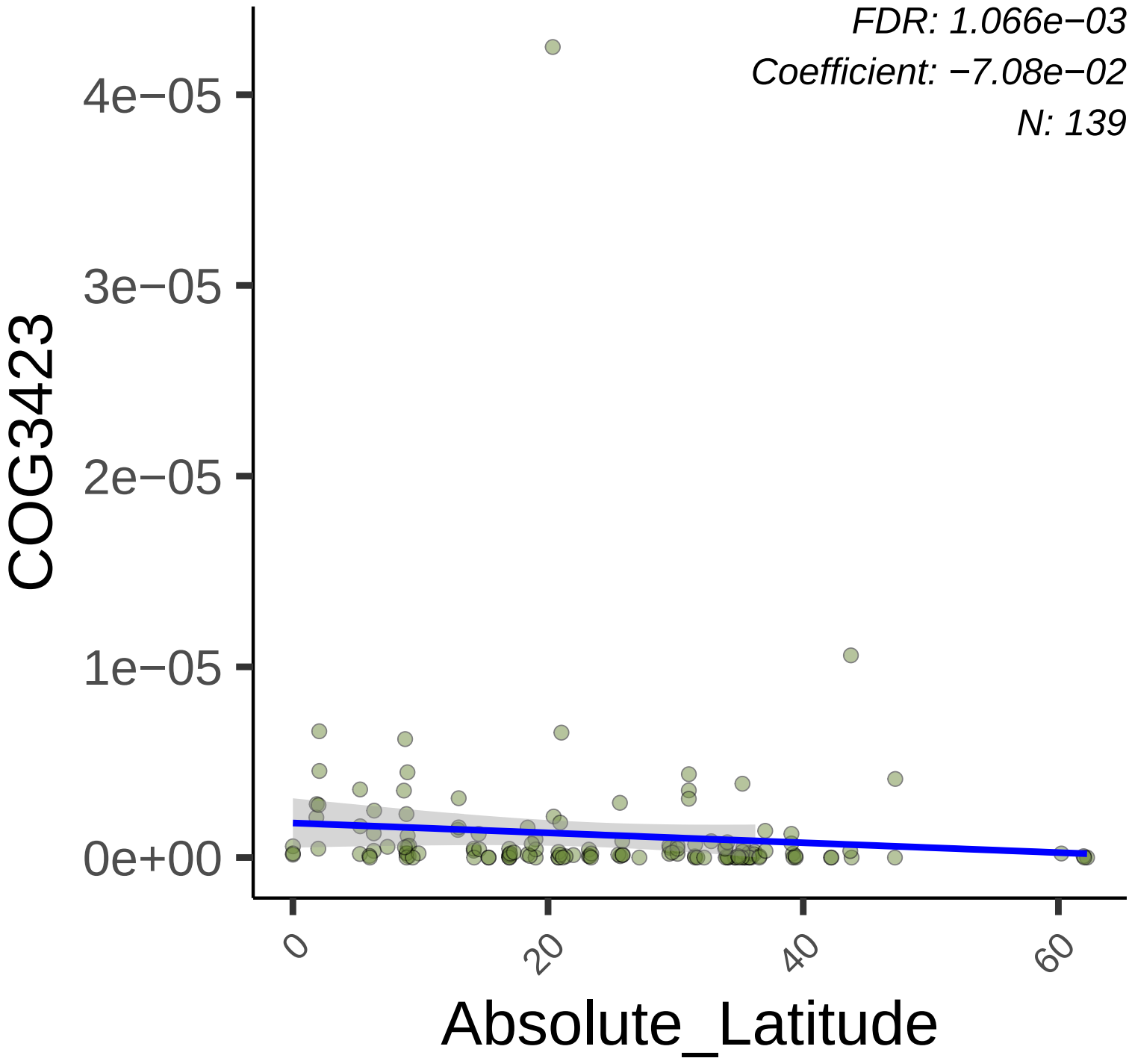

FDR: 1.006e−03
Coefficient: 8.03e−02
N: 139
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG3301
0
20
40
60
Absolute_Latitude

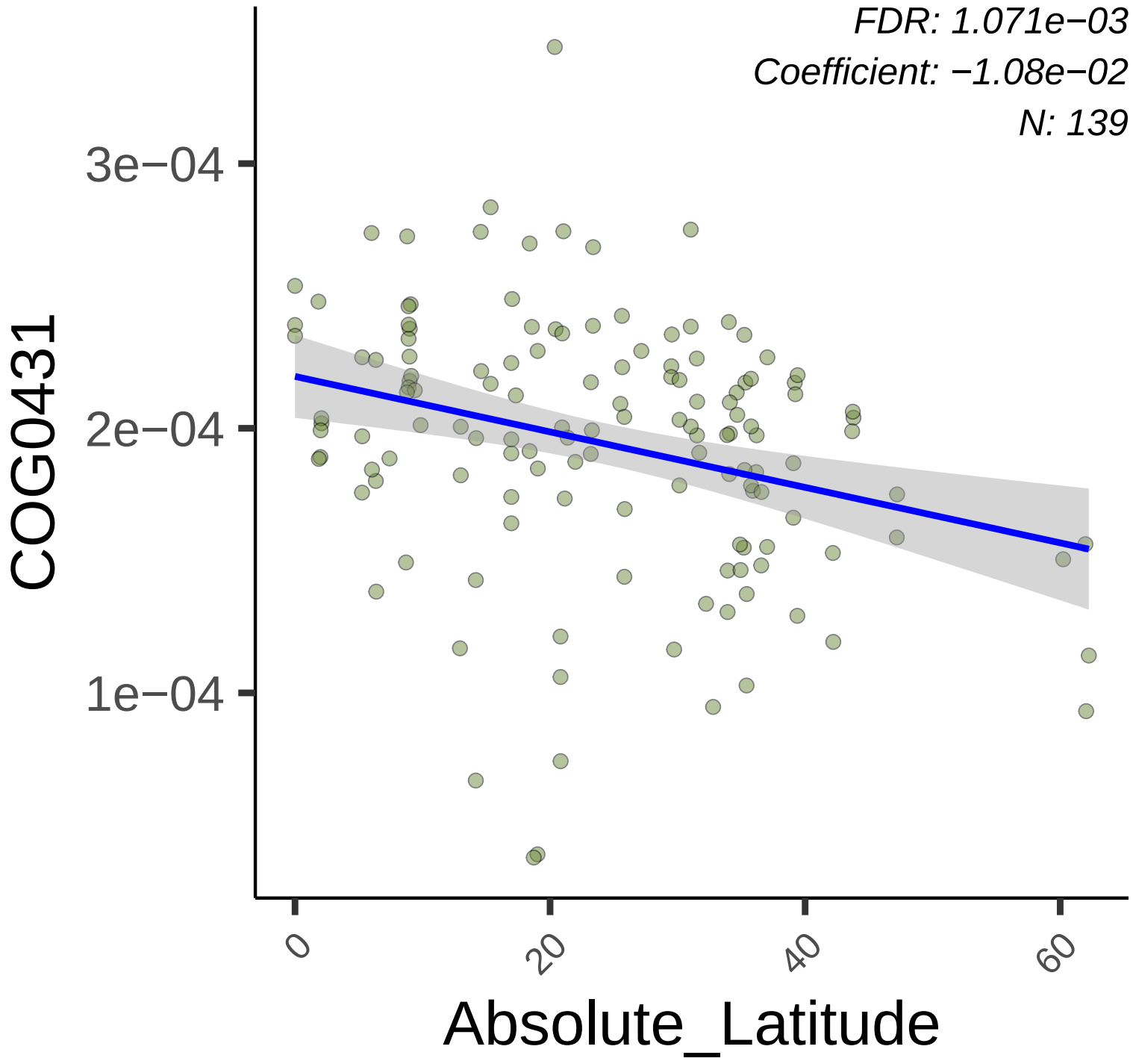

FDR: 1.034e−03
Coefficient: −5.67e−02
N: 139
COG3884
5e−06
4e−06
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

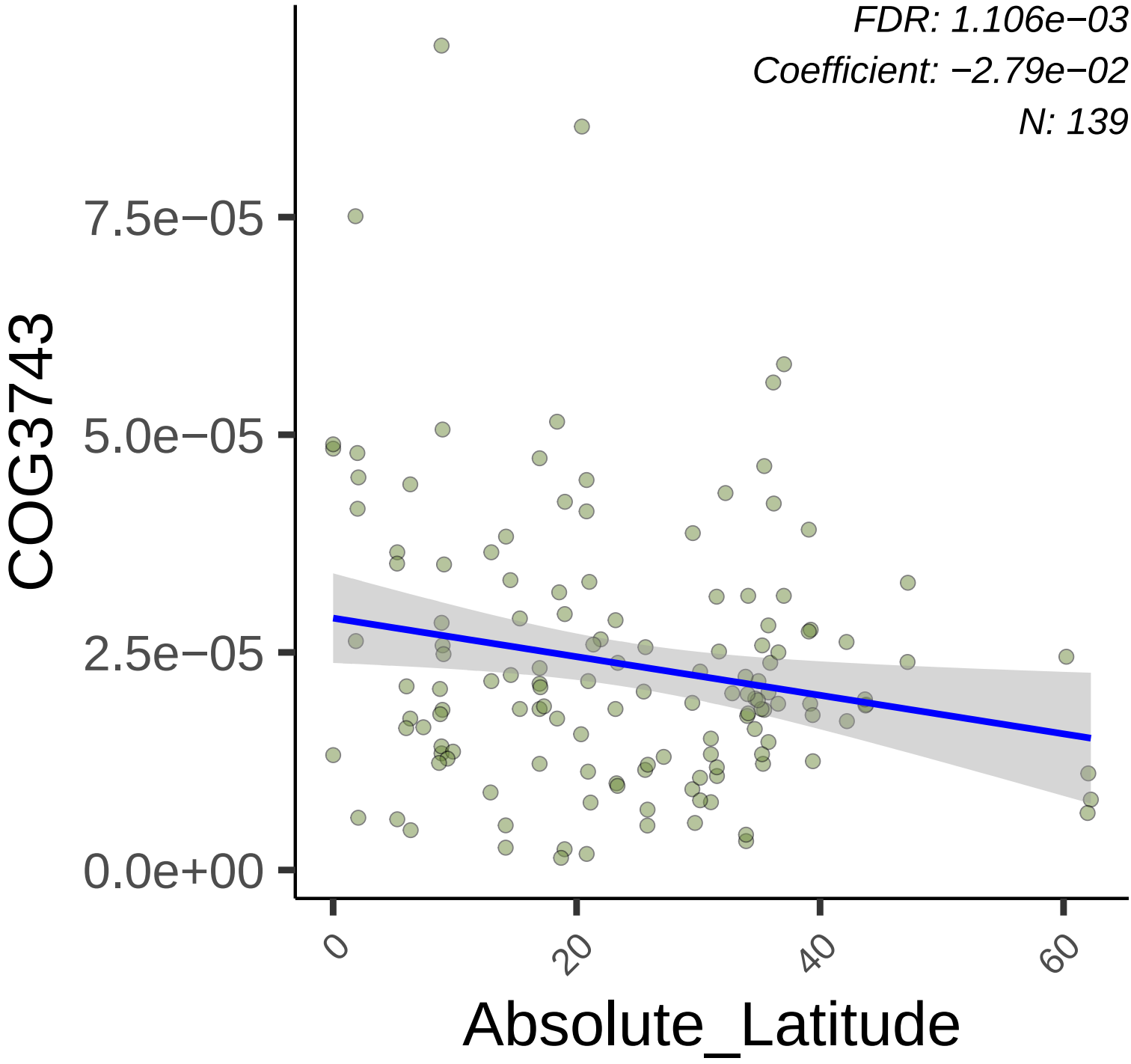

FDR: 1.049e−03
Coefficient: −2.27e−02
N: 139
COG3150
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

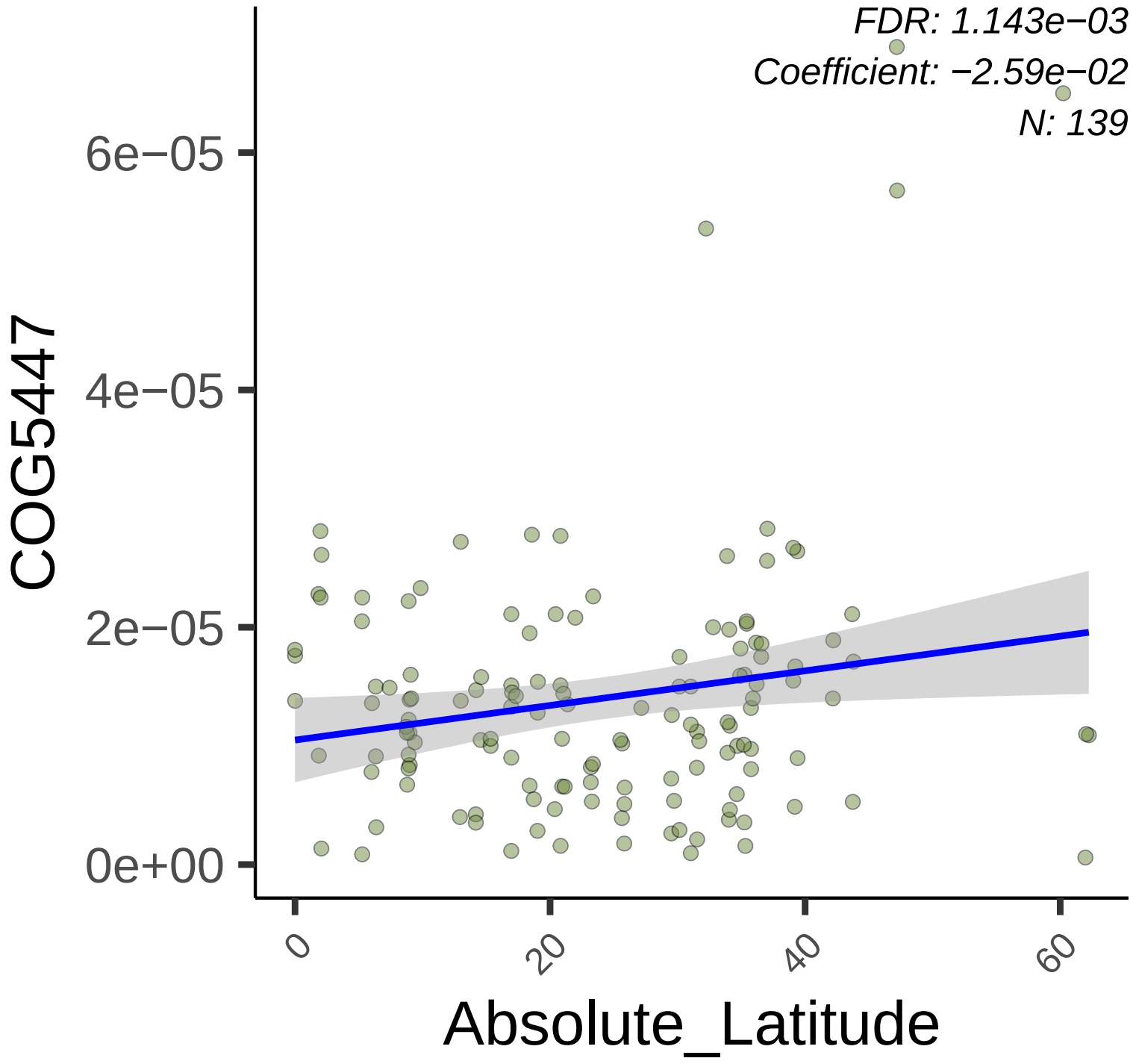

FDR: 1.055e−03
Coefficient: −1.22e−02
N: 139
4e−04
3e−04
2e−04
1e−04
COG1061
0
20
40
60
Absolute_Latitude

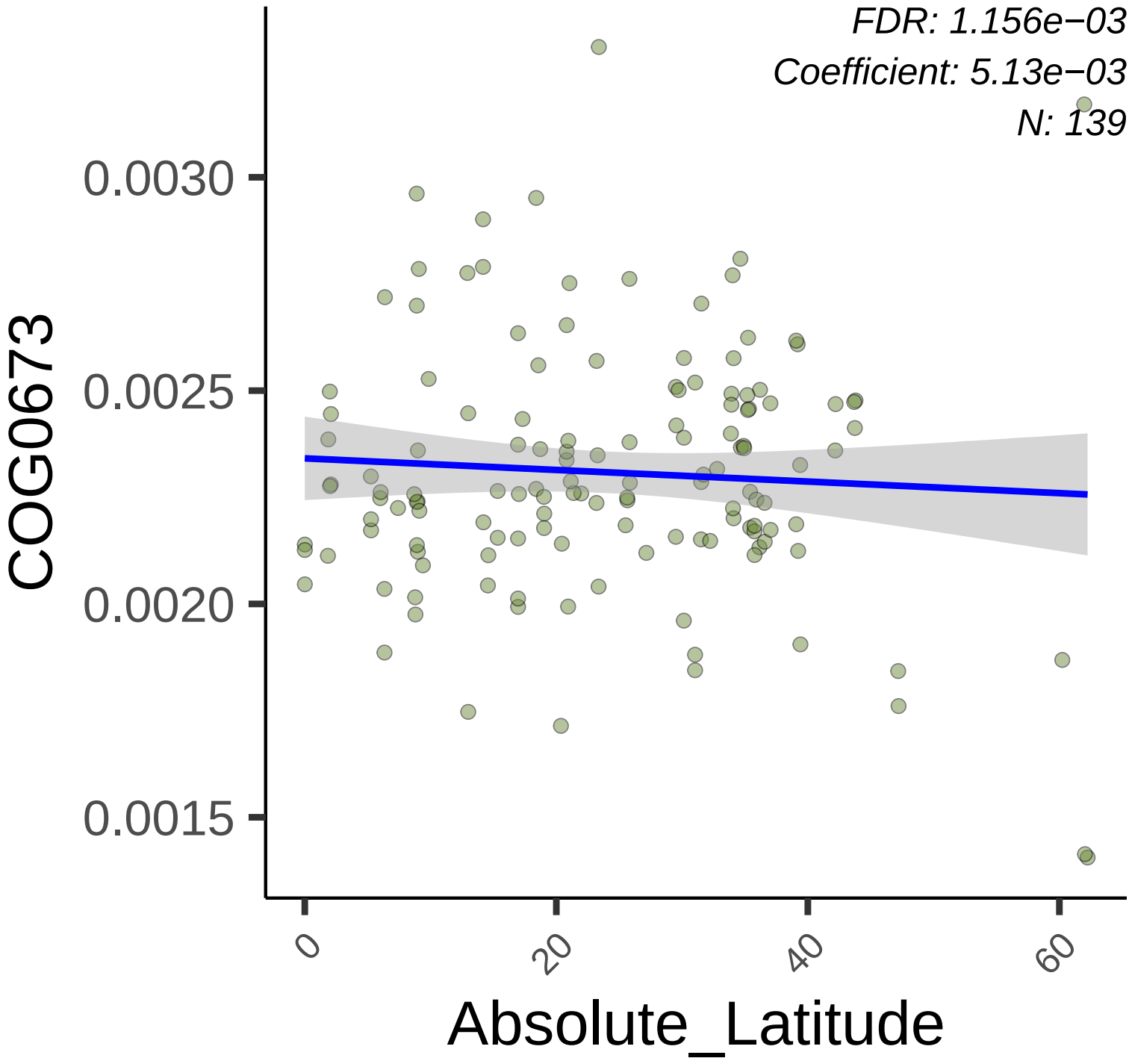

FDR: 1.058e−03
Coefficient: −1.94e−02
N: 139
COG3788
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

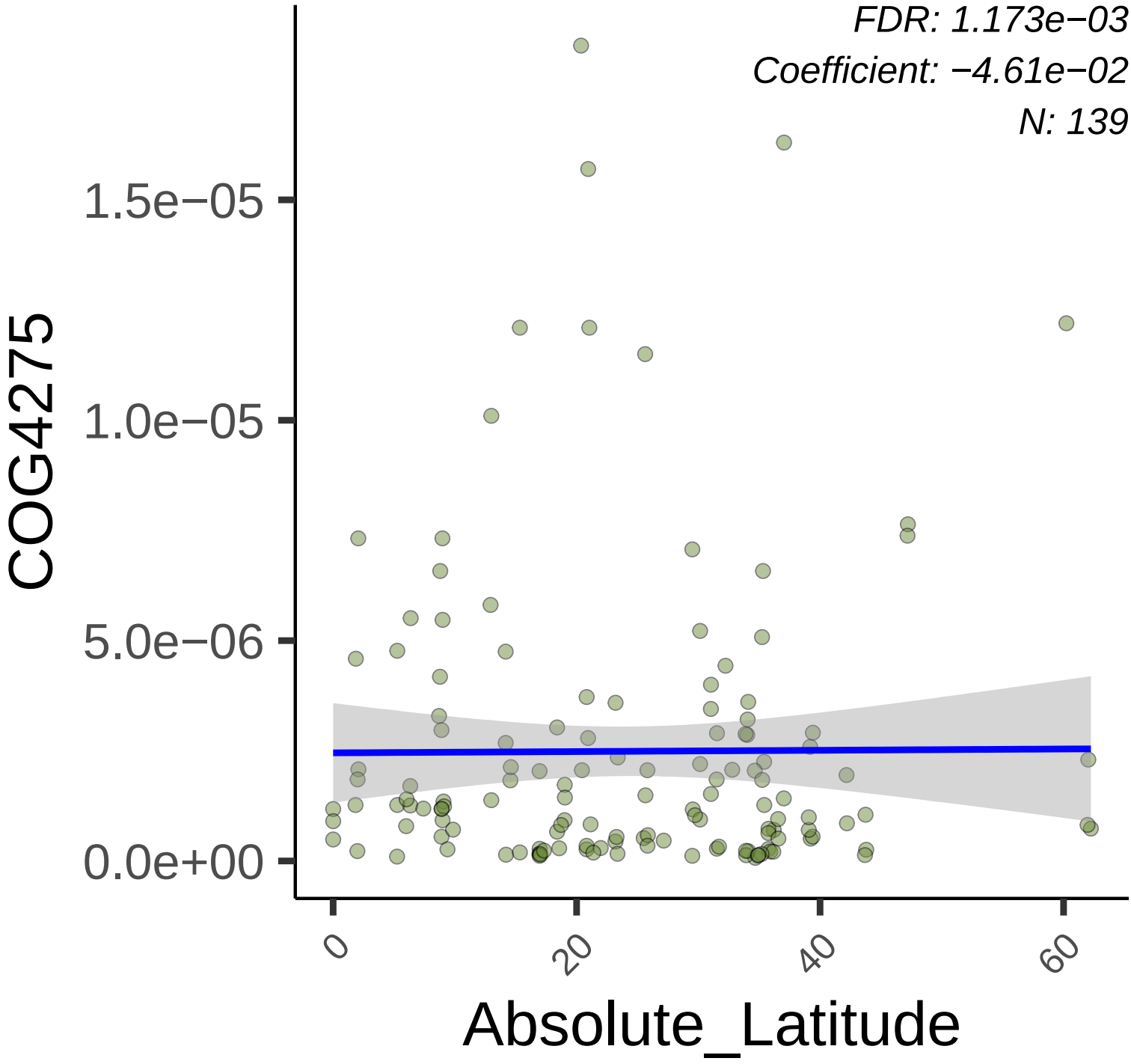

FDR: 1.066e−03
Coefficient: −7.08e−02
N: 139
COG3423
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

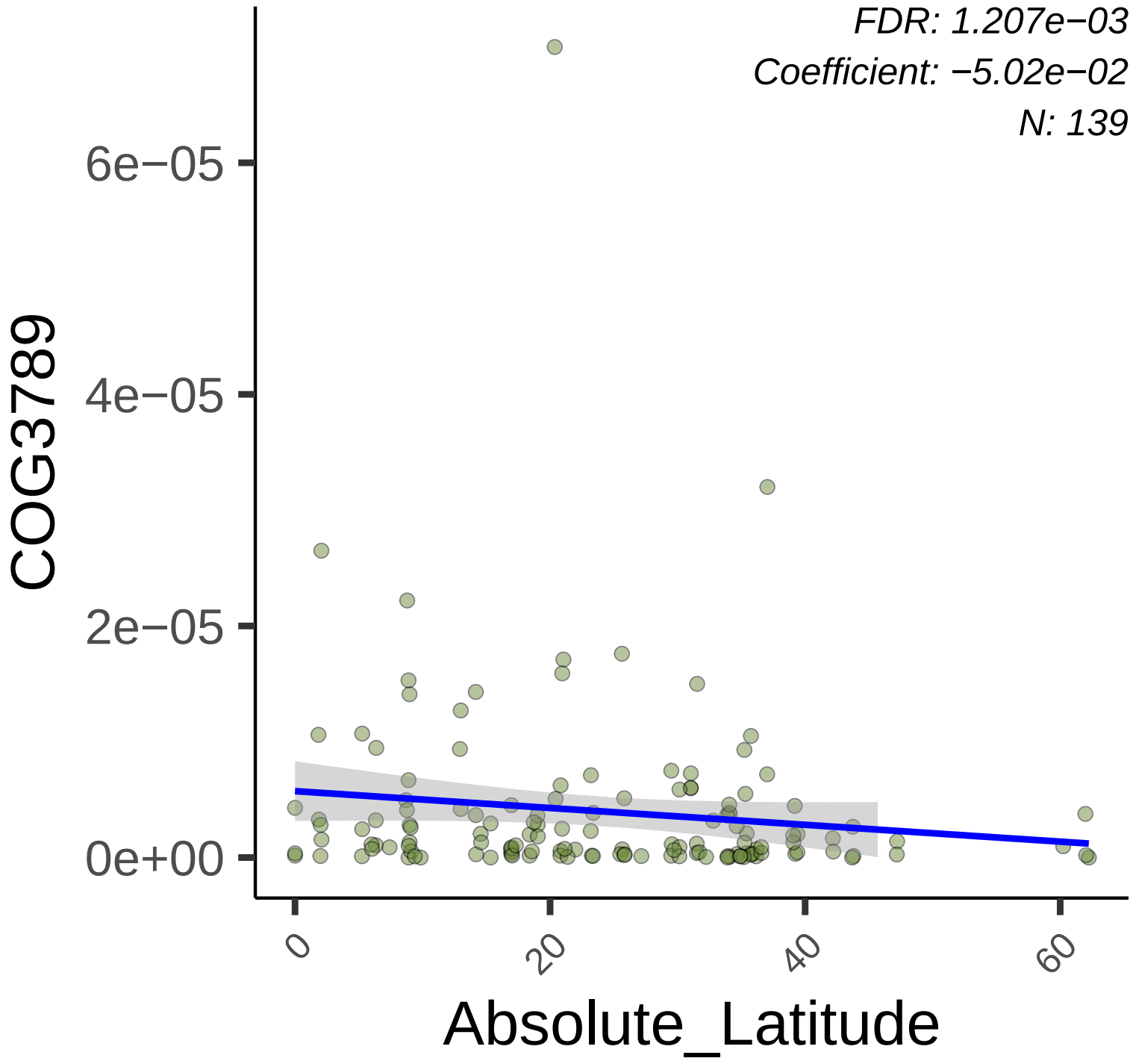

FDR: 1.071e−03
Coefficient: −1.08e−02
N: 139
3e−04
2e−04
1e−04
COG0431
0
20
40
60
Absolute_Latitude

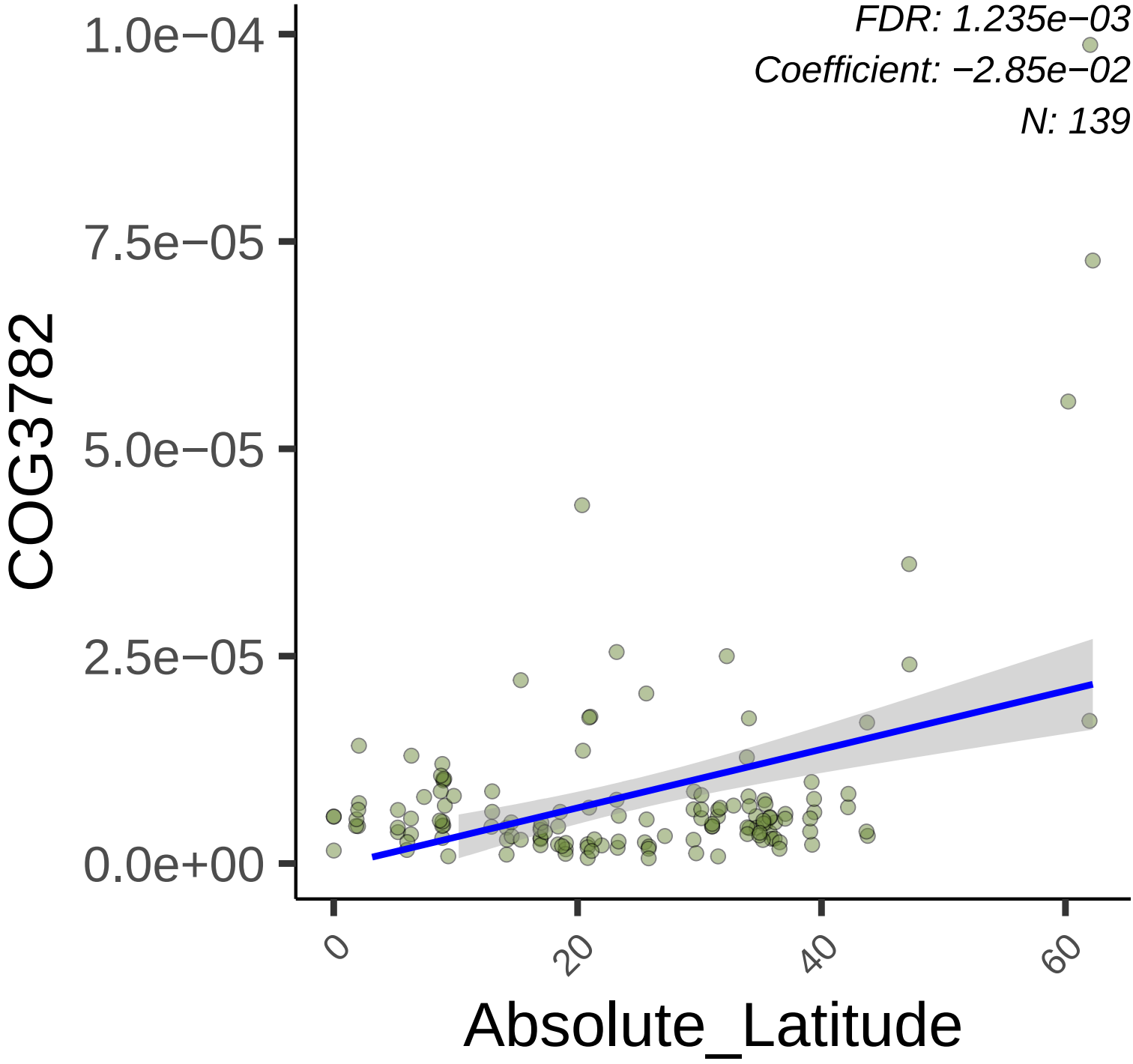

FDR: 1.106e−03
Coefficient: −2.79e−02
N: 139
COG3743
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

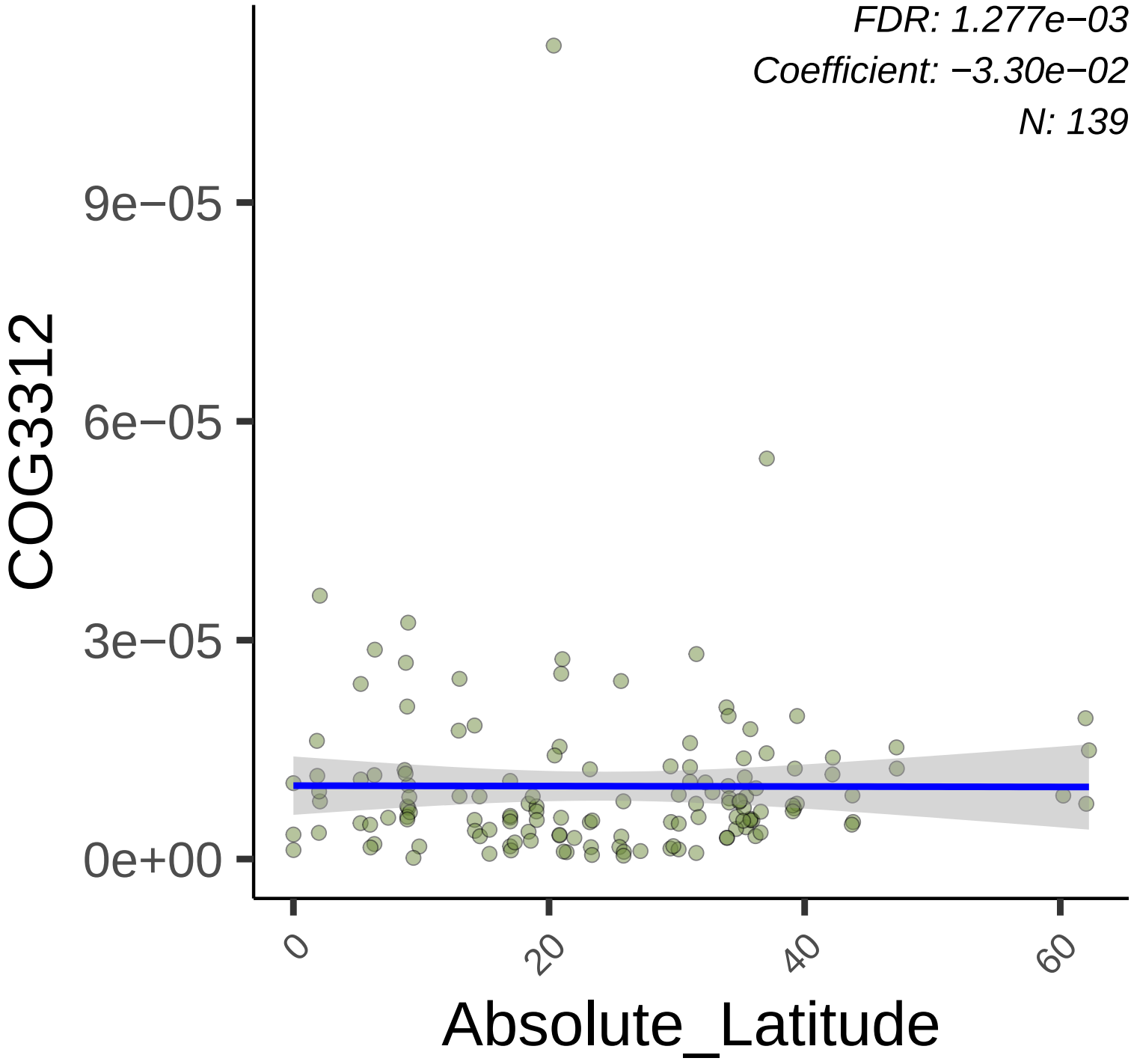

FDR: 1.143e−03
Coefficient: −2.59e−02
N: 139
COG5447
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

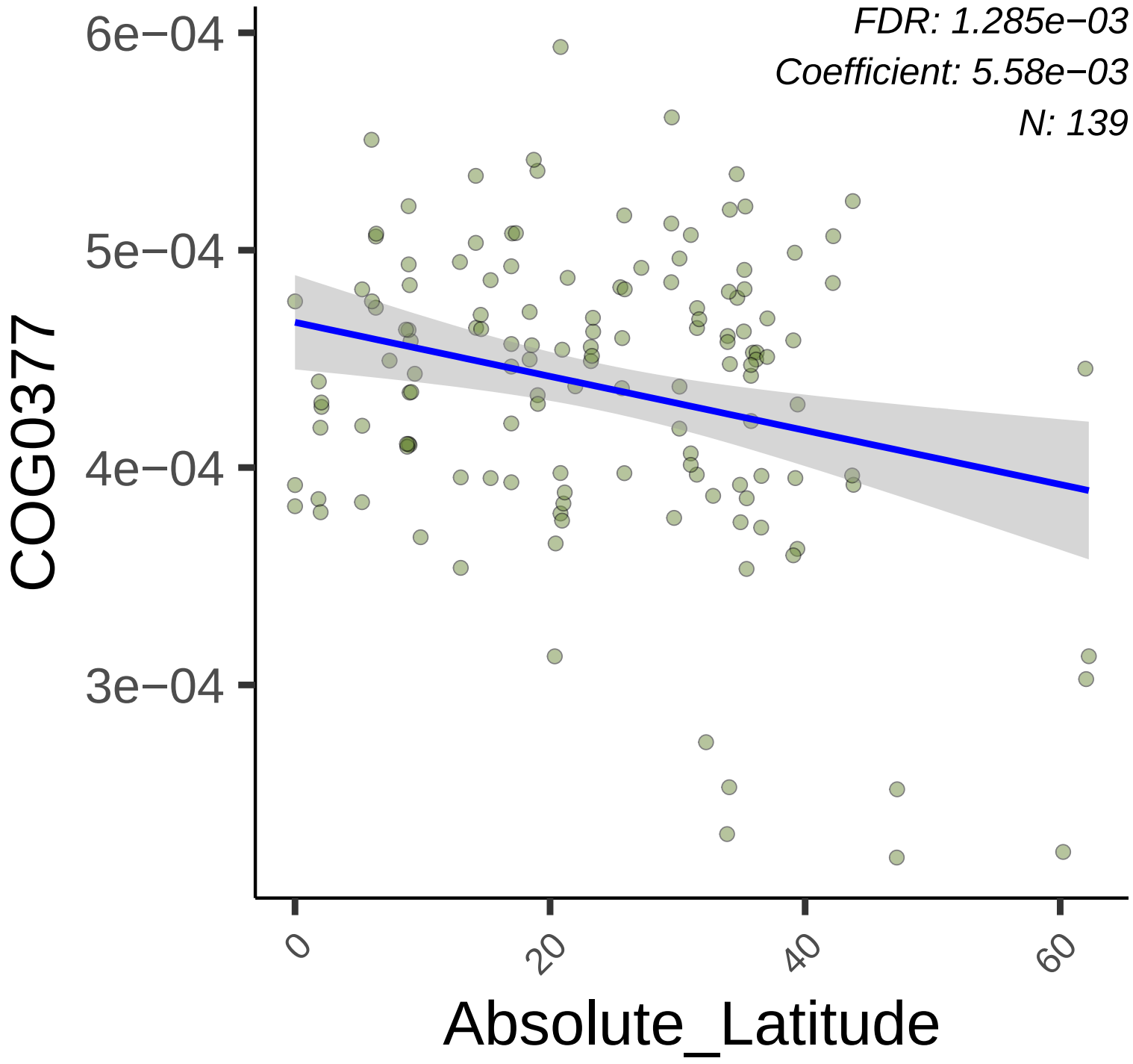

FDR: 1.156e−03
Coefficient: 5.13e−03
N: 139
0.0030
0.0025
0.0020
0.0015
COG0673
0
20
40
60
Absolute_Latitude

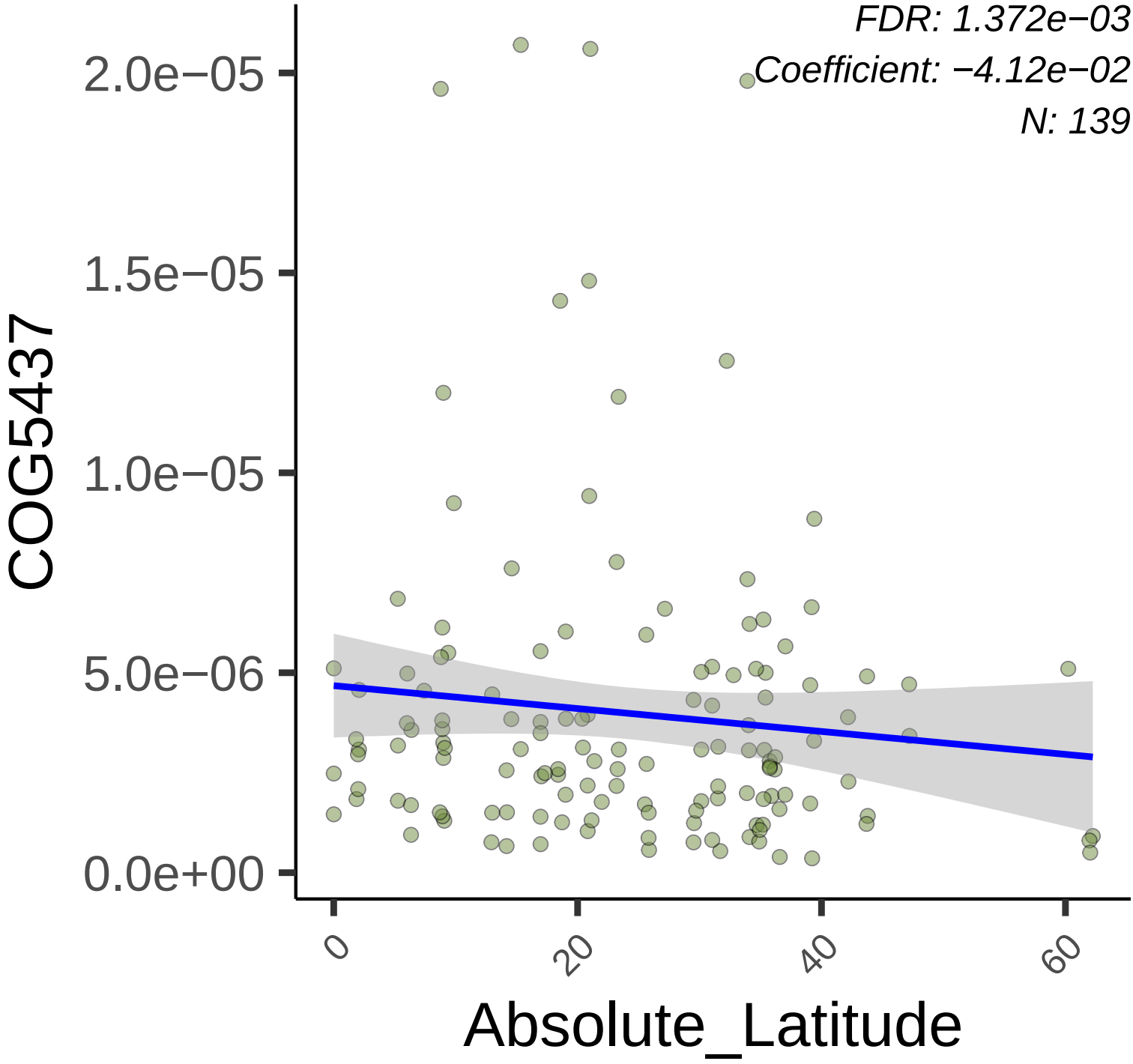

FDR: 1.173e−03
Coefficient: −4.61e−02
N: 139
COG4275
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

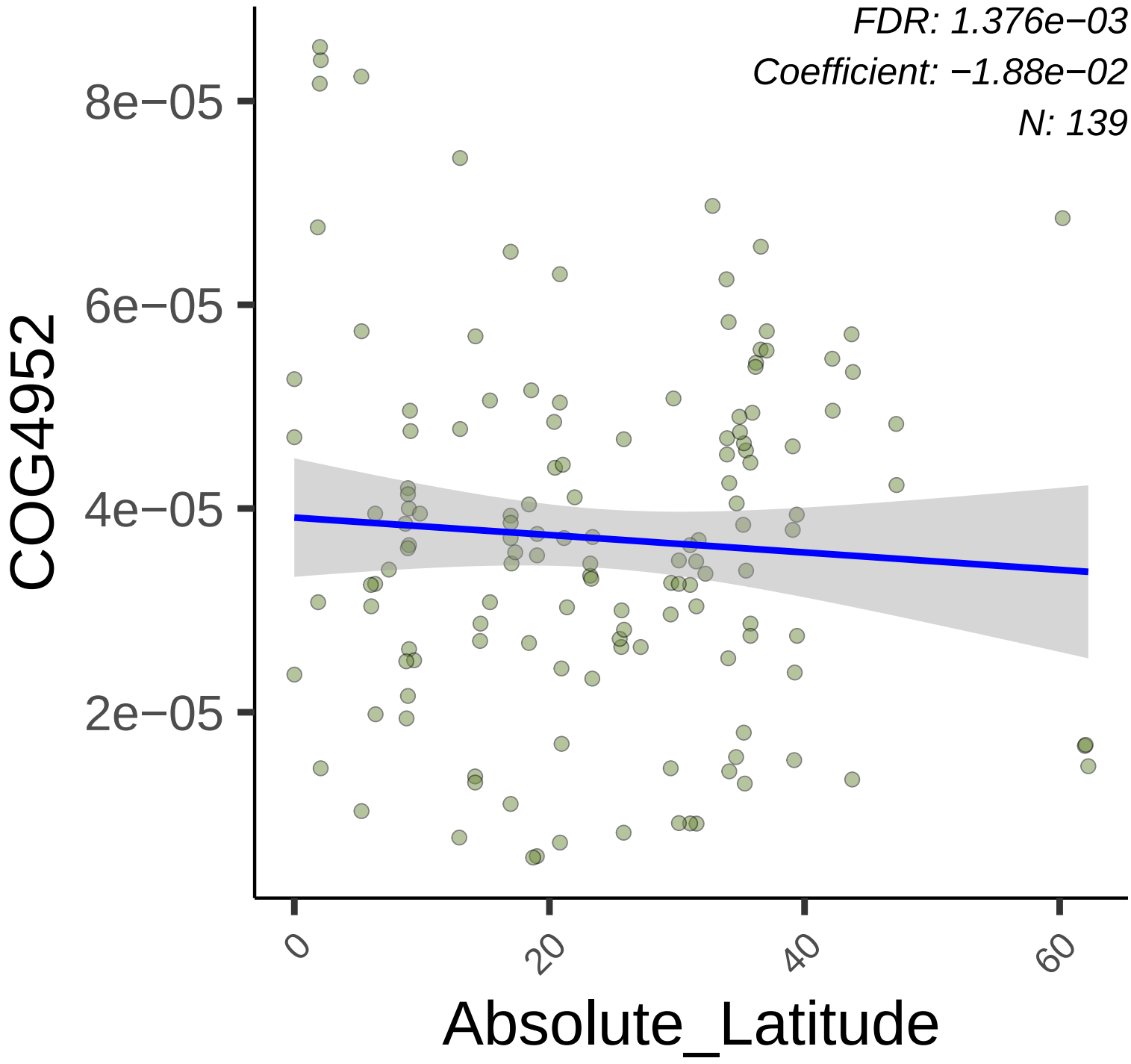

FDR: 1.207e−03
Coefficient: −5.02e−02
N: 139
COG3789
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

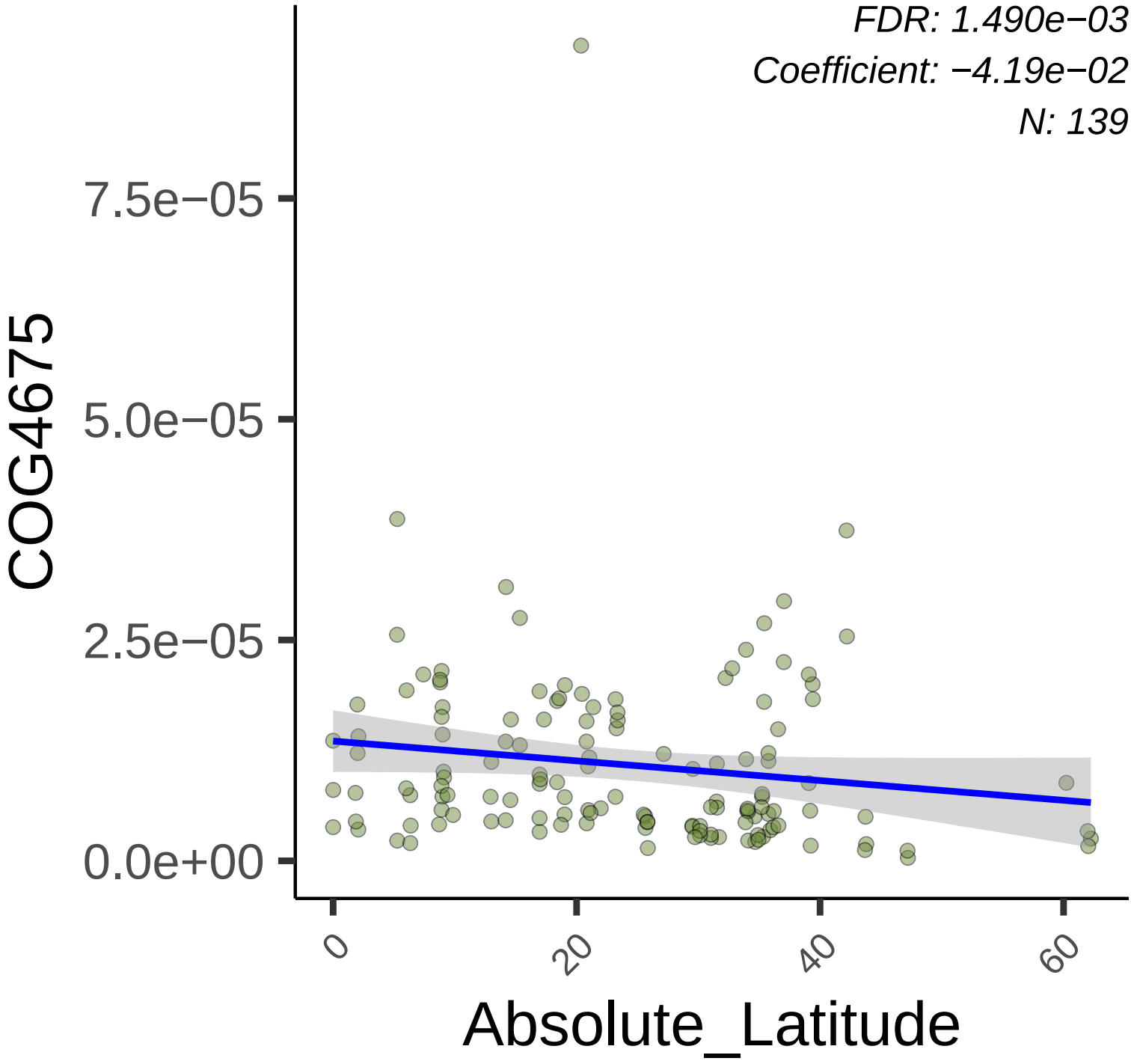

FDR: 1.235e−03
Coefficient: −2.85e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3782
0
20
40
60
Absolute_Latitude

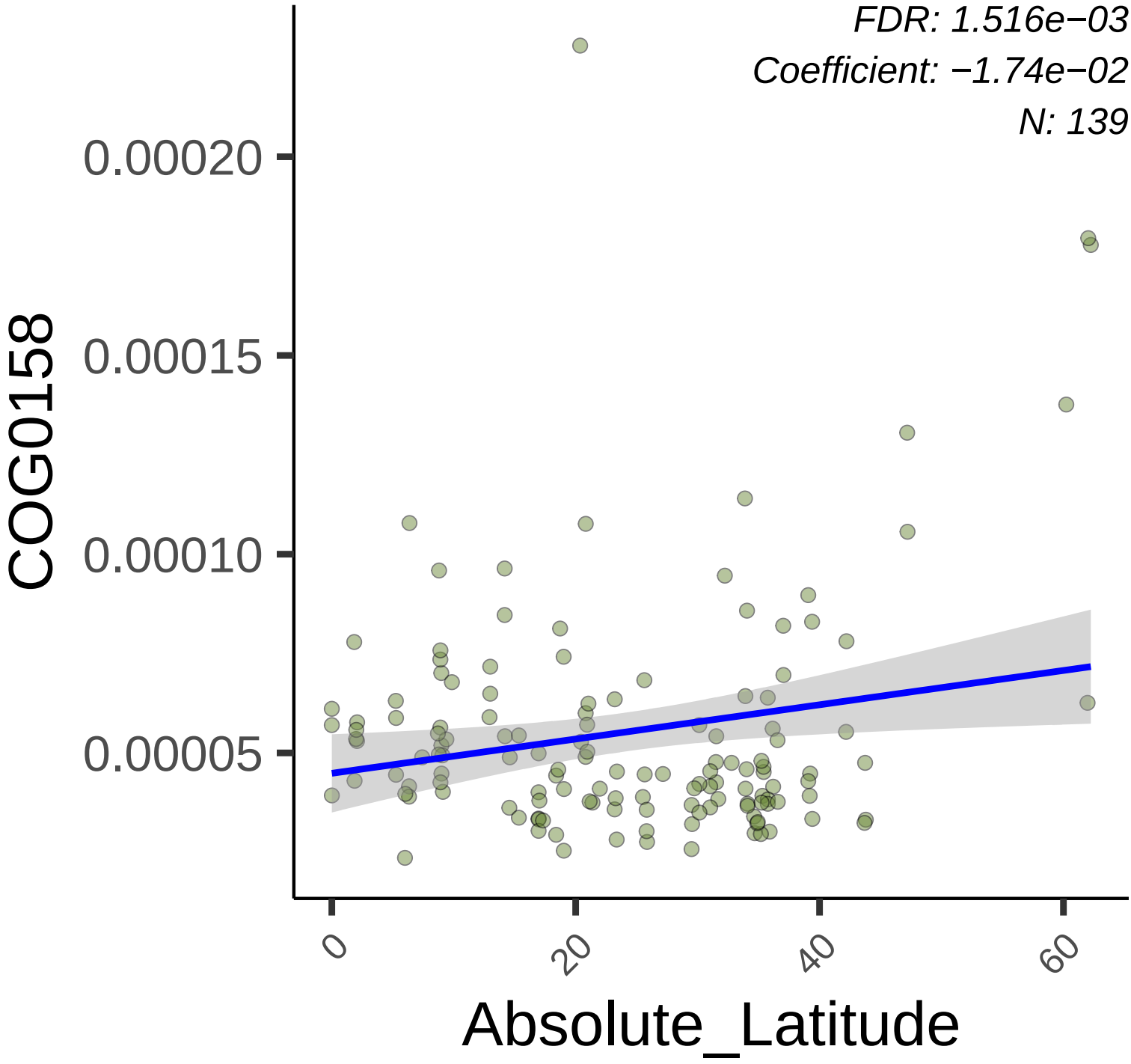

FDR: 1.277e−03
Coefficient: −3.30e−02
N: 139
COG3312
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

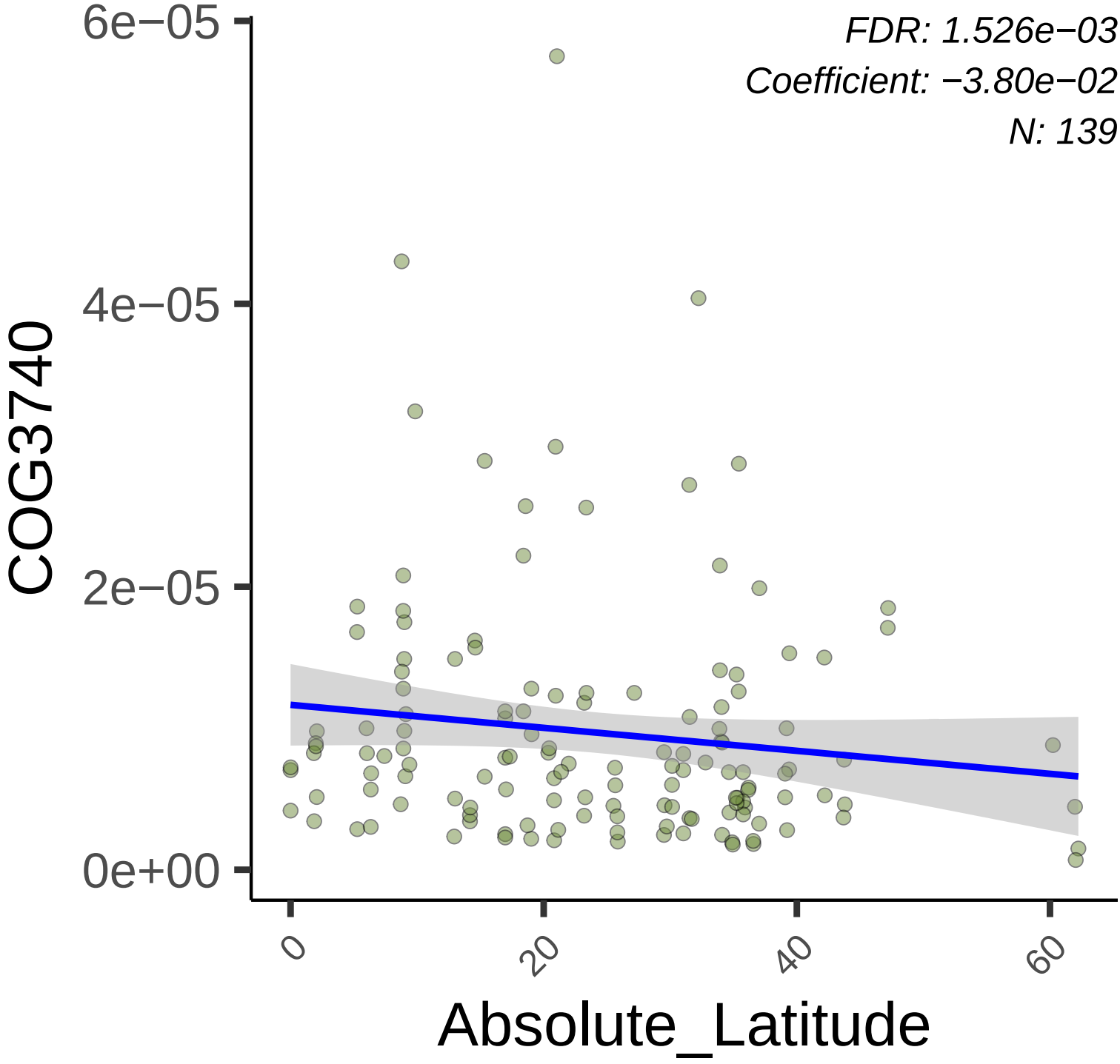

FDR: 1.285e−03
Coefficient: 5.58e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0377
0
20
40
60
Absolute_Latitude

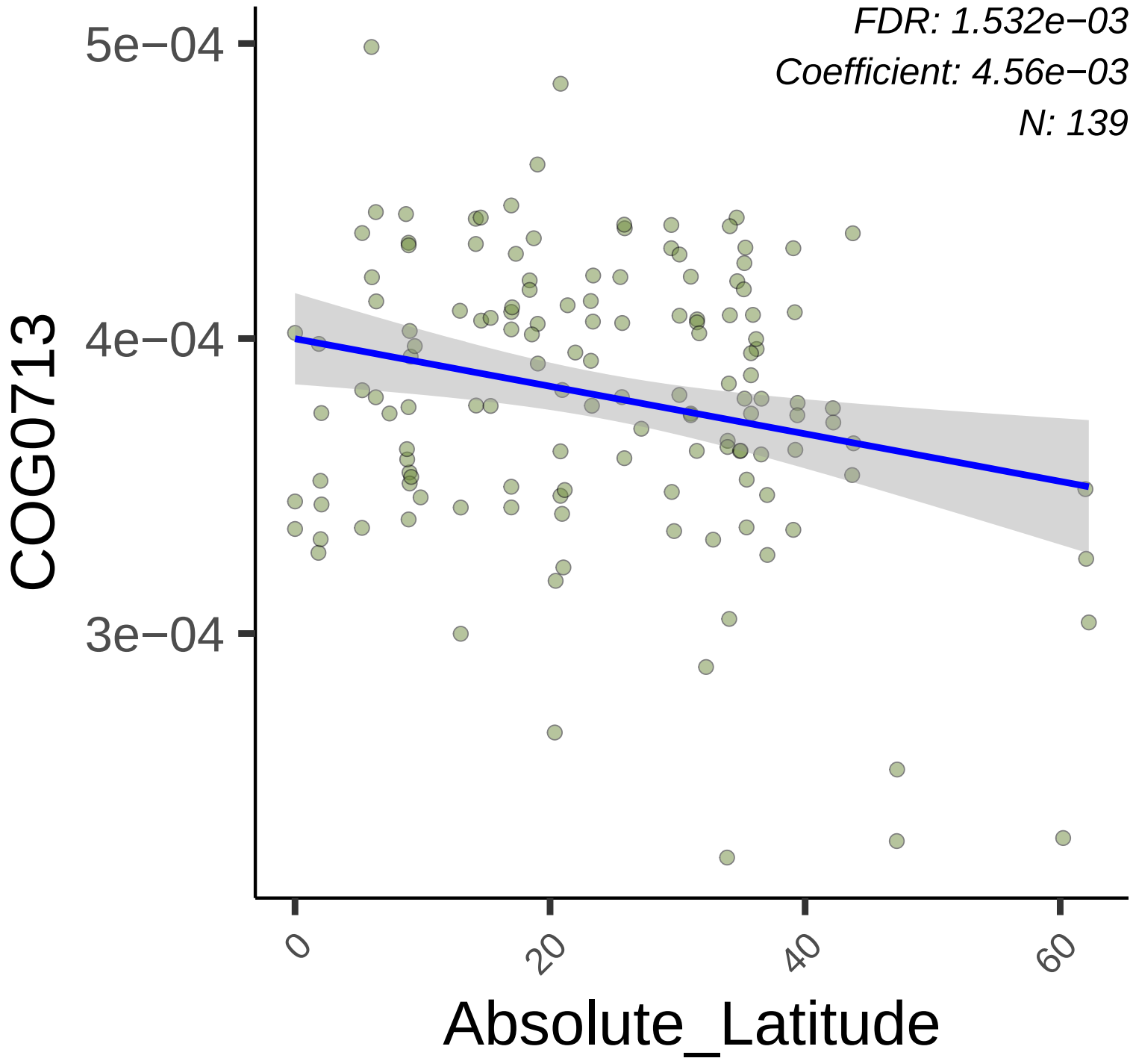

FDR: 1.372e−03
Coefficient: −4.12e−02
N: 139
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG5437
0
20
40
60
Absolute_Latitude

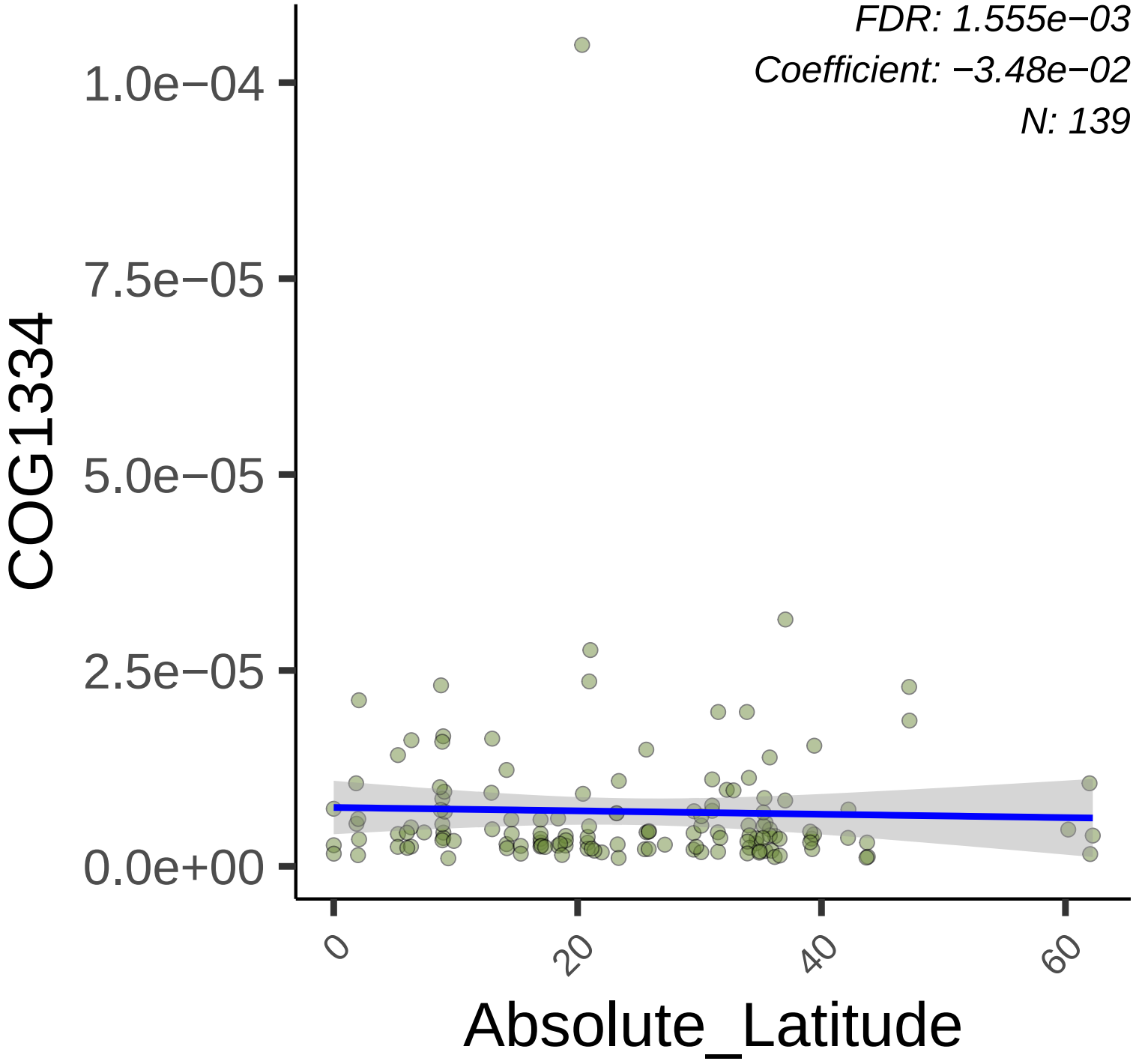

FDR: 1.376e−03
Coefficient: −1.88e−02
N: 139
8e−05
6e−05
4e−05
2e−05
COG4952
0
20
40
60
Absolute_Latitude

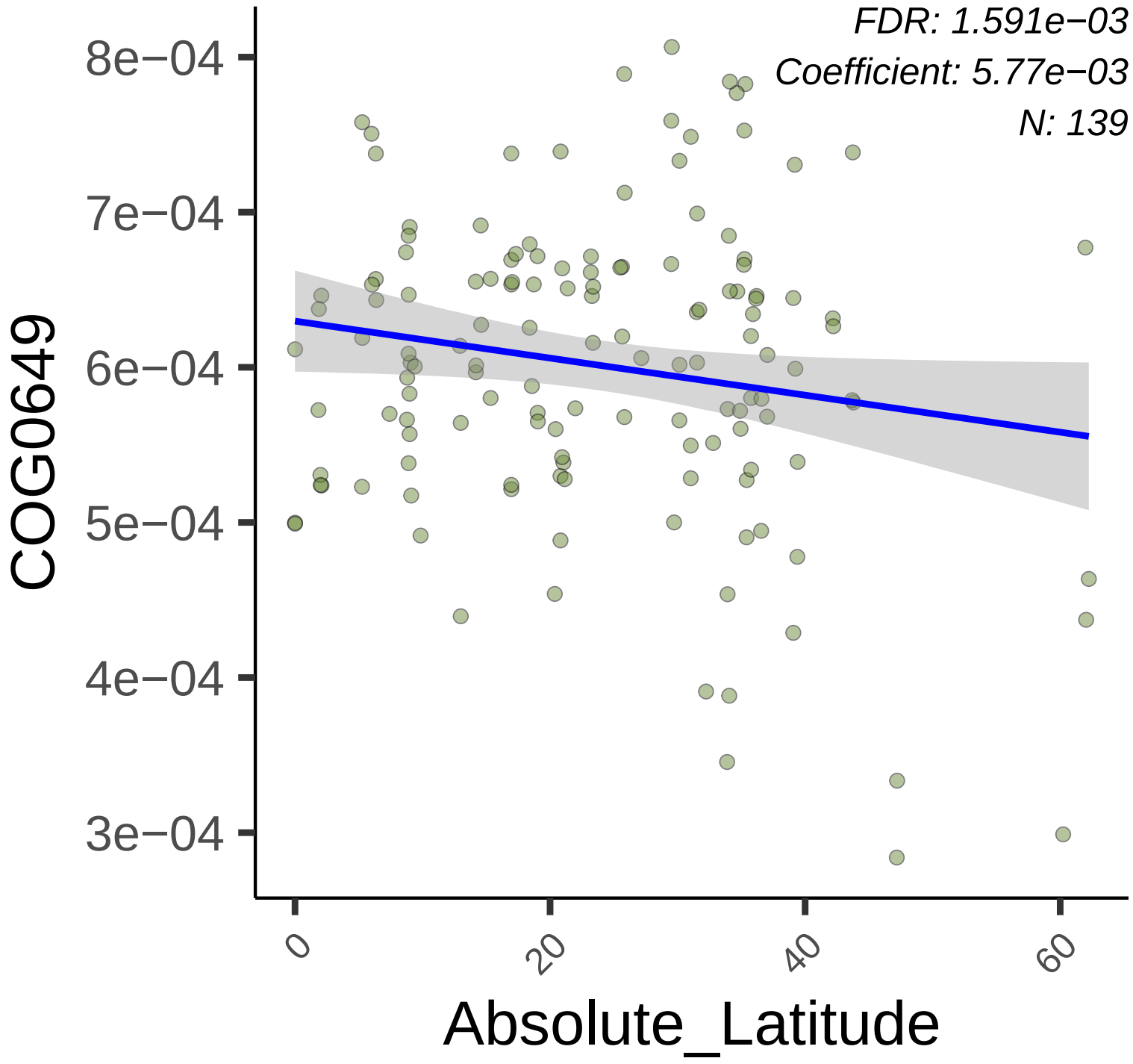

FDR: 1.490e−03
Coefficient: −4.19e−02
N: 139
COG4675
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

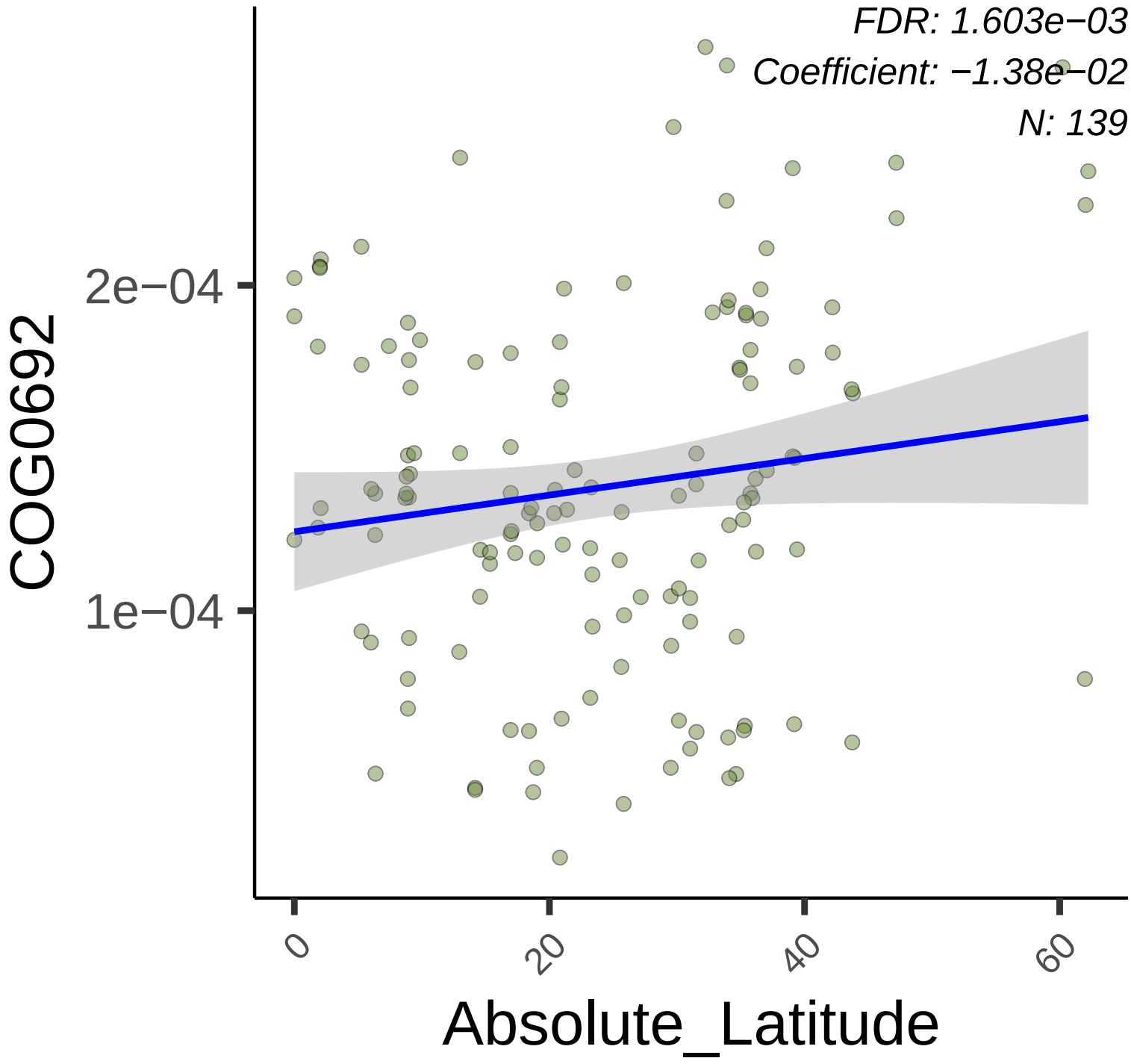

FDR: 1.516e−03
Coefficient: −1.74e−02
N: 139
COG0158
0.00020
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

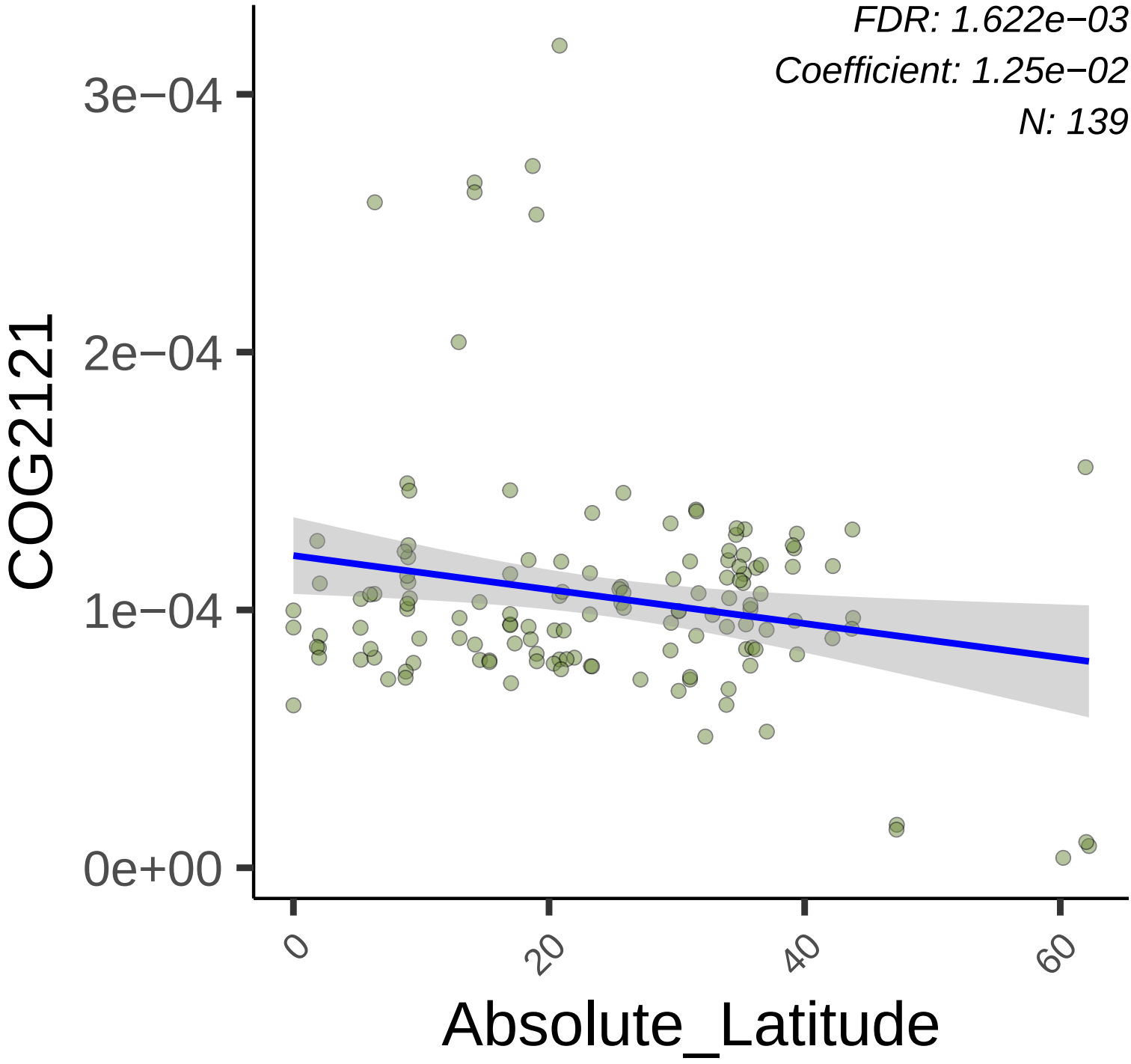

FDR: 1.526e−03
Coefficient: −3.80e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG3740
0
20
40
60
Absolute_Latitude

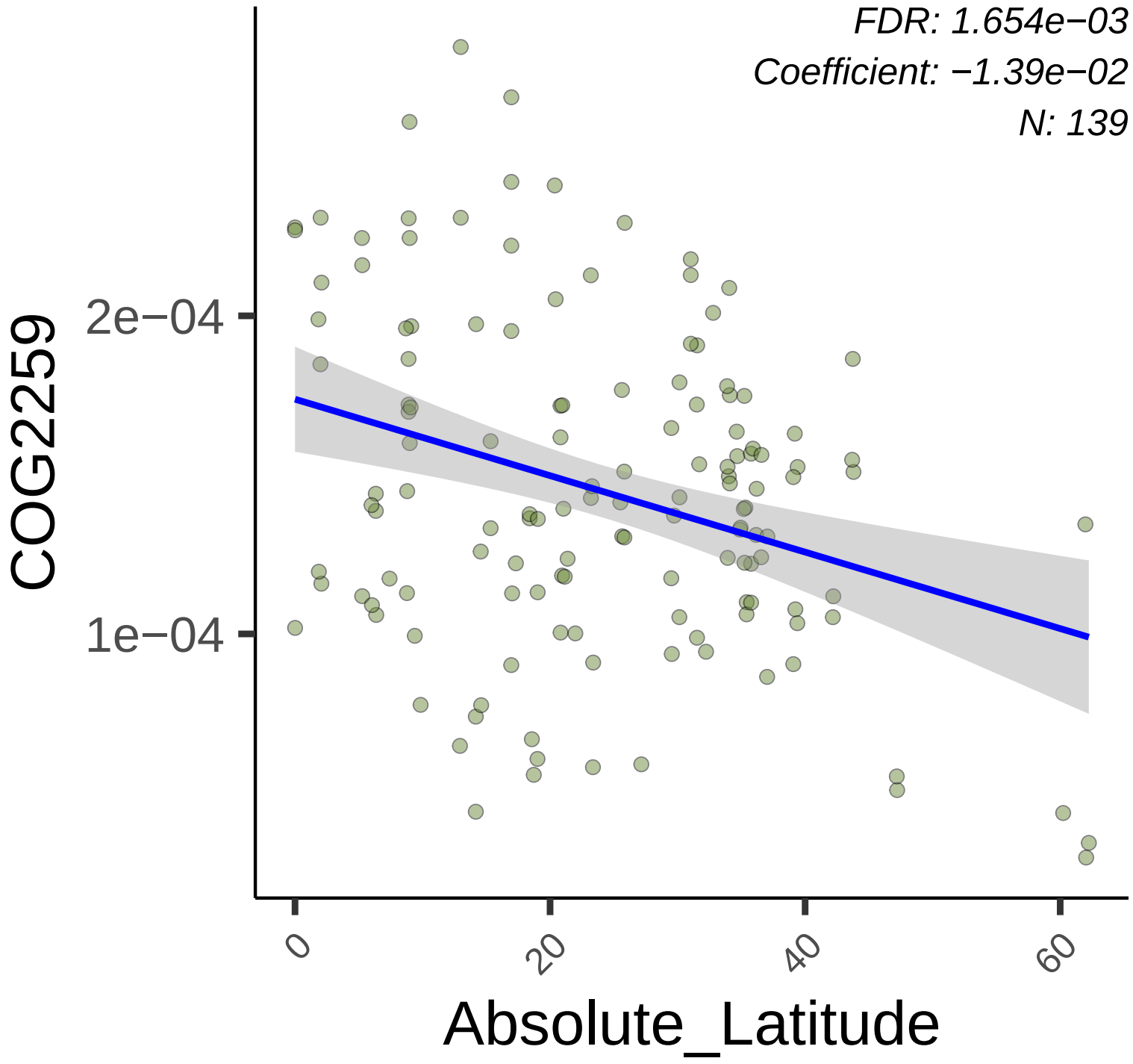

FDR: 1.532e−03
Coefficient: 4.56e−03
N: 139
5e−04
4e−04
3e−04
COG0713
0
20
40
60
Absolute_Latitude

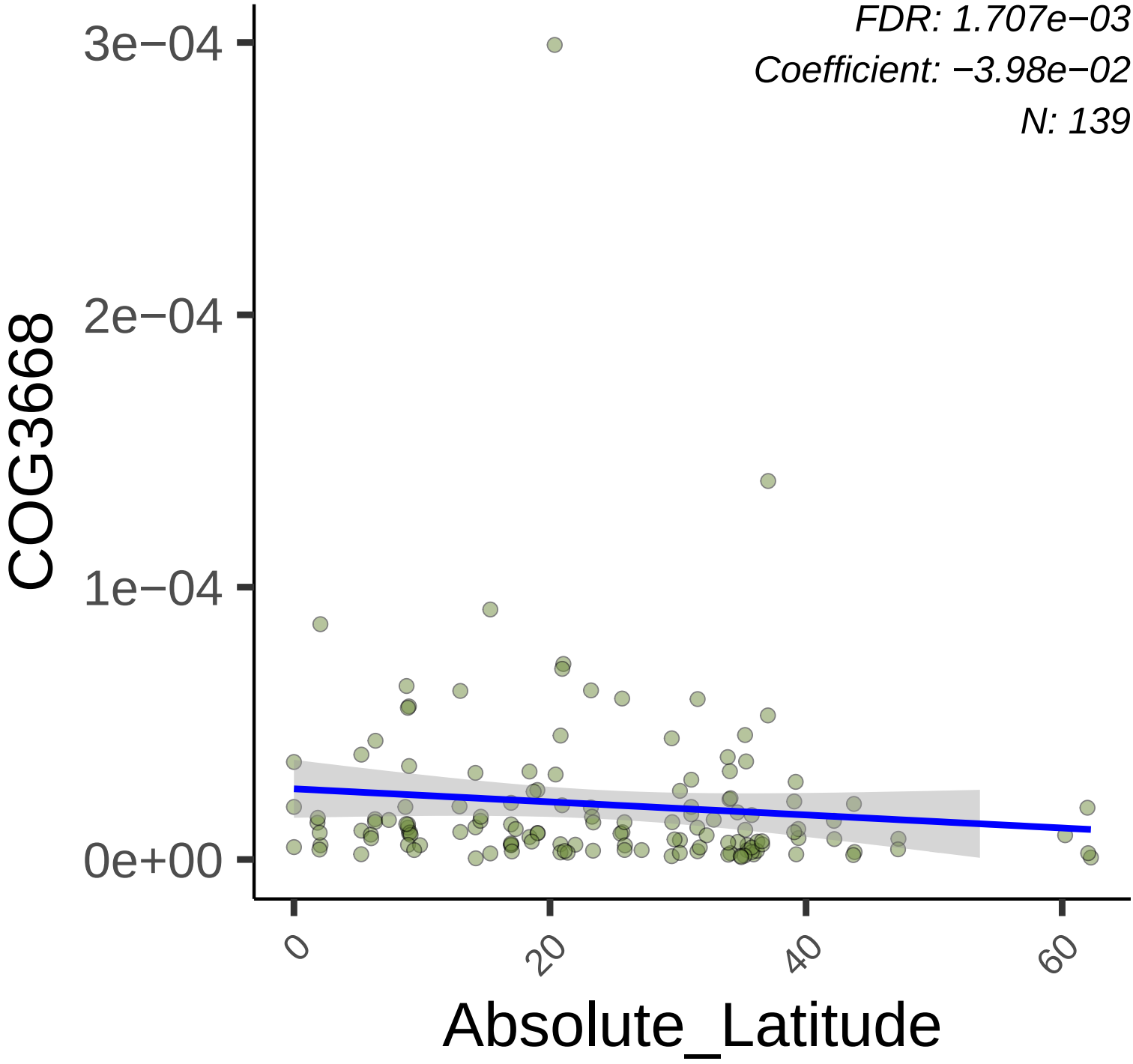

FDR: 1.555e−03
Coefficient: −3.48e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG1334
0
20
40
60
Absolute_Latitude

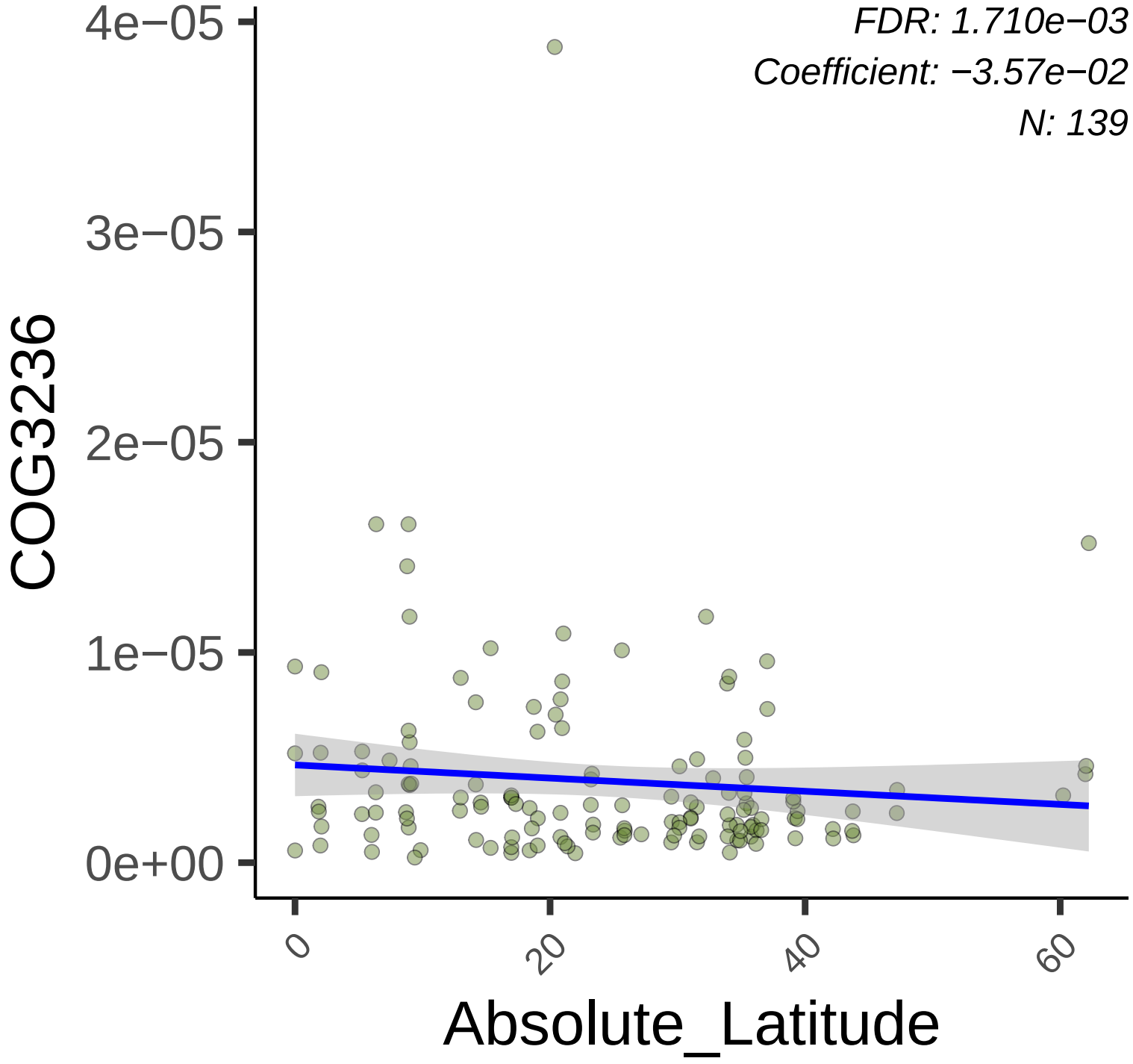

FDR: 1.591e−03
Coefficient: 5.77e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
3e−04
COG0649
0
20
40
60
Absolute_Latitude

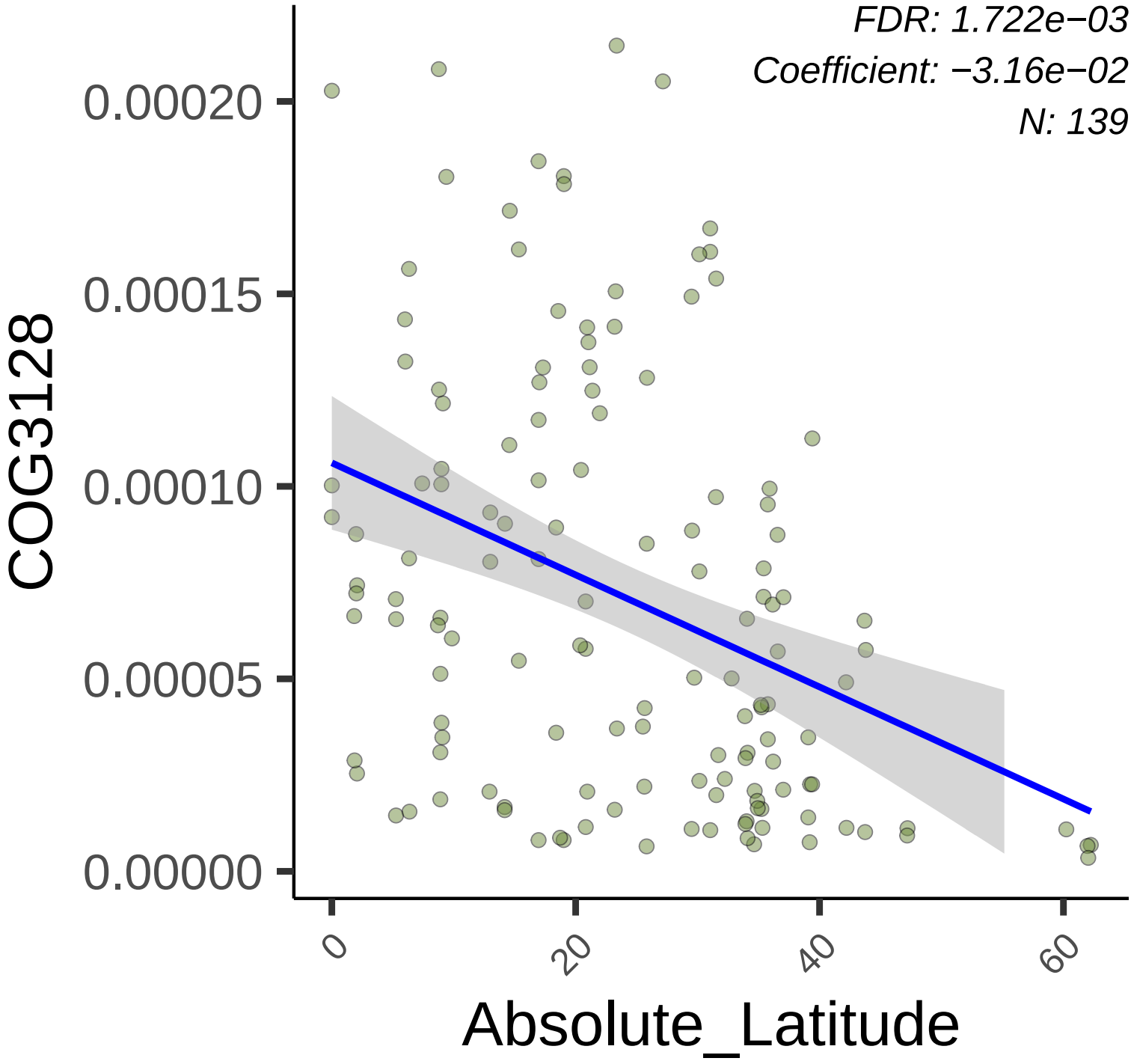

FDR: 1.603e−03
Coefficient: −1.38e−02
N: 139
COG0692
2e−04
1e−04
0
20
40
60
Absolute_Latitude

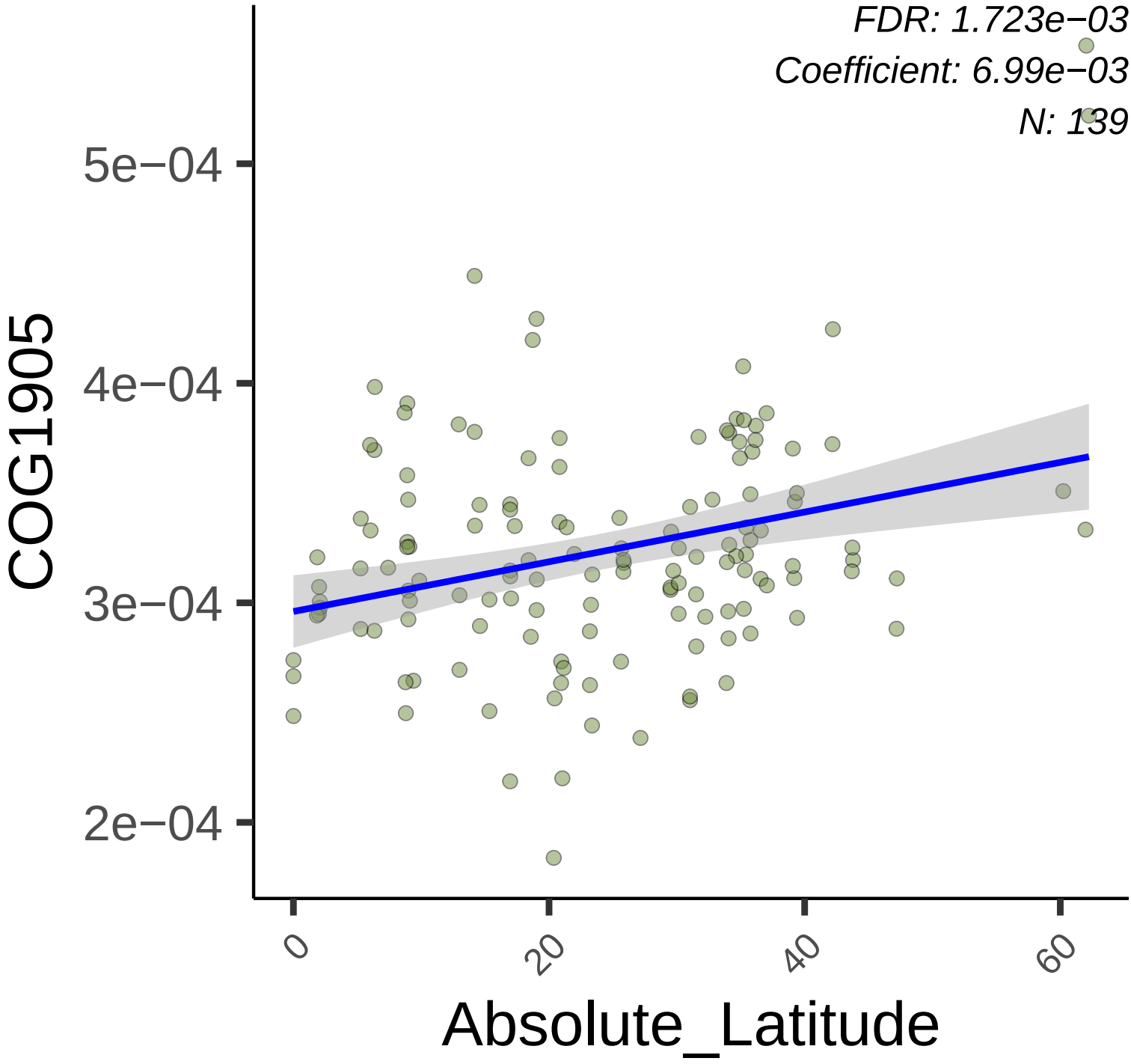

FDR: 1.622e−03
Coefficient: 1.25e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG2121
0
20
40
60
Absolute_Latitude

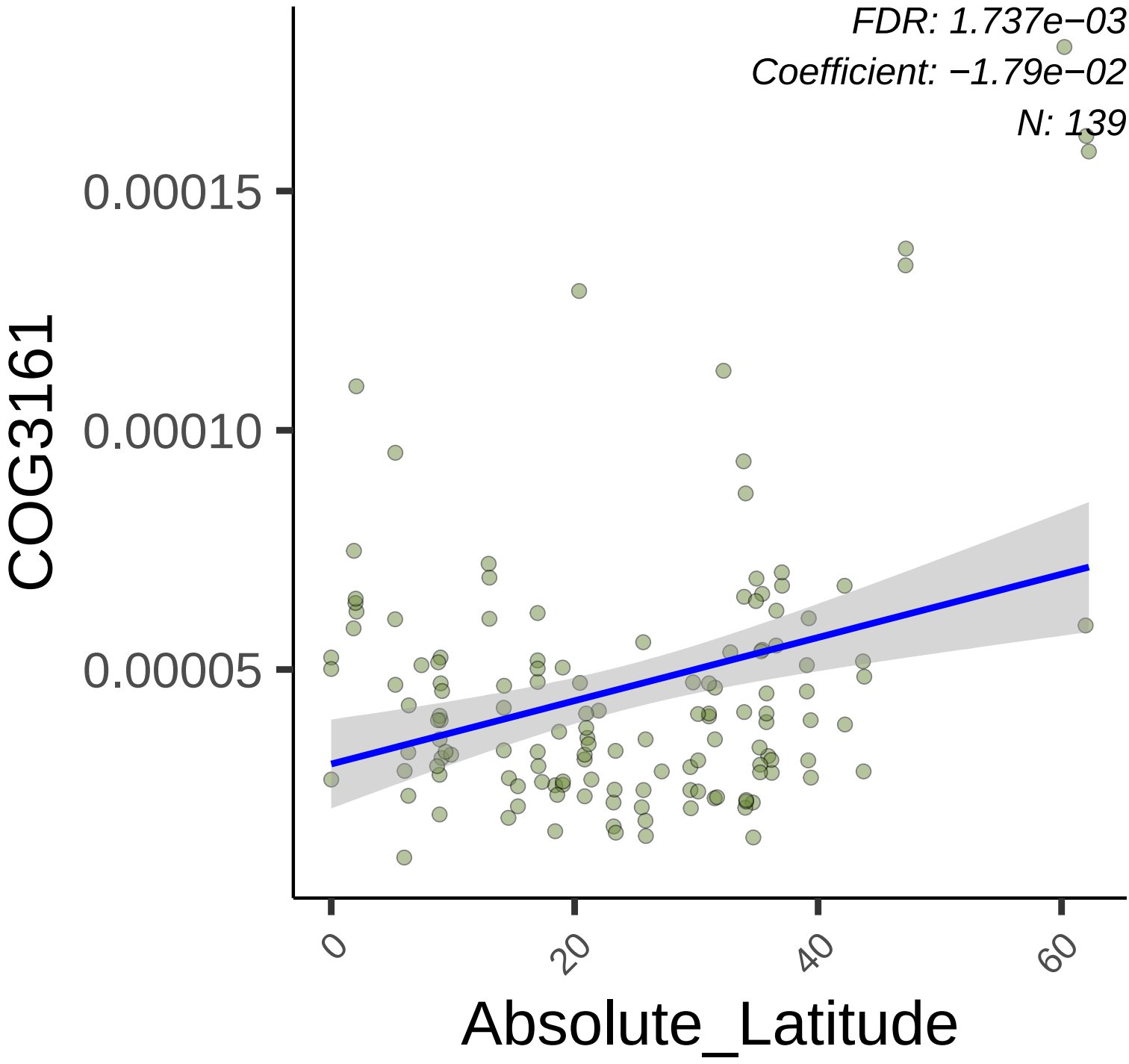

FDR: 1.654e−03
Coefficient: −1.39e−02
N: 139
COG2259
2e−04
1e−04
0
20
40
60
Absolute_Latitude

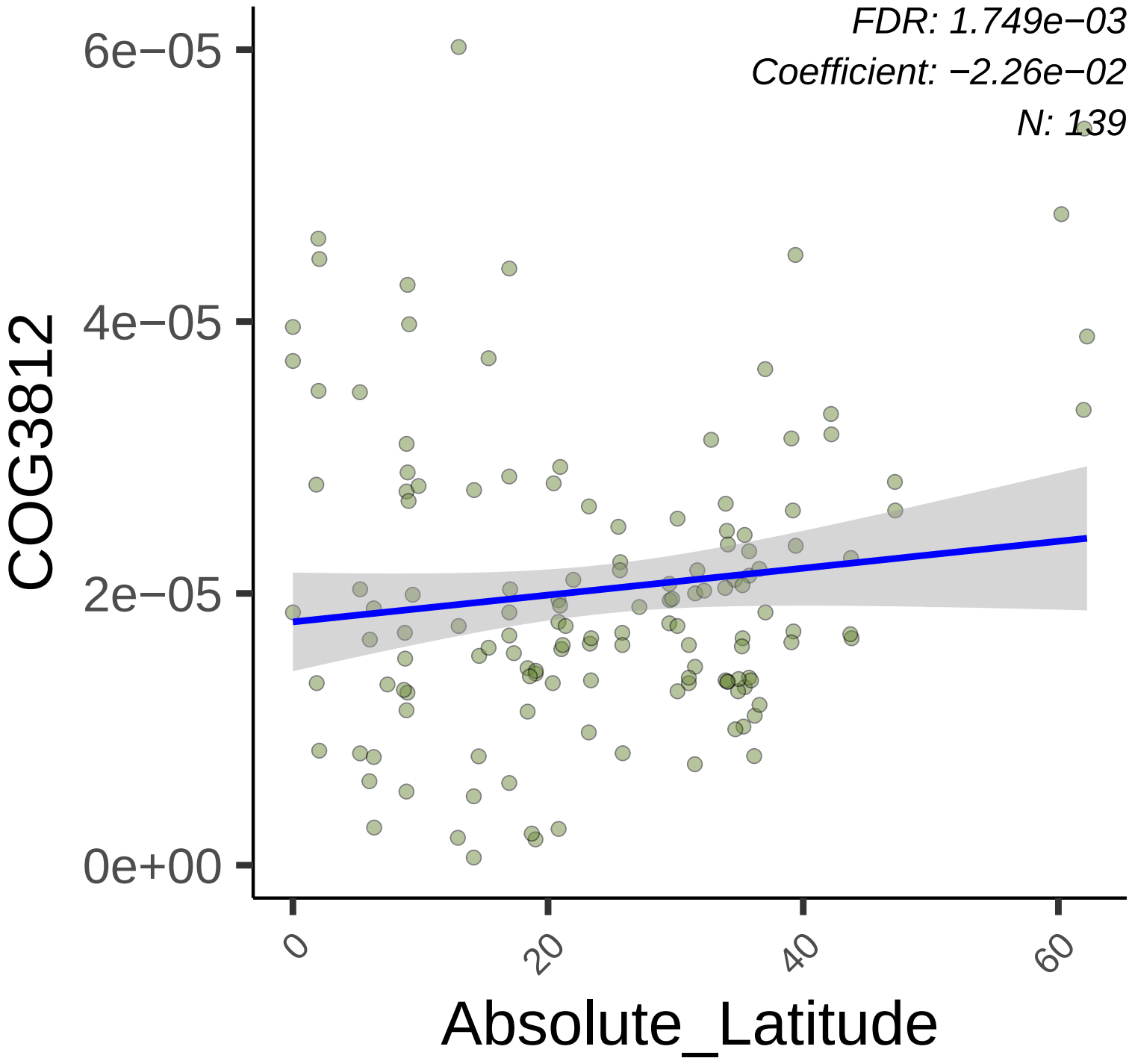

FDR: 1.707e−03
Coefficient: −3.98e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG3668
0
20
40
60
Absolute_Latitude

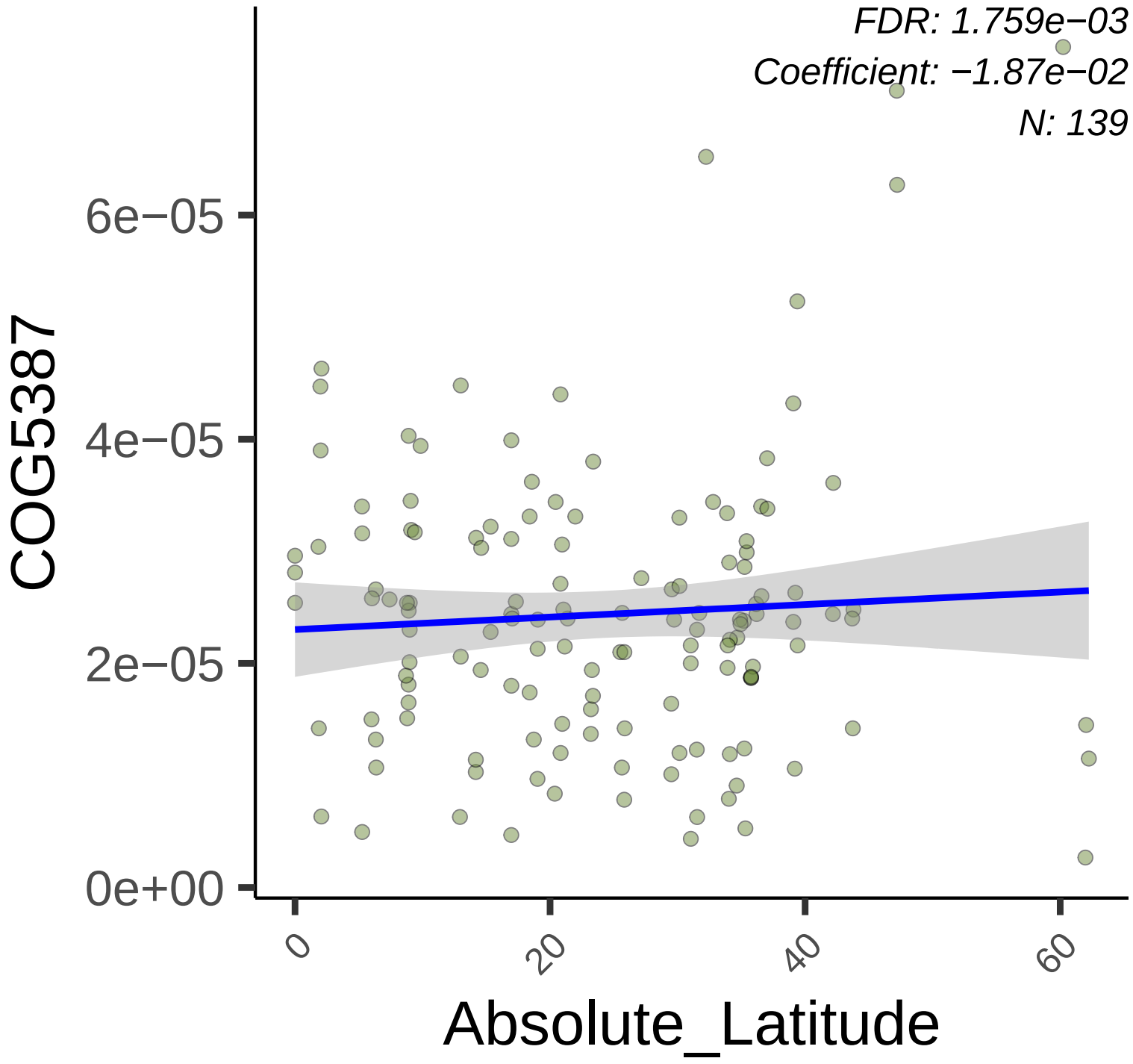

FDR: 1.710e−03
Coefficient: −3.57e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG3236
0
20
40
60
Absolute_Latitude

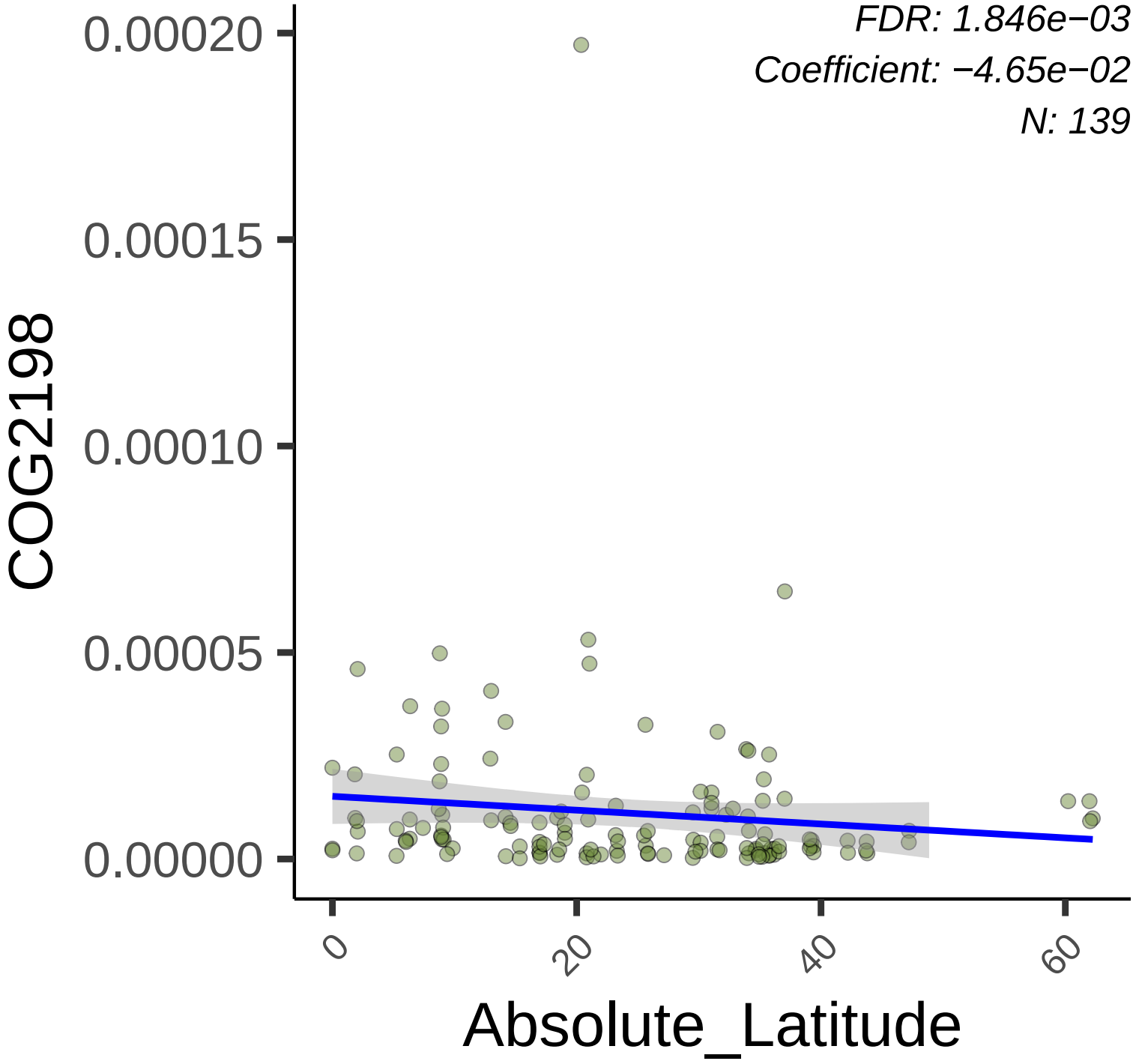

FDR: 1.722e−03
Coefficient: −3.16e−02
N: 139
COG3128
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

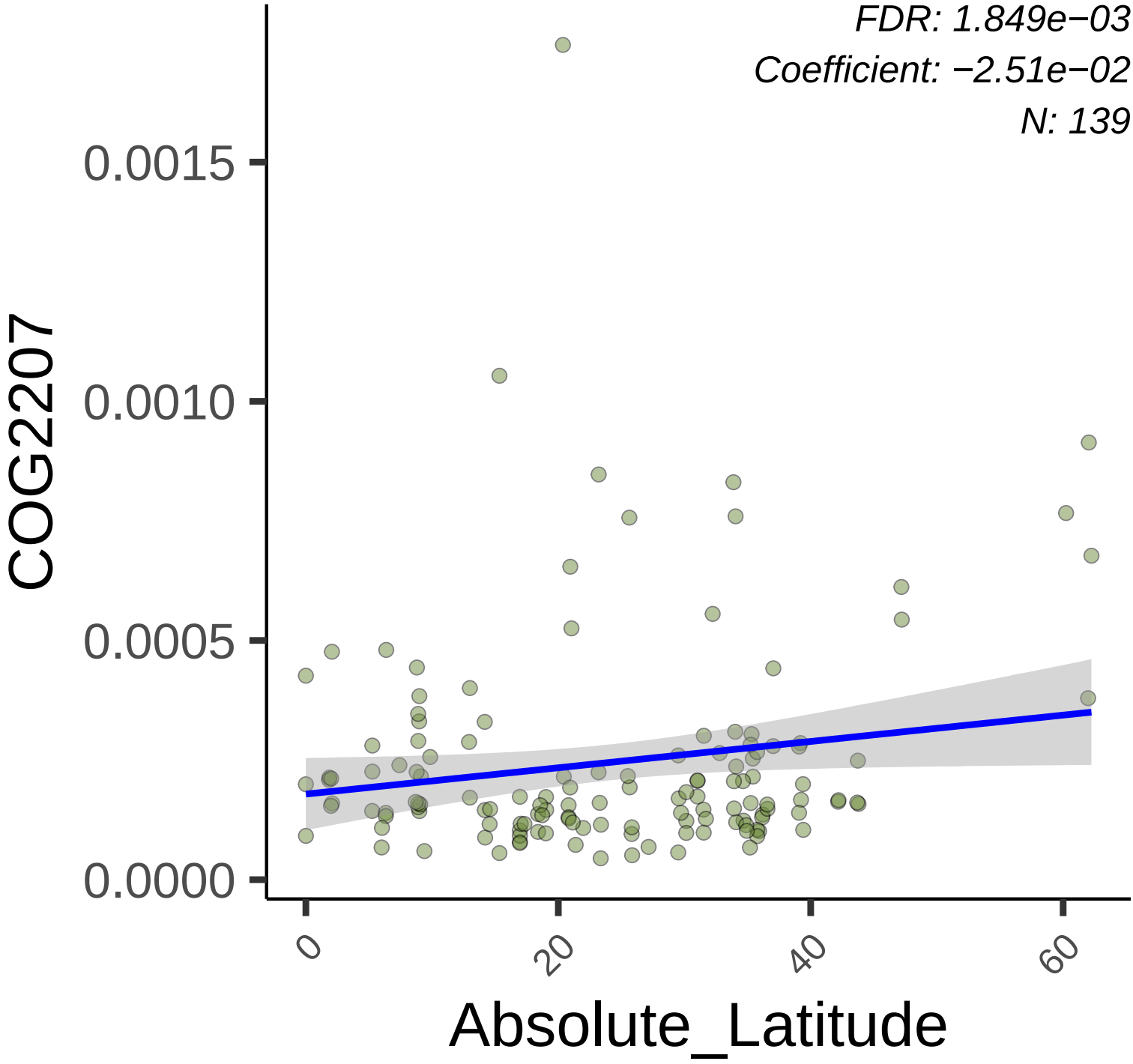

FDR: 1.723e−03
Coefficient: 6.99e−03
N: 139
COG1905
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

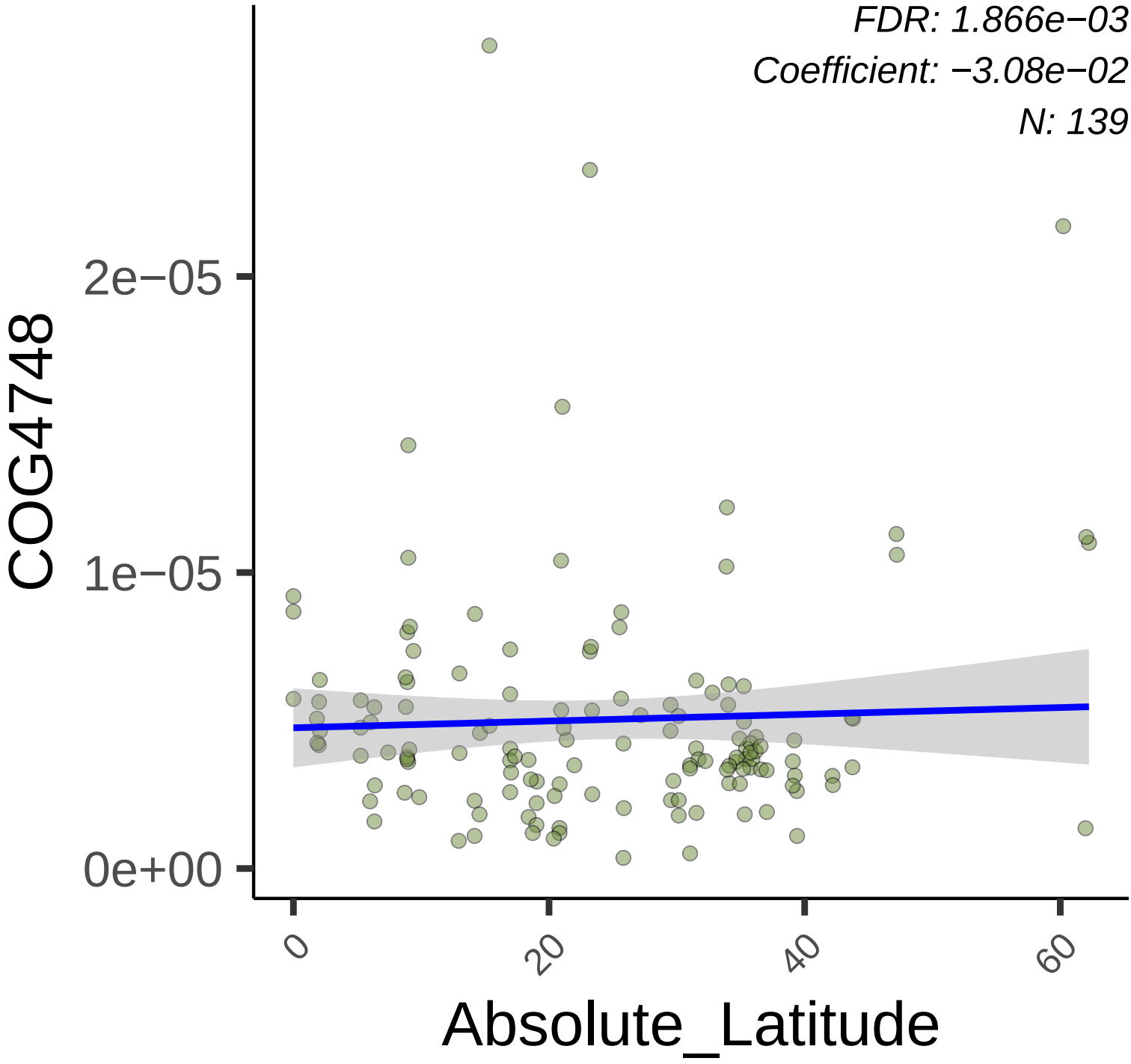

FDR: 1.737e−03
Coefficient: −1.79e−02
N: 139
0.00015
0.00010
0.00005
COG3161
0
20
40
60
Absolute_Latitude

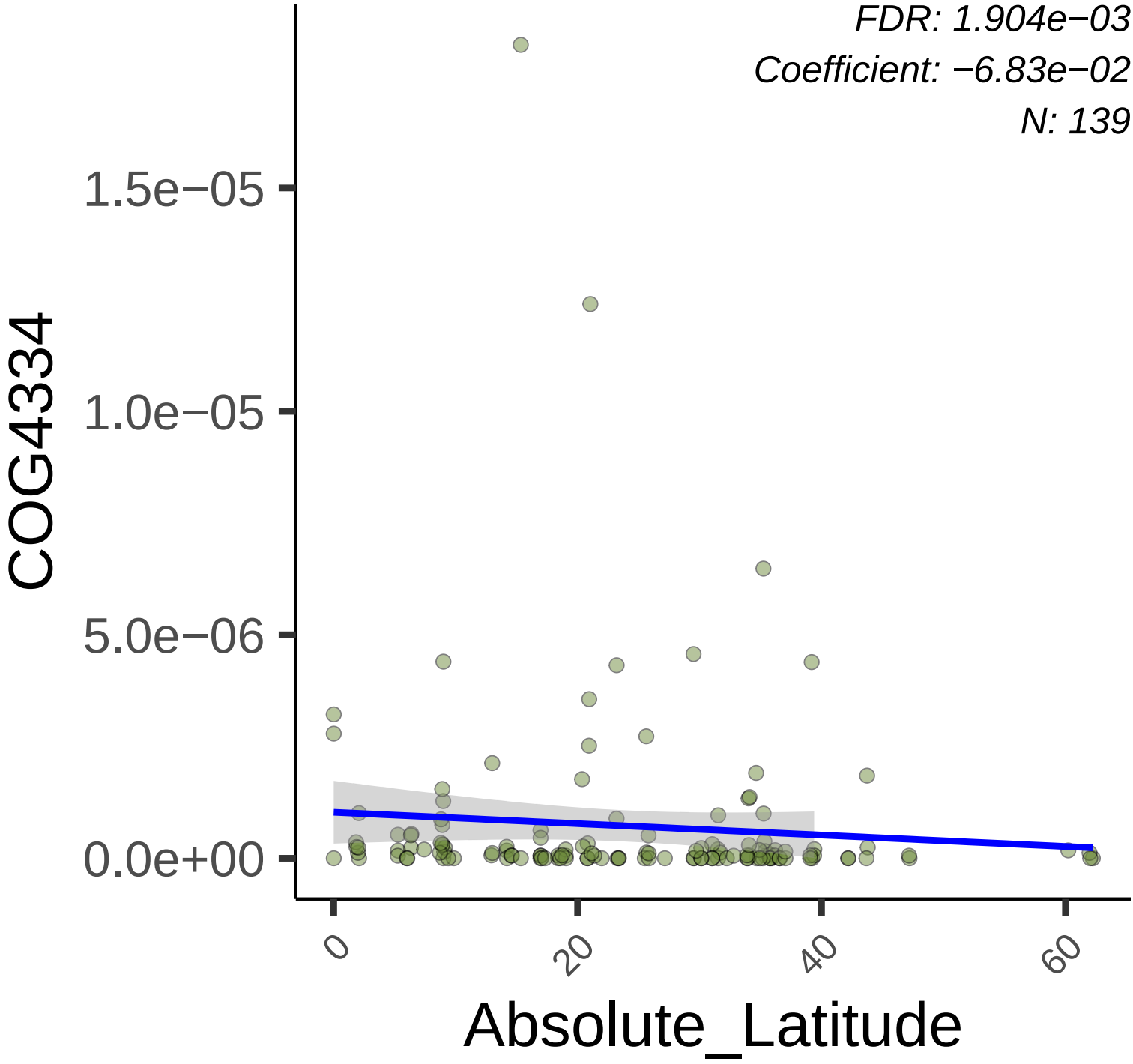

FDR: 1.749e−03
Coefficient: −2.26e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG3812
0
20
40
60
Absolute_Latitude

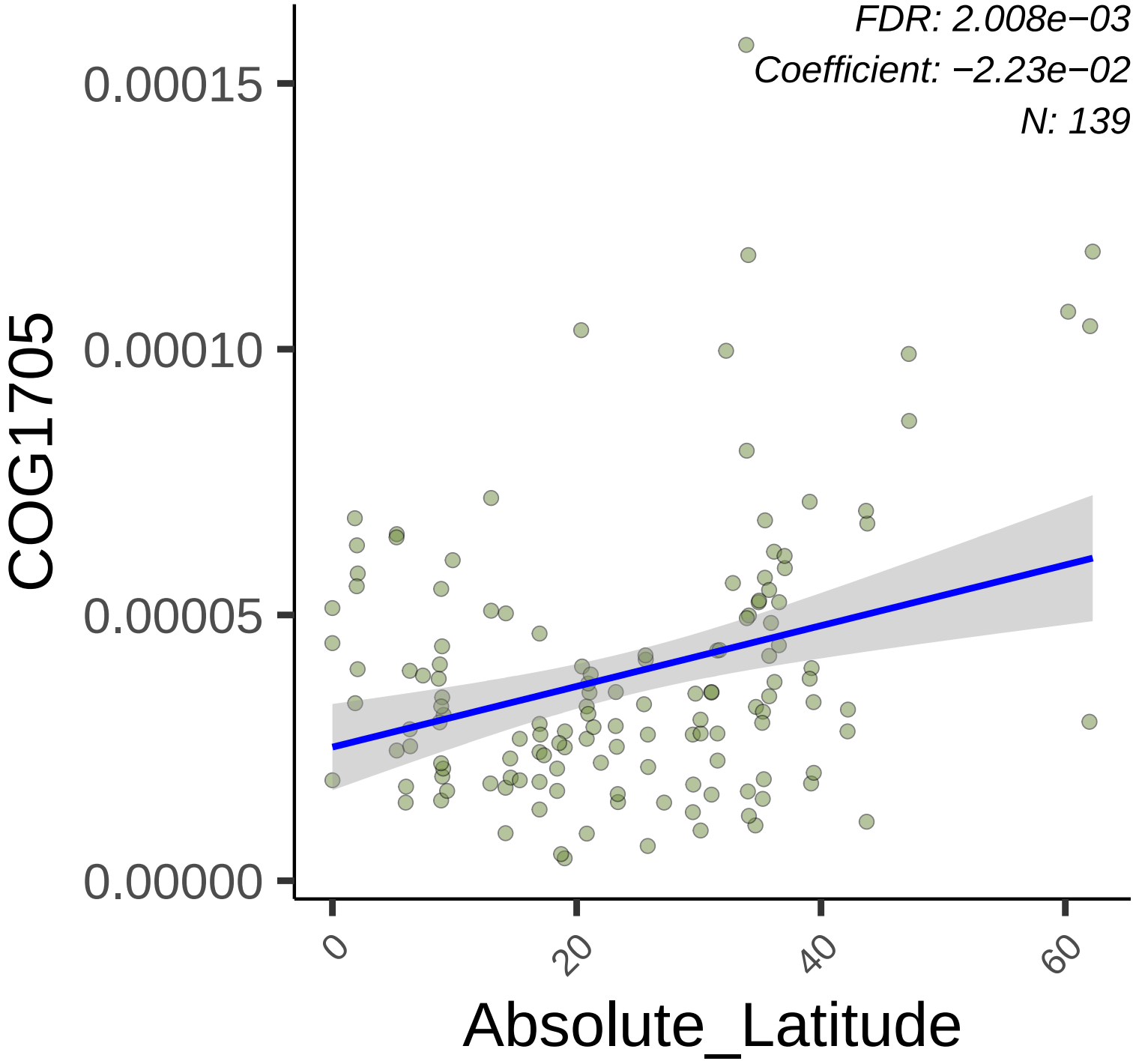

FDR: 1.759e−03
Coefficient: −1.87e−02
N: 139
COG5387
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

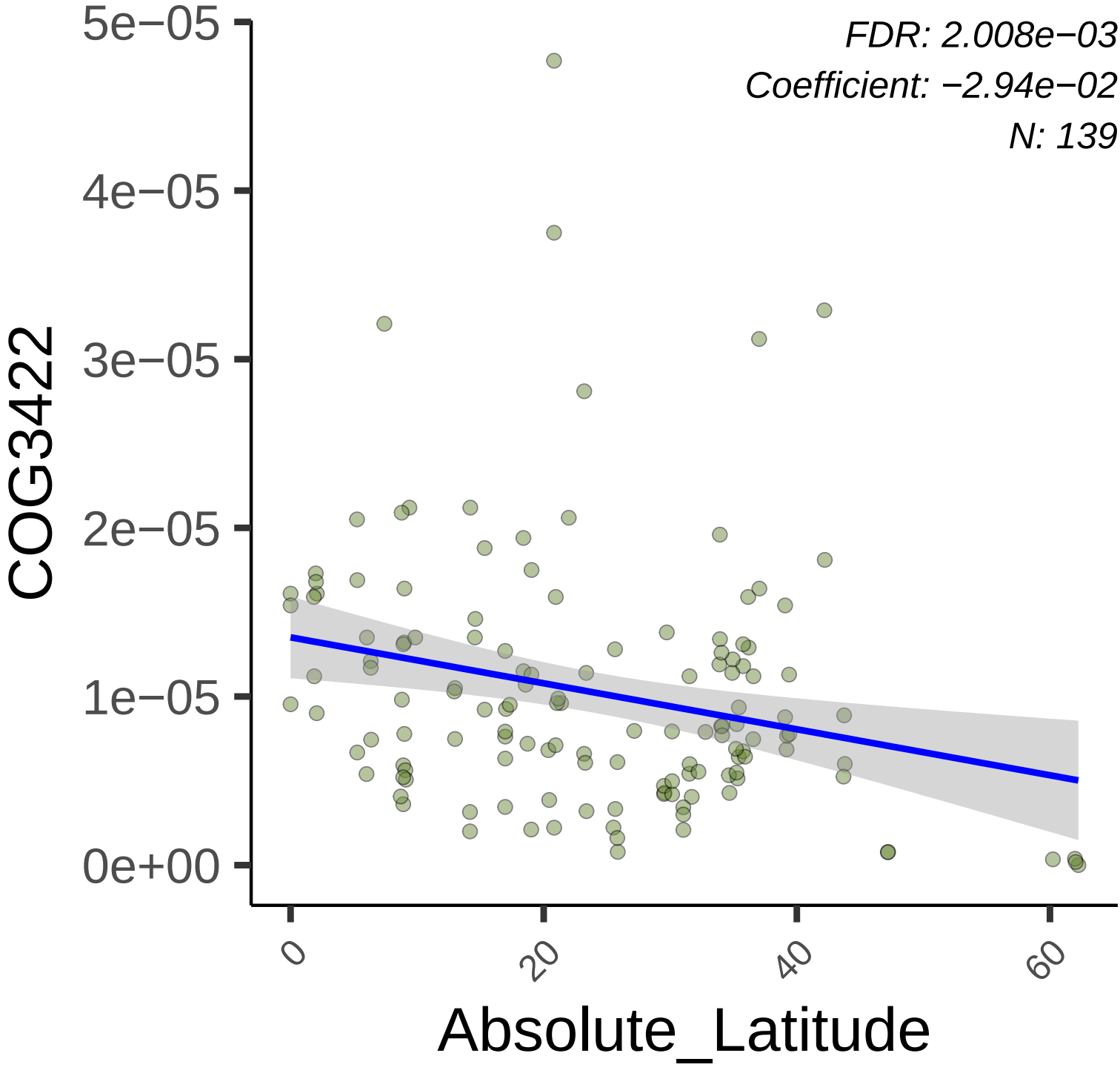

FDR: 1.846e−03
Coefficient: −4.65e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG2198
0
20
40
60
Absolute_Latitude

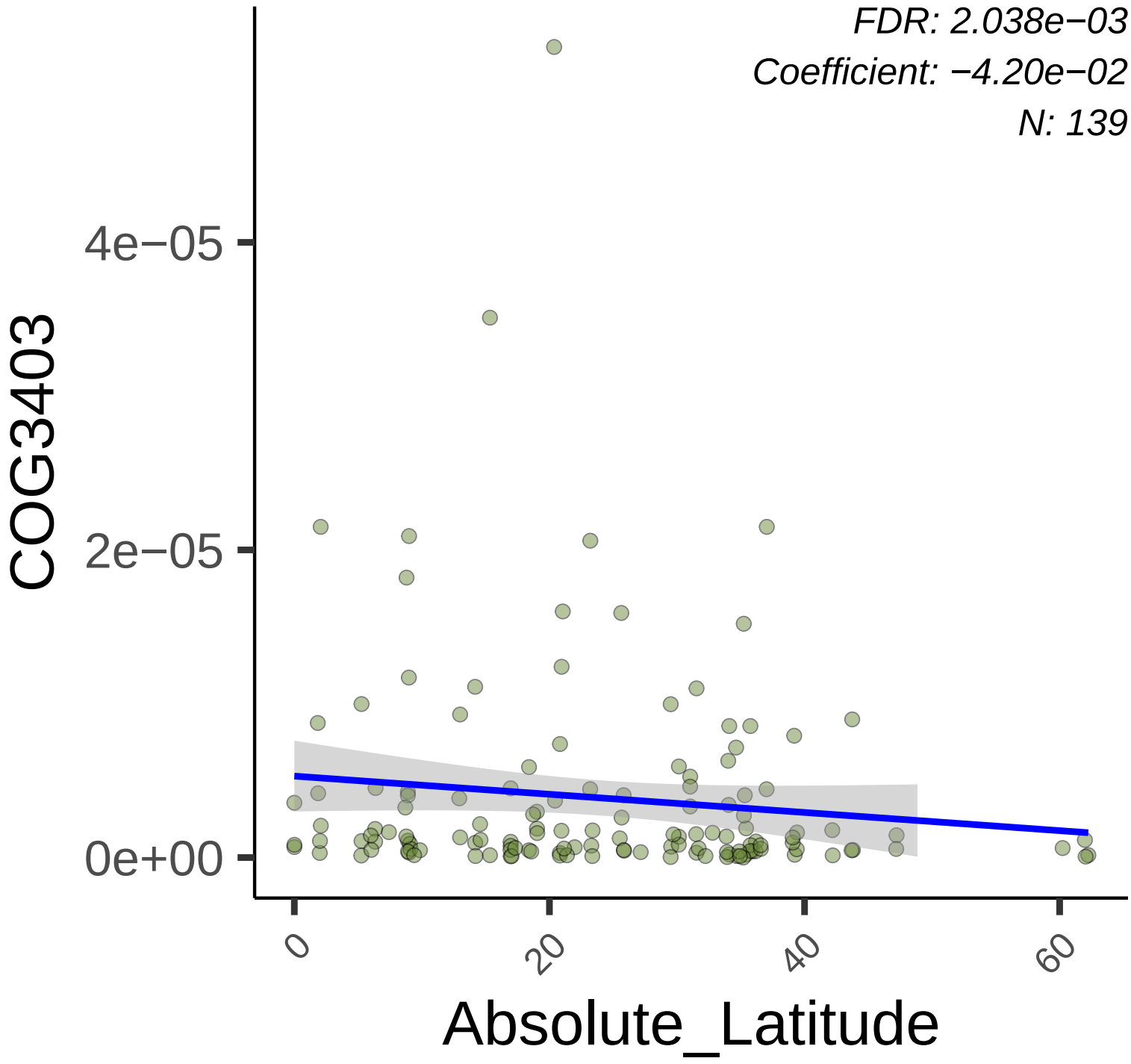

FDR: 1.849e−03
Coefficient: −2.51e−02
N: 139
COG2207
0.0015
0.0010
0.0005
0.0000
0
20
40
60
Absolute_Latitude

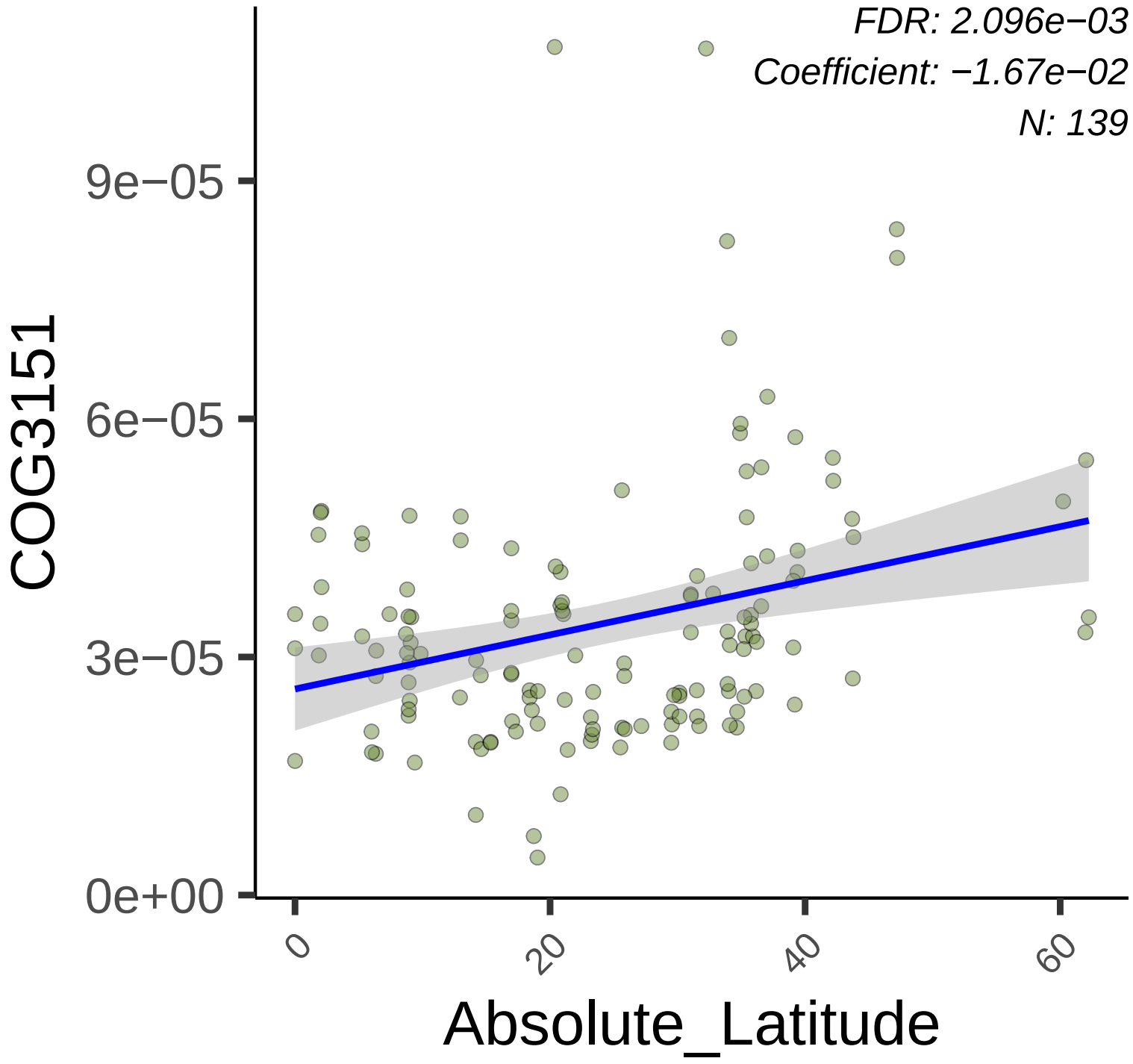

FDR: 1.866e−03
Coefficient: −3.08e−02
N: 139
COG4748
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

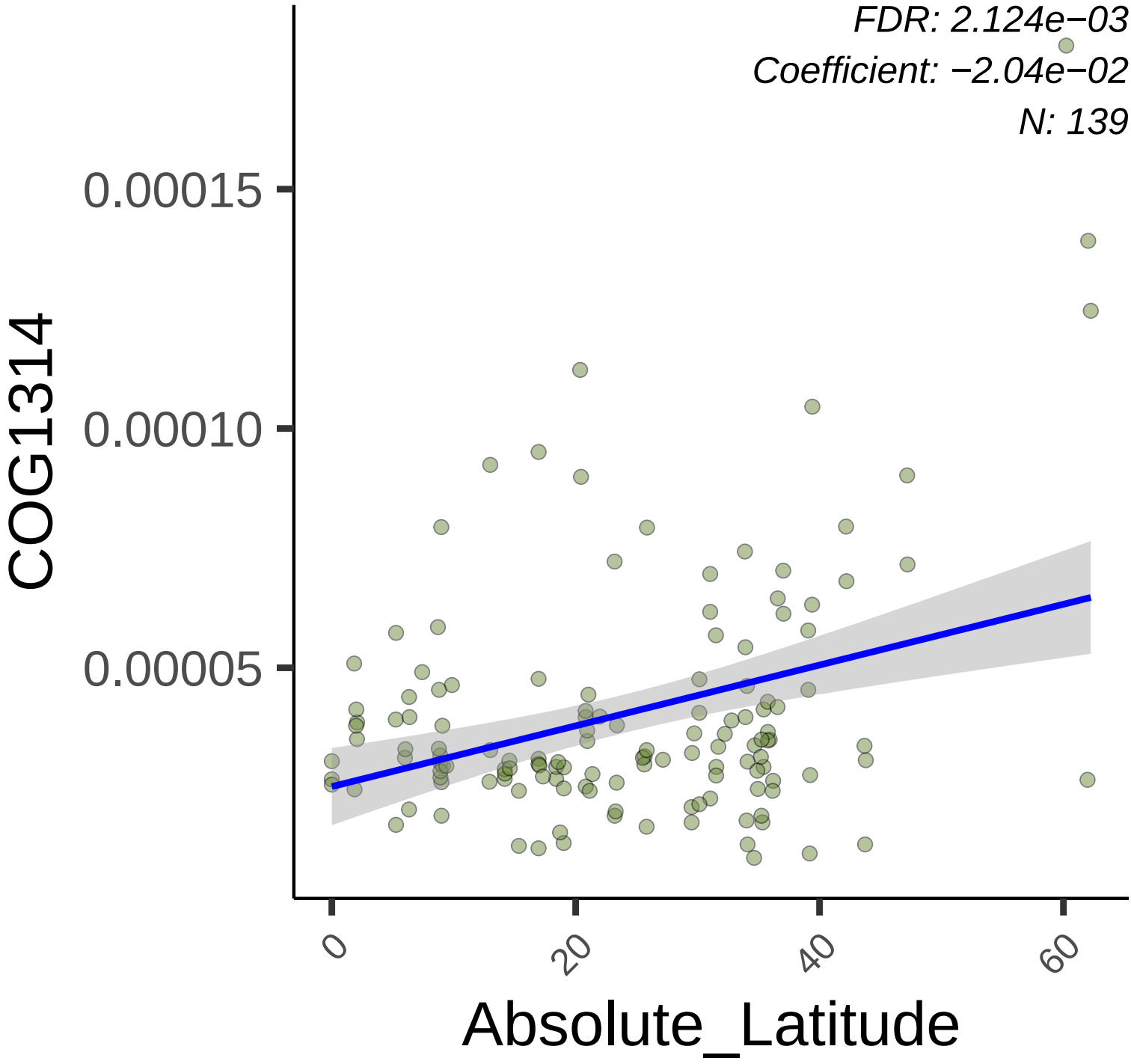

FDR: 1.904e−03
Coefficient: −6.83e−02
N: 139
COG4334
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

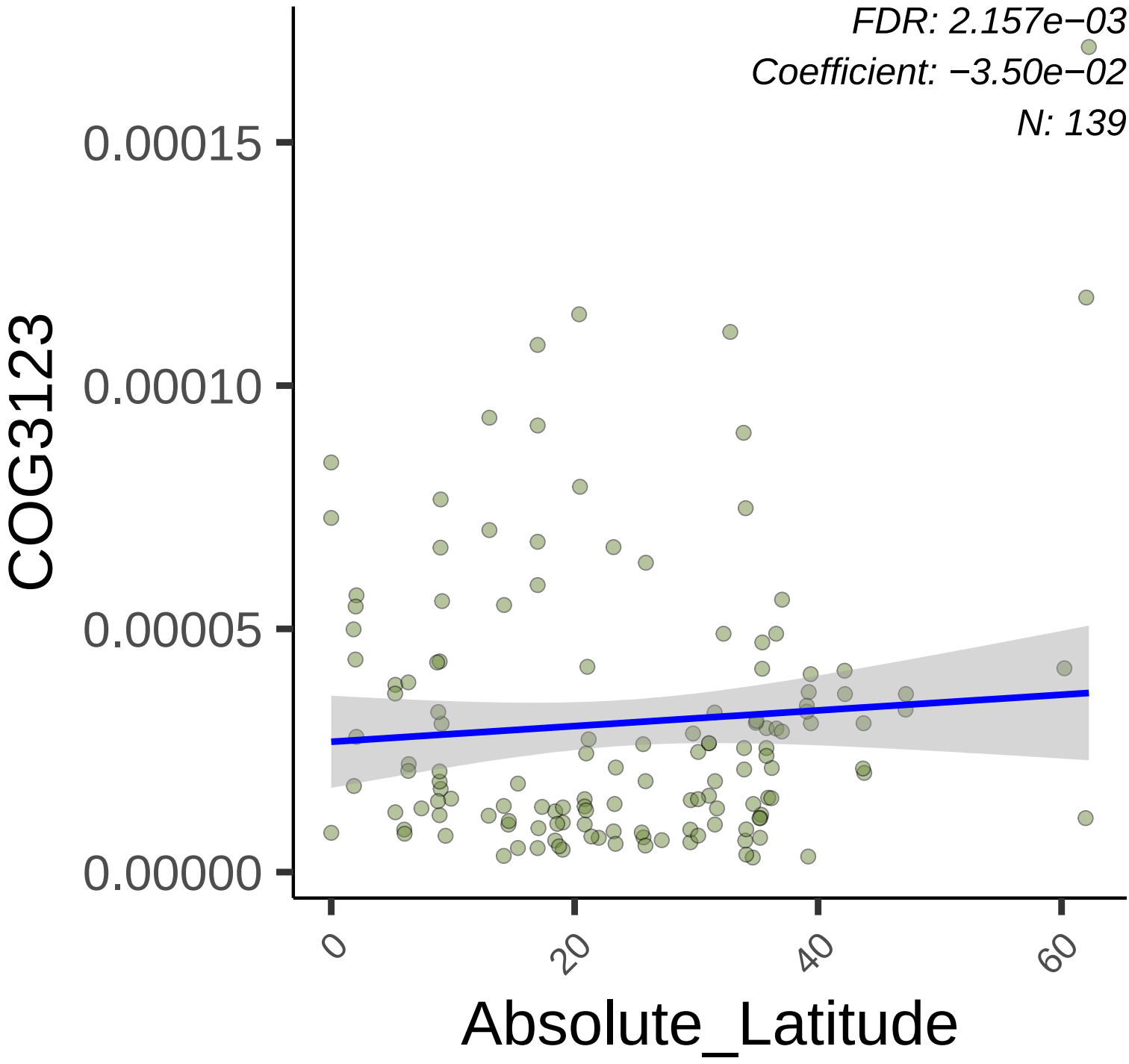

FDR: 2.008e−03
Coefficient: −2.23e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG1705
0
20
40
60
Absolute_Latitude

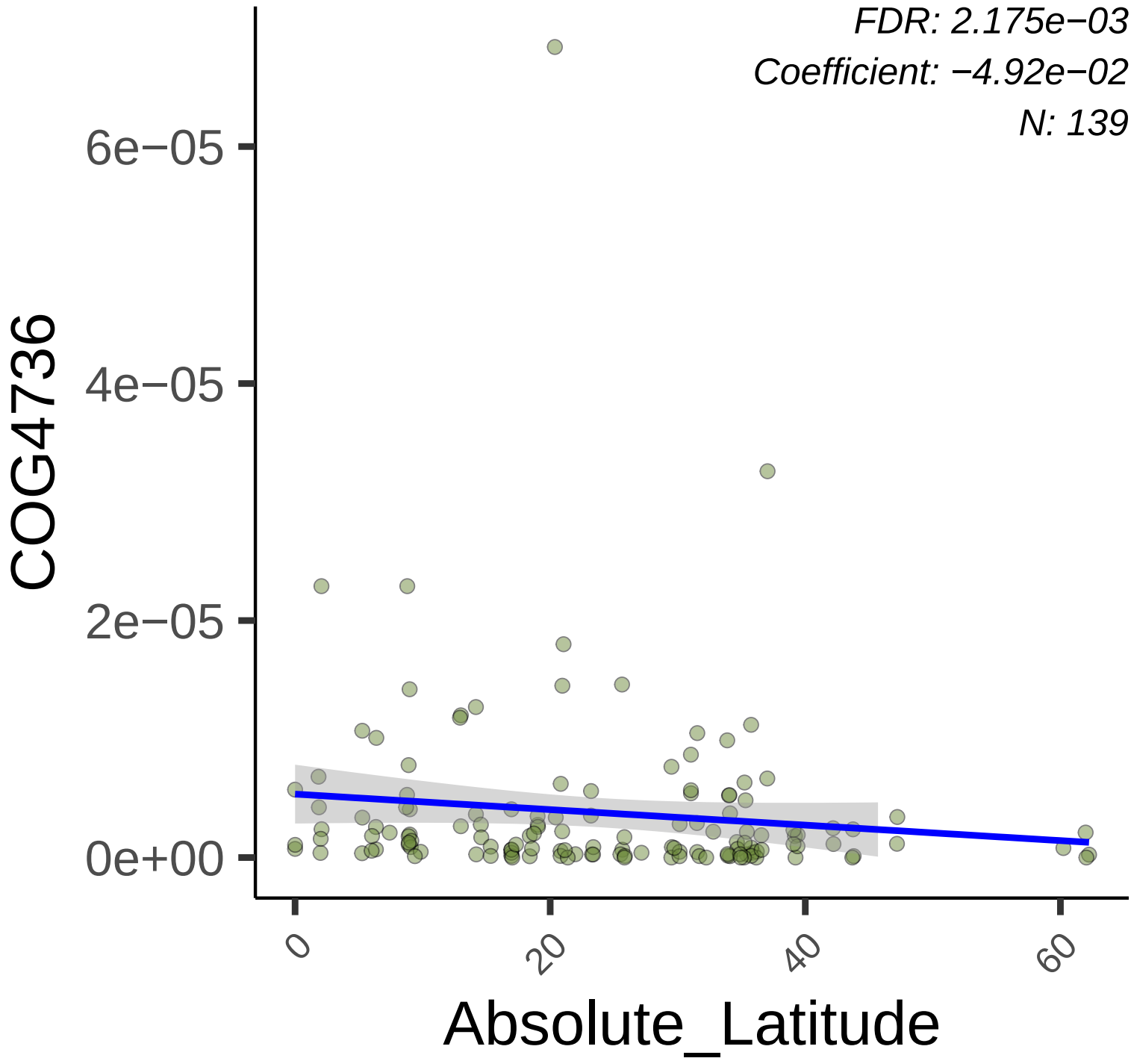

FDR: 2.008e−03
Coefficient: −2.94e−02
N: 139
COG3422
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

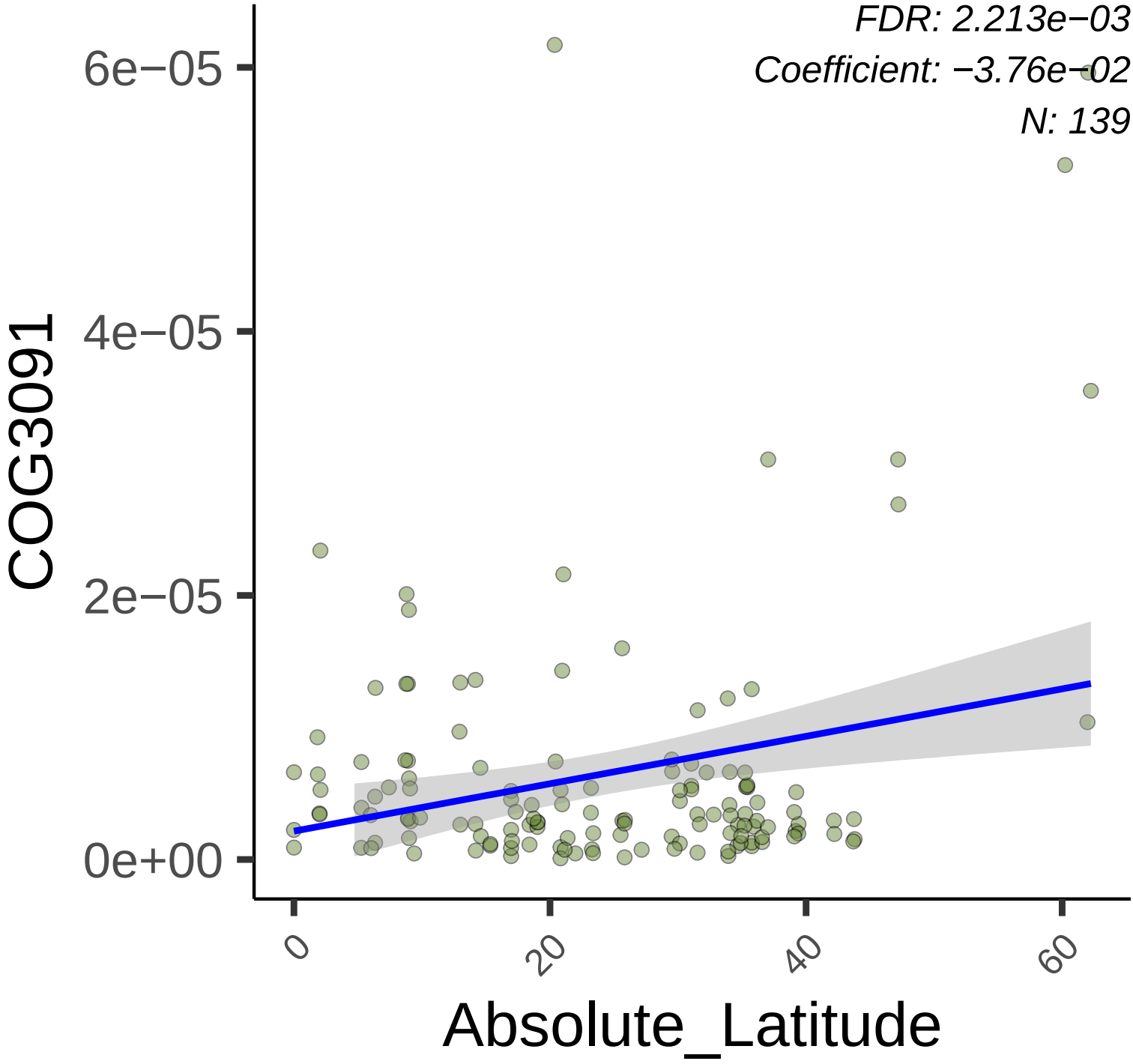

FDR: 2.038e−03
Coefficient: −4.20e−02
N: 139
COG3403
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

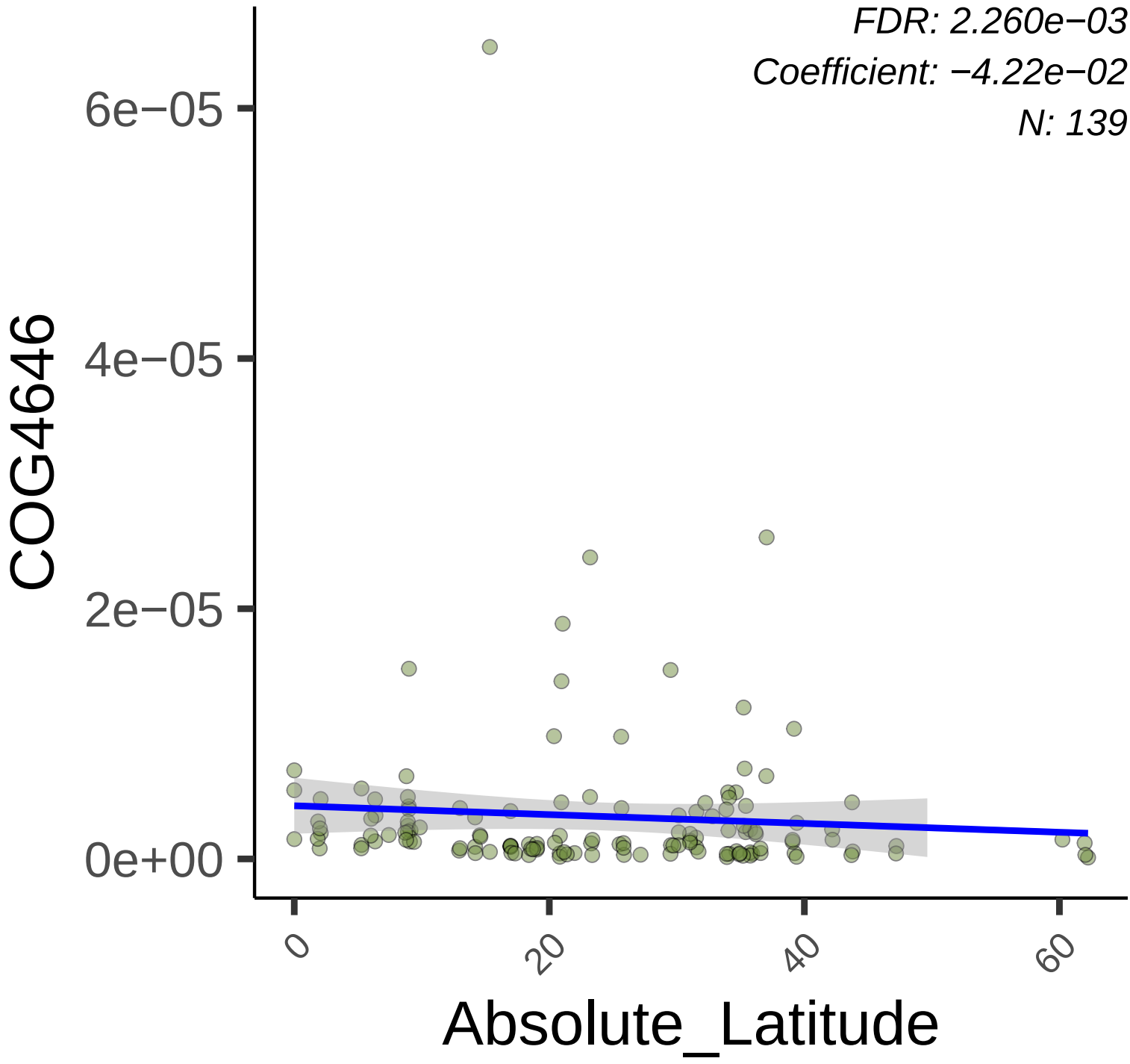

FDR: 2.096e−03
Coefficient: −1.67e−02
N: 139
COG3151
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

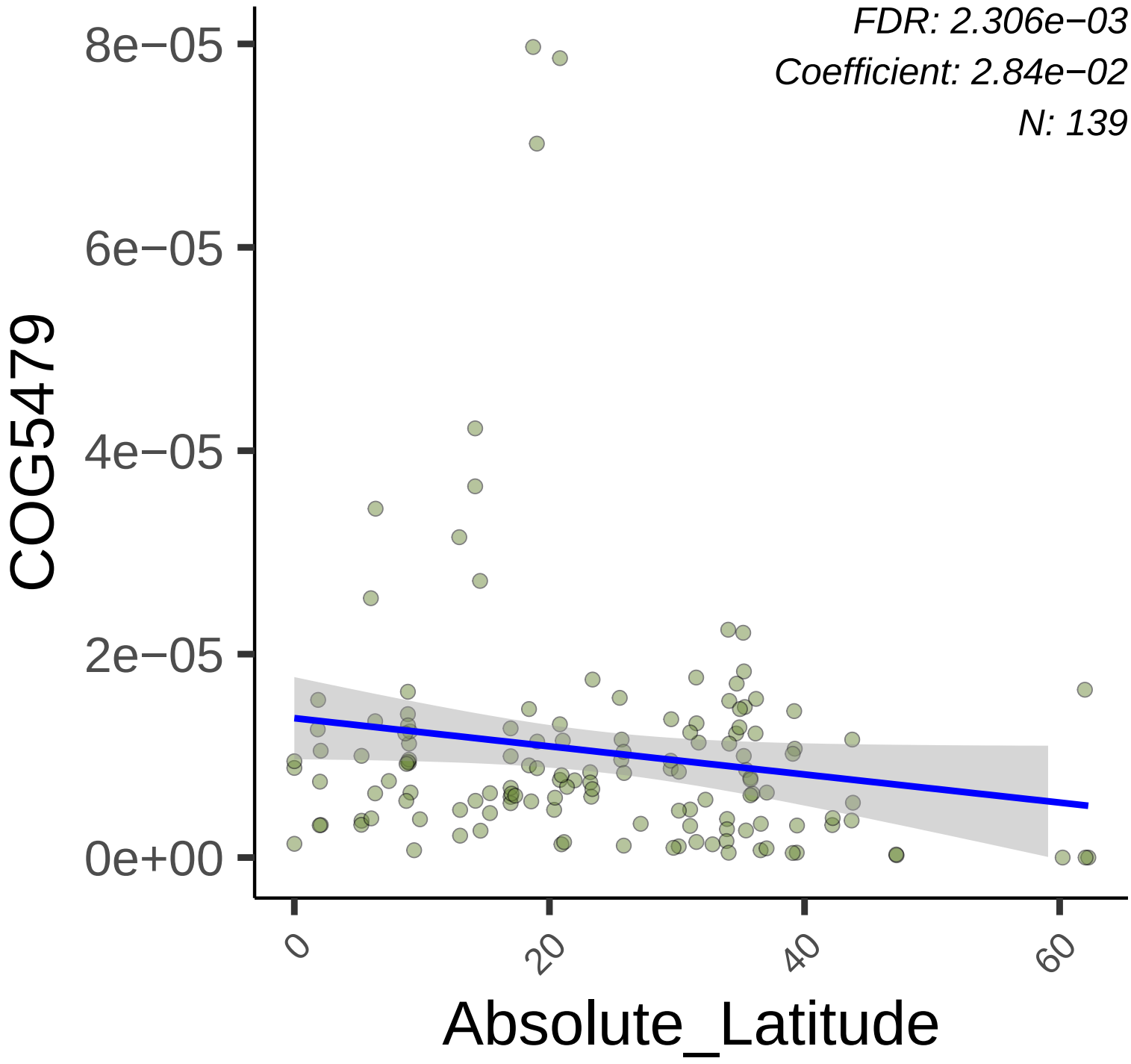

FDR: 2.124e−03
Coefficient: −2.04e−02
N: 139
0.00015
0.00010
0.00005
COG1314
0
20
40
60
Absolute_Latitude

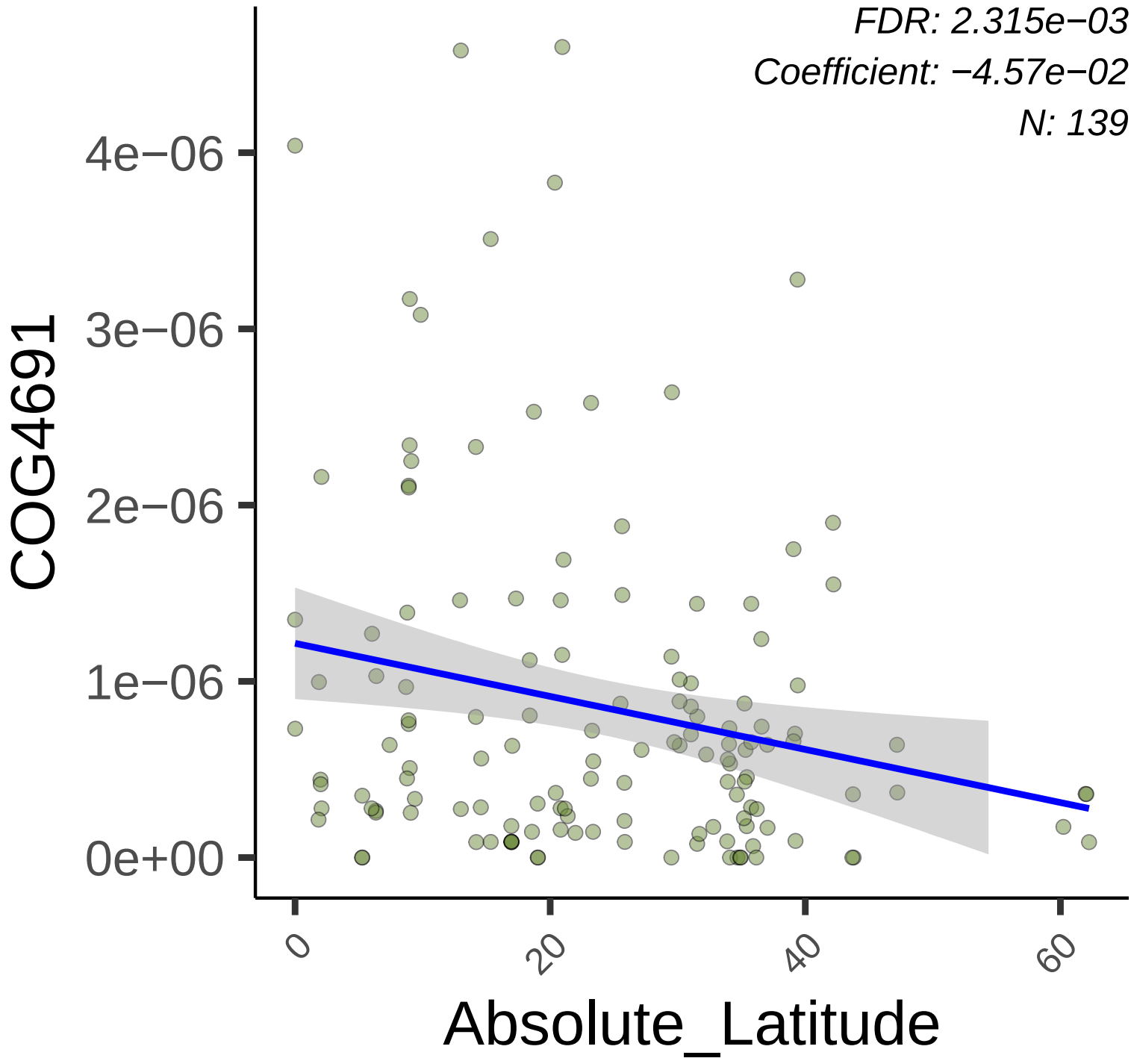

FDR: 2.157e−03
Coefficient: −3.50e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG3123
0
20
40
60
Absolute_Latitude

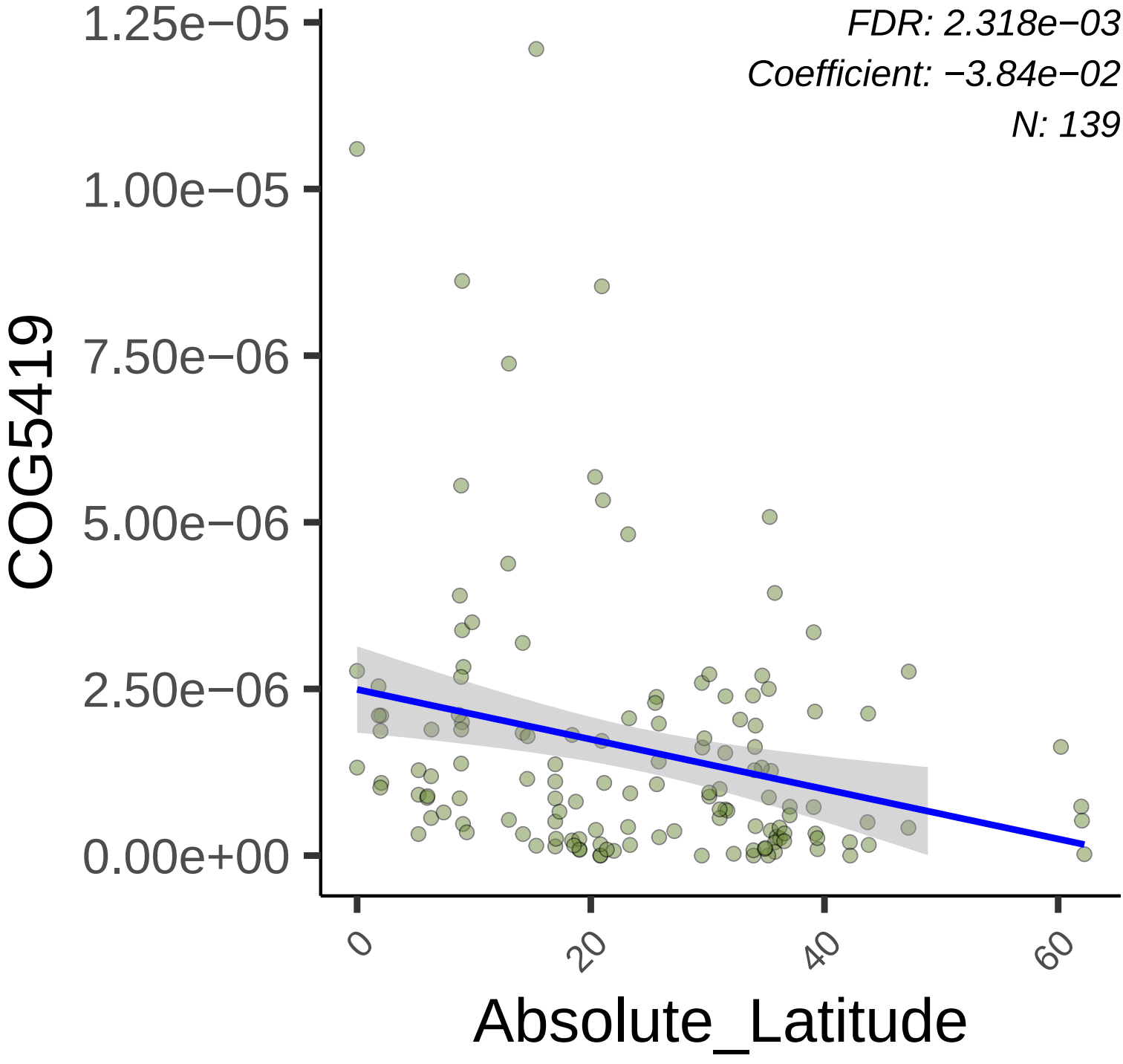

FDR: 2.175e−03
Coefficient: −4.92e−02
N: 139
COG4736
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

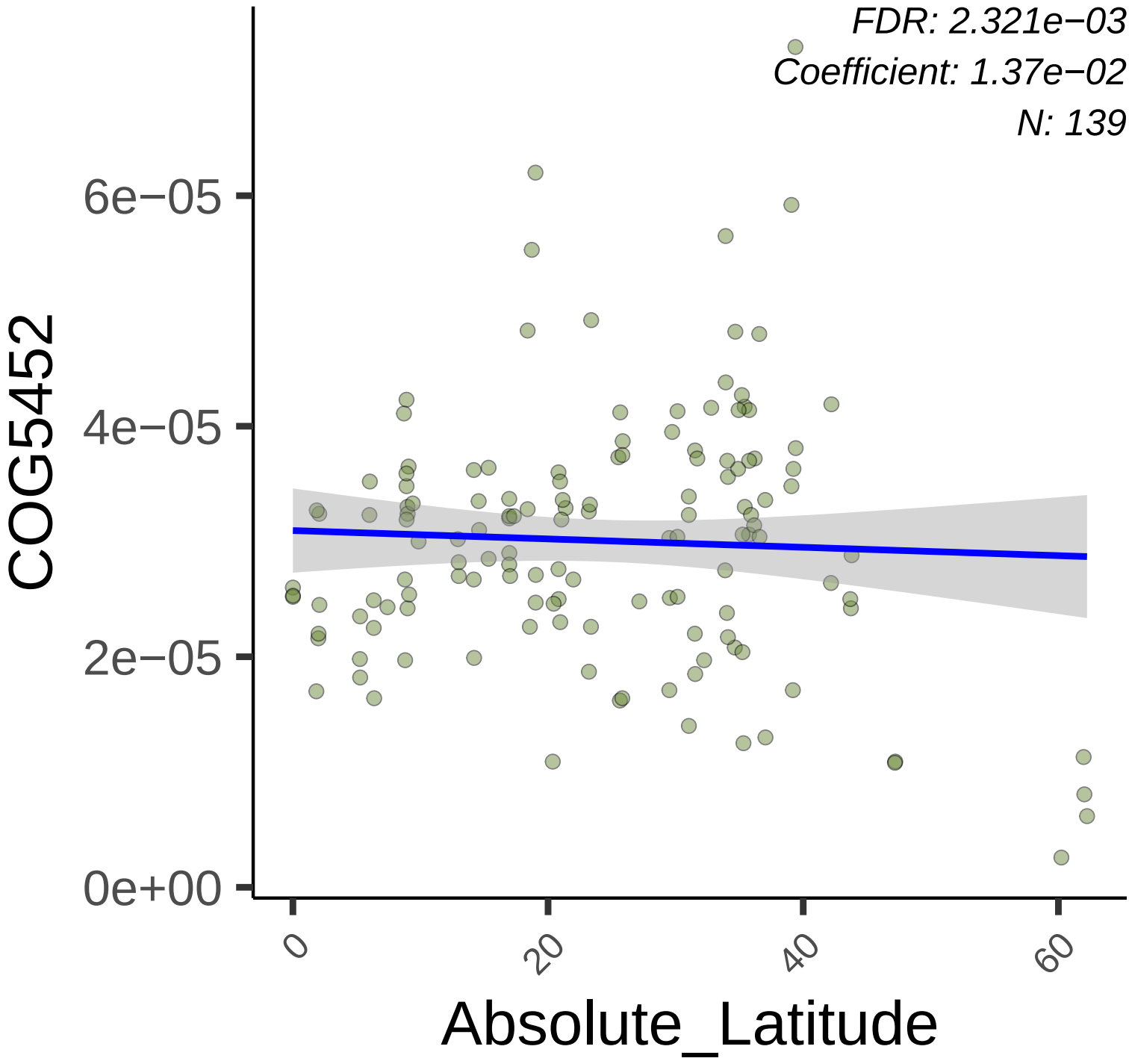

FDR: 2.213e−03
Coefficient: −3.76e−02
N: 139
COG3091
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

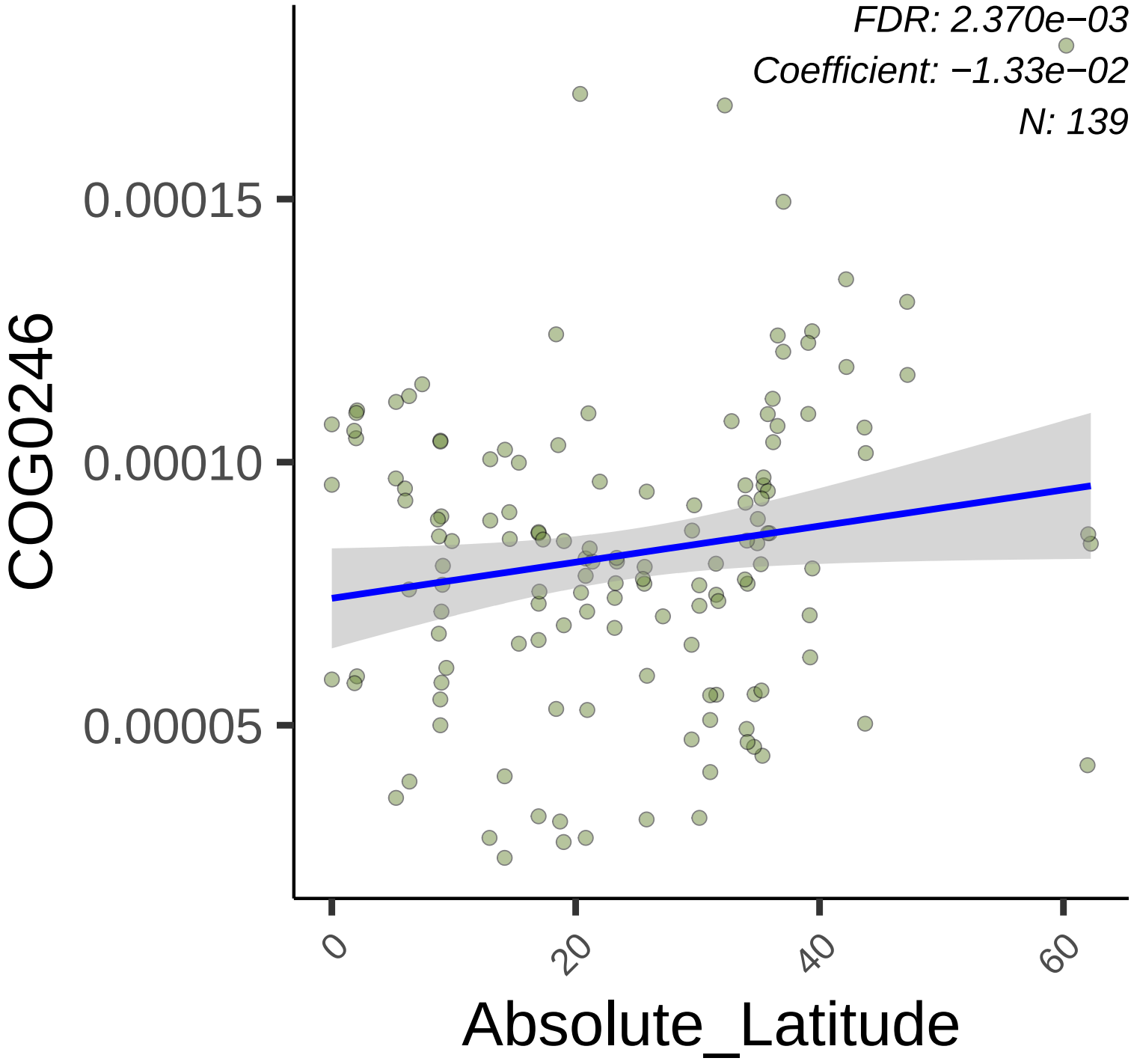

FDR: 2.260e−03
Coefficient: −4.22e−02
N: 139
COG4646
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

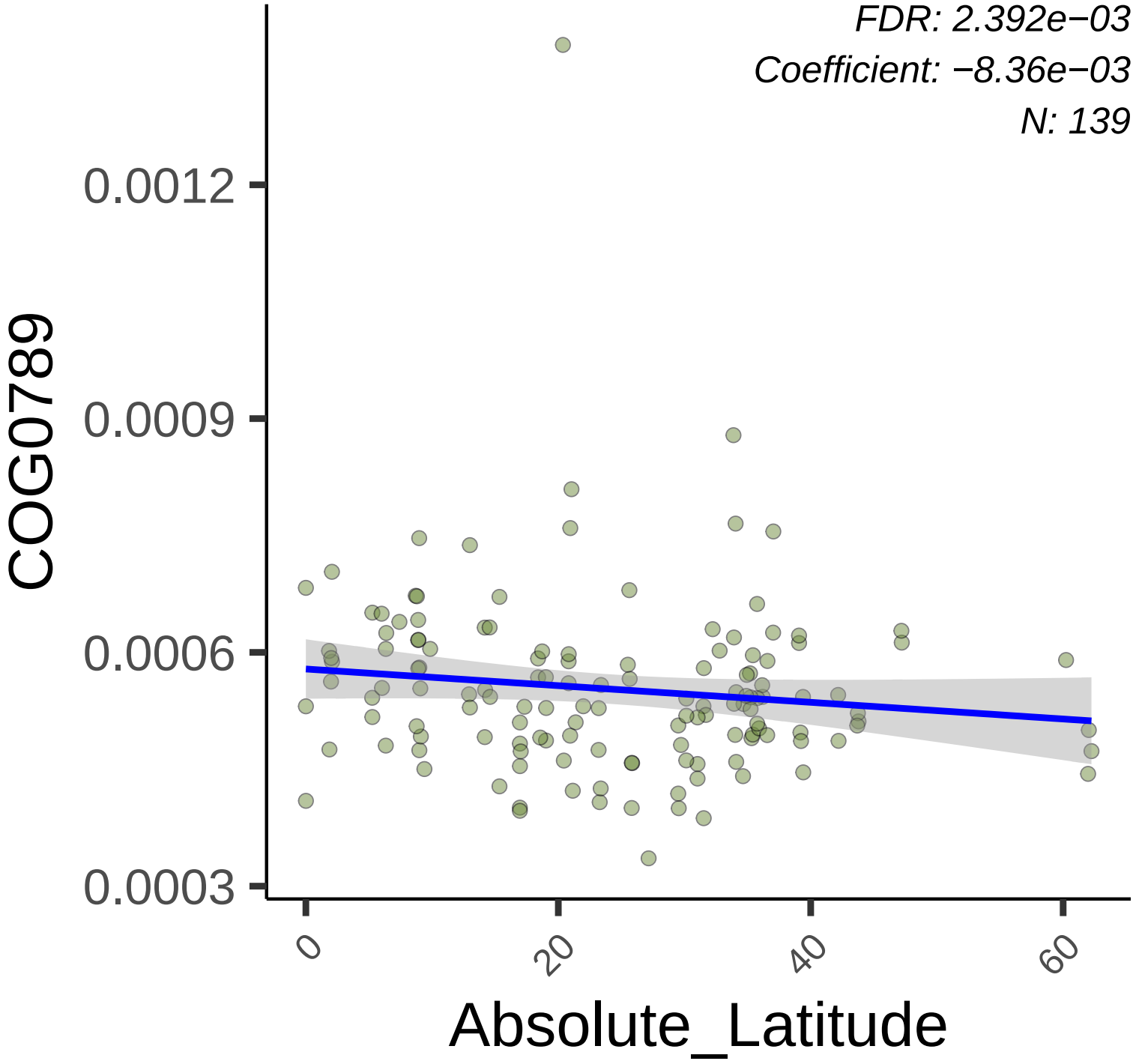

FDR: 2.306e−03
Coefficient: 2.84e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG5479
0
20
40
60
Absolute_Latitude

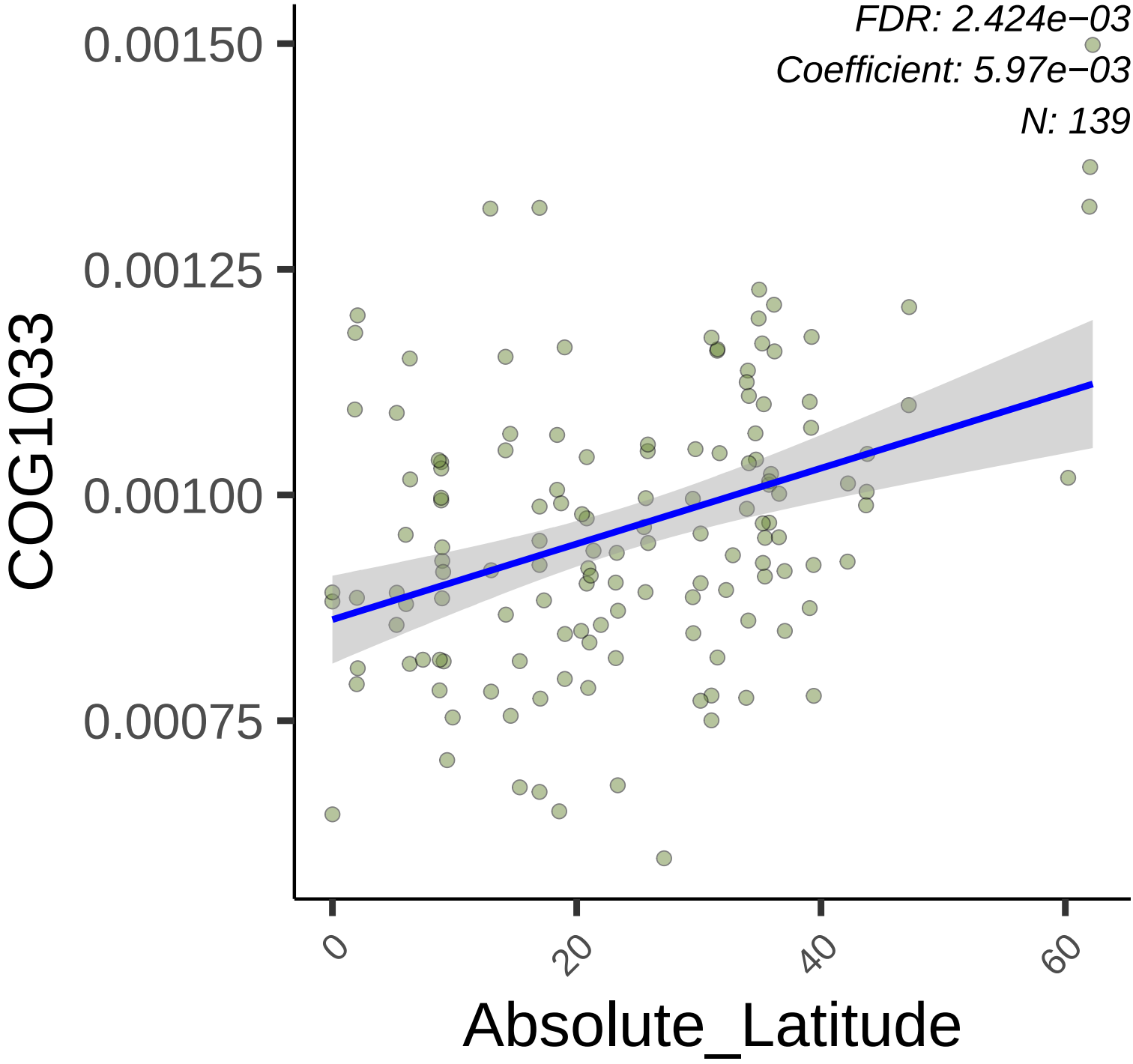

FDR: 2.315e−03
Coefficient: −4.57e−02
N: 139
COG4691
4e−06
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

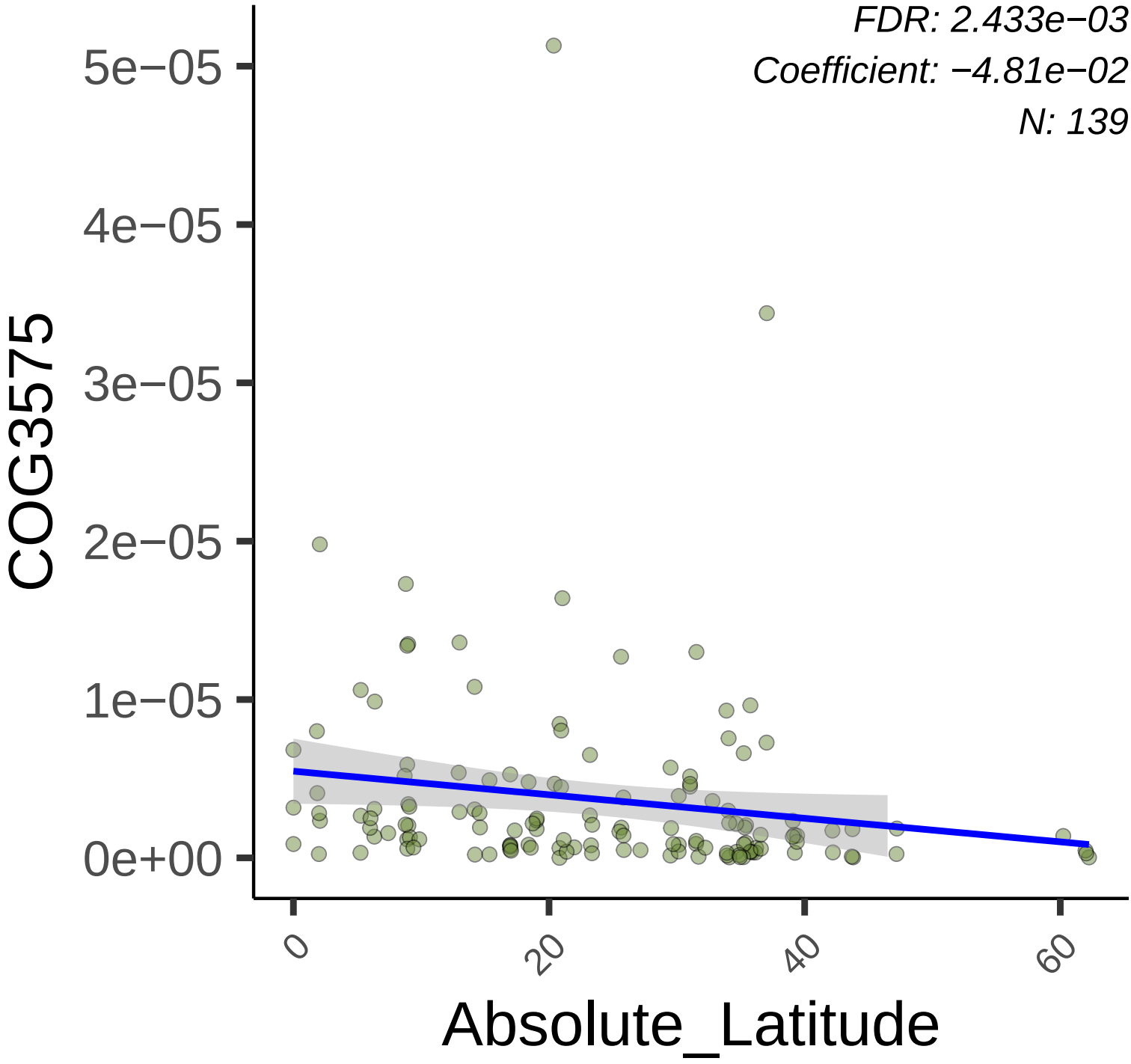

FDR: 2.318e−03
Coefficient: −3.84e−02
N: 139
1.25e−05
1.00e−05
7.50e−06
5.00e−06
2.50e−06
0.00e+00
COG5419
0
20
40
60
Absolute_Latitude

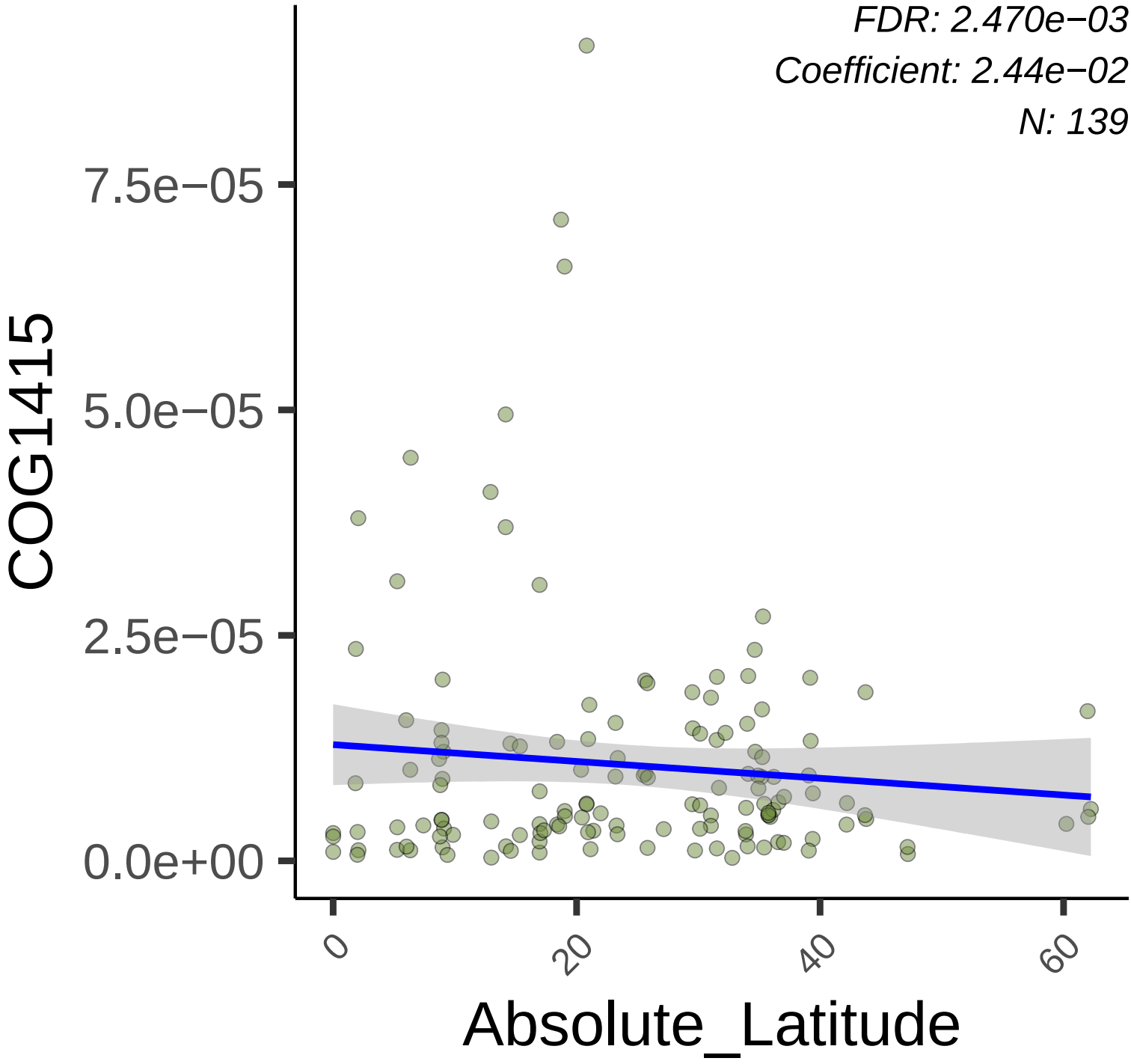

FDR: 2.321e−03
Coefficient: 1.37e−02
N: 139
COG5452
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

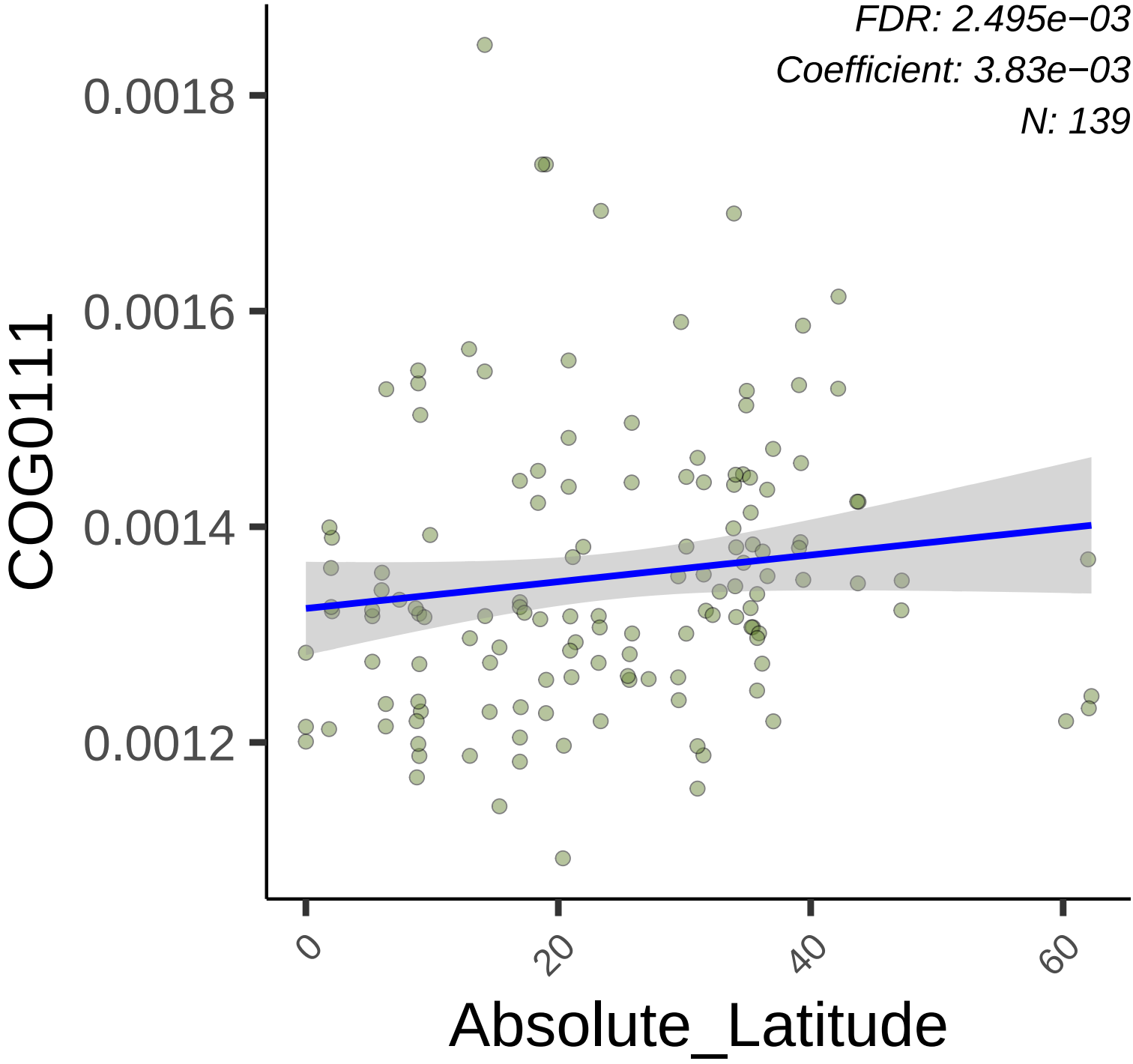

FDR: 2.370e−03
Coefficient: −1.33e−02
N: 139
0.00015
0.00010
0.00005
COG0246
0
20
40
60
Absolute_Latitude

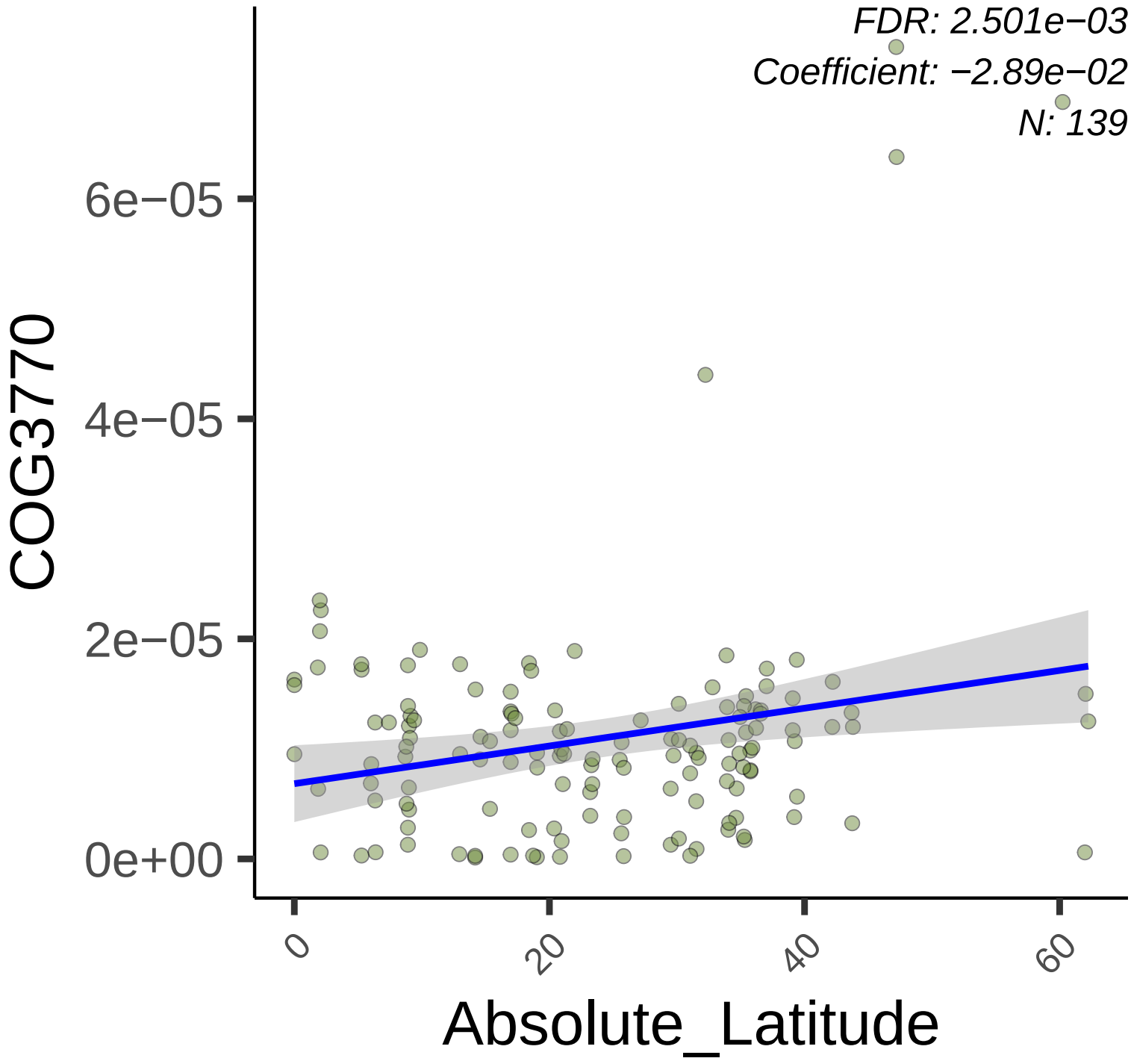

FDR: 2.392e−03
Coefficient: −8.36e−03
N: 139
COG0789
0.0012
0.0009
0.0006
0.0003
0
20
40
60
Absolute_Latitude

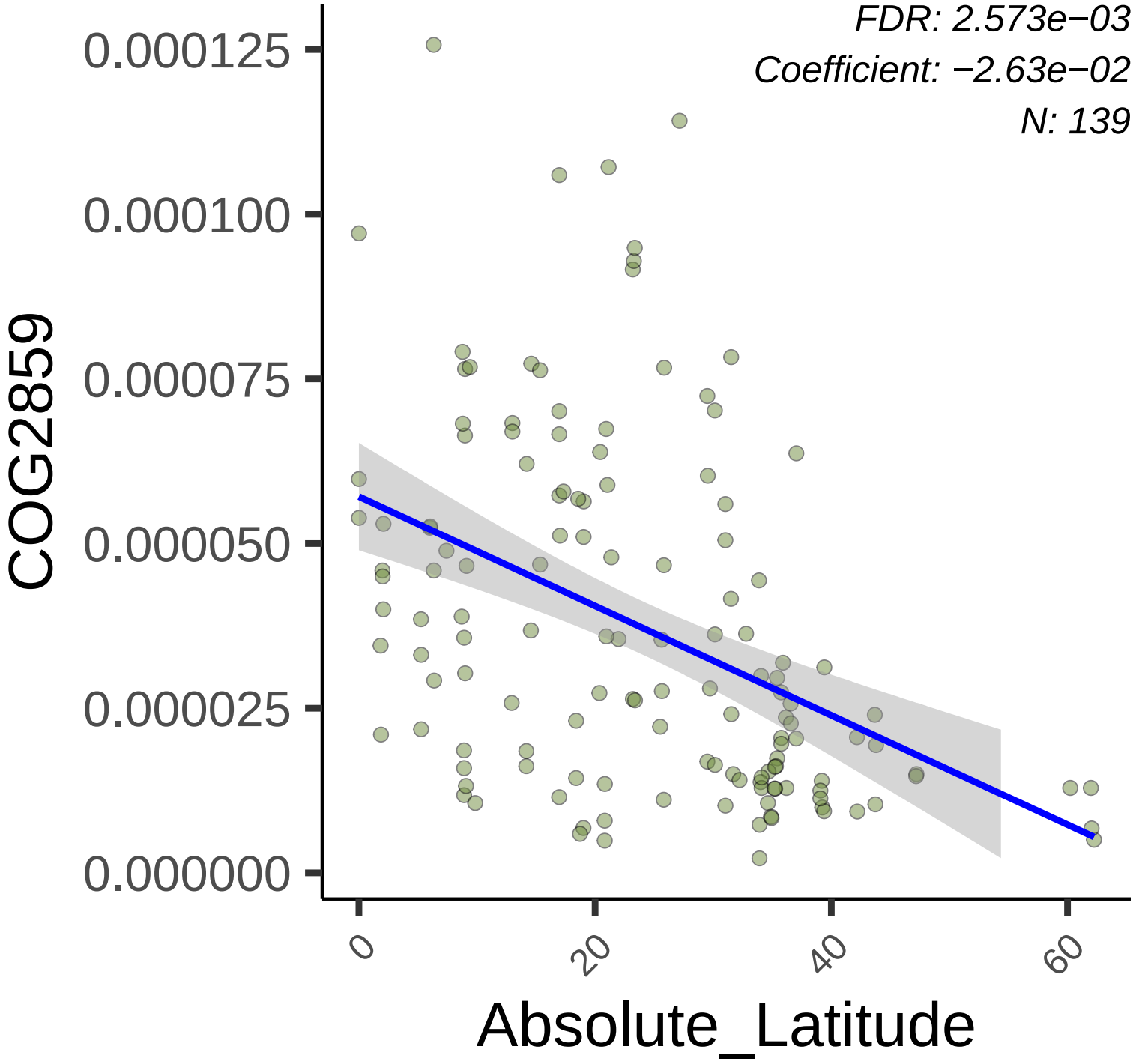

FDR: 2.424e−03
Coefficient: 5.97e−03
N: 139
0.00150
0.00125
0.00100
0.00075
COG1033
0
20
40
60
Absolute_Latitude

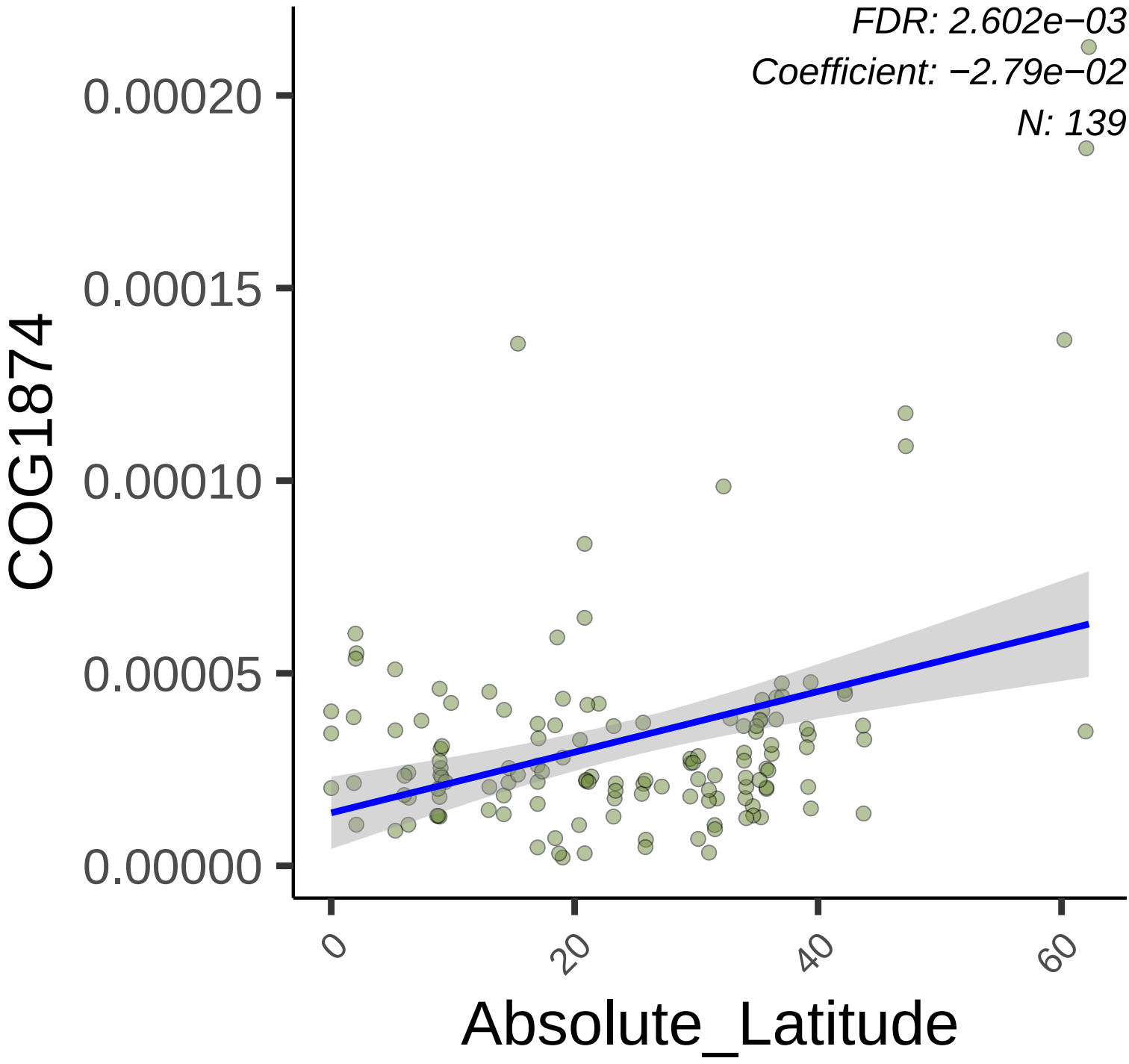

FDR: 2.433e−03
Coefficient: −4.81e−02
N: 139
COG3575
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

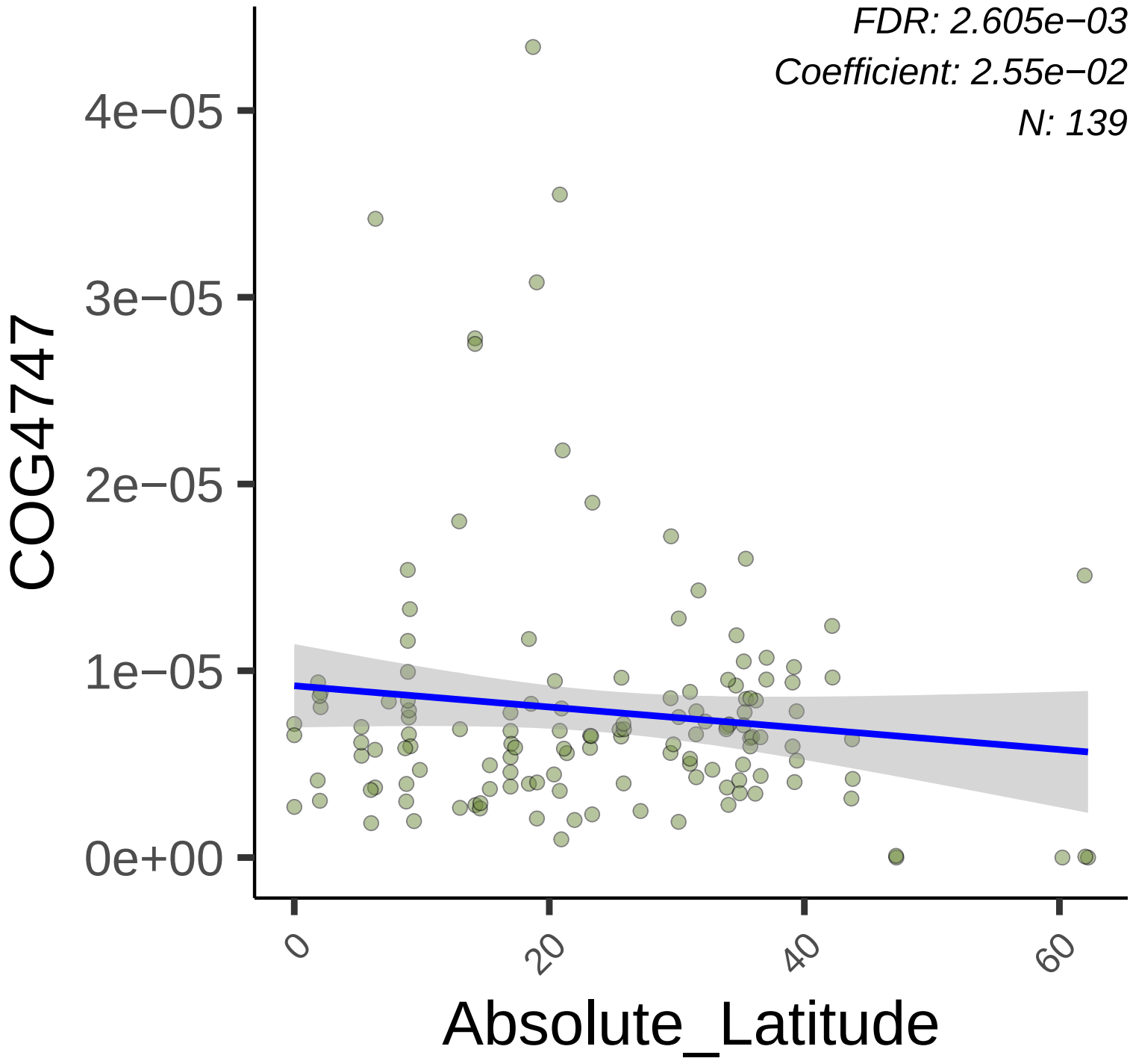

FDR: 2.470e−03
Coefficient: 2.44e−02
N: 139
COG1415
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

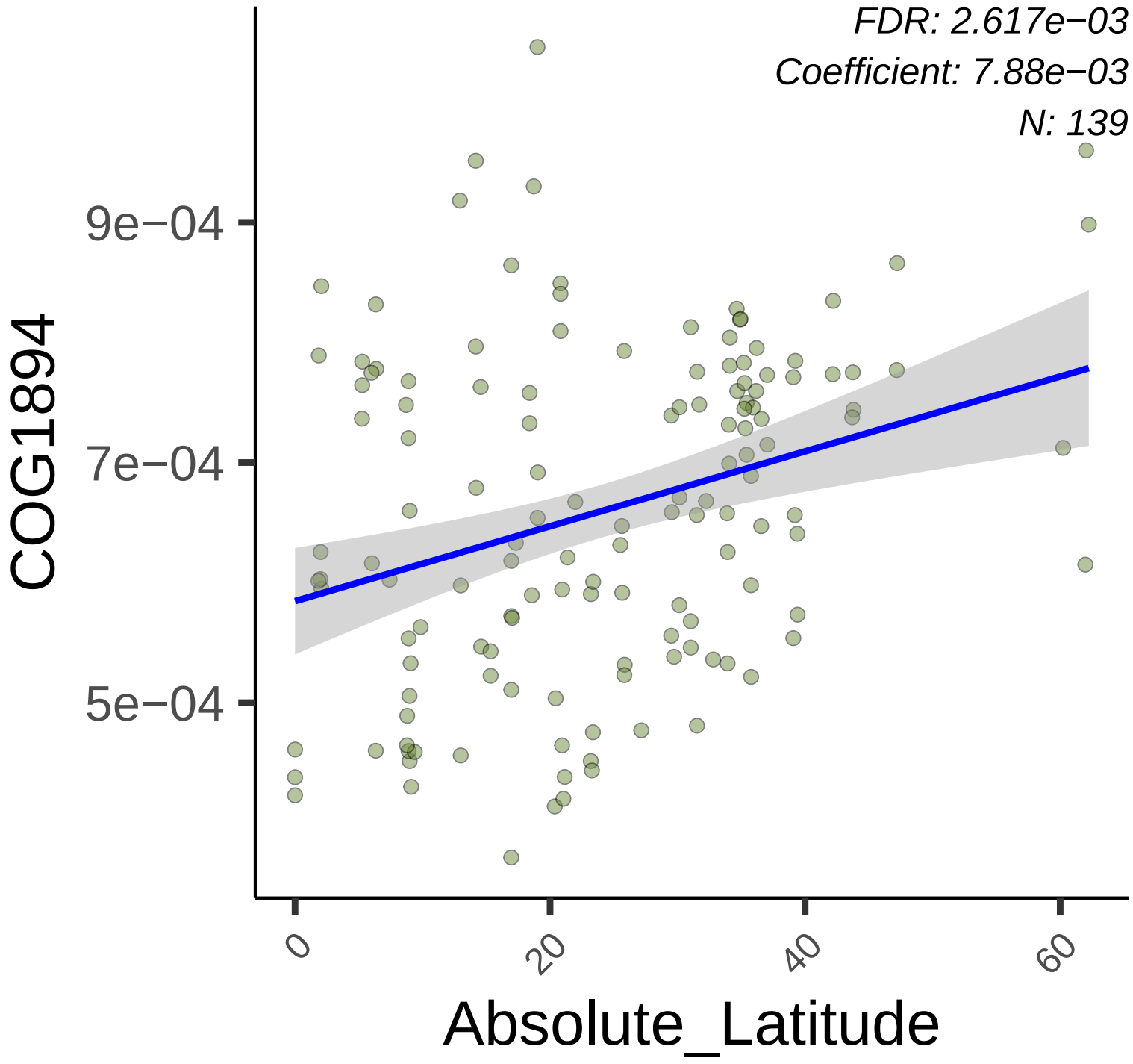

FDR: 2.495e−03
Coefficient: 3.83e−03
N: 139
0.0018
0.0016
0.0014
0.0012
COG0111
0
20
40
60
Absolute_Latitude

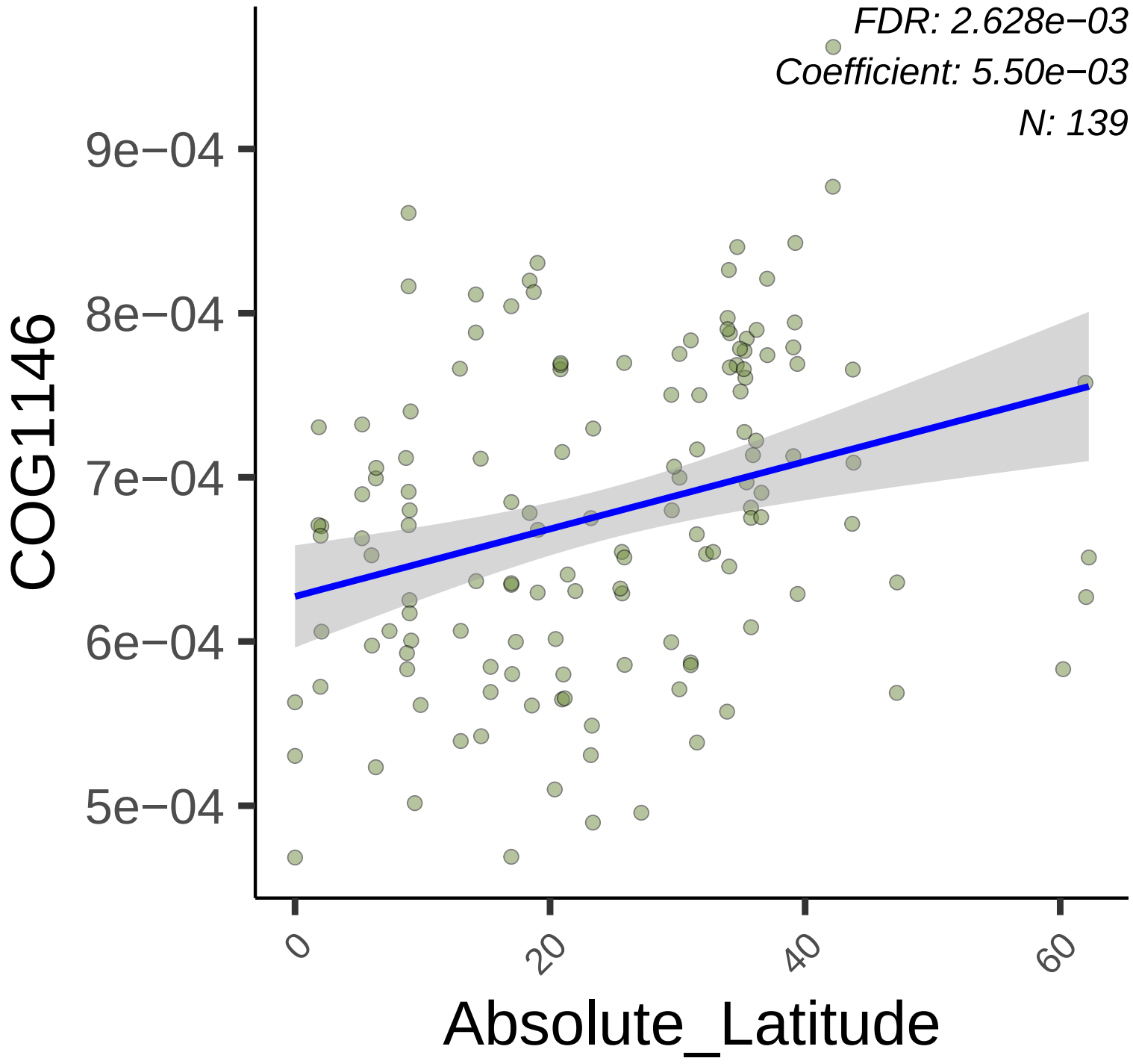

FDR: 2.501e−03
Coefficient: −2.89e−02
N: 139
COG3770
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

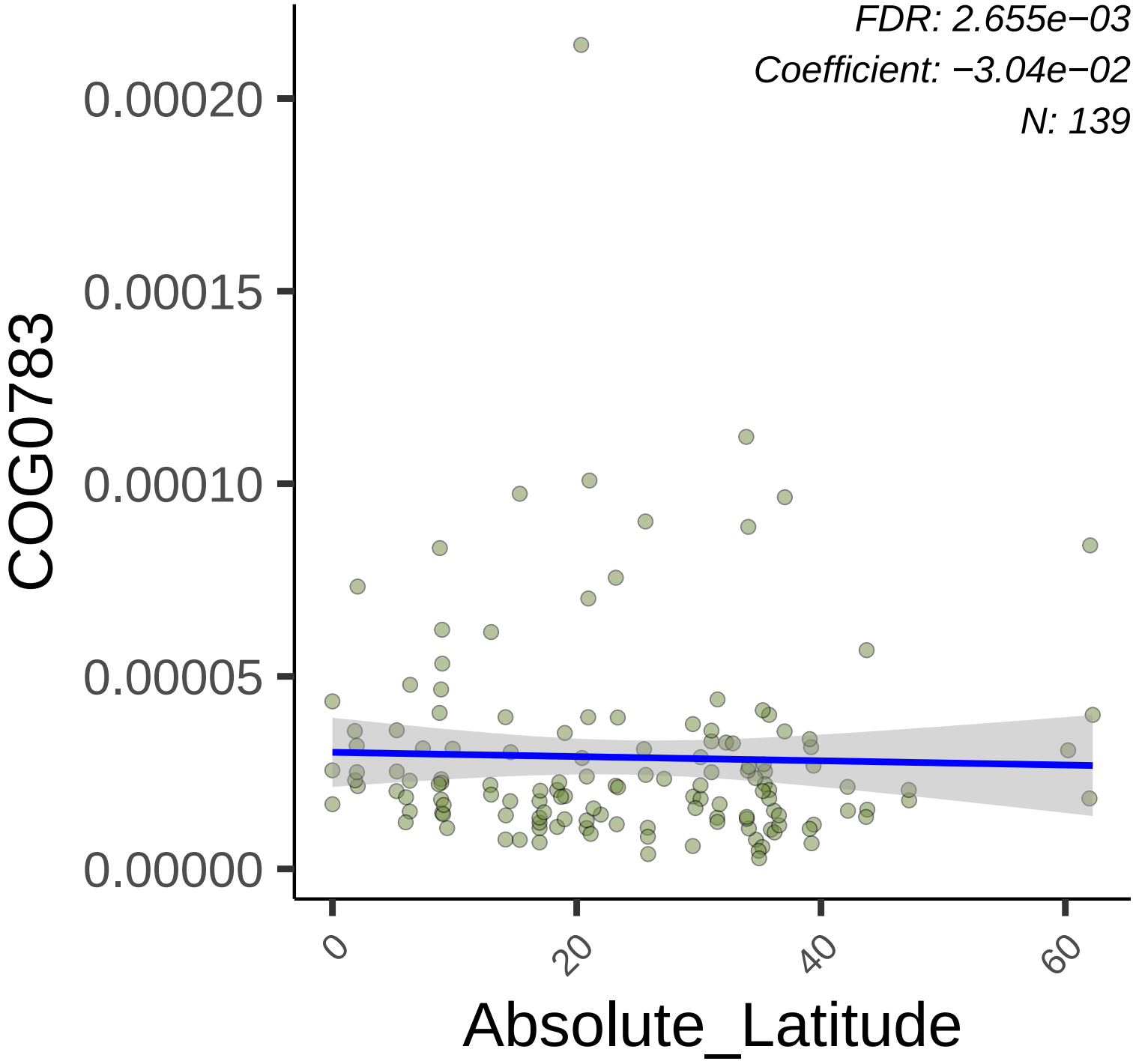

FDR: 2.573e−03
Coefficient: −2.63e−02
N: 139
COG2859
0.000125
0.000100
0.000075
0.000050
0.000025
0.000000
0
20
40
60
Absolute_Latitude

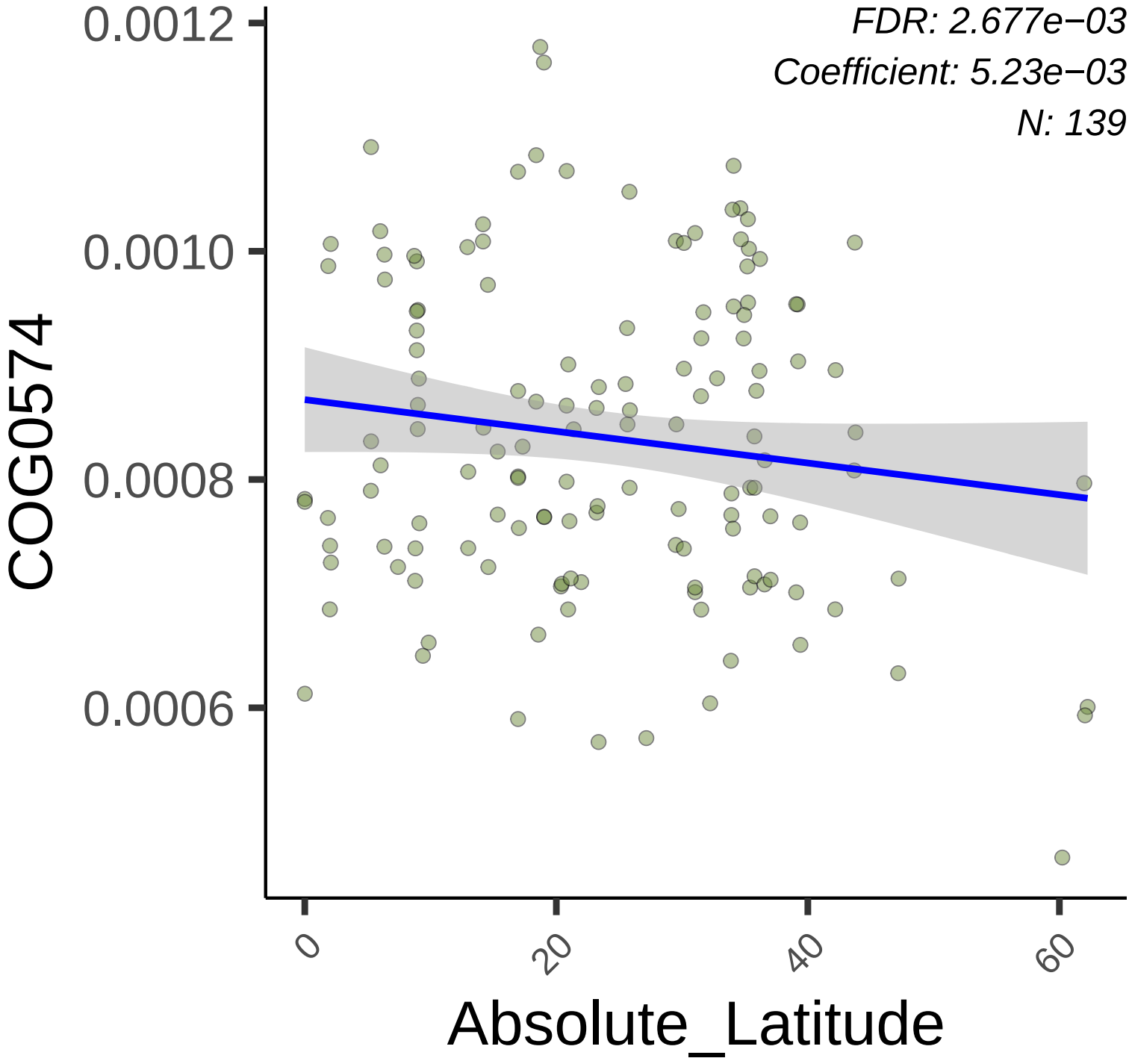

FDR: 2.602e−03
Coefficient: −2.79e−02
N: 139
COG1874
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

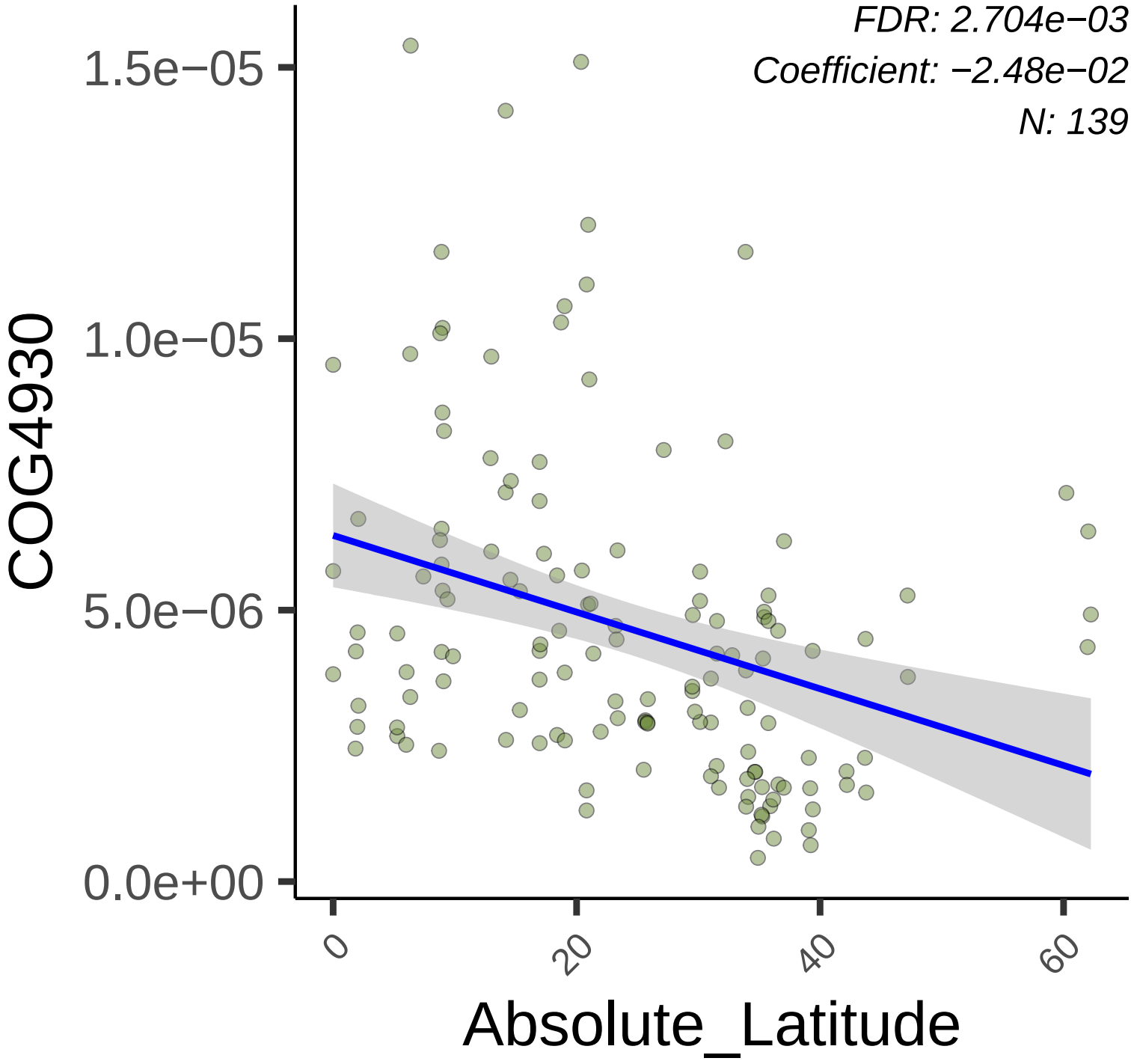

FDR: 2.605e−03
Coefficient: 2.55e−02
N: 139
COG4747
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

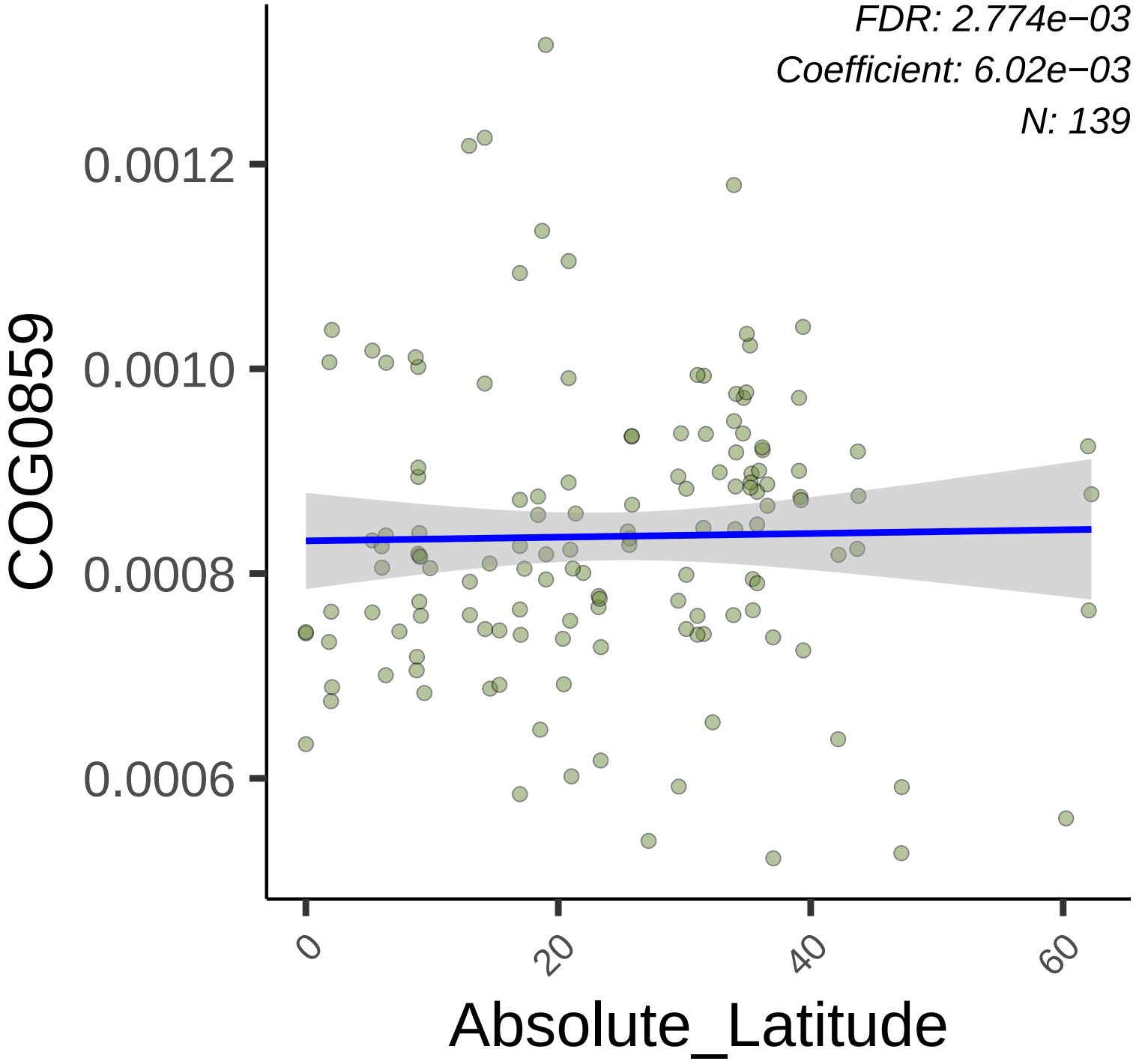

FDR: 2.617e−03
Coefficient: 7.88e−03
N: 139
COG1894
9e−04
7e−04
5e−04
0
20
40
60
Absolute_Latitude

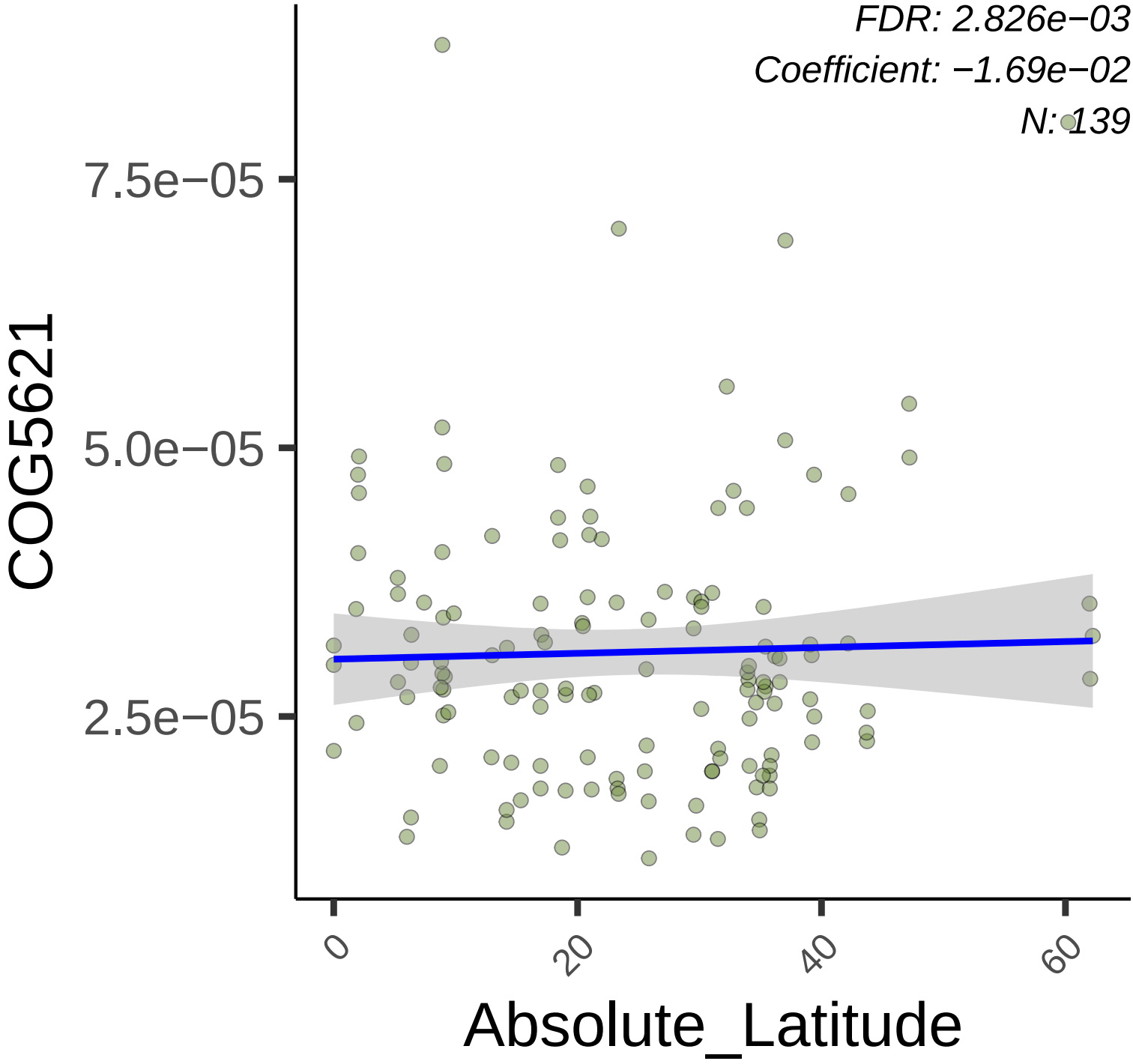

FDR: 2.628e−03
Coefficient: 5.50e−03
N: 139
COG1146
9e−04
8e−04
7e−04
6e−04
5e−04
0
20
40
60
Absolute_Latitude

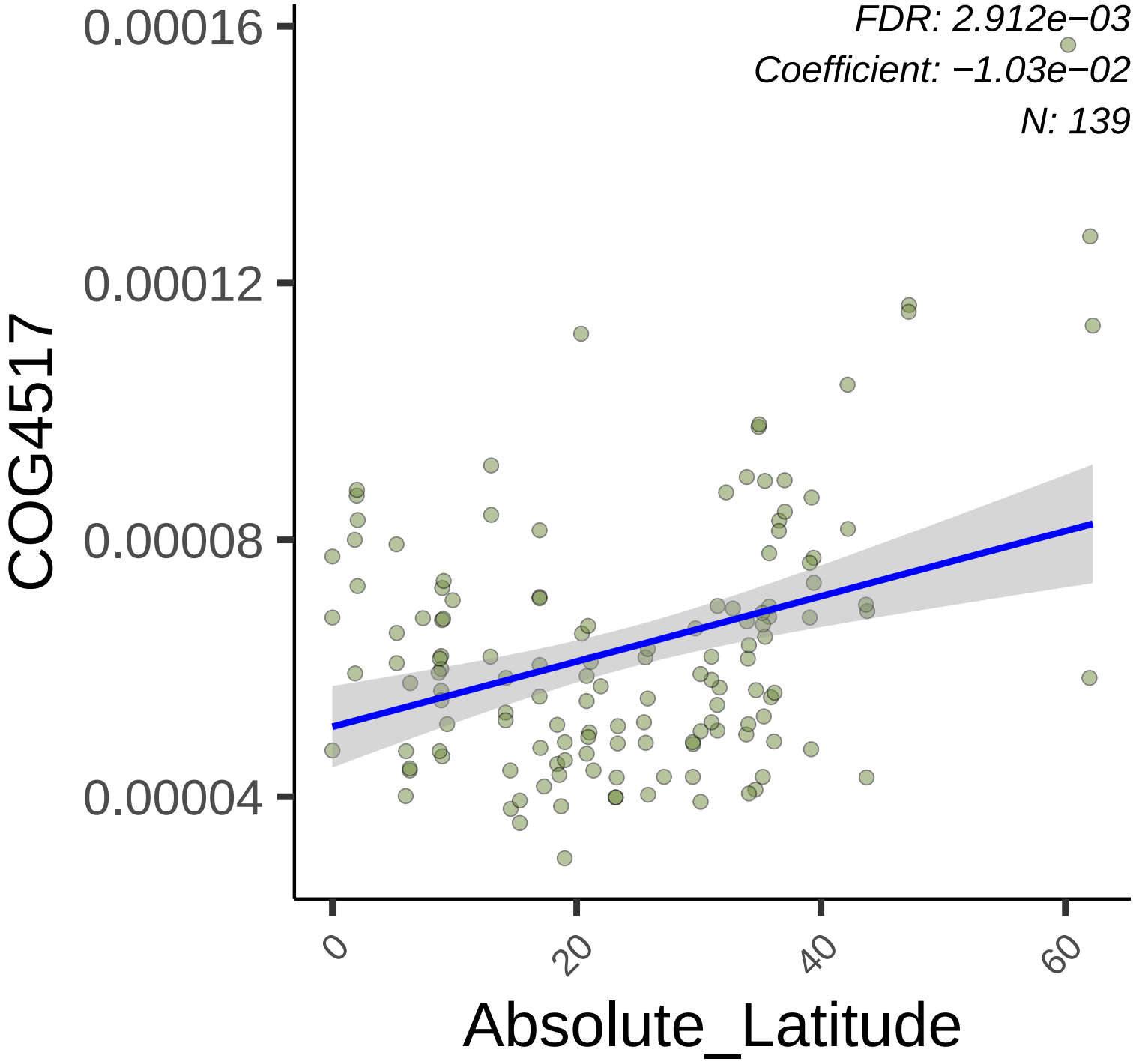

FDR: 2.655e−03
Coefficient: −3.04e−02
N: 139
COG0783
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

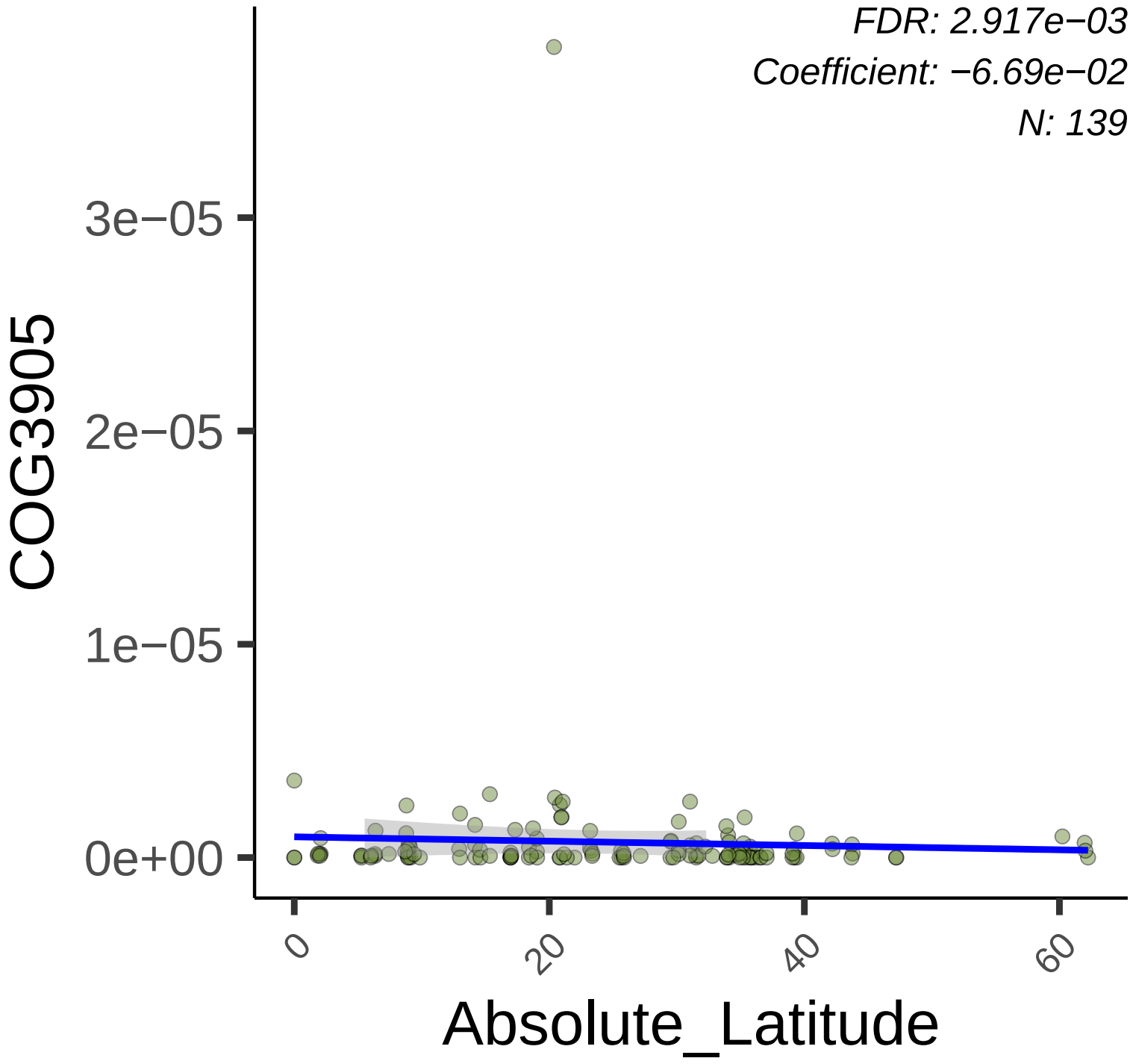

FDR: 2.677e−03
Coefficient: 5.23e−03
N: 139
0.0012
0.0010
0.0008
0.0006
COG0574
0
20
40
60
Absolute_Latitude

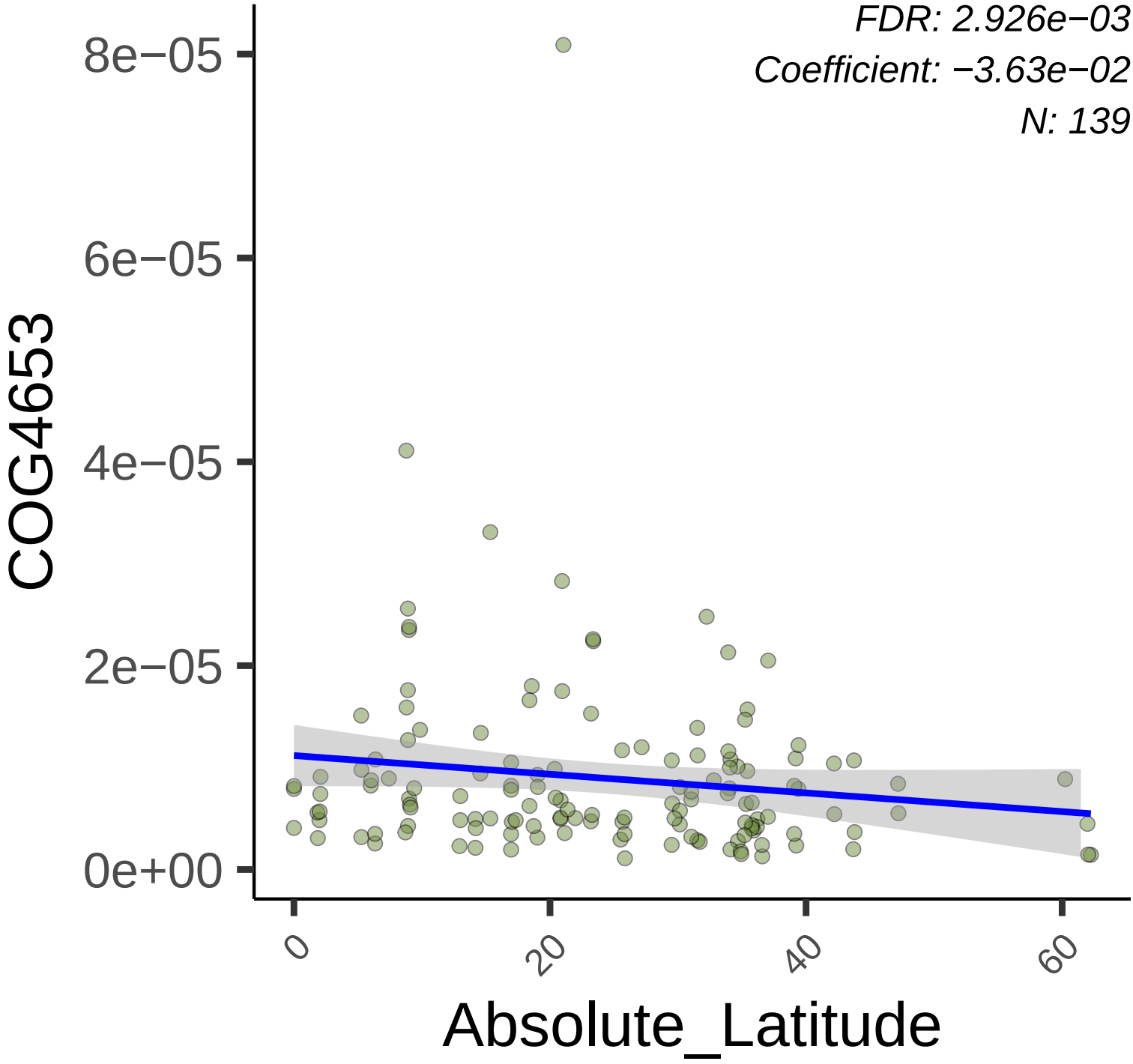

FDR: 2.704e−03
Coefficient: −2.48e−02
N: 139
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG4930
0
20
40
60
Absolute_Latitude

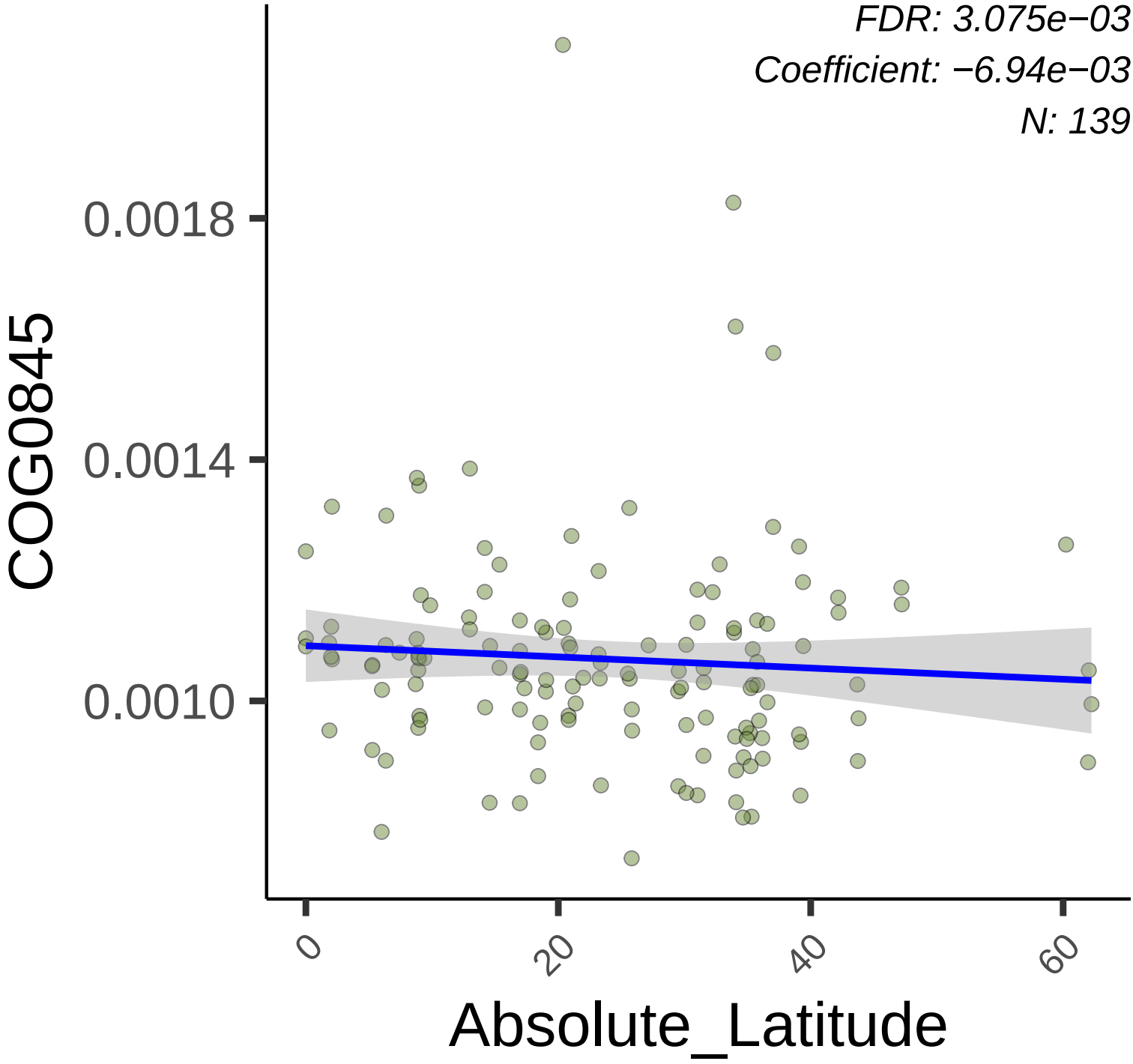

FDR: 2.774e−03
Coefficient: 6.02e−03
N: 139
COG0859
0.0012
0.0010
0.0008
0.0006
0
20
40
60
Absolute_Latitude

