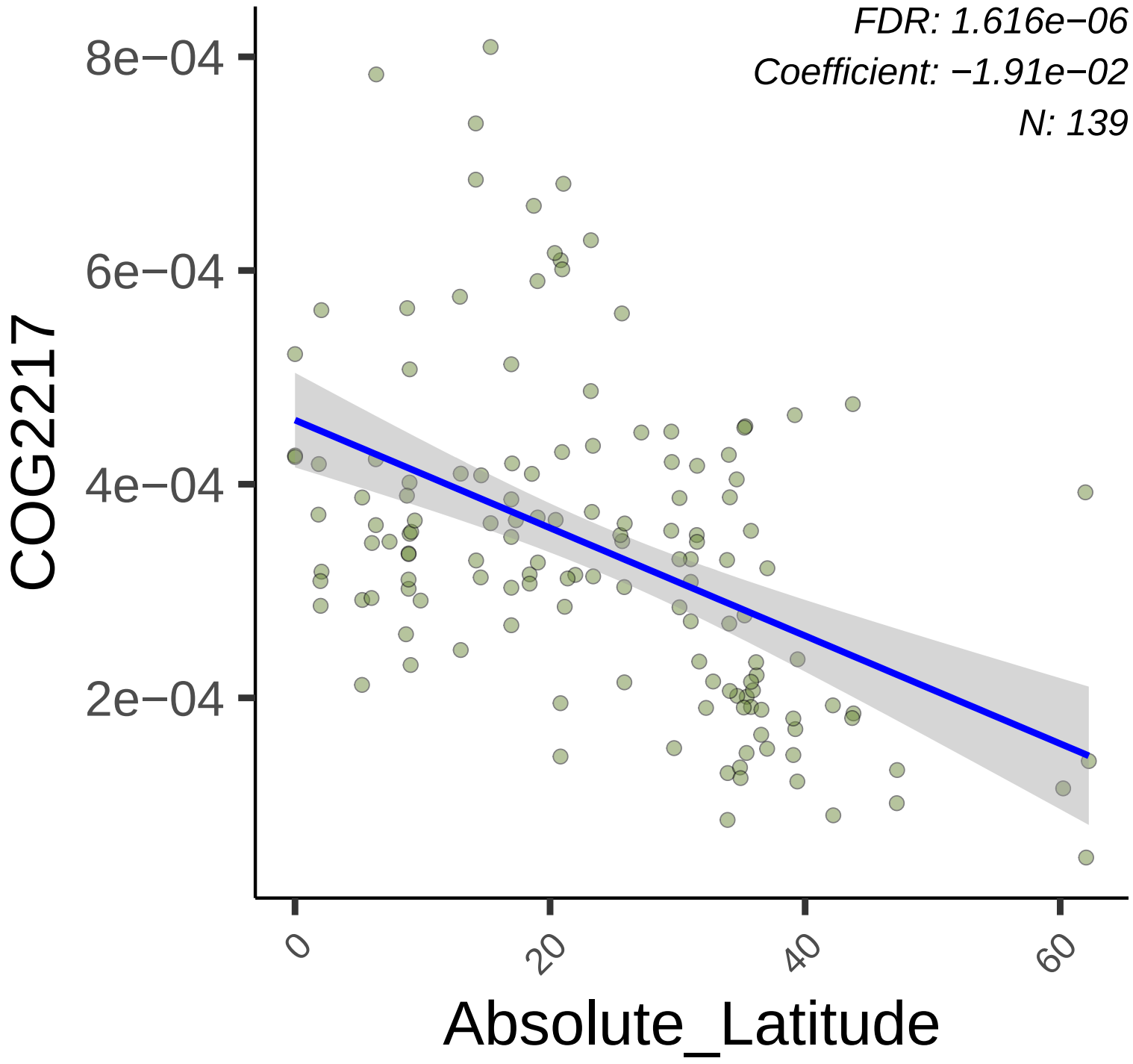
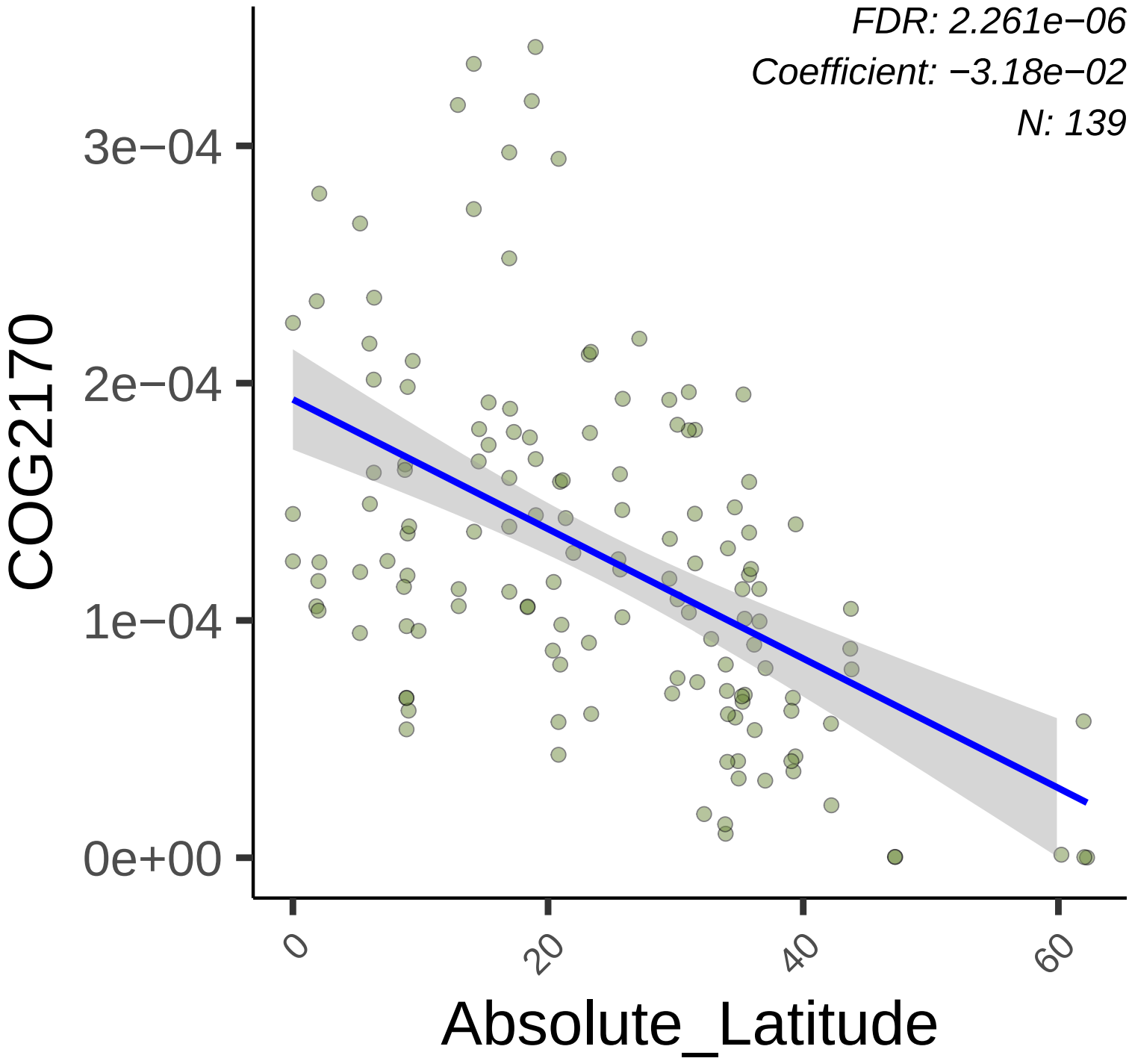
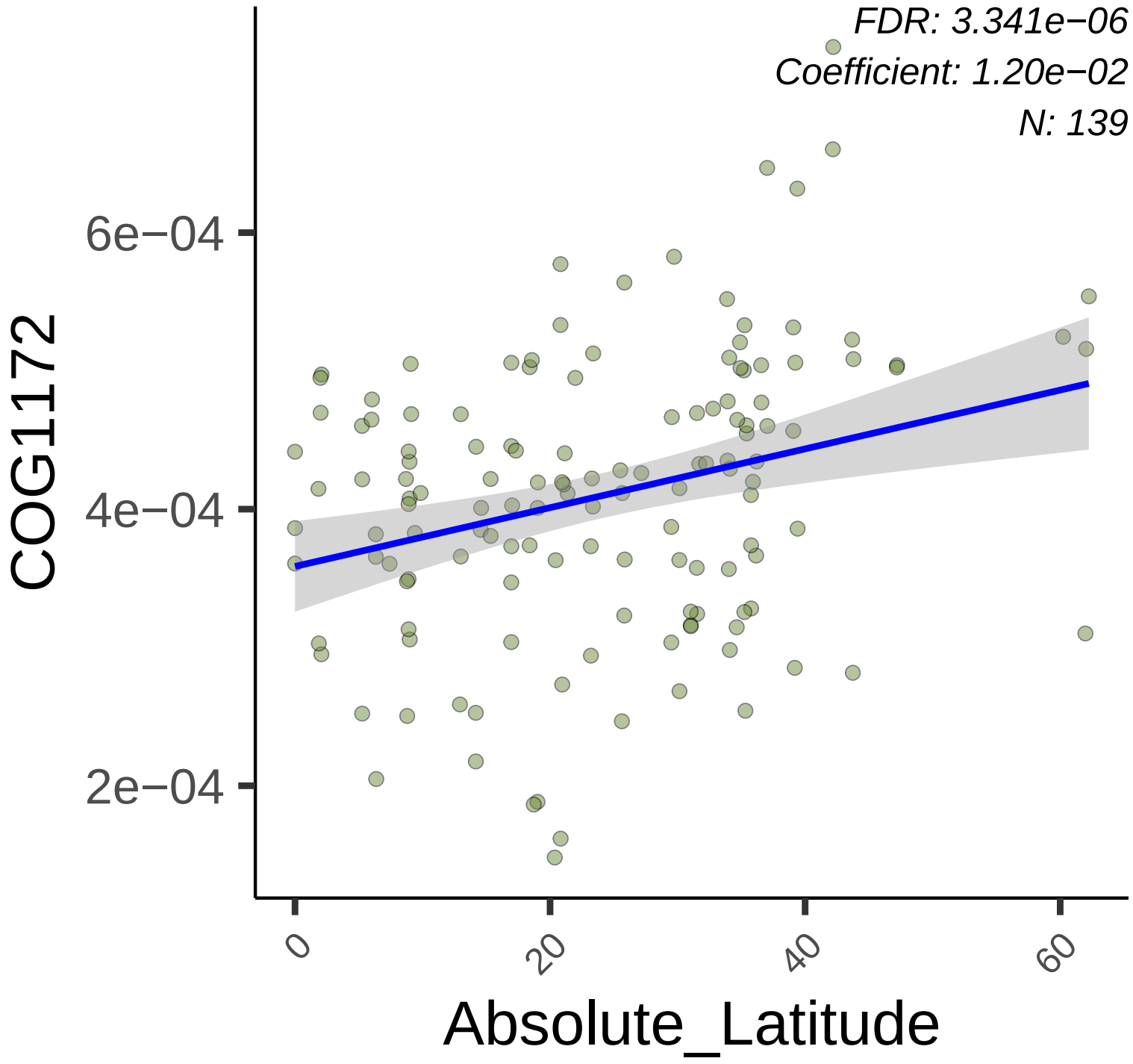
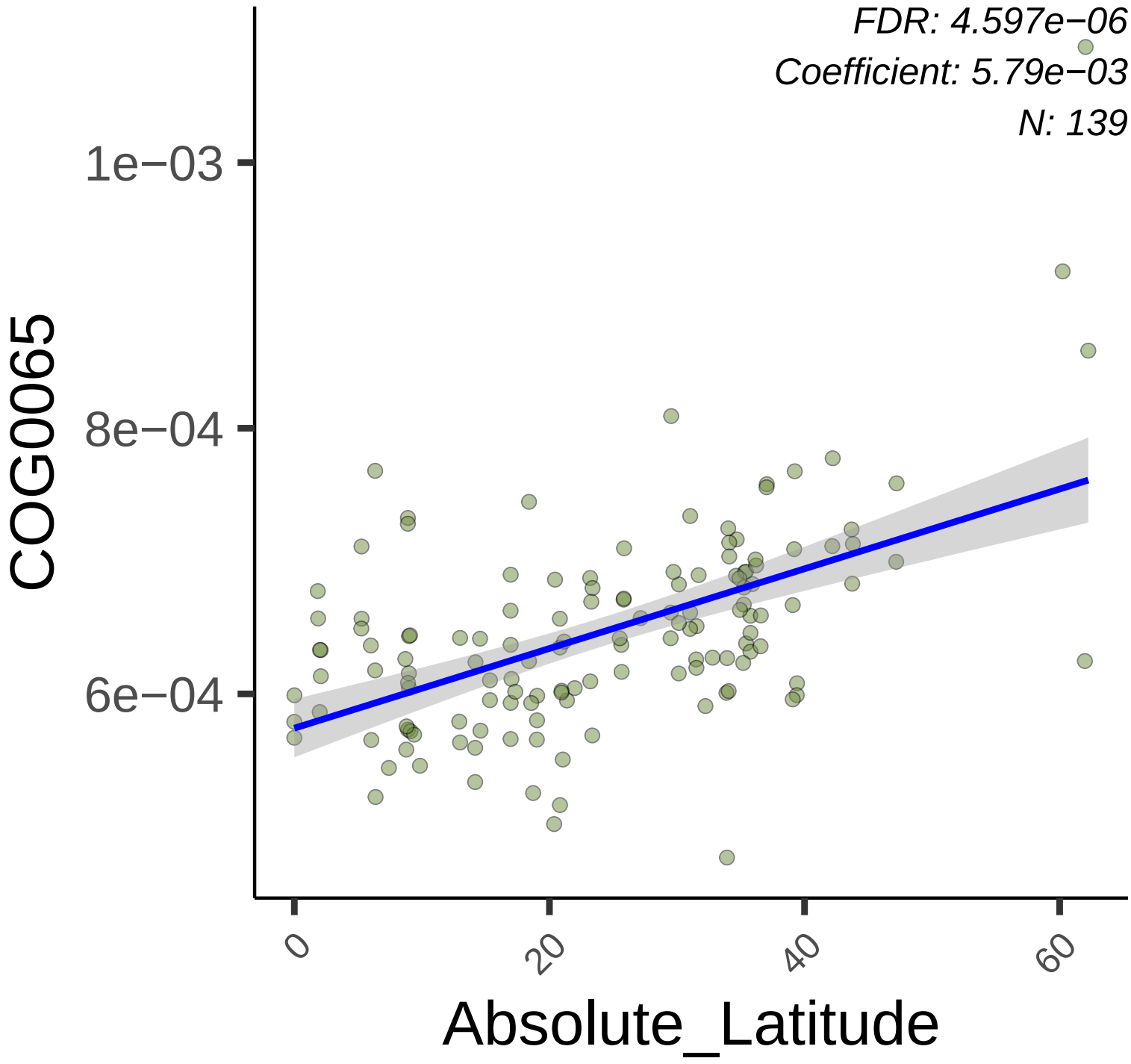
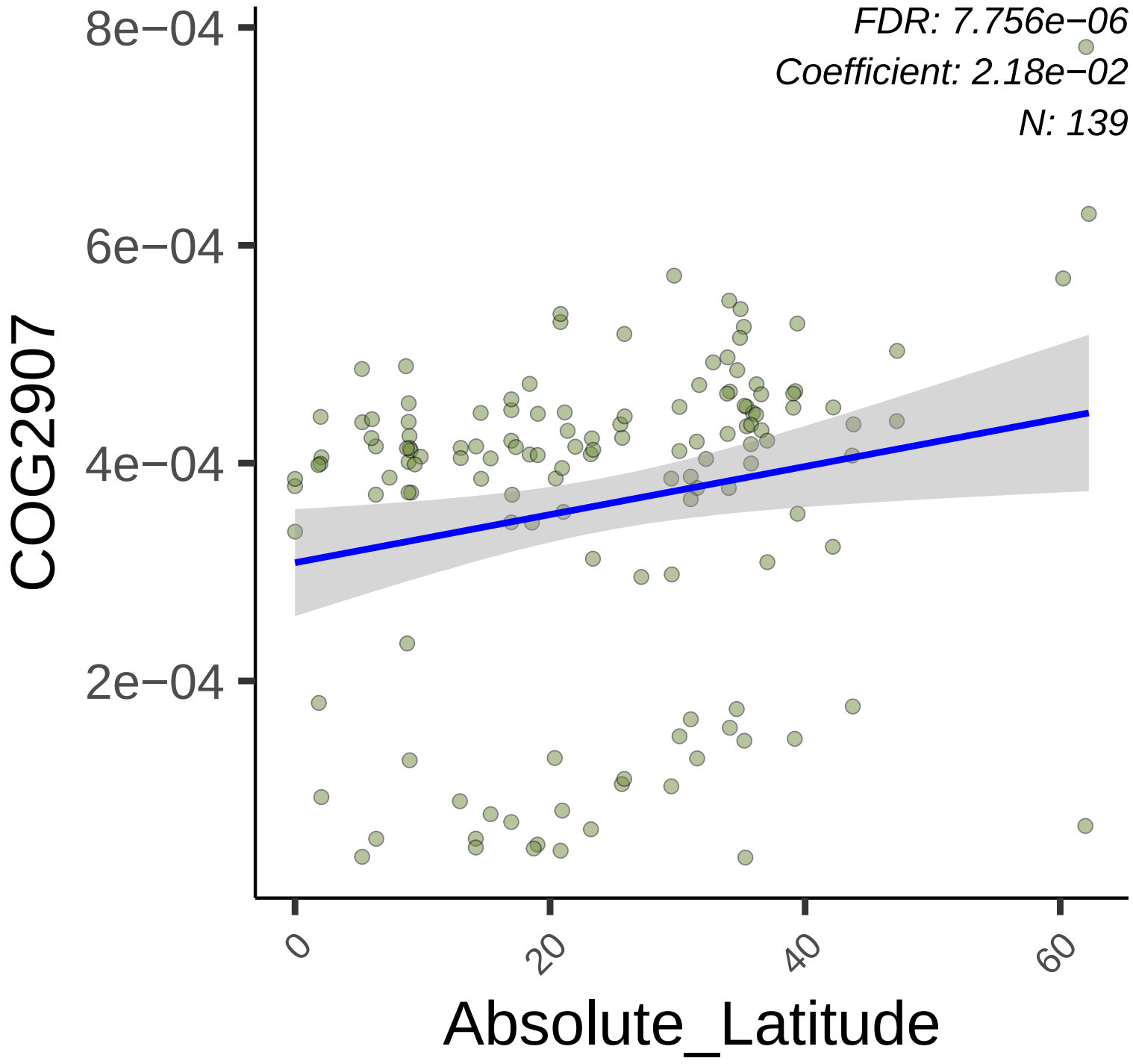
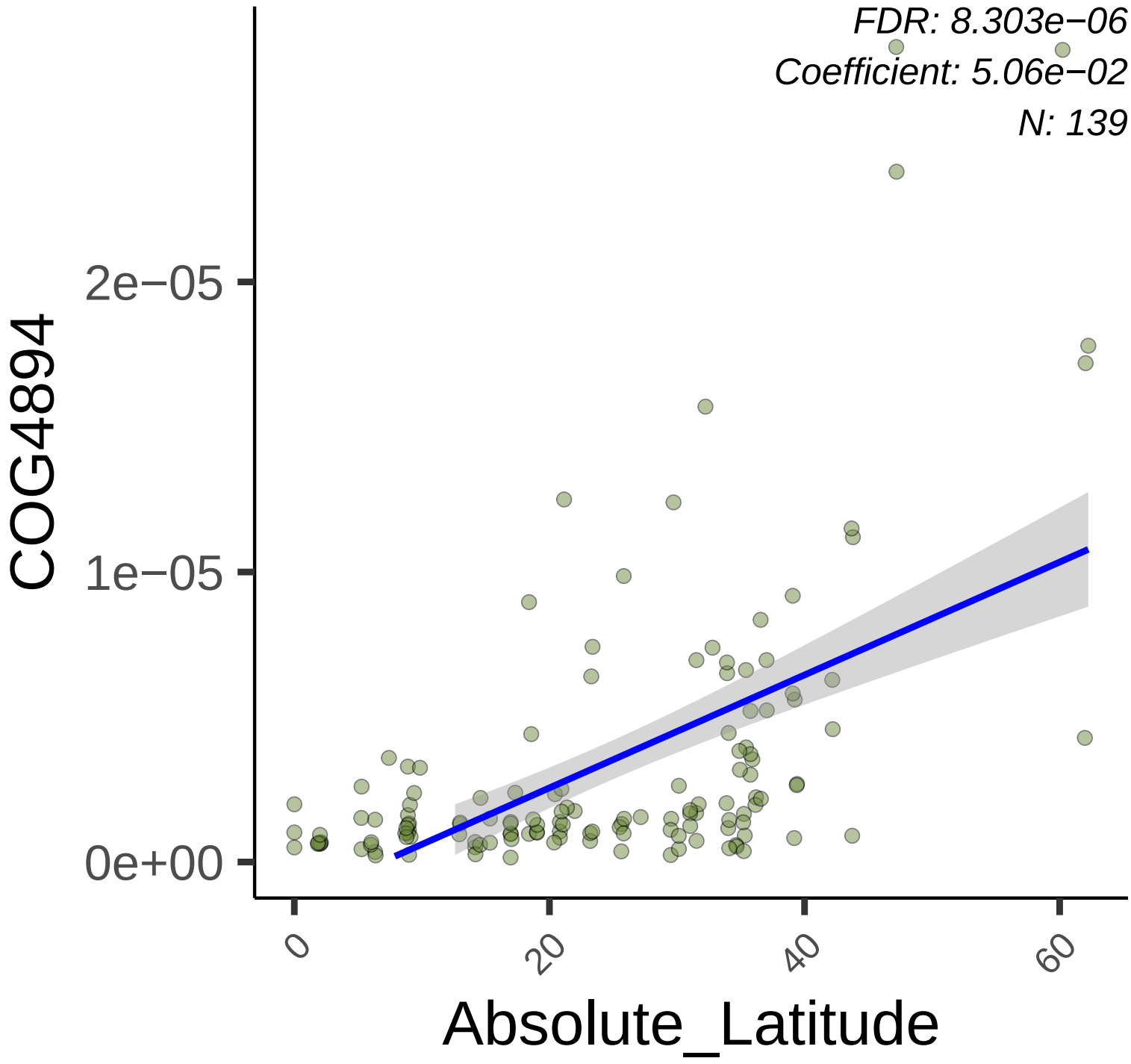

FDR: 1.616e−06
Coefficient: −1.91e−02
N: 139
8e−04
6e−04
4e−04
2e−04
COG2217
0
20
40
60
Absolute_Latitude

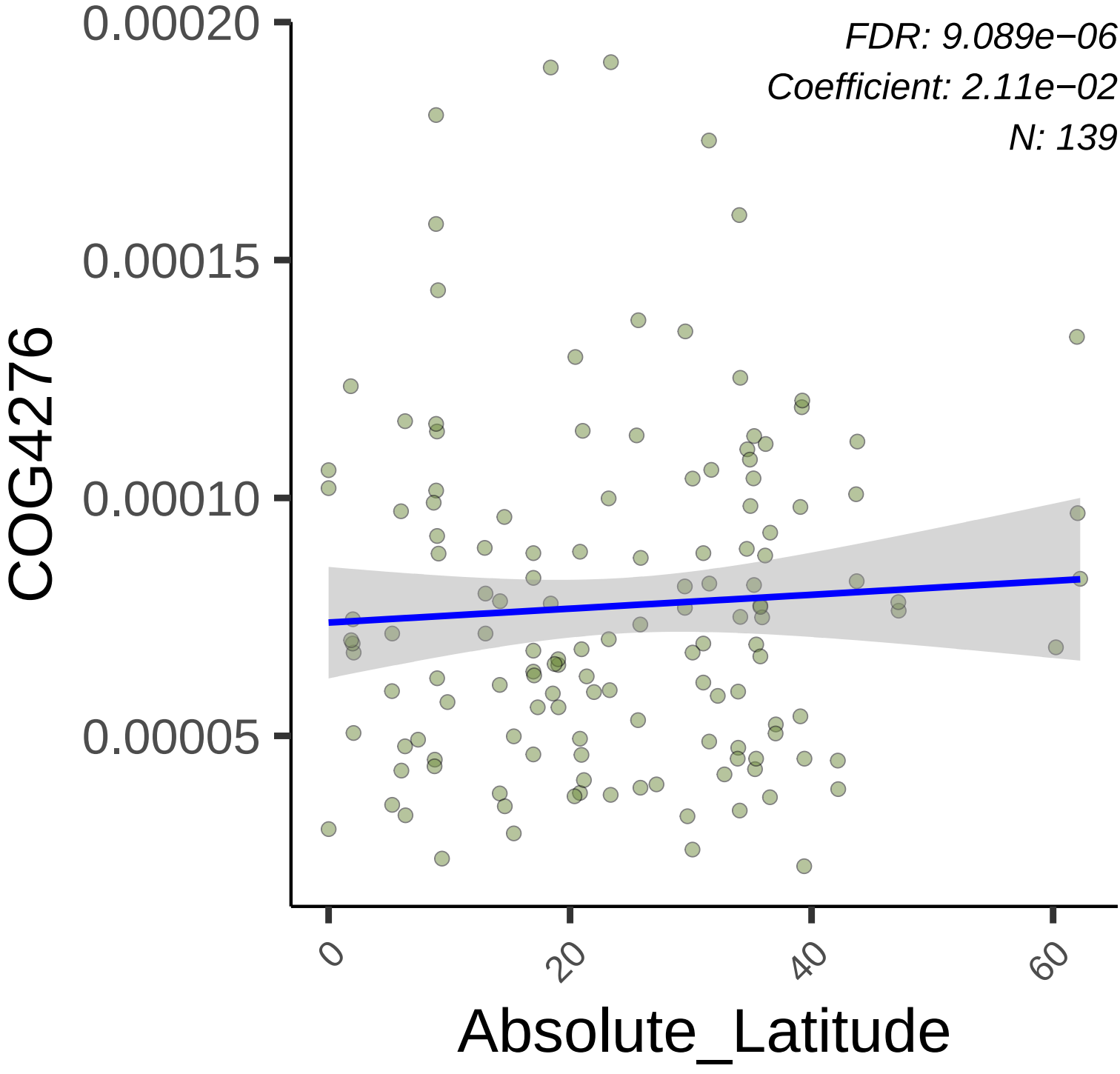

FDR: 2.261e−06
Coefficient: −3.18e−02
N: 139
COG2170
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

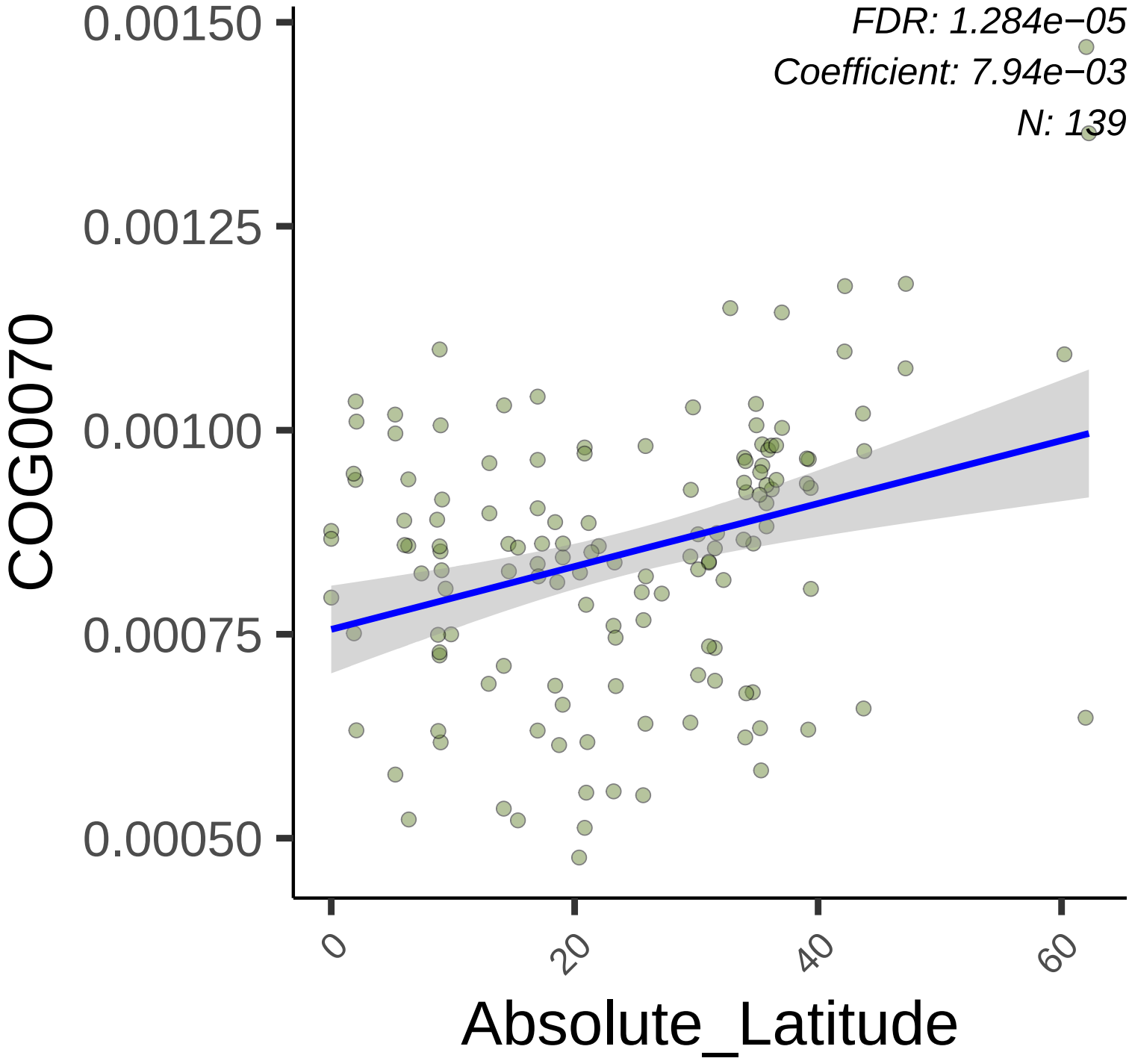

FDR: 3.341e−06
Coefficient: 1.20e−02
N: 139
COG1172
6e−04
4e−04
2e−04
0
20
40
60
Absolute_Latitude

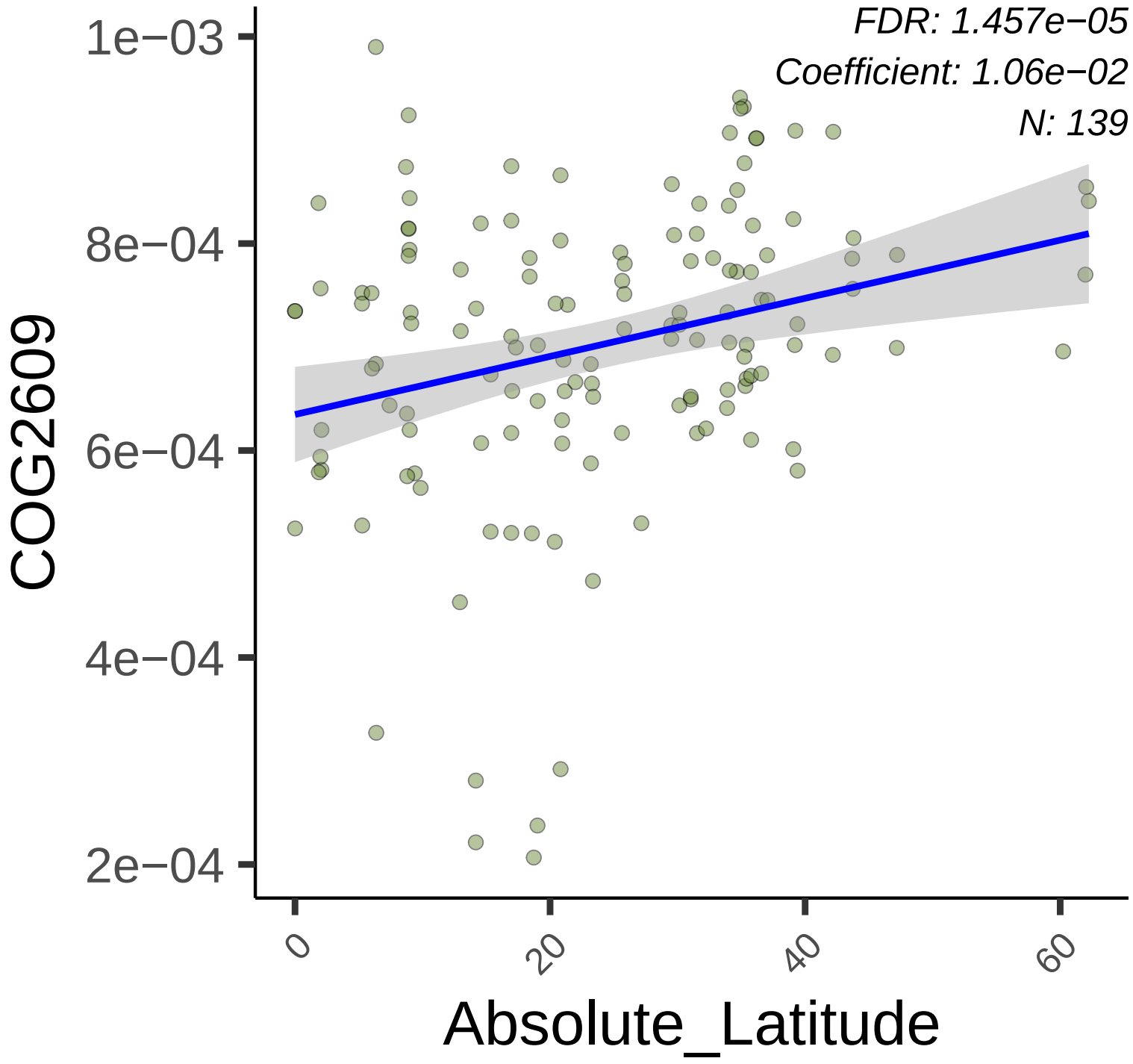

FDR: 4.597e−06
Coefficient: 5.79e−03
N: 139
1e−03
8e−04
6e−04
COG0065
0
20
40
60
Absolute_Latitude

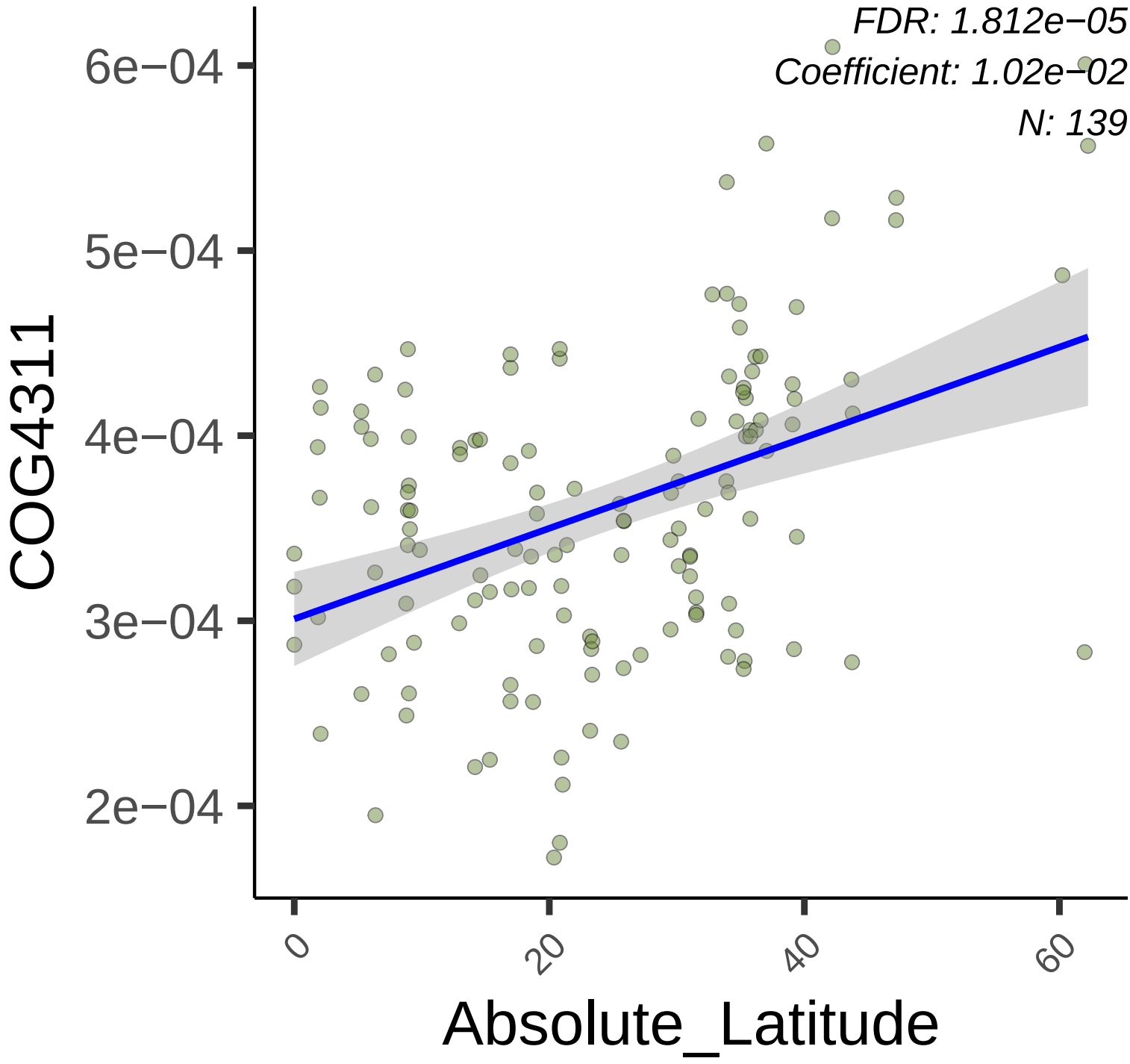

FDR: 7.756e−06
Coefficient: 2.18e−02
N: 139
8e−04
6e−04
4e−04
2e−04
COG2907
0
20
40
60
Absolute_Latitude

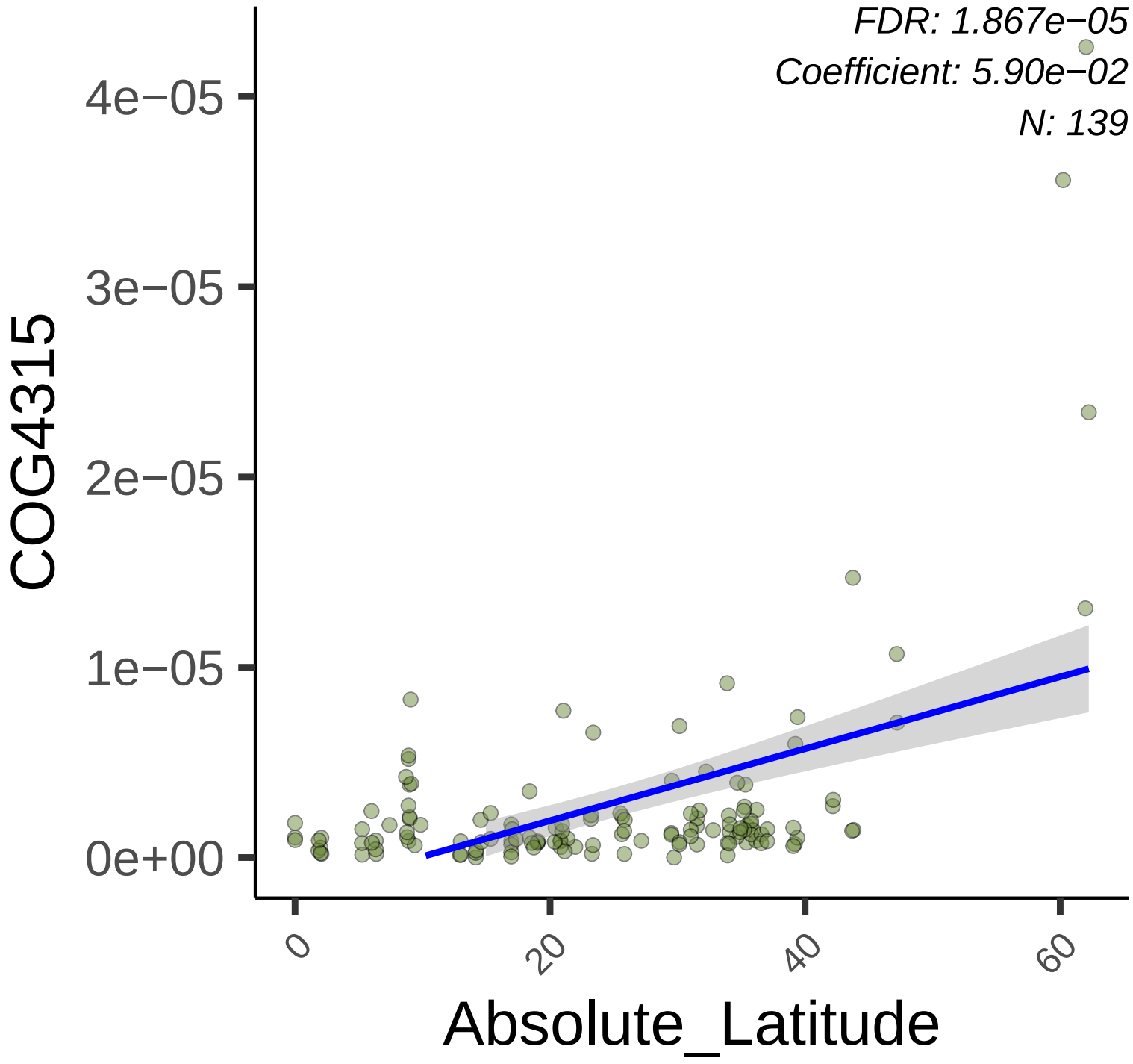

FDR: 8.303e−06
Coefficient: 5.06e−02
N: 139
COG4894
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

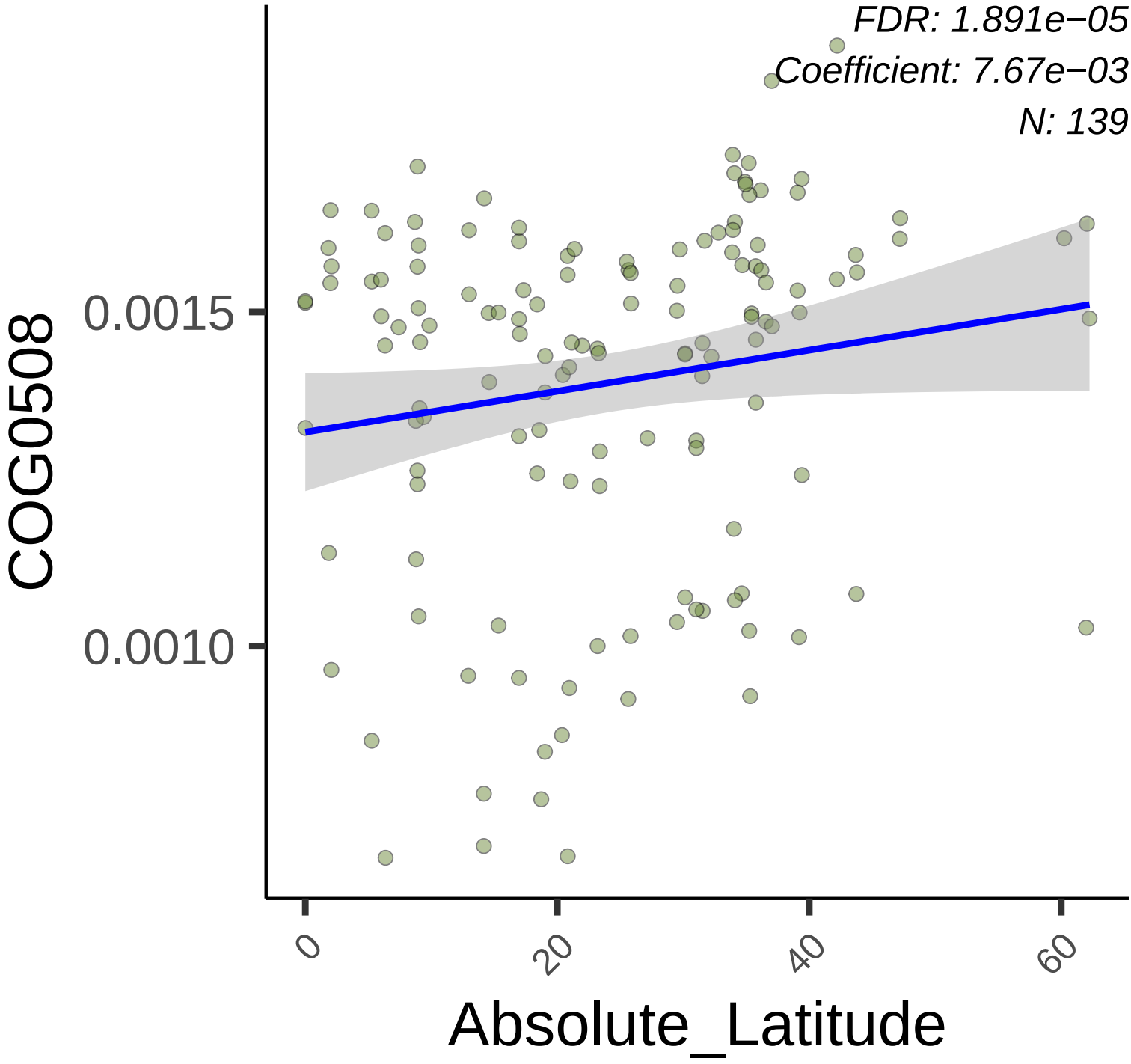

FDR: 9.089e−06
Coefficient: 2.11e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG4276
0
20
40
60
Absolute_Latitude

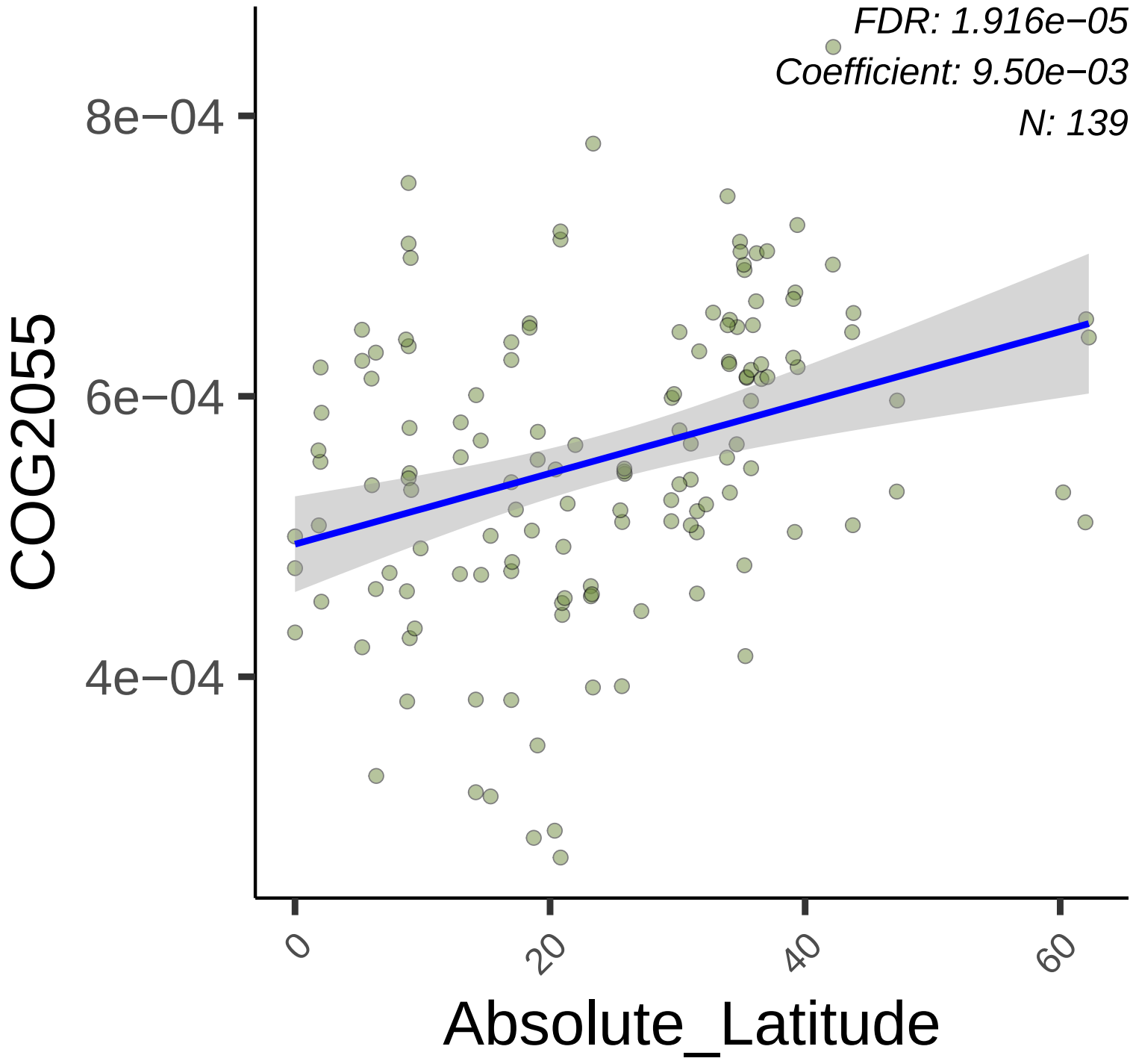

FDR: 1.284e−05
Coefficient: 7.94e−03
N: 139
0.00150
0.00125
0.00100
0.00075
0.00050
COG0070
0
20
40
60
Absolute_Latitude

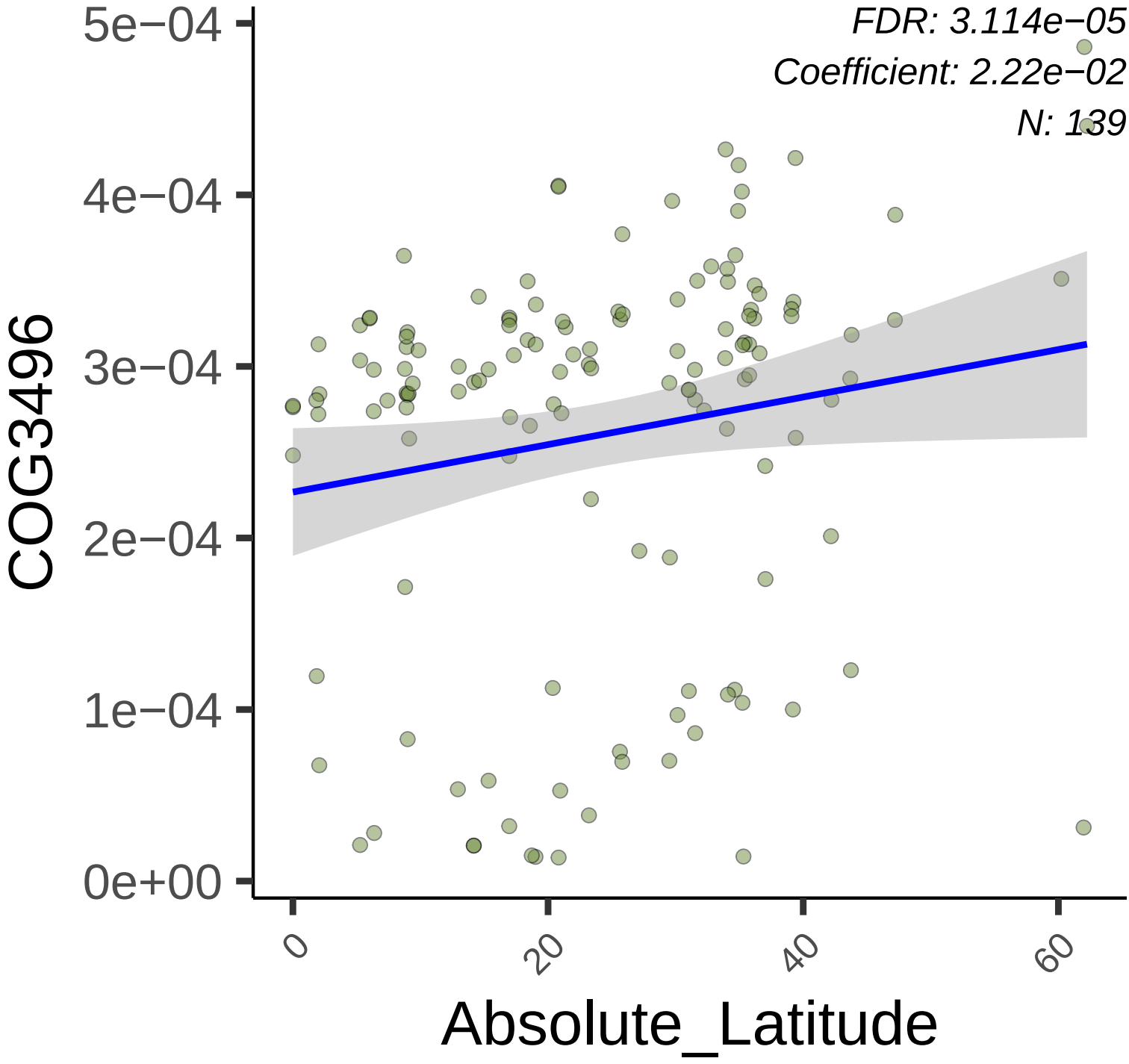

FDR: 1.457e−05
Coefficient: 1.06e−02
N: 139
1e−03
8e−04
6e−04
4e−04
2e−04
COG2609
0
20
40
60
Absolute_Latitude

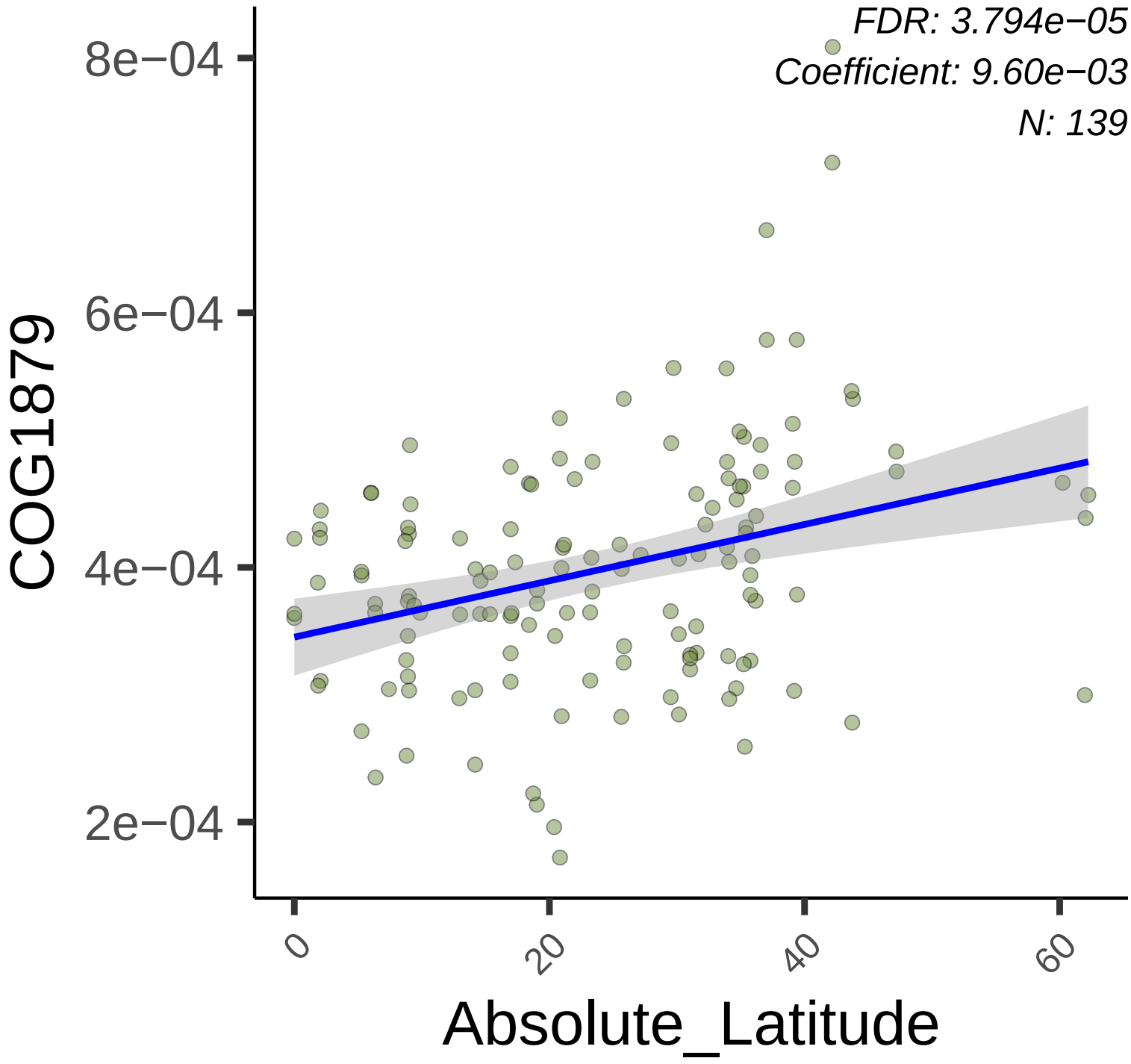

FDR: 1.812e−05
Coefficient: 1.02e−02
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
COG4311
0
20
40
60
Absolute_Latitude

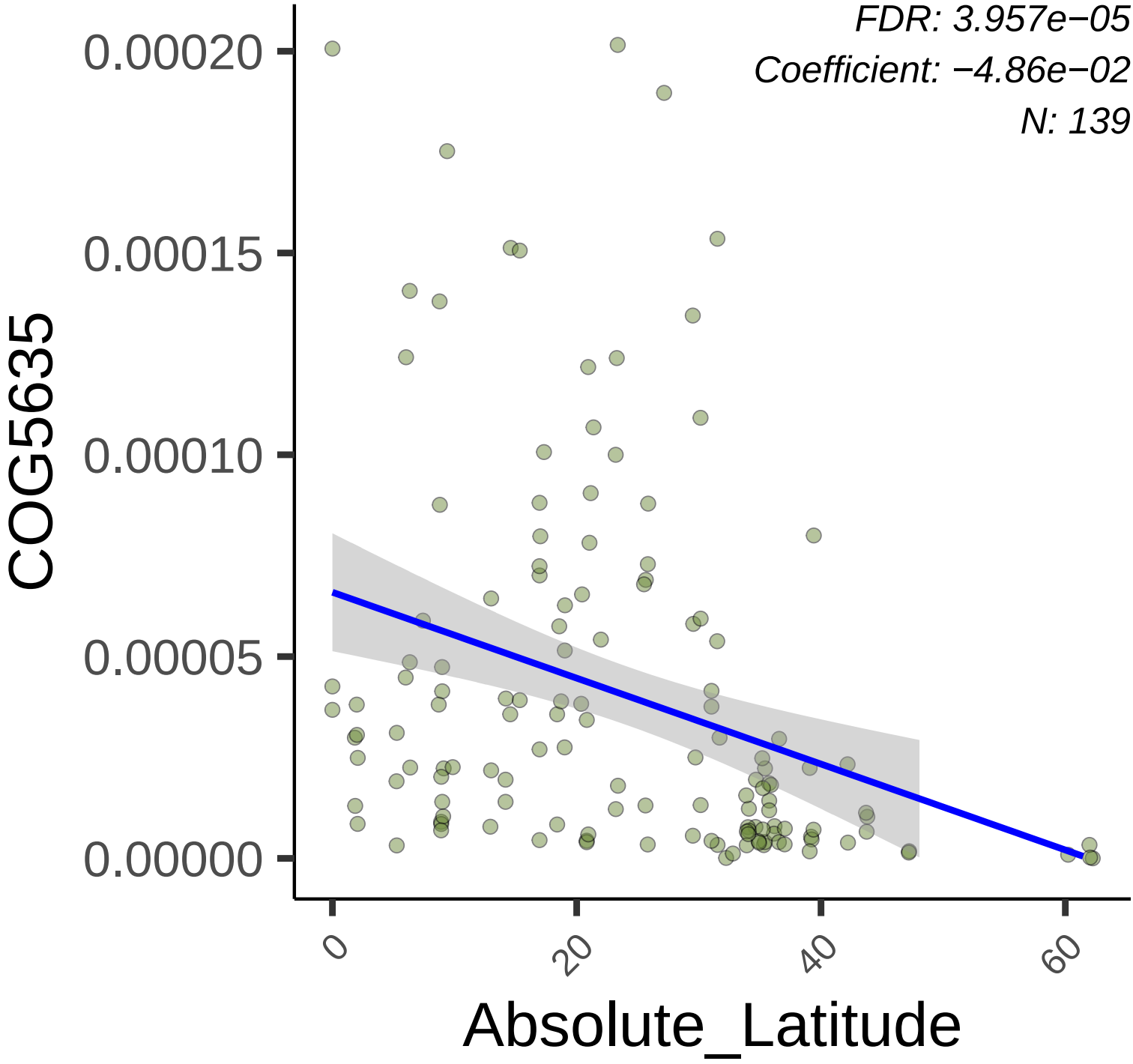

FDR: 1.867e−05
Coefficient: 5.90e−02
N: 139
COG4315
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

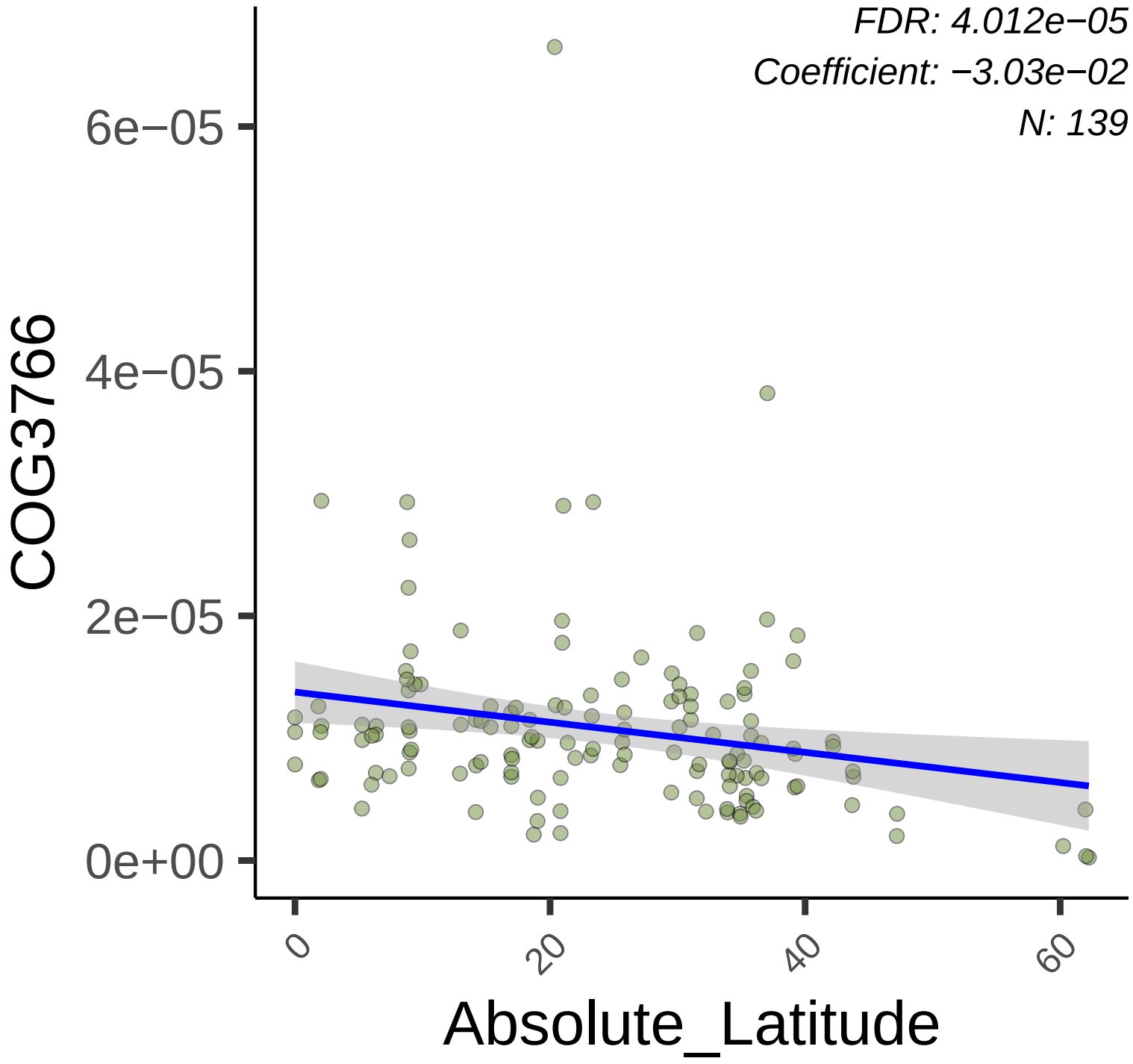

FDR: 1.891e−05
Coefficient: 7.67e−03
N: 139
COG0508
0.0015
0.0010
0
20
40
60
Absolute_Latitude

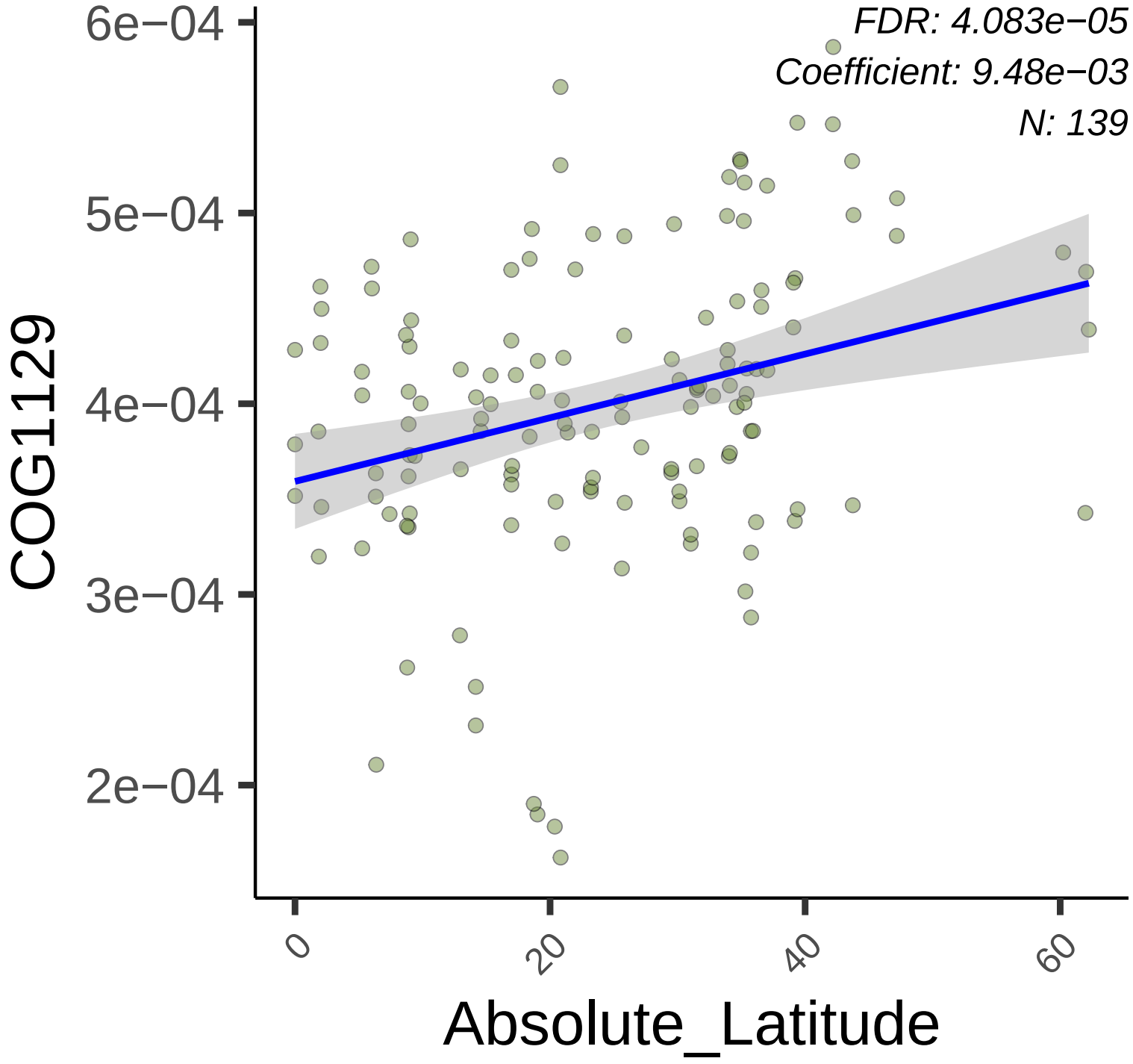

FDR: 1.916e−05
Coefficient: 9.50e−03
N: 139
8e−04
6e−04
4e−04
COG2055
0
20
40
60
Absolute_Latitude

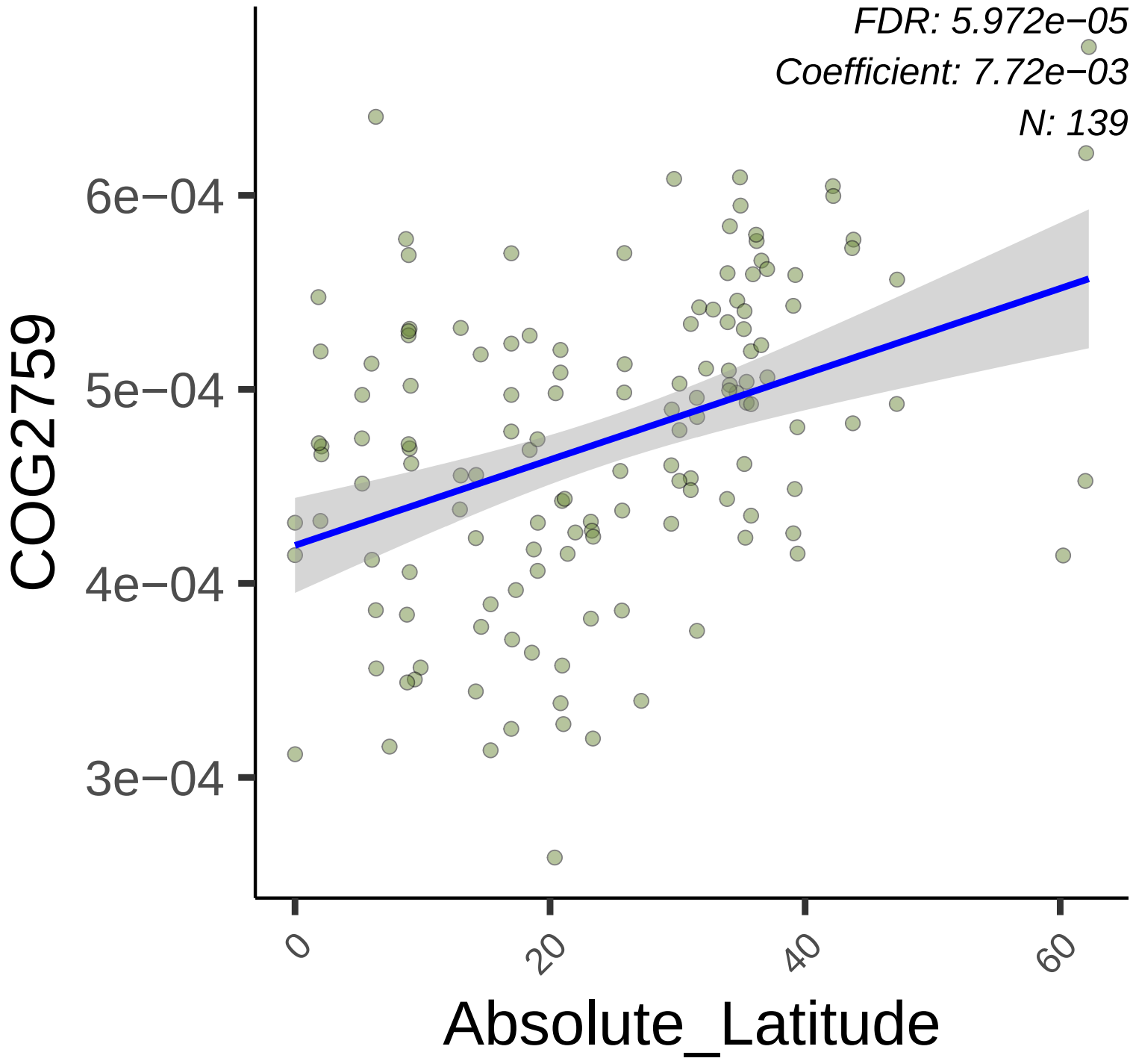

FDR: 3.114e−05
Coefficient: 2.22e−02
N: 139
COG3496
5e−04
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

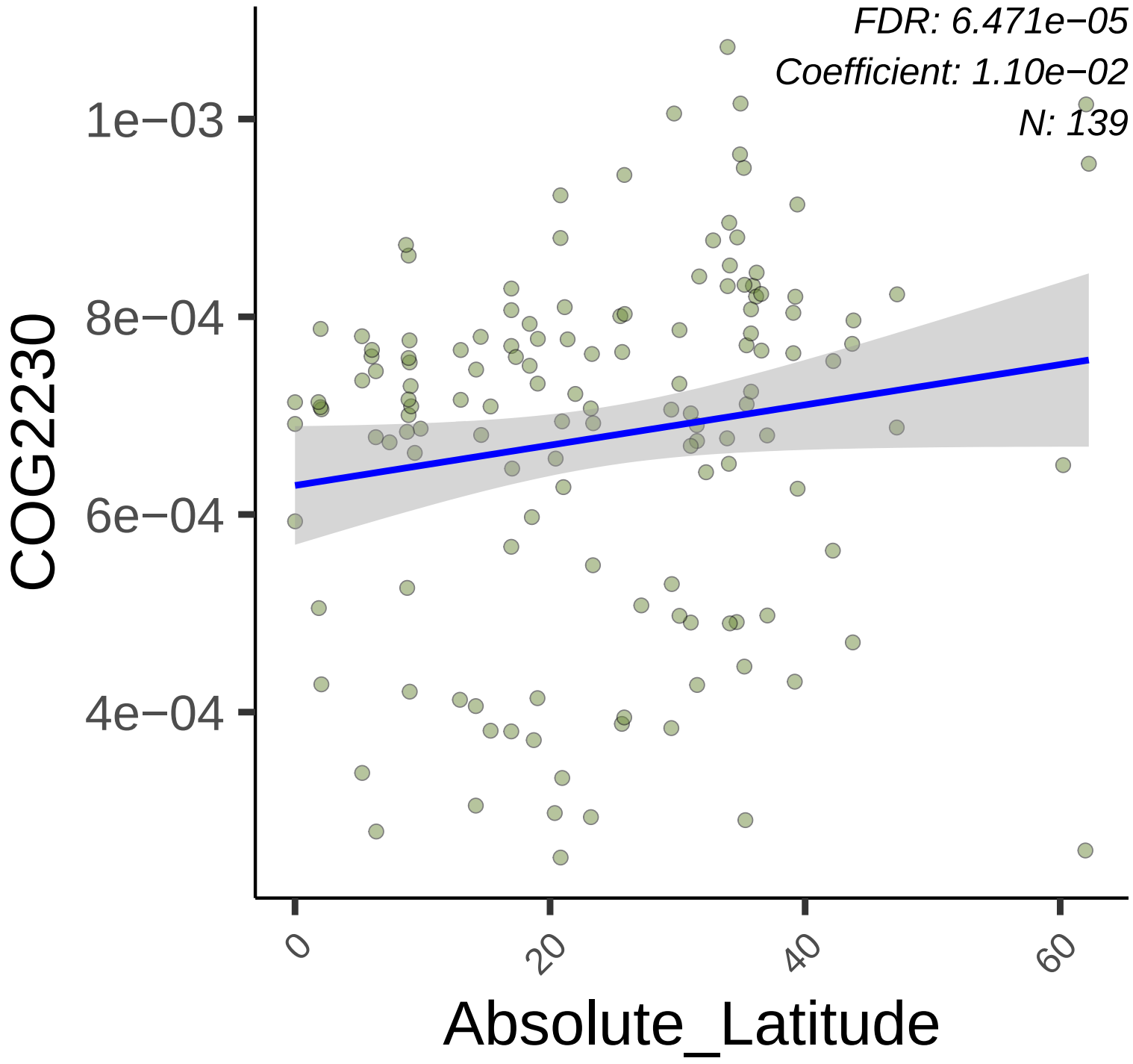

FDR: 3.794e−05
Coefficient: 9.60e−03
N: 139
8e−04
6e−04
4e−04
2e−04
COG1879
0
20
40
60
Absolute_Latitude

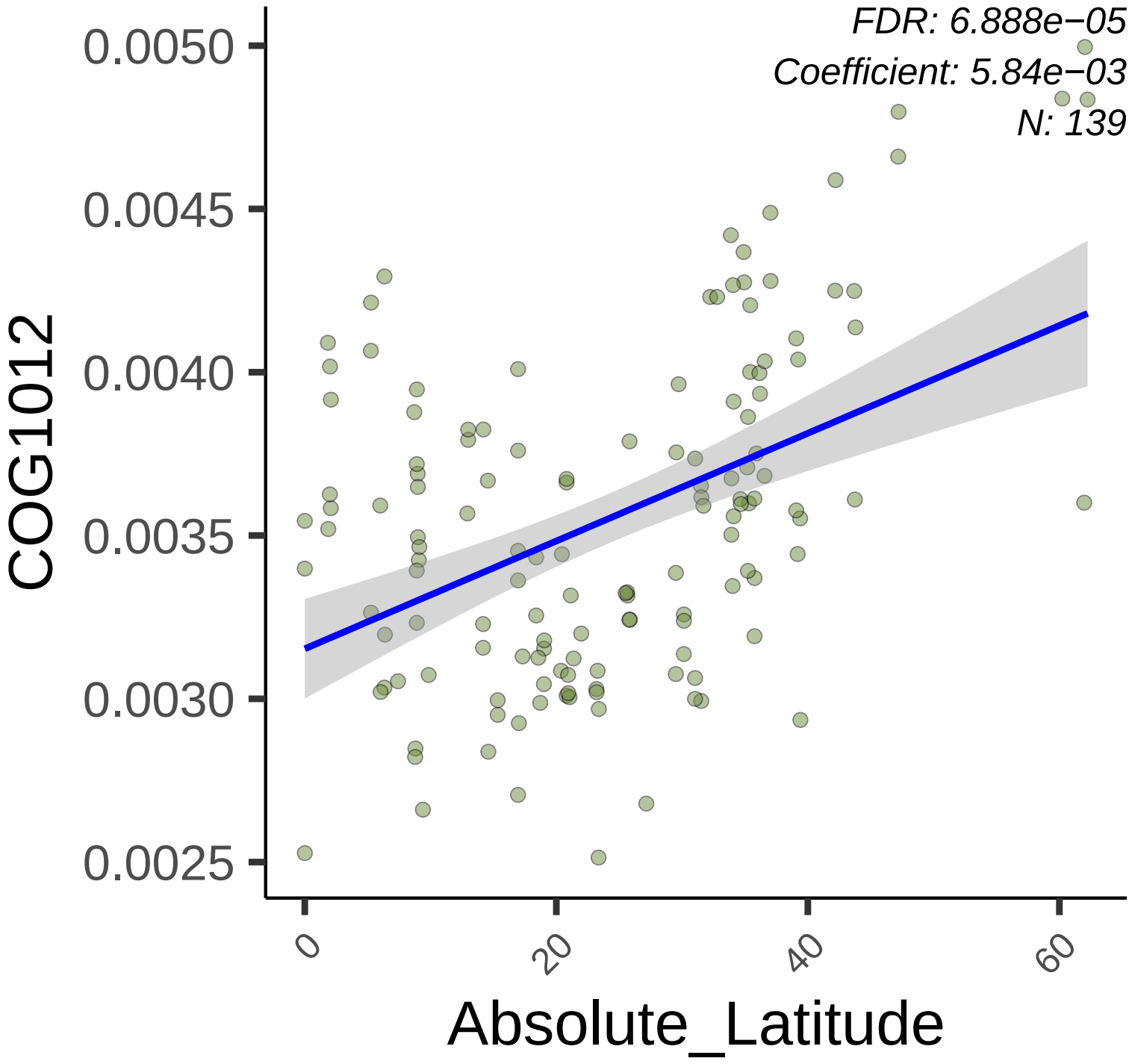

FDR: 3.957e−05
Coefficient: −4.86e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG5635
0
20
40
60
Absolute_Latitude

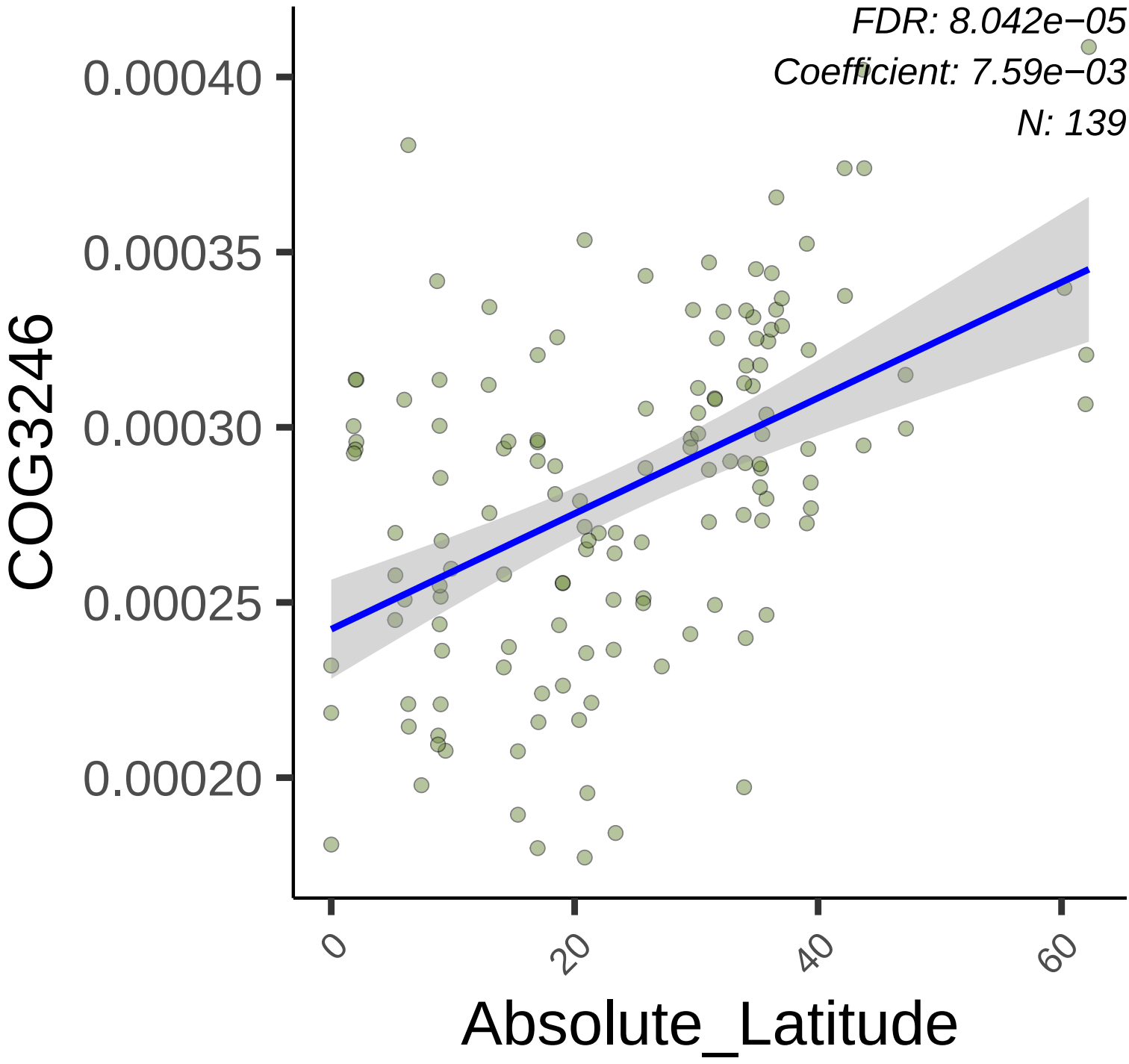

FDR: 4.012e−05
Coefficient: −3.03e−02
N: 139
COG3766
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

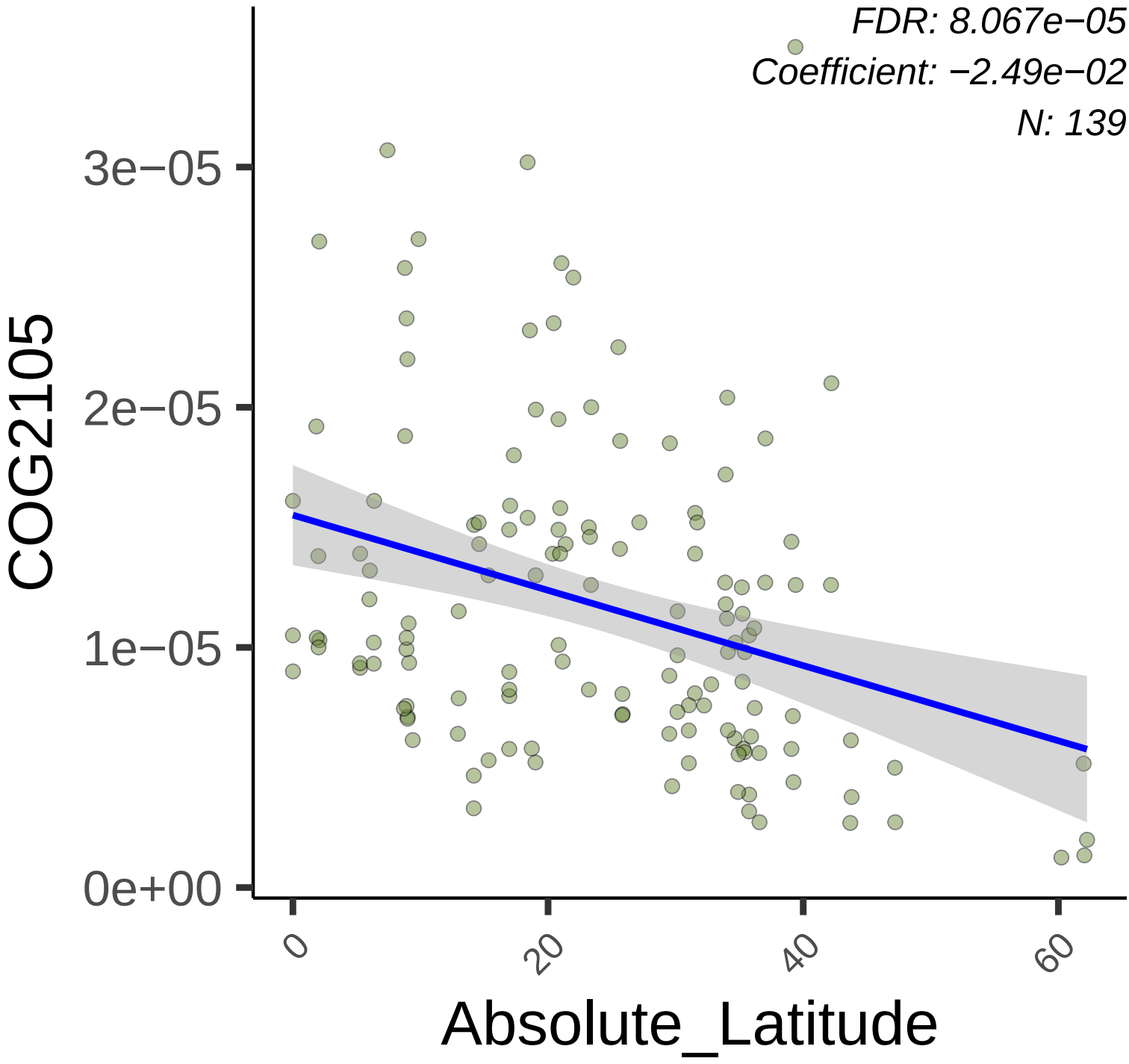

FDR: 4.083e−05
Coefficient: 9.48e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
COG1129
0
20
40
60
Absolute_Latitude

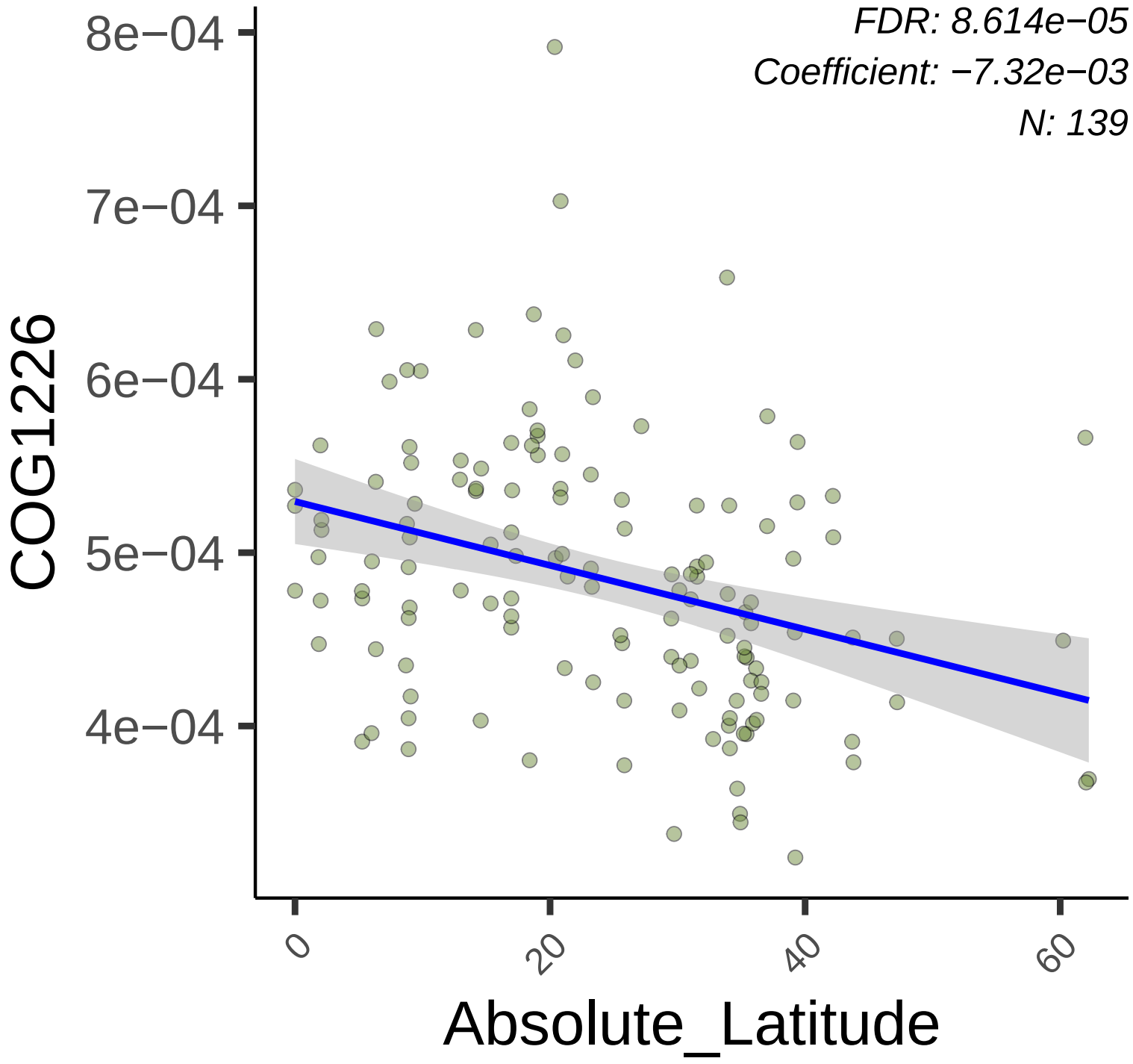

FDR: 5.972e−05
Coefficient: 7.72e−03
N: 139
COG2759
6e−04
5e−04
4e−04
3e−04
0
20
40
60
Absolute_Latitude

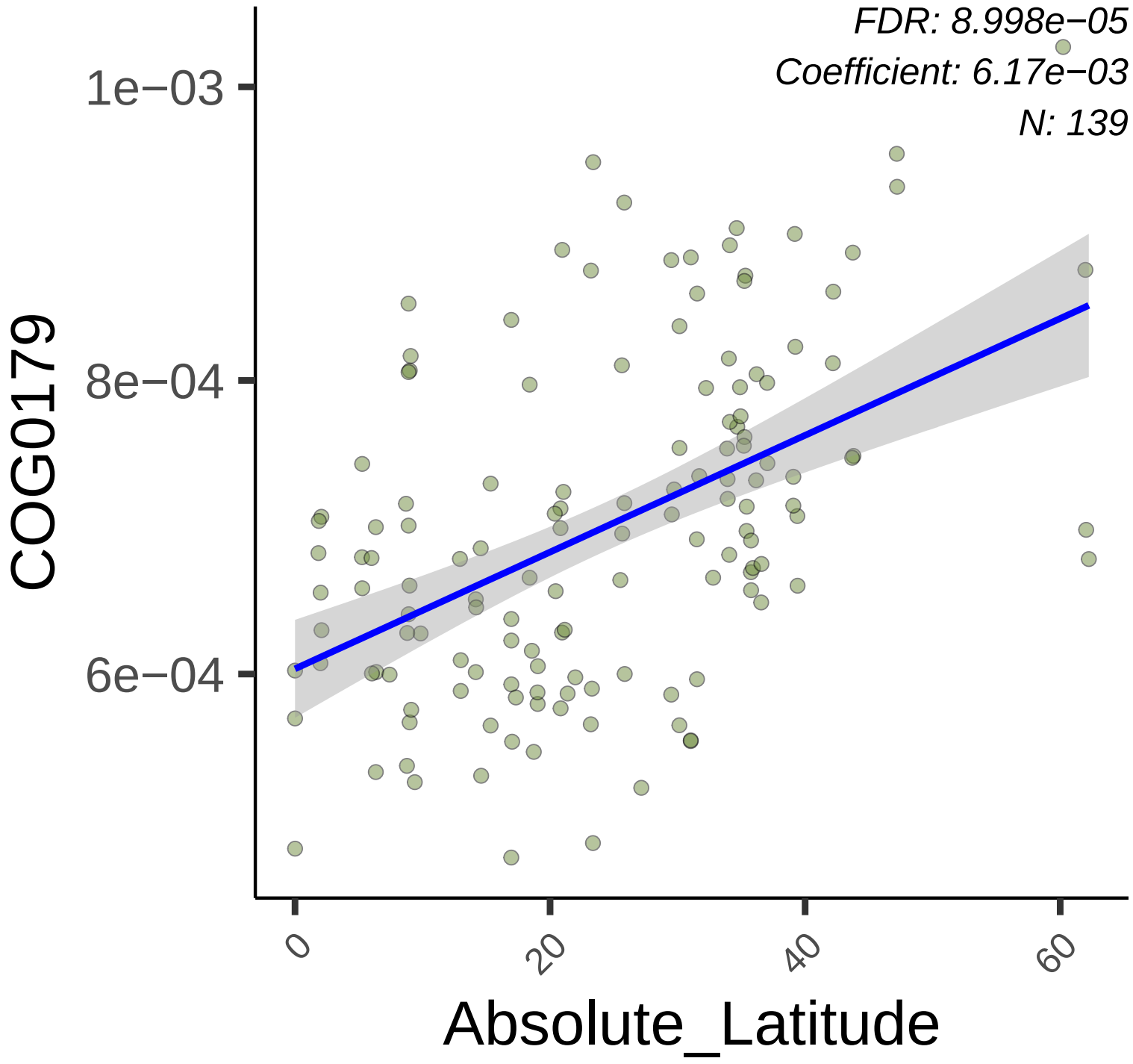

FDR: 6.471e−05
Coefficient: 1.10e−02
N: 139
1e−03
8e−04
6e−04
4e−04
COG2230
0
20
40
60
Absolute_Latitude

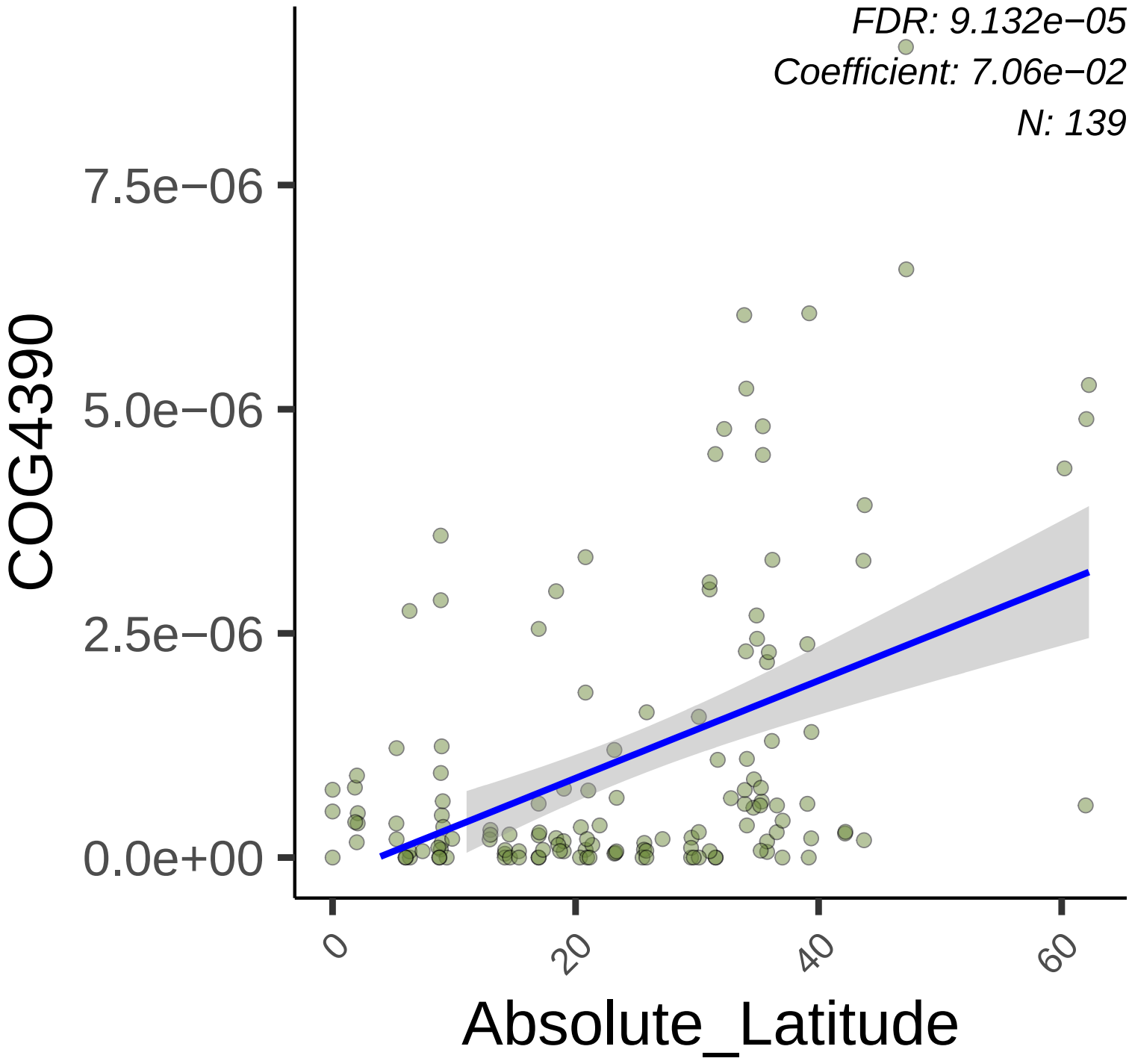

FDR: 6.888e−05
Coefficient: 5.84e−03
N: 139
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
COG1012
0
20
40
60
Absolute_Latitude

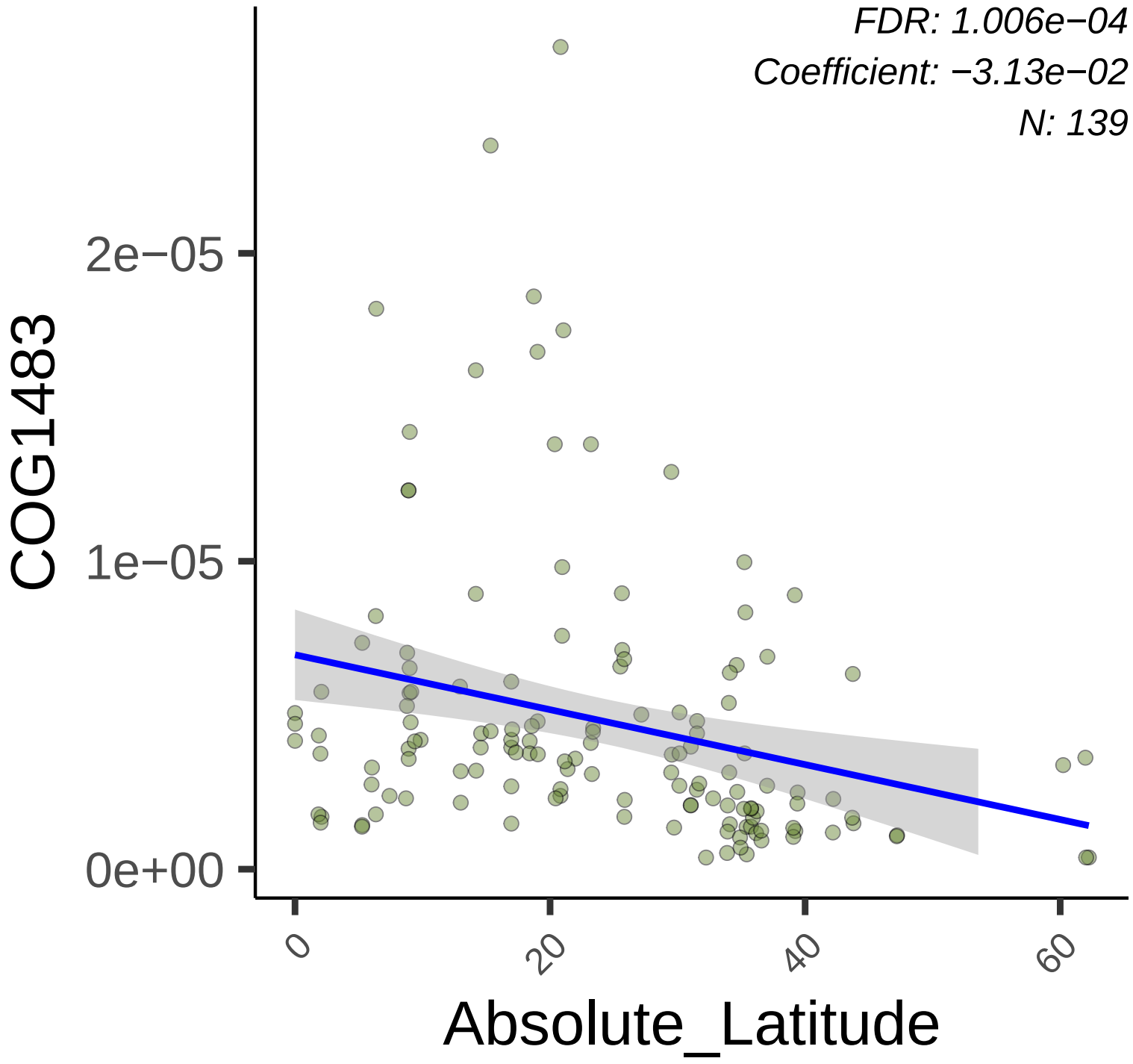

FDR: 8.042e−05
Coefficient: 7.59e−03
N: 139
0.00040
0.00035
0.00030
0.00025
0.00020
COG3246
0
20
40
60
Absolute_Latitude

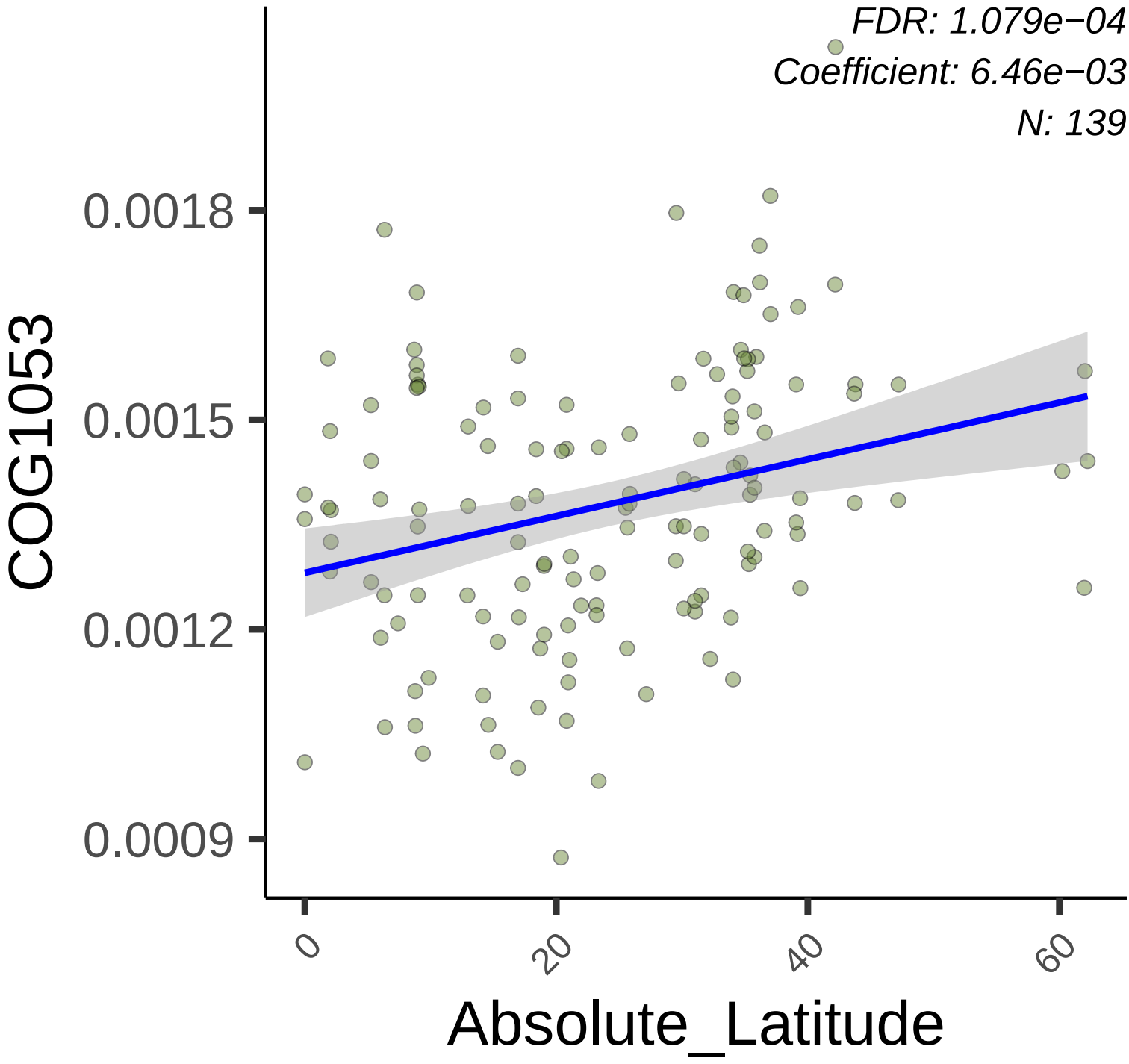

FDR: 8.067e−05
Coefficient: −2.49e−02
N: 139
COG2105
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

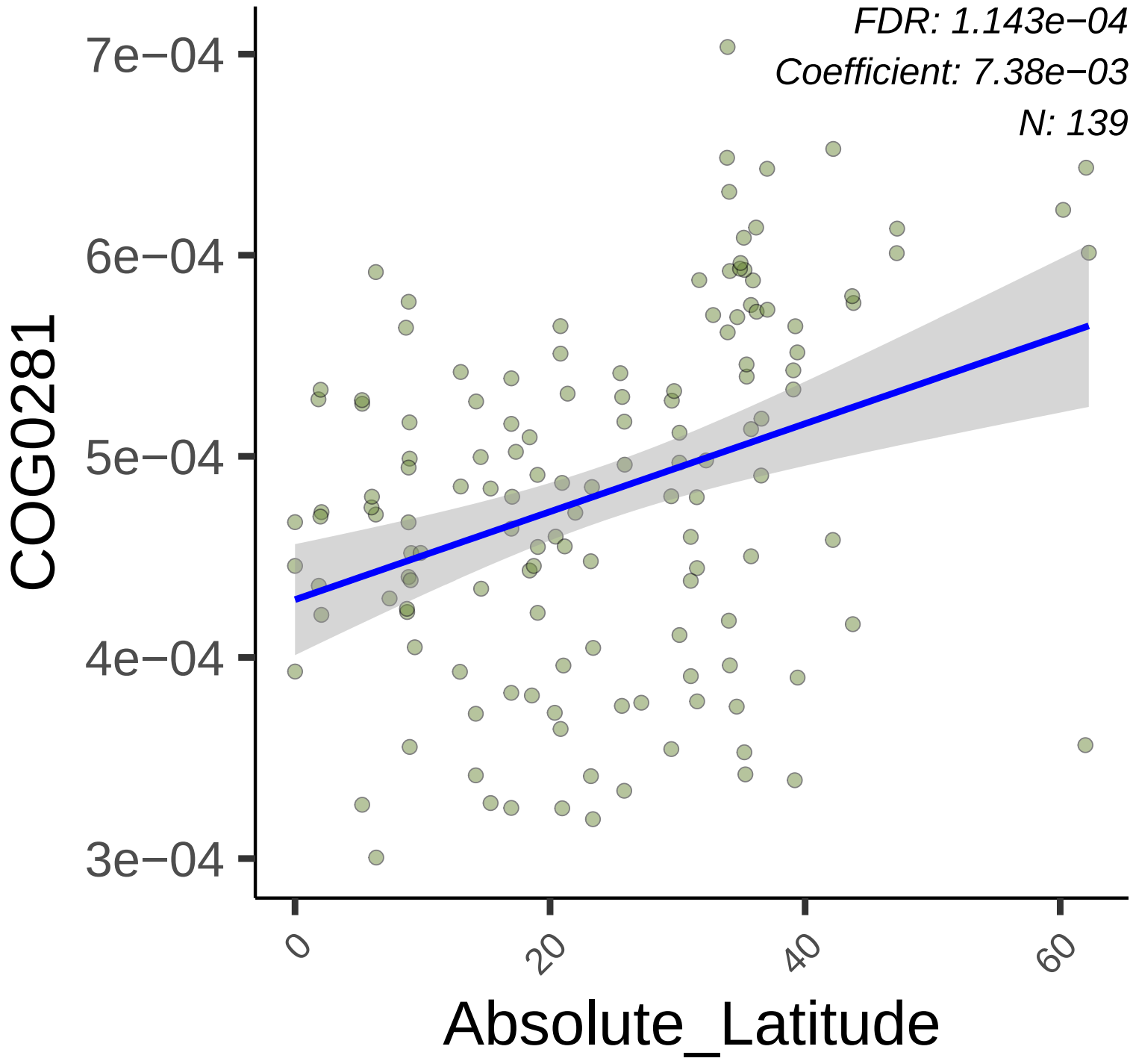

FDR: 8.614e−05
Coefficient: −7.32e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
COG1226
0
20
40
60
Absolute_Latitude

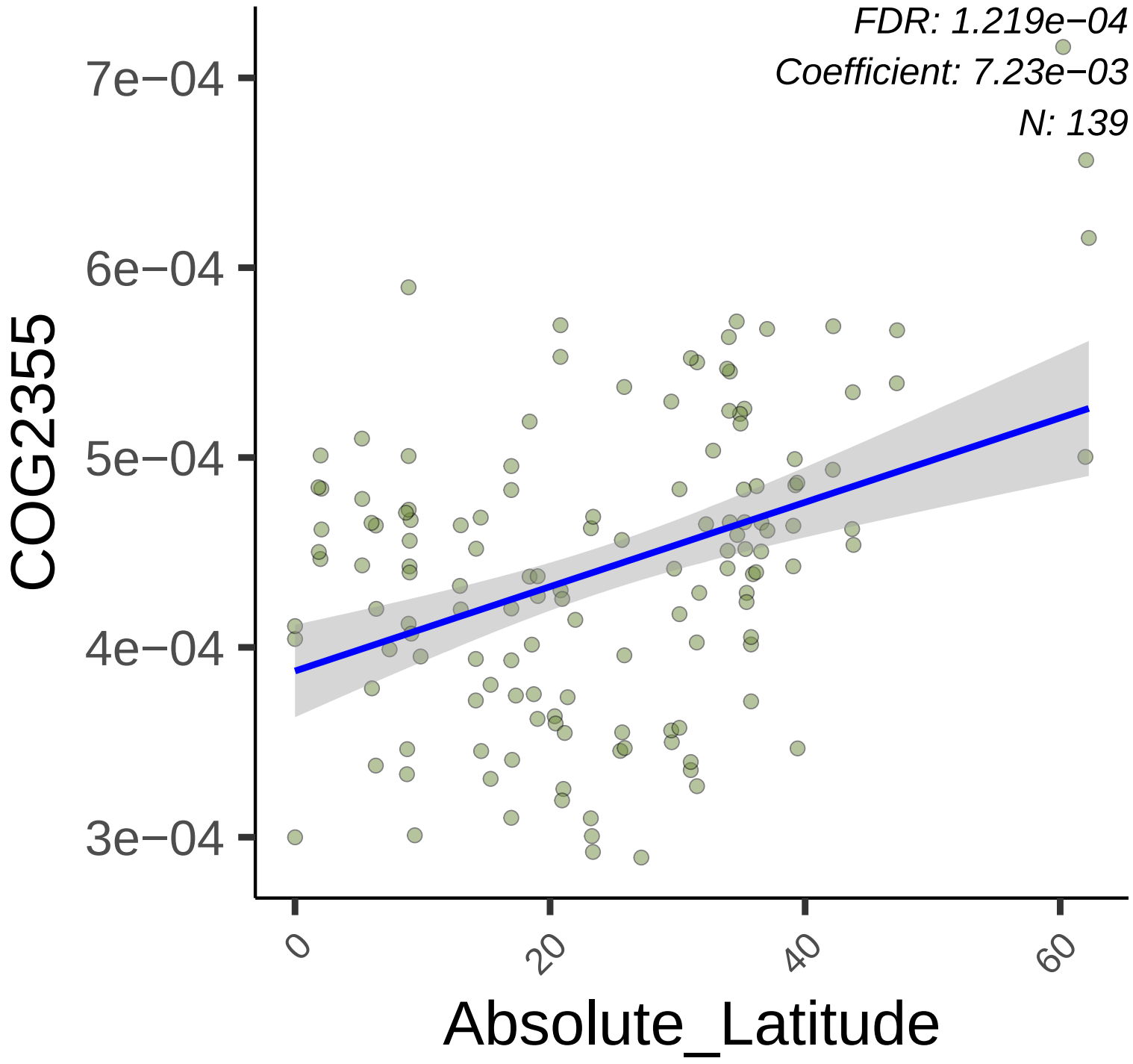

FDR: 8.998e−05
Coefficient: 6.17e−03
N: 139
1e−03
8e−04
6e−04
COG0179
0
20
40
60
Absolute_Latitude

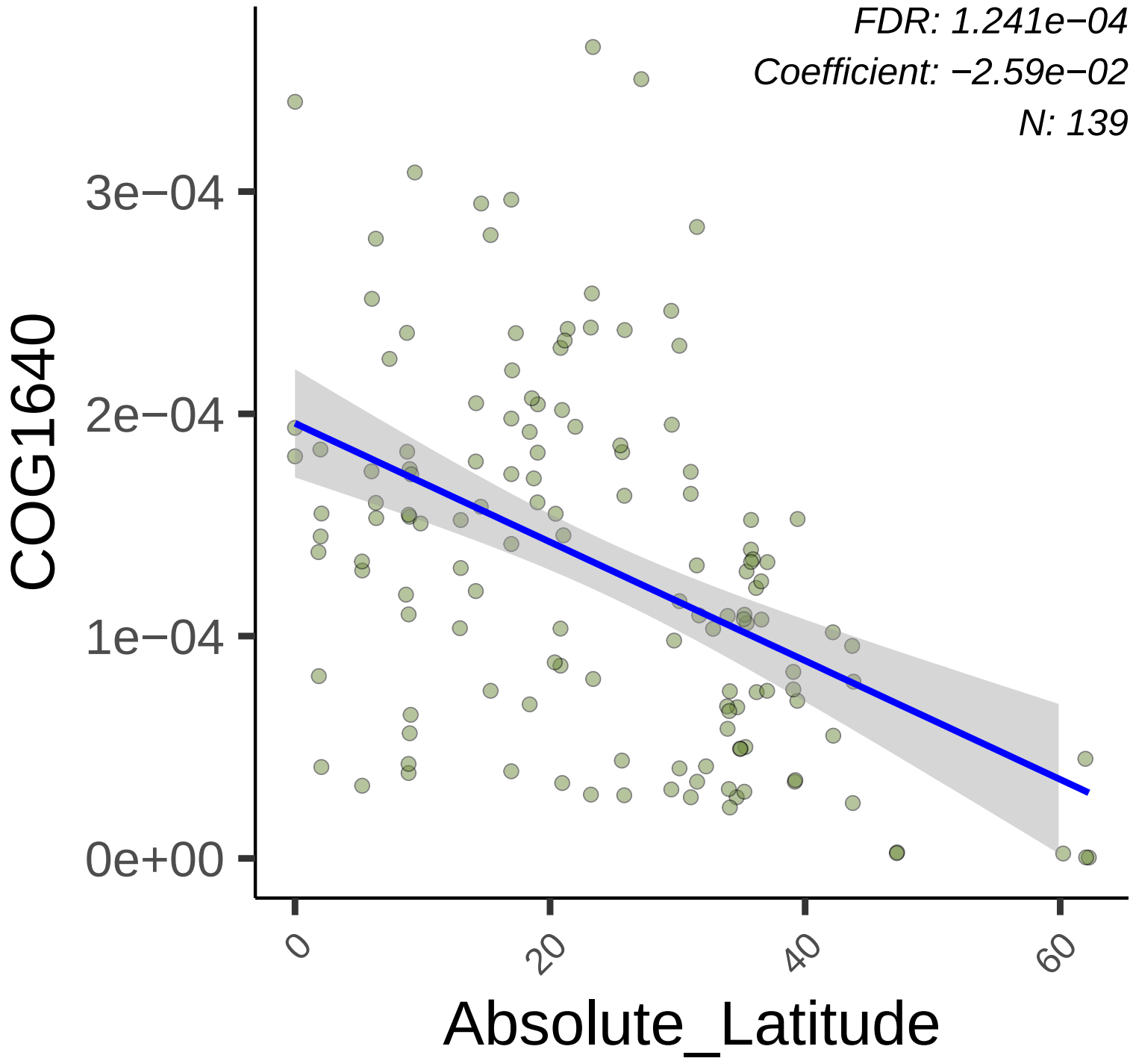

FDR: 9.132e−05
Coefficient: 7.06e−02
N: 139
COG4390
7.5e−06
5.0e−06
2.5e−06
0.0e+00
0
20
40
60
Absolute_Latitude

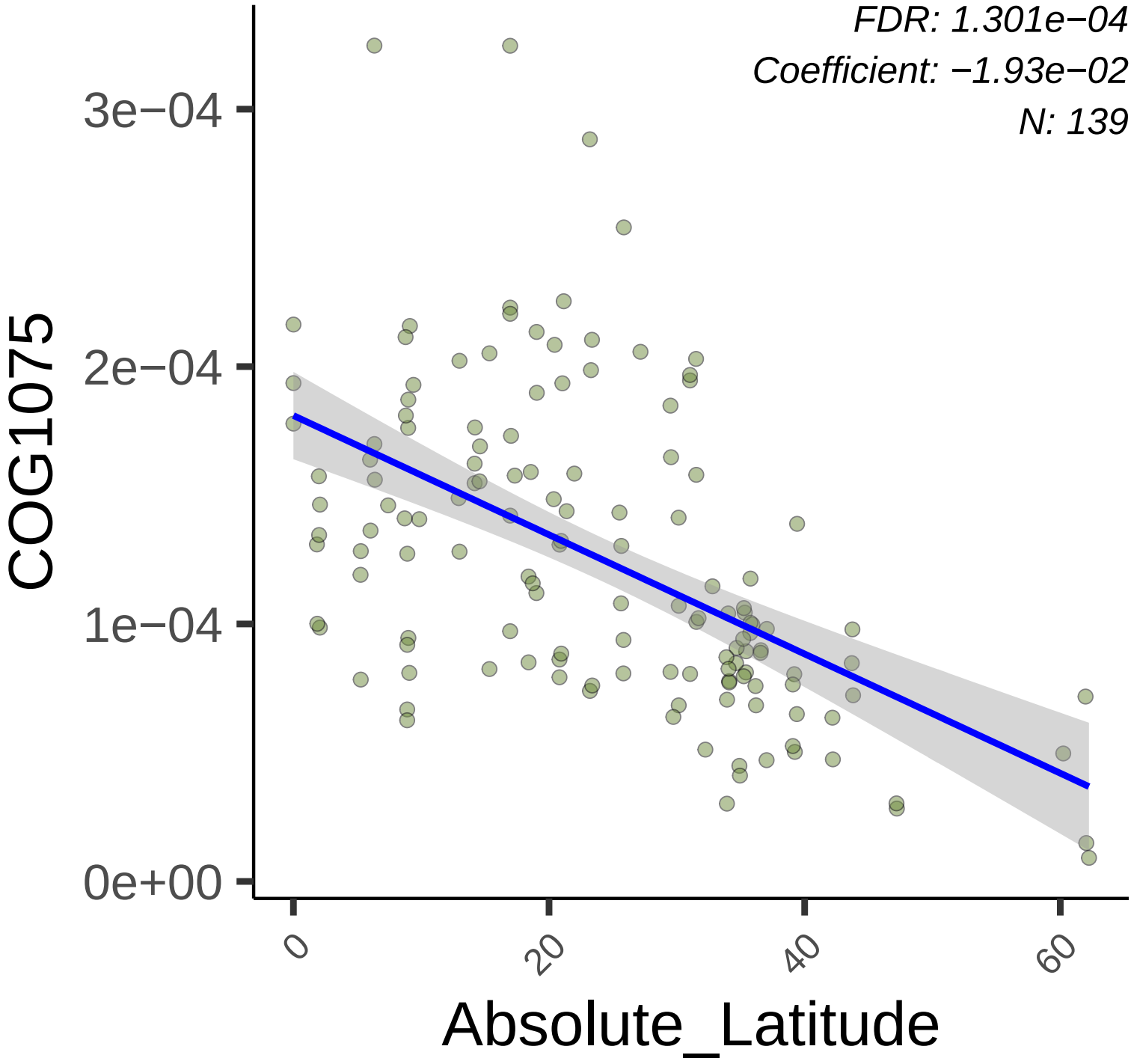

FDR: 1.006e−04
Coefficient: −3.13e−02
N: 139
COG1483
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

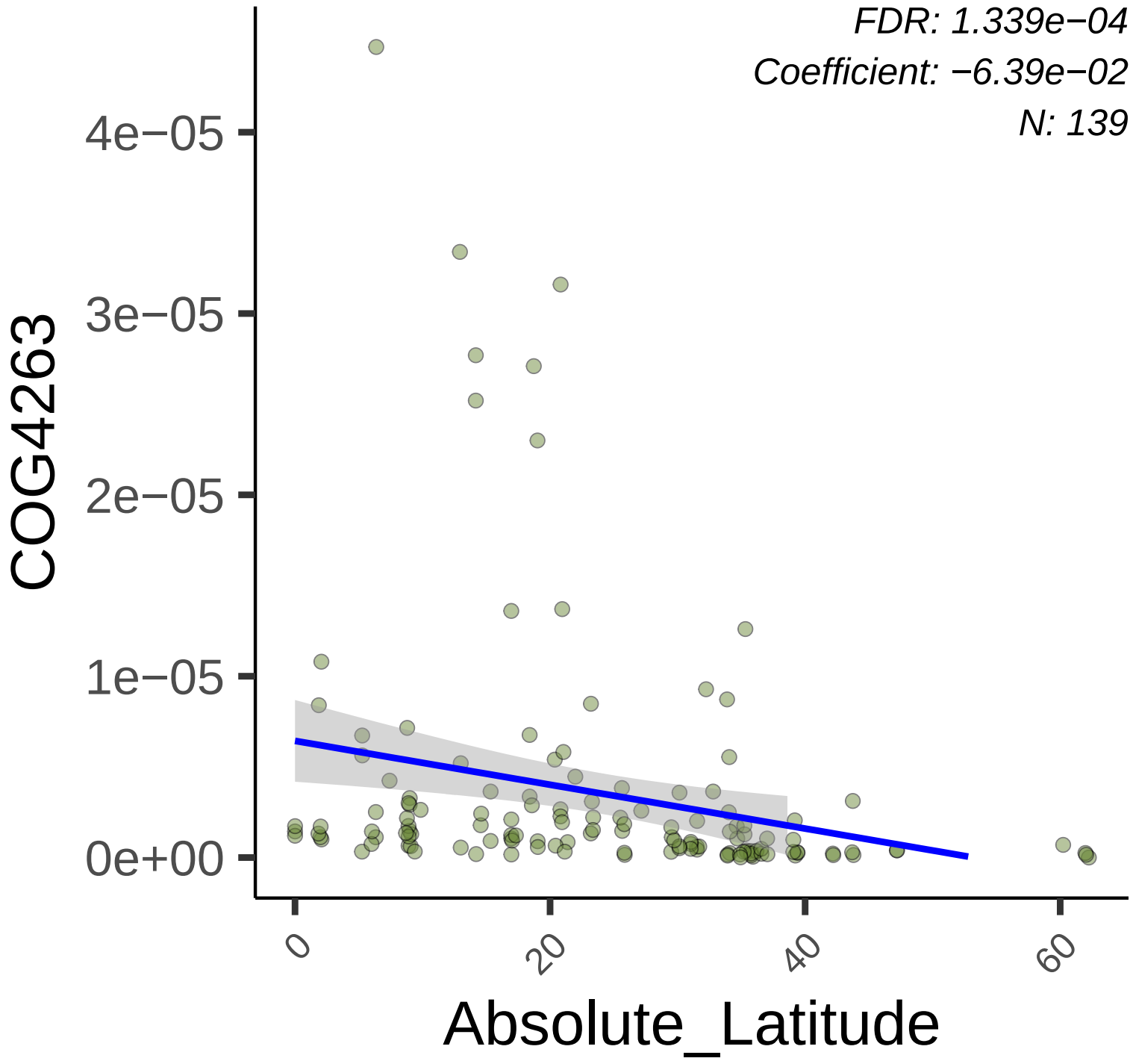

FDR: 1.079e−04
Coefficient: 6.46e−03
N: 139
COG1053
0.0018
0.0015
0.0012
0.0009
0
20
40
60
Absolute_Latitude

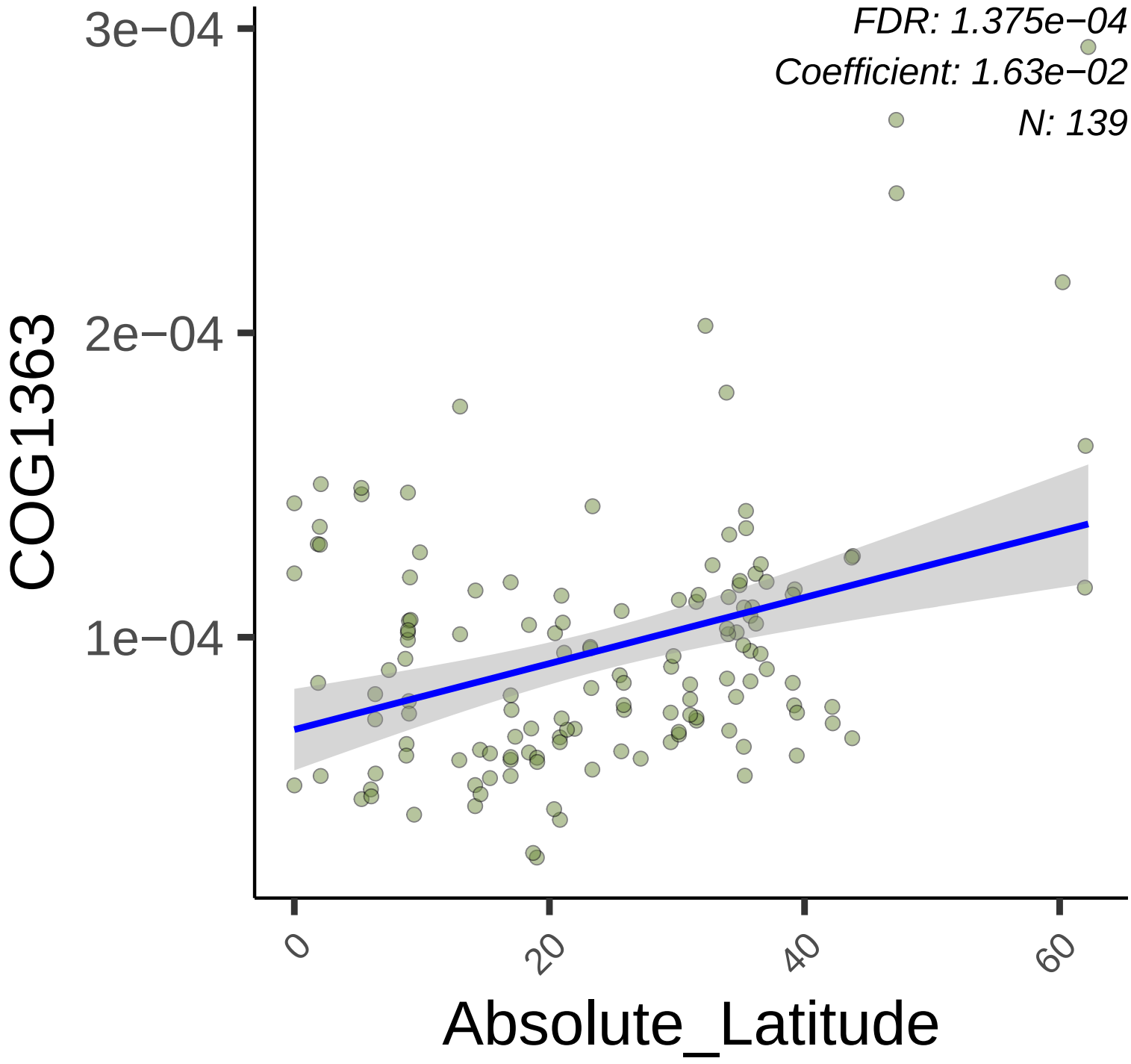

FDR: 1.143e−04
Coefficient: 7.38e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG0281
0
20
40
60
Absolute_Latitude

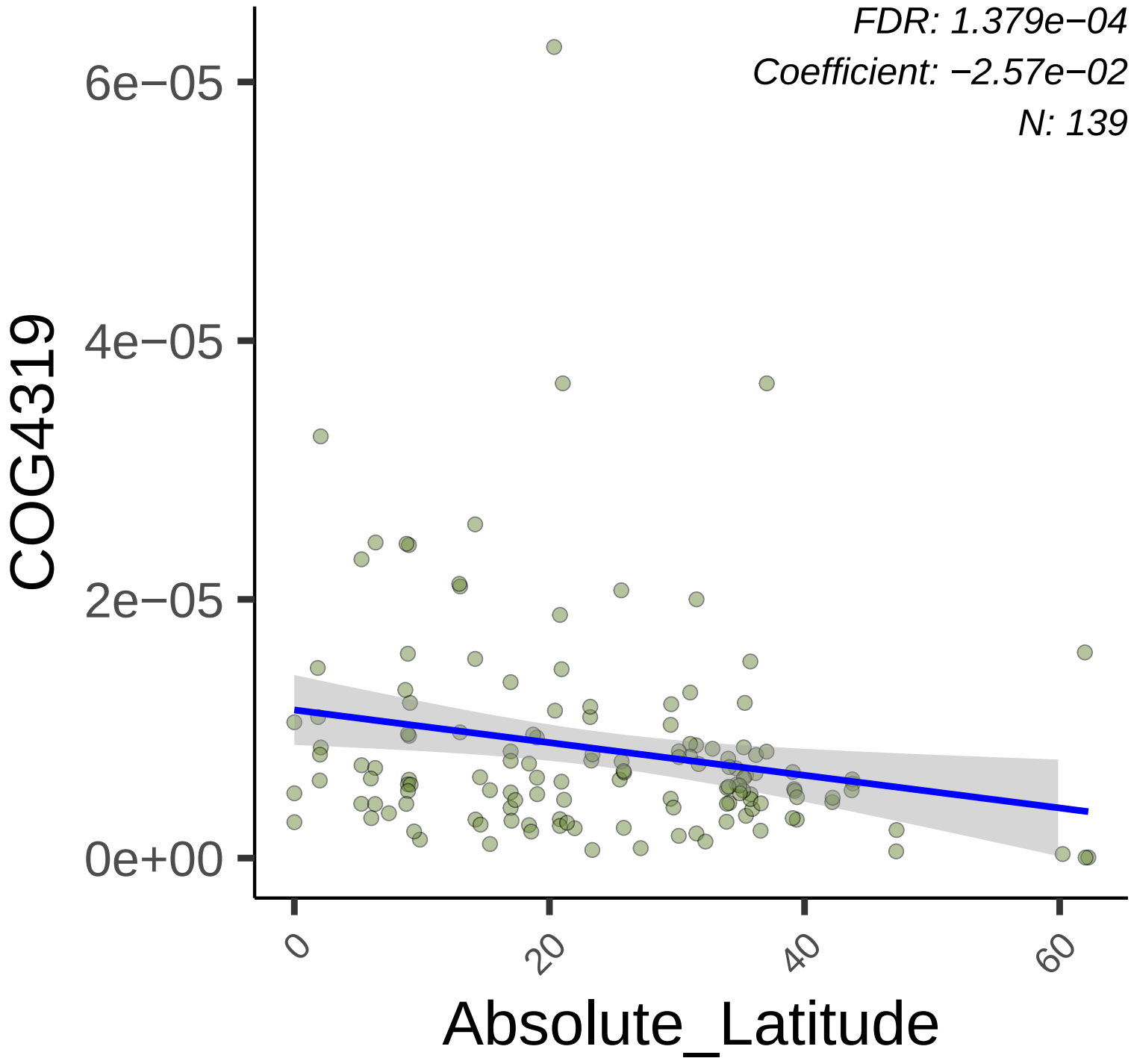

FDR: 1.219e−04
Coefficient: 7.23e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG2355
0
20
40
60
Absolute_Latitude

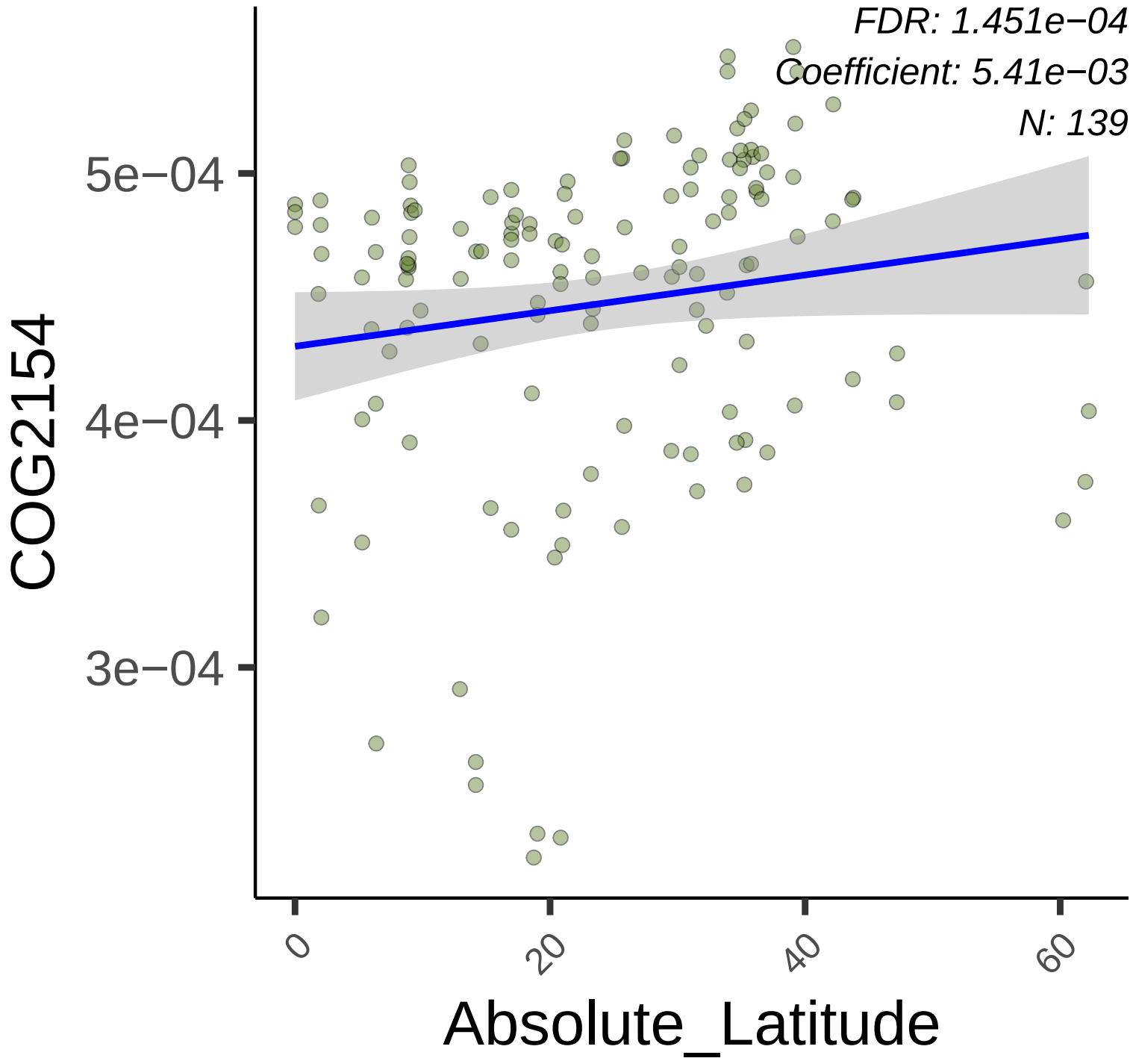

FDR: 1.241e−04
Coefficient: −2.59e−02
N: 139
COG1640
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

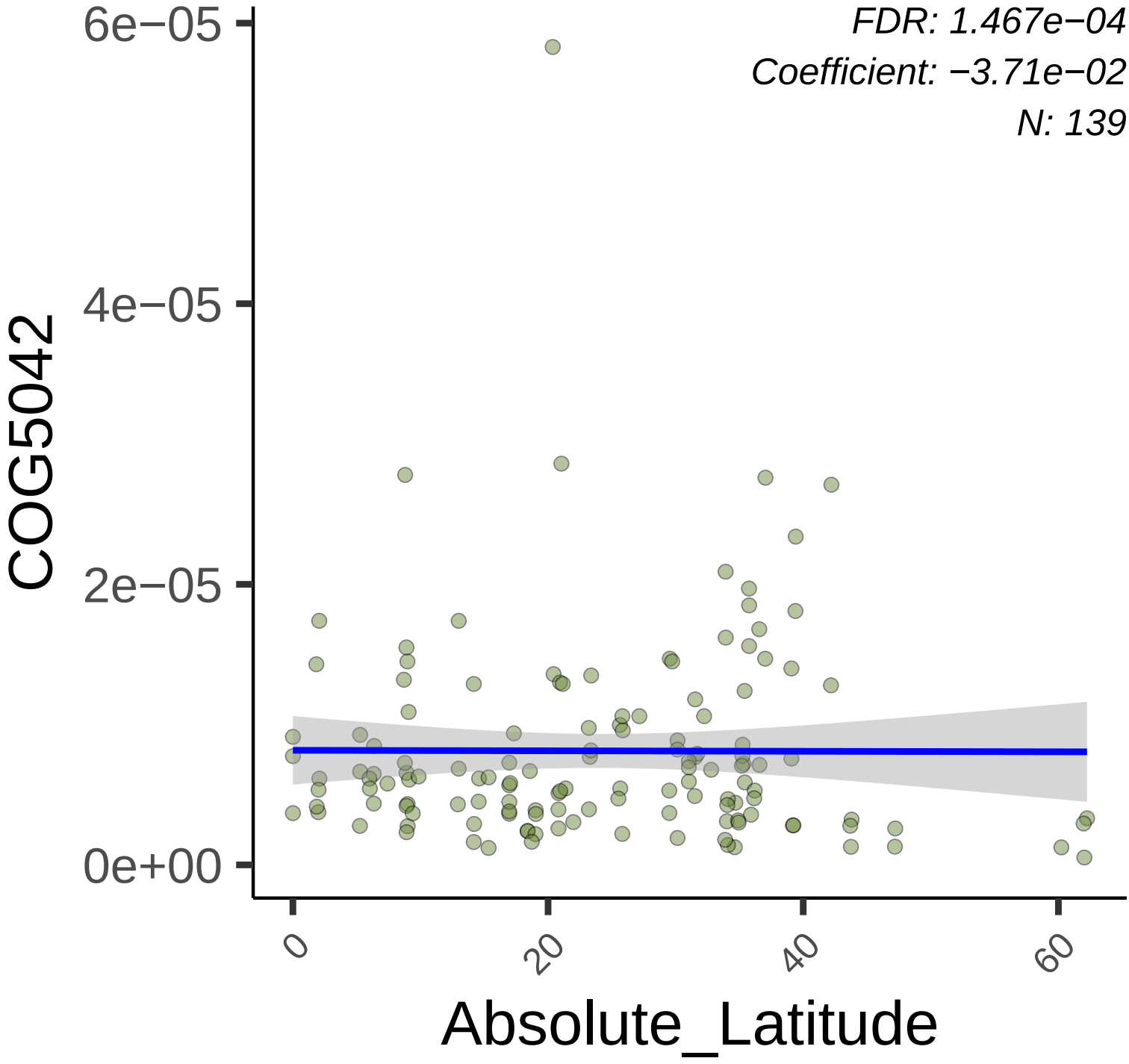

FDR: 1.301e−04
Coefficient: −1.93e−02
N: 139
COG1075
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

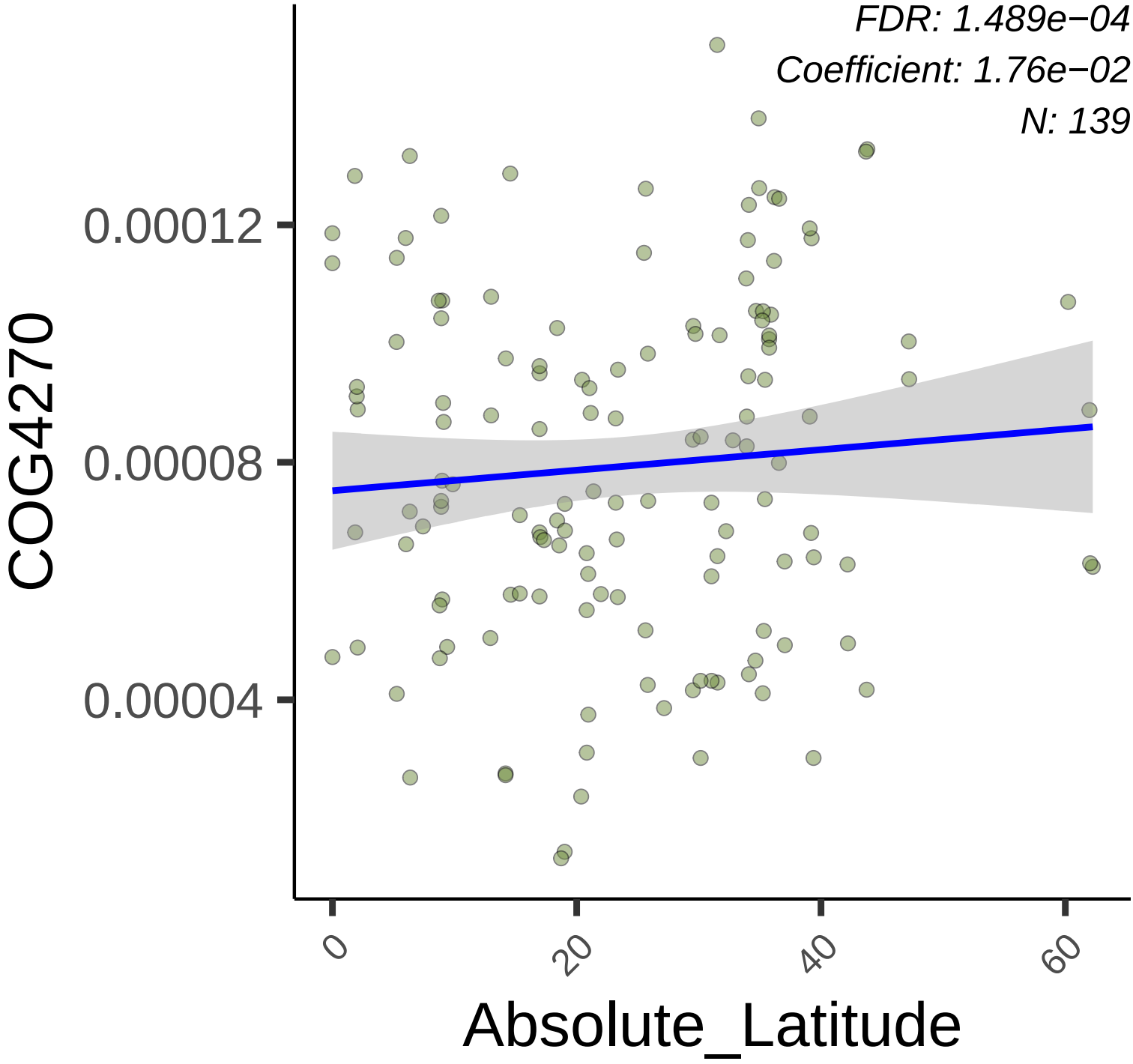

FDR: 1.339e−04
Coefficient: −6.39e−02
N: 139
COG4263
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

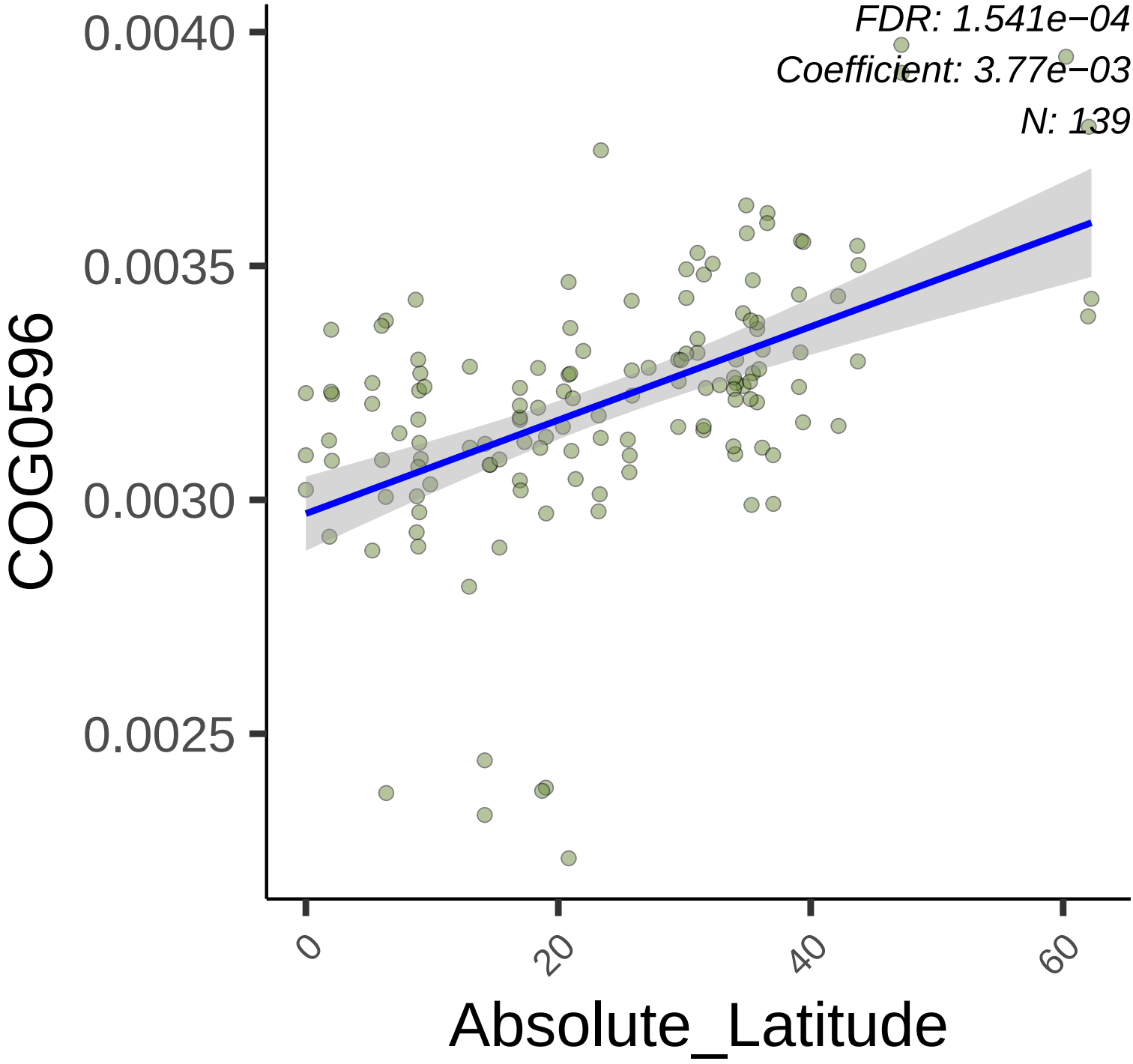

FDR: 1.375e−04
Coefficient: 1.63e−02
N: 139
3e−04
2e−04
1e−04
COG1363
0
20
40
60
Absolute_Latitude

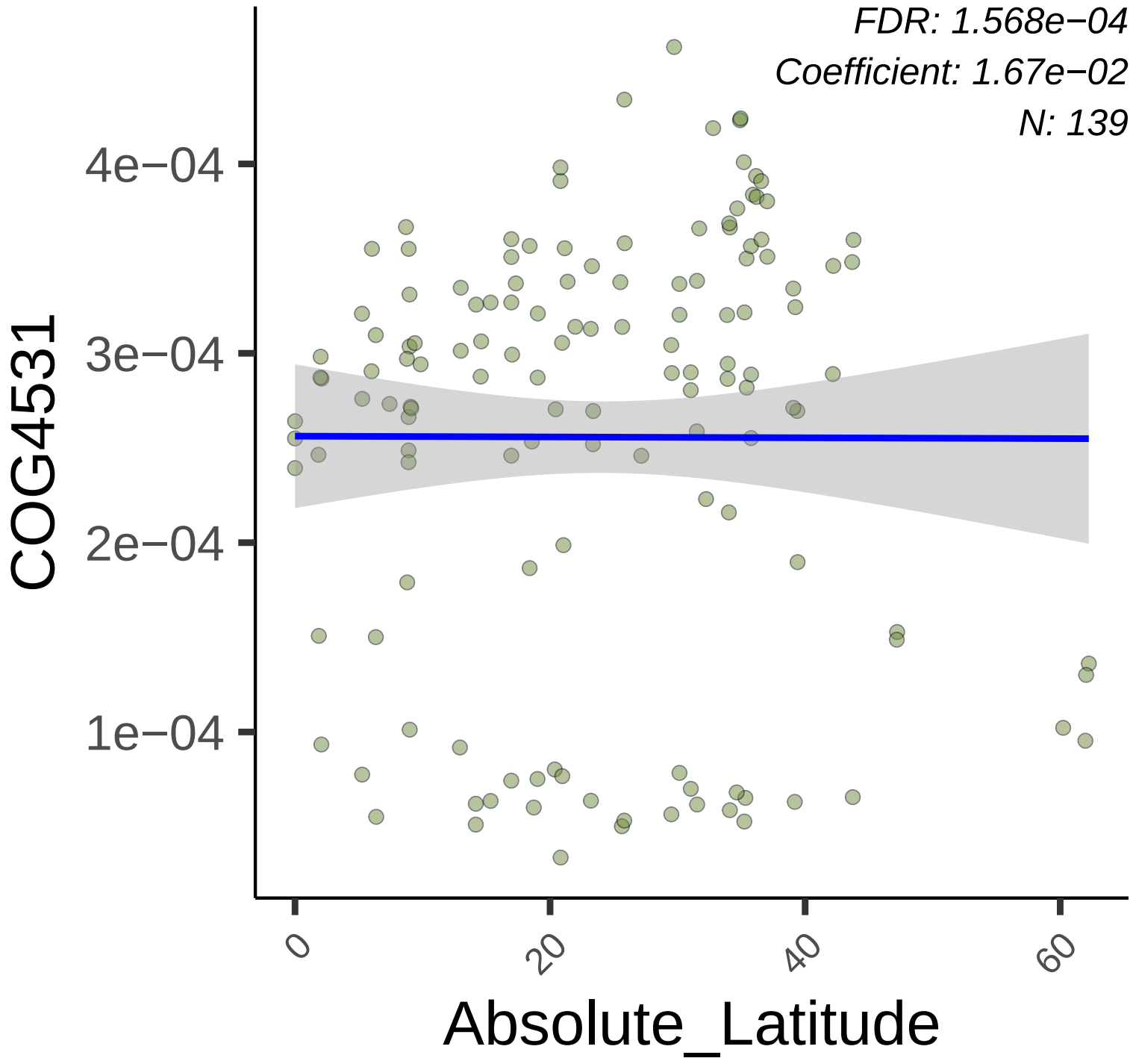

FDR: 1.379e−04
Coefficient: −2.57e−02
N: 139
COG4319
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

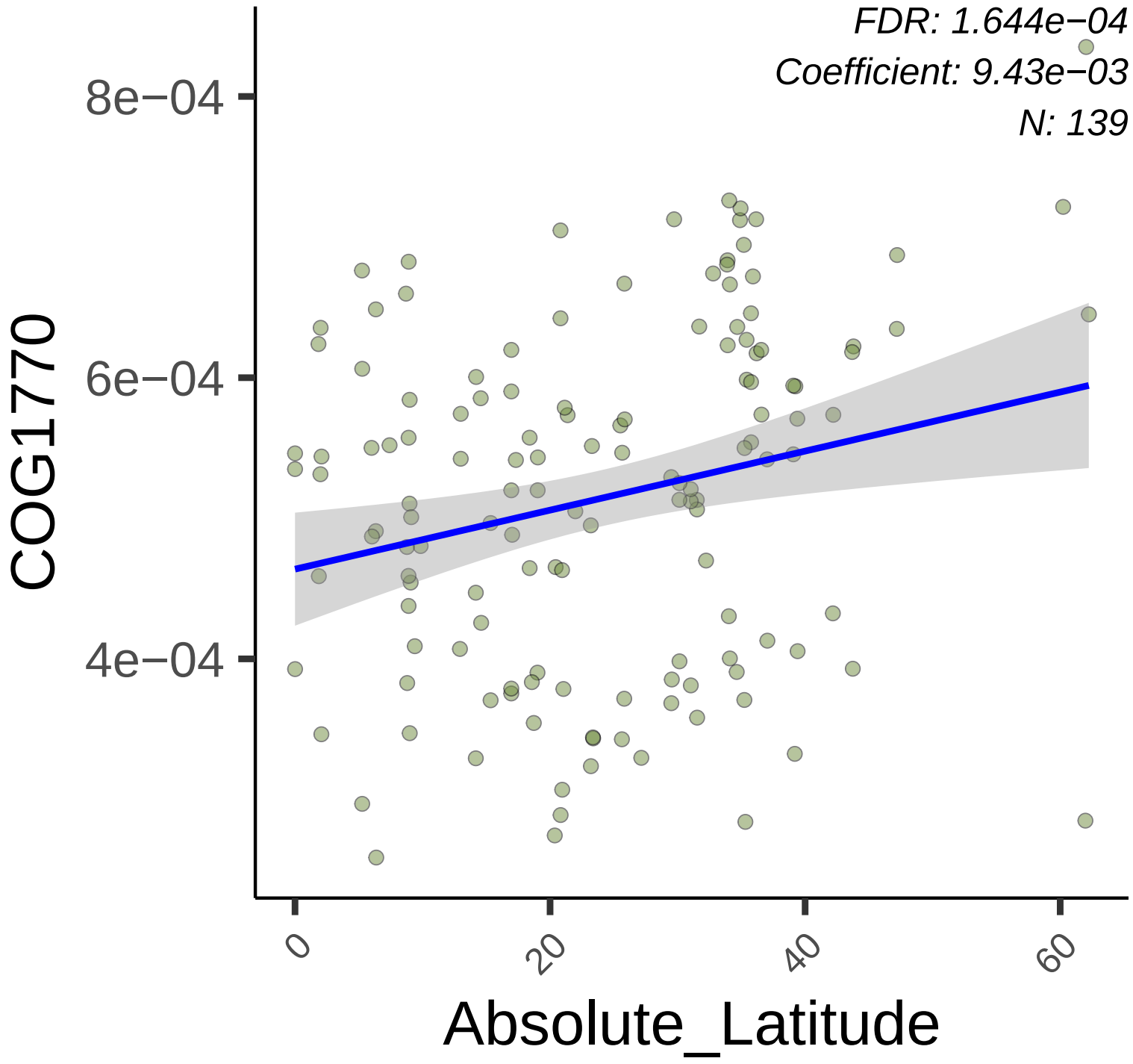

FDR: 1.451e−04
Coefficient: 5.41e−03
N: 139
5e−04
4e−04
3e−04
COG2154
0
20
40
60
Absolute_Latitude

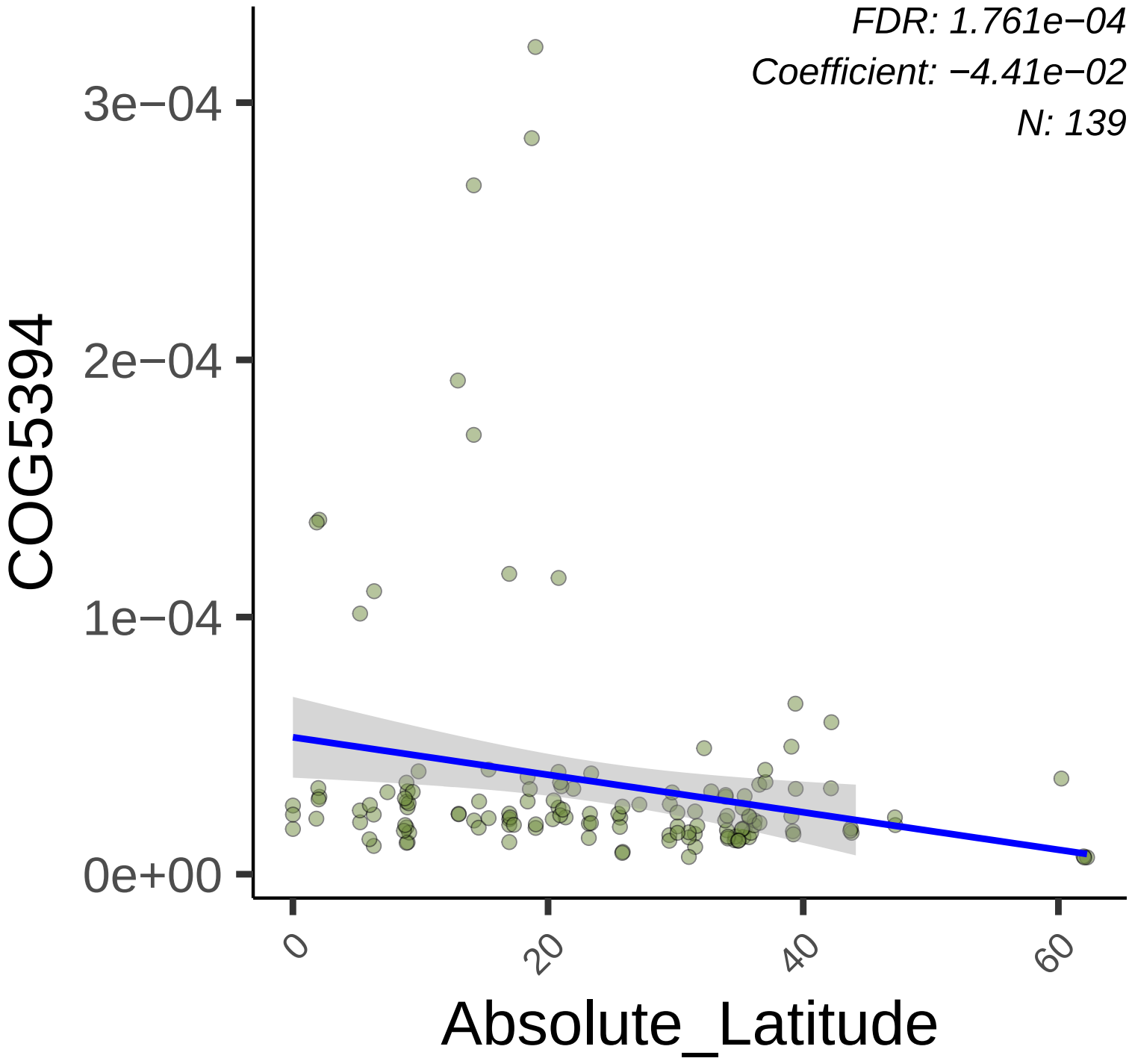

FDR: 1.467e−04
Coefficient: −3.71e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG5042
0
20
40
60
Absolute_Latitude

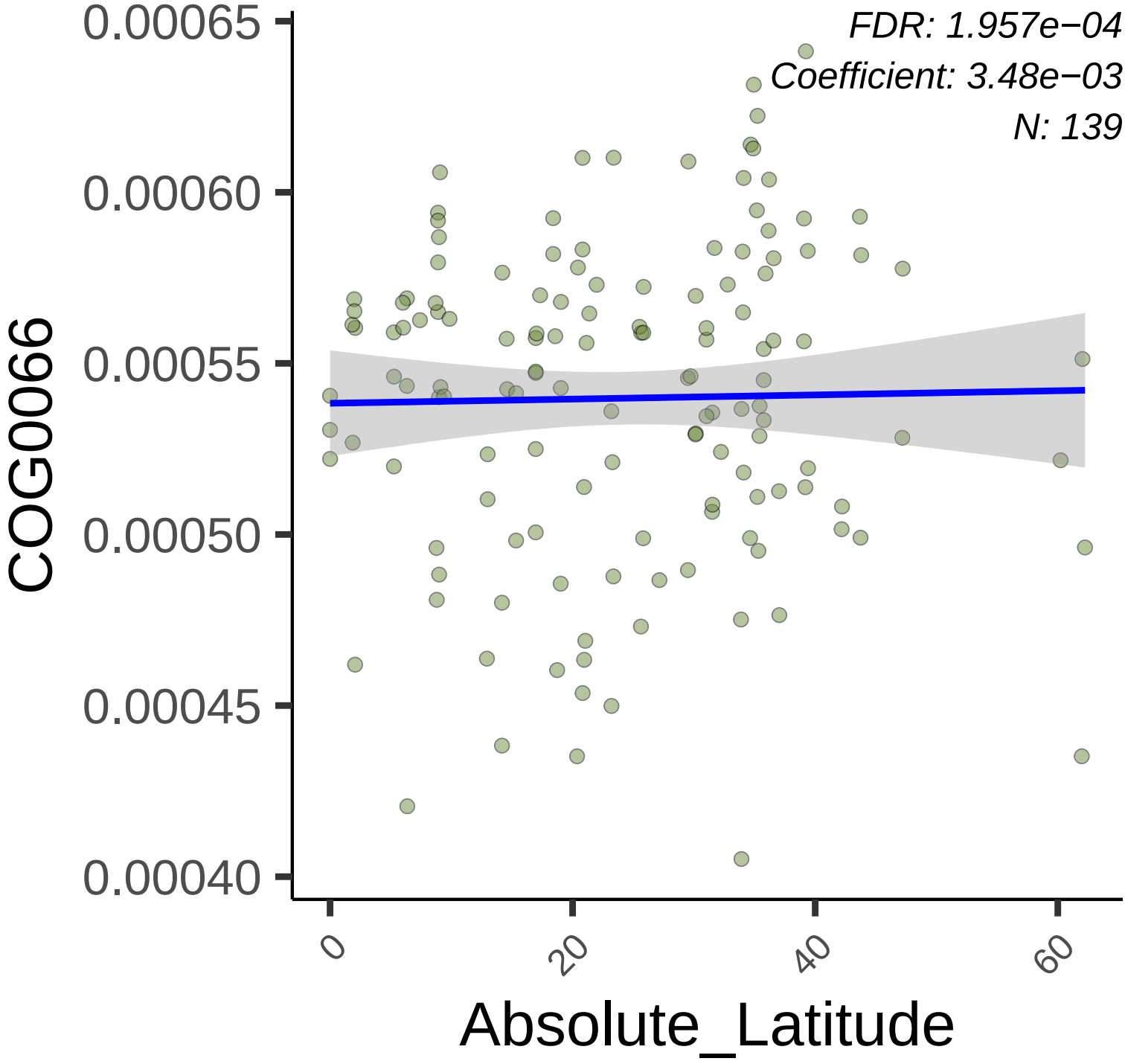

FDR: 1.489e−04
Coefficient: 1.76e−02
N: 139
COG4270
0.00012
0.00008
0.00004
0
20
40
60
Absolute_Latitude

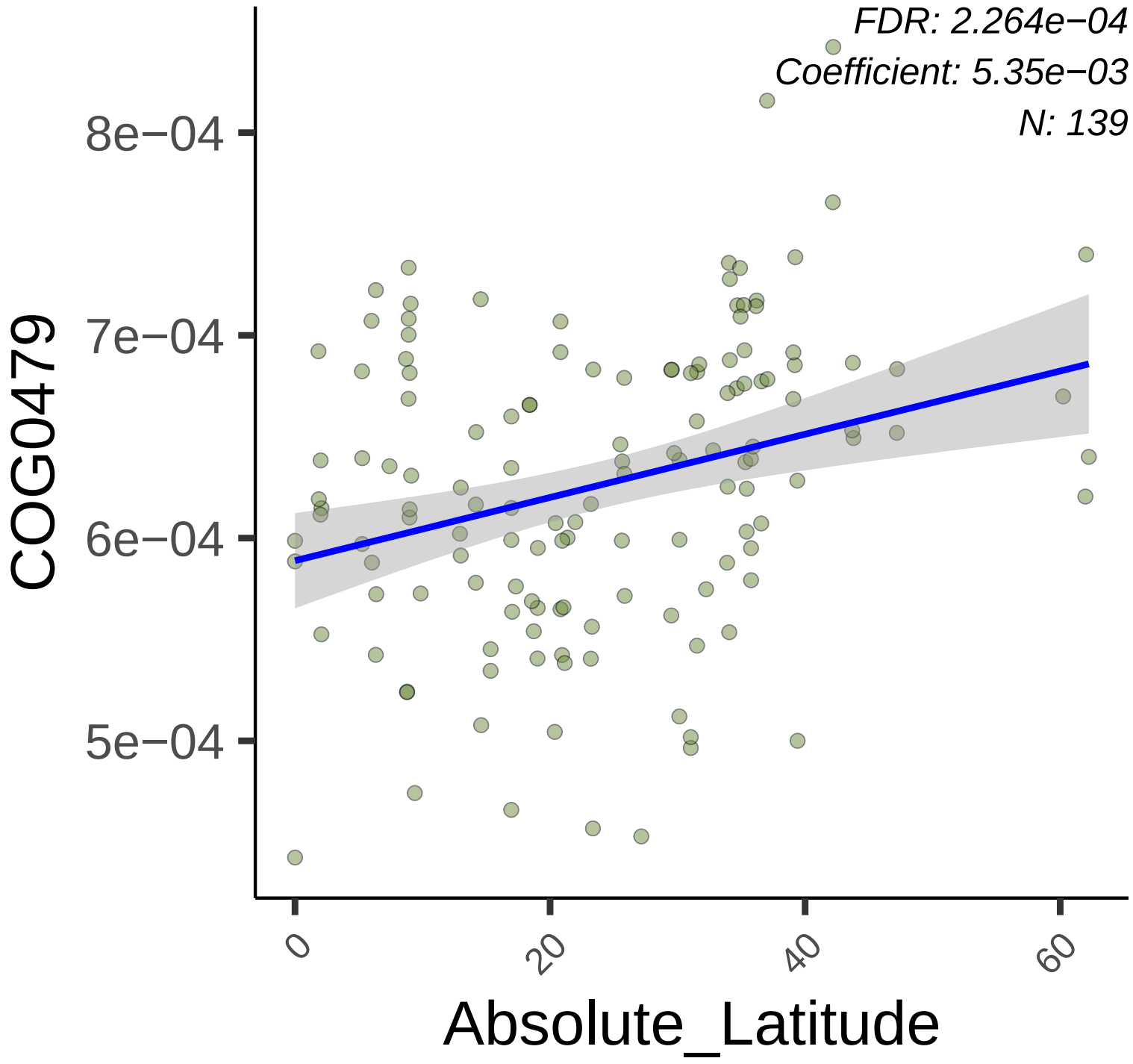

FDR: 1.541e−04
Coefficient: 3.77e−03
N: 139
0.0040
0.0035
0.0030
0.0025
COG0596
0
20
40
60
Absolute_Latitude

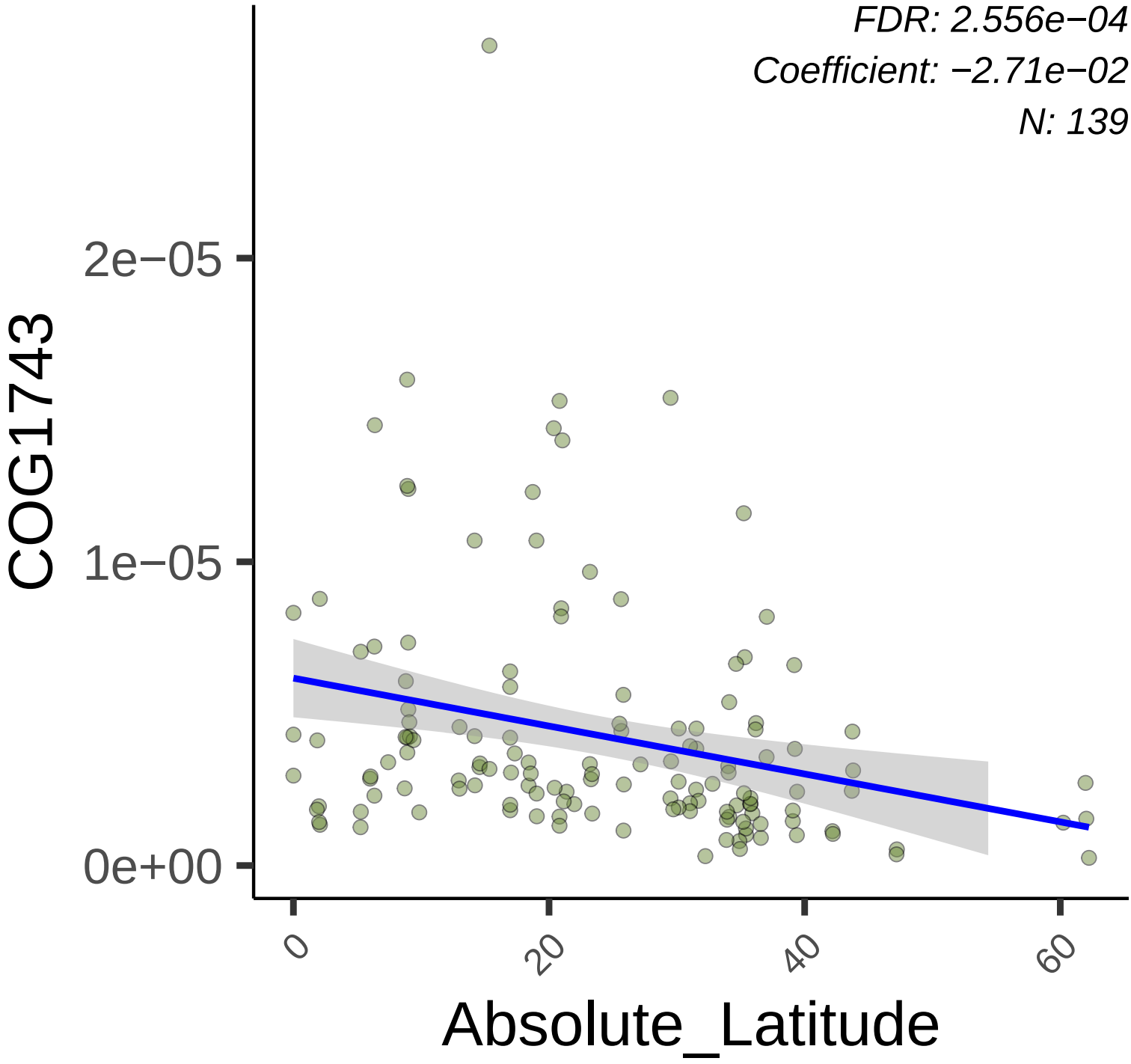

FDR: 1.568e−04
Coefficient: 1.67e−02
N: 139
COG4531
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

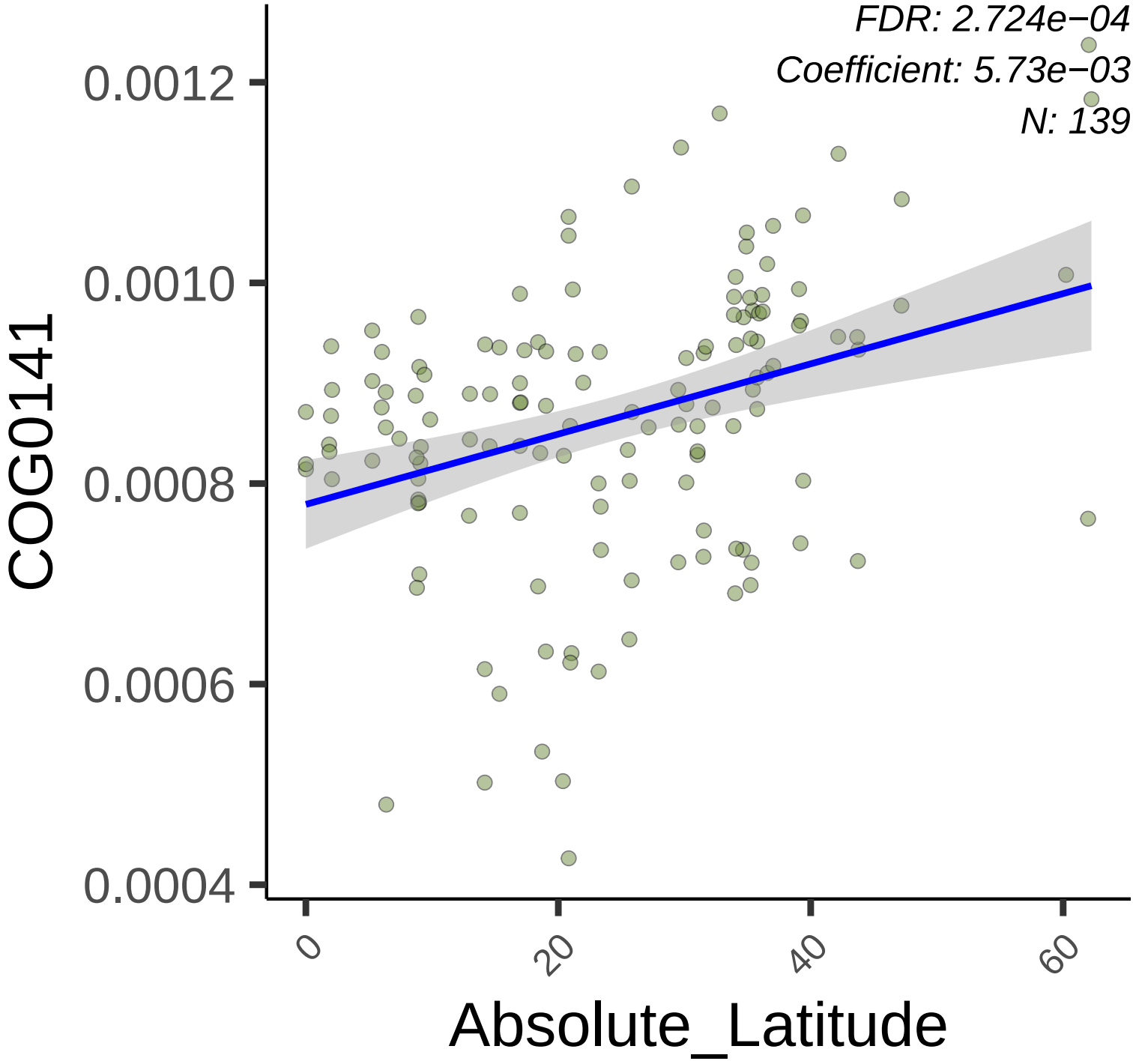

FDR: 1.644e−04
Coefficient: 9.43e−03
N: 139
8e−04
6e−04
4e−04
COG1770
0
20
40
60
Absolute_Latitude

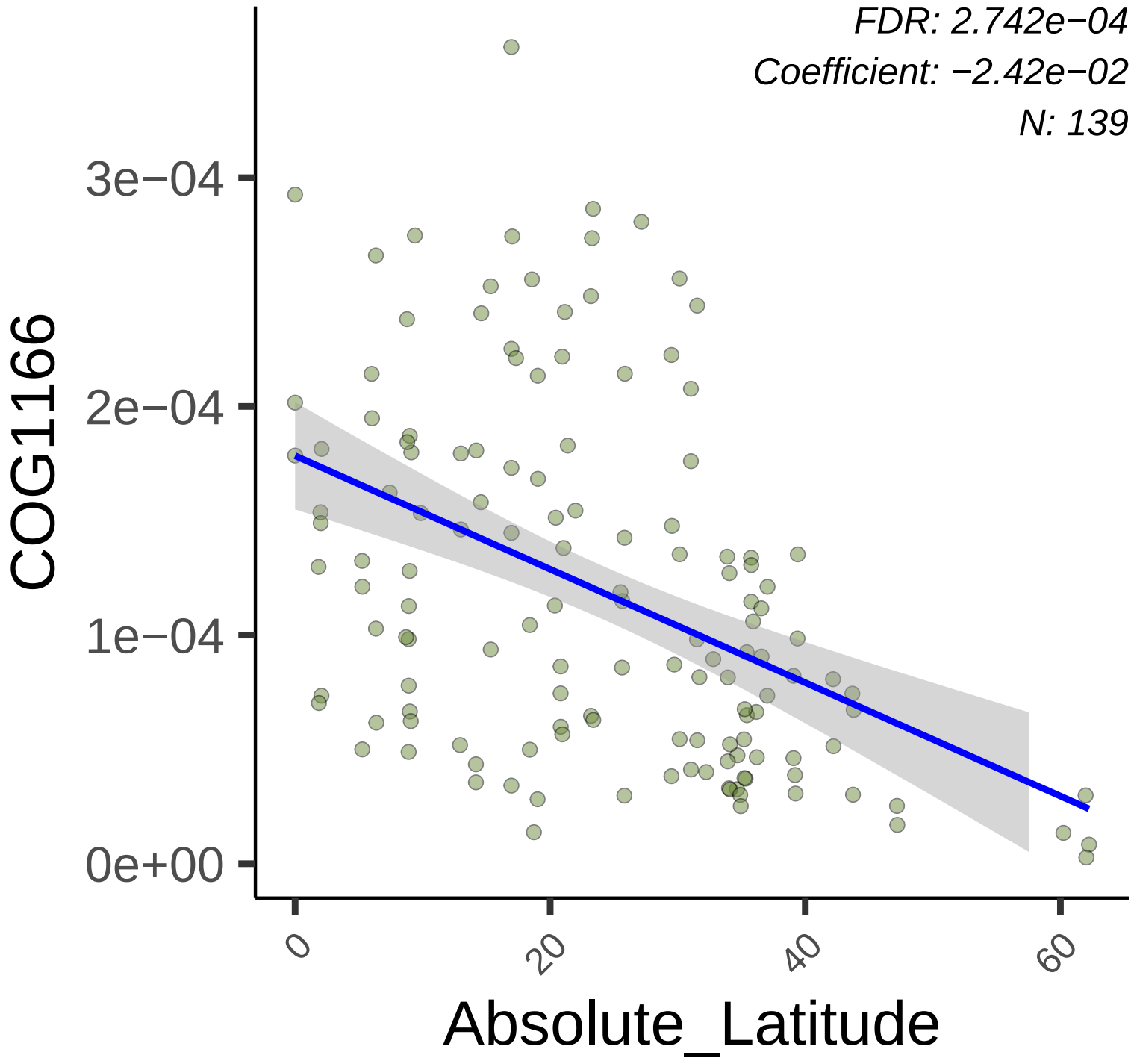

FDR: 1.761e−04
Coefficient: −4.41e−02
N: 139
COG5394
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

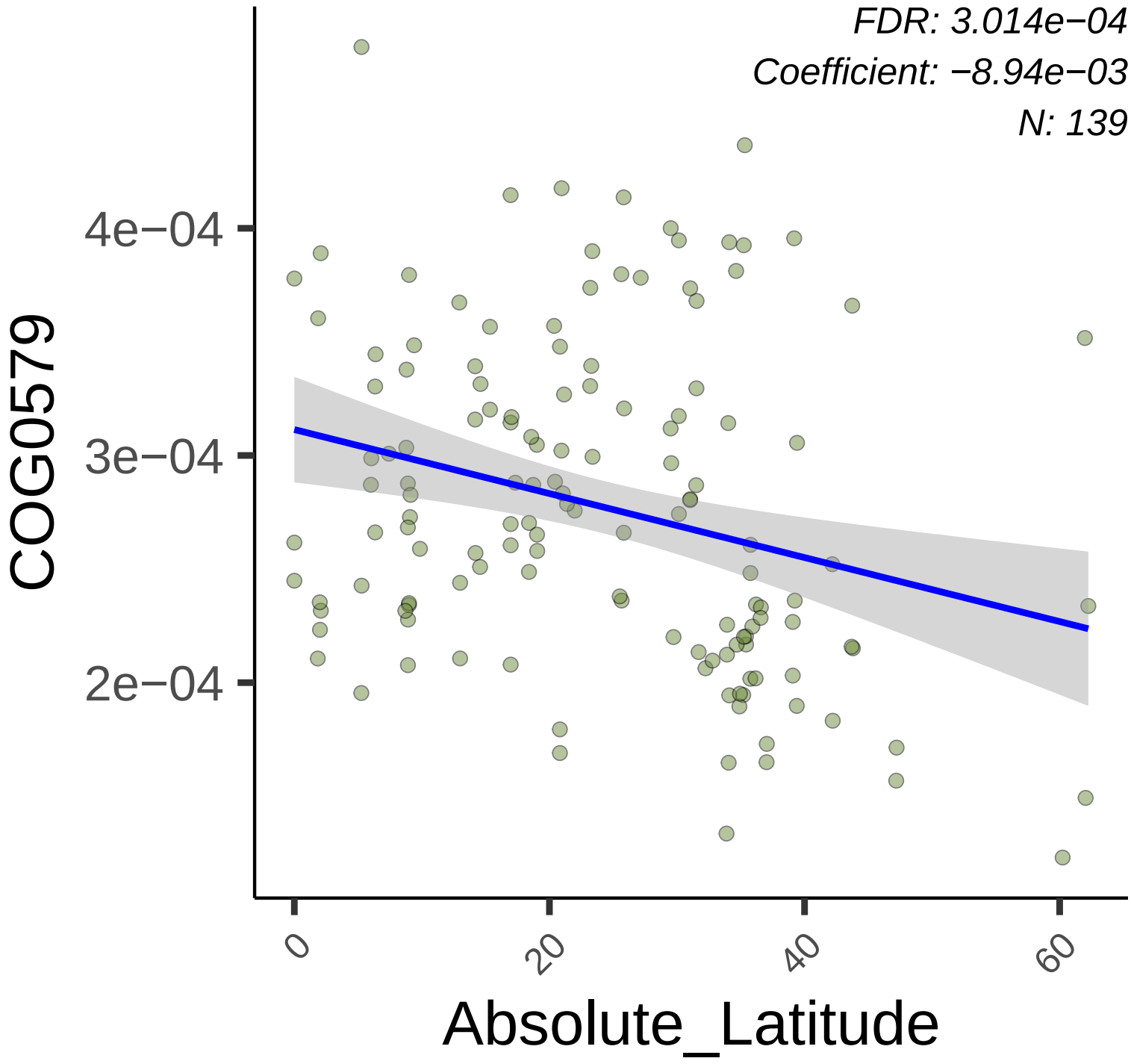

FDR: 1.957e−04
Coefficient: 3.48e−03
N: 139
0.00065
0.00060
0.00055
0.00050
0.00045
0.00040
COG0066
0
20
40
60
Absolute_Latitude

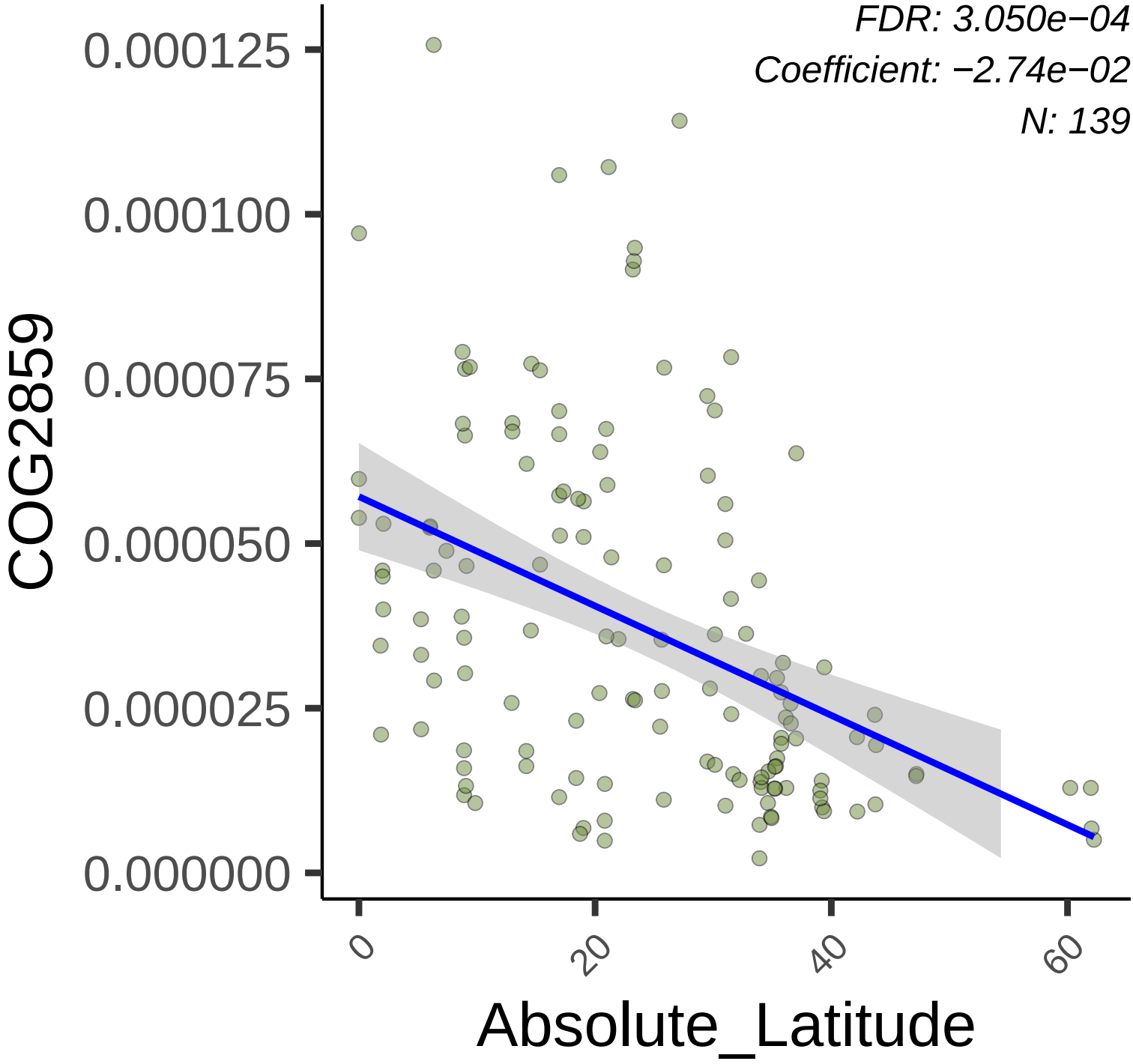

FDR: 2.264e−04
Coefficient: 5.35e−03
N: 139
8e−04
7e−04
6e−04
5e−04
COG0479
0
20
40
60
Absolute_Latitude

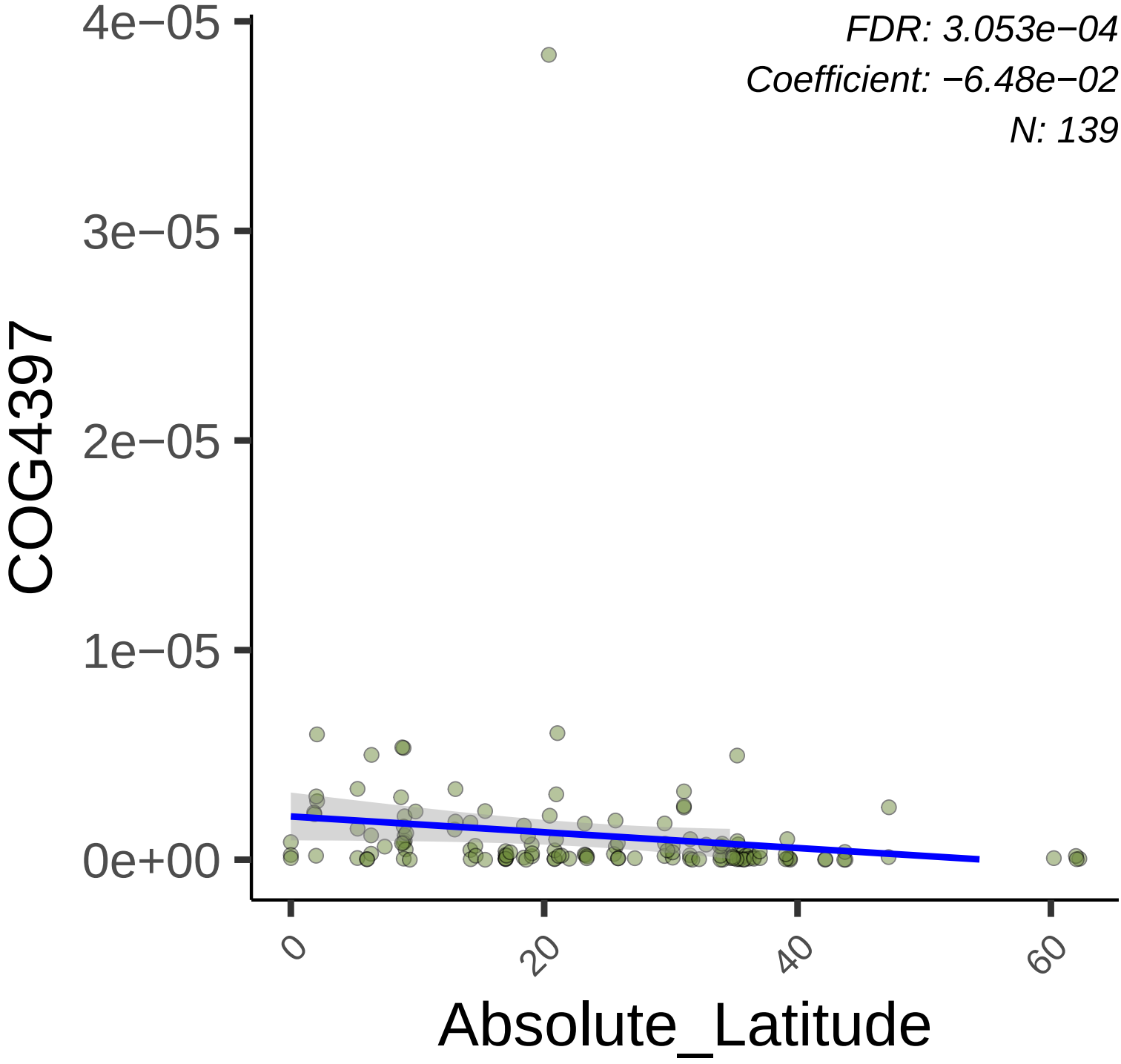

FDR: 2.556e−04
Coefficient: −2.71e−02
N: 139
COG1743
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

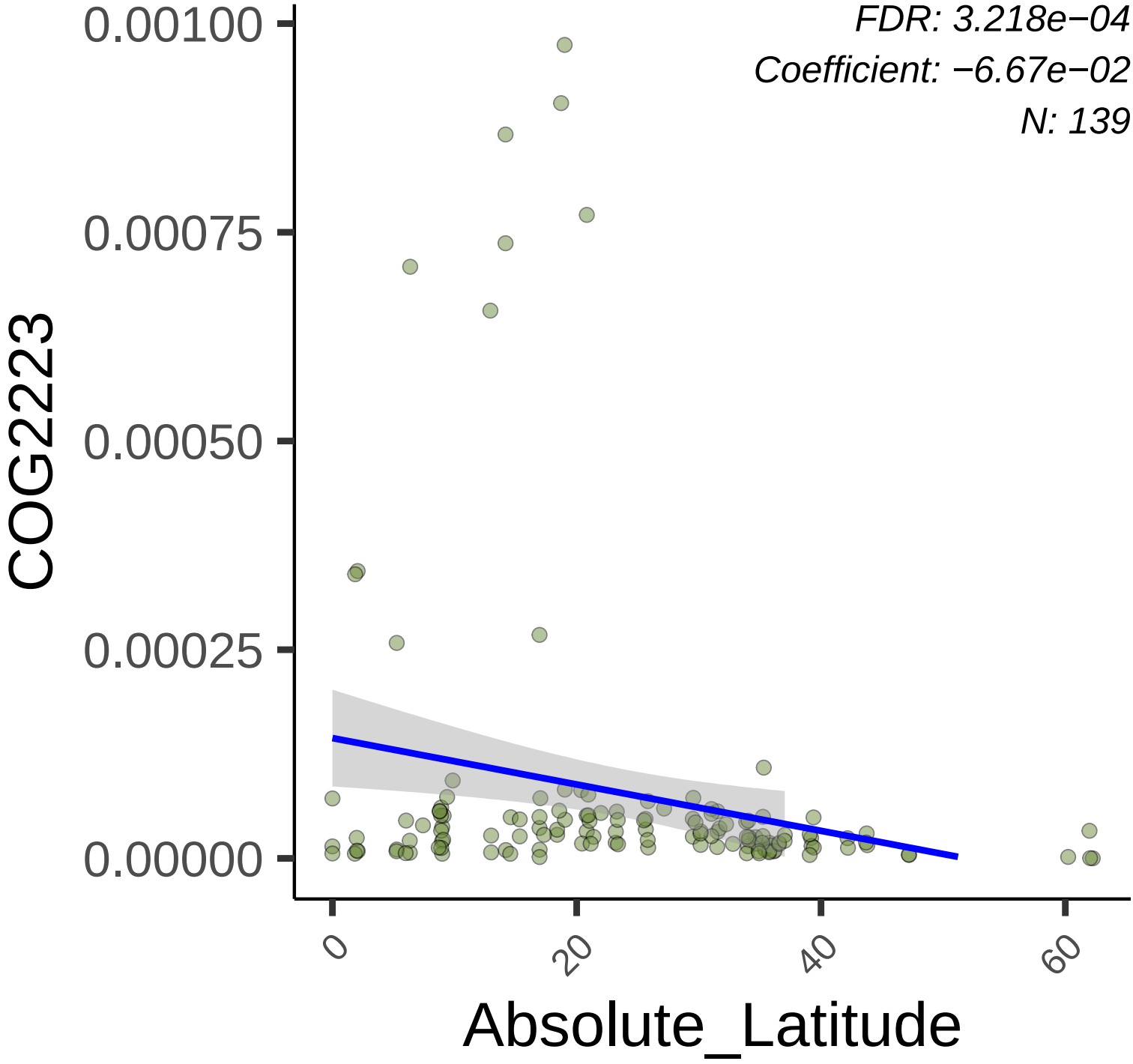

FDR: 2.724e−04
Coefficient: 5.73e−03
N: 139
0.0012
0.0010
0.0008
0.0006
0.0004
COG0141
0
20
40
60
Absolute_Latitude