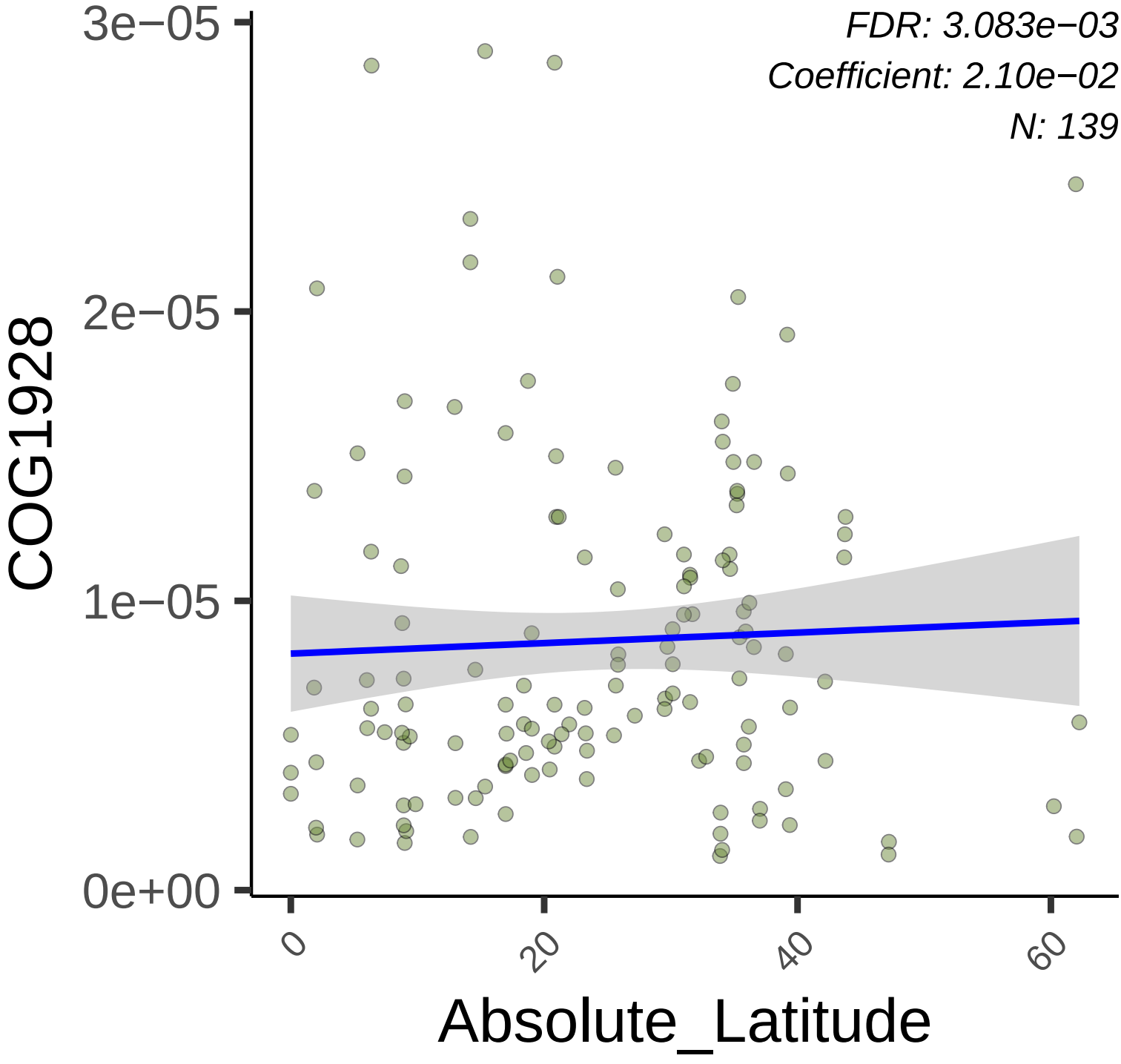

FDR: 2.826e−03
Coefficient: −1.69e−02
N: 139
7.5e−05
5.0e−05
2.5e−05
COG5621
0
20
40
60
Absolute_Latitude

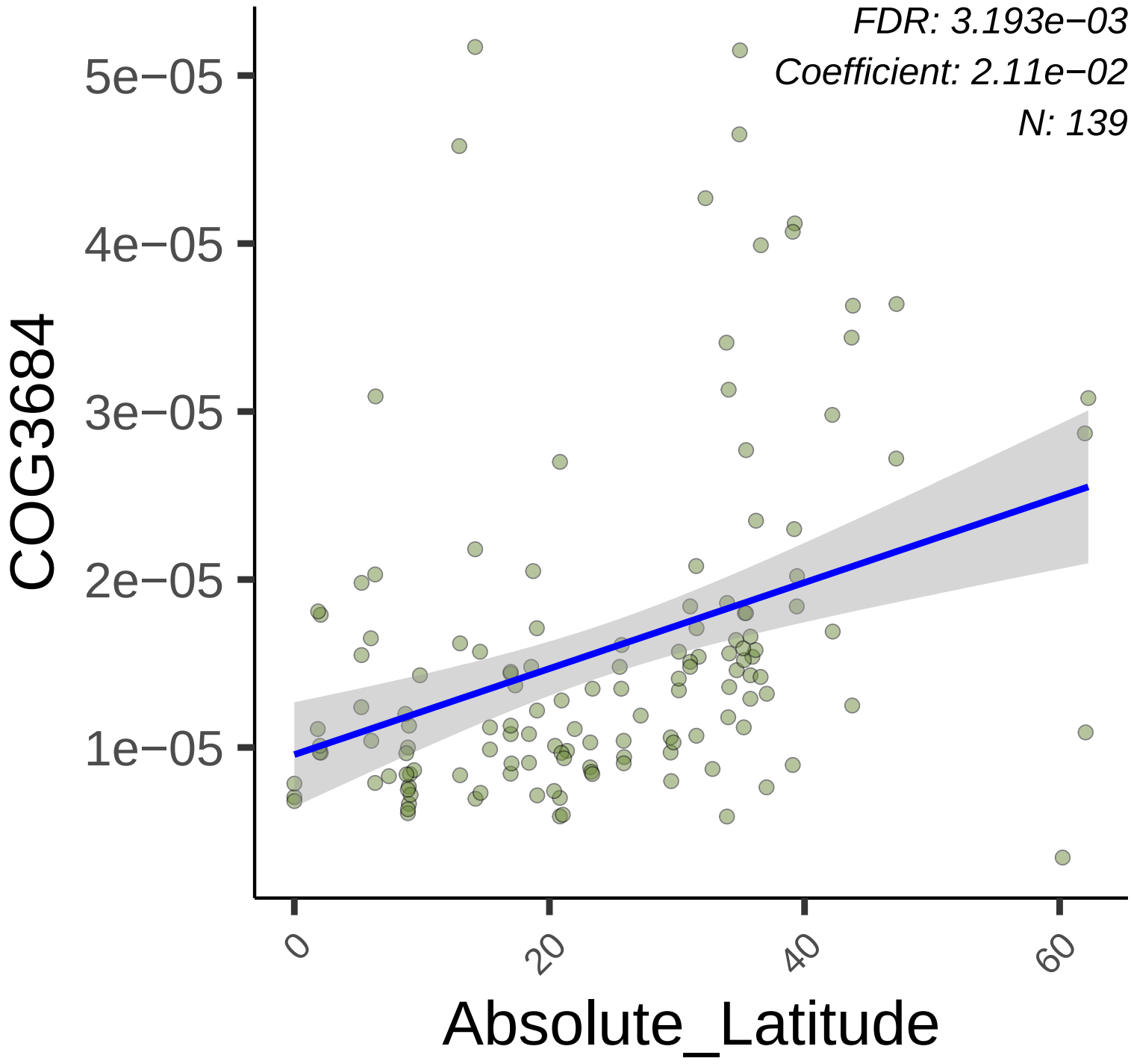

FDR: 2.912e−03
Coefficient: −1.03e−02
N: 139
0.00016
0.00012
0.00008
0.00004
COG4517
0
20
40
60
Absolute_Latitude

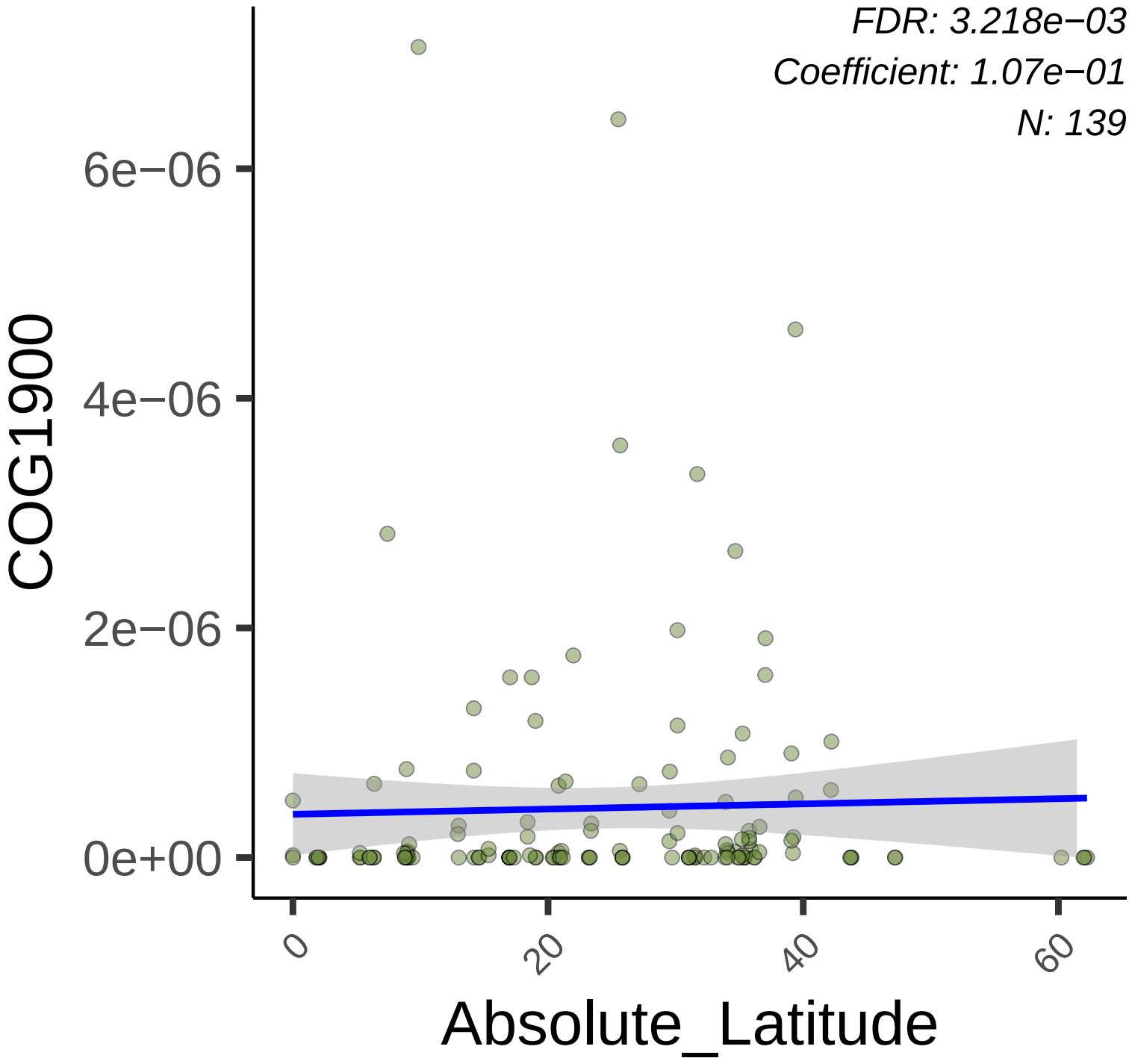

FDR: 2.917e−03
Coefficient: −6.69e−02
N: 139
COG3905
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

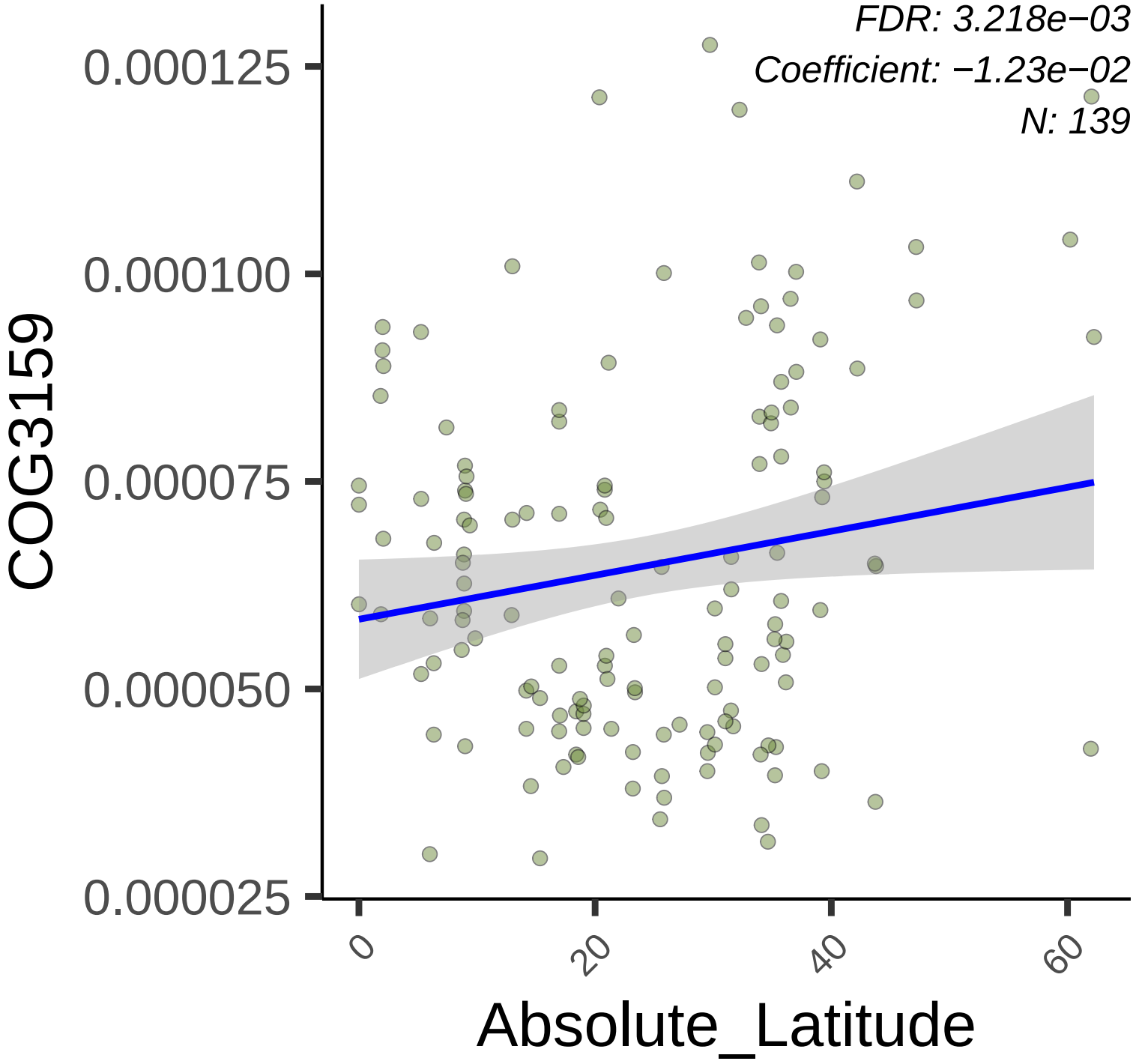

FDR: 2.926e−03
Coefficient: −3.63e−02
N: 139
COG4653
8e−05
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

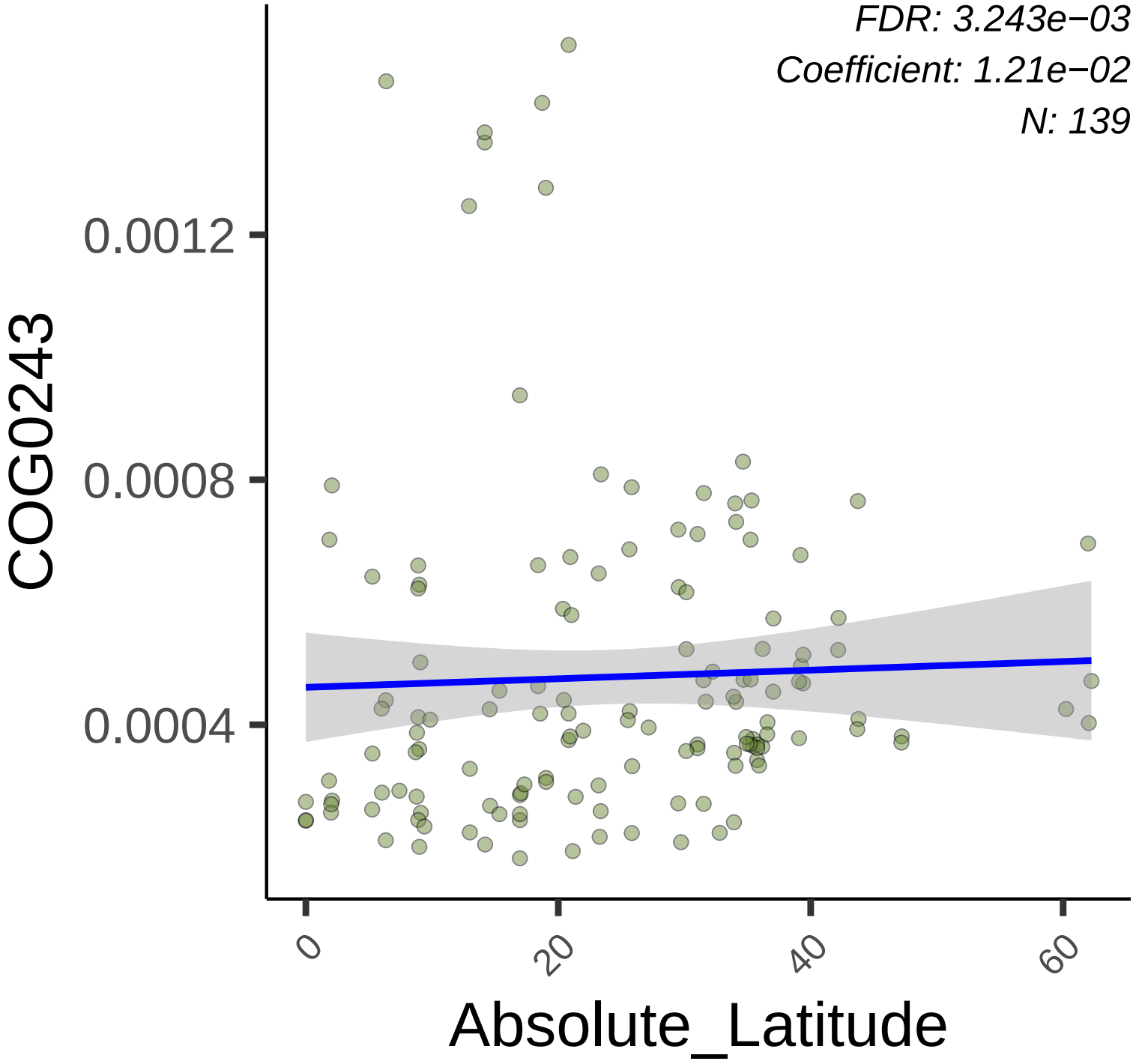

FDR: 3.075e−03
Coefficient: −6.94e−03
N: 139
COG0845
0.0018
0.0014
0.0010
0
20
40
60
Absolute_Latitude

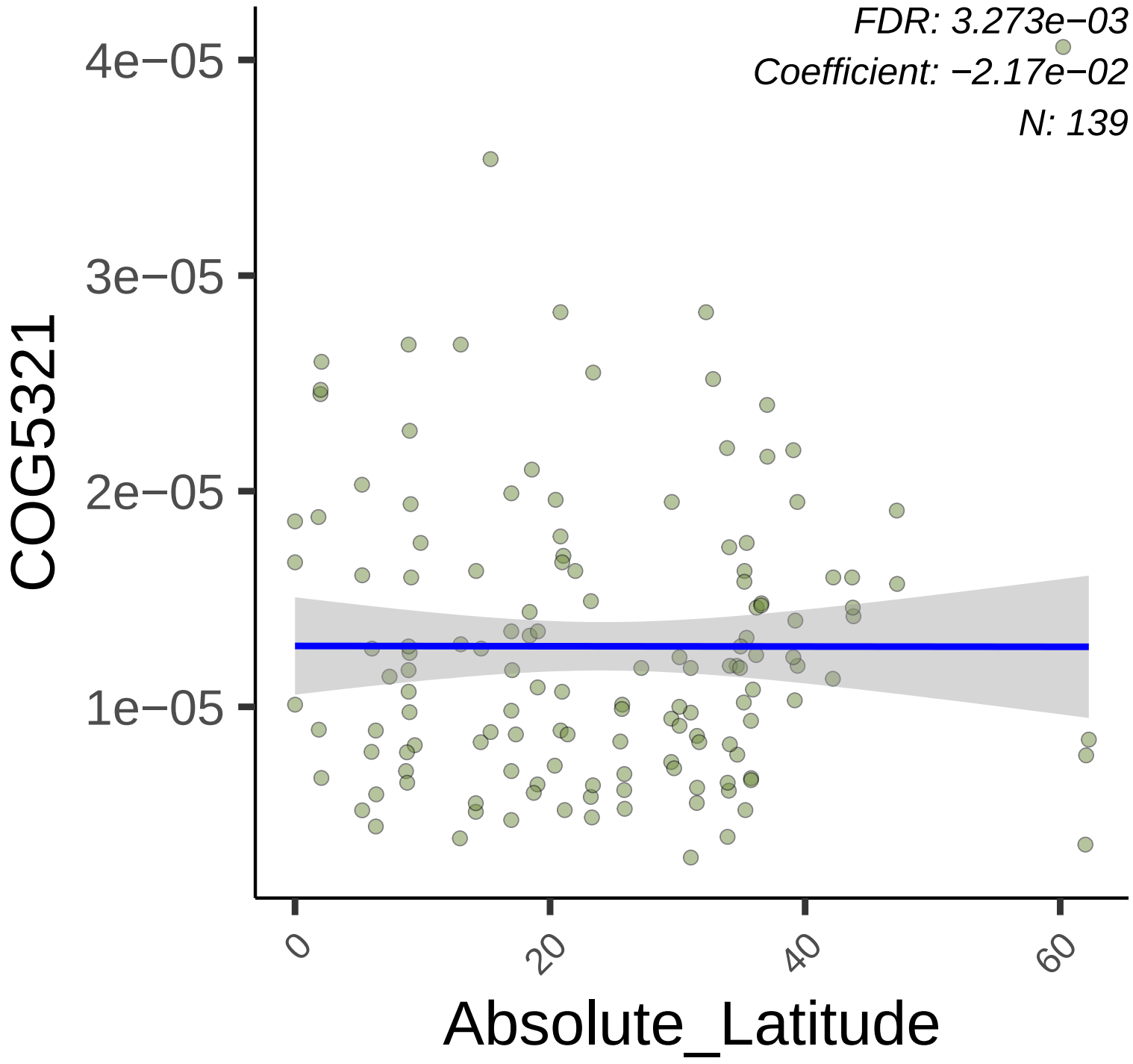

FDR: 3.083e−03
Coefficient: 2.10e−02
N: 139
3e−05
2e−05
1e−05
0e+00
COG1928
0
20
40
60
Absolute_Latitude

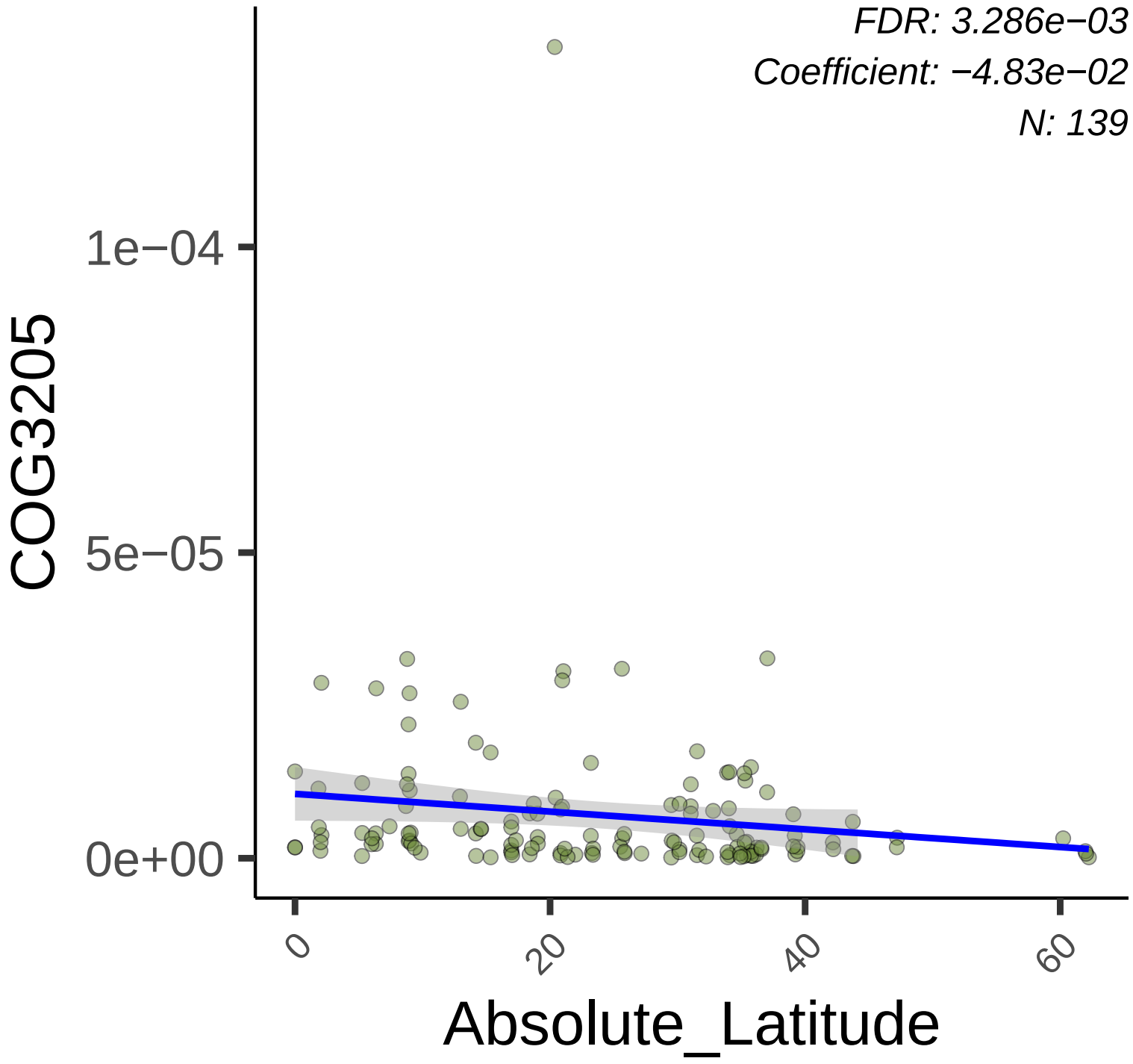

FDR: 3.193e−03
Coefficient: 2.11e−02
N: 139
5e−05
4e−05
3e−05
2e−05
1e−05
COG3684
0
20
40
60
Absolute_Latitude

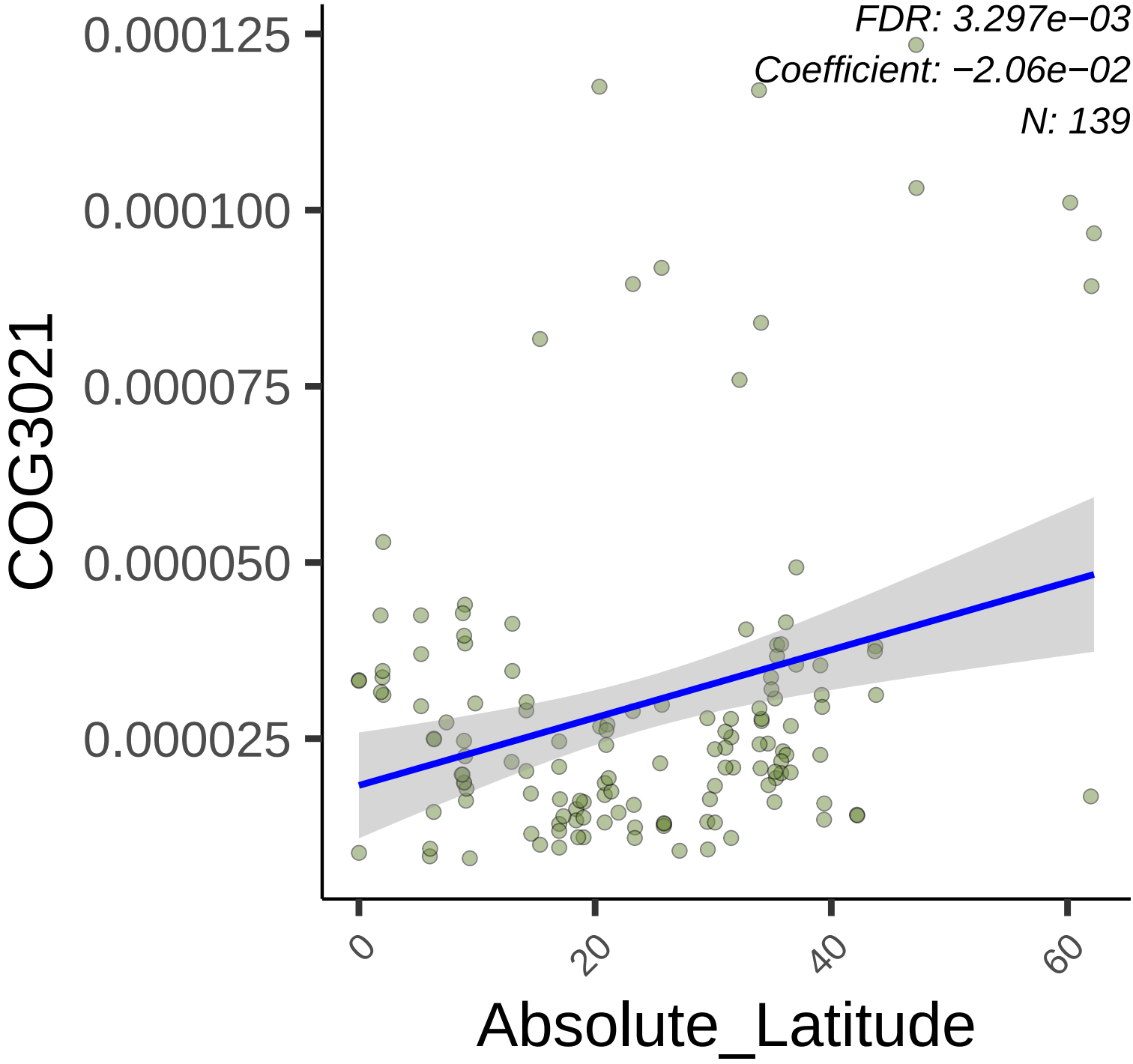

FDR: 3.218e−03
Coefficient: 1.07e−01
N: 139
COG1900
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

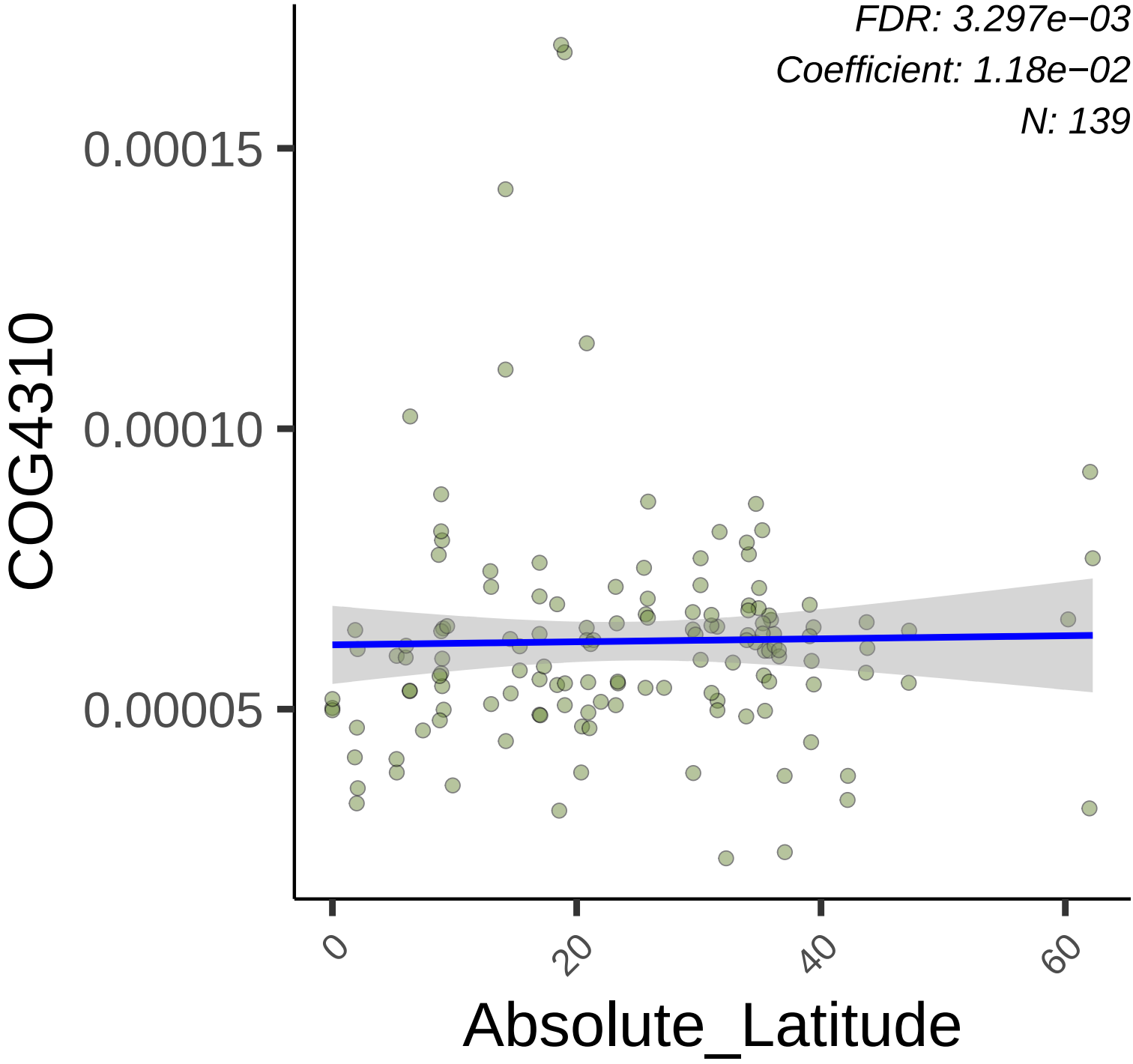

FDR: 3.218e−03
Coefficient: −1.23e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
COG3159
0
20
40
60
Absolute_Latitude

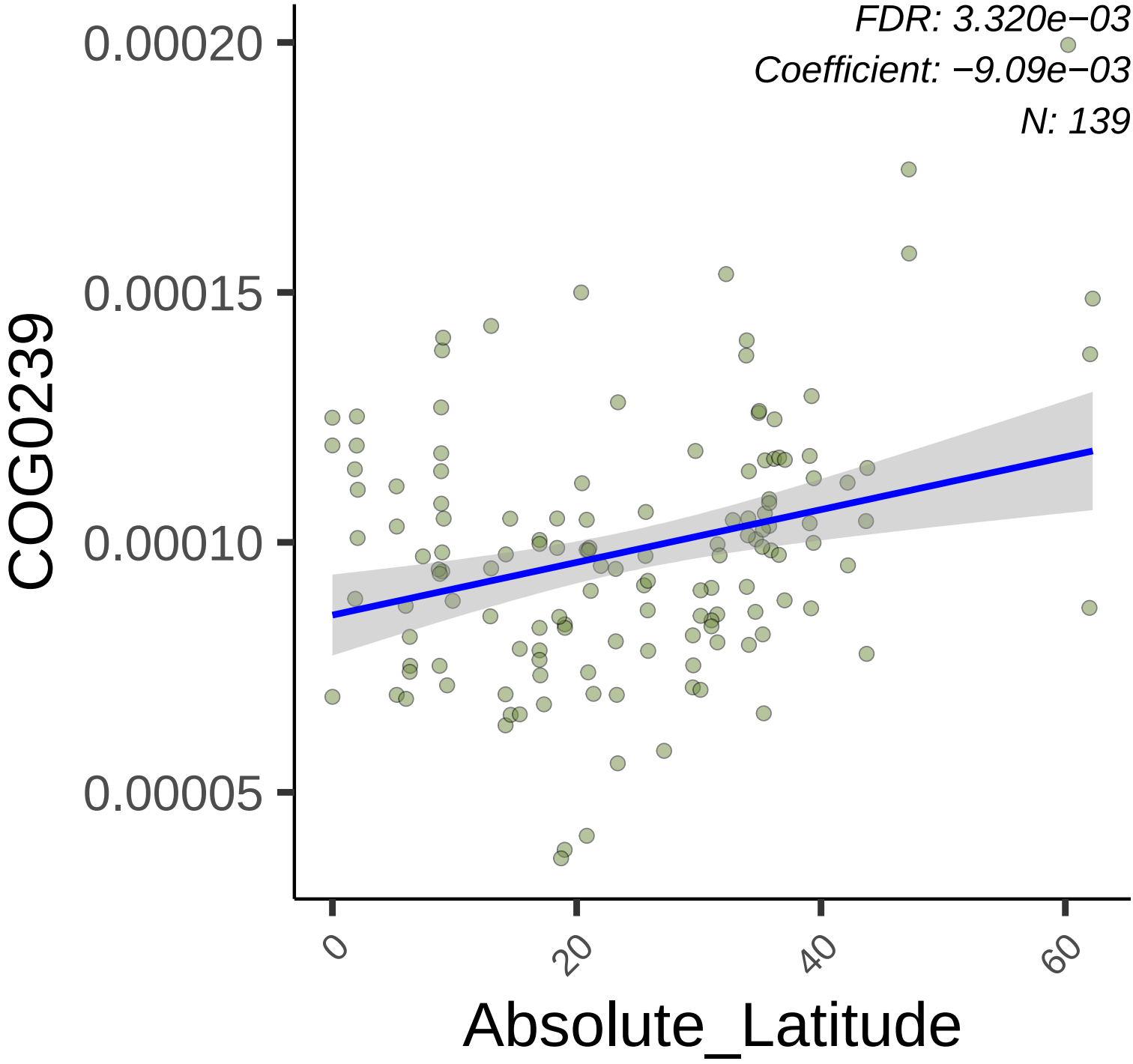

FDR: 3.243e−03
Coefficient: 1.21e−02
N: 139
COG0243
0.0012
0.0008
0.0004
0
20
40
60
Absolute_Latitude

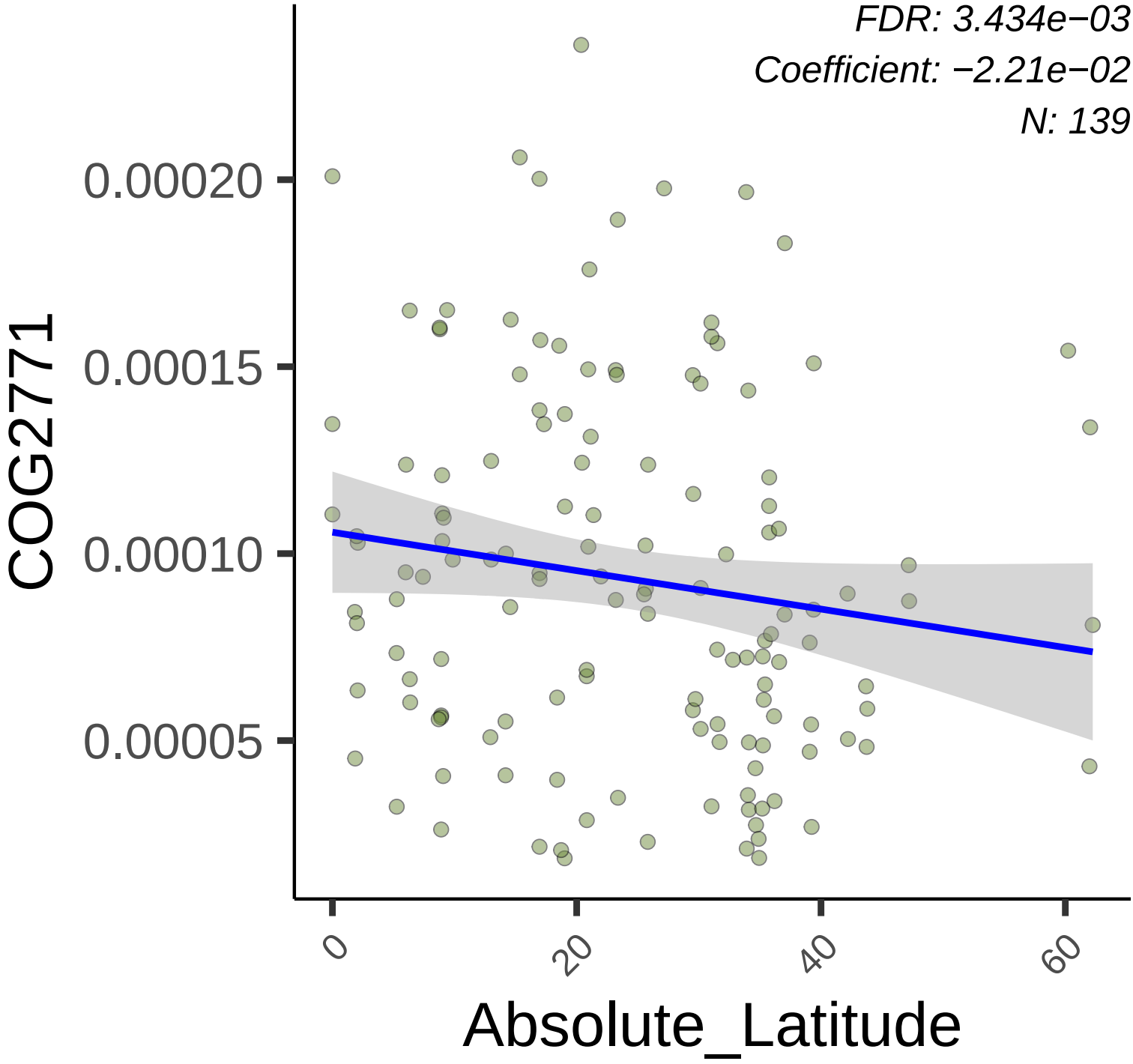

FDR: 3.273e−03
Coefficient: −2.17e−02
N: 139
4e−05
3e−05
2e−05
1e−05
COG5321
0
20
40
60
Absolute_Latitude

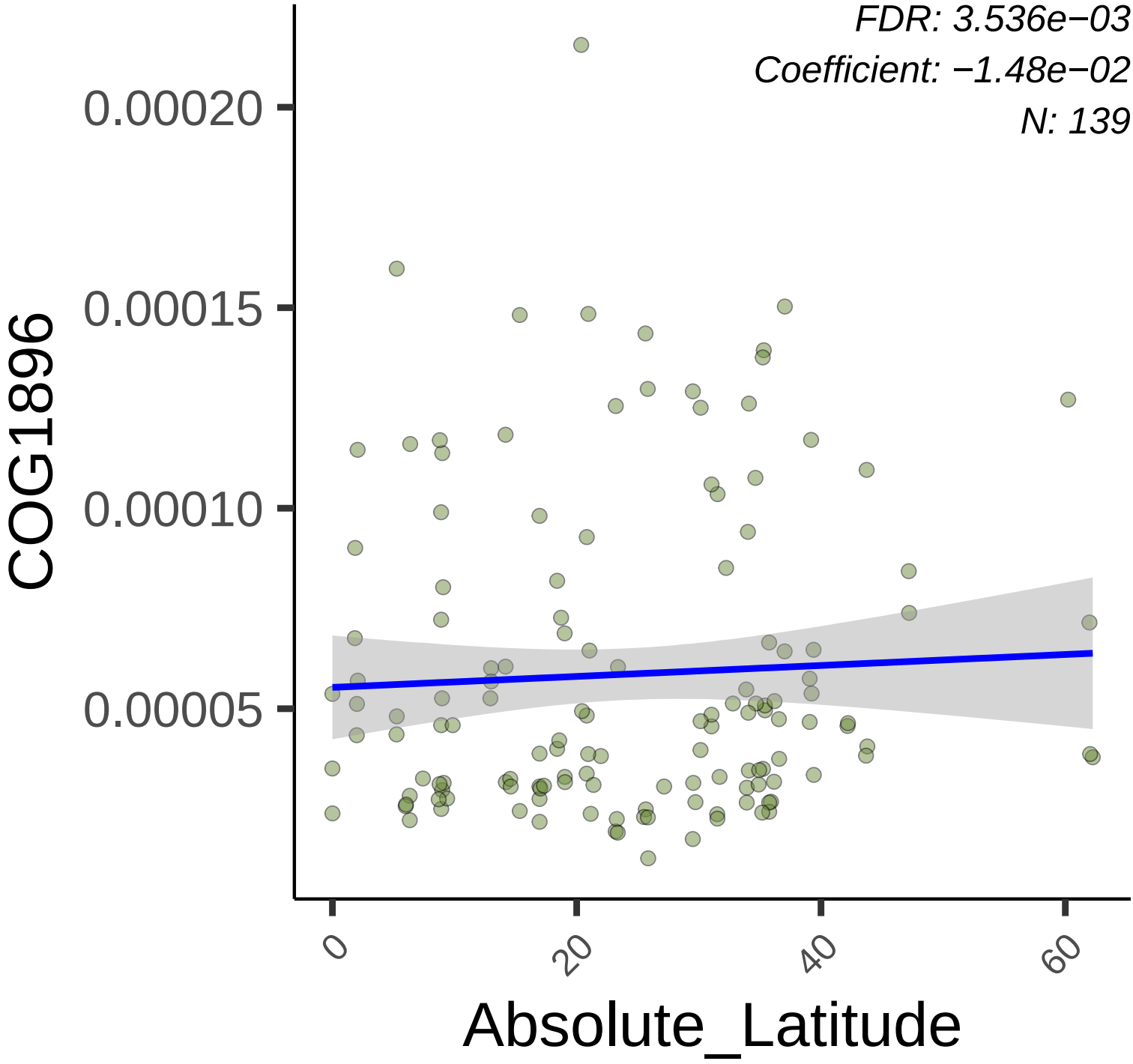

FDR: 3.286e−03
Coefficient: −4.83e−02
N: 139
COG3205
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

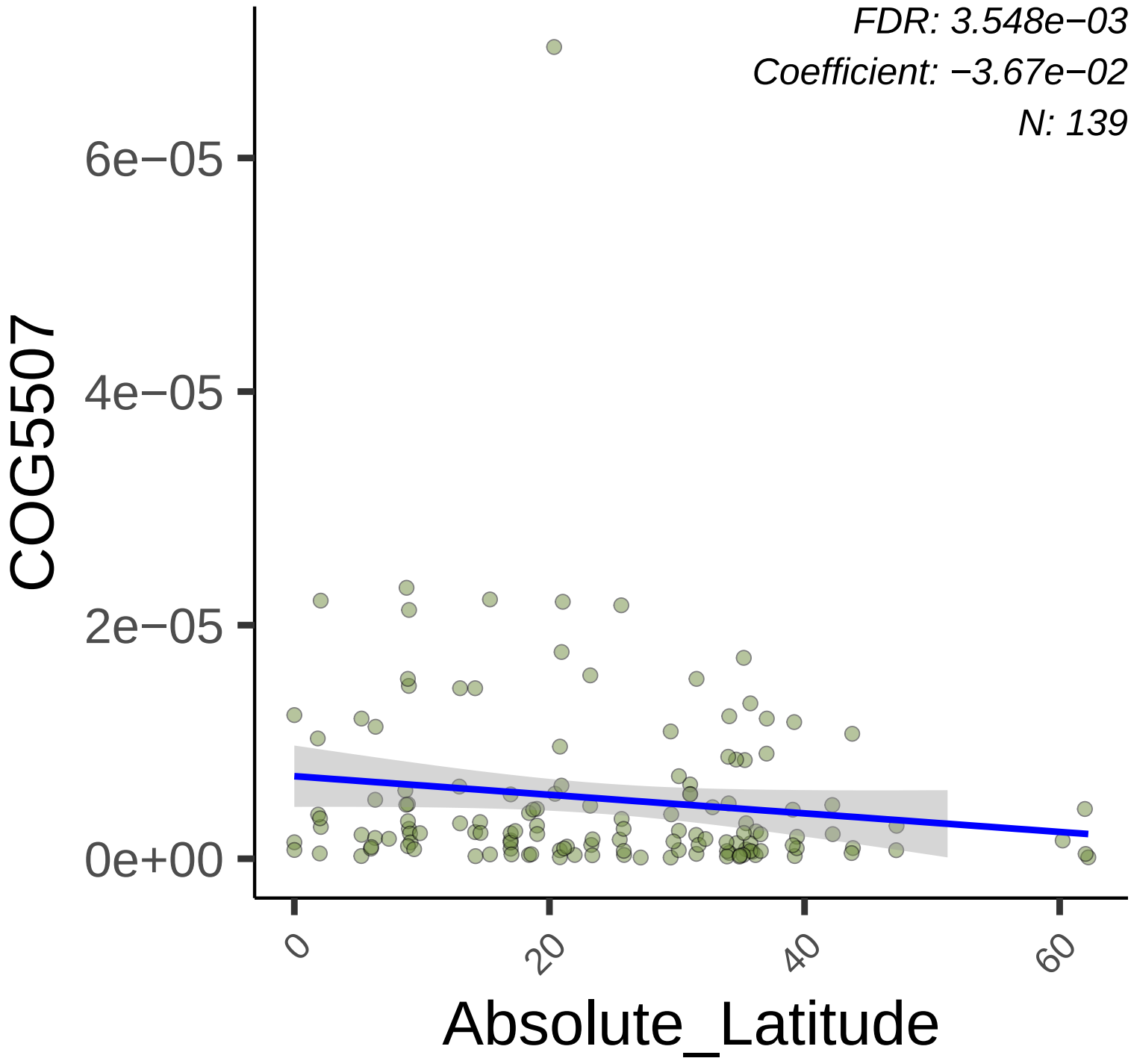

FDR: 3.297e−03
Coefficient: −2.06e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
COG3021
0
20
40
60
Absolute_Latitude

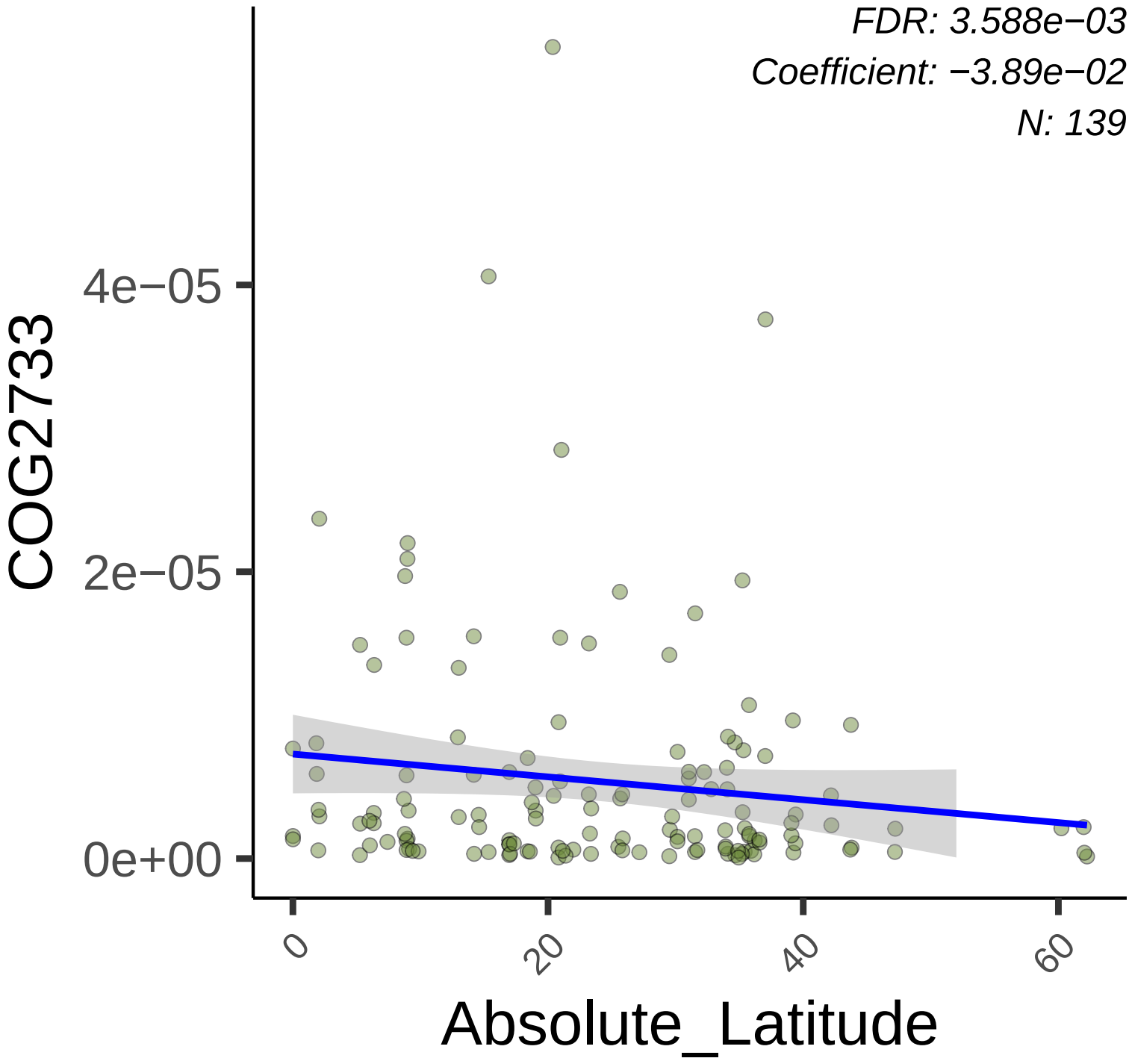

FDR: 3.297e−03
Coefficient: 1.18e−02
N: 139
0.00015
0.00010
0.00005
COG4310
0
20
40
60
Absolute_Latitude

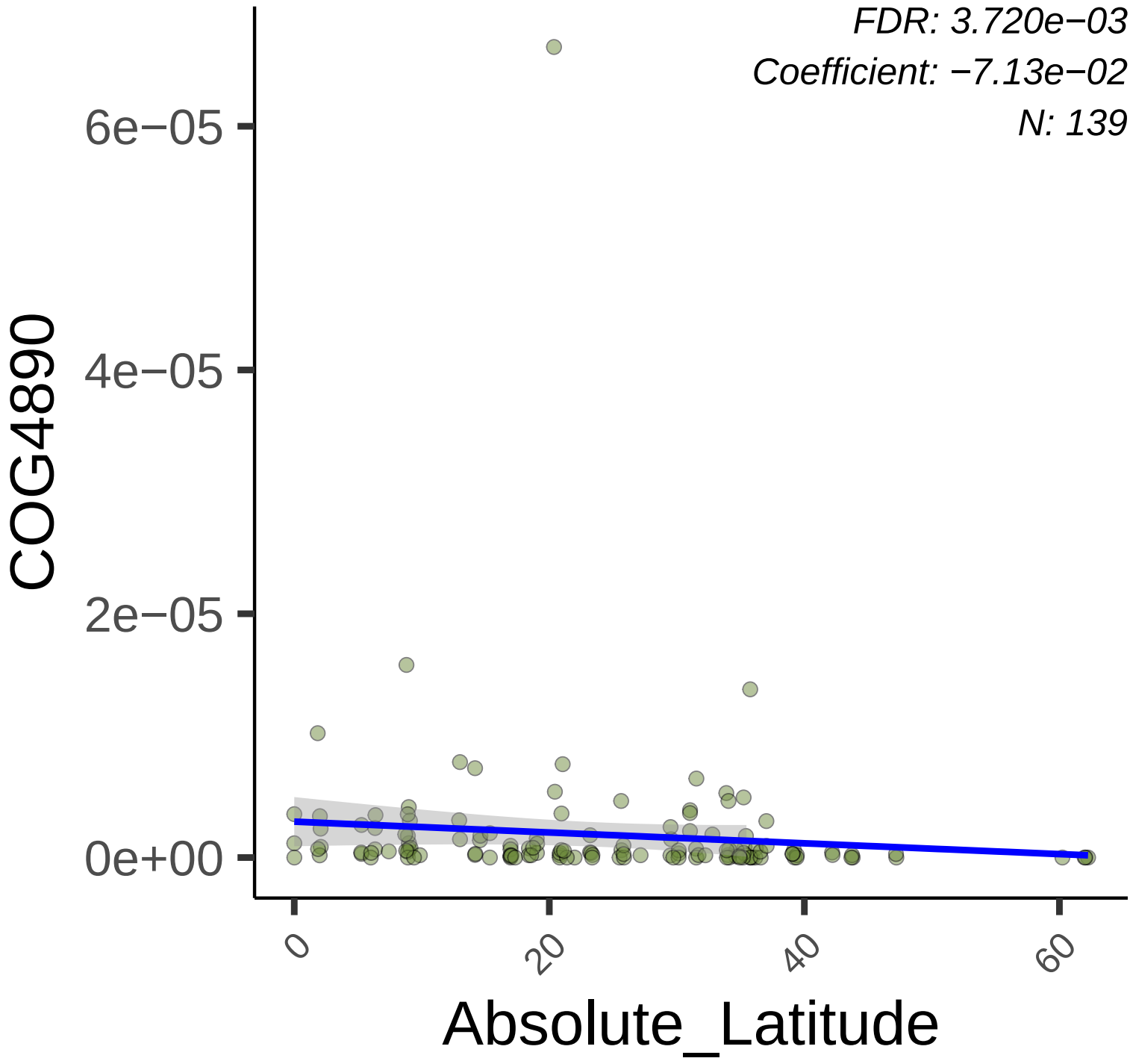

FDR: 3.320e−03
Coefficient: −9.09e−03
N: 139
0.00020
0.00015
0.00010
0.00005
COG0239
0
20
40
60
Absolute_Latitude

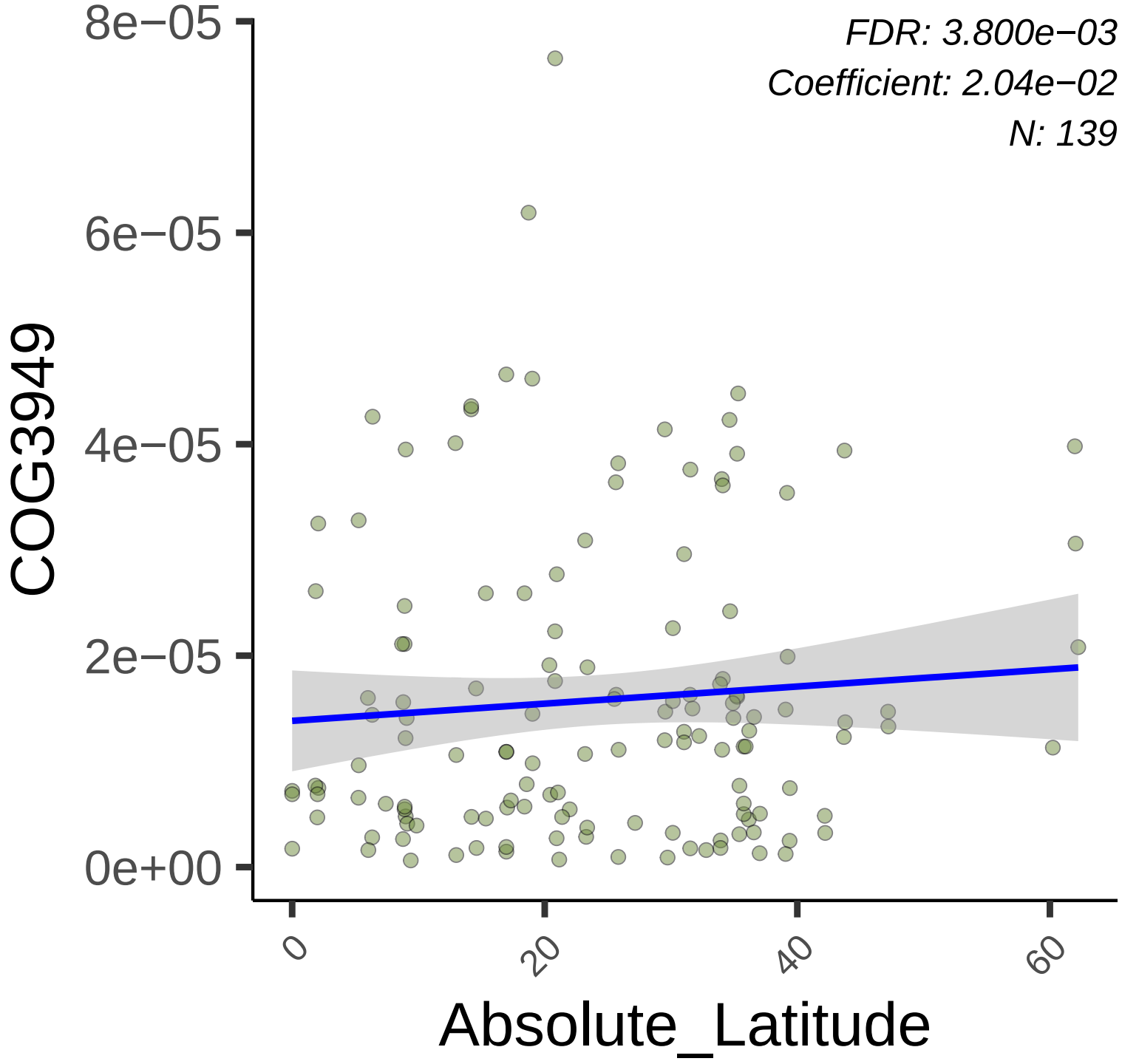

FDR: 3.434e−03
Coefficient: −2.21e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG2771
0
20
40
60
Absolute_Latitude

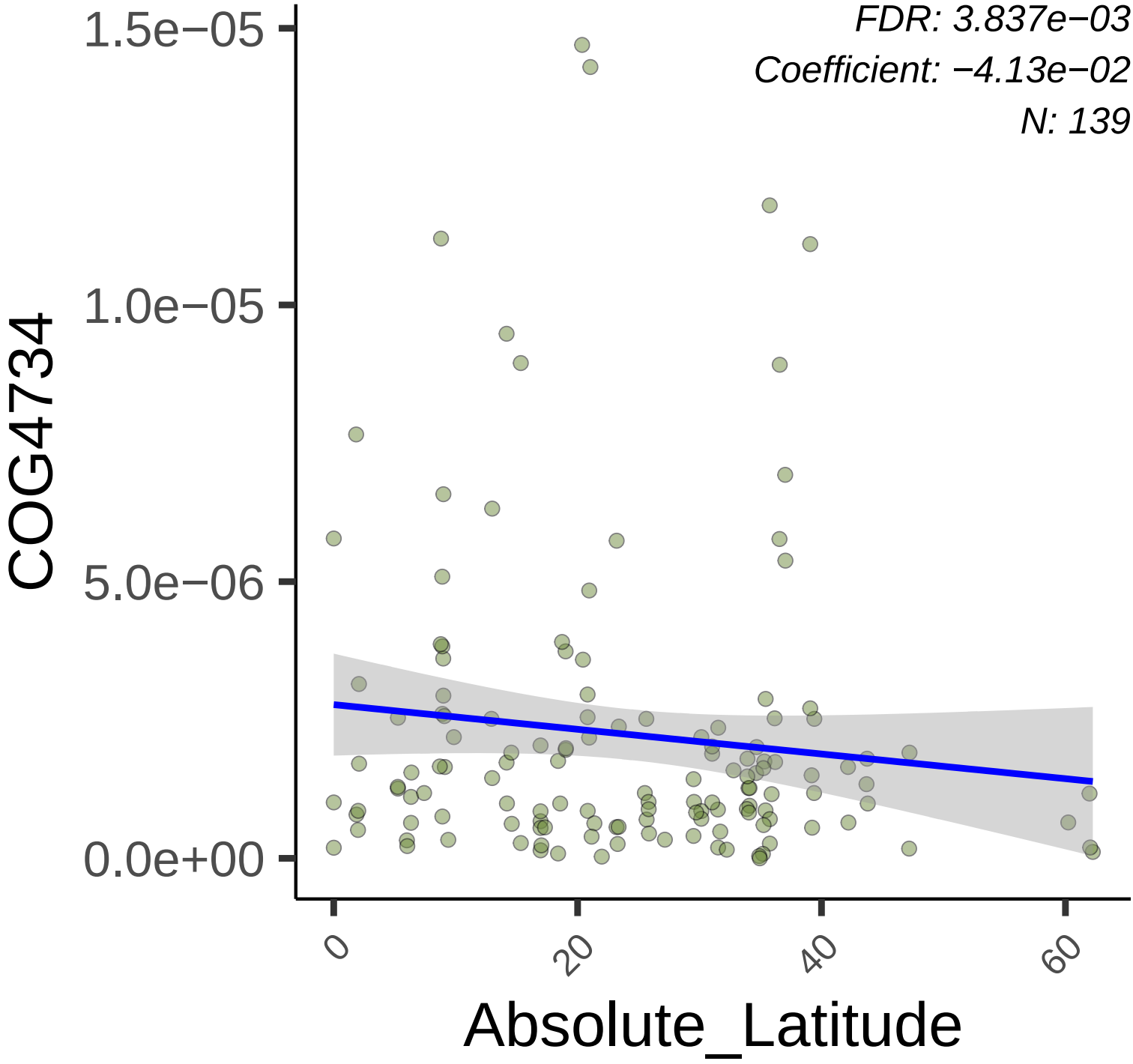

FDR: 3.536e−03
Coefficient: −1.48e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG1896
0
20
40
60
Absolute_Latitude

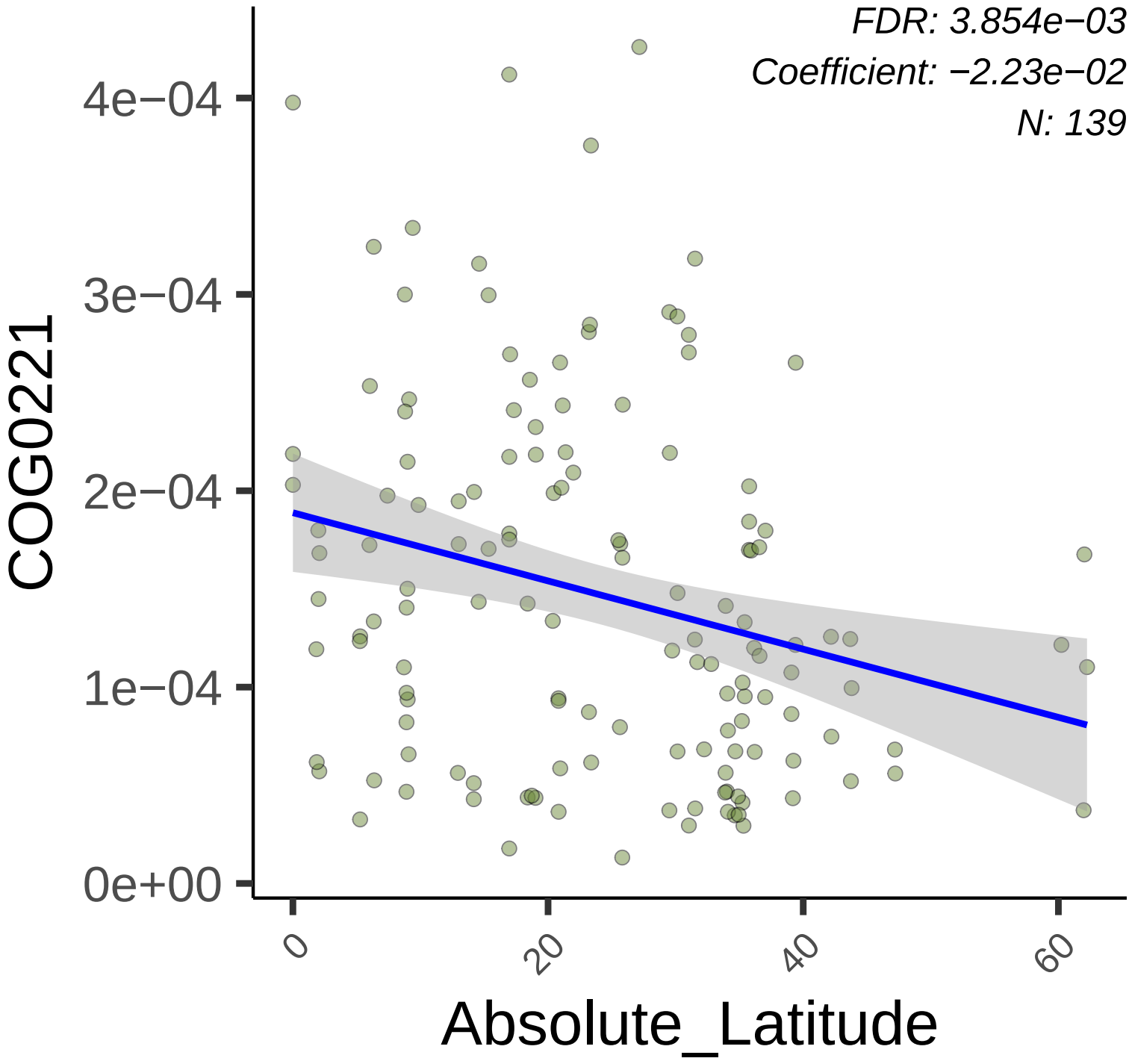

FDR: 3.548e−03
Coefficient: −3.67e−02
N: 139
COG5507
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

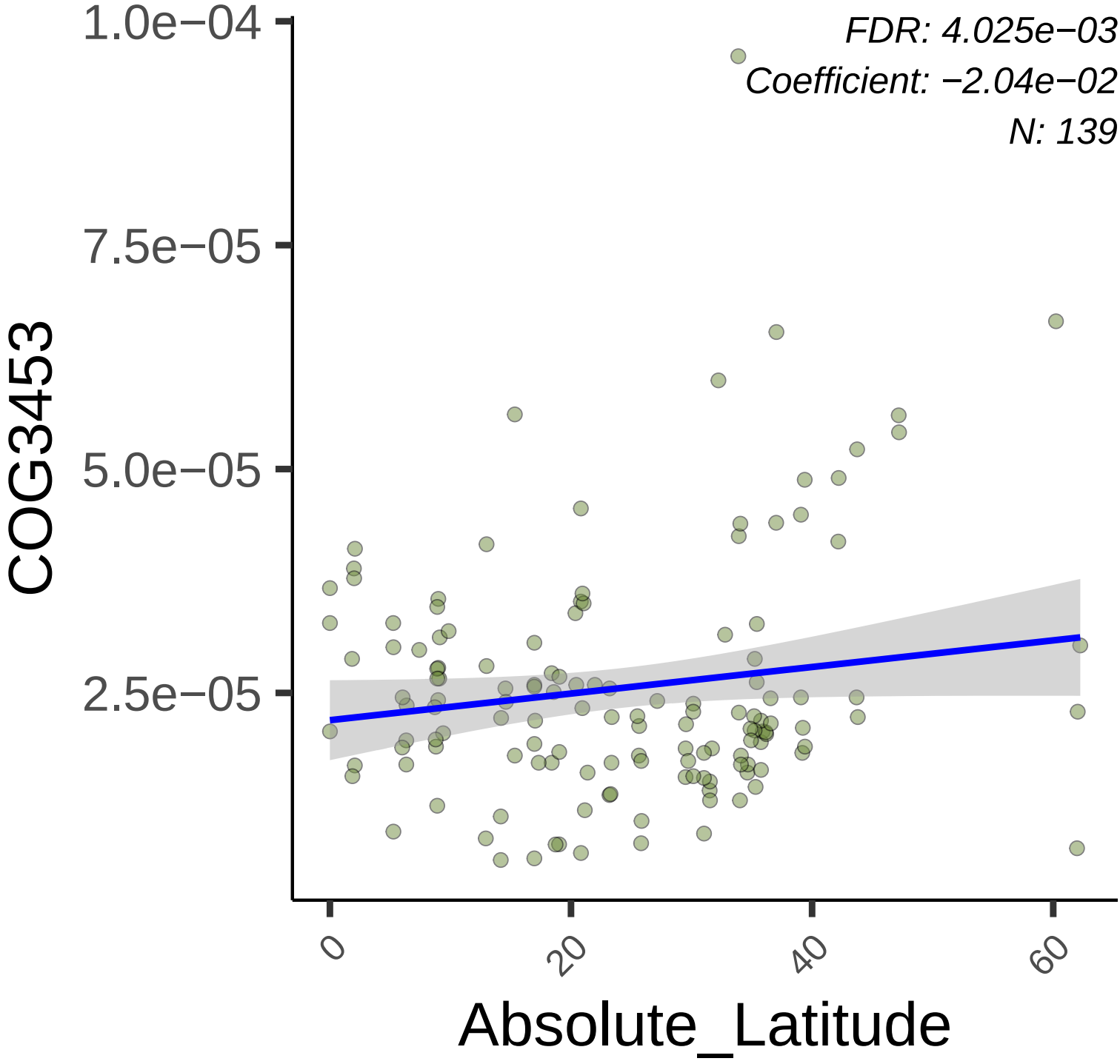

FDR: 3.588e−03
Coefficient: −3.89e−02
N: 139
COG2733
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

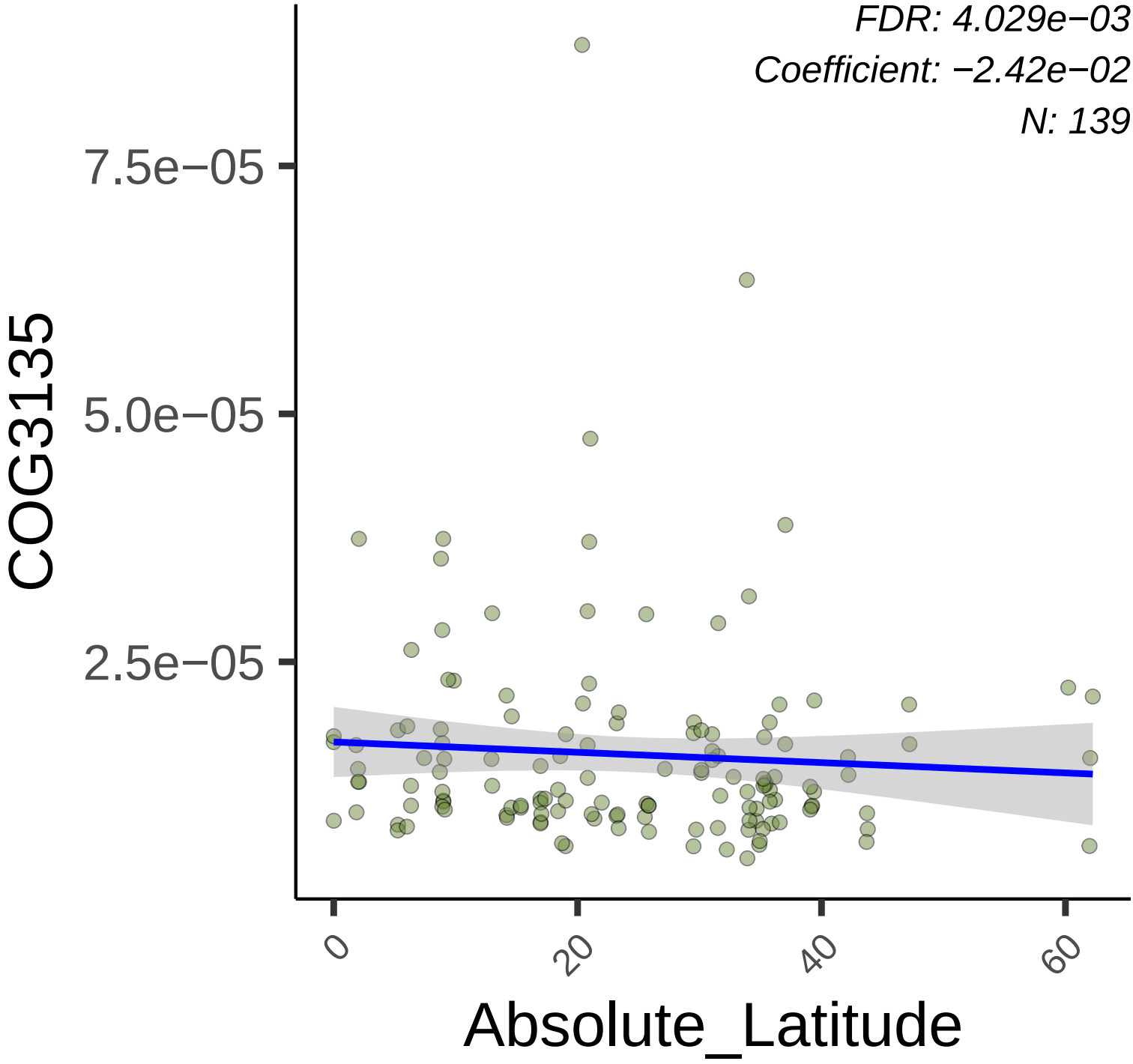

FDR: 3.720e−03
Coefficient: −7.13e−02
N: 139
COG4890
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

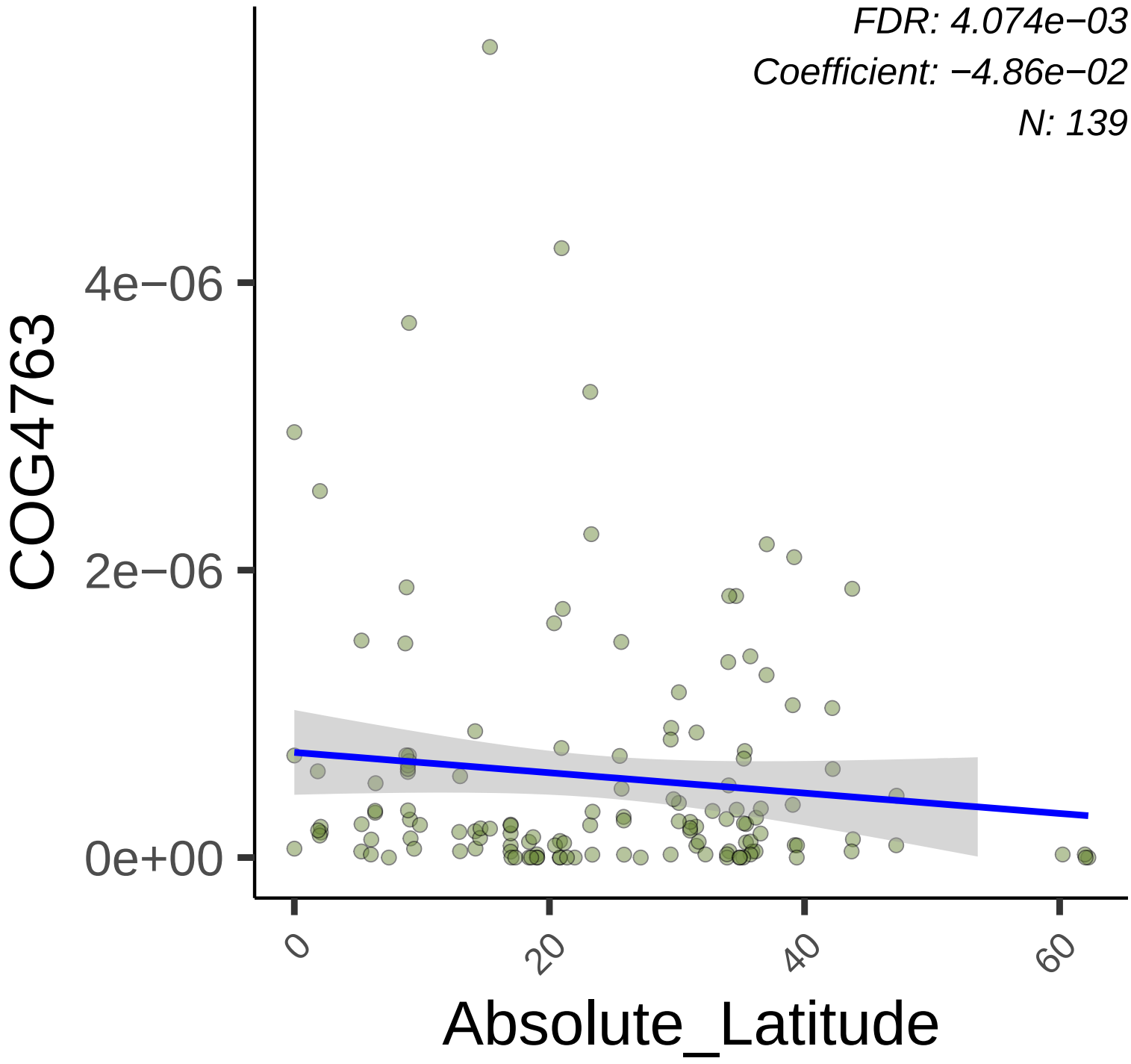

FDR: 3.800e−03
Coefficient: 2.04e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG3949
0
20
40
60
Absolute_Latitude

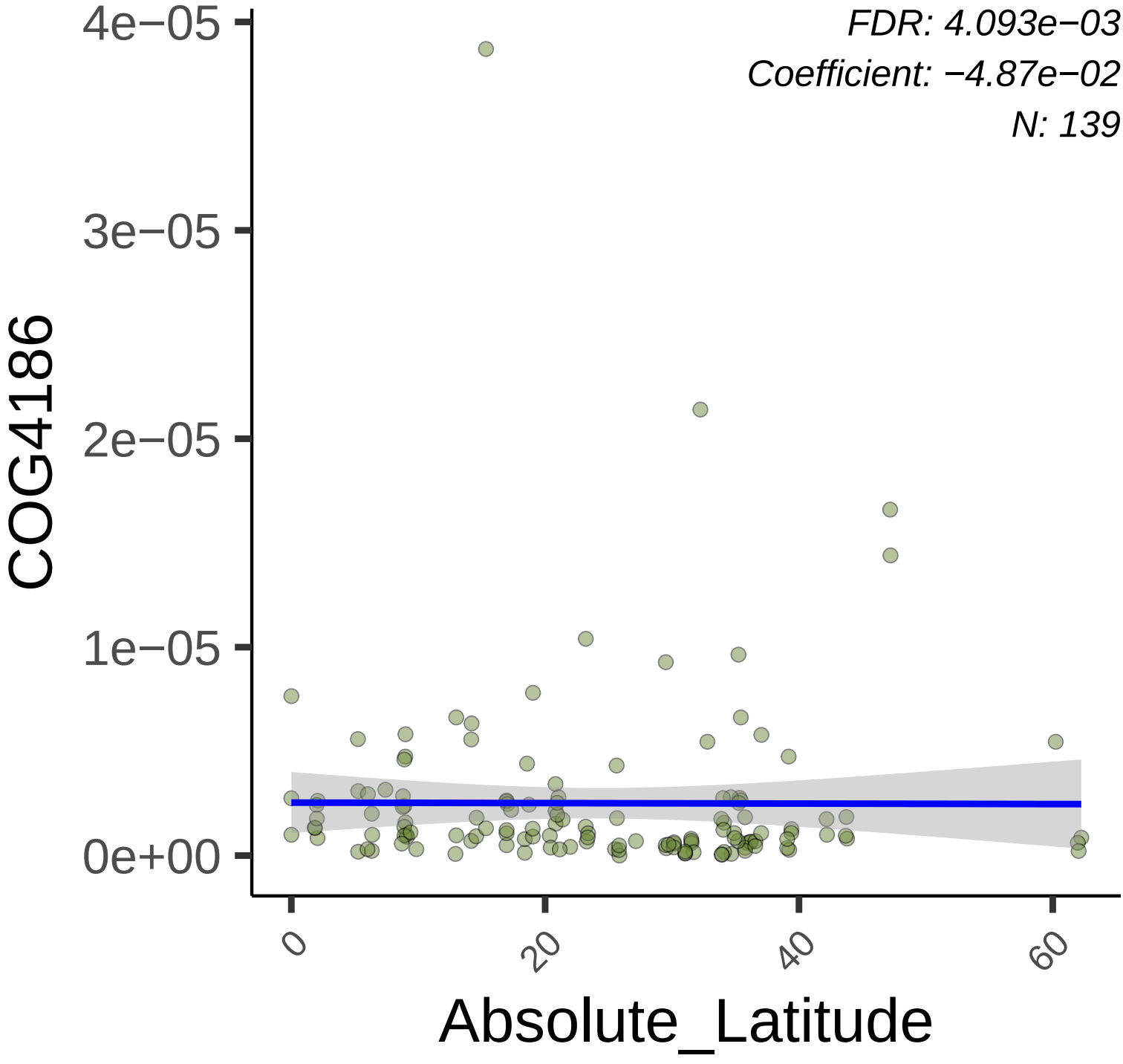

FDR: 3.837e−03
Coefficient: −4.13e−02
N: 139
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG4734
0
20
40
60
Absolute_Latitude

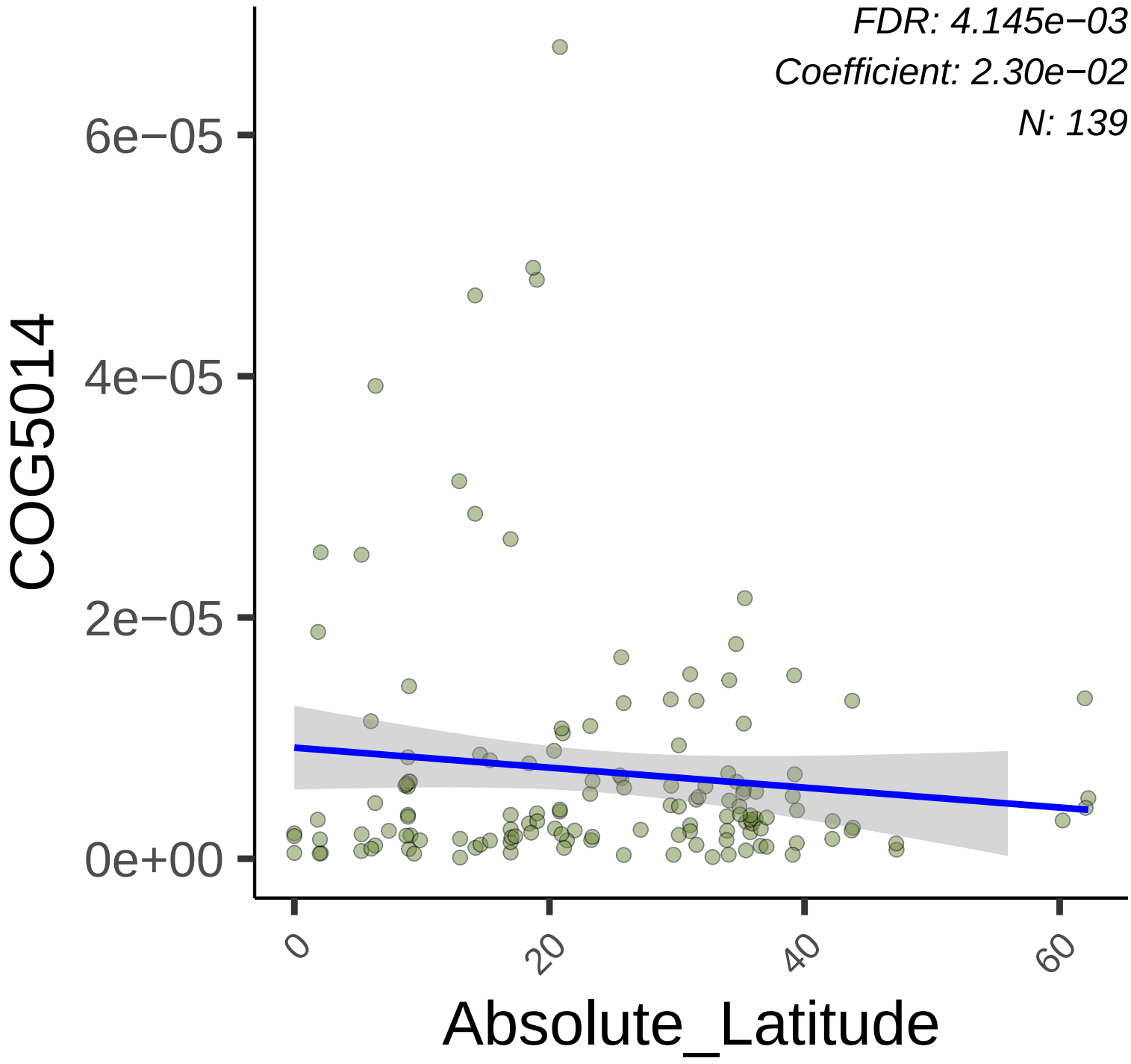

FDR: 3.854e−03
Coefficient: −2.23e−02
N: 139
COG0221
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

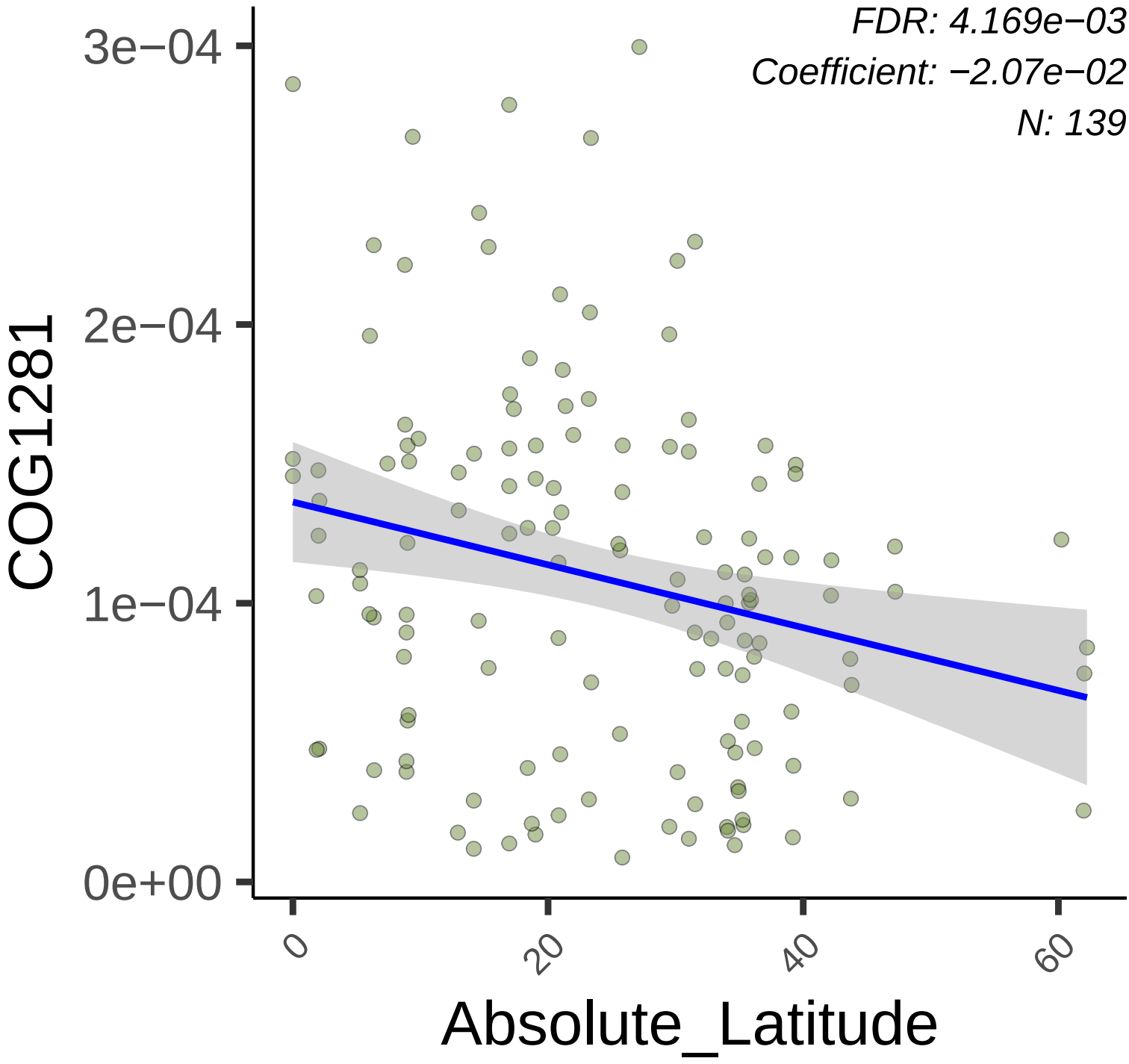

FDR: 4.025e−03
Coefficient: −2.04e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
COG3453
0
20
40
60
Absolute_Latitude

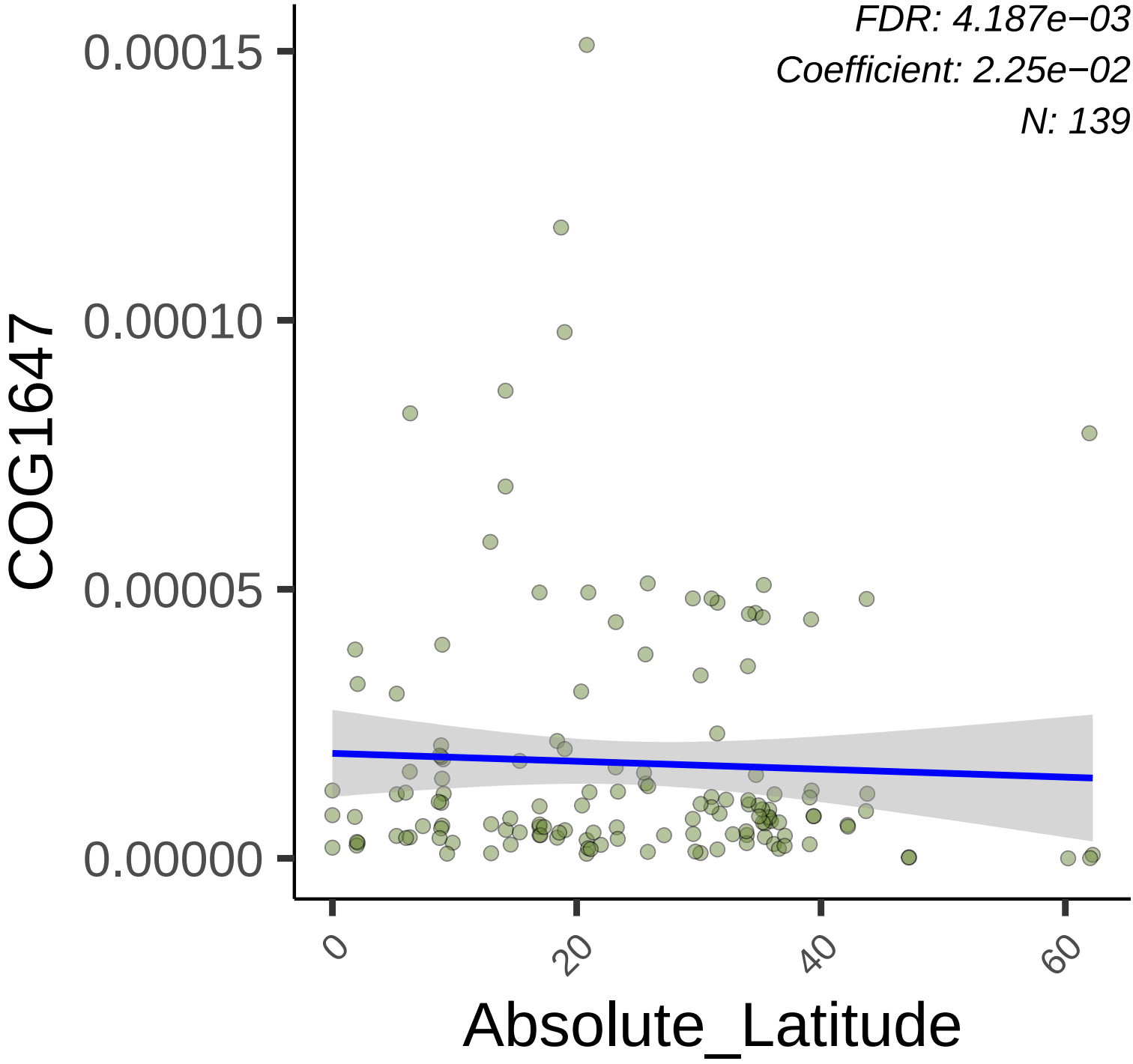

FDR: 4.029e−03
Coefficient: −2.42e−02
N: 139
7.5e−05
5.0e−05
2.5e−05
COG3135
0
20
40
60
Absolute_Latitude

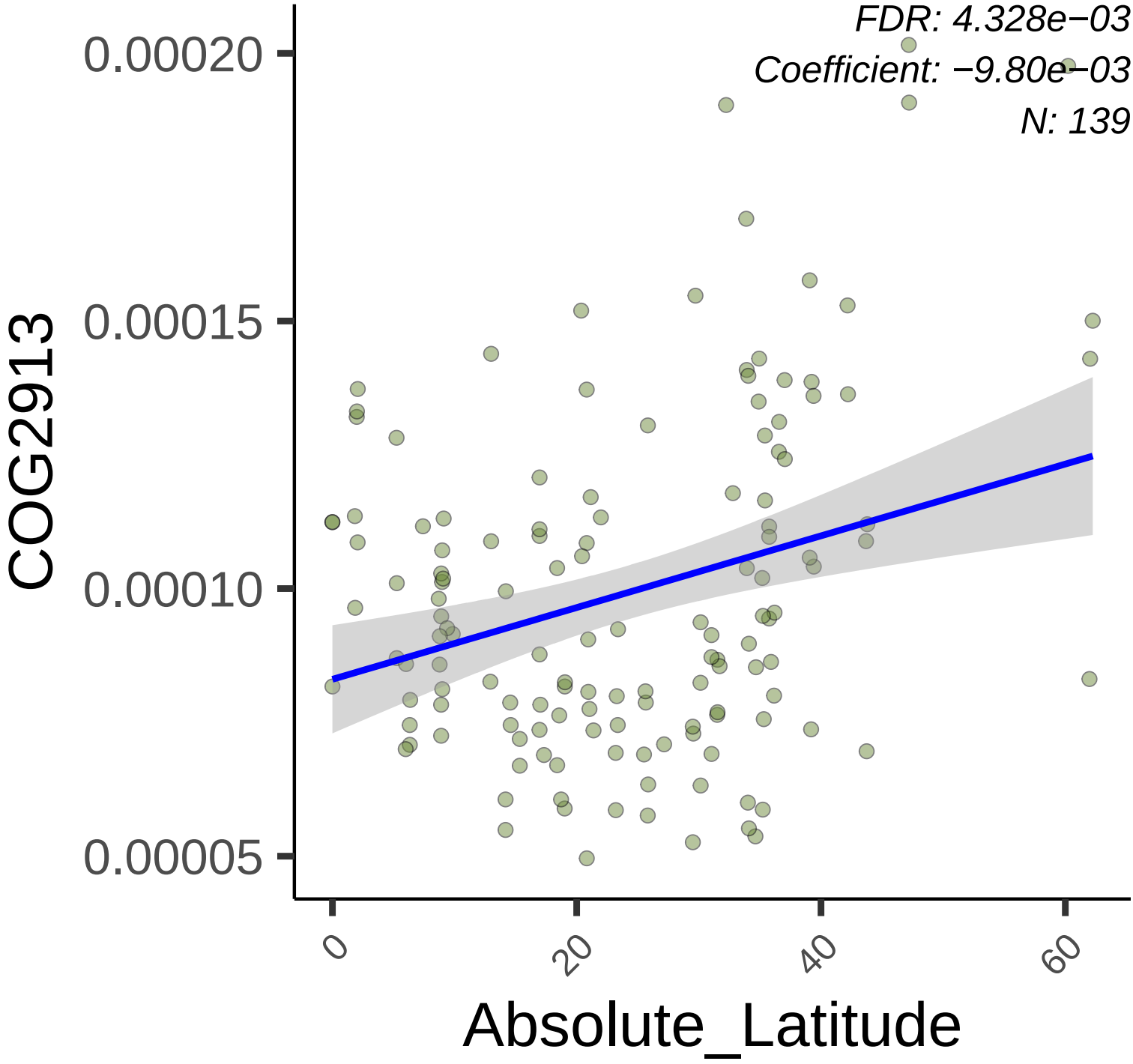

FDR: 4.074e−03
Coefficient: −4.86e−02
N: 139
COG4763
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

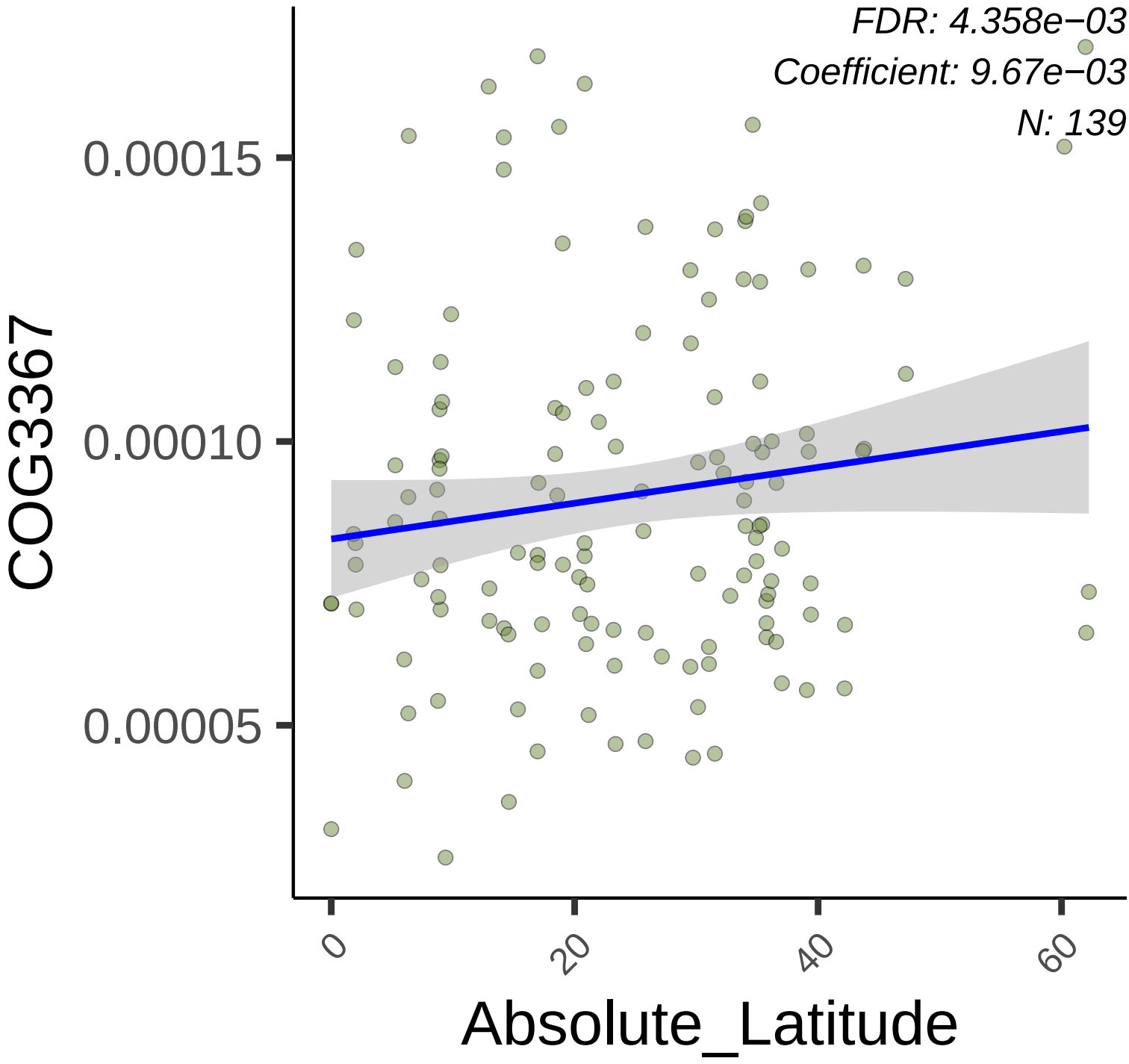

FDR: 4.093e−03
Coefficient: −4.87e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG4186
0
20
40
60
Absolute_Latitude

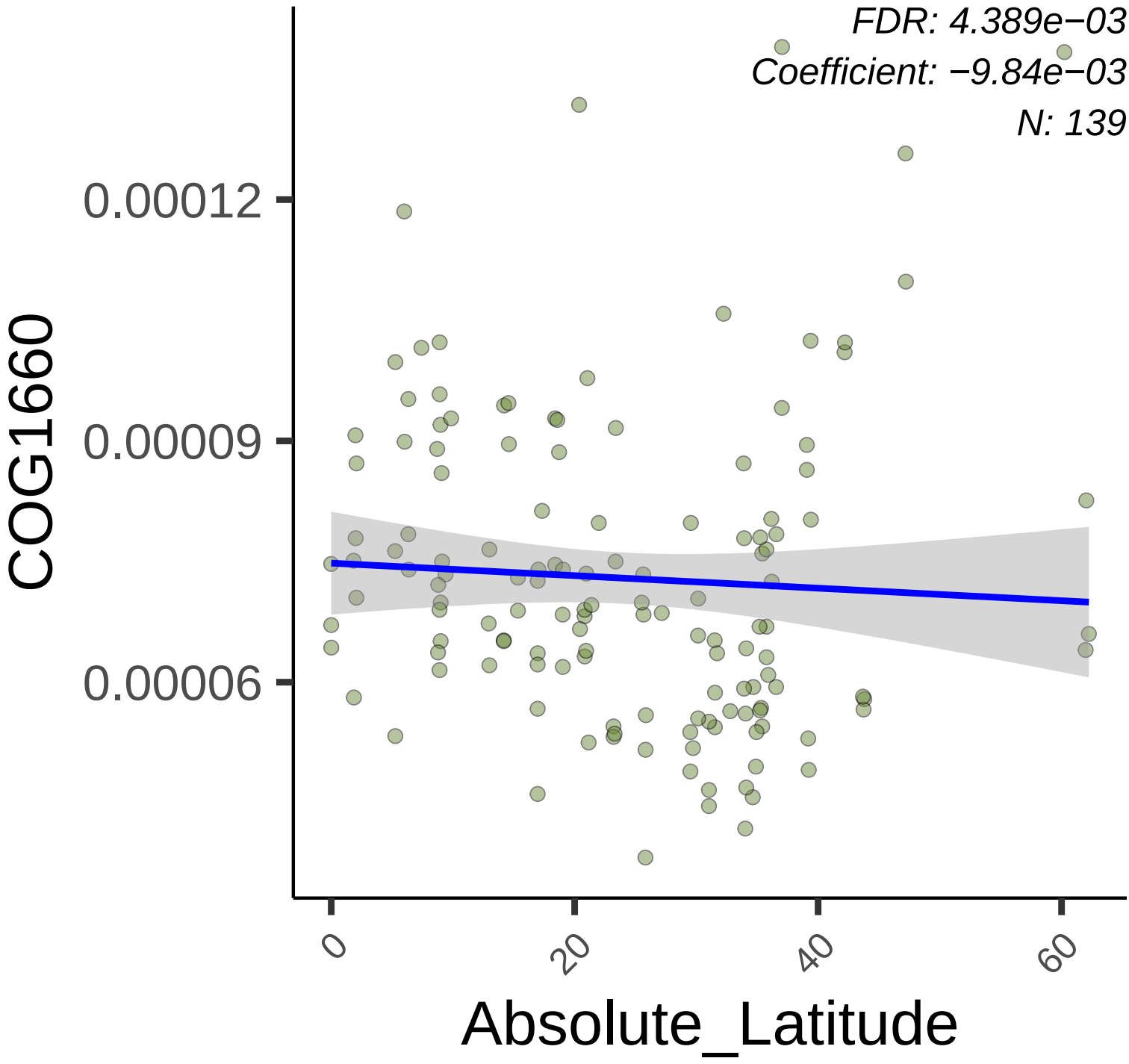

FDR: 4.145e−03
Coefficient: 2.30e−02
N: 139
COG5014
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

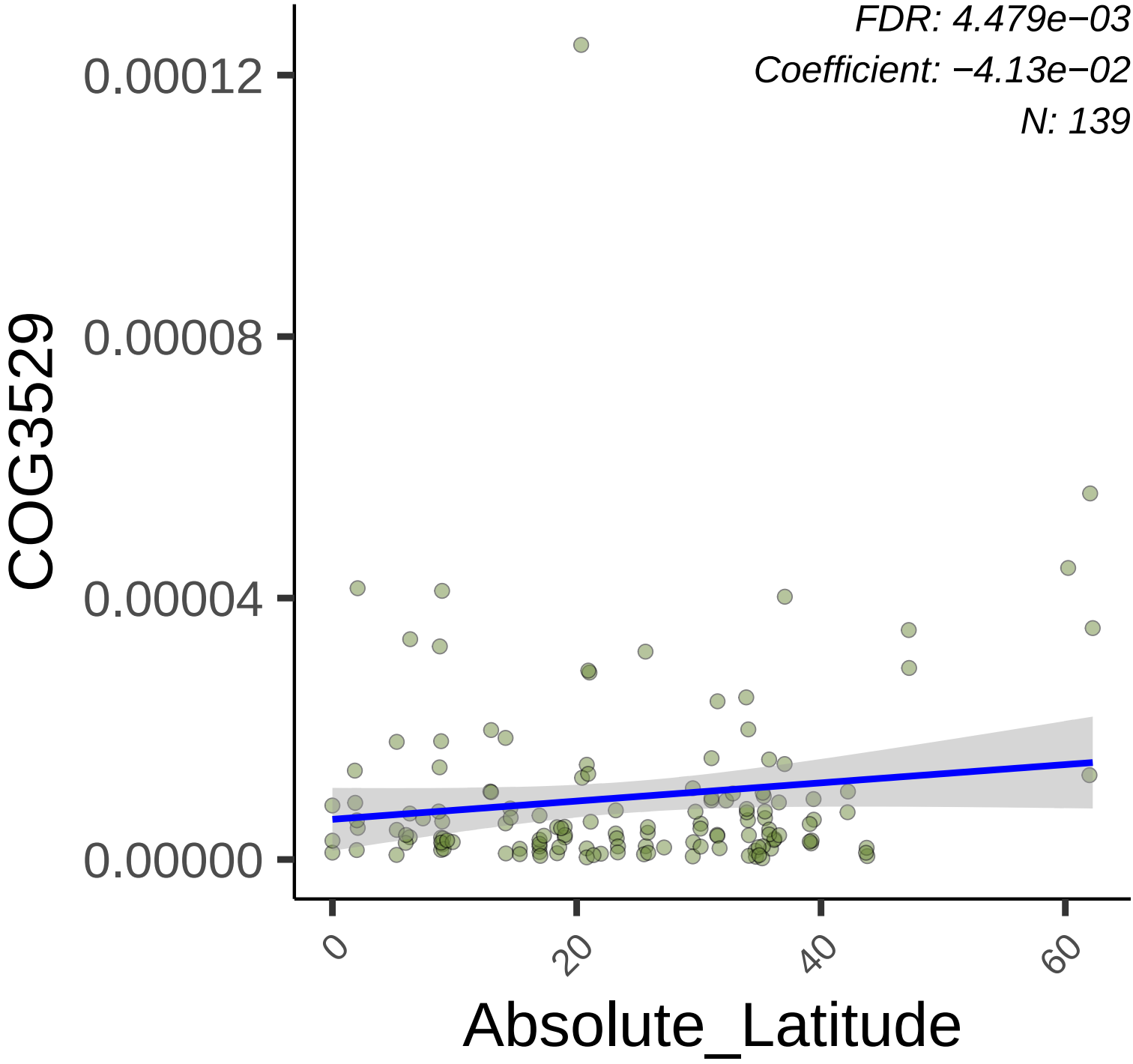

FDR: 4.169e−03
Coefficient: −2.07e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG1281
0
20
40
60
Absolute_Latitude

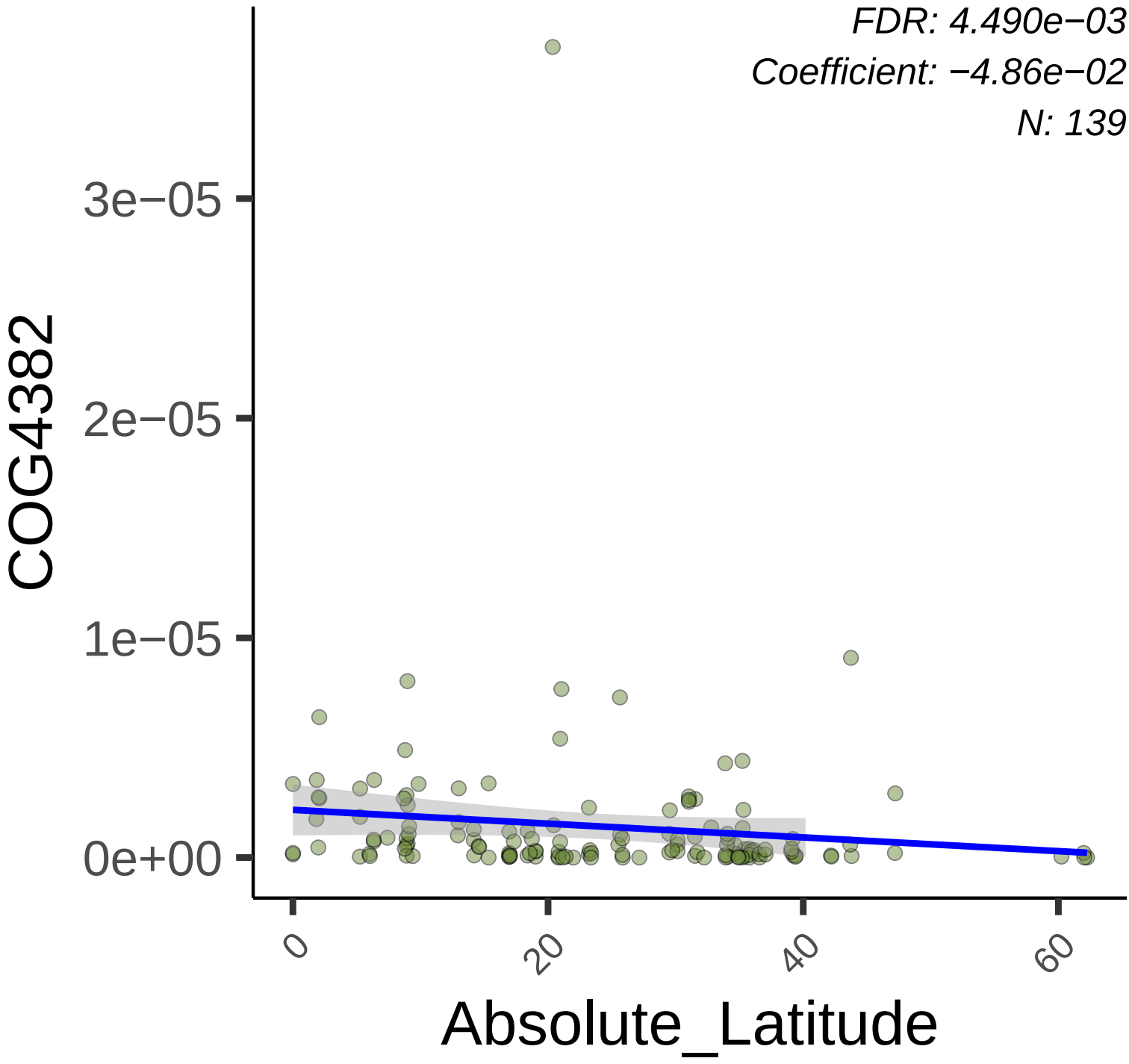

FDR: 4.187e−03
Coefficient: 2.25e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG1647
0
20
40
60
Absolute_Latitude

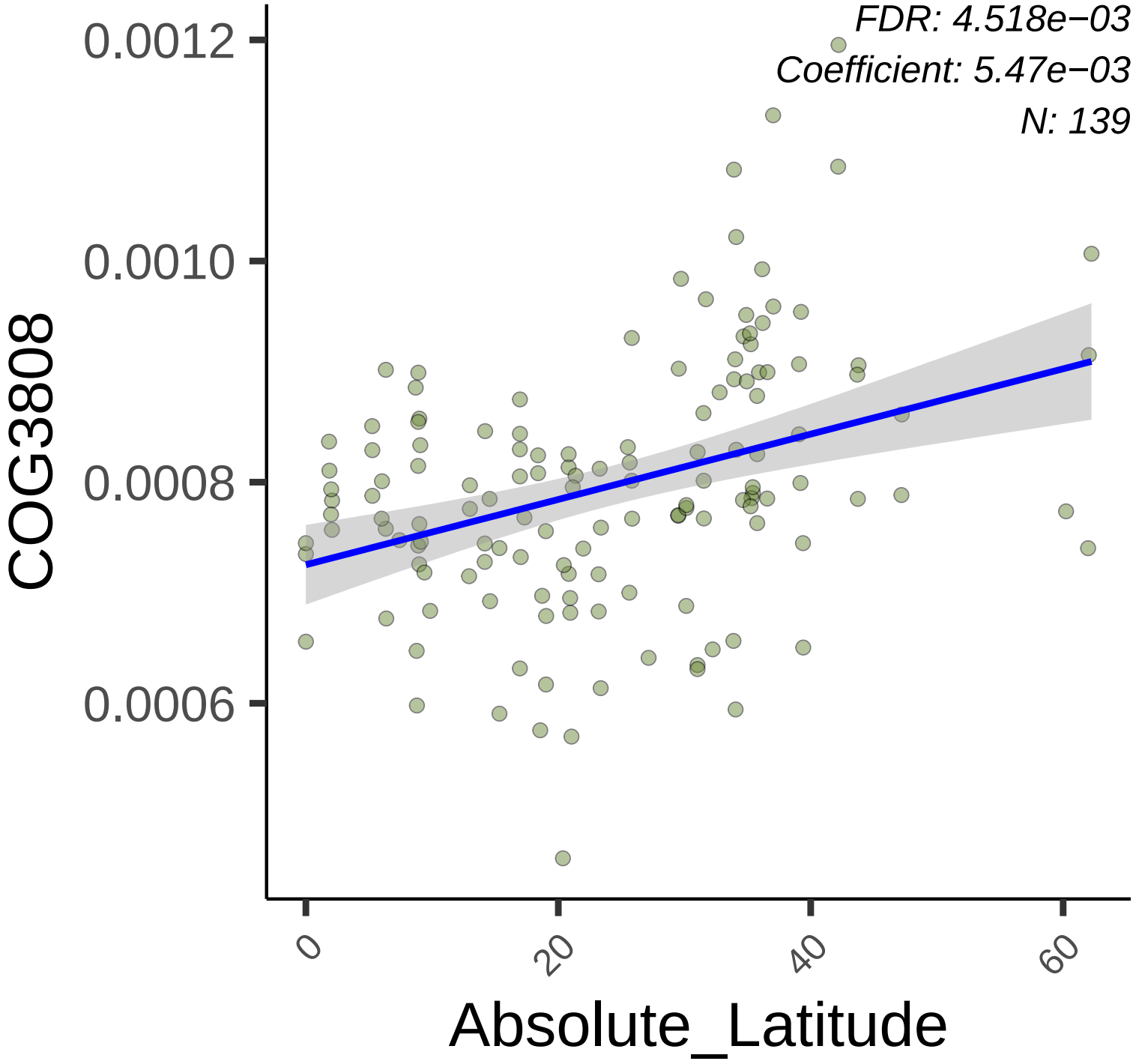

FDR: 4.328e−03
Coefficient: −9.80e−03
N: 139
0.00020
0.00015
0.00010
0.00005
COG2913
0
20
40
60
Absolute_Latitude

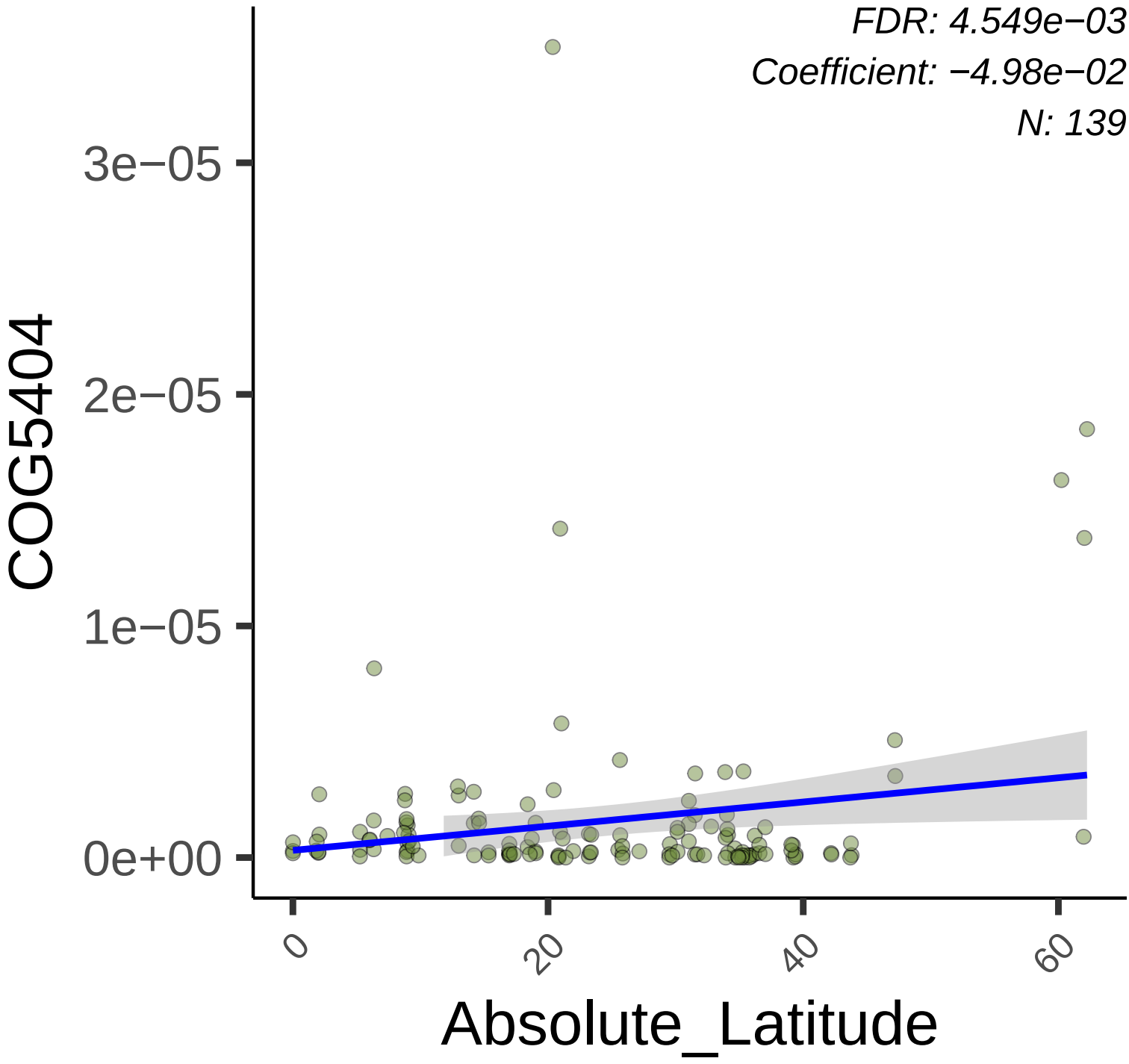

FDR: 4.358e−03
Coefficient: 9.67e−03
N: 139
0.00015
0.00010
0.00005
COG3367
0
20
40
60
Absolute_Latitude

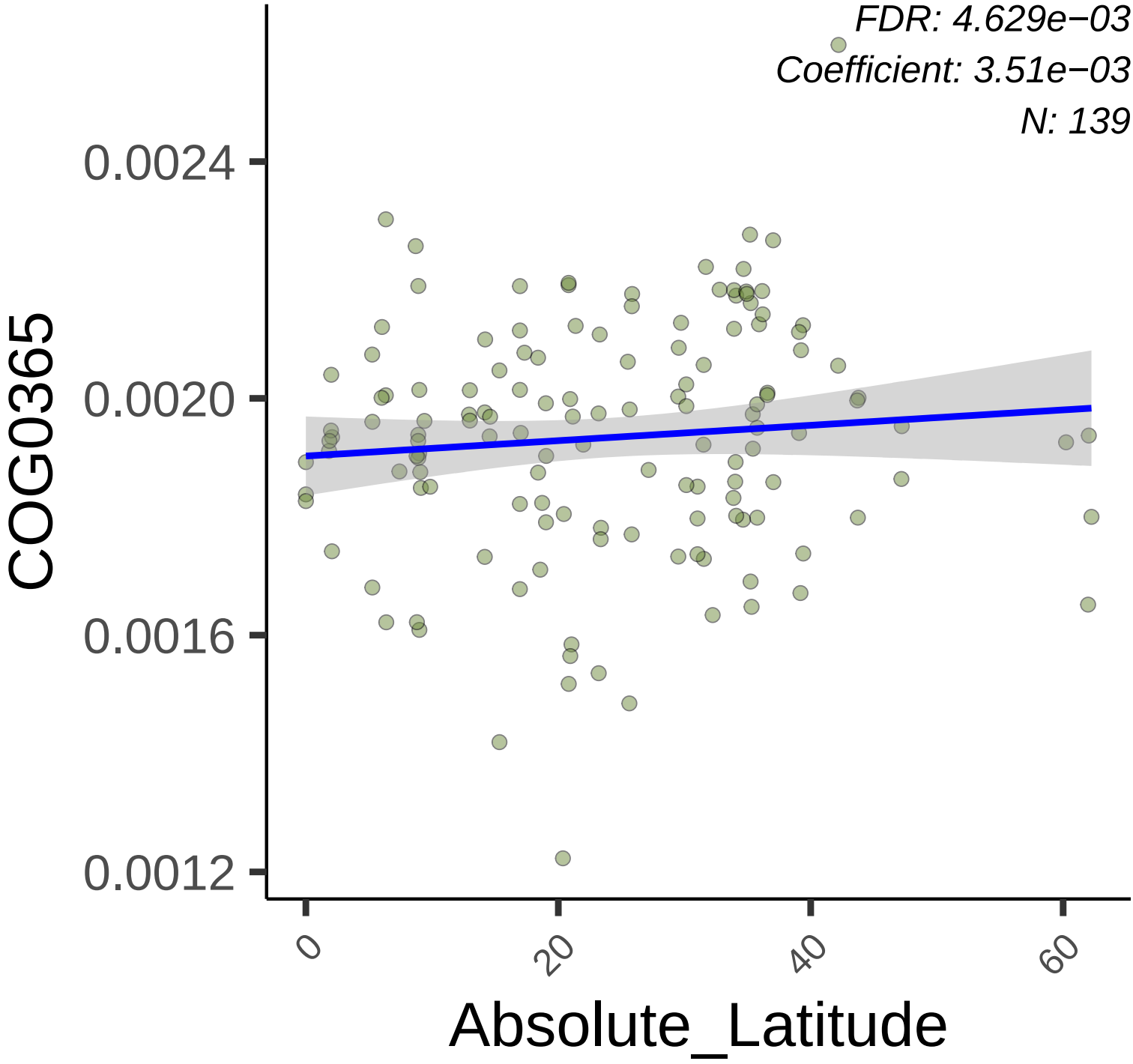

FDR: 4.389e−03
Coefficient: −9.84e−03
N: 139
0.00012
0.00009
0.00006
COG1660
0
20
40
60
Absolute_Latitude

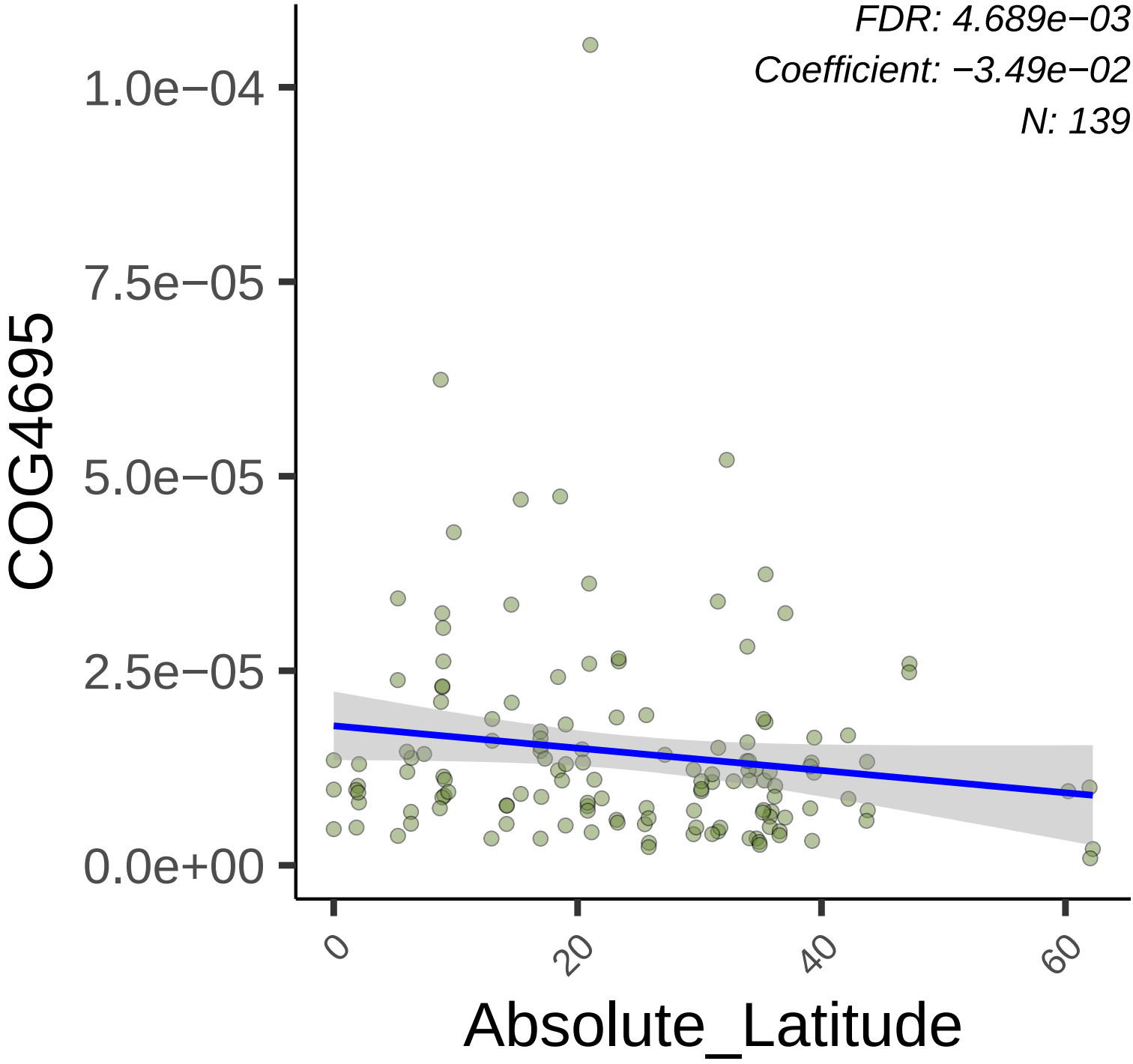

FDR: 4.479e−03
Coefficient: −4.13e−02
N: 139
COG3529
0.00012
0.00008
0.00004
0.00000
0
20
40
60
Absolute_Latitude

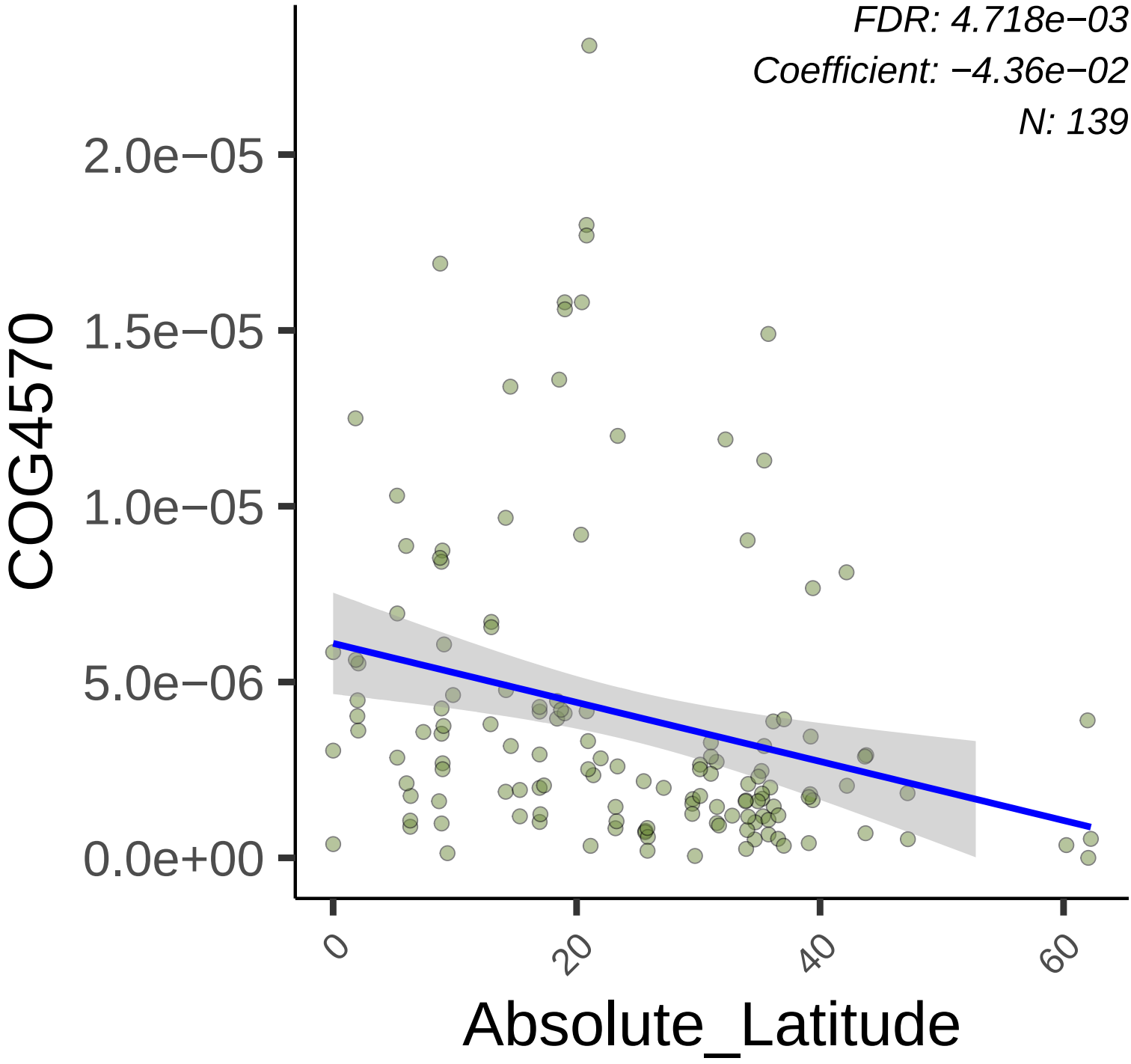

FDR: 4.490e−03
Coefficient: −4.86e−02
N: 139
COG4382
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

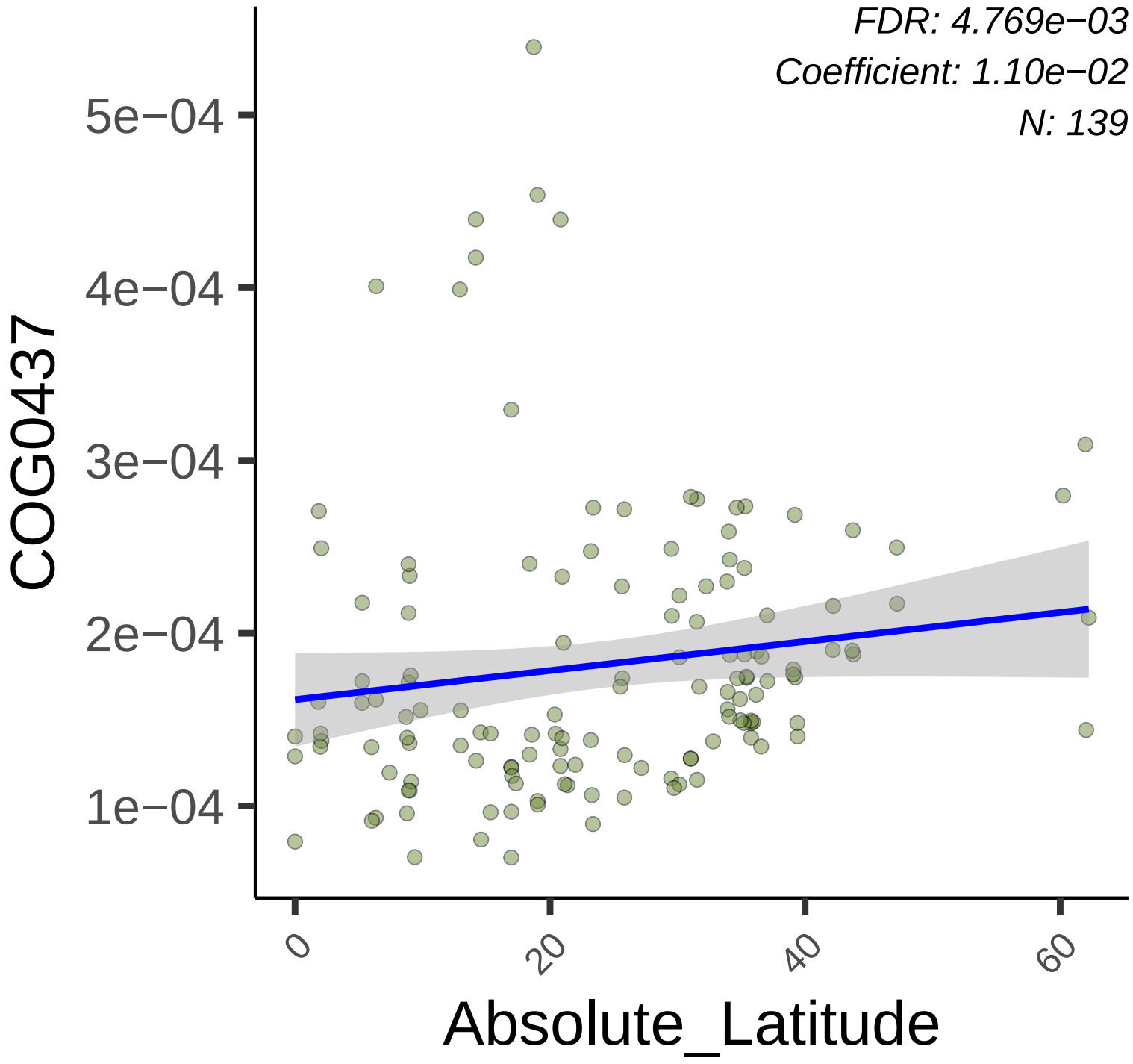

FDR: 4.518e−03
Coefficient: 5.47e−03
N: 139
0.0012
0.0010
0.0008
0.0006
COG3808
0
20
40
60
Absolute_Latitude

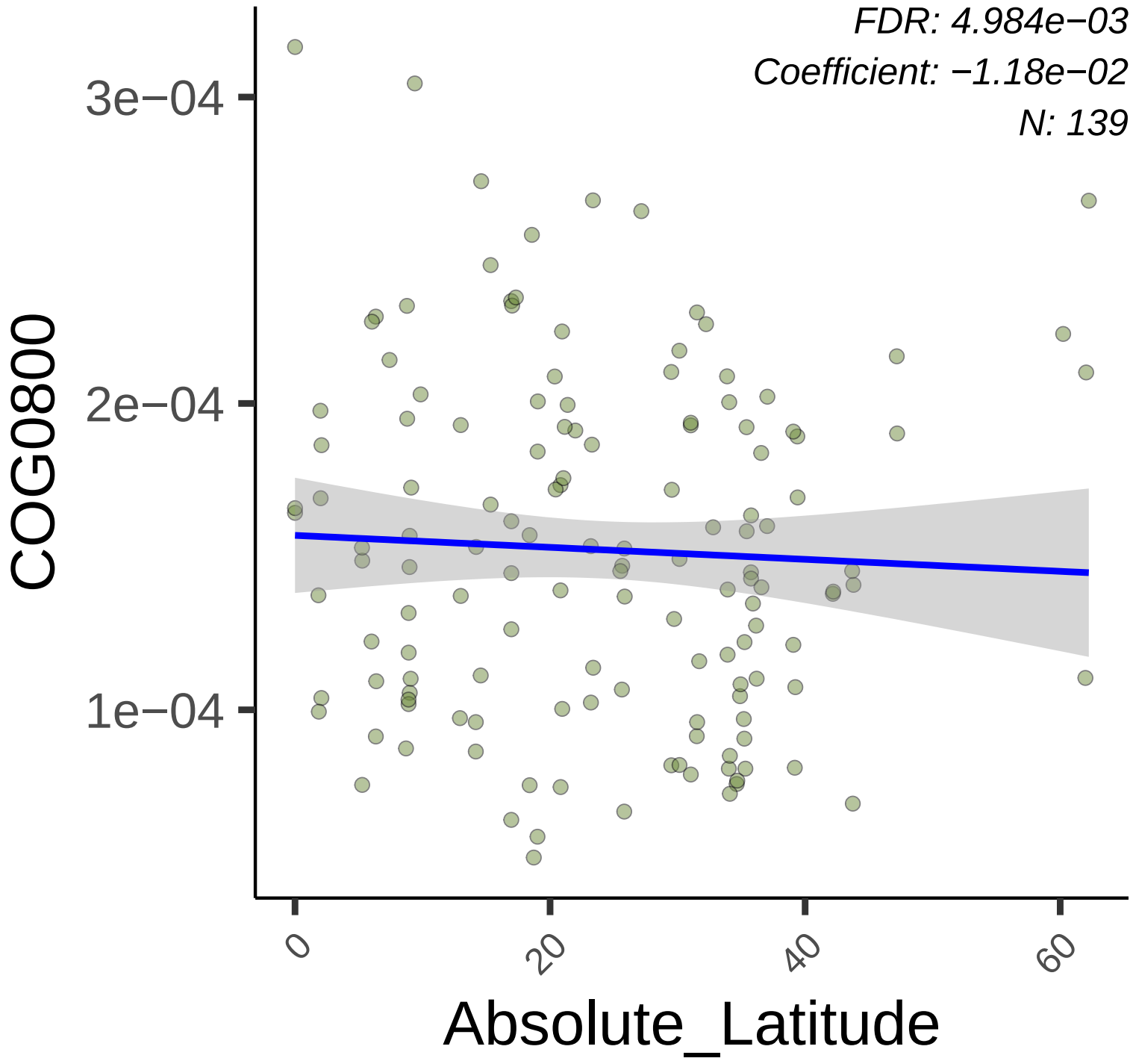

FDR: 4.549e−03
Coefficient: −4.98e−02
N: 139
COG5404
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

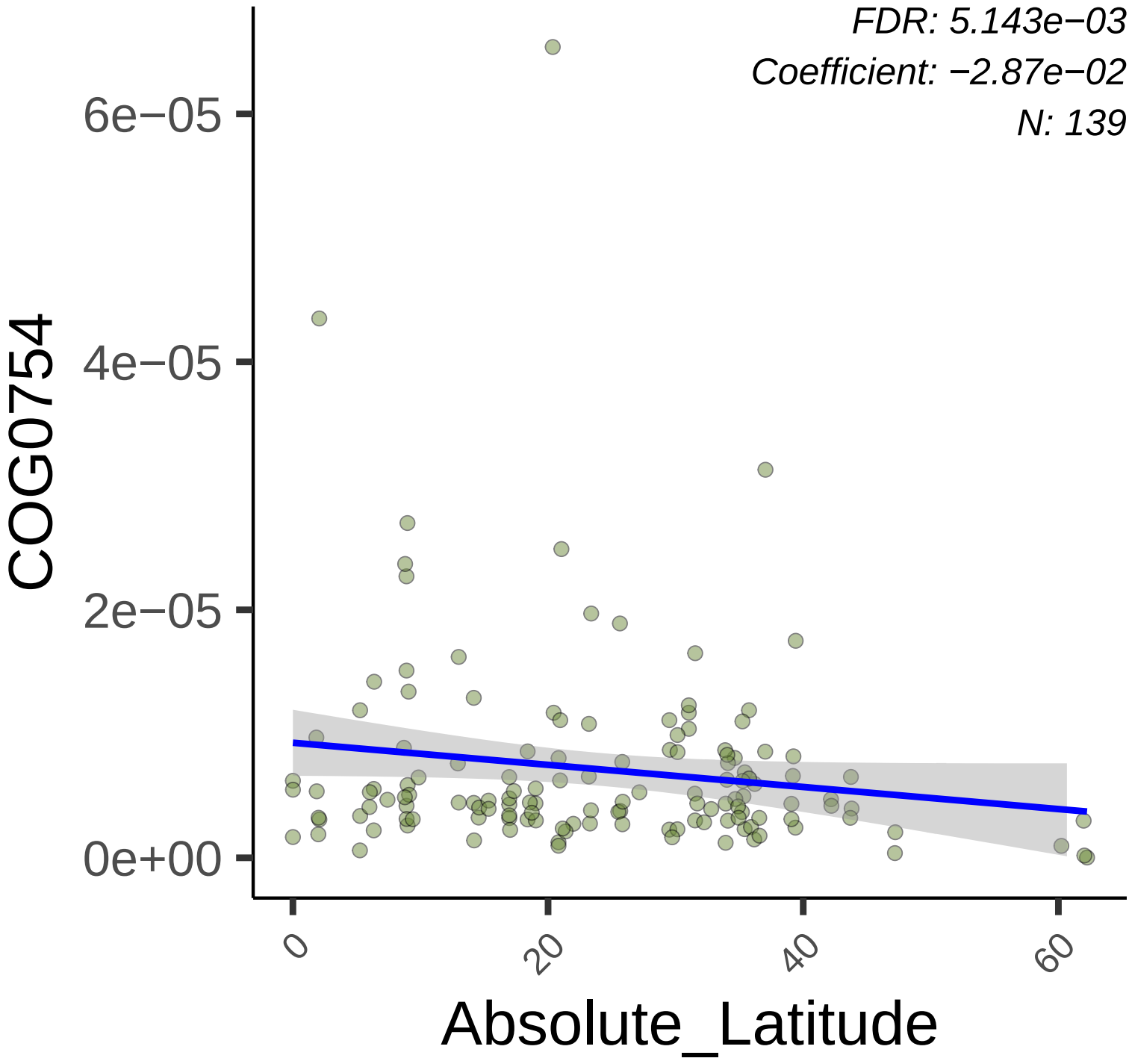

FDR: 4.629e−03
Coefficient: 3.51e−03
N: 139
COG0365
0.0024
0.0020
0.0016
0.0012
0
20
40
60
Absolute_Latitude

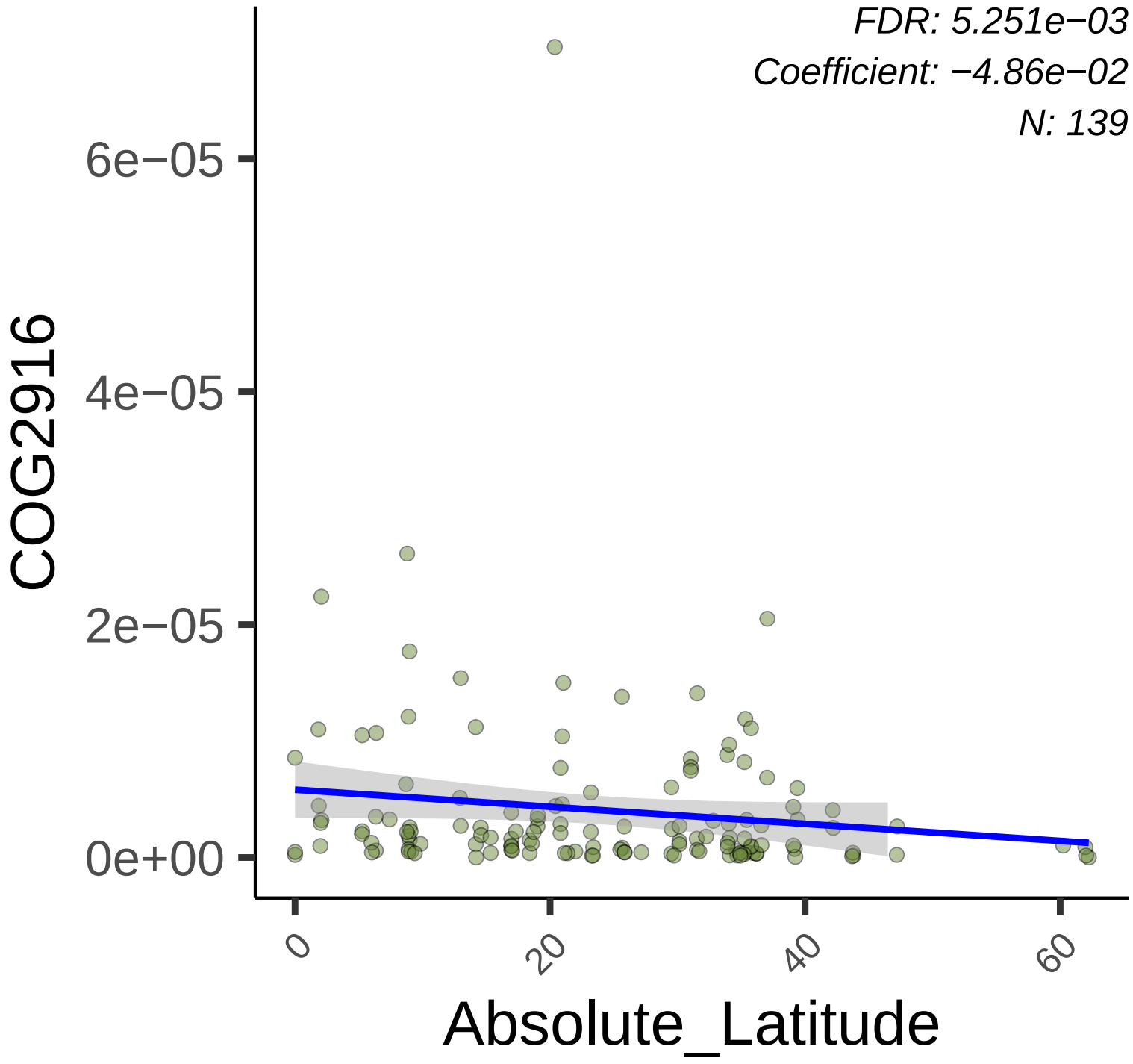

FDR: 4.689e−03
Coefficient: −3.49e−02
N: 139
COG4695
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

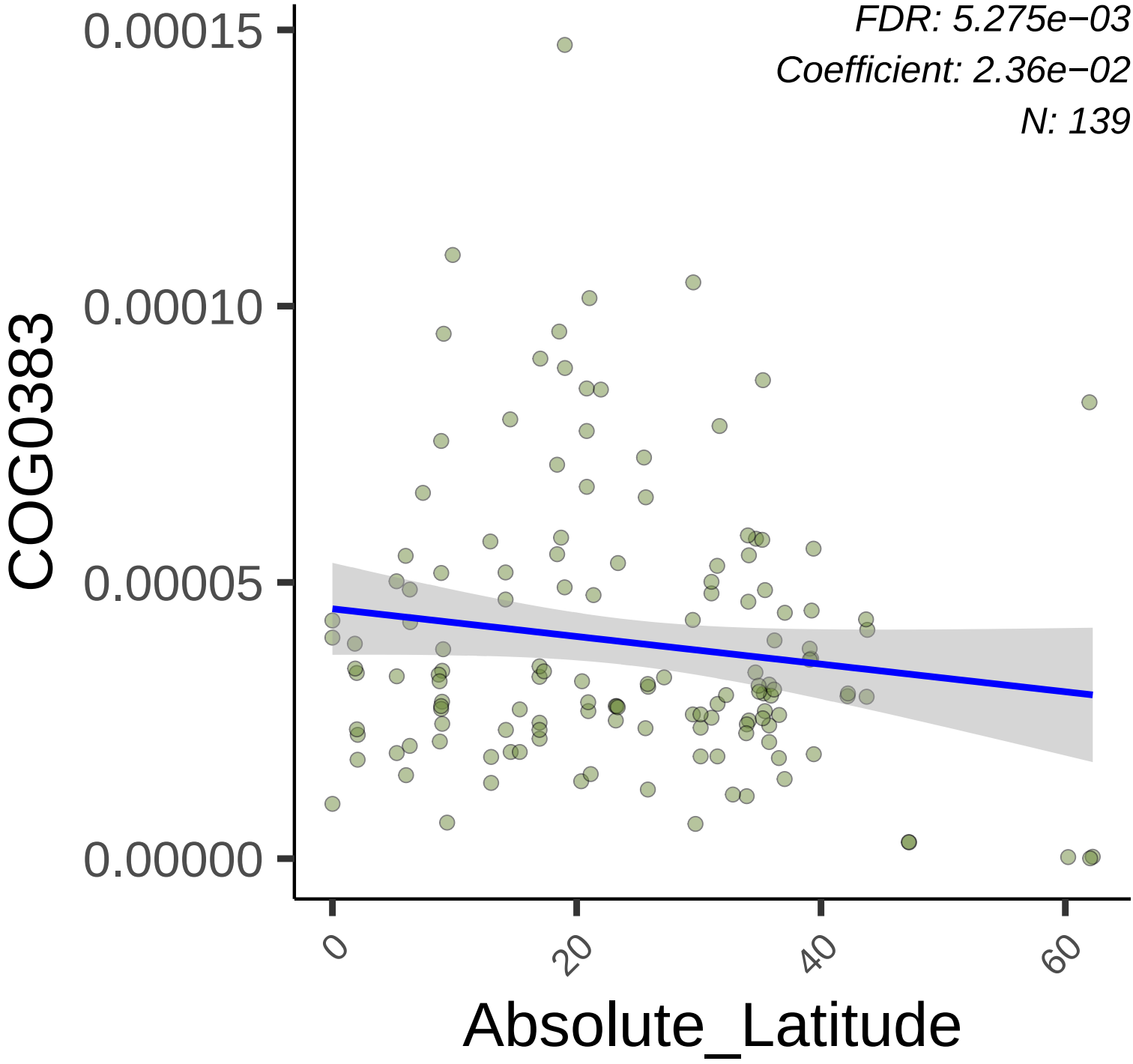

FDR: 4.718e−03
Coefficient: −4.36e−02
N: 139
COG4570
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

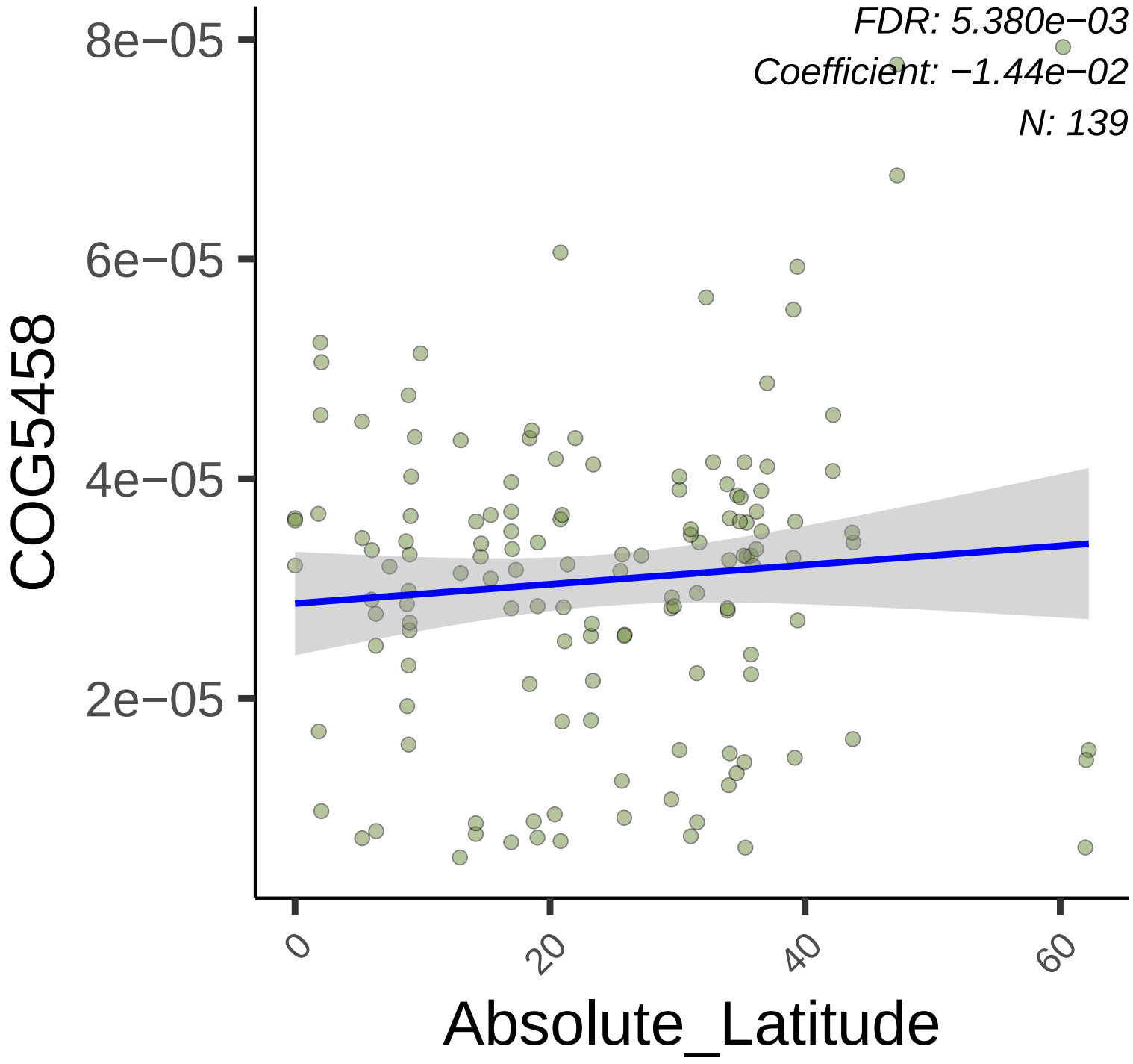

FDR: 4.769e−03
Coefficient: 1.10e−02
N: 139
COG0437
5e−04
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

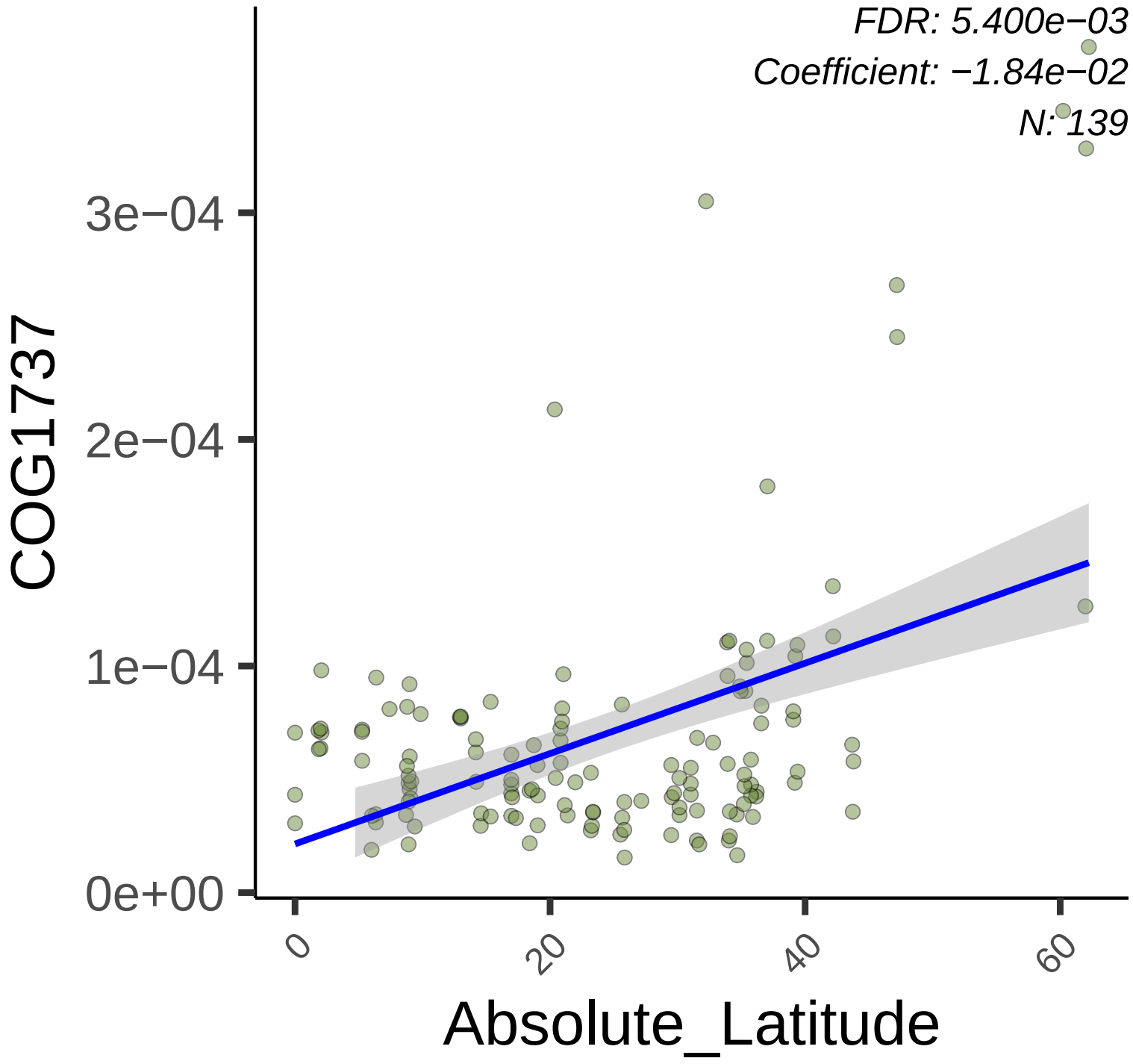

FDR: 4.984e−03
Coefficient: −1.18e−02
N: 139
3e−04
2e−04
1e−04
COG0800
0
20
40
60
Absolute_Latitude

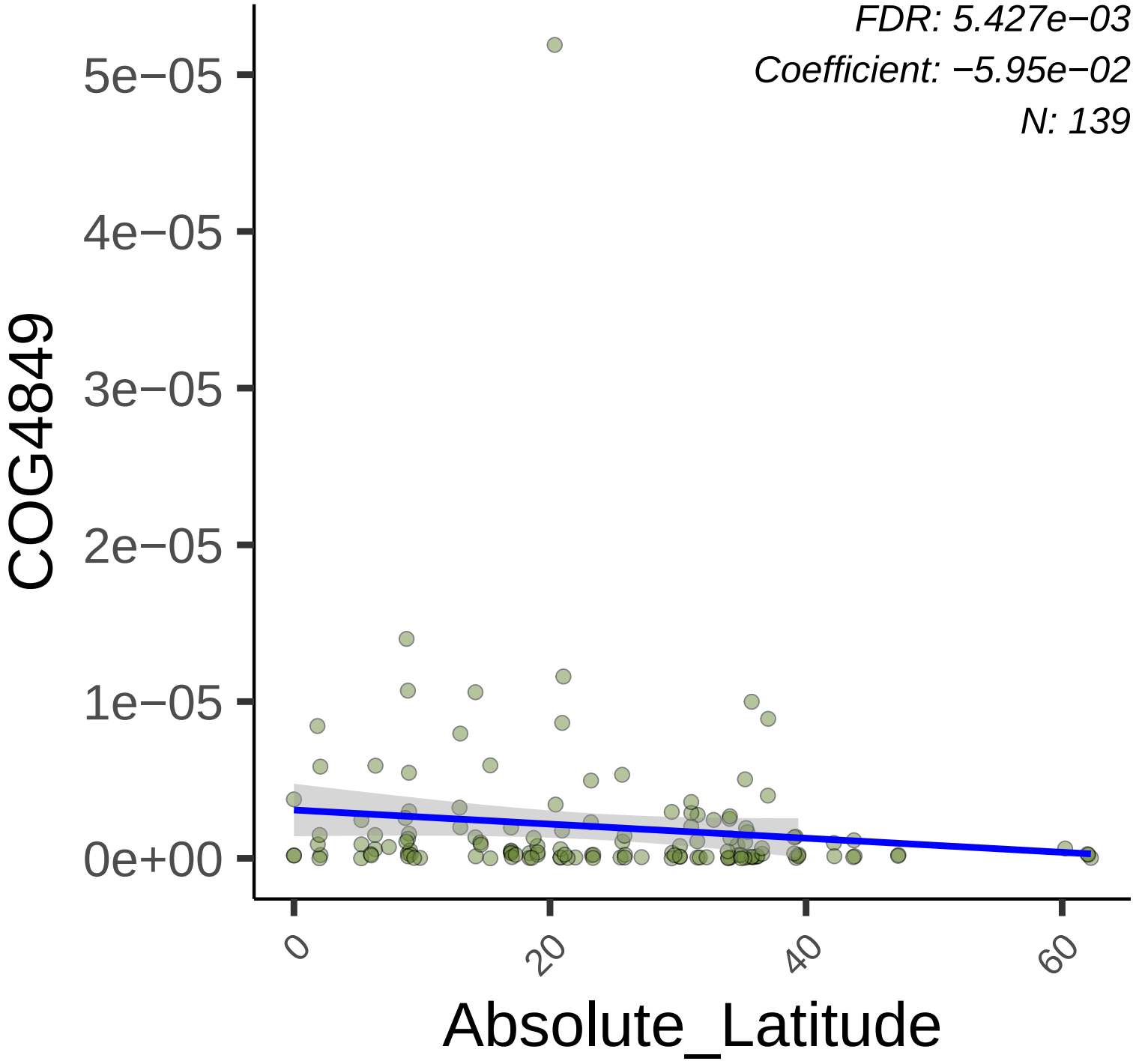

FDR: 5.143e−03
Coefficient: −2.87e−02
N: 139
COG0754
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

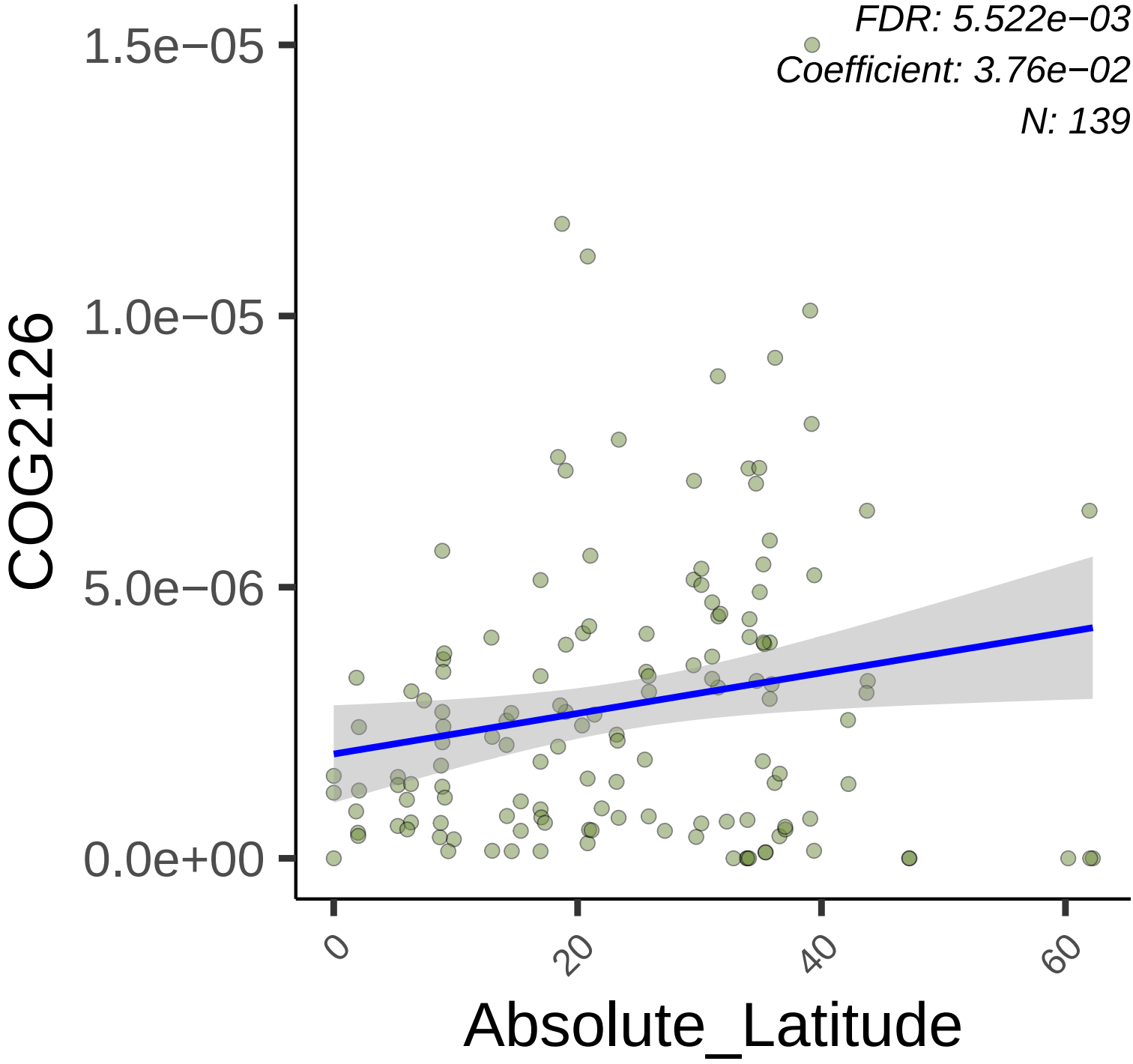

FDR: 5.251e−03
Coefficient: −4.86e−02
N: 139
COG2916
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

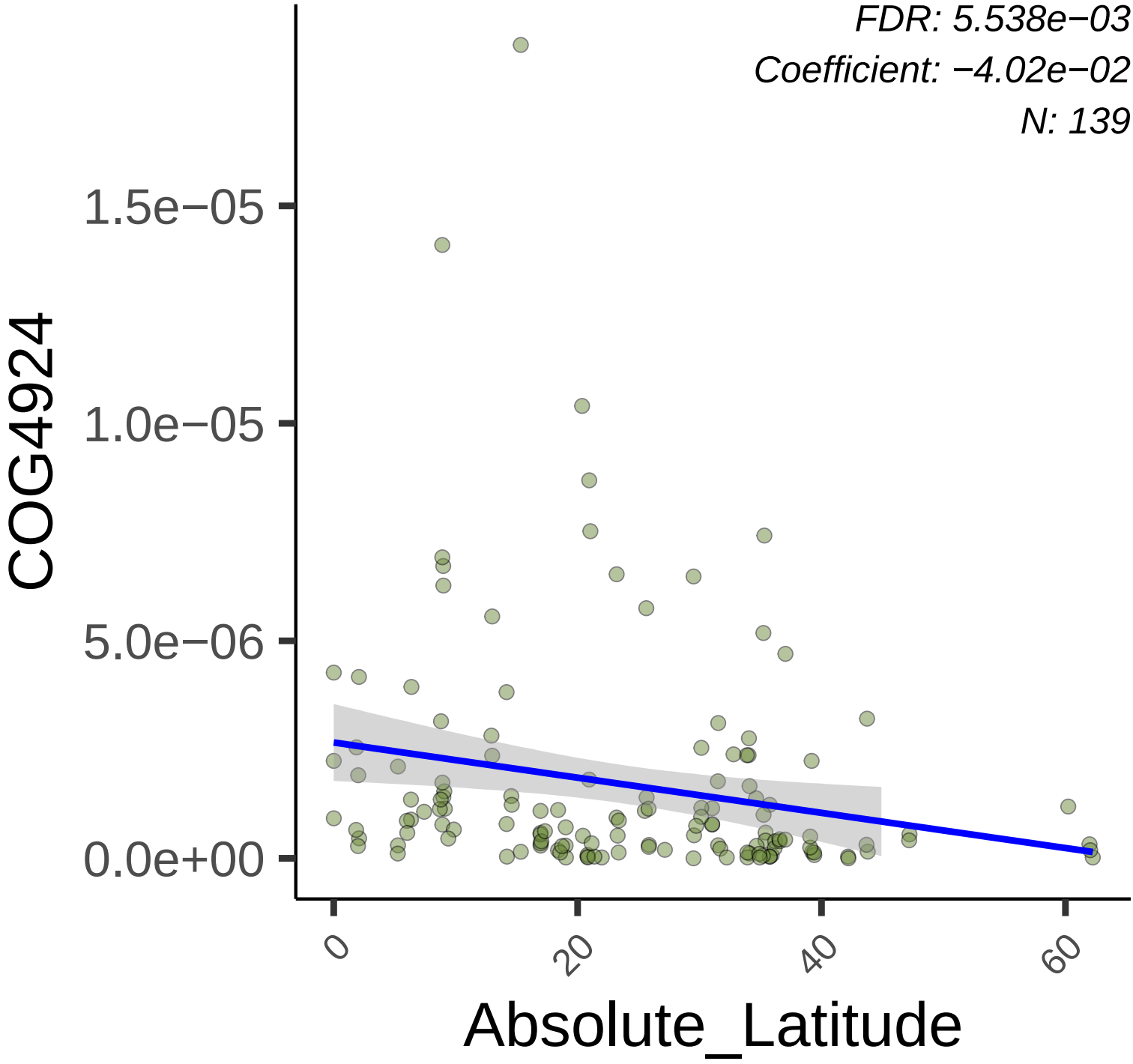

FDR: 5.275e−03
Coefficient: 2.36e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG0383
0
20
40
60
Absolute_Latitude

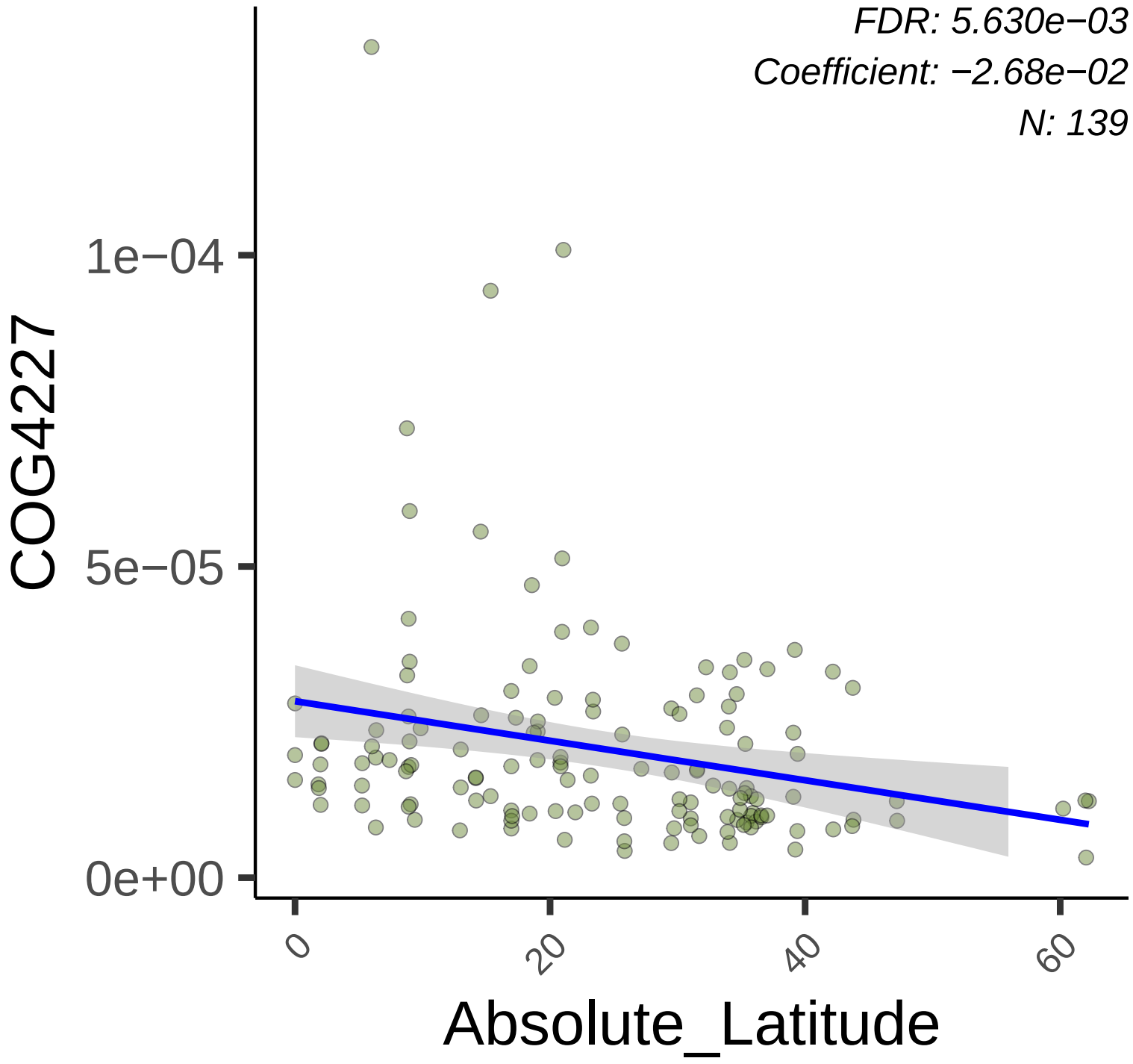

FDR: 5.380e−03
Coefficient: −1.44e−02
N: 139
8e−05
6e−05
4e−05
2e−05
COG5458
0
20
40
60
Absolute_Latitude

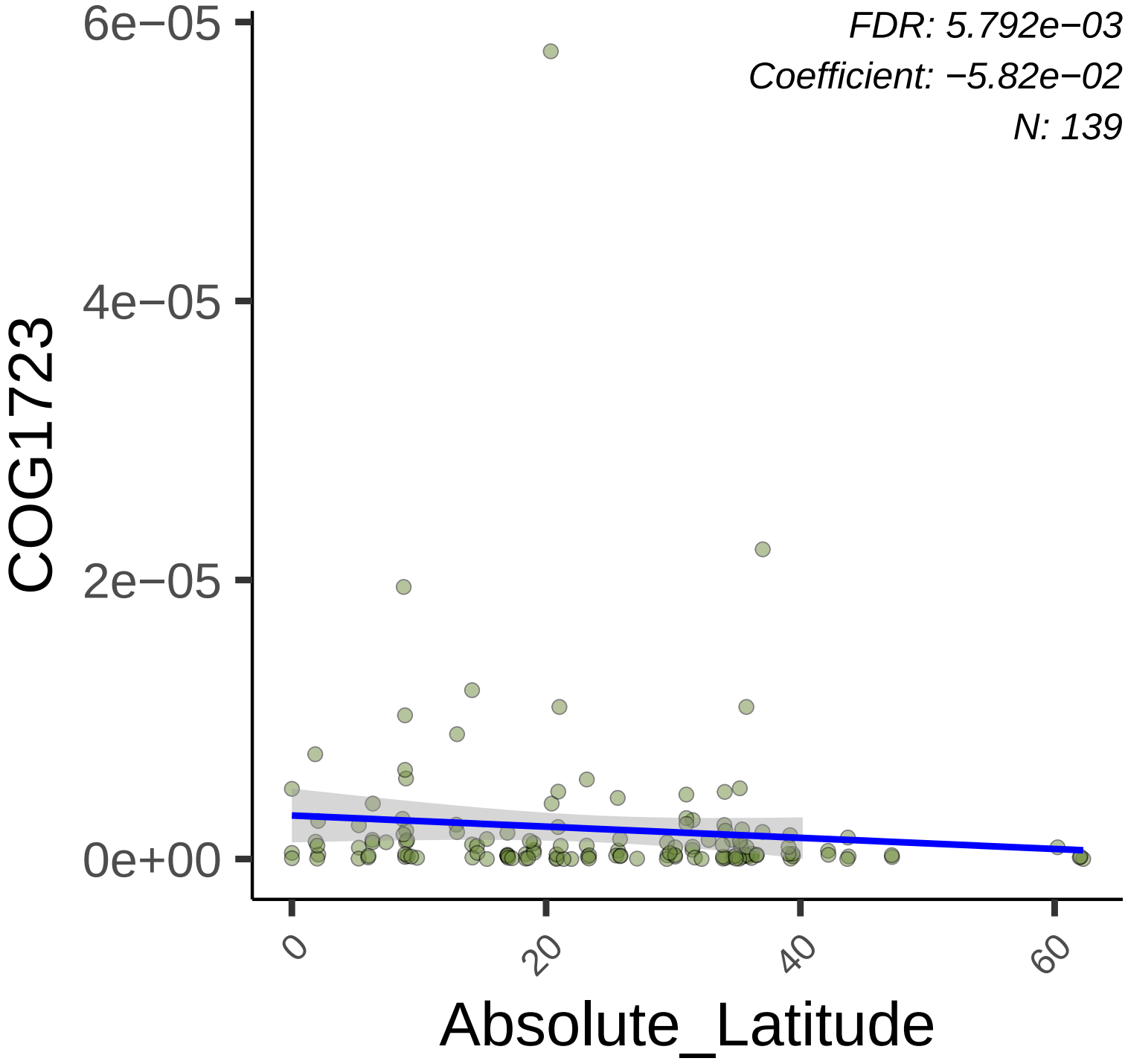

FDR: 5.400e−03
Coefficient: −1.84e−02
N: 139
COG1737
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

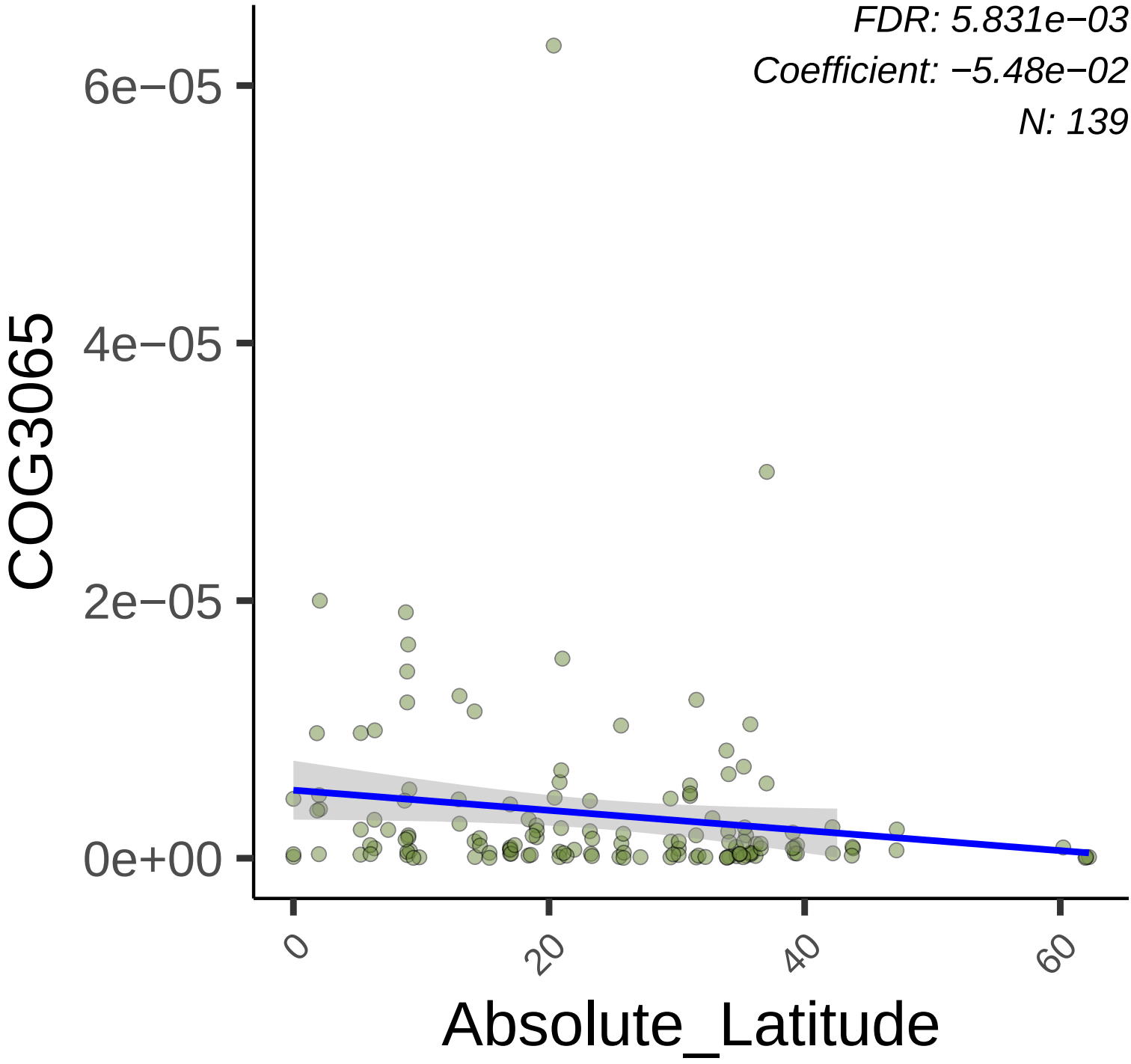

FDR: 5.427e−03
Coefficient: −5.95e−02
N: 139
COG4849
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

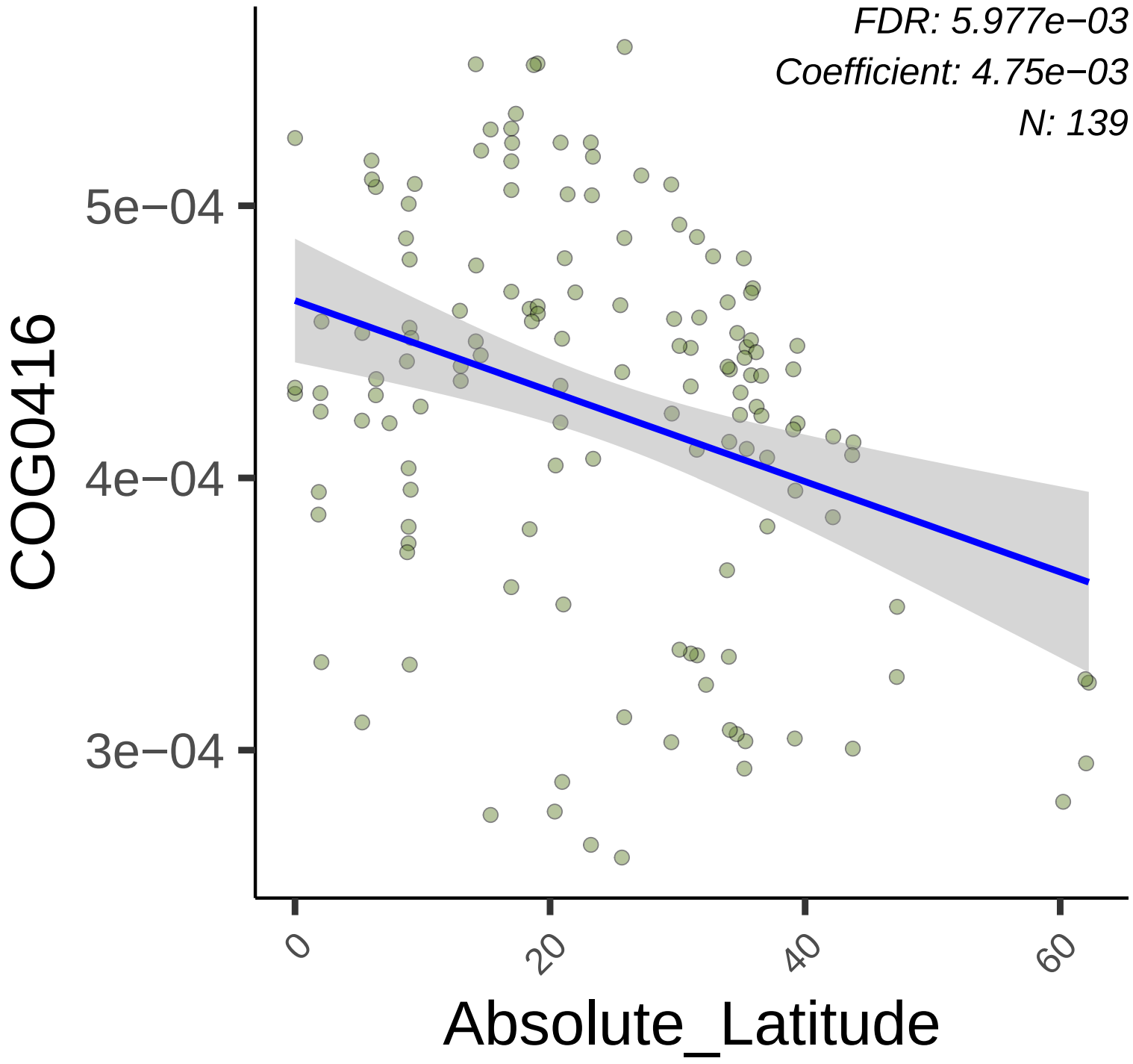

FDR: 5.522e−03
Coefficient: 3.76e−02
N: 139
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG2126
0
20
40
60
Absolute_Latitude

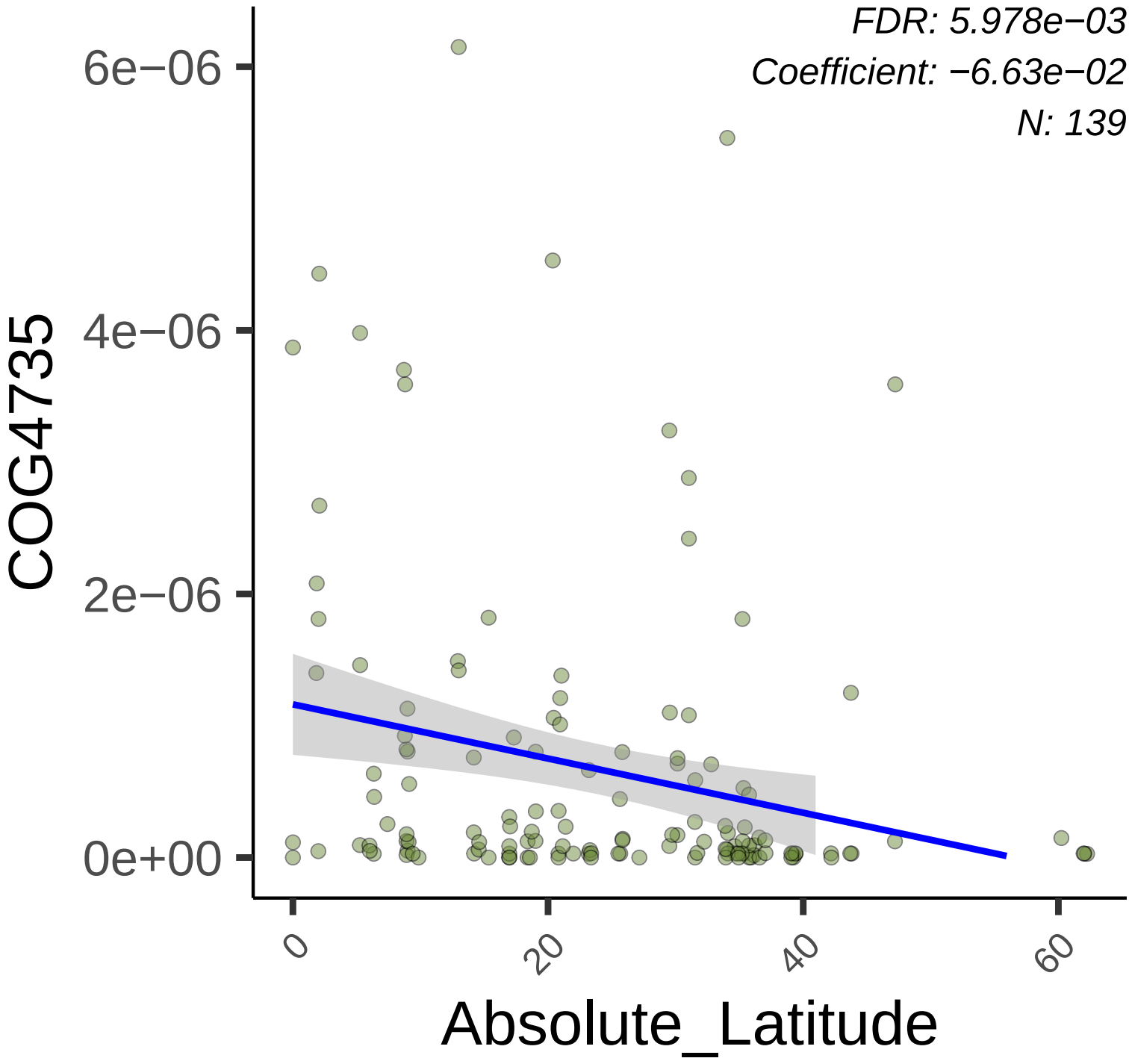

FDR: 5.538e−03
Coefficient: −4.02e−02
N: 139
COG4924
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

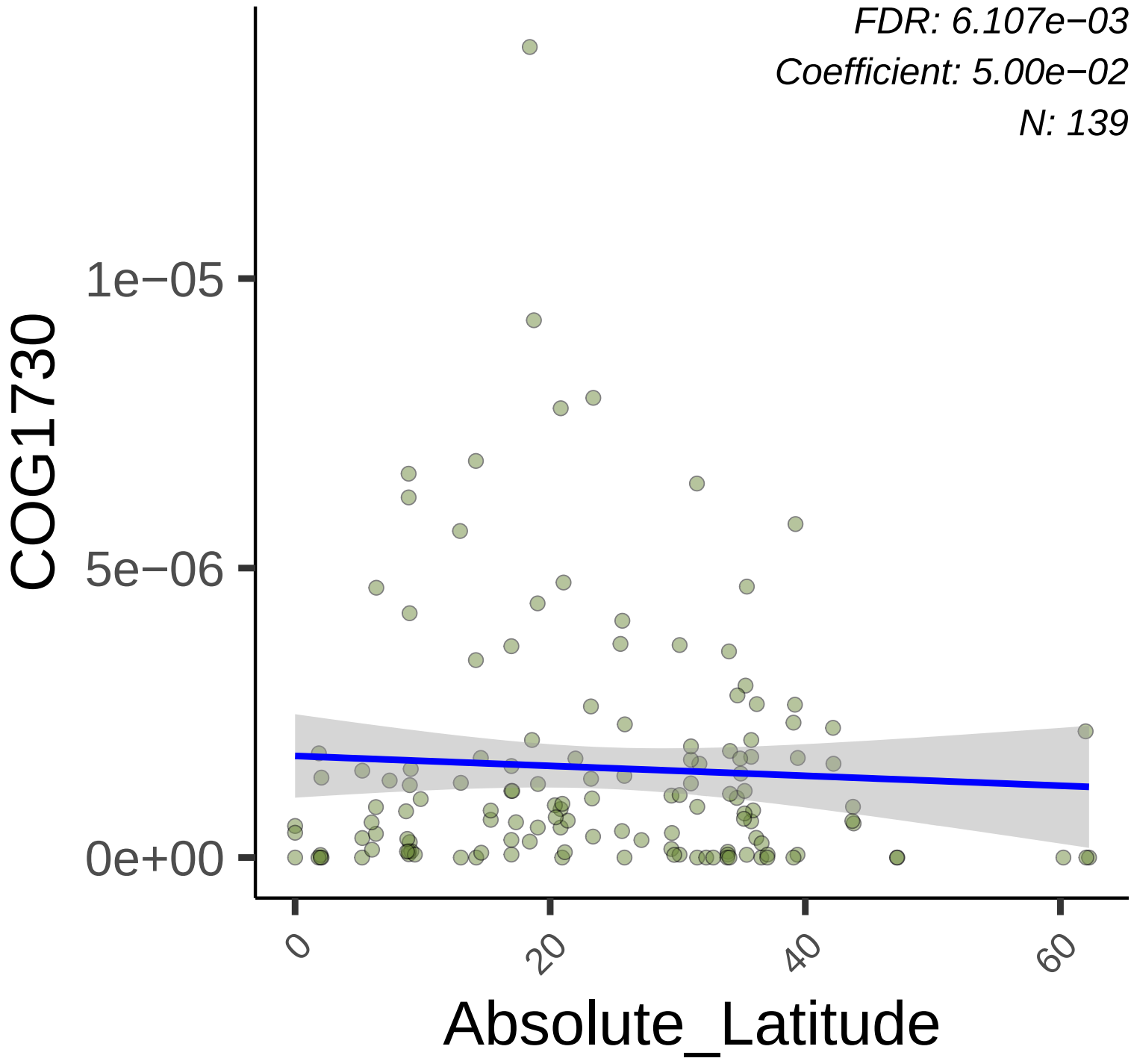

FDR: 5.630e−03
Coefficient: −2.68e−02
N: 139
COG4227
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

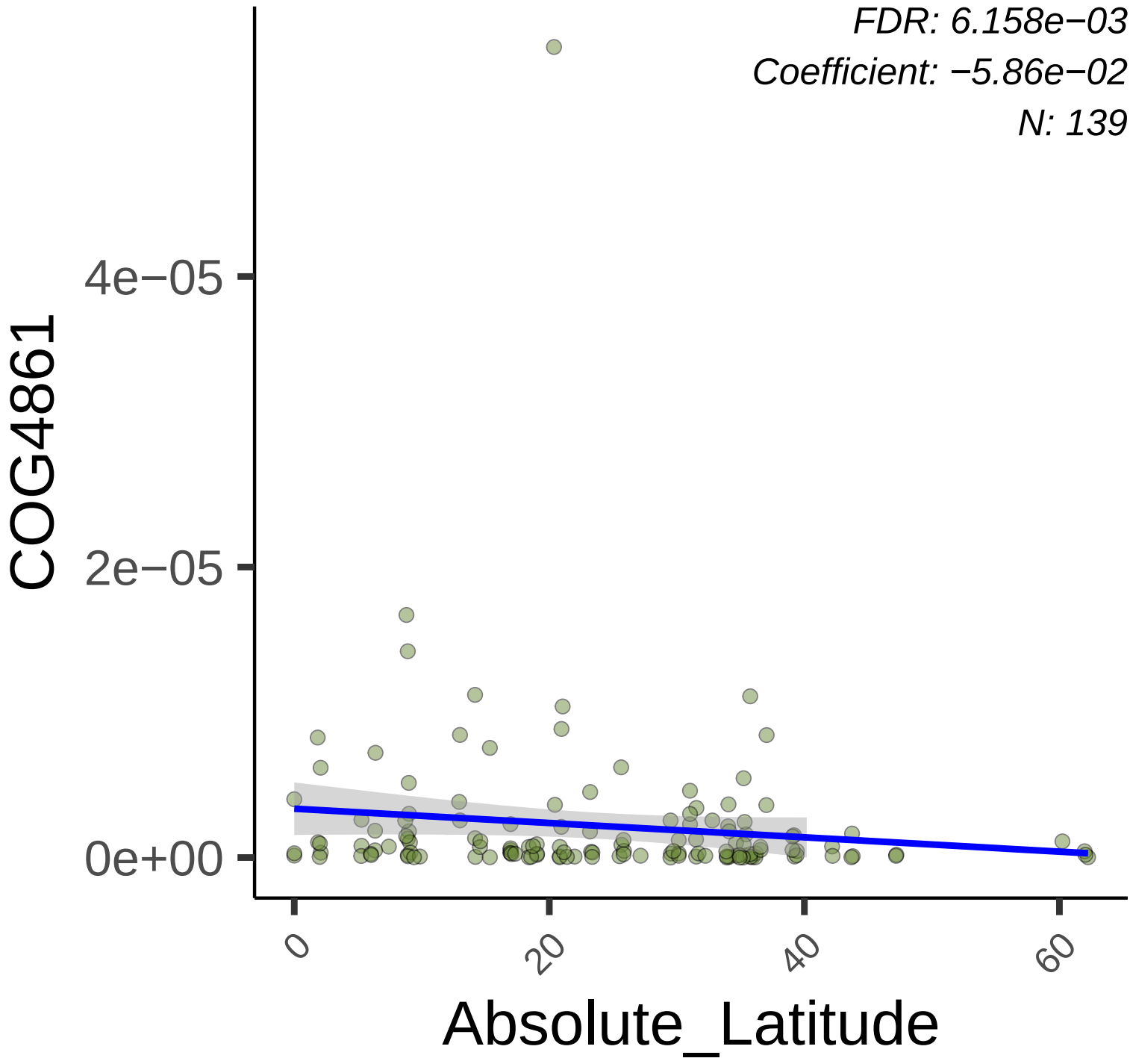

FDR: 5.792e−03
Coefficient: −5.82e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG1723
0
20
40
60
Absolute_Latitude

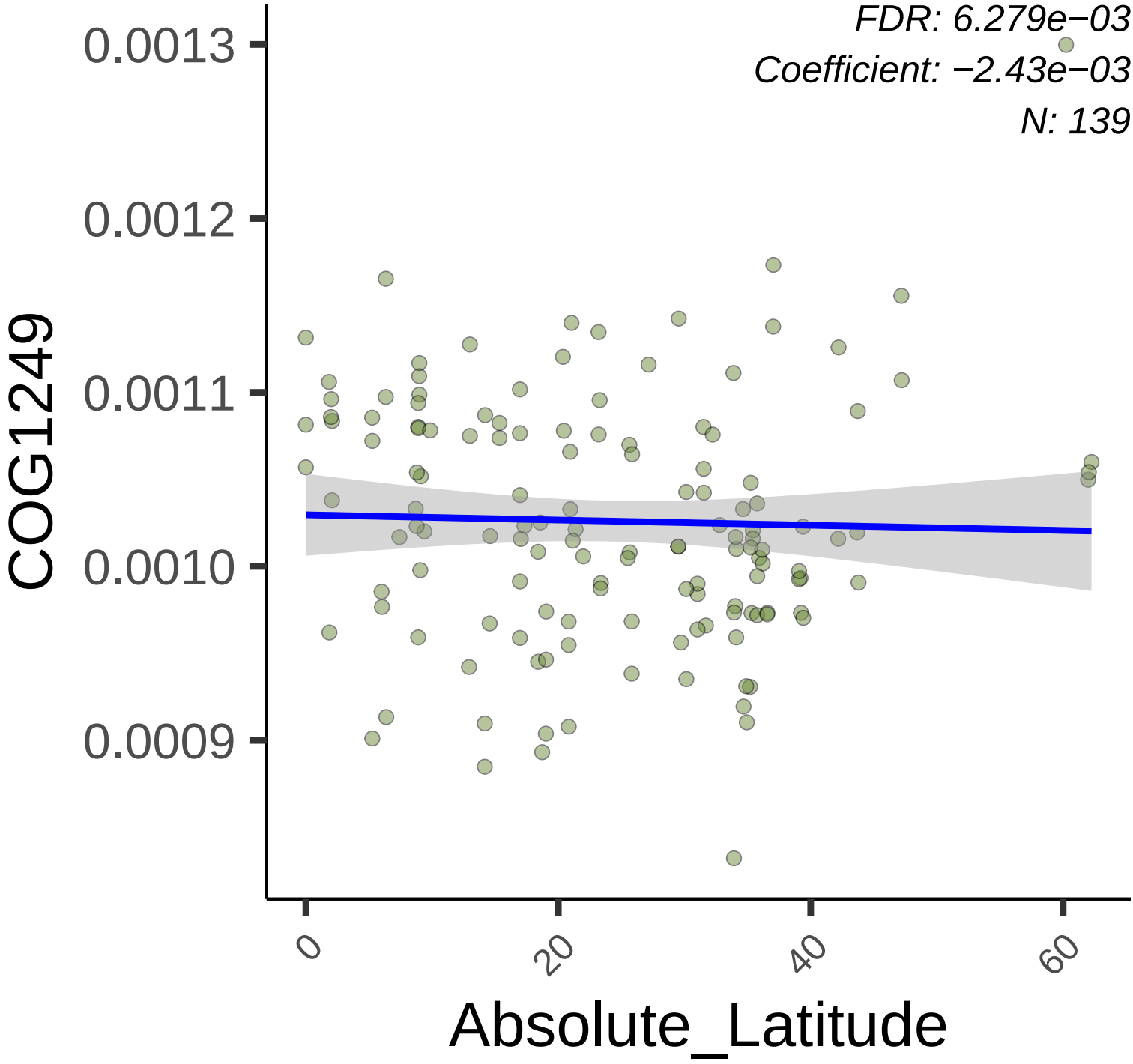

FDR: 5.831e−03
Coefficient: −5.48e−02
N: 139
COG3065
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

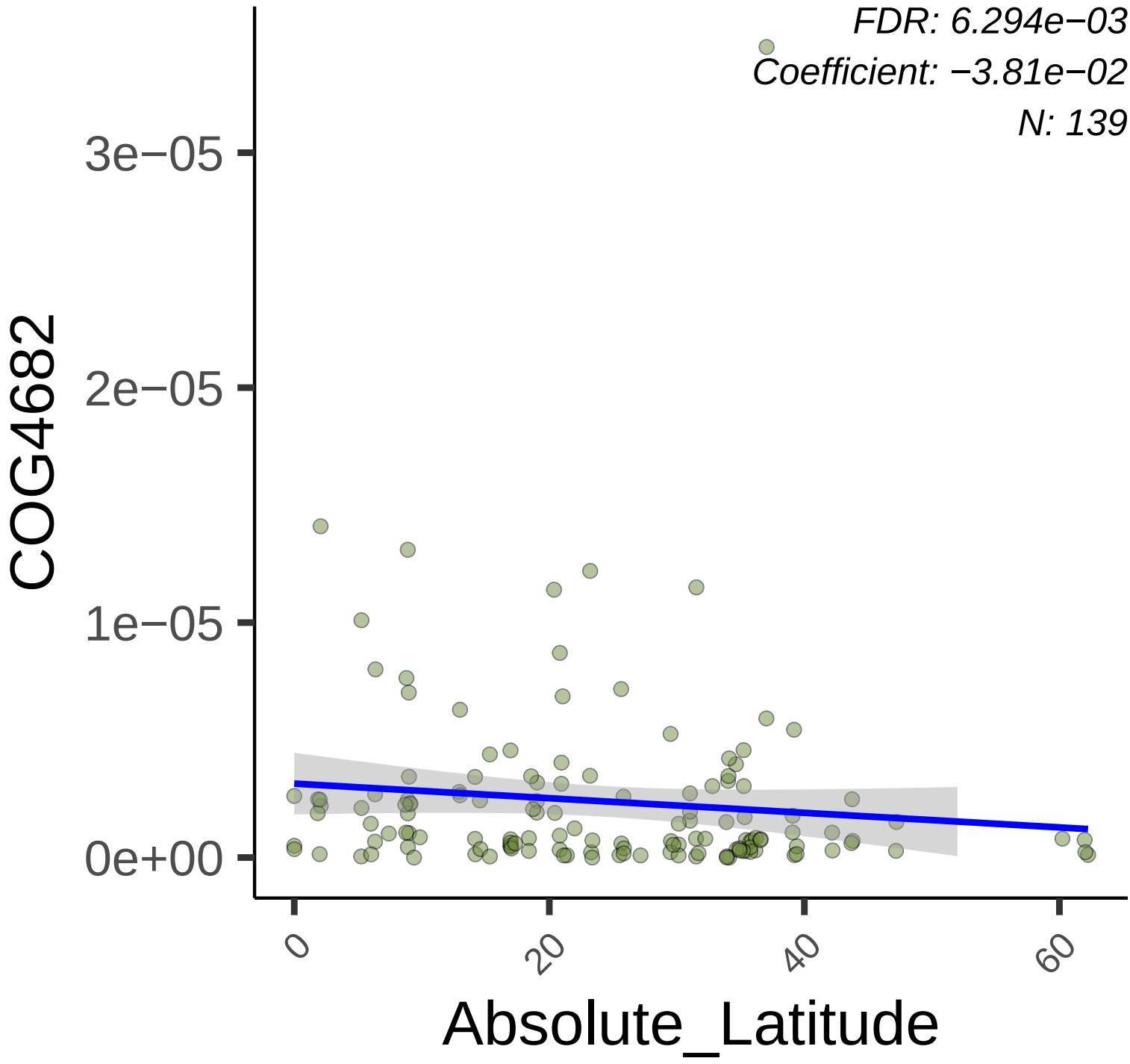

FDR: 5.977e−03
Coefficient: 4.75e−03
N: 139
5e−04
4e−04
3e−04
COG0416
0
20
40
60
Absolute_Latitude

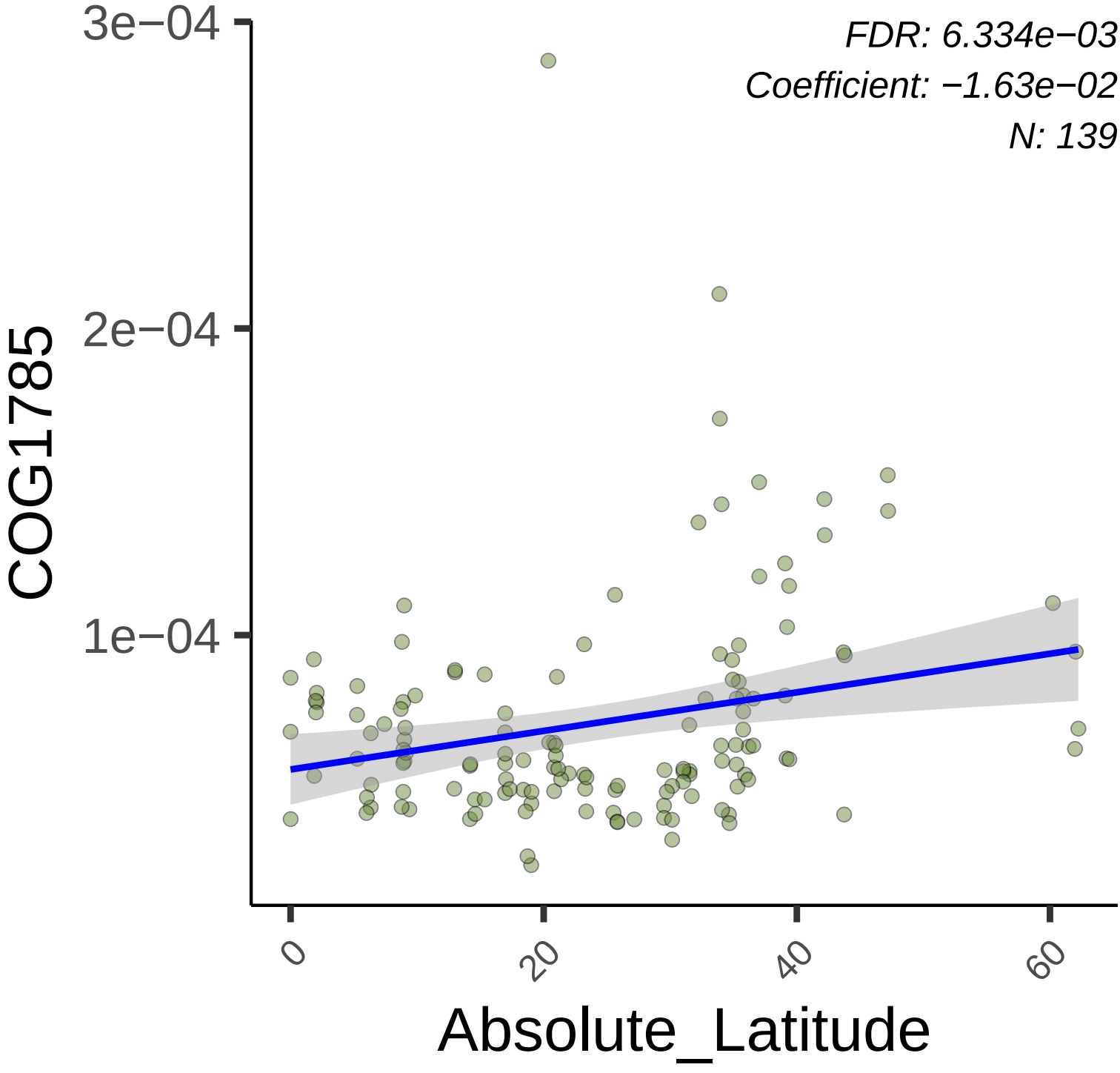

FDR: 5.978e−03
Coefficient: −6.63e−02
N: 139
6e−06
4e−06
2e−06
0e+00
COG4735
0
20
40
60
Absolute_Latitude

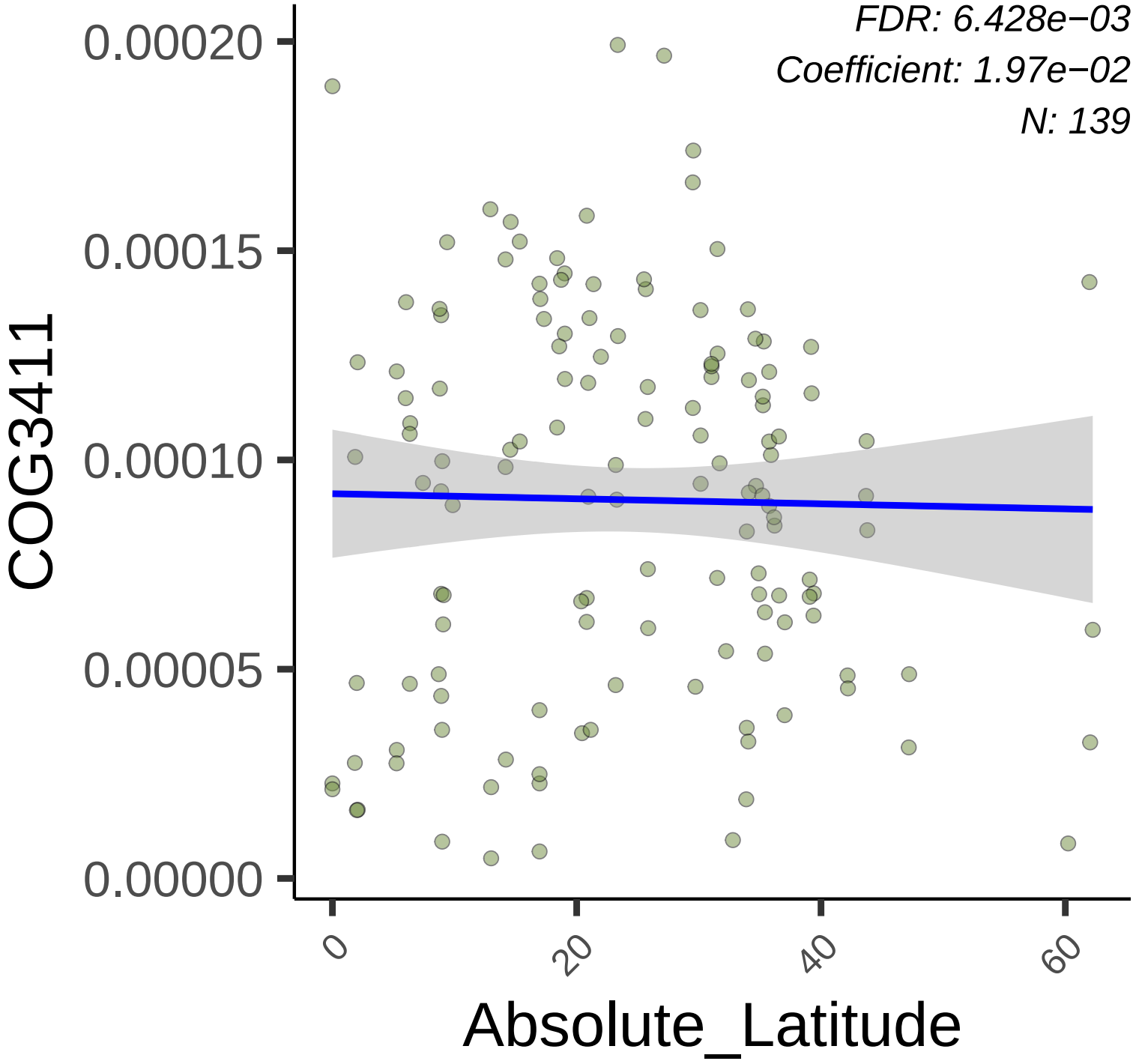

FDR: 6.107e−03
Coefficient: 5.00e−02
N: 139
COG1730
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

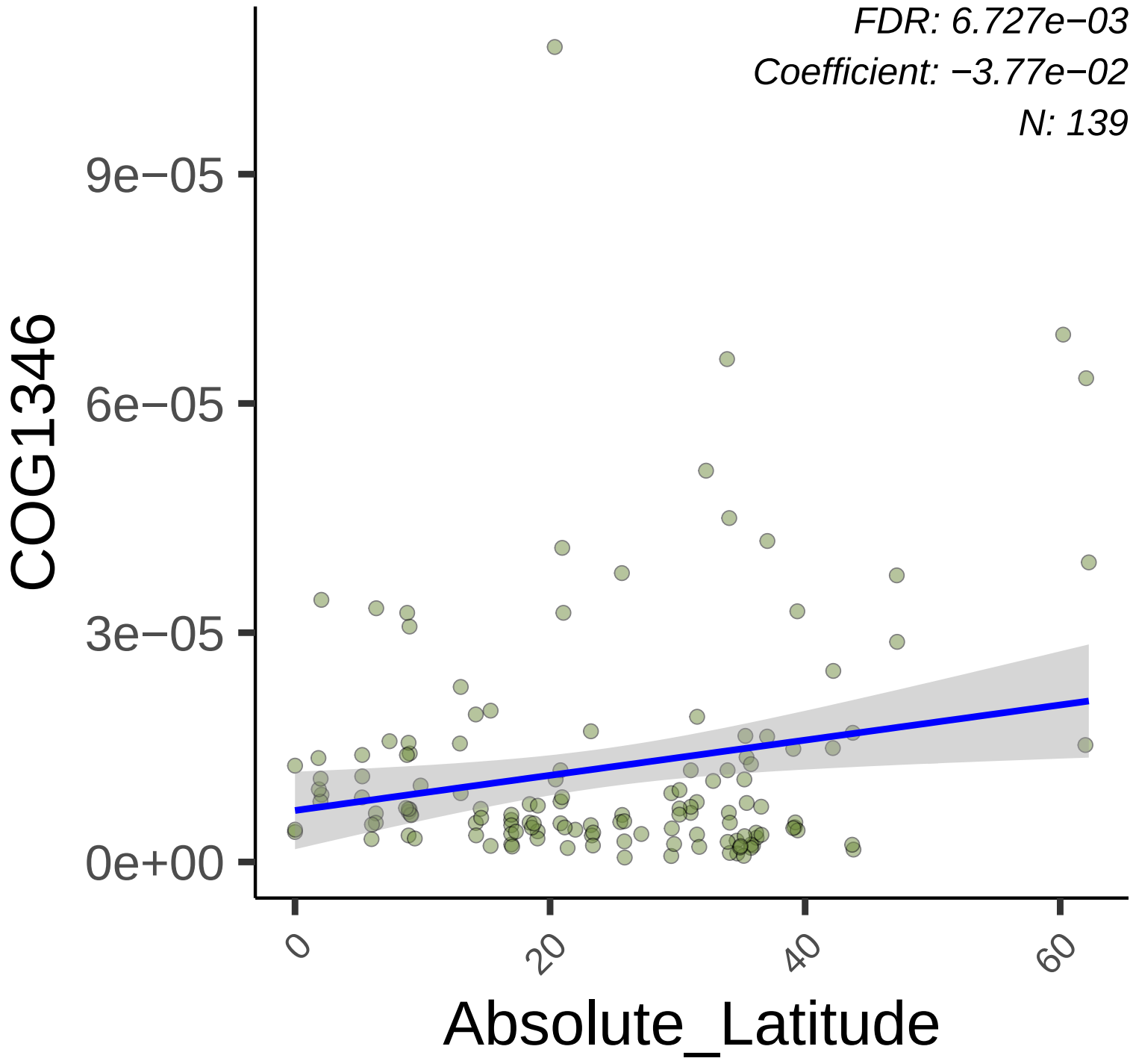

FDR: 6.158e−03
Coefficient: −5.86e−02
N: 139
COG4861
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

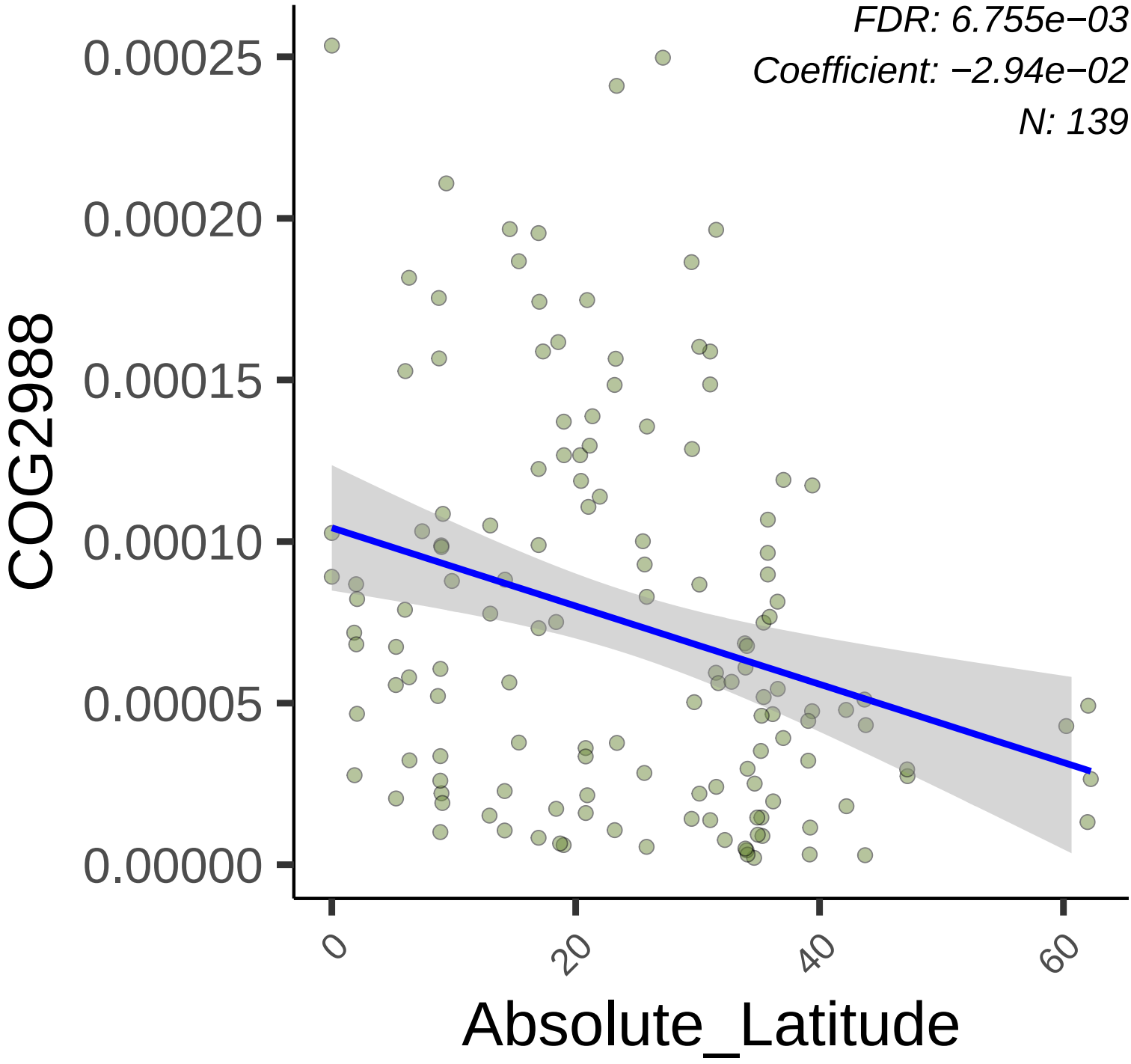

FDR: 6.279e−03
Coefficient: −2.43e−03
N: 139
0.0013
0.0012
0.0011
0.0010
0.0009
COG1249
0
20
40
60
Absolute_Latitude

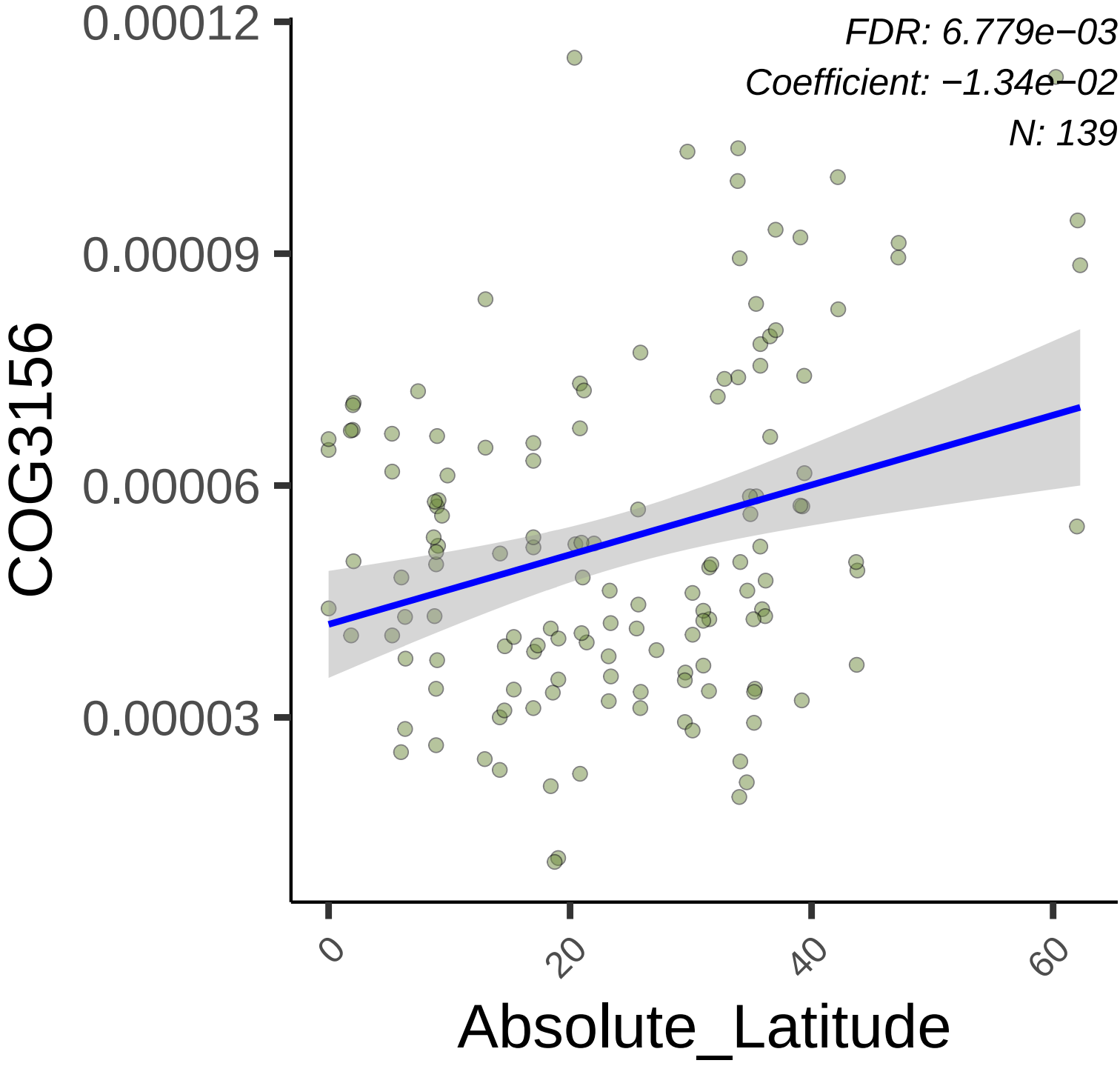

FDR: 6.294e−03
Coefficient: −3.81e−02
N: 139
COG4682
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

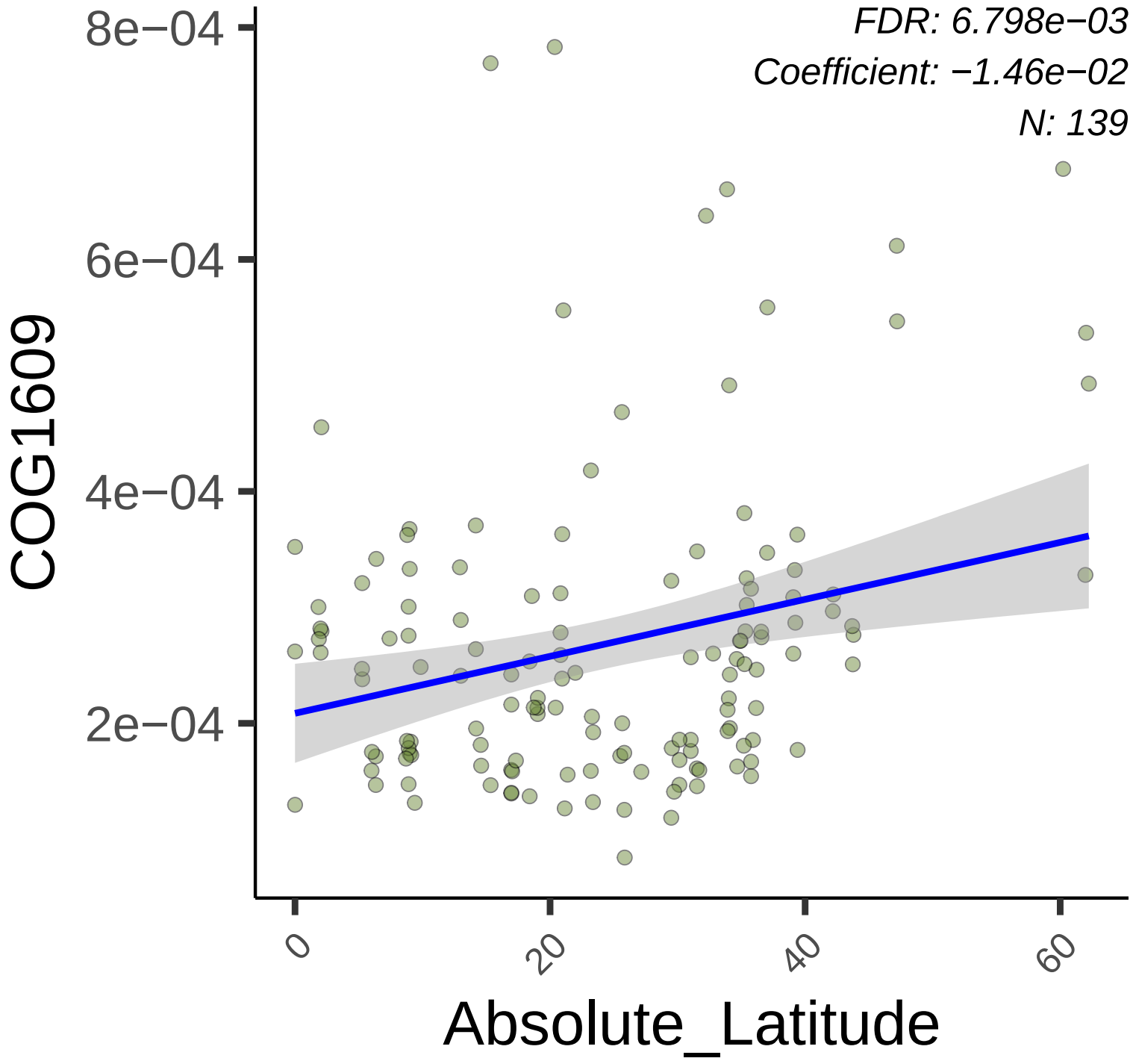

FDR: 6.334e−03
Coefficient: −1.63e−02
N: 139
3e−04
2e−04
1e−04
COG1785
0
20
40
60
Absolute_Latitude

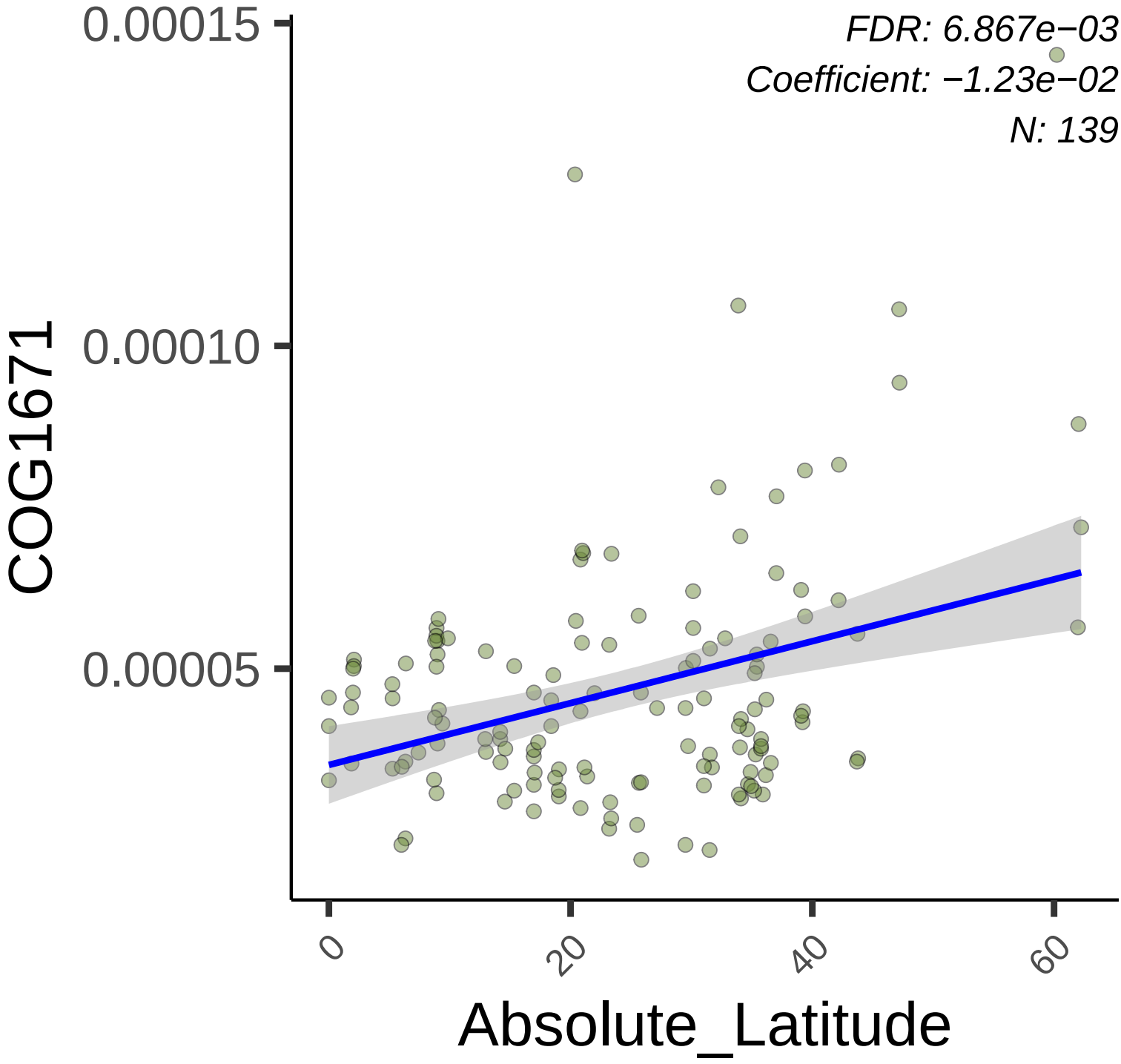

FDR: 6.428e−03
Coefficient: 1.97e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG3411
0
20
40
60
Absolute_Latitude

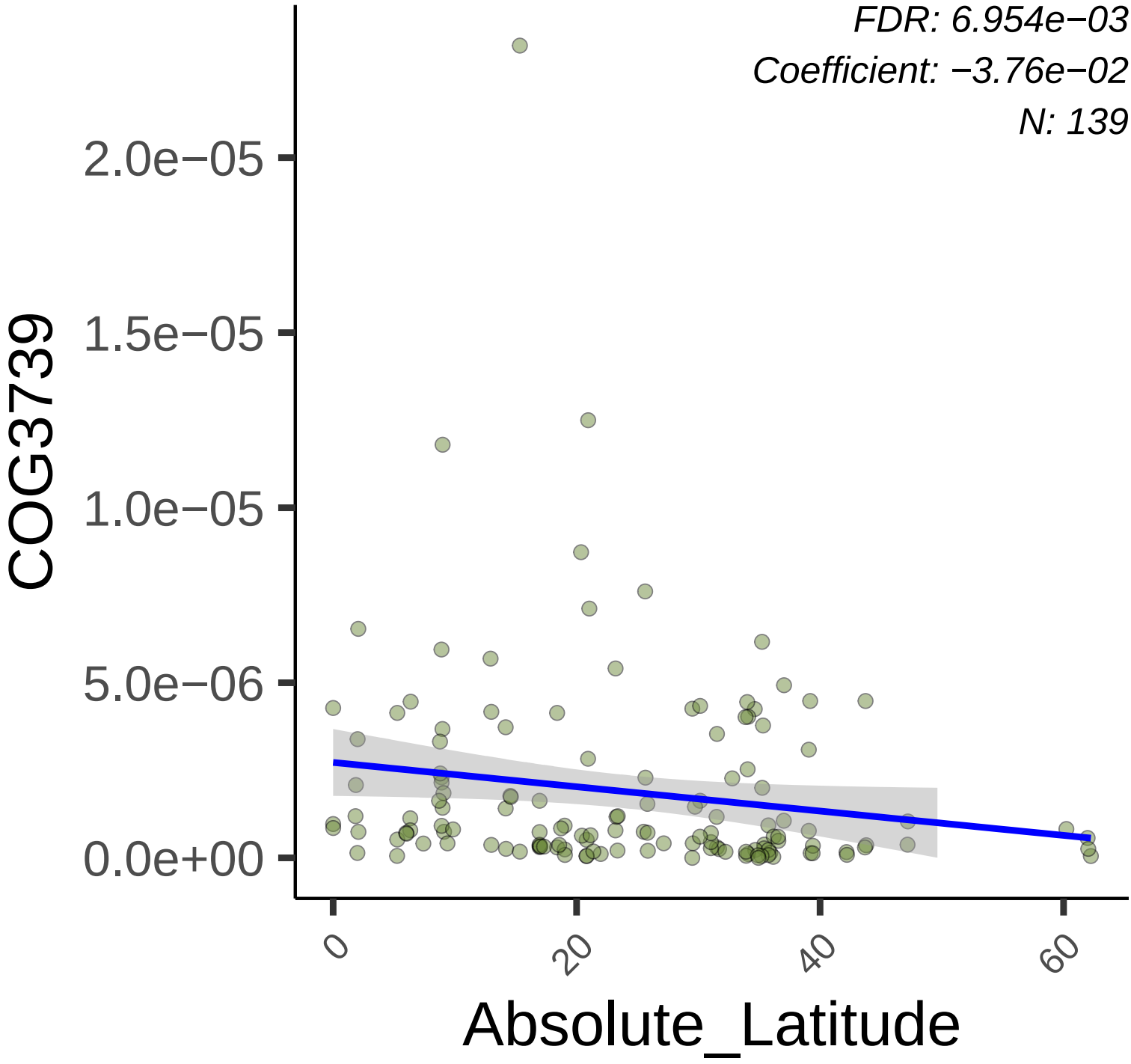

FDR: 6.727e−03
Coefficient: −3.77e−02
N: 139
COG1346
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

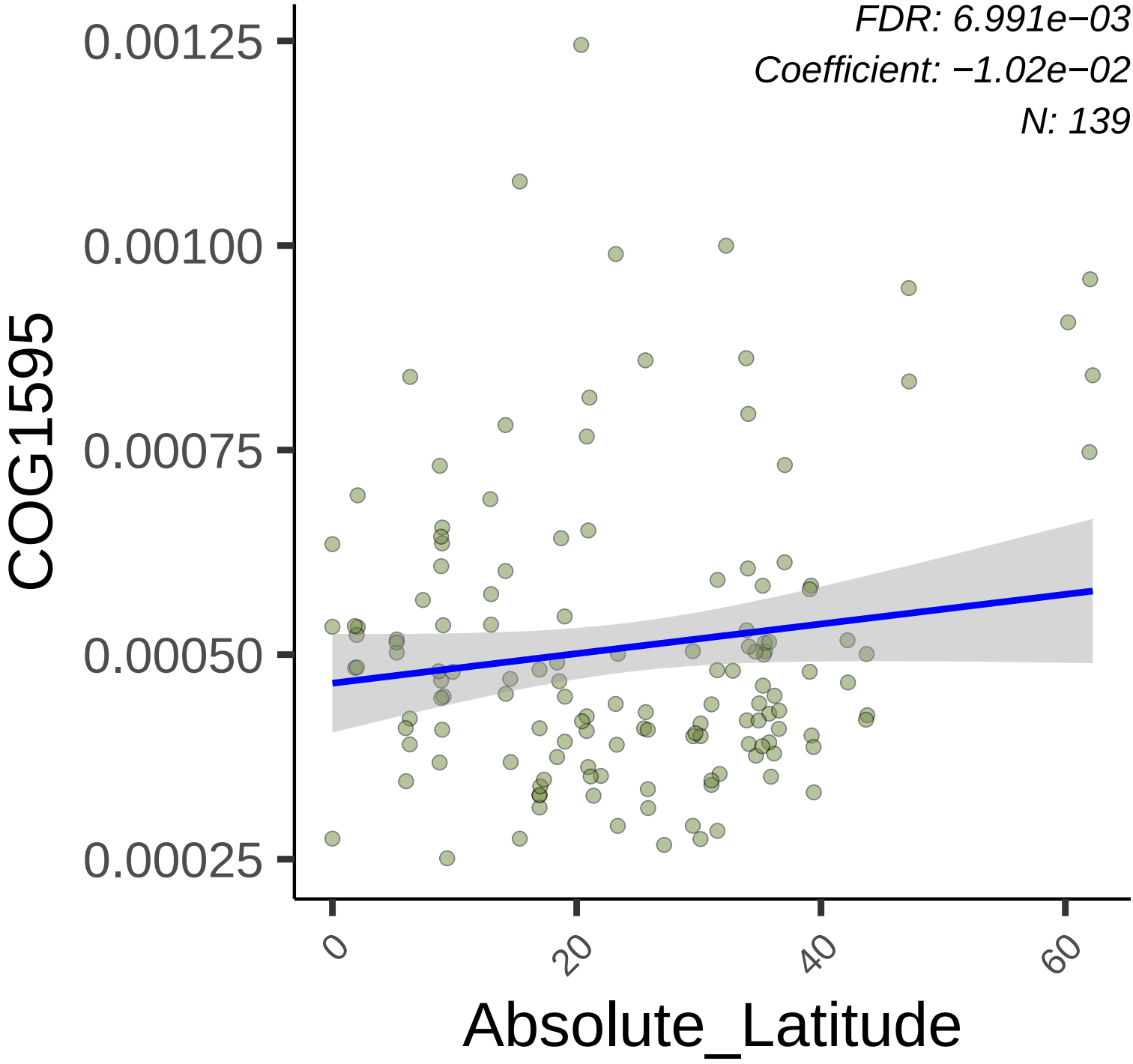

FDR: 6.755e−03
Coefficient: −2.94e−02
N: 139
COG2988
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

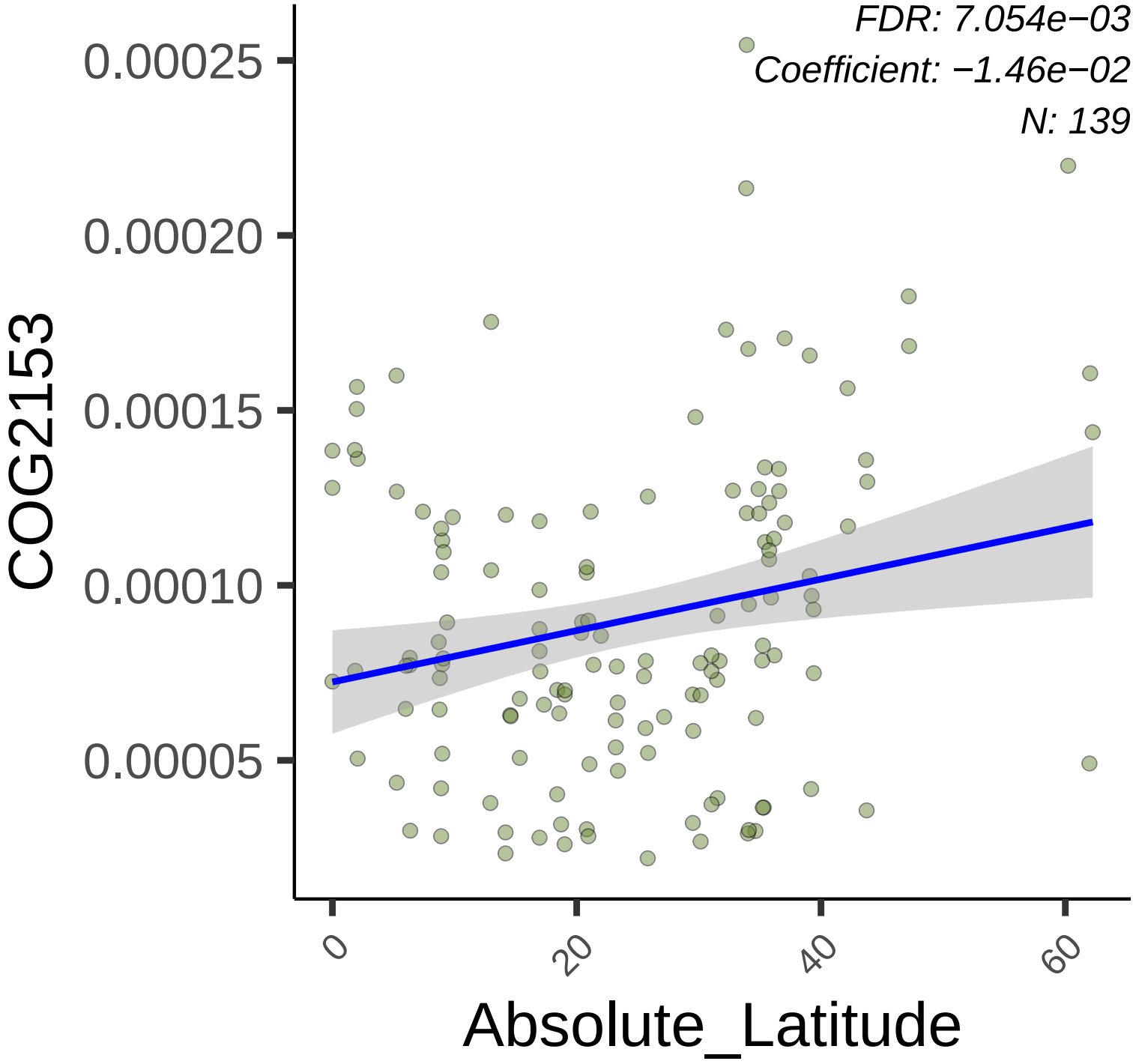

FDR: 6.779e−03
Coefficient: −1.34e−02
N: 139
0.00012
0.00009
0.00006
0.00003
COG3156
0
20
40
60
Absolute_Latitude

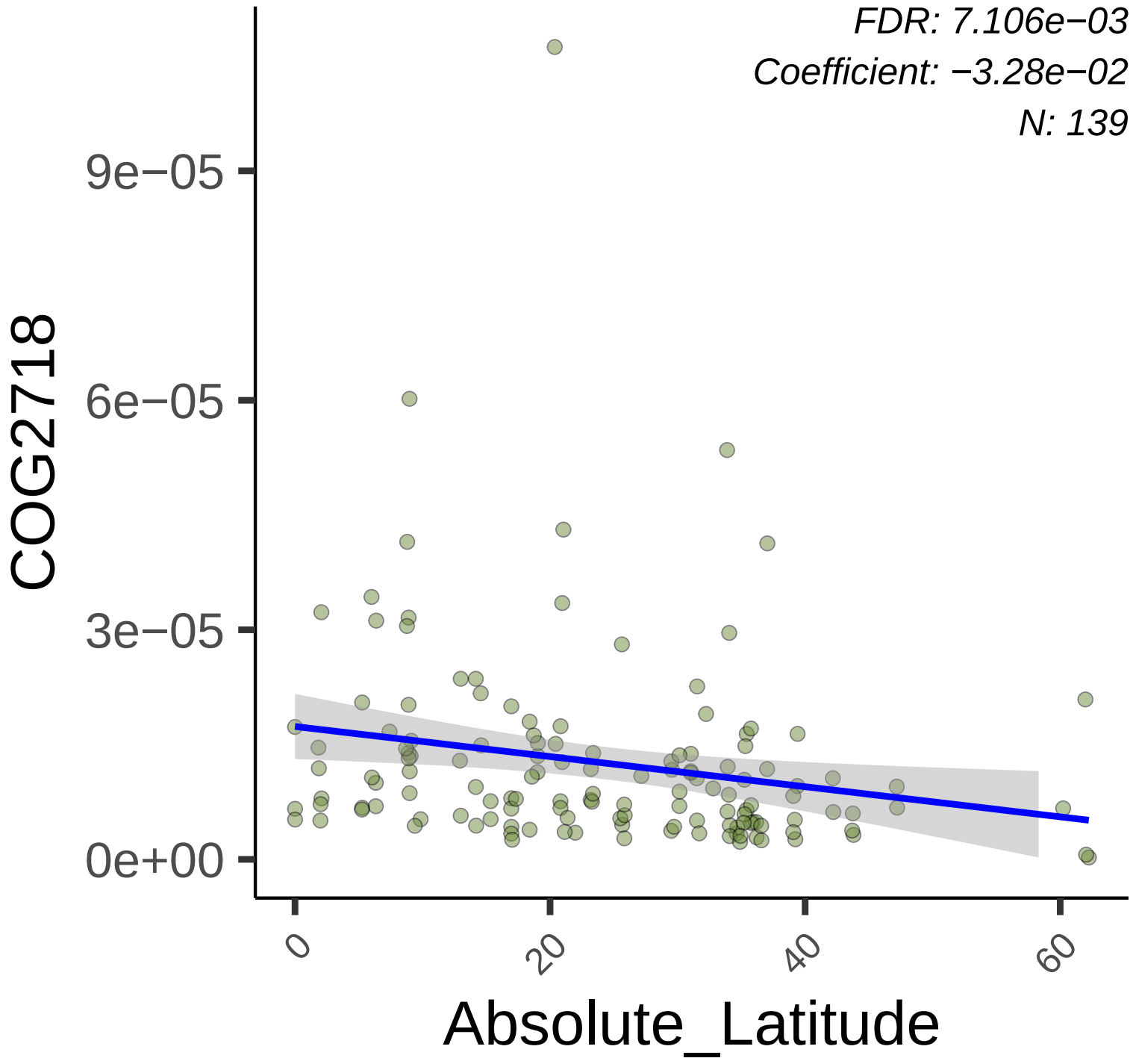

FDR: 6.798e−03
Coefficient: −1.46e−02
N: 139
8e−04
6e−04
4e−04
2e−04
COG1609
0
20
40
60
Absolute_Latitude

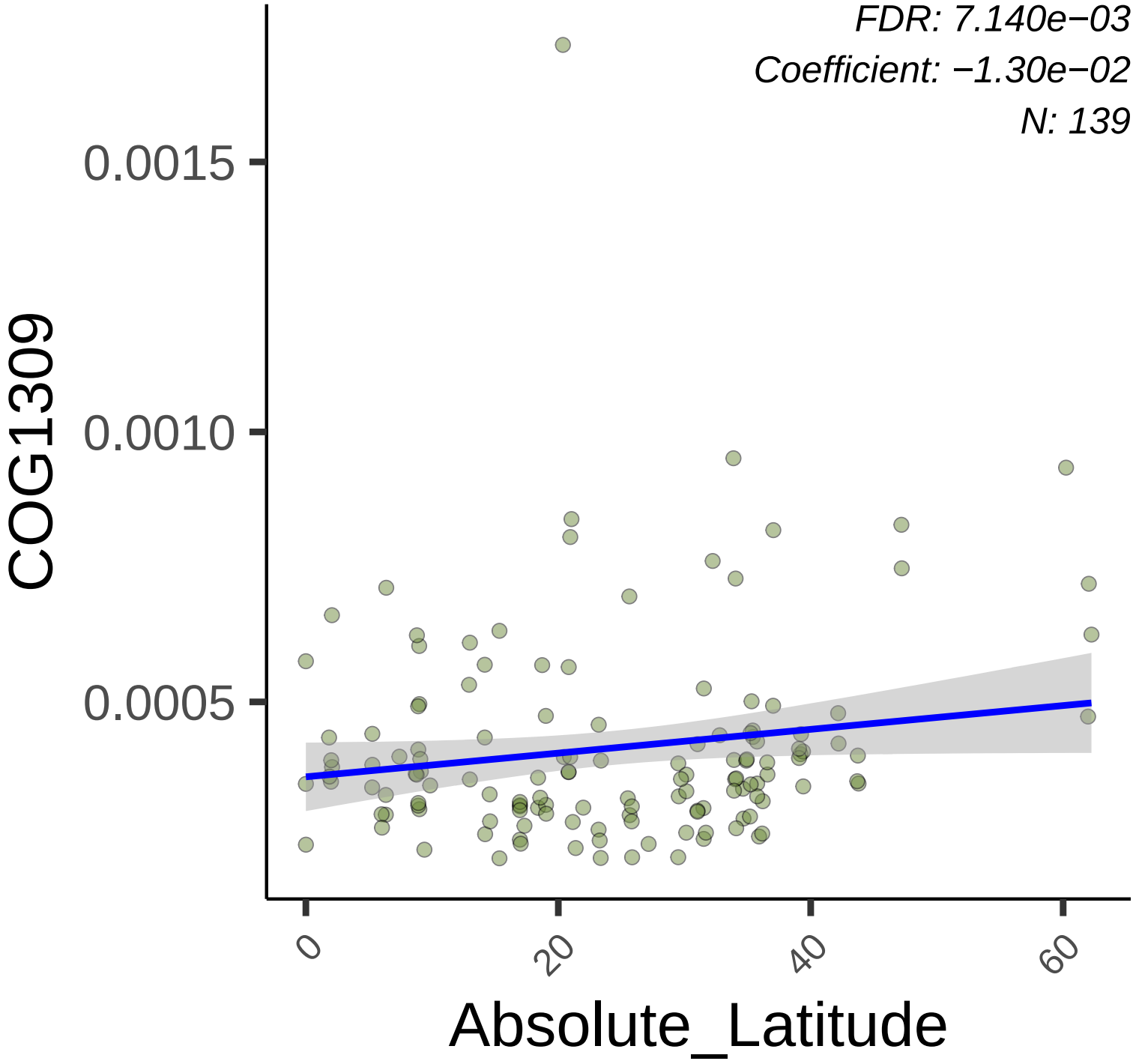

FDR: 6.867e−03
Coefficient: −1.23e−02
N: 139
0.00015
0.00010
0.00005
COG1671
0
20
40
60
Absolute_Latitude

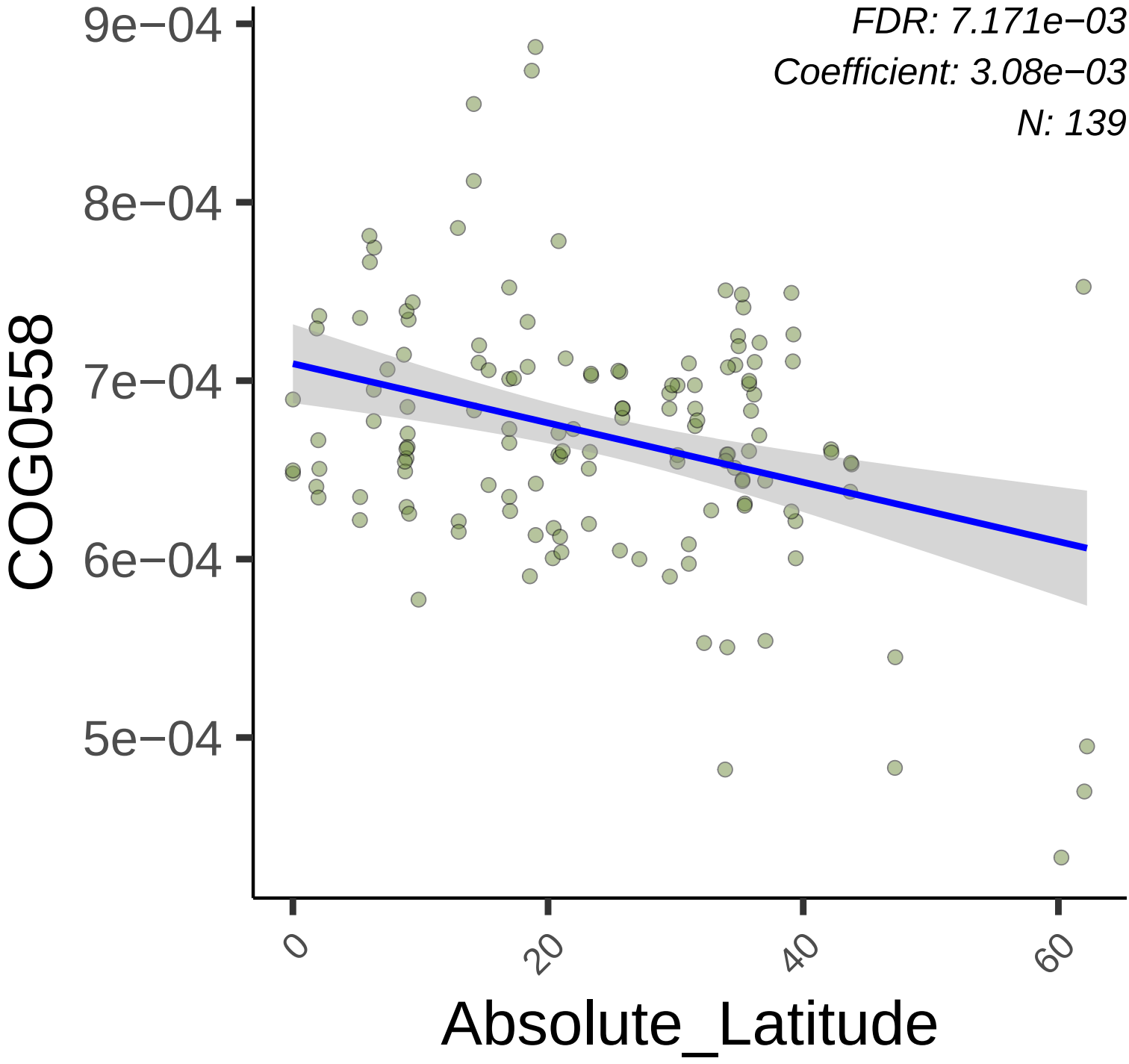

FDR: 6.954e−03
Coefficient: −3.76e−02
N: 139
COG3739
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

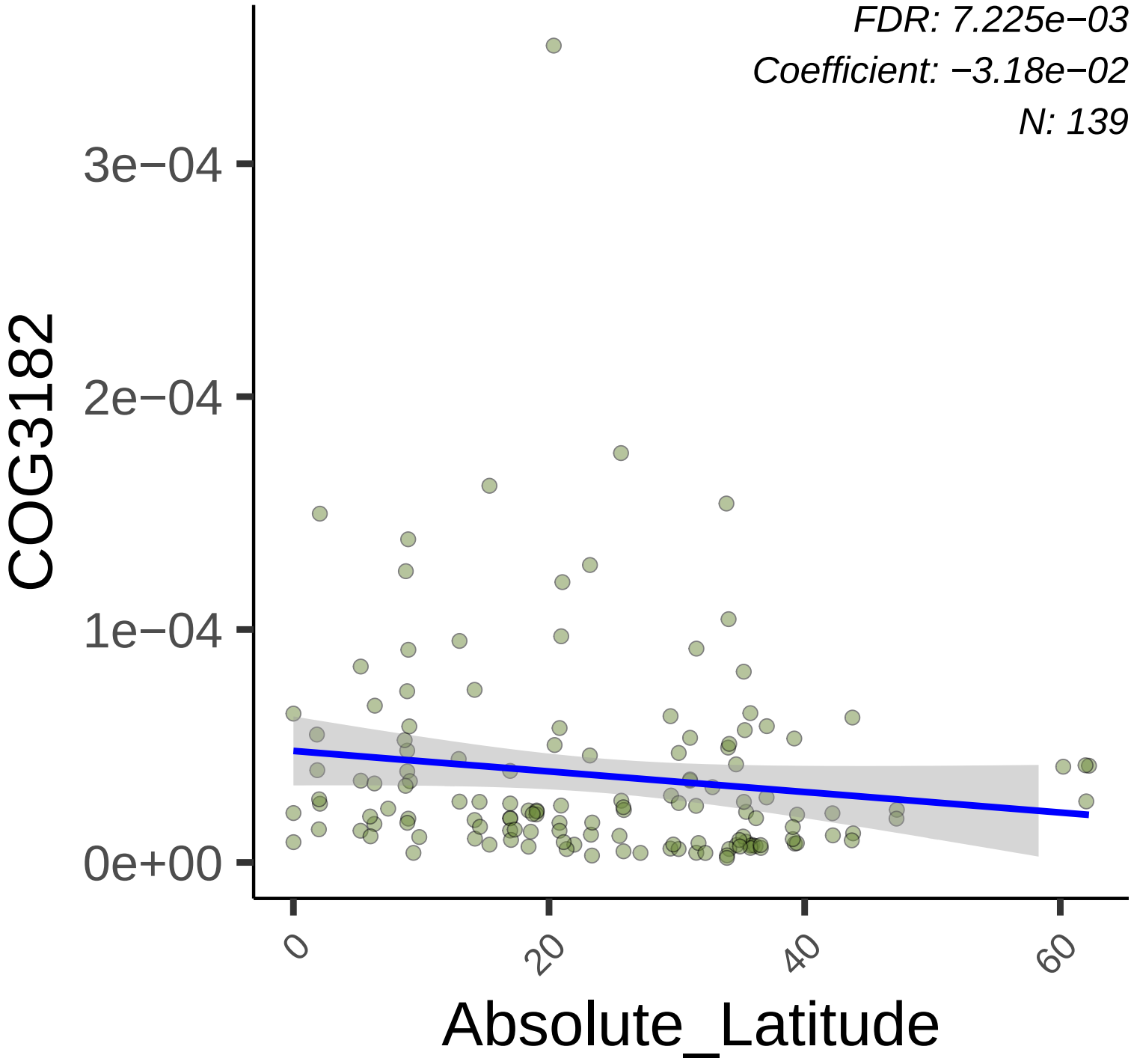

FDR: 6.991e−03
Coefficient: −1.02e−02
N: 139
0.00125
0.00100
0.00075
0.00050
0.00025
COG1595
0
20
40
60
Absolute_Latitude

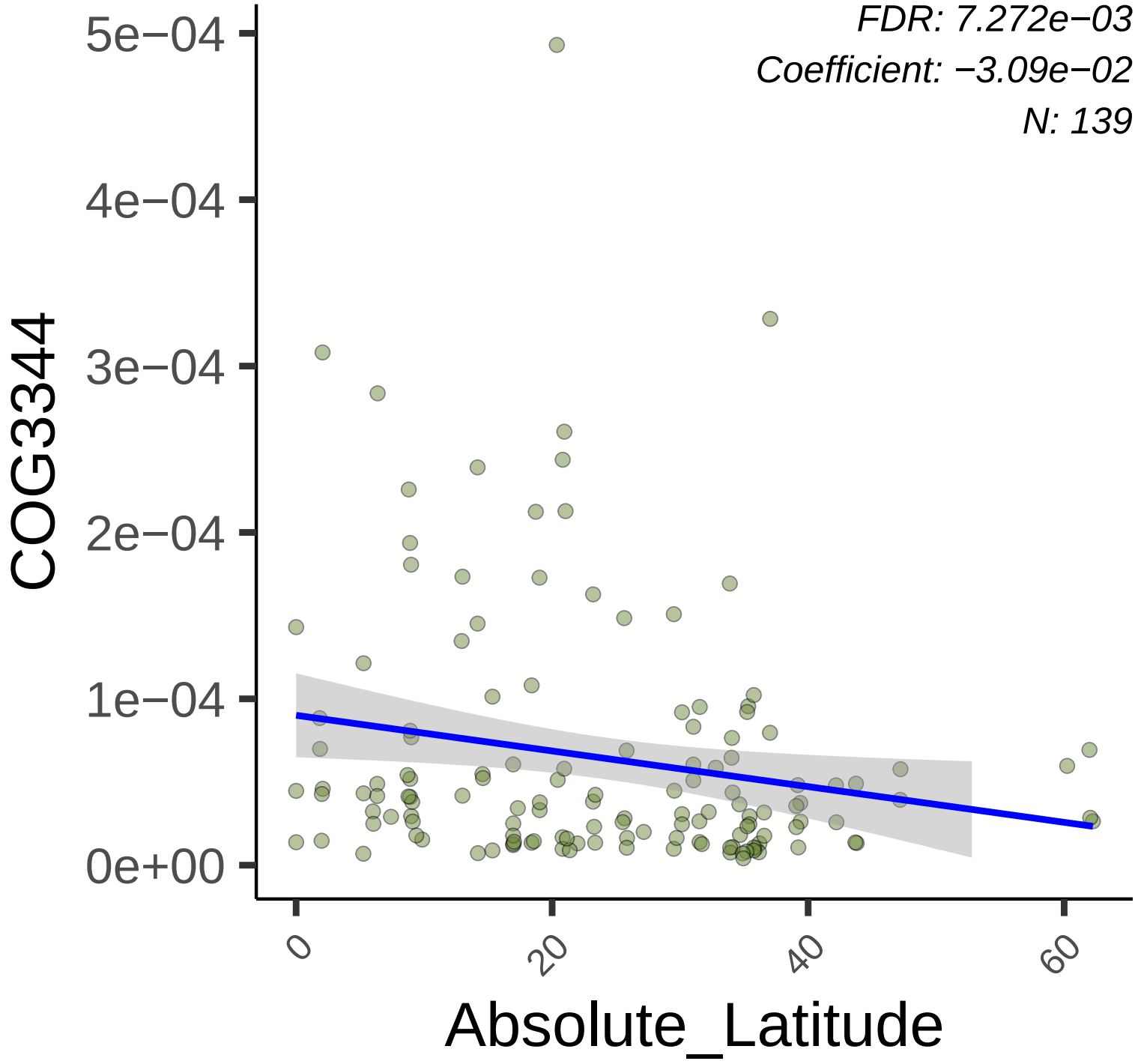

FDR: 7.054e−03
Coefficient: −1.46e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG2153
0
20
40
60
Absolute_Latitude

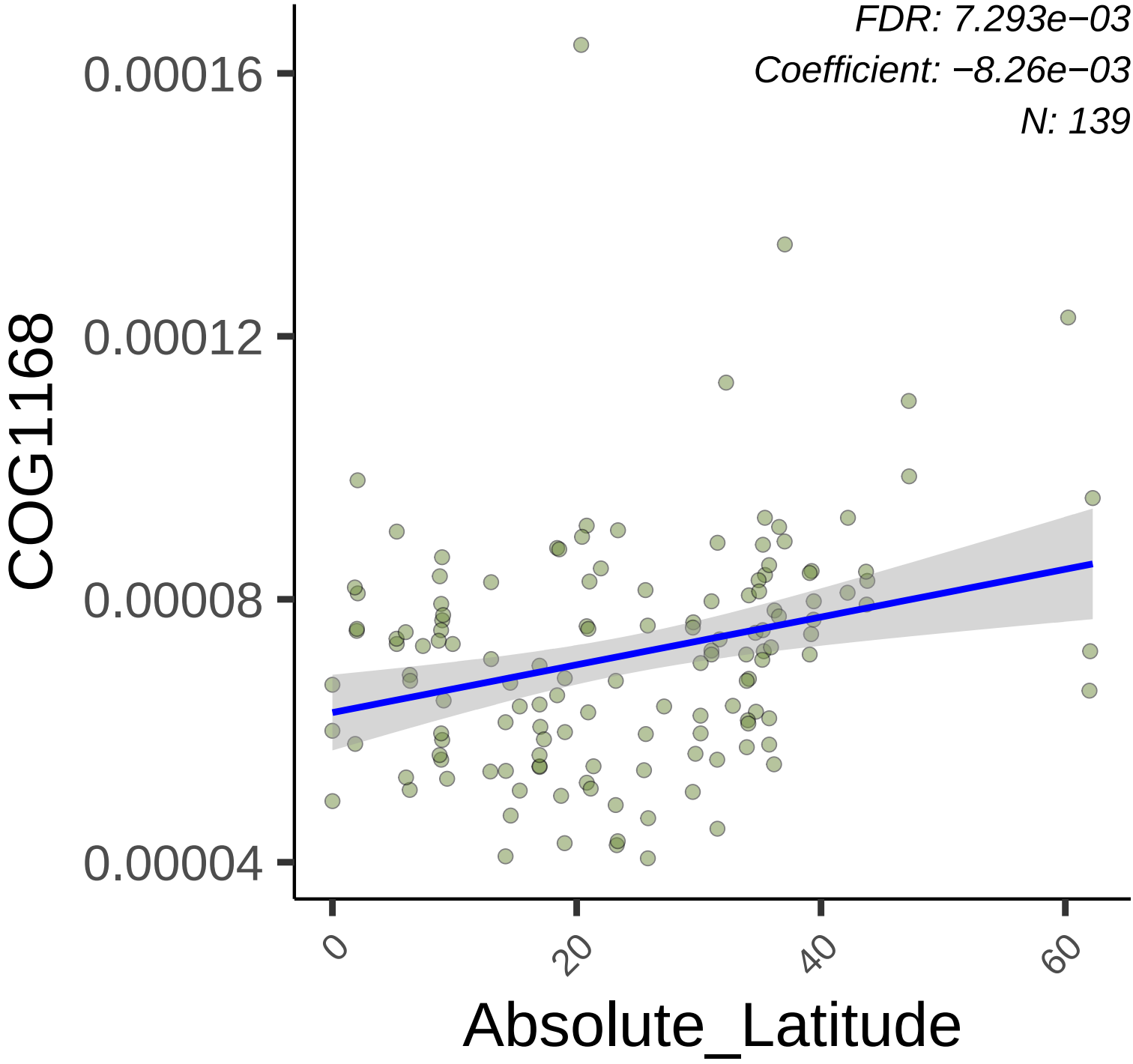

FDR: 7.106e−03
Coefficient: −3.28e−02
N: 139
COG2718
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

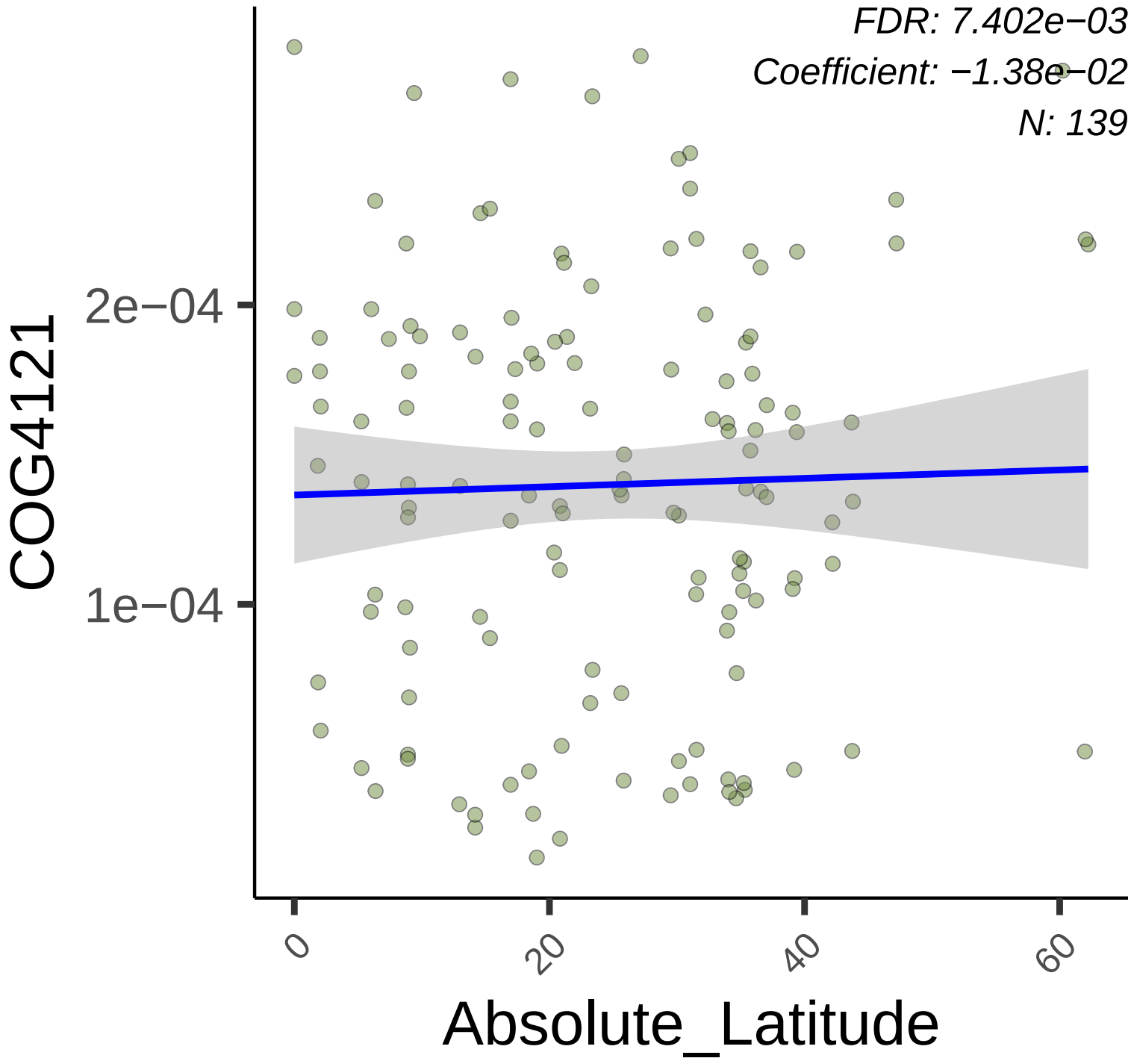

FDR: 7.140e−03
Coefficient: −1.30e−02
N: 139
COG1309
0.0015
0.0010
0.0005
0
20
40
60
Absolute_Latitude

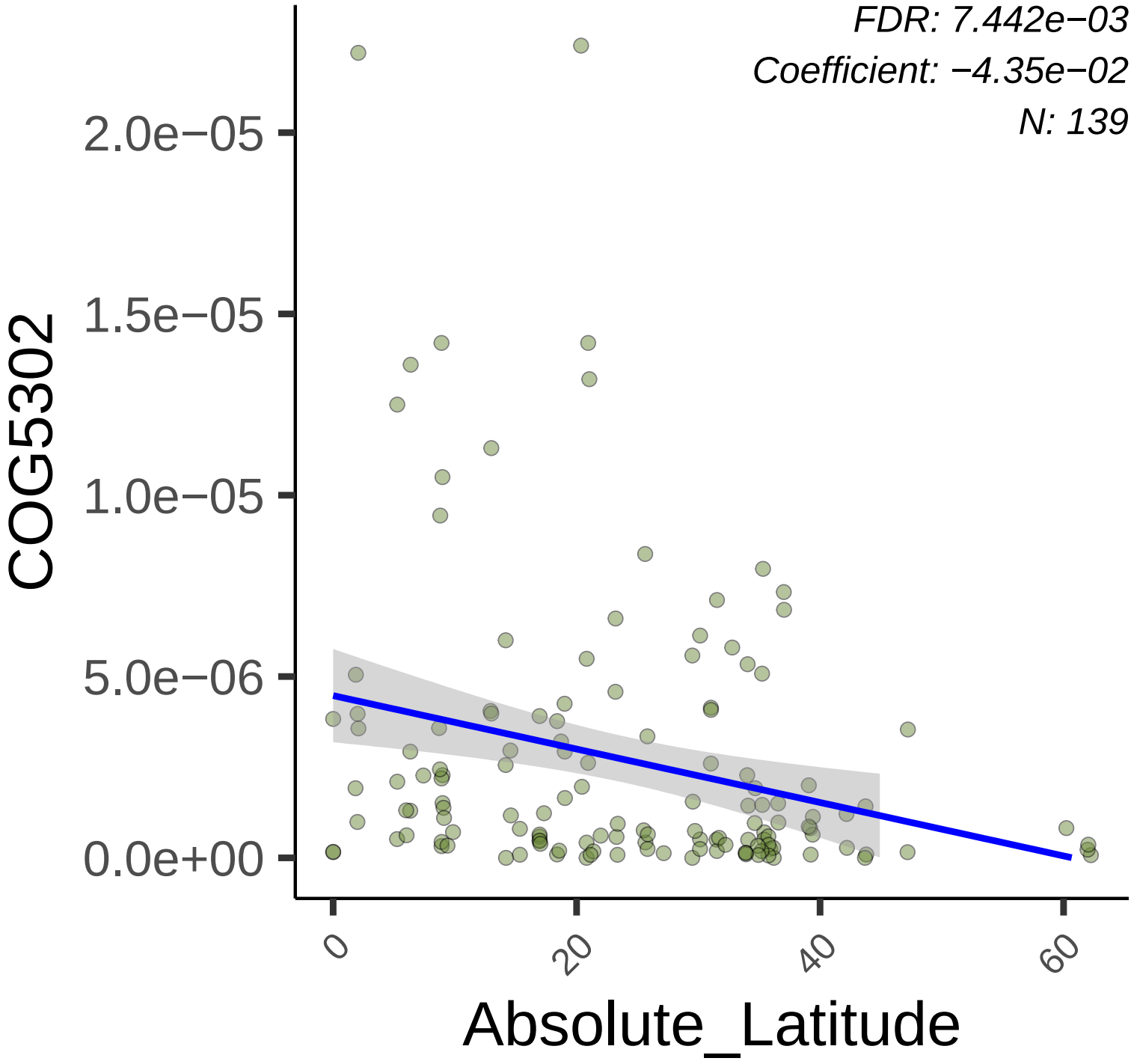

FDR: 7.171e−03
Coefficient: 3.08e−03
N: 139
9e−04
8e−04
7e−04
6e−04
5e−04
COG0558
0
20
40
60
Absolute_Latitude

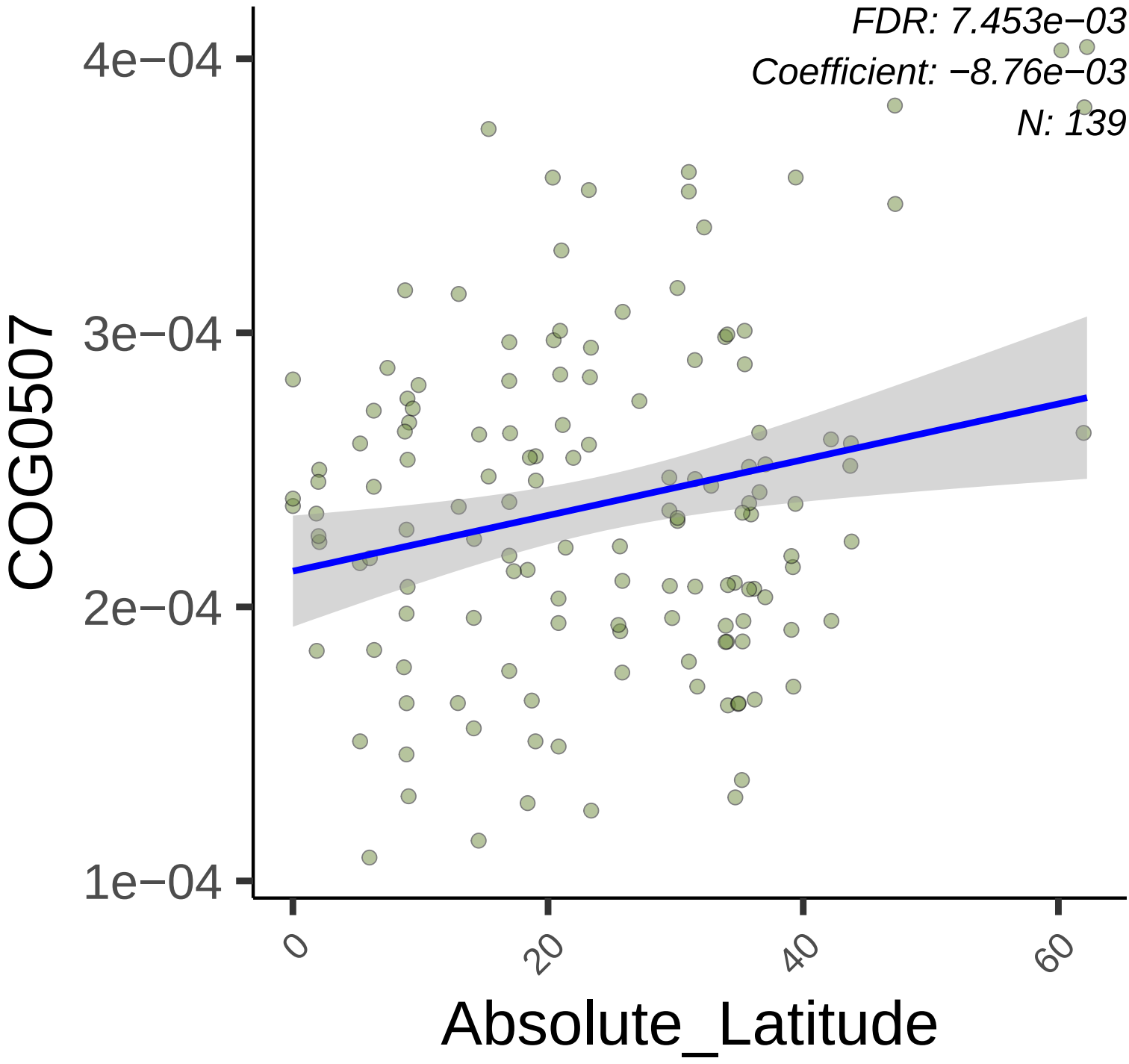

FDR: 7.225e−03
Coefficient: −3.18e−02
N: 139
COG3182
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

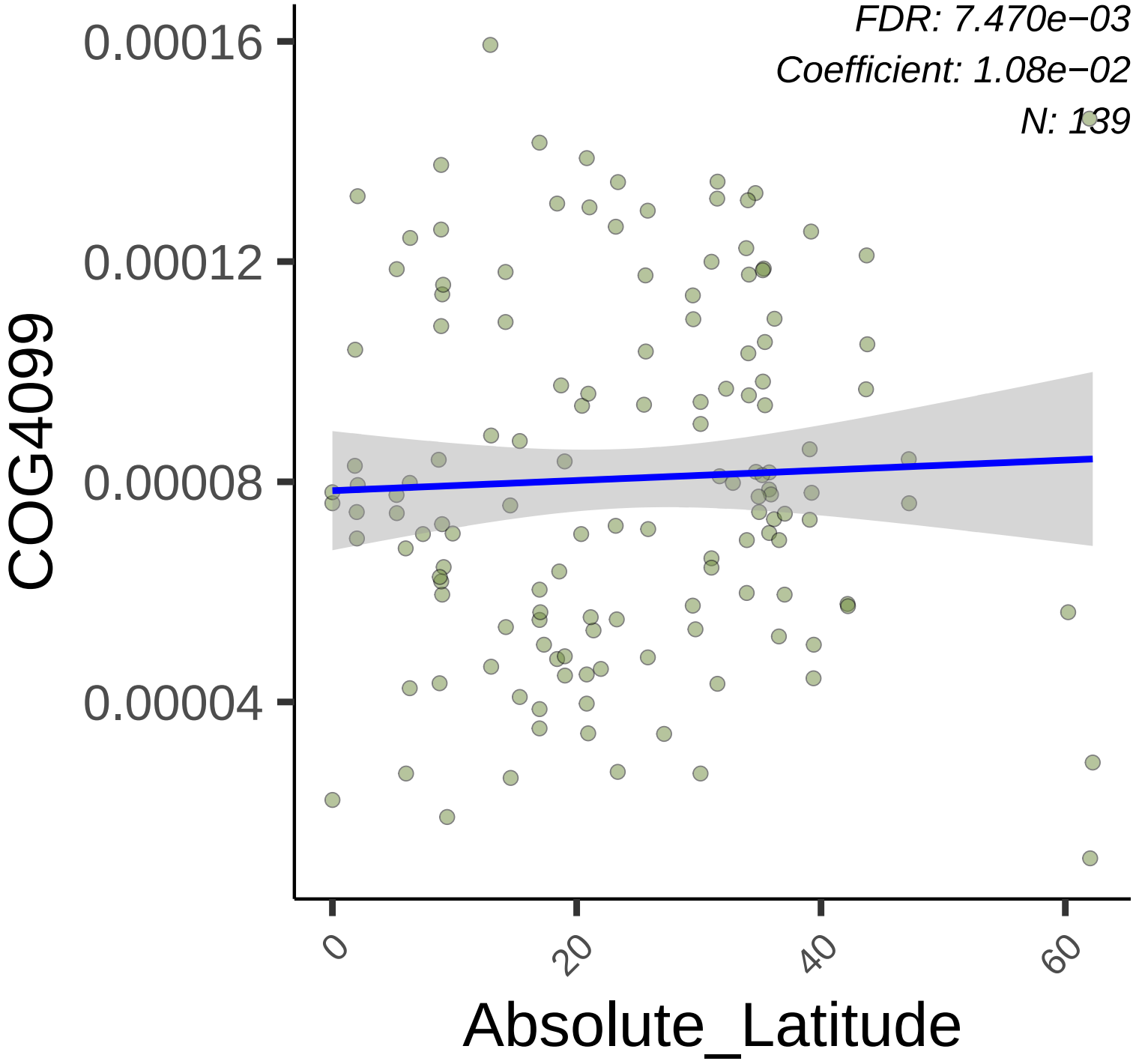

FDR: 7.272e−03
Coefficient: −3.09e−02
N: 139
COG3344
5e−04
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

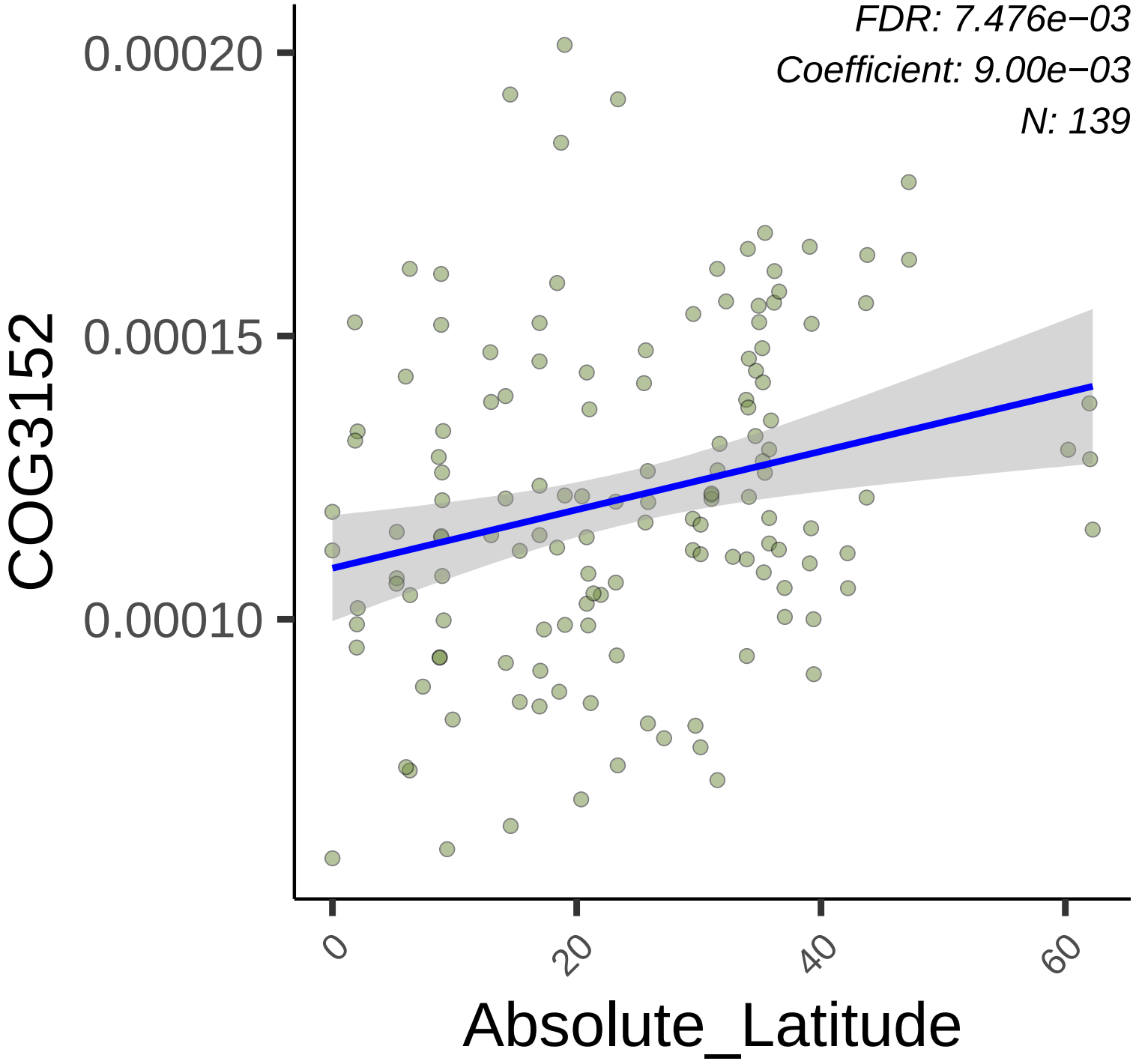

FDR: 7.293e−03
Coefficient: −8.26e−03
N: 139
0.00016
0.00012
0.00008
0.00004
COG1168
0
20
40
60
Absolute_Latitude

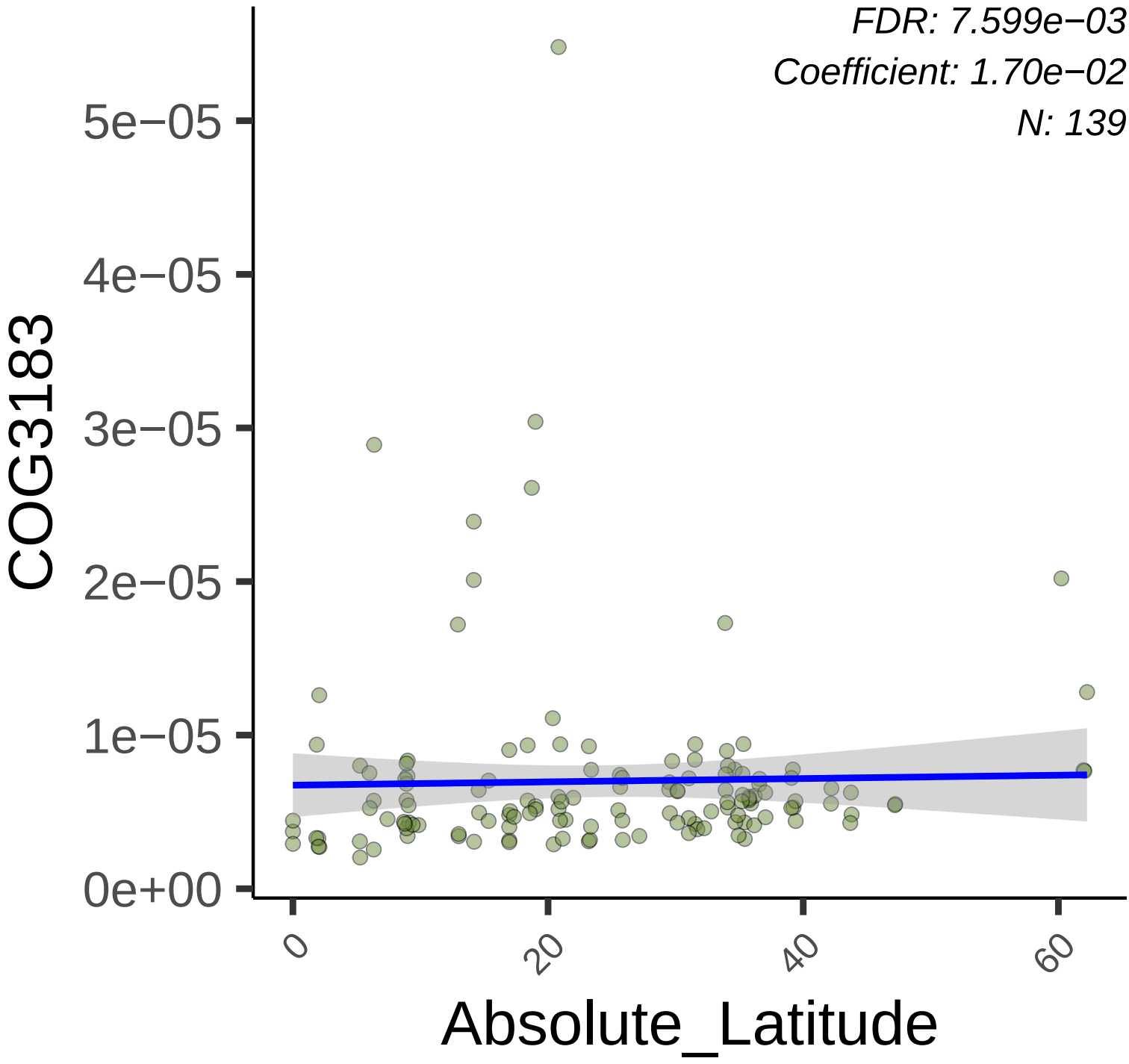

FDR: 7.402e−03
Coefficient: −1.38e−02
N: 139
COG4121
2e−04
1e−04
0
20
40
60
Absolute_Latitude

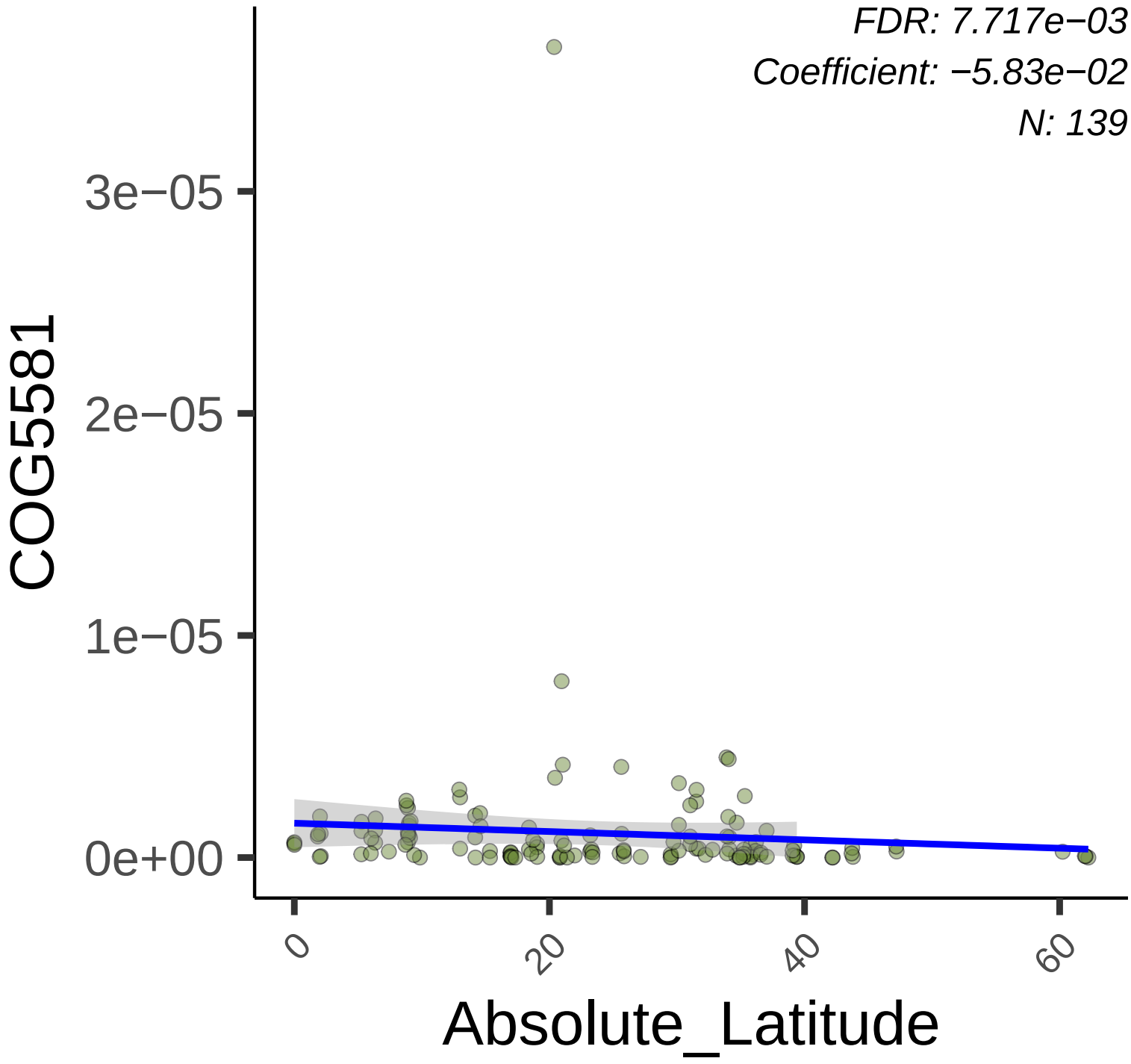

FDR: 7.442e−03
Coefficient: −4.35e−02
N: 139
COG5302
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

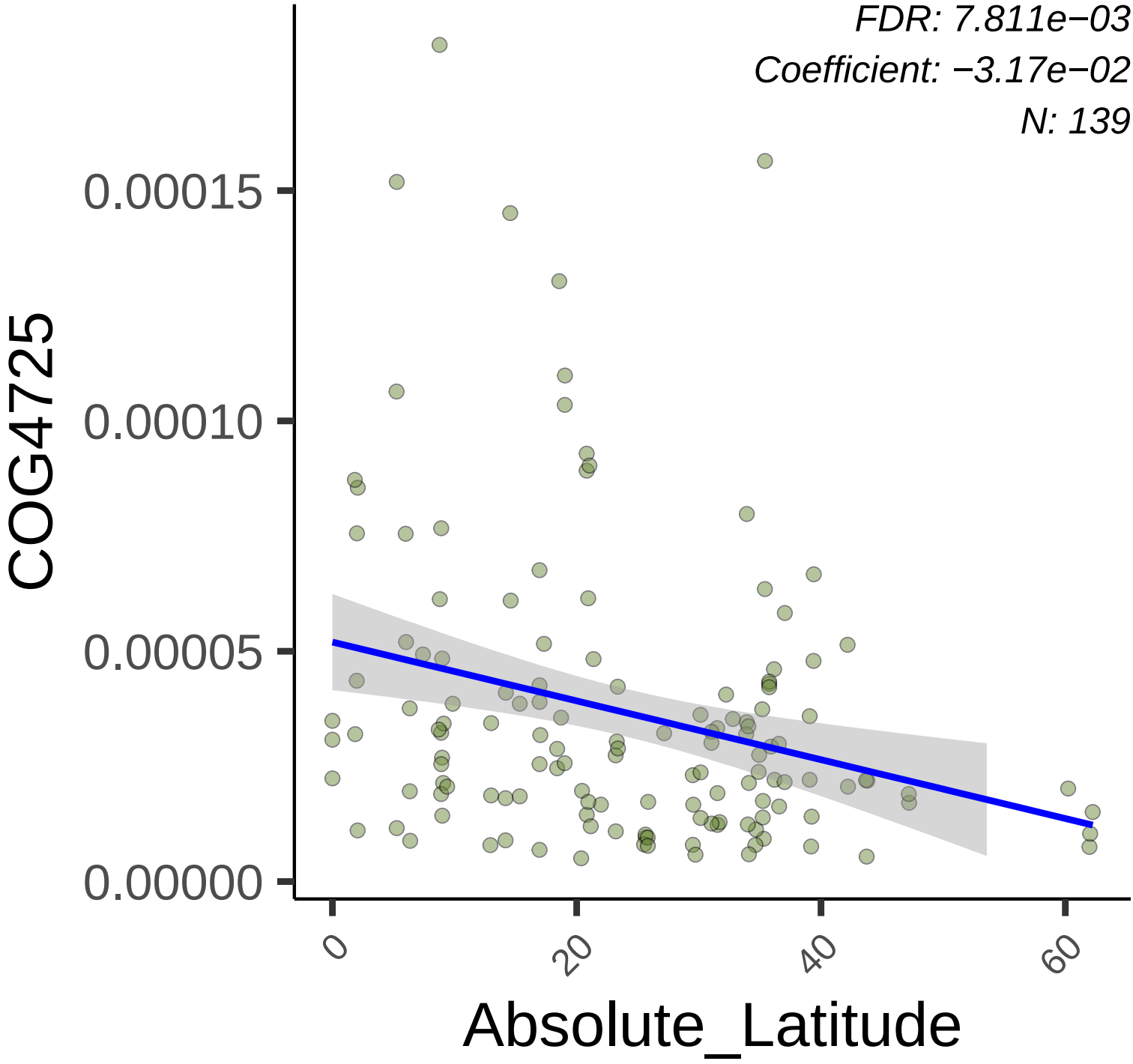

FDR: 7.453e−03
Coefficient: −8.76e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG0507
0
20
40
60
Absolute_Latitude

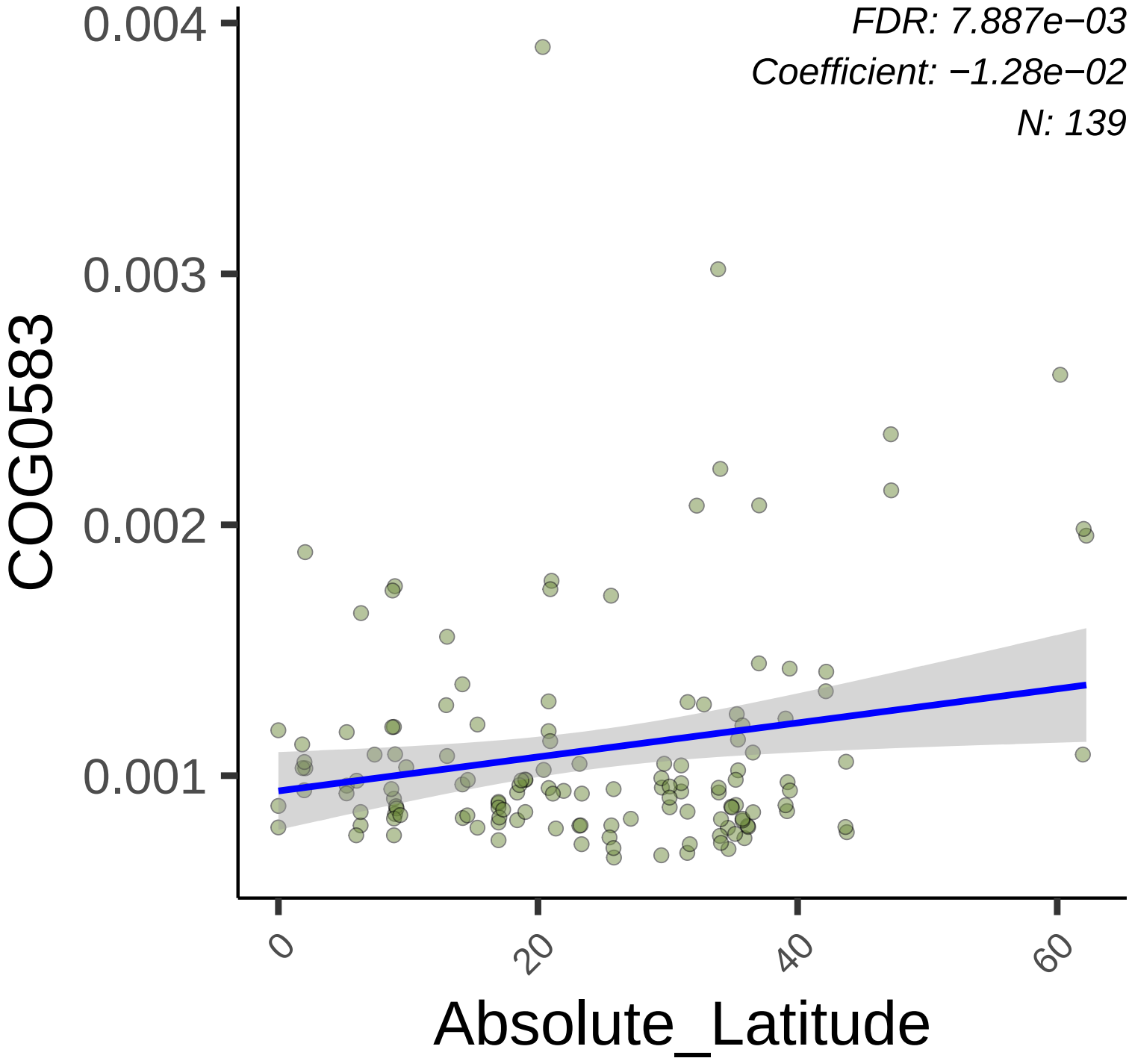

FDR: 7.470e−03
Coefficient: 1.08e−02
N: 139
0.00016
0.00012
0.00008
0.00004
COG4099
0
20
40
60
Absolute_Latitude

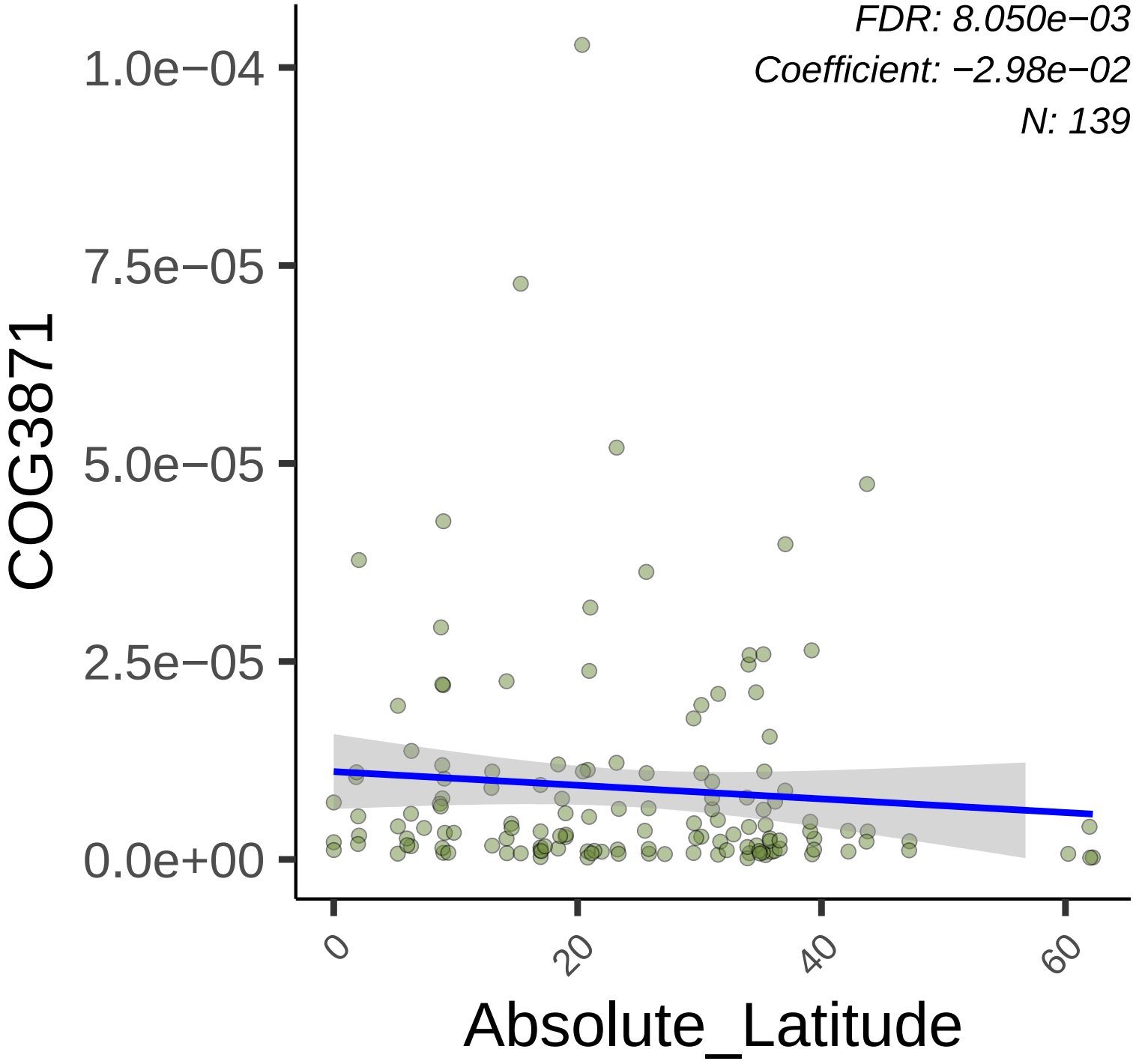

FDR: 7.476e−03
Coefficient: 9.00e−03
N: 139
0.00020
0.00015
0.00010
COG3152
0
20
40
60
Absolute_Latitude

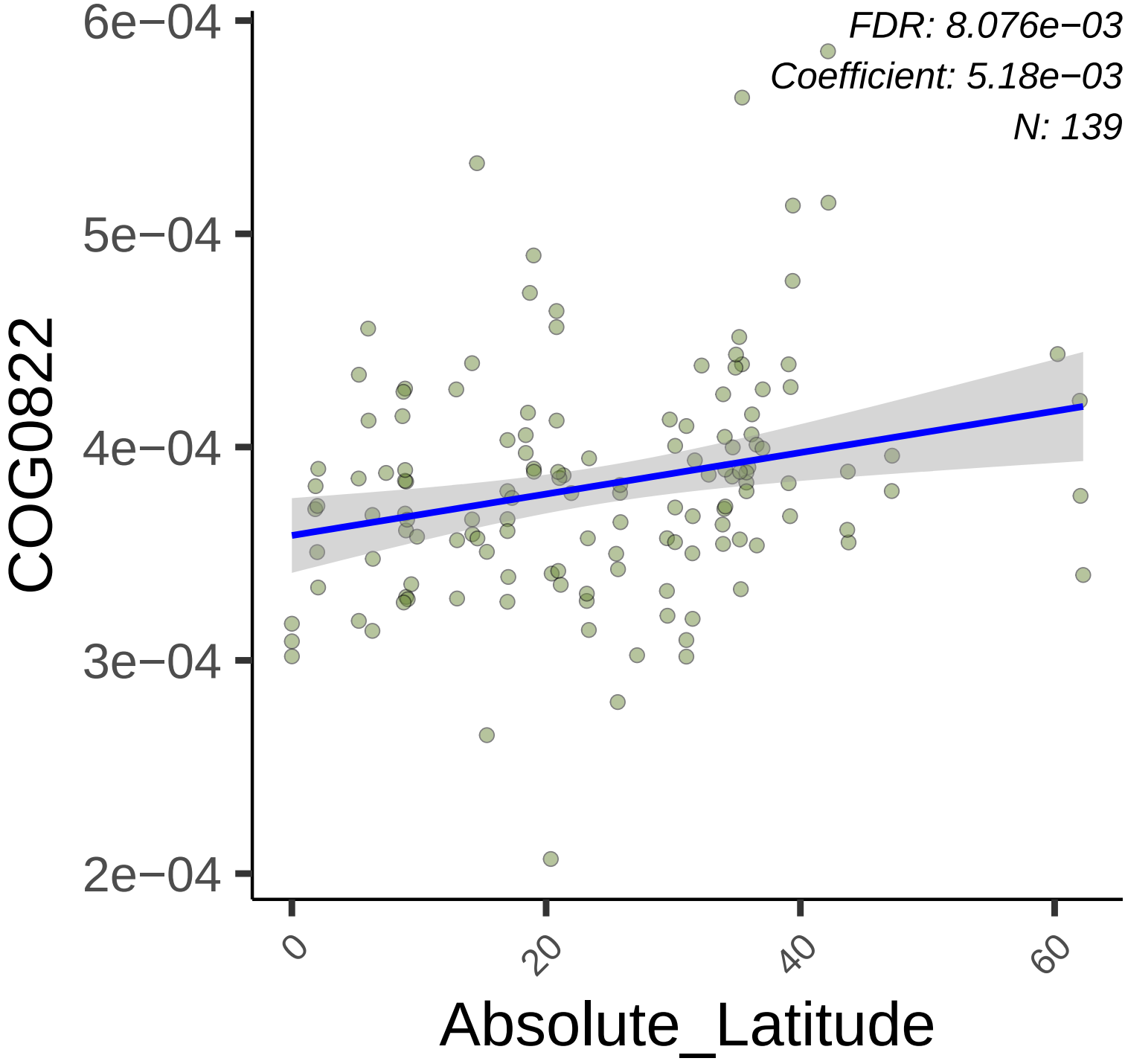

FDR: 7.599e−03
Coefficient: 1.70e−02
N: 139
COG3183
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

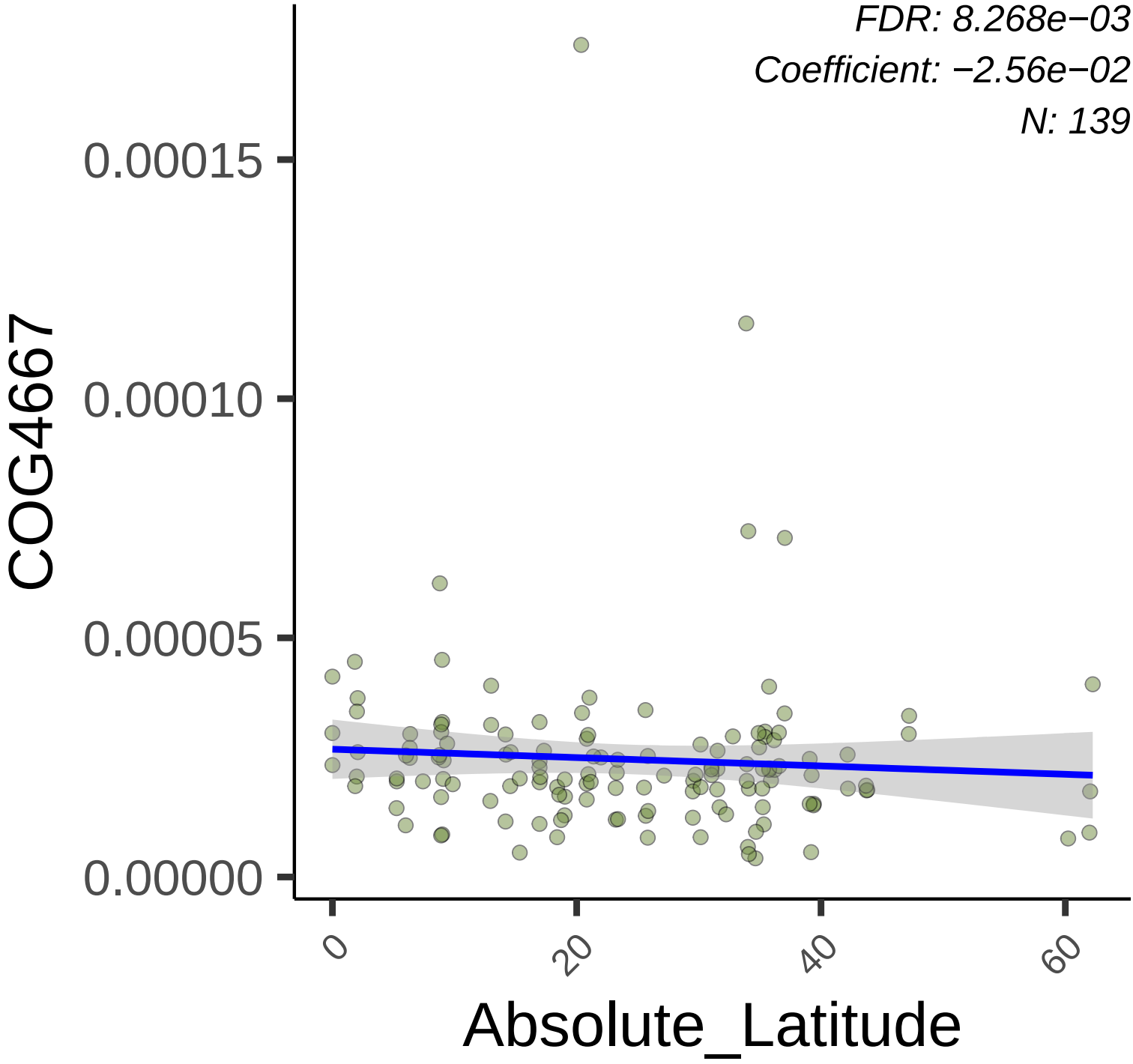

FDR: 7.717e−03
Coefficient: −5.83e−02
N: 139
COG5581
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

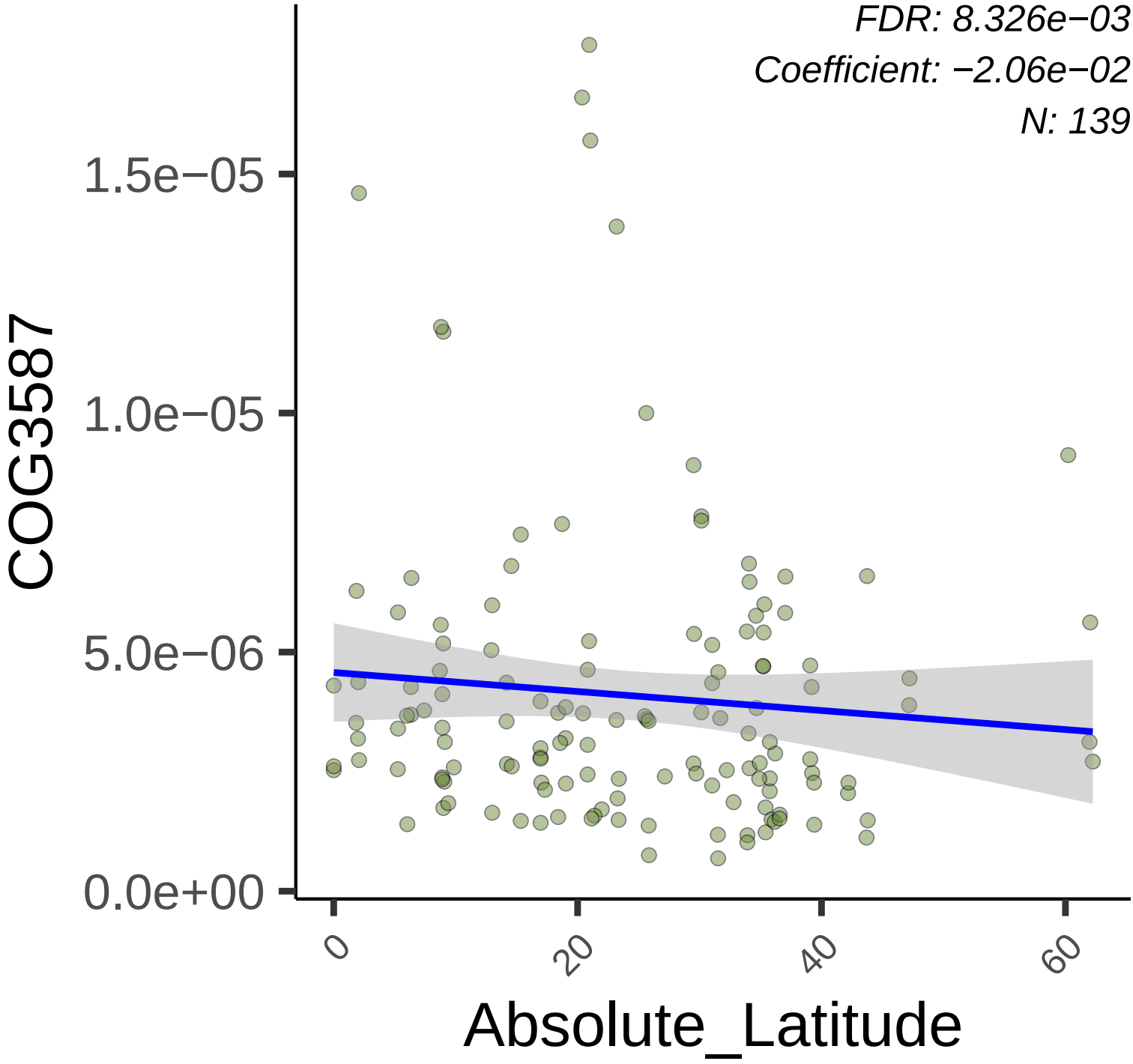

FDR: 7.811e−03
Coefficient: −3.17e−02
N: 139
COG4725
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

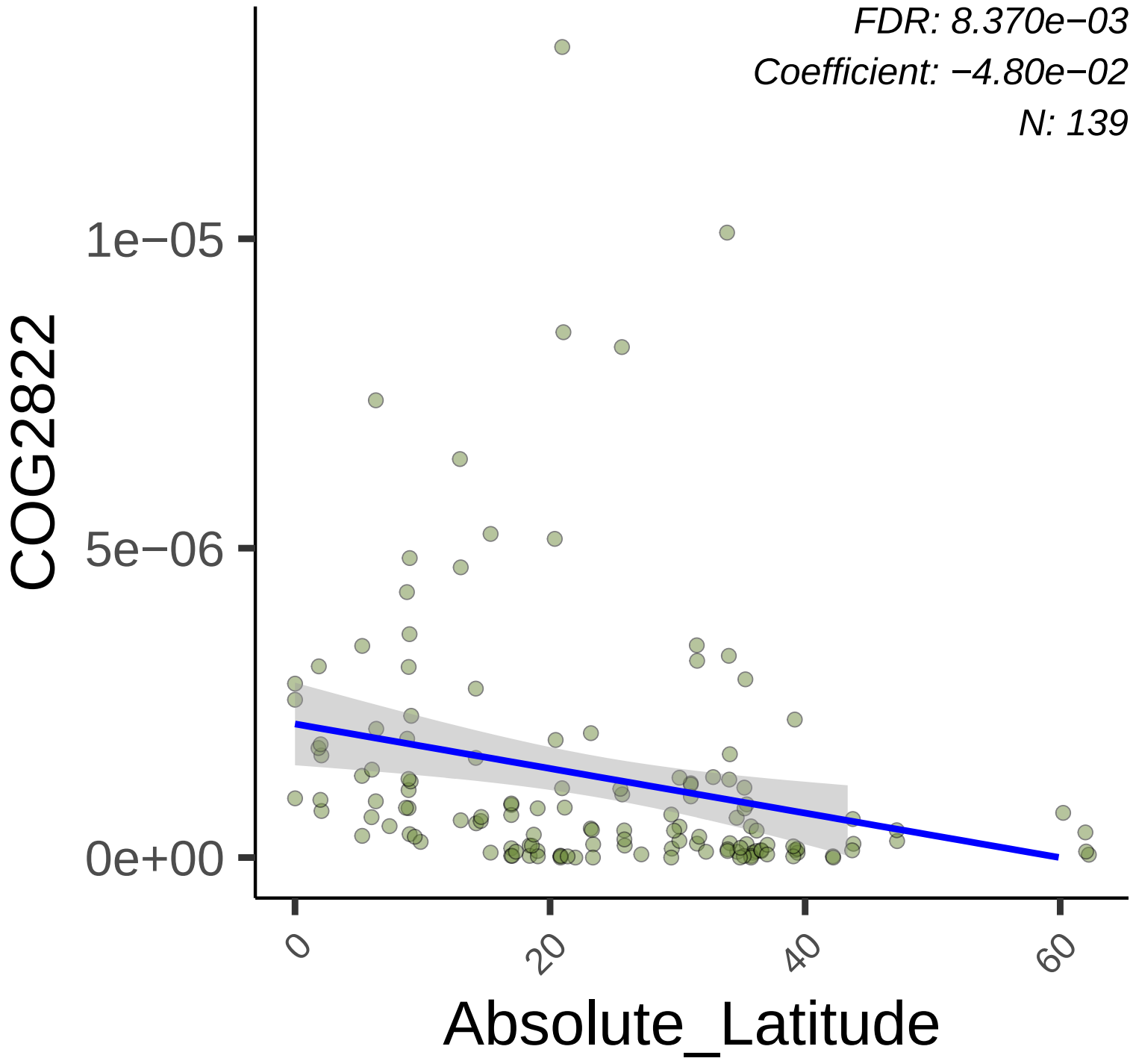

FDR: 7.887e−03
Coefficient: −1.28e−02
N: 139
0.004
0.003
0.002
0.001
COG0583
0
20
40
60
Absolute_Latitude

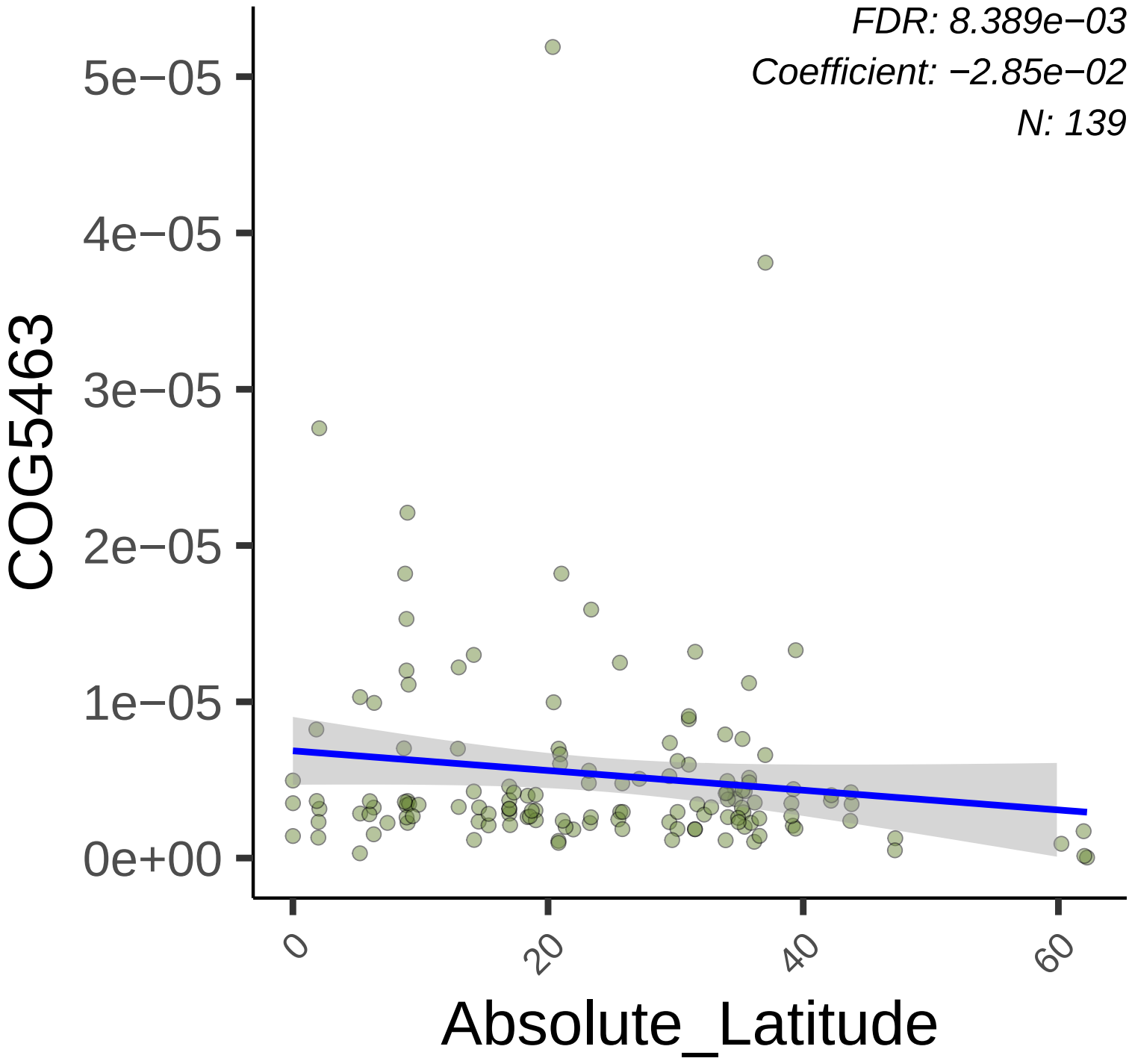

FDR: 8.050e−03
Coefficient: −2.98e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3871
0
20
40
60
Absolute_Latitude

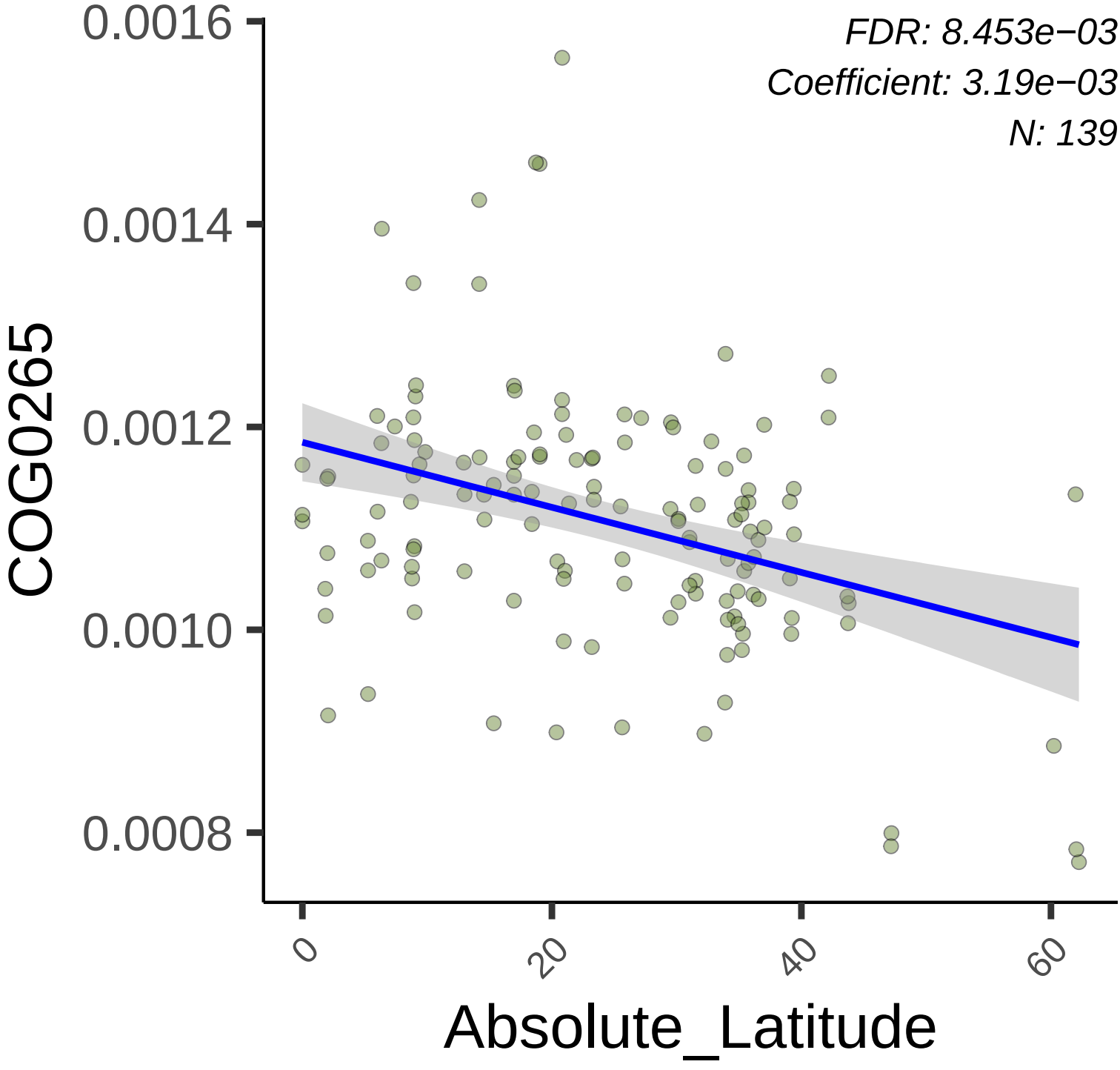

FDR: 8.076e−03
Coefficient: 5.18e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
COG0822
0
20
40
60
Absolute_Latitude

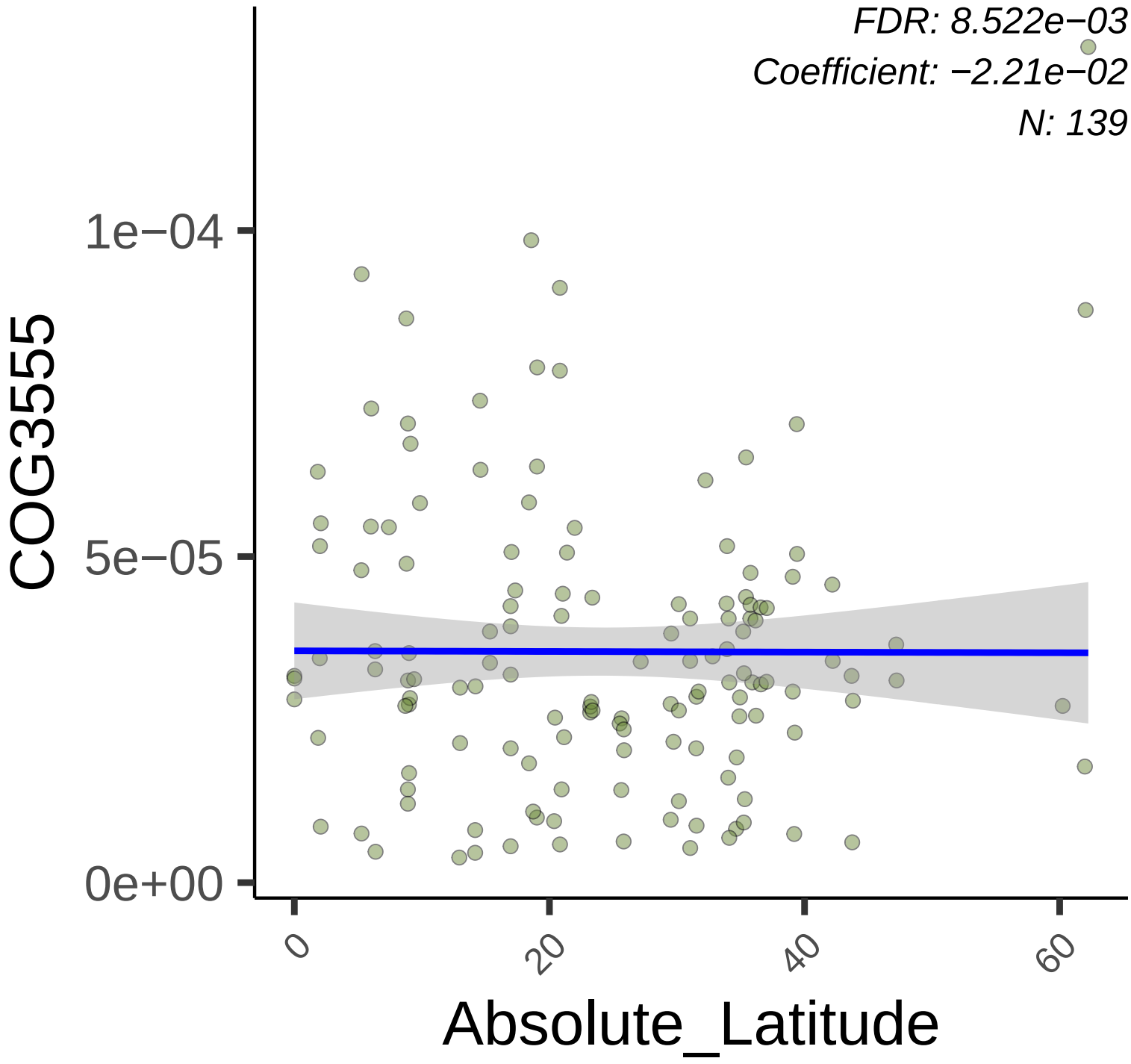

FDR: 8.268e−03
Coefficient: −2.56e−02
N: 139
COG4667
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

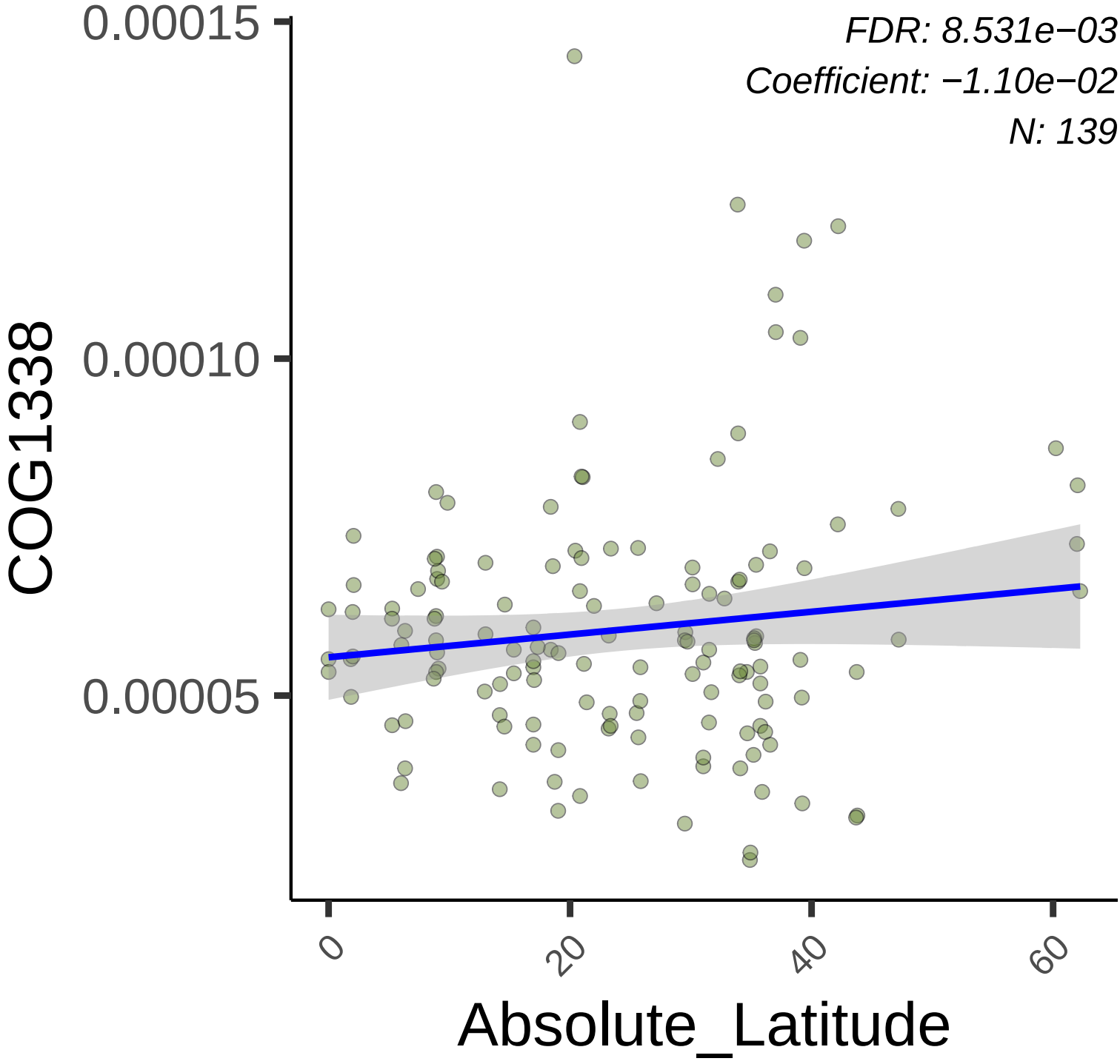

FDR: 8.326e−03
Coefficient: −2.06e−02
N: 139
COG3587
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

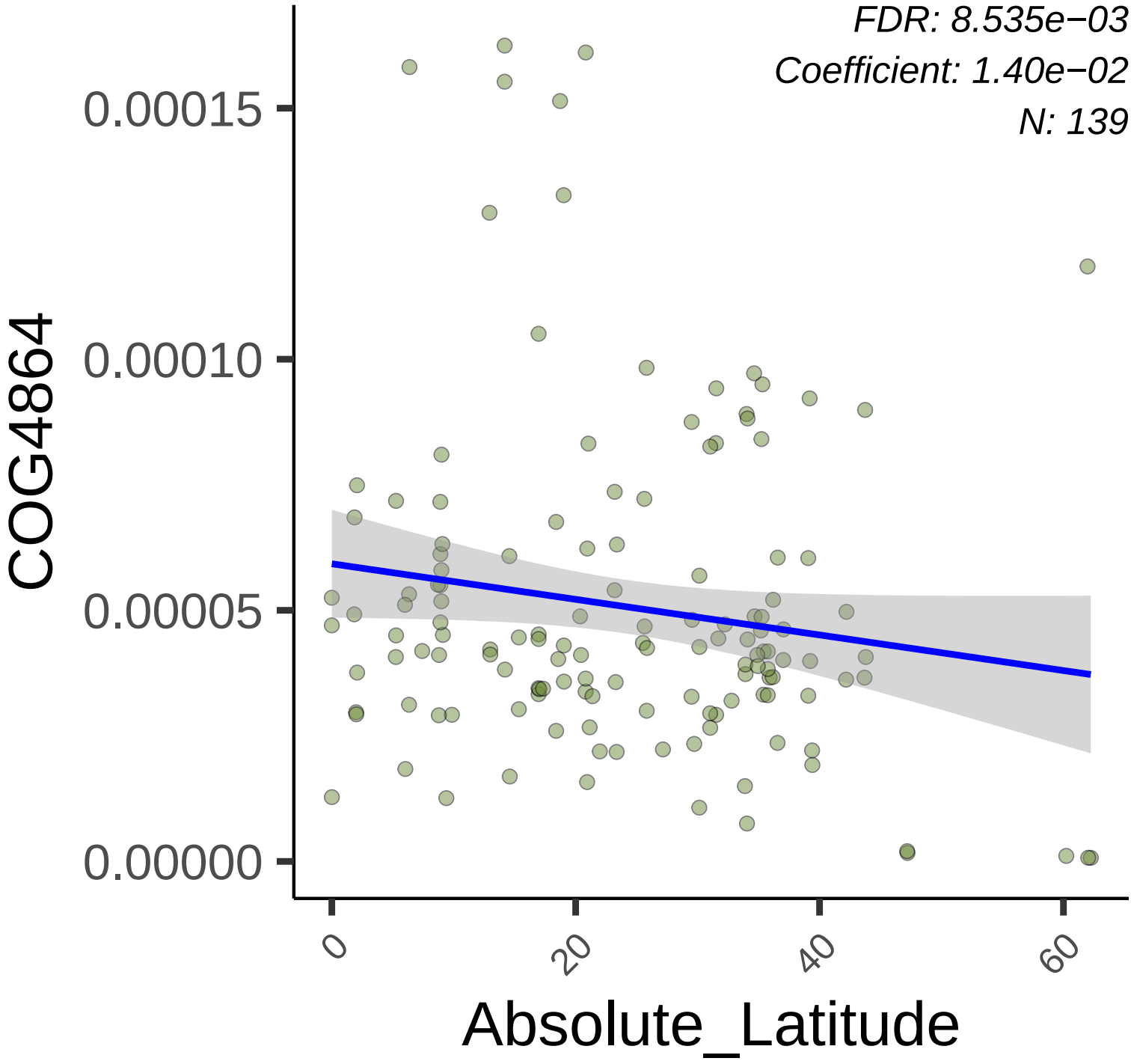

FDR: 8.370e−03
Coefficient: −4.80e−02
N: 139
COG2822
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

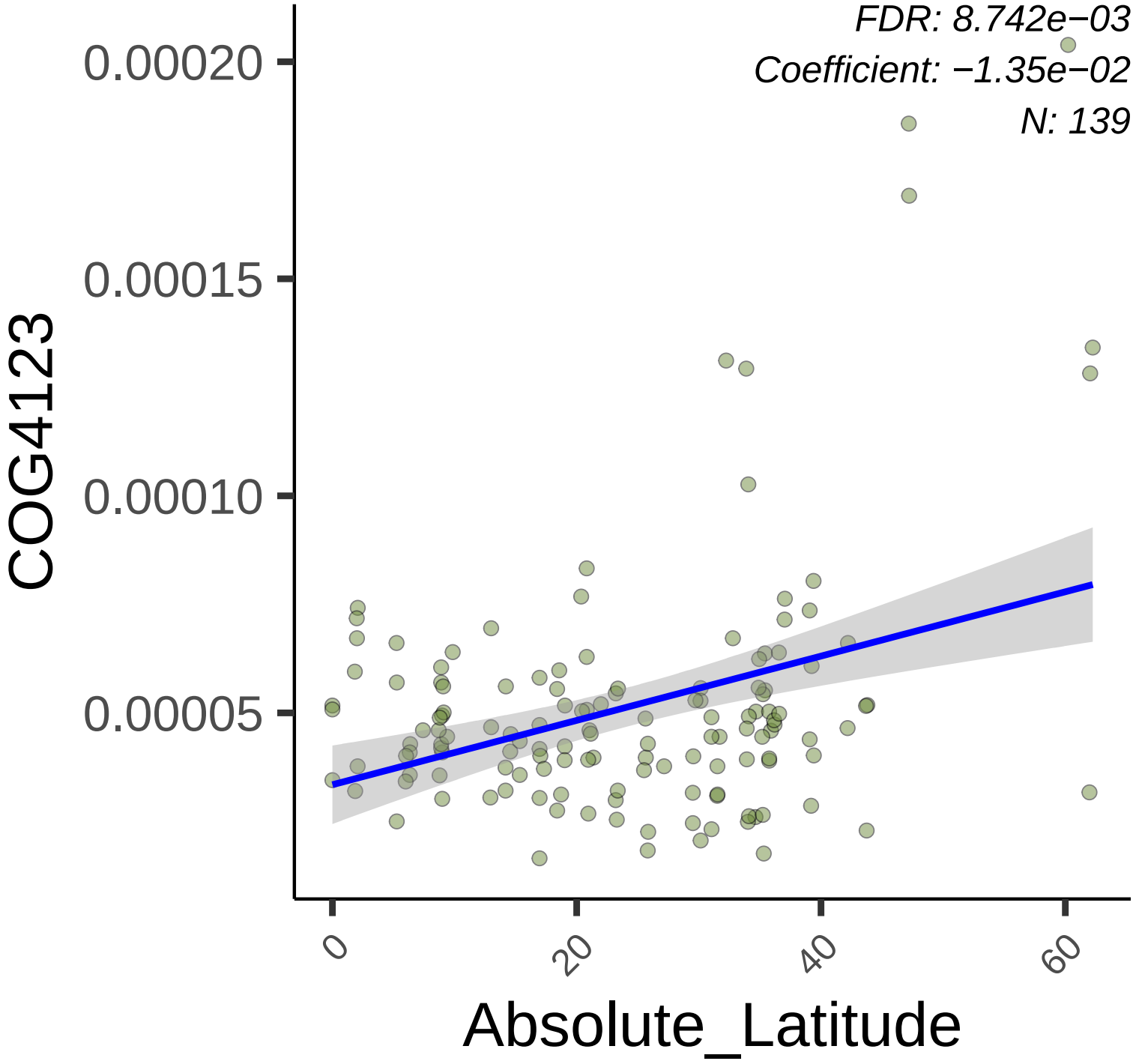

FDR: 8.389e−03
Coefficient: −2.85e−02
N: 139
COG5463
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

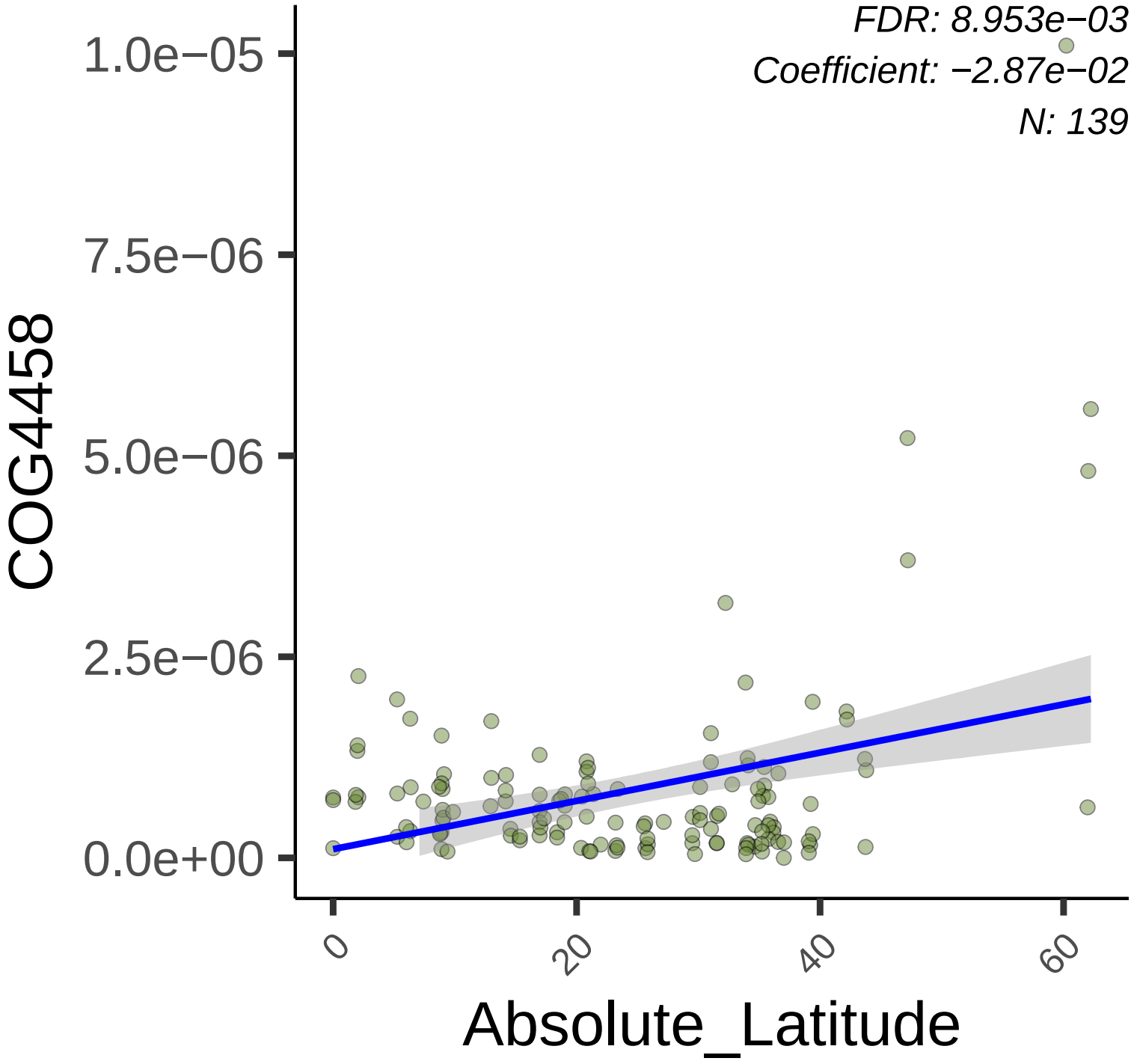

FDR: 8.453e−03
Coefficient: 3.19e−03
N: 139
0.0016
0.0014
0.0012
0.0010
0.0008
COG0265
0
20
40
60
Absolute_Latitude

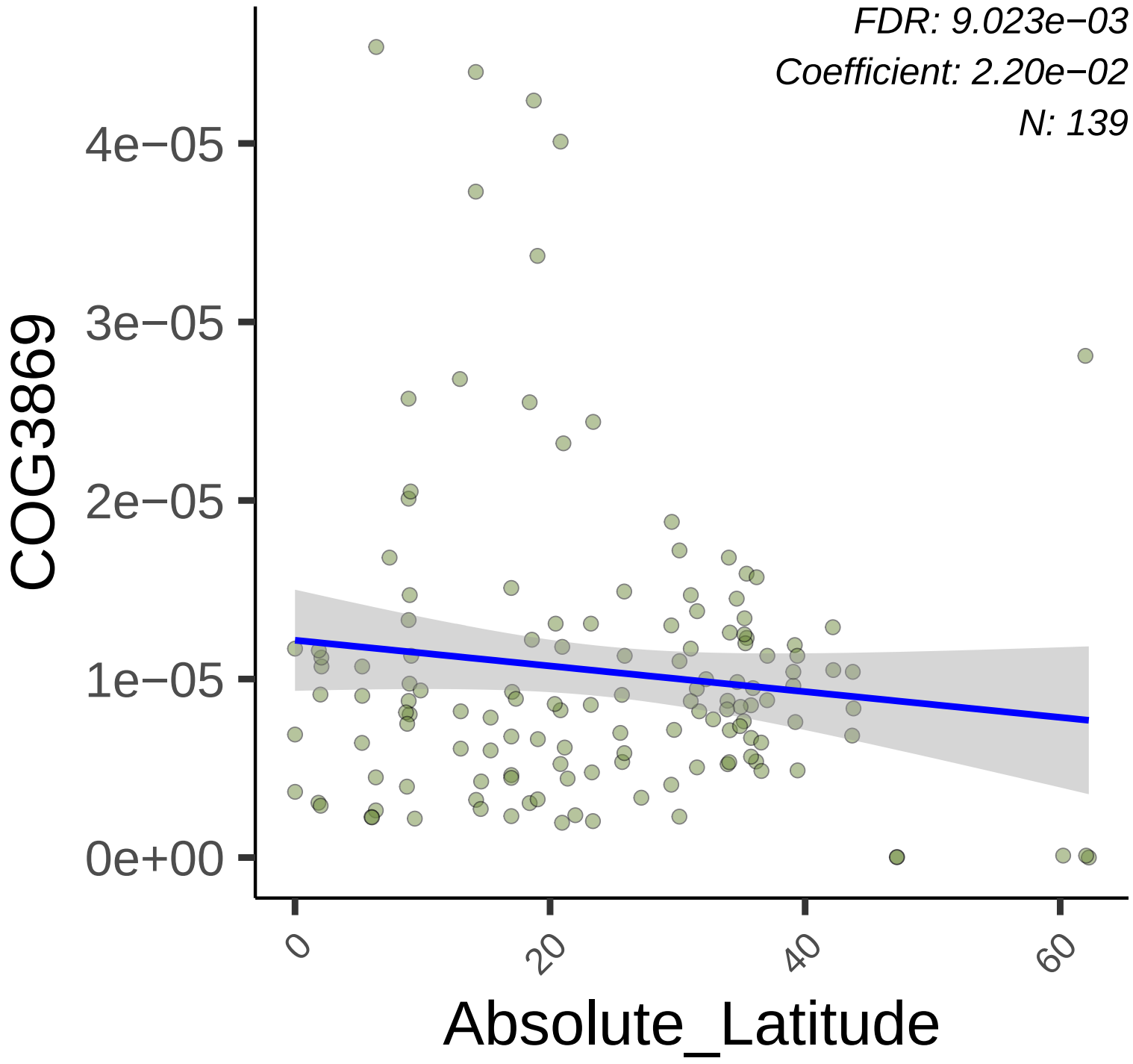

FDR: 8.522e−03
Coefficient: −2.21e−02
N: 139
COG3555
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

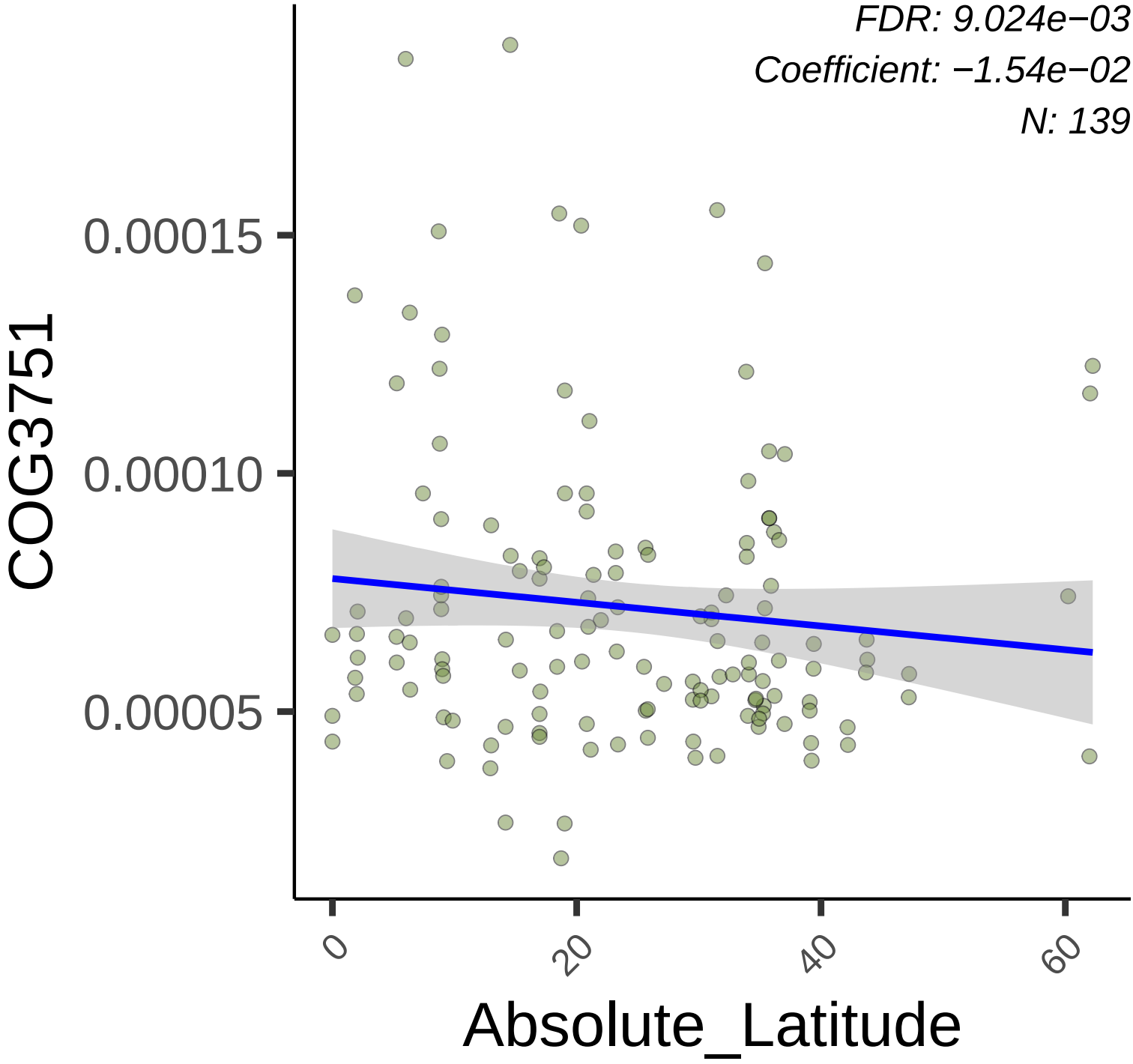

FDR: 8.531e−03
Coefficient: −1.10e−02
N: 139
0.00015
0.00010
0.00005
COG1338
0
20
40
60
Absolute_Latitude

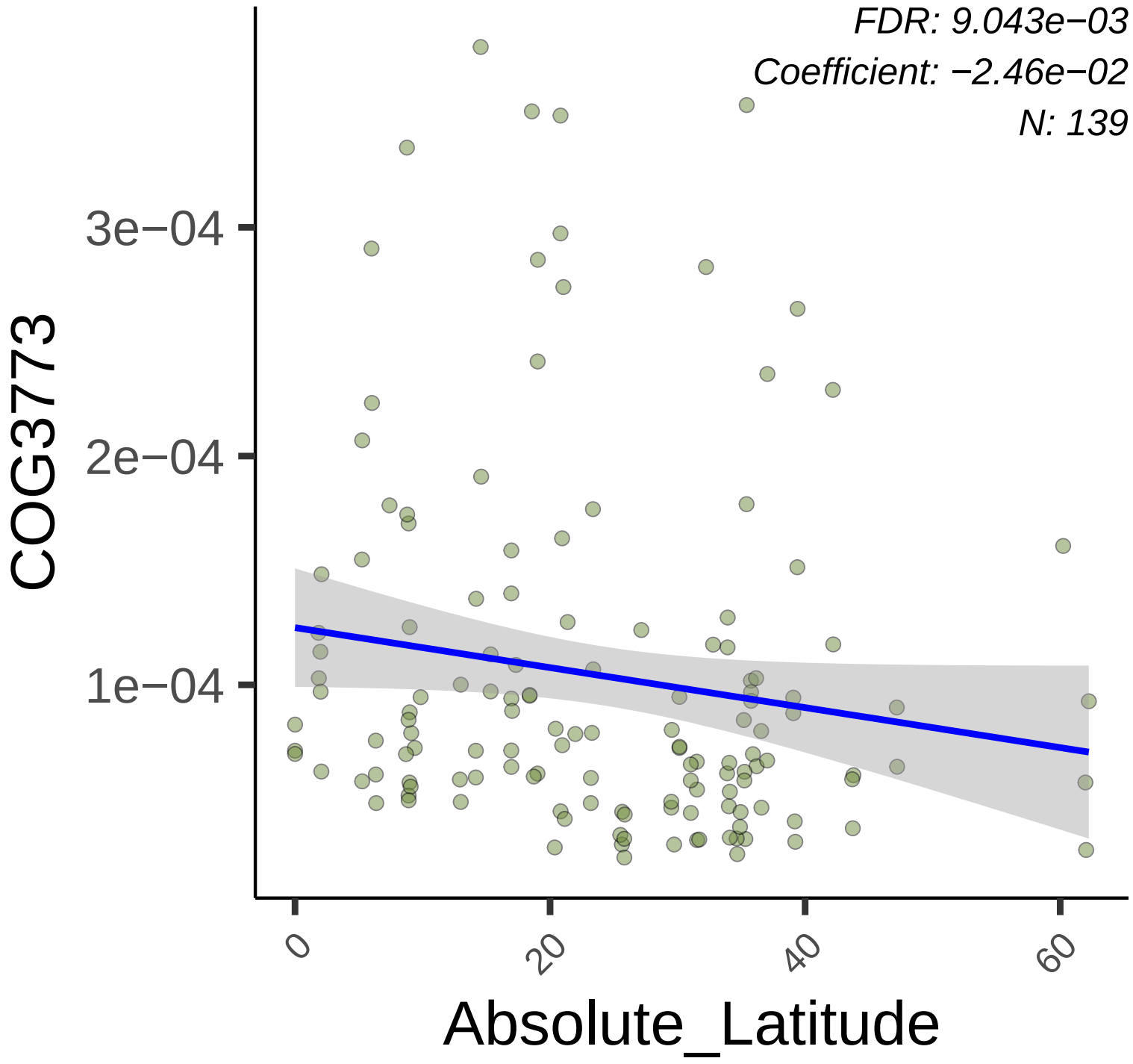

FDR: 8.535e−03
Coefficient: 1.40e−02
N: 139
COG4864
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

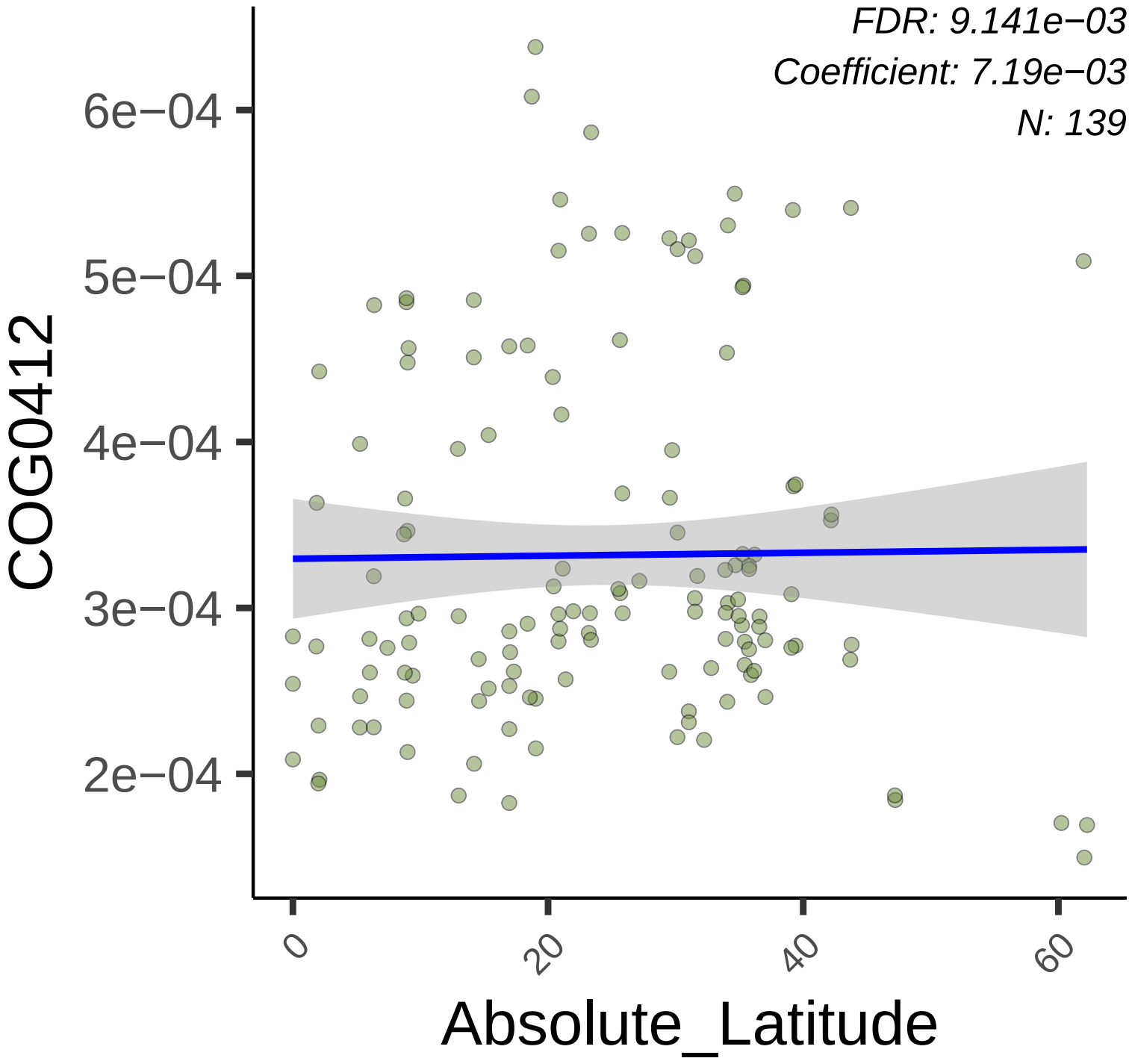

FDR: 8.742e−03
Coefficient: −1.35e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG4123
0
20
40
60
Absolute_Latitude

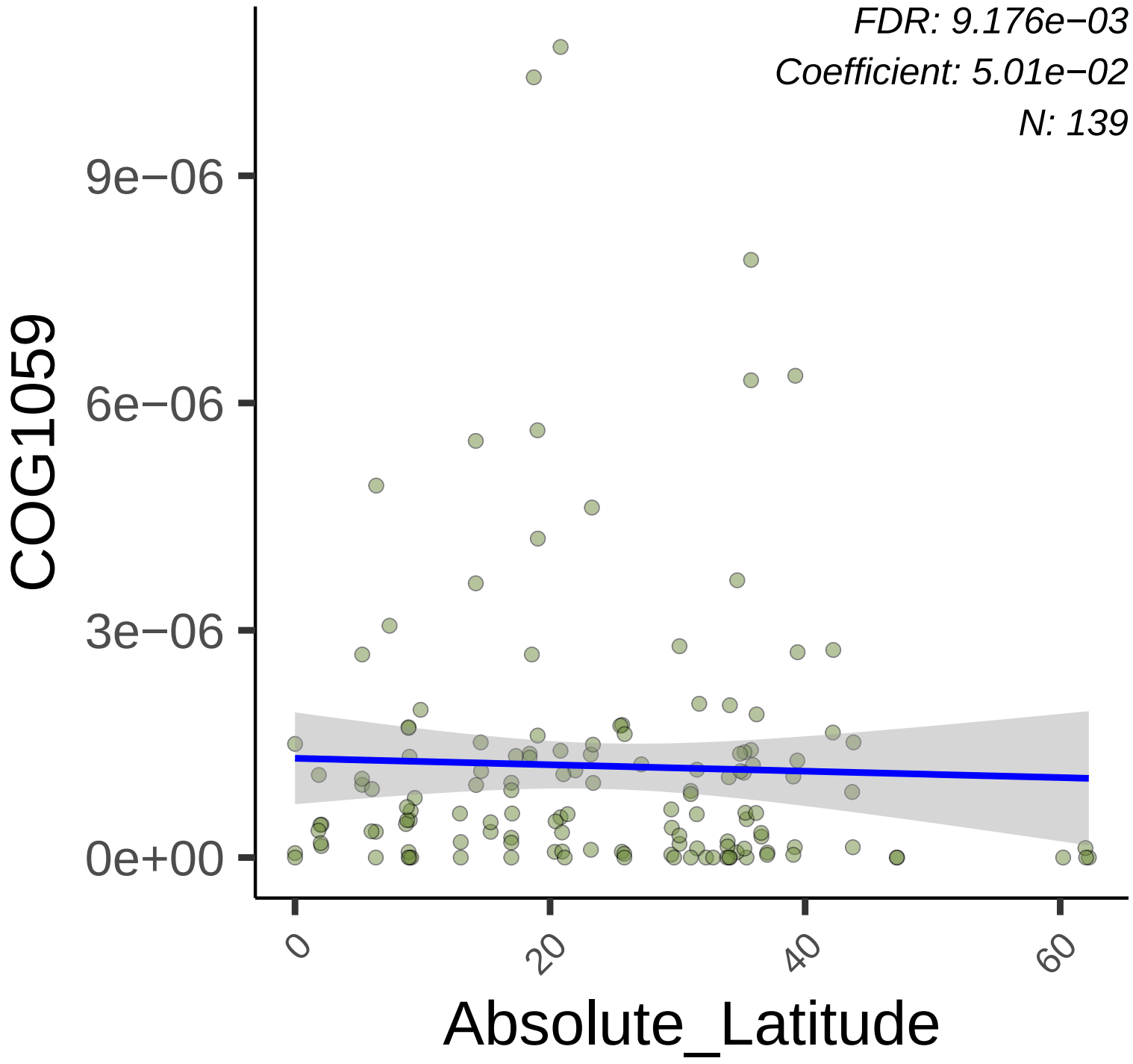

FDR: 8.953e−03
Coefficient: −2.87e−02
N: 139
1.0e−05
7.5e−06
5.0e−06
2.5e−06
0.0e+00
COG4458
0
20
40
60
Absolute_Latitude

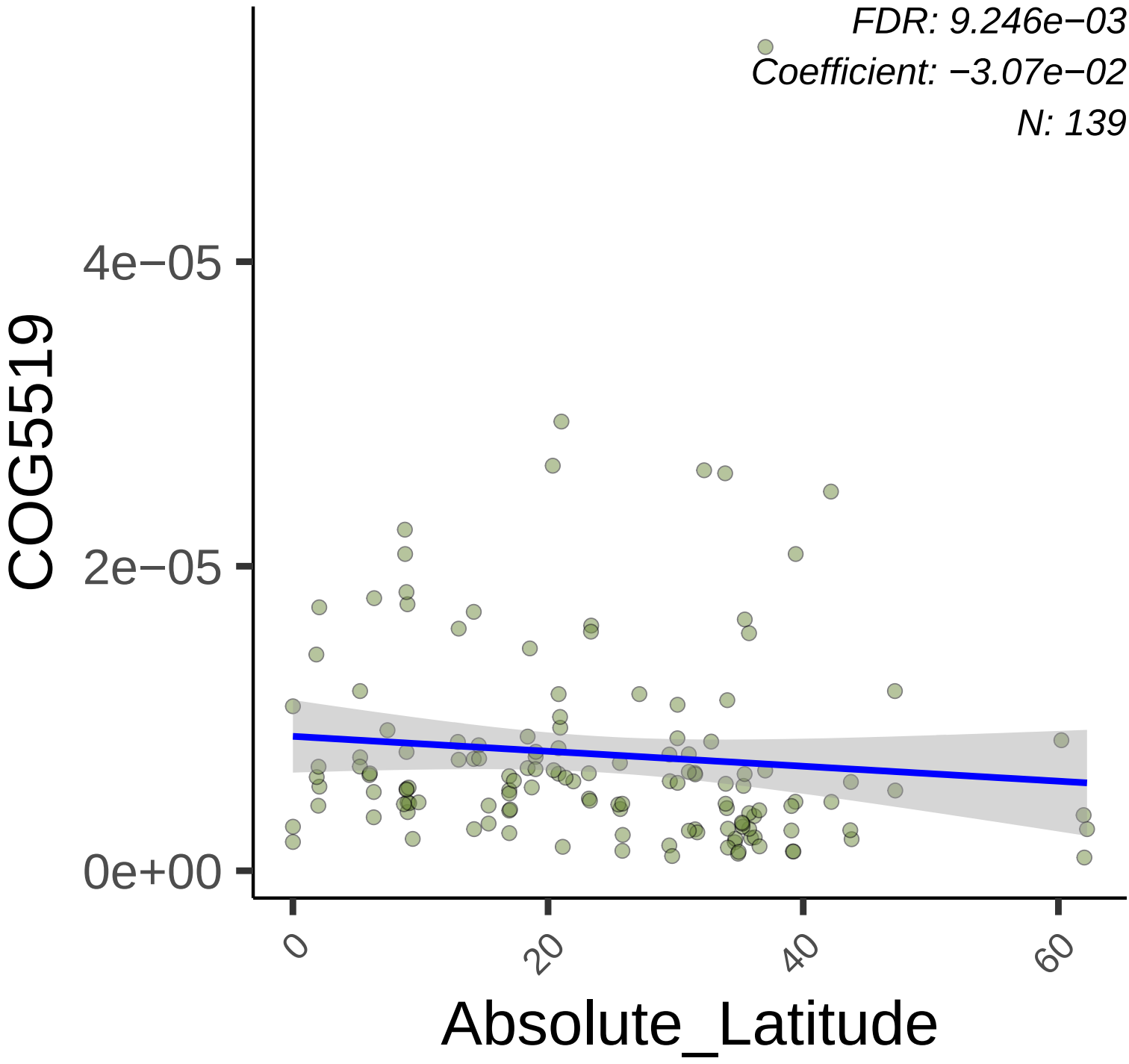

FDR: 9.023e−03
Coefficient: 2.20e−02
N: 139
COG3869
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

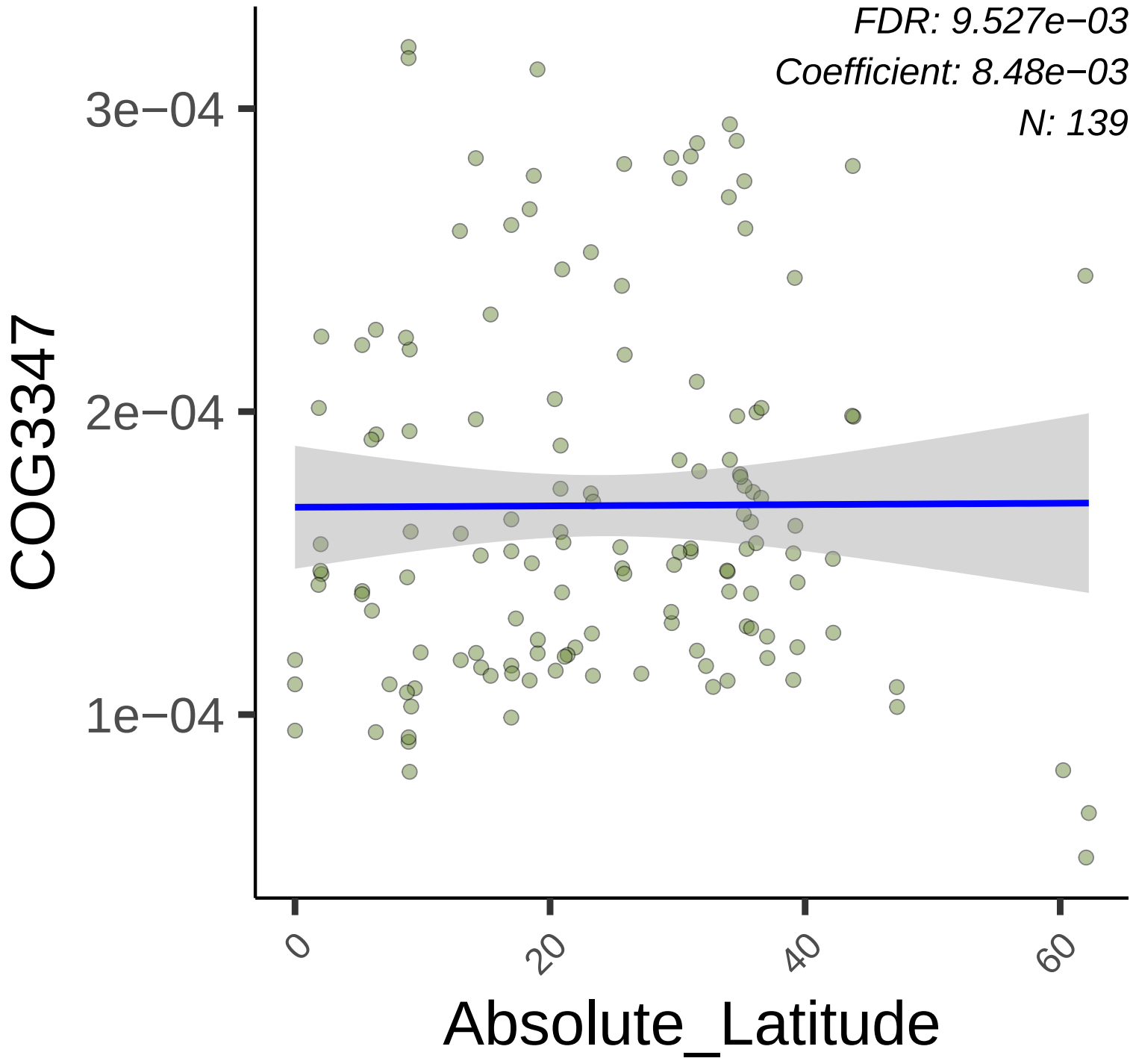

FDR: 9.024e−03
Coefficient: −1.54e−02
N: 139
0.00015
0.00010
0.00005
COG3751
0
20
40
60
Absolute_Latitude

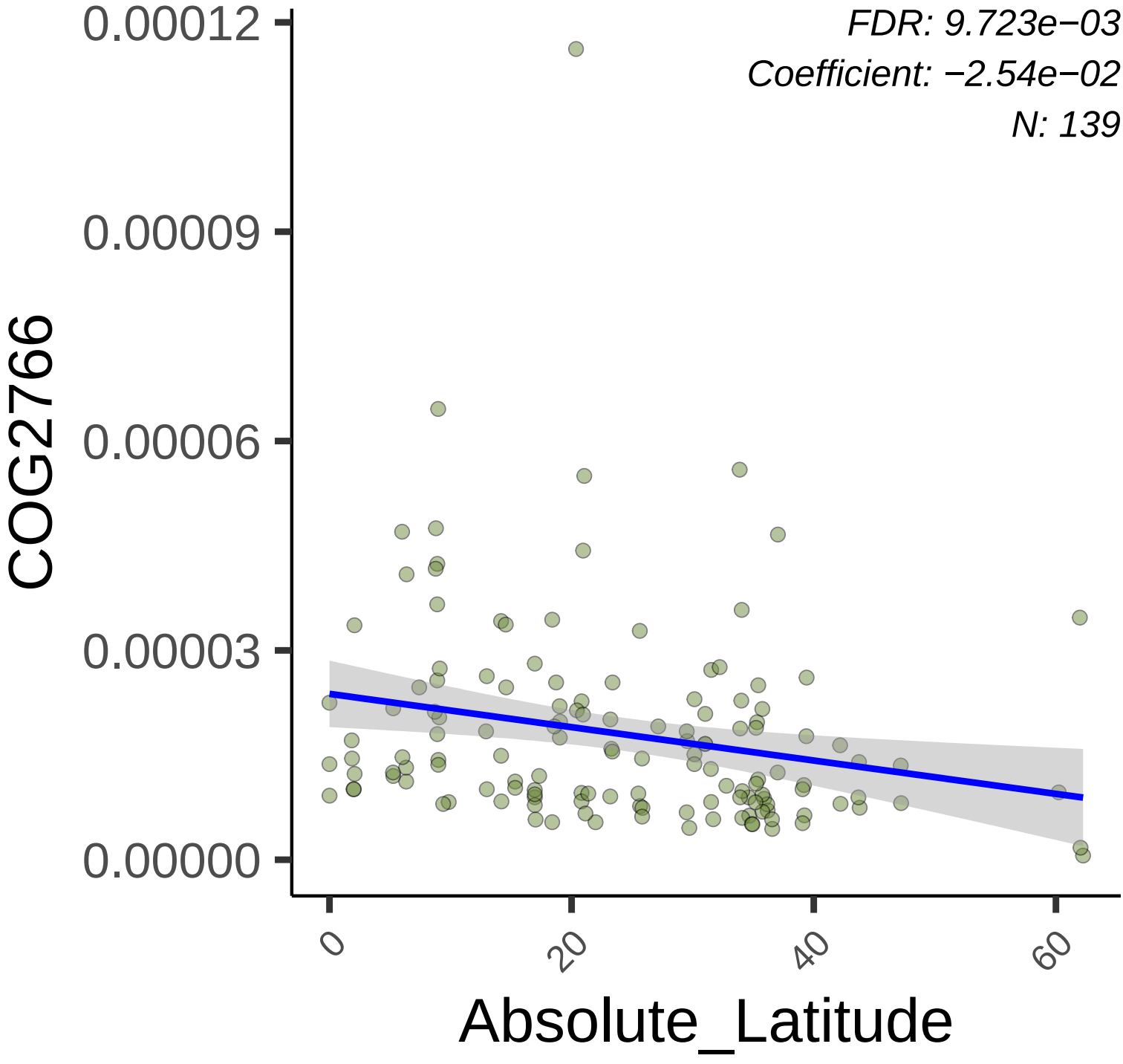

FDR: 9.043e−03
Coefficient: −2.46e−02
N: 139
COG3773
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

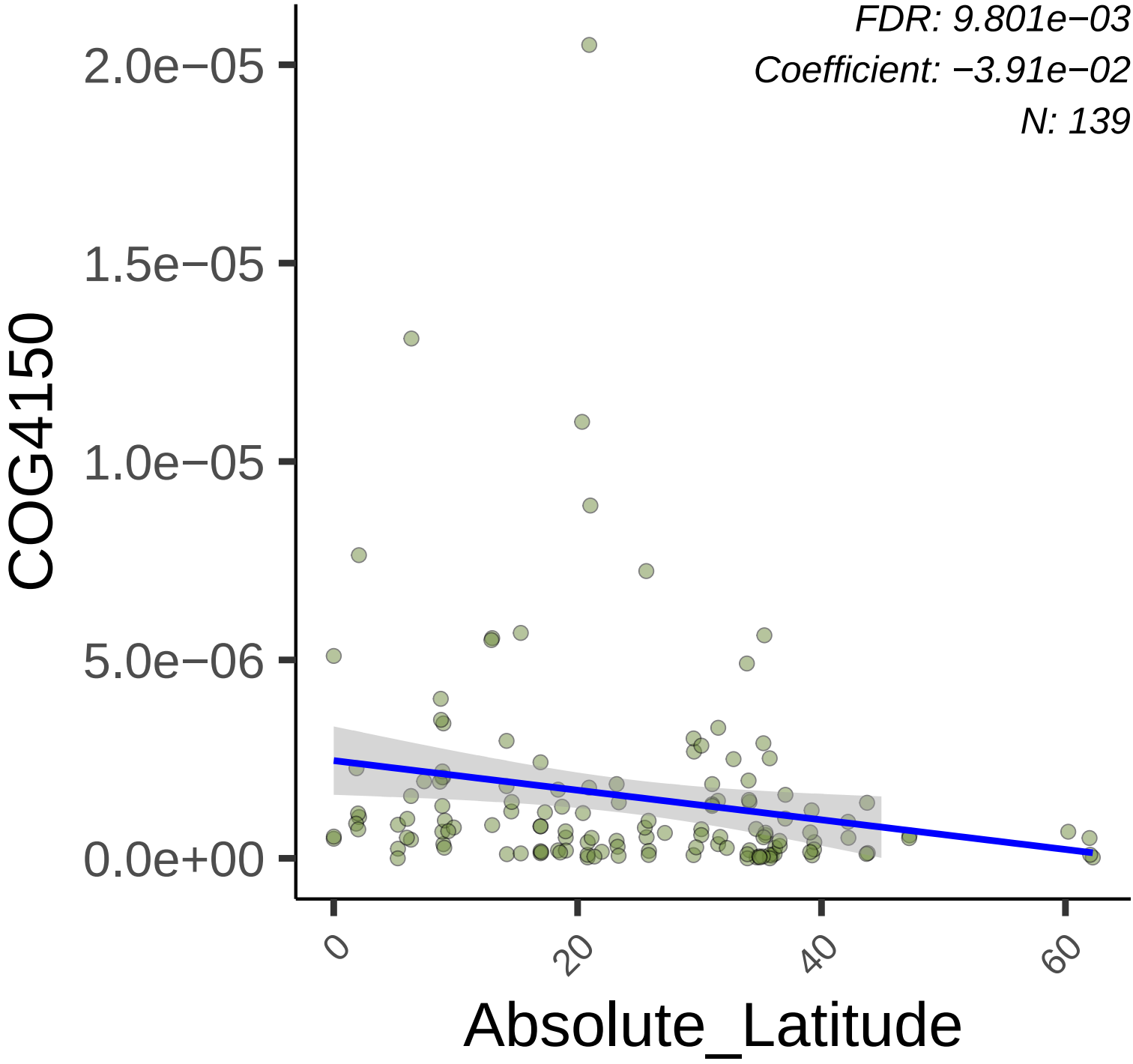

FDR: 9.141e−03
Coefficient: 7.19e−03
N: 139
COG0412
6e−04
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

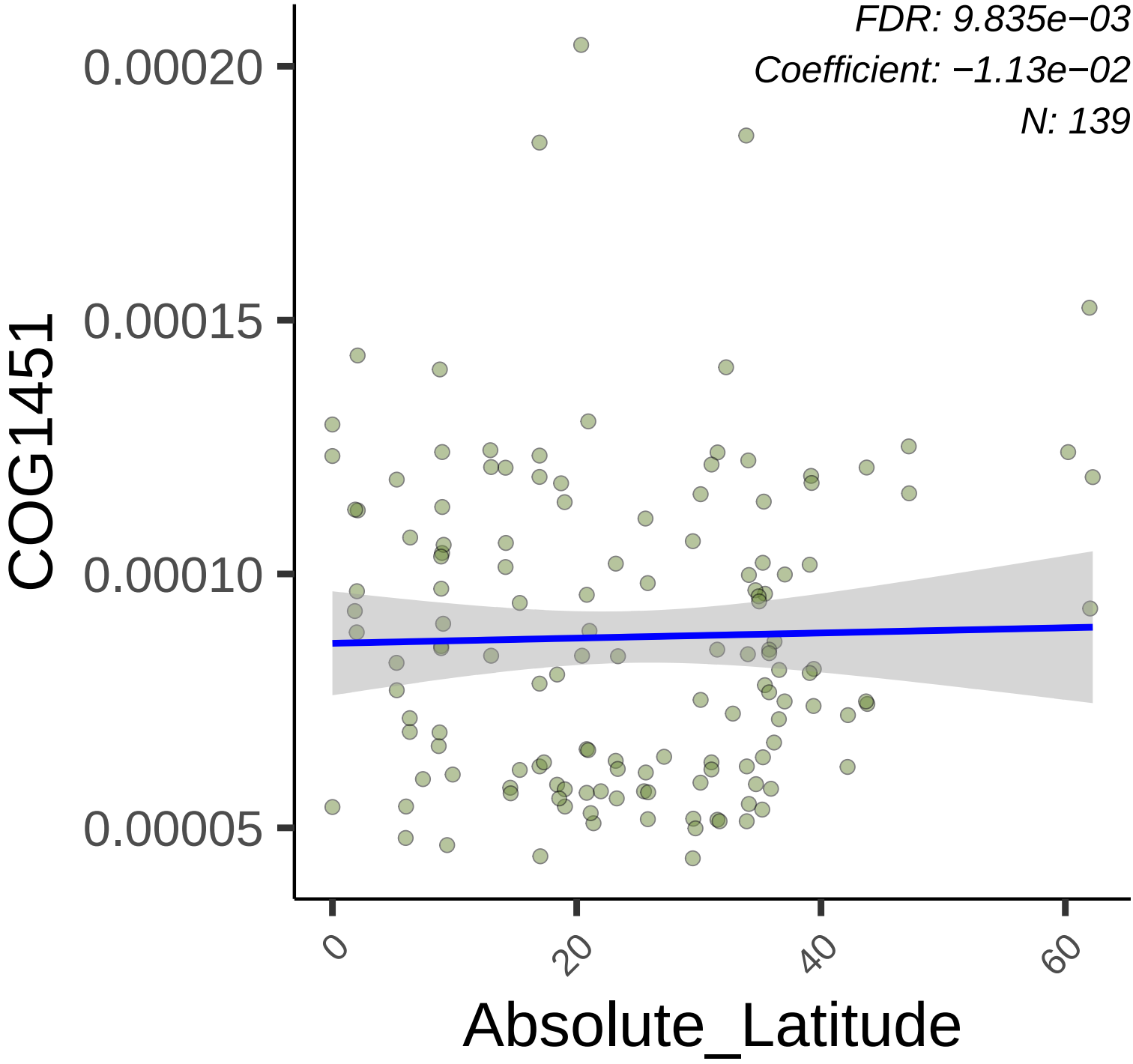

FDR: 9.176e−03
Coefficient: 5.01e−02
N: 139
COG1059
9e−06
6e−06
3e−06
0e+00
0
20
40
60
Absolute_Latitude

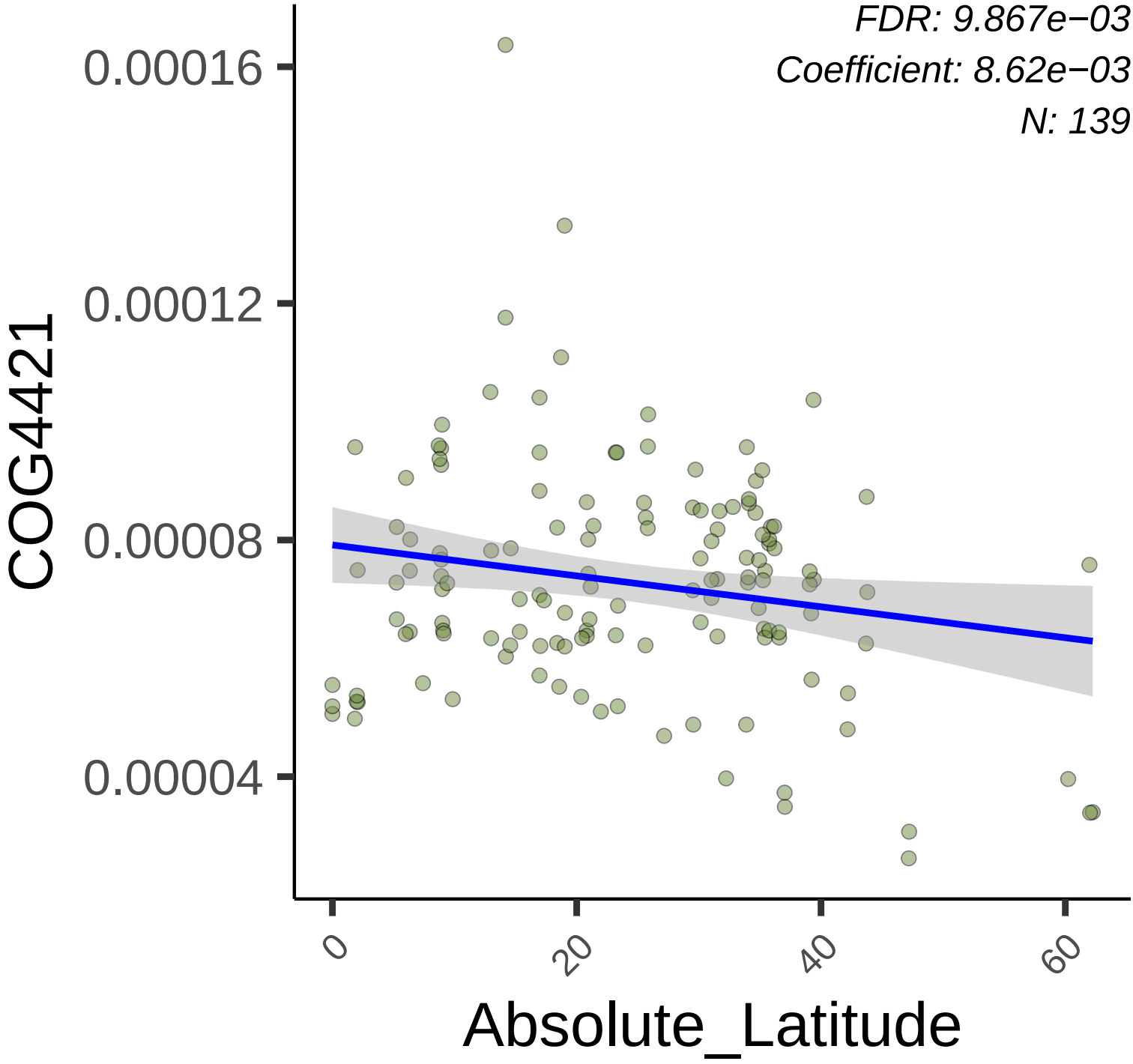

FDR: 9.246e−03
Coefficient: −3.07e−02
N: 139
COG5519
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

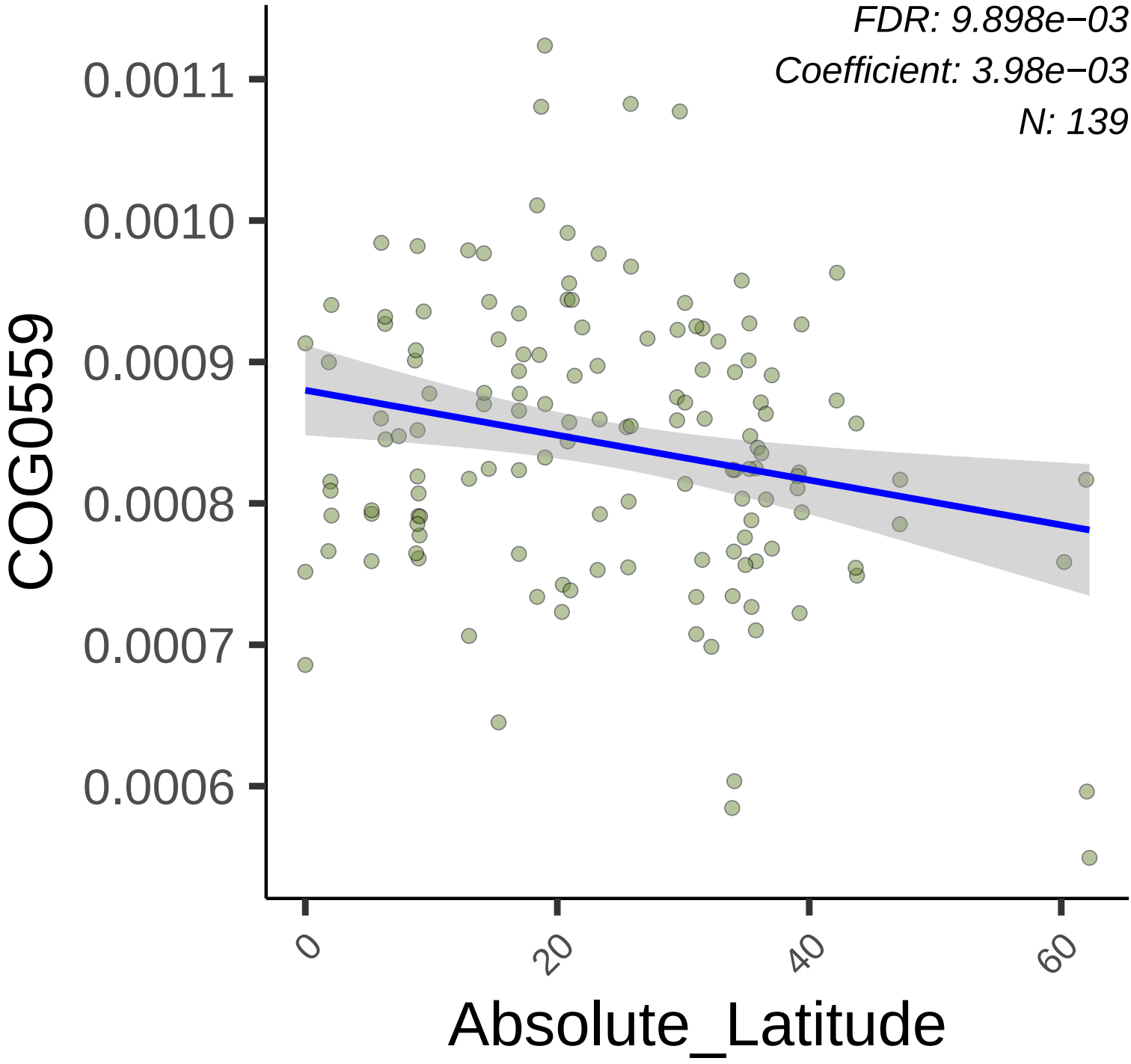

FDR: 9.527e−03
Coefficient: 8.48e−03
N: 139
3e−04
2e−04
1e−04
COG3347
0
20
40
60
Absolute_Latitude

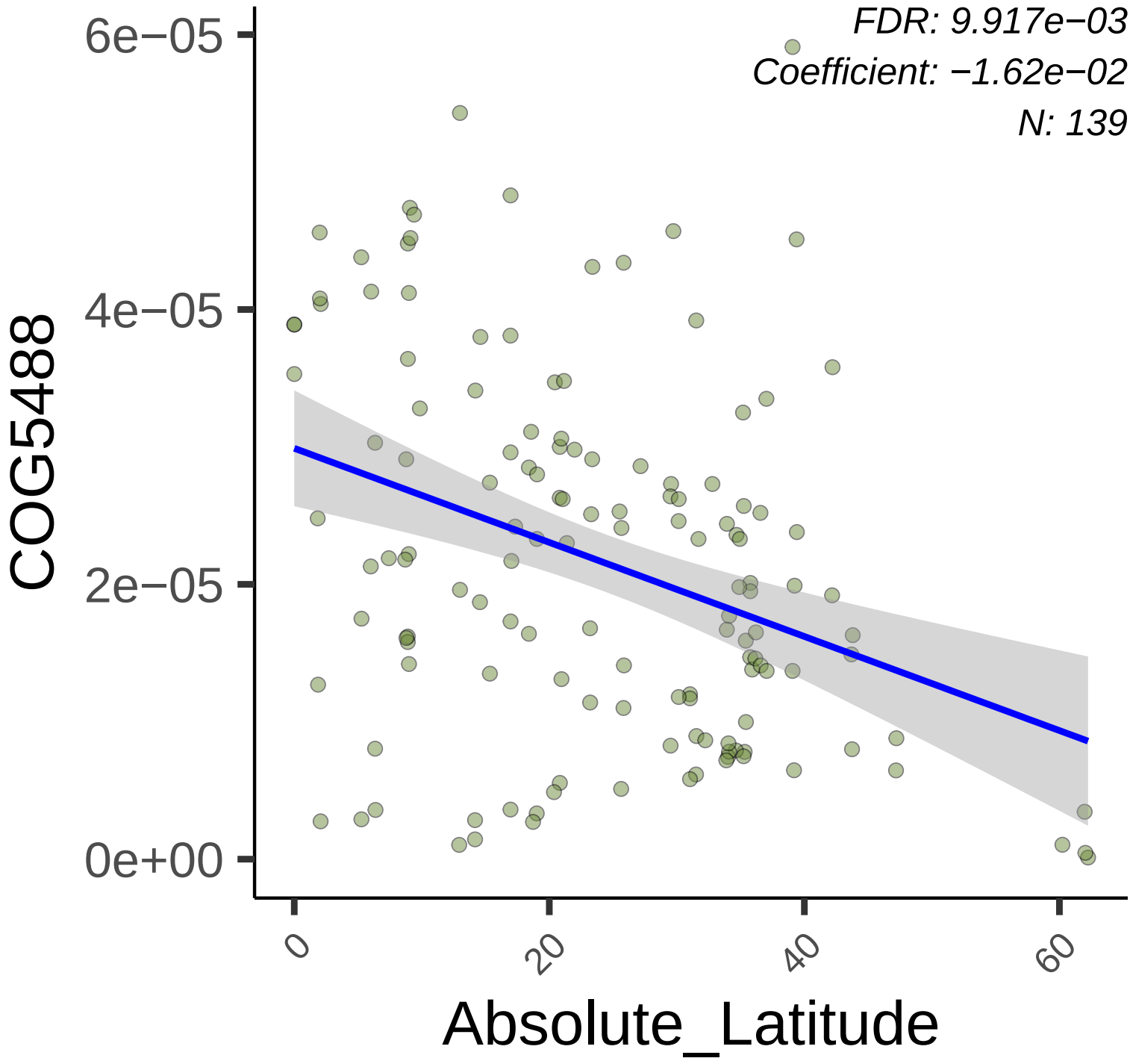

FDR: 9.723e−03
Coefficient: −2.54e−02
N: 139
0.00012
0.00009
0.00006
0.00003
0.00000
COG2766
0
20
40
60
Absolute_Latitude

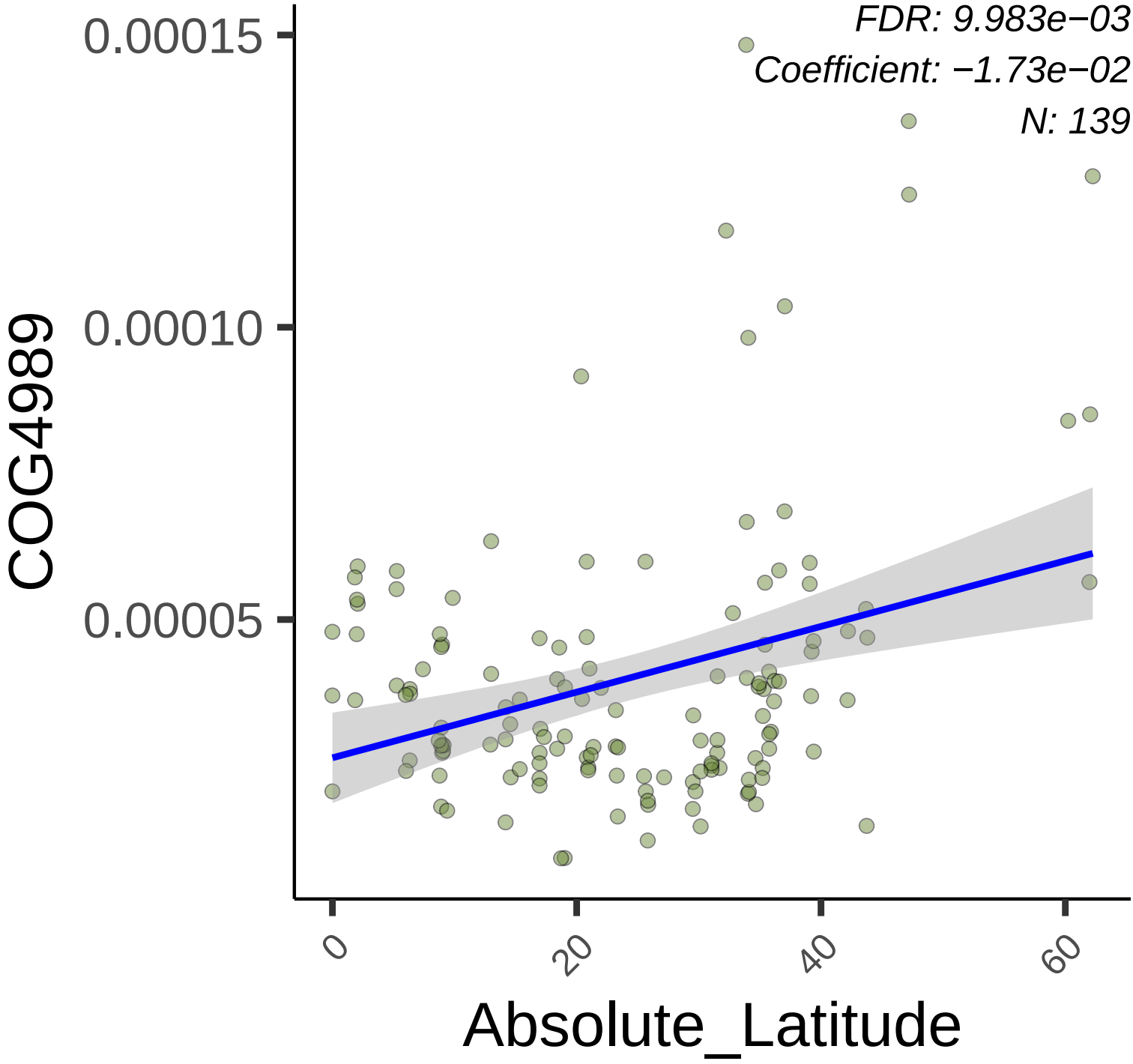

FDR: 9.801e−03
Coefficient: −3.91e−02
N: 139
COG4150
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

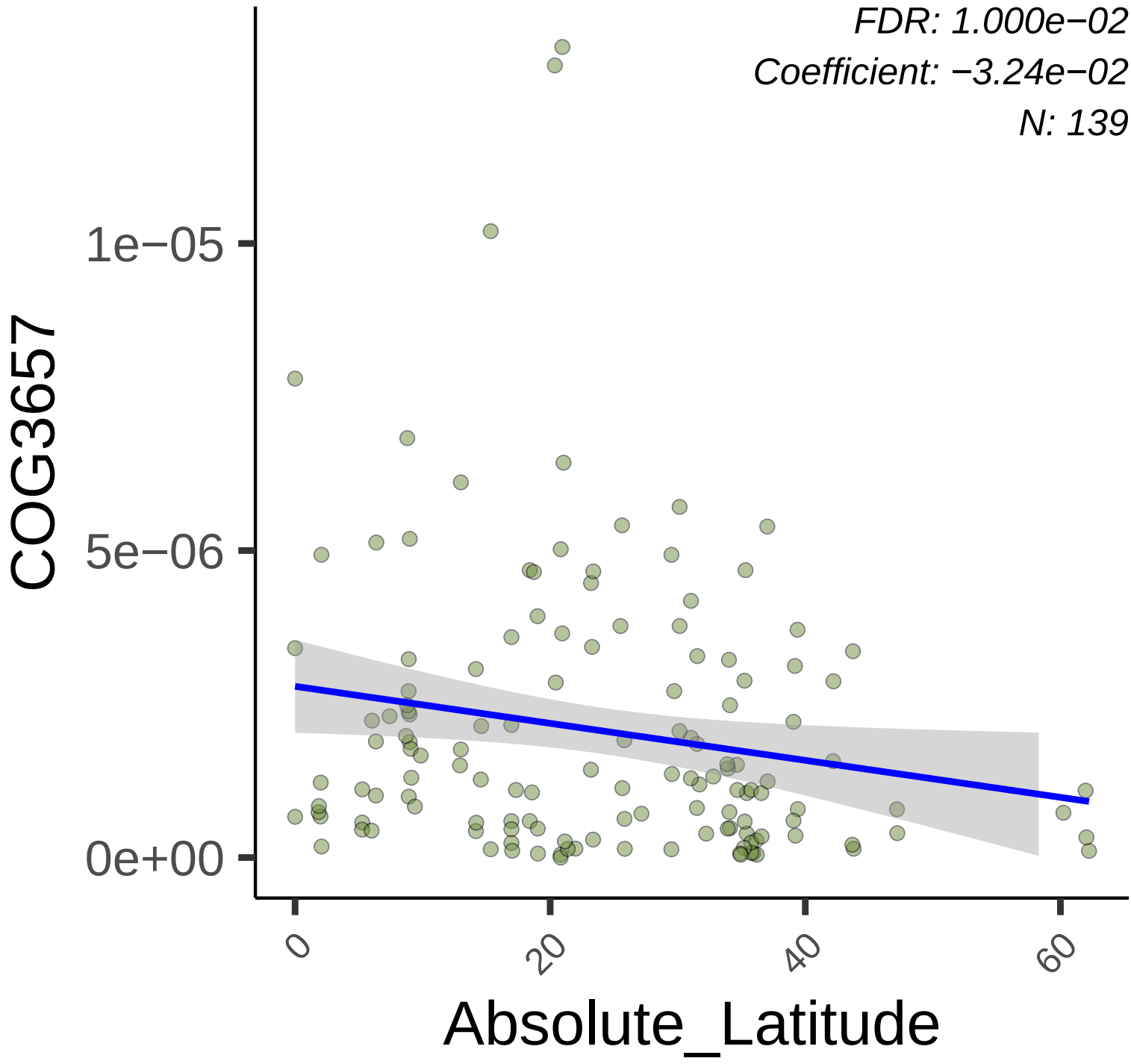

FDR: 9.835e−03
Coefficient: −1.13e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG1451
0
20
40
60
Absolute_Latitude

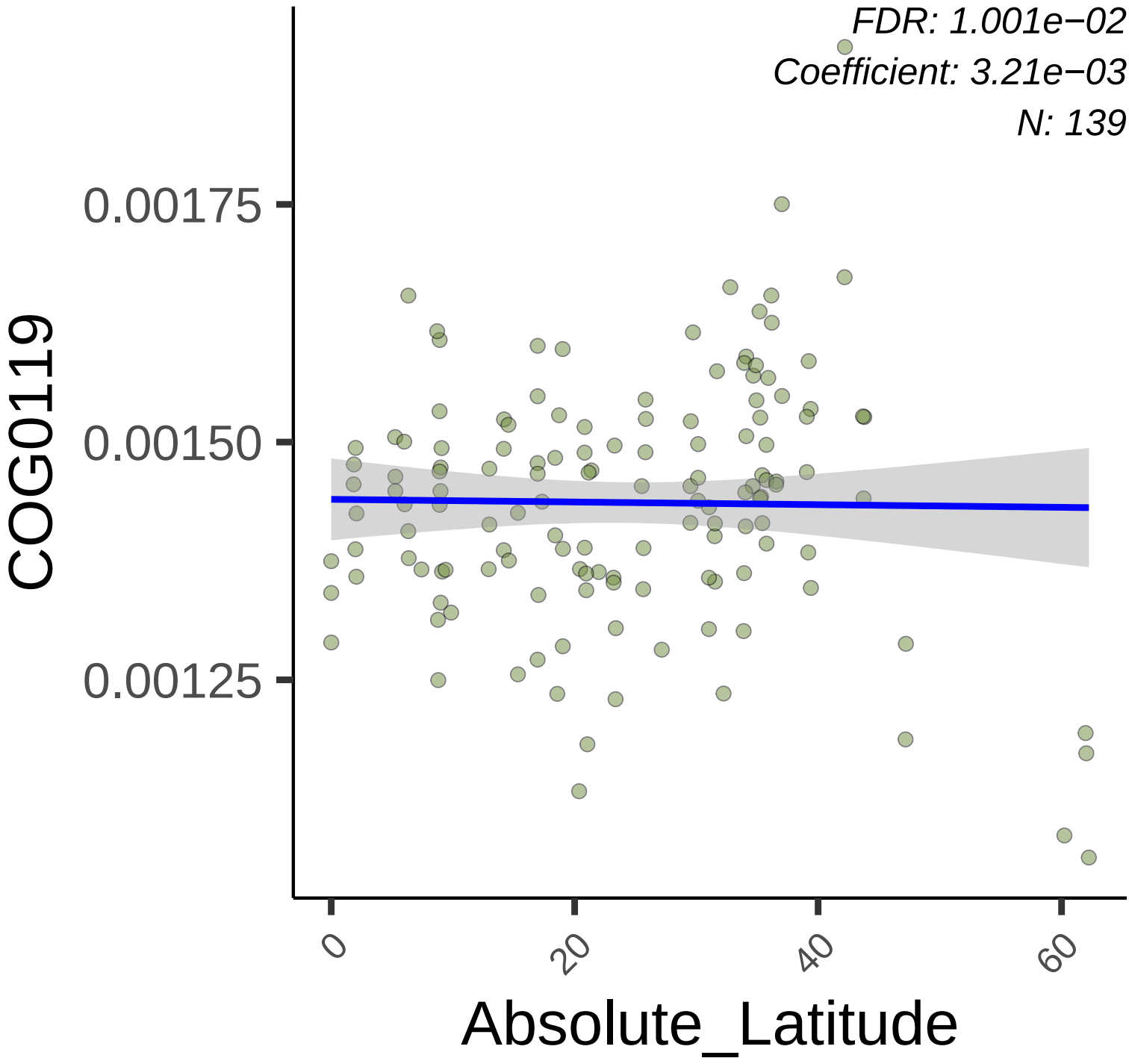

FDR: 9.867e−03
Coefficient: 8.62e−03
N: 139
0.00016
0.00012
0.00008
0.00004
COG4421
0
20
40
60
Absolute_Latitude

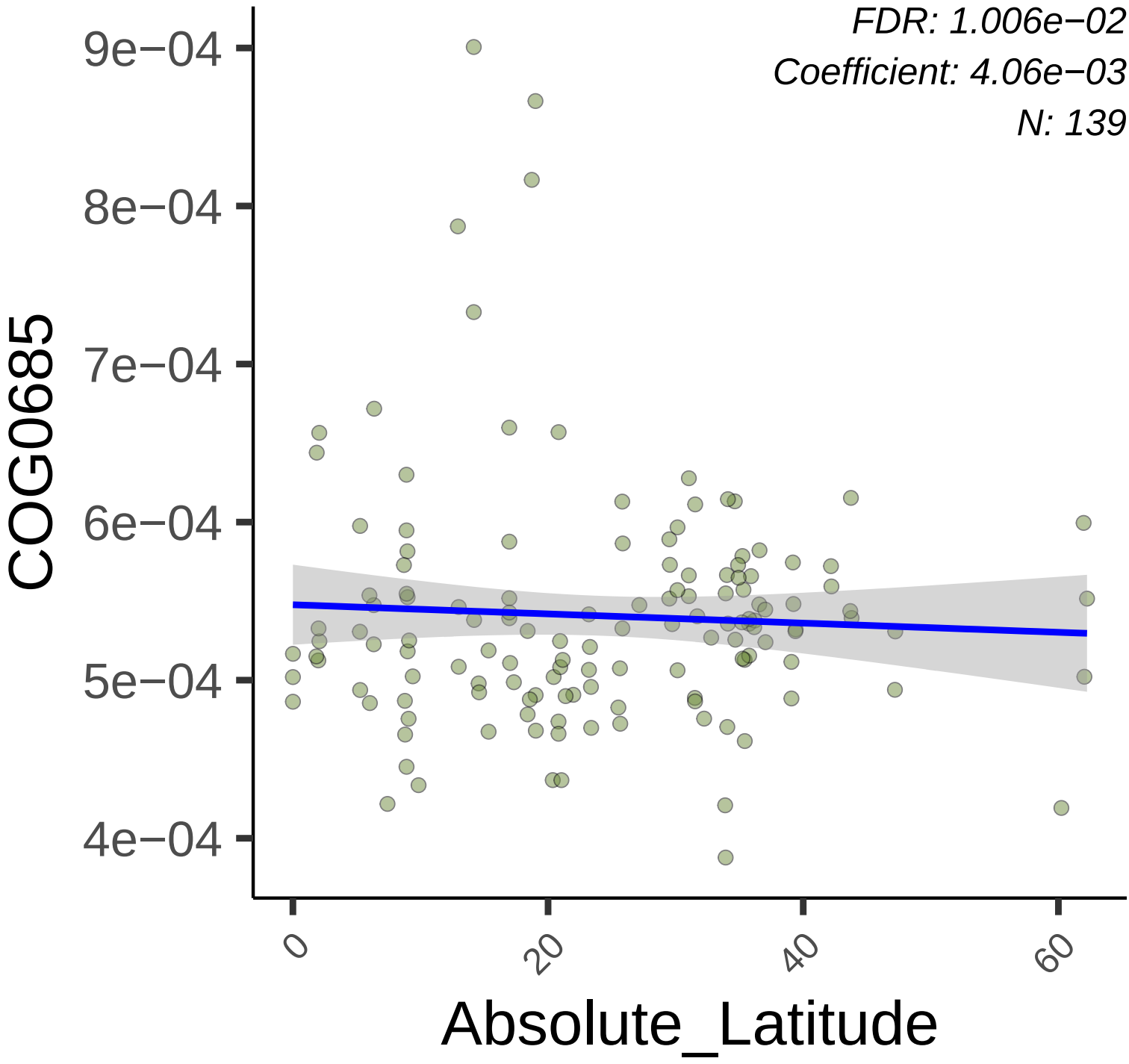

FDR: 9.898e−03
Coefficient: 3.98e−03
N: 139
COG0559
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
0
20
40
60
Absolute_Latitude

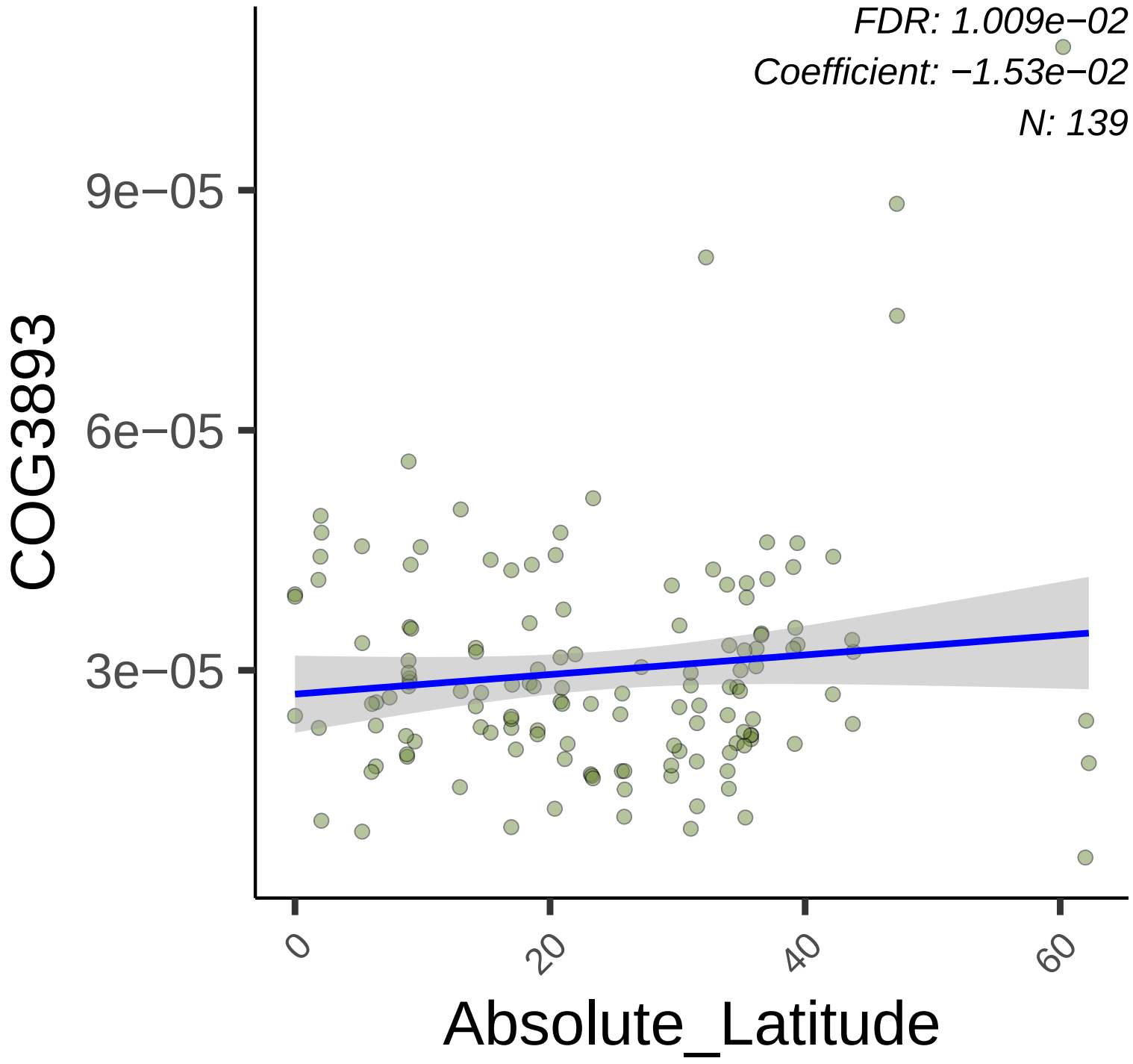

FDR: 9.917e−03
Coefficient: −1.62e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG5488
0
20
40
60
Absolute_Latitude

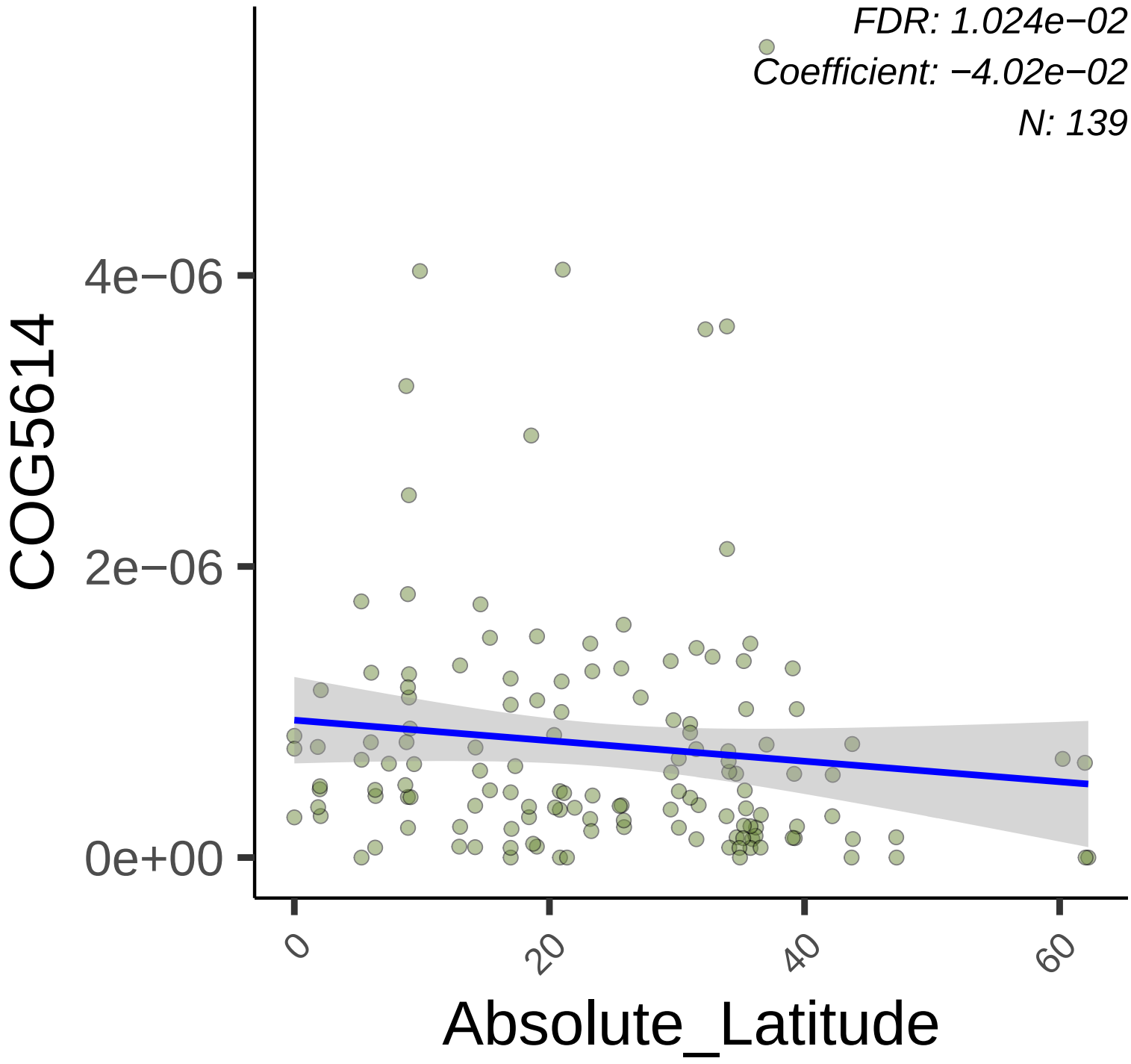

FDR: 9.983e−03
Coefficient: −1.73e−02
N: 139
0.00015
0.00010
0.00005
COG4989
0
20
40
60
Absolute_Latitude

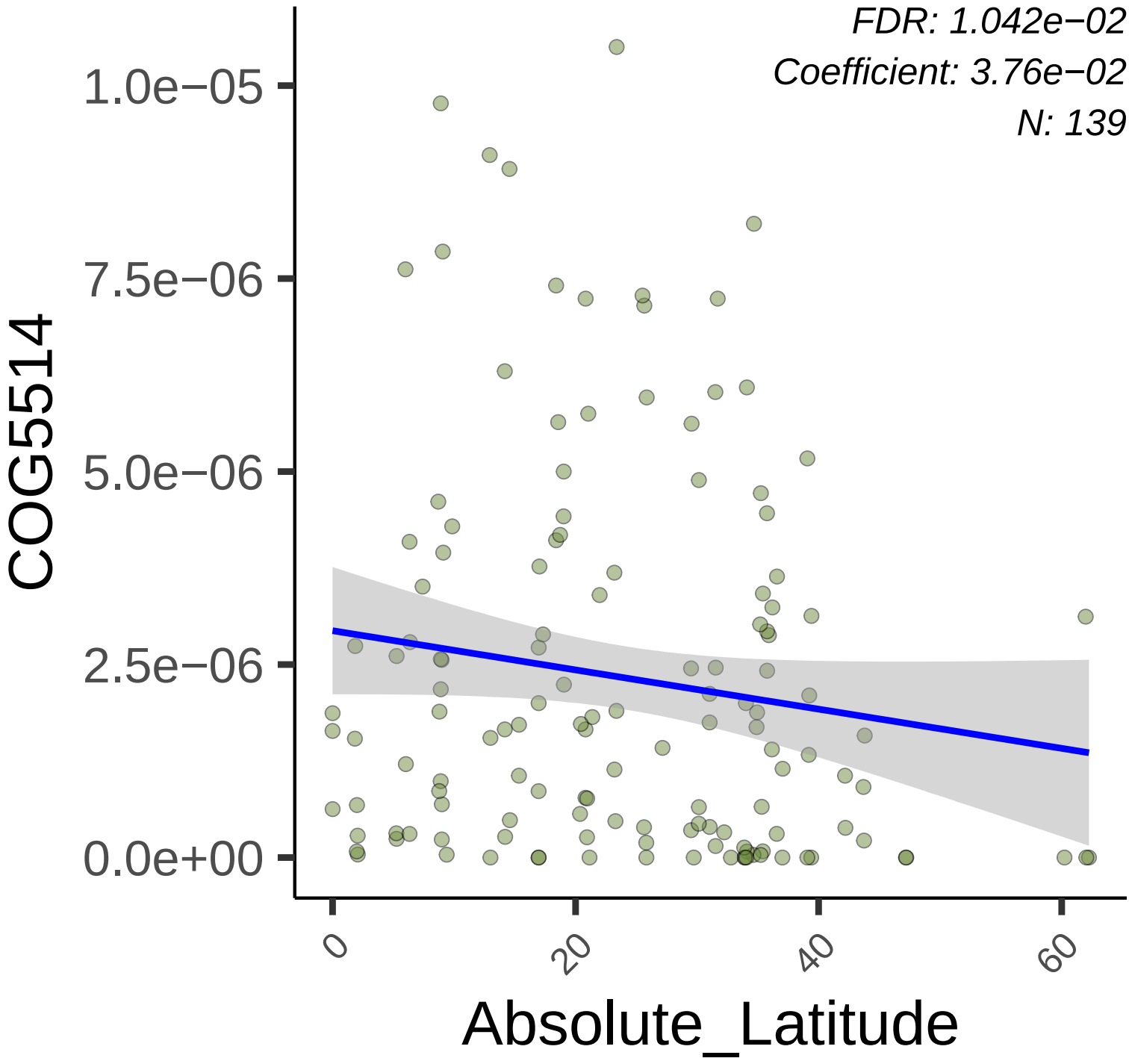

FDR: 1.000e−02
Coefficient: −3.24e−02
N: 139
COG3657
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

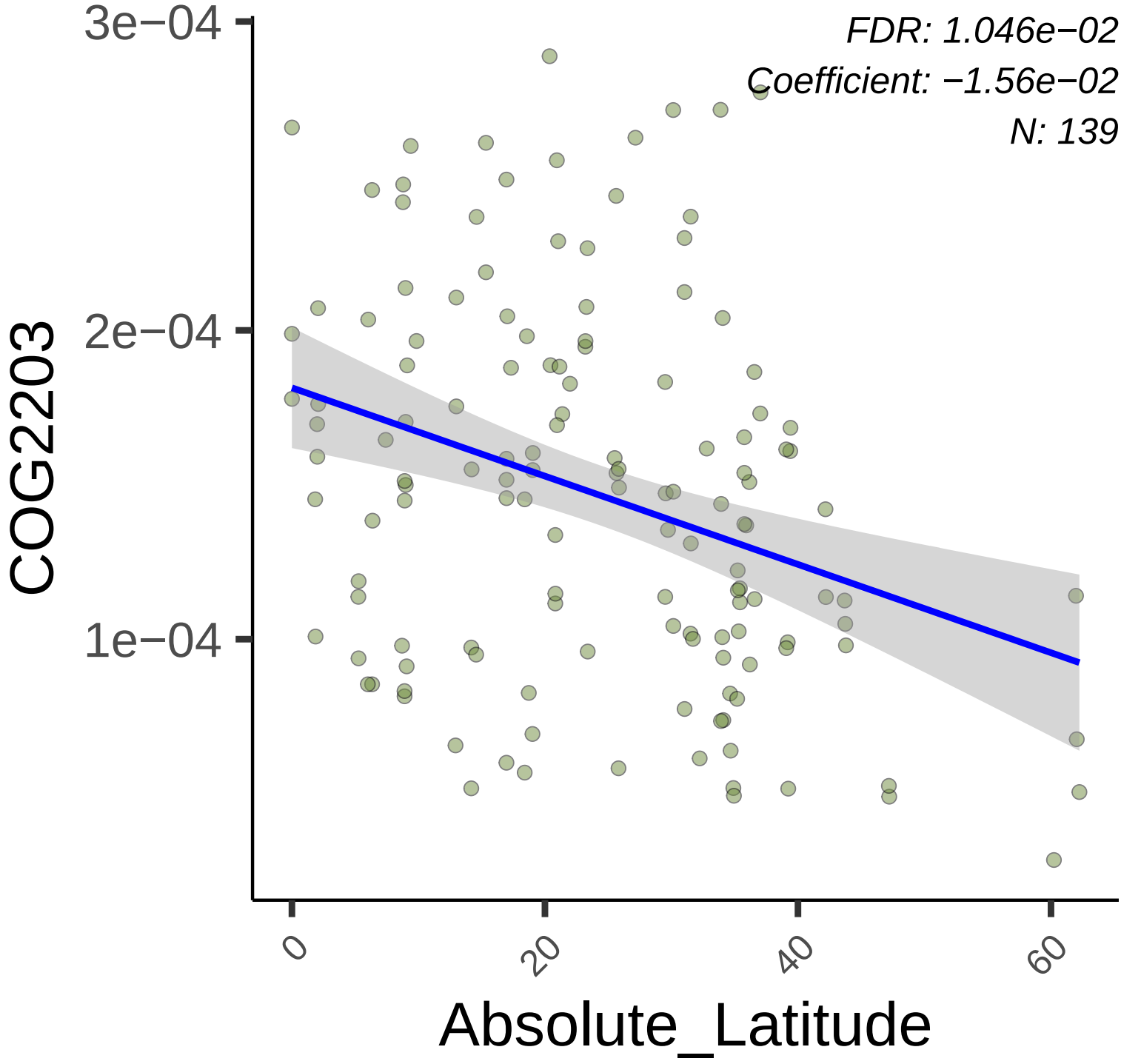

FDR: 1.001e−02
Coefficient: 3.21e−03
N: 139
0.00175
0.00150
0.00125
COG0119
0
20
40
60
Absolute_Latitude

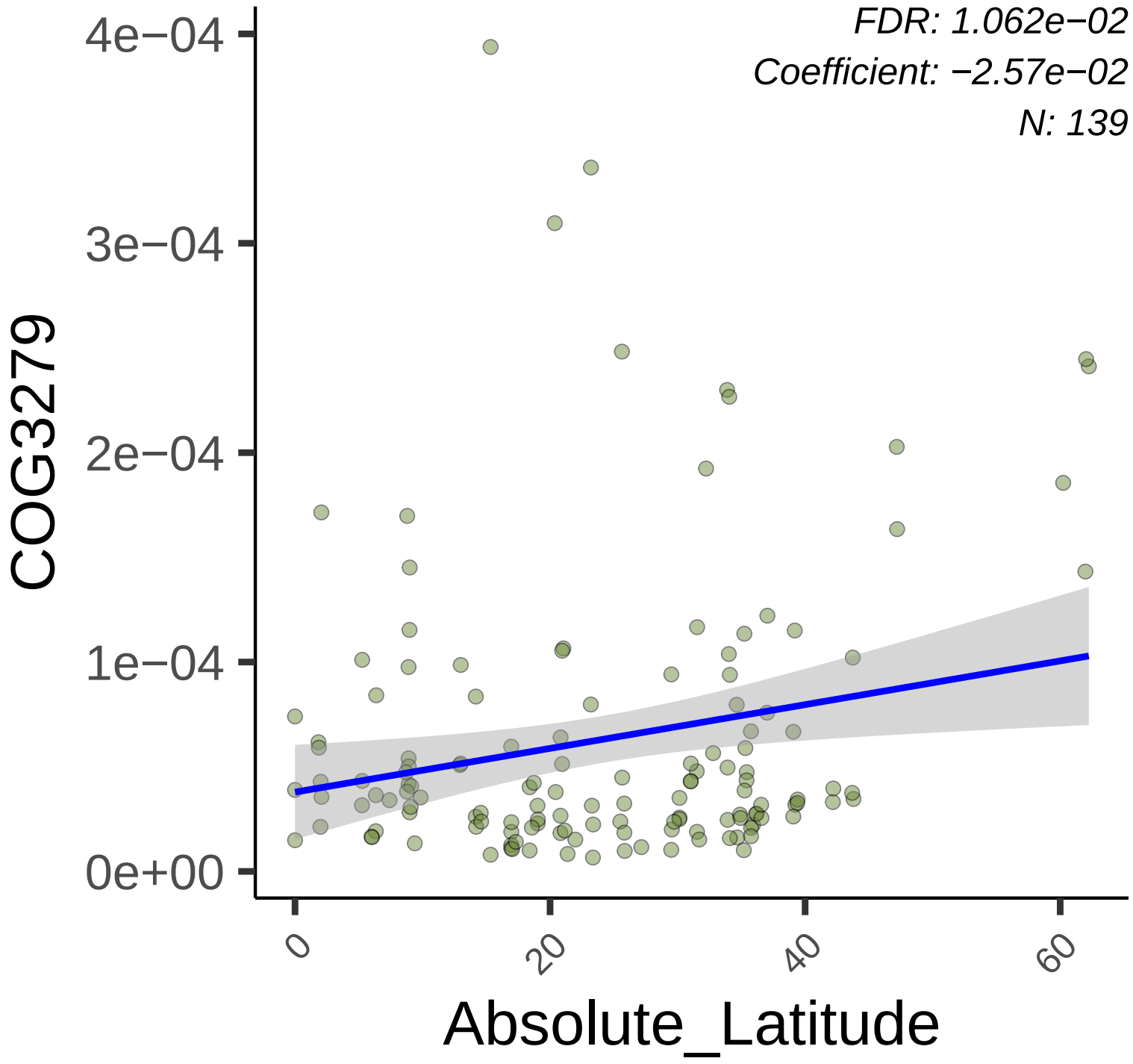

FDR: 1.006e−02
Coefficient: 4.06e−03
N: 139
9e−04
8e−04
7e−04
6e−04
5e−04
4e−04
COG0685
0
20
40
60
Absolute_Latitude

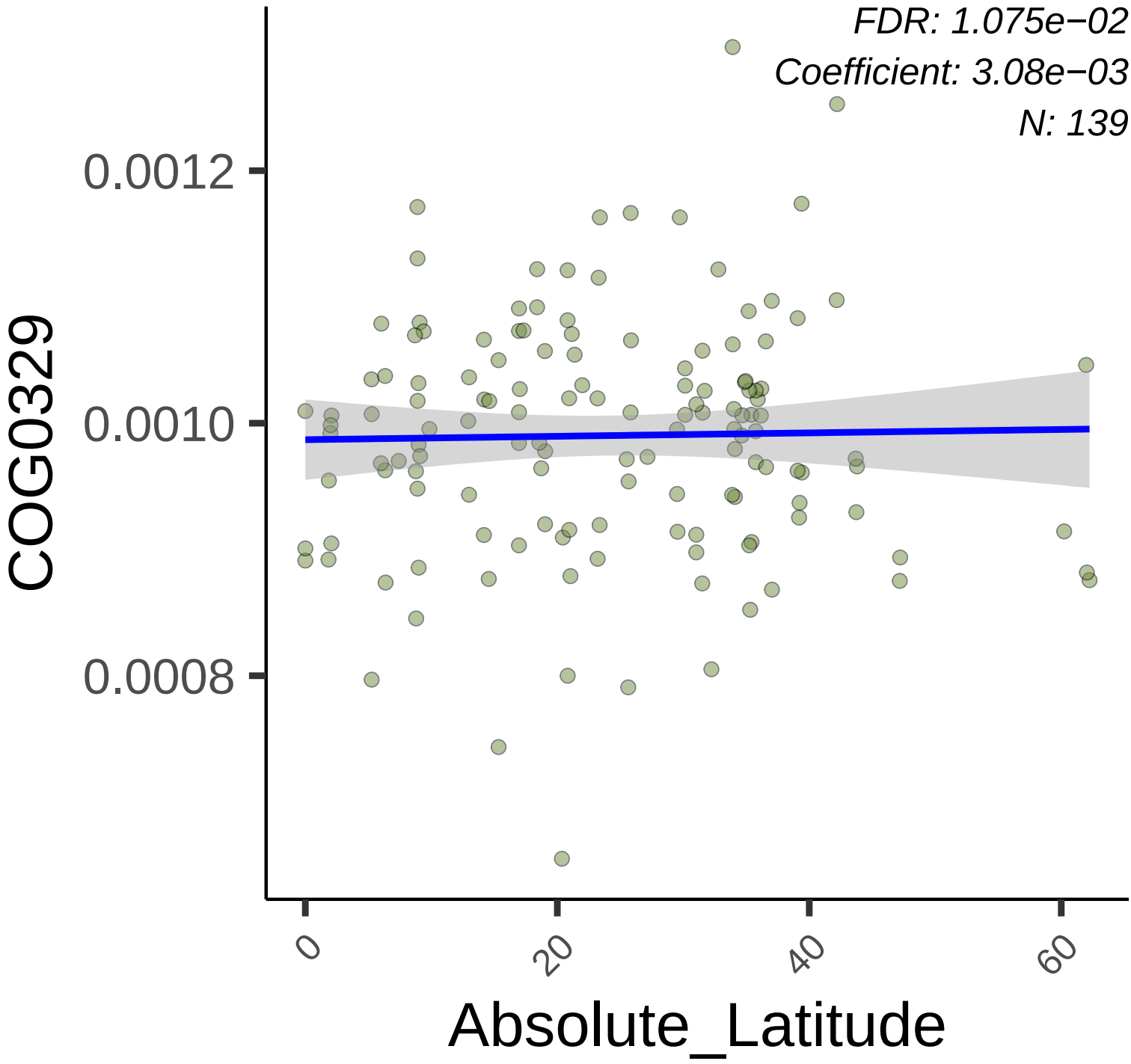

FDR: 1.009e−02
Coefficient: −1.53e−02
N: 139
9e−05
6e−05
3e−05
COG3893
0
20
40
60
Absolute_Latitude

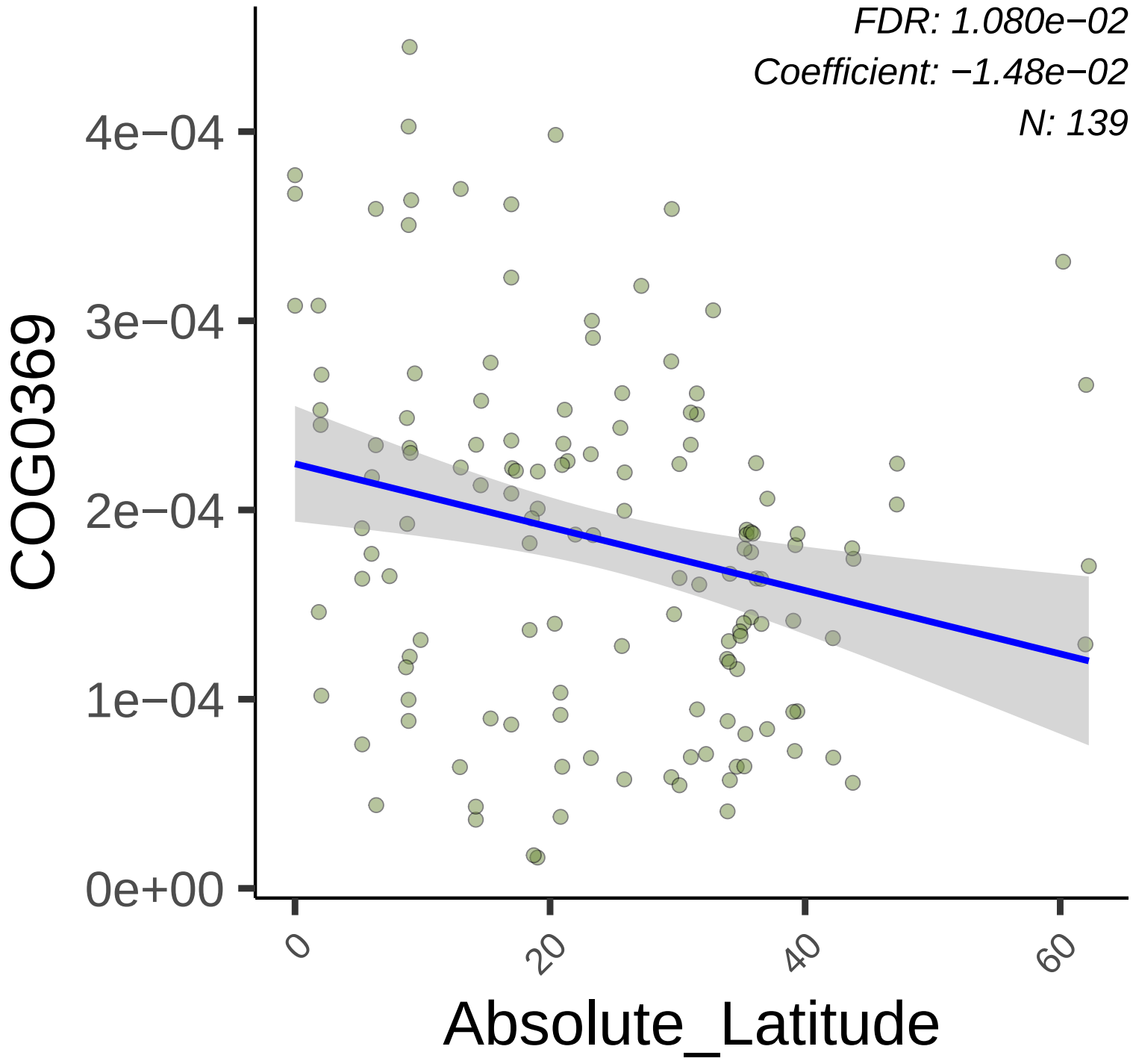

FDR: 1.024e−02
Coefficient: −4.02e−02
N: 139
COG5614
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

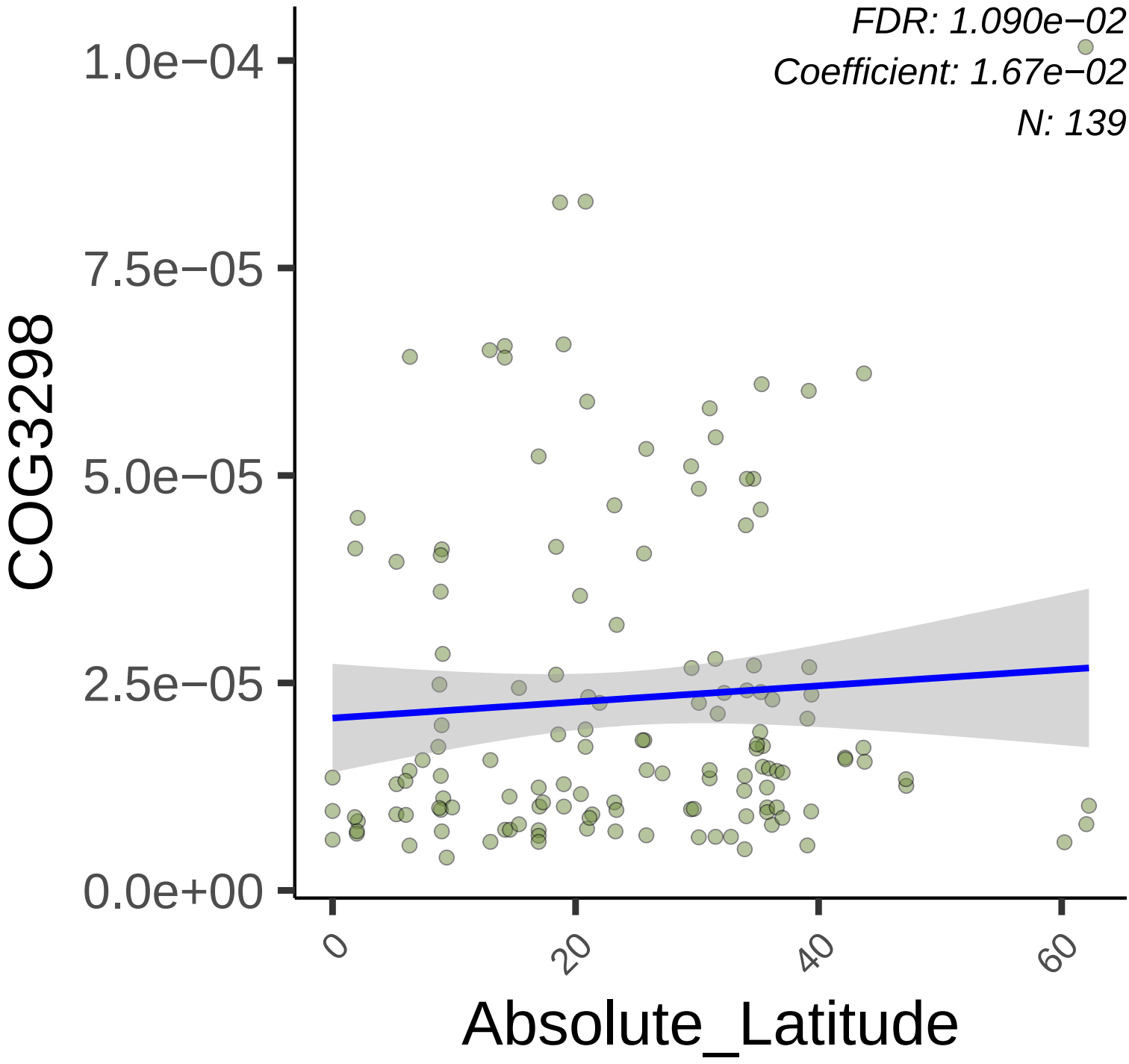

FDR: 1.042e−02
Coefficient: 3.76e−02
N: 139
1.0e−05
7.5e−06
5.0e−06
2.5e−06
0.0e+00
COG5514
0
20
40
60
Absolute_Latitude

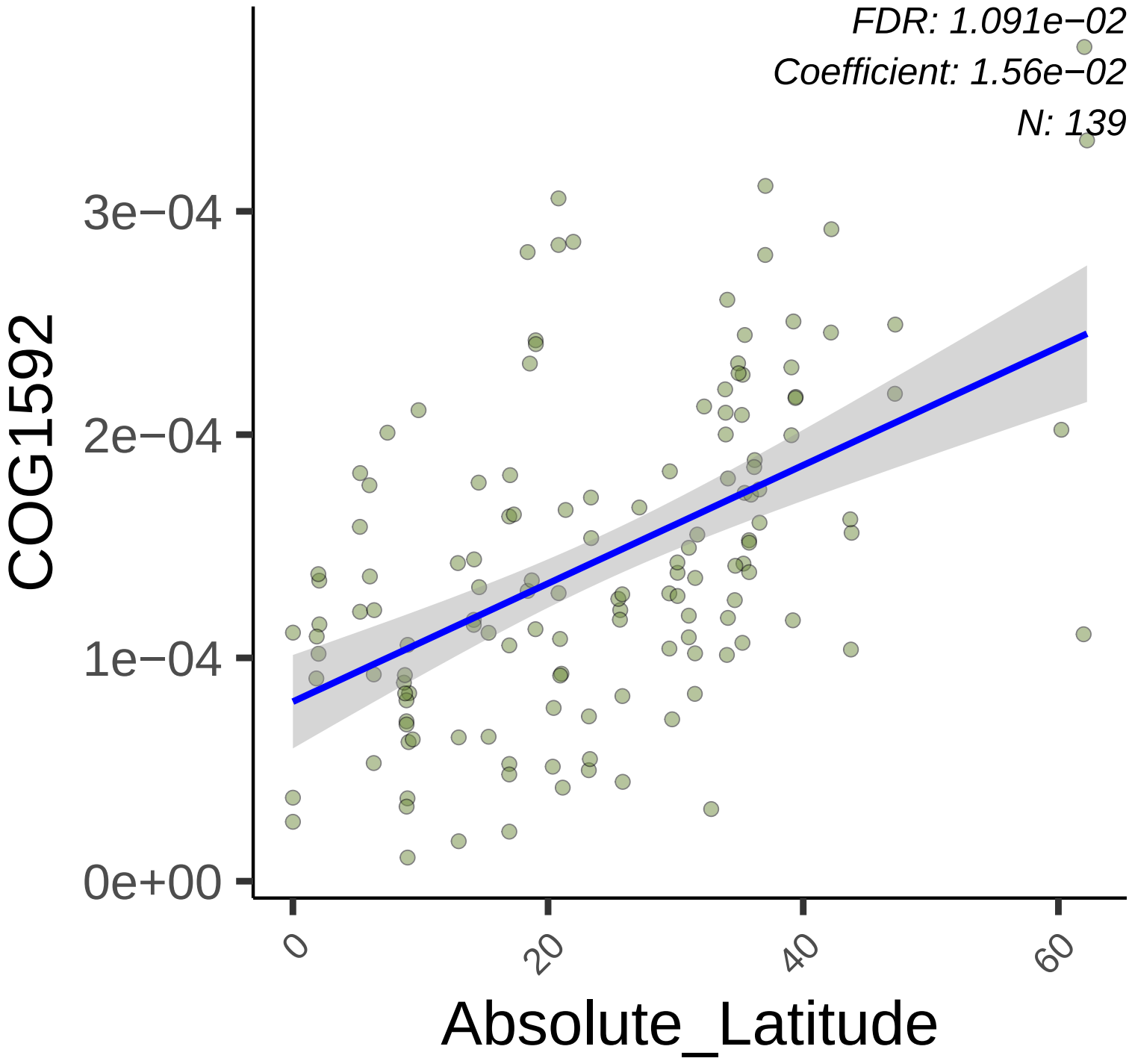

FDR: 1.046e−02
Coefficient: −1.56e−02
N: 139
3e−04
2e−04
1e−04
COG2203
0
20
40
60
Absolute_Latitude

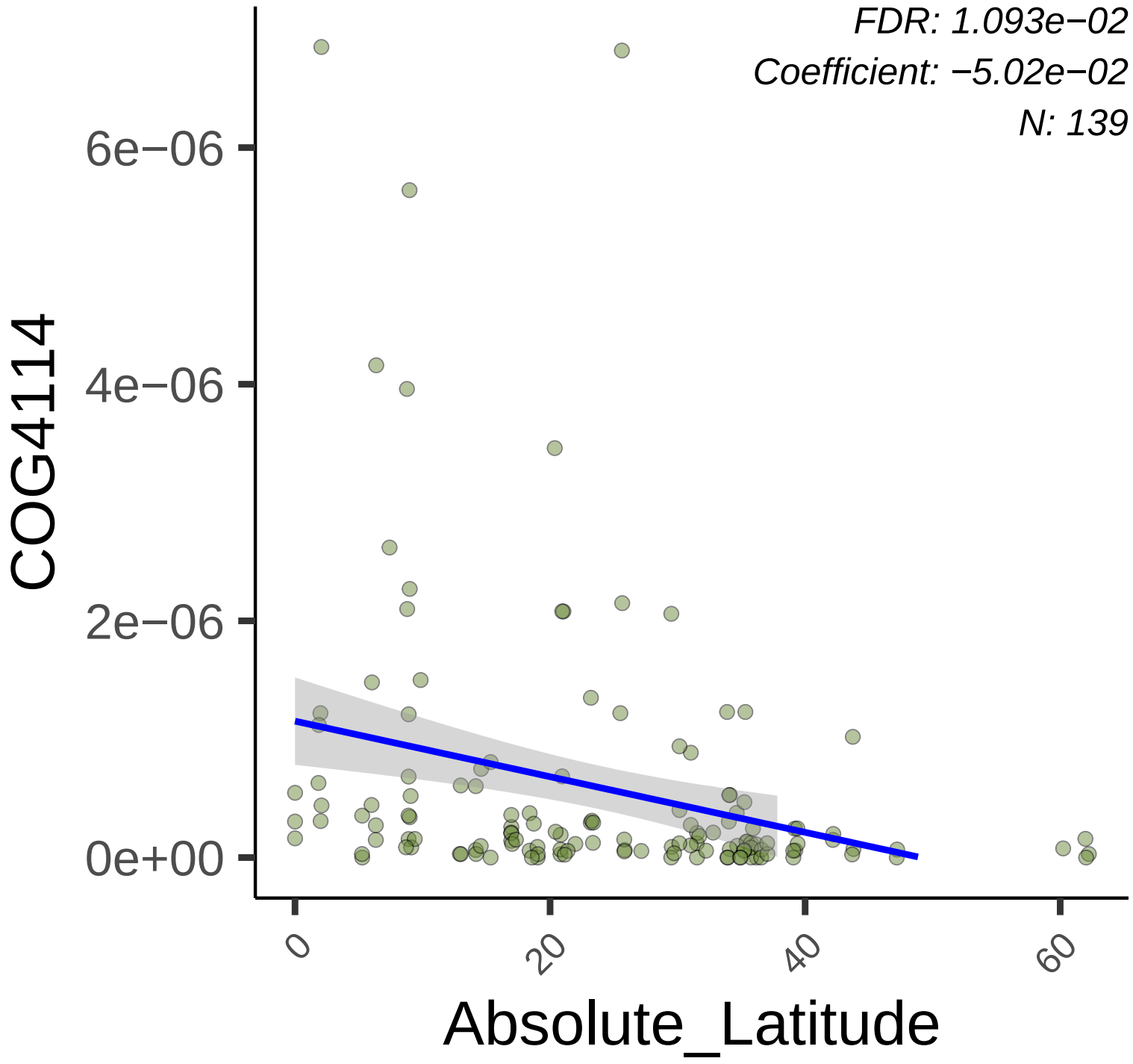

FDR: 1.062e−02
Coefficient: −2.57e−02
N: 139
4e−04
3e−04
2e−04
1e−04
0e+00
COG3279
0
20
40
60
Absolute_Latitude

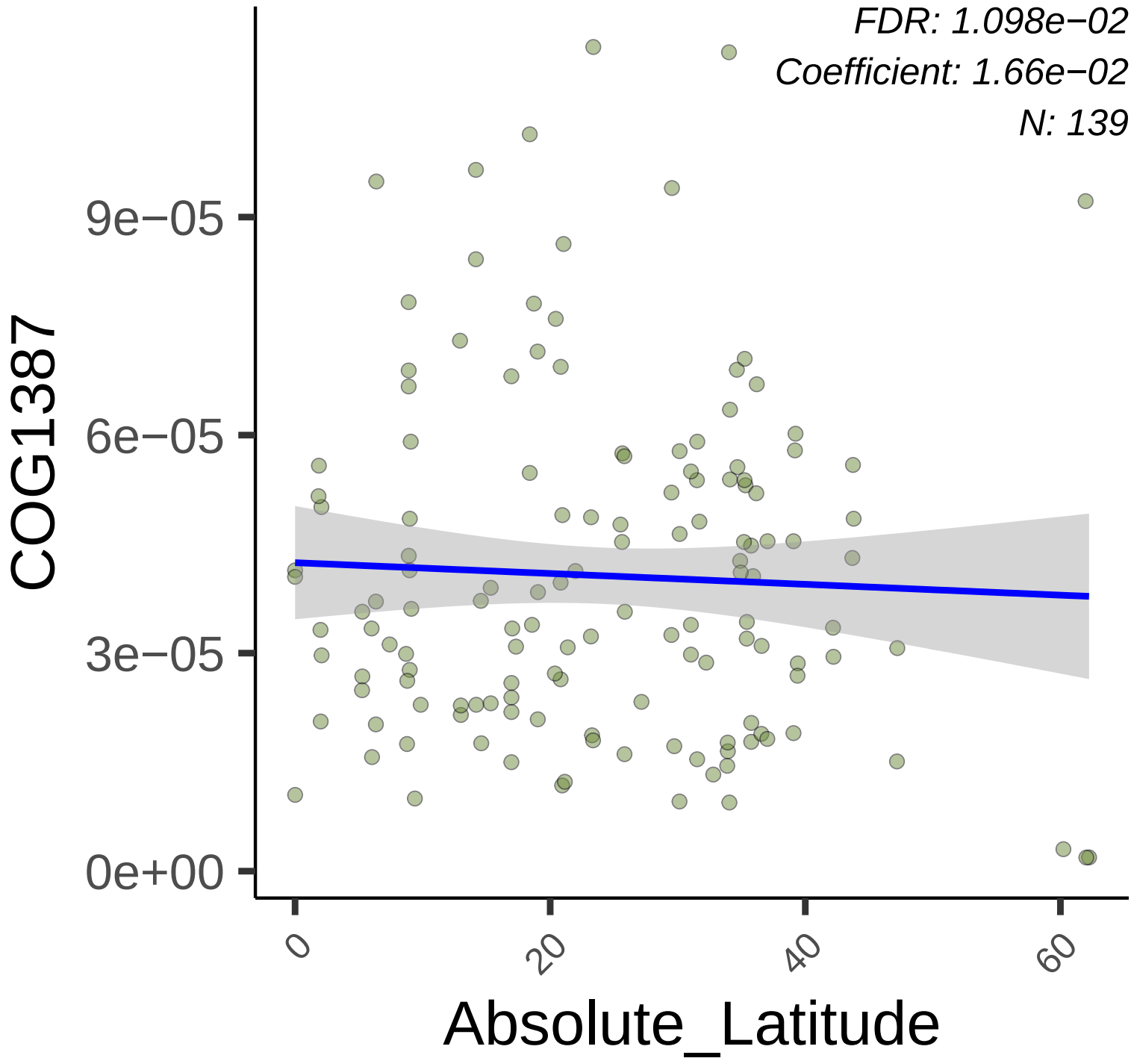

FDR: 1.075e−02
Coefficient: 3.08e−03
N: 139
0.0012
0.0010
0.0008
COG0329
0
20
40
60
Absolute_Latitude

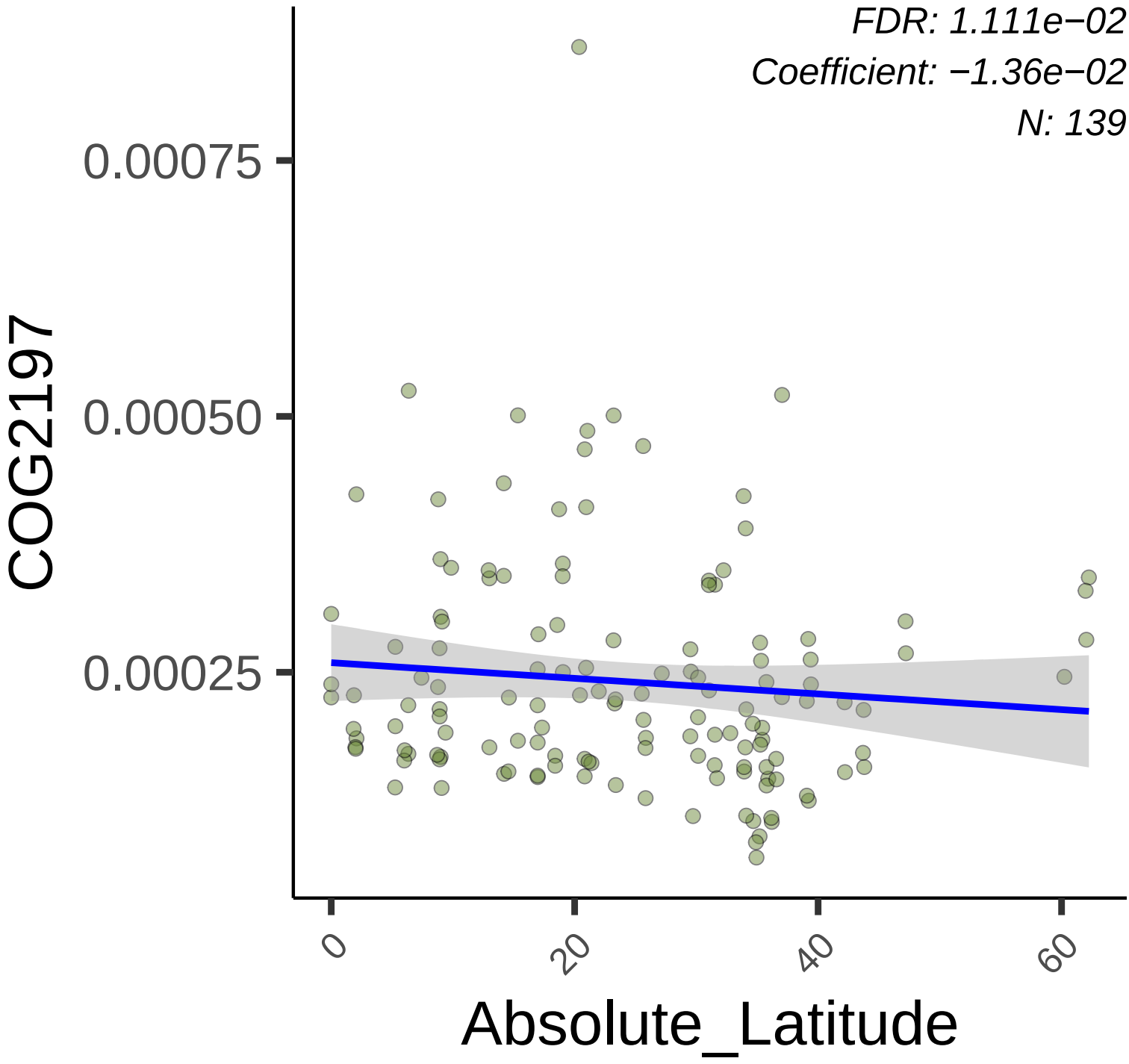

FDR: 1.080e−02
Coefficient: −1.48e−02
N: 139
COG0369
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

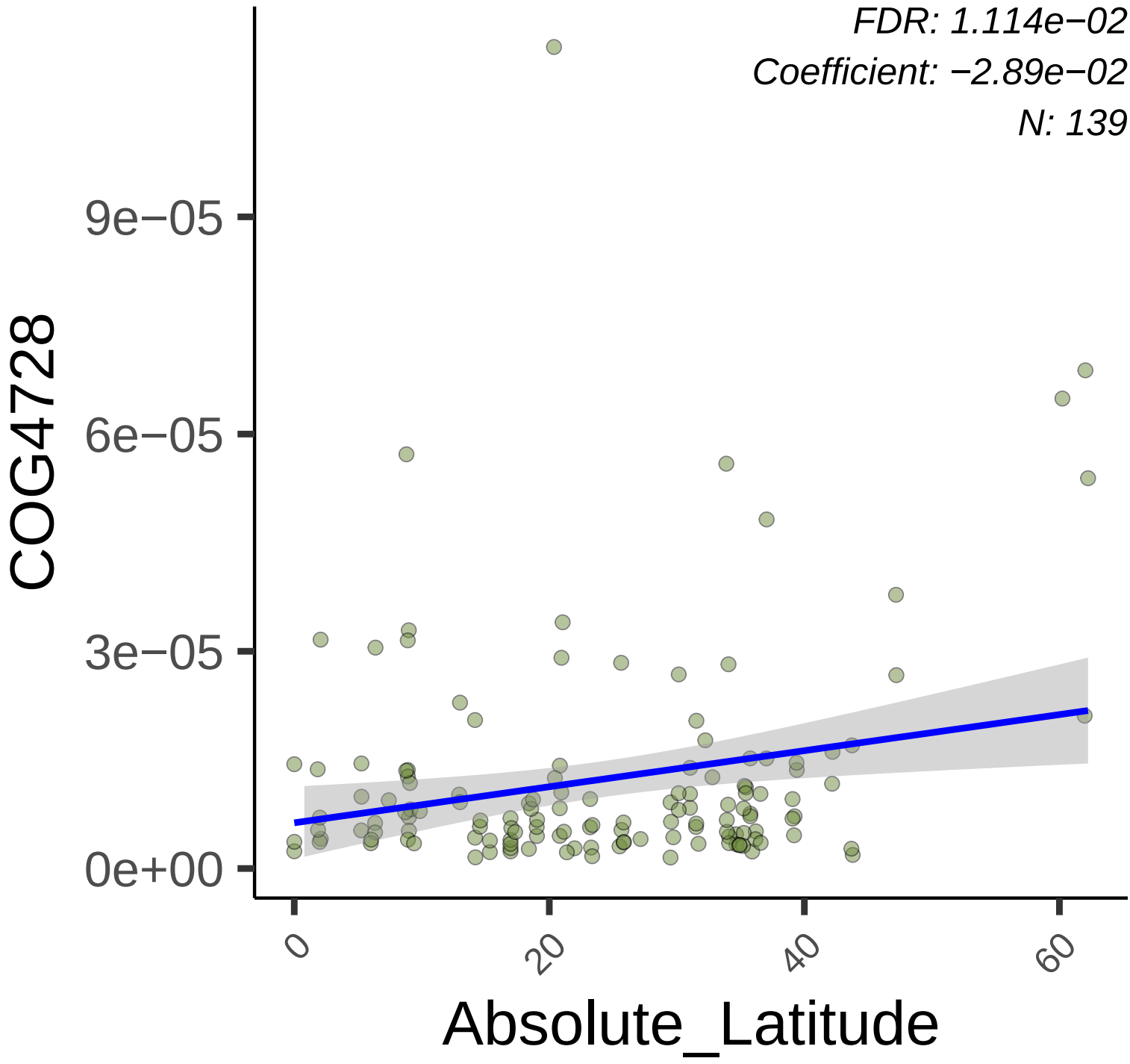

FDR: 1.090e−02
Coefficient: 1.67e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3298
0
20
40
60
Absolute_Latitude

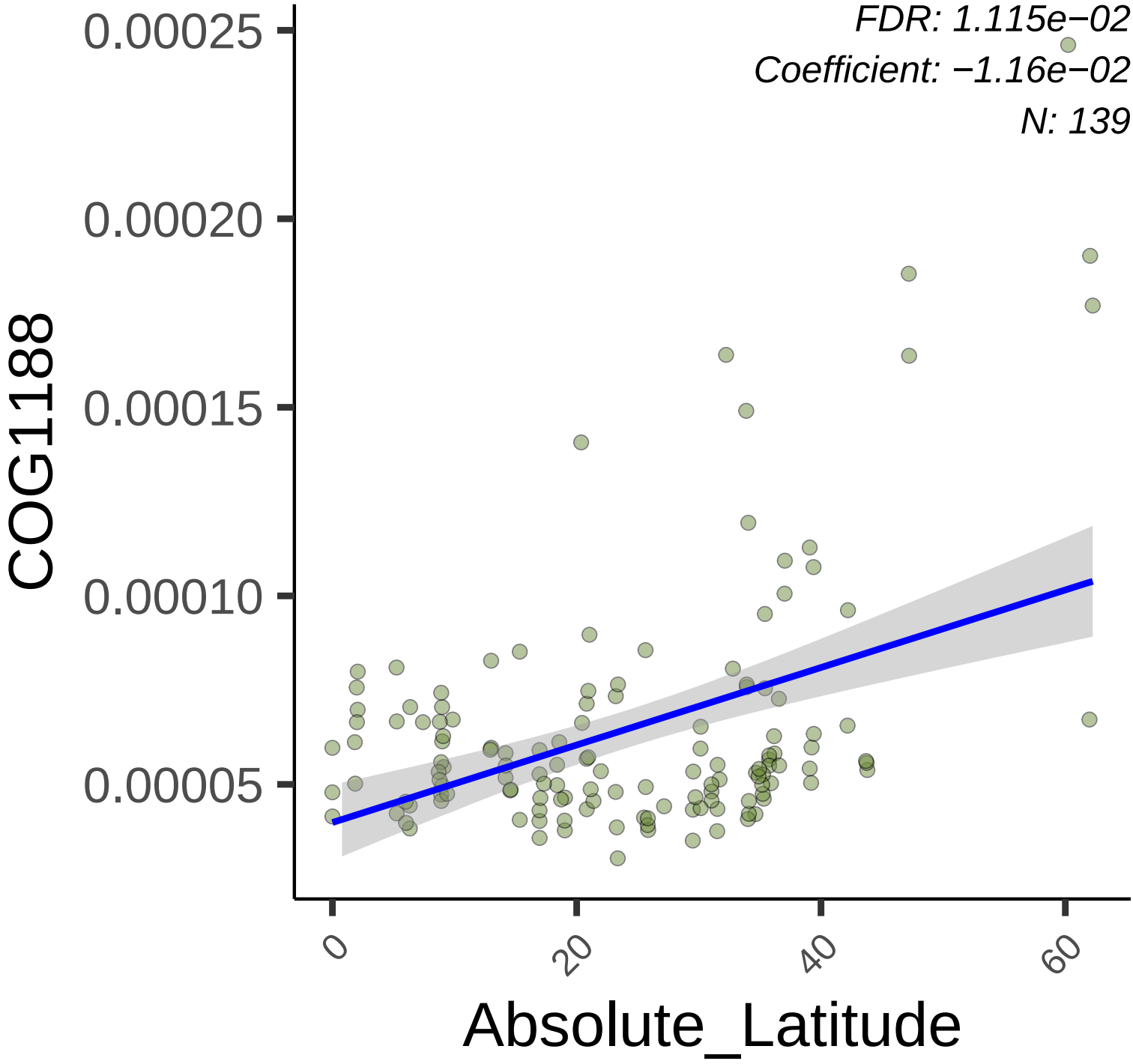

FDR: 1.091e−02
Coefficient: 1.56e−02
N: 139
COG1592
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

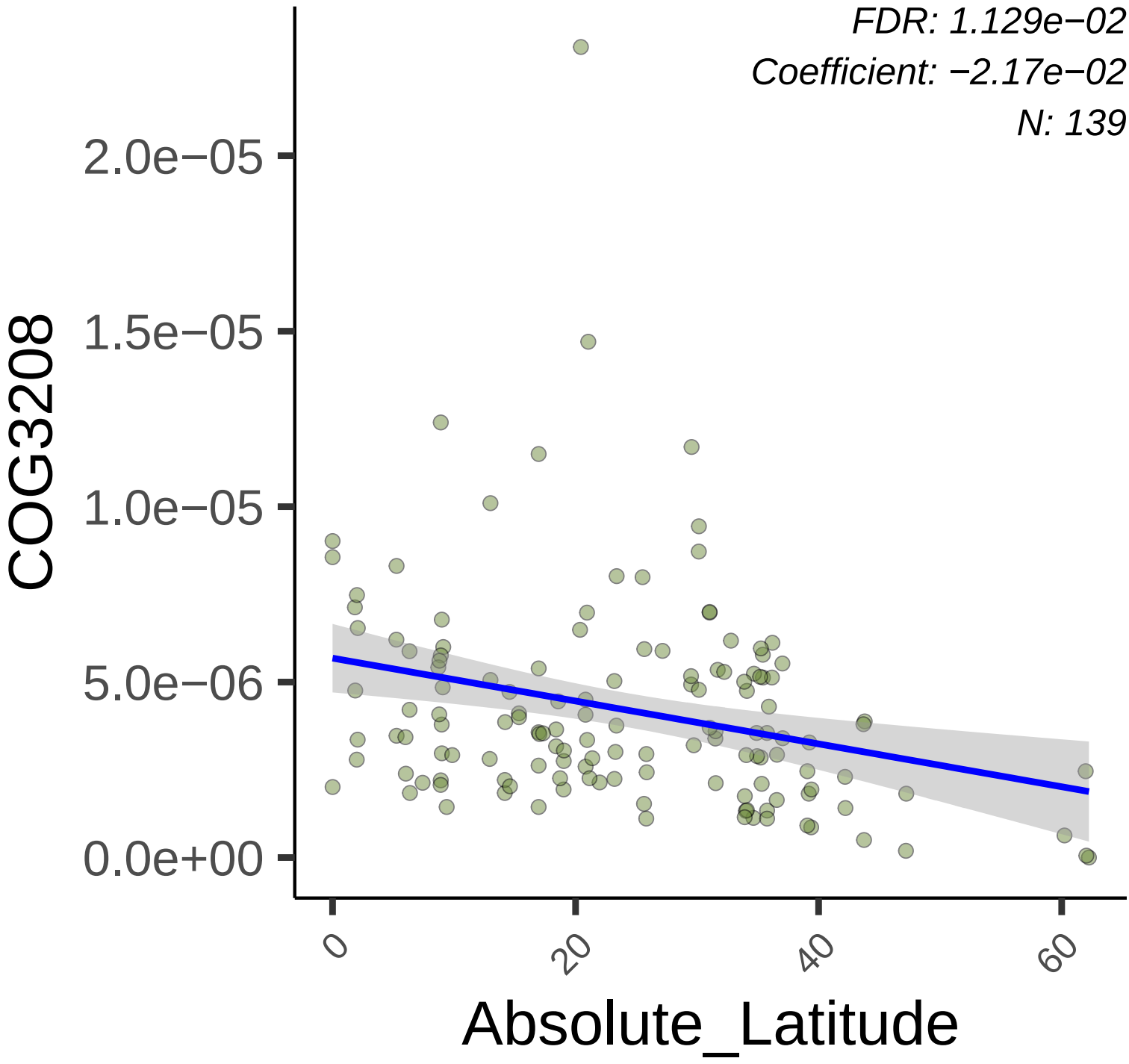

FDR: 1.093e−02
Coefficient: −5.02e−02
N: 139
COG4114
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

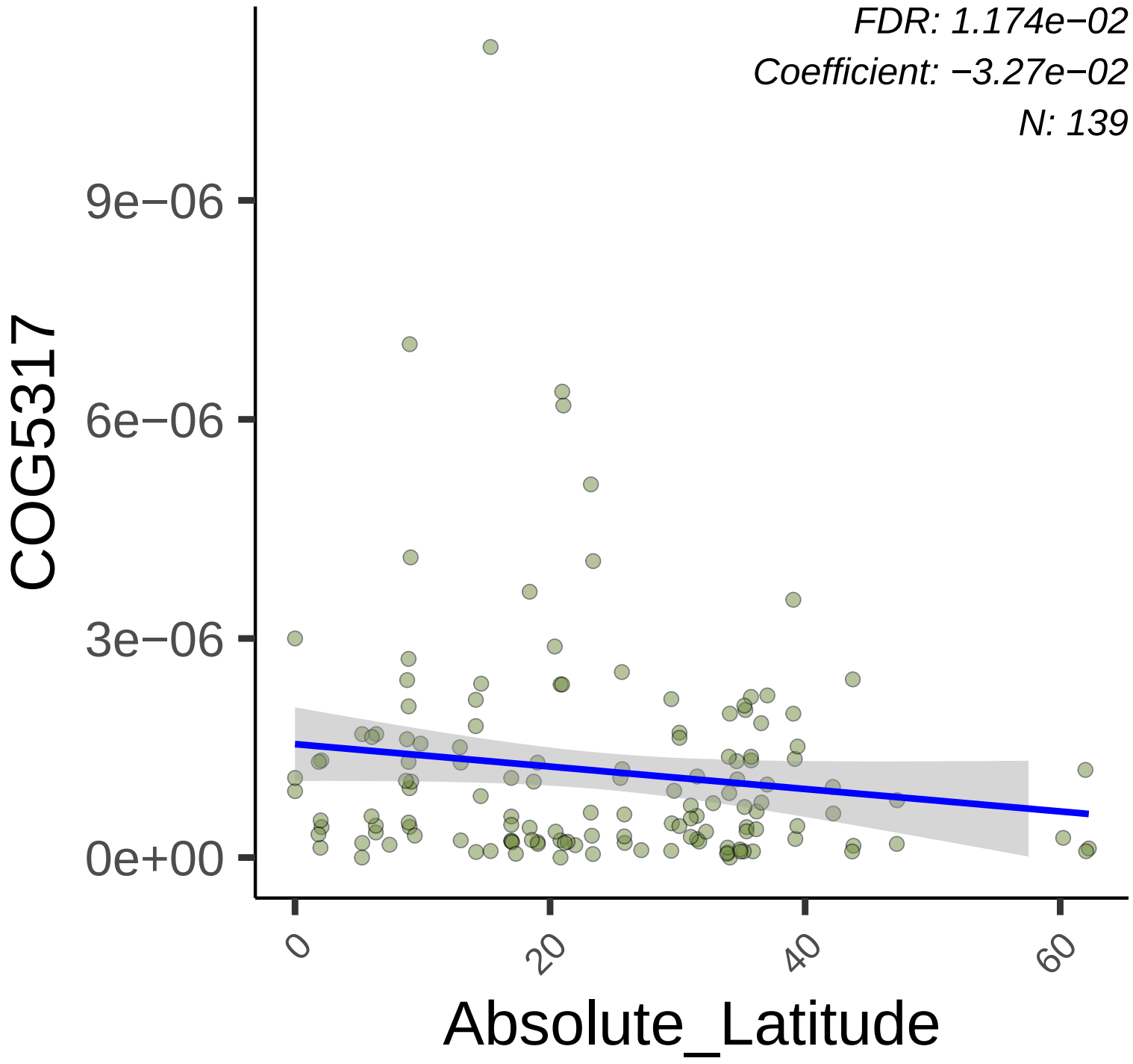

FDR: 1.098e−02
Coefficient: 1.66e−02
N: 139
COG1387
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

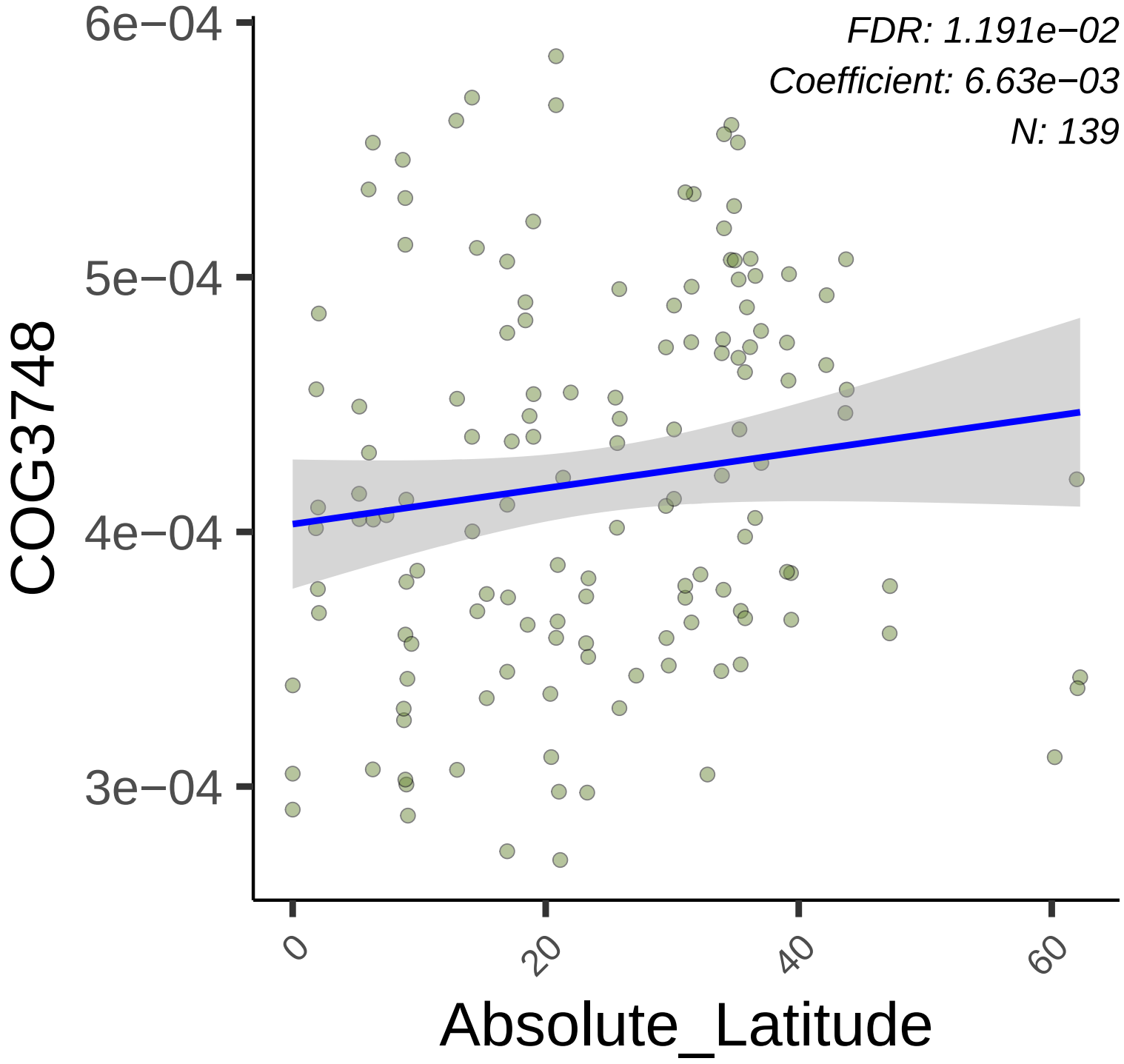

FDR: 1.111e−02
Coefficient: −1.36e−02
N: 139
0.00075
0.00050
0.00025
COG2197
0
20
40
60
Absolute_Latitude

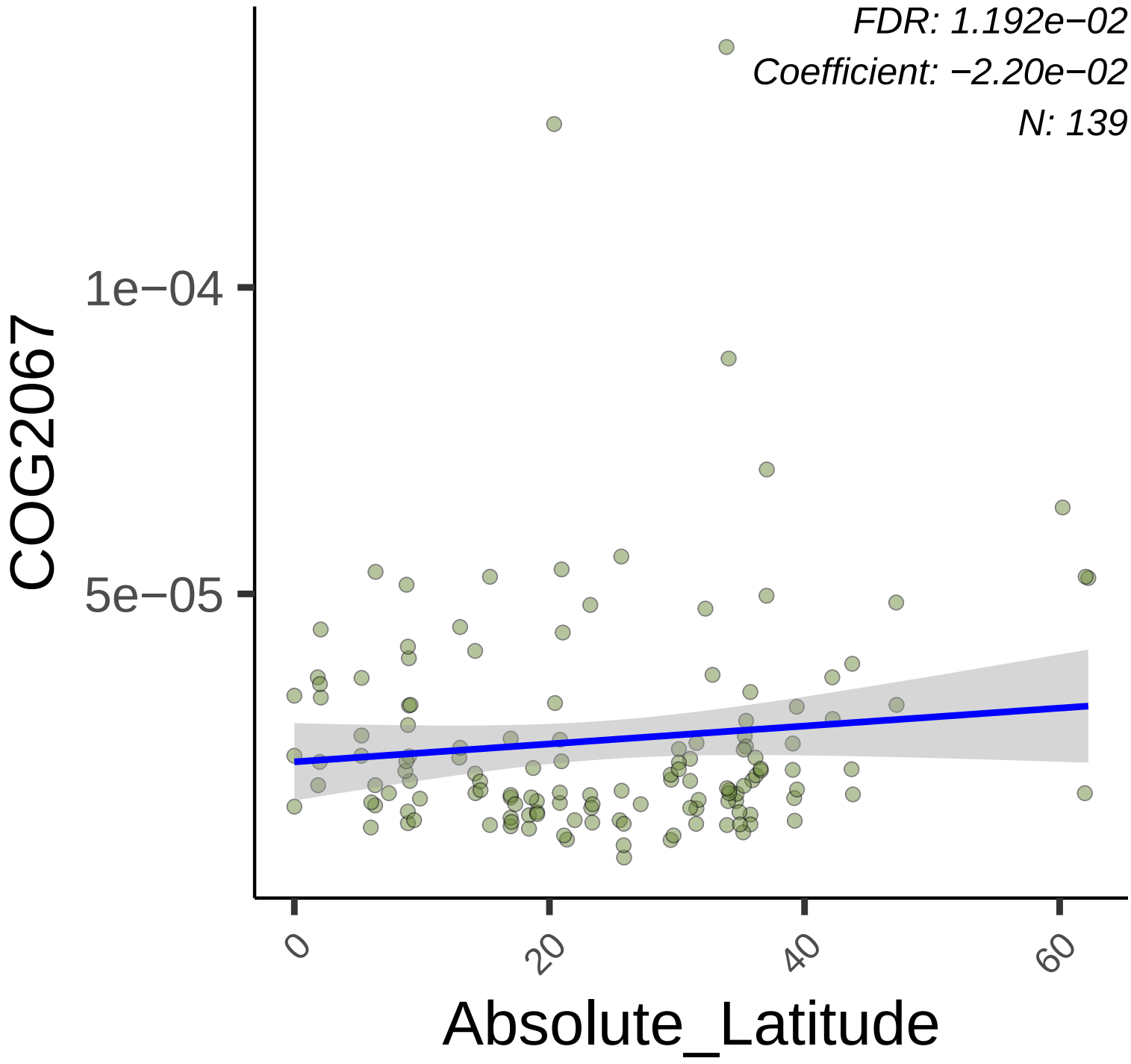

FDR: 1.114e−02
Coefficient: −2.89e−02
N: 139
COG4728
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

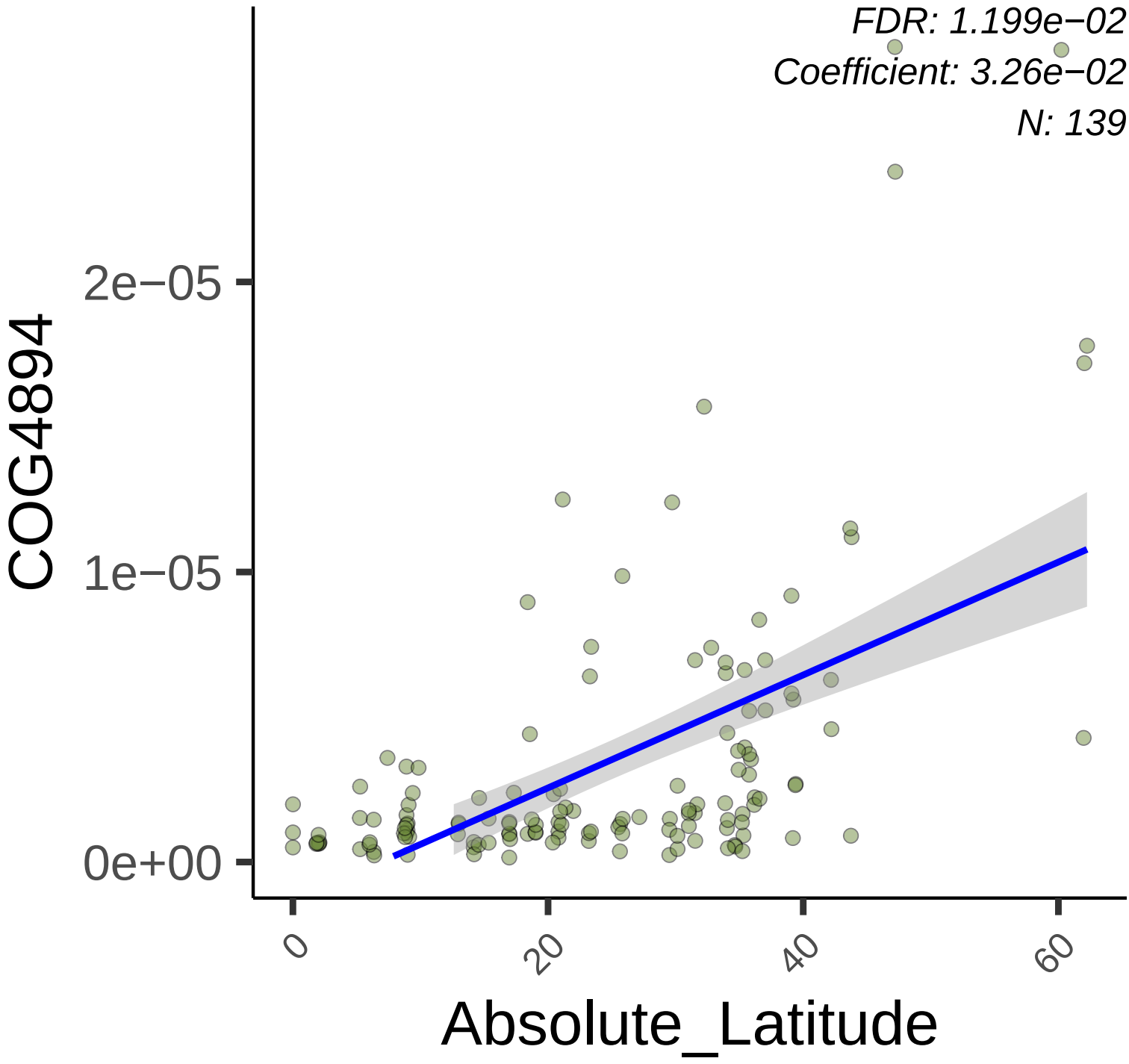

FDR: 1.115e−02
Coefficient: −1.16e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG1188
0
20
40
60
Absolute_Latitude

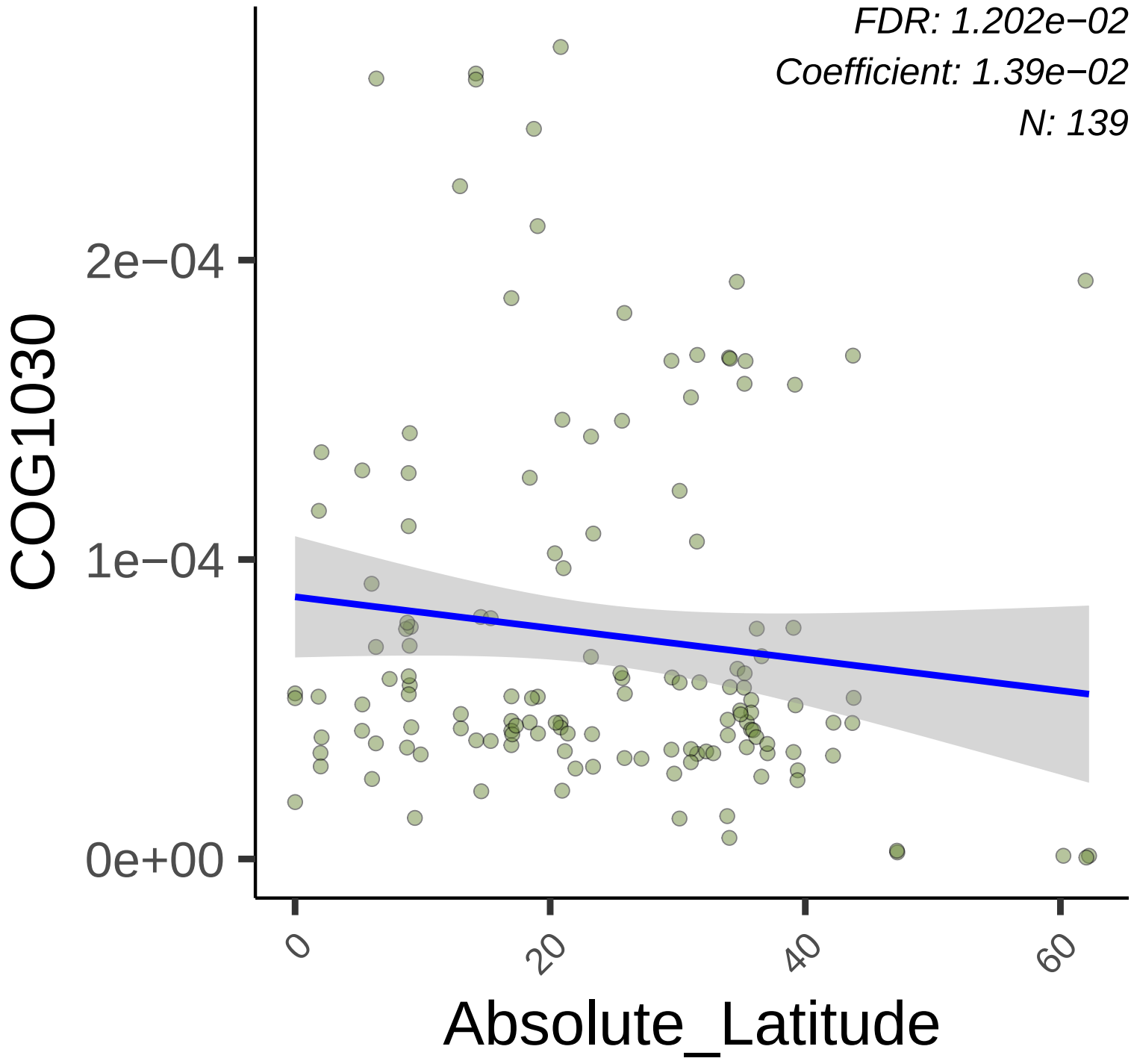

FDR: 1.129e−02
Coefficient: −2.17e−02
N: 139
COG3208
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

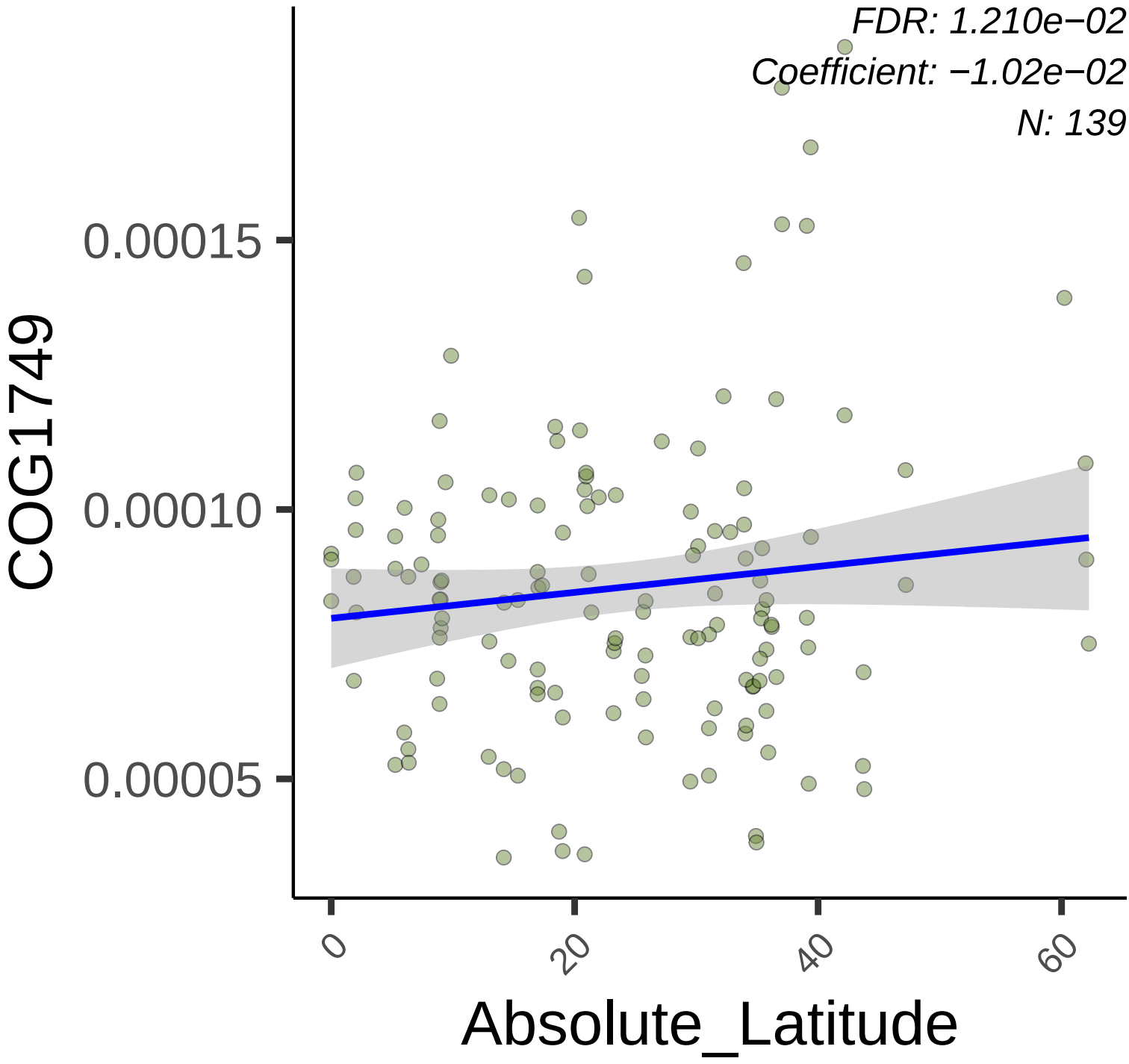

FDR: 1.174e−02
Coefficient: −3.27e−02
N: 139
COG5317
9e−06
6e−06
3e−06
0e+00
0
20
40
60
Absolute_Latitude

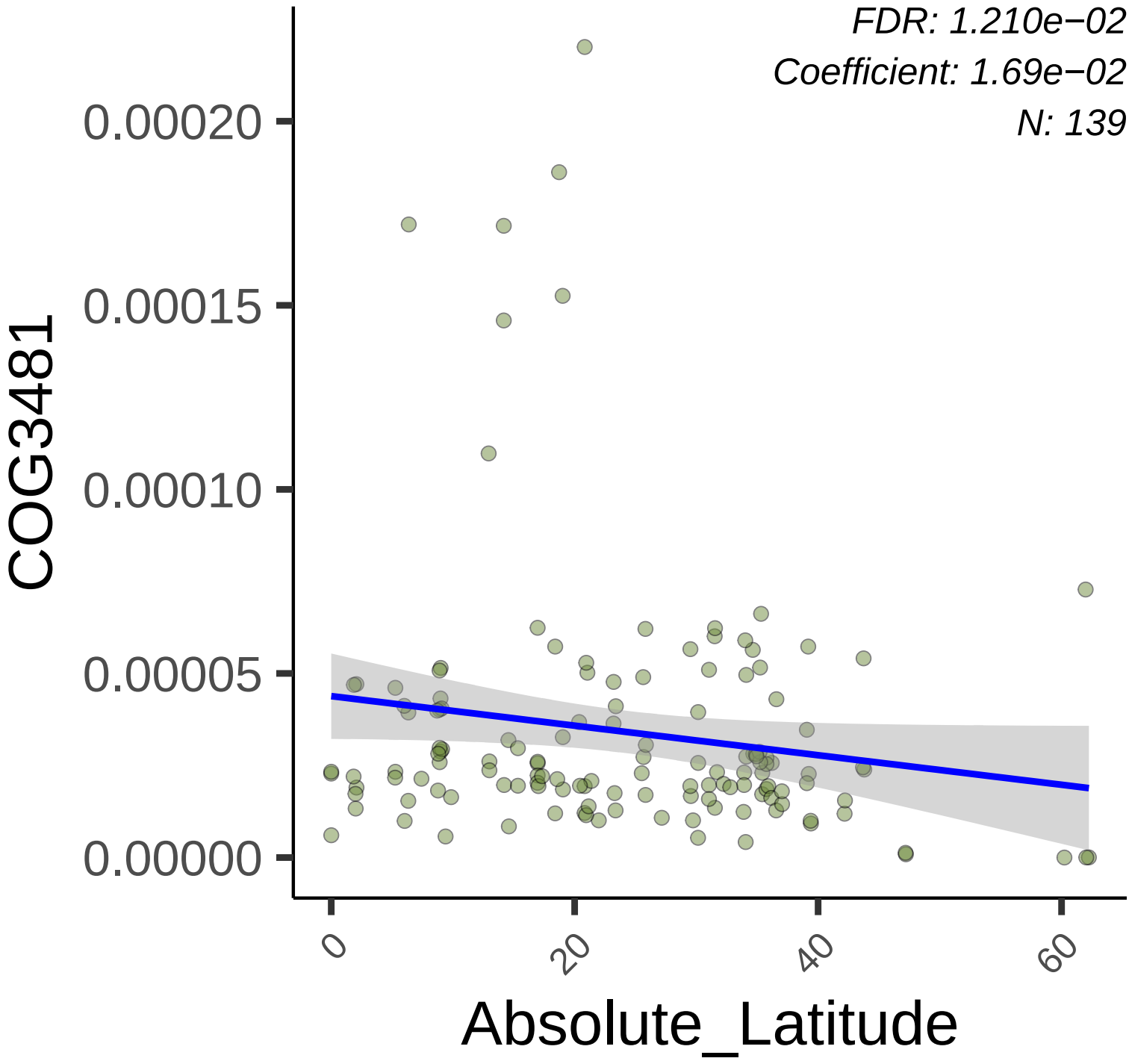

FDR: 1.191e−02
Coefficient: 6.63e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG3748
0
20
40
60
Absolute_Latitude

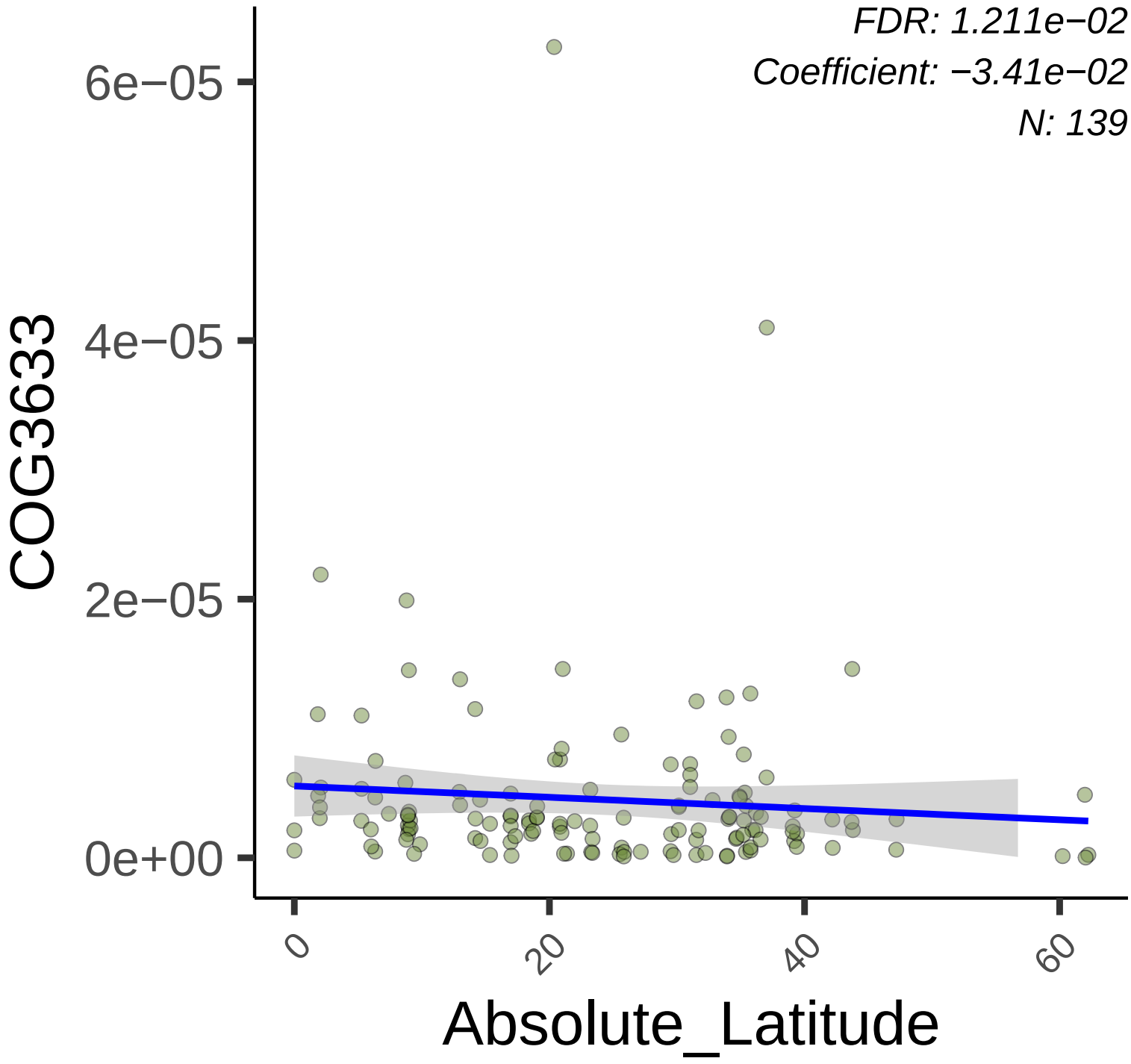

FDR: 1.192e−02
Coefficient: −2.20e−02
N: 139
COG2067
1e−04
5e−05
0
20
40
60
Absolute_Latitude

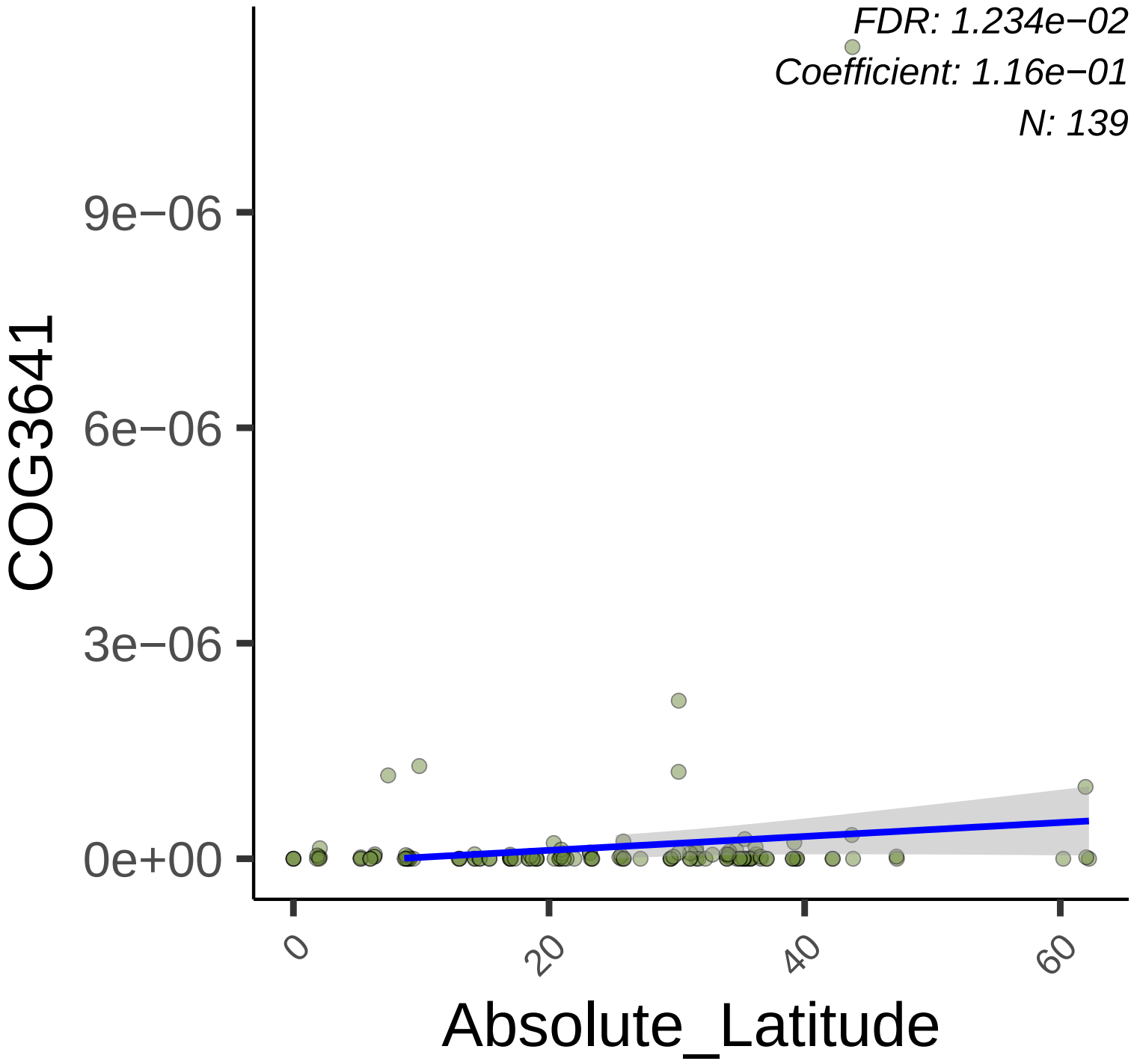

FDR: 1.199e−02
Coefficient: 3.26e−02
N: 139
COG4894
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