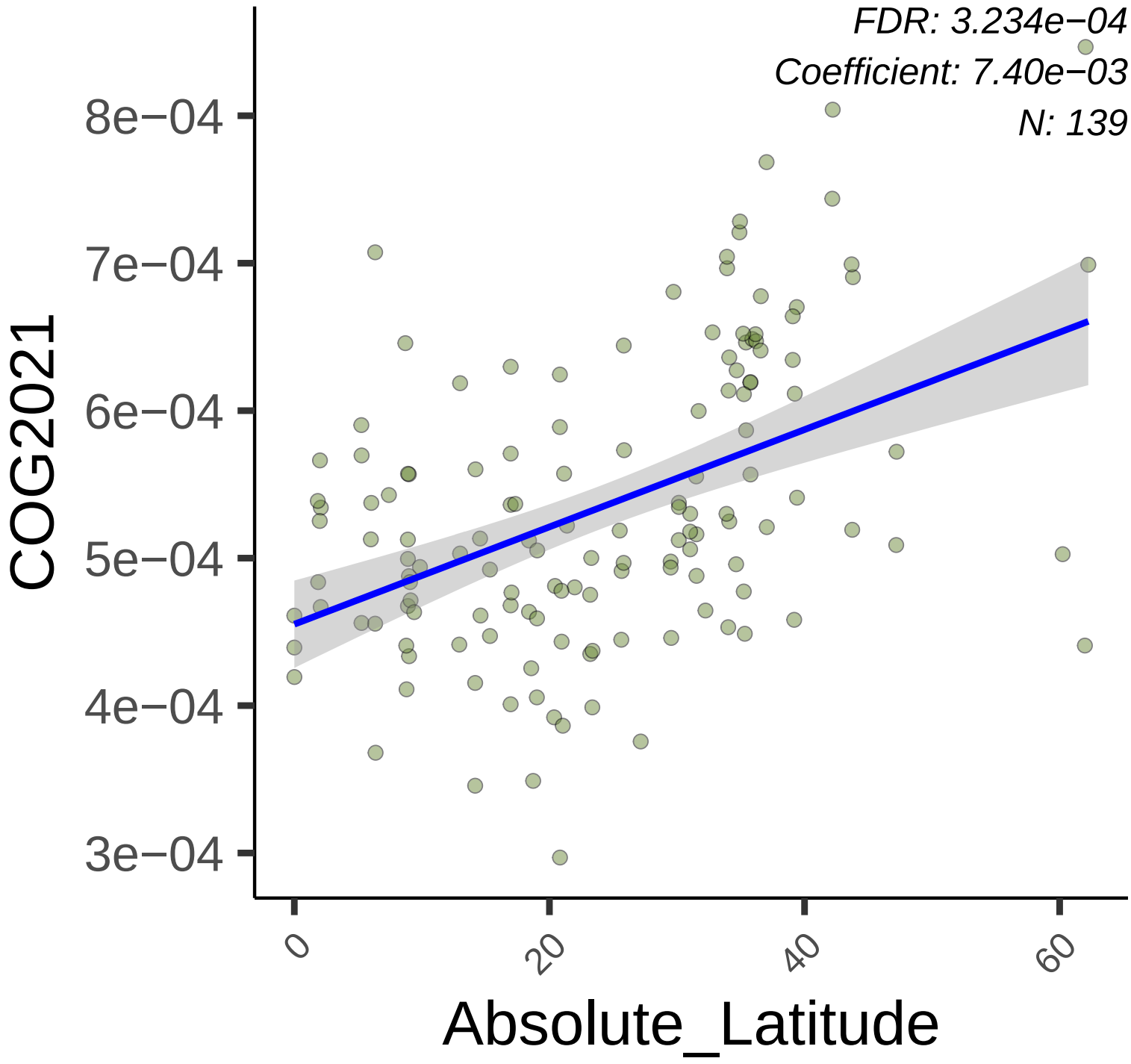

FDR: 2.742e−04
Coefficient: −2.42e−02
N: 139
COG1166
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

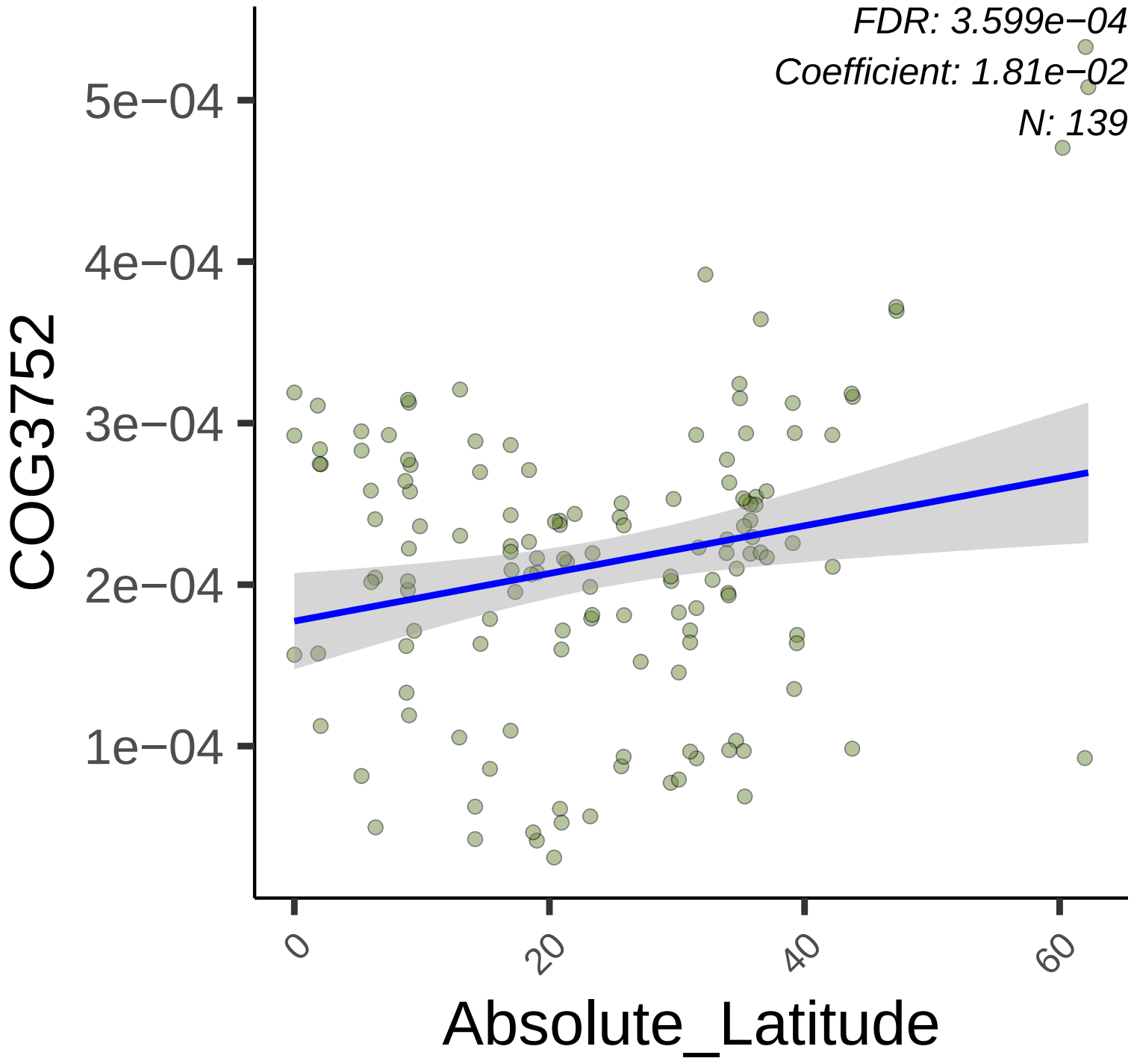

FDR: 3.014e−04
Coefficient: −8.94e−03
N: 139
COG0579
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

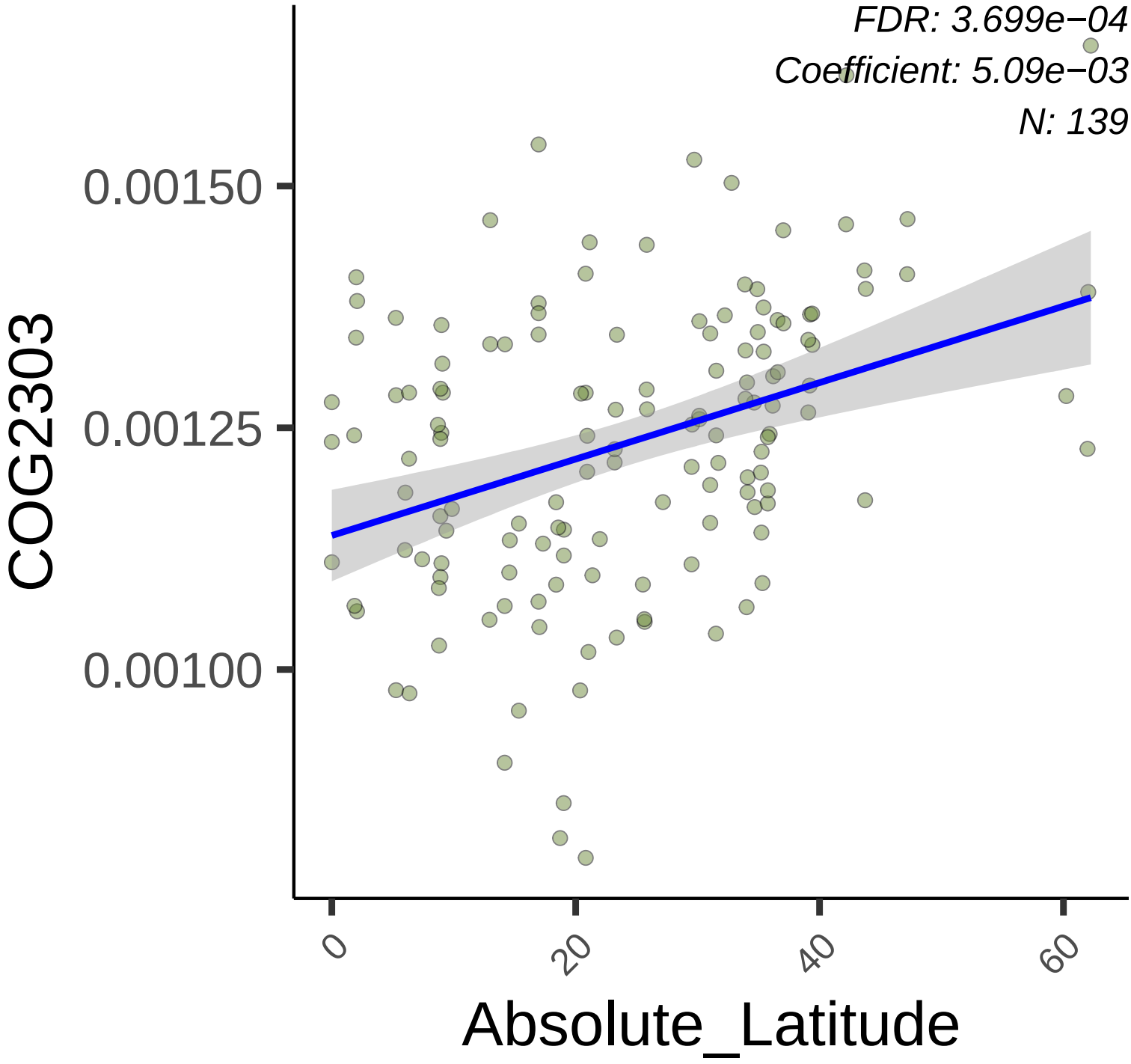

FDR: 3.050e−04
Coefficient: −2.74e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
0.000000
COG2859
0
20
40
60
Absolute_Latitude

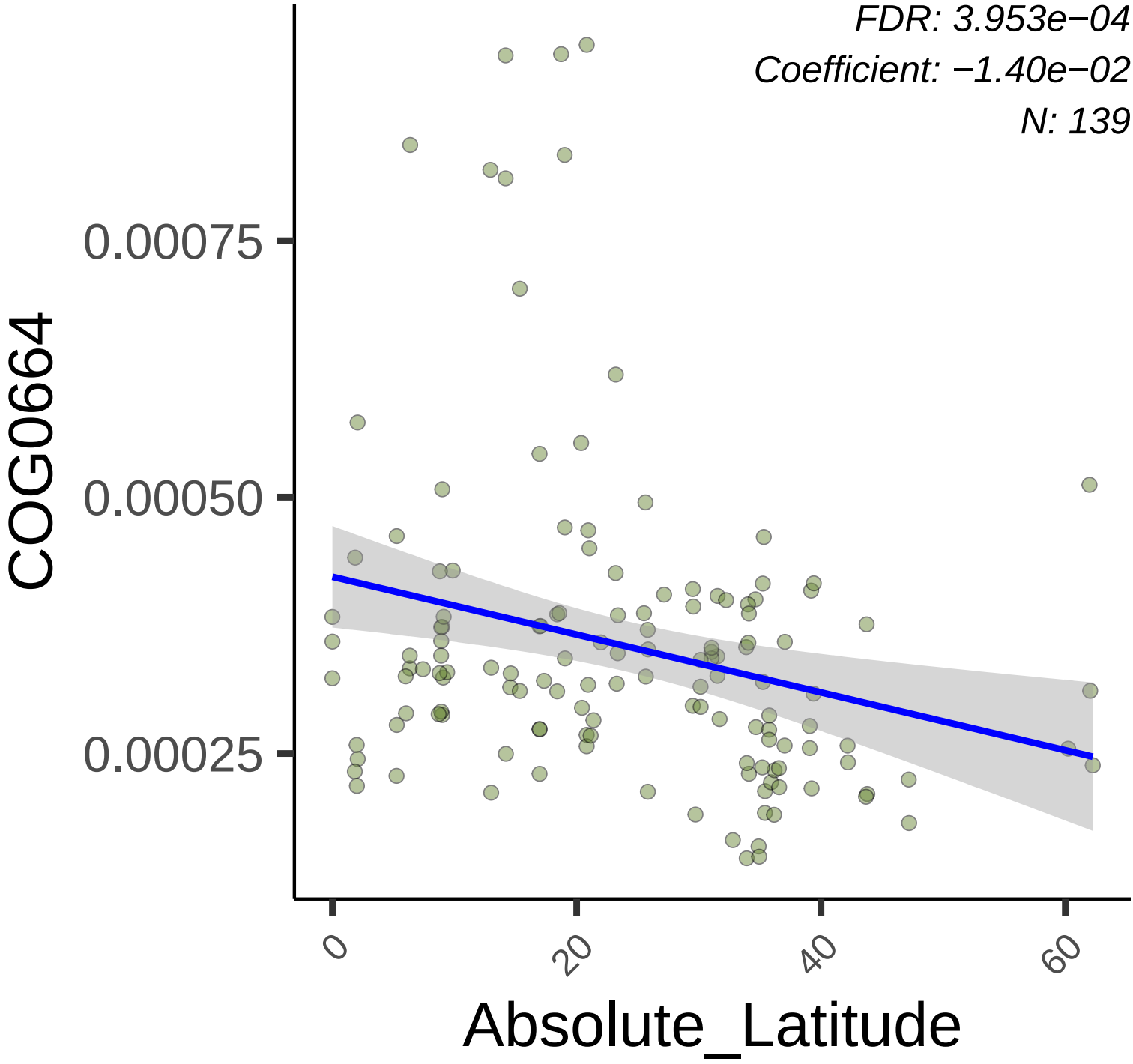

FDR: 3.053e−04
Coefficient: −6.48e−02
N: 139
COG4397
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

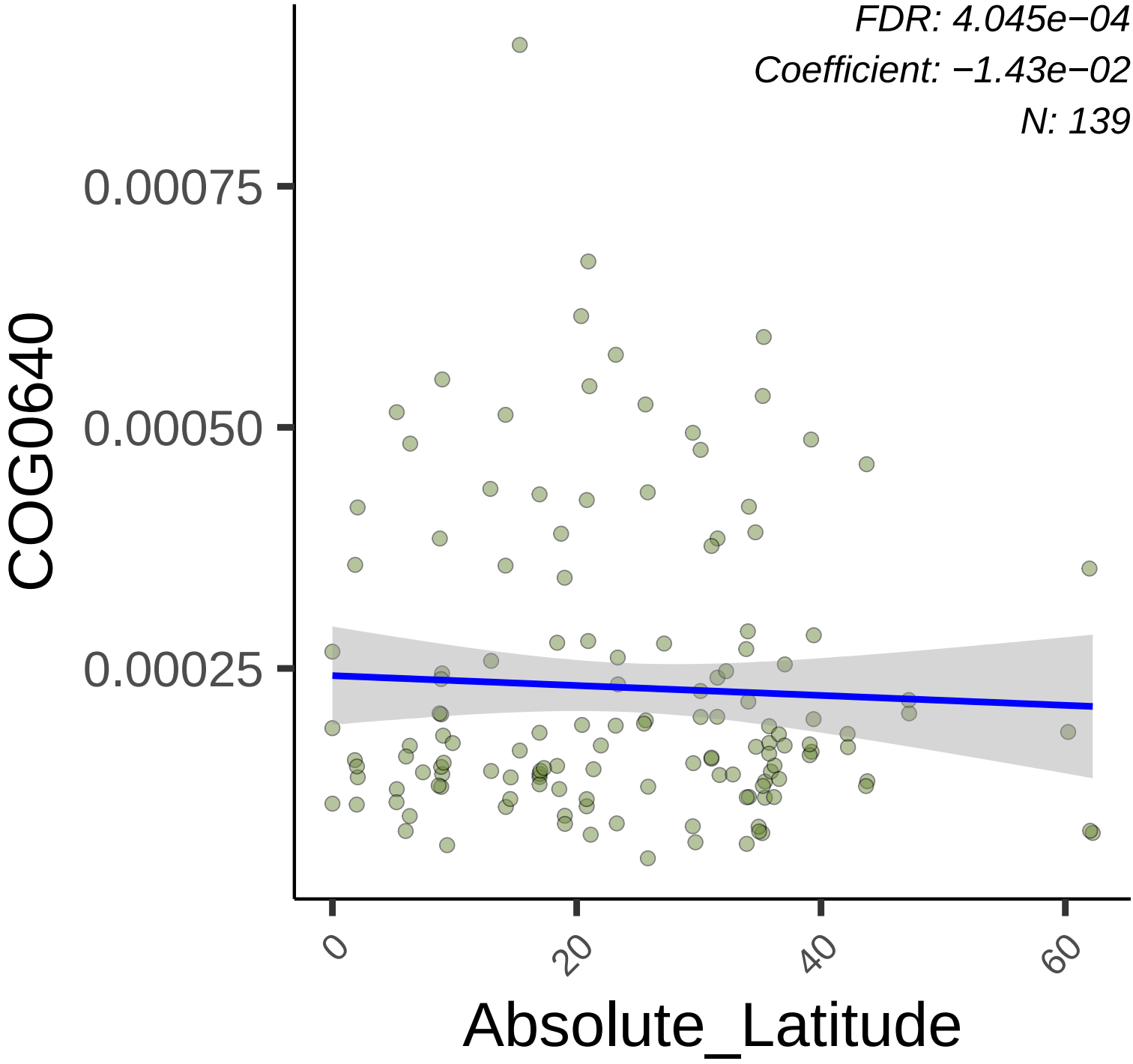

FDR: 3.218e−04
Coefficient: −6.67e−02
N: 139
0.00100
0.00075
0.00050
0.00025
0.00000
COG2223
0
20
40
60
Absolute_Latitude

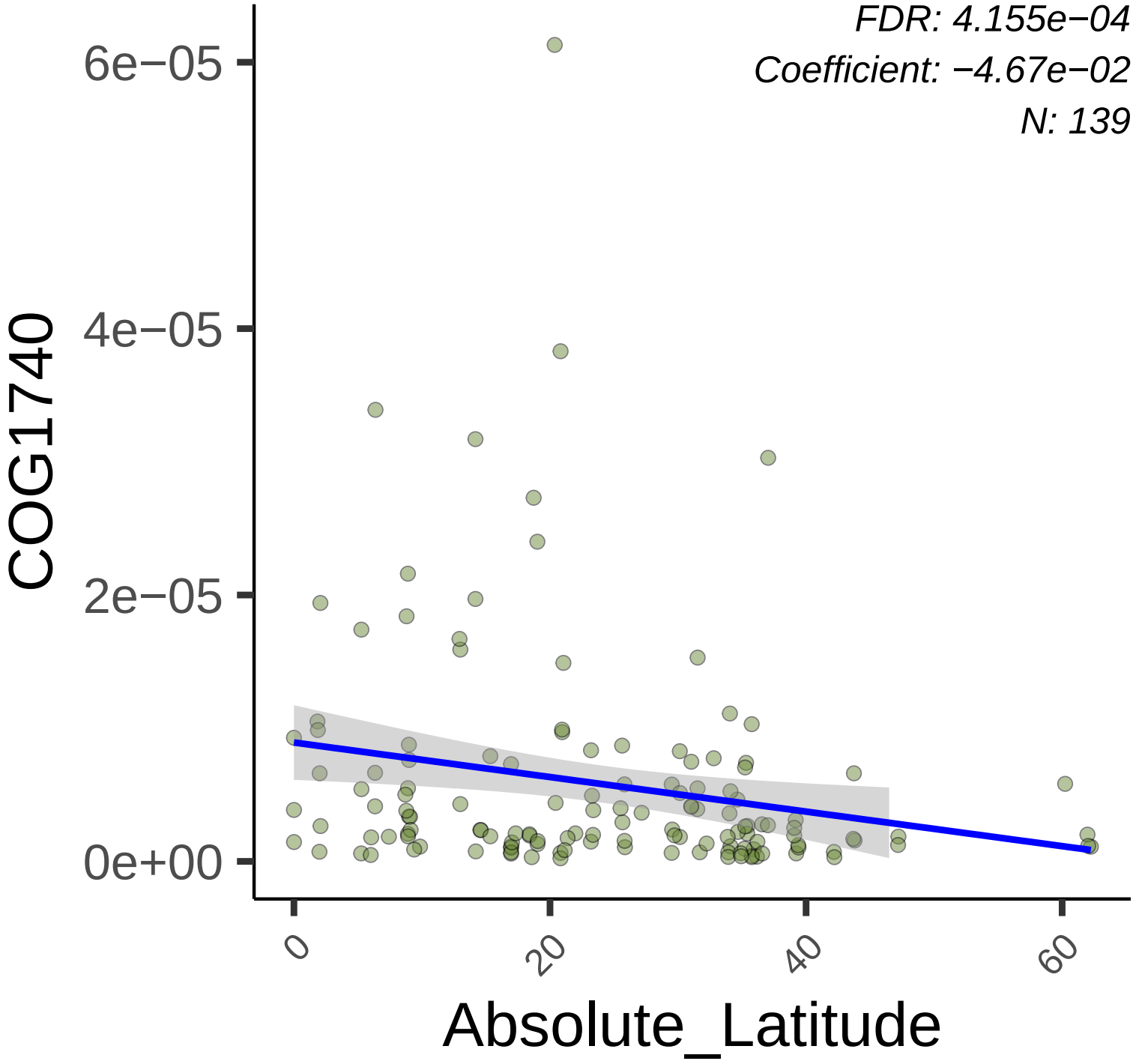

FDR: 3.234e−04
Coefficient: 7.40e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
3e−04
COG2021
0
20
40
60
Absolute_Latitude

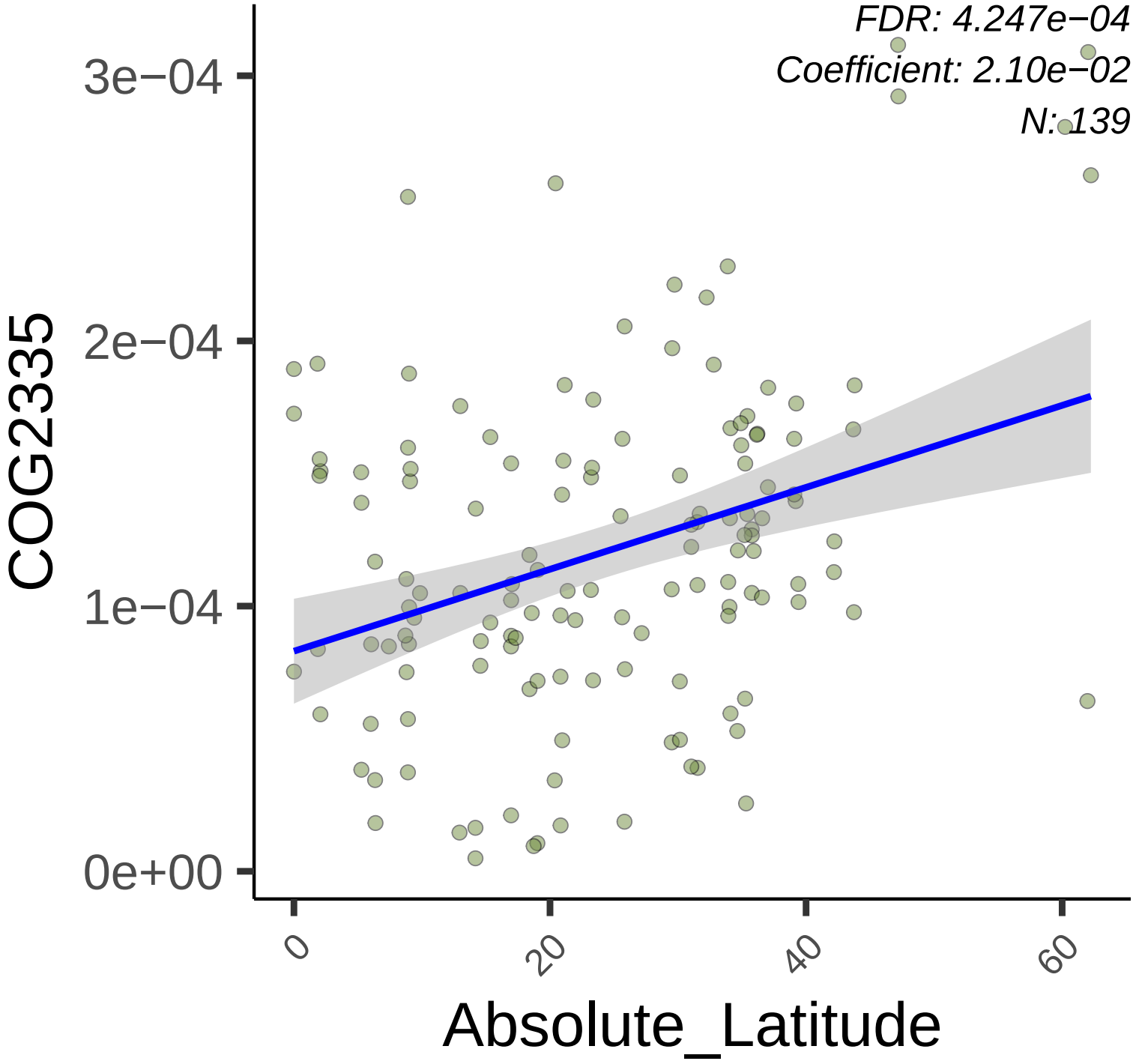

FDR: 3.599e−04
Coefficient: 1.81e−02
N: 139
5e−04
4e−04
3e−04
2e−04
1e−04
COG3752
0
20
40
60
Absolute_Latitude

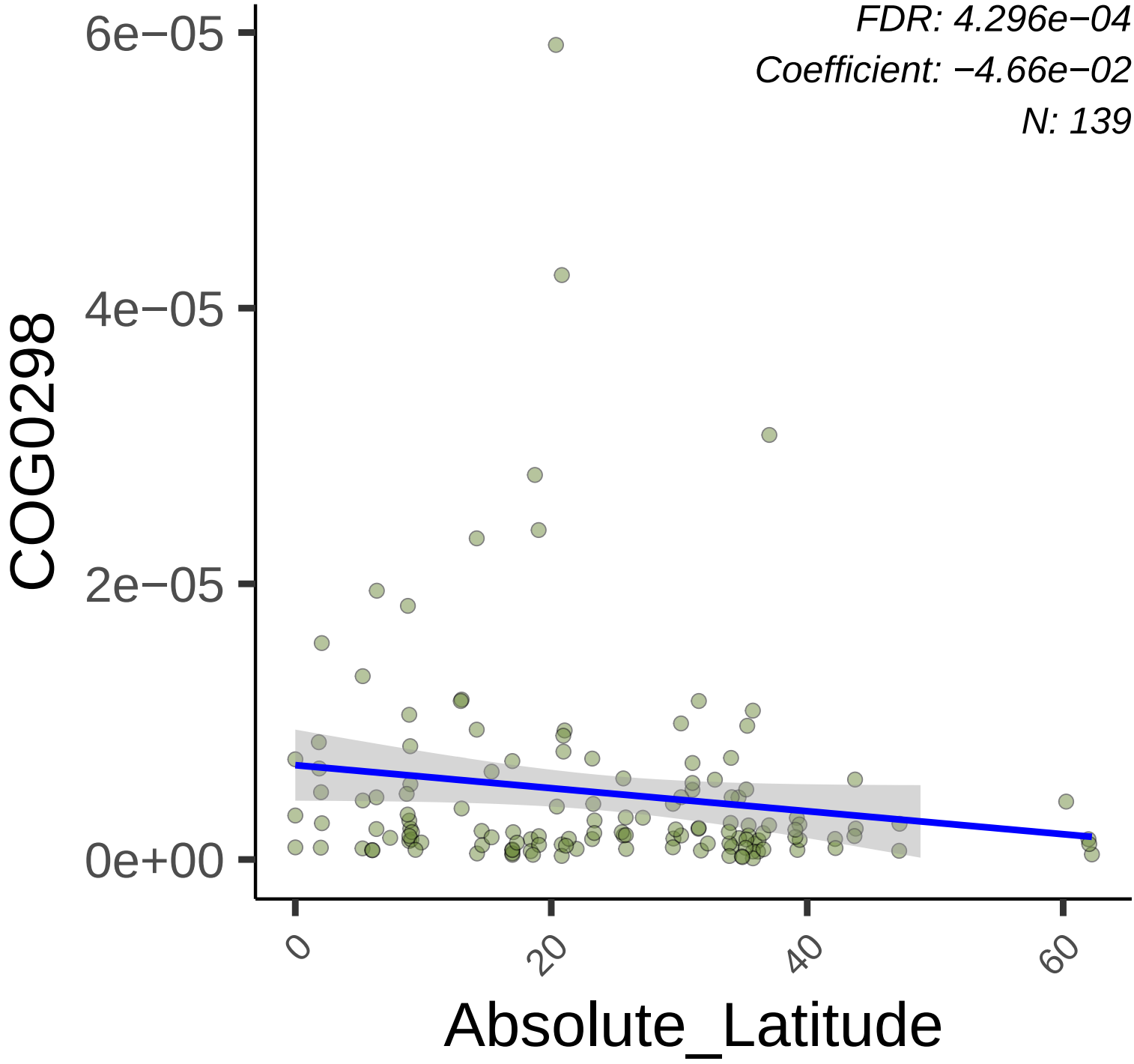

FDR: 3.699e−04
Coefficient: 5.09e−03
N: 139
0.00150
0.00125
0.00100
COG2303
0
20
40
60
Absolute_Latitude

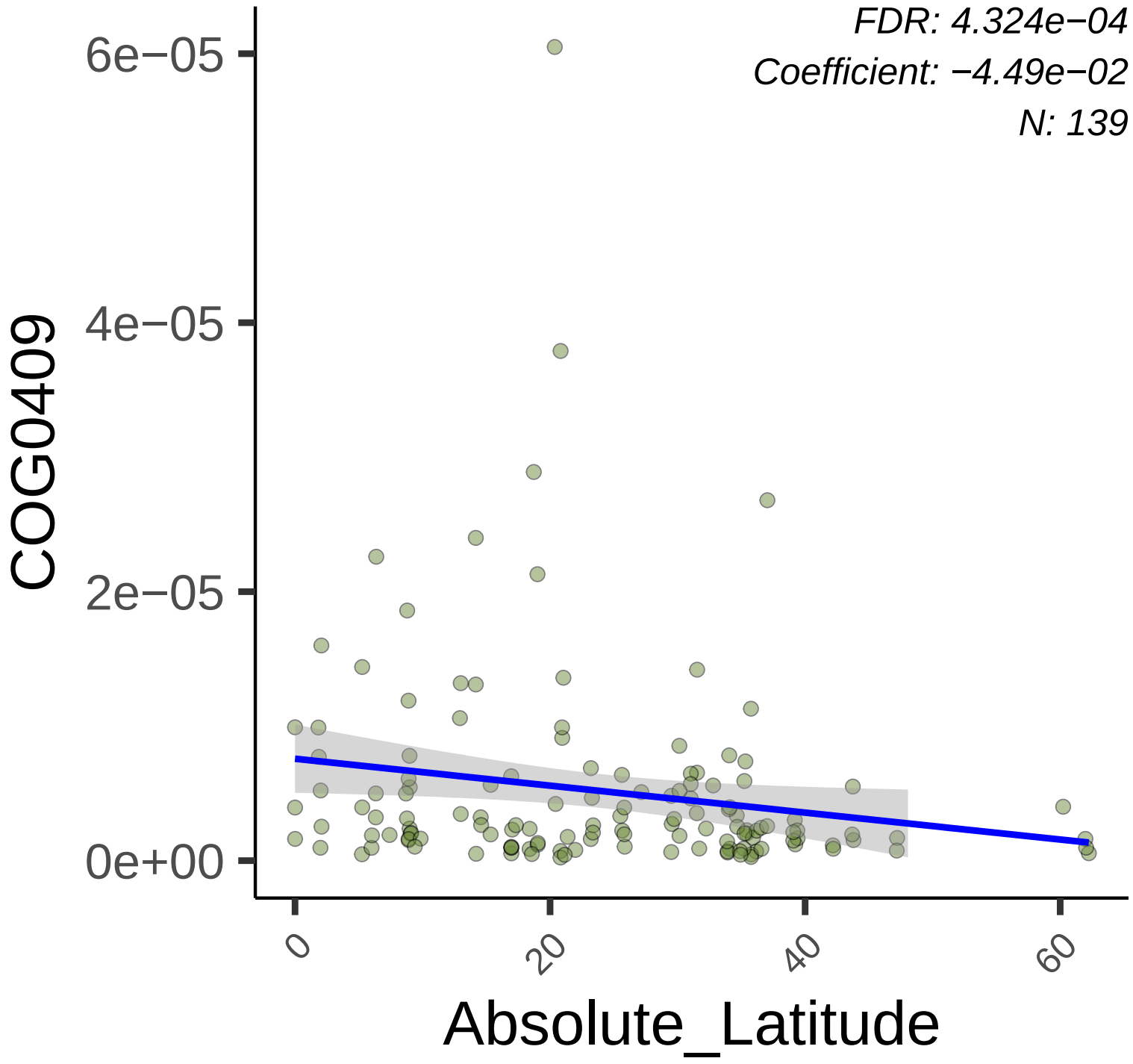

FDR: 3.953e−04
Coefficient: −1.40e−02
N: 139
0.00075
0.00050
0.00025
COG0664
0
20
40
60
Absolute_Latitude

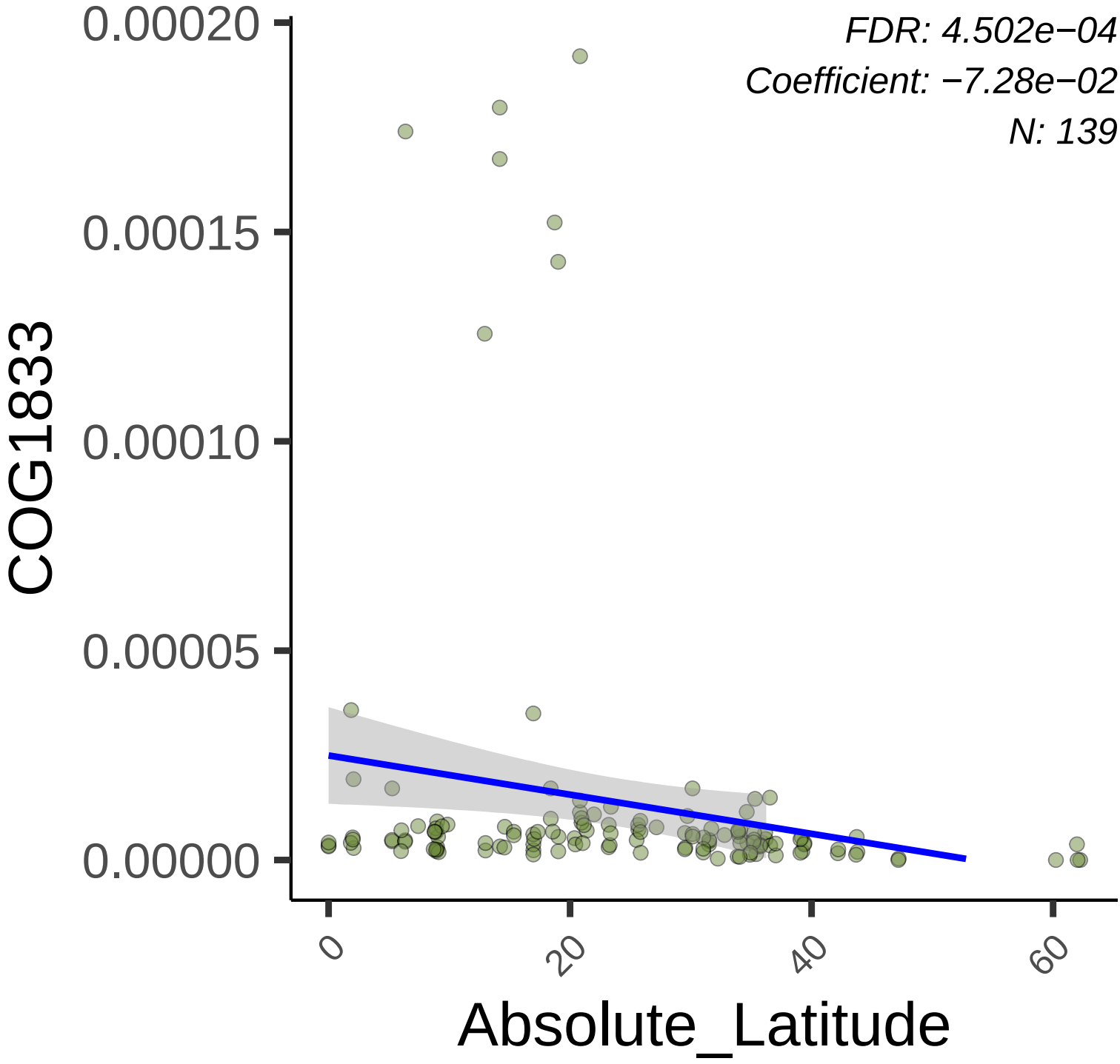

FDR: 4.045e−04
Coefficient: −1.43e−02
N: 139
0.00075
0.00050
0.00025
COG0640
0
20
40
60
Absolute_Latitude

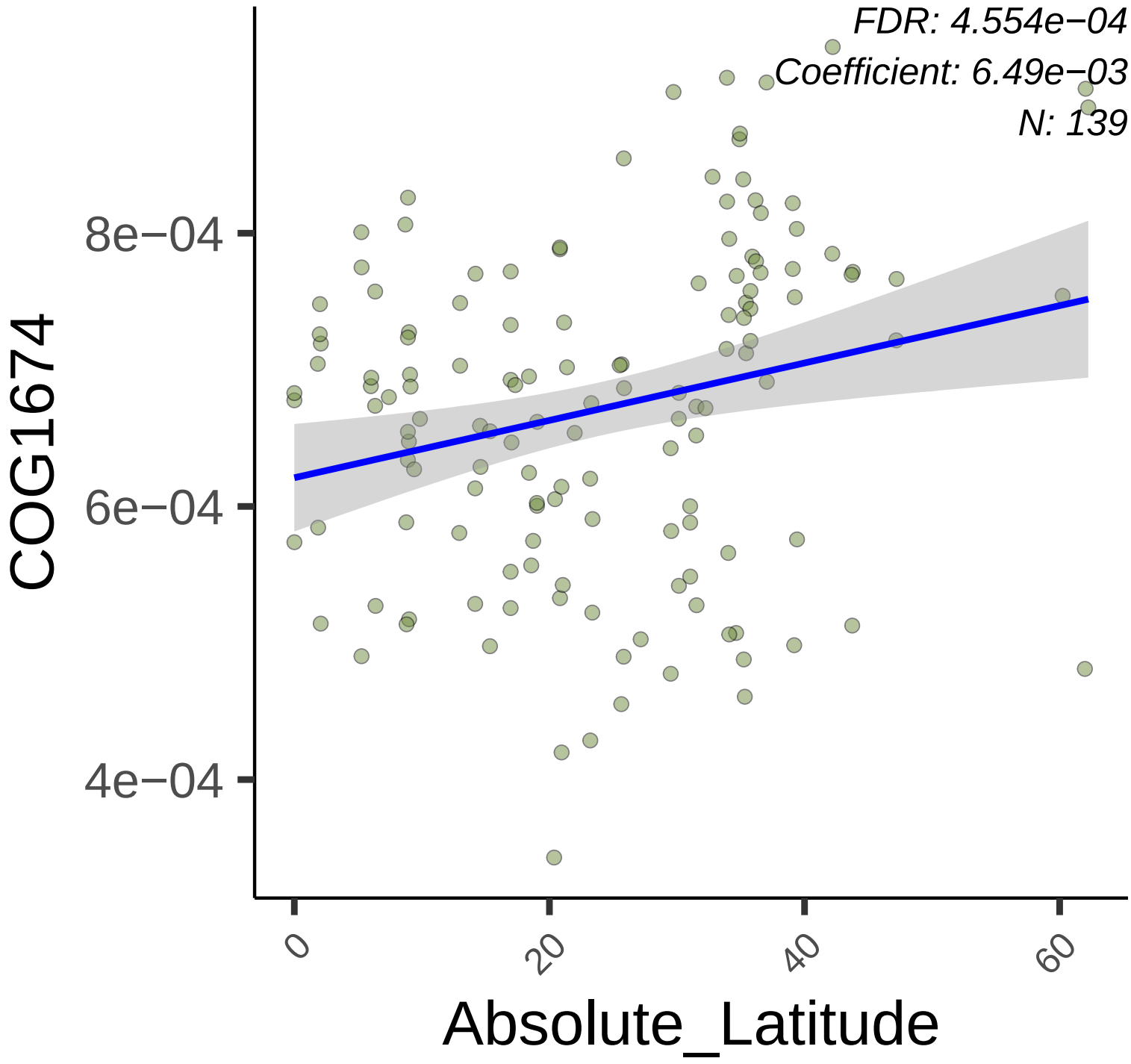

FDR: 4.155e−04
Coefficient: −4.67e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG1740
0
20
40
60
Absolute_Latitude

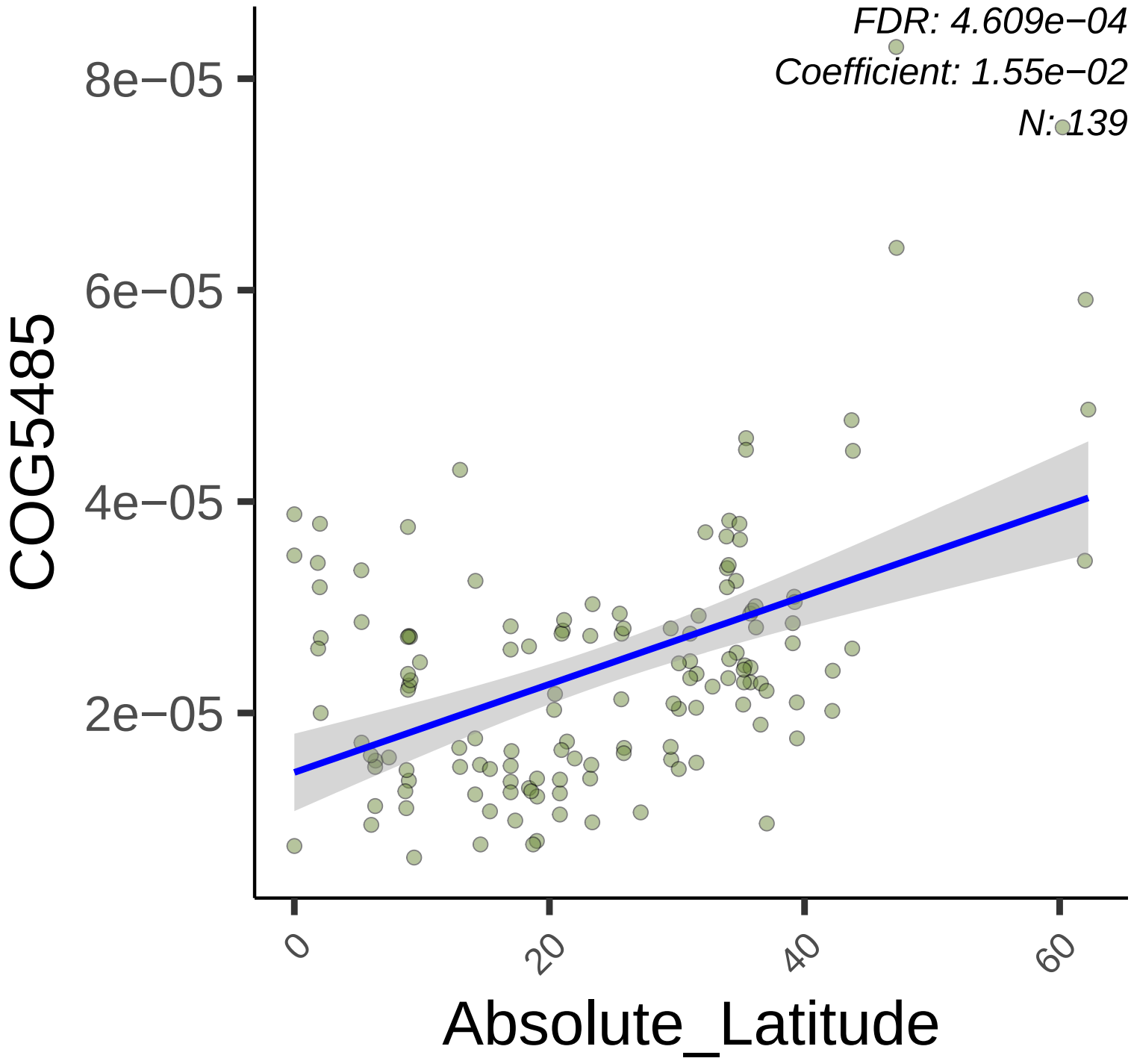

FDR: 4.247e−04
Coefficient: 2.10e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG2335
0
20
40
60
Absolute_Latitude

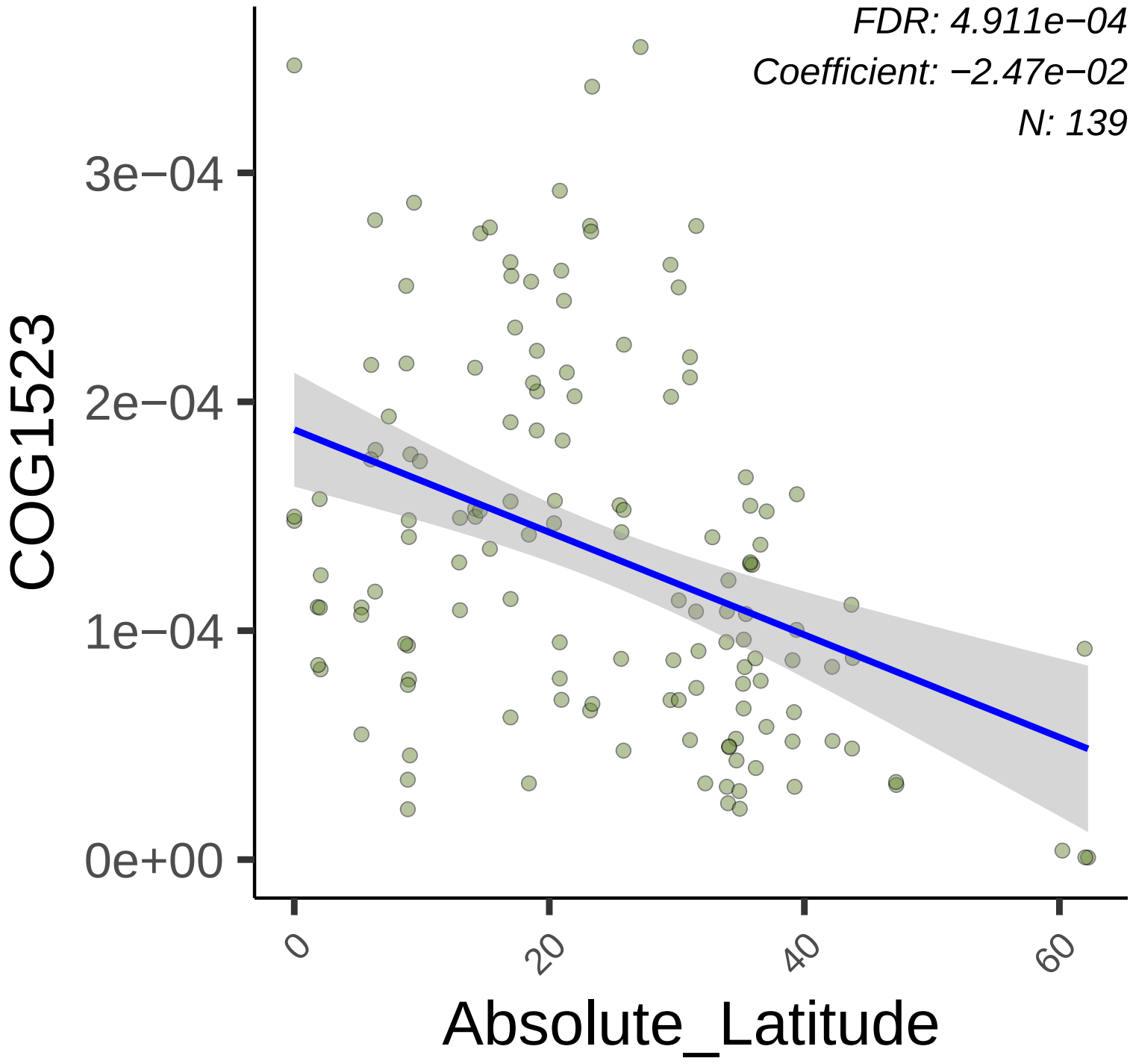

FDR: 4.296e−04
Coefficient: −4.66e−02
N: 139
COG0298
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

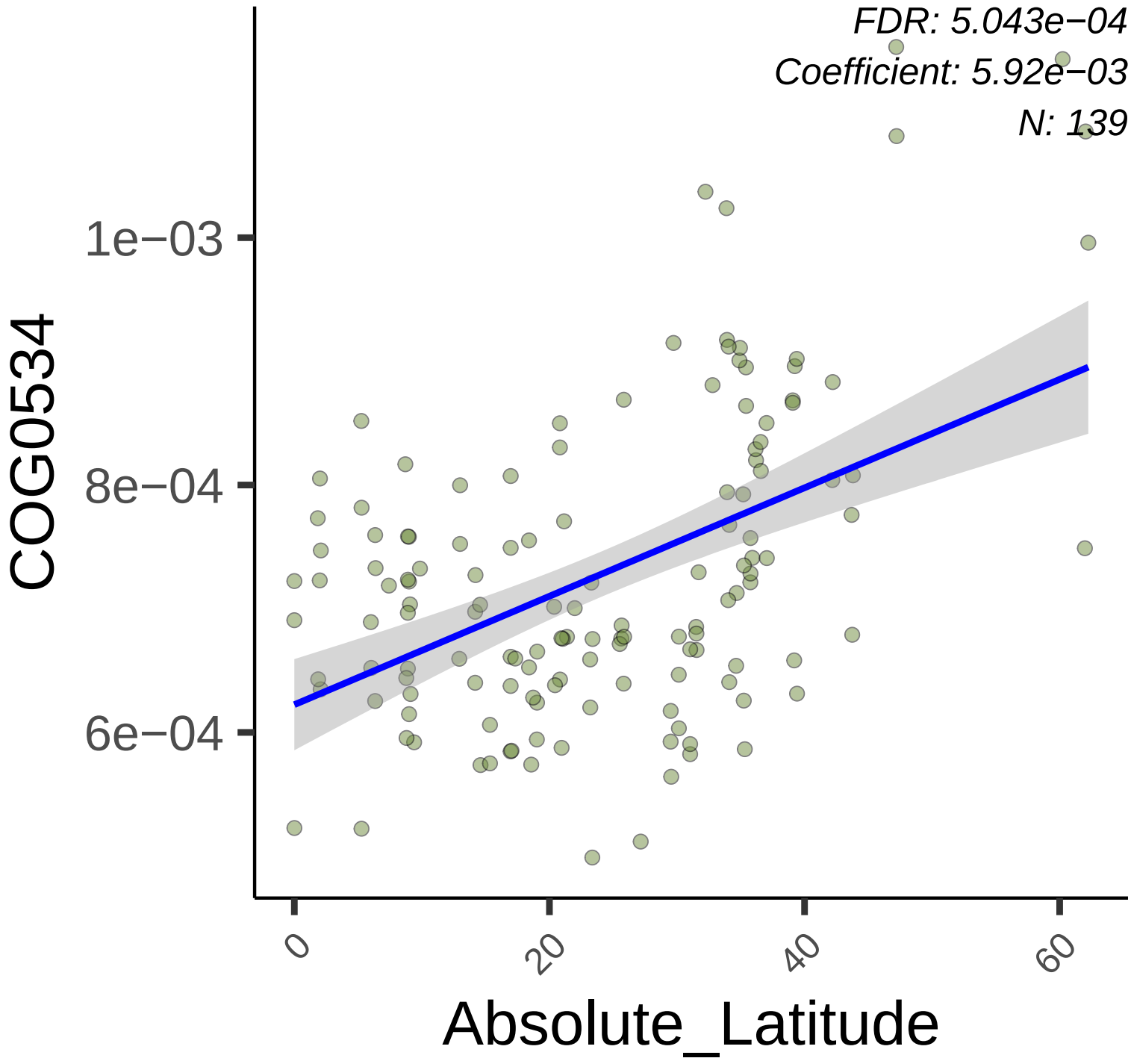

FDR: 4.324e−04
Coefficient: −4.49e−02
N: 139
COG0409
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

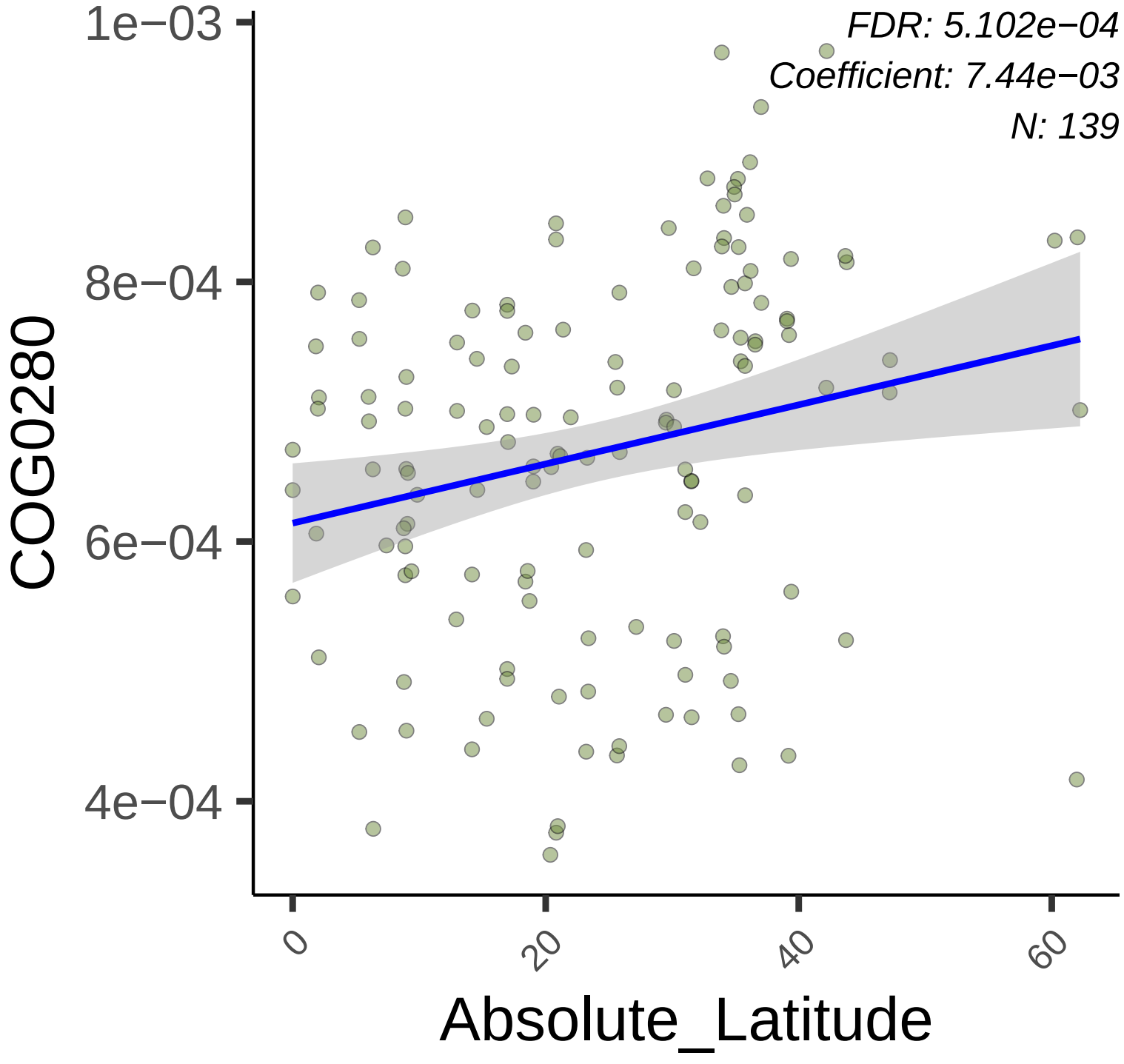

FDR: 4.502e−04
Coefficient: −7.28e−02
N: 139
COG1833
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

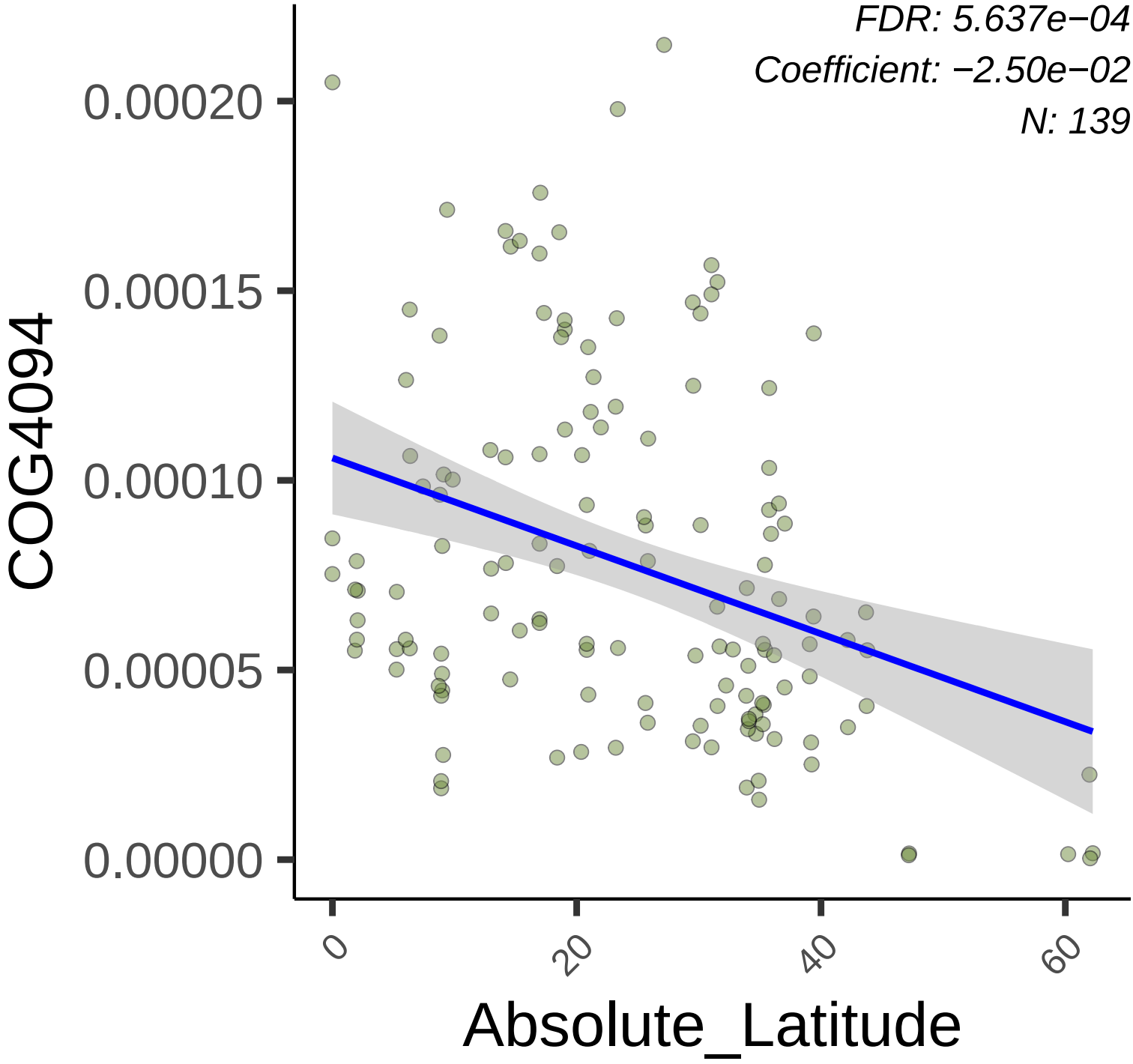

FDR: 4.554e−04
Coefficient: 6.49e−03
N: 139
8e−04
6e−04
4e−04
COG1674
0
20
40
60
Absolute_Latitude

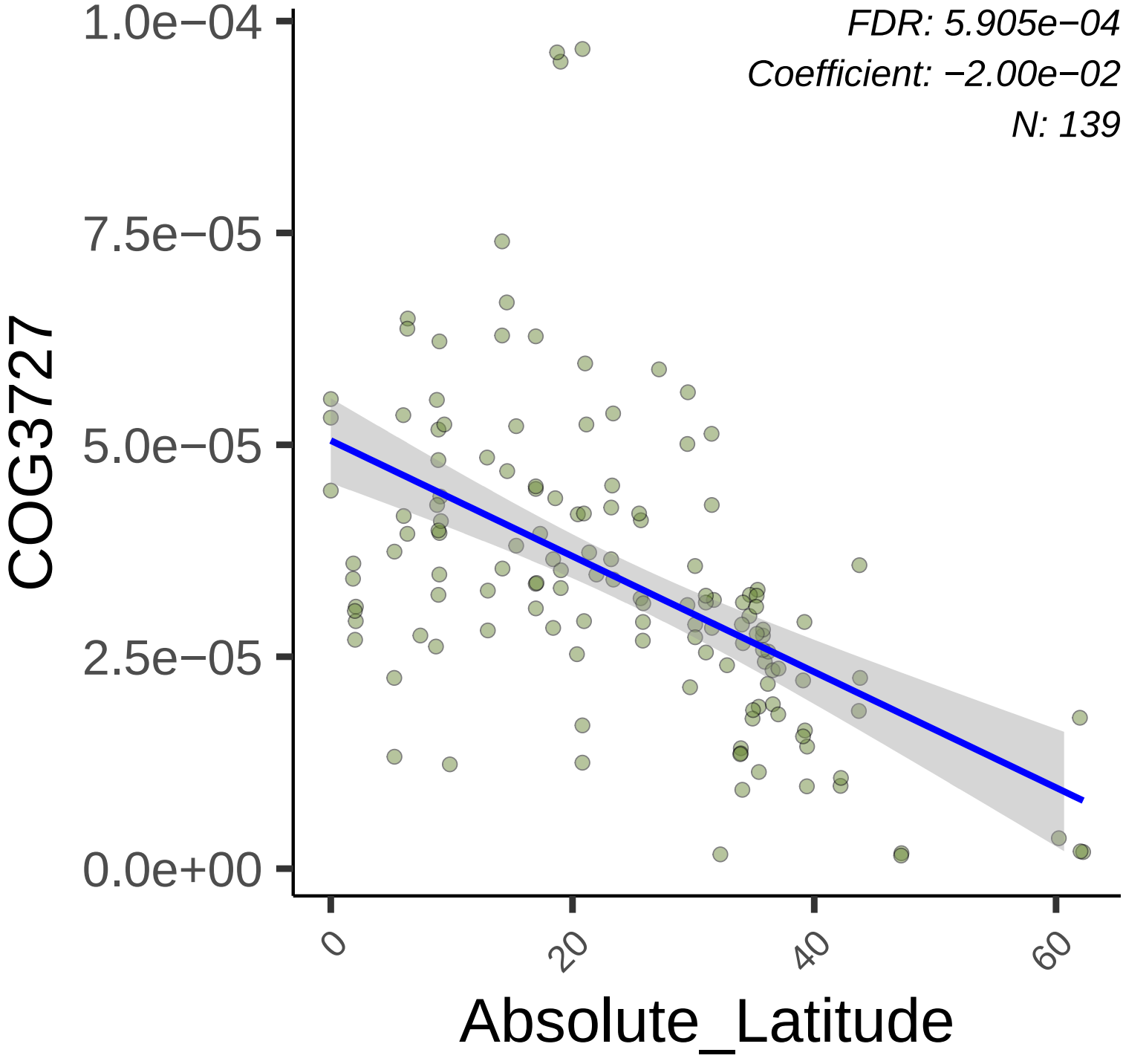

FDR: 4.609e−04
Coefficient: 1.55e−02
N: 139
8e−05
6e−05
4e−05
2e−05
COG5485
0
20
40
60
Absolute_Latitude

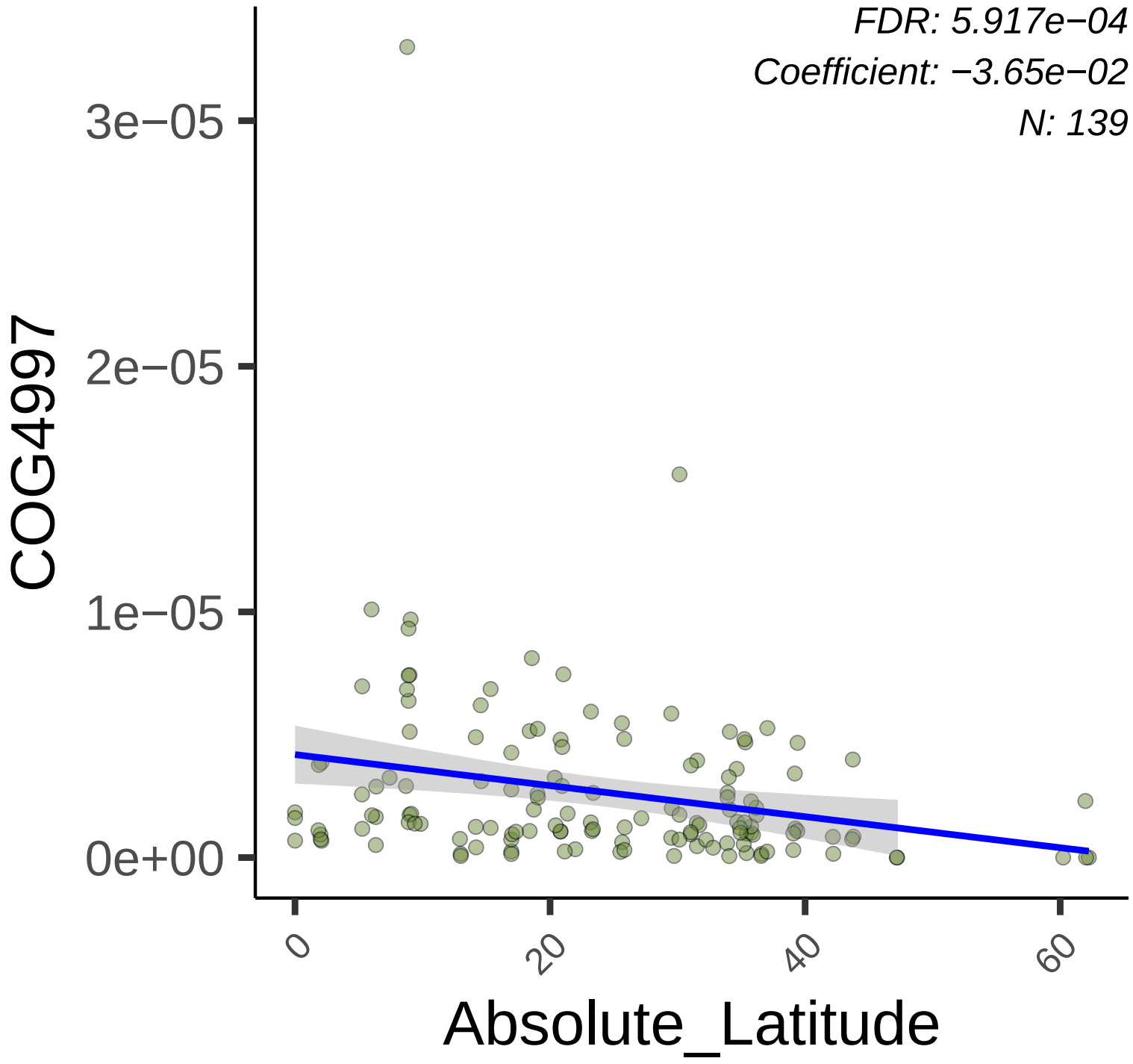

FDR: 4.911e−04
Coefficient: −2.47e−02
N: 139
COG1523
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

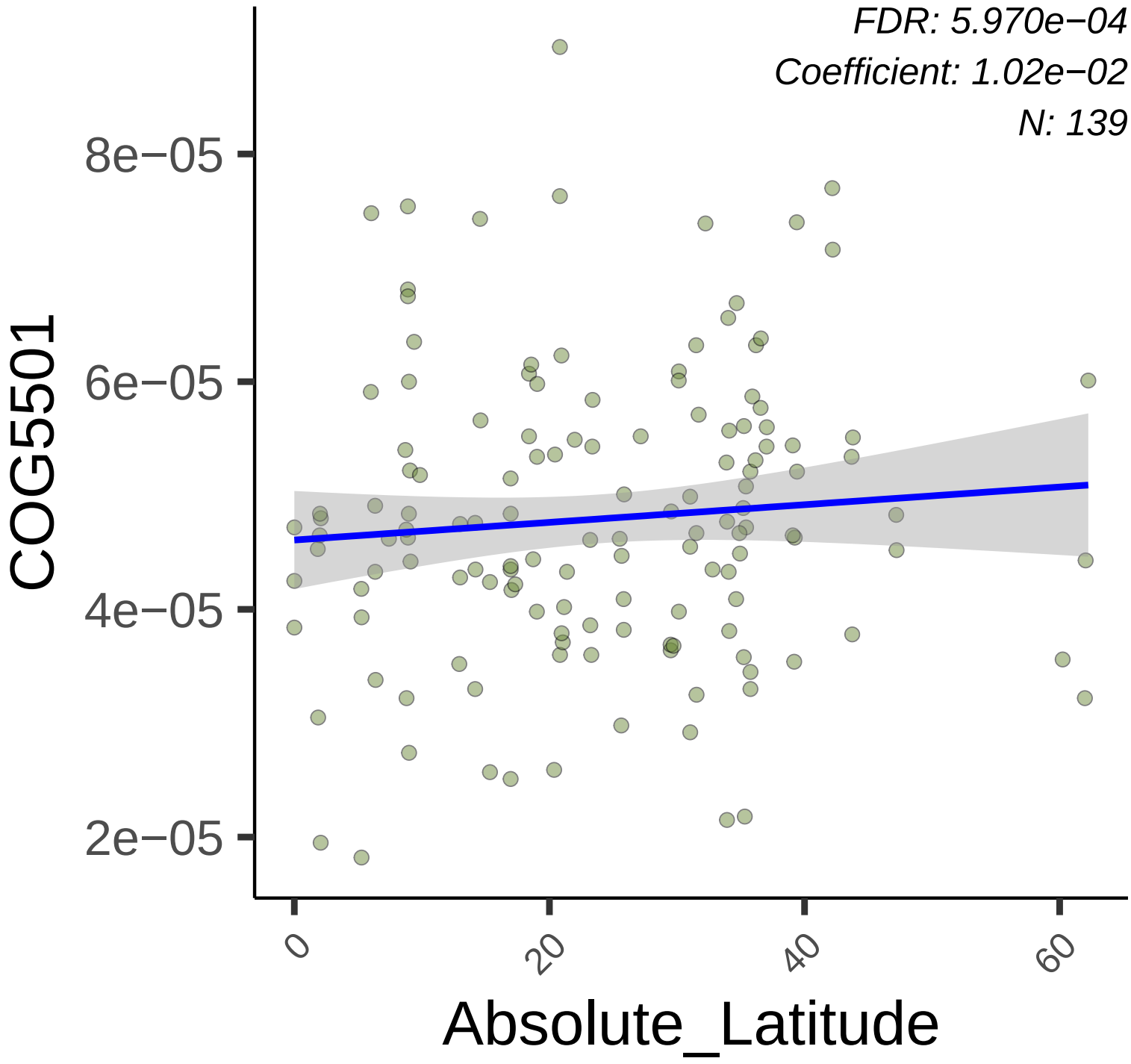

FDR: 5.043e−04
Coefficient: 5.92e−03
N: 139
1e−03
8e−04
6e−04
COG0534
0
20
40
60
Absolute_Latitude

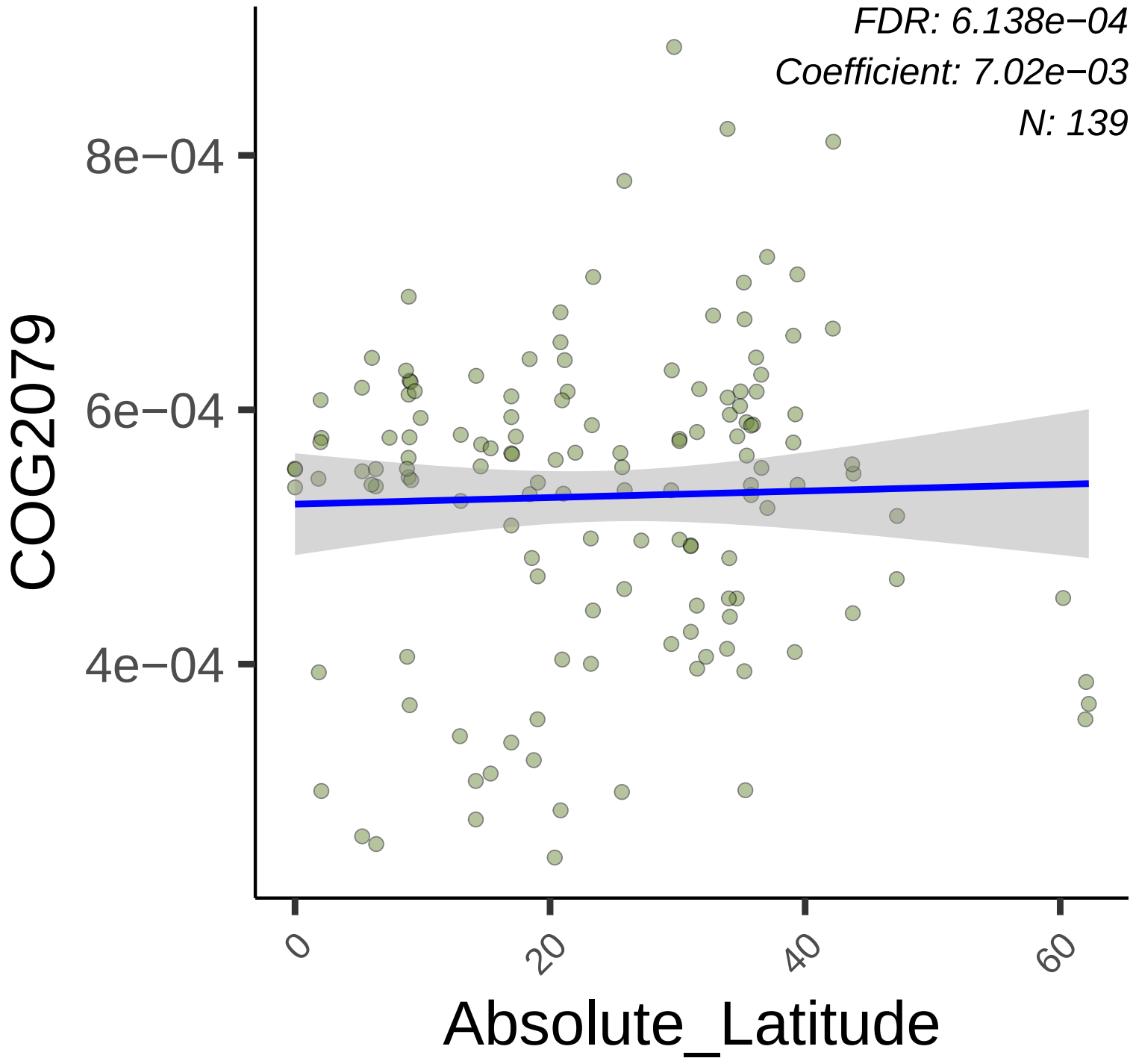

FDR: 5.102e−04
Coefficient: 7.44e−03
N: 139
1e−03
8e−04
6e−04
4e−04
COG0280
0
20
40
60
Absolute_Latitude

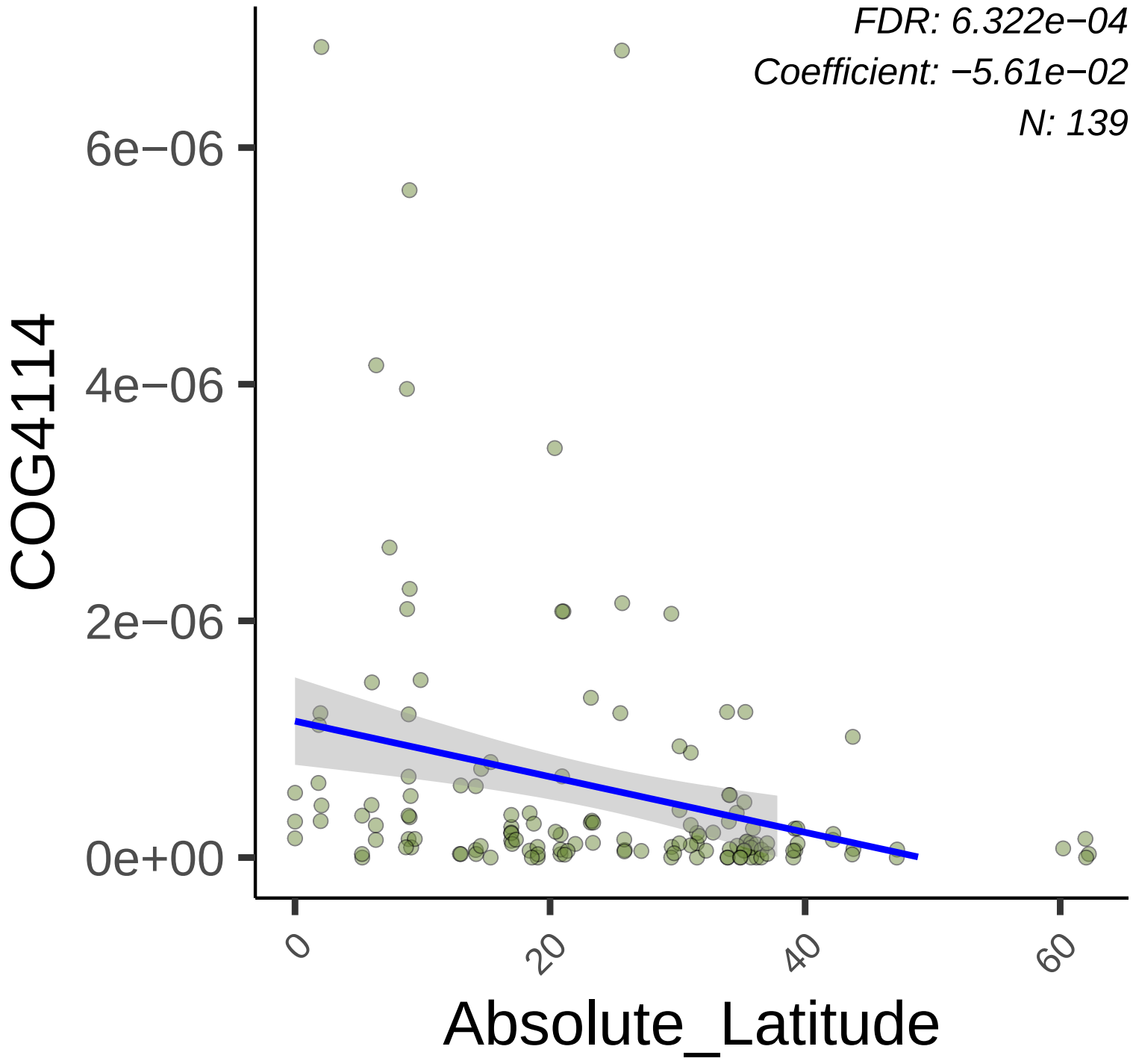

FDR: 5.637e−04
Coefficient: −2.50e−02
N: 139
COG4094
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

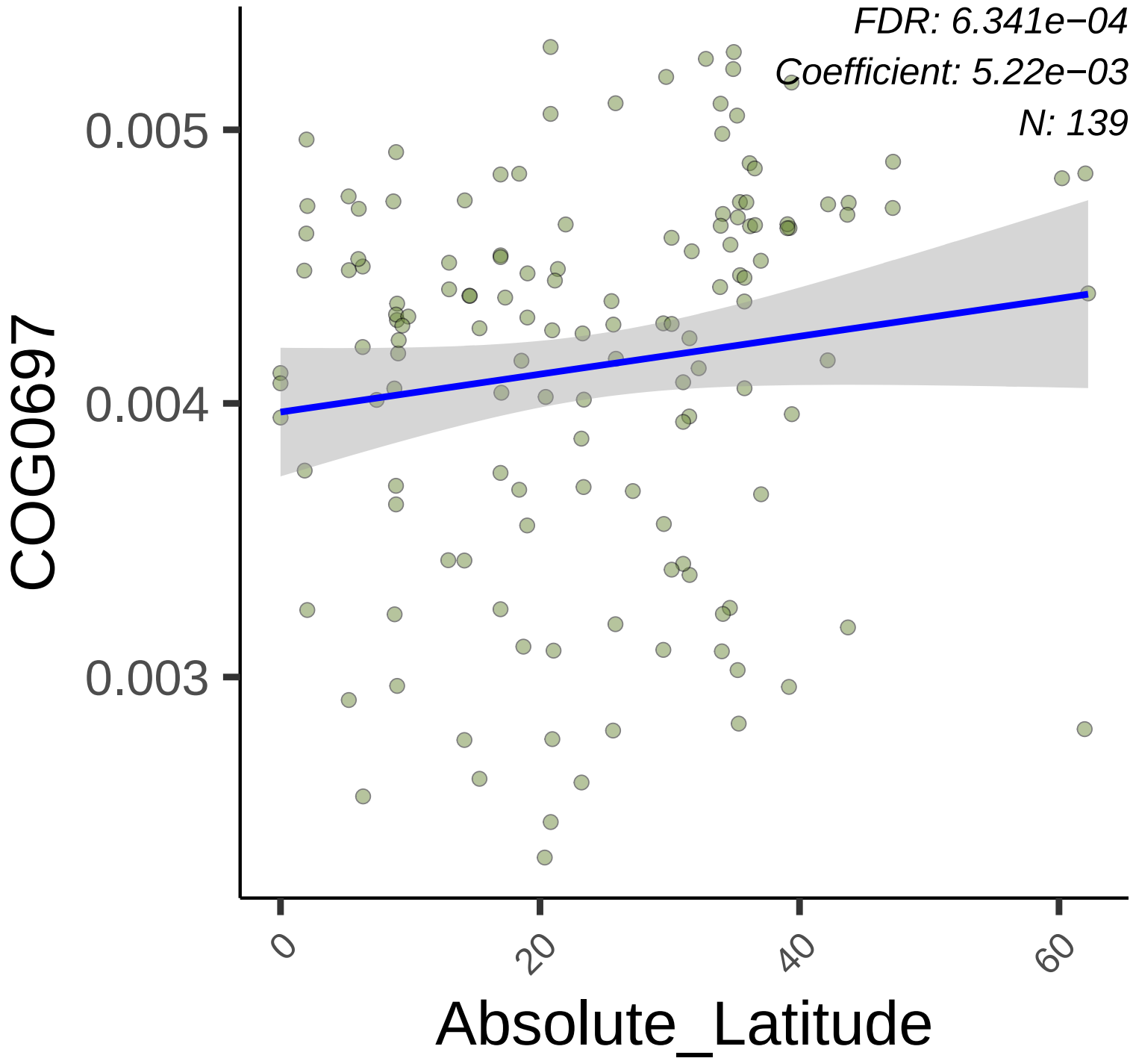

FDR: 5.905e−04
Coefficient: −2.00e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3727
0
20
40
60
Absolute_Latitude

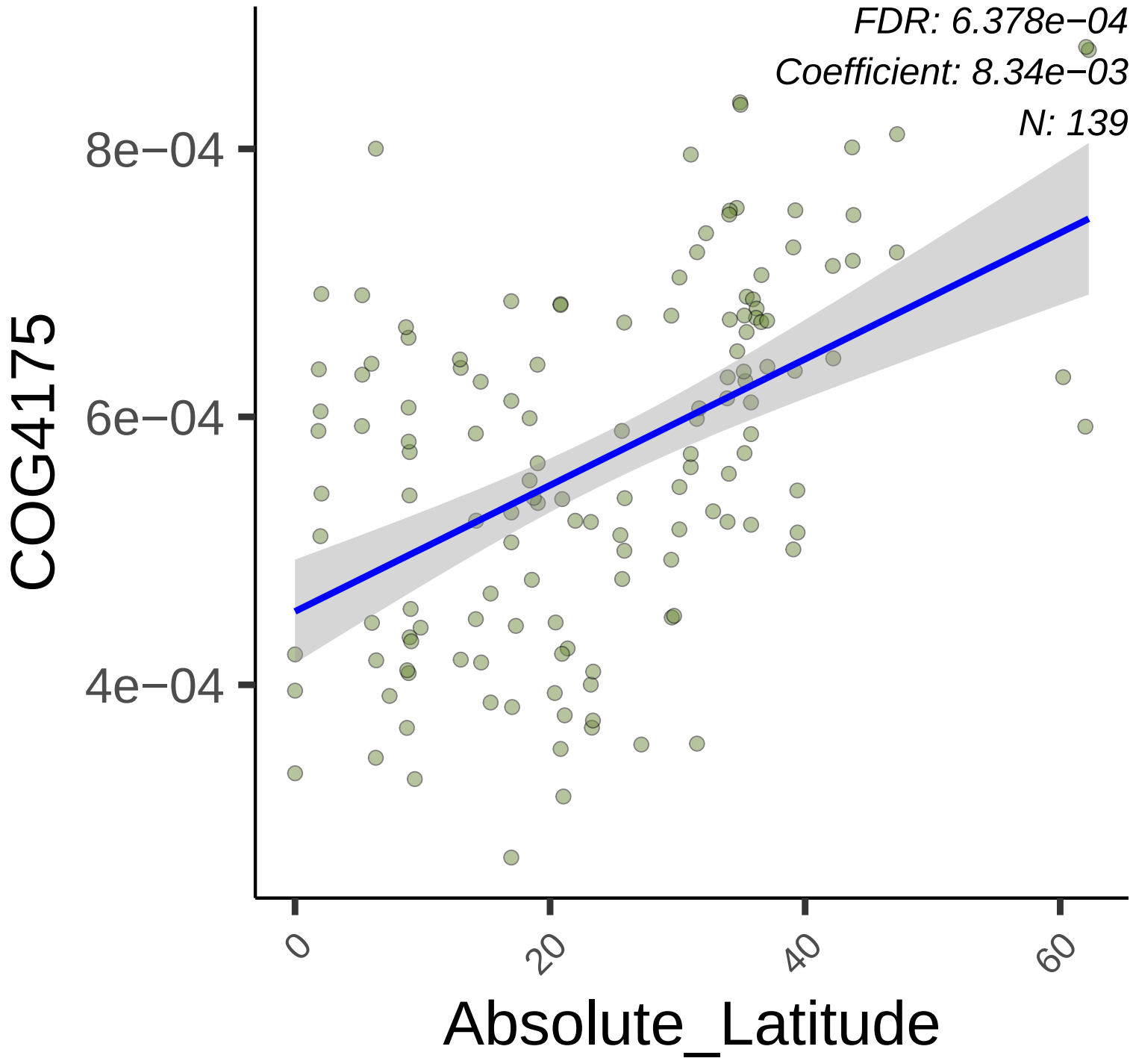

FDR: 5.917e−04
Coefficient: −3.65e−02
N: 139
COG4997
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

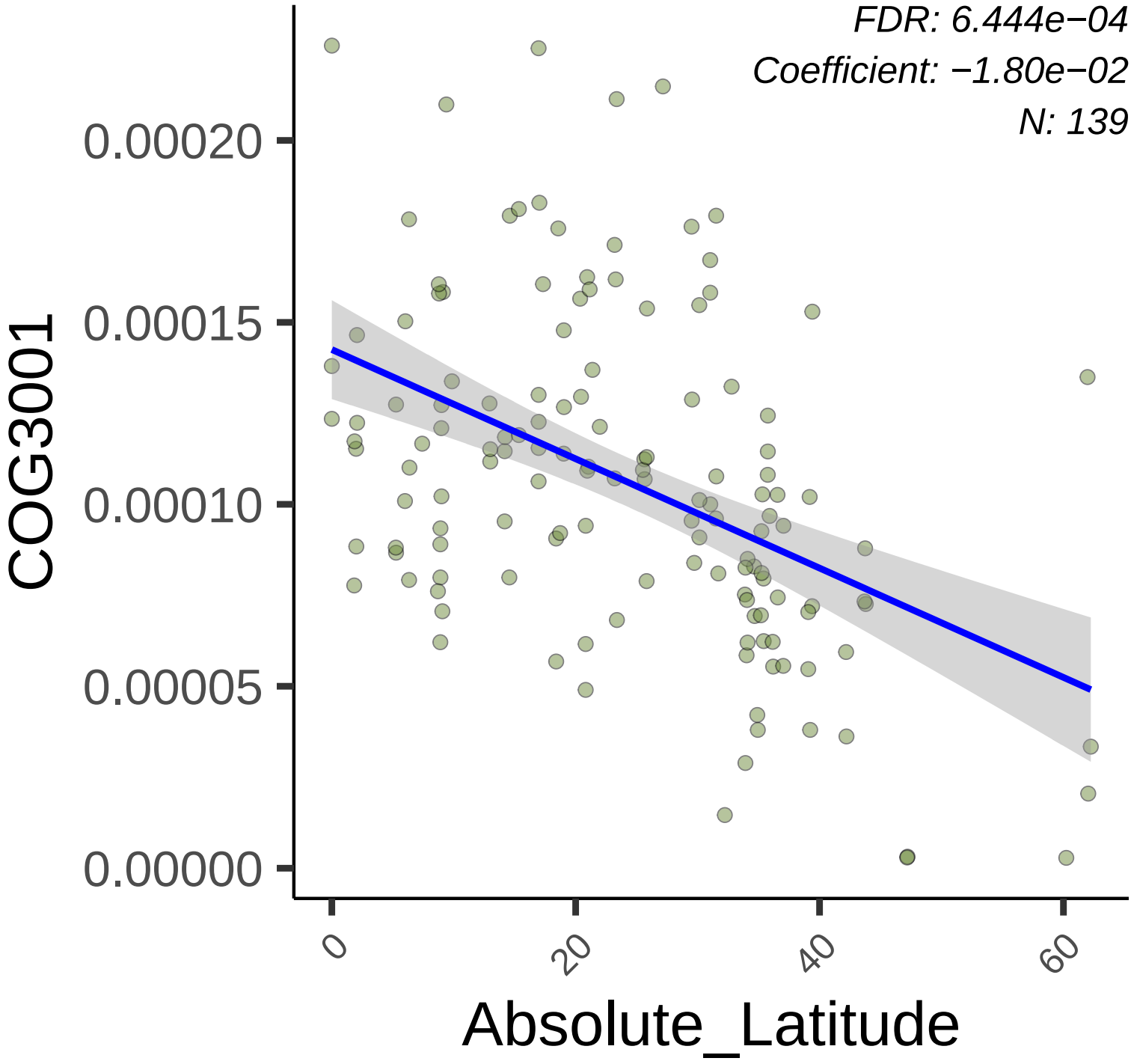

FDR: 5.970e−04
Coefficient: 1.02e−02
N: 139
8e−05
6e−05
4e−05
2e−05
COG5501
0
20
40
60
Absolute_Latitude

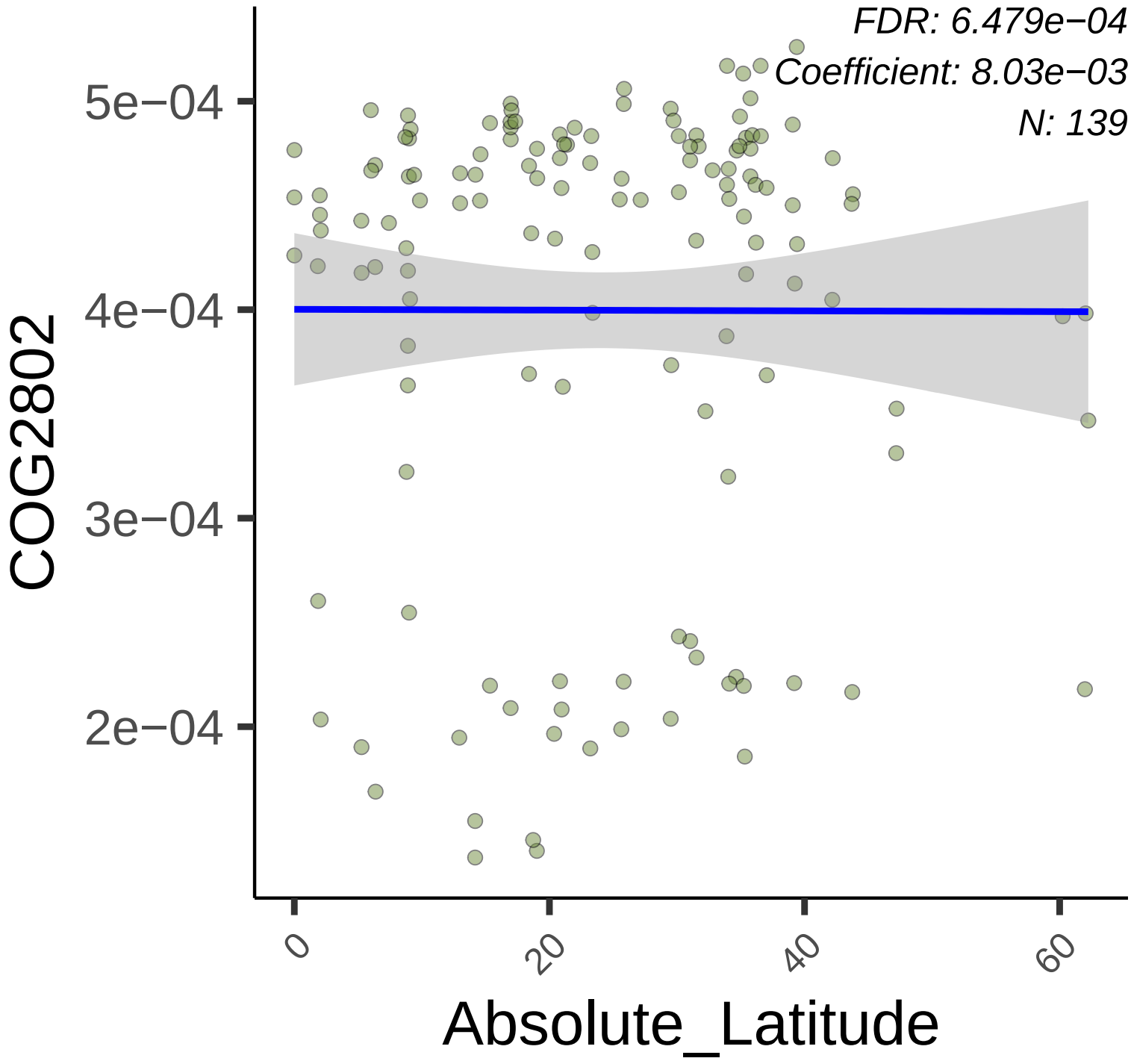

FDR: 6.138e−04
Coefficient: 7.02e−03
N: 139
8e−04
6e−04
4e−04
COG2079
0
20
40
60
Absolute_Latitude

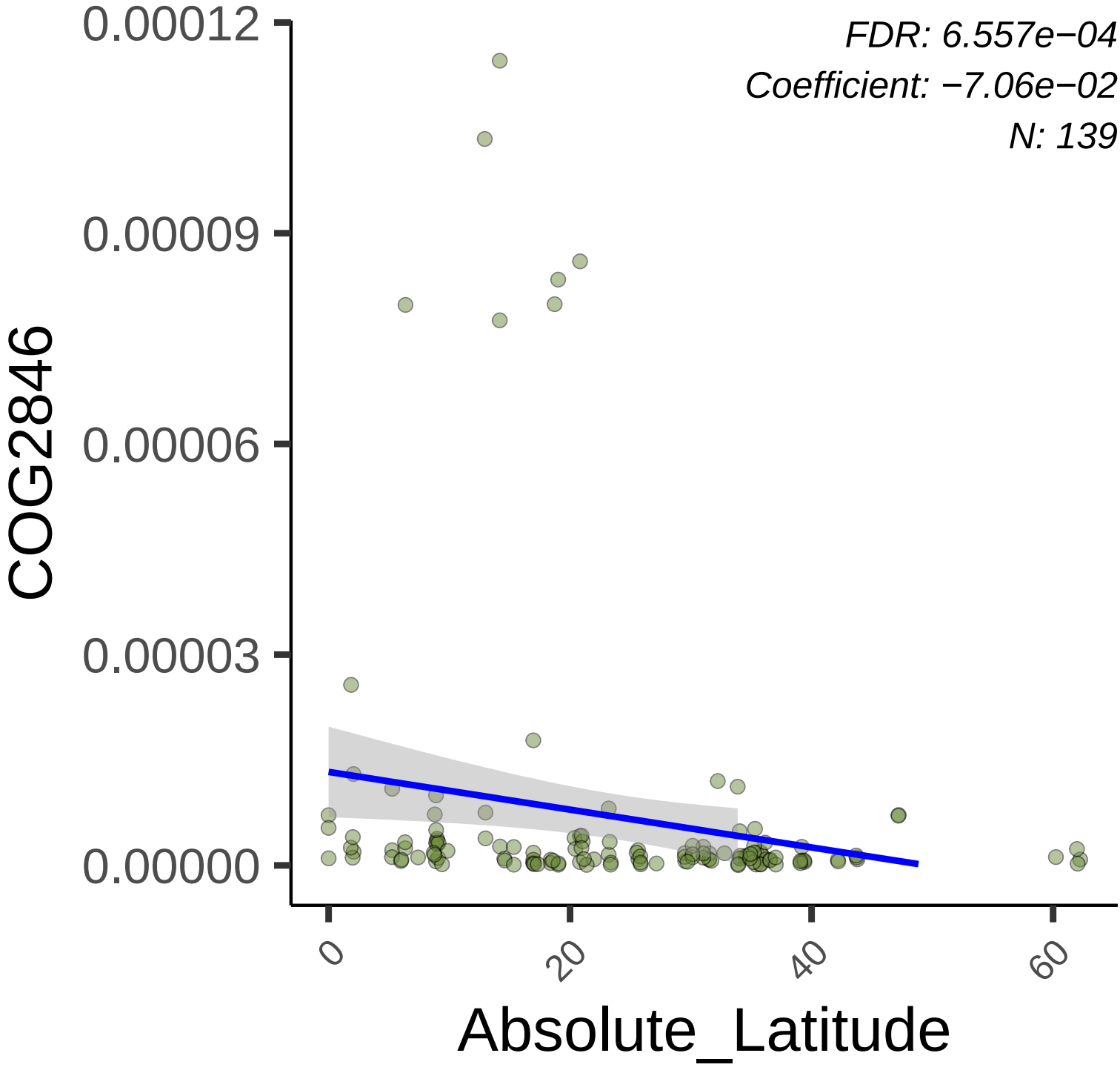

FDR: 6.322e−04
Coefficient: −5.61e−02
N: 139
COG4114
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

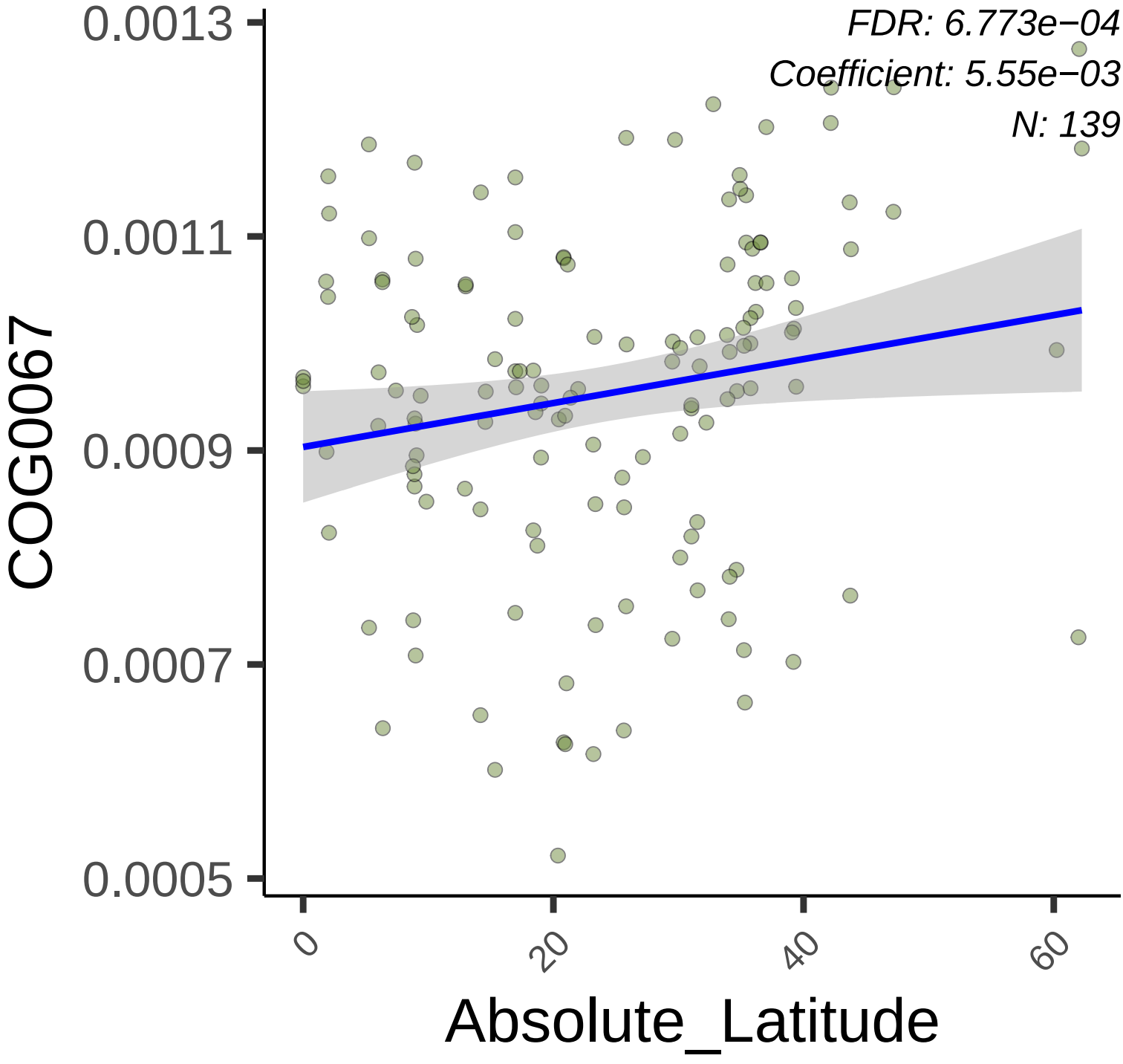

FDR: 6.341e−04
Coefficient: 5.22e−03
N: 139
0.005
0.004
0.003
COG0697
0
20
40
60
Absolute_Latitude

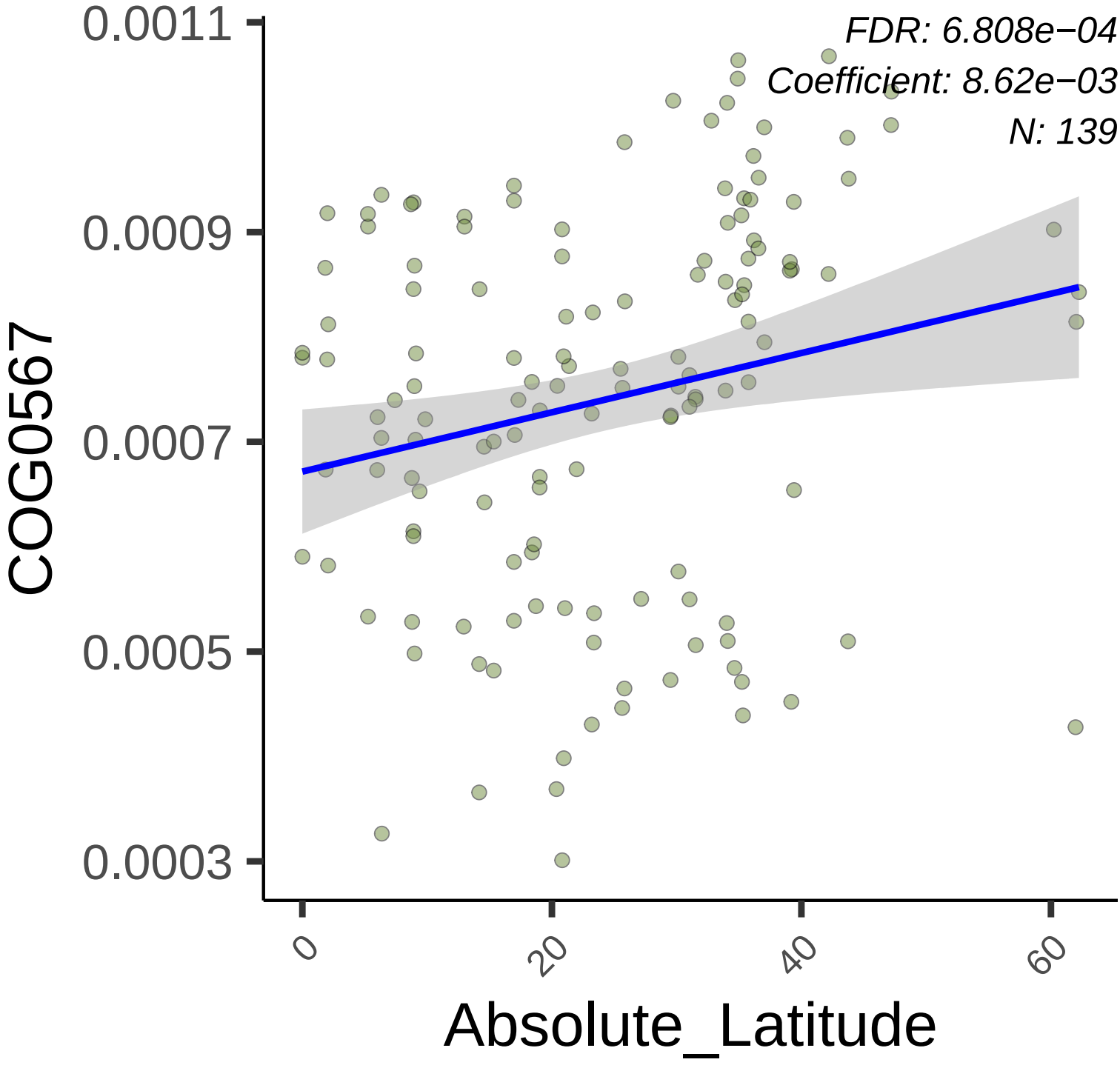

FDR: 6.378e−04
Coefficient: 8.34e−03
N: 139
8e−04
6e−04
4e−04
COG4175
0
20
40
60
Absolute_Latitude

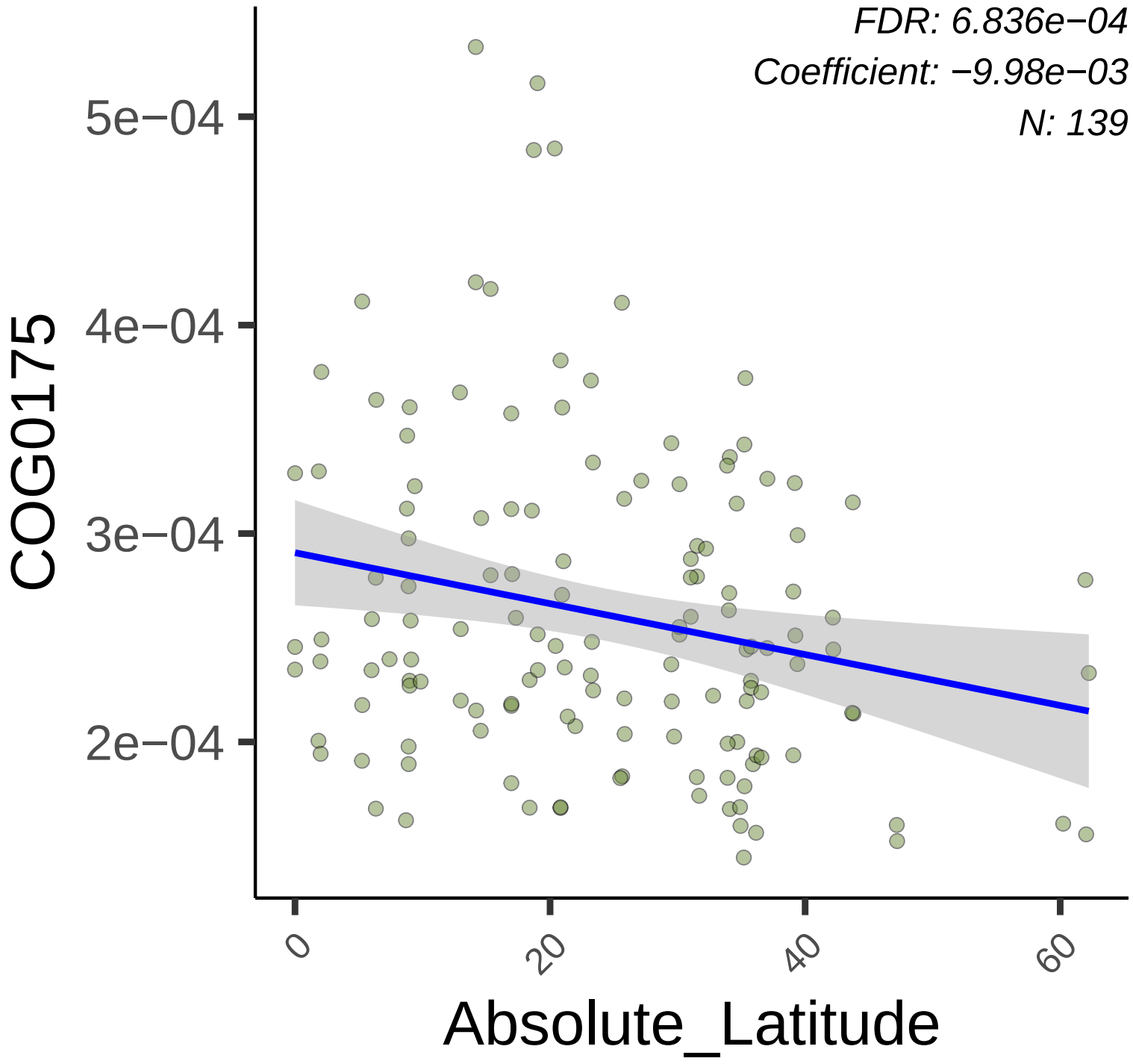

FDR: 6.444e−04
Coefficient: −1.80e−02
N: 139
COG3001
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

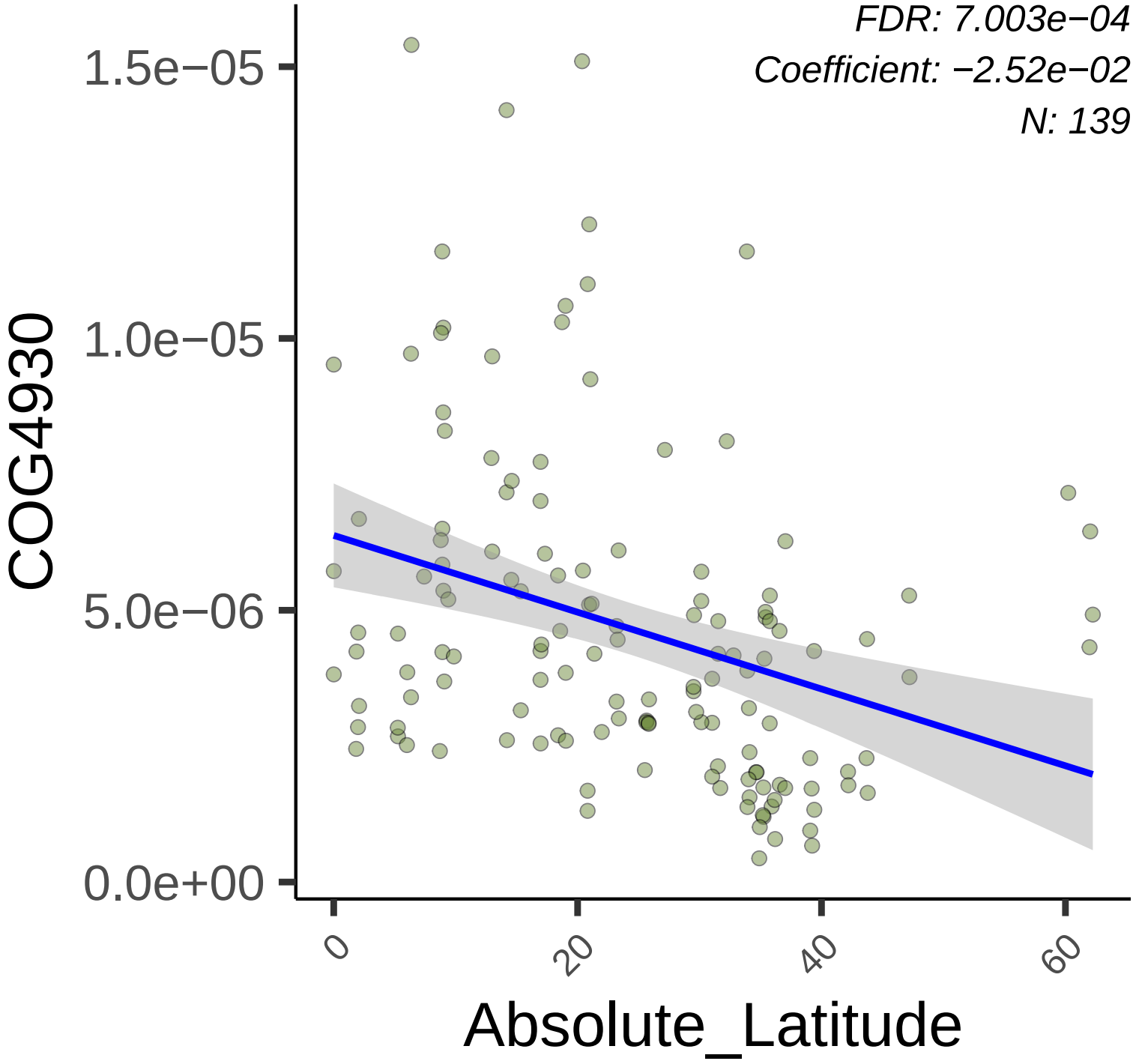

FDR: 6.479e−04
Coefficient: 8.03e−03
N: 139
5e−04
4e−04
3e−04
2e−04
COG2802
0
20
40
60
Absolute_Latitude

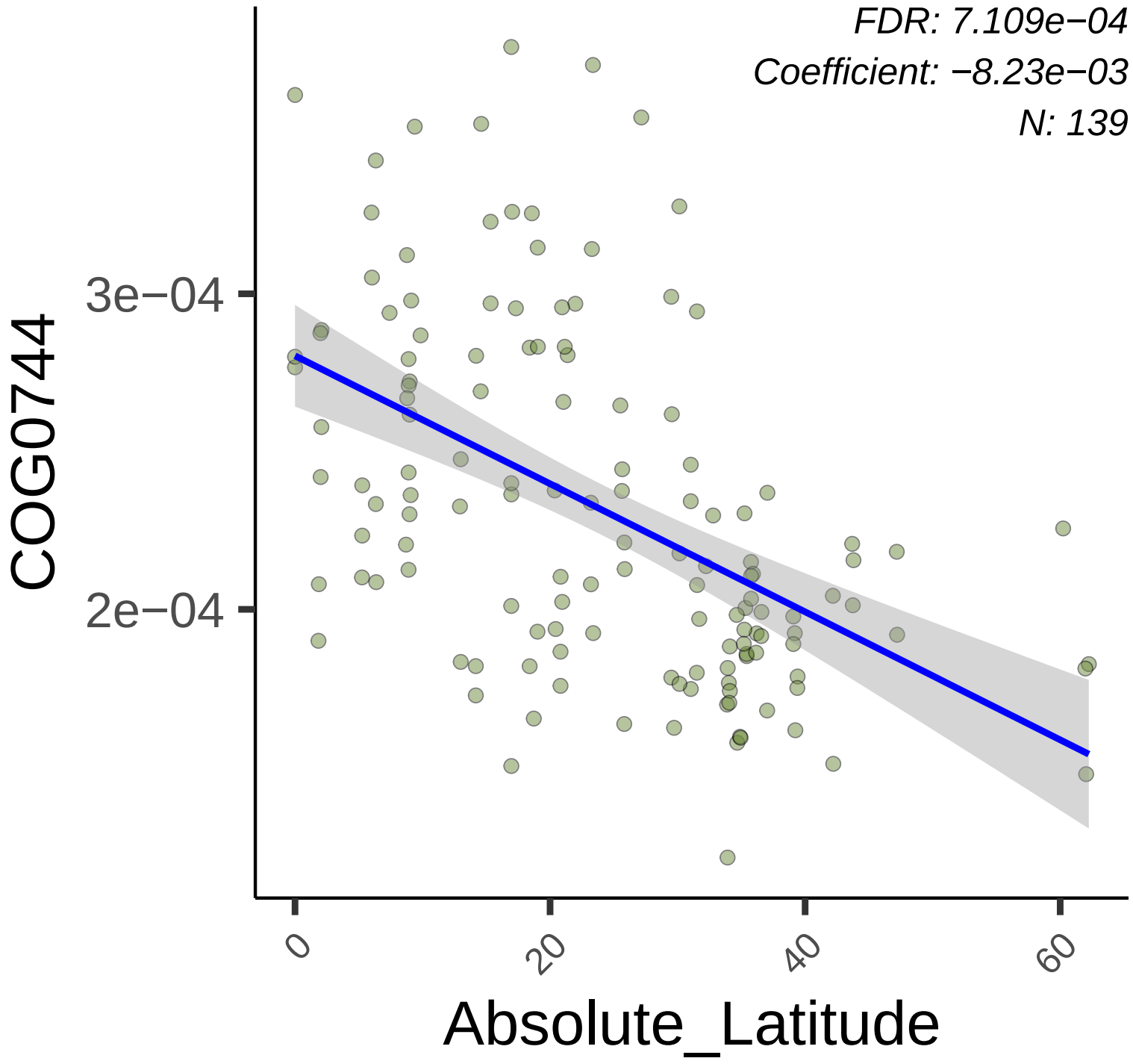

FDR: 6.557e−04
Coefficient: −7.06e−02
N: 139
0.00012
0.00009
0.00006
0.00003
0.00000
COG2846
0
20
40
60
Absolute_Latitude

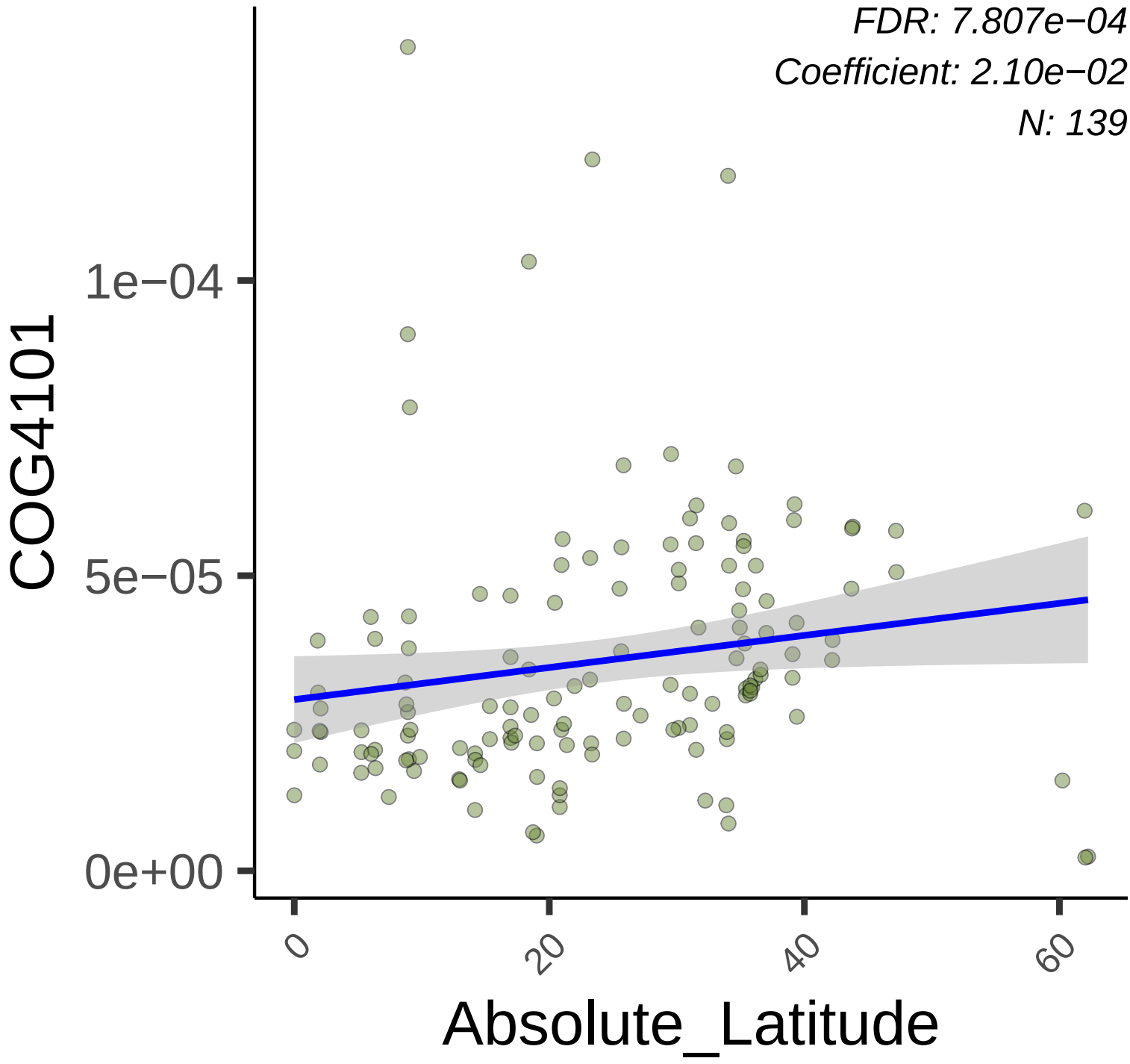

FDR: 6.773e−04
Coefficient: 5.55e−03
N: 139
0.0013
0.0011
0.0009
0.0007
0.0005
COG0067
0
20
40
60
Absolute_Latitude

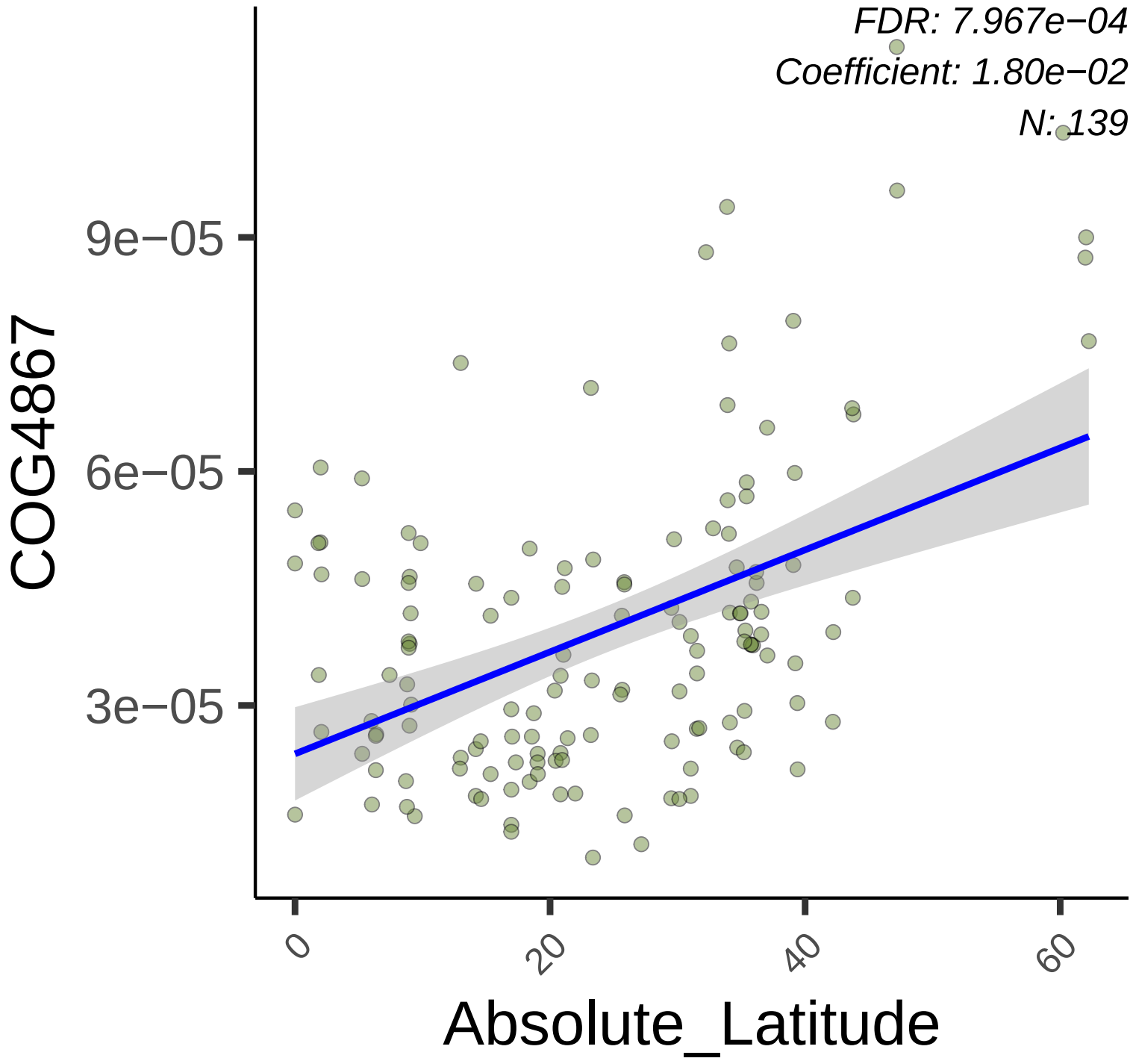

FDR: 6.808e−04
Coefficient: 8.62e−03
N: 139
0.0011
0.0009
0.0007
0.0005
0.0003
COG0567
0
20
40
60
Absolute_Latitude

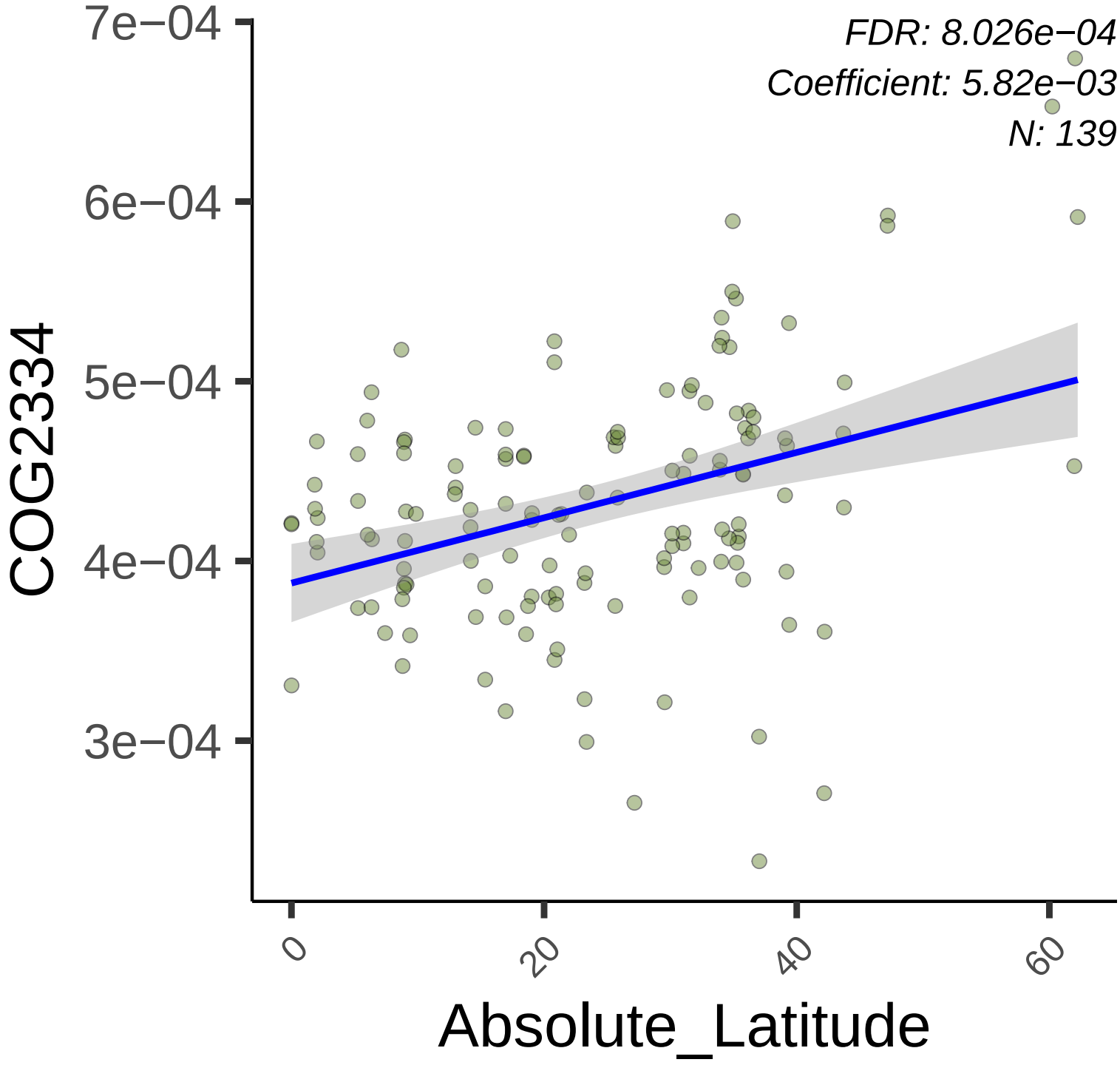

FDR: 6.836e−04
Coefficient: −9.98e−03
N: 139
COG0175
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

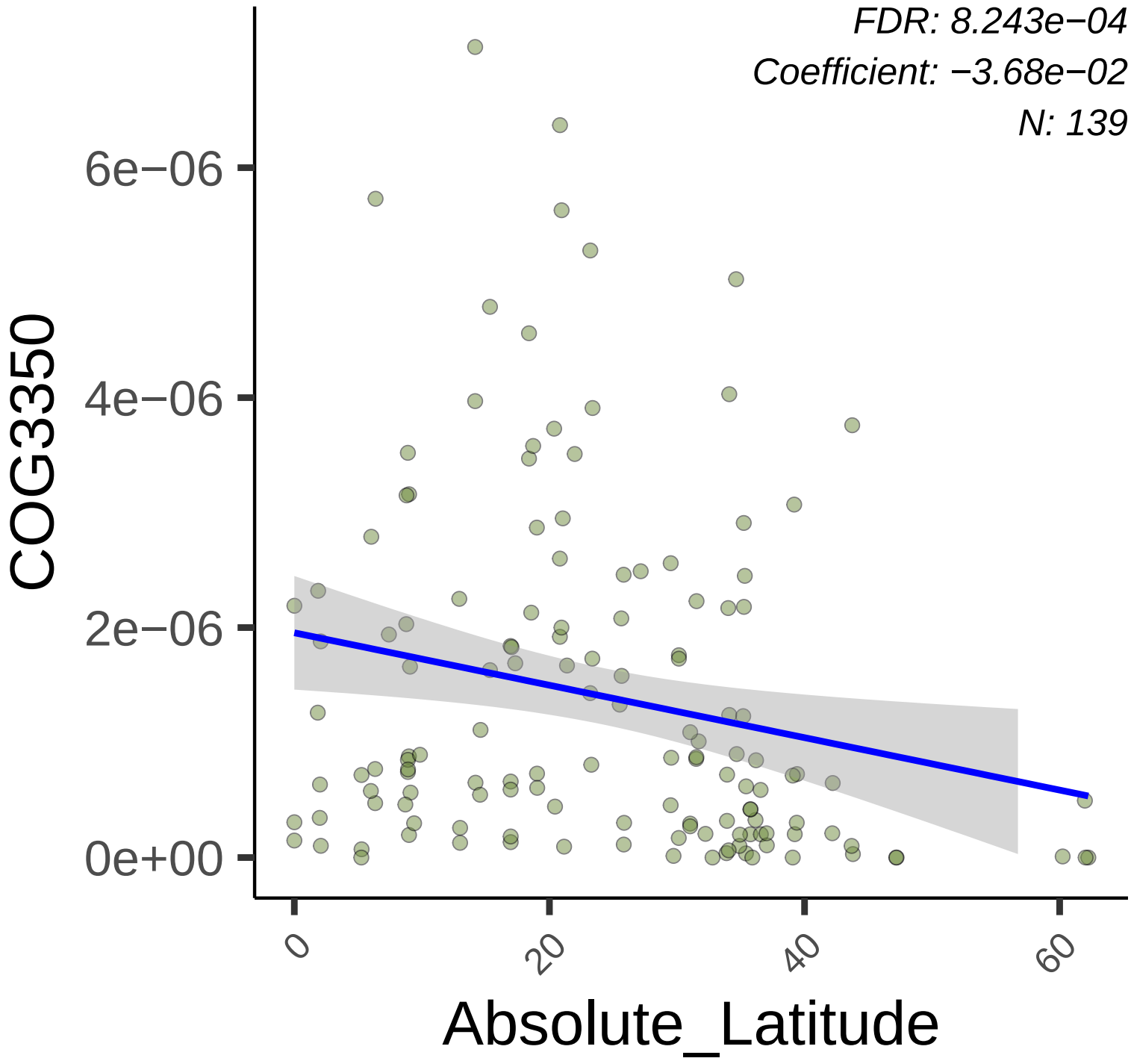

FDR: 7.003e−04
Coefficient: −2.52e−02
N: 139
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG4930
0
20
40
60
Absolute_Latitude

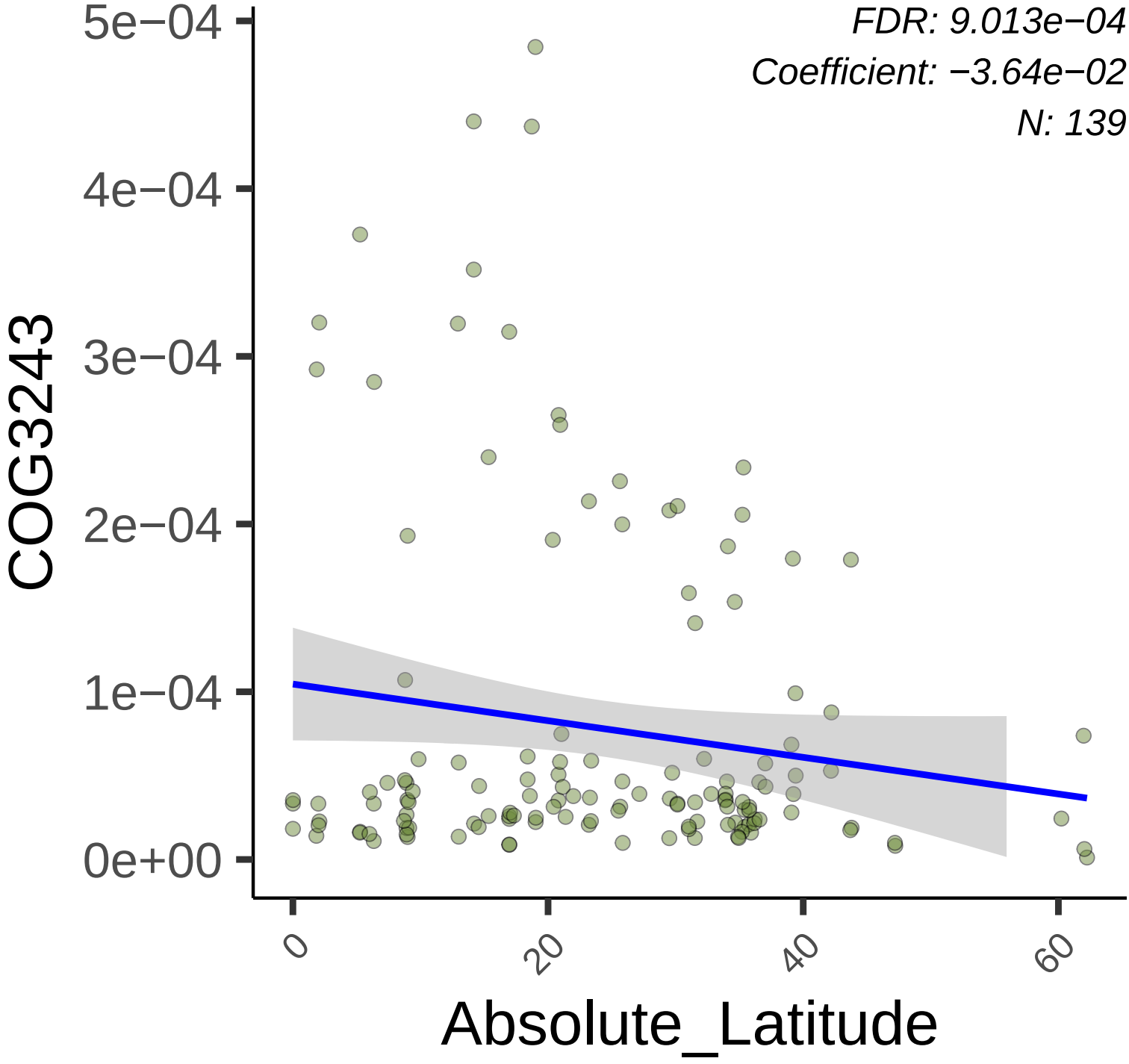

FDR: 7.109e−04
Coefficient: −8.23e−03
N: 139
COG0744
3e−04
2e−04
0
20
40
60
Absolute_Latitude

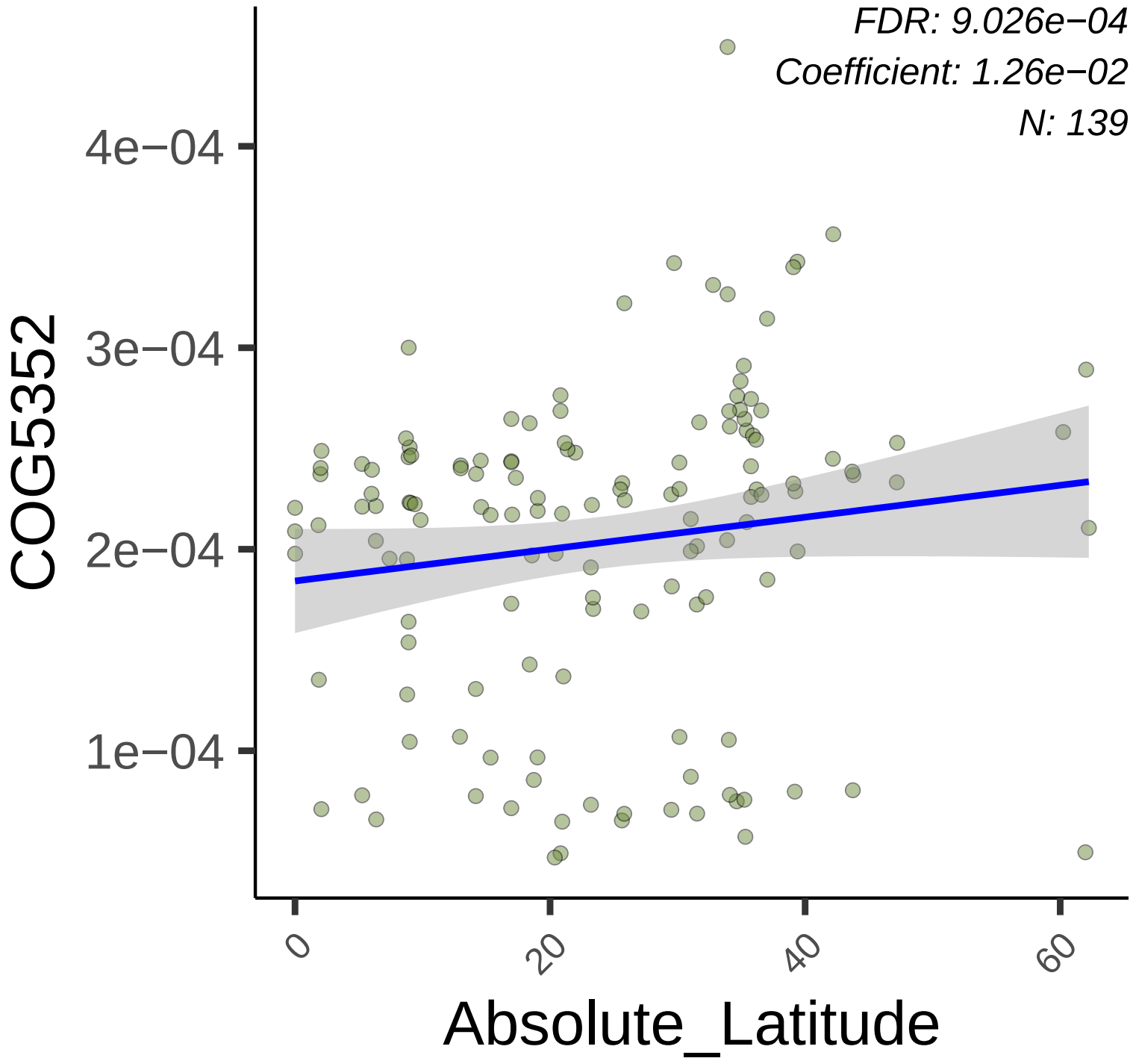

FDR: 7.807e−04
Coefficient: 2.10e−02
N: 139
COG4101
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

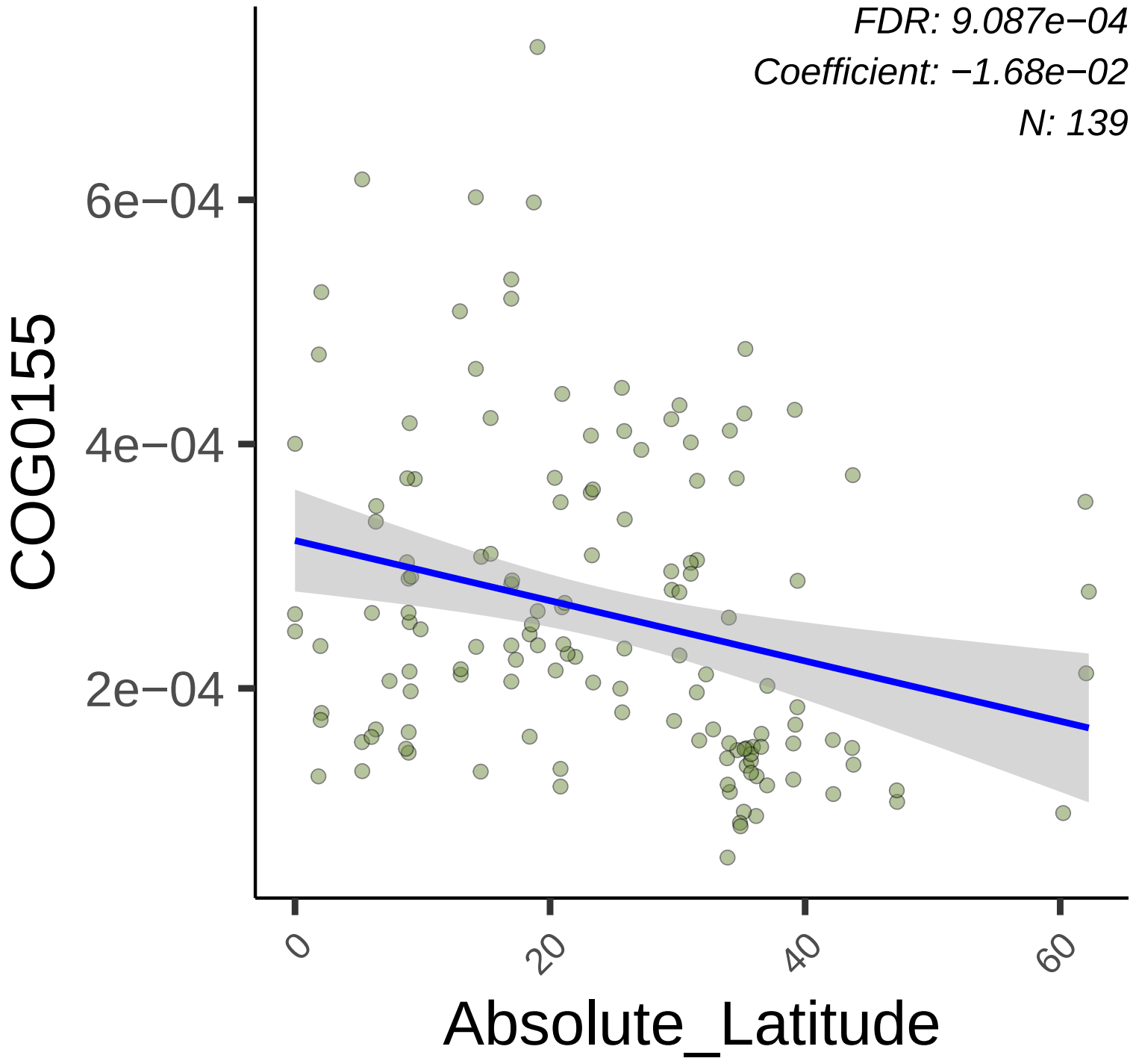

FDR: 7.967e−04
Coefficient: 1.80e−02
N: 139
COG4867
9e−05
6e−05
3e−05
0
20
40
60
Absolute_Latitude

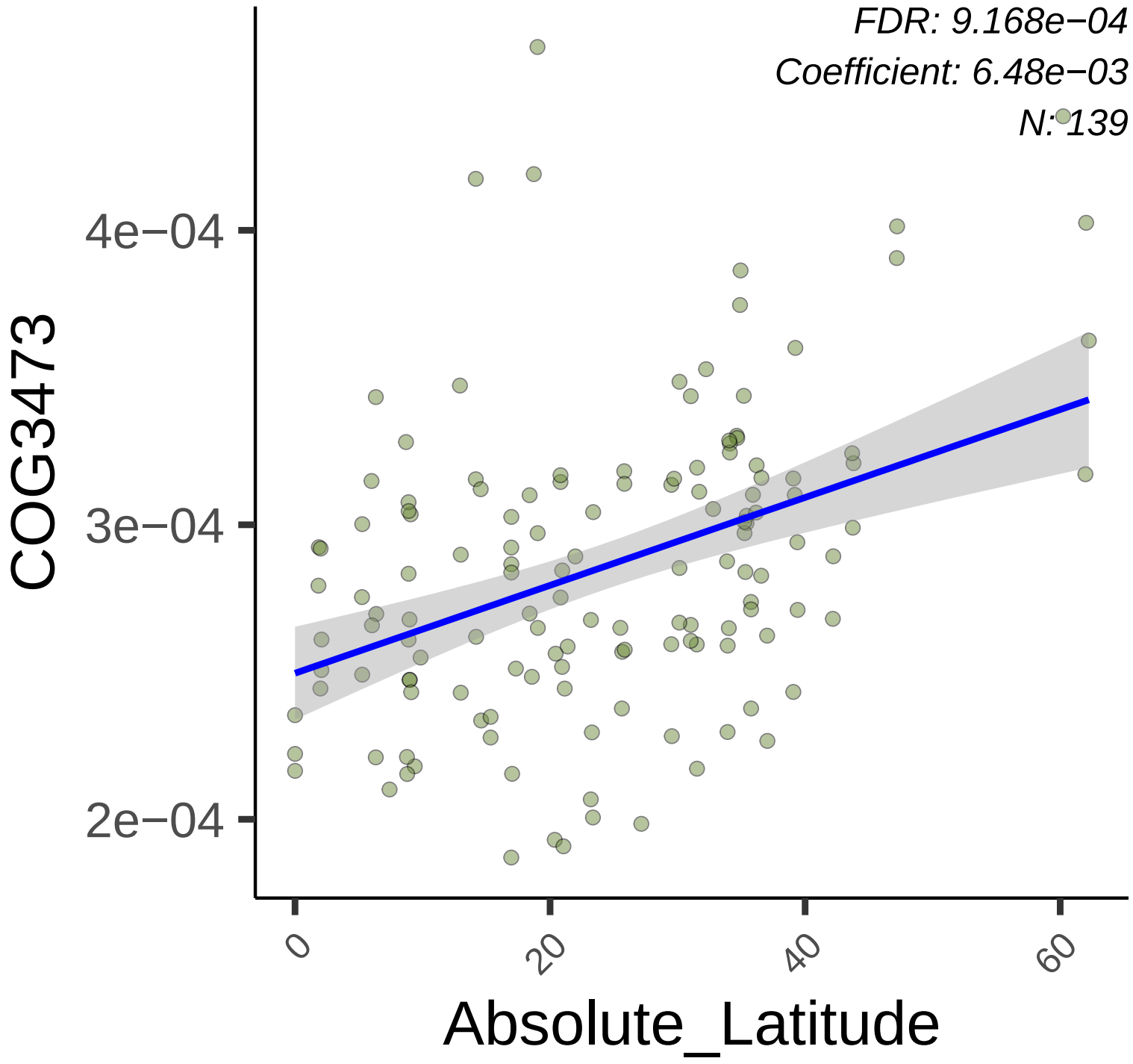

FDR: 8.026e−04
Coefficient: 5.82e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG2334
0
20
40
60
Absolute_Latitude

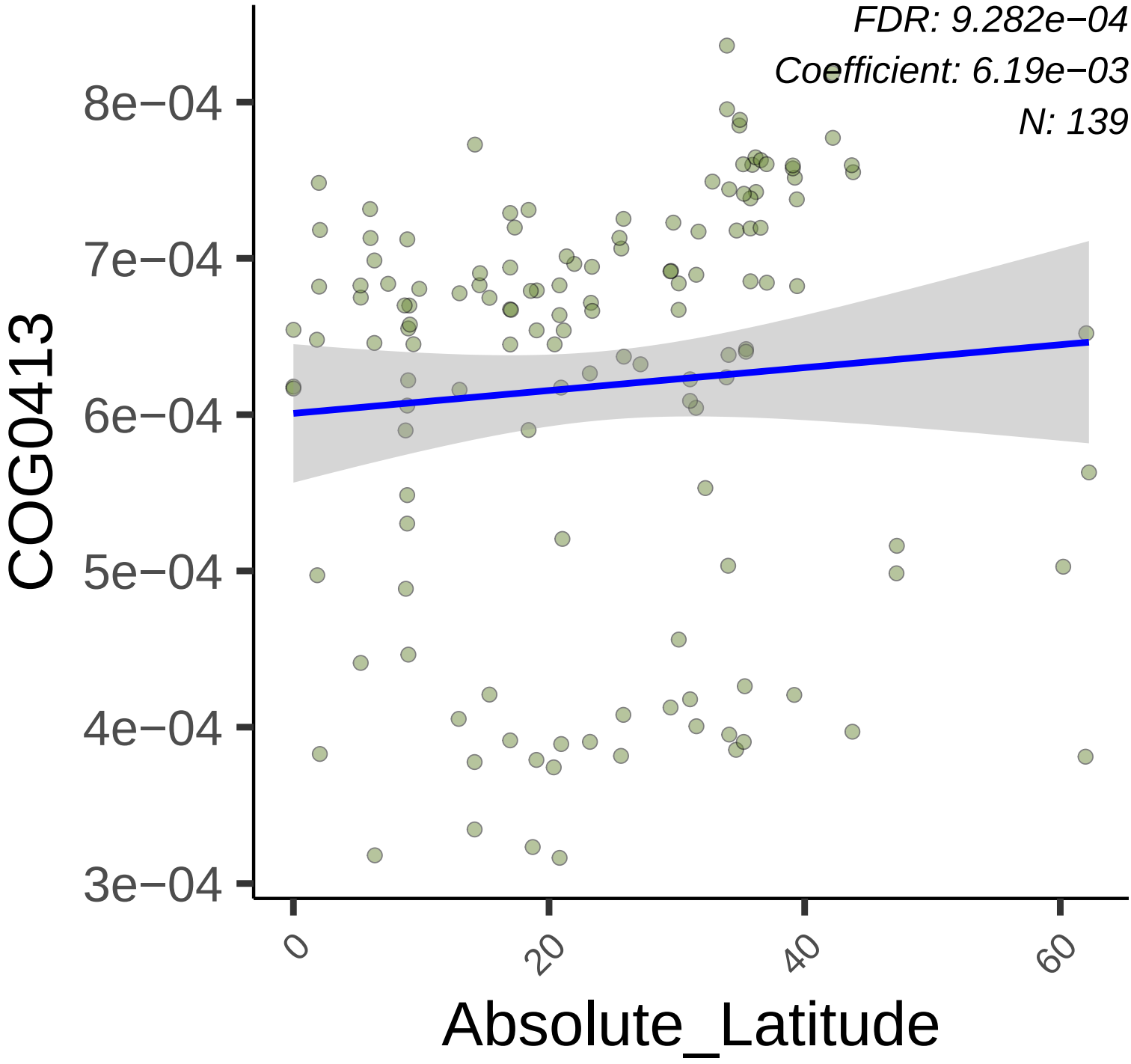

FDR: 8.243e−04
Coefficient: −3.68e−02
N: 139
COG3350
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

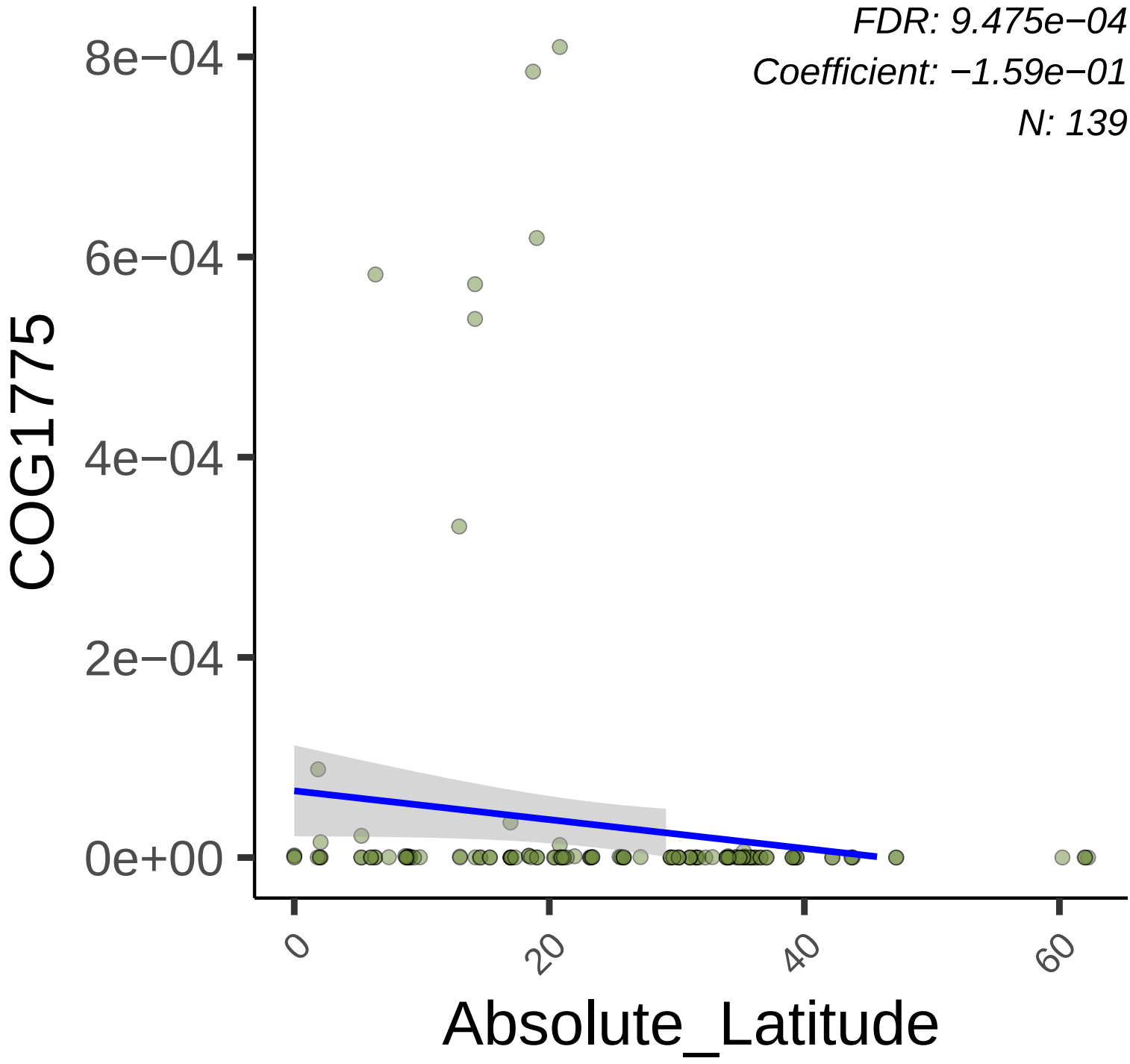

FDR: 9.013e−04
Coefficient: −3.64e−02
N: 139
COG3243
5e−04
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

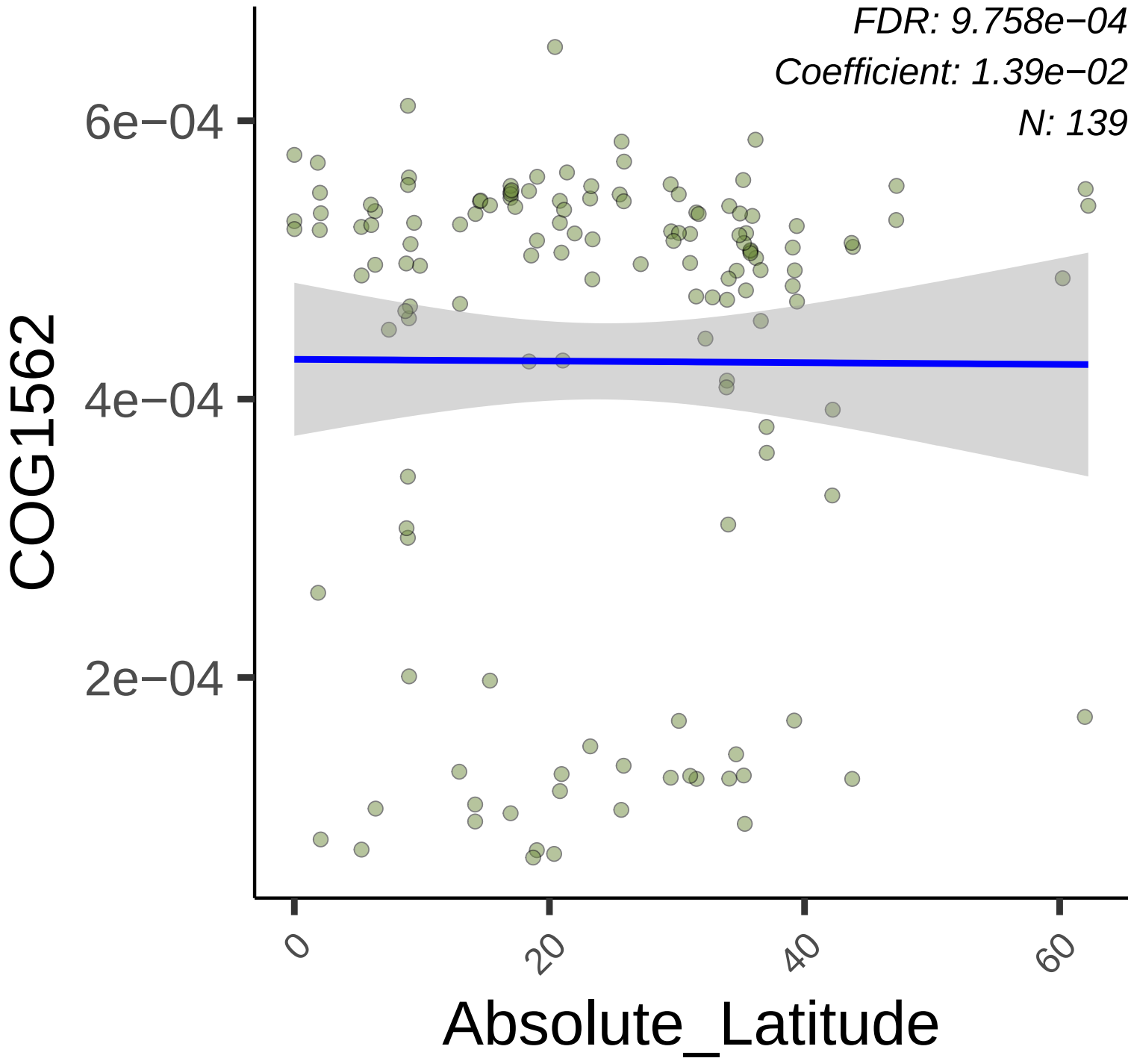

FDR: 9.026e−04
Coefficient: 1.26e−02
N: 139
COG5352
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

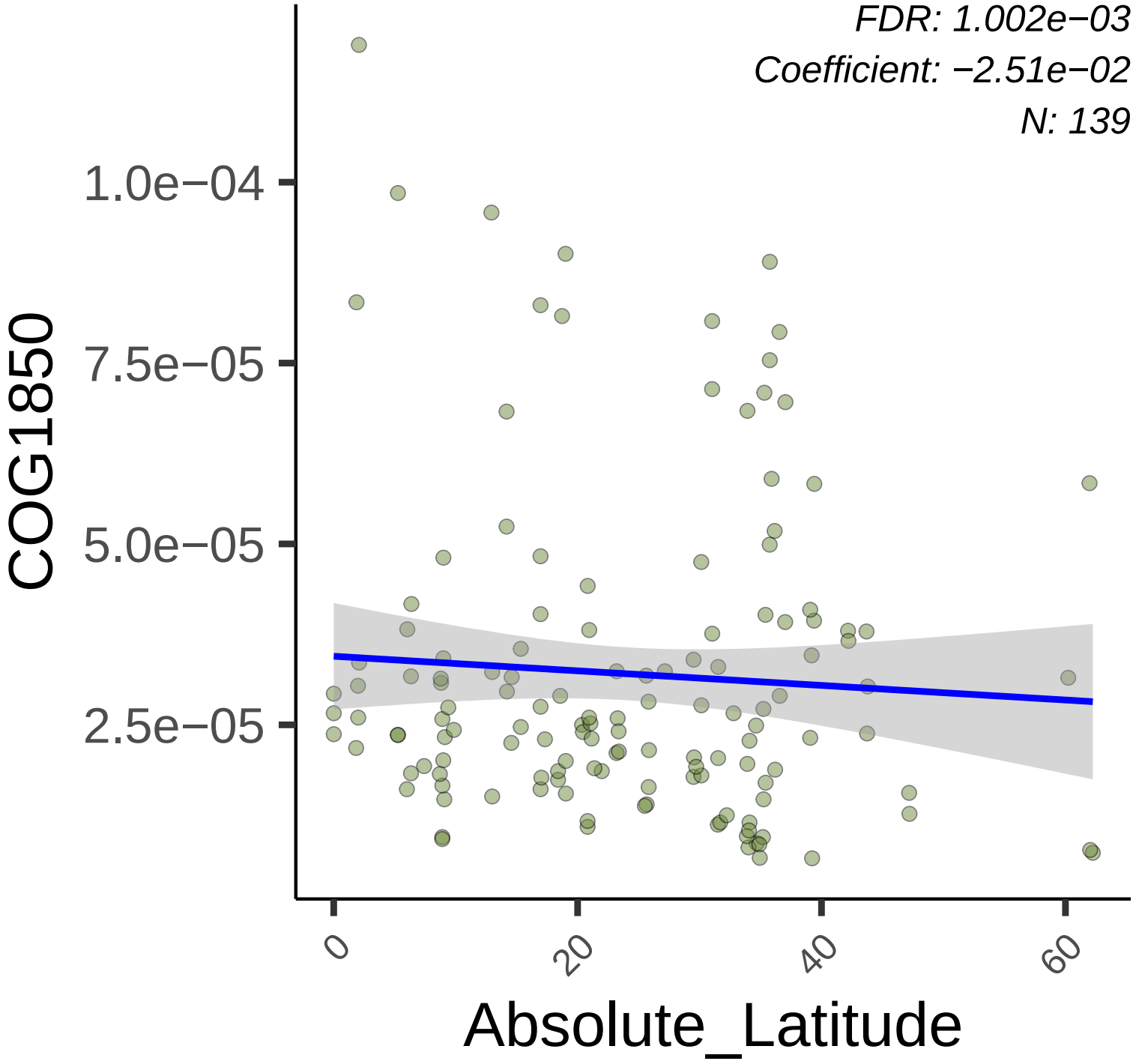

FDR: 9.087e−04
Coefficient: −1.68e−02
N: 139
6e−04
4e−04
2e−04
COG0155
0
20
40
60
Absolute_Latitude

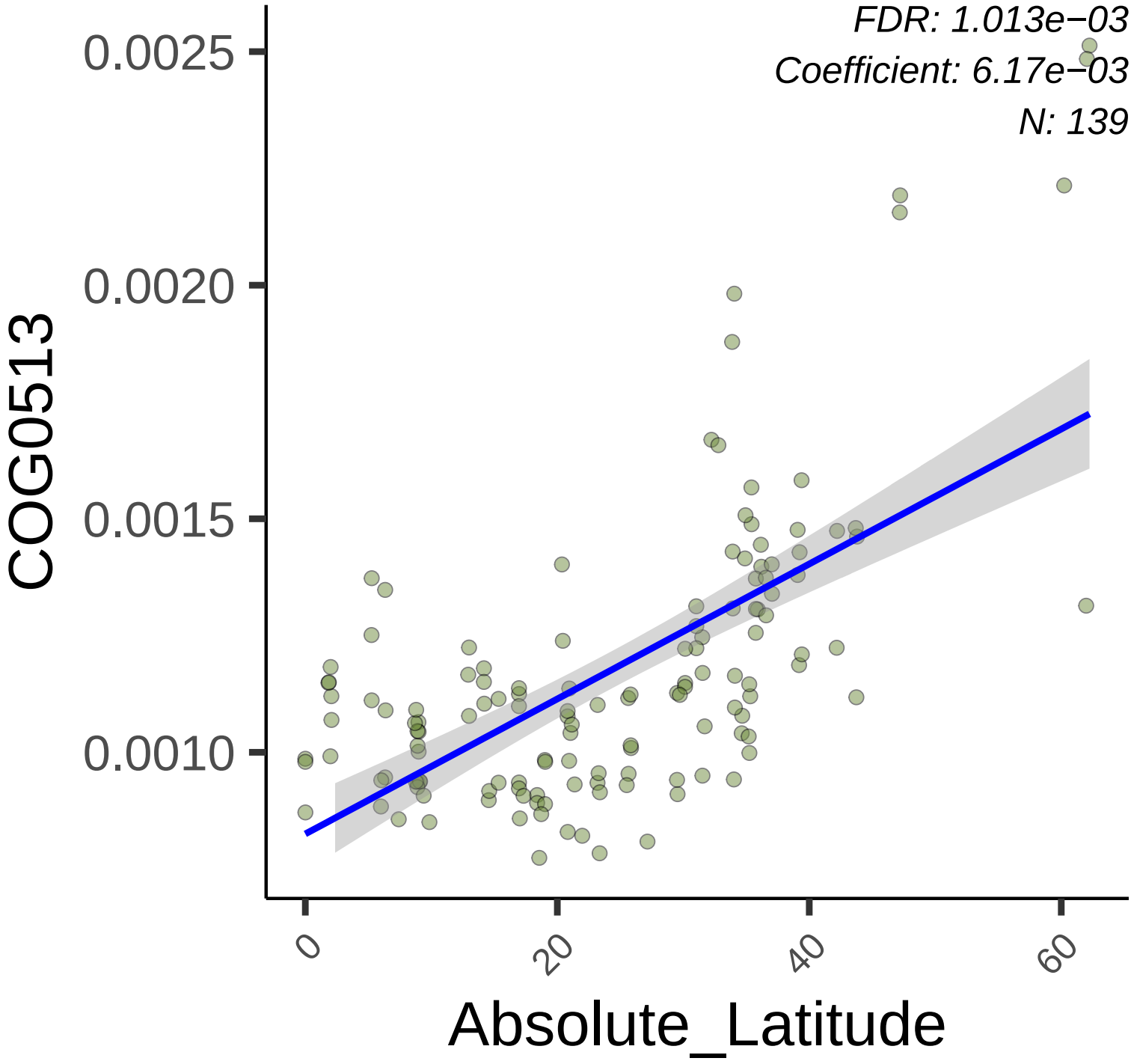

FDR: 9.168e−04
Coefficient: 6.48e−03
N: 139
COG3473
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

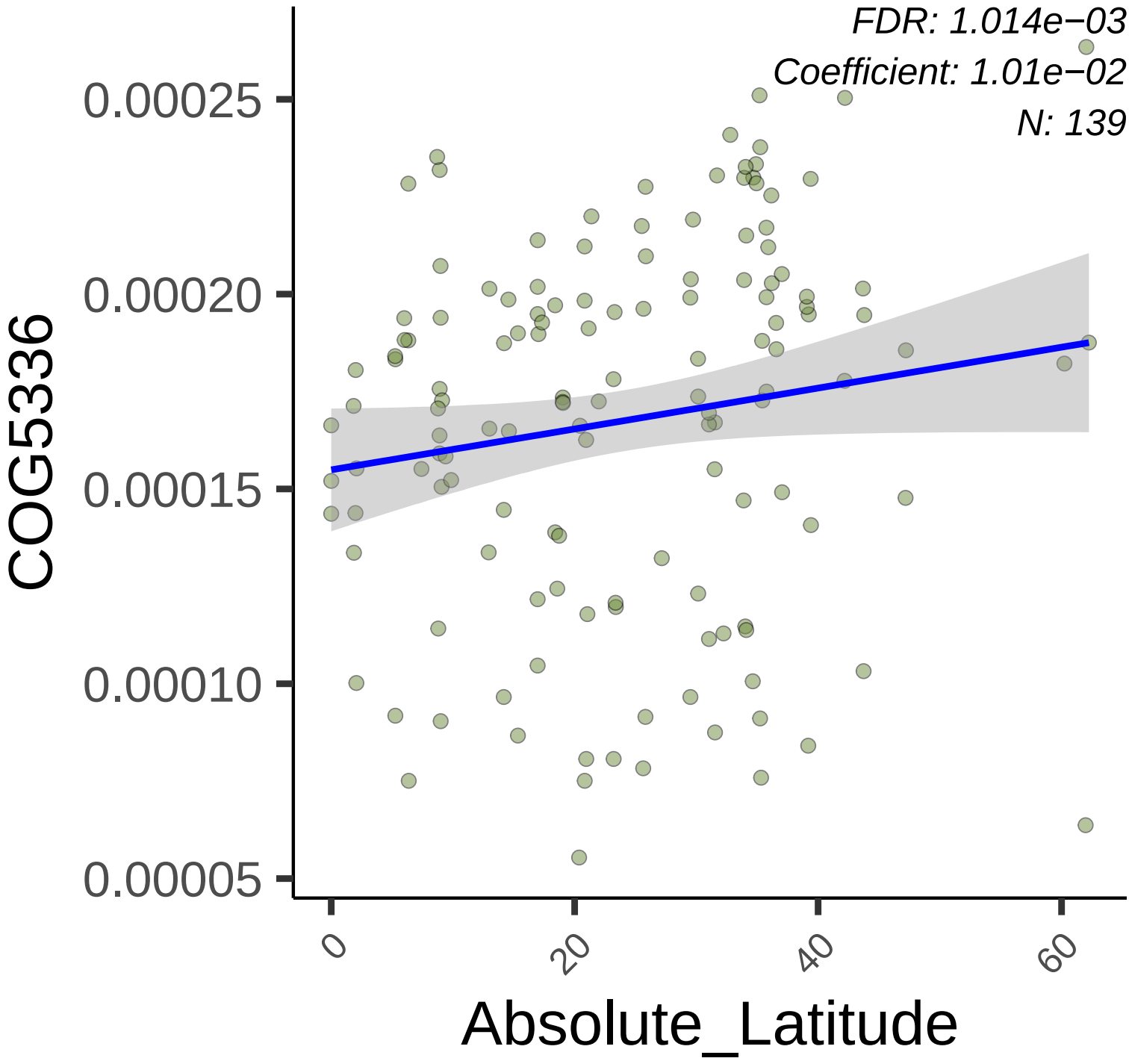

FDR: 9.282e−04
Coefficient: 6.19e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
3e−04
COG0413
0
20
40
60
Absolute_Latitude

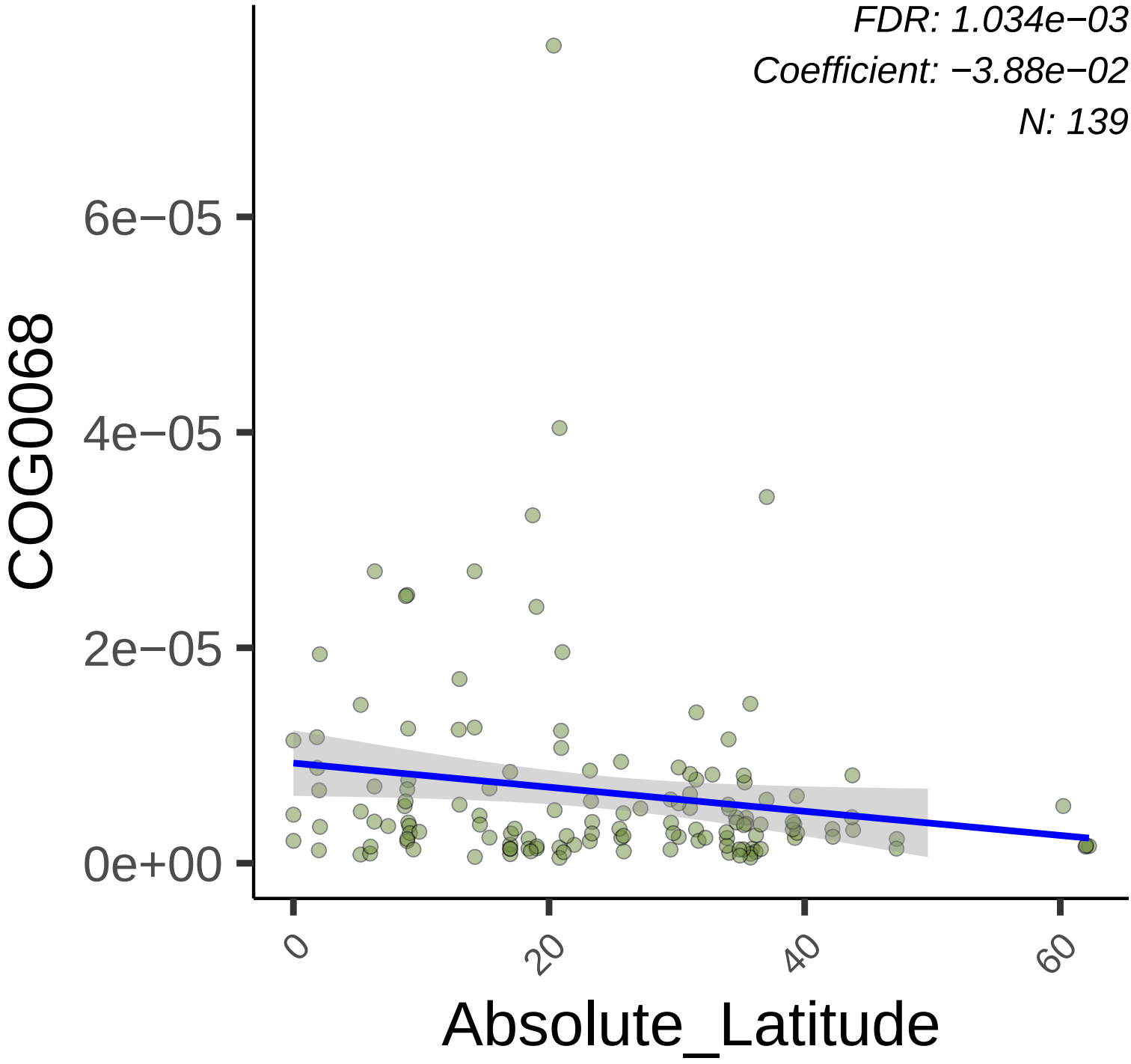

FDR: 9.475e−04
Coefficient: −1.59e−01
N: 139
8e−04
6e−04
4e−04
2e−04
0e+00
COG1775
0
20
40
60
Absolute_Latitude

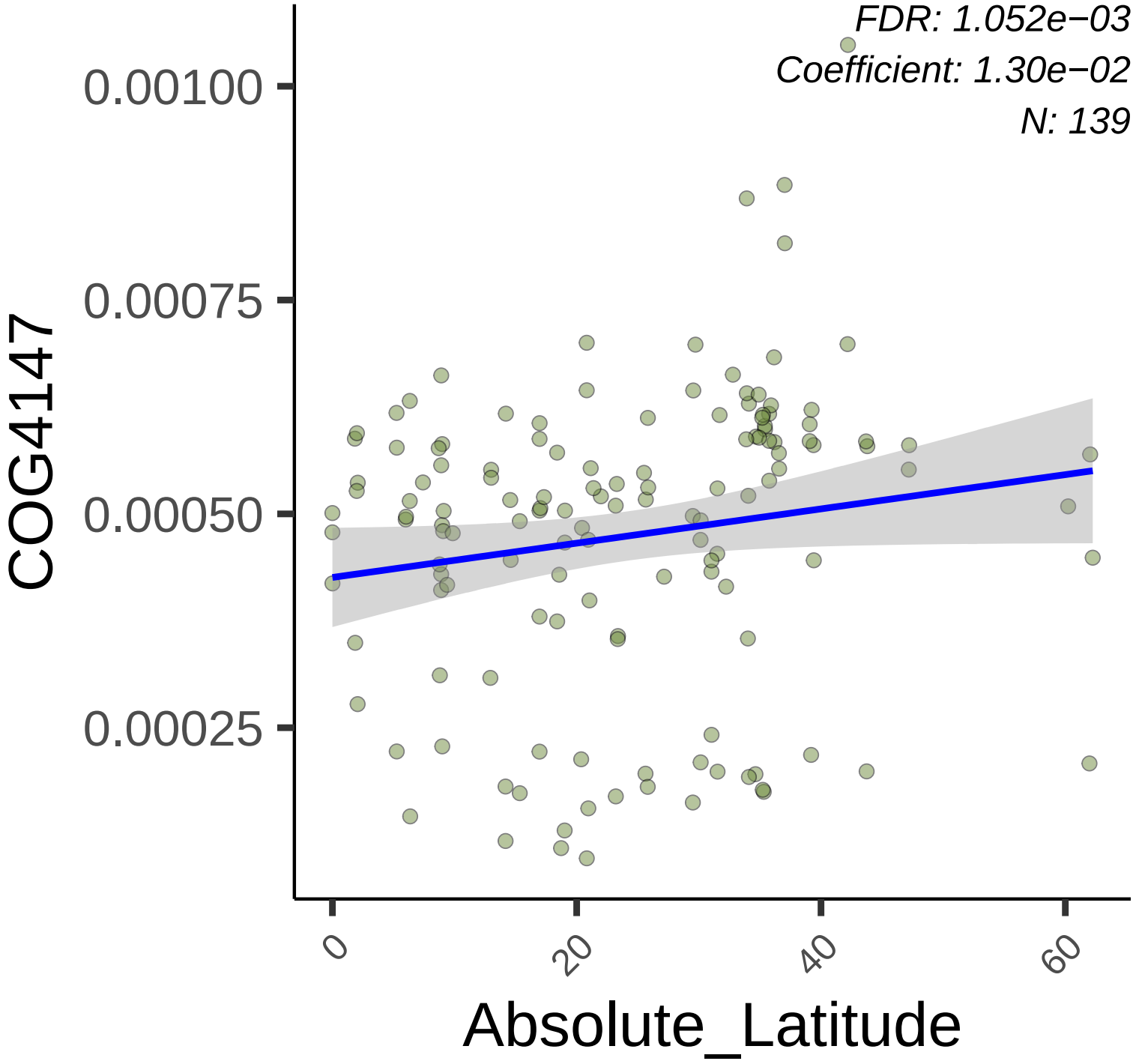

FDR: 9.758e−04
Coefficient: 1.39e−02
N: 139
6e−04
4e−04
2e−04
COG1562
0
20
40
60
Absolute_Latitude

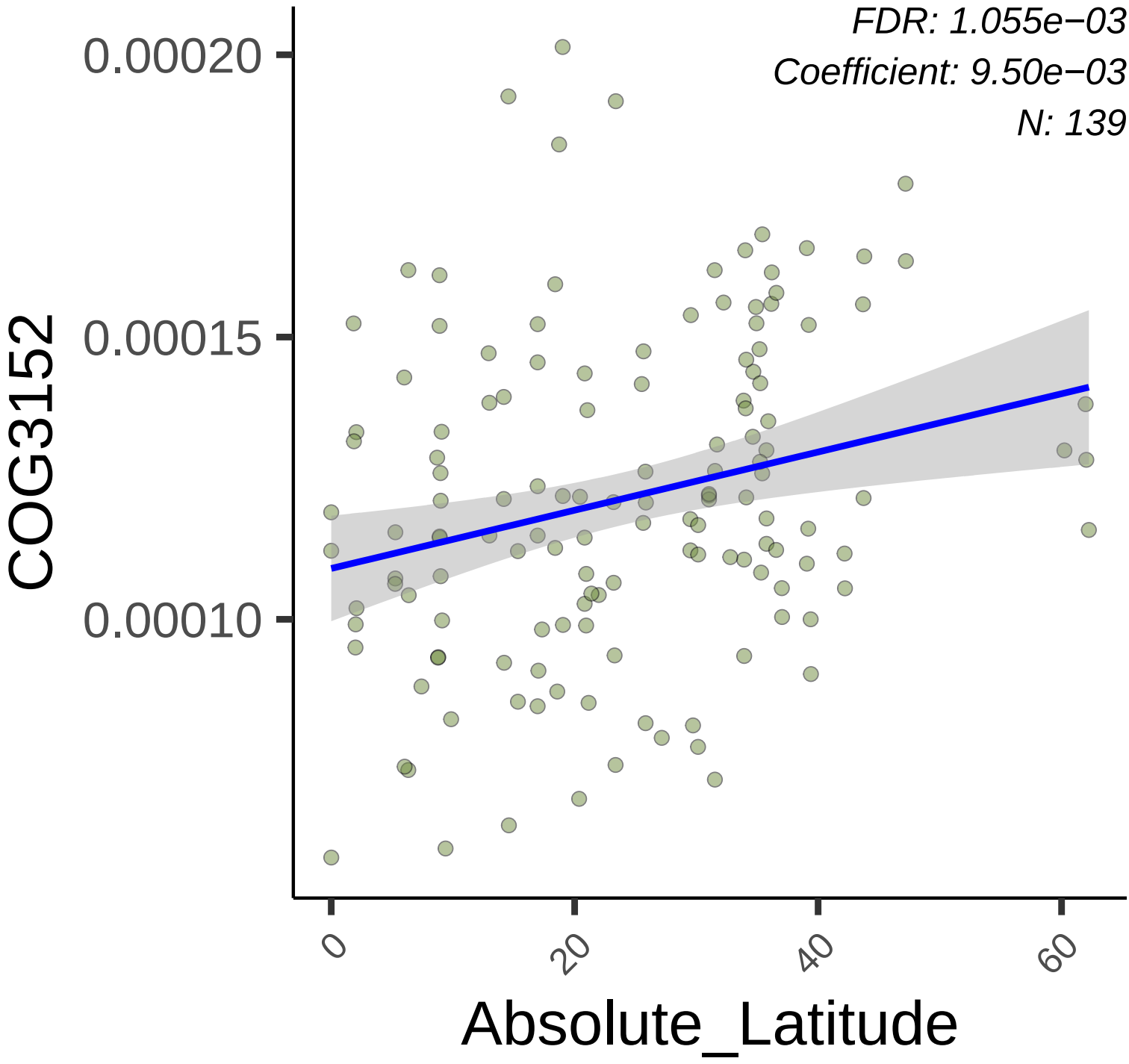

FDR: 1.002e−03
Coefficient: −2.51e−02
N: 139
COG1850
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0
20
40
60
Absolute_Latitude

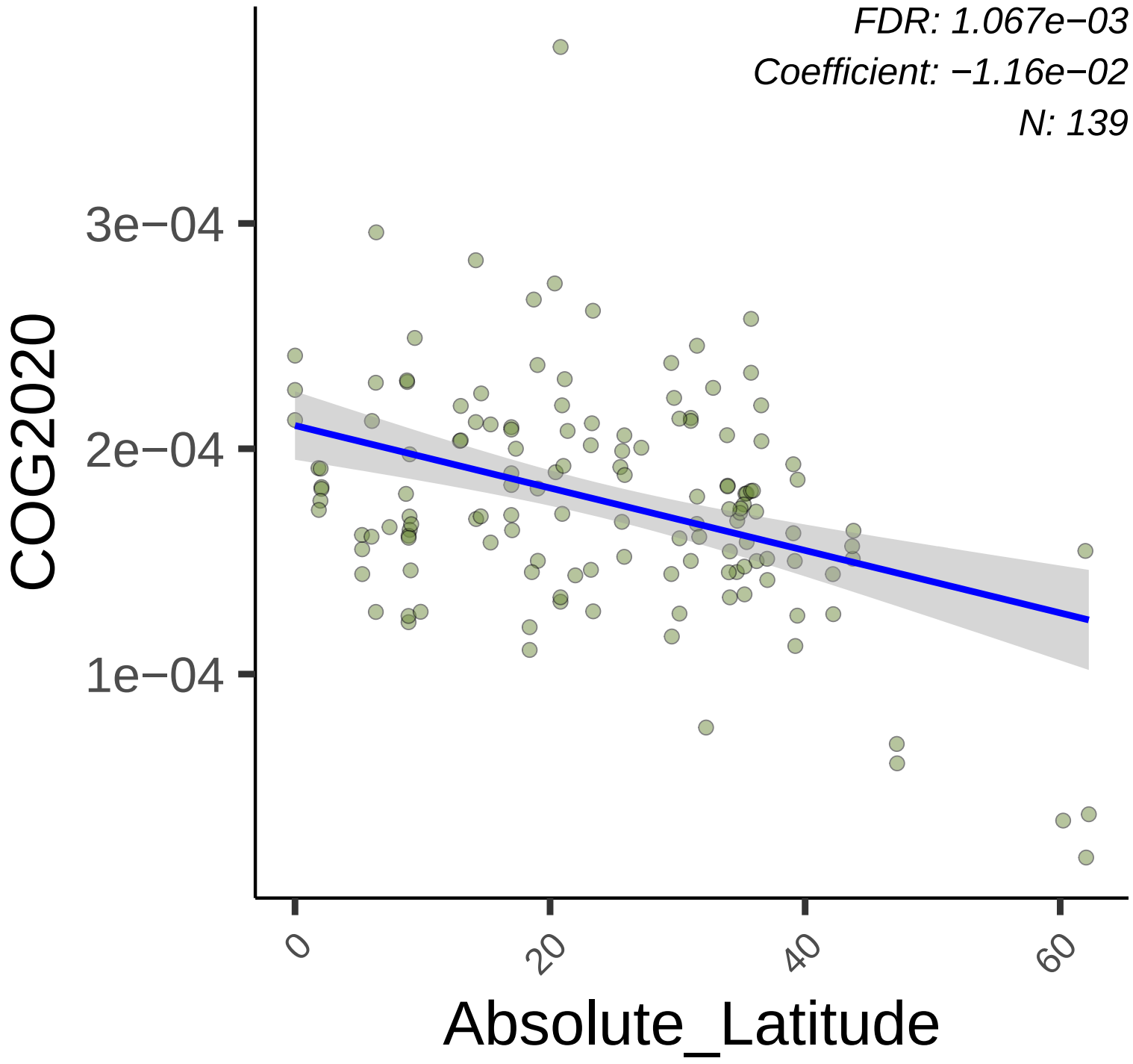

FDR: 1.013e−03
Coefficient: 6.17e−03
N: 139
0.0025
0.0020
0.0015
0.0010
COG0513
0
20
40
60
Absolute_Latitude

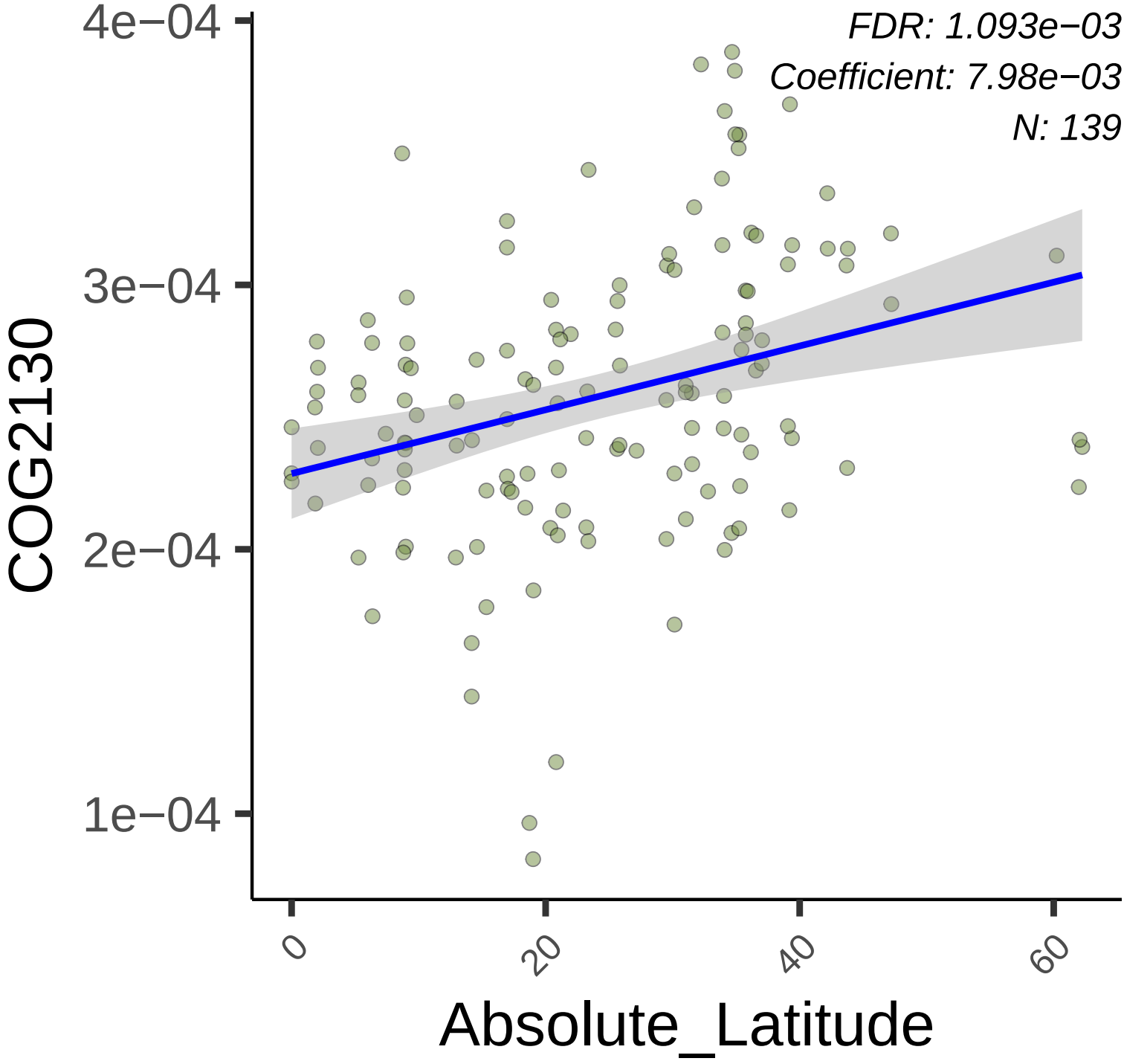

FDR: 1.014e−03
Coefficient: 1.01e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG5336
0
20
40
60
Absolute_Latitude

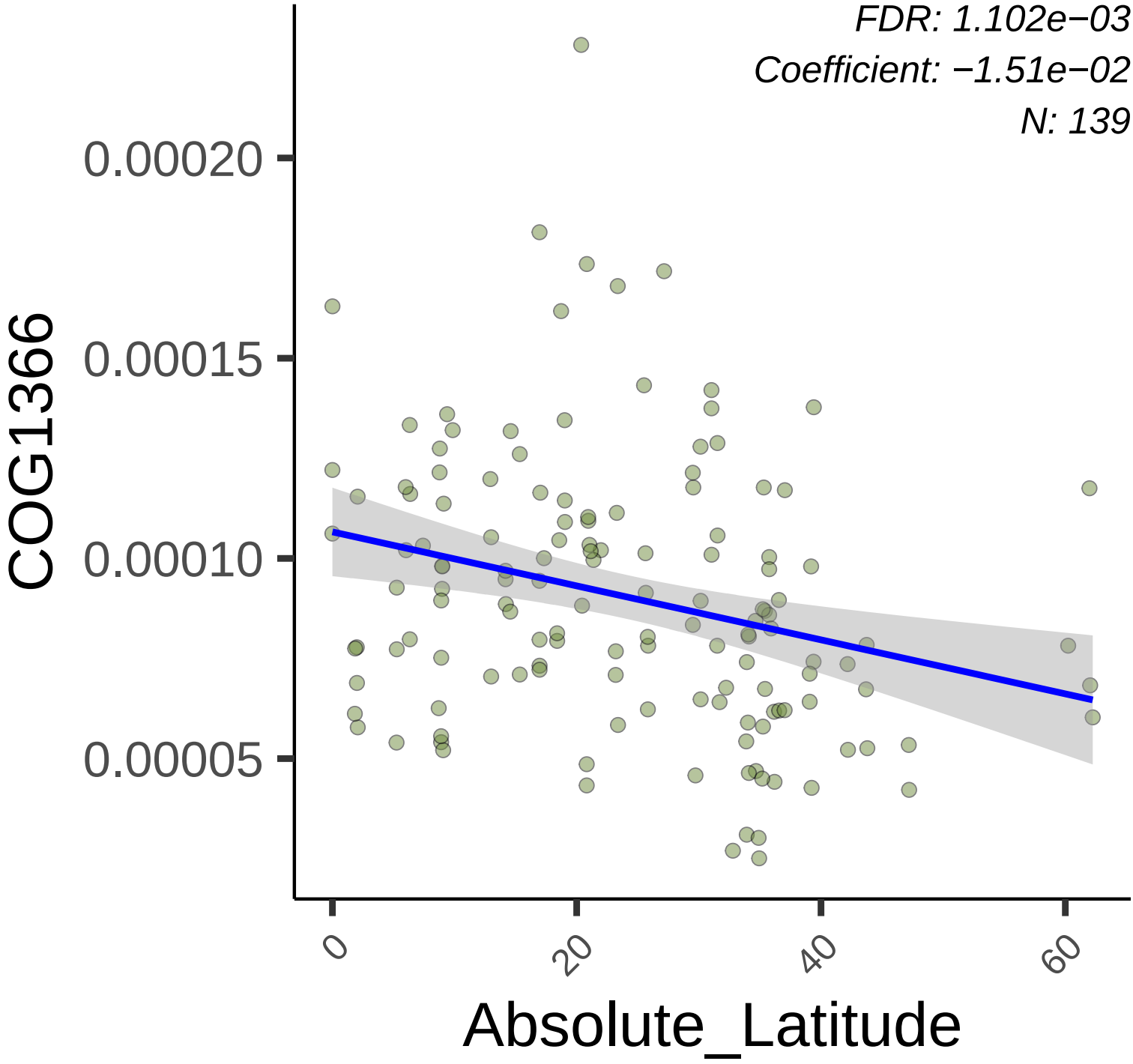

FDR: 1.034e−03
Coefficient: −3.88e−02
N: 139
COG0068
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