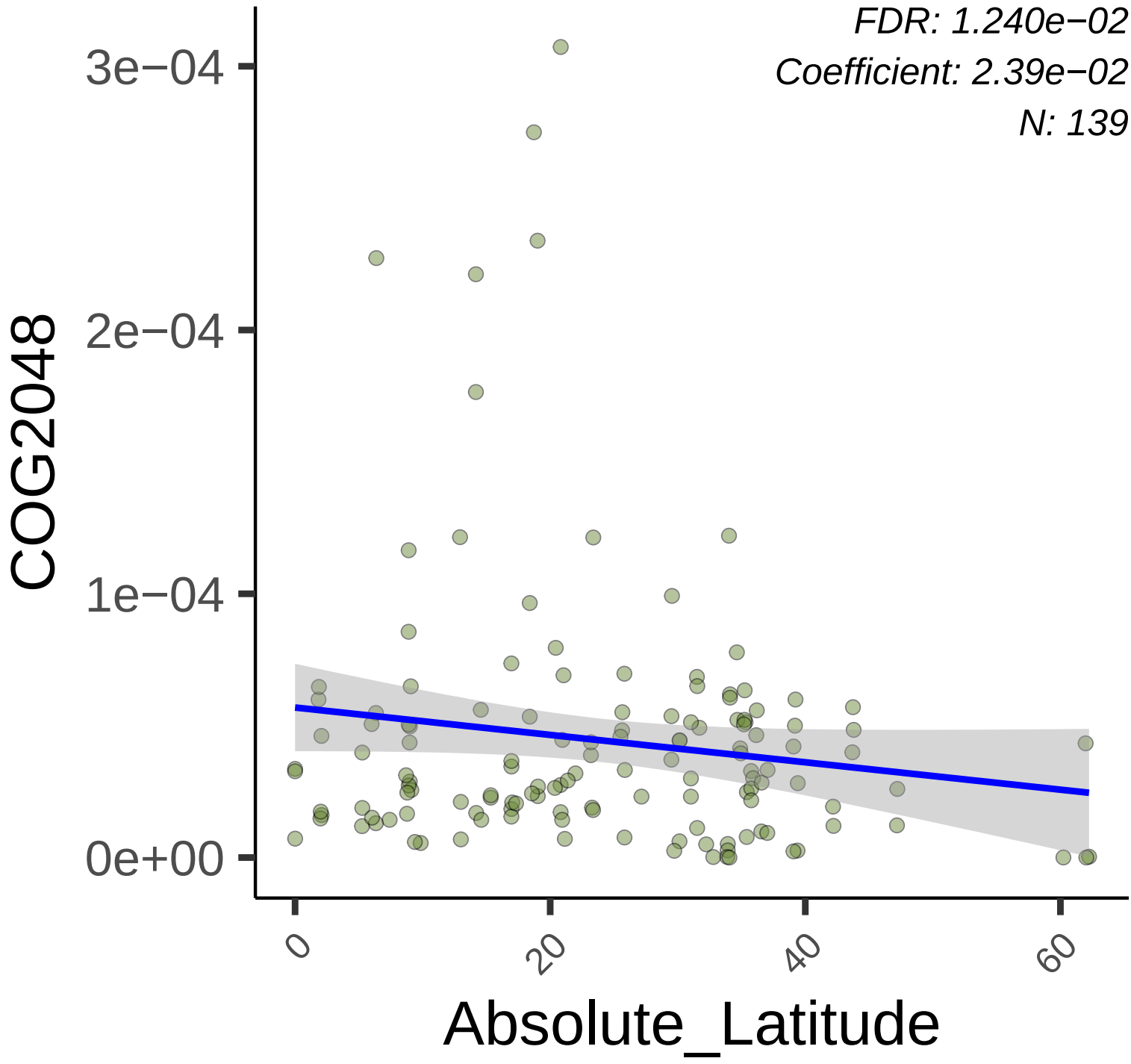

FDR: 1.202e−02
Coefficient: 1.39e−02
N: 139
COG1030
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

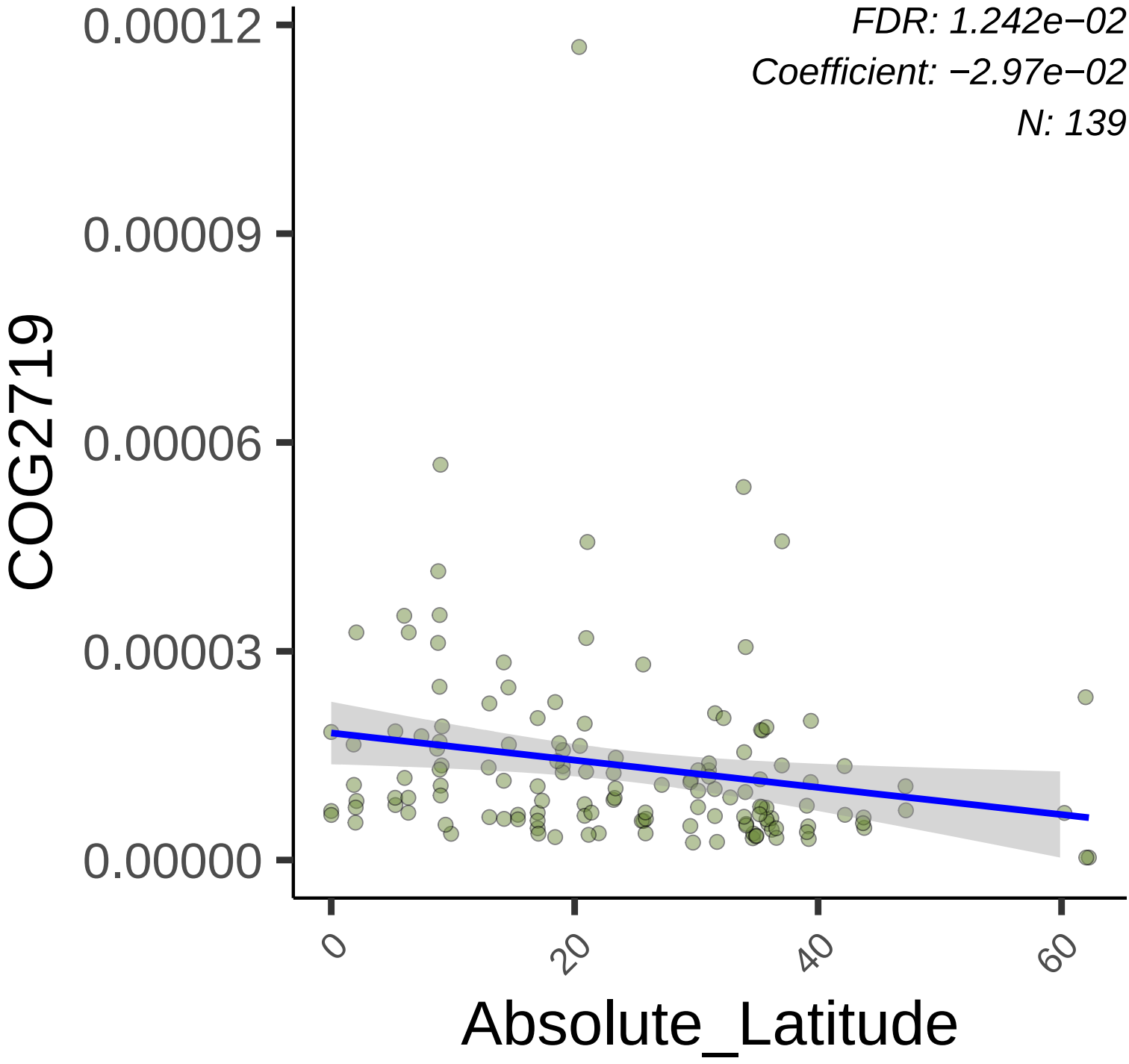

FDR: 1.210e−02
Coefficient: −1.02e−02
N: 139
COG1749
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

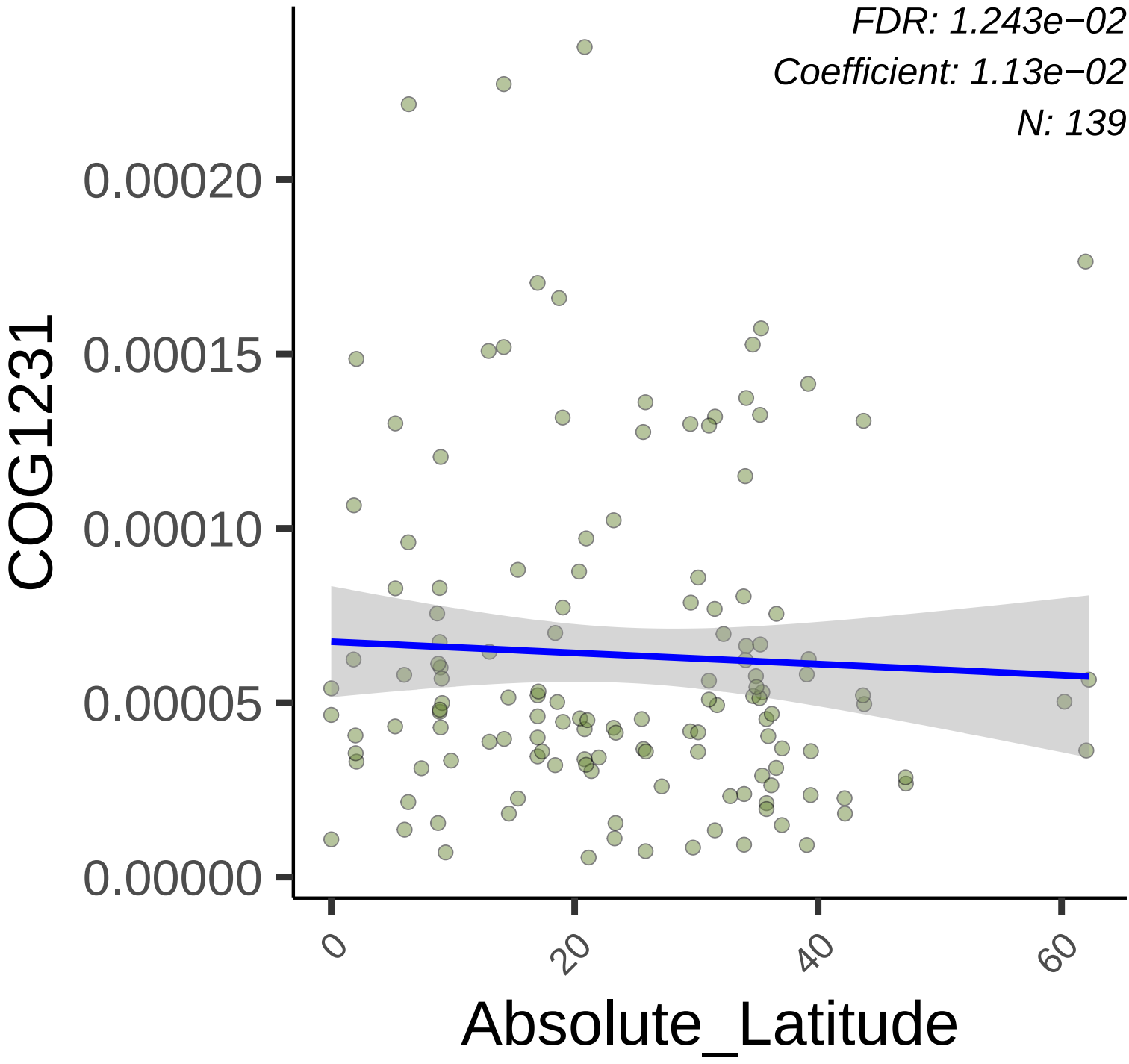

FDR: 1.210e−02
Coefficient: 1.69e−02
N: 139
COG3481
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

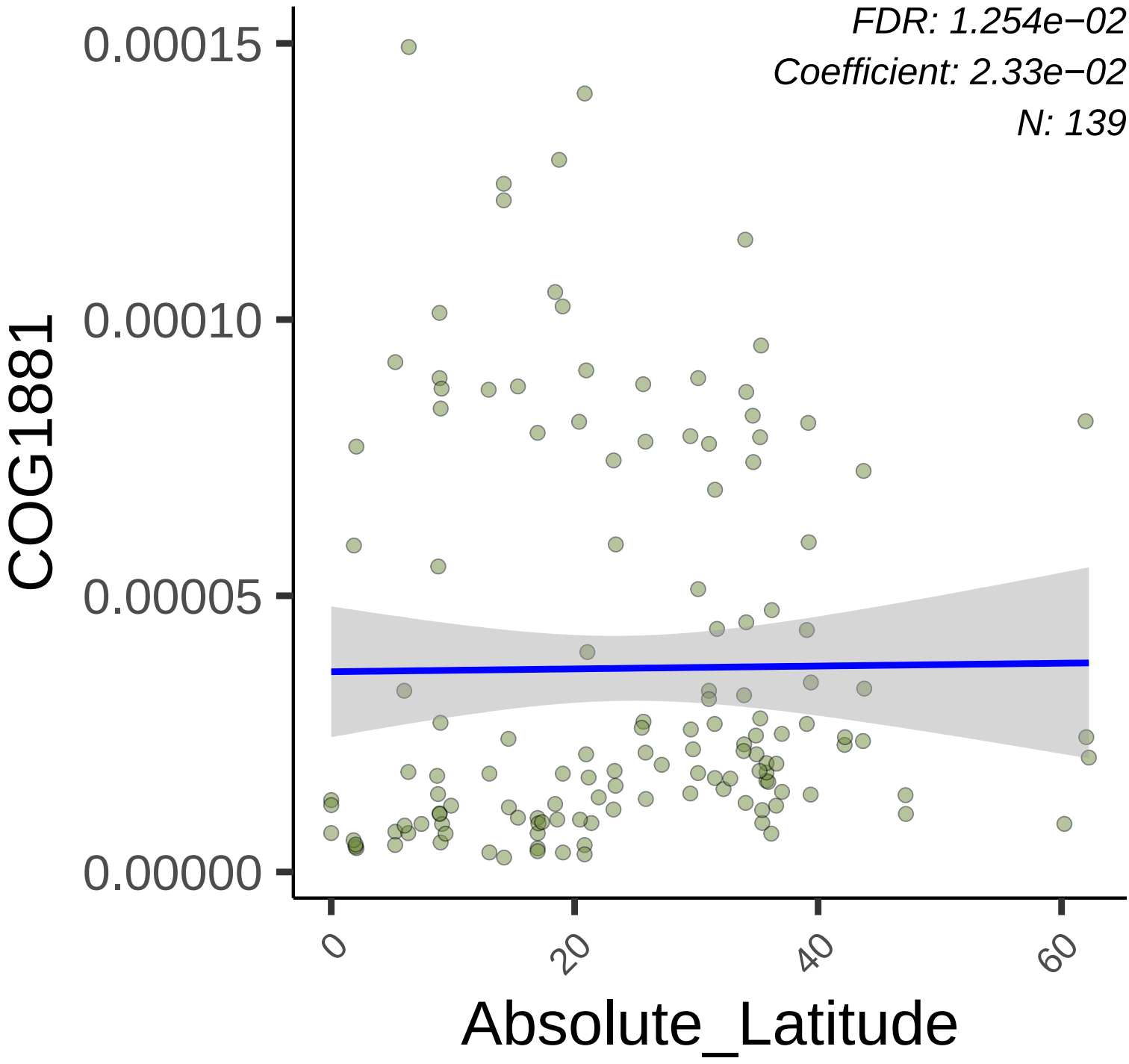

FDR: 1.211e−02
Coefficient: −3.41e−02
N: 139
COG3633
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

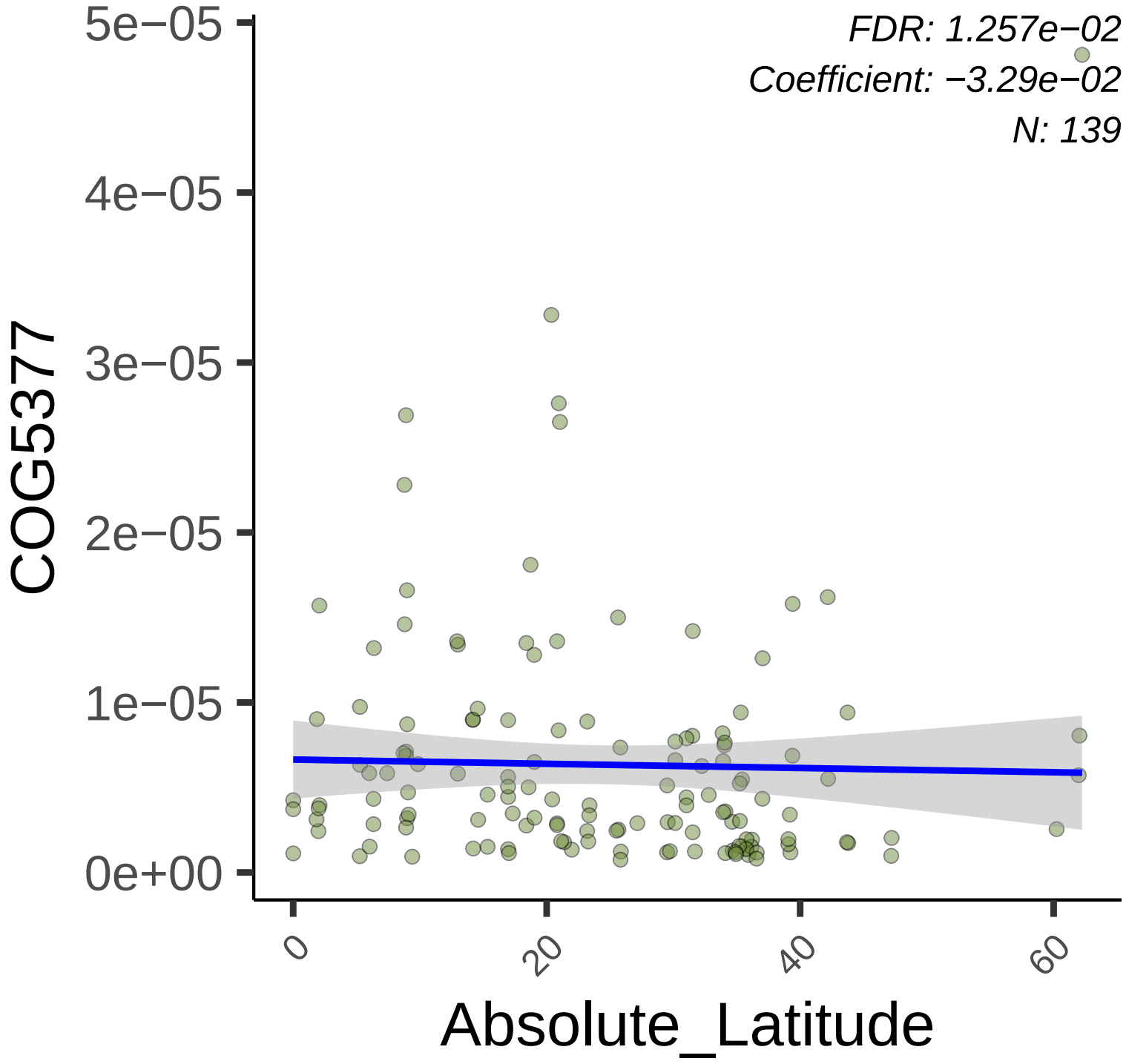

FDR: 1.234e−02
Coefficient: 1.16e−01
N: 139
COG3641
9e−06
6e−06
3e−06
0e+00
0
20
40
60
Absolute_Latitude

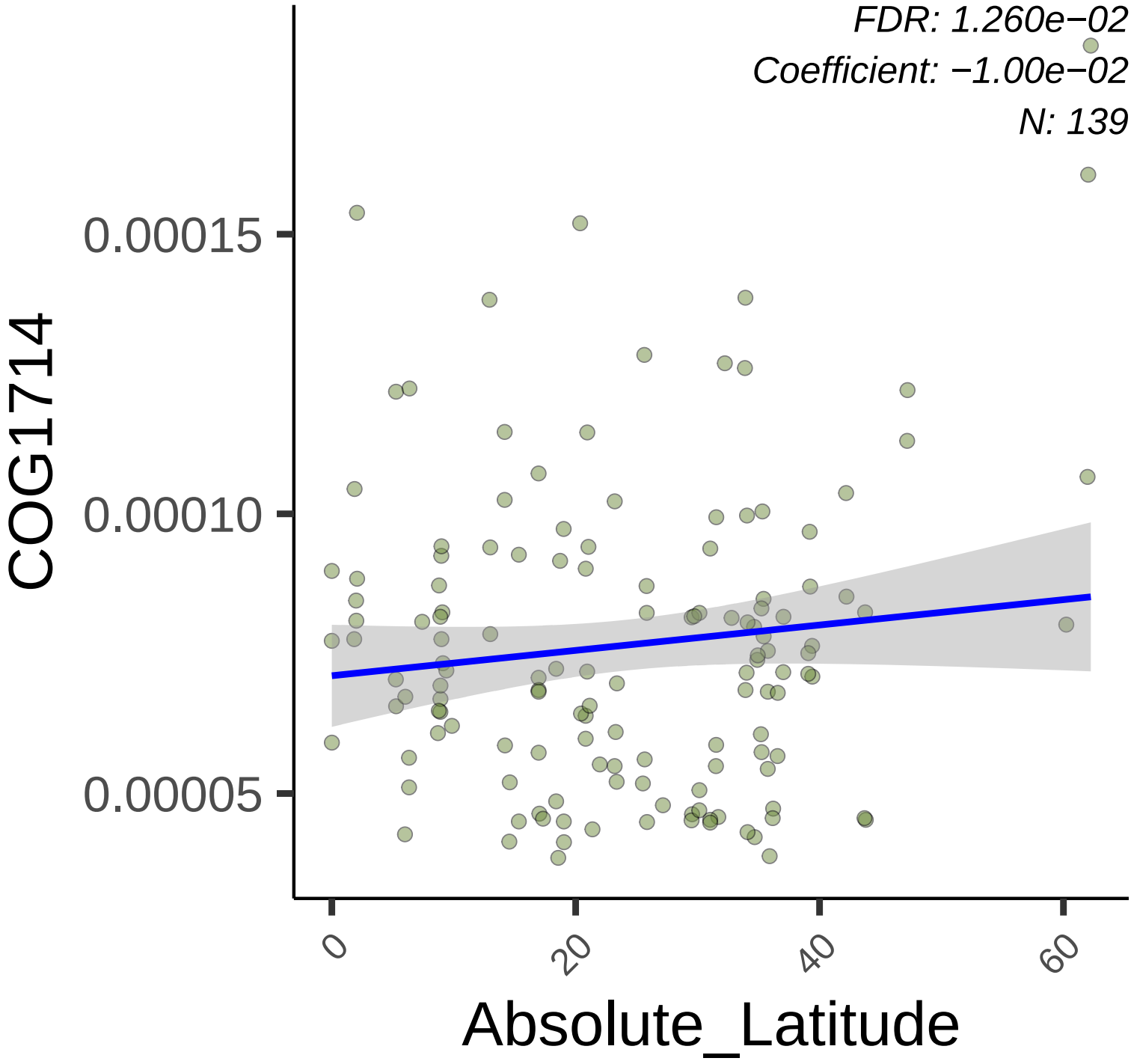

FDR: 1.240e−02
Coefficient: 2.39e−02
N: 139
COG2048
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

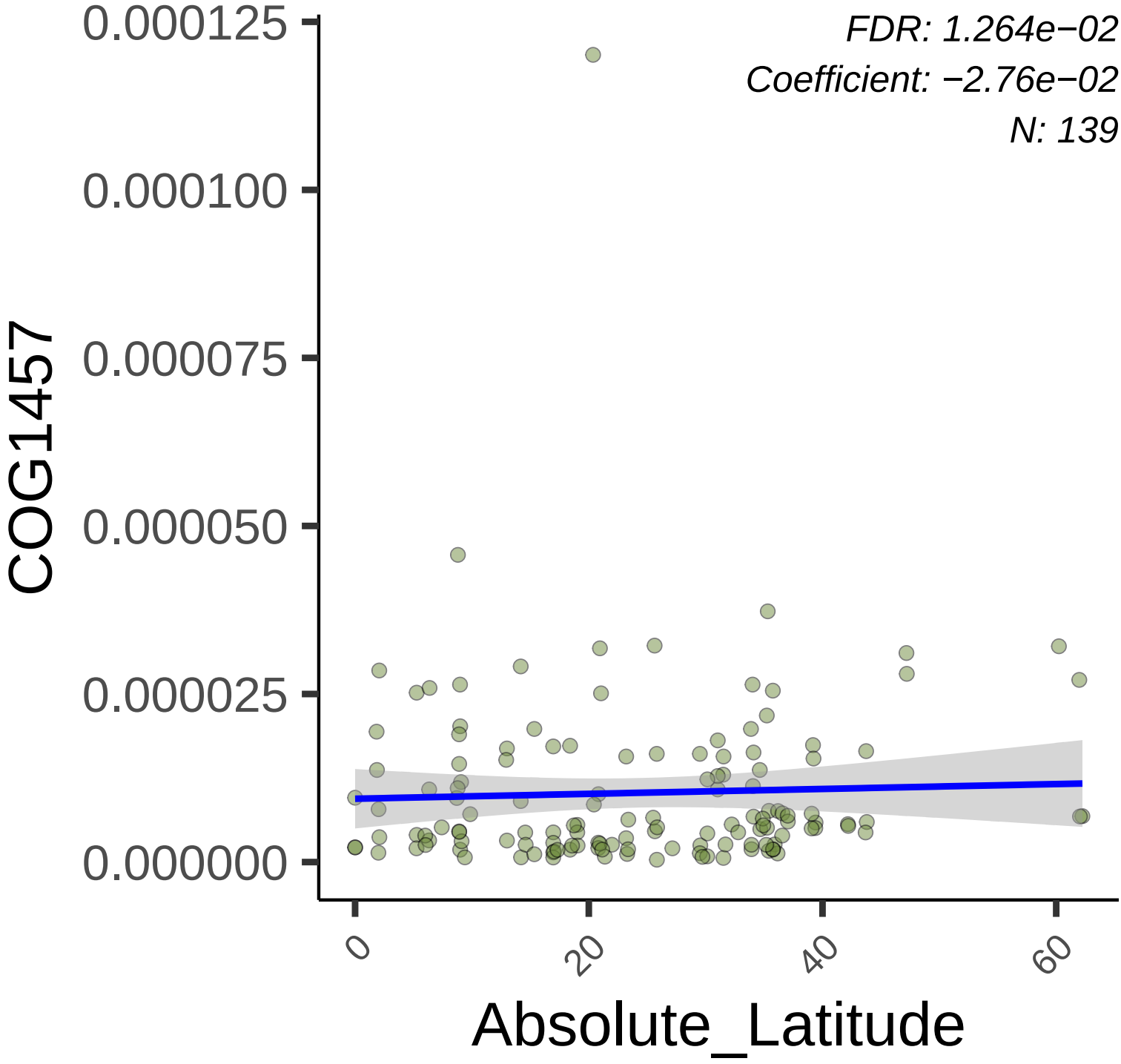

FDR: 1.242e−02
Coefficient: −2.97e−02
N: 139
0.00012
0.00009
0.00006
0.00003
0.00000
COG2719
0
20
40
60
Absolute_Latitude

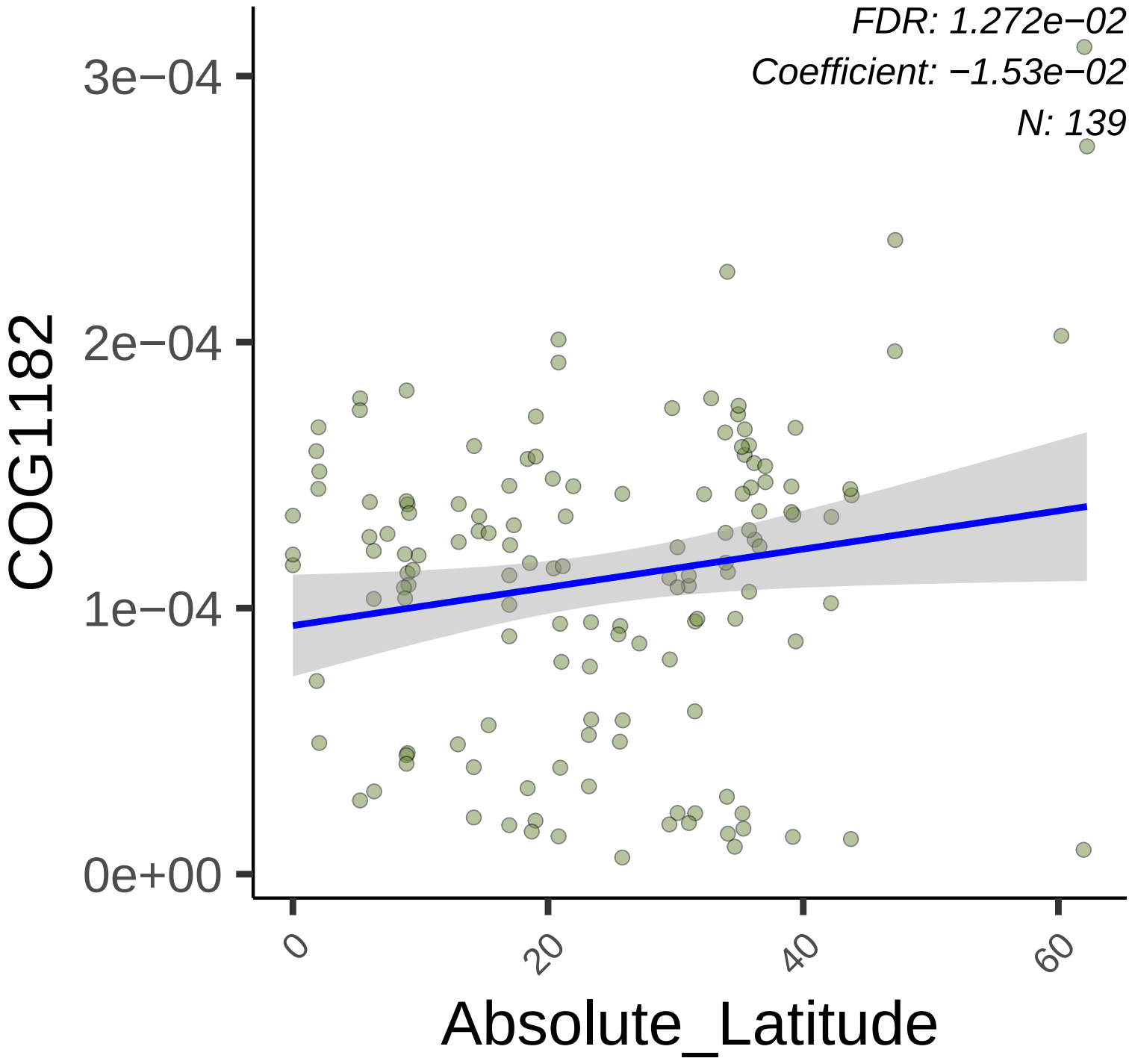

FDR: 1.243e−02
Coefficient: 1.13e−02
N: 139
COG1231
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

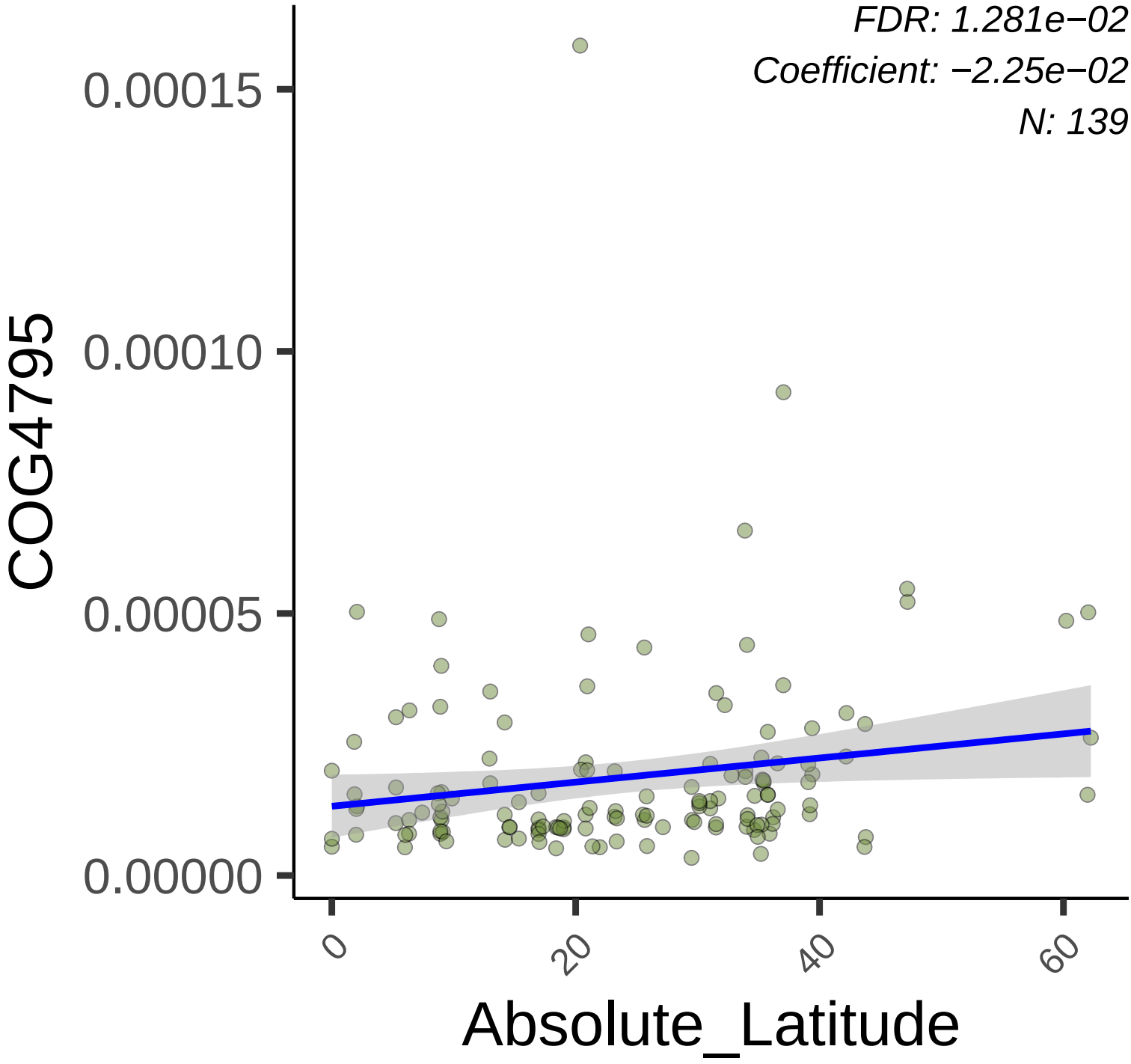

FDR: 1.254e−02
Coefficient: 2.33e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG1881
0
20
40
60
Absolute_Latitude

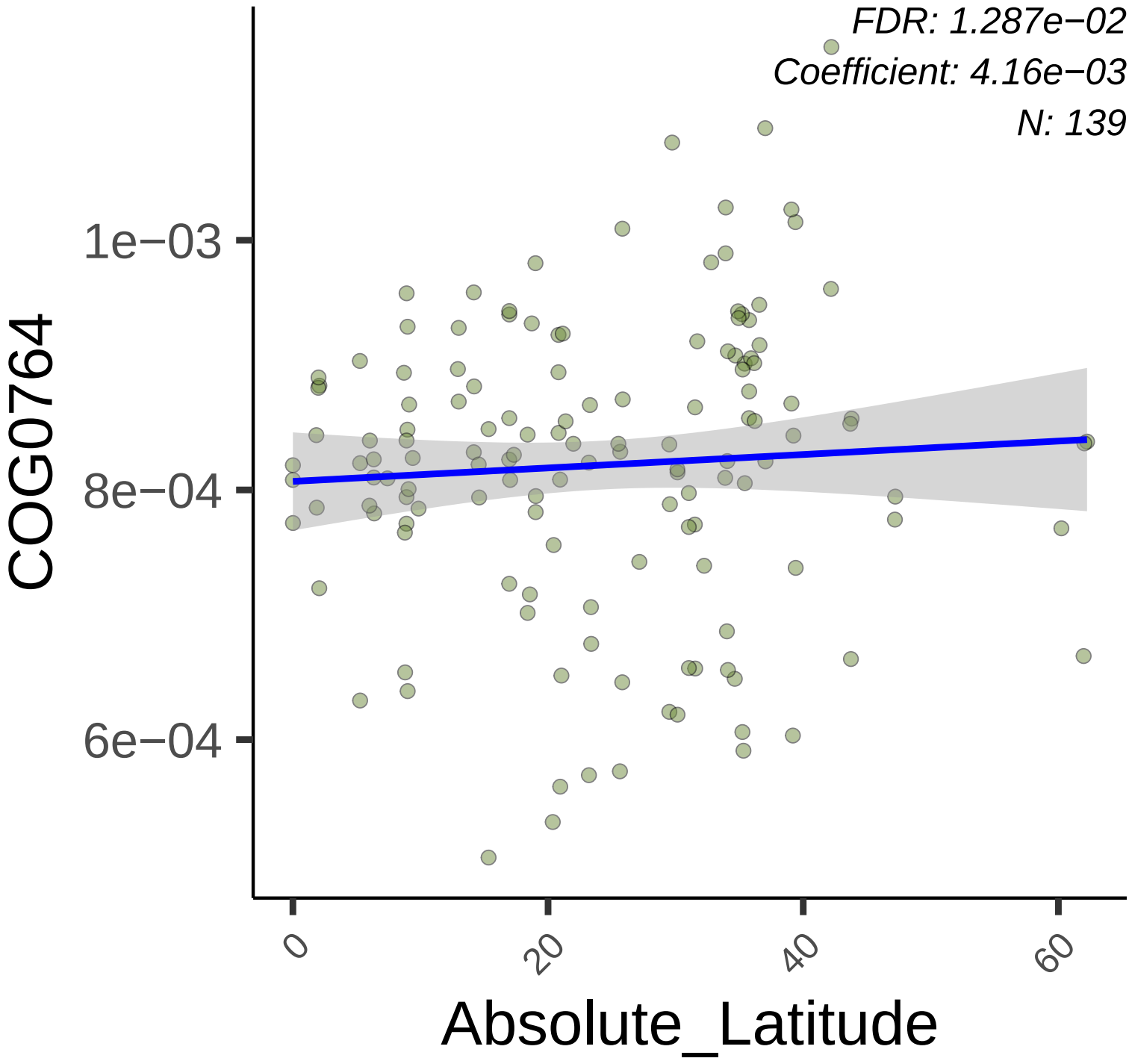

FDR: 1.257e−02
Coefficient: −3.29e−02
N: 139
COG5377
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

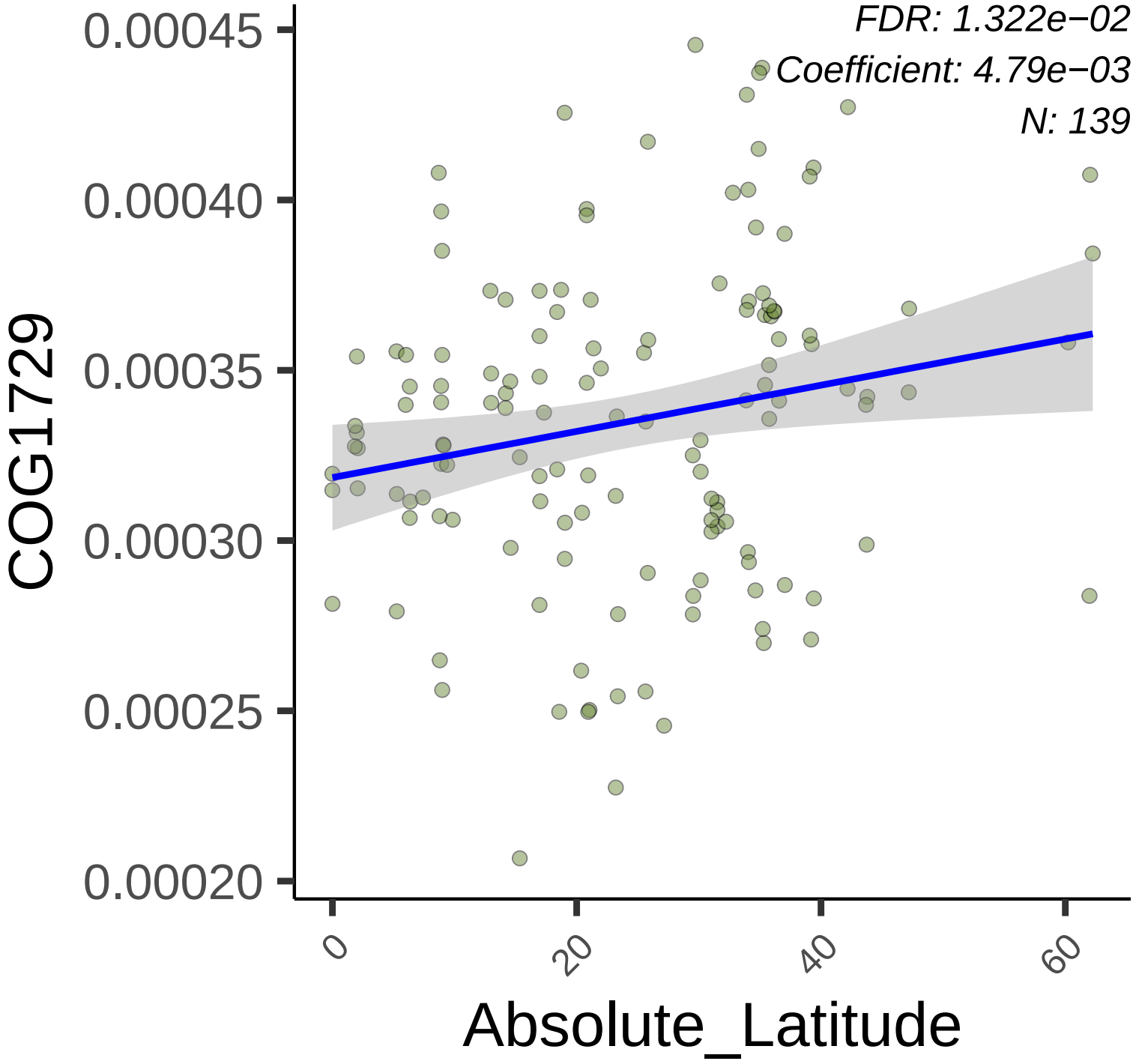

FDR: 1.260e−02
Coefficient: −1.00e−02
N: 139
0.00015
0.00010
0.00005
COG1714
0
20
40
60
Absolute_Latitude

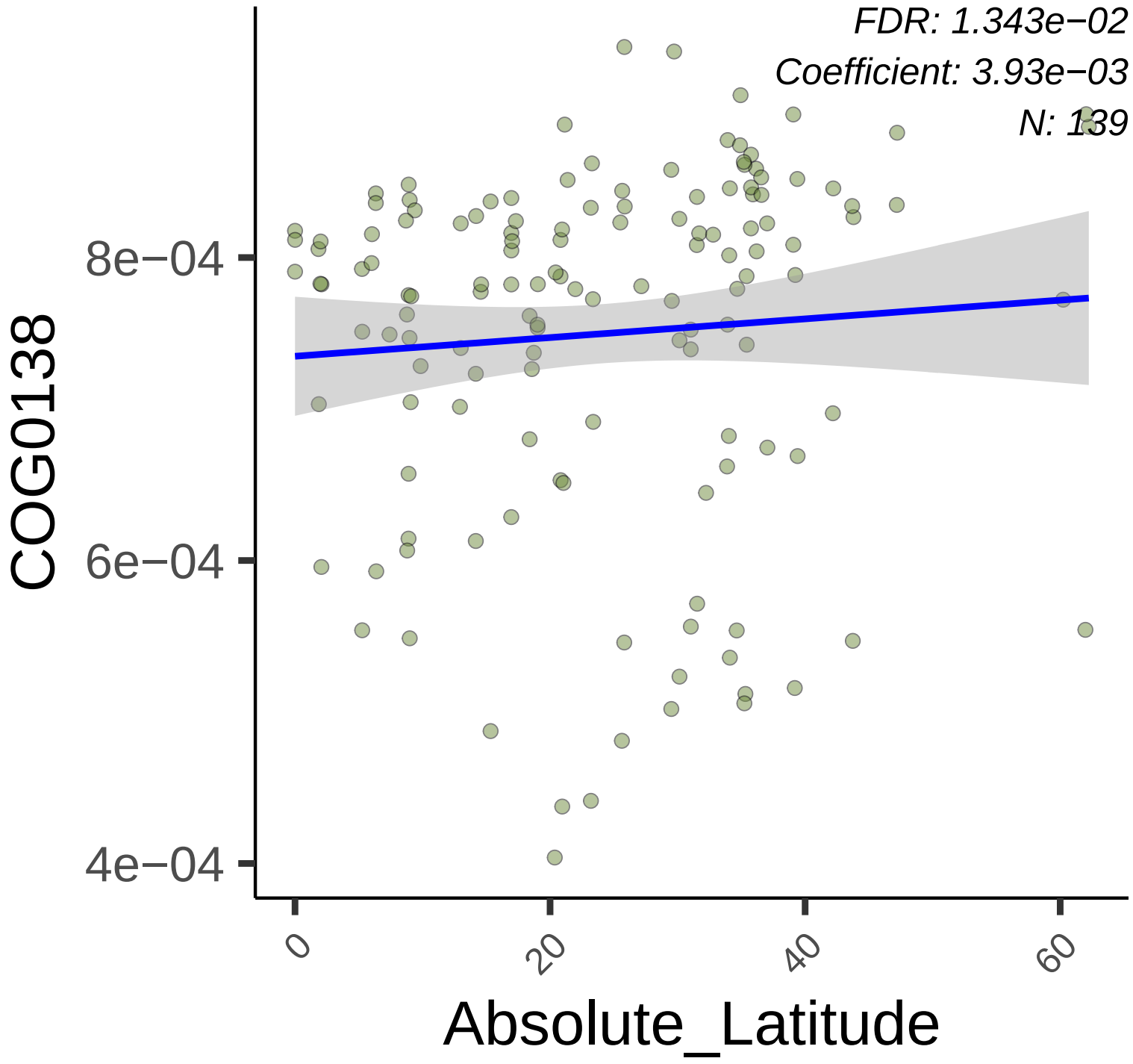

FDR: 1.264e−02
Coefficient: −2.76e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
0.000000
COG1457
0
20
40
60
Absolute_Latitude

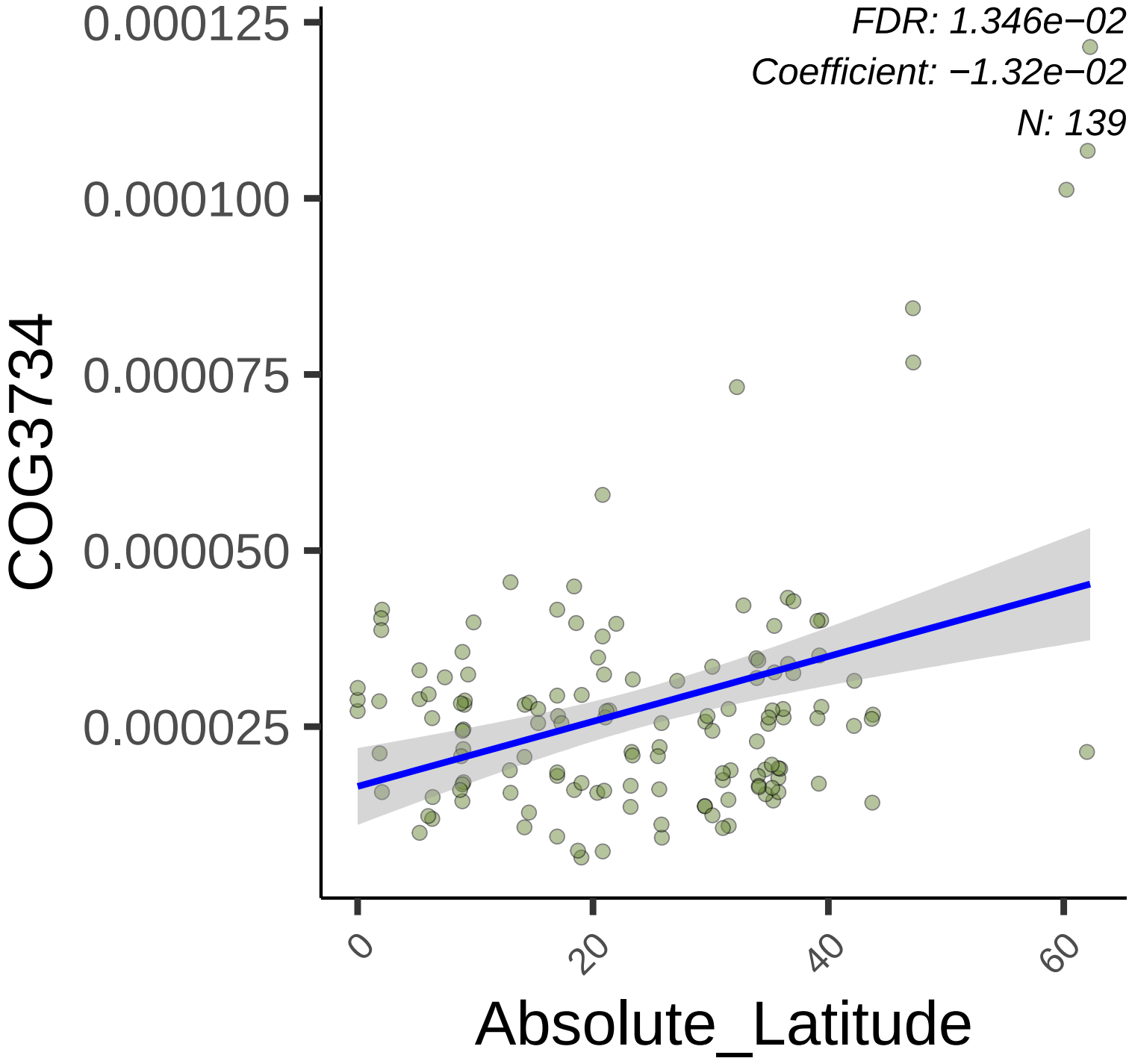

FDR: 1.272e−02
Coefficient: −1.53e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG1182
0
20
40
60
Absolute_Latitude

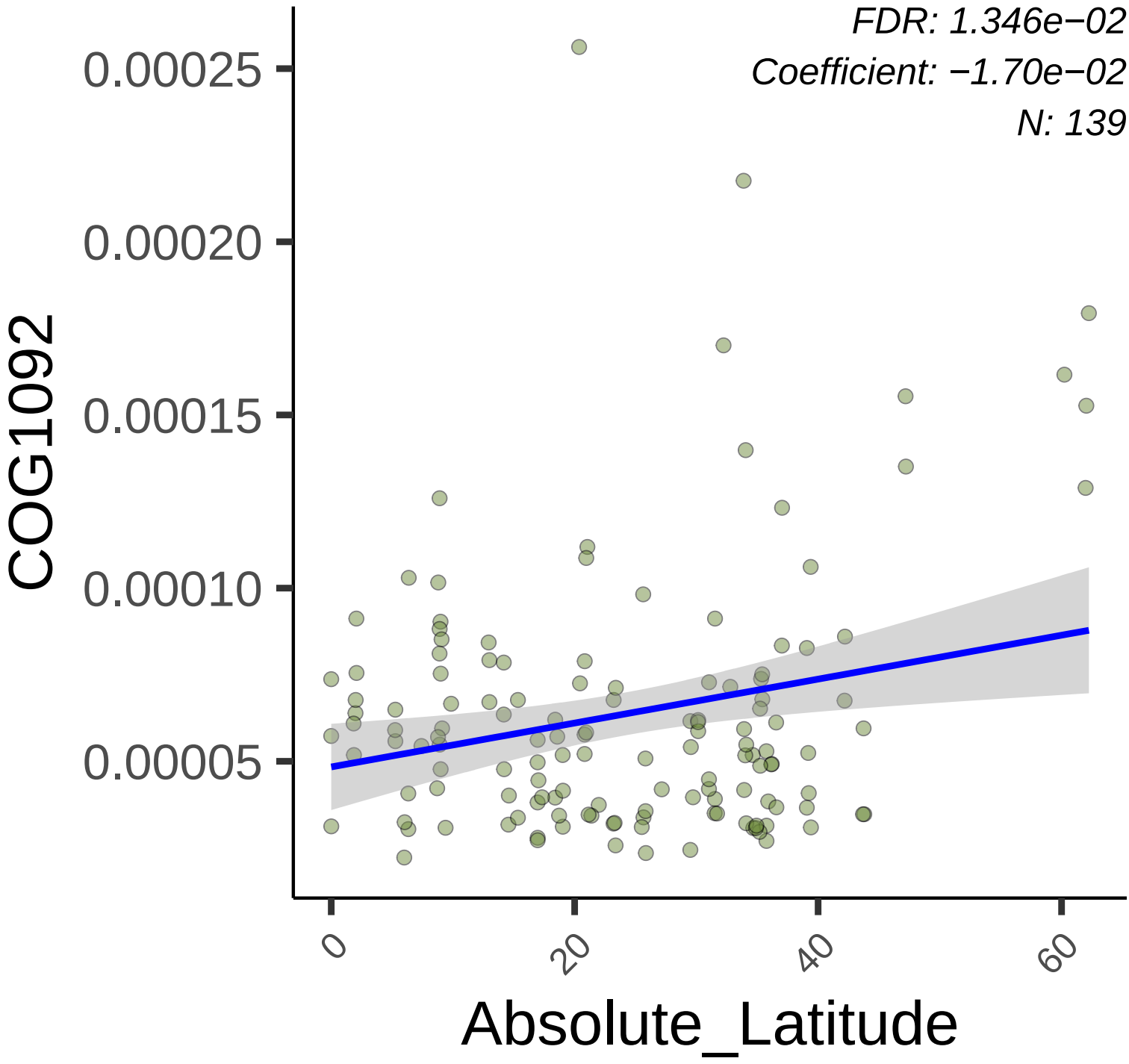

FDR: 1.281e−02
Coefficient: −2.25e−02
N: 139
COG4795
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

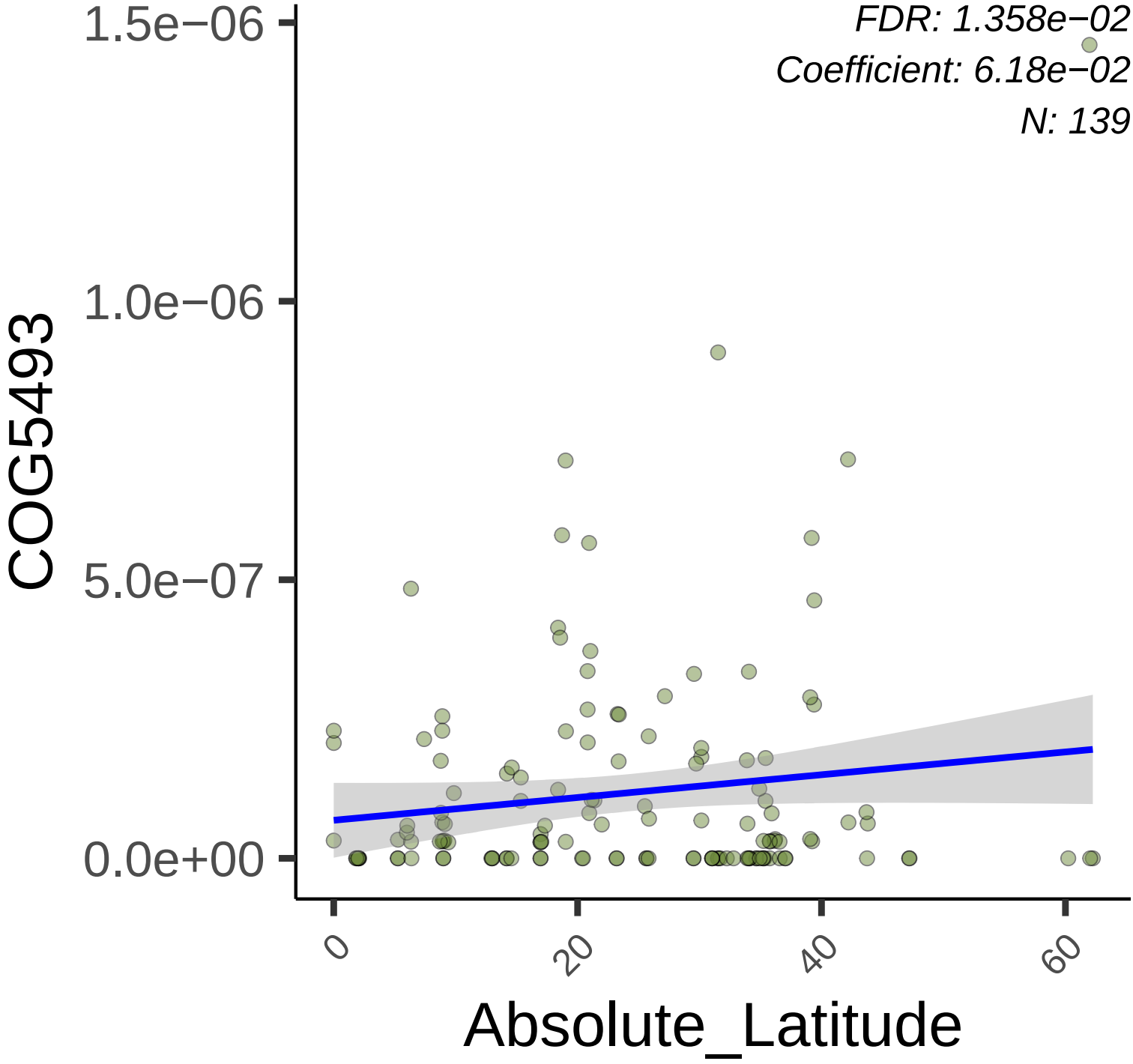

FDR: 1.287e−02
Coefficient: 4.16e−03
N: 139
1e−03
8e−04
6e−04
COG0764
0
20
40
60
Absolute_Latitude

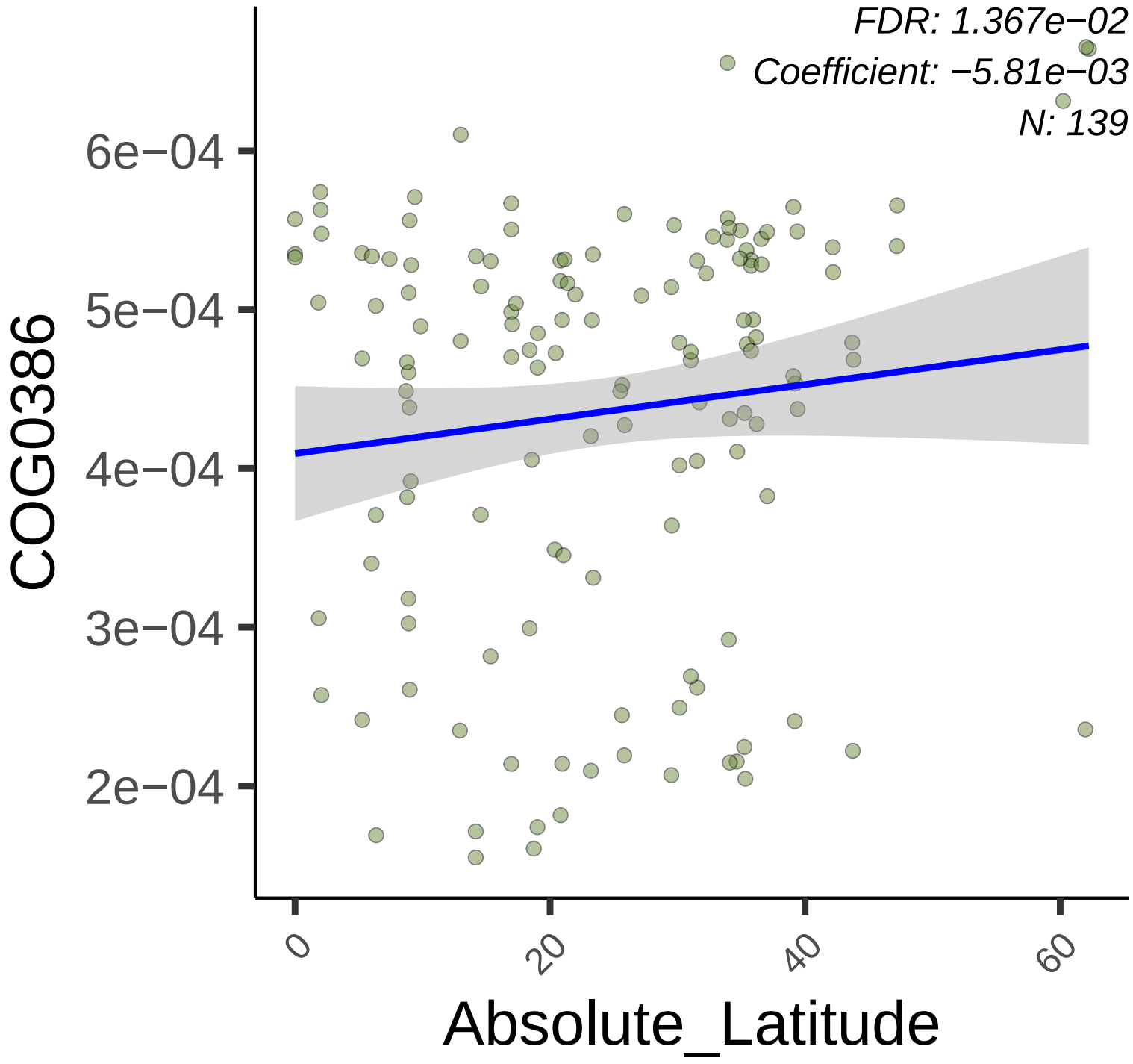

FDR: 1.322e−02
Coefficient: 4.79e−03
N: 139
0.00045
0.00040
0.00035
0.00030
0.00025
0.00020
COG1729
0
20
40
60
Absolute_Latitude

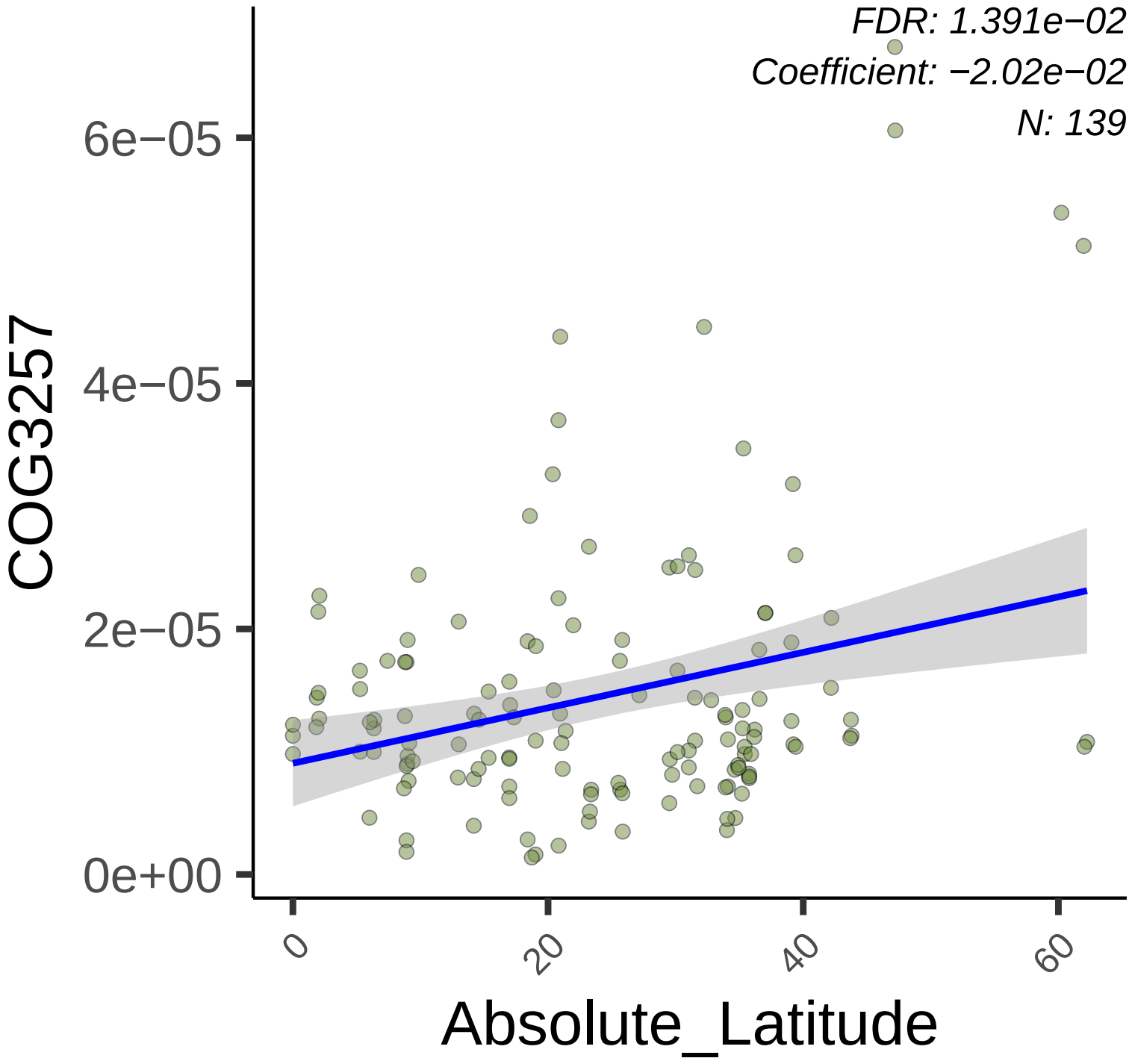

FDR: 1.343e−02
Coefficient: 3.93e−03
N: 139
COG0138
8e−04
6e−04
4e−04
0
20
40
60
Absolute_Latitude

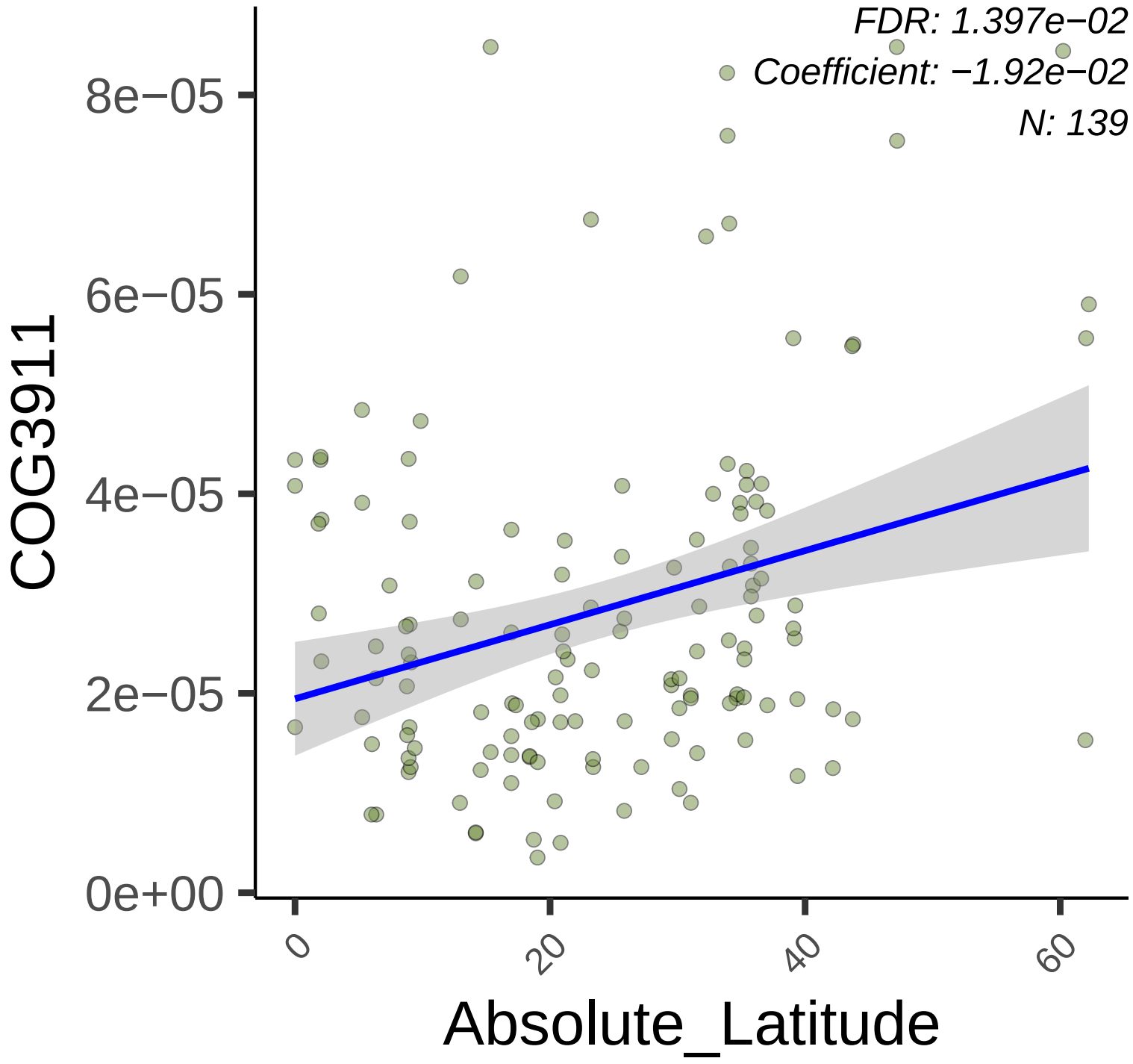

FDR: 1.346e−02
Coefficient: −1.32e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
COG3734
0
20
40
60
Absolute_Latitude

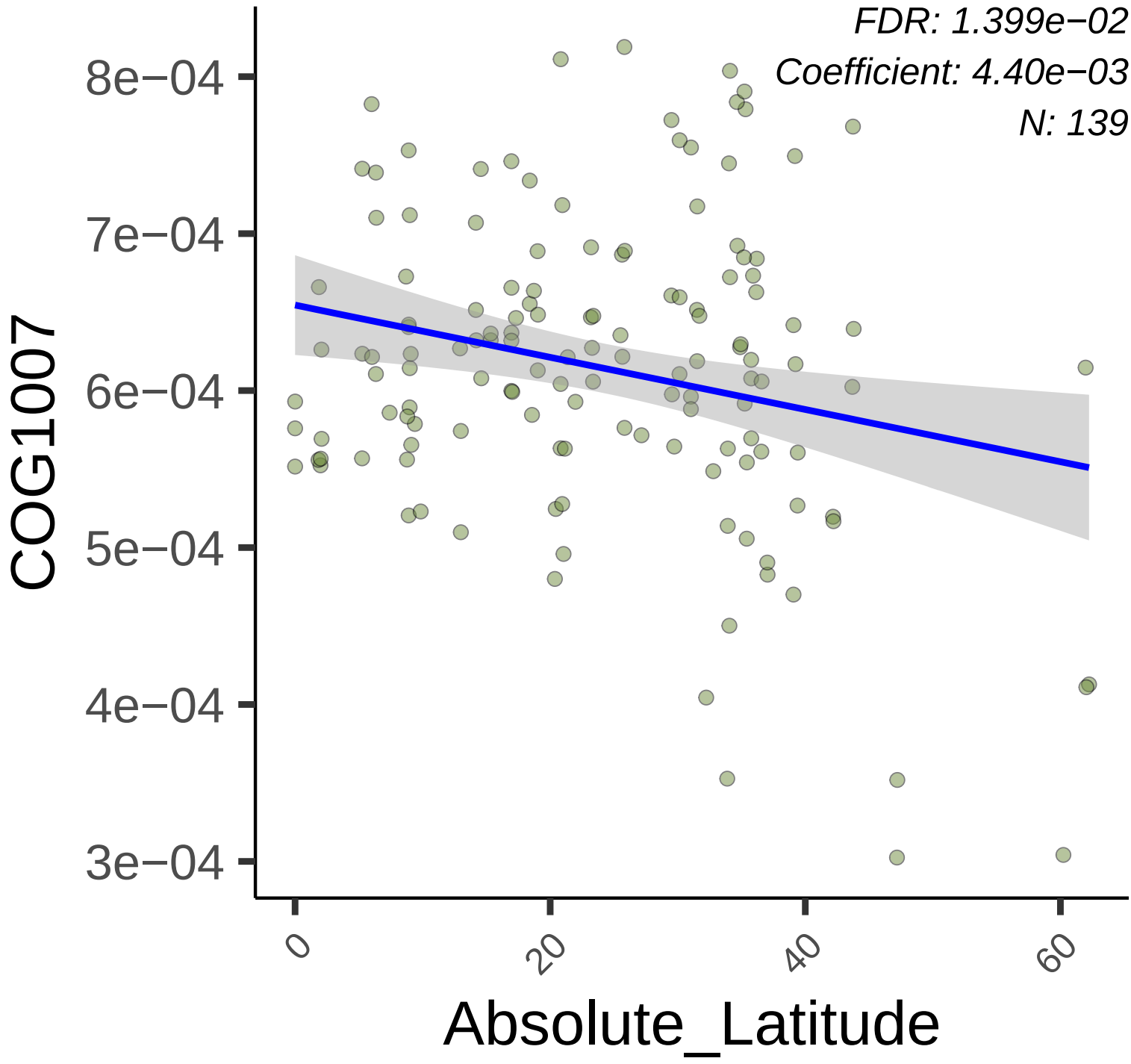

FDR: 1.346e−02
Coefficient: −1.70e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG1092
0
20
40
60
Absolute_Latitude

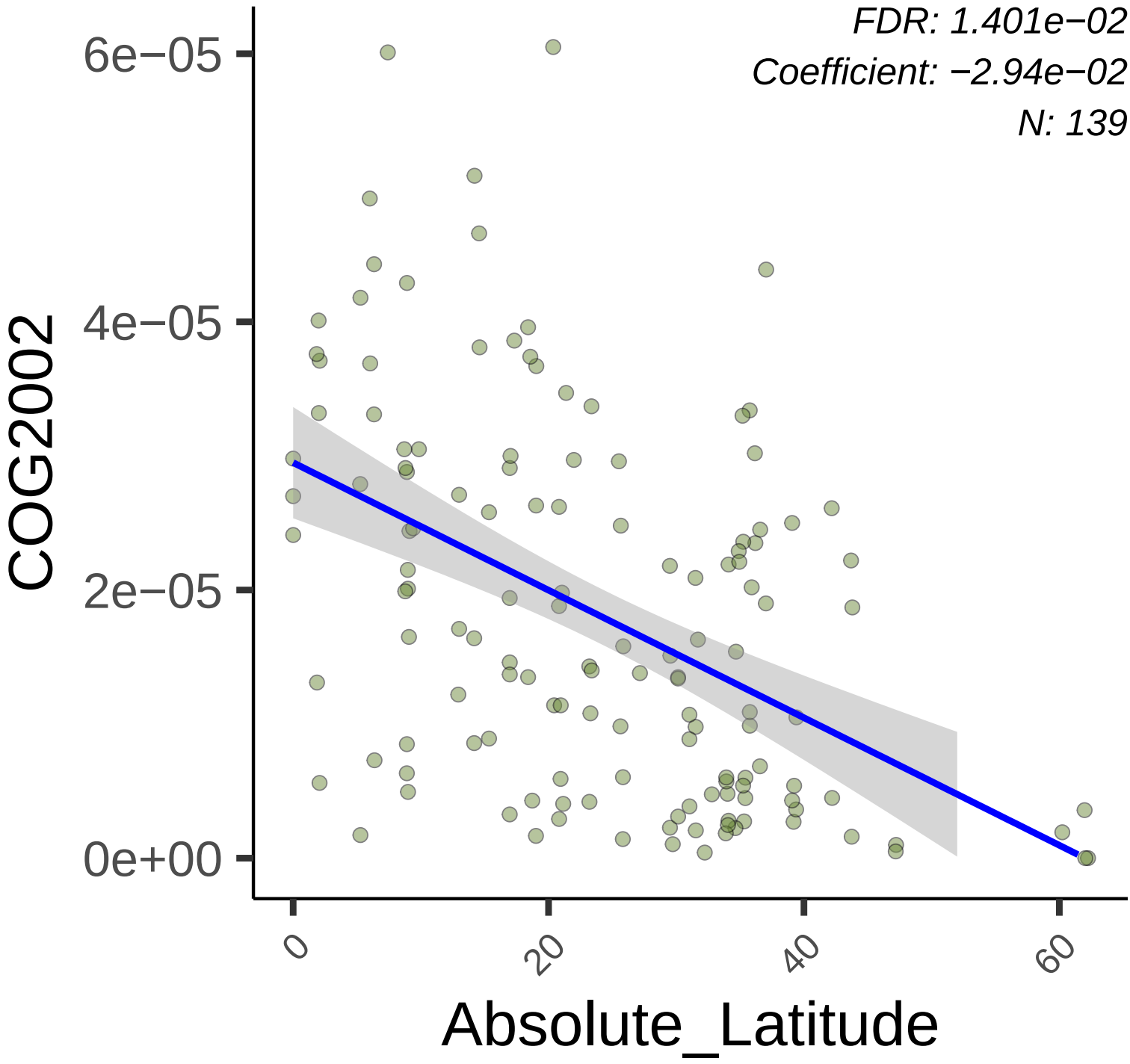

FDR: 1.358e−02
Coefficient: 6.18e−02
N: 139
1.5e−06
1.0e−06
5.0e−07
0.0e+00
COG5493
0
20
40
60
Absolute_Latitude

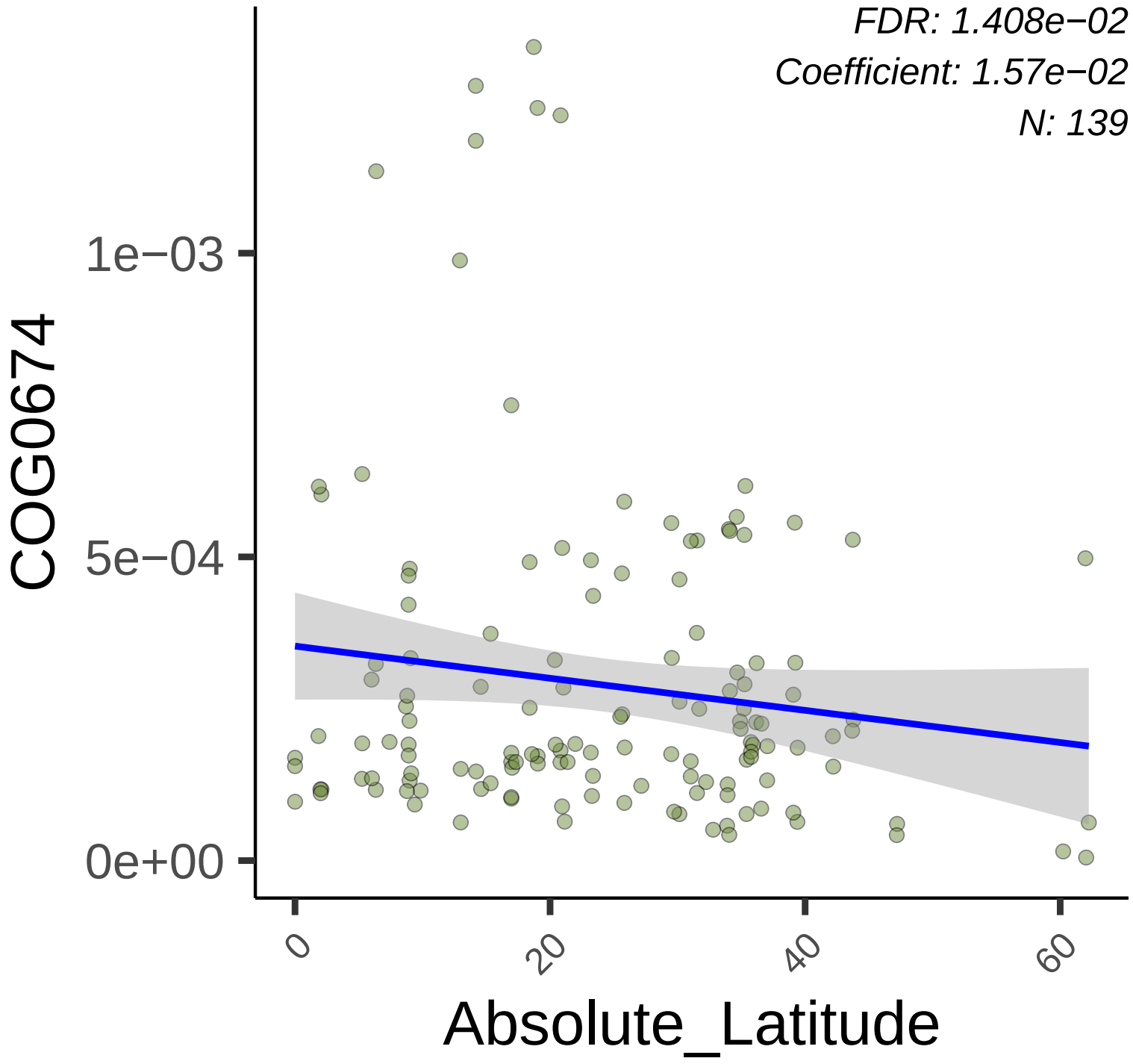

FDR: 1.367e−02
Coefficient: −5.81e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
COG0386
0
20
40
60
Absolute_Latitude

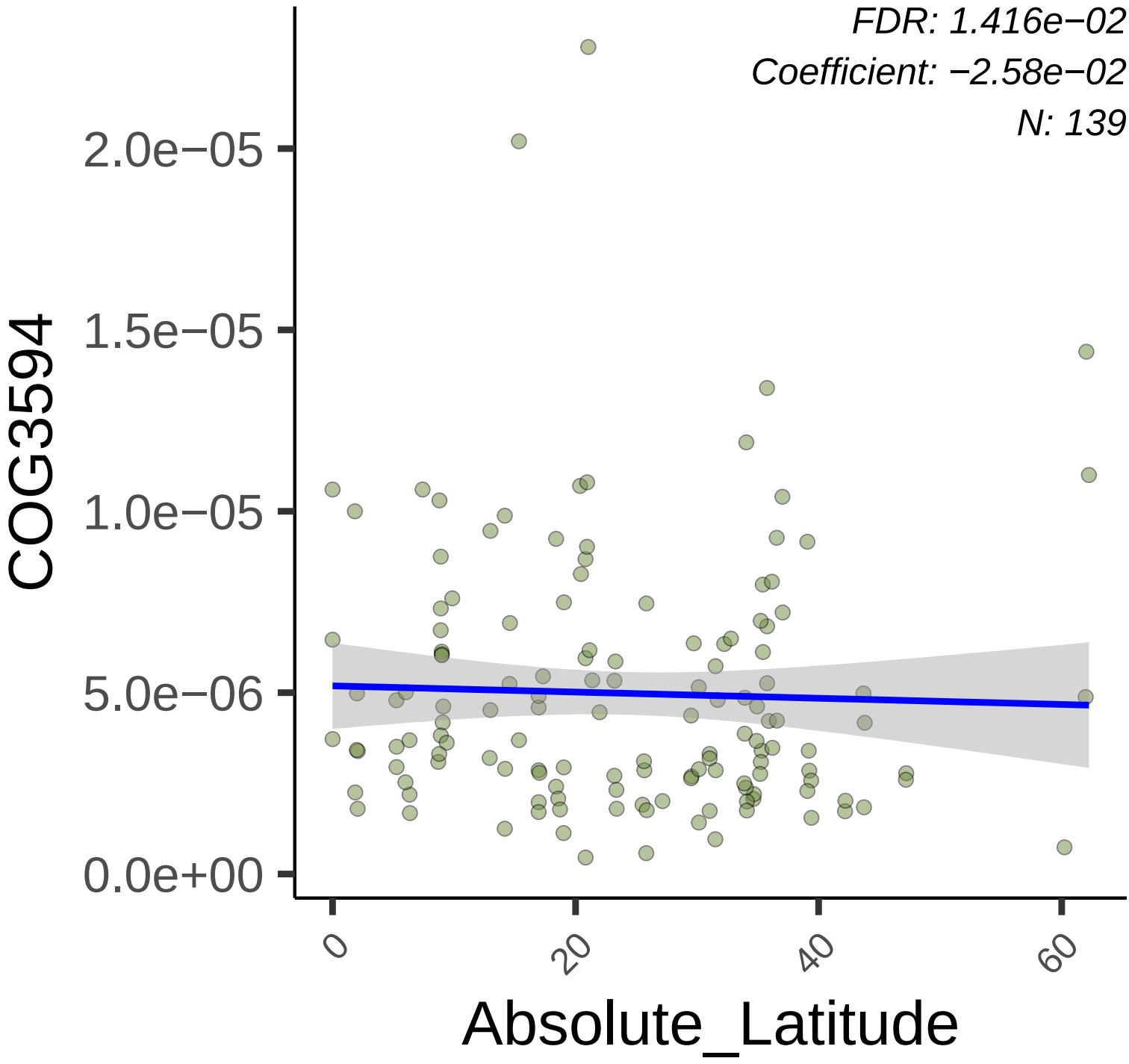

FDR: 1.391e−02
Coefficient: −2.02e−02
N: 139
COG3257
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

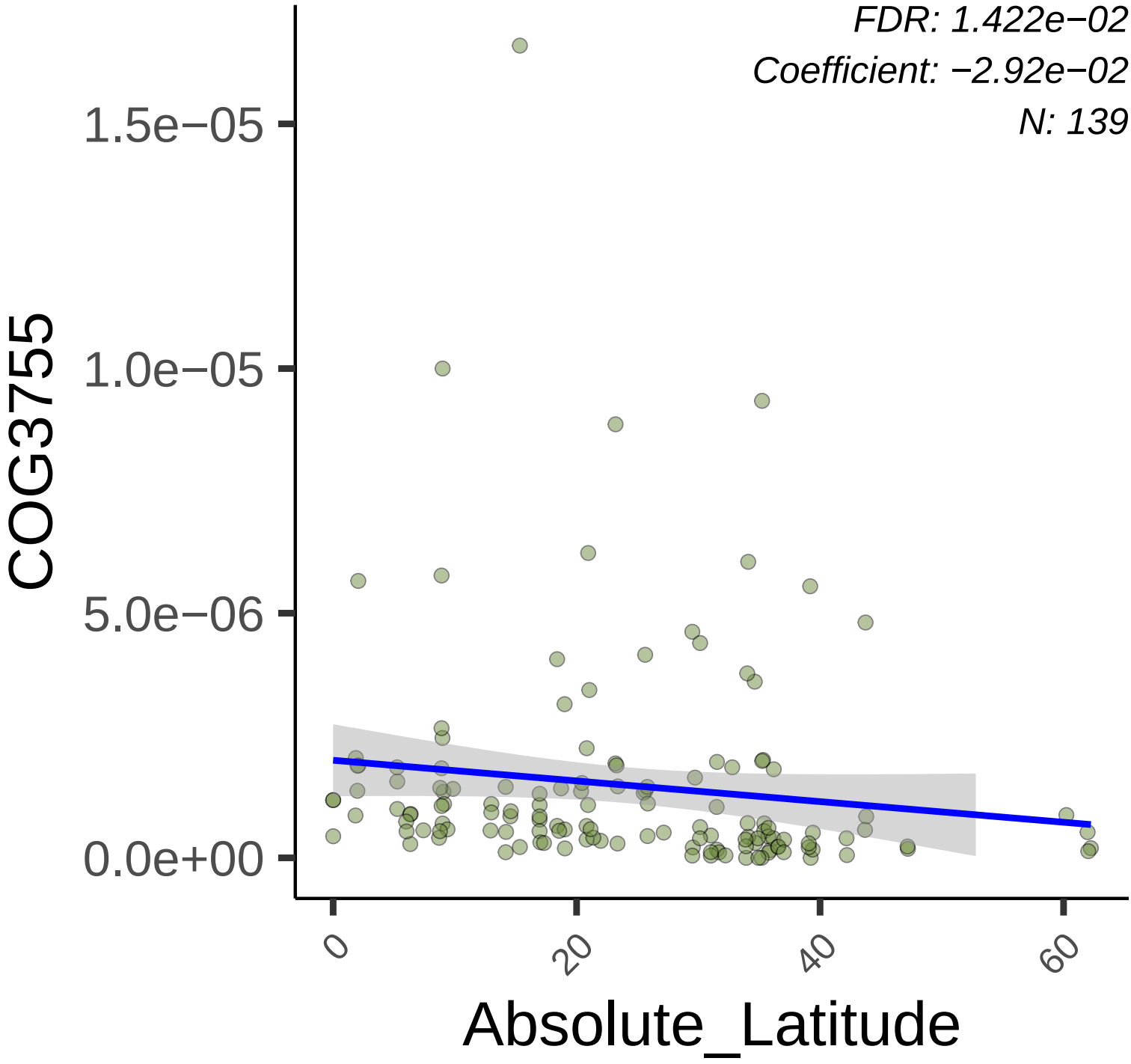

FDR: 1.397e−02
Coefficient: −1.92e−02
N: 139
COG3911
8e−05
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

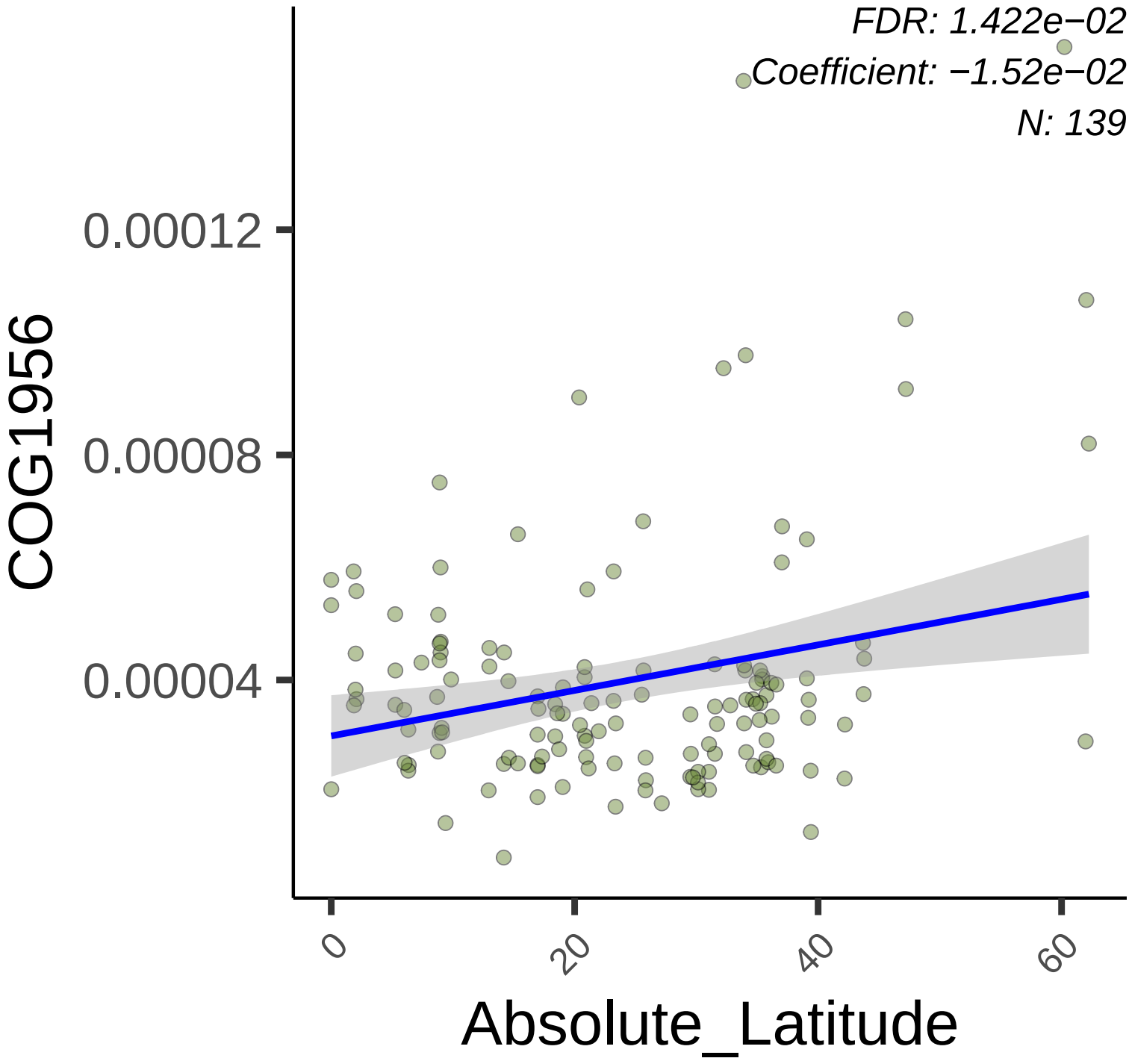

FDR: 1.399e−02
Coefficient: 4.40e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
3e−04
COG1007
0
20
40
60
Absolute_Latitude

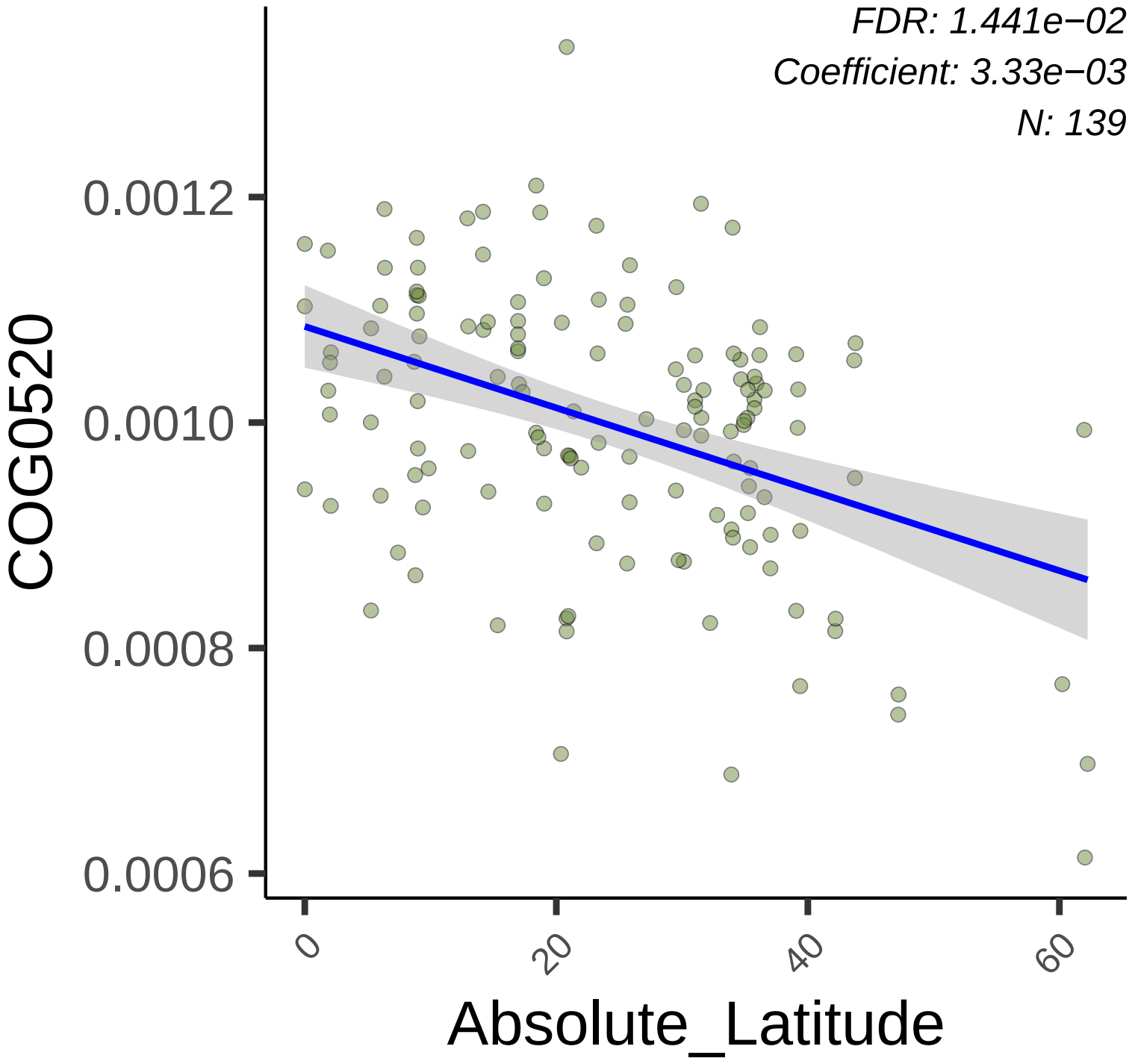

FDR: 1.401e−02
Coefficient: −2.94e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG2002
0
20
40
60
Absolute_Latitude

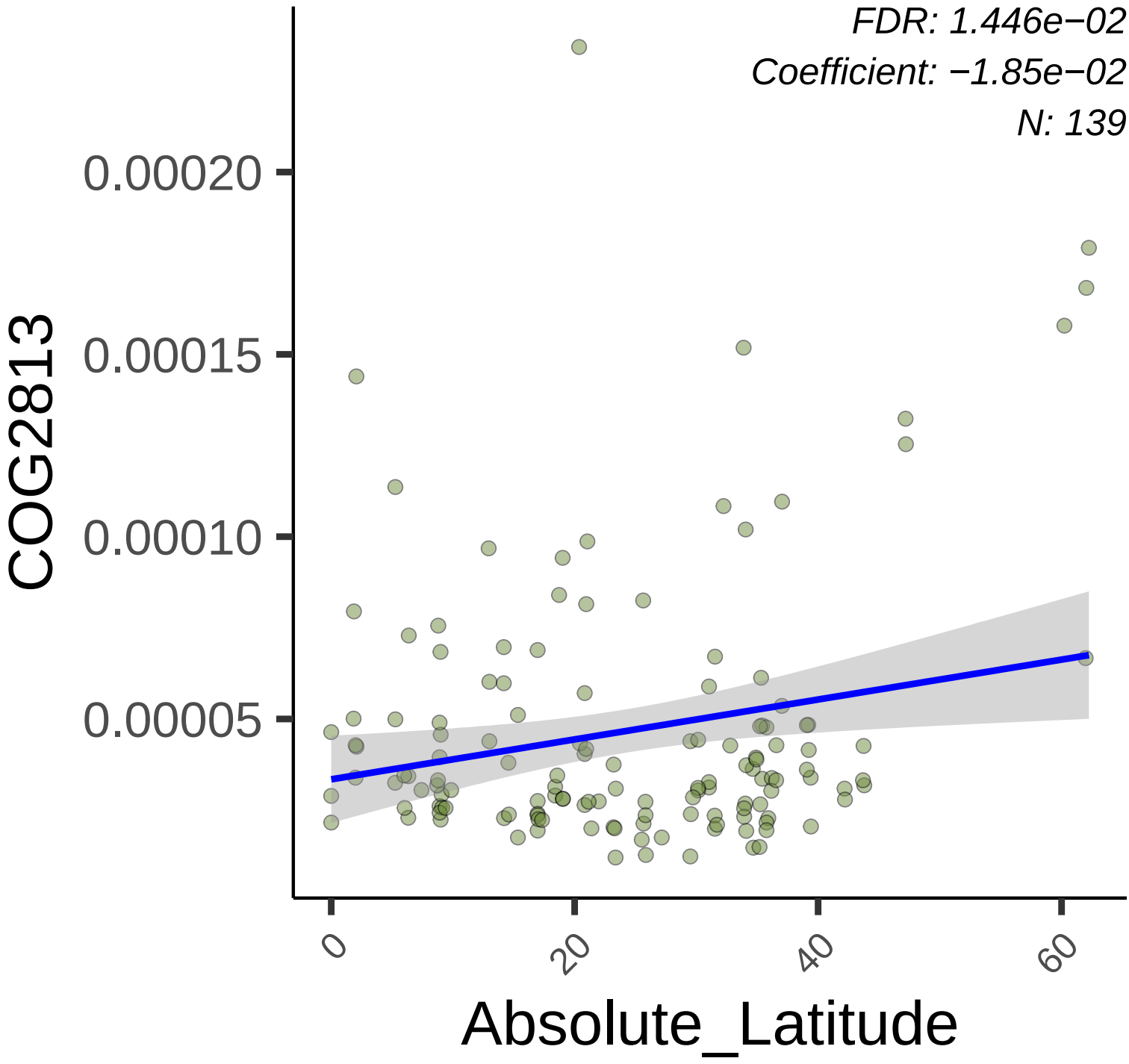

FDR: 1.408e−02
Coefficient: 1.57e−02
N: 139
COG0674
1e−03
5e−04
0e+00
0
20
40
60
Absolute_Latitude

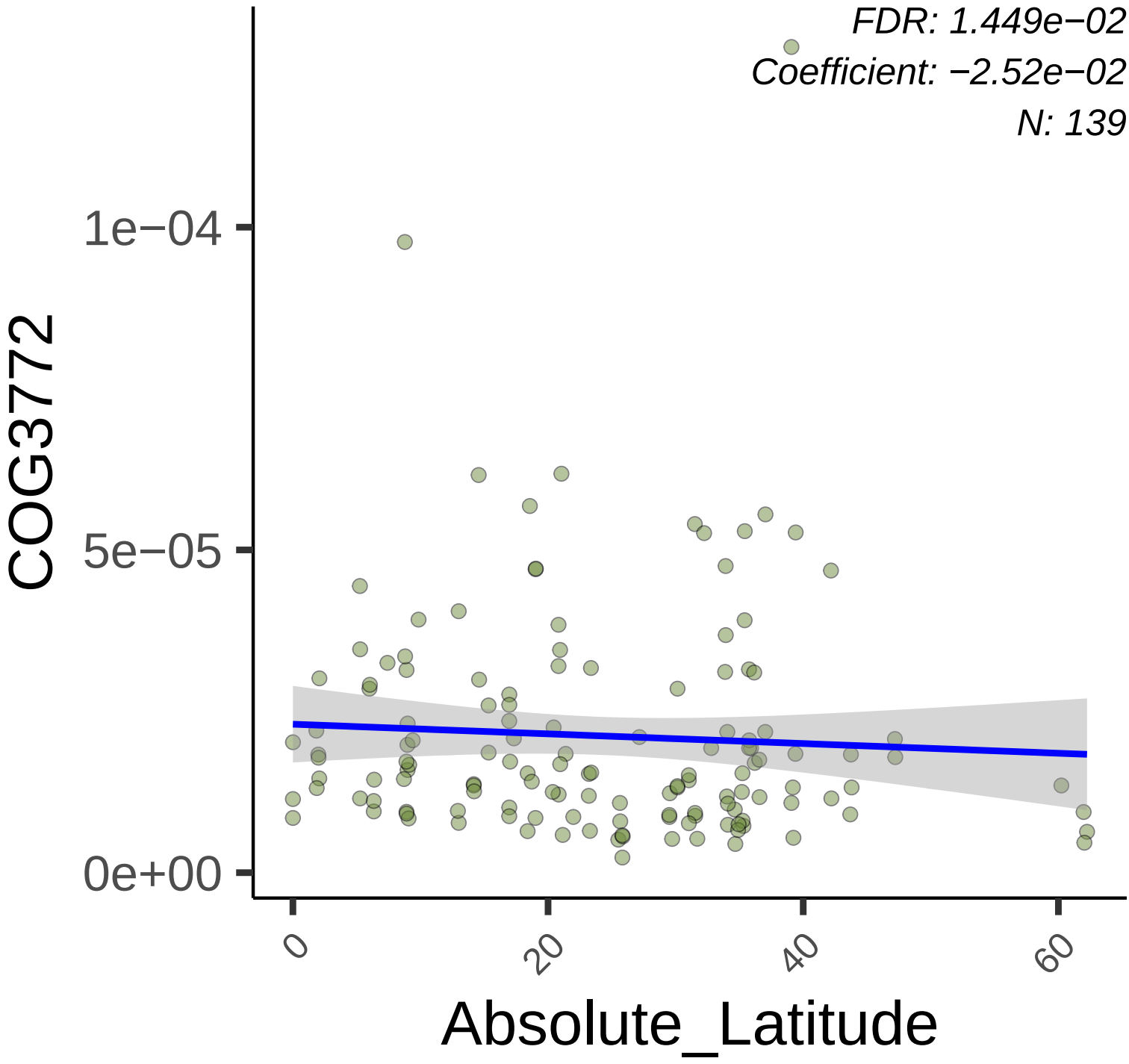

FDR: 1.416e−02
Coefficient: −2.58e−02
N: 139
COG3594
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

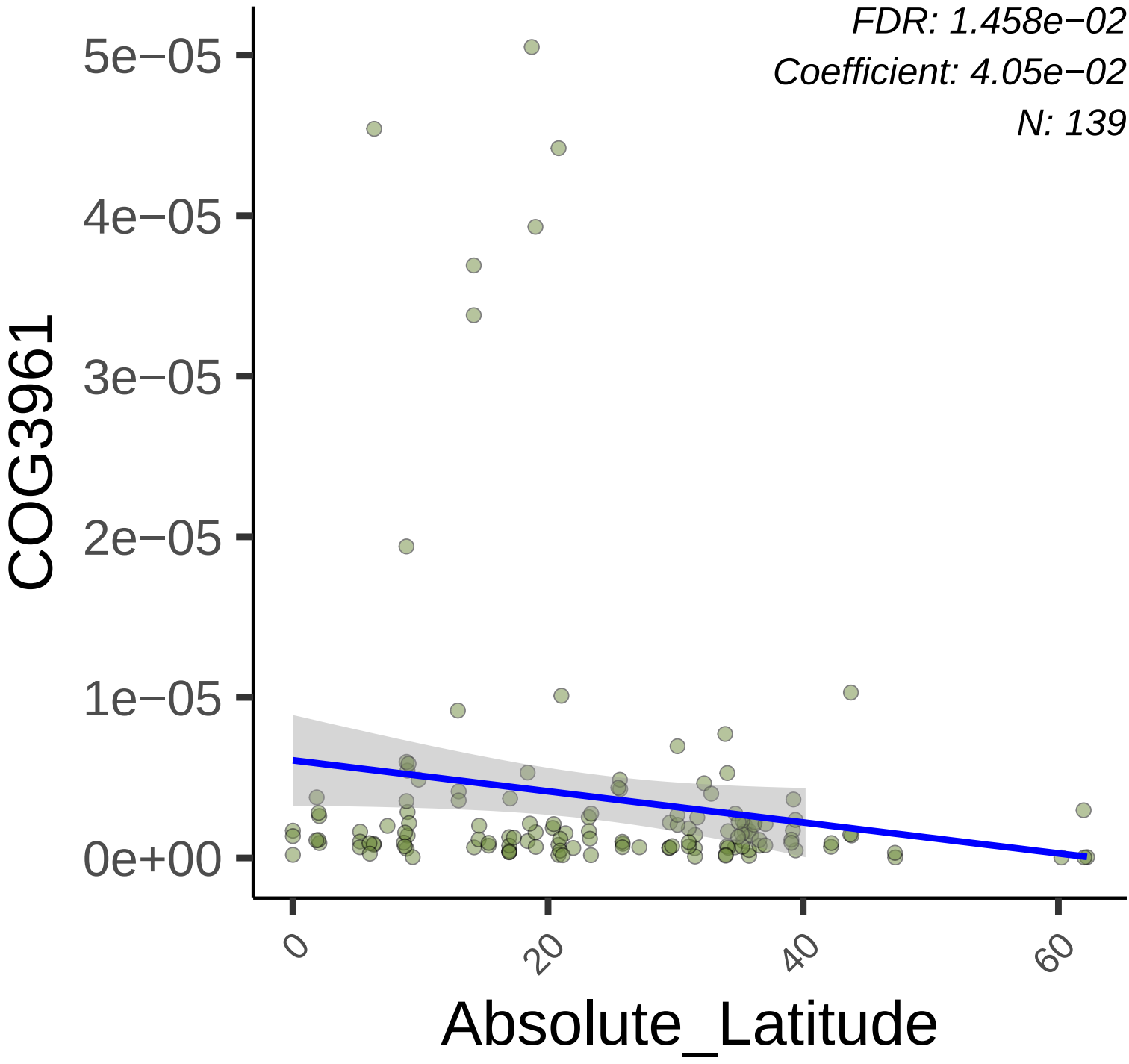

FDR: 1.422e−02
Coefficient: −2.92e−02
N: 139
COG3755
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

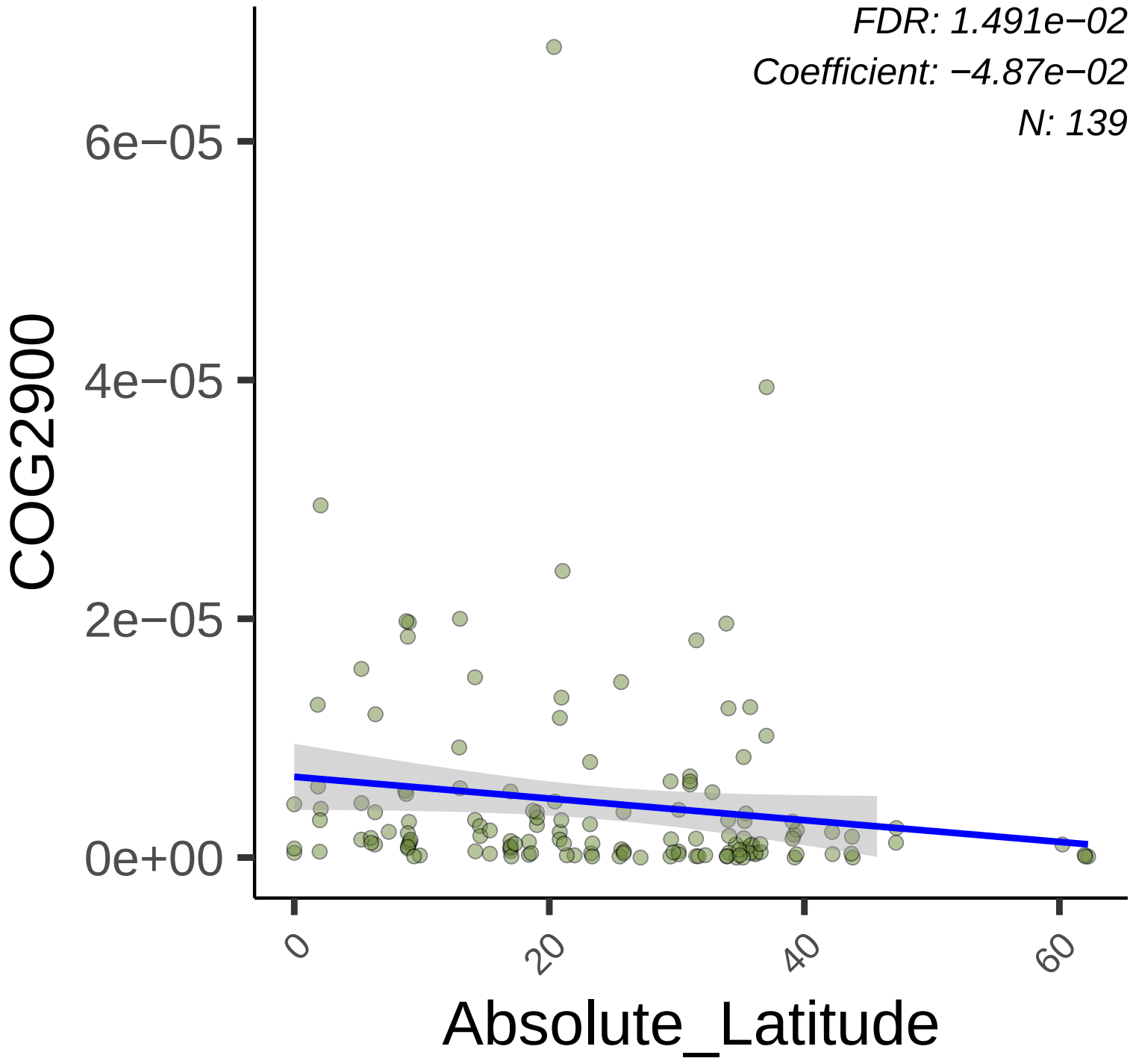

FDR: 1.422e−02
Coefficient: −1.52e−02
N: 139
COG1956
0.00012
0.00008
0.00004
0
20
40
60
Absolute_Latitude

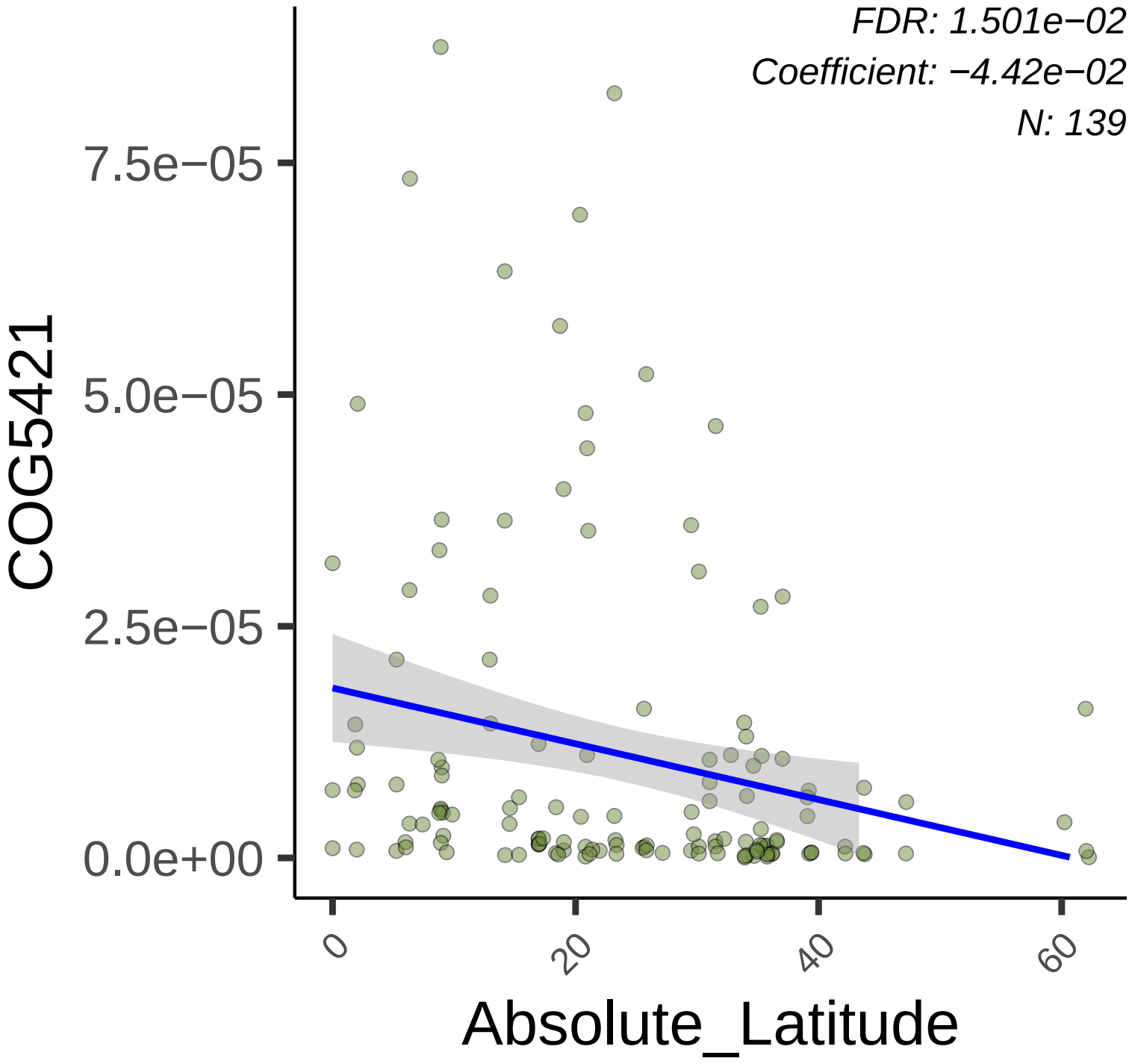

FDR: 1.441e−02
Coefficient: 3.33e−03
N: 139
COG0520
0.0012
0.0010
0.0008
0.0006
0
20
40
60
Absolute_Latitude

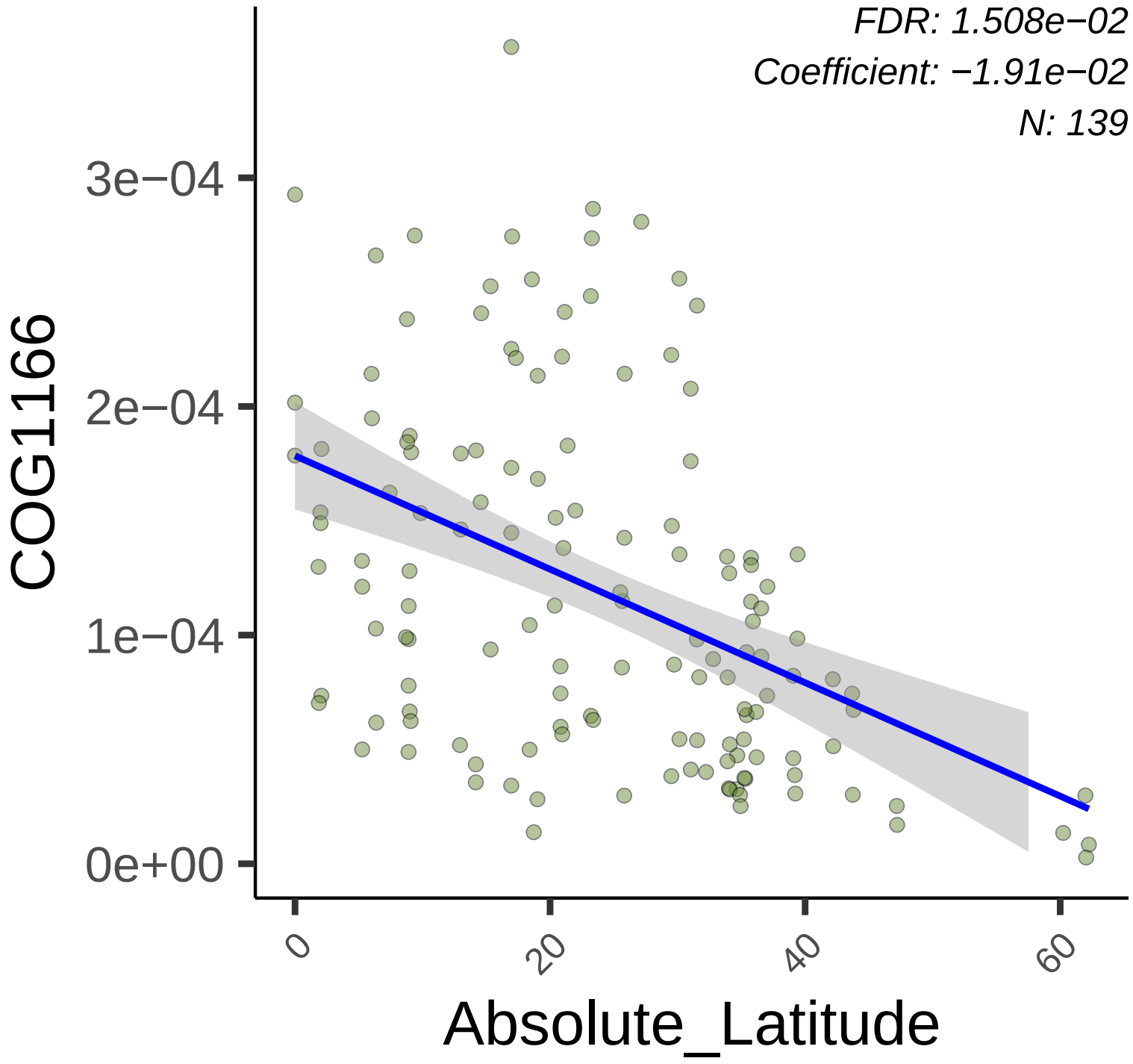

FDR: 1.446e−02
Coefficient: −1.85e−02
N: 139
COG2813
0.00020
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

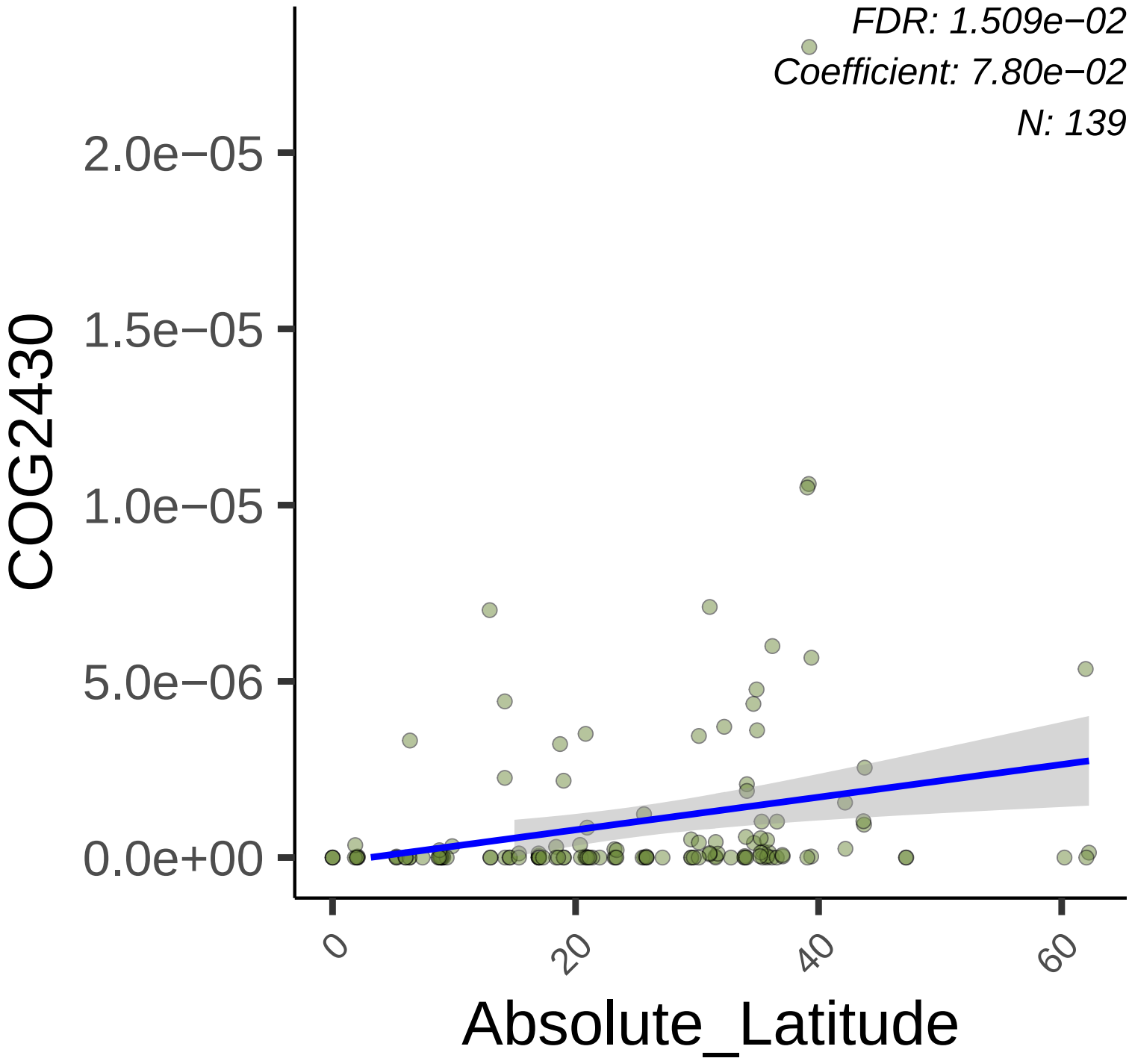

FDR: 1.449e−02
Coefficient: −2.52e−02
N: 139
COG3772
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

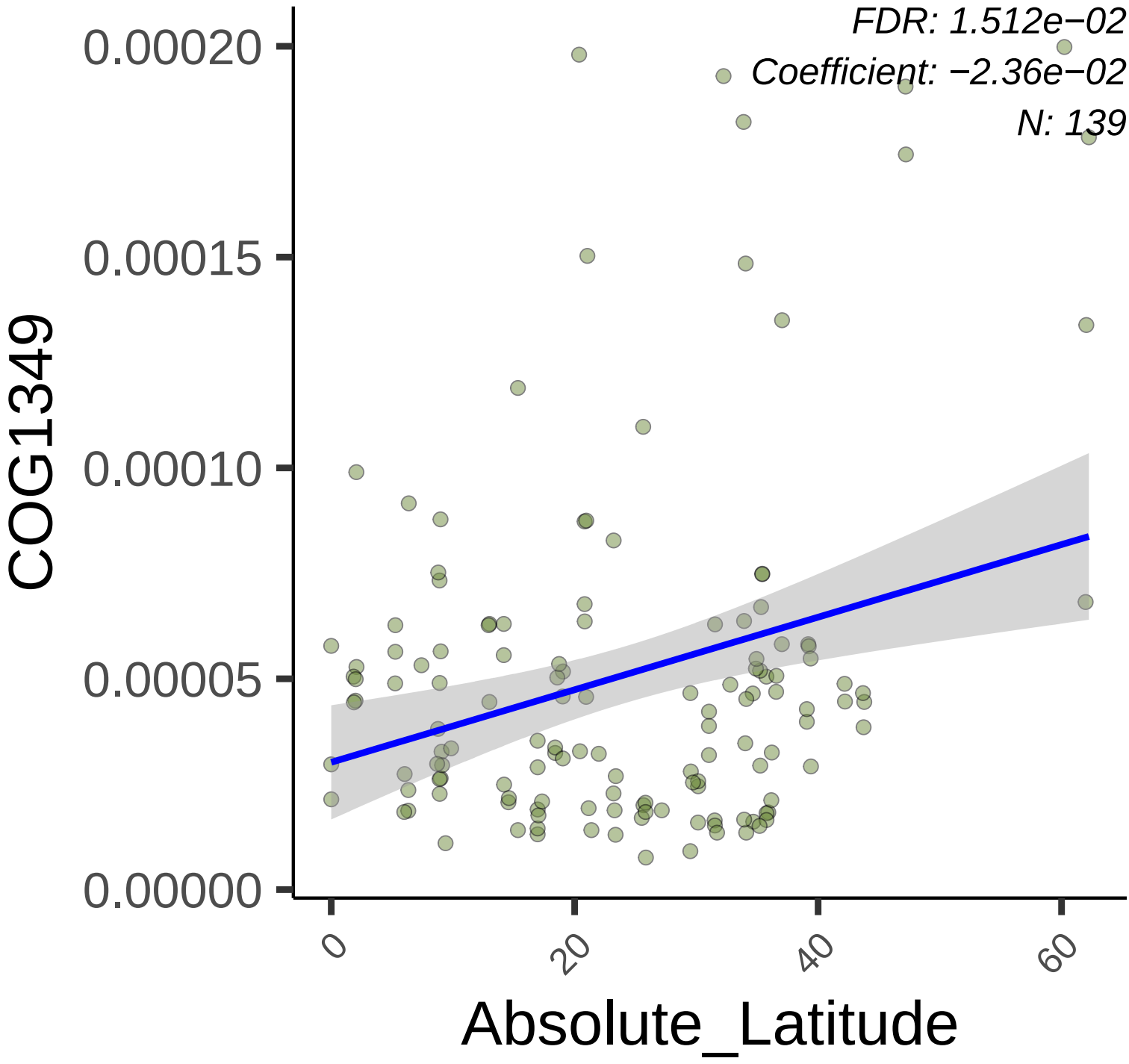

FDR: 1.458e−02
Coefficient: 4.05e−02
N: 139
COG3961
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

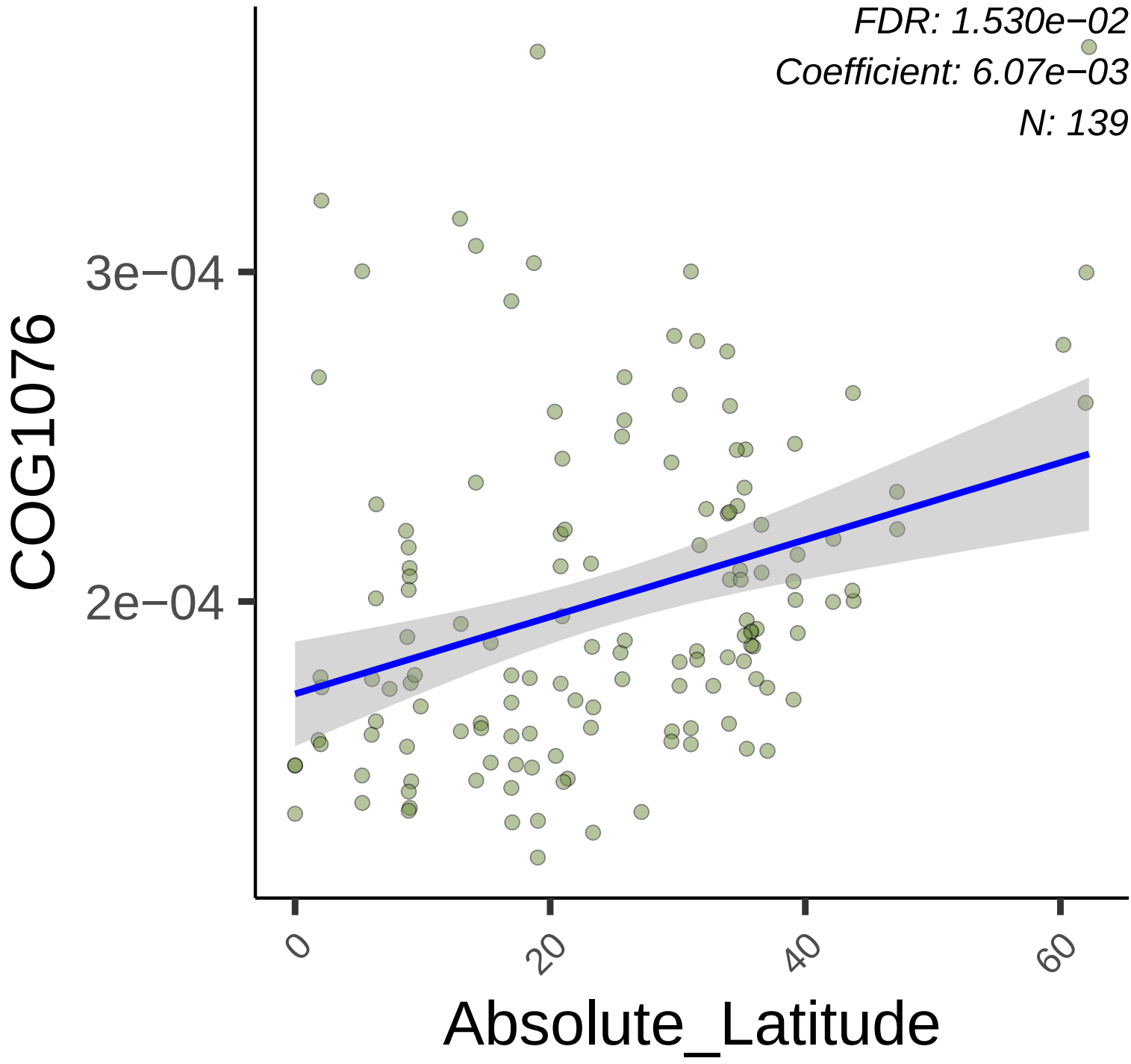

FDR: 1.491e−02
Coefficient: −4.87e−02
N: 139
COG2900
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

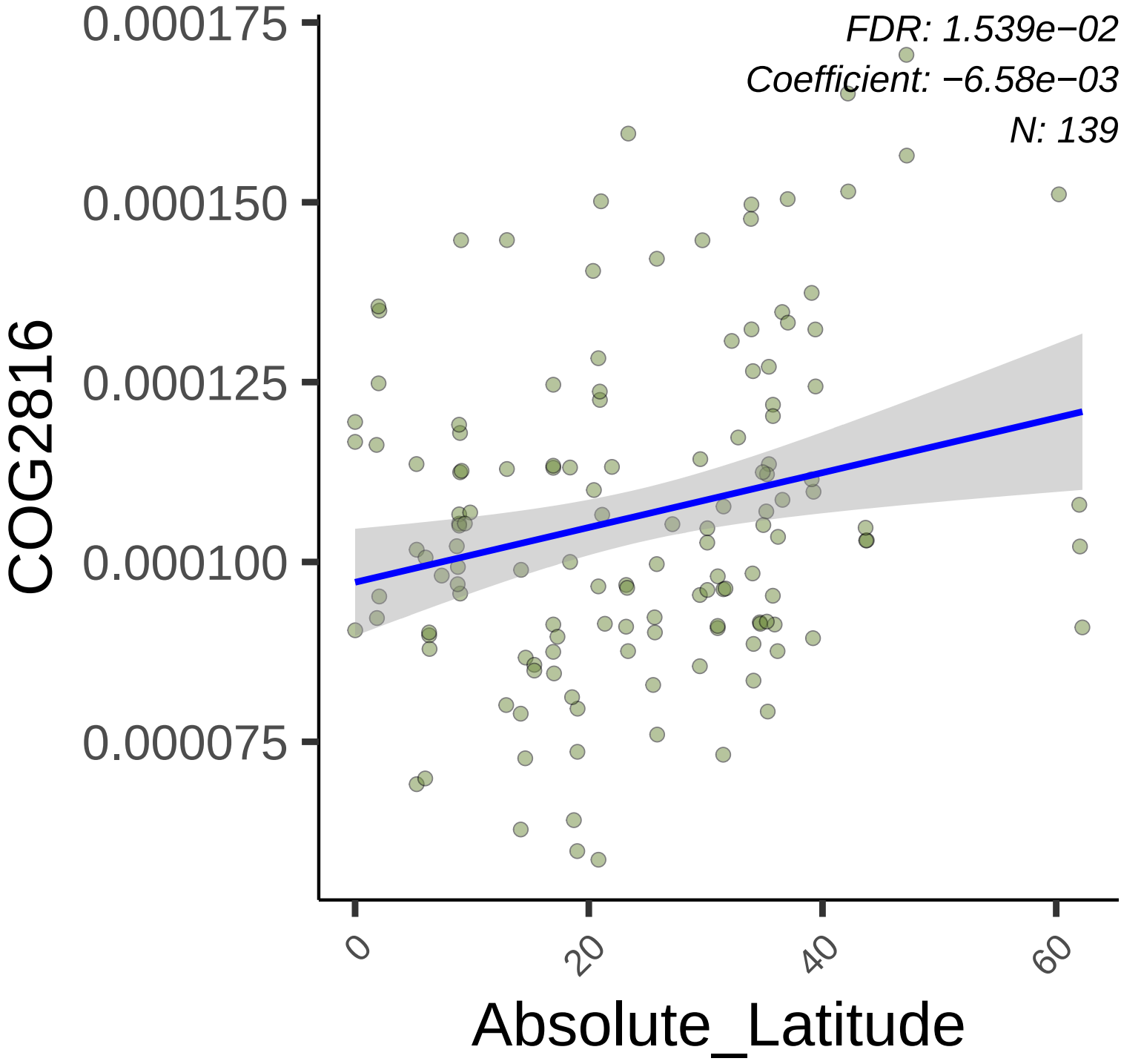

FDR: 1.501e−02
Coefficient: −4.42e−02
N: 139
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG5421
0
20
40
60
Absolute_Latitude

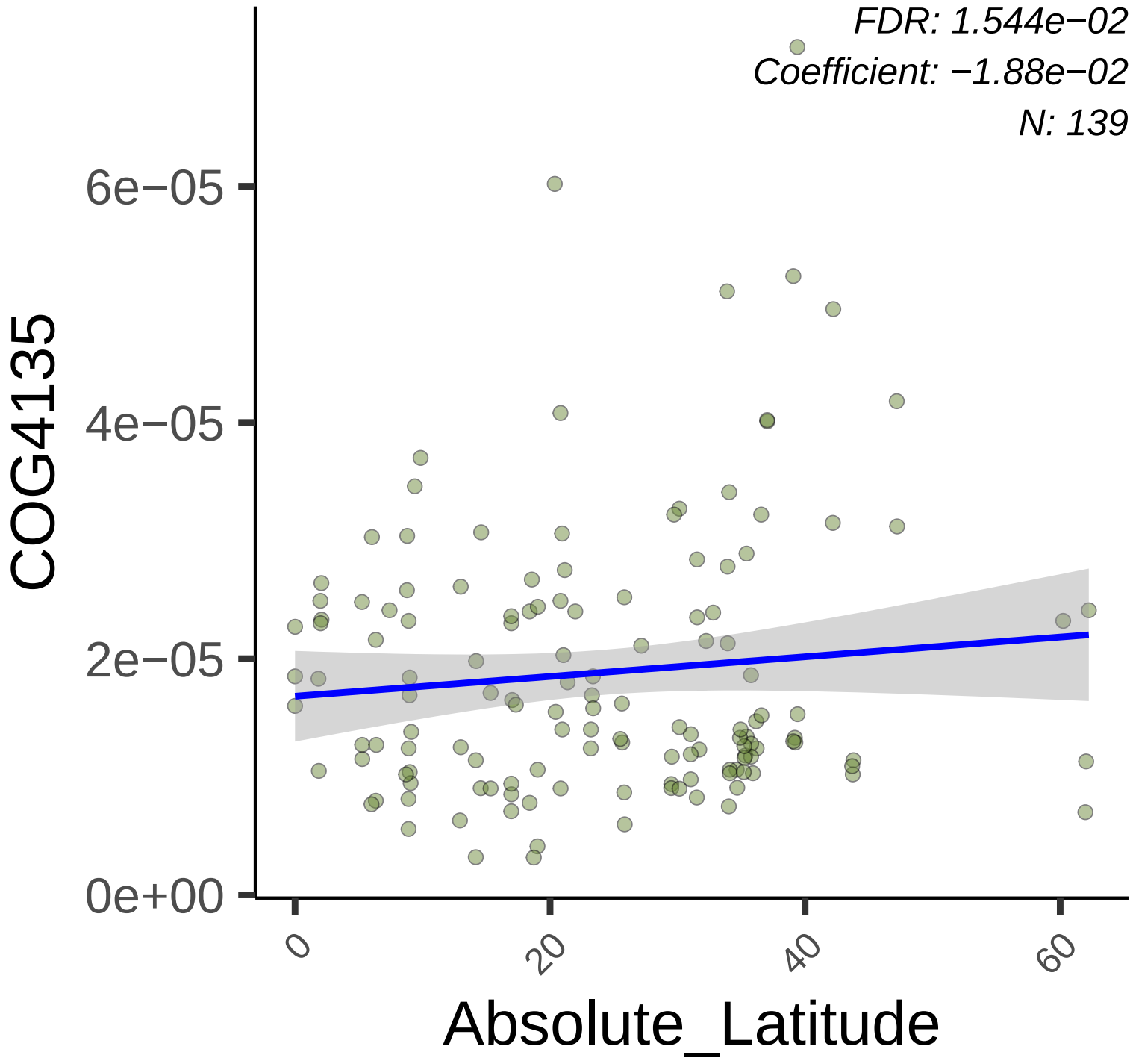

FDR: 1.508e−02
Coefficient: −1.91e−02
N: 139
COG1166
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

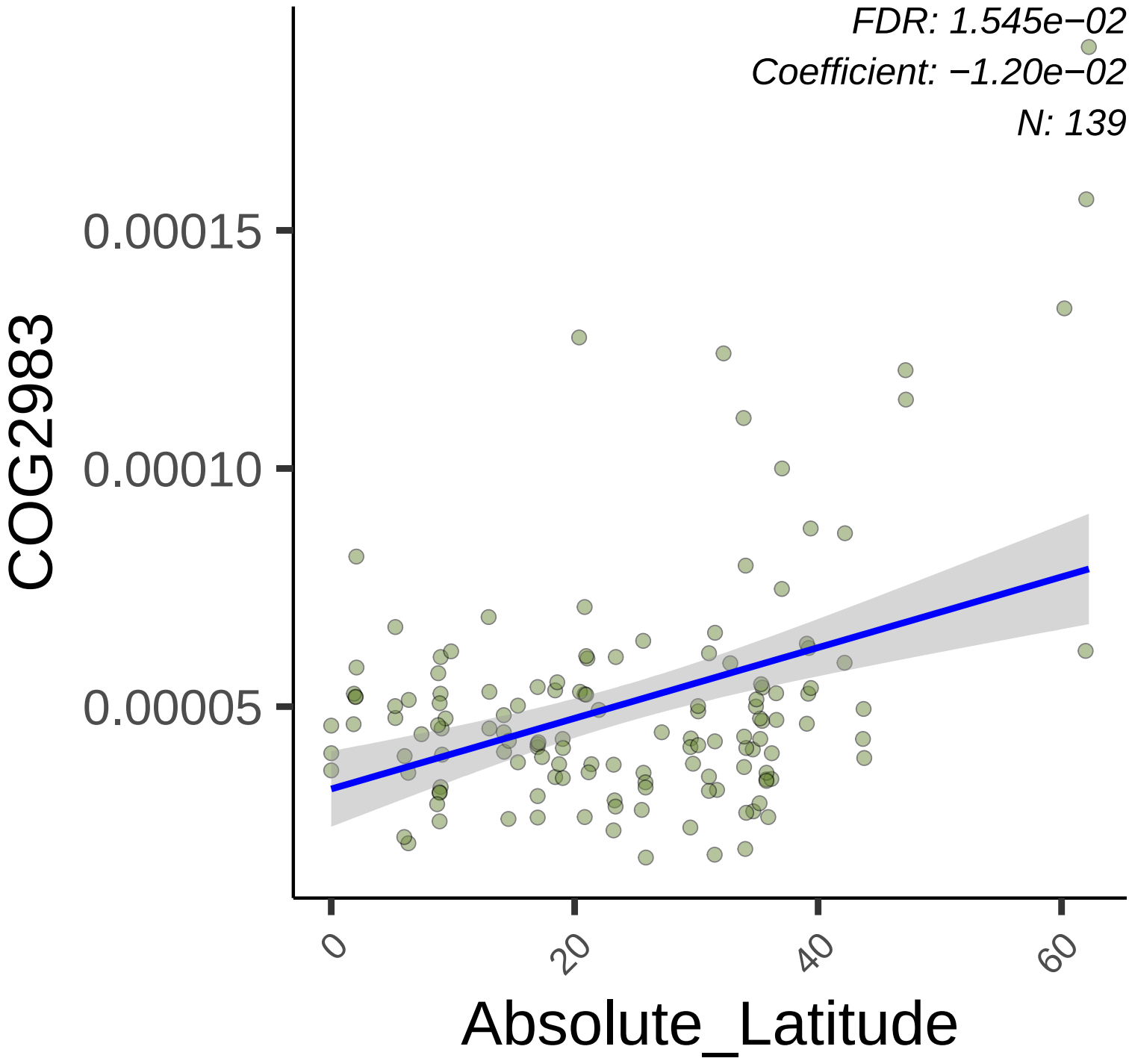

FDR: 1.509e−02
Coefficient: 7.80e−02
N: 139
COG2430
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

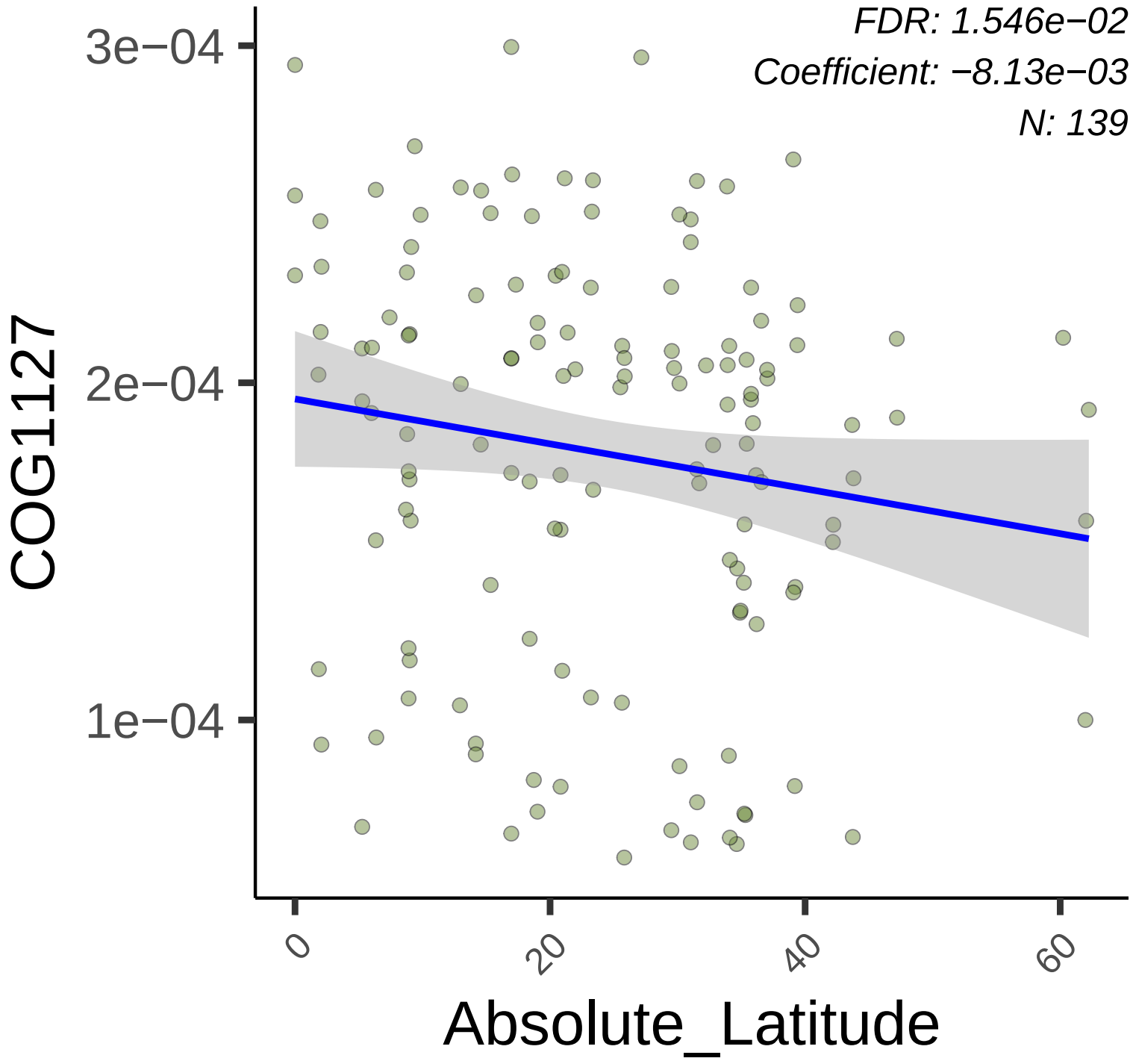

FDR: 1.512e−02
Coefficient: −2.36e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG1349
0
20
40
60
Absolute_Latitude

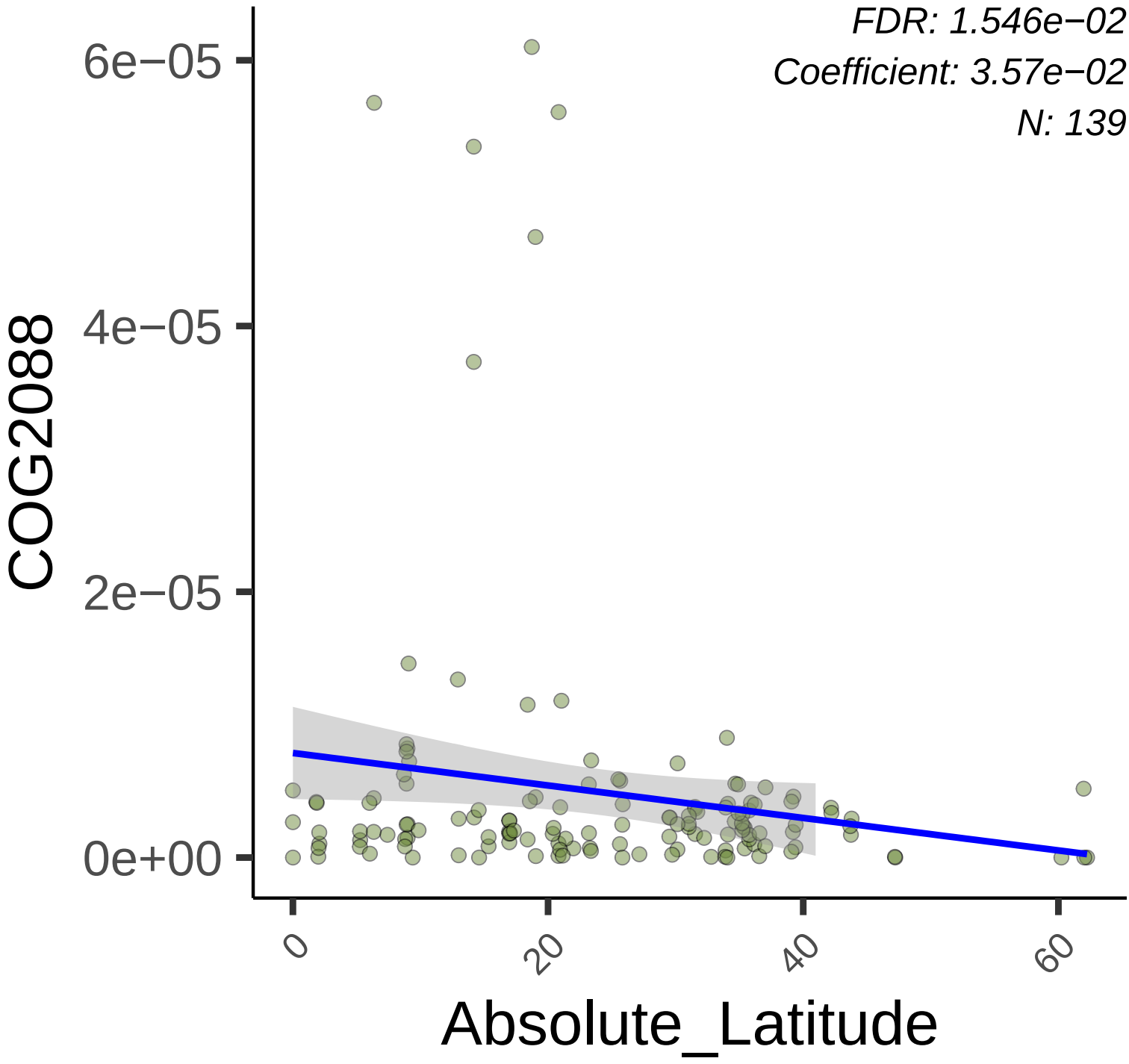

FDR: 1.530e−02
Coefficient: 6.07e−03
N: 139
COG1076
3e−04
2e−04
0
20
40
60
Absolute_Latitude

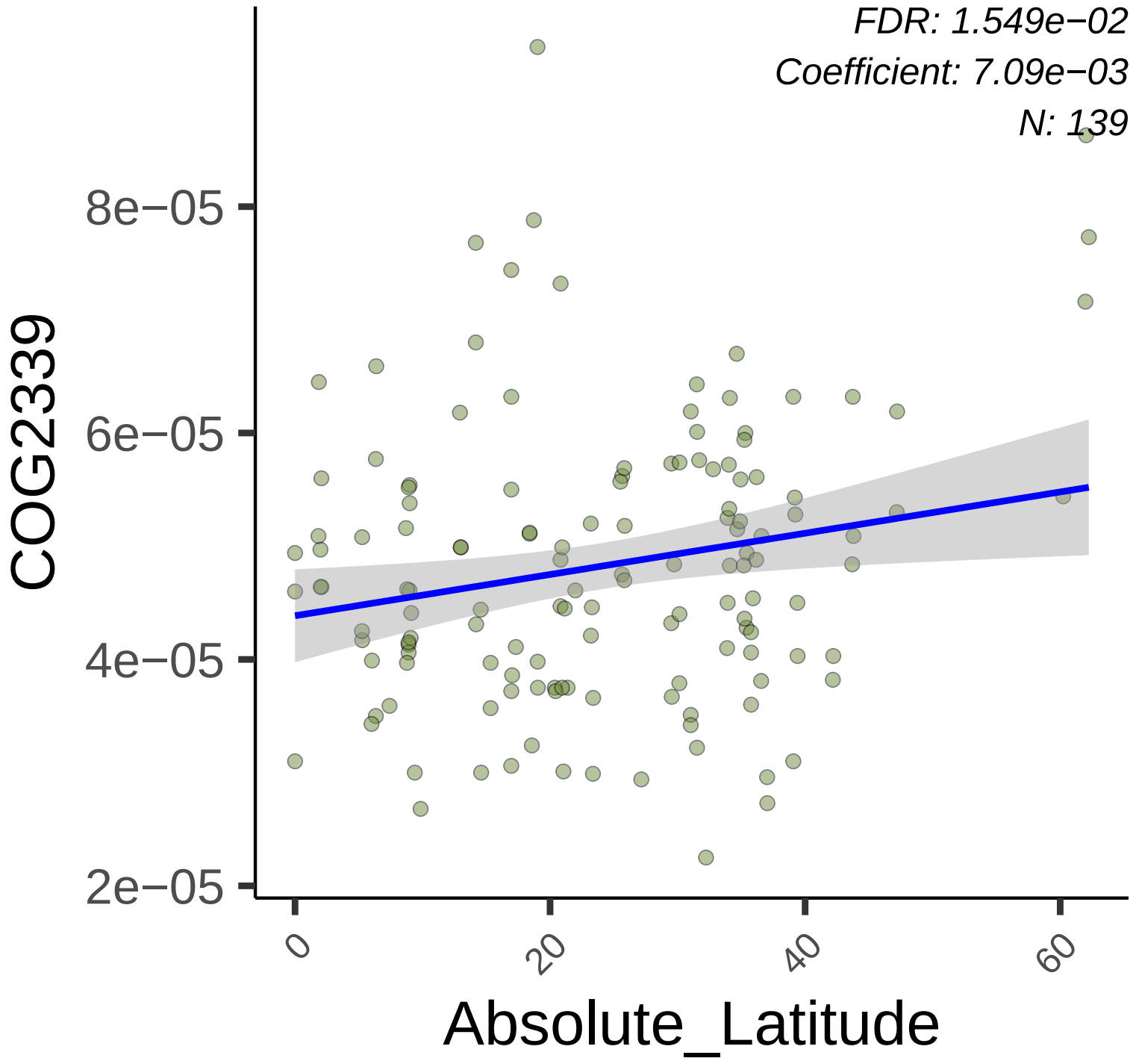

FDR: 1.539e−02
Coefficient: −6.58e−03
N: 139
0.000175
0.000150
0.000125
0.000100
0.000075
COG2816
0
20
40
60
Absolute_Latitude

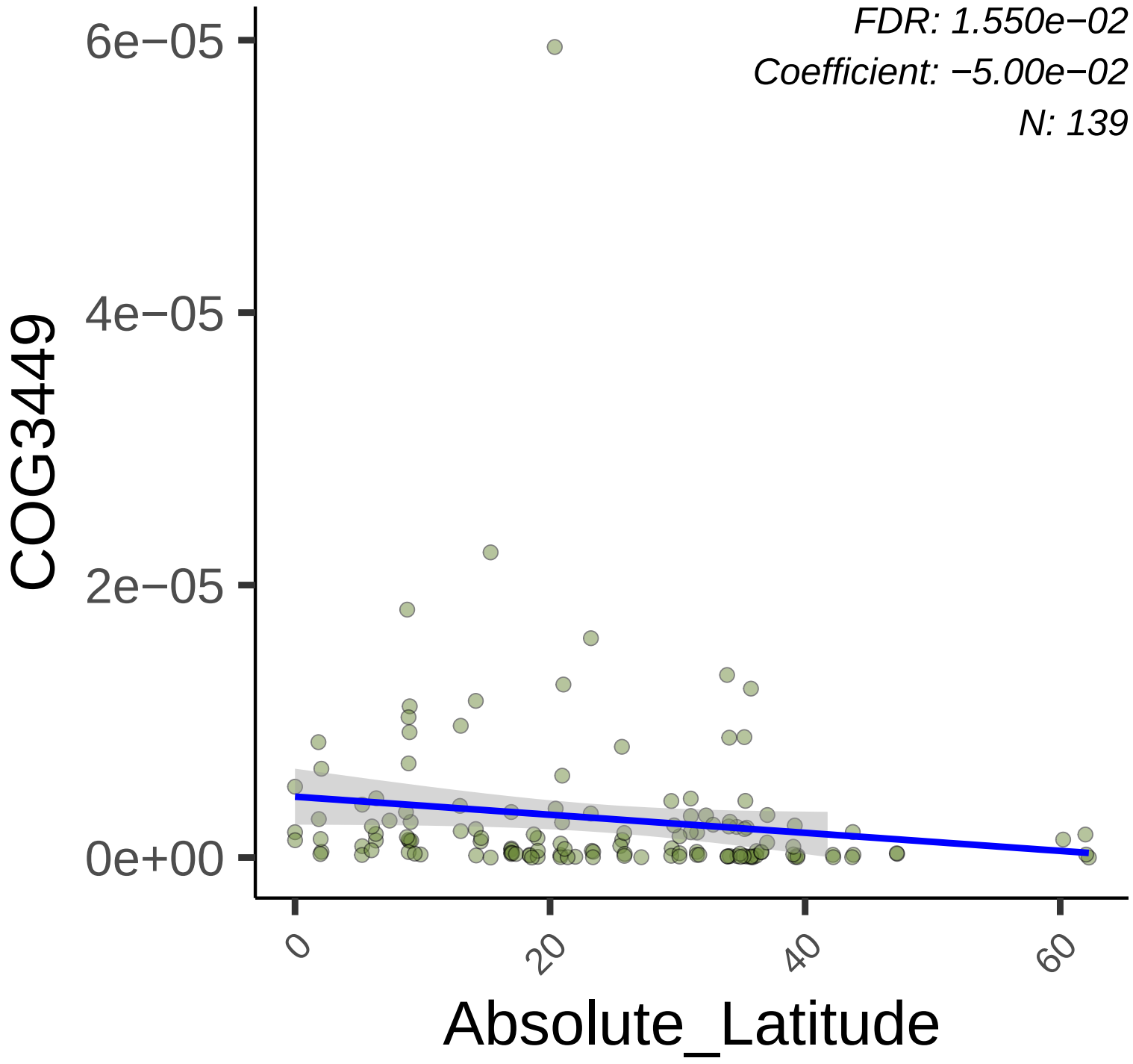

FDR: 1.544e−02
Coefficient: −1.88e−02
N: 139
COG4135
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

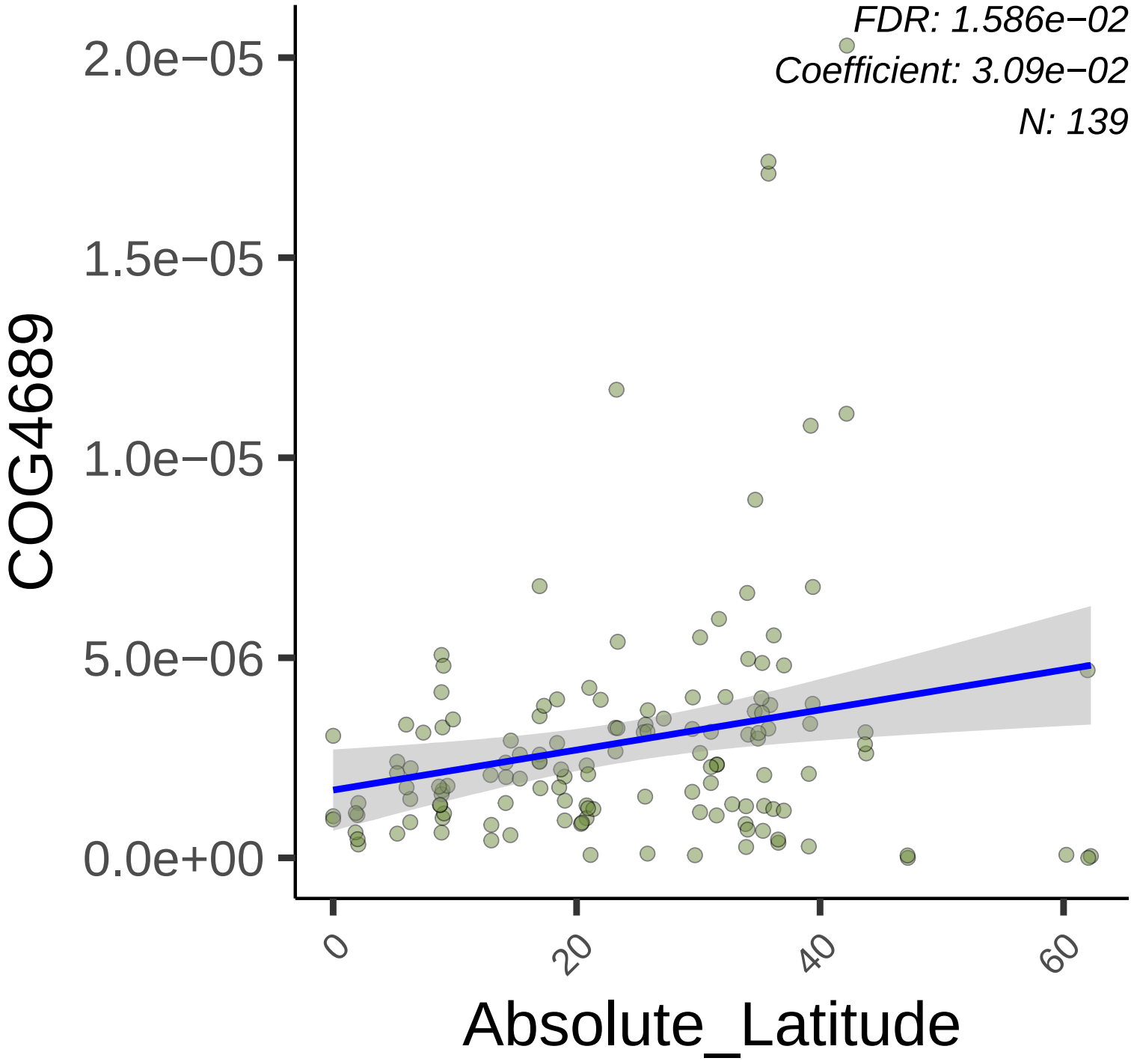

FDR: 1.545e−02
Coefficient: −1.20e−02
N: 139
COG2983
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

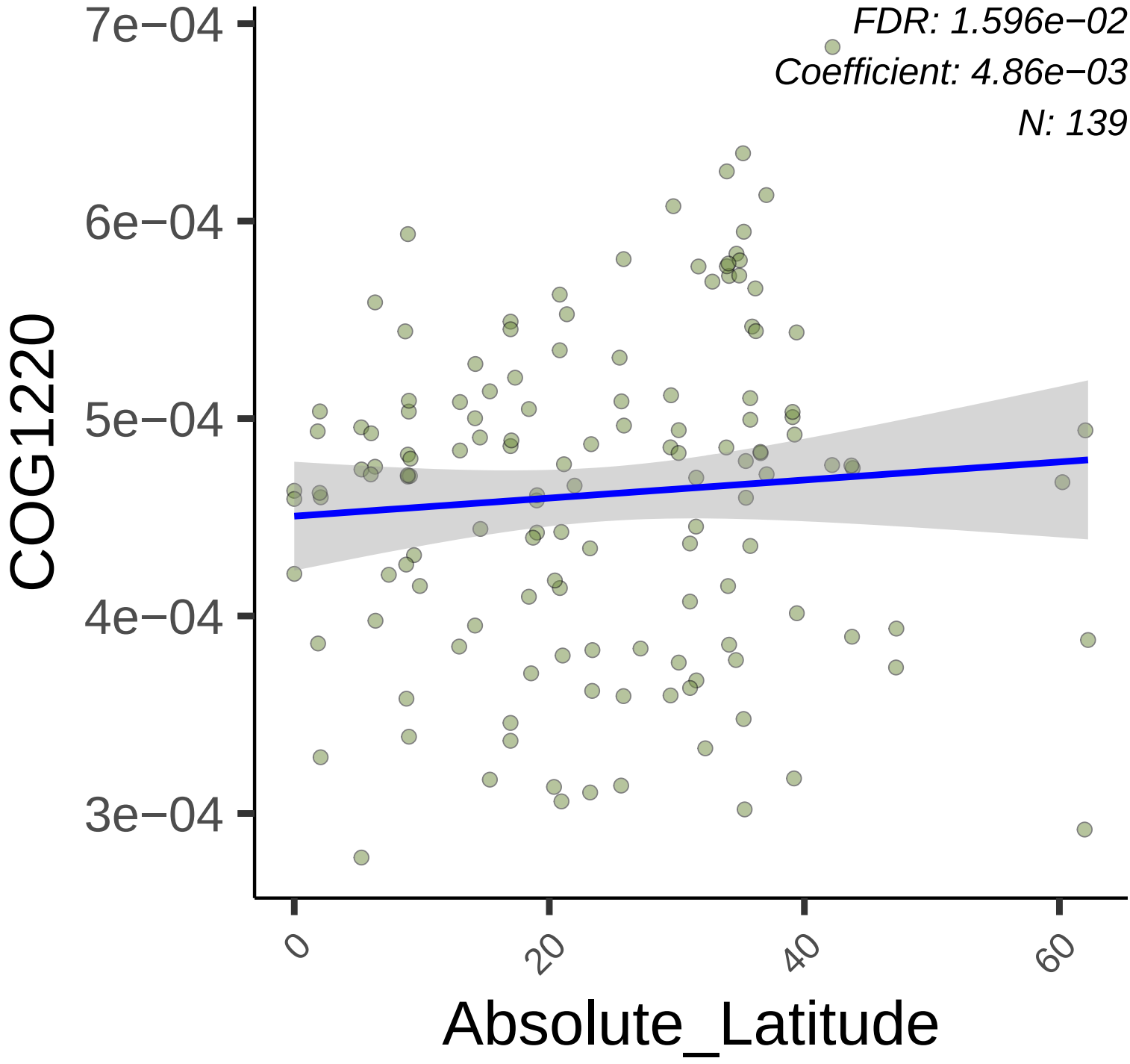

FDR: 1.546e−02
Coefficient: −8.13e−03
N: 139
3e−04
2e−04
1e−04
COG1127
0
20
40
60
Absolute_Latitude

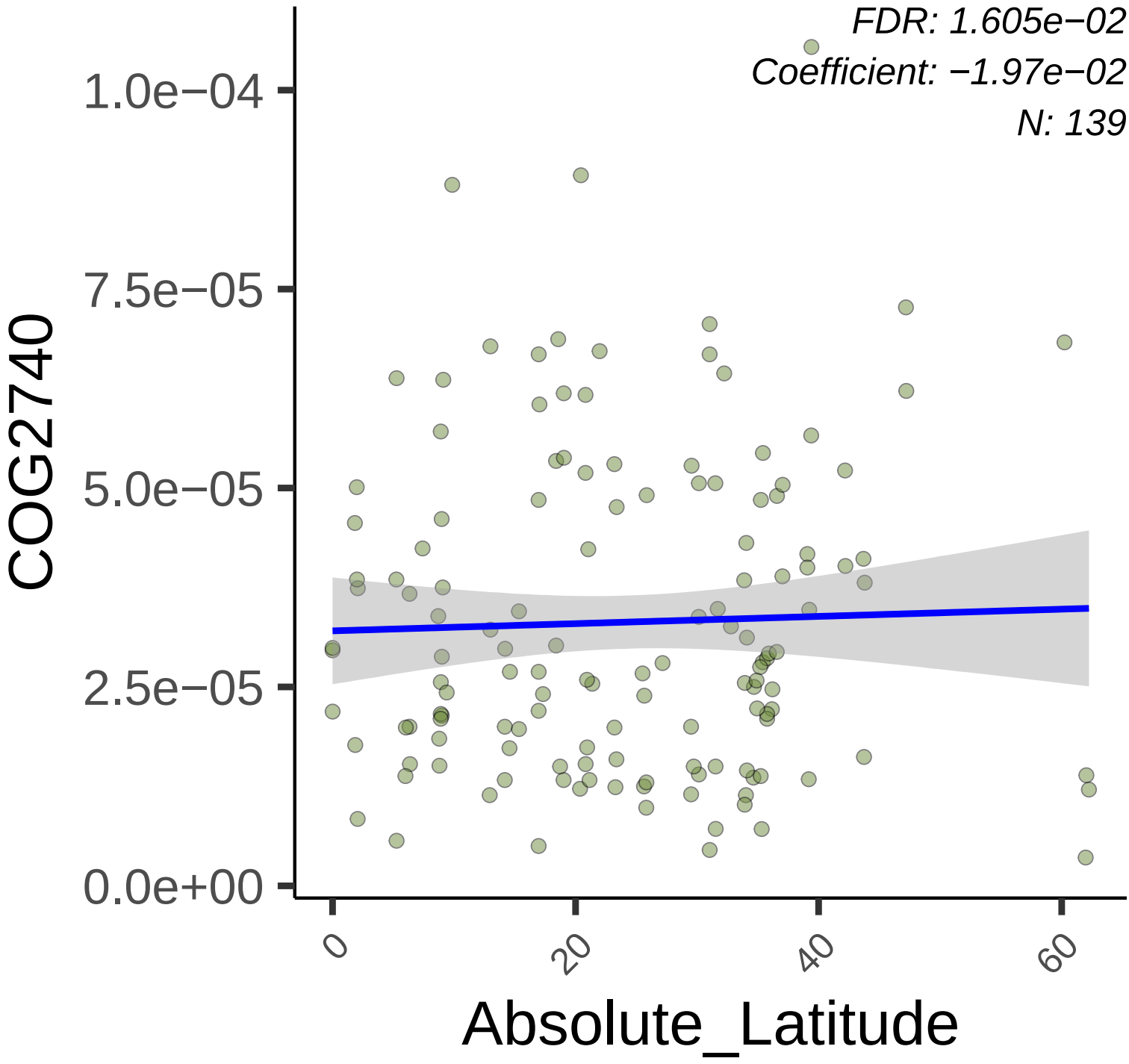

FDR: 1.546e−02
Coefficient: 3.57e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG2088
0
20
40
60
Absolute_Latitude

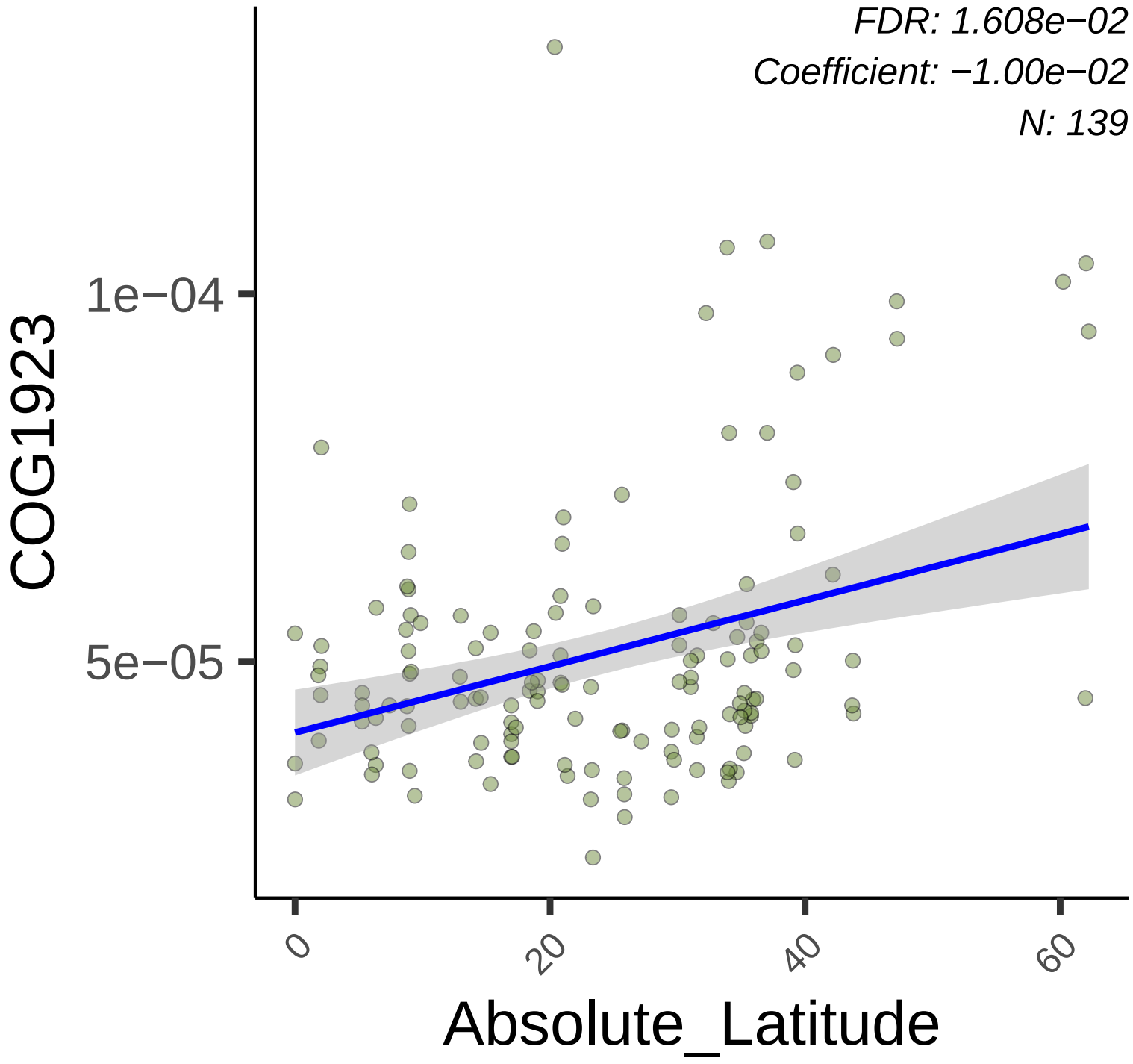

FDR: 1.549e−02
Coefficient: 7.09e−03
N: 139
8e−05
6e−05
4e−05
2e−05
COG2339
0
20
40
60
Absolute_Latitude

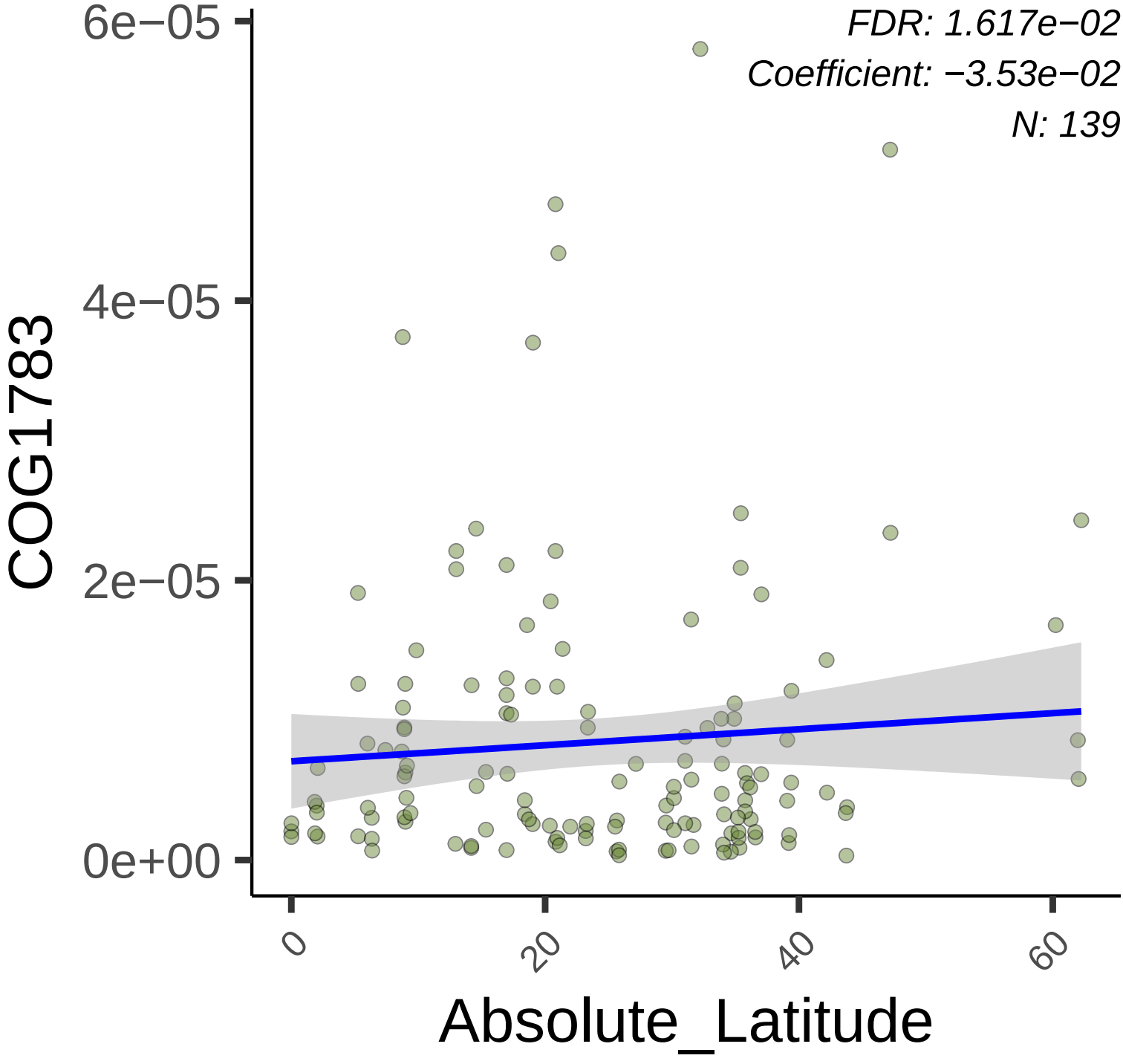

FDR: 1.550e−02
Coefficient: −5.00e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG3449
0
20
40
60
Absolute_Latitude

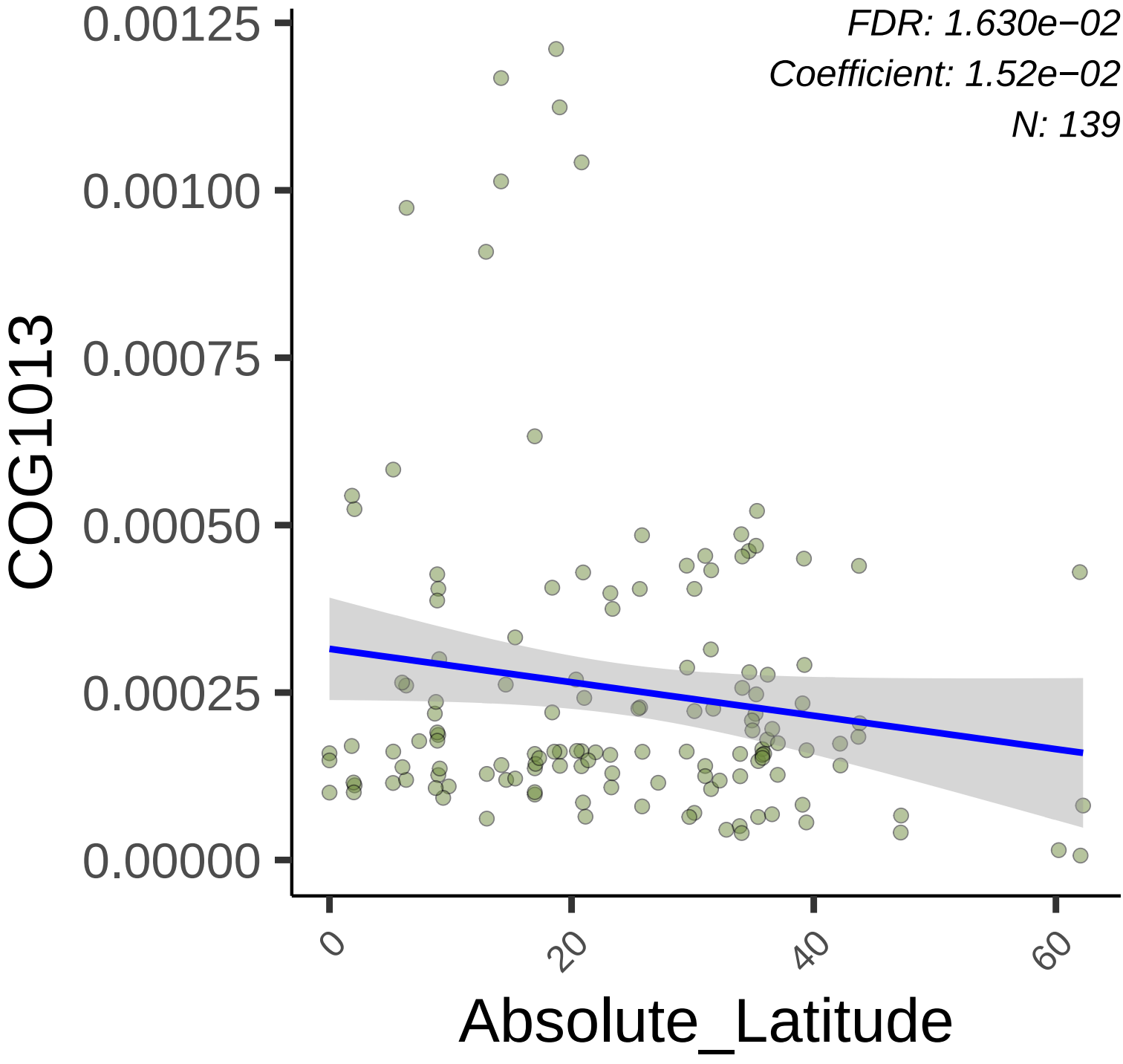

FDR: 1.586e−02
Coefficient: 3.09e−02
N: 139
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG4689
0
20
40
60
Absolute_Latitude

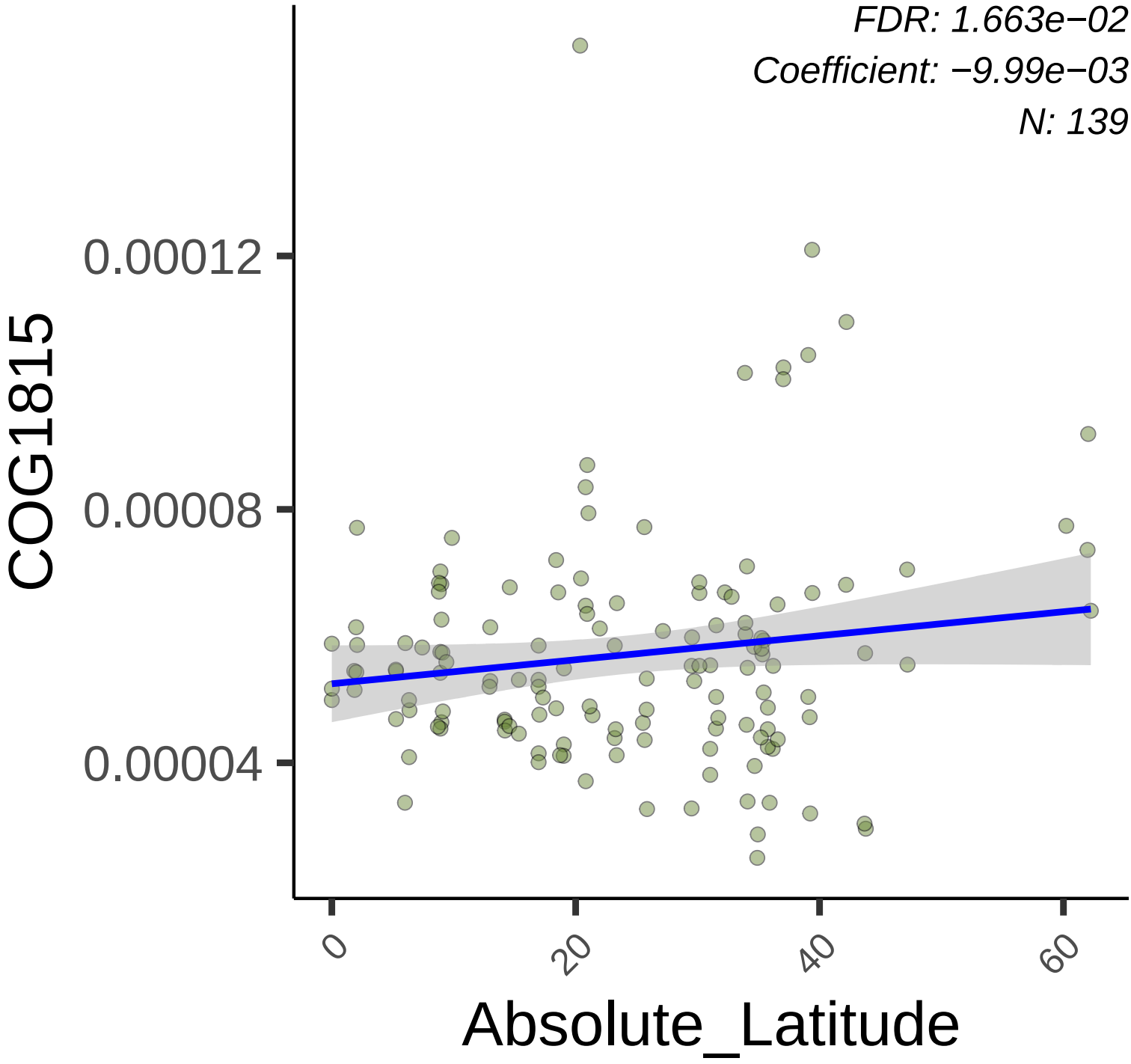

FDR: 1.596e−02
Coefficient: 4.86e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG1220
0
20
40
60
Absolute_Latitude

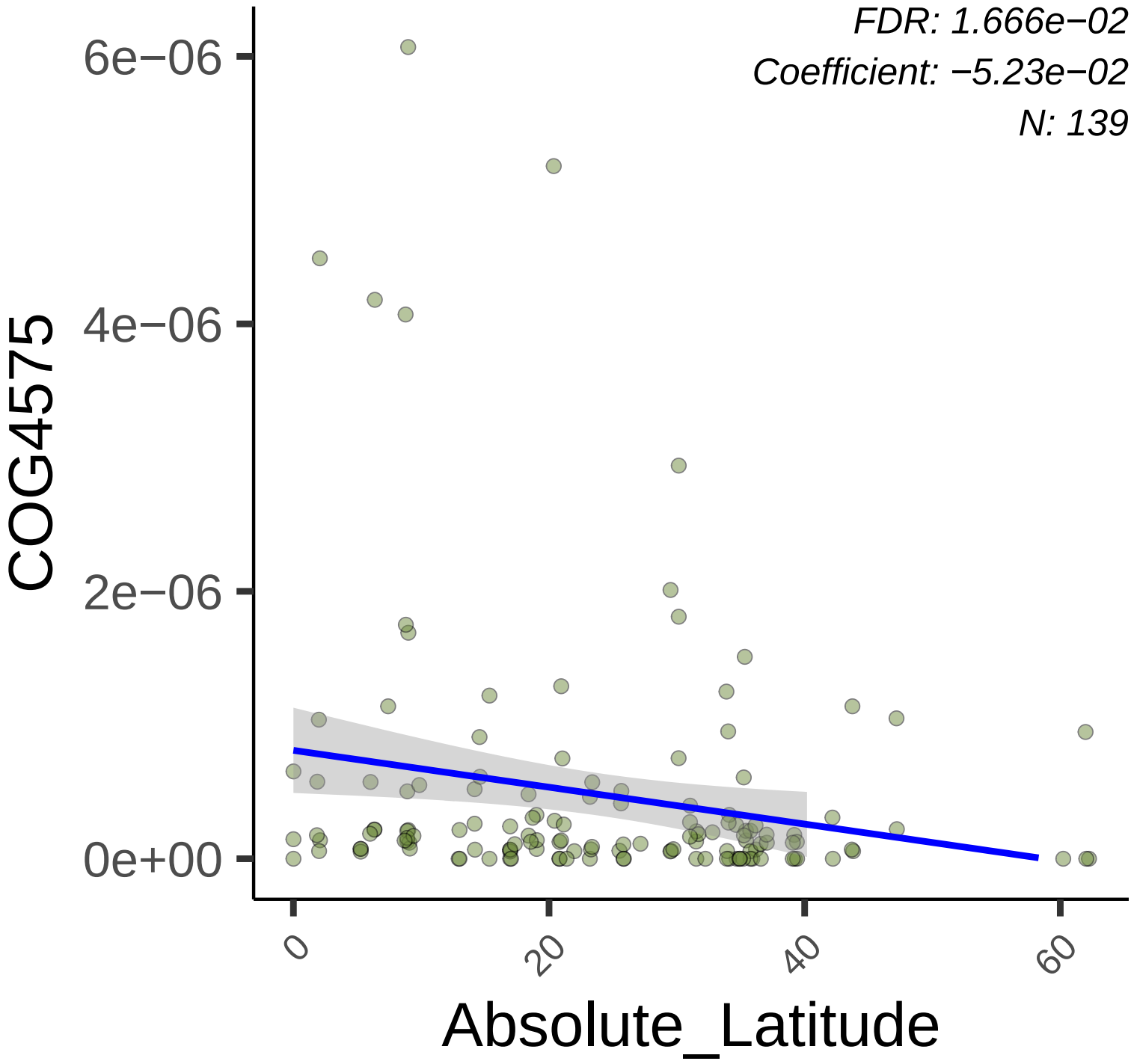

FDR: 1.605e−02
Coefficient: −1.97e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG2740
0
20
40
60
Absolute_Latitude

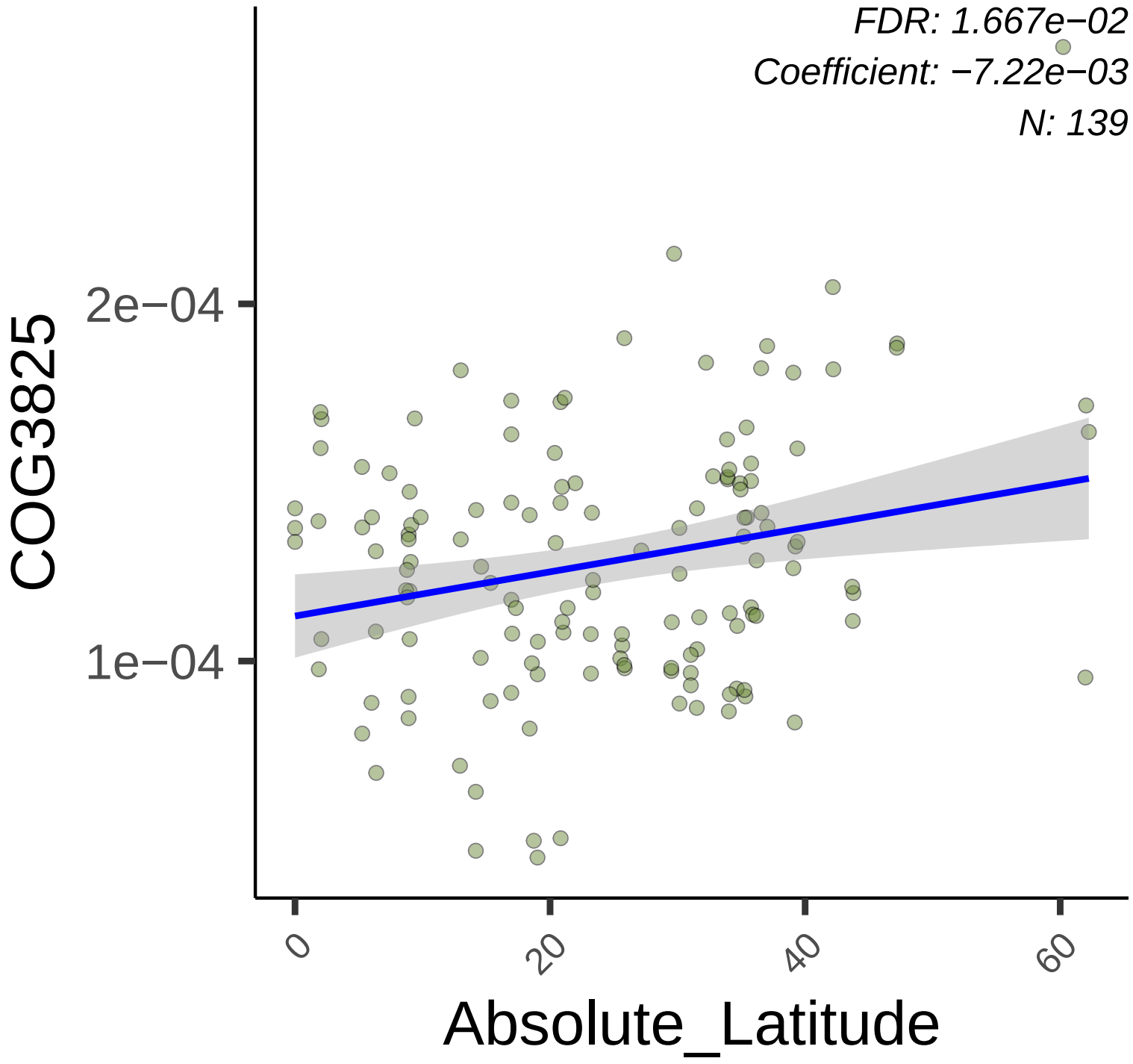

FDR: 1.608e−02
Coefficient: −1.00e−02
N: 139
COG1923
1e−04
5e−05
0
20
40
60
Absolute_Latitude

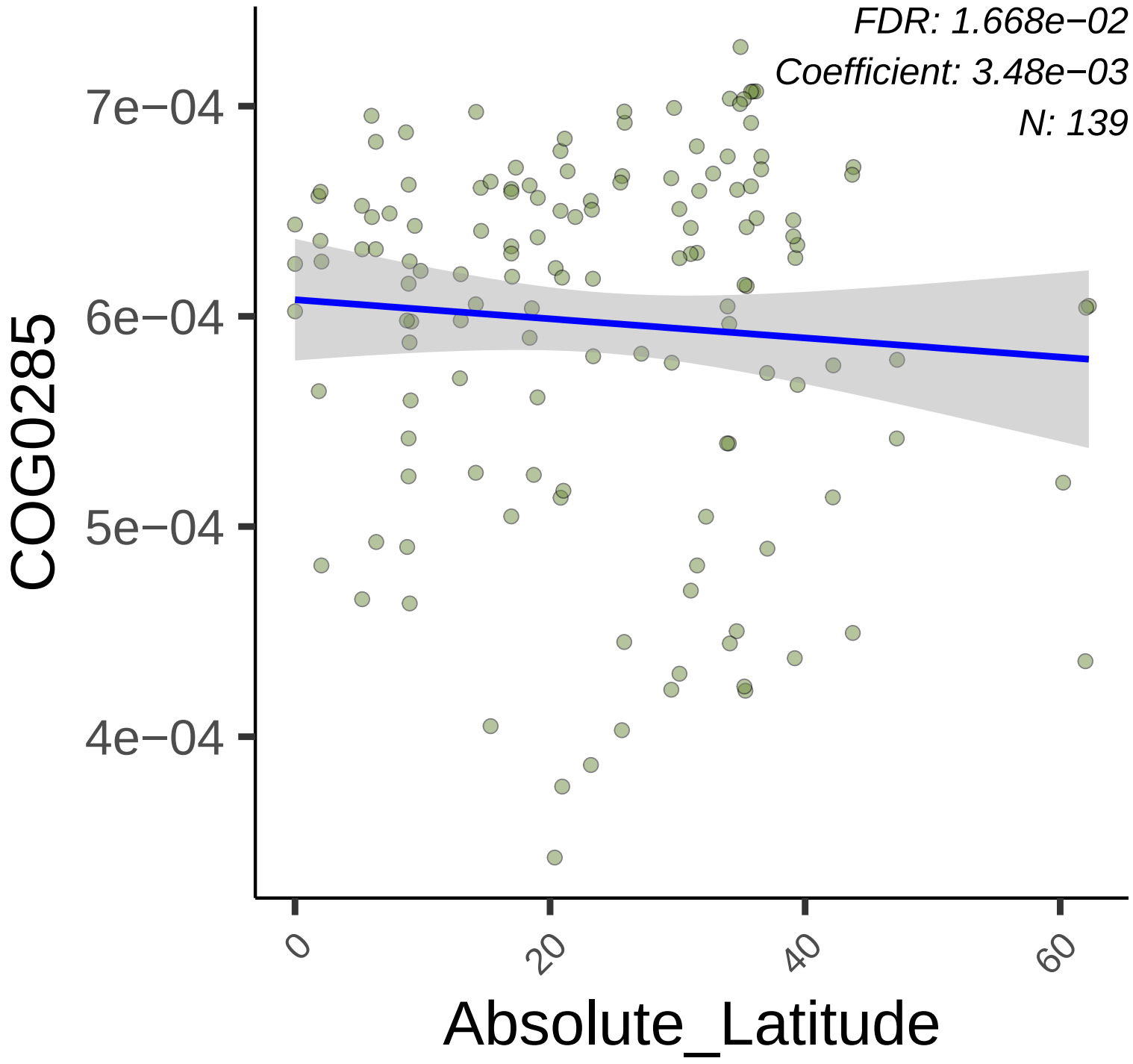

FDR: 1.617e−02
Coefficient: −3.53e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG1783
0
20
40
60
Absolute_Latitude

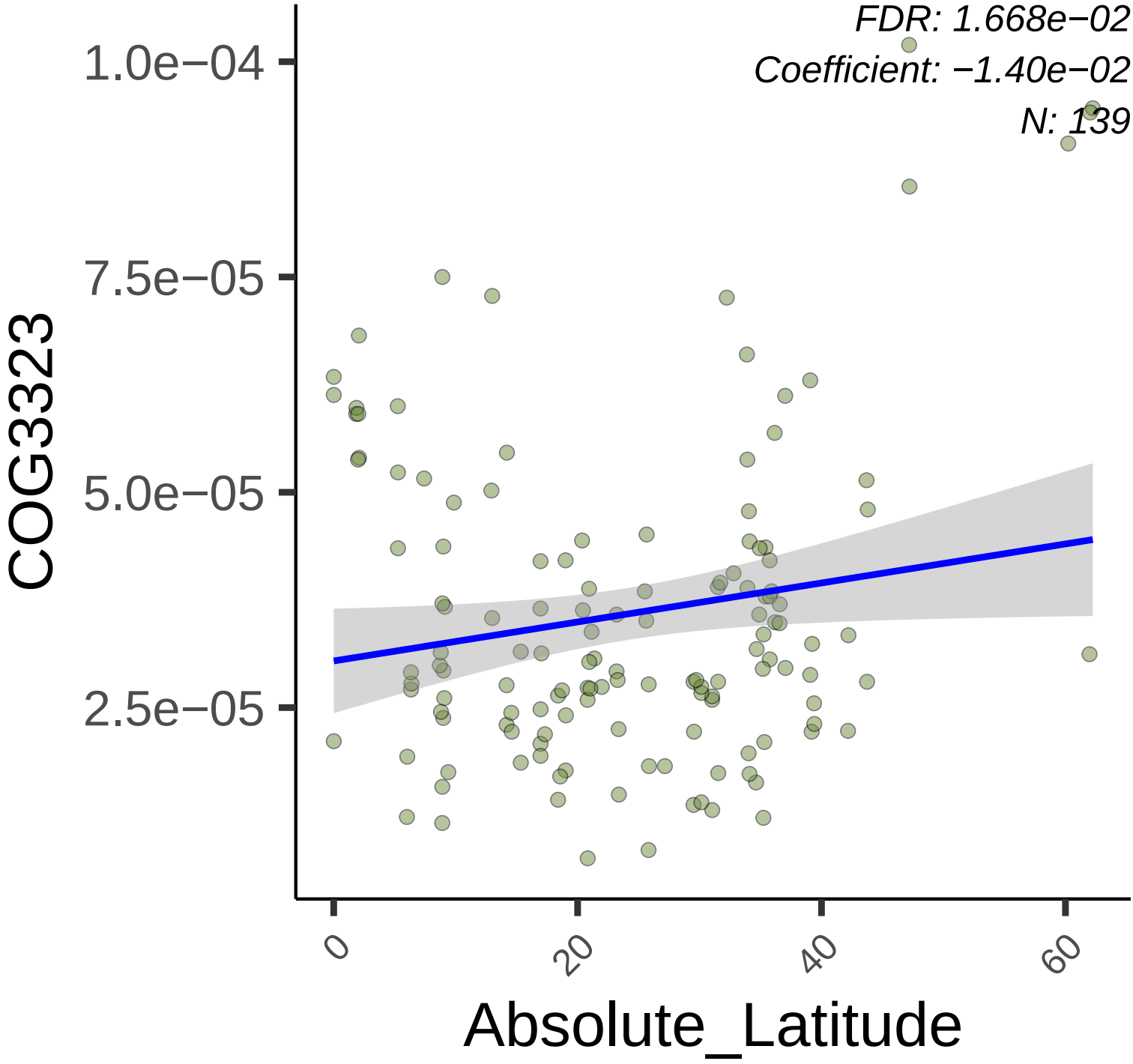

FDR: 1.630e−02
Coefficient: 1.52e−02
N: 139
COG1013
0.00125
0.00100
0.00075
0.00050
0.00025
0.00000
0
20
40
60
Absolute_Latitude

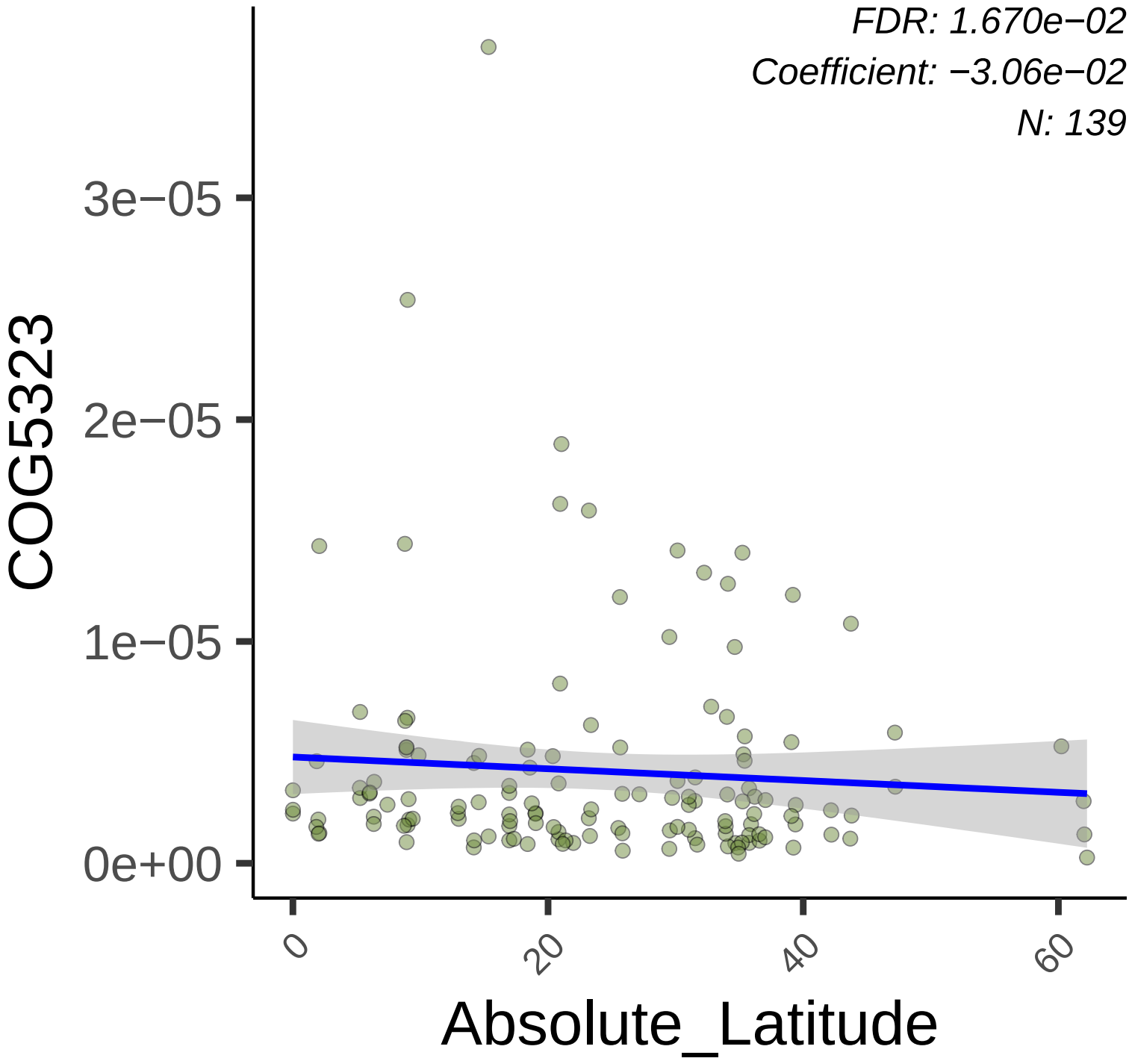

FDR: 1.663e−02
Coefficient: −9.99e−03
N: 139
COG1815
0.00012
0.00008
0.00004
0
20
40
60
Absolute_Latitude

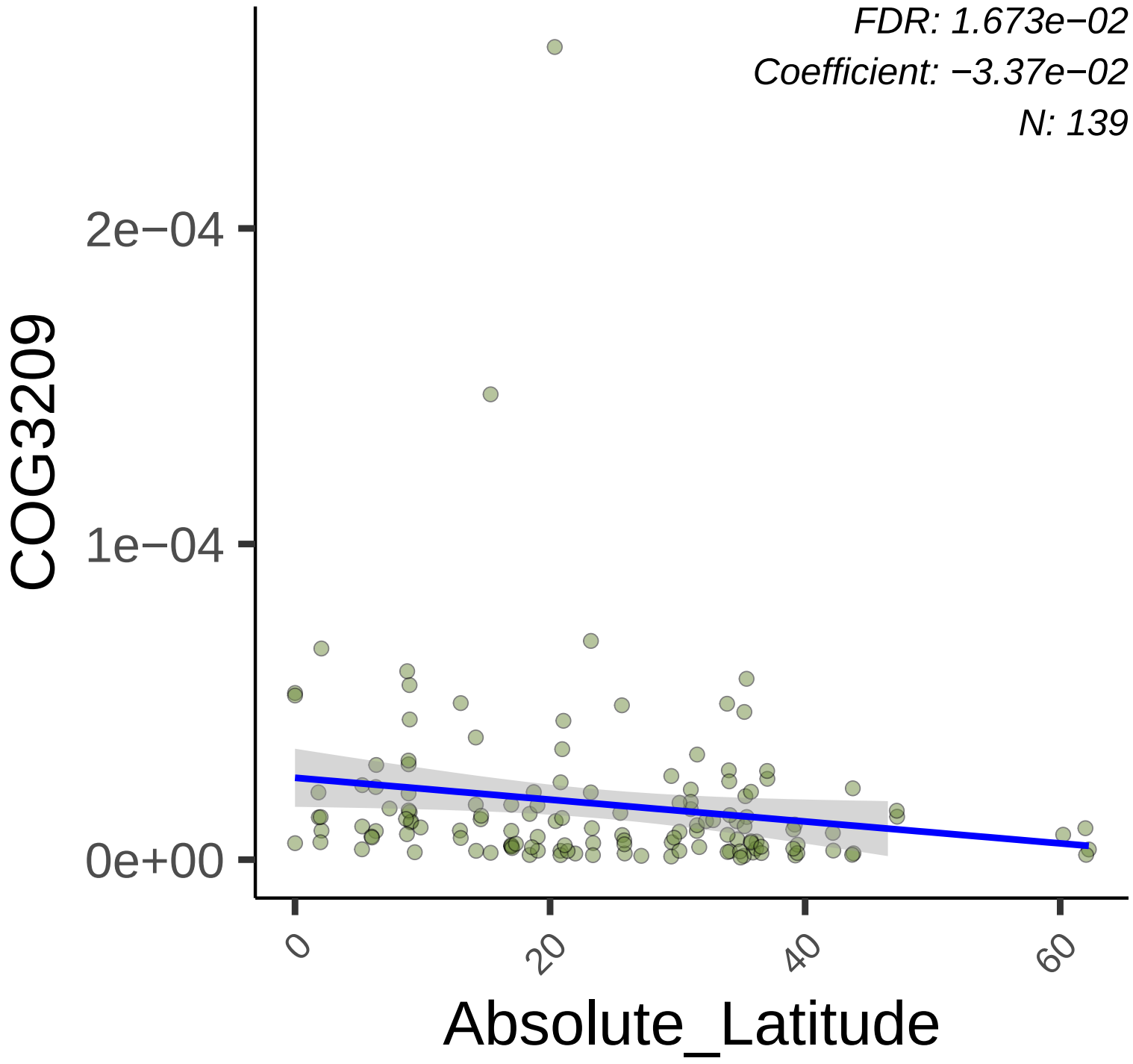

FDR: 1.666e−02
Coefficient: −5.23e−02
N: 139
6e−06
4e−06
2e−06
0e+00
COG4575
0
20
40
60
Absolute_Latitude

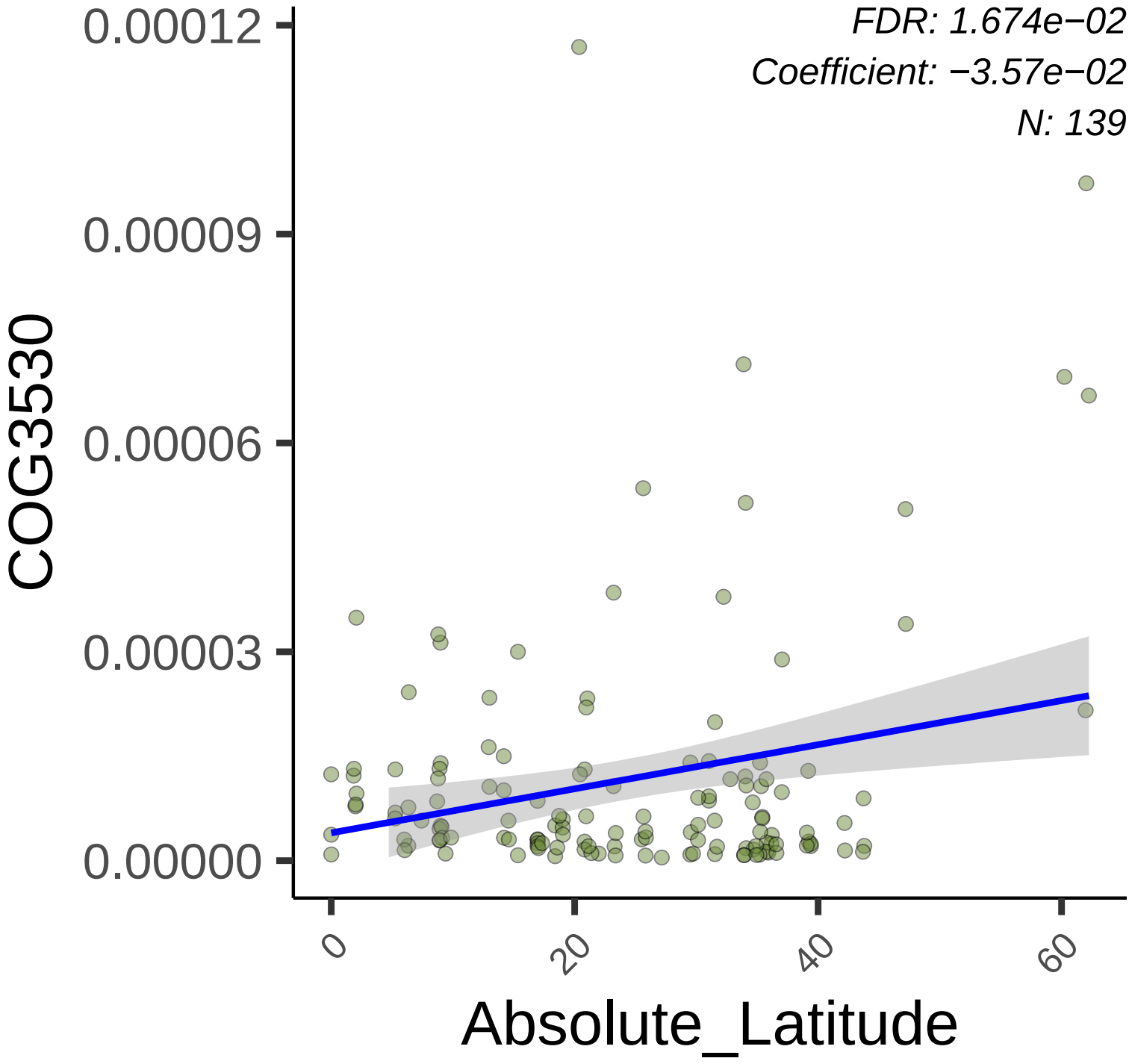

FDR: 1.667e−02
Coefficient: −7.22e−03
N: 139
COG3825
2e−04
1e−04
0
20
40
60
Absolute_Latitude

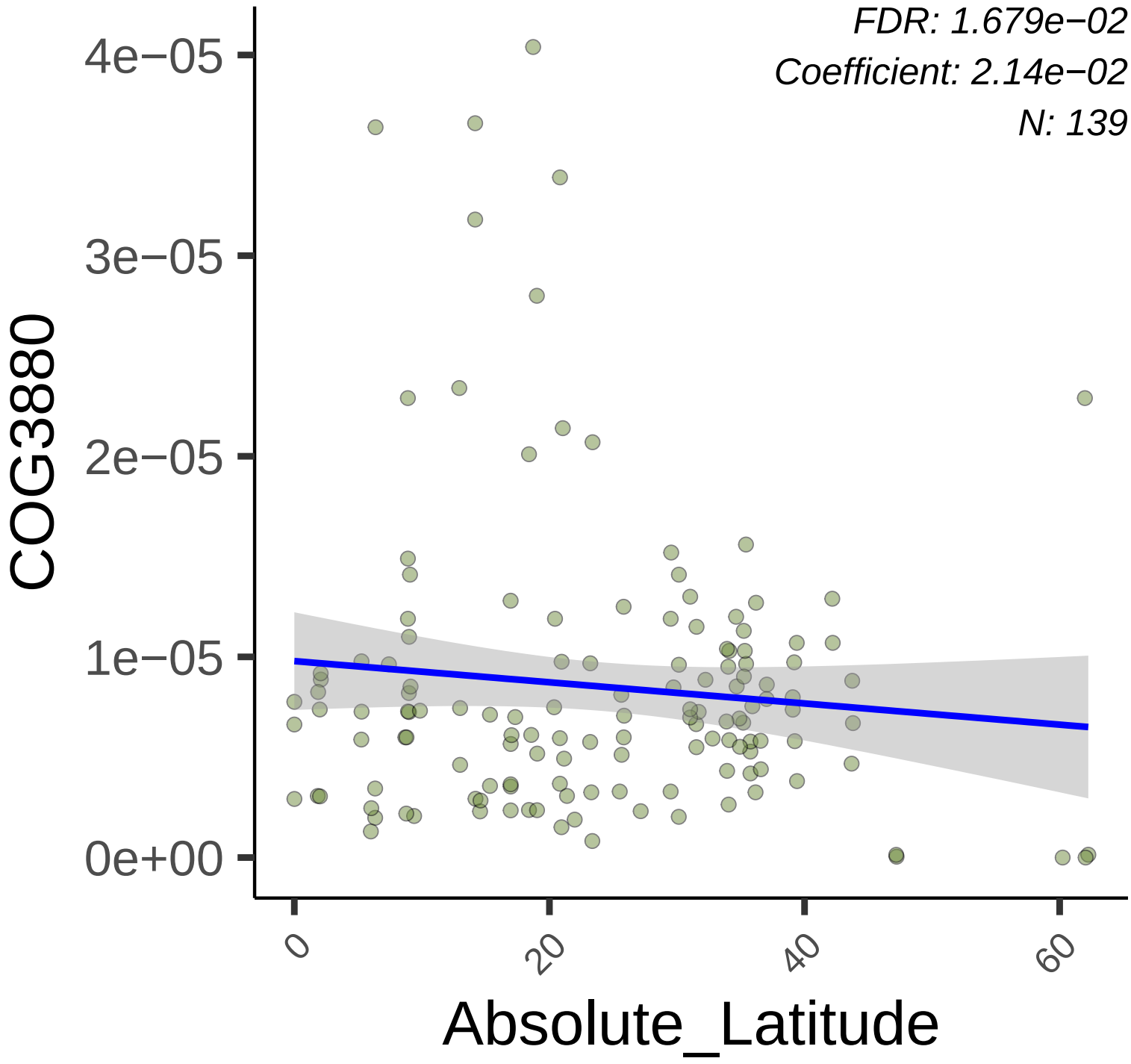

FDR: 1.668e−02
Coefficient: 3.48e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0285
0
20
40
60
Absolute_Latitude

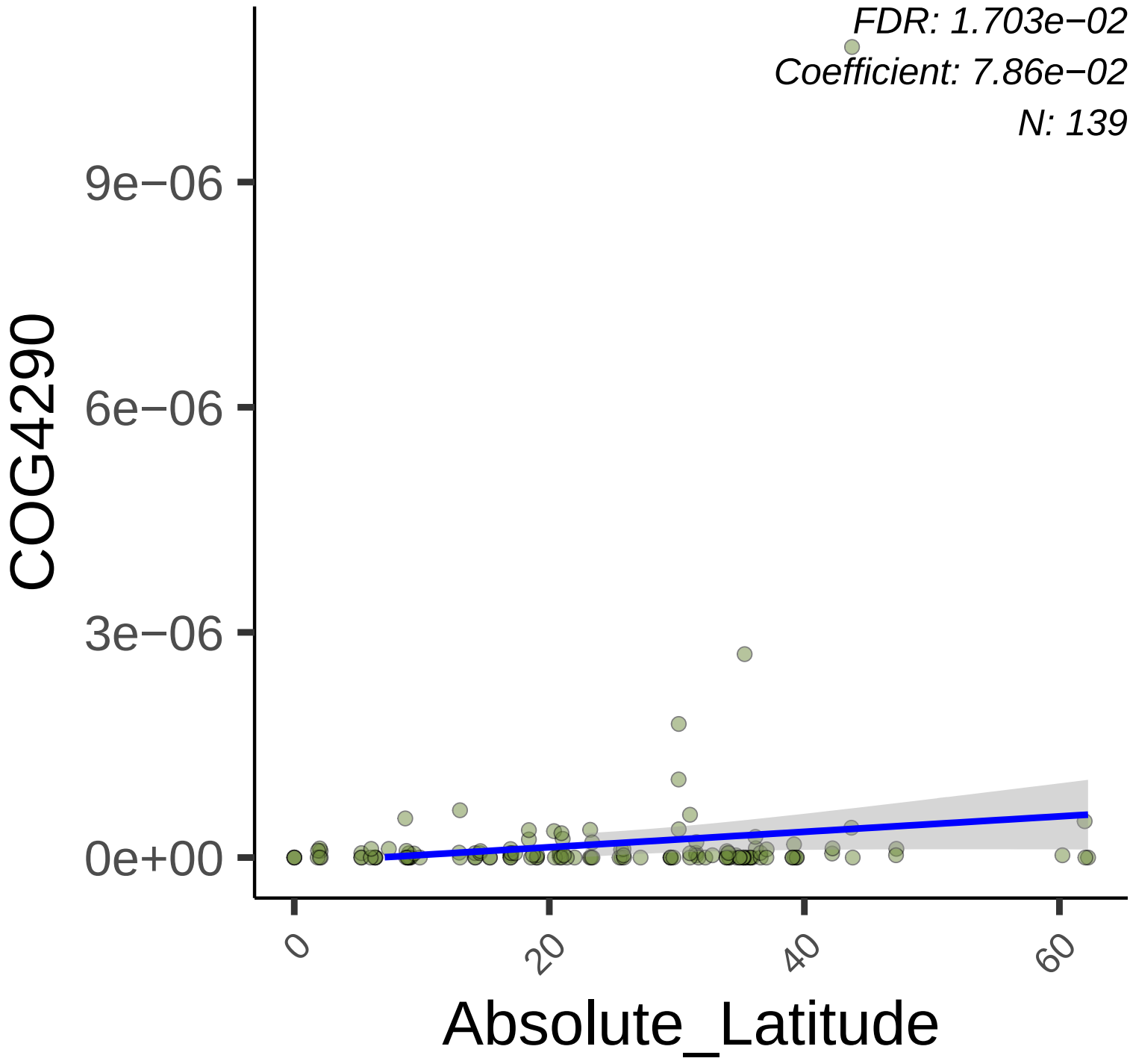

FDR: 1.668e−02
Coefficient: −1.40e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
COG3323
0
20
40
60
Absolute_Latitude

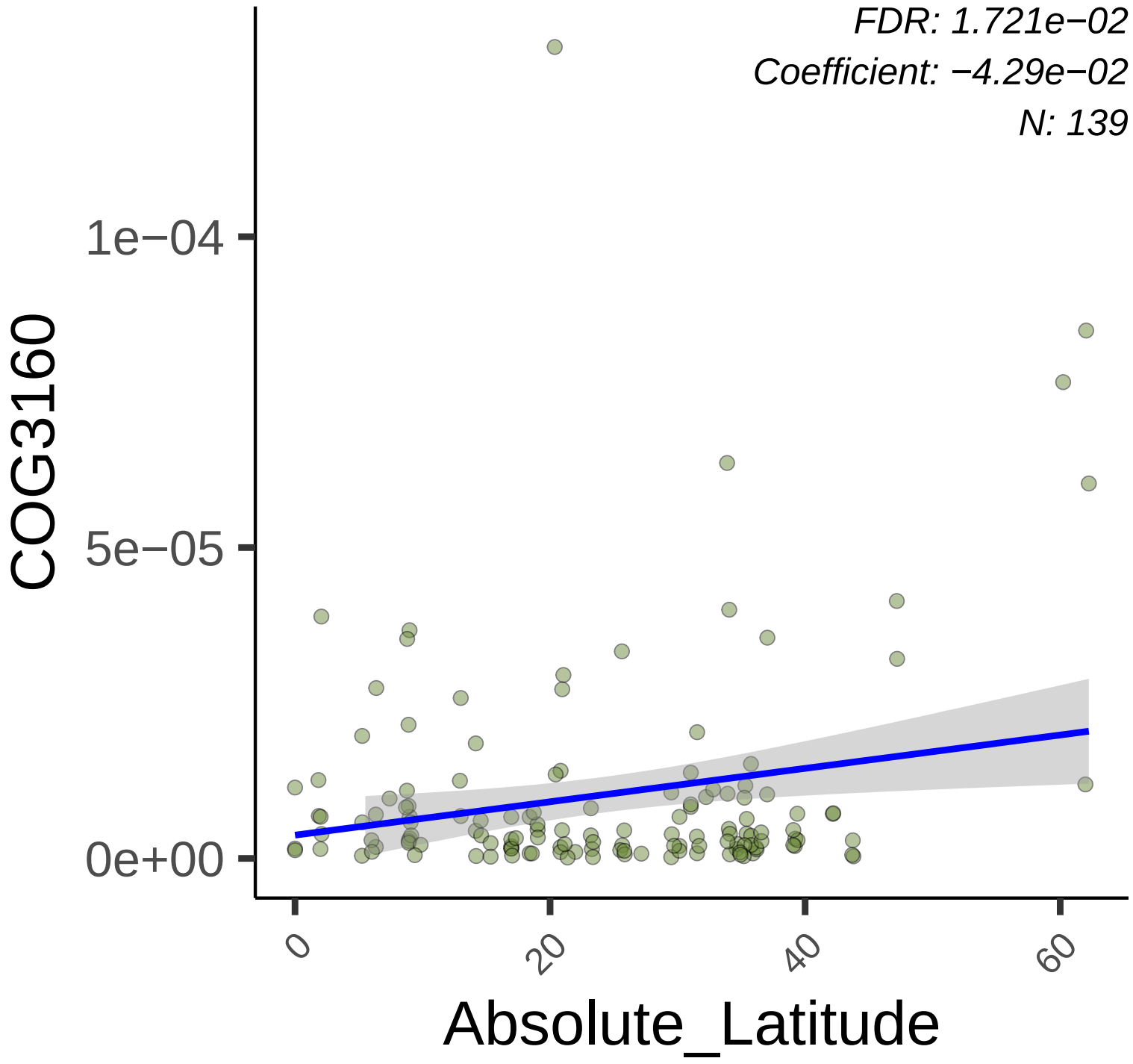

FDR: 1.670e−02
Coefficient: −3.06e−02
N: 139
COG5323
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

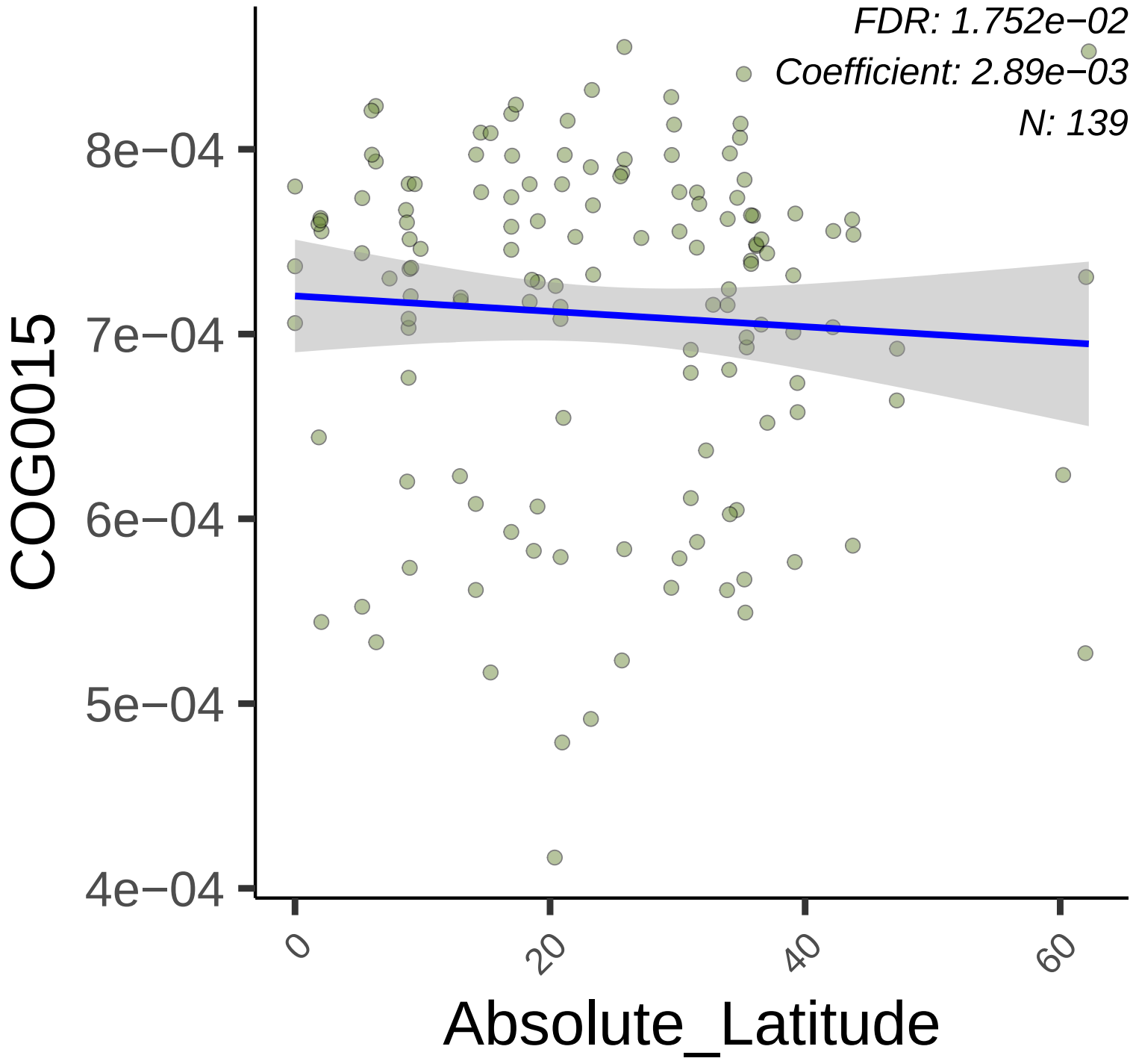

FDR: 1.673e−02
Coefficient: −3.37e−02
N: 139
COG3209
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

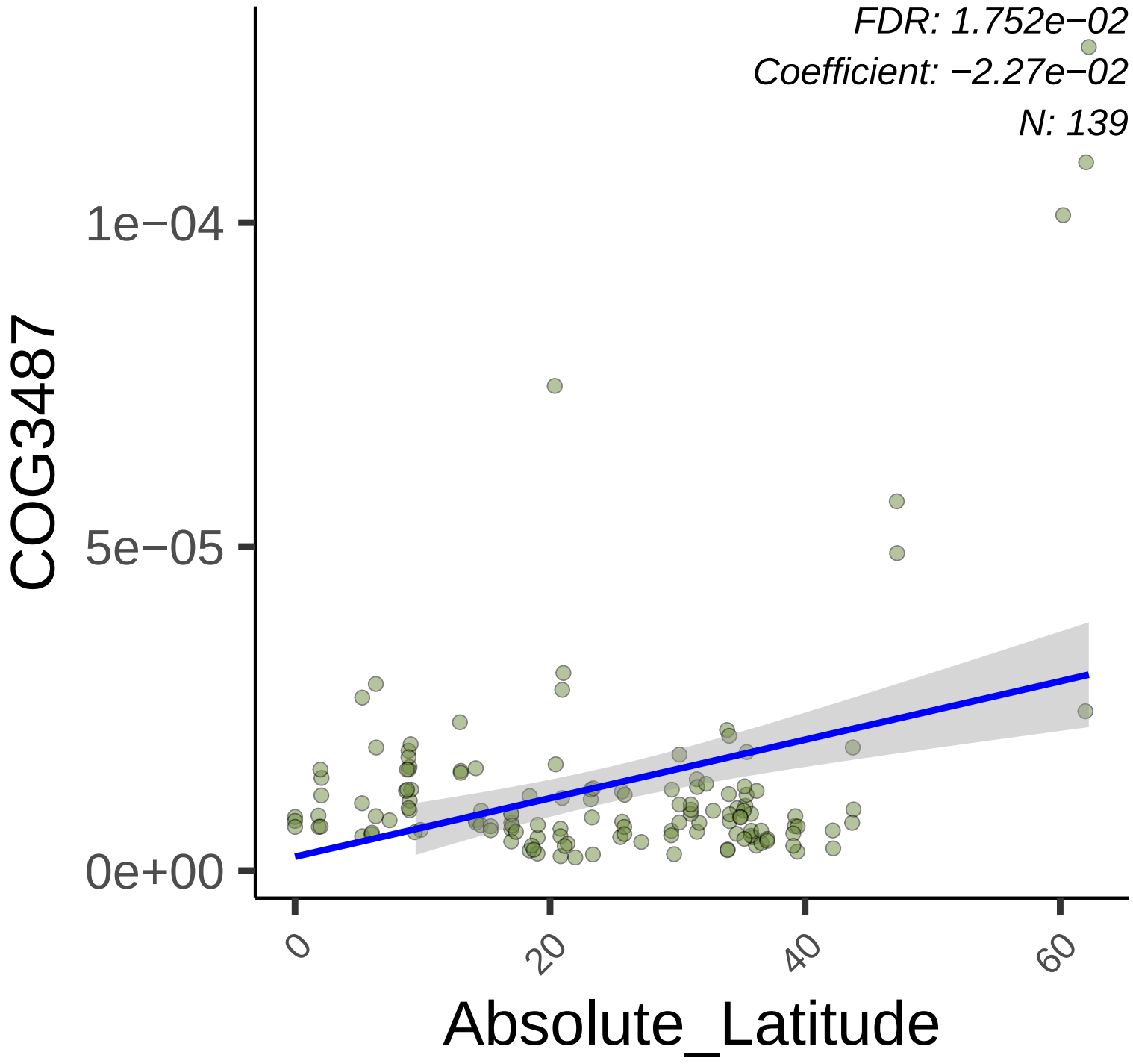

FDR: 1.674e−02
Coefficient: −3.57e−02
N: 139
0.00012
0.00009
0.00006
0.00003
0.00000
COG3530
0
20
40
60
Absolute_Latitude

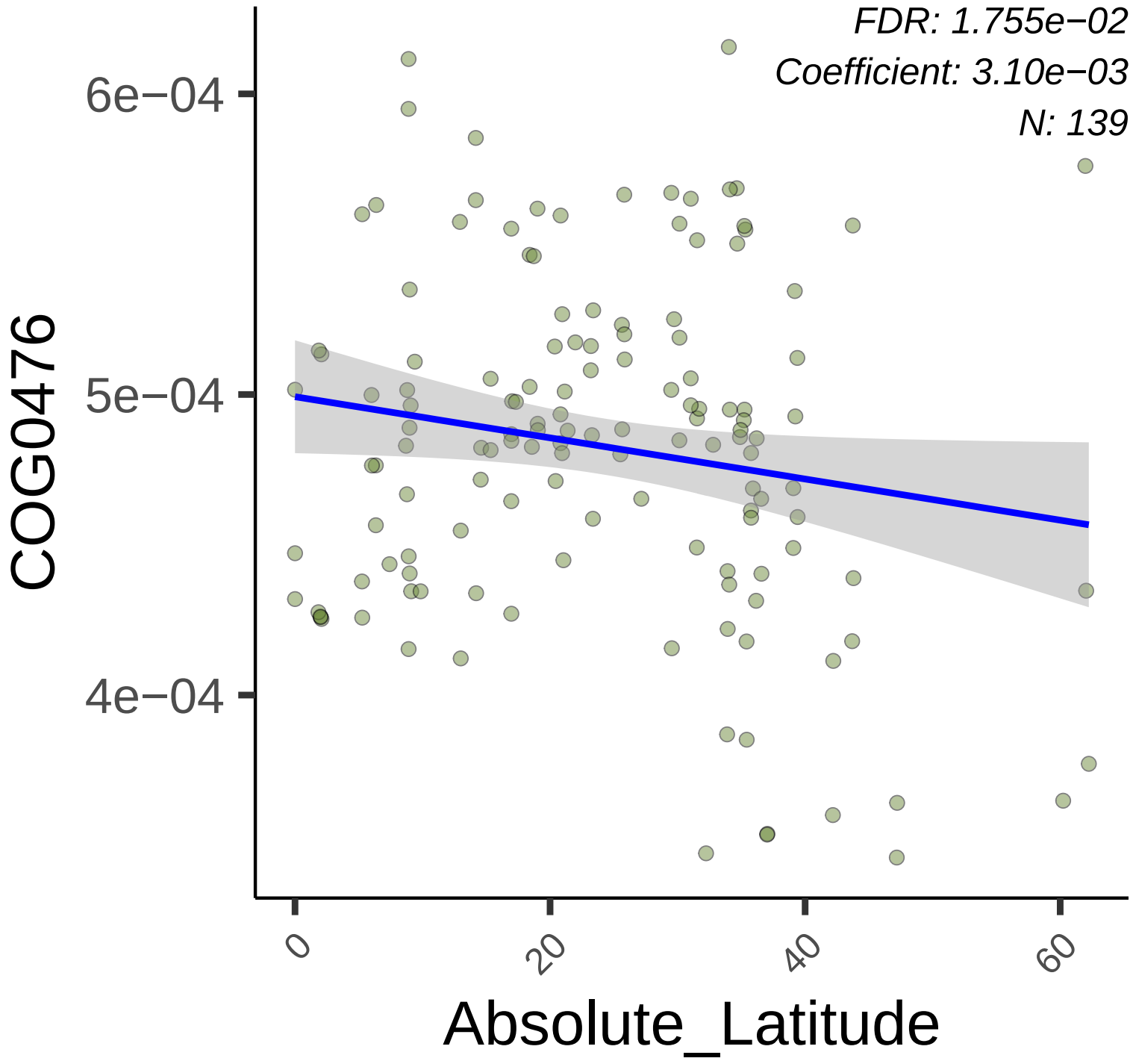

FDR: 1.679e−02
Coefficient: 2.14e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG3880
0
20
40
60
Absolute_Latitude

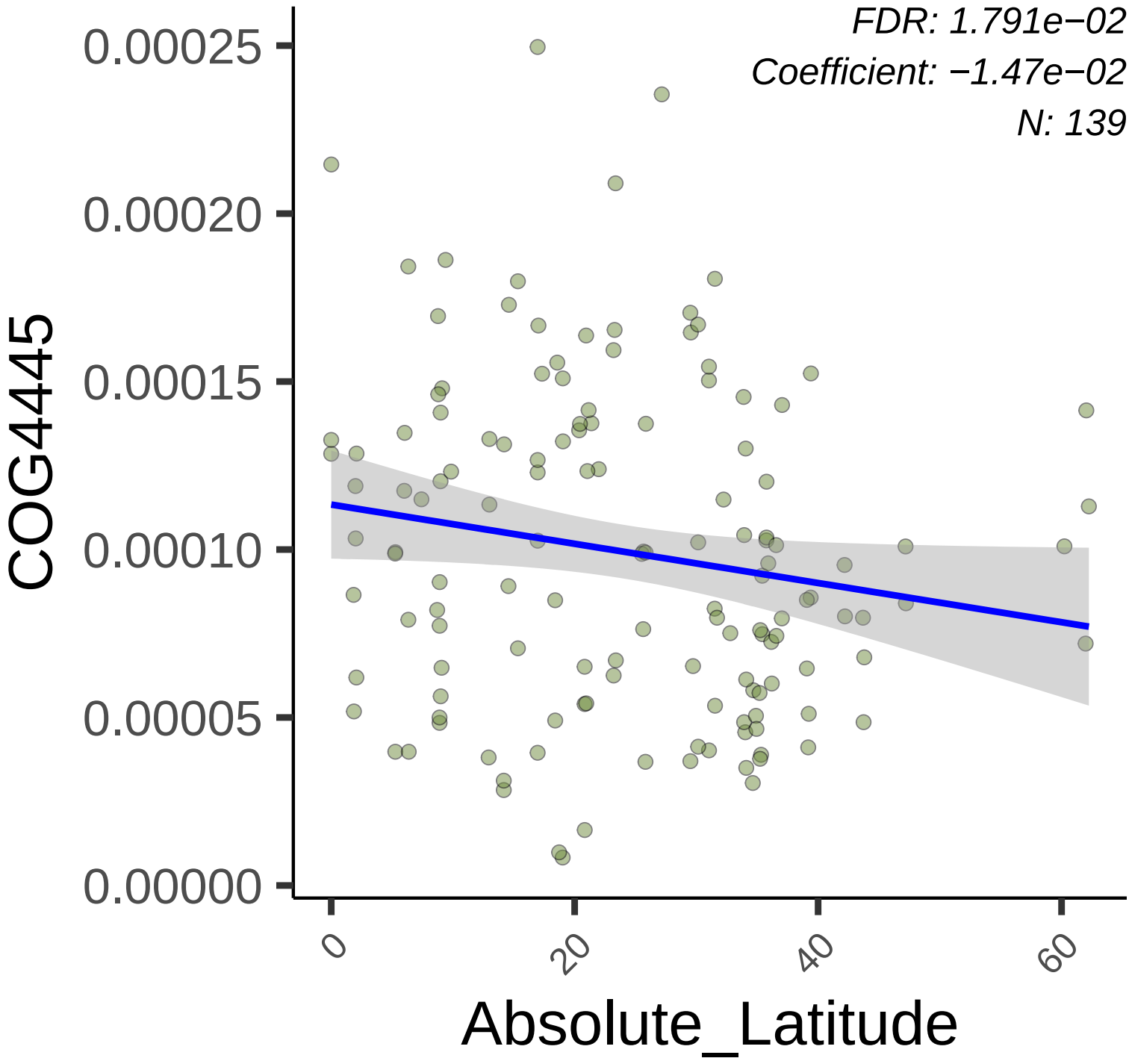

FDR: 1.703e−02
Coefficient: 7.86e−02
N: 139
COG4290
9e−06
6e−06
3e−06
0e+00
0
20
40
60
Absolute_Latitude

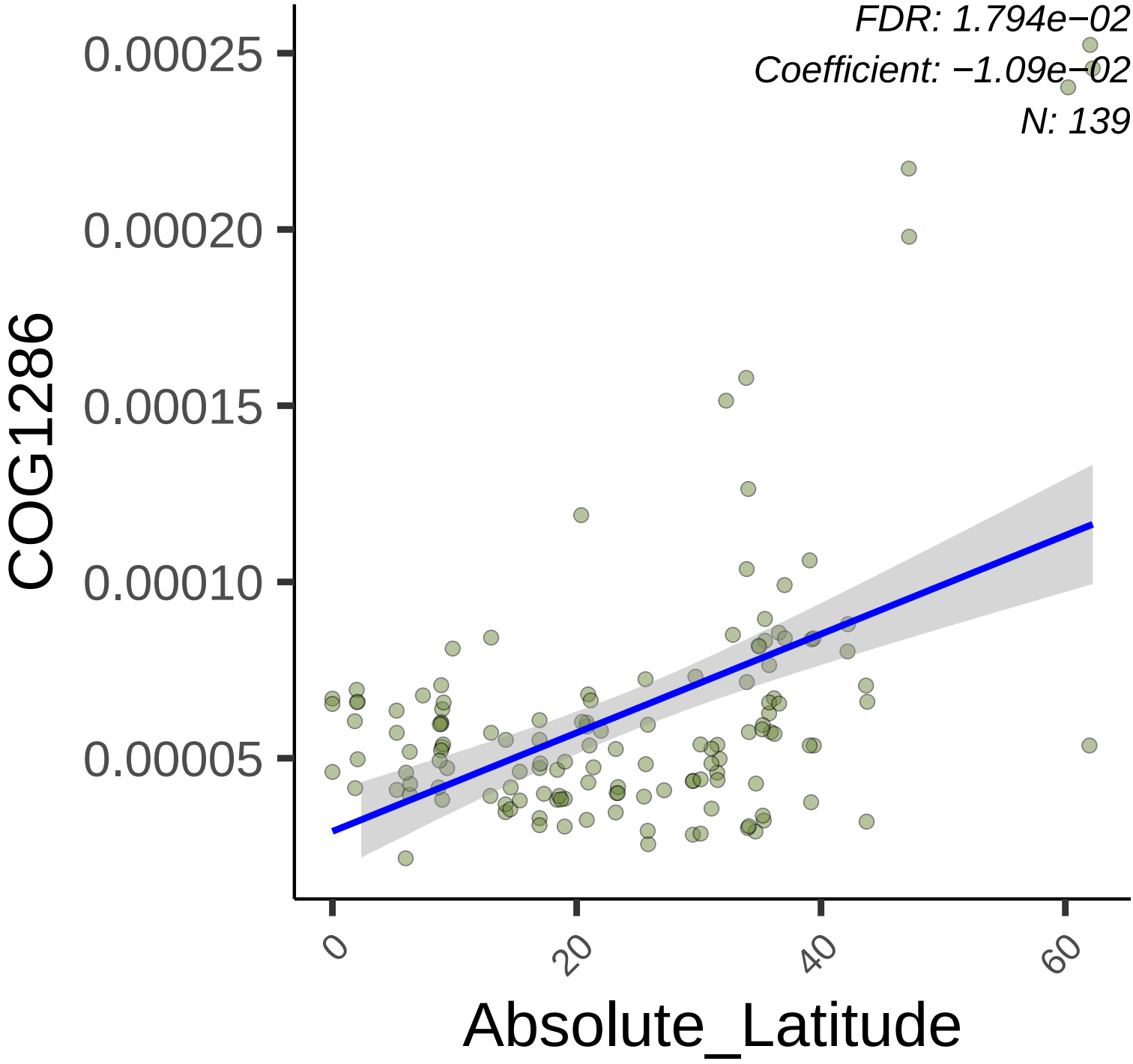

FDR: 1.721e−02
Coefficient: −4.29e−02
N: 139
COG3160
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

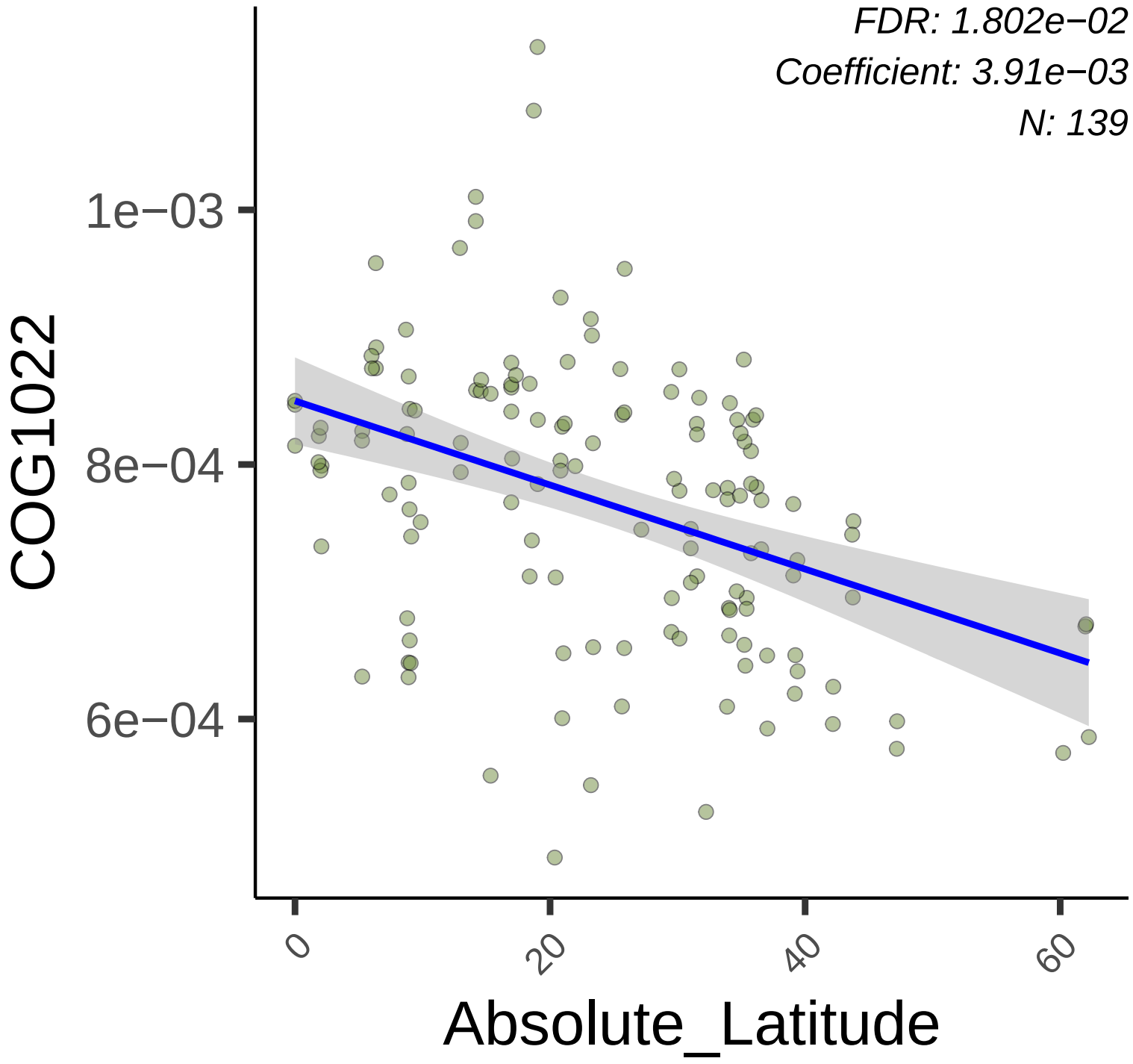

FDR: 1.752e−02
Coefficient: 2.89e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
COG0015
0
20
40
60
Absolute_Latitude

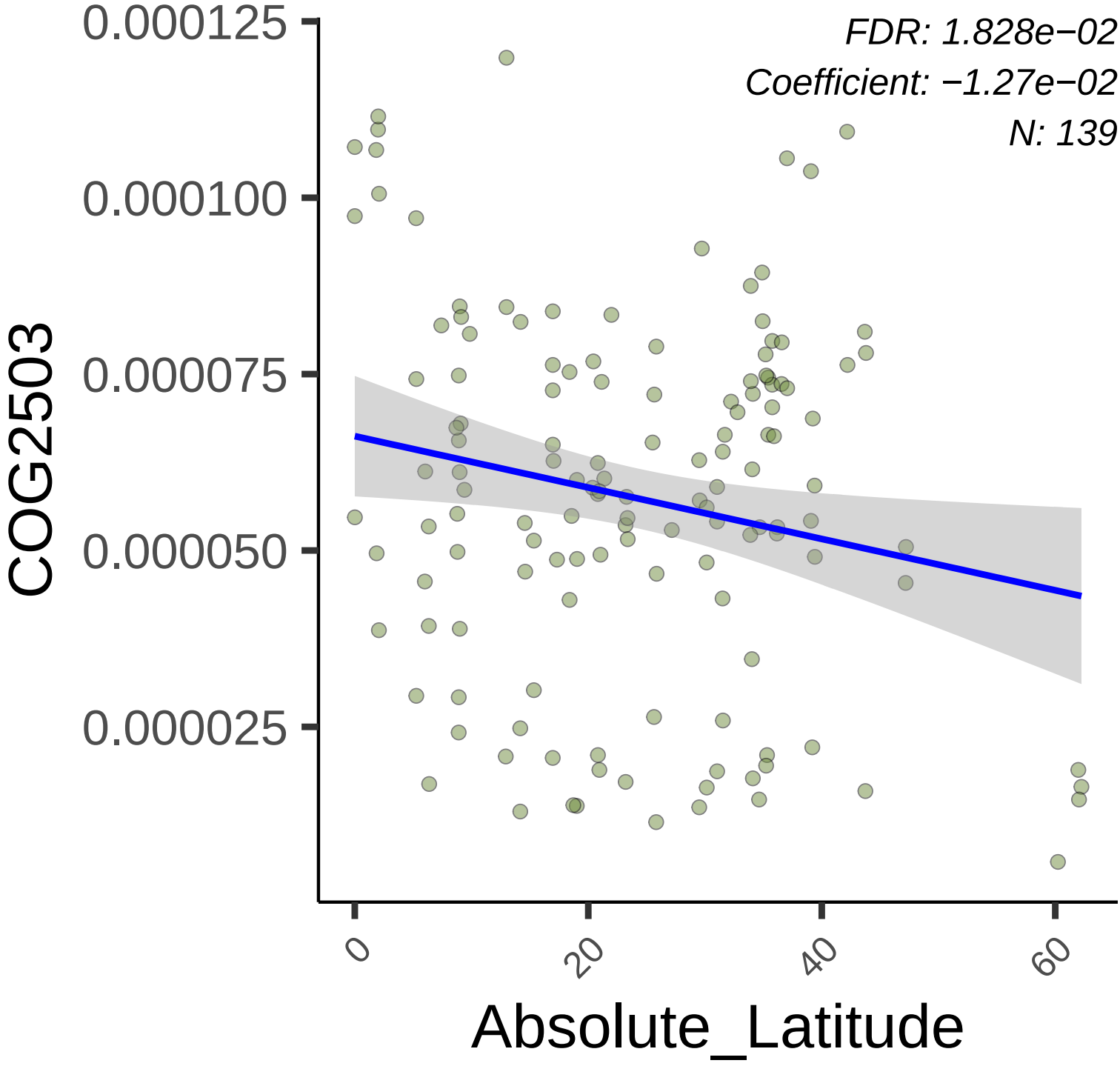

FDR: 1.752e−02
Coefficient: −2.27e−02
N: 139
COG3487
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

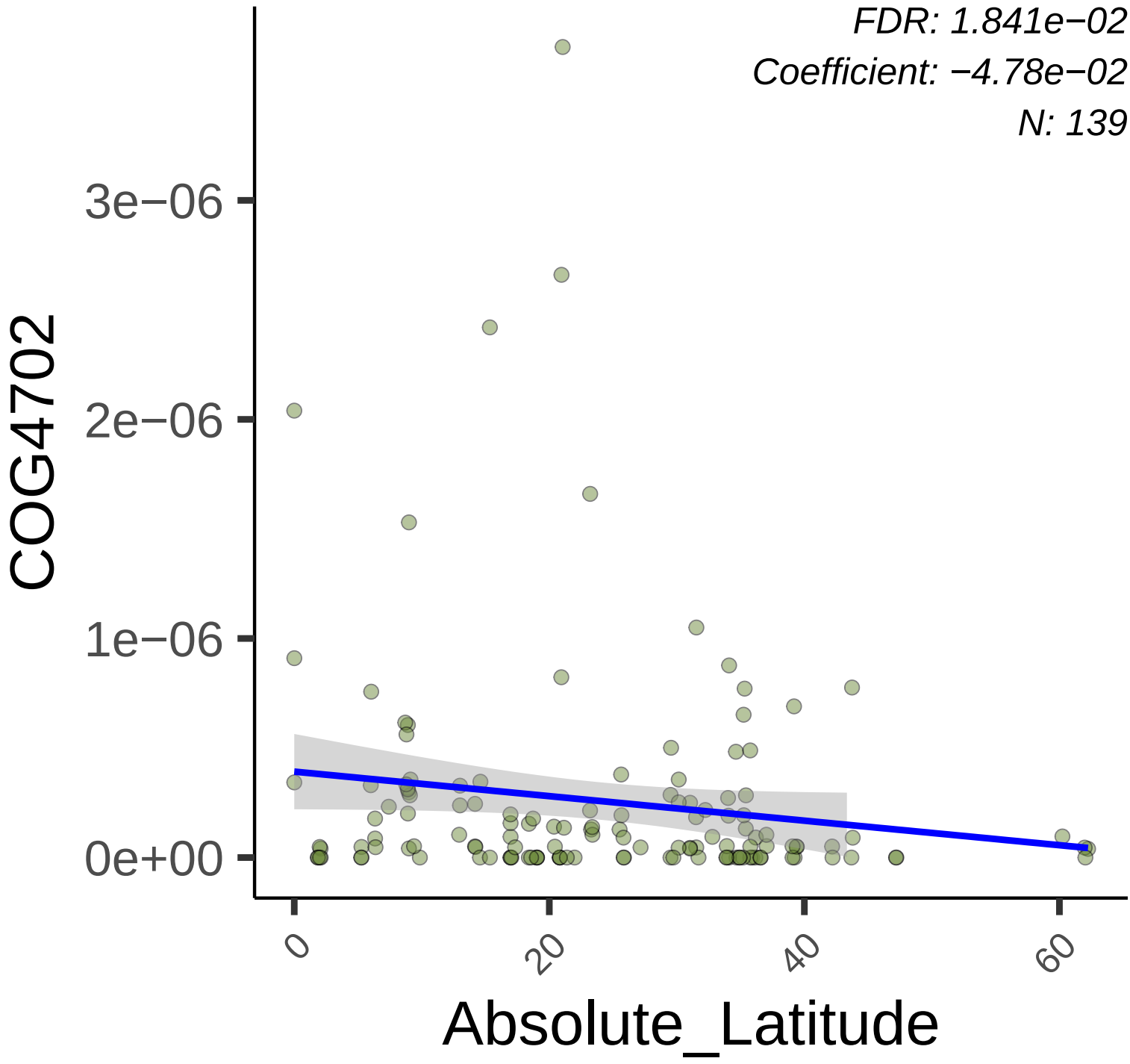

FDR: 1.755e−02
Coefficient: 3.10e−03
N: 139
6e−04
5e−04
4e−04
COG0476
0
20
40
60
Absolute_Latitude

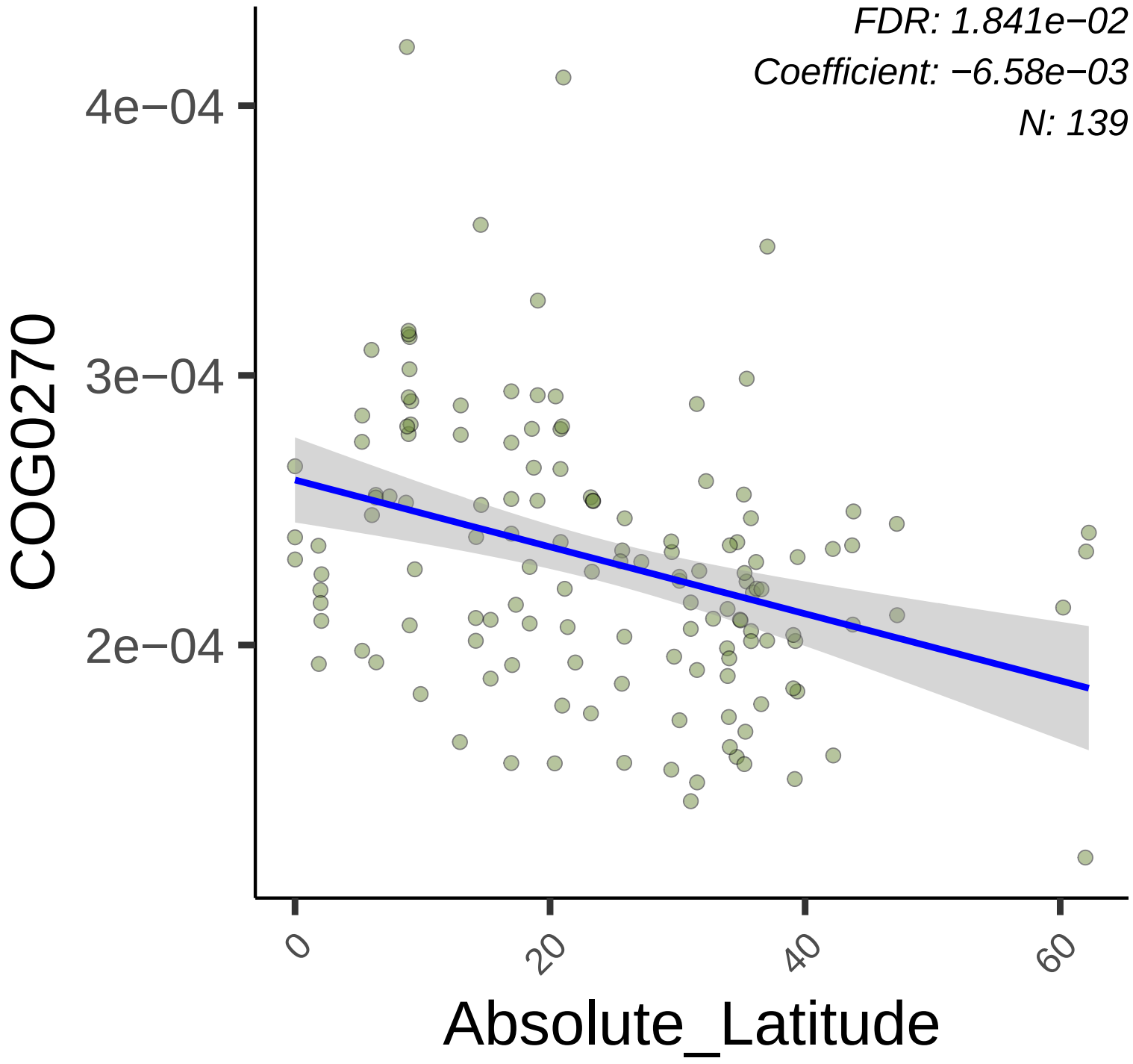

FDR: 1.791e−02
Coefficient: −1.47e−02
N: 139
COG4445
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

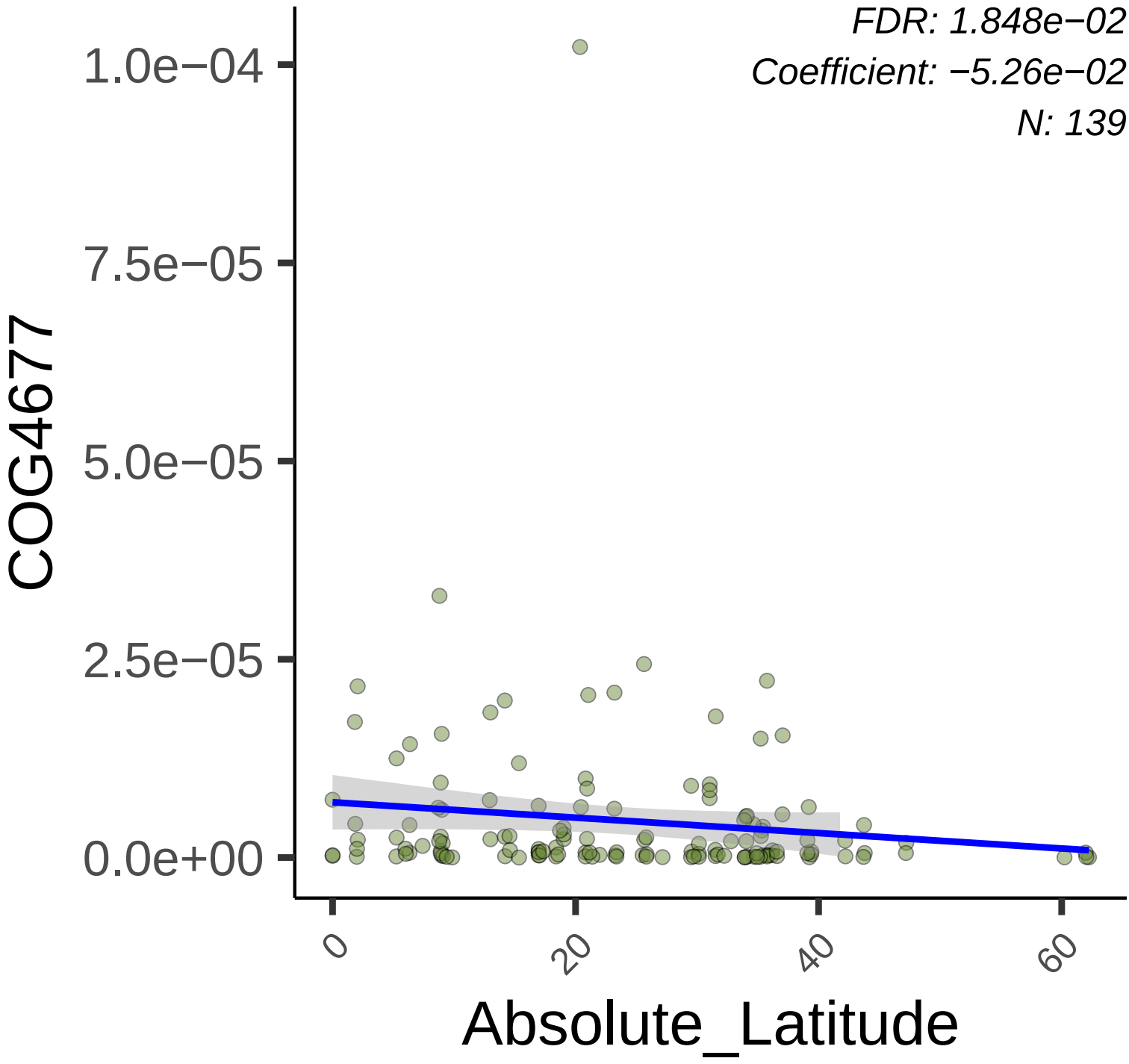

FDR: 1.794e−02
Coefficient: −1.09e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG1286
0
20
40
60
Absolute_Latitude

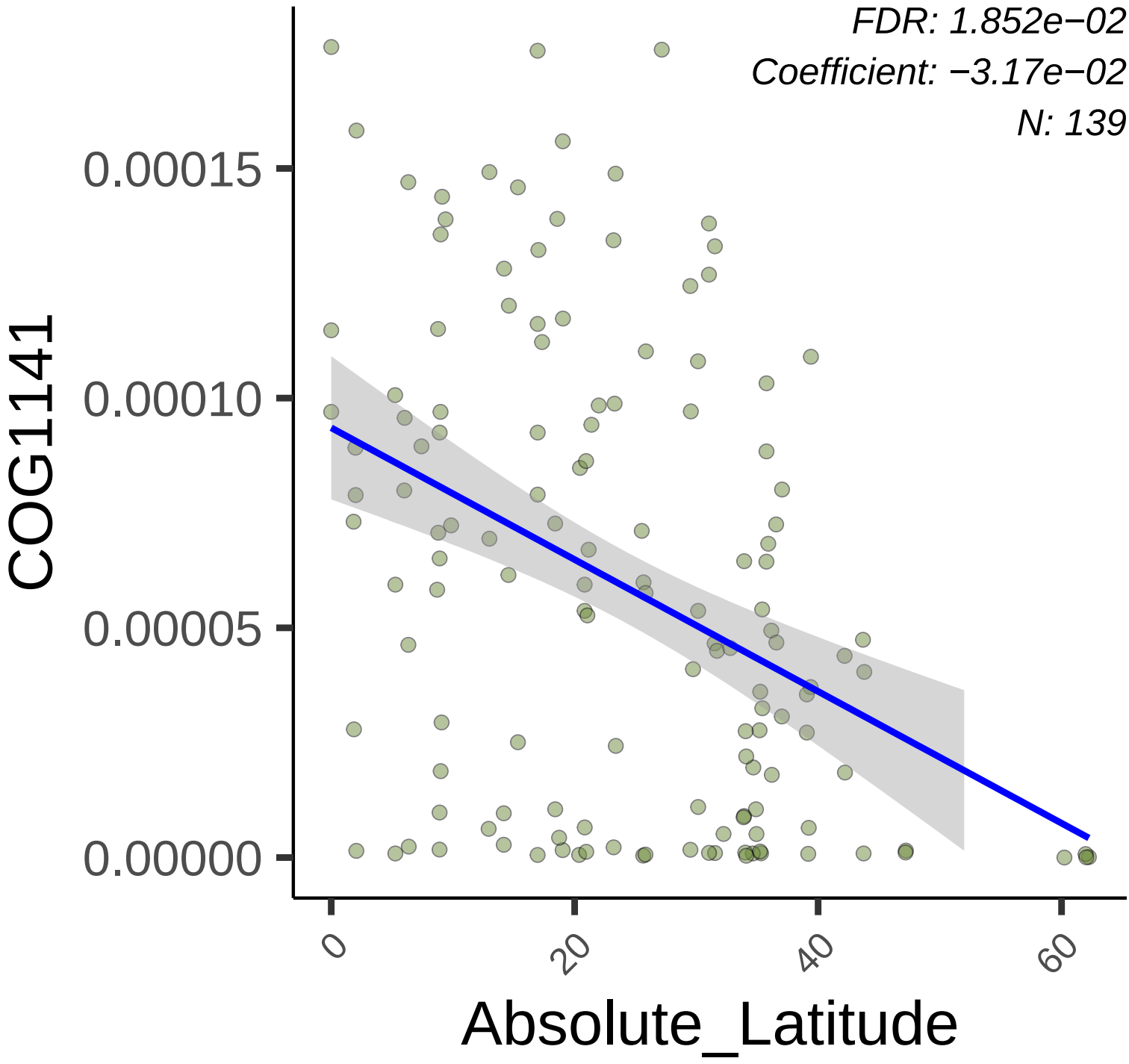

FDR: 1.802e−02
Coefficient: 3.91e−03
N: 139
1e−03
8e−04
6e−04
COG1022
0
20
40
60
Absolute_Latitude

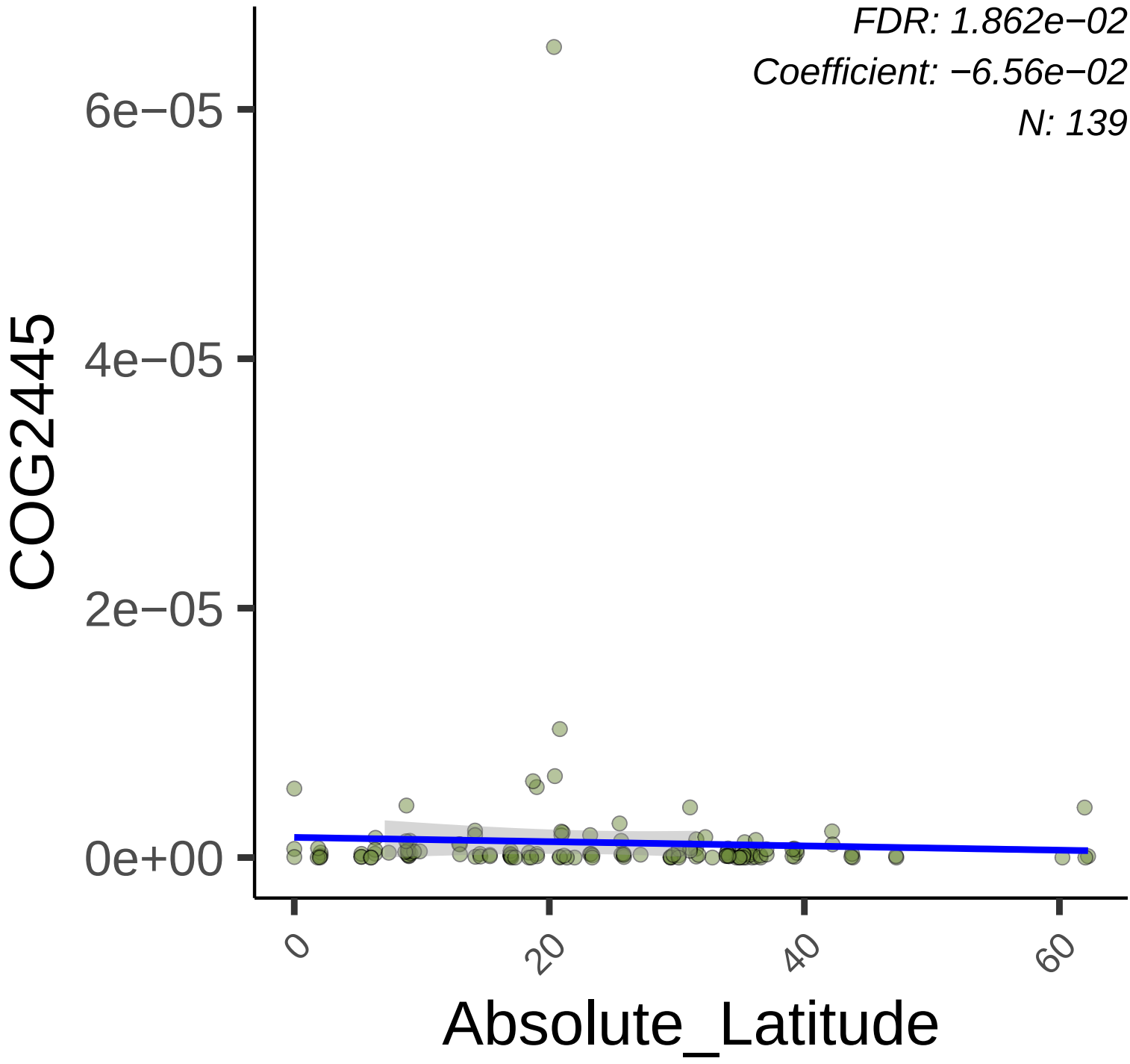

FDR: 1.828e−02
Coefficient: −1.27e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
COG2503
0
20
40
60
Absolute_Latitude

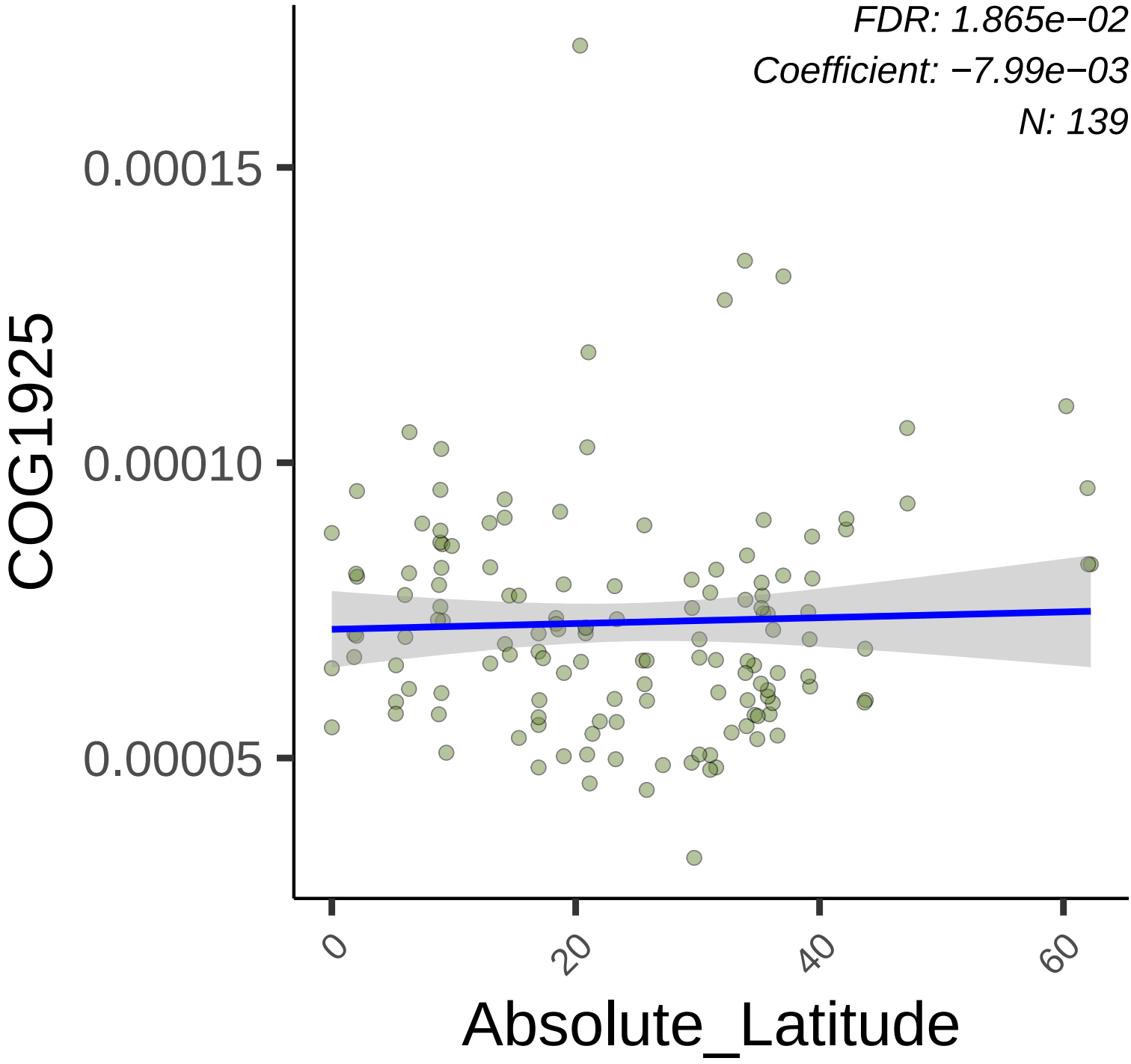

FDR: 1.841e−02
Coefficient: −4.78e−02
N: 139
COG4702
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

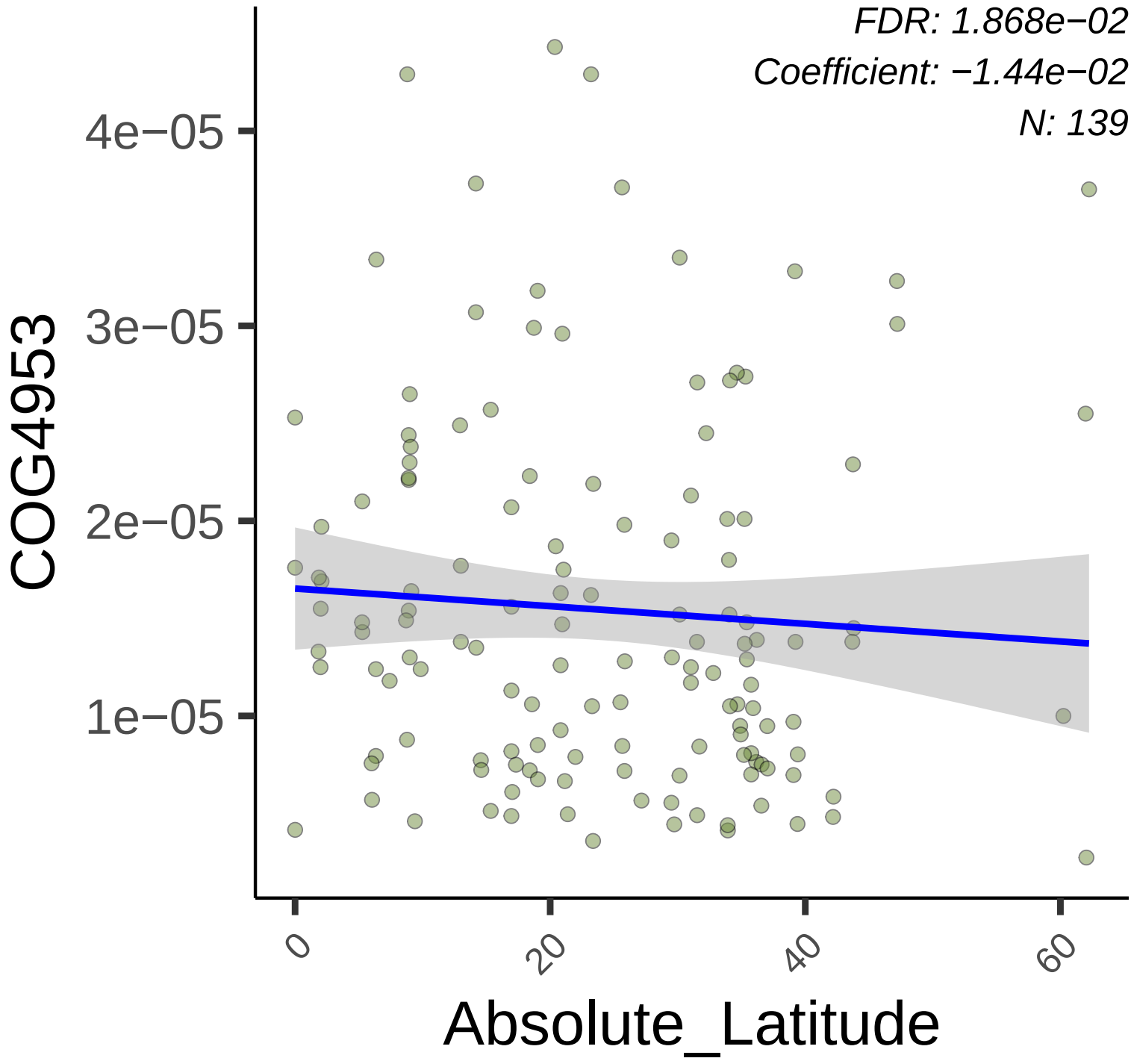

FDR: 1.841e−02
Coefficient: −6.58e−03
N: 139
4e−04
3e−04
2e−04
COG0270
0
20
40
60
Absolute_Latitude

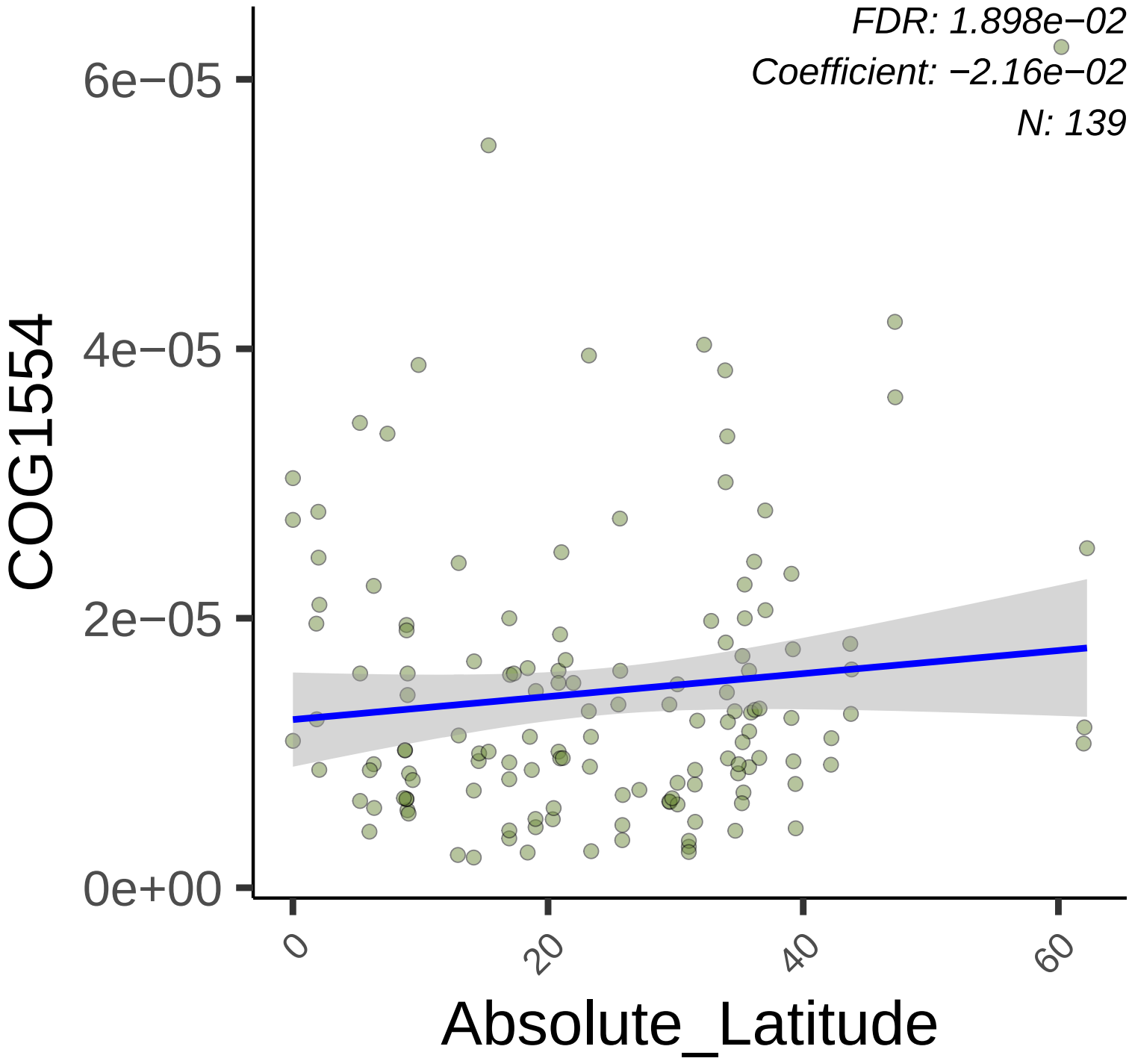

FDR: 1.848e−02
Coefficient: −5.26e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG4677
0
20
40
60
Absolute_Latitude

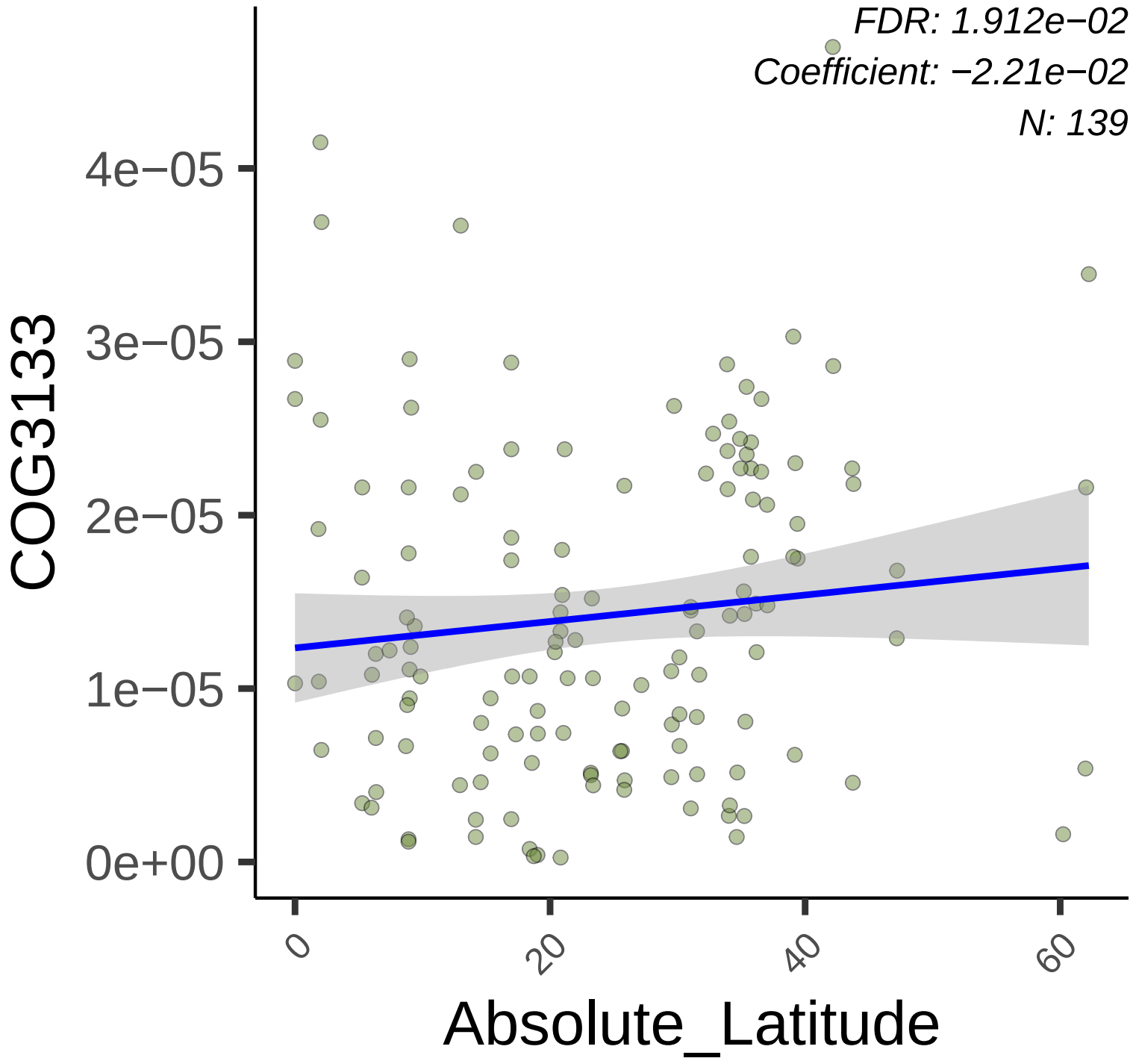

FDR: 1.852e−02
Coefficient: −3.17e−02
N: 139
COG1141
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

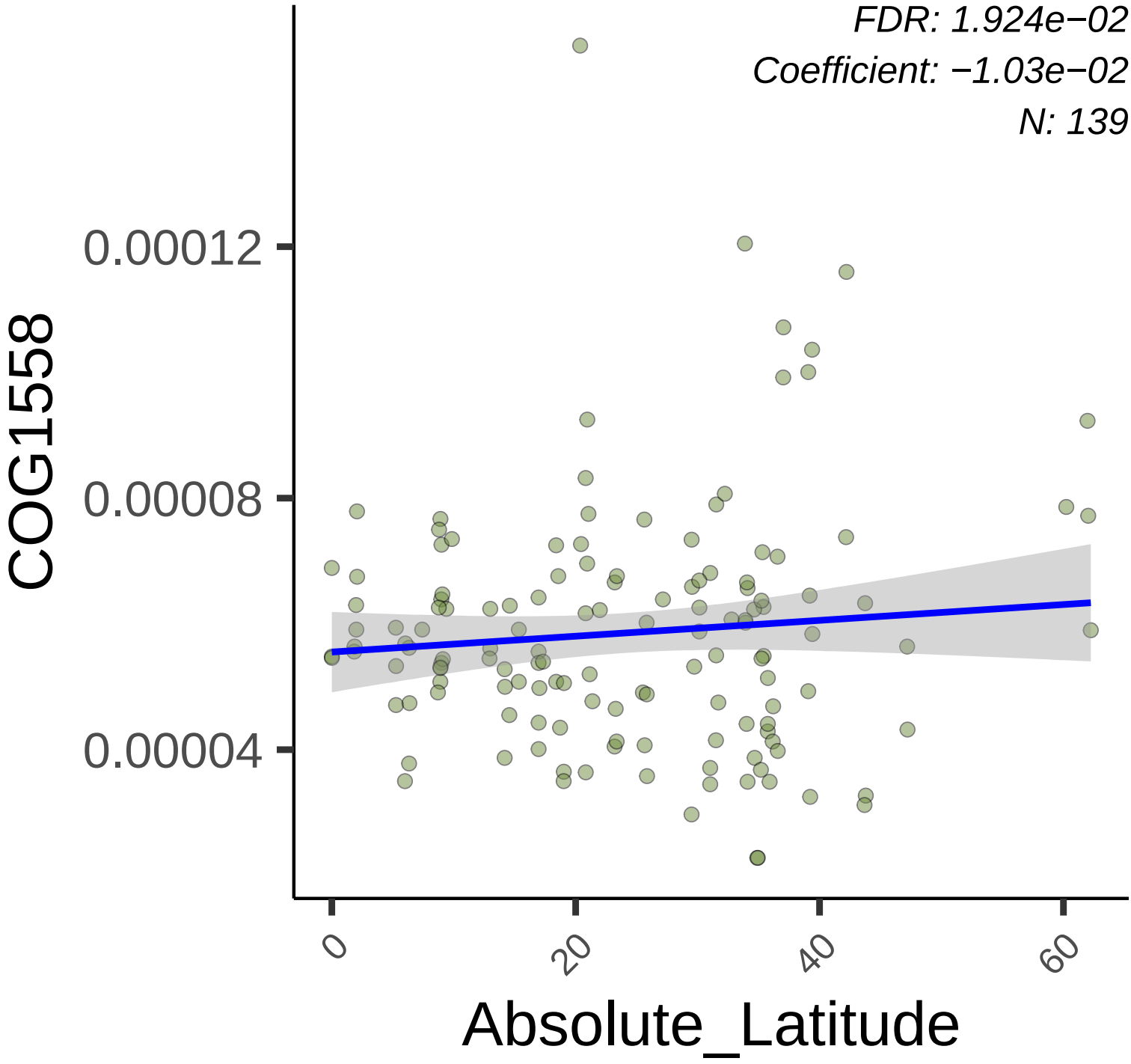

FDR: 1.862e−02
Coefficient: −6.56e−02
N: 139
COG2445
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

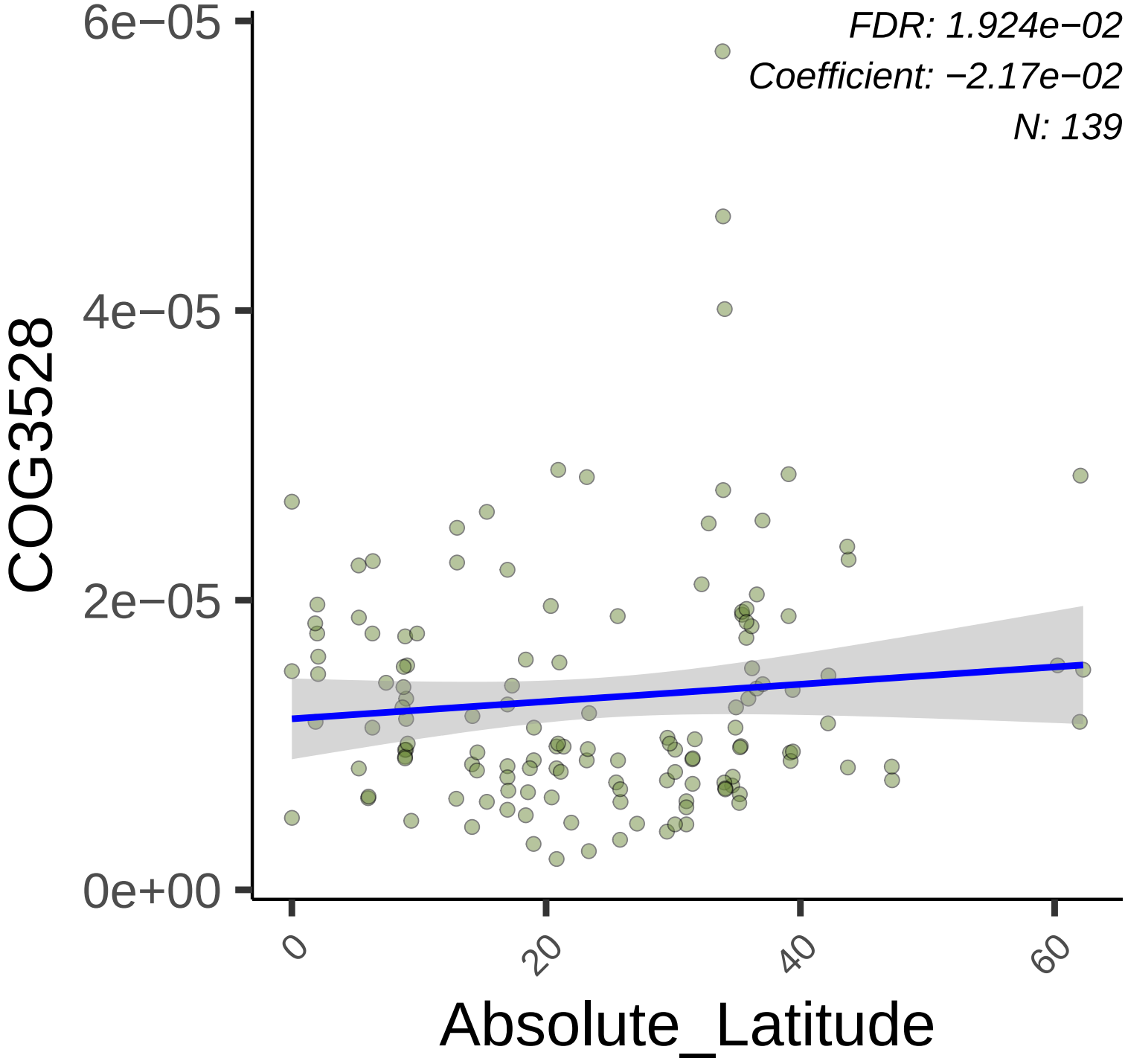

FDR: 1.865e−02
Coefficient: −7.99e−03
N: 139
0.00015
0.00010
0.00005
COG1925
0
20
40
60
Absolute_Latitude

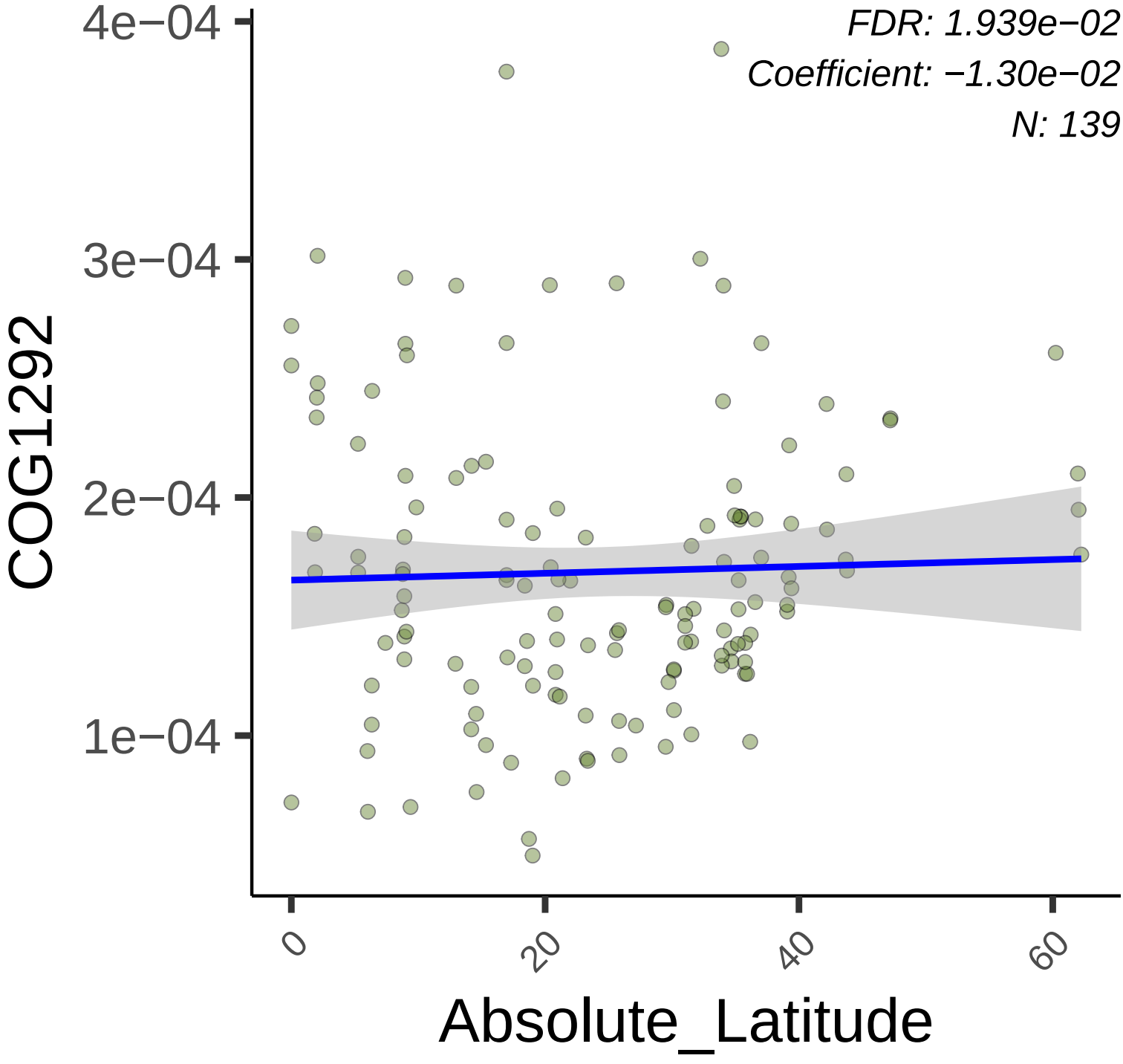

FDR: 1.868e−02
Coefficient: −1.44e−02
N: 139
COG4953
4e−05
3e−05
2e−05
1e−05
0
20
40
60
Absolute_Latitude

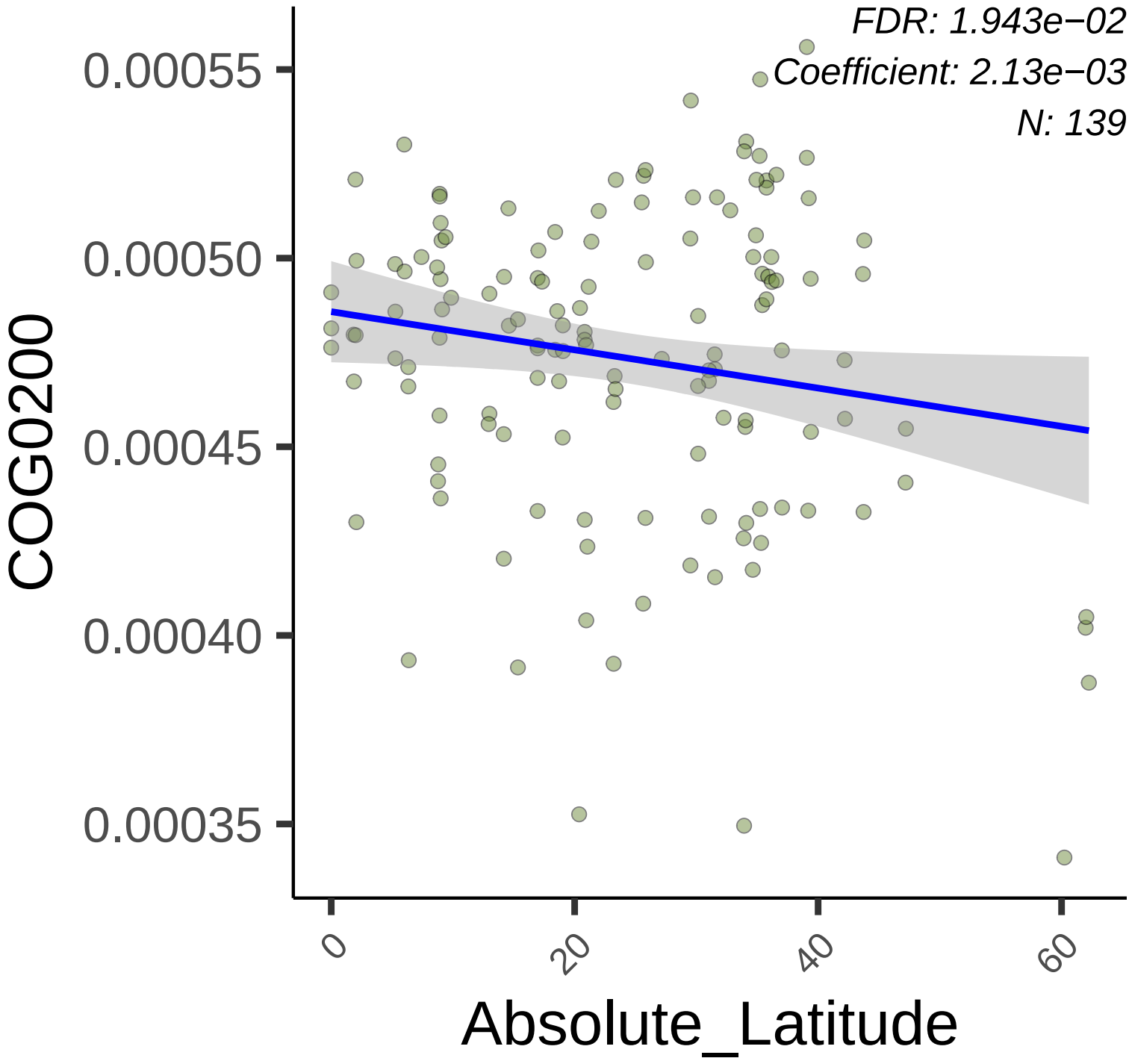

FDR: 1.898e−02
Coefficient: −2.16e−02
N: 139
COG1554
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

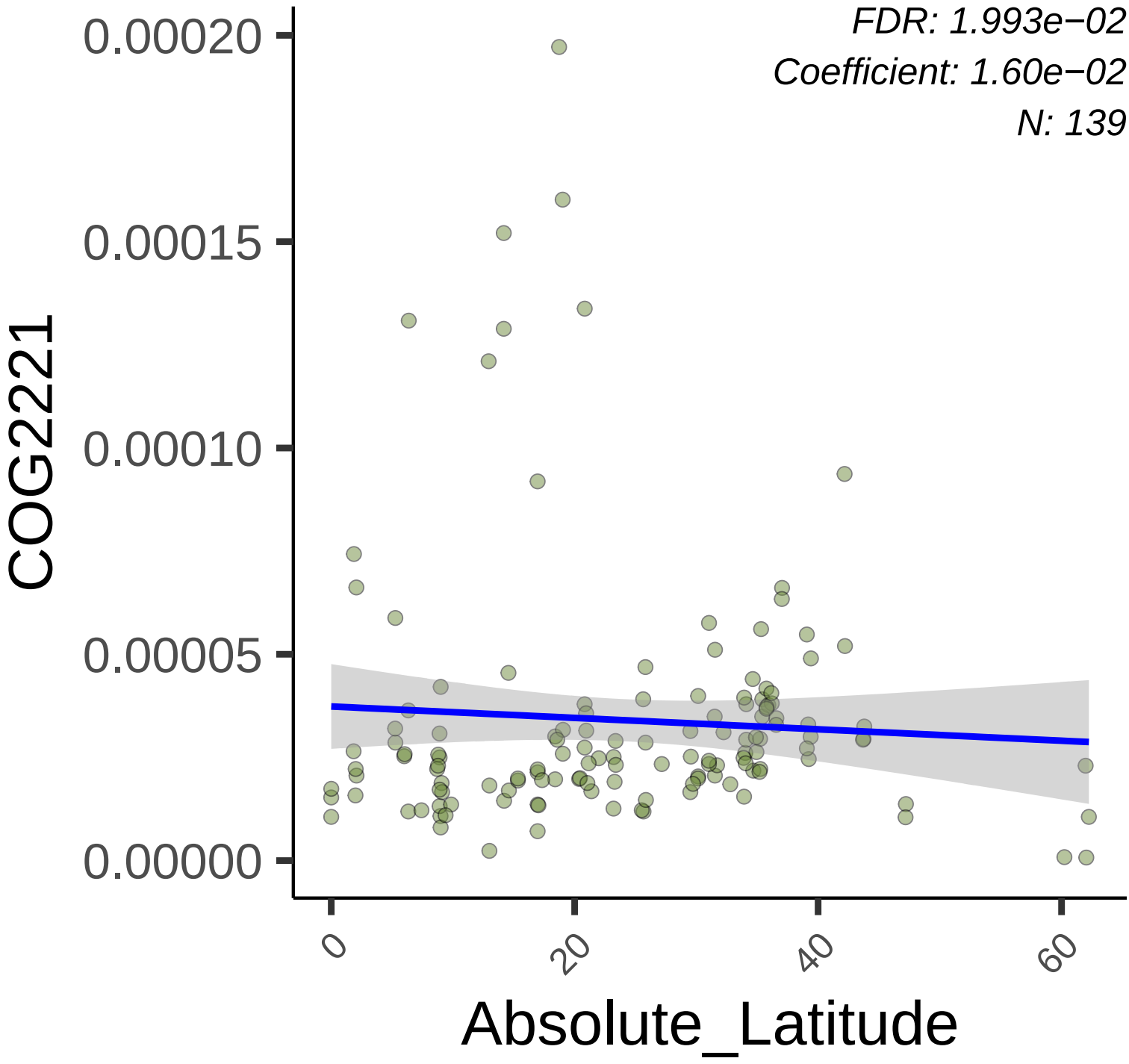

FDR: 1.912e−02
Coefficient: −2.21e−02
N: 139
COG3133
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

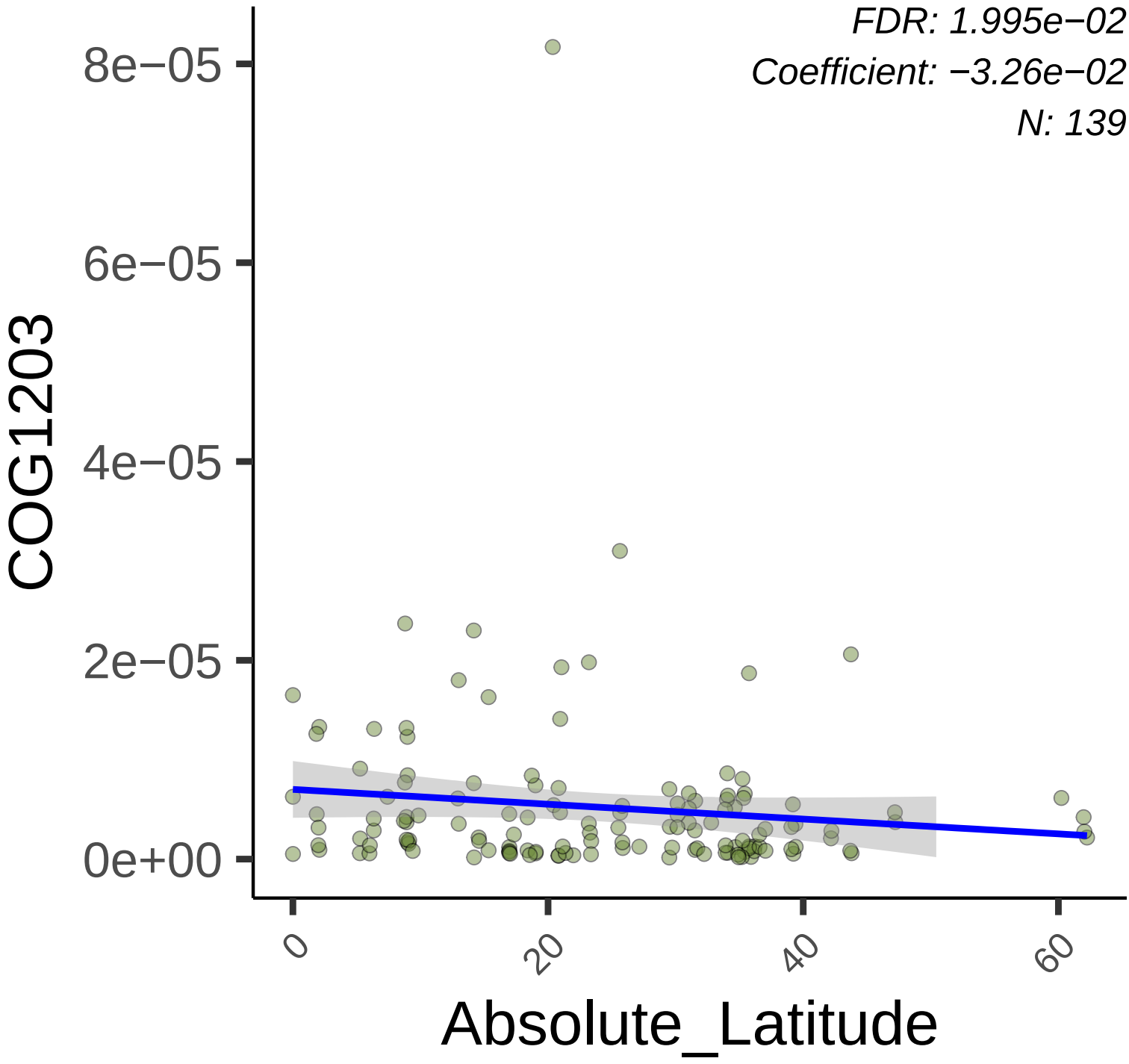

FDR: 1.924e−02
Coefficient: −1.03e−02
N: 139
COG1558
0.00012
0.00008
0.00004
0
20
40
60
Absolute_Latitude

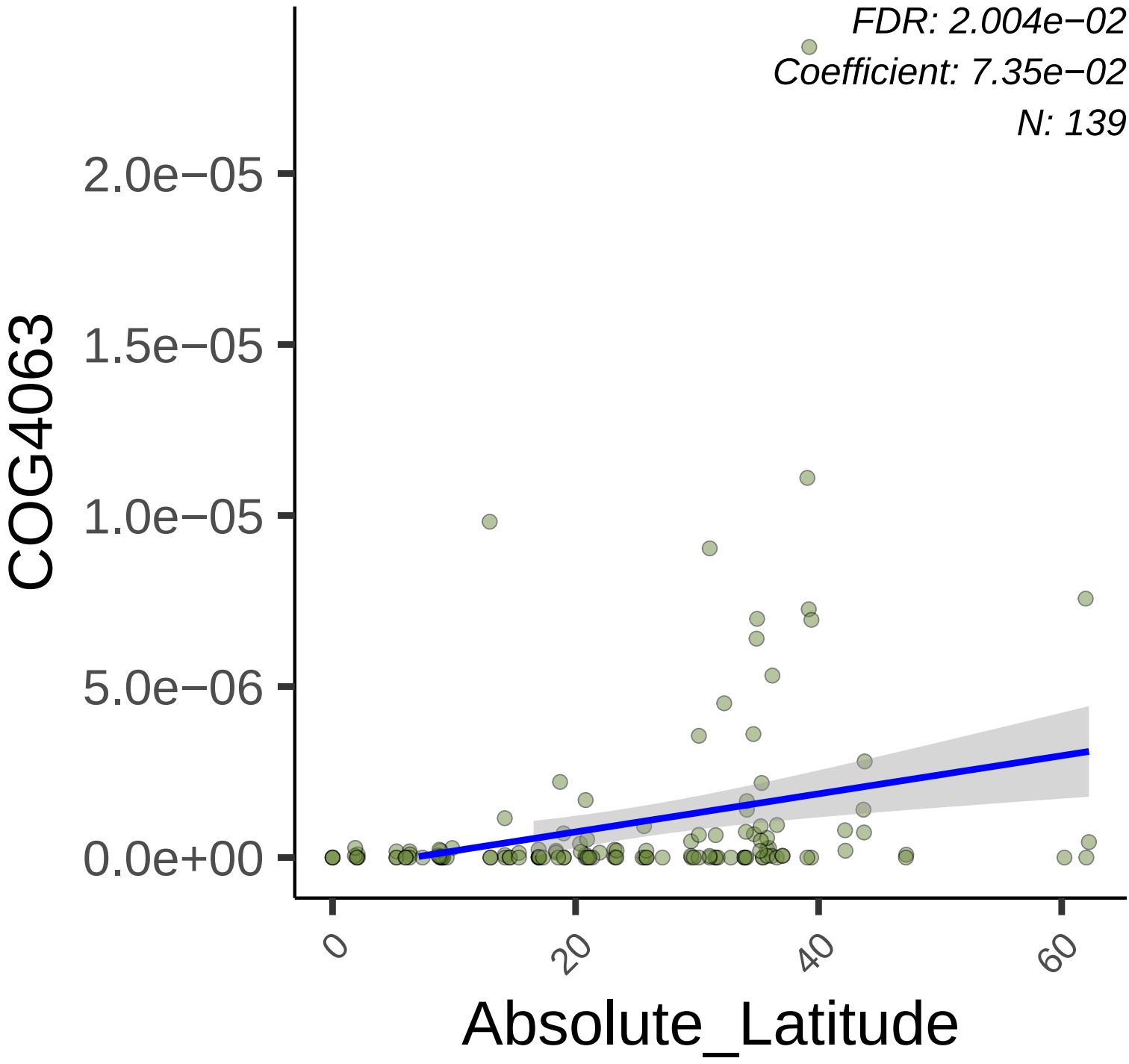

FDR: 1.924e−02
Coefficient: −2.17e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG3528
0
20
40
60
Absolute_Latitude

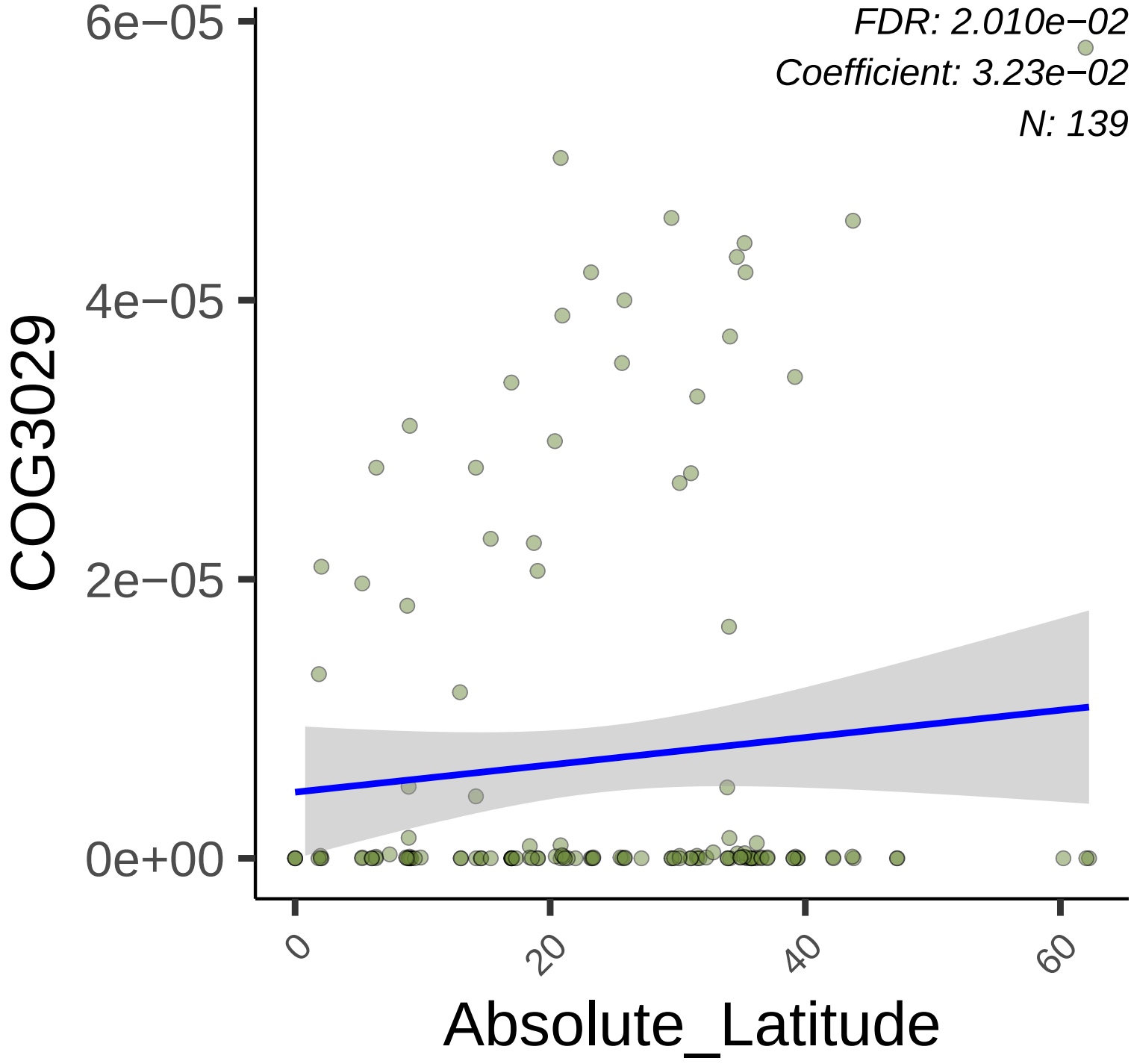

FDR: 1.939e−02
Coefficient: −1.30e−02
N: 139
4e−04
3e−04
2e−04
1e−04
COG1292
0
20
40
60
Absolute_Latitude

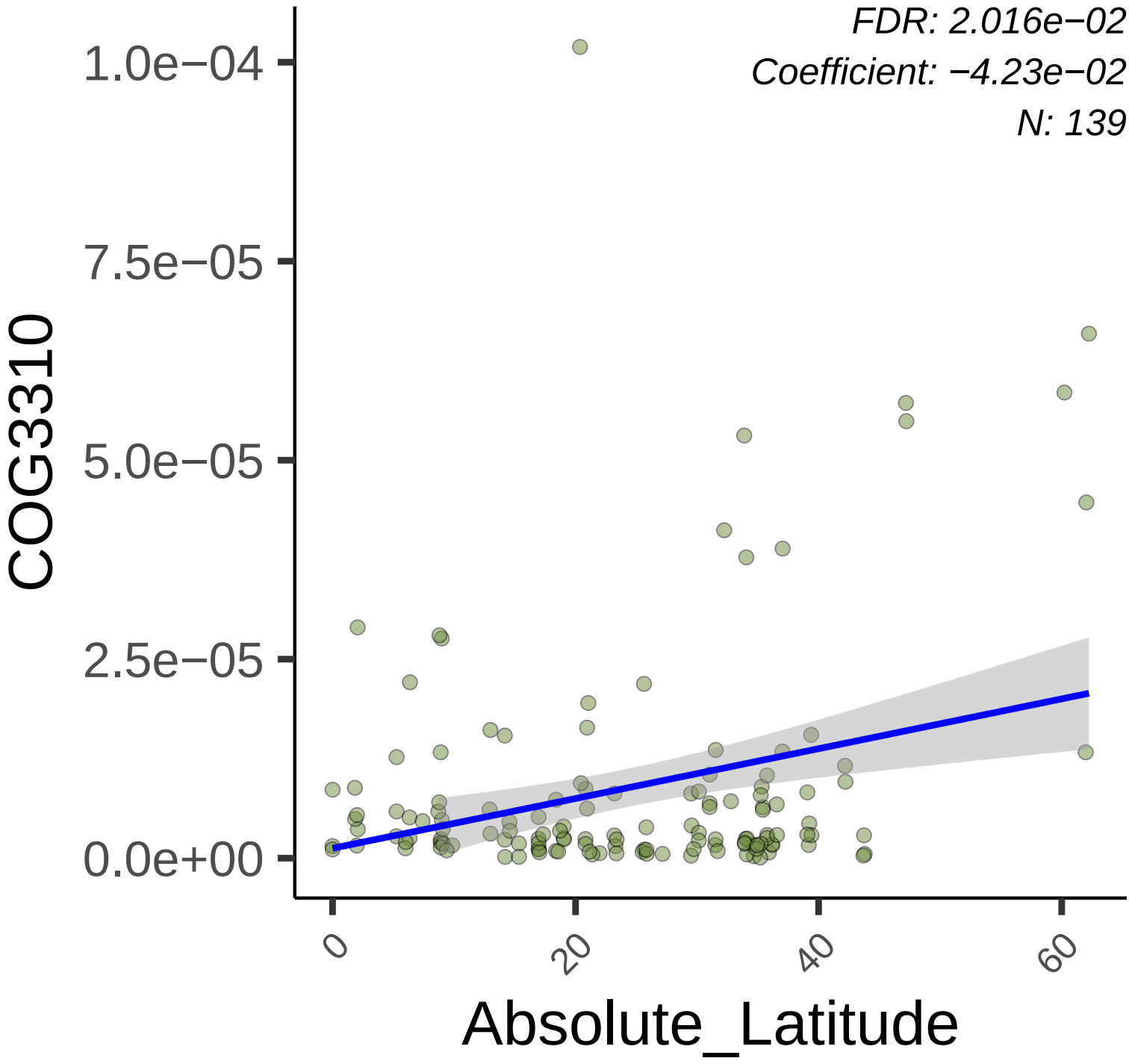

FDR: 1.943e−02
Coefficient: 2.13e−03
N: 139
0.00055
0.00050
0.00045
0.00040
0.00035
COG0200
0
20
40
60
Absolute_Latitude

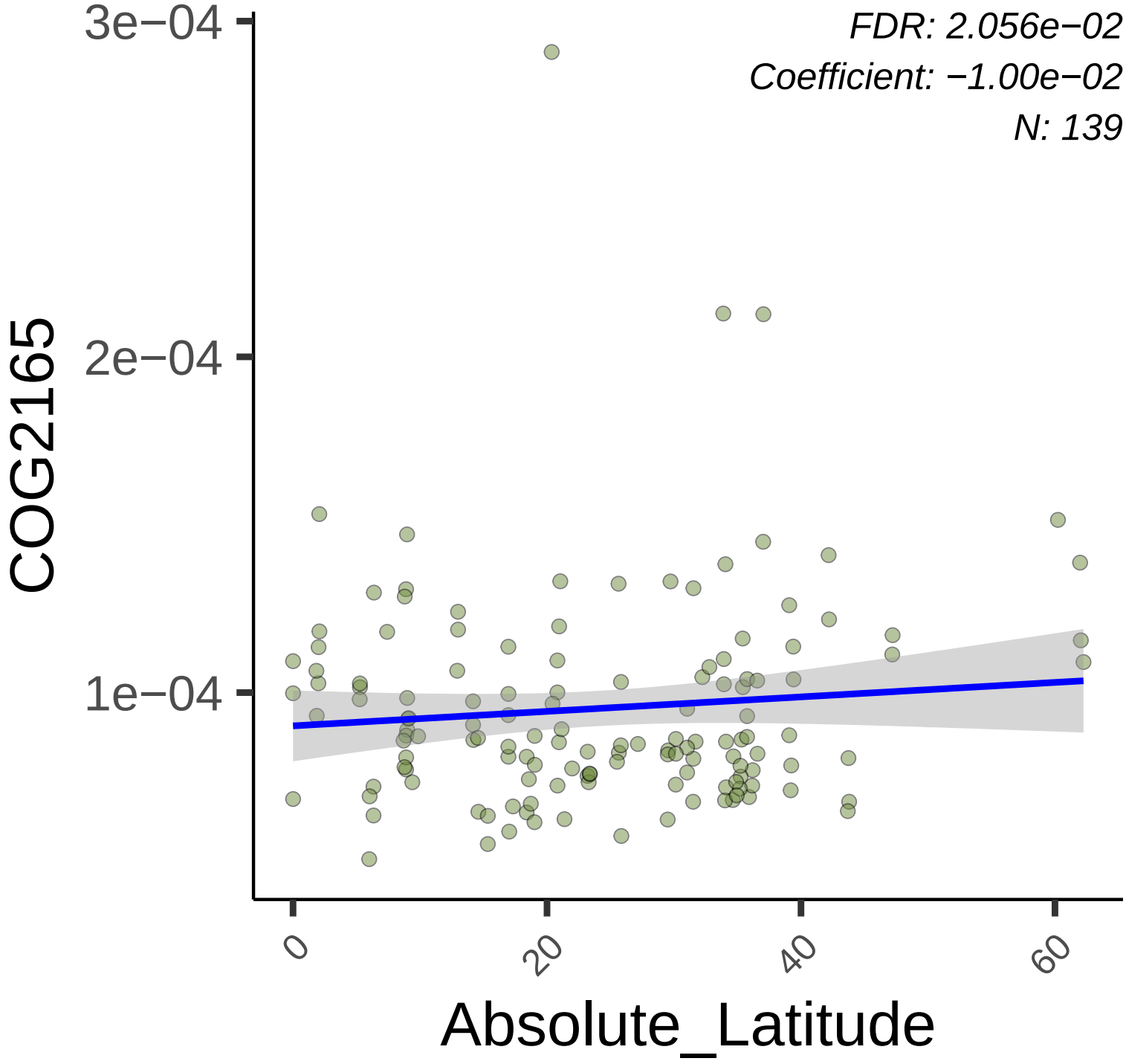

FDR: 1.993e−02
Coefficient: 1.60e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG2221
0
20
40
60
Absolute_Latitude

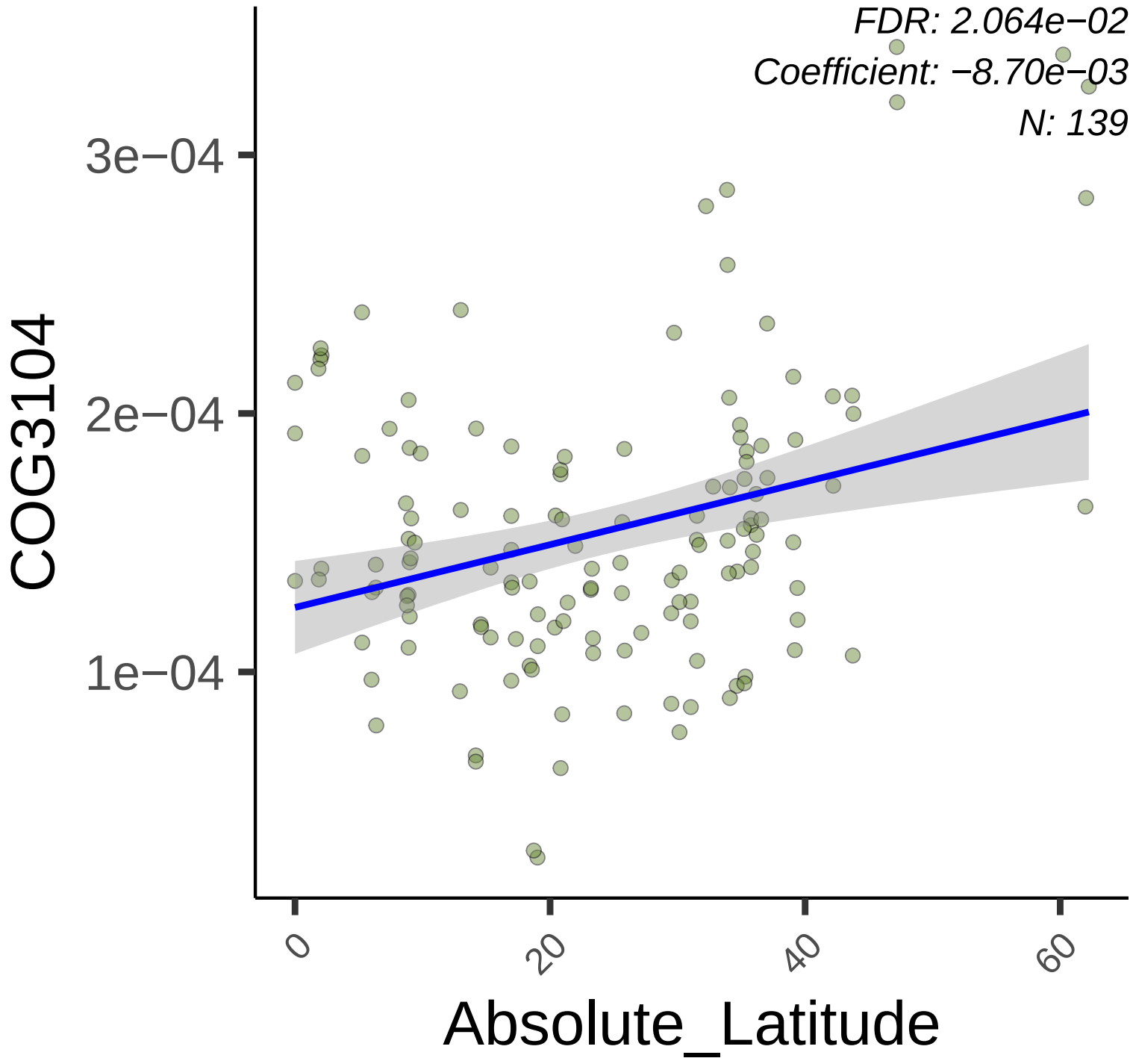

FDR: 1.995e−02
Coefficient: −3.26e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG1203
0
20
40
60
Absolute_Latitude

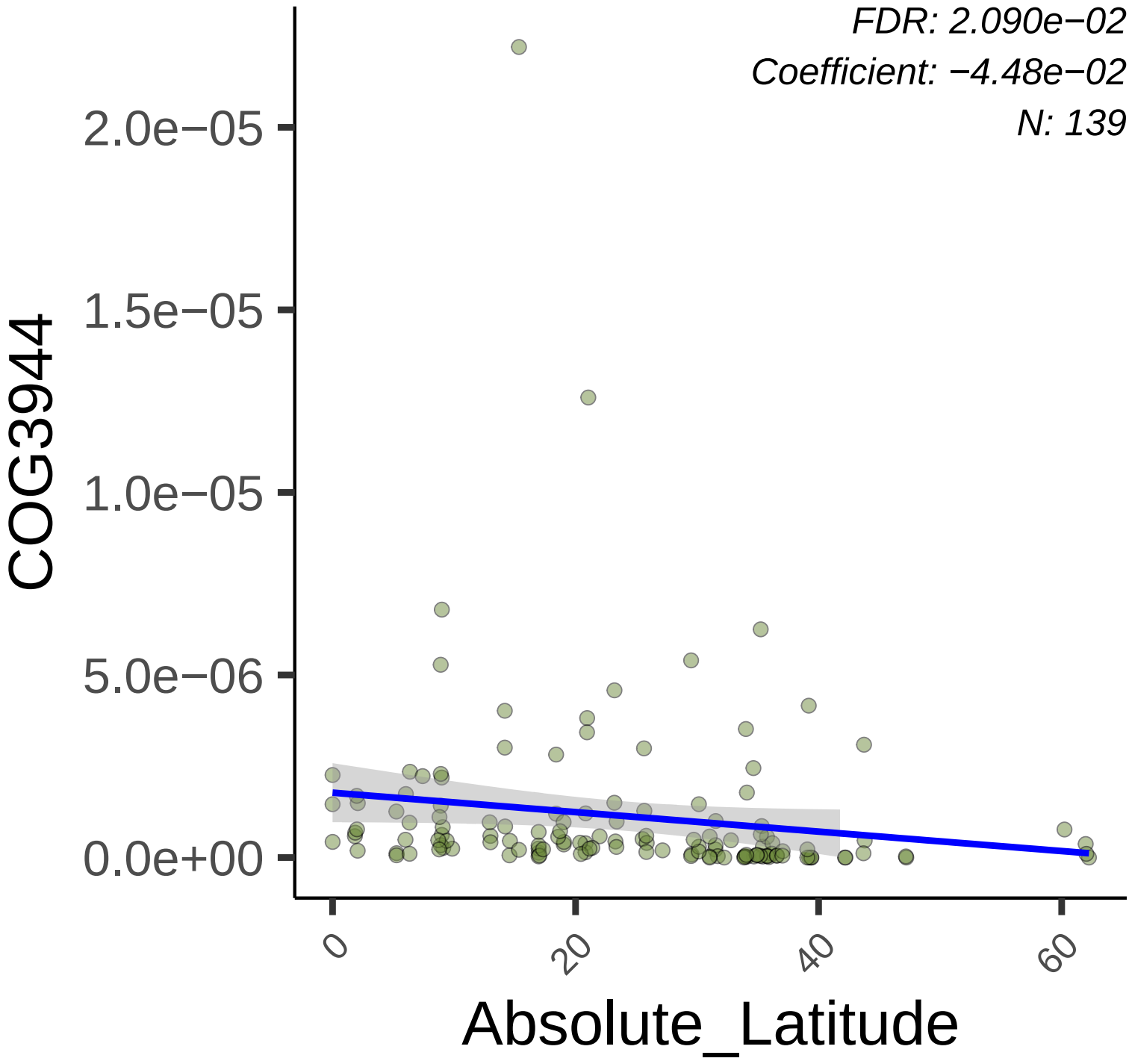

FDR: 2.004e−02
Coefficient: 7.35e−02
N: 139
COG4063
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

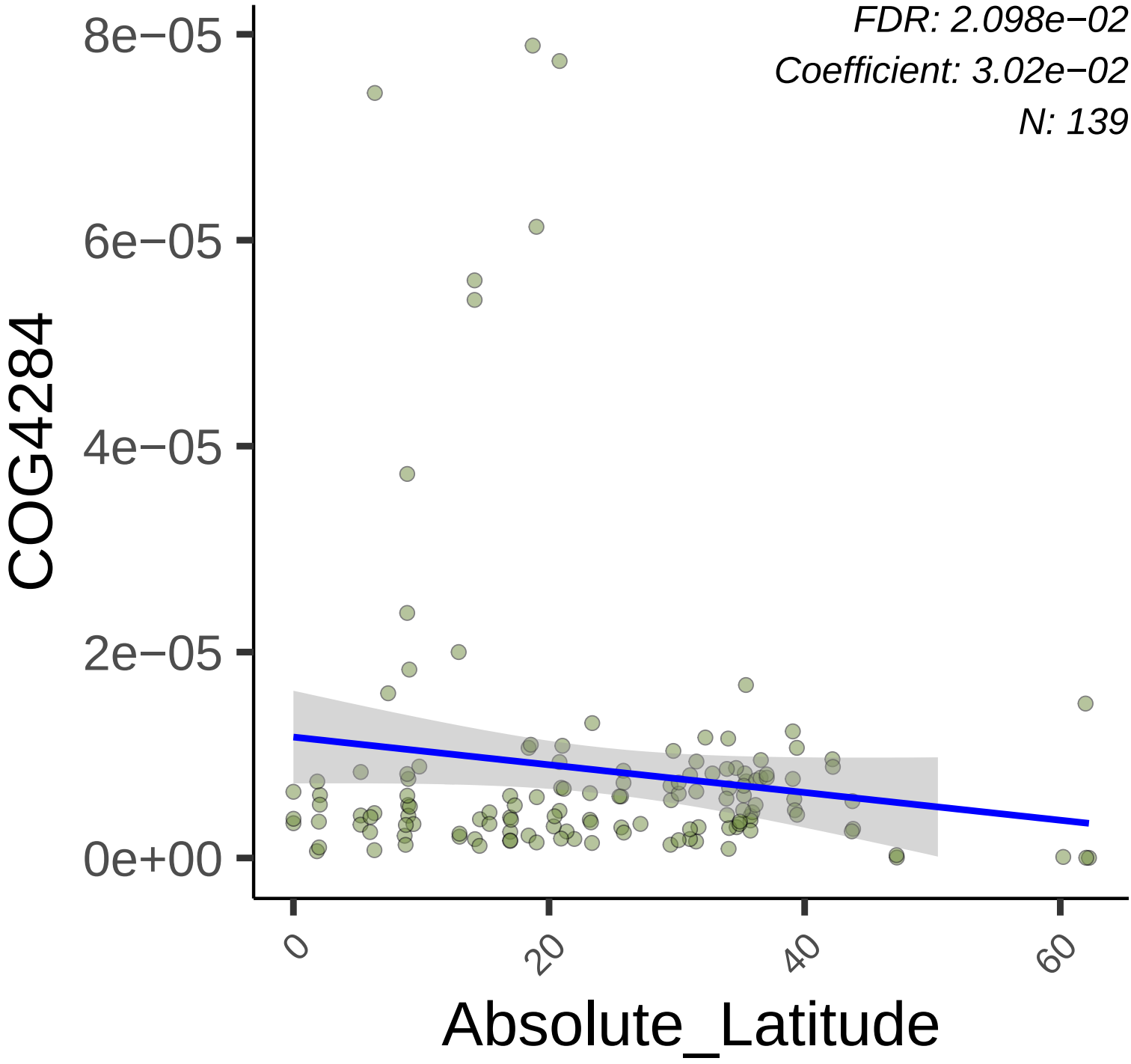

FDR: 2.010e−02
Coefficient: 3.23e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG3029
0
20
40
60
Absolute_Latitude

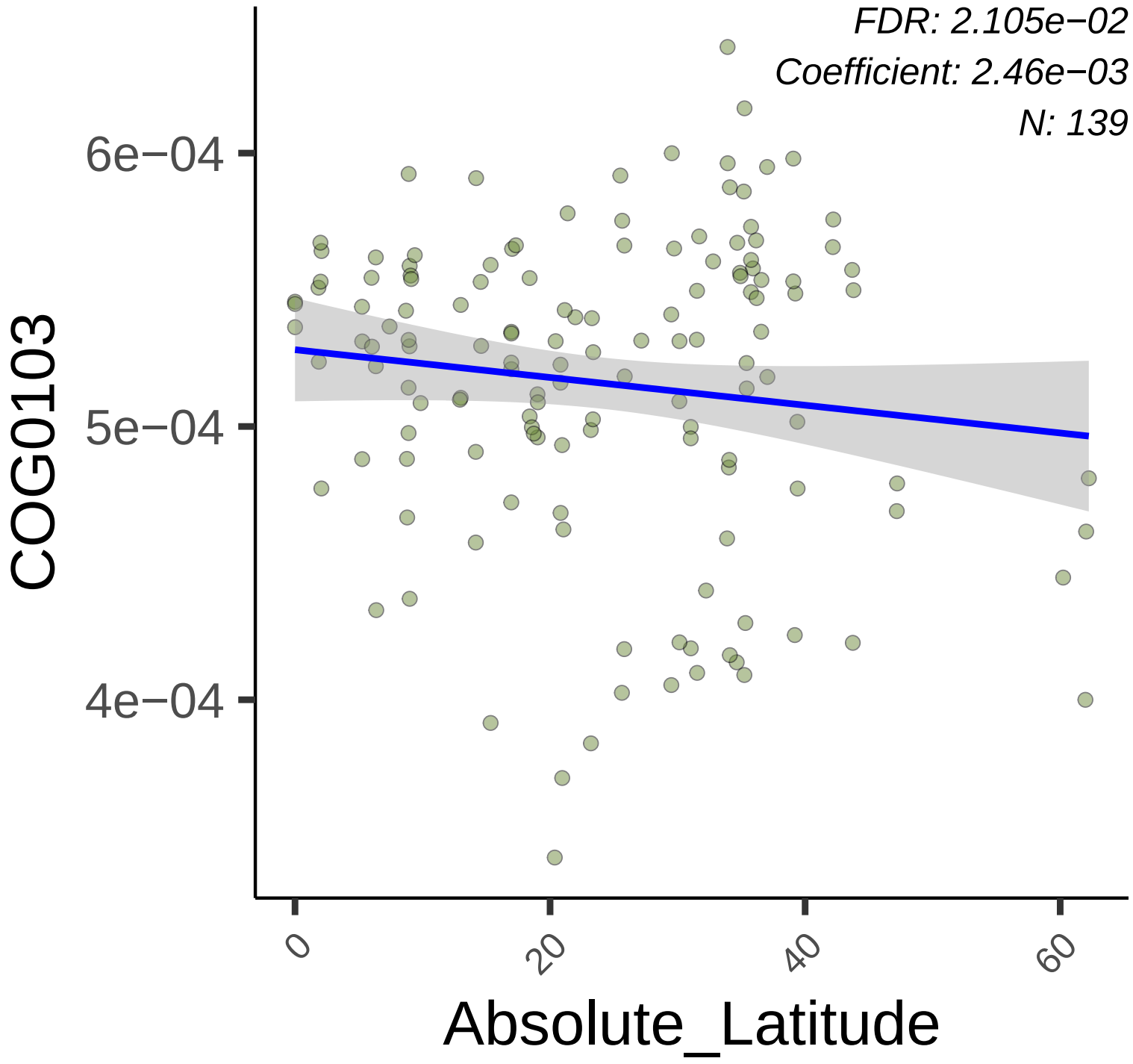

FDR: 2.016e−02
Coefficient: −4.23e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3310
0
20
40
60
Absolute_Latitude

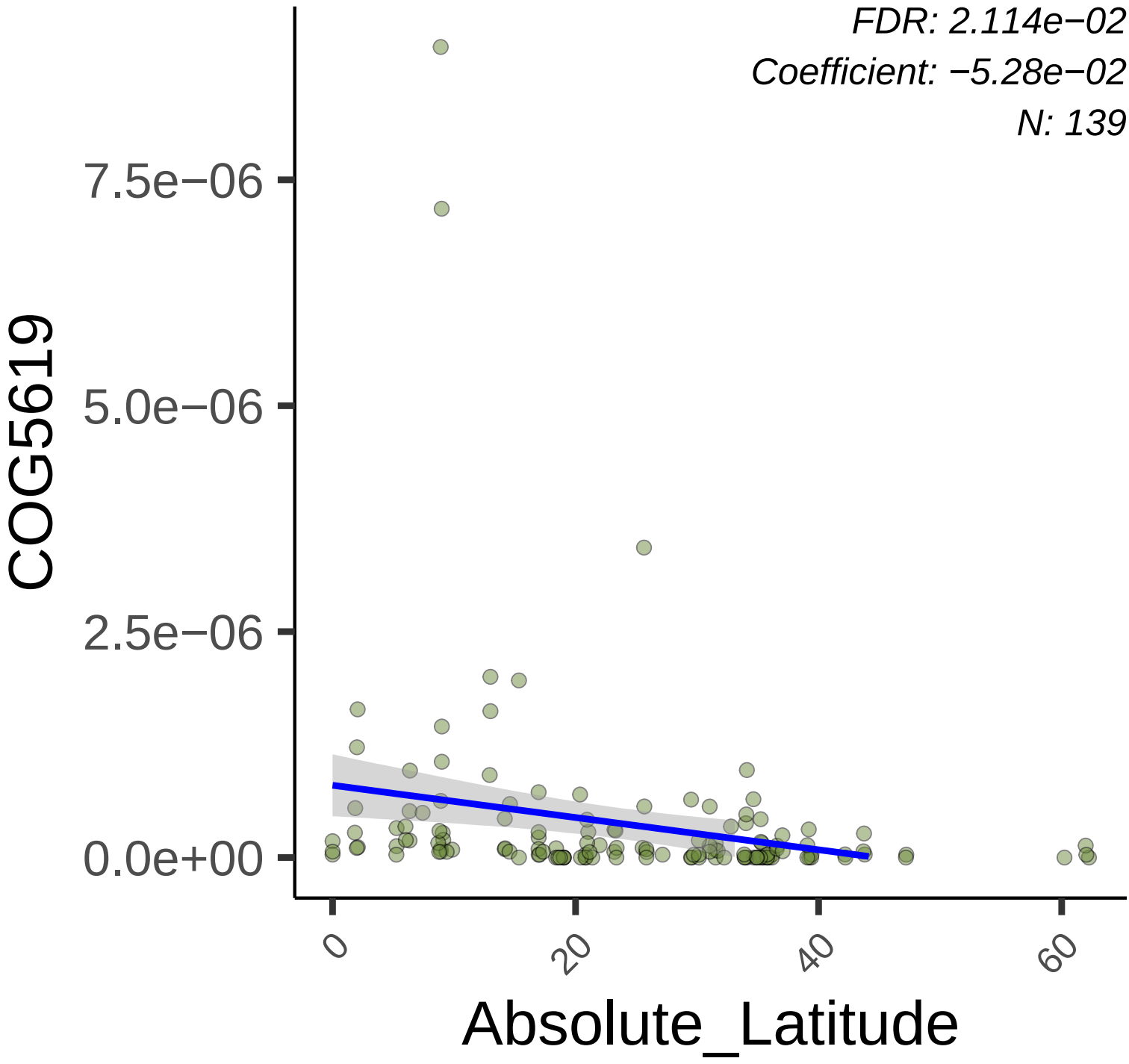

FDR: 2.056e−02
Coefficient: −1.00e−02
N: 139
3e−04
2e−04
1e−04
COG2165
0
20
40
60
Absolute_Latitude

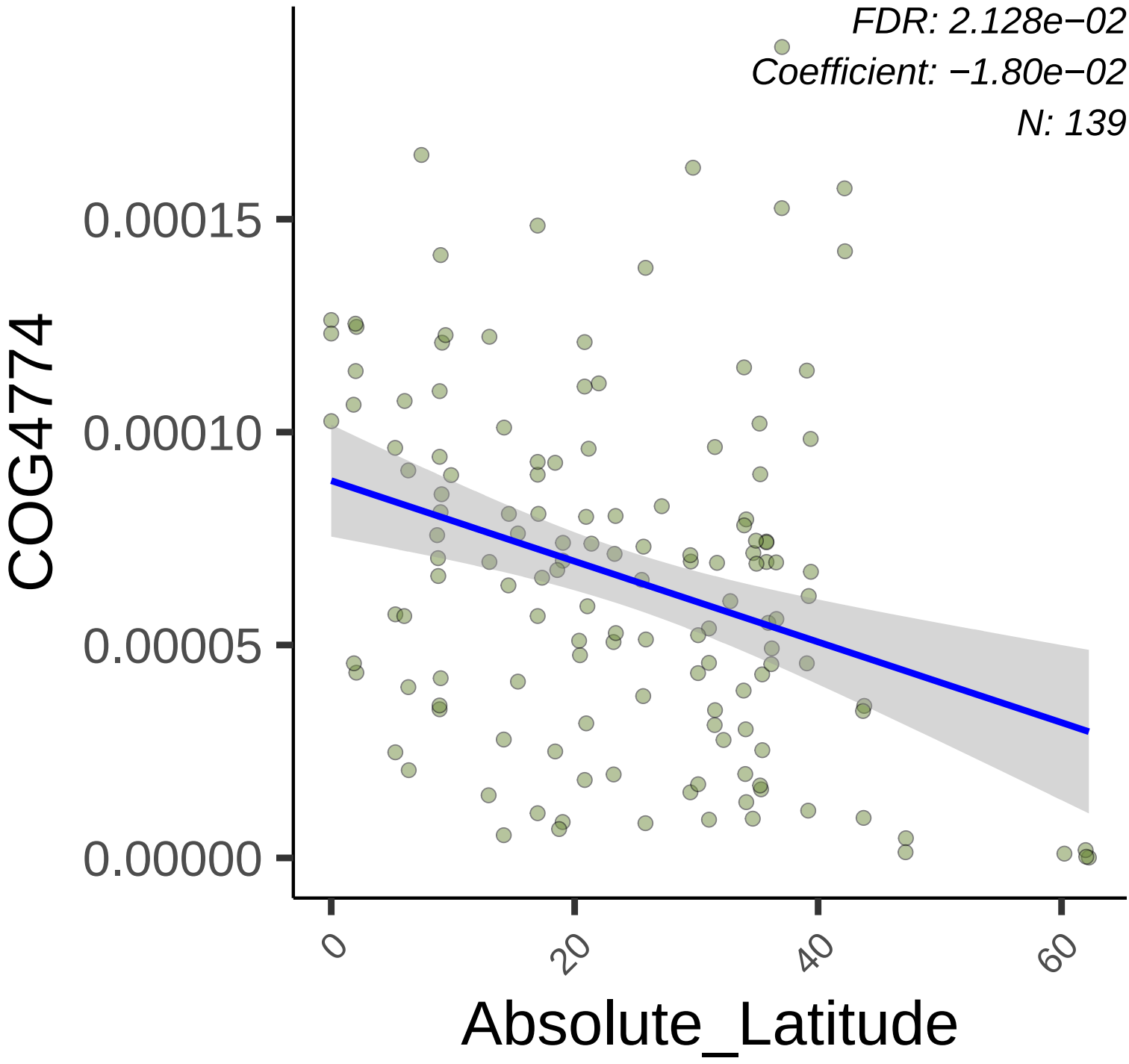

FDR: 2.064e−02
Coefficient: −8.70e−03
N: 139
3e−04
2e−04
1e−04
COG3104
0
20
40
60
Absolute_Latitude

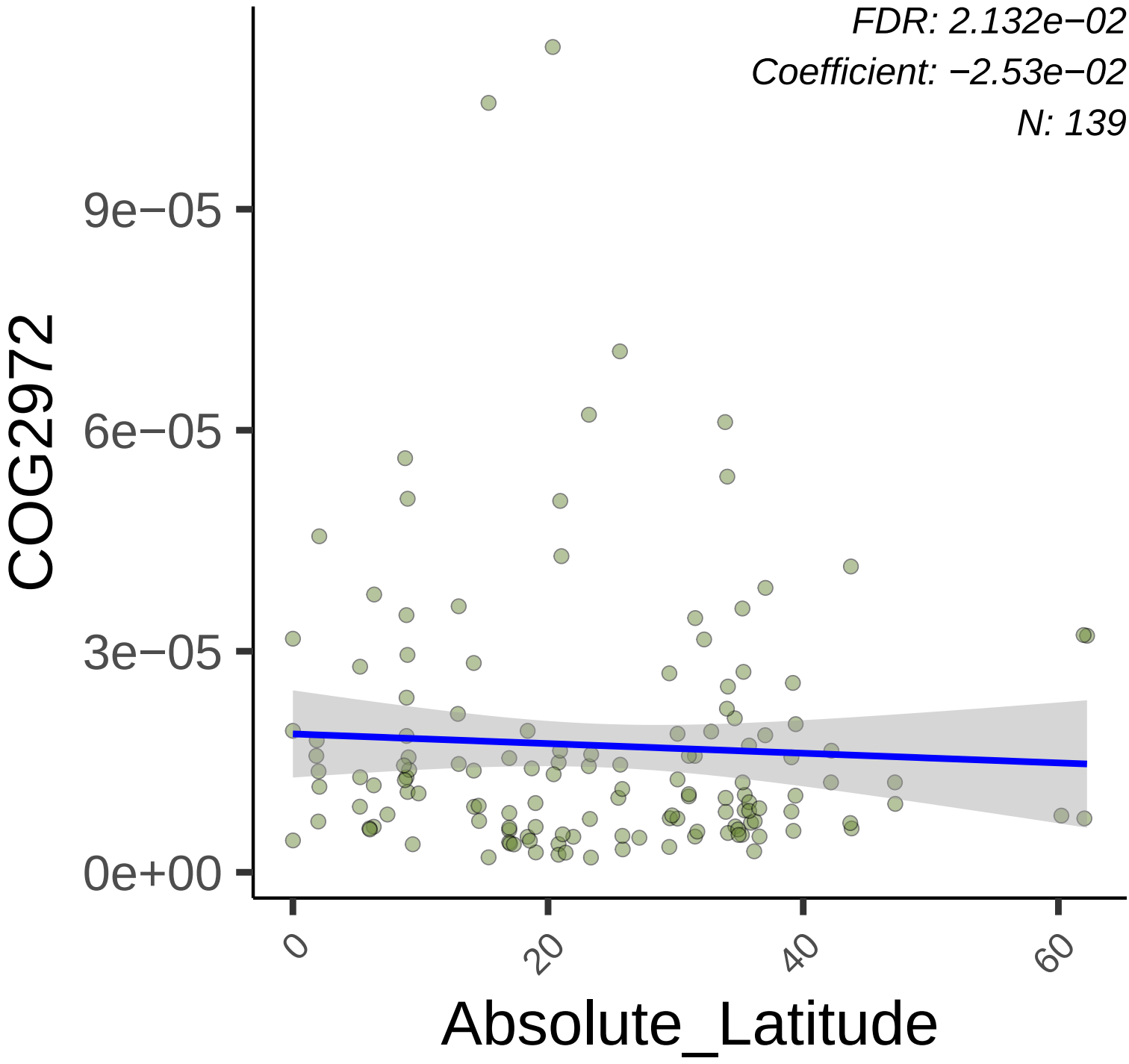

FDR: 2.090e−02
Coefficient: −4.48e−02
N: 139
COG3944
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

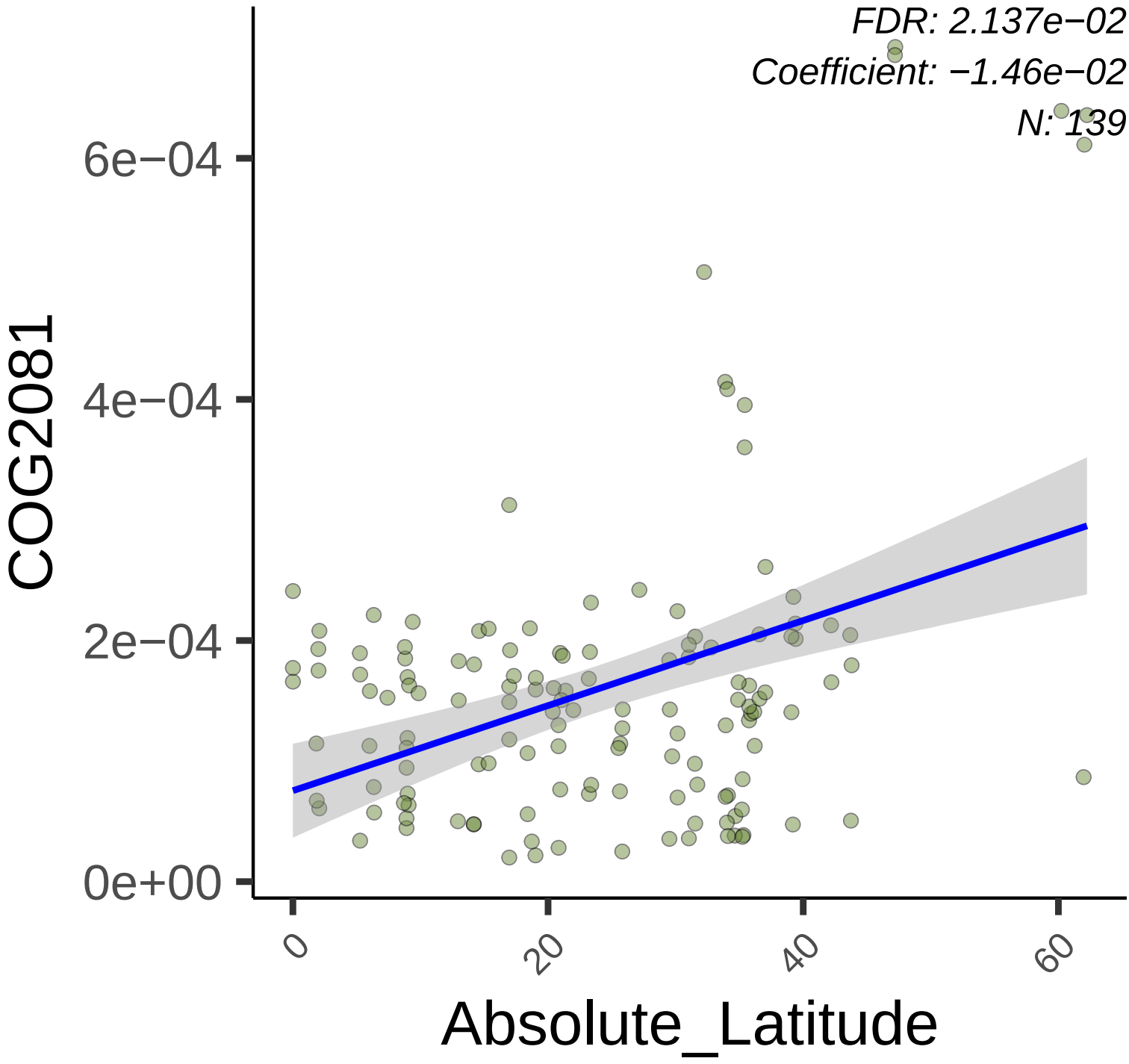

FDR: 2.098e−02
Coefficient: 3.02e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG4284
0
20
40
60
Absolute_Latitude

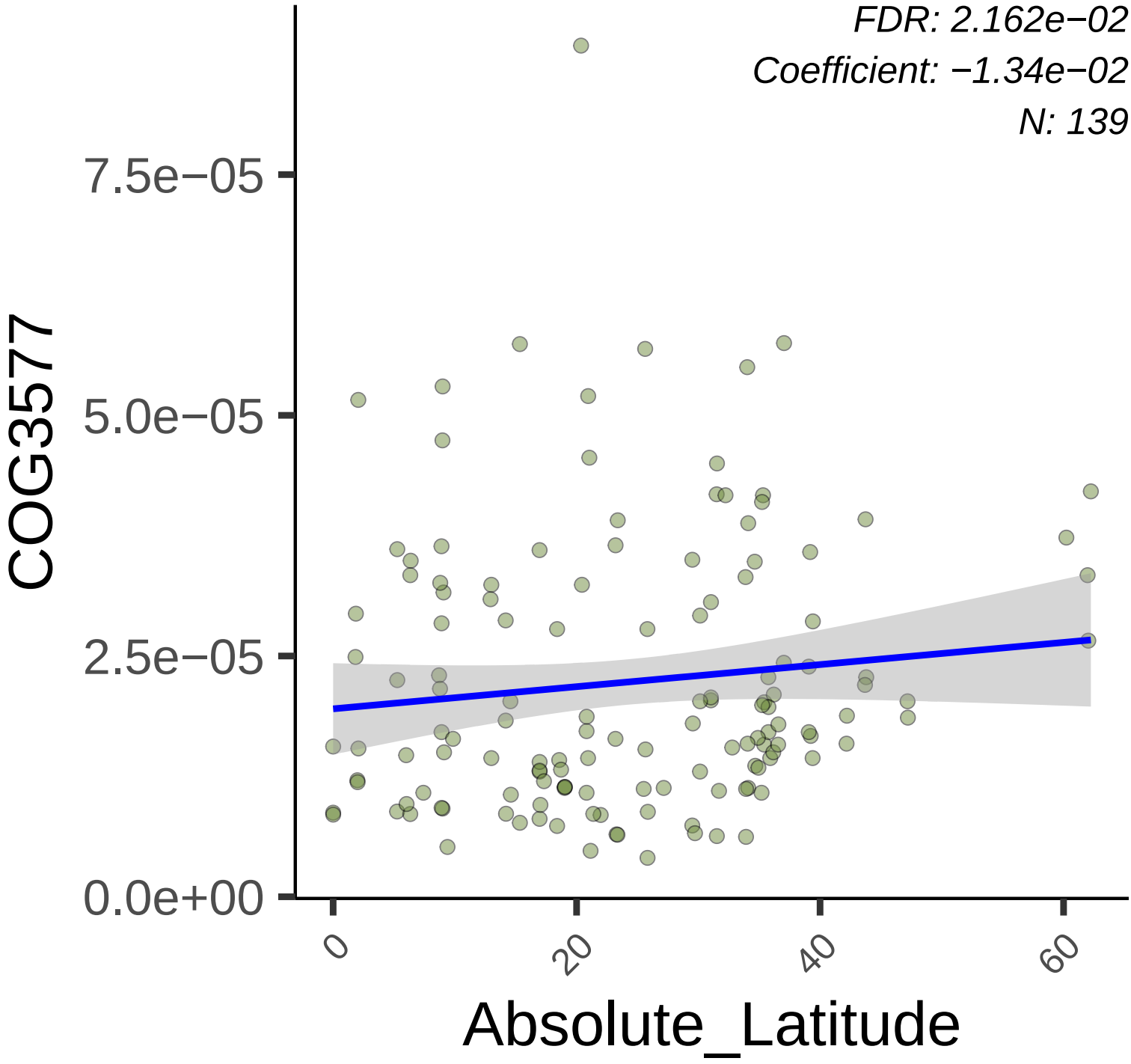

FDR: 2.105e−02
Coefficient: 2.46e−03
N: 139
6e−04
5e−04
4e−04
COG0103
0
20
40
60
Absolute_Latitude

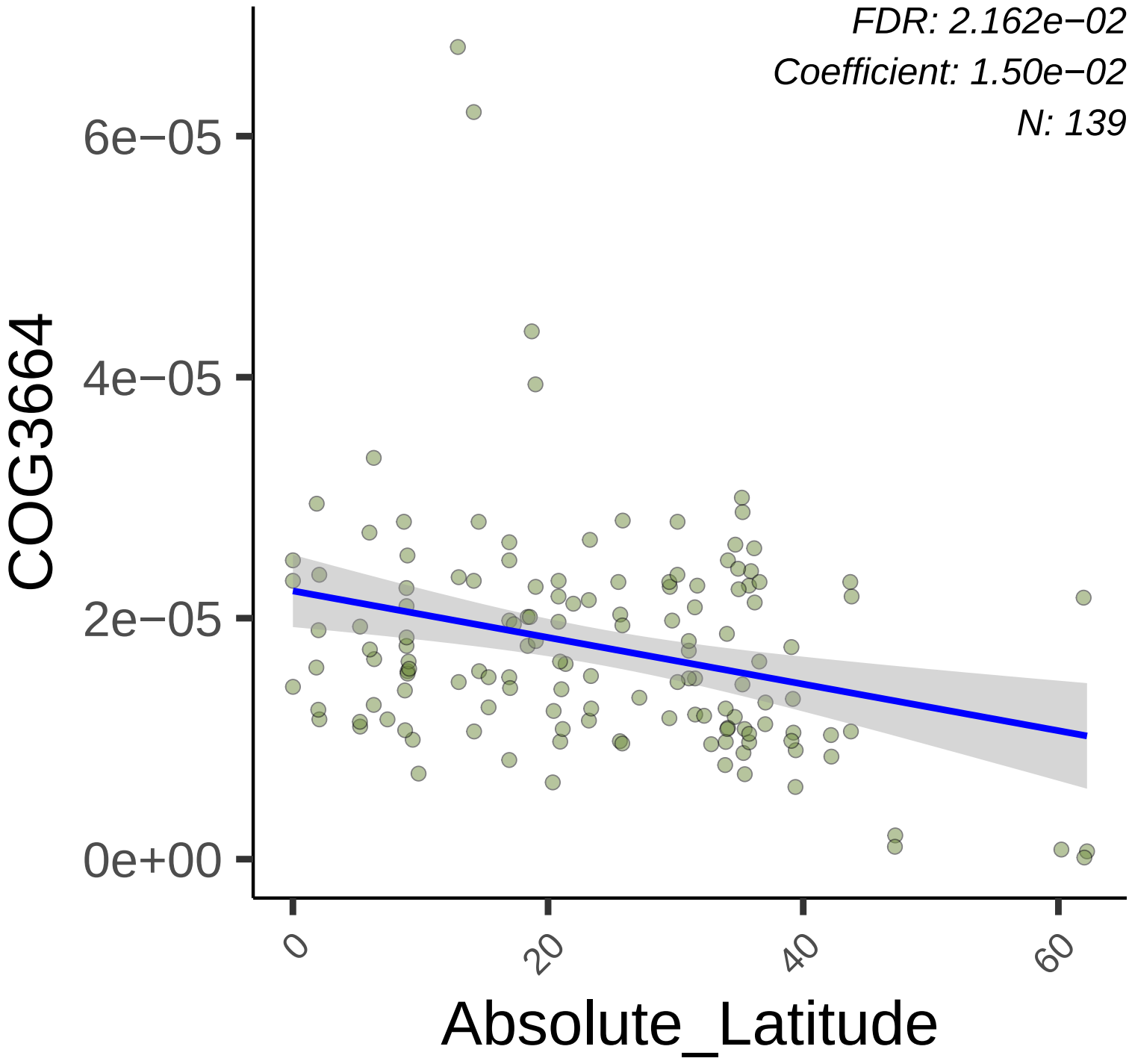

FDR: 2.114e−02
Coefficient: −5.28e−02
N: 139
7.5e−06
5.0e−06
2.5e−06
0.0e+00
COG5619
0
20
40
60
Absolute_Latitude

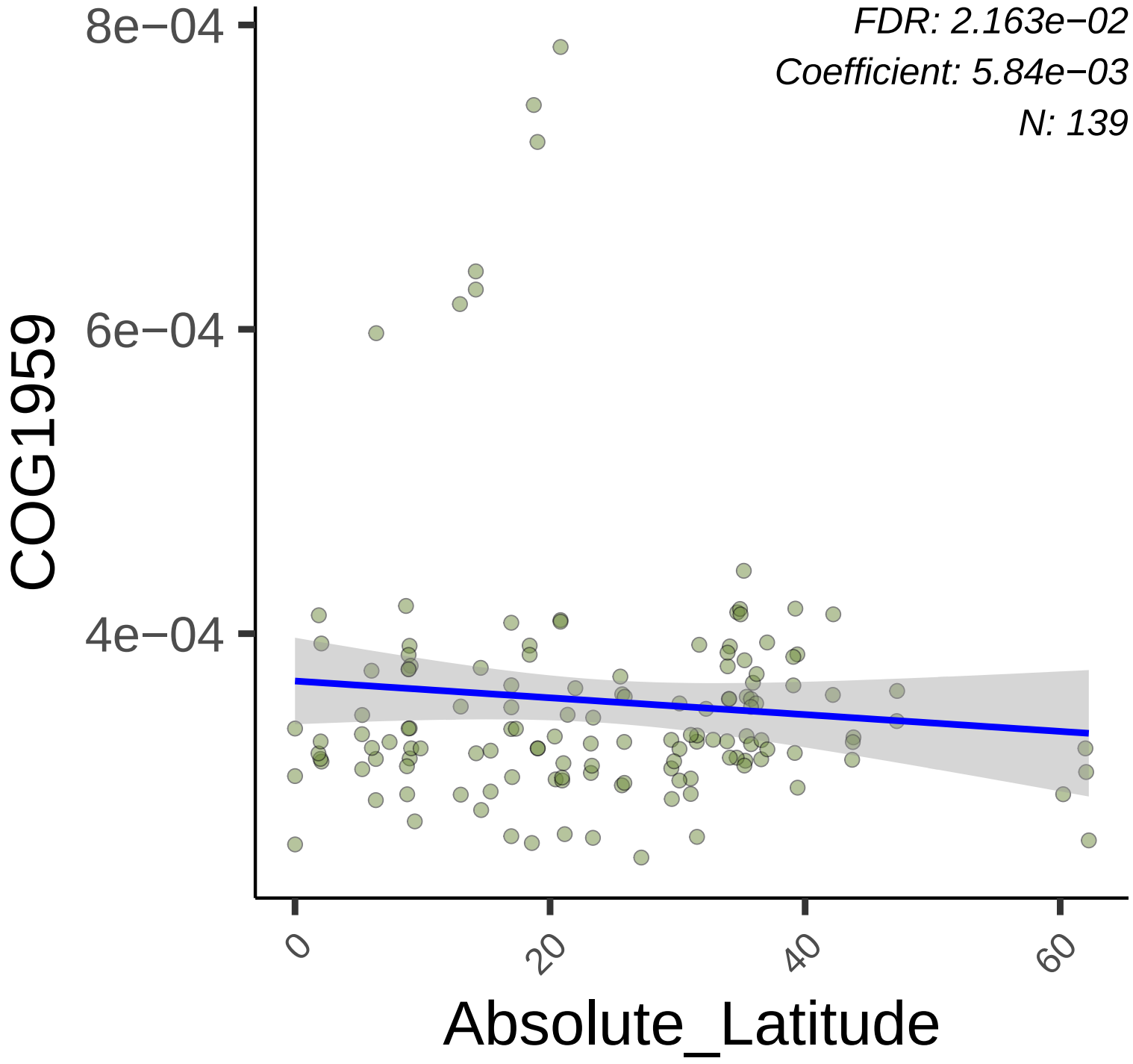

FDR: 2.128e−02
Coefficient: −1.80e−02
N: 139
COG4774
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

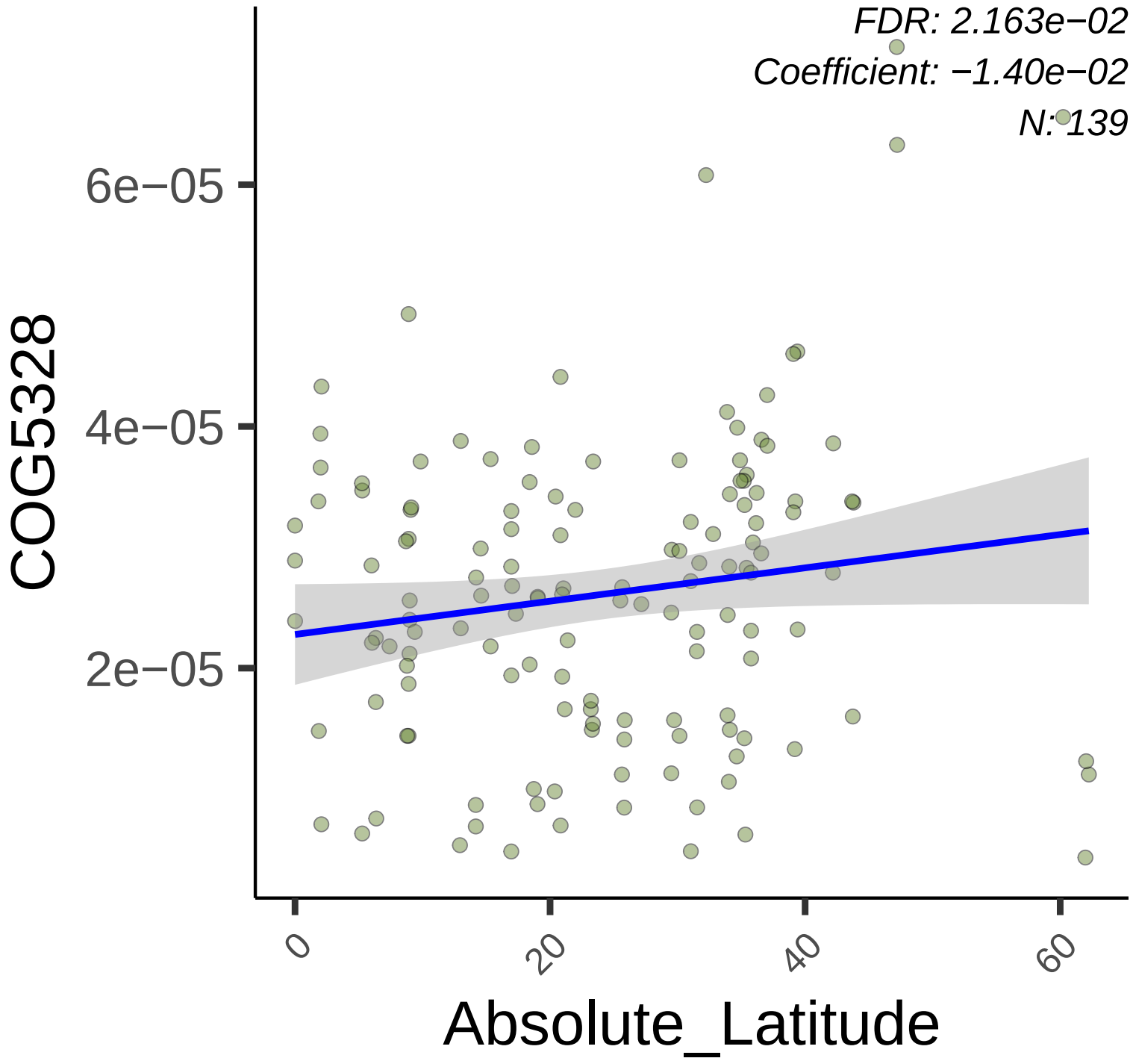

FDR: 2.132e−02
Coefficient: −2.53e−02
N: 139
COG2972
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

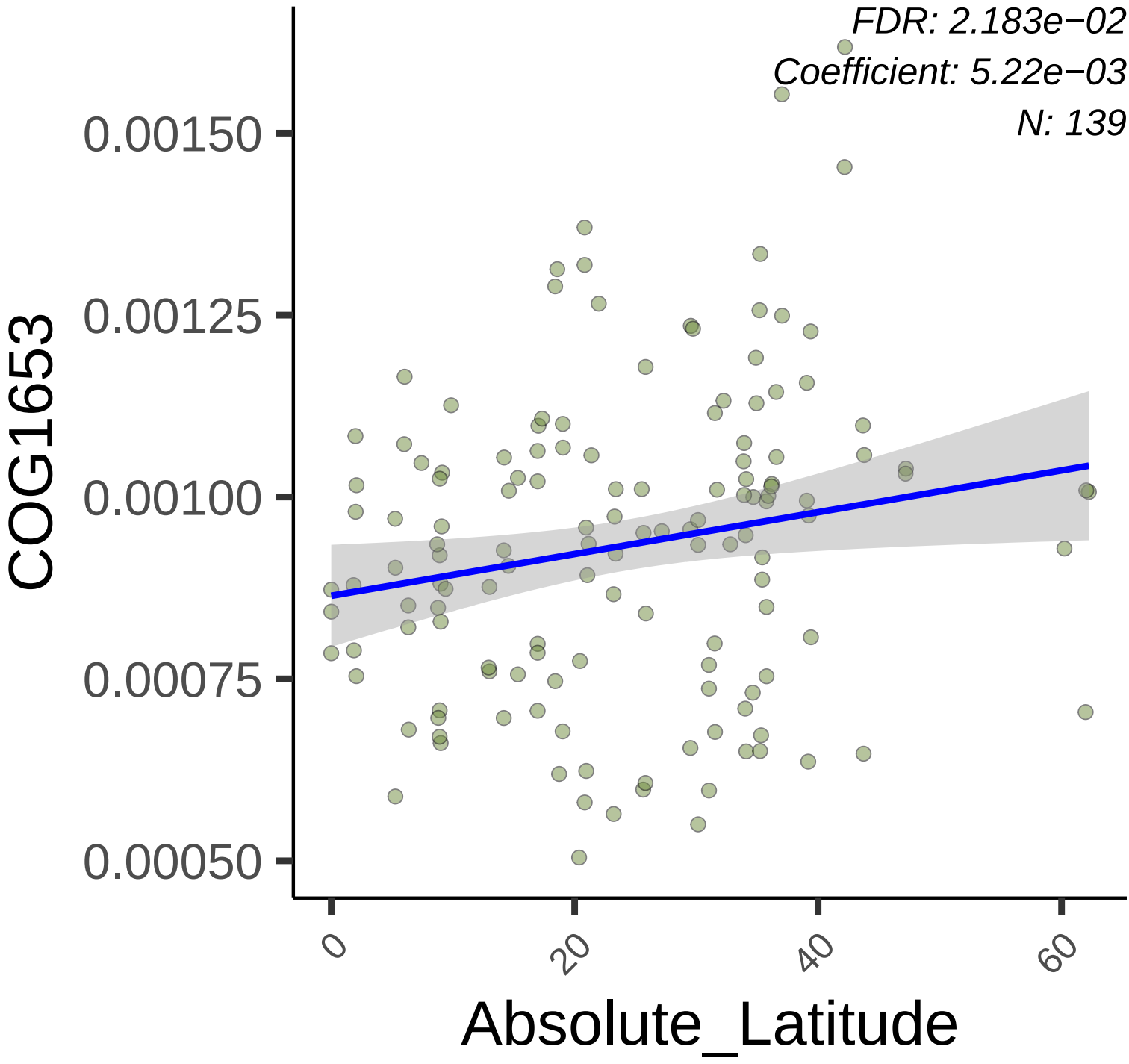

FDR: 2.137e−02
Coefficient: −1.46e−02
N: 139
COG2081
6e−04
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

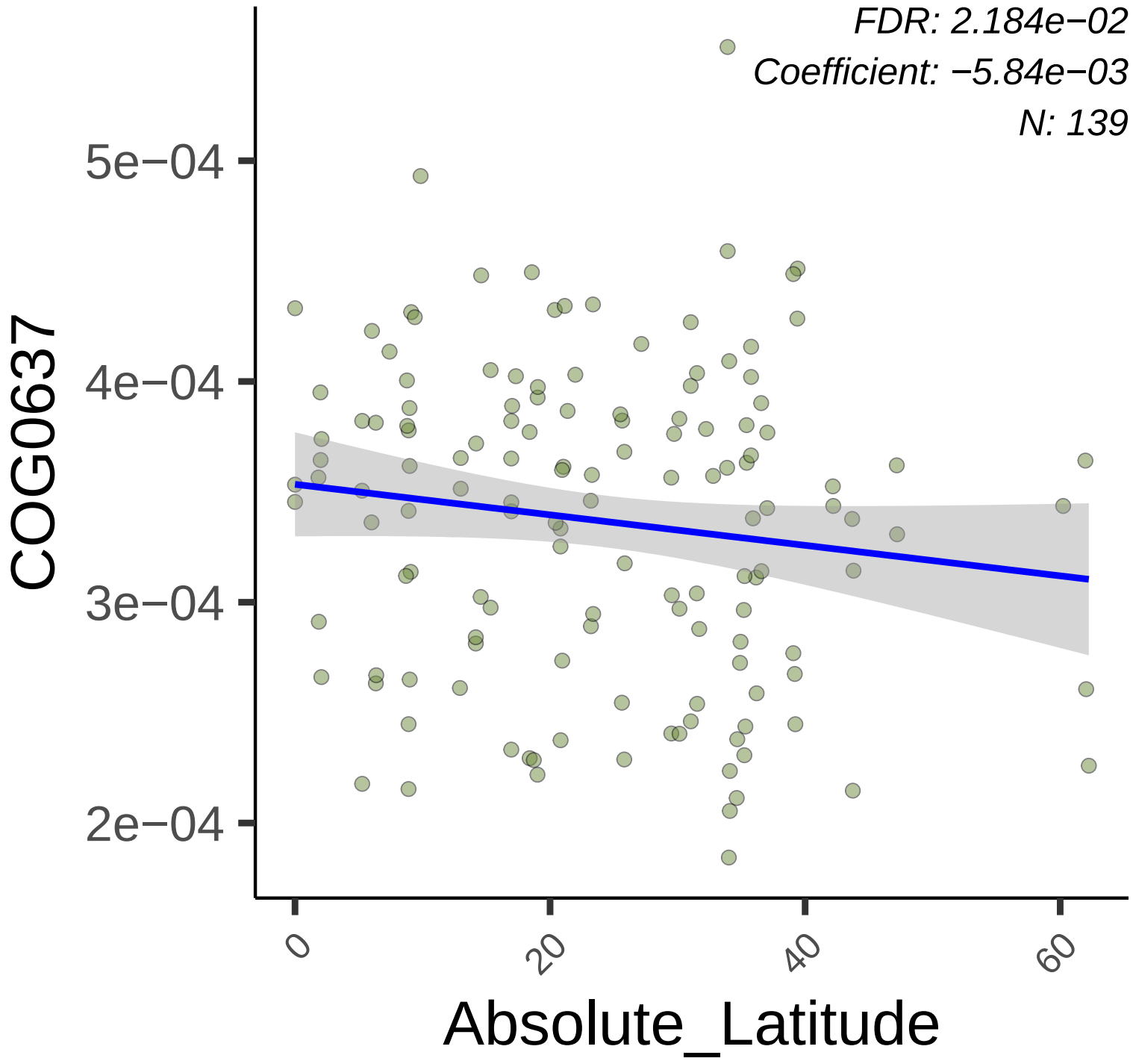

FDR: 2.162e−02
Coefficient: −1.34e−02
N: 139
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3577
0
20
40
60
Absolute_Latitude

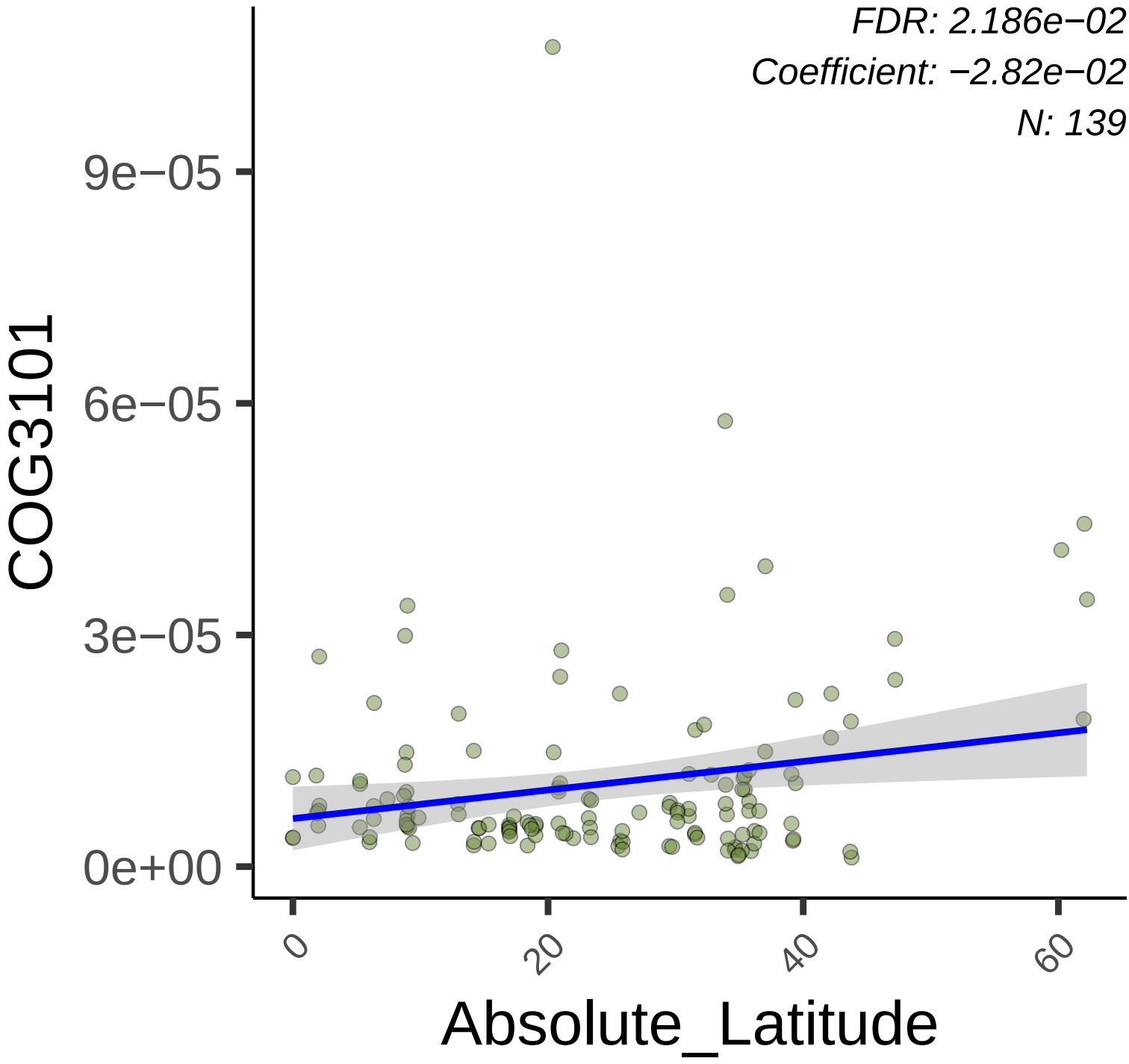

FDR: 2.162e−02
Coefficient: 1.50e−02
N: 139
COG3664
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

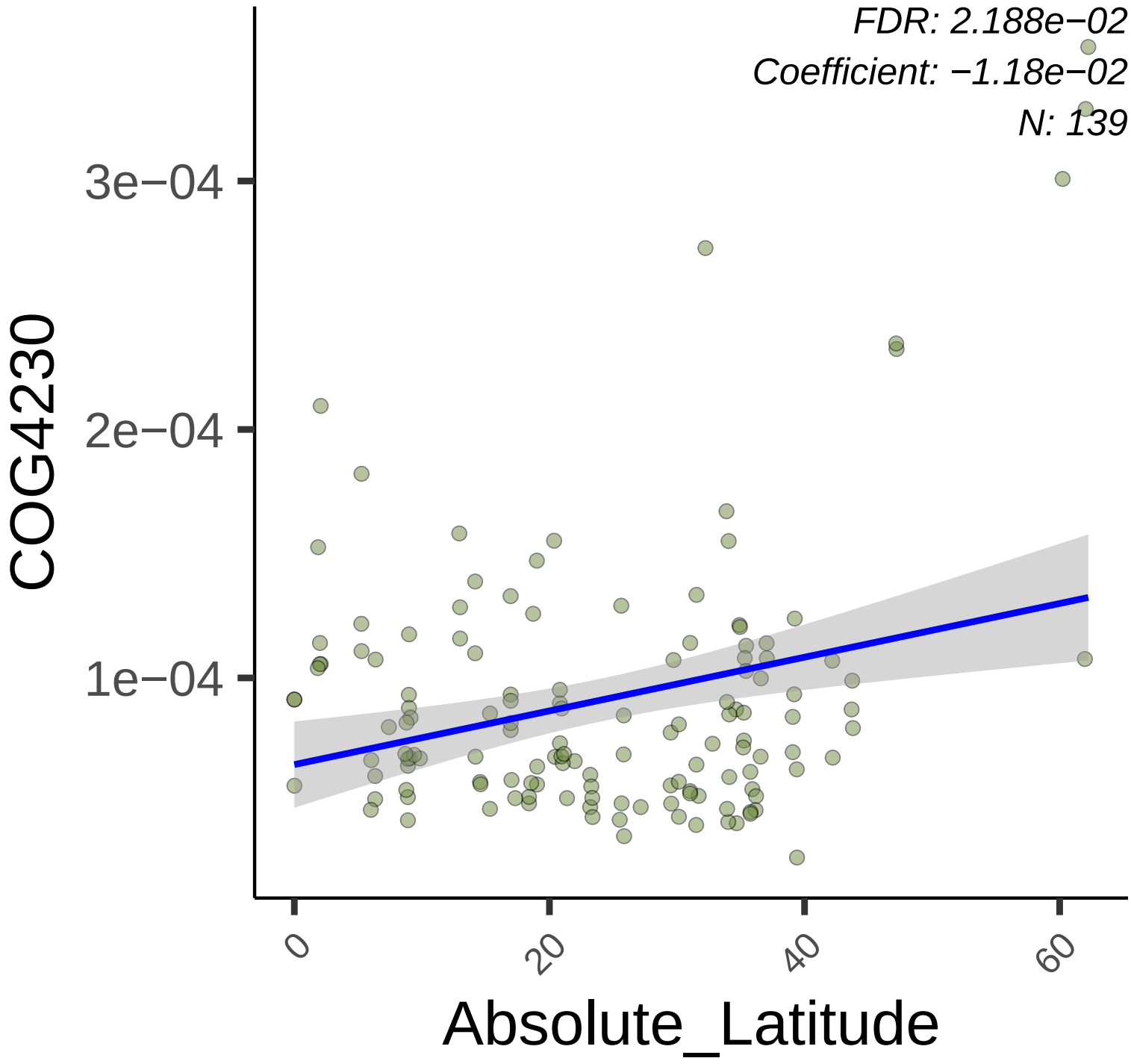

FDR: 2.163e−02
Coefficient: 5.84e−03
N: 139
8e−04
6e−04
4e−04
COG1959
0
20
40
60
Absolute_Latitude

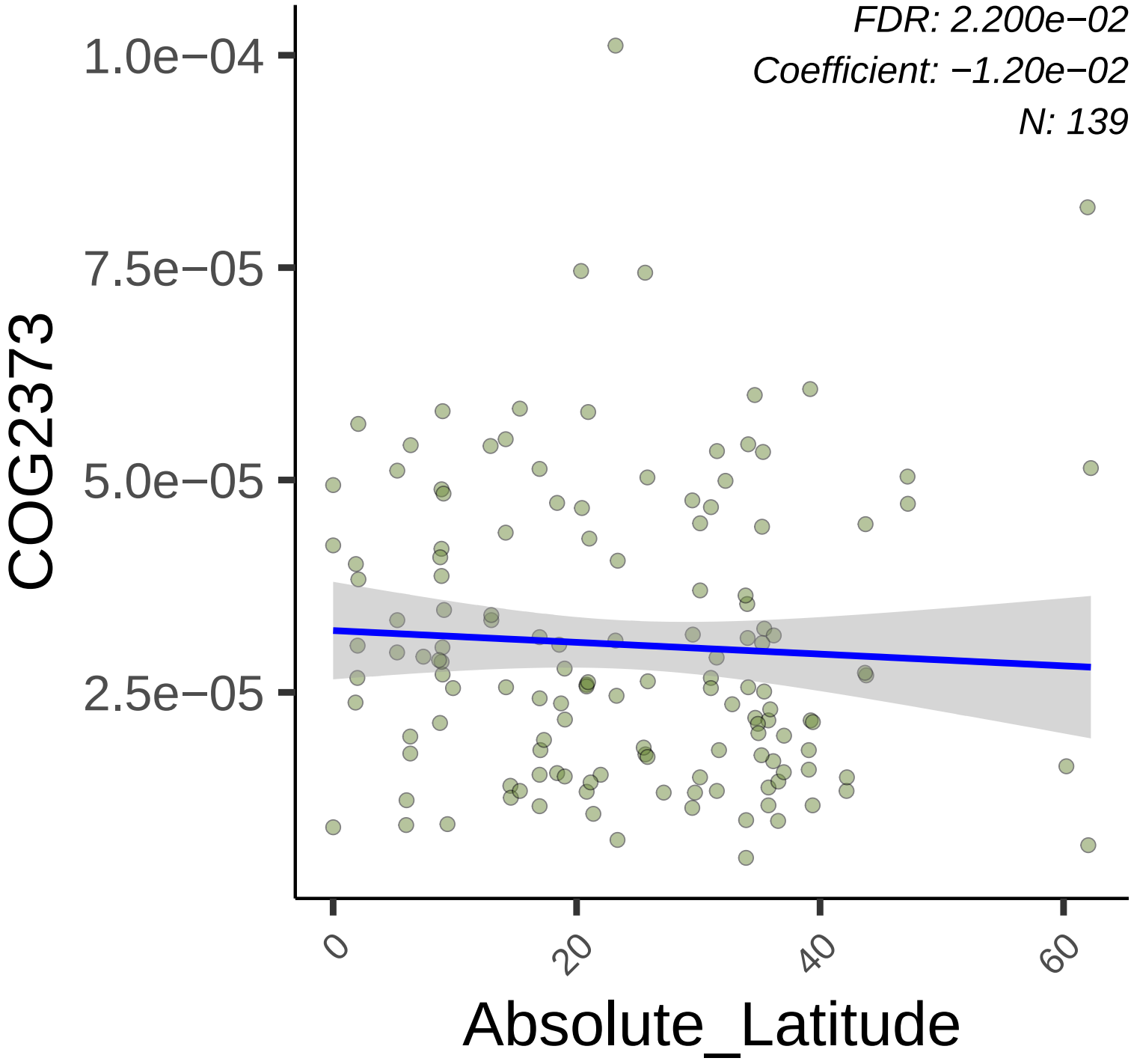

FDR: 2.163e−02
Coefficient: −1.40e−02
N: 139
6e−05
4e−05
2e−05
COG5328
0
20
40
60
Absolute_Latitude

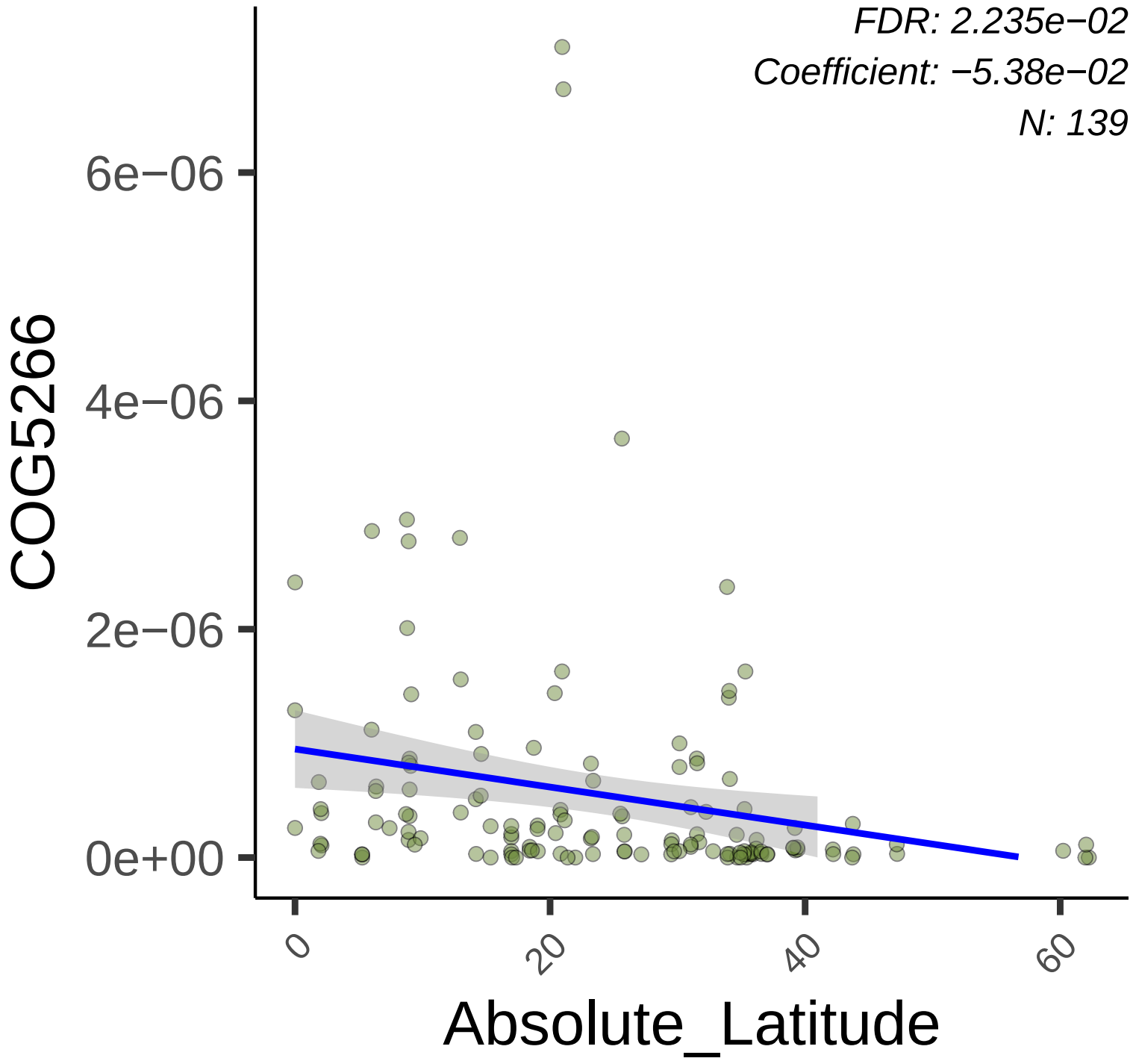

FDR: 2.183e−02
Coefficient: 5.22e−03
N: 139
0.00150
0.00125
0.00100
0.00075
0.00050
COG1653
0
20
40
60
Absolute_Latitude

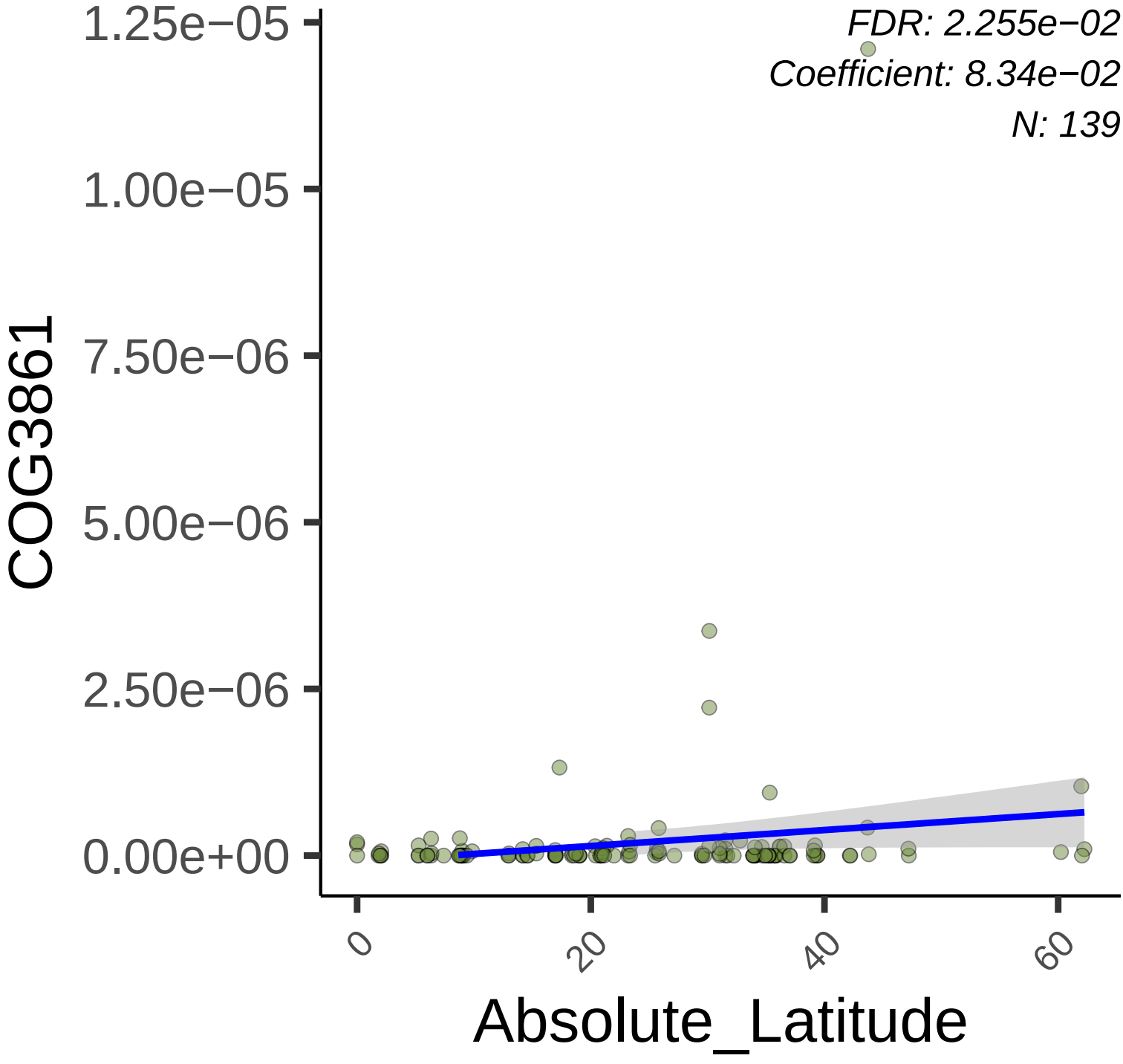

FDR: 2.184e−02
Coefficient: −5.84e−03
N: 139
5e−04
4e−04
3e−04
2e−04
COG0637
0
20
40
60
Absolute_Latitude

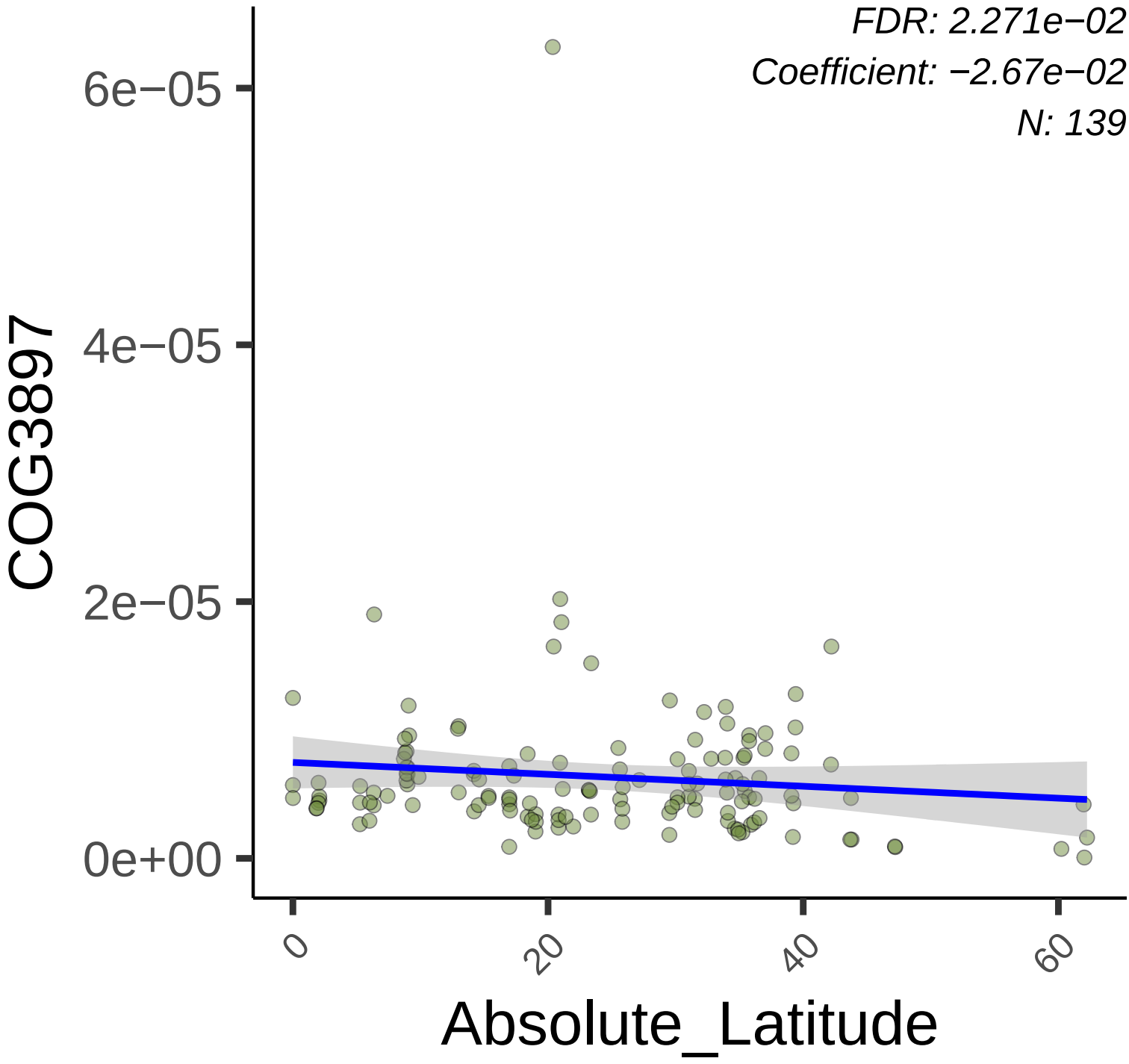

FDR: 2.186e−02
Coefficient: −2.82e−02
N: 139
COG3101
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

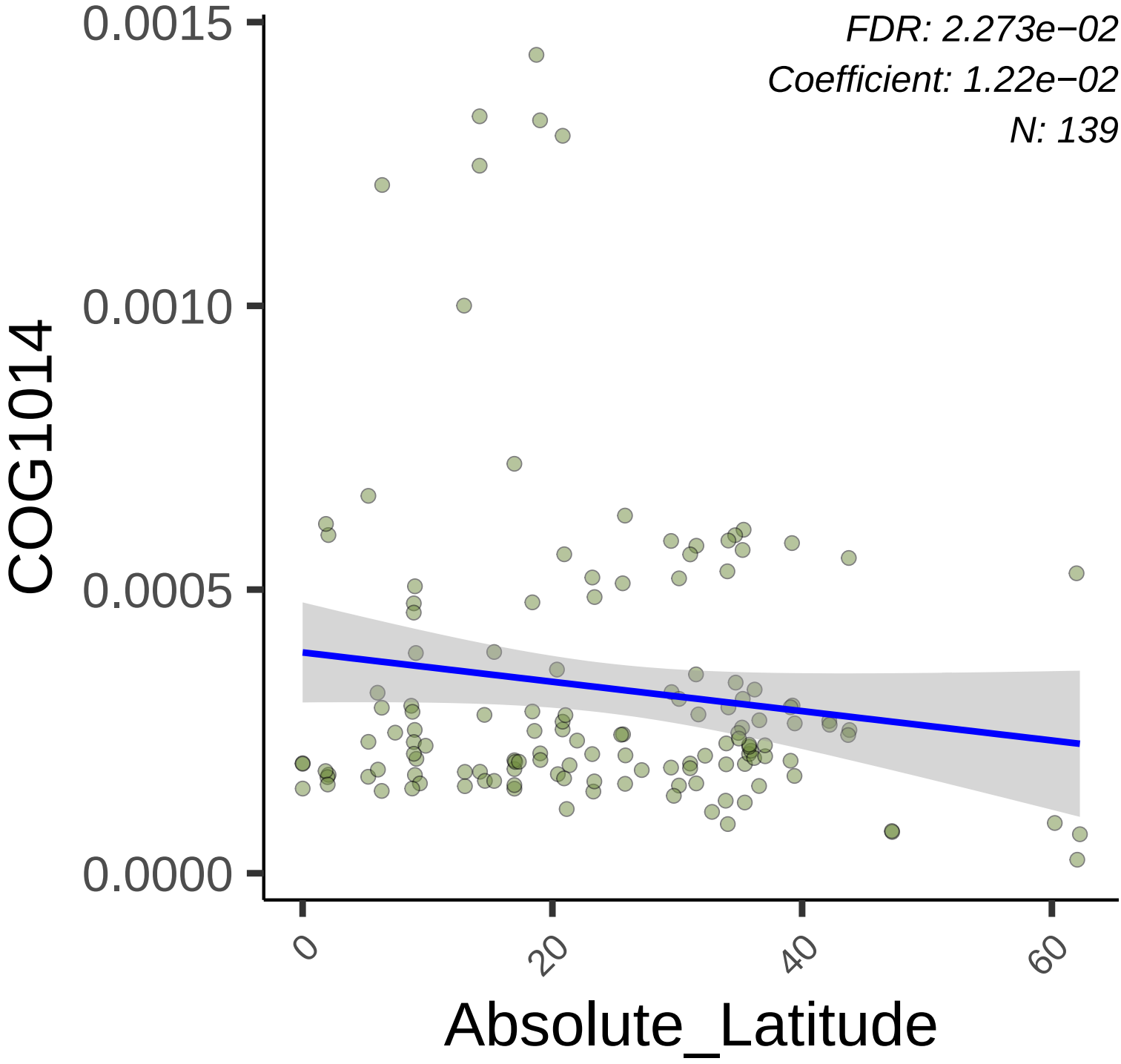

FDR: 2.188e−02
Coefficient: −1.18e−02
N: 139
3e−04
2e−04
1e−04
COG4230
0
20
40
60
Absolute_Latitude

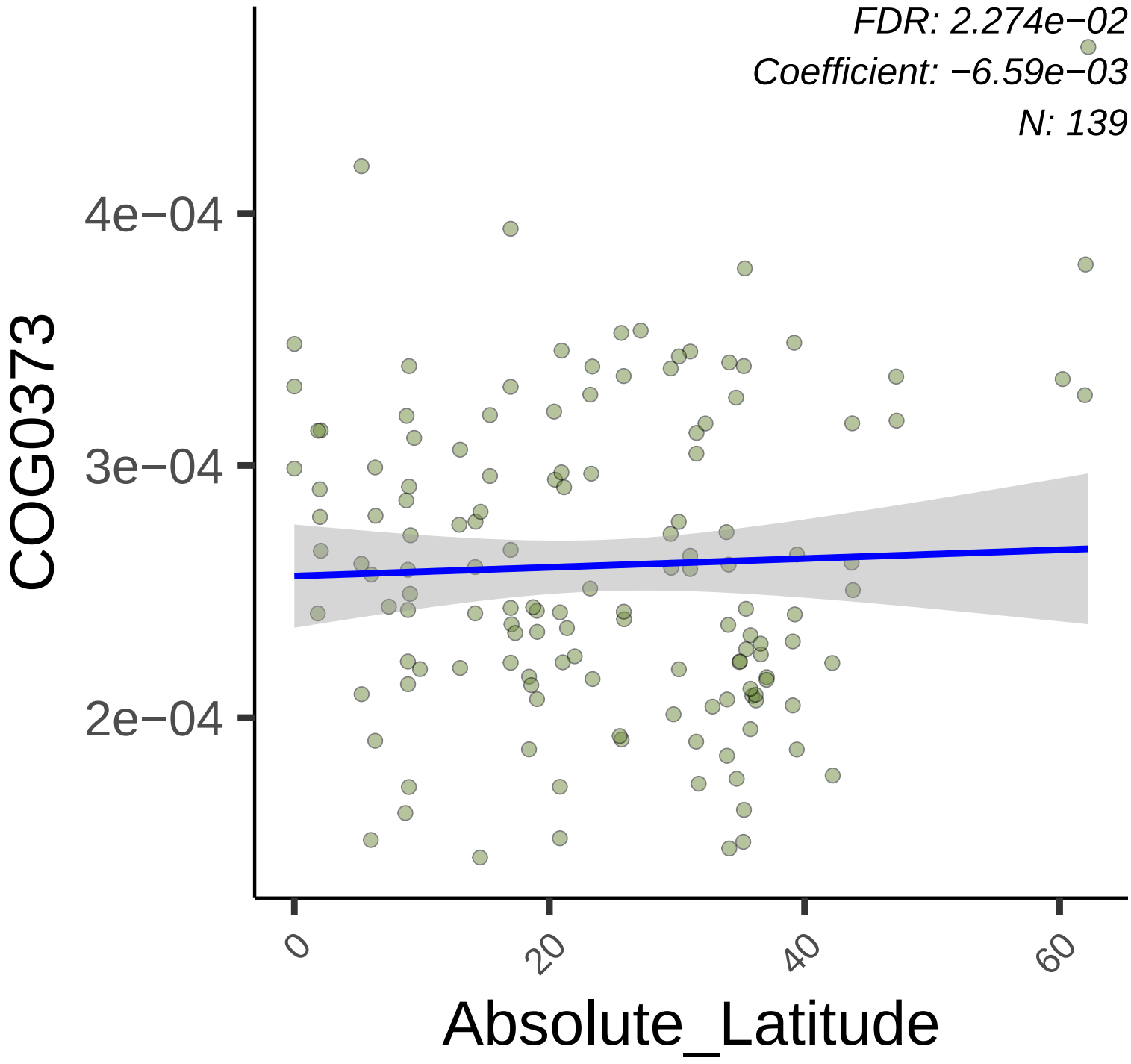

FDR: 2.200e−02
Coefficient: −1.20e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
COG2373
0
20
40
60
Absolute_Latitude

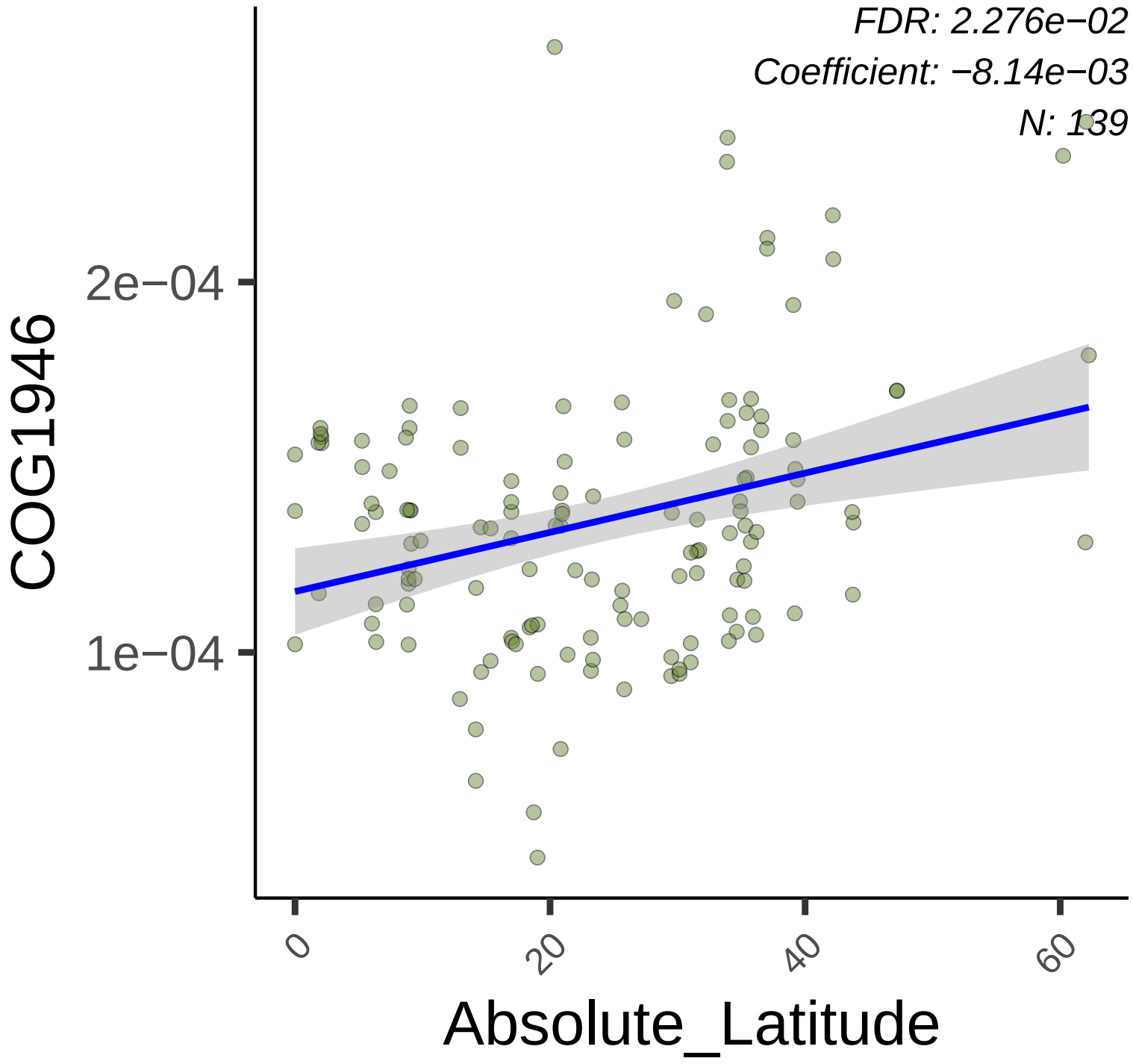

FDR: 2.235e−02
Coefficient: −5.38e−02
N: 139
COG5266
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

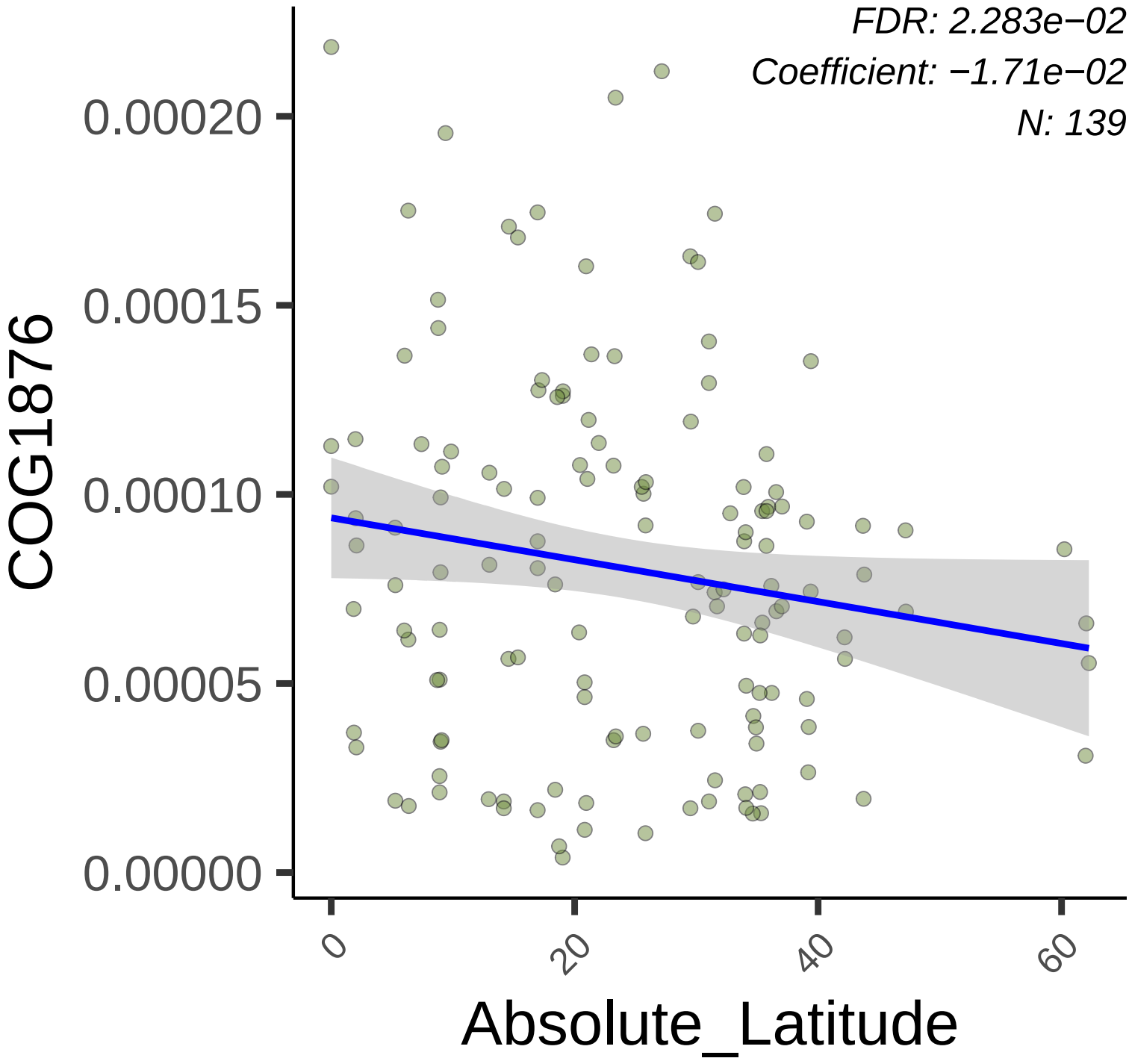

FDR: 2.255e−02
Coefficient: 8.34e−02
N: 139
1.25e−05
1.00e−05
7.50e−06
5.00e−06
2.50e−06
0.00e+00
COG3861
0
20
40
60
Absolute_Latitude

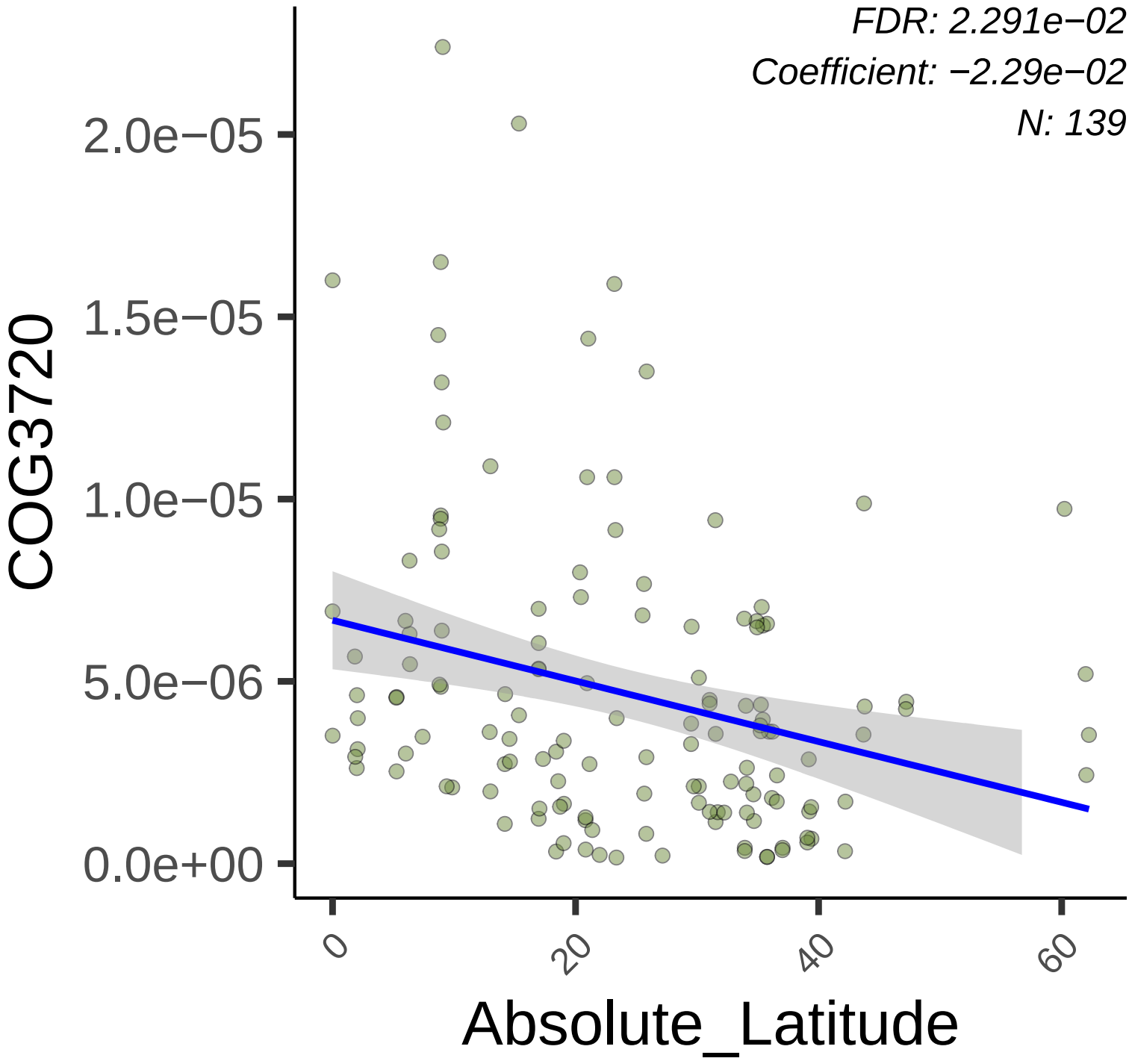

FDR: 2.271e−02
Coefficient: −2.67e−02
N: 139
COG3897
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

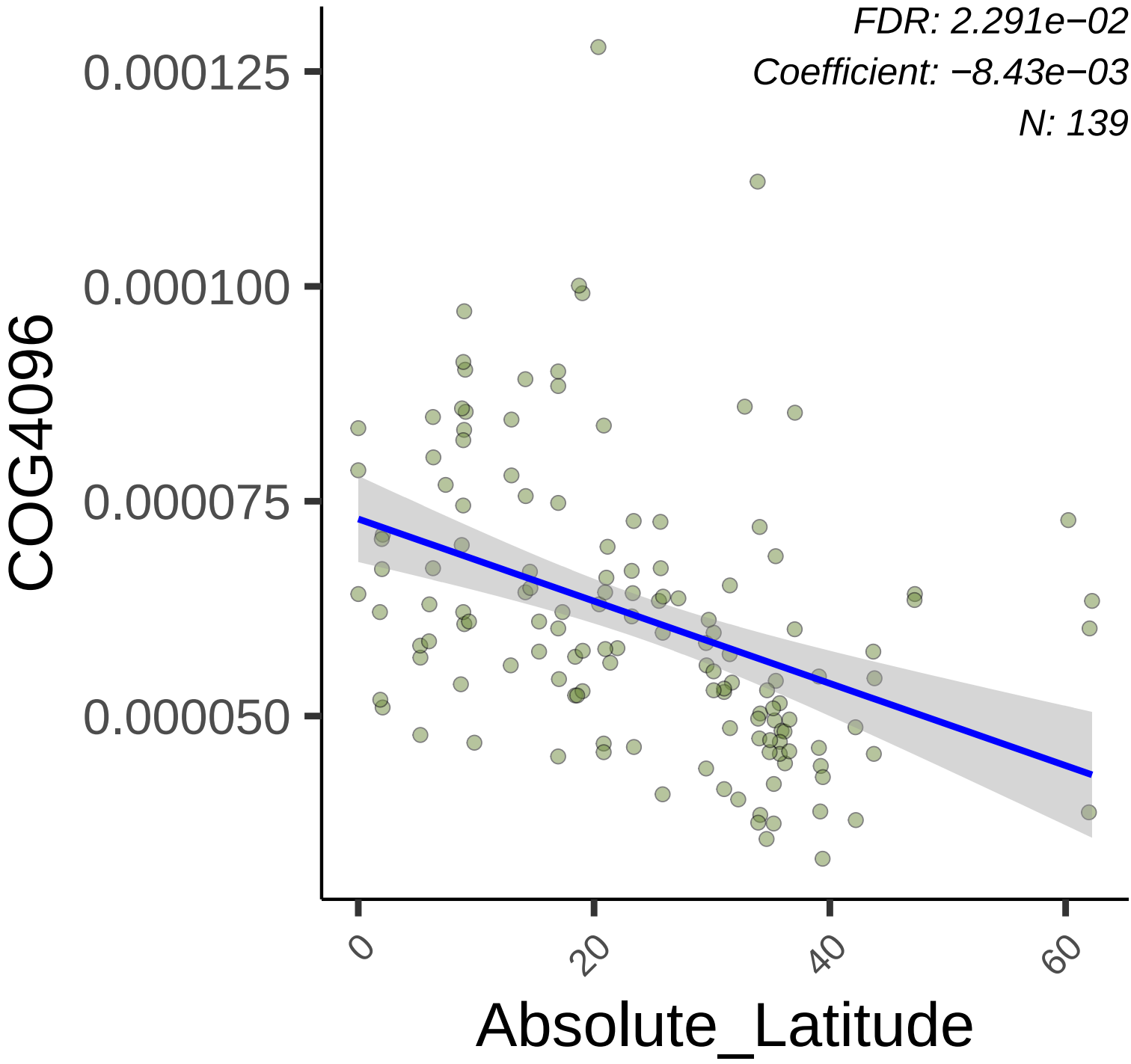

FDR: 2.273e−02
Coefficient: 1.22e−02
N: 139
0.0015
0.0010
0.0005
0.0000
COG1014
0
20
40
60
Absolute_Latitude

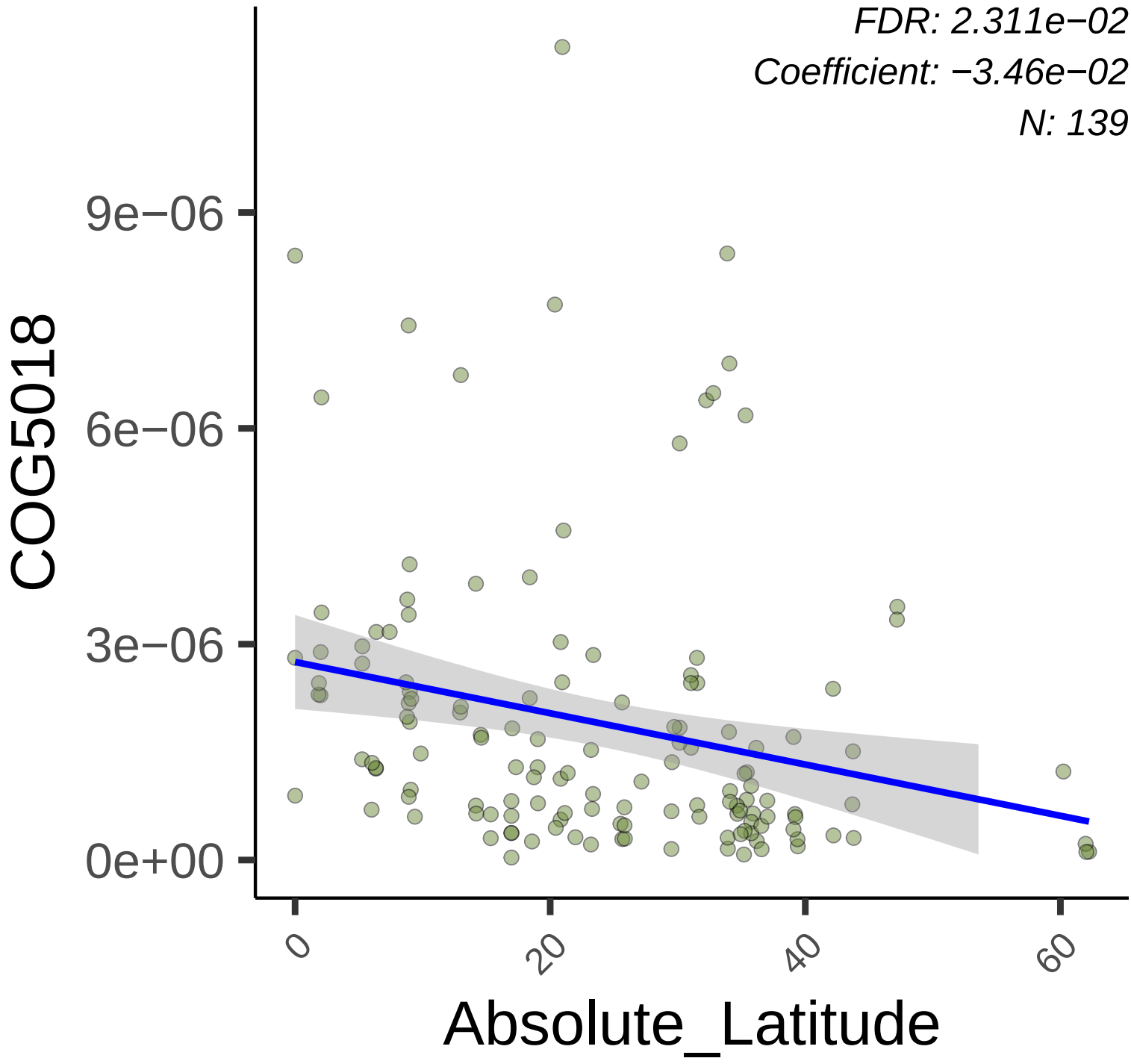

FDR: 2.274e−02
Coefficient: −6.59e−03
N: 139
4e−04
3e−04
2e−04
COG0373
0
20
40
60
Absolute_Latitude

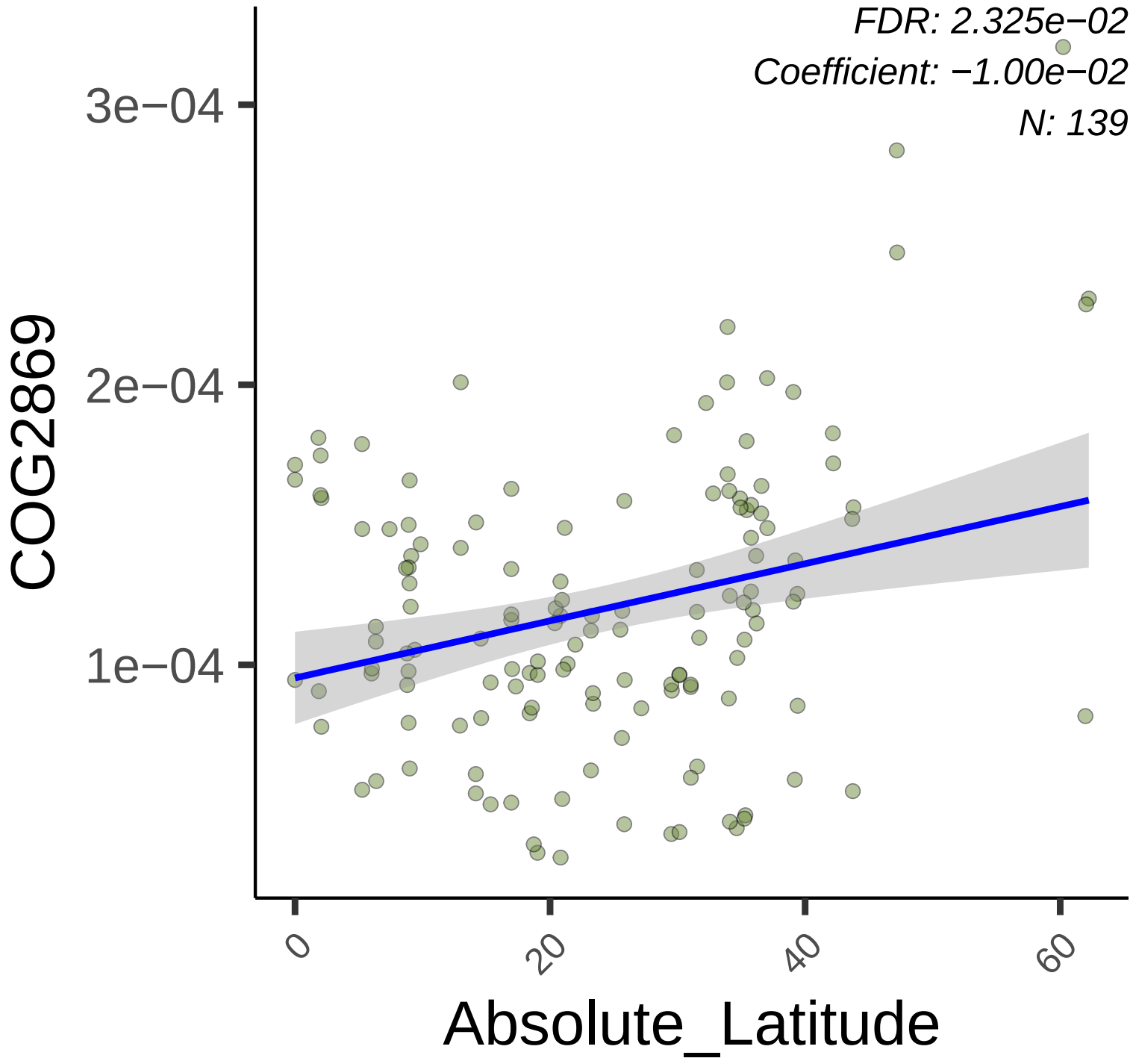

FDR: 2.276e−02
Coefficient: −8.14e−03
N: 139
COG1946
2e−04
1e−04
0
20
40
60
Absolute_Latitude

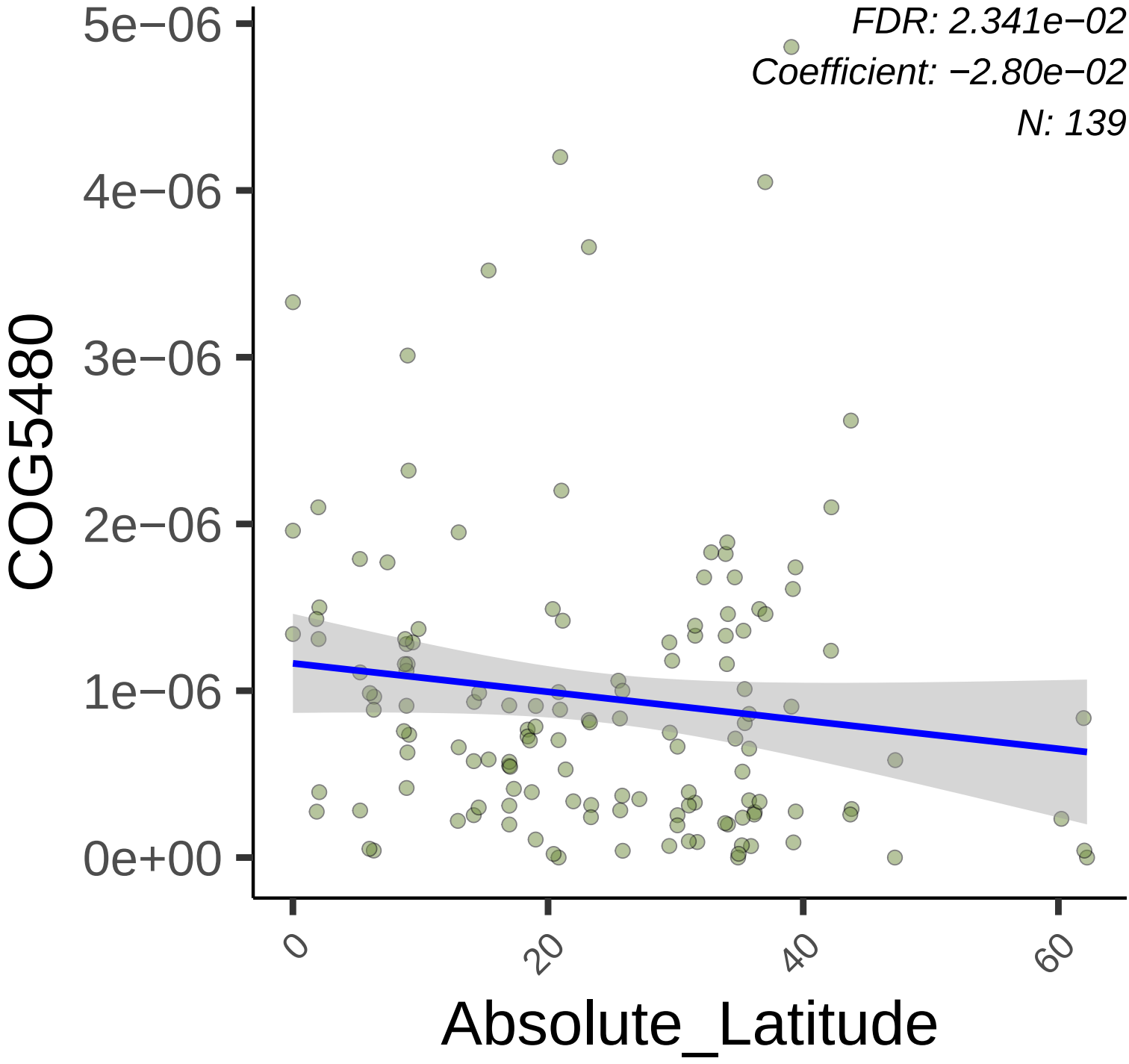

FDR: 2.283e−02
Coefficient: −1.71e−02
N: 139
COG1876
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

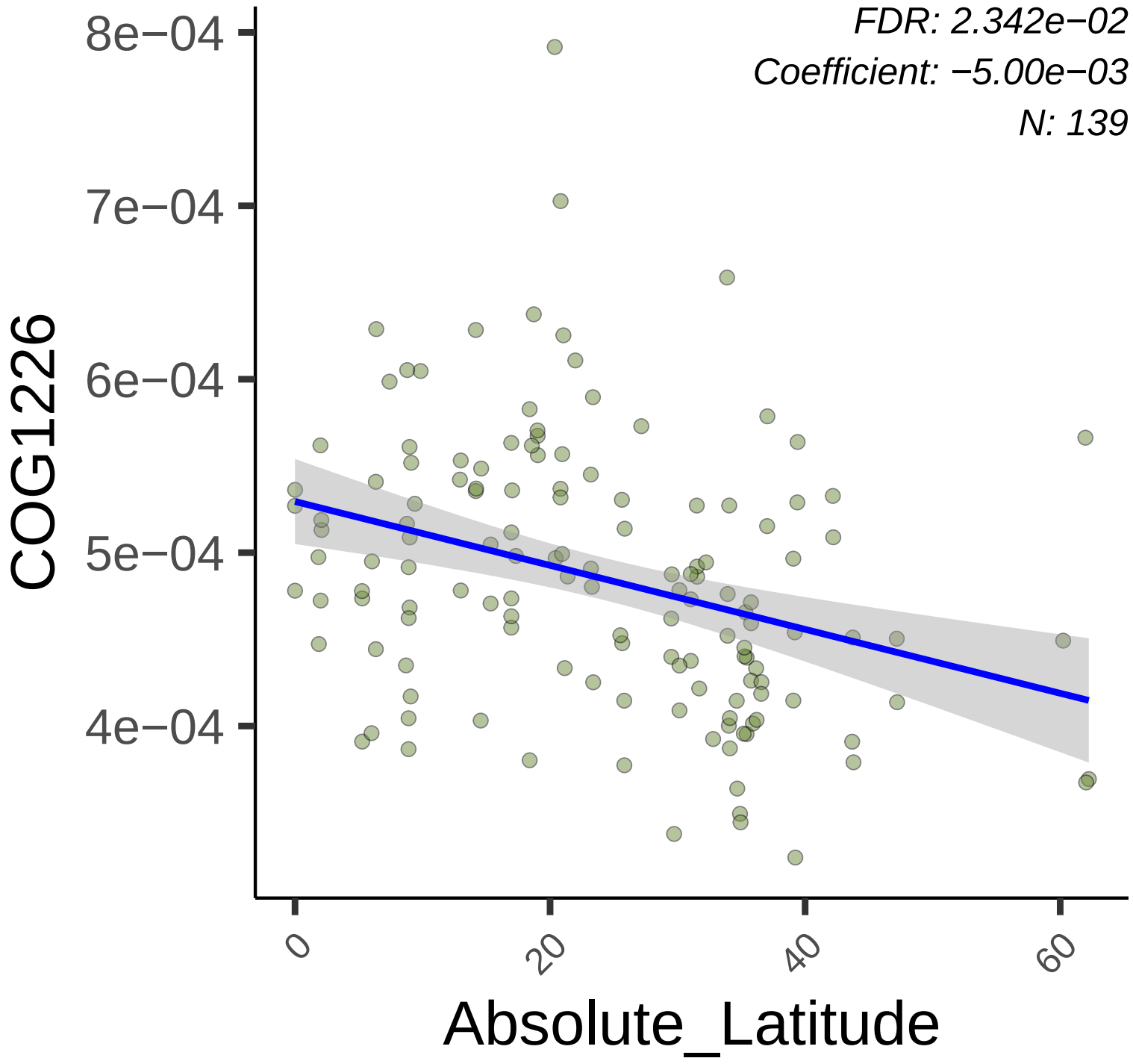

FDR: 2.291e−02
Coefficient: −2.29e−02
N: 139
COG3720
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

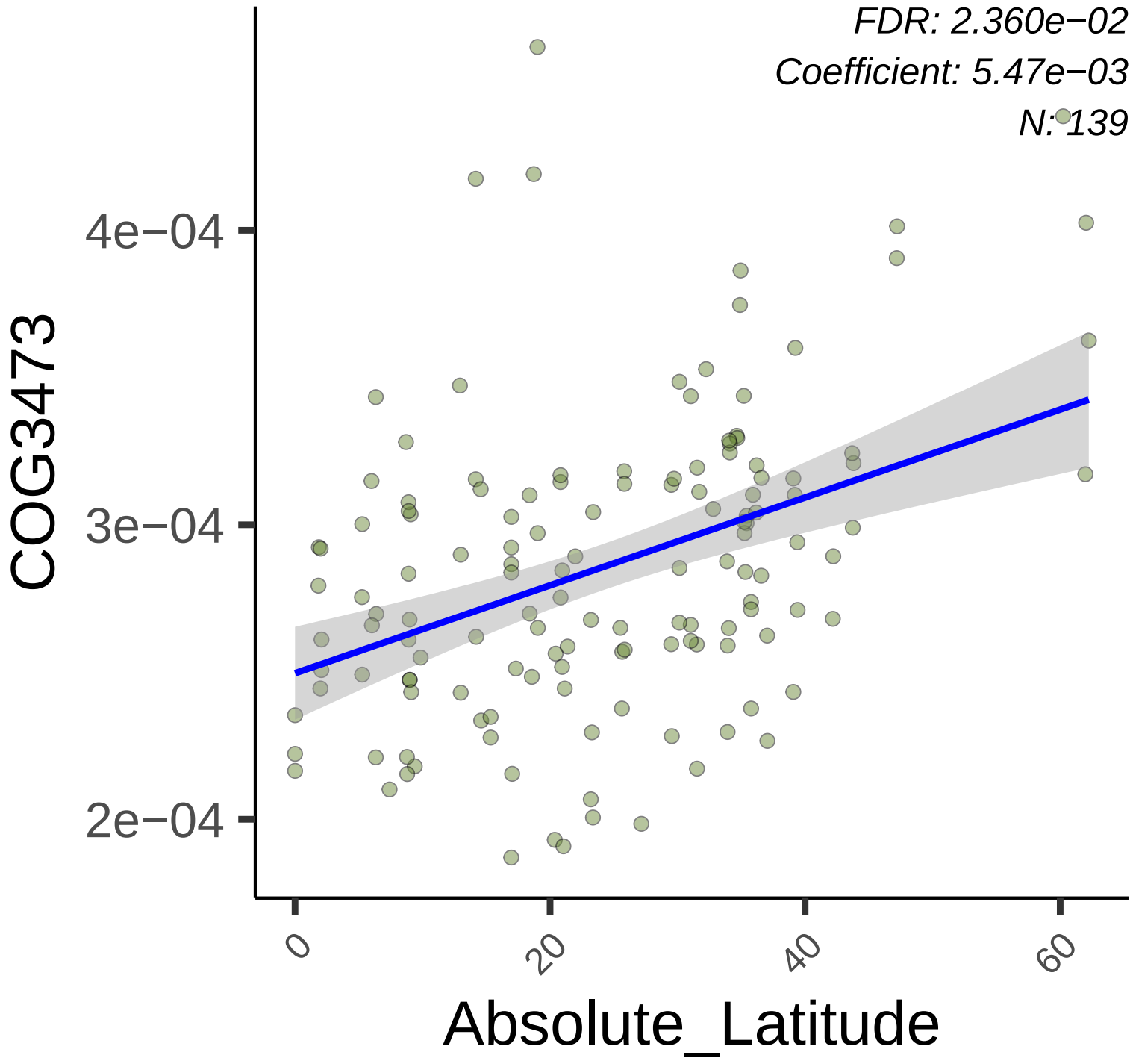

FDR: 2.291e−02
Coefficient: −8.43e−03
N: 139
0.000125
0.000100
0.000075
0.000050
COG4096
0
20
40
60
Absolute_Latitude

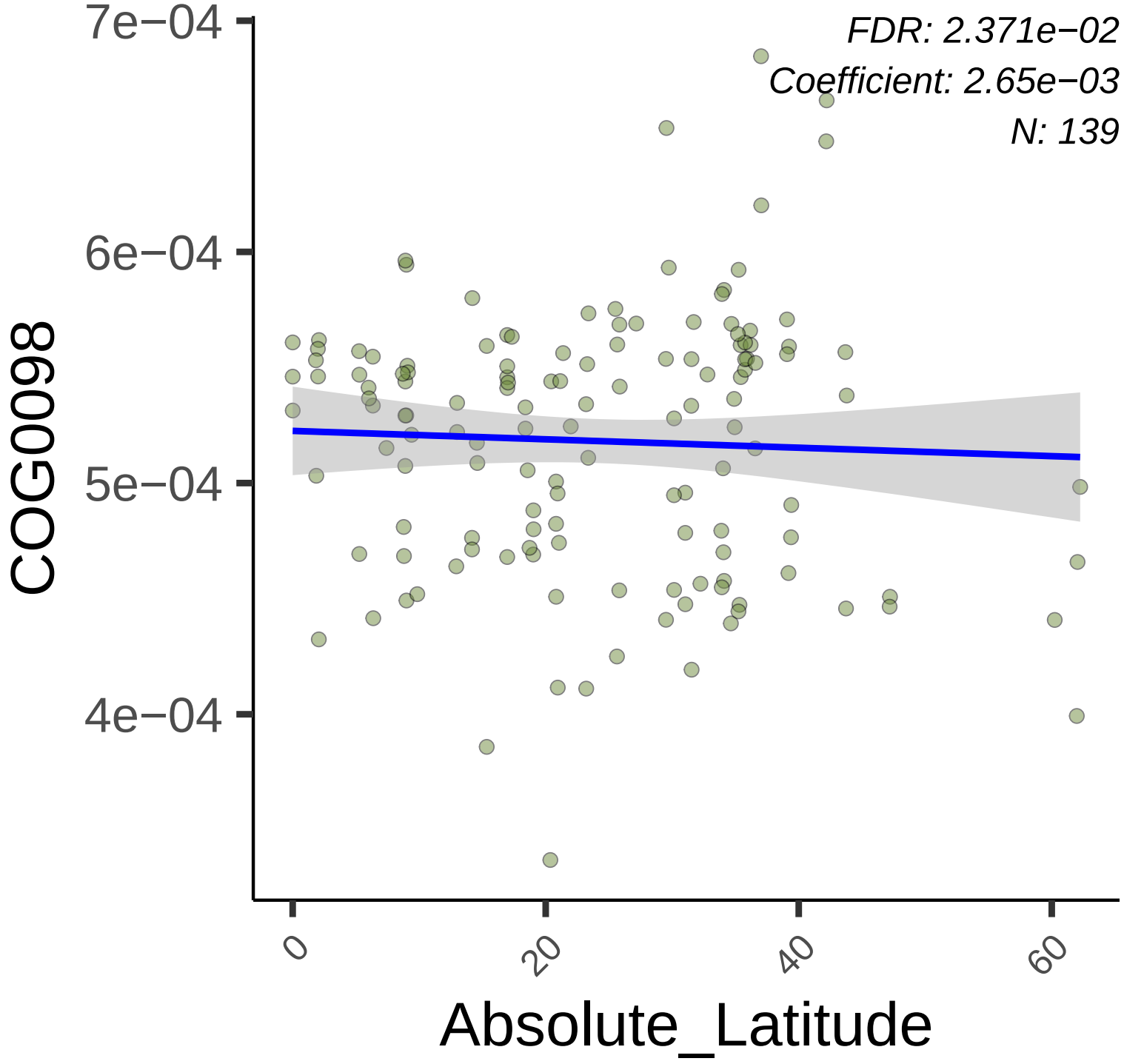

FDR: 2.311e−02
Coefficient: −3.46e−02
N: 139
COG5018
9e−06
6e−06
3e−06
0e+00
0
20
40
60
Absolute_Latitude

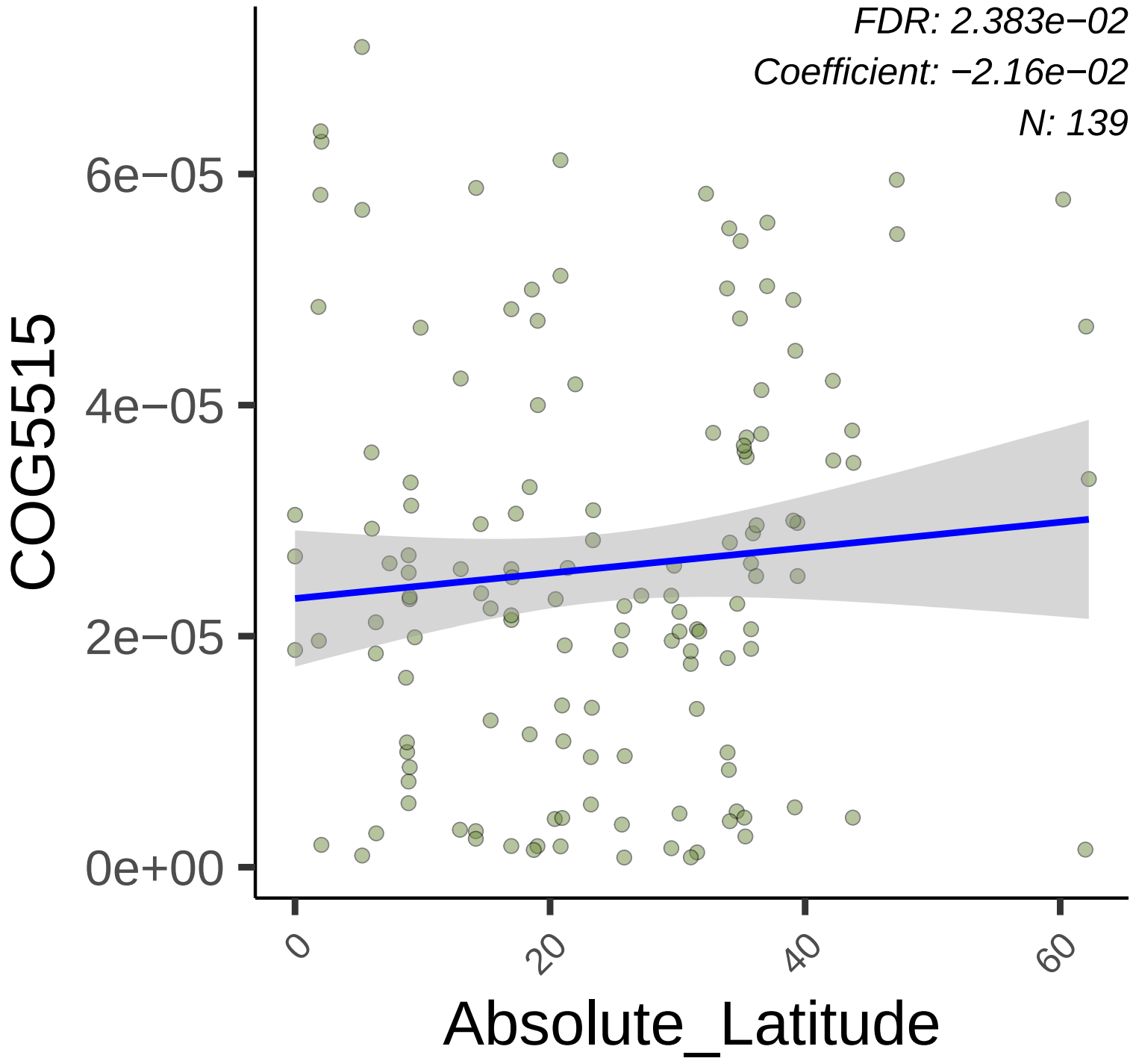

FDR: 2.325e−02
Coefficient: −1.00e−02
N: 139
3e−04
2e−04
1e−04
COG2869
0
20
40
60
Absolute_Latitude

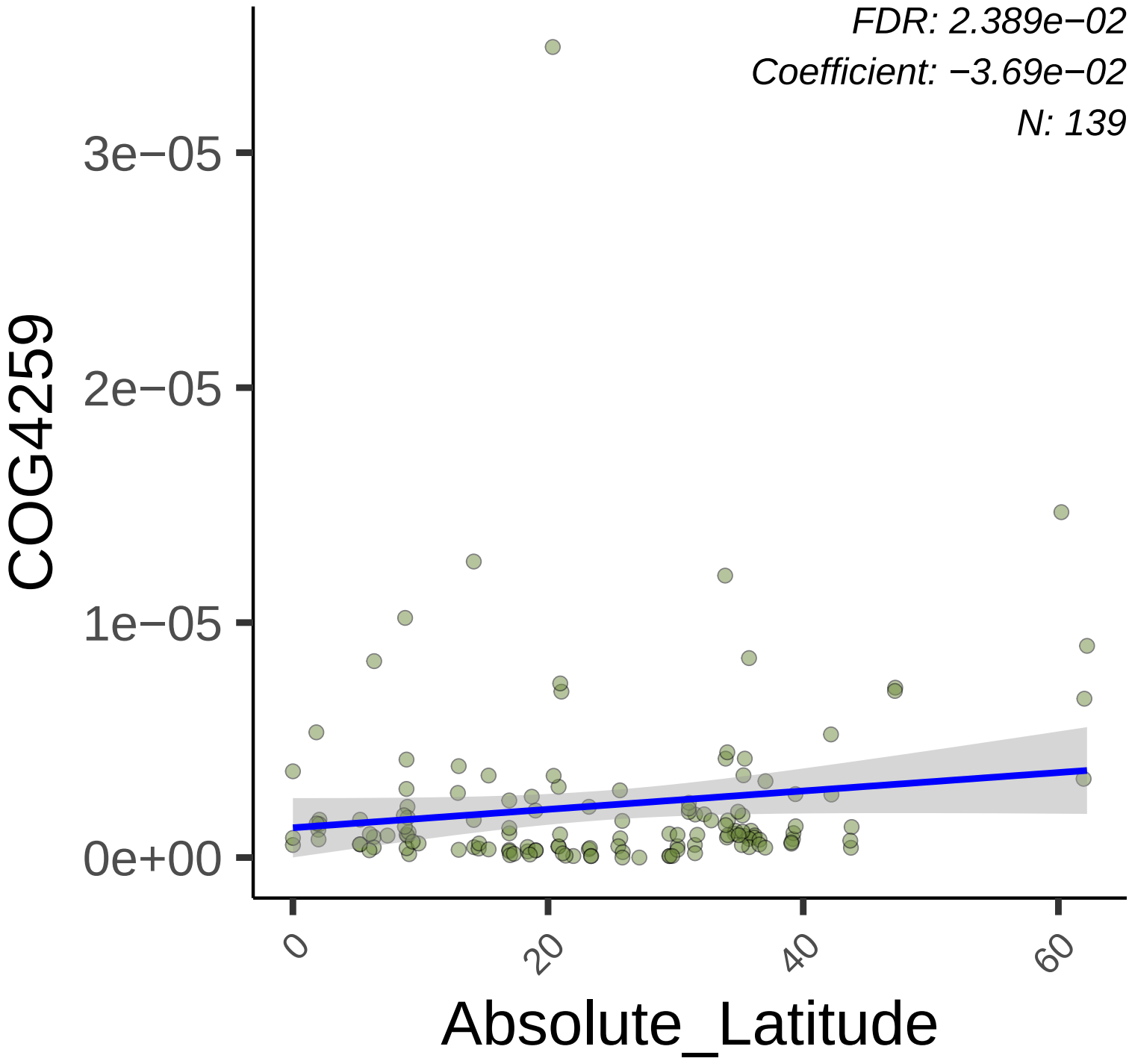

FDR: 2.341e−02
Coefficient: −2.80e−02
N: 139
COG5480
5e−06
4e−06
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

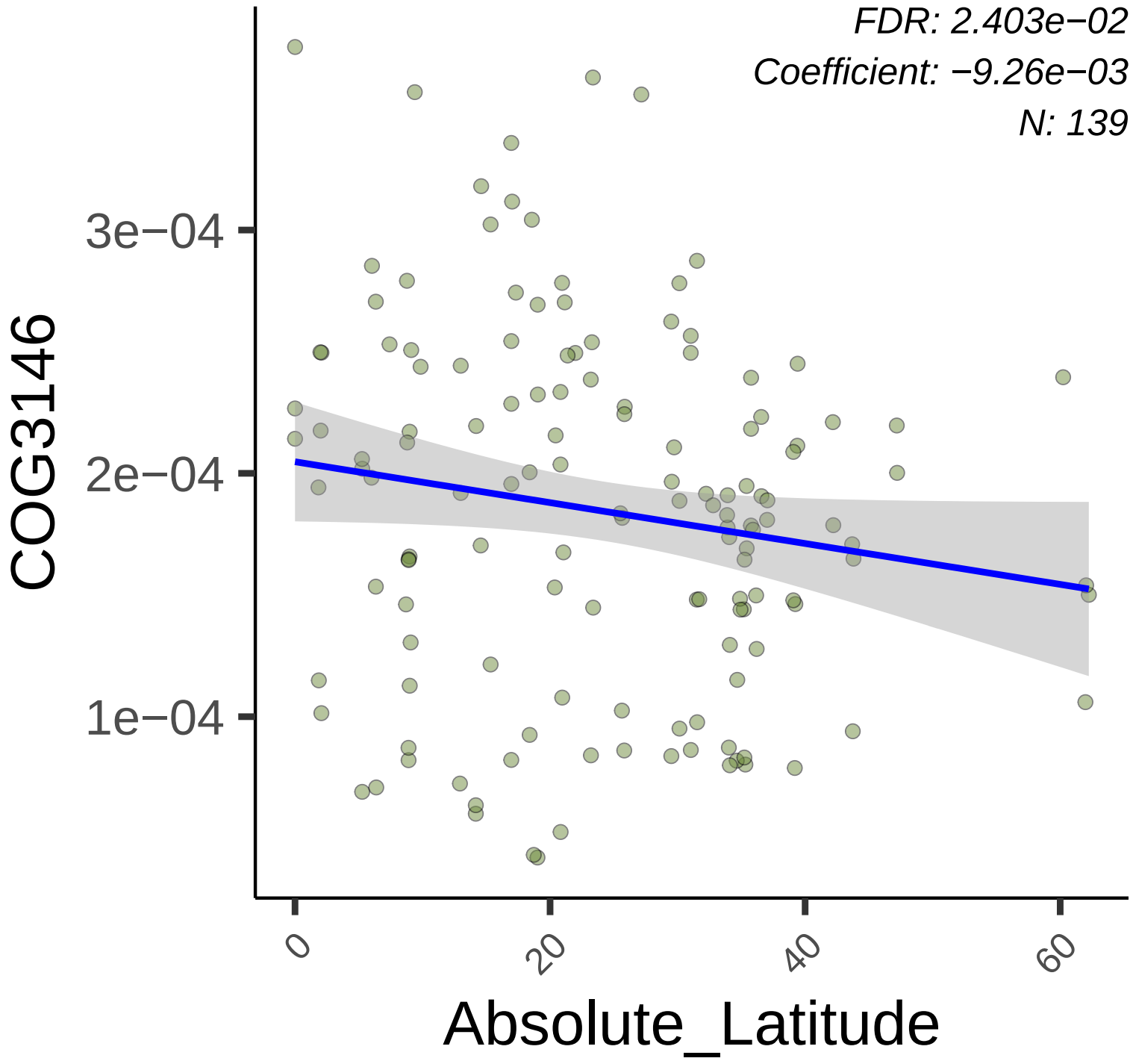

FDR: 2.342e−02
Coefficient: −5.00e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
COG1226
0
20
40
60
Absolute_Latitude

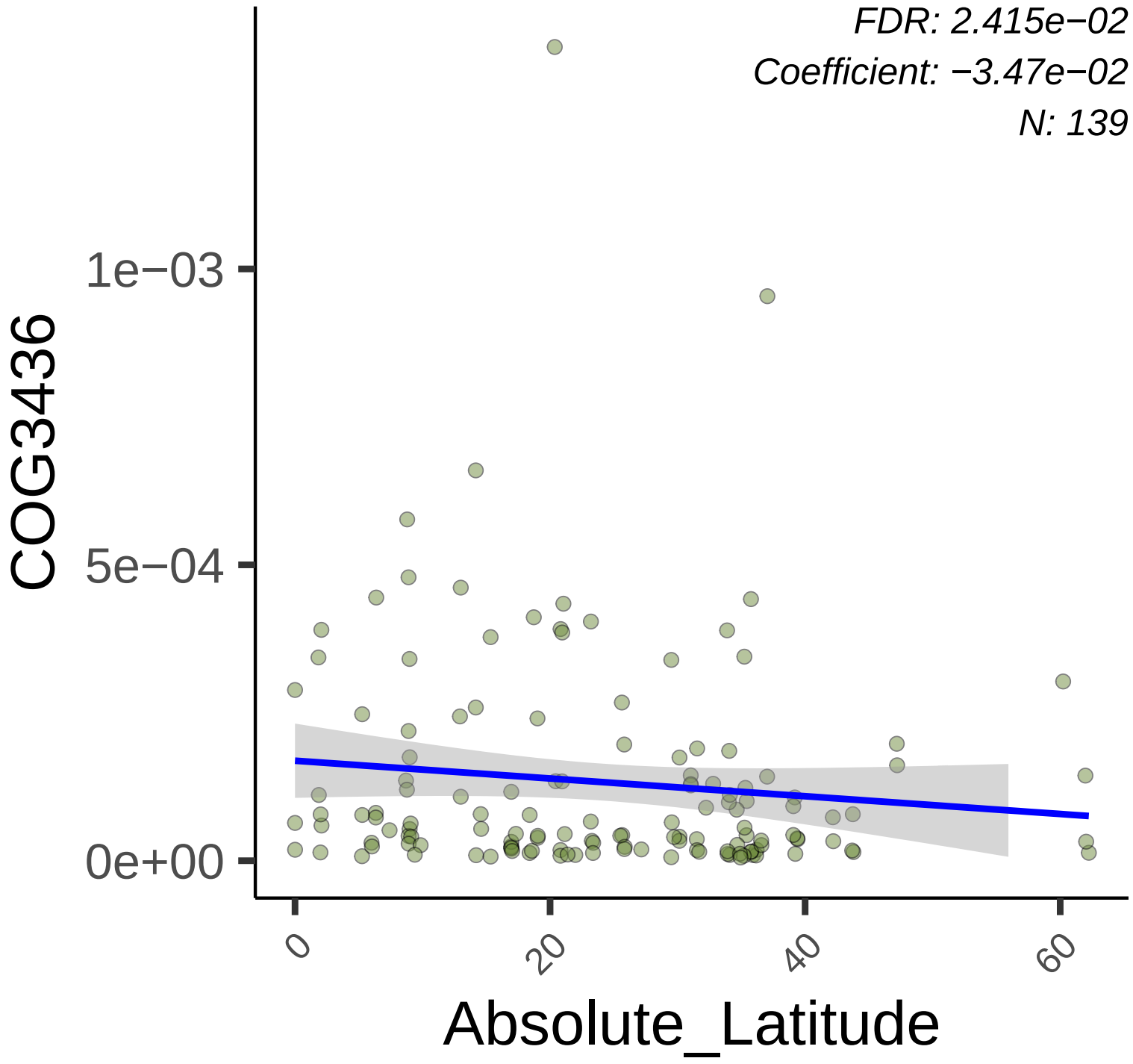

FDR: 2.360e−02
Coefficient: 5.47e−03
N: 139
COG3473
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

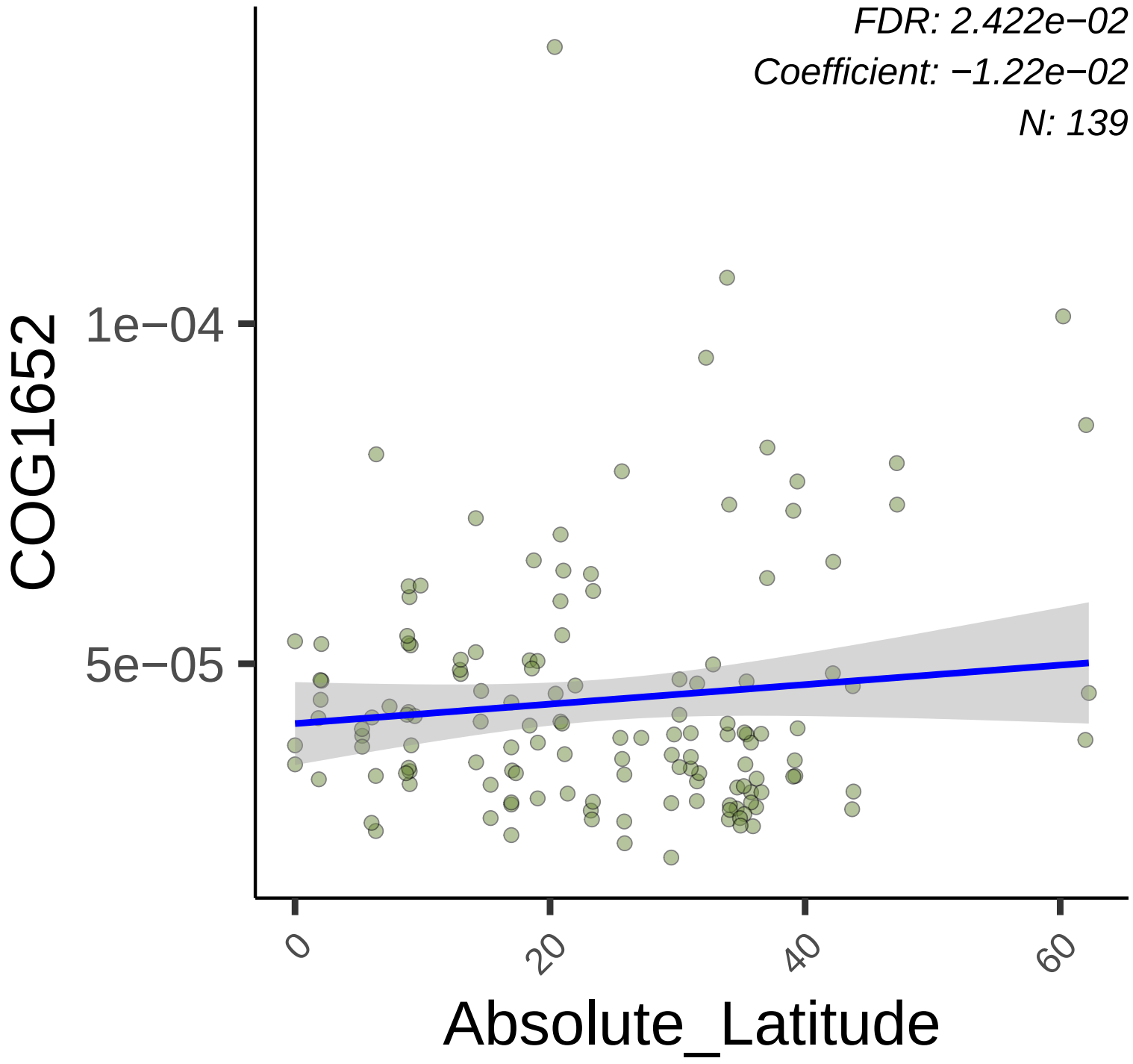

FDR: 2.371e−02
Coefficient: 2.65e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0098
0
20
40
60
Absolute_Latitude

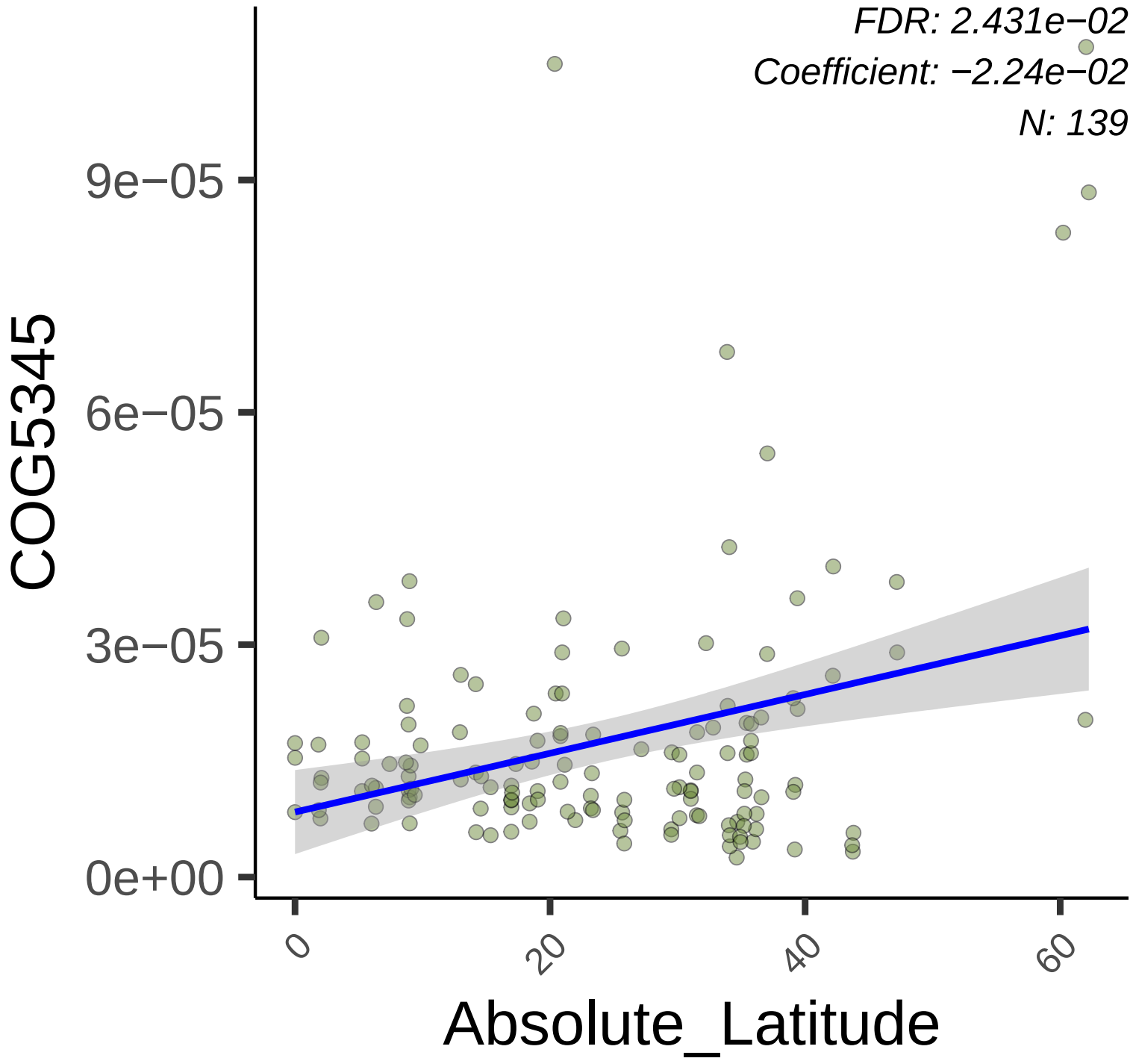

FDR: 2.383e−02
Coefficient: −2.16e−02
N: 139
COG5515
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

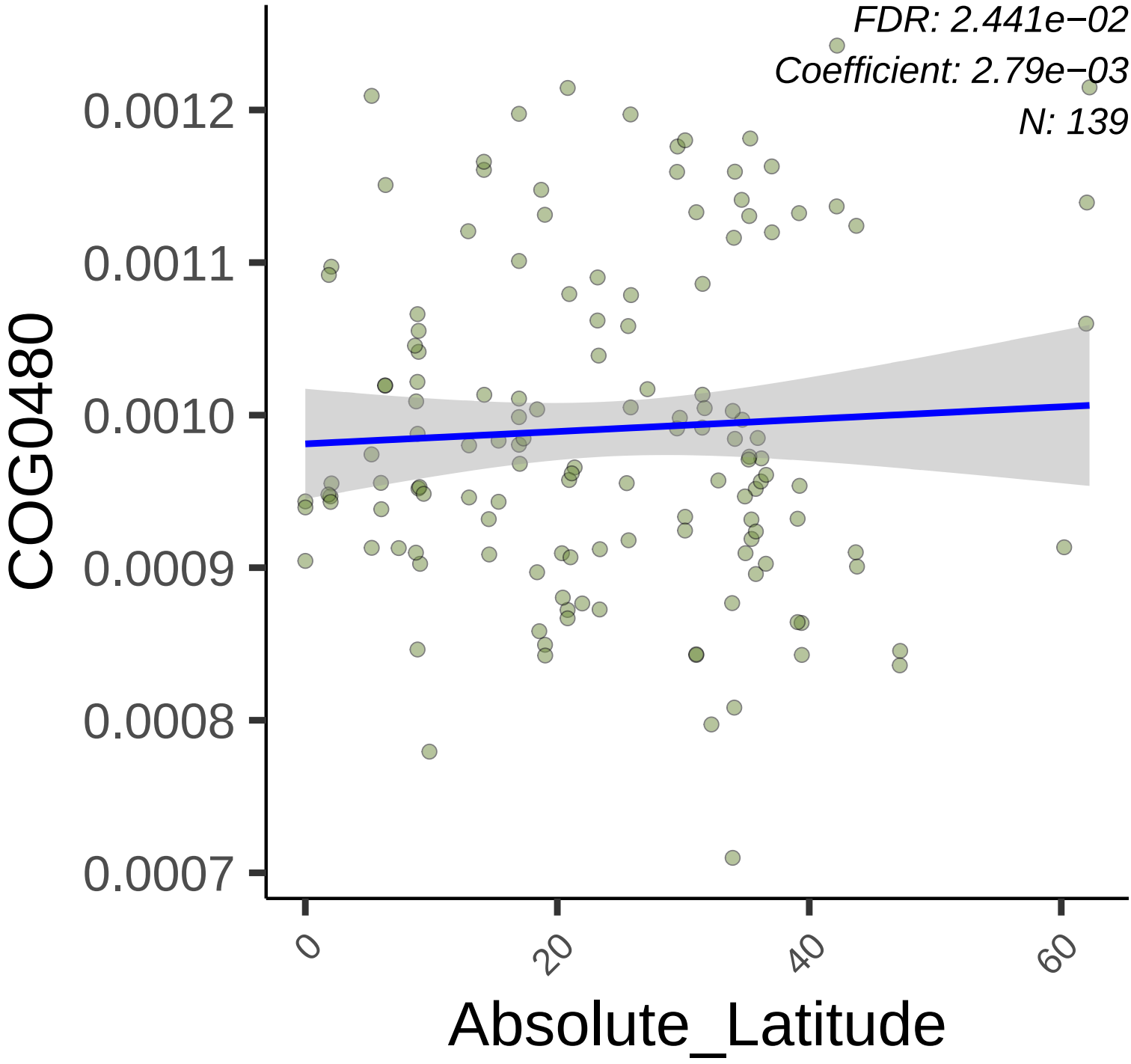

FDR: 2.389e−02
Coefficient: −3.69e−02
N: 139
COG4259
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

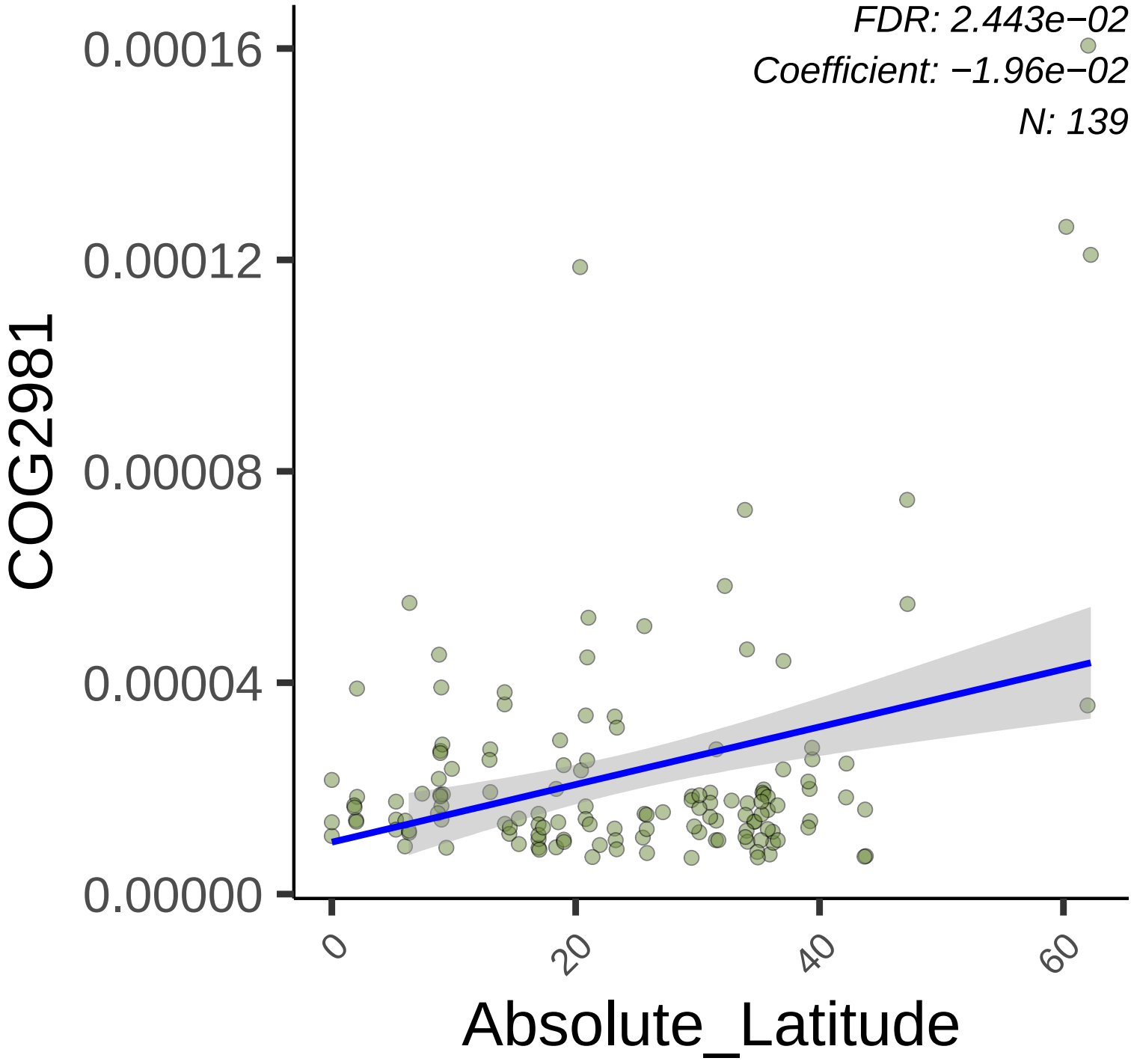

FDR: 2.403e−02
Coefficient: −9.26e−03
N: 139
COG3146
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

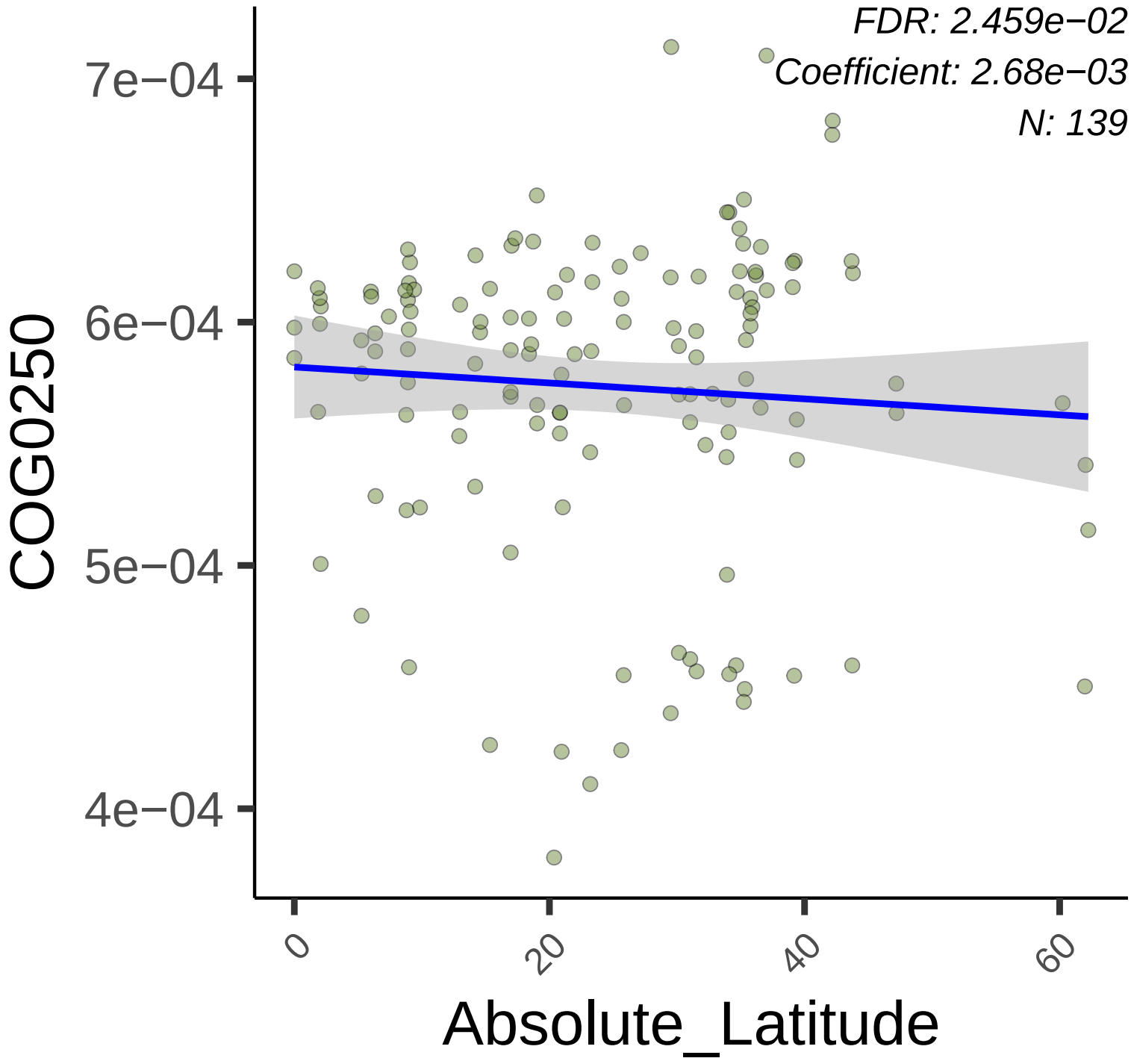

FDR: 2.415e−02
Coefficient: −3.47e−02
N: 139
COG3436
1e−03
5e−04
0e+00
0
20
40
60
Absolute_Latitude

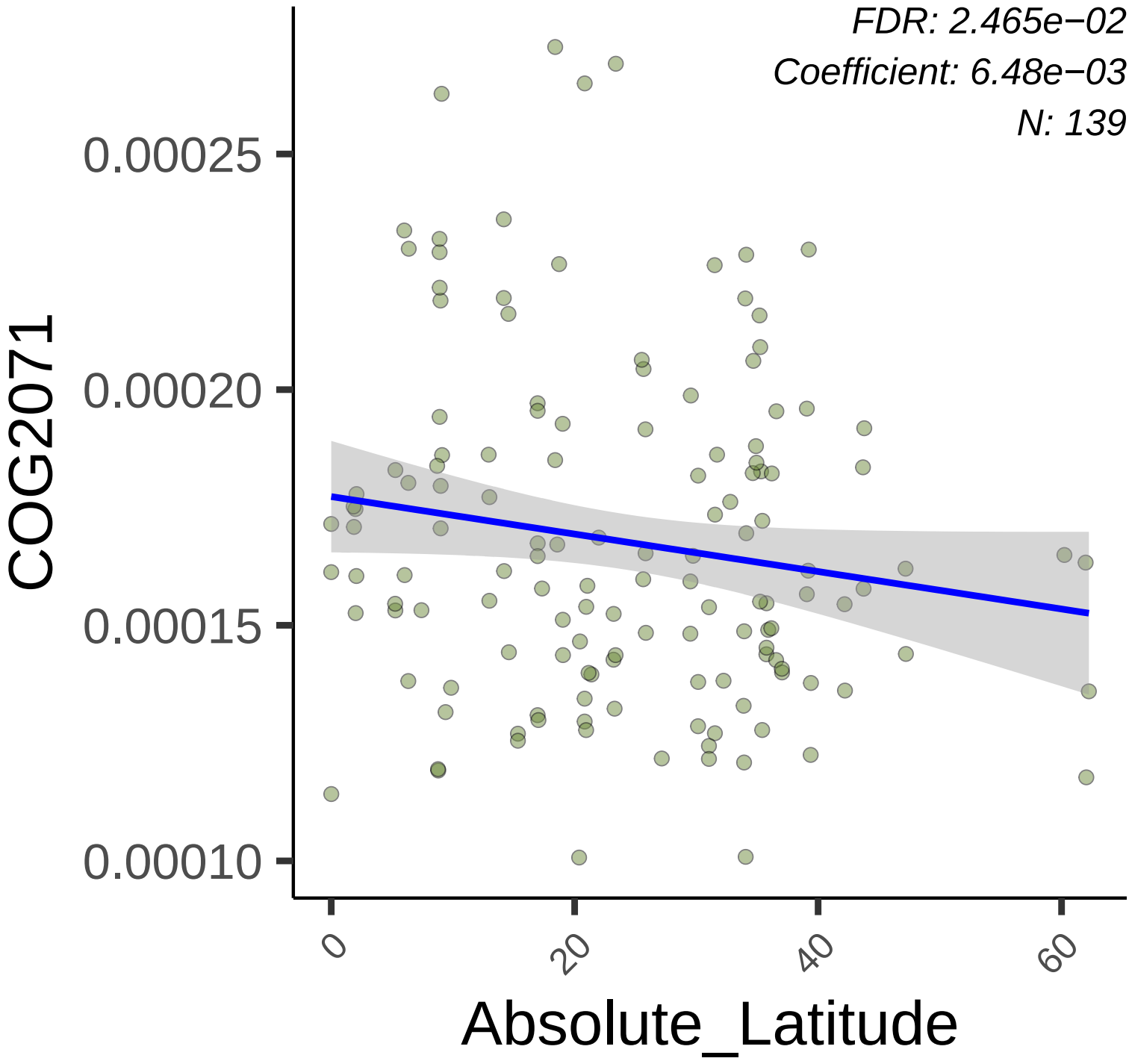

FDR: 2.422e−02
Coefficient: −1.22e−02
N: 139
COG1652
1e−04
5e−05
0
20
40
60
Absolute_Latitude

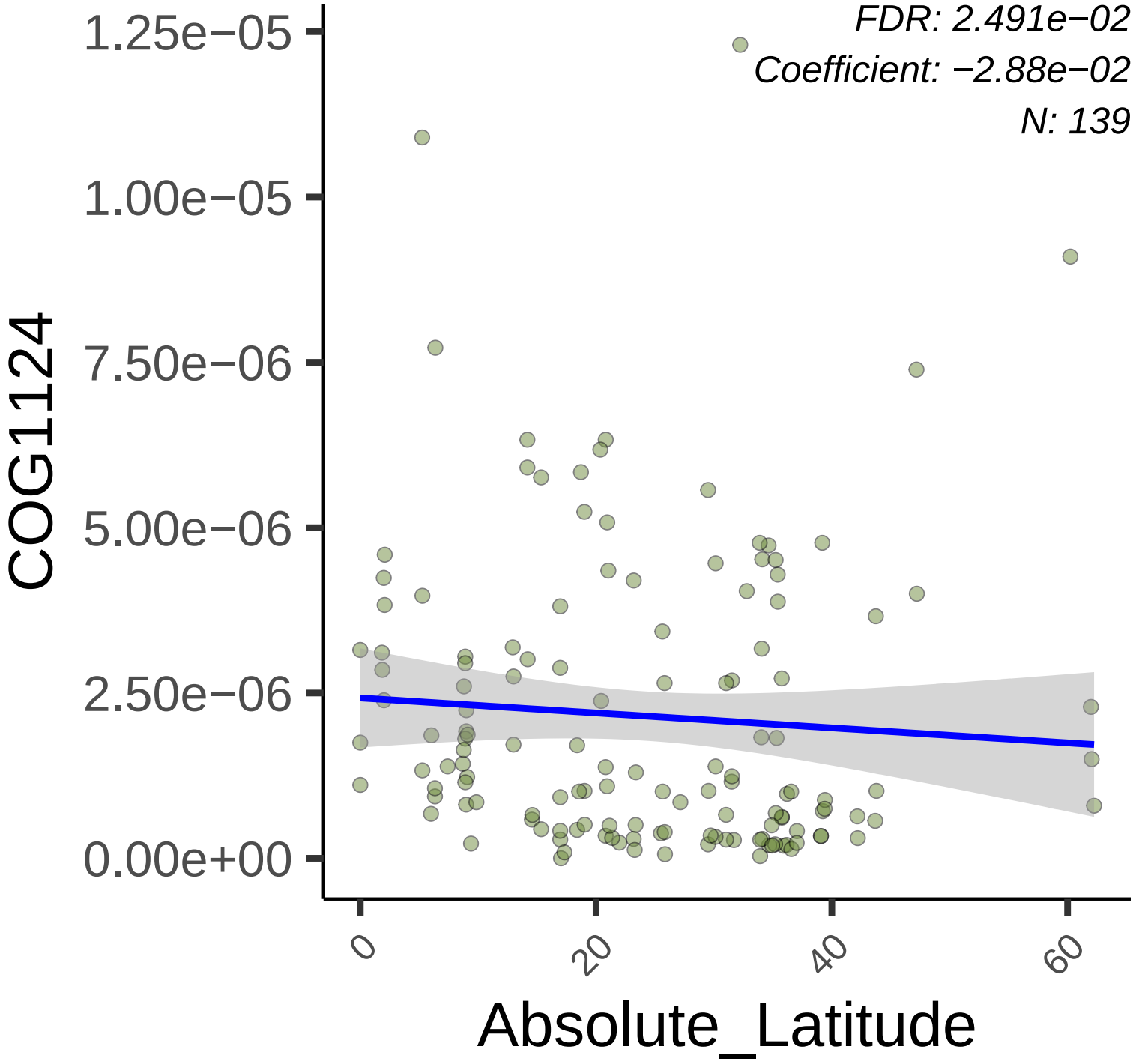

FDR: 2.431e−02
Coefficient: −2.24e−02
N: 139
COG5345
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

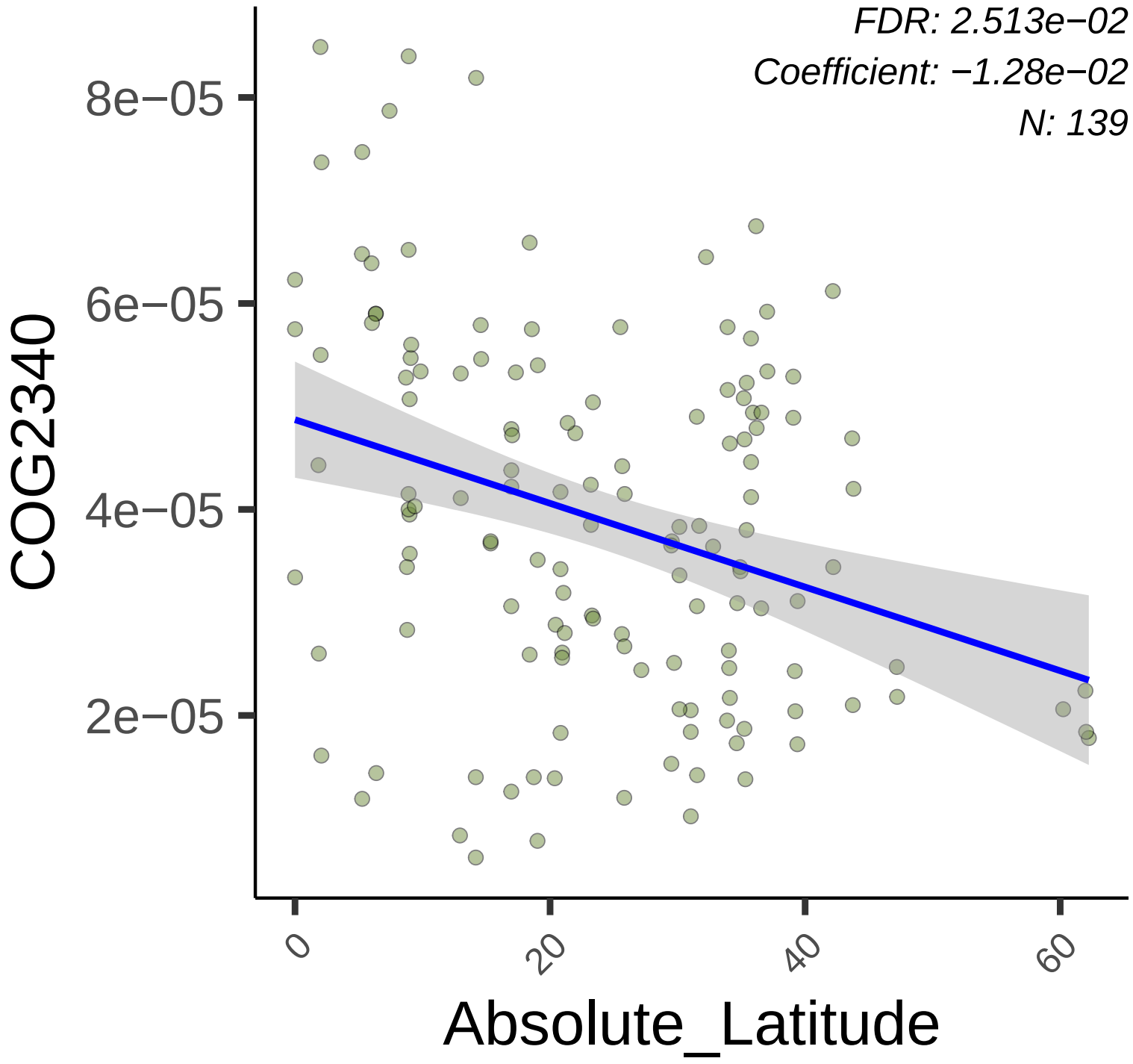

FDR: 2.441e−02
Coefficient: 2.79e−03
N: 139
COG0480
0.0012
0.0011
0.0010
0.0009
0.0008
0.0007
0
20
40
60
Absolute_Latitude

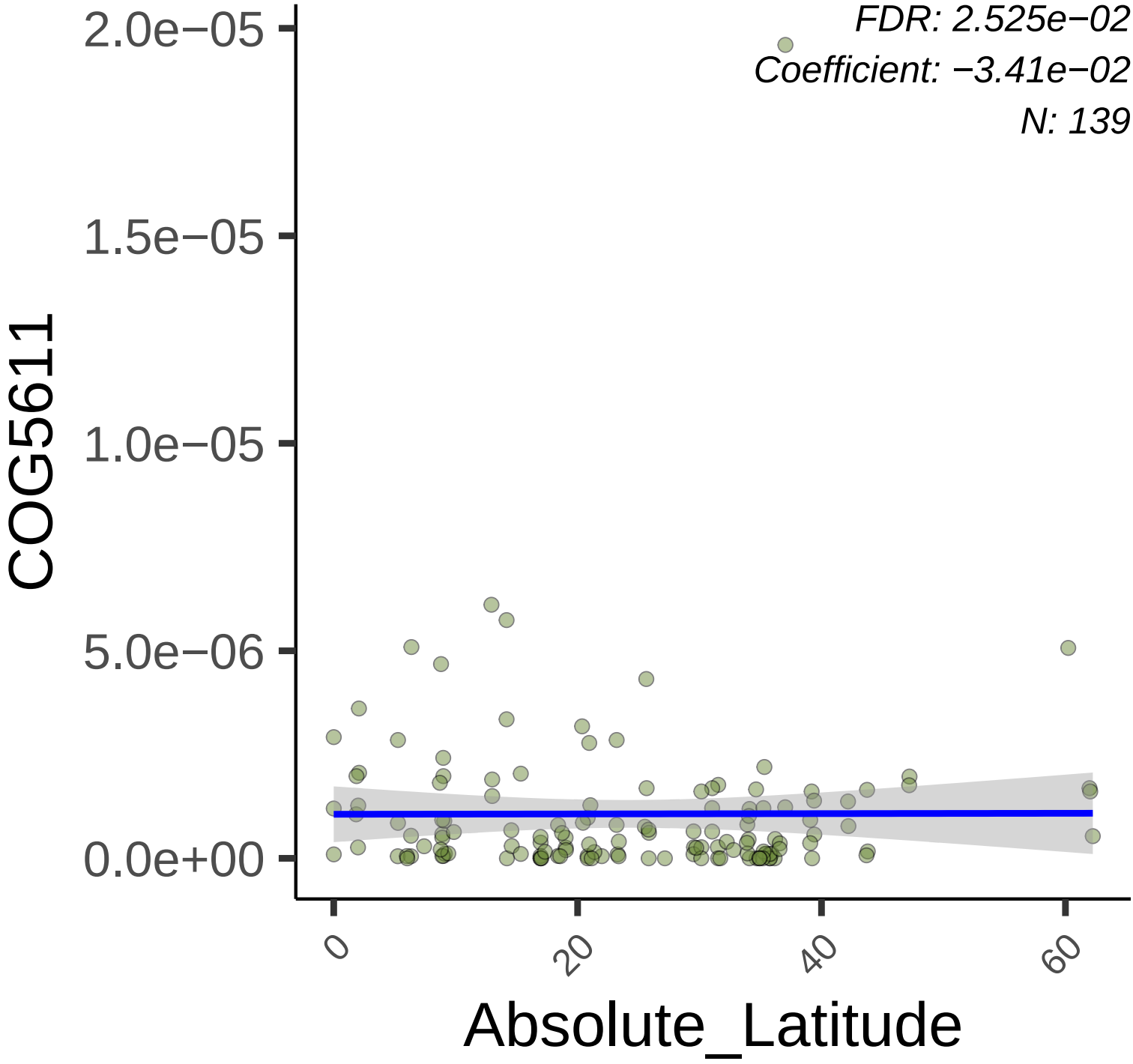

FDR: 2.443e−02
Coefficient: −1.96e−02
N: 139
0.00016
0.00012
0.00008
0.00004
0.00000
COG2981
0
20
40
60
Absolute_Latitude

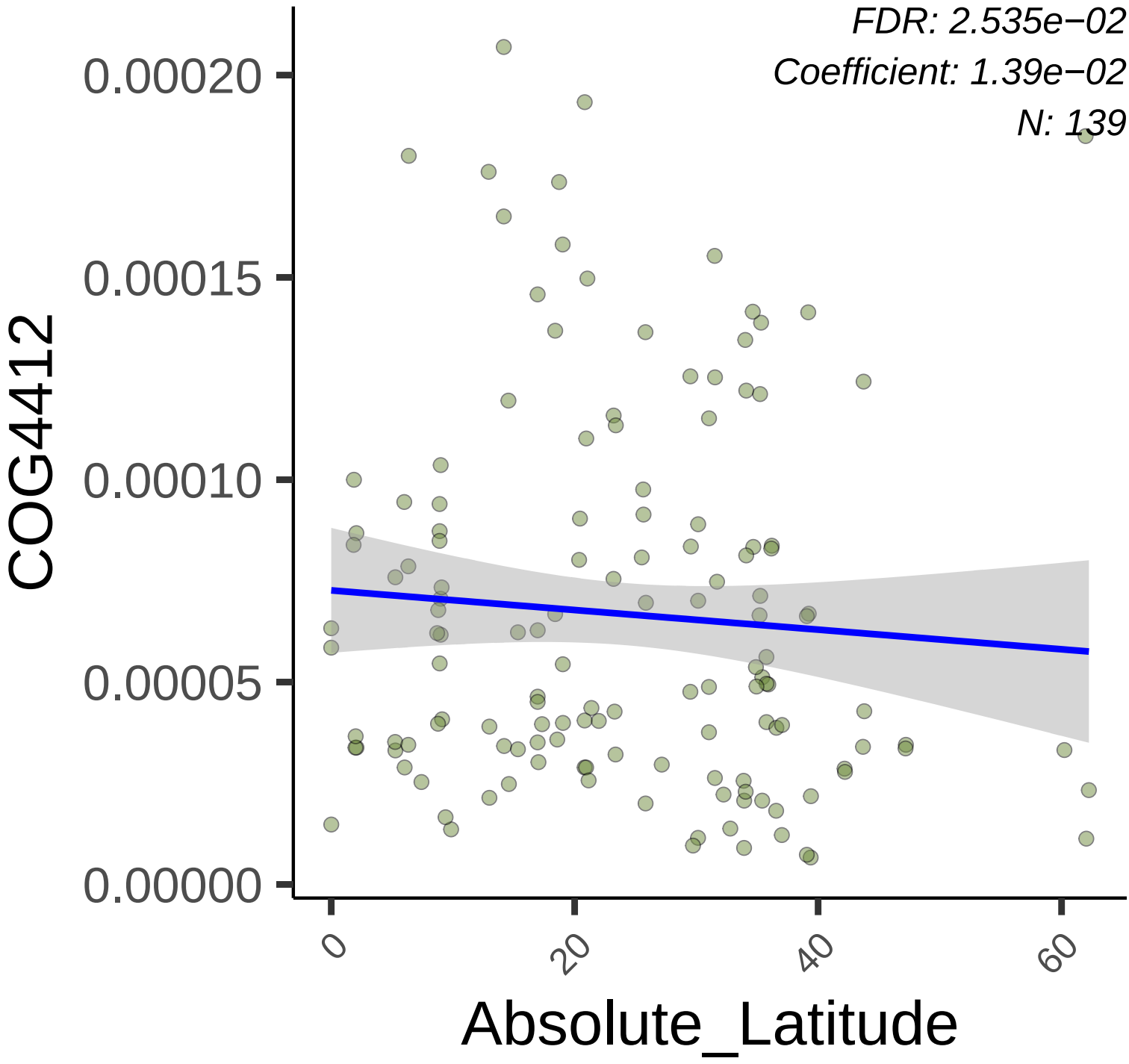

FDR: 2.459e−02
Coefficient: 2.68e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0250
0
20
40
60
Absolute_Latitude

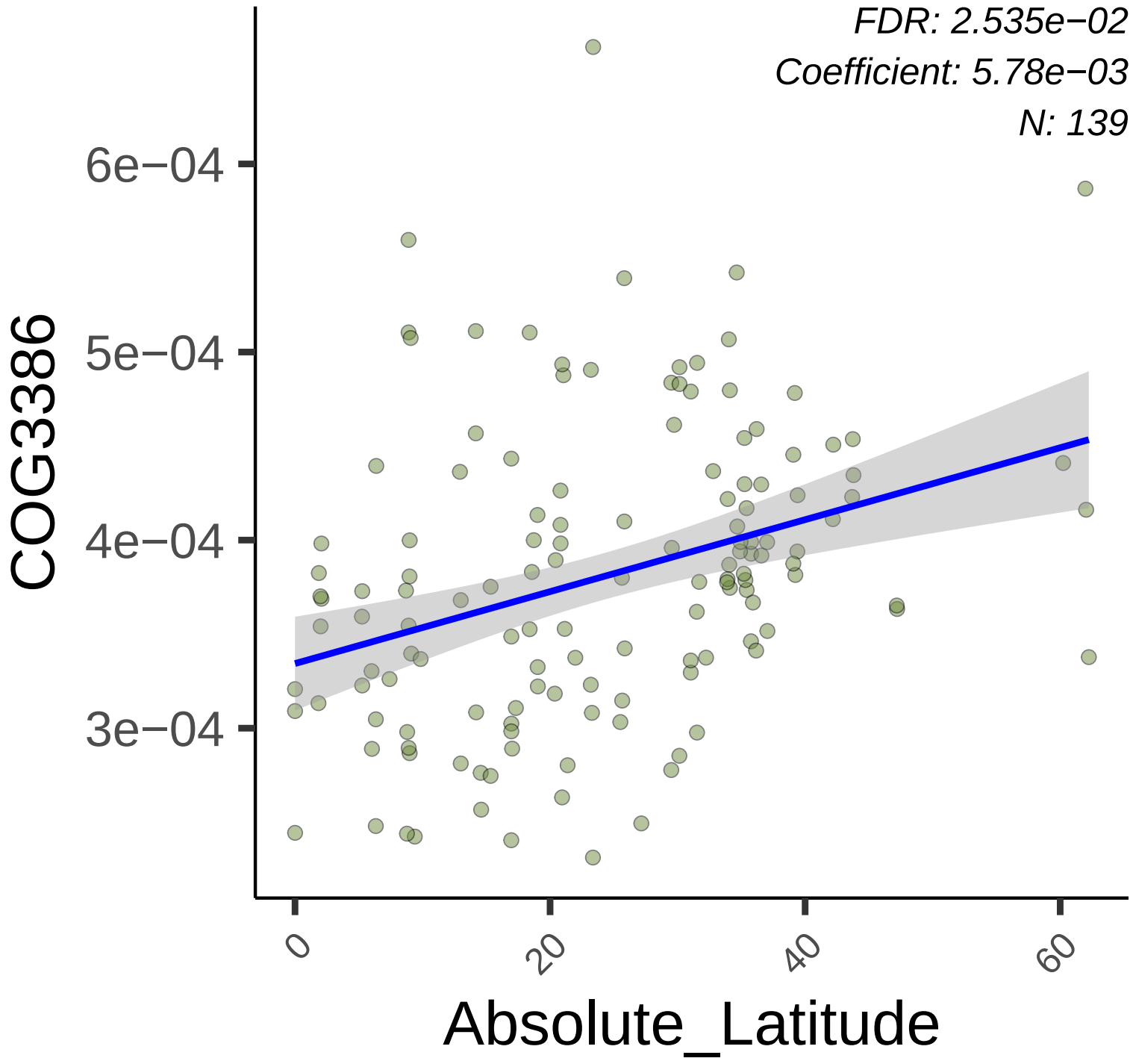

FDR: 2.465e−02
Coefficient: 6.48e−03
N: 139
COG2071
0.00025
0.00020
0.00015
0.00010
0
20
40
60
Absolute_Latitude

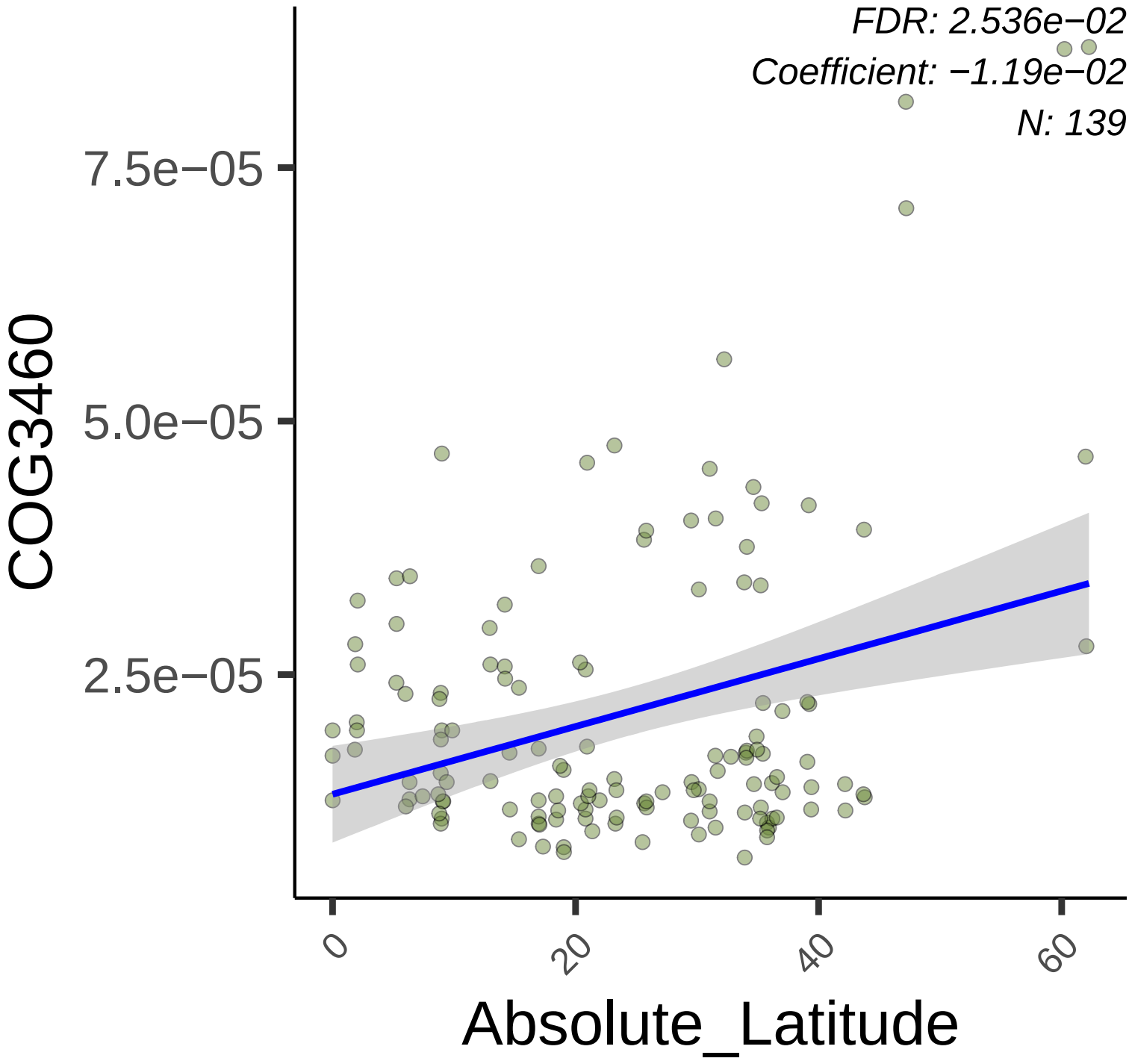

FDR: 2.491e−02
Coefficient: −2.88e−02
N: 139
1.25e−05
1.00e−05
7.50e−06
5.00e−06
2.50e−06
0.00e+00
COG1124
0
20
40
60
Absolute_Latitude