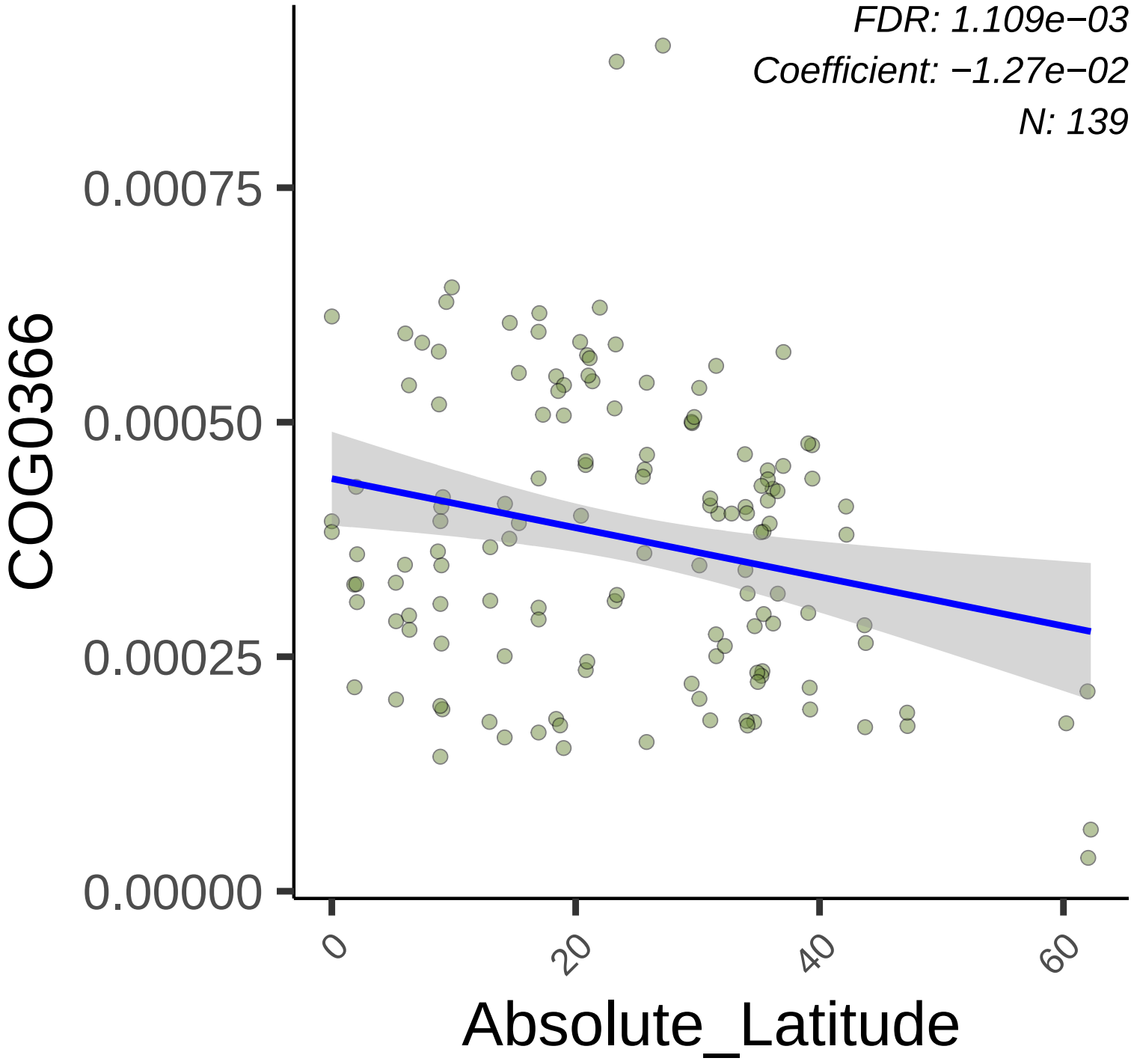

FDR: 1.052e−03
Coefficient: 1.30e−02
N: 139
0.00100
0.00075
0.00050
0.00025
COG4147
0
20
40
60
Absolute_Latitude

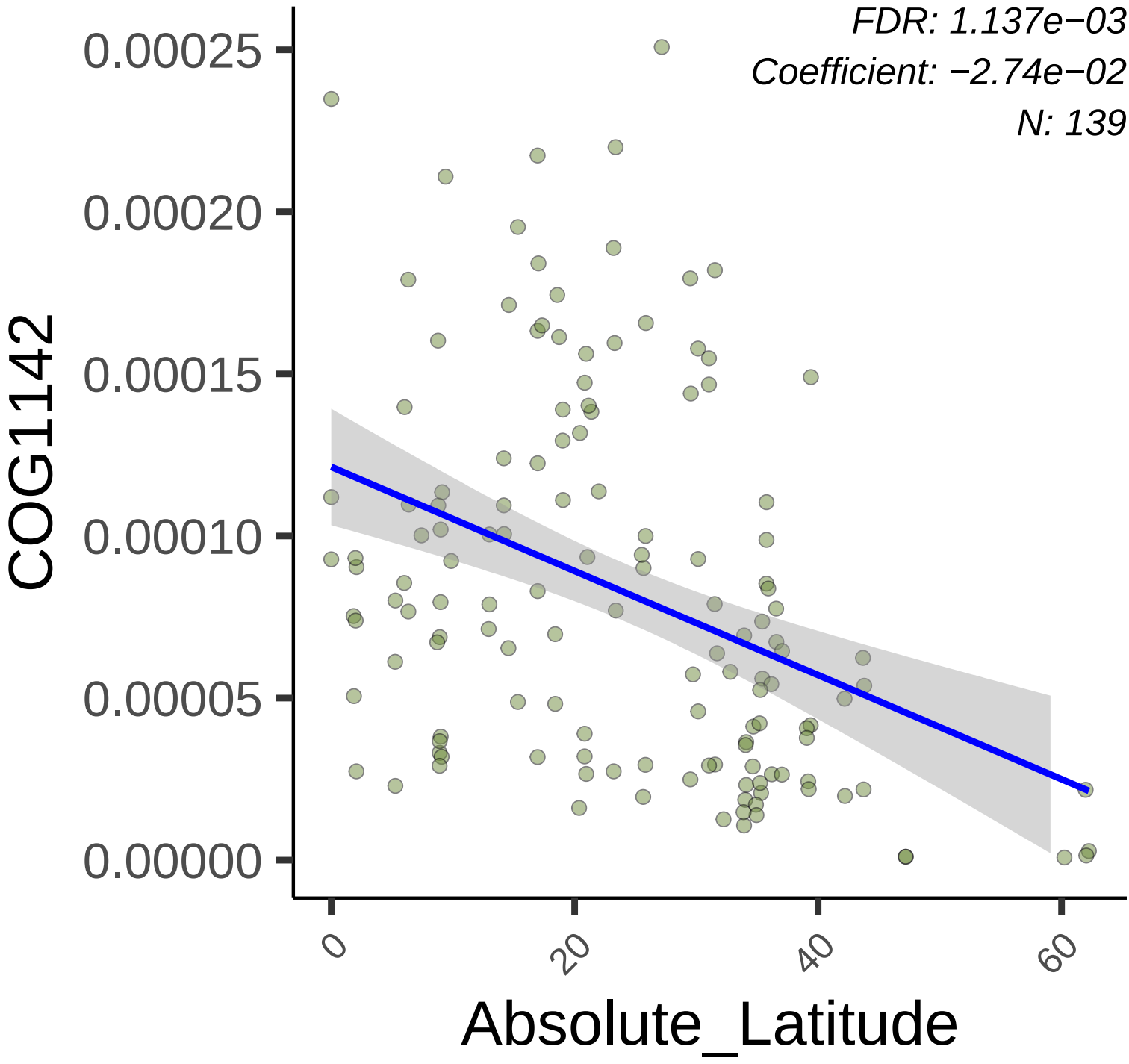

FDR: 1.055e−03
Coefficient: 9.50e−03
N: 139
0.00020
0.00015
0.00010
COG3152
0
20
40
60
Absolute_Latitude

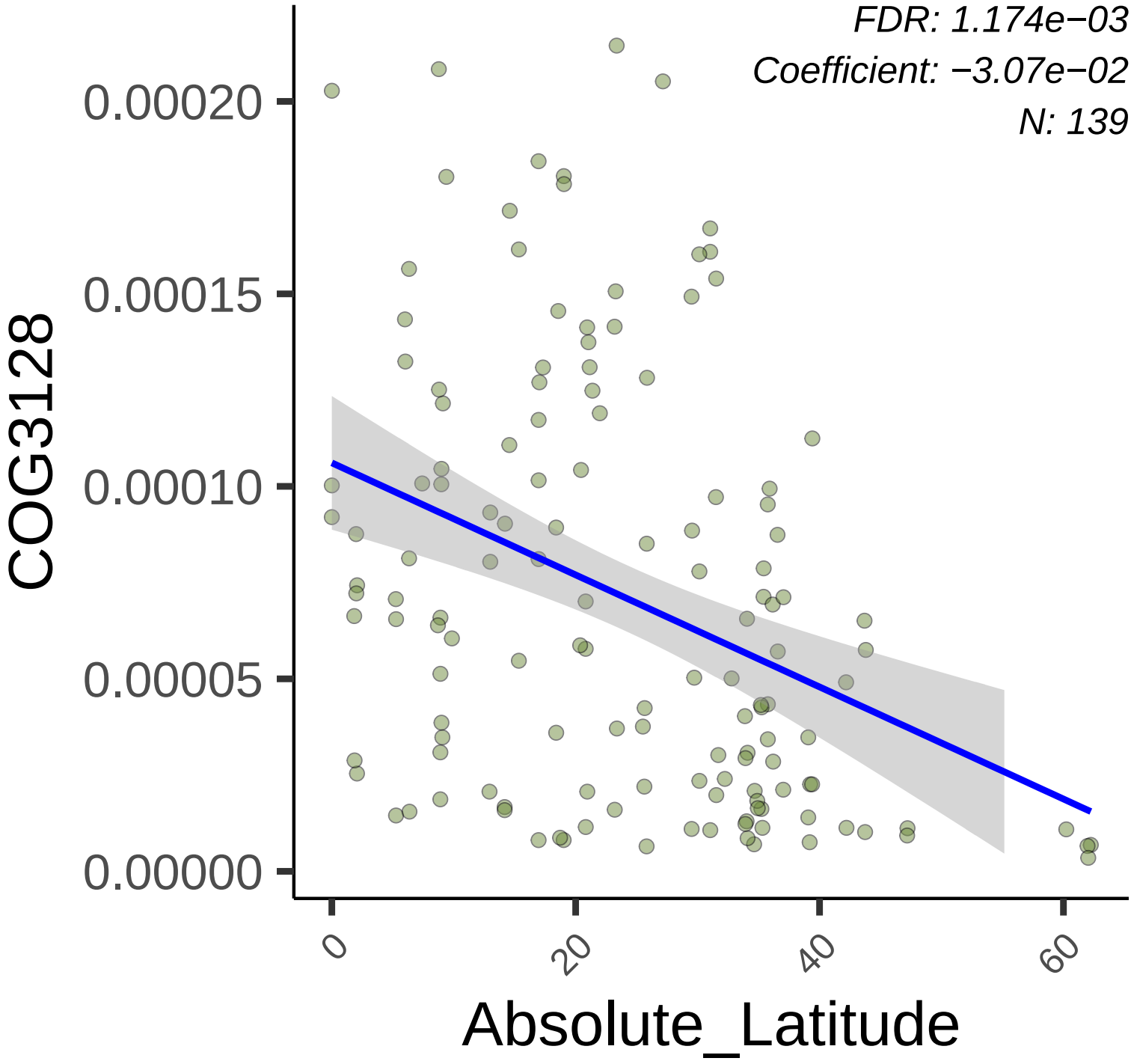

FDR: 1.067e−03
Coefficient: −1.16e−02
N: 139
3e−04
2e−04
1e−04
COG2020
0
20
40
60
Absolute_Latitude

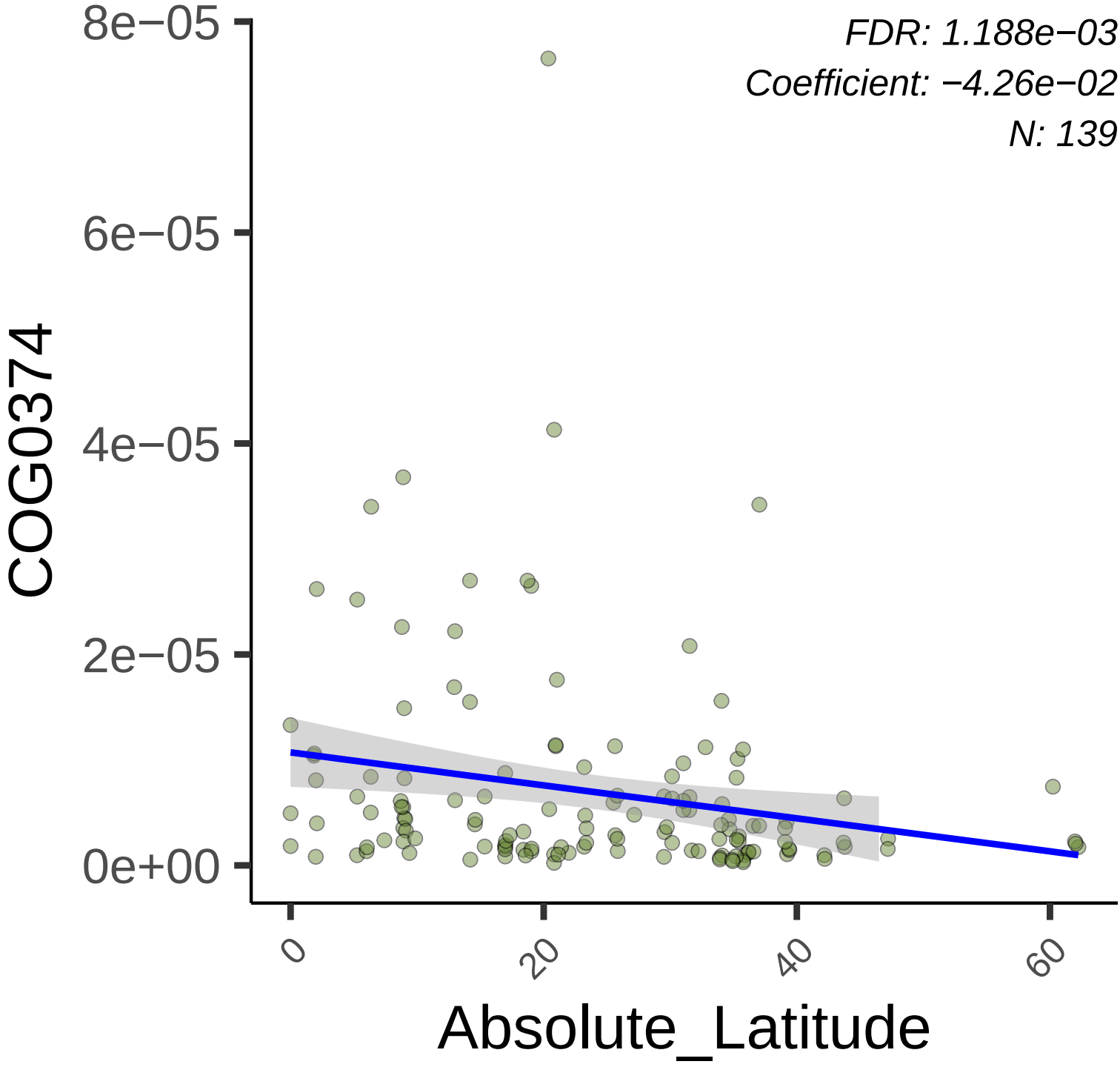

FDR: 1.093e−03
Coefficient: 7.98e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG2130
0
20
40
60
Absolute_Latitude

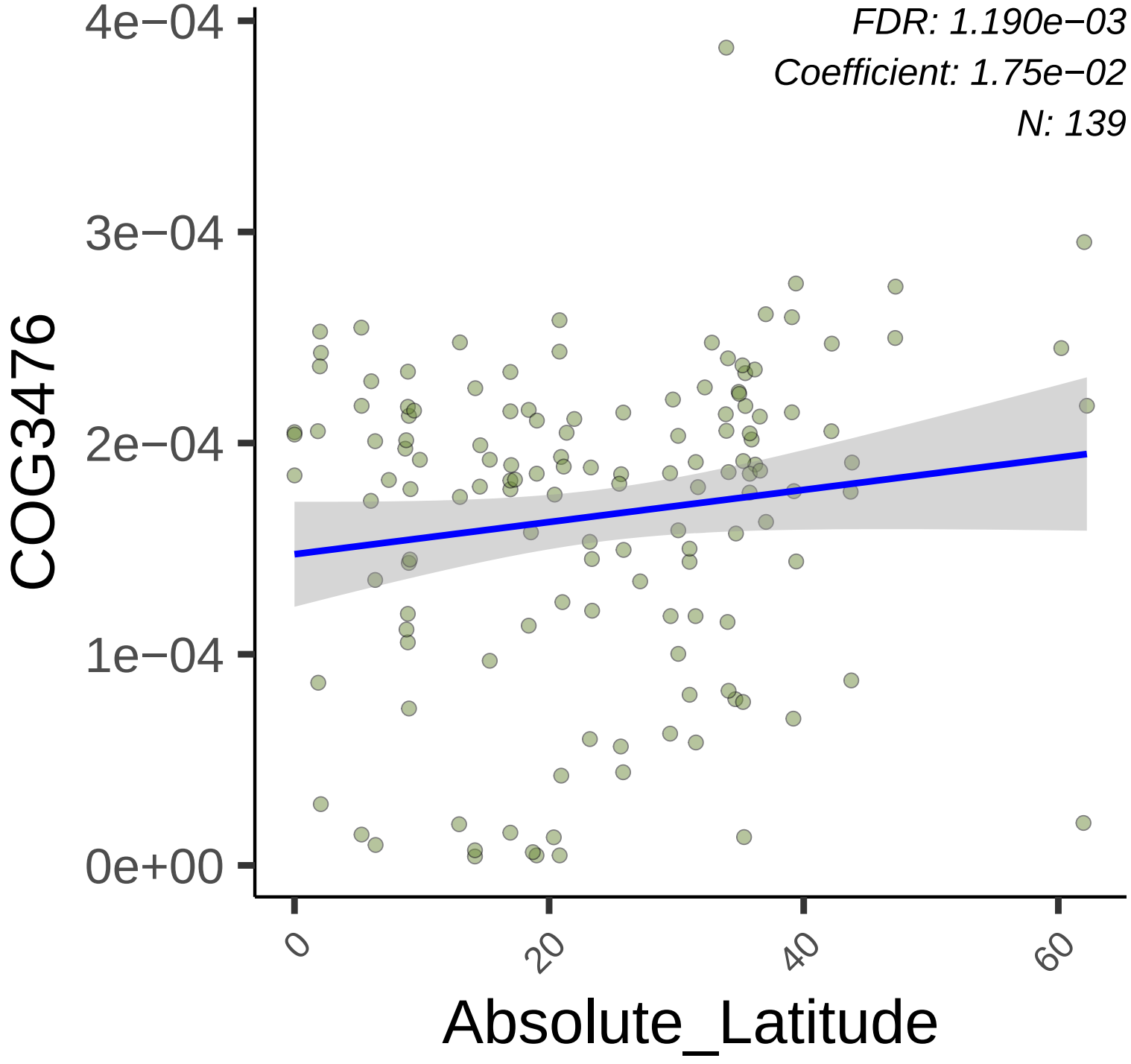

FDR: 1.102e−03
Coefficient: −1.51e−02
N: 139
COG1366
0.00020
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

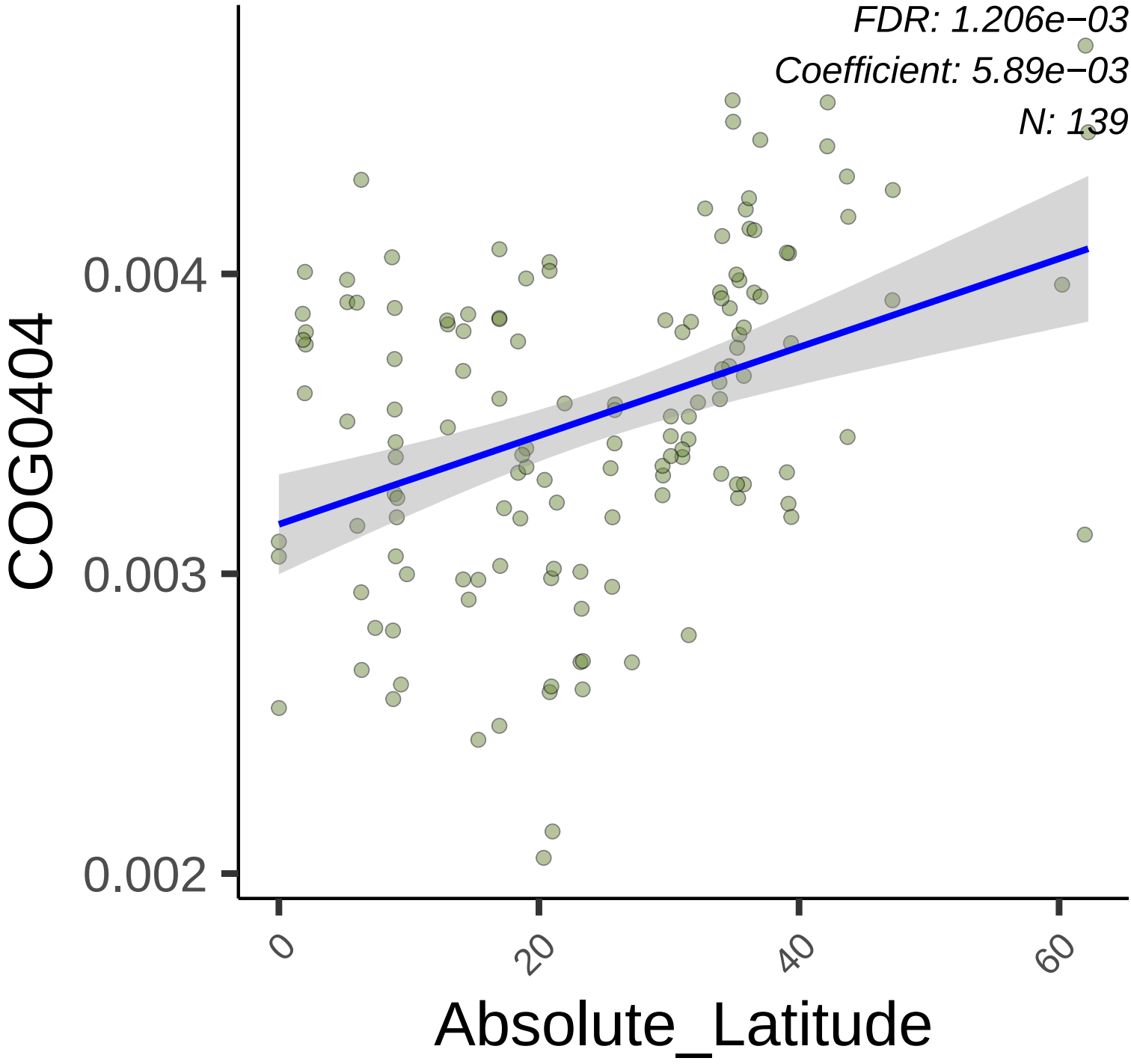

FDR: 1.109e−03
Coefficient: −1.27e−02
N: 139
COG0366
0.00075
0.00050
0.00025
0.00000
0
20
40
60
Absolute_Latitude

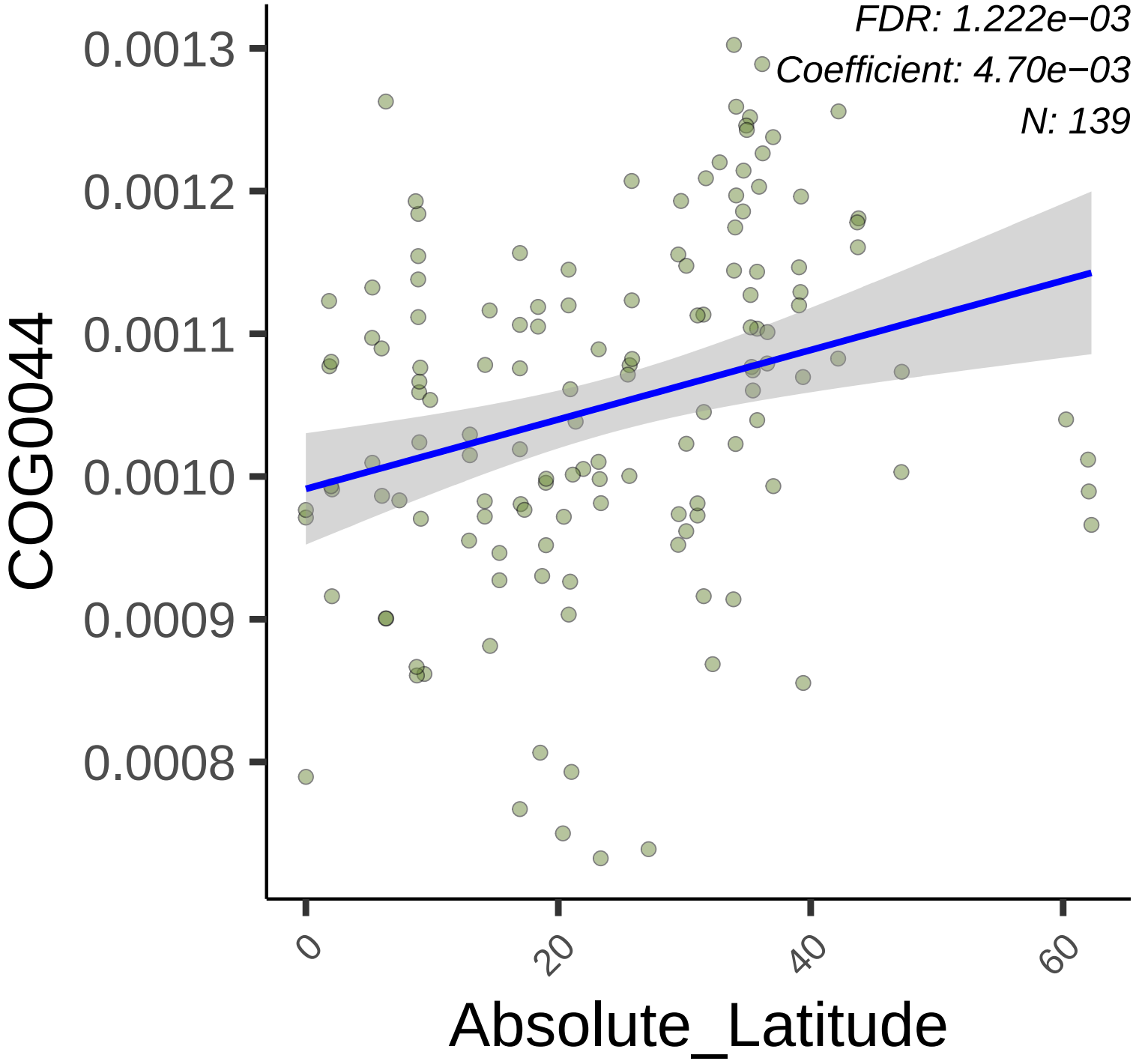

FDR: 1.137e−03
Coefficient: −2.74e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
COG1142
0
20
40
60
Absolute_Latitude

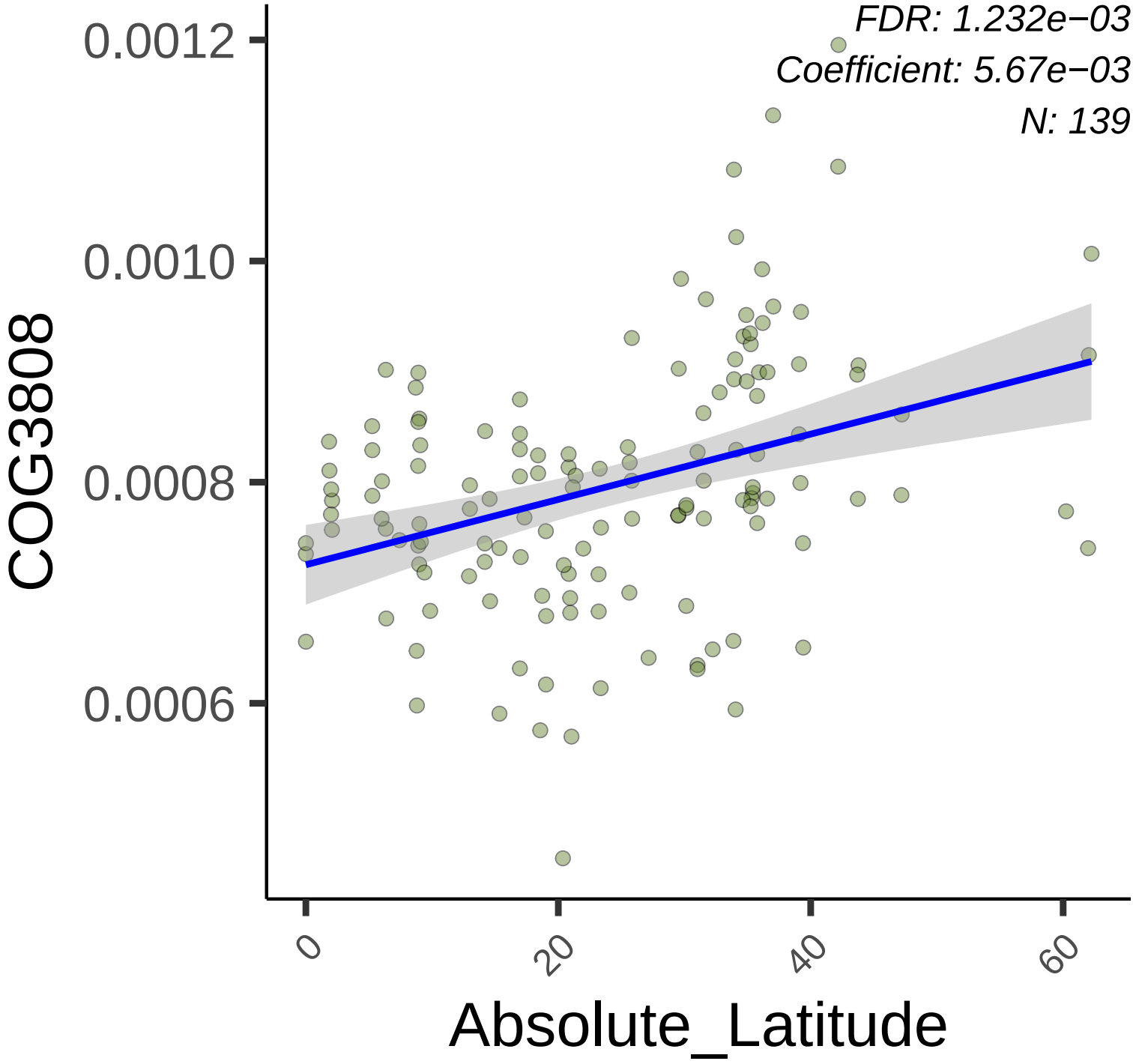

FDR: 1.174e−03
Coefficient: −3.07e−02
N: 139
COG3128
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

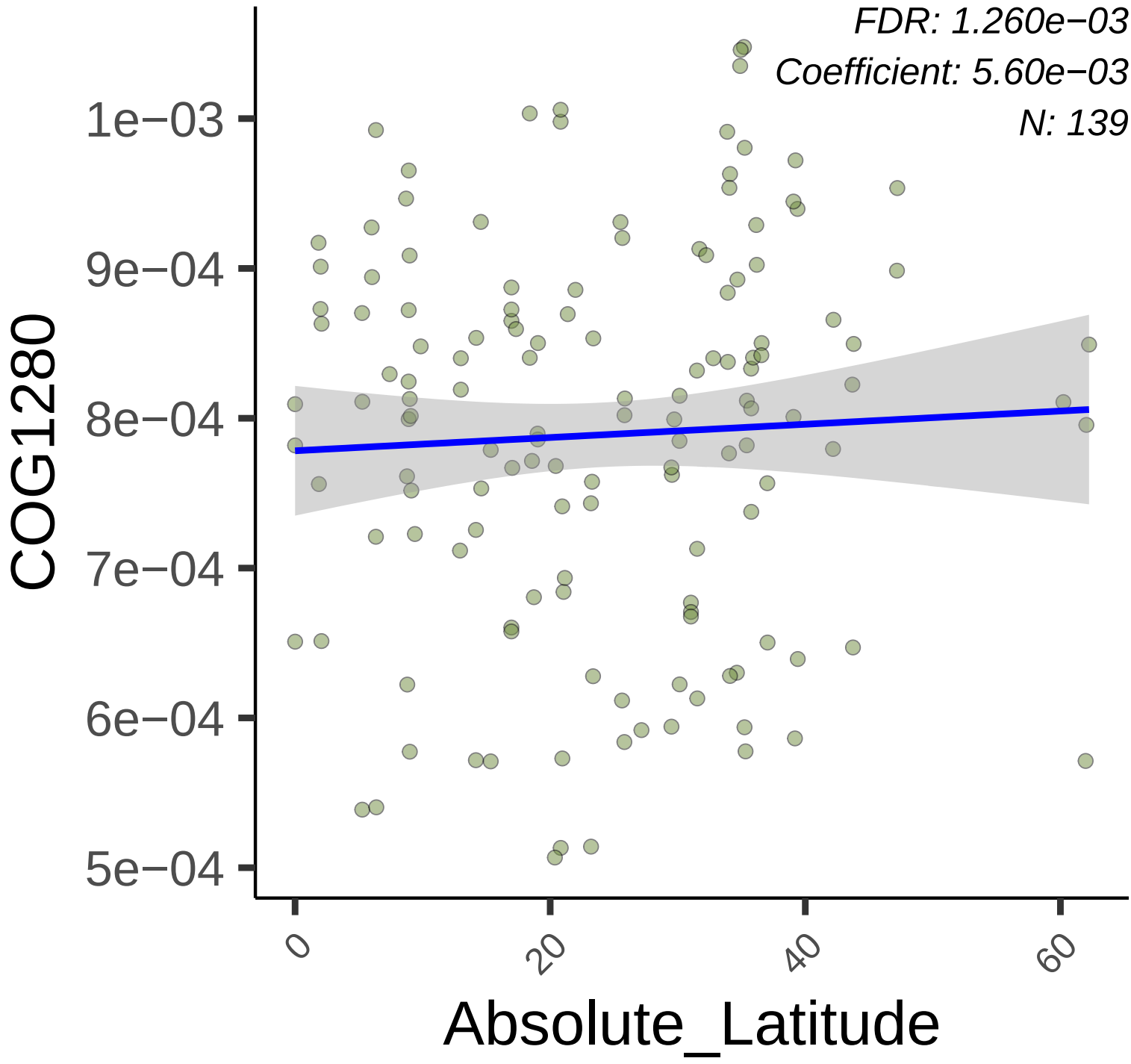

FDR: 1.188e−03
Coefficient: −4.26e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG0374
0
20
40
60
Absolute_Latitude

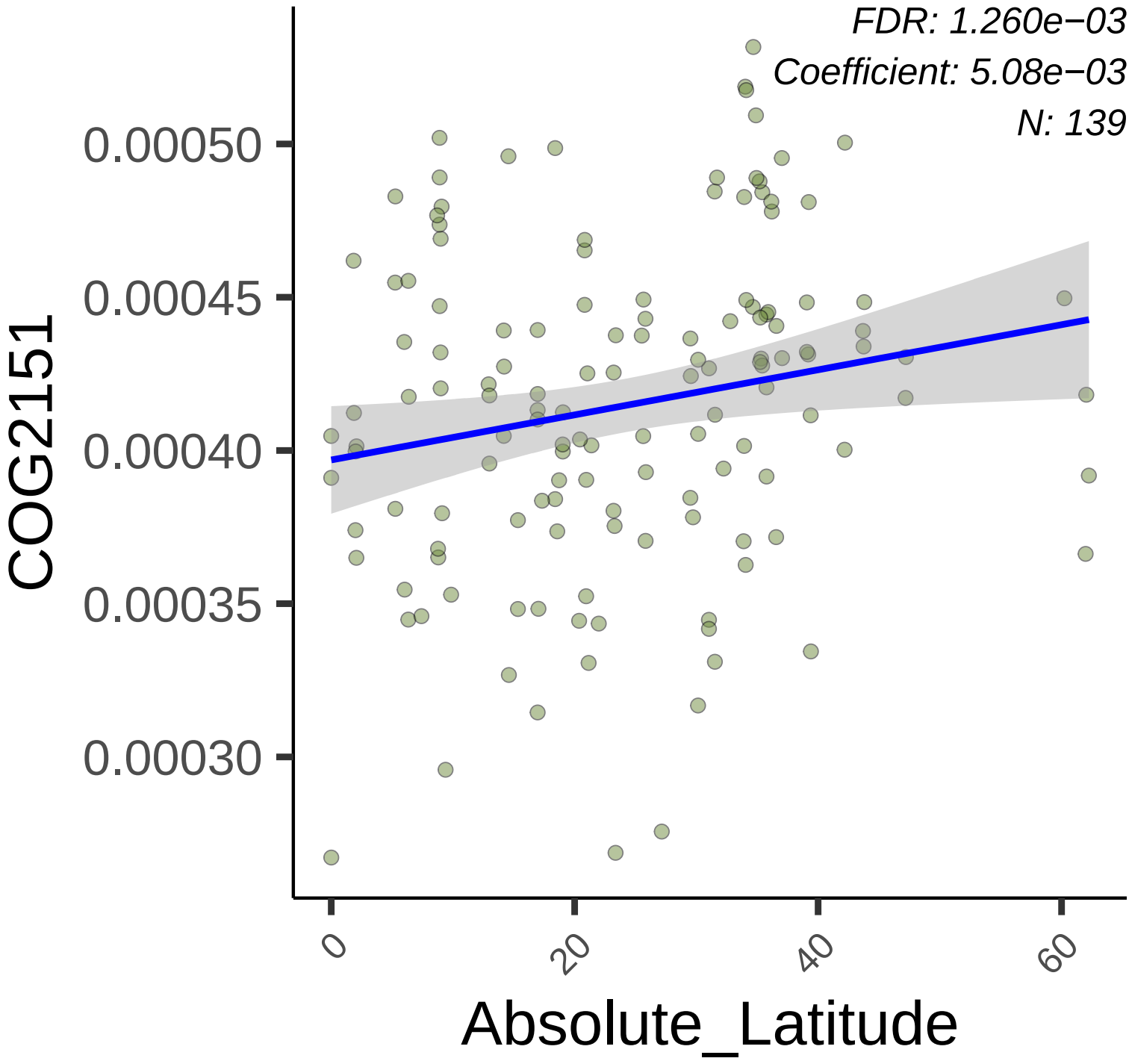

FDR: 1.190e−03
Coefficient: 1.75e−02
N: 139
COG3476
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

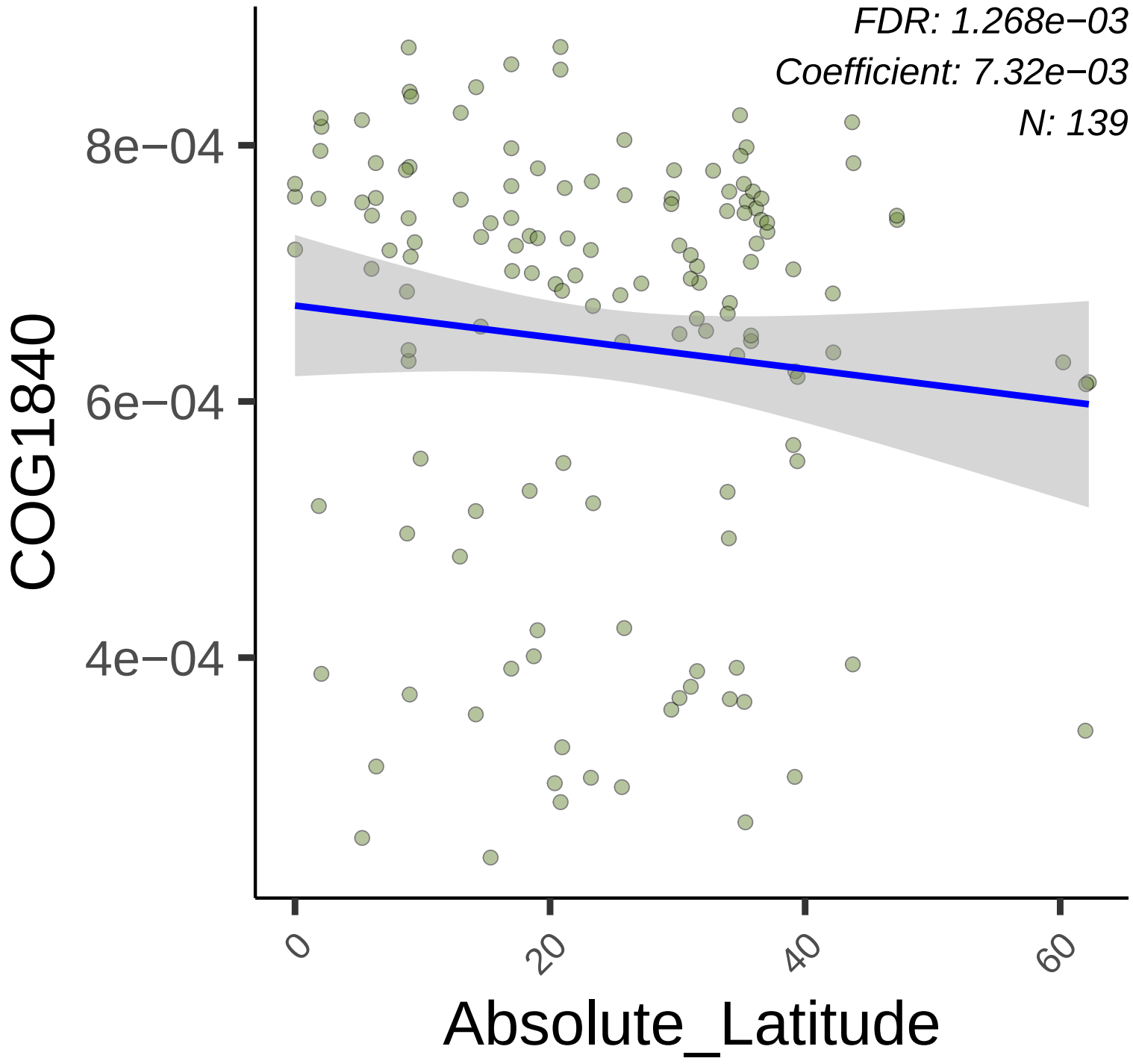

FDR: 1.206e−03
Coefficient: 5.89e−03
N: 139
COG0404
0.004
0.003
0.002
0
20
40
60
Absolute_Latitude

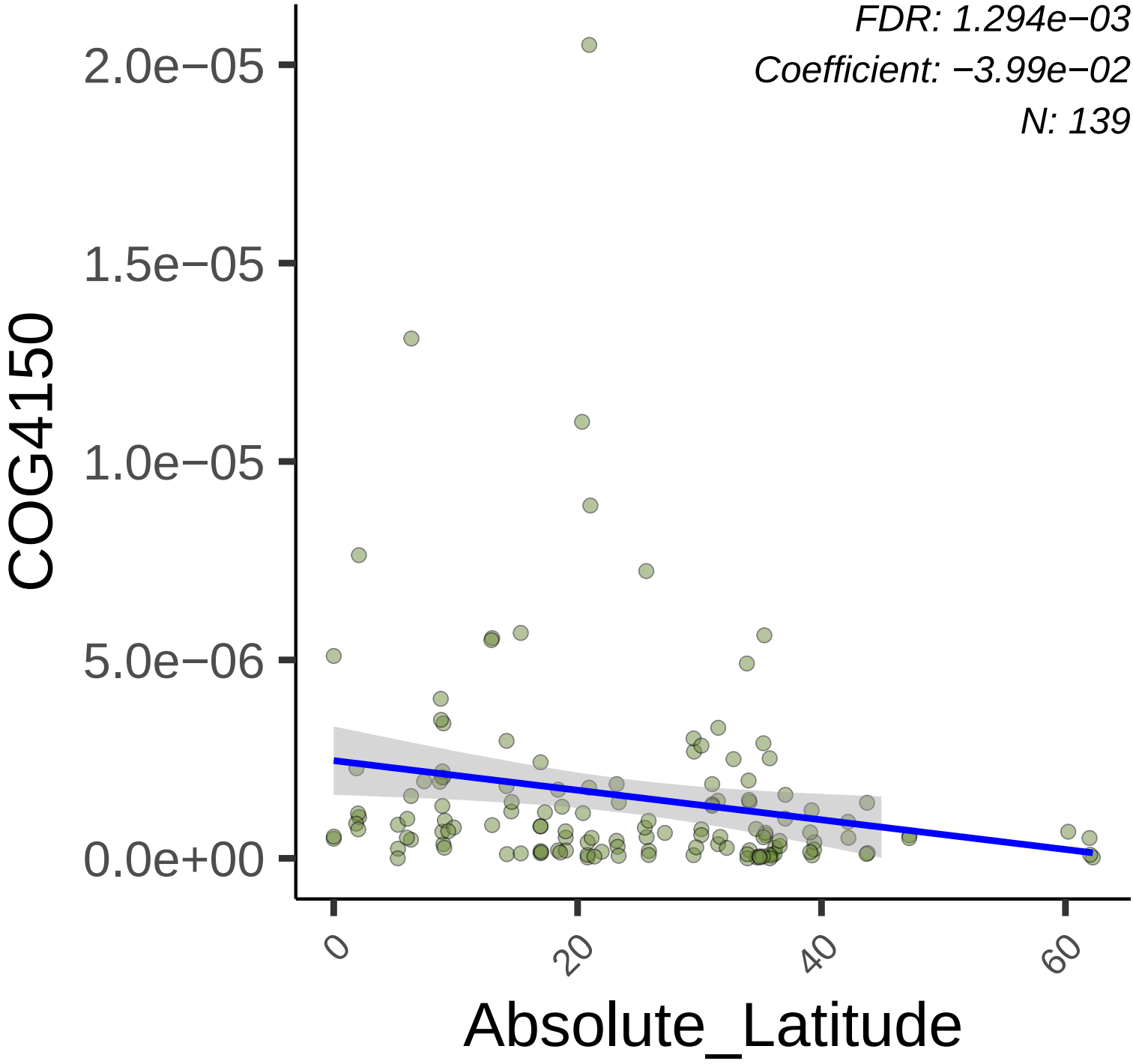

FDR: 1.222e−03
Coefficient: 4.70e−03
N: 139
0.0013
0.0012
0.0011
0.0010
0.0009
0.0008
COG0044
0
20
40
60
Absolute_Latitude

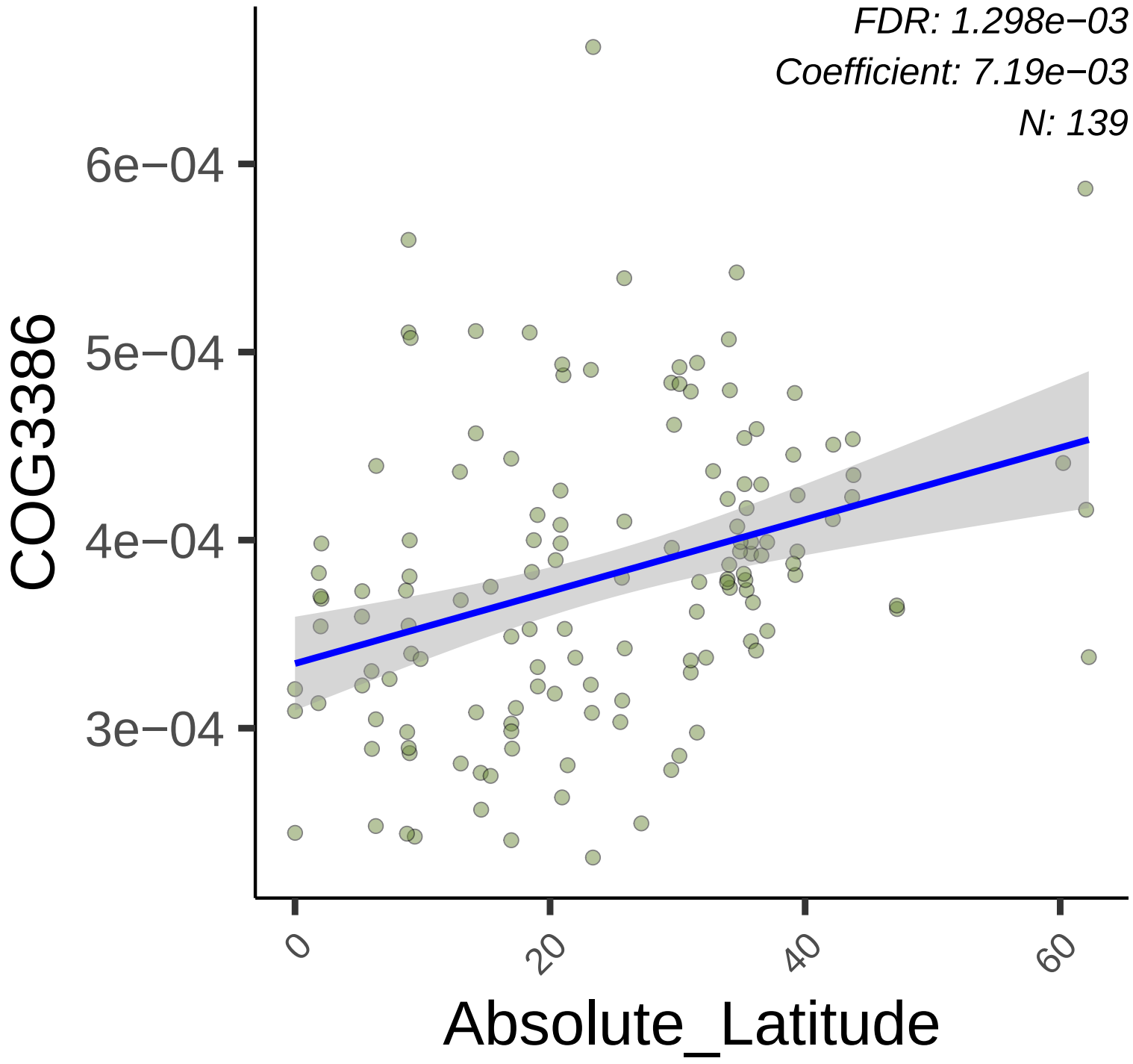

FDR: 1.232e−03
Coefficient: 5.67e−03
N: 139
0.0012
0.0010
0.0008
0.0006
COG3808
0
20
40
60
Absolute_Latitude

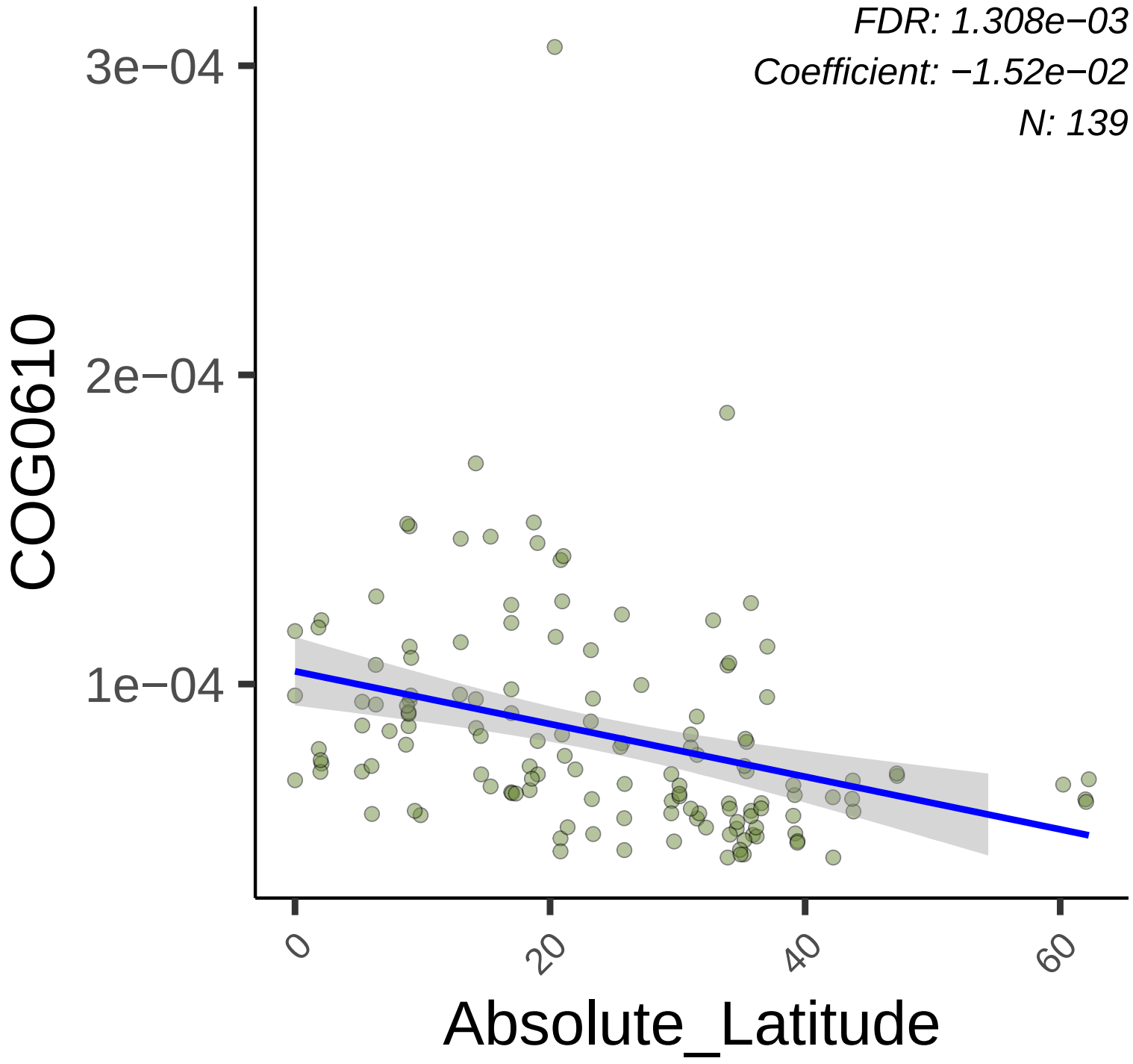

FDR: 1.260e−03
Coefficient: 5.60e−03
N: 139
1e−03
9e−04
8e−04
7e−04
6e−04
5e−04
COG1280
0
20
40
60
Absolute_Latitude

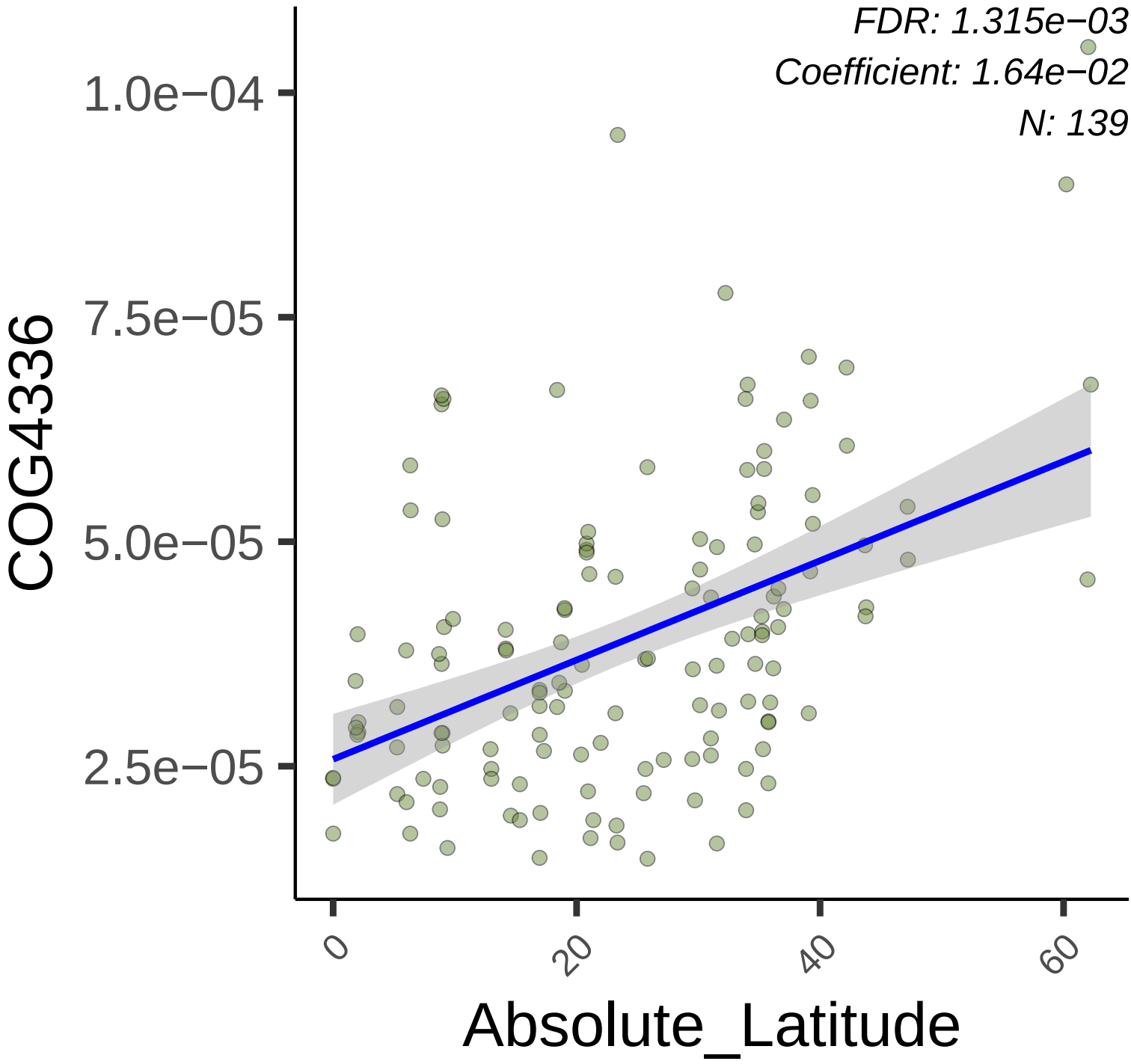

FDR: 1.260e−03
Coefficient: 5.08e−03
N: 139
0.00050
0.00045
0.00040
0.00035
0.00030
COG2151
0
20
40
60
Absolute_Latitude

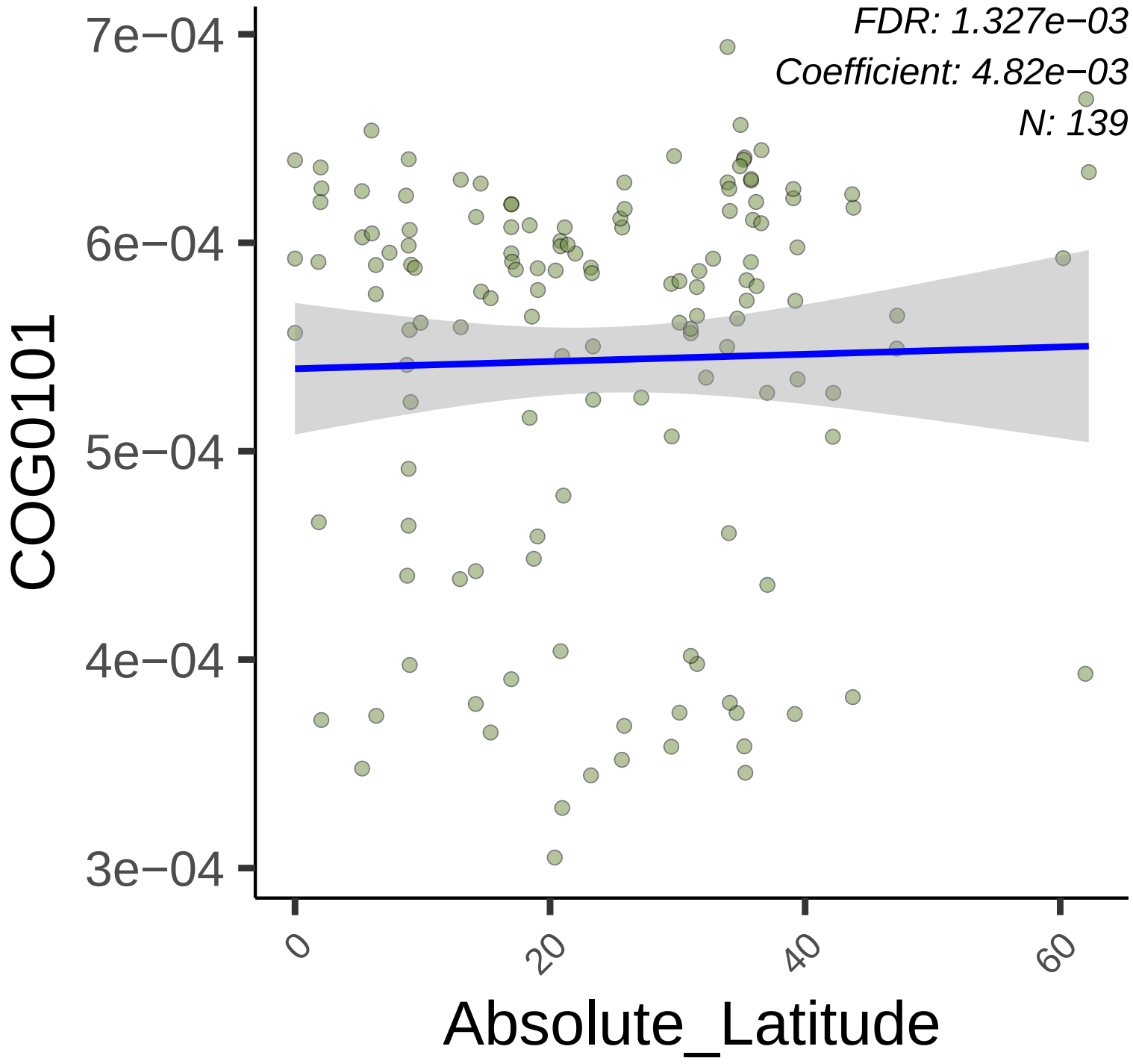

FDR: 1.268e−03
Coefficient: 7.32e−03
N: 139
8e−04
6e−04
4e−04
COG1840
0
20
40
60
Absolute_Latitude

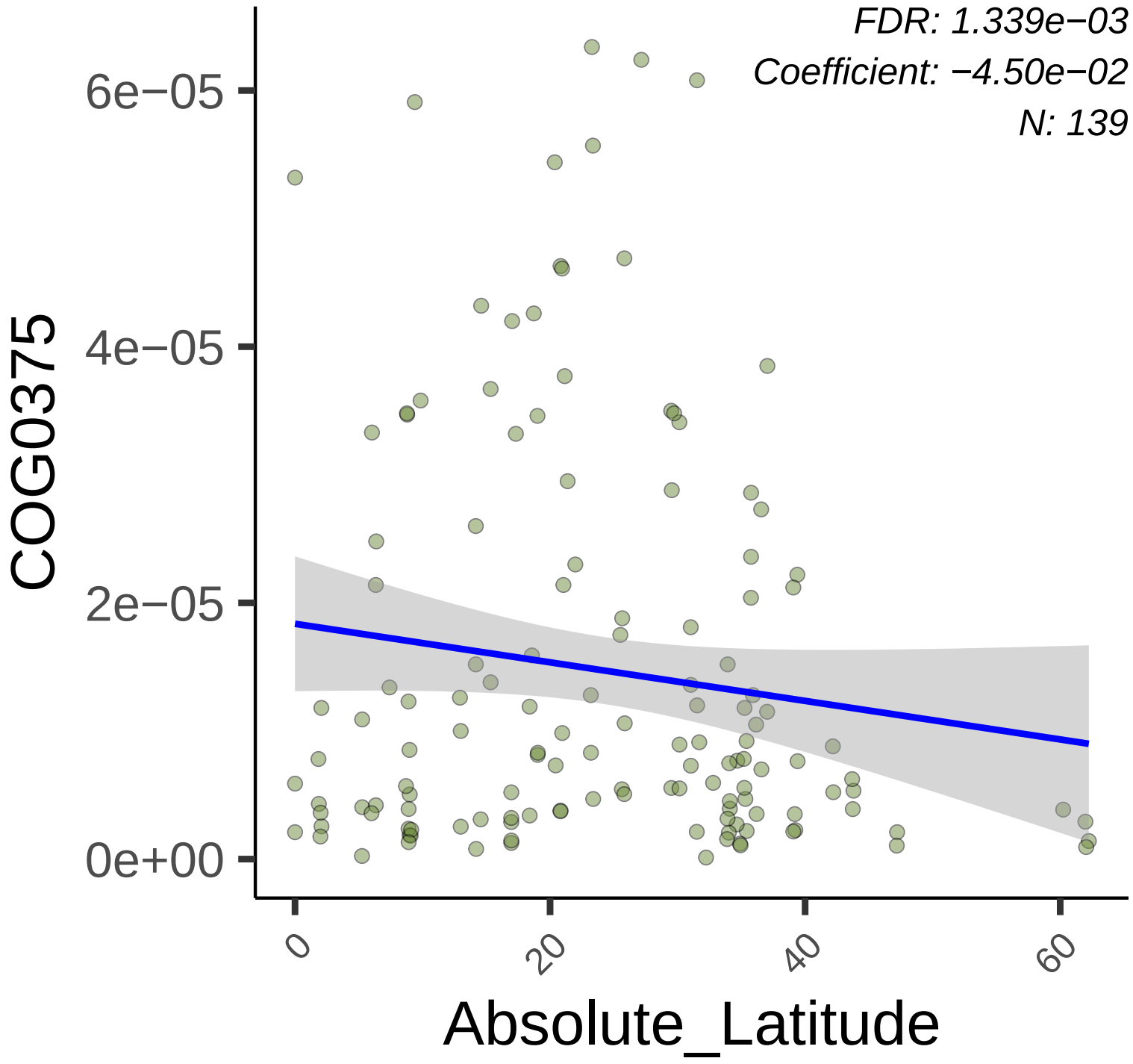

FDR: 1.294e−03
Coefficient: −3.99e−02
N: 139
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG4150
0
20
40
60
Absolute_Latitude

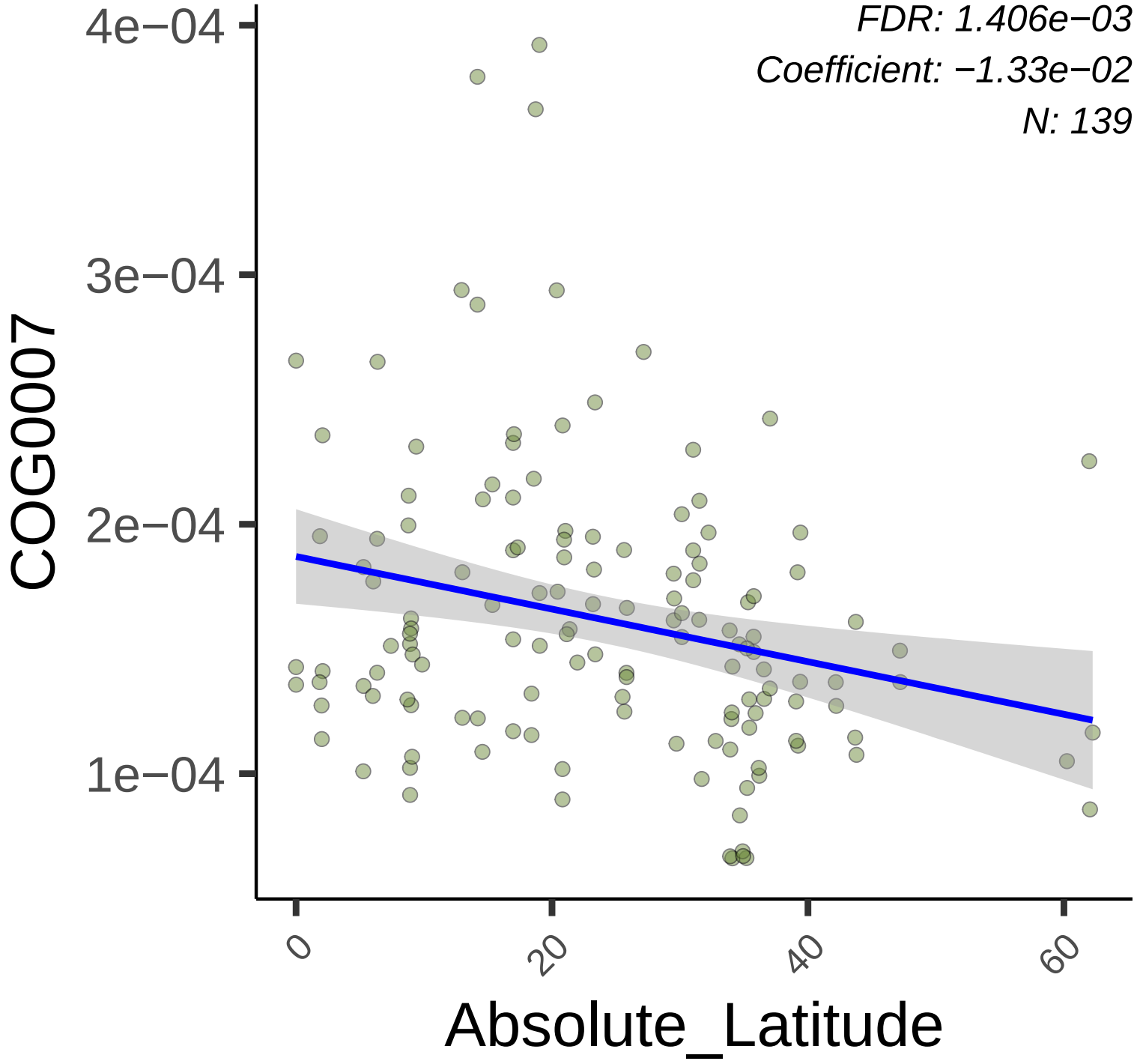

FDR: 1.298e−03
Coefficient: 7.19e−03
N: 139
COG3386
6e−04
5e−04
4e−04
3e−04
0
20
40
60
Absolute_Latitude

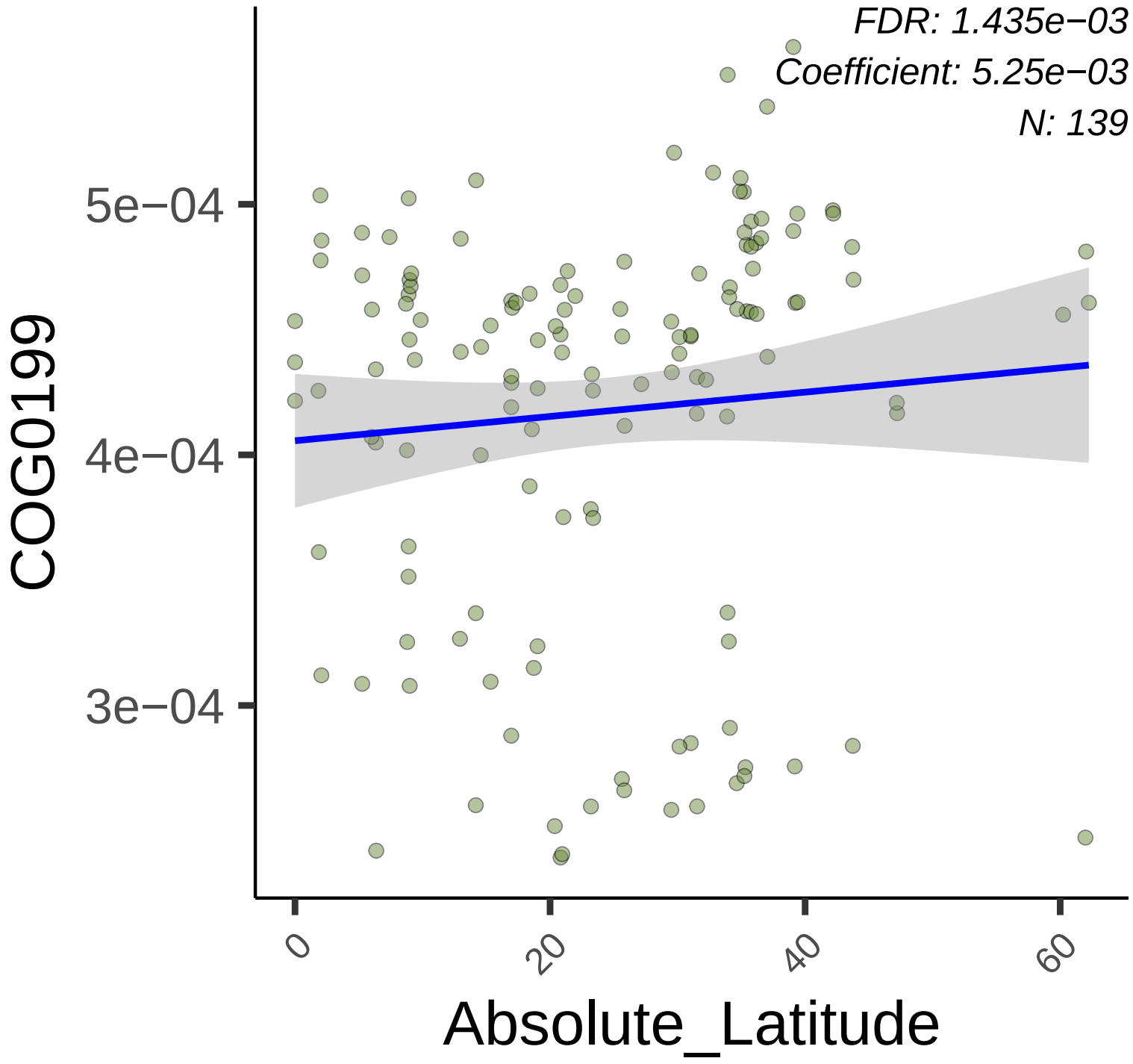

FDR: 1.308e−03
Coefficient: −1.52e−02
N: 139
3e−04
2e−04
1e−04
COG0610
0
20
40
60
Absolute_Latitude

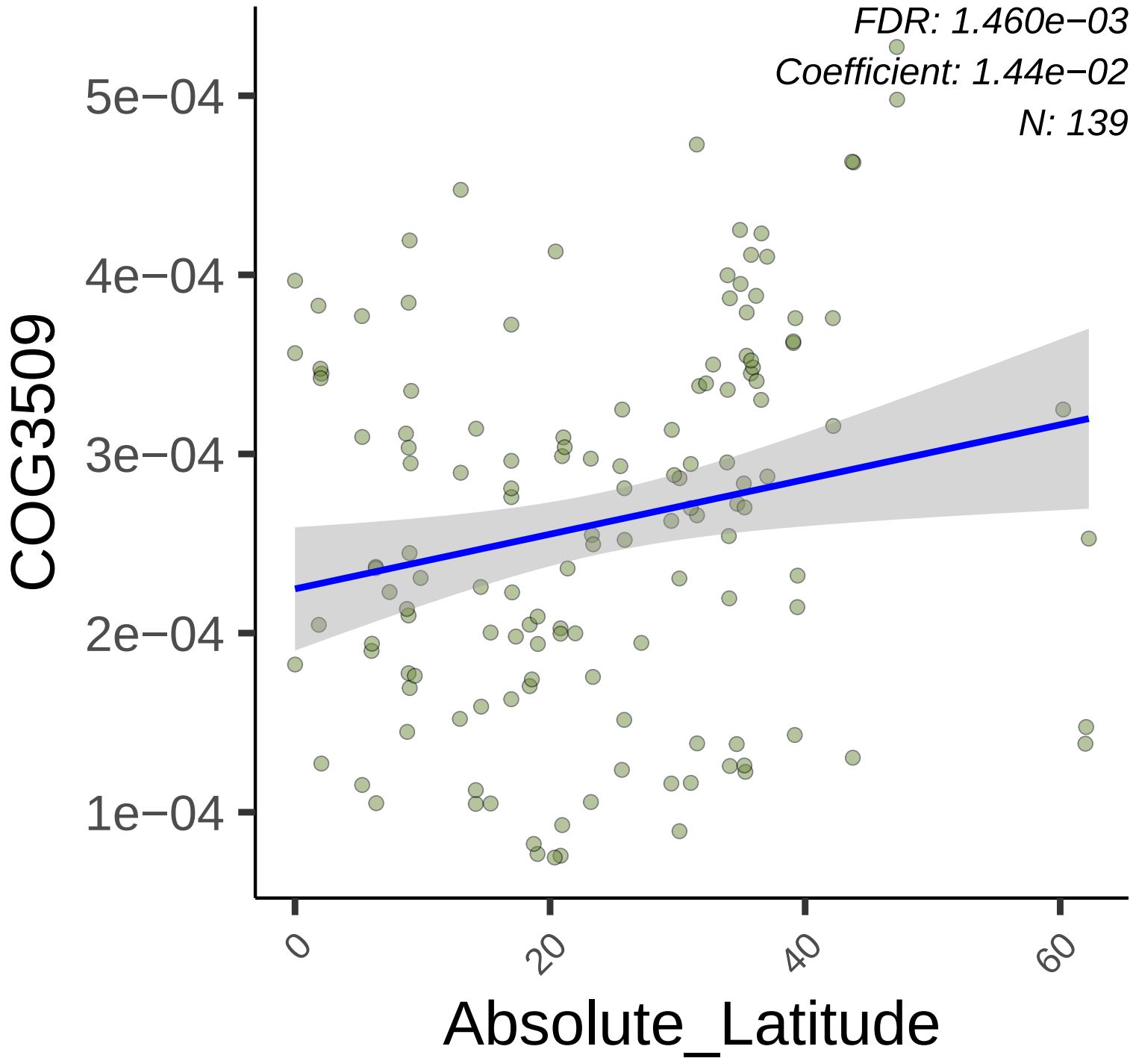

FDR: 1.315e−03
Coefficient: 1.64e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
COG4336
0
20
40
60
Absolute_Latitude

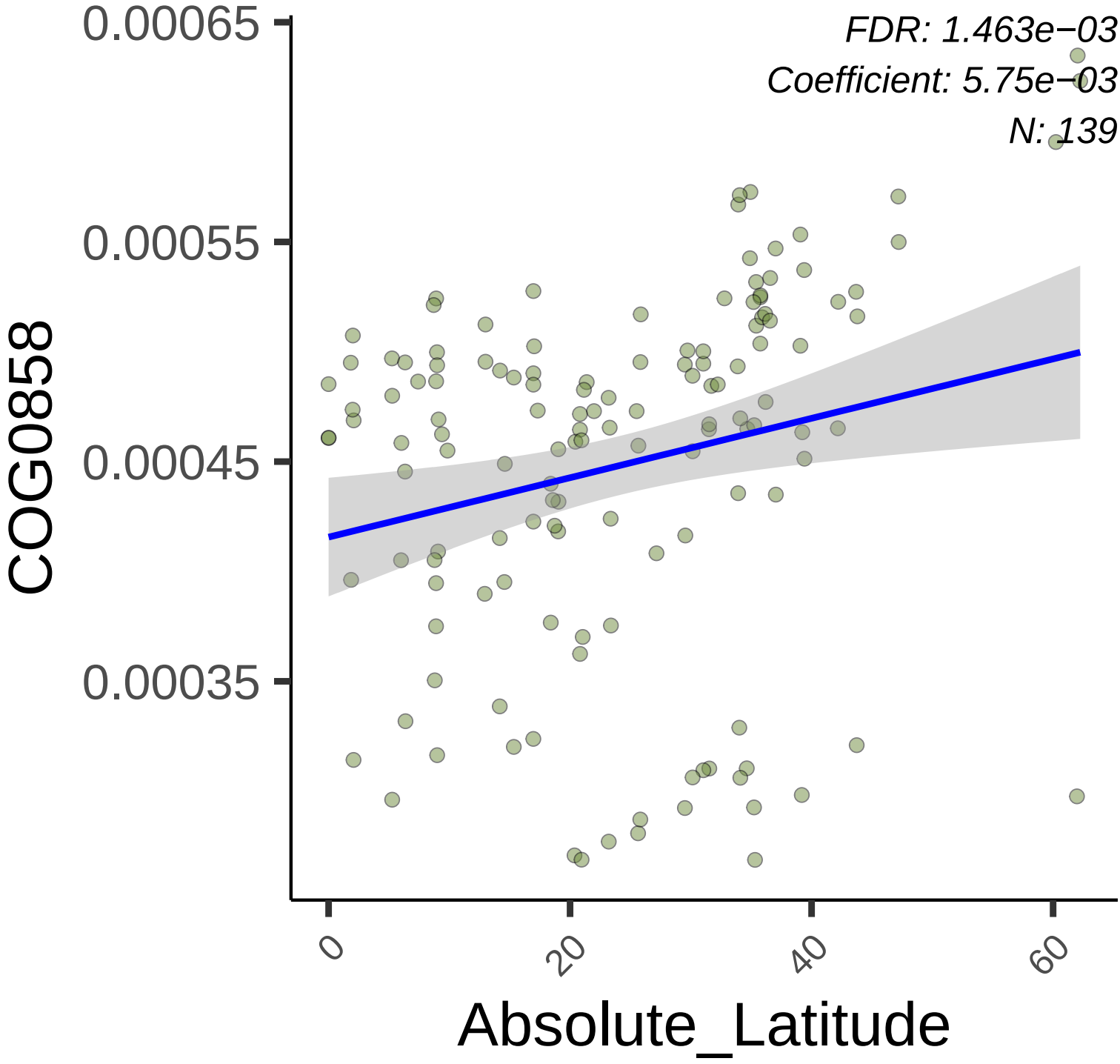

FDR: 1.327e−03
Coefficient: 4.82e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG0101
0
20
40
60
Absolute_Latitude

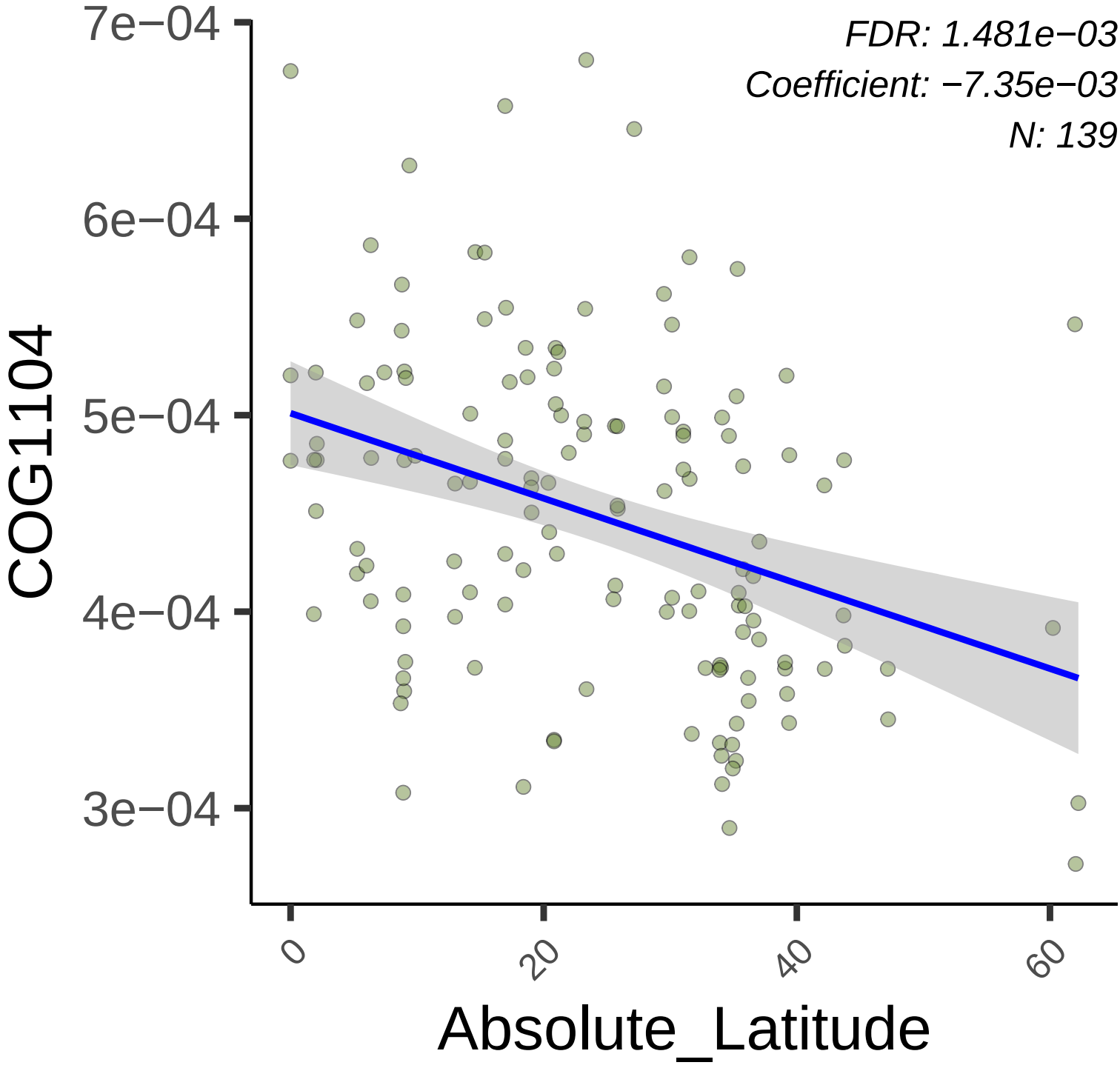

FDR: 1.339e−03
Coefficient: −4.50e−02
N: 139
COG0375
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

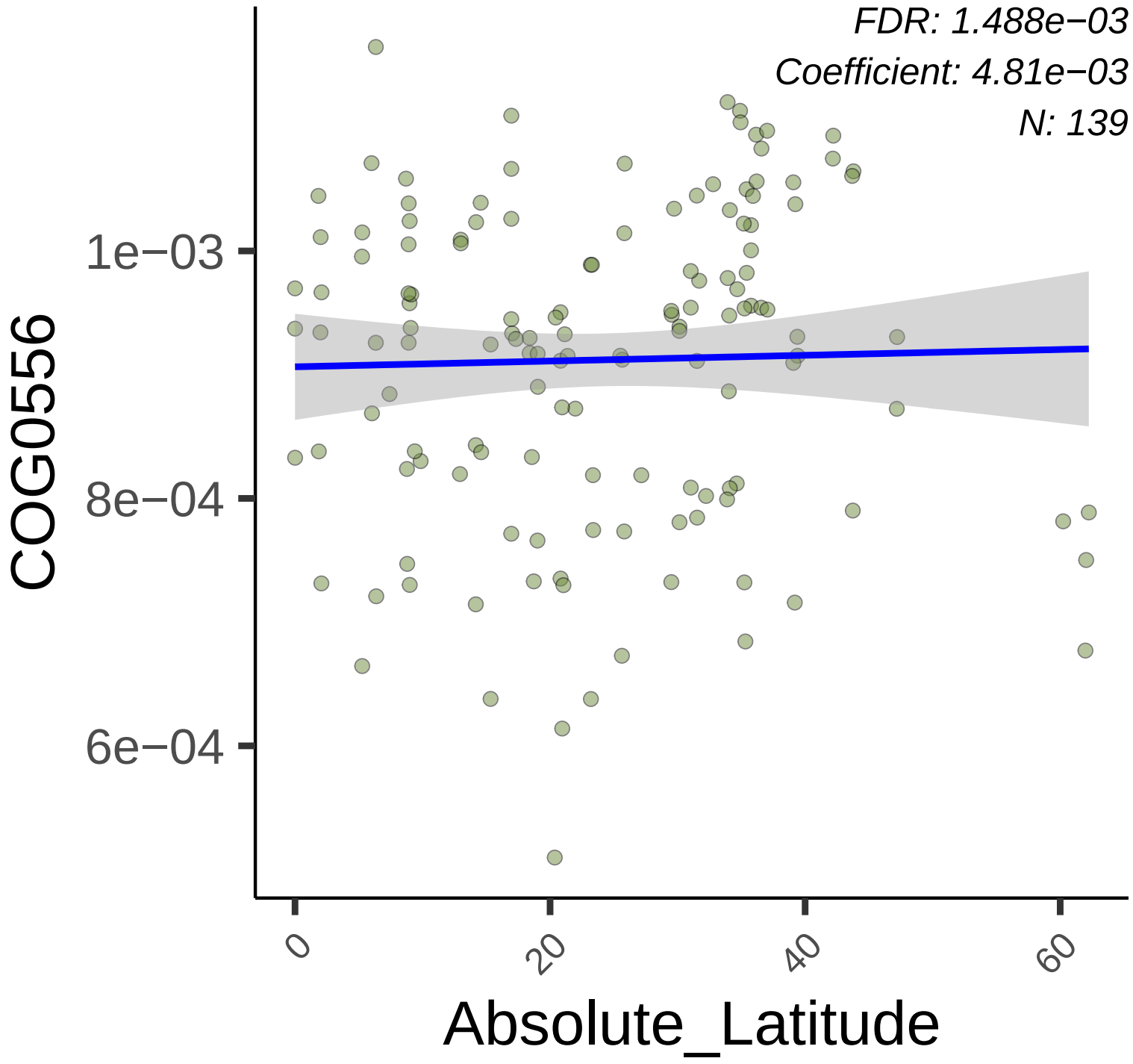

FDR: 1.406e−03
Coefficient: −1.33e−02
N: 139
4e−04
3e−04
2e−04
1e−04
COG0007
0
20
40
60
Absolute_Latitude

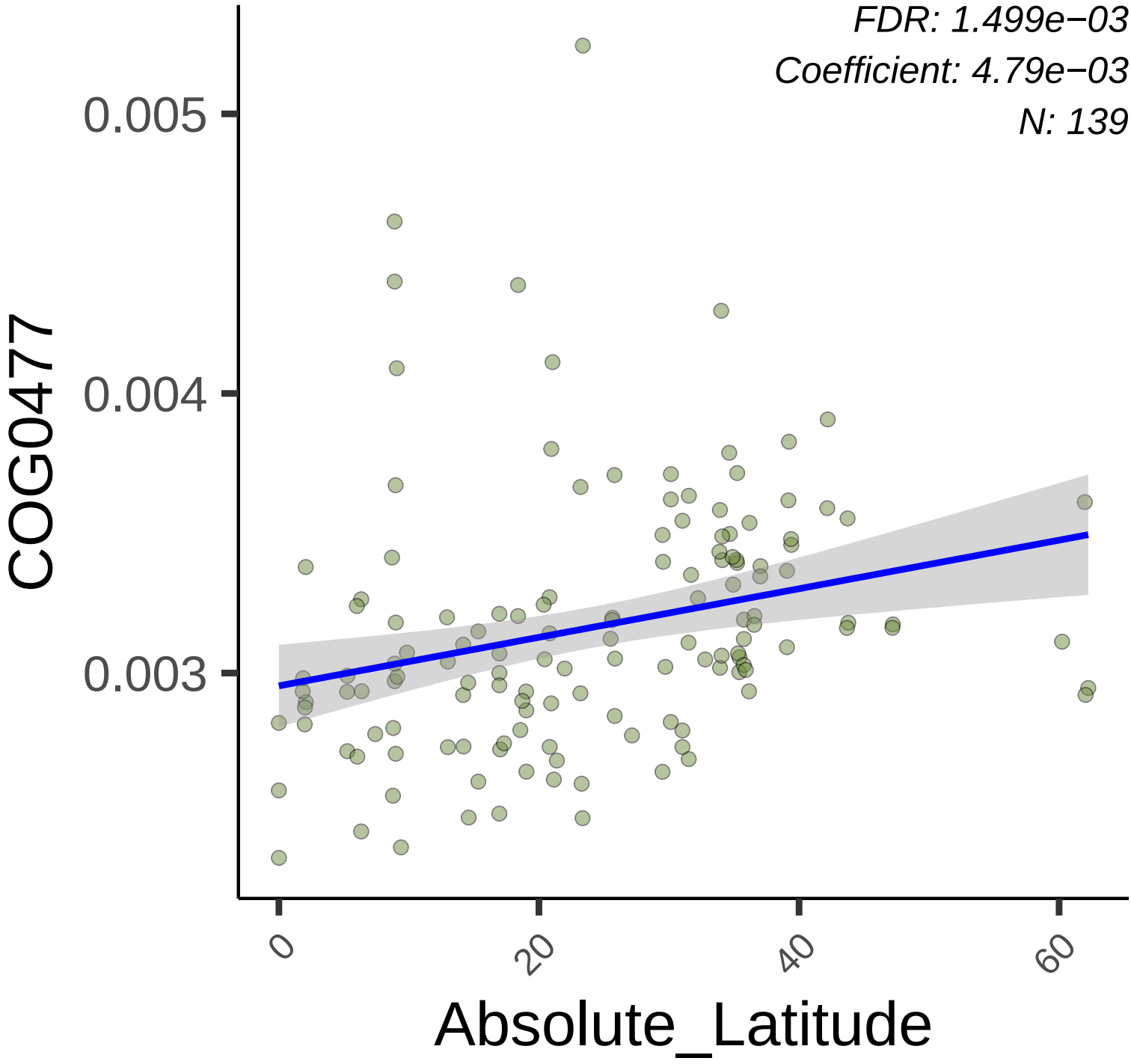

FDR: 1.435e−03
Coefficient: 5.25e−03
N: 139
5e−04
4e−04
3e−04
COG0199
0
20
40
60
Absolute_Latitude

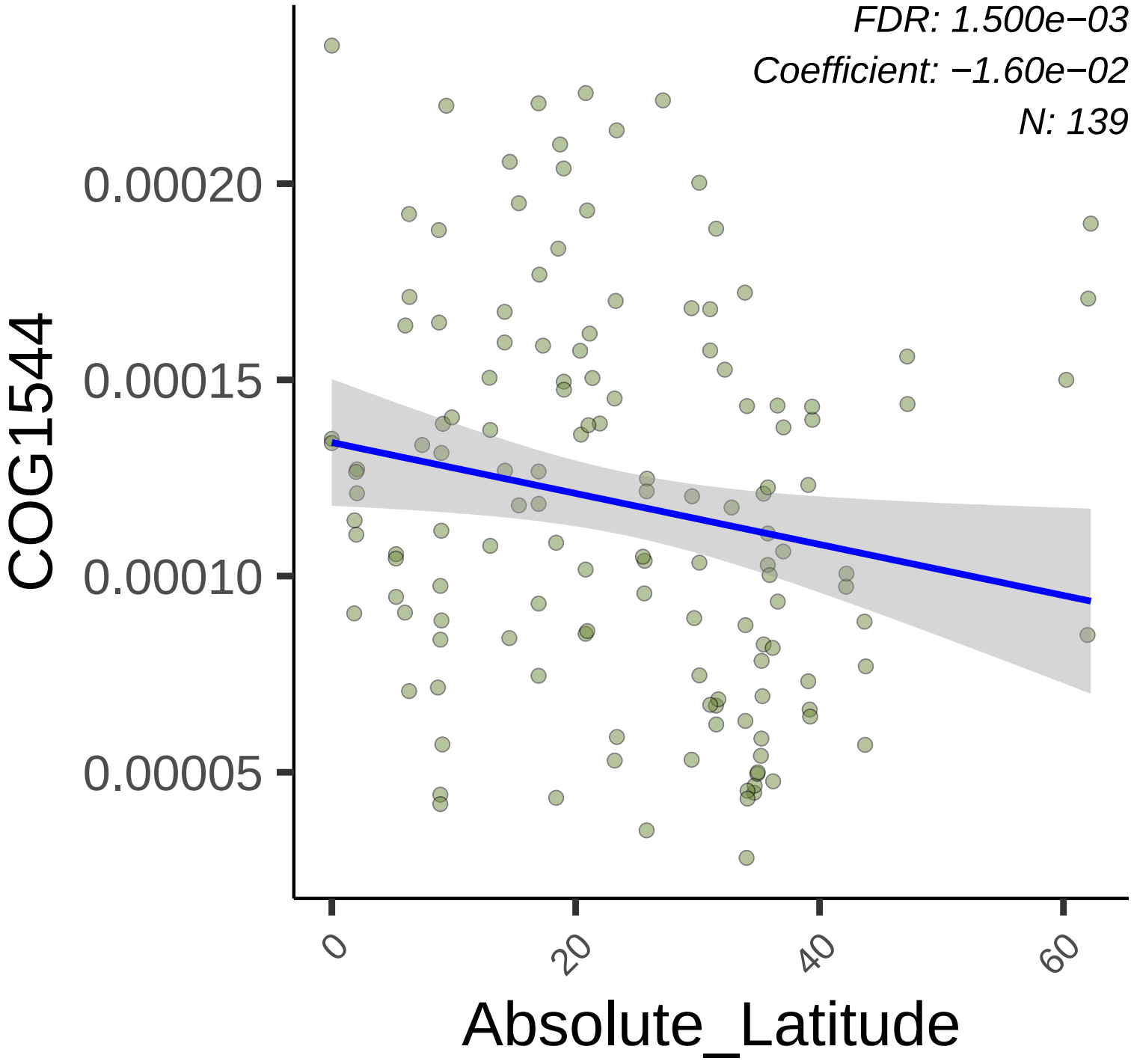

FDR: 1.460e−03
Coefficient: 1.44e−02
N: 139
COG3509
5e−04
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

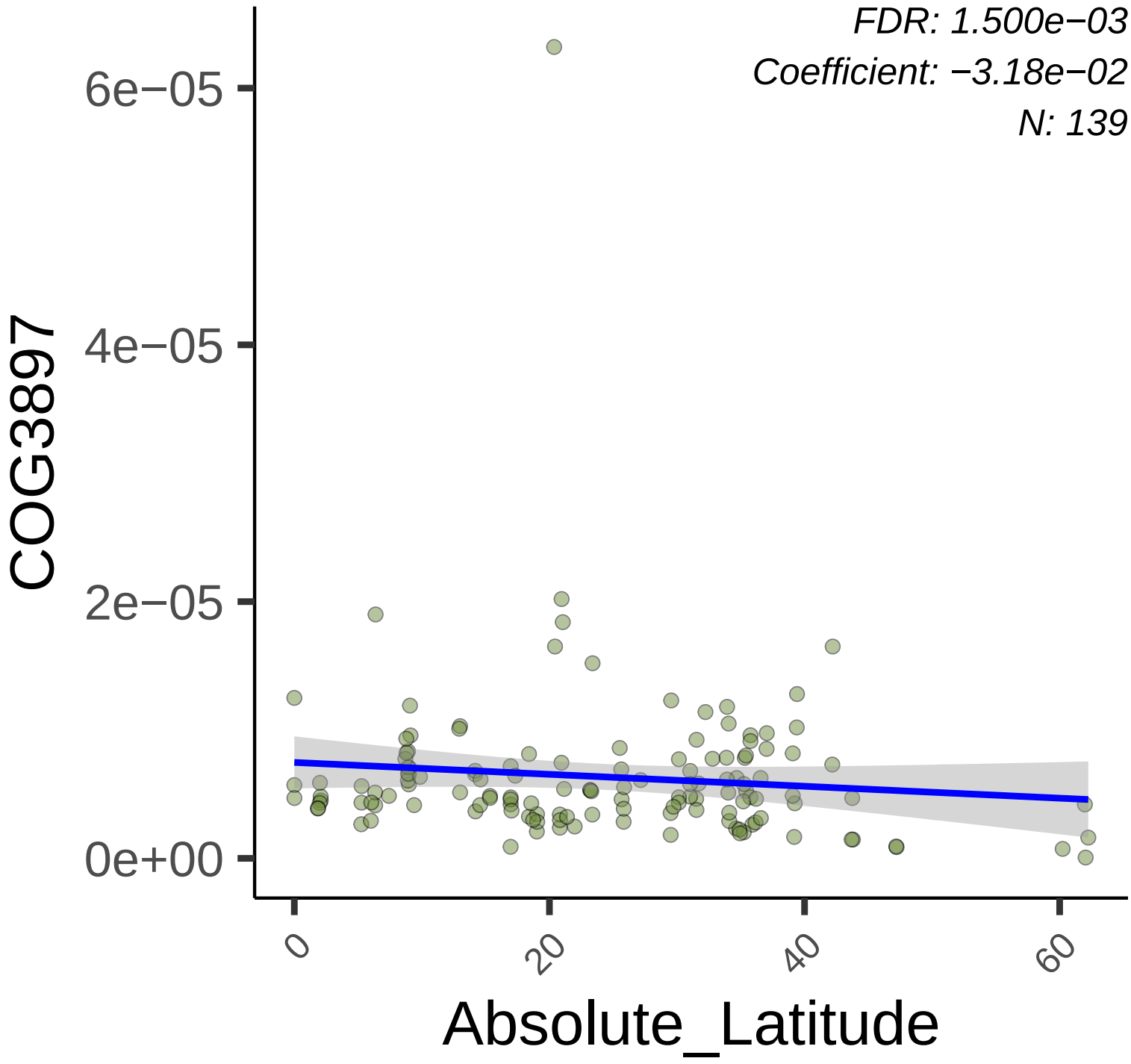

FDR: 1.463e−03
Coefficient: 5.75e−03
N: 139
0.00065
0.00055
0.00045
0.00035
COG0858
0
20
40
60
Absolute_Latitude

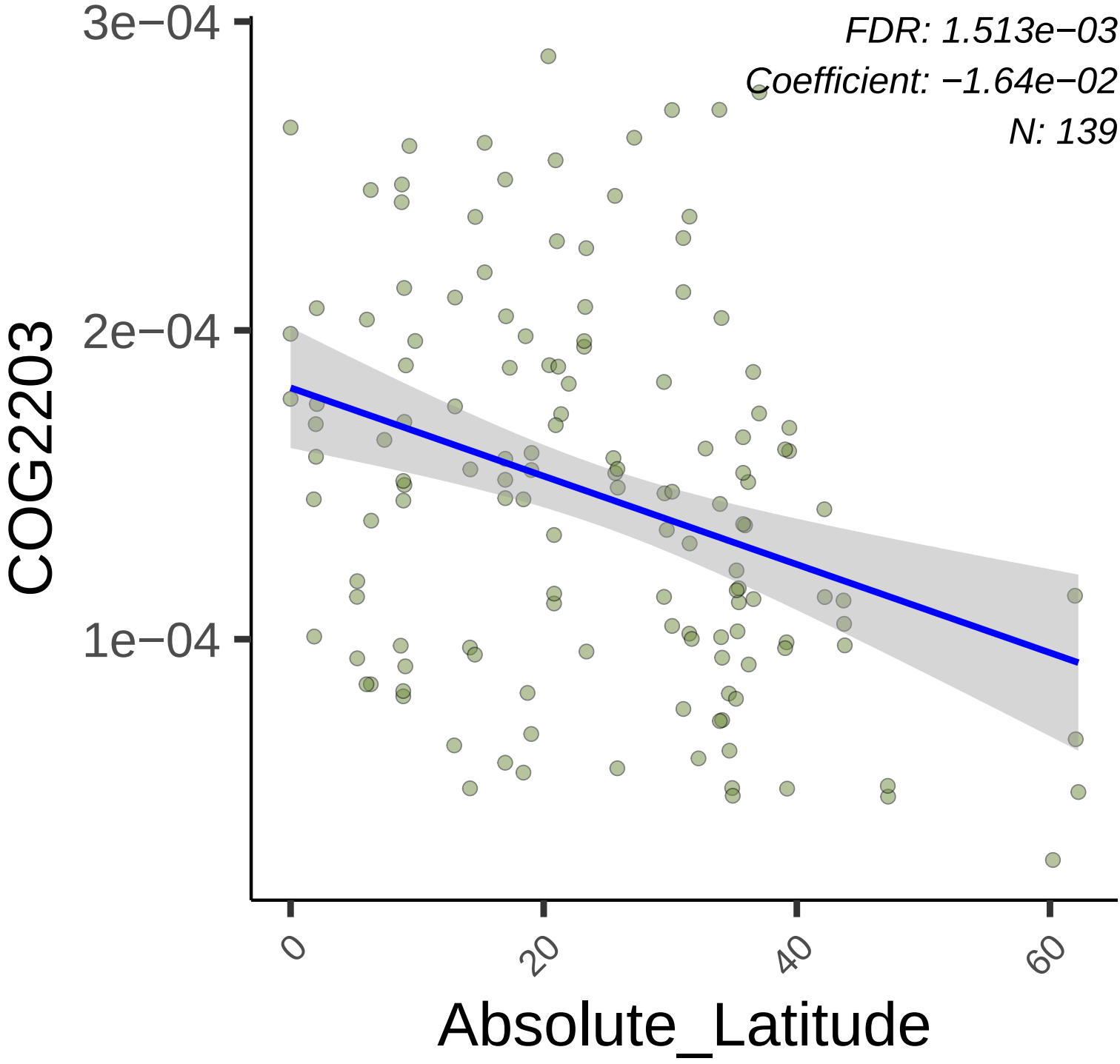

FDR: 1.481e−03
Coefficient: −7.35e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG1104
0
20
40
60
Absolute_Latitude

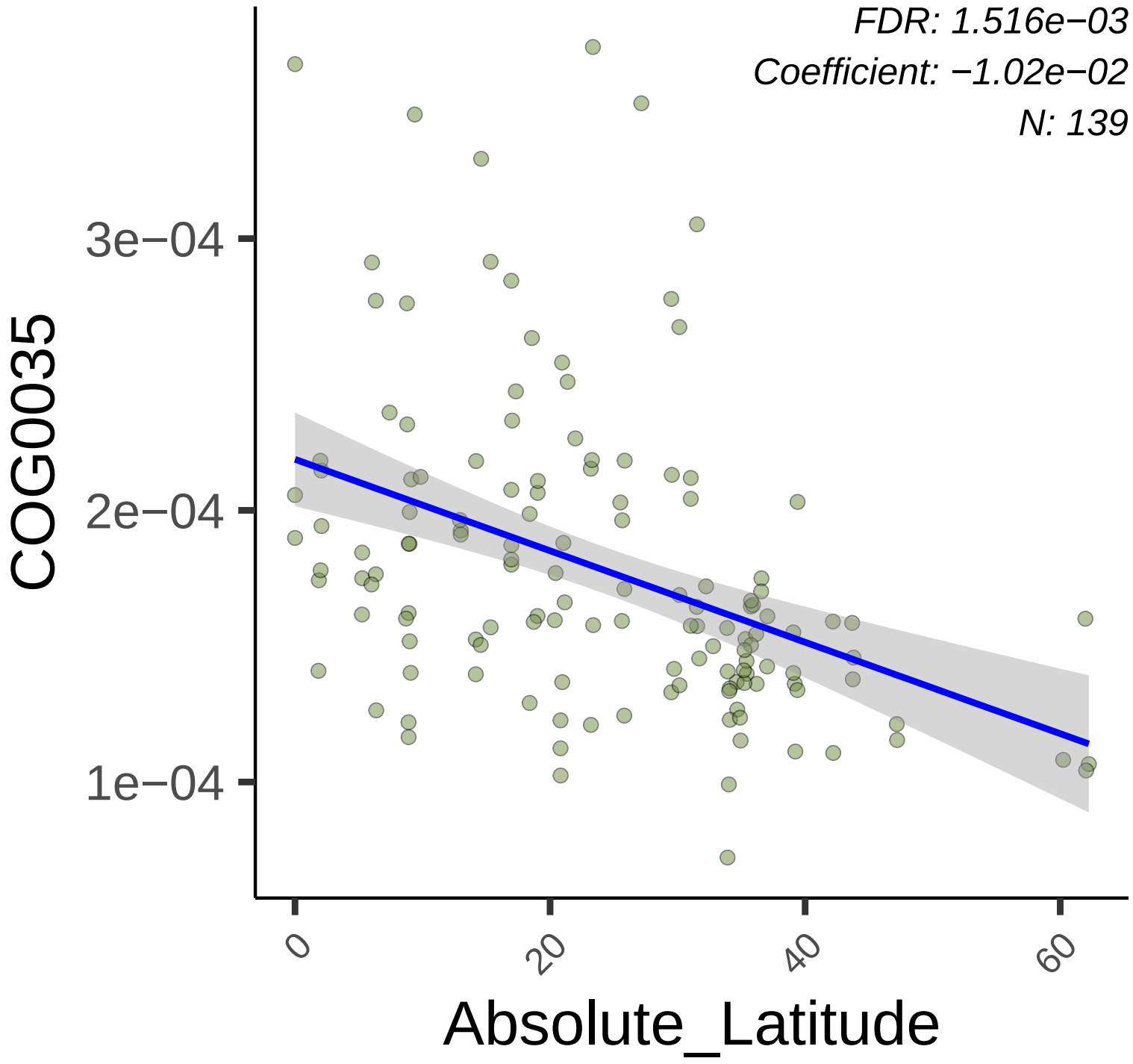

FDR: 1.488e−03
Coefficient: 4.81e−03
N: 139
COG0556
1e−03
8e−04
6e−04
0
20
40
60
Absolute_Latitude

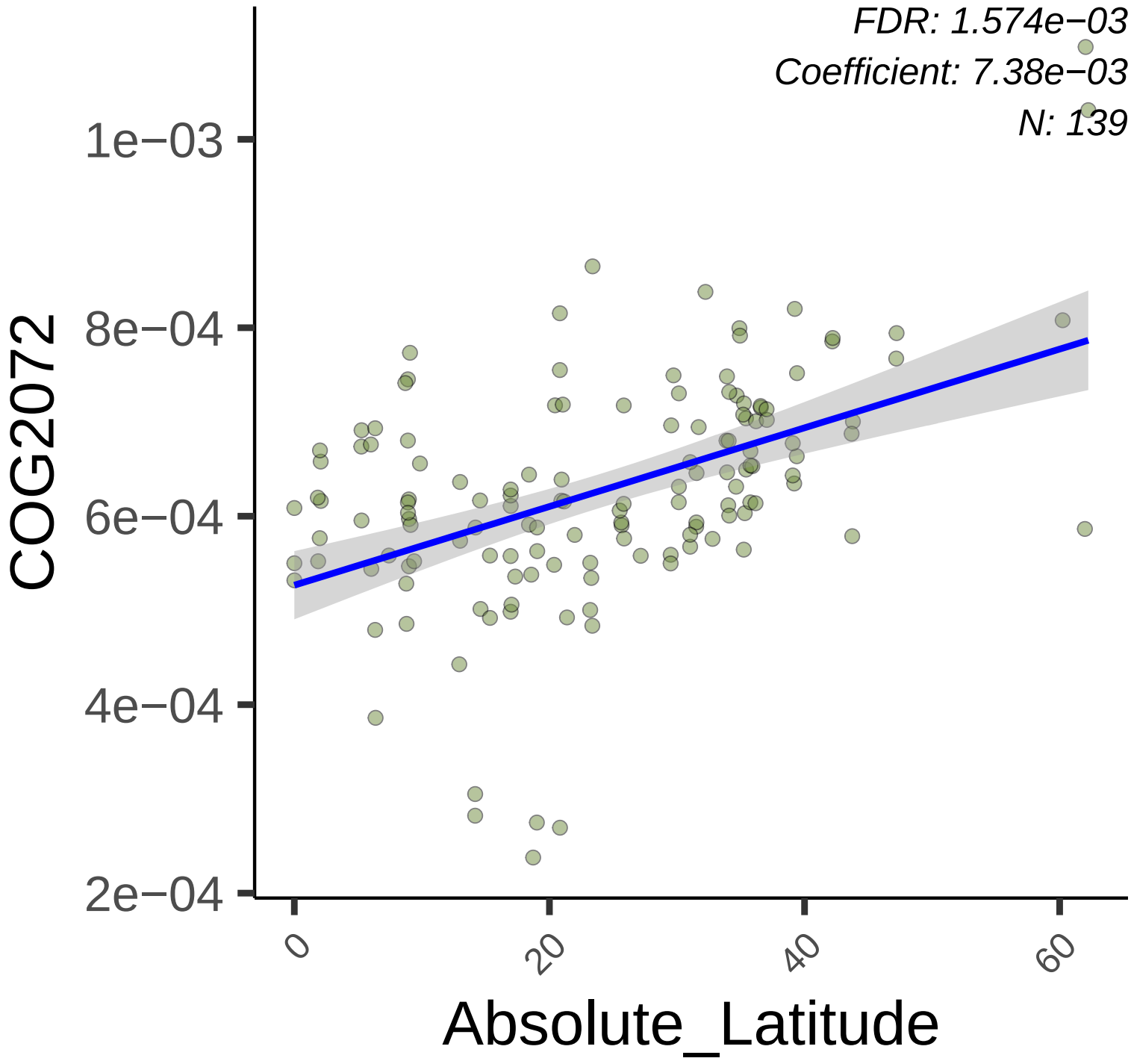

FDR: 1.499e−03
Coefficient: 4.79e−03
N: 139
0.005
0.004
0.003
COG0477
0
20
40
60
Absolute_Latitude

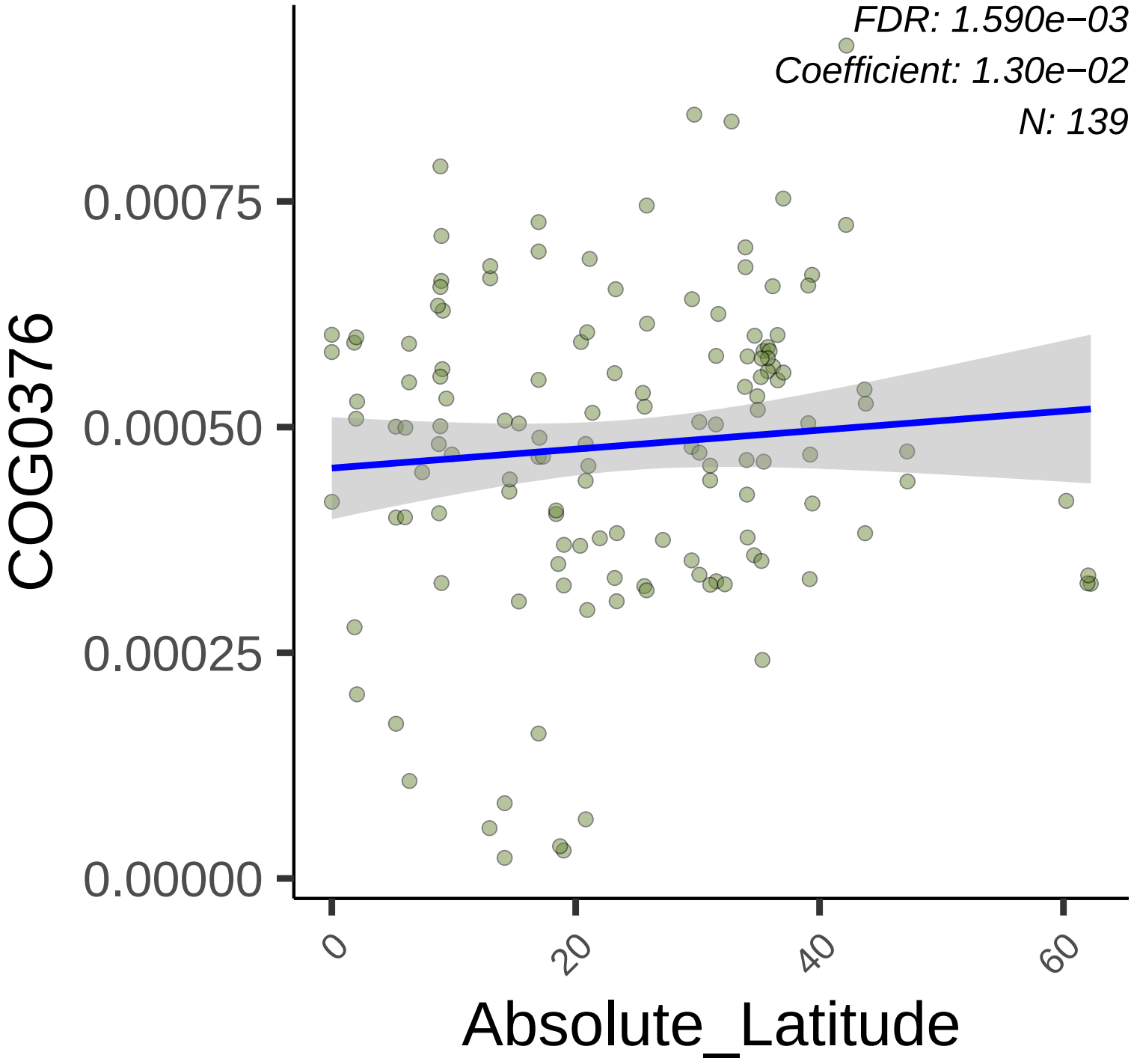

FDR: 1.500e−03
Coefficient: −1.60e−02
N: 139
COG1544
0.00020
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

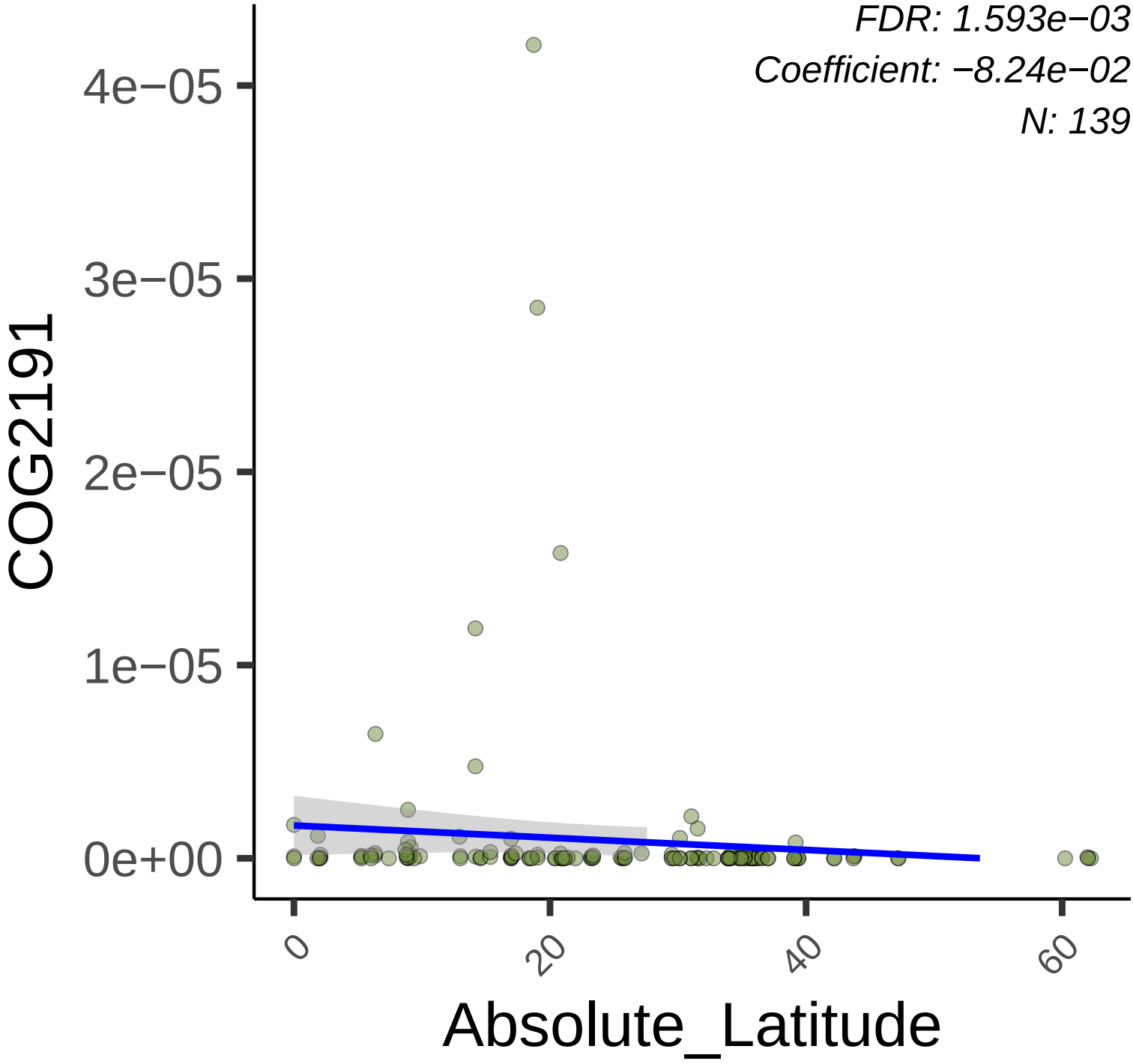

FDR: 1.500e−03
Coefficient: −3.18e−02
N: 139
COG3897
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

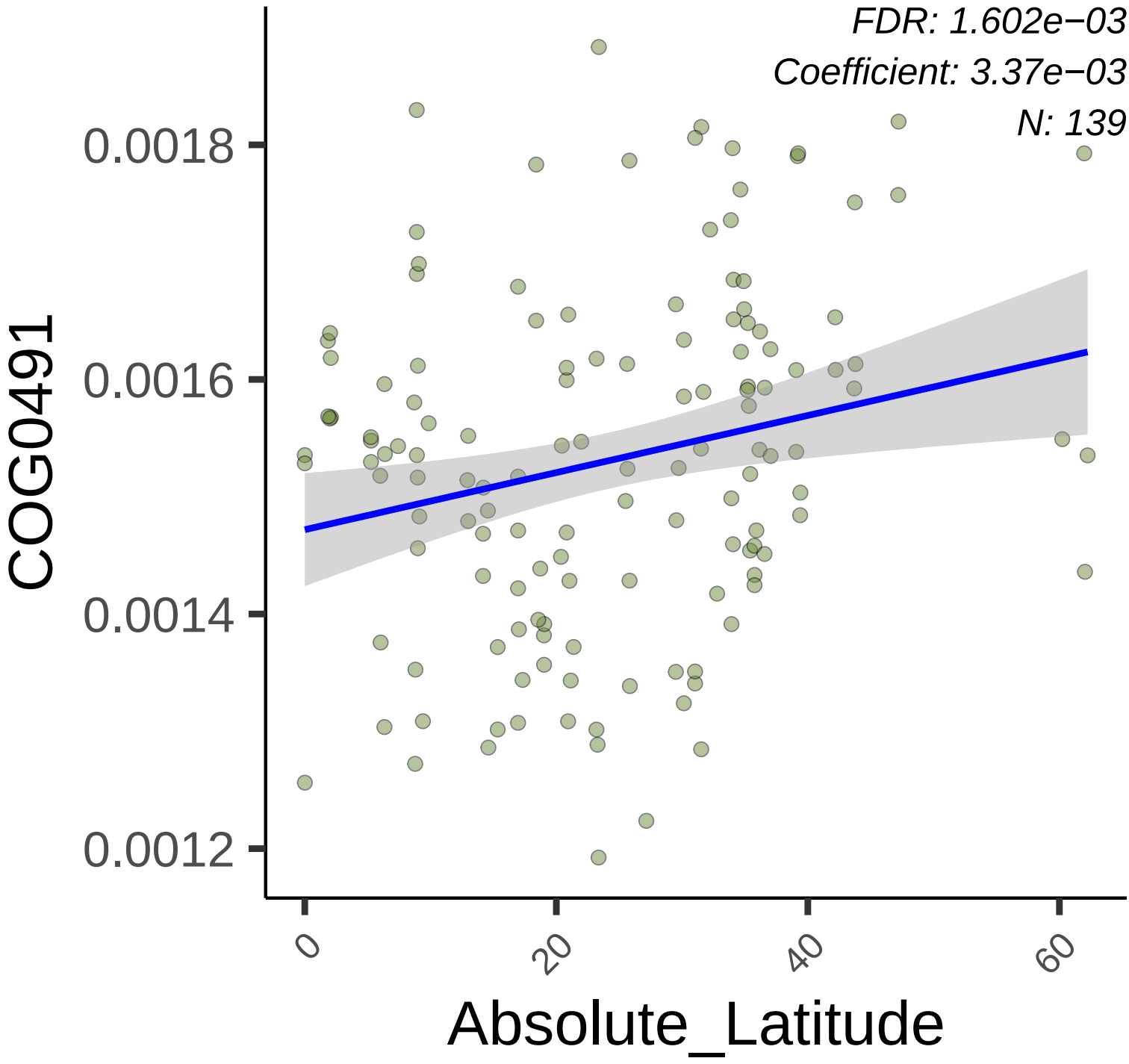

FDR: 1.513e−03
Coefficient: −1.64e−02
N: 139
3e−04
2e−04
1e−04
COG2203
0
20
40
60
Absolute_Latitude

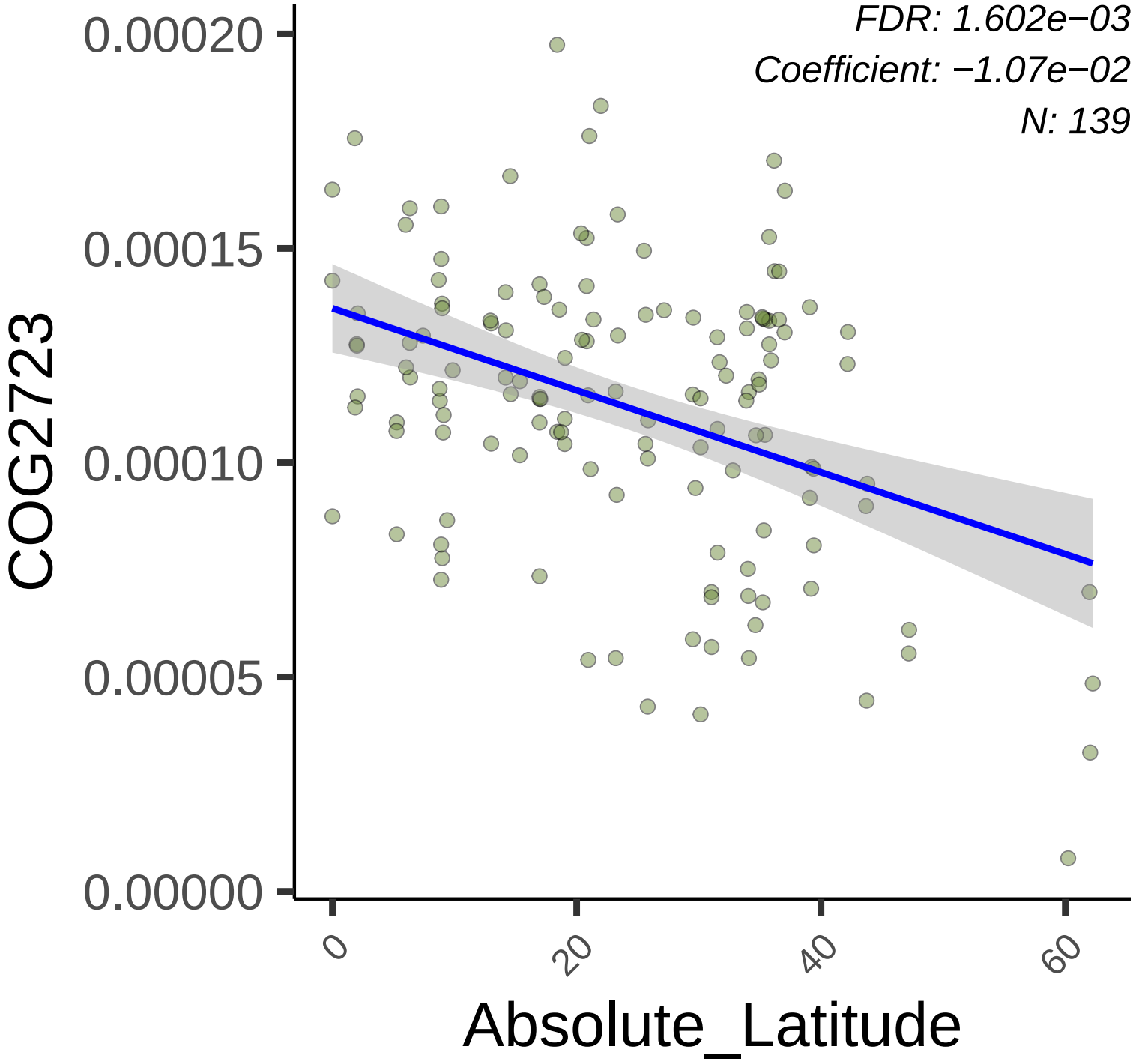

FDR: 1.516e−03
Coefficient: −1.02e−02
N: 139
COG0035
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

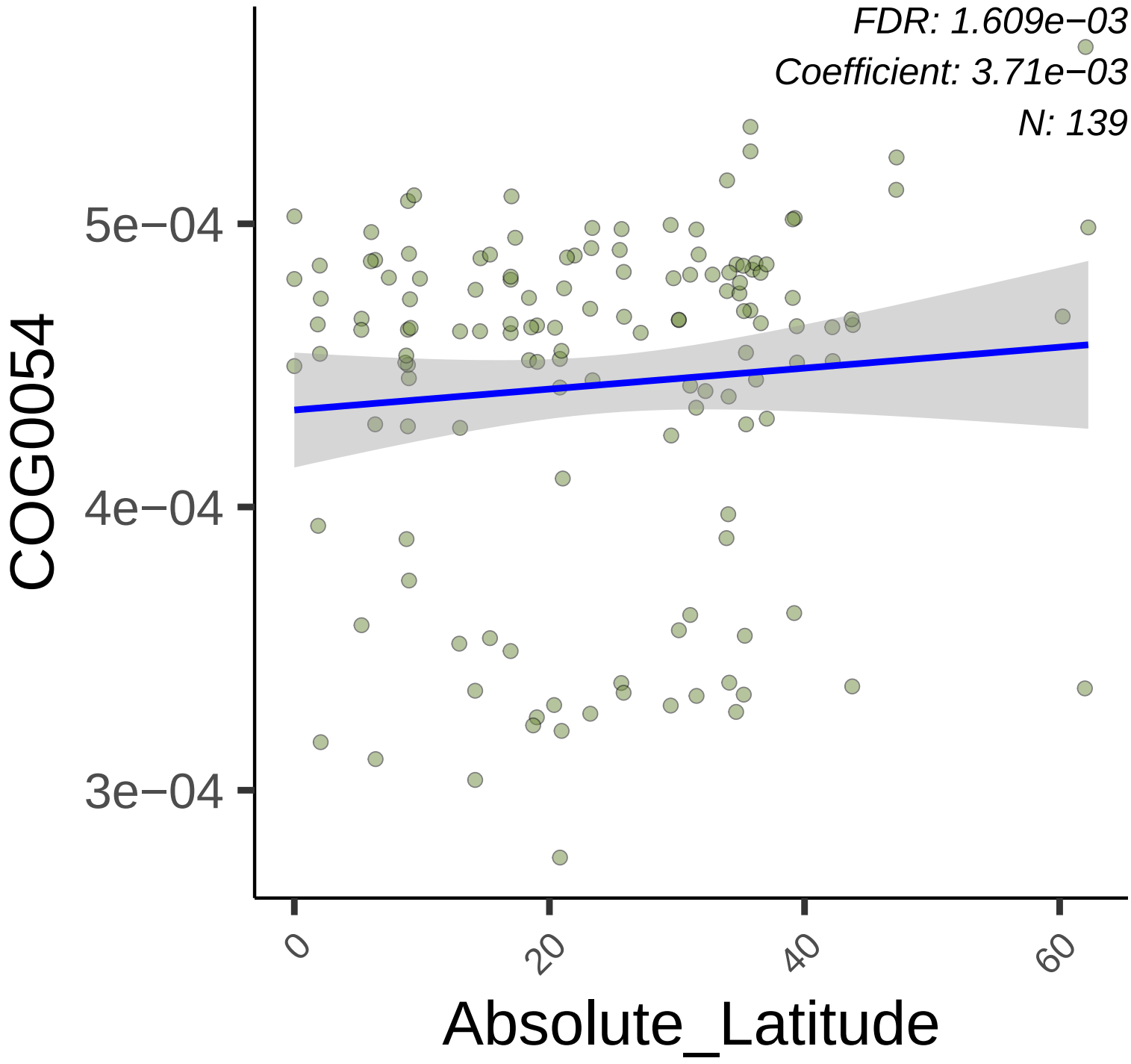

FDR: 1.574e−03
Coefficient: 7.38e−03
N: 139
1e−03
8e−04
6e−04
4e−04
2e−04
COG2072
0
20
40
60
Absolute_Latitude

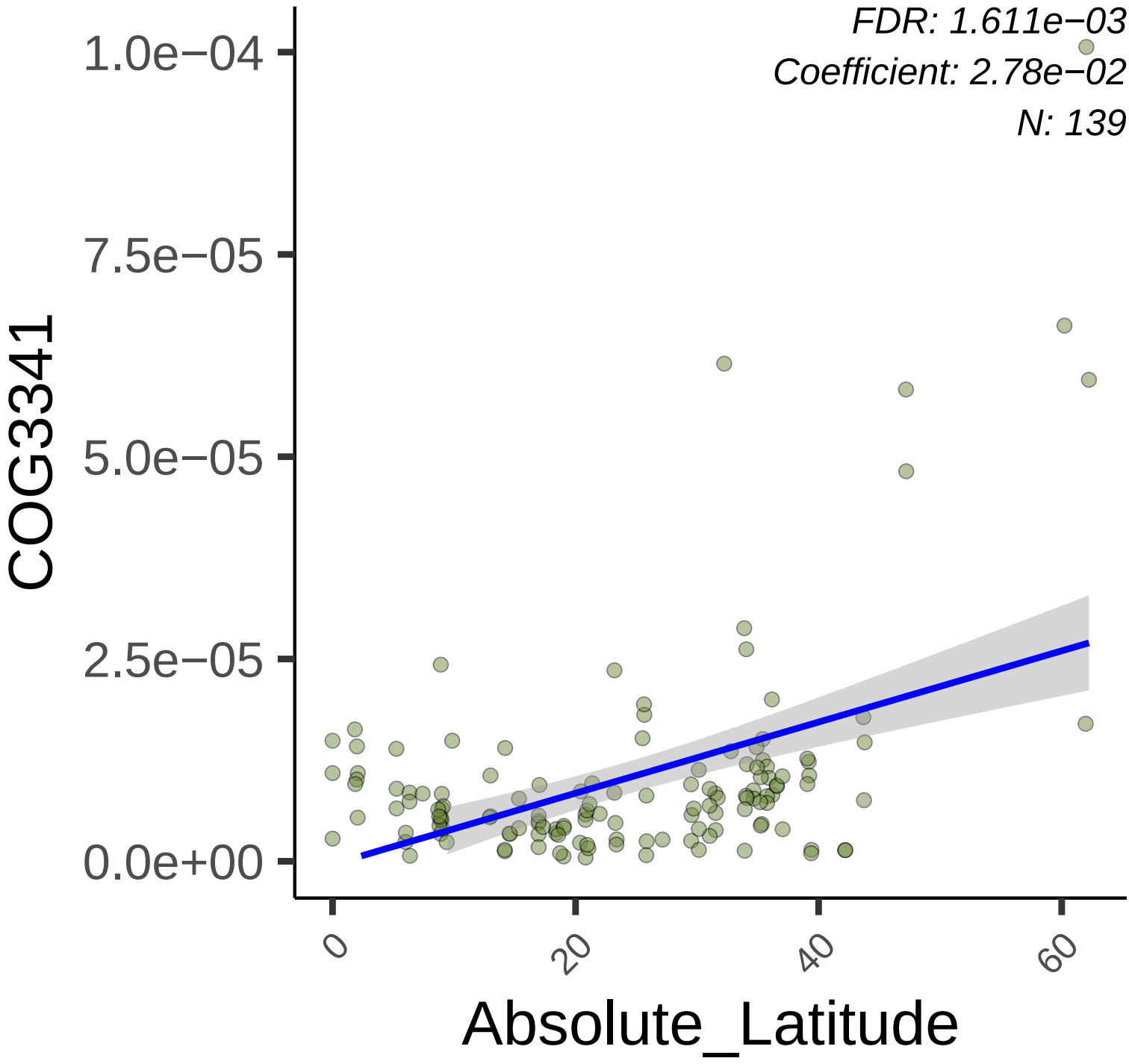

FDR: 1.590e−03
Coefficient: 1.30e−02
N: 139
0.00075
0.00050
0.00025
0.00000
COG0376
0
20
40
60
Absolute_Latitude

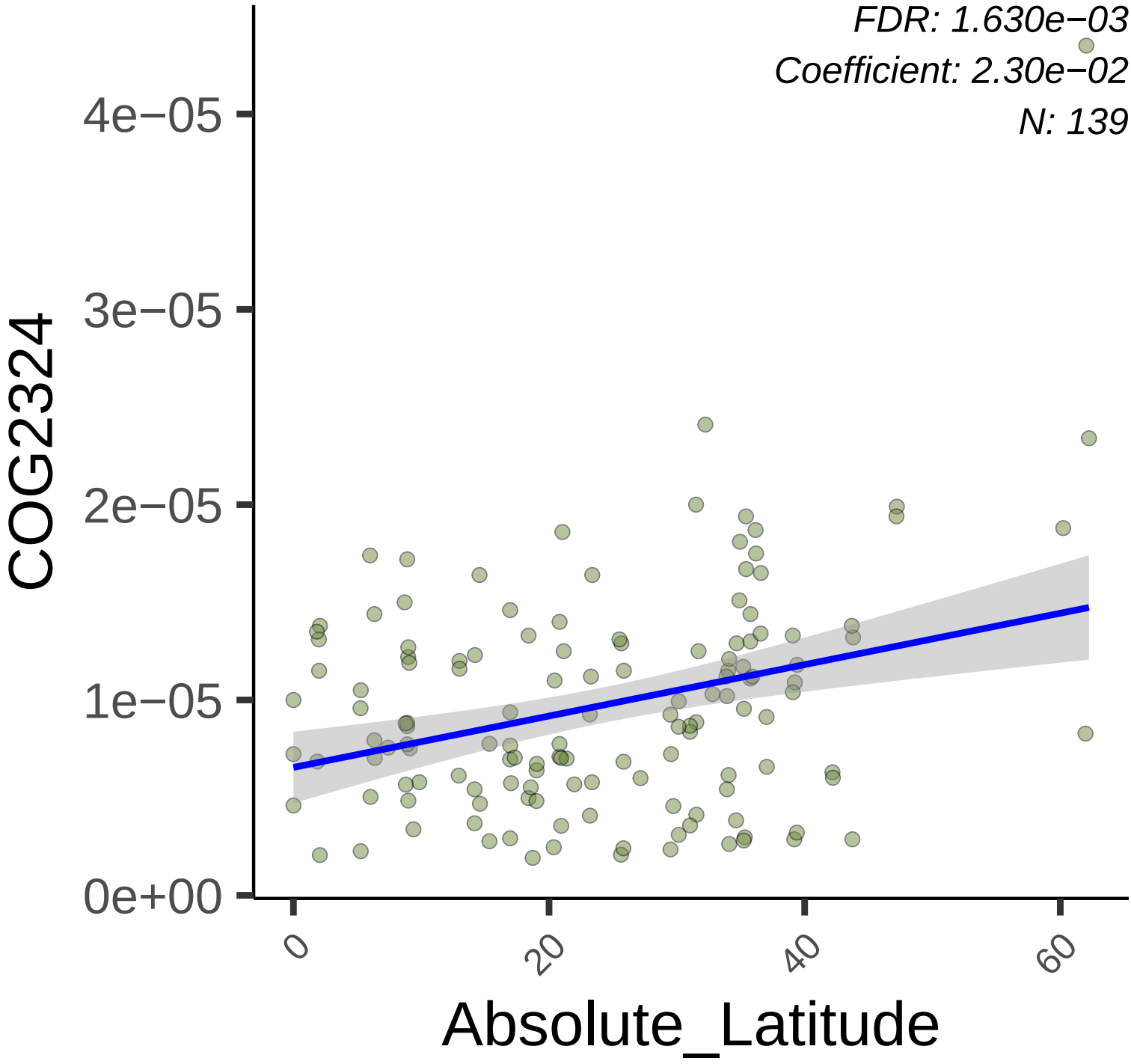

FDR: 1.593e−03
Coefficient: −8.24e−02
N: 139
COG2191
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

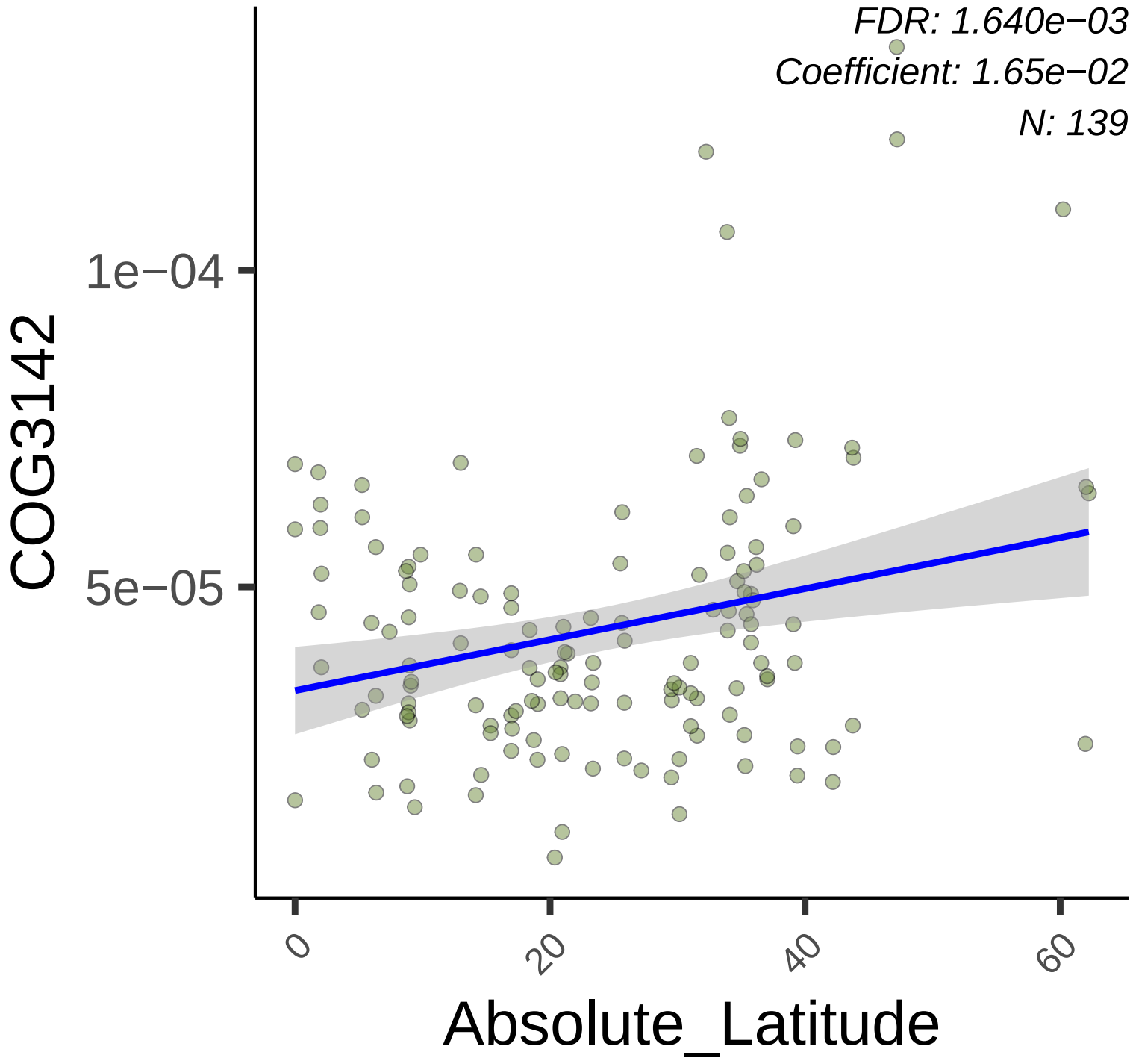

FDR: 1.602e−03
Coefficient: 3.37e−03
N: 139
COG0491
0.0018
0.0016
0.0014
0.0012
0
20
40
60
Absolute_Latitude

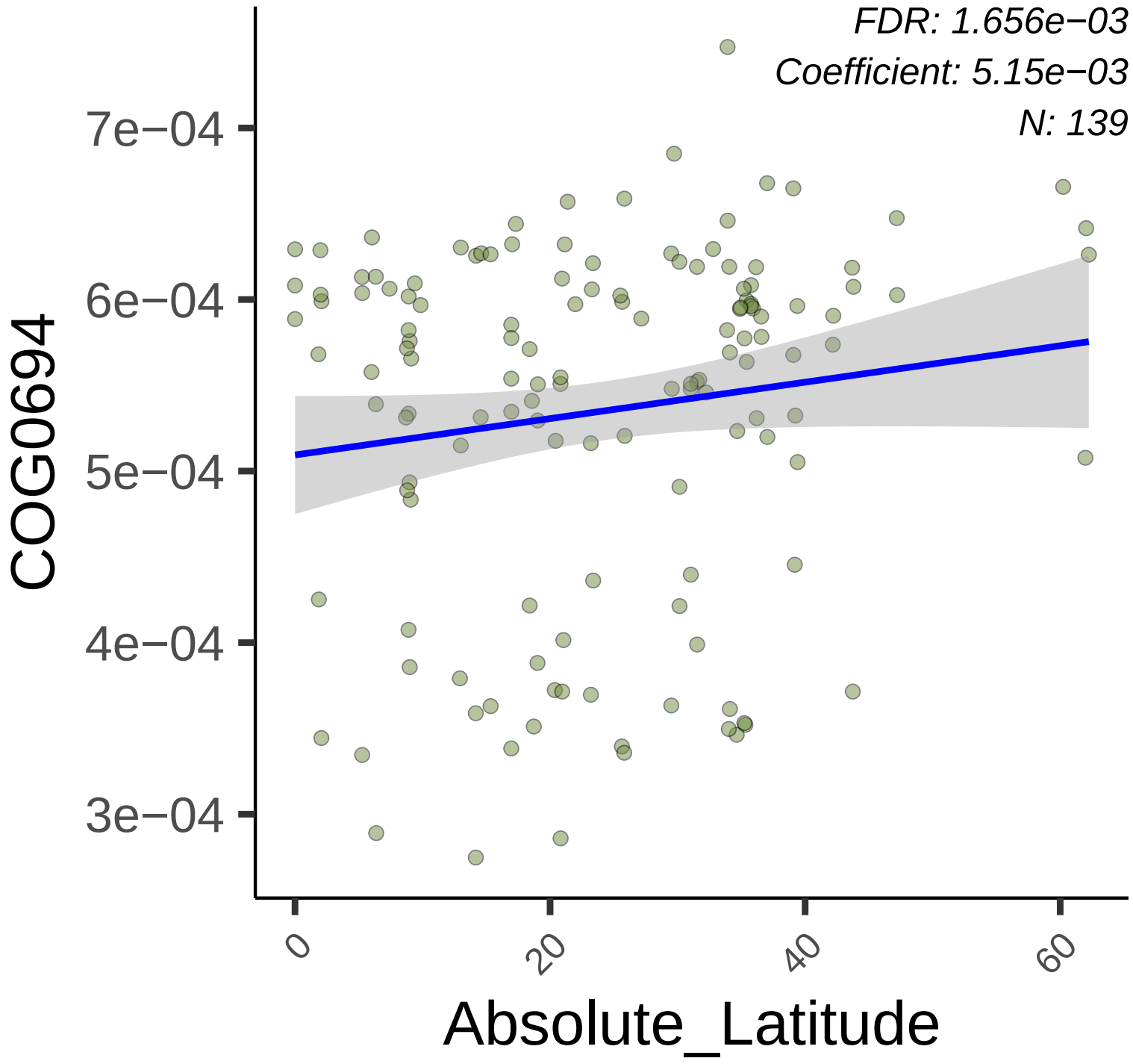

FDR: 1.602e−03
Coefficient: −1.07e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG2723
0
20
40
60
Absolute_Latitude

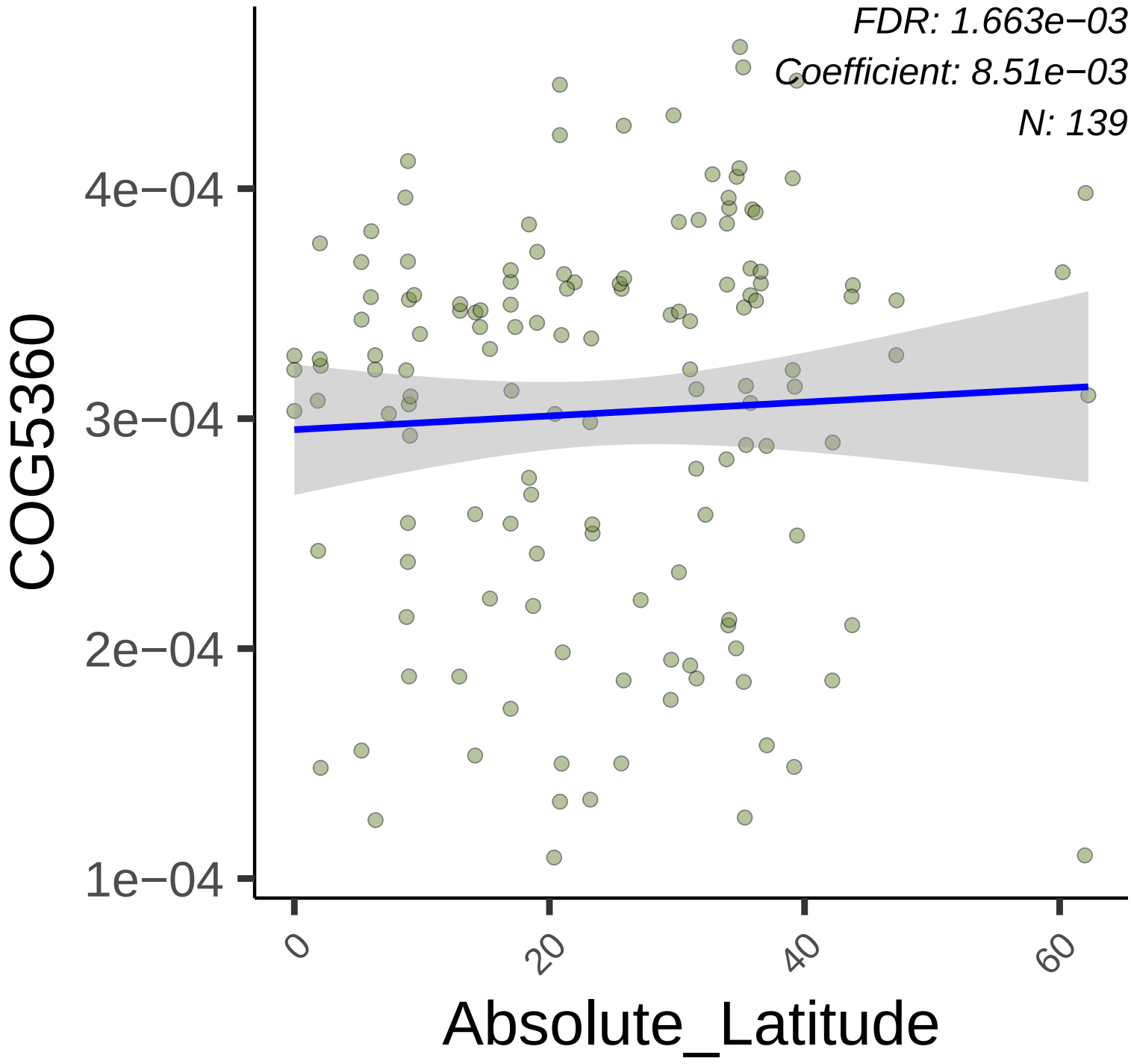

FDR: 1.609e−03
Coefficient: 3.71e−03
N: 139
5e−04
4e−04
3e−04
COG0054
0
20
40
60
Absolute_Latitude

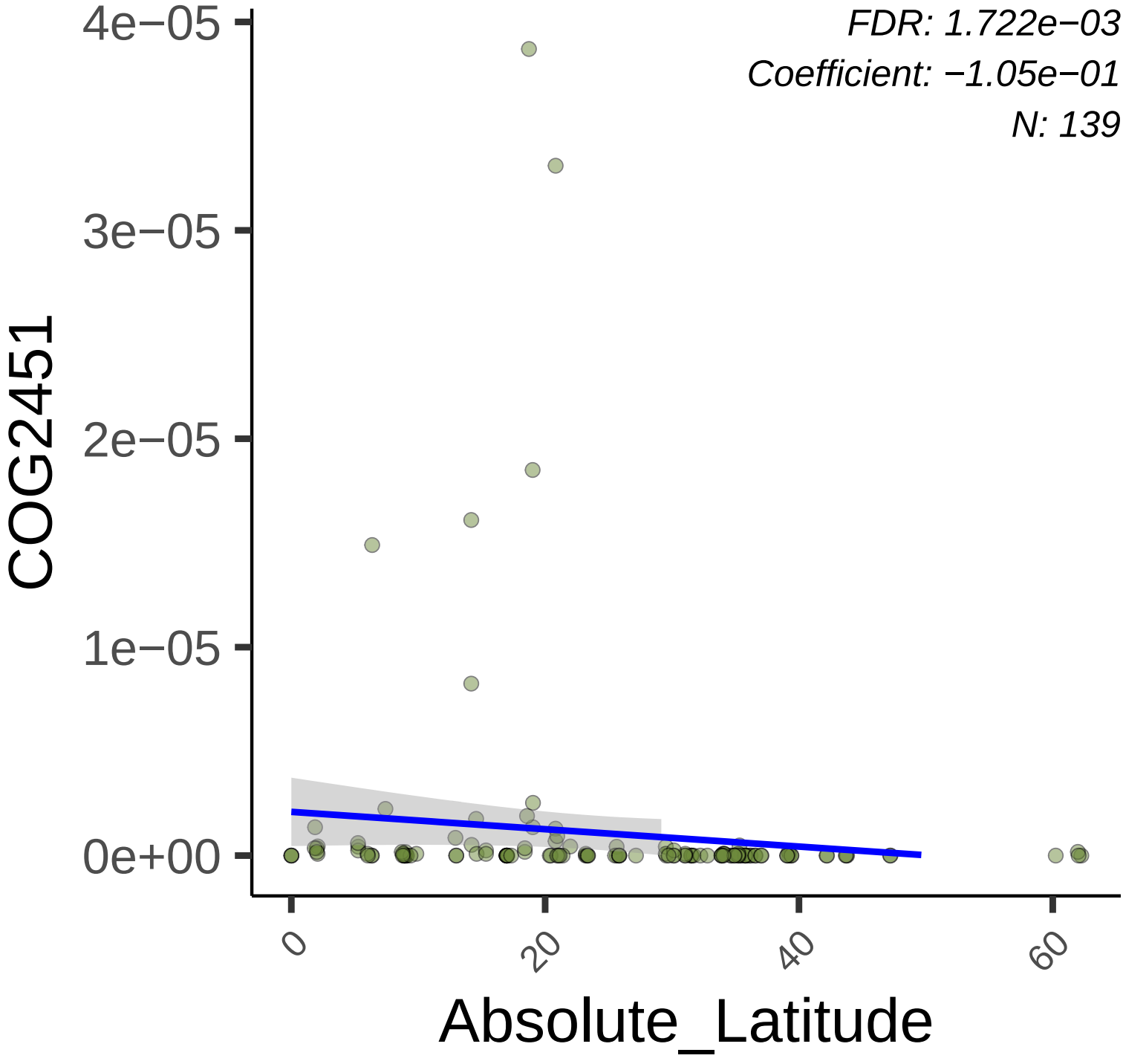

FDR: 1.611e−03
Coefficient: 2.78e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3341
0
20
40
60
Absolute_Latitude

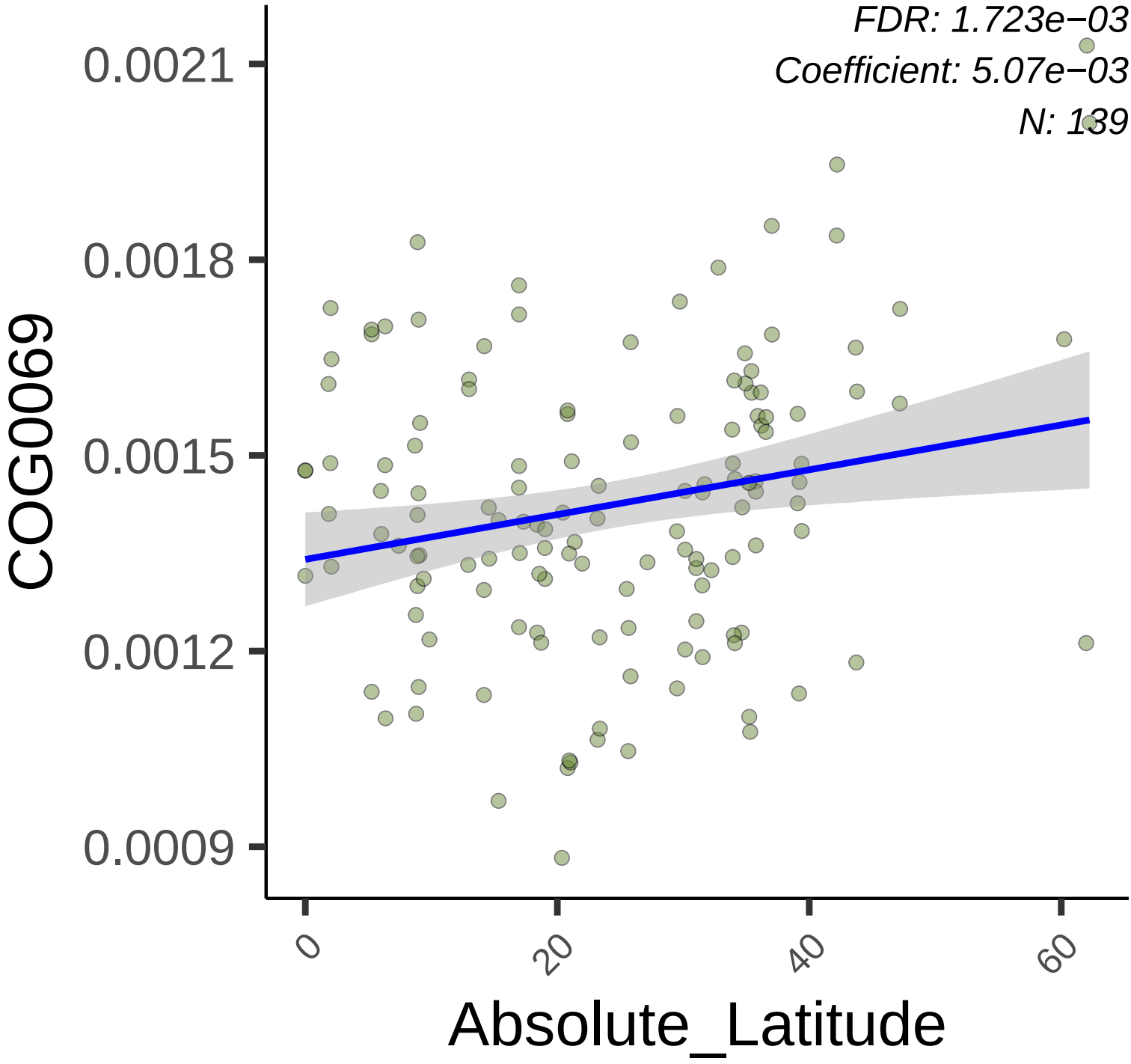

FDR: 1.630e−03
Coefficient: 2.30e−02
N: 139
COG2324
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

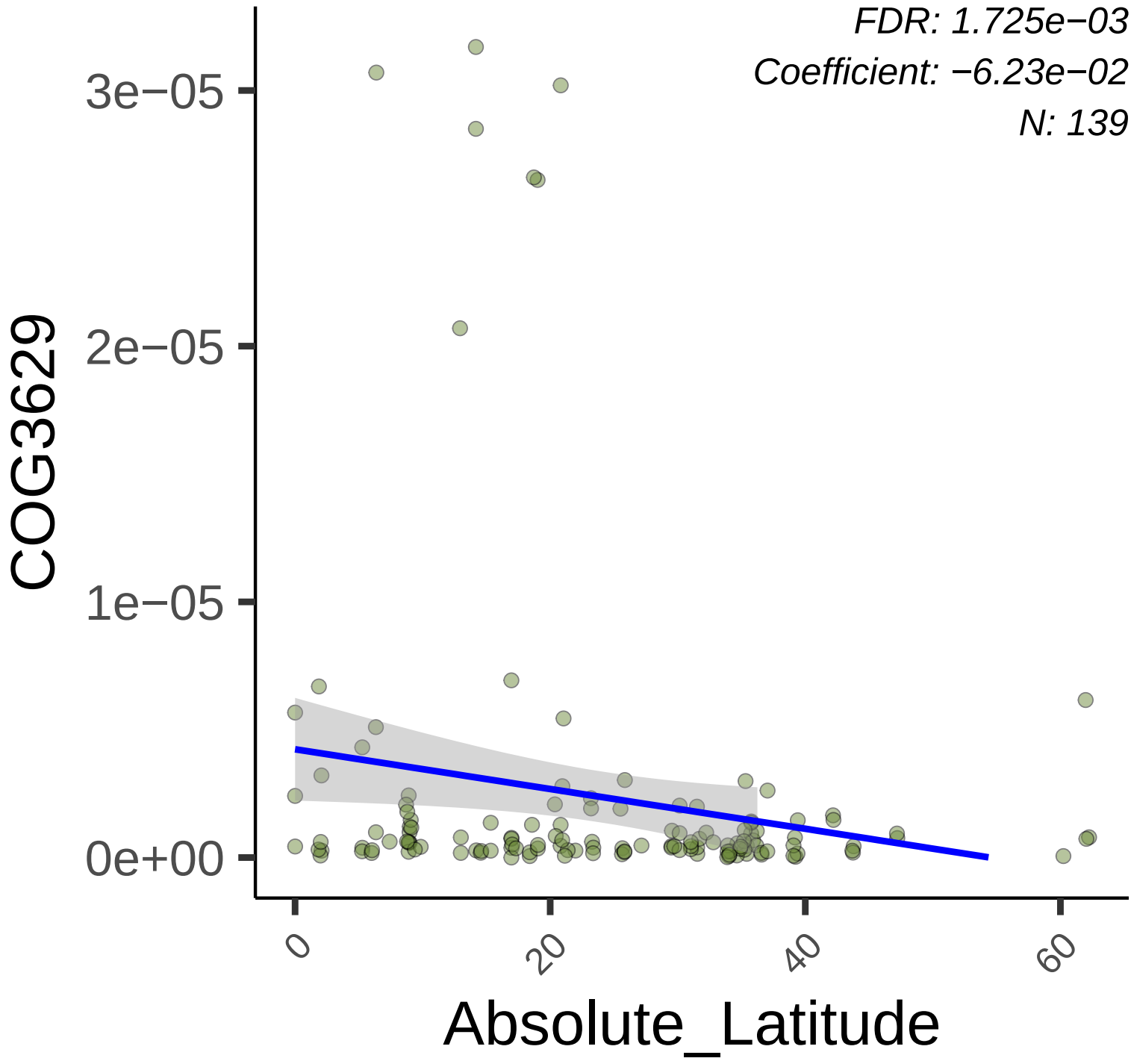

FDR: 1.640e−03
Coefficient: 1.65e−02
N: 139
1e−04
5e−05
COG3142
0
20
40
60
Absolute_Latitude

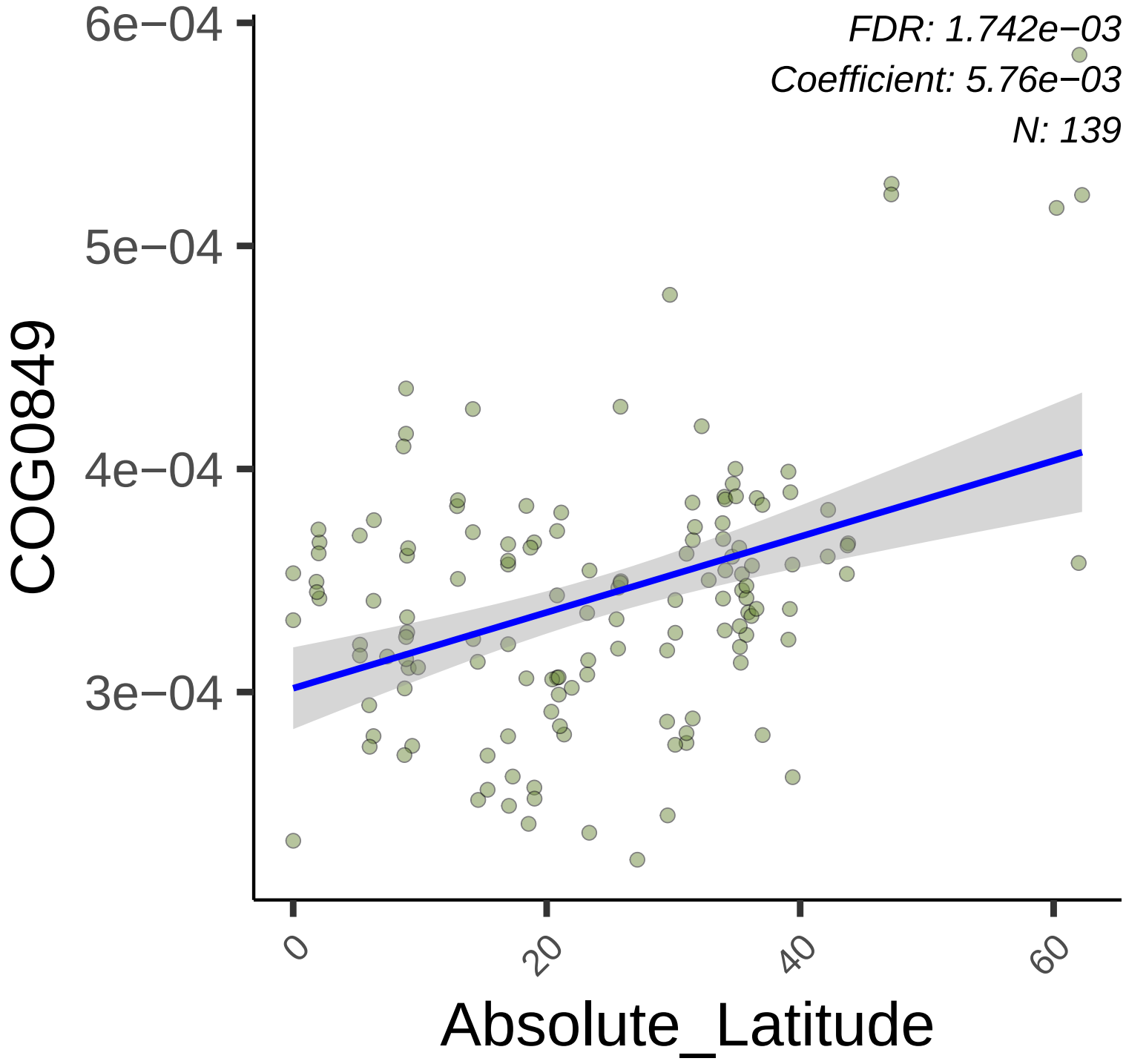

FDR: 1.656e−03
Coefficient: 5.15e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG0694
0
20
40
60
Absolute_Latitude

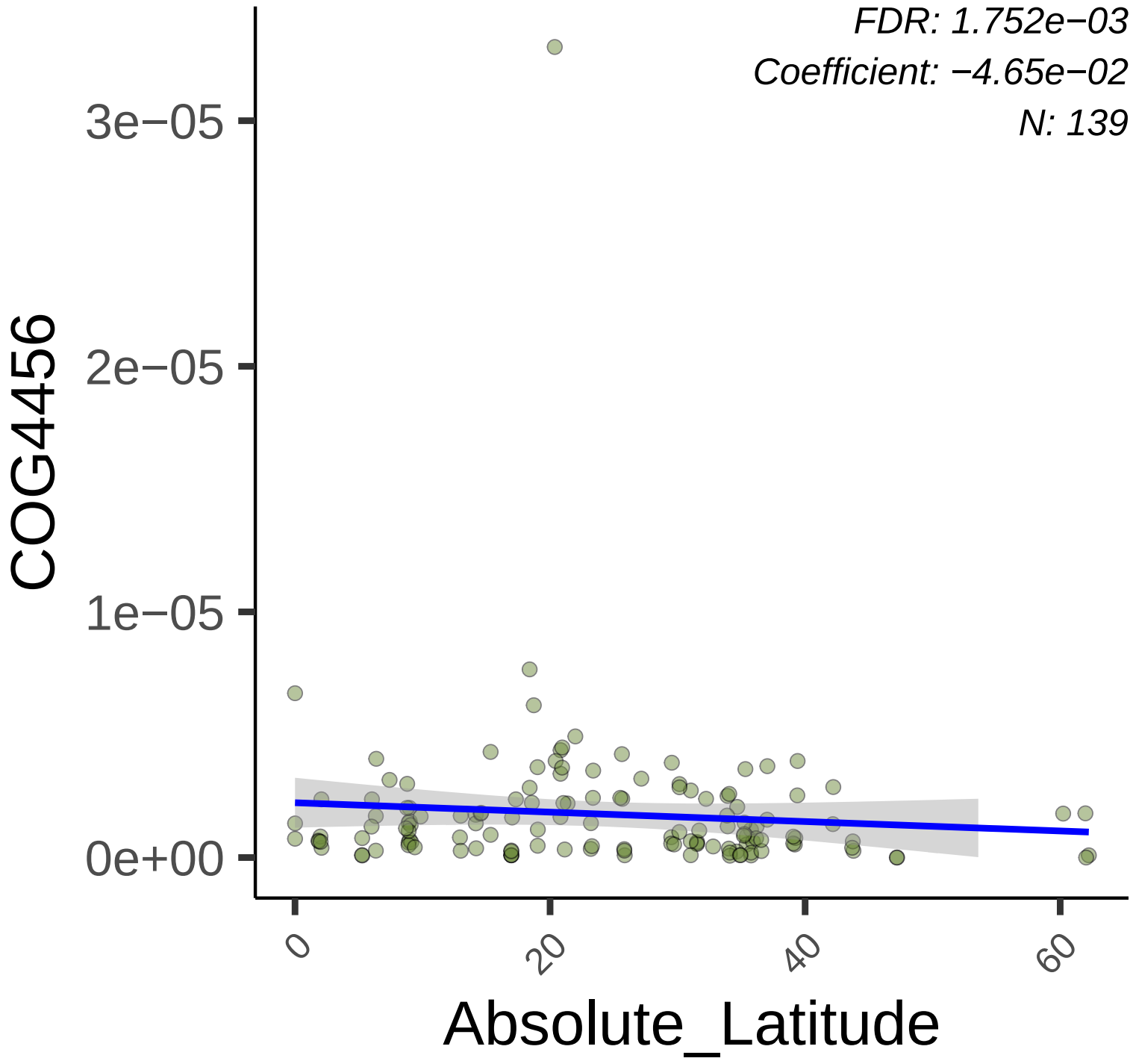

FDR: 1.663e−03
Coefficient: 8.51e−03
N: 139
COG5360
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

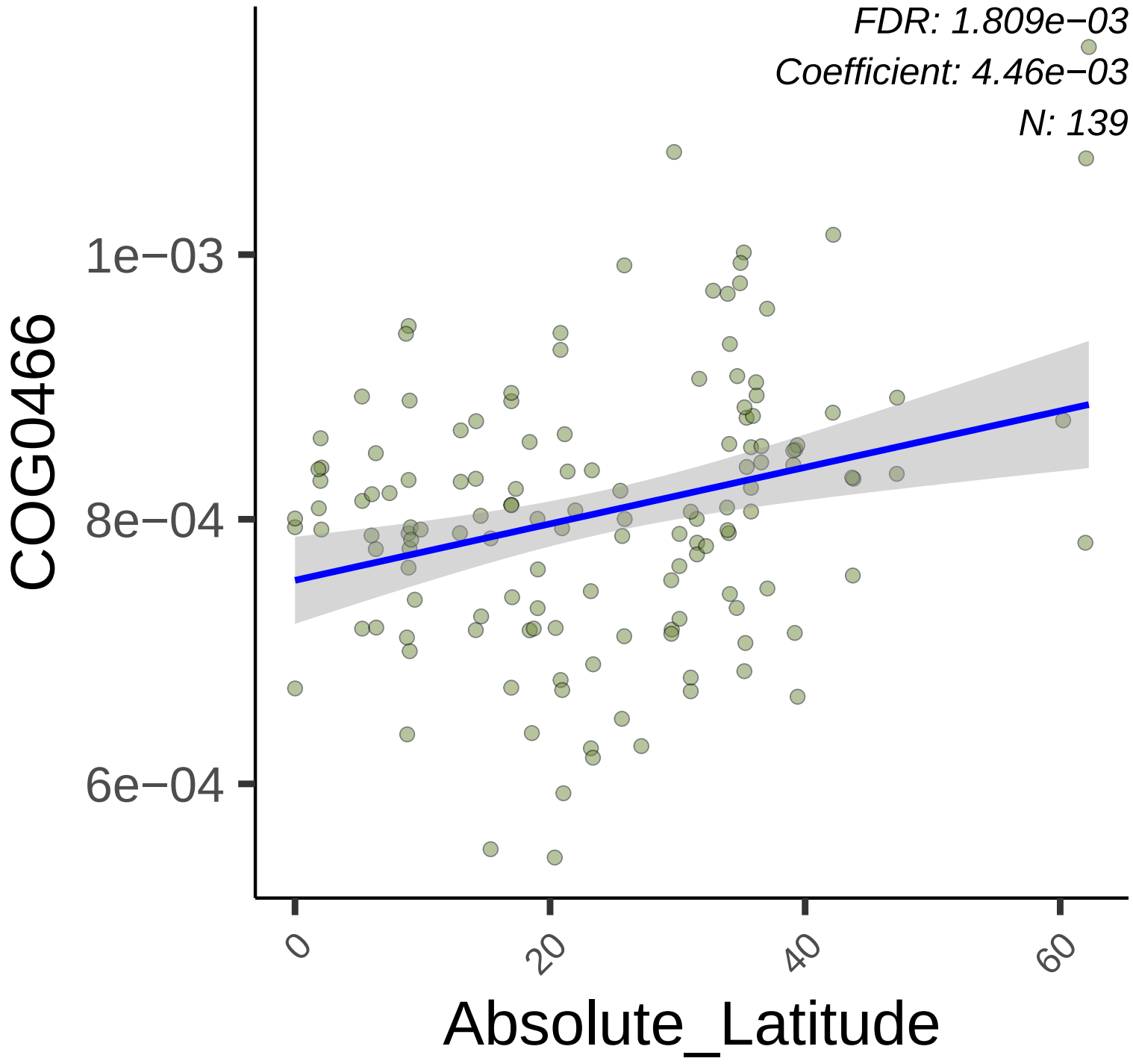

FDR: 1.722e−03
Coefficient: −1.05e−01
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG2451
0
20
40
60
Absolute_Latitude

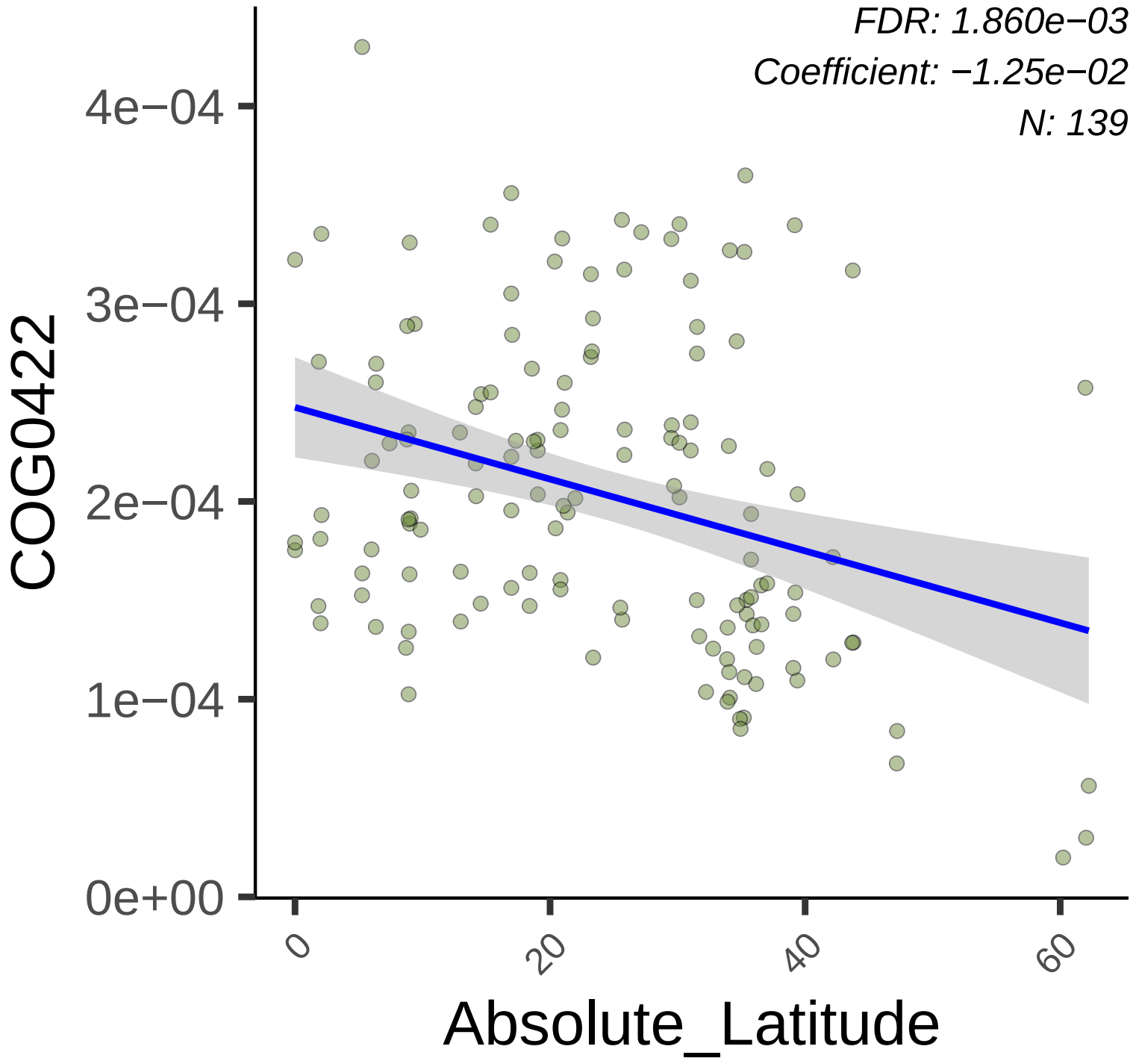

FDR: 1.723e−03
Coefficient: 5.07e−03
N: 139
0.0021
0.0018
0.0015
0.0012
0.0009
COG0069
0
20
40
60
Absolute_Latitude

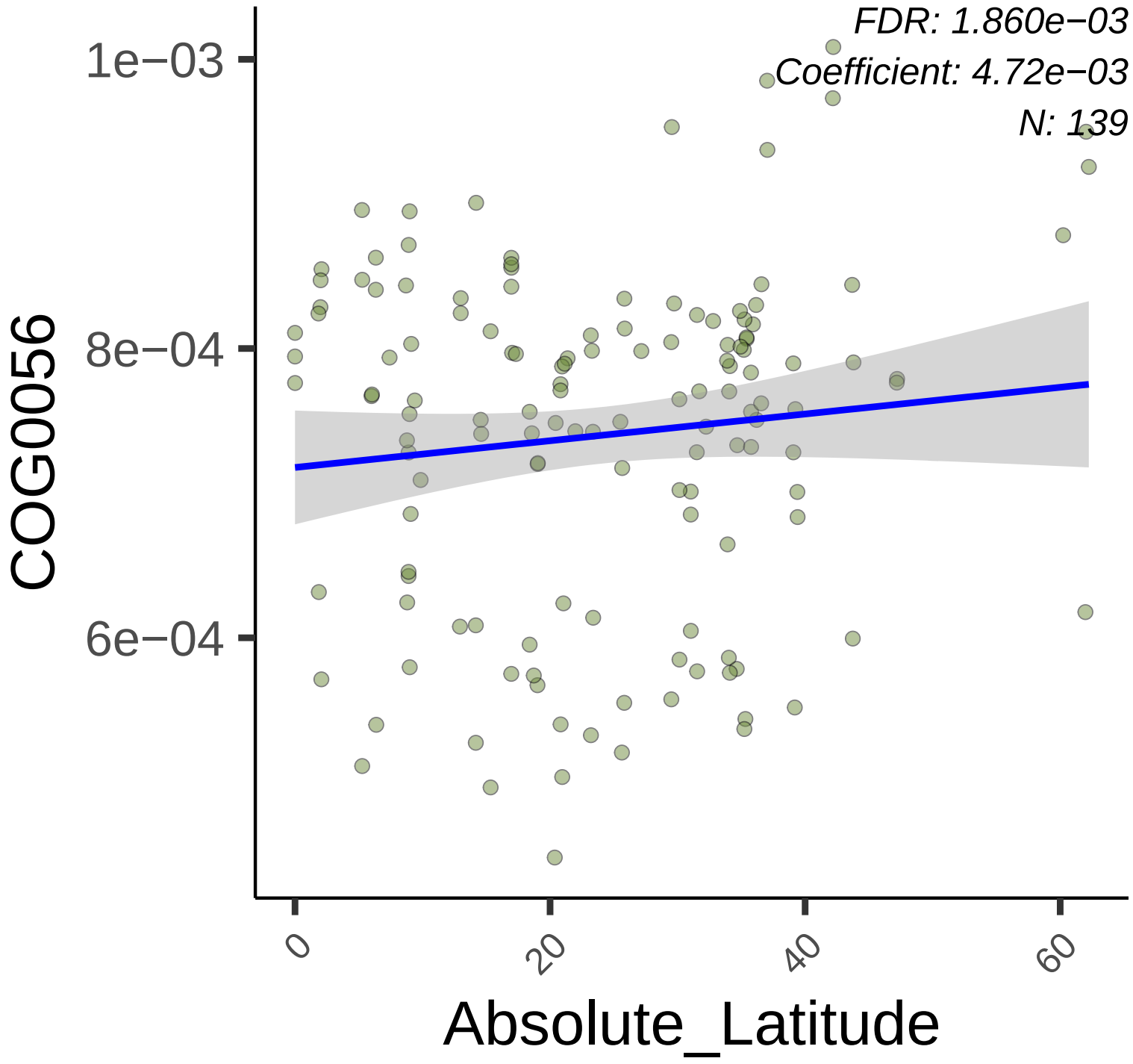

FDR: 1.725e−03
Coefficient: −6.23e−02
N: 139
COG3629
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

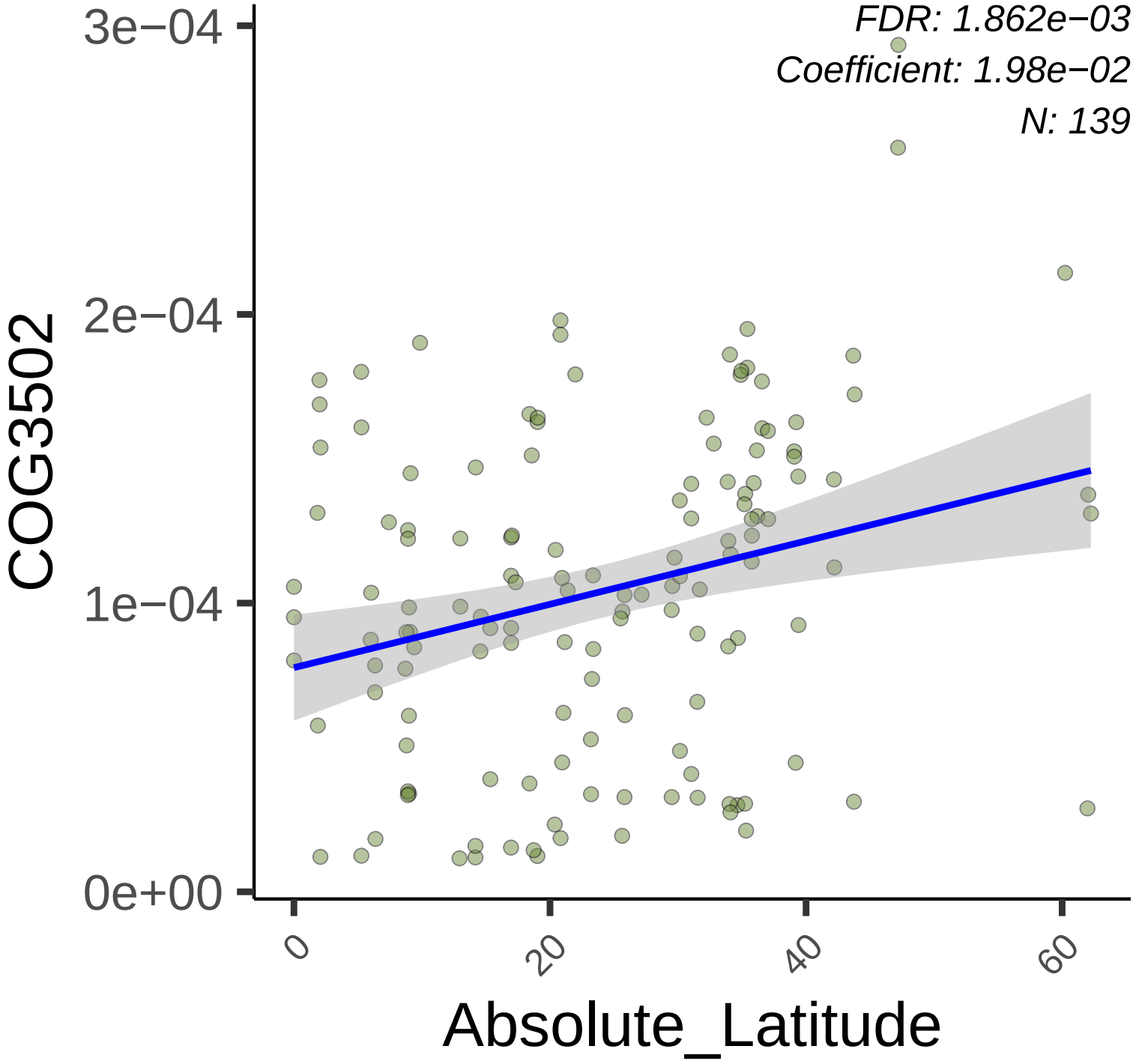

FDR: 1.742e−03
Coefficient: 5.76e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0849
0
20
40
60
Absolute_Latitude

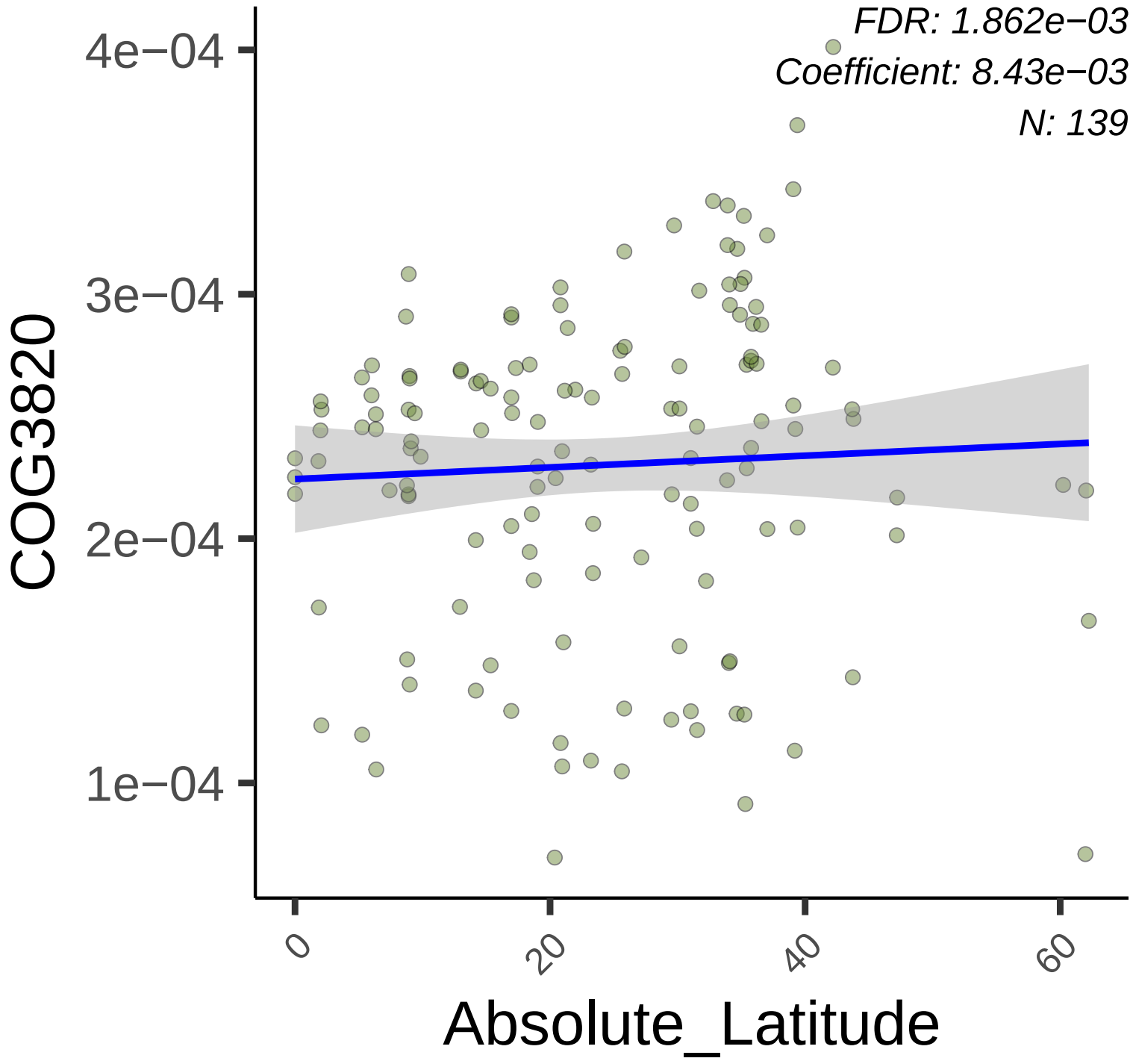

FDR: 1.752e−03
Coefficient: −4.65e−02
N: 139
COG4456
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

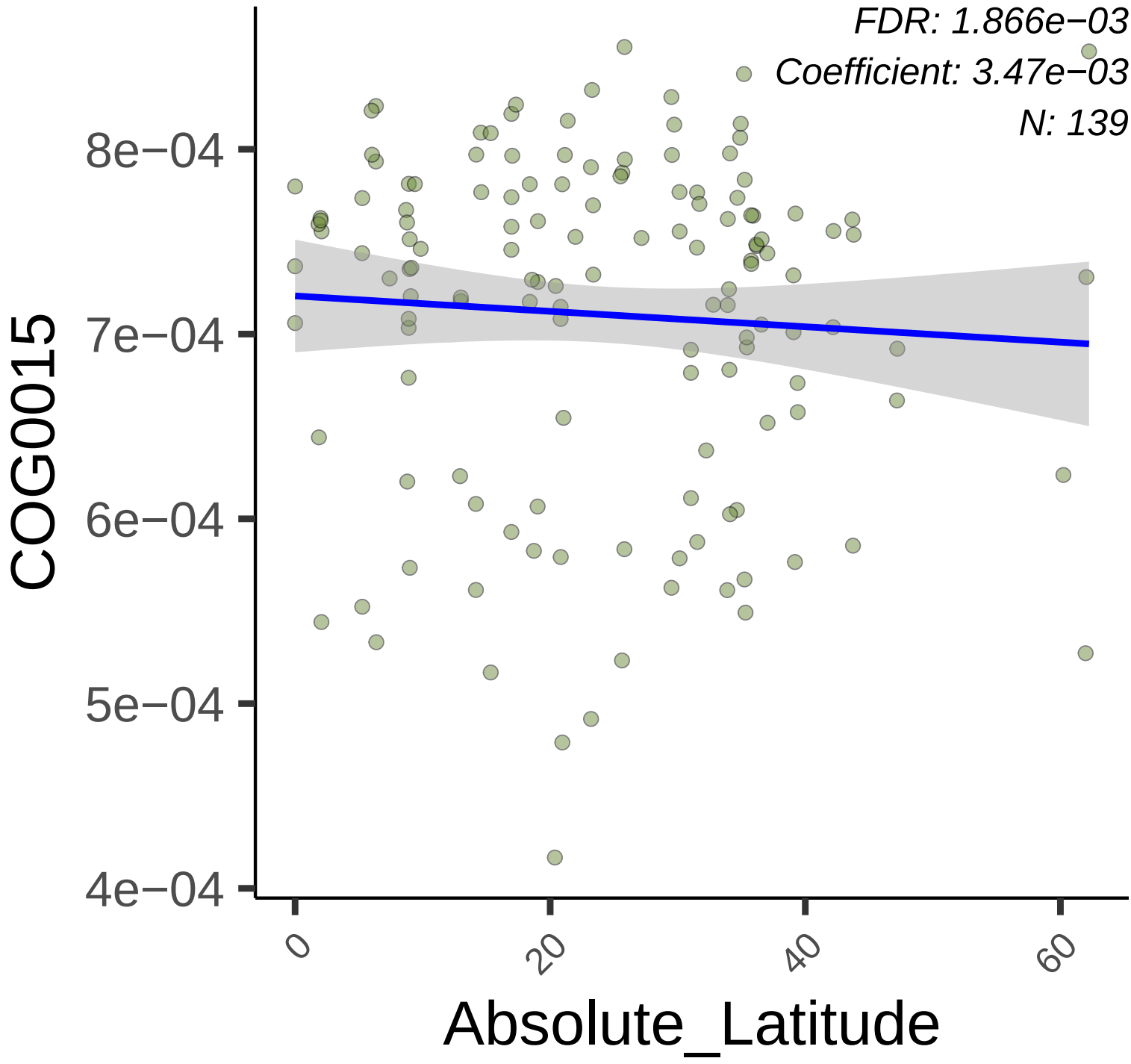

FDR: 1.809e−03
Coefficient: 4.46e−03
N: 139
COG0466
1e−03
8e−04
6e−04
0
20
40
60
Absolute_Latitude

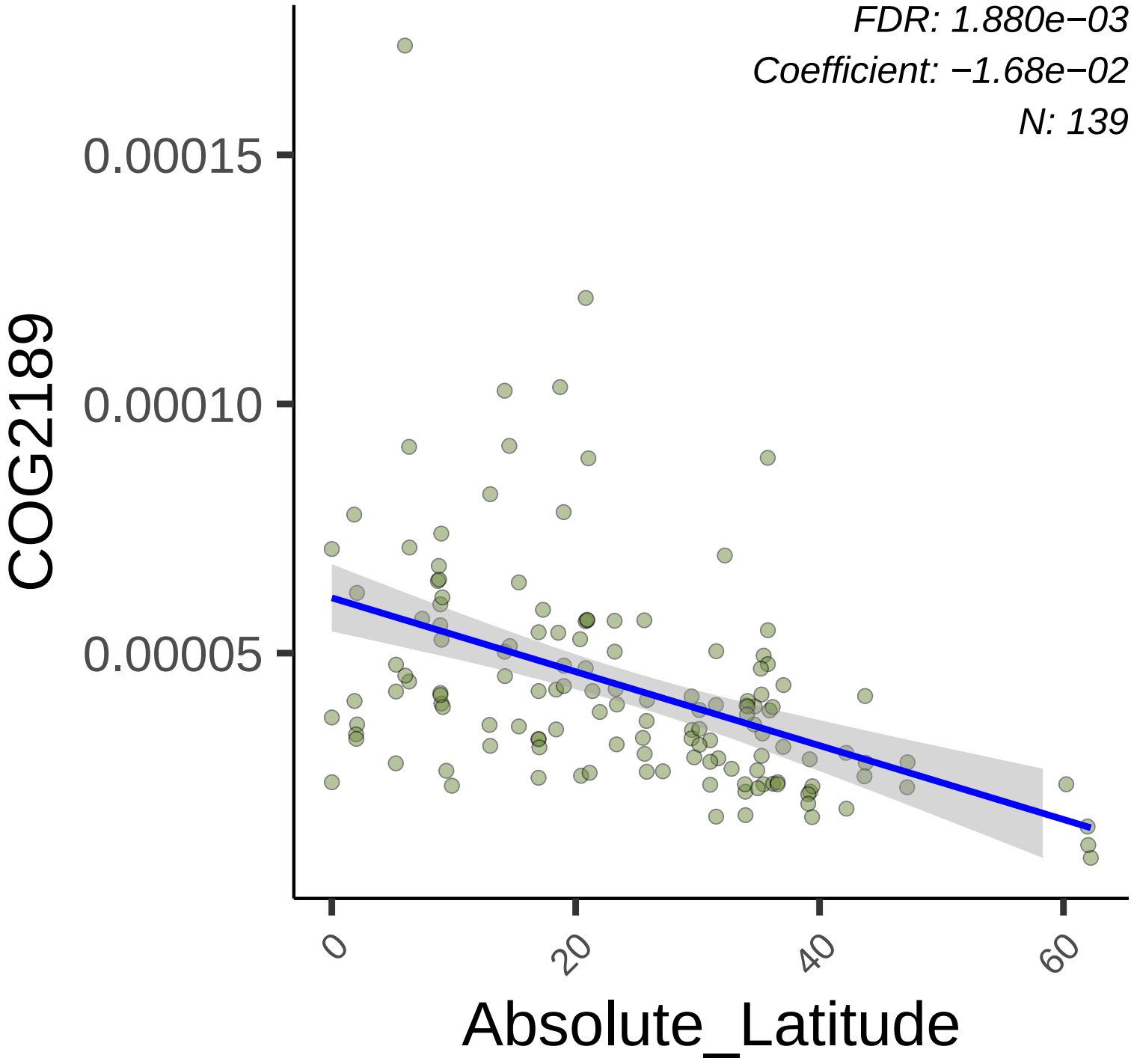

FDR: 1.860e−03
Coefficient: −1.25e−02
N: 139
COG0422
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

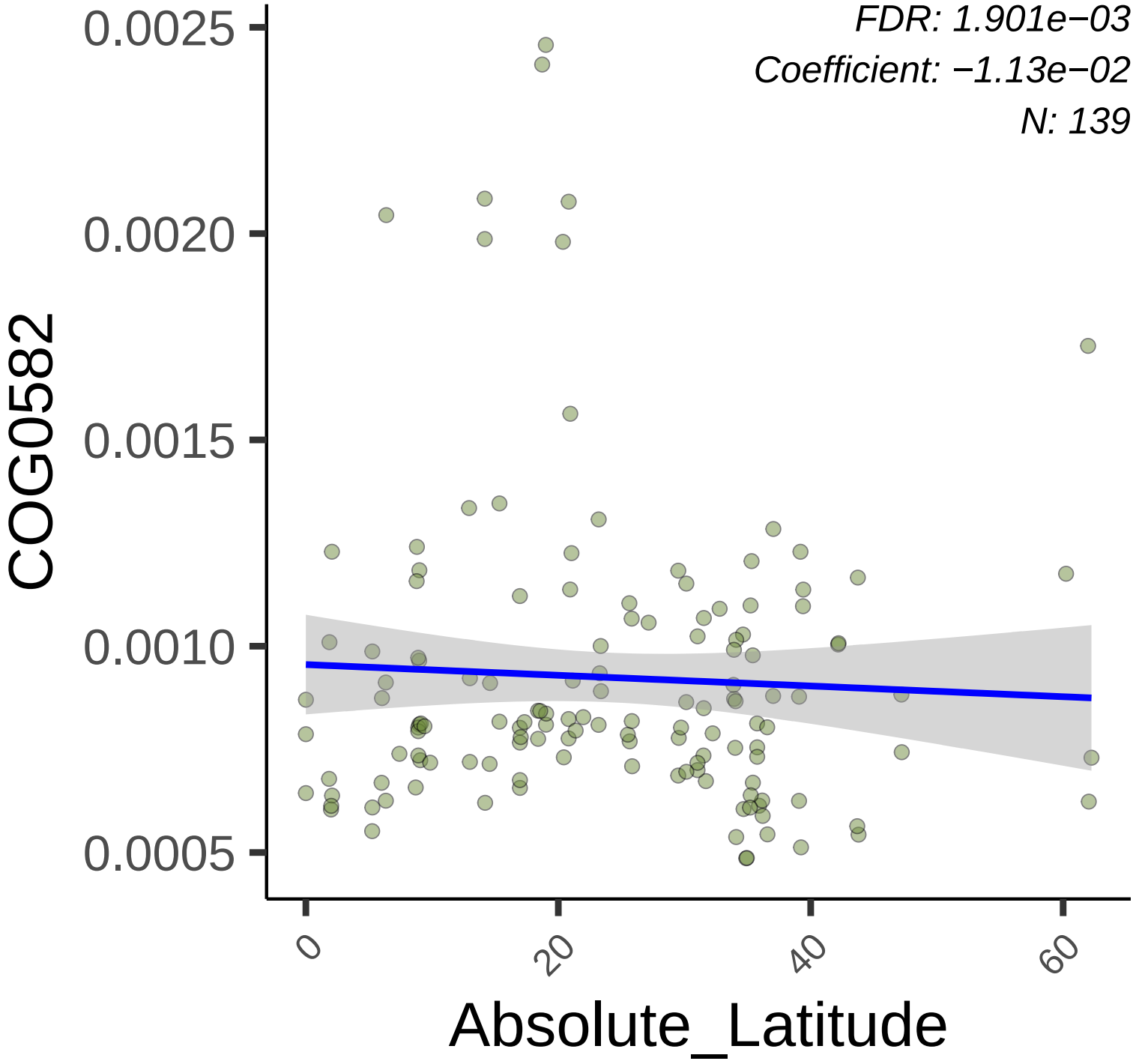

FDR: 1.860e−03
Coefficient: 4.72e−03
N: 139
1e−03
8e−04
6e−04
COG0056
0
20
40
60
Absolute_Latitude

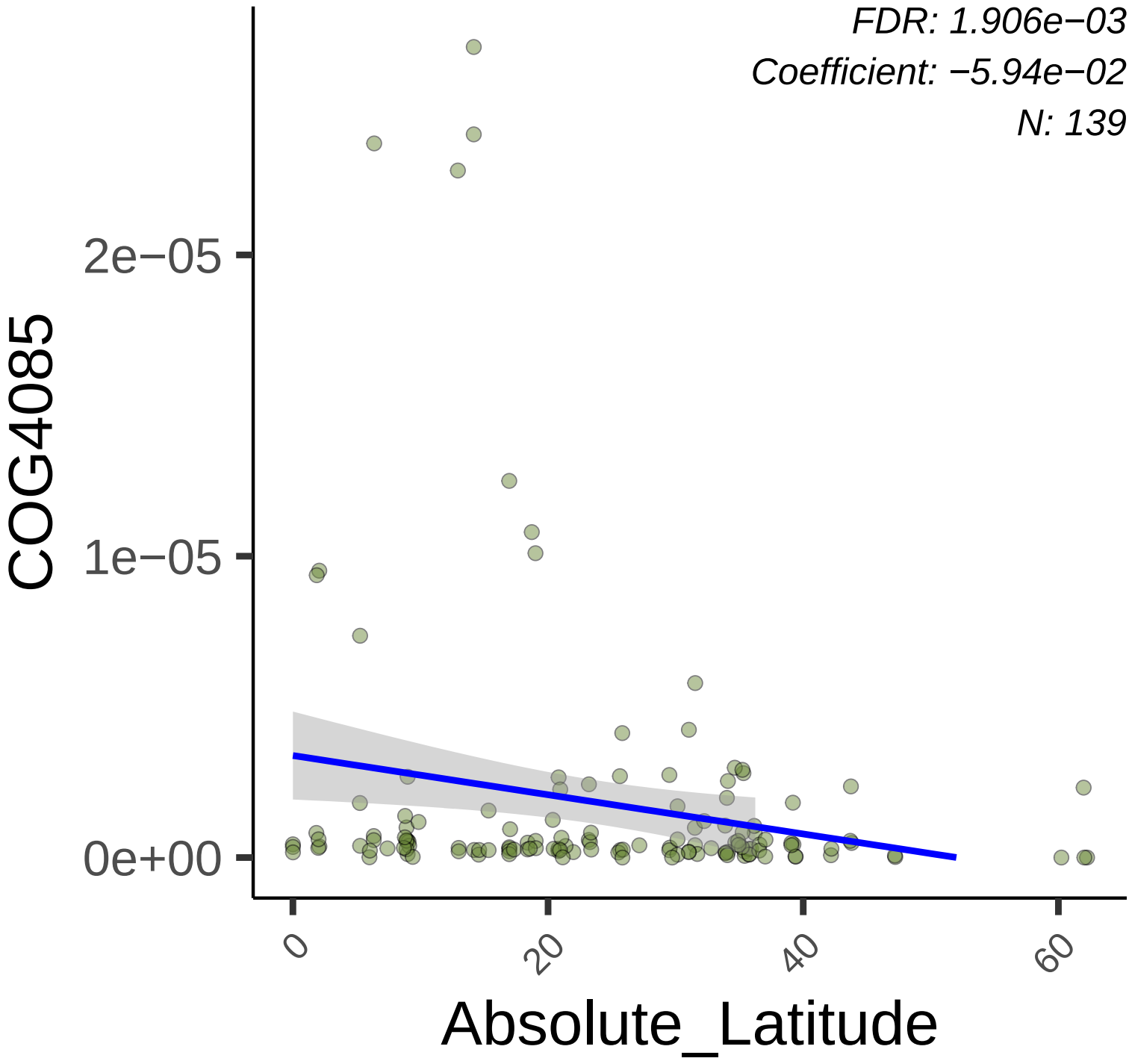

FDR: 1.862e−03
Coefficient: 1.98e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG3502
0
20
40
60
Absolute_Latitude

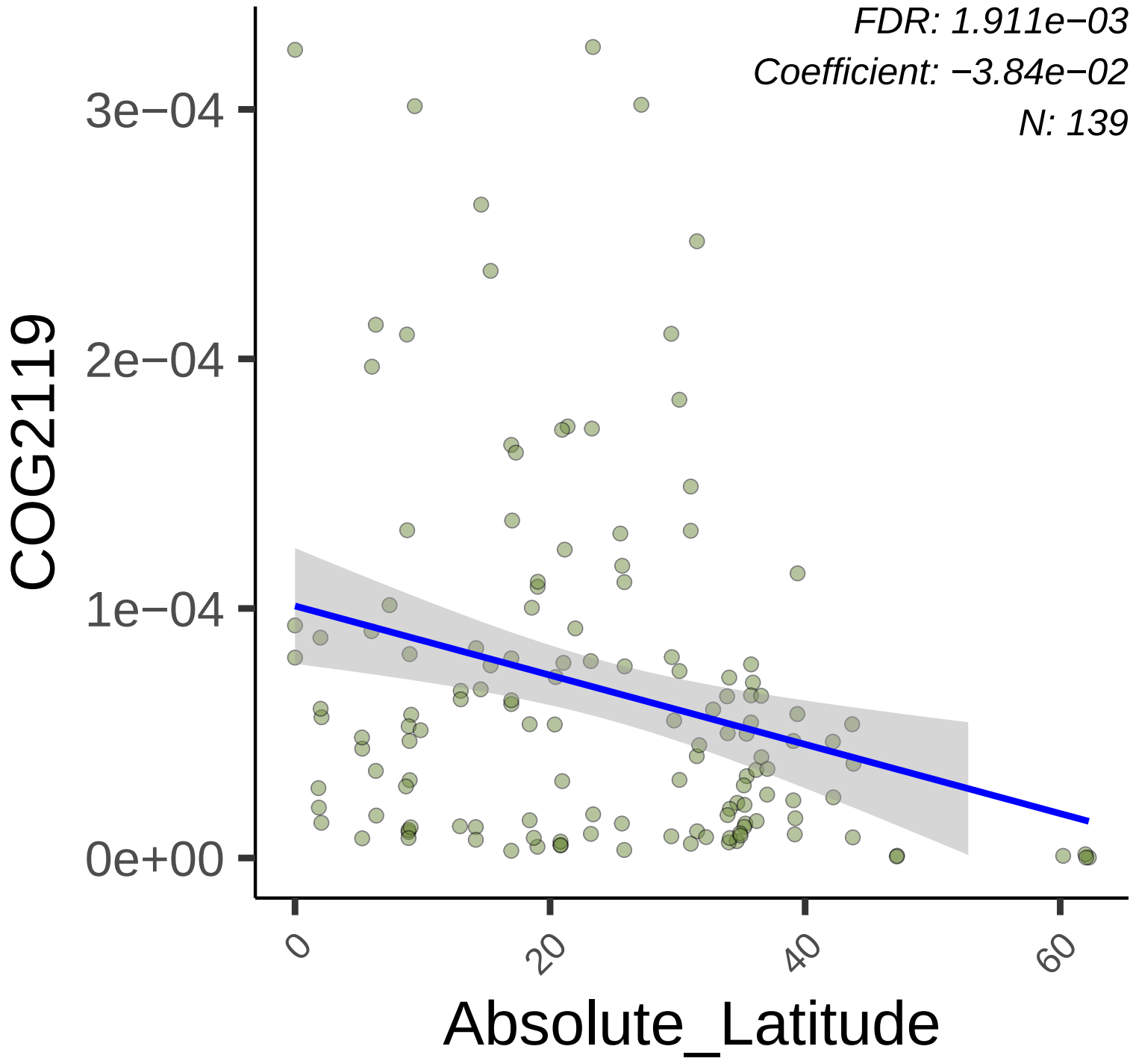

FDR: 1.862e−03
Coefficient: 8.43e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG3820
0
20
40
60
Absolute_Latitude

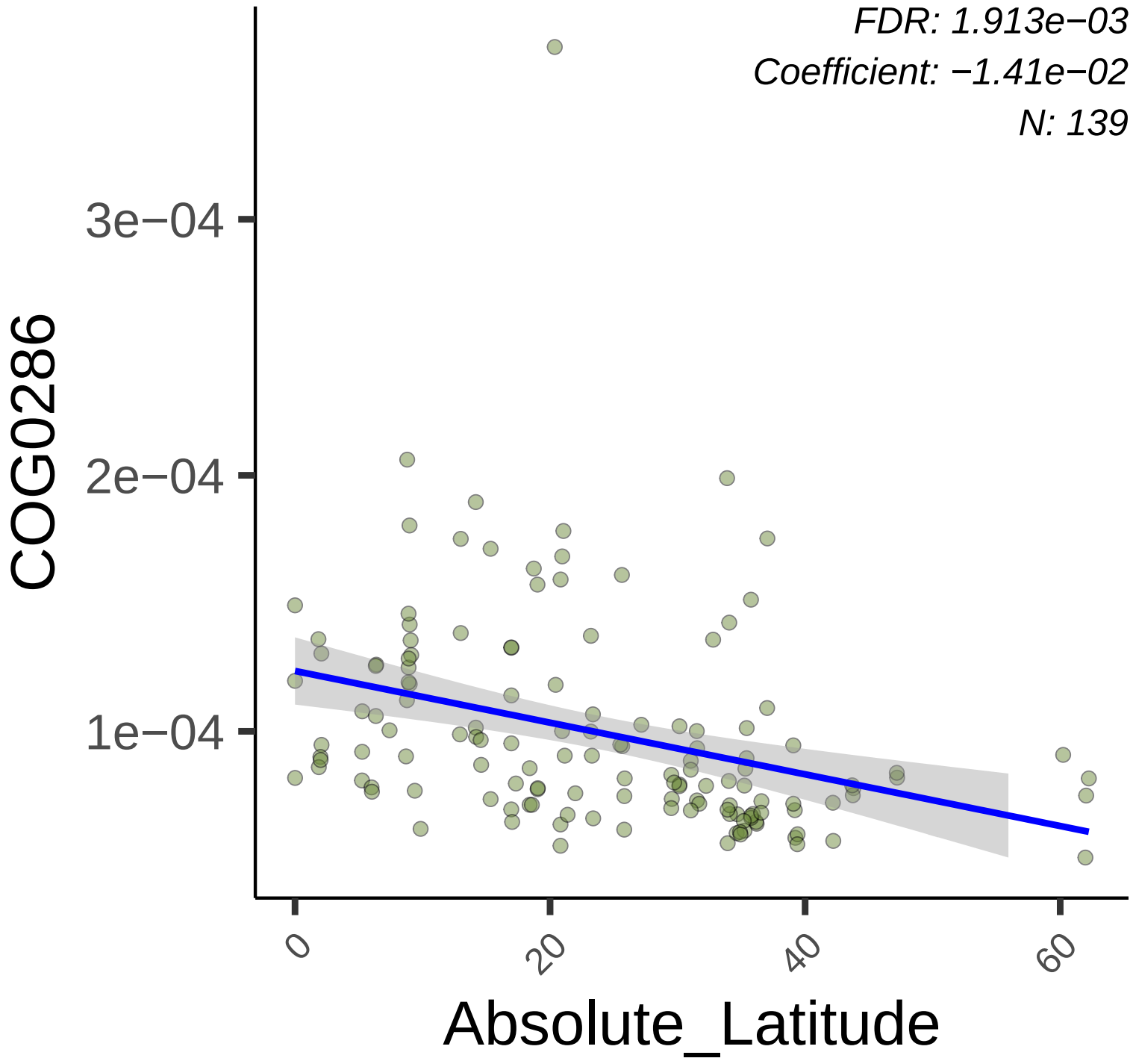

FDR: 1.866e−03
Coefficient: 3.47e−03
N: 139
COG0015
8e−04
7e−04
6e−04
5e−04
4e−04
0
20
40
60
Absolute_Latitude

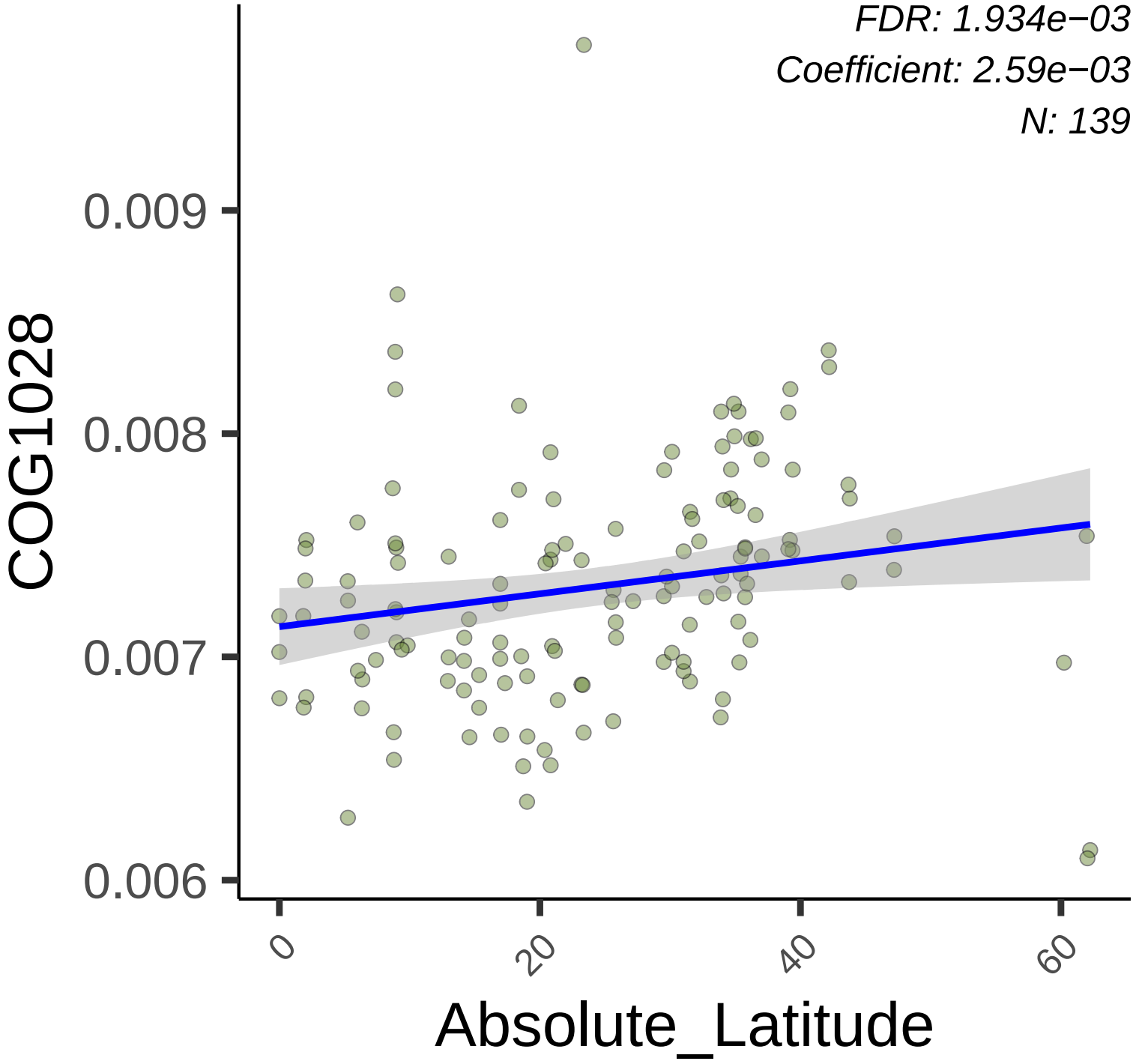

FDR: 1.880e−03
Coefficient: −1.68e−02
N: 139
COG2189
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

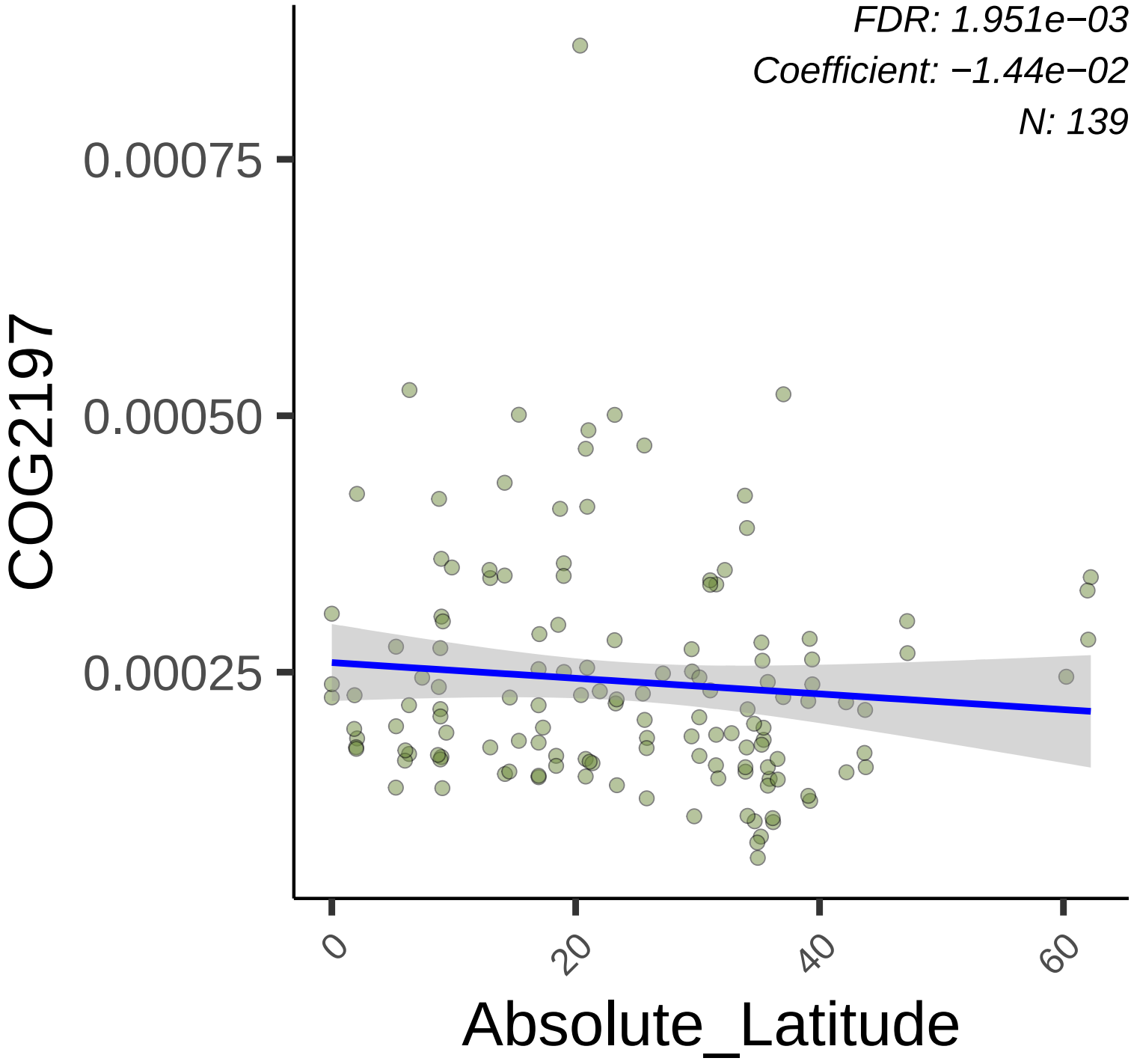

FDR: 1.901e−03
Coefficient: −1.13e−02
N: 139
0.0025
0.0020
0.0015
0.0010
0.0005
COG0582
0
20
40
60
Absolute_Latitude

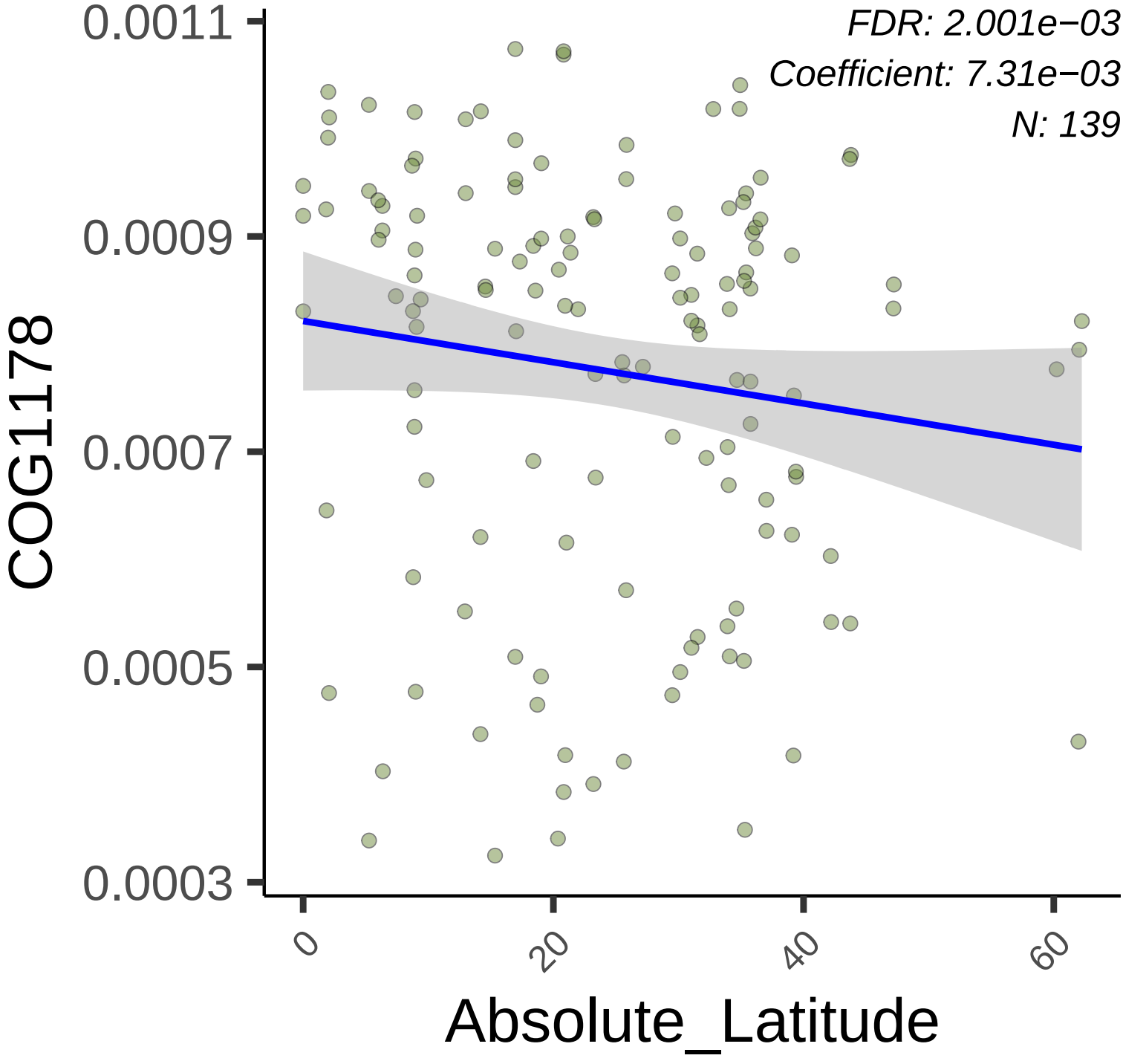

FDR: 1.906e−03
Coefficient: −5.94e−02
N: 139
COG4085
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

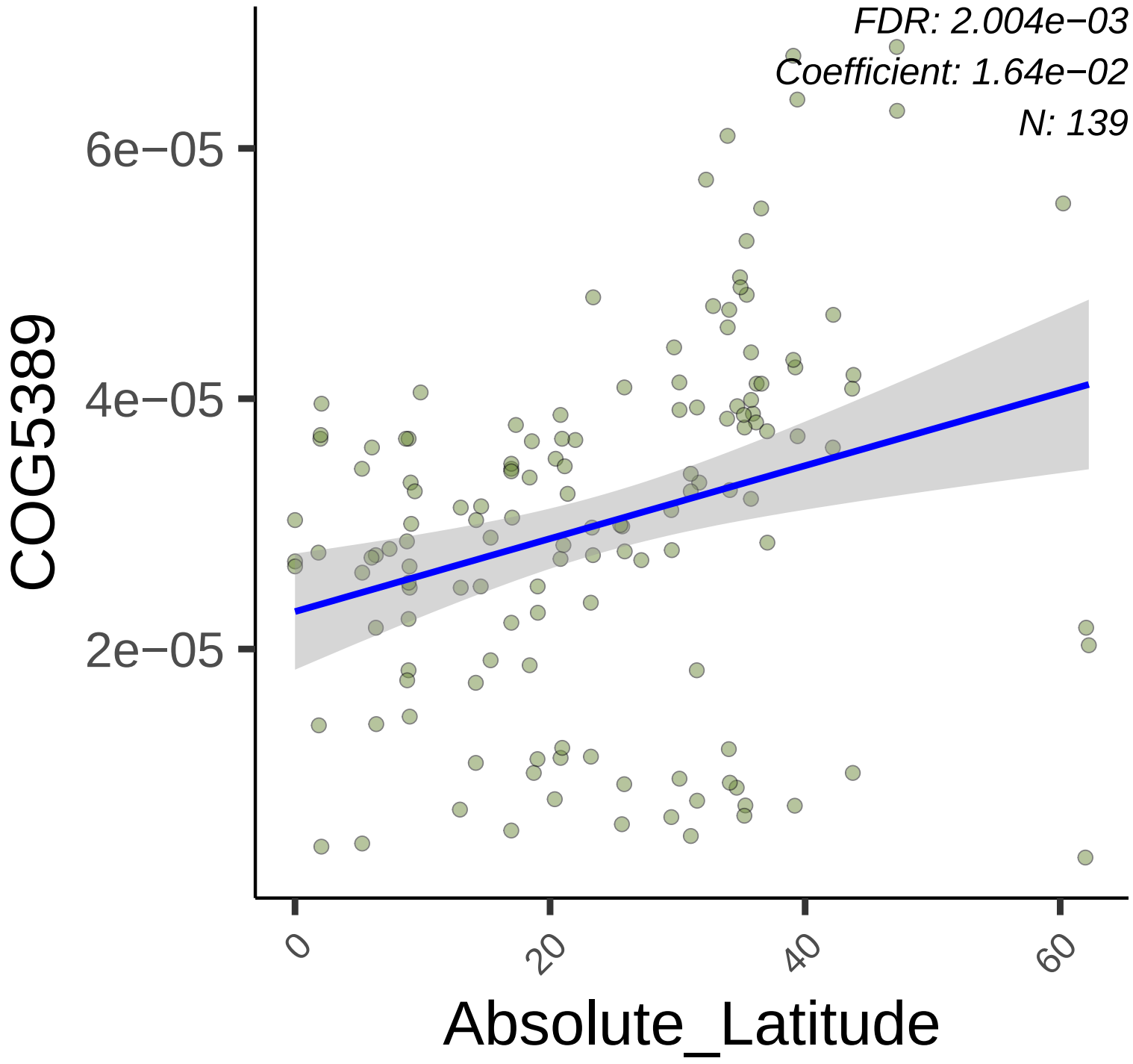

FDR: 1.911e−03
Coefficient: −3.84e−02
N: 139
COG2119
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

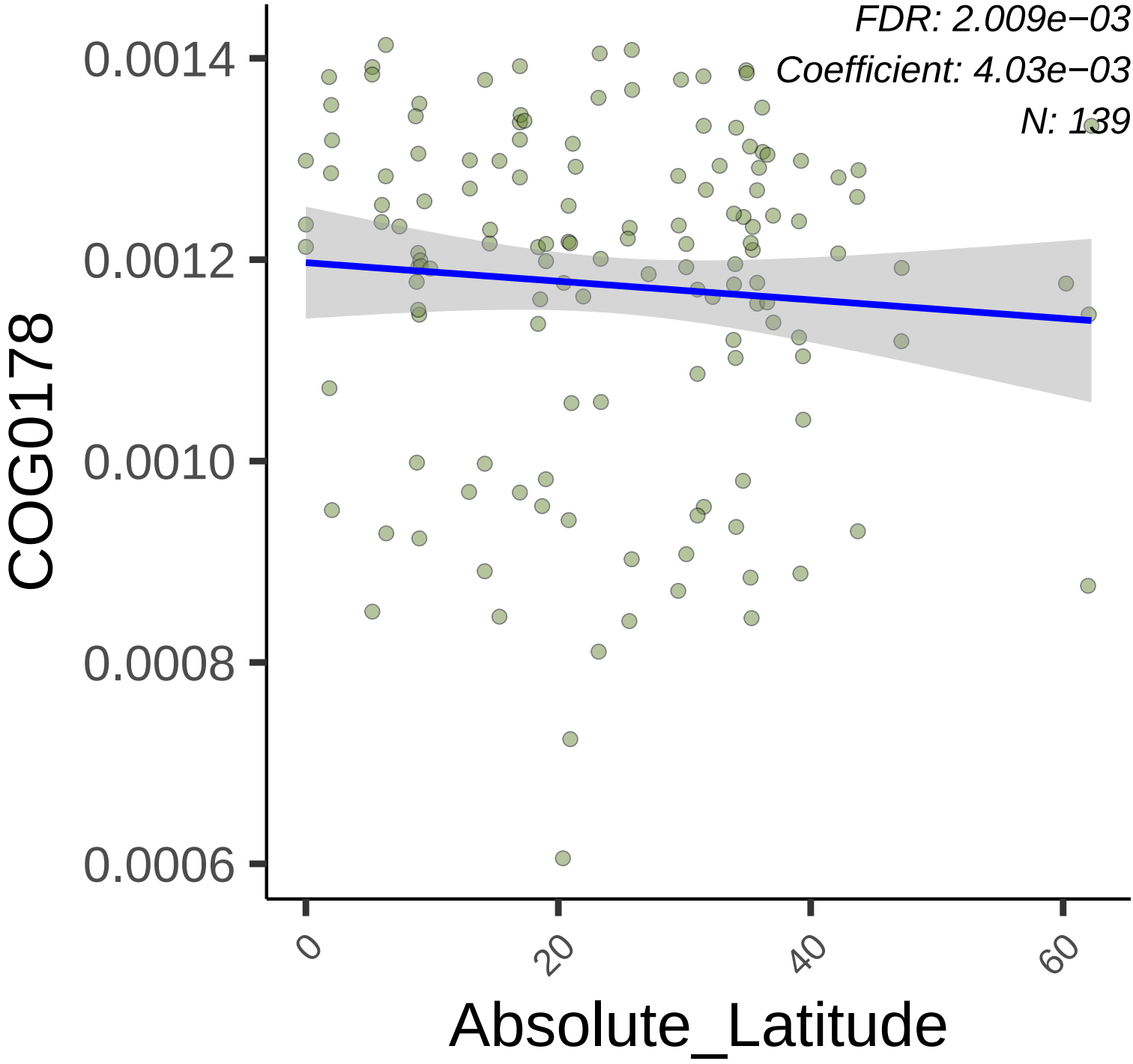

FDR: 1.913e−03
Coefficient: −1.41e−02
N: 139
3e−04
2e−04
1e−04
COG0286
0
20
40
60
Absolute_Latitude

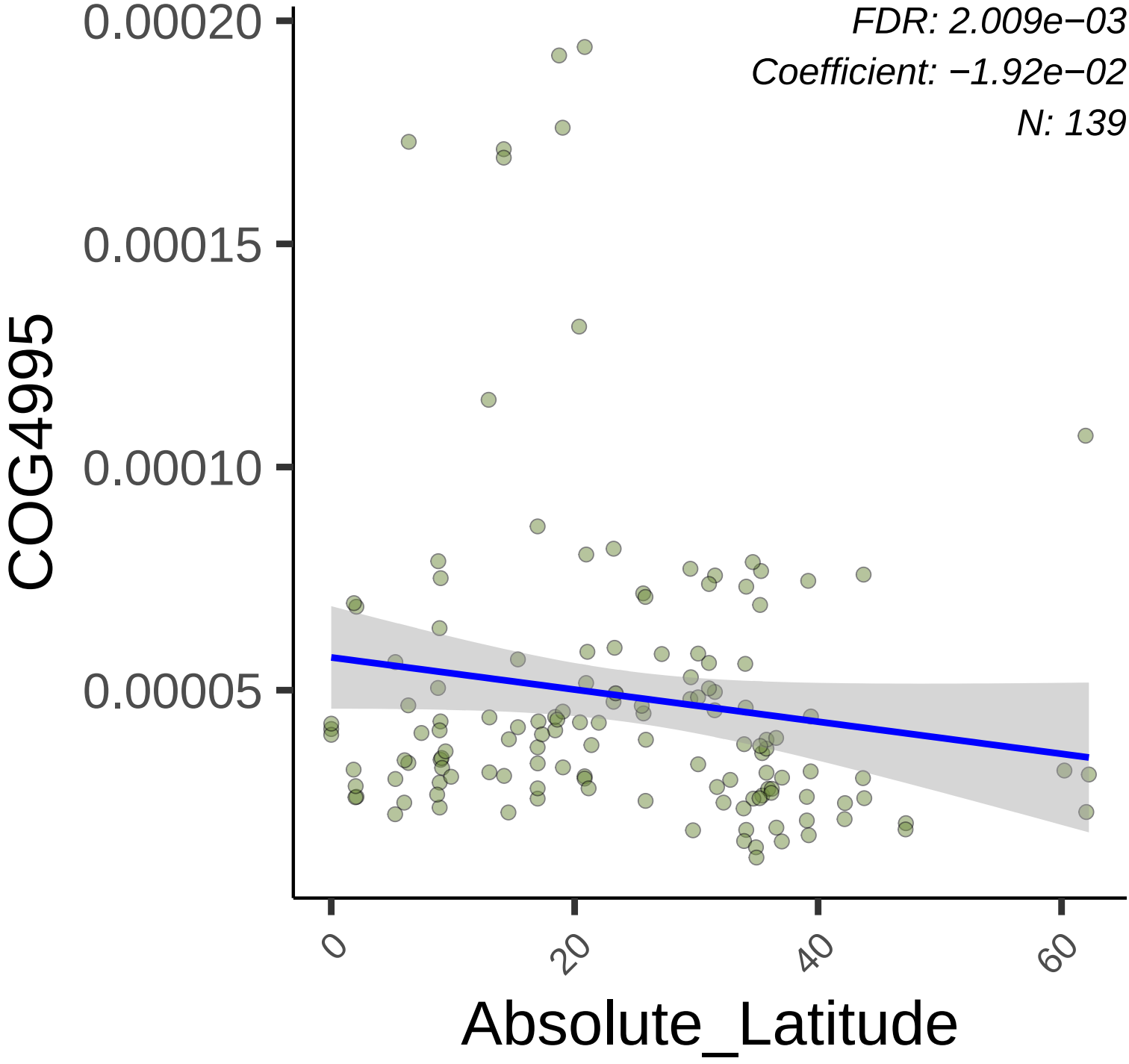

FDR: 1.934e−03
Coefficient: 2.59e−03
N: 139
COG1028
0.009
0.008
0.007
0.006
0
20
40
60
Absolute_Latitude

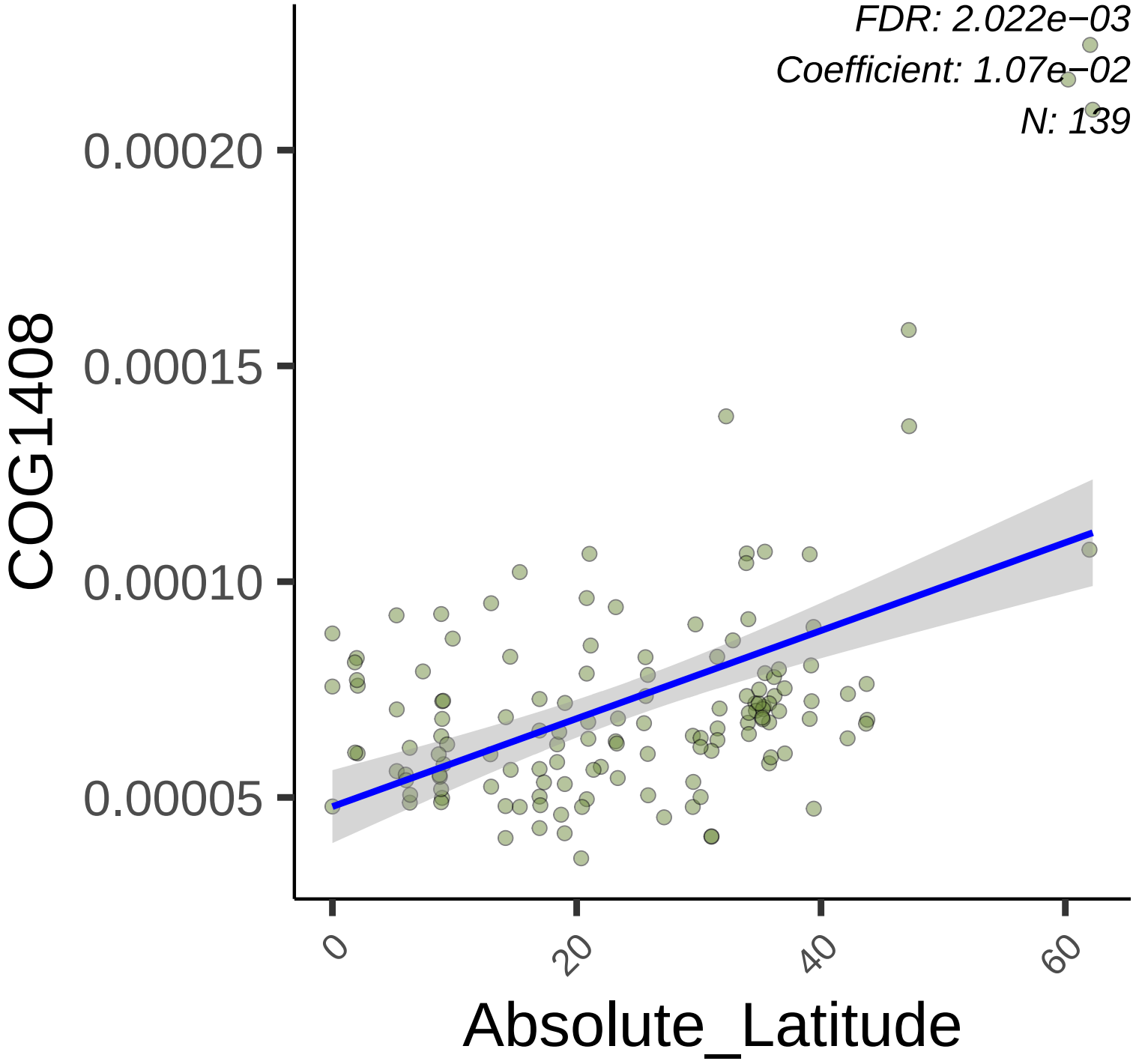

FDR: 1.951e−03
Coefficient: −1.44e−02
N: 139
0.00075
0.00050
0.00025
COG2197
0
20
40
60
Absolute_Latitude

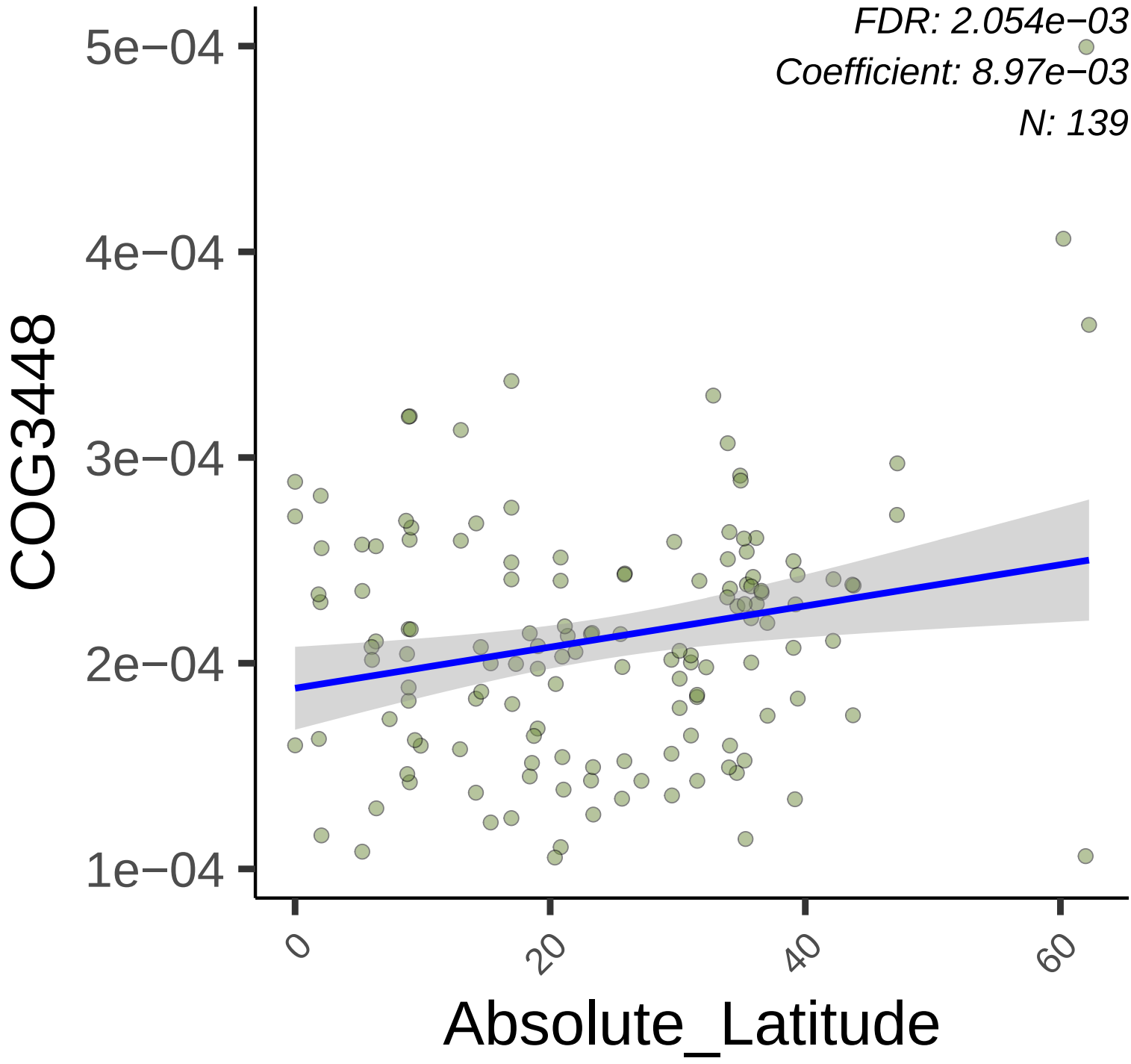

FDR: 2.001e−03
Coefficient: 7.31e−03
N: 139
0.0011
0.0009
0.0007
0.0005
0.0003
COG1178
0
20
40
60
Absolute_Latitude

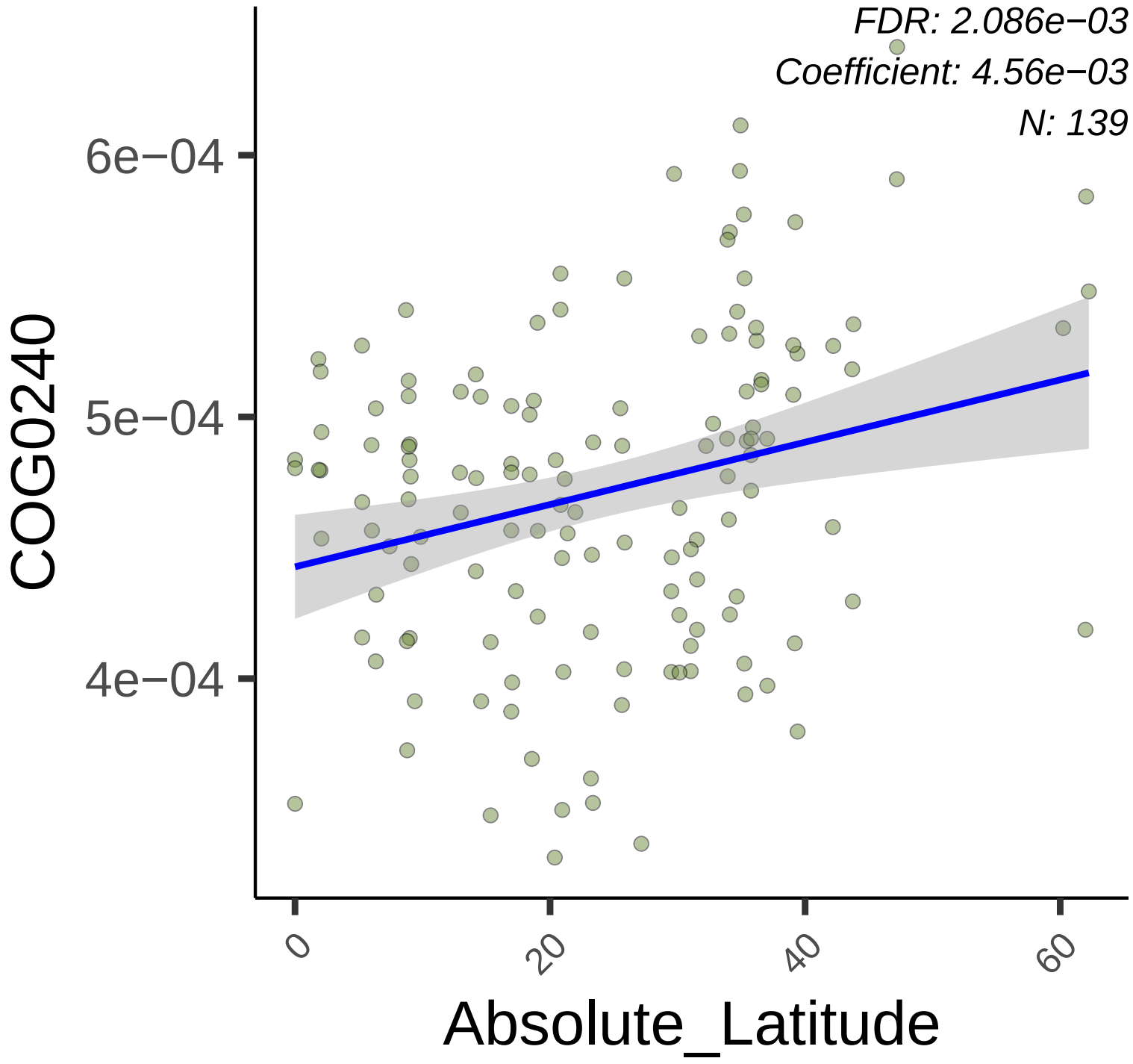

FDR: 2.004e−03
Coefficient: 1.64e−02
N: 139
6e−05
4e−05
2e−05
COG5389
0
20
40
60
Absolute_Latitude

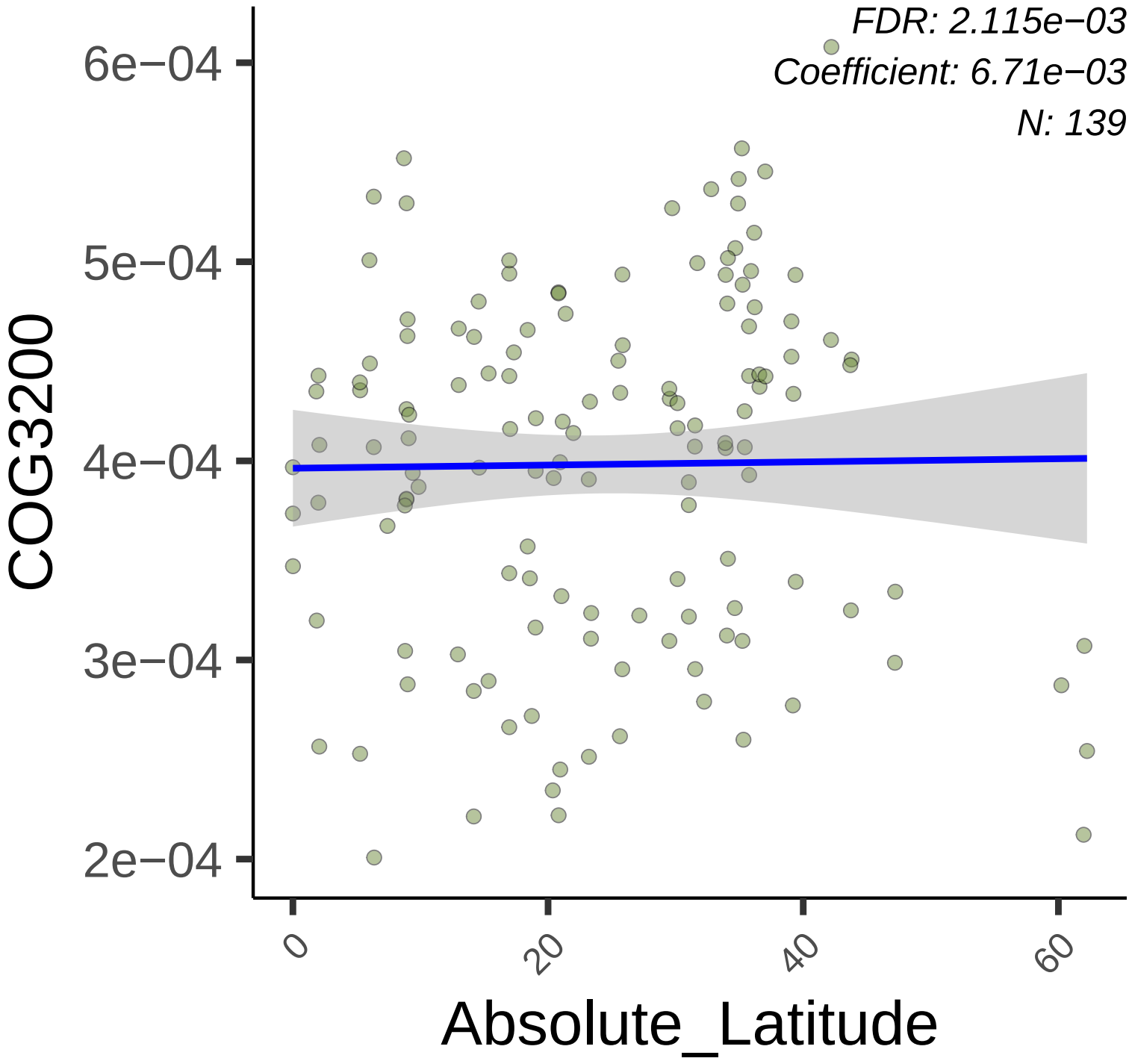

FDR: 2.009e−03
Coefficient: 4.03e−03
N: 139
0.0014
0.0012
0.0010
0.0008
0.0006
COG0178
0
20
40
60
Absolute_Latitude

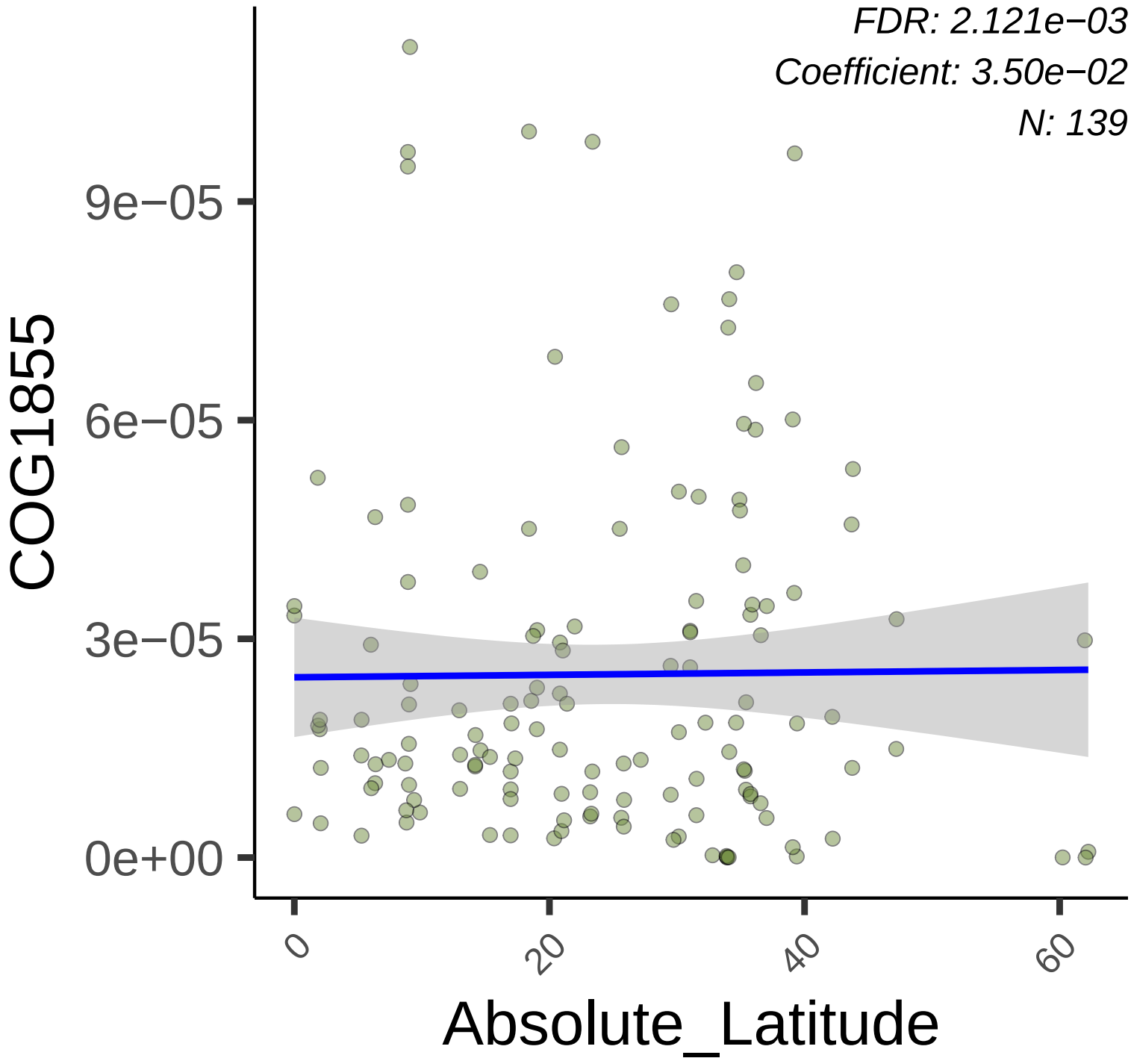

FDR: 2.009e−03
Coefficient: −1.92e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG4995
0
20
40
60
Absolute_Latitude

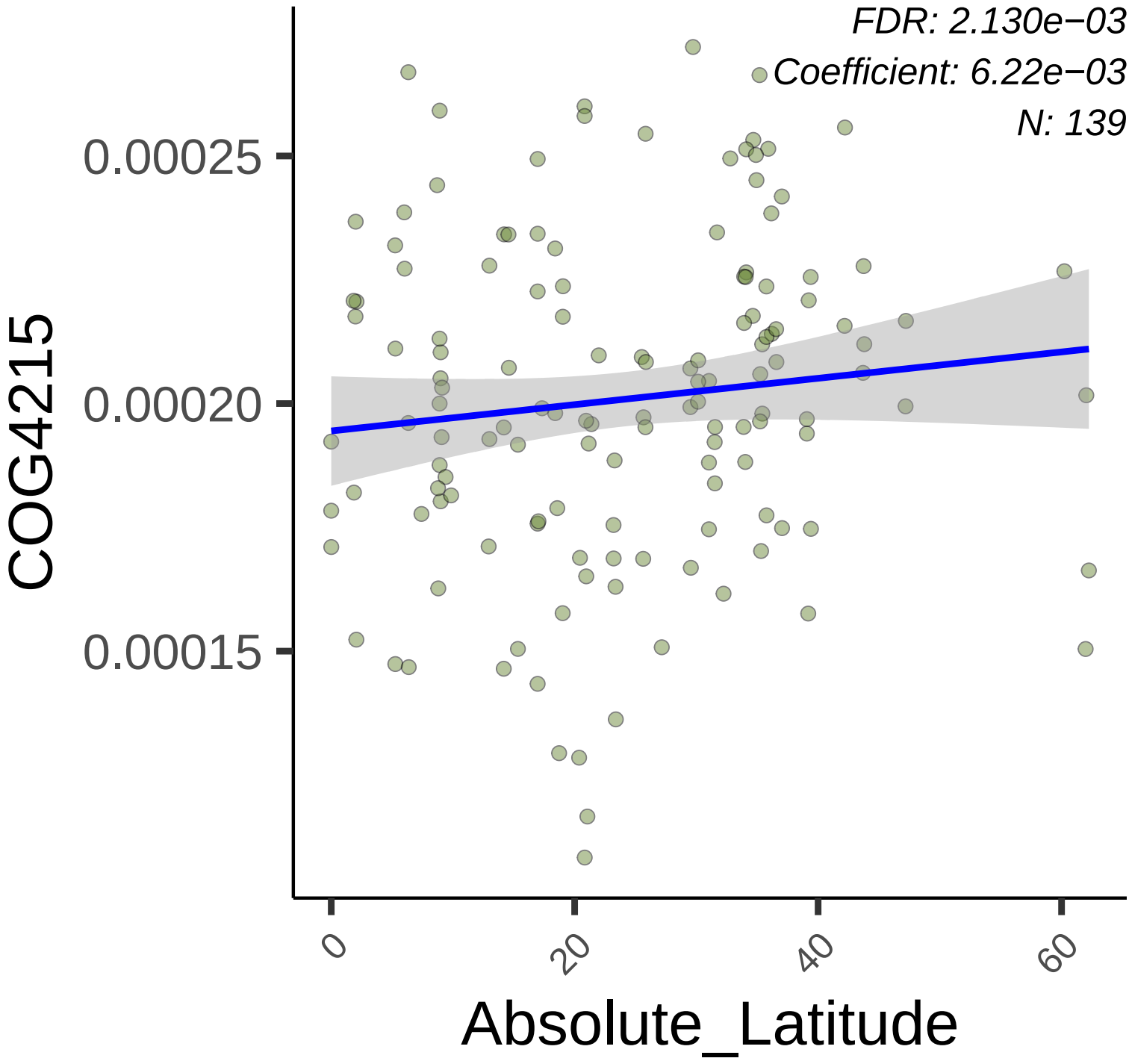

FDR: 2.022e−03
Coefficient: 1.07e−02
N: 139
COG1408
0.00020
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

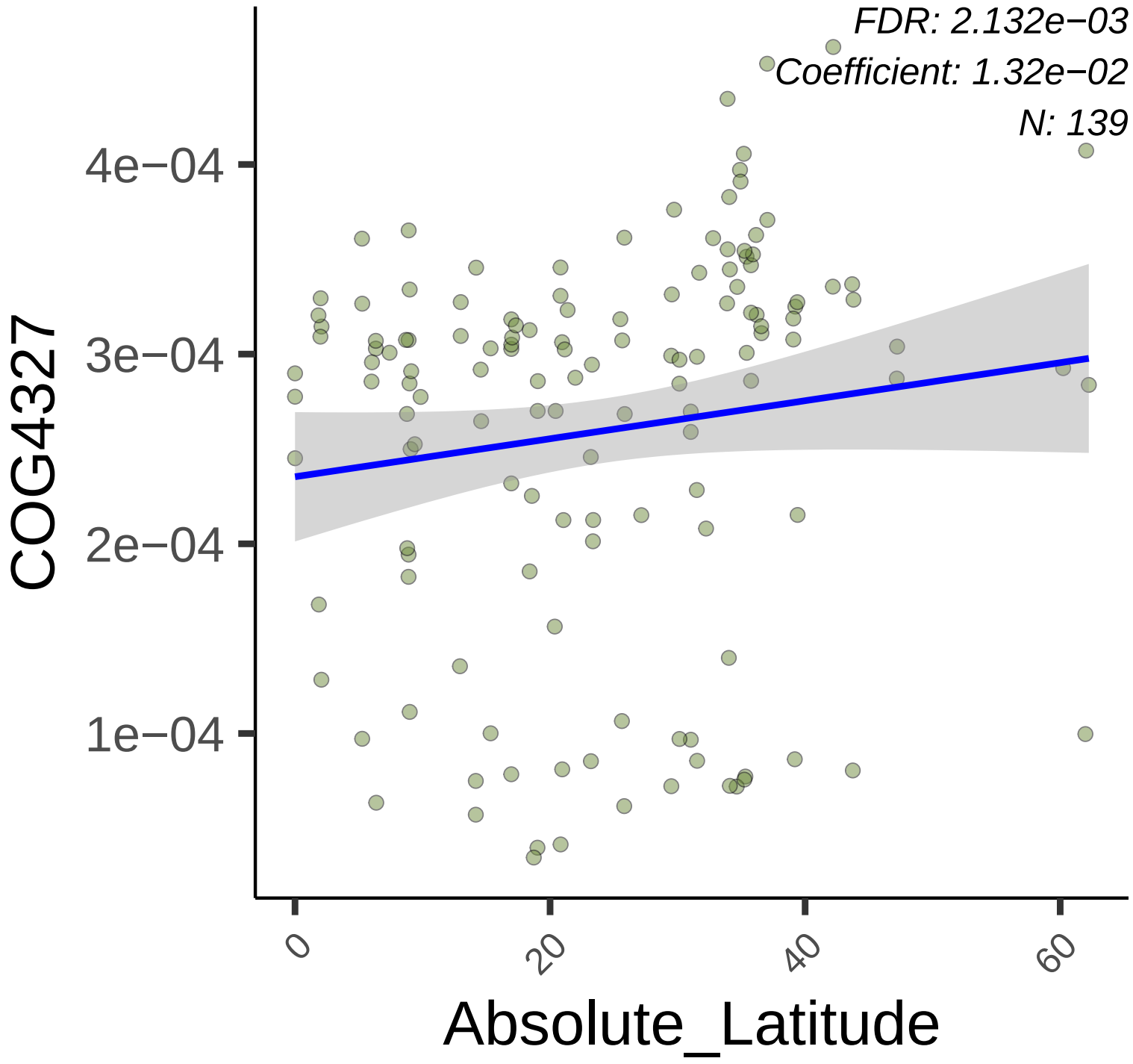

FDR: 2.054e−03
Coefficient: 8.97e−03
N: 139
5e−04
4e−04
3e−04
2e−04
1e−04
COG3448
0
20
40
60
Absolute_Latitude

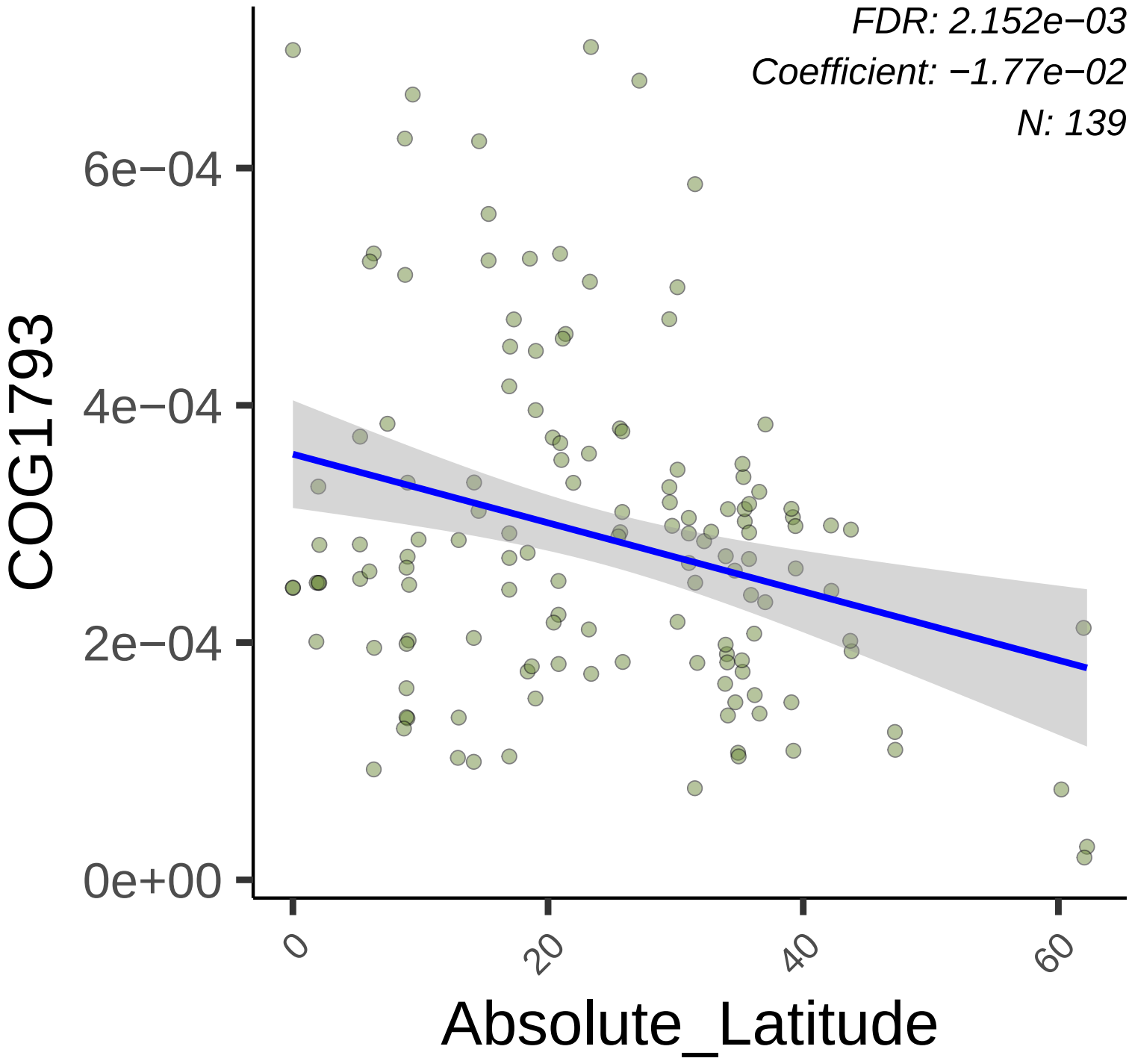

FDR: 2.086e−03
Coefficient: 4.56e−03
N: 139
6e−04
5e−04
4e−04
COG0240
0
20
40
60
Absolute_Latitude

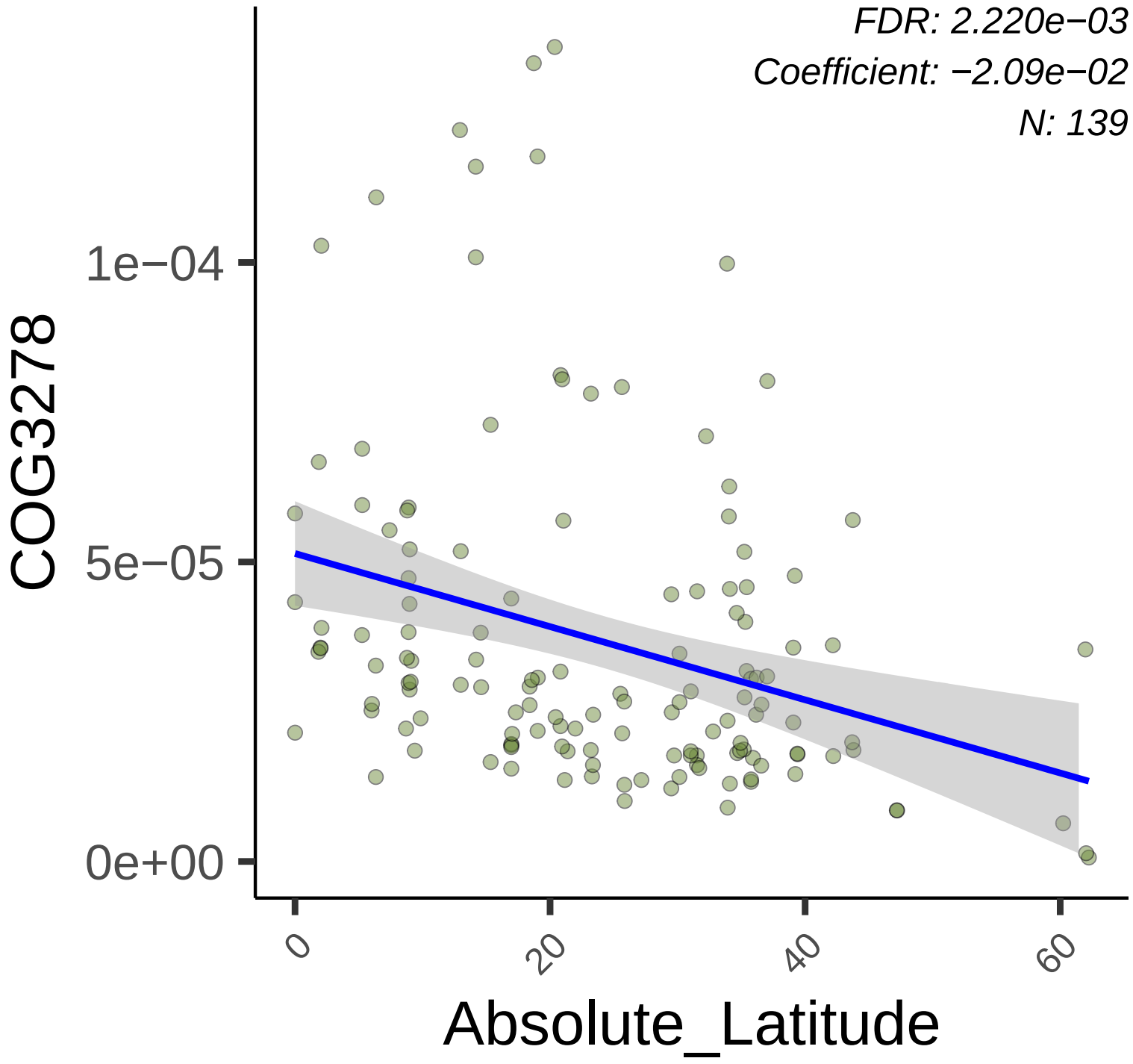

FDR: 2.115e−03
Coefficient: 6.71e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
COG3200
0
20
40
60
Absolute_Latitude

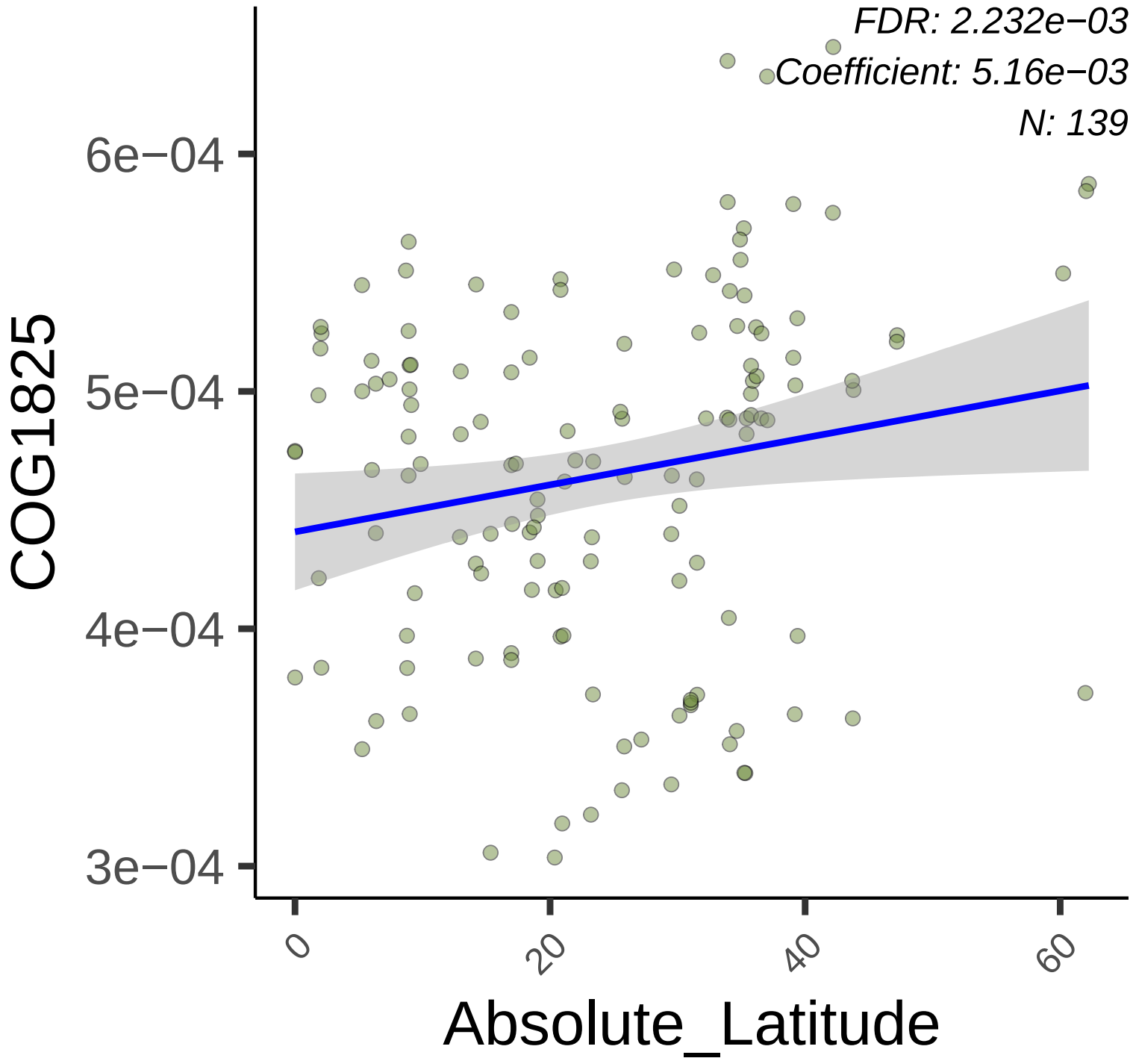

FDR: 2.121e−03
Coefficient: 3.50e−02
N: 139
COG1855
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

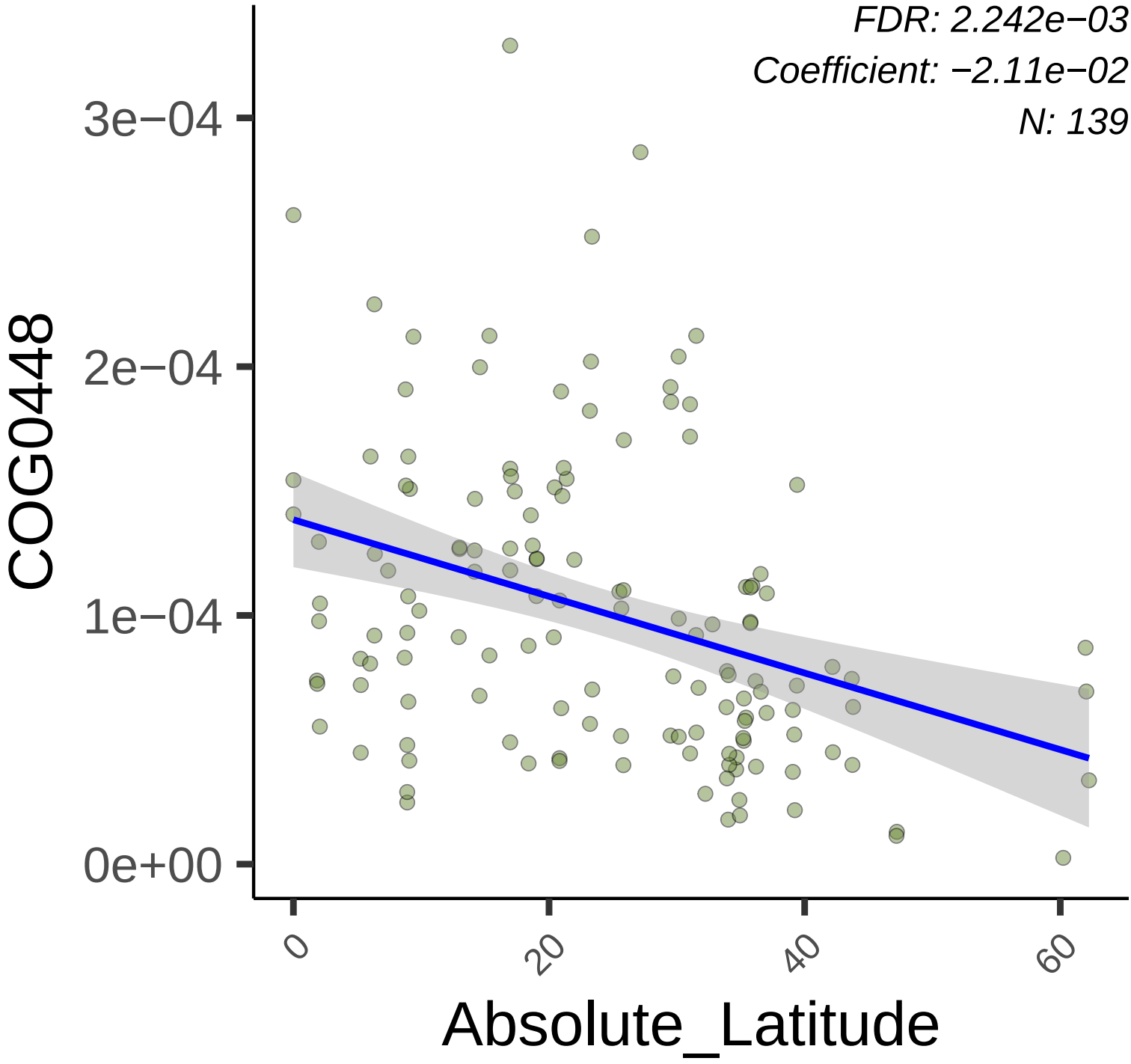

FDR: 2.130e−03
Coefficient: 6.22e−03
N: 139
0.00025
0.00020
0.00015
COG4215
0
20
40
60
Absolute_Latitude

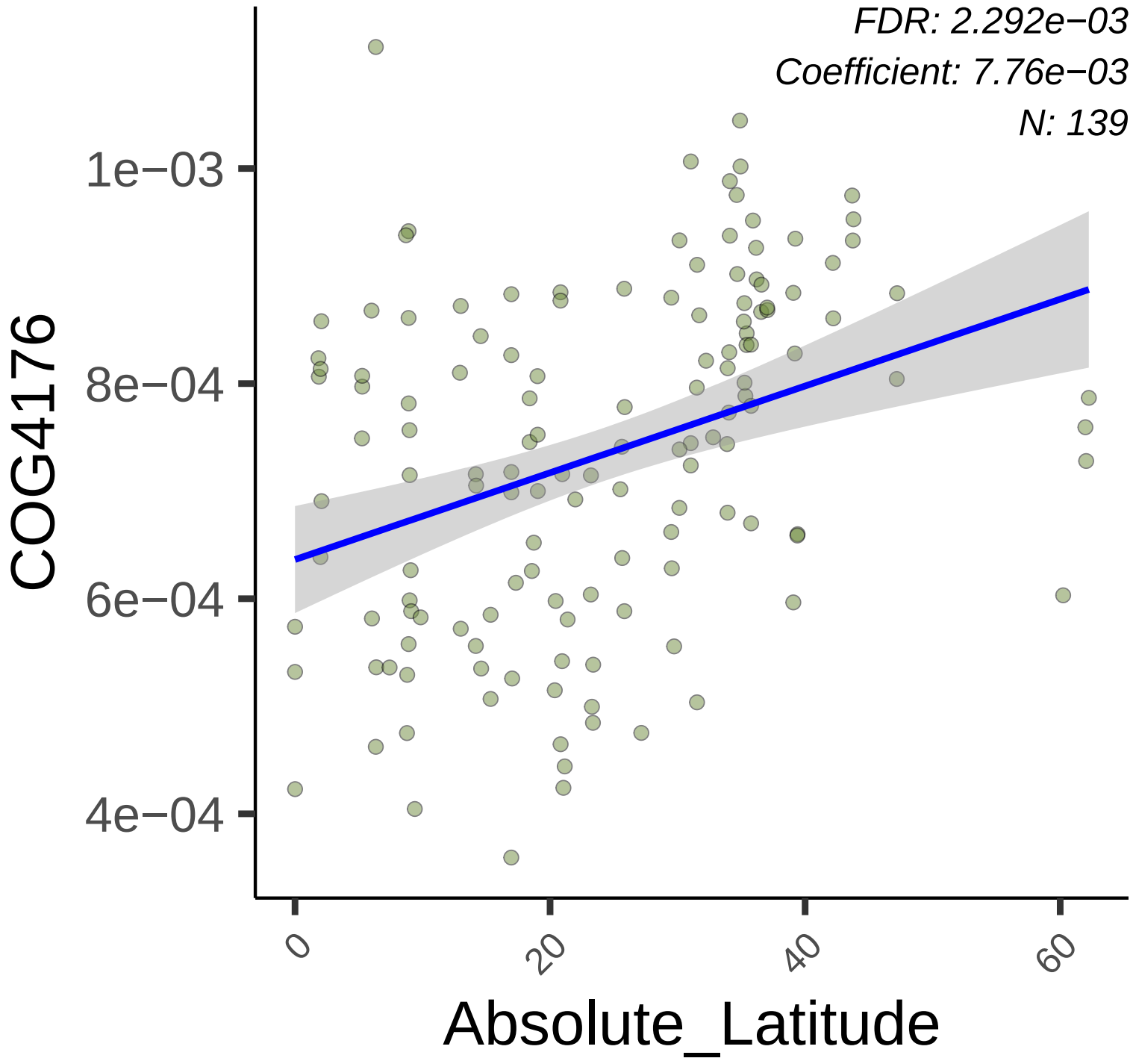

FDR: 2.132e−03
Coefficient: 1.32e−02
N: 139
COG4327
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

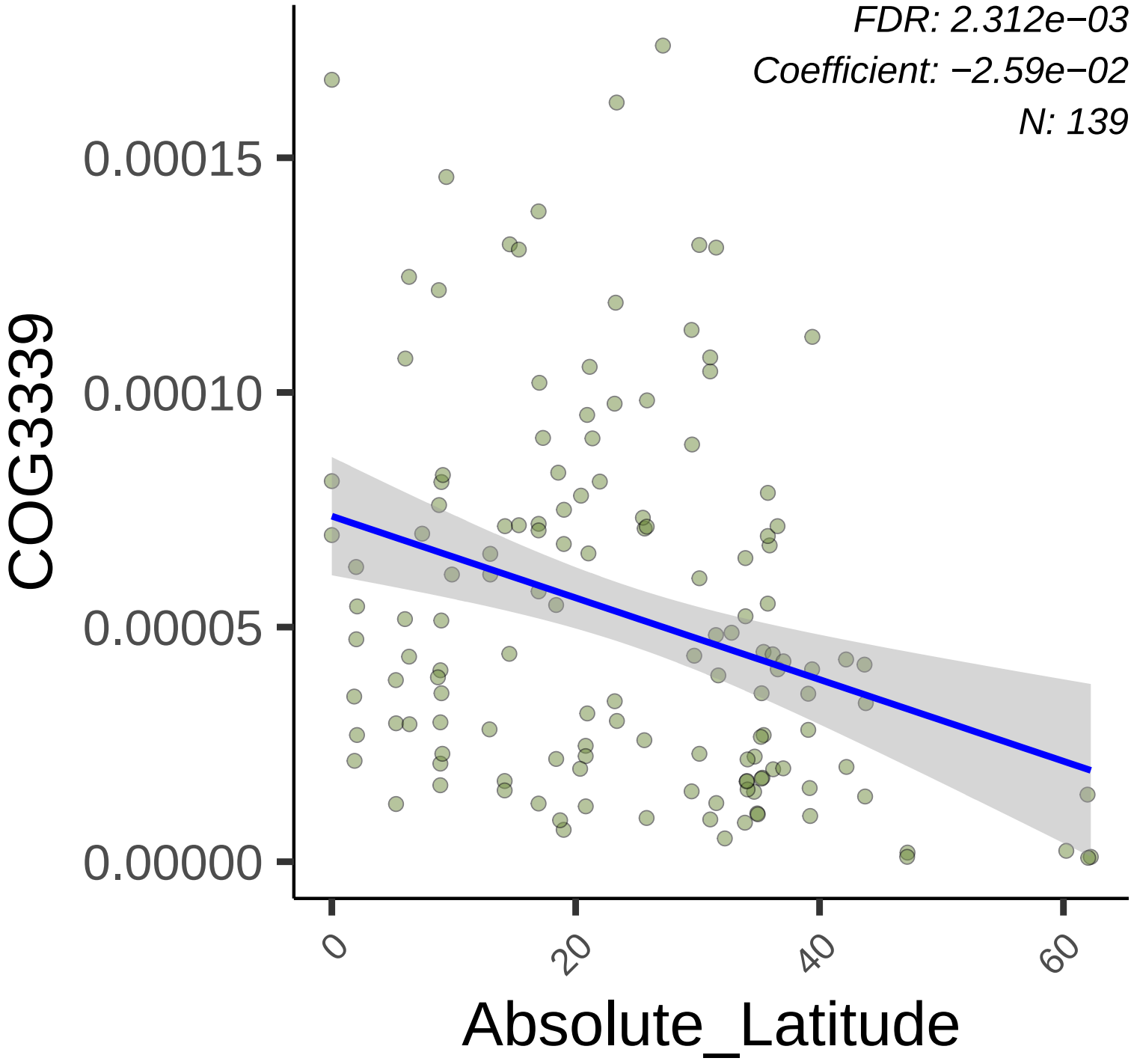

FDR: 2.152e−03
Coefficient: −1.77e−02
N: 139
COG1793
6e−04
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

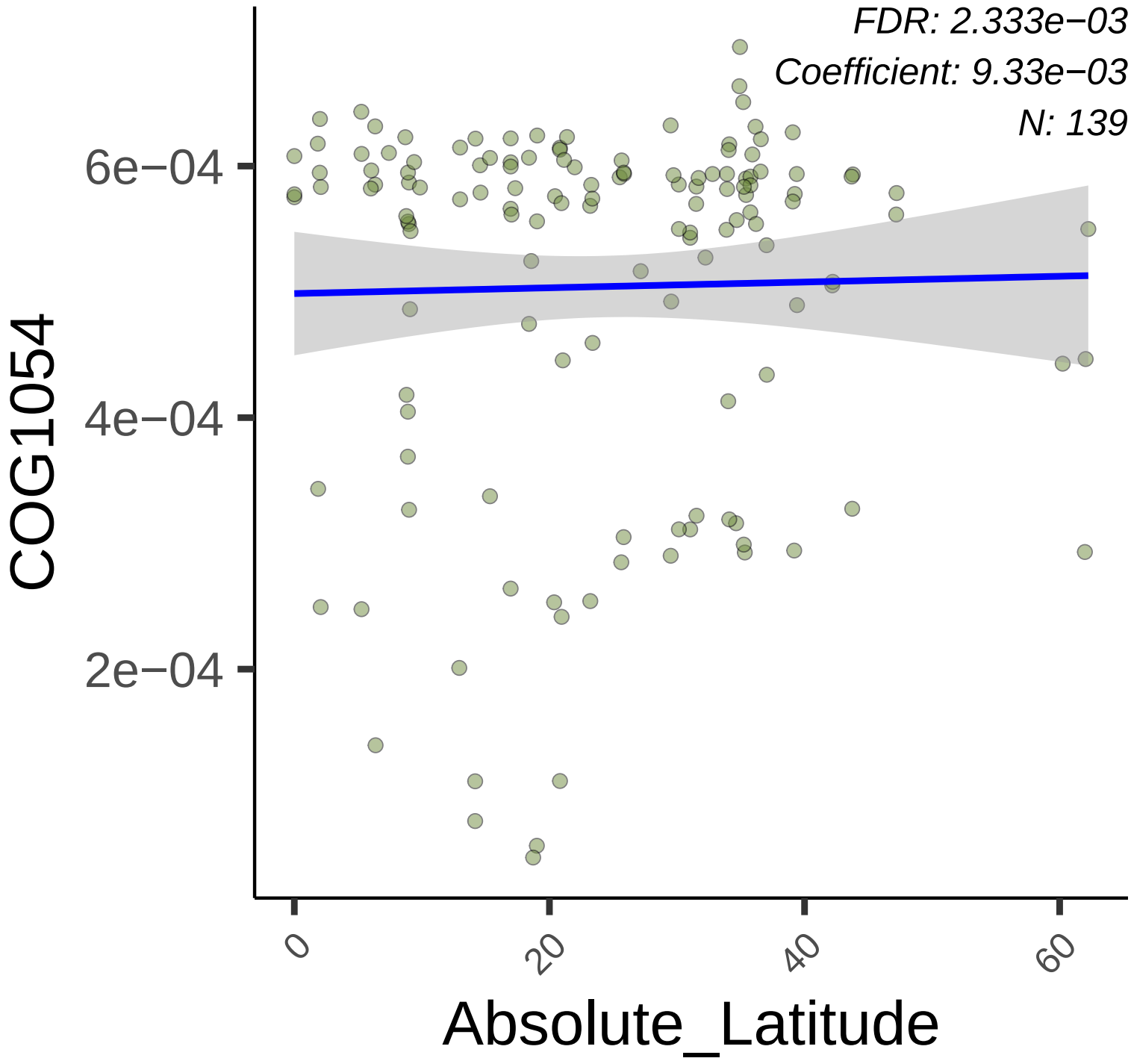

FDR: 2.220e−03
Coefficient: −2.09e−02
N: 139
COG3278
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

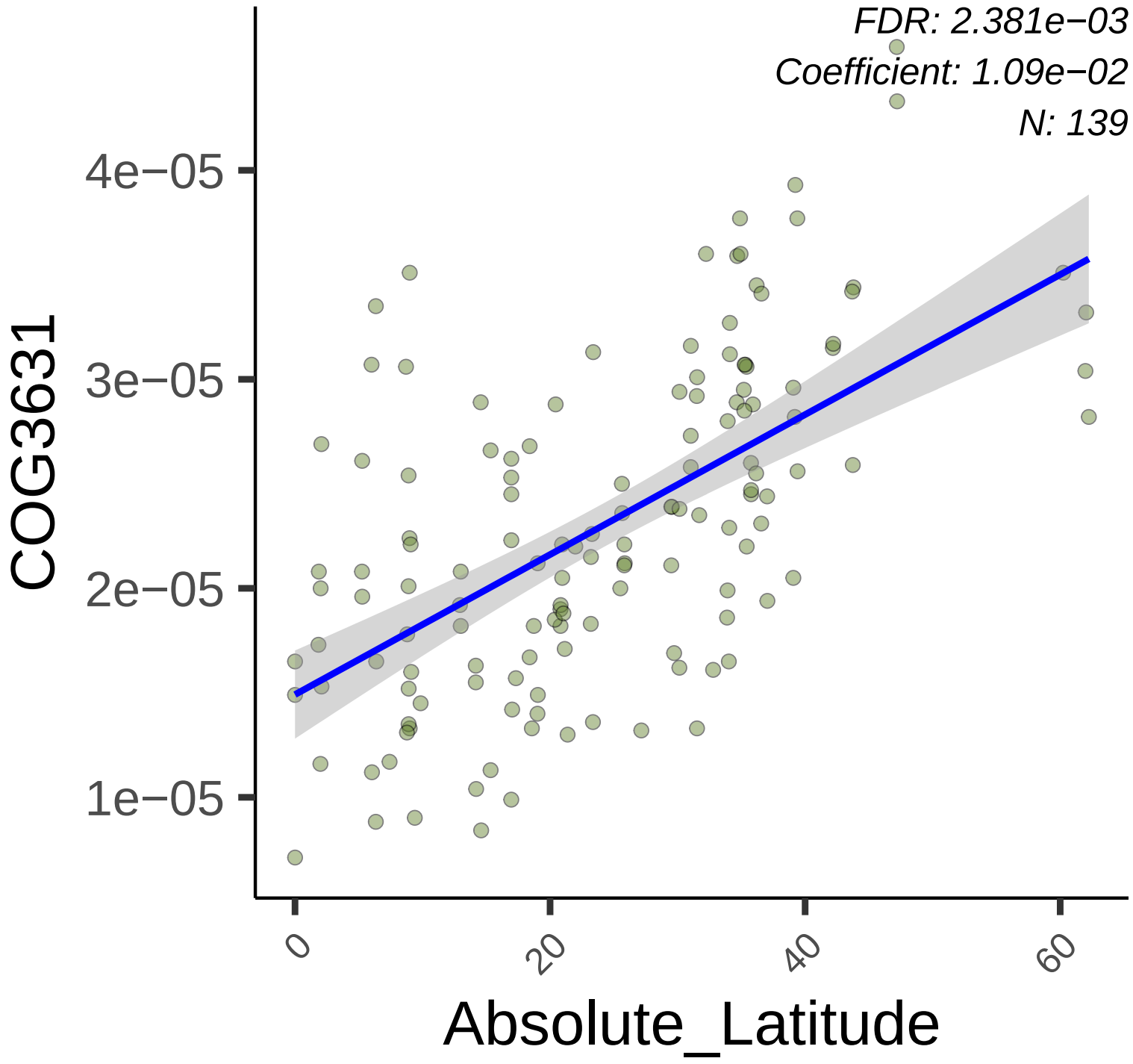

FDR: 2.232e−03
Coefficient: 5.16e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG1825
0
20
40
60
Absolute_Latitude

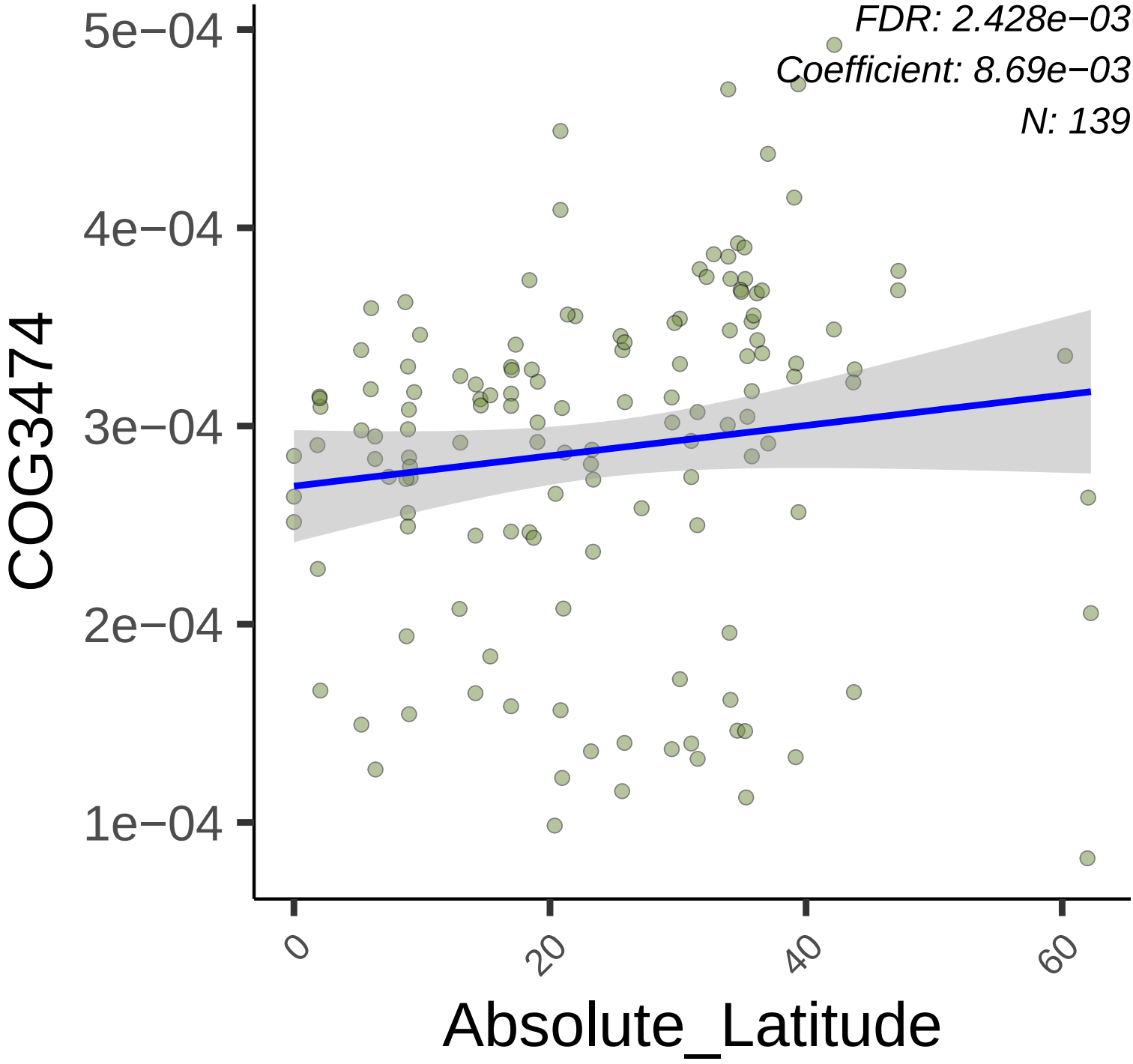

FDR: 2.242e−03
Coefficient: −2.11e−02
N: 139
COG0448
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

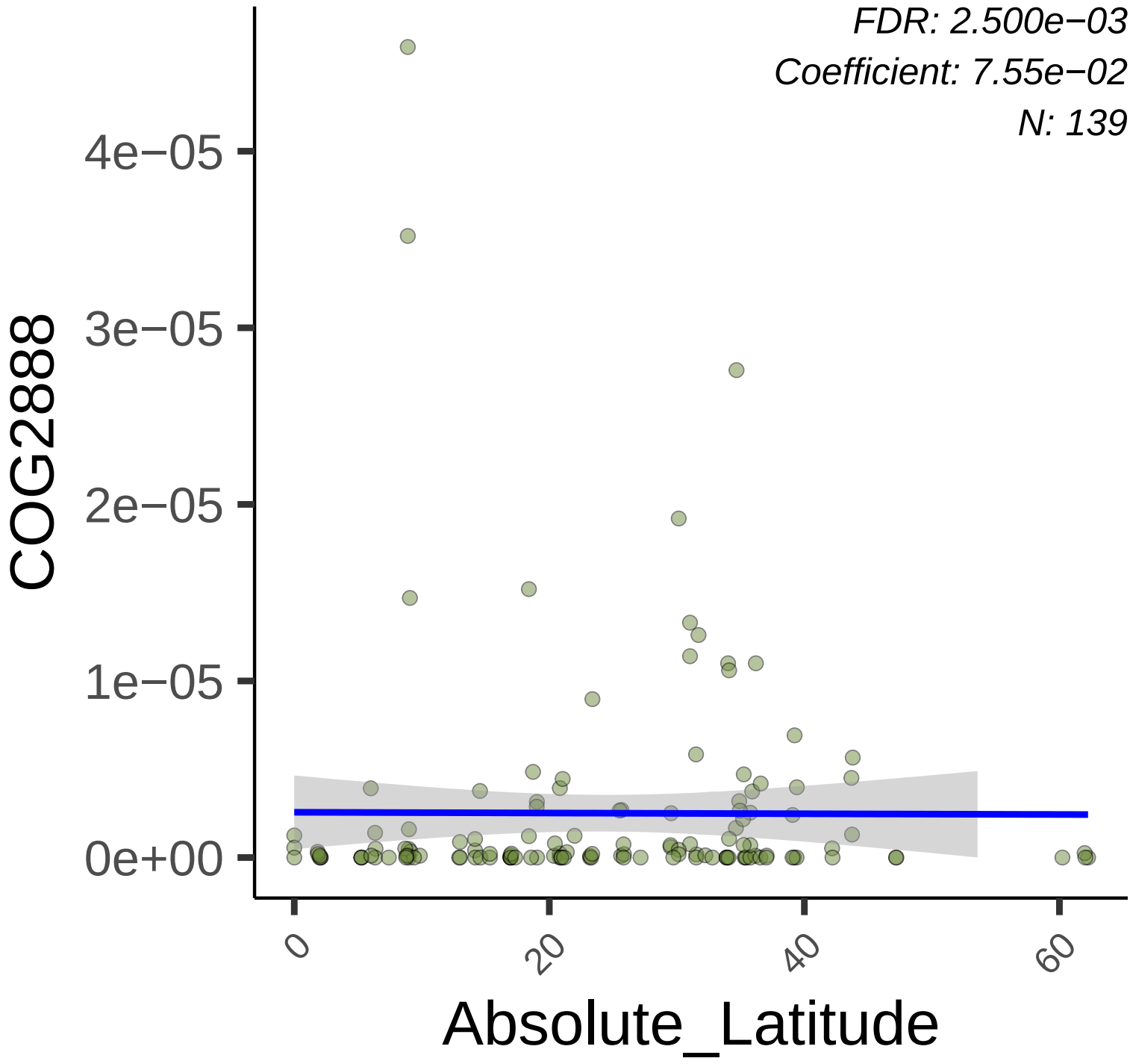

FDR: 2.292e−03
Coefficient: 7.76e−03
N: 139
COG4176
1e−03
8e−04
6e−04
4e−04
0
20
40
60
Absolute_Latitude

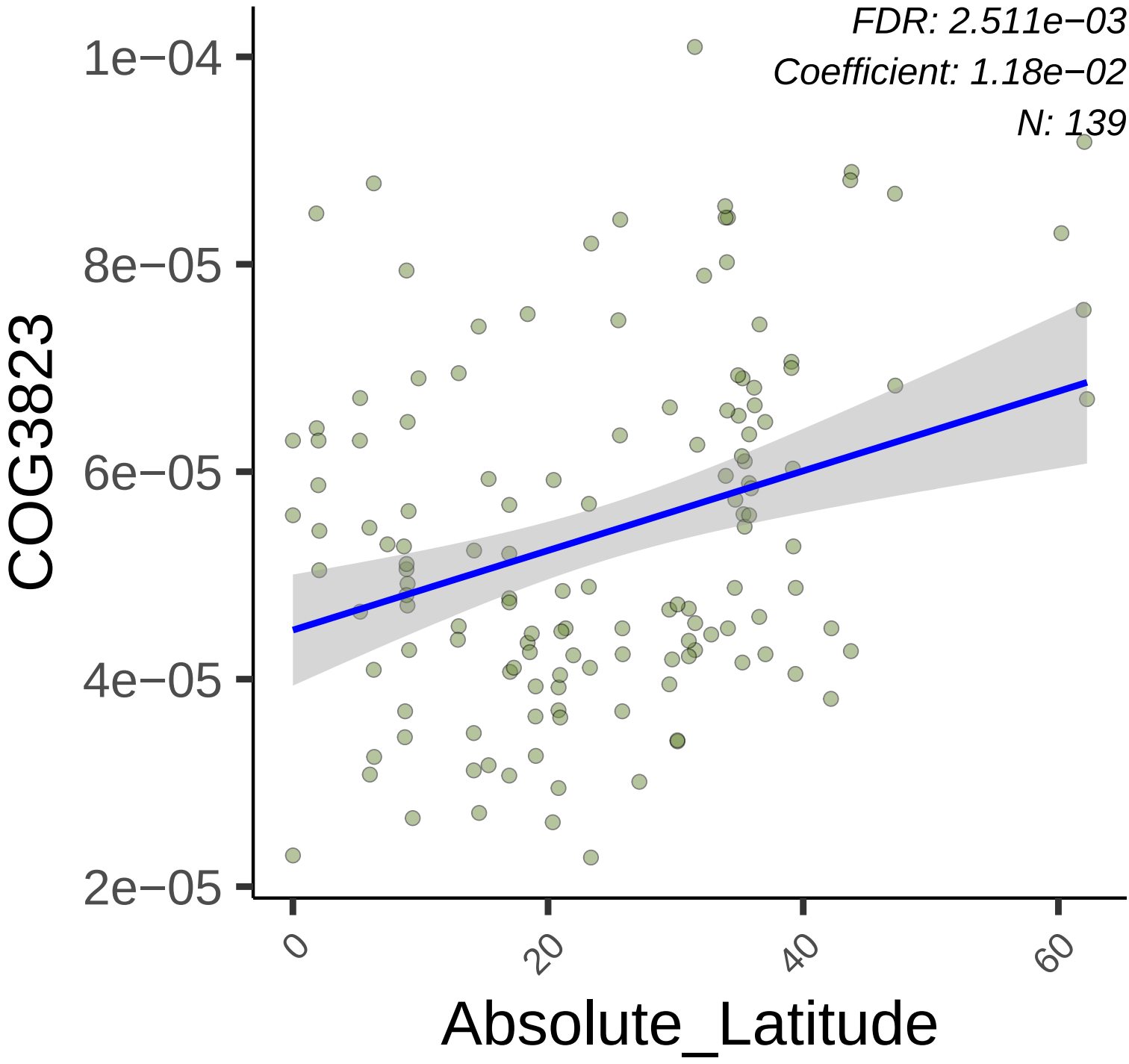

FDR: 2.312e−03
Coefficient: −2.59e−02
N: 139
COG3339
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

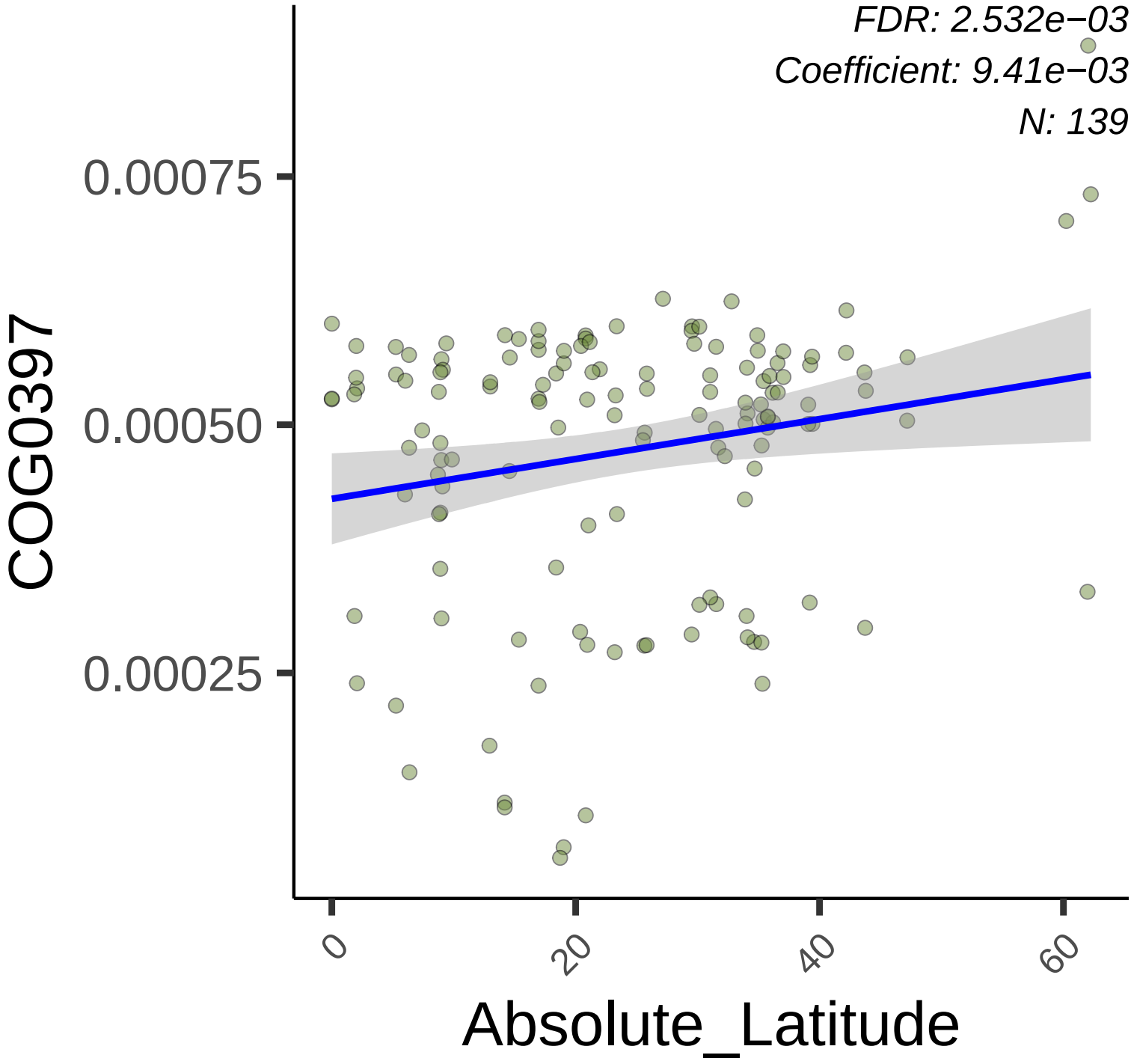

FDR: 2.333e−03
Coefficient: 9.33e−03
N: 139
6e−04
4e−04
2e−04
COG1054
0
20
40
60
Absolute_Latitude

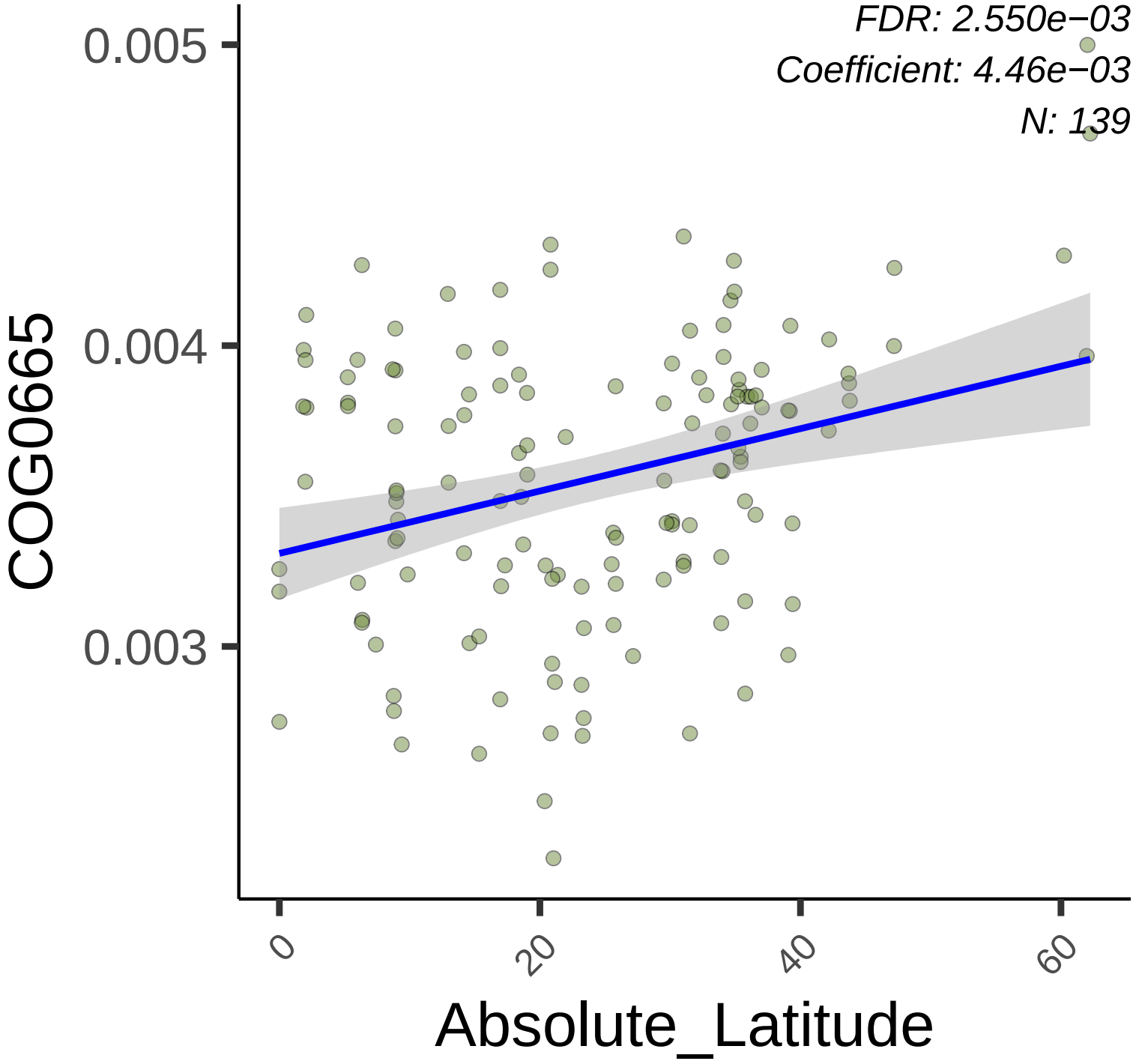

FDR: 2.381e−03
Coefficient: 1.09e−02
N: 139
COG3631
4e−05
3e−05
2e−05
1e−05
0
20
40
60
Absolute_Latitude

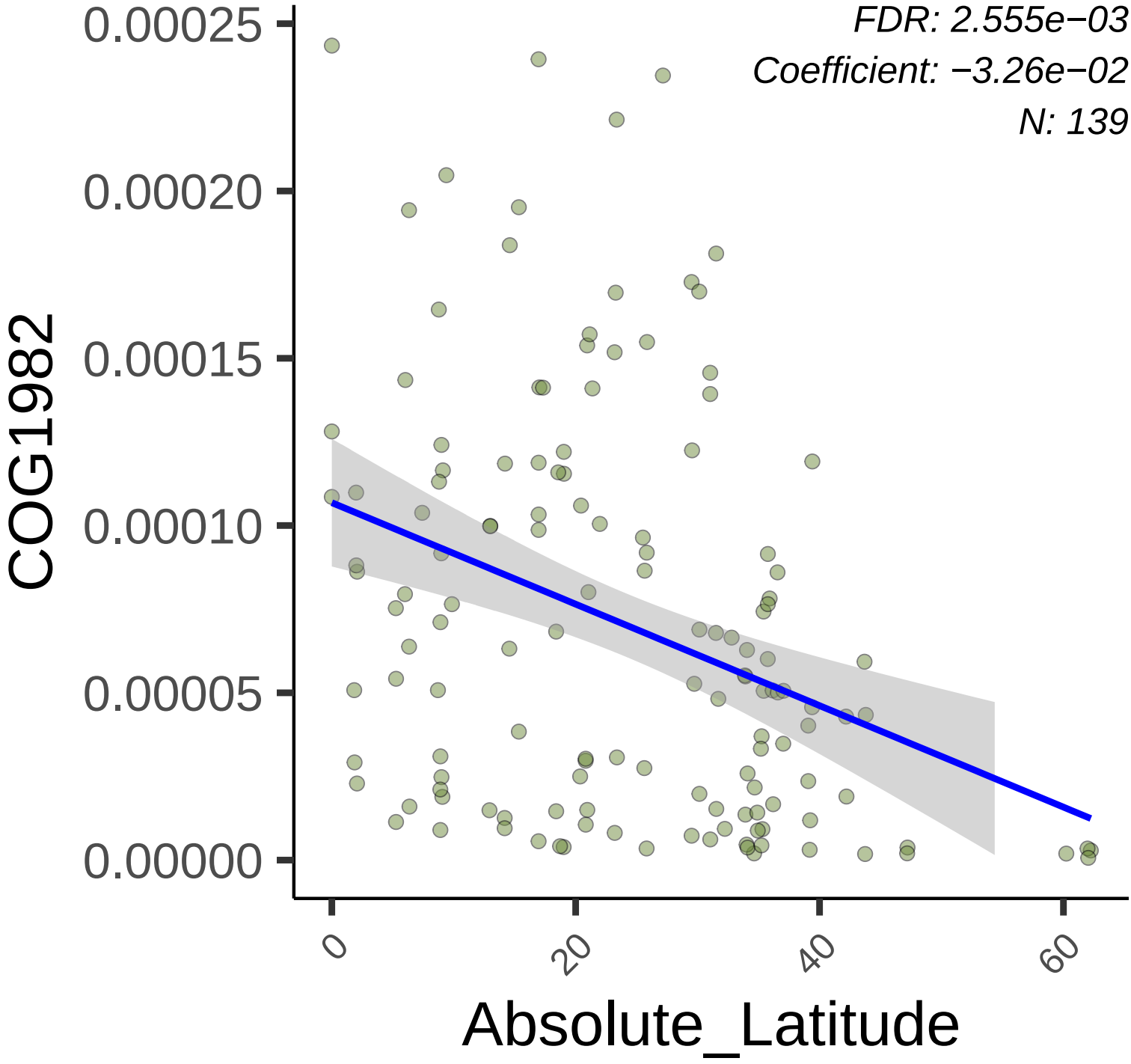

FDR: 2.428e−03
Coefficient: 8.69e−03
N: 139
5e−04
4e−04
3e−04
2e−04
1e−04
COG3474
0
20
40
60
Absolute_Latitude

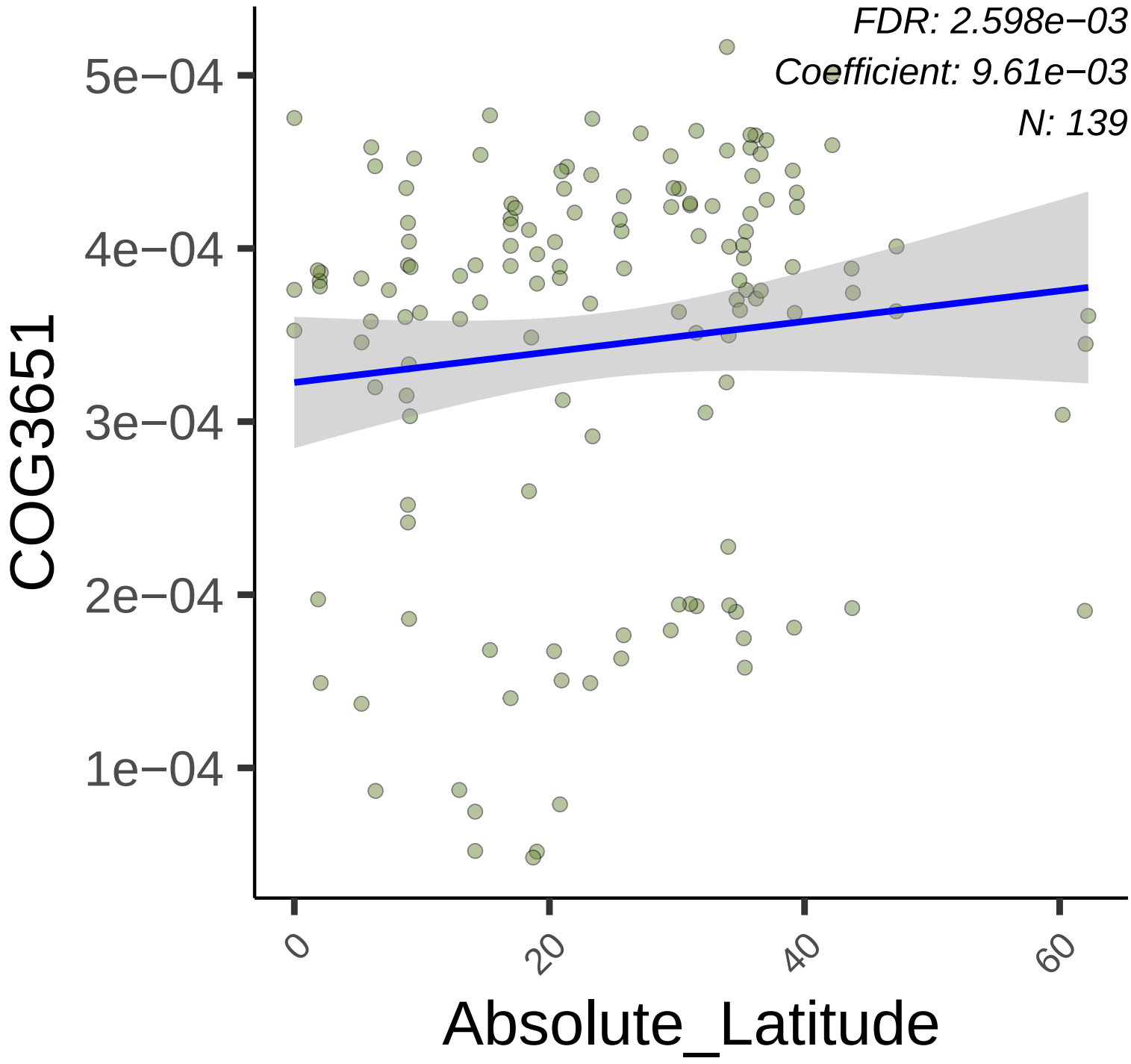

FDR: 2.500e−03
Coefficient: 7.55e−02
N: 139
COG2888
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

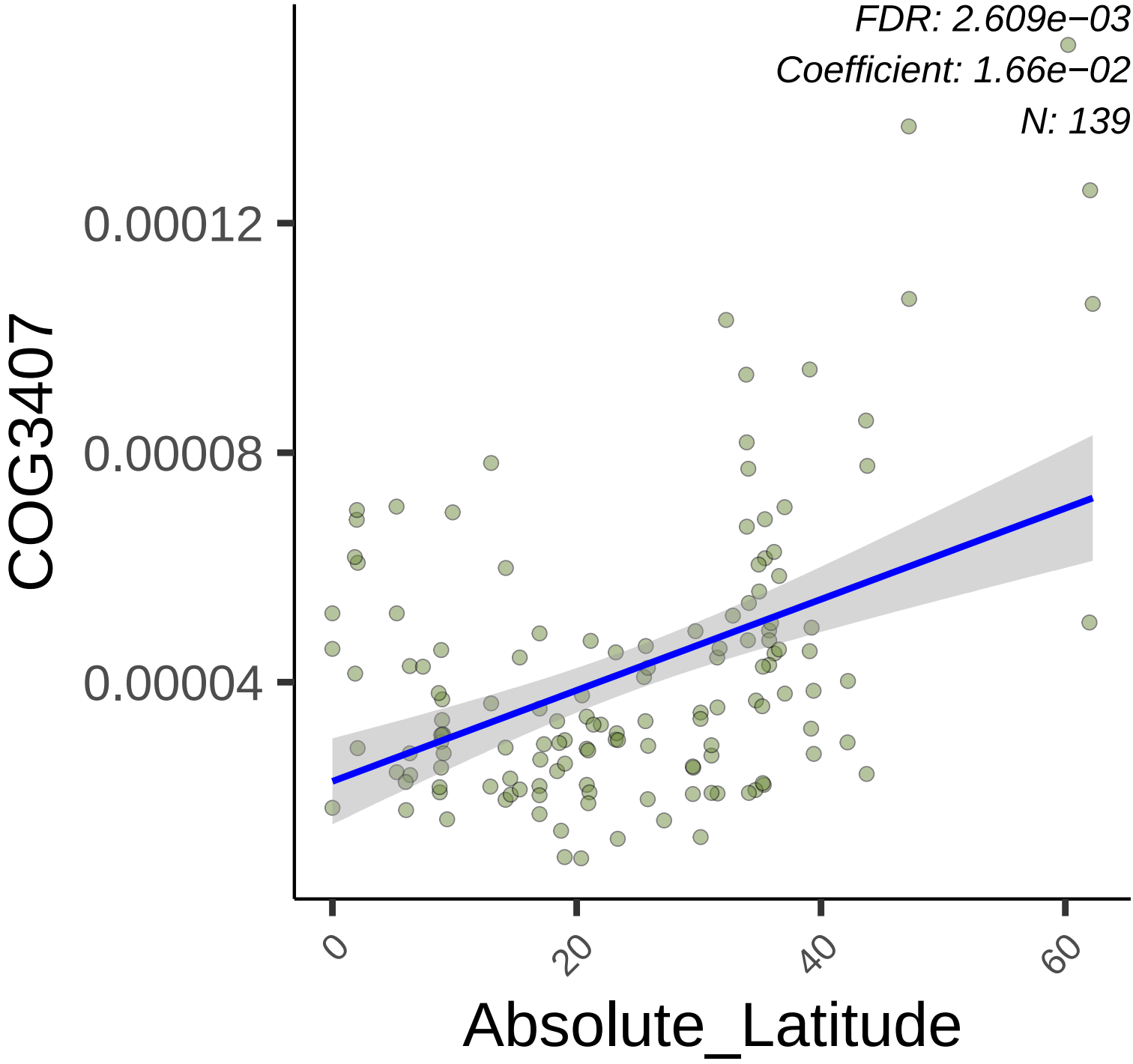

FDR: 2.511e−03
Coefficient: 1.18e−02
N: 139
1e−04
8e−05
6e−05
4e−05
2e−05
COG3823
0
20
40
60
Absolute_Latitude

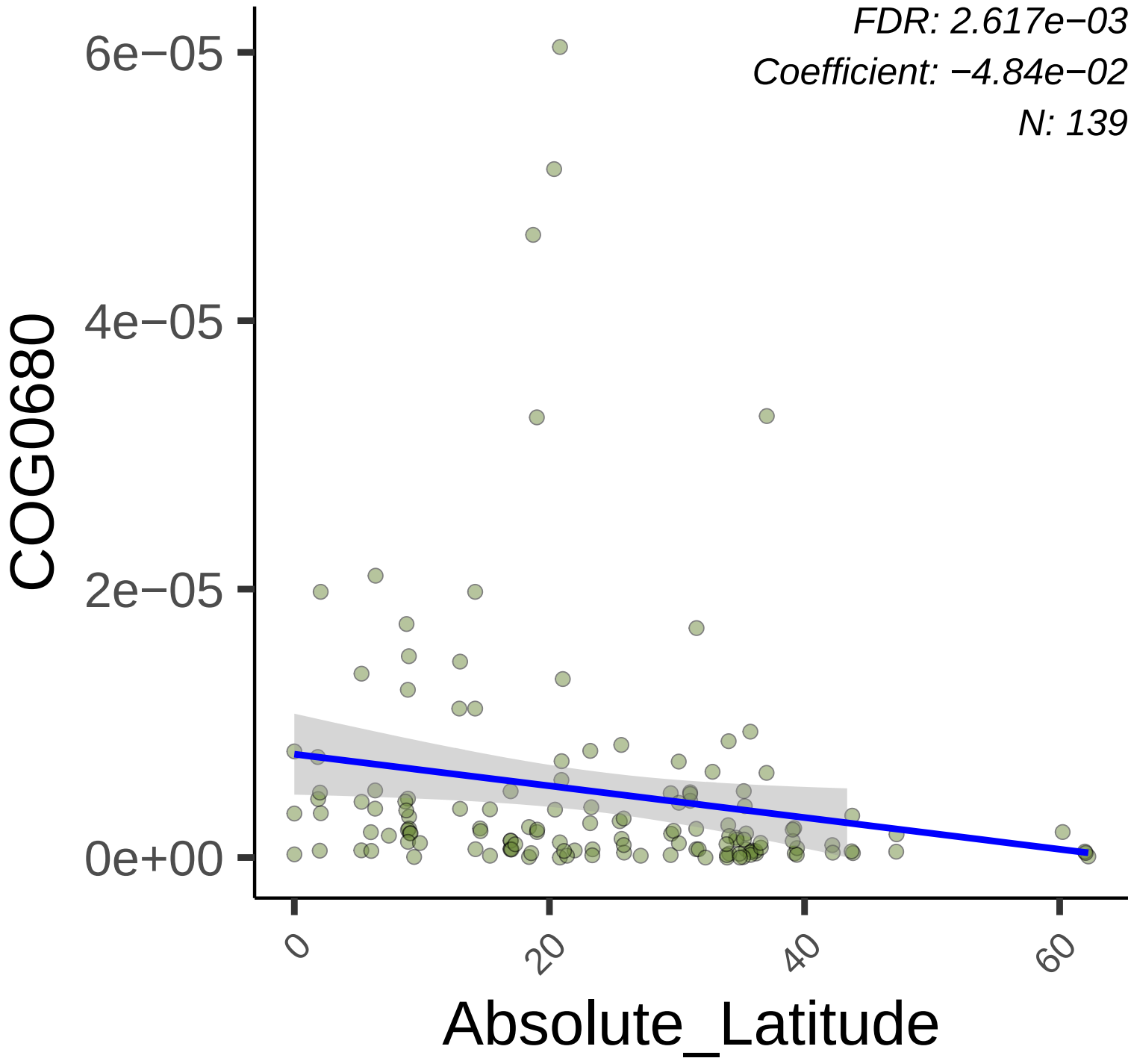

FDR: 2.532e−03
Coefficient: 9.41e−03
N: 139
0.00075
0.00050
0.00025
COG0397
0
20
40
60
Absolute_Latitude

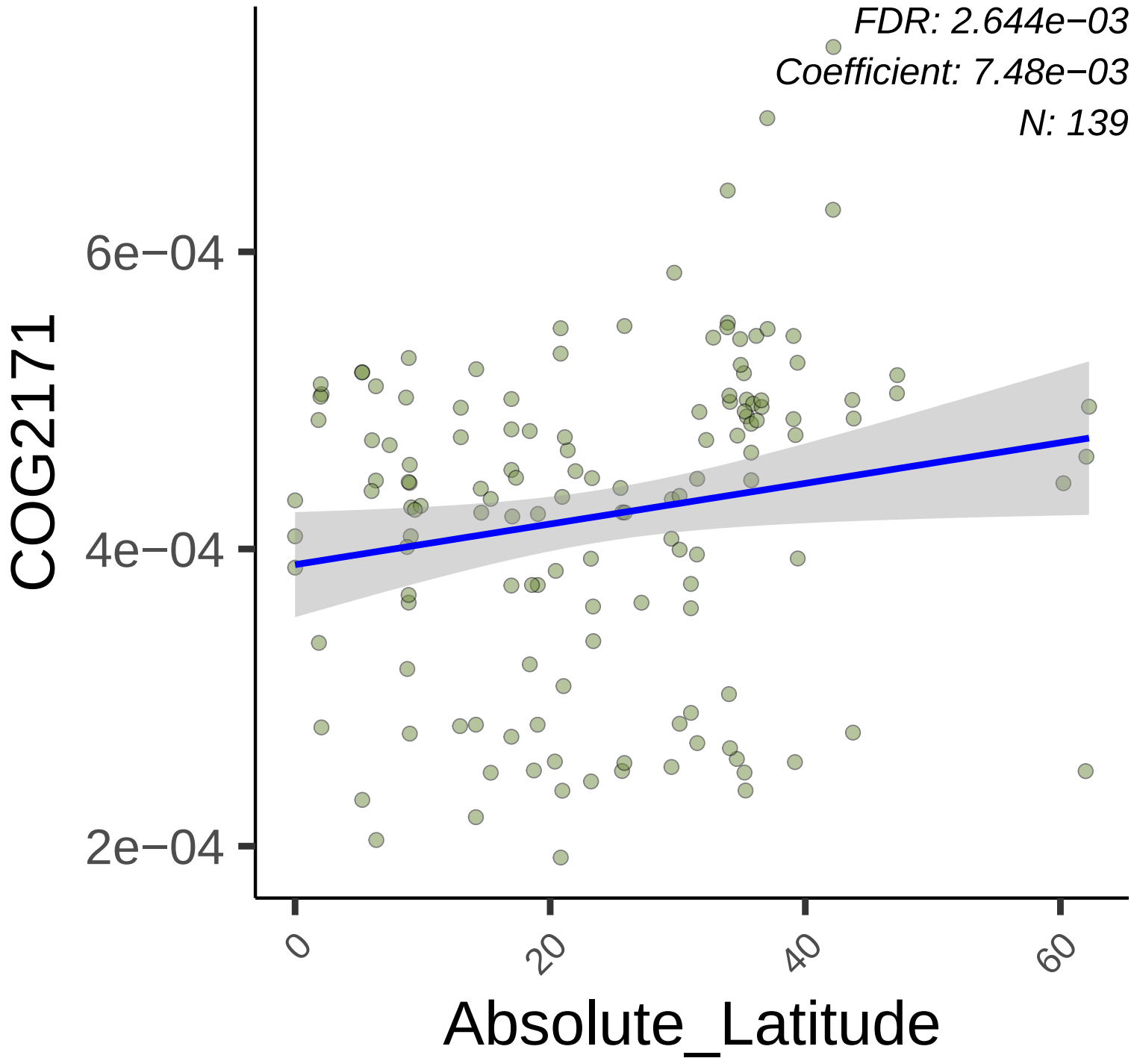

FDR: 2.550e−03
Coefficient: 4.46e−03
N: 139
0.005
0.004
0.003
COG0665
0
20
40
60
Absolute_Latitude

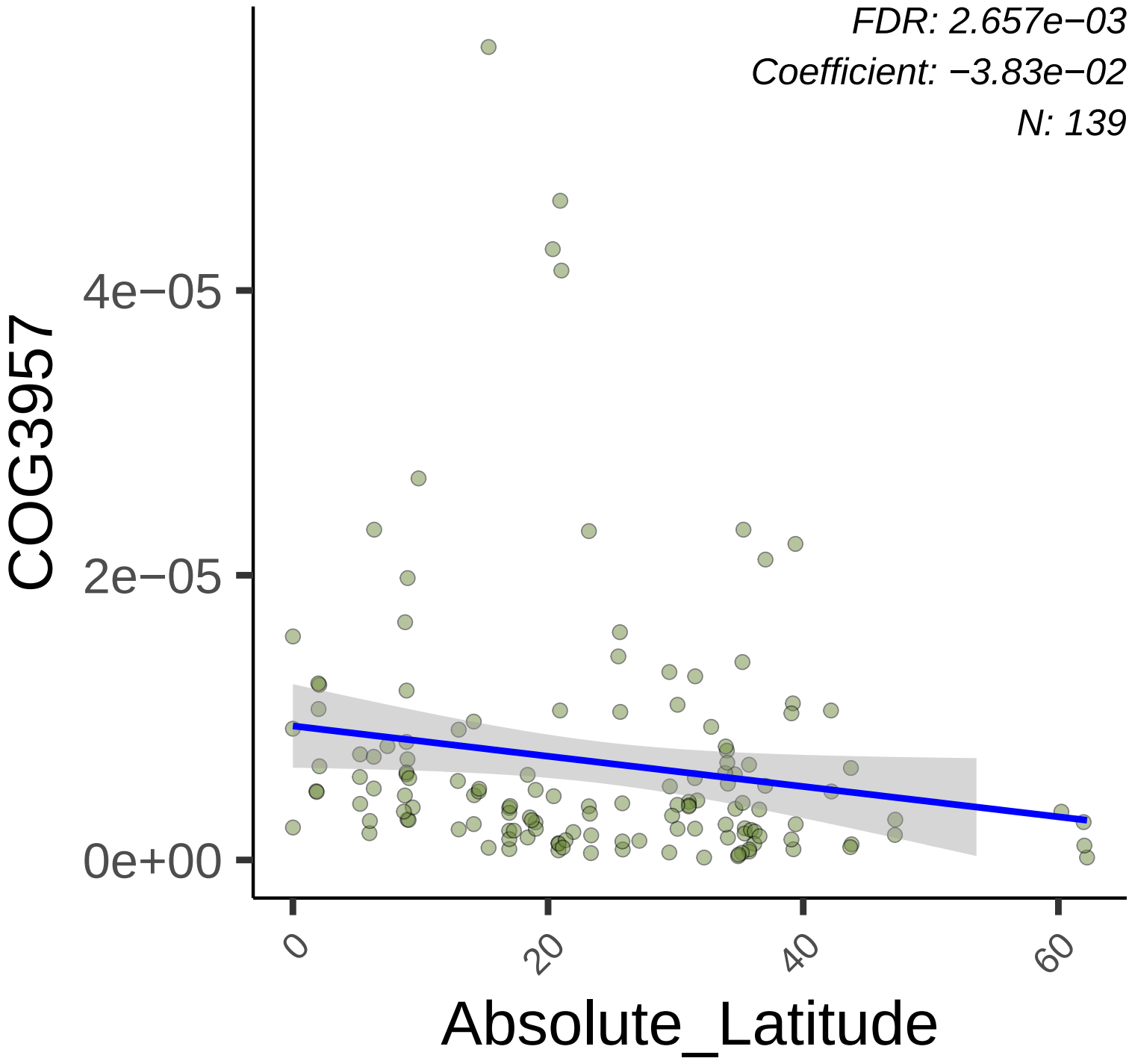

FDR: 2.555e−03
Coefficient: −3.26e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
COG1982
0
20
40
60
Absolute_Latitude

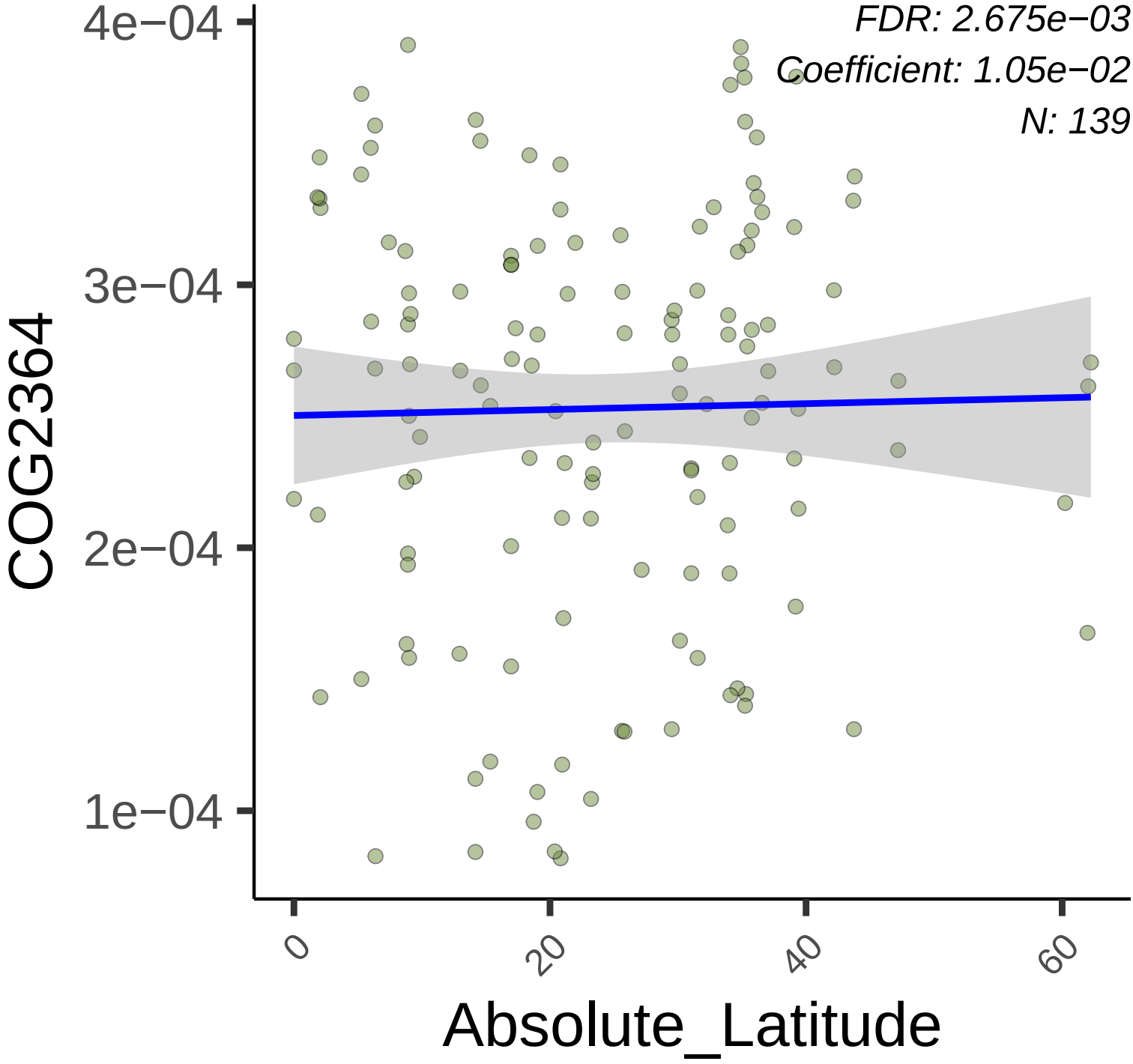

FDR: 2.598e−03
Coefficient: 9.61e−03
N: 139
5e−04
4e−04
3e−04
2e−04
1e−04
COG3651
0
20
40
60
Absolute_Latitude

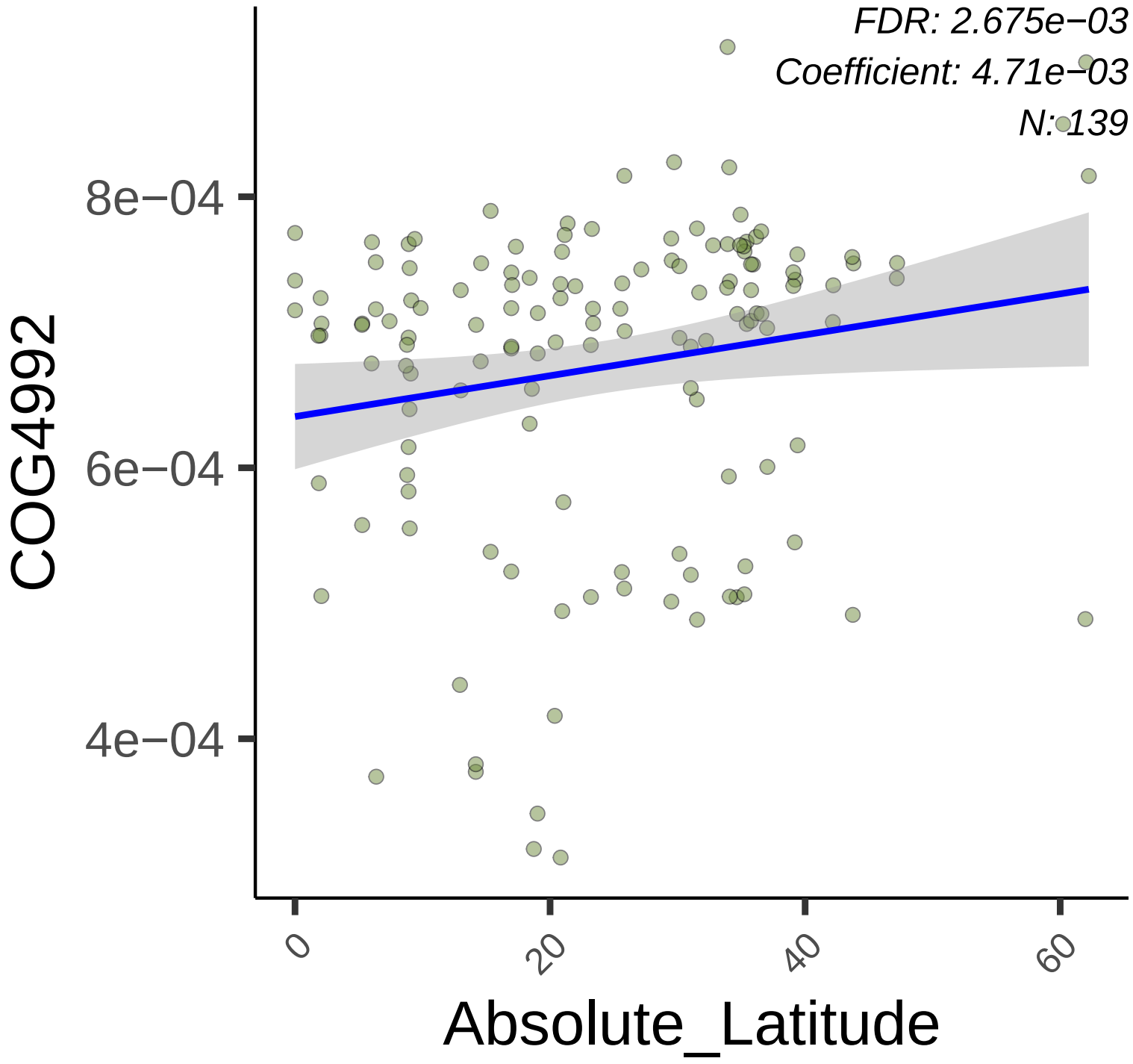

FDR: 2.609e−03
Coefficient: 1.66e−02
N: 139
COG3407
0.00012
0.00008
0.00004
0
20
40
60
Absolute_Latitude

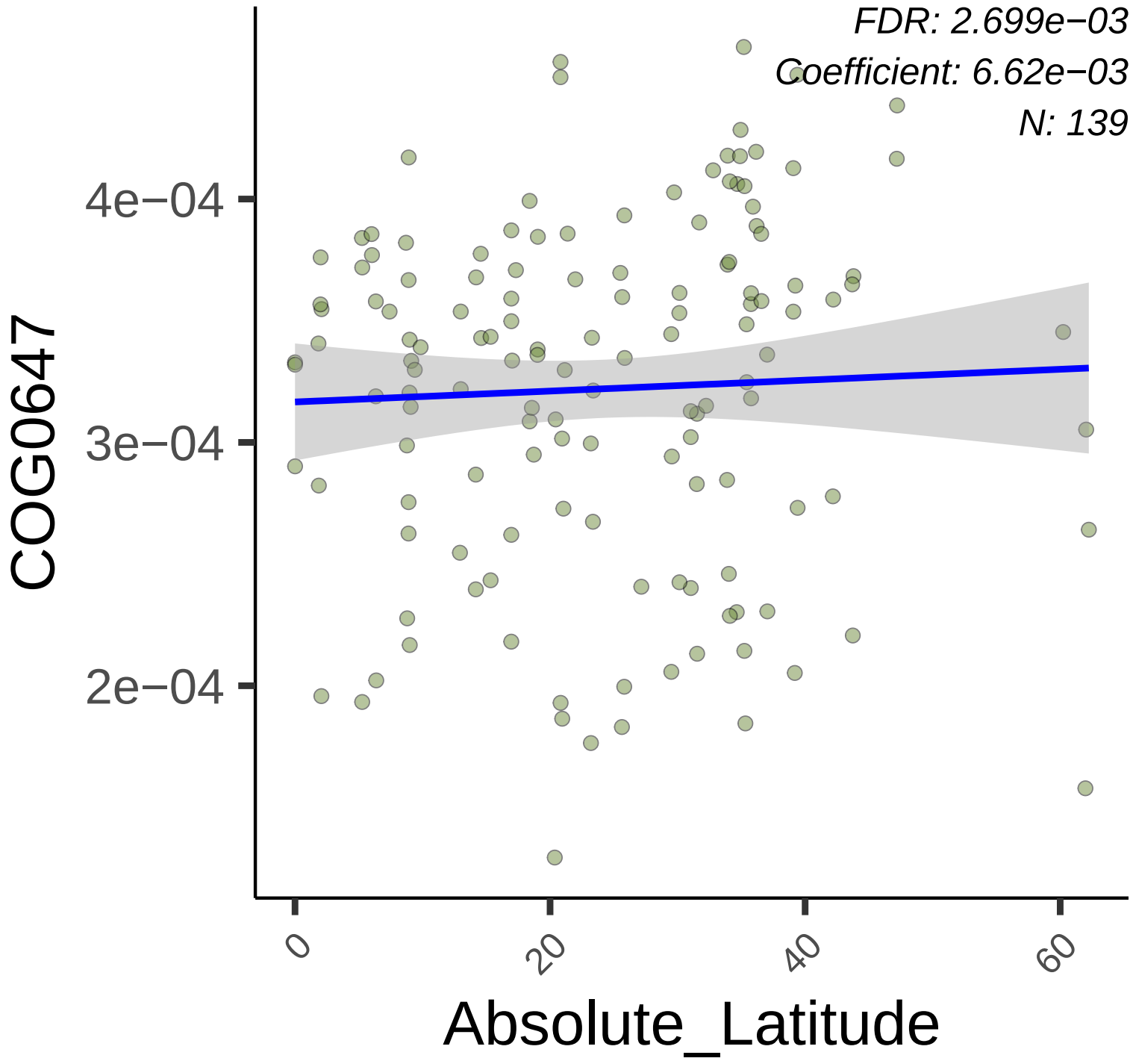

FDR: 2.617e−03
Coefficient: −4.84e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG0680
0
20
40
60
Absolute_Latitude

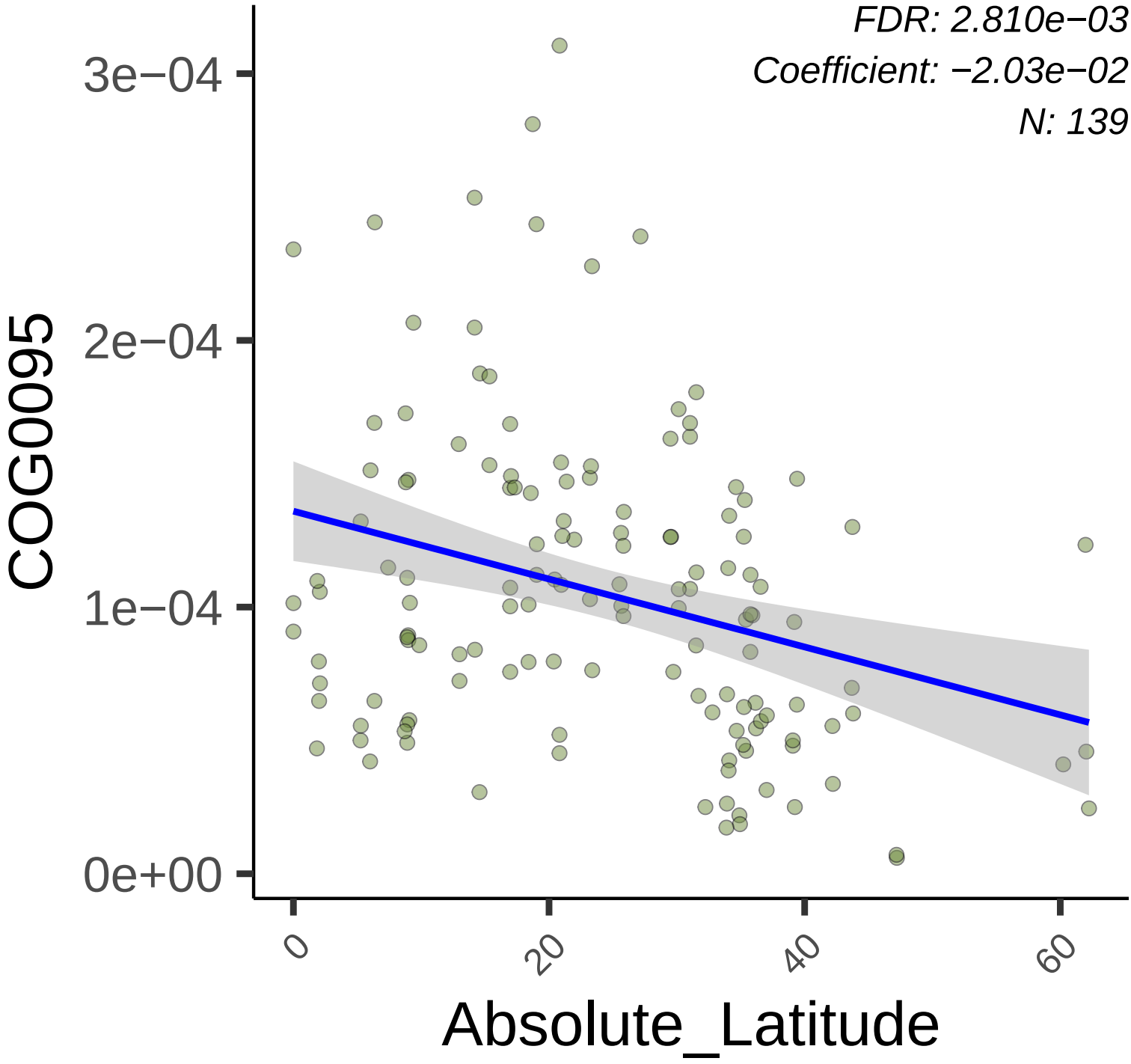

FDR: 2.644e−03
Coefficient: 7.48e−03
N: 139
COG2171
6e−04
4e−04
2e−04
0
20
40
60
Absolute_Latitude

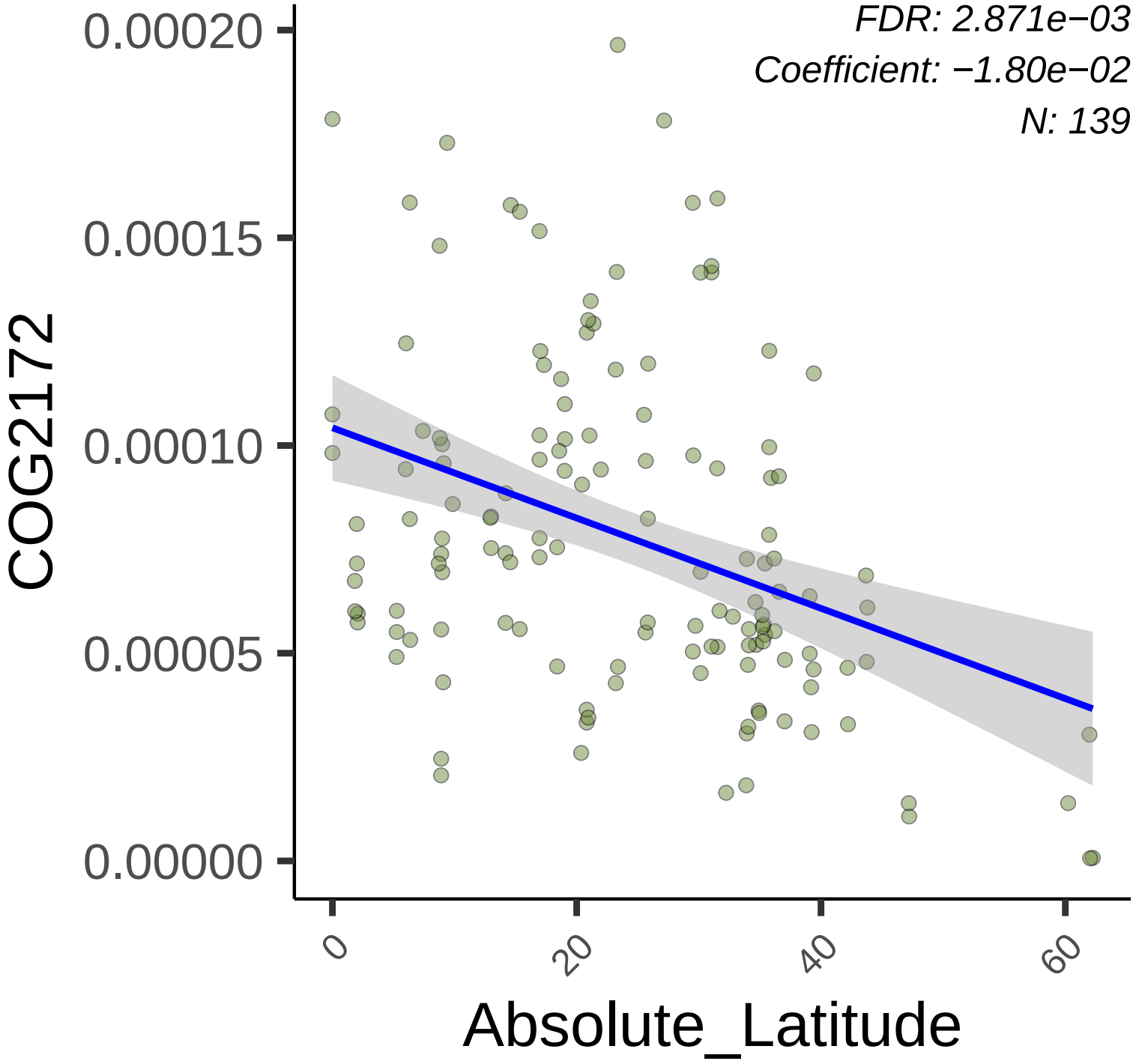

FDR: 2.657e−03
Coefficient: −3.83e−02
N: 139
COG3957
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

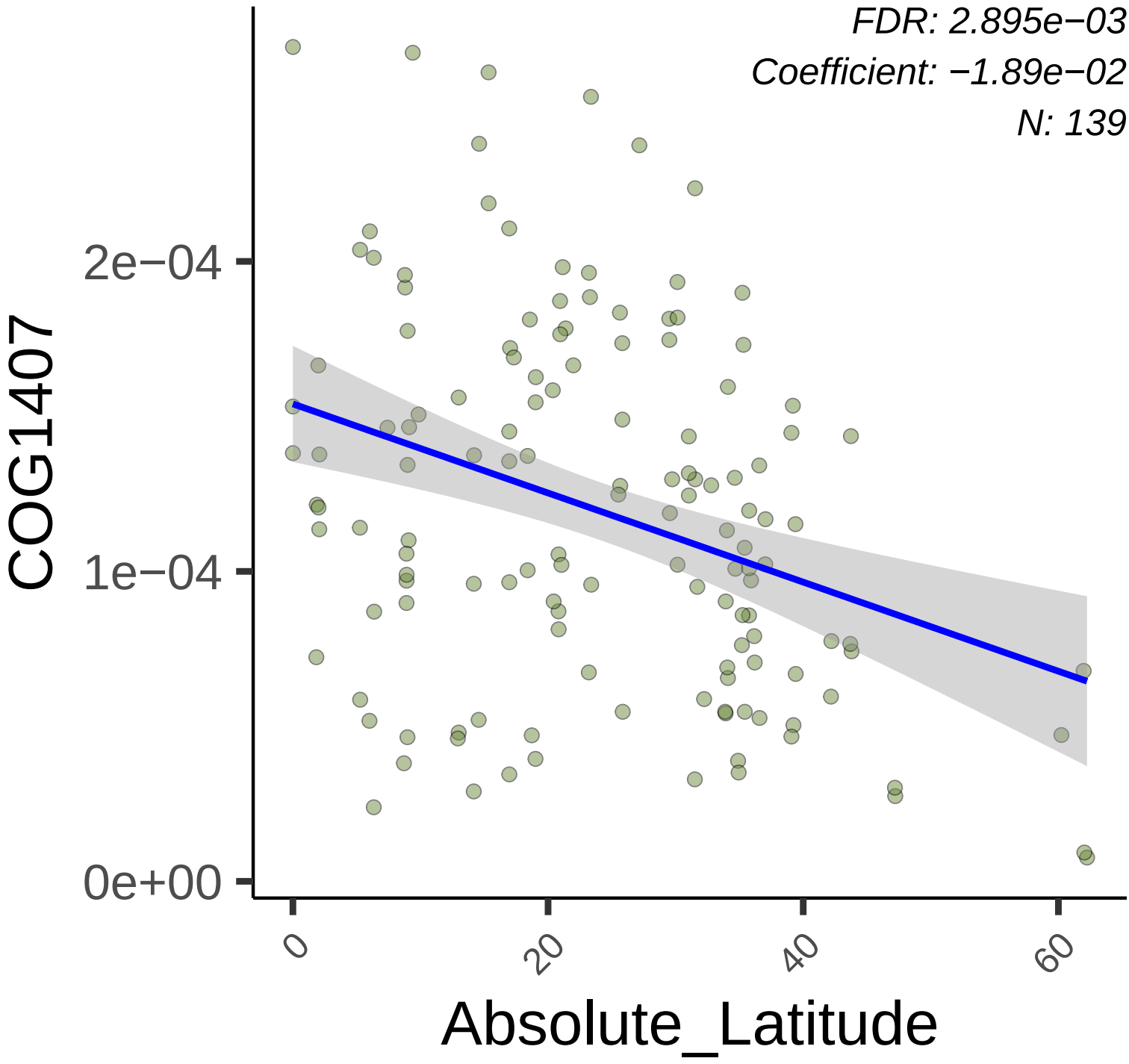

FDR: 2.675e−03
Coefficient: 1.05e−02
N: 139
4e−04
3e−04
2e−04
1e−04
COG2364
0
20
40
60
Absolute_Latitude

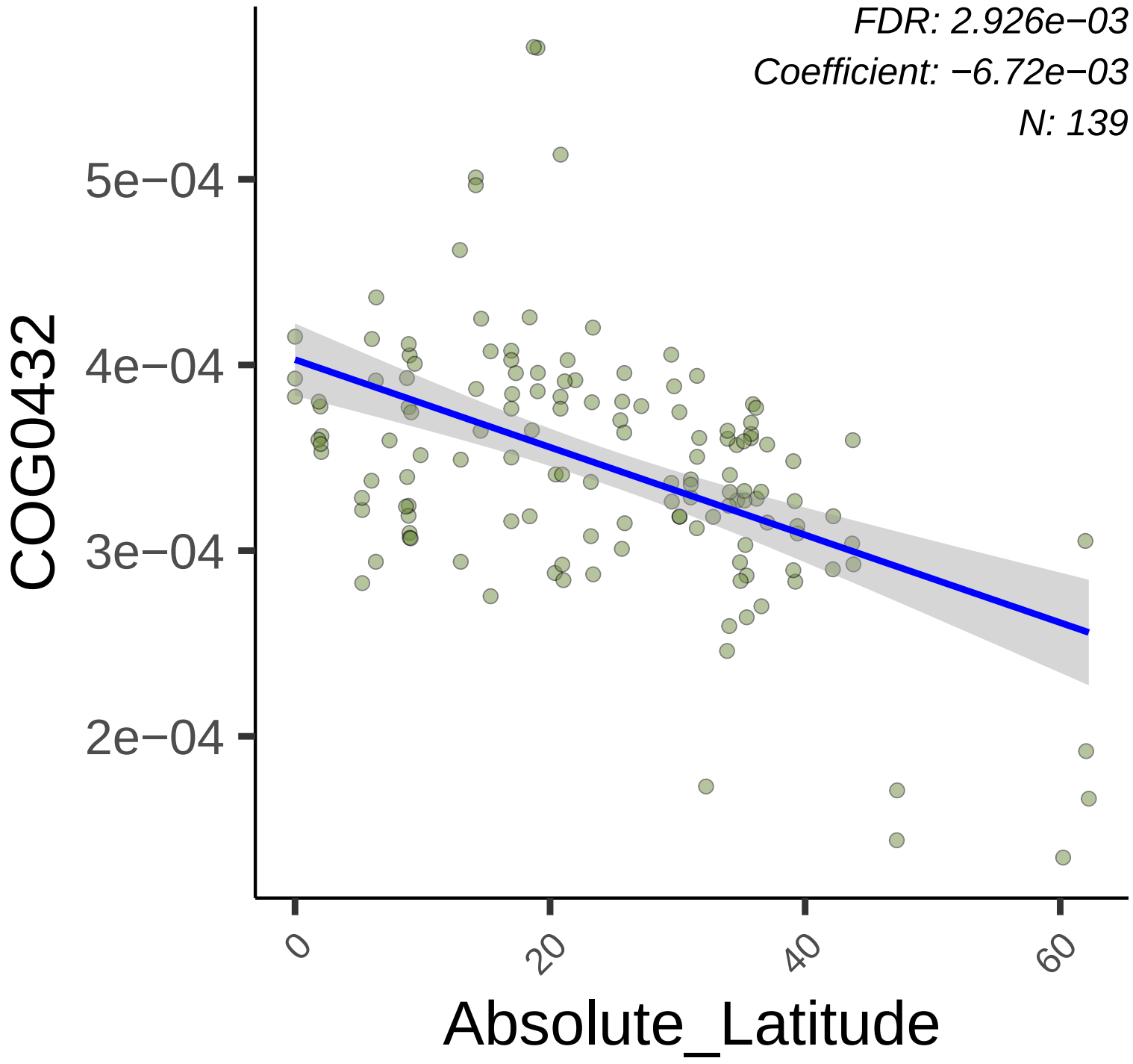

FDR: 2.675e−03
Coefficient: 4.71e−03
N: 139
8e−04
6e−04
4e−04
COG4992
0
20
40
60
Absolute_Latitude

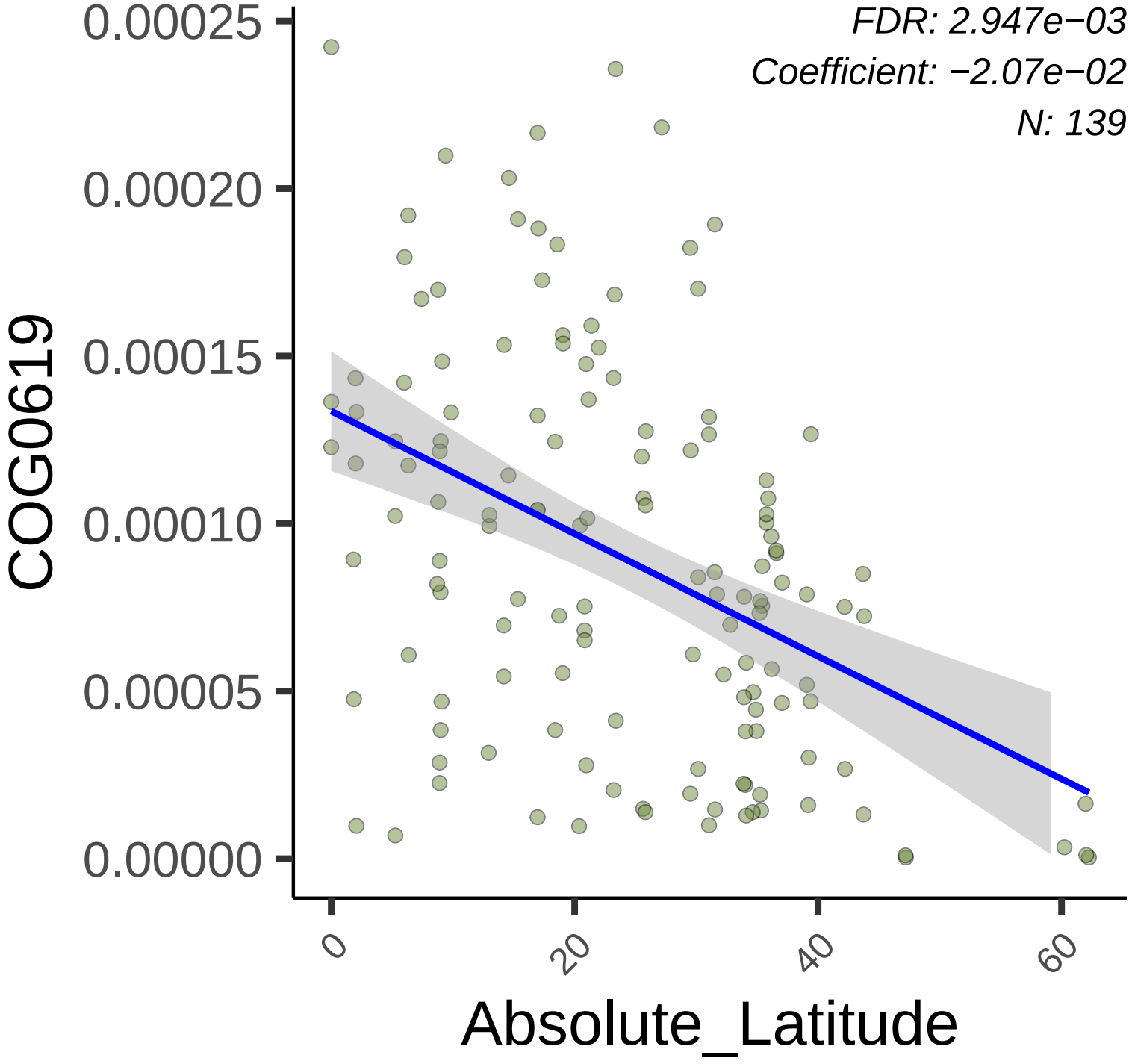

FDR: 2.699e−03
Coefficient: 6.62e−03
N: 139
COG0647
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

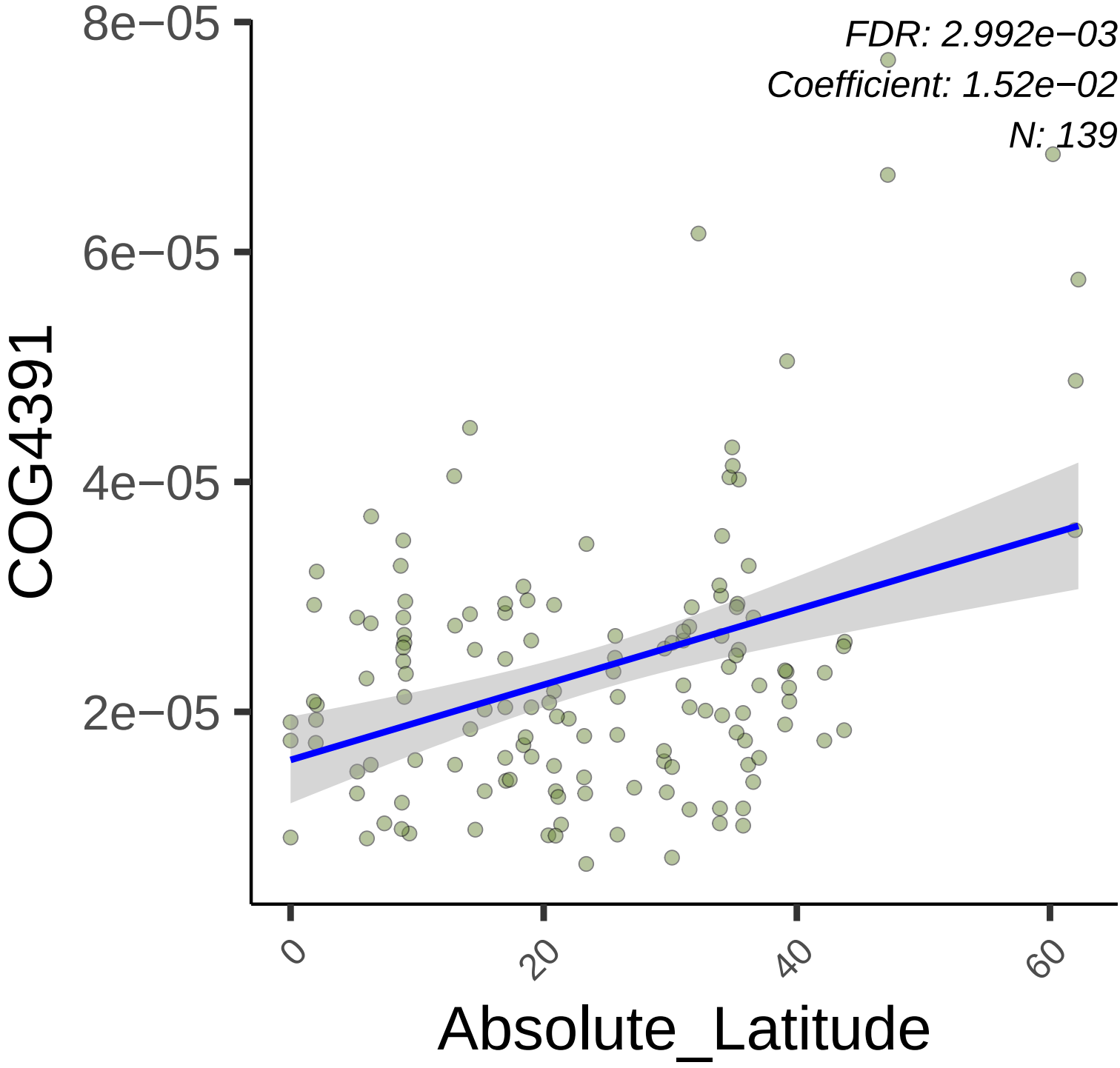

FDR: 2.810e−03
Coefficient: −2.03e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG0095
0
20
40
60
Absolute_Latitude

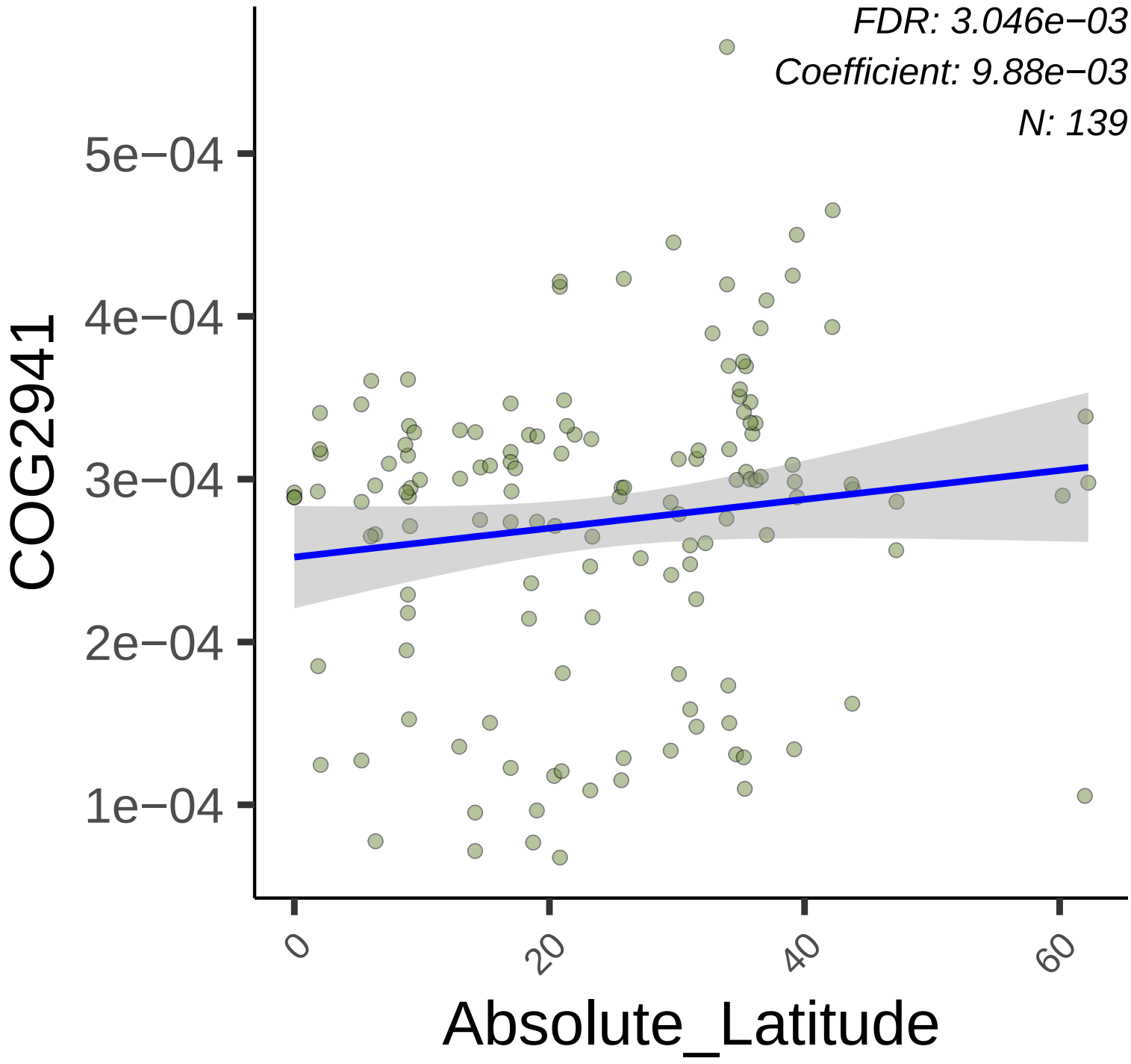

FDR: 2.871e−03
Coefficient: −1.80e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG2172
0
20
40
60
Absolute_Latitude

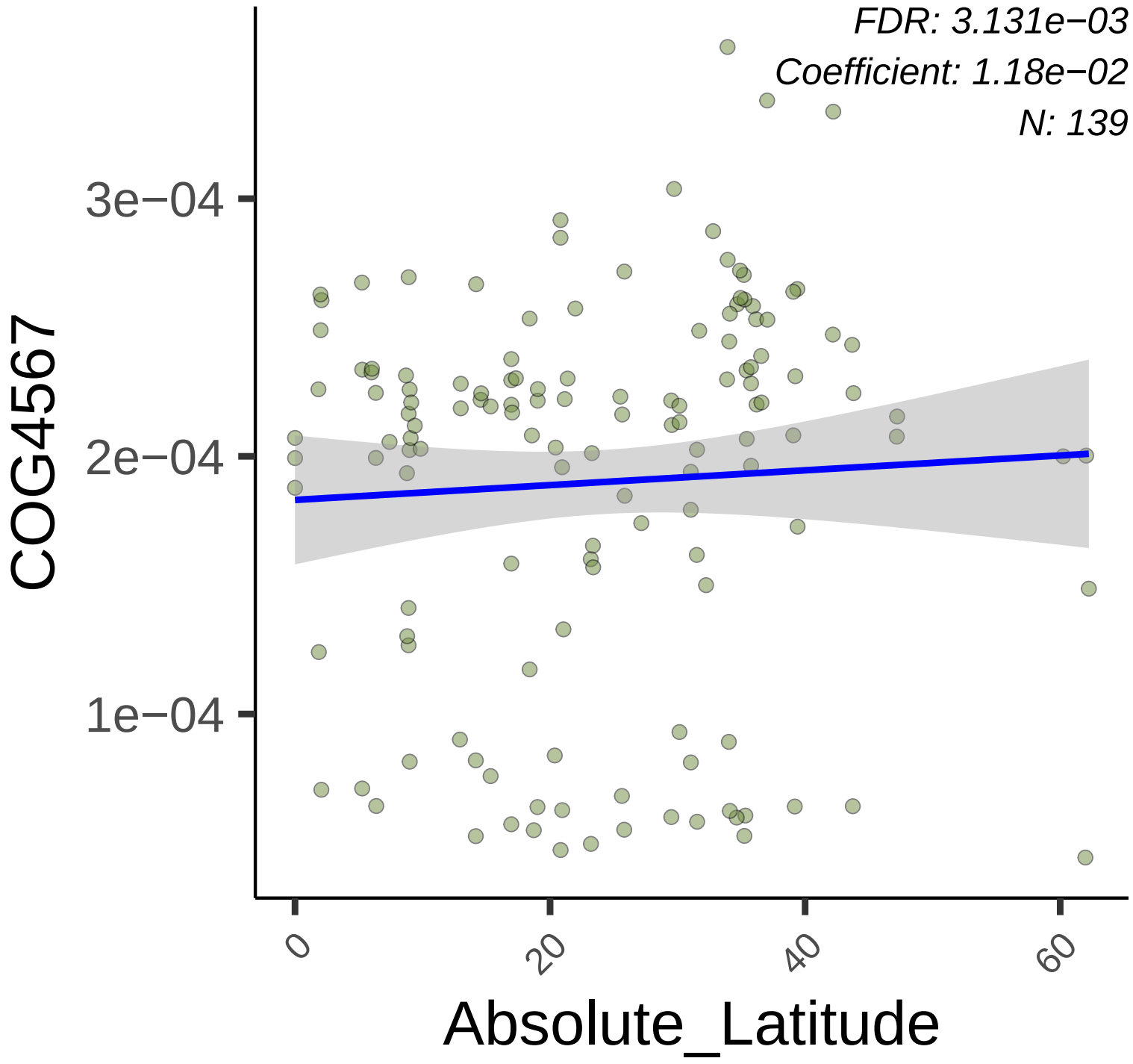

FDR: 2.895e−03
Coefficient: −1.89e−02
N: 139
COG1407
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

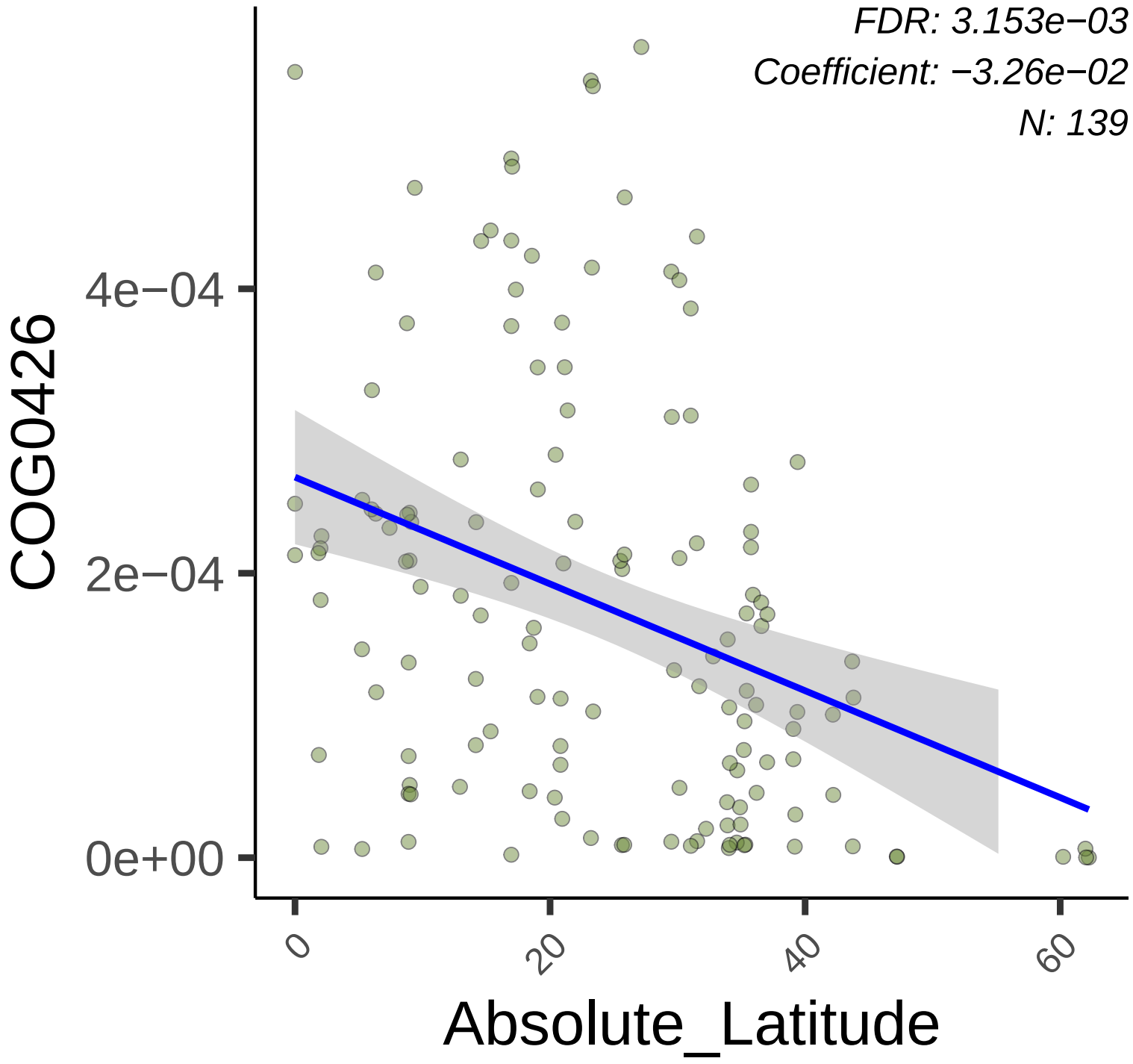

FDR: 2.926e−03
Coefficient: −6.72e−03
N: 139
COG0432
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

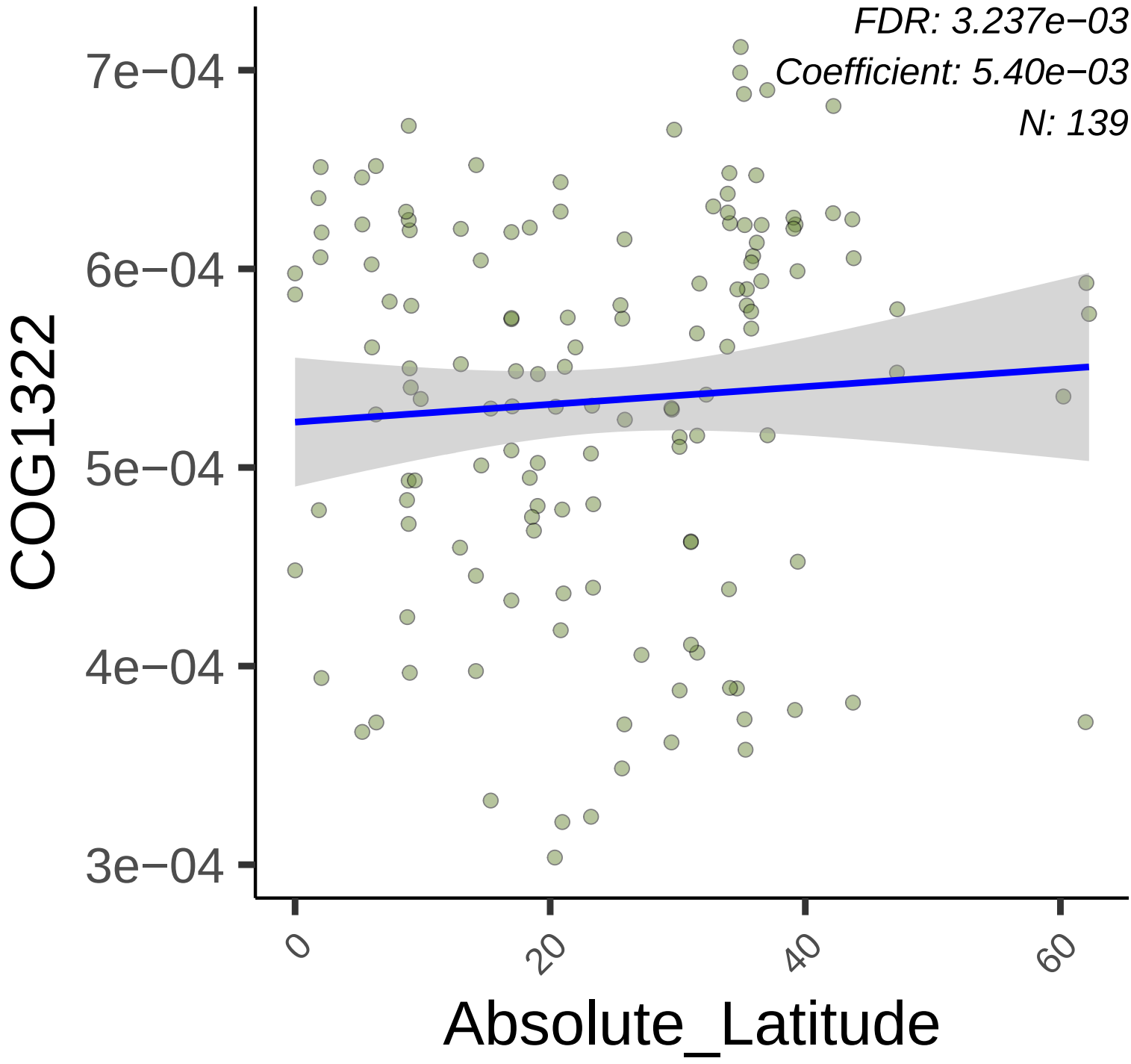

FDR: 2.947e−03
Coefficient: −2.07e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
COG0619
0
20
40
60
Absolute_Latitude

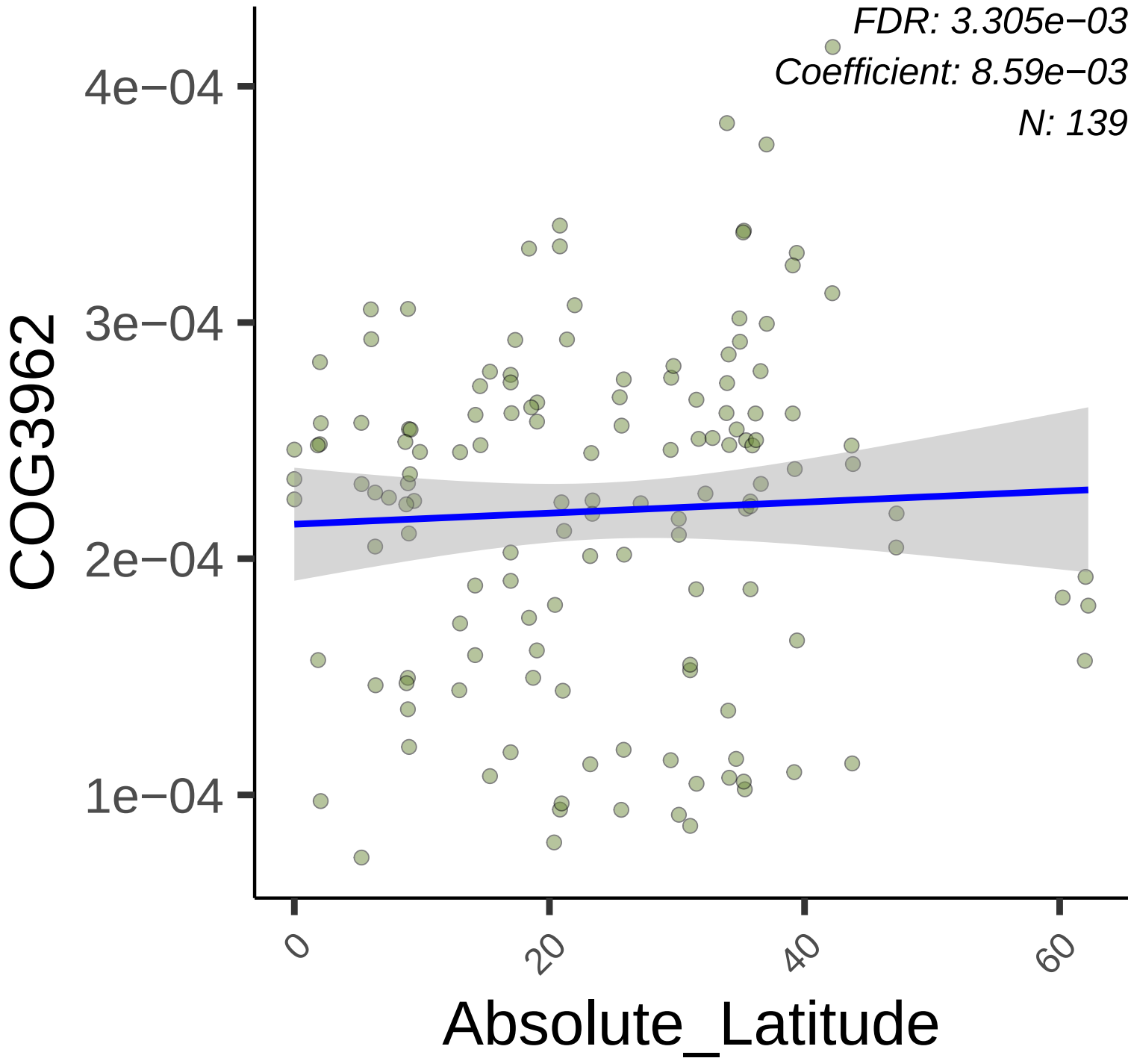

FDR: 2.992e−03
Coefficient: 1.52e−02
N: 139
8e−05
6e−05
4e−05
2e−05
COG4391
0
20
40
60
Absolute_Latitude