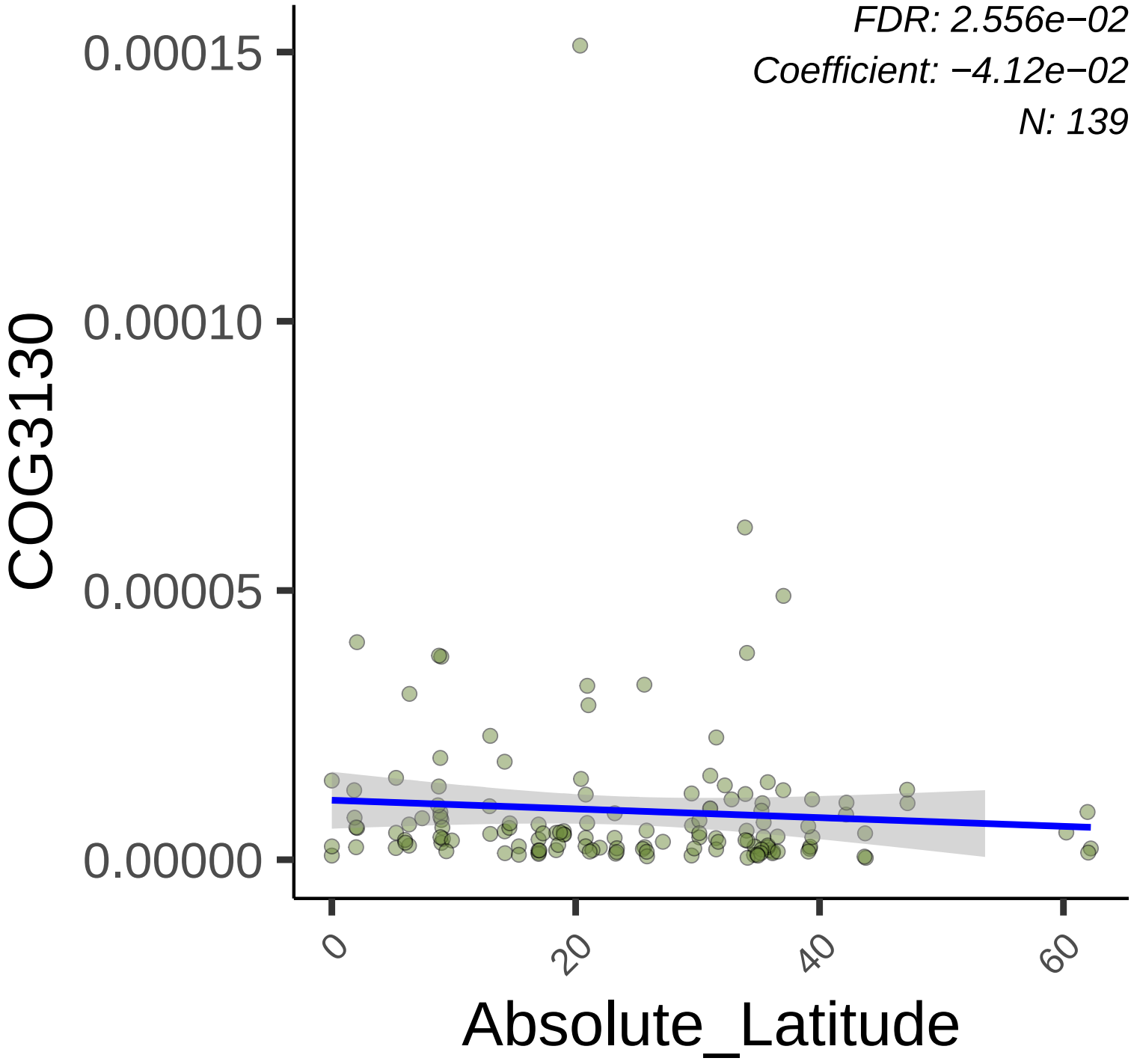

FDR: 2.513e−02
Coefficient: −1.28e−02
N: 139
8e−05
6e−05
4e−05
2e−05
COG2340
0
20
40
60
Absolute_Latitude

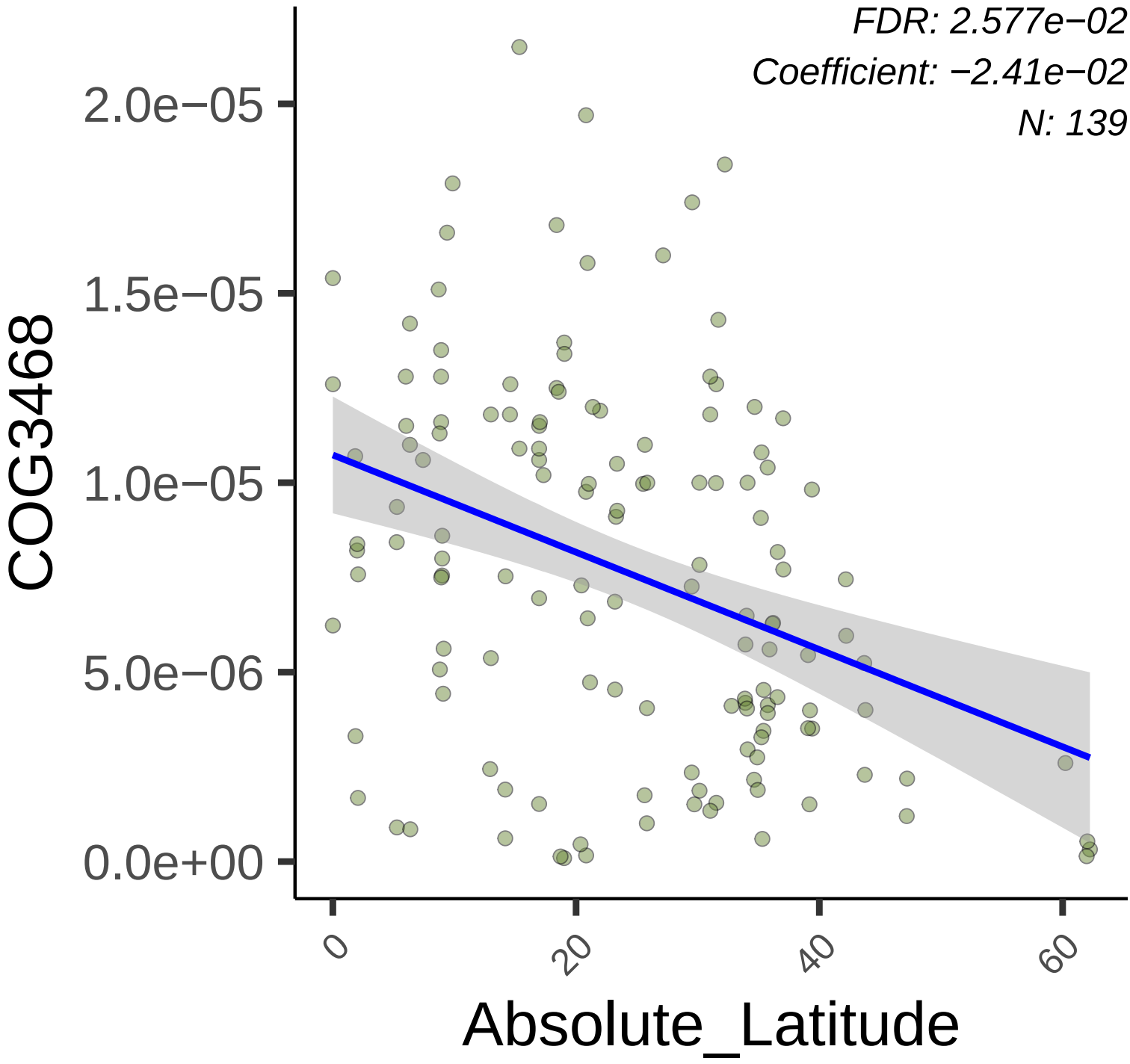

FDR: 2.525e−02
Coefficient: −3.41e−02
N: 139
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG5611
0
20
40
60
Absolute_Latitude

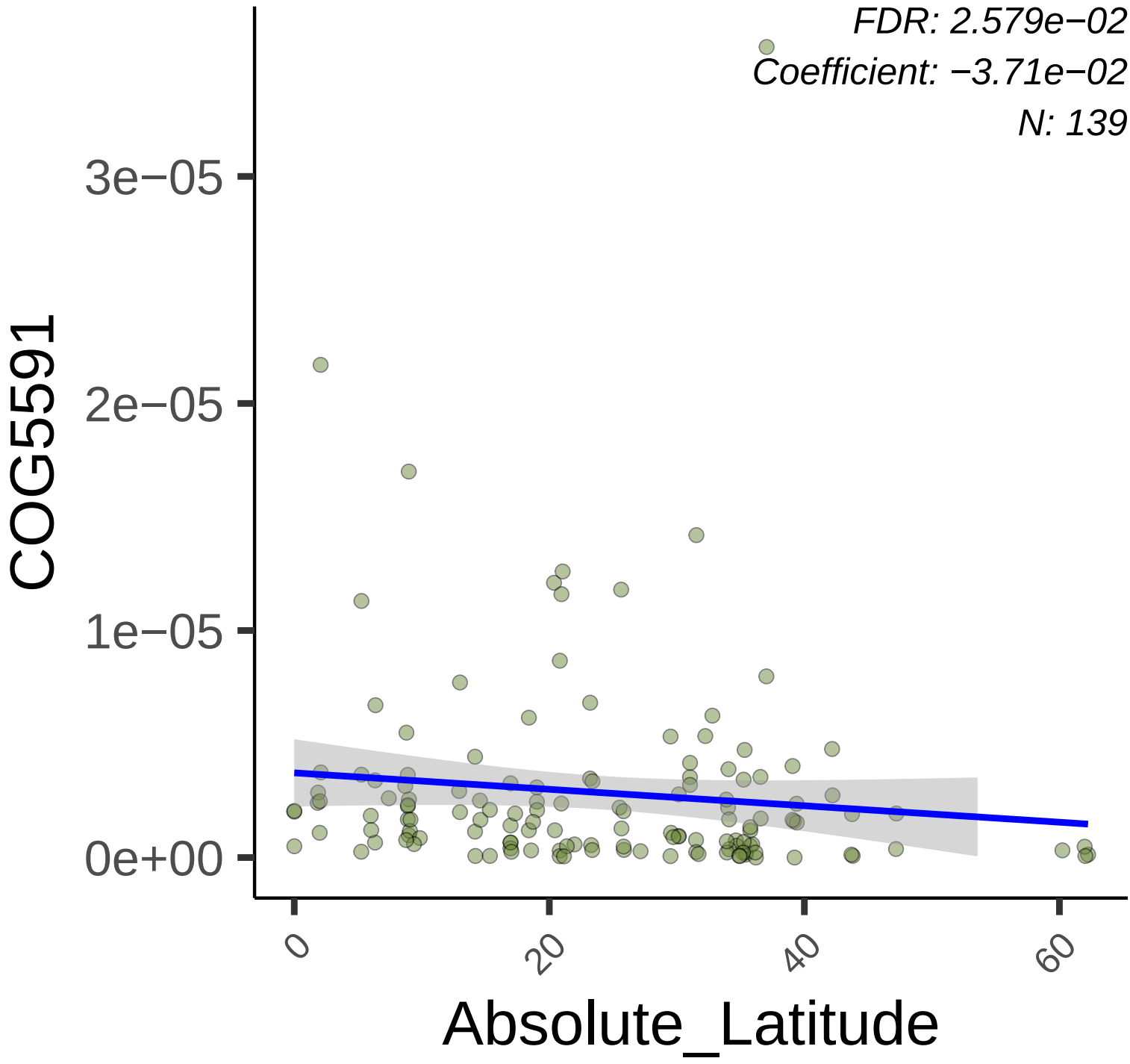

FDR: 2.535e−02
Coefficient: 1.39e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG4412
0
20
40
60
Absolute_Latitude

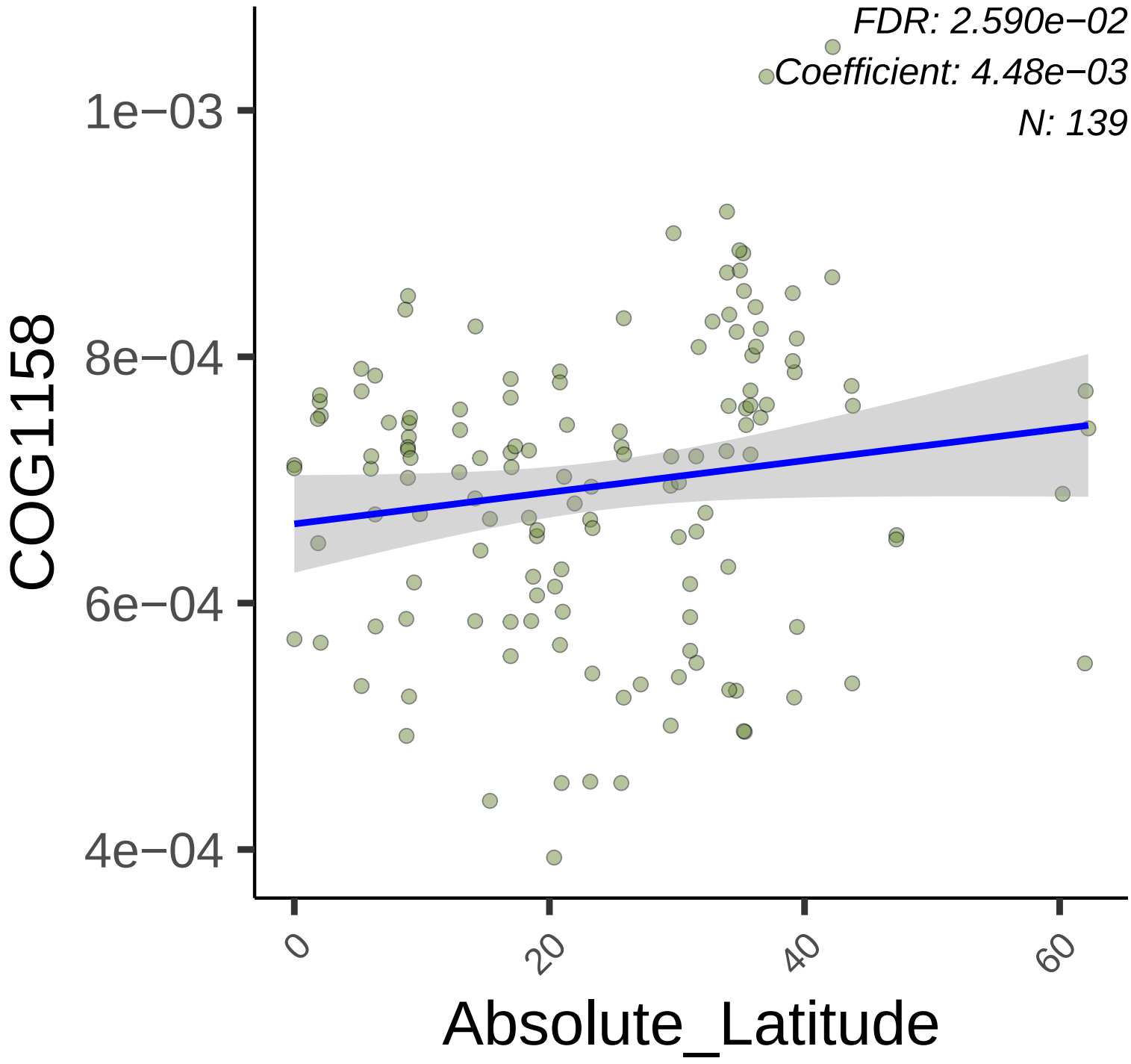

FDR: 2.535e−02
Coefficient: 5.78e−03
N: 139
COG3386
6e−04
5e−04
4e−04
3e−04
0
20
40
60
Absolute_Latitude

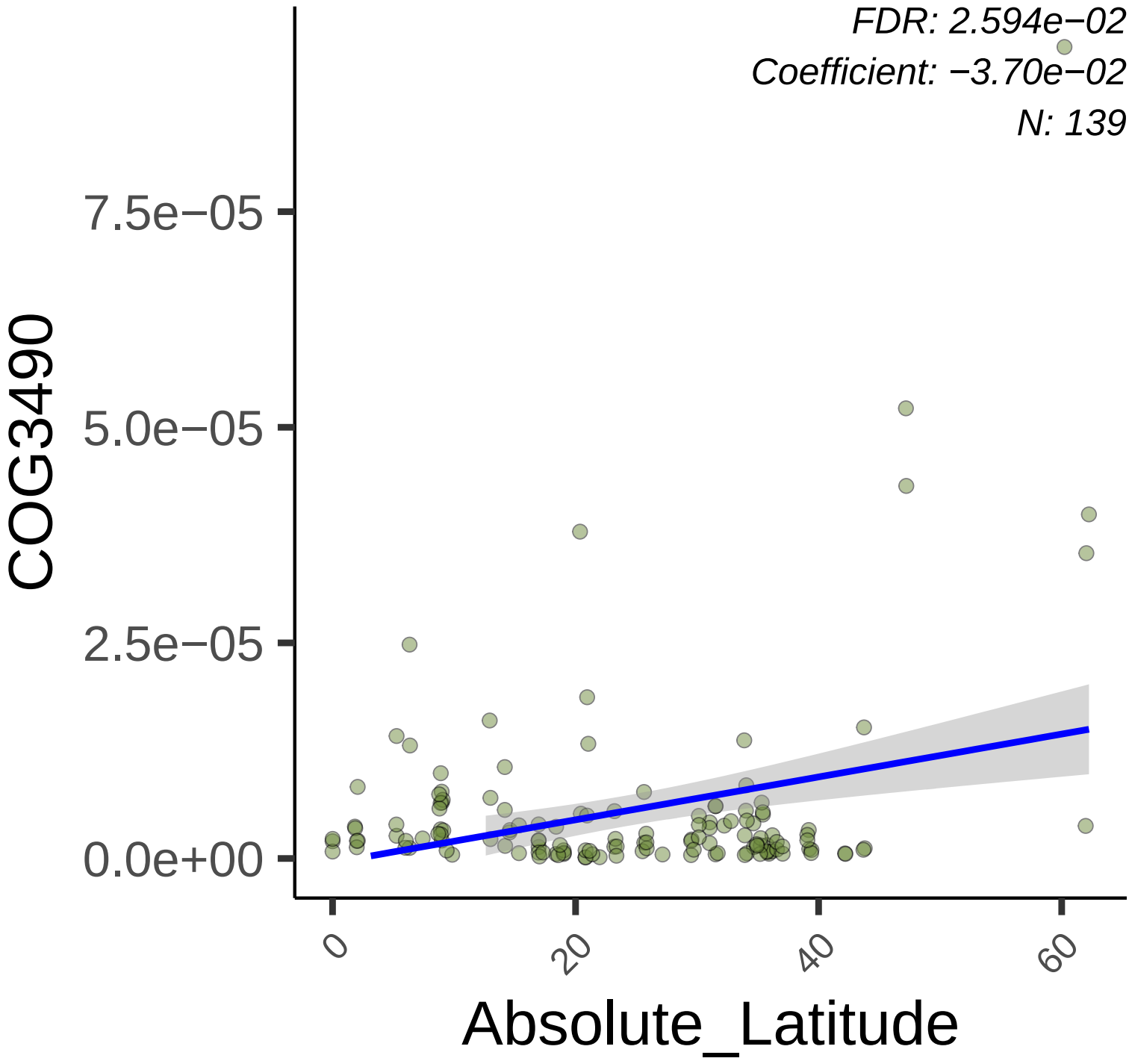

FDR: 2.536e−02
Coefficient: −1.19e−02
N: 139
7.5e−05
5.0e−05
2.5e−05
COG3460
0
20
40
60
Absolute_Latitude

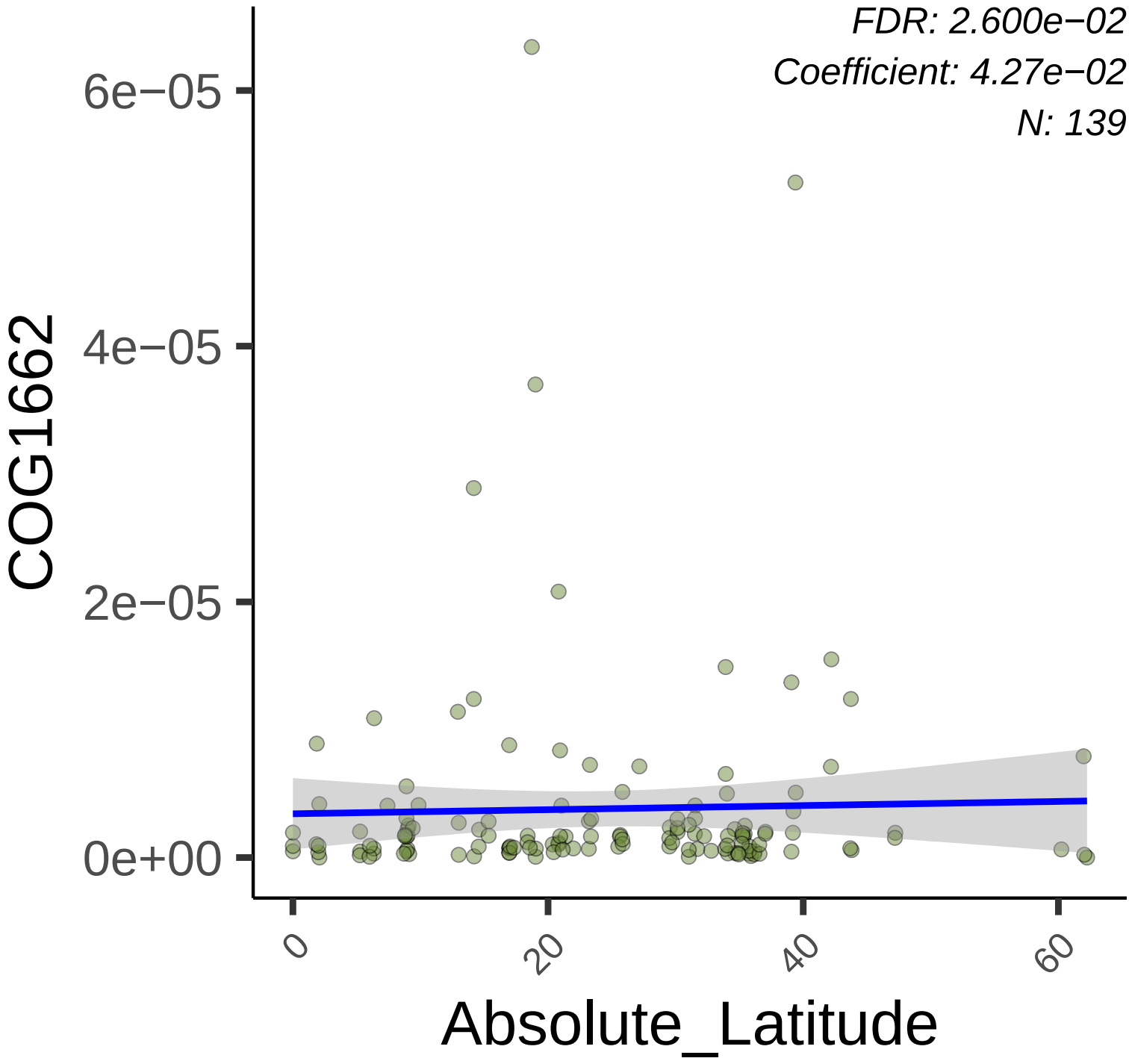

FDR: 2.556e−02
Coefficient: −4.12e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG3130
0
20
40
60
Absolute_Latitude

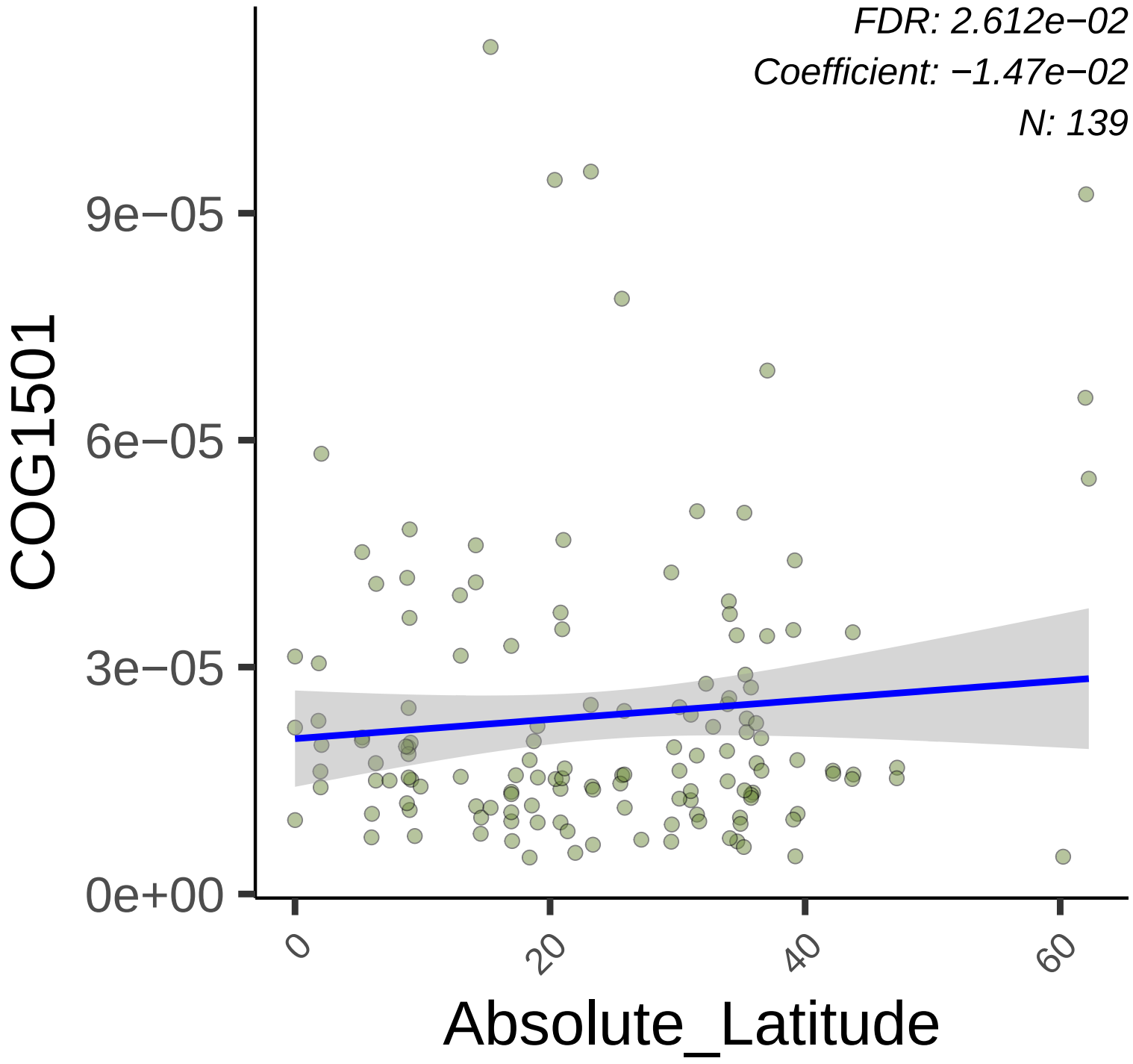

FDR: 2.577e−02
Coefficient: −2.41e−02
N: 139
COG3468
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

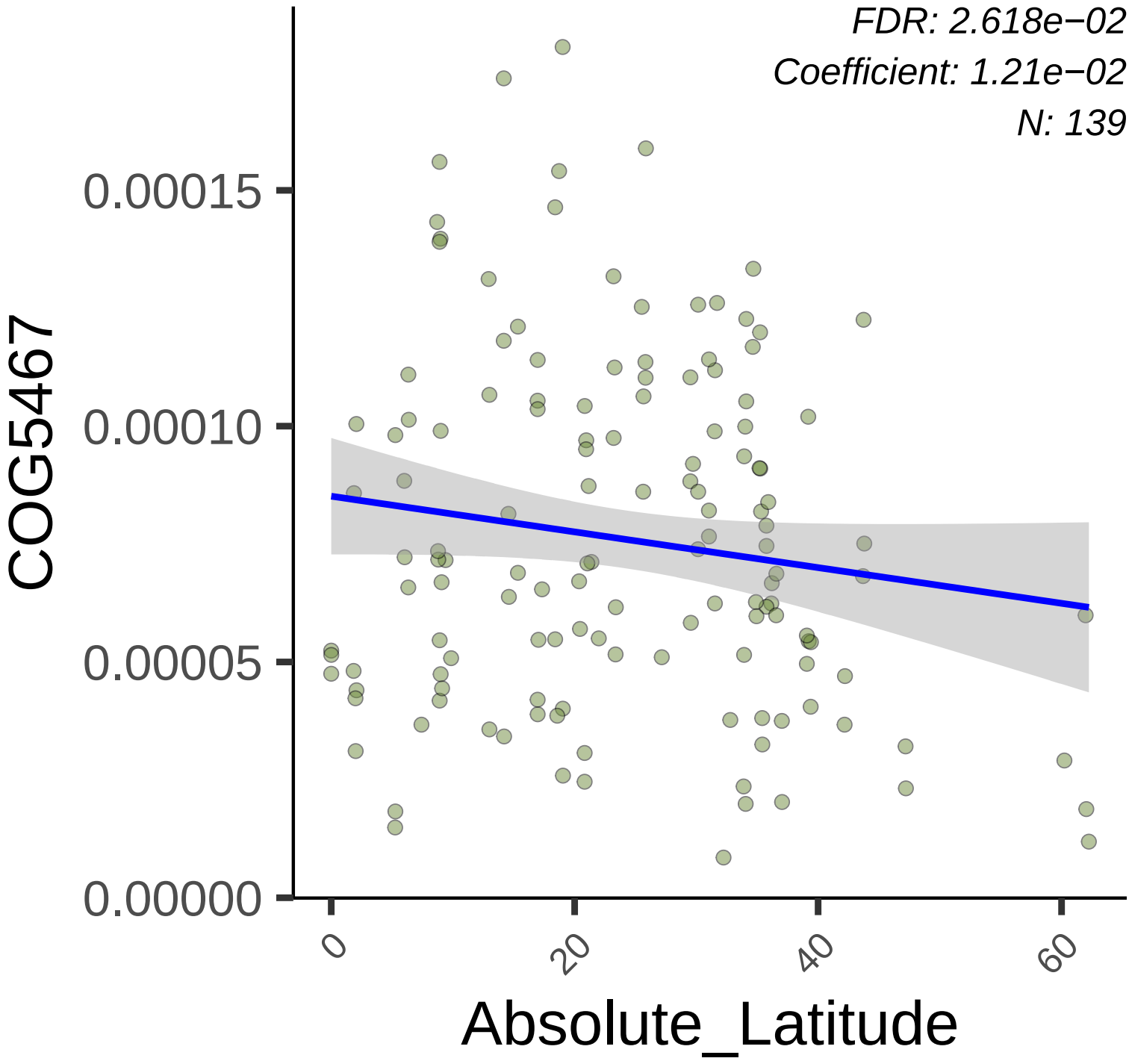

FDR: 2.579e−02
Coefficient: −3.71e−02
N: 139
COG5591
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

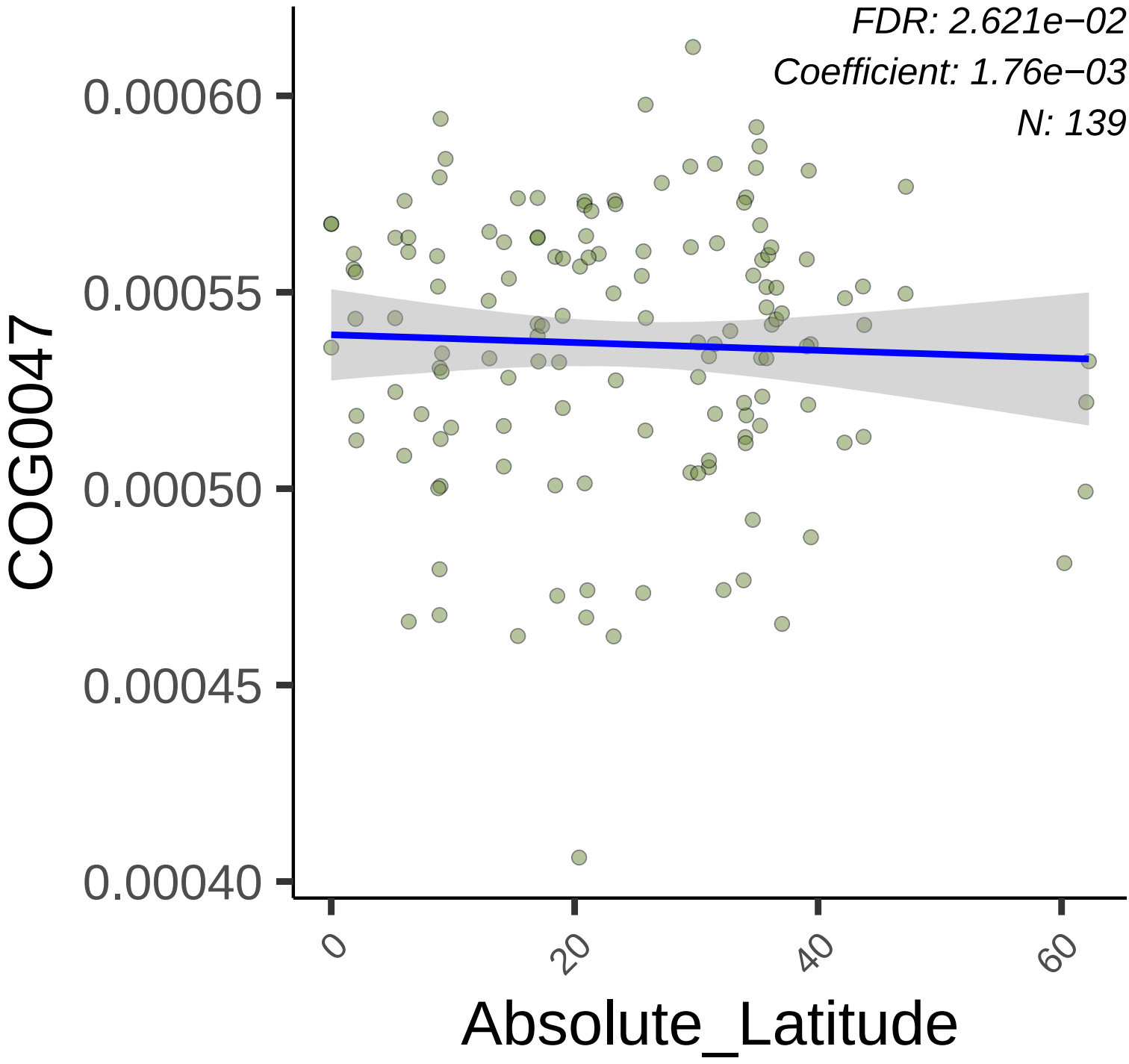

FDR: 2.590e−02
Coefficient: 4.48e−03
N: 139
1e−03
8e−04
6e−04
4e−04
COG1158
0
20
40
60
Absolute_Latitude

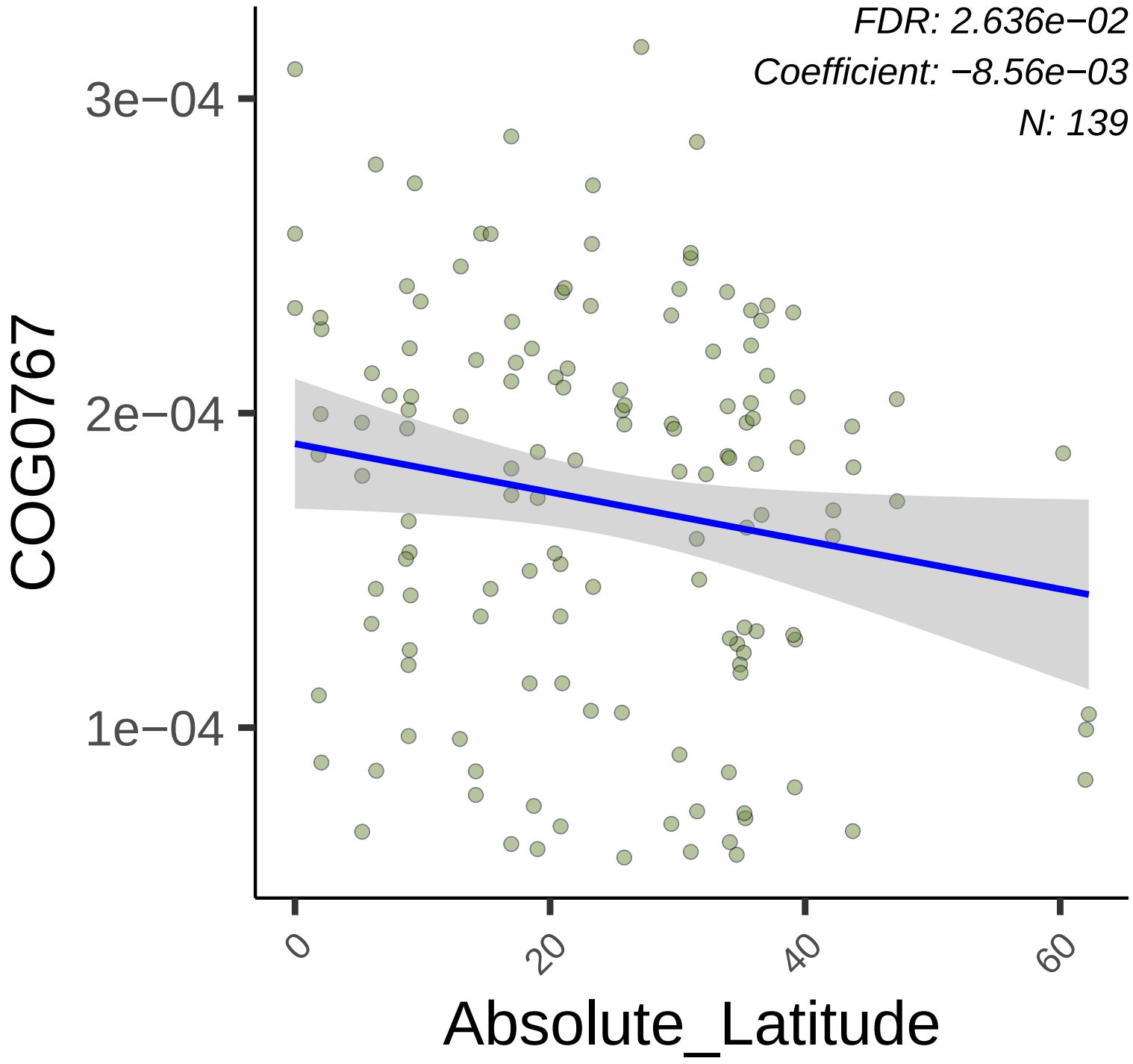

FDR: 2.594e−02
Coefficient: −3.70e−02
N: 139
COG3490
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

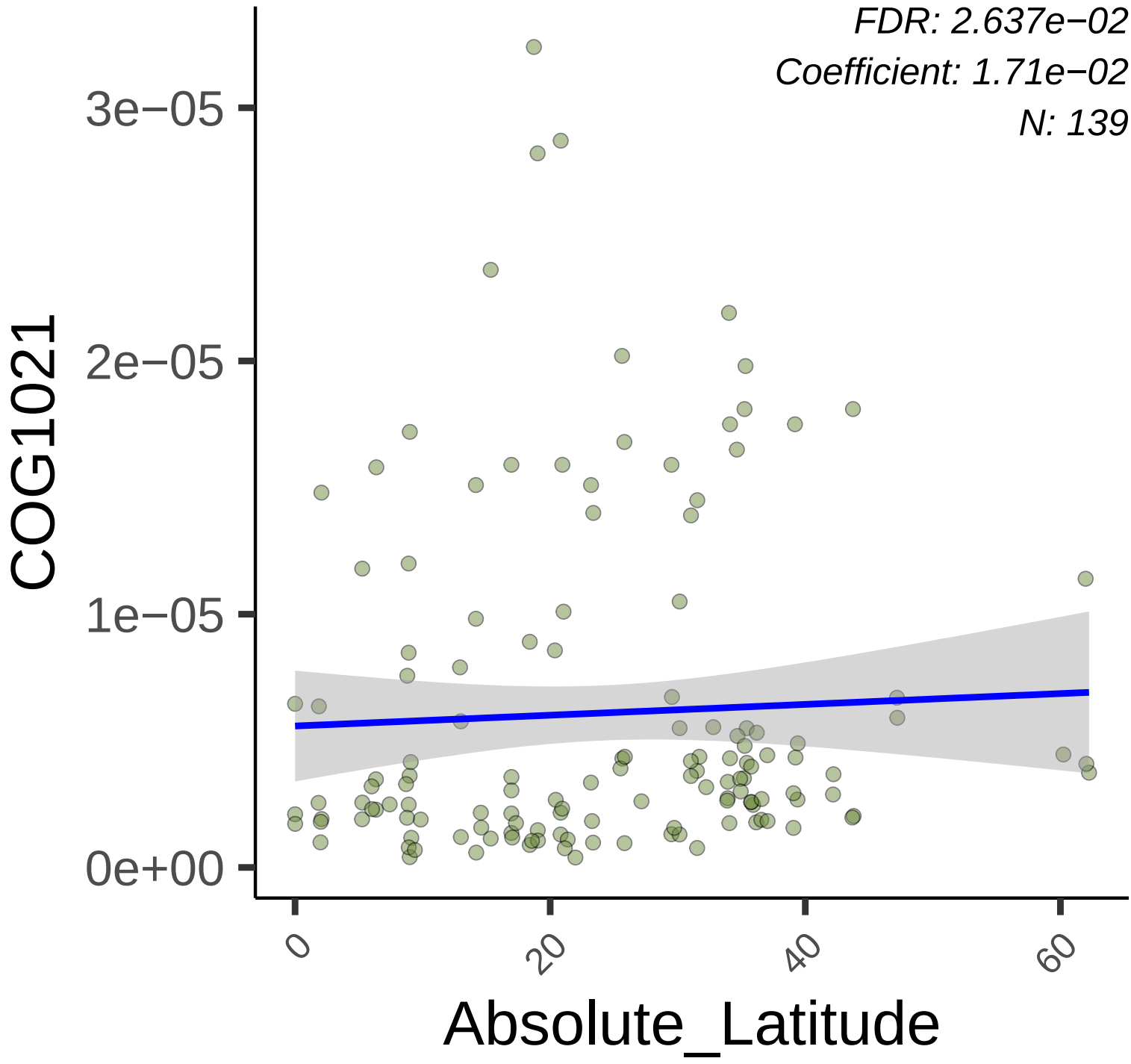

FDR: 2.600e−02
Coefficient: 4.27e−02
N: 139
COG1662
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

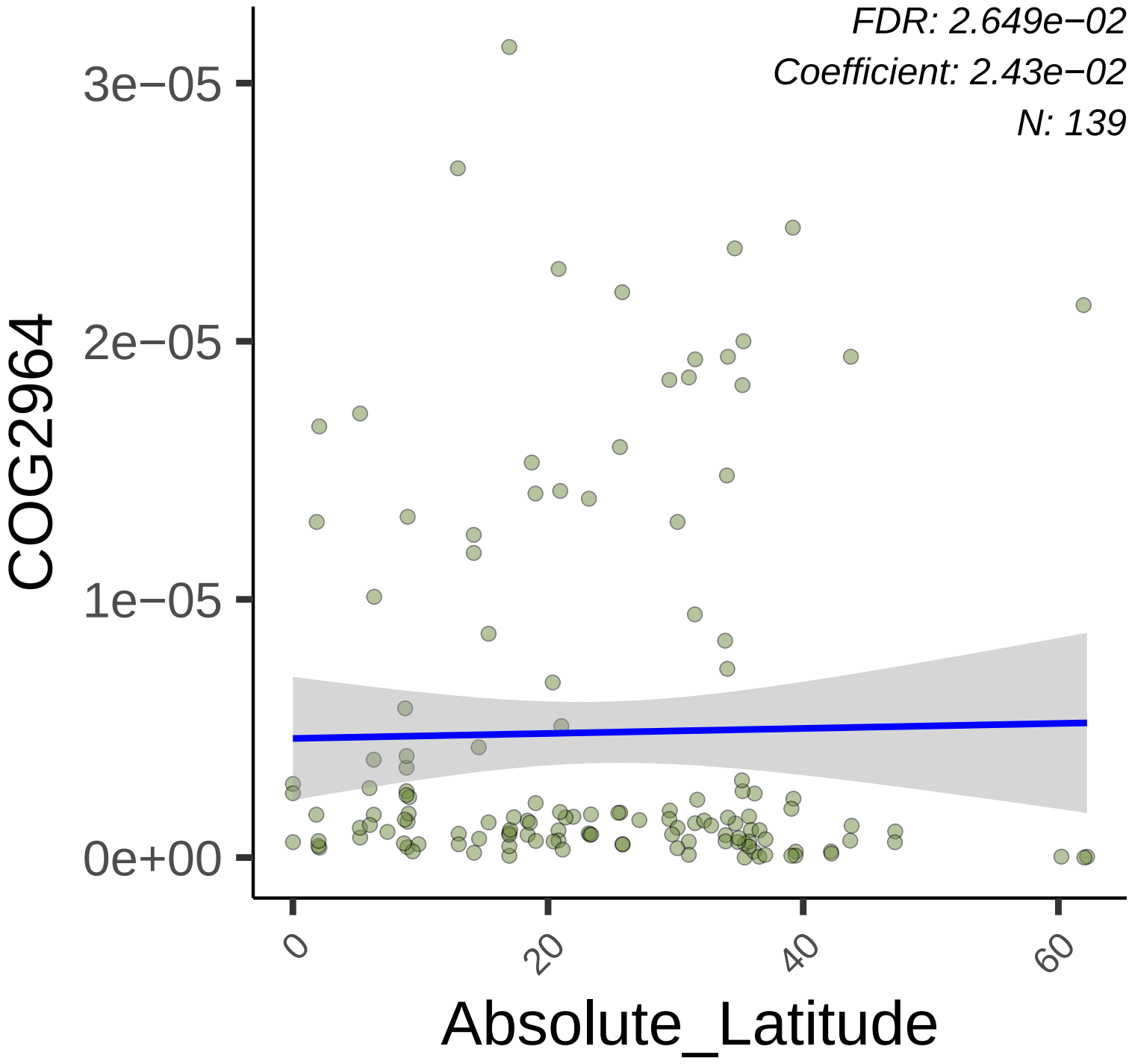

FDR: 2.612e−02
Coefficient: −1.47e−02
N: 139
COG1501
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

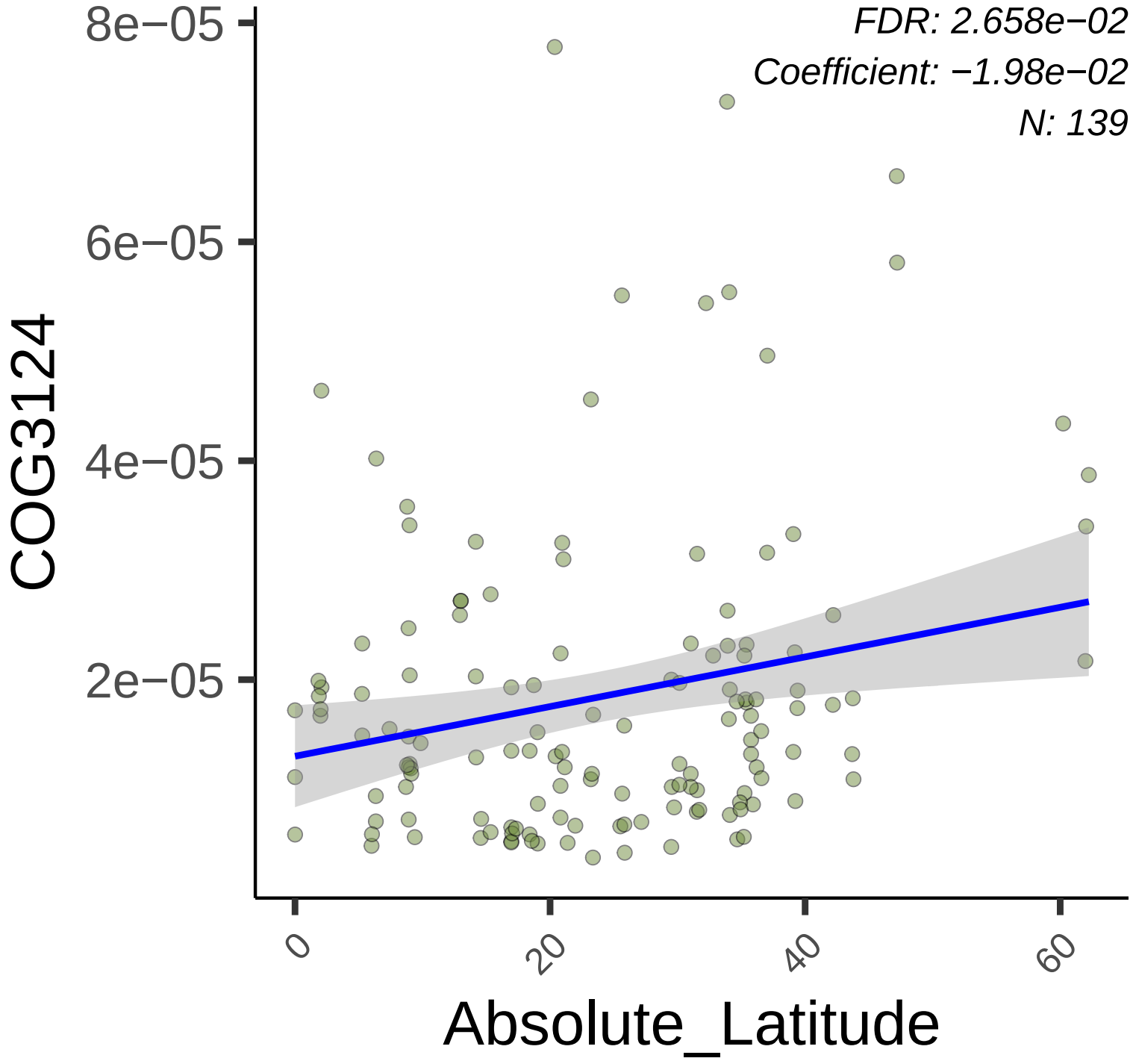

FDR: 2.618e−02
Coefficient: 1.21e−02
N: 139
COG5467
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

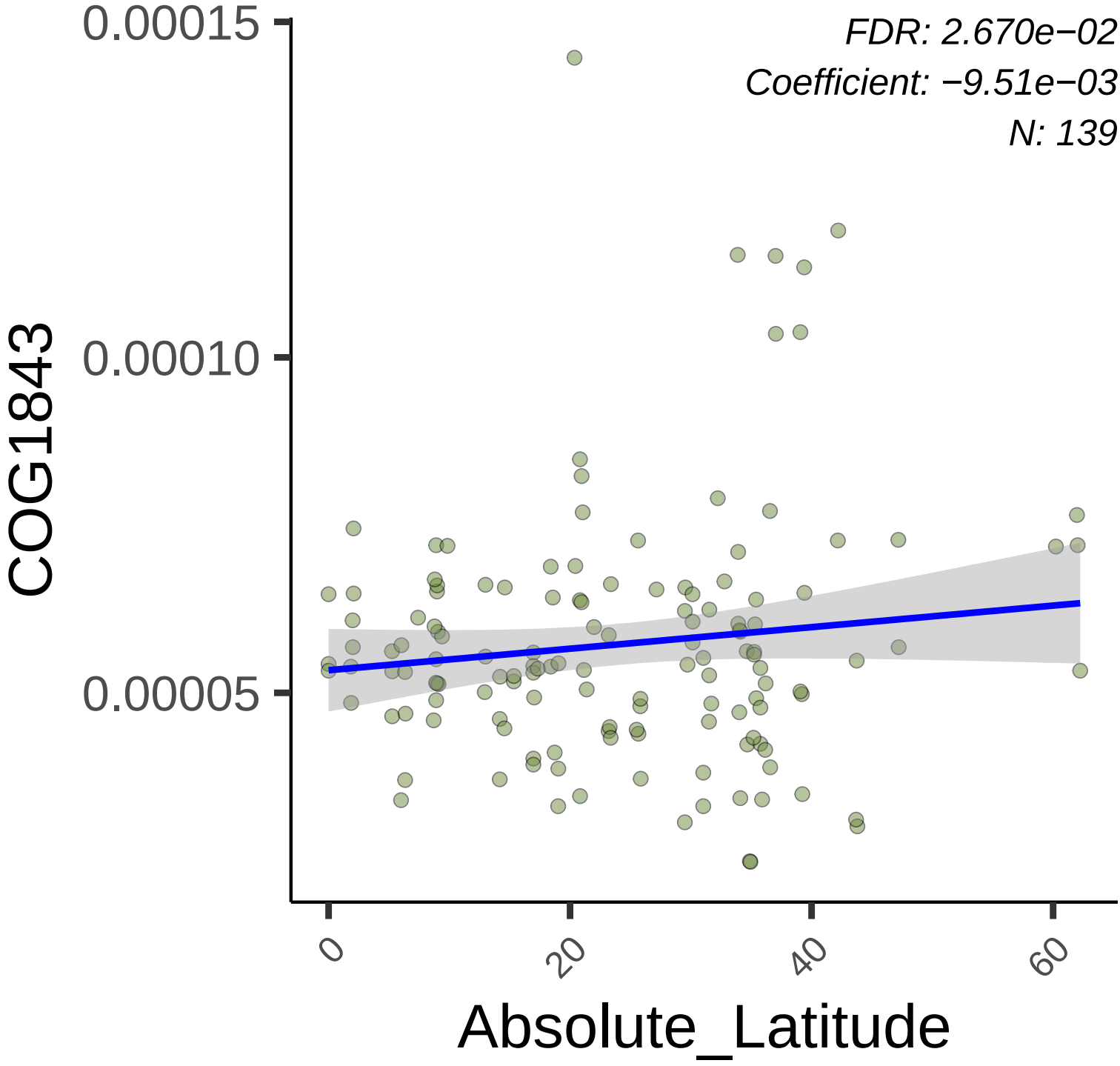

FDR: 2.621e−02
Coefficient: 1.76e−03
N: 139
0.00060
0.00055
0.00050
0.00045
0.00040
COG0047
0
20
40
60
Absolute_Latitude

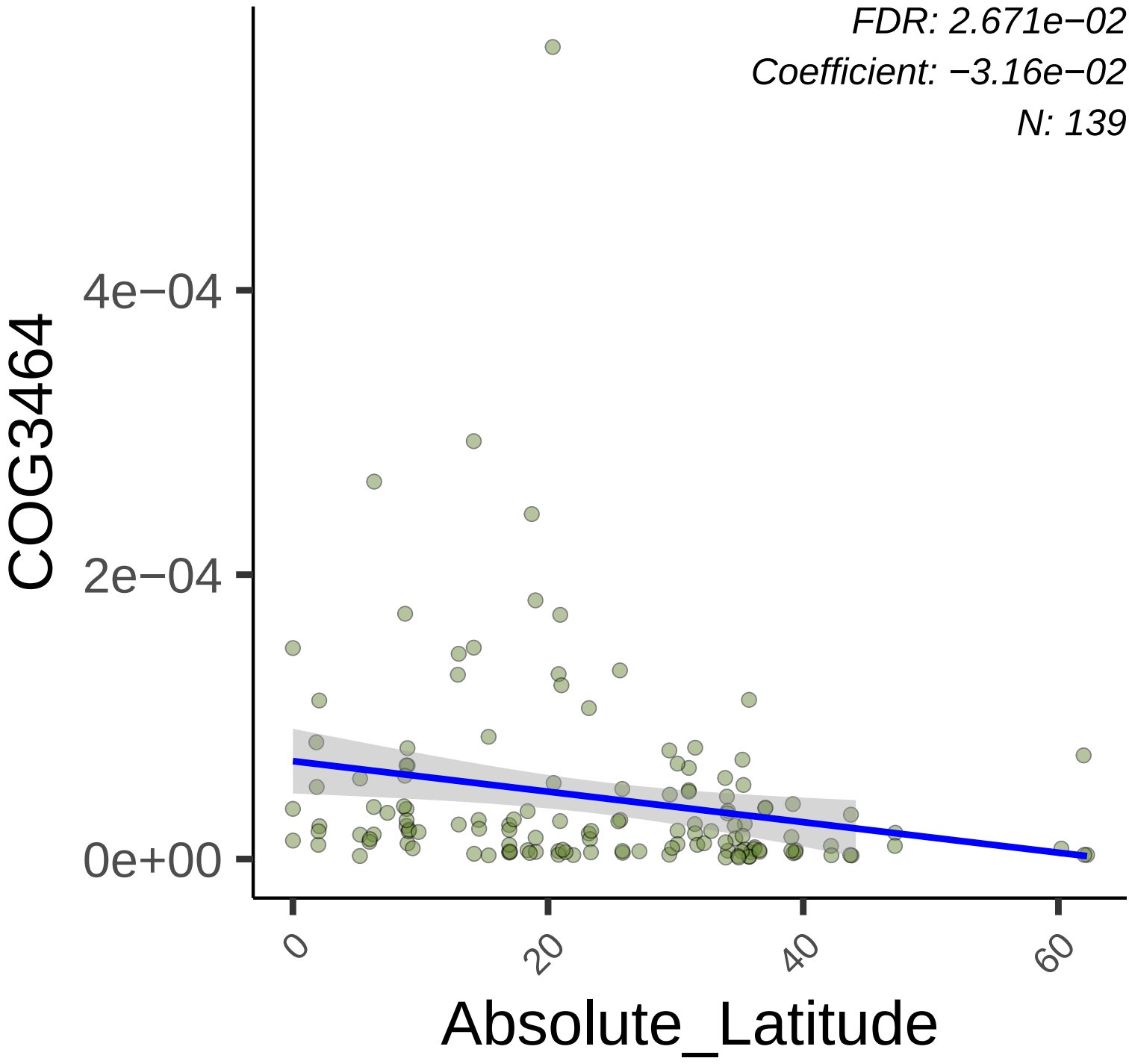

FDR: 2.636e−02
Coefficient: −8.56e−03
N: 139
3e−04
2e−04
1e−04
COG0767
0
20
40
60
Absolute_Latitude

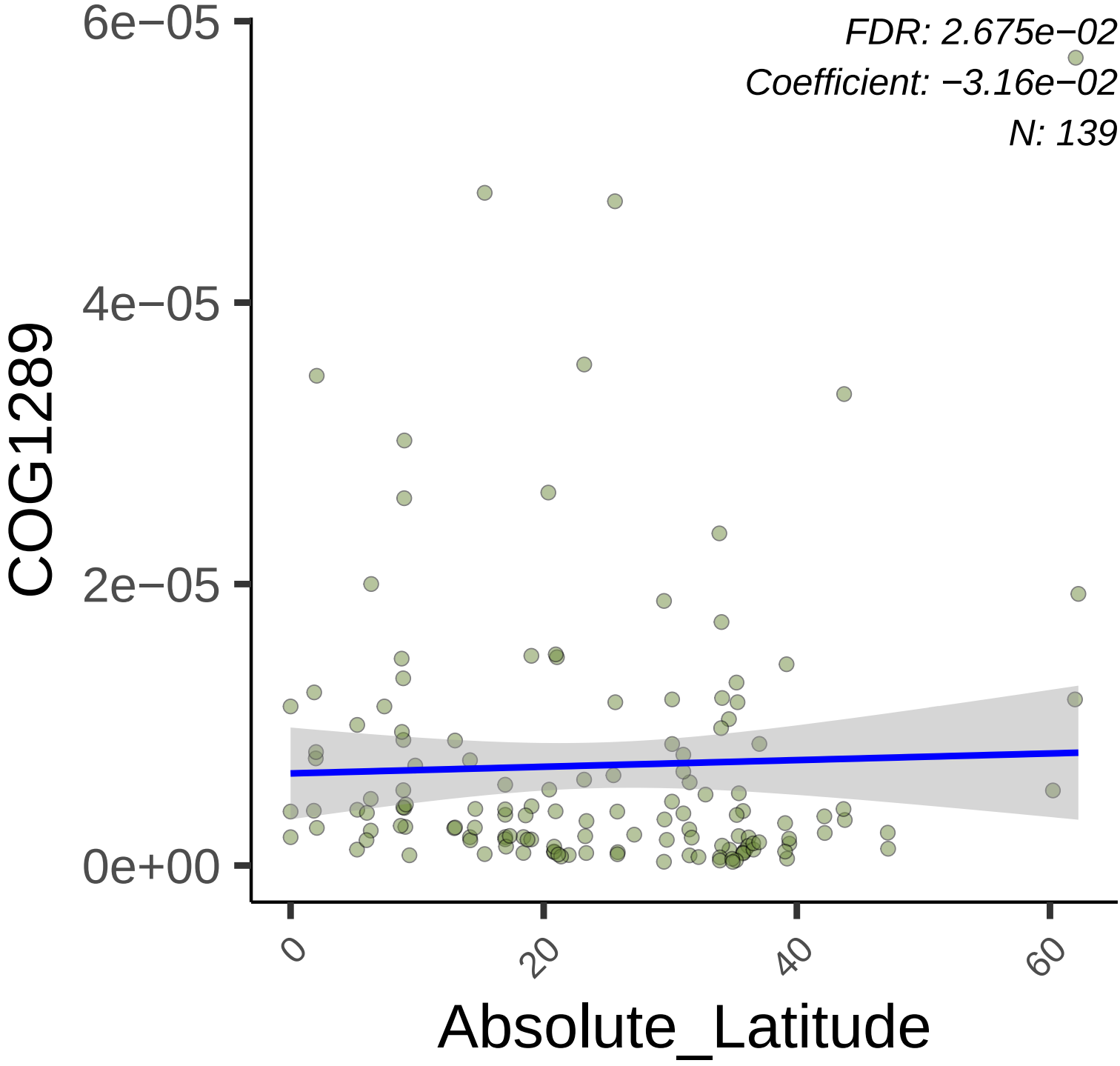

FDR: 2.637e−02
Coefficient: 1.71e−02
N: 139
COG1021
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

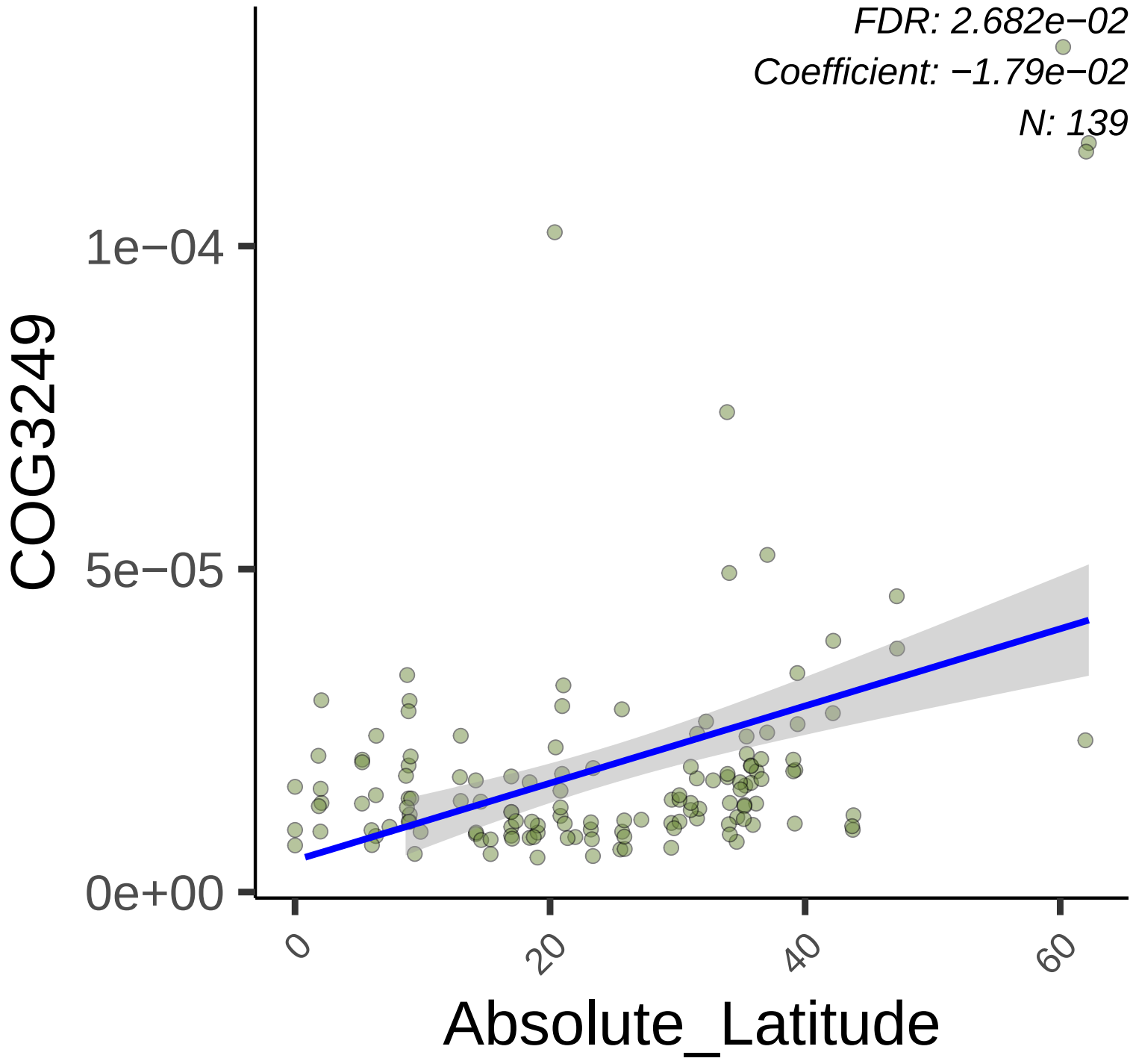

FDR: 2.649e−02
Coefficient: 2.43e−02
N: 139
COG2964
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

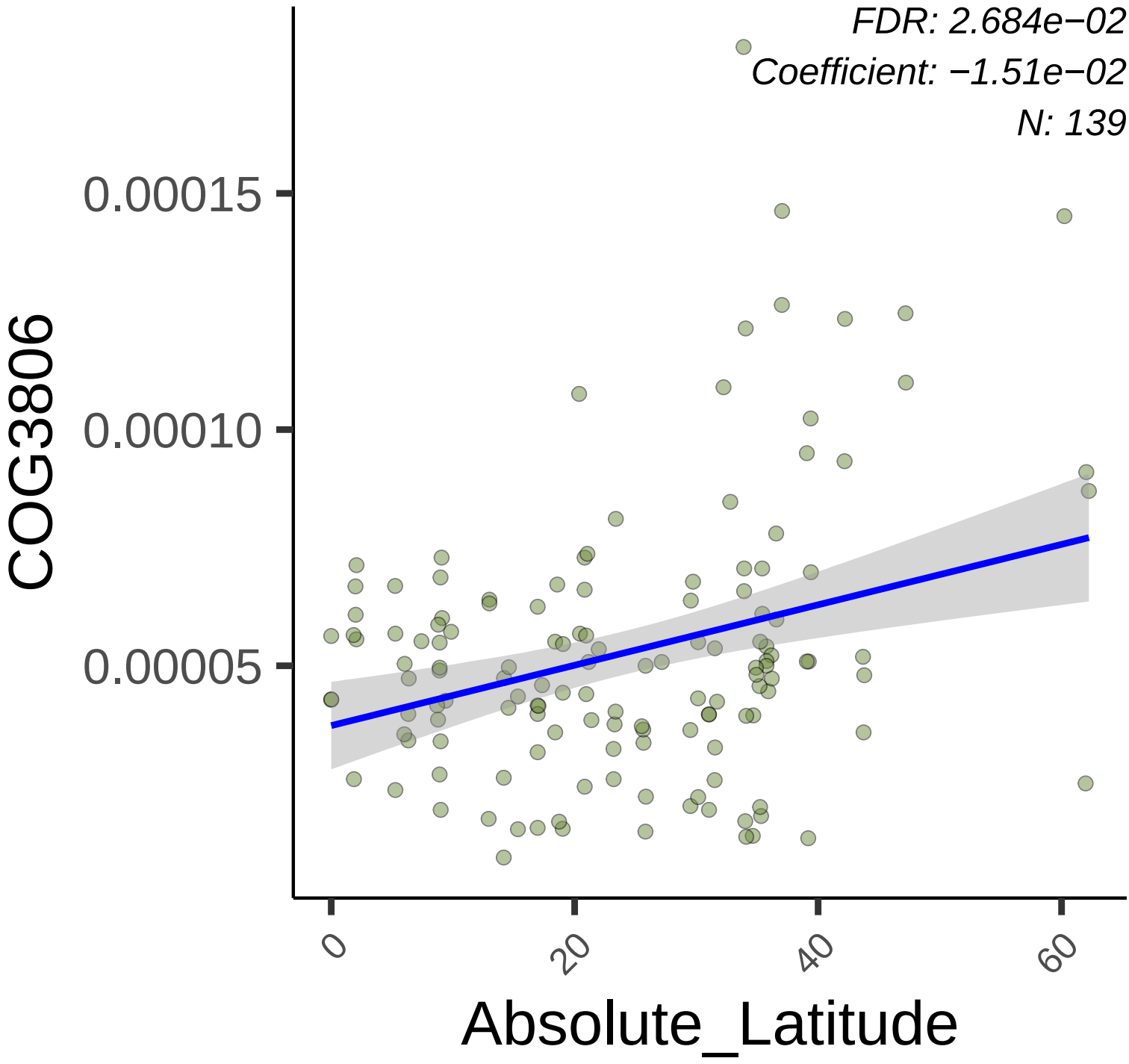

FDR: 2.658e−02
Coefficient: −1.98e−02
N: 139
8e−05
6e−05
4e−05
2e−05
COG3124
0
20
40
60
Absolute_Latitude

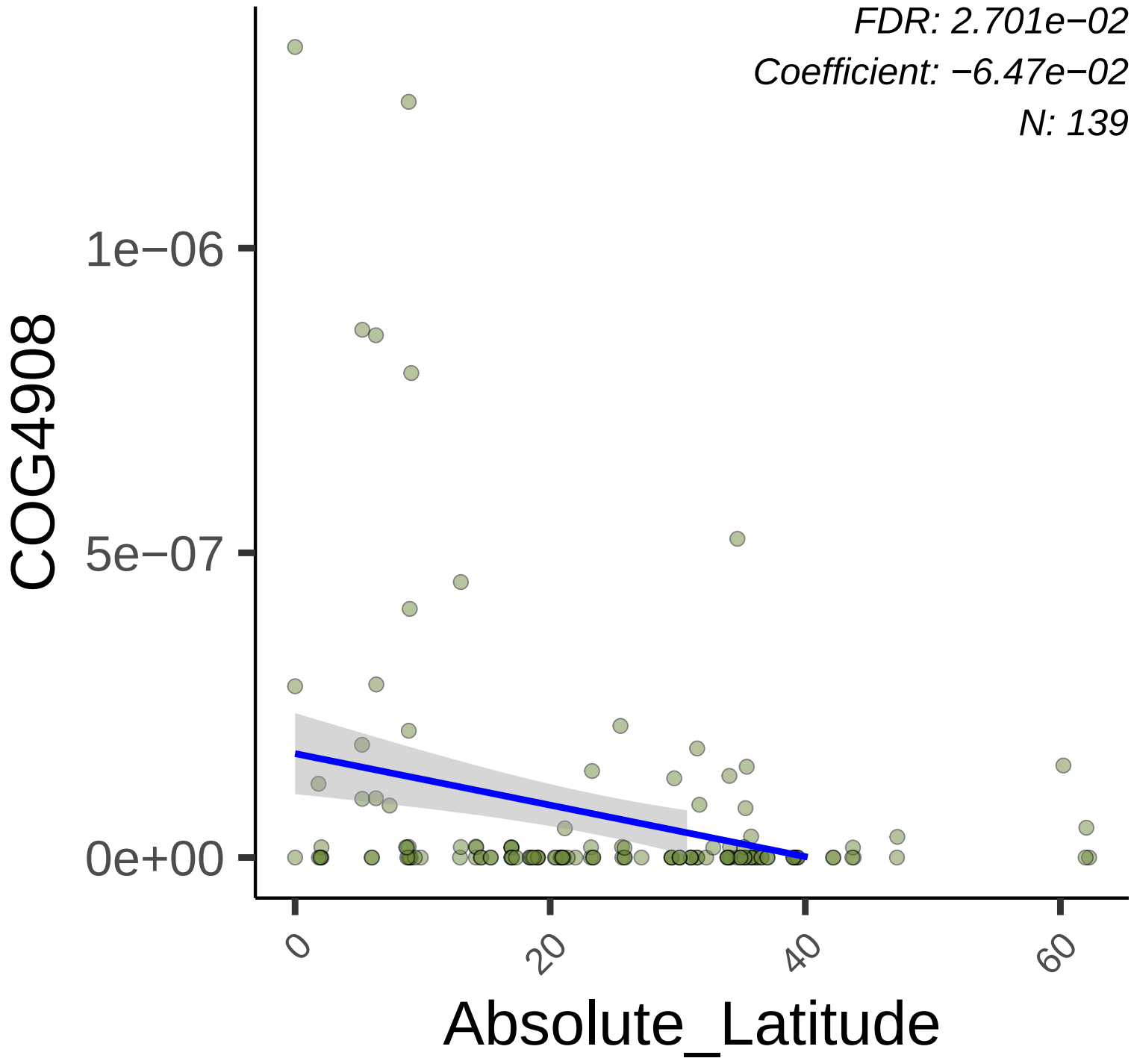

FDR: 2.670e−02
Coefficient: −9.51e−03
N: 139
0.00015
0.00010
0.00005
COG1843
0
20
40
60
Absolute_Latitude

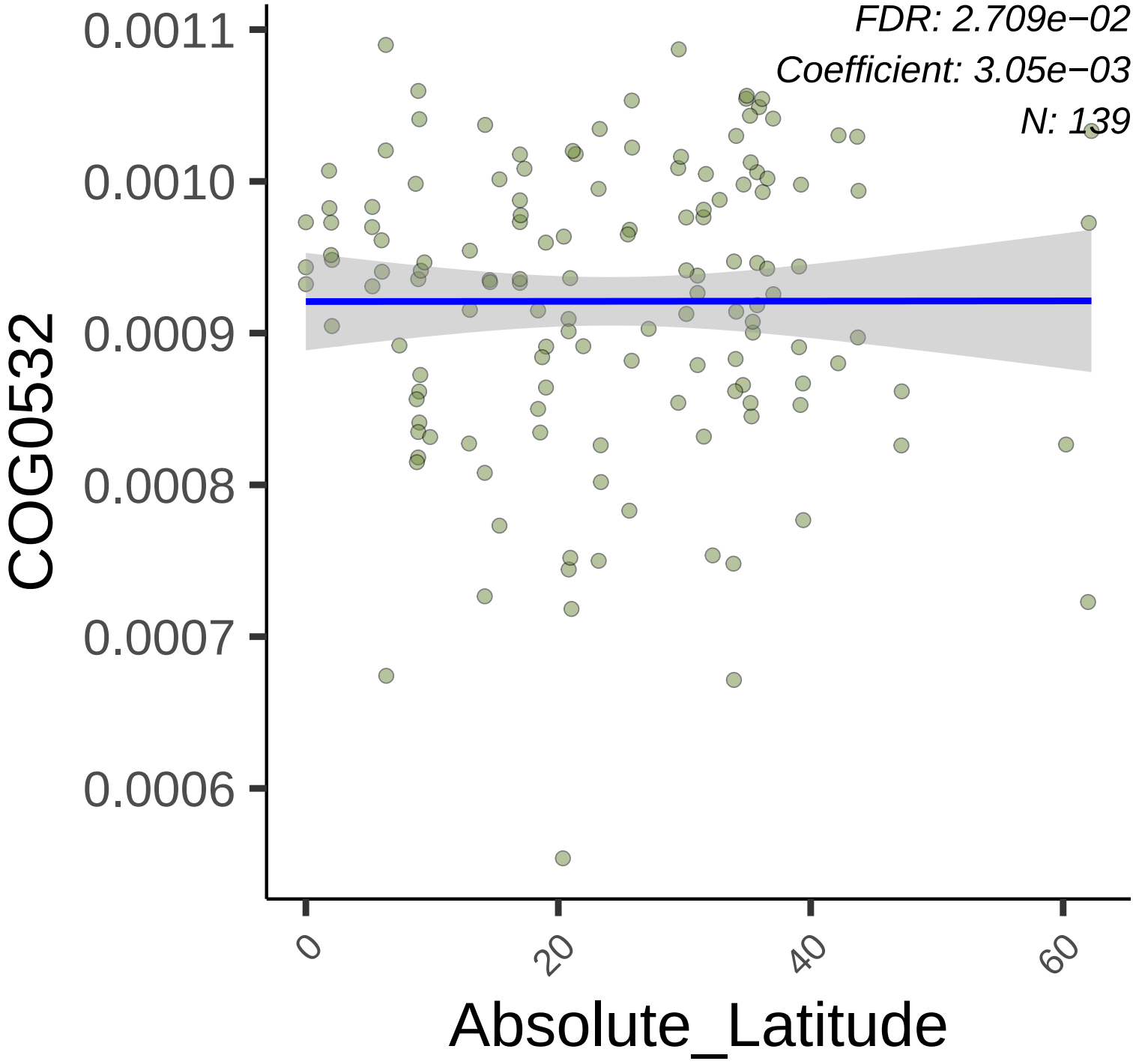

FDR: 2.671e−02
Coefficient: −3.16e−02
N: 139
COG3464
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

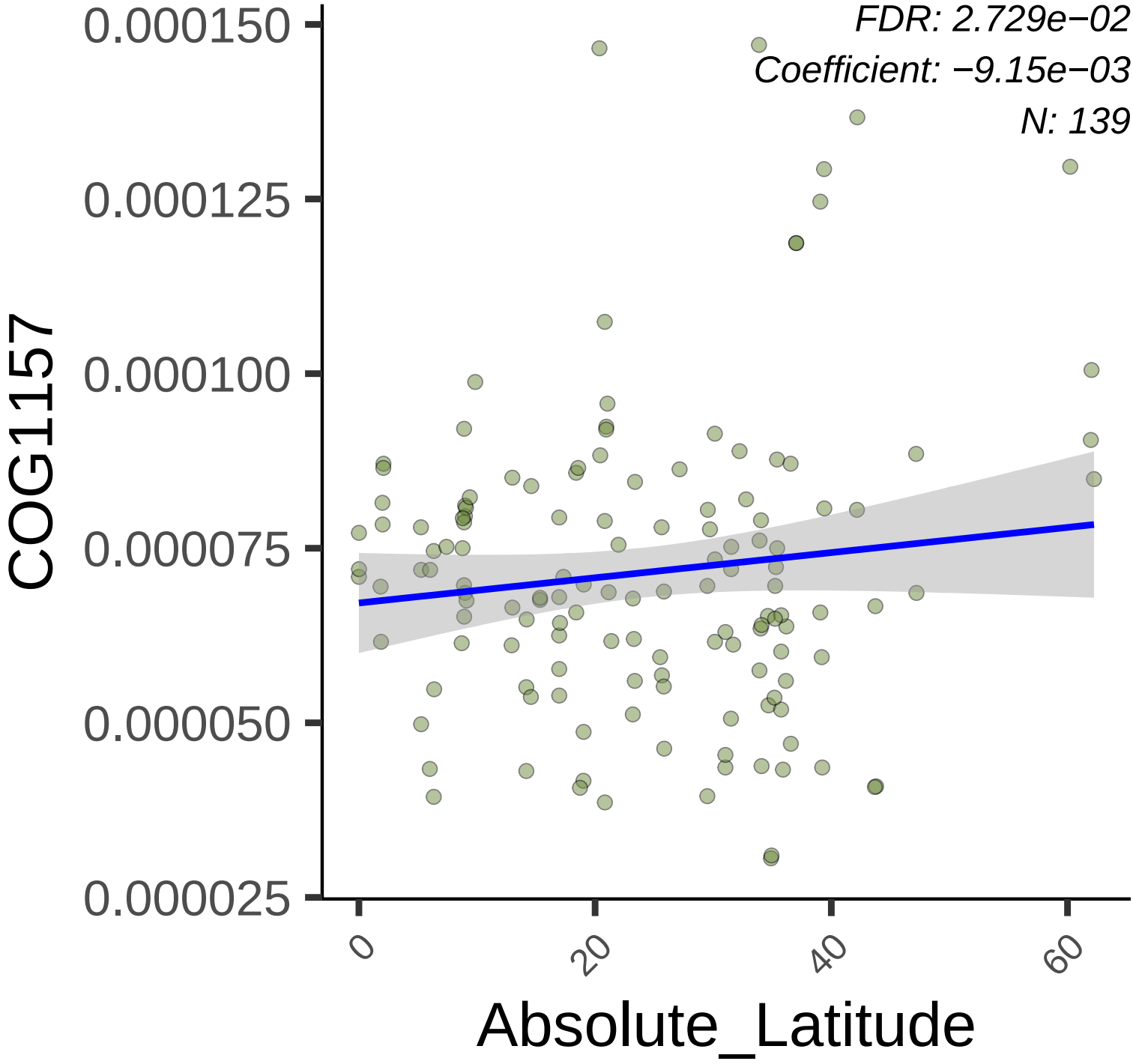

FDR: 2.675e−02
Coefficient: −3.16e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG1289
0
20
40
60
Absolute_Latitude

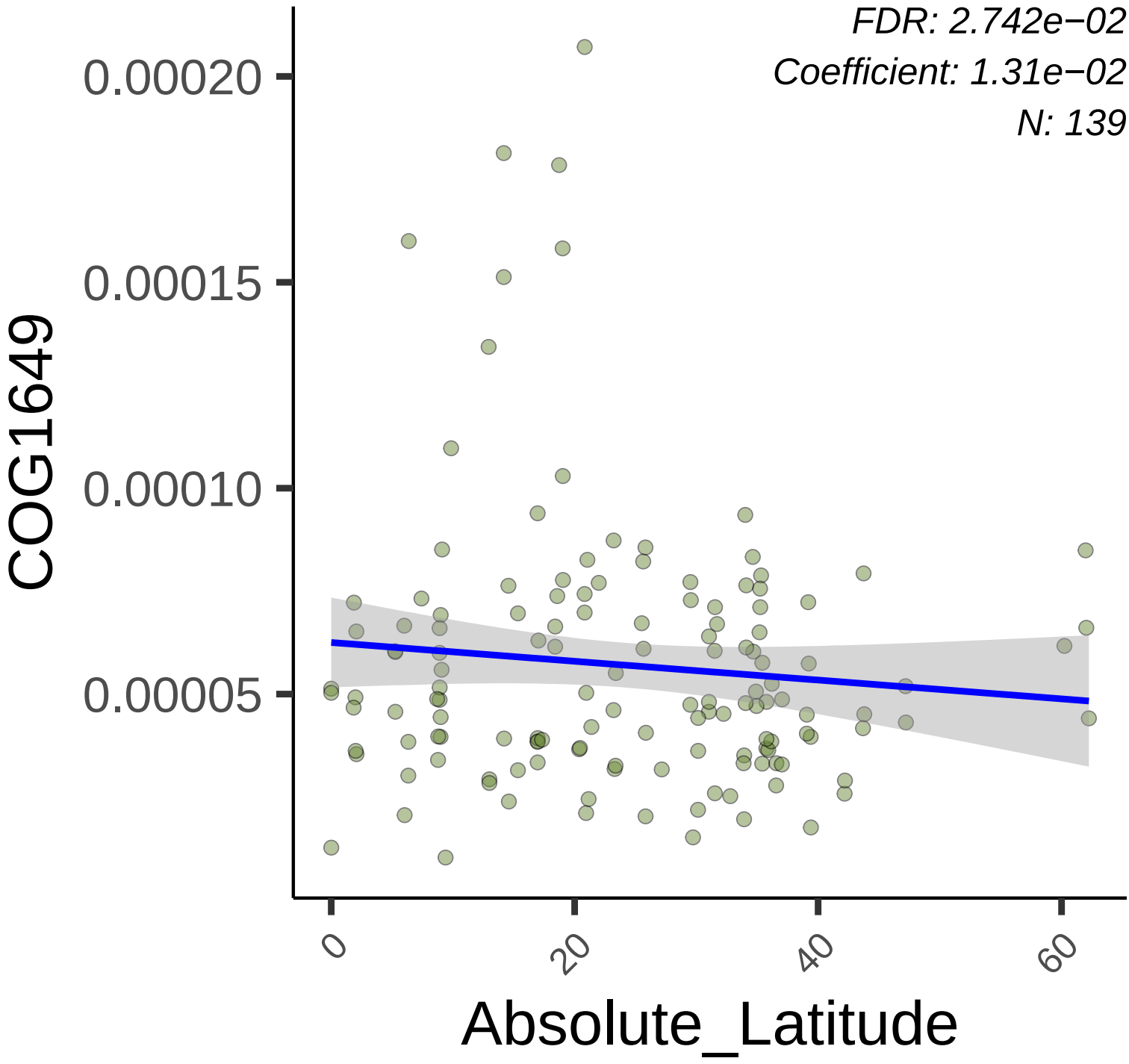

FDR: 2.682e−02
Coefficient: −1.79e−02
N: 139
COG3249
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

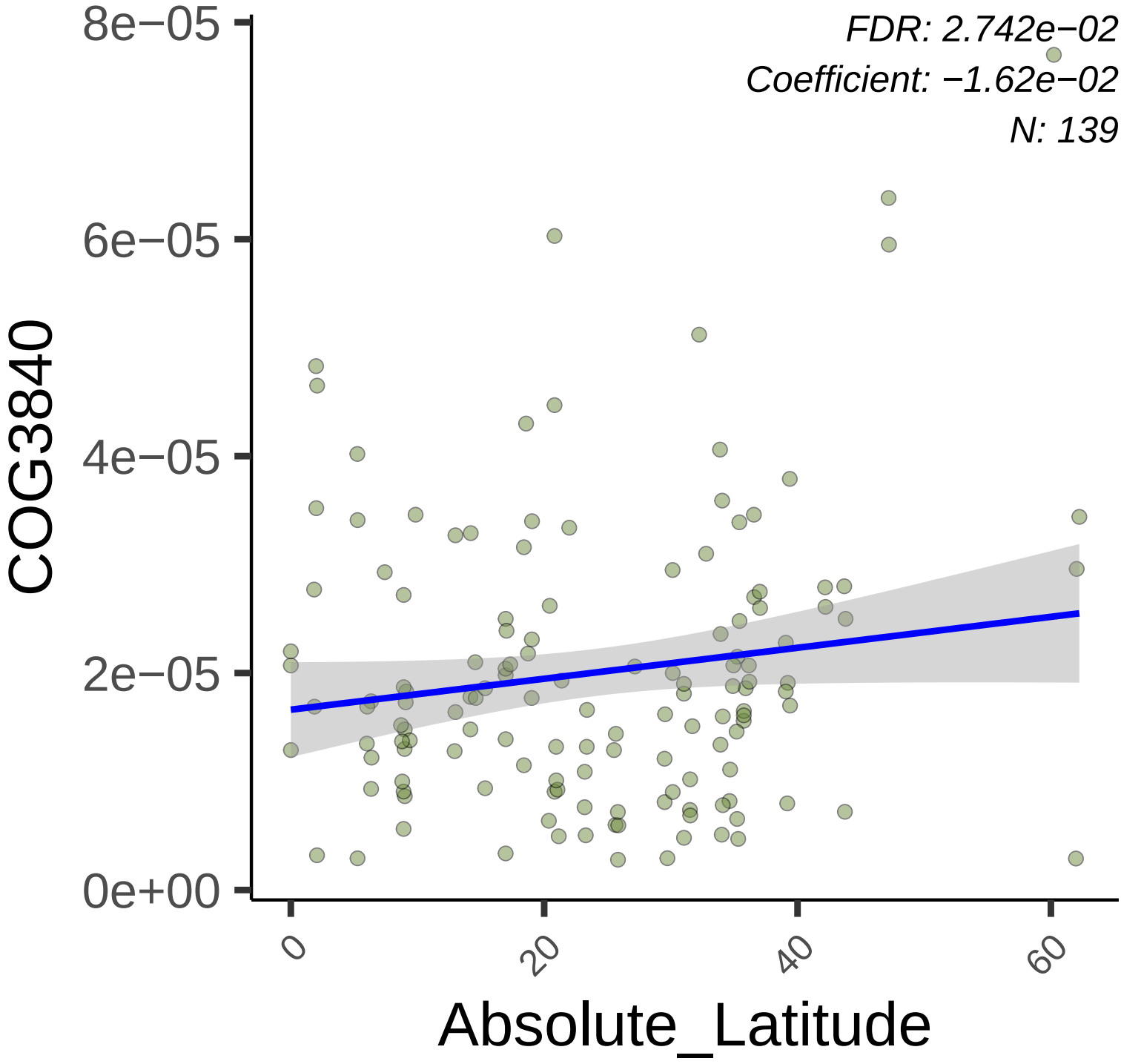

FDR: 2.684e−02
Coefficient: −1.51e−02
N: 139
0.00015
0.00010
0.00005
COG3806
0
20
40
60
Absolute_Latitude

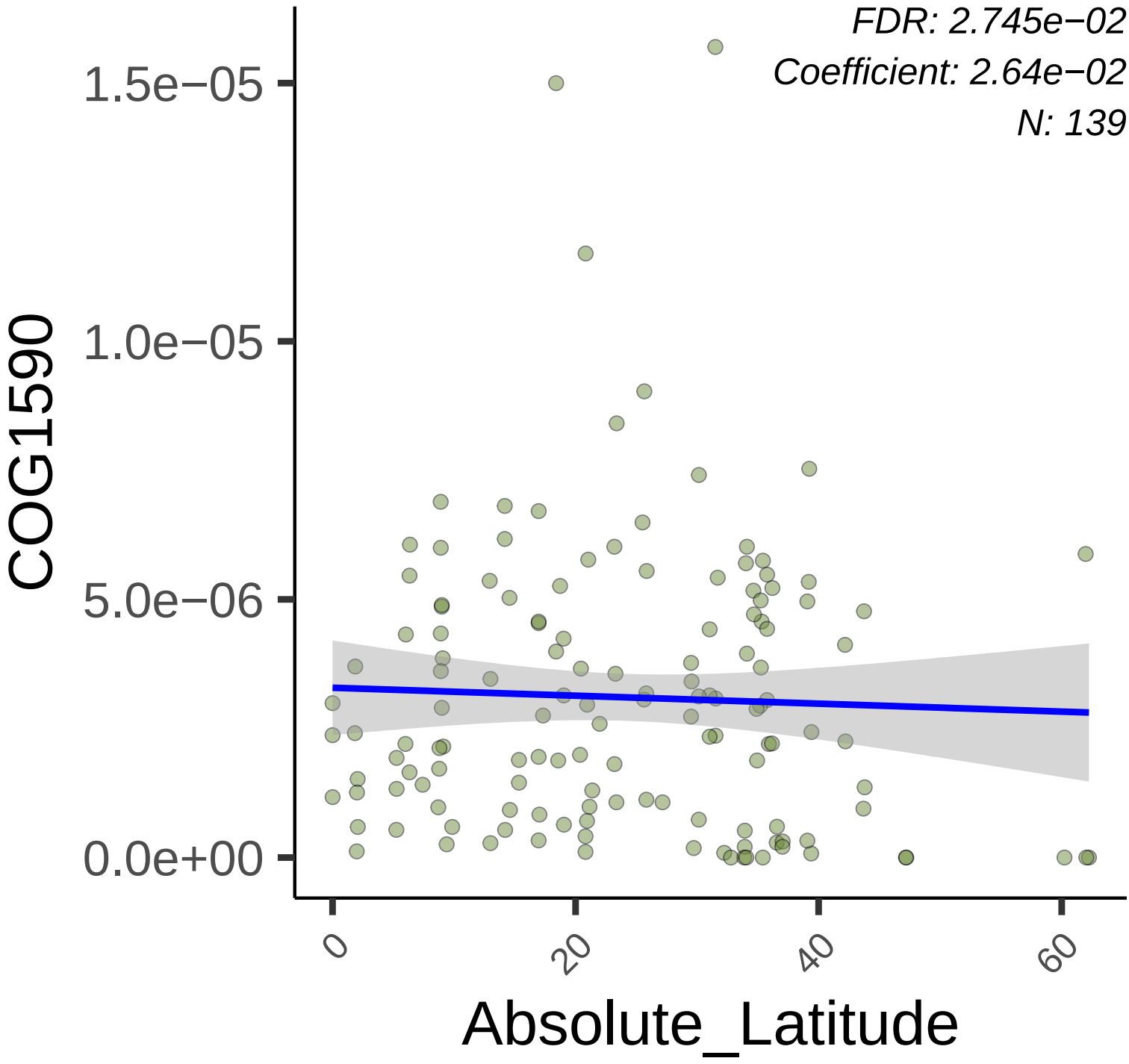

FDR: 2.701e−02
Coefficient: −6.47e−02
N: 139
COG4908
1e−06
5e−07
0e+00
0
20
40
60
Absolute_Latitude

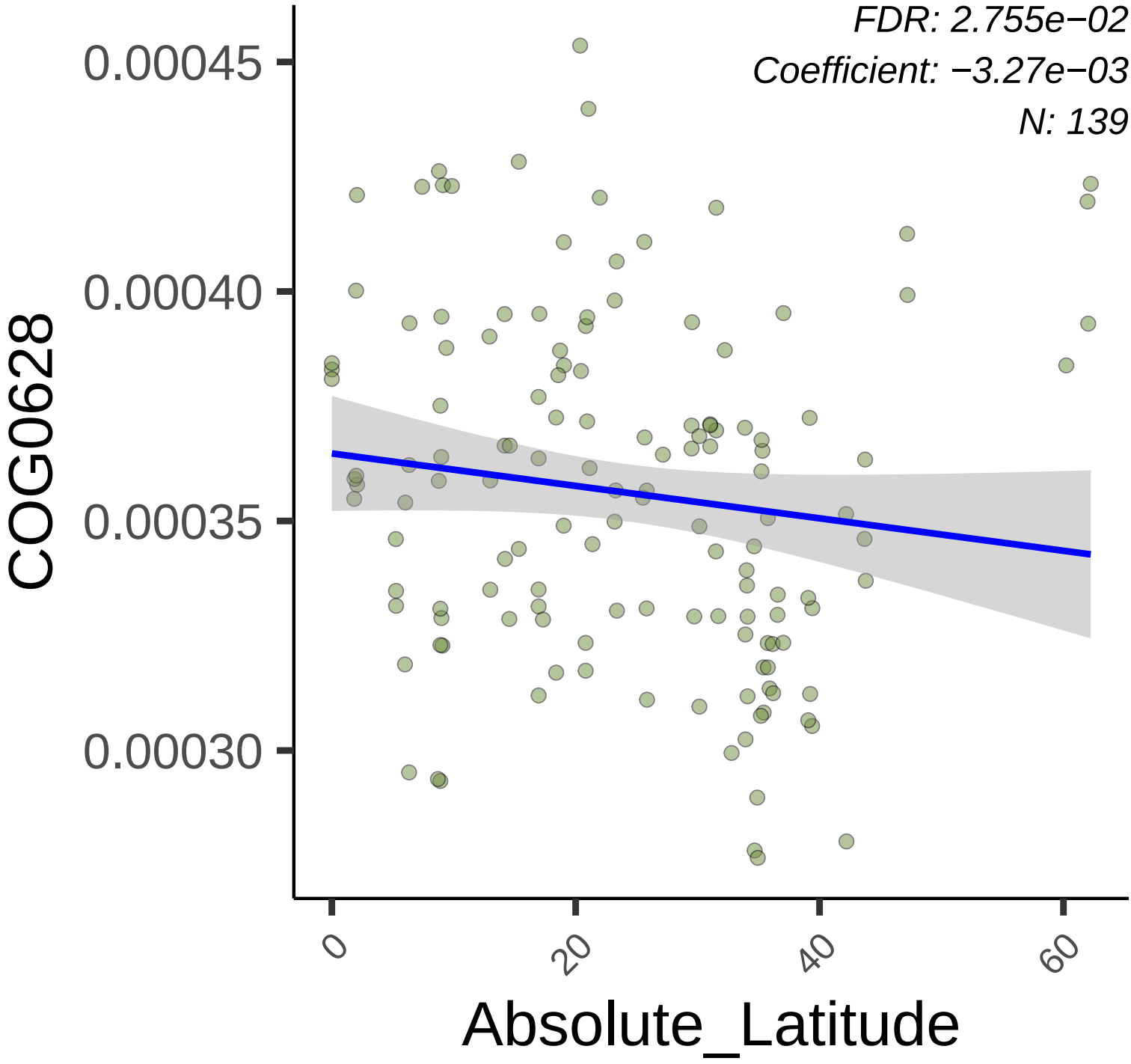

FDR: 2.709e−02
Coefficient: 3.05e−03
N: 139
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
COG0532
0
20
40
60
Absolute_Latitude

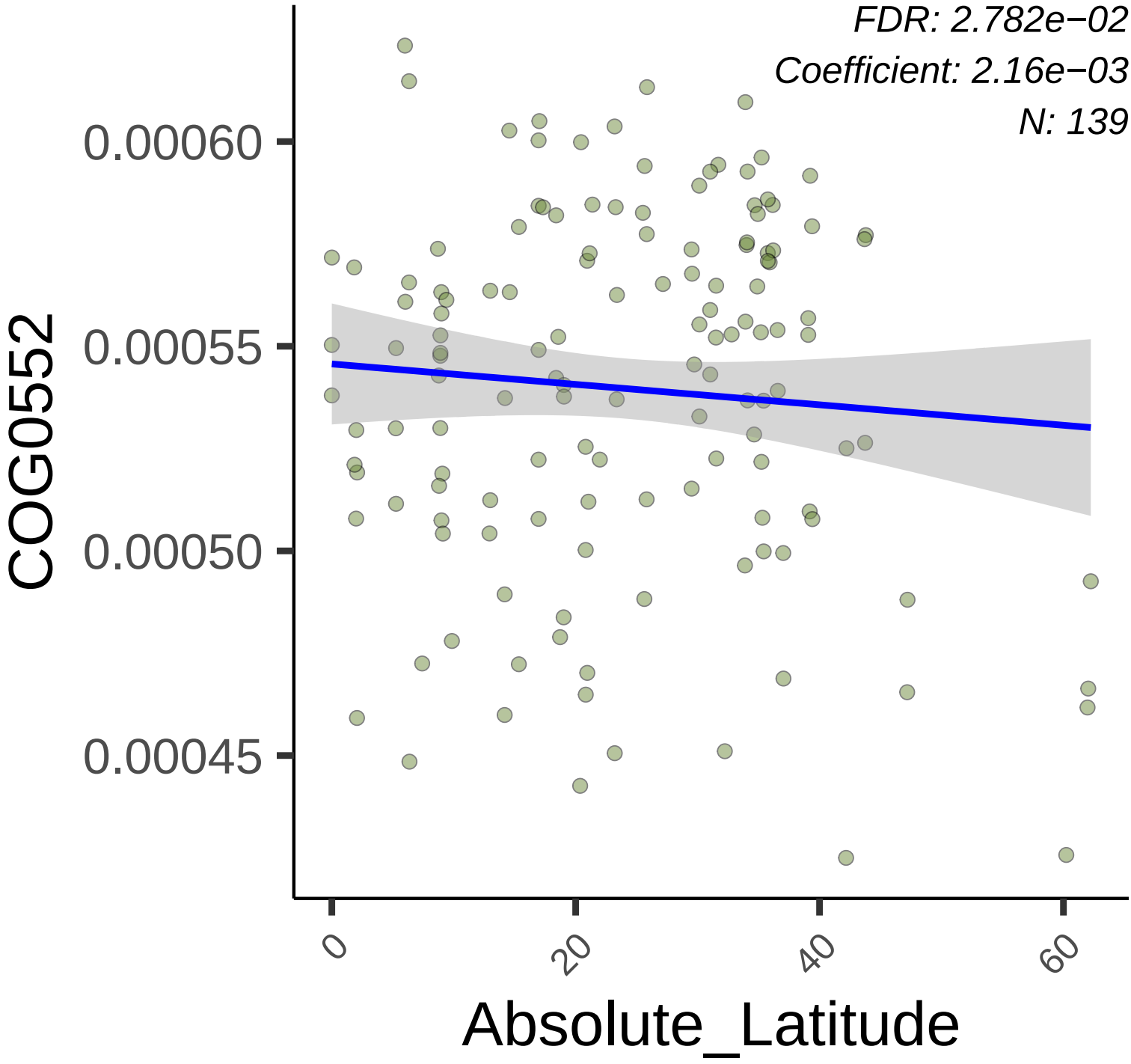

FDR: 2.729e−02
Coefficient: −9.15e−03
N: 139
0.000150
0.000125
0.000100
0.000075
0.000050
0.000025
COG1157
0
20
40
60
Absolute_Latitude

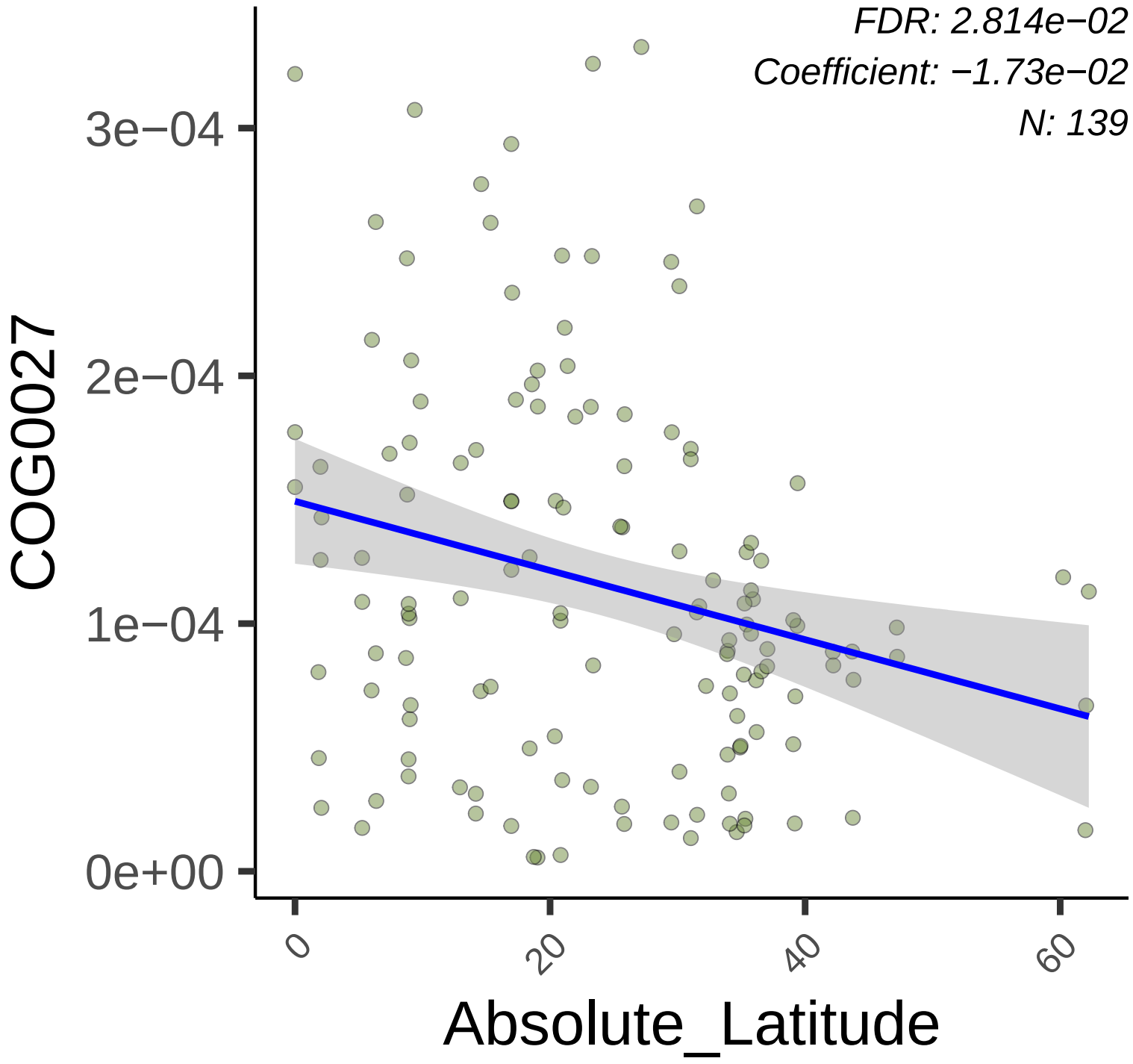

FDR: 2.742e−02
Coefficient: 1.31e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG1649
0
20
40
60
Absolute_Latitude

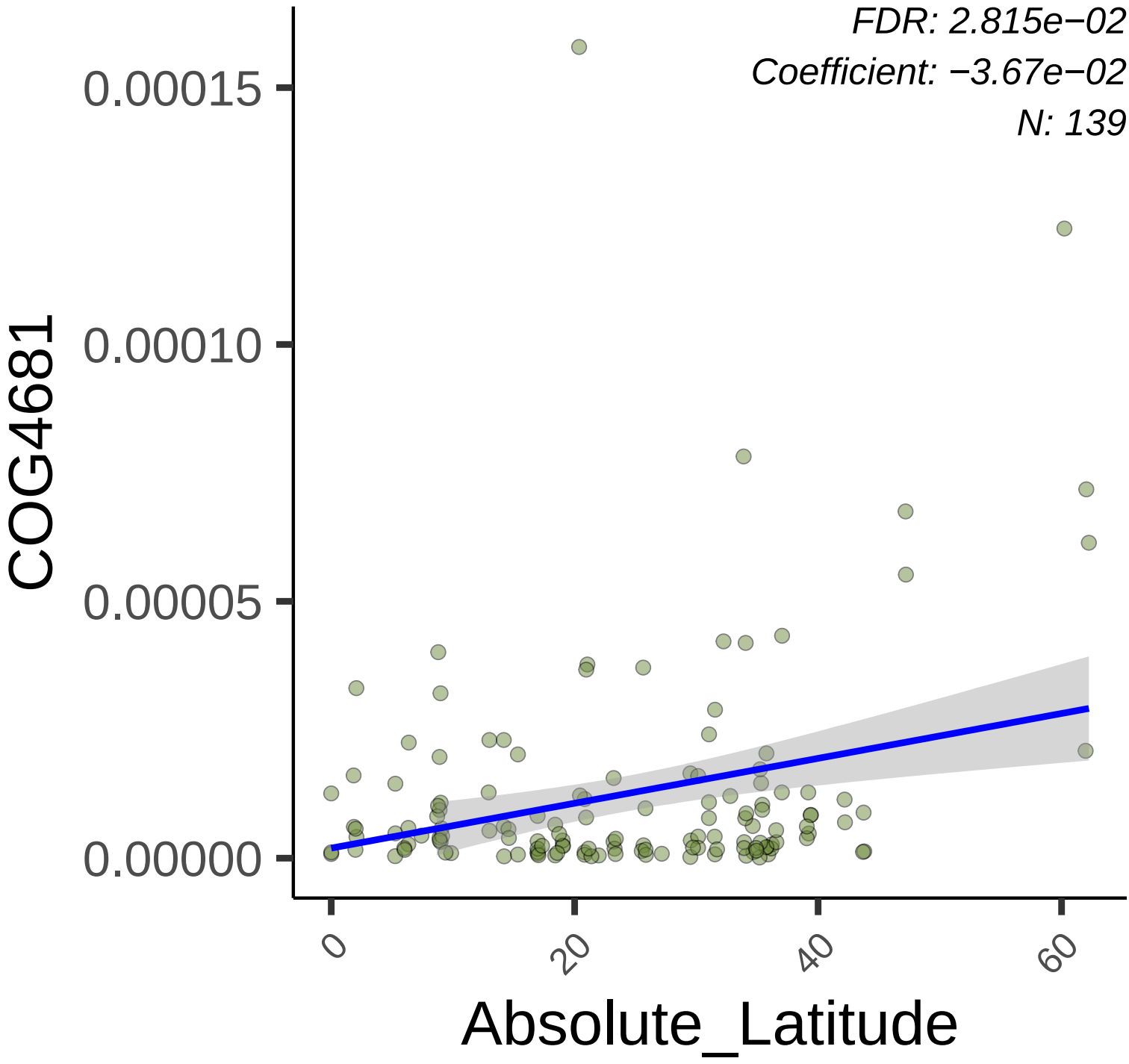

FDR: 2.742e−02
Coefficient: −1.62e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG3840
0
20
40
60
Absolute_Latitude

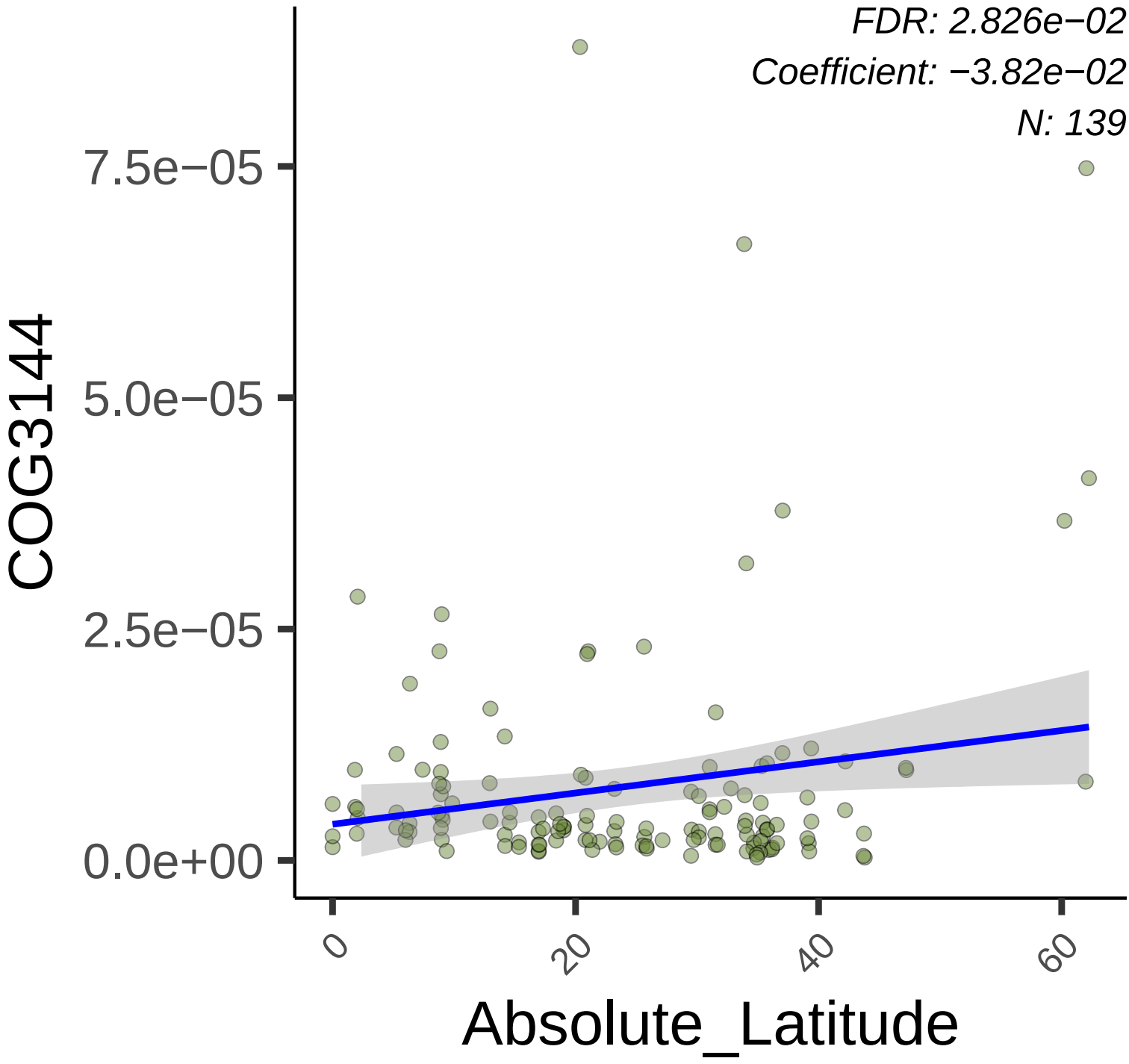

FDR: 2.745e−02
Coefficient: 2.64e−02
N: 139
COG1590
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

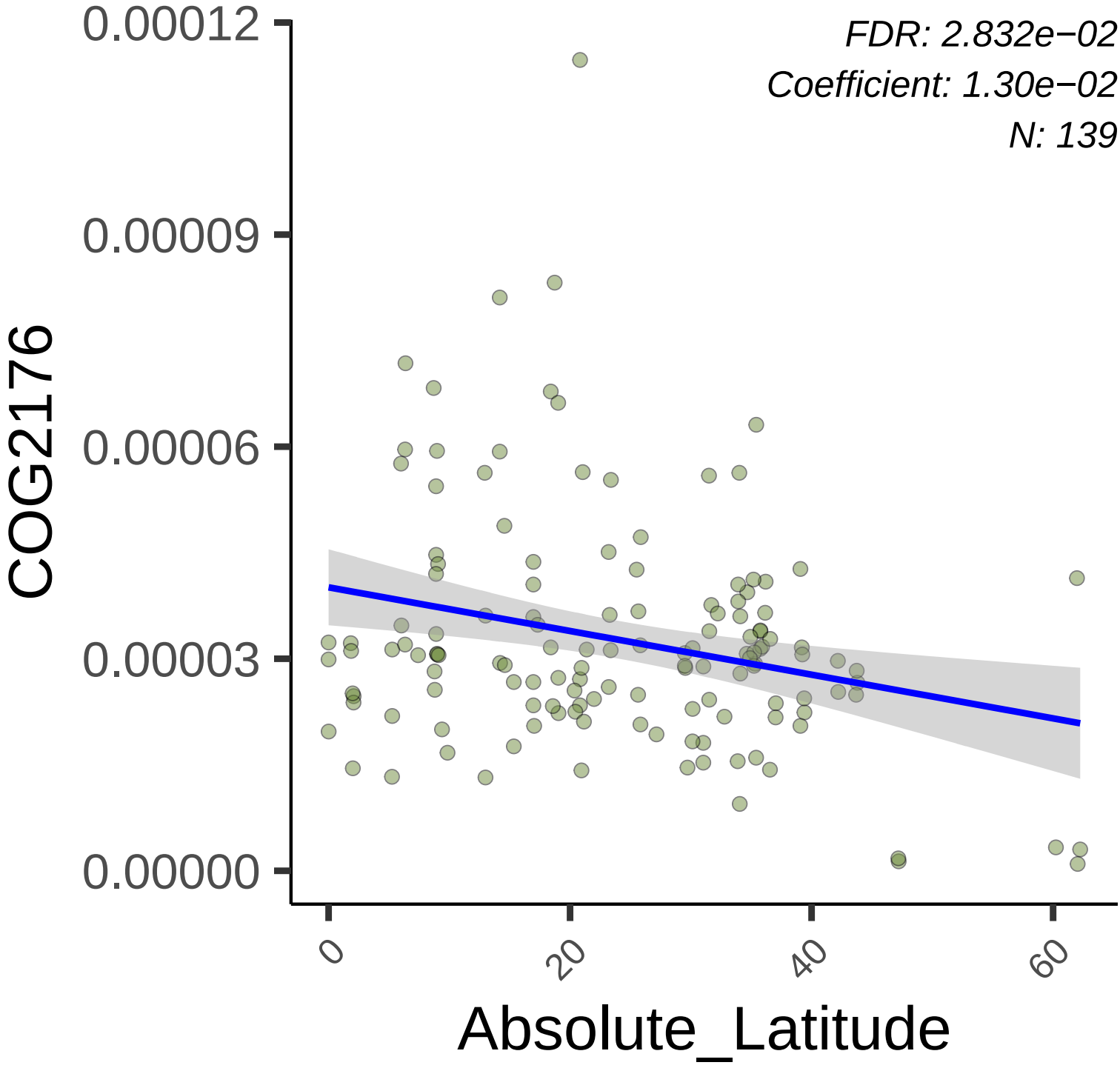

FDR: 2.755e−02
Coefficient: −3.27e−03
N: 139
0.00045
0.00040
0.00035
0.00030
COG0628
0
20
40
60
Absolute_Latitude

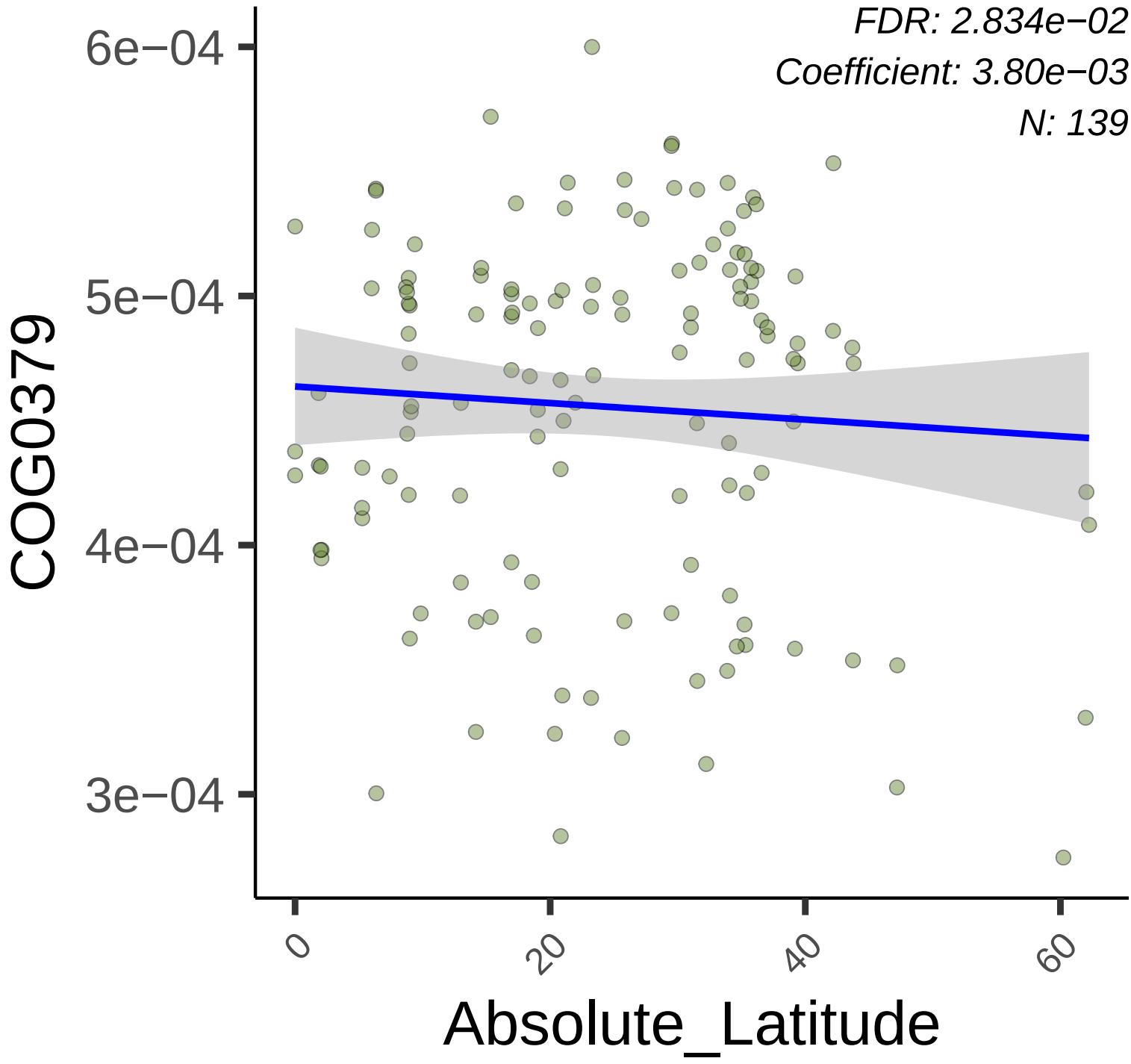

FDR: 2.782e−02
Coefficient: 2.16e−03
N: 139
0.00060
0.00055
0.00050
0.00045
COG0552
0
20
40
60
Absolute_Latitude

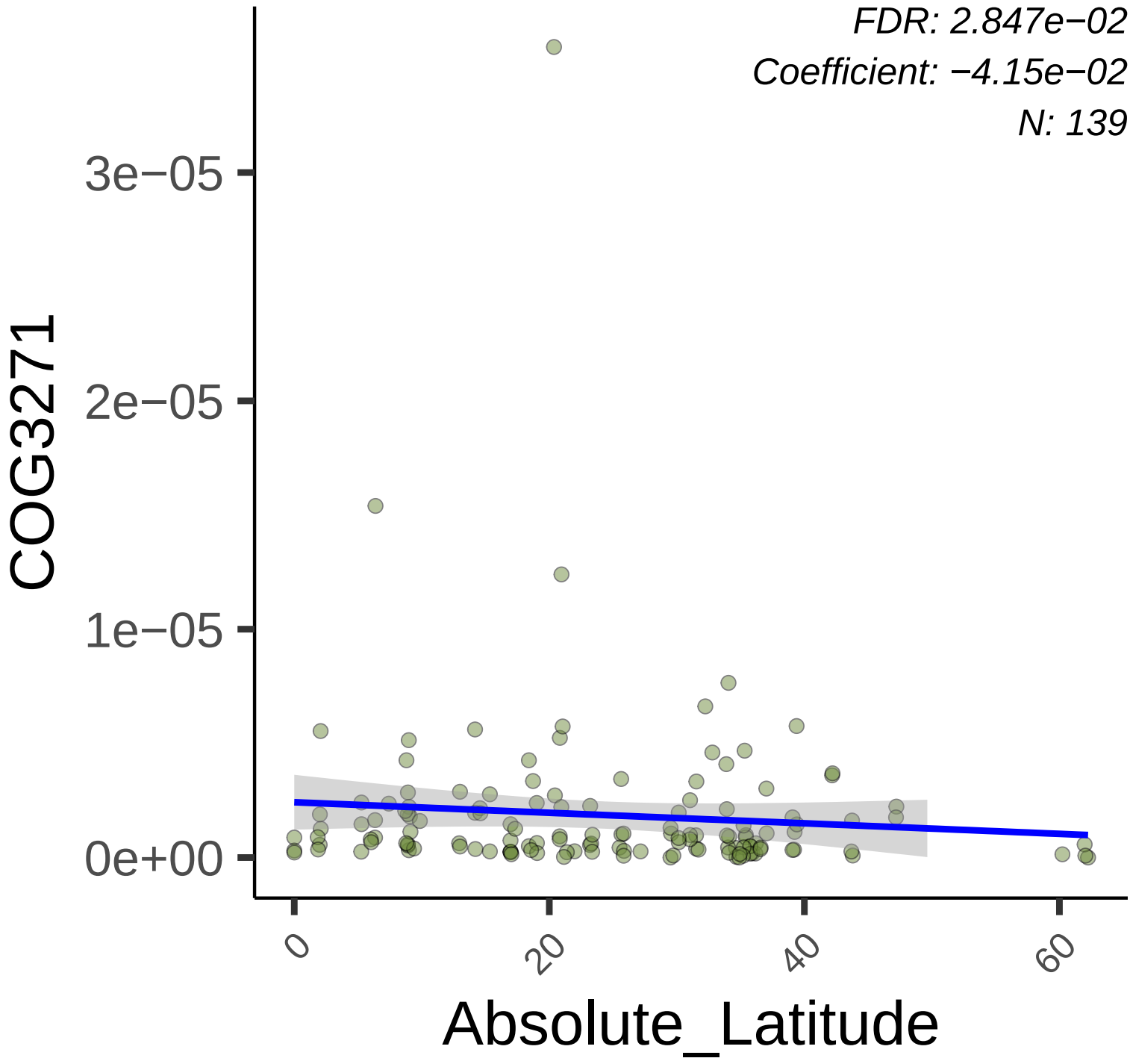

FDR: 2.814e−02
Coefficient: −1.73e−02
N: 139
COG0027
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

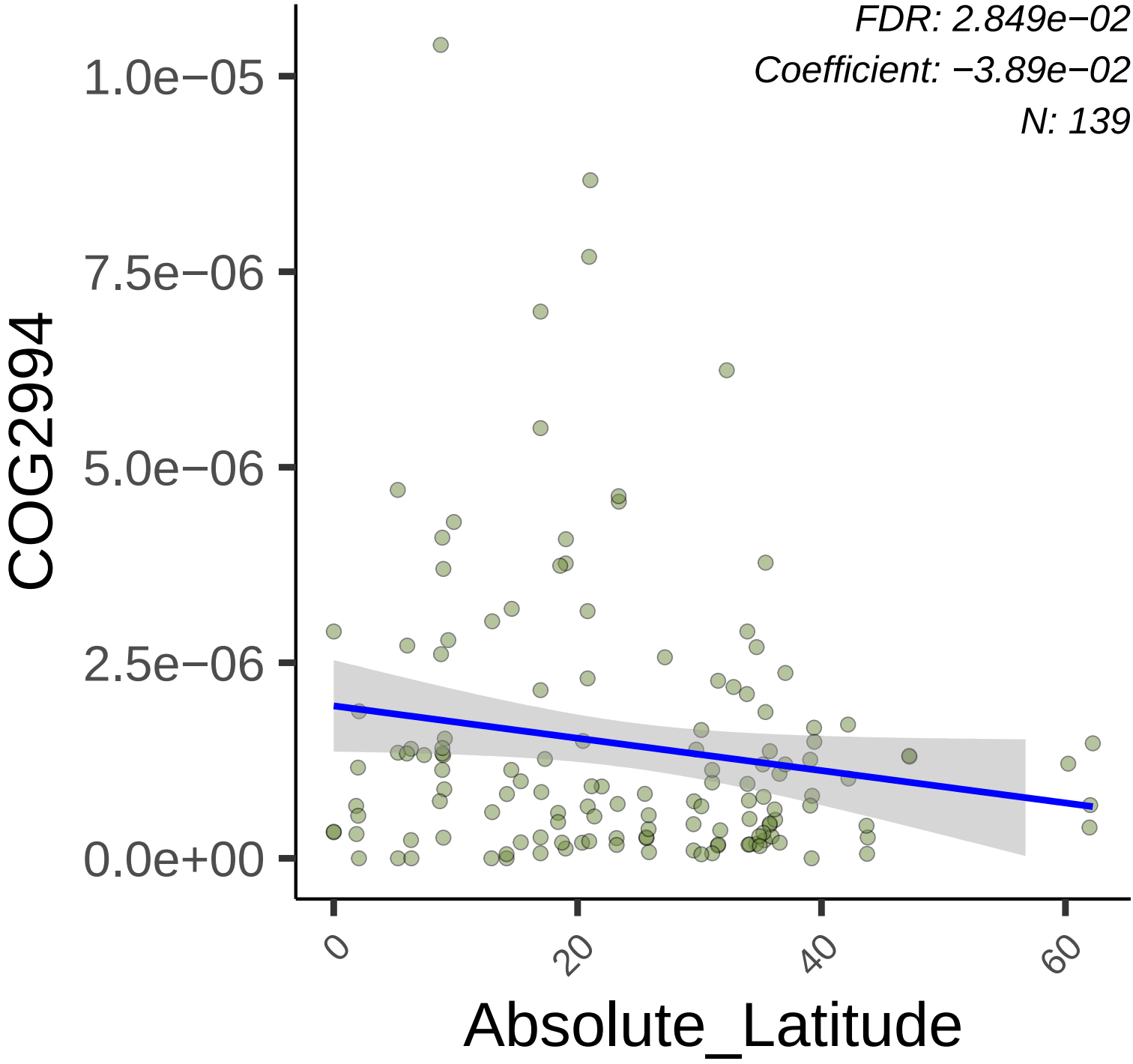

FDR: 2.815e−02
Coefficient: −3.67e−02
N: 139
COG4681
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

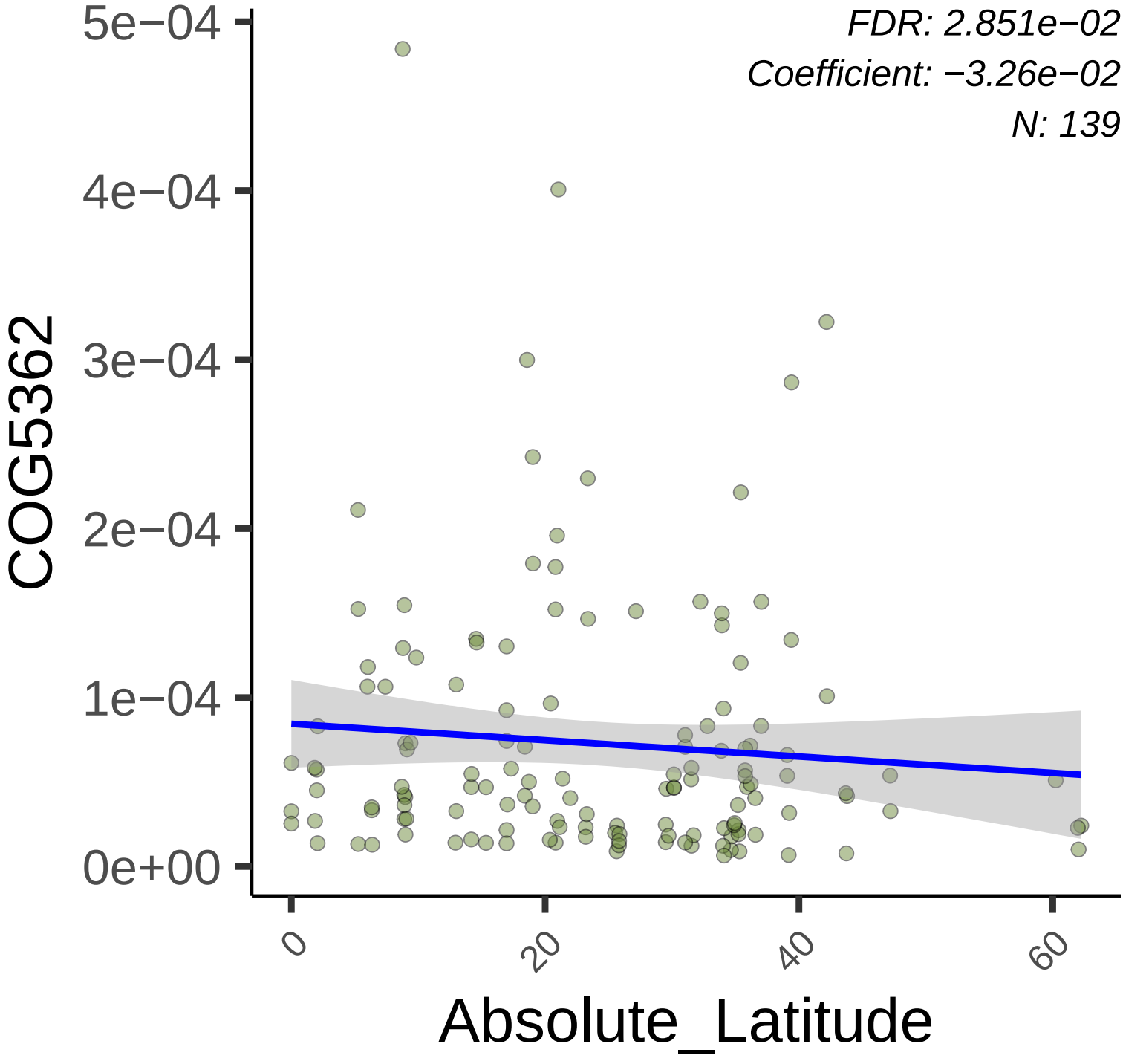

FDR: 2.826e−02
Coefficient: −3.82e−02
N: 139
COG3144
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

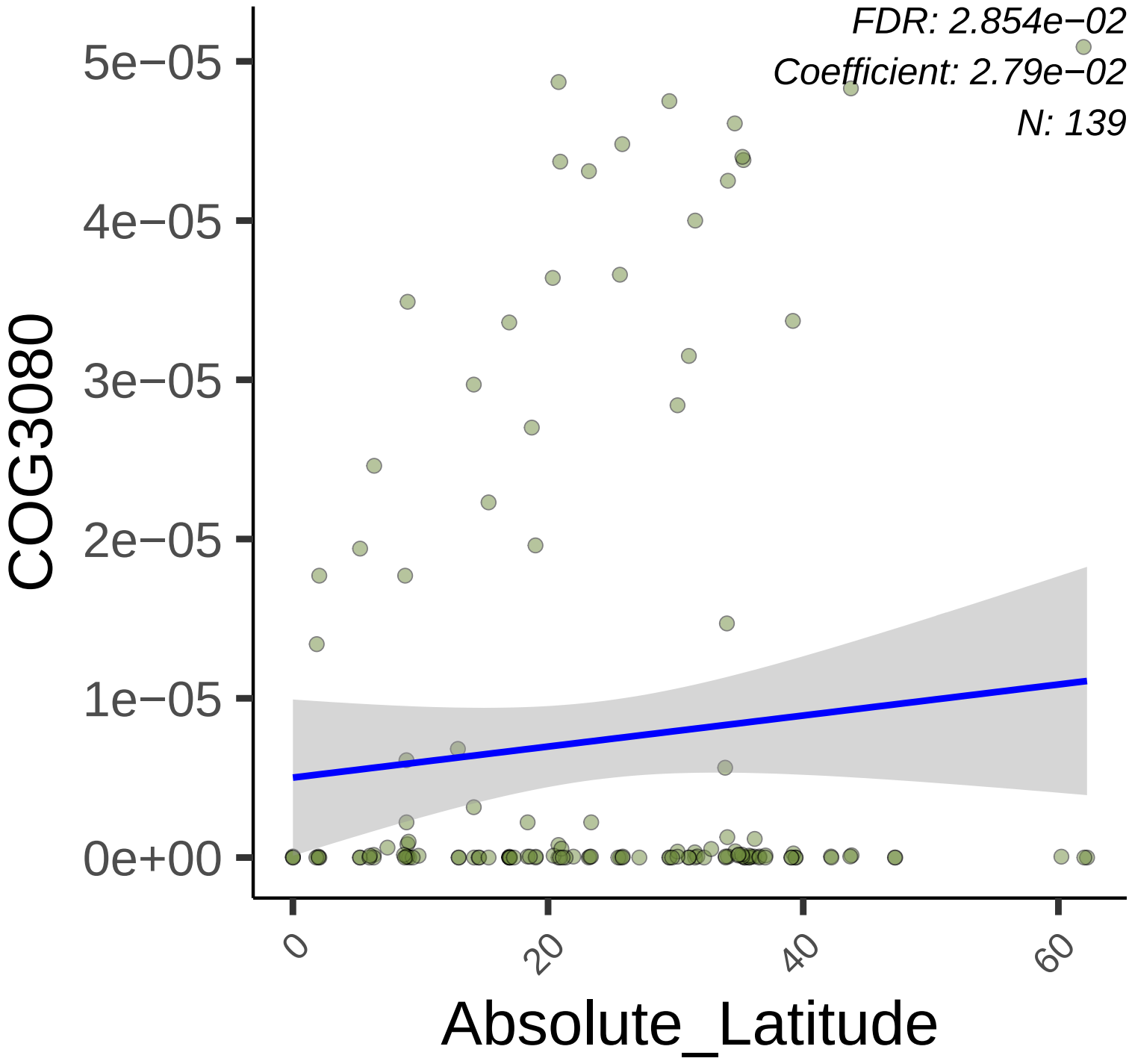

FDR: 2.832e−02
Coefficient: 1.30e−02
N: 139
0.00012
0.00009
0.00006
0.00003
0.00000
COG2176
0
20
40
60
Absolute_Latitude

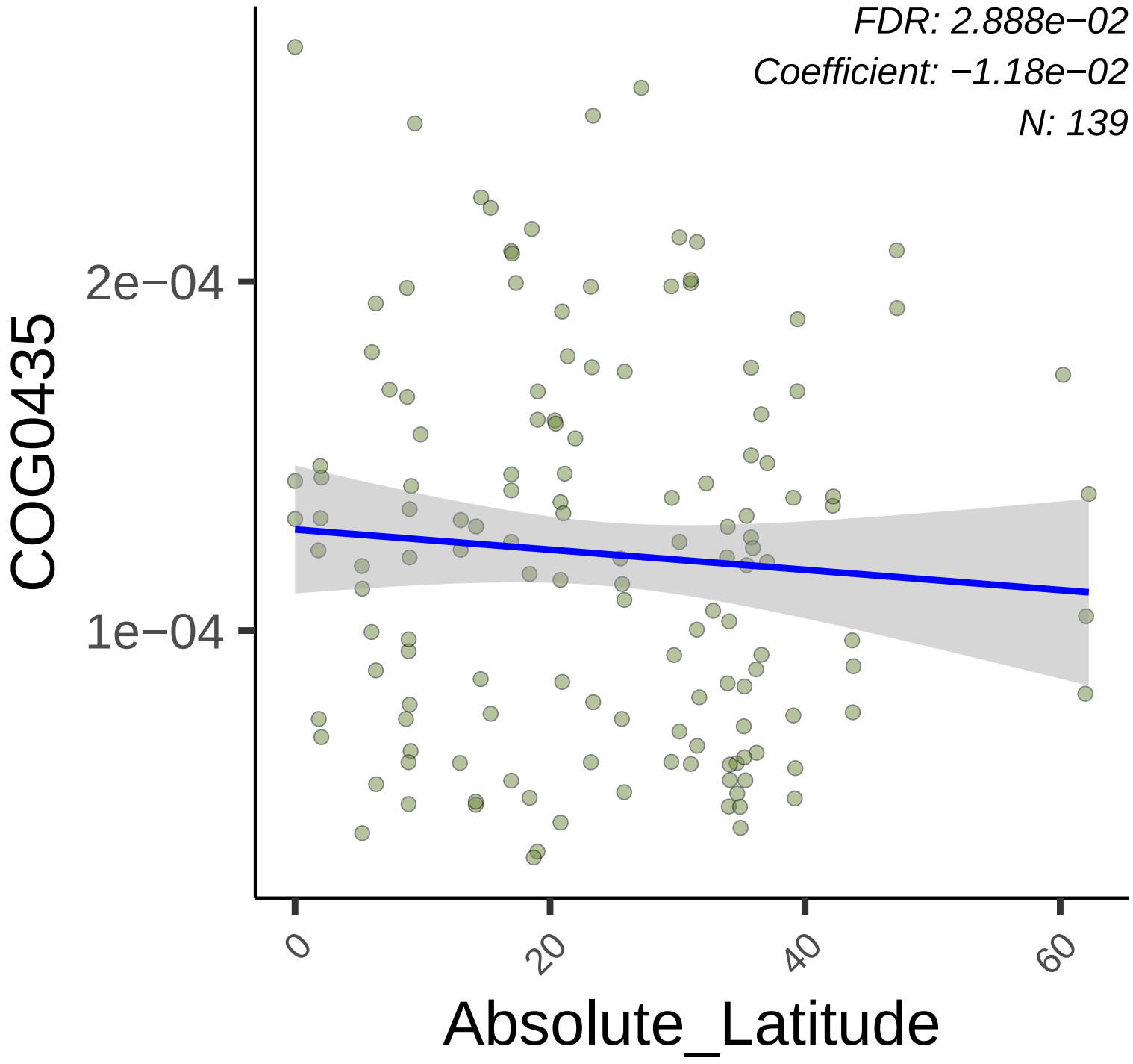

FDR: 2.834e−02
Coefficient: 3.80e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0379
0
20
40
60
Absolute_Latitude

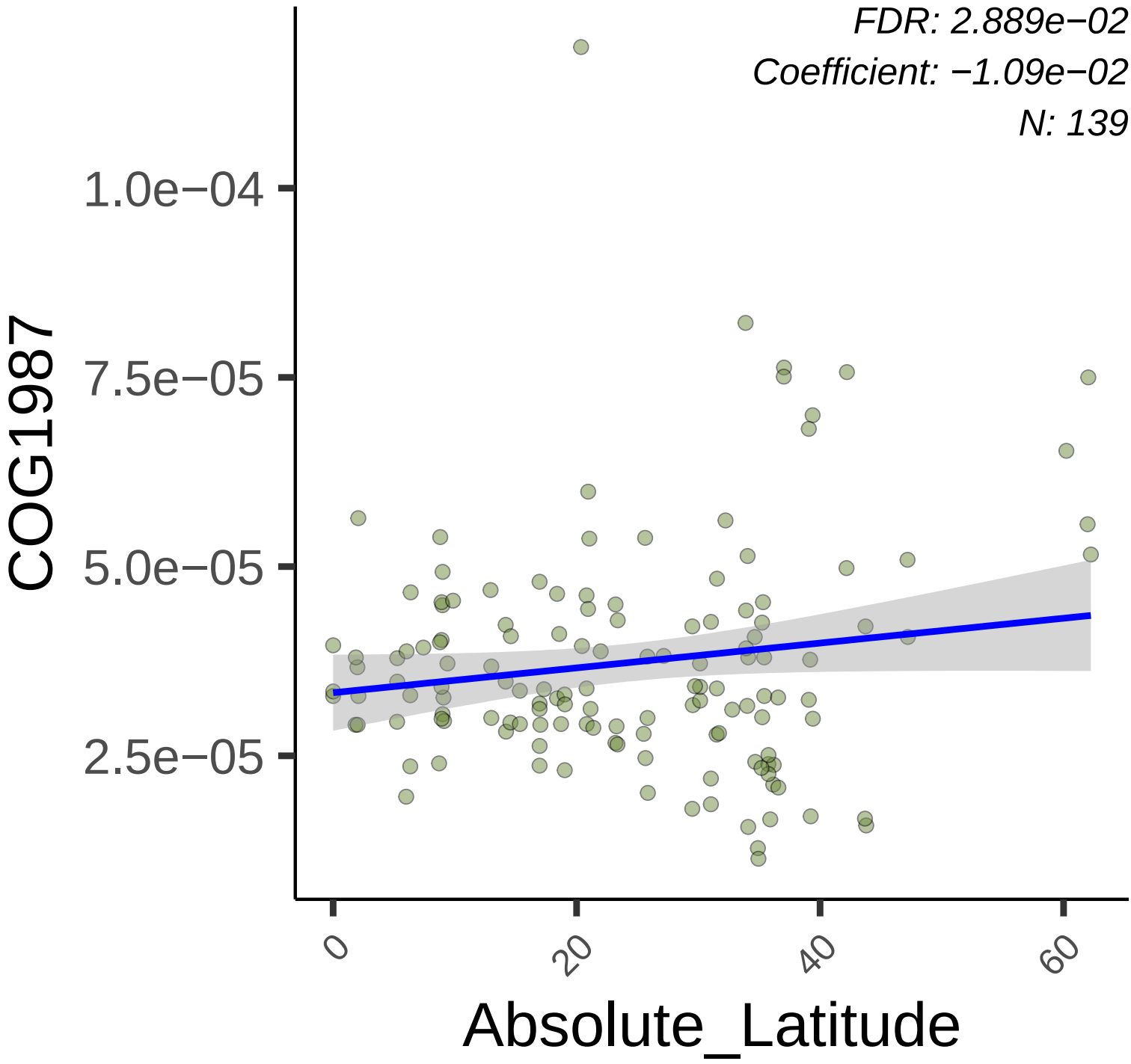

FDR: 2.847e−02
Coefficient: −4.15e−02
N: 139
COG3271
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

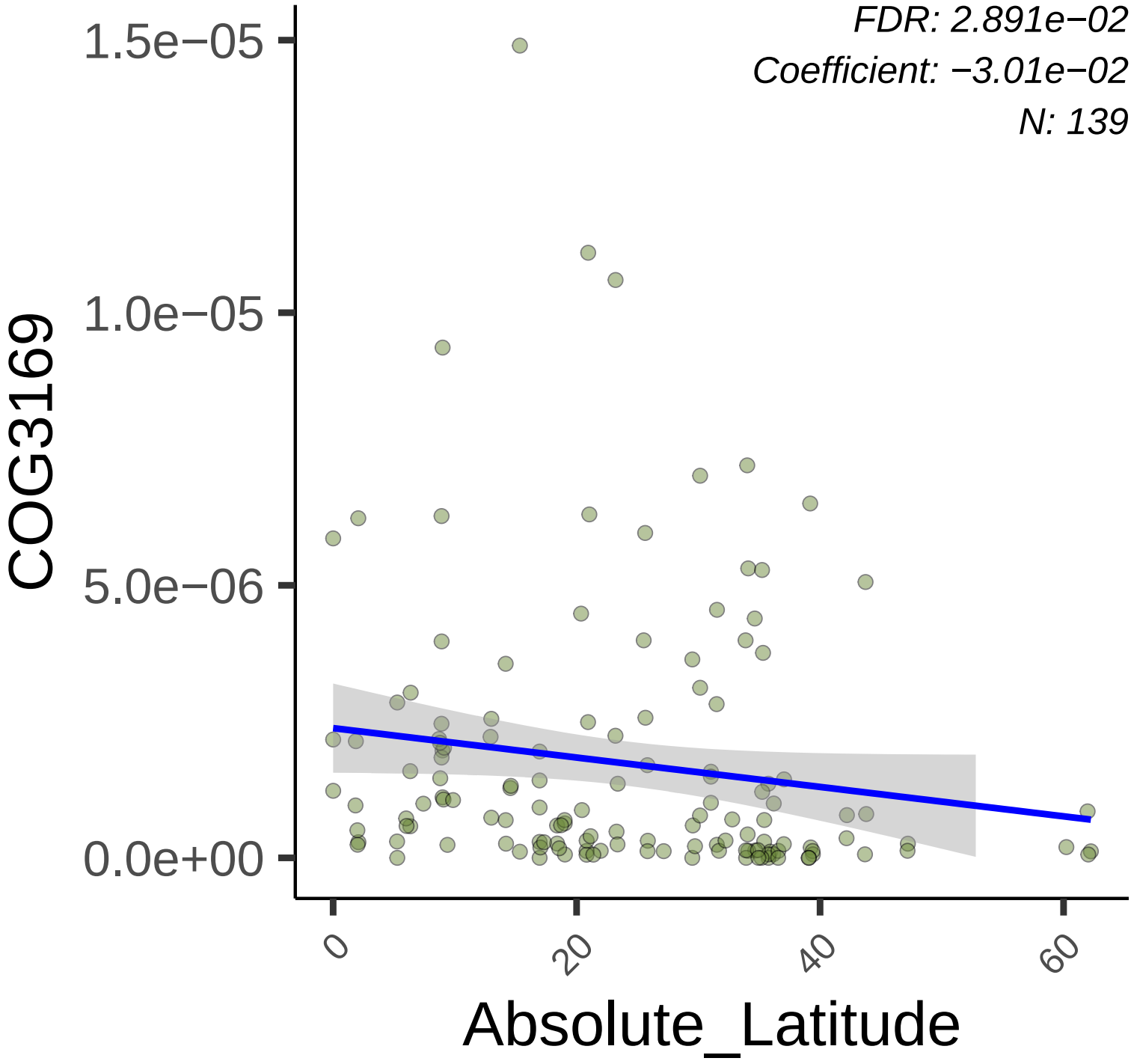

FDR: 2.849e−02
Coefficient: −3.89e−02
N: 139
1.0e−05
7.5e−06
5.0e−06
2.5e−06
0.0e+00
COG2994
0
20
40
60
Absolute_Latitude

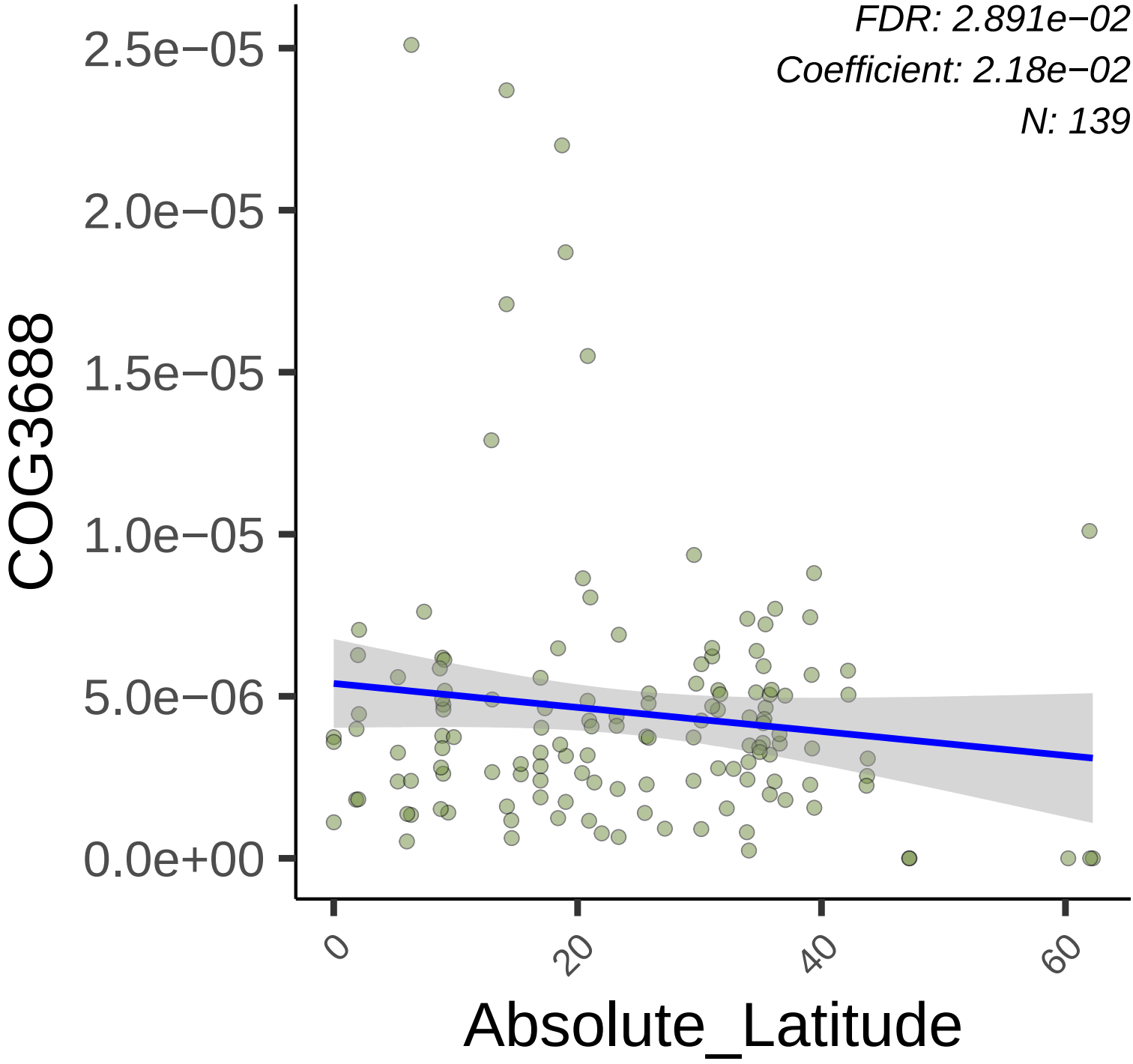

FDR: 2.851e−02
Coefficient: −3.26e−02
N: 139
COG5362
5e−04
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

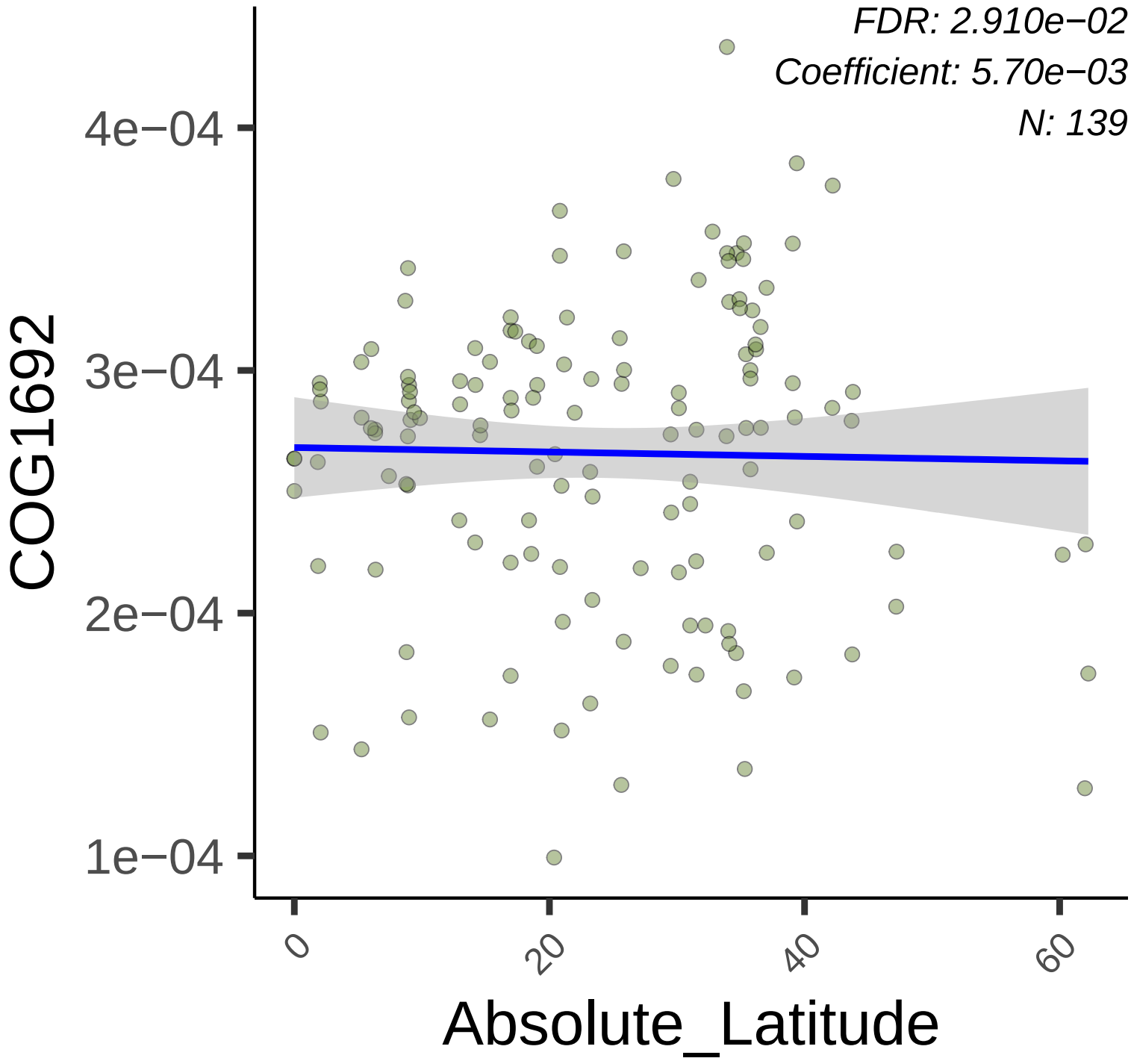

FDR: 2.854e−02
Coefficient: 2.79e−02
N: 139
COG3080
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

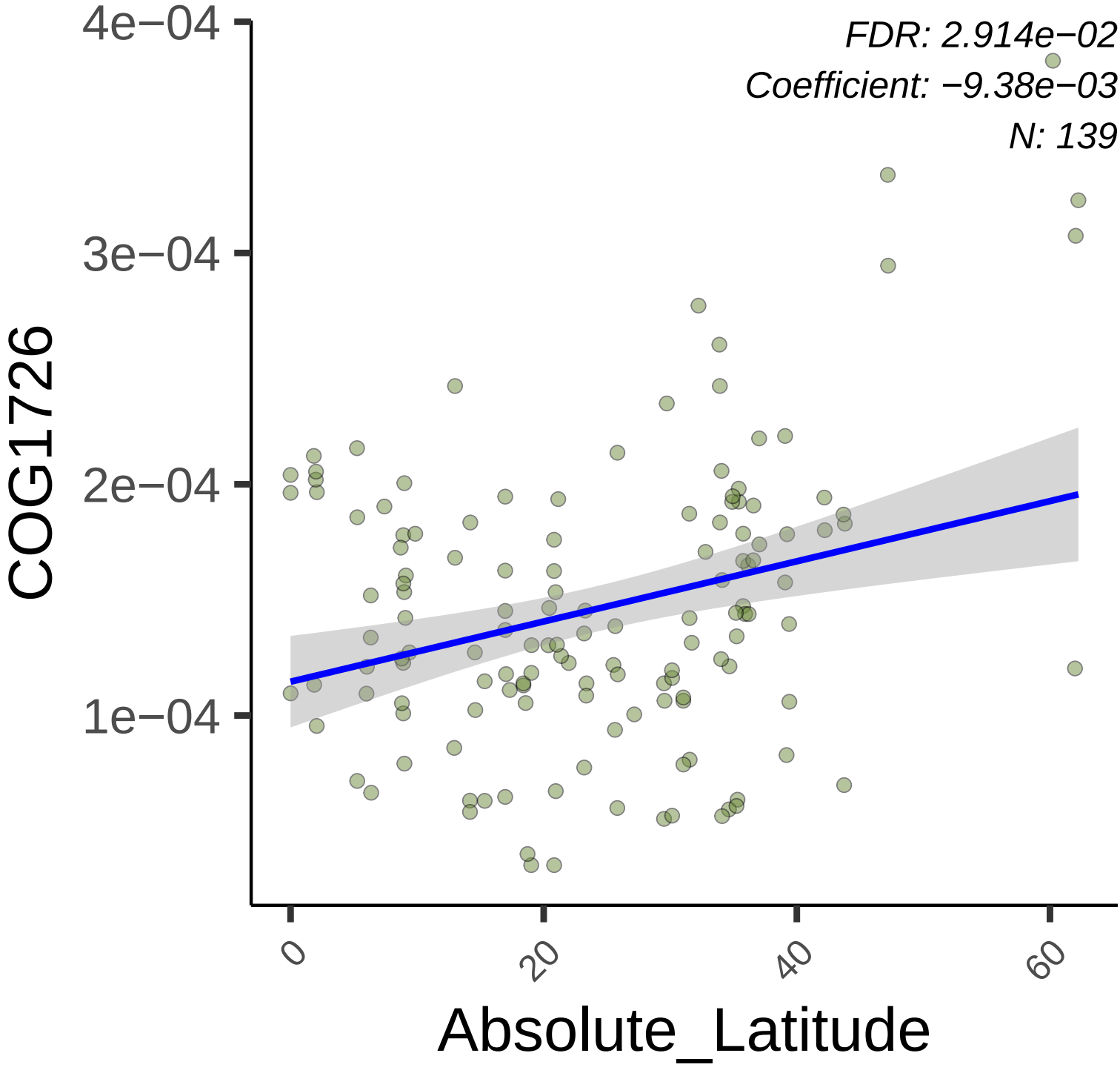

FDR: 2.888e−02
Coefficient: −1.18e−02
N: 139
COG0435
2e−04
1e−04
0
20
40
60
Absolute_Latitude

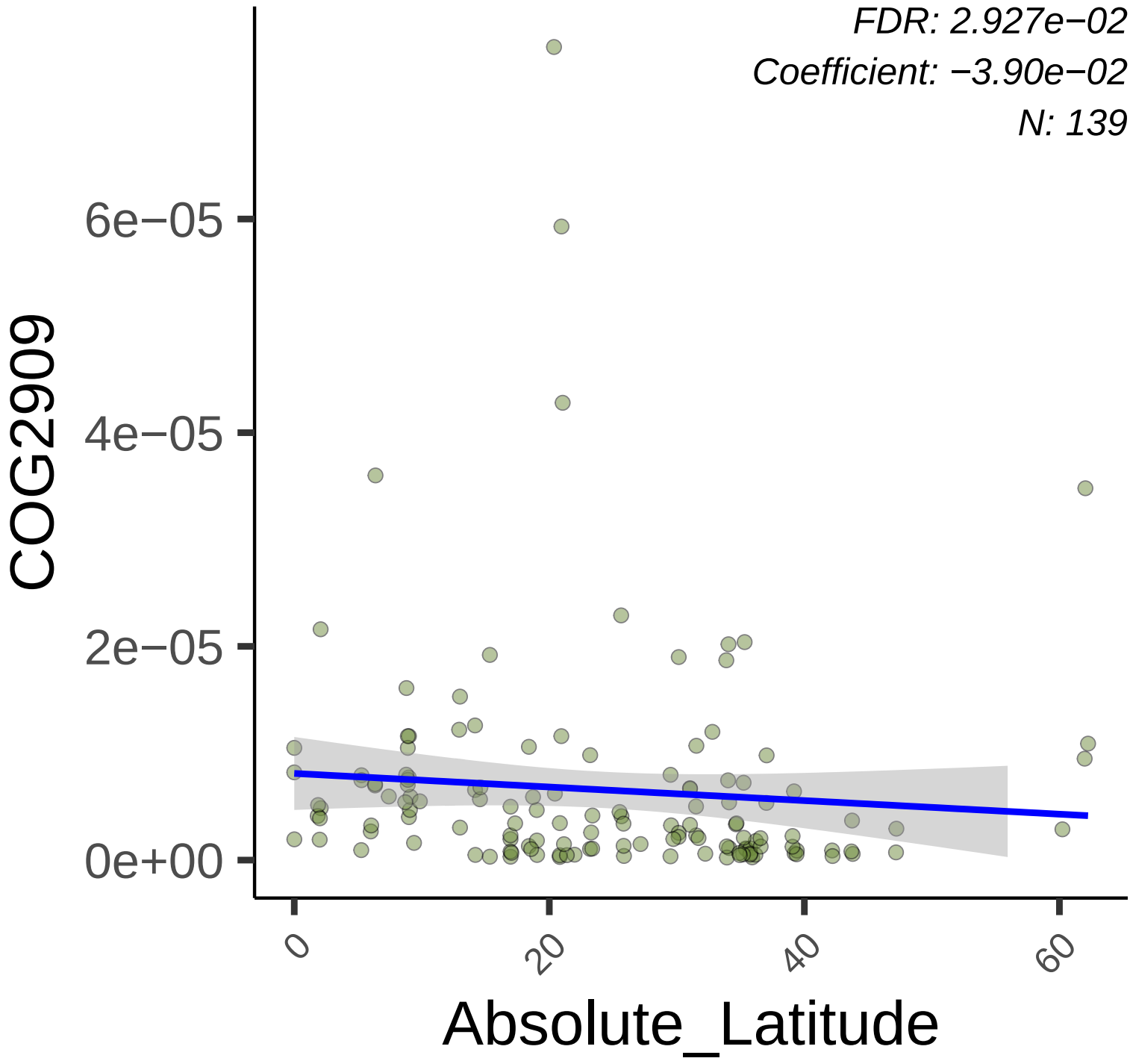

FDR: 2.889e−02
Coefficient: −1.09e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
COG1987
0
20
40
60
Absolute_Latitude

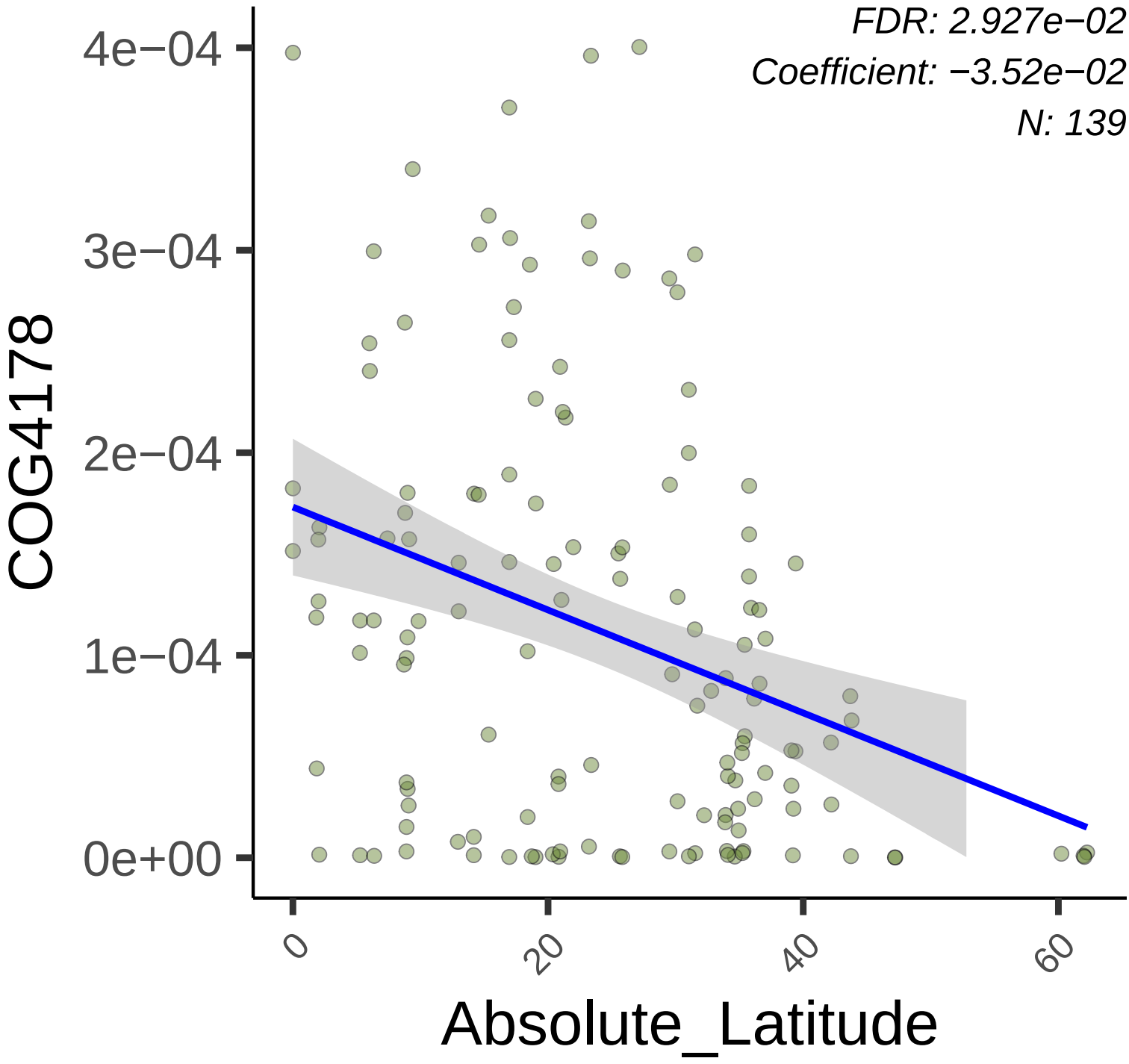

FDR: 2.891e−02
Coefficient: −3.01e−02
N: 139
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG3169
0
20
40
60
Absolute_Latitude

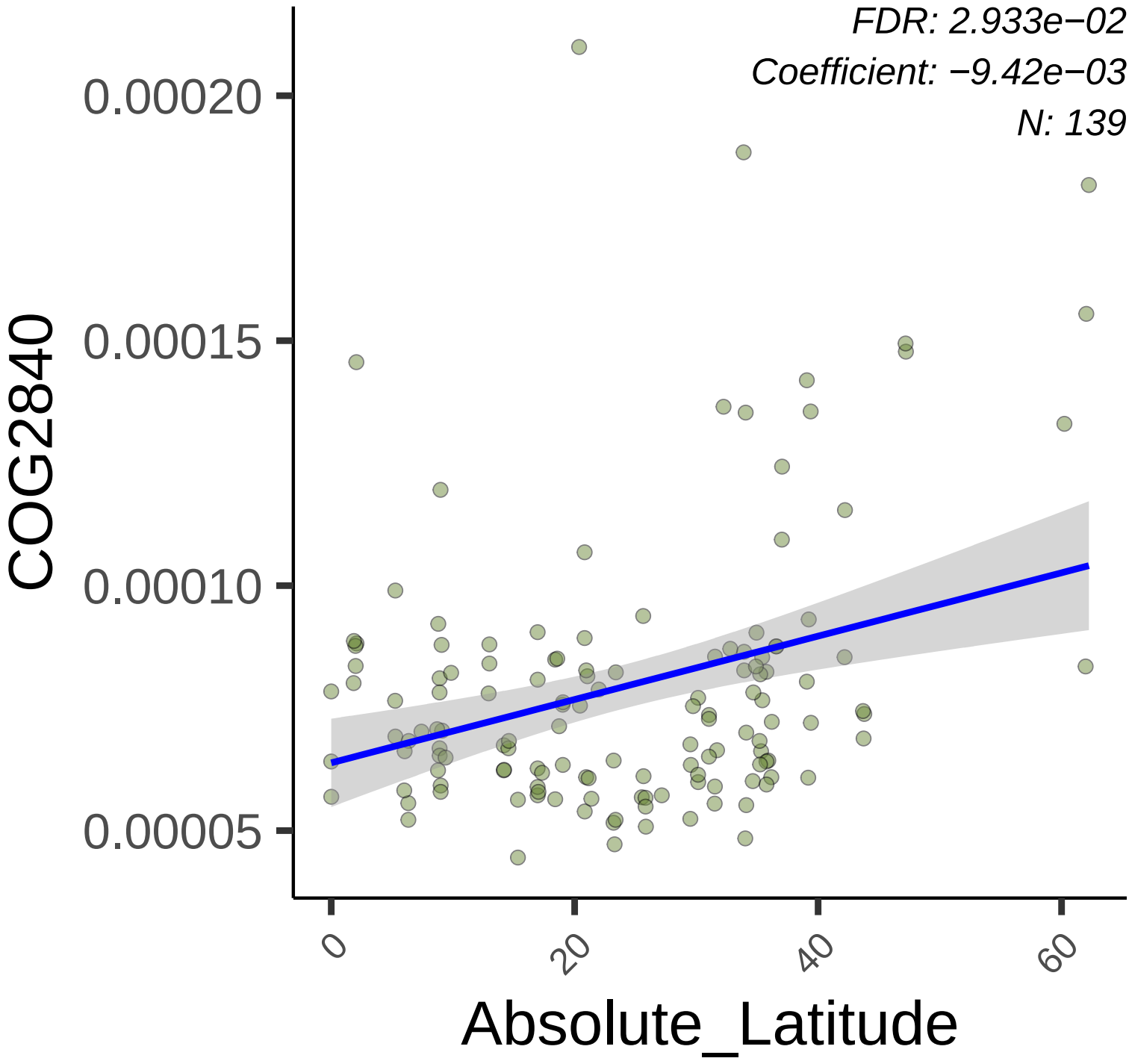

FDR: 2.891e−02
Coefficient: 2.18e−02
N: 139
COG3688
2.5e−05
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

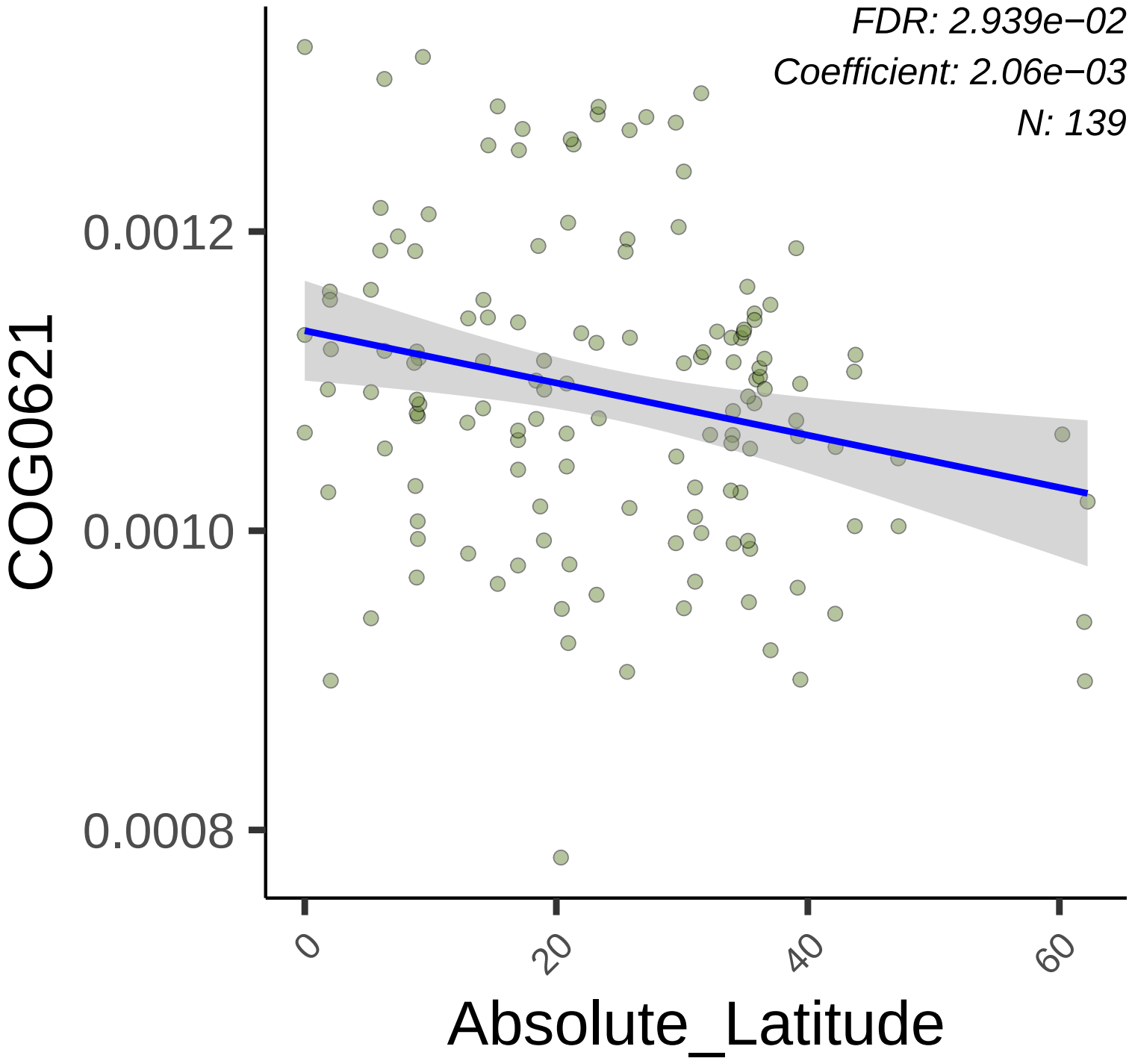

FDR: 2.910e−02
Coefficient: 5.70e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG1692
0
20
40
60
Absolute_Latitude

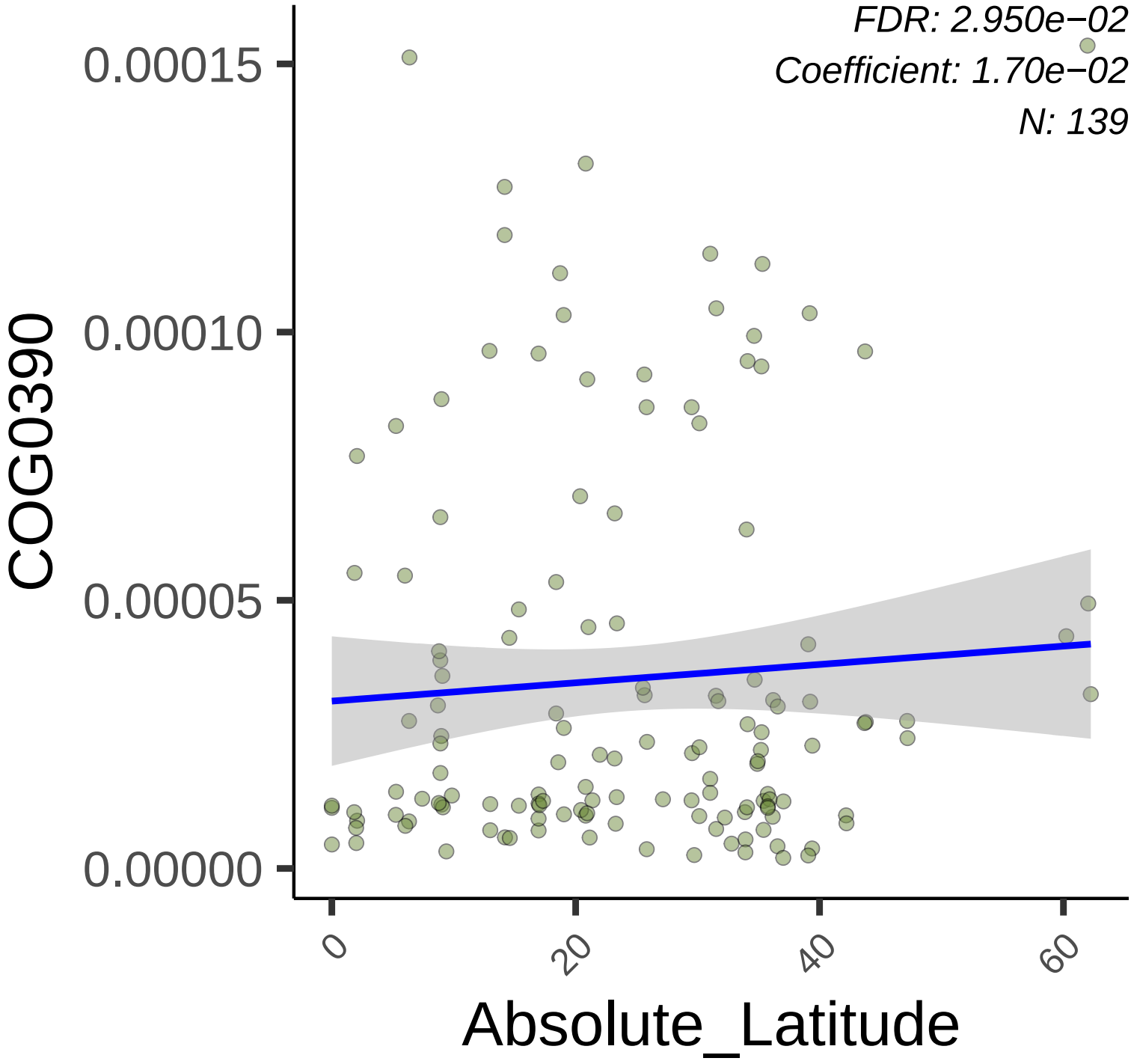

FDR: 2.914e−02
Coefficient: −9.38e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG1726
0
20
40
60
Absolute_Latitude

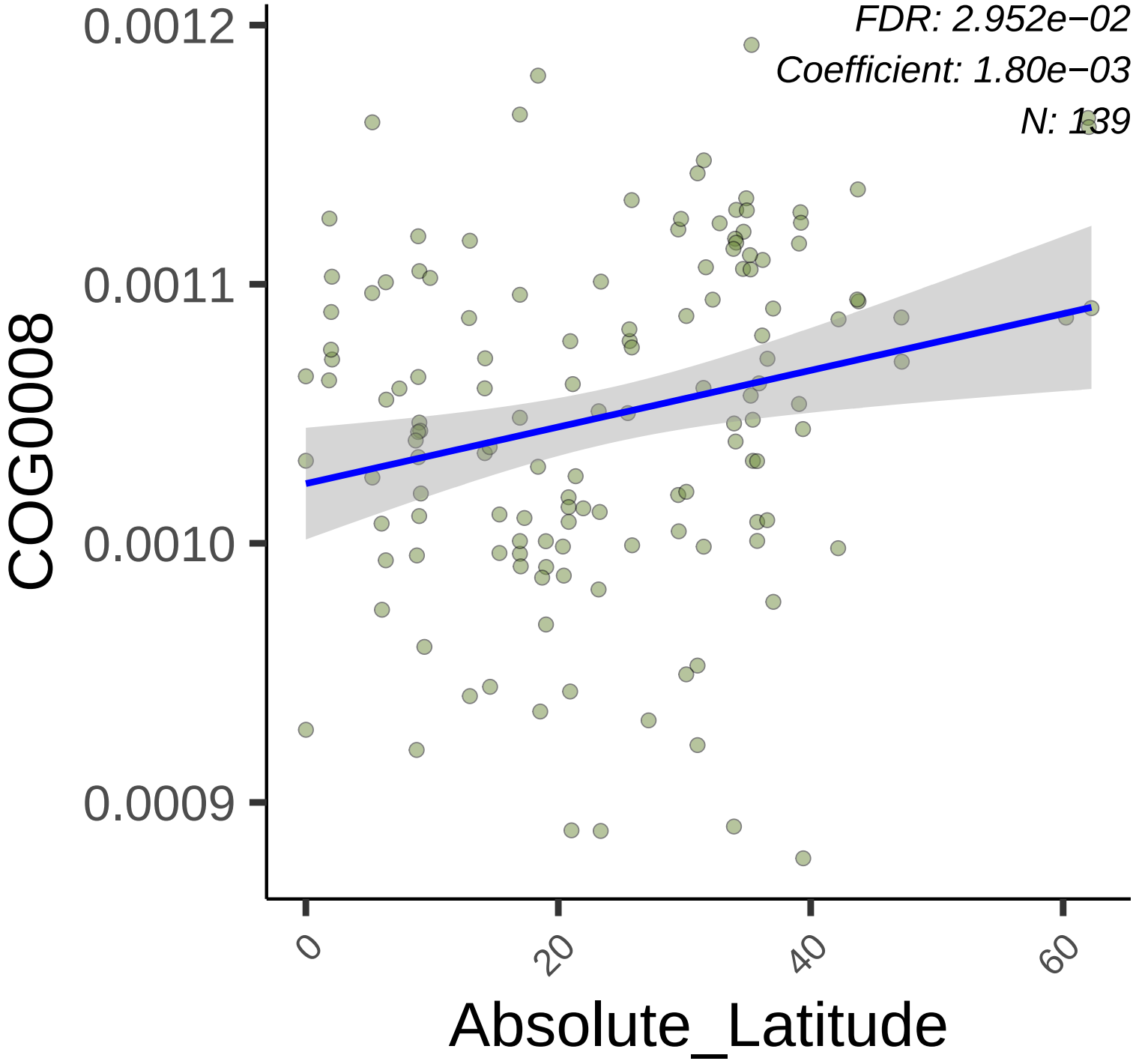

FDR: 2.927e−02
Coefficient: −3.90e−02
N: 139
COG2909
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

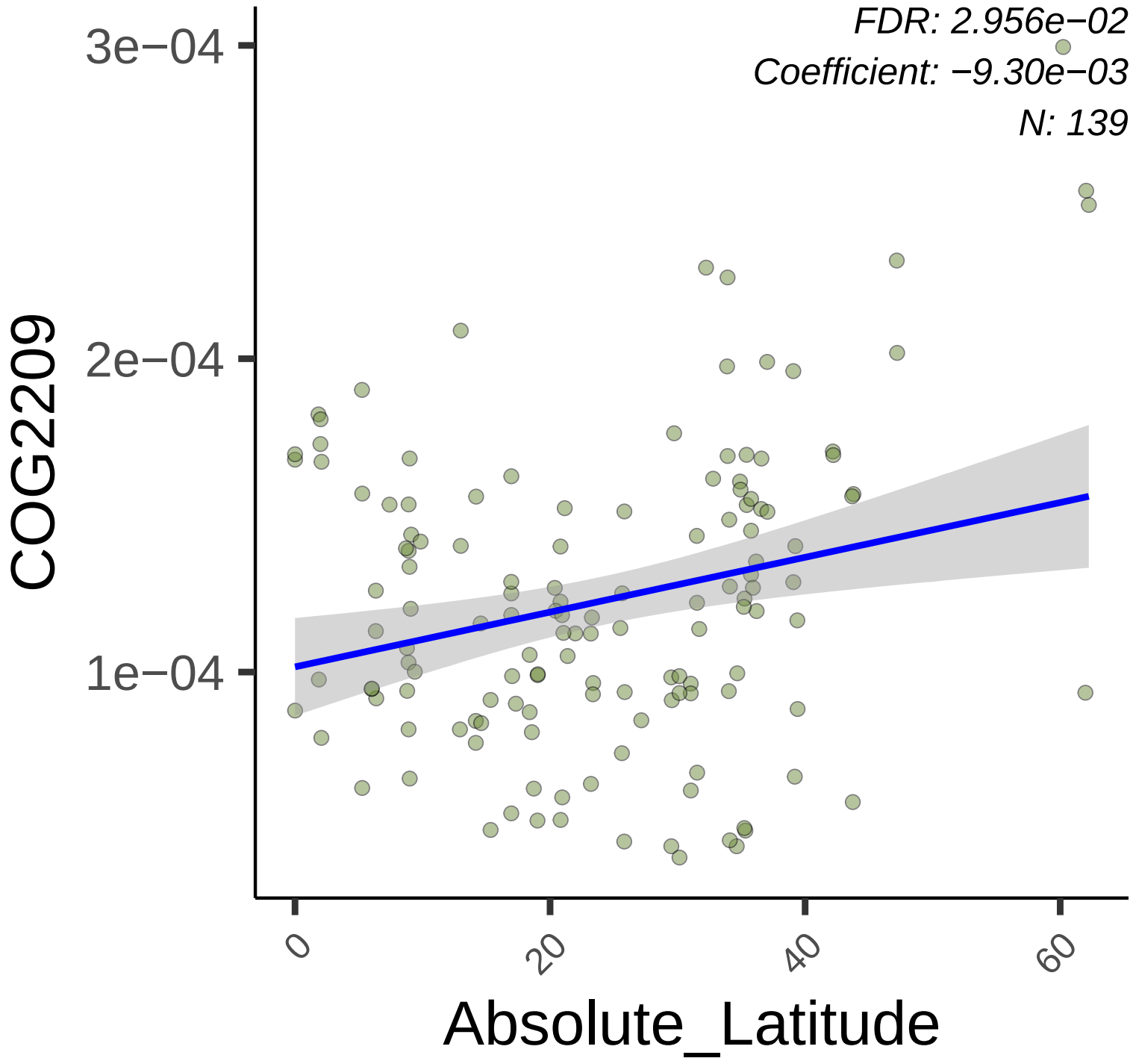

FDR: 2.927e−02
Coefficient: −3.52e−02
N: 139
4e−04
3e−04
2e−04
1e−04
0e+00
COG4178
0
20
40
60
Absolute_Latitude

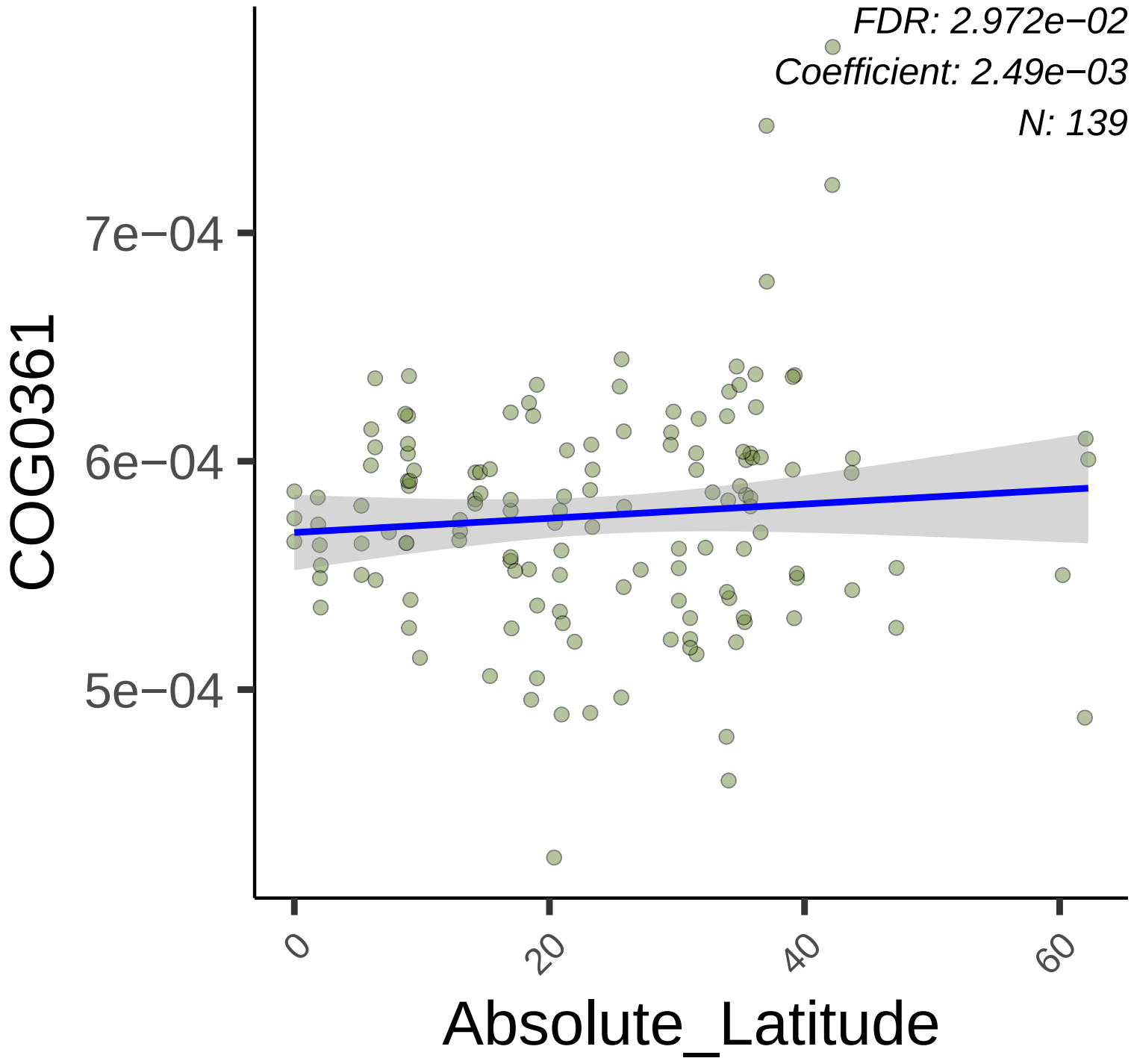

FDR: 2.933e−02
Coefficient: −9.42e−03
N: 139
COG2840
0.00020
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

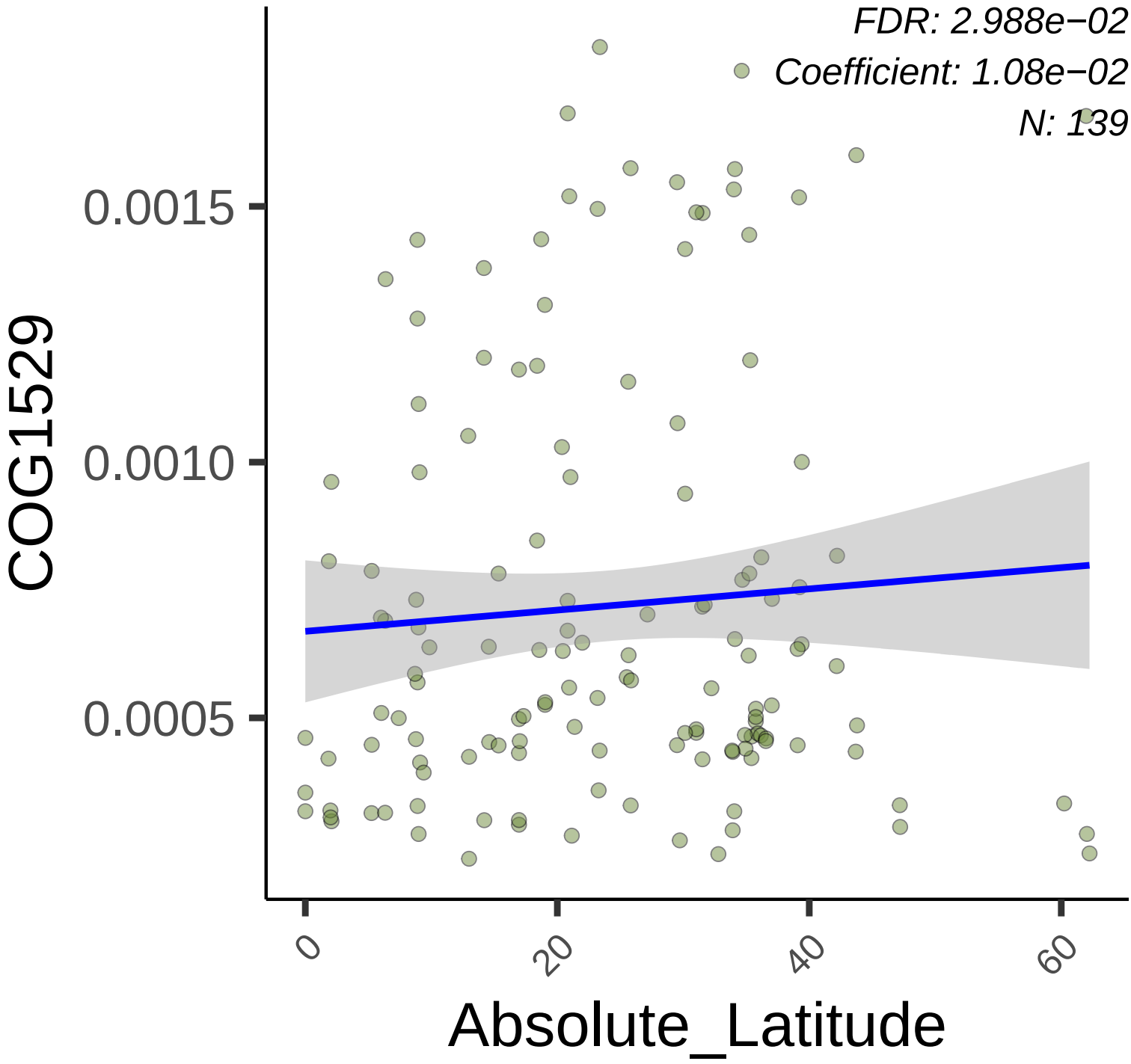

FDR: 2.939e−02
Coefficient: 2.06e−03
N: 139
COG0621
0.0012
0.0010
0.0008
0
20
40
60
Absolute_Latitude

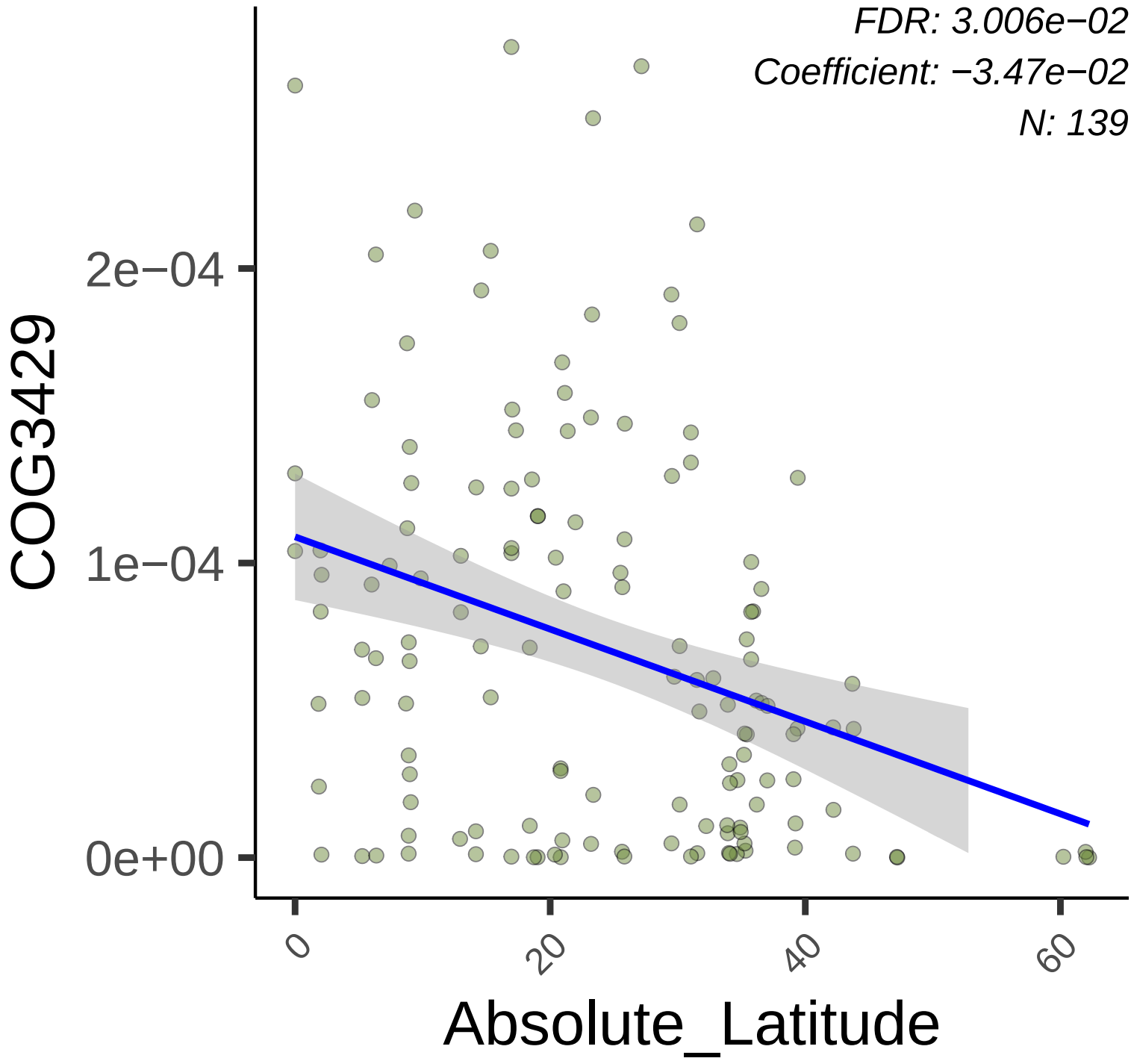

FDR: 2.950e−02
Coefficient: 1.70e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG0390
0
20
40
60
Absolute_Latitude

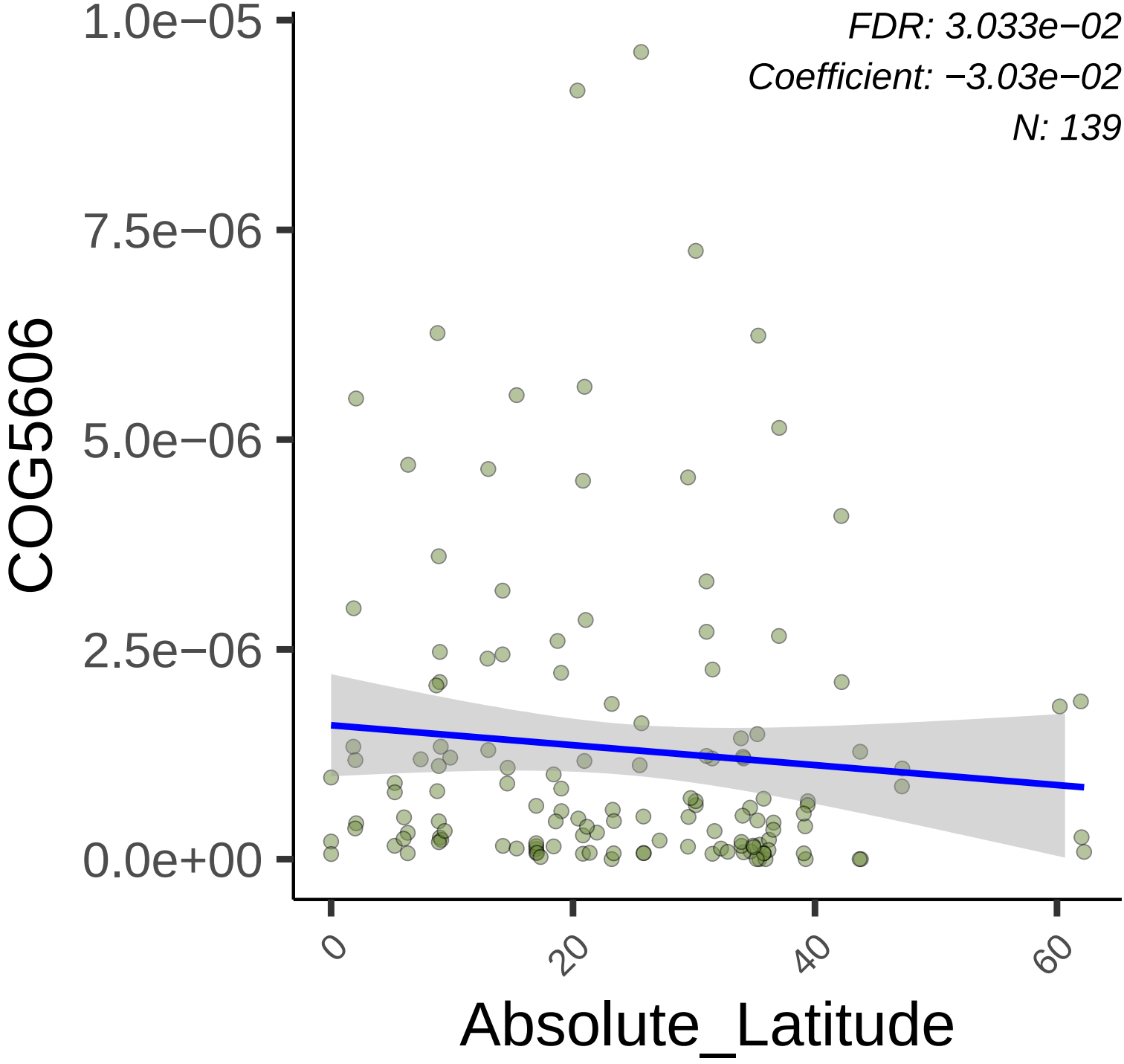

FDR: 2.952e−02
Coefficient: 1.80e−03
N: 139
0.0012
0.0011
0.0010
0.0009
COG0008
0
20
40
60
Absolute_Latitude

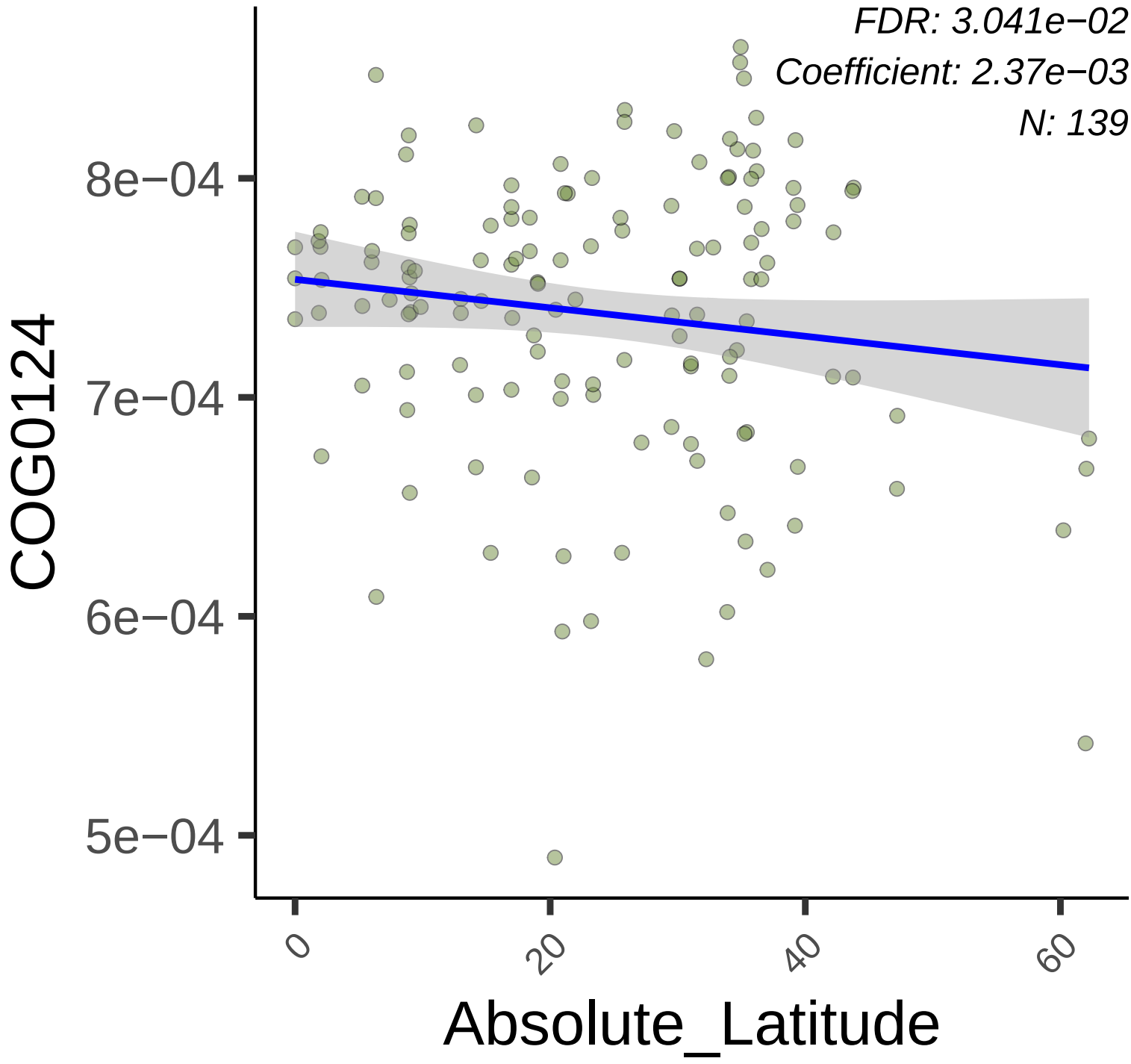

FDR: 2.956e−02
Coefficient: −9.30e−03
N: 139
3e−04
2e−04
1e−04
COG2209
0
20
40
60
Absolute_Latitude

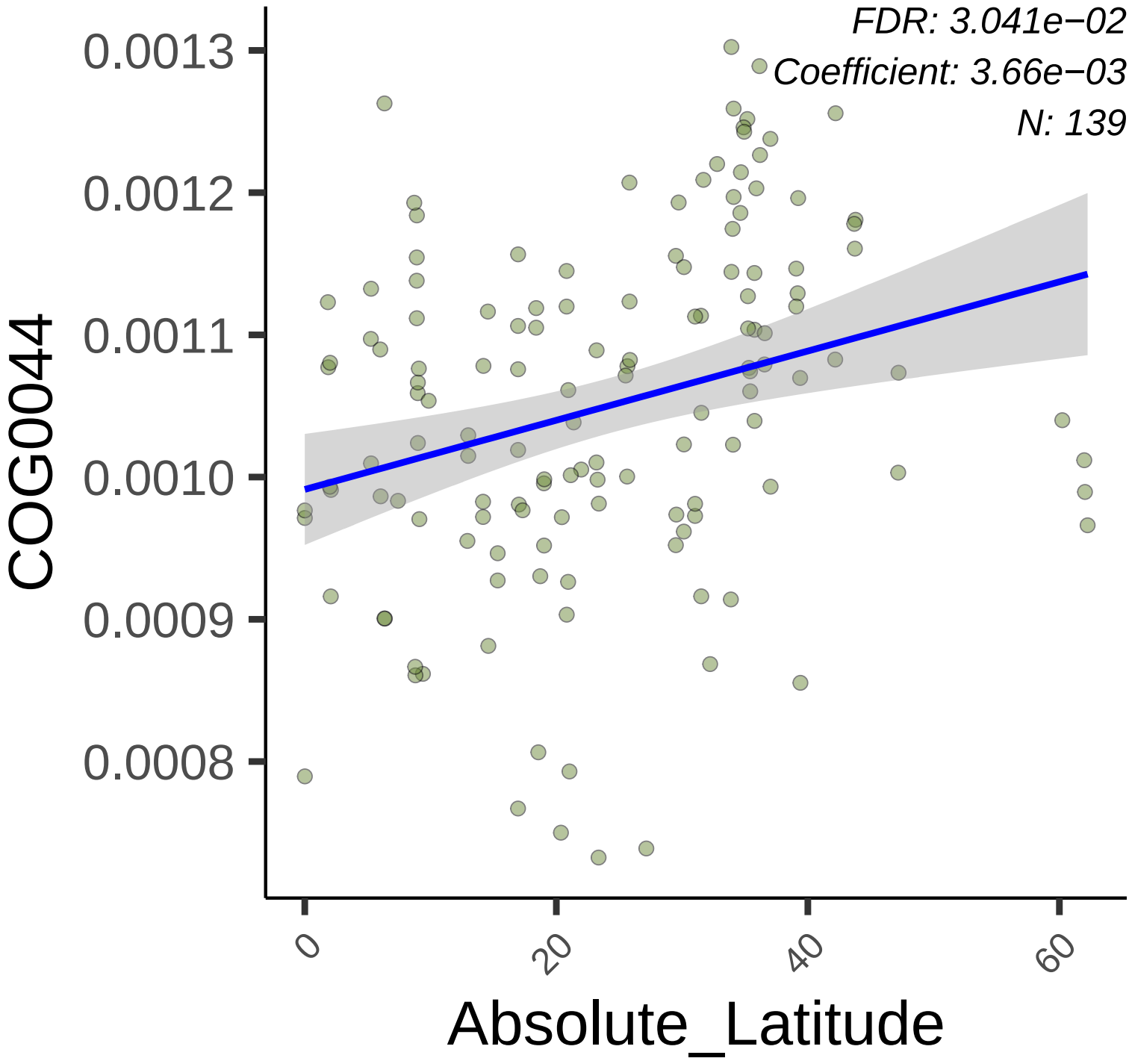

FDR: 2.972e−02
Coefficient: 2.49e−03
N: 139
7e−04
6e−04
5e−04
COG0361
0
20
40
60
Absolute_Latitude

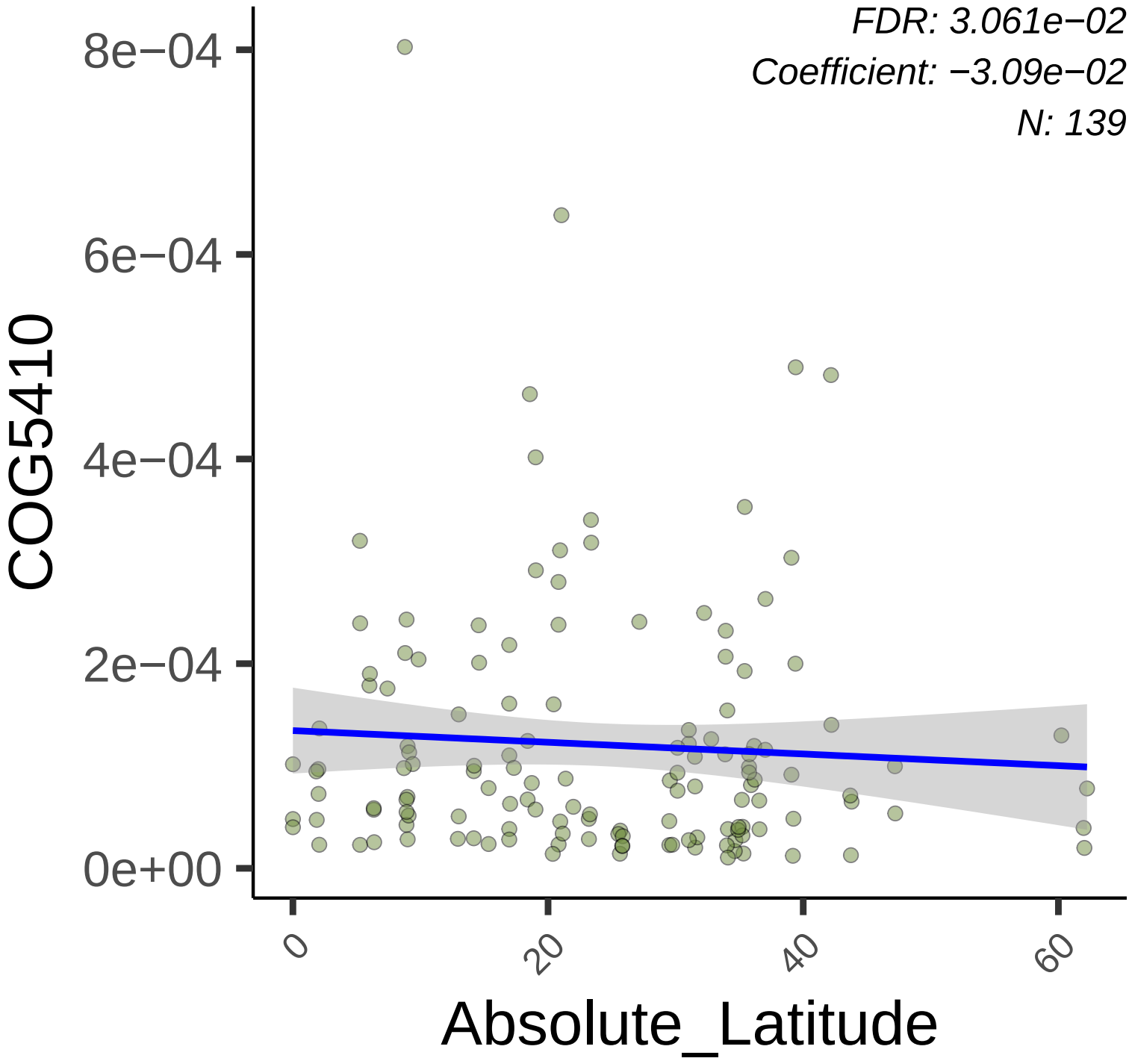

FDR: 2.988e−02
Coefficient: 1.08e−02
N: 139
COG1529
0.0015
0.0010
0.0005
0
20
40
60
Absolute_Latitude

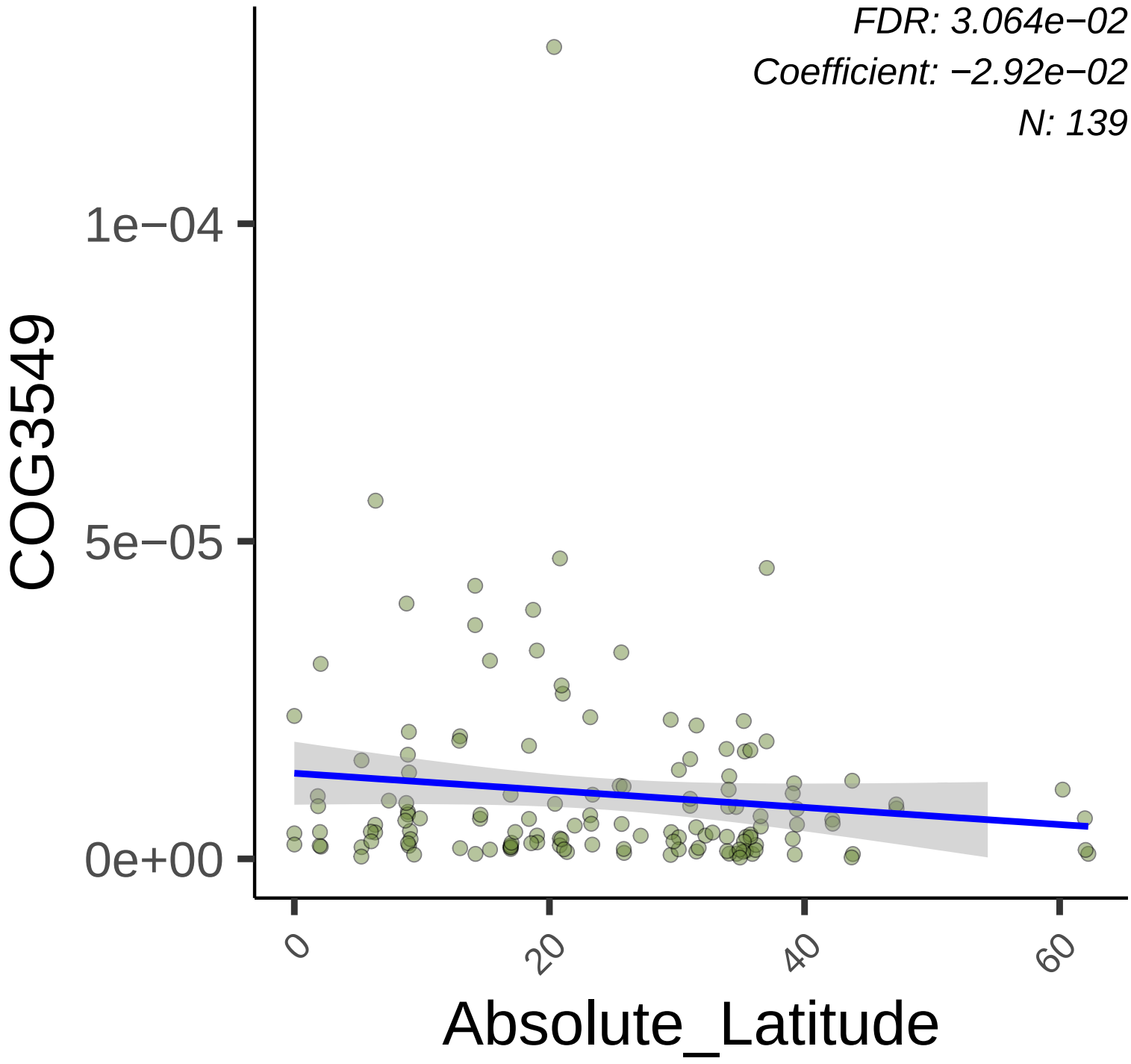

FDR: 3.006e−02
Coefficient: −3.47e−02
N: 139
COG3429
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

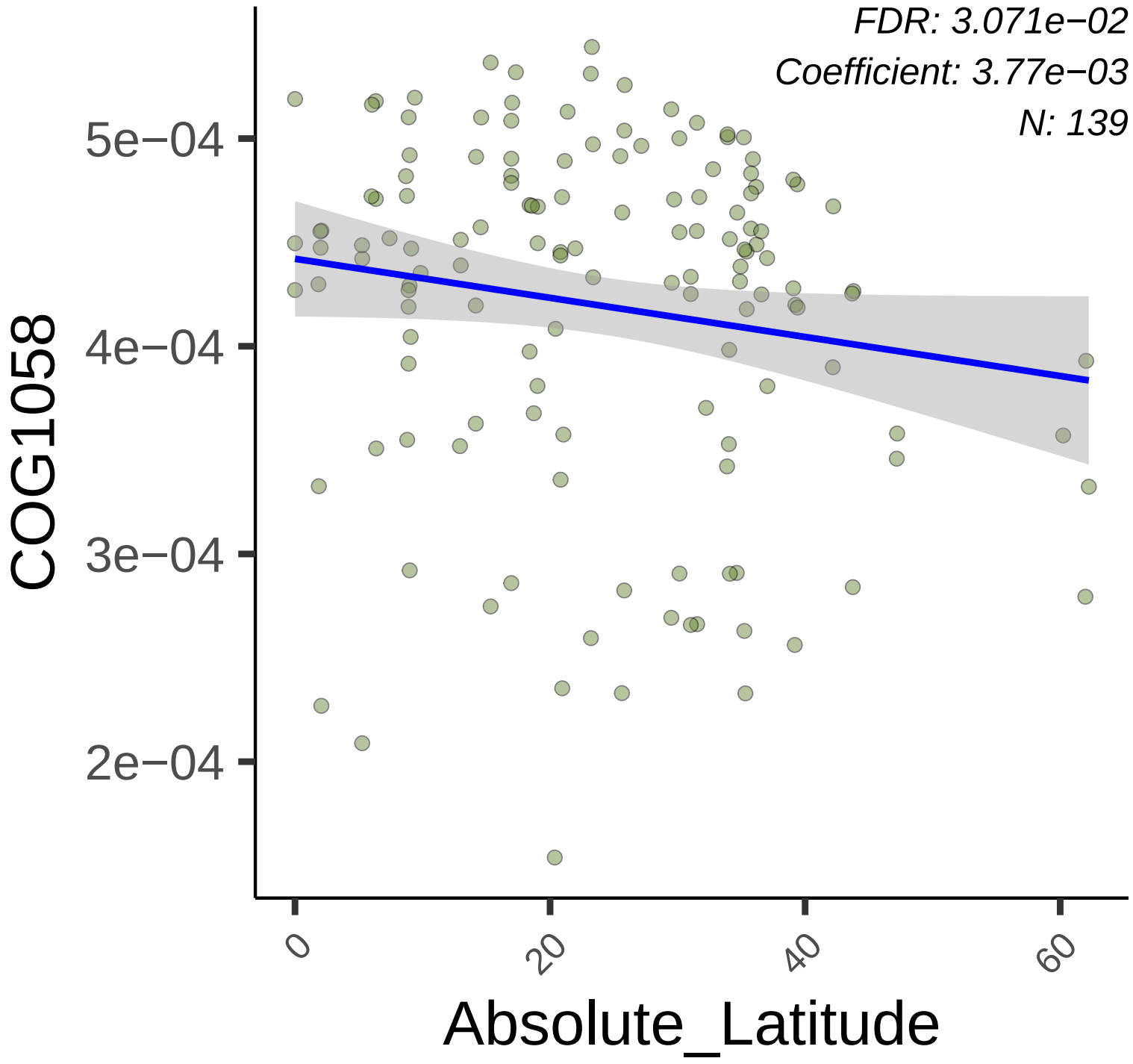

FDR: 3.033e−02
Coefficient: −3.03e−02
N: 139
1.0e−05
7.5e−06
5.0e−06
2.5e−06
0.0e+00
COG5606
0
20
40
60
Absolute_Latitude

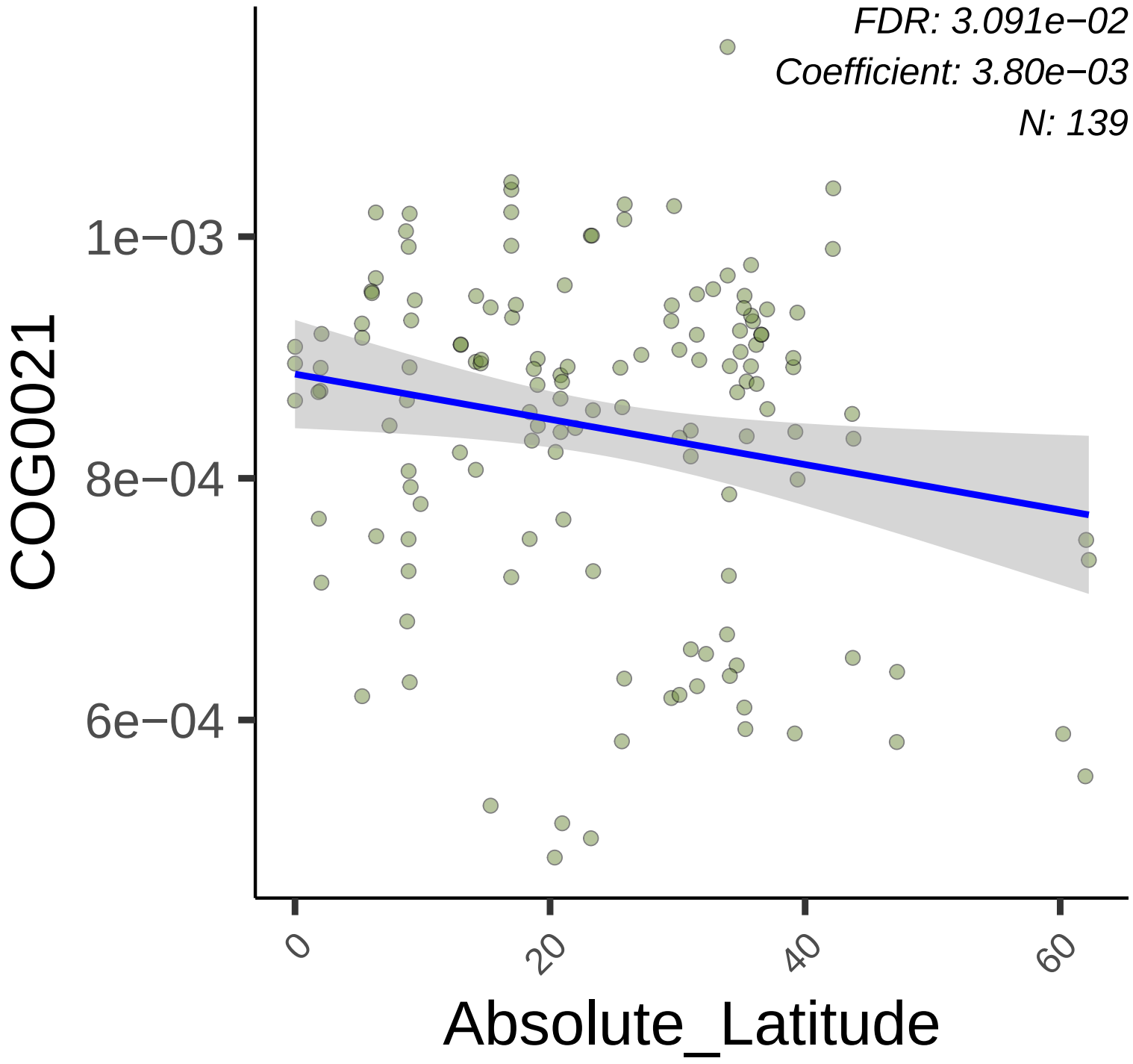

FDR: 3.041e−02
Coefficient: 2.37e−03
N: 139
8e−04
7e−04
6e−04
5e−04
COG0124
0
20
40
60
Absolute_Latitude

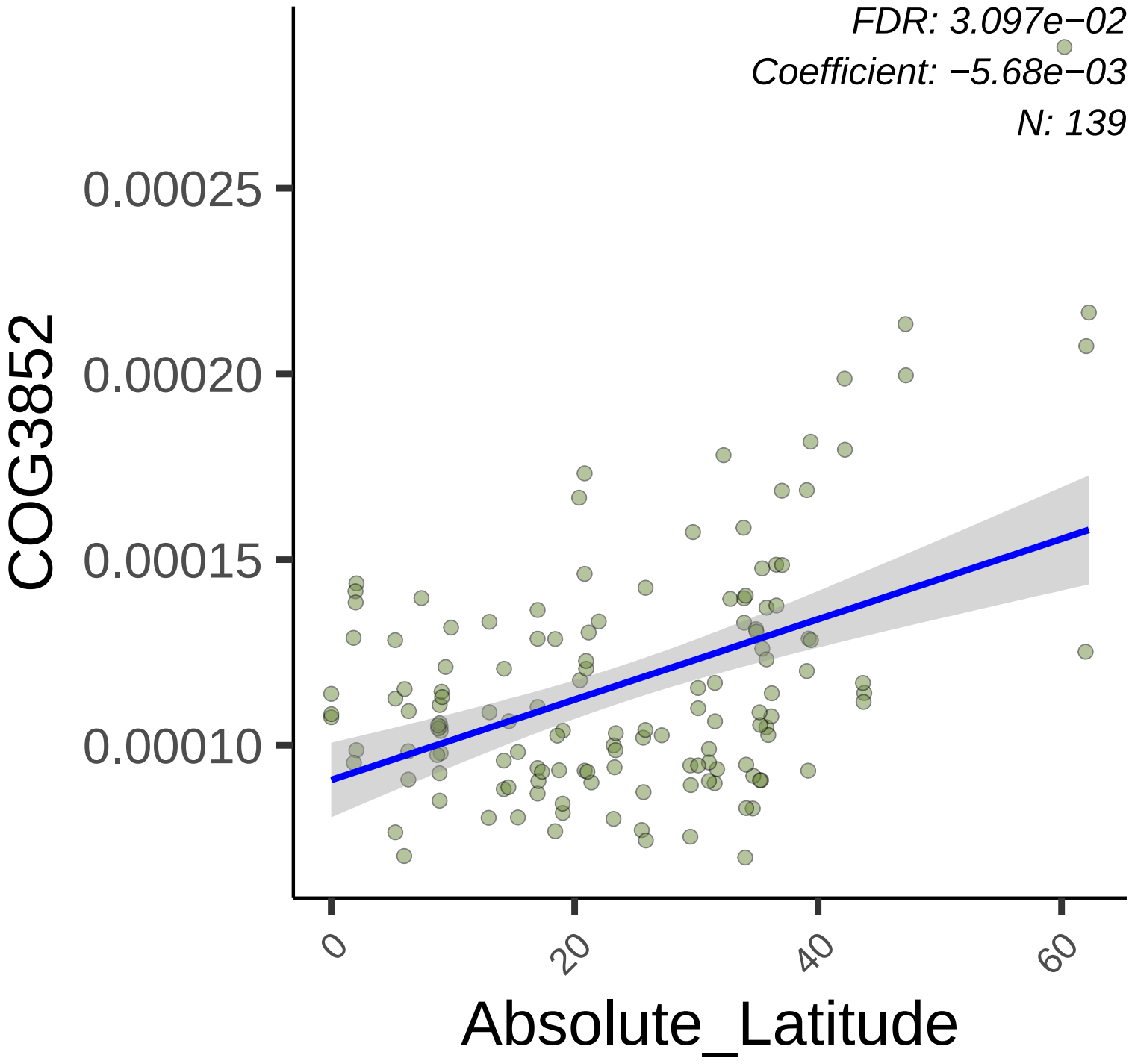

FDR: 3.041e−02
Coefficient: 3.66e−03
N: 139
0.0013
0.0012
0.0011
0.0010
0.0009
0.0008
COG0044
0
20
40
60
Absolute_Latitude

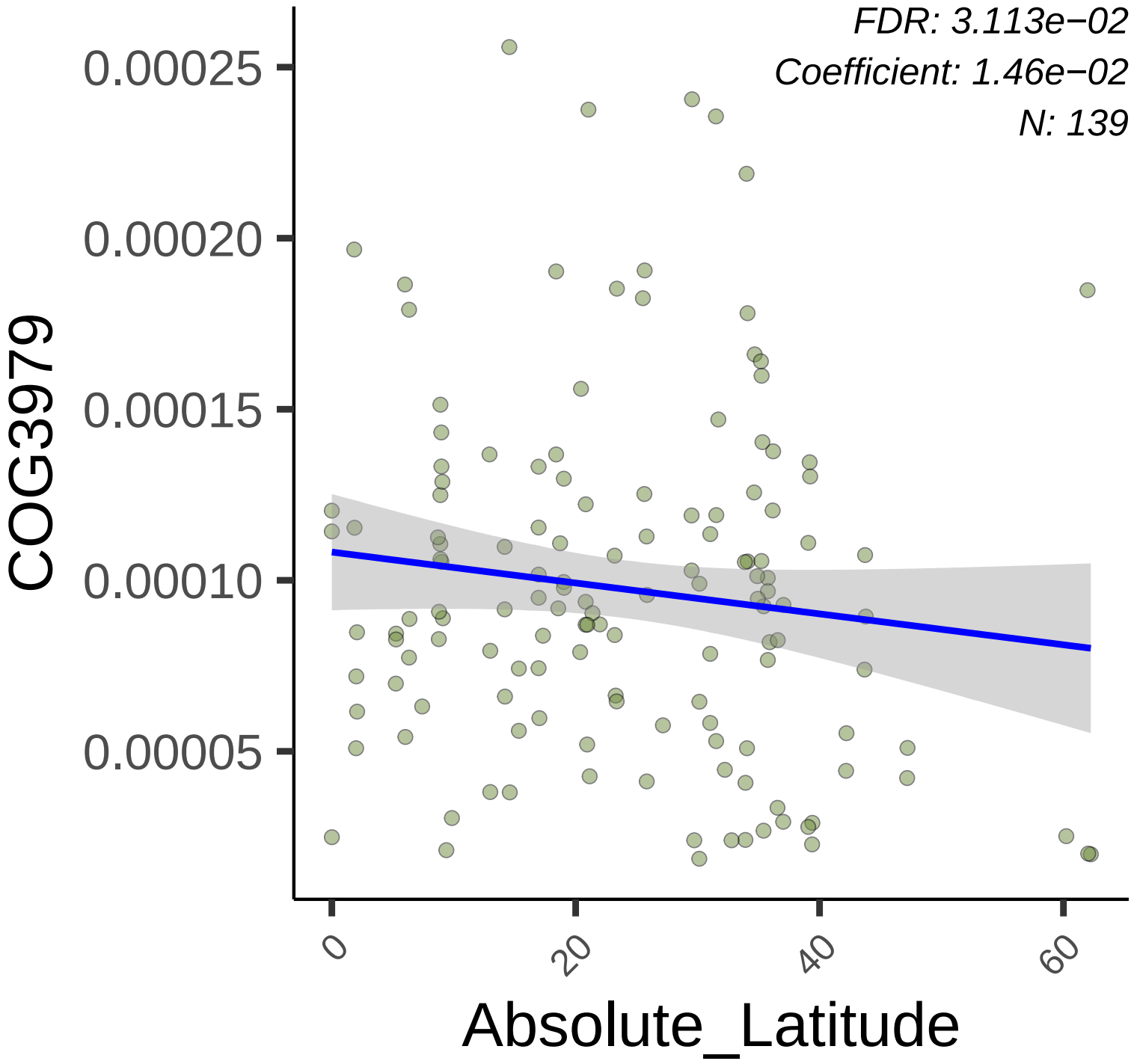

FDR: 3.061e−02
Coefficient: −3.09e−02
N: 139
COG5410
8e−04
6e−04
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

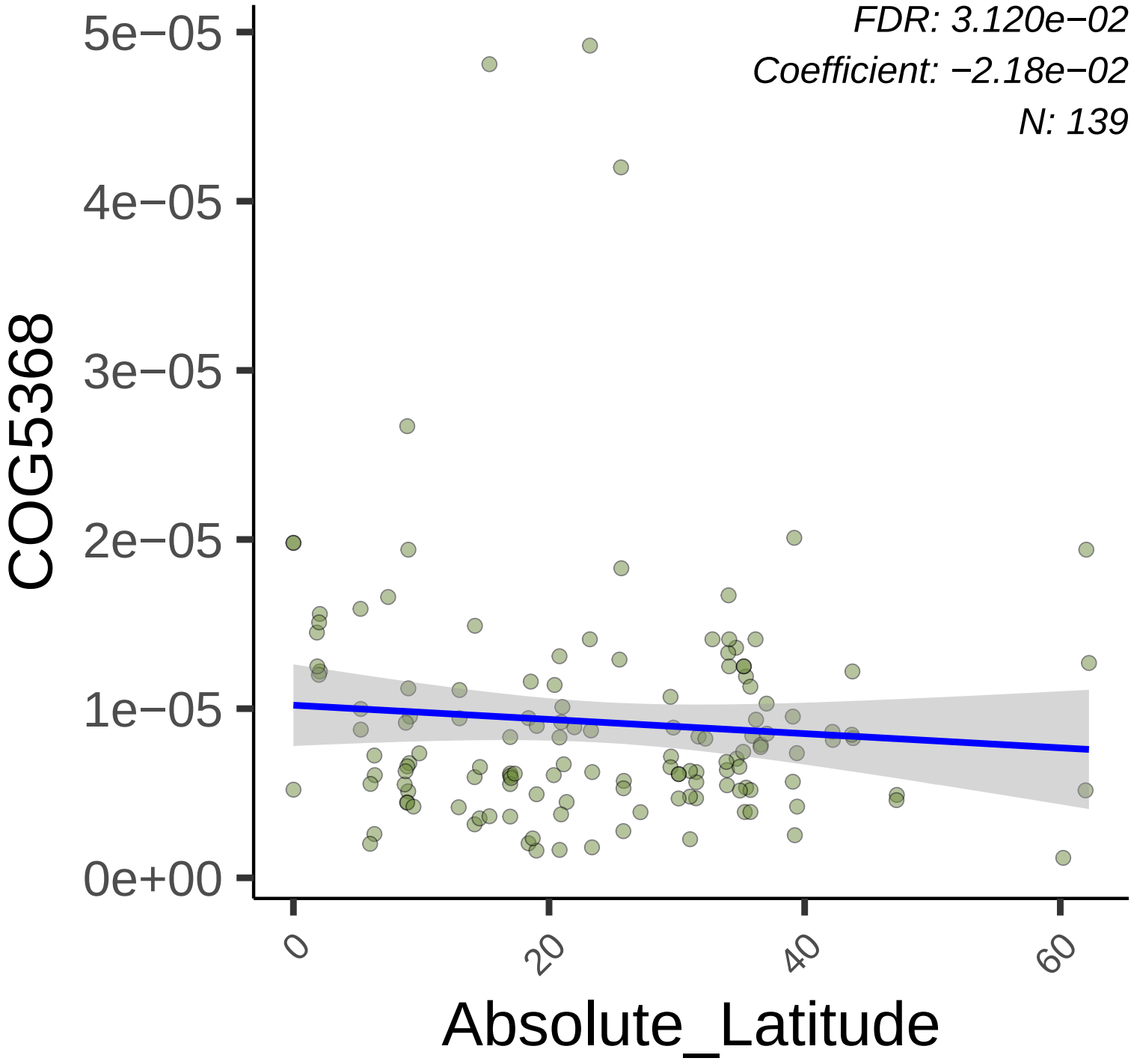

FDR: 3.064e−02
Coefficient: −2.92e−02
N: 139
COG3549
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

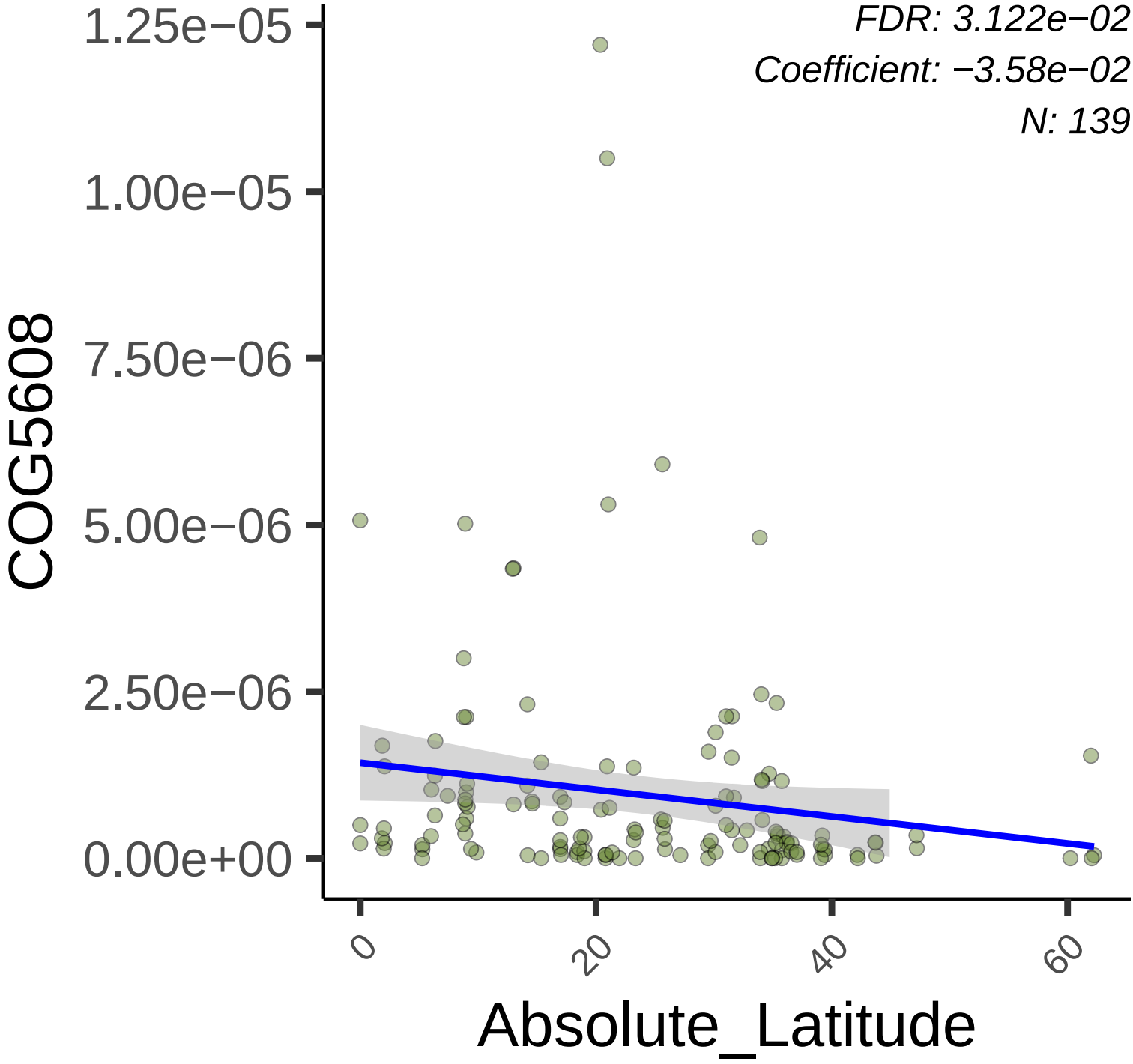

FDR: 3.071e−02
Coefficient: 3.77e−03
N: 139
COG1058
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

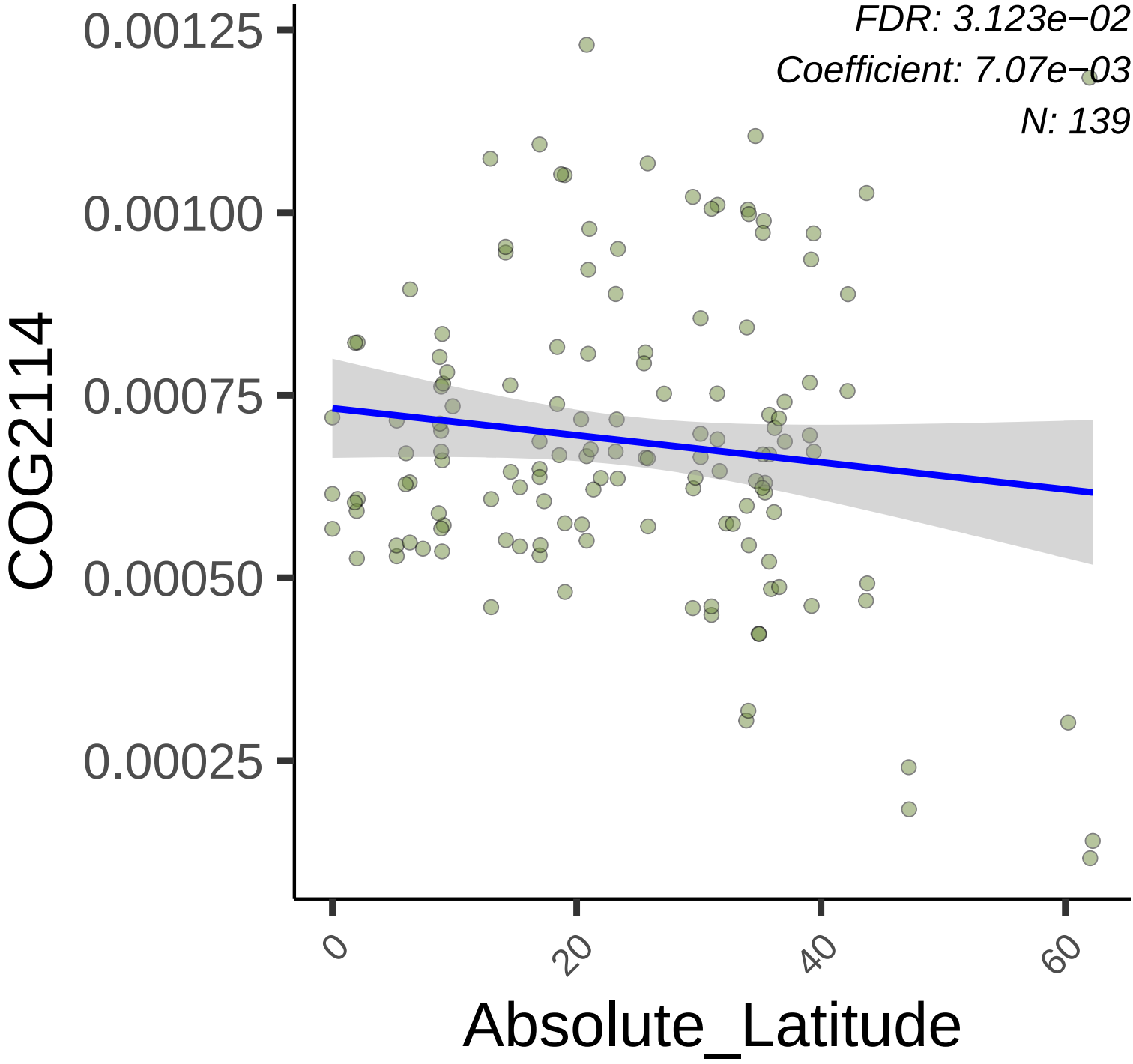

FDR: 3.091e−02
Coefficient: 3.80e−03
N: 139
1e−03
8e−04
6e−04
COG0021
0
20
40
60
Absolute_Latitude

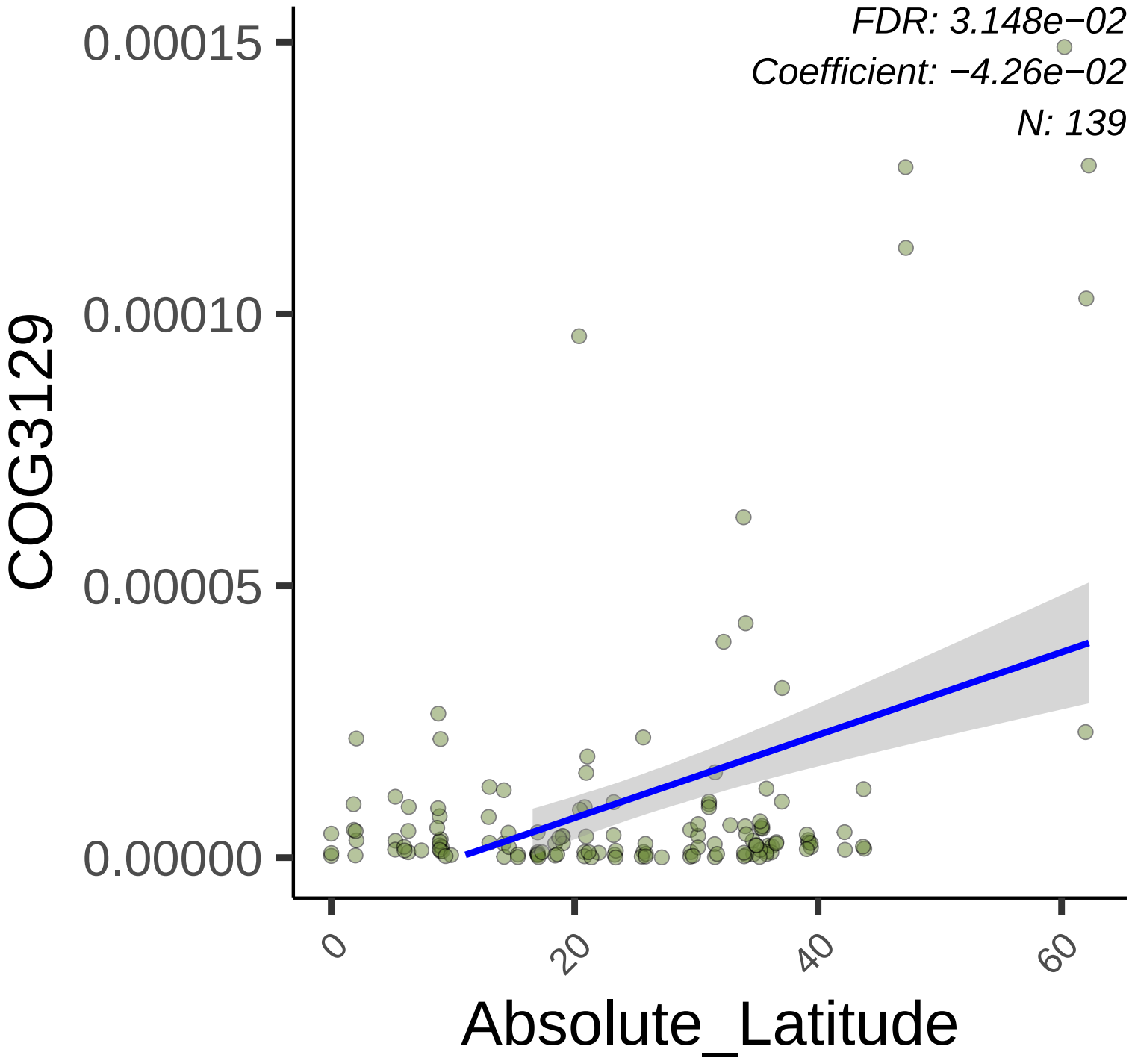

FDR: 3.097e−02
Coefficient: −5.68e−03
N: 139
COG3852
0.00025
0.00020
0.00015
0.00010
0
20
40
60
Absolute_Latitude

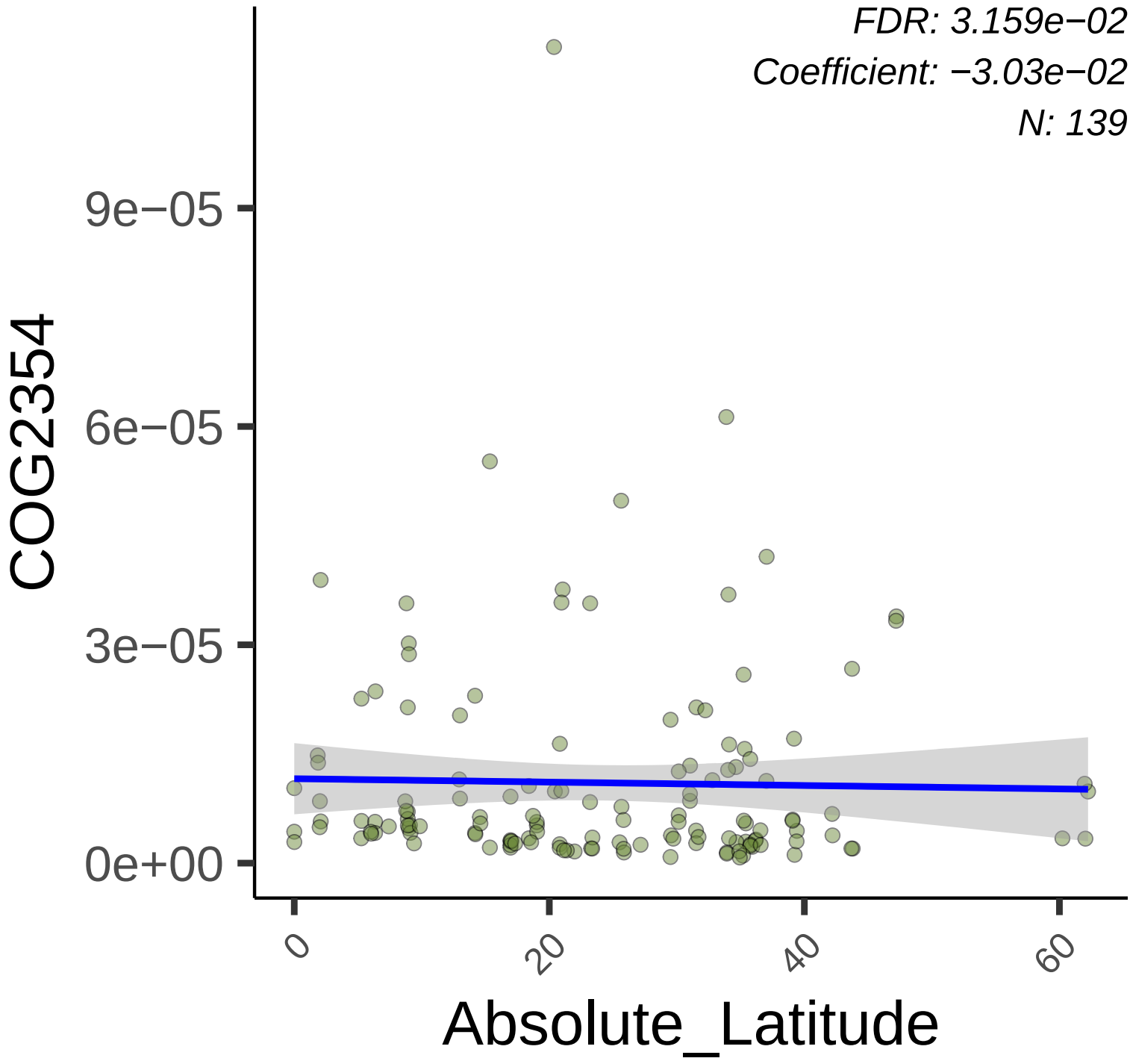

FDR: 3.113e−02
Coefficient: 1.46e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG3979
0
20
40
60
Absolute_Latitude