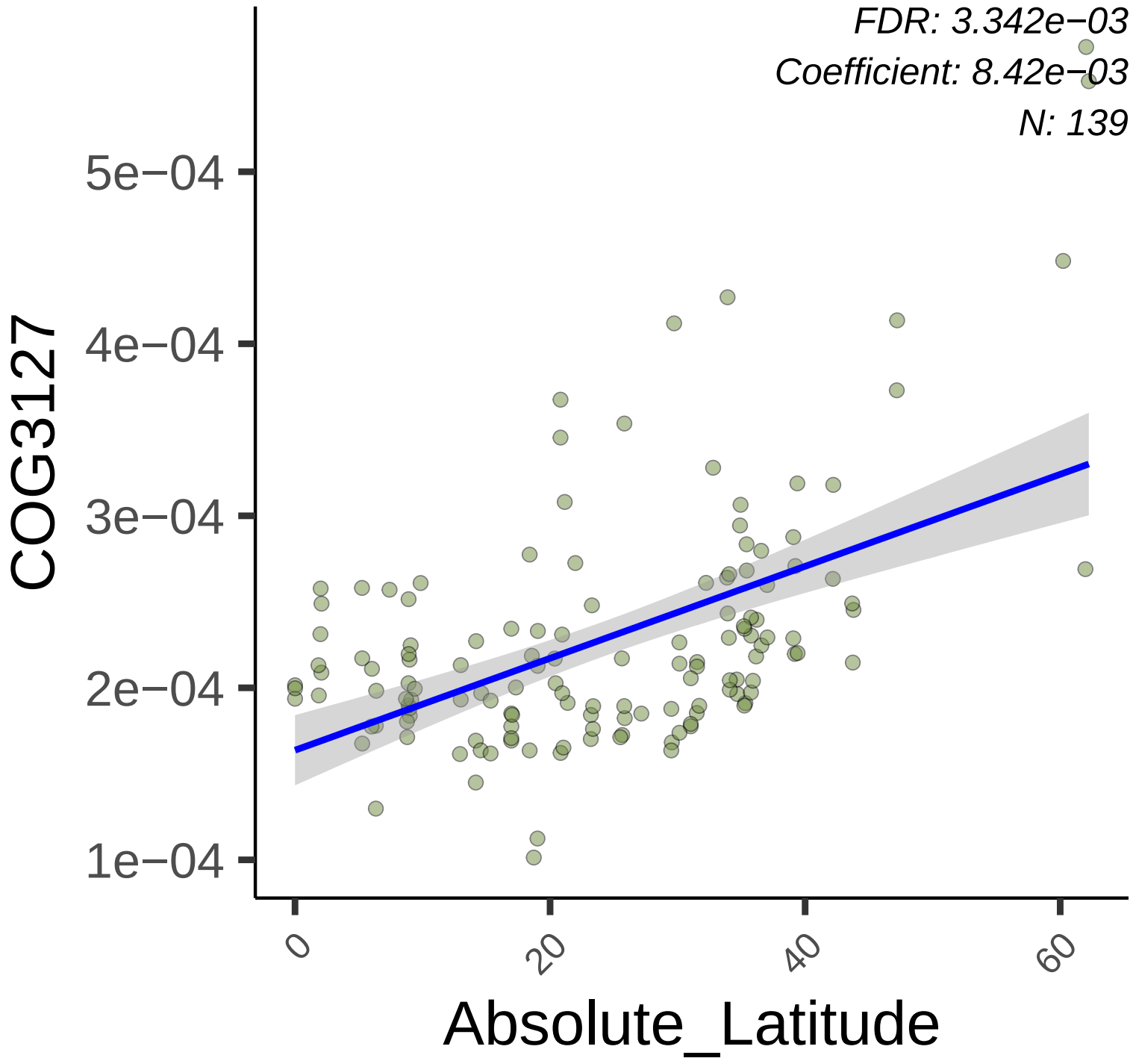

FDR: 3.046e−03
Coefficient: 9.88e−03
N: 139
COG2941
5e−04
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

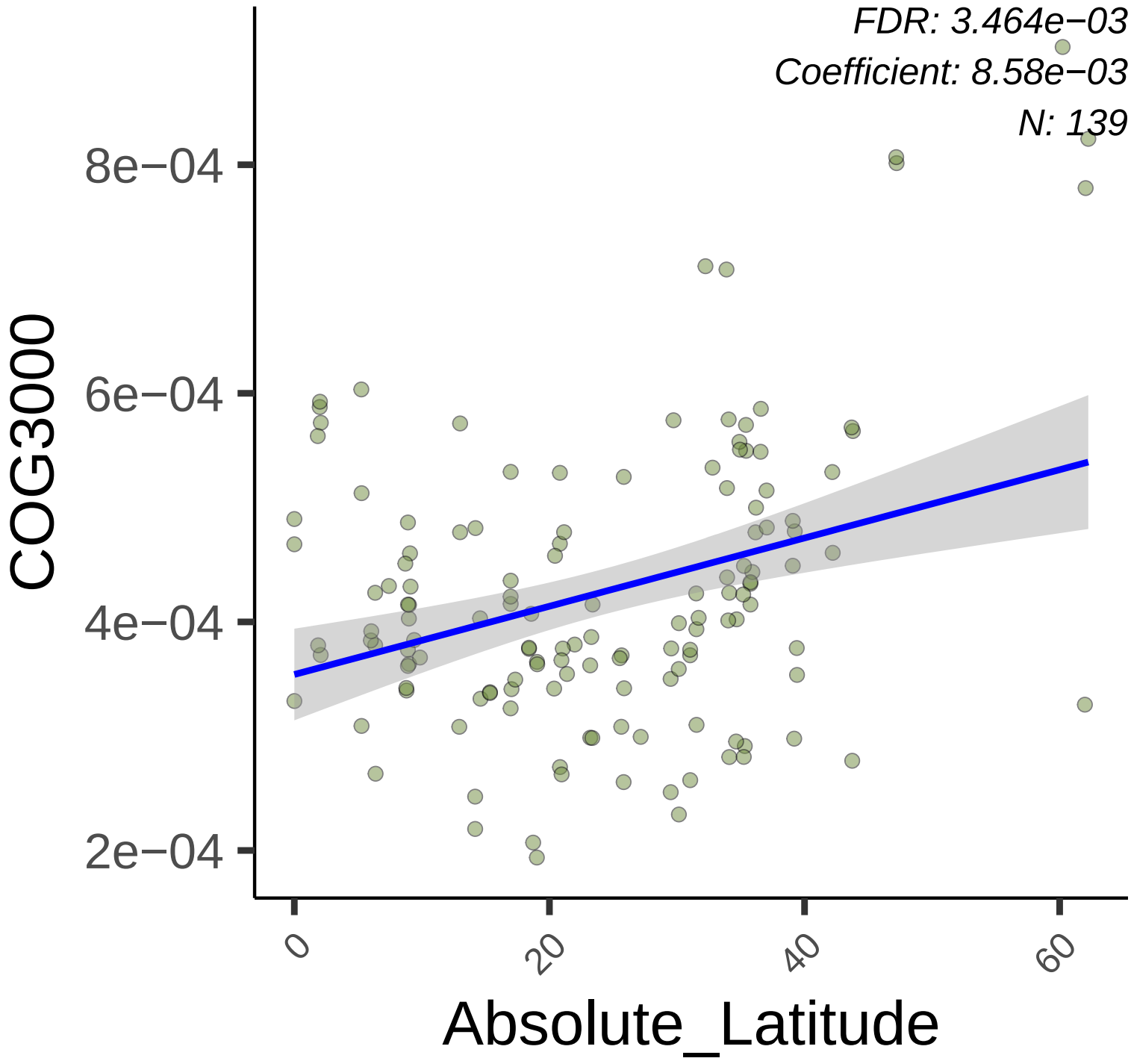

FDR: 3.131e−03
Coefficient: 1.18e−02
N: 139
3e−04
2e−04
1e−04
COG4567
0
20
40
60
Absolute_Latitude

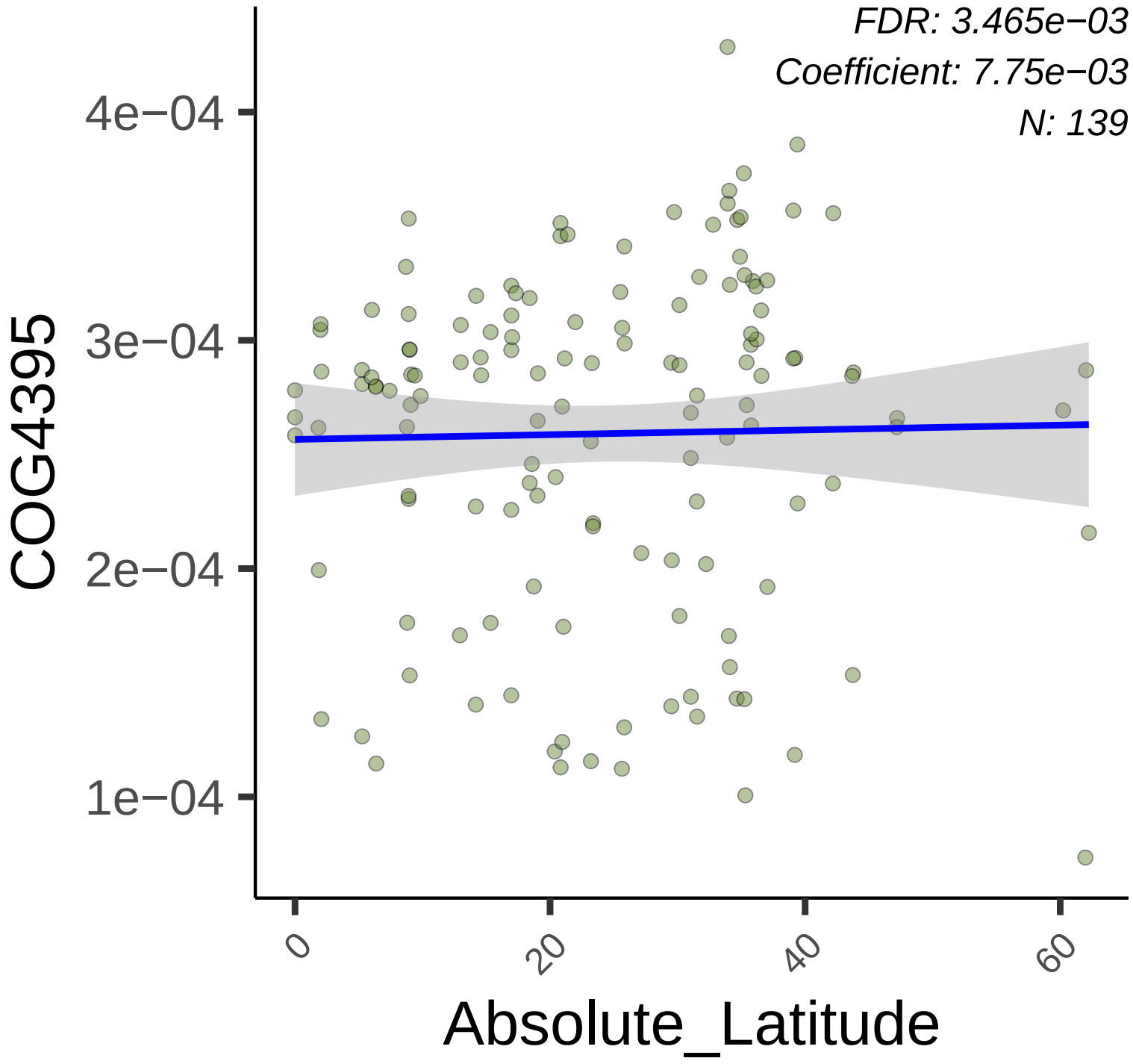

FDR: 3.153e−03
Coefficient: −3.26e−02
N: 139
COG0426
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

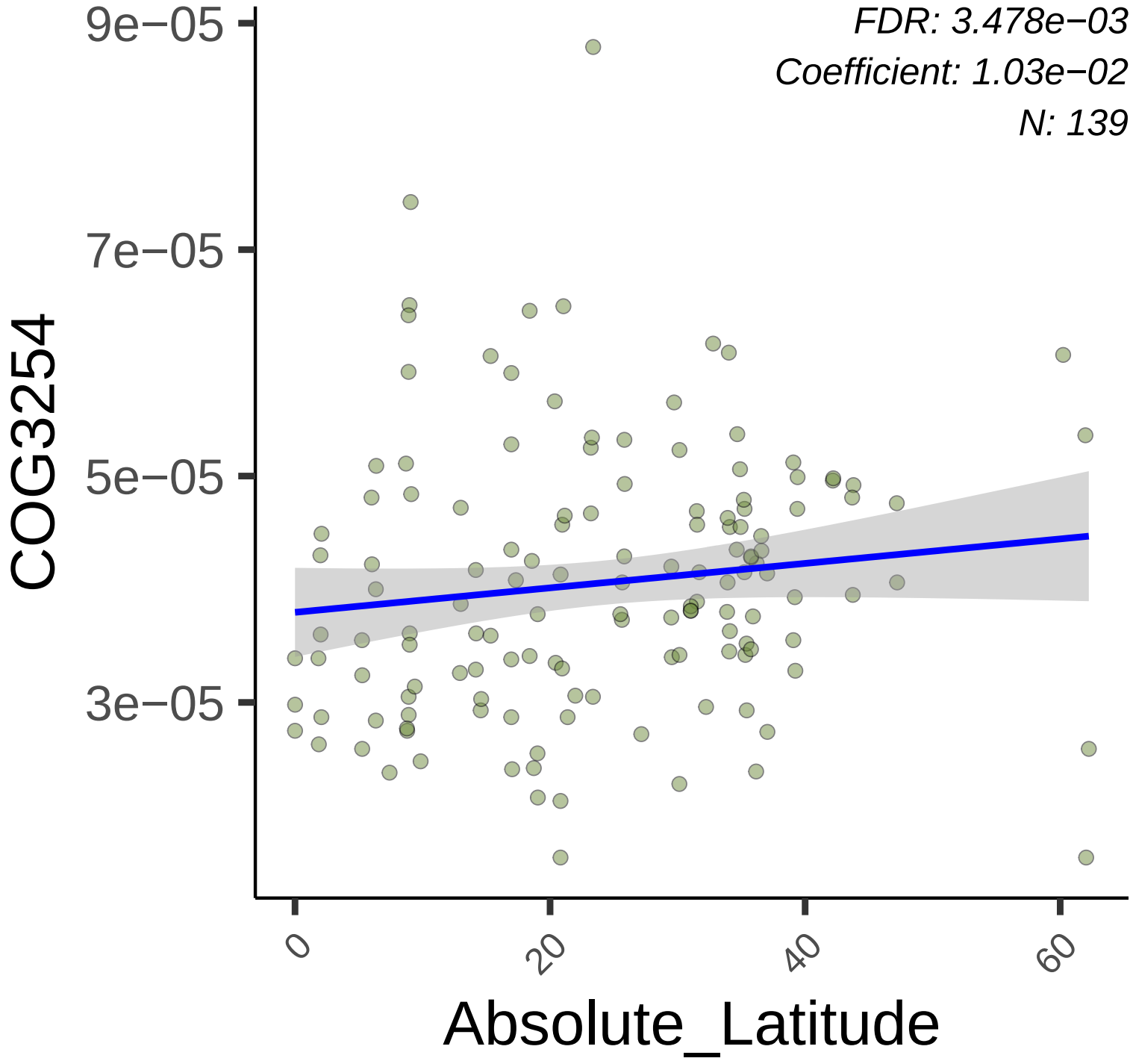

FDR: 3.237e−03
Coefficient: 5.40e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG1322
0
20
40
60
Absolute_Latitude

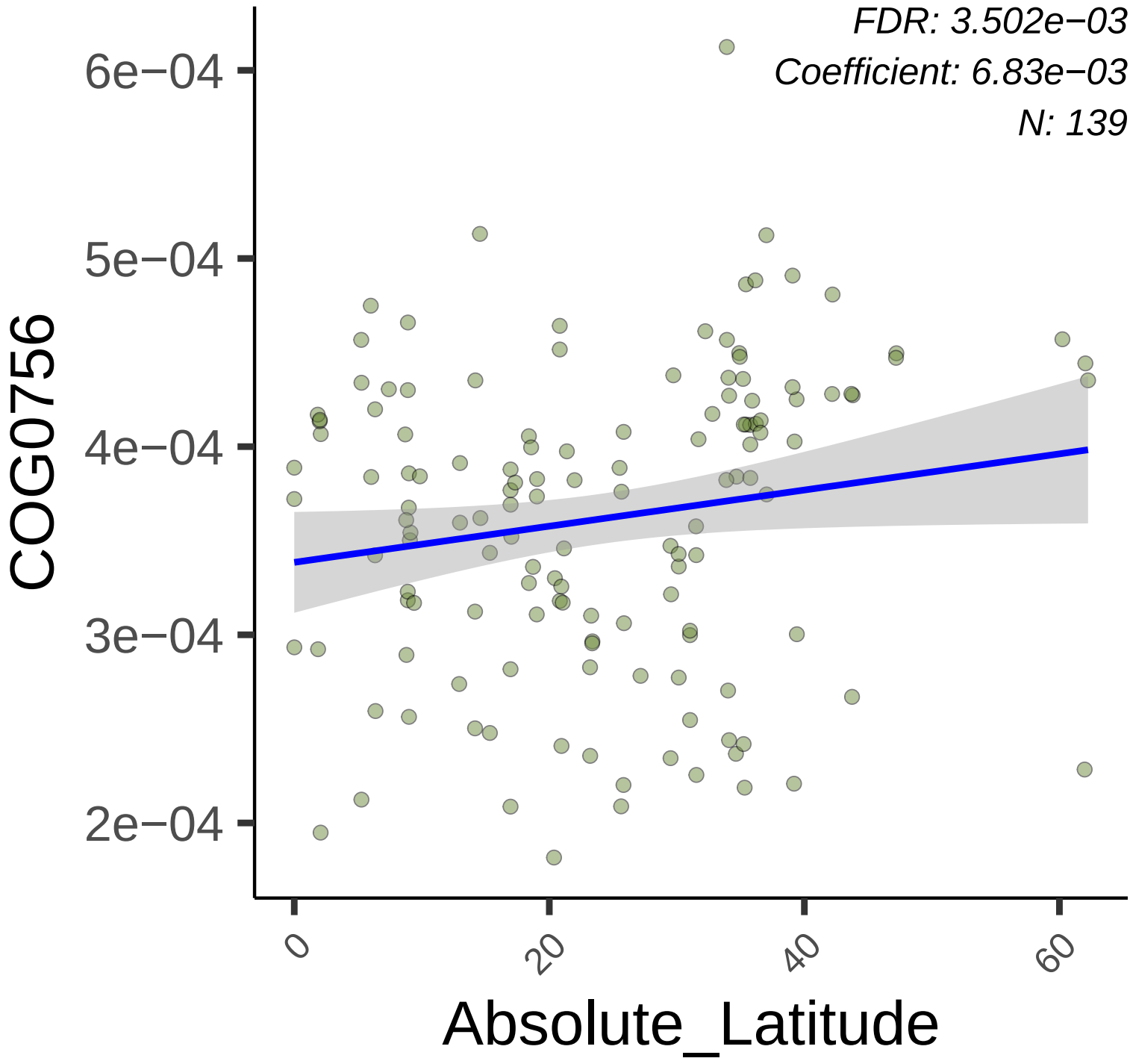

FDR: 3.305e−03
Coefficient: 8.59e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG3962
0
20
40
60
Absolute_Latitude

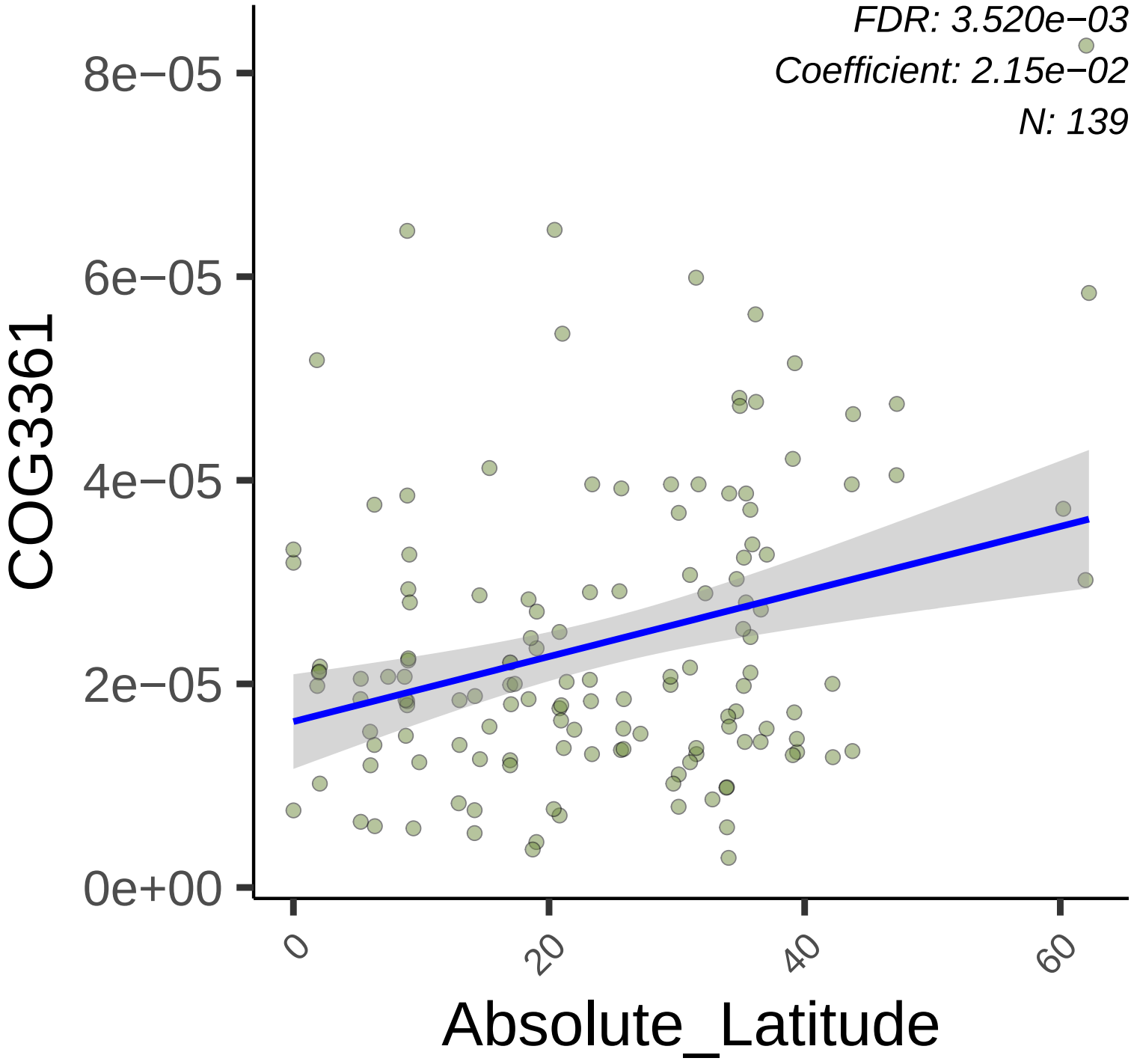

FDR: 3.342e−03
Coefficient: 8.42e−03
N: 139
COG3127
5e−04
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

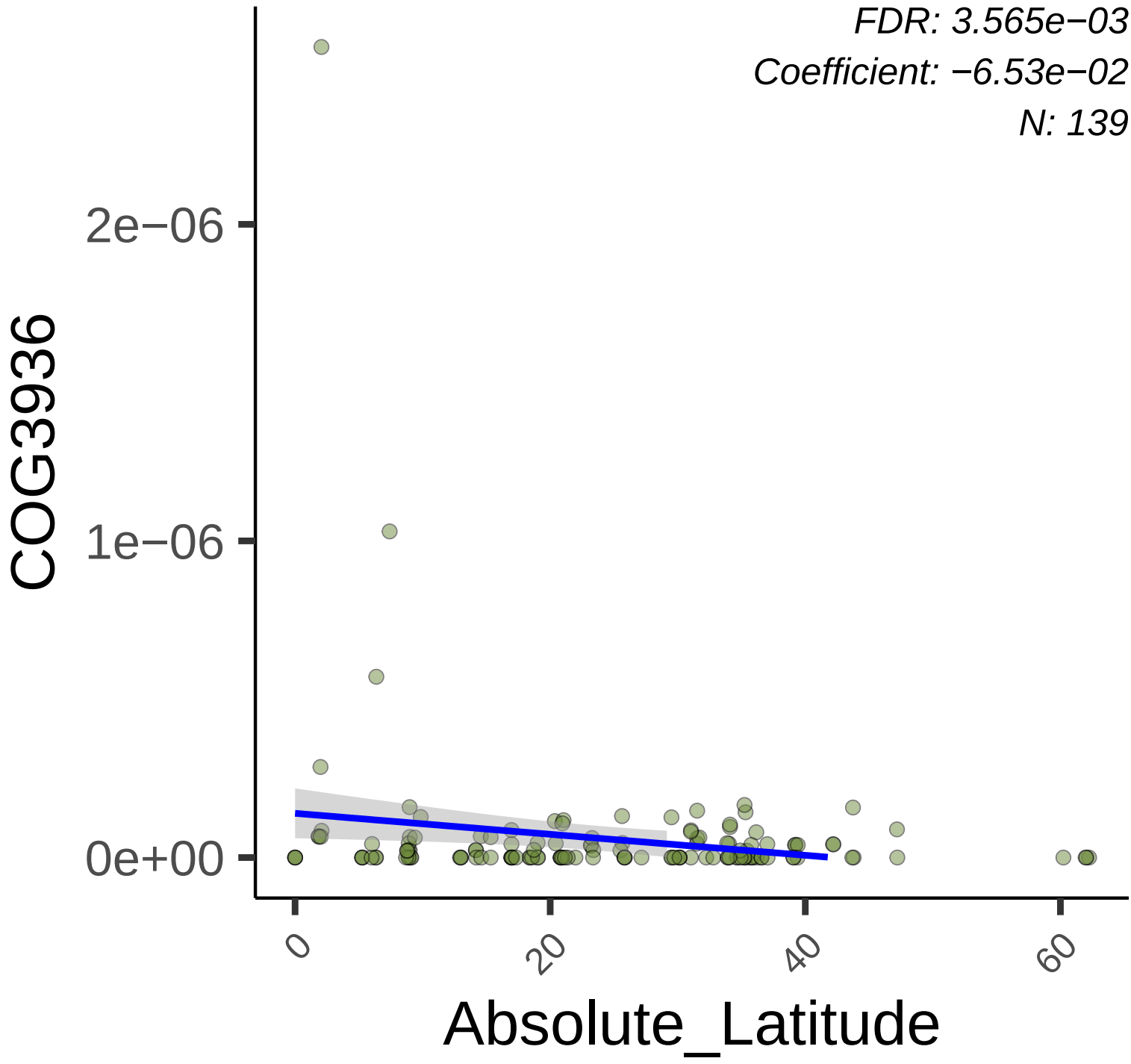

FDR: 3.464e−03
Coefficient: 8.58e−03
N: 139
8e−04
6e−04
4e−04
2e−04
COG3000
0
20
40
60
Absolute_Latitude

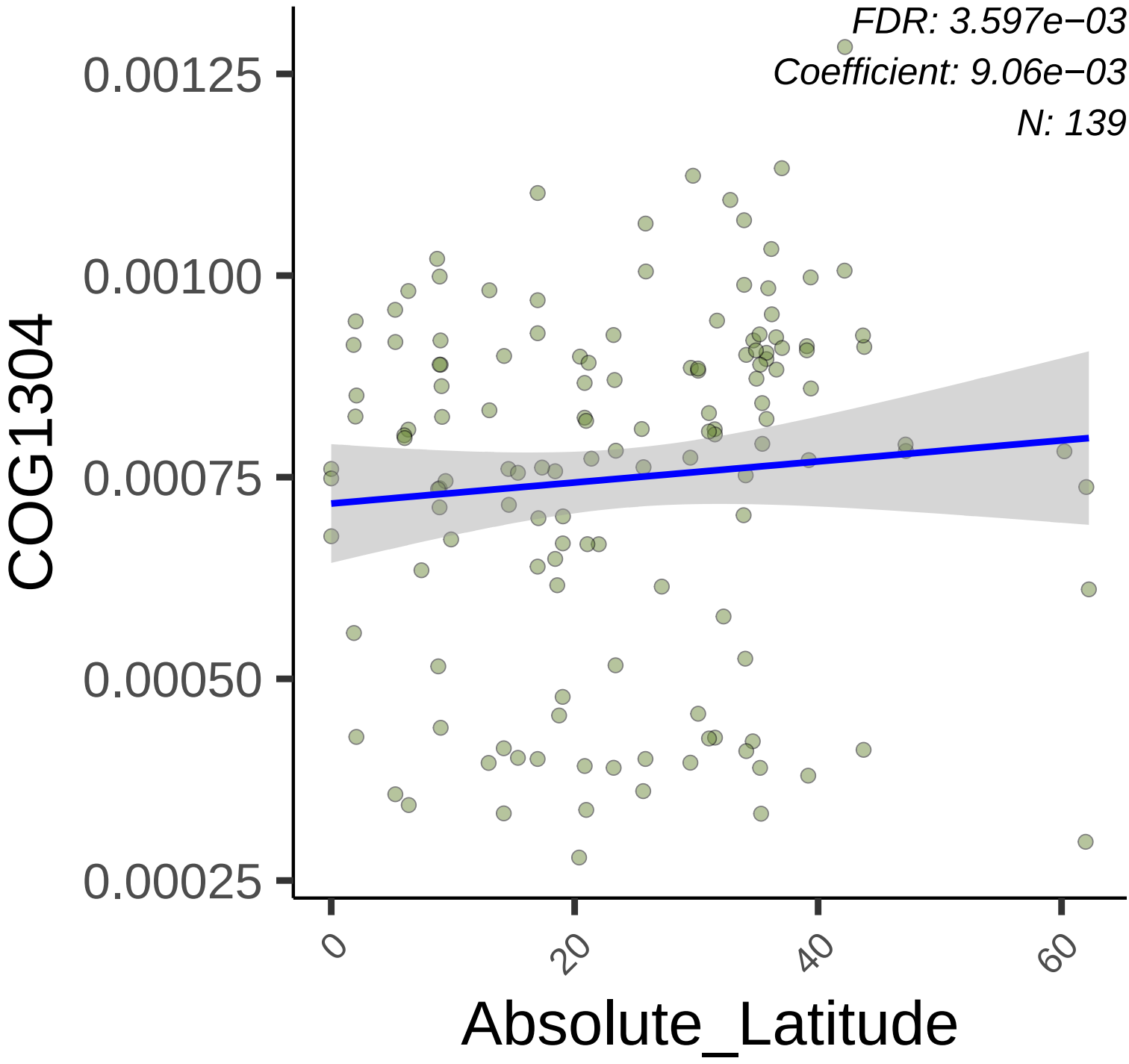

FDR: 3.465e−03
Coefficient: 7.75e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG4395
0
20
40
60
Absolute_Latitude

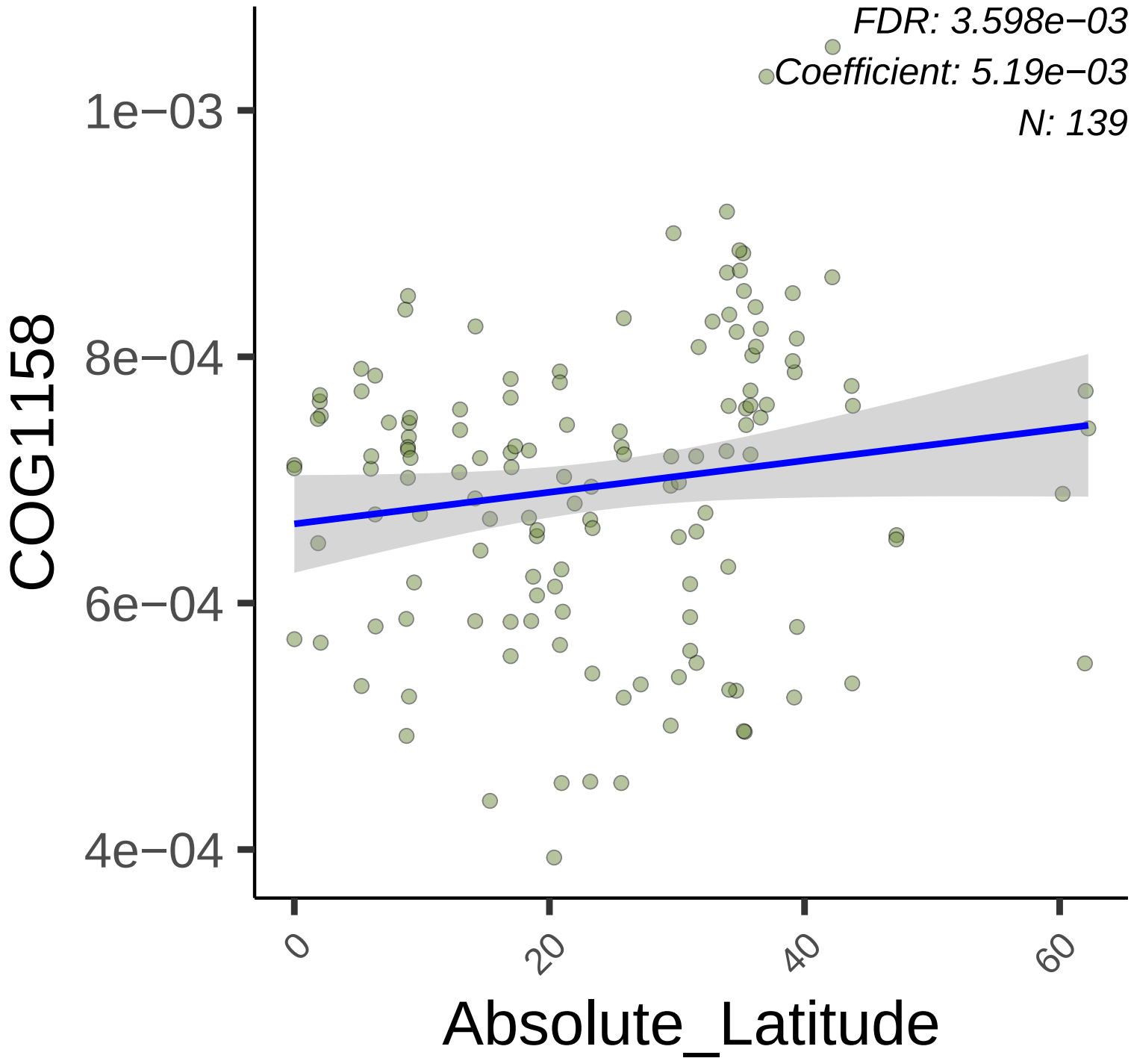

FDR: 3.478e−03
Coefficient: 1.03e−02
N: 139
9e−05
7e−05
5e−05
3e−05
COG3254
0
20
40
60
Absolute_Latitude

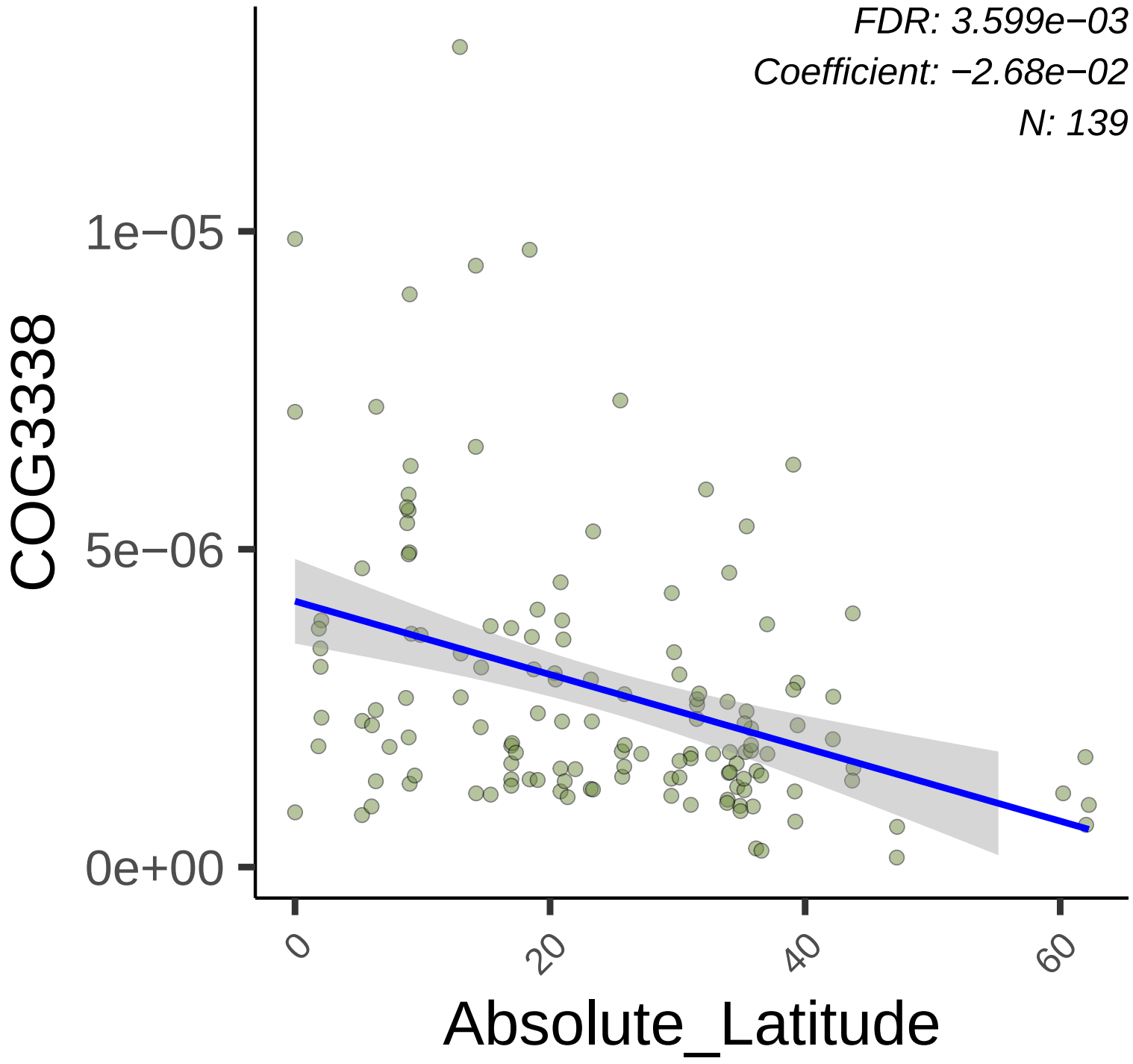

FDR: 3.502e−03
Coefficient: 6.83e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
COG0756
0
20
40
60
Absolute_Latitude

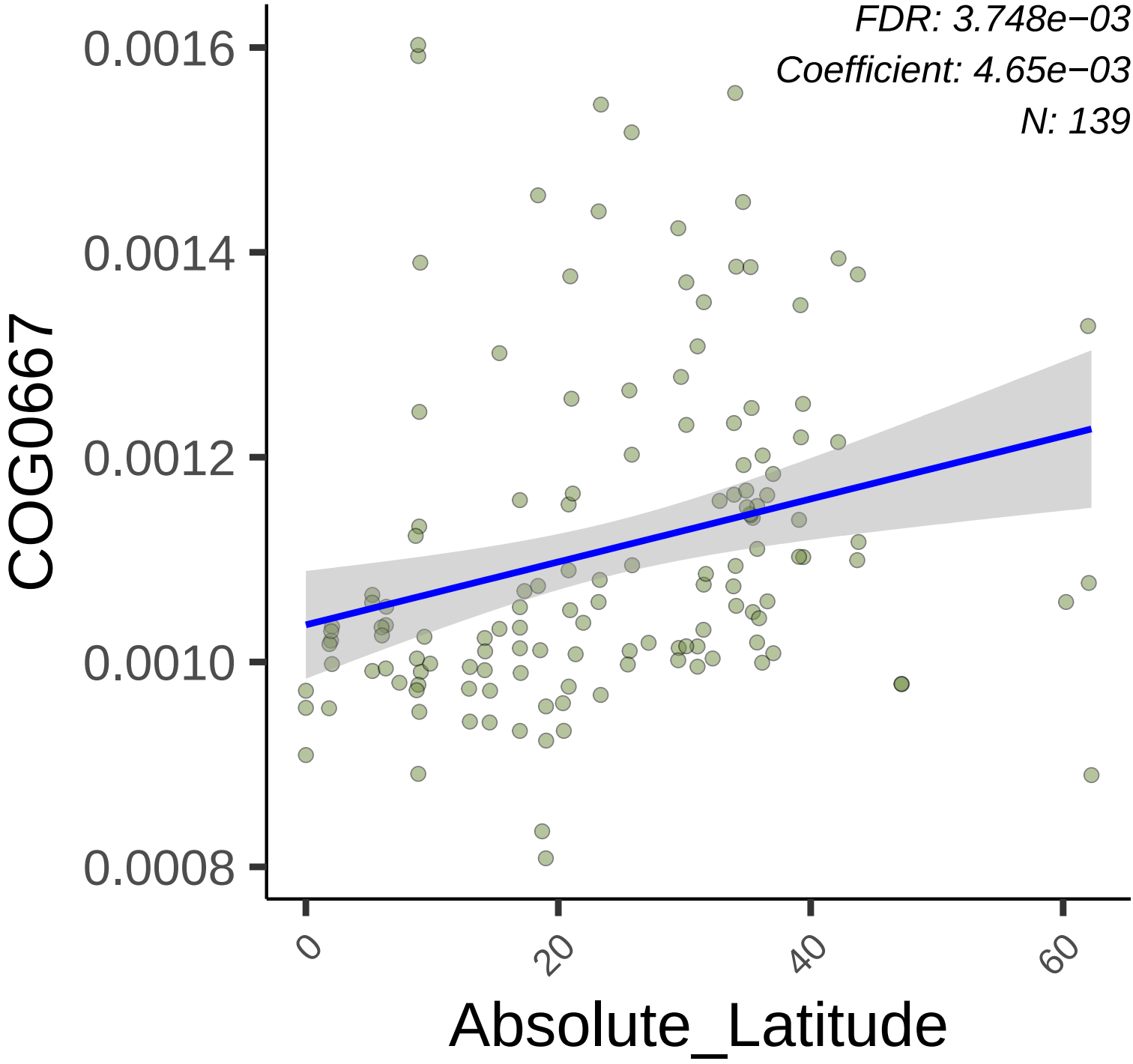

FDR: 3.520e−03
Coefficient: 2.15e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG3361
0
20
40
60
Absolute_Latitude

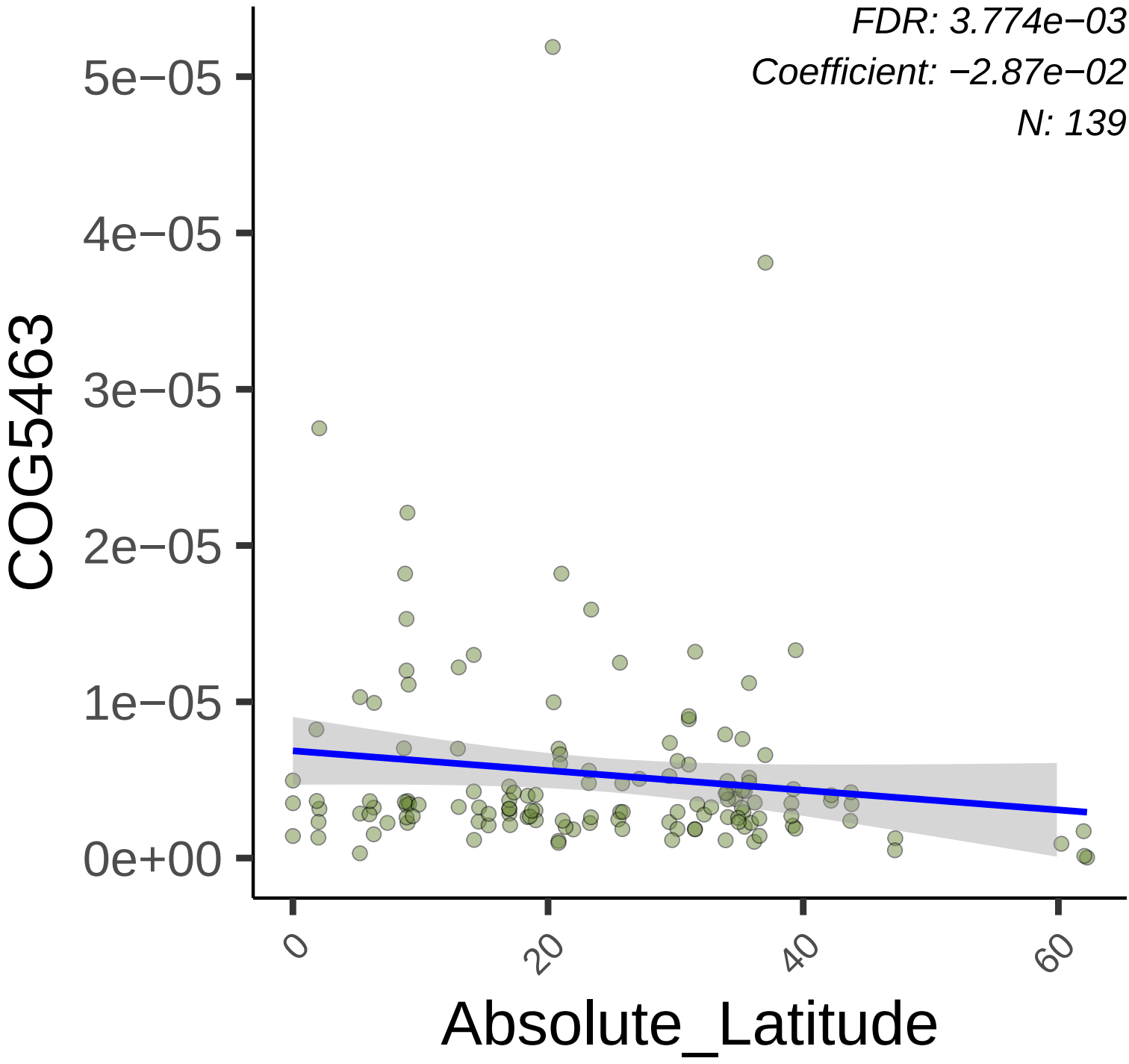

FDR: 3.565e−03
Coefficient: −6.53e−02
N: 139
COG3936
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

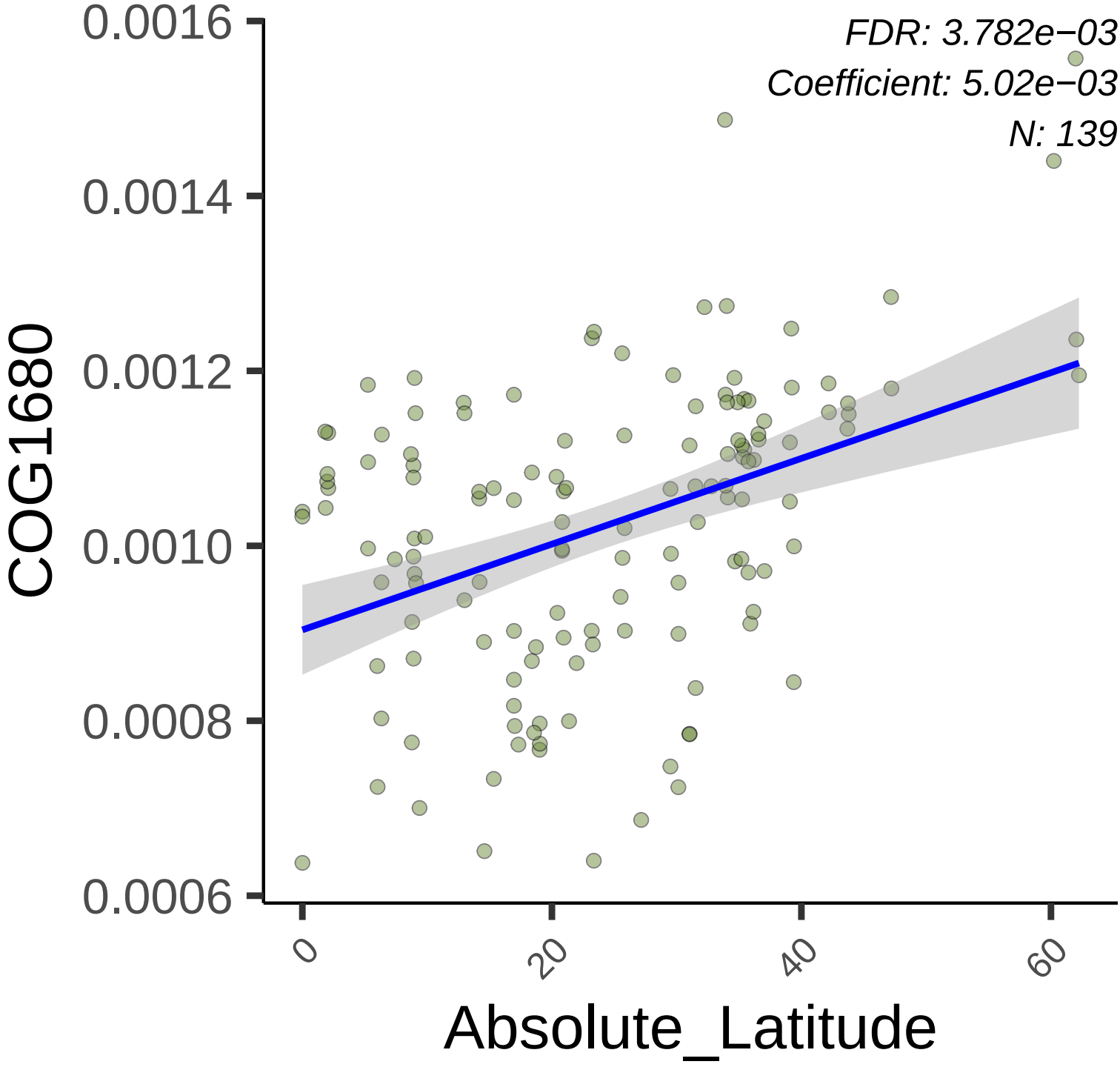

FDR: 3.597e−03
Coefficient: 9.06e−03
N: 139
0.00125
0.00100
0.00075
0.00050
0.00025
COG1304
0
20
40
60
Absolute_Latitude

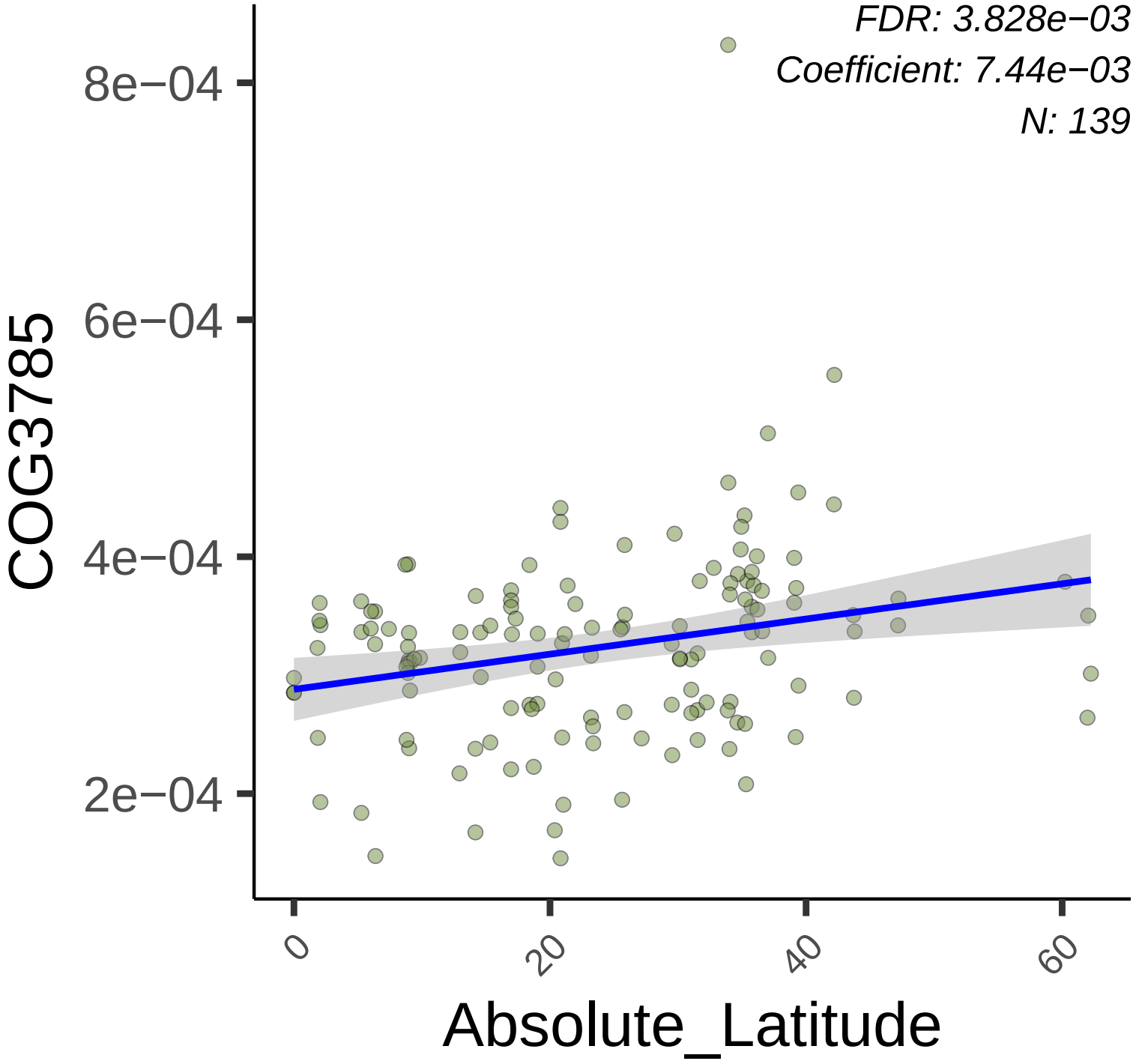

FDR: 3.598e−03
Coefficient: 5.19e−03
N: 139
1e−03
8e−04
6e−04
4e−04
COG1158
0
20
40
60
Absolute_Latitude

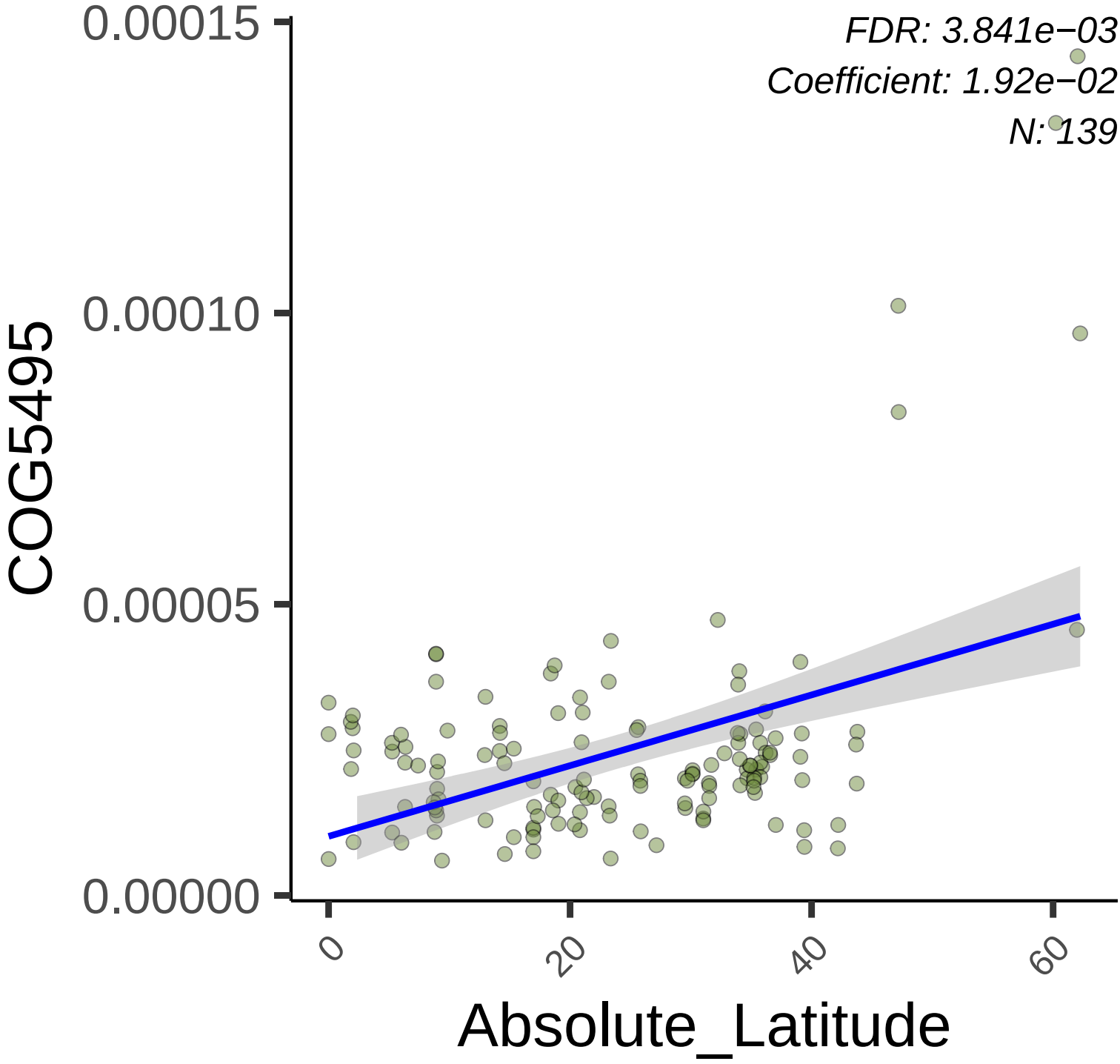

FDR: 3.599e−03
Coefficient: −2.68e−02
N: 139
COG3338
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

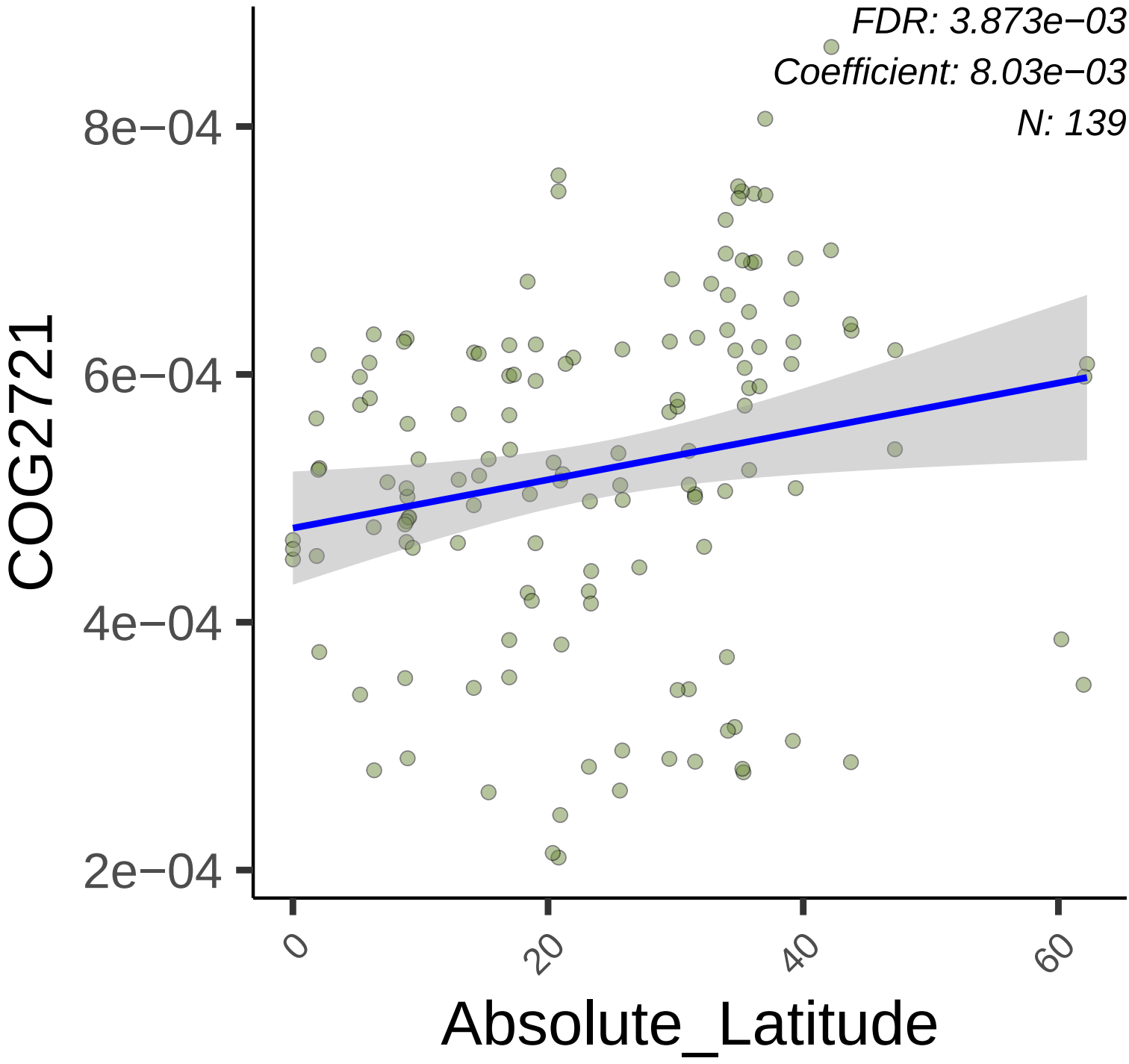

FDR: 3.748e−03
Coefficient: 4.65e−03
N: 139
0.0016
0.0014
0.0012
0.0010
0.0008
COG0667
0
20
40
60
Absolute_Latitude

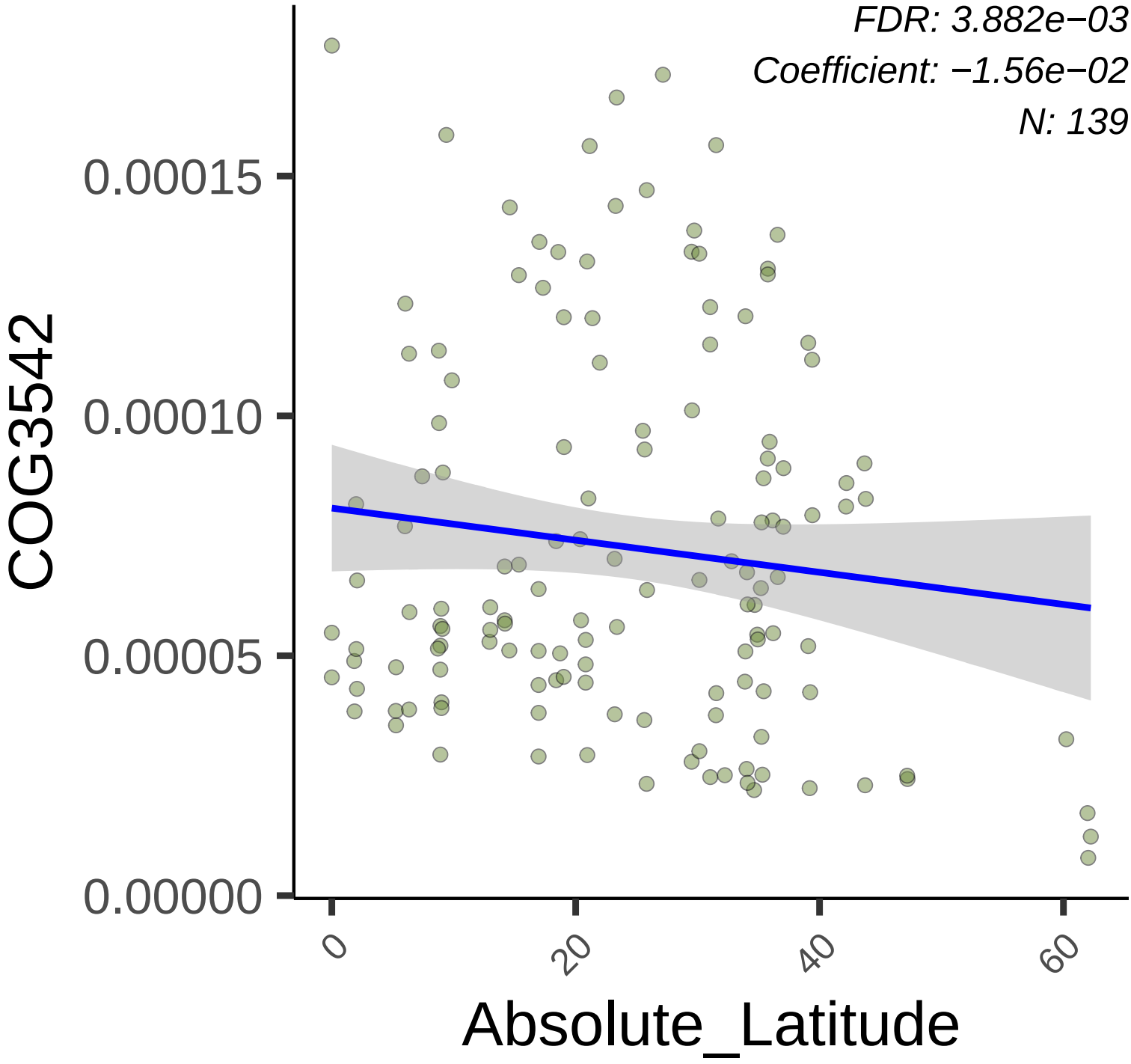

FDR: 3.774e−03
Coefficient: −2.87e−02
N: 139
COG5463
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

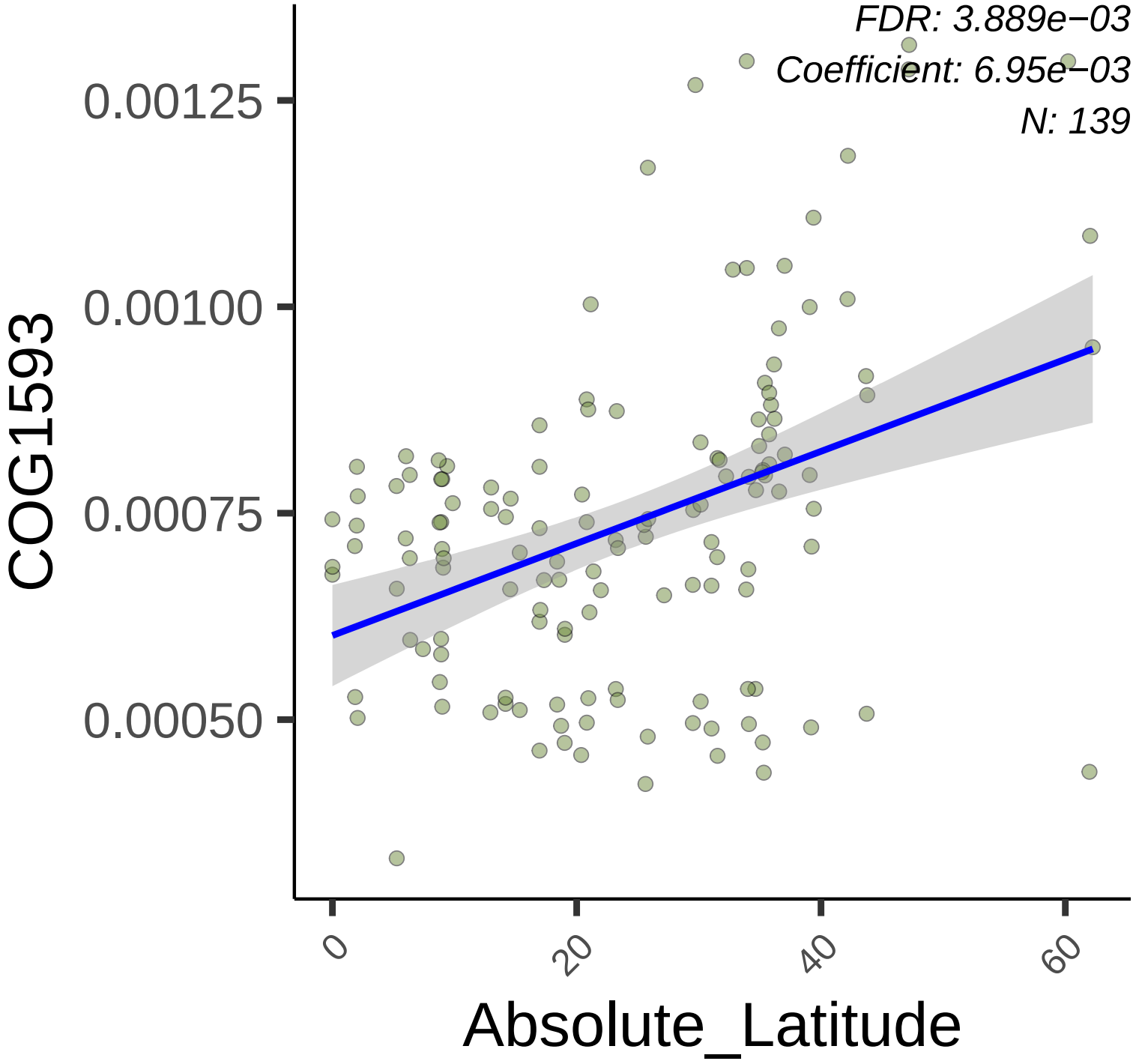

FDR: 3.782e−03
Coefficient: 5.02e−03
N: 139
0.0016
0.0014
0.0012
0.0010
0.0008
0.0006
COG1680
0
20
40
60
Absolute_Latitude

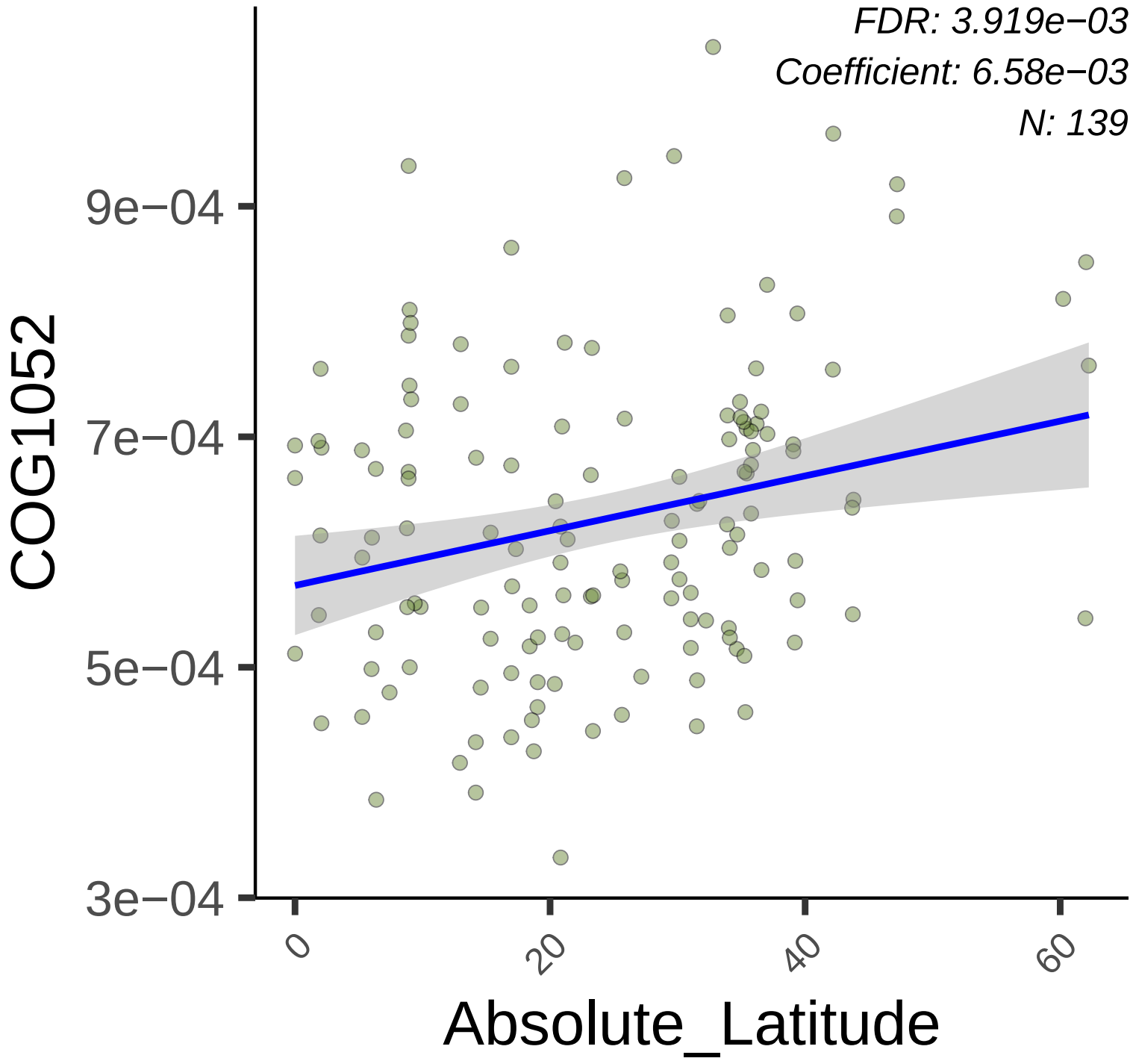

FDR: 3.828e−03
Coefficient: 7.44e−03
N: 139
8e−04
6e−04
4e−04
2e−04
COG3785
0
20
40
60
Absolute_Latitude

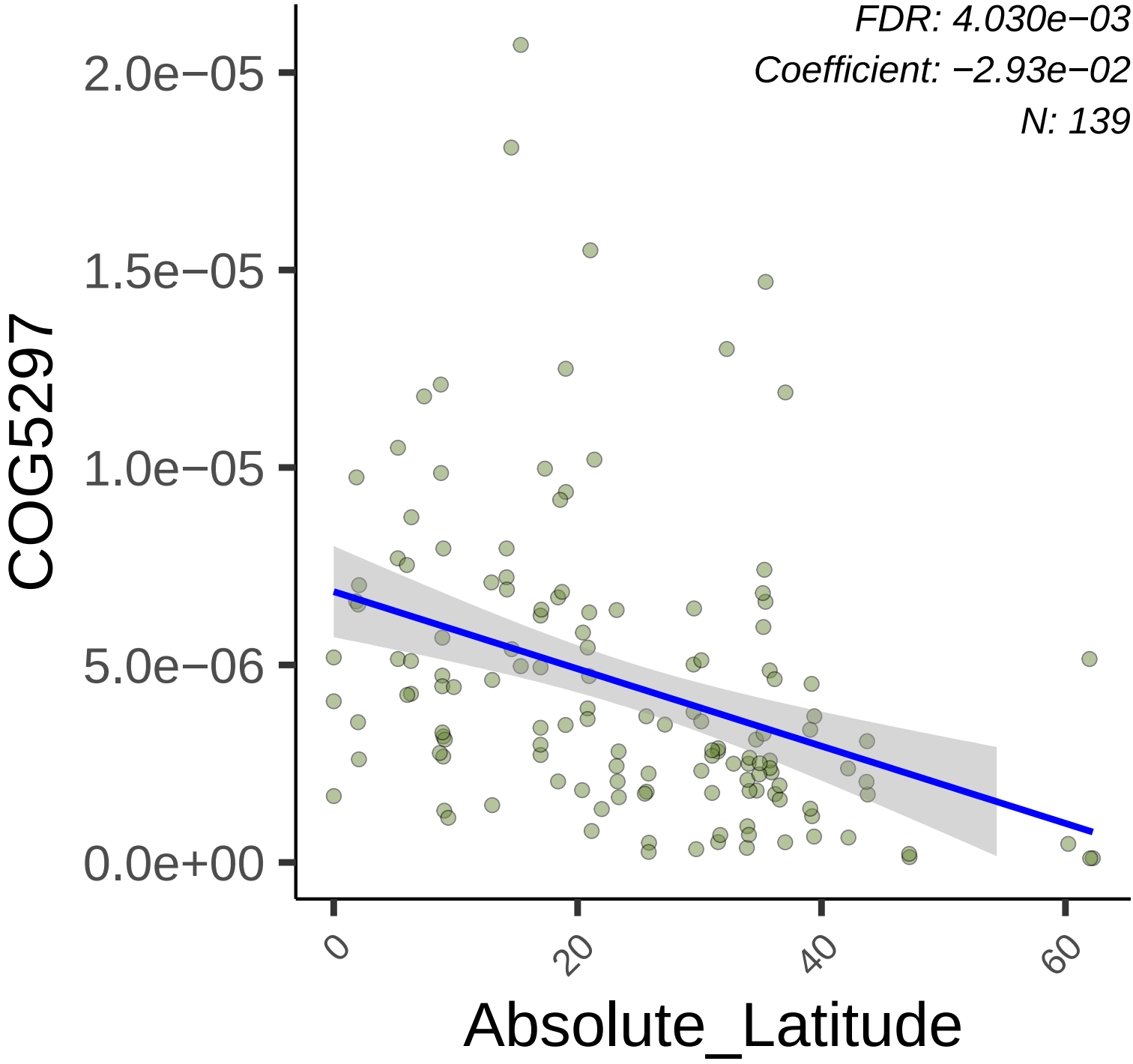

FDR: 3.841e−03
Coefficient: 1.92e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG5495
0
20
40
60
Absolute_Latitude

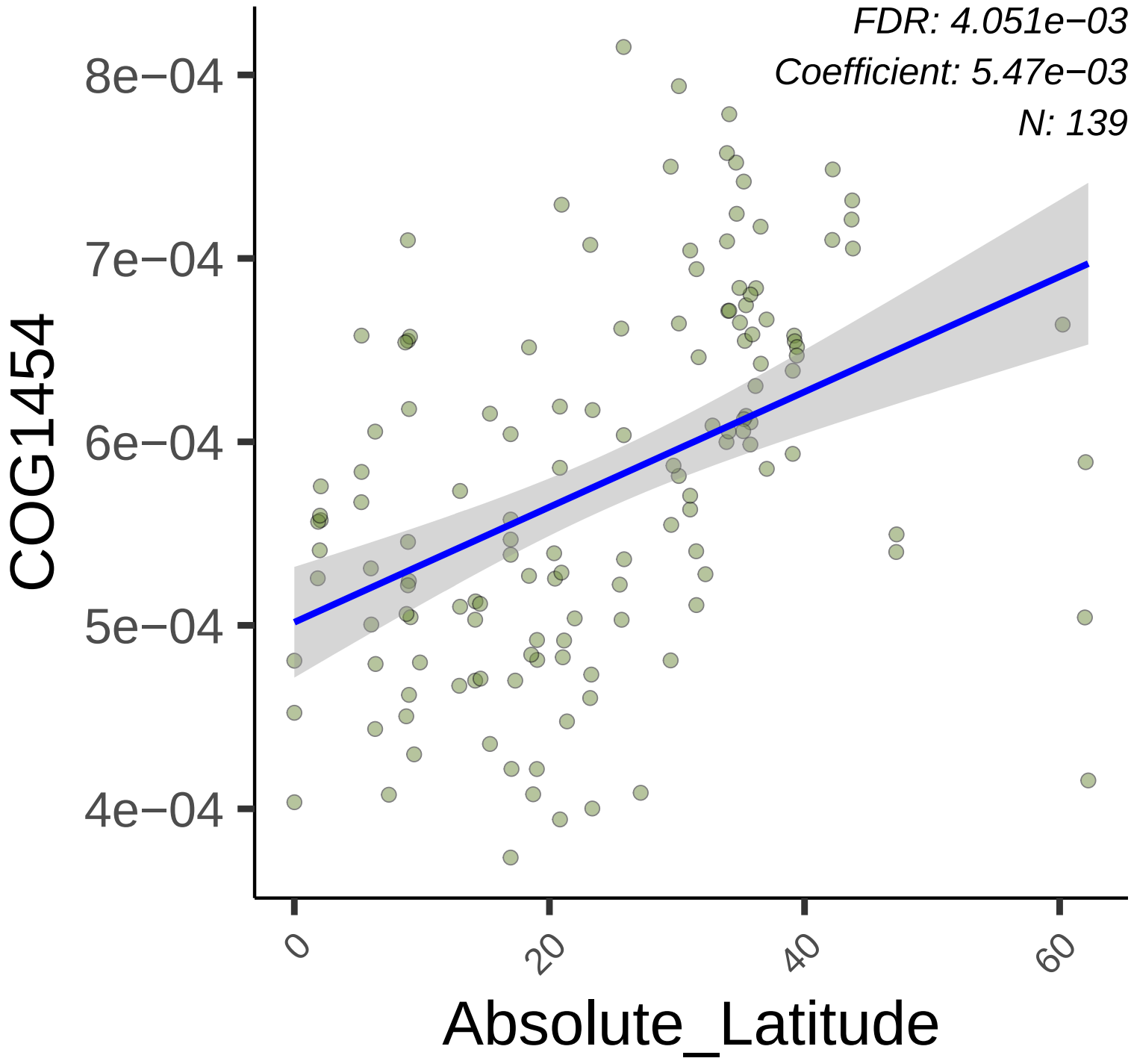

FDR: 3.873e−03
Coefficient: 8.03e−03
N: 139
8e−04
6e−04
4e−04
2e−04
COG2721
0
20
40
60
Absolute_Latitude

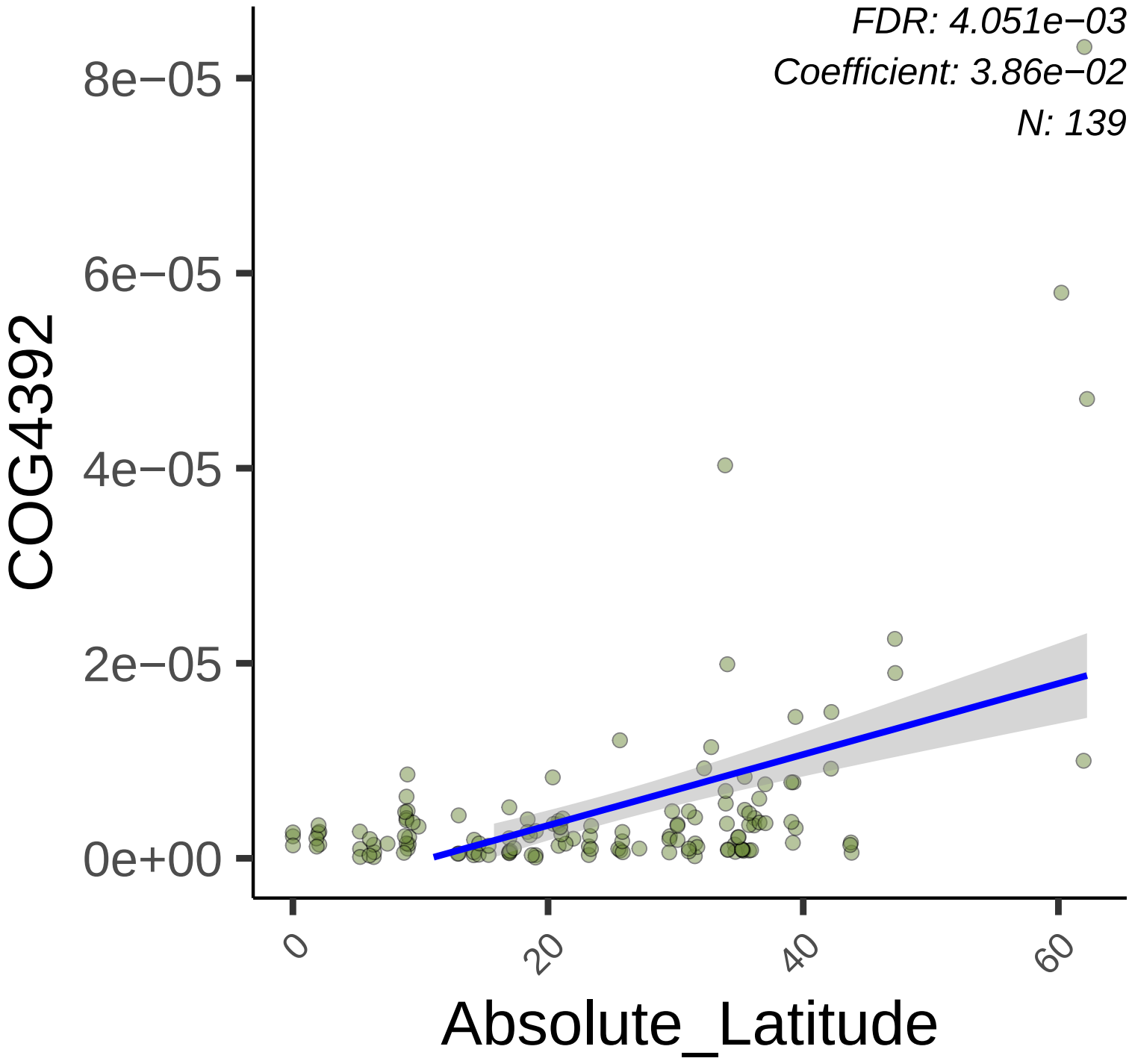

FDR: 3.882e−03
Coefficient: −1.56e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG3542
0
20
40
60
Absolute_Latitude

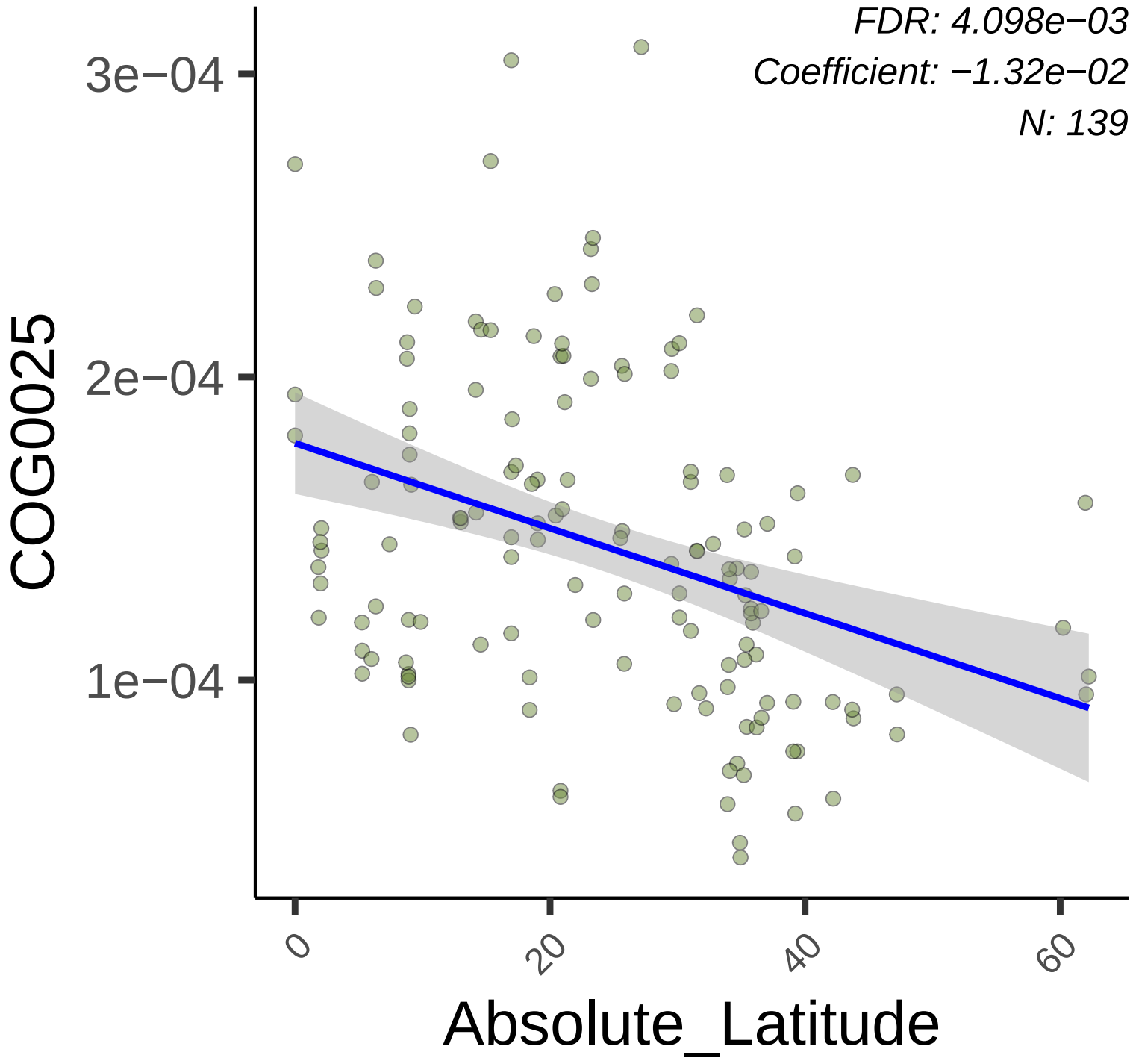

FDR: 3.889e−03
Coefficient: 6.95e−03
N: 139
0.00125
0.00100
0.00075
0.00050
COG1593
0
20
40
60
Absolute_Latitude

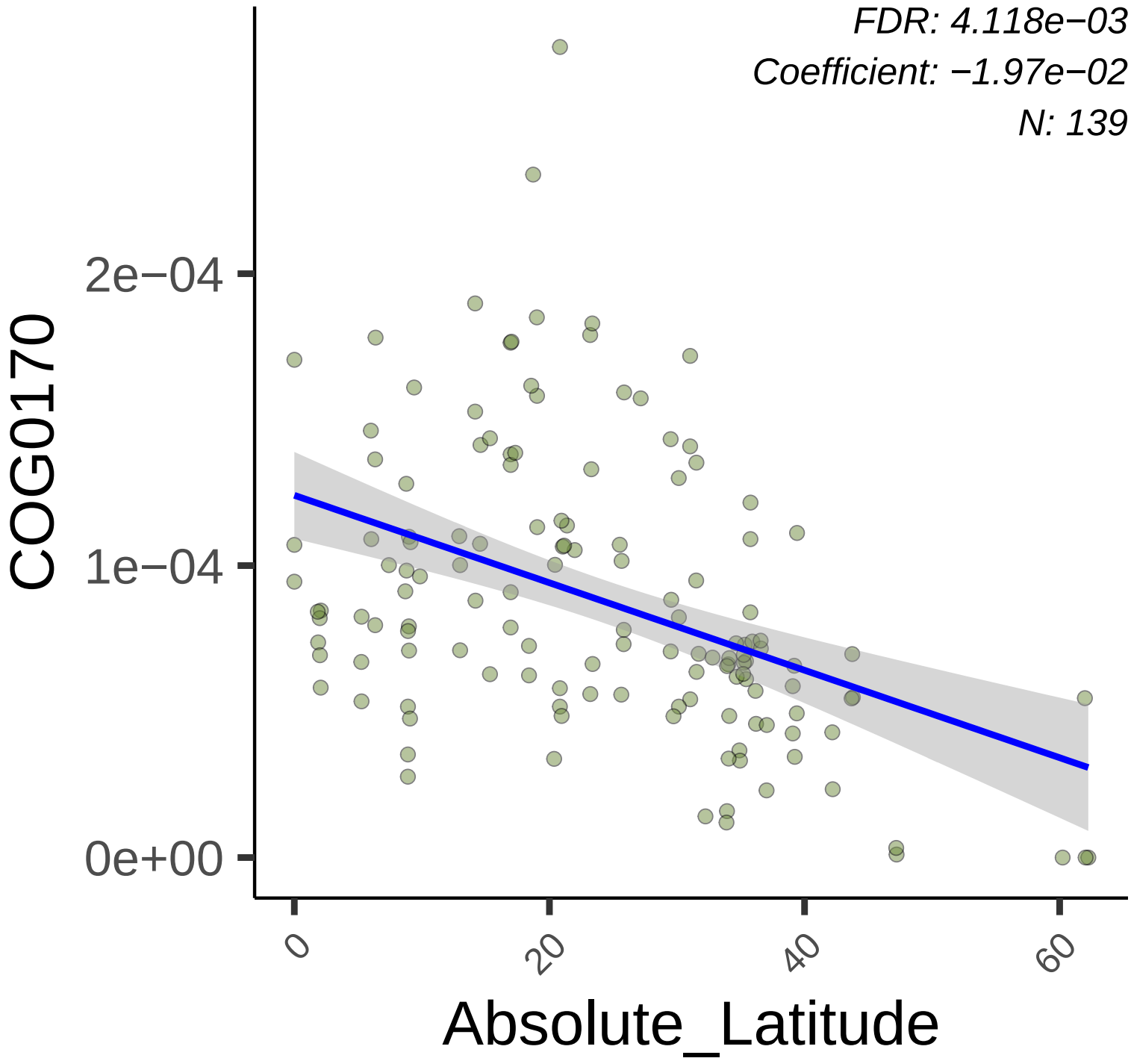

FDR: 3.919e−03
Coefficient: 6.58e−03
N: 139
COG1052
9e−04
7e−04
5e−04
3e−04
0
20
40
60
Absolute_Latitude

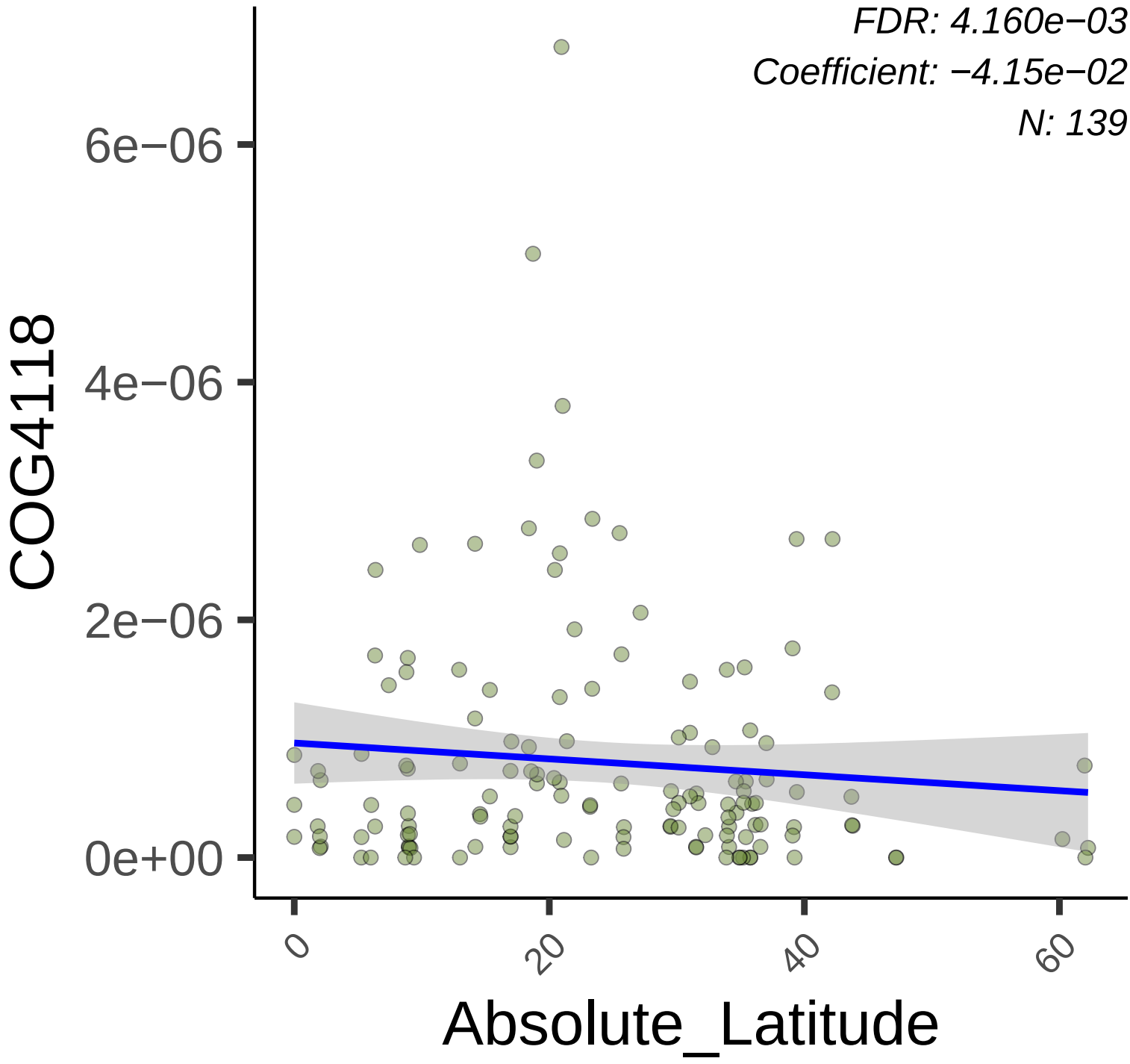

FDR: 4.030e−03
Coefficient: −2.93e−02
N: 139
COG5297
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

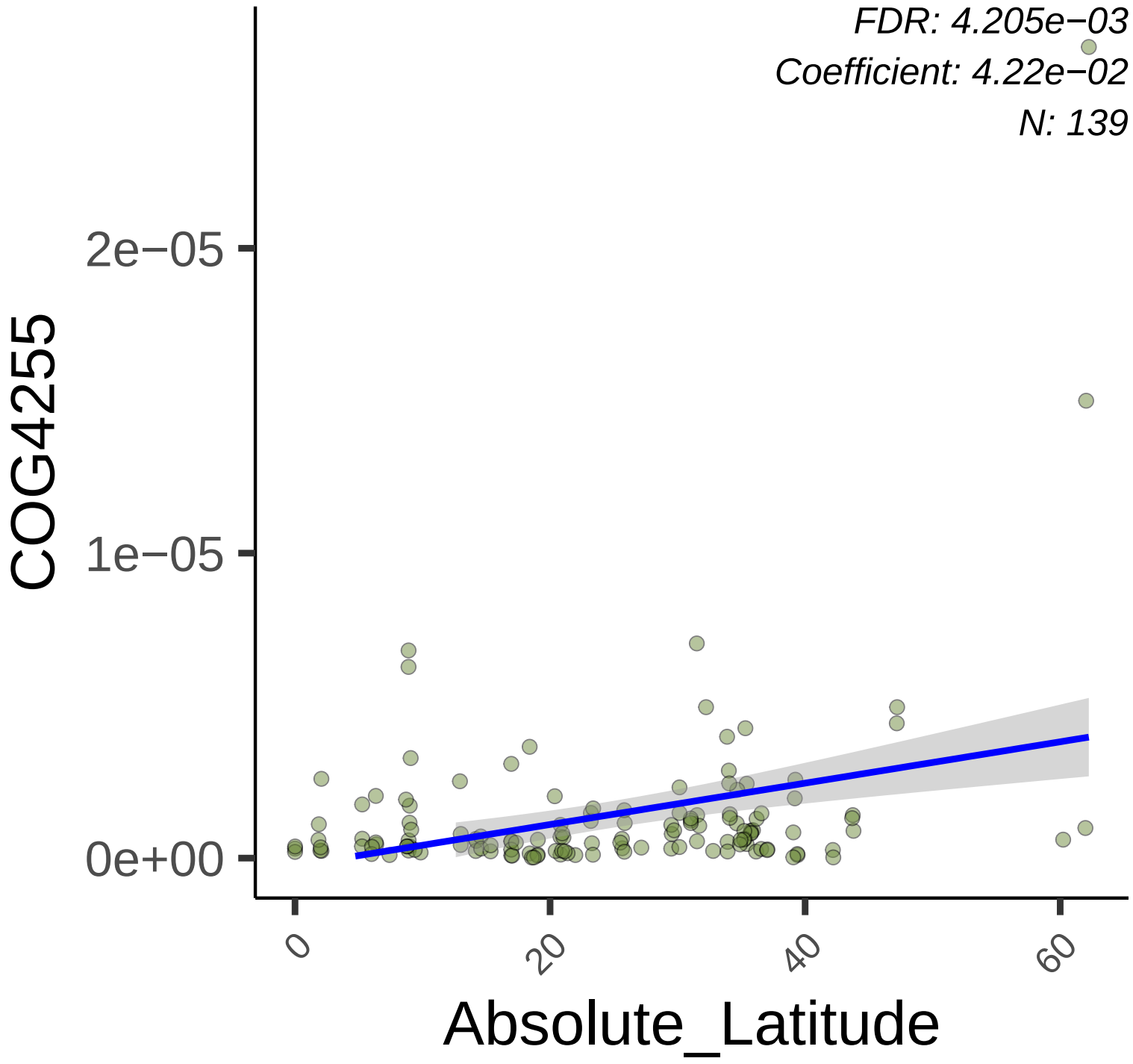

FDR: 4.051e−03
Coefficient: 5.47e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
COG1454
0
20
40
60
Absolute_Latitude

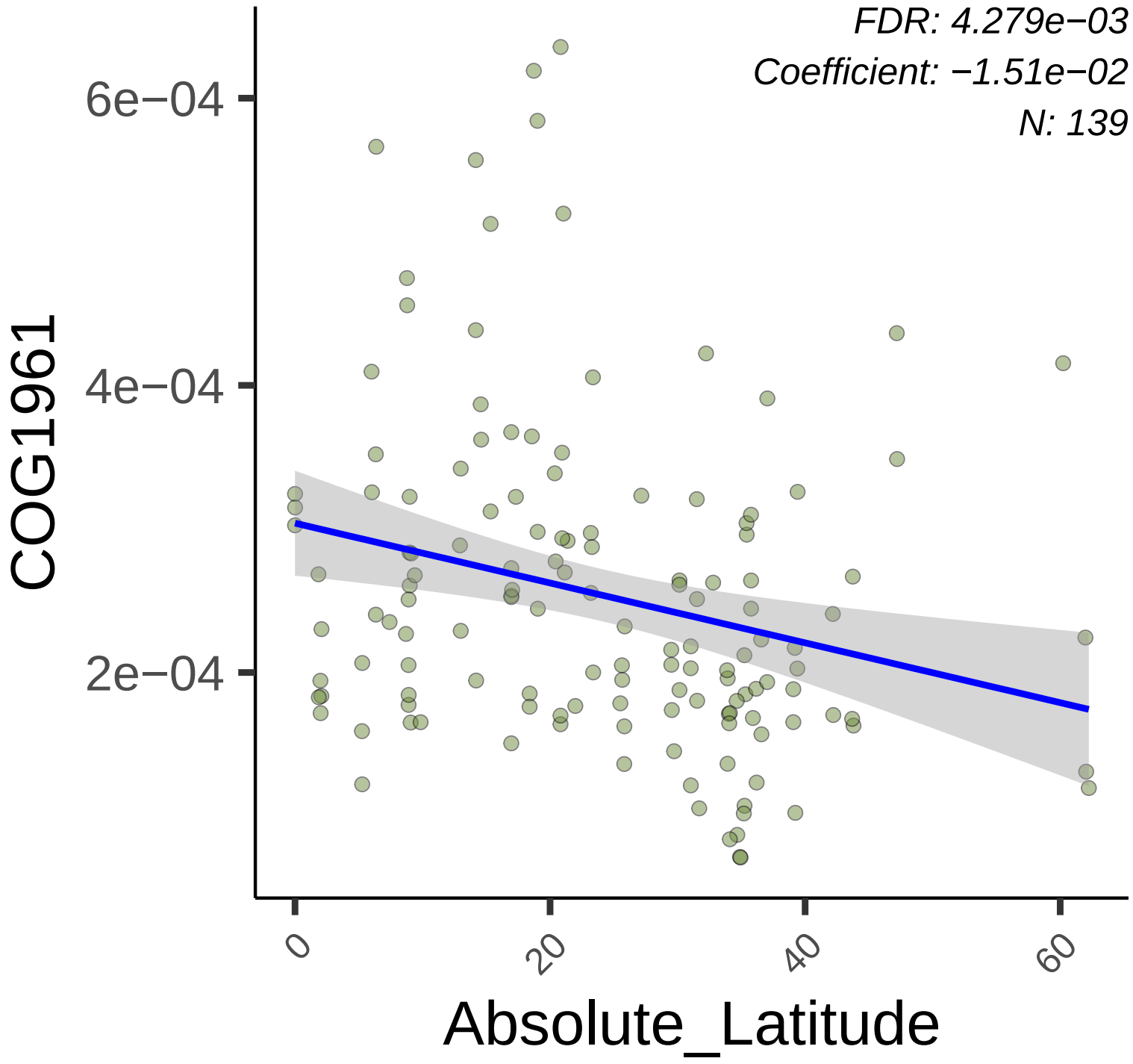

FDR: 4.051e−03
Coefficient: 3.86e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG4392
0
20
40
60
Absolute_Latitude

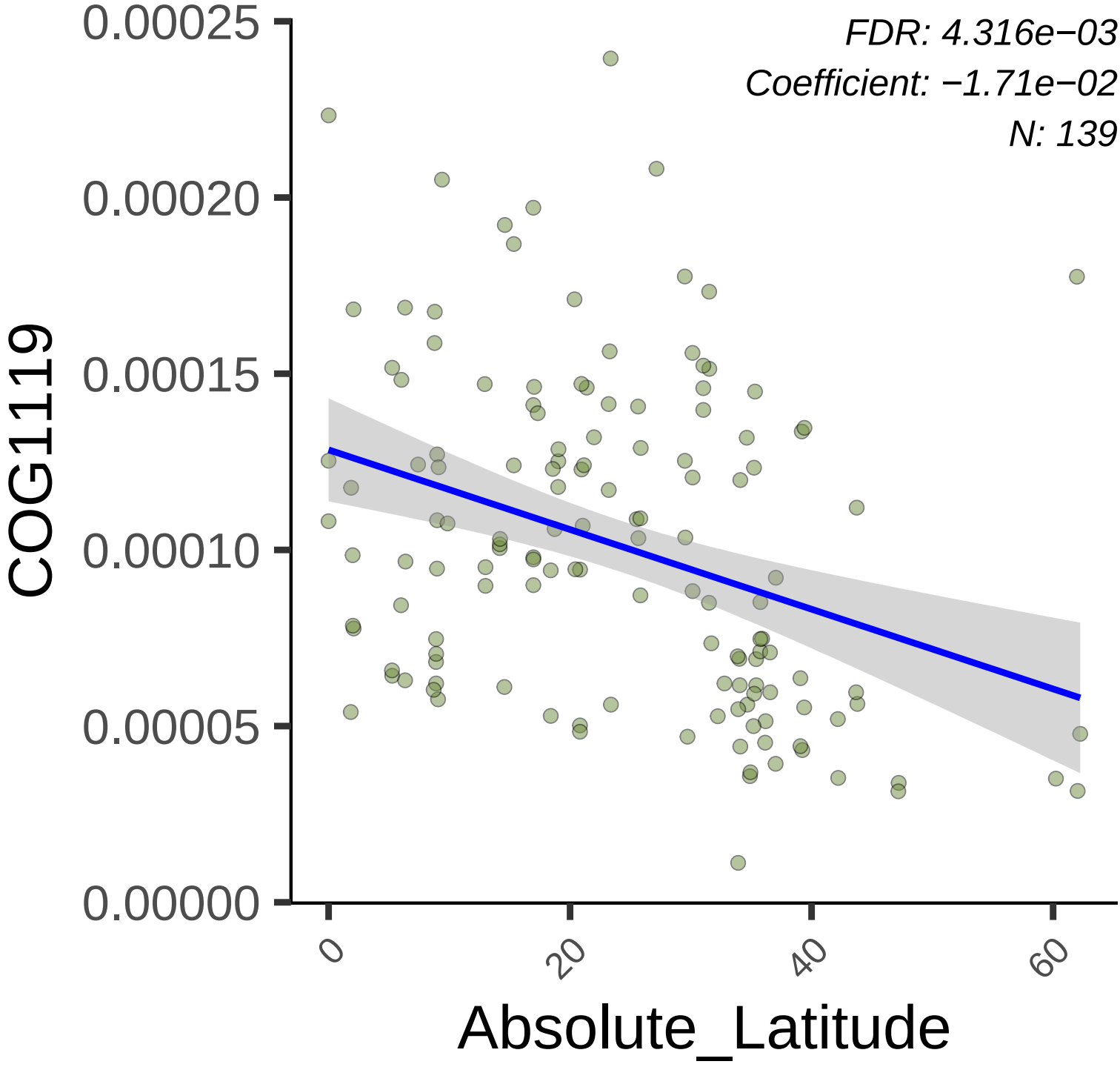

FDR: 4.098e−03
Coefficient: −1.32e−02
N: 139
3e−04
2e−04
1e−04
COG0025
0
20
40
60
Absolute_Latitude

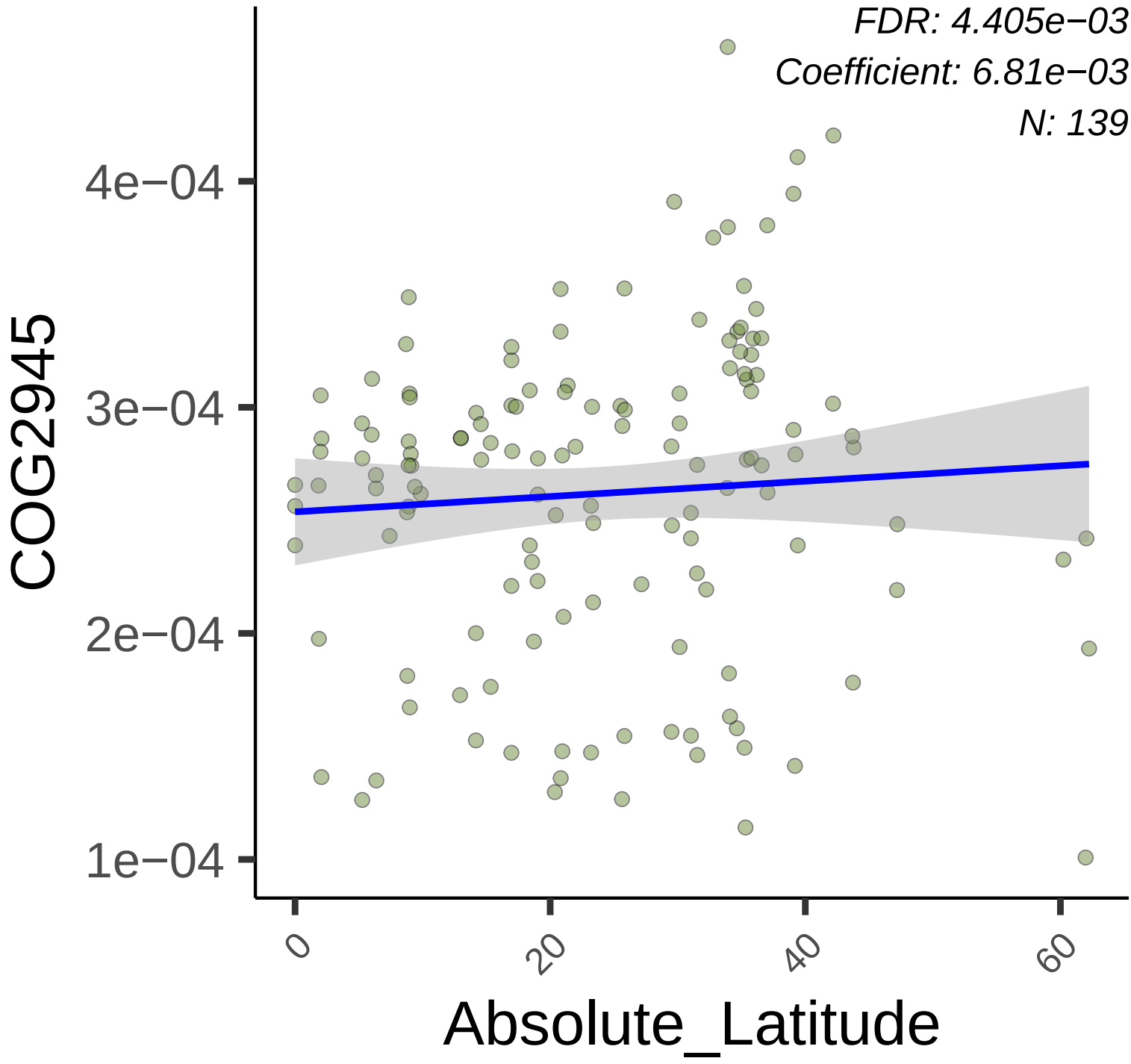

FDR: 4.118e−03
Coefficient: −1.97e−02
N: 139
COG0170
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

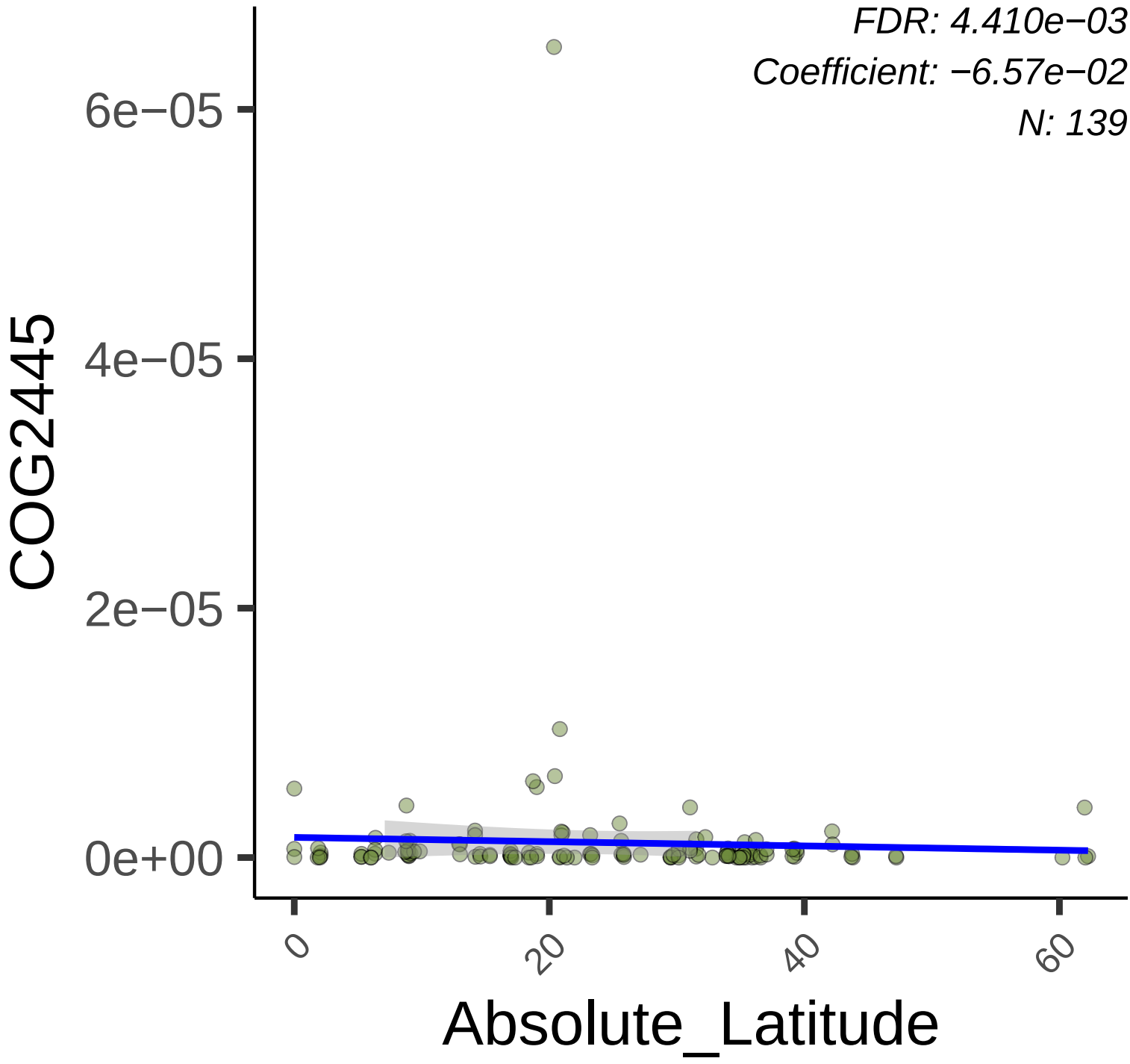

FDR: 4.160e−03
Coefficient: −4.15e−02
N: 139
COG4118
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

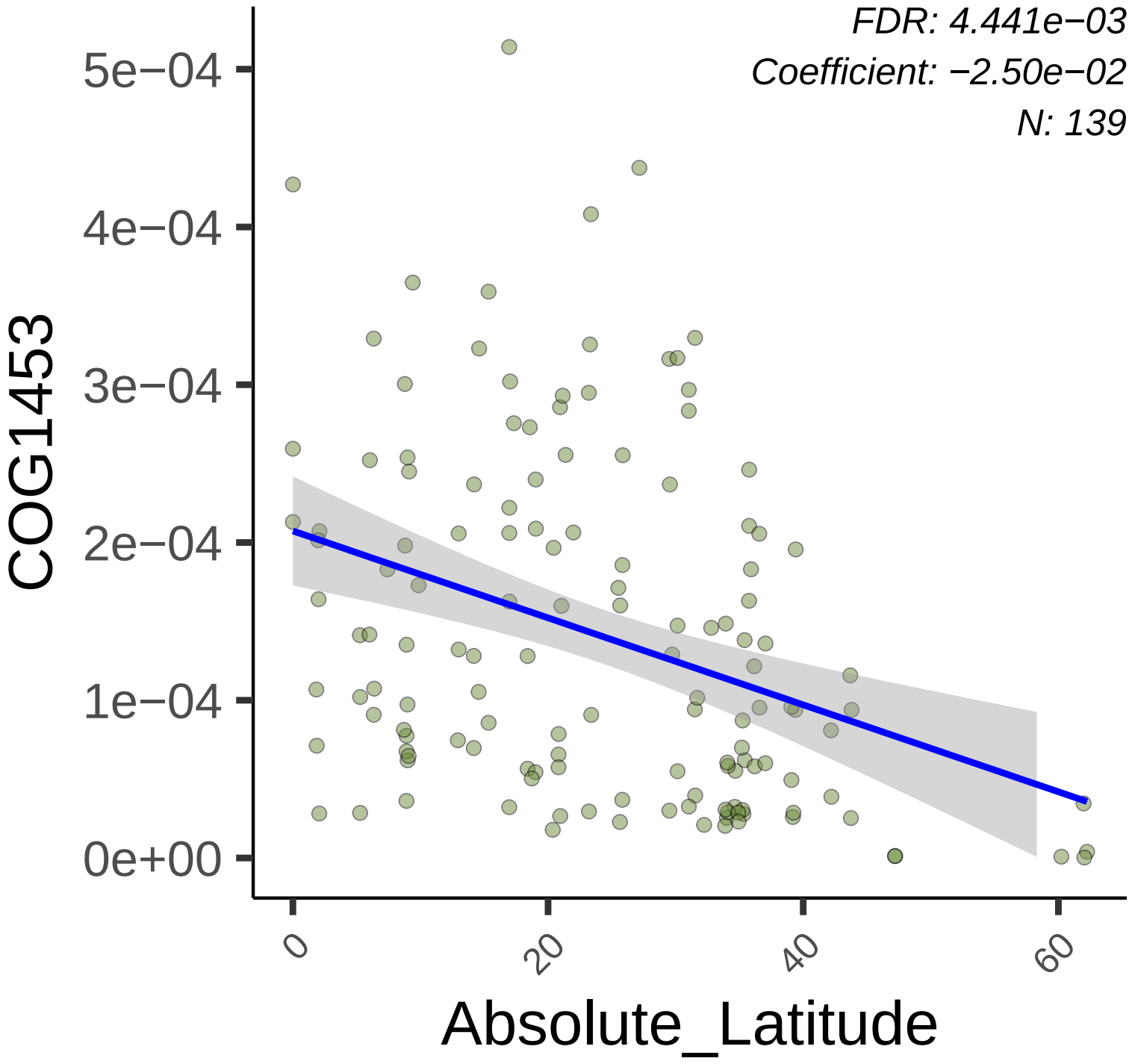

FDR: 4.205e−03
Coefficient: 4.22e−02
N: 139
COG4255
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

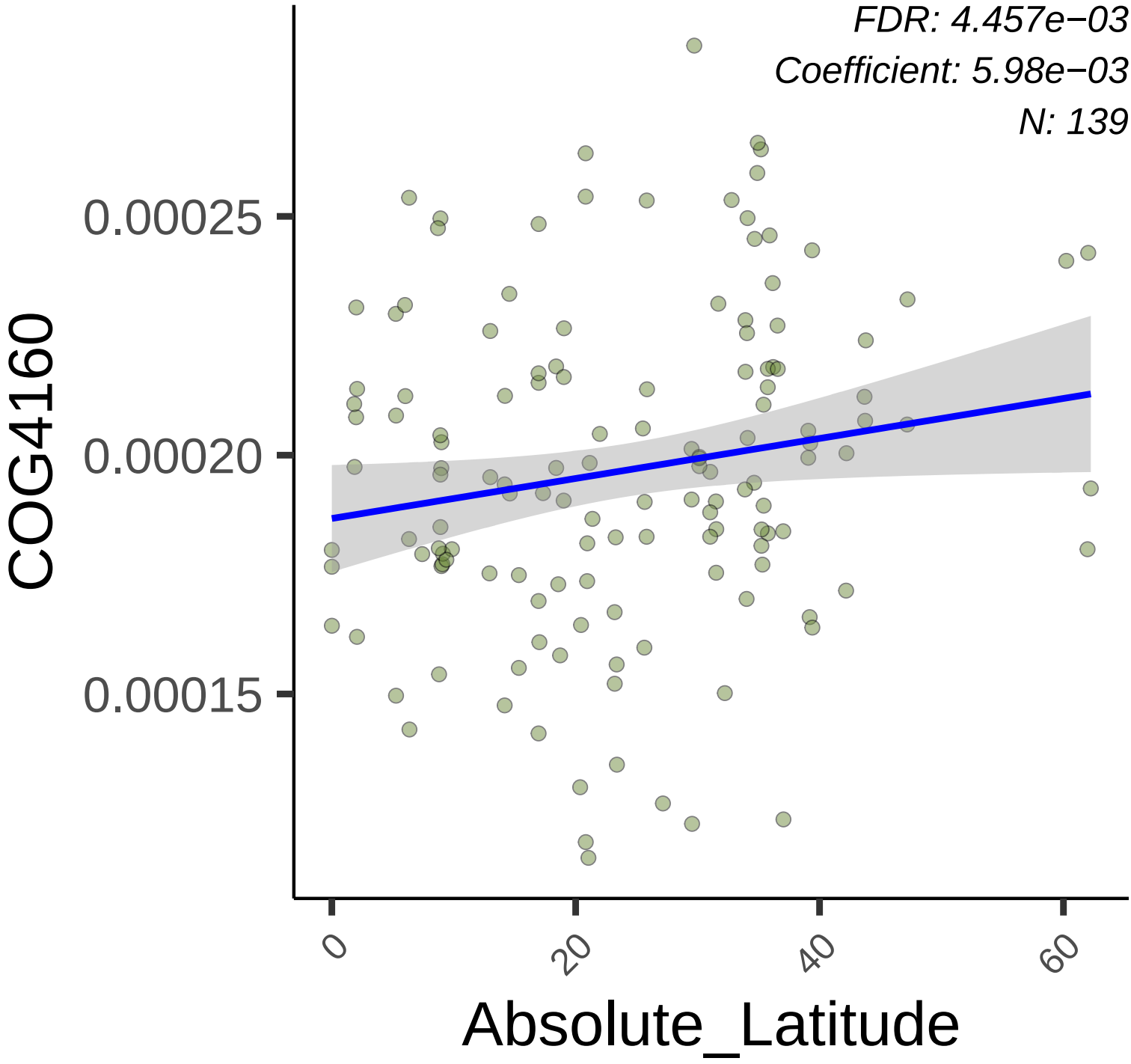

FDR: 4.279e−03
Coefficient: −1.51e−02
N: 139
6e−04
4e−04
2e−04
COG1961
0
20
40
60
Absolute_Latitude

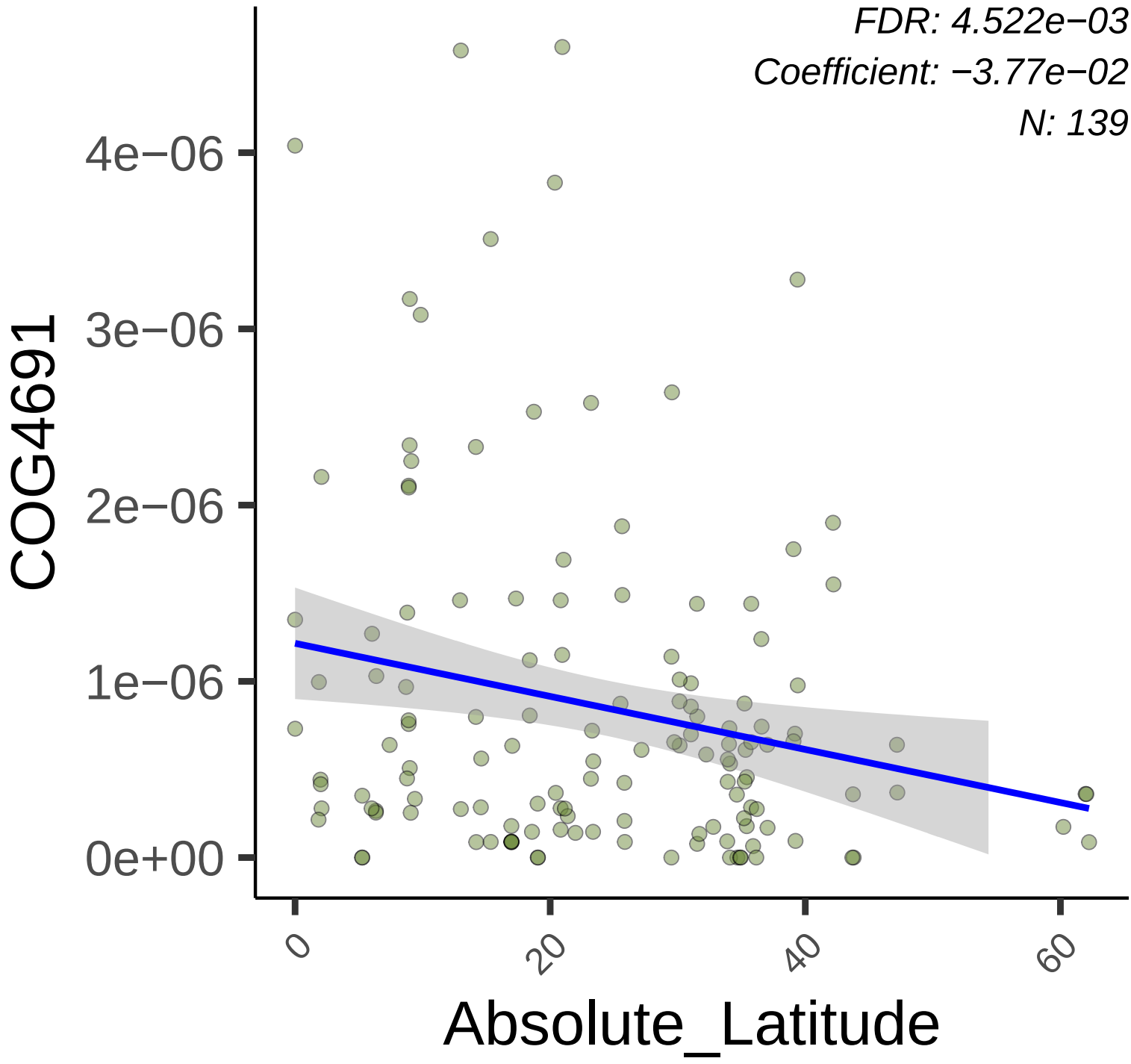

FDR: 4.316e−03
Coefficient: −1.71e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
COG1119
0
20
40
60
Absolute_Latitude

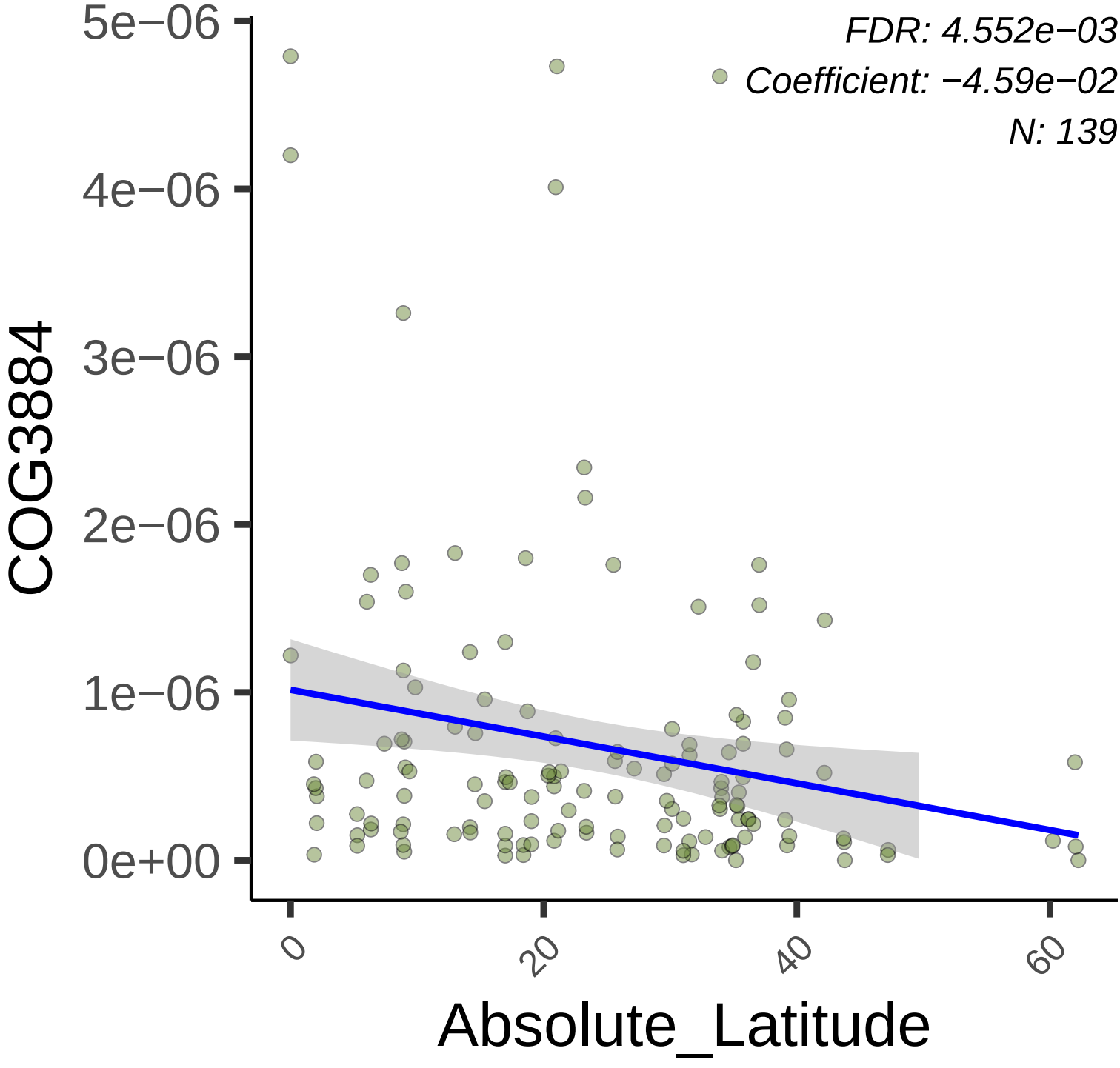

FDR: 4.405e−03
Coefficient: 6.81e−03
N: 139
COG2945
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

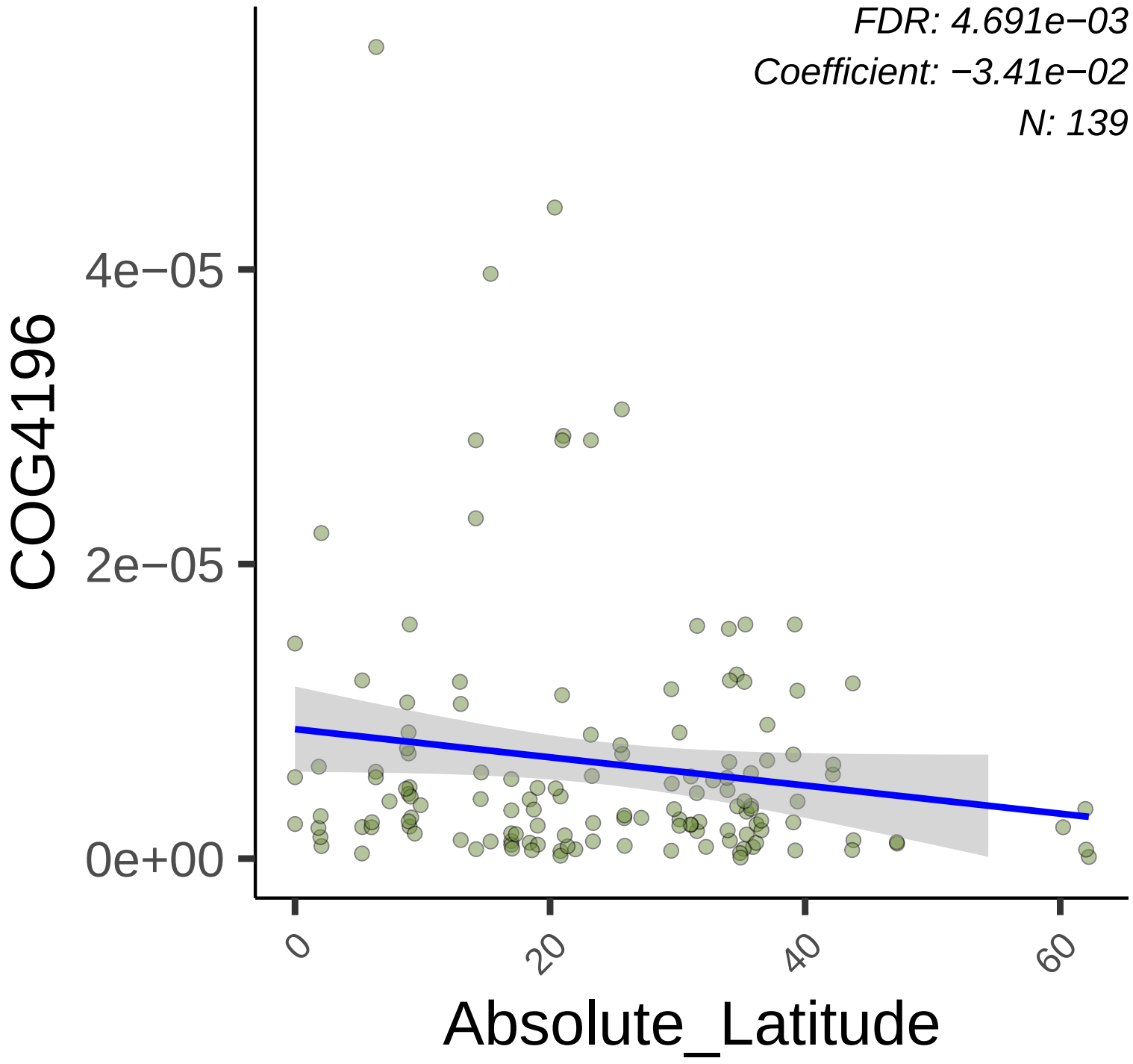

FDR: 4.410e−03
Coefficient: −6.57e−02
N: 139
COG2445
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

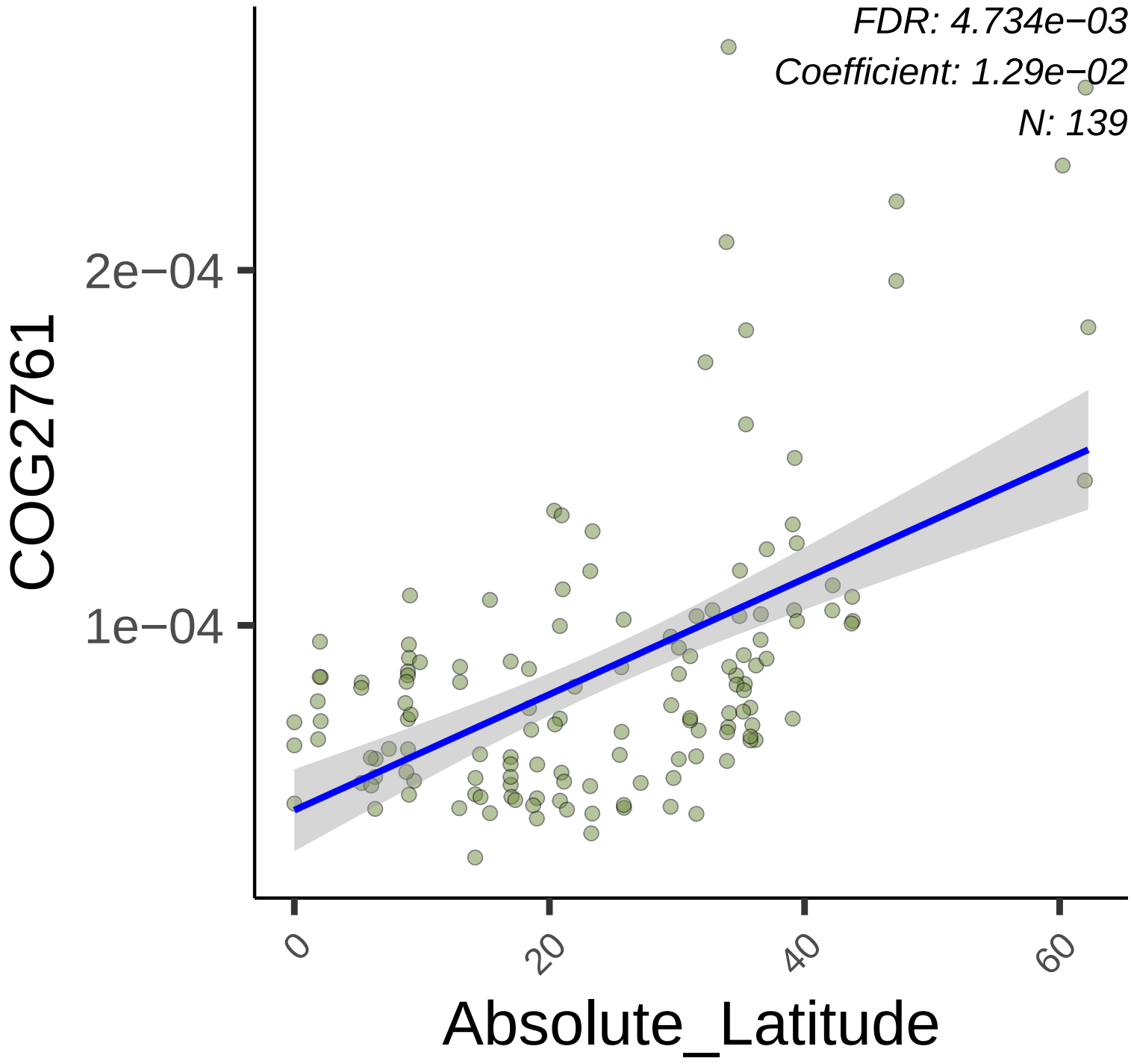

FDR: 4.441e−03
Coefficient: −2.50e−02
N: 139
COG1453
5e−04
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

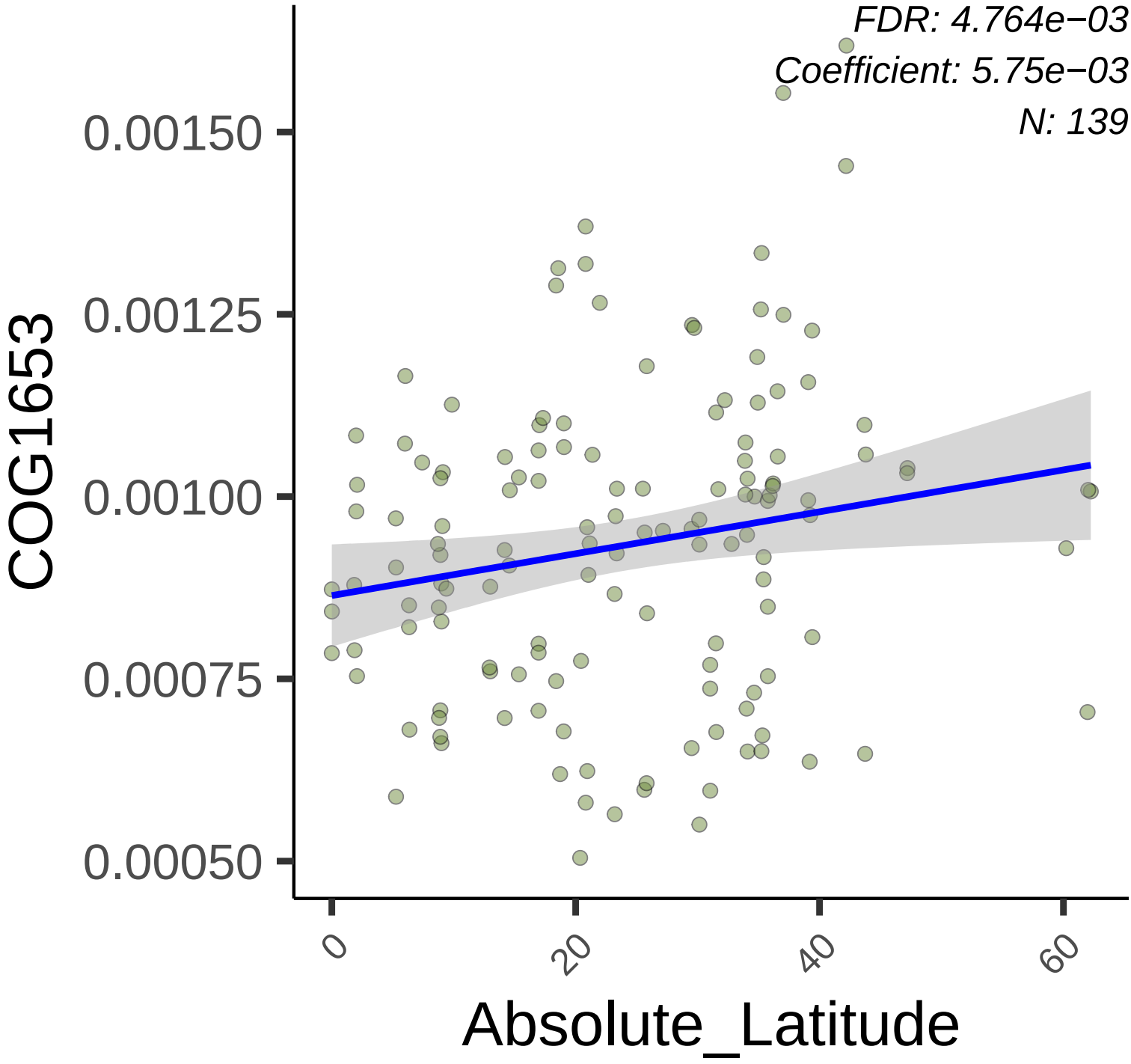

FDR: 4.457e−03
Coefficient: 5.98e−03
N: 139
0.00025
0.00020
0.00015
COG4160
0
20
40
60
Absolute_Latitude

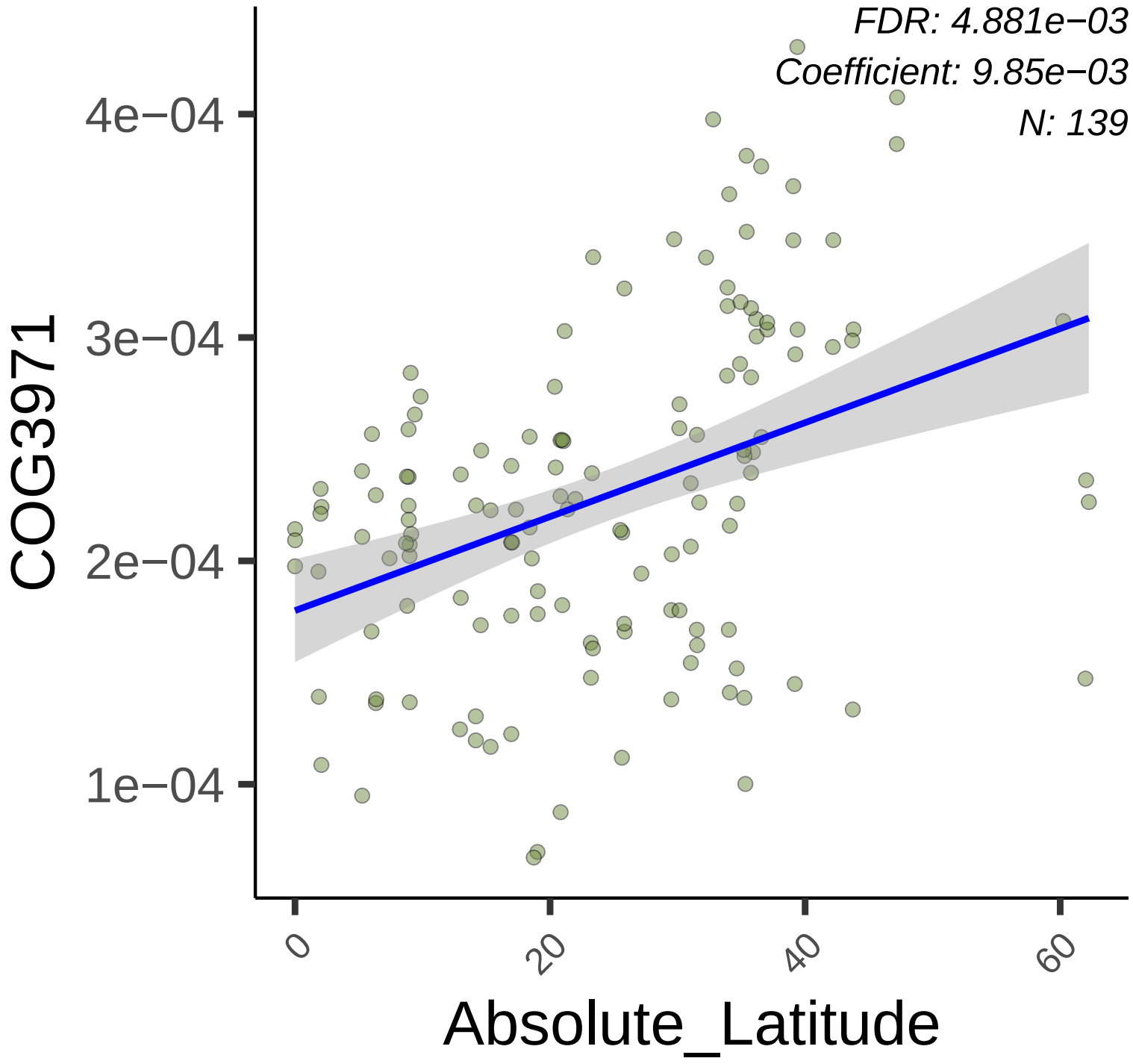

FDR: 4.522e−03
Coefficient: −3.77e−02
N: 139
COG4691
4e−06
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

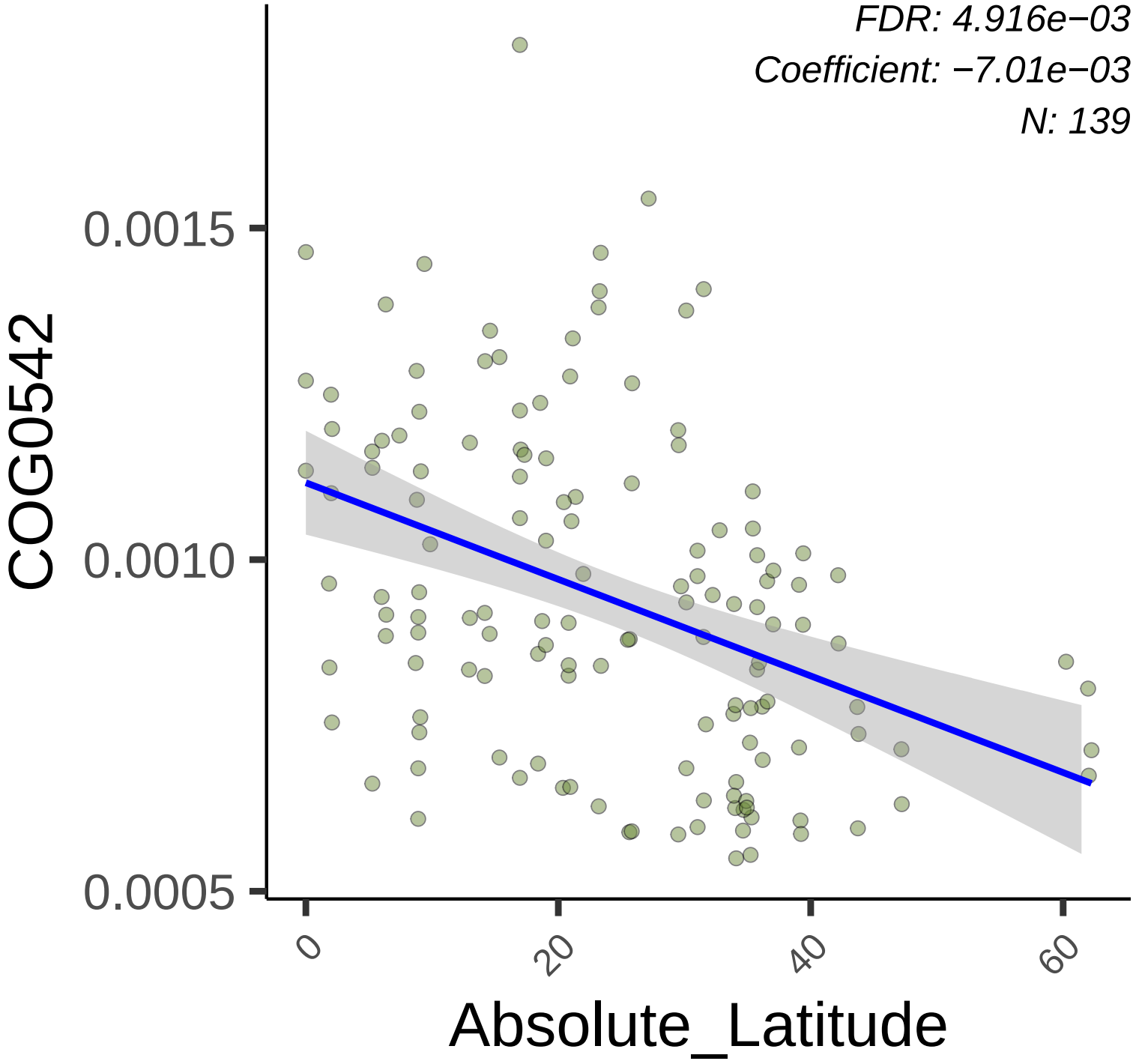

FDR: 4.552e−03
Coefficient: −4.59e−02
N: 139
COG3884
5e−06
4e−06
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

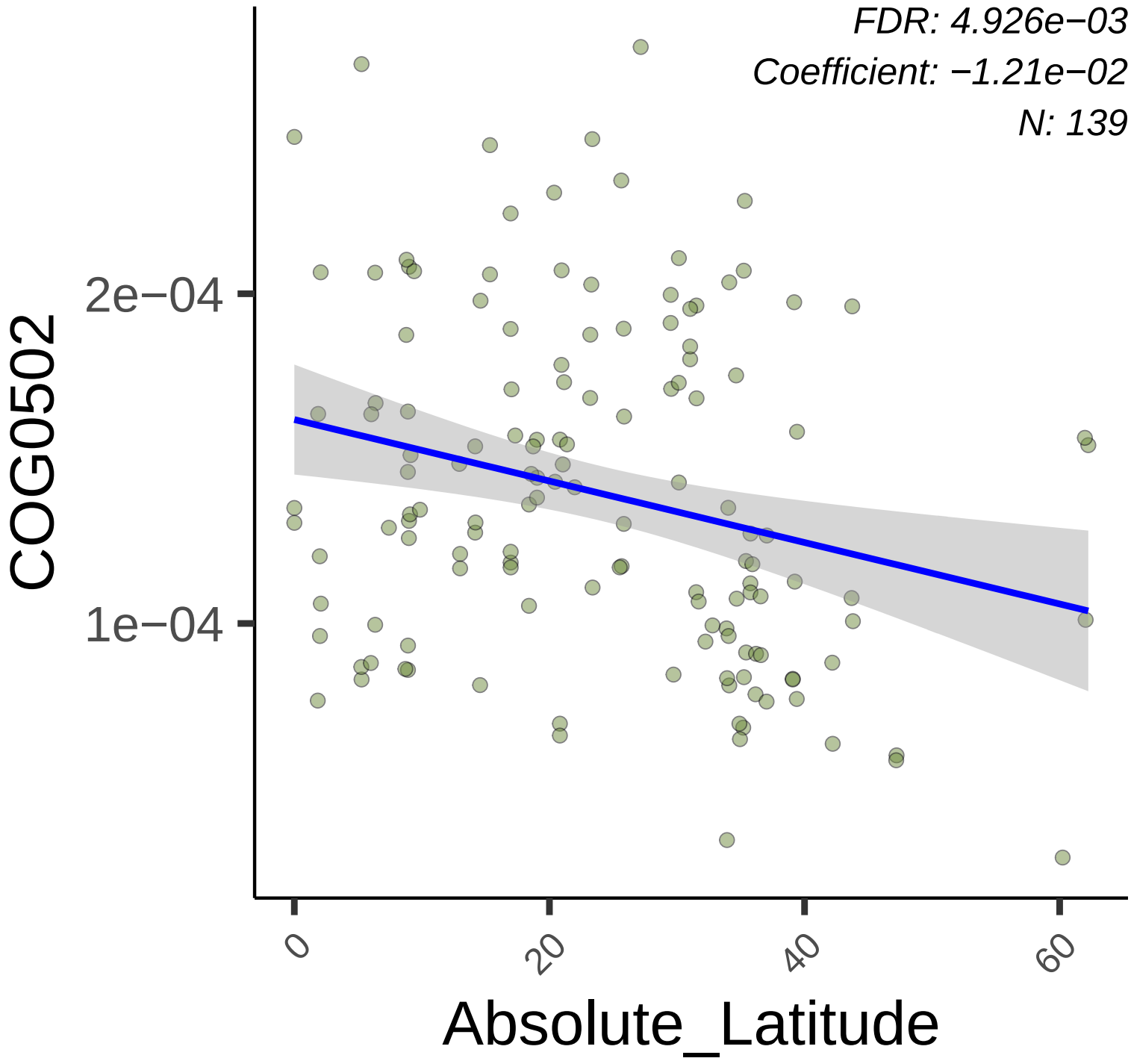

FDR: 4.691e−03
Coefficient: −3.41e−02
N: 139
COG4196
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

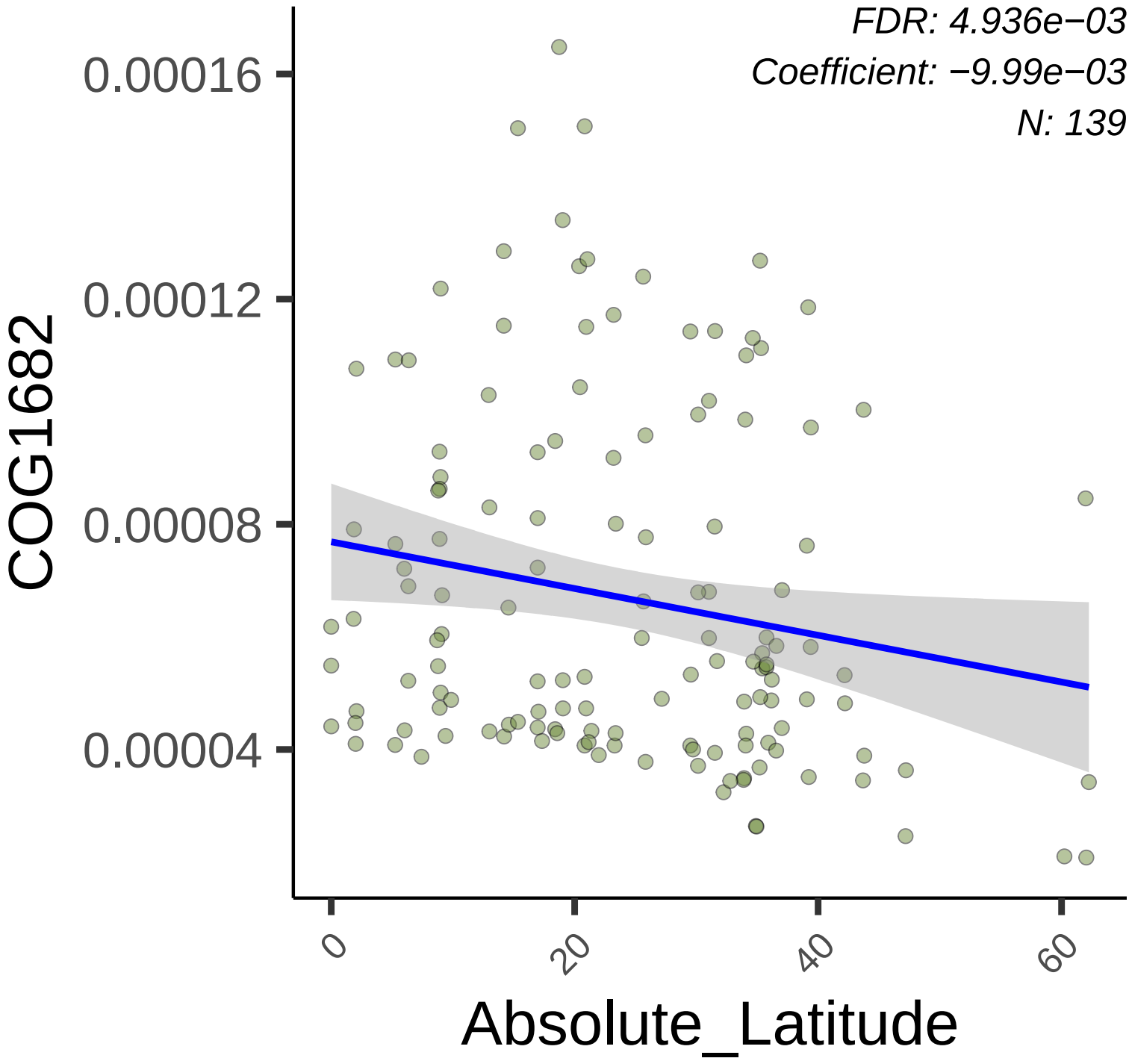

FDR: 4.734e−03
Coefficient: 1.29e−02
N: 139
COG2761
2e−04
1e−04
0
20
40
60
Absolute_Latitude

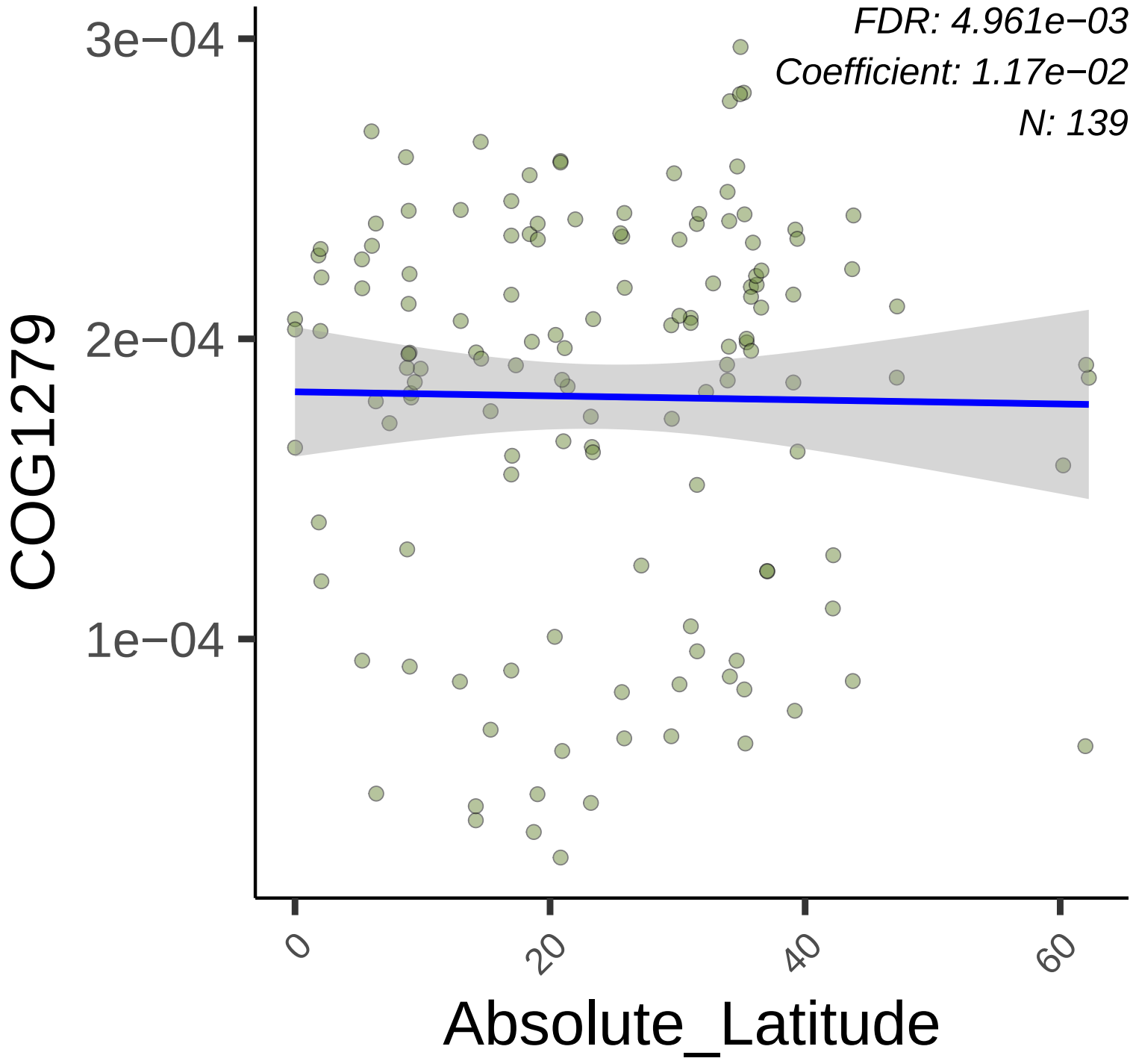

FDR: 4.764e−03
Coefficient: 5.75e−03
N: 139
COG1653
0.00150
0.00125
0.00100
0.00075
0.00050
0
20
40
60
Absolute_Latitude

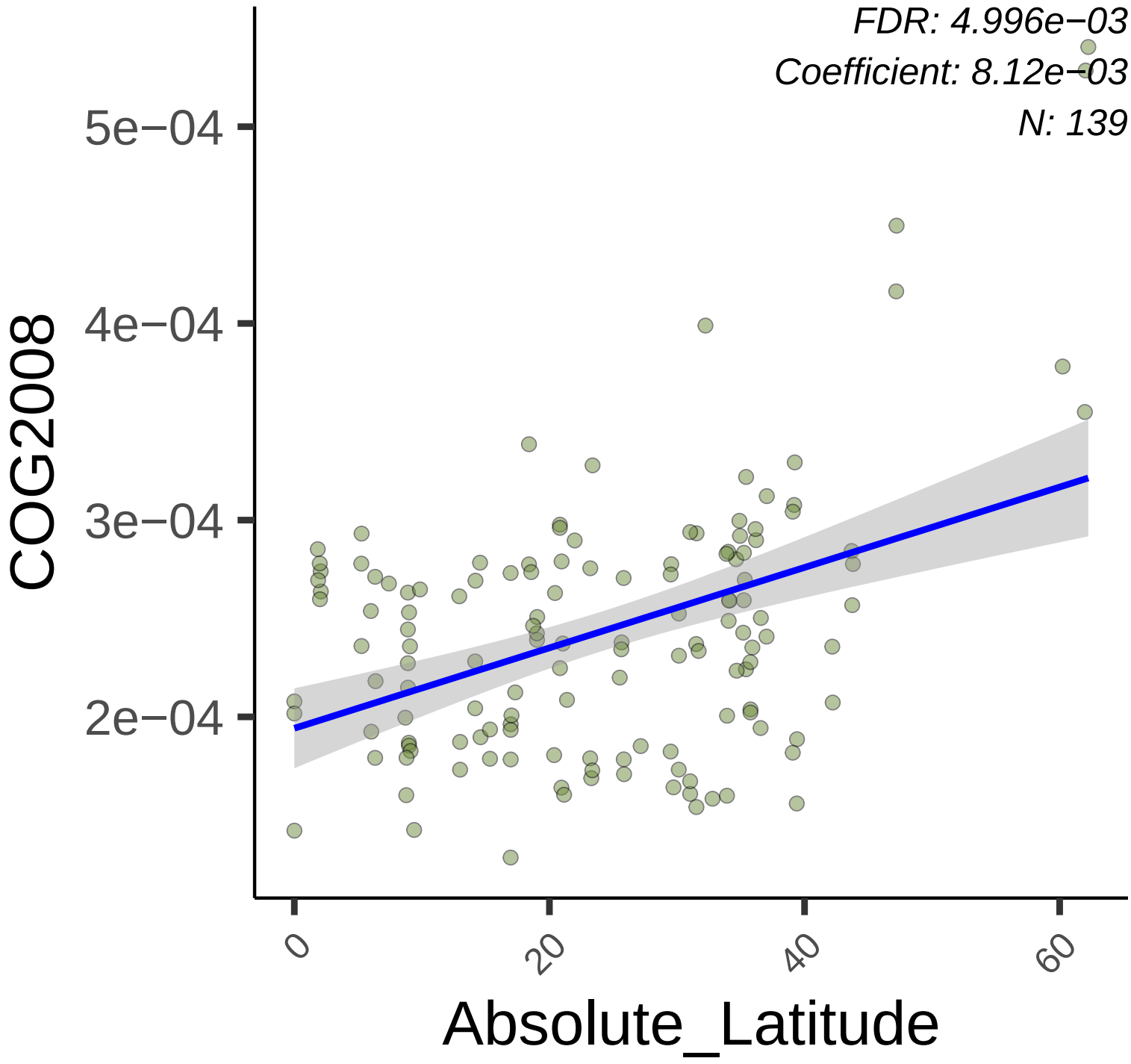

FDR: 4.881e−03
Coefficient: 9.85e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG3971
0
20
40
60
Absolute_Latitude

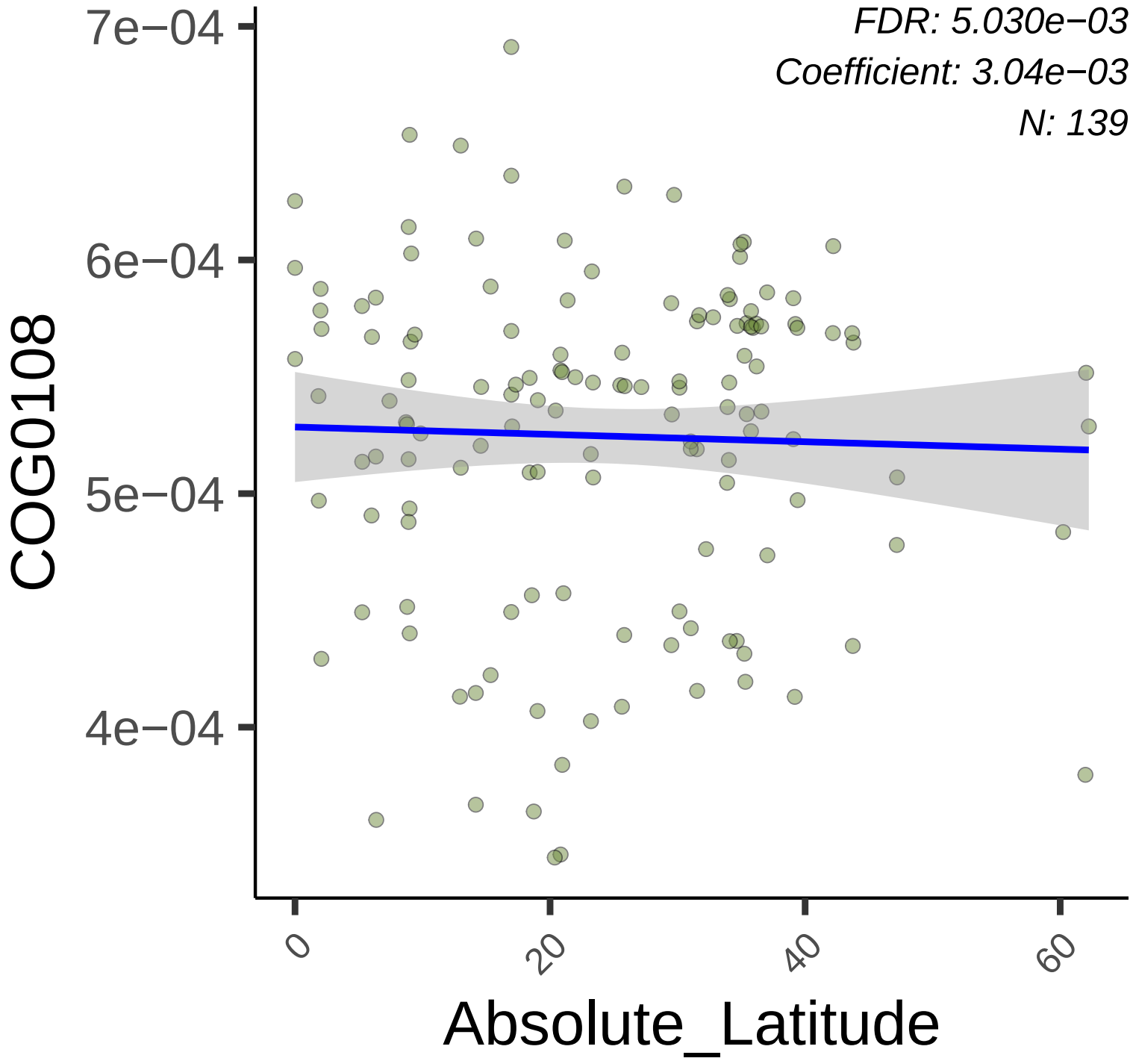

FDR: 4.916e−03
Coefficient: −7.01e−03
N: 139
0.0015
0.0010
0.0005
COG0542
0
20
40
60
Absolute_Latitude

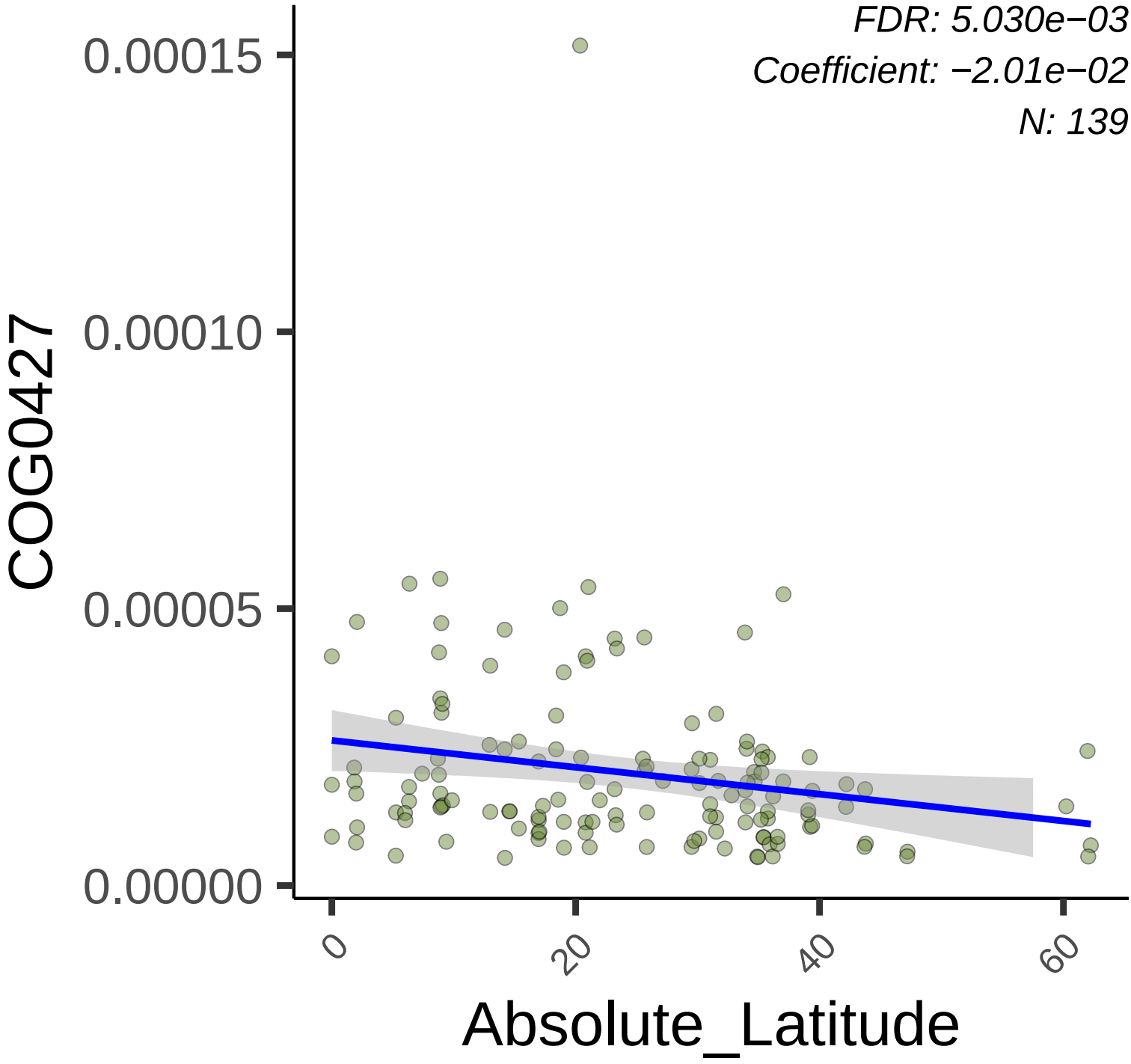

FDR: 4.926e−03
Coefficient: −1.21e−02
N: 139
COG0502
2e−04
1e−04
0
20
40
60
Absolute_Latitude

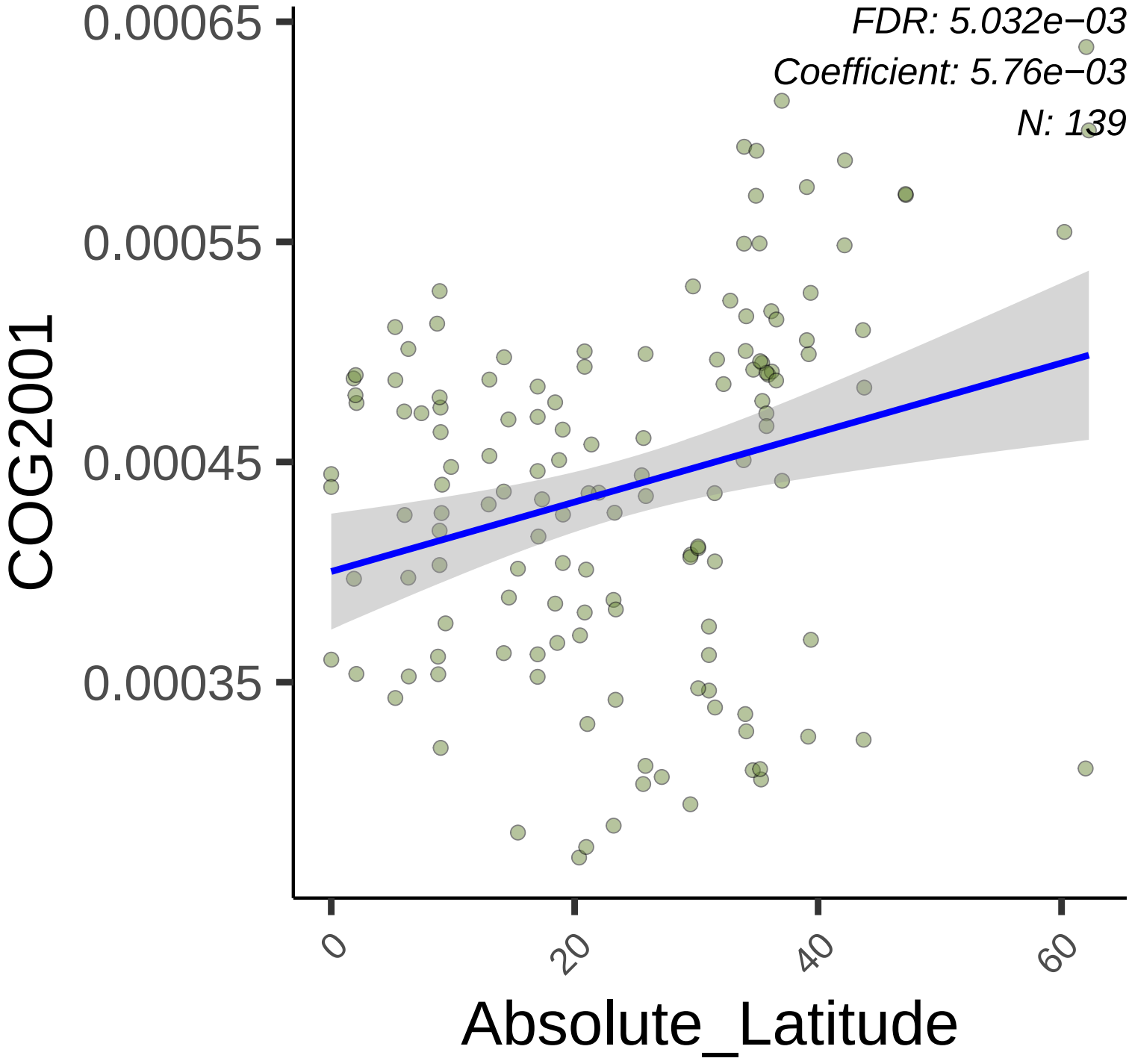

FDR: 4.936e−03
Coefficient: −9.99e−03
N: 139
0.00016
0.00012
0.00008
0.00004
COG1682
0
20
40
60
Absolute_Latitude

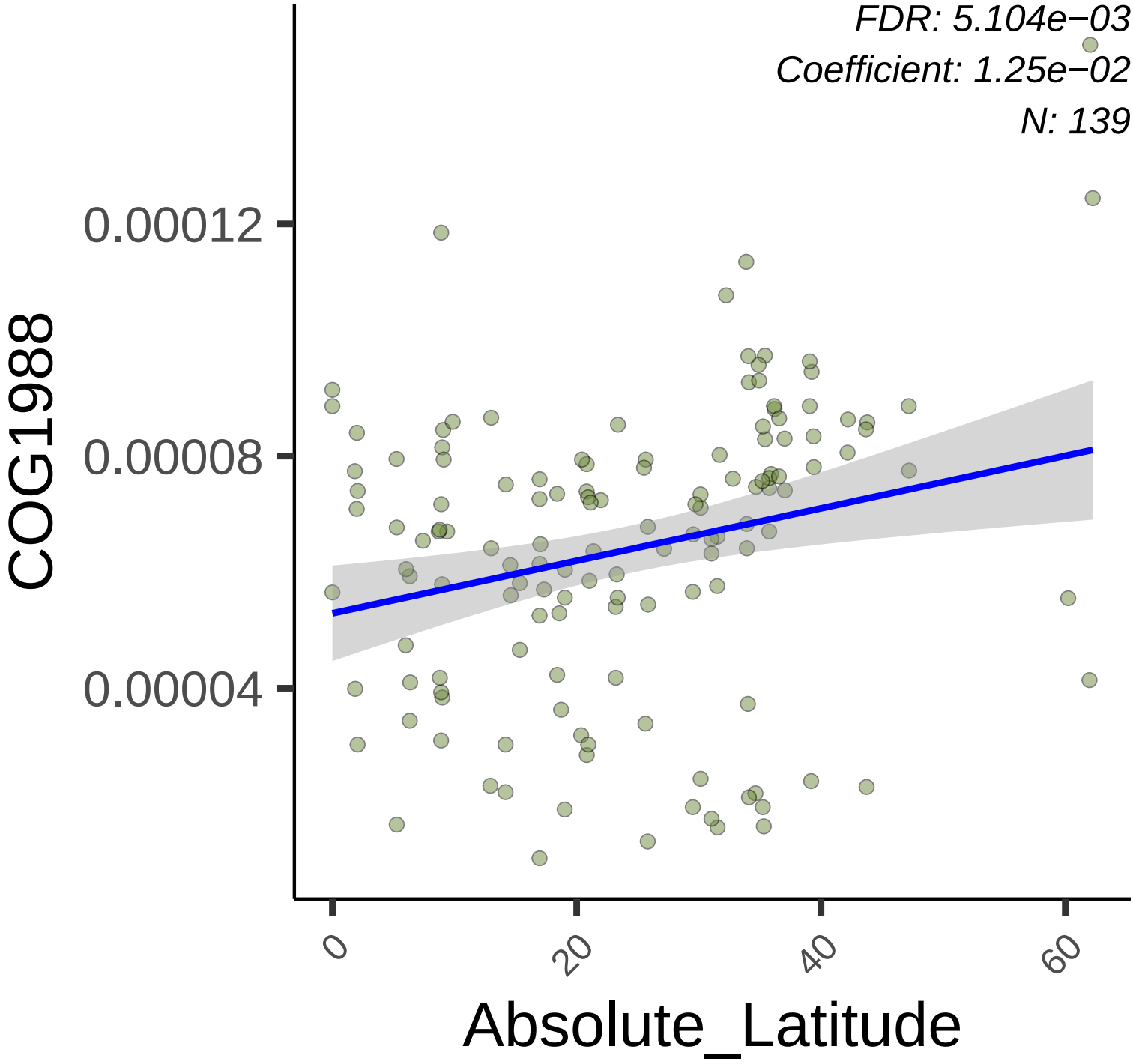

FDR: 4.961e−03
Coefficient: 1.17e−02
N: 139
3e−04
2e−04
1e−04
COG1279
0
20
40
60
Absolute_Latitude

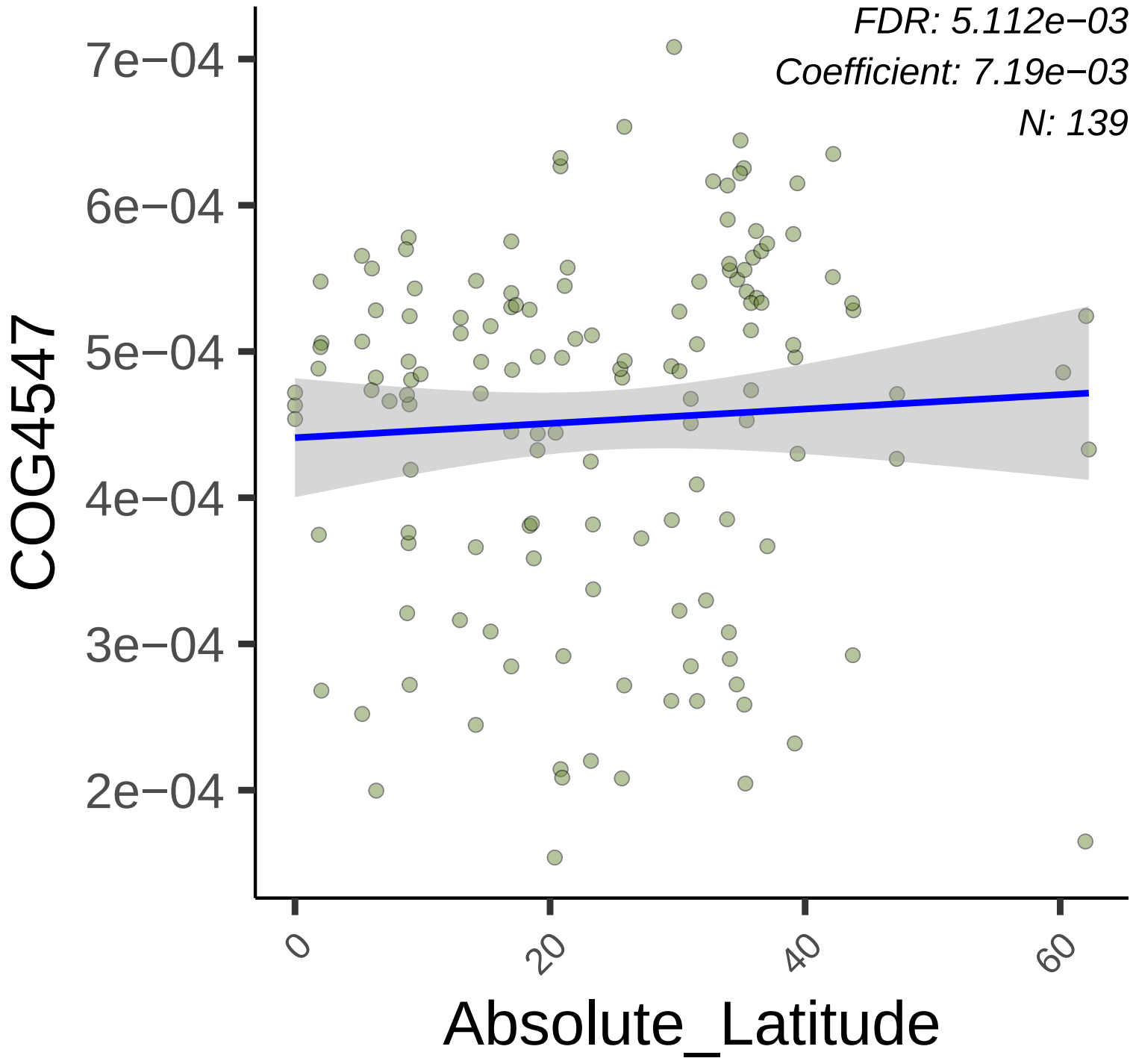

FDR: 4.996e−03
Coefficient: 8.12e−03
N: 139
5e−04
4e−04
3e−04
2e−04
COG2008
0
20
40
60
Absolute_Latitude

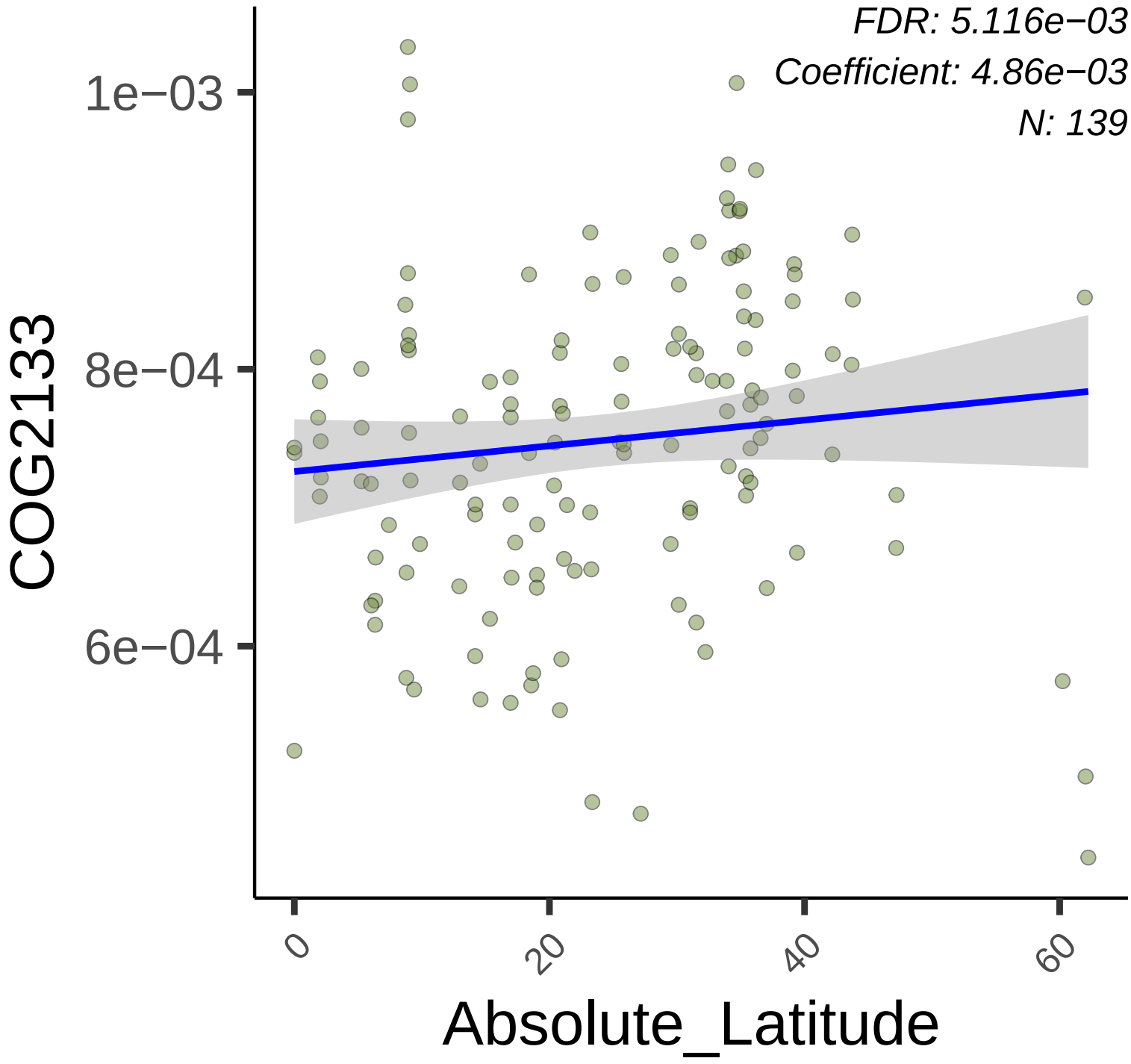

FDR: 5.030e−03
Coefficient: 3.04e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0108
0
20
40
60
Absolute_Latitude

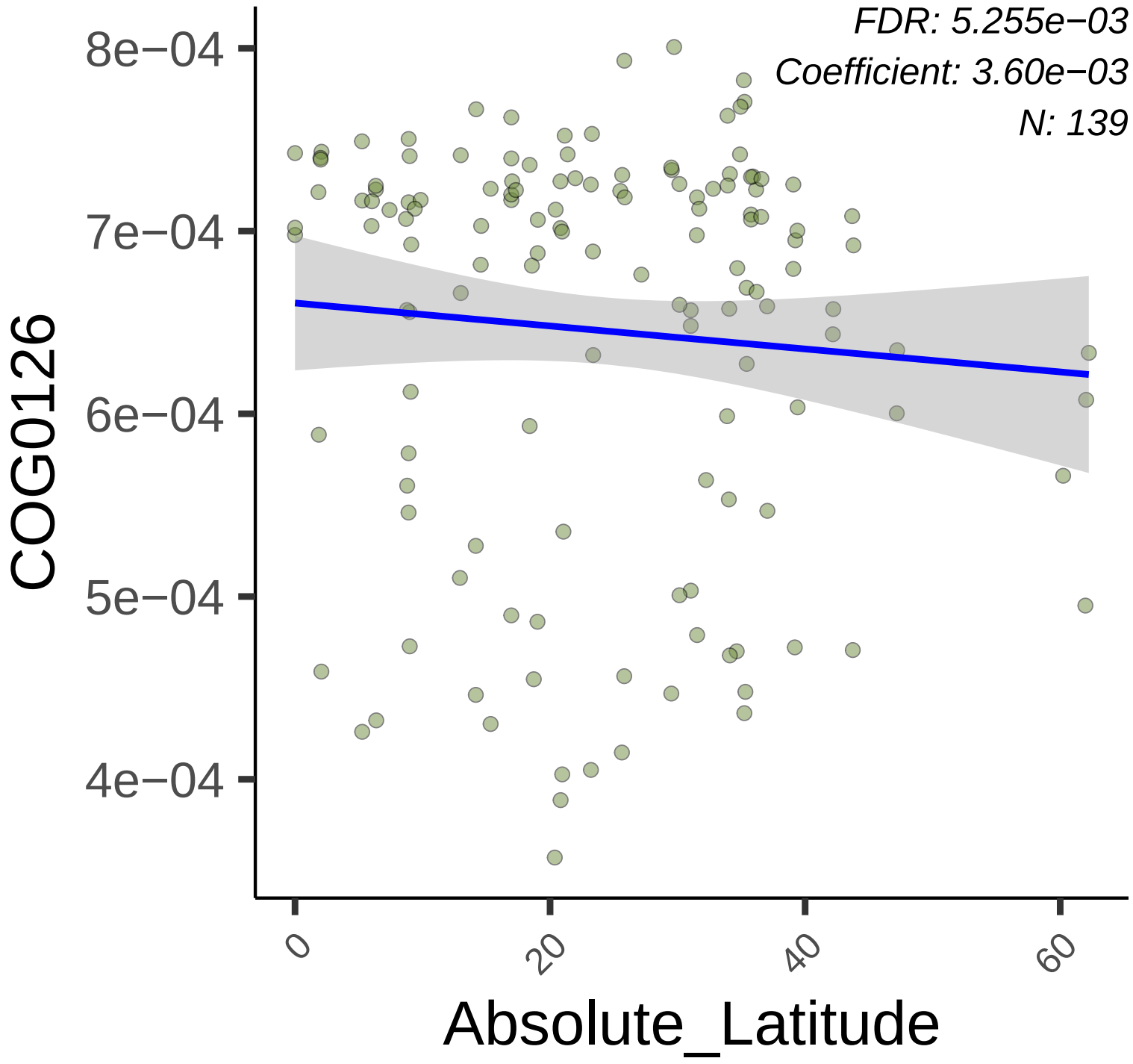

FDR: 5.030e−03
Coefficient: −2.01e−02
N: 139
COG0427
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

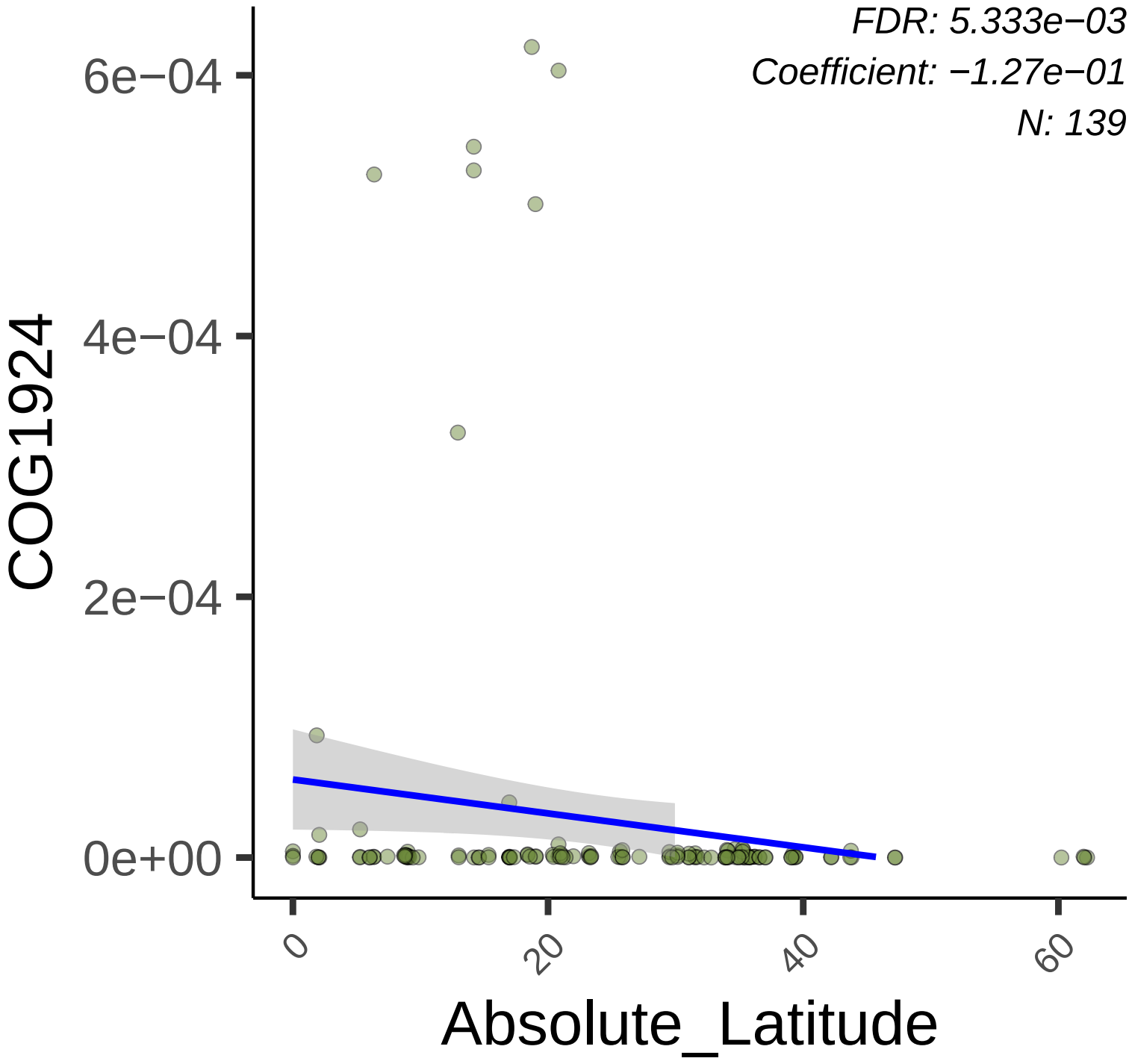

FDR: 5.032e−03
Coefficient: 5.76e−03
N: 139
0.00065
0.00055
0.00045
0.00035
COG2001
0
20
40
60
Absolute_Latitude

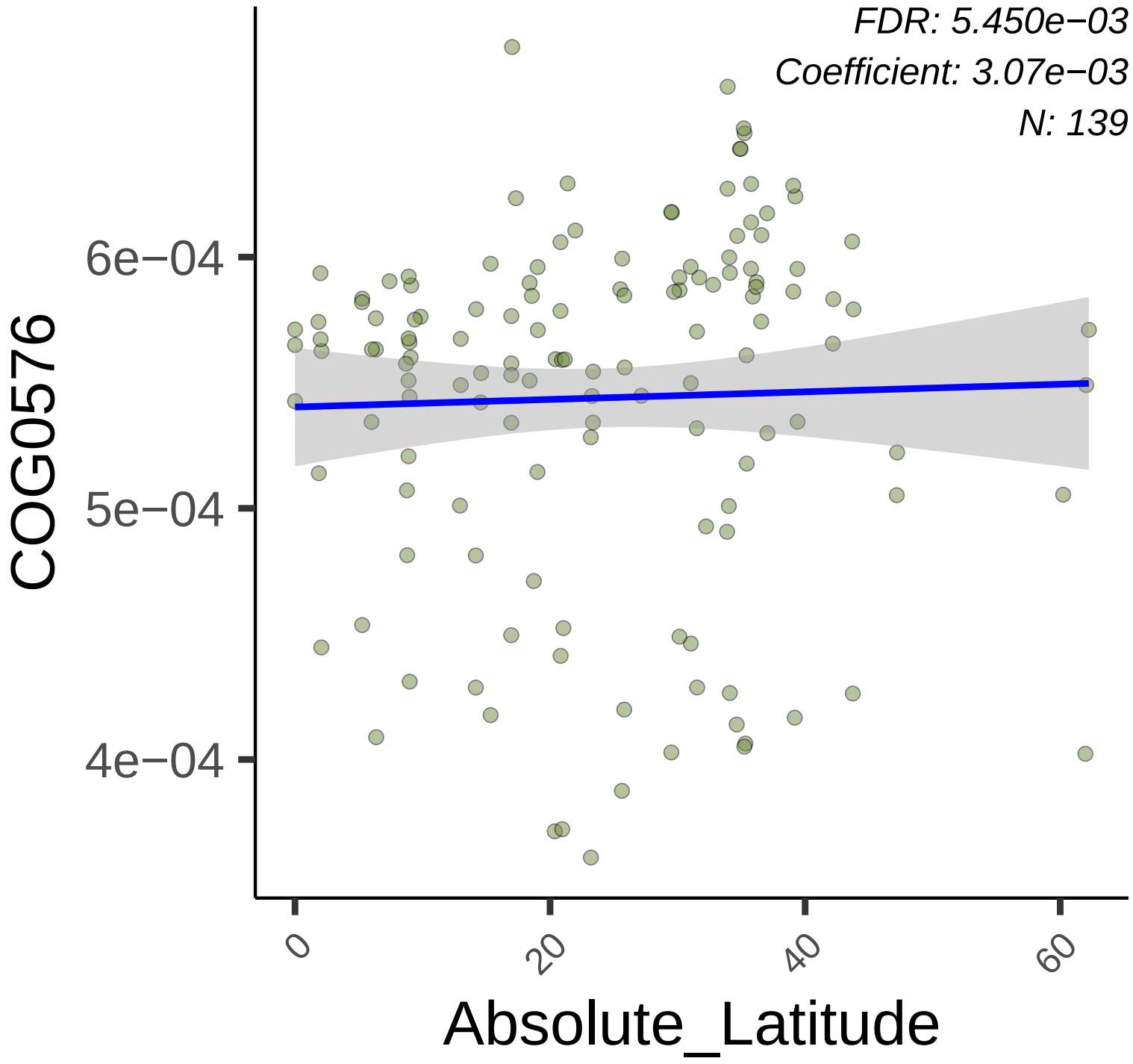

FDR: 5.104e−03
Coefficient: 1.25e−02
N: 139
COG1988
0.00012
0.00008
0.00004
0
20
40
60
Absolute_Latitude

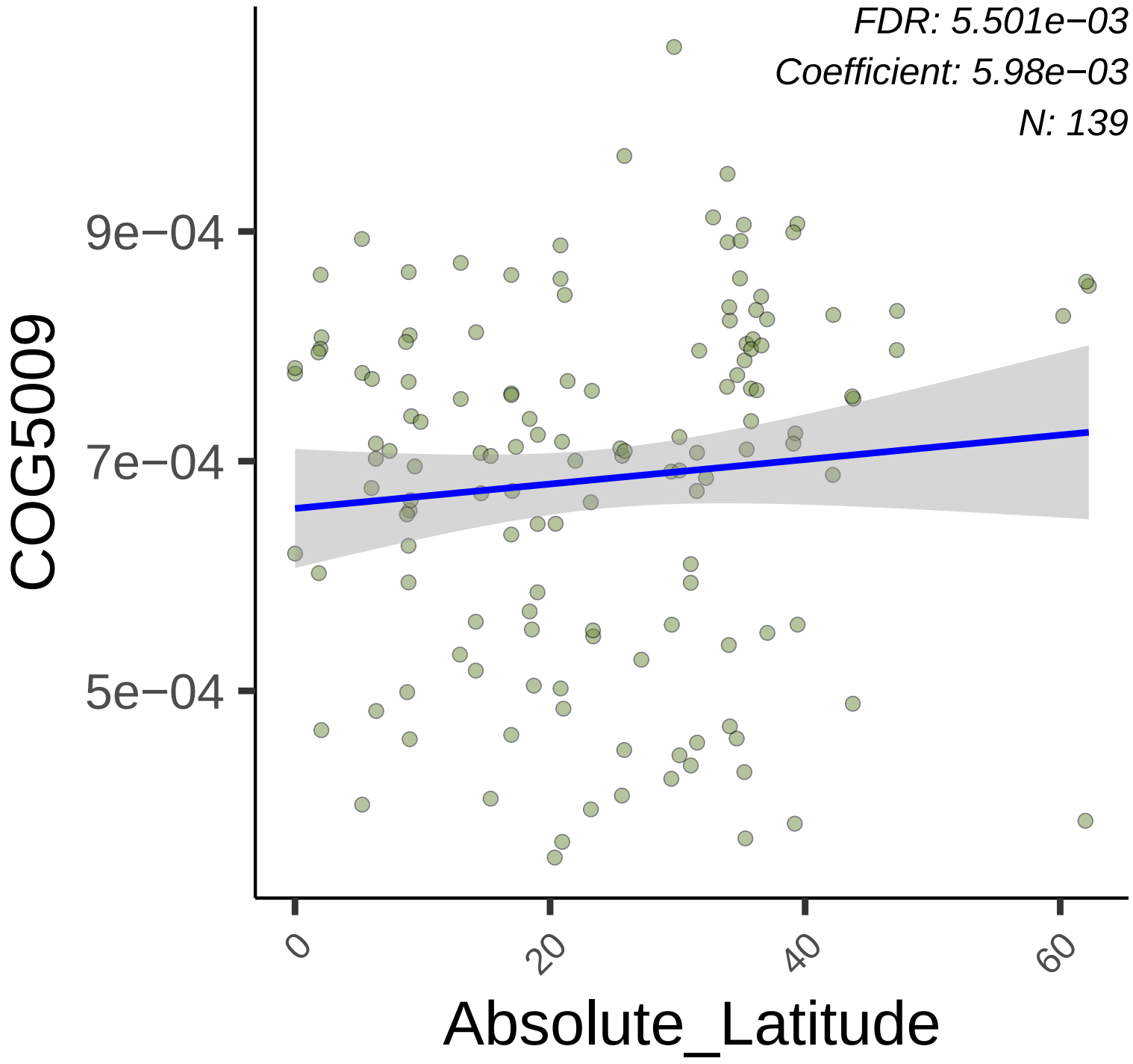

FDR: 5.112e−03
Coefficient: 7.19e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
2e−04
COG4547
0
20
40
60
Absolute_Latitude

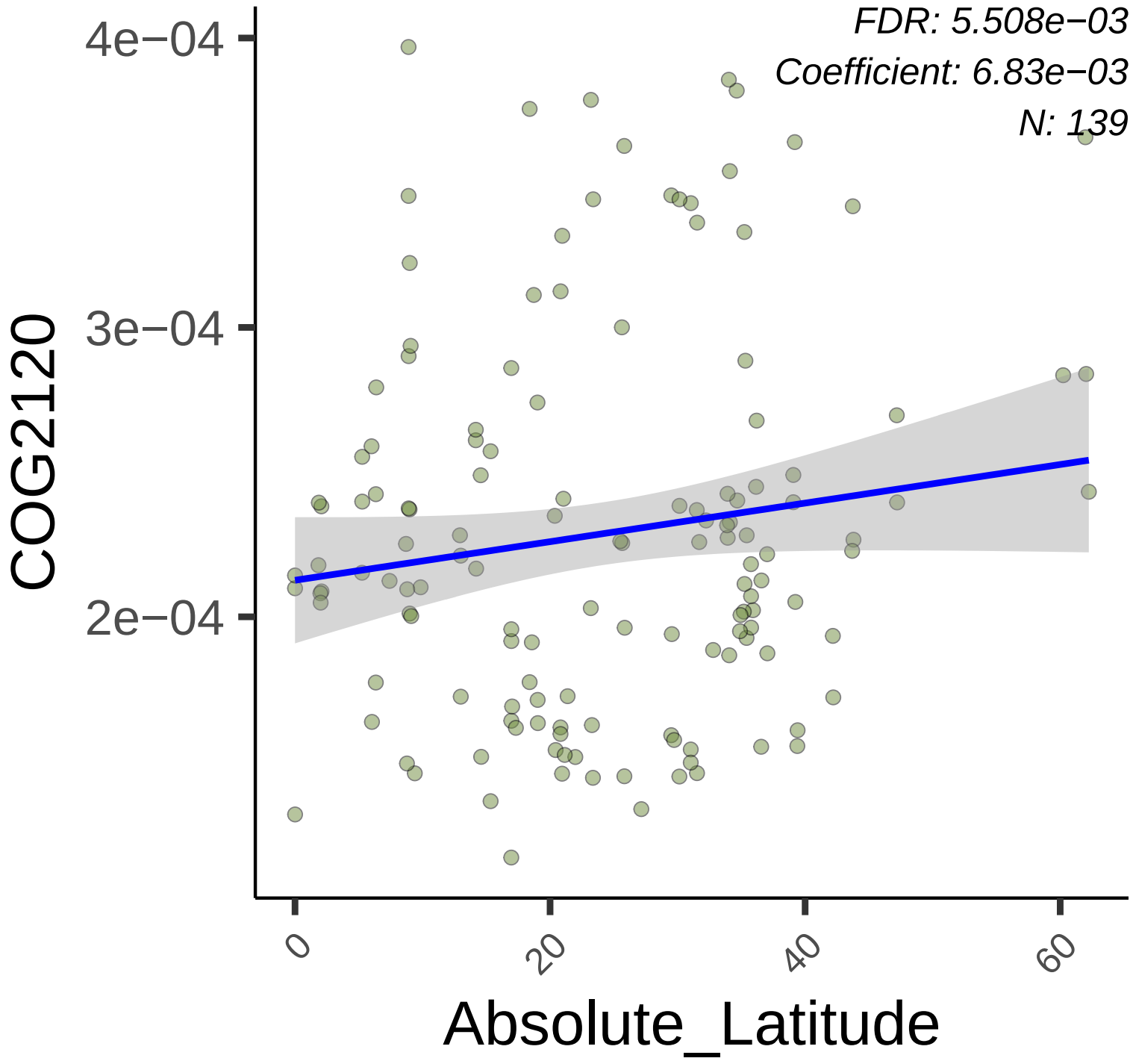

FDR: 5.116e−03
Coefficient: 4.86e−03
N: 139
1e−03
8e−04
6e−04
COG2133
0
20
40
60
Absolute_Latitude

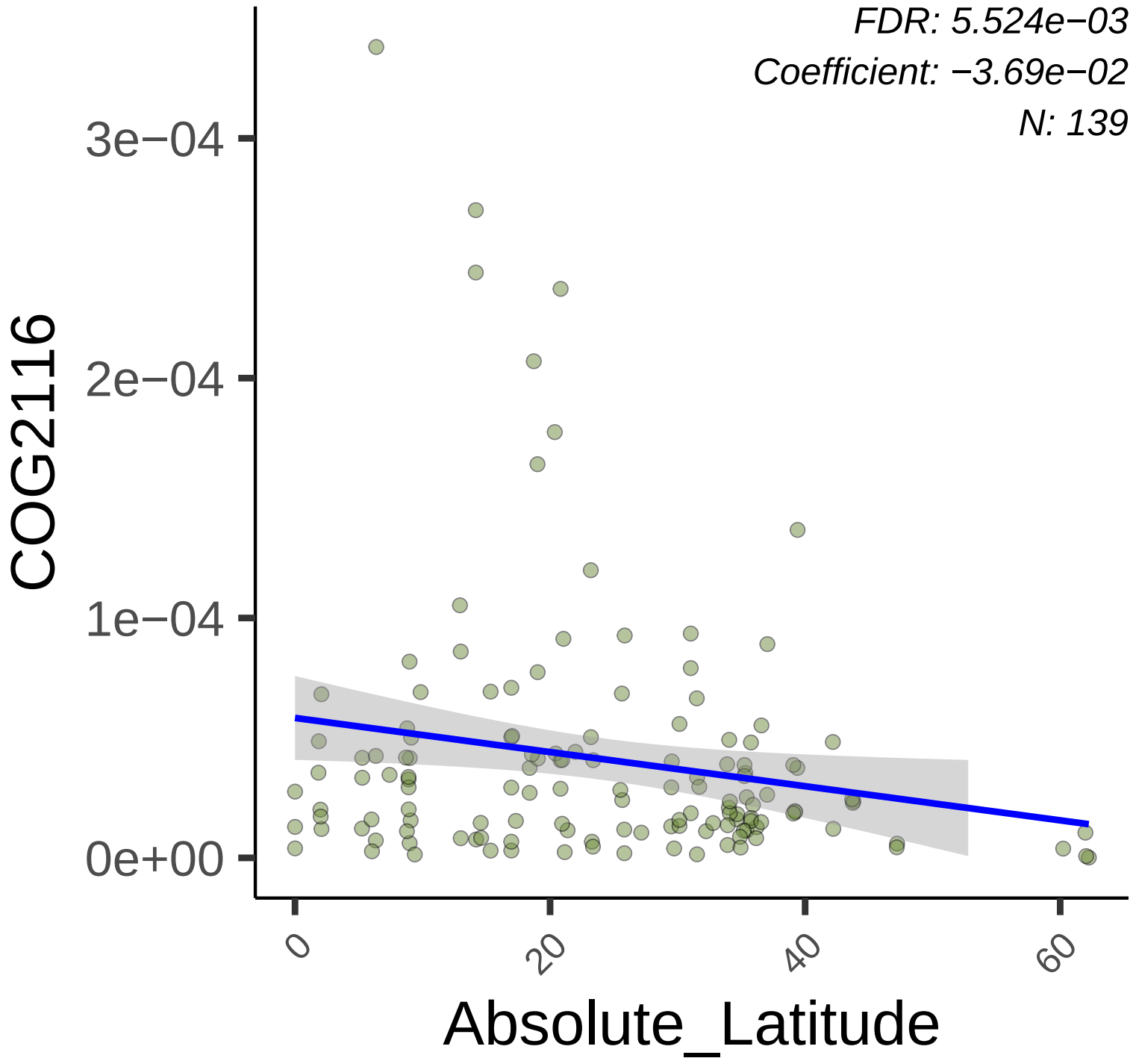

FDR: 5.255e−03
Coefficient: 3.60e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
COG0126
0
20
40
60
Absolute_Latitude

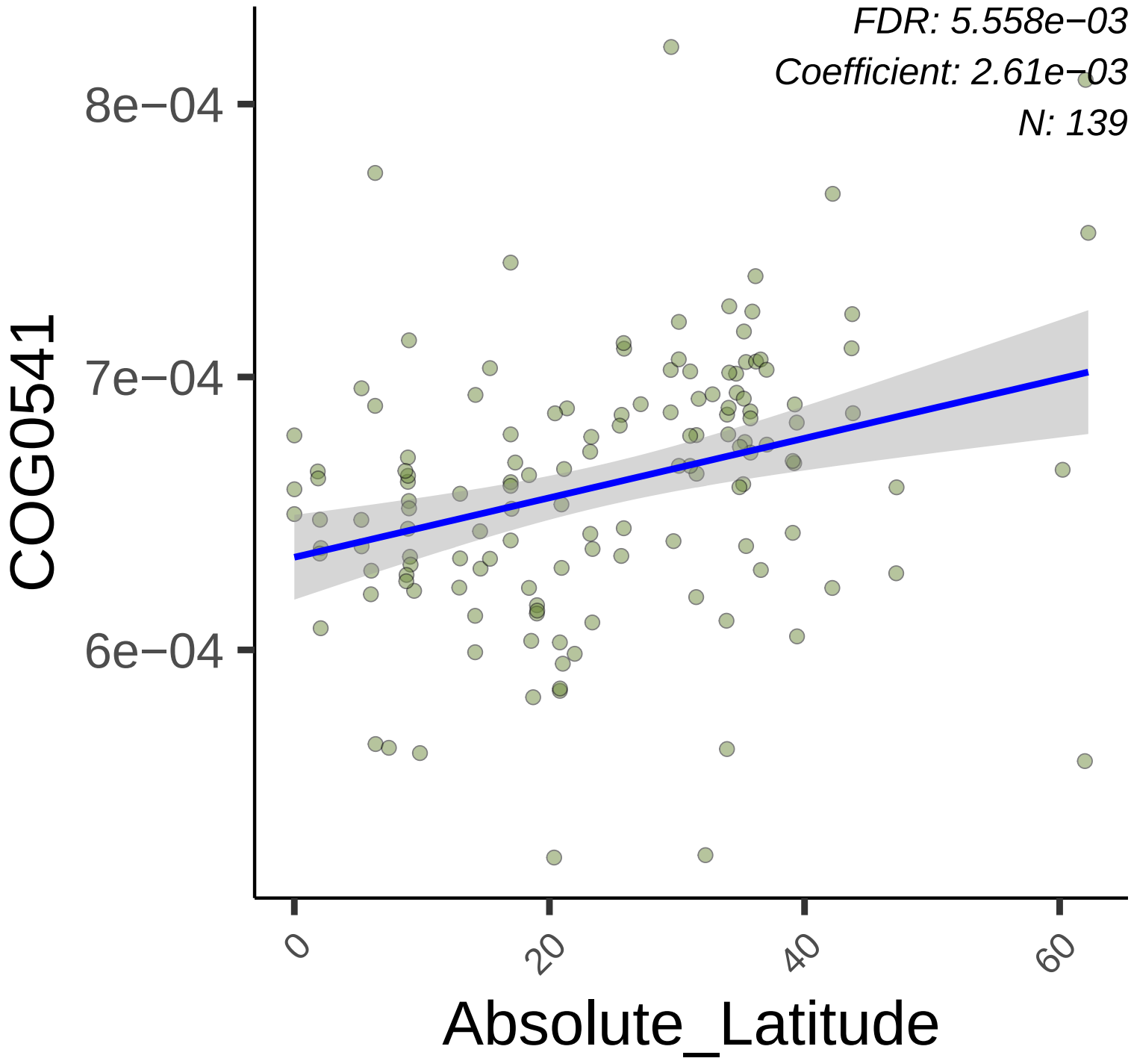

FDR: 5.333e−03
Coefficient: −1.27e−01
N: 139
COG1924
6e−04
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

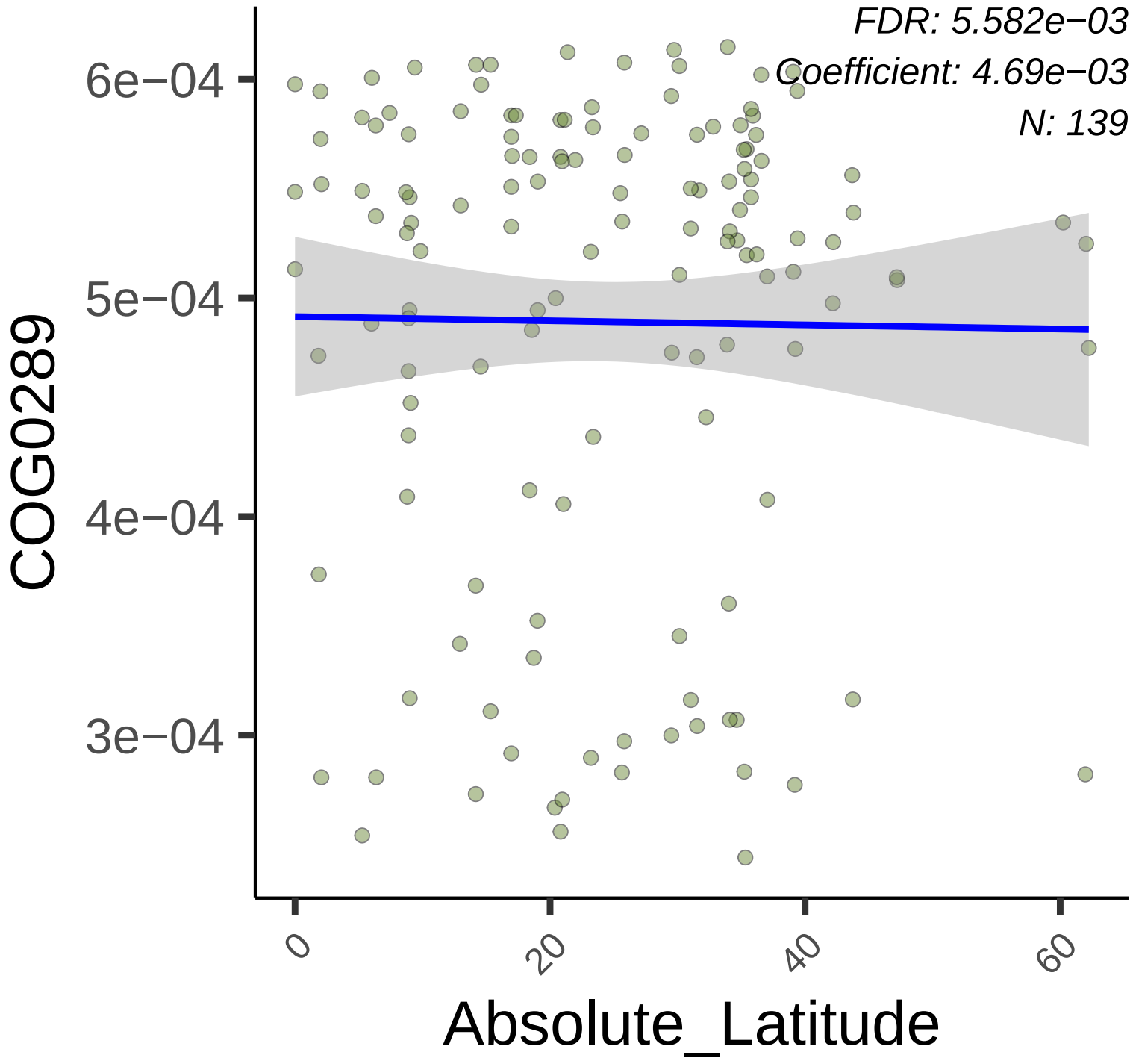

FDR: 5.450e−03
Coefficient: 3.07e−03
N: 139
COG0576
6e−04
5e−04
4e−04
0
20
40
60
Absolute_Latitude

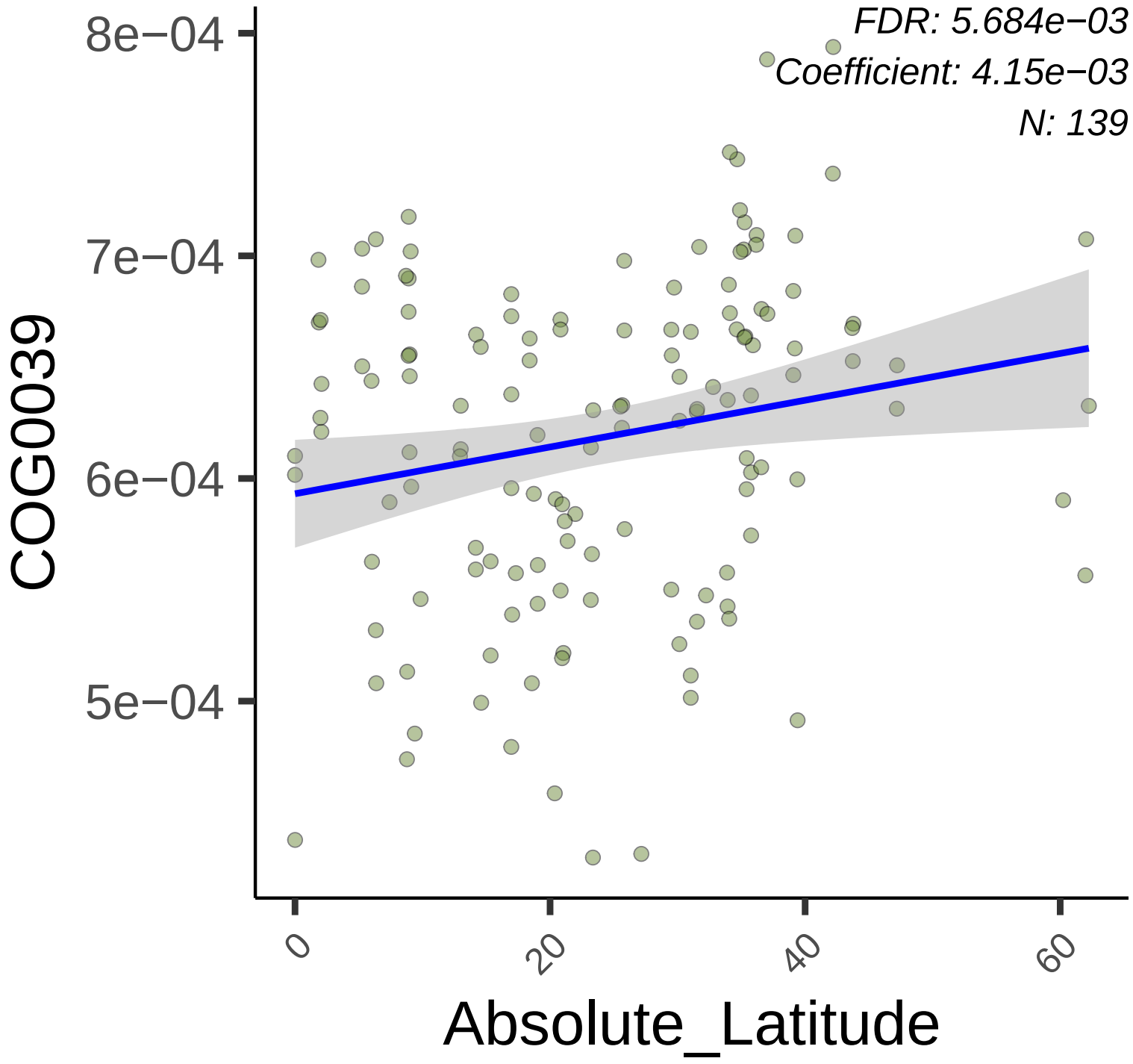

FDR: 5.501e−03
Coefficient: 5.98e−03
N: 139
COG5009
9e−04
7e−04
5e−04
0
20
40
60
Absolute_Latitude

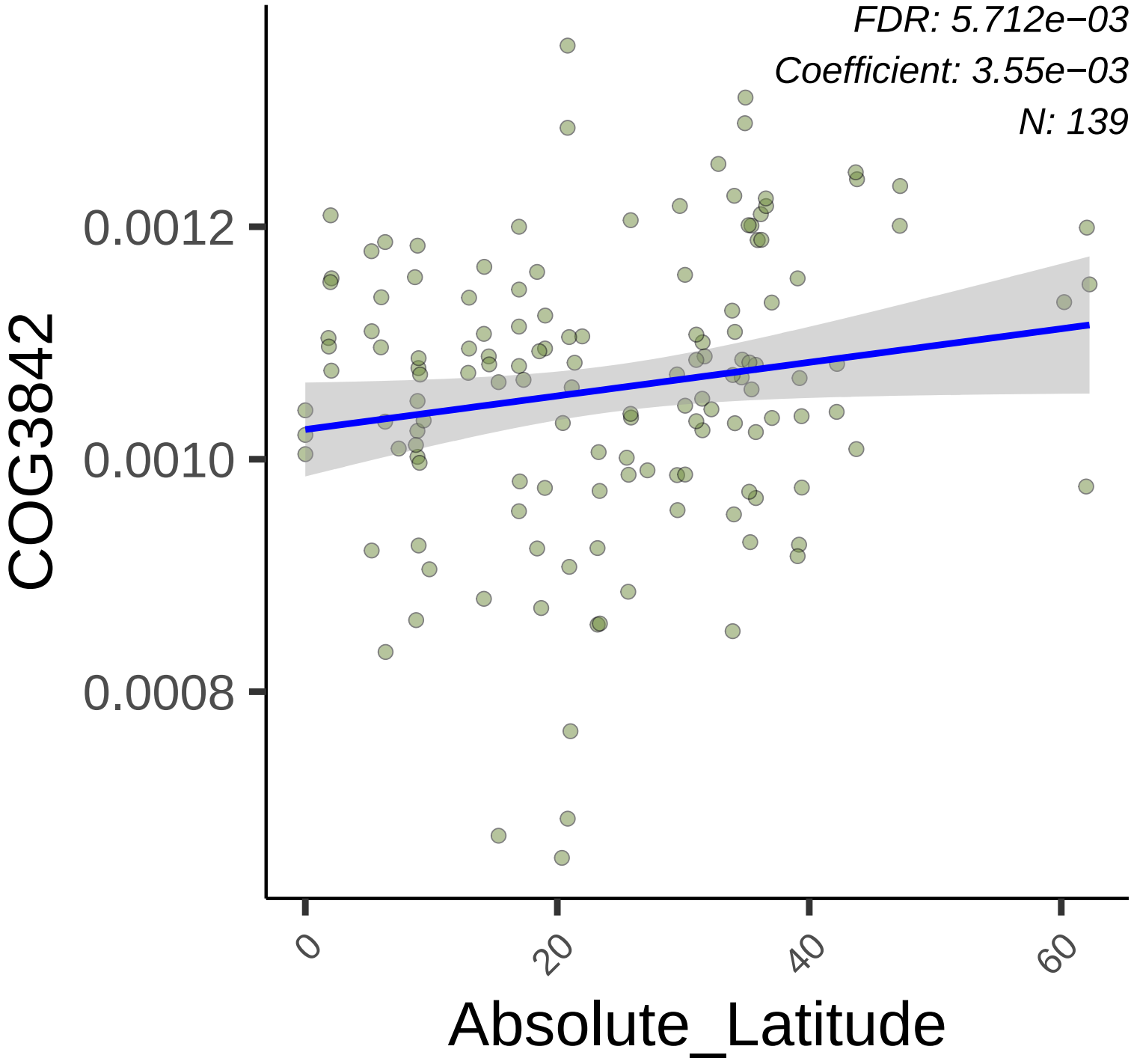

FDR: 5.508e−03
Coefficient: 6.83e−03
N: 139
4e−04
3e−04
2e−04
COG2120
0
20
40
60
Absolute_Latitude

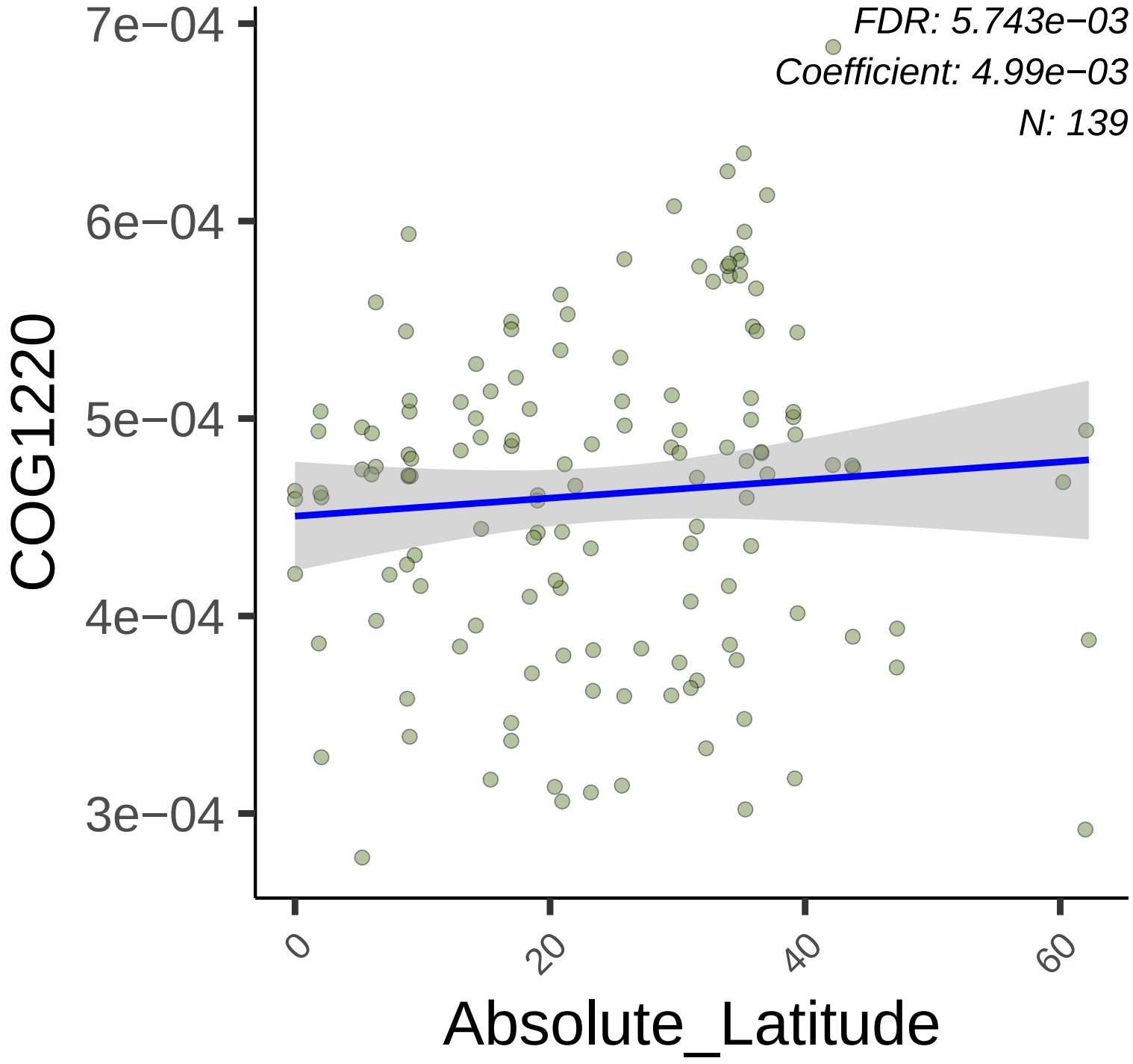

FDR: 5.524e−03
Coefficient: −3.69e−02
N: 139
COG2116
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

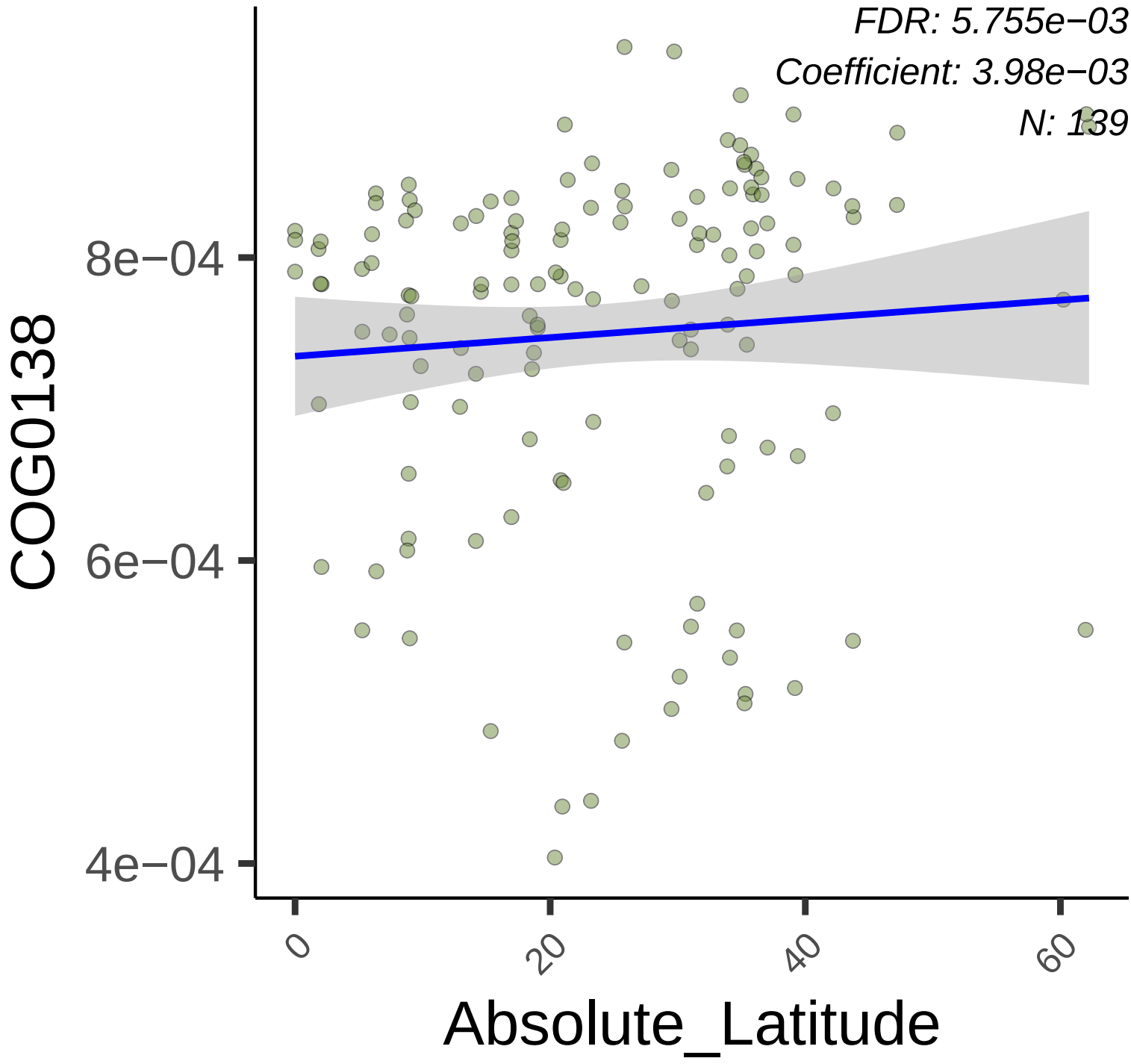

FDR: 5.558e−03
Coefficient: 2.61e−03
N: 139
8e−04
7e−04
6e−04
COG0541
0
20
40
60
Absolute_Latitude

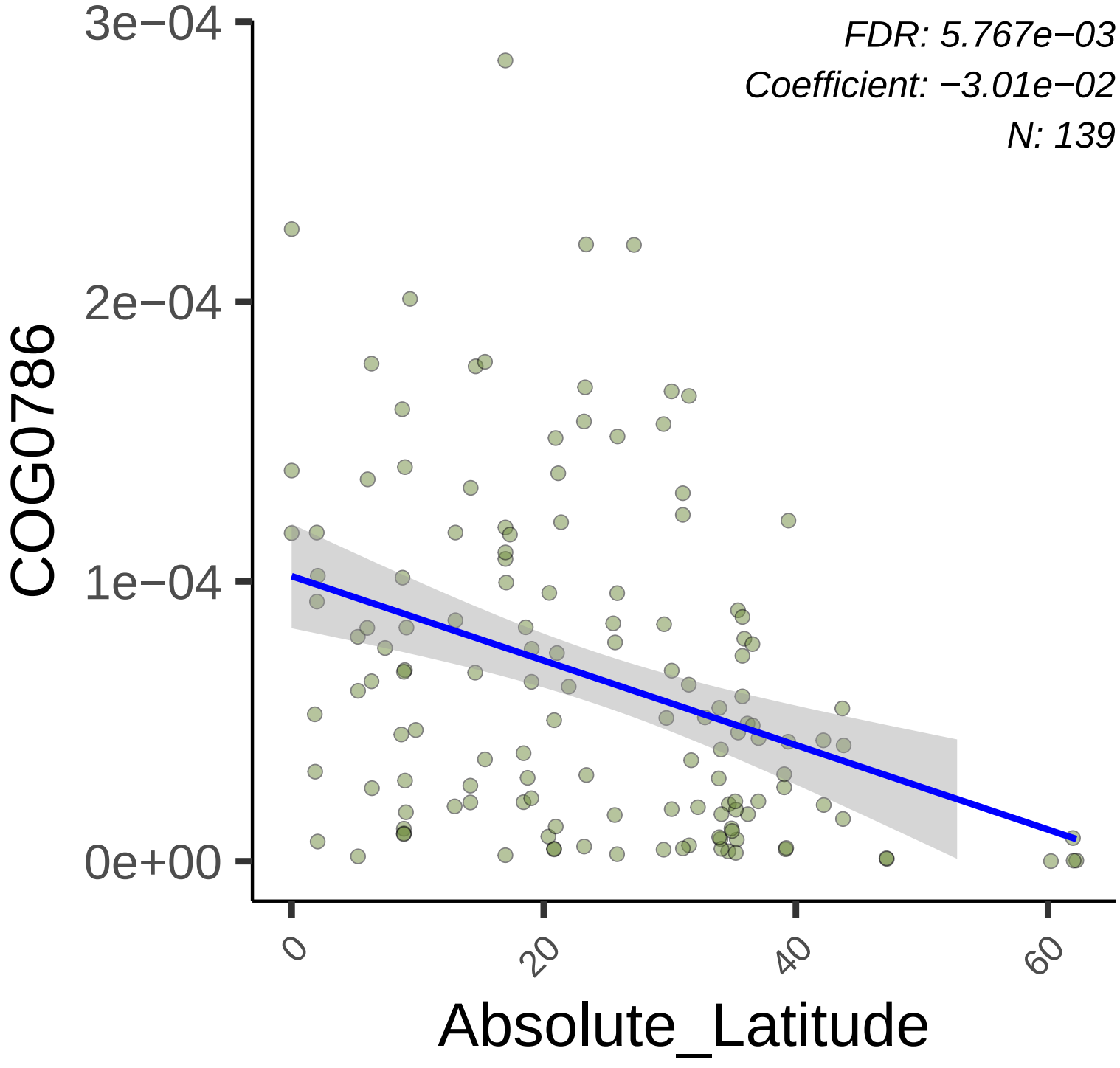

FDR: 5.582e−03
Coefficient: 4.69e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0289
0
20
40
60
Absolute_Latitude

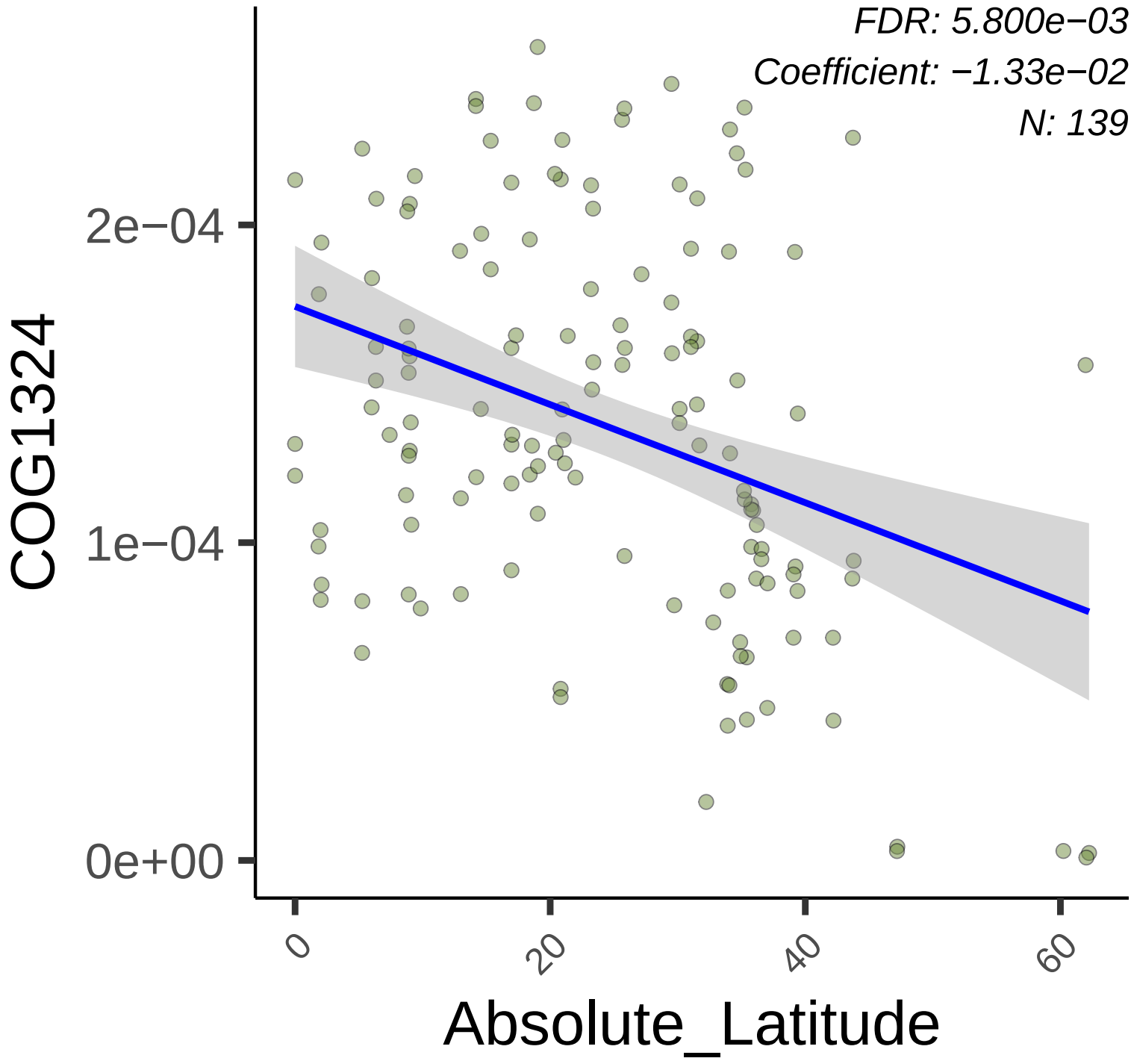

FDR: 5.684e−03
Coefficient: 4.15e−03
N: 139
8e−04
7e−04
6e−04
5e−04
COG0039
0
20
40
60
Absolute_Latitude

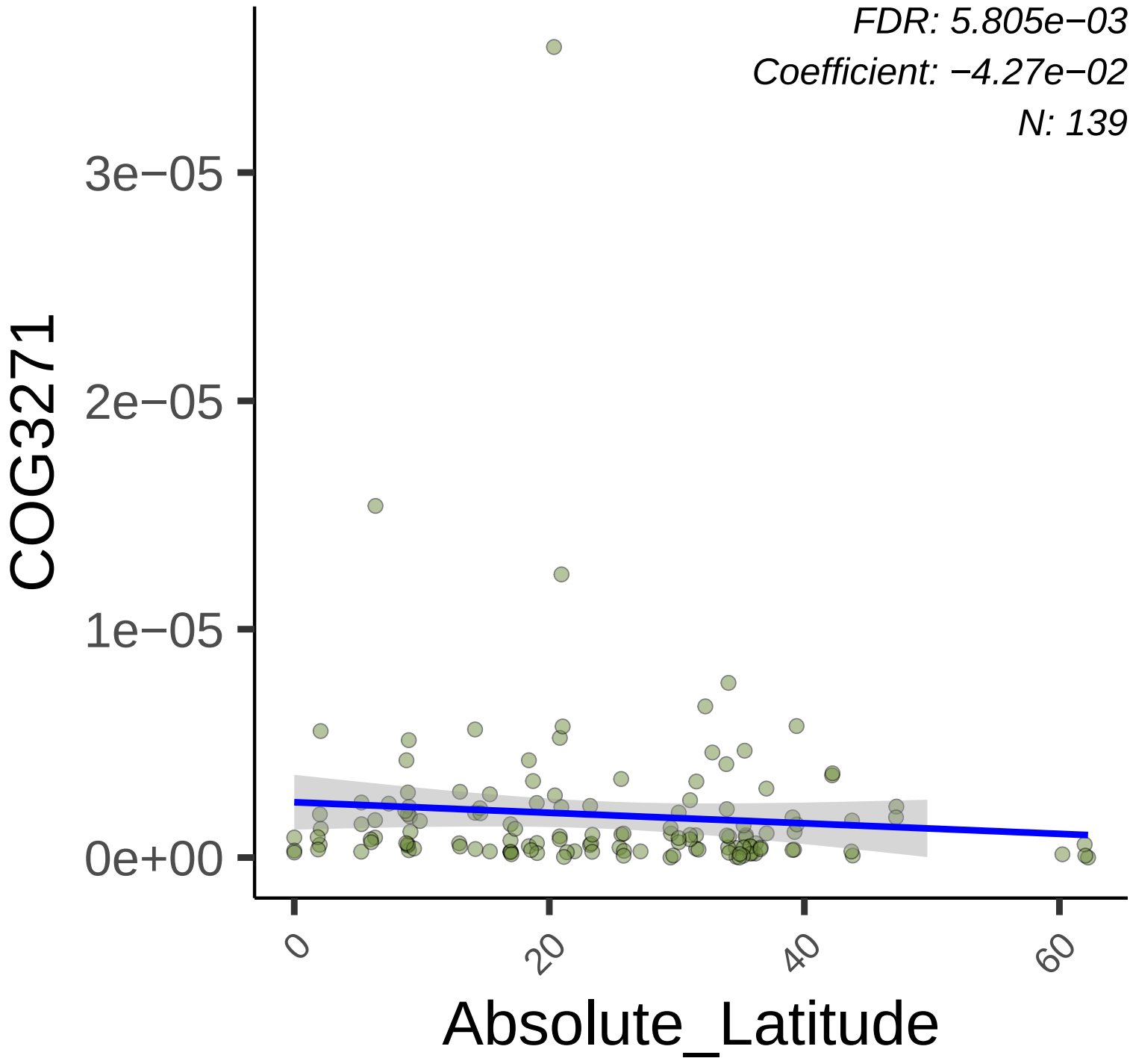

FDR: 5.712e−03
Coefficient: 3.55e−03
N: 139
0.0012
0.0010
0.0008
COG3842
0
20
40
60
Absolute_Latitude

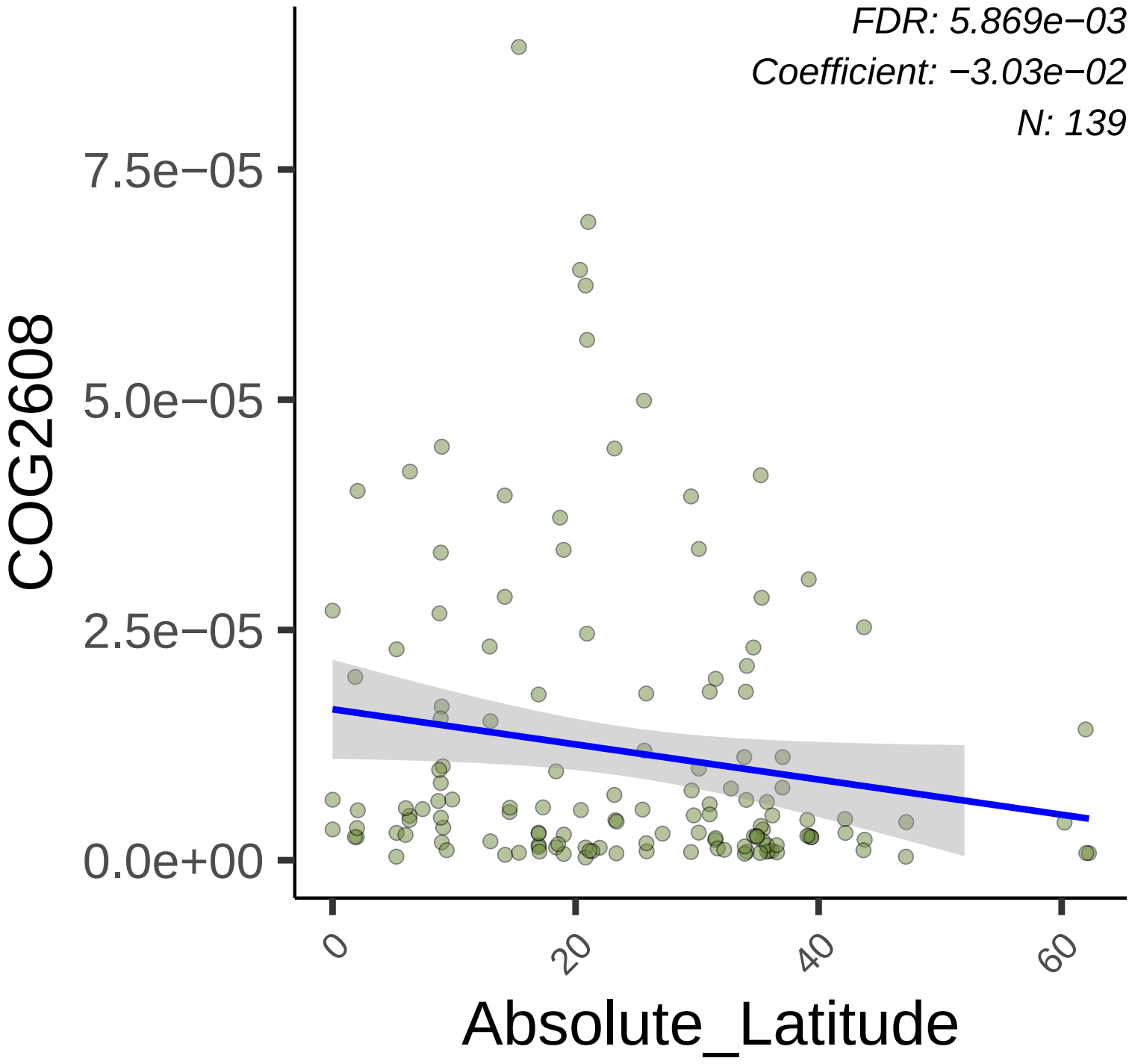

FDR: 5.743e−03
Coefficient: 4.99e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG1220
0
20
40
60
Absolute_Latitude

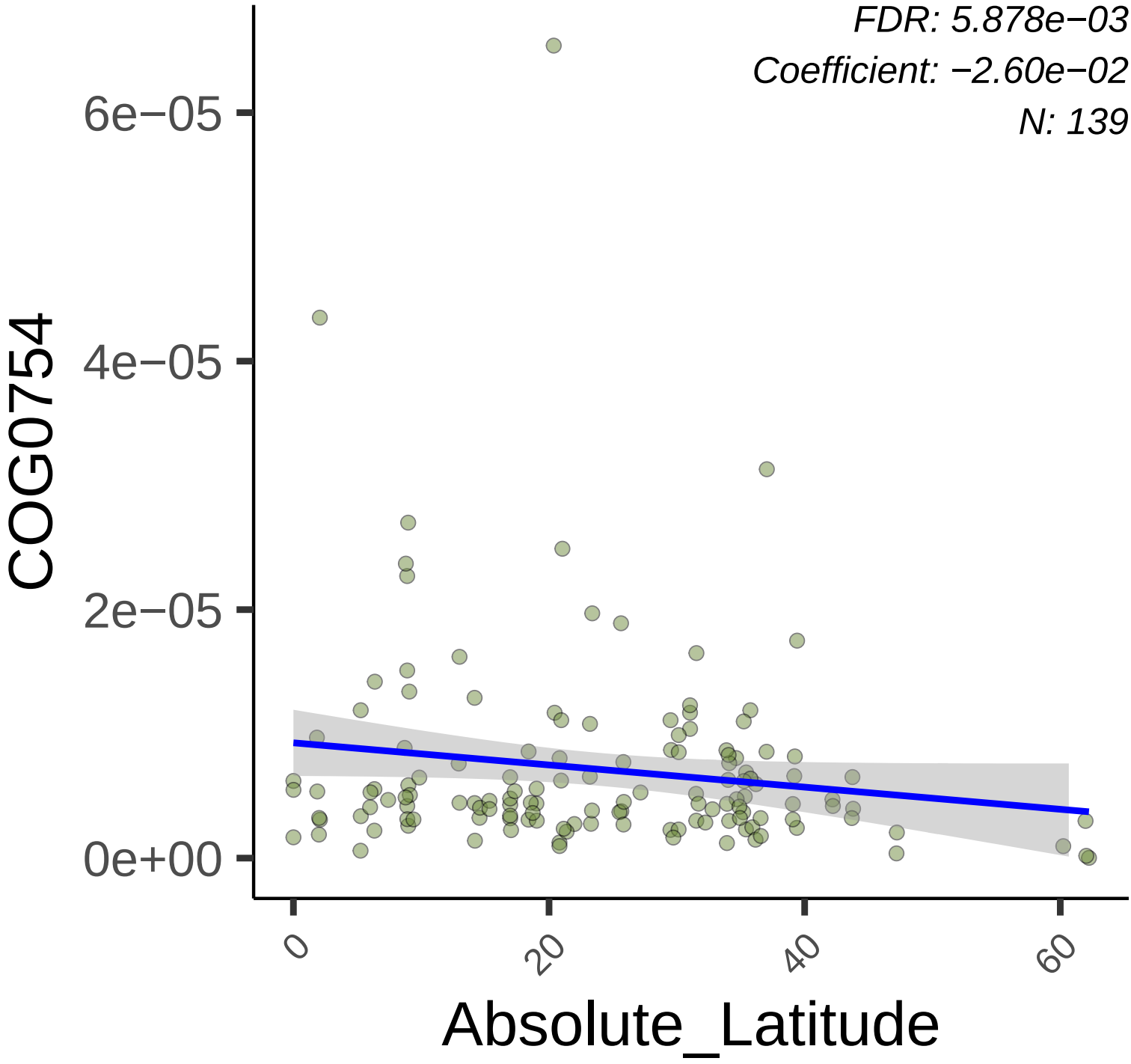

FDR: 5.755e−03
Coefficient: 3.98e−03
N: 139
COG0138
8e−04
6e−04
4e−04
0
20
40
60
Absolute_Latitude

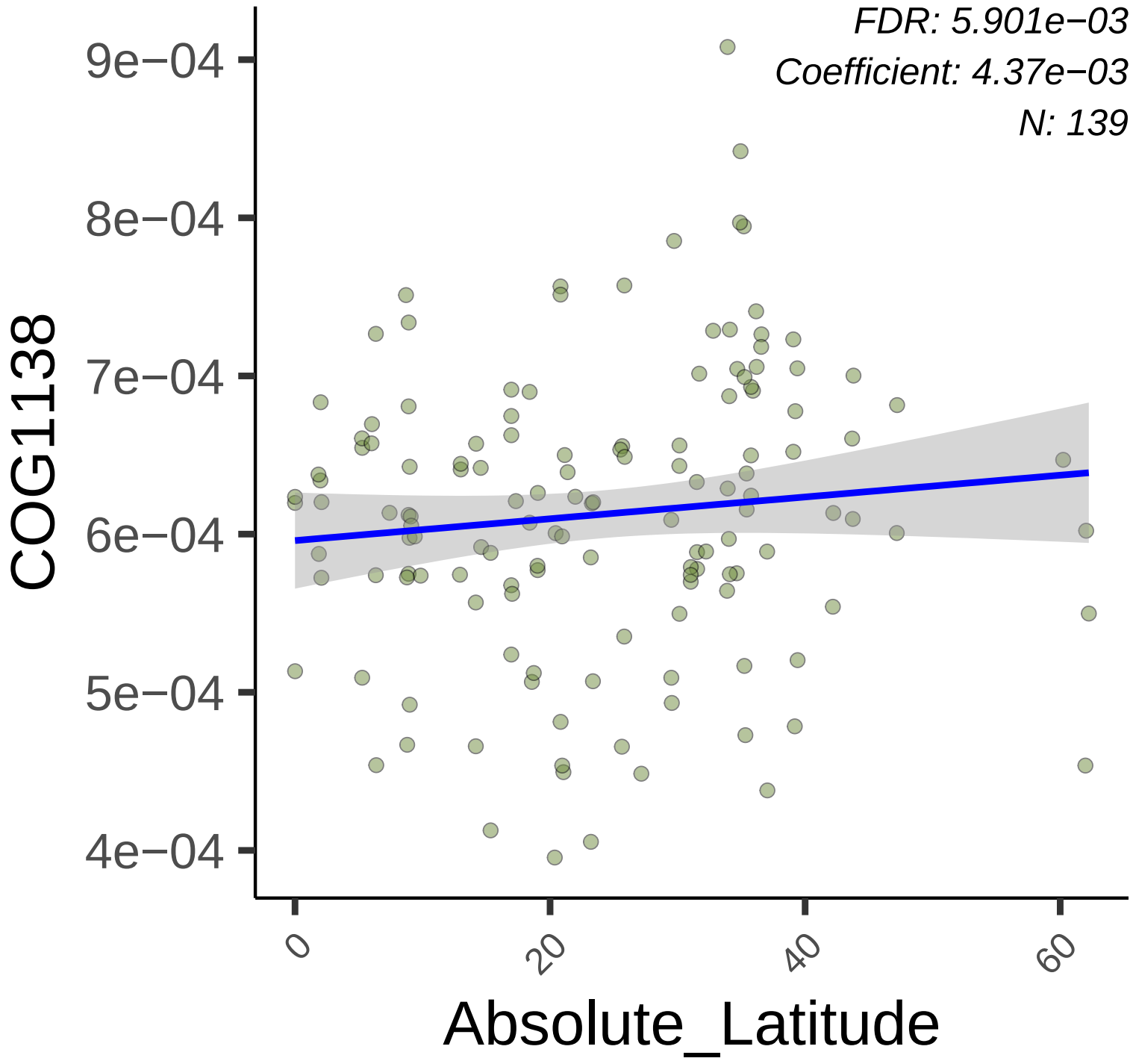

FDR: 5.767e−03
Coefficient: −3.01e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG0786
0
20
40
60
Absolute_Latitude

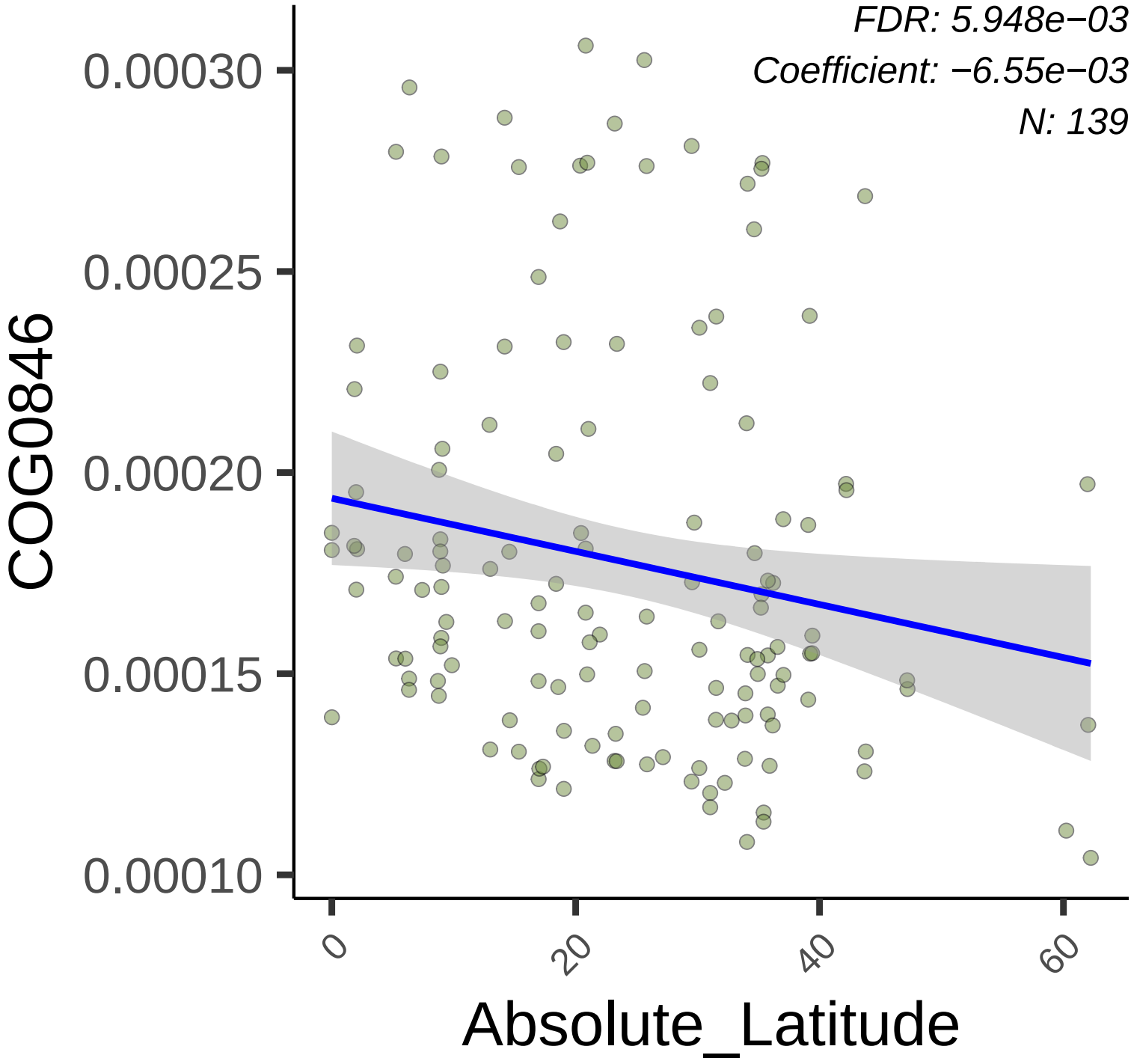

FDR: 5.800e−03
Coefficient: −1.33e−02
N: 139
COG1324
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

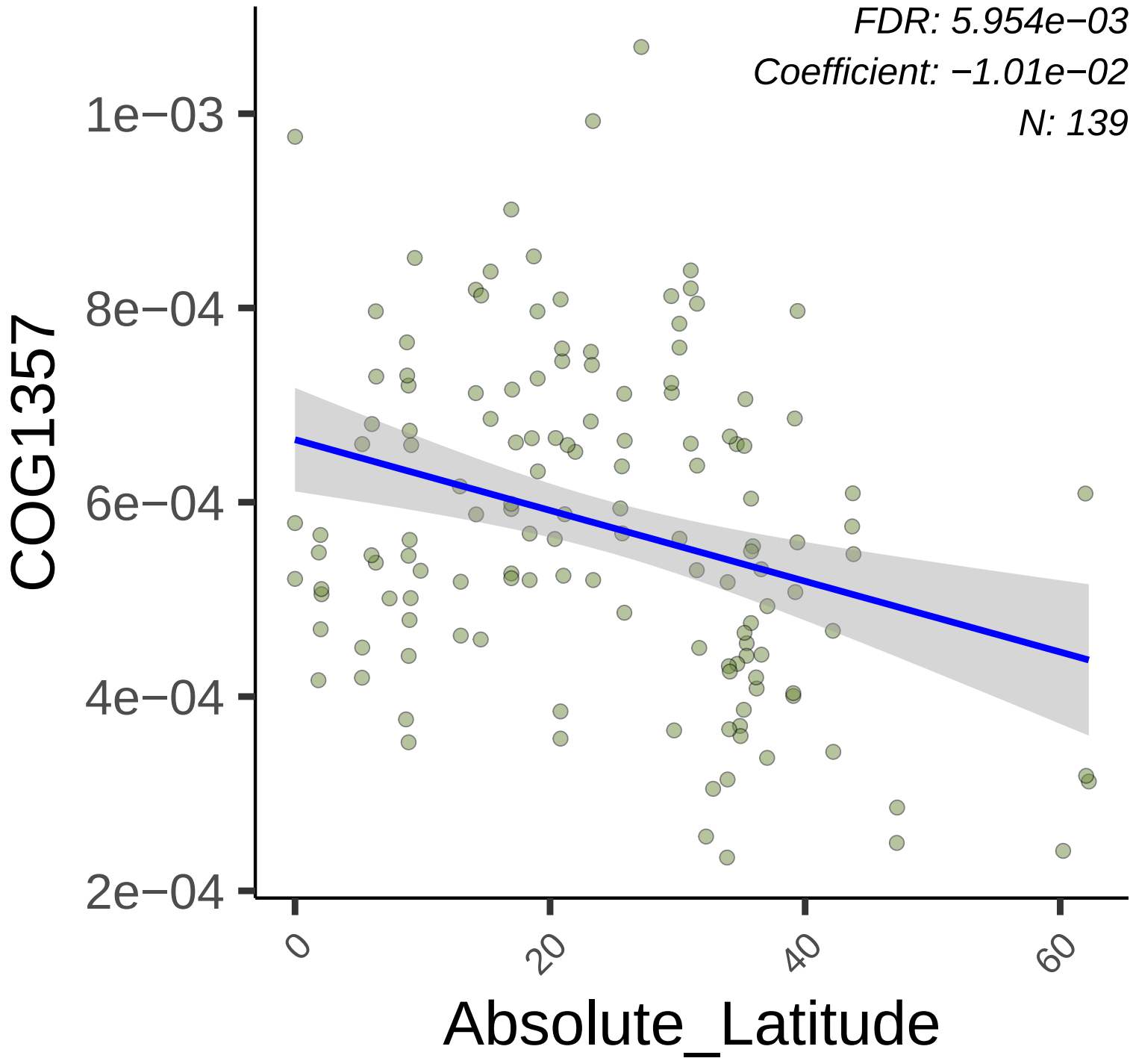

FDR: 5.805e−03
Coefficient: −4.27e−02
N: 139
COG3271
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

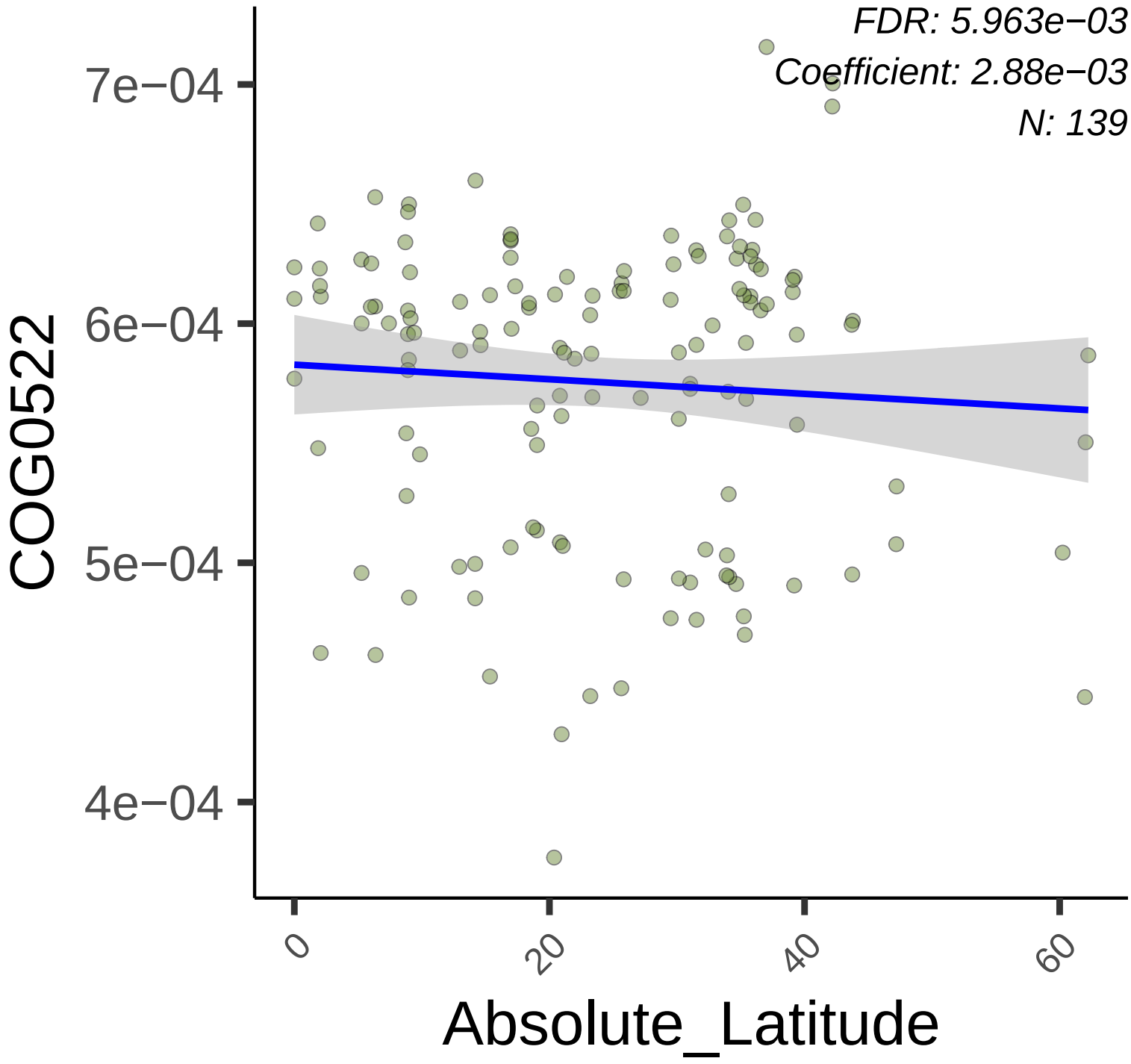

FDR: 5.869e−03
Coefficient: −3.03e−02
N: 139
COG2608
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

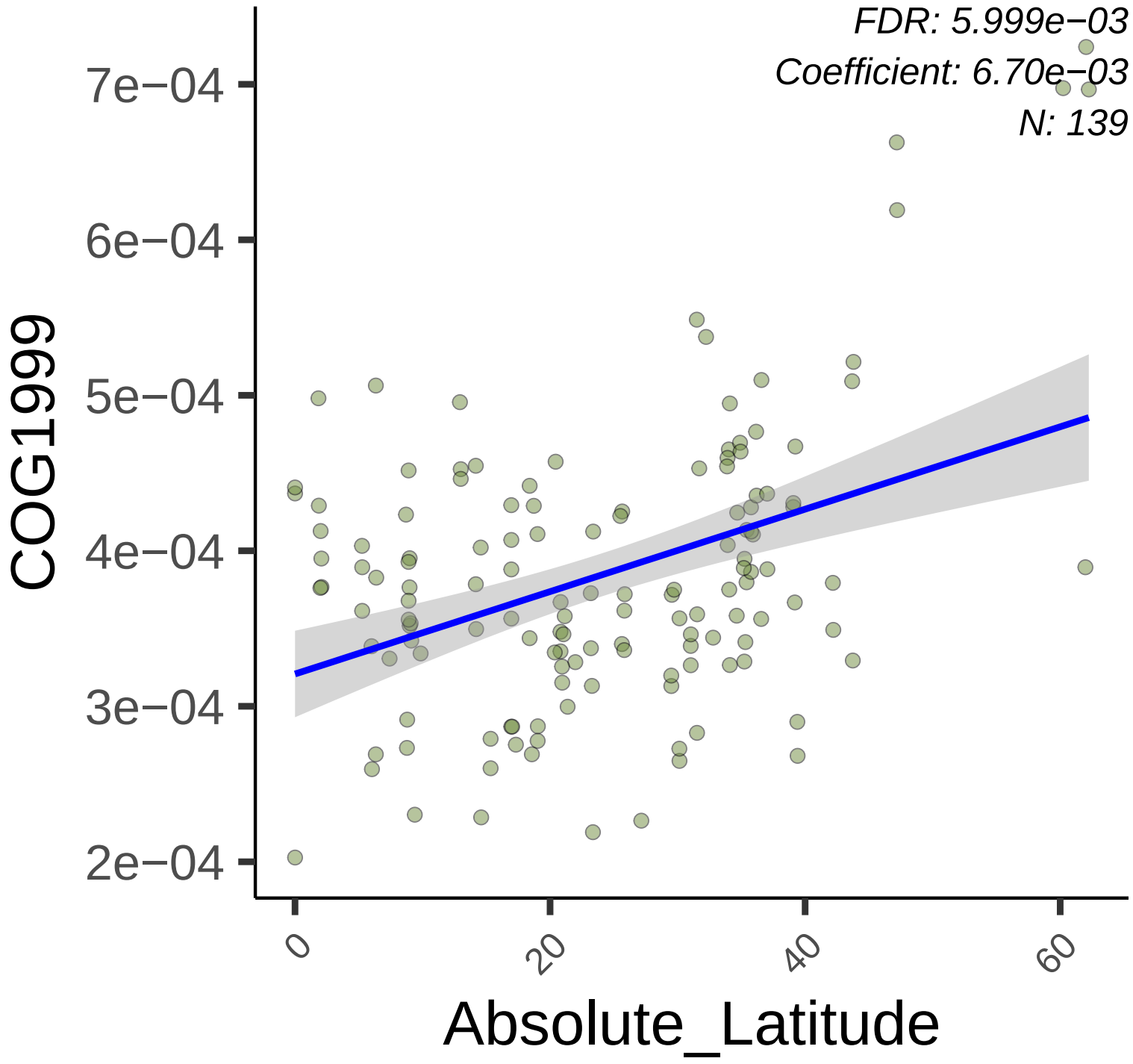

FDR: 5.878e−03
Coefficient: −2.60e−02
N: 139
COG0754
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

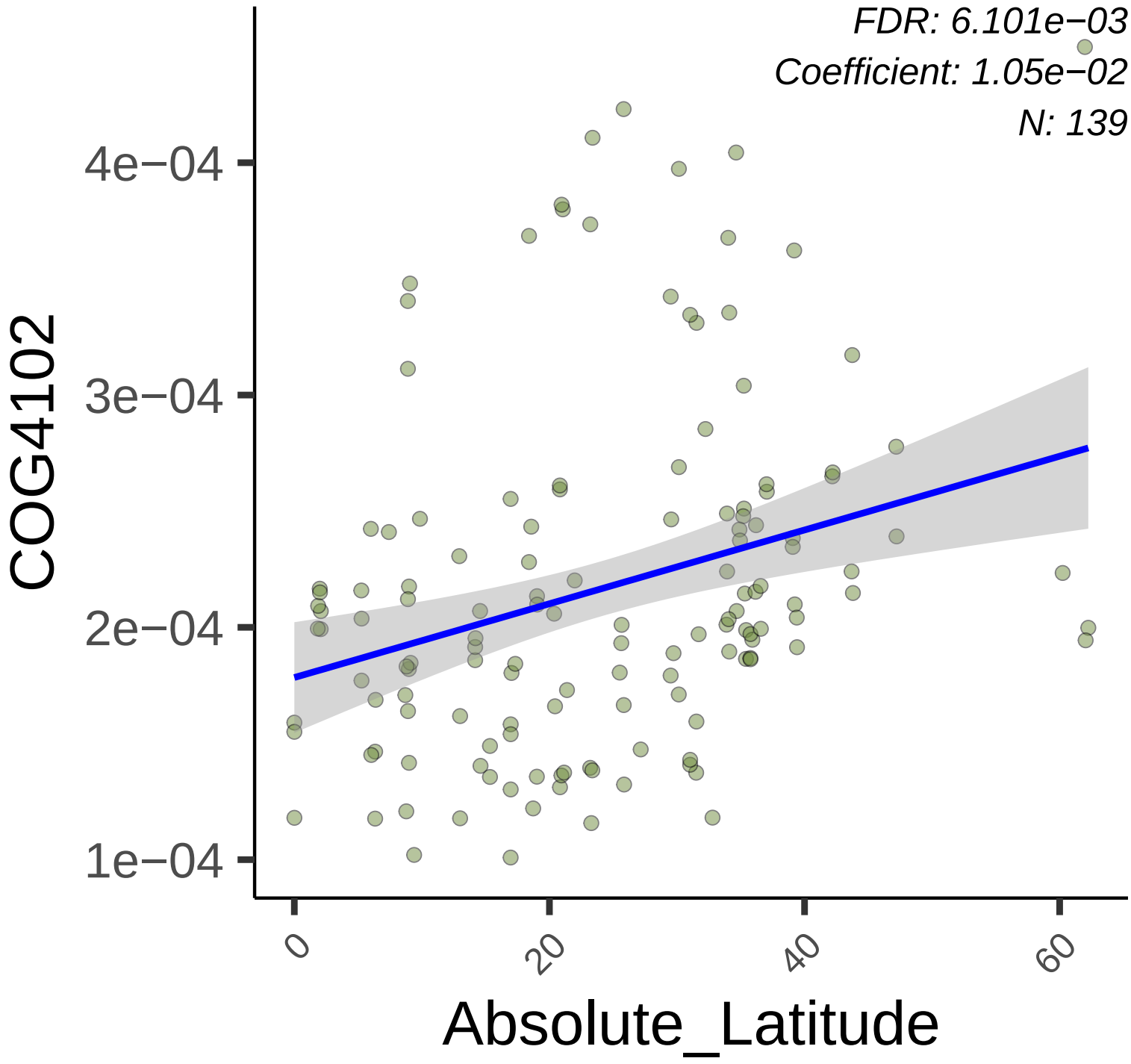

FDR: 5.901e−03
Coefficient: 4.37e−03
N: 139
9e−04
8e−04
7e−04
6e−04
5e−04
4e−04
COG1138
0
20
40
60
Absolute_Latitude

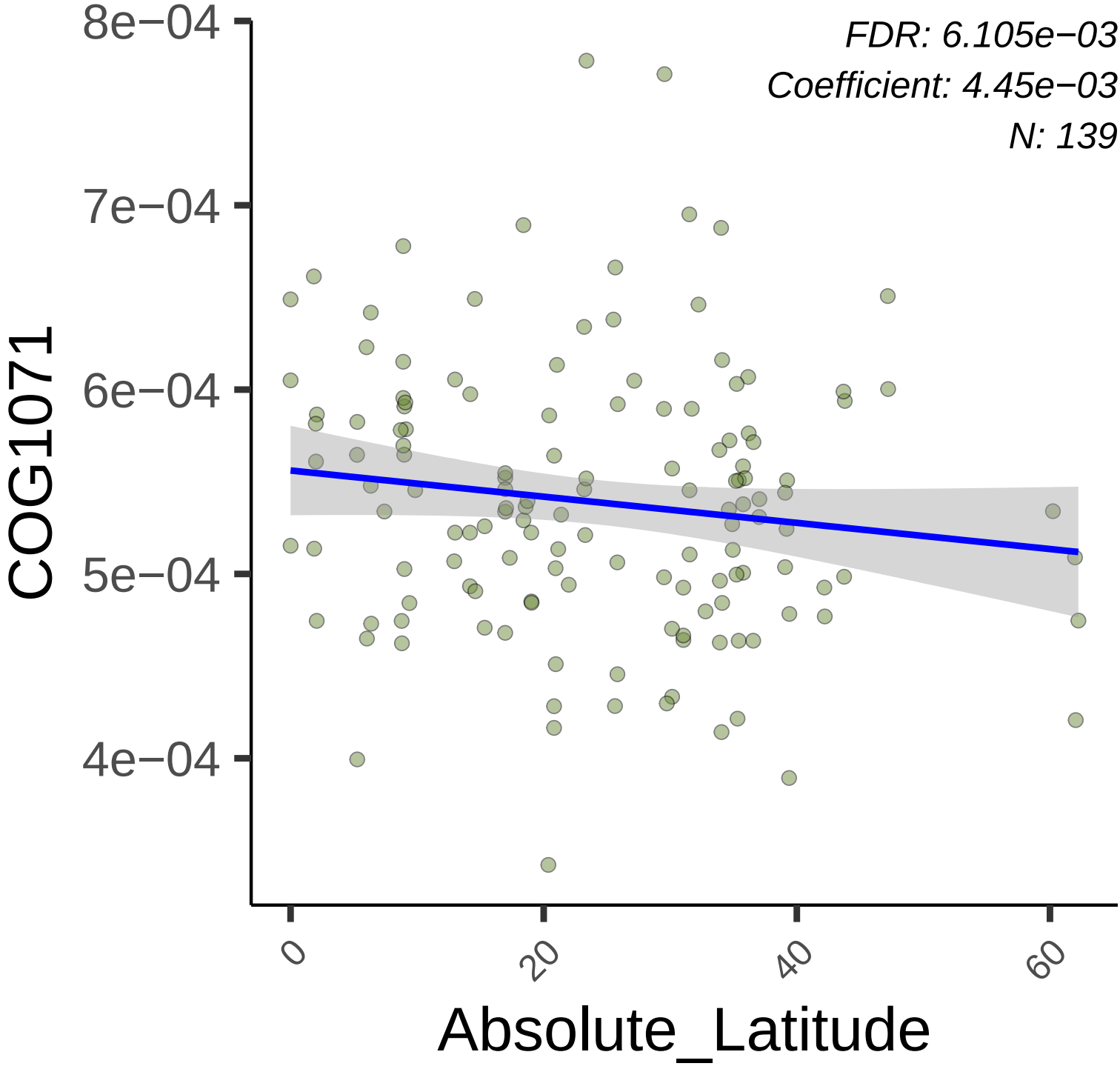

FDR: 5.948e−03
Coefficient: −6.55e−03
N: 139
0.00030
0.00025
0.00020
0.00015
0.00010
COG0846
0
20
40
60
Absolute_Latitude

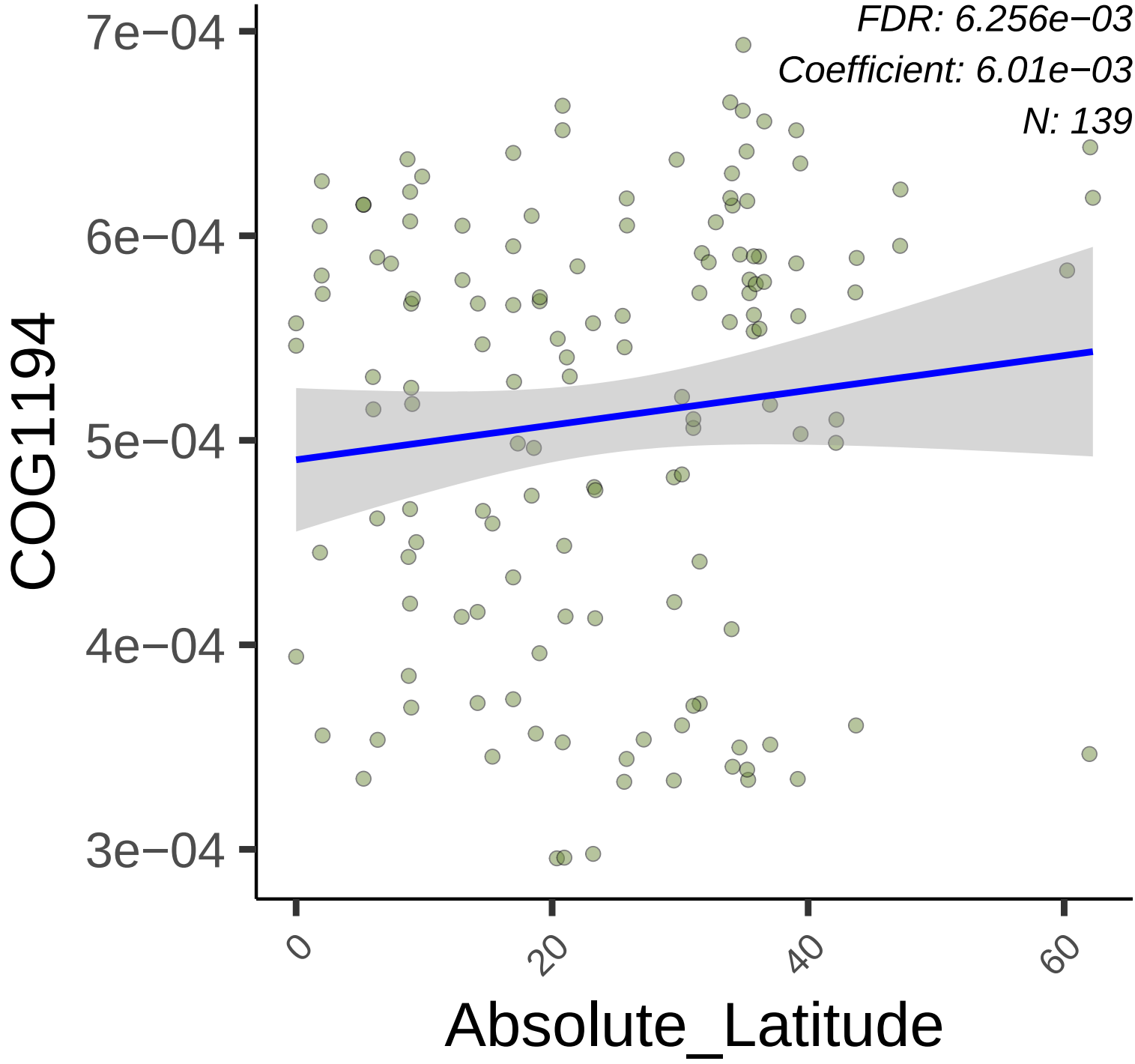

FDR: 5.954e−03
Coefficient: −1.01e−02
N: 139
COG1357
1e−03
8e−04
6e−04
4e−04
2e−04
0
20
40
60
Absolute_Latitude

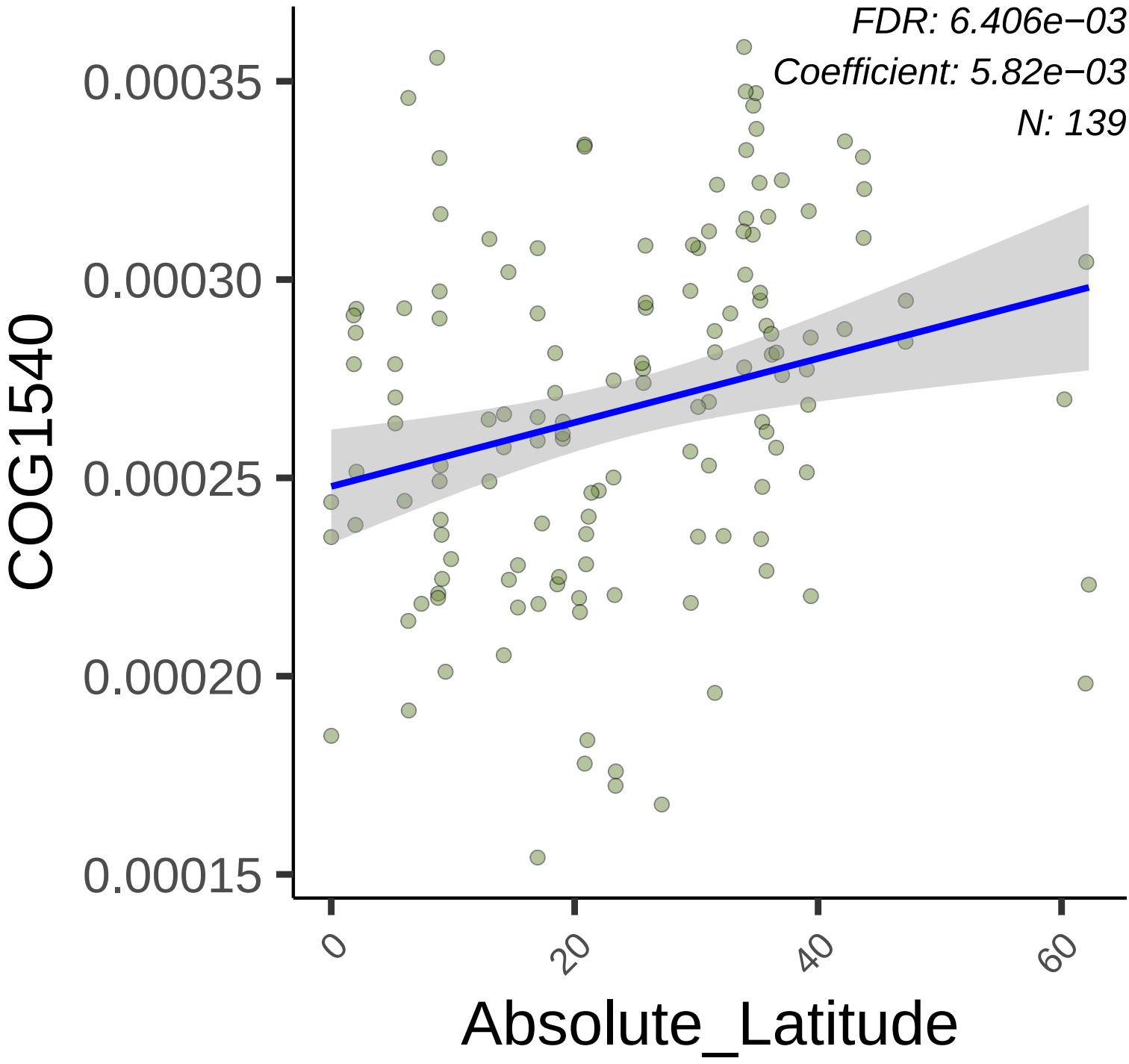

FDR: 5.963e−03
Coefficient: 2.88e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0522
0
20
40
60
Absolute_Latitude

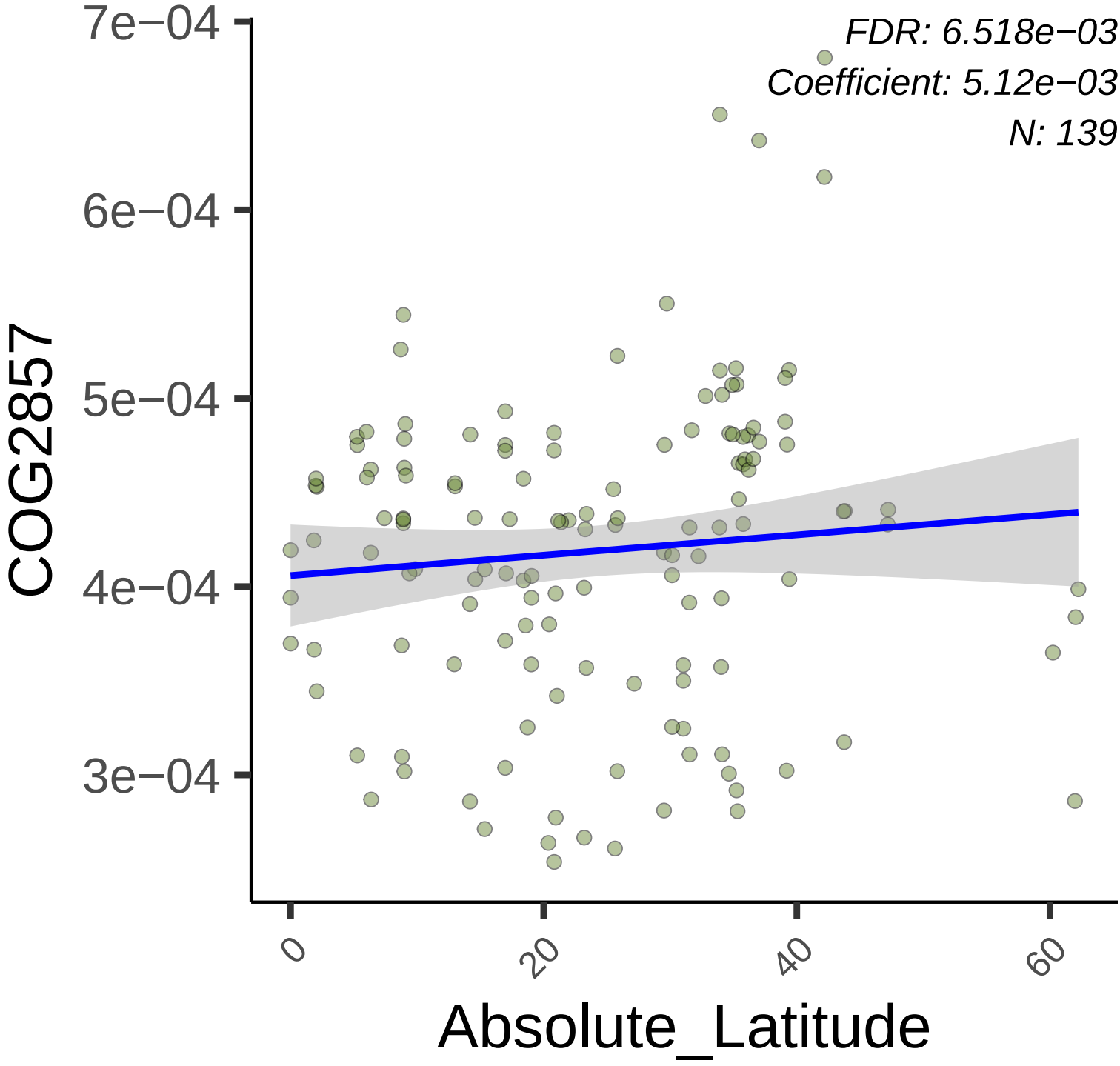

FDR: 5.999e−03
Coefficient: 6.70e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
2e−04
COG1999
0
20
40
60
Absolute_Latitude

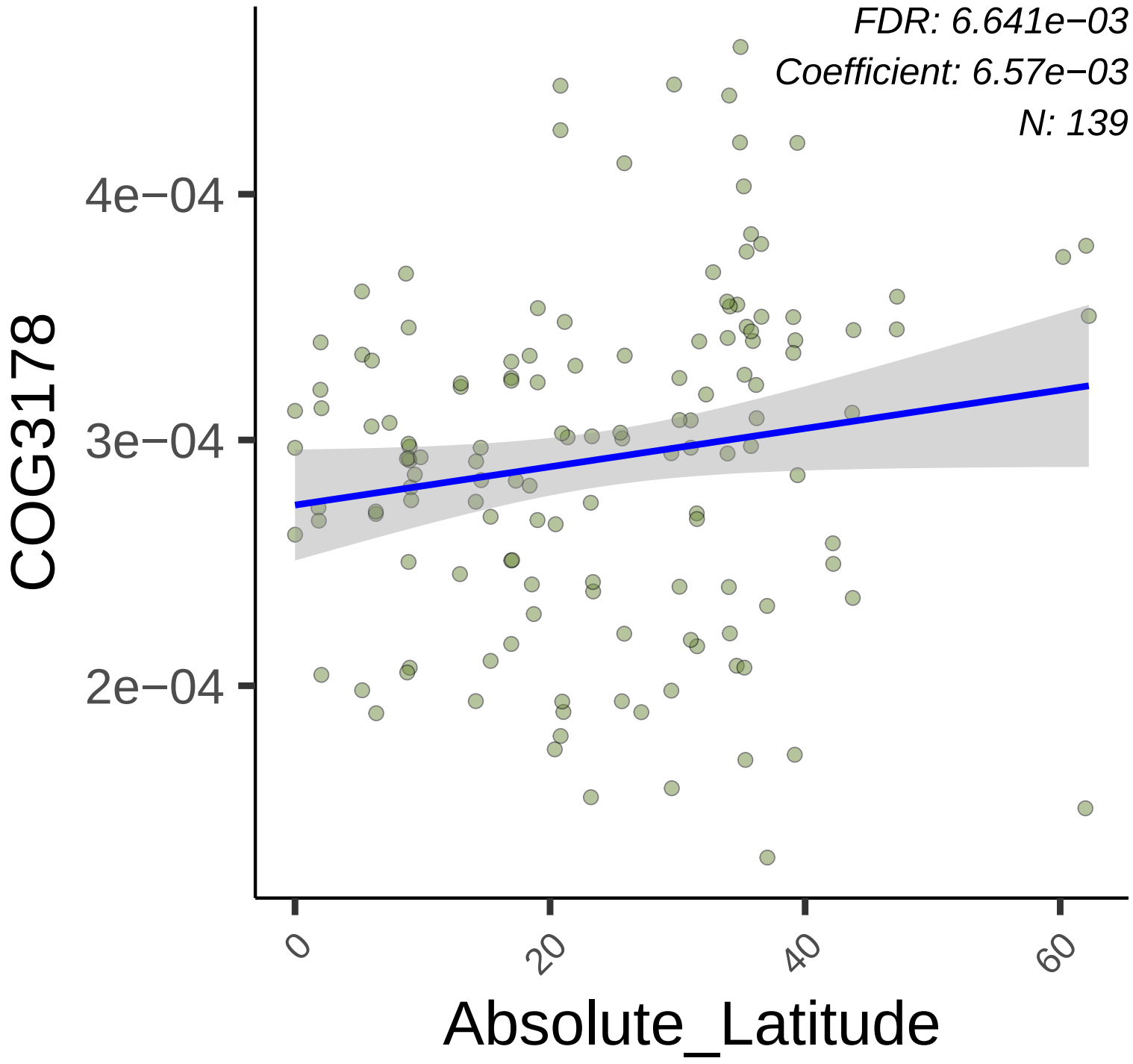

FDR: 6.101e−03
Coefficient: 1.05e−02
N: 139
COG4102
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

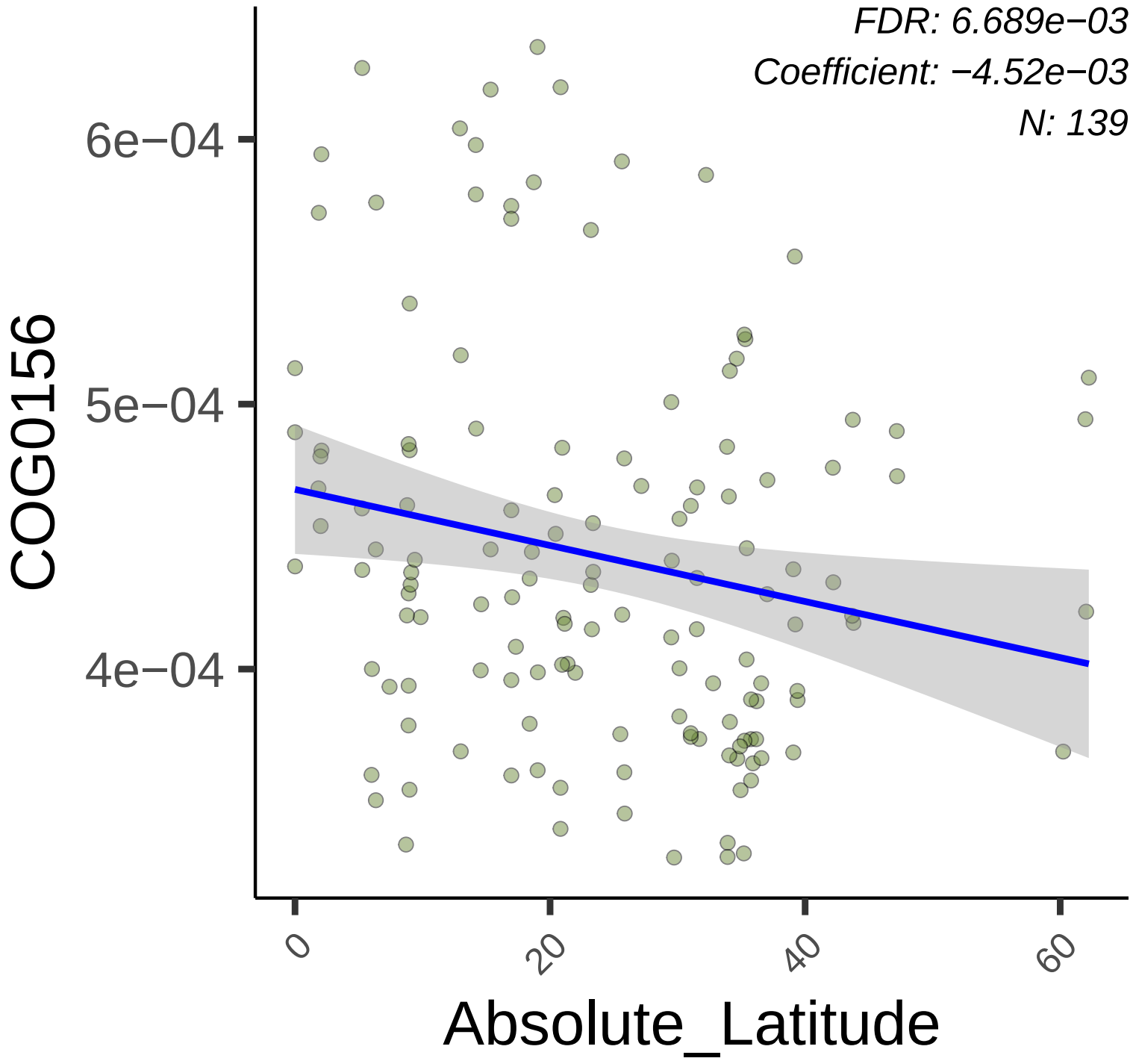

FDR: 6.105e−03
Coefficient: 4.45e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
COG1071
0
20
40
60
Absolute_Latitude

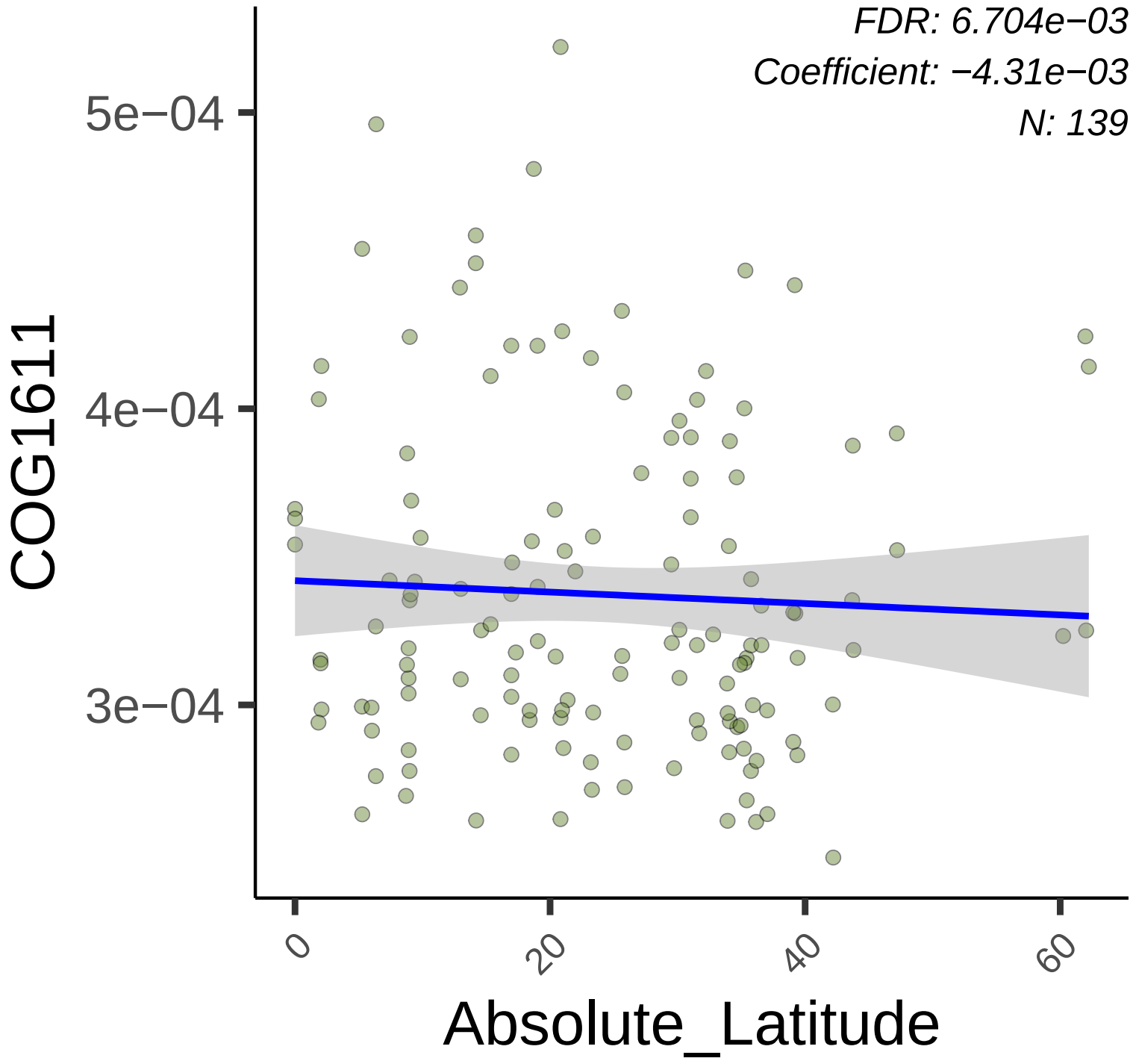

FDR: 6.256e−03
Coefficient: 6.01e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG1194
0
20
40
60
Absolute_Latitude

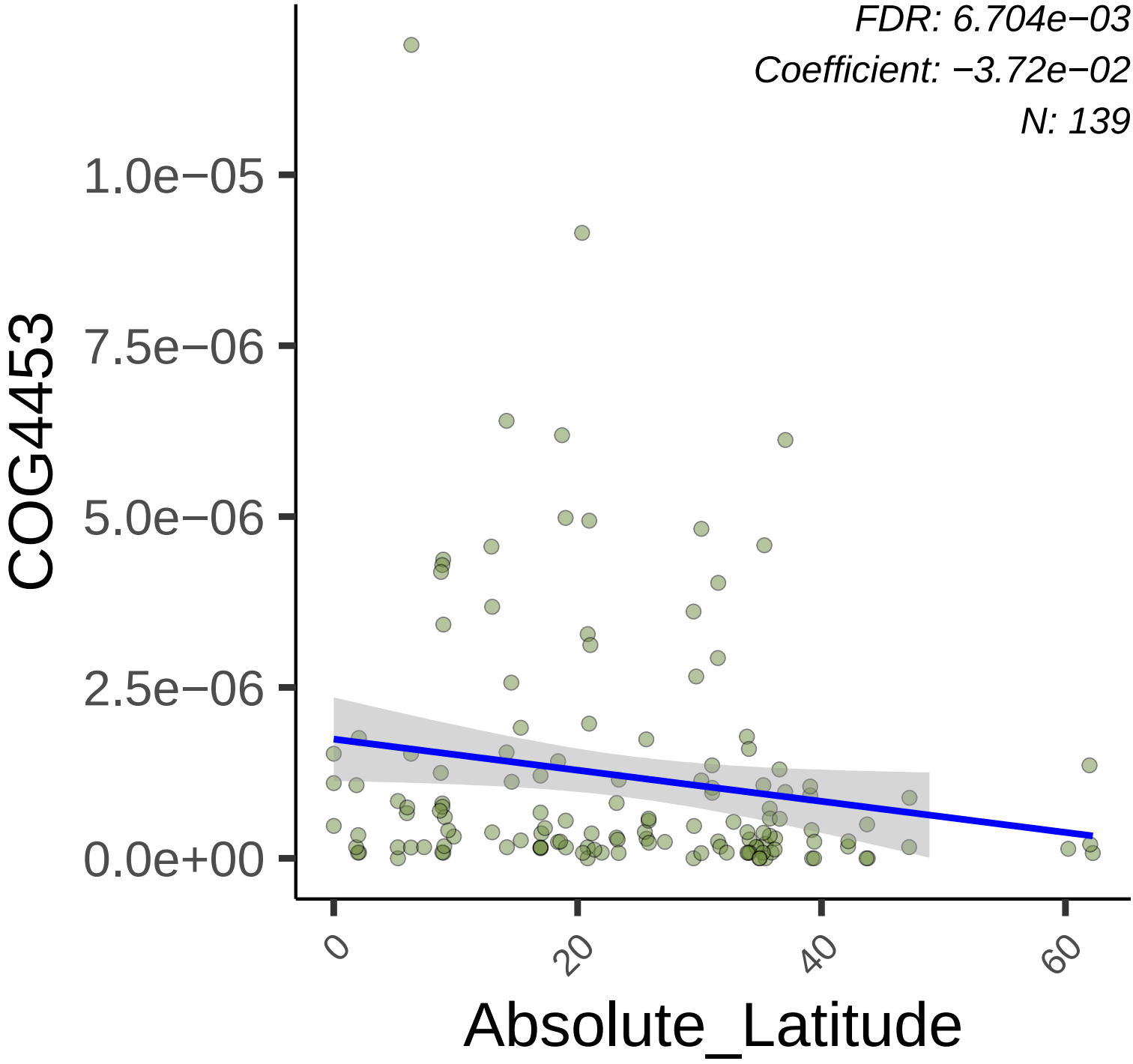

FDR: 6.406e−03
Coefficient: 5.82e−03
N: 139
0.00035
0.00030
0.00025
0.00020
0.00015
COG1540
0
20
40
60
Absolute_Latitude

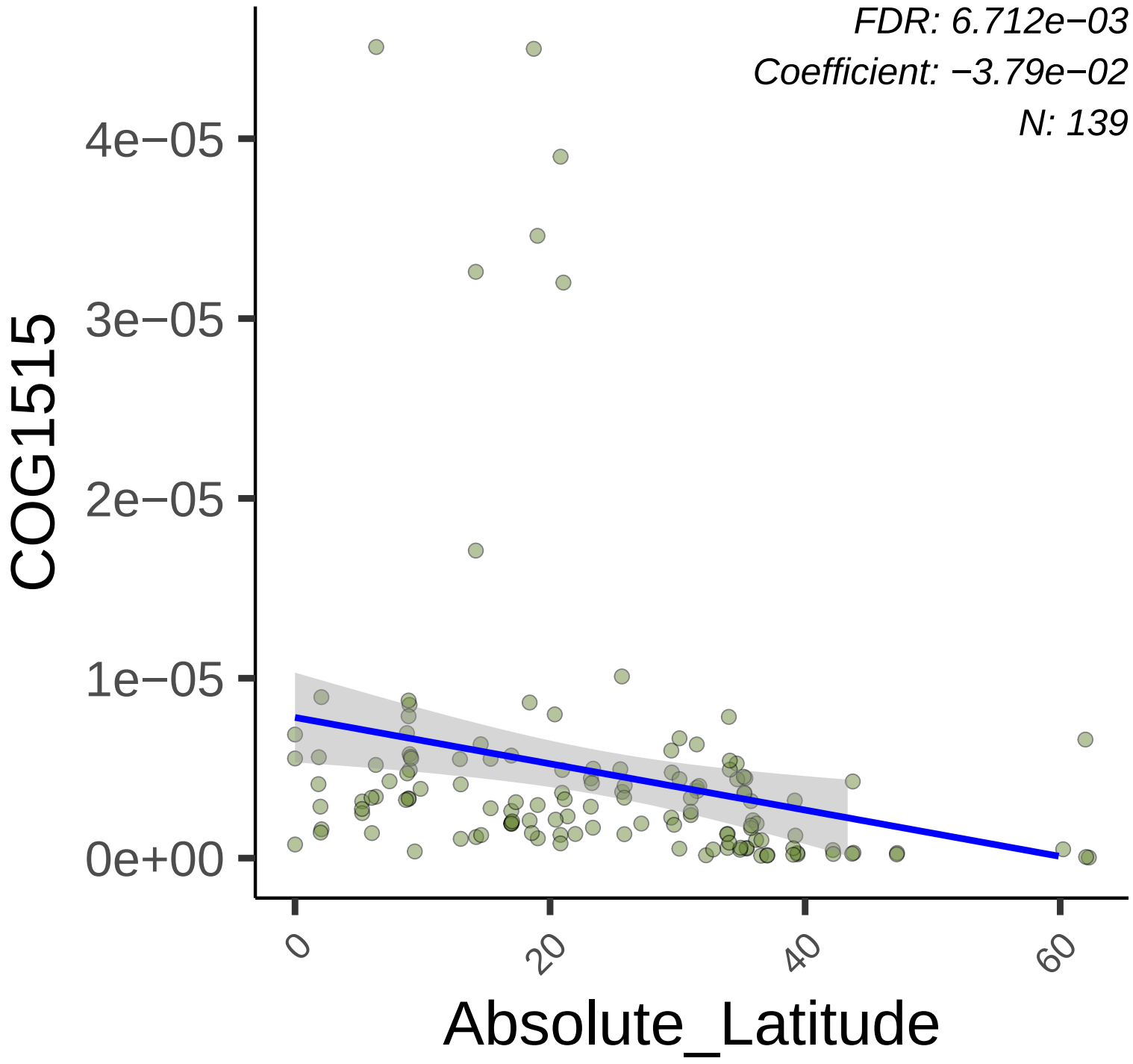

FDR: 6.518e−03
Coefficient: 5.12e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG2857
0
20
40
60
Absolute_Latitude

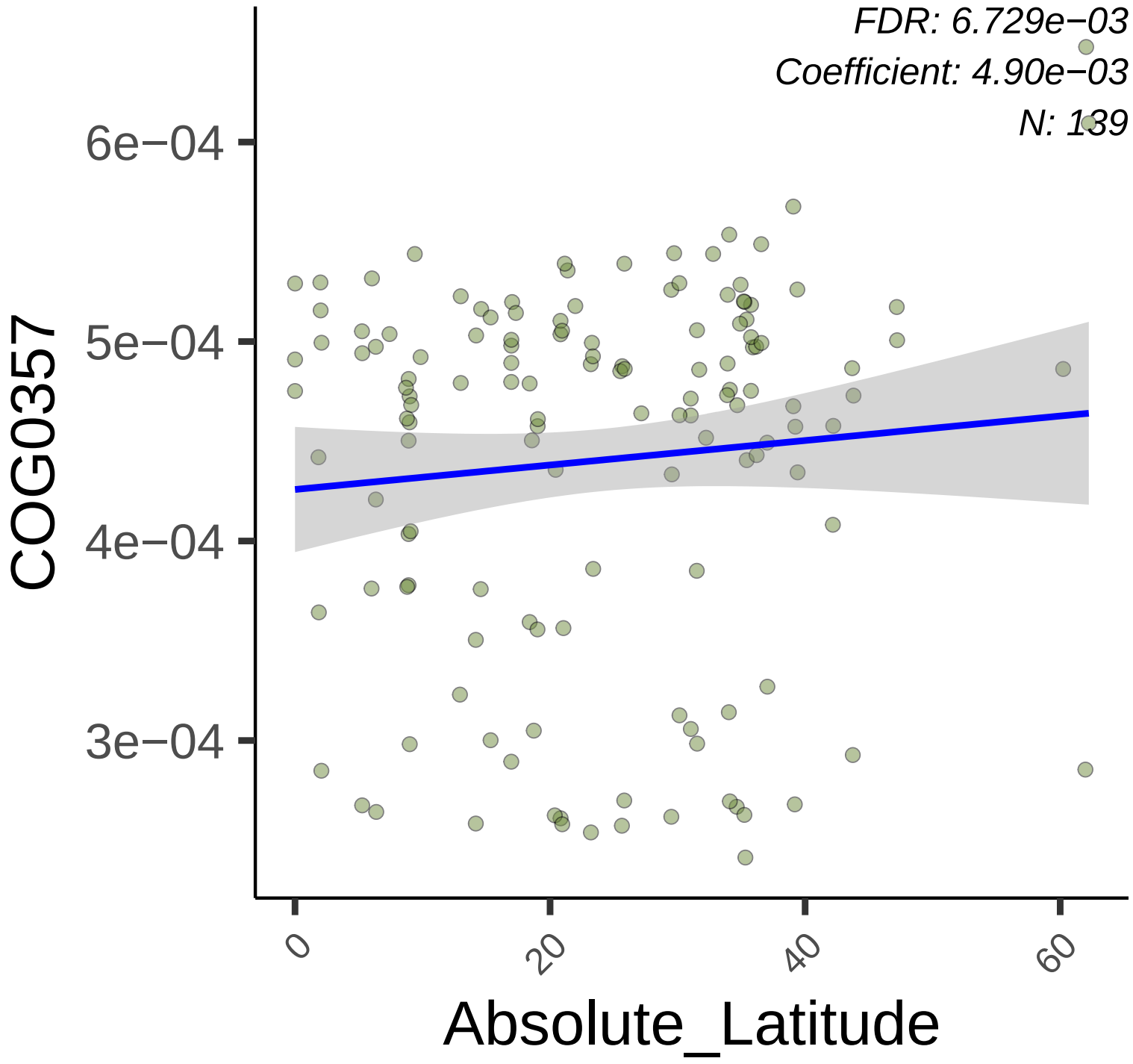

FDR: 6.641e−03
Coefficient: 6.57e−03
N: 139
4e−04
3e−04
2e−04
COG3178
0
20
40
60
Absolute_Latitude

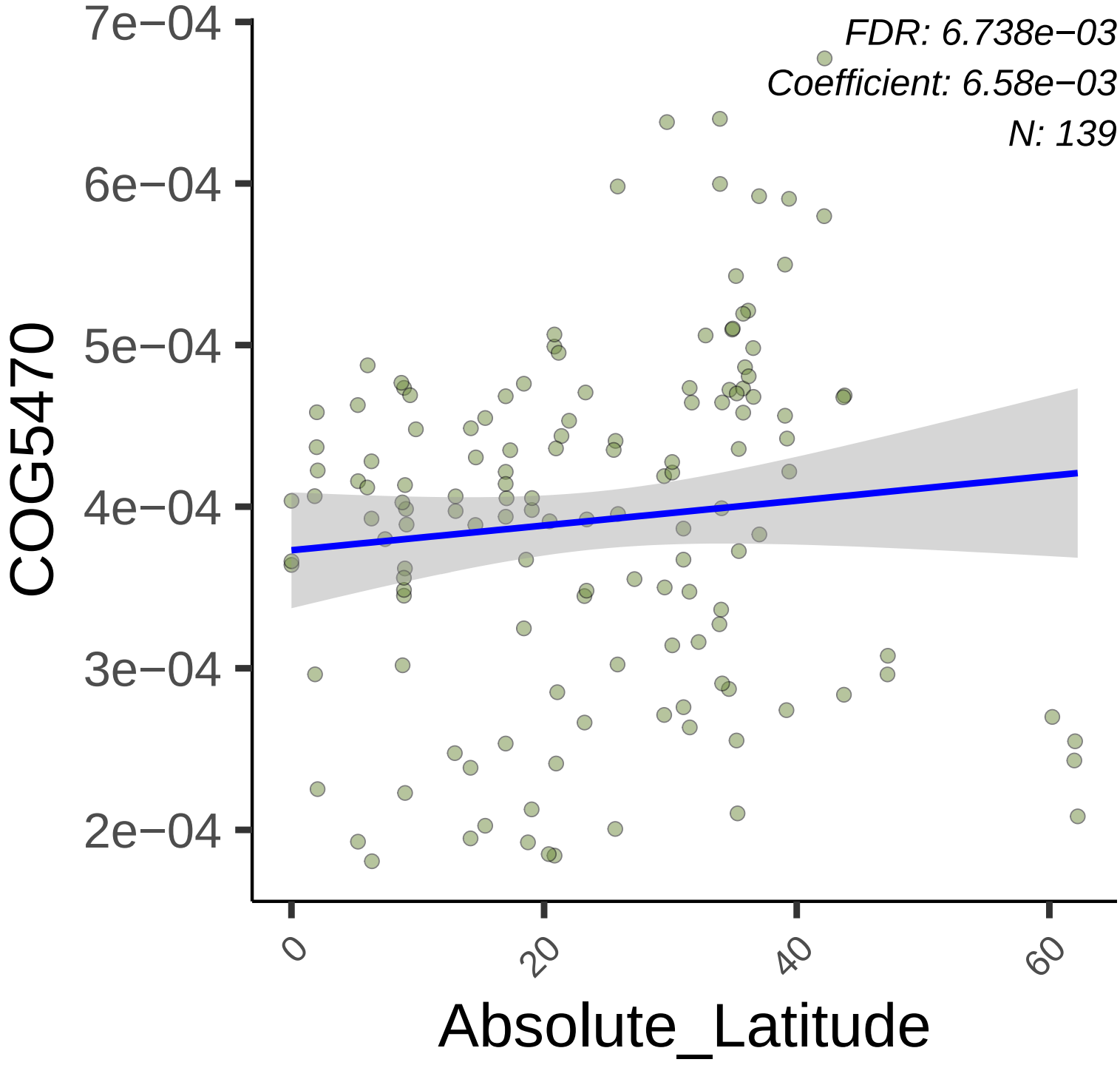

FDR: 6.689e−03
Coefficient: −4.52e−03
N: 139
6e−04
5e−04
4e−04
COG0156
0
20
40
60
Absolute_Latitude

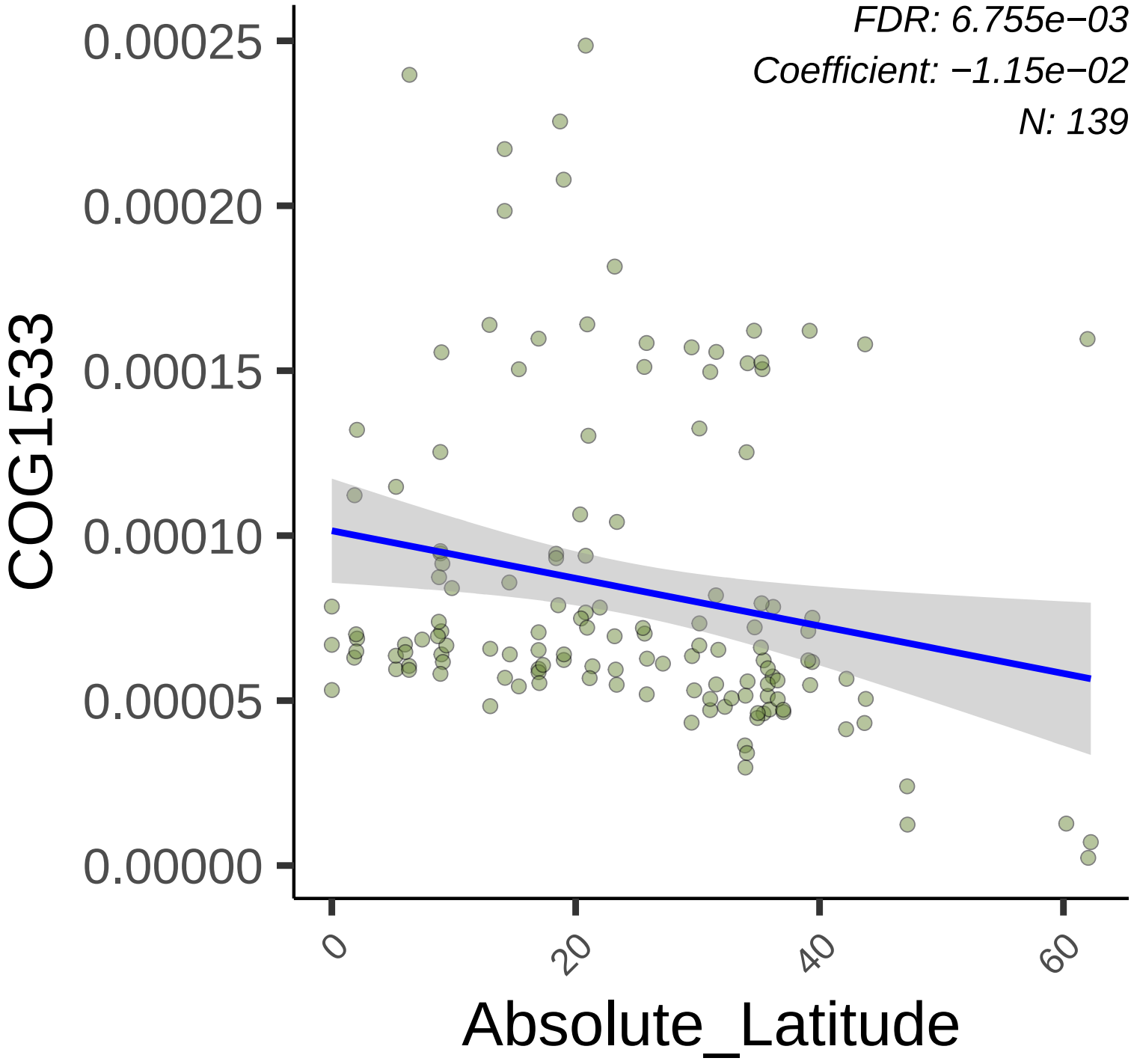

FDR: 6.704e−03
Coefficient: −4.31e−03
N: 139
5e−04
4e−04
3e−04
COG1611
0
20
40
60
Absolute_Latitude

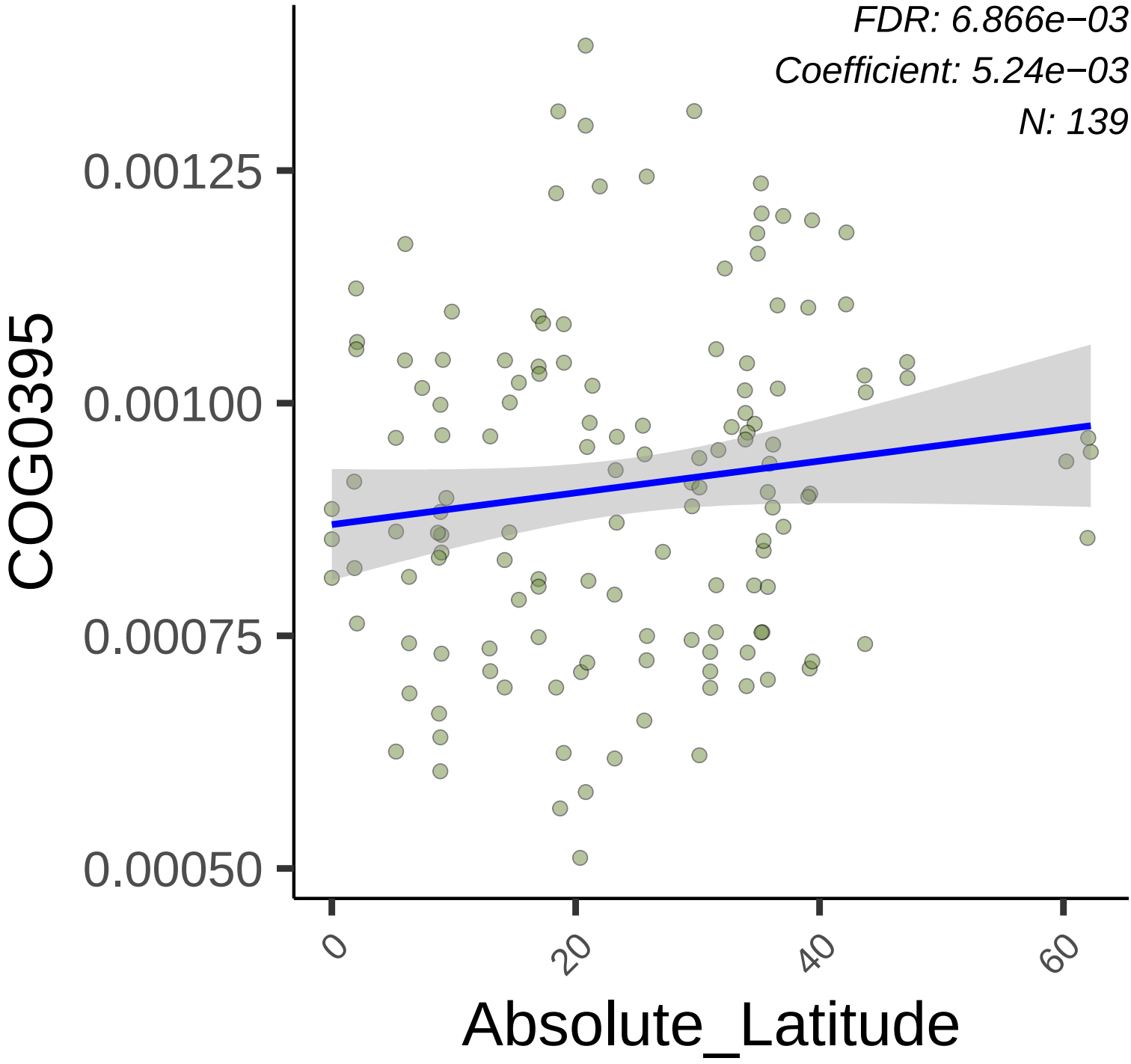

FDR: 6.704e−03
Coefficient: −3.72e−02
N: 139
COG4453
1.0e−05
7.5e−06
5.0e−06
2.5e−06
0.0e+00
0
20
40
60
Absolute_Latitude

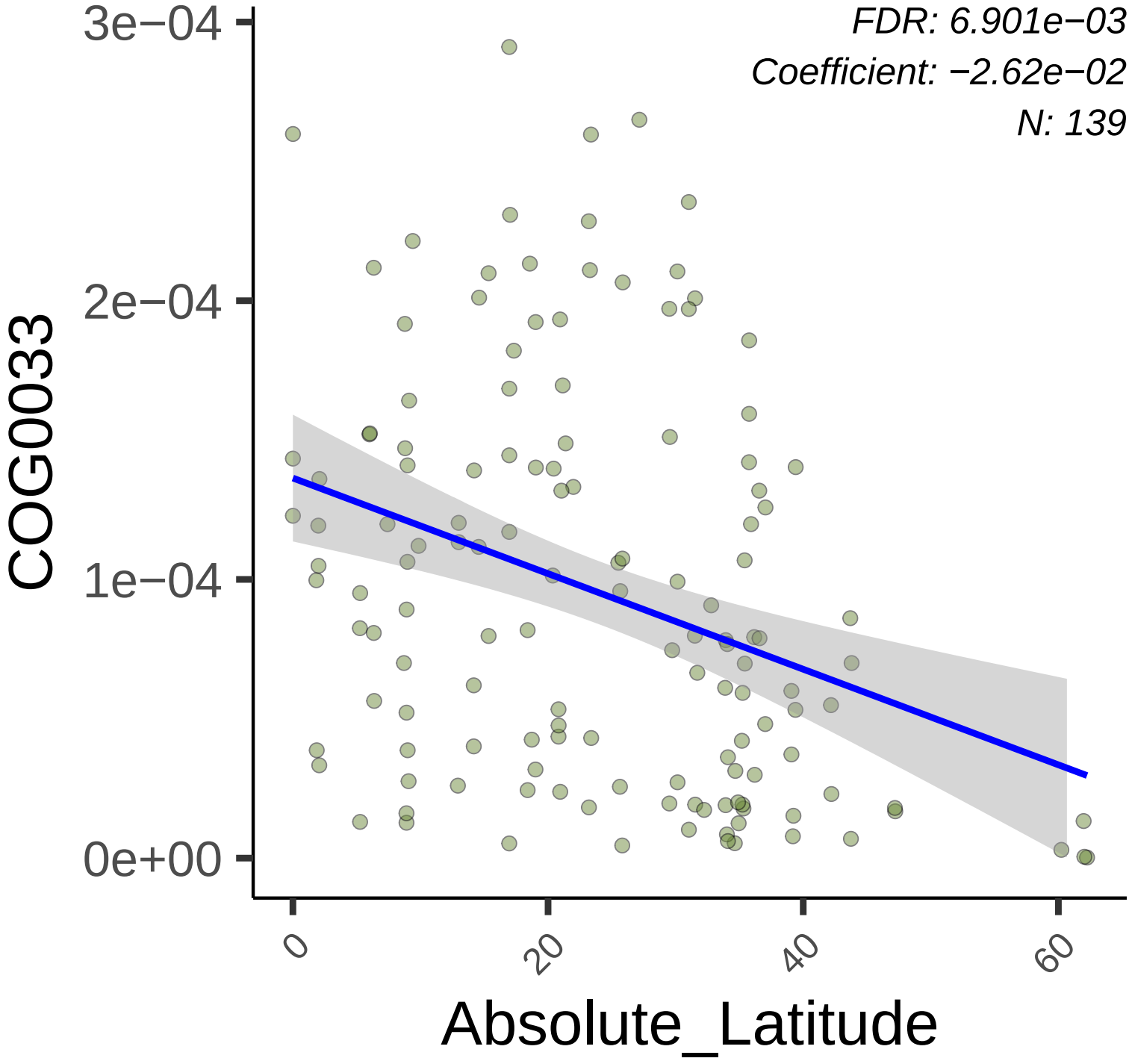

FDR: 6.712e−03
Coefficient: −3.79e−02
N: 139
COG1515
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

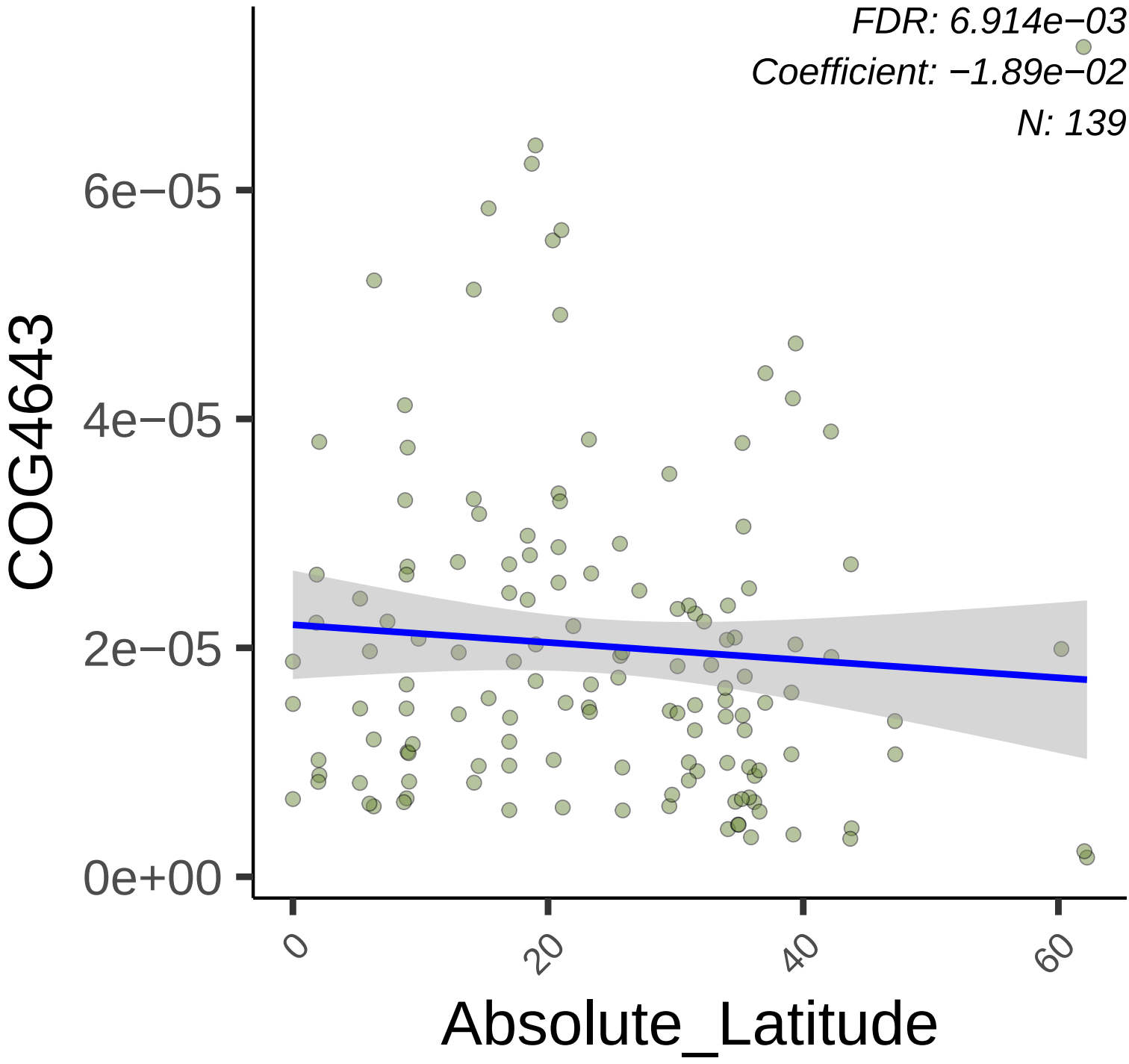

FDR: 6.729e−03
Coefficient: 4.90e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0357
0
20
40
60
Absolute_Latitude

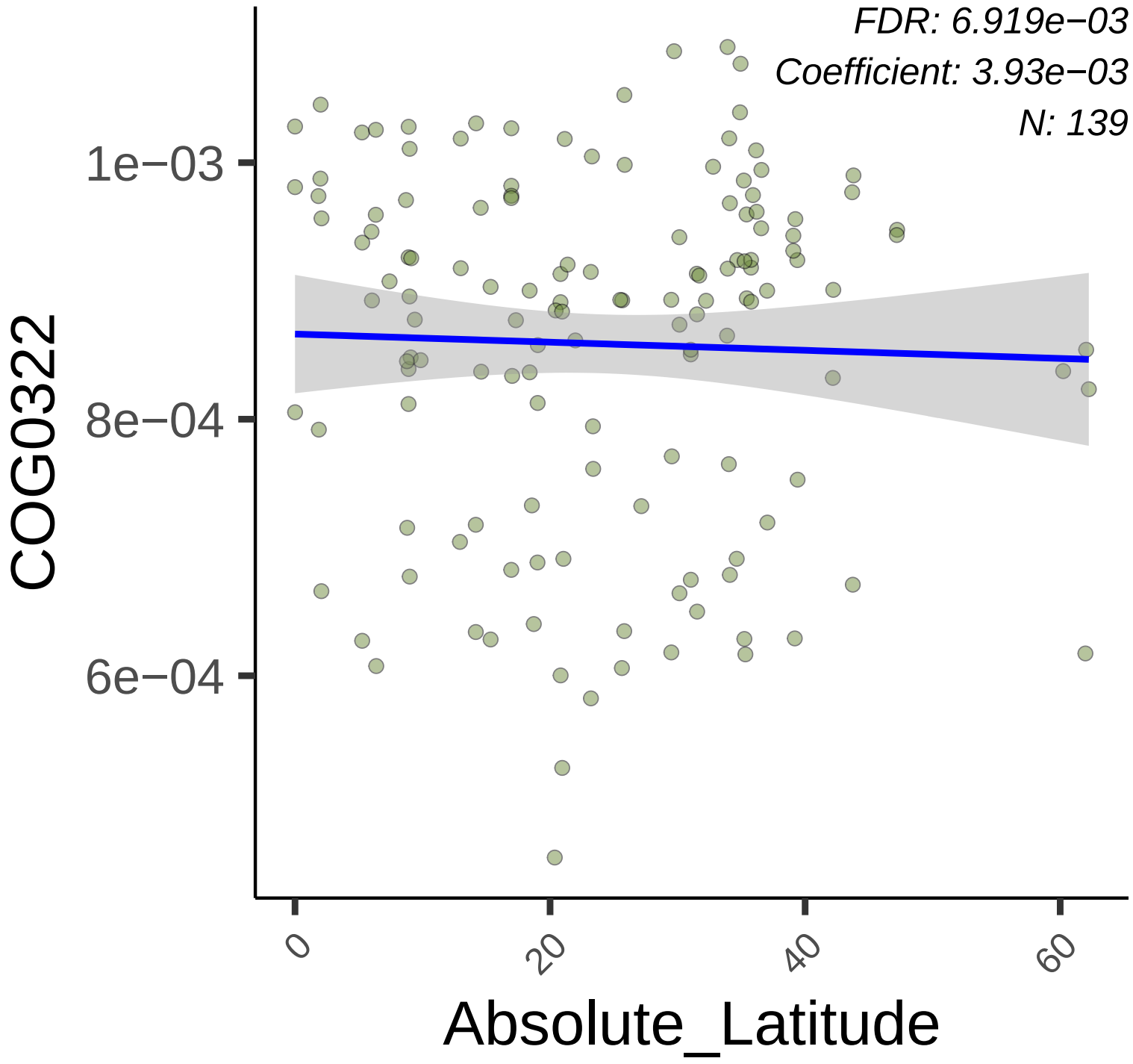

FDR: 6.738e−03
Coefficient: 6.58e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
2e−04
COG5470
0
20
40
60
Absolute_Latitude

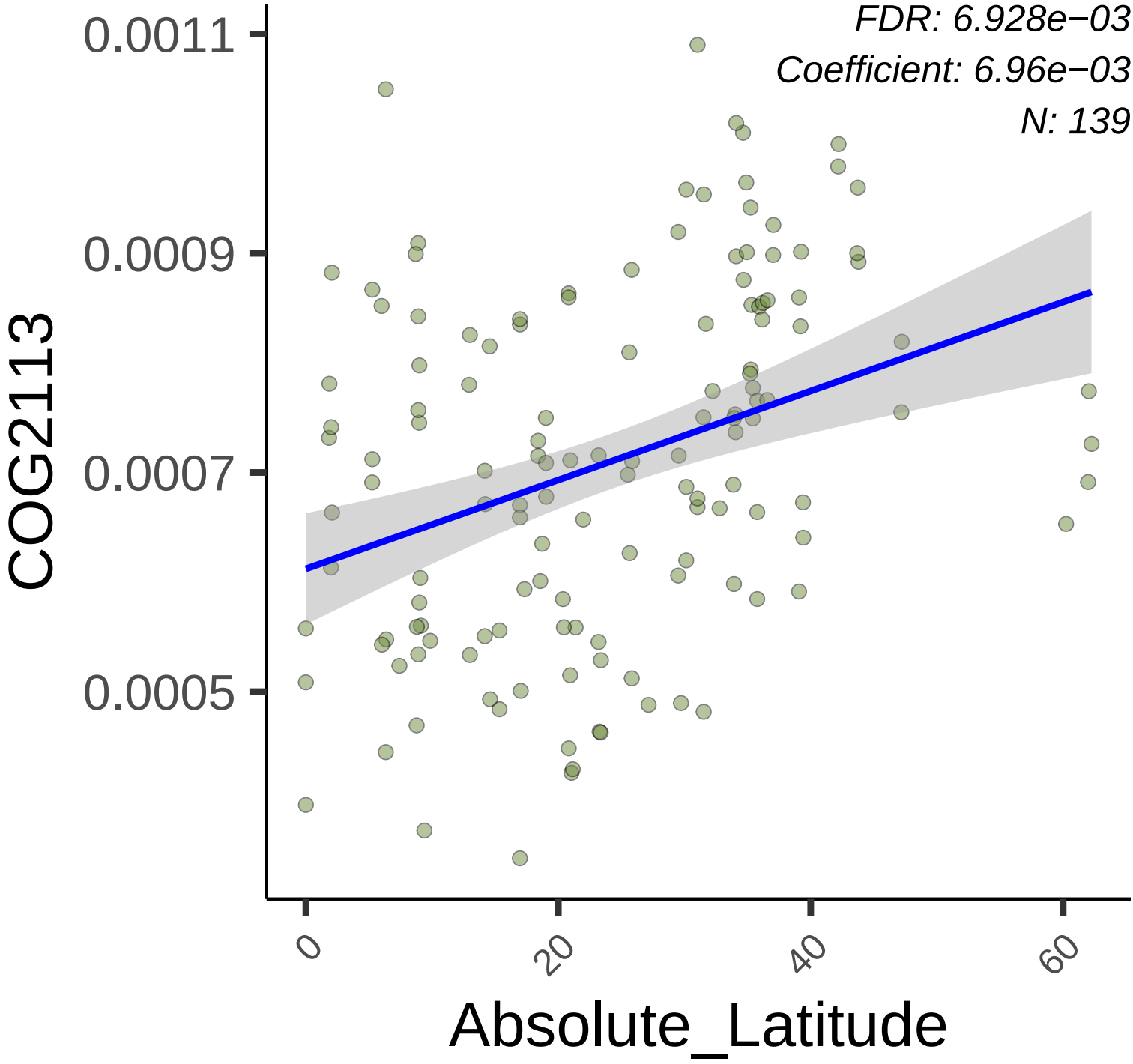

FDR: 6.755e−03
Coefficient: −1.15e−02
N: 139
COG1533
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

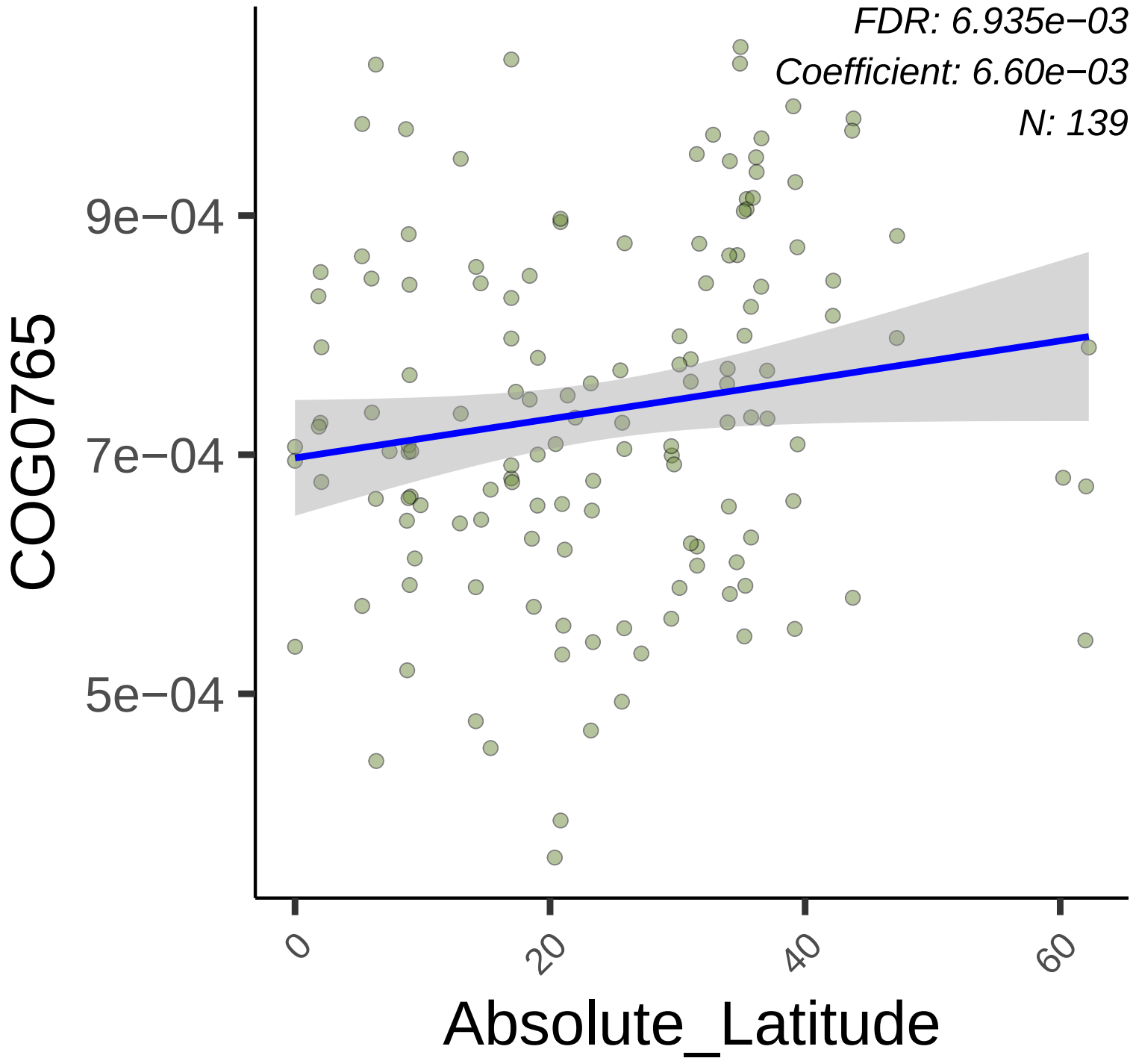

FDR: 6.866e−03
Coefficient: 5.24e−03
N: 139
0.00125
0.00100
0.00075
0.00050
COG0395
0
20
40
60
Absolute_Latitude

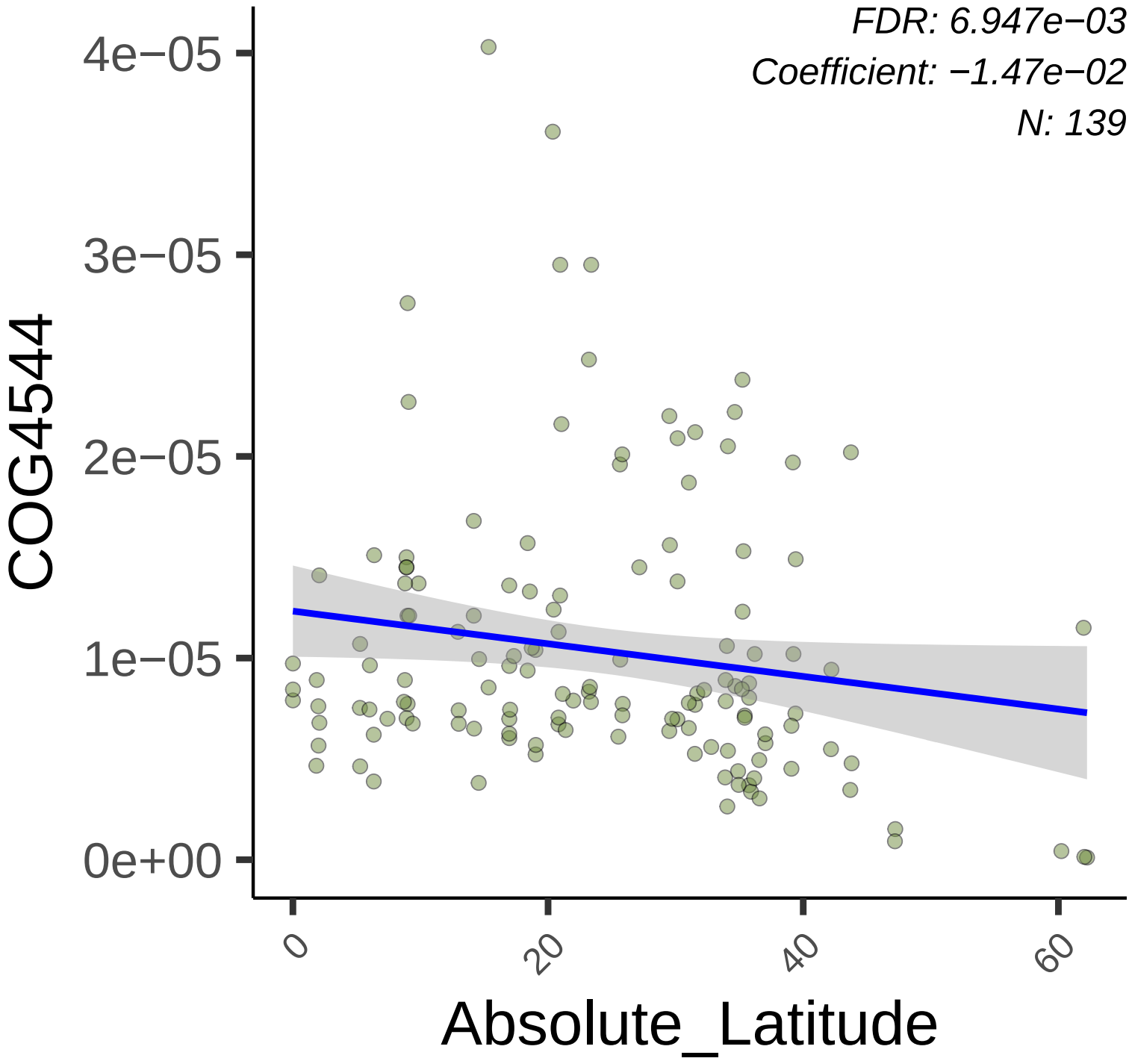

FDR: 6.901e−03
Coefficient: −2.62e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG0033
0
20
40
60
Absolute_Latitude

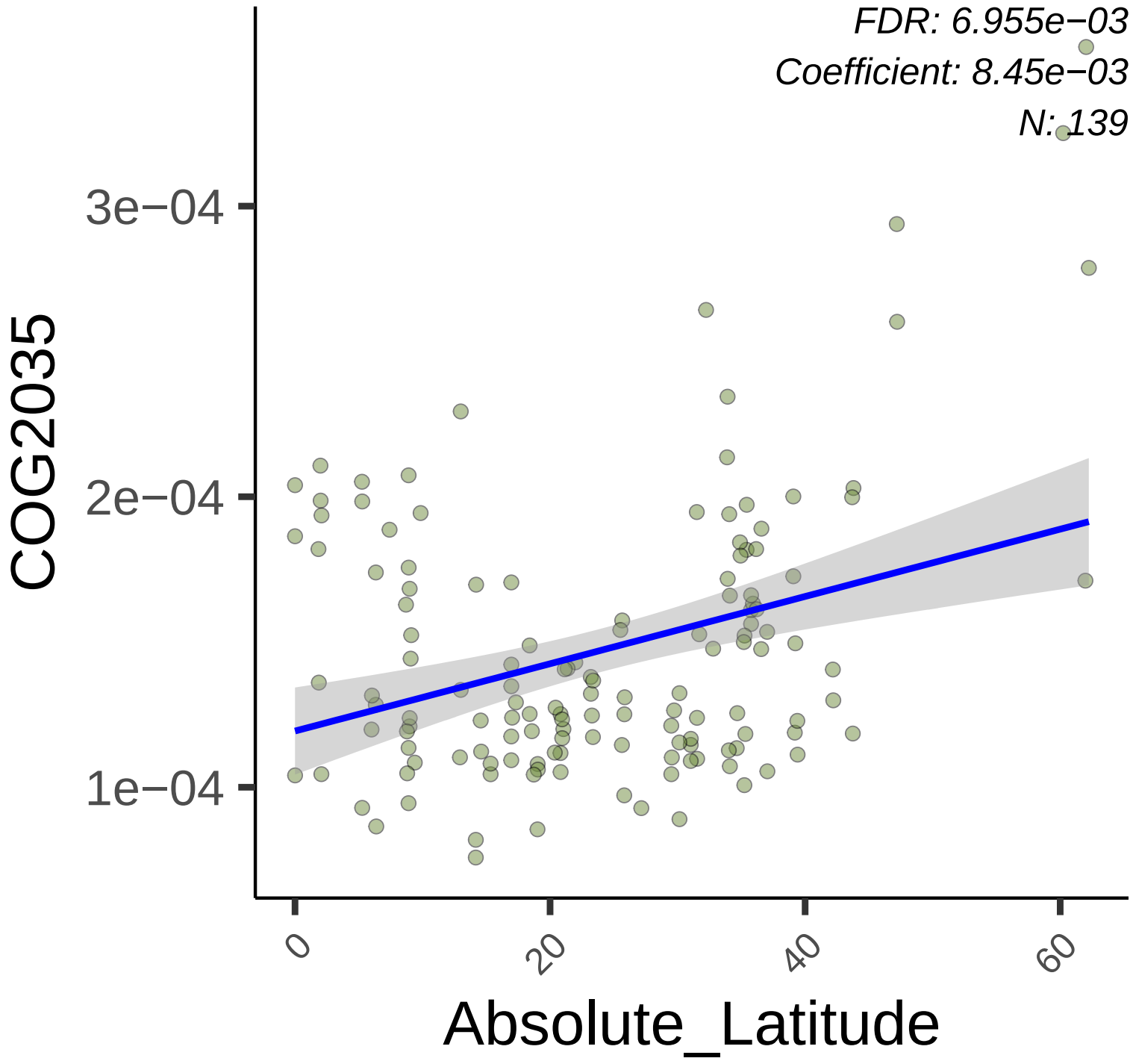

FDR: 6.914e−03
Coefficient: −1.89e−02
N: 139
COG4643
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

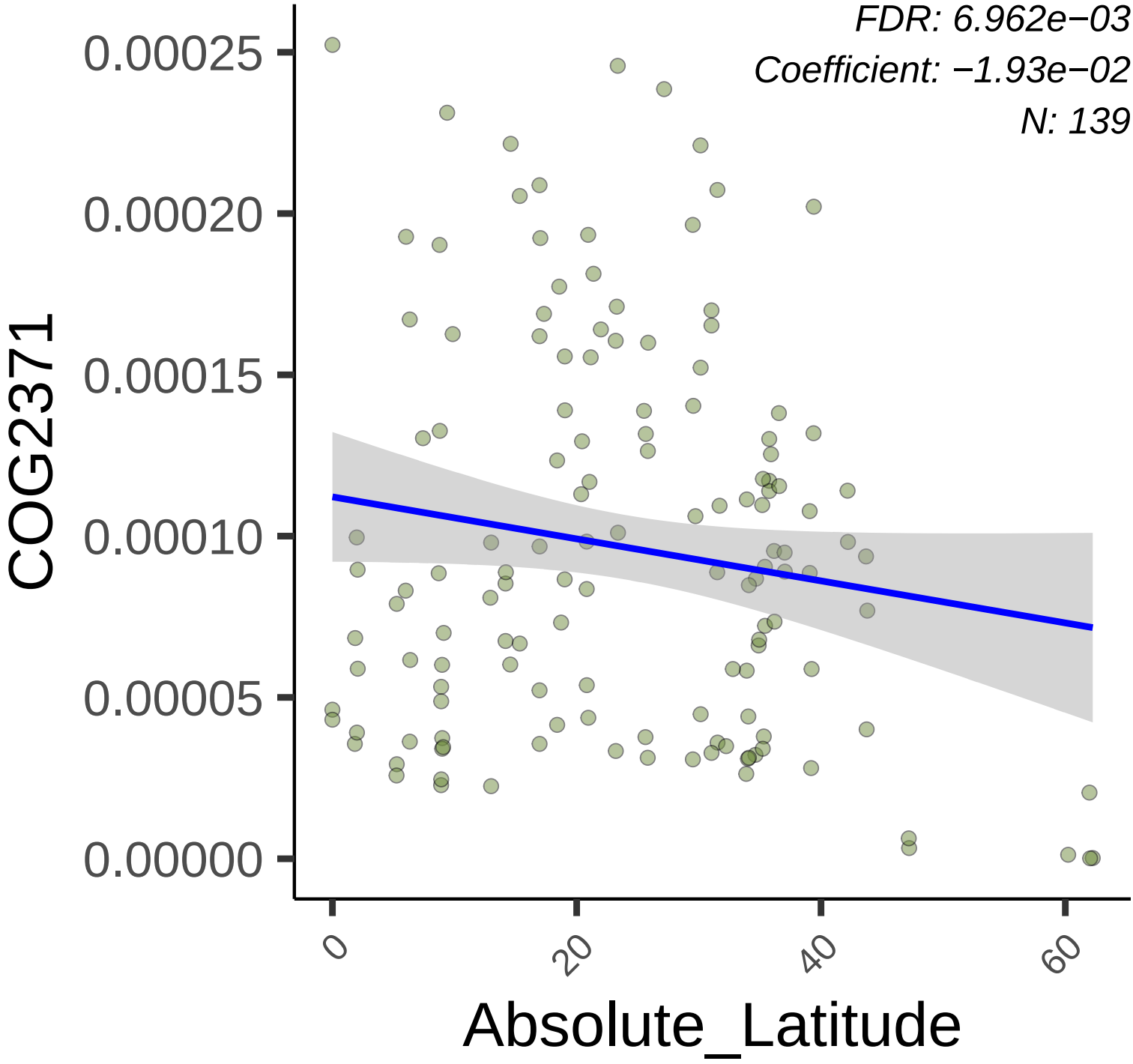

FDR: 6.919e−03
Coefficient: 3.93e−03
N: 139
1e−03
8e−04
6e−04
COG0322
0
20
40
60
Absolute_Latitude

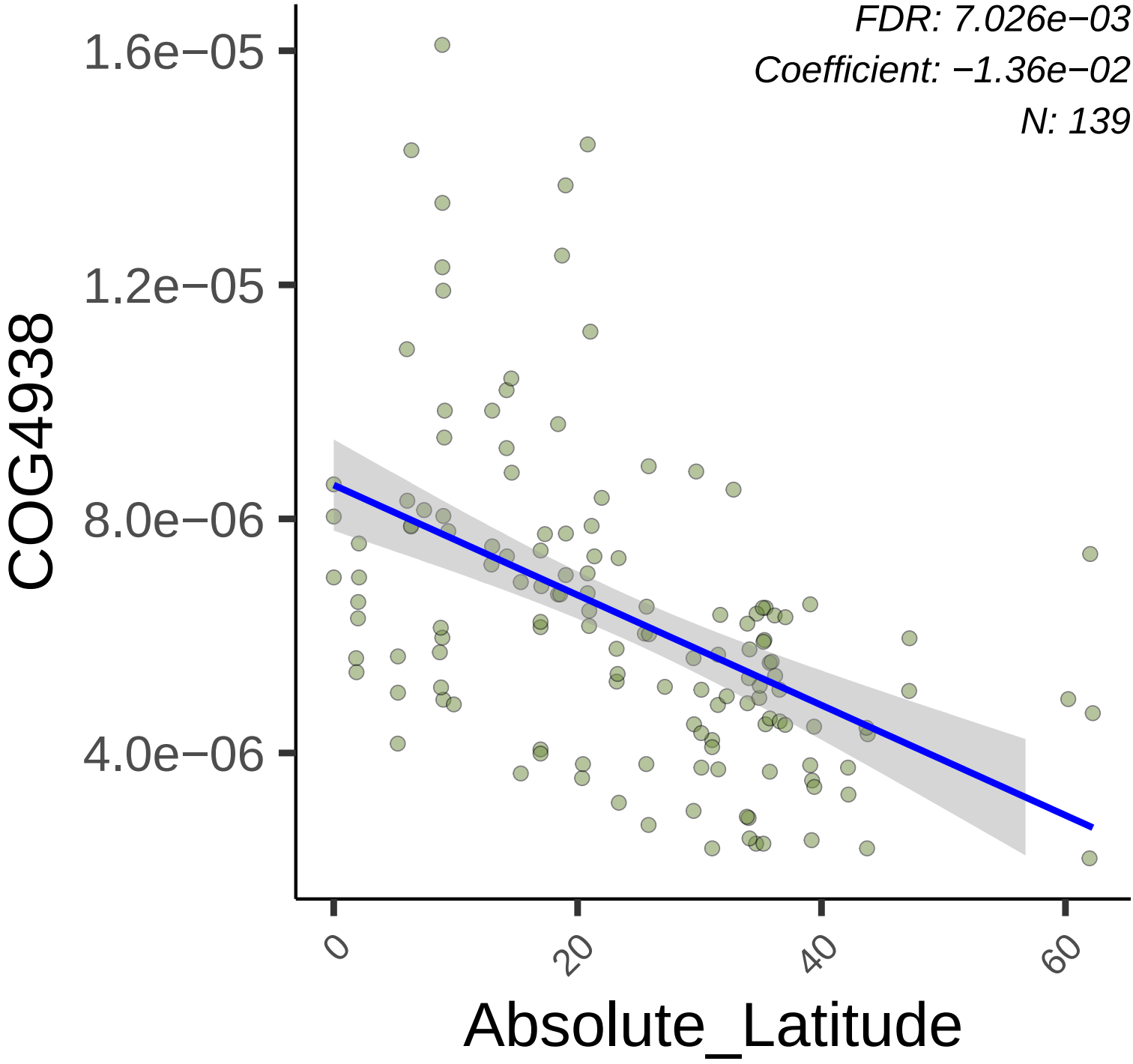

FDR: 6.928e−03
Coefficient: 6.96e−03
N: 139
0.0011
0.0009
0.0007
0.0005
COG2113
0
20
40
60
Absolute_Latitude

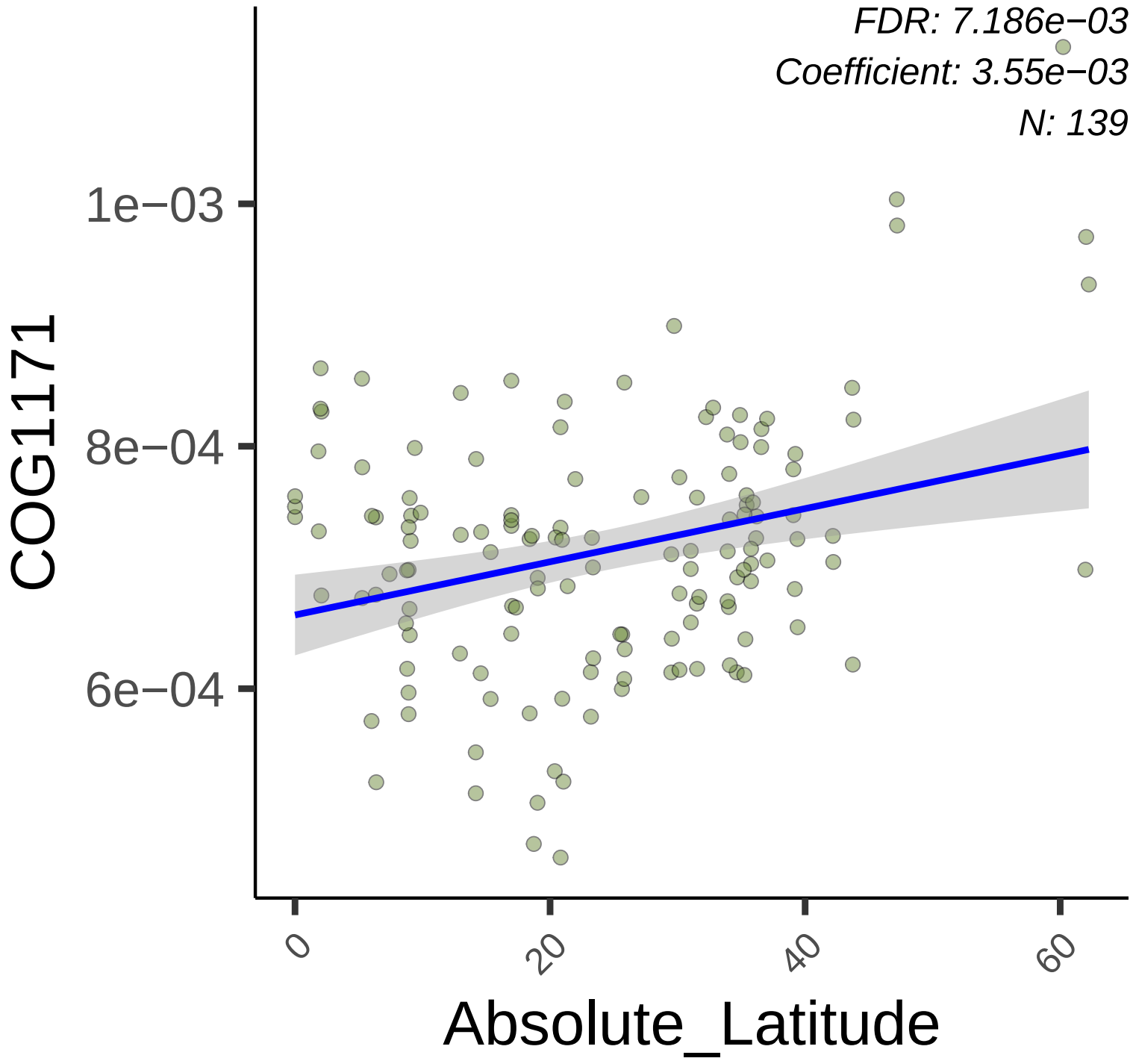

FDR: 6.935e−03
Coefficient: 6.60e−03
N: 139
9e−04
7e−04
5e−04
COG0765
0
20
40
60
Absolute_Latitude

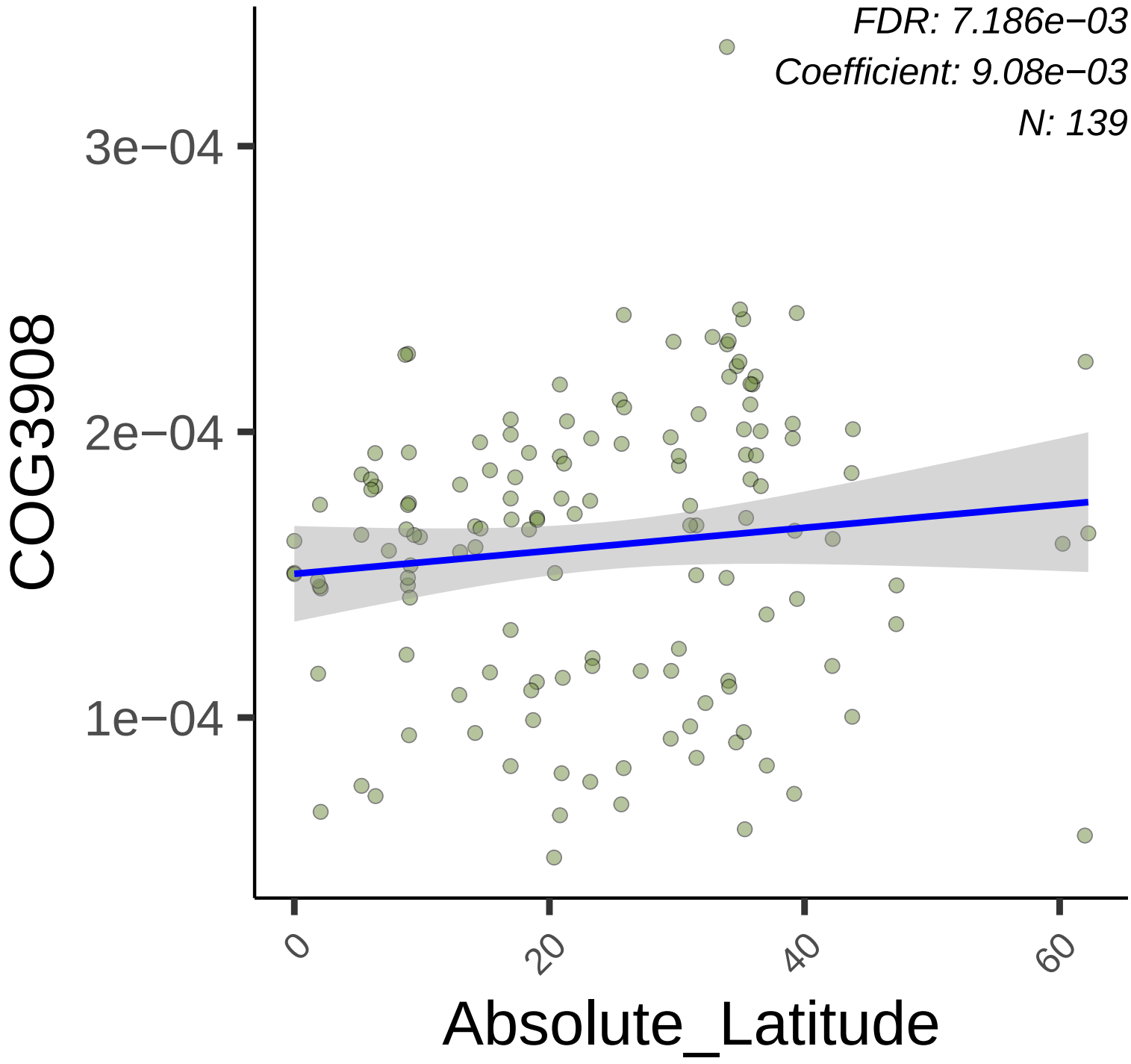

FDR: 6.947e−03
Coefficient: −1.47e−02
N: 139
COG4544
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

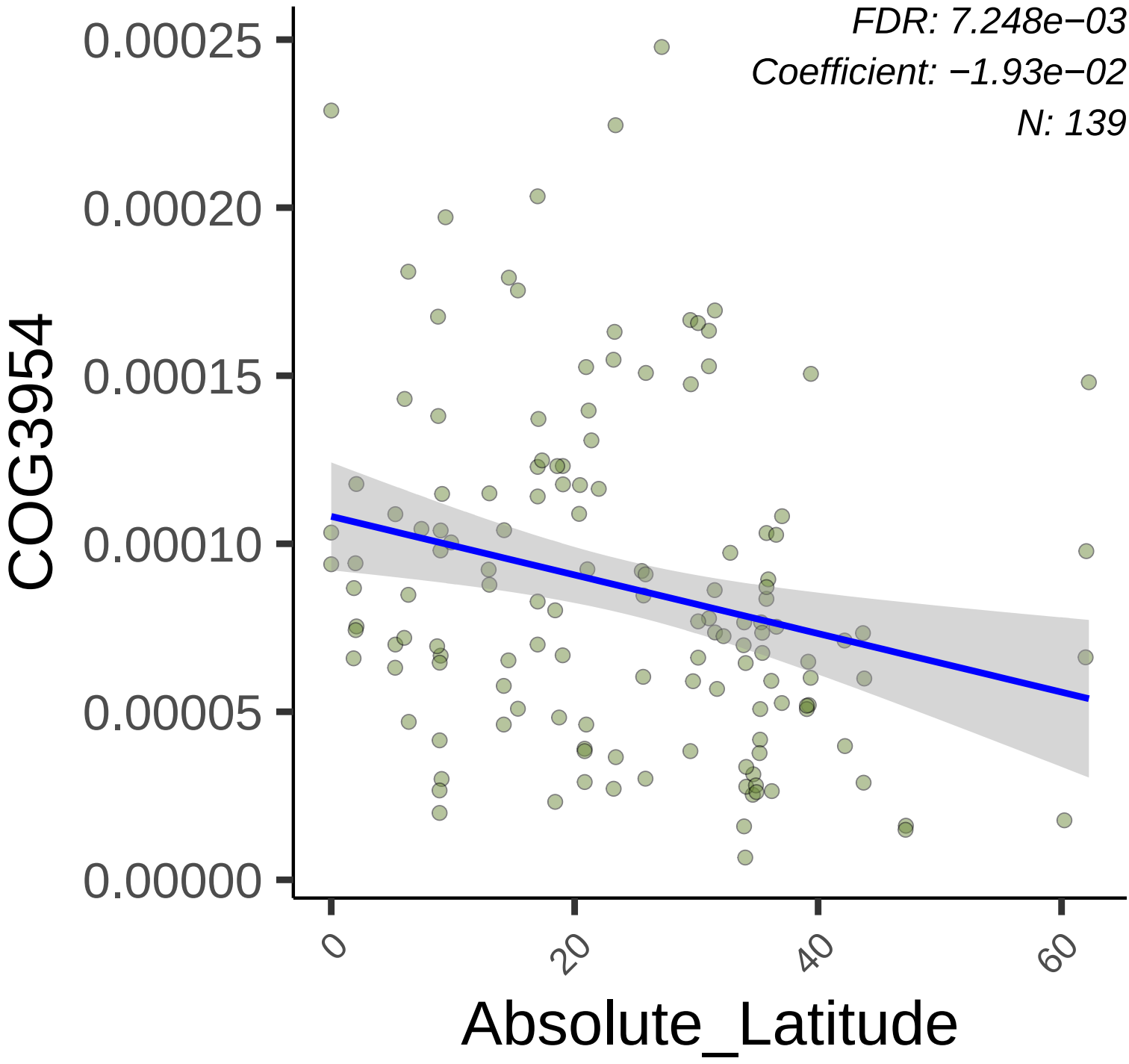

FDR: 6.955e−03
Coefficient: 8.45e−03
N: 139
3e−04
2e−04
1e−04
COG2035
0
20
40
60
Absolute_Latitude

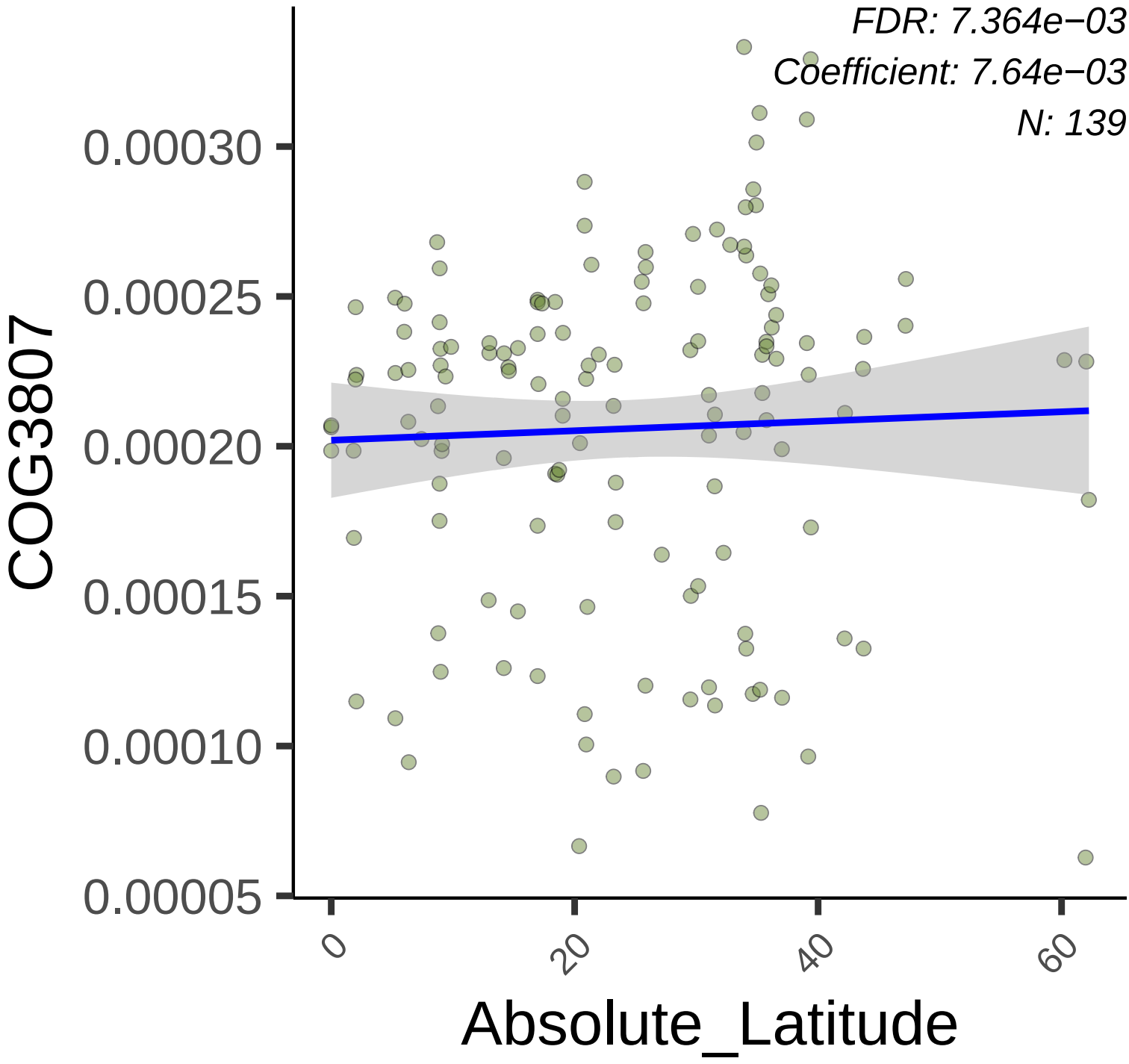

FDR: 6.962e−03
Coefficient: −1.93e−02
N: 139
COG2371
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

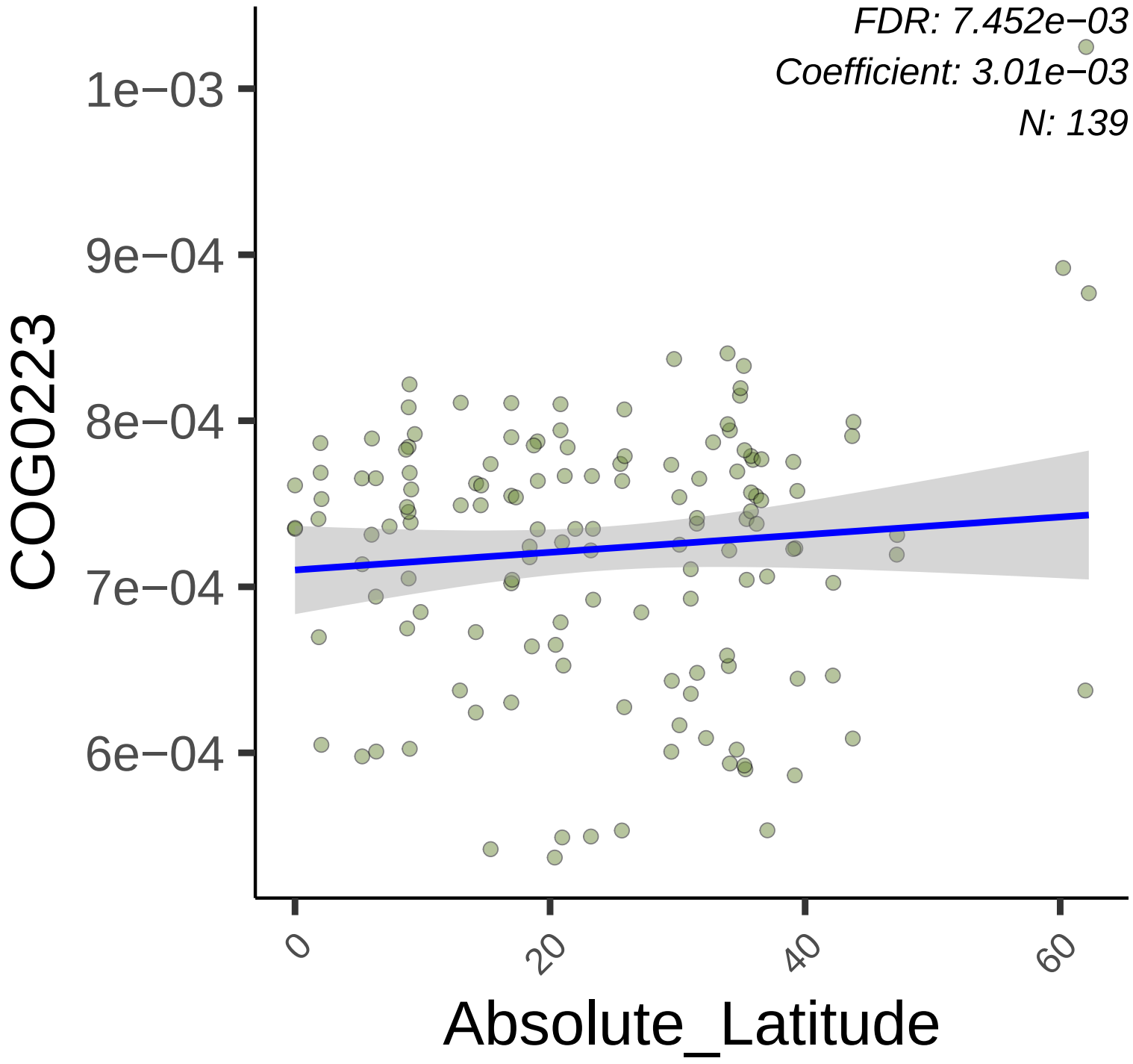

FDR: 7.026e−03
Coefficient: −1.36e−02
N: 139
1.6e−05
1.2e−05
8.0e−06
4.0e−06
COG4938
0
20
40
60
Absolute_Latitude

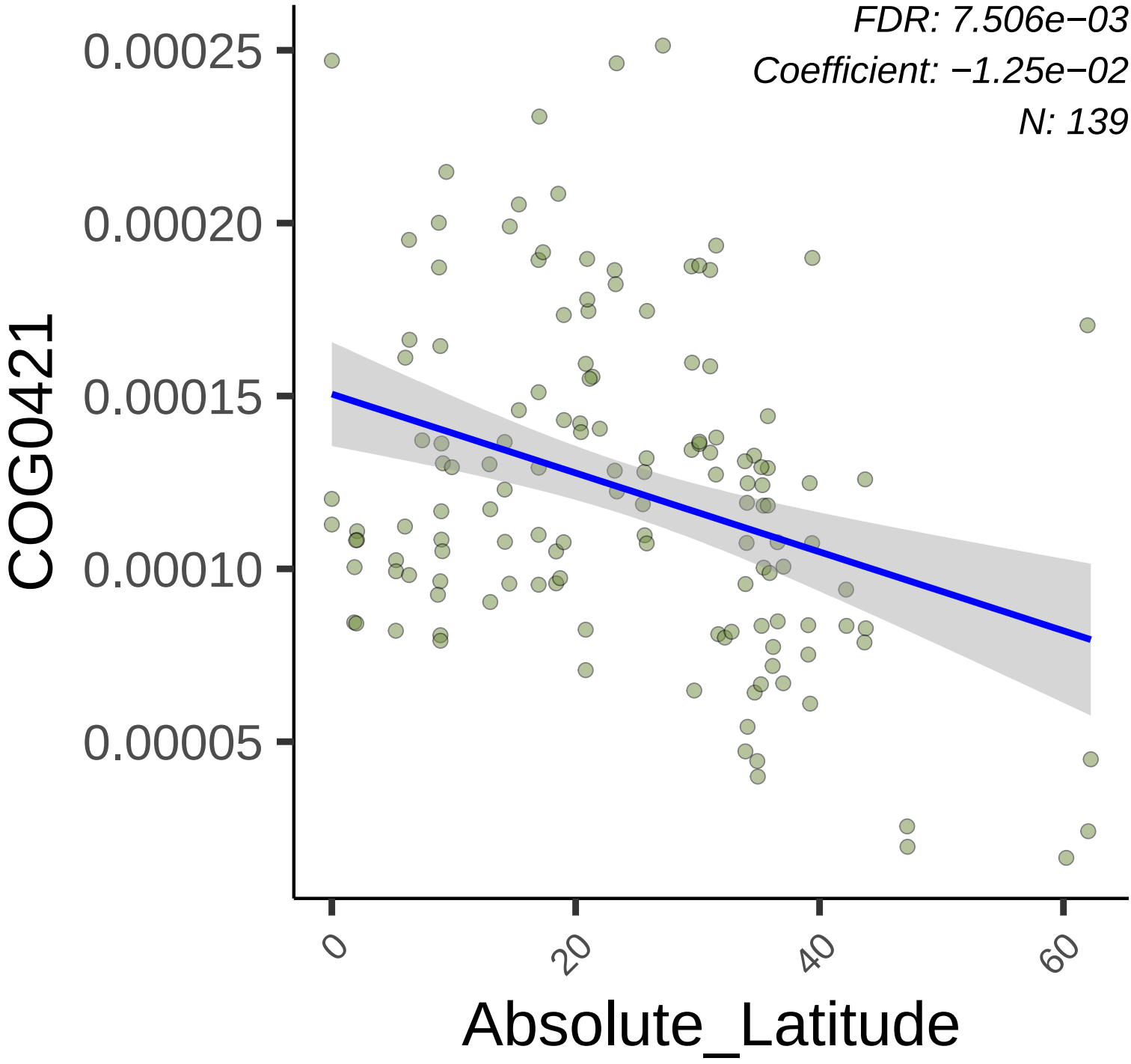

FDR: 7.186e−03
Coefficient: 3.55e−03
N: 139
1e−03
8e−04
6e−04
COG1171
0
20
40
60
Absolute_Latitude

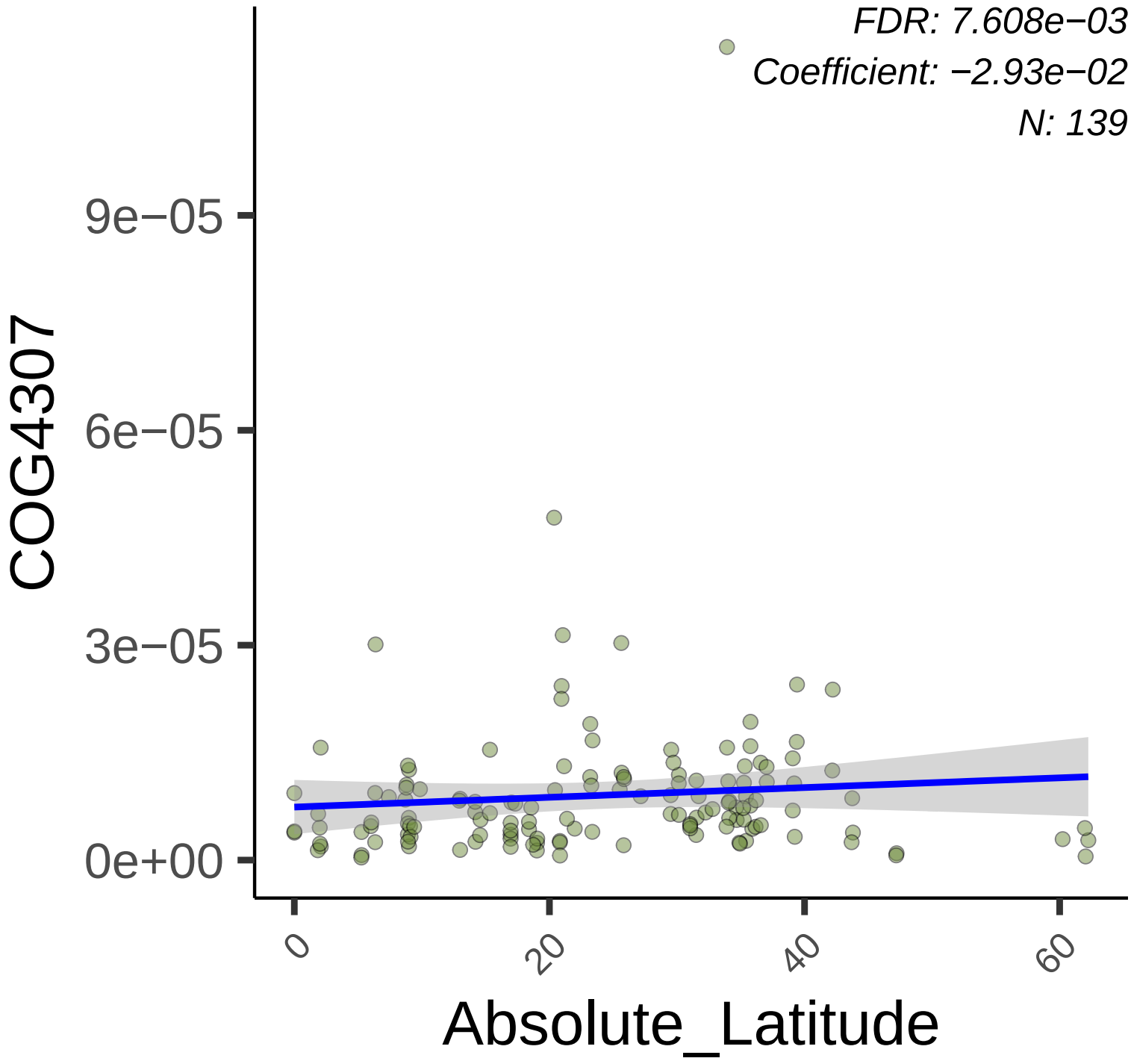

FDR: 7.186e−03
Coefficient: 9.08e−03
N: 139
3e−04
2e−04
1e−04
COG3908
0
20
40
60
Absolute_Latitude