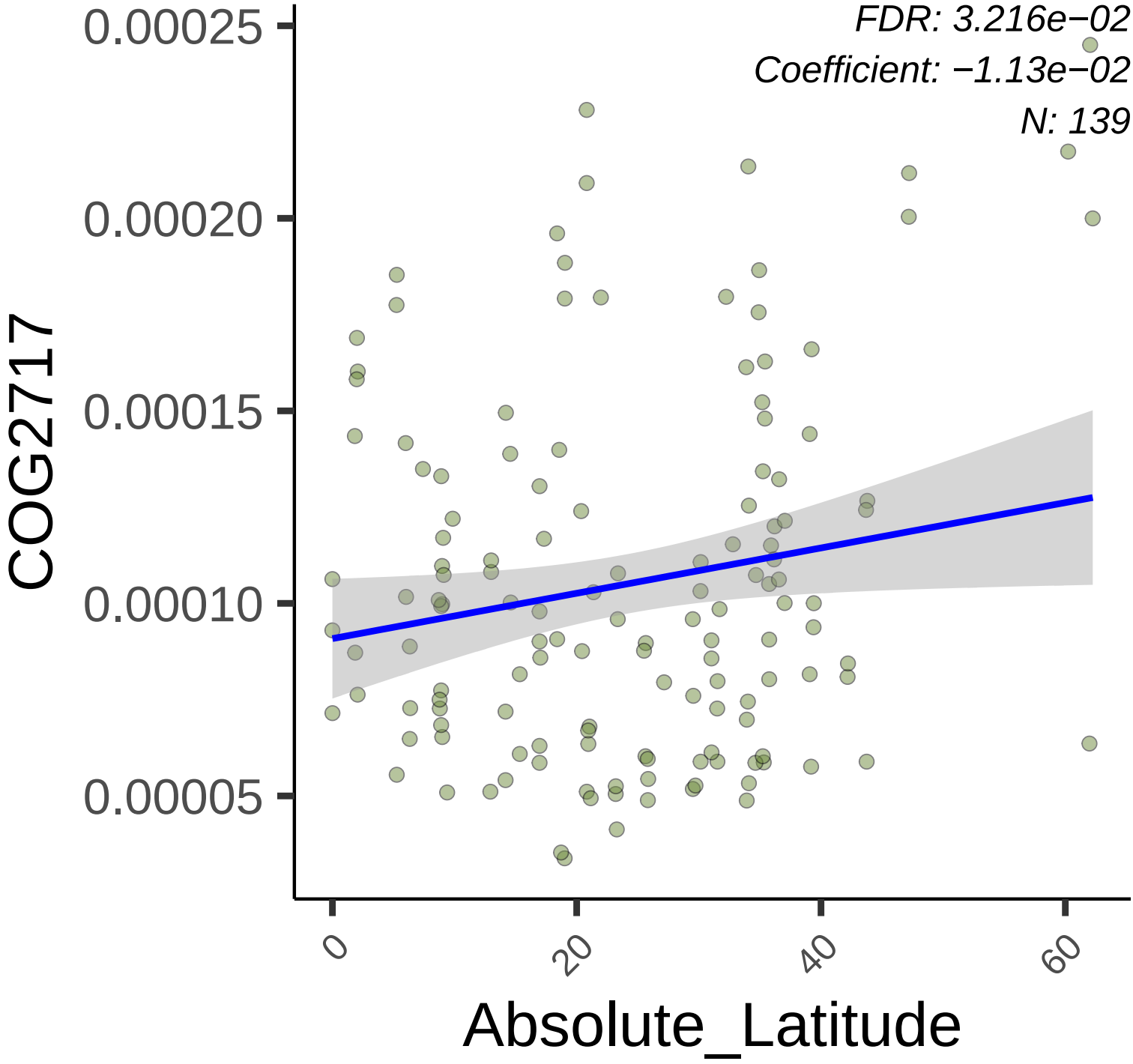

FDR: 3.120e−02
Coefficient: −2.18e−02
N: 139
COG5368
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

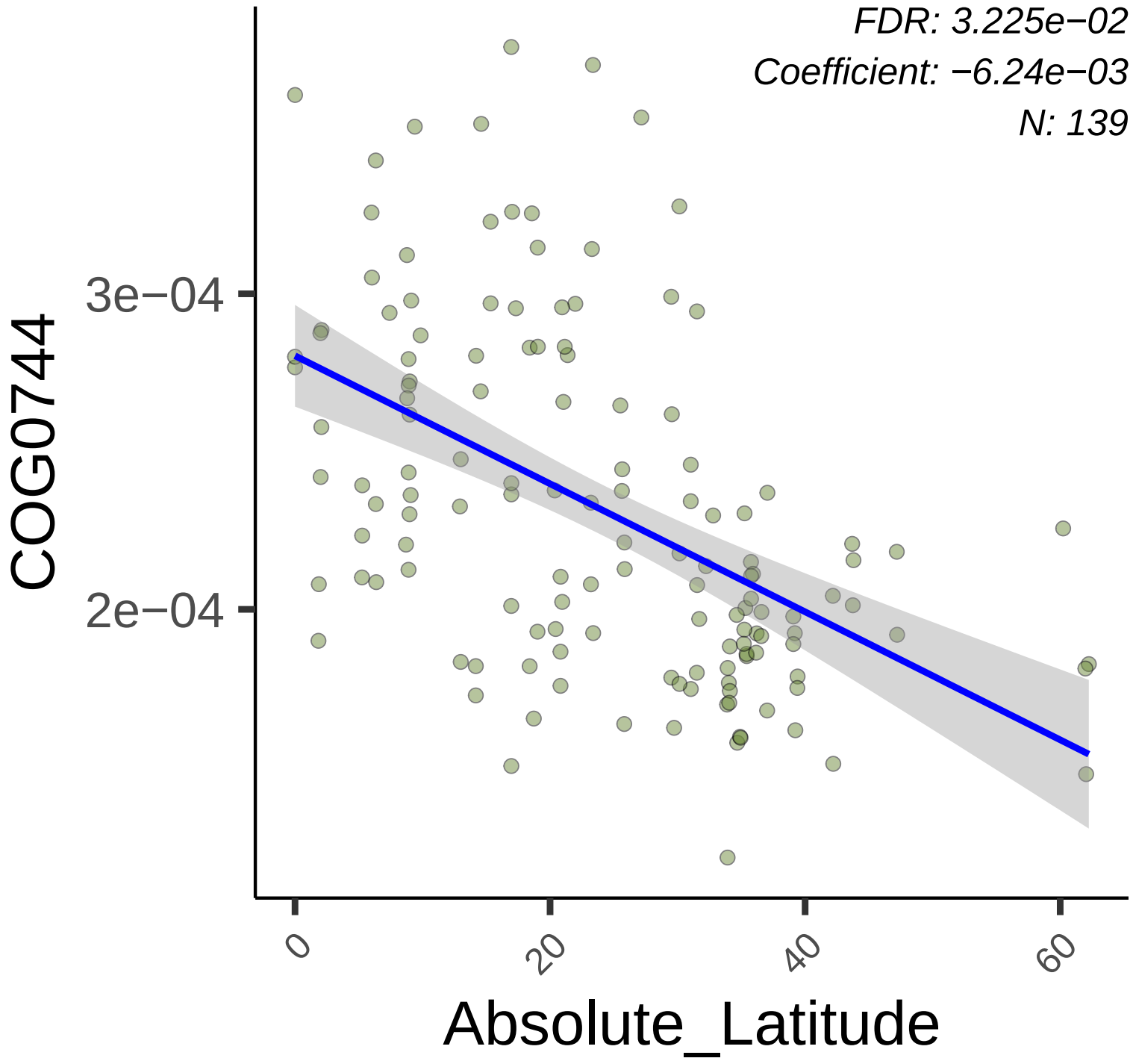

FDR: 3.122e−02
Coefficient: −3.58e−02
N: 139
COG5608
1.25e−05
1.00e−05
7.50e−06
5.00e−06
2.50e−06
0.00e+00
0
20
40
60
Absolute_Latitude

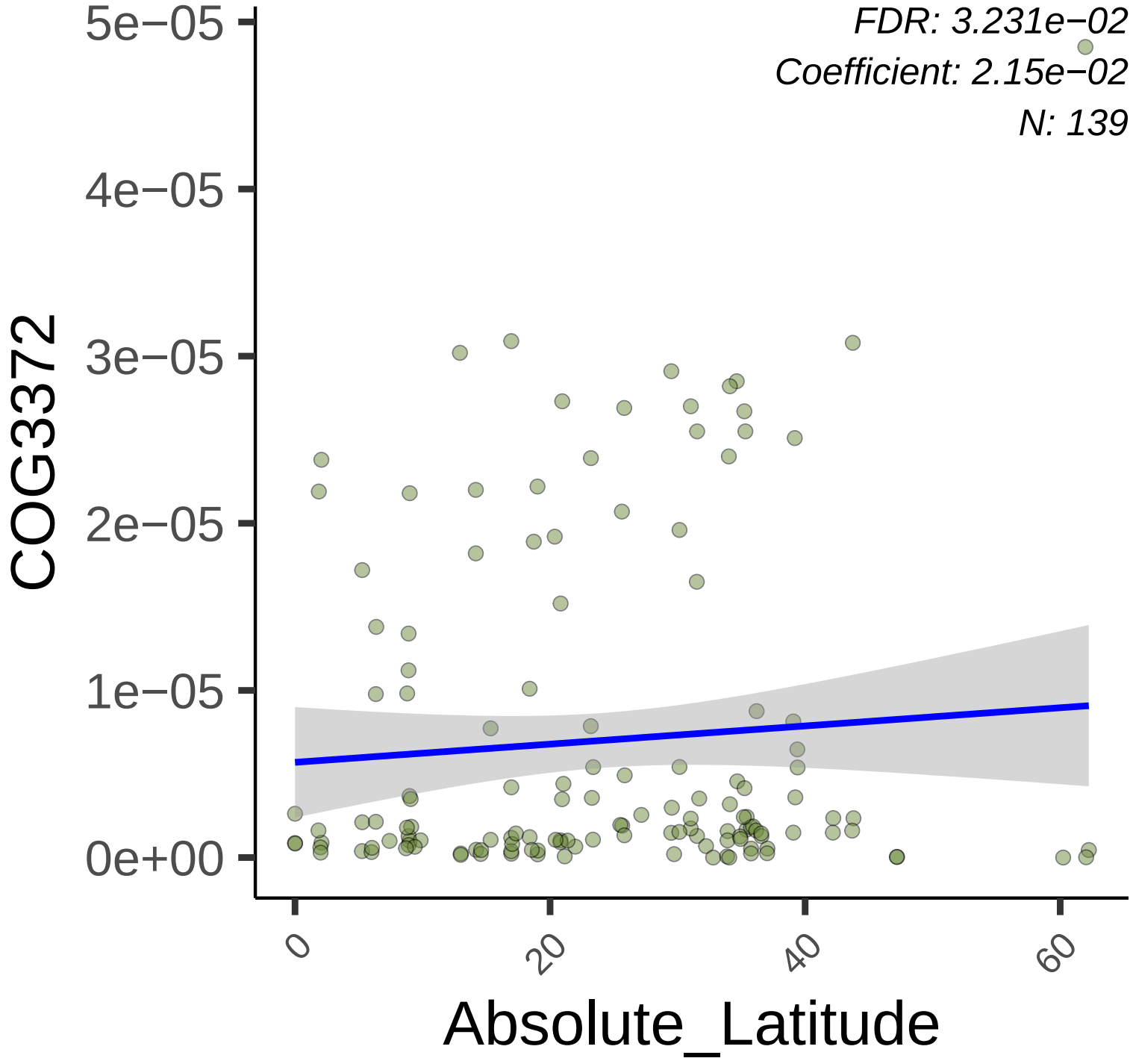

FDR: 3.123e−02
Coefficient: 7.07e−03
N: 139
0.00125
0.00100
0.00075
0.00050
0.00025
COG2114
0
20
40
60
Absolute_Latitude

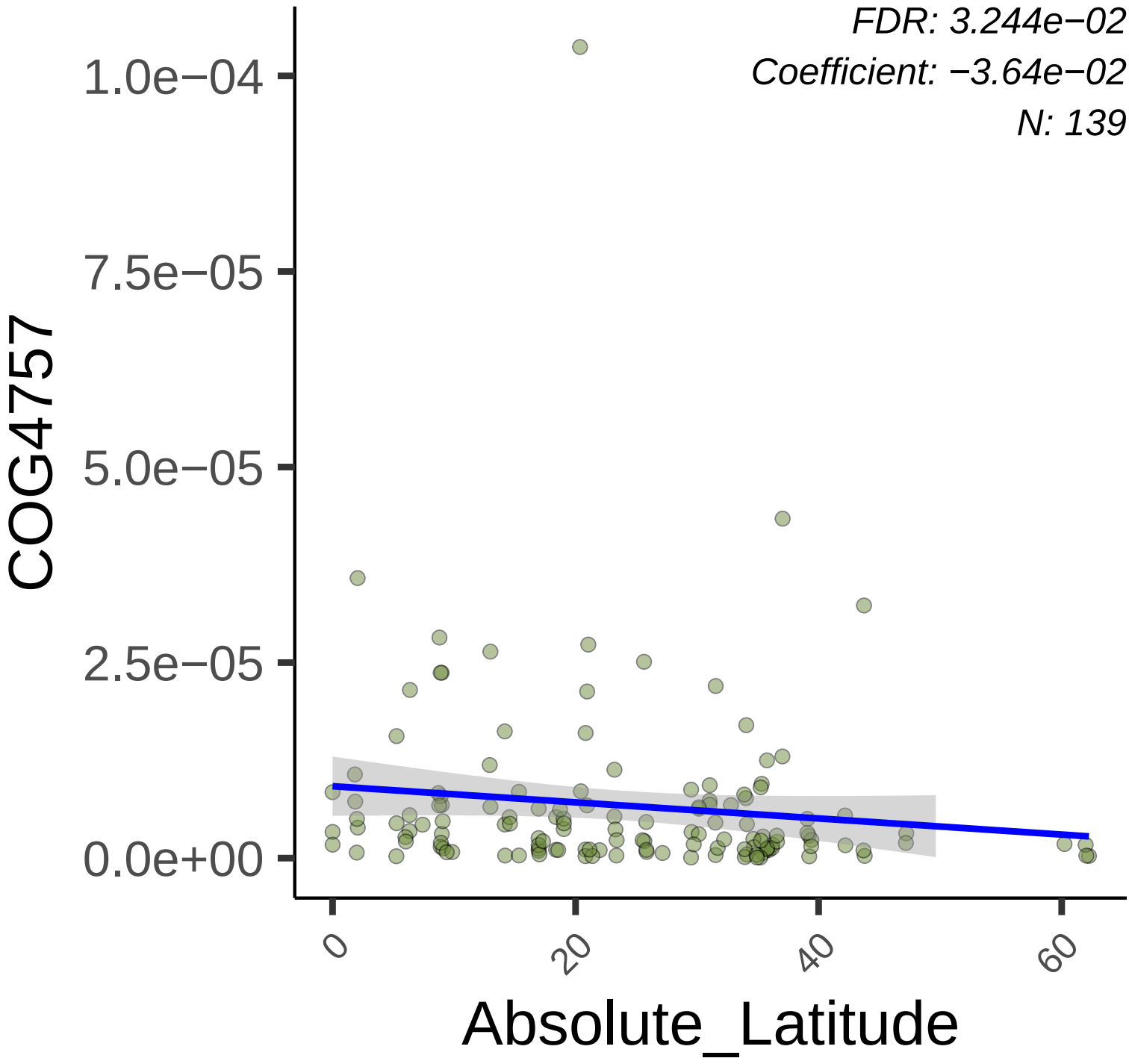

FDR: 3.148e−02
Coefficient: −4.26e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG3129
0
20
40
60
Absolute_Latitude

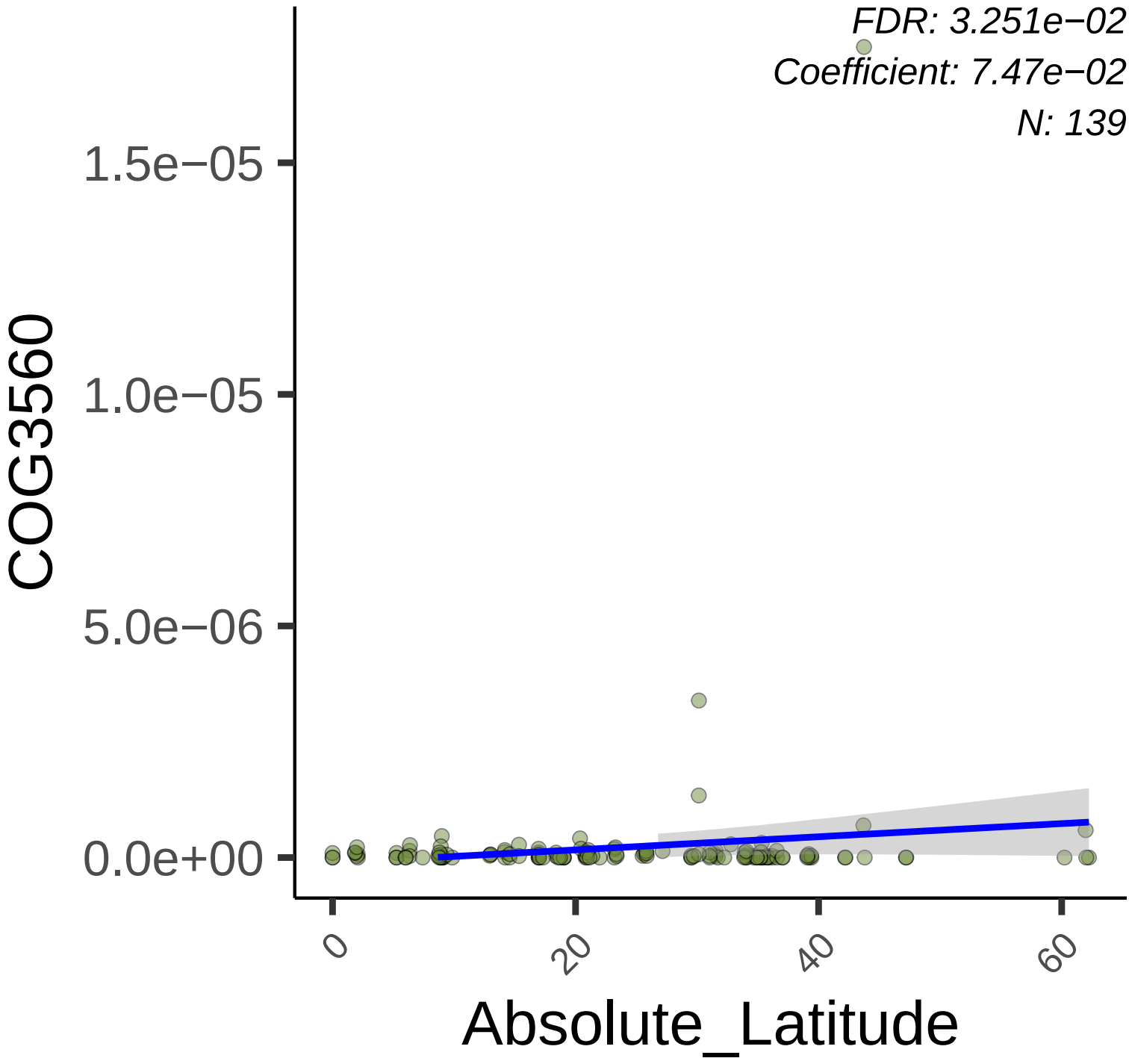

FDR: 3.159e−02
Coefficient: −3.03e−02
N: 139
COG2354
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

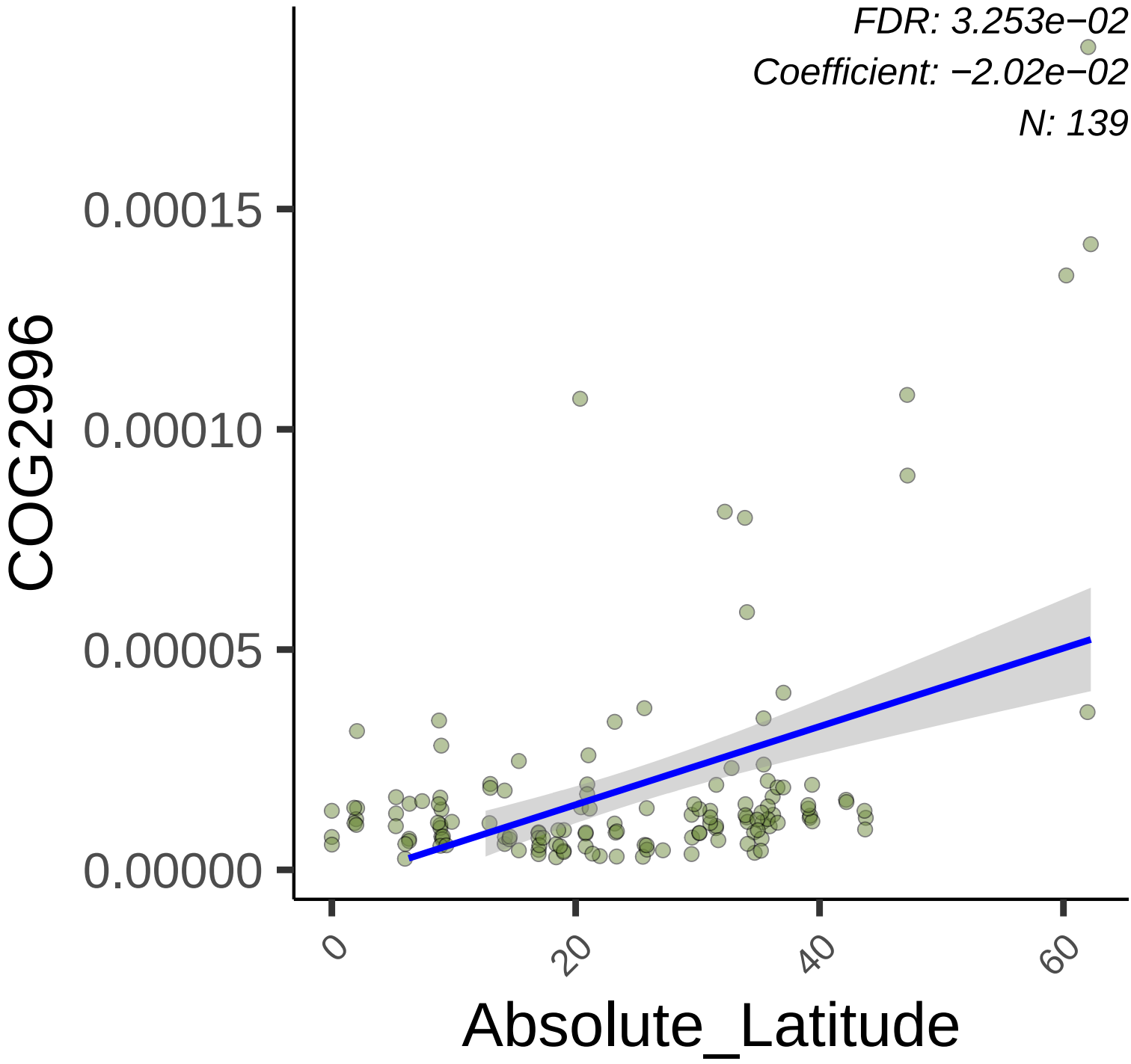

FDR: 3.216e−02
Coefficient: −1.13e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG2717
0
20
40
60
Absolute_Latitude

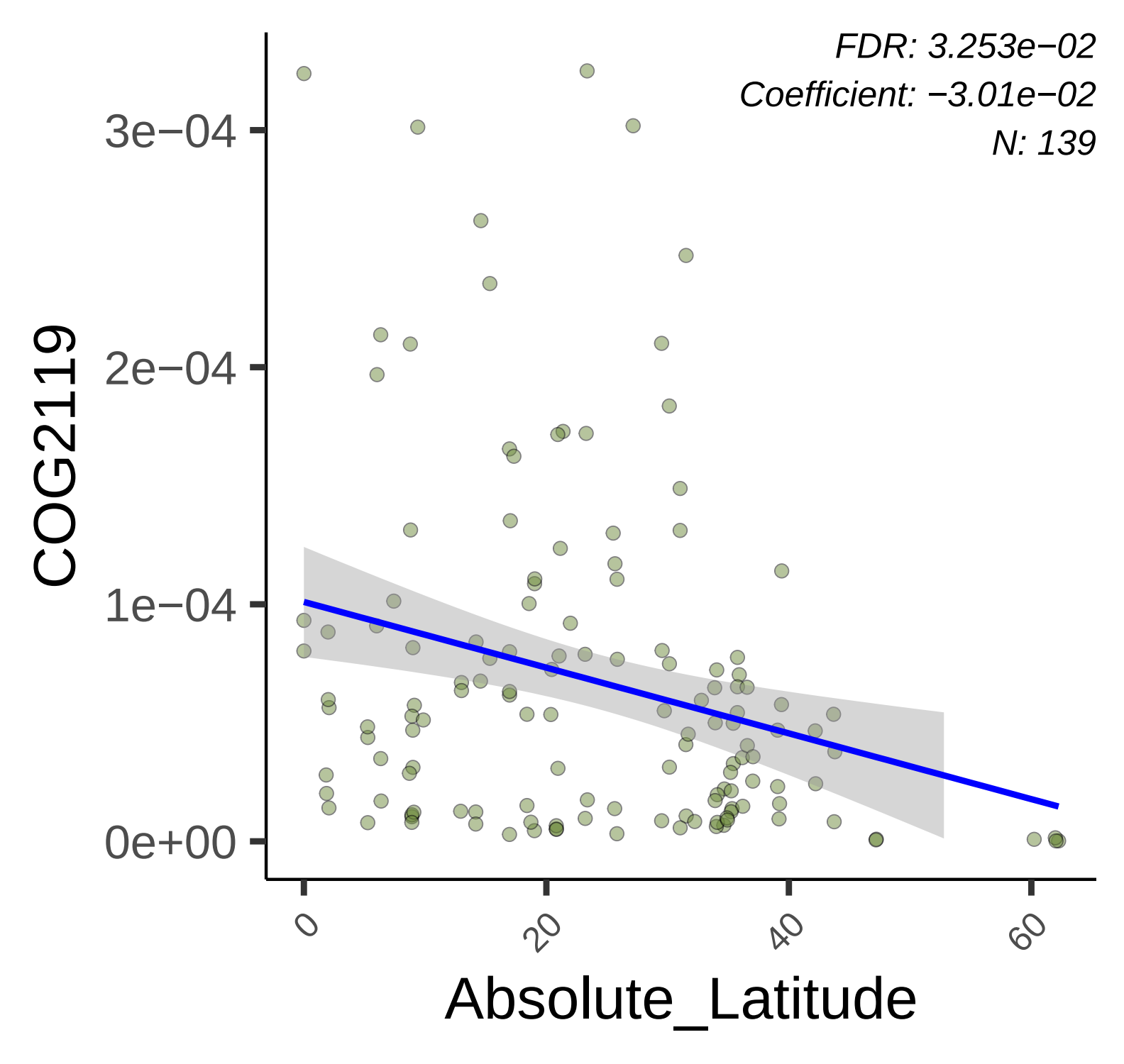

FDR: 3.225e−02
Coefficient: −6.24e−03
N: 139
COG0744
3e−04
2e−04
0
20
40
60
Absolute_Latitude

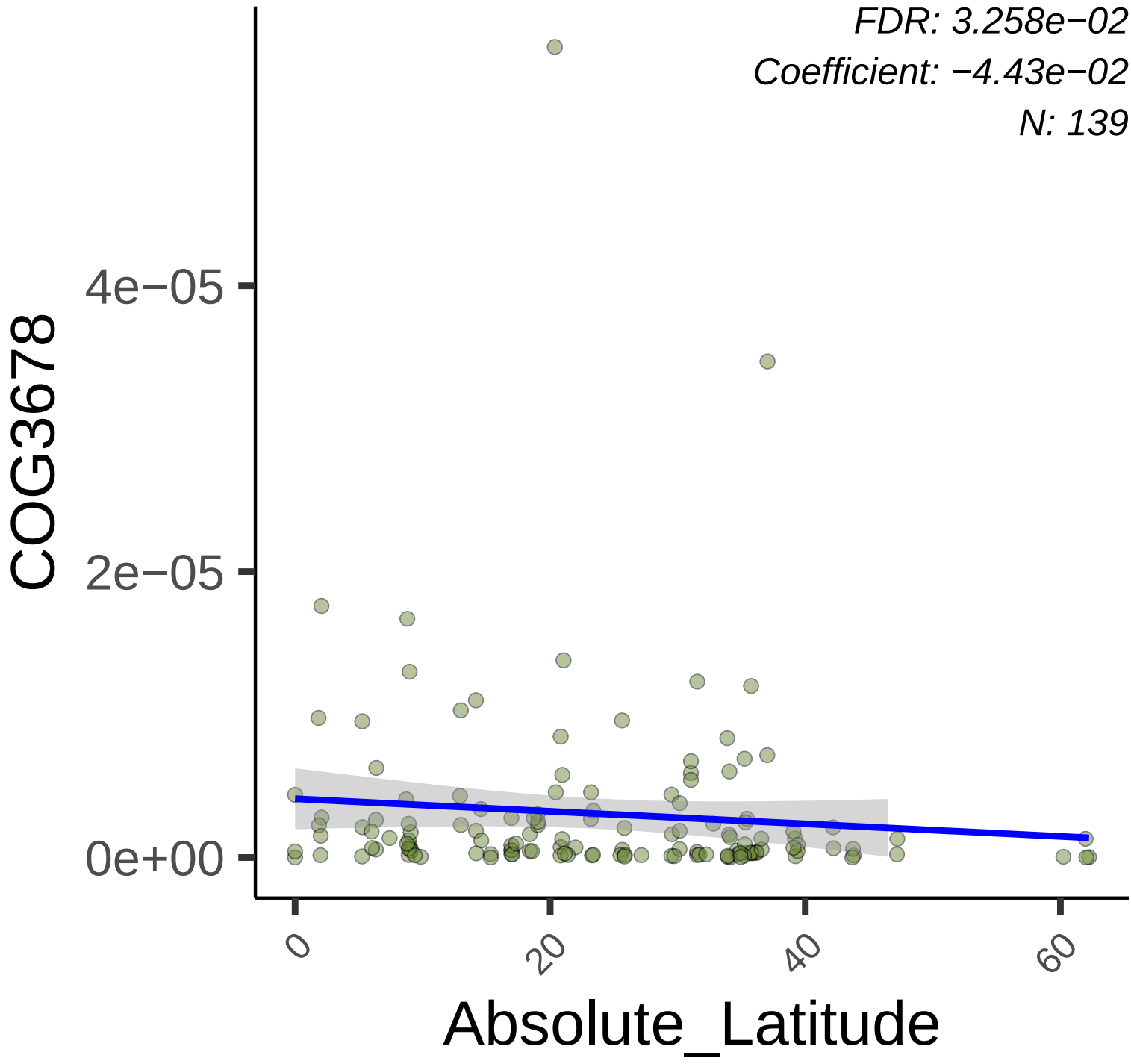

FDR: 3.231e−02
Coefficient: 2.15e−02
N: 139
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
COG3372
0
20
40
60
Absolute_Latitude

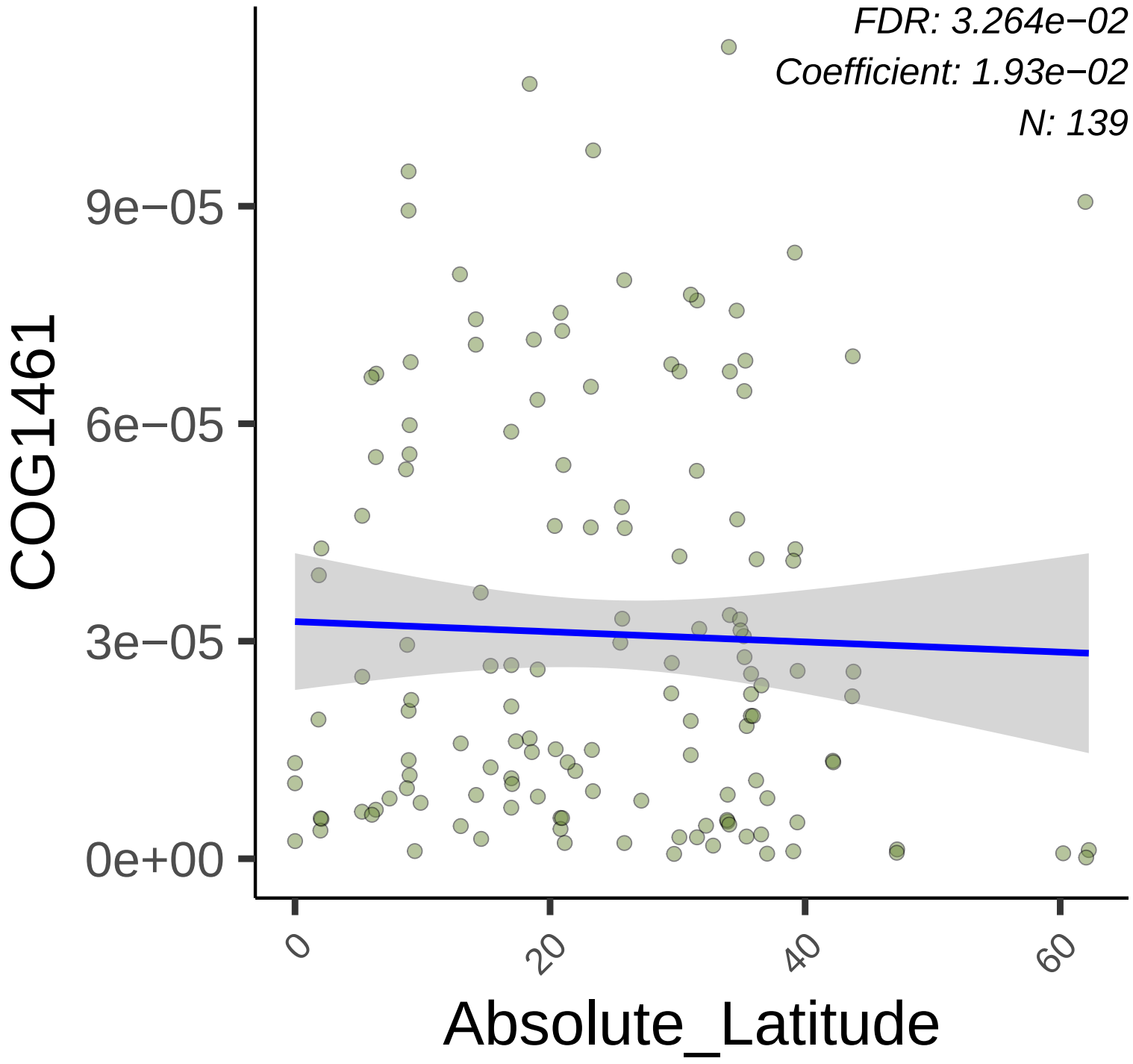

FDR: 3.244e−02
Coefficient: −3.64e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG4757
0
20
40
60
Absolute_Latitude

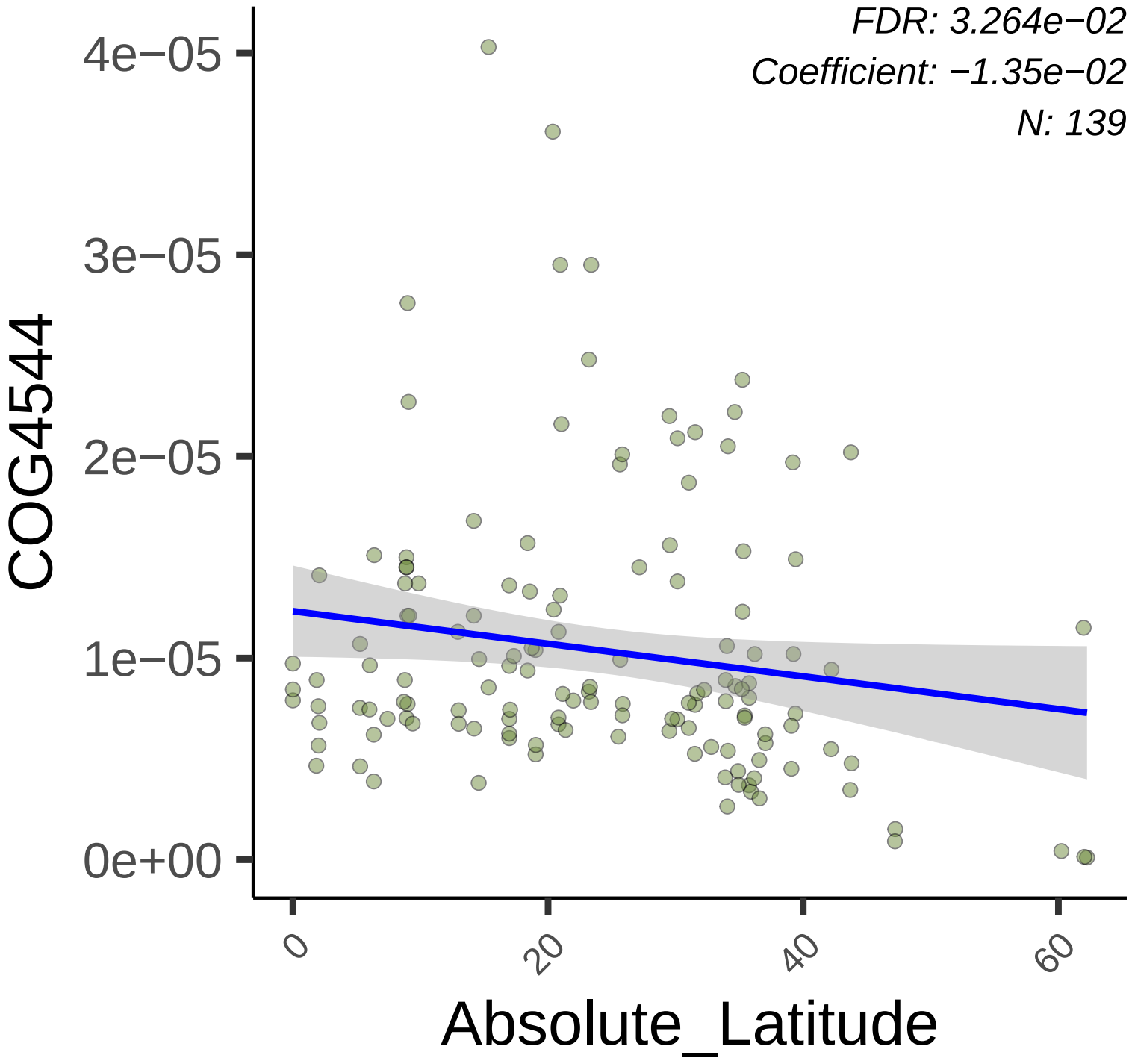

FDR: 3.251e−02
Coefficient: 7.47e−02
N: 139
COG3560
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

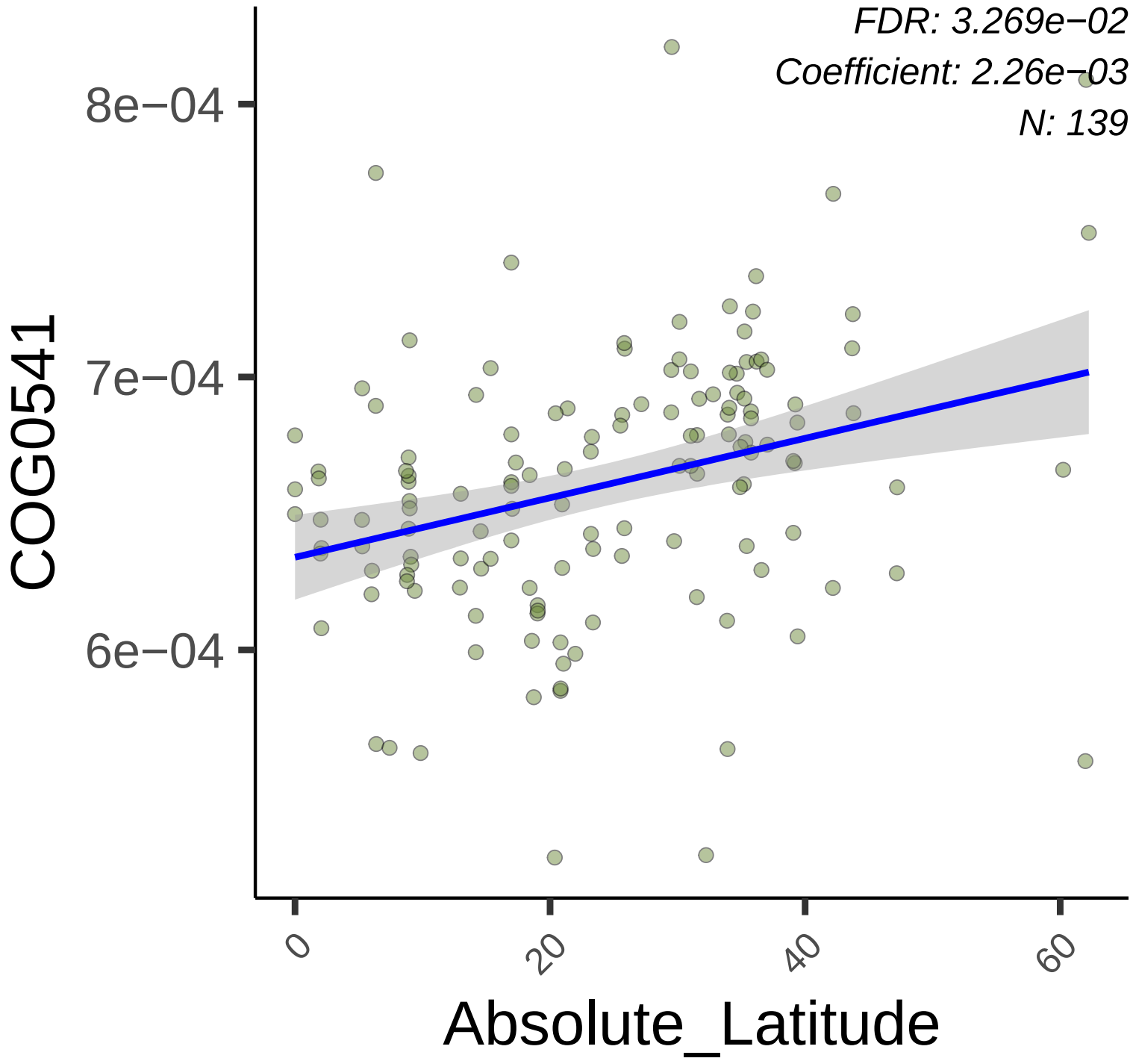

FDR: 3.253e−02
Coefficient: −2.02e−02
N: 139
COG2996
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

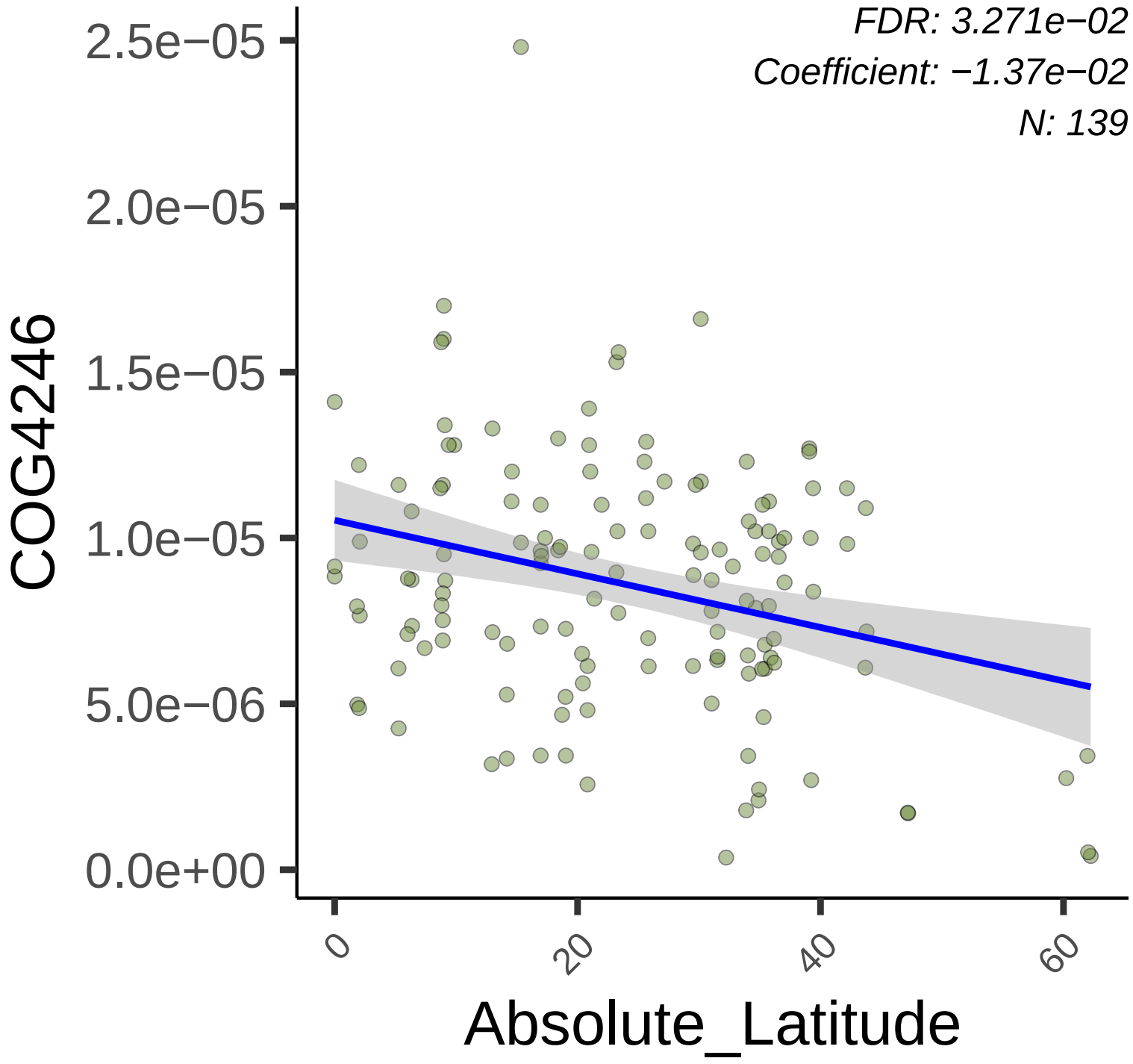

FDR: 3.253e−02
Coefficient: −3.01e−02
N: 139
COG2119
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

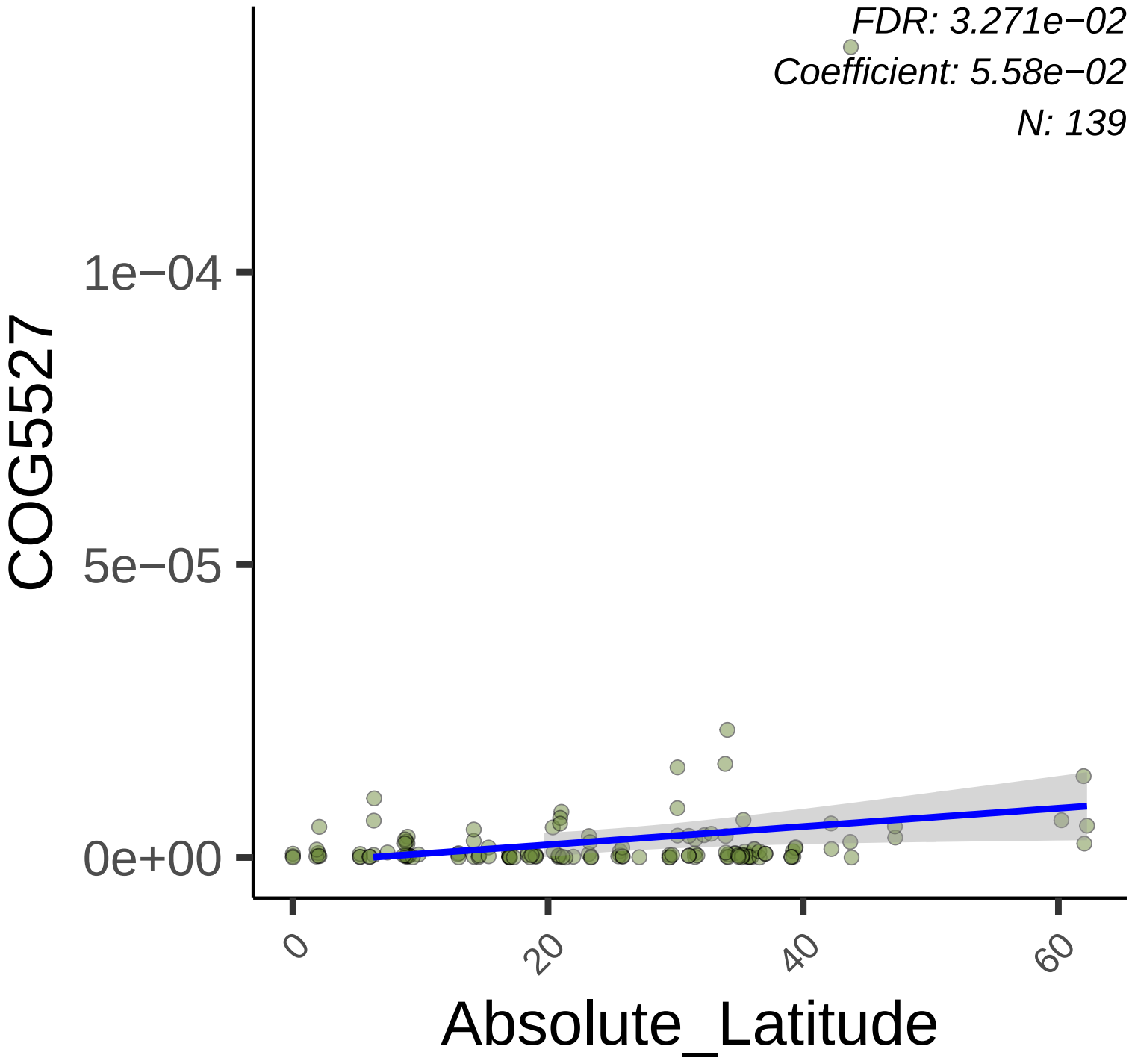

FDR: 3.258e−02
Coefficient: −4.43e−02
N: 139
COG3678
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

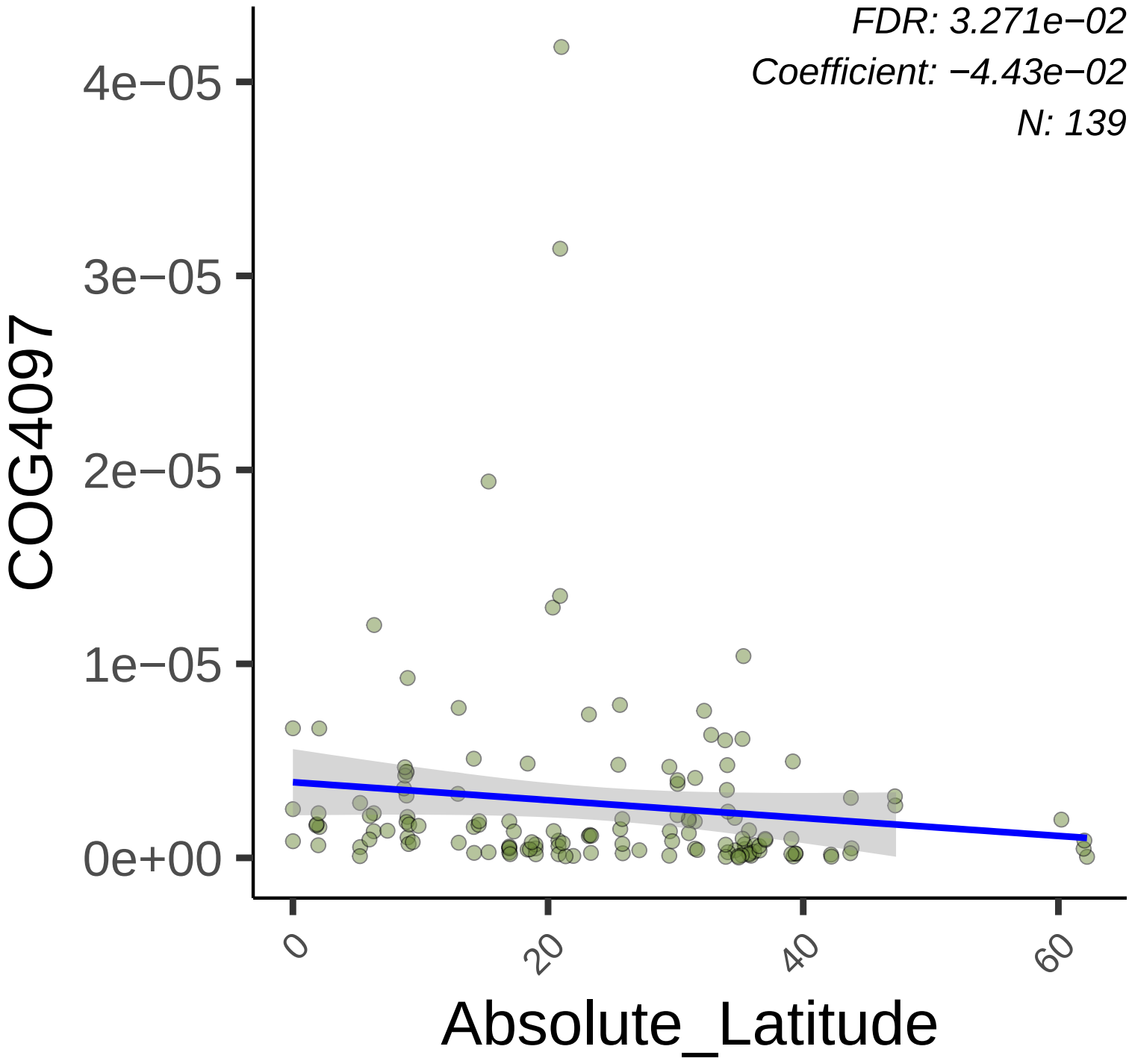

FDR: 3.264e−02
Coefficient: 1.93e−02
N: 139
COG1461
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

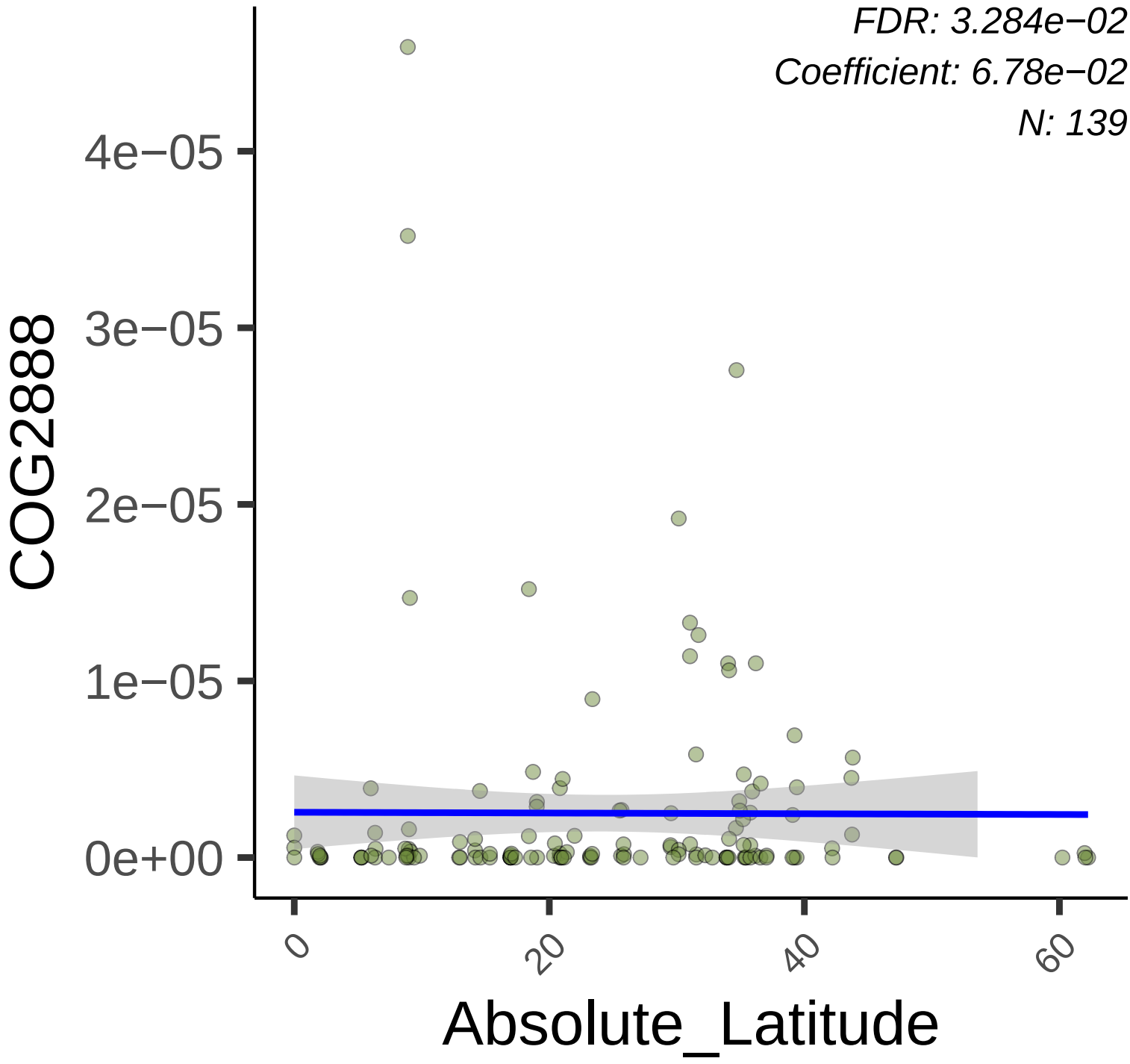

FDR: 3.264e−02
Coefficient: −1.35e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG4544
0
20
40
60
Absolute_Latitude

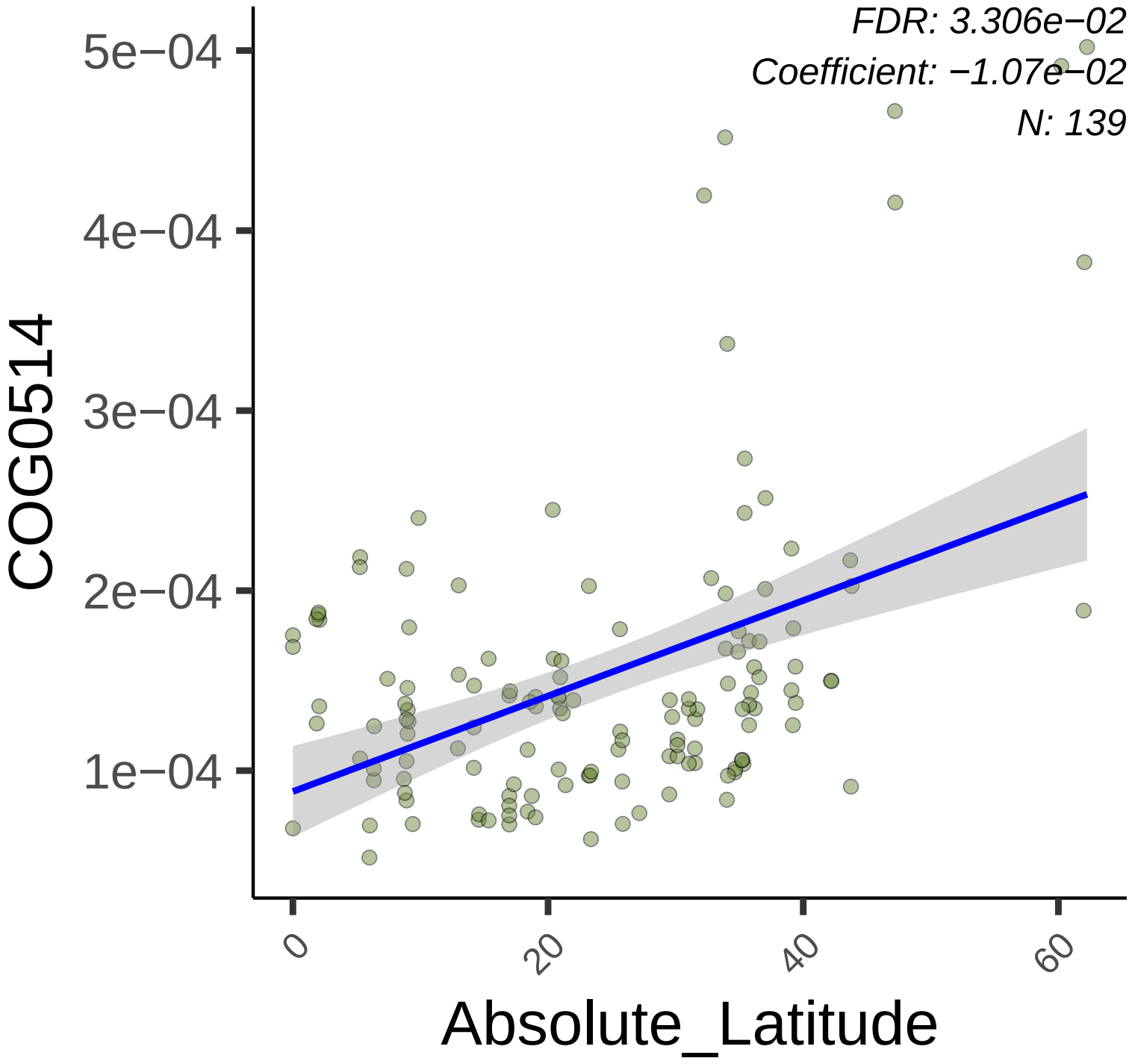

FDR: 3.269e−02
Coefficient: 2.26e−03
N: 139
8e−04
7e−04
6e−04
COG0541
0
20
40
60
Absolute_Latitude

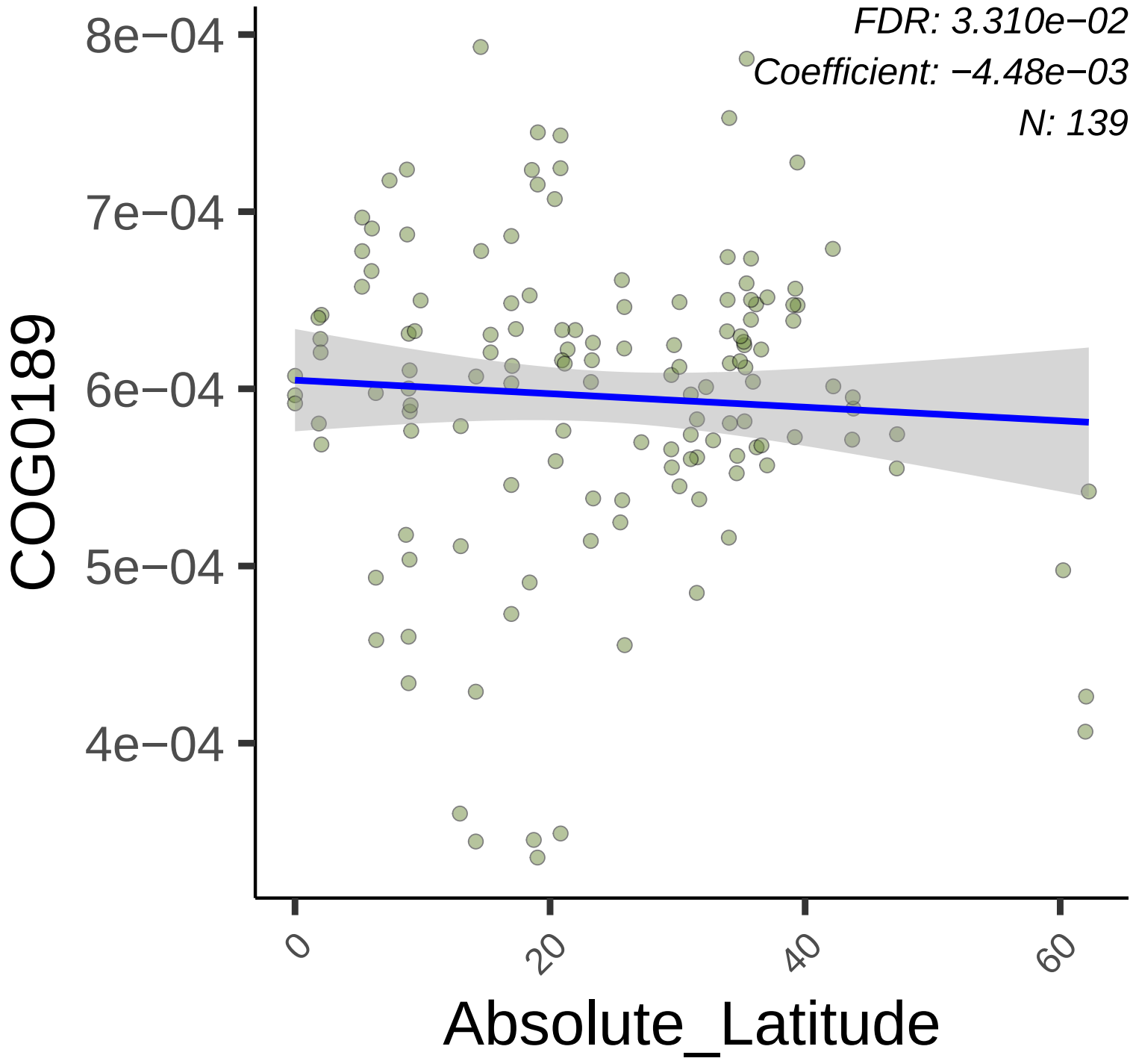

FDR: 3.271e−02
Coefficient: −1.37e−02
N: 139
COG4246
2.5e−05
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

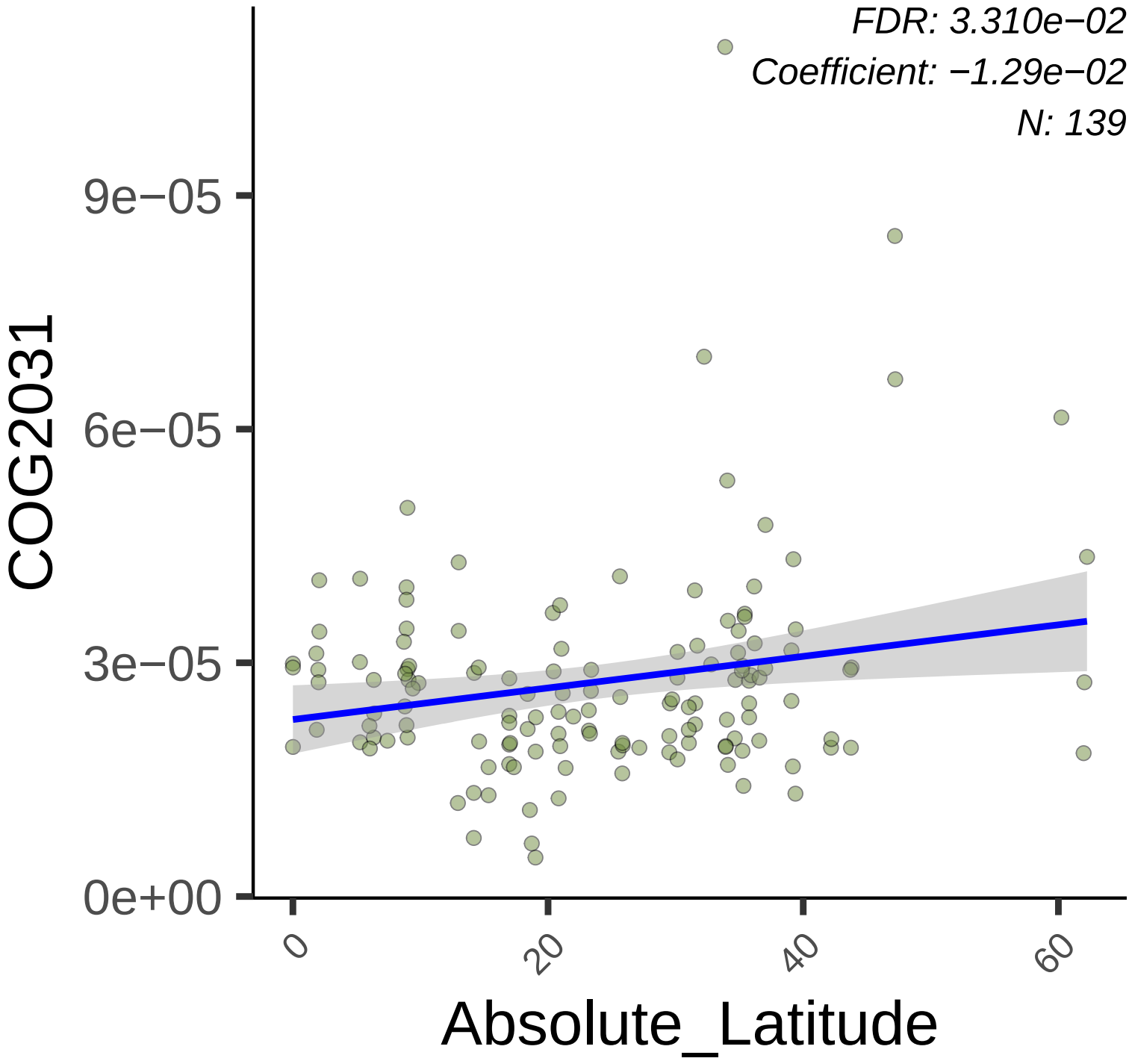

FDR: 3.271e−02
Coefficient: 5.58e−02
N: 139
COG5527
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

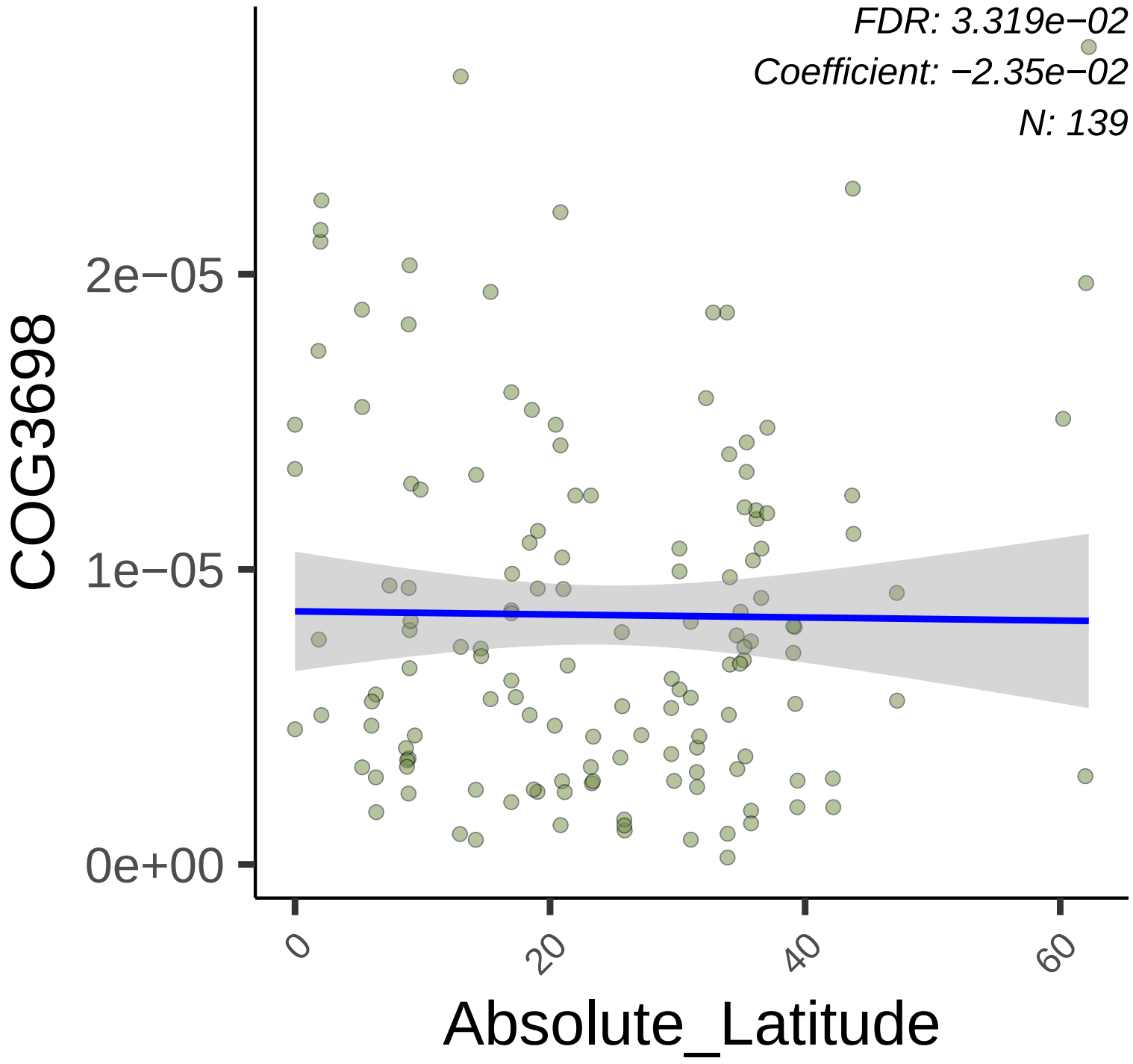

FDR: 3.271e−02
Coefficient: −4.43e−02
N: 139
COG4097
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

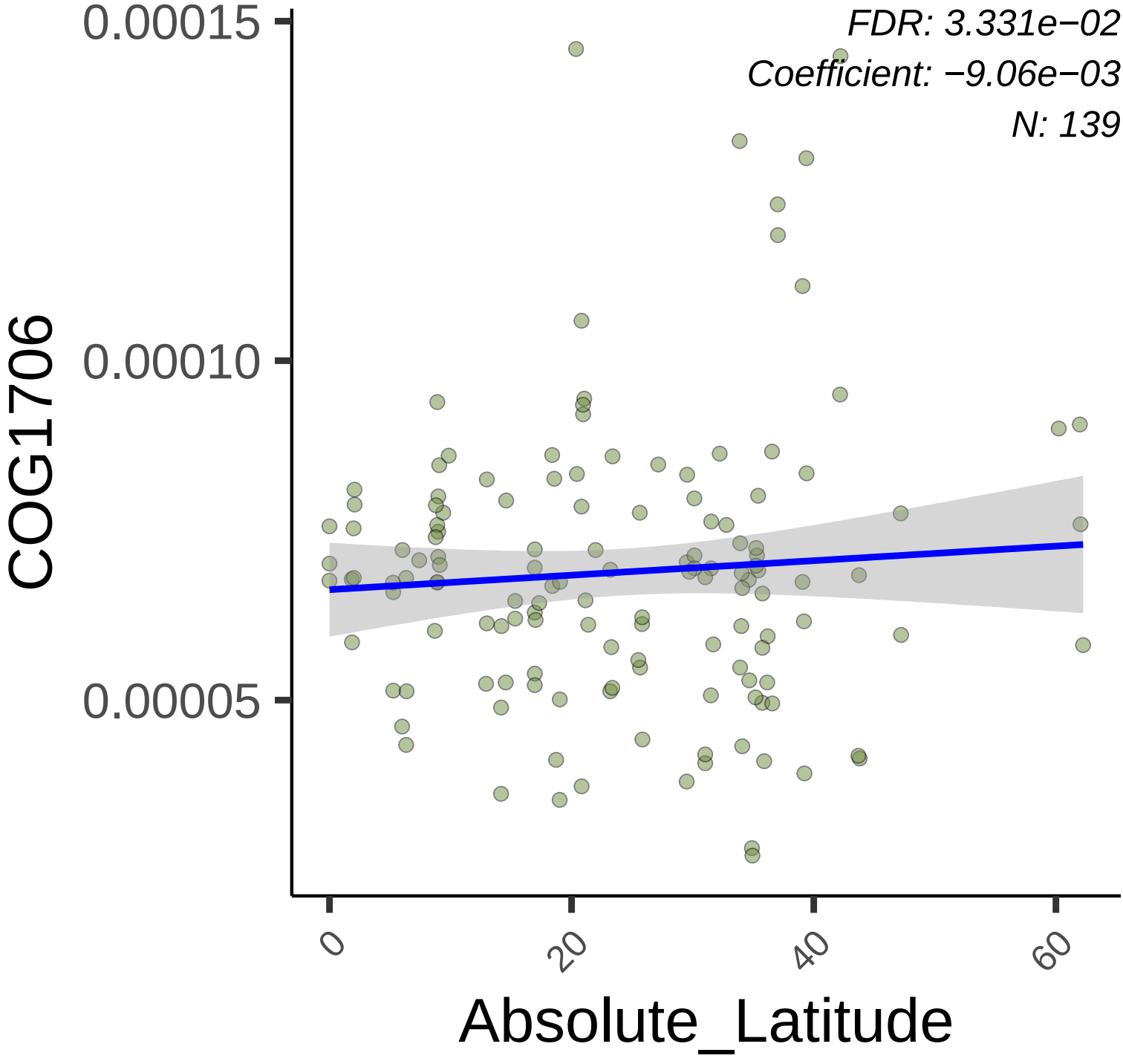

FDR: 3.284e−02
Coefficient: 6.78e−02
N: 139
COG2888
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

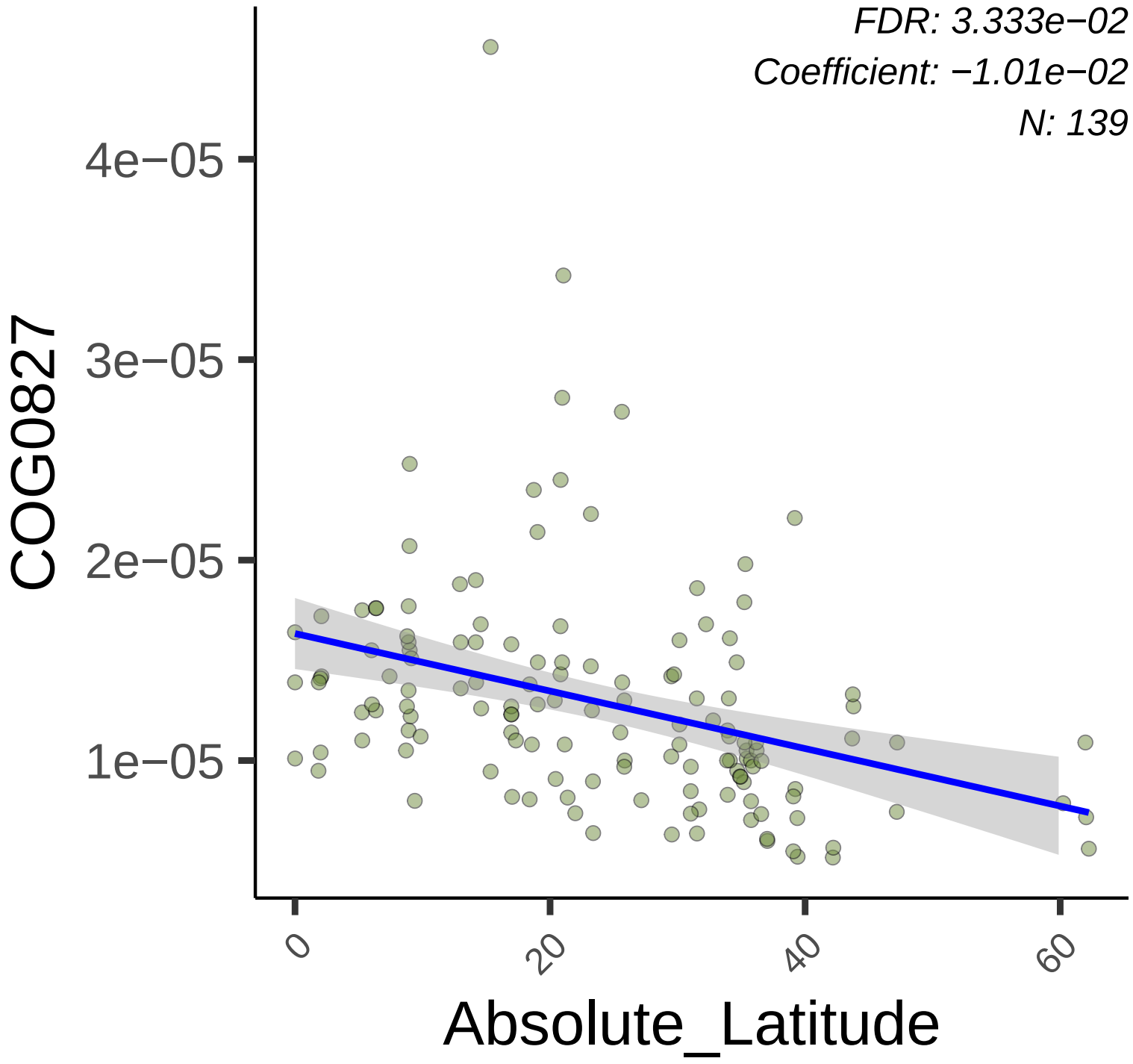

FDR: 3.306e−02
Coefficient: −1.07e−02
N: 139
5e−04
4e−04
3e−04
2e−04
1e−04
COG0514
0
20
40
60
Absolute_Latitude

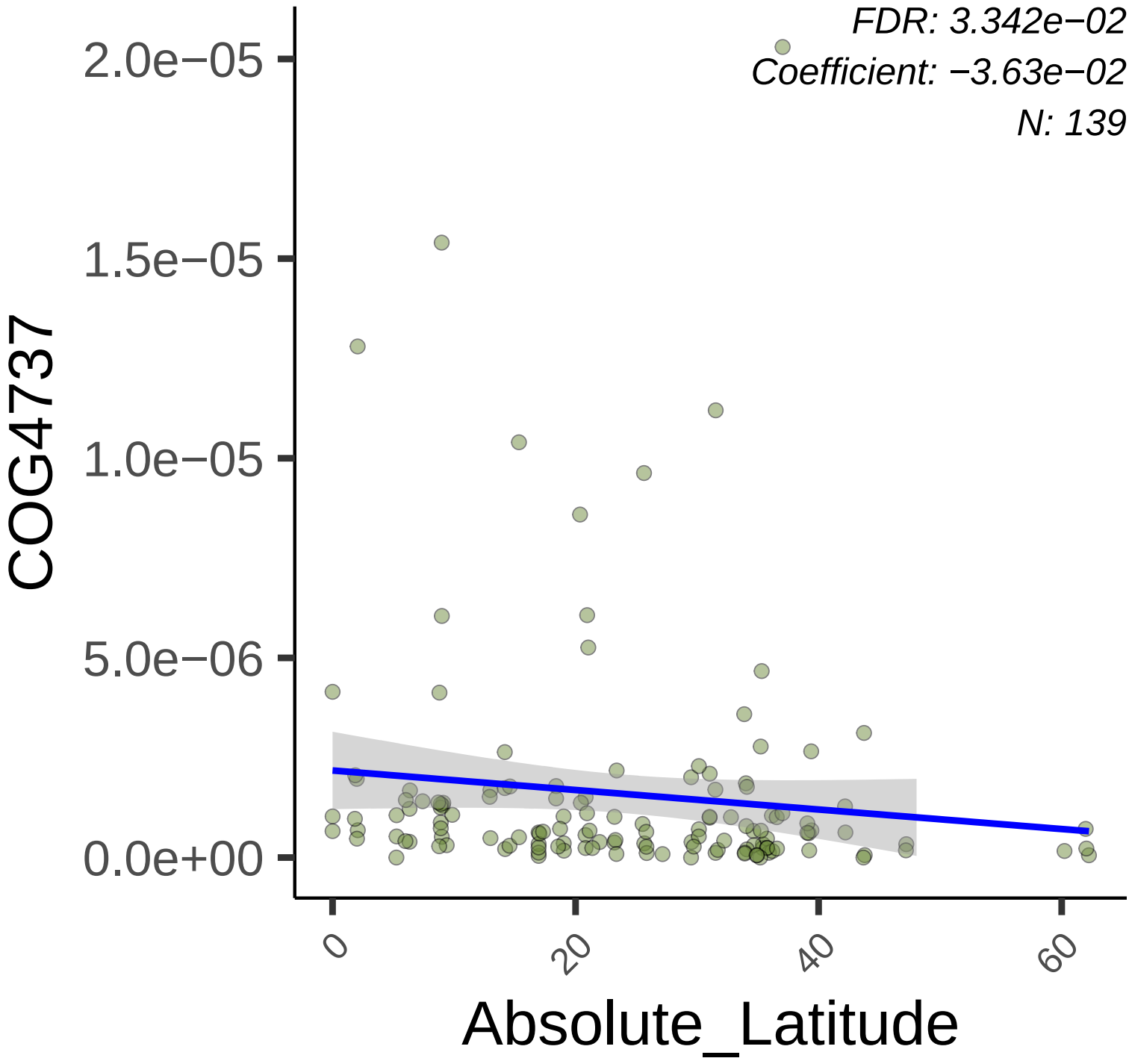

FDR: 3.310e−02
Coefficient: −4.48e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
COG0189
0
20
40
60
Absolute_Latitude

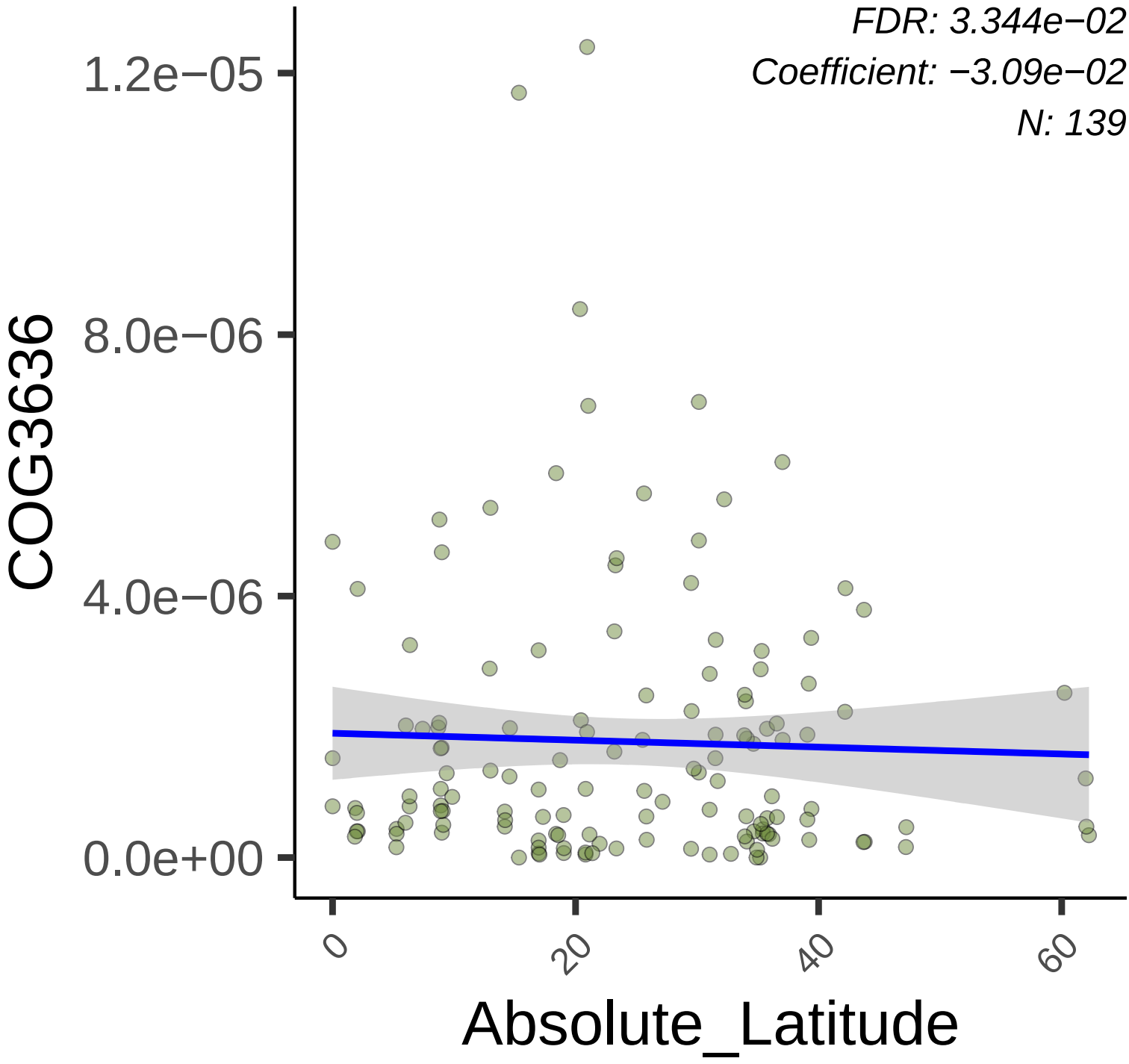

FDR: 3.310e−02
Coefficient: −1.29e−02
N: 139
COG2031
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

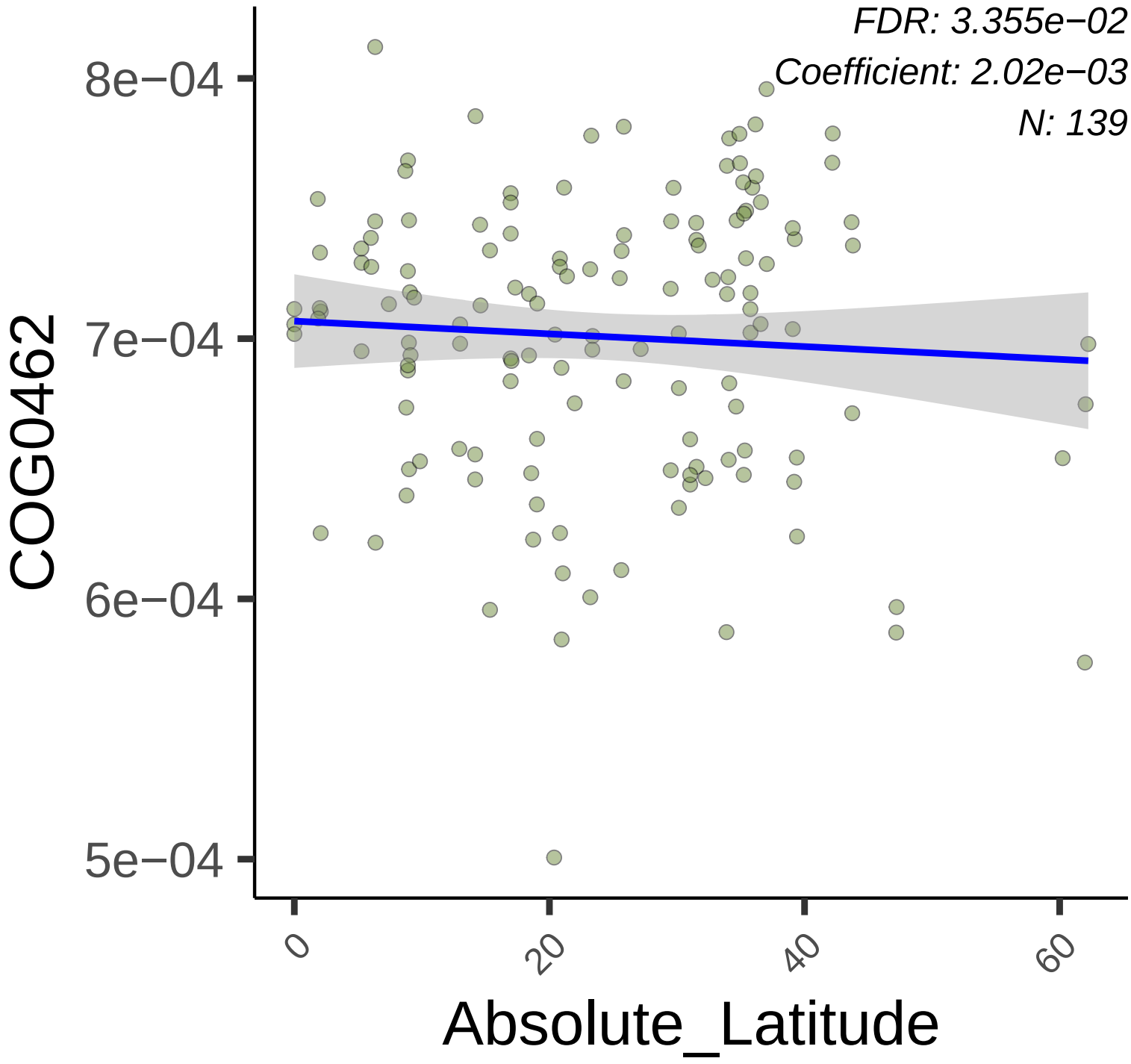

FDR: 3.319e−02
Coefficient: −2.35e−02
N: 139
COG3698
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

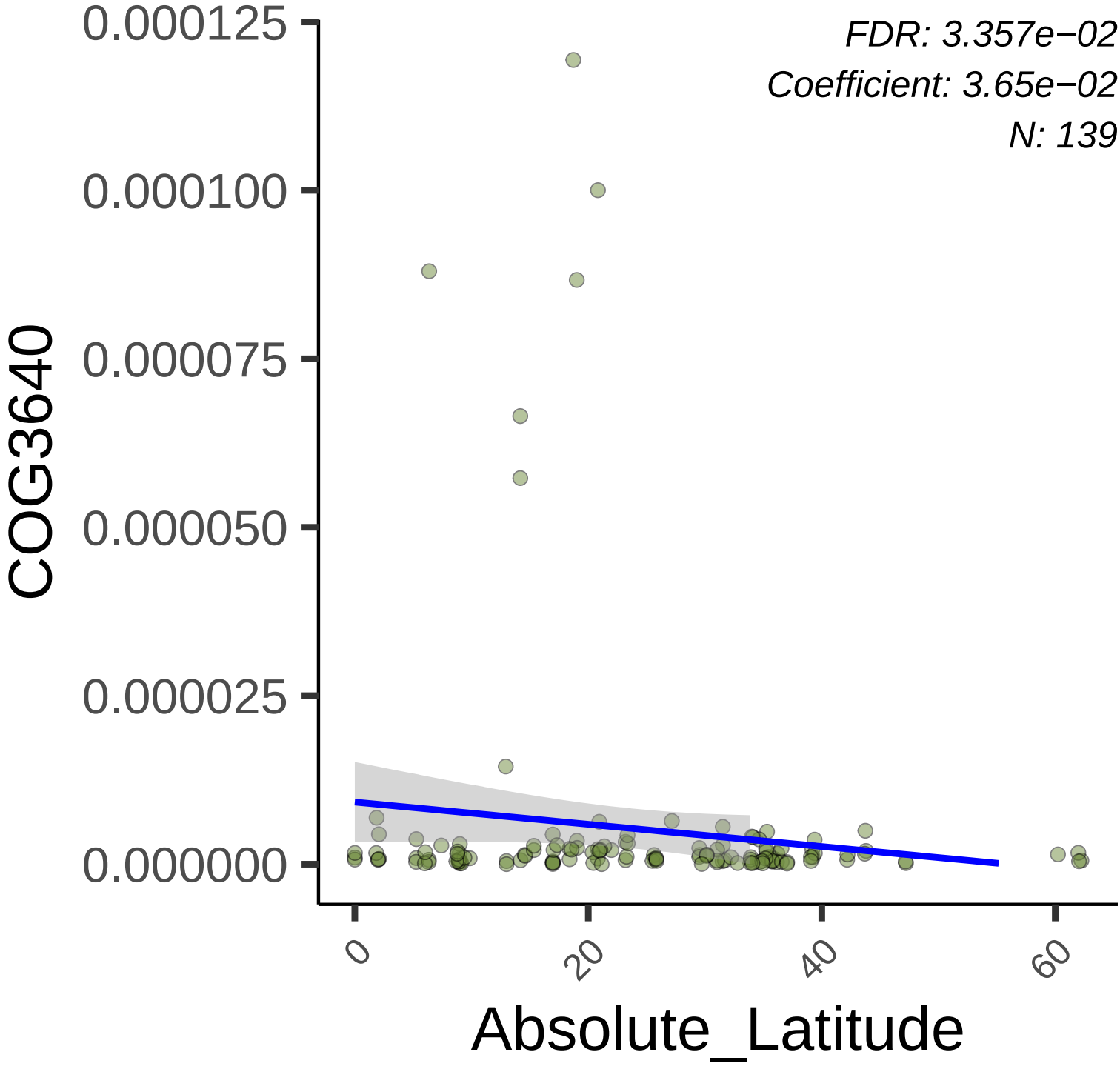

FDR: 3.331e−02
Coefficient: −9.06e−03
N: 139
0.00015
0.00010
0.00005
COG1706
0
20
40
60
Absolute_Latitude

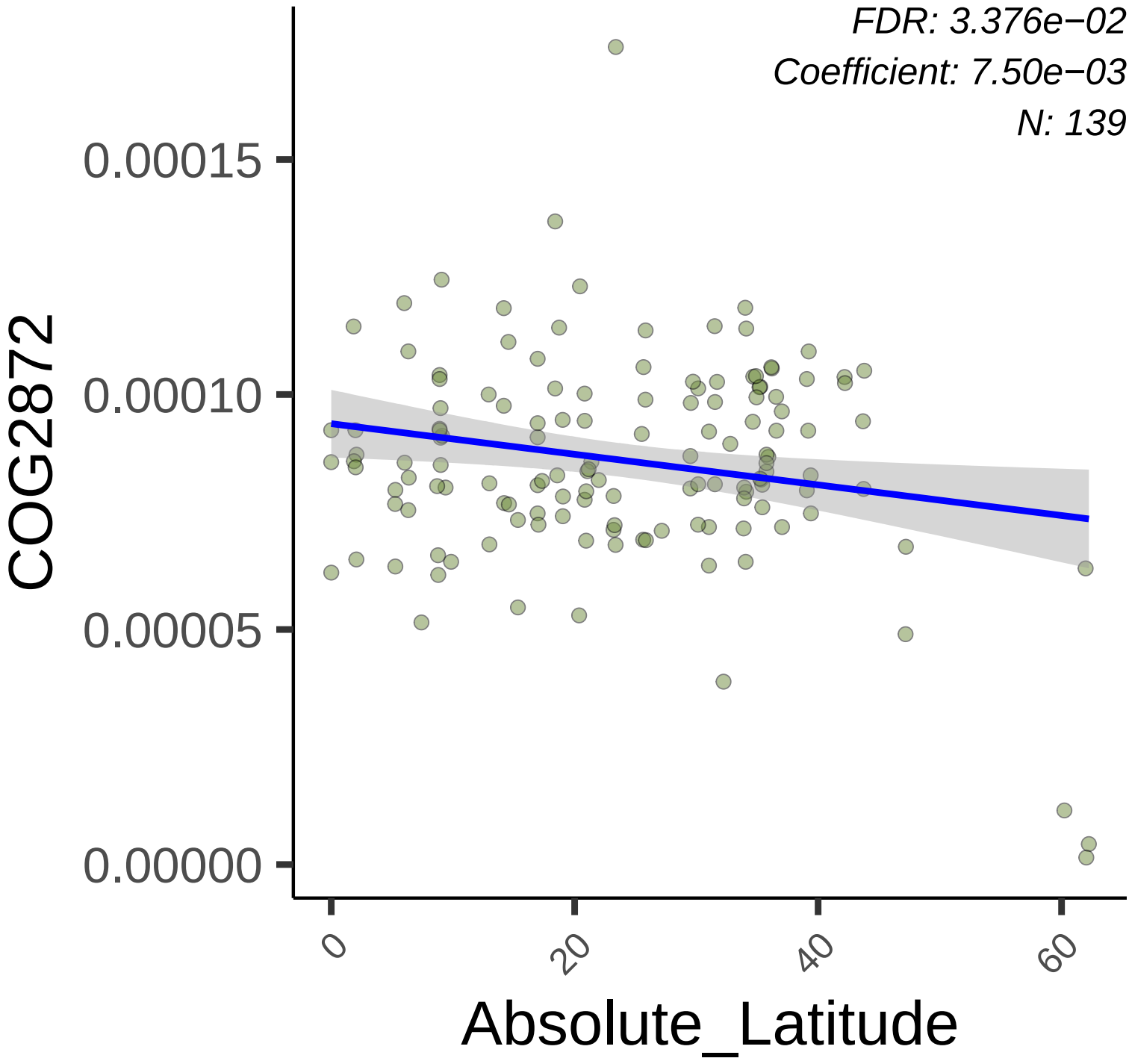

FDR: 3.333e−02
Coefficient: −1.01e−02
N: 139
COG0827
4e−05
3e−05
2e−05
1e−05
0
20
40
60
Absolute_Latitude

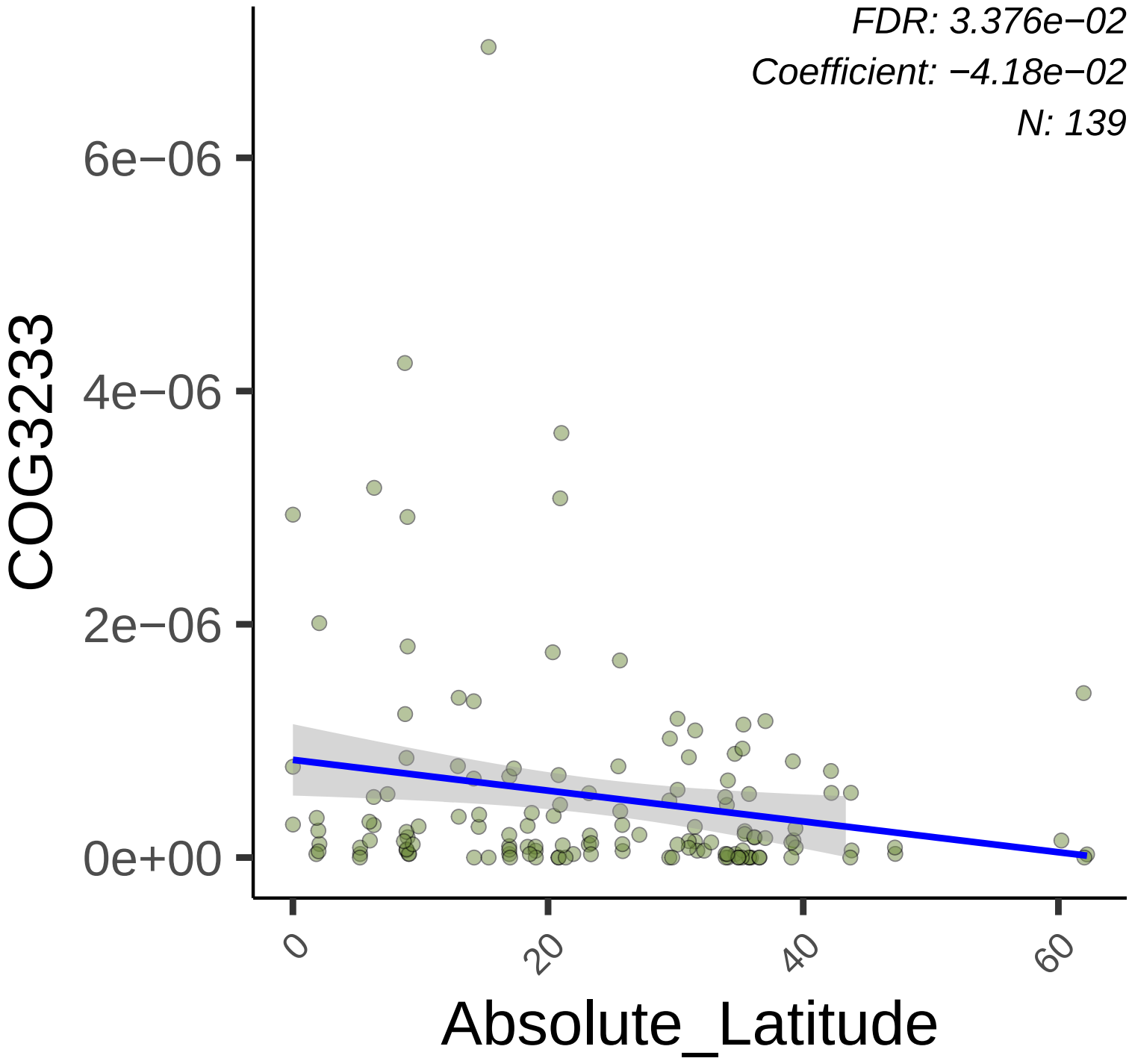

FDR: 3.342e−02
Coefficient: −3.63e−02
N: 139
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG4737
0
20
40
60
Absolute_Latitude

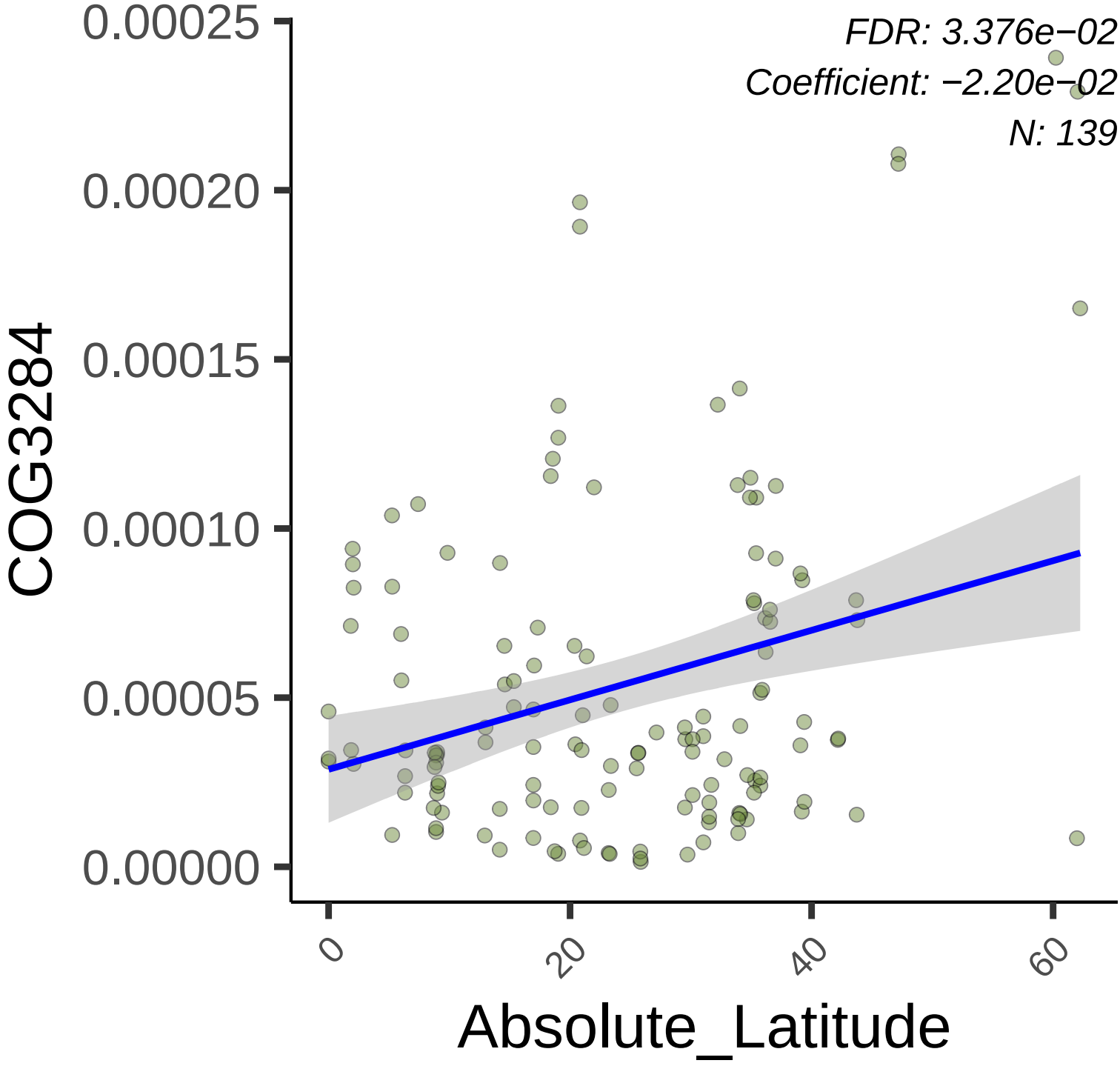

FDR: 3.344e−02
Coefficient: −3.09e−02
N: 139
COG3636
1.2e−05
8.0e−06
4.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

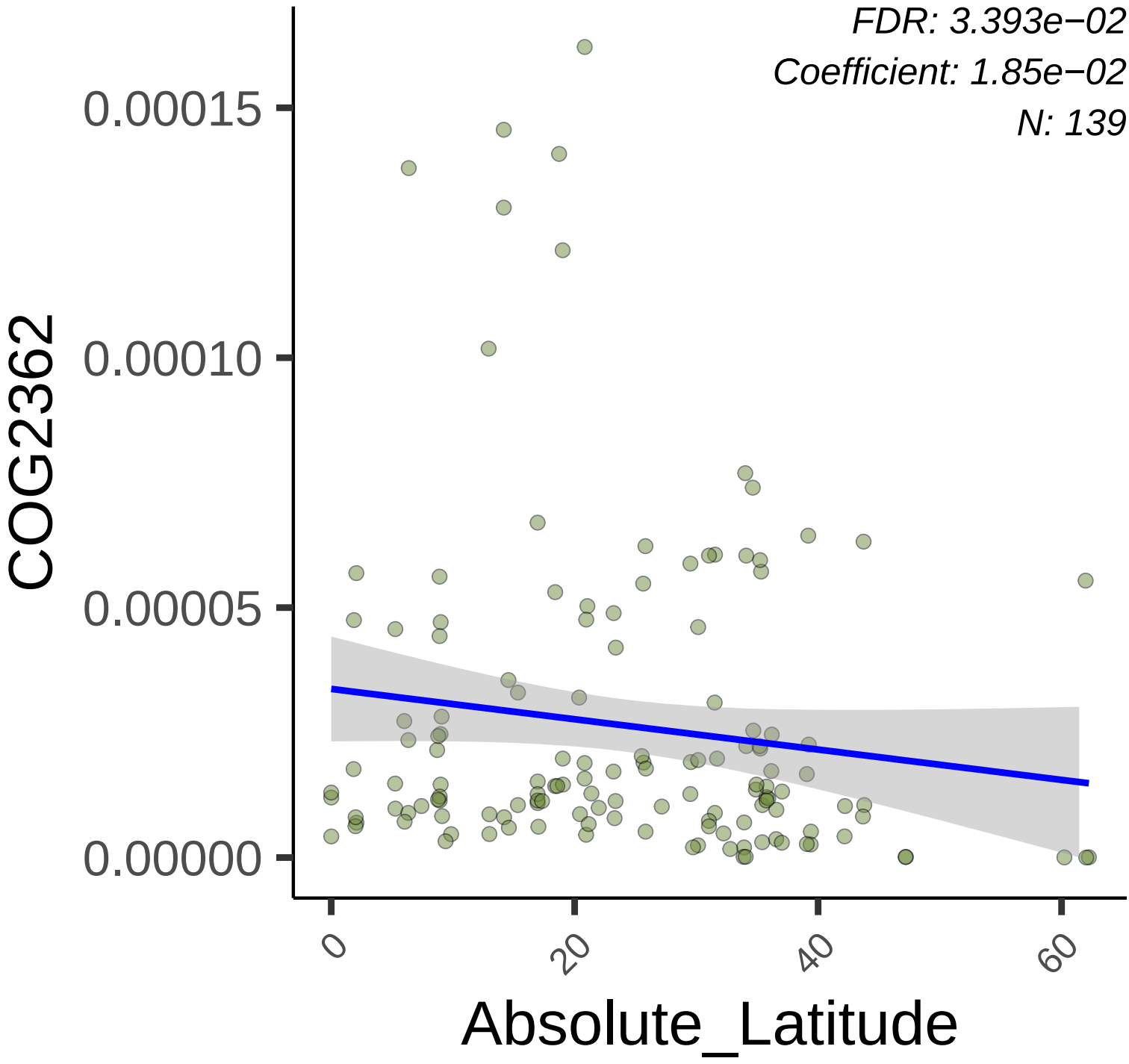

FDR: 3.355e−02
Coefficient: 2.02e−03
N: 139
8e−04
7e−04
6e−04
5e−04
COG0462
0
20
40
60
Absolute_Latitude

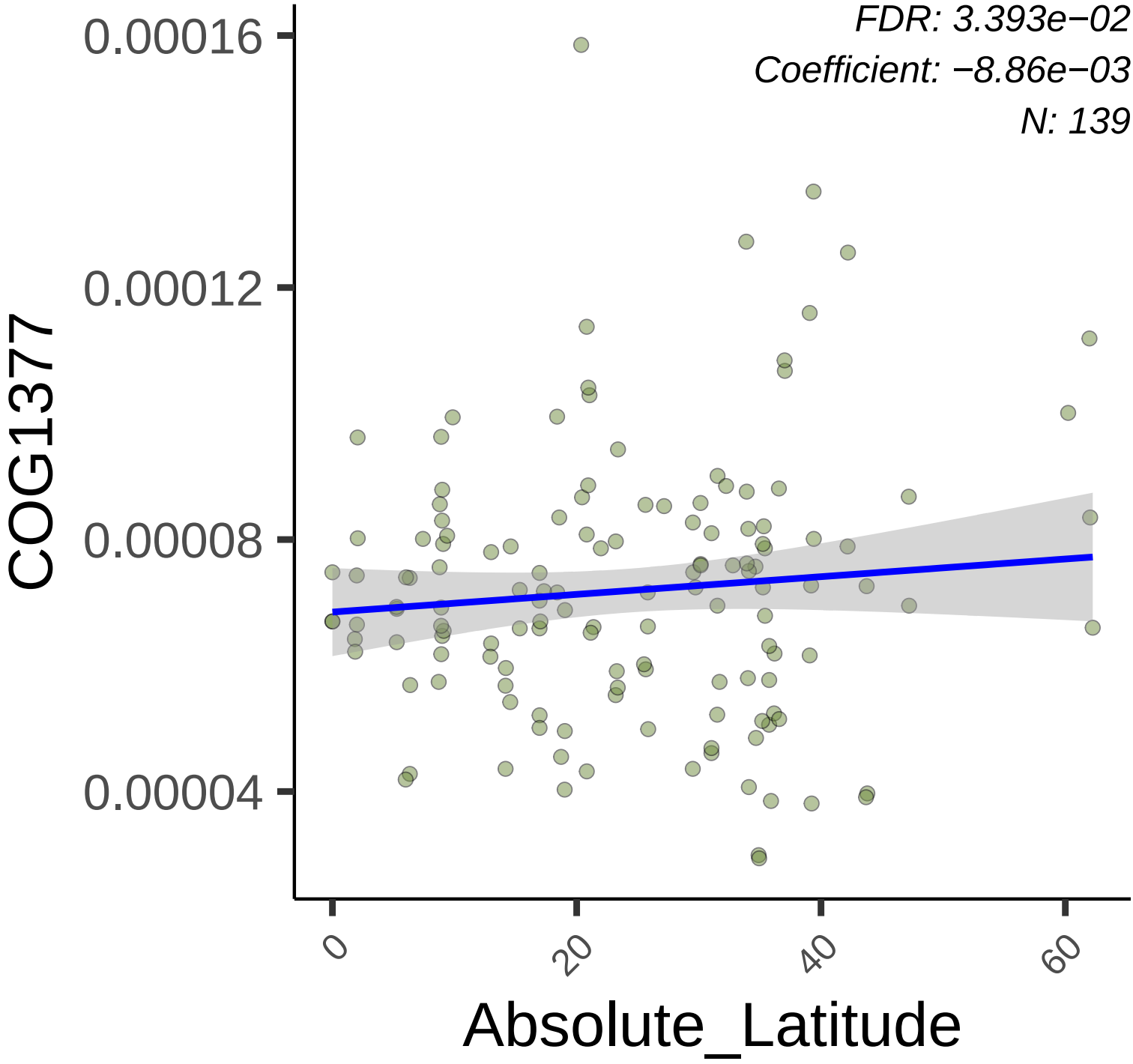

FDR: 3.357e−02
Coefficient: 3.65e−02
N: 139
COG3640
0.000125
0.000100
0.000075
0.000050
0.000025
0.000000
0
20
40
60
Absolute_Latitude

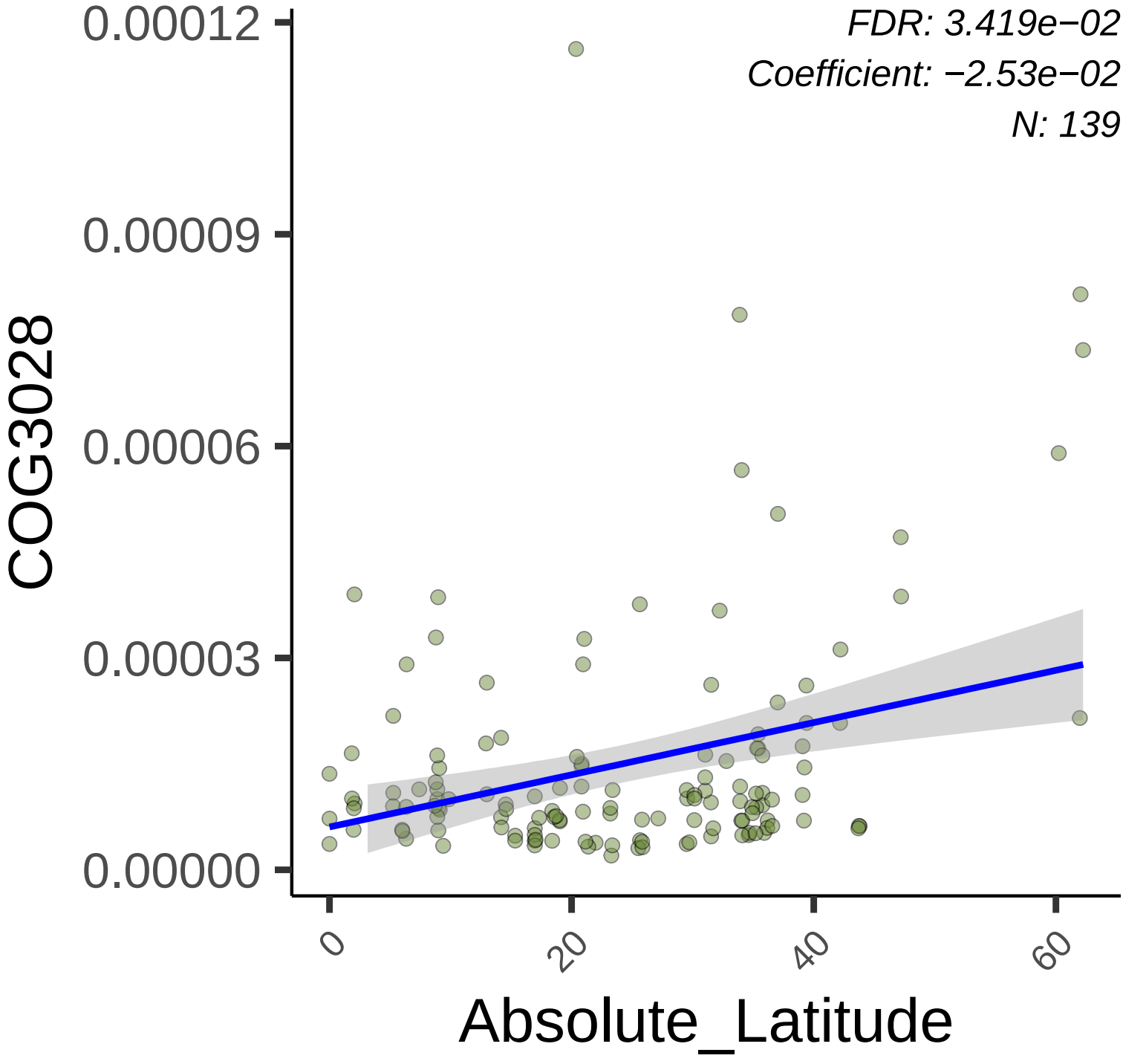

FDR: 3.376e−02
Coefficient: 7.50e−03
N: 139
0.00015
0.00010
0.00005
0.00000
COG2872
0
20
40
60
Absolute_Latitude

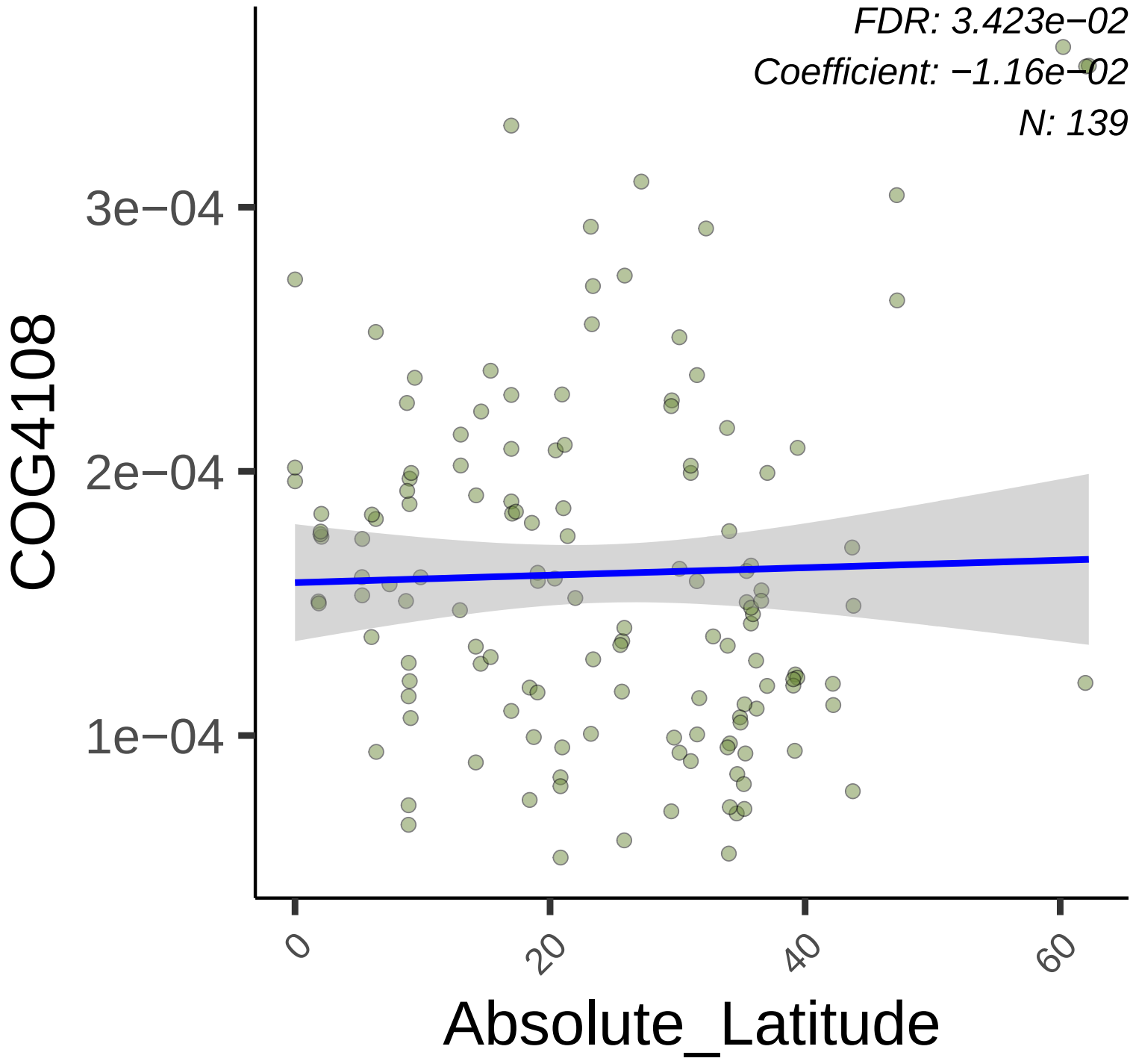

FDR: 3.376e−02
Coefficient: −4.18e−02
N: 139
COG3233
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

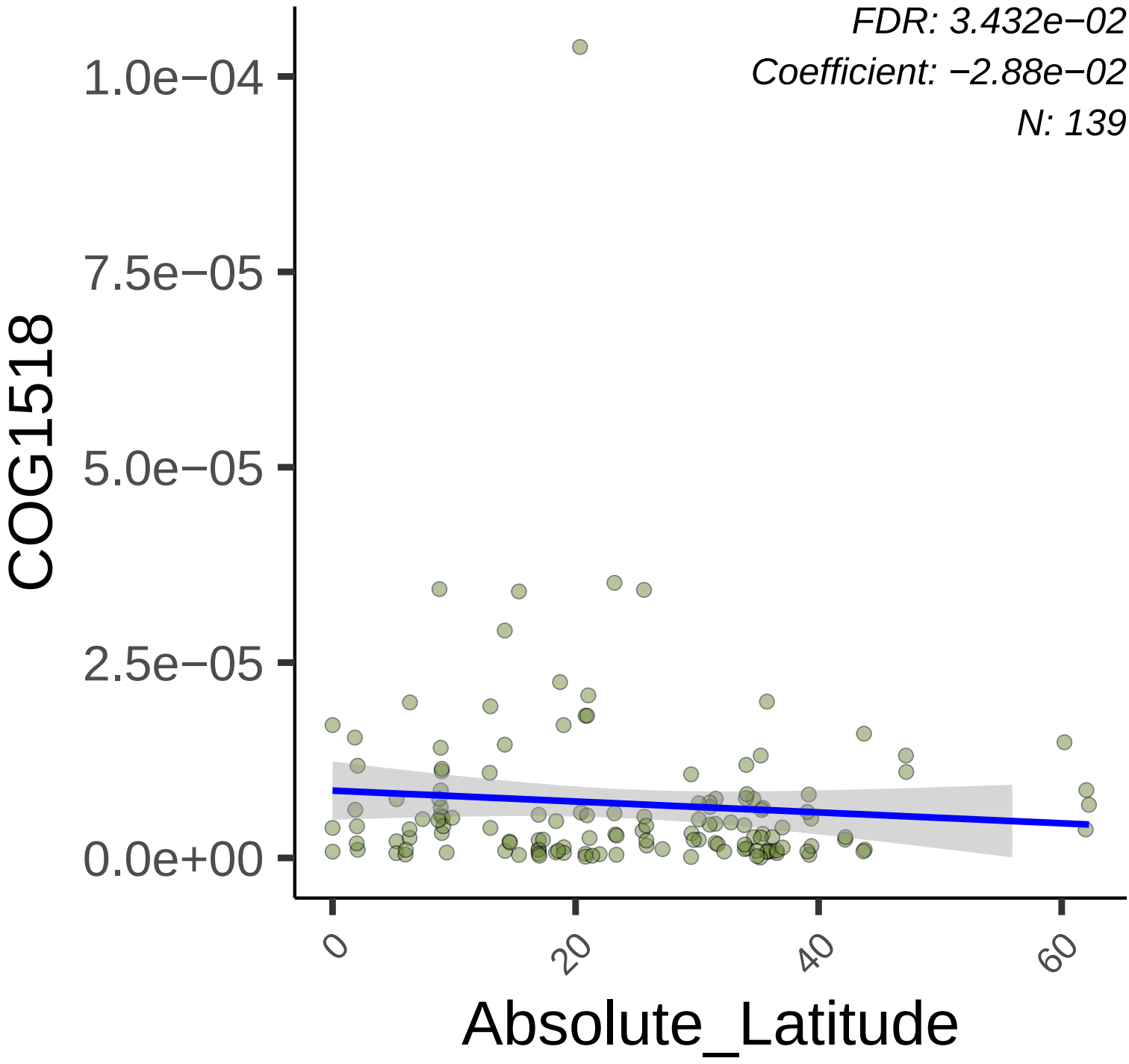

FDR: 3.376e−02
Coefficient: −2.20e−02
N: 139
COG3284
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

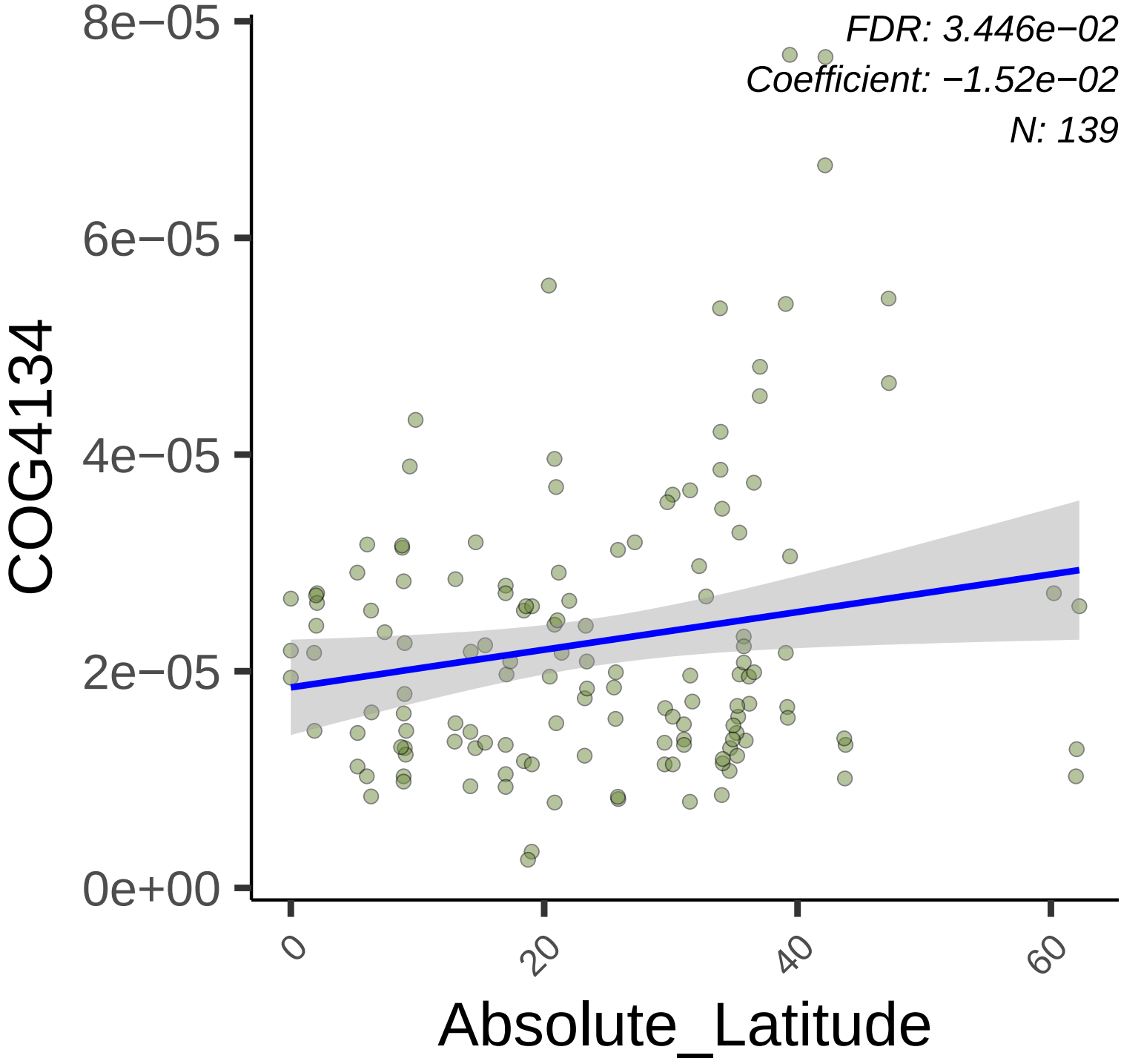

FDR: 3.393e−02
Coefficient: 1.85e−02
N: 139
COG2362
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

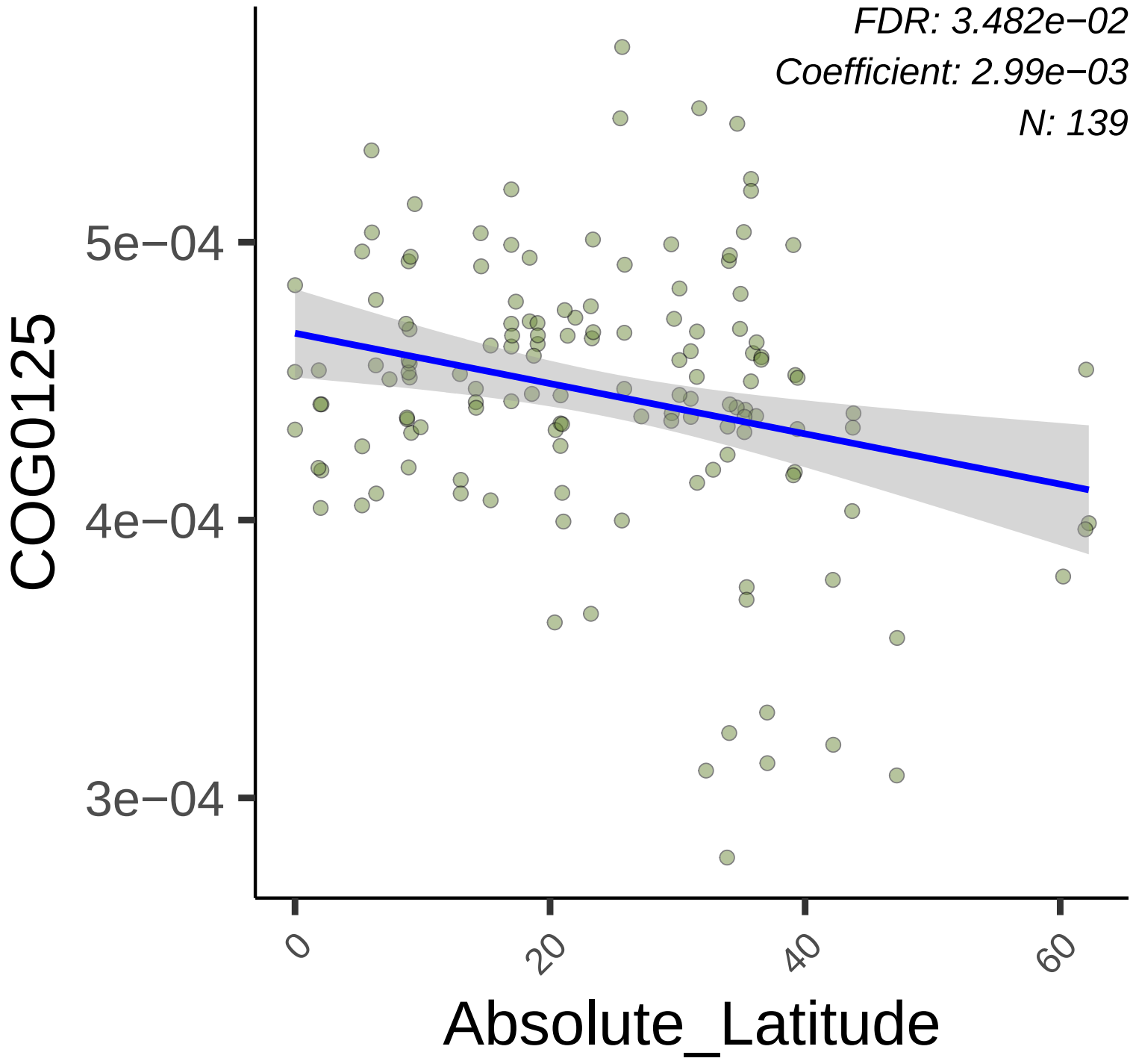

FDR: 3.393e−02
Coefficient: −8.86e−03
N: 139
0.00016
0.00012
0.00008
0.00004
COG1377
0
20
40
60
Absolute_Latitude

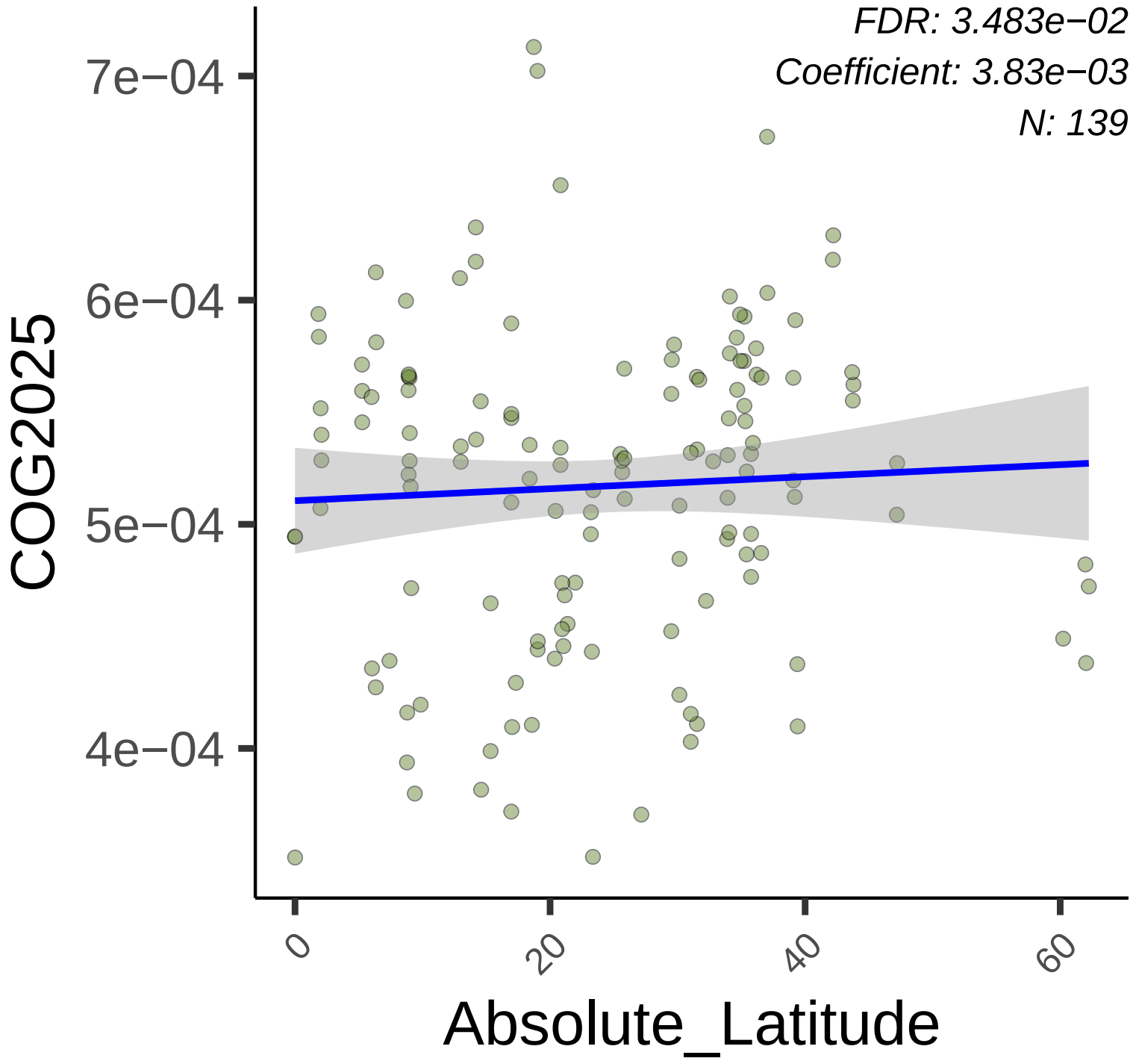

FDR: 3.419e−02
Coefficient: −2.53e−02
N: 139
0.00012
0.00009
0.00006
0.00003
0.00000
COG3028
0
20
40
60
Absolute_Latitude

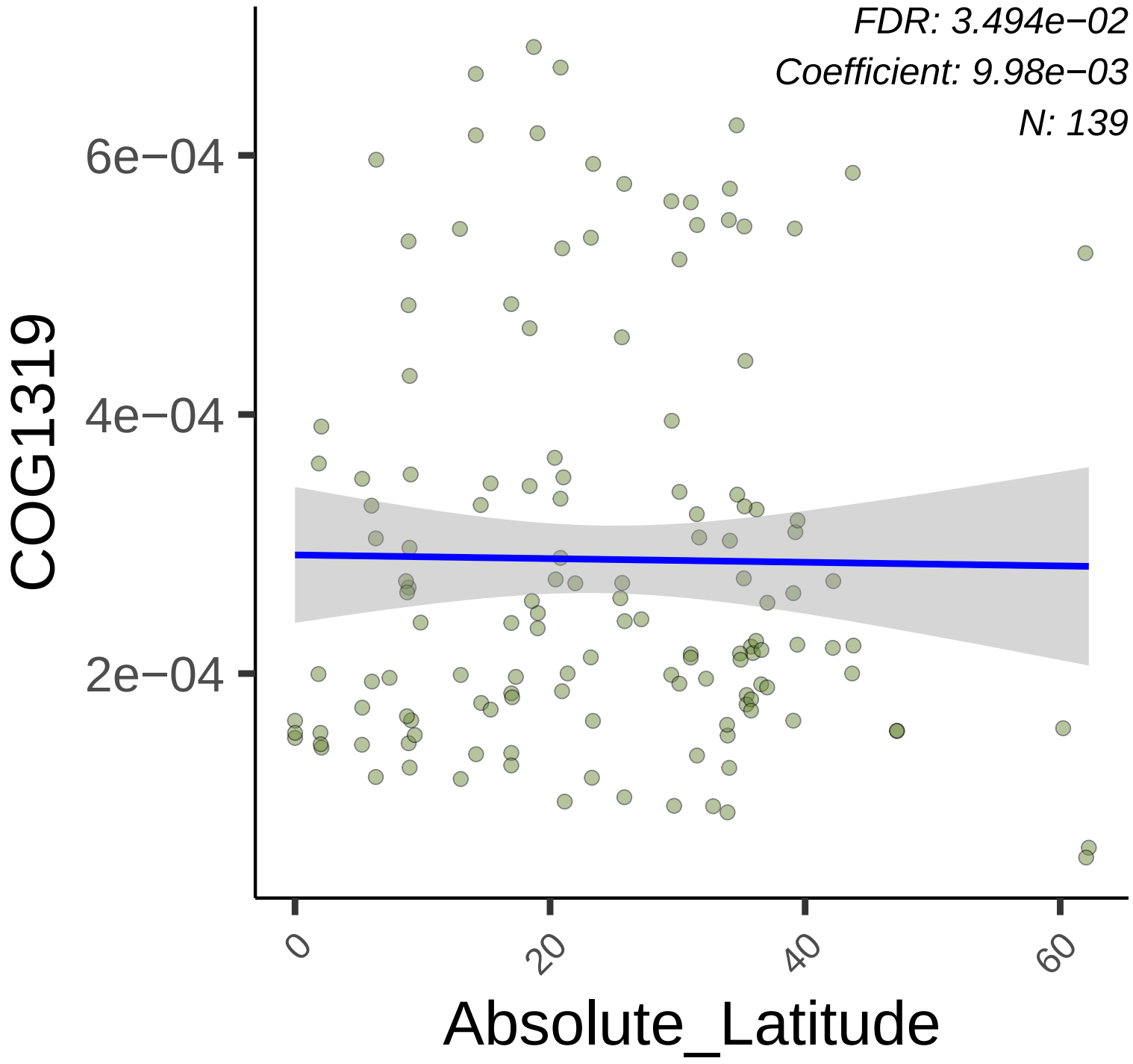

FDR: 3.423e−02
Coefficient: −1.16e−02
N: 139
3e−04
2e−04
1e−04
COG4108
0
20
40
60
Absolute_Latitude

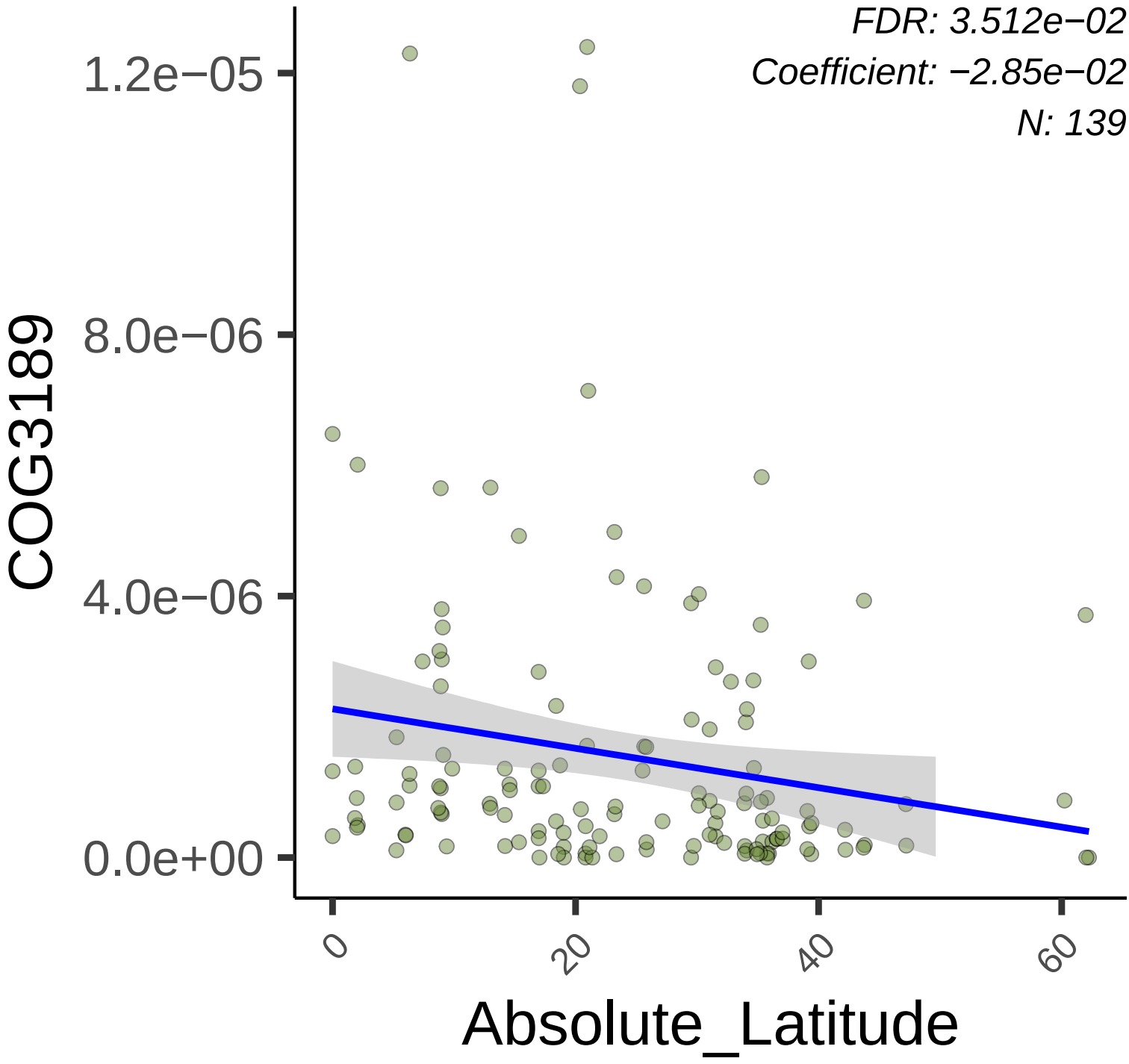

FDR: 3.432e−02
Coefficient: −2.88e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG1518
0
20
40
60
Absolute_Latitude

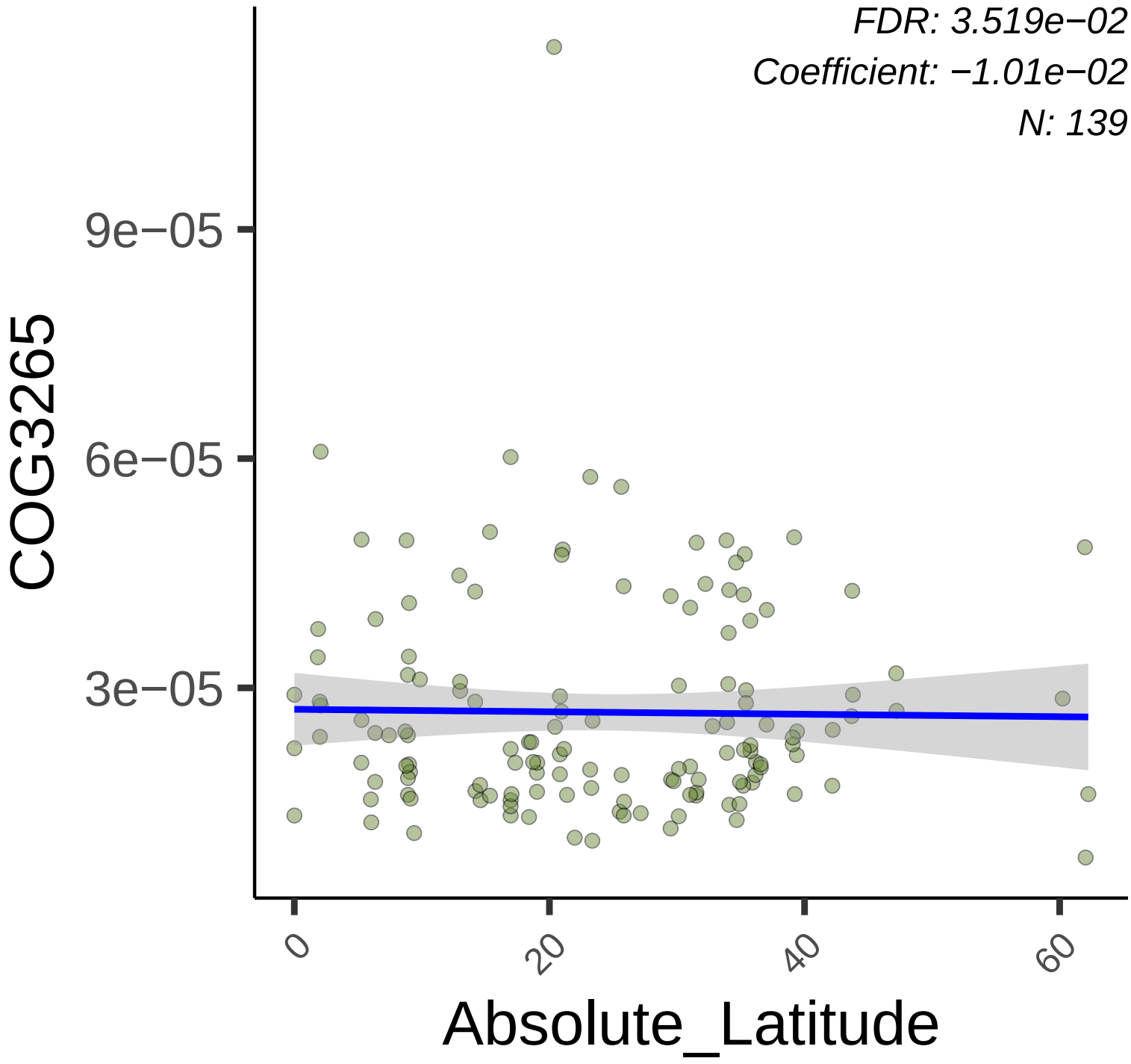

FDR: 3.446e−02
Coefficient: −1.52e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG4134
0
20
40
60
Absolute_Latitude

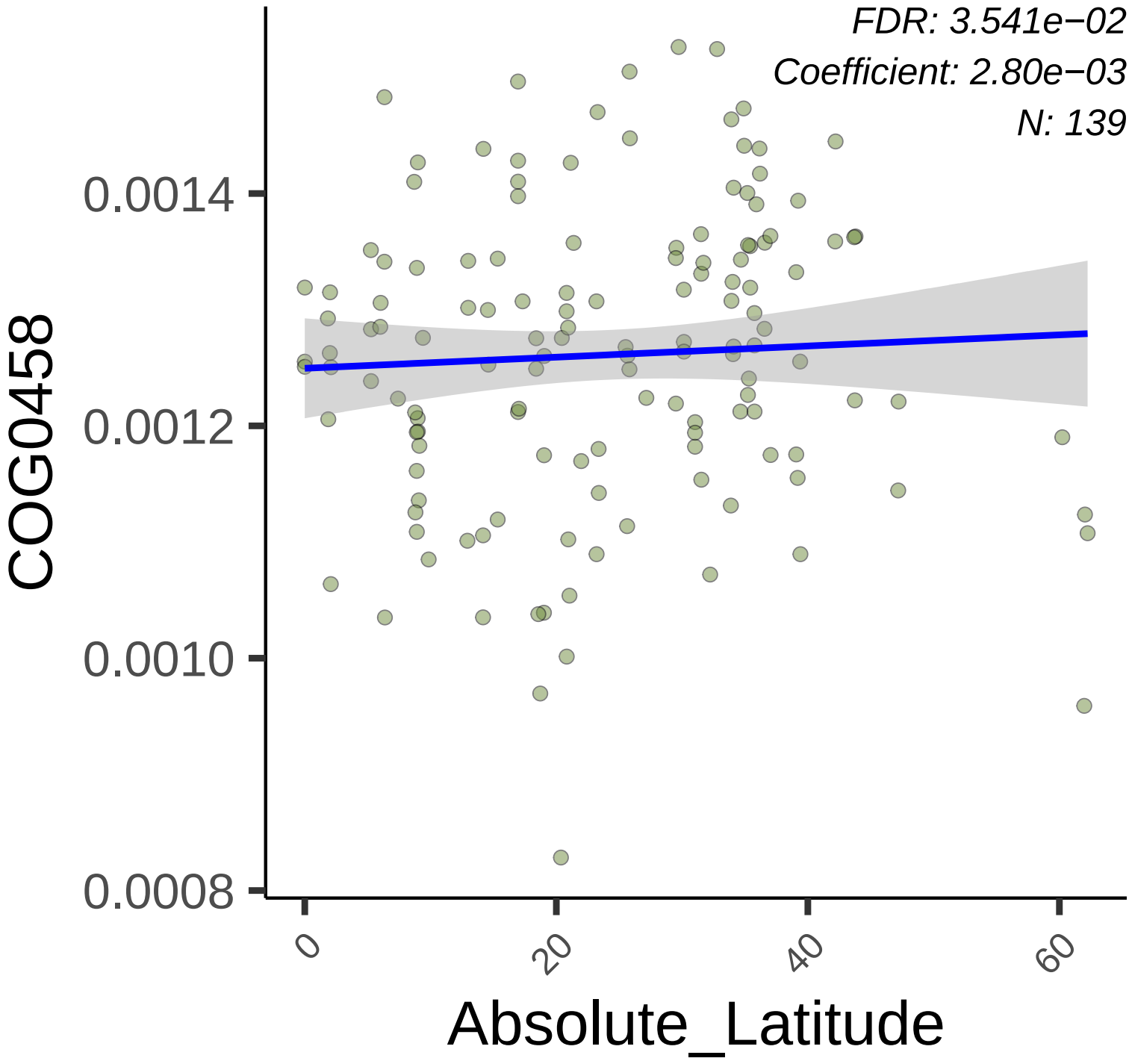

FDR: 3.482e−02
Coefficient: 2.99e−03
N: 139
5e−04
4e−04
3e−04
COG0125
0
20
40
60
Absolute_Latitude

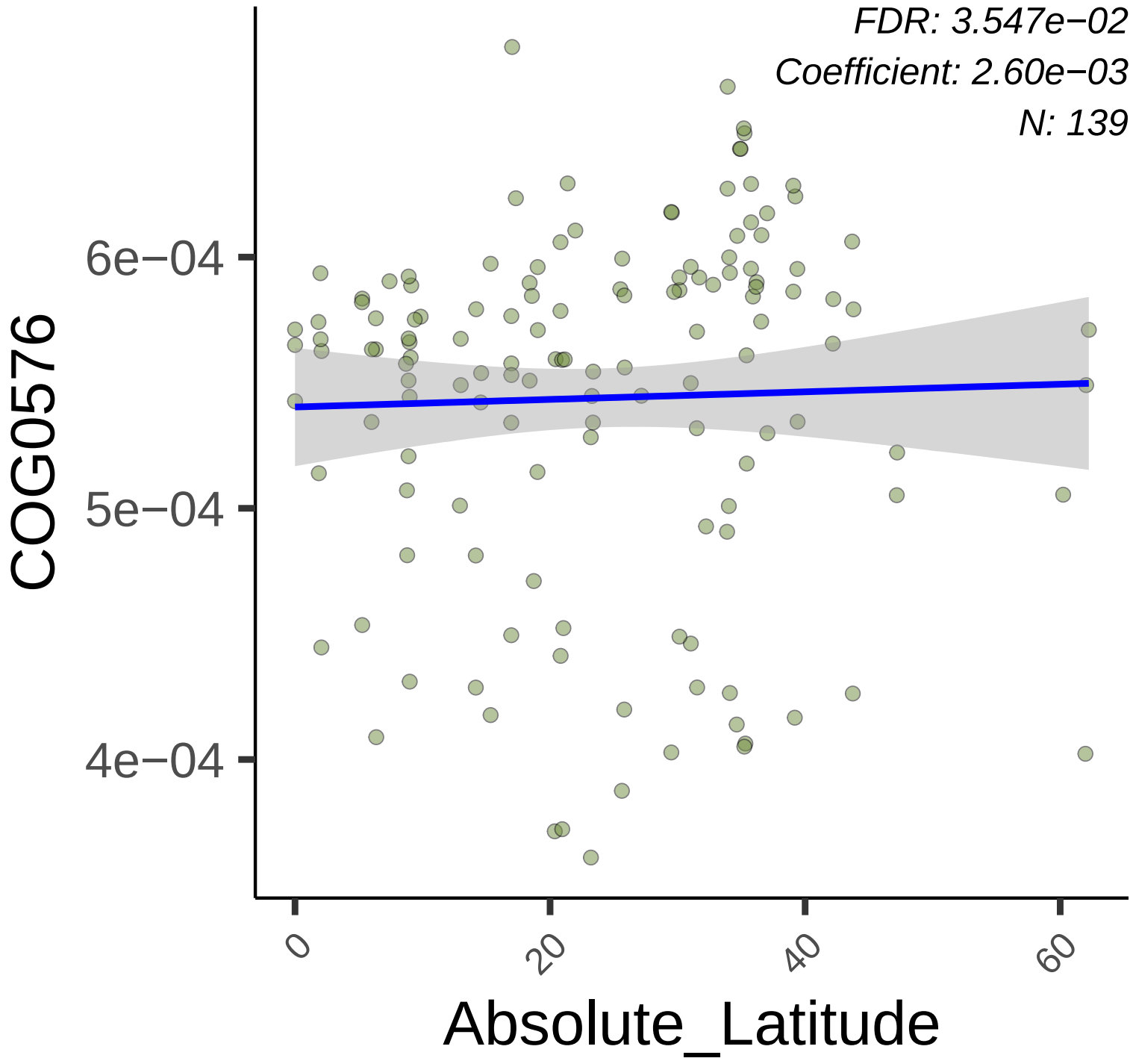

FDR: 3.483e−02
Coefficient: 3.83e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG2025
0
20
40
60
Absolute_Latitude

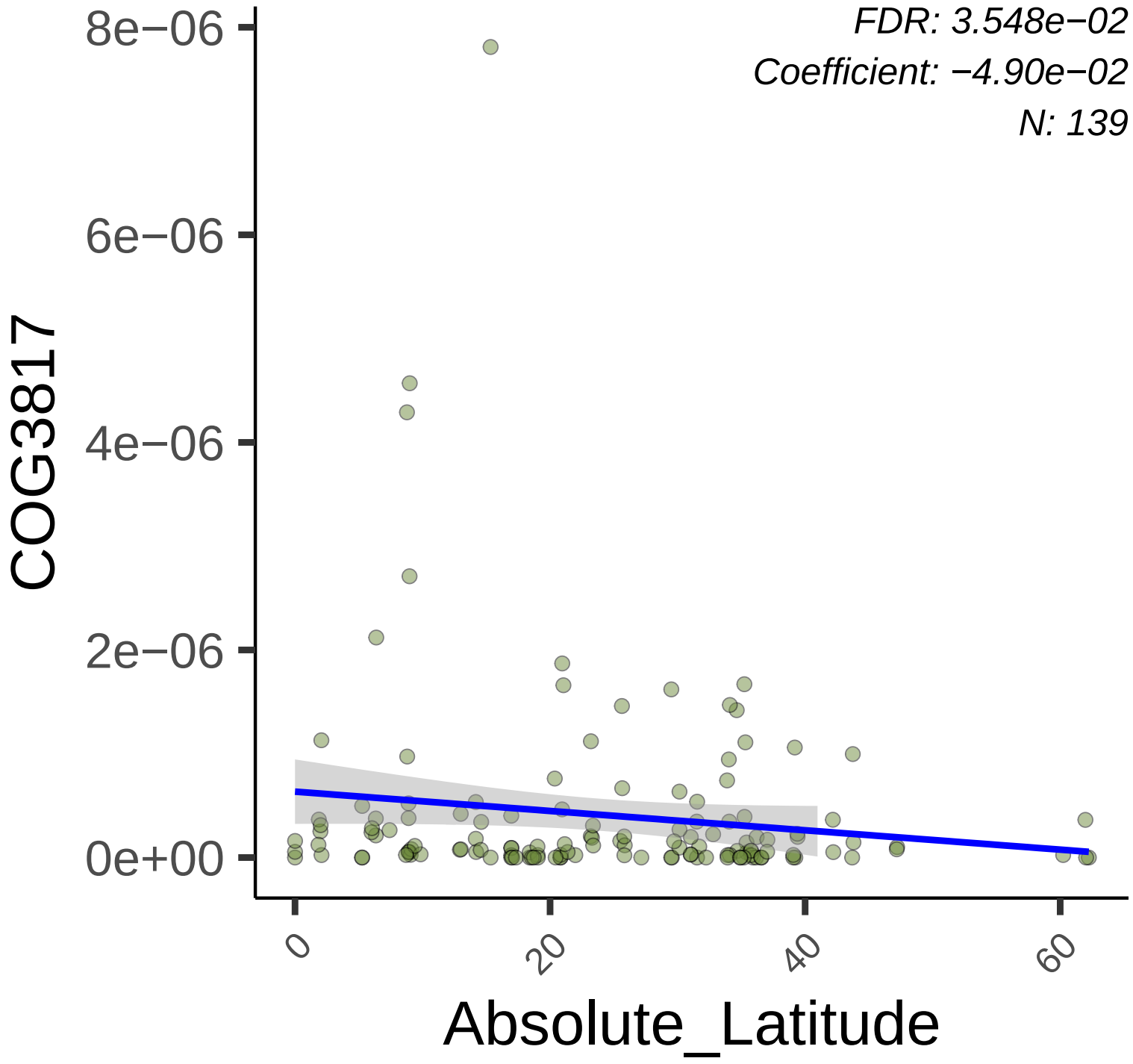

FDR: 3.494e−02
Coefficient: 9.98e−03
N: 139
6e−04
4e−04
2e−04
COG1319
0
20
40
60
Absolute_Latitude

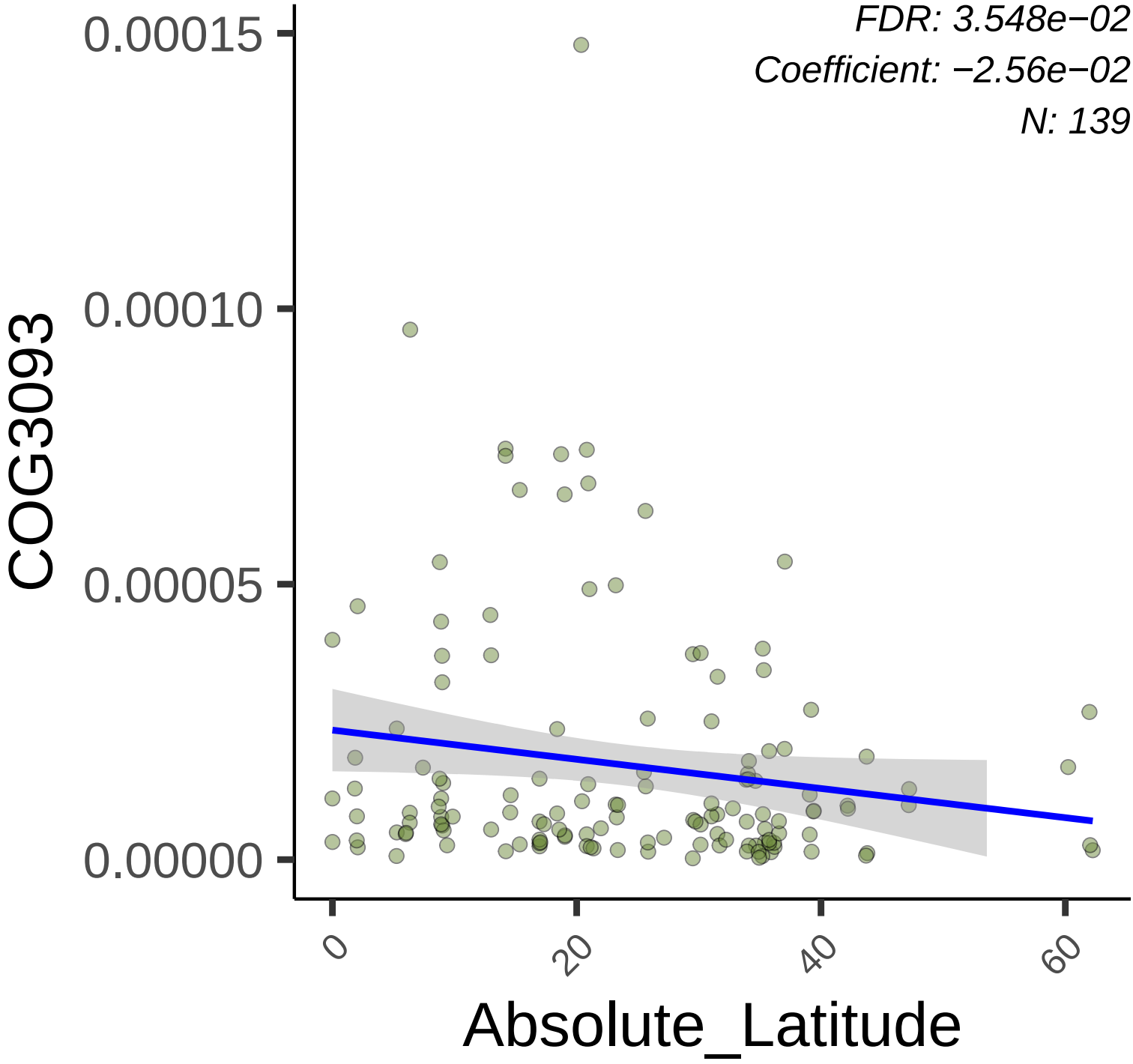

FDR: 3.512e−02
Coefficient: −2.85e−02
N: 139
1.2e−05
8.0e−06
4.0e−06
0.0e+00
COG3189
0
20
40
60
Absolute_Latitude

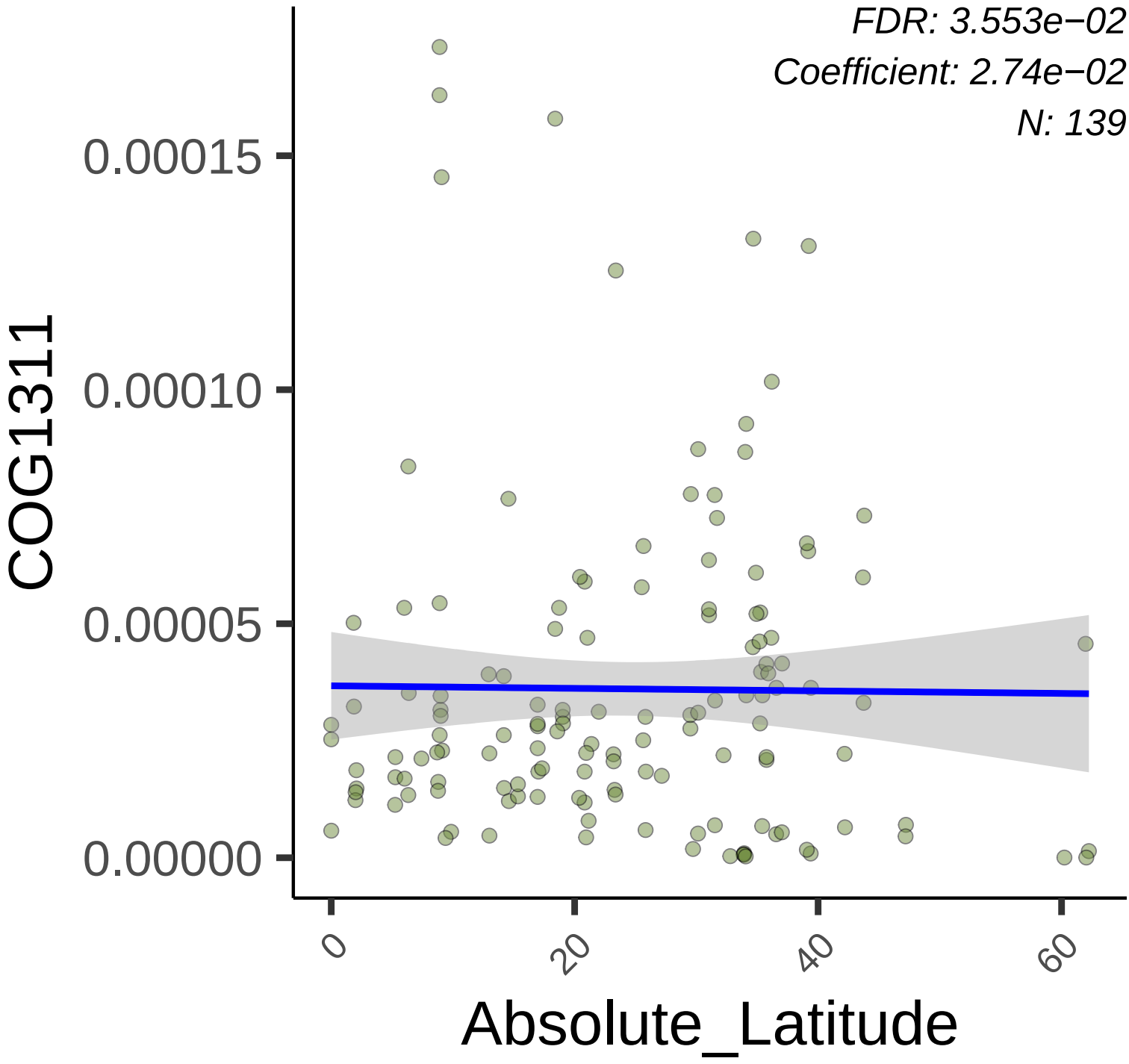

FDR: 3.519e−02
Coefficient: −1.01e−02
N: 139
9e−05
6e−05
3e−05
COG3265
0
20
40
60
Absolute_Latitude

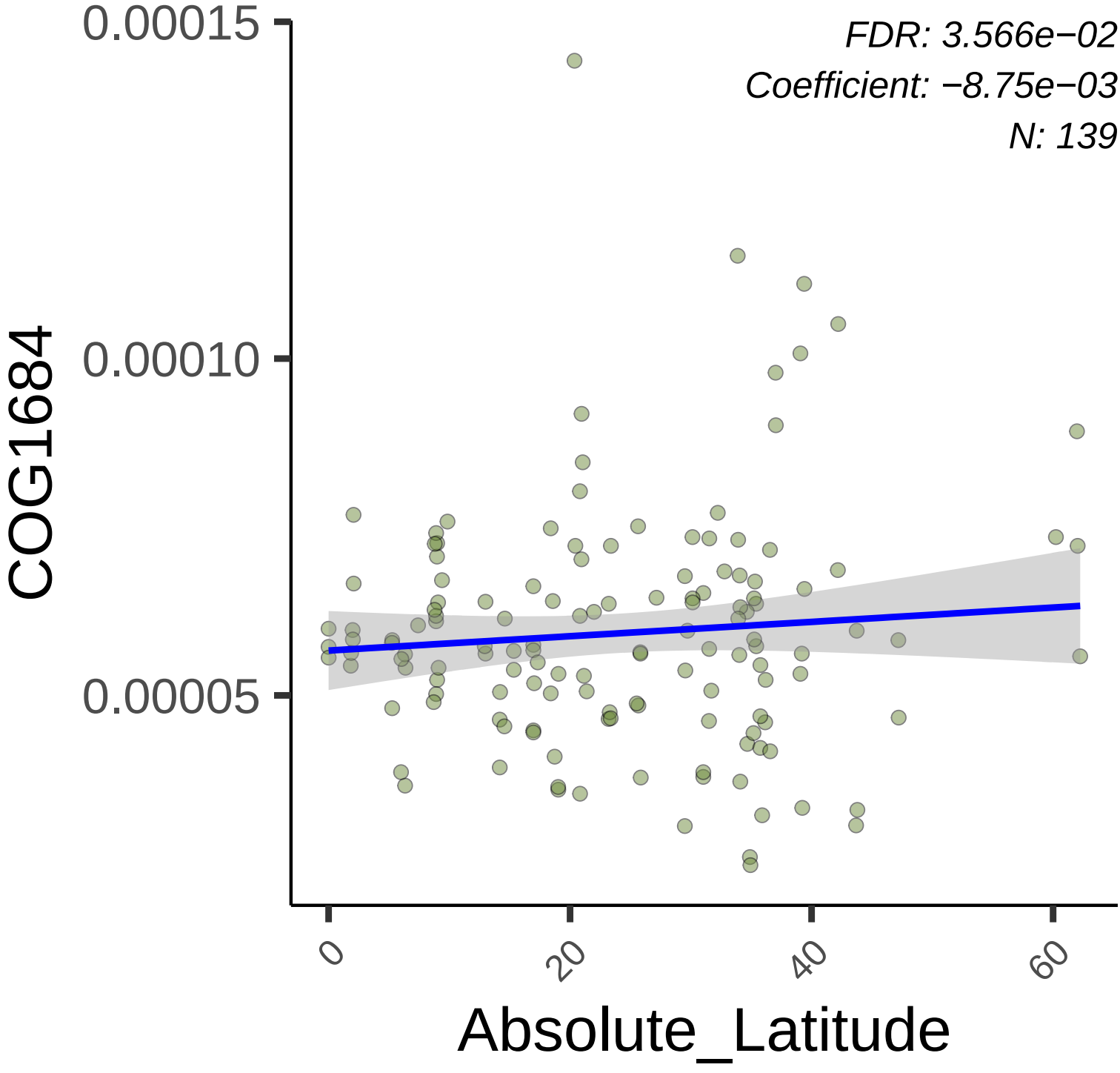

FDR: 3.541e−02
Coefficient: 2.80e−03
N: 139
0.0014
0.0012
0.0010
0.0008
COG0458
0
20
40
60
Absolute_Latitude

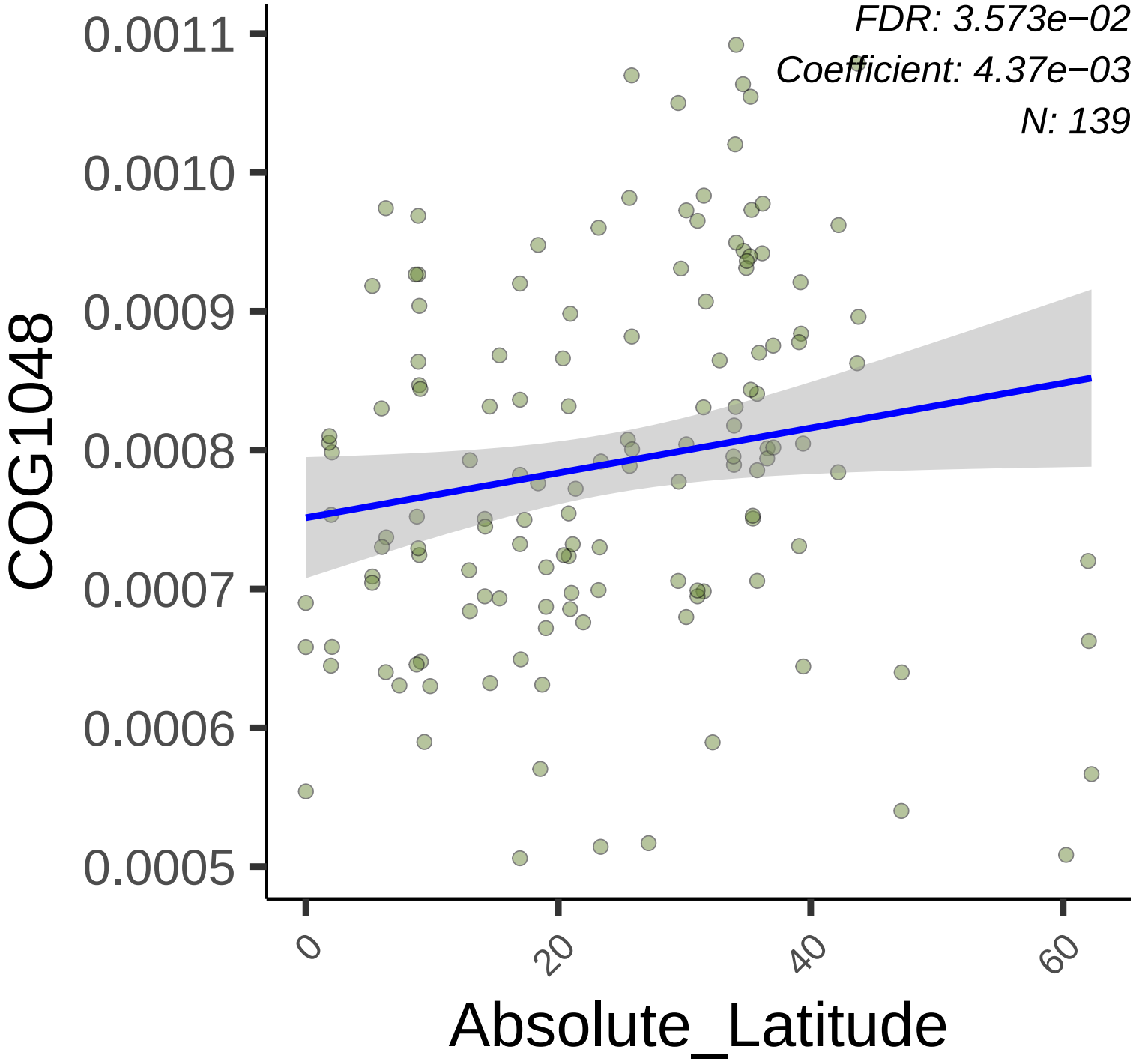

FDR: 3.547e−02
Coefficient: 2.60e−03
N: 139
COG0576
6e−04
5e−04
4e−04
0
20
40
60
Absolute_Latitude

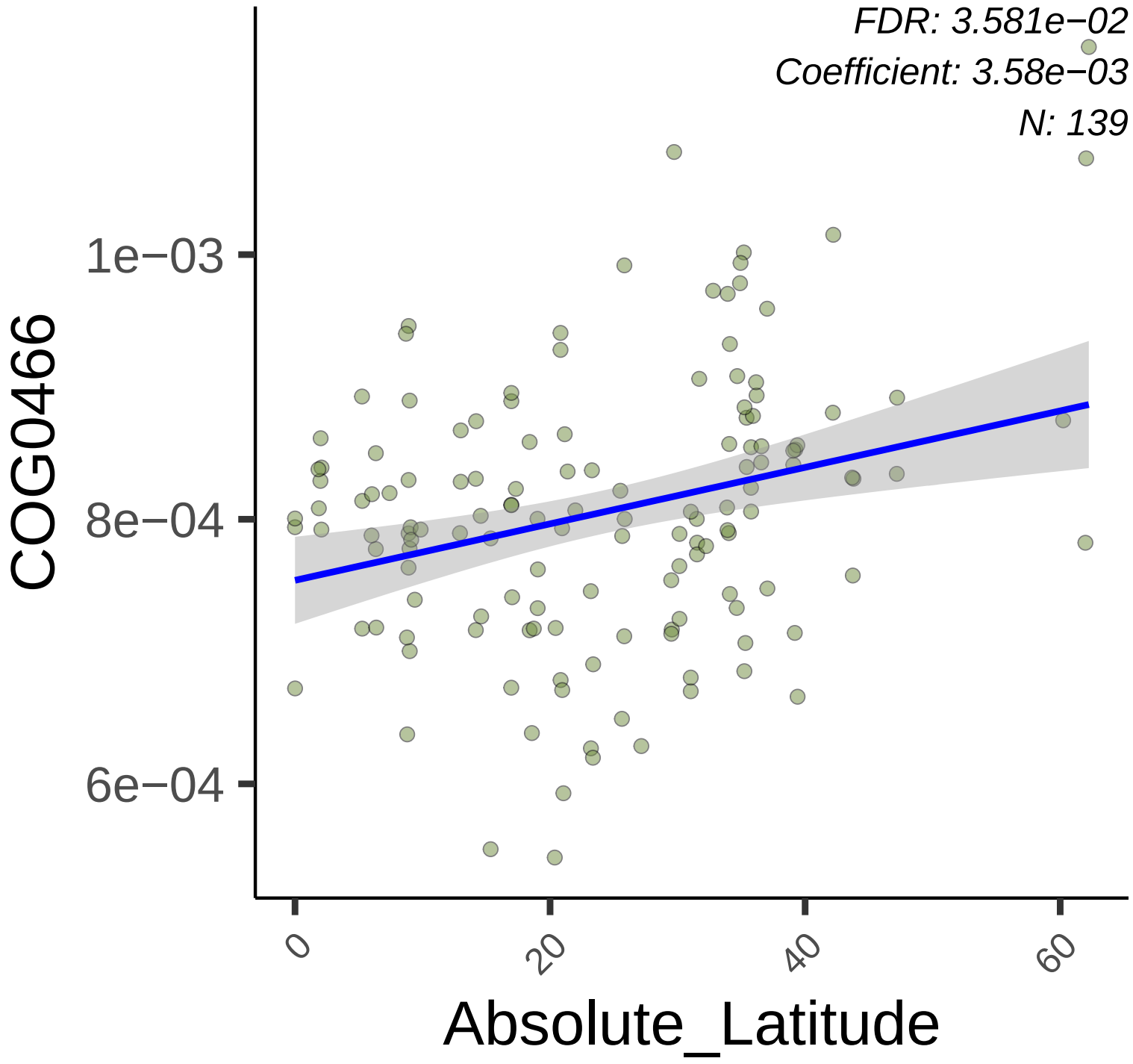

FDR: 3.548e−02
Coefficient: −4.90e−02
N: 139
8e−06
6e−06
4e−06
2e−06
0e+00
COG3817
0
20
40
60
Absolute_Latitude

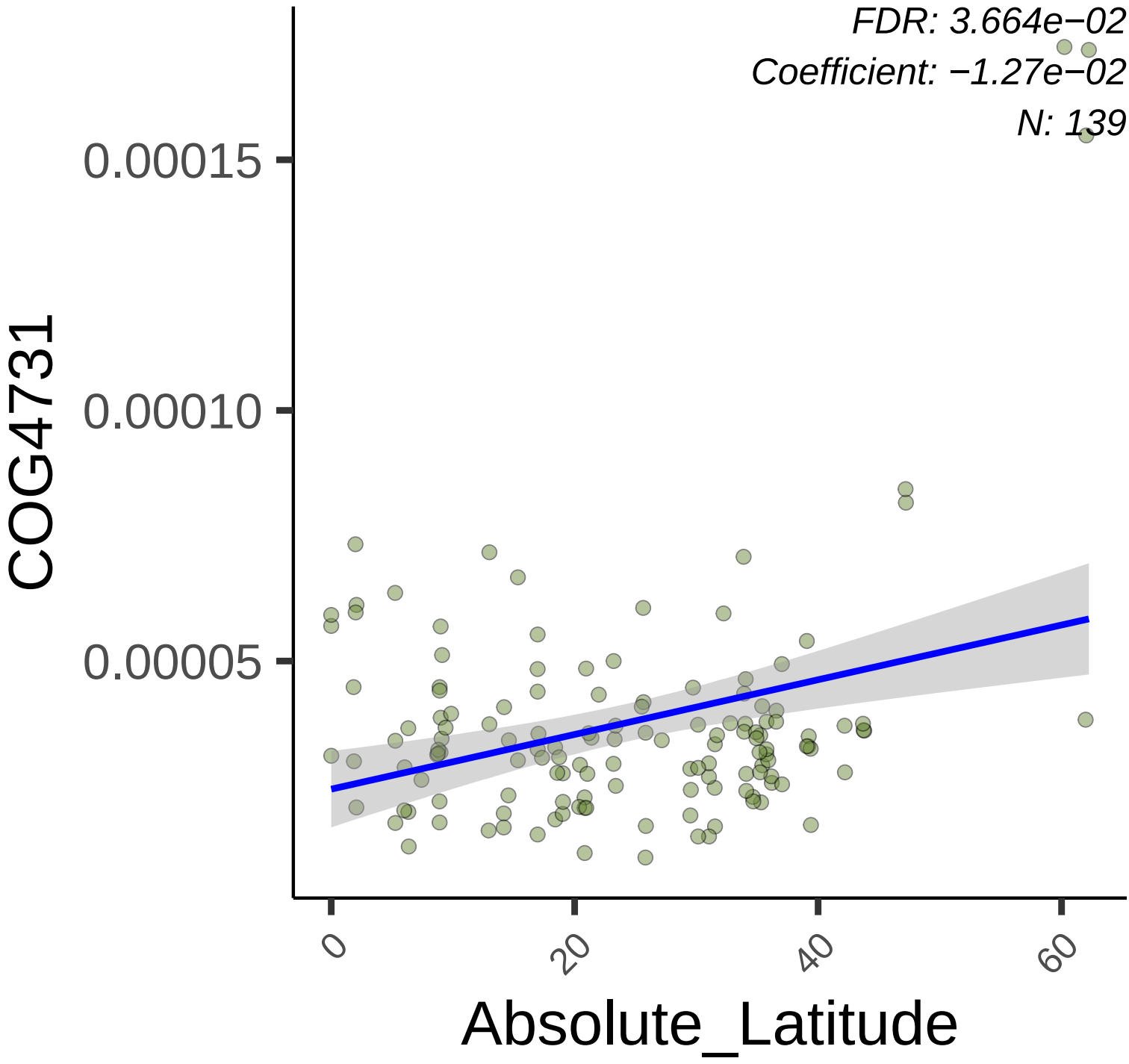

FDR: 3.548e−02
Coefficient: −2.56e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG3093
0
20
40
60
Absolute_Latitude

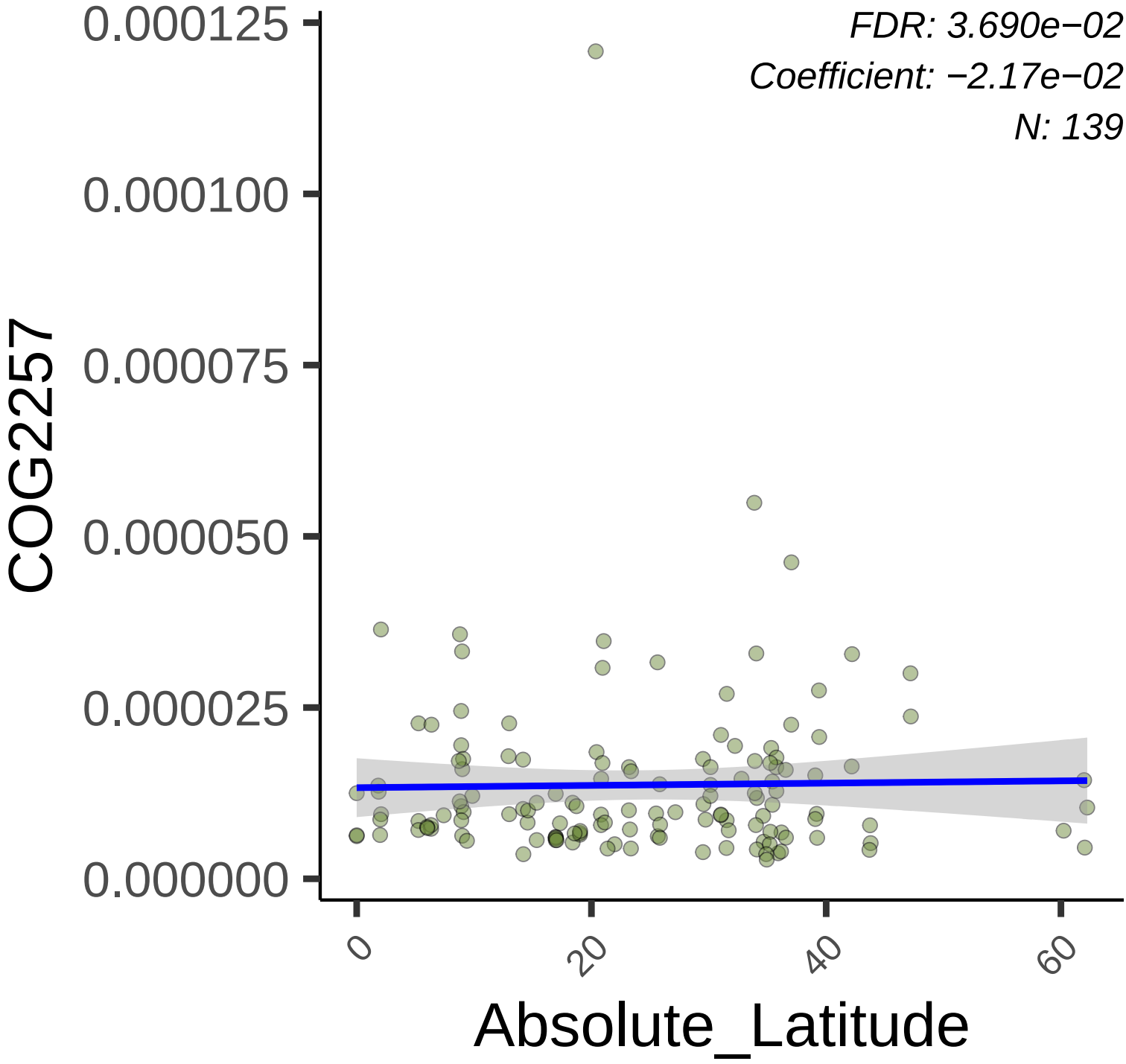

FDR: 3.553e−02
Coefficient: 2.74e−02
N: 139
COG1311
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

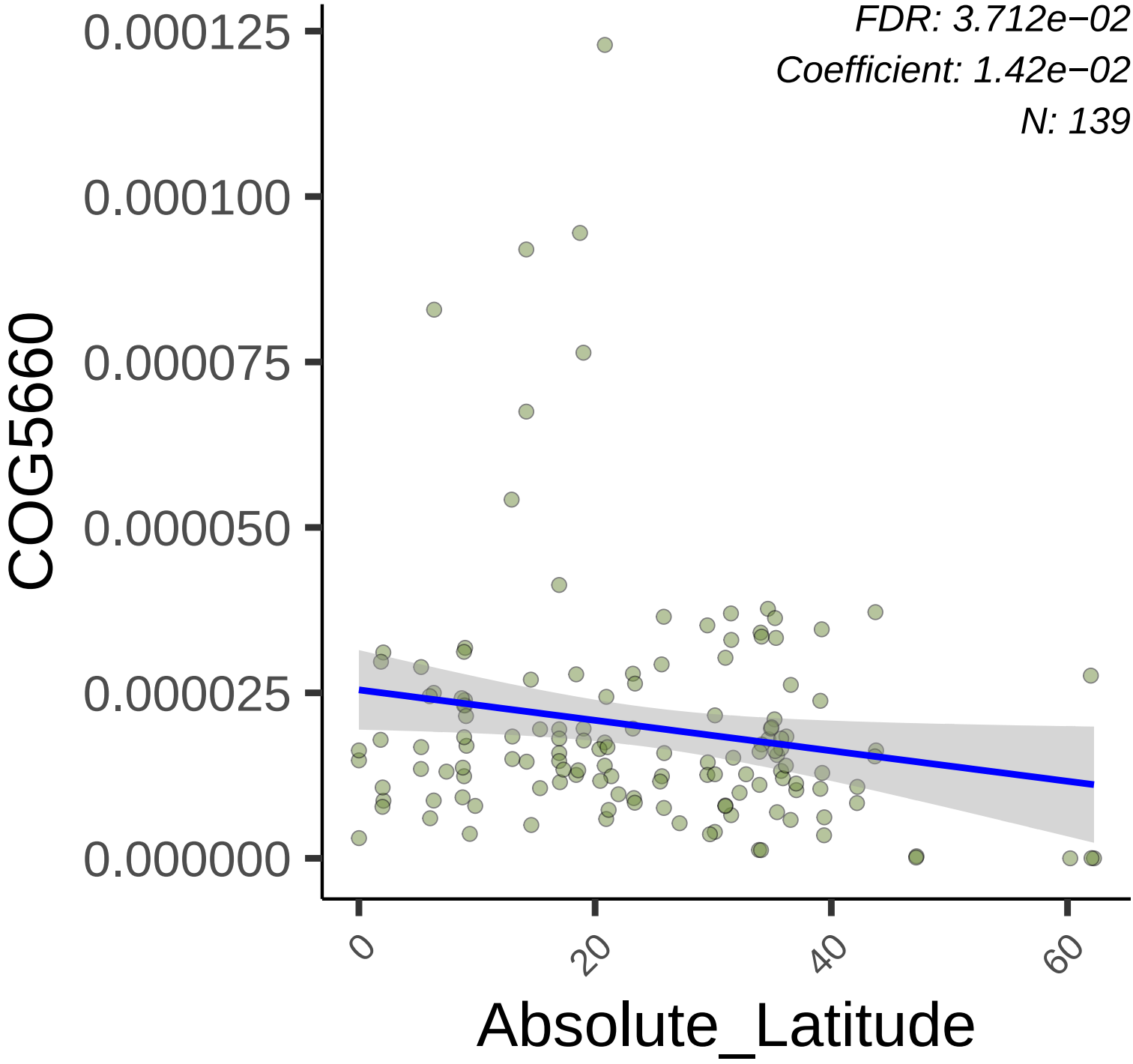

FDR: 3.566e−02
Coefficient: −8.75e−03
N: 139
0.00015
0.00010
0.00005
COG1684
0
20
40
60
Absolute_Latitude

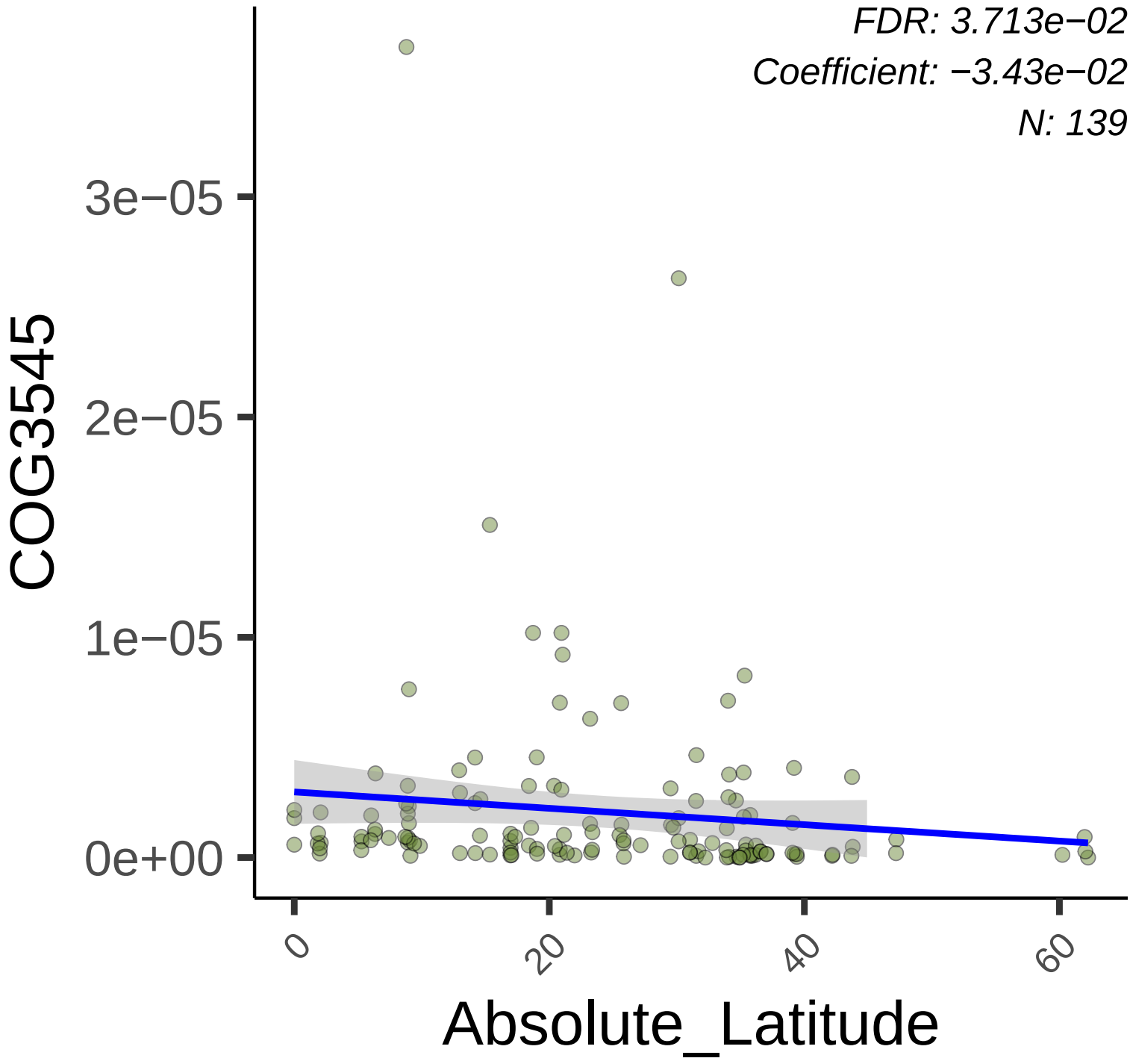

FDR: 3.573e−02
Coefficient: 4.37e−03
N: 139
COG1048
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
0.0005
0
20
40
60
Absolute_Latitude

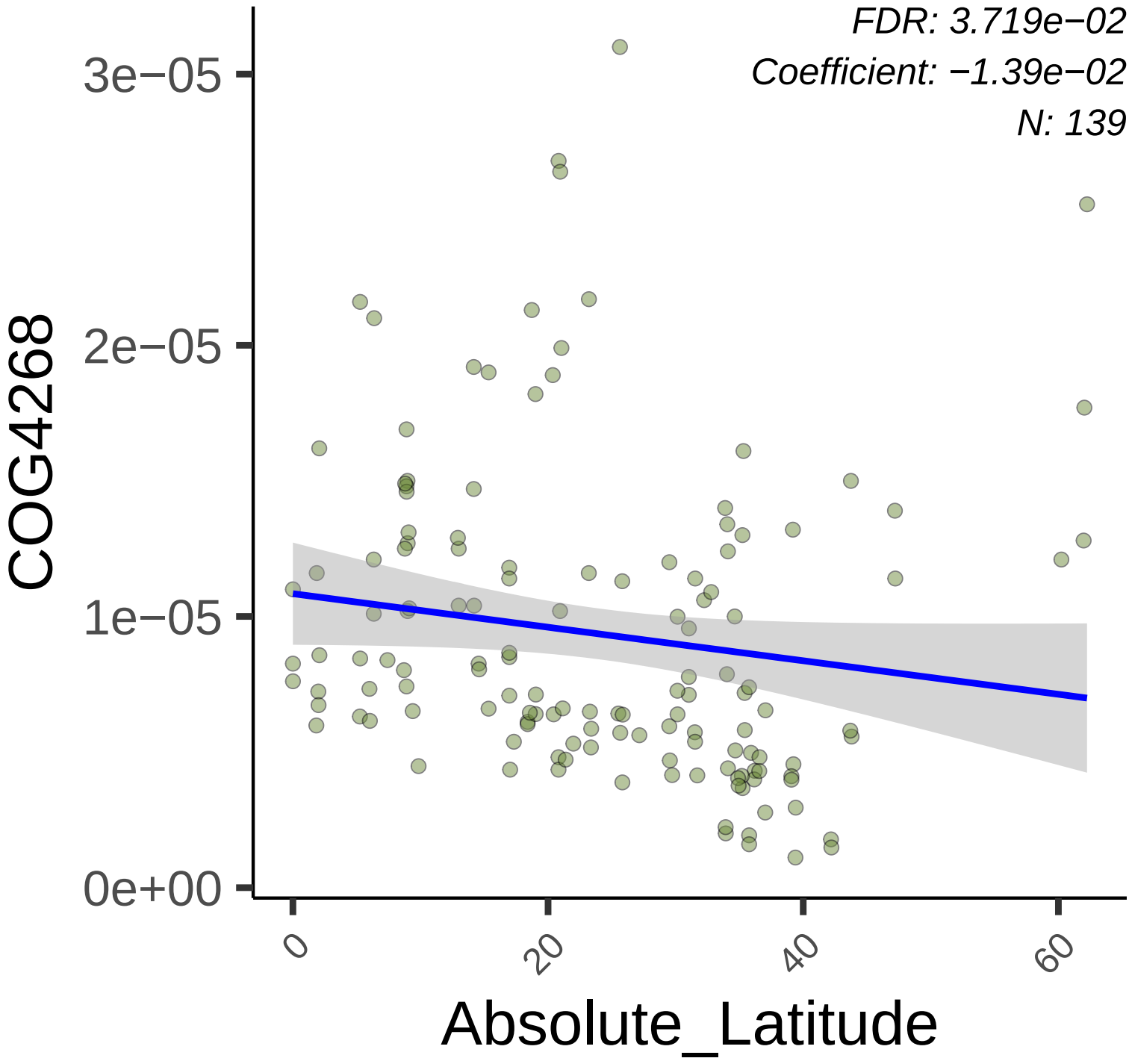

FDR: 3.581e−02
Coefficient: 3.58e−03
N: 139
COG0466
1e−03
8e−04
6e−04
0
20
40
60
Absolute_Latitude

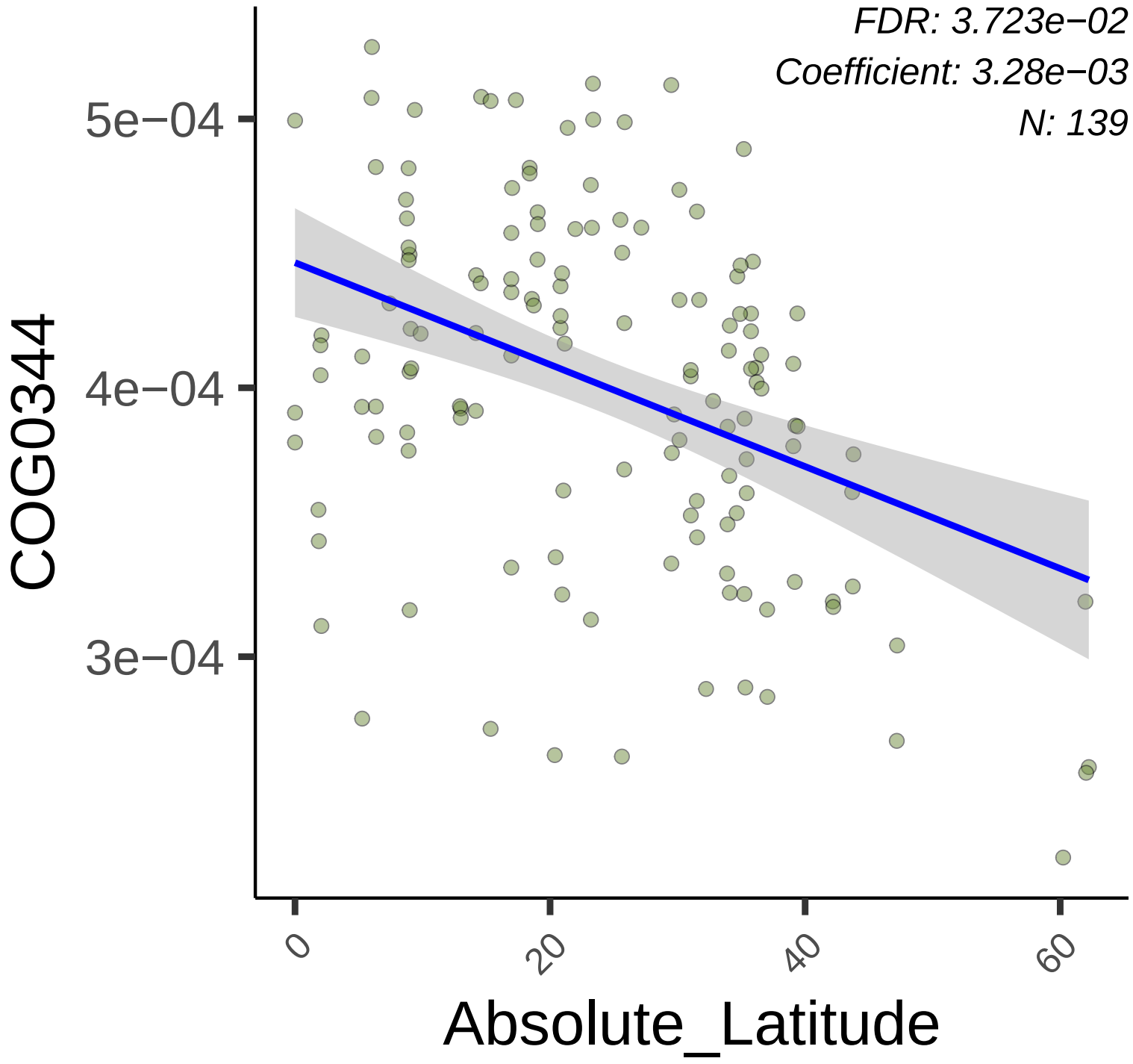

FDR: 3.664e−02
Coefficient: −1.27e−02
N: 139
0.00015
0.00010
0.00005
COG4731
0
20
40
60
Absolute_Latitude

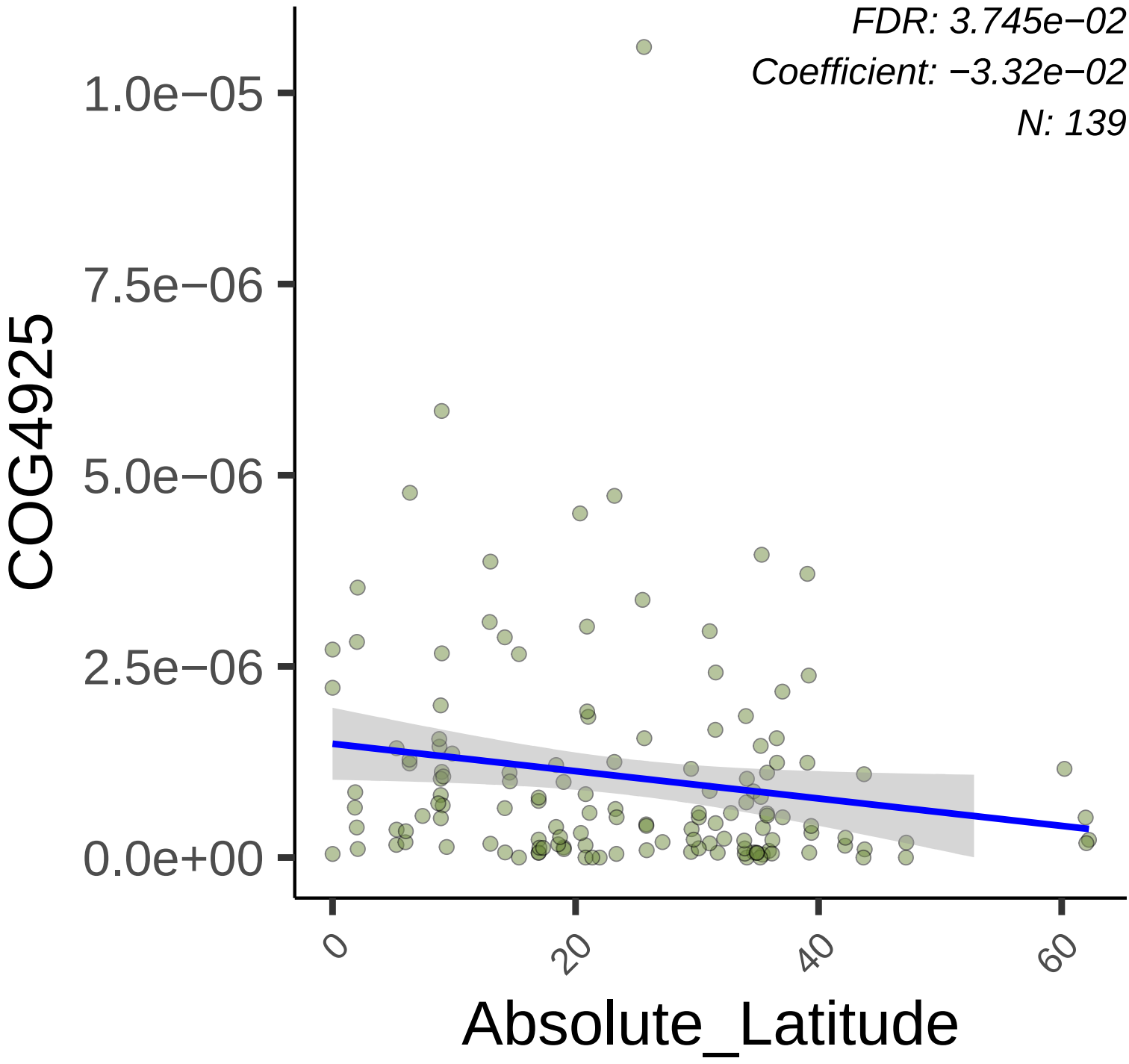

FDR: 3.690e−02
Coefficient: −2.17e−02
N: 139
COG2257
0.000125
0.000100
0.000075
0.000050
0.000025
0.000000
0
20
40
60
Absolute_Latitude

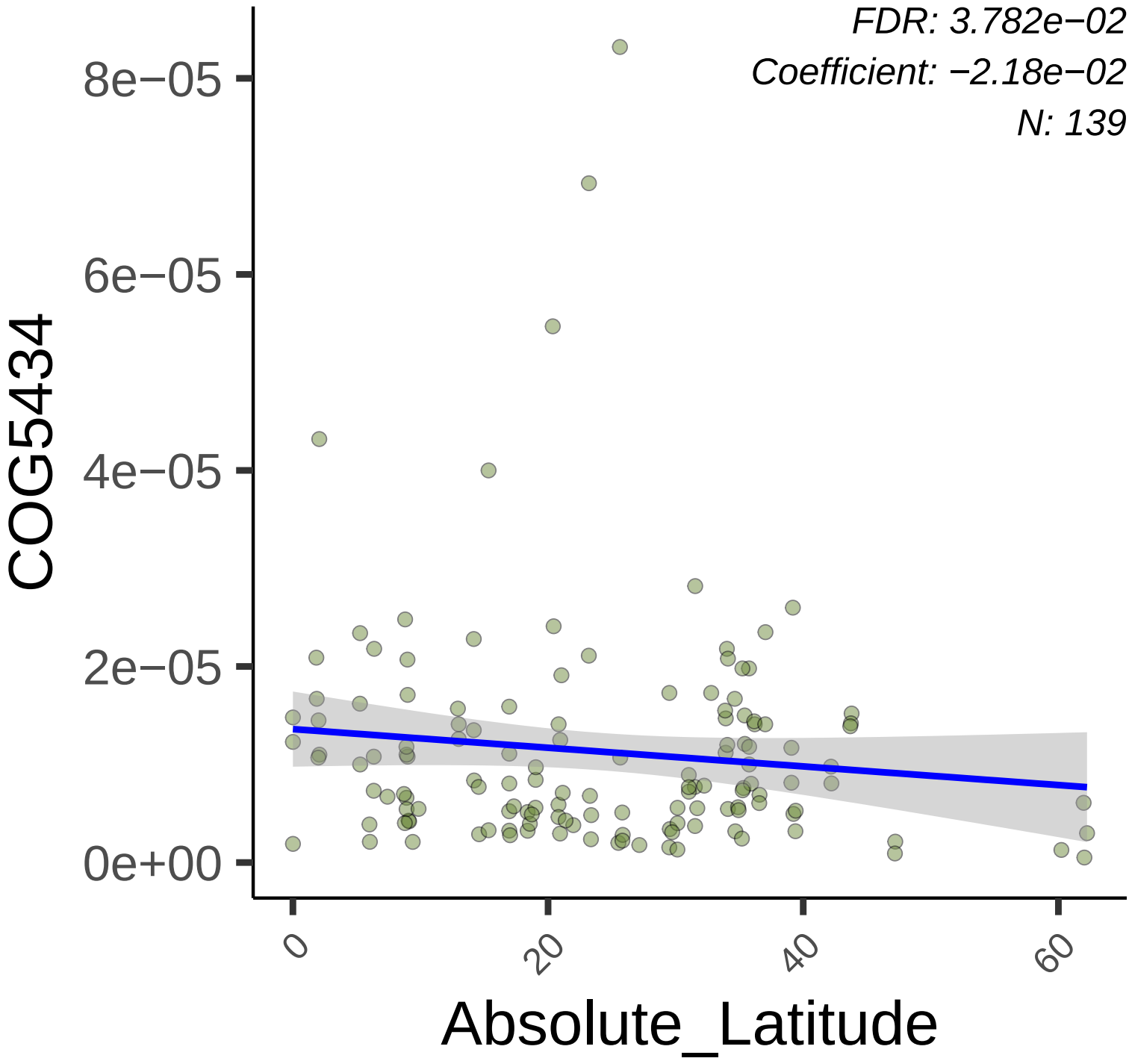

FDR: 3.712e−02
Coefficient: 1.42e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
0.000000
COG5660
0
20
40
60
Absolute_Latitude

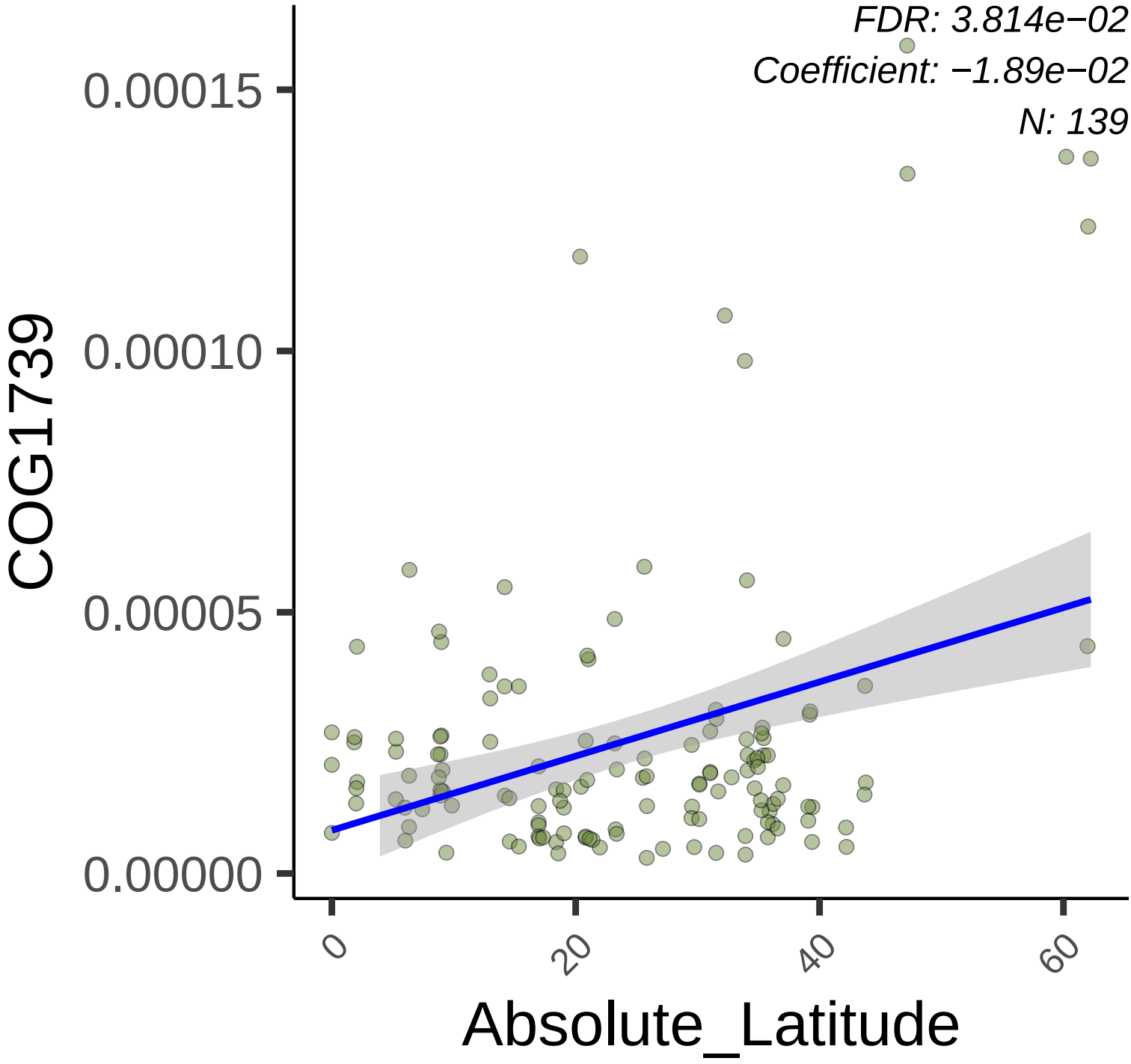

FDR: 3.713e−02
Coefficient: −3.43e−02
N: 139
COG3545
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

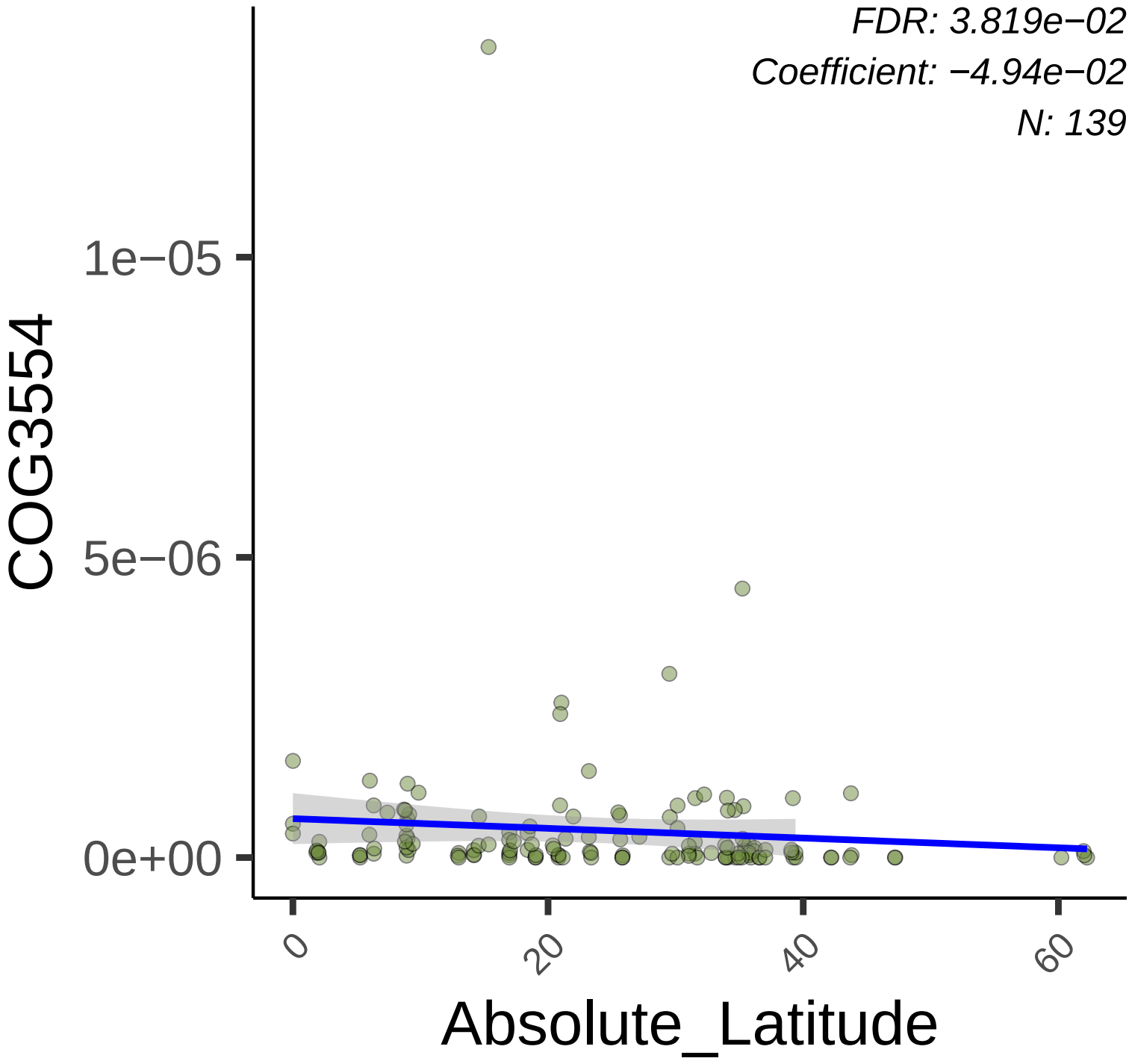

FDR: 3.719e−02
Coefficient: −1.39e−02
N: 139
COG4268
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

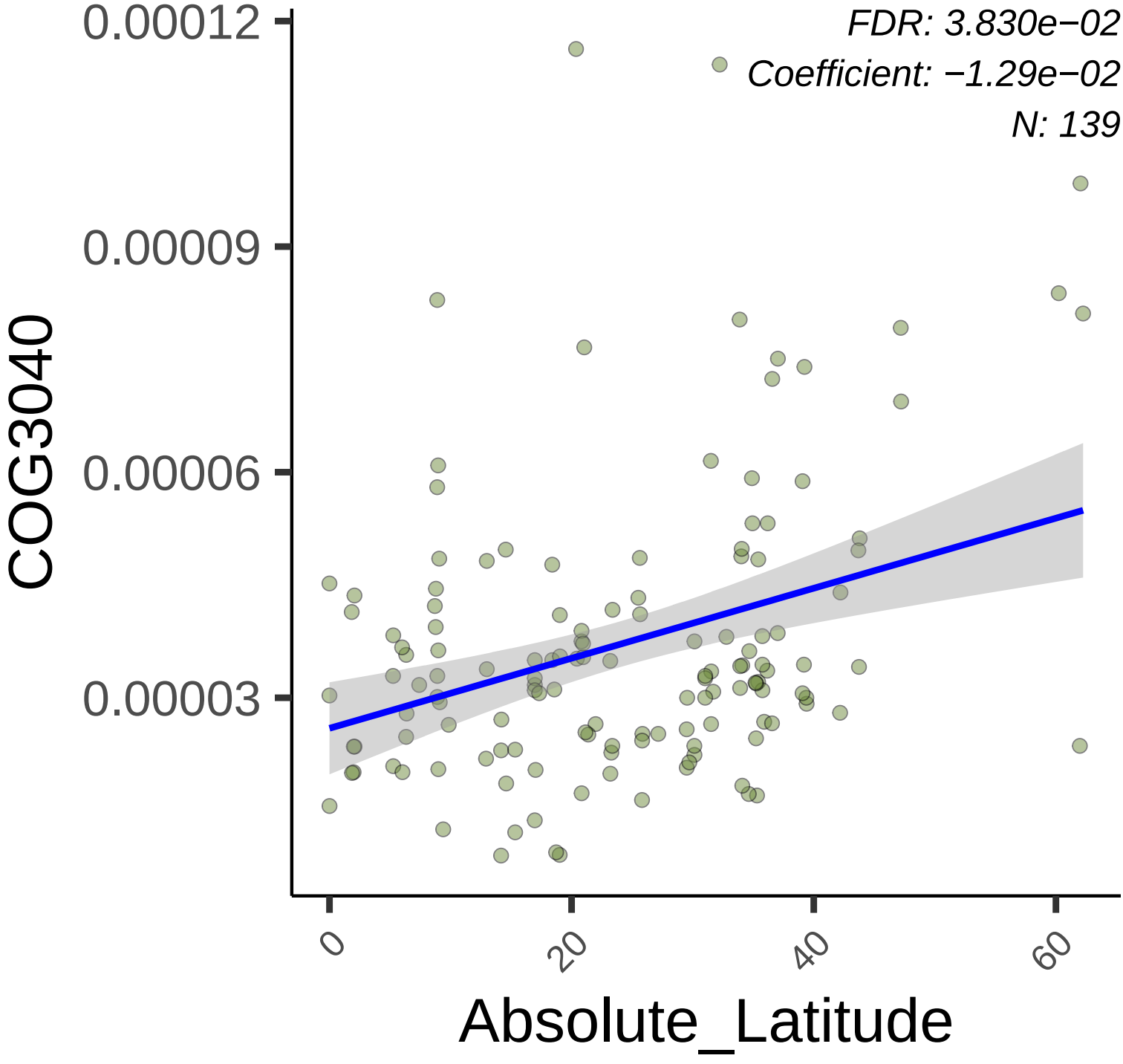

FDR: 3.723e−02
Coefficient: 3.28e−03
N: 139
5e−04
4e−04
3e−04
COG0344
0
20
40
60
Absolute_Latitude

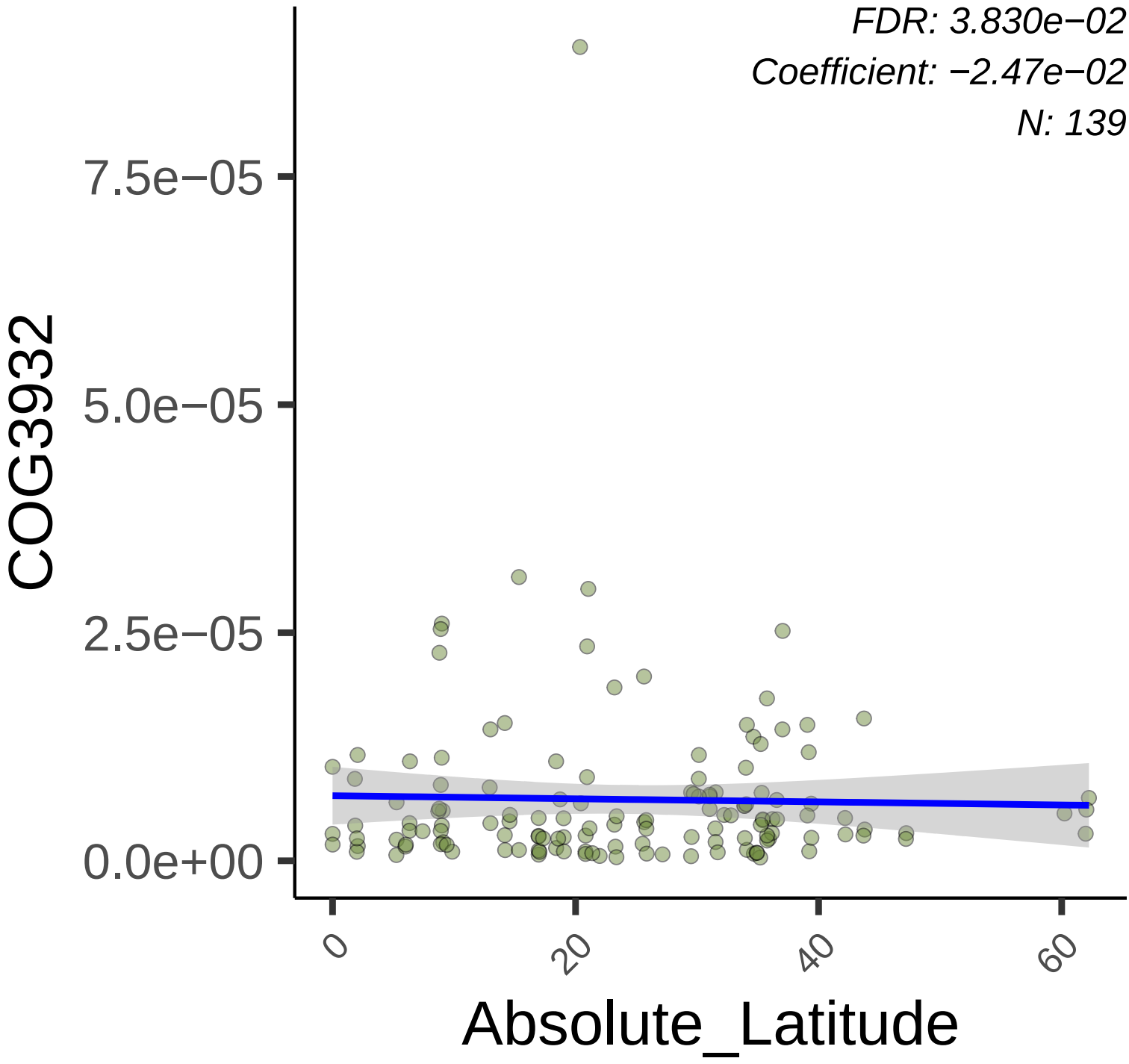

FDR: 3.745e−02
Coefficient: −3.32e−02
N: 139
COG4925
1.0e−05
7.5e−06
5.0e−06
2.5e−06
0.0e+00
0
20
40
60
Absolute_Latitude

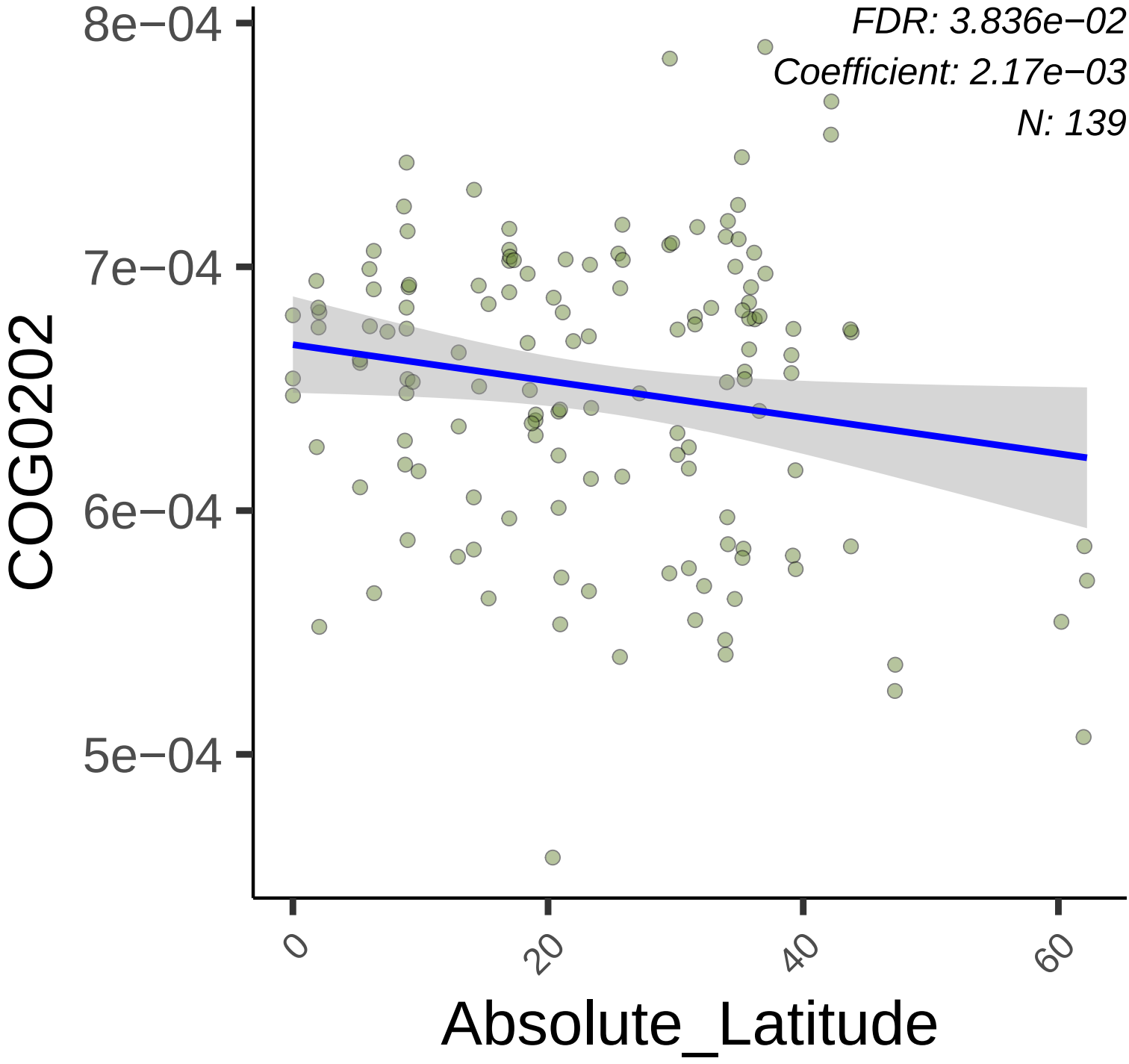

FDR: 3.782e−02
Coefficient: −2.18e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG5434
0
20
40
60
Absolute_Latitude

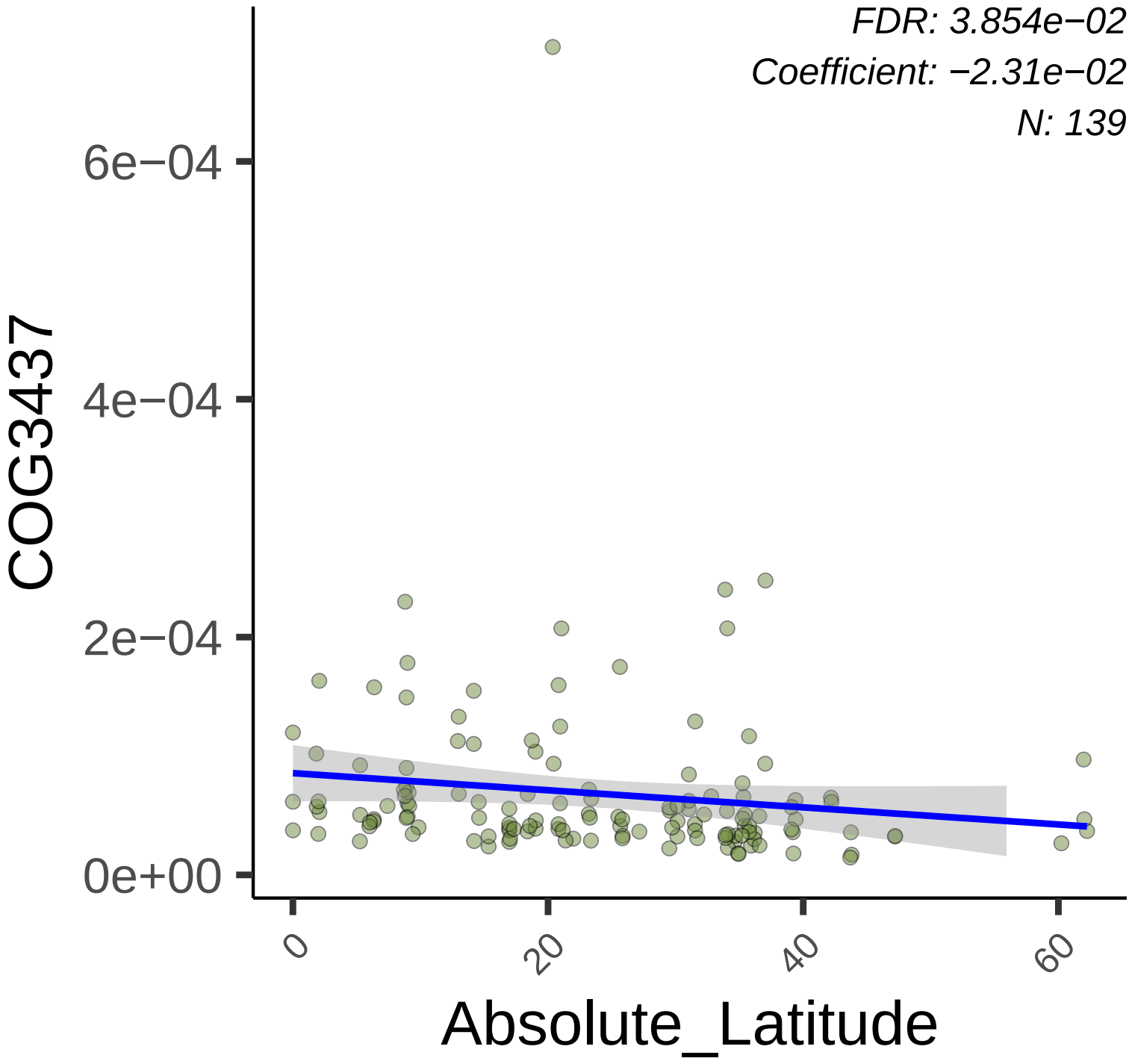

FDR: 3.814e−02
Coefficient: −1.89e−02
N: 139
COG1739
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

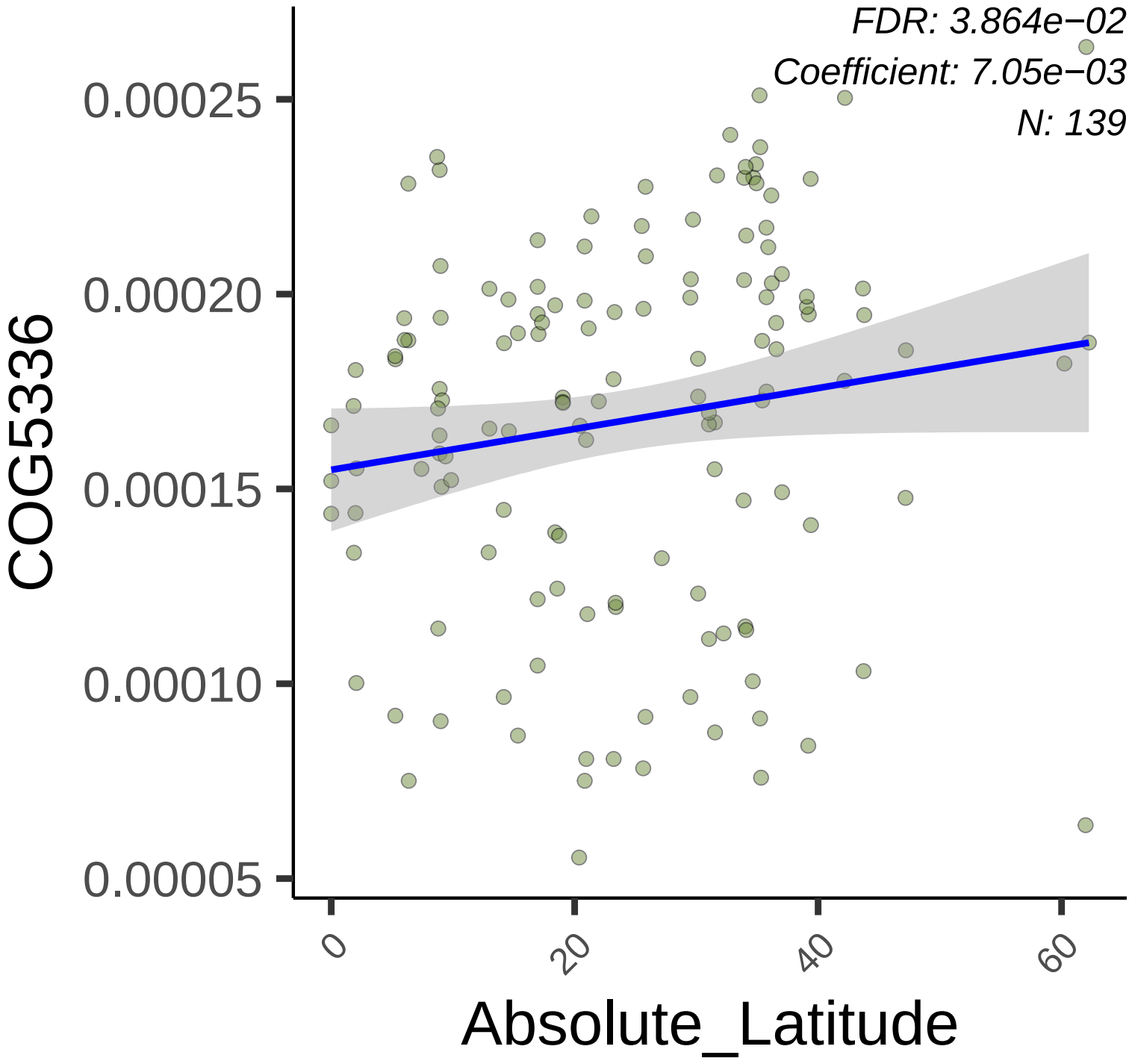

FDR: 3.819e−02
Coefficient: −4.94e−02
N: 139
COG3554
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

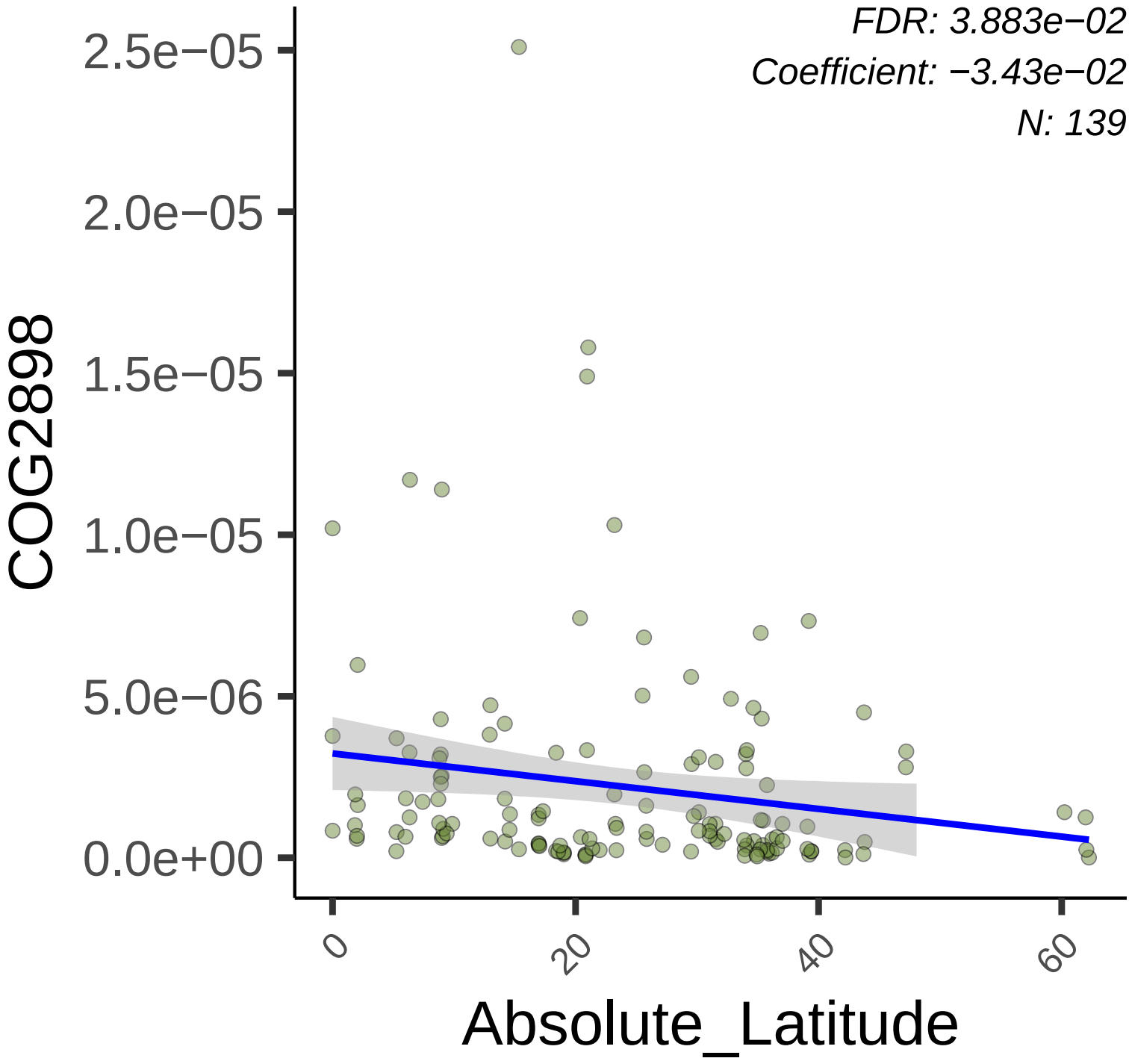

FDR: 3.830e−02
Coefficient: −1.29e−02
N: 139
0.00012
0.00009
0.00006
0.00003
COG3040
0
20
40
60
Absolute_Latitude

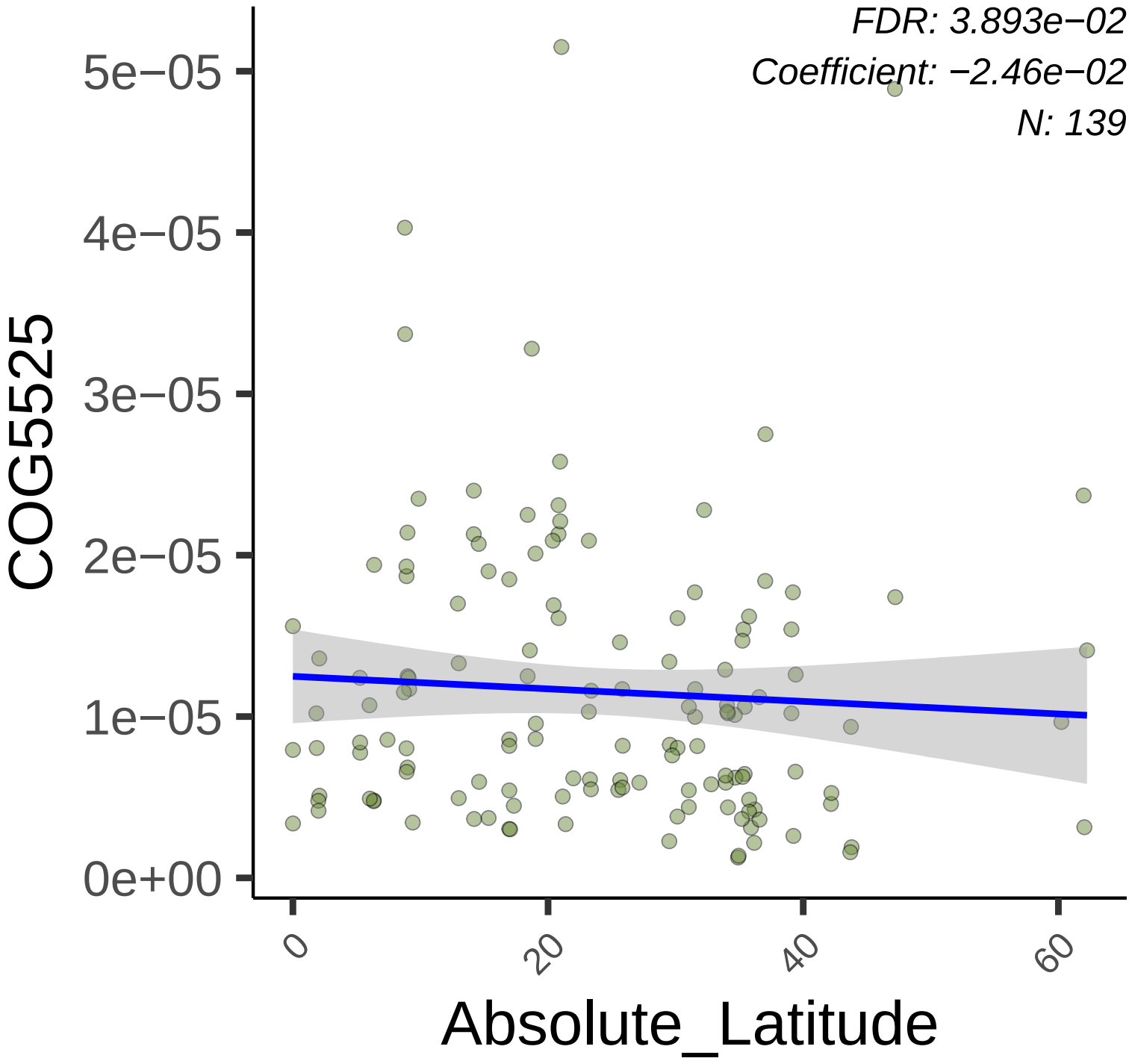

FDR: 3.830e−02
Coefficient: −2.47e−02
N: 139
COG3932
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

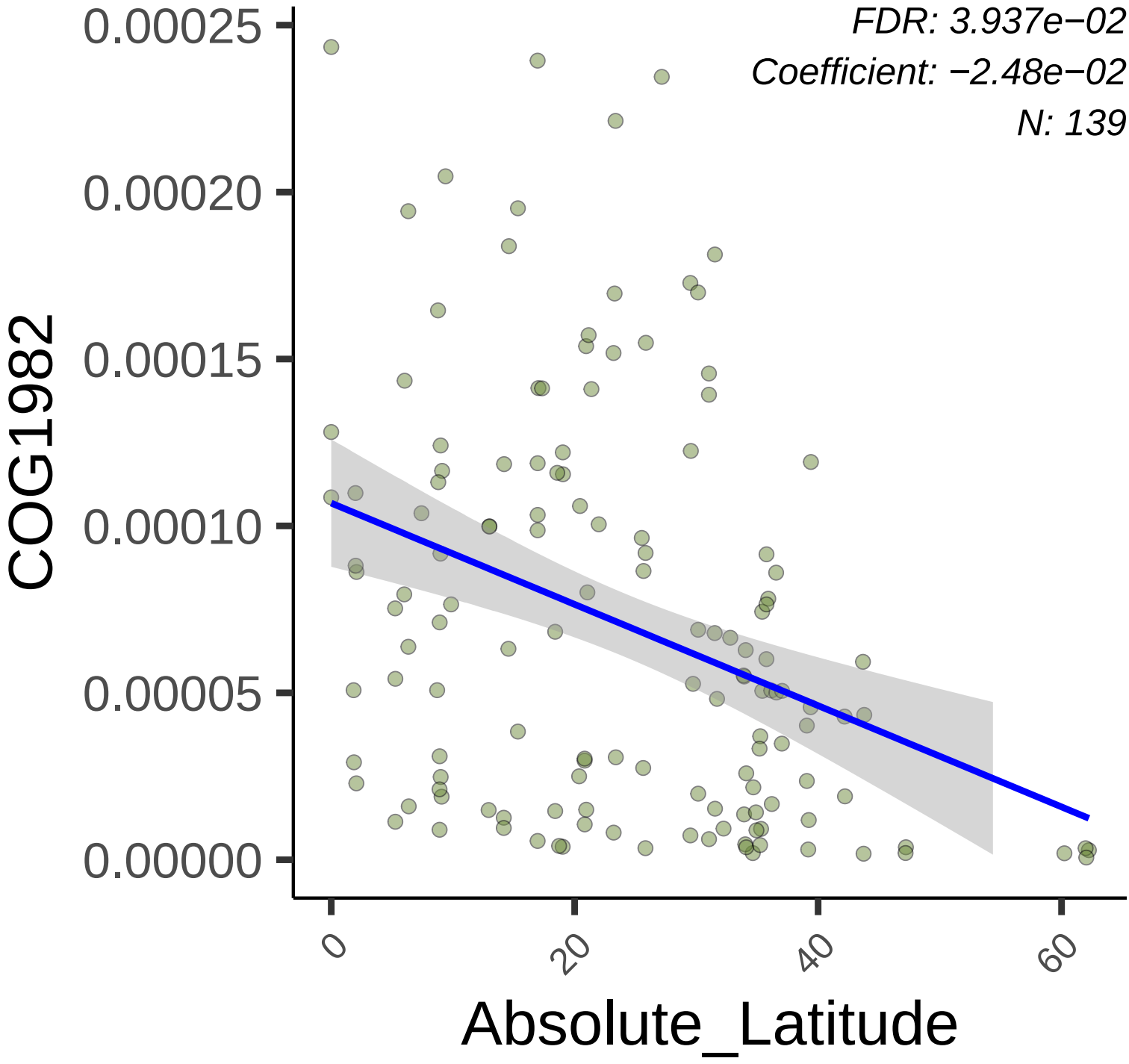

FDR: 3.836e−02
Coefficient: 2.17e−03
N: 139
8e−04
7e−04
6e−04
5e−04
COG0202
0
20
40
60
Absolute_Latitude

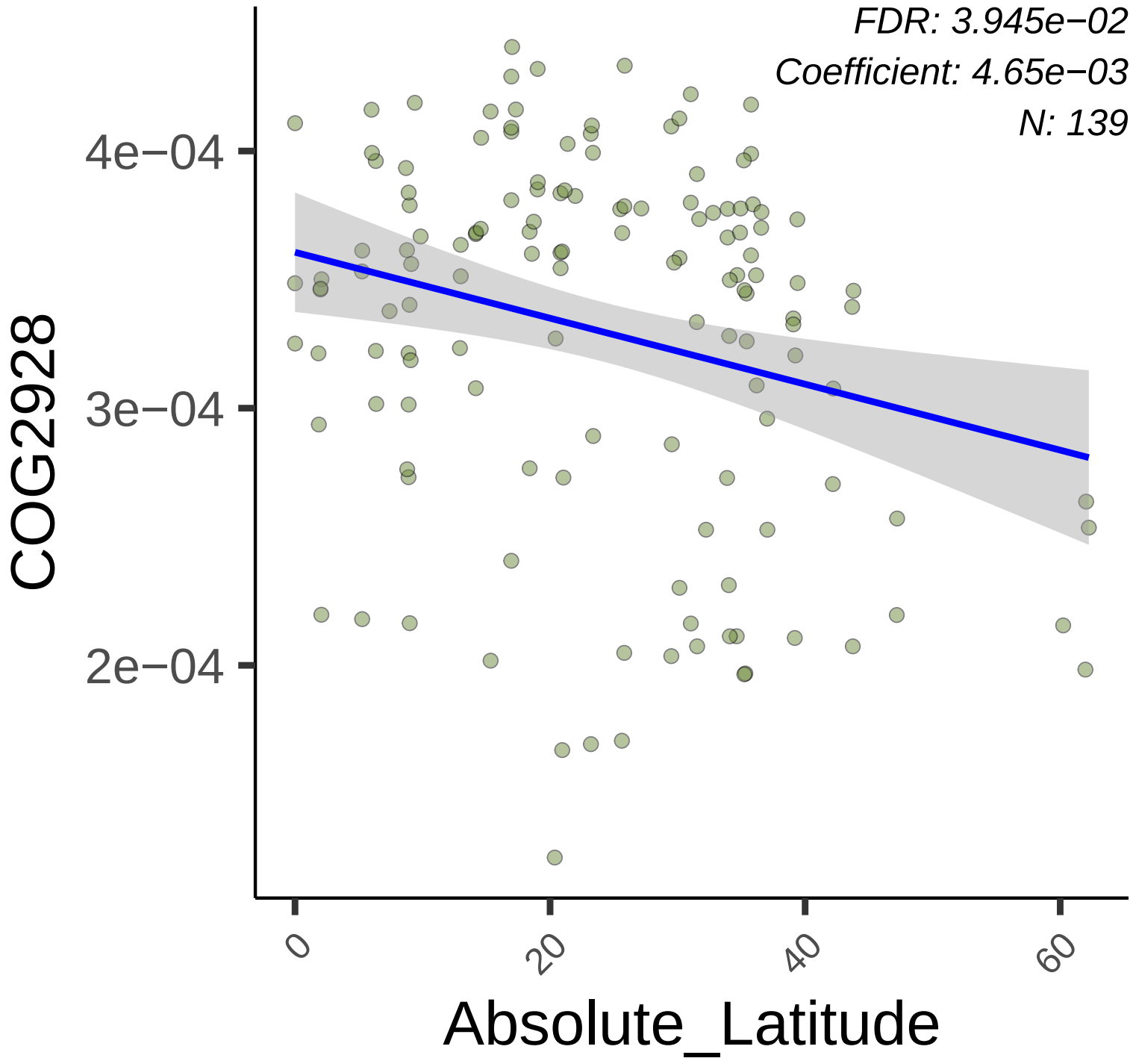

FDR: 3.854e−02
Coefficient: −2.31e−02
N: 139
COG3437
6e−04
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