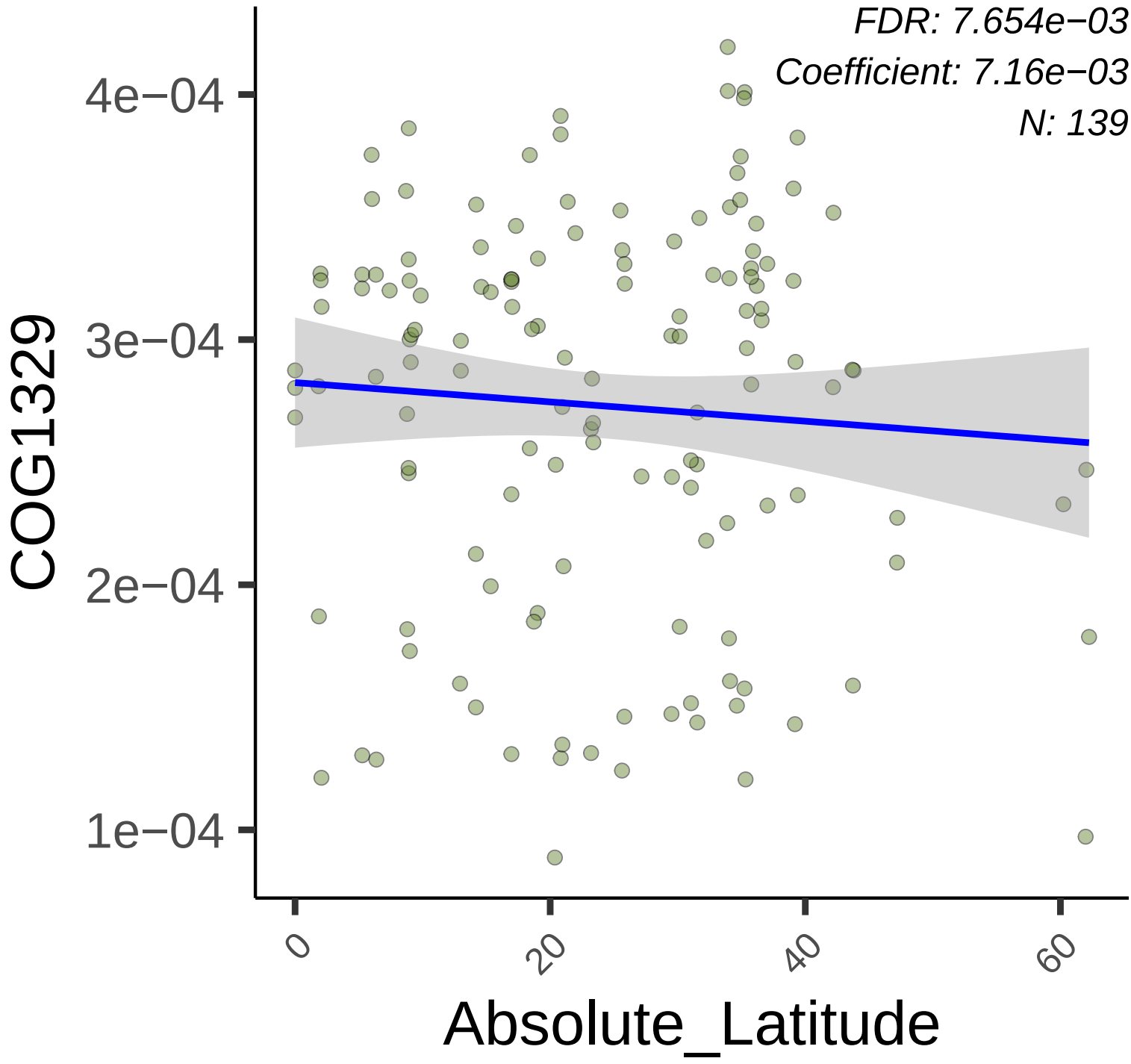

FDR: 7.248e−03
Coefficient: −1.93e−02
N: 139
COG3954
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

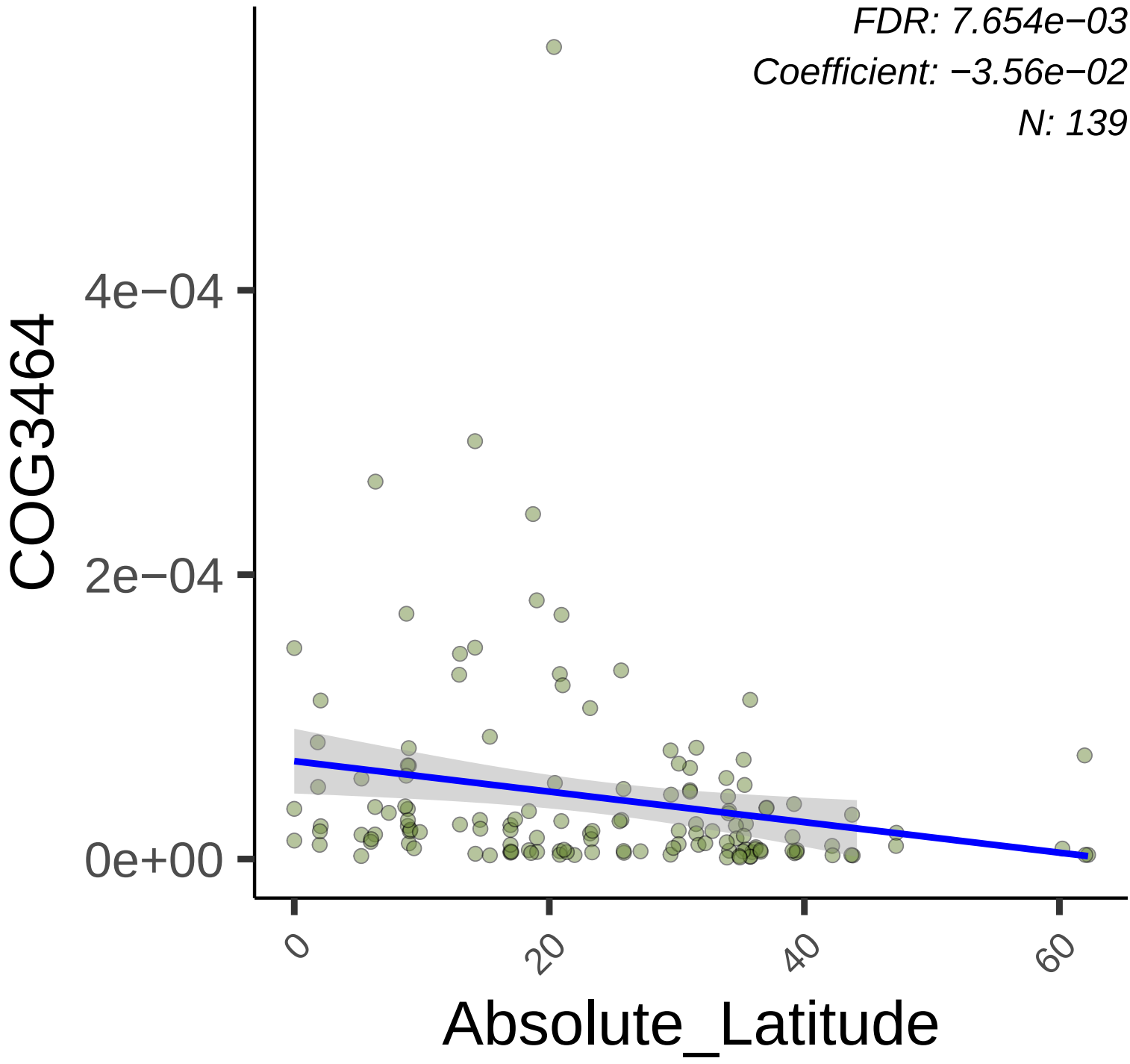

FDR: 7.364e−03
Coefficient: 7.64e−03
N: 139
COG3807
0.00030
0.00025
0.00020
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

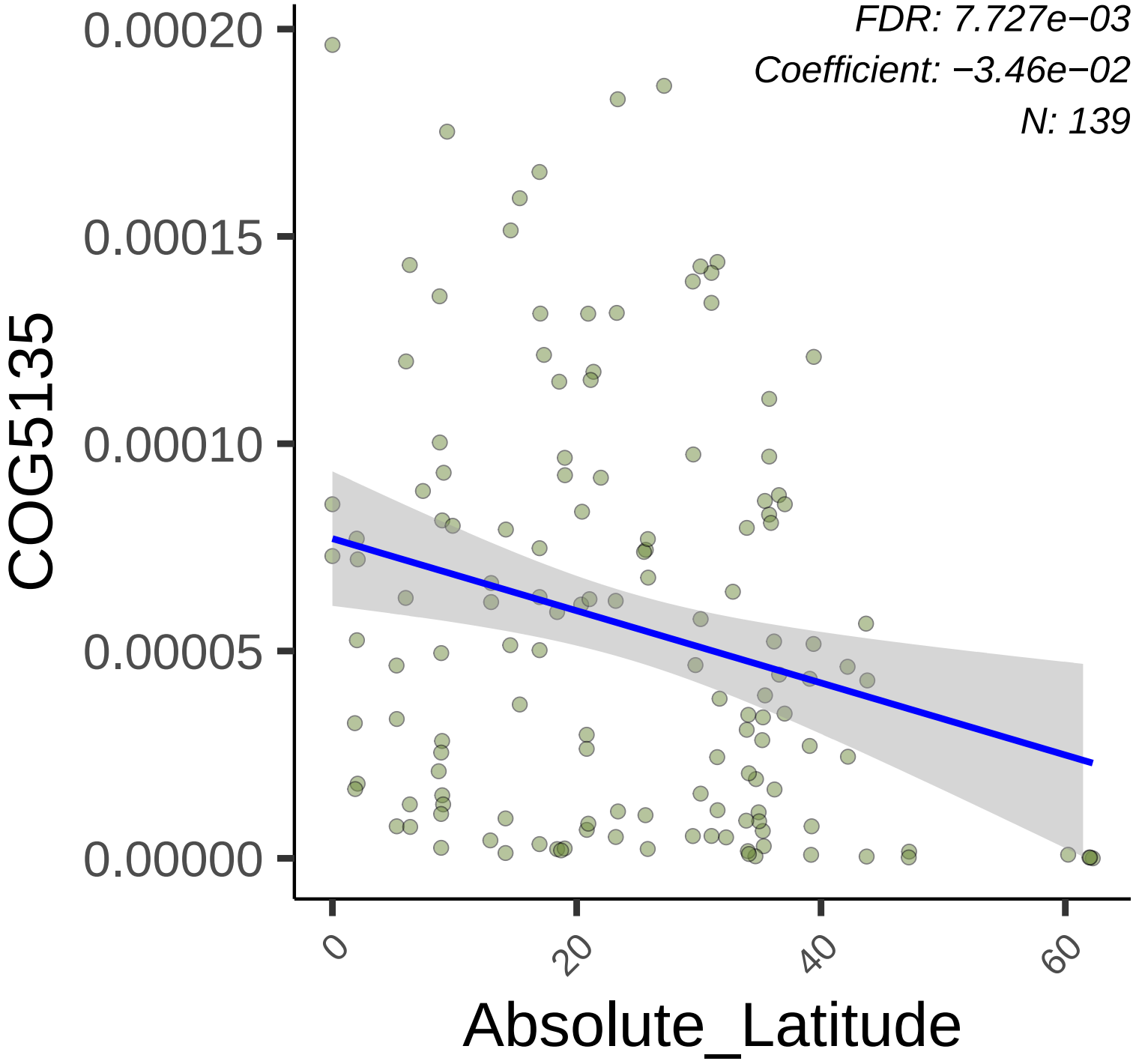

FDR: 7.452e−03
Coefficient: 3.01e−03
N: 139
1e−03
9e−04
8e−04
7e−04
6e−04
COG0223
0
20
40
60
Absolute_Latitude

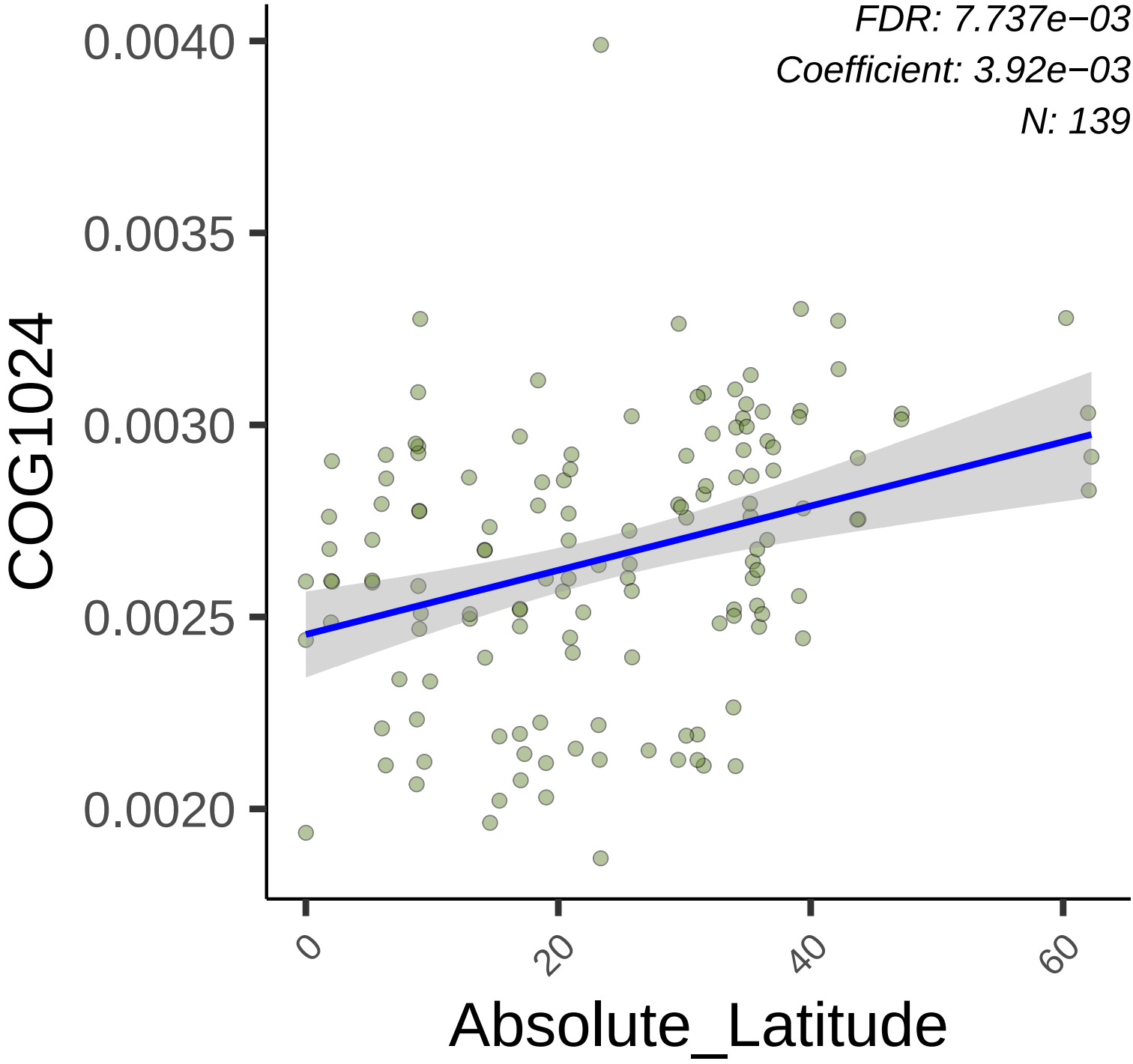

FDR: 7.506e−03
Coefficient: −1.25e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG0421
0
20
40
60
Absolute_Latitude

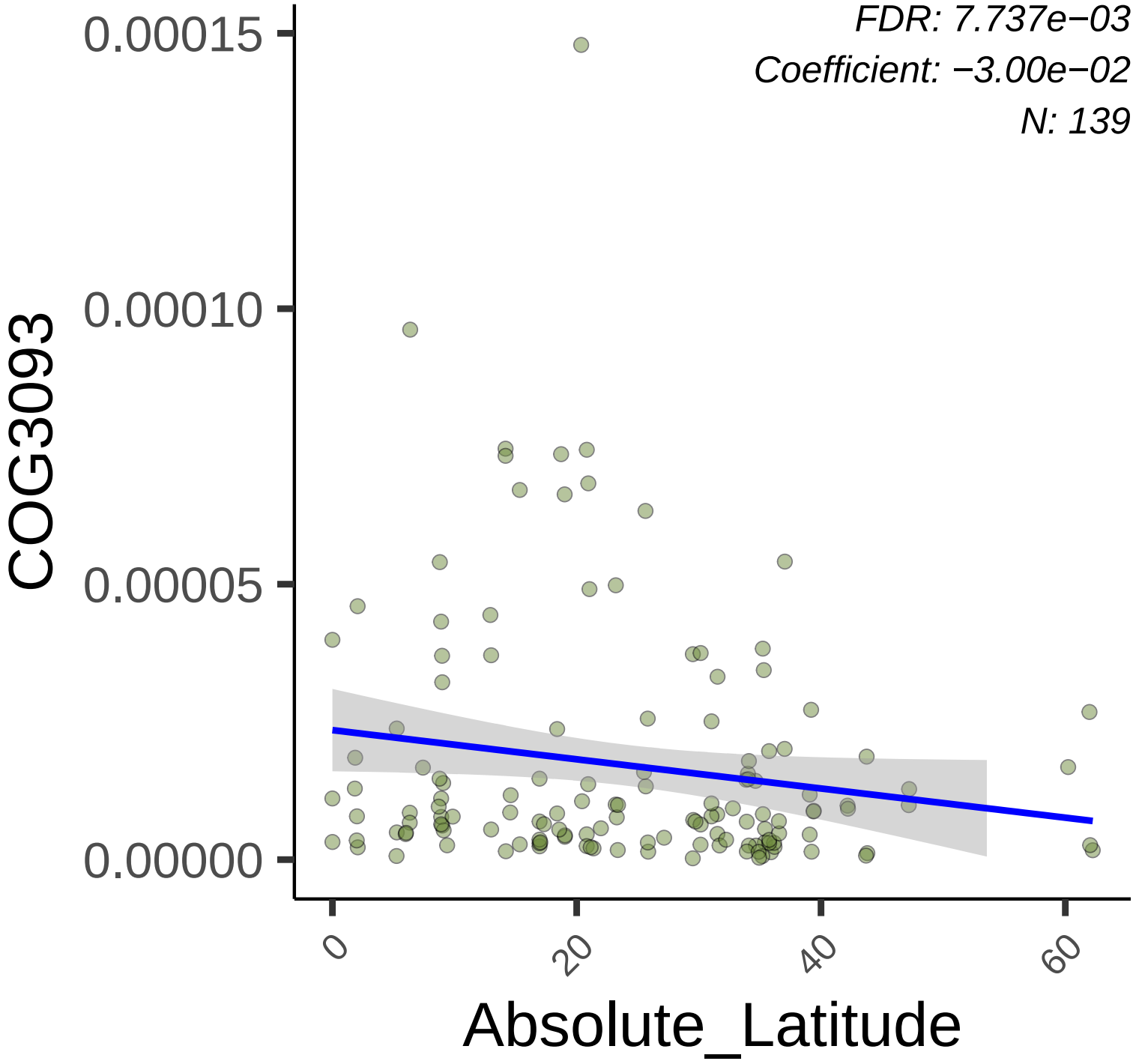

FDR: 7.608e−03
Coefficient: −2.93e−02
N: 139
COG4307
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

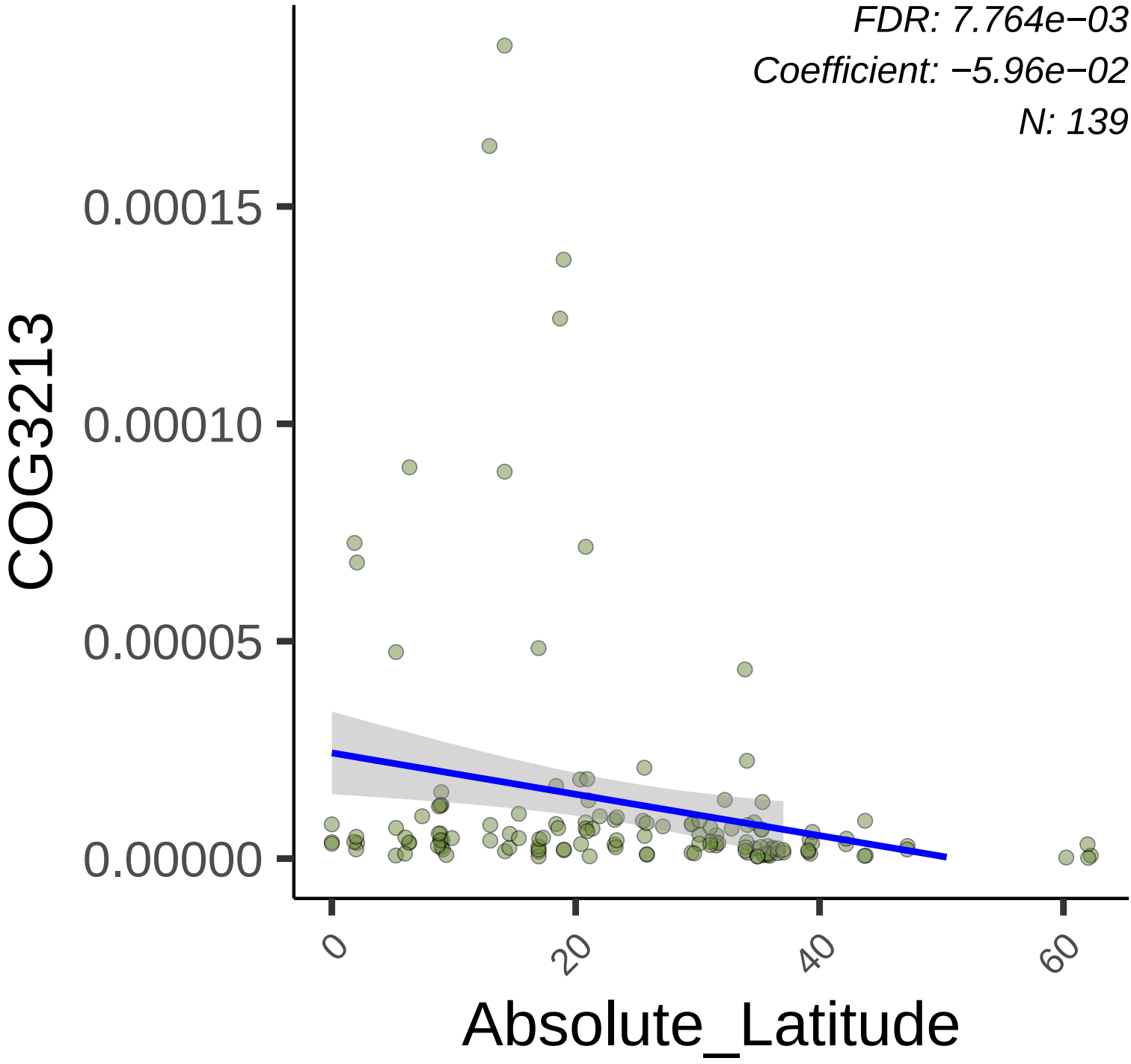

FDR: 7.654e−03
Coefficient: 7.16e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG1329
0
20
40
60
Absolute_Latitude

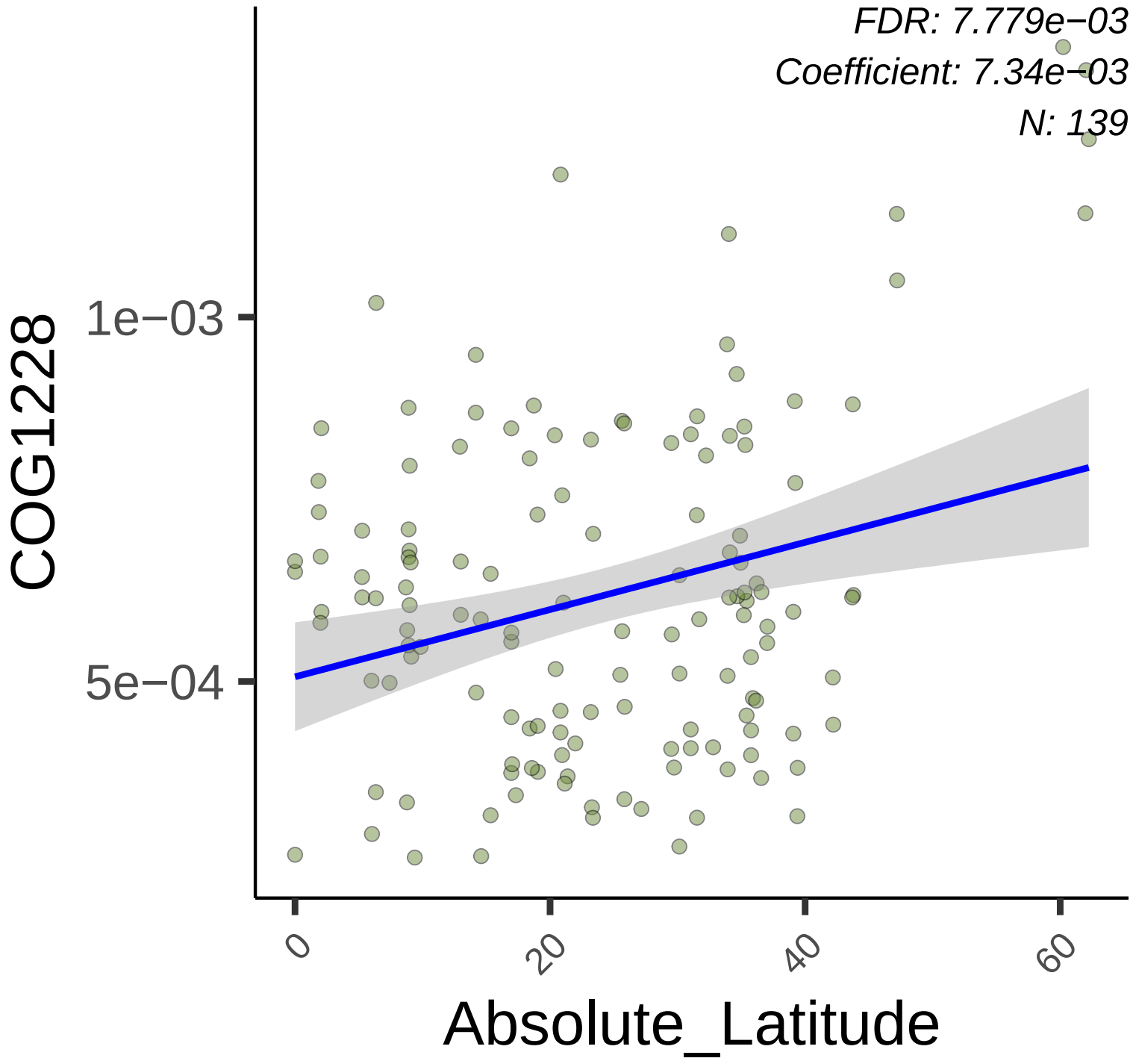

FDR: 7.654e−03
Coefficient: −3.56e−02
N: 139
COG3464
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

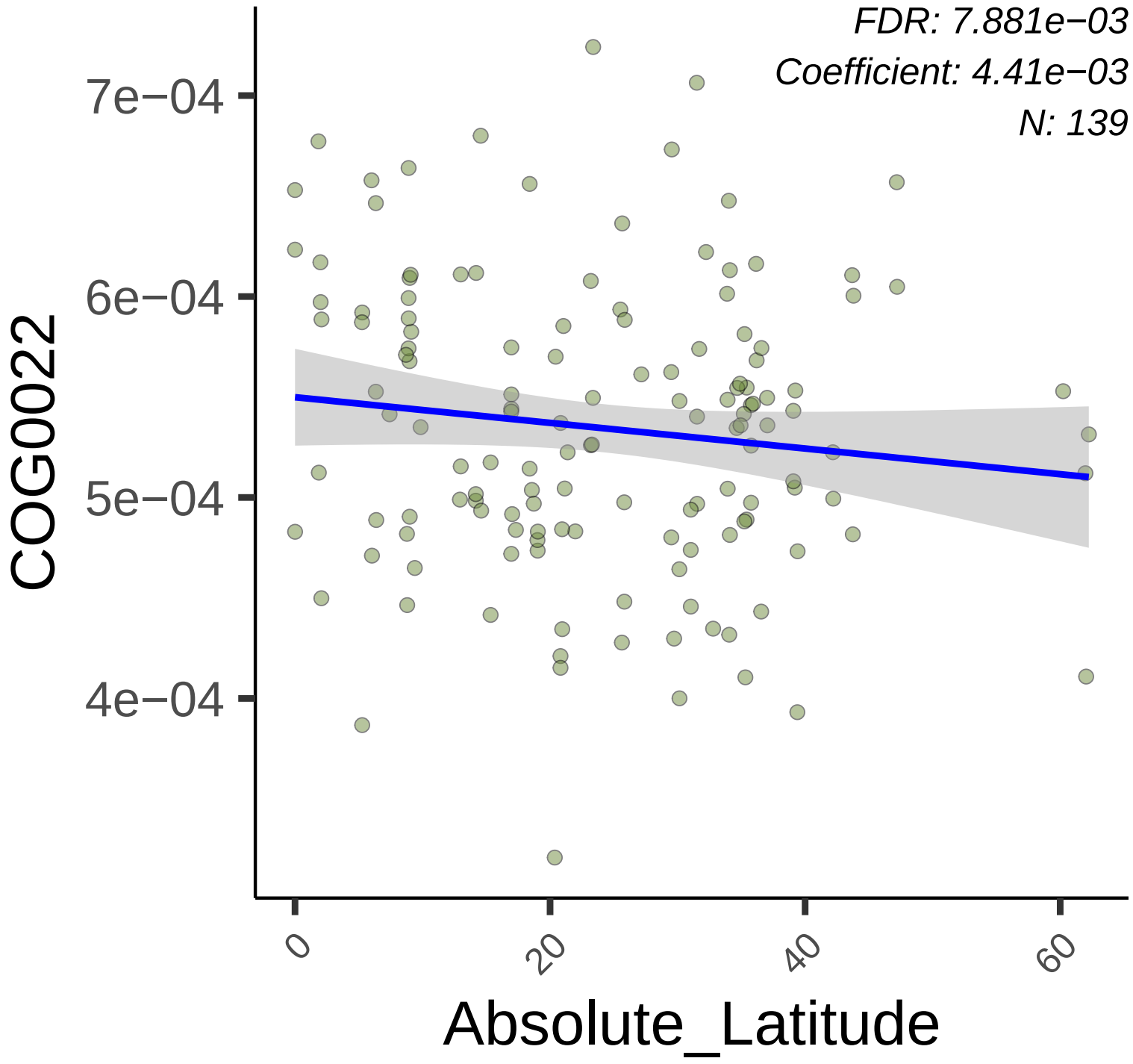

FDR: 7.727e−03
Coefficient: −3.46e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG5135
0
20
40
60
Absolute_Latitude

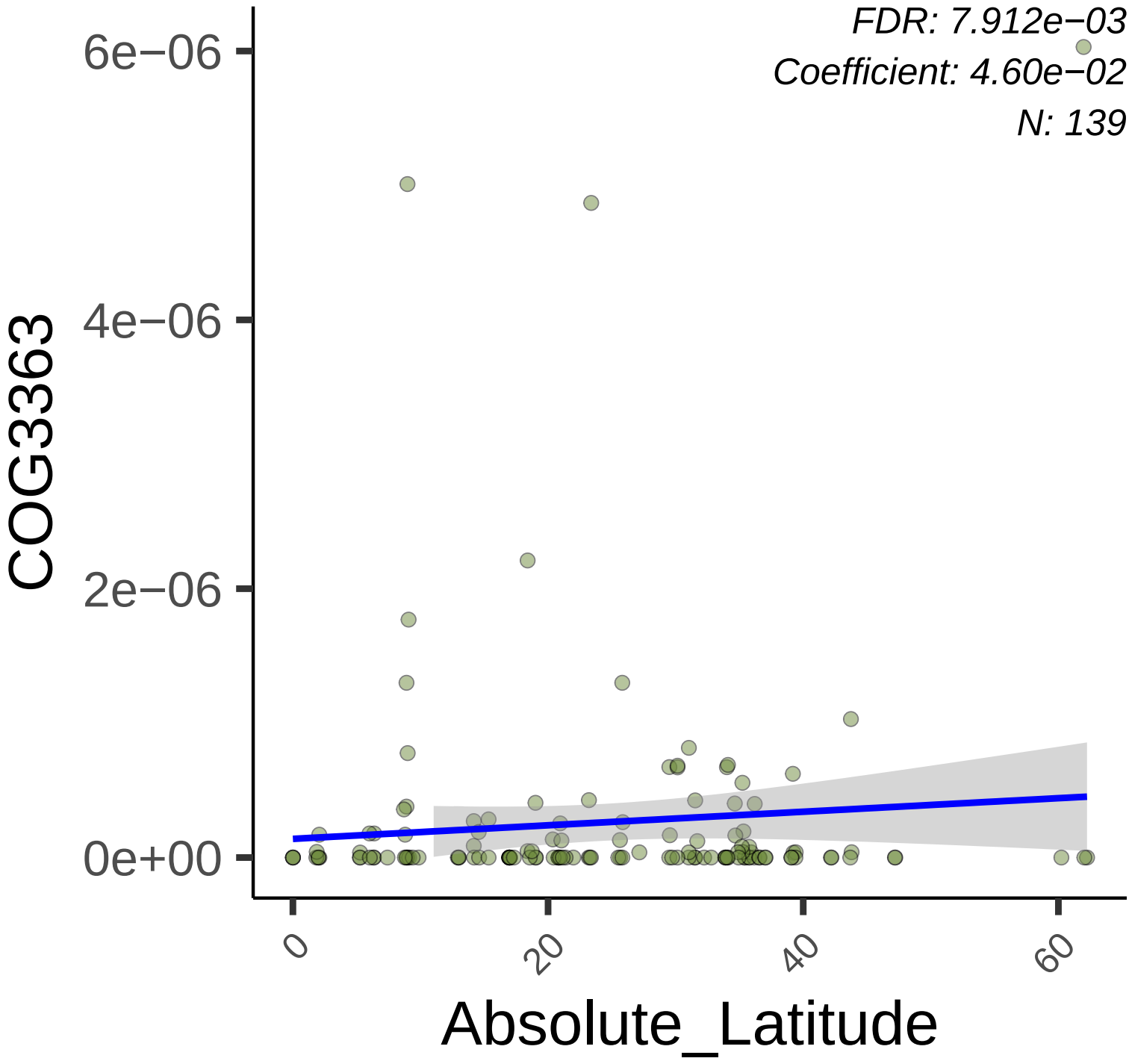

FDR: 7.737e−03
Coefficient: 3.92e−03
N: 139
0.0040
0.0035
0.0030
0.0025
0.0020
COG1024
0
20
40
60
Absolute_Latitude

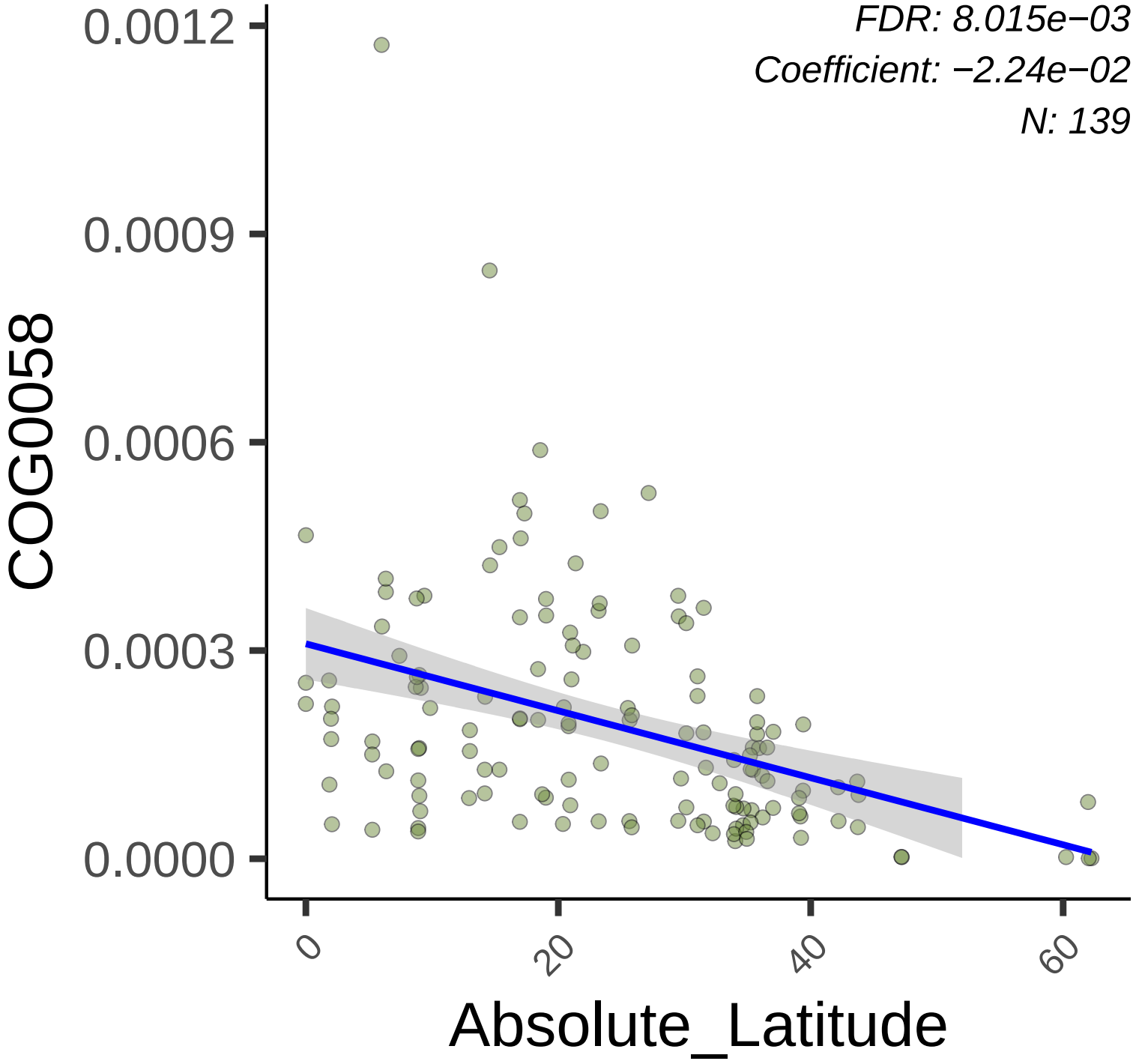

FDR: 7.737e−03
Coefficient: −3.00e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG3093
0
20
40
60
Absolute_Latitude

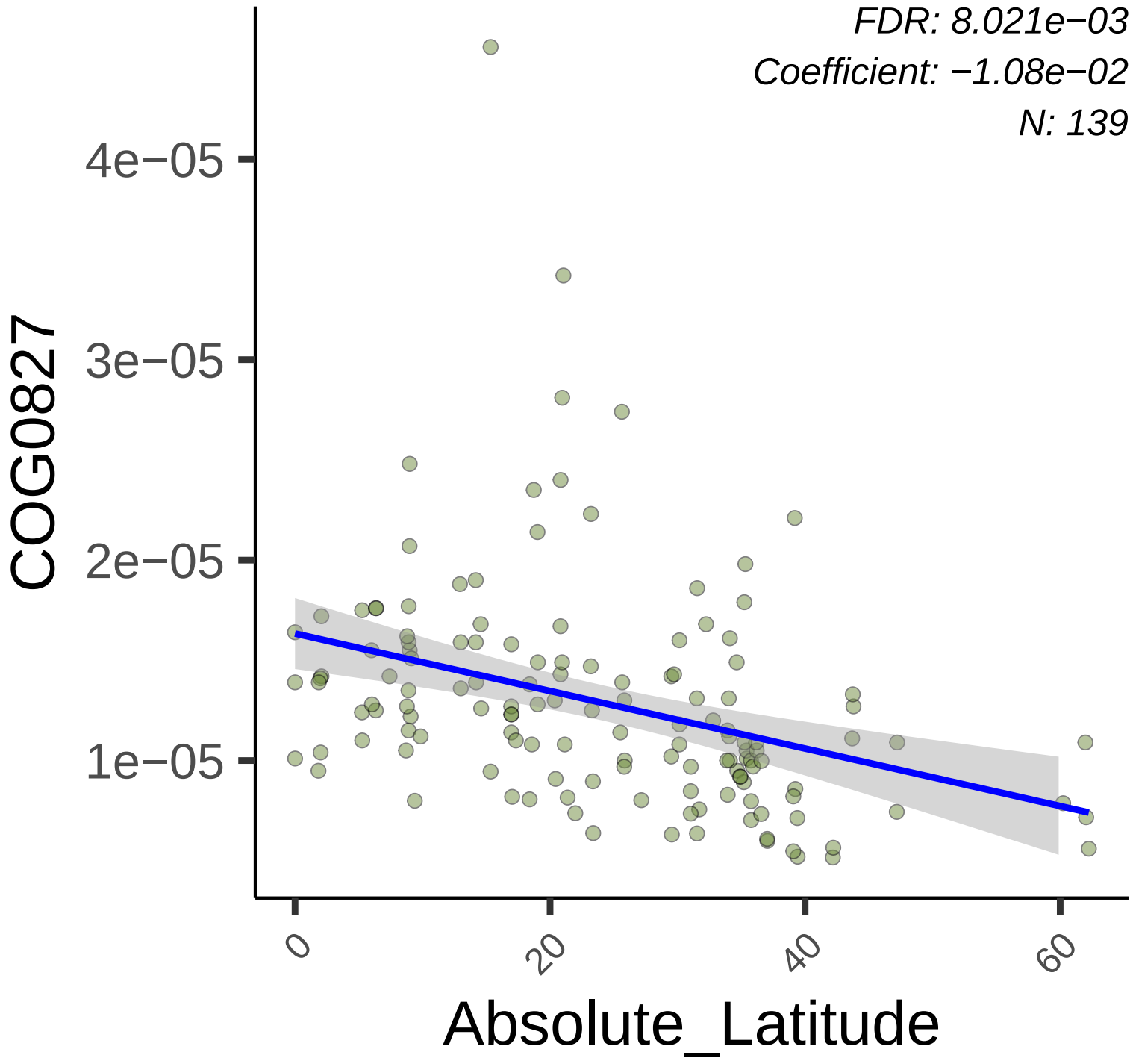

FDR: 7.764e−03
Coefficient: −5.96e−02
N: 139
COG3213
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

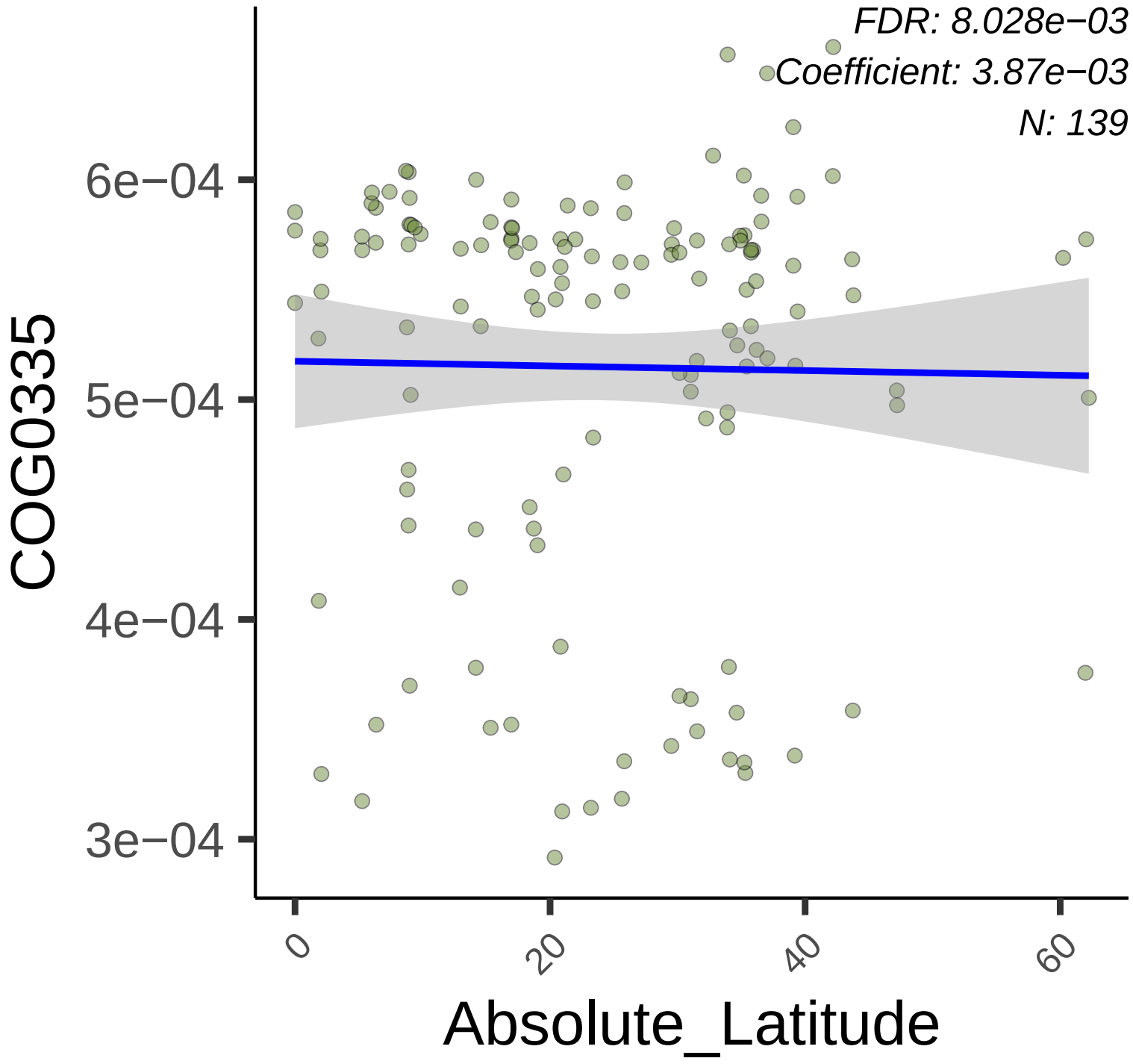

FDR: 7.779e−03
Coefficient: 7.34e−03
N: 139
COG1228
1e−03
5e−04
0
20
40
60
Absolute_Latitude

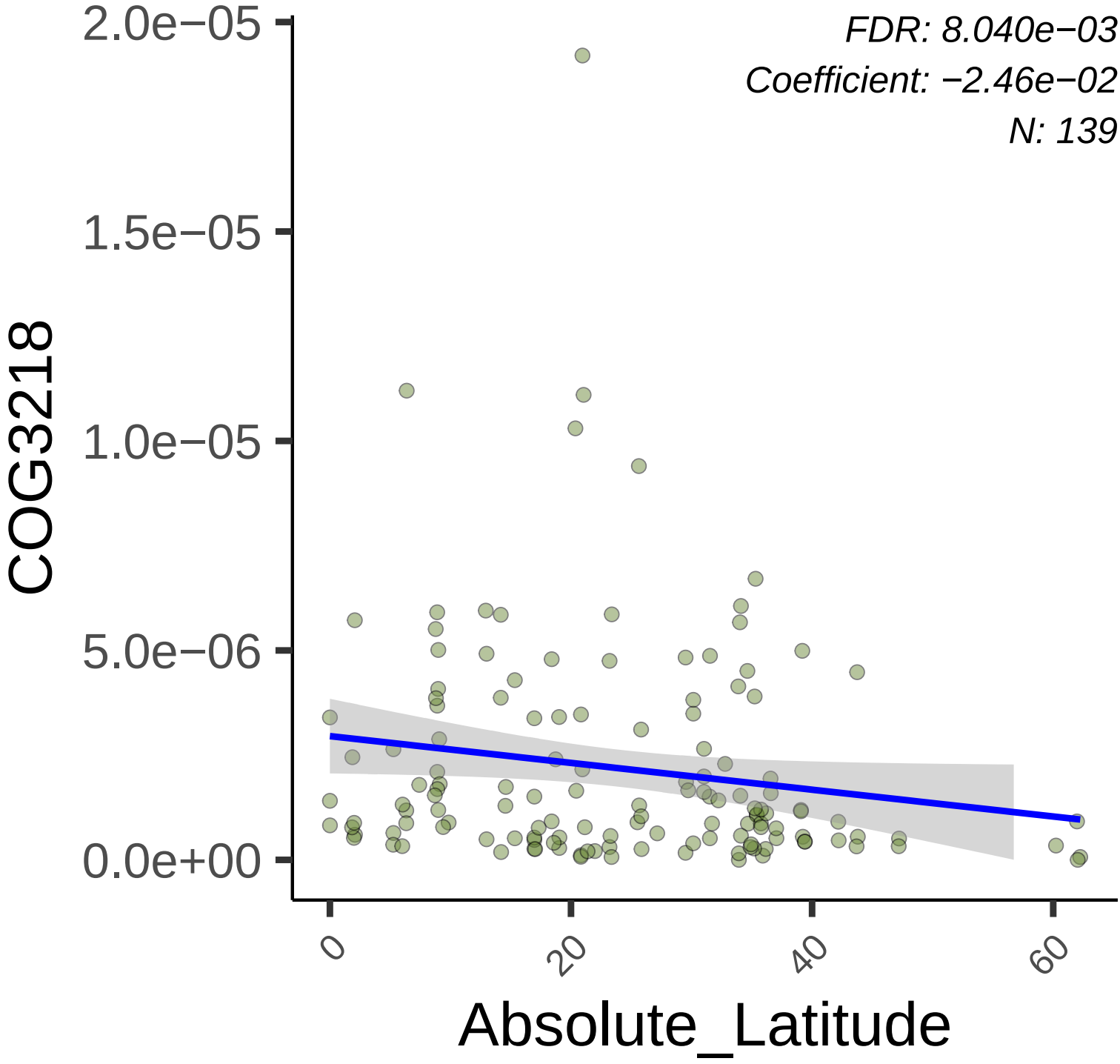

FDR: 7.881e−03
Coefficient: 4.41e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0022
0
20
40
60
Absolute_Latitude

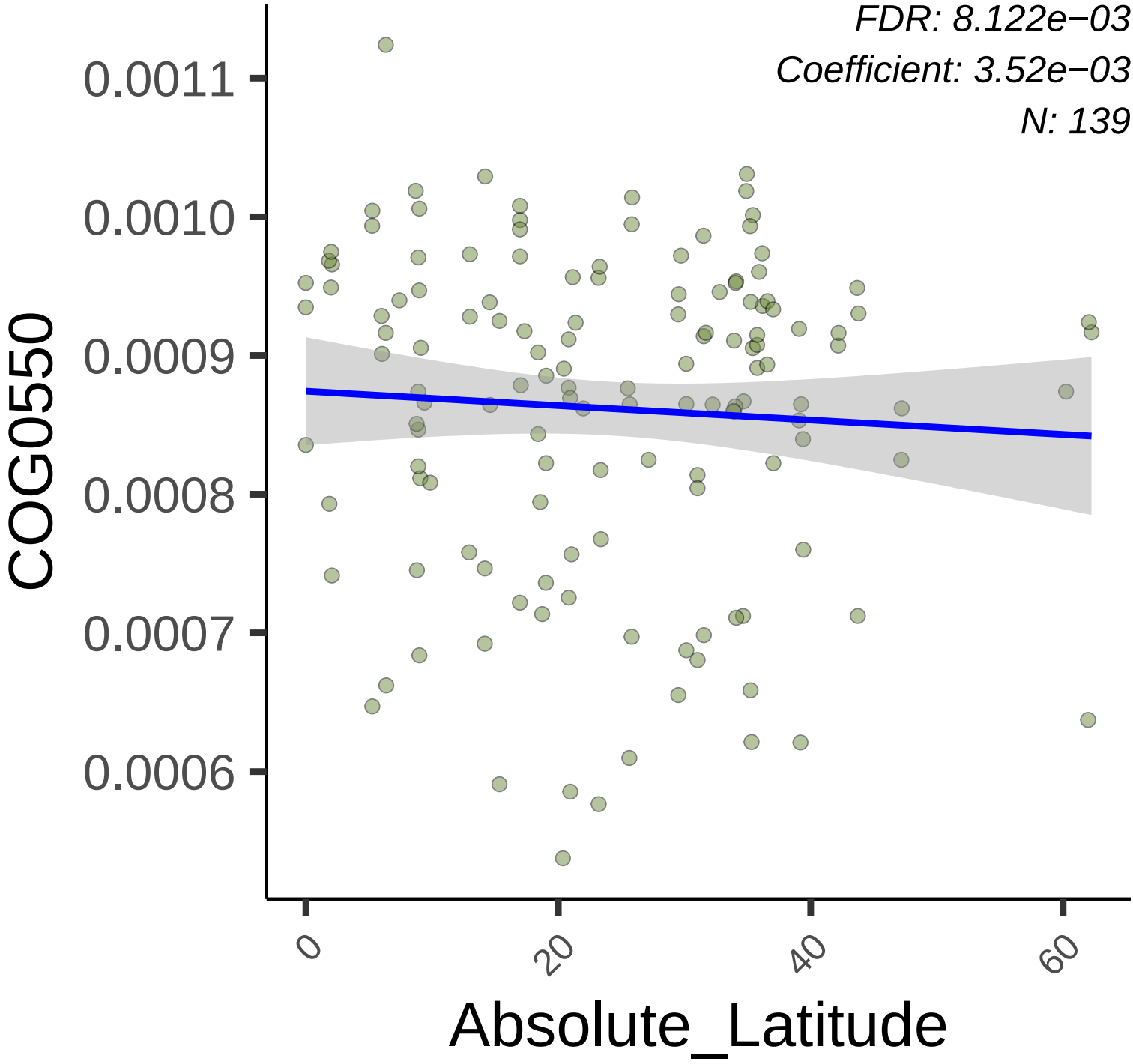

FDR: 7.912e−03
Coefficient: 4.60e−02
N: 139
6e−06
4e−06
2e−06
0e+00
COG3363
0
20
40
60
Absolute_Latitude

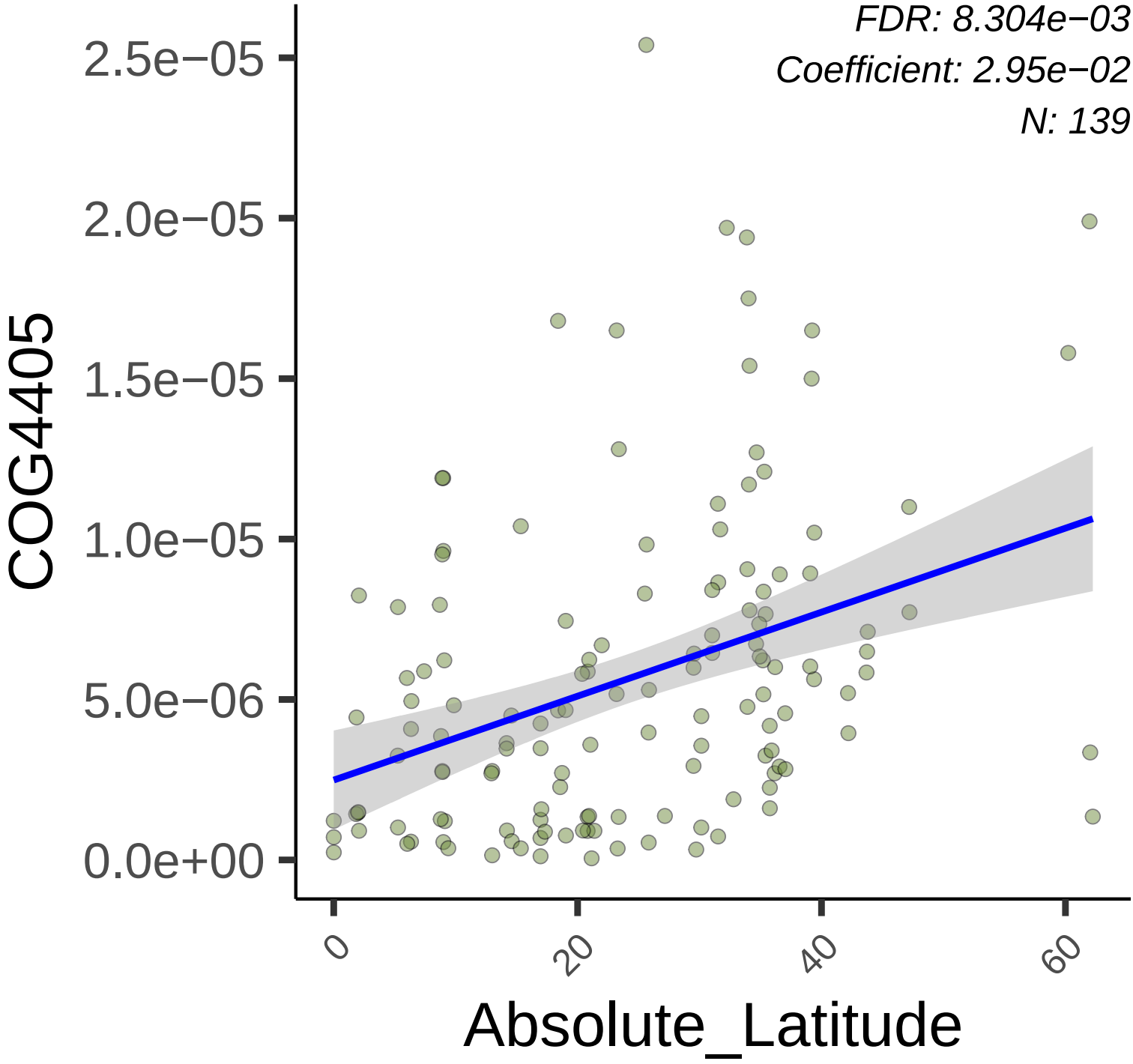

FDR: 8.015e−03
Coefficient: −2.24e−02
N: 139
0.0012
0.0009
0.0006
0.0003
0.0000
COG0058
0
20
40
60
Absolute_Latitude

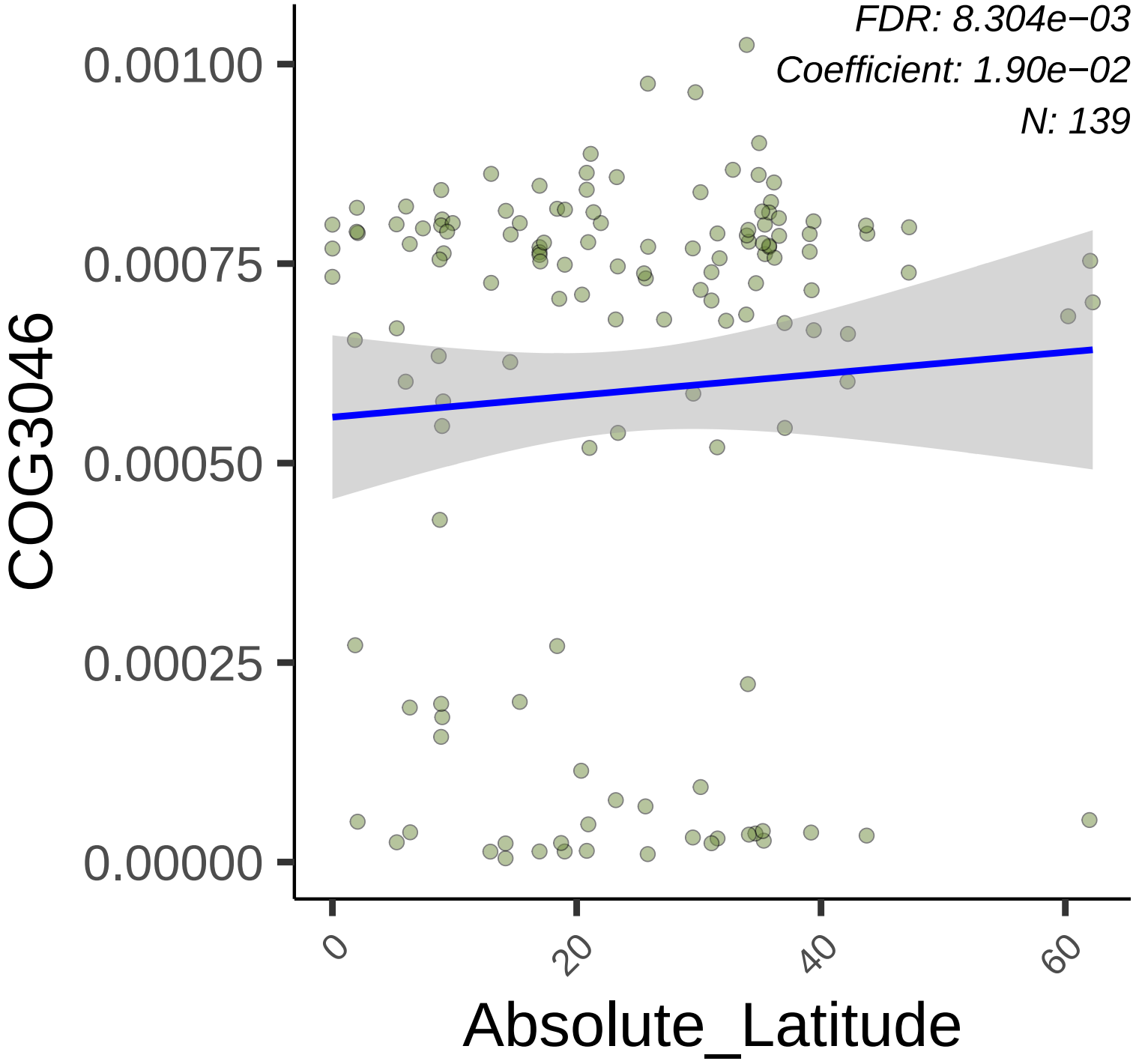

FDR: 8.021e−03
Coefficient: −1.08e−02
N: 139
COG0827
4e−05
3e−05
2e−05
1e−05
0
20
40
60
Absolute_Latitude

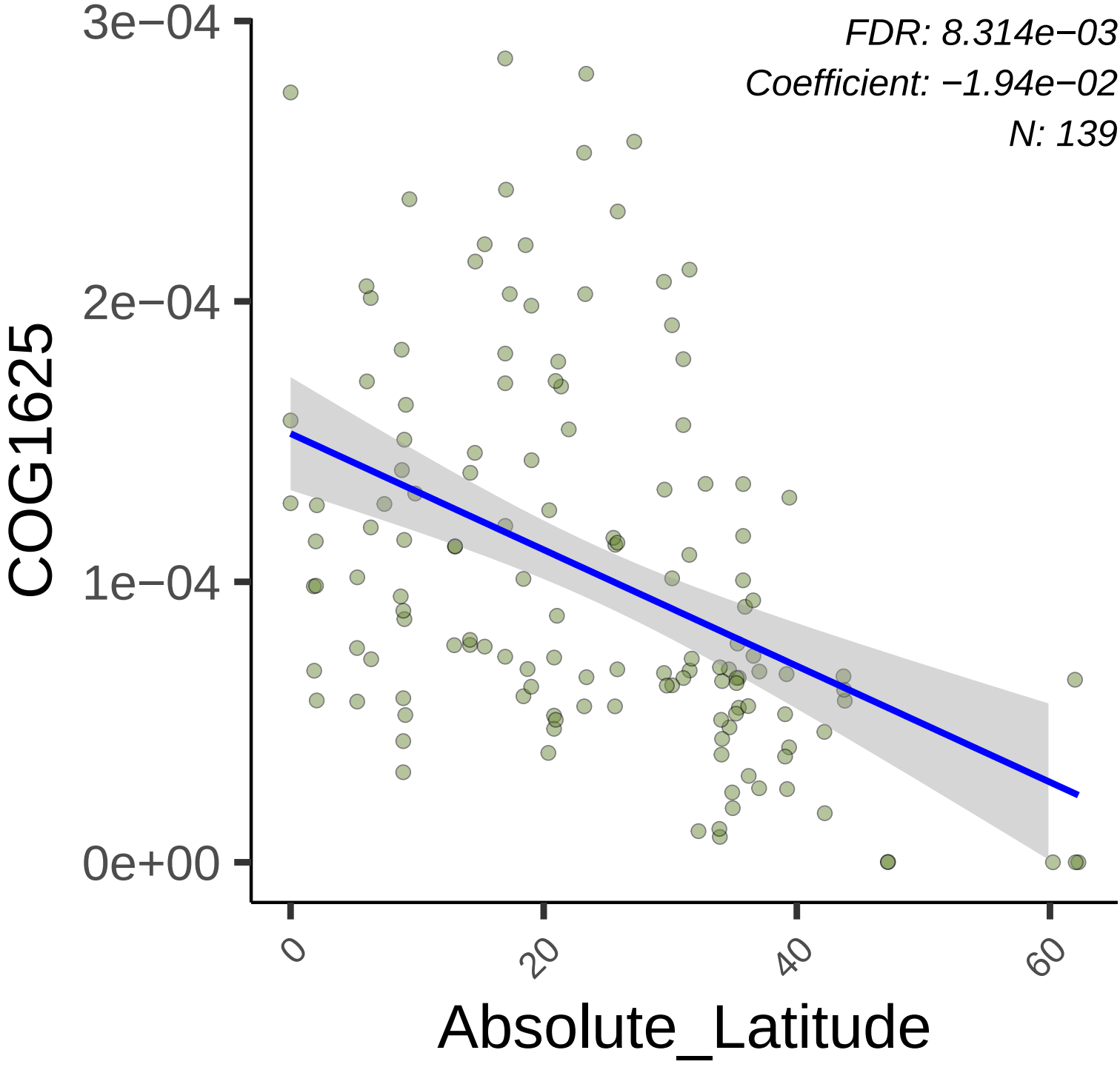

FDR: 8.028e−03
Coefficient: 3.87e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0335
0
20
40
60
Absolute_Latitude

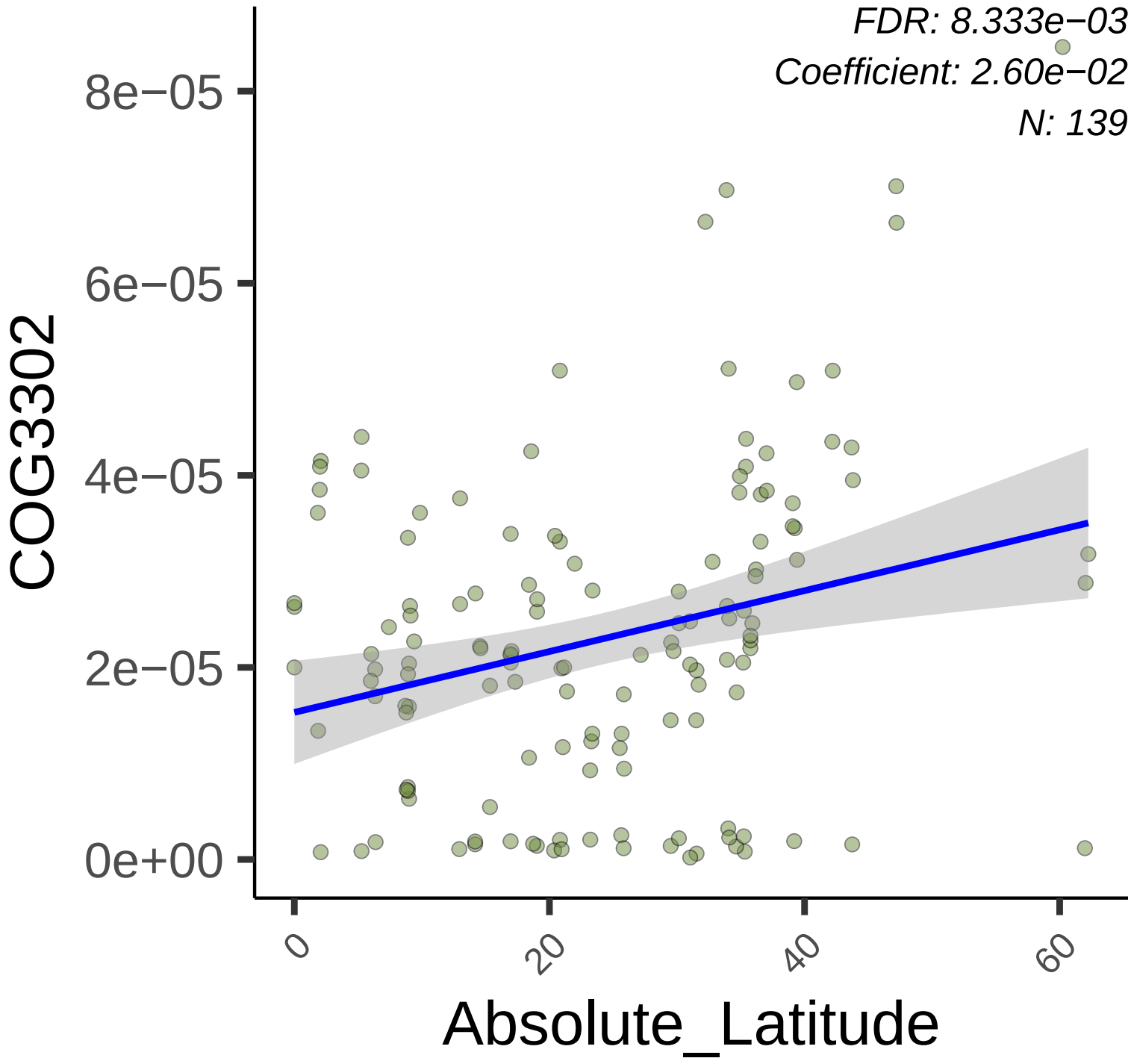

FDR: 8.040e−03
Coefficient: −2.46e−02
N: 139
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG3218
0
20
40
60
Absolute_Latitude

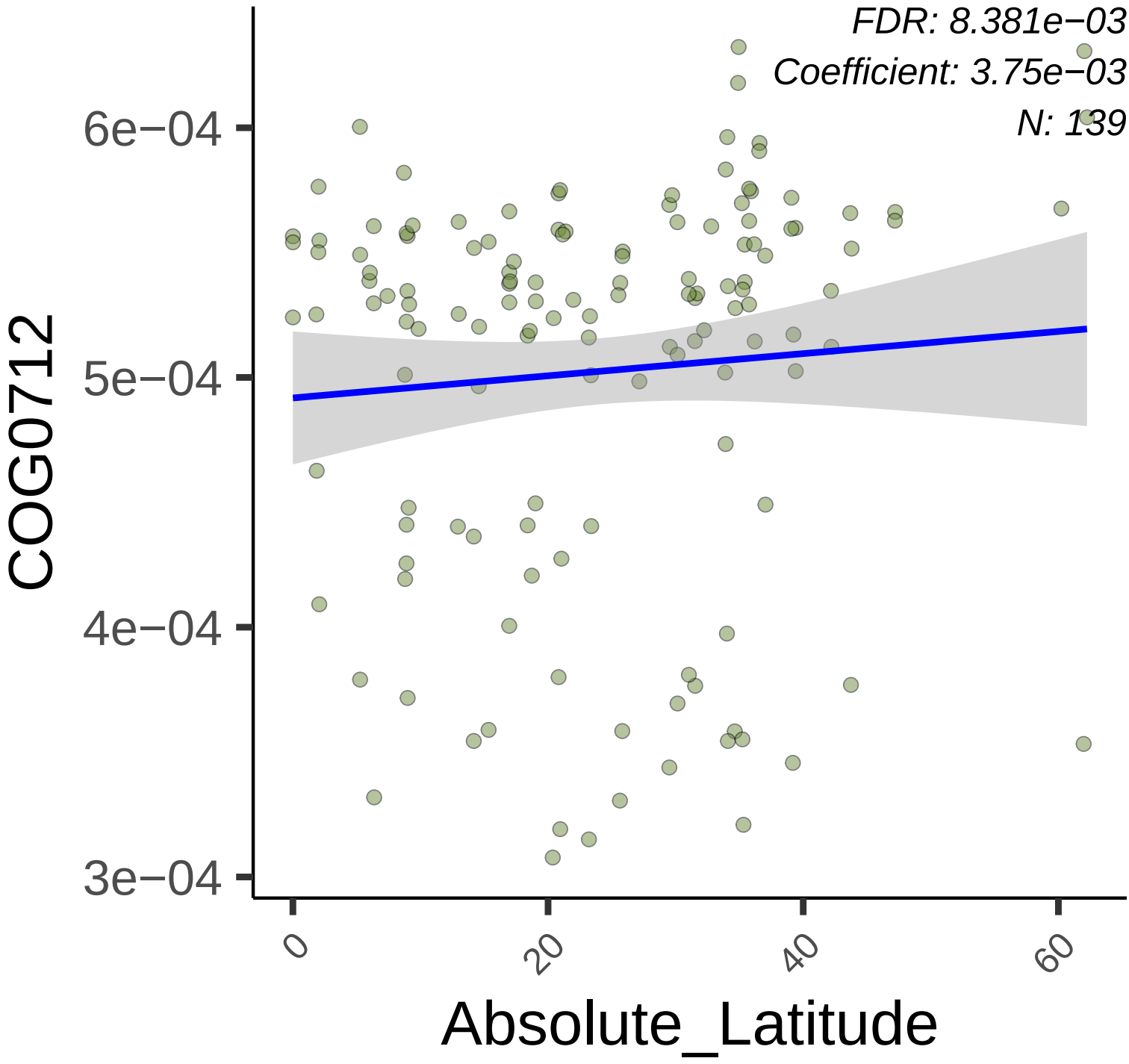

FDR: 8.122e−03
Coefficient: 3.52e−03
N: 139
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
COG0550
0
20
40
60
Absolute_Latitude

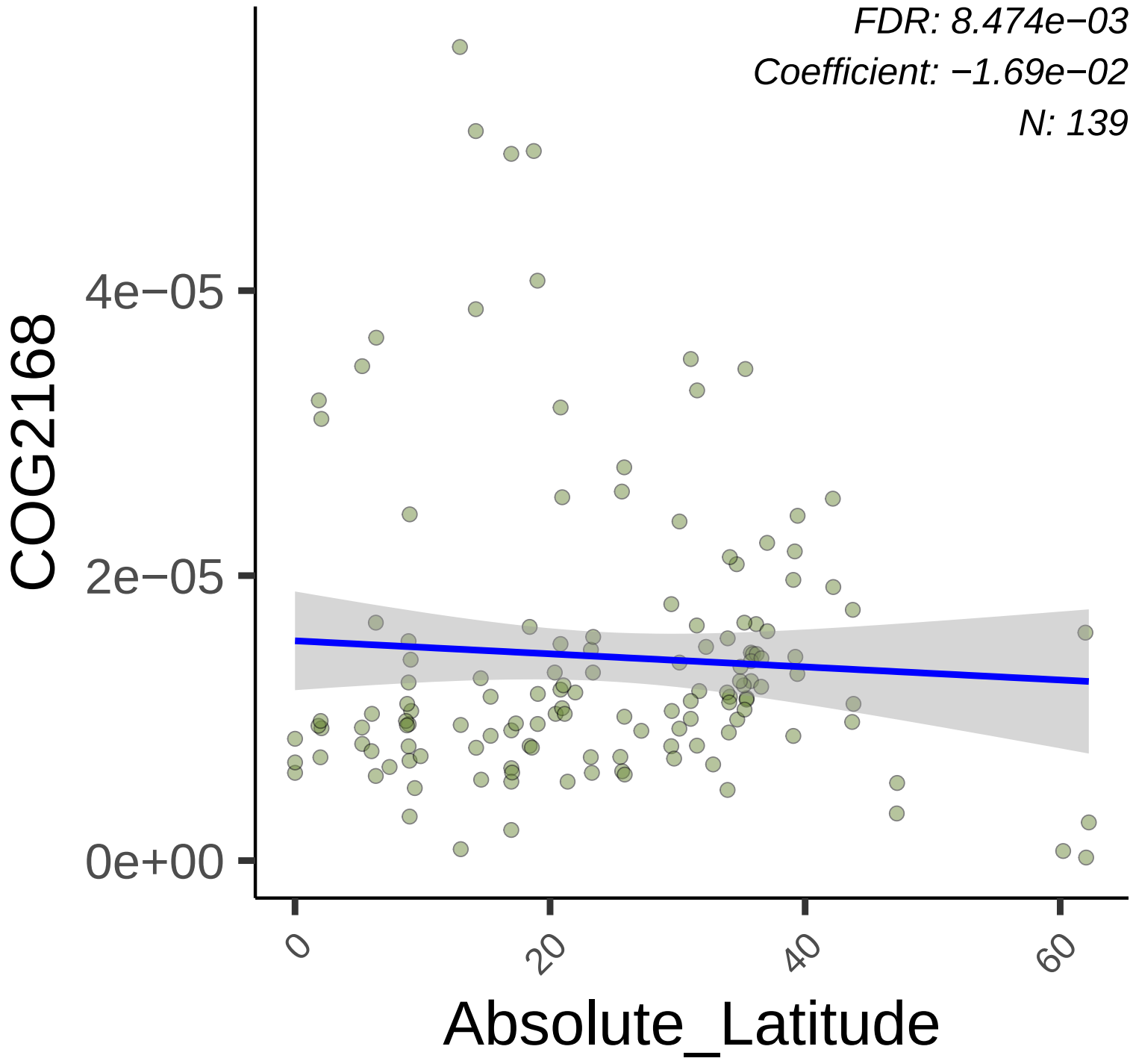

FDR: 8.304e−03
Coefficient: 2.95e−02
N: 139
COG4405
2.5e−05
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

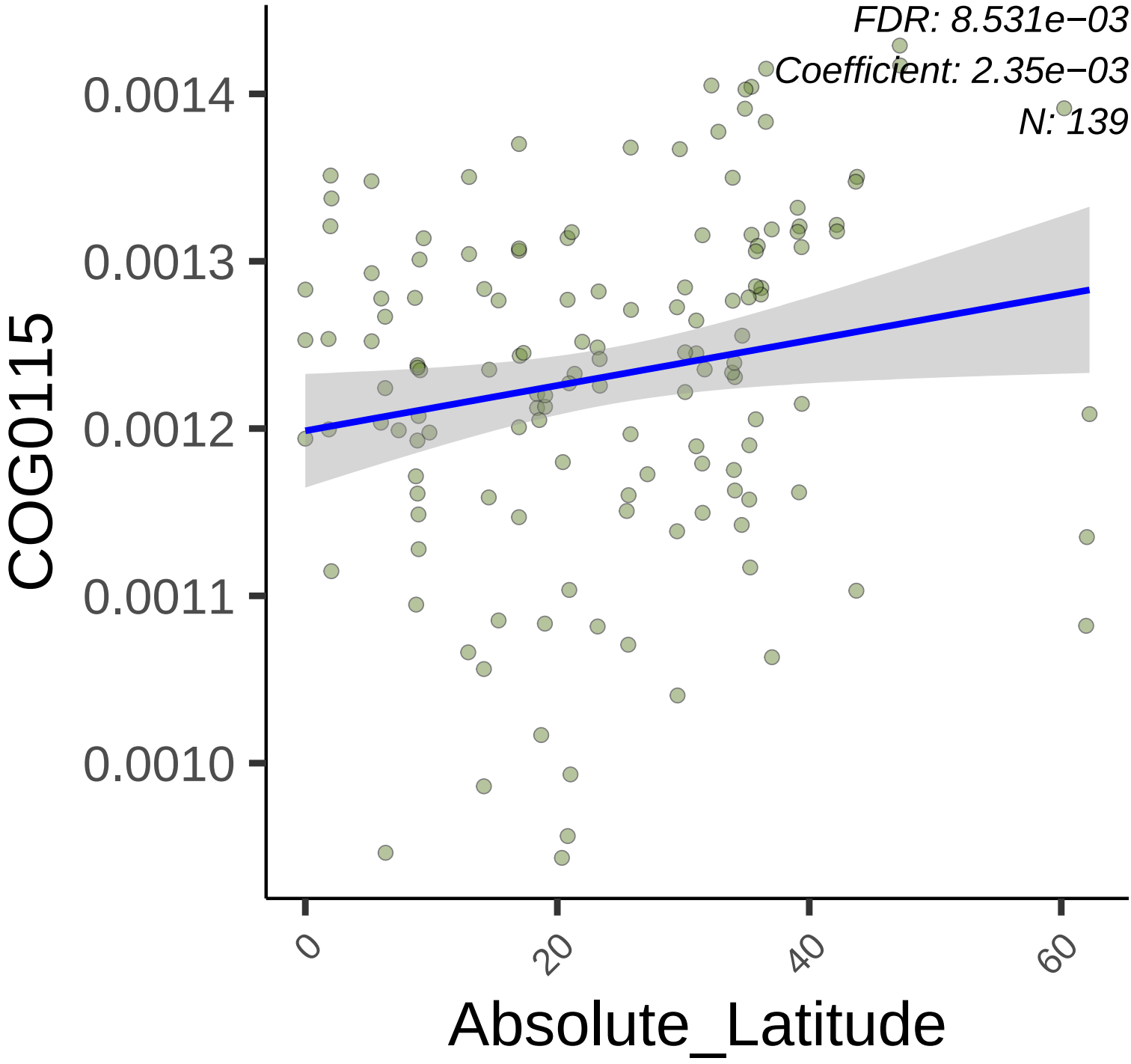

FDR: 8.304e−03
Coefficient: 1.90e−02
N: 139
0.00100
0.00075
0.00050
0.00025
0.00000
COG3046
0
20
40
60
Absolute_Latitude

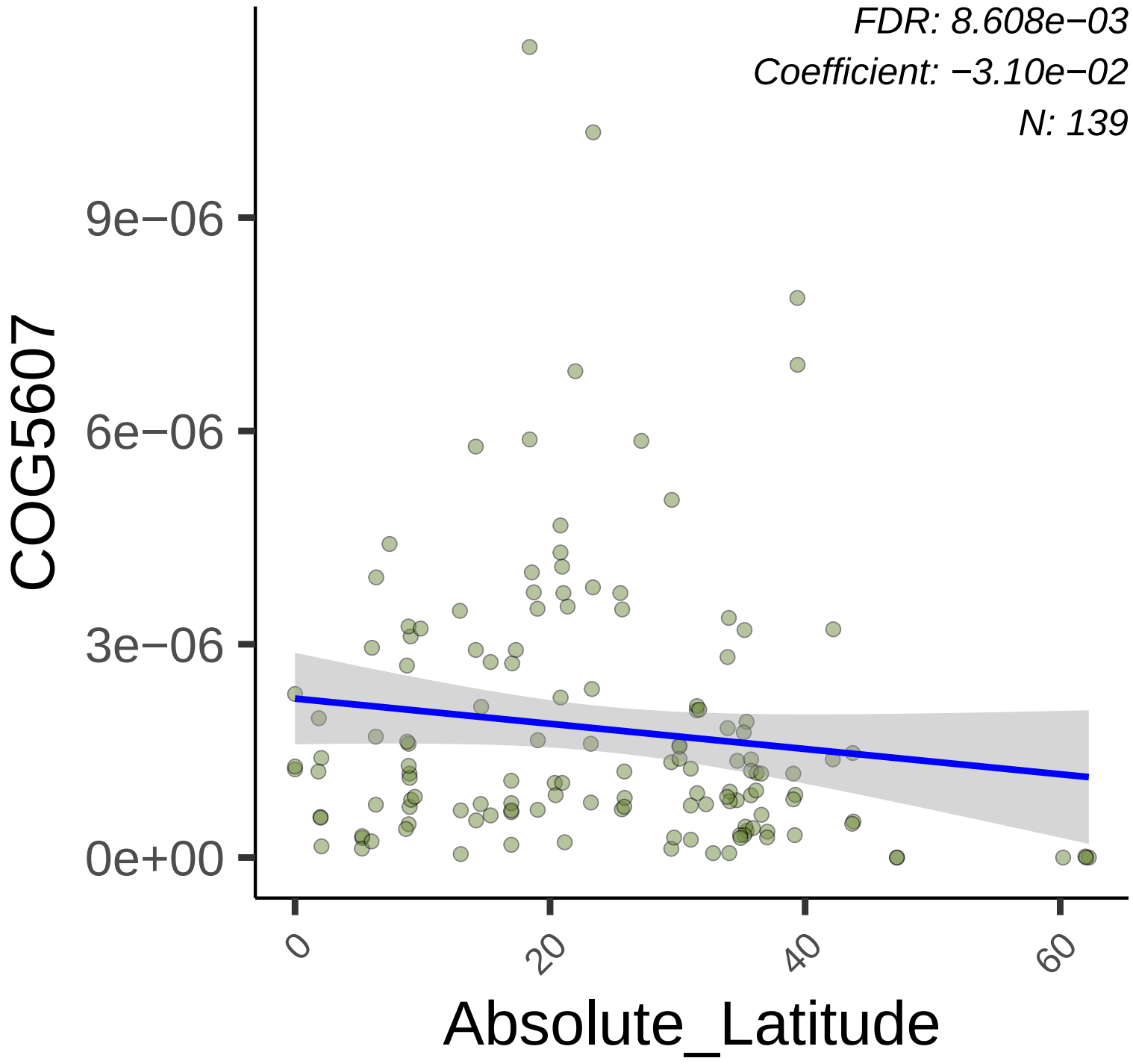

FDR: 8.314e−03
Coefficient: −1.94e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG1625
0
20
40
60
Absolute_Latitude

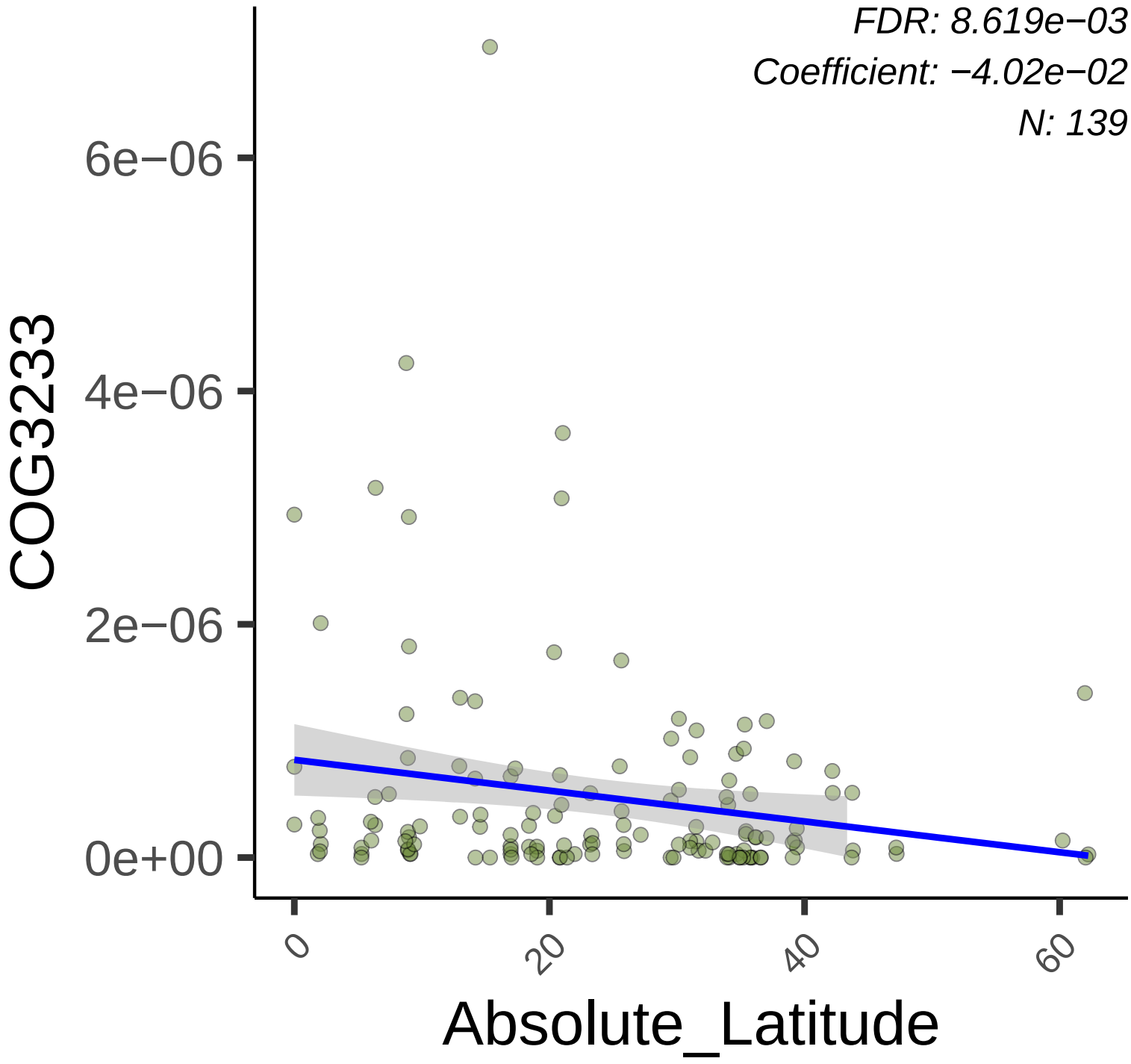

FDR: 8.333e−03
Coefficient: 2.60e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG3302
0
20
40
60
Absolute_Latitude

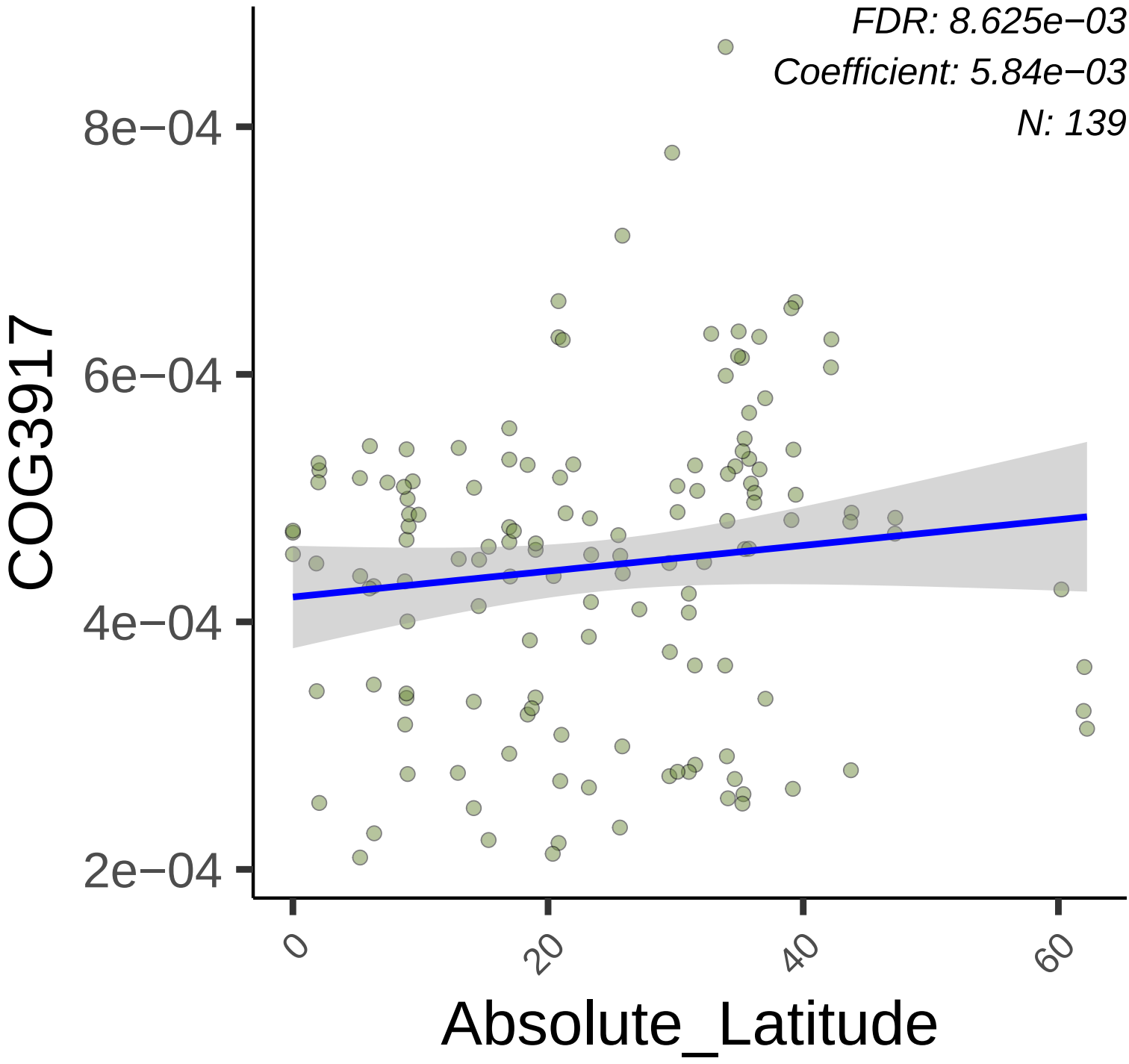

FDR: 8.381e−03
Coefficient: 3.75e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0712
0
20
40
60
Absolute_Latitude

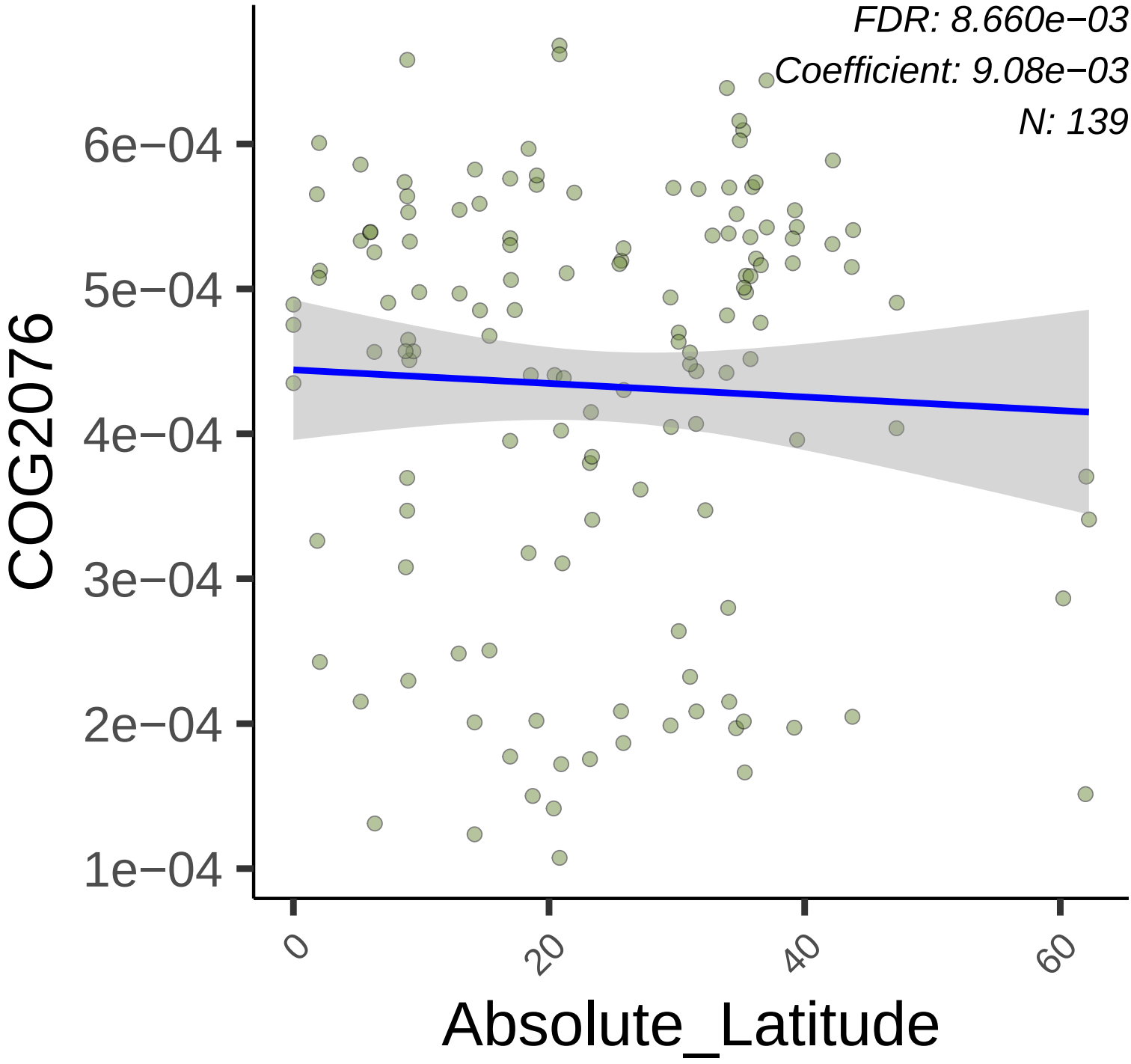

FDR: 8.474e−03
Coefficient: −1.69e−02
N: 139
COG2168
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

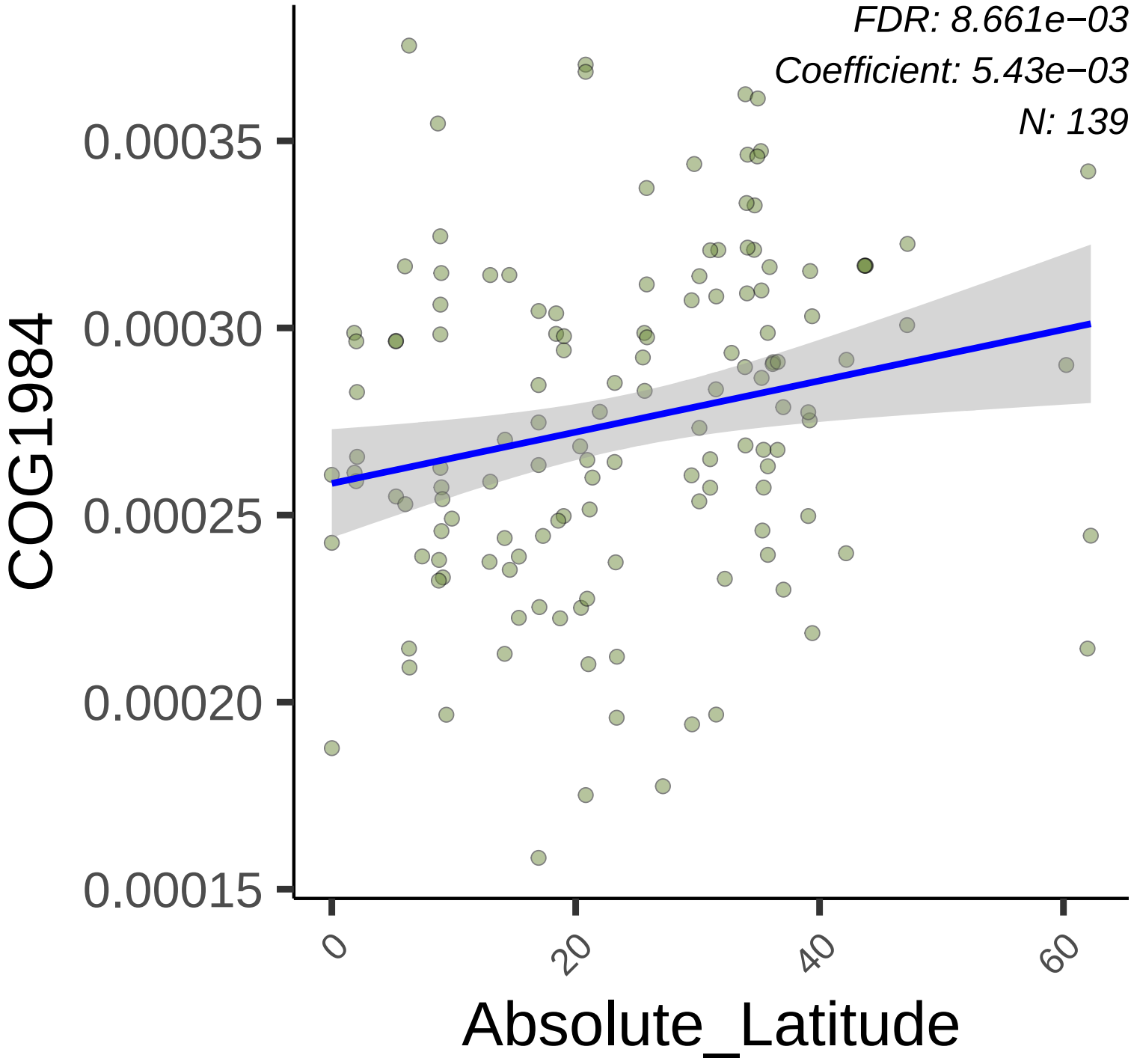

FDR: 8.531e−03
Coefficient: 2.35e−03
N: 139
0.0014
0.0013
0.0012
0.0011
0.0010
COG0115
0
20
40
60
Absolute_Latitude

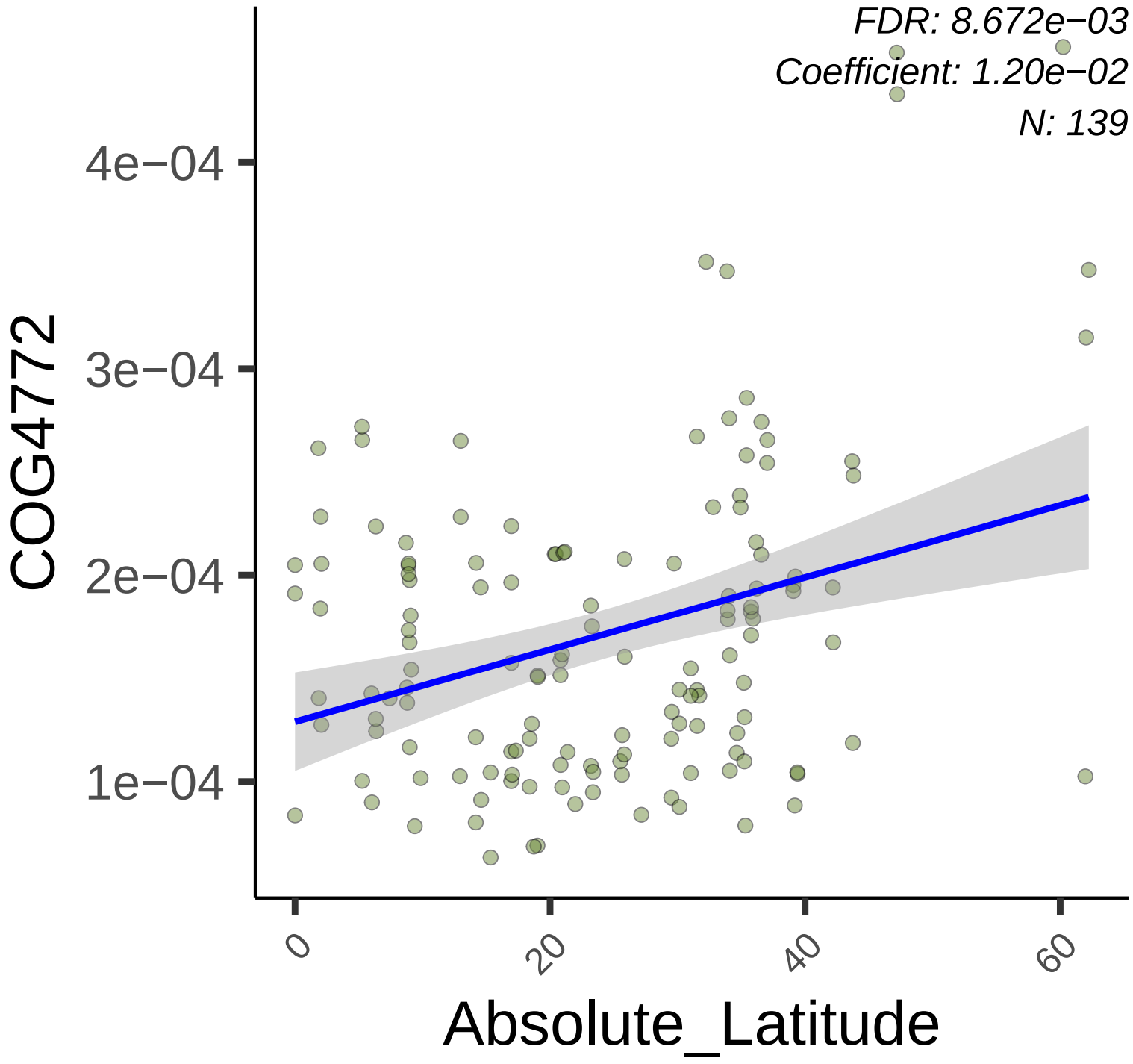

FDR: 8.608e−03
Coefficient: −3.10e−02
N: 139
COG5607
9e−06
6e−06
3e−06
0e+00
0
20
40
60
Absolute_Latitude

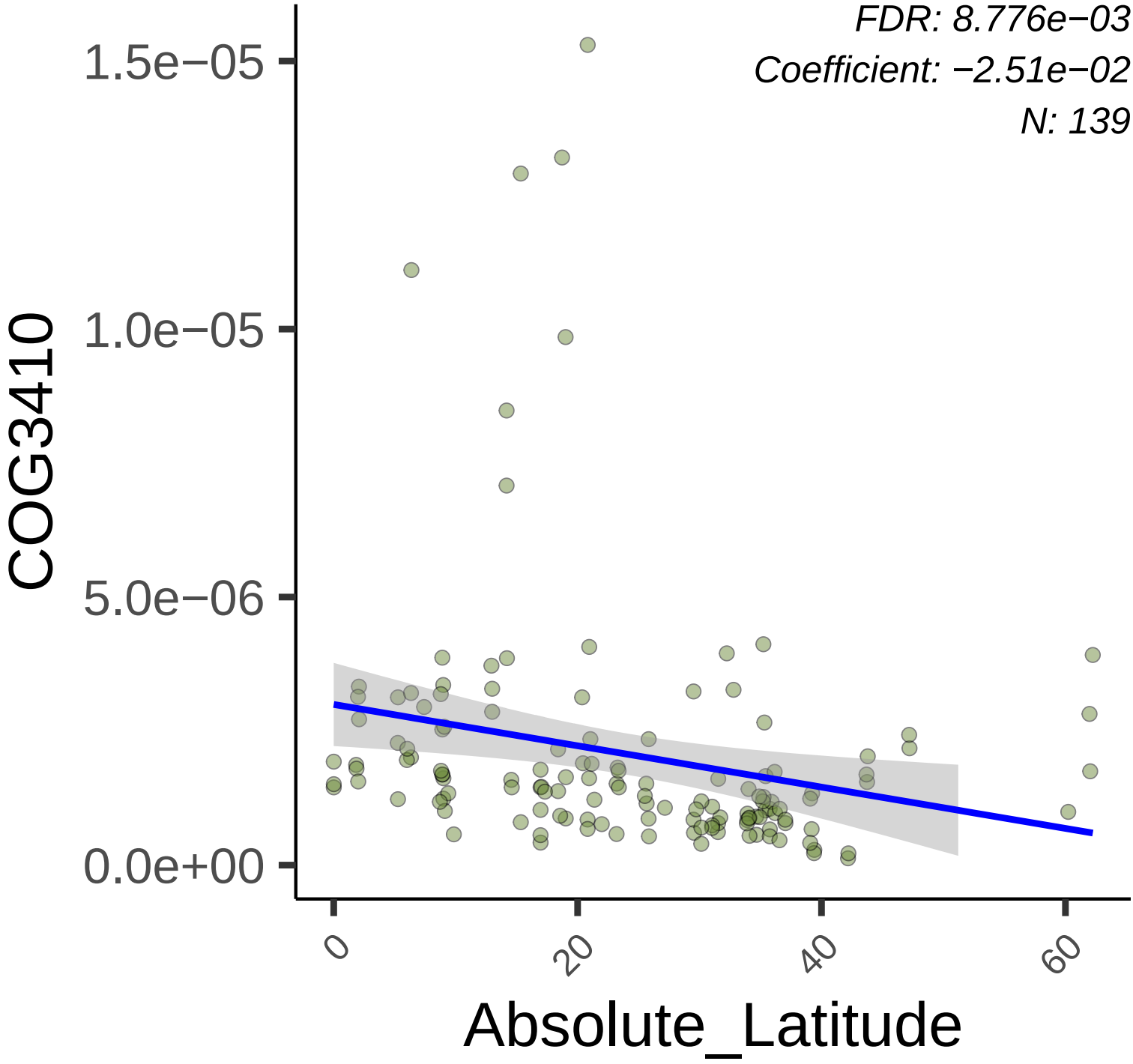

FDR: 8.619e−03
Coefficient: −4.02e−02
N: 139
COG3233
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

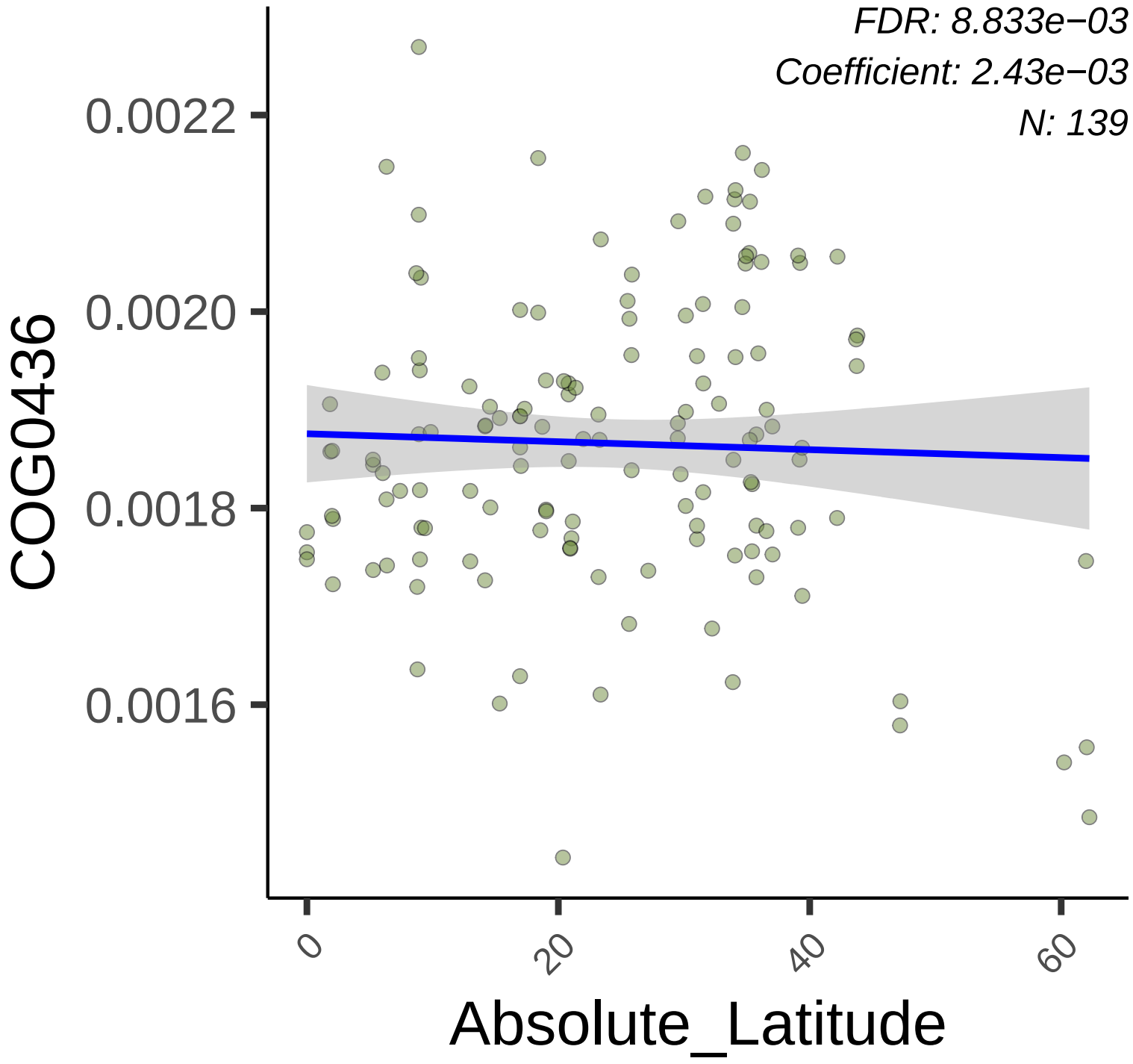

FDR: 8.625e−03
Coefficient: 5.84e−03
N: 139
8e−04
6e−04
4e−04
2e−04
COG3917
0
20
40
60
Absolute_Latitude

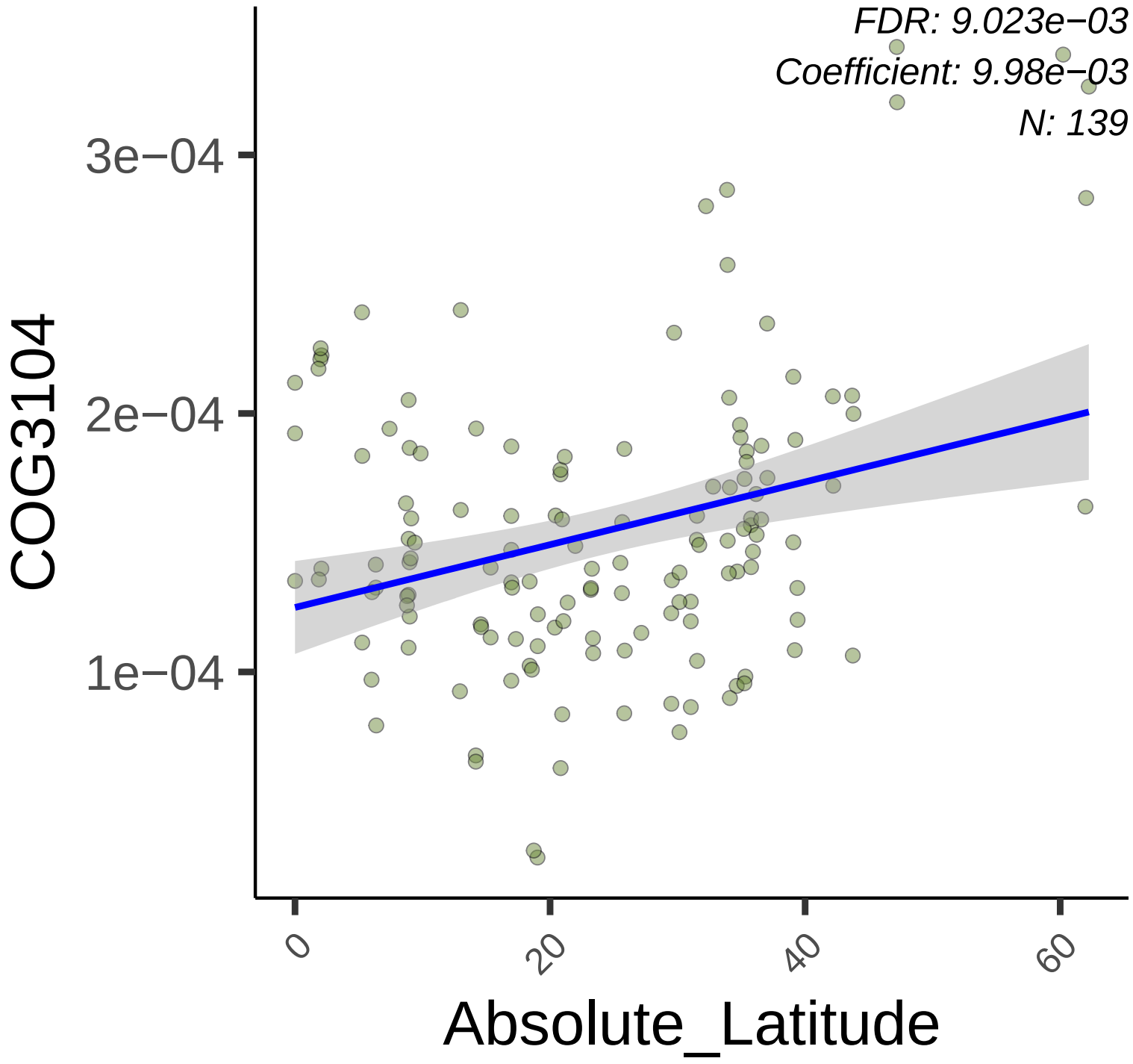

FDR: 8.660e−03
Coefficient: 9.08e−03
N: 139
COG2076
6e−04
5e−04
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

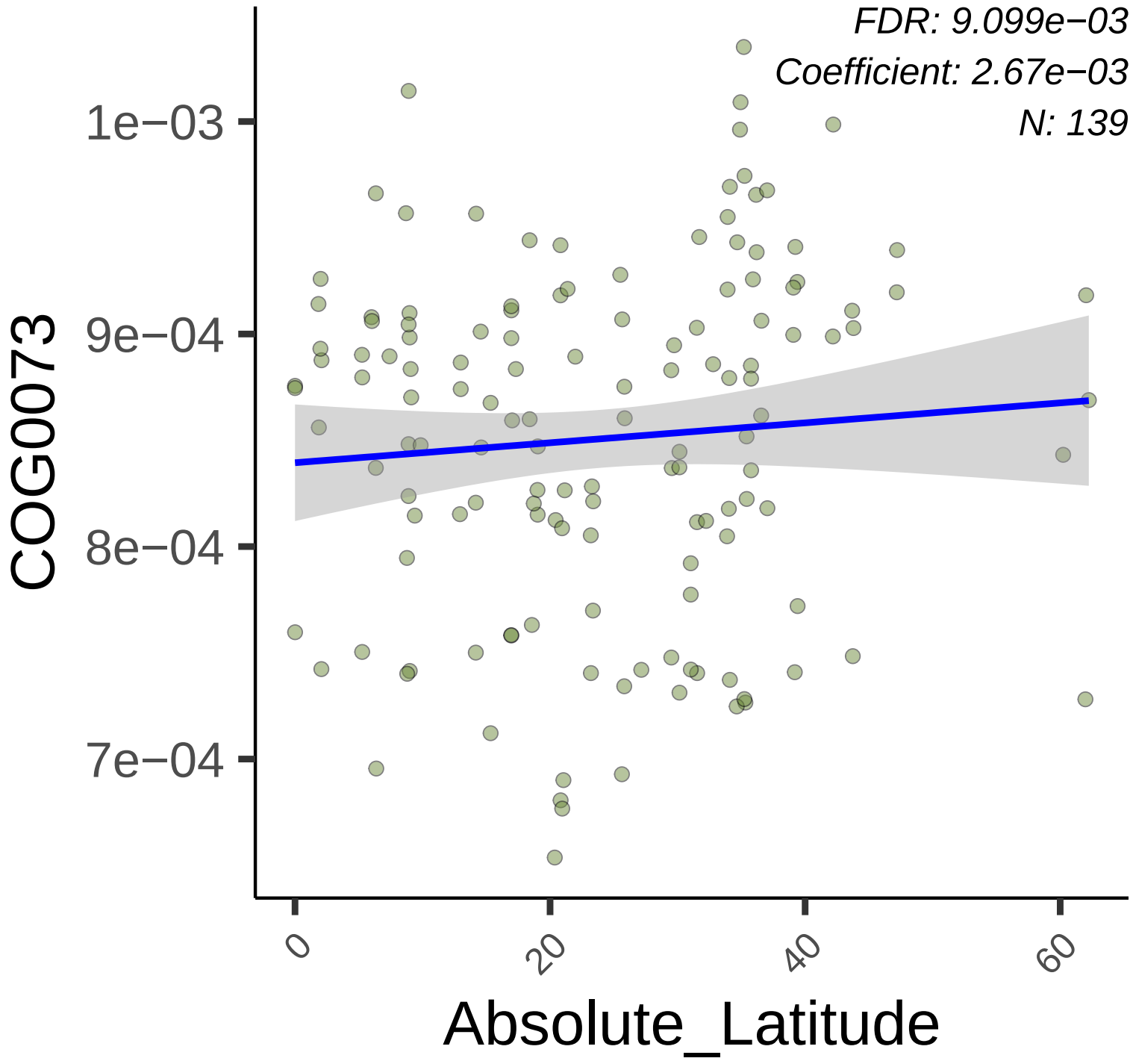

FDR: 8.661e−03
Coefficient: 5.43e−03
N: 139
COG1984
0.00035
0.00030
0.00025
0.00020
0.00015
0
20
40
60
Absolute_Latitude

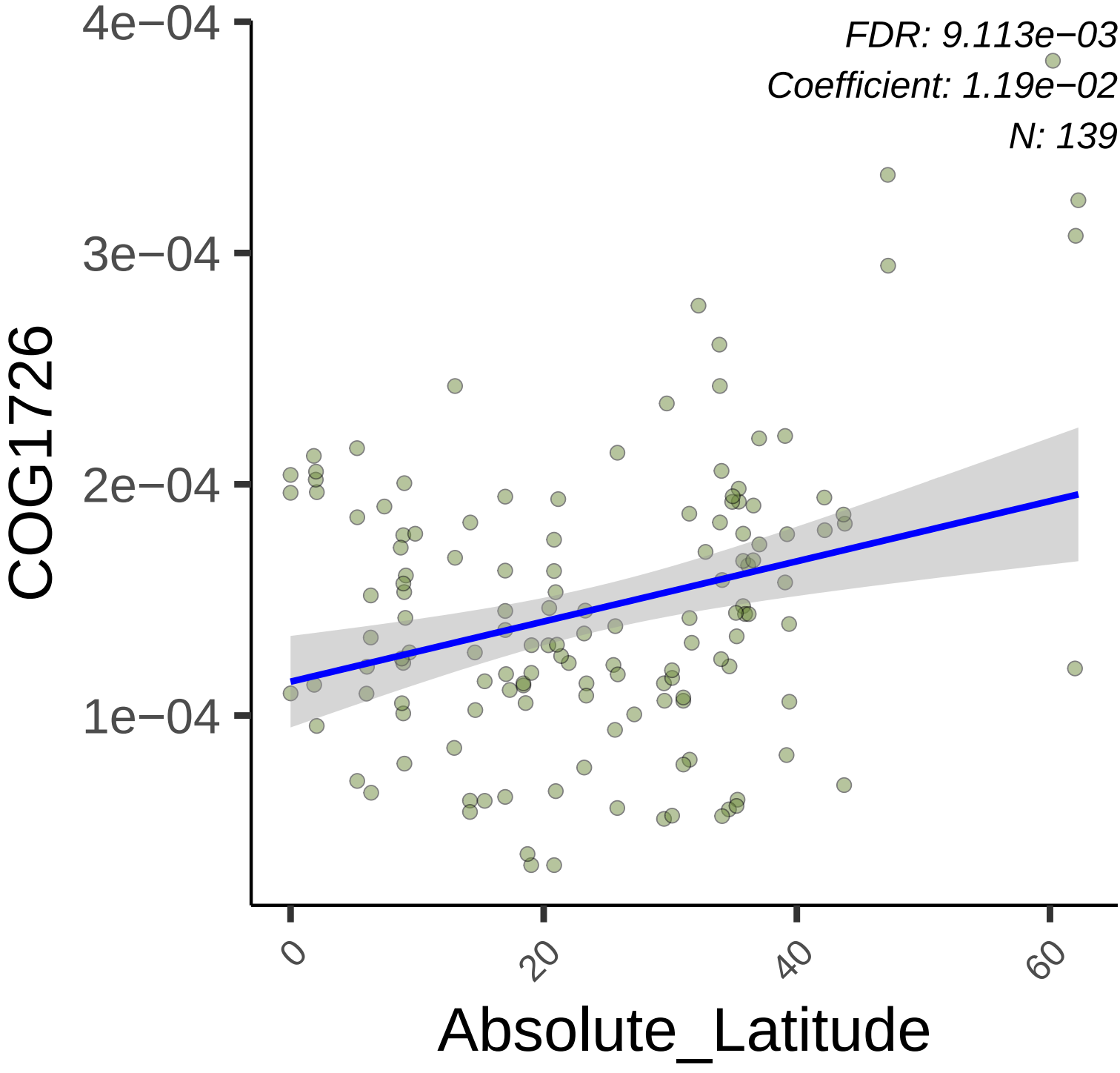

FDR: 8.672e−03
Coefficient: 1.20e−02
N: 139
COG4772
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

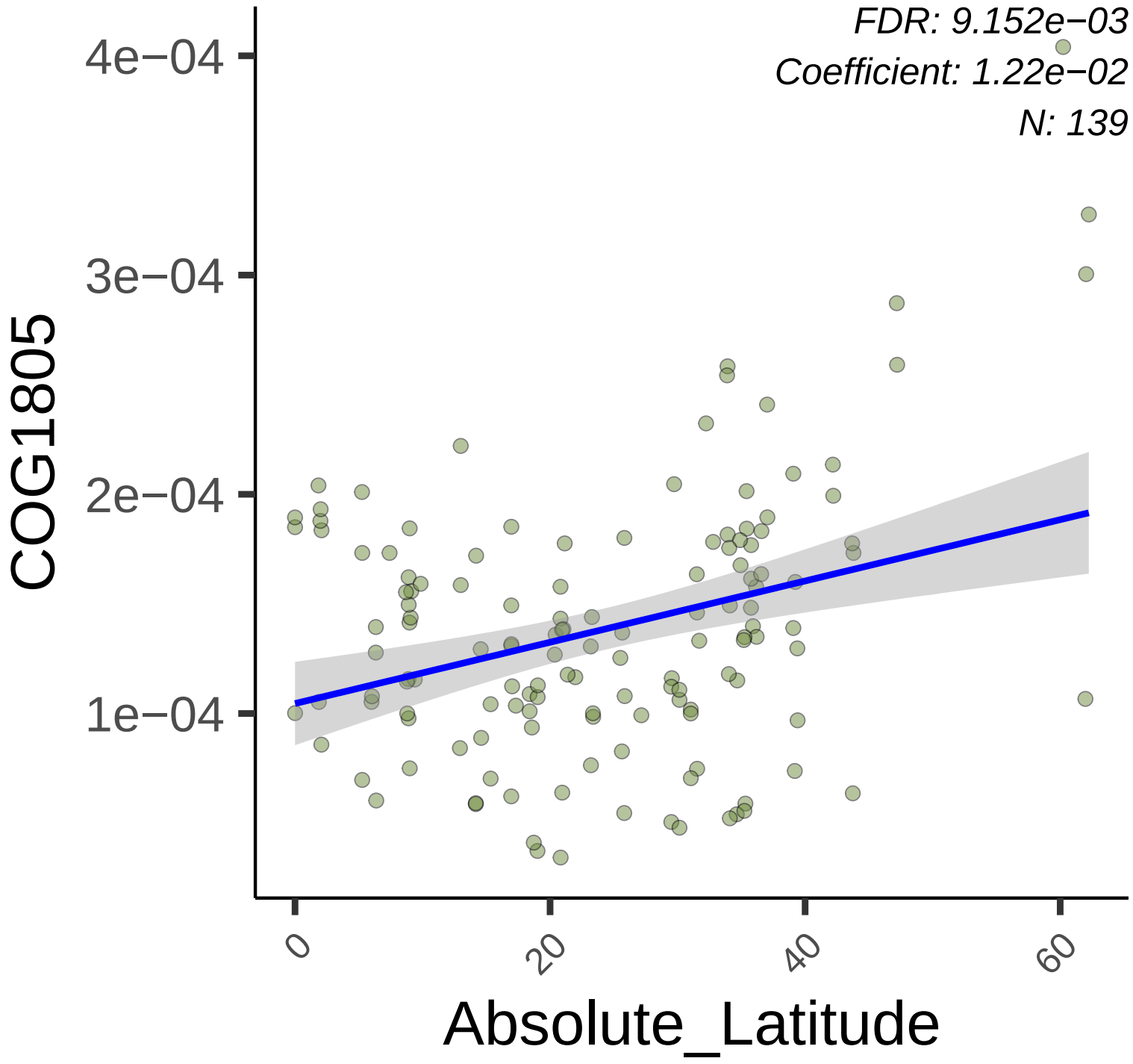

FDR: 8.776e−03
Coefficient: −2.51e−02
N: 139
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG3410
0
20
40
60
Absolute_Latitude

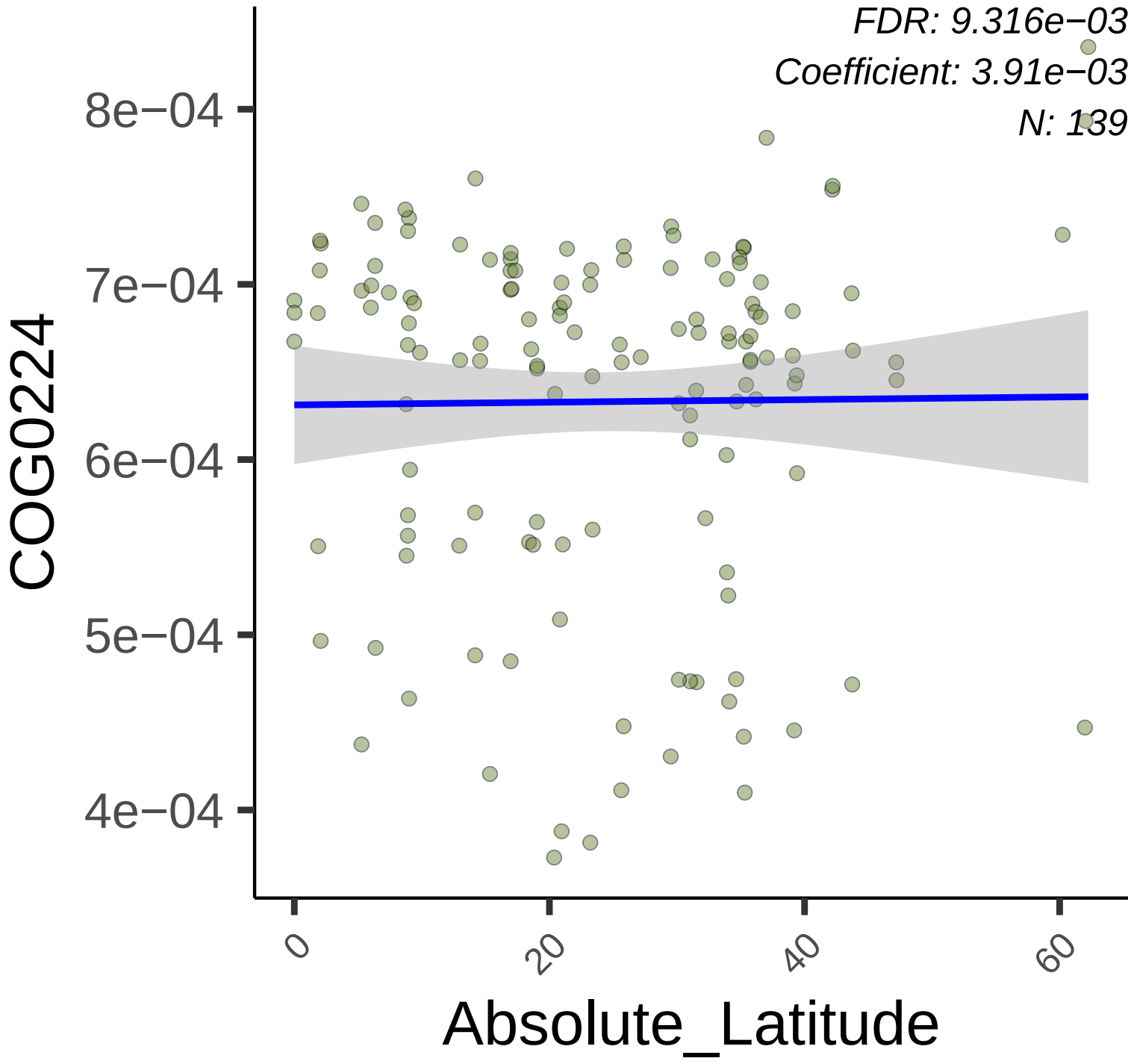

FDR: 8.833e−03
Coefficient: 2.43e−03
N: 139
COG0436
0.0022
0.0020
0.0018
0.0016
0
20
40
60
Absolute_Latitude

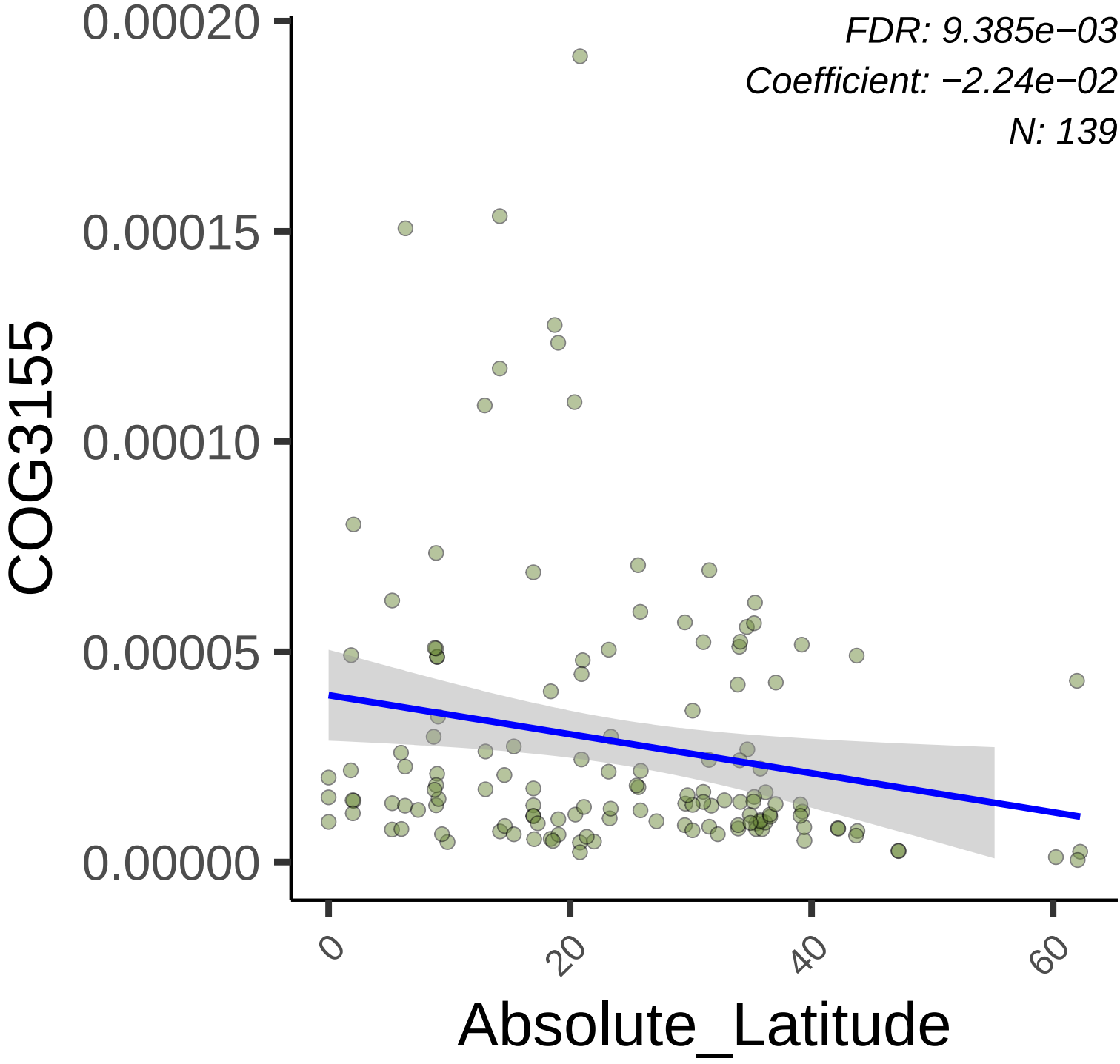

FDR: 9.023e−03
Coefficient: 9.98e−03
N: 139
3e−04
2e−04
1e−04
COG3104
0
20
40
60
Absolute_Latitude

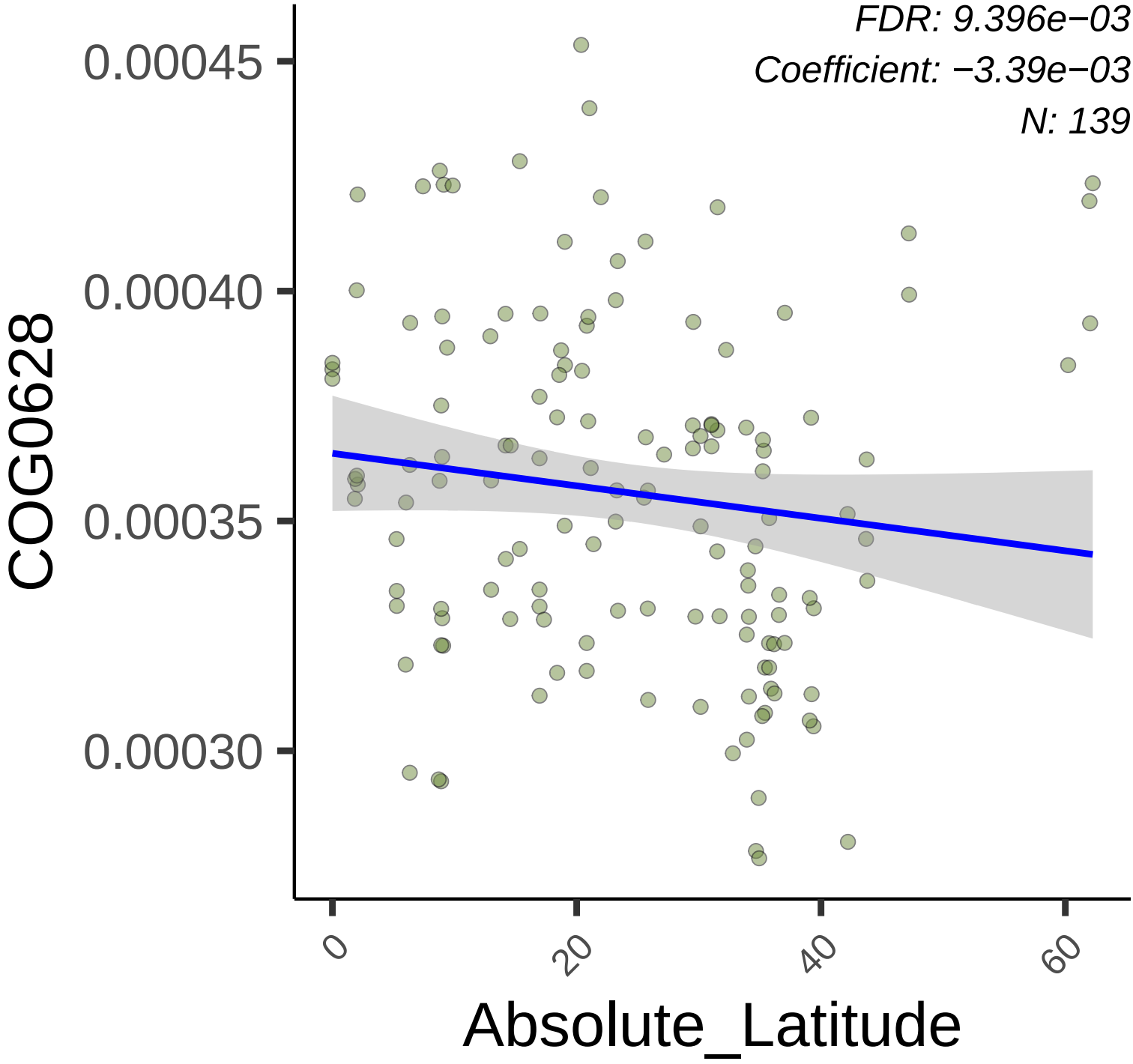

FDR: 9.099e−03
Coefficient: 2.67e−03
N: 139
1e−03
9e−04
8e−04
7e−04
COG0073
0
20
40
60
Absolute_Latitude

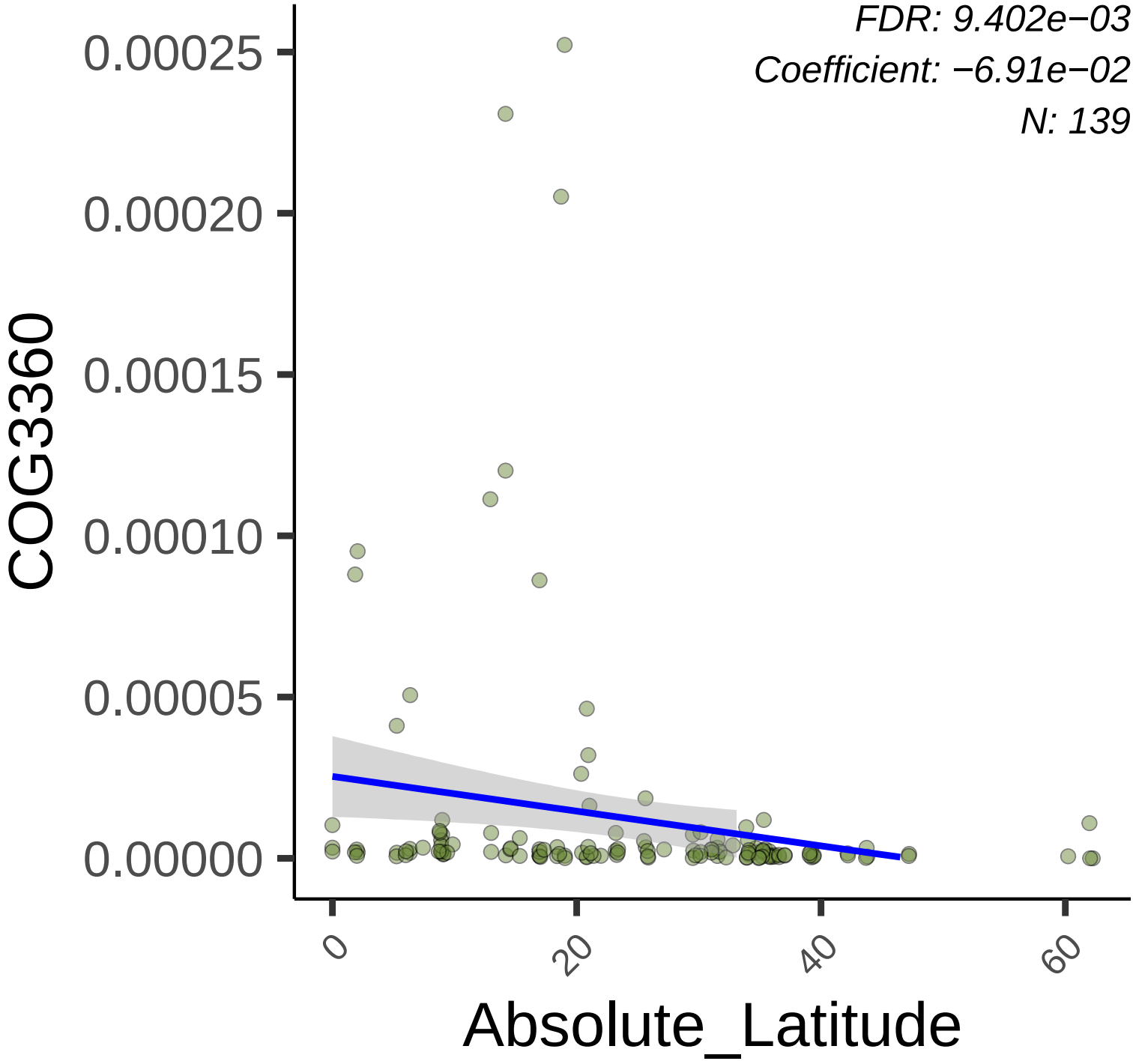

FDR: 9.113e−03
Coefficient: 1.19e−02
N: 139
4e−04
3e−04
2e−04
1e−04
COG1726
0
20
40
60
Absolute_Latitude

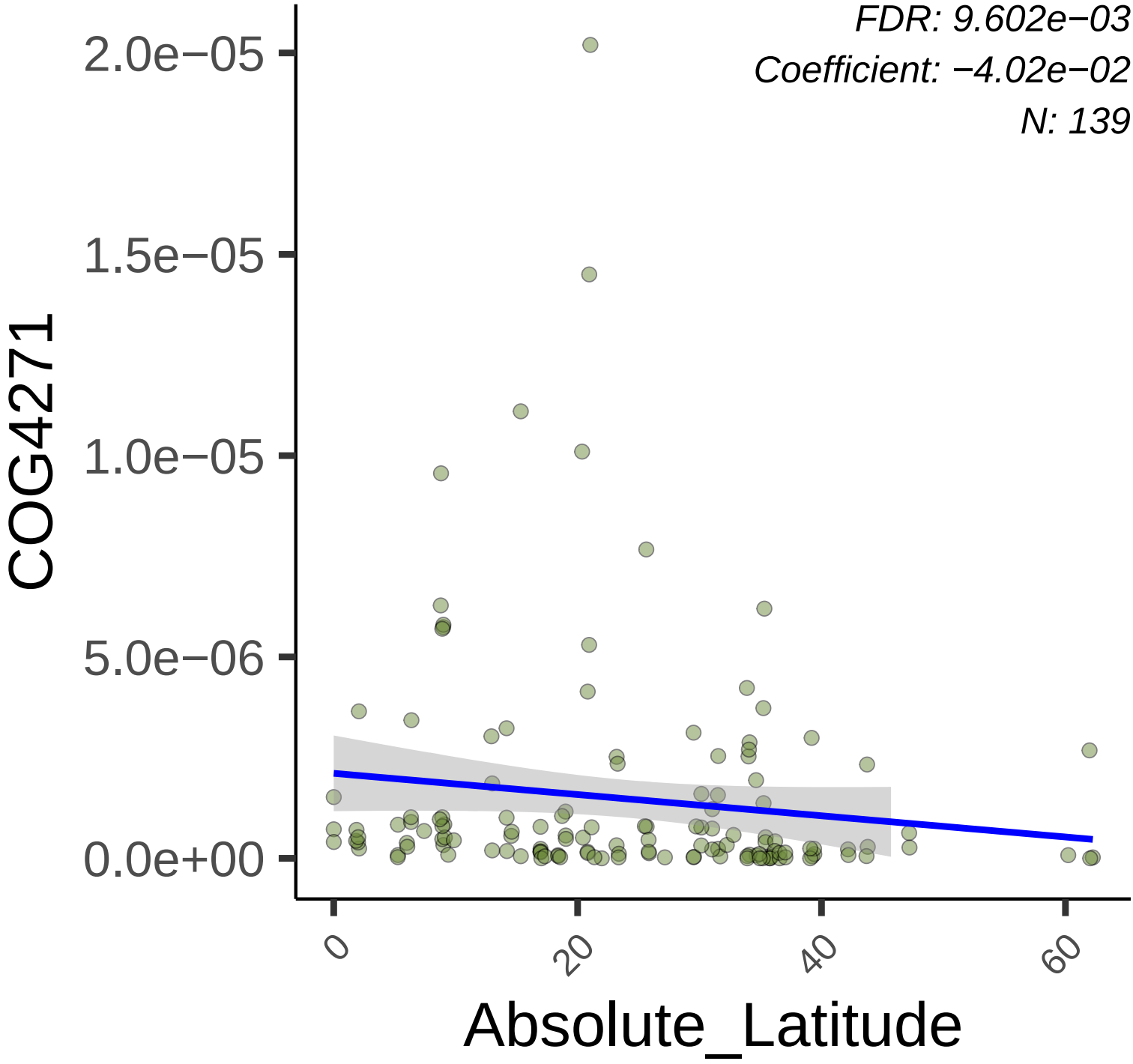

FDR: 9.152e−03
Coefficient: 1.22e−02
N: 139
4e−04
3e−04
2e−04
1e−04
COG1805
0
20
40
60
Absolute_Latitude

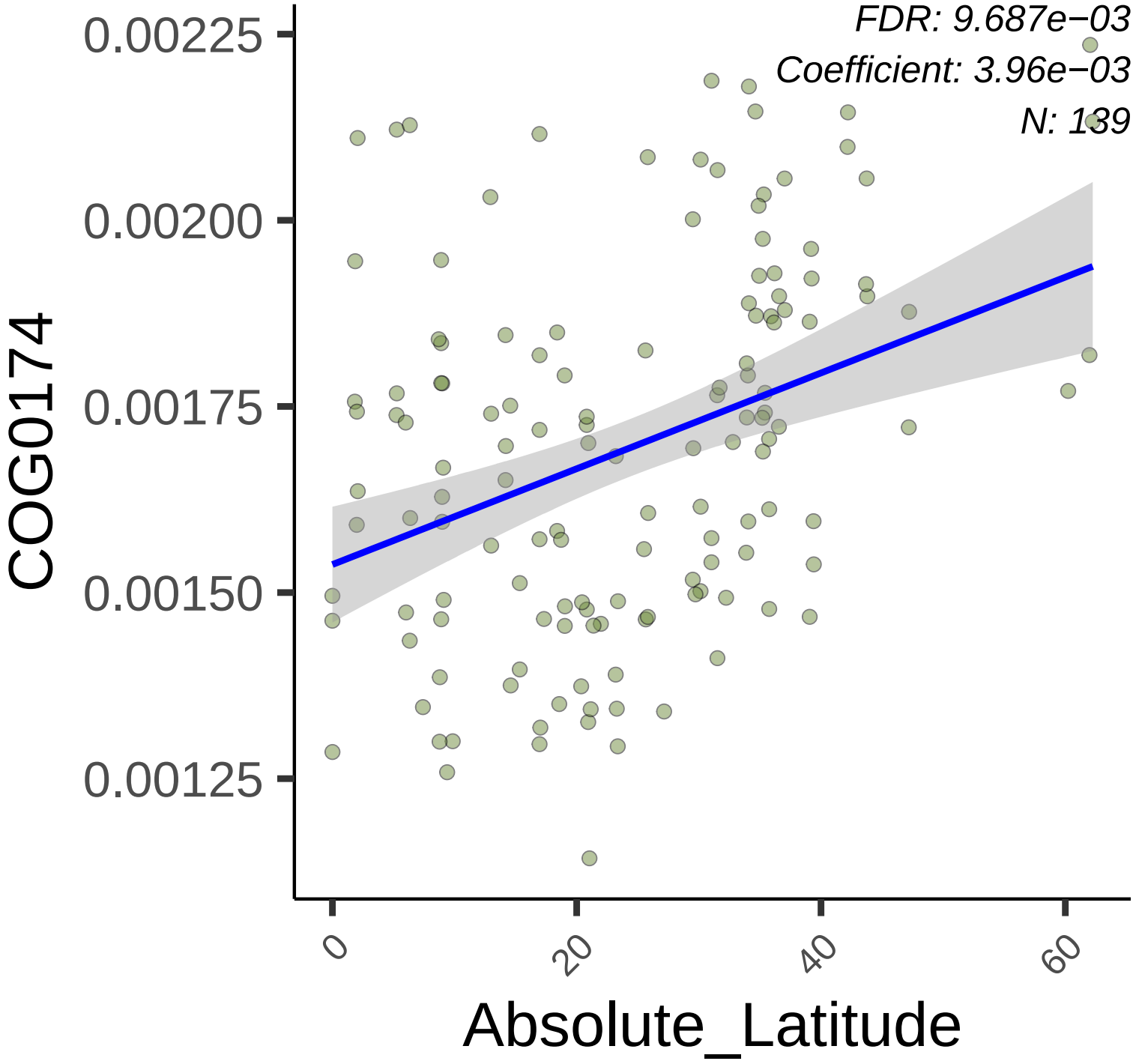

FDR: 9.316e−03
Coefficient: 3.91e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
COG0224
0
20
40
60
Absolute_Latitude

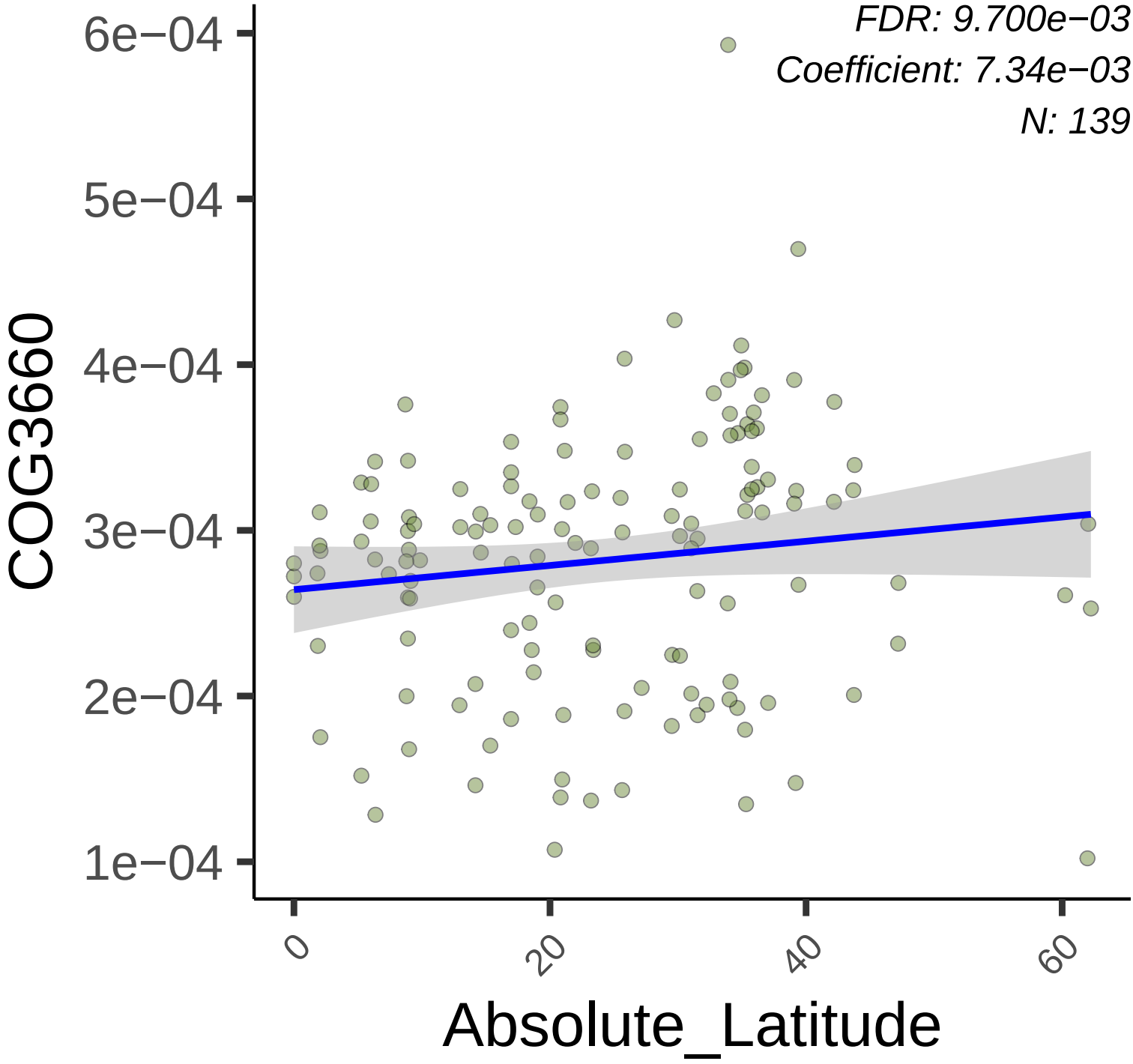

FDR: 9.385e−03
Coefficient: −2.24e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG3155
0
20
40
60
Absolute_Latitude

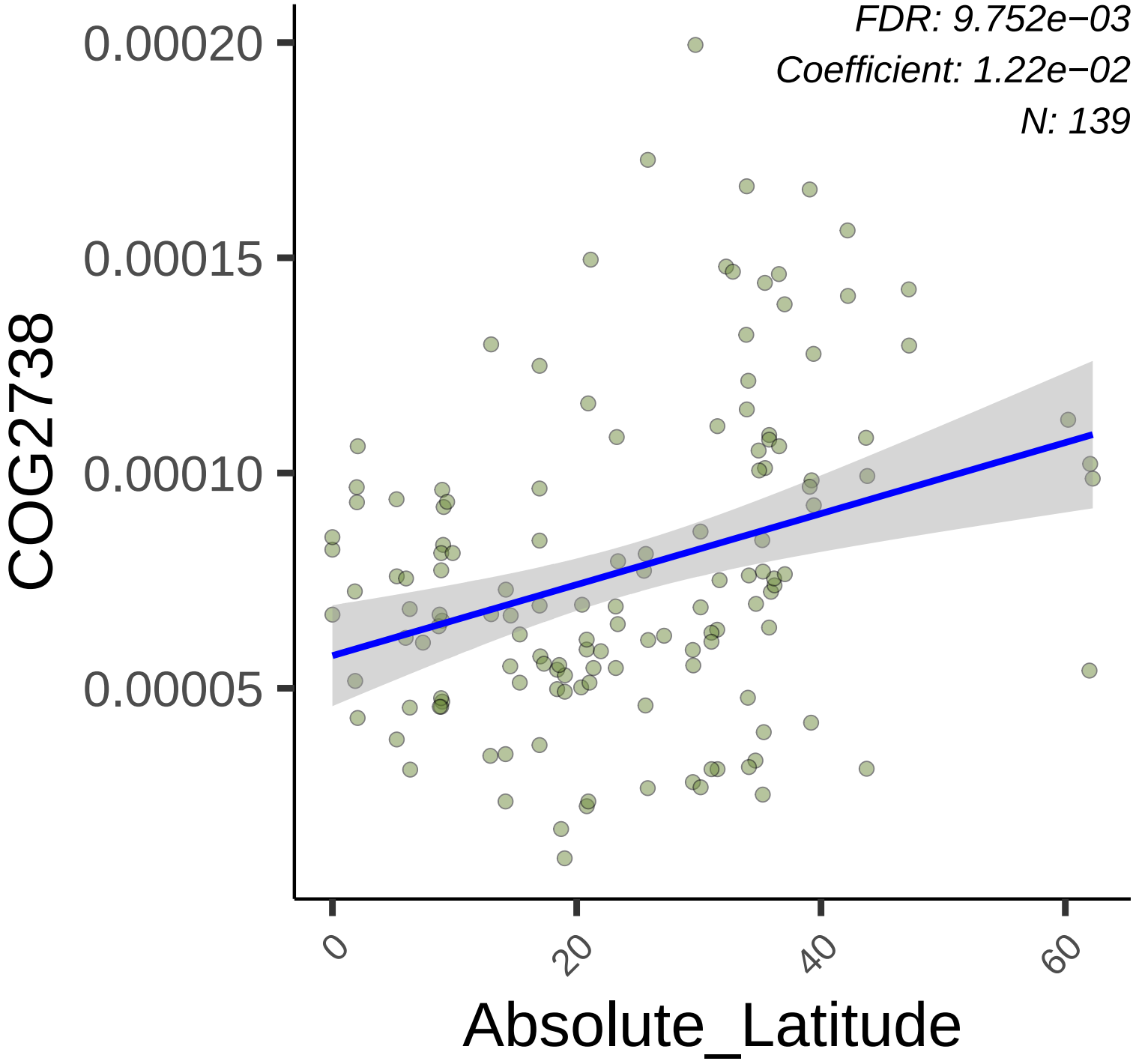

FDR: 9.396e−03
Coefficient: −3.39e−03
N: 139
0.00045
0.00040
0.00035
0.00030
COG0628
0
20
40
60
Absolute_Latitude

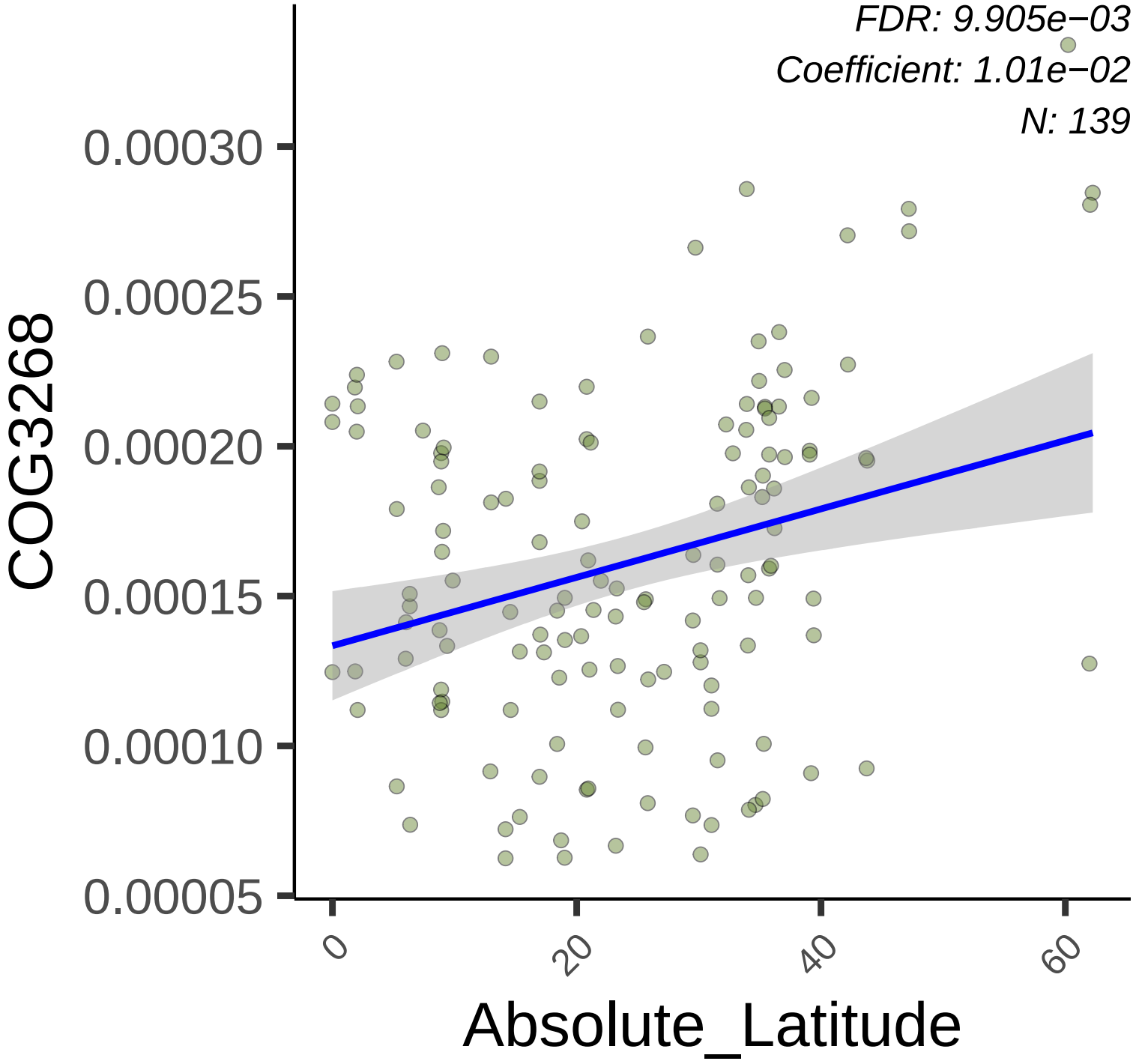

FDR: 9.402e−03
Coefficient: −6.91e−02
N: 139
COG3360
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

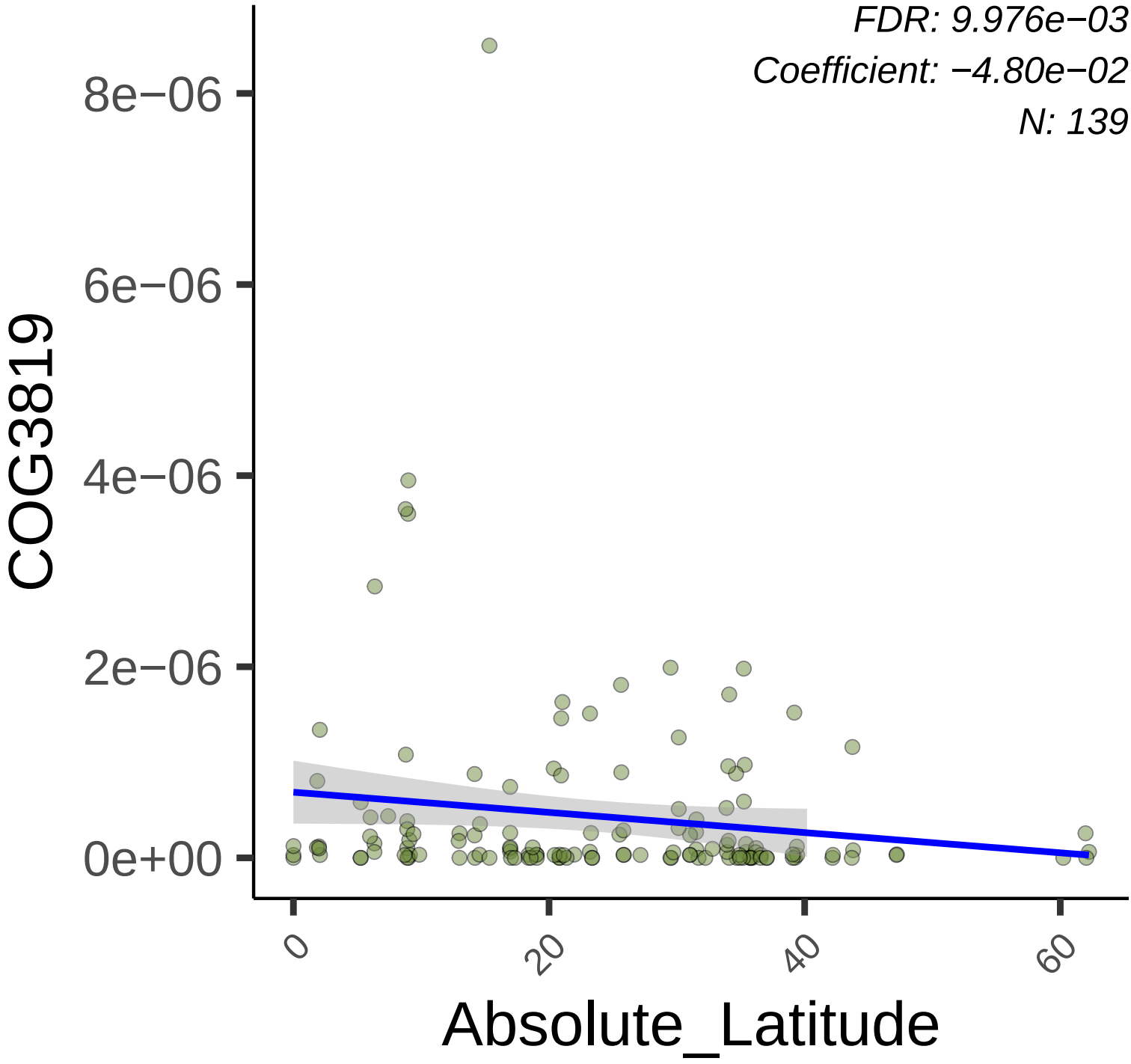

FDR: 9.602e−03
Coefficient: −4.02e−02
N: 139
COG4271
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

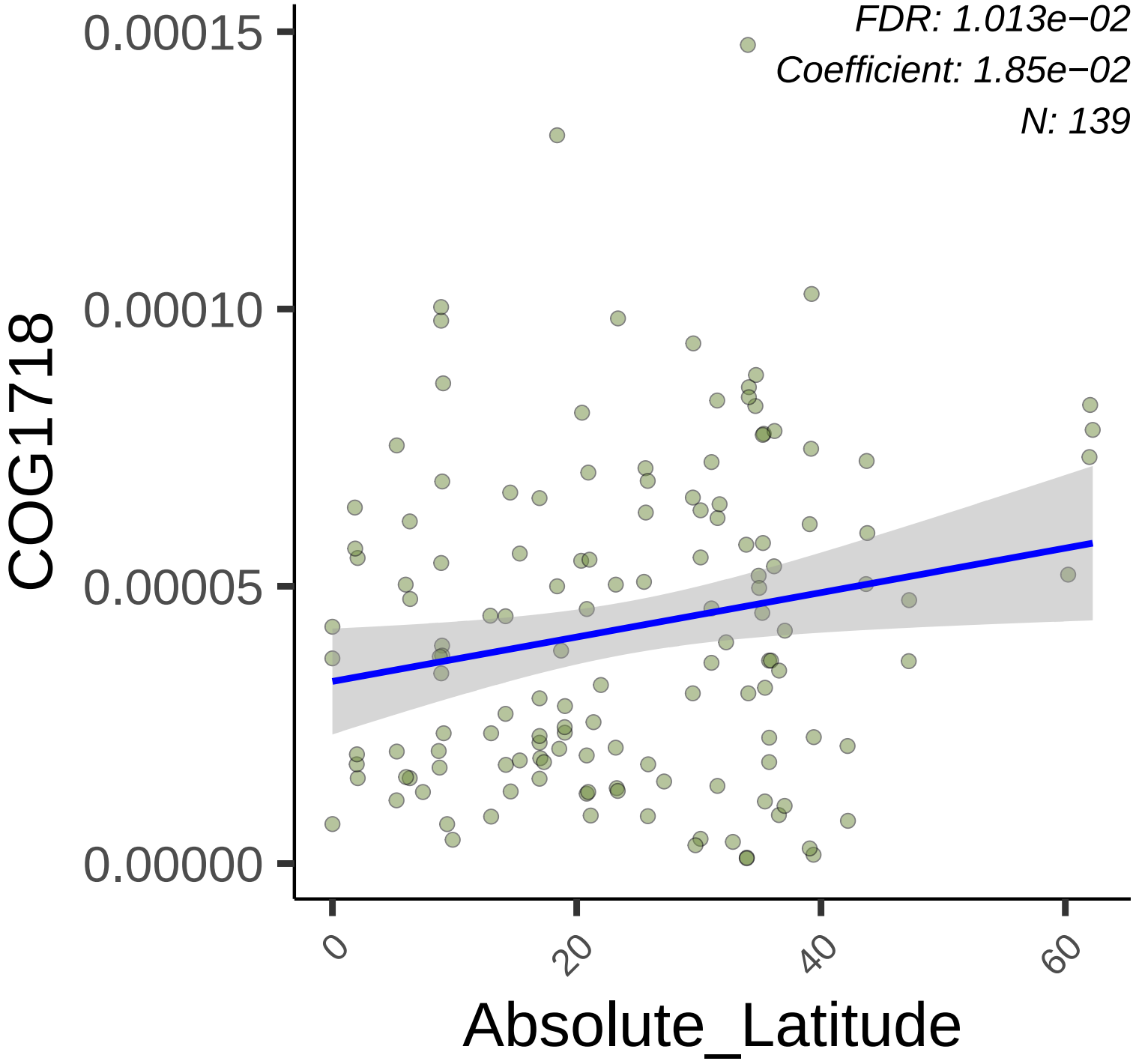

FDR: 9.687e−03
Coefficient: 3.96e−03
N: 139
0.00225
0.00200
0.00175
0.00150
0.00125
COG0174
0
20
40
60
Absolute_Latitude

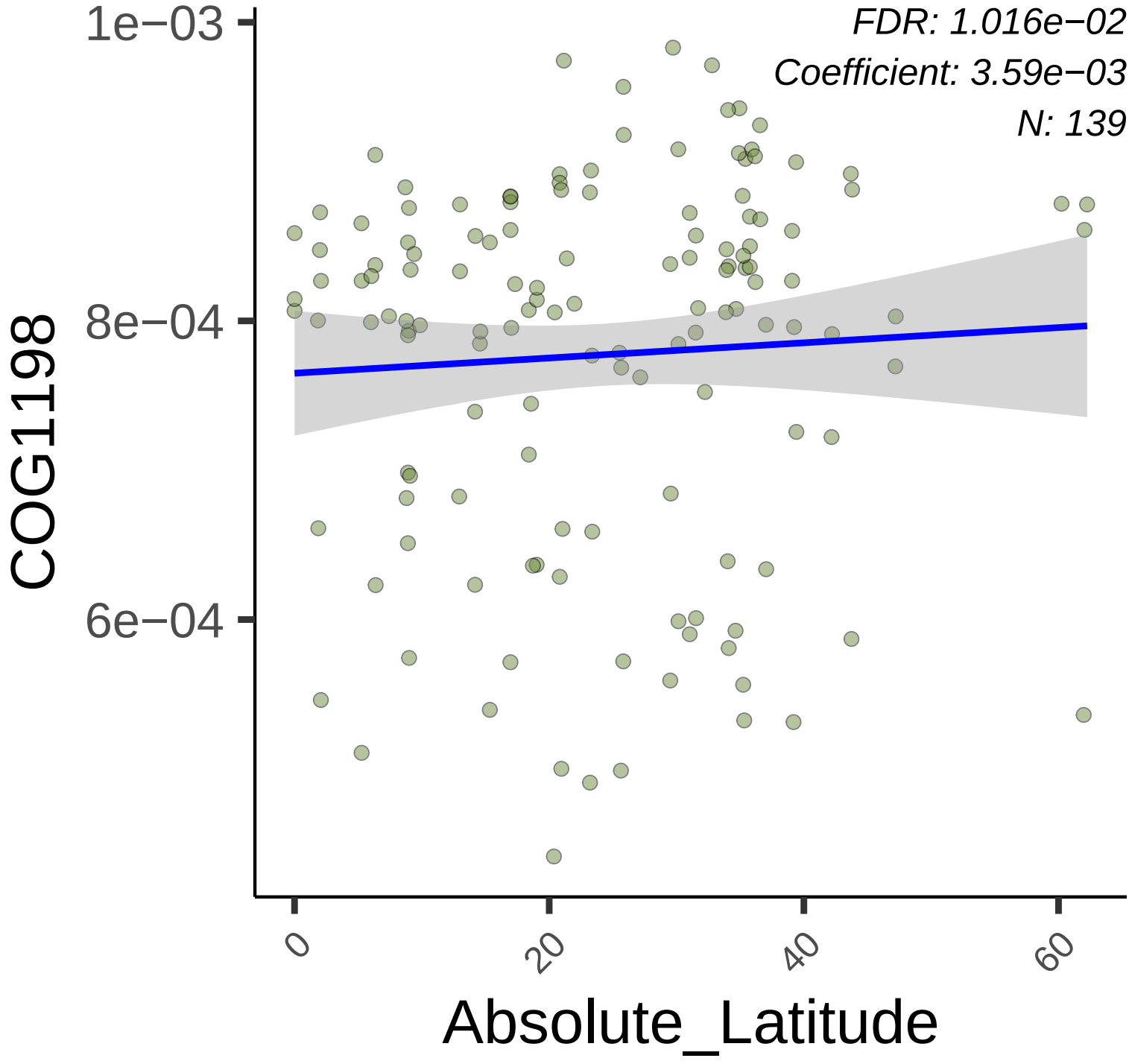

FDR: 9.700e−03
Coefficient: 7.34e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
1e−04
COG3660
0
20
40
60
Absolute_Latitude

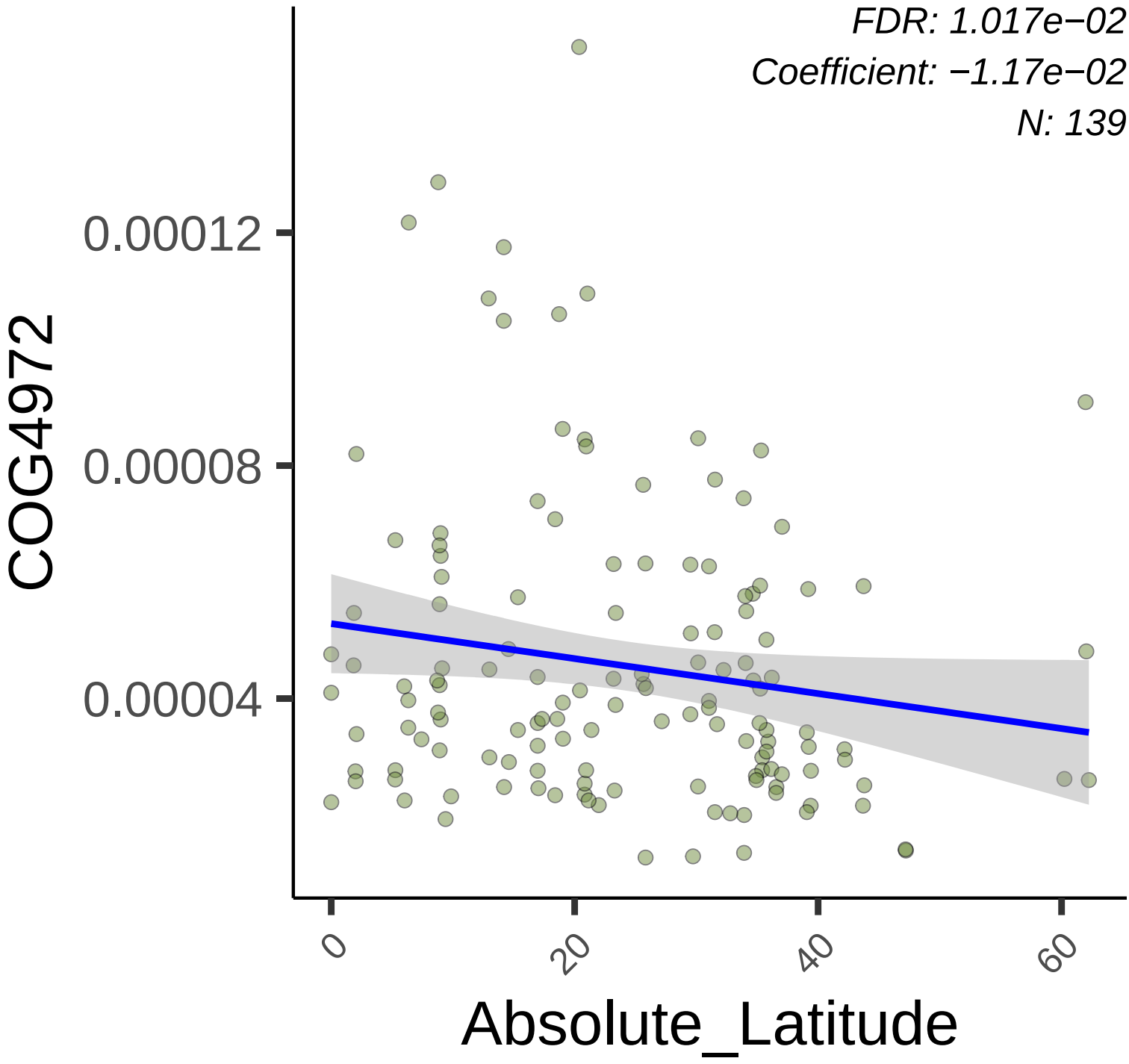

FDR: 9.752e−03
Coefficient: 1.22e−02
N: 139
0.00020
0.00015
0.00010
0.00005
COG2738
0
20
40
60
Absolute_Latitude

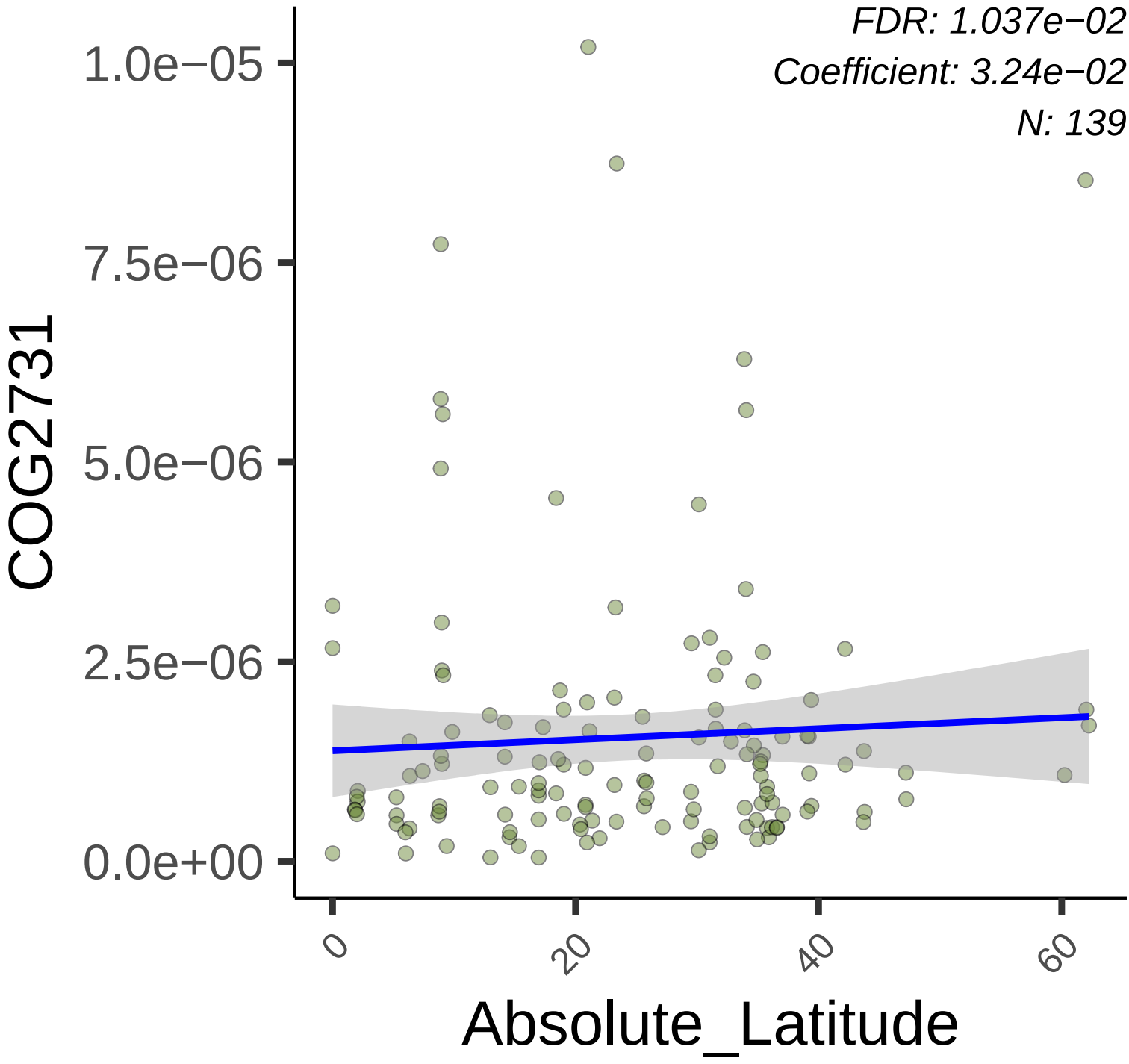

FDR: 9.905e−03
Coefficient: 1.01e−02
N: 139
COG3268
0.00030
0.00025
0.00020
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

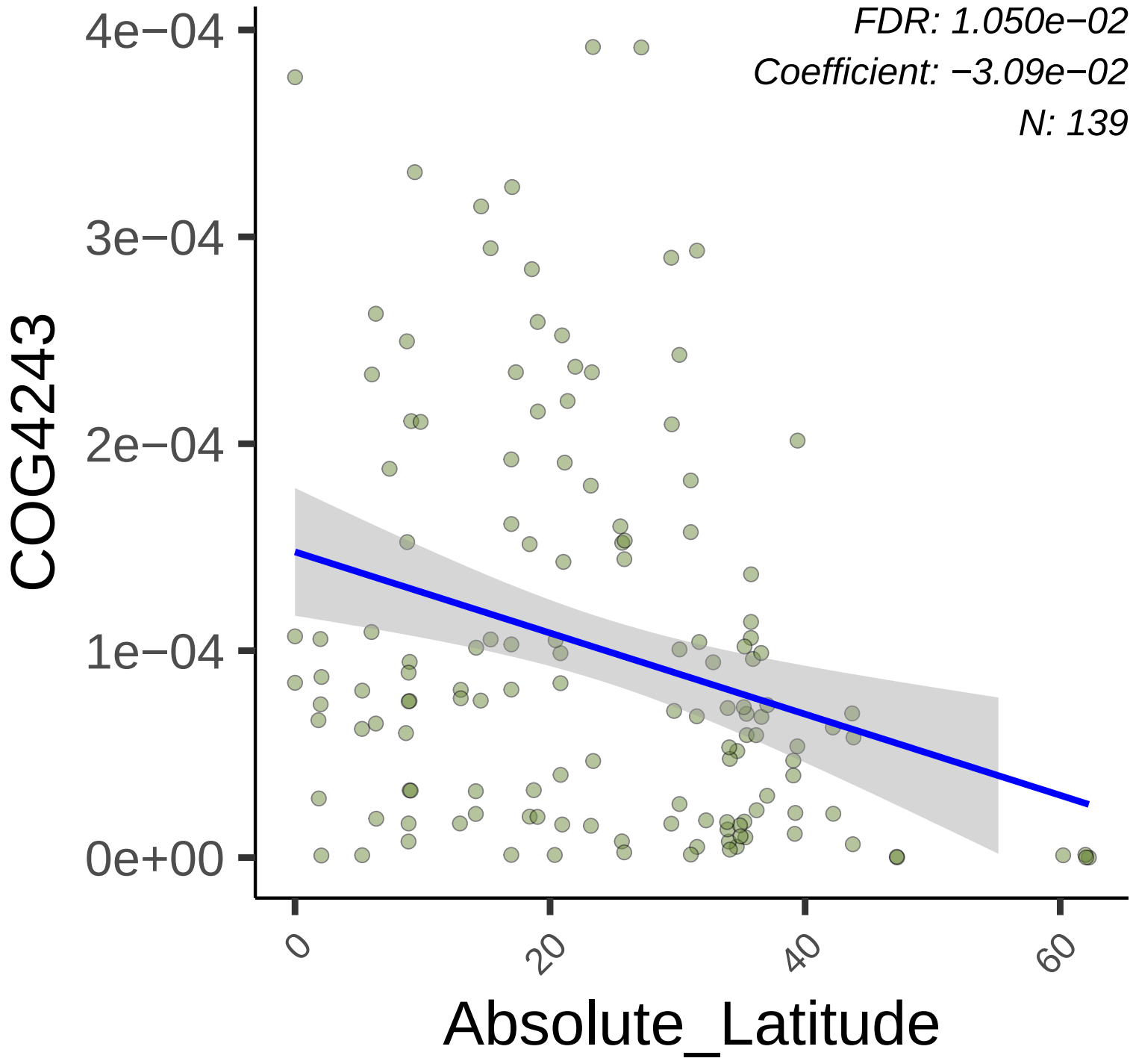

FDR: 9.976e−03
Coefficient: −4.80e−02
N: 139
COG3819
8e−06
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

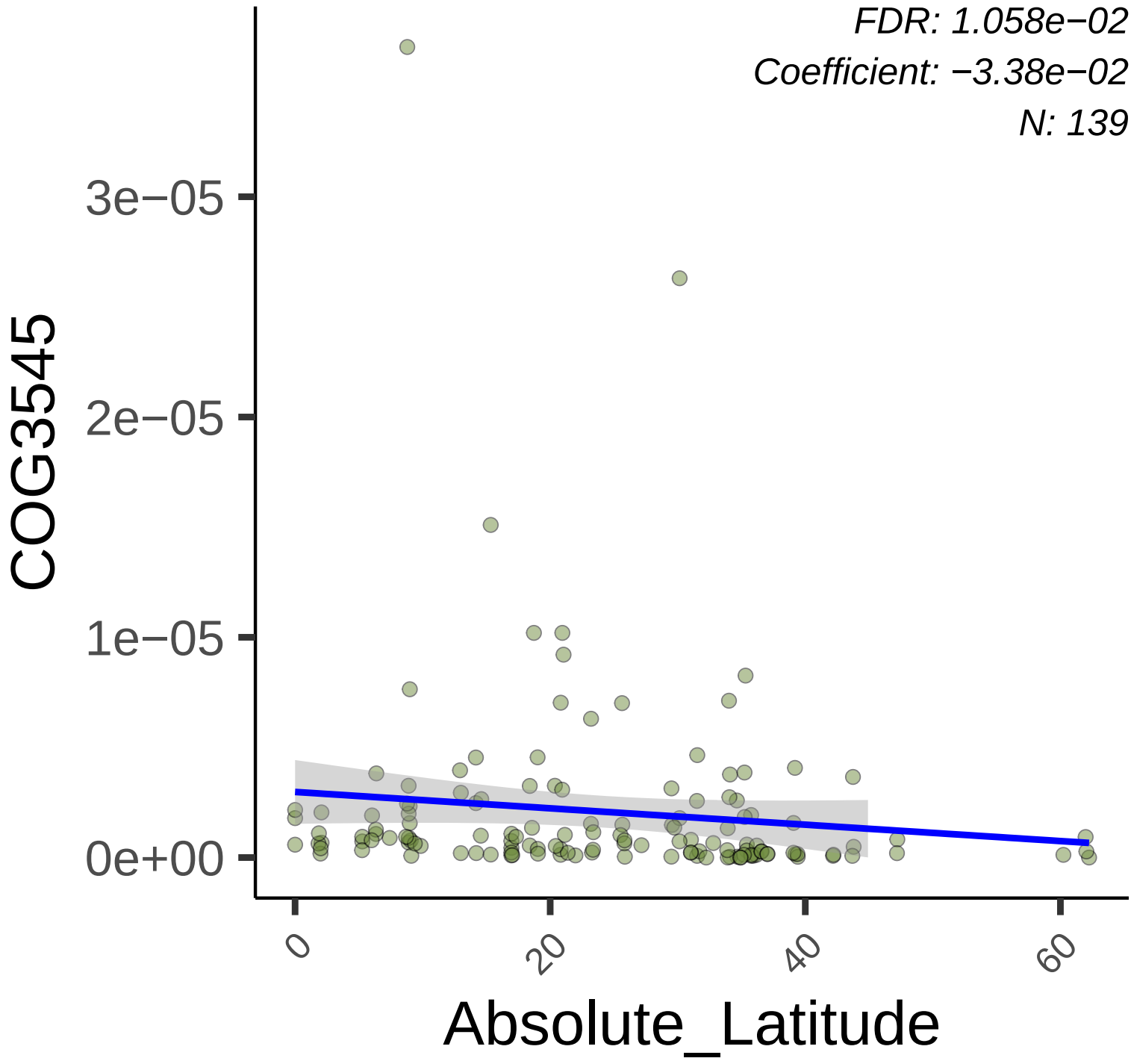

FDR: 1.013e−02
Coefficient: 1.85e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG1718
0
20
40
60
Absolute_Latitude

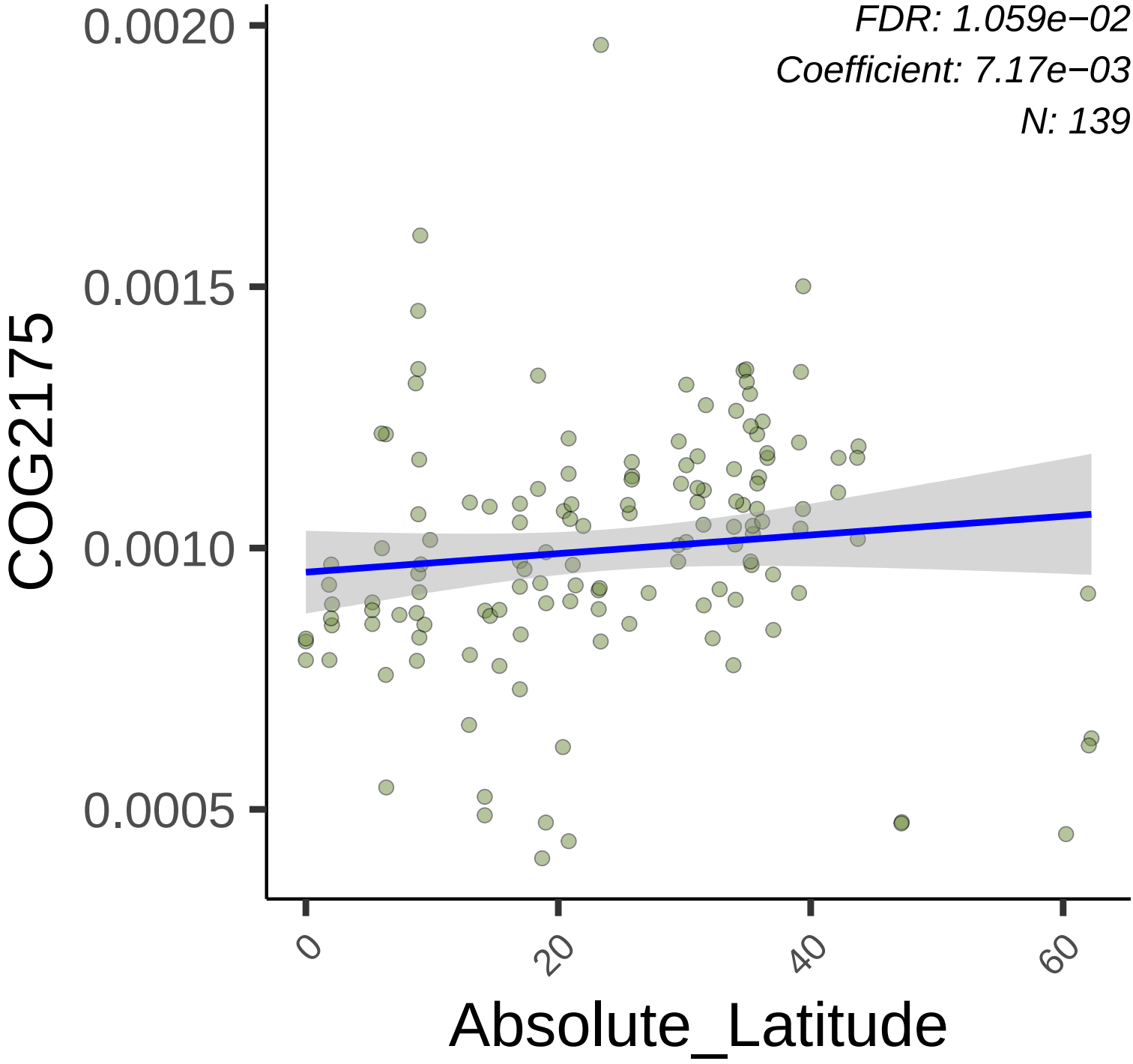

FDR: 1.016e−02
Coefficient: 3.59e−03
N: 139
1e−03
8e−04
6e−04
COG1198
0
20
40
60
Absolute_Latitude

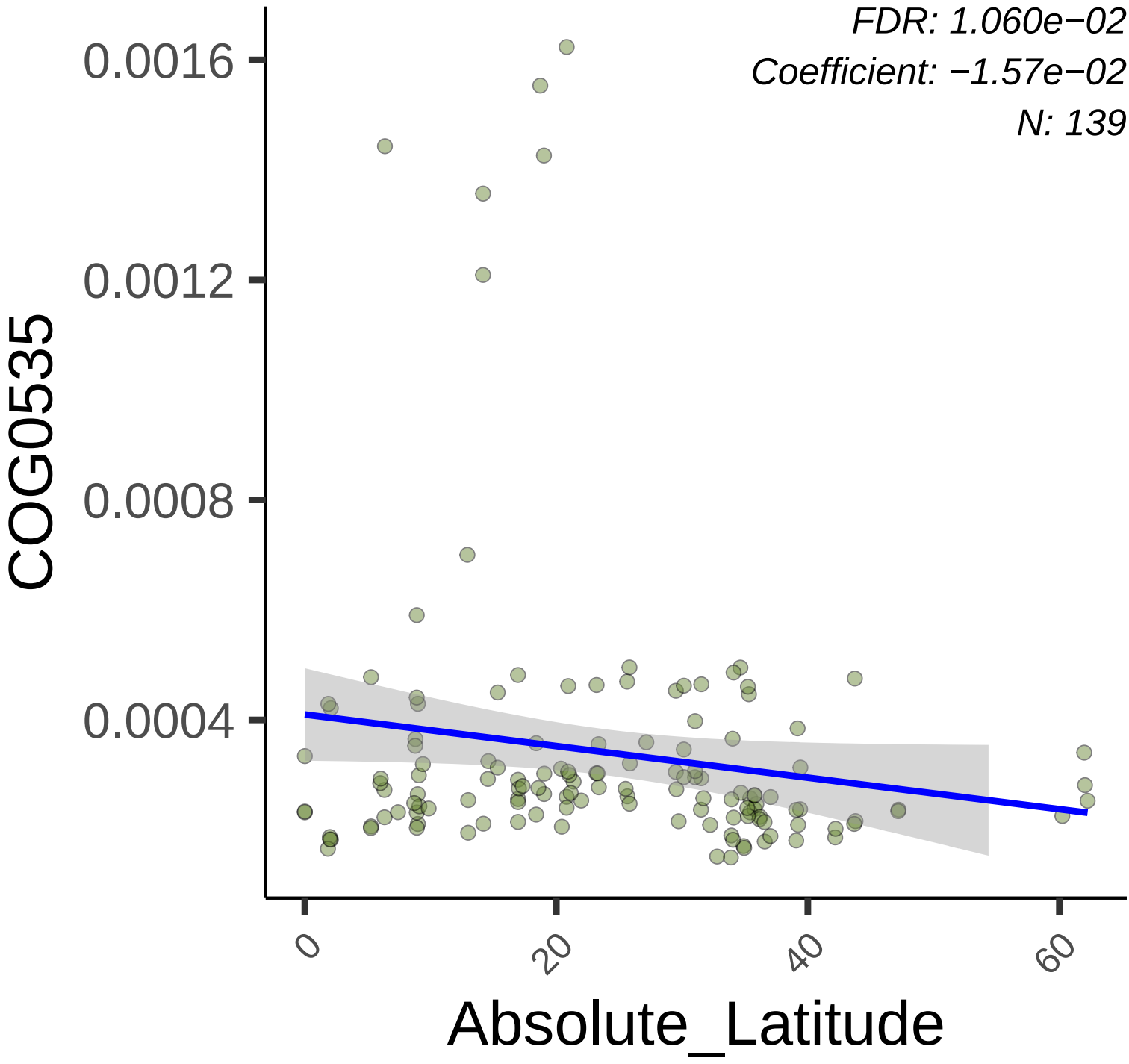

FDR: 1.017e−02
Coefficient: −1.17e−02
N: 139
COG4972
0.00012
0.00008
0.00004
0
20
40
60
Absolute_Latitude