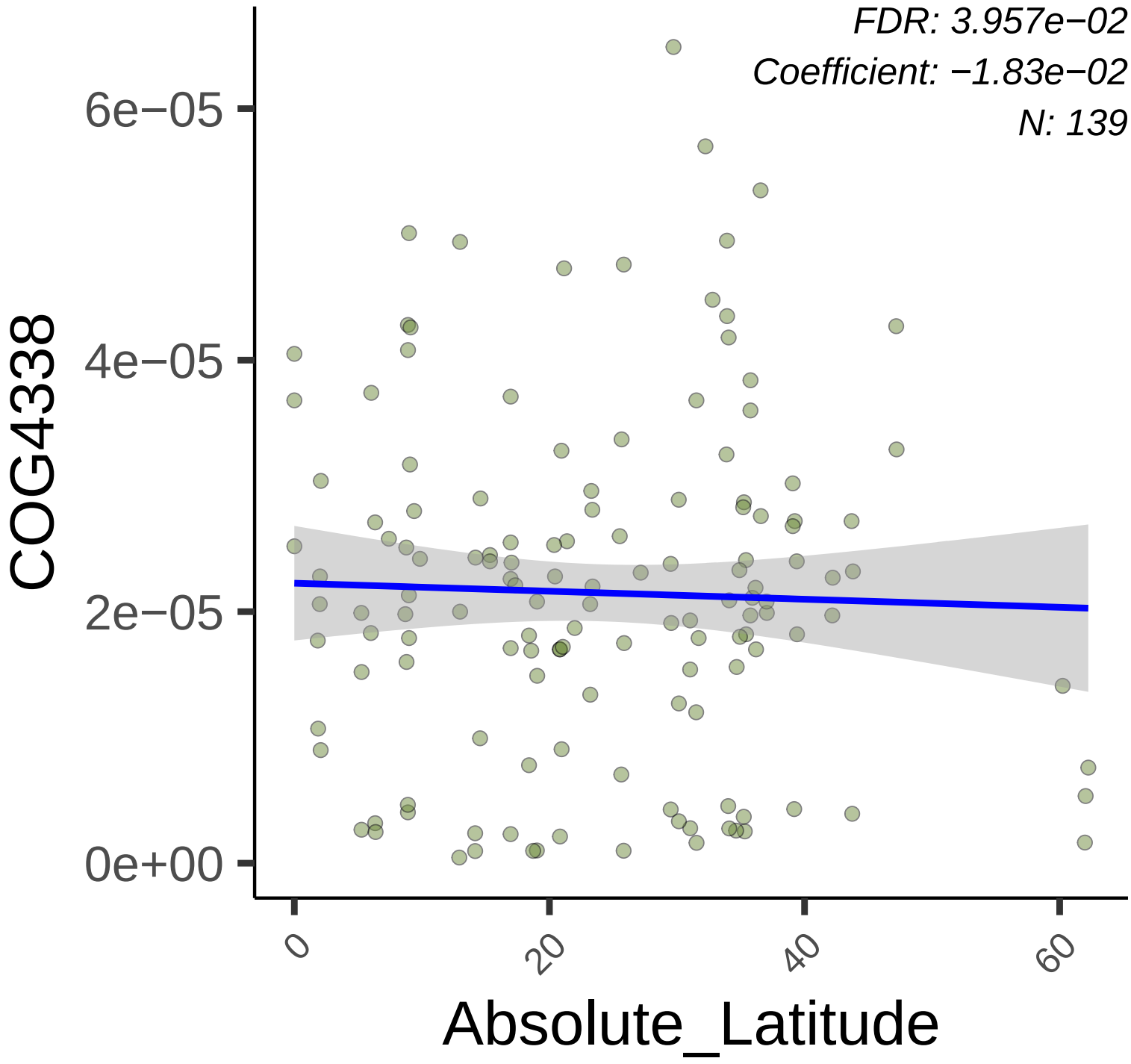

FDR: 3.864e−02
Coefficient: 7.05e−03
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG5336
0
20
40
60
Absolute_Latitude

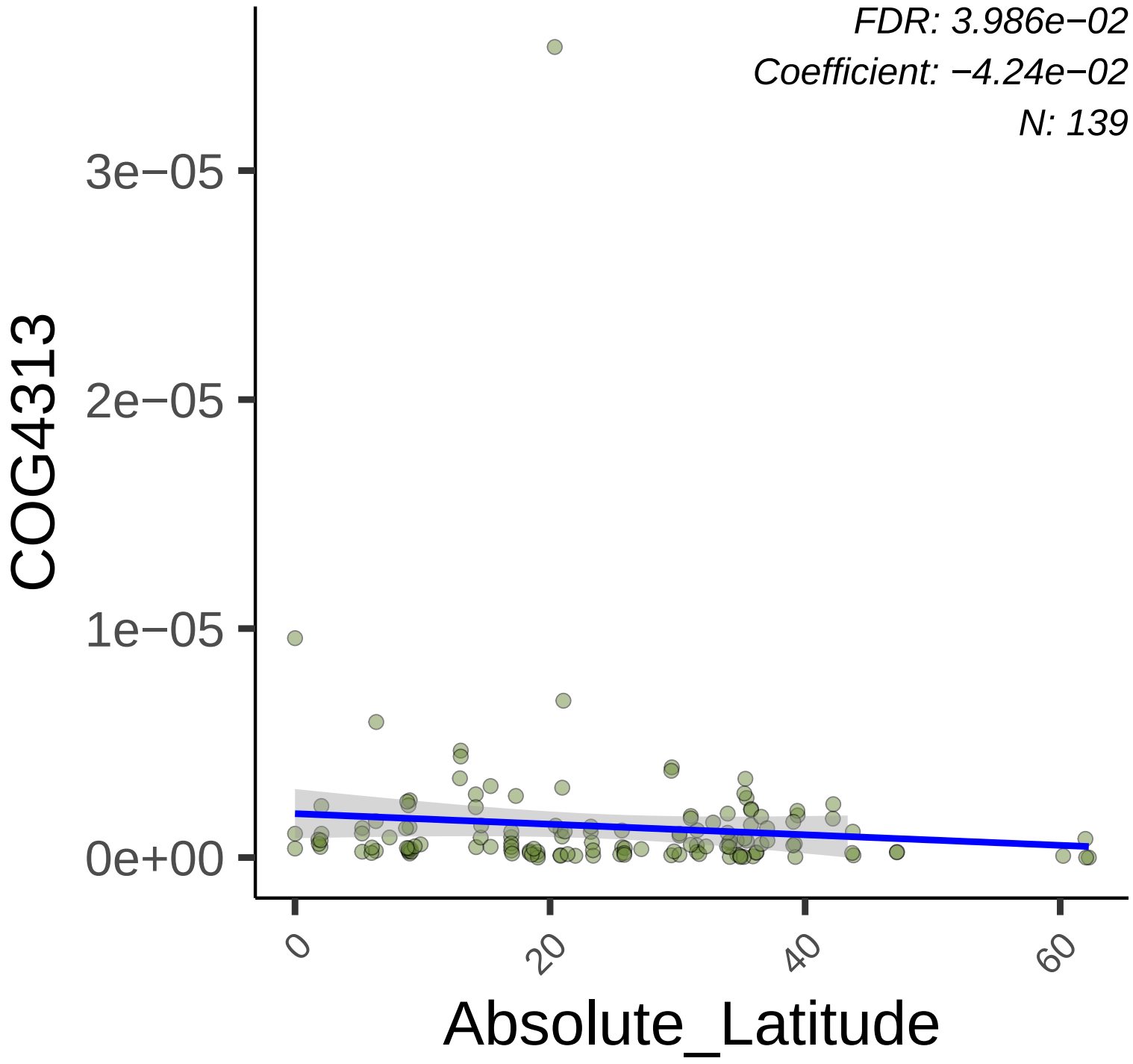

FDR: 3.883e−02
Coefficient: −3.43e−02
N: 139
COG2898
2.5e−05
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

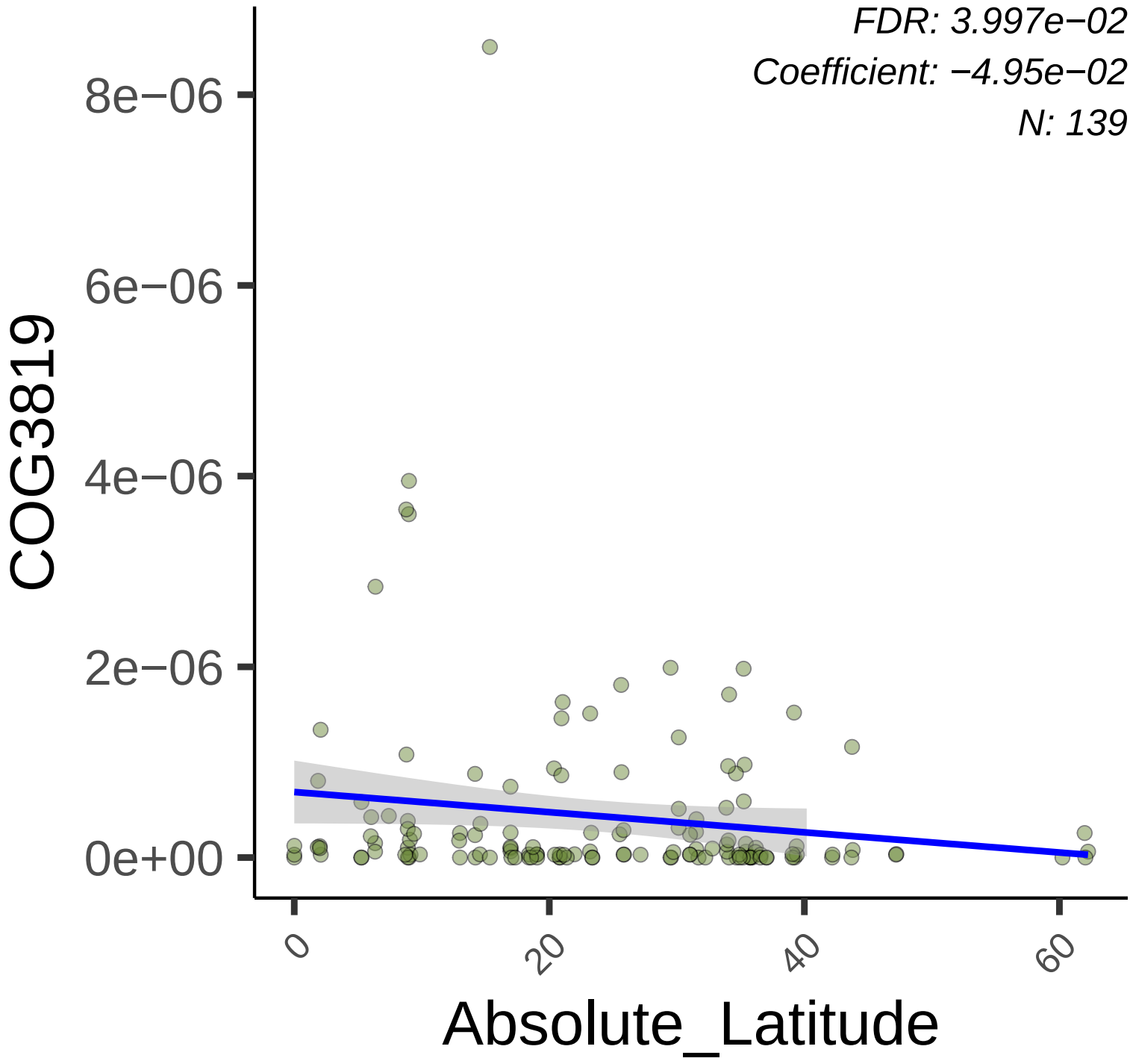

FDR: 3.893e−02
Coefficient: −2.46e−02
N: 139
COG5525
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

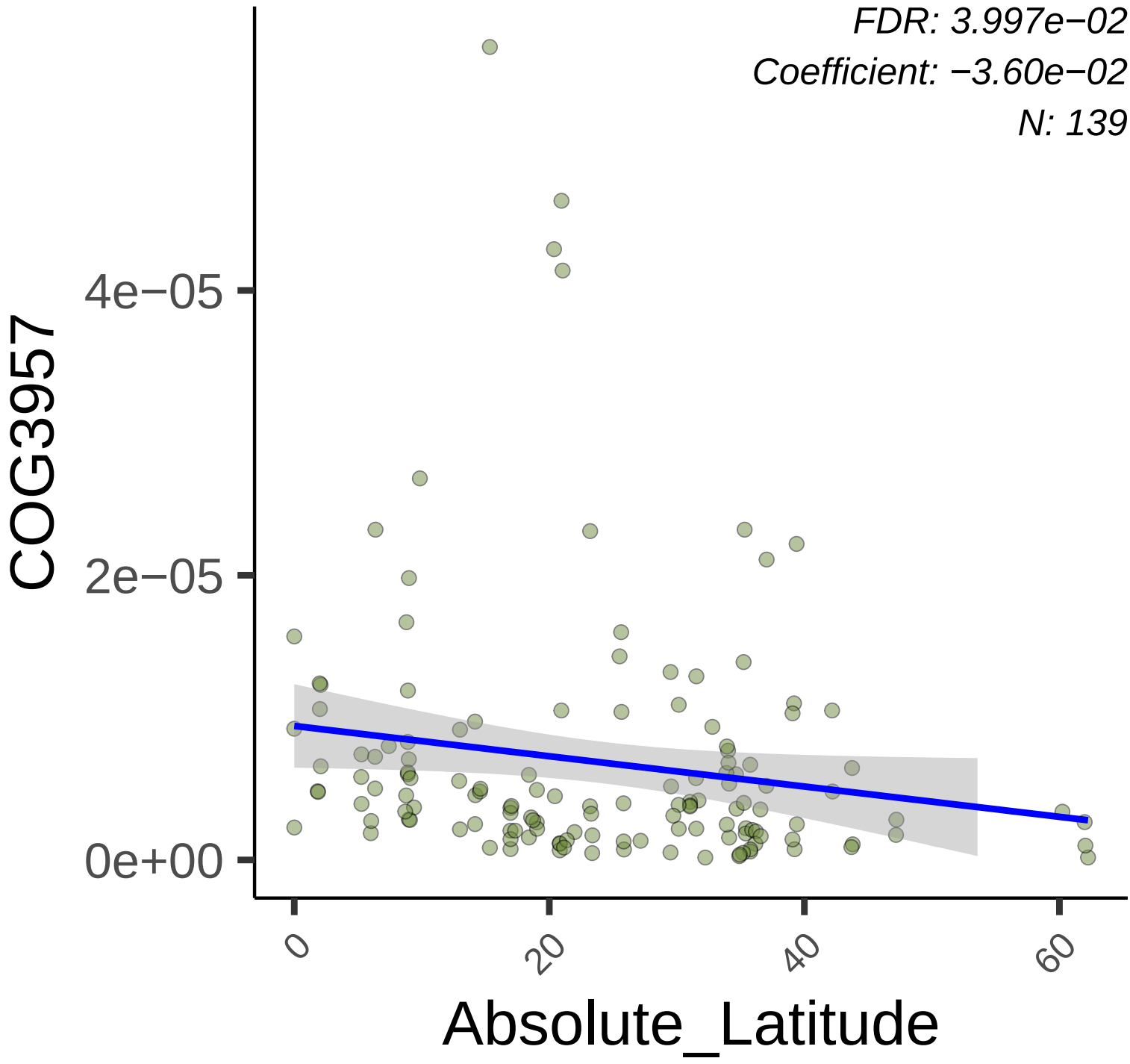

FDR: 3.937e−02
Coefficient: −2.48e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
COG1982
0
20
40
60
Absolute_Latitude

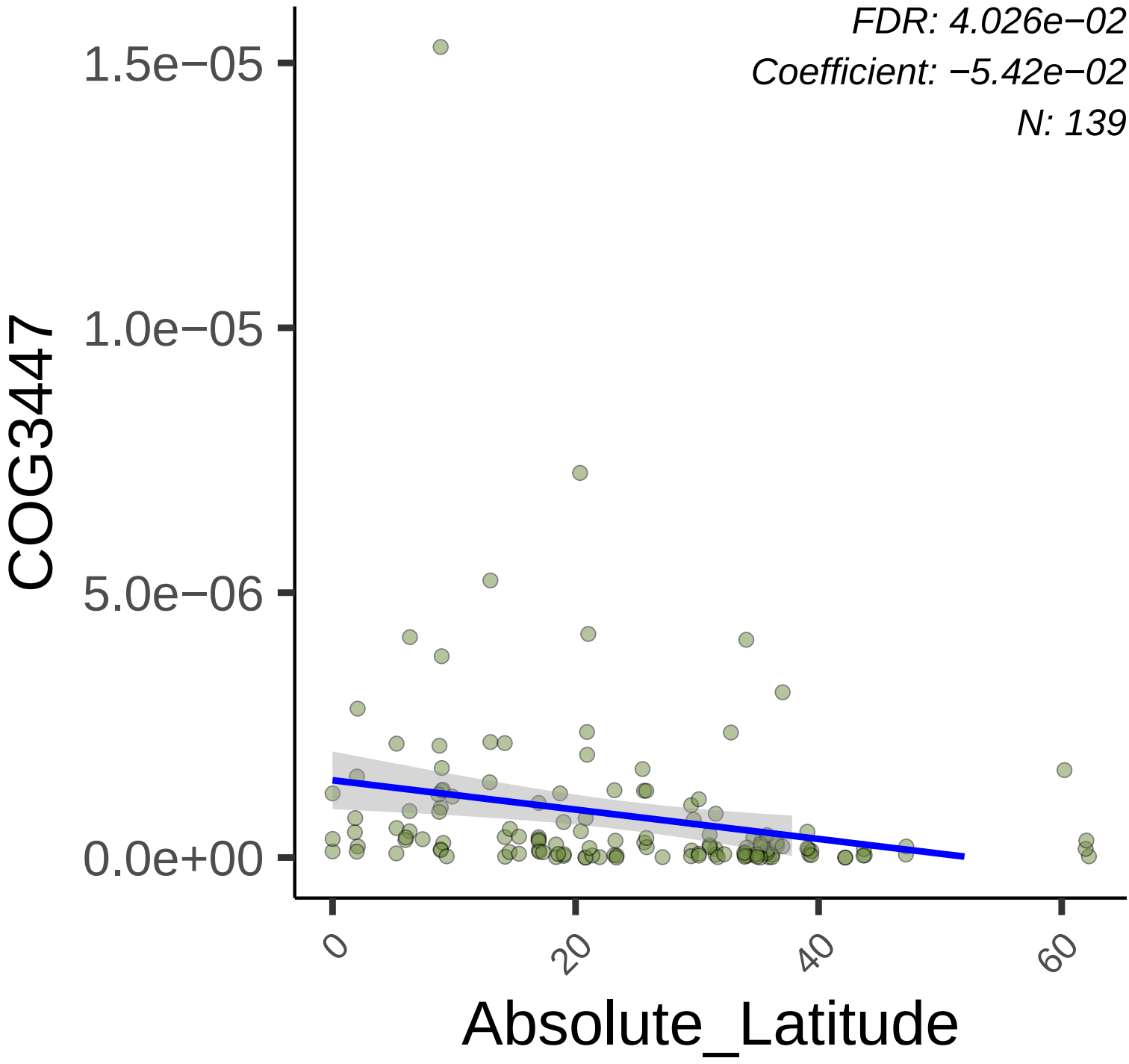

FDR: 3.945e−02
Coefficient: 4.65e−03
N: 139
4e−04
3e−04
2e−04
COG2928
0
20
40
60
Absolute_Latitude

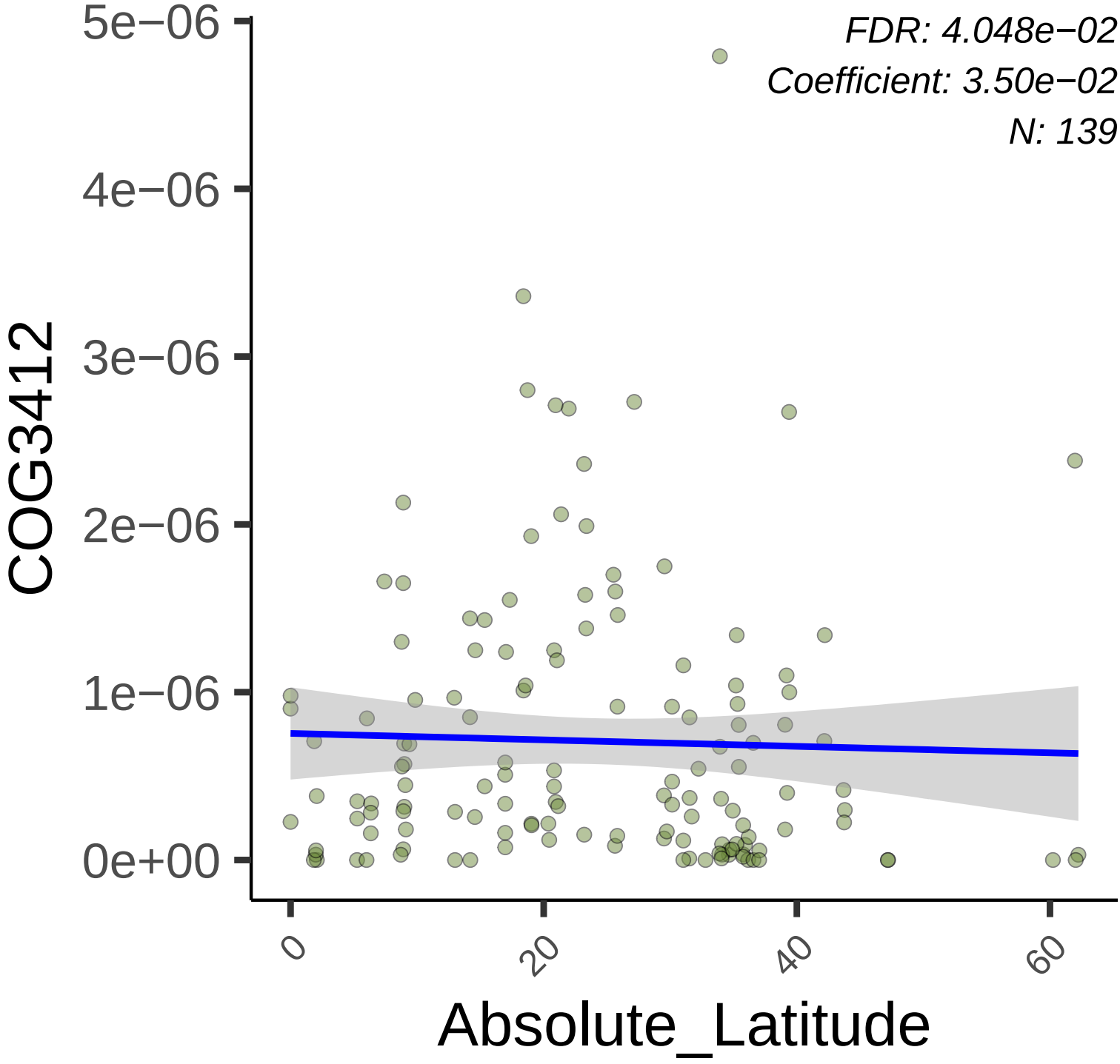

FDR: 3.957e−02
Coefficient: −1.83e−02
N: 139
COG4338
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

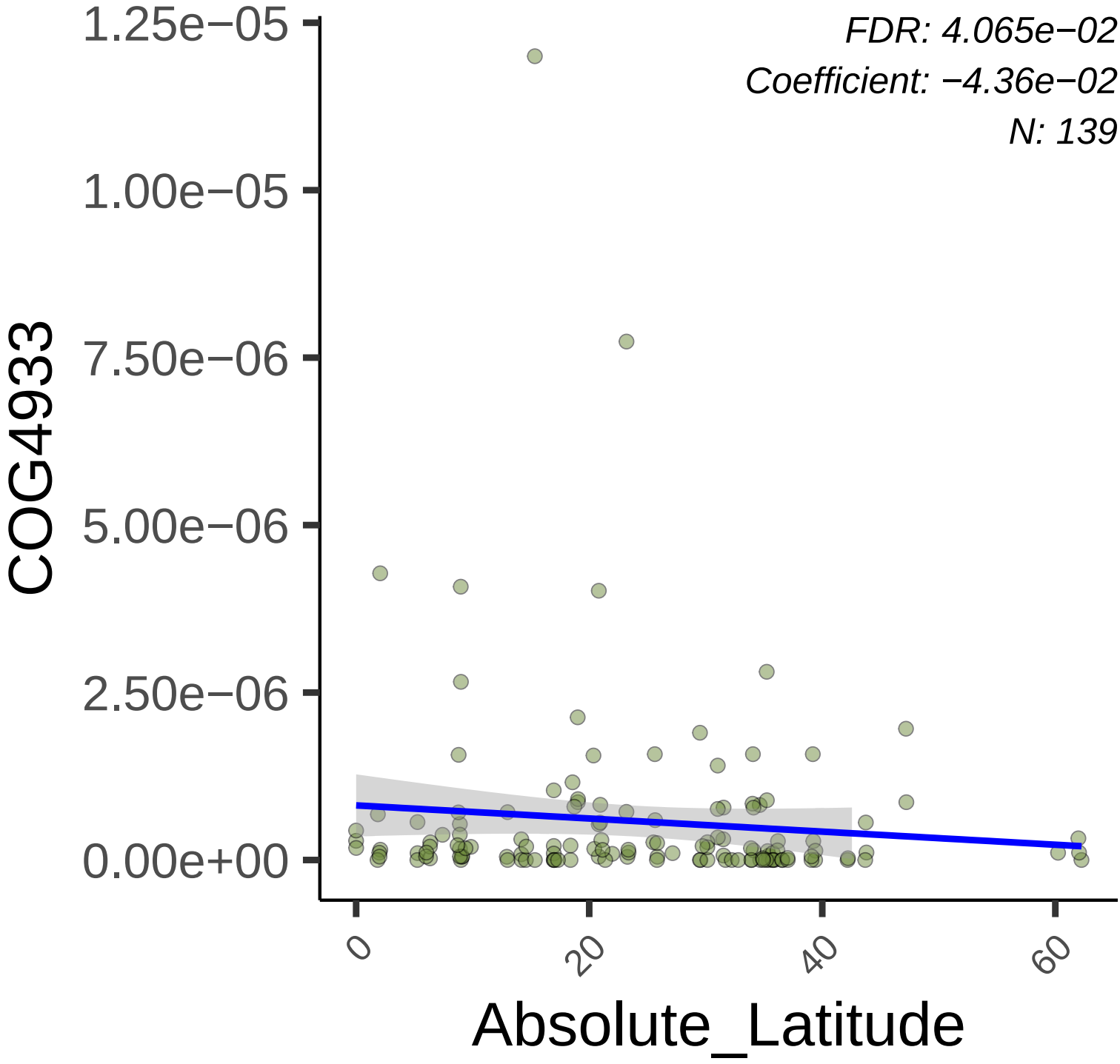

FDR: 3.986e−02
Coefficient: −4.24e−02
N: 139
COG4313
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

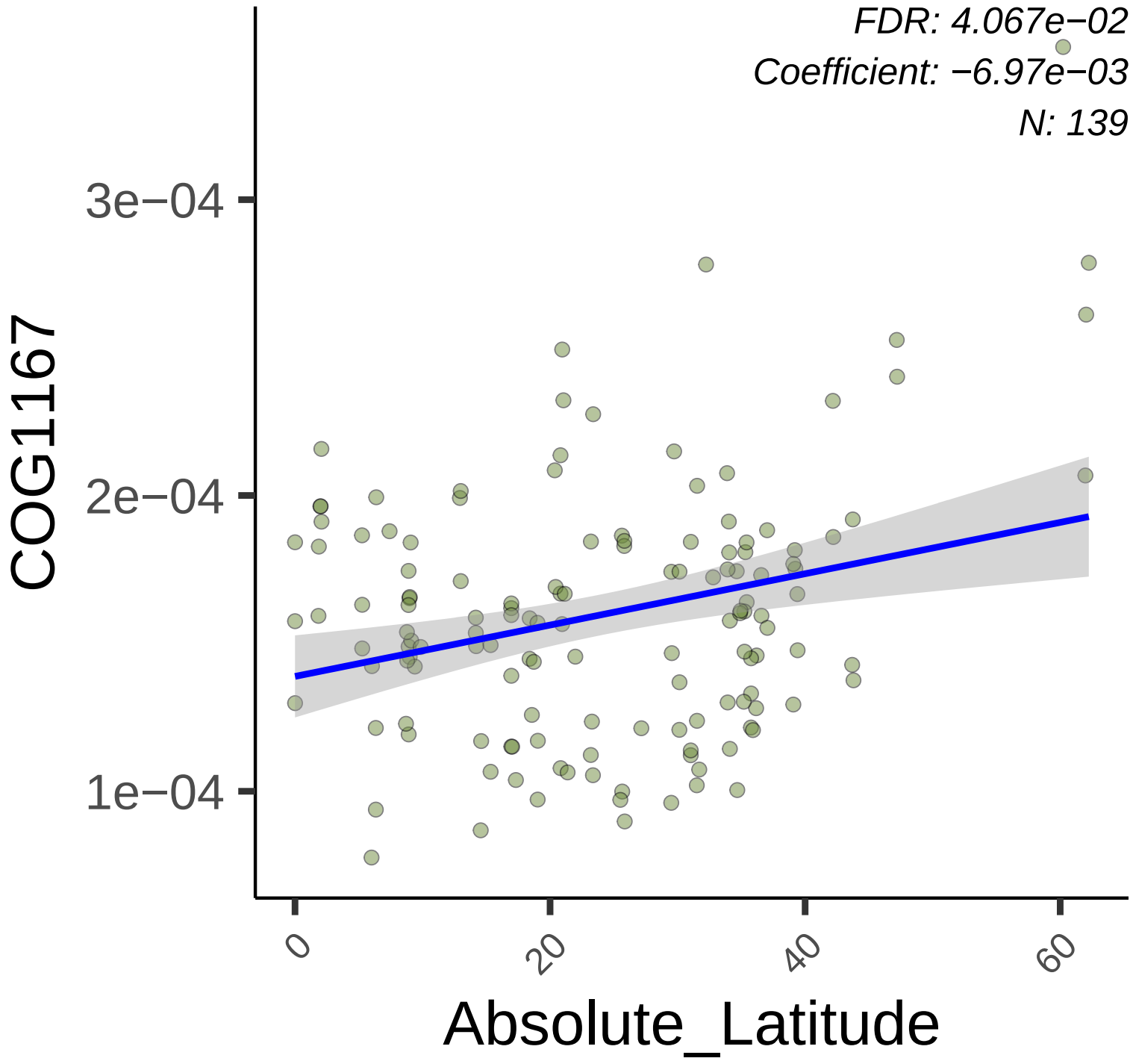

FDR: 3.997e−02
Coefficient: −4.95e−02
N: 139
COG3819
8e−06
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

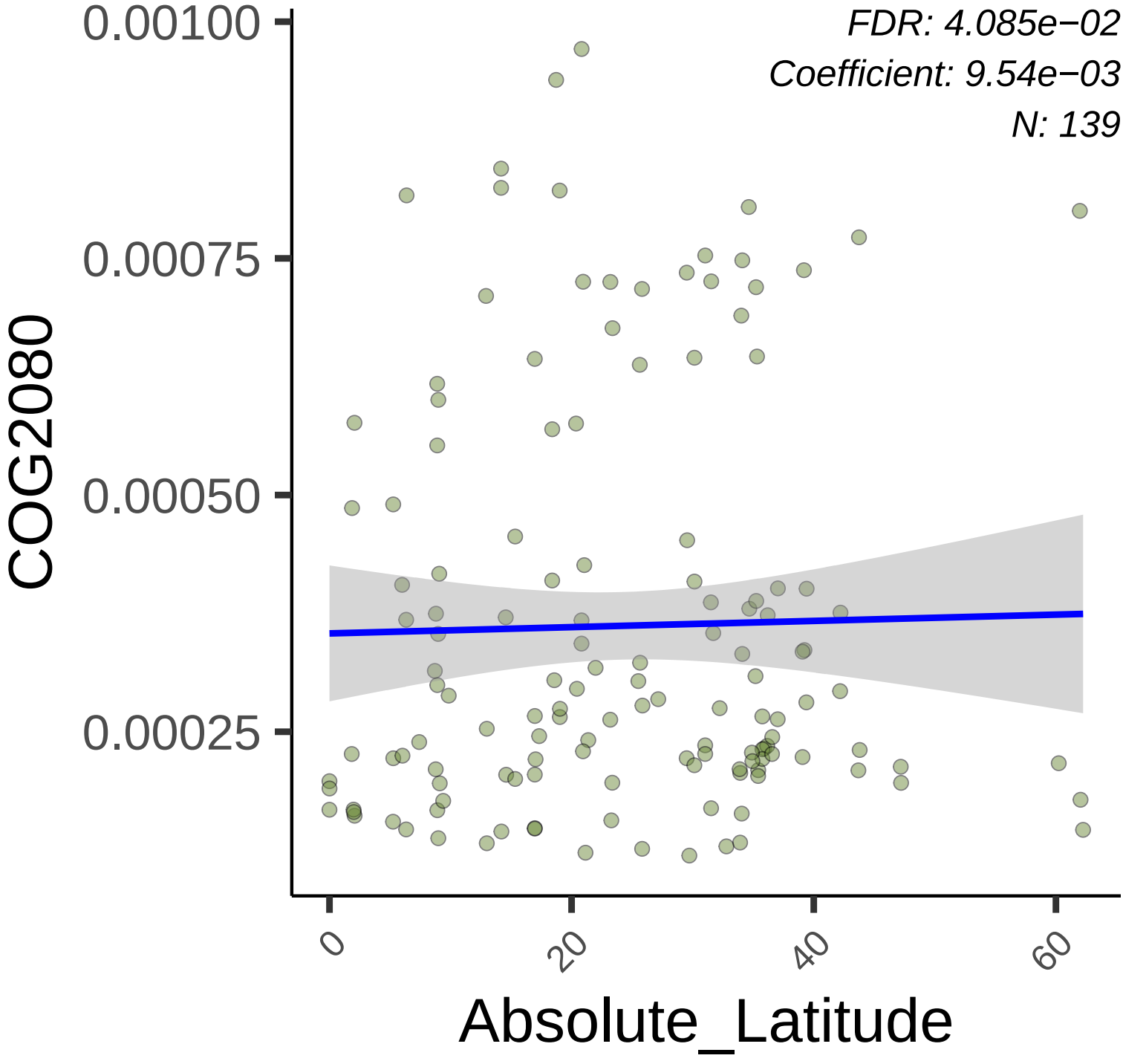

FDR: 3.997e−02
Coefficient: −3.60e−02
N: 139
COG3957
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

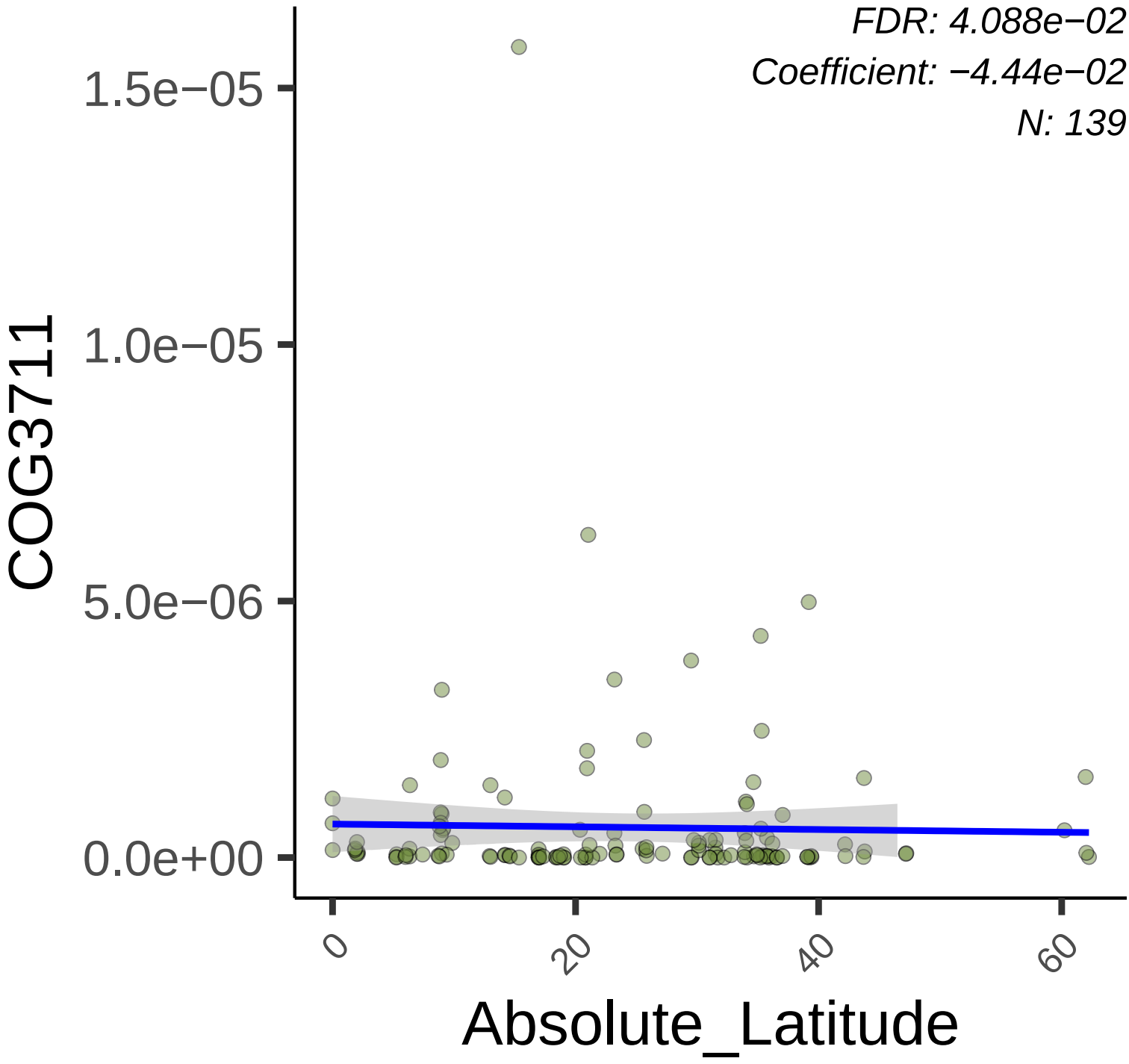

FDR: 4.026e−02
Coefficient: −5.42e−02
N: 139
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG3447
0
20
40
60
Absolute_Latitude

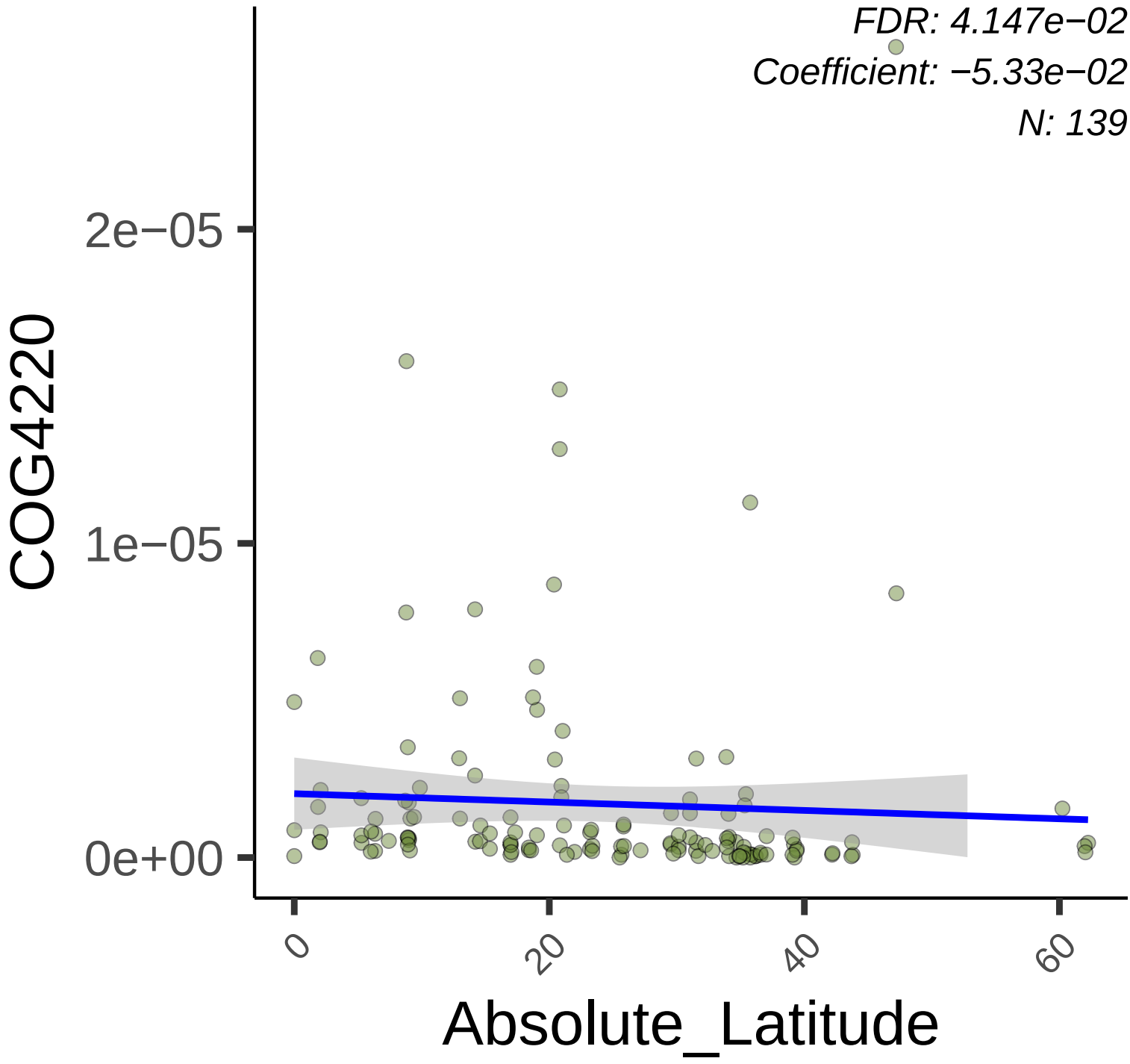

FDR: 4.048e−02
Coefficient: 3.50e−02
N: 139
COG3412
5e−06
4e−06
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

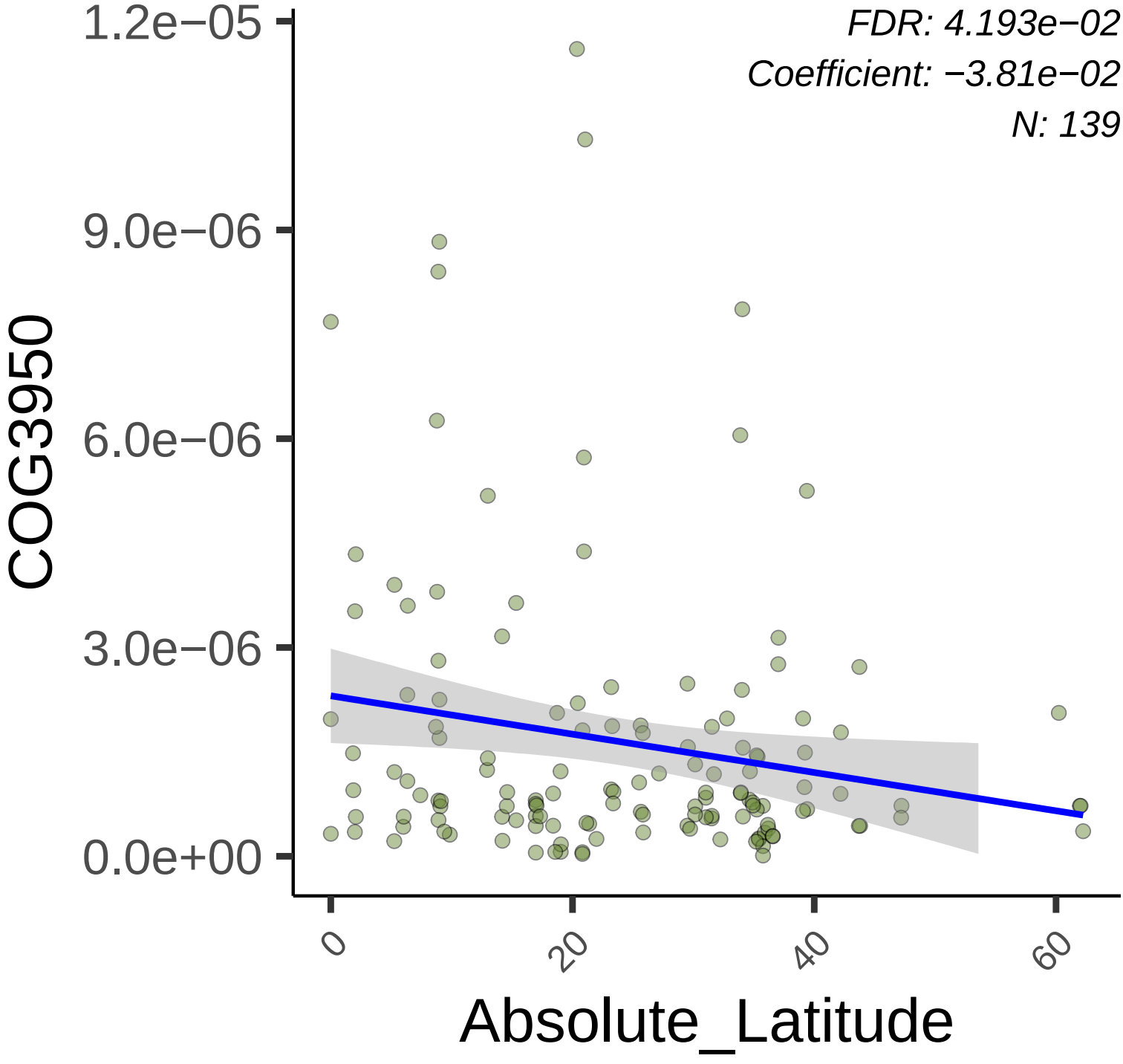

FDR: 4.065e−02
Coefficient: −4.36e−02
N: 139
COG4933
1.25e−05
1.00e−05
7.50e−06
5.00e−06
2.50e−06
0.00e+00
0
20
40
60
Absolute_Latitude

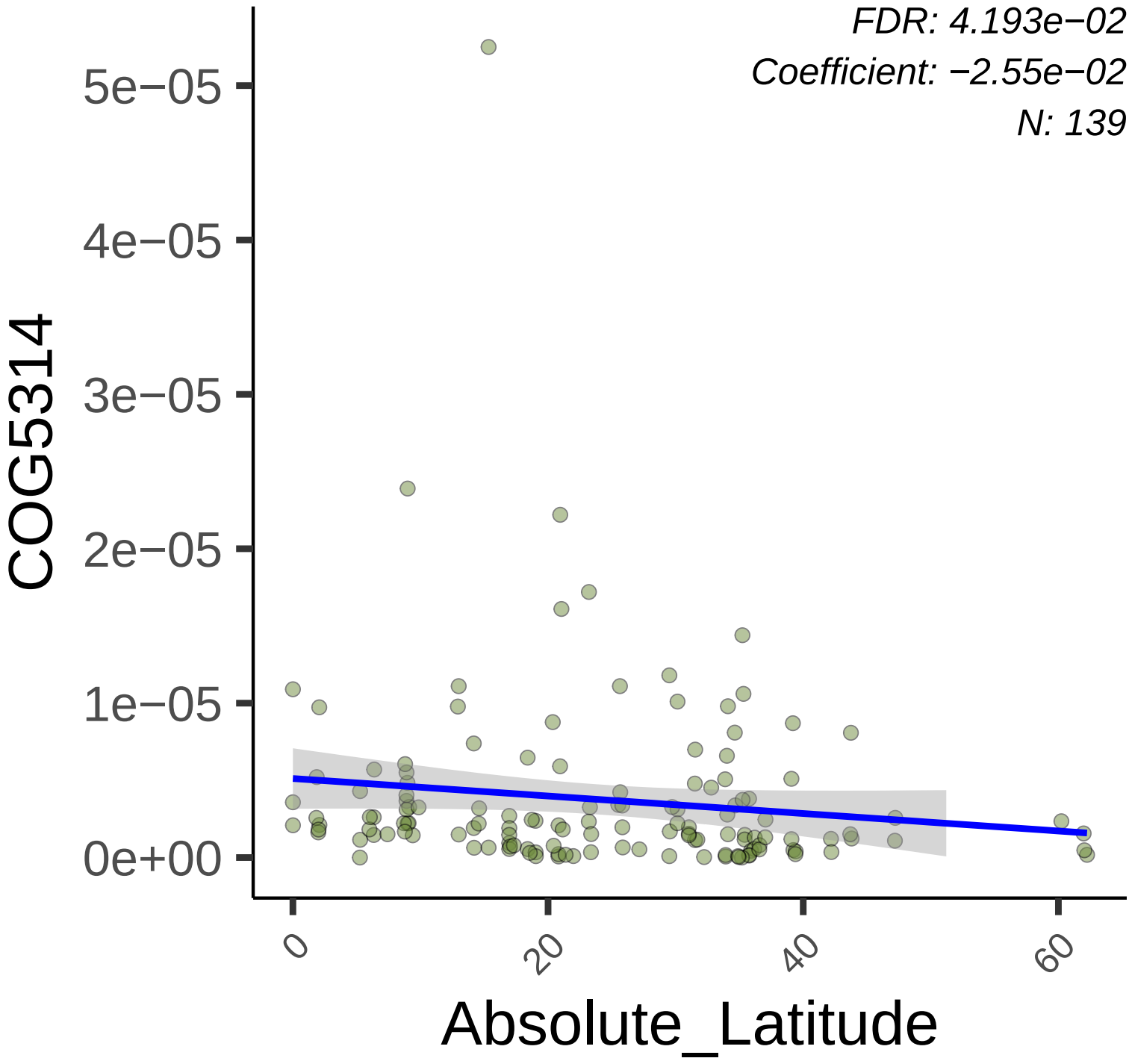

FDR: 4.067e−02
Coefficient: −6.97e−03
N: 139
3e−04
2e−04
1e−04
COG1167
0
20
40
60
Absolute_Latitude

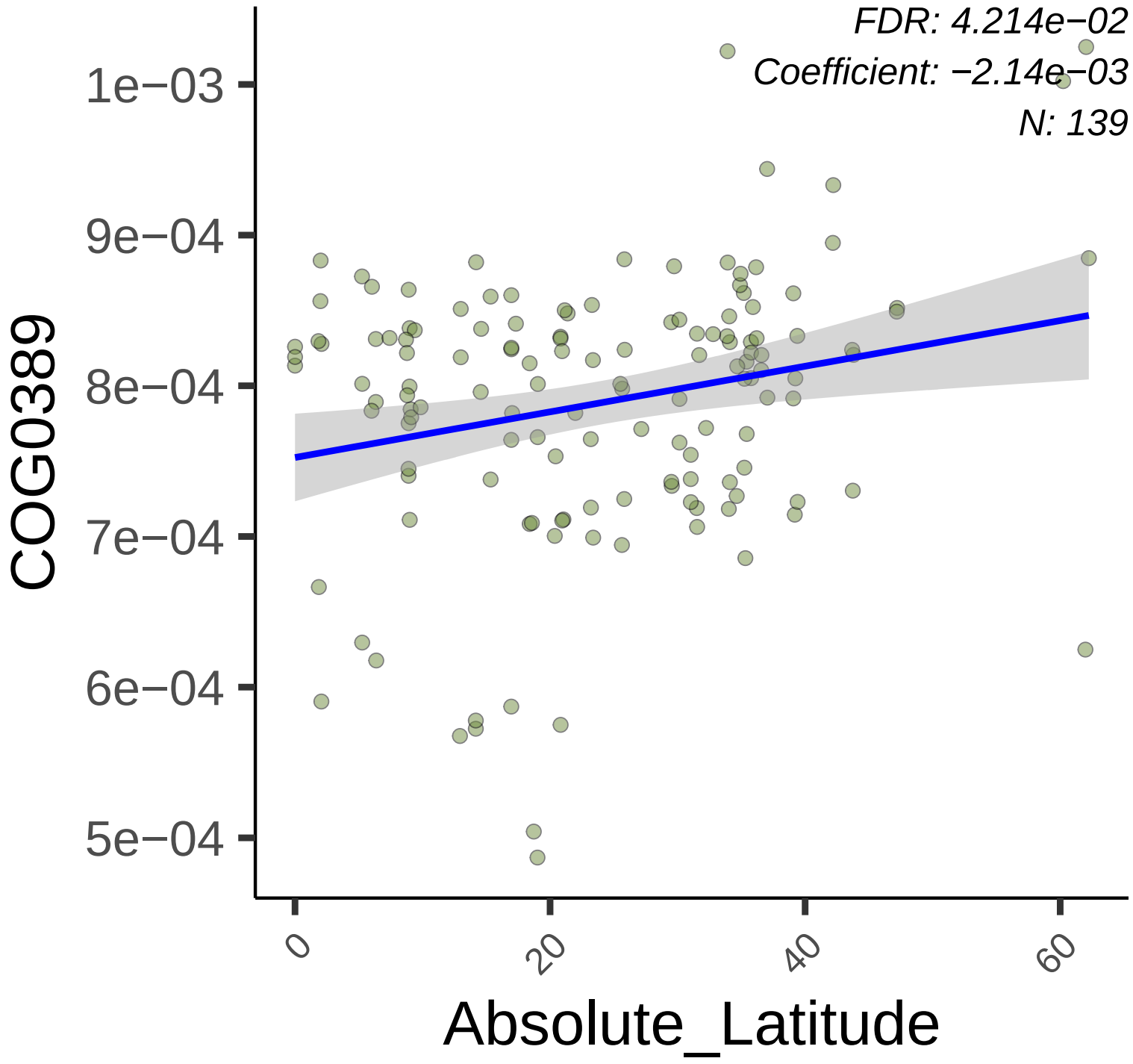

FDR: 4.085e−02
Coefficient: 9.54e−03
N: 139
0.00100
0.00075
0.00050
0.00025
COG2080
0
20
40
60
Absolute_Latitude

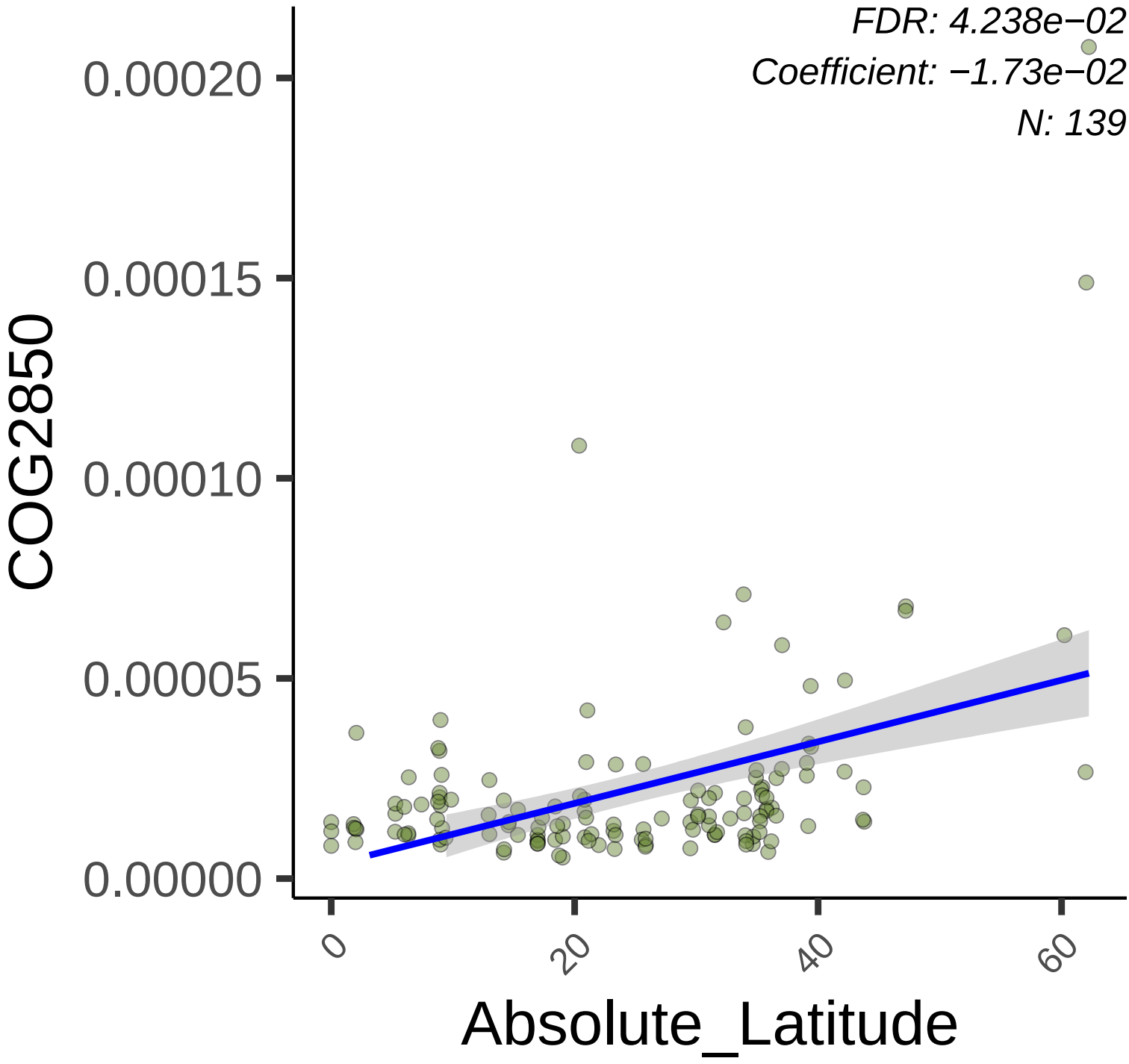

FDR: 4.088e−02
Coefficient: −4.44e−02
N: 139
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG3711
0
20
40
60
Absolute_Latitude

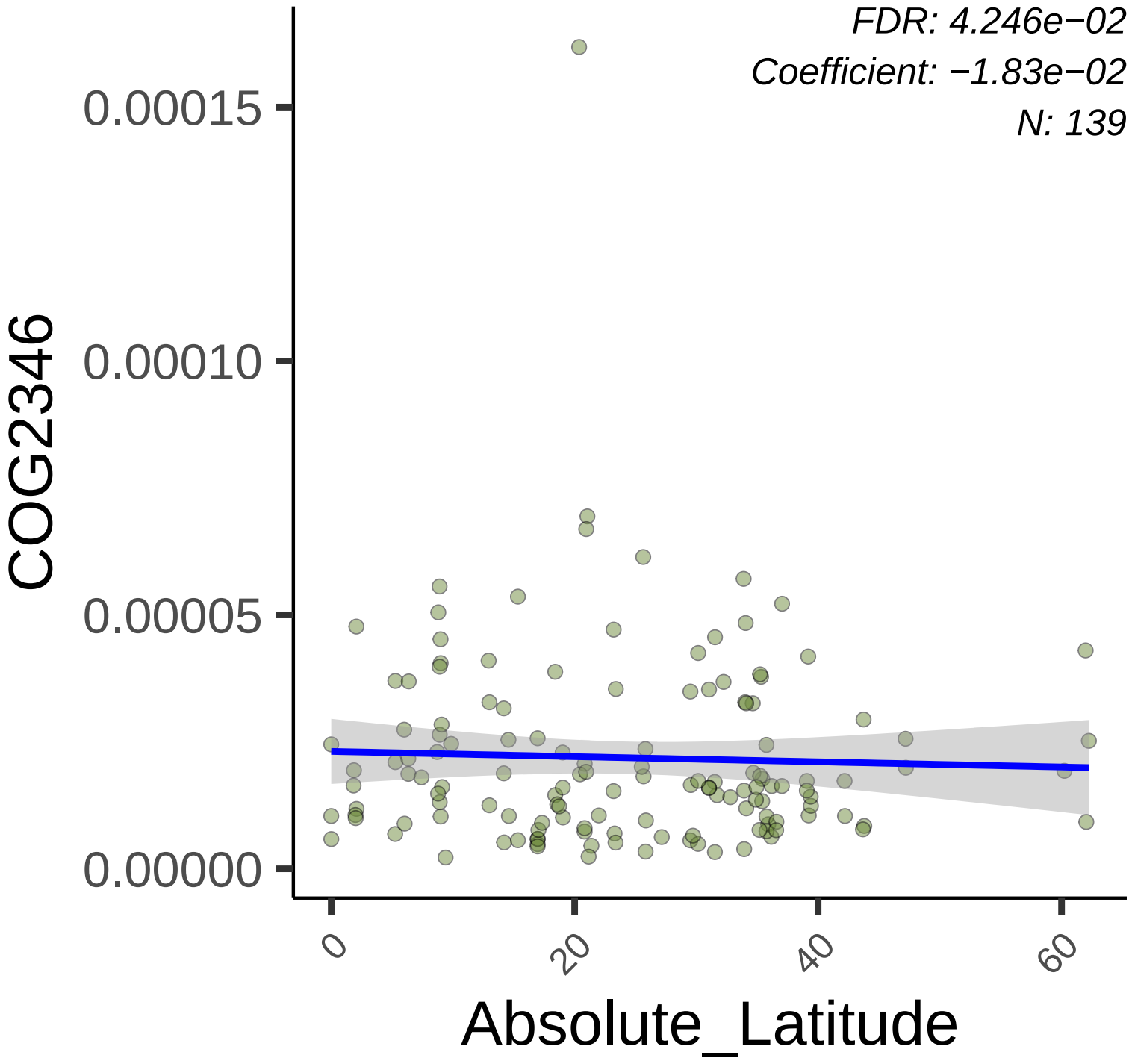

FDR: 4.147e−02
Coefficient: −5.33e−02
N: 139
COG4220
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

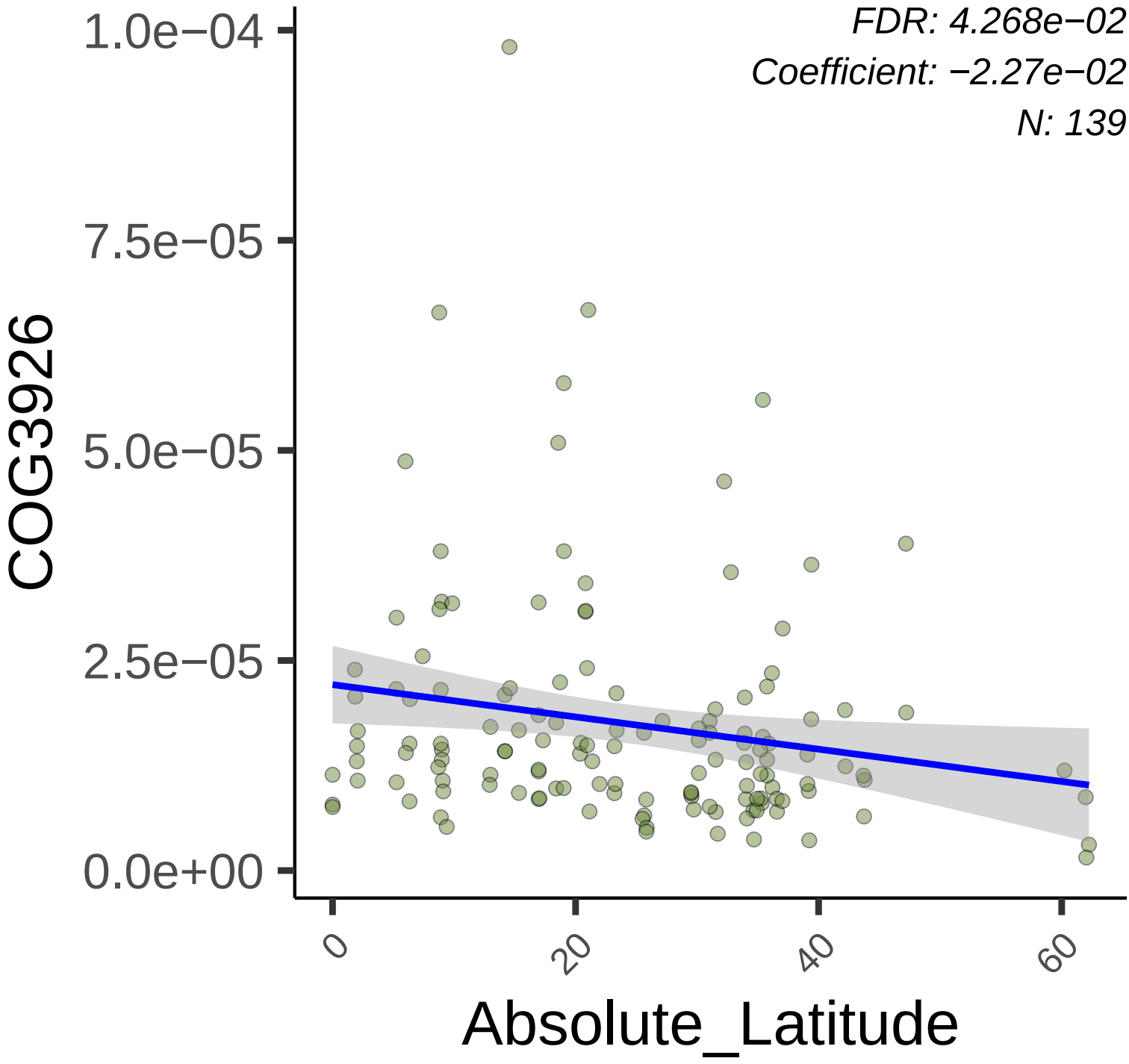

FDR: 4.193e−02
Coefficient: −3.81e−02
N: 139
1.2e−05
9.0e−06
6.0e−06
3.0e−06
0.0e+00
COG3950
0
20
40
60
Absolute_Latitude

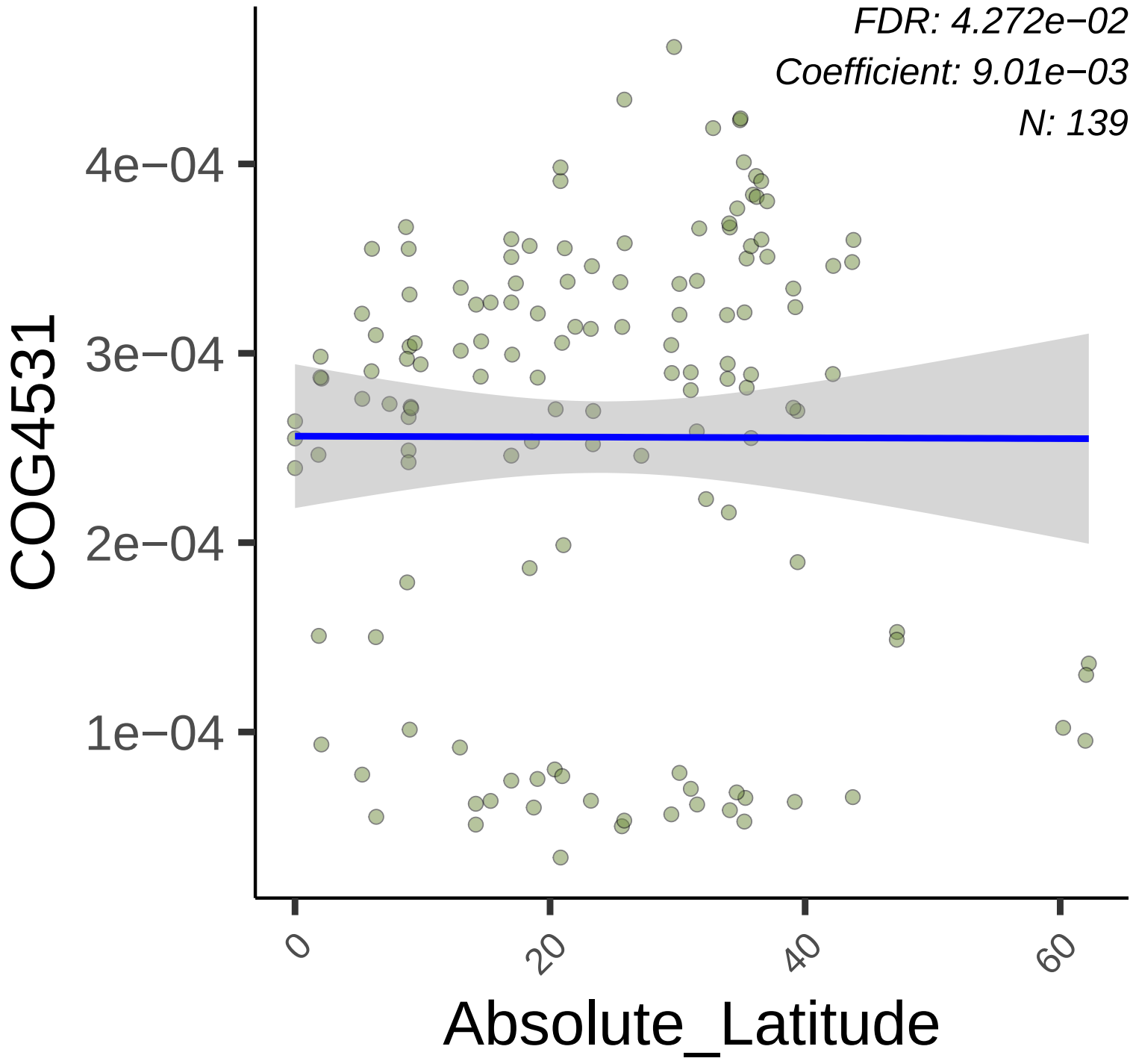

FDR: 4.193e−02
Coefficient: −2.55e−02
N: 139
COG5314
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

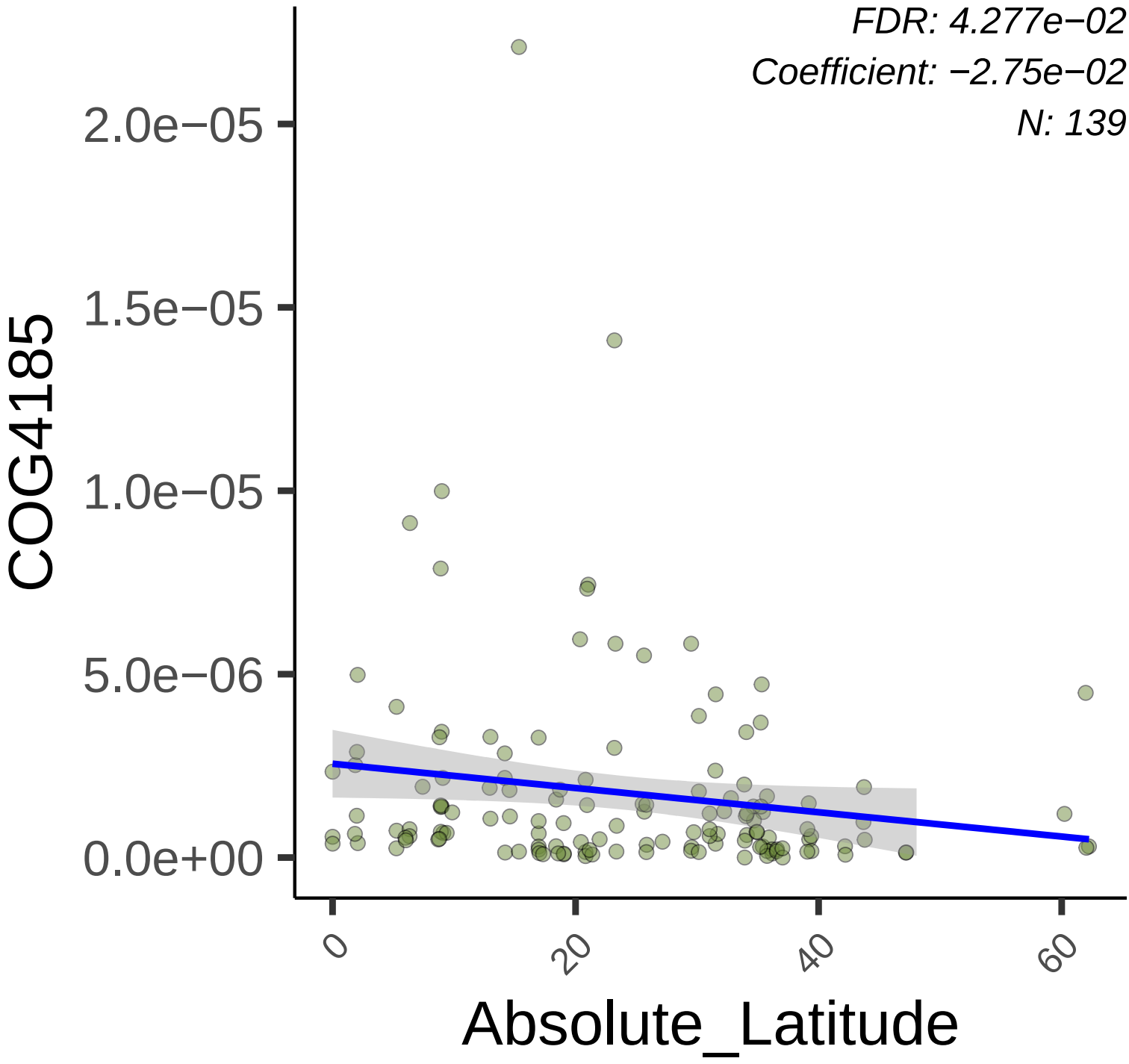

FDR: 4.214e−02
Coefficient: −2.14e−03
N: 139
1e−03
9e−04
8e−04
7e−04
6e−04
5e−04
COG0389
0
20
40
60
Absolute_Latitude

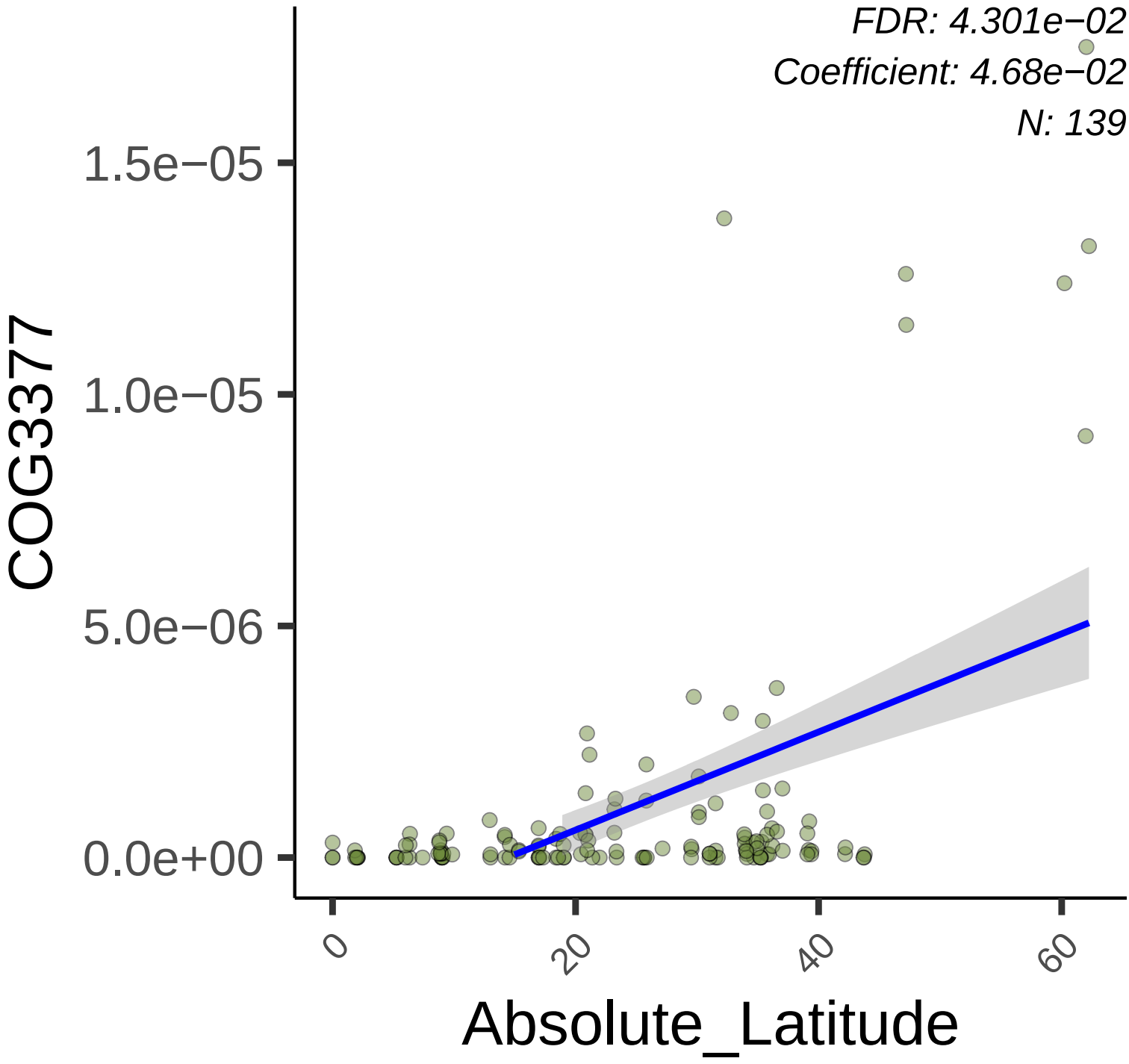

FDR: 4.238e−02
Coefficient: −1.73e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG2850
0
20
40
60
Absolute_Latitude

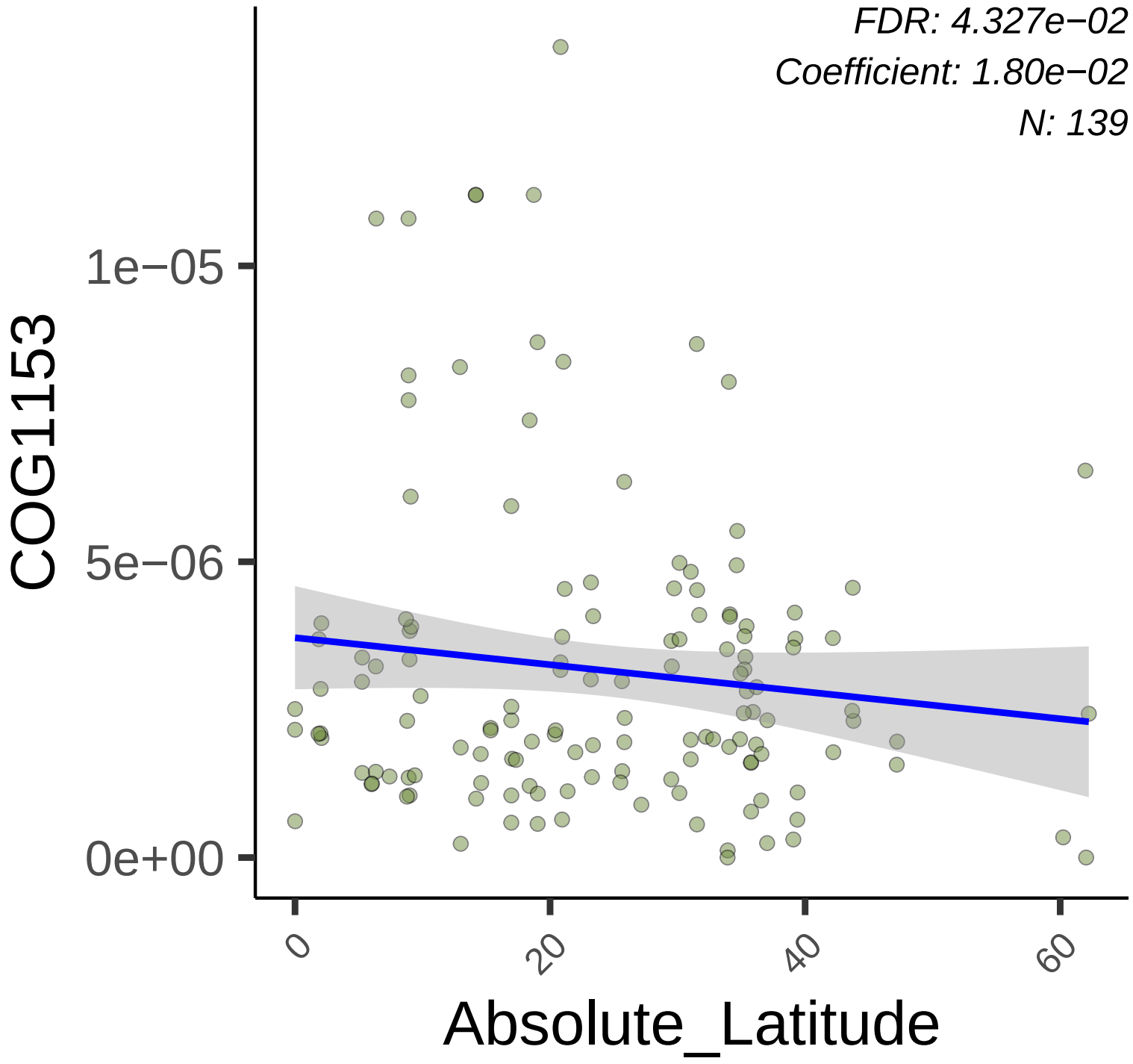

FDR: 4.246e−02
Coefficient: −1.83e−02
N: 139
COG2346
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

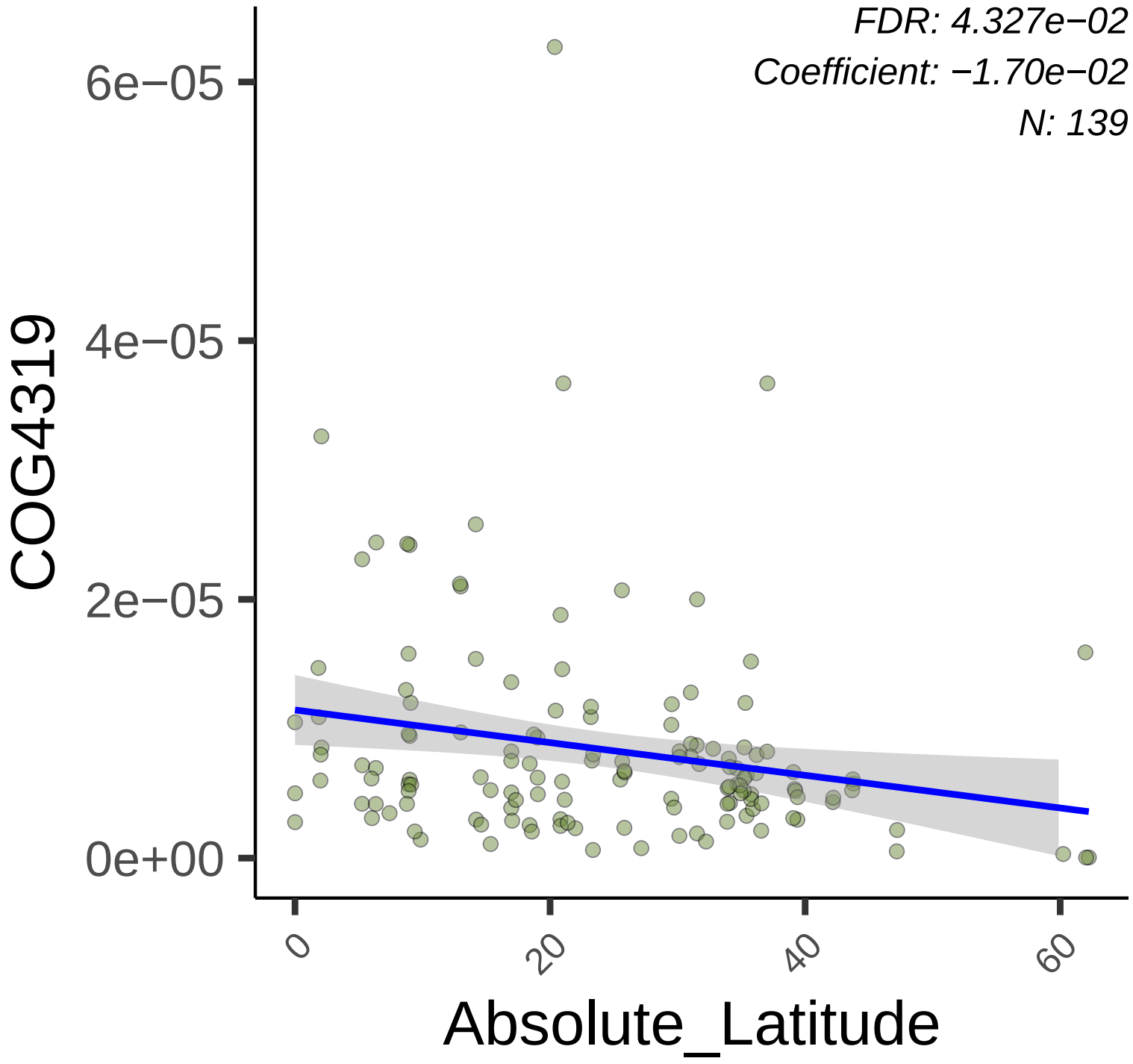

FDR: 4.268e−02
Coefficient: −2.27e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3926
0
20
40
60
Absolute_Latitude

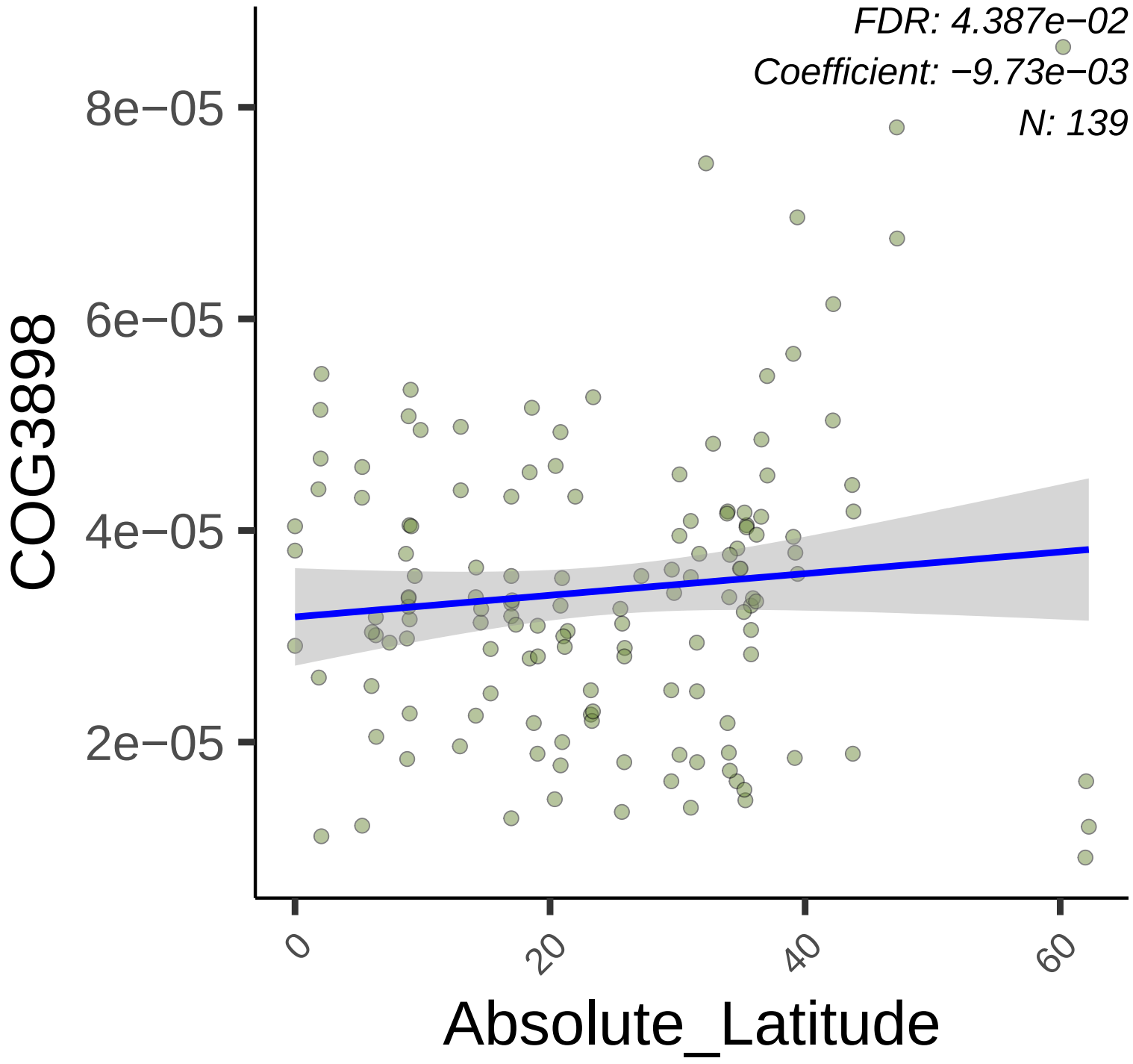

FDR: 4.272e−02
Coefficient: 9.01e−03
N: 139
COG4531
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

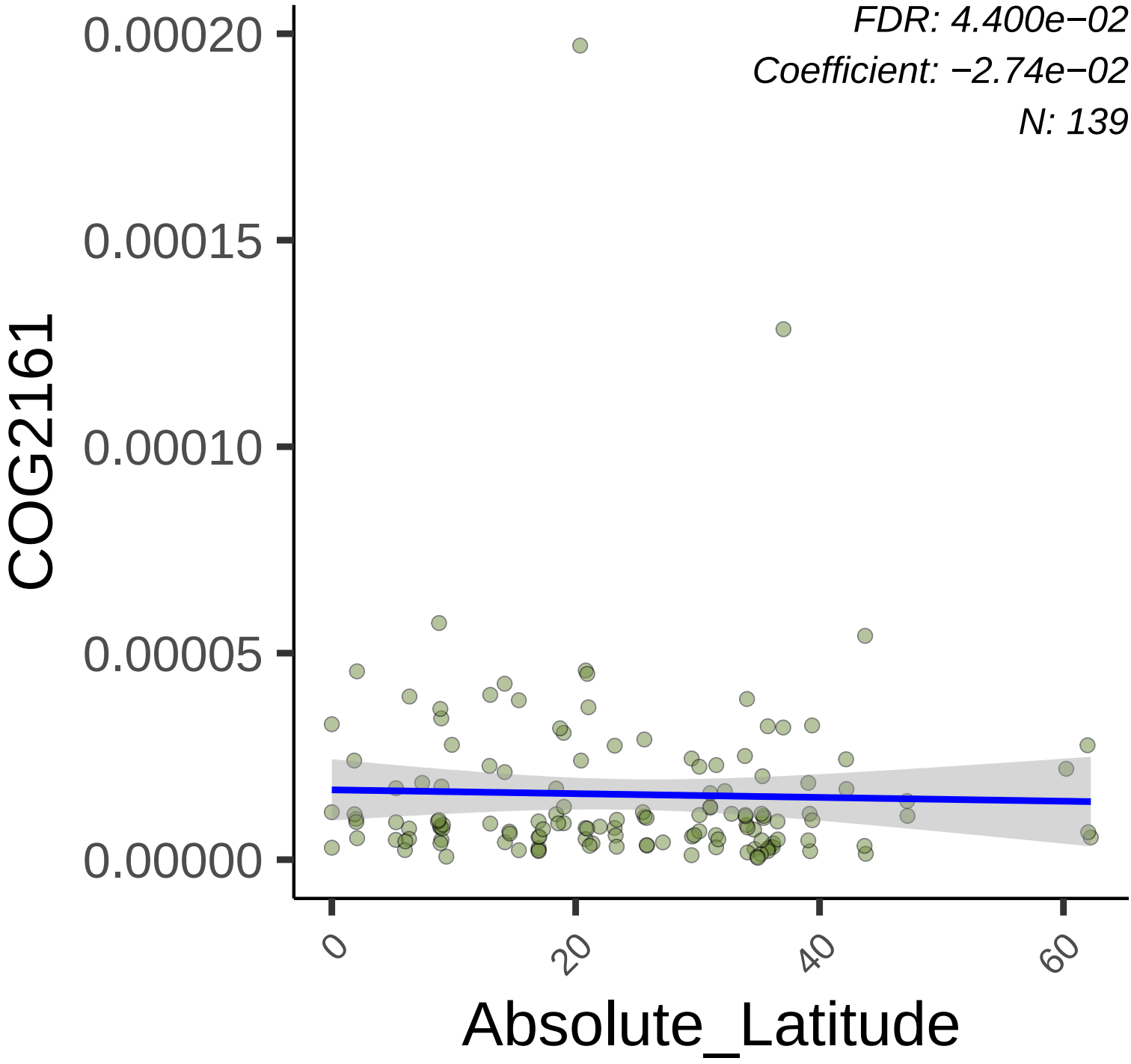

FDR: 4.277e−02
Coefficient: −2.75e−02
N: 139
COG4185
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

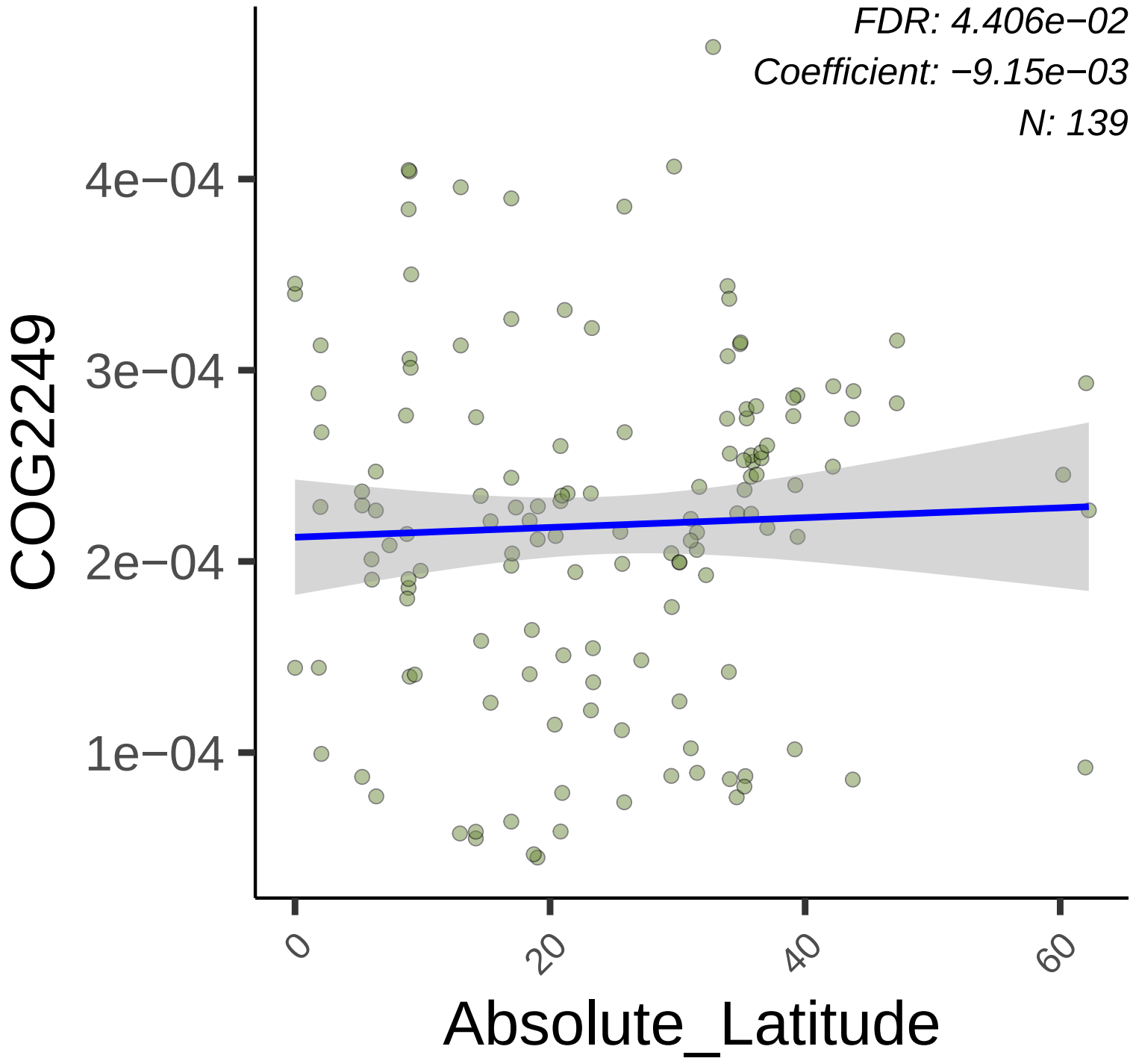

FDR: 4.301e−02
Coefficient: 4.68e−02
N: 139
COG3377
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

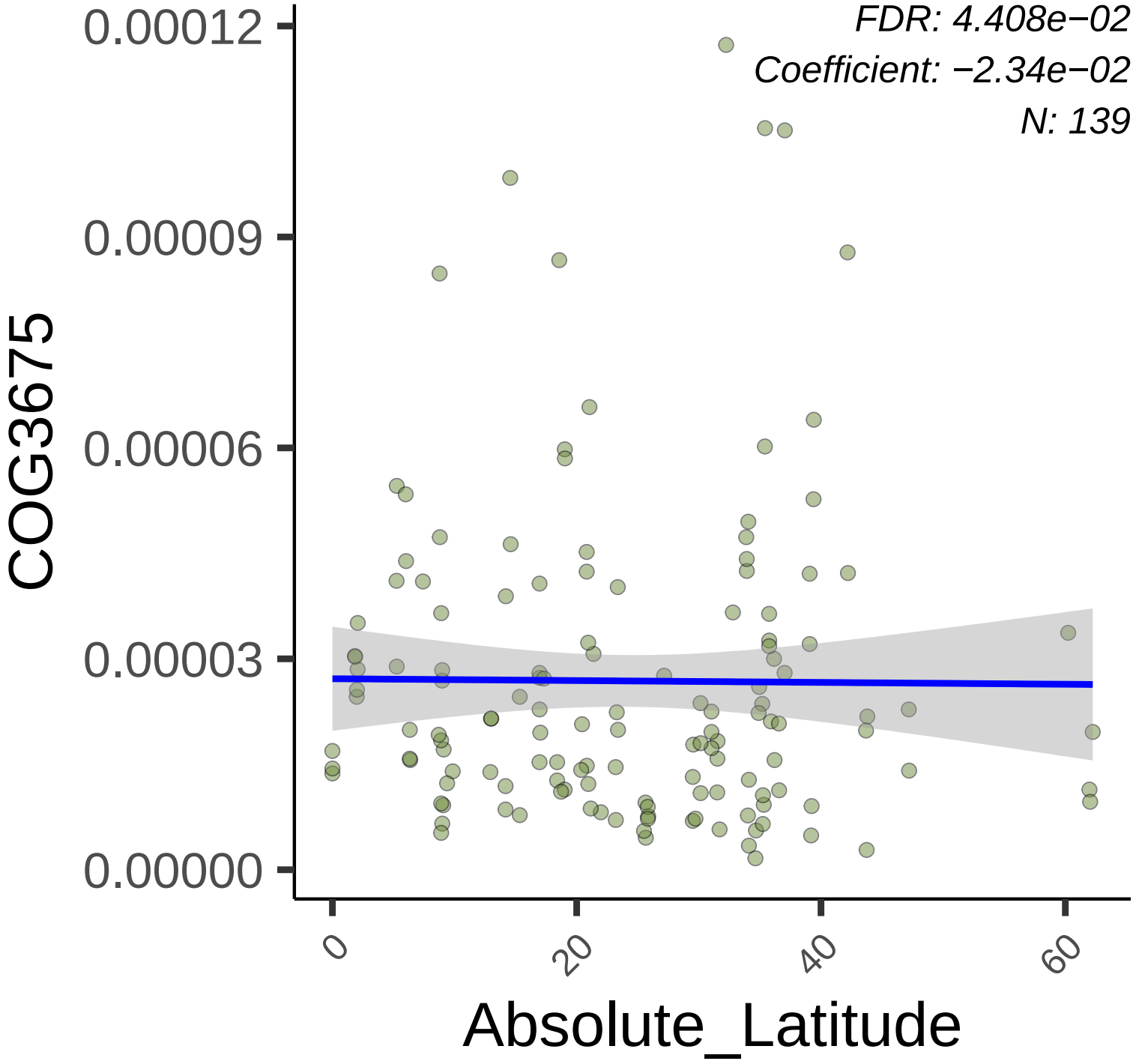

FDR: 4.327e−02
Coefficient: 1.80e−02
N: 139
COG1153
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

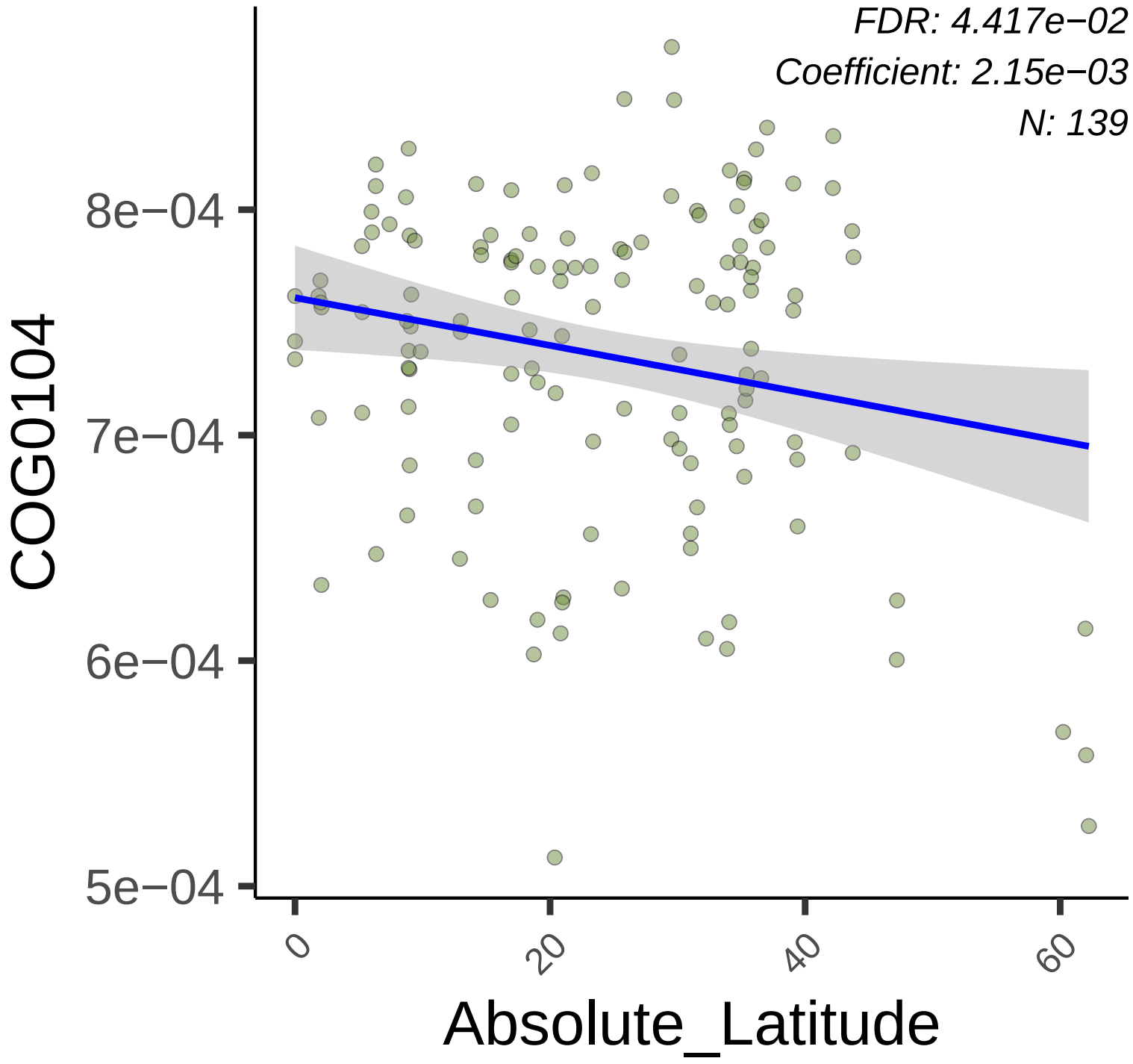

FDR: 4.327e−02
Coefficient: −1.70e−02
N: 139
COG4319
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

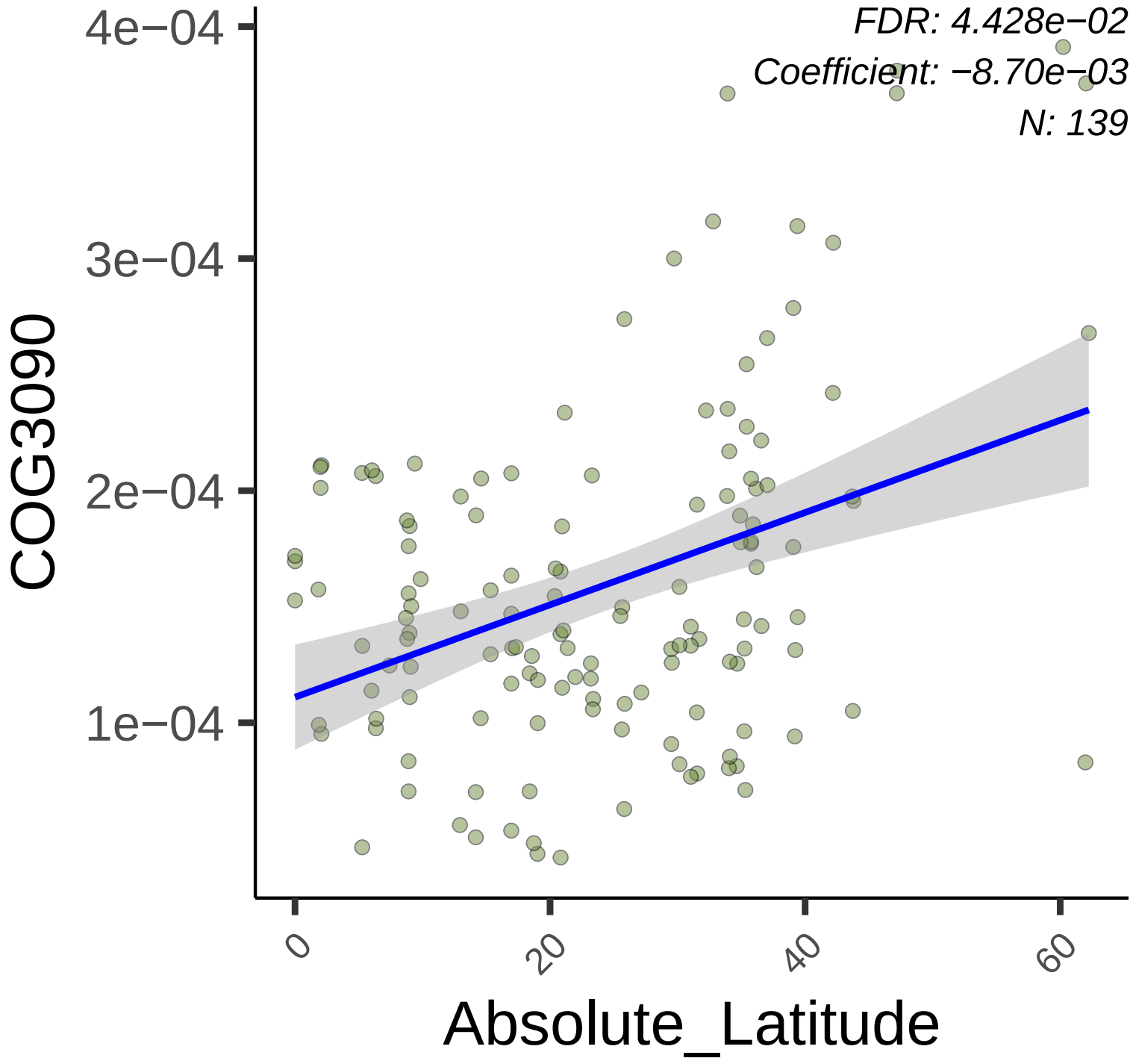

FDR: 4.387e−02
Coefficient: −9.73e−03
N: 139
8e−05
6e−05
4e−05
2e−05
COG3898
0
20
40
60
Absolute_Latitude

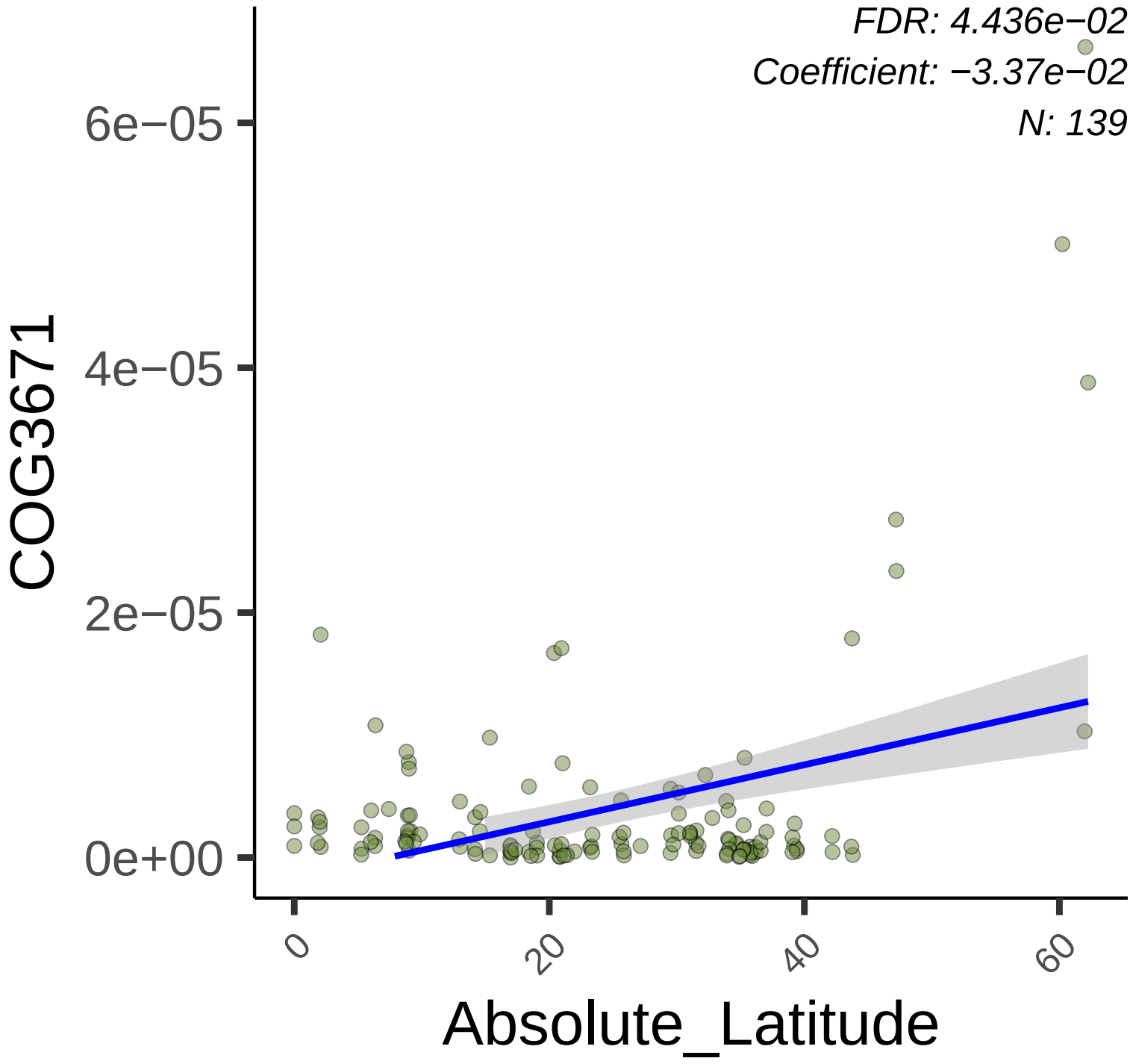

FDR: 4.400e−02
Coefficient: −2.74e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG2161
0
20
40
60
Absolute_Latitude

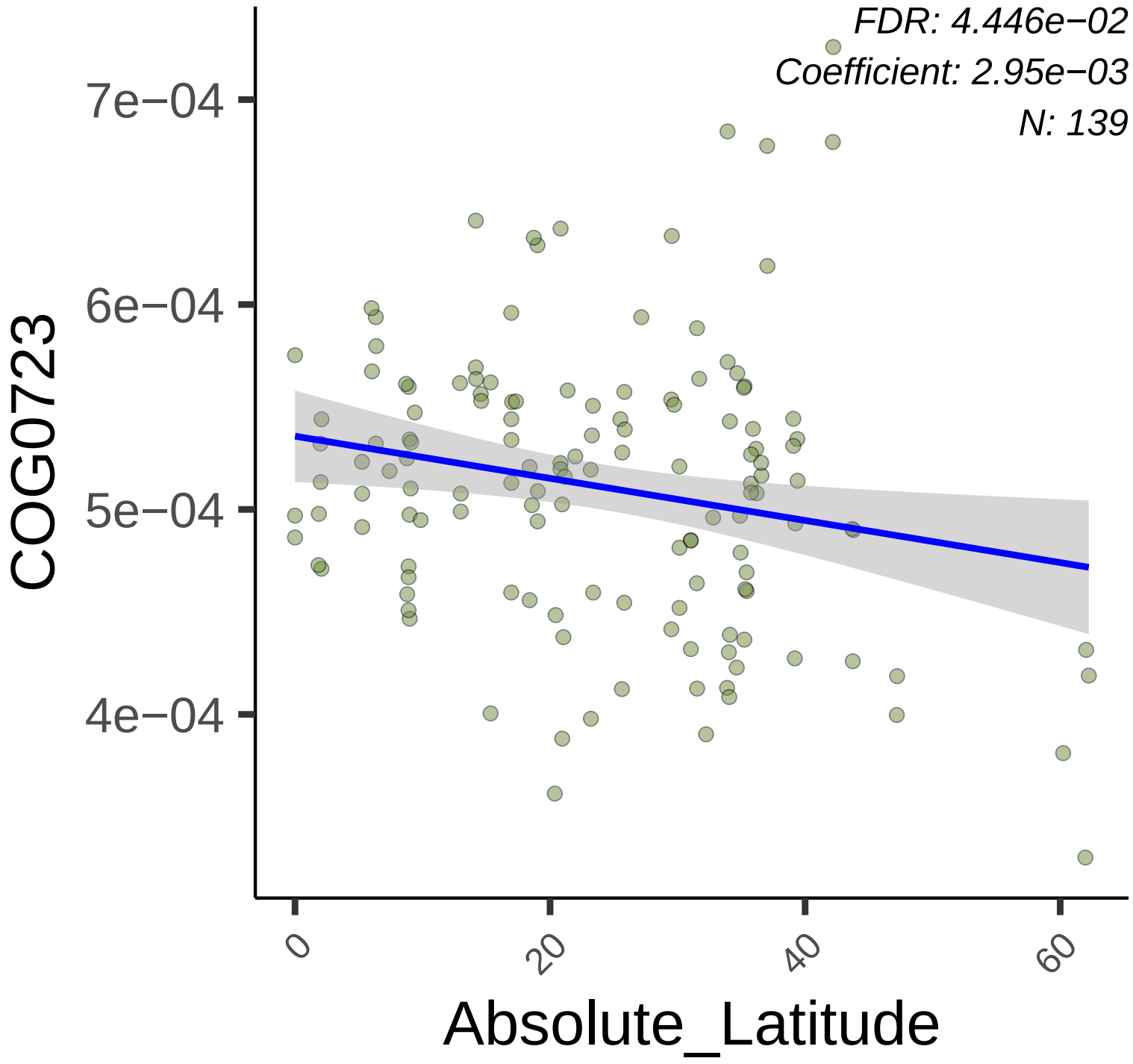

FDR: 4.406e−02
Coefficient: −9.15e−03
N: 139
COG2249
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

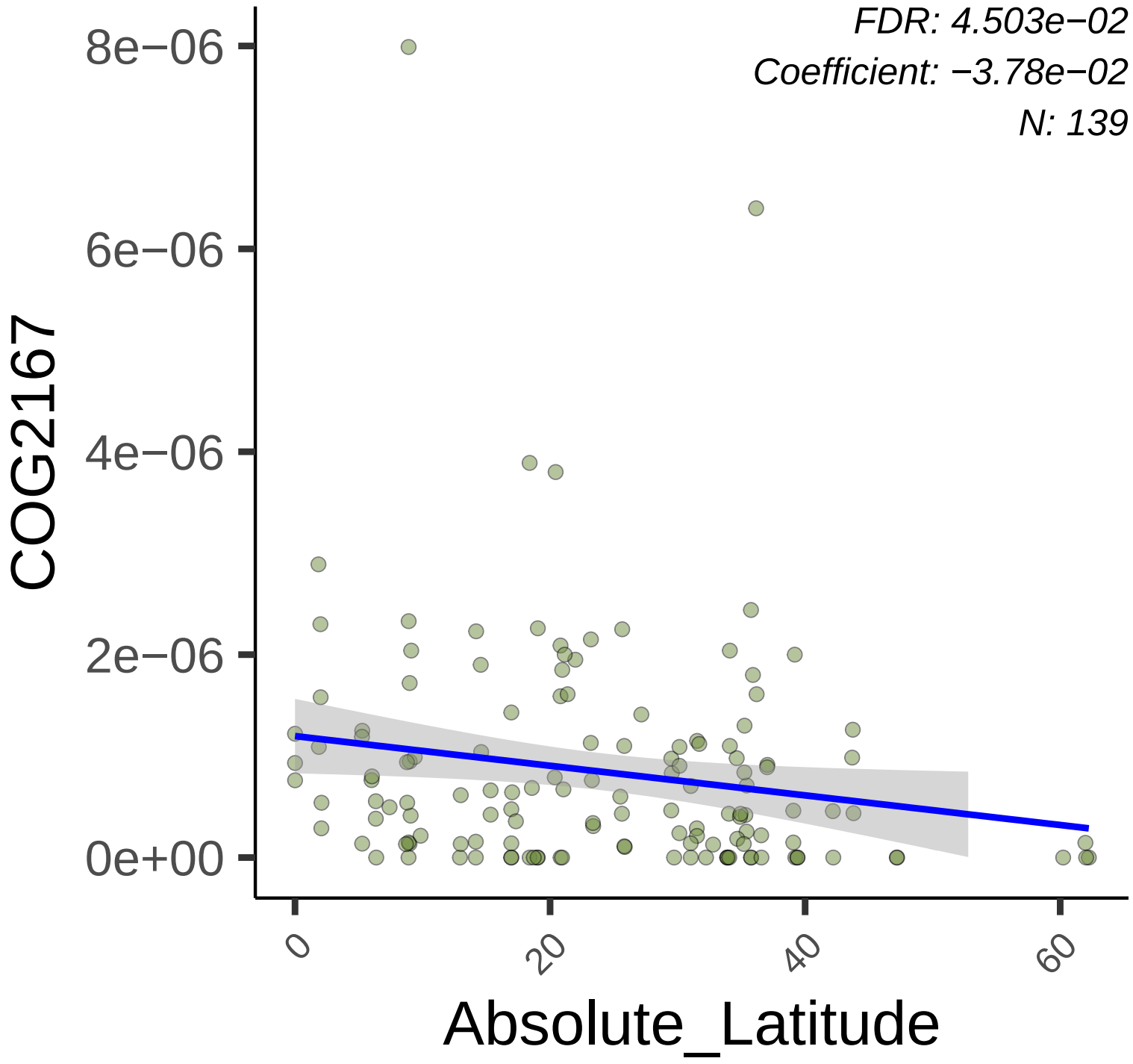

FDR: 4.408e−02
Coefficient: −2.34e−02
N: 139
0.00012
0.00009
0.00006
0.00003
0.00000
COG3675
0
20
40
60
Absolute_Latitude

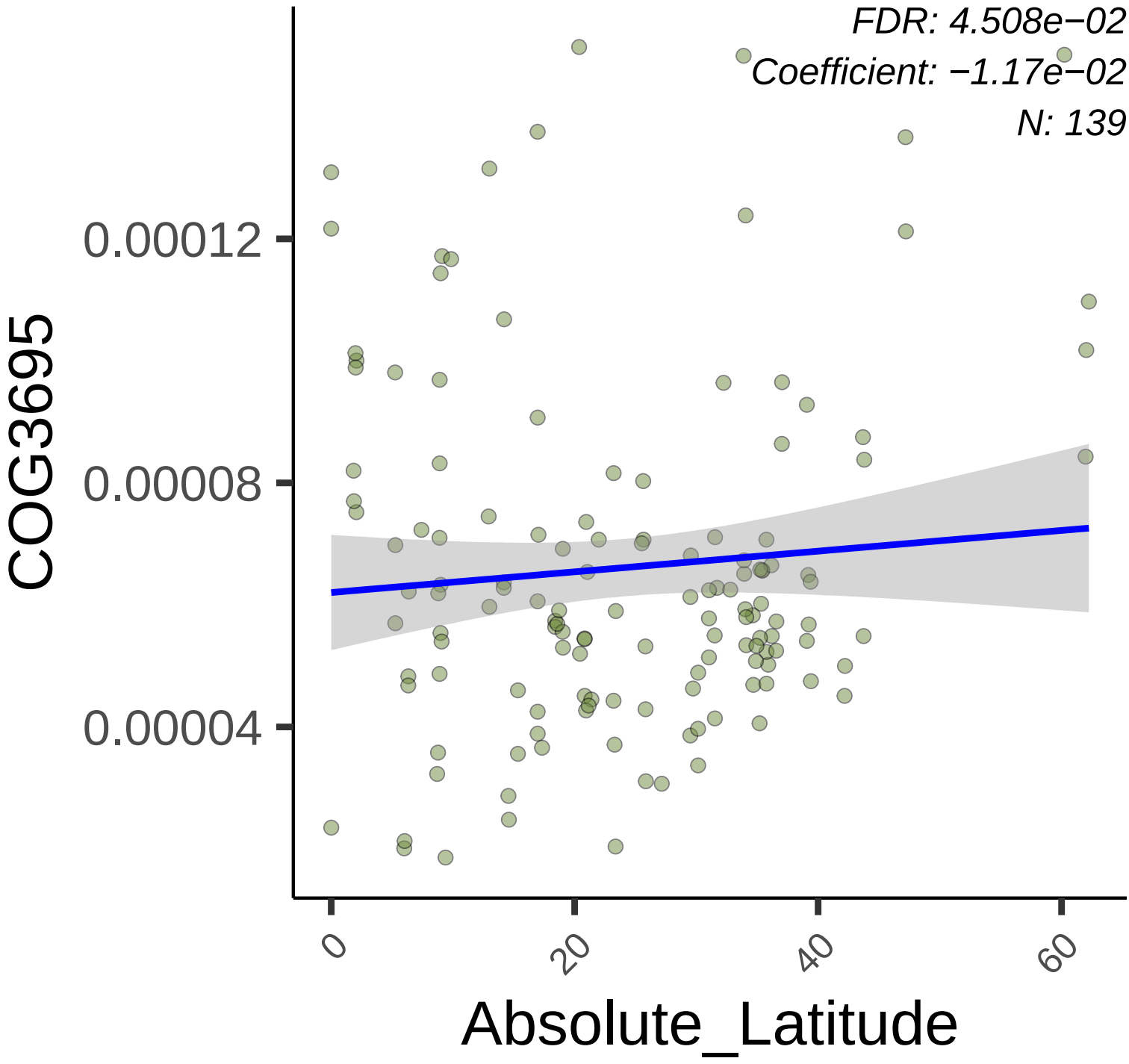

FDR: 4.417e−02
Coefficient: 2.15e−03
N: 139
COG0104
8e−04
7e−04
6e−04
5e−04
0
20
40
60
Absolute_Latitude

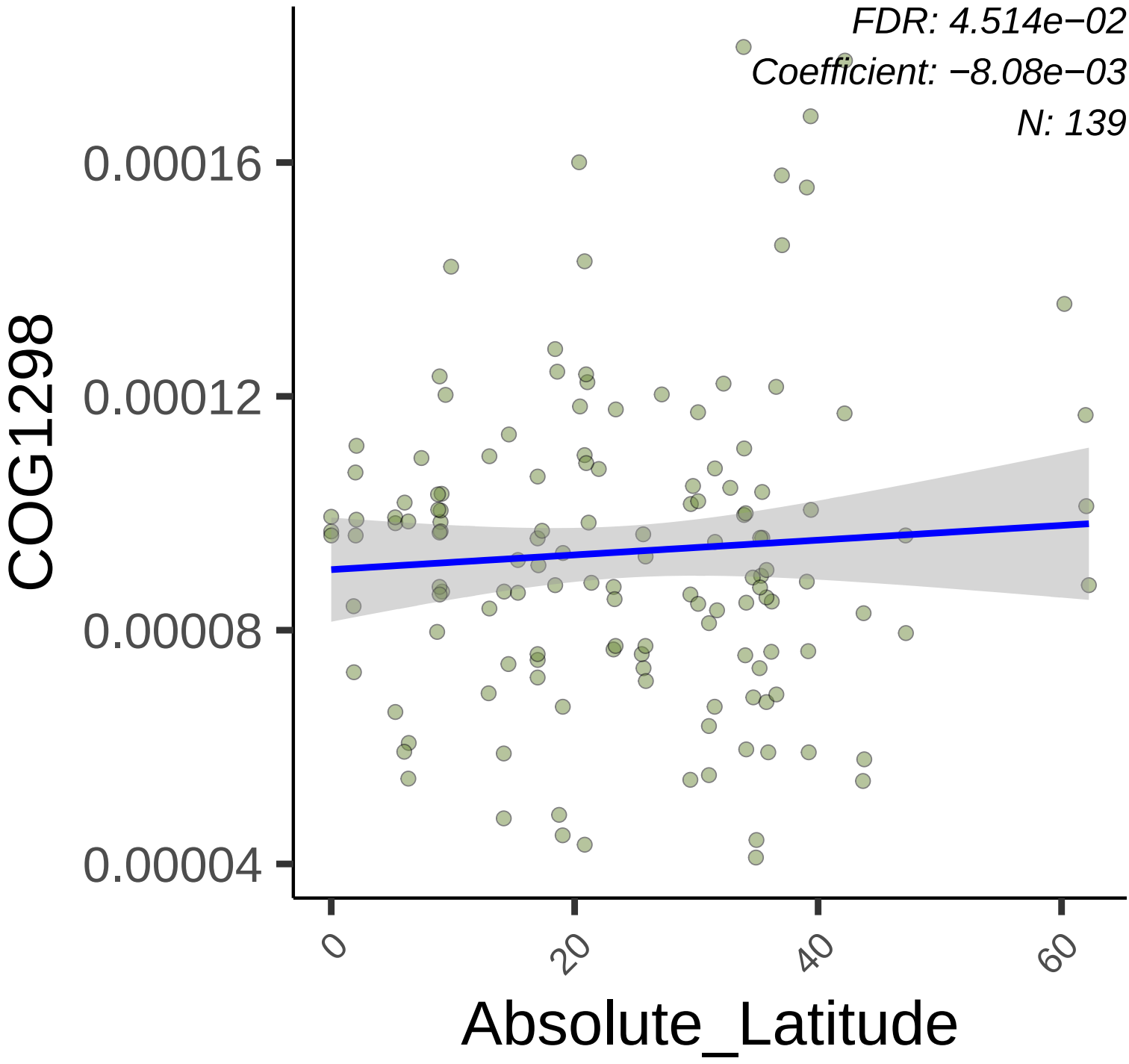

FDR: 4.428e−02
Coefficient: −8.70e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG3090
0
20
40
60
Absolute_Latitude

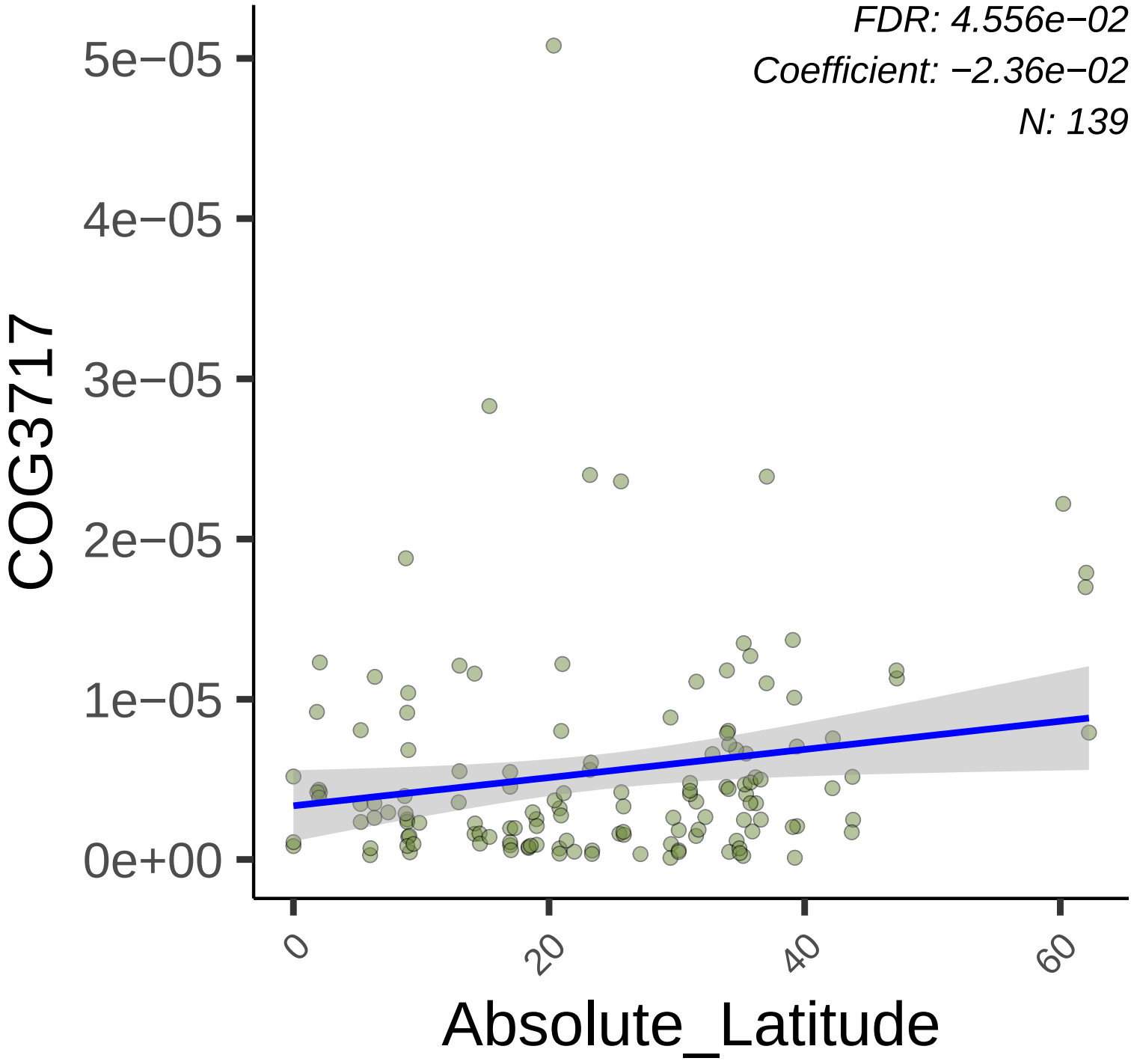

FDR: 4.436e−02
Coefficient: −3.37e−02
N: 139
COG3671
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

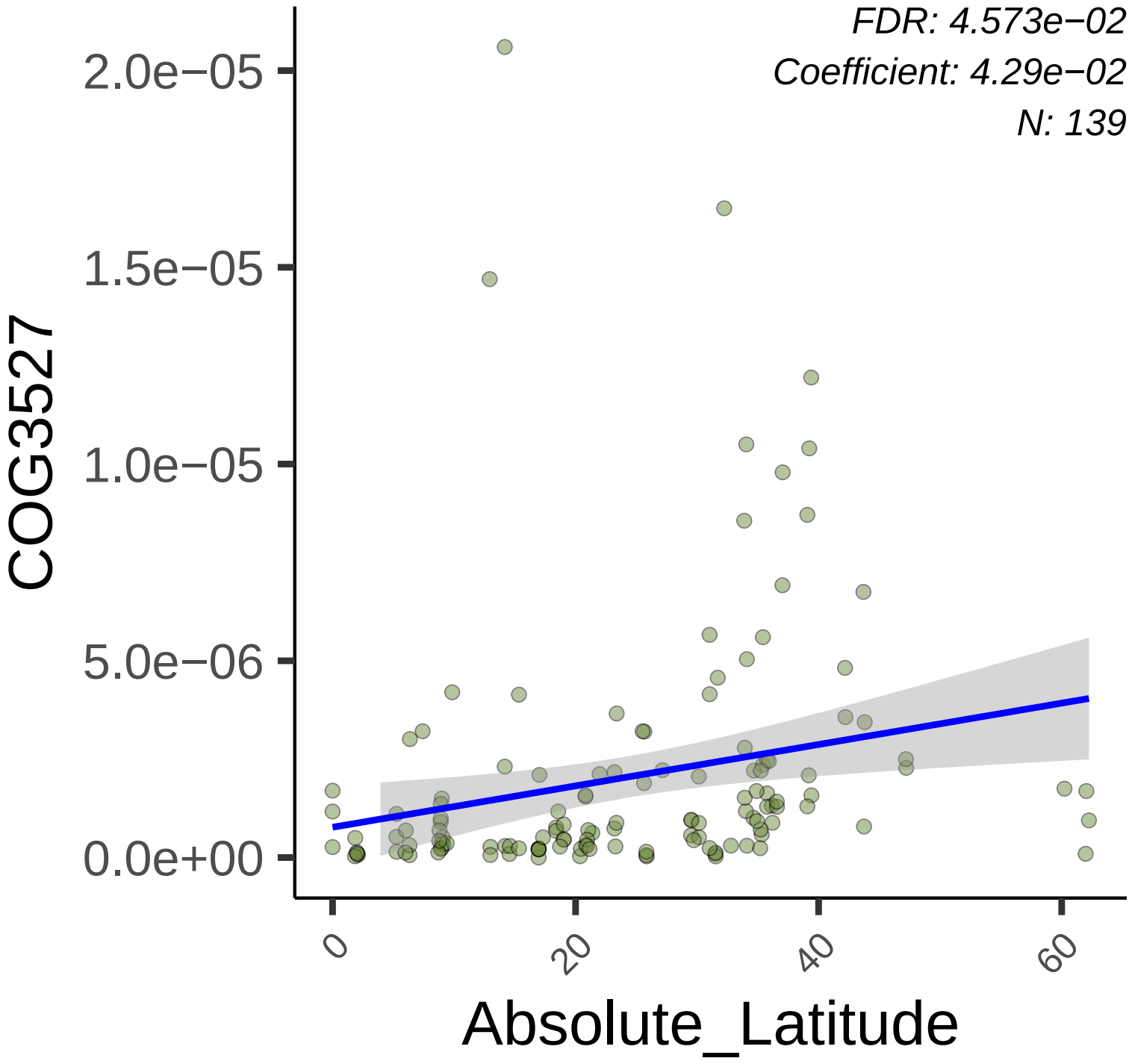

FDR: 4.446e−02
Coefficient: 2.95e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0723
0
20
40
60
Absolute_Latitude

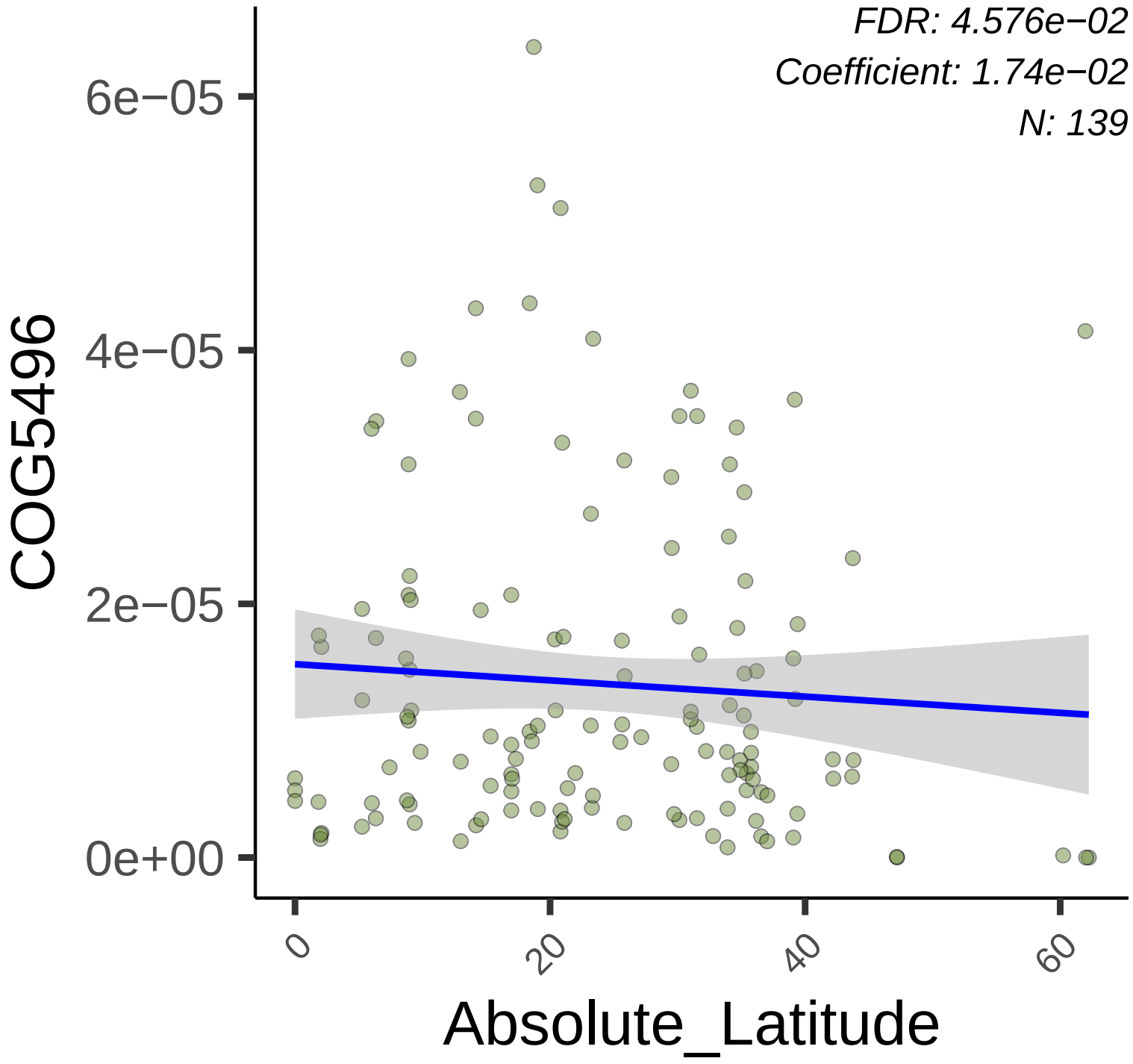

FDR: 4.503e−02
Coefficient: −3.78e−02
N: 139
8e−06
6e−06
4e−06
2e−06
0e+00
COG2167
0
20
40
60
Absolute_Latitude

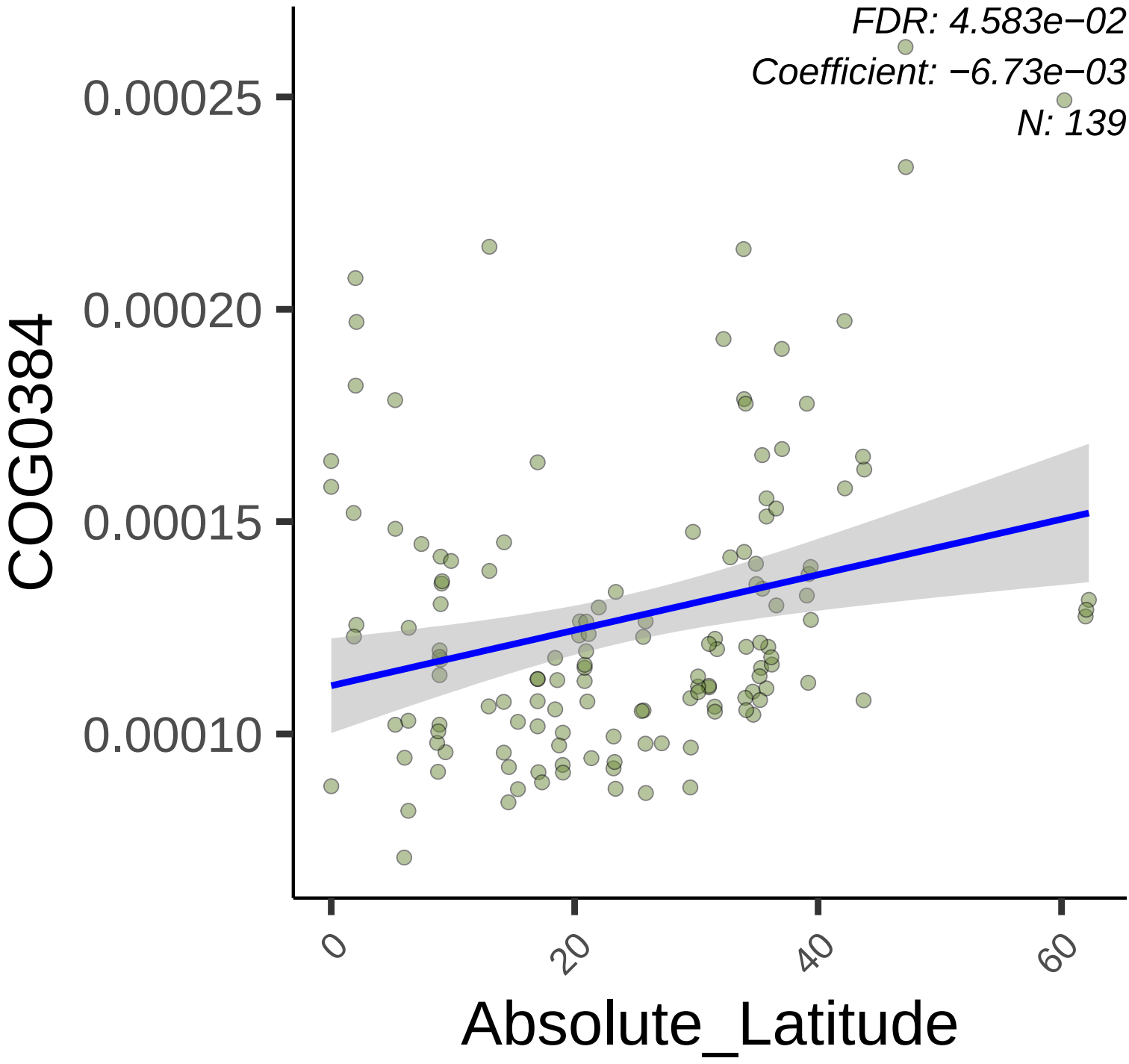

FDR: 4.508e−02
Coefficient: −1.17e−02
N: 139
COG3695
0.00012
0.00008
0.00004
0
20
40
60
Absolute_Latitude

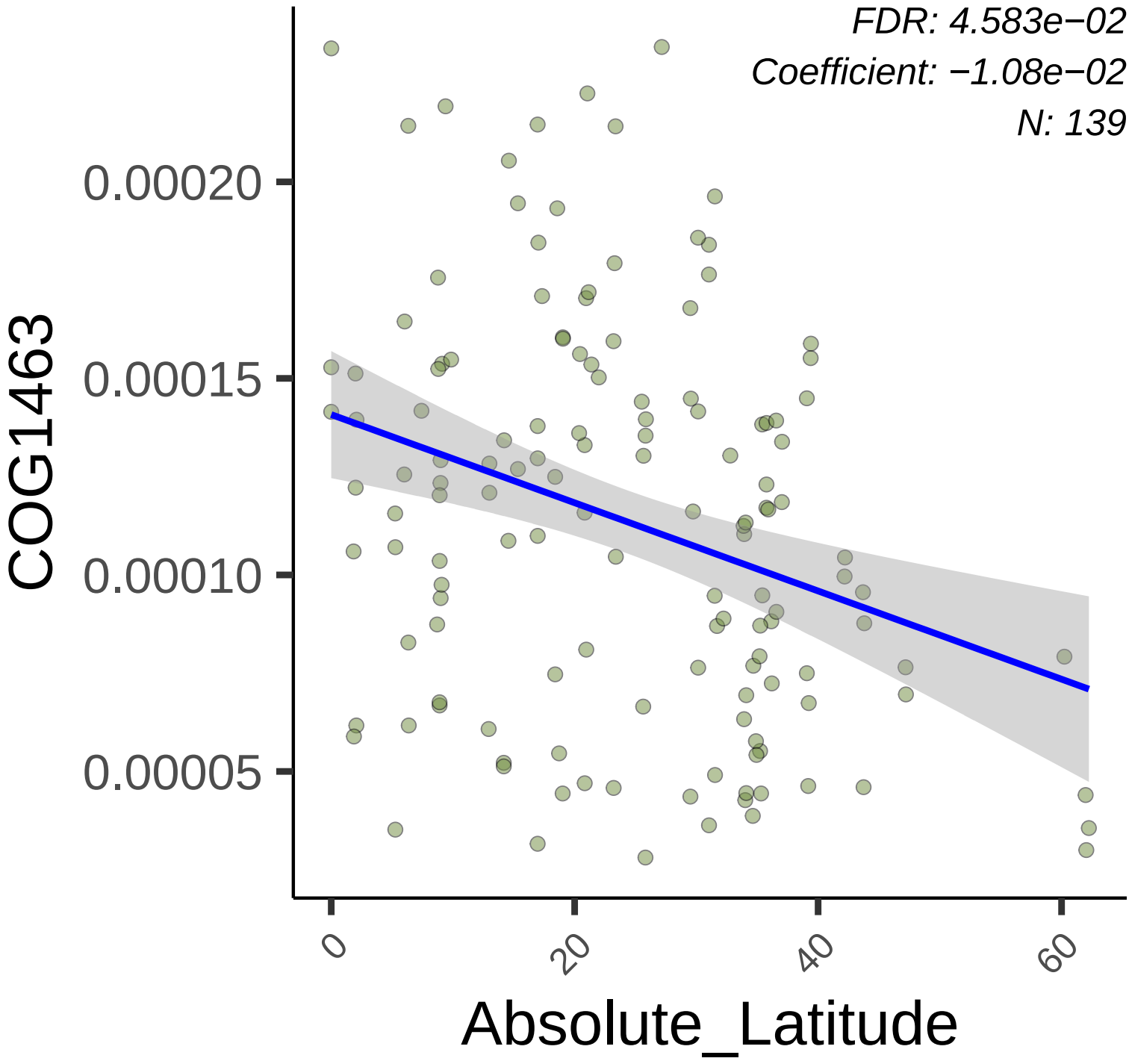

FDR: 4.514e−02
Coefficient: −8.08e−03
N: 139
COG1298
0.00016
0.00012
0.00008
0.00004
0
20
40
60
Absolute_Latitude

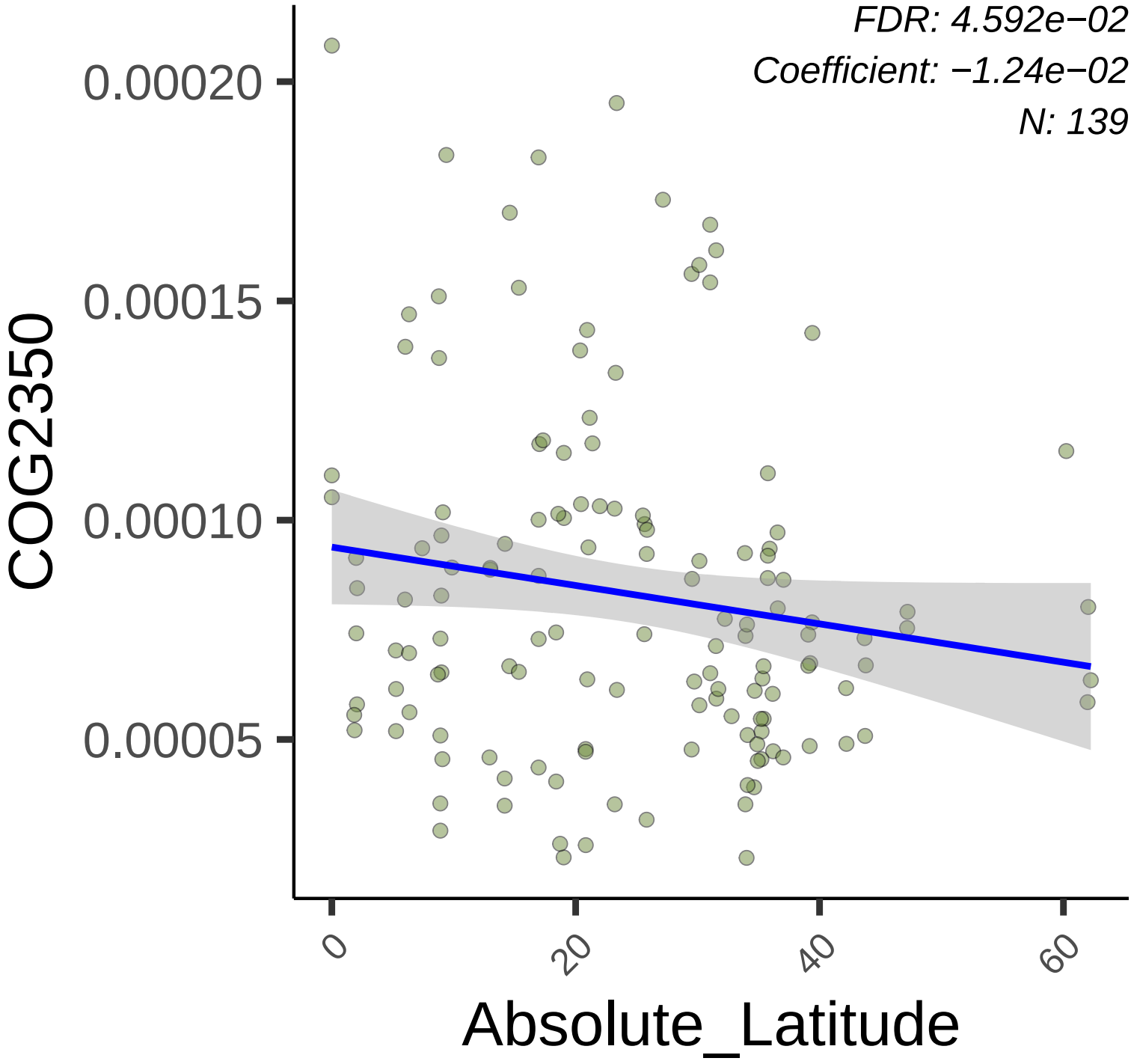

FDR: 4.556e−02
Coefficient: −2.36e−02
N: 139
COG3717
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

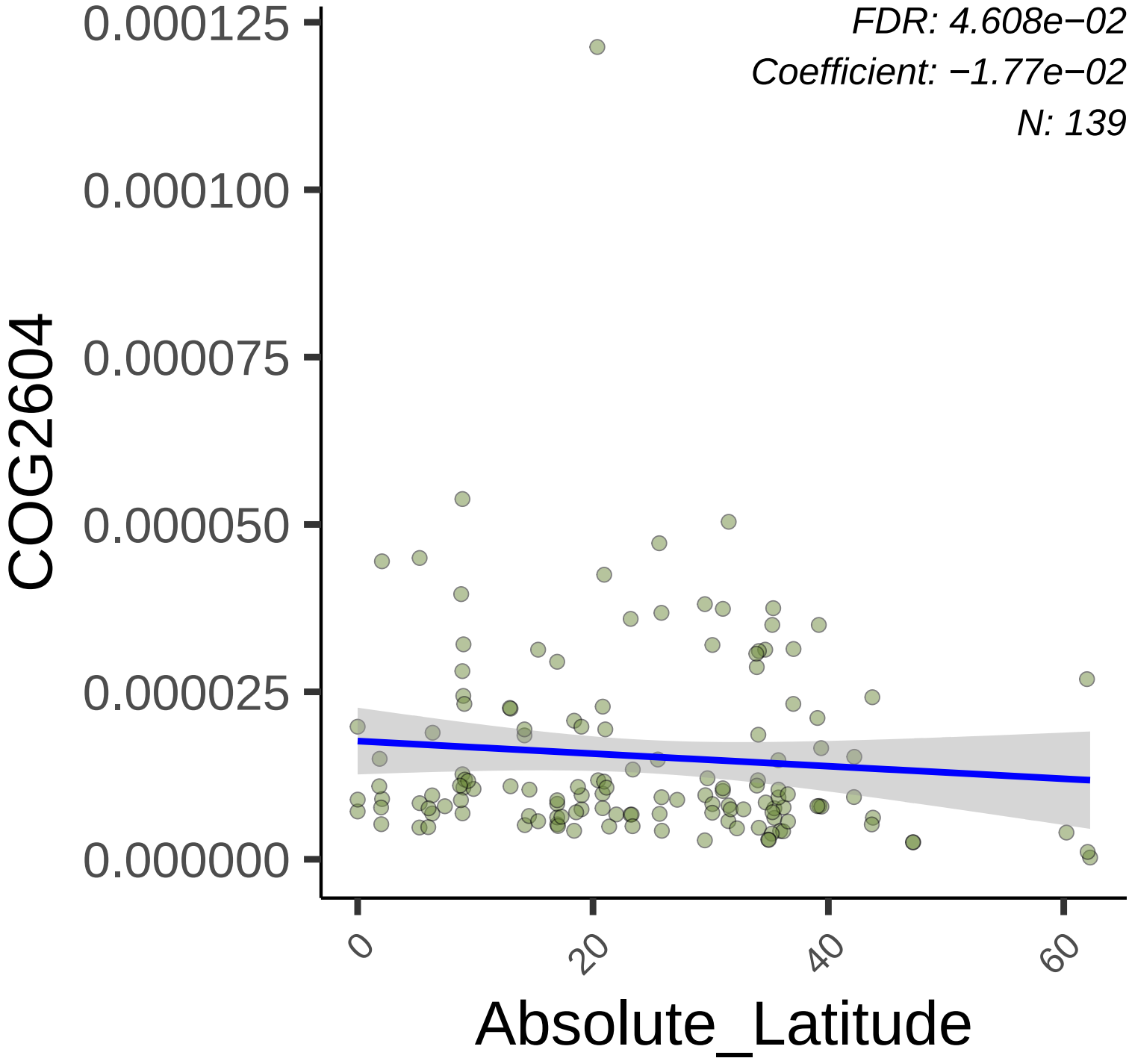

FDR: 4.573e−02
Coefficient: 4.29e−02
N: 139
COG3527
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

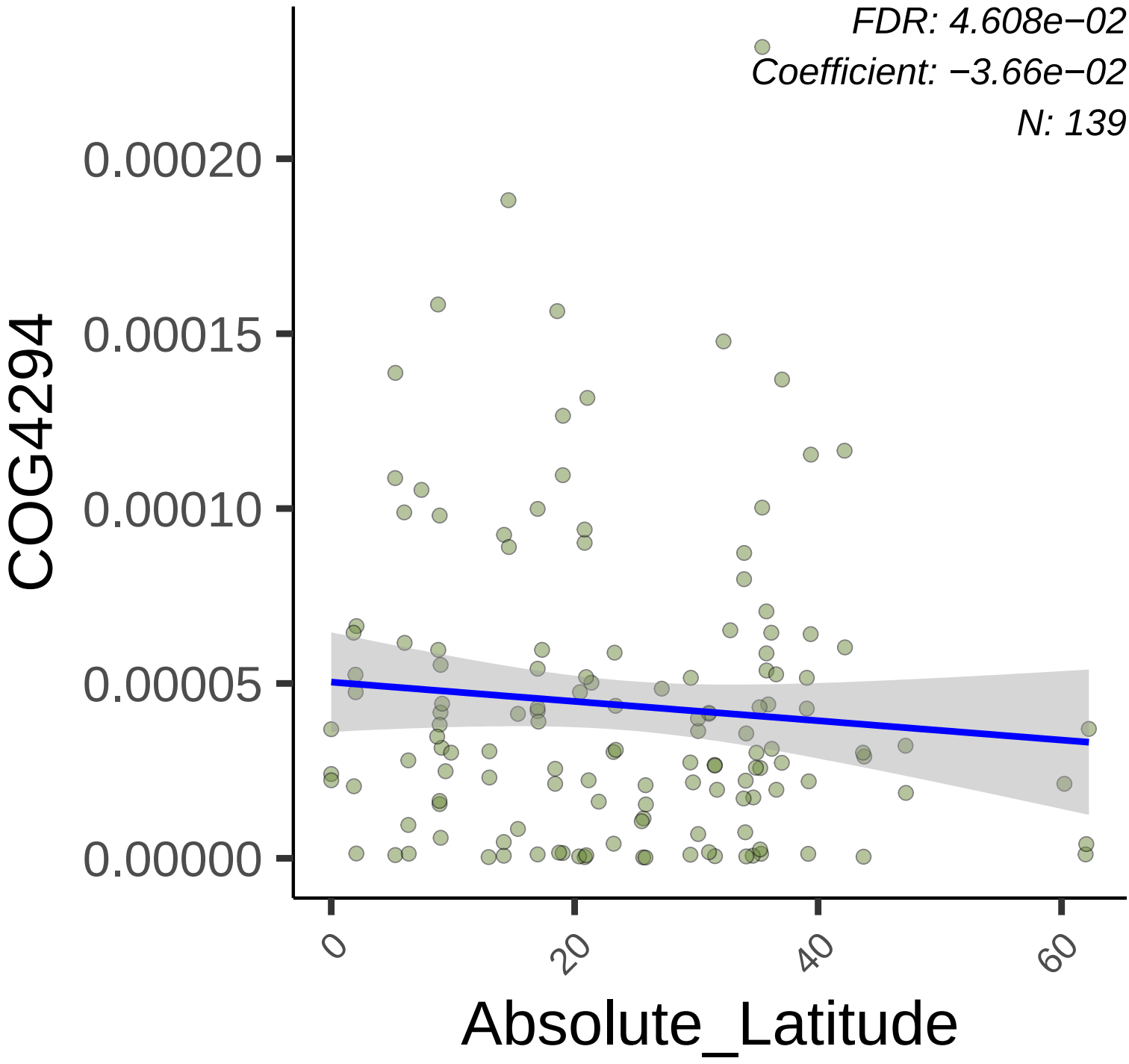

FDR: 4.576e−02
Coefficient: 1.74e−02
N: 139
COG5496
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

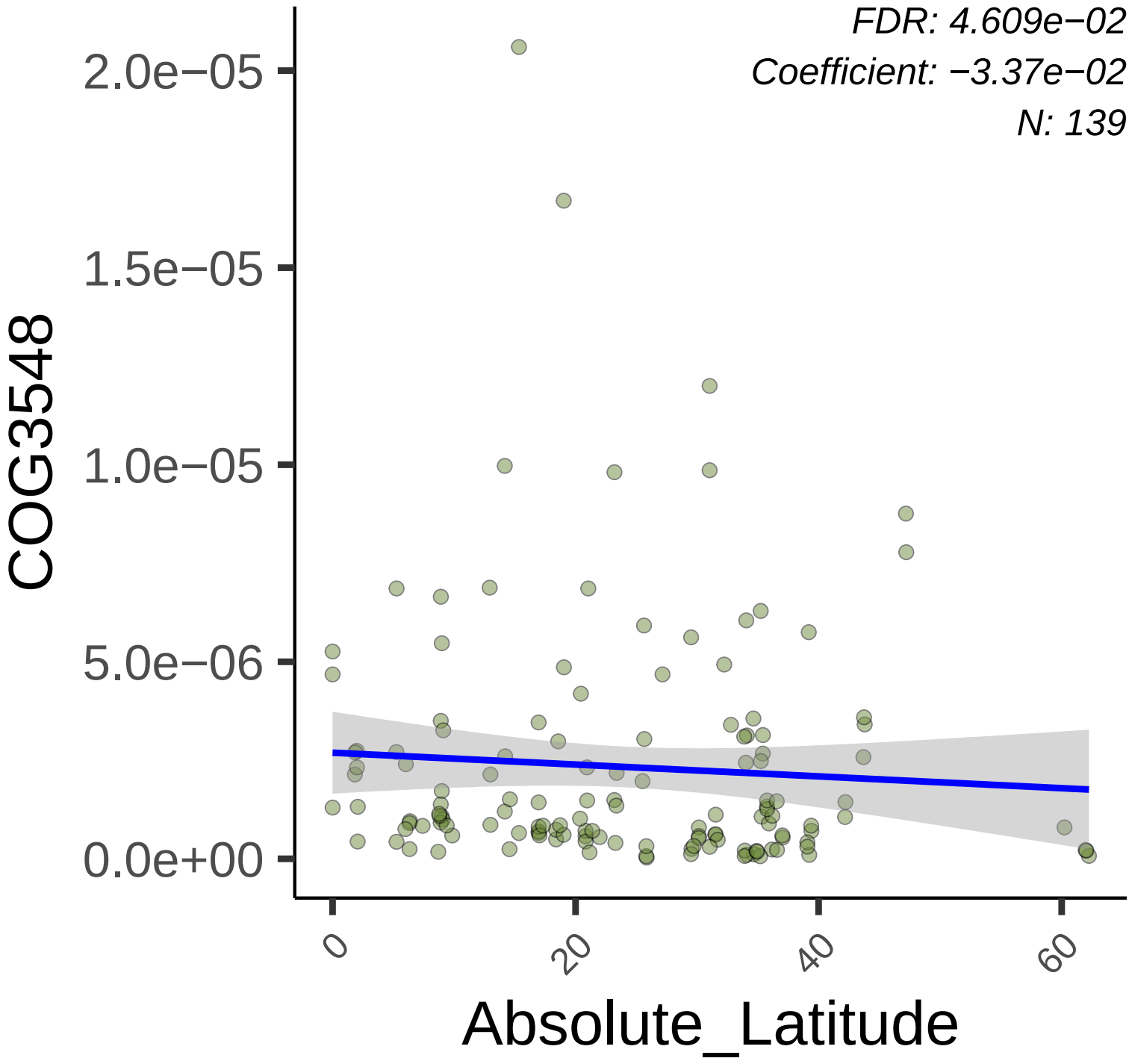

FDR: 4.583e−02
Coefficient: −6.73e−03
N: 139
0.00025
0.00020
0.00015
0.00010
COG0384
0
20
40
60
Absolute_Latitude

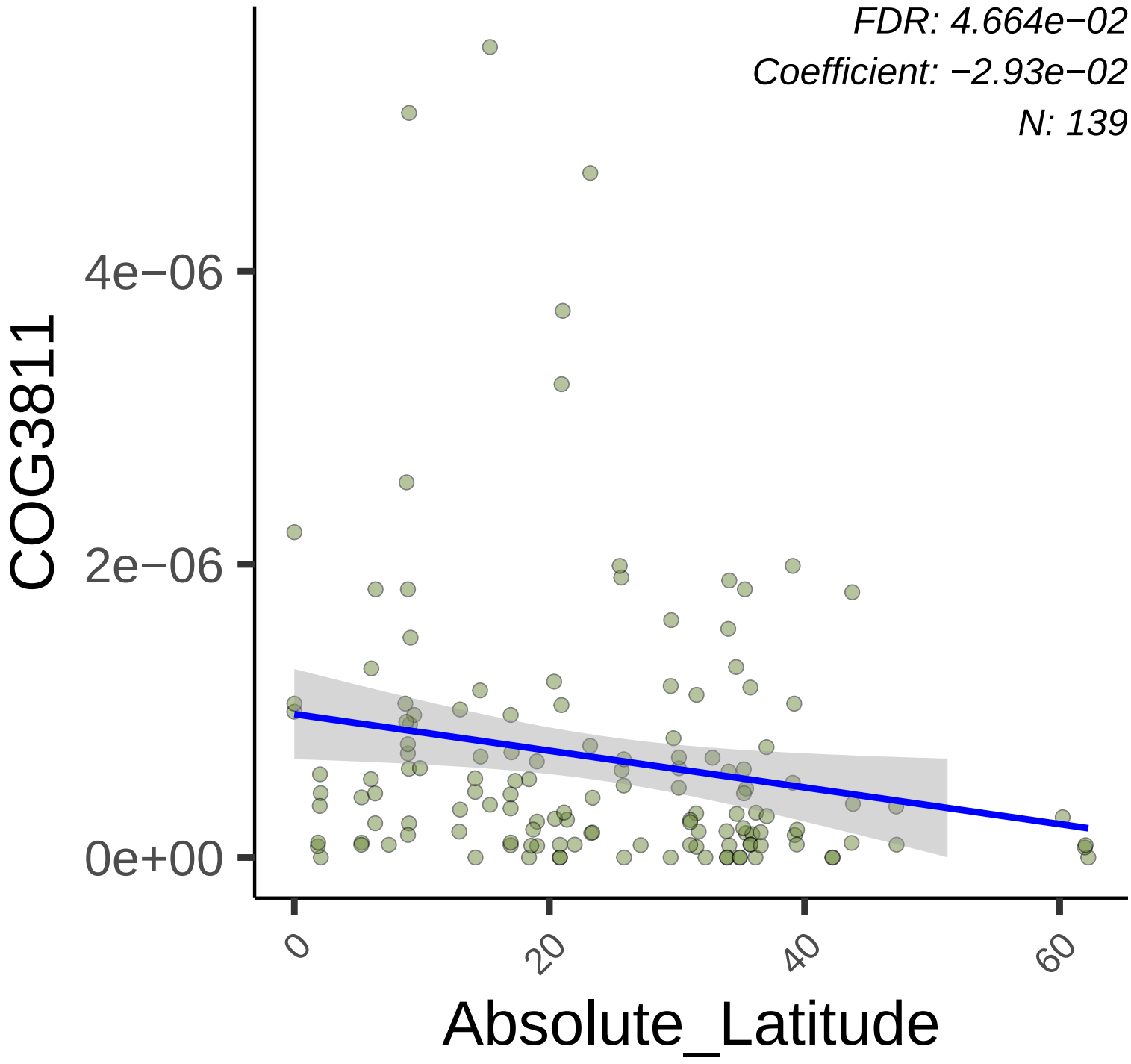

FDR: 4.583e−02
Coefficient: −1.08e−02
N: 139
COG1463
0.00020
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

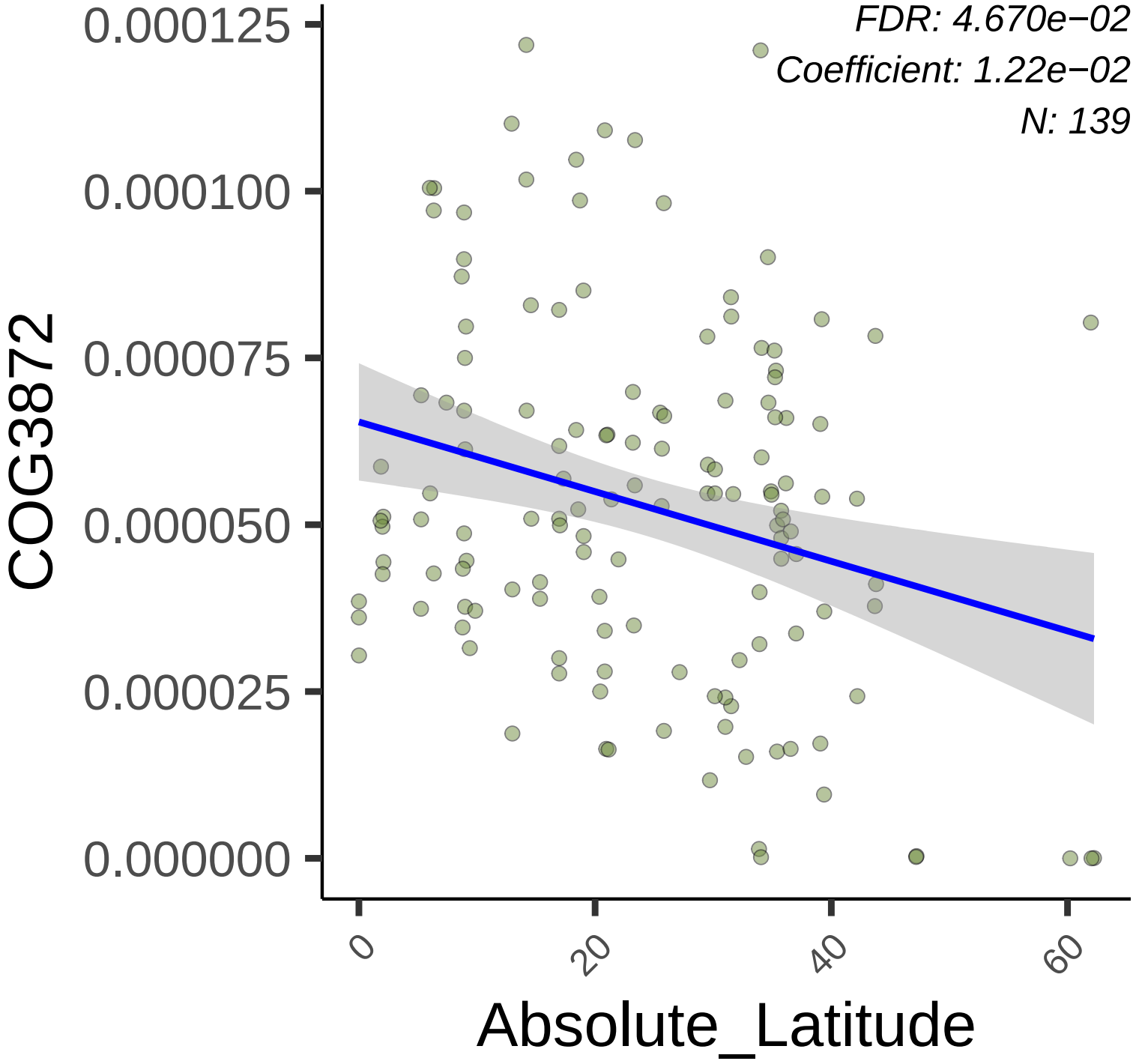

FDR: 4.592e−02
Coefficient: −1.24e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG2350
0
20
40
60
Absolute_Latitude

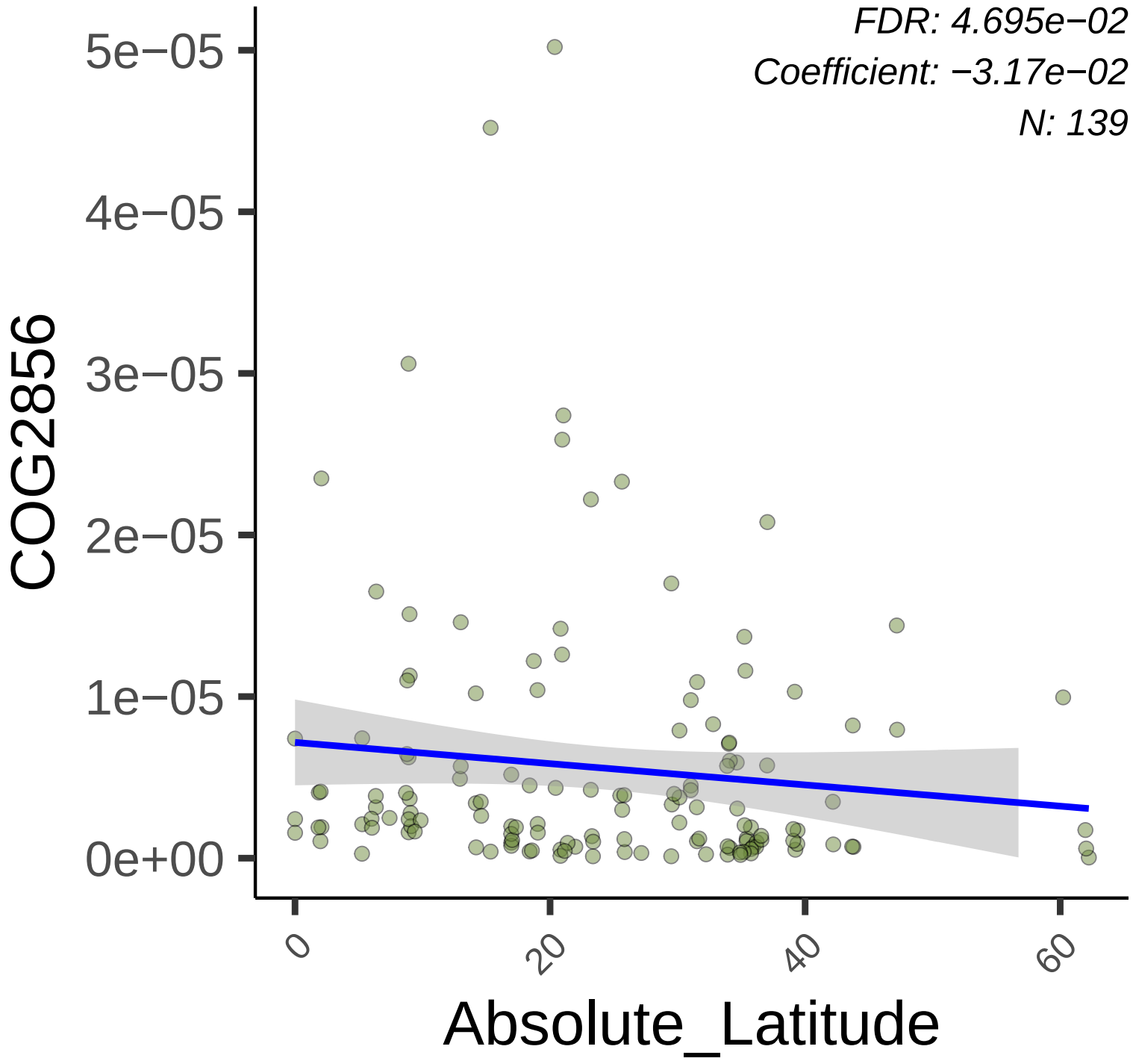

FDR: 4.608e−02
Coefficient: −1.77e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
0.000000
COG2604
0
20
40
60
Absolute_Latitude

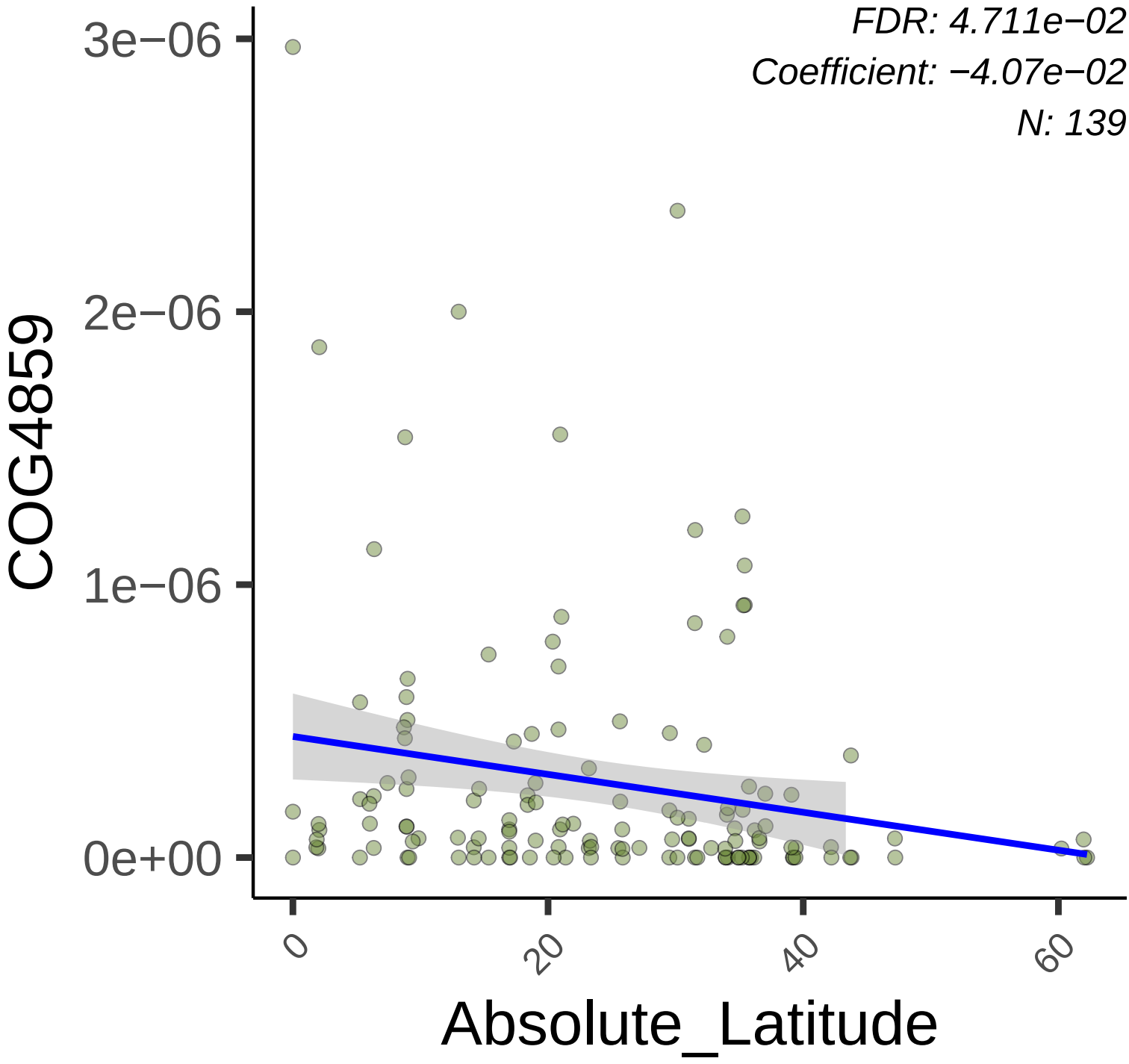

FDR: 4.608e−02
Coefficient: −3.66e−02
N: 139
COG4294
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

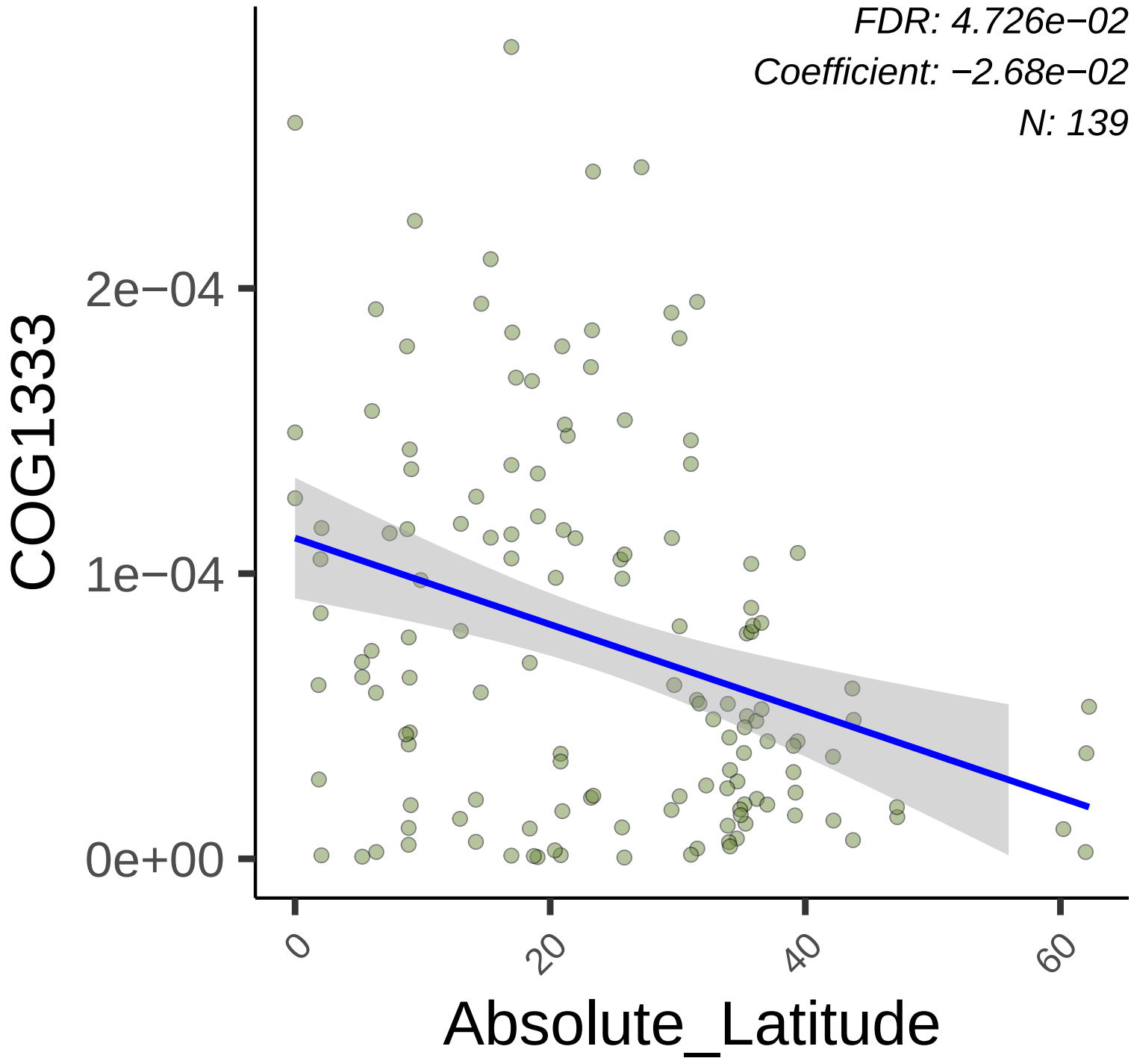

FDR: 4.609e−02
Coefficient: −3.37e−02
N: 139
COG3548
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

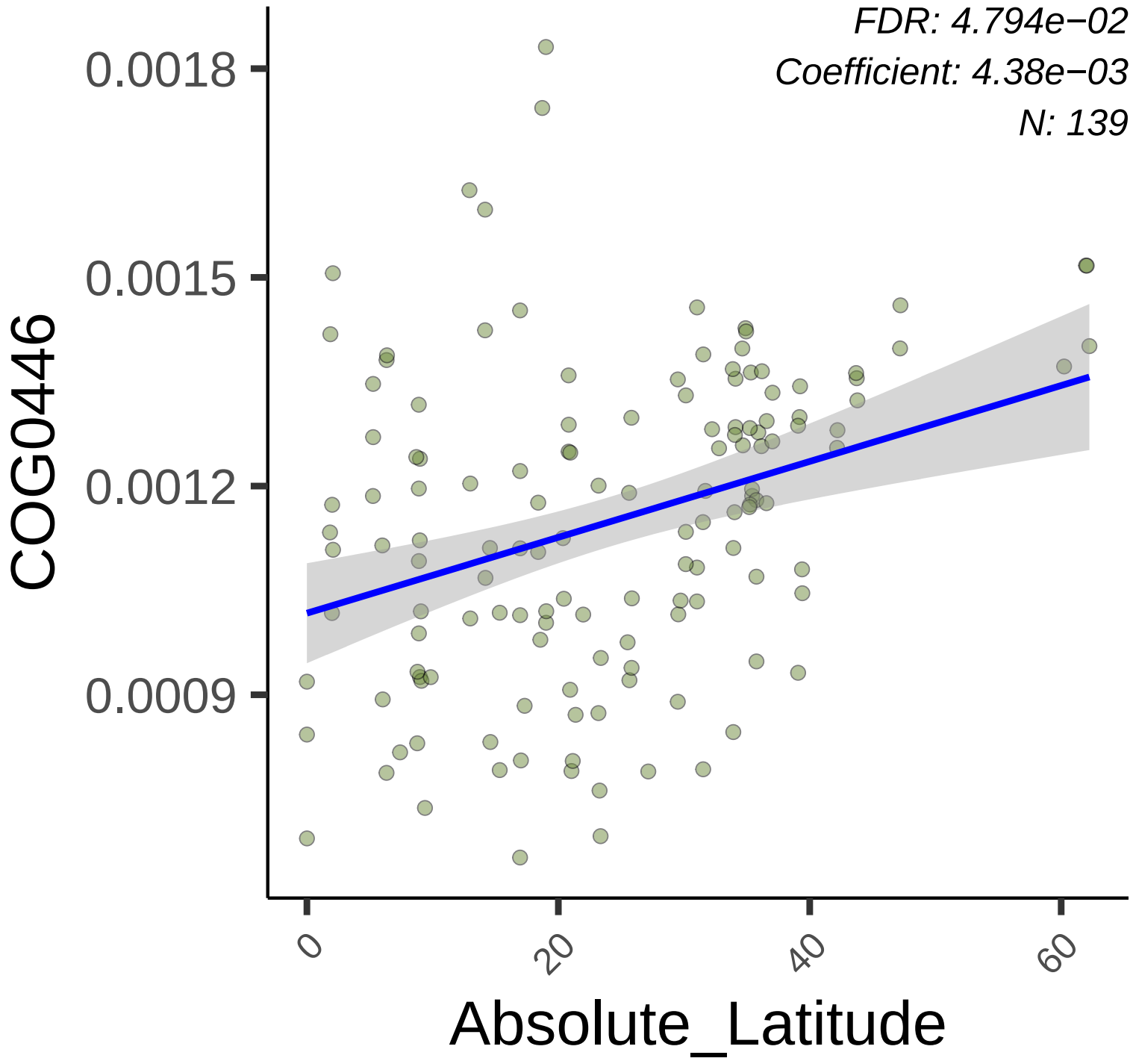

FDR: 4.664e−02
Coefficient: −2.93e−02
N: 139
COG3811
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

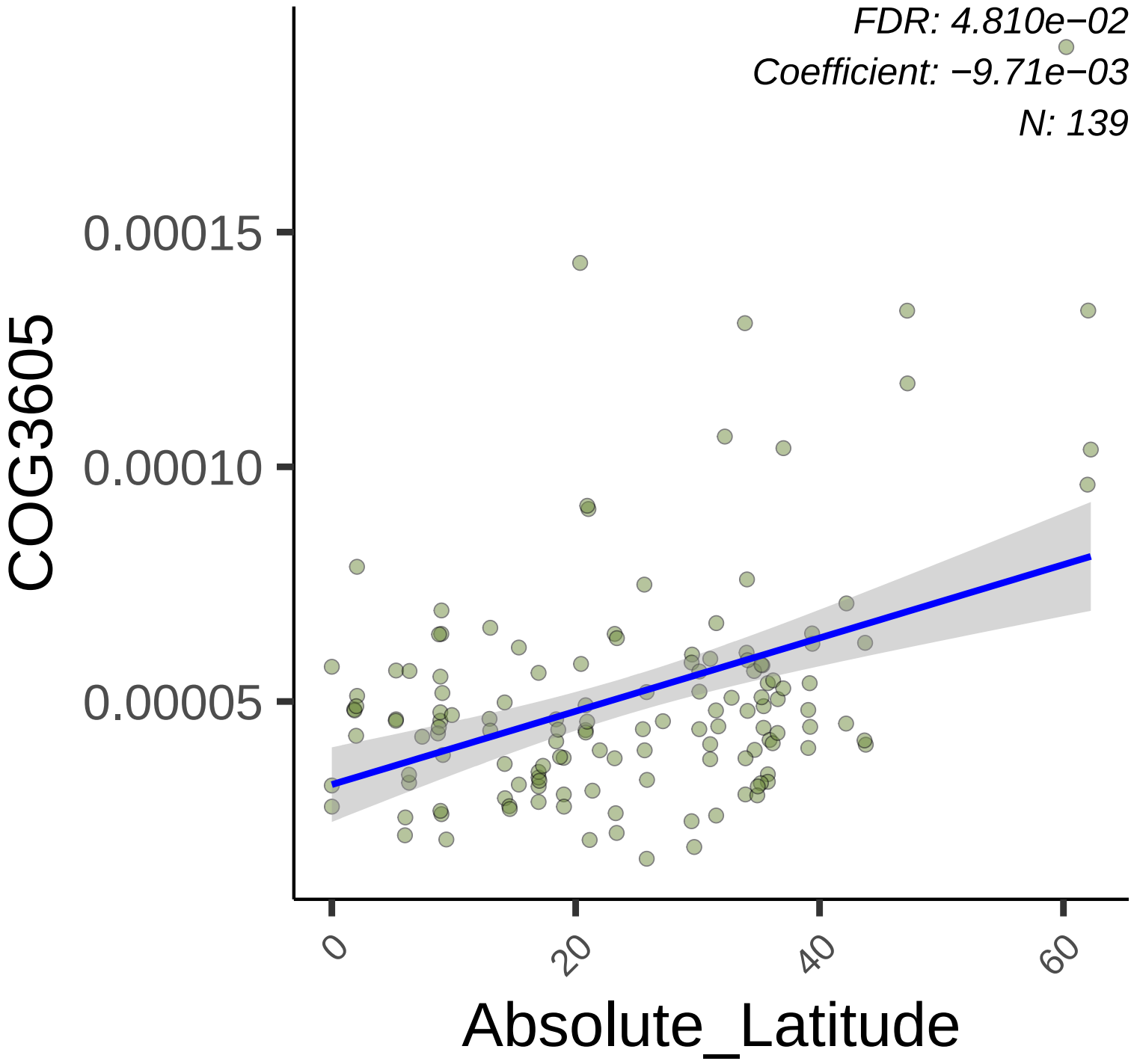

FDR: 4.670e−02
Coefficient: 1.22e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
0.000000
COG3872
0
20
40
60
Absolute_Latitude

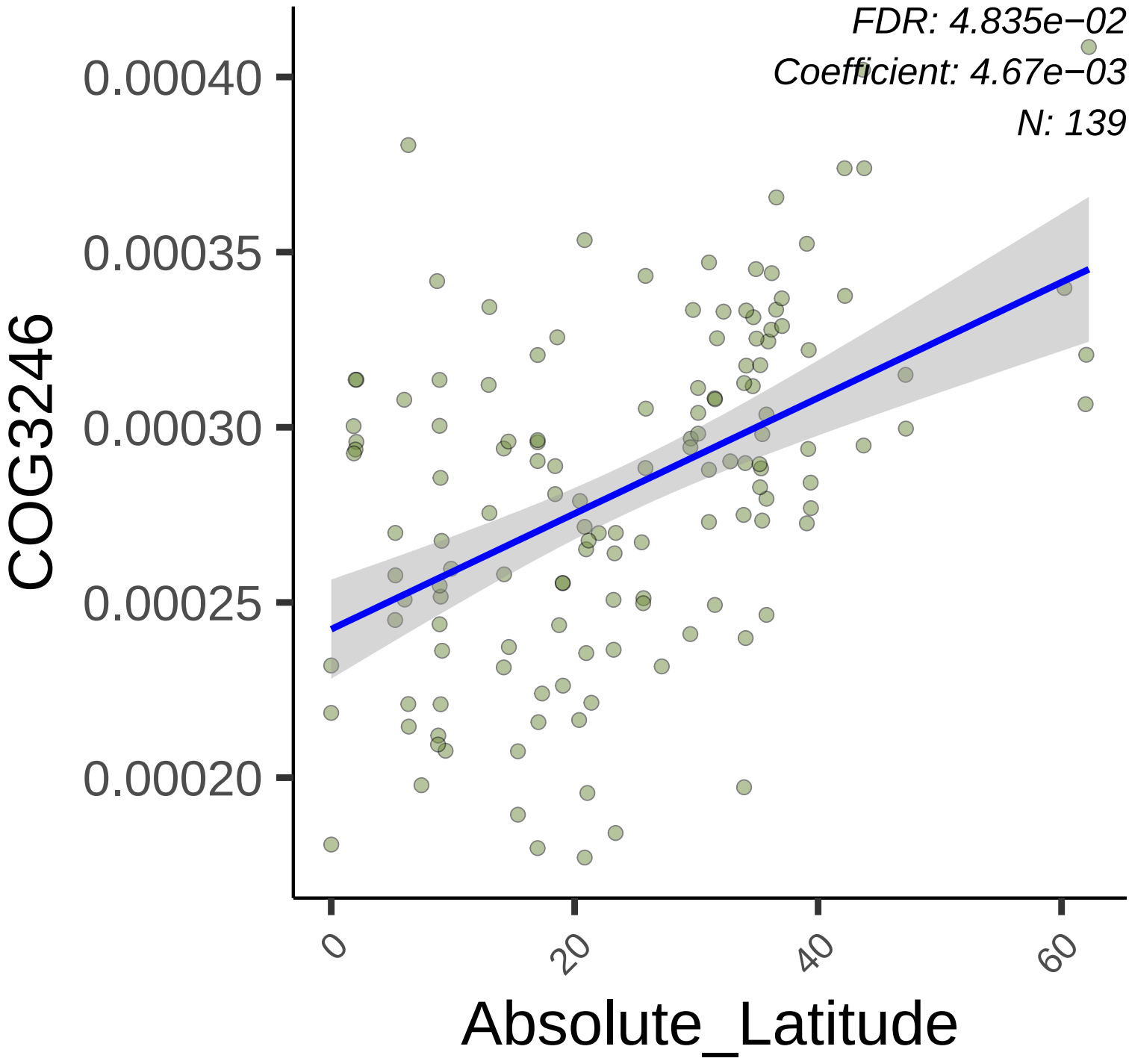

FDR: 4.695e−02
Coefficient: −3.17e−02
N: 139
COG2856
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

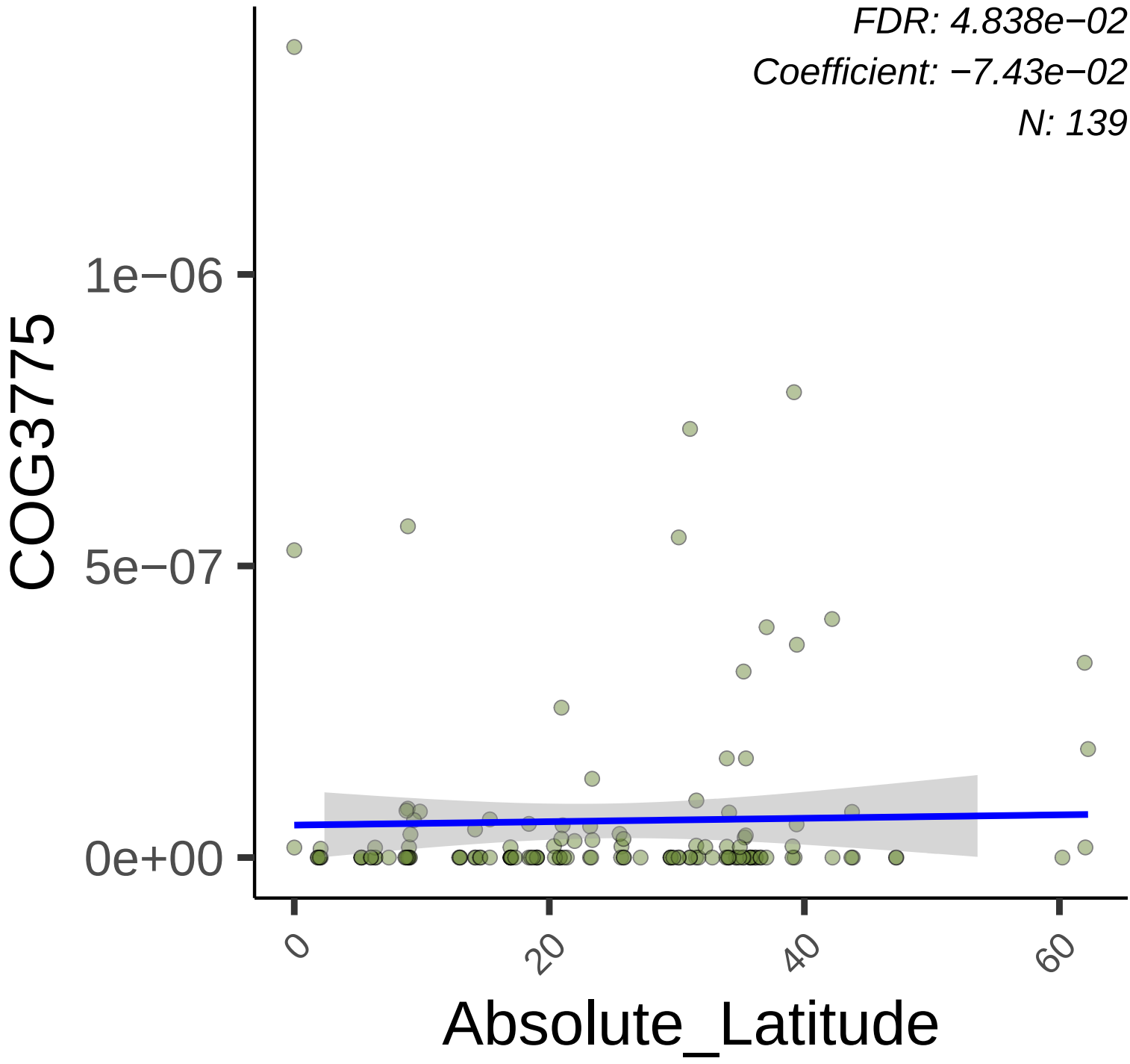

FDR: 4.711e−02
Coefficient: −4.07e−02
N: 139
3e−06
2e−06
1e−06
0e+00
COG4859
0
20
40
60
Absolute_Latitude

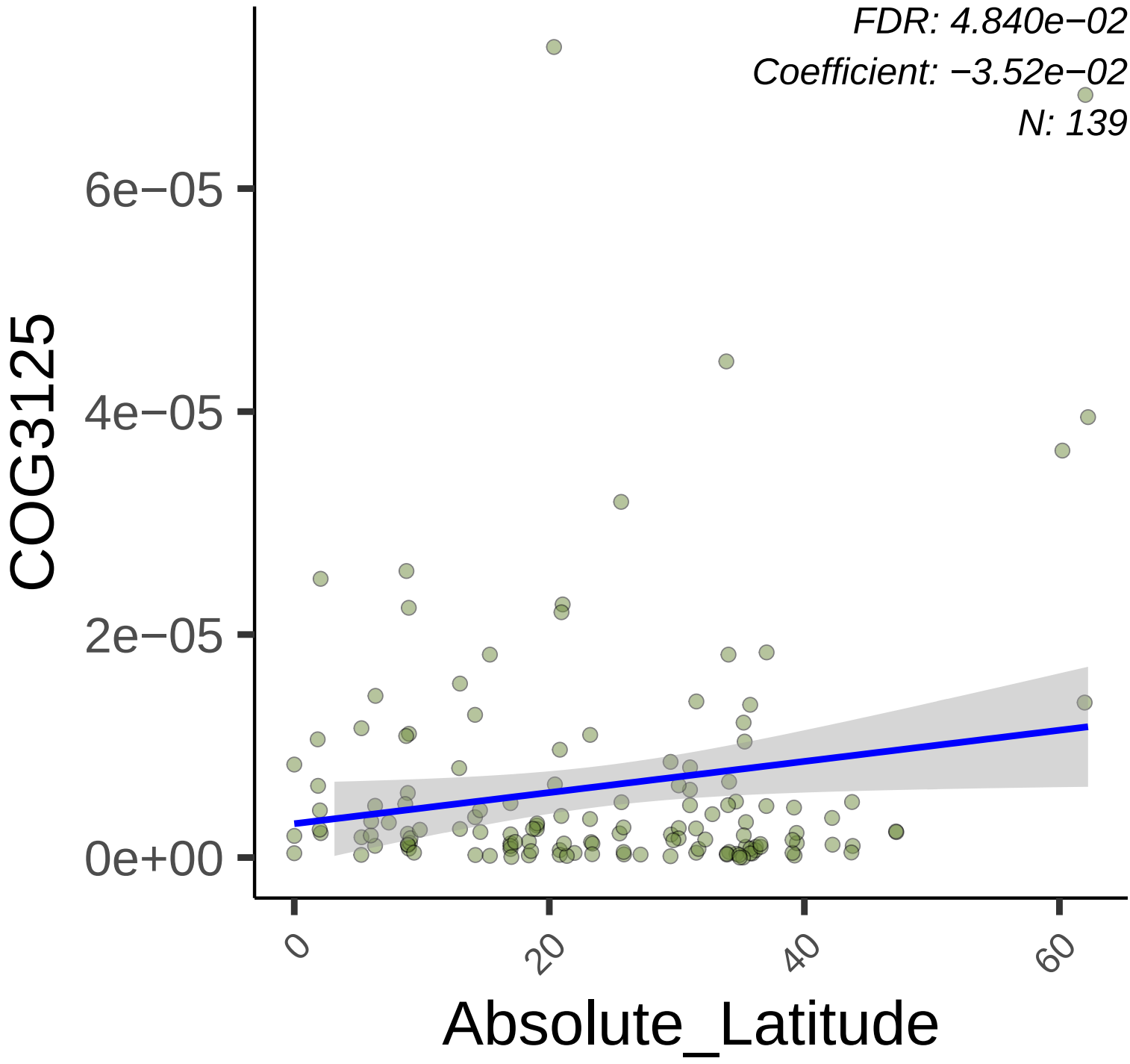

FDR: 4.726e−02
Coefficient: −2.68e−02
N: 139
COG1333
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

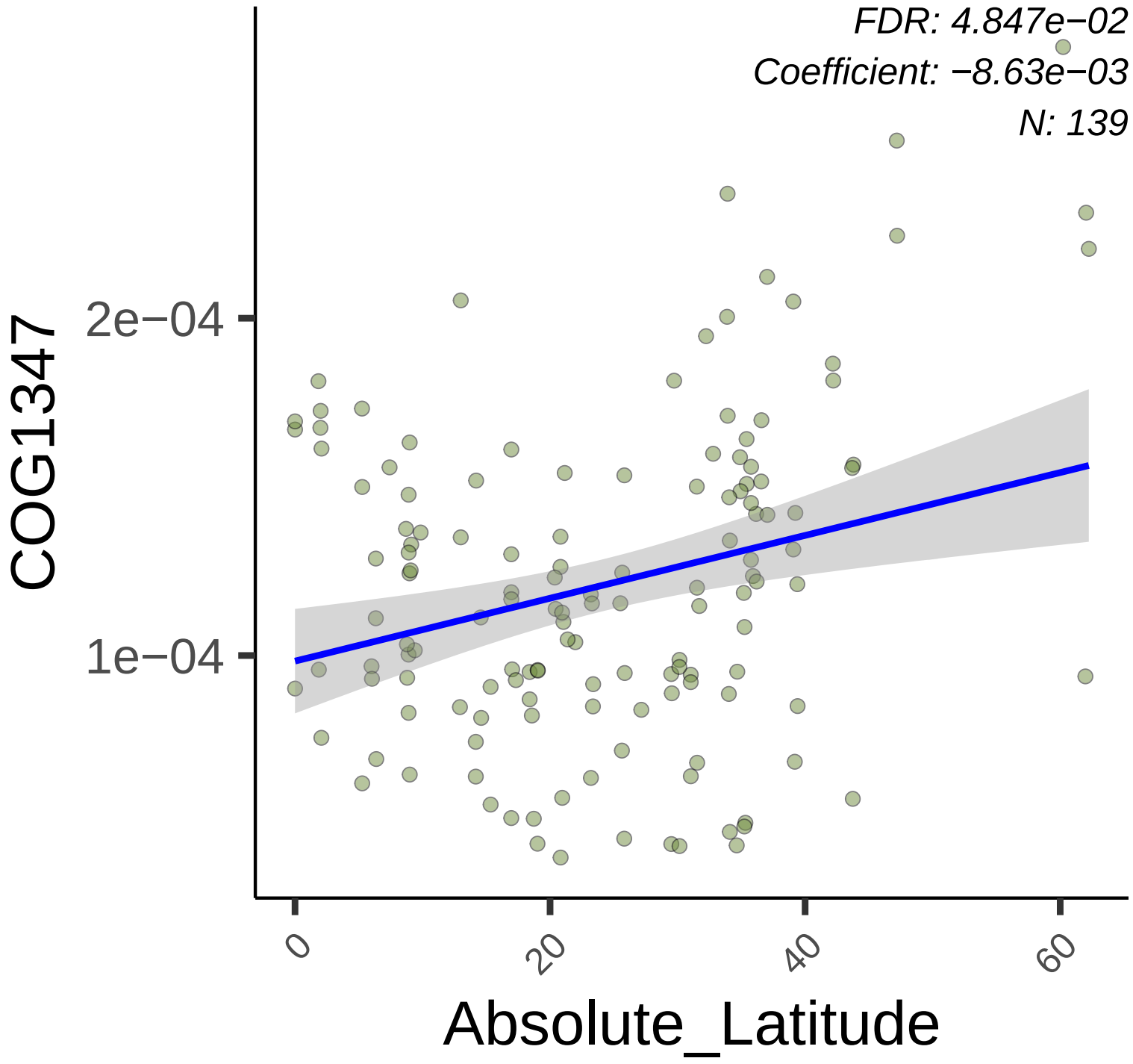

FDR: 4.794e−02
Coefficient: 4.38e−03
N: 139
0.0018
0.0015
0.0012
0.0009
COG0446
0
20
40
60
Absolute_Latitude

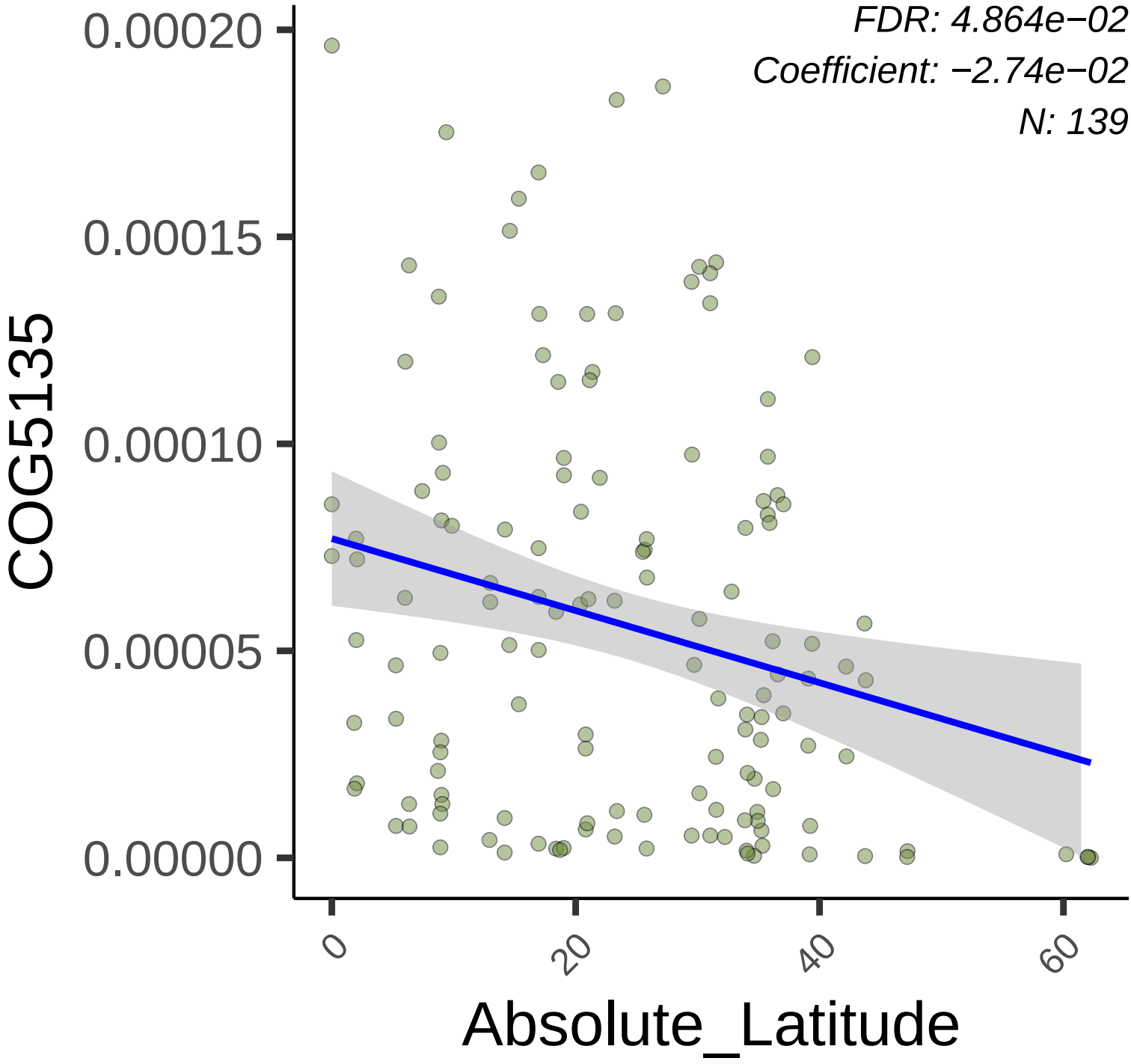

FDR: 4.810e−02
Coefficient: −9.71e−03
N: 139
0.00015
0.00010
0.00005
COG3605
0
20
40
60
Absolute_Latitude

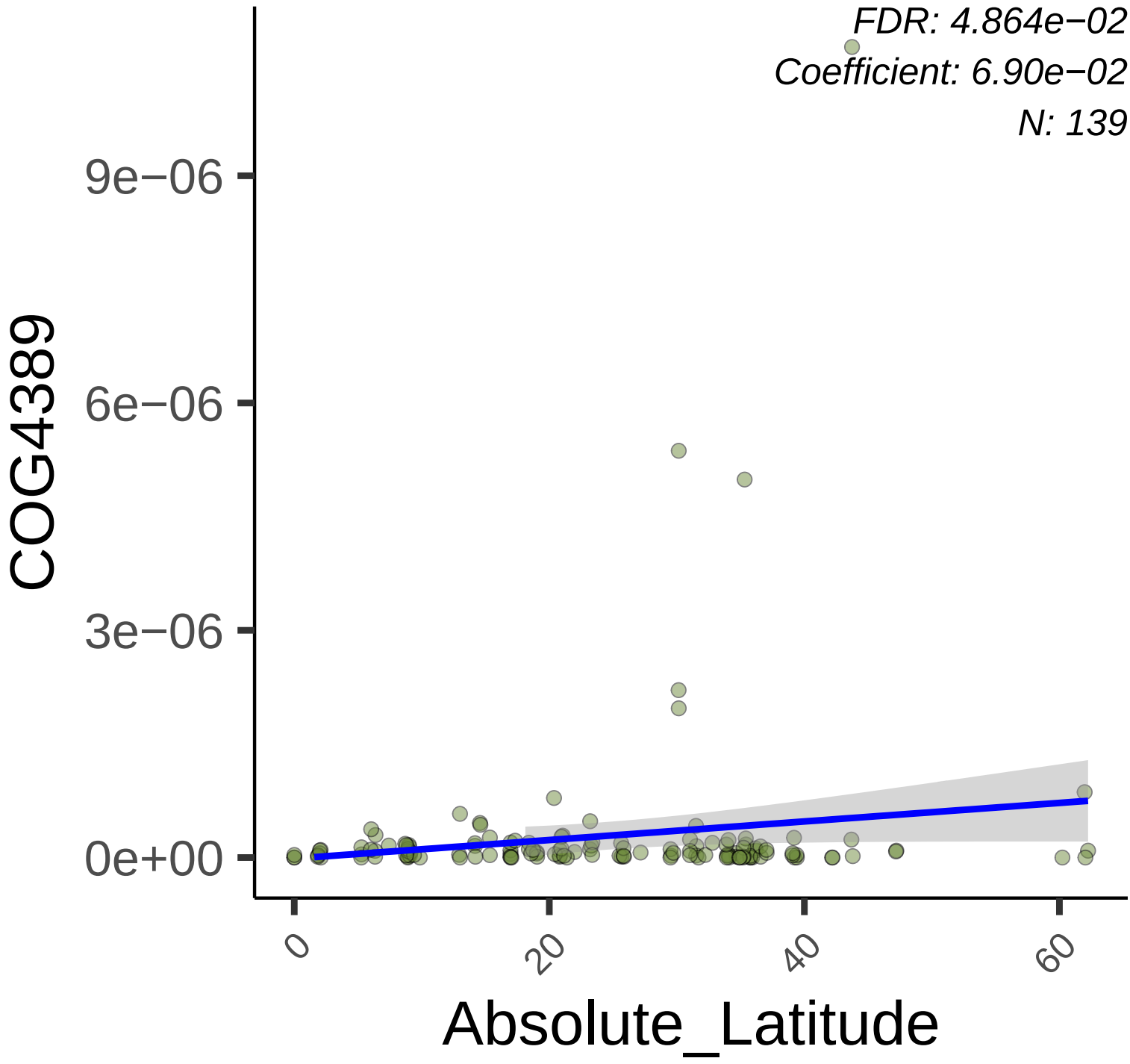

FDR: 4.835e−02
Coefficient: 4.67e−03
N: 139
0.00040
0.00035
0.00030
0.00025
0.00020
COG3246
0
20
40
60
Absolute_Latitude

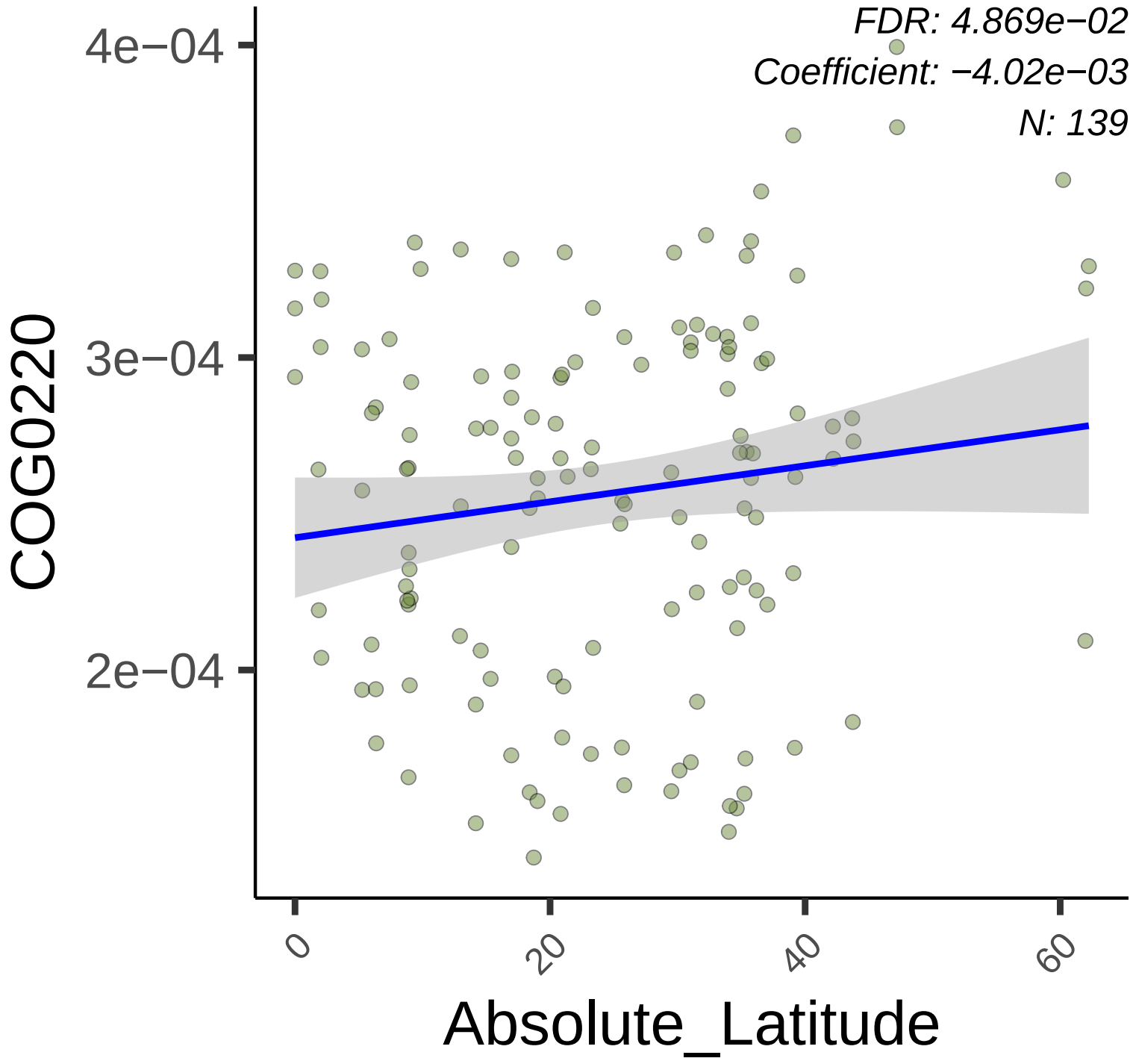

FDR: 4.838e−02
Coefficient: −7.43e−02
N: 139
COG3775
1e−06
5e−07
0e+00
0
20
40
60
Absolute_Latitude

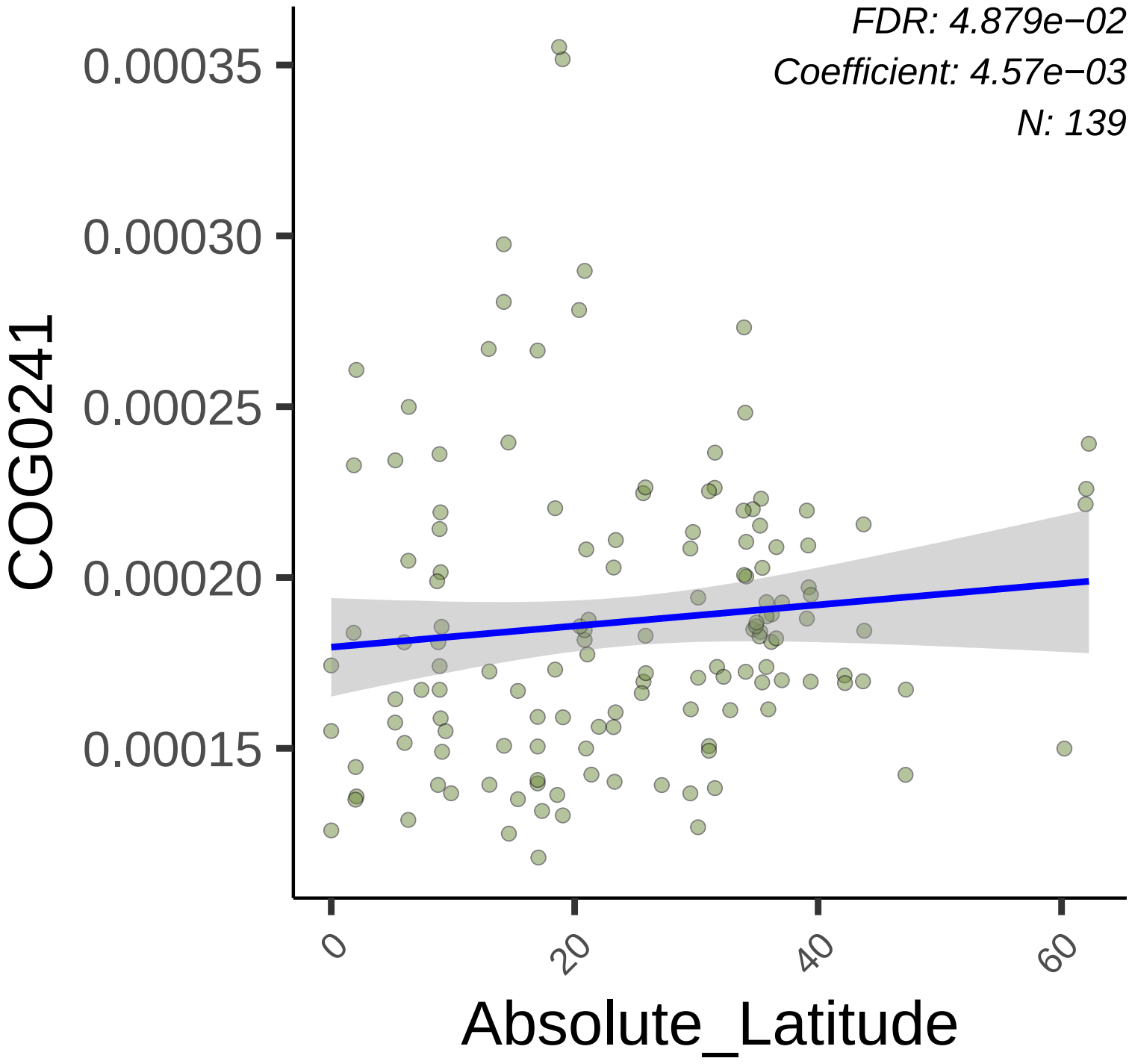

FDR: 4.840e−02
Coefficient: −3.52e−02
N: 139
COG3125
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

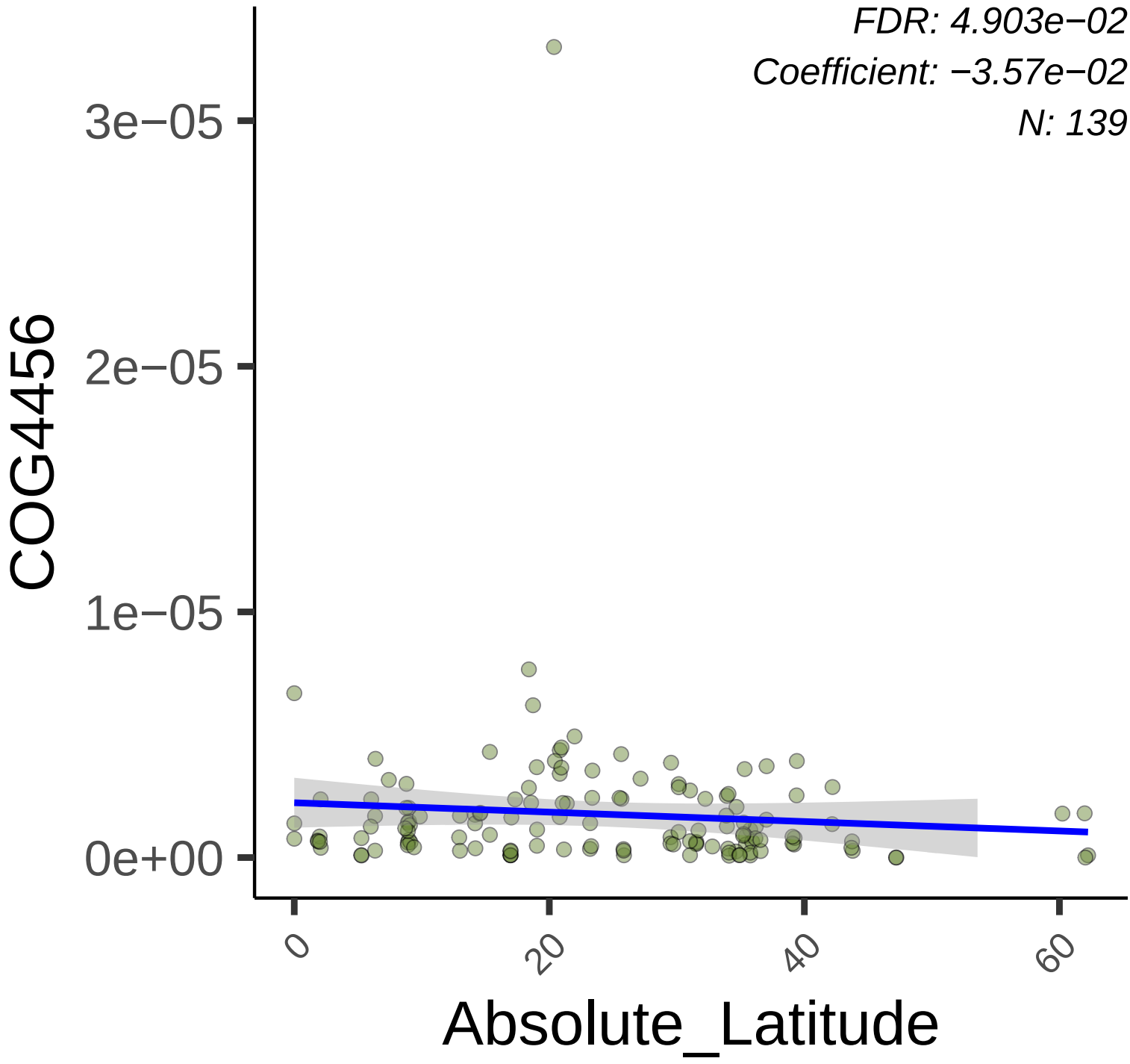

FDR: 4.847e−02
Coefficient: −8.63e−03
N: 139
COG1347
2e−04
1e−04
0
20
40
60
Absolute_Latitude

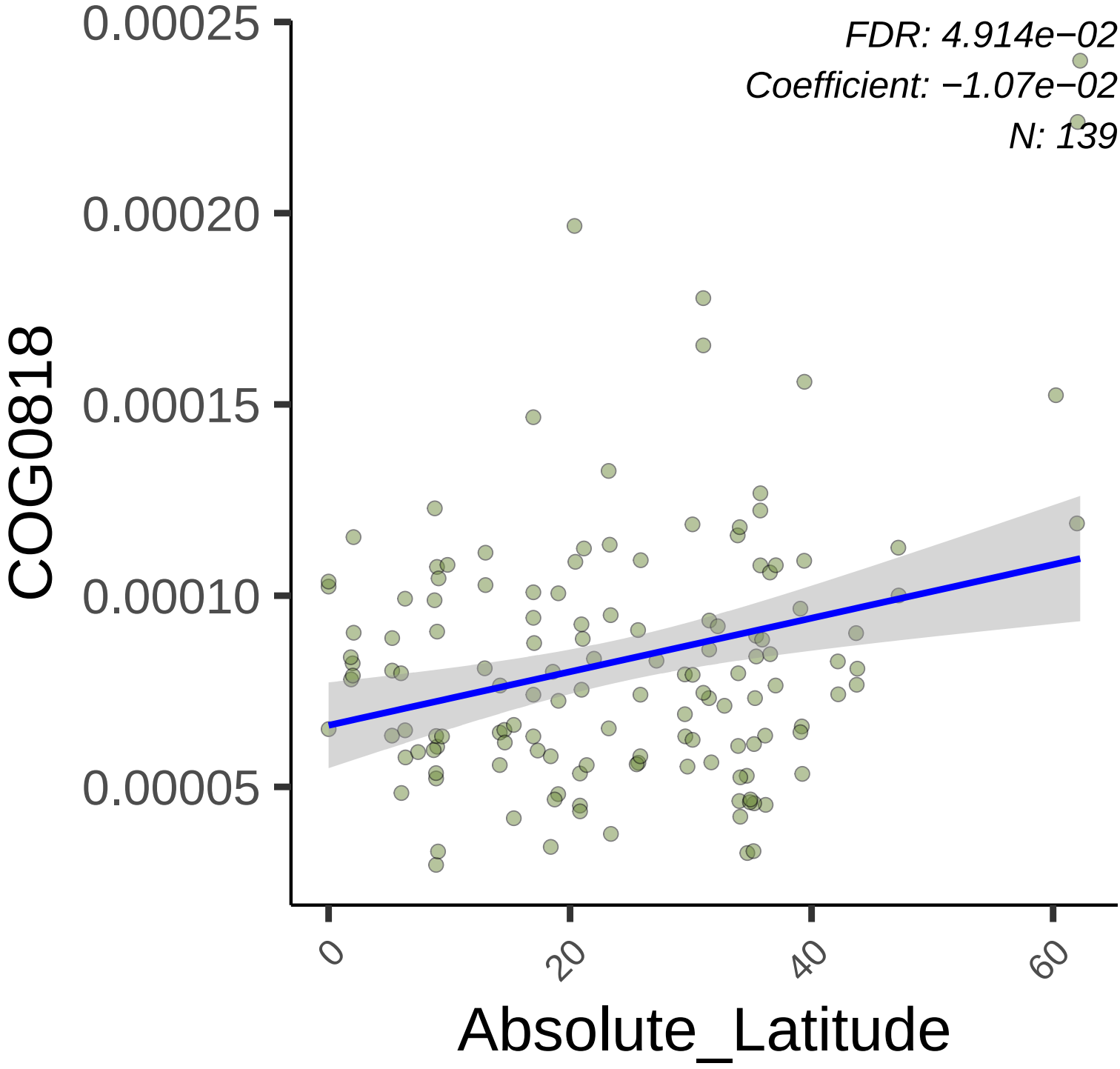

FDR: 4.864e−02
Coefficient: −2.74e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG5135
0
20
40
60
Absolute_Latitude

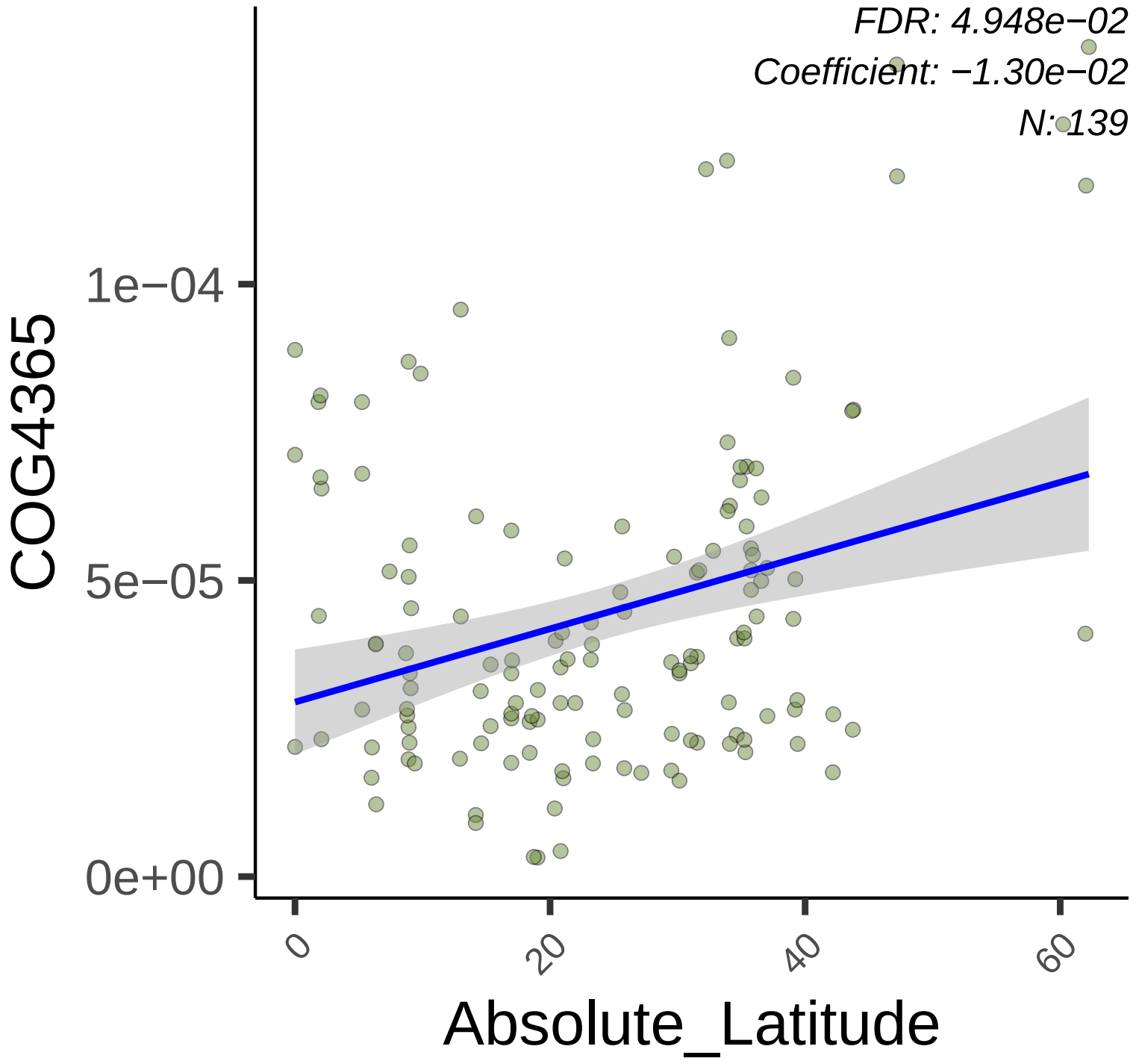

FDR: 4.864e−02
Coefficient: 6.90e−02
N: 139
COG4389
9e−06
6e−06
3e−06
0e+00
0
20
40
60
Absolute_Latitude

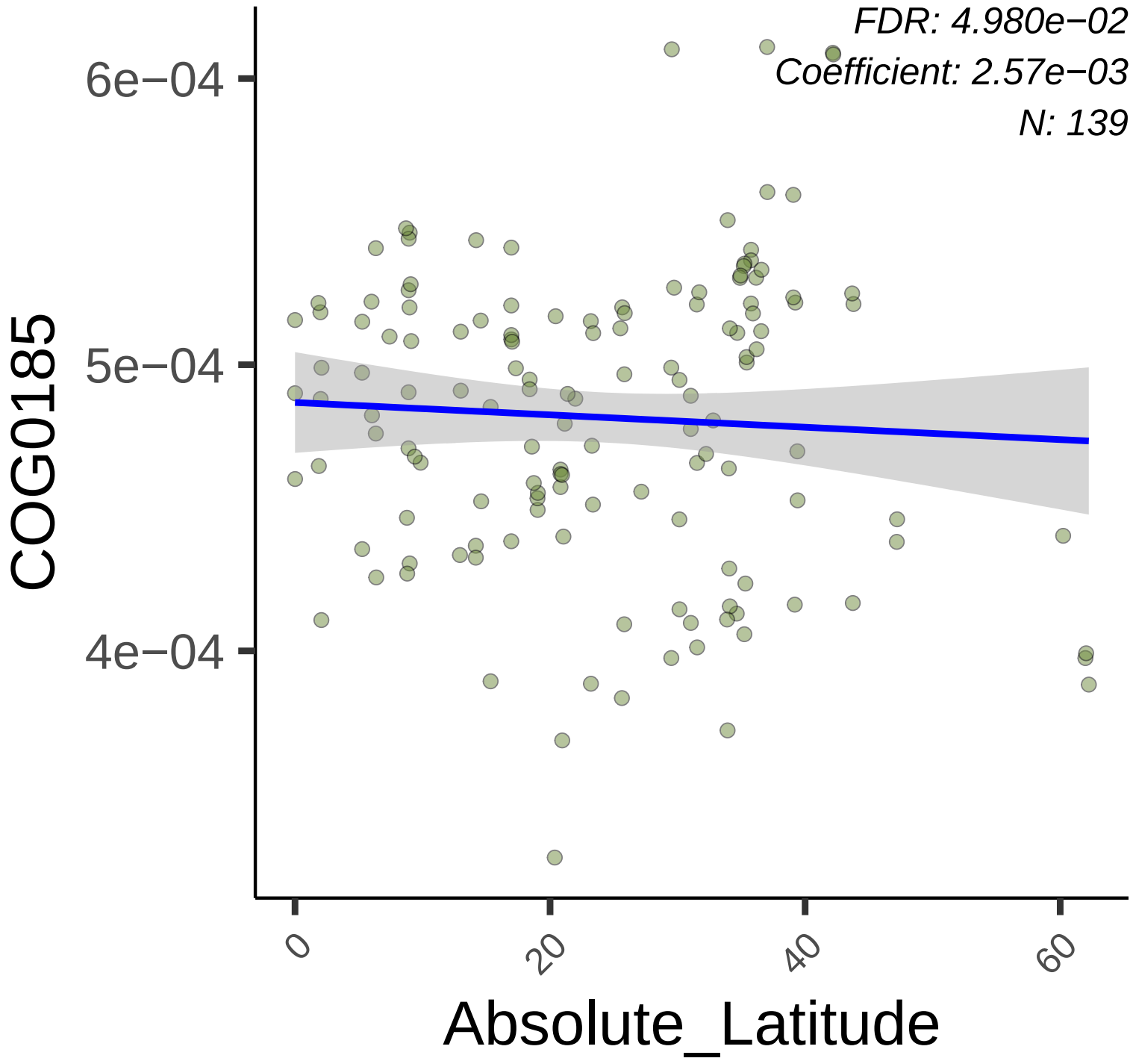

FDR: 4.869e−02
Coefficient: −4.02e−03
N: 139
4e−04
3e−04
2e−04
COG0220
0
20
40
60
Absolute_Latitude

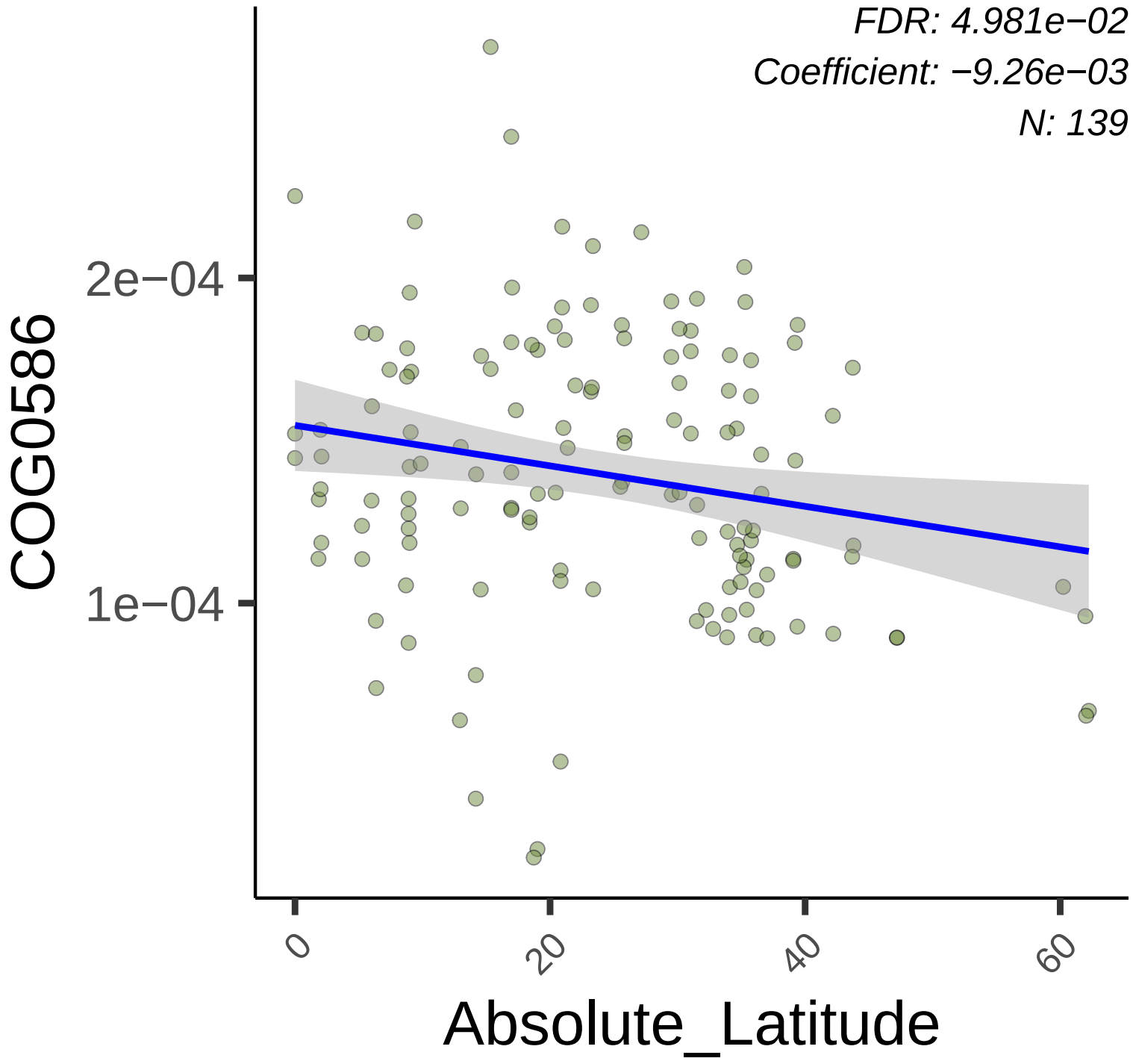

FDR: 4.879e−02
Coefficient: 4.57e−03
N: 139
0.00035
0.00030
0.00025
0.00020
0.00015
COG0241
0
20
40
60
Absolute_Latitude

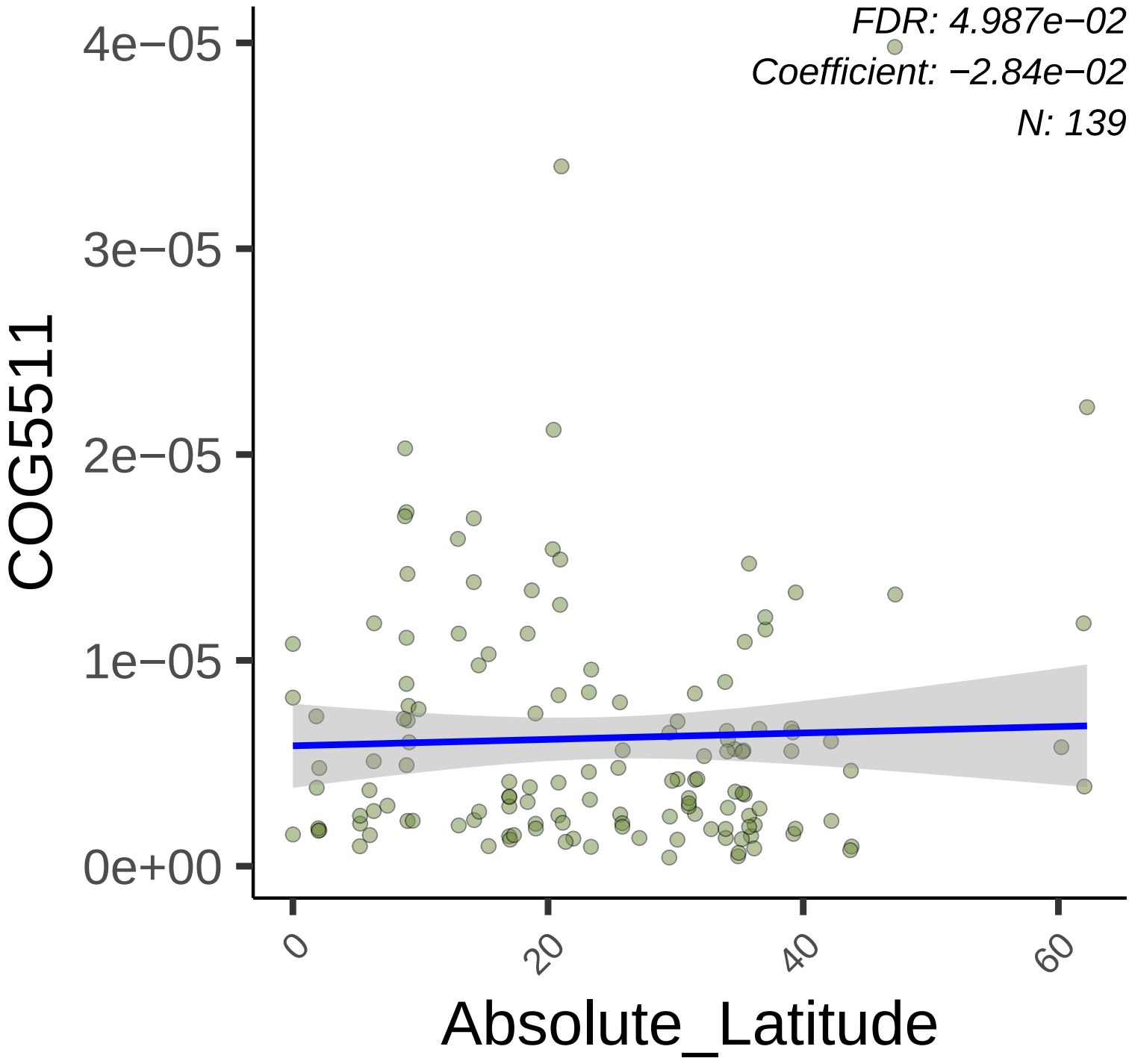

FDR: 4.903e−02
Coefficient: −3.57e−02
N: 139
COG4456
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

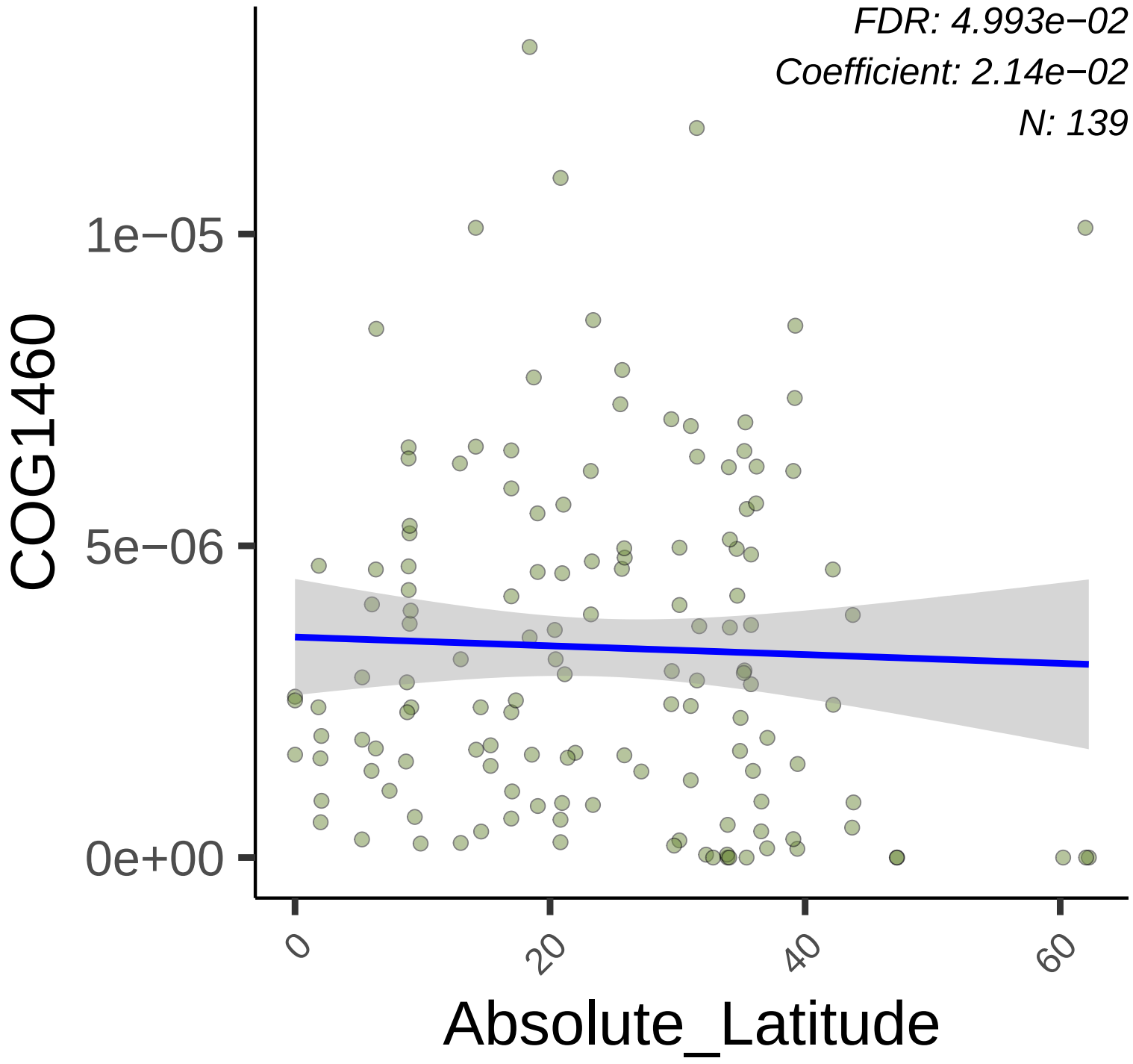

FDR: 4.914e−02
Coefficient: −1.07e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG0818
0
20
40
60
Absolute_Latitude

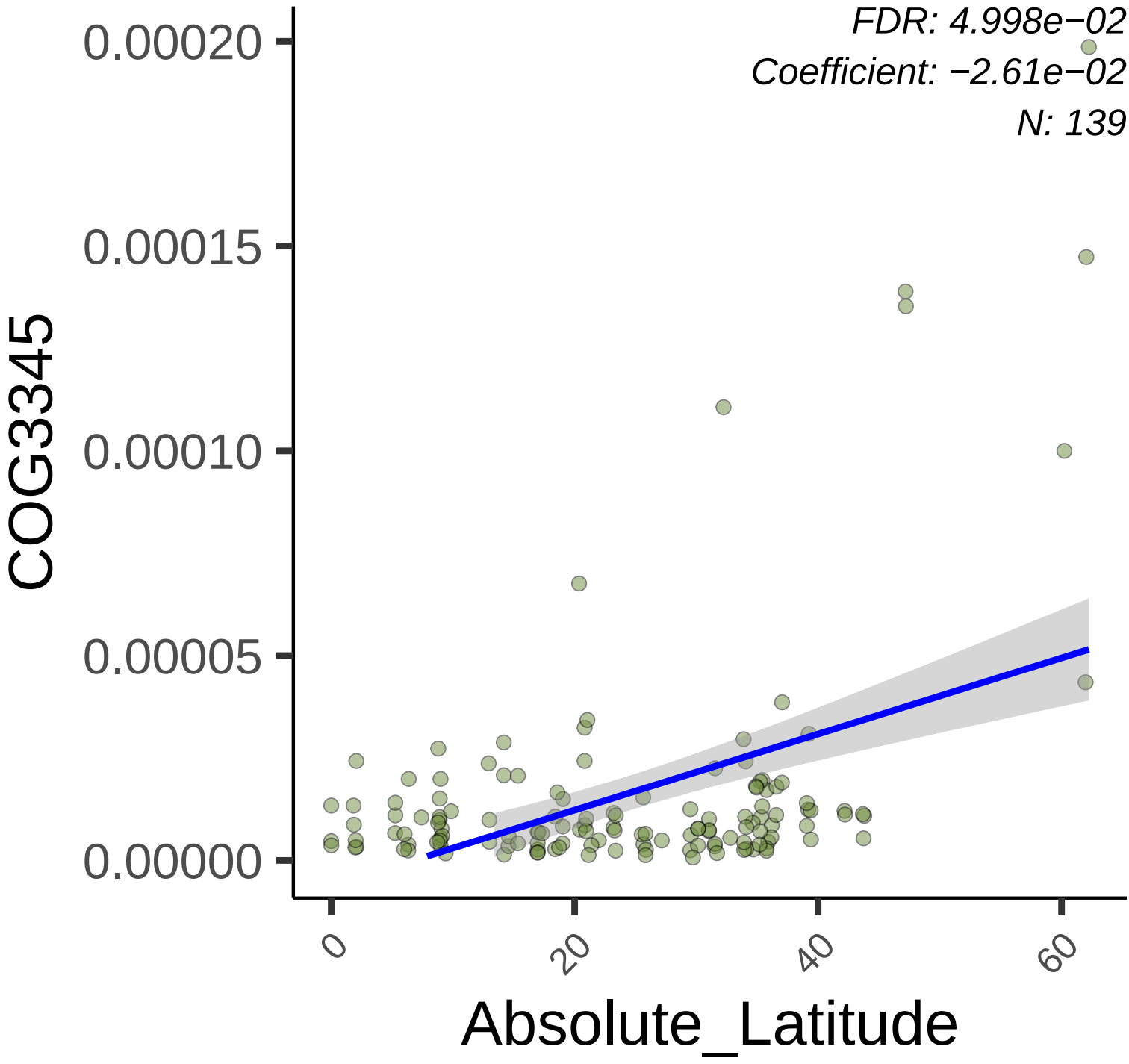

FDR: 4.948e−02
Coefficient: −1.30e−02
N: 139
COG4365
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

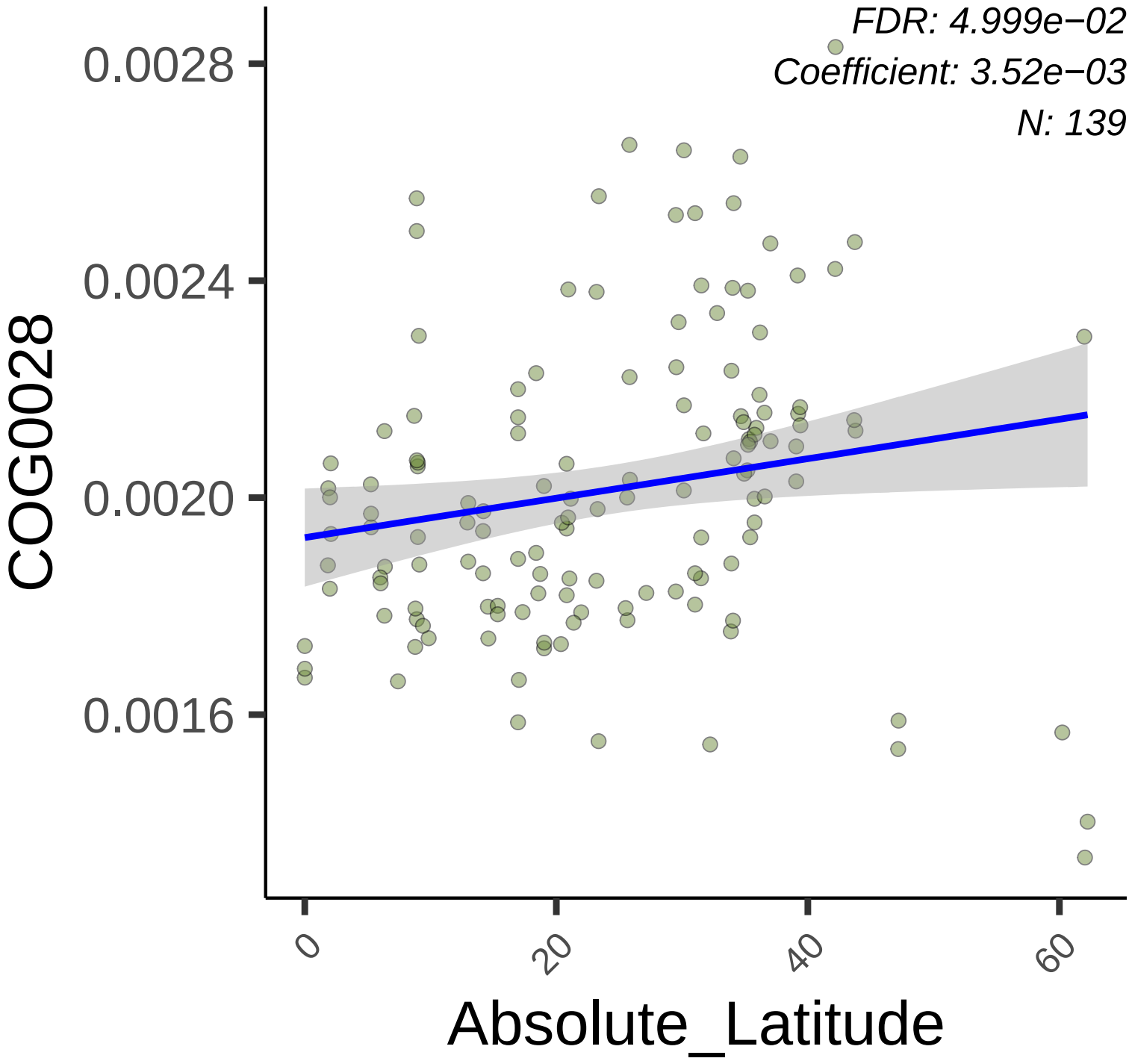

FDR: 4.980e−02
Coefficient: 2.57e−03
N: 139
6e−04
5e−04
4e−04
COG0185
0
20
40
60
Absolute_Latitude


FDR: 4.981e−02
Coefficient: −9.26e−03
N: 139
COG0586
2e−04
1e−04
0
20
40
60
Absolute_Latitude


FDR: 4.987e−02
Coefficient: −2.84e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG5511
0
20
40
60
Absolute_Latitude


FDR: 4.993e−02
Coefficient: 2.14e−02
N: 139
COG1460
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude


FDR: 4.998e−02
Coefficient: −2.61e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG3345
0
20
40
60
Absolute_Latitude


FDR: 4.999e−02
Coefficient: 3.52e−03
N: 139
0.0028
0.0024
0.0020
0.0016
COG0028
0
20
40
60
Absolute_Latitude