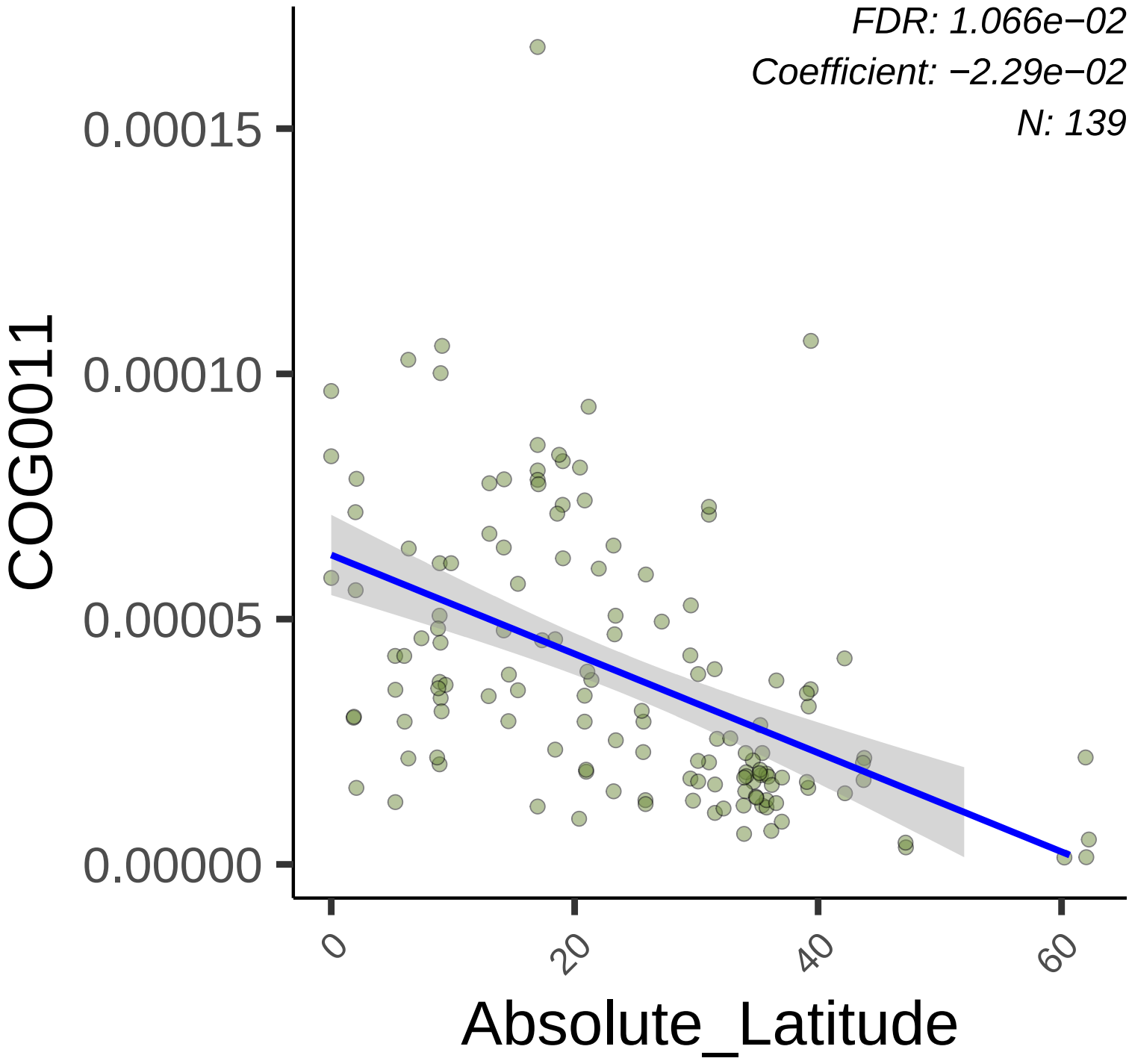

FDR: 1.037e−02
Coefficient: 3.24e−02
N: 139
1.0e−05
7.5e−06
5.0e−06
2.5e−06
0.0e+00
COG2731
0
20
40
60
Absolute_Latitude

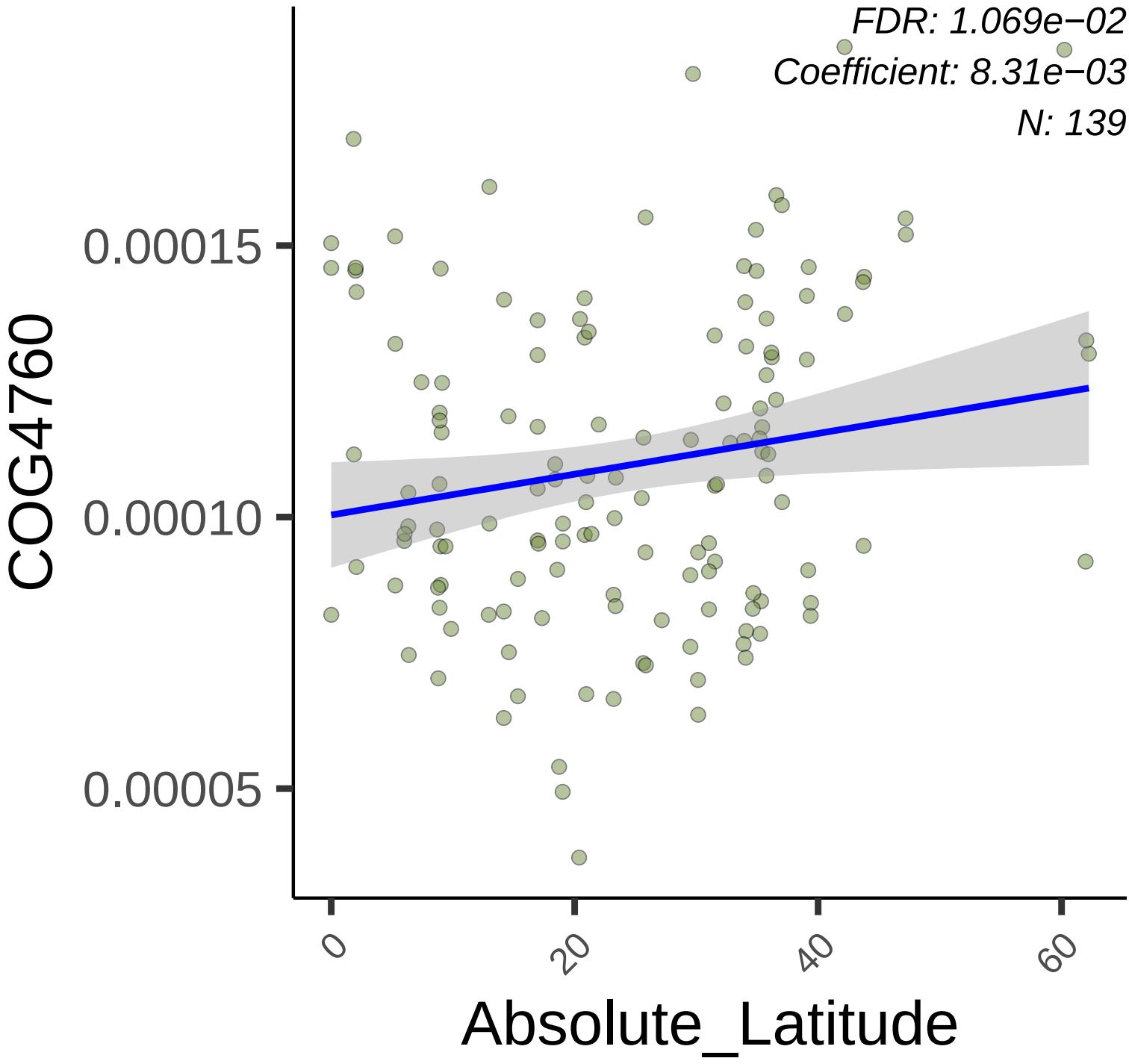

FDR: 1.050e−02
Coefficient: −3.09e−02
N: 139
4e−04
3e−04
2e−04
1e−04
0e+00
COG4243
0
20
40
60
Absolute_Latitude

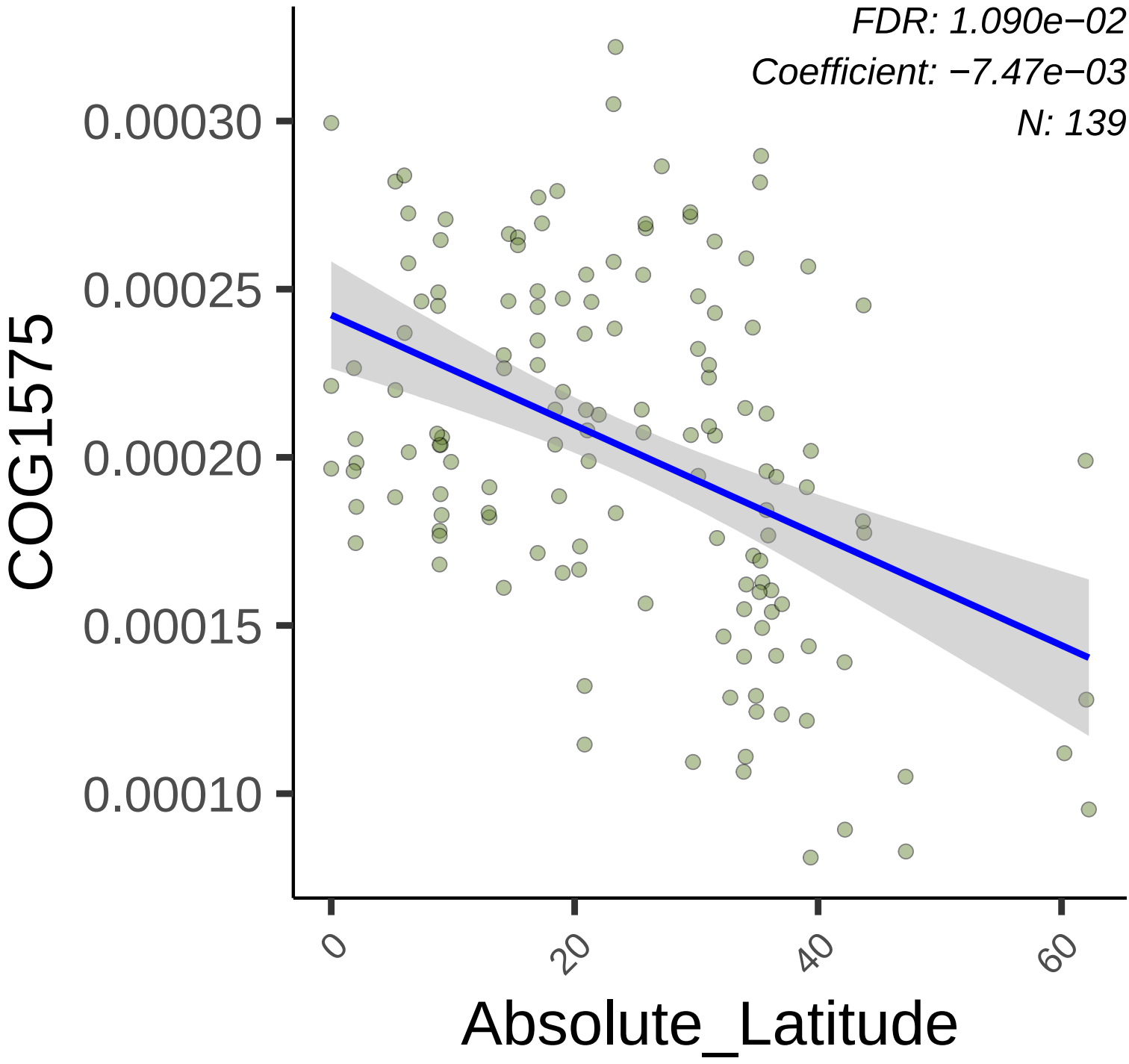

FDR: 1.058e−02
Coefficient: −3.38e−02
N: 139
COG3545
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

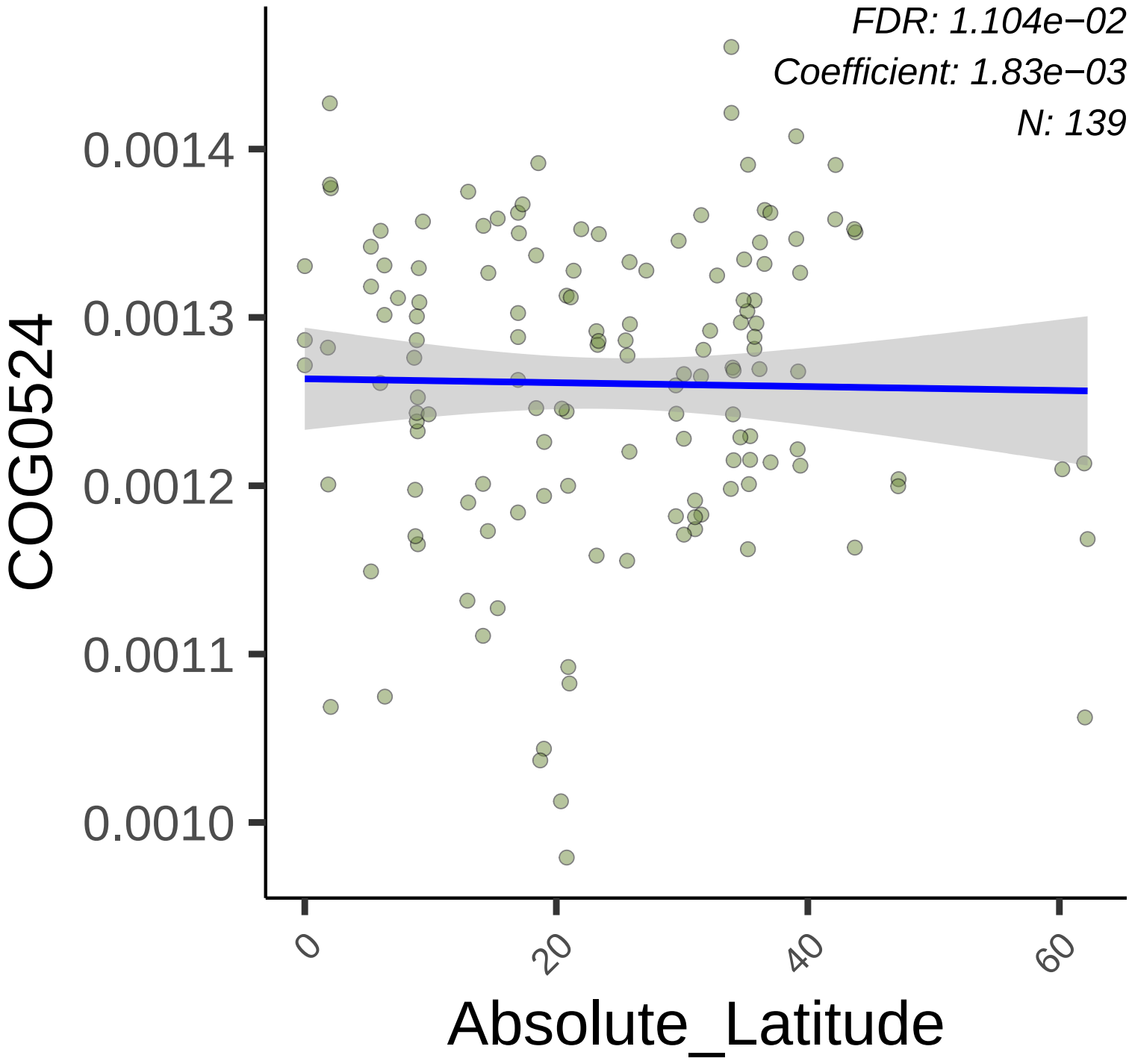

FDR: 1.059e−02
Coefficient: 7.17e−03
N: 139
0.0020
0.0015
0.0010
0.0005
COG2175
0
20
40
60
Absolute_Latitude

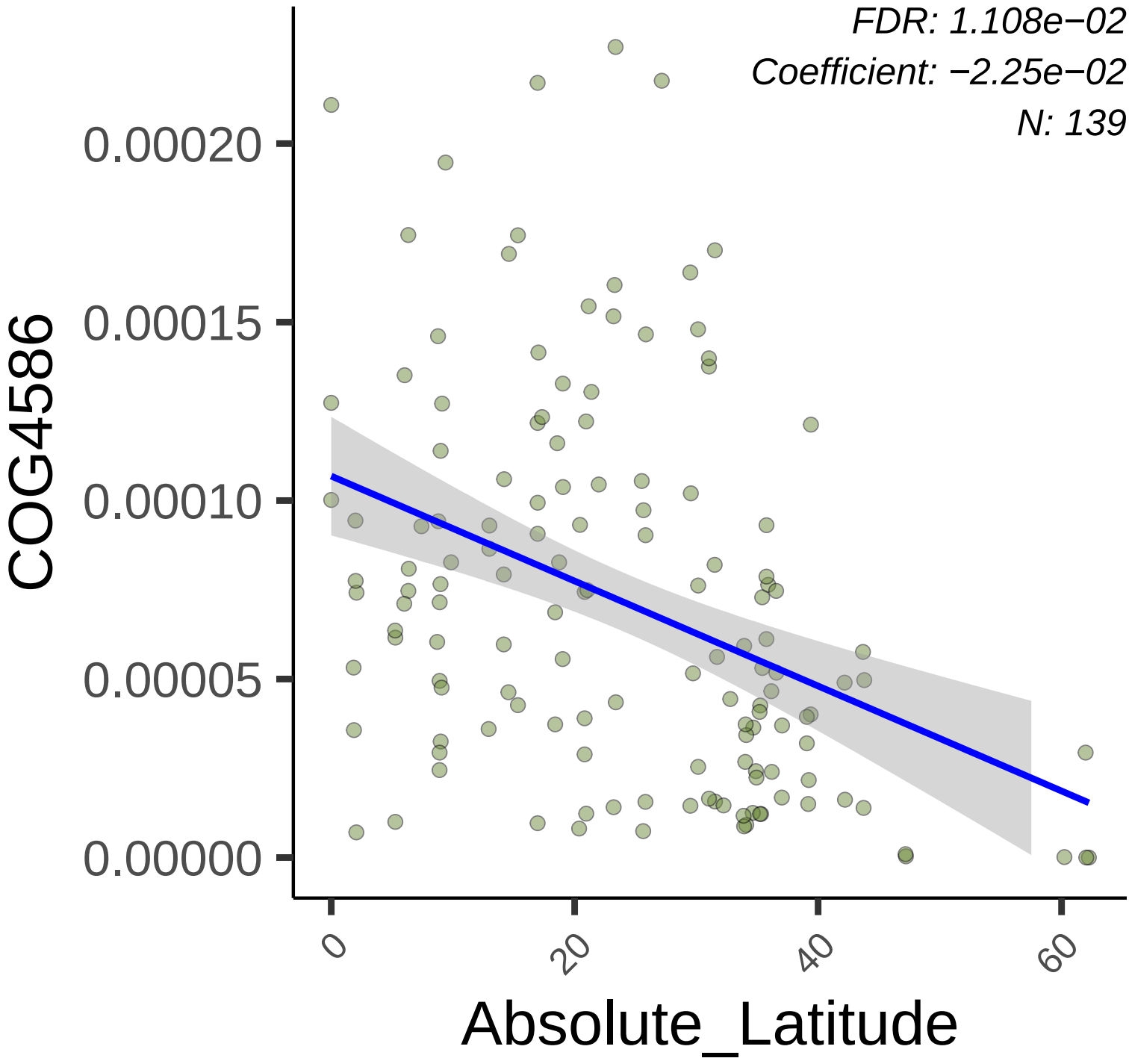

FDR: 1.060e−02
Coefficient: −1.57e−02
N: 139
0.0016
0.0012
0.0008
0.0004
COG0535
0
20
40
60
Absolute_Latitude

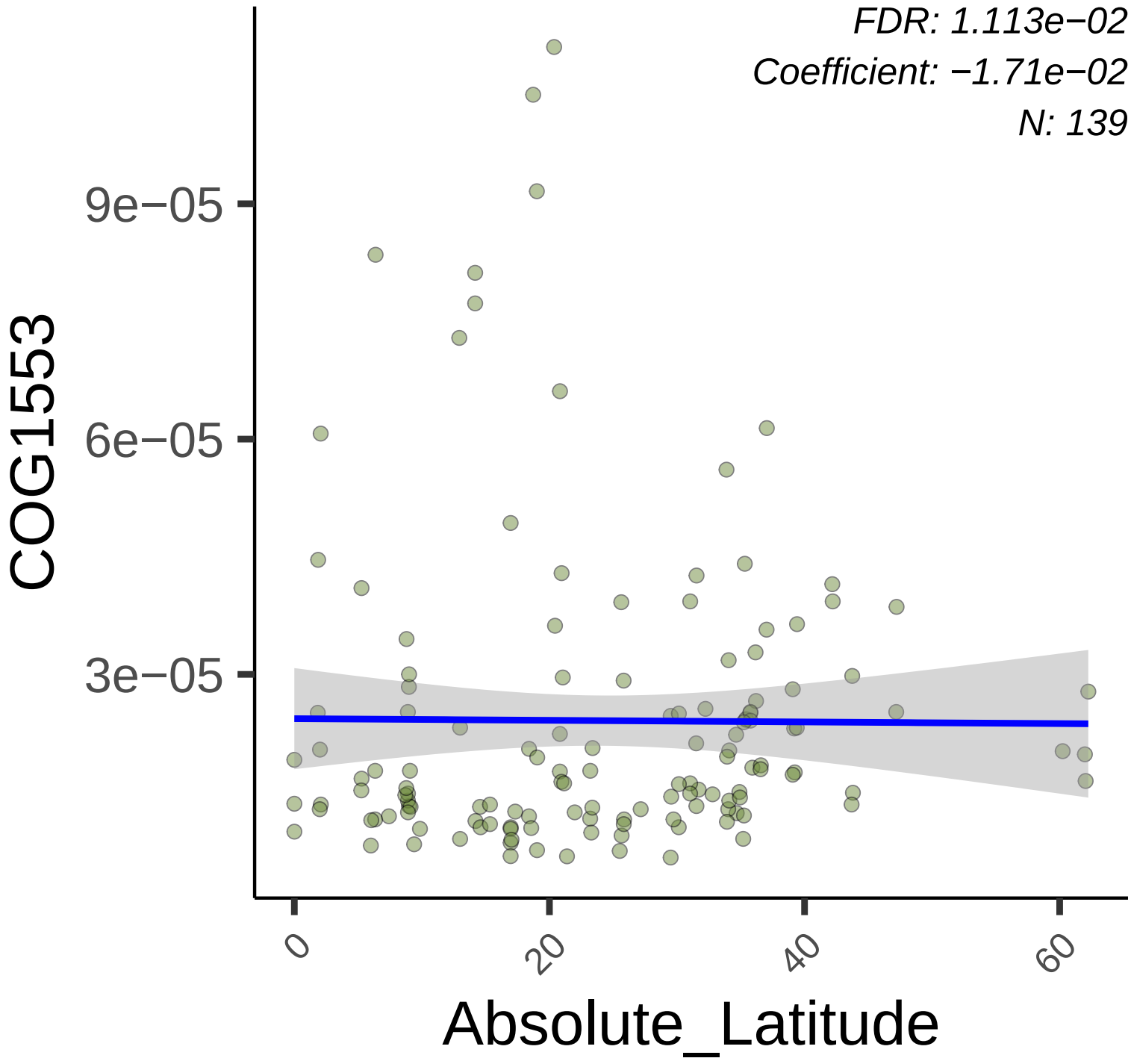

FDR: 1.066e−02
Coefficient: −2.29e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG0011
0
20
40
60
Absolute_Latitude

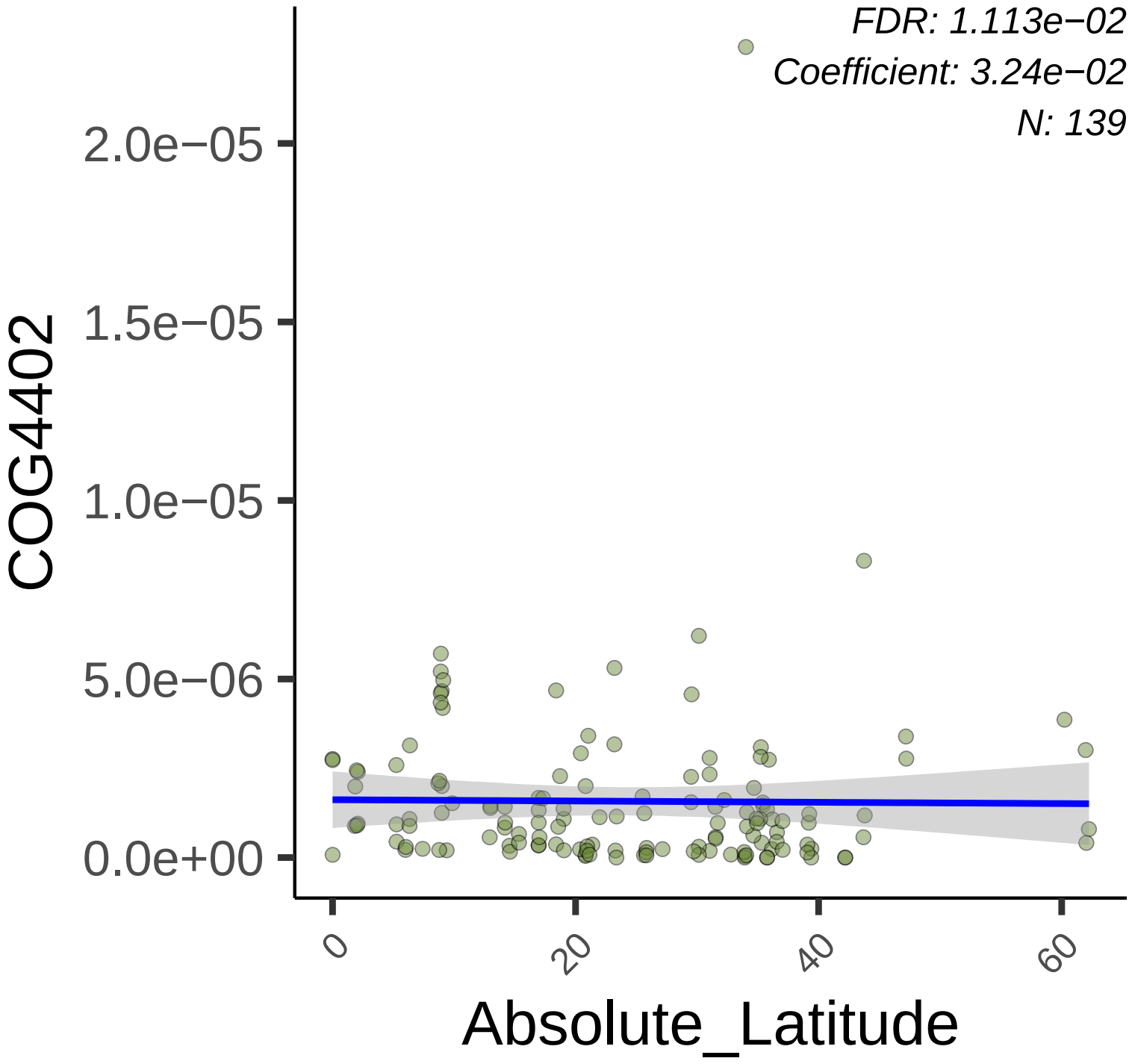

FDR: 1.069e−02
Coefficient: 8.31e−03
N: 139
COG4760
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

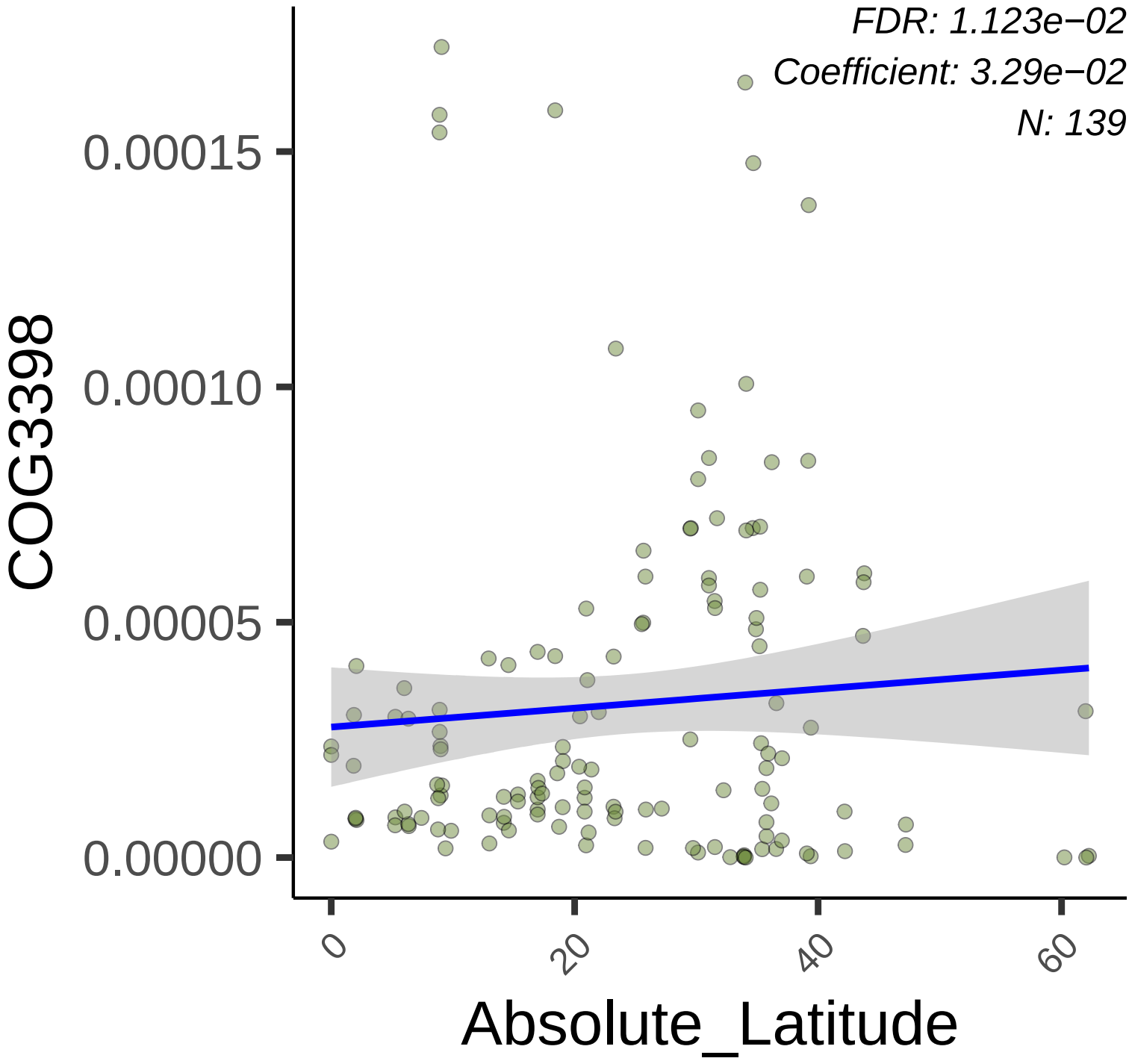

FDR: 1.090e−02
Coefficient: −7.47e−03
N: 139
0.00030
0.00025
0.00020
0.00015
0.00010
COG1575
0
20
40
60
Absolute_Latitude

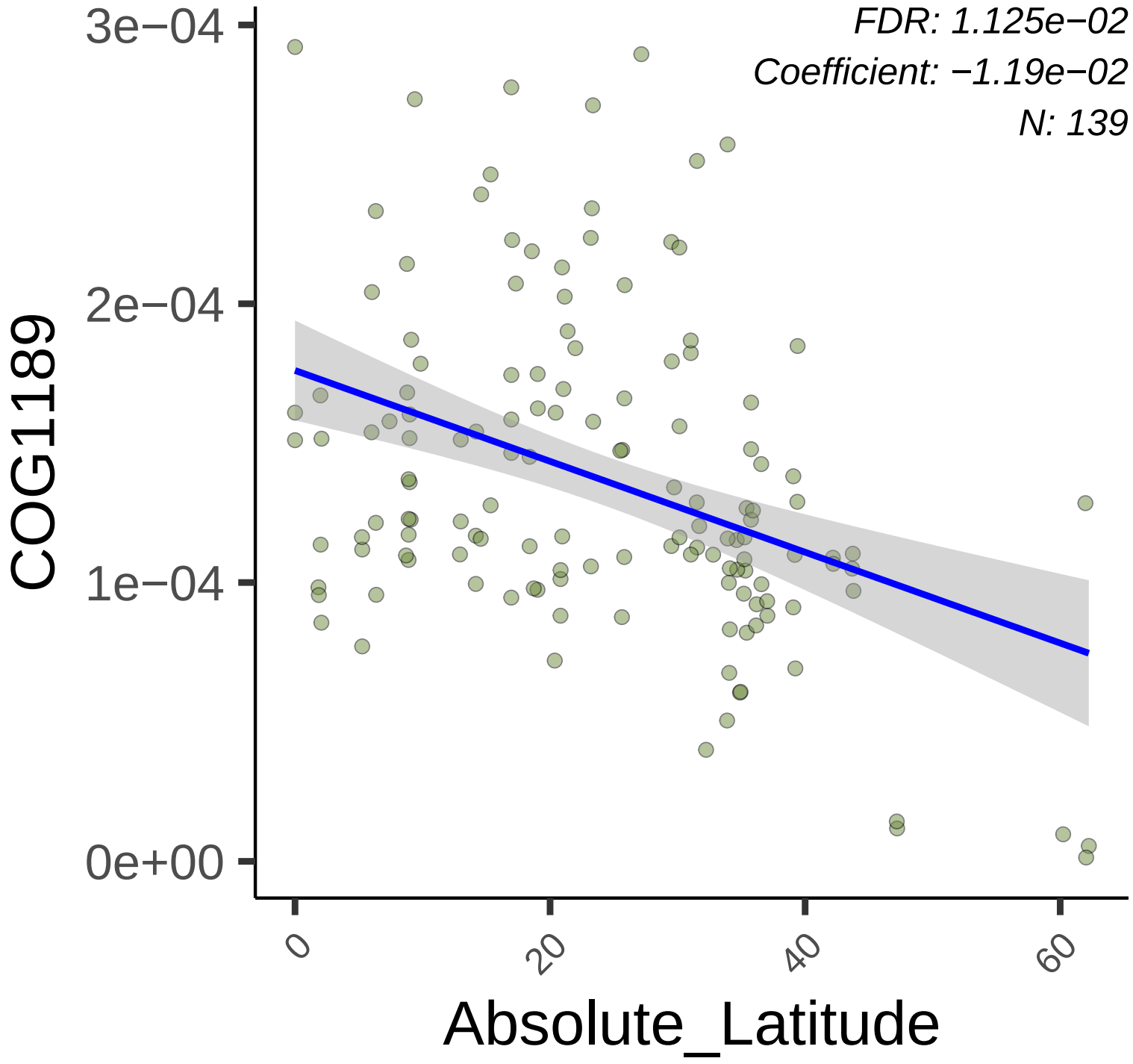

FDR: 1.104e−02
Coefficient: 1.83e−03
N: 139
COG0524
0.0014
0.0013
0.0012
0.0011
0.0010
0
20
40
60
Absolute_Latitude

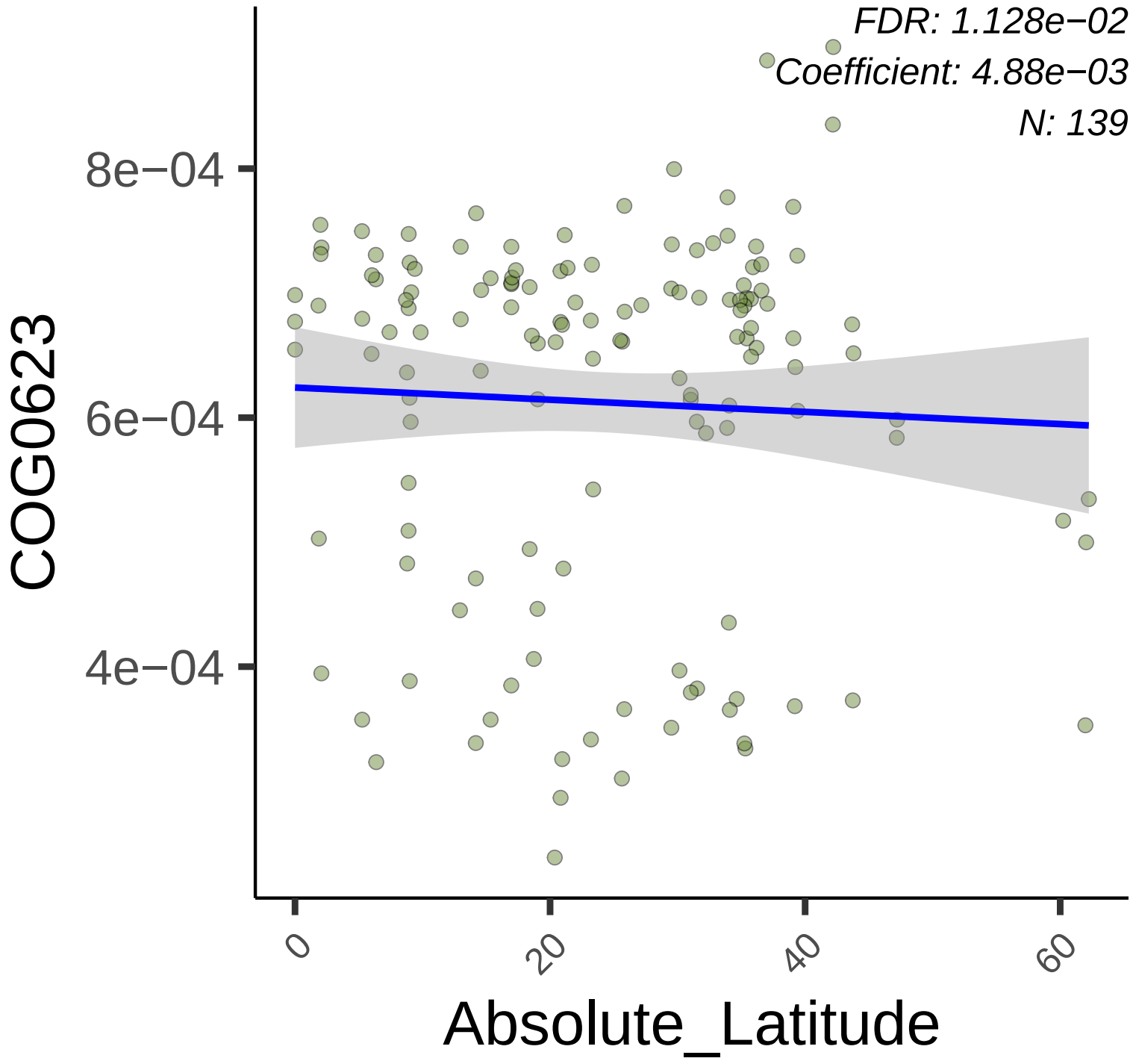

FDR: 1.108e−02
Coefficient: −2.25e−02
N: 139
COG4586
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

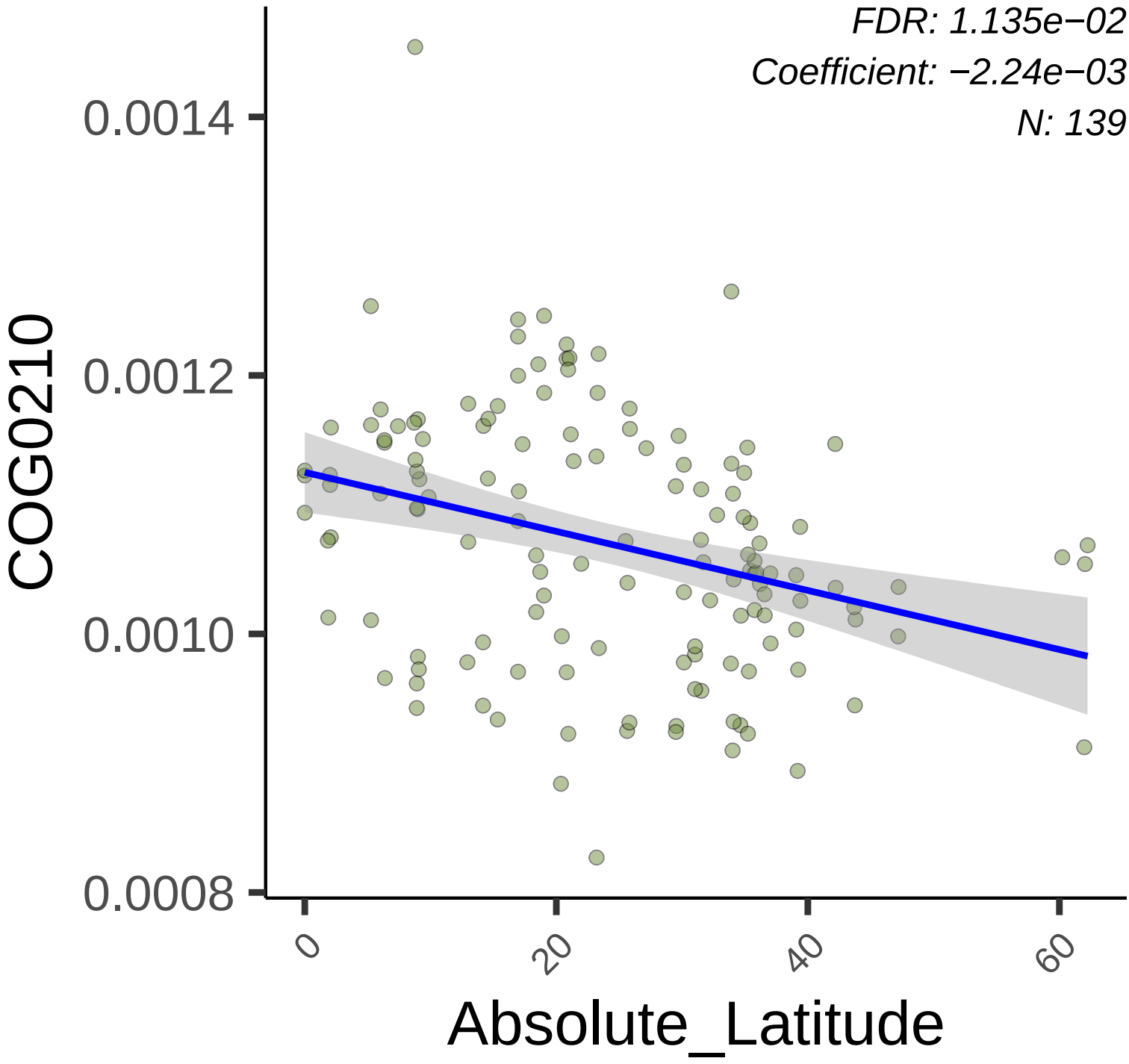

FDR: 1.113e−02
Coefficient: −1.71e−02
N: 139
COG1553
9e−05
6e−05
3e−05
0
20
40
60
Absolute_Latitude

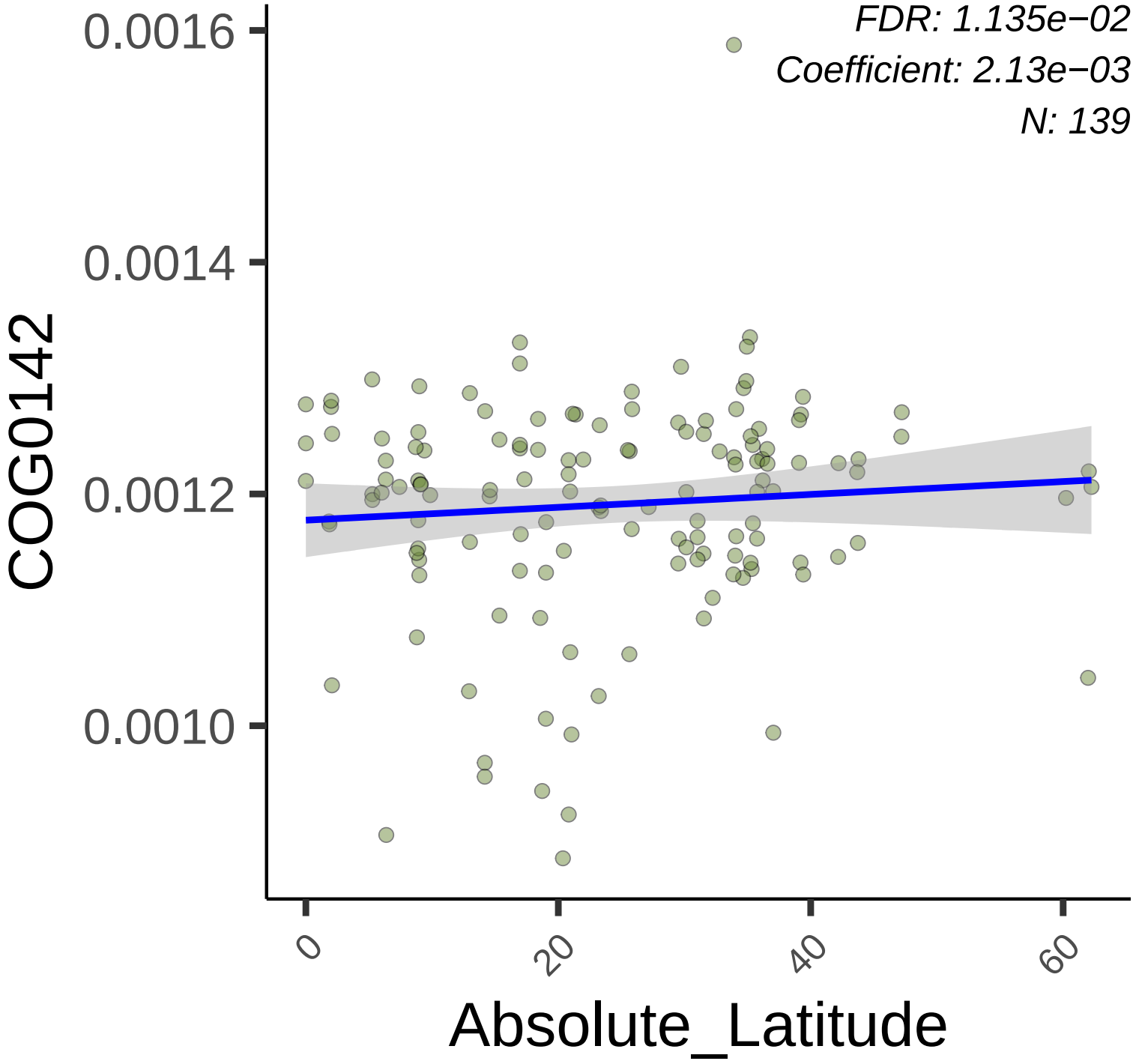

FDR: 1.113e−02
Coefficient: 3.24e−02
N: 139
COG4402
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

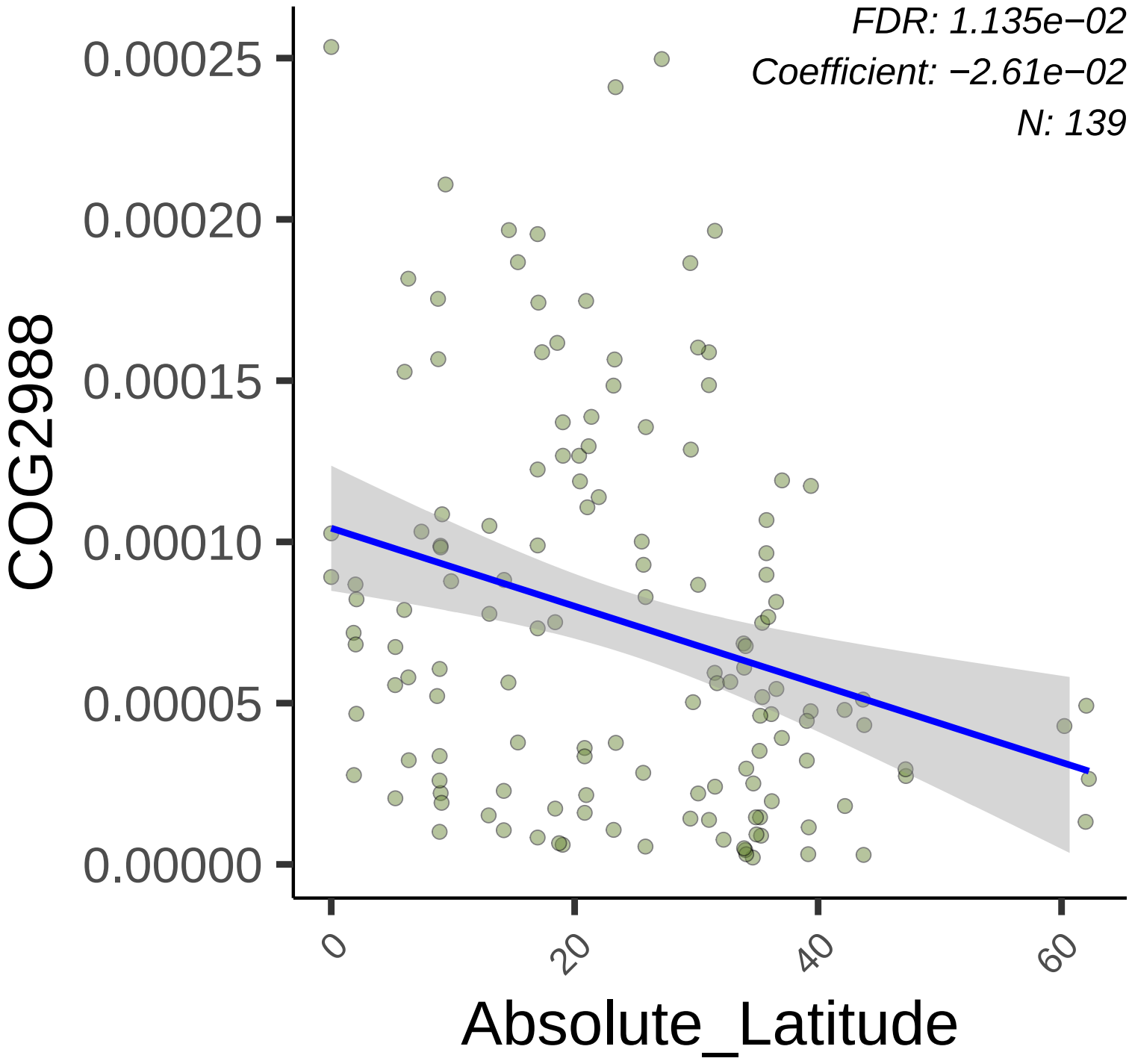

FDR: 1.123e−02
Coefficient: 3.29e−02
N: 139
COG3398
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

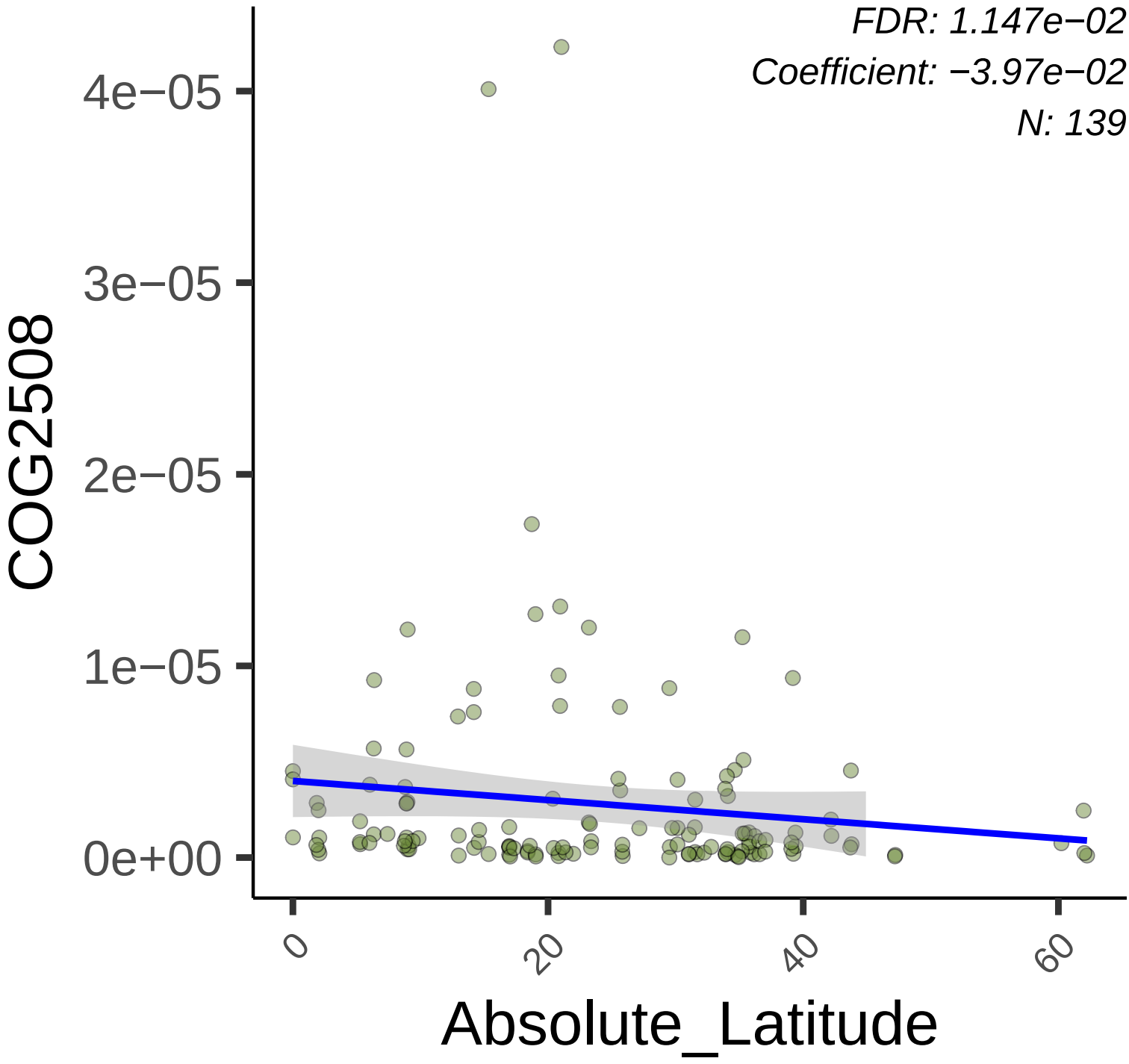

FDR: 1.125e−02
Coefficient: −1.19e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG1189
0
20
40
60
Absolute_Latitude

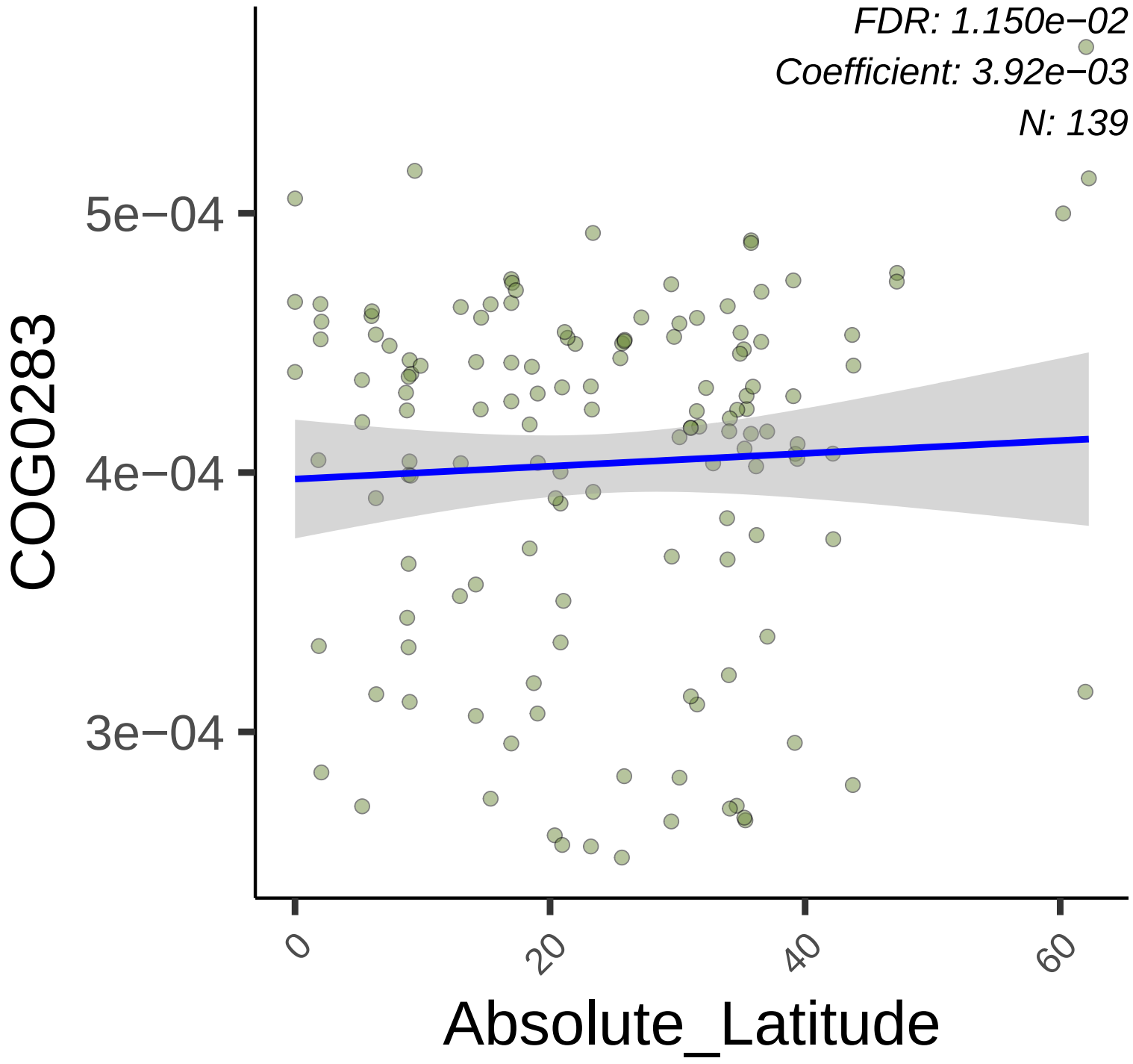

FDR: 1.128e−02
Coefficient: 4.88e−03
N: 139
8e−04
6e−04
4e−04
COG0623
0
20
40
60
Absolute_Latitude

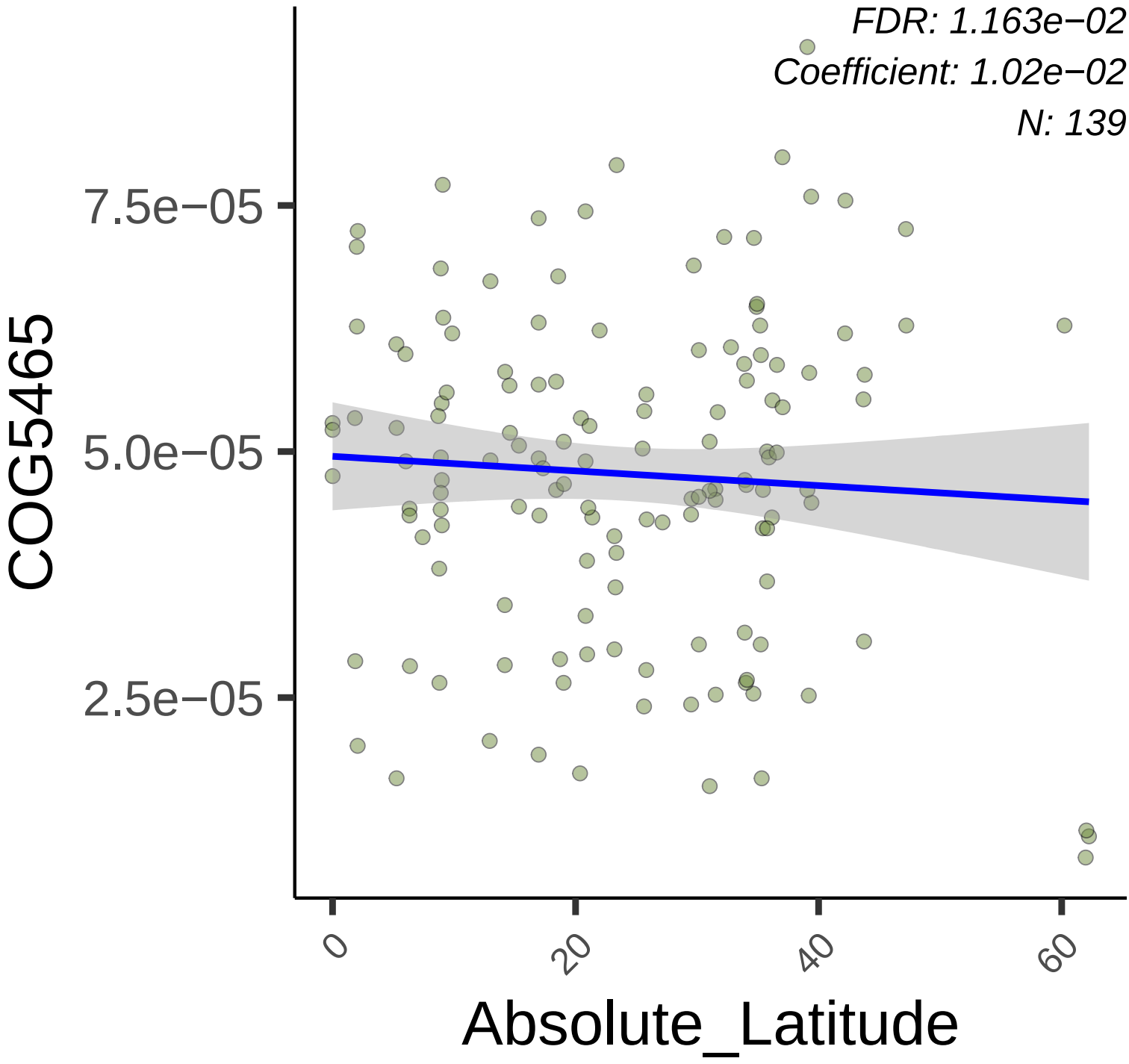

FDR: 1.135e−02
Coefficient: −2.24e−03
N: 139
0.0014
0.0012
0.0010
0.0008
COG0210
0
20
40
60
Absolute_Latitude

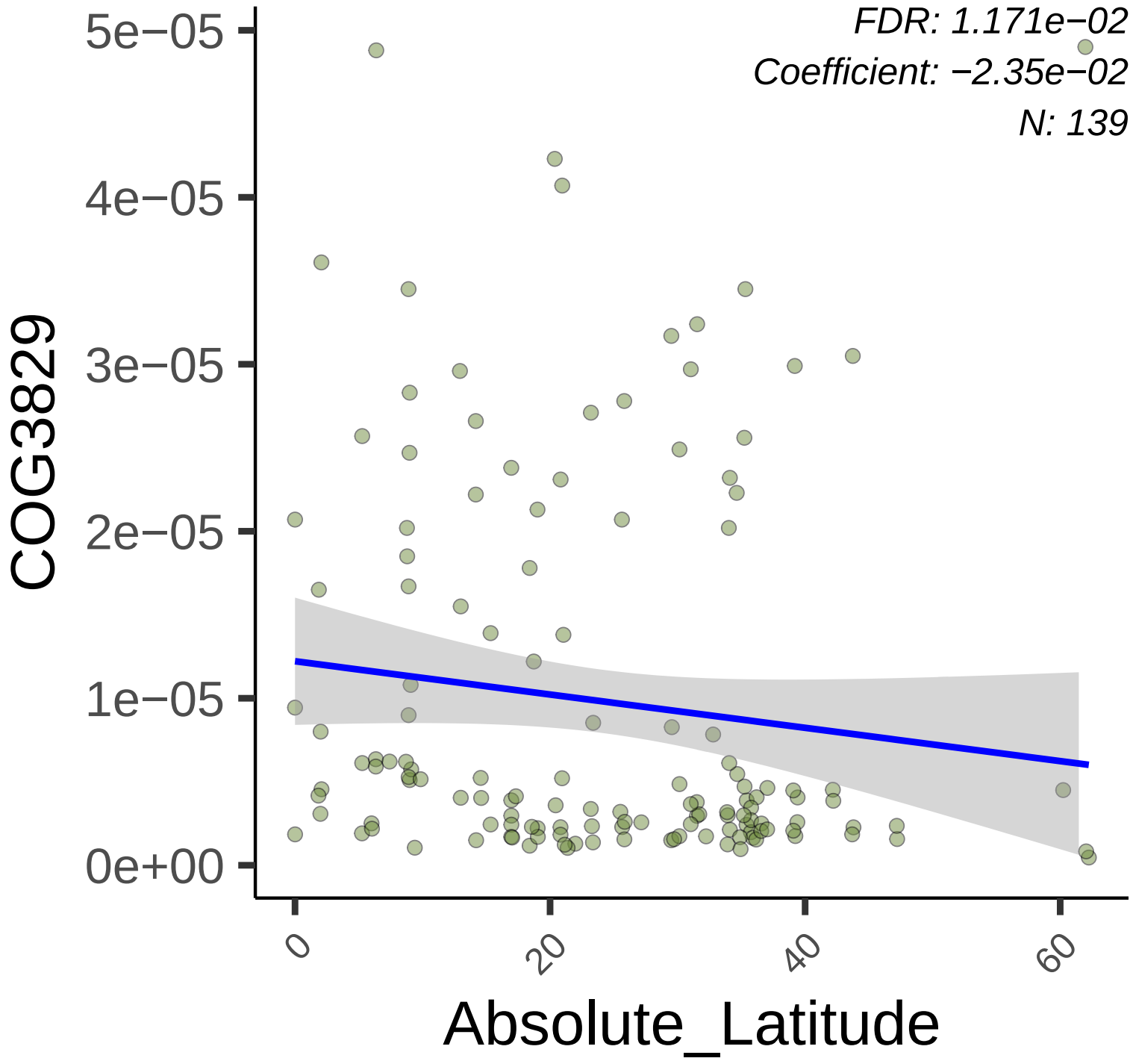

FDR: 1.135e−02
Coefficient: 2.13e−03
N: 139
0.0016
0.0014
0.0012
0.0010
COG0142
0
20
40
60
Absolute_Latitude

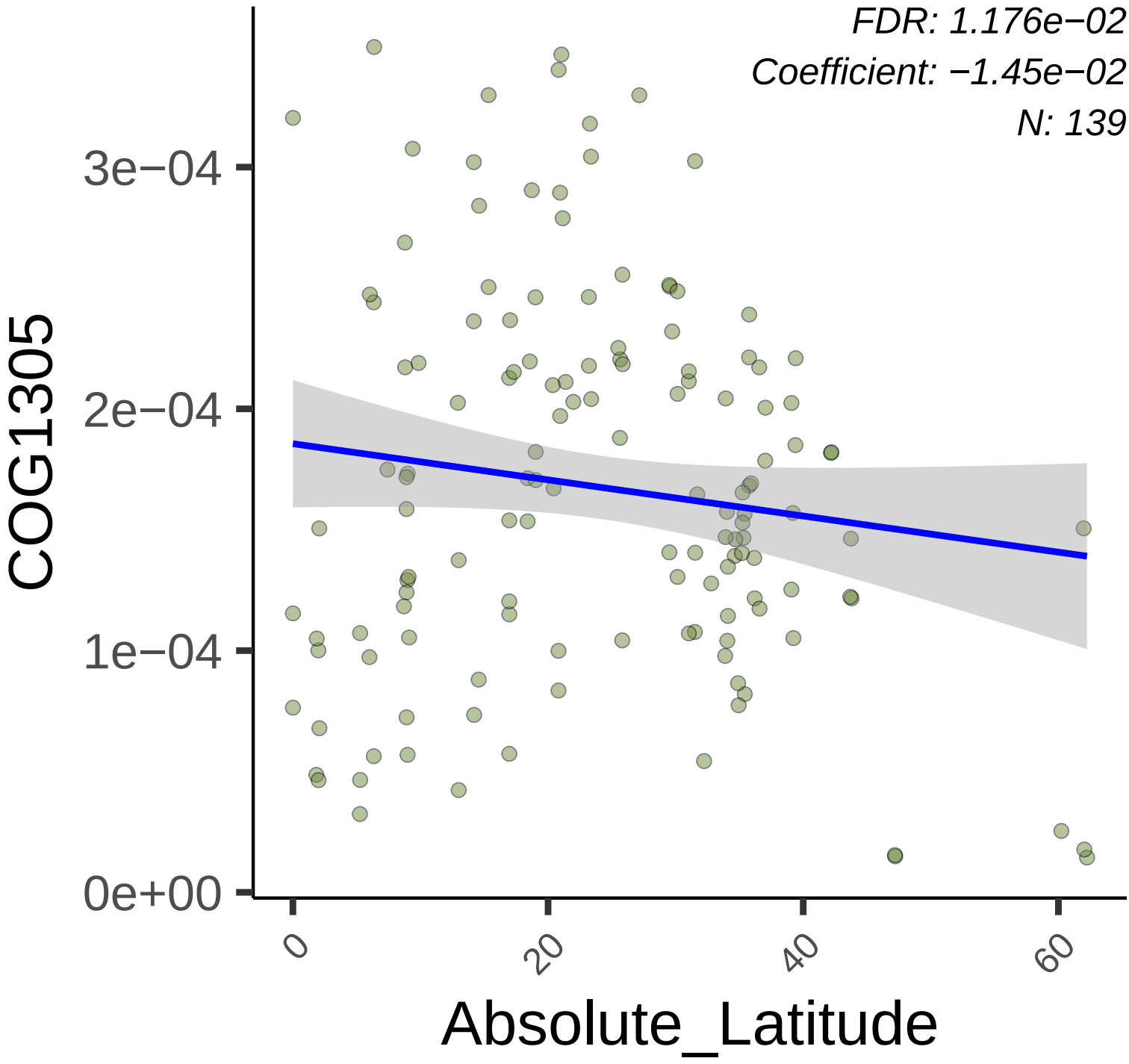

FDR: 1.135e−02
Coefficient: −2.61e−02
N: 139
COG2988
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

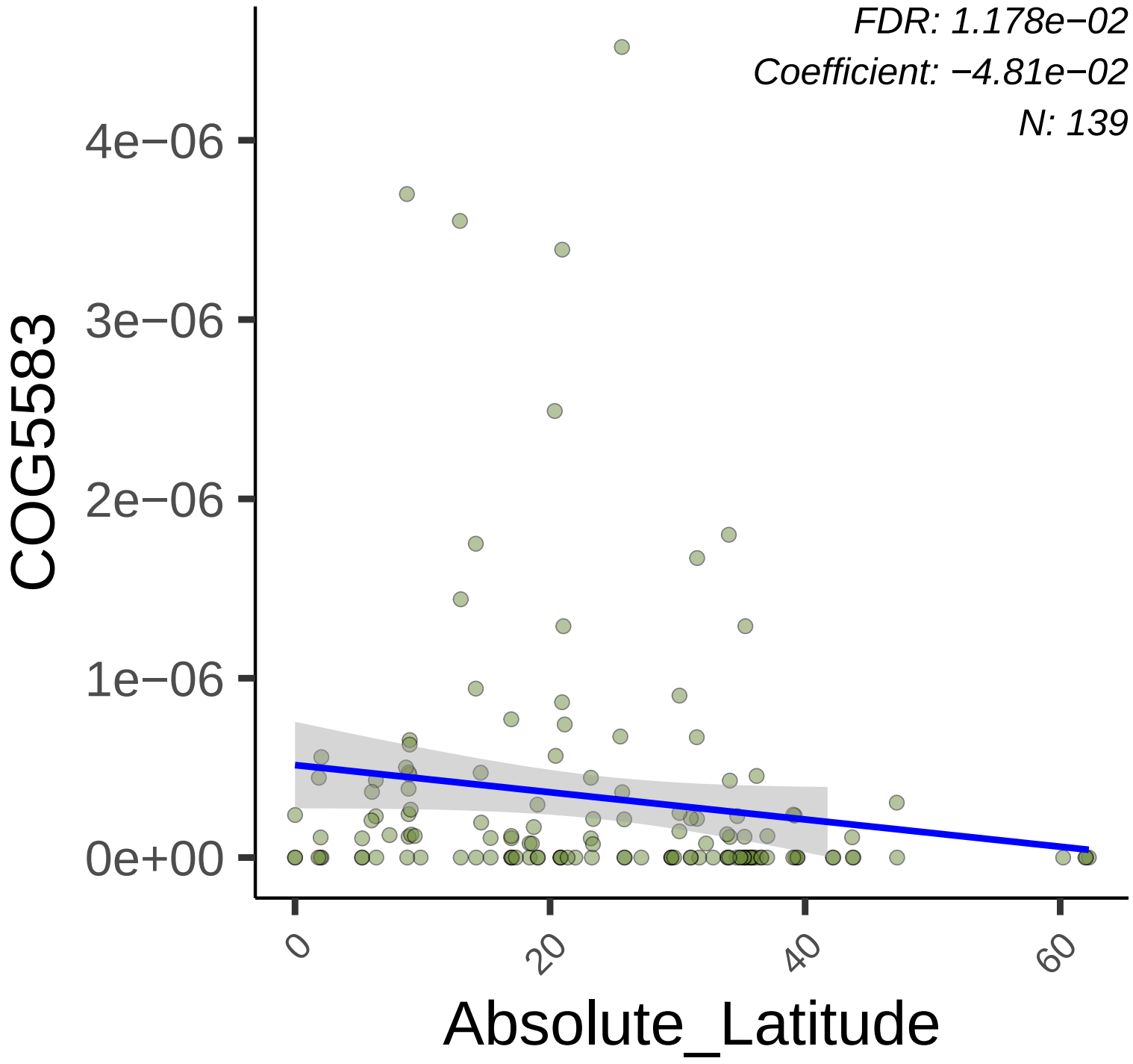

FDR: 1.147e−02
Coefficient: −3.97e−02
N: 139
COG2508
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

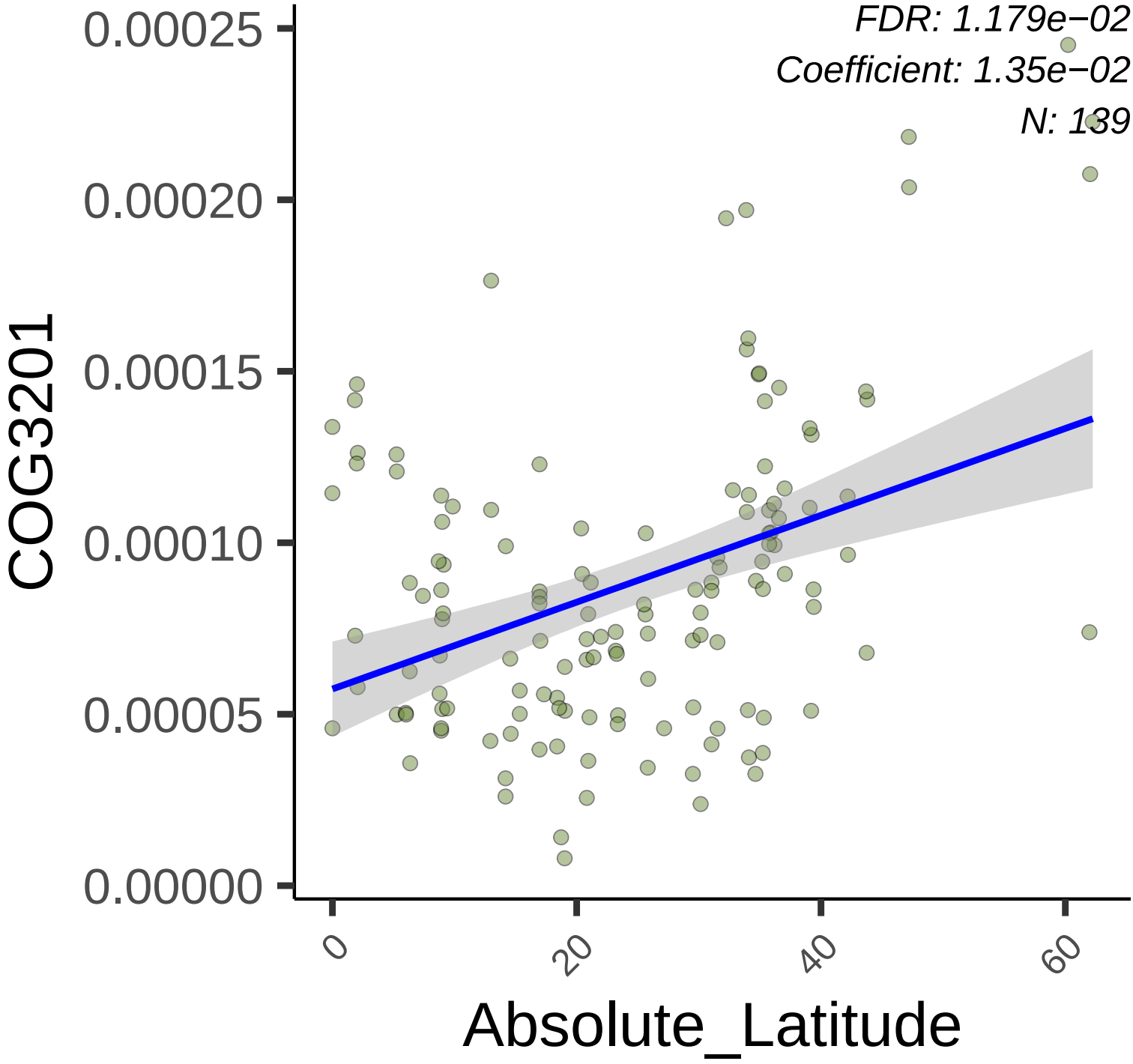

FDR: 1.150e−02
Coefficient: 3.92e−03
N: 139
5e−04
4e−04
3e−04
COG0283
0
20
40
60
Absolute_Latitude

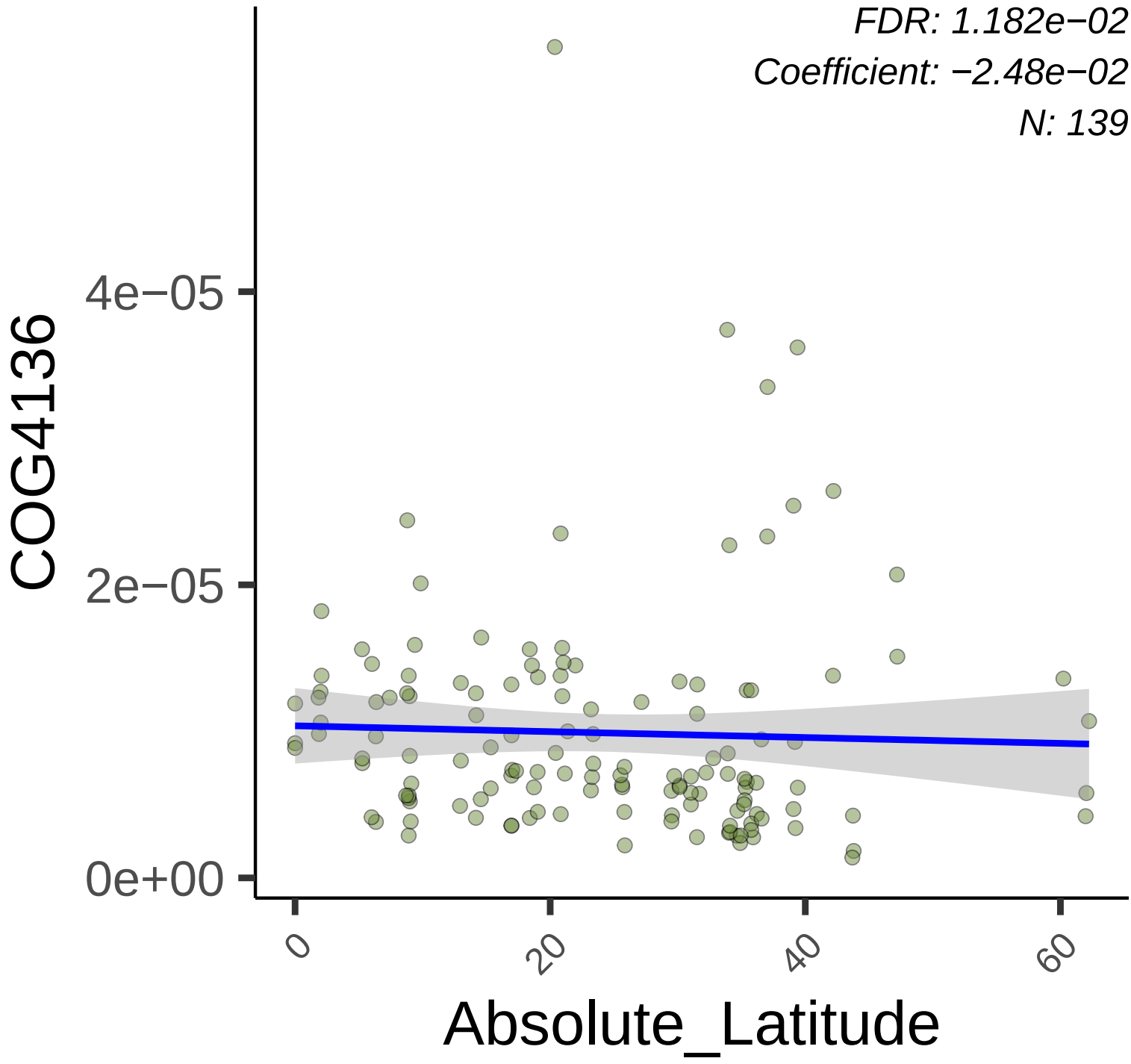

FDR: 1.163e−02
Coefficient: 1.02e−02
N: 139
7.5e−05
5.0e−05
2.5e−05
COG5465
0
20
40
60
Absolute_Latitude

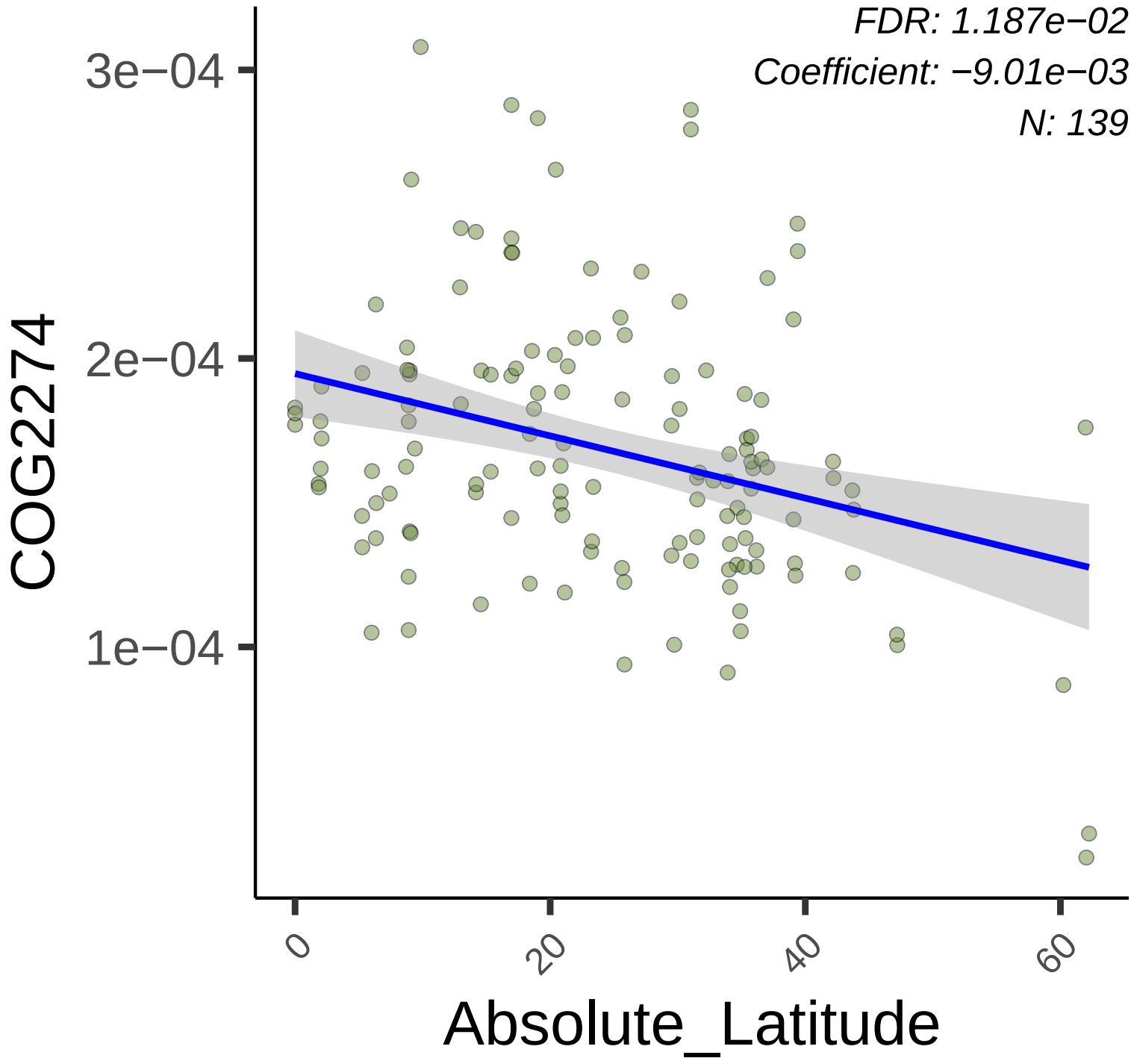

FDR: 1.171e−02
Coefficient: −2.35e−02
N: 139
COG3829
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

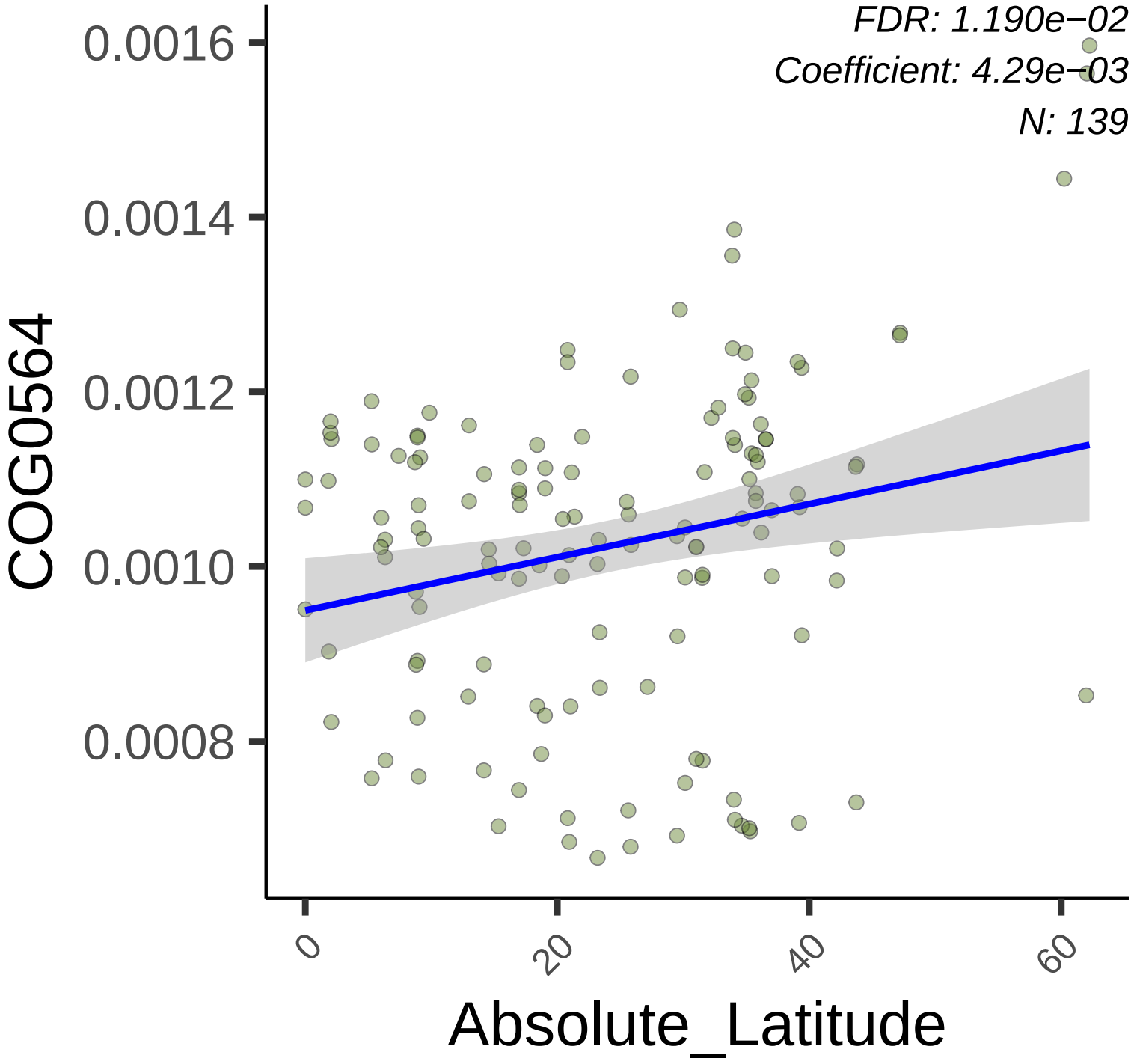

FDR: 1.176e−02
Coefficient: −1.45e−02
N: 139
COG1305
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

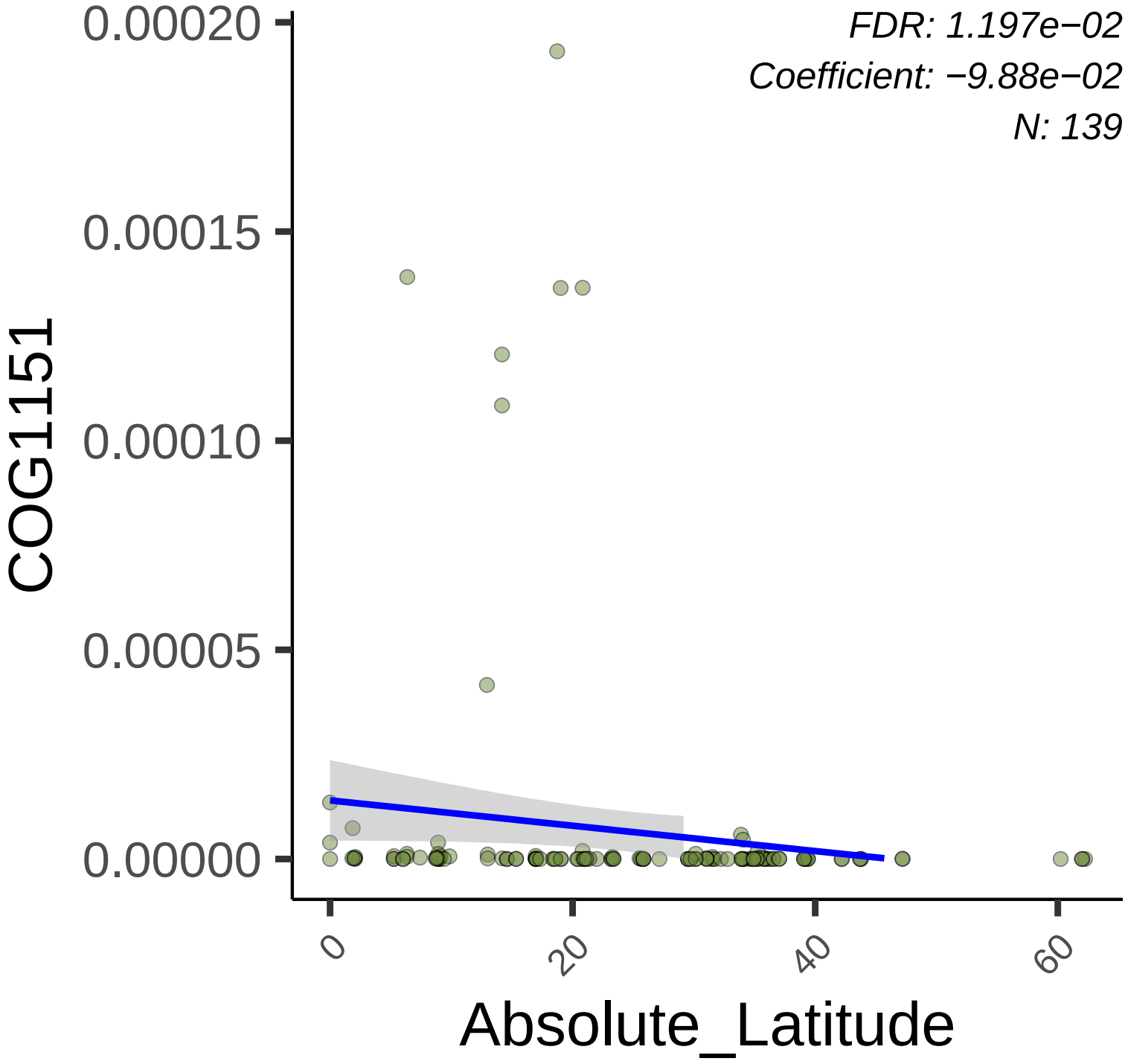

FDR: 1.178e−02
Coefficient: −4.81e−02
N: 139
COG5583
4e−06
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

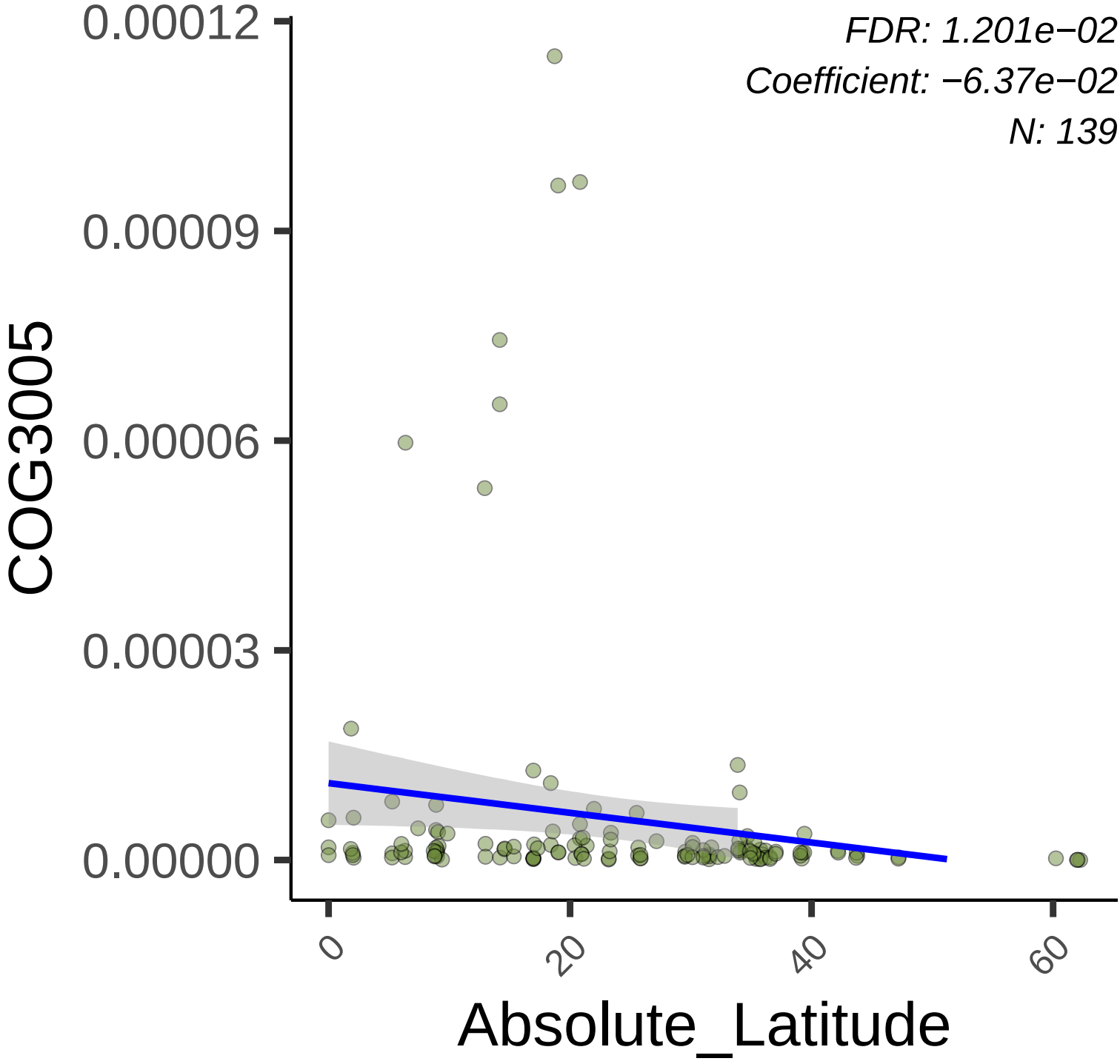

FDR: 1.179e−02
Coefficient: 1.35e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
COG3201
0
20
40
60
Absolute_Latitude

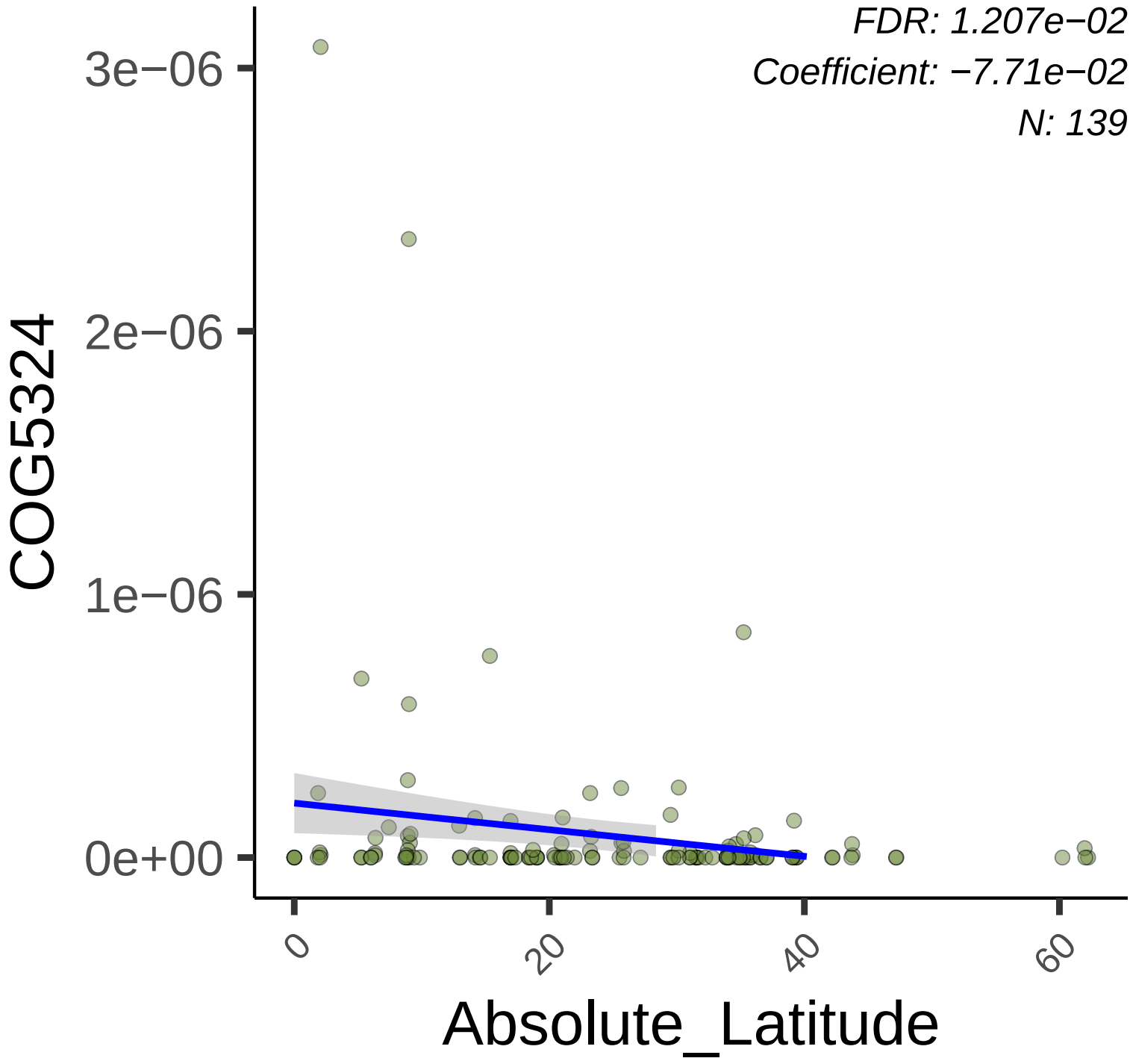

FDR: 1.182e−02
Coefficient: −2.48e−02
N: 139
COG4136
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

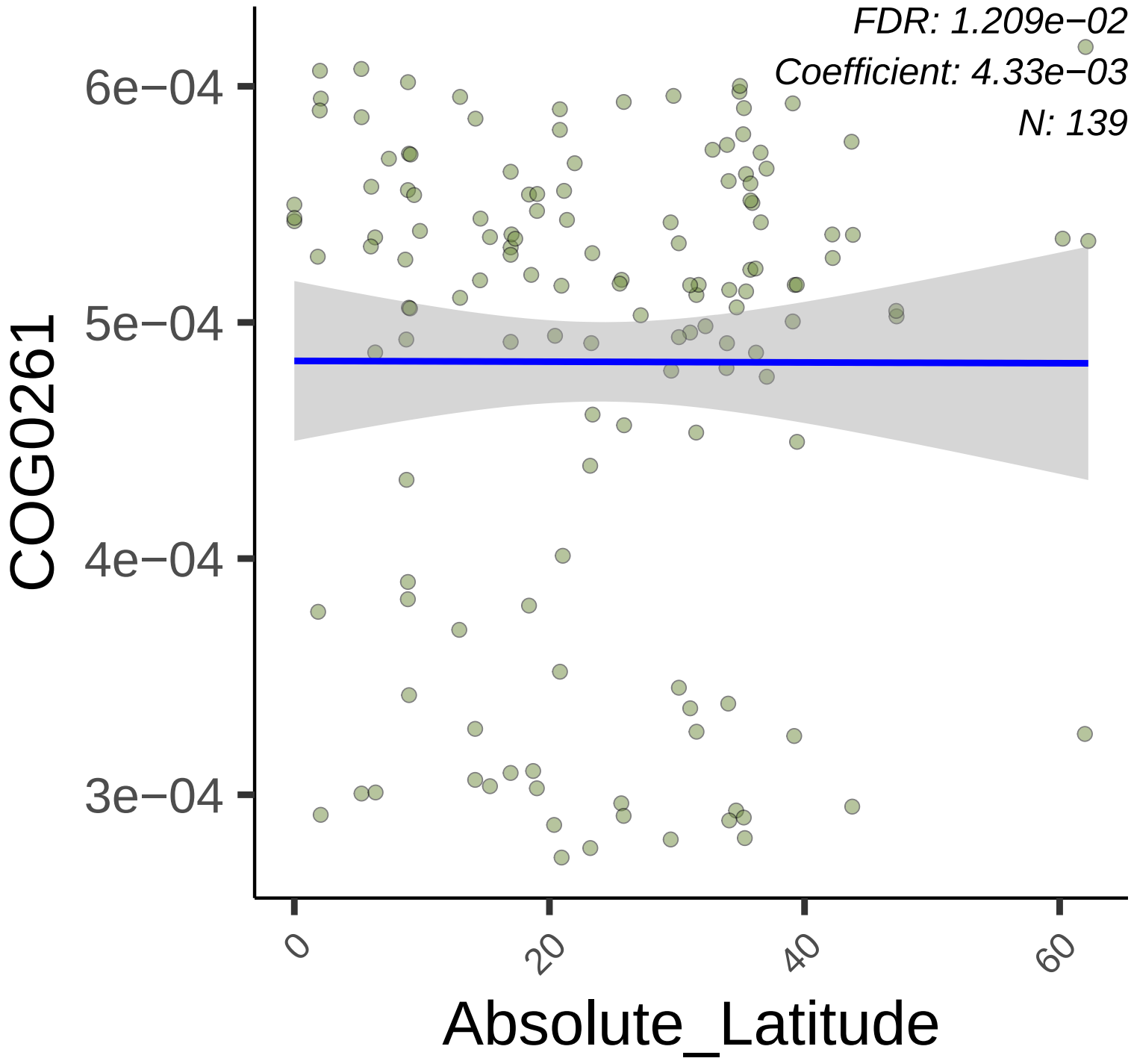

FDR: 1.187e−02
Coefficient: −9.01e−03
N: 139
3e−04
2e−04
1e−04
COG2274
0
20
40
60
Absolute_Latitude

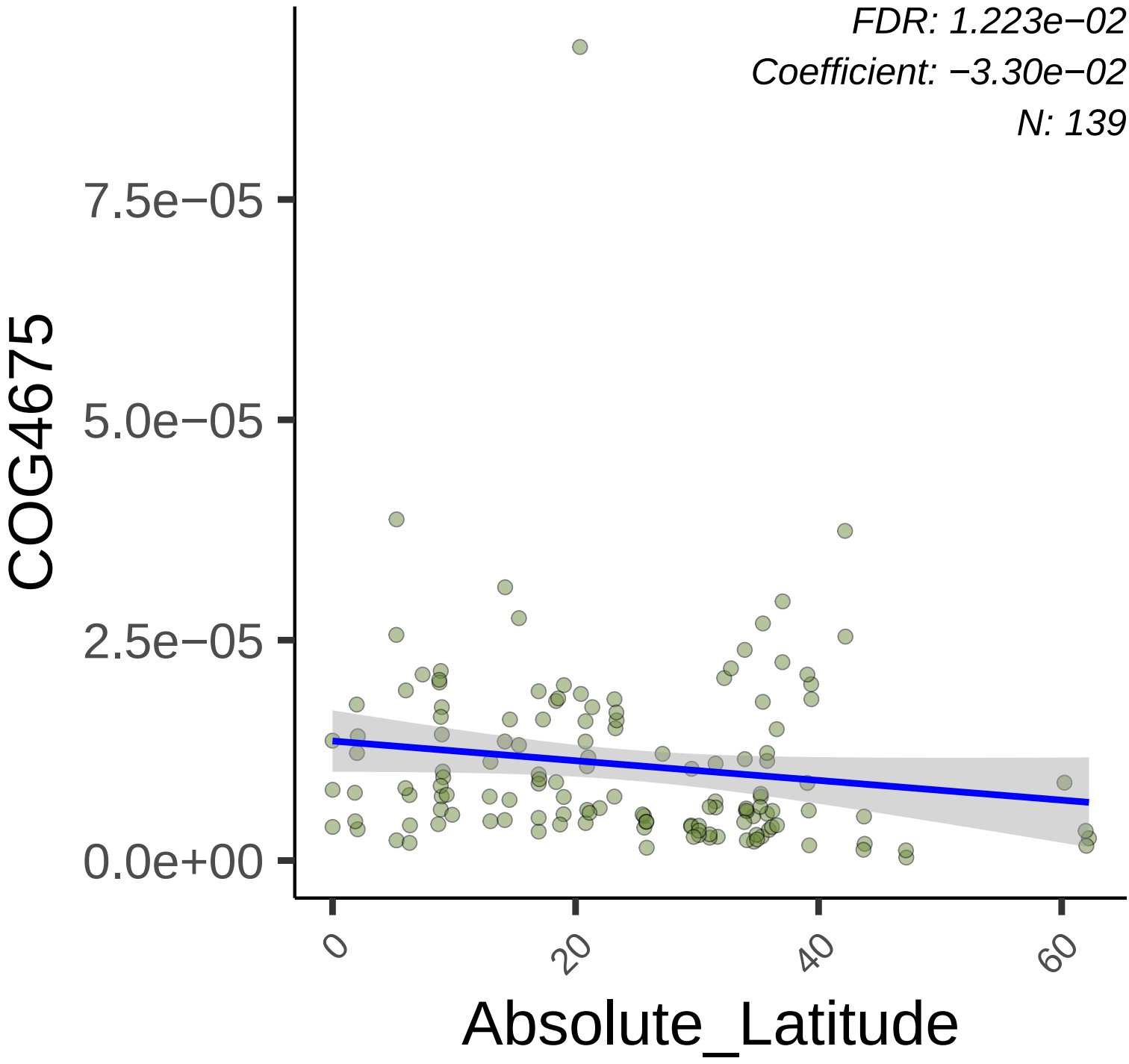

FDR: 1.190e−02
Coefficient: 4.29e−03
N: 139
0.0016
0.0014
0.0012
0.0010
0.0008
COG0564
0
20
40
60
Absolute_Latitude

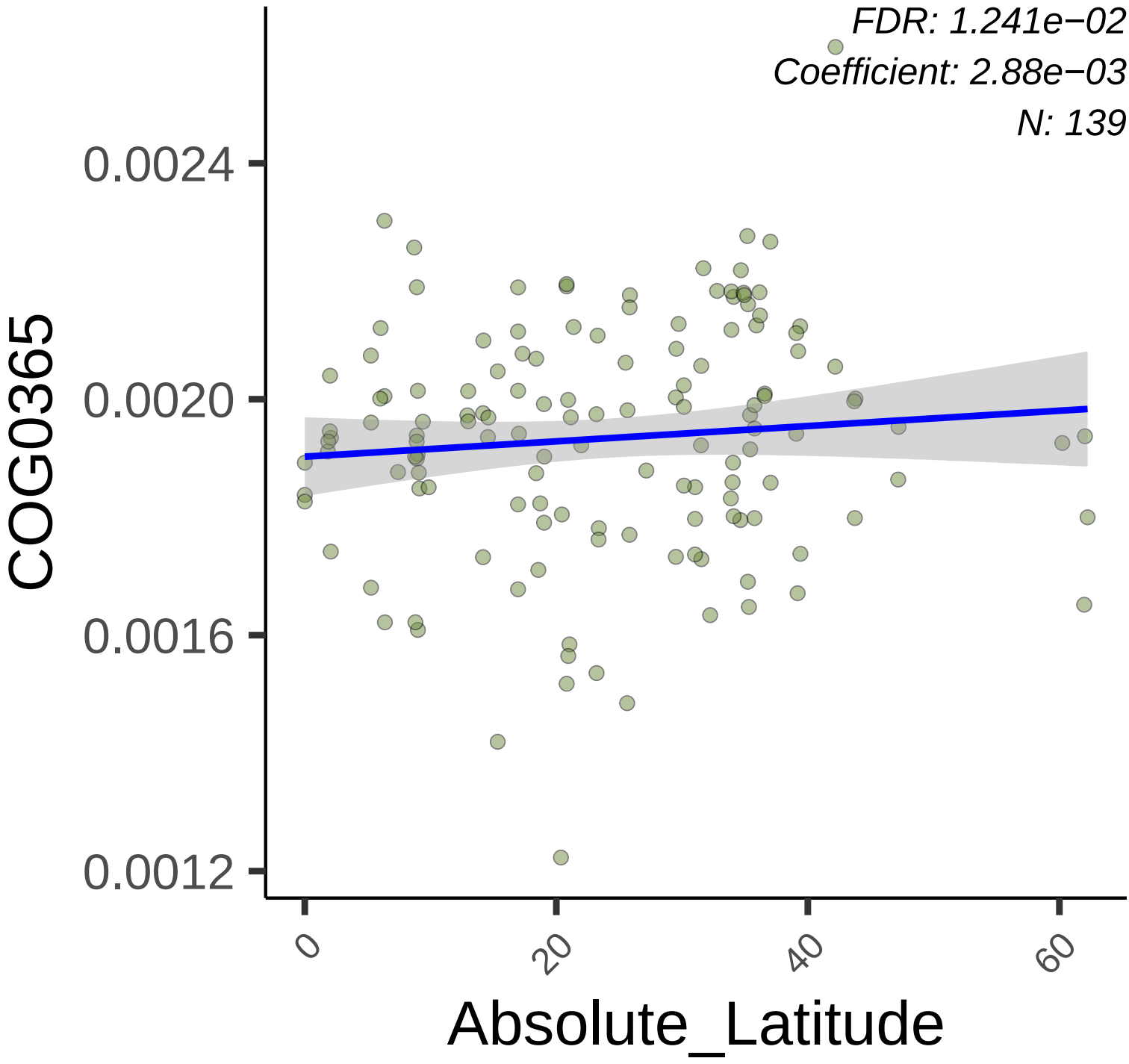

FDR: 1.197e−02
Coefficient: −9.88e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG1151
0
20
40
60
Absolute_Latitude

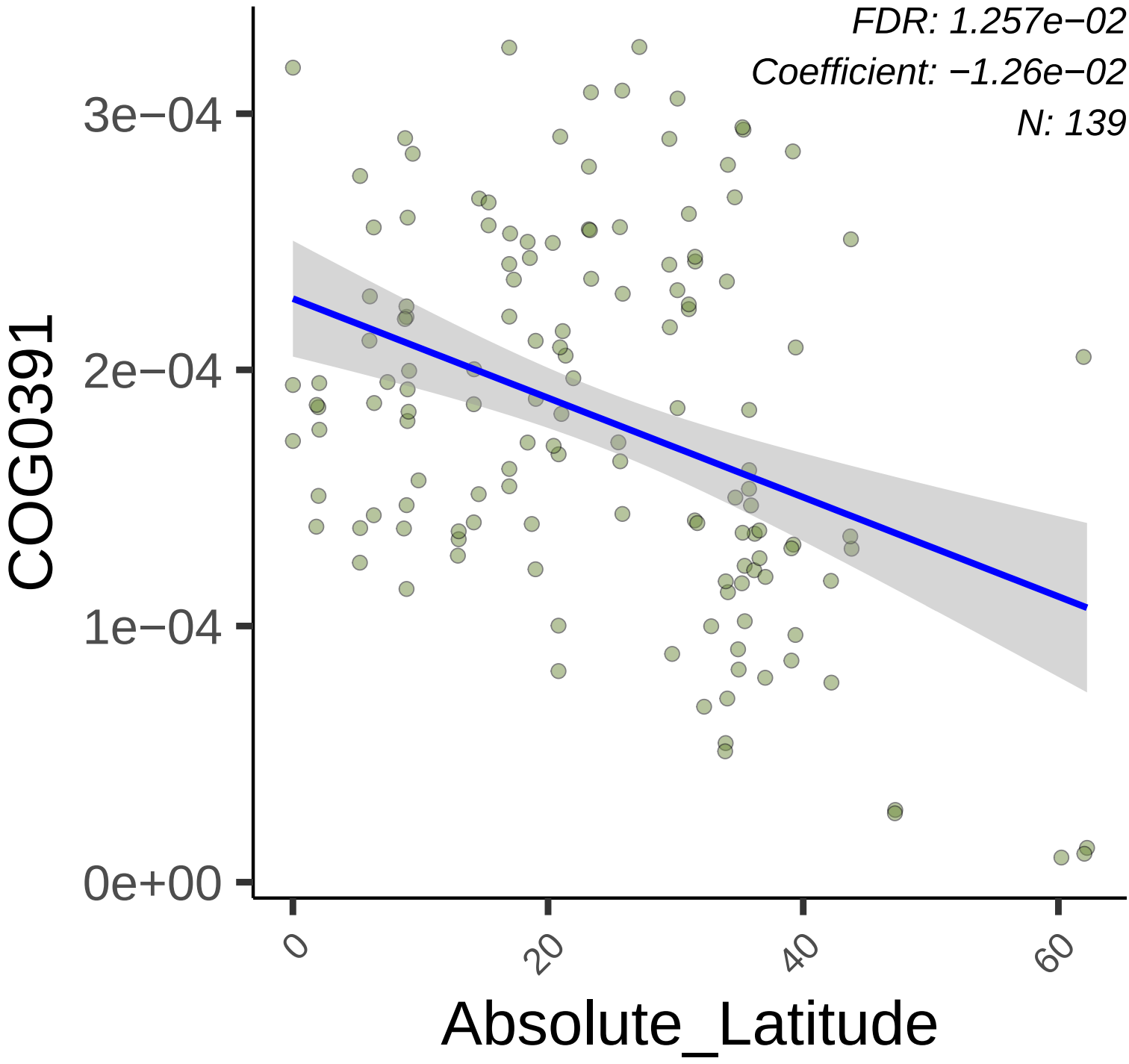

FDR: 1.201e−02
Coefficient: −6.37e−02
N: 139
COG3005
0.00012
0.00009
0.00006
0.00003
0.00000
0
20
40
60
Absolute_Latitude

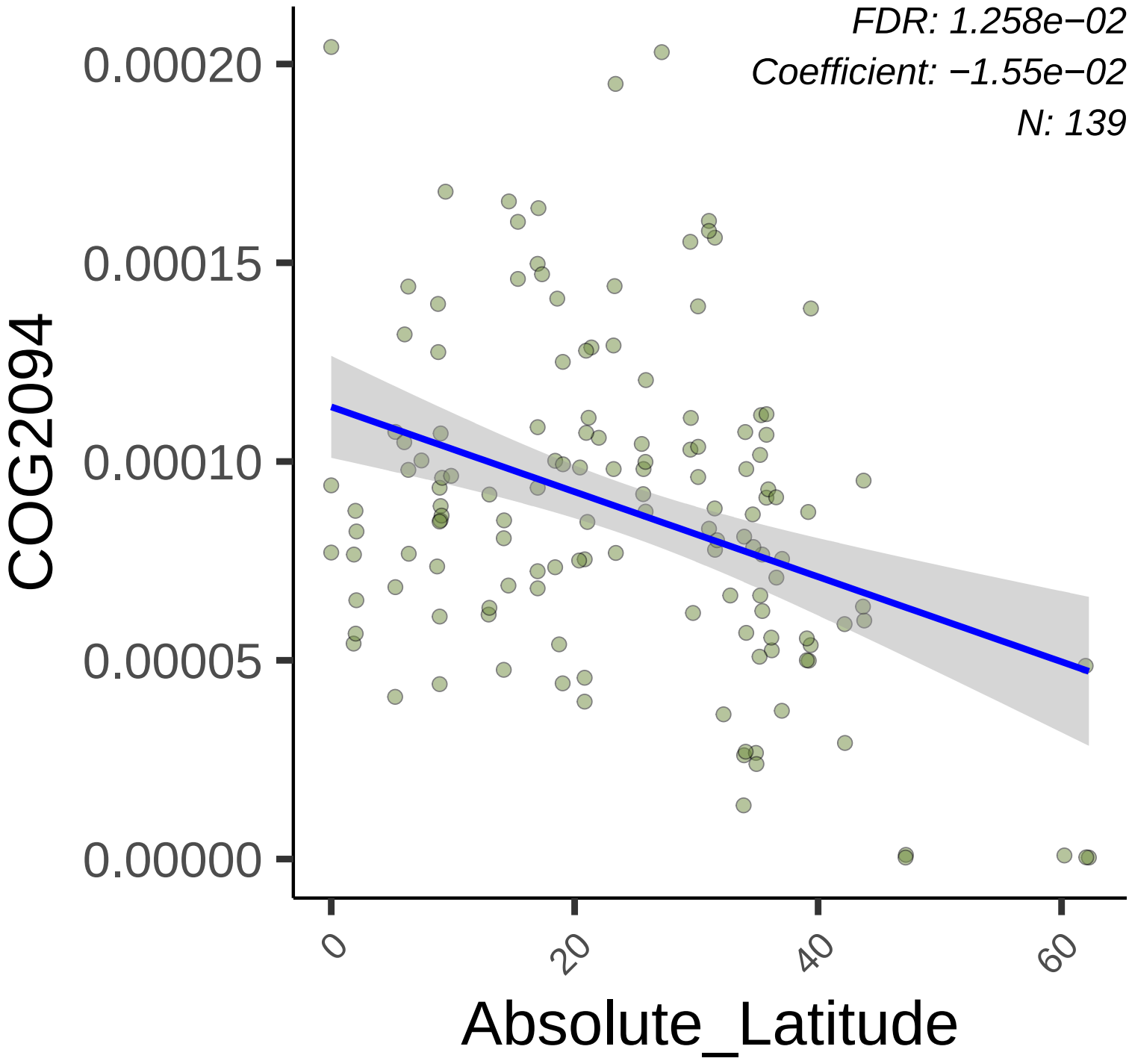

FDR: 1.207e−02
Coefficient: −7.71e−02
N: 139
COG5324
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

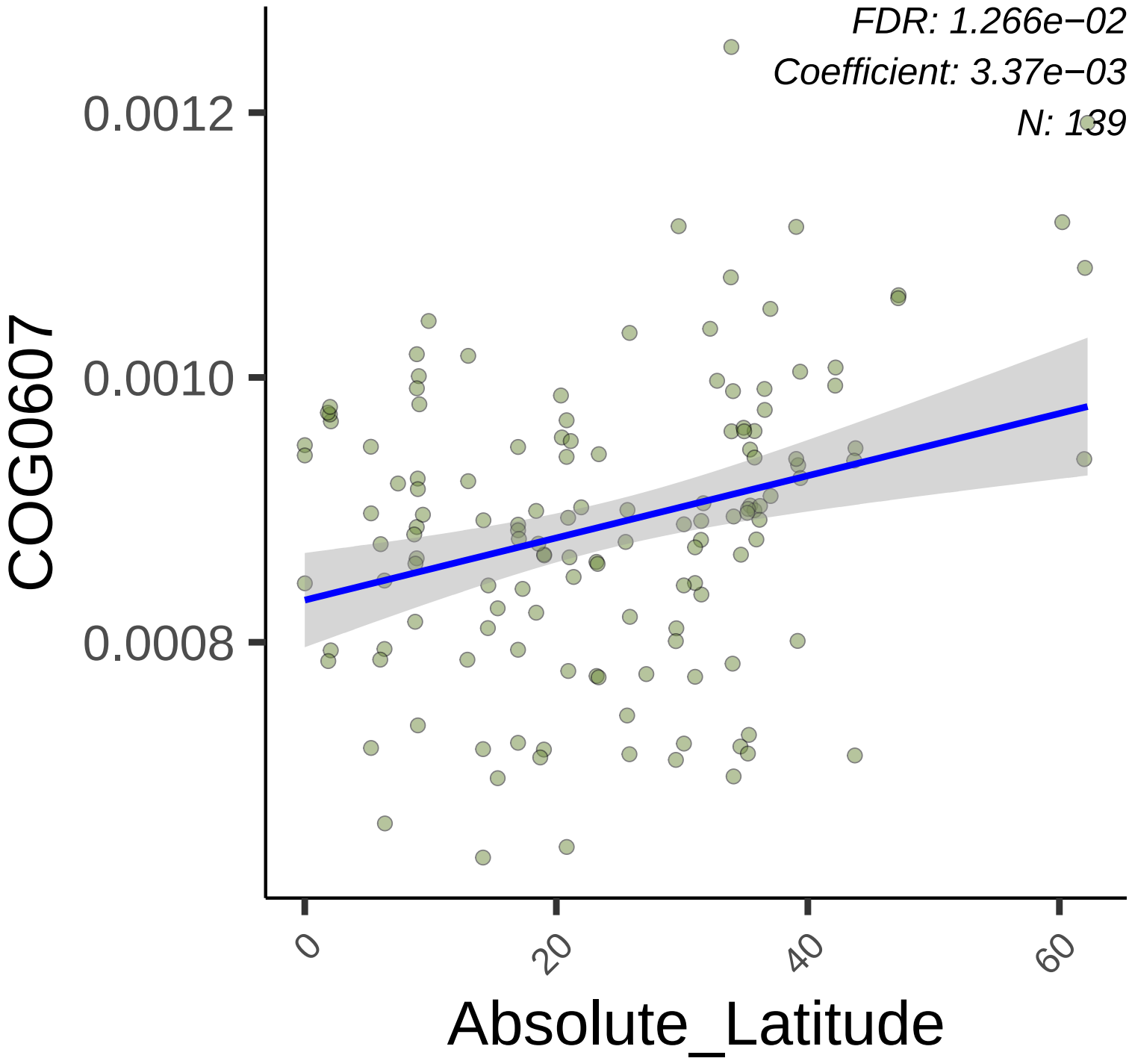

FDR: 1.209e−02
Coefficient: 4.33e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0261
0
20
40
60
Absolute_Latitude

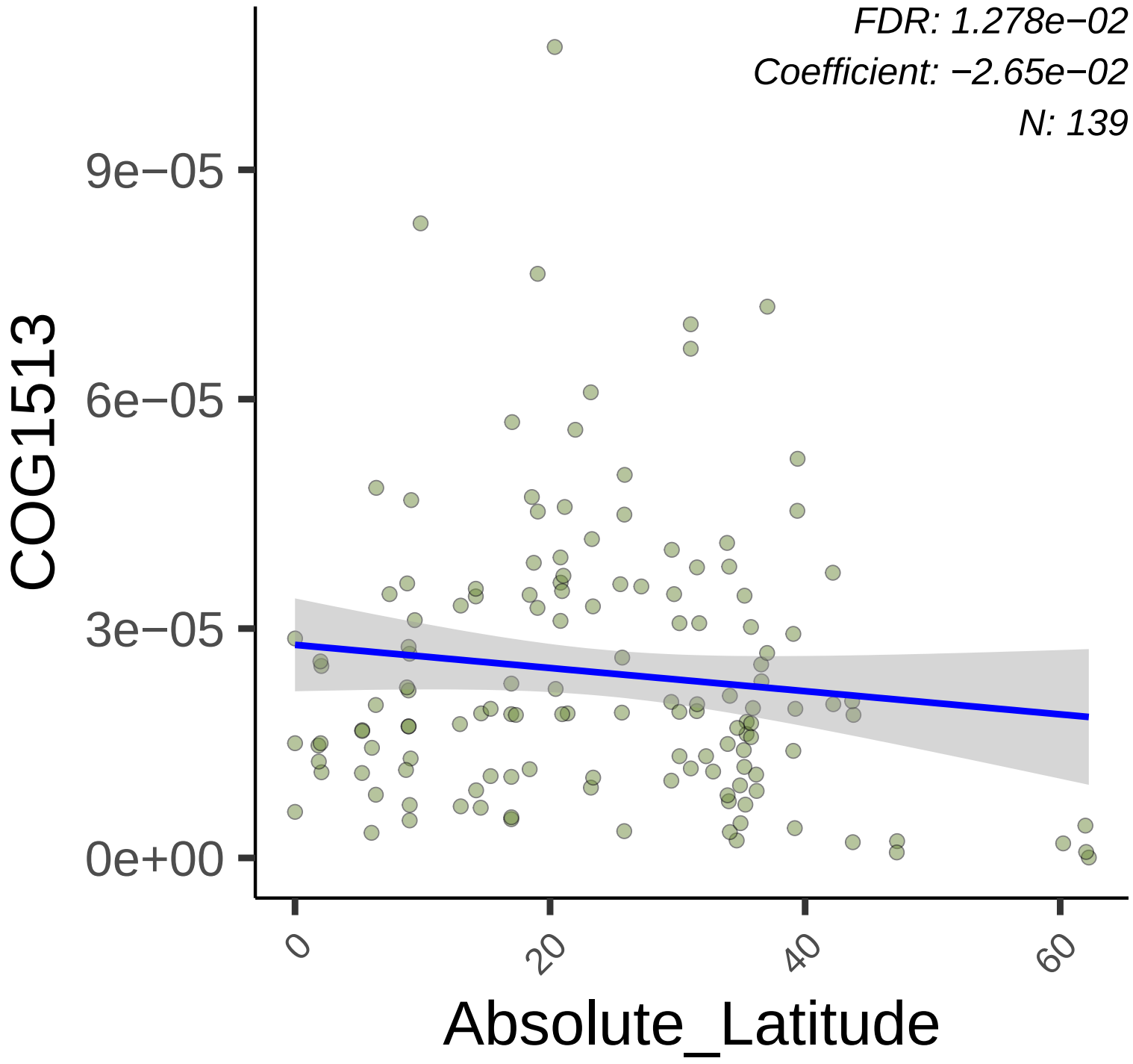

FDR: 1.223e−02
Coefficient: −3.30e−02
N: 139
COG4675
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

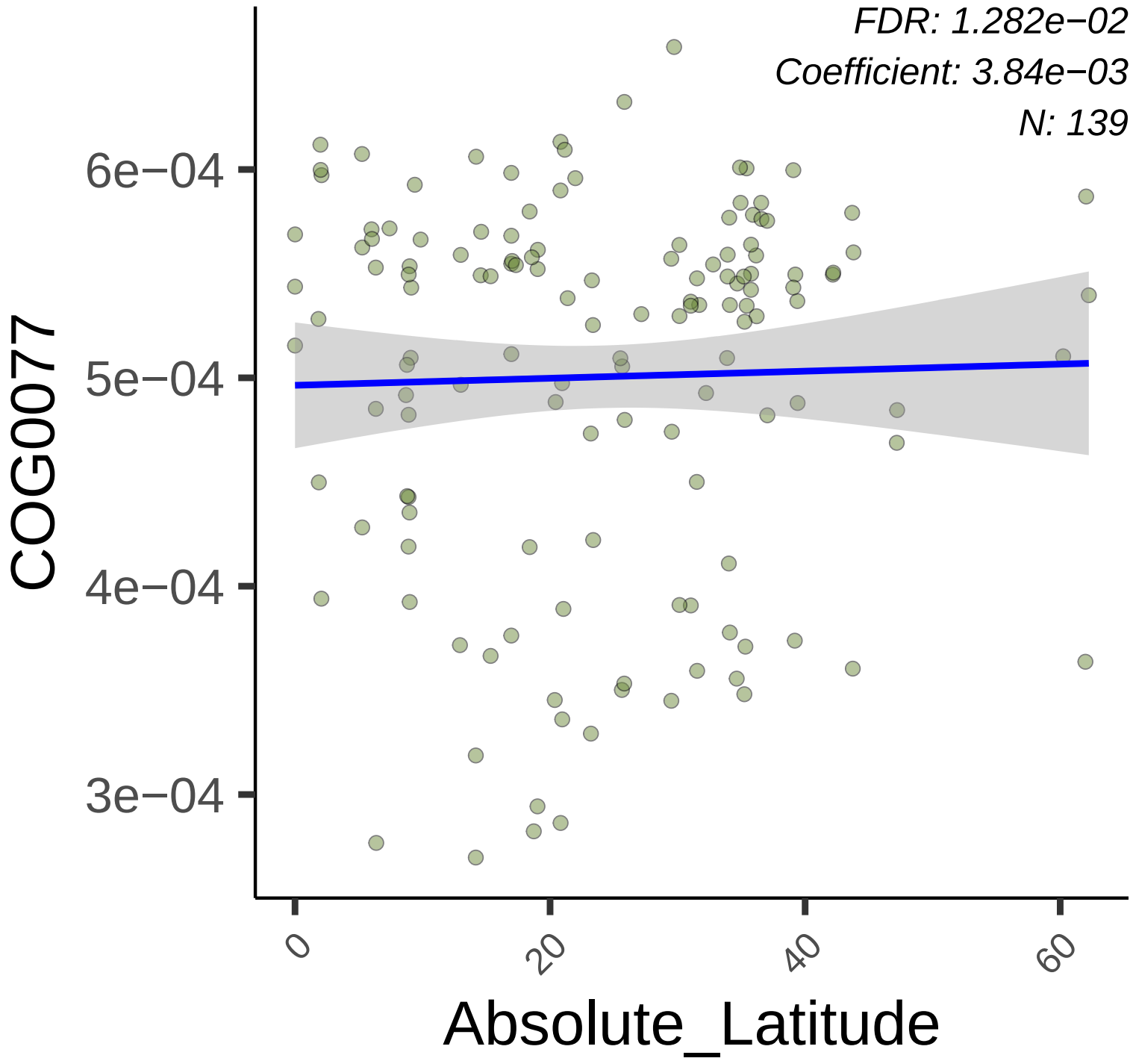

FDR: 1.241e−02
Coefficient: 2.88e−03
N: 139
COG0365
0.0024
0.0020
0.0016
0.0012
0
20
40
60
Absolute_Latitude

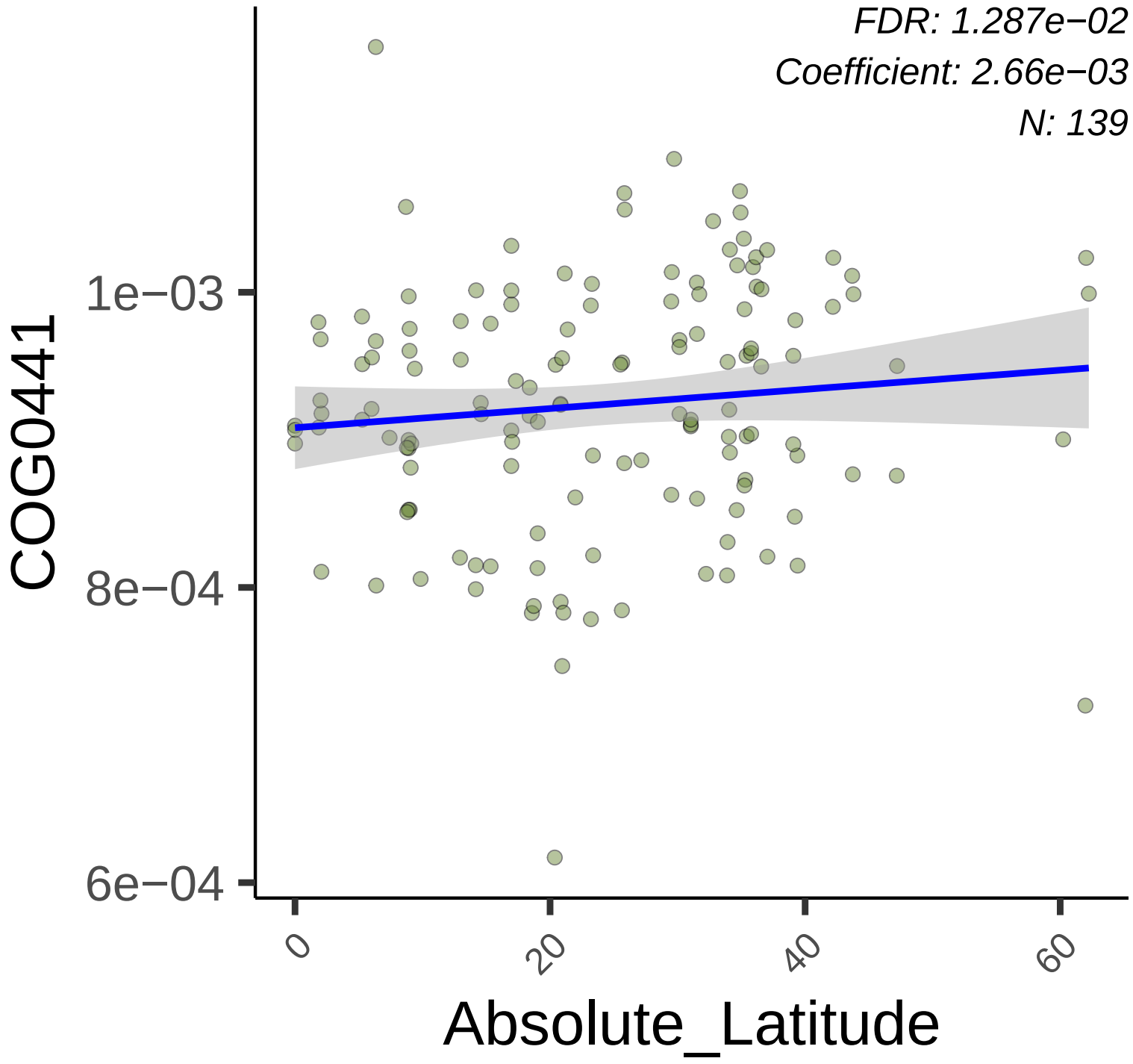

FDR: 1.257e−02
Coefficient: −1.26e−02
N: 139
COG0391
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

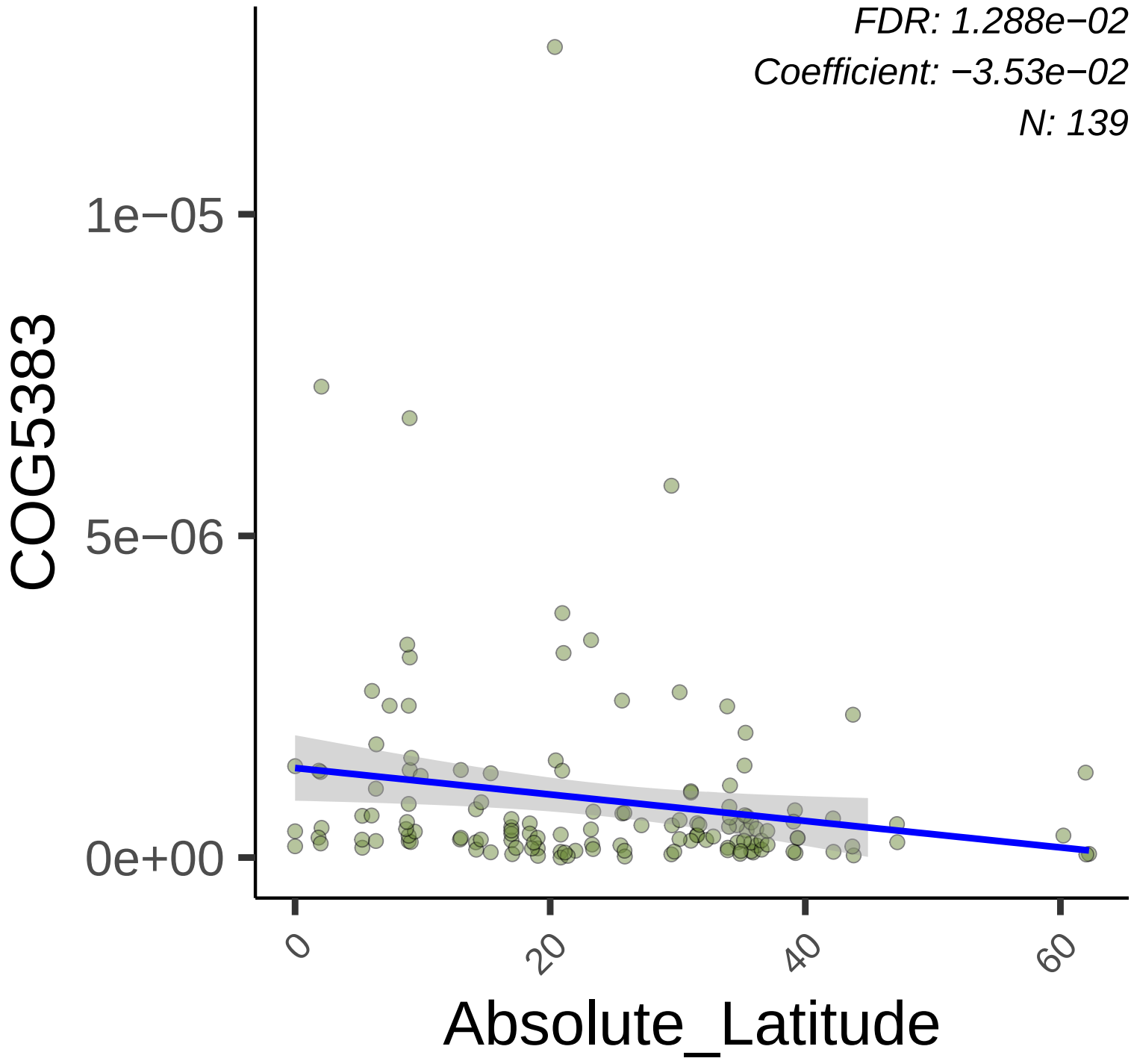

FDR: 1.258e−02
Coefficient: −1.55e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG2094
0
20
40
60
Absolute_Latitude

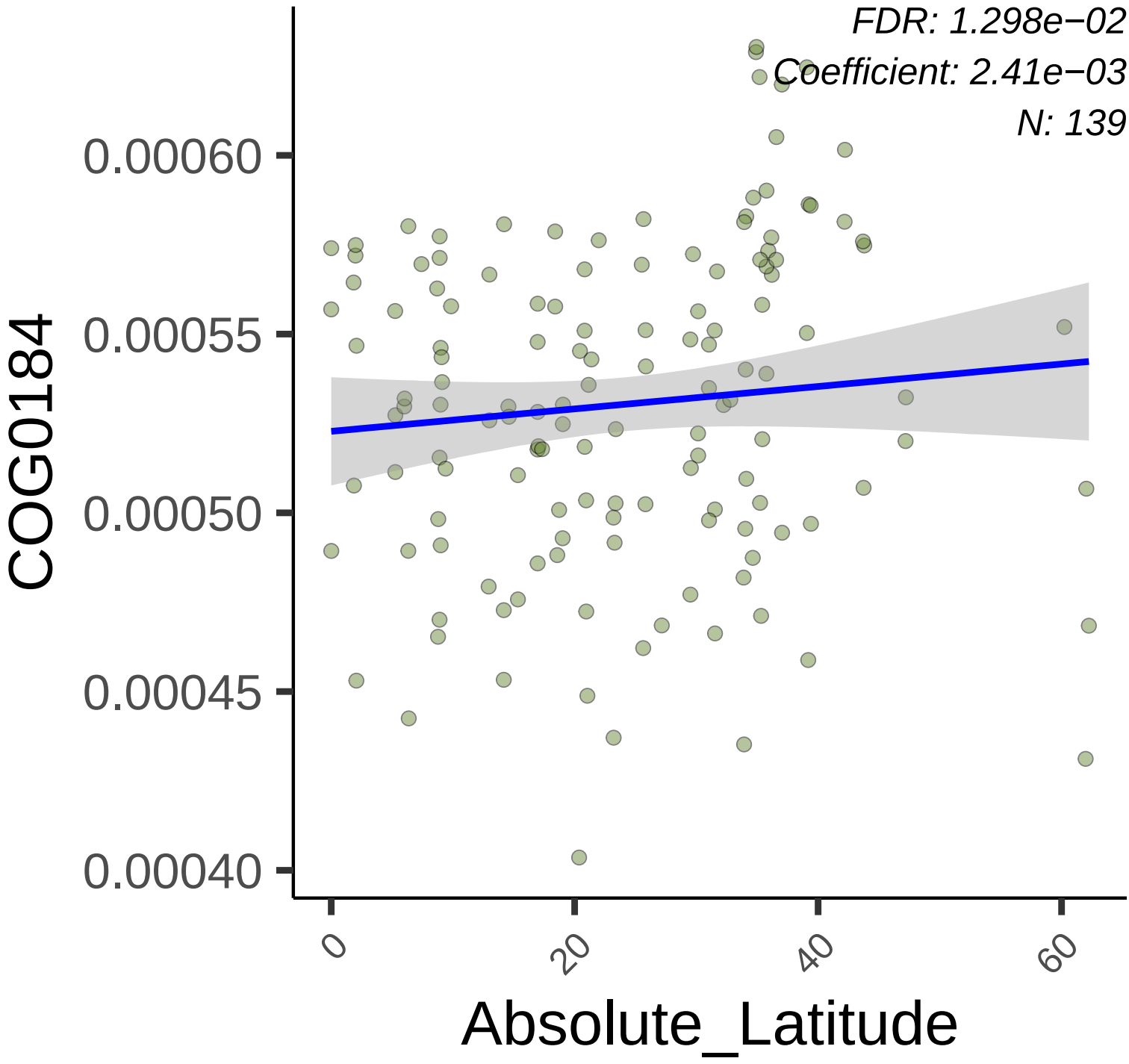

FDR: 1.266e−02
Coefficient: 3.37e−03
N: 139
0.0012
0.0010
0.0008
COG0607
0
20
40
60
Absolute_Latitude

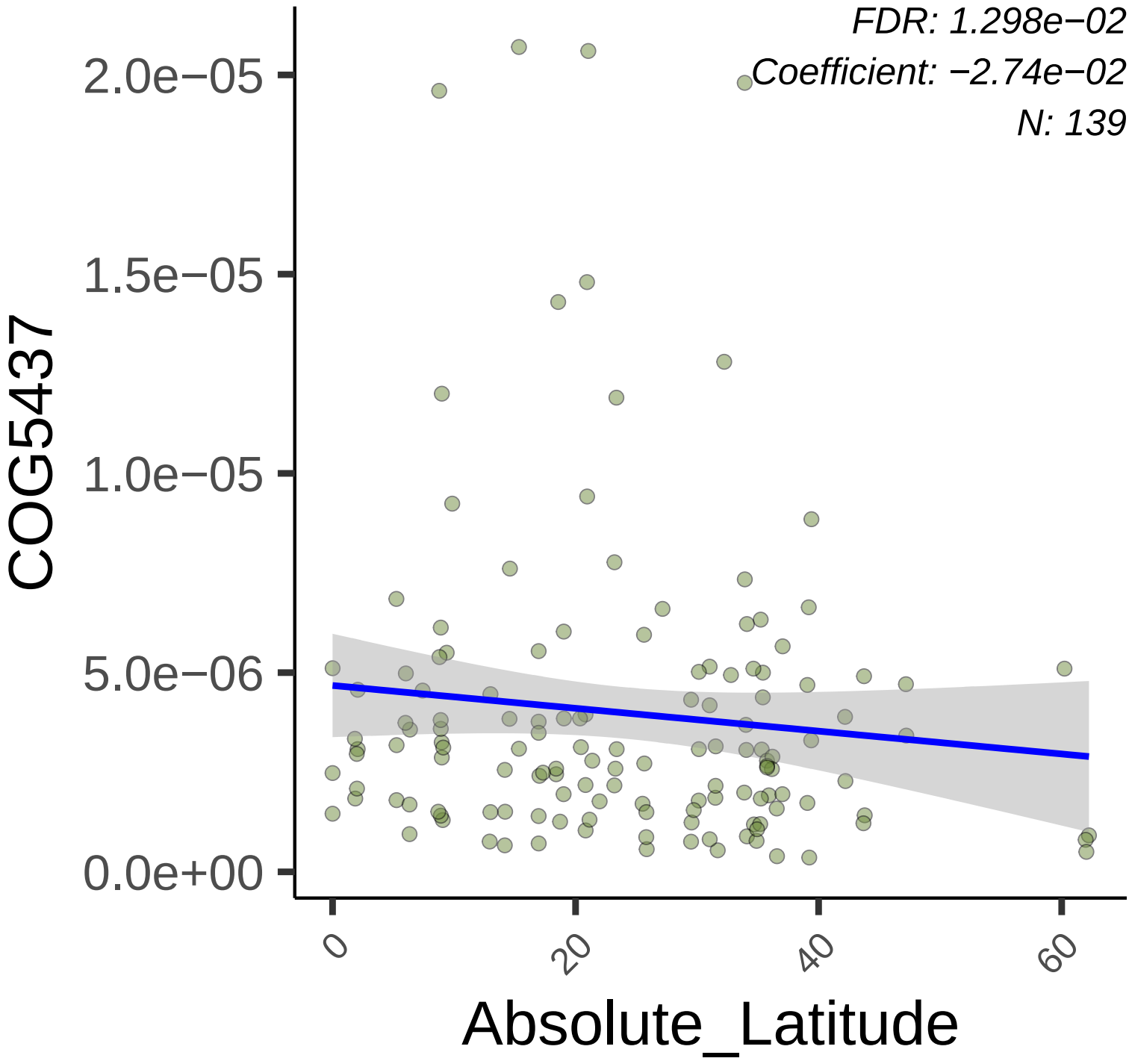

FDR: 1.278e−02
Coefficient: −2.65e−02
N: 139
COG1513
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

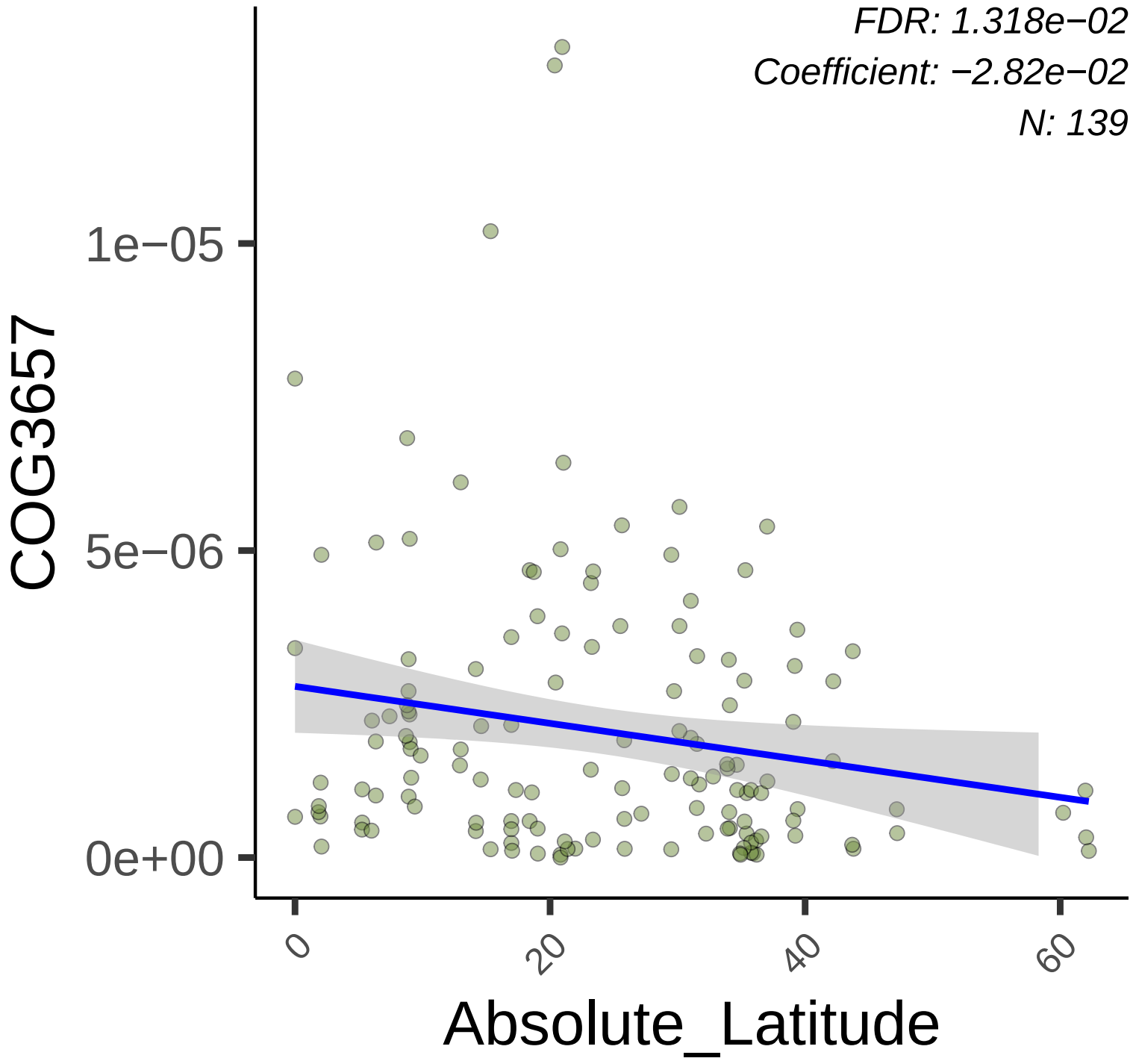

FDR: 1.282e−02
Coefficient: 3.84e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0077
0
20
40
60
Absolute_Latitude

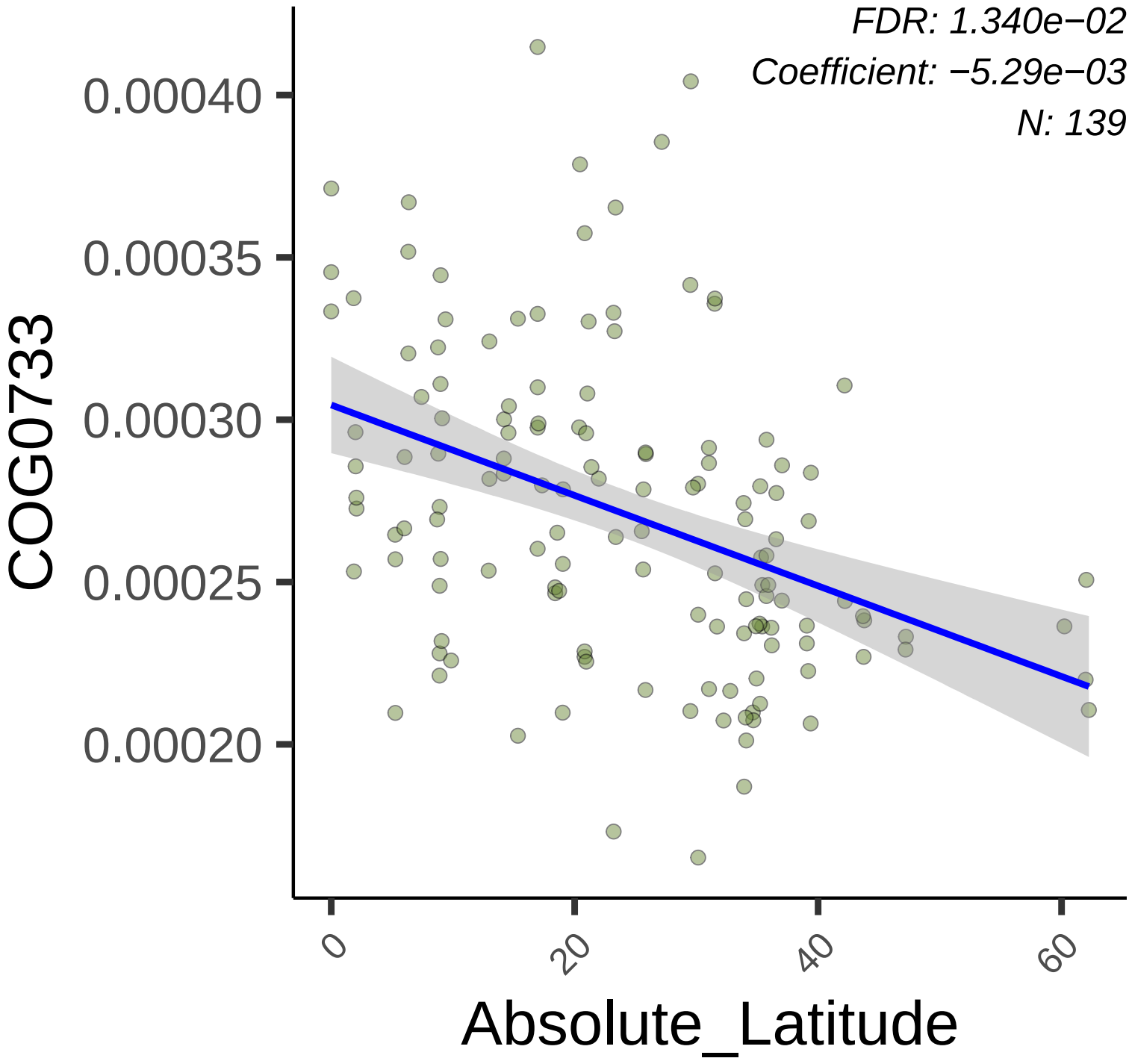

FDR: 1.287e−02
Coefficient: 2.66e−03
N: 139
COG0441
1e−03
8e−04
6e−04
0
20
40
60
Absolute_Latitude

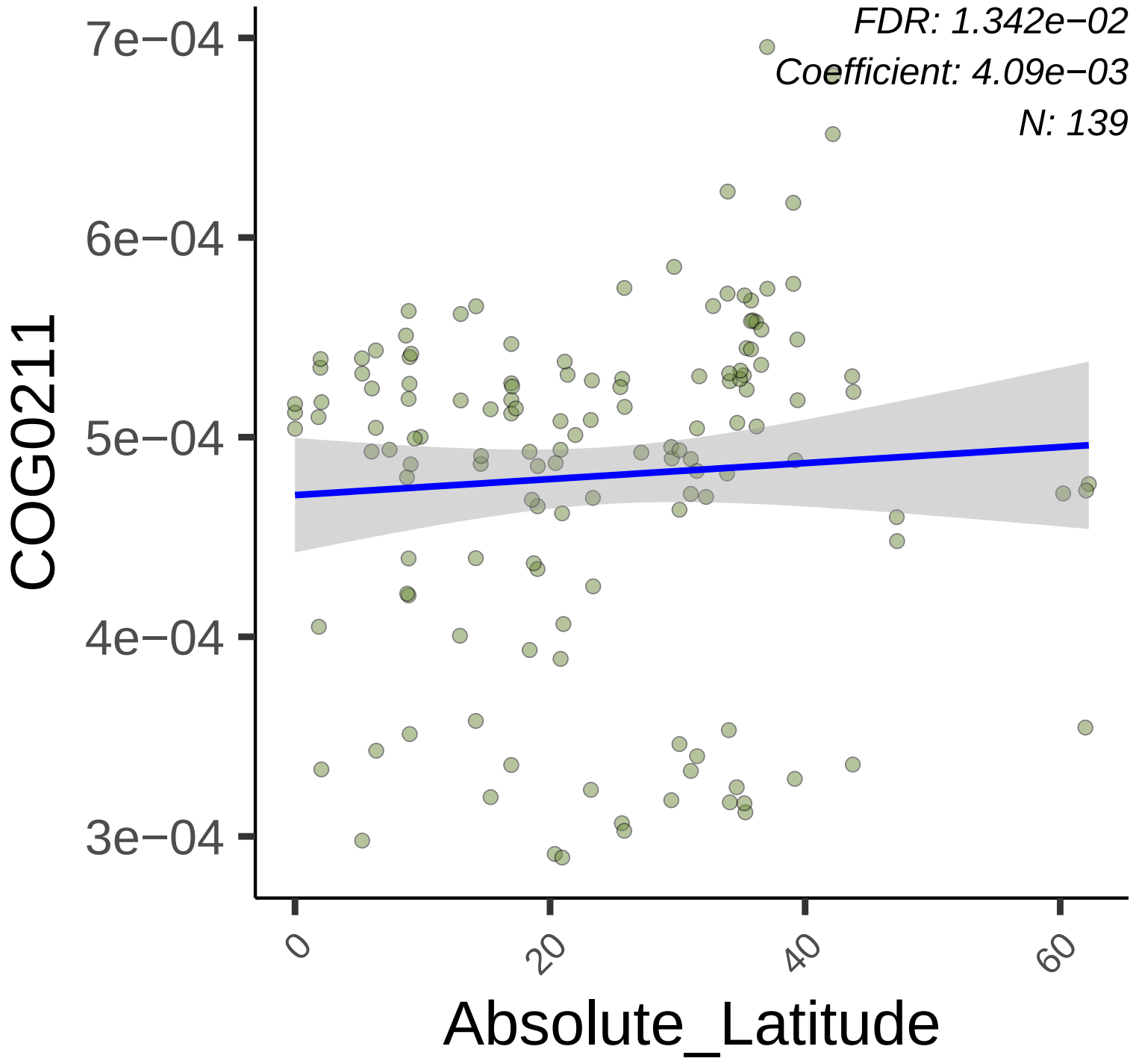

FDR: 1.288e−02
Coefficient: −3.53e−02
N: 139
COG5383
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

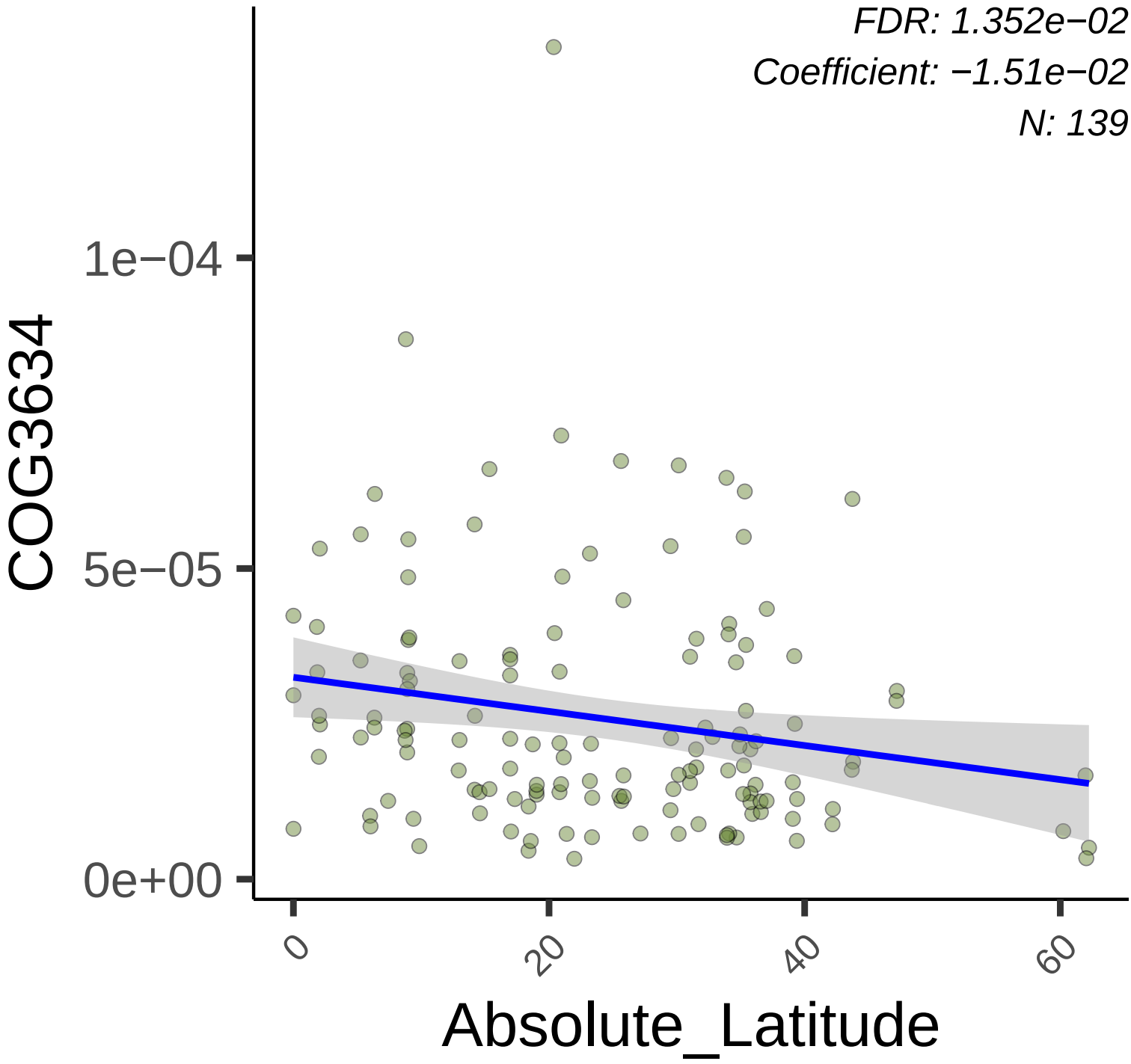

FDR: 1.298e−02
Coefficient: 2.41e−03
N: 139
0.00060
0.00055
0.00050
0.00045
0.00040
COG0184
0
20
40
60
Absolute_Latitude

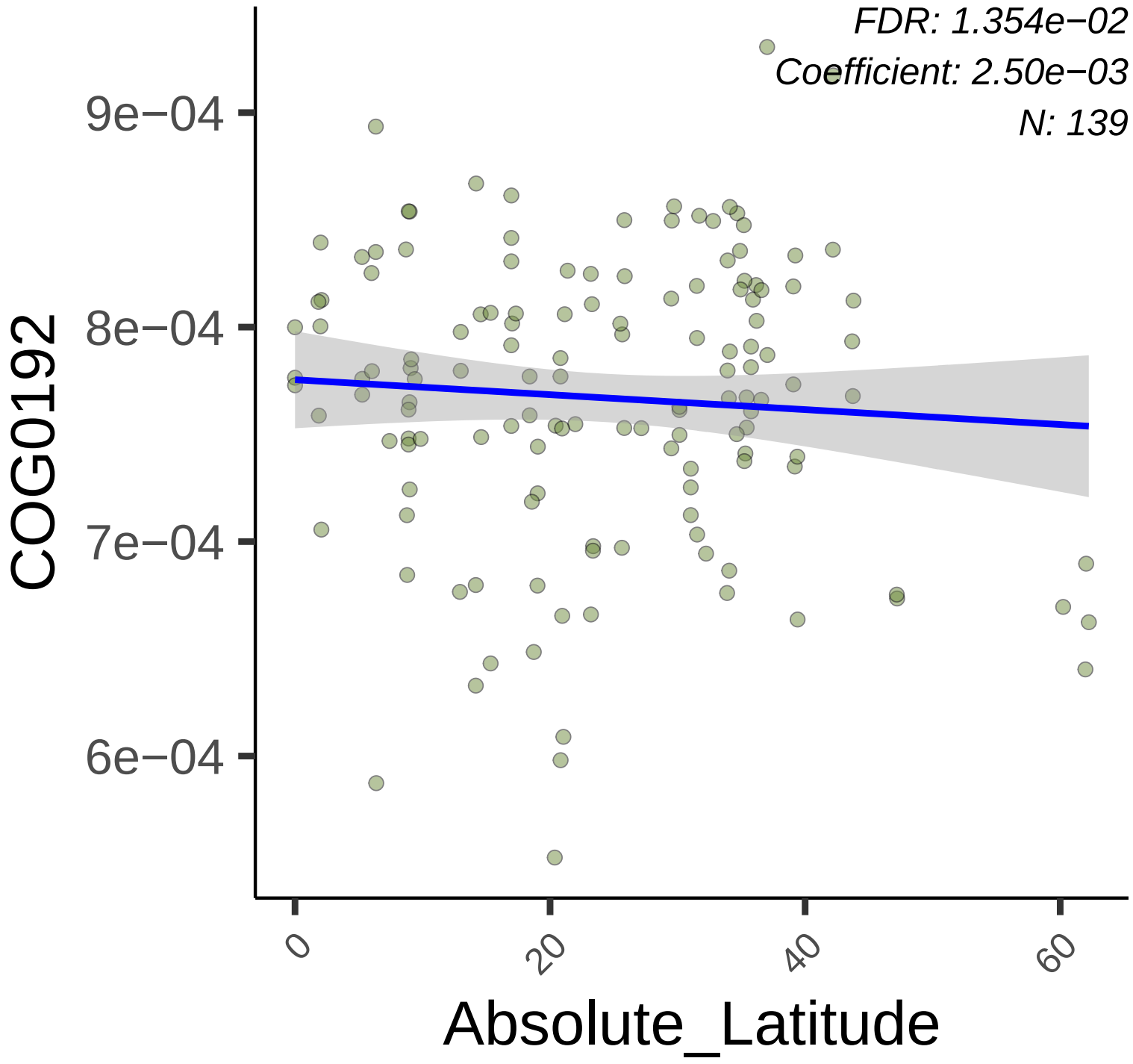

FDR: 1.298e−02
Coefficient: −2.74e−02
N: 139
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG5437
0
20
40
60
Absolute_Latitude

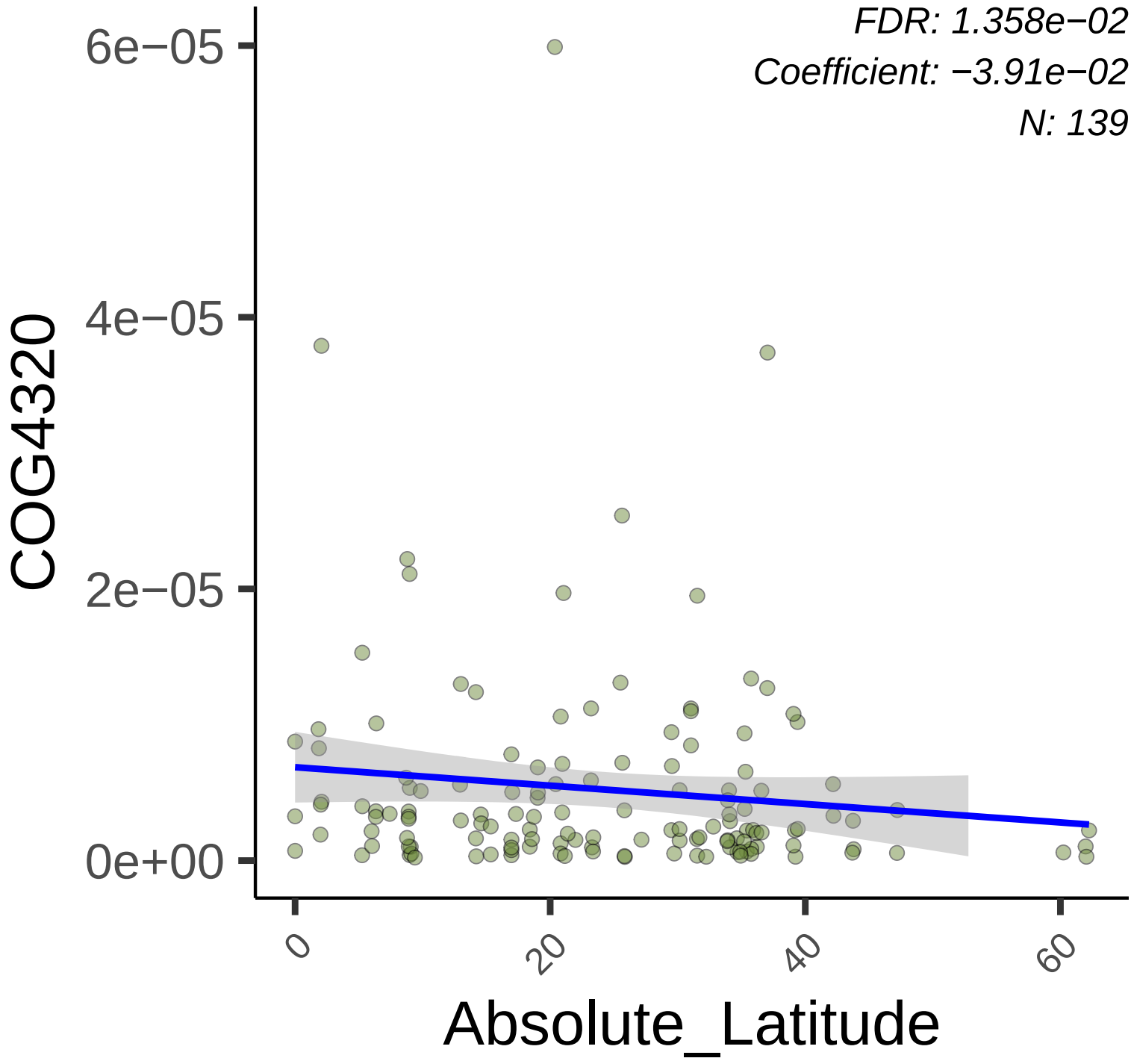

FDR: 1.318e−02
Coefficient: −2.82e−02
N: 139
COG3657
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

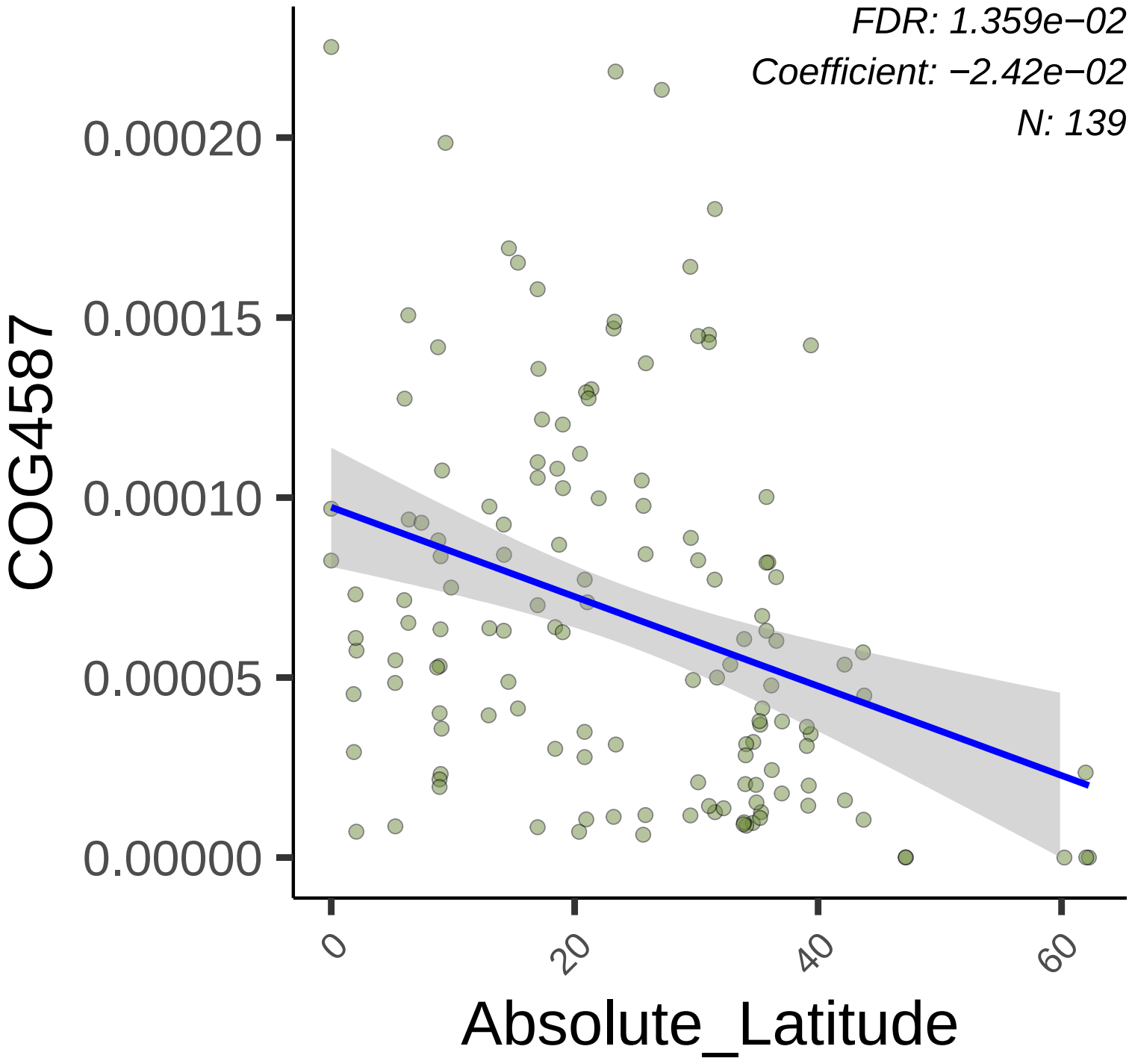

FDR: 1.340e−02
Coefficient: −5.29e−03
N: 139
COG0733
0.00040
0.00035
0.00030
0.00025
0.00020
0
20
40
60
Absolute_Latitude

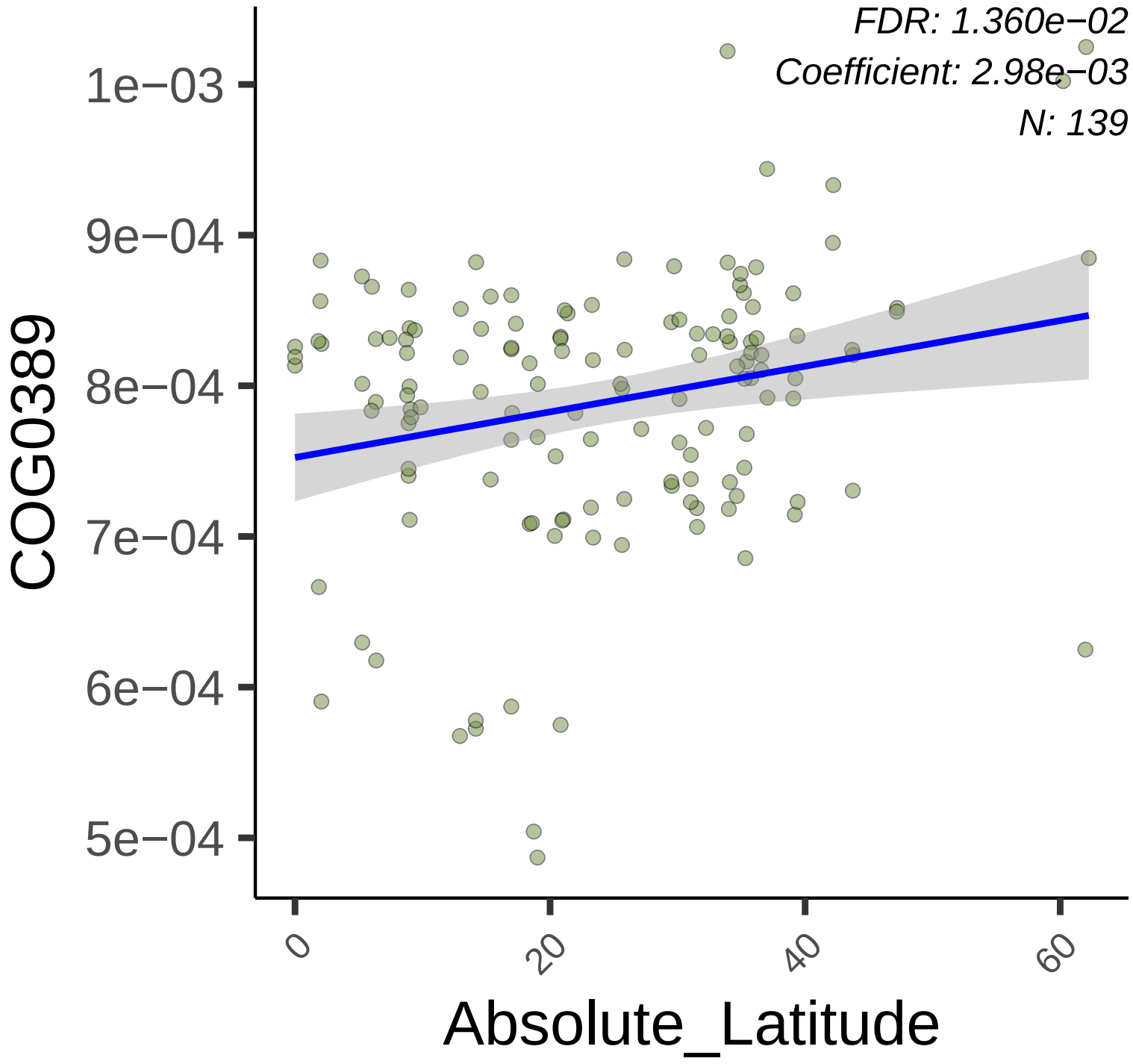

FDR: 1.342e−02
Coefficient: 4.09e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG0211
0
20
40
60
Absolute_Latitude

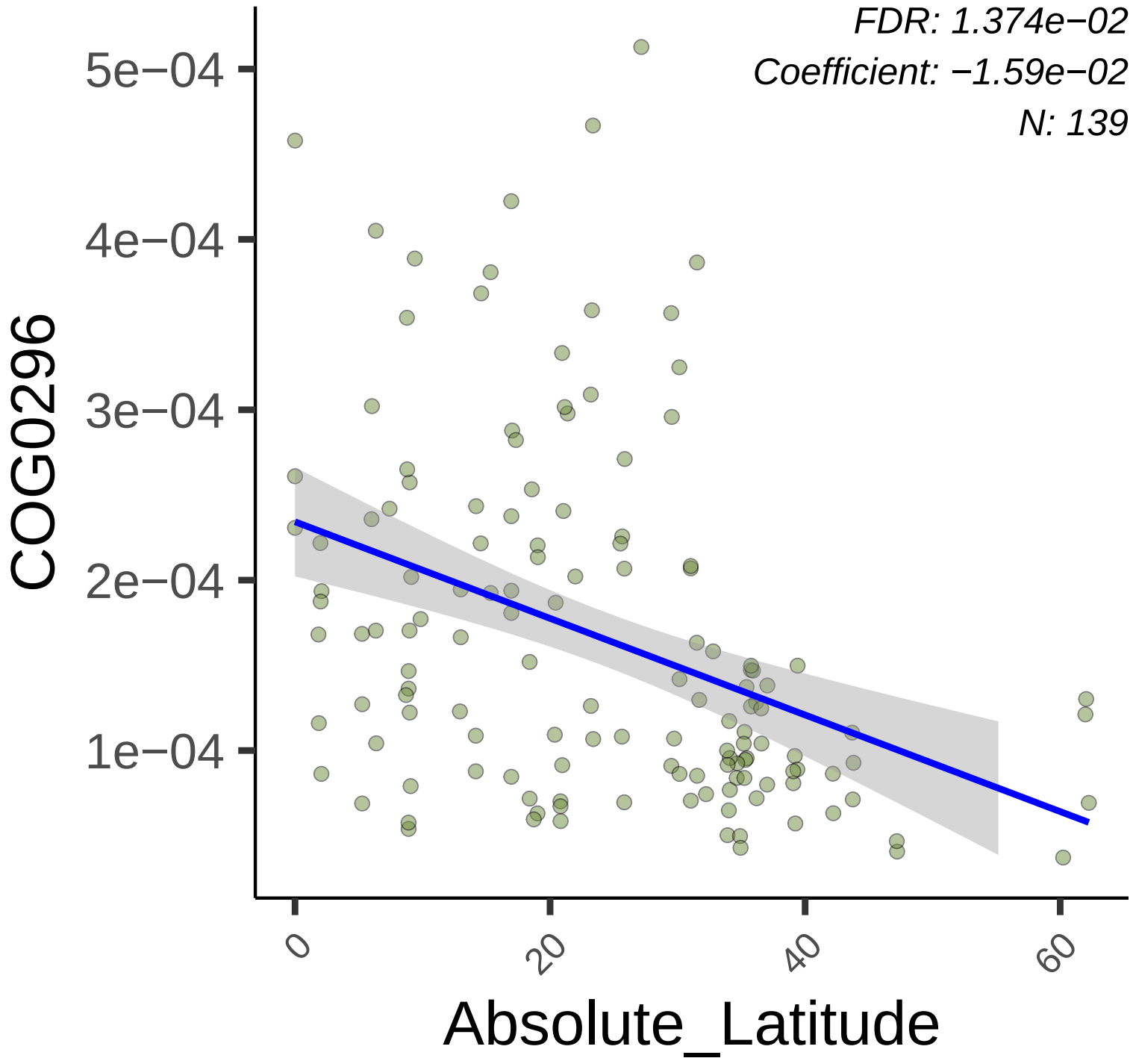

FDR: 1.352e−02
Coefficient: −1.51e−02
N: 139
COG3634
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

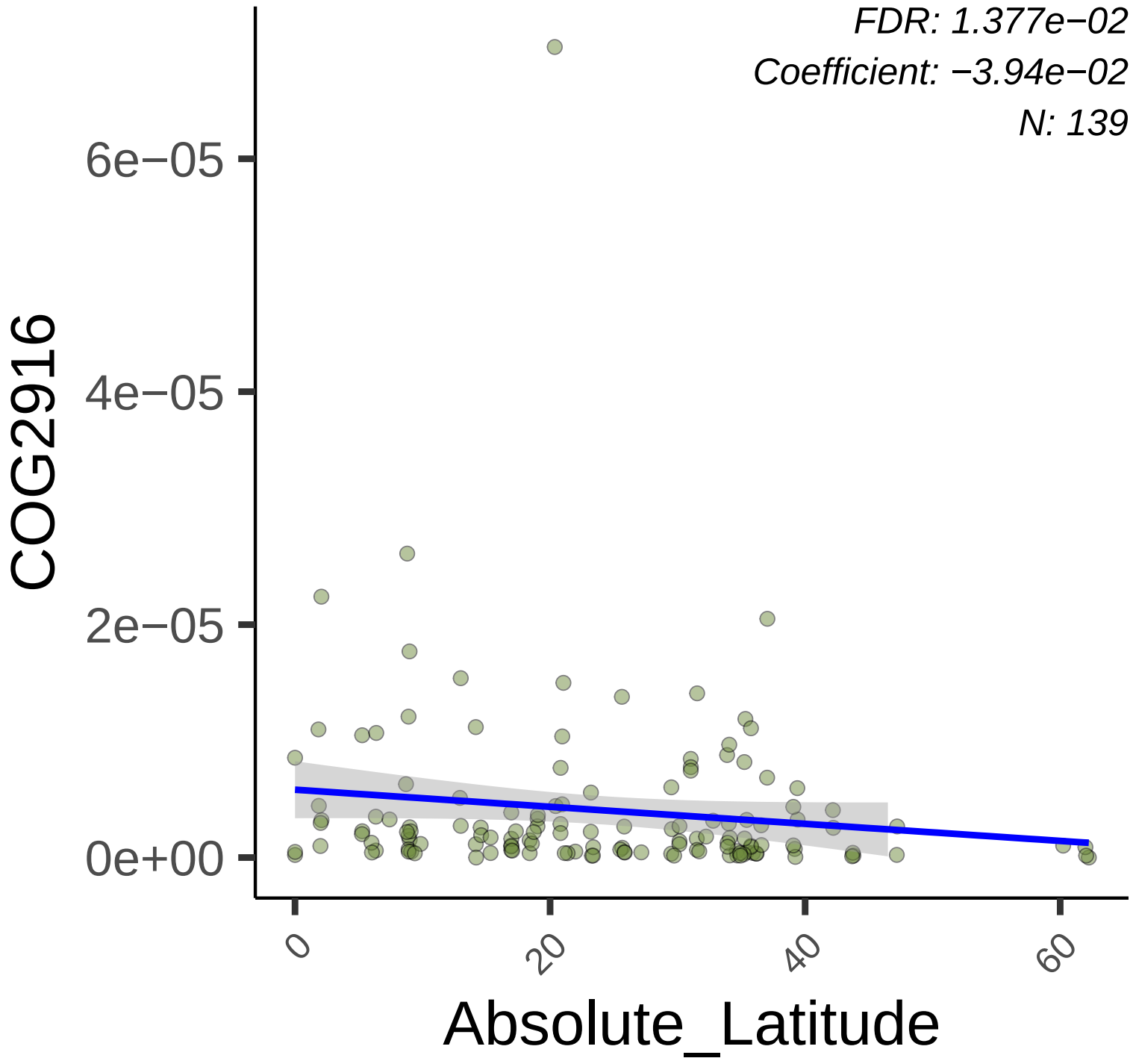

FDR: 1.354e−02
Coefficient: 2.50e−03
N: 139
9e−04
8e−04
7e−04
6e−04
COG0192
0
20
40
60
Absolute_Latitude

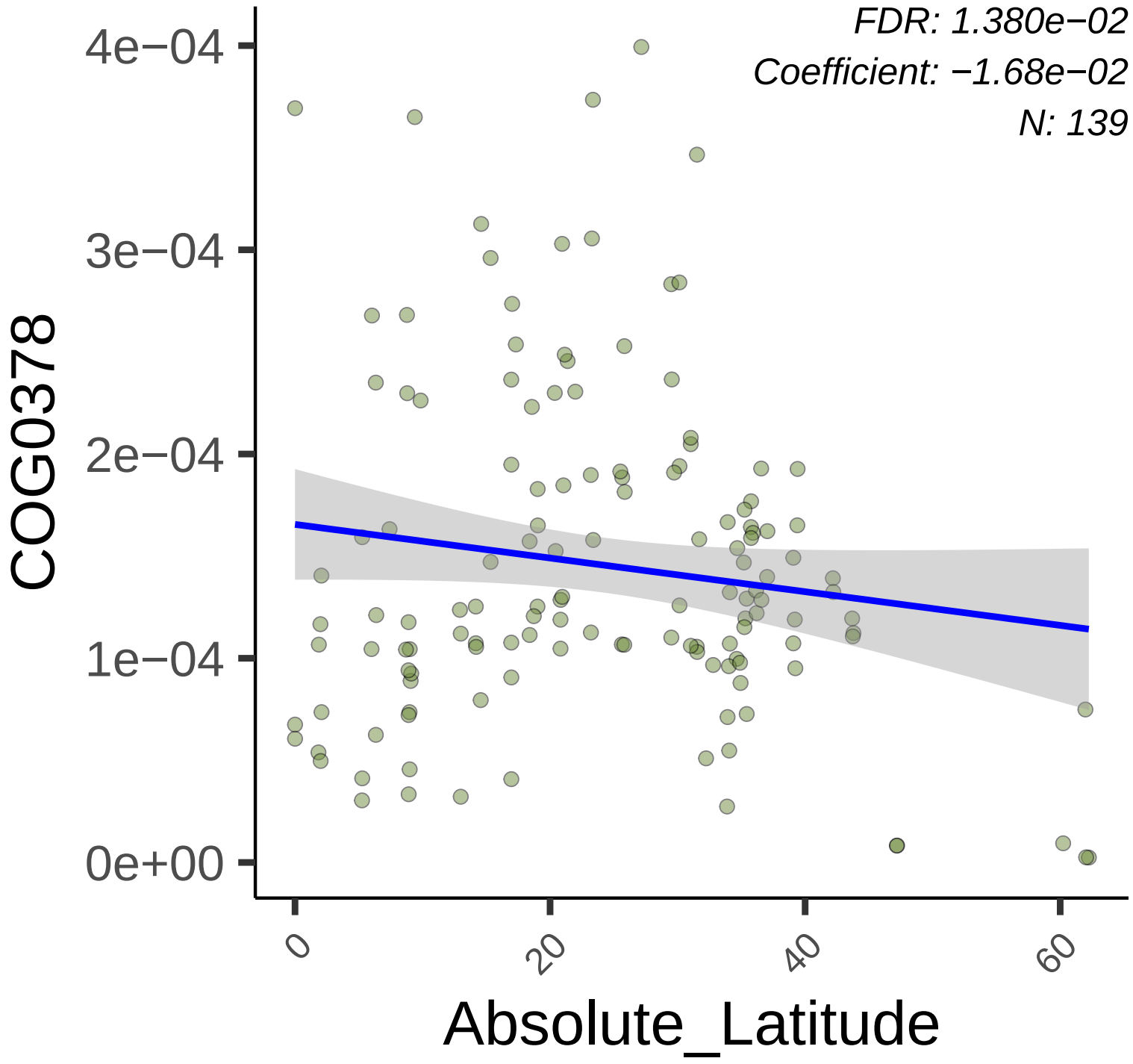

FDR: 1.358e−02
Coefficient: −3.91e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG4320
0
20
40
60
Absolute_Latitude

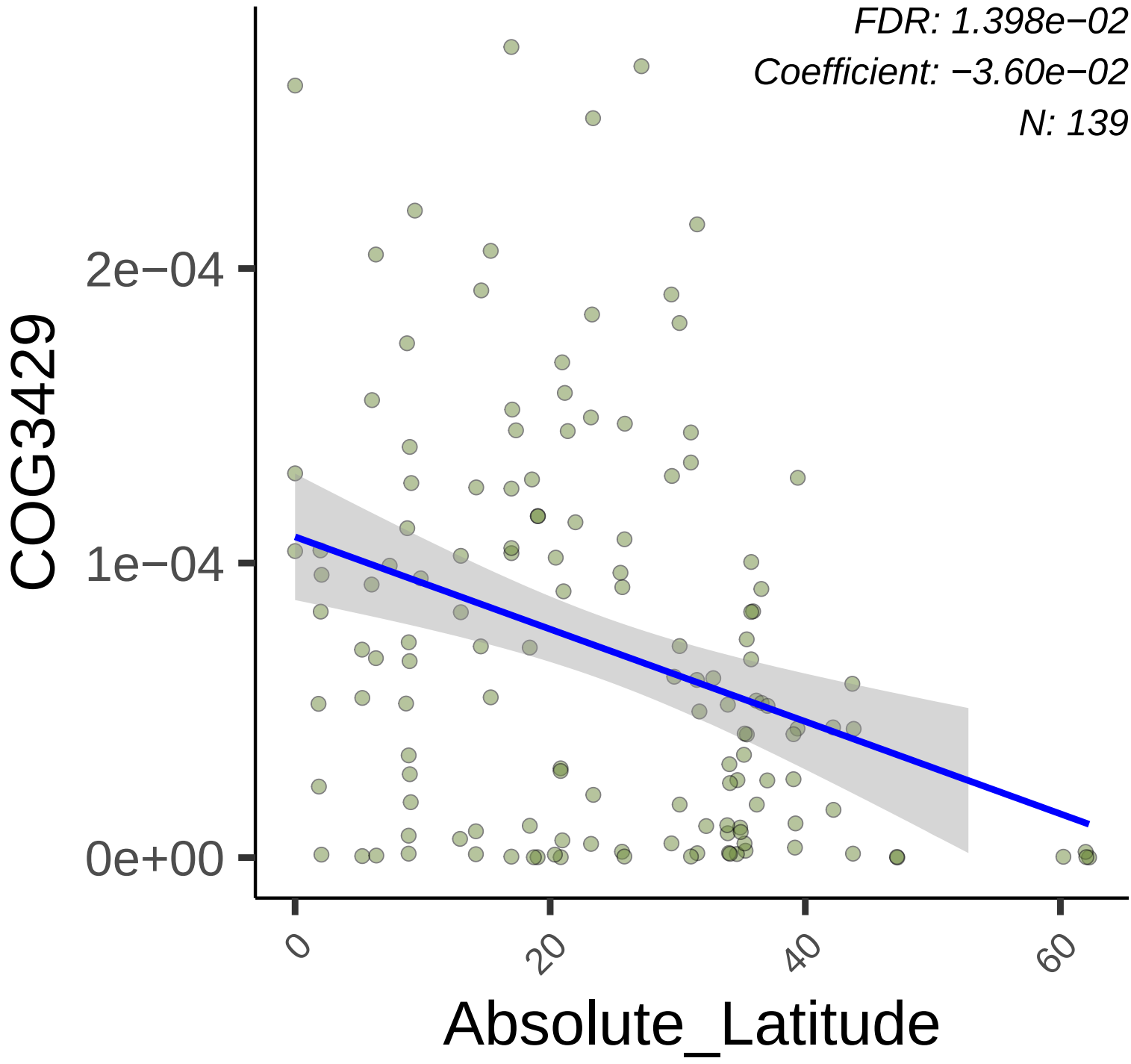

FDR: 1.359e−02
Coefficient: −2.42e−02
N: 139
COG4587
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

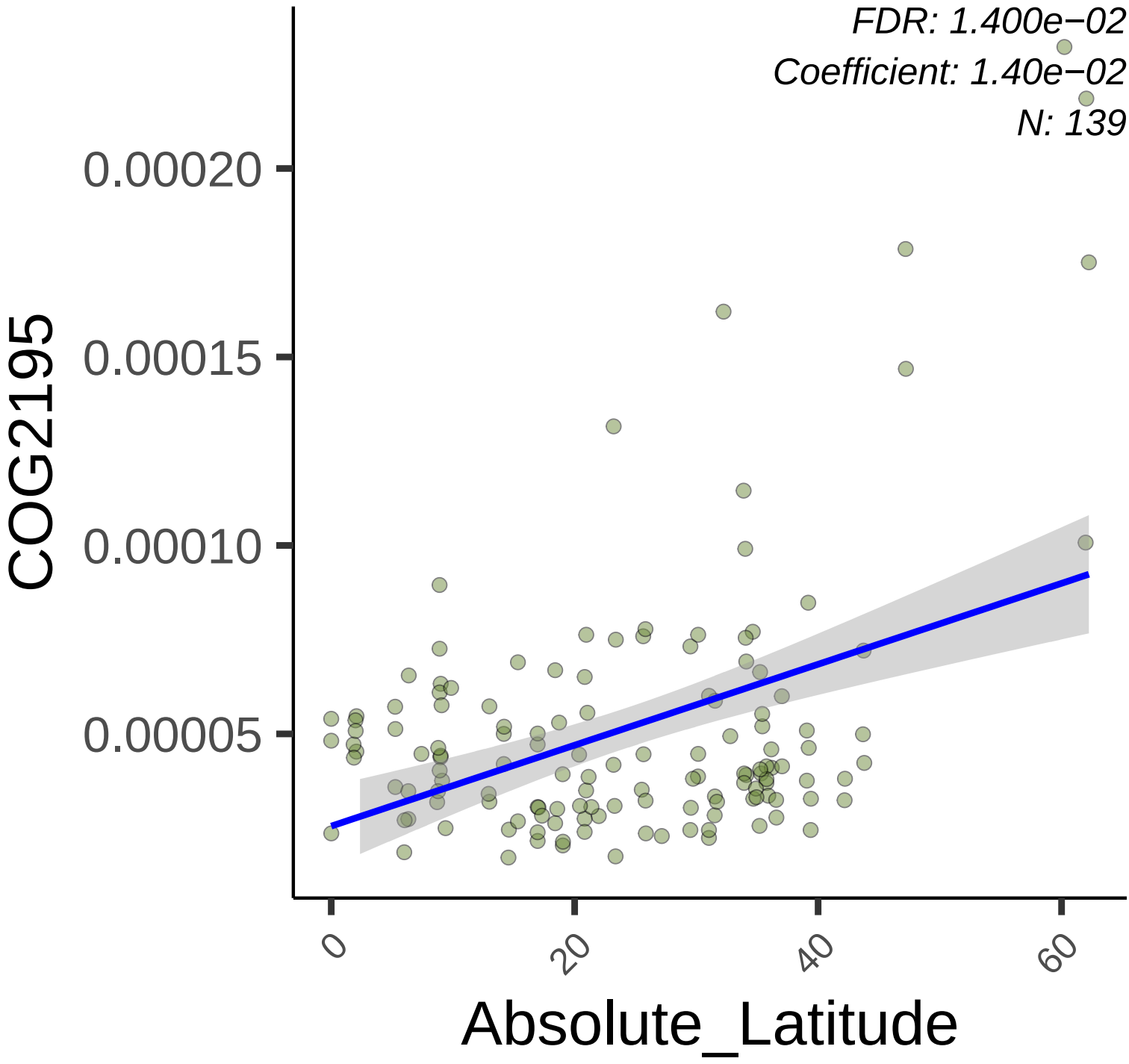

FDR: 1.360e−02
Coefficient: 2.98e−03
N: 139
1e−03
9e−04
8e−04
7e−04
6e−04
5e−04
COG0389
0
20
40
60
Absolute_Latitude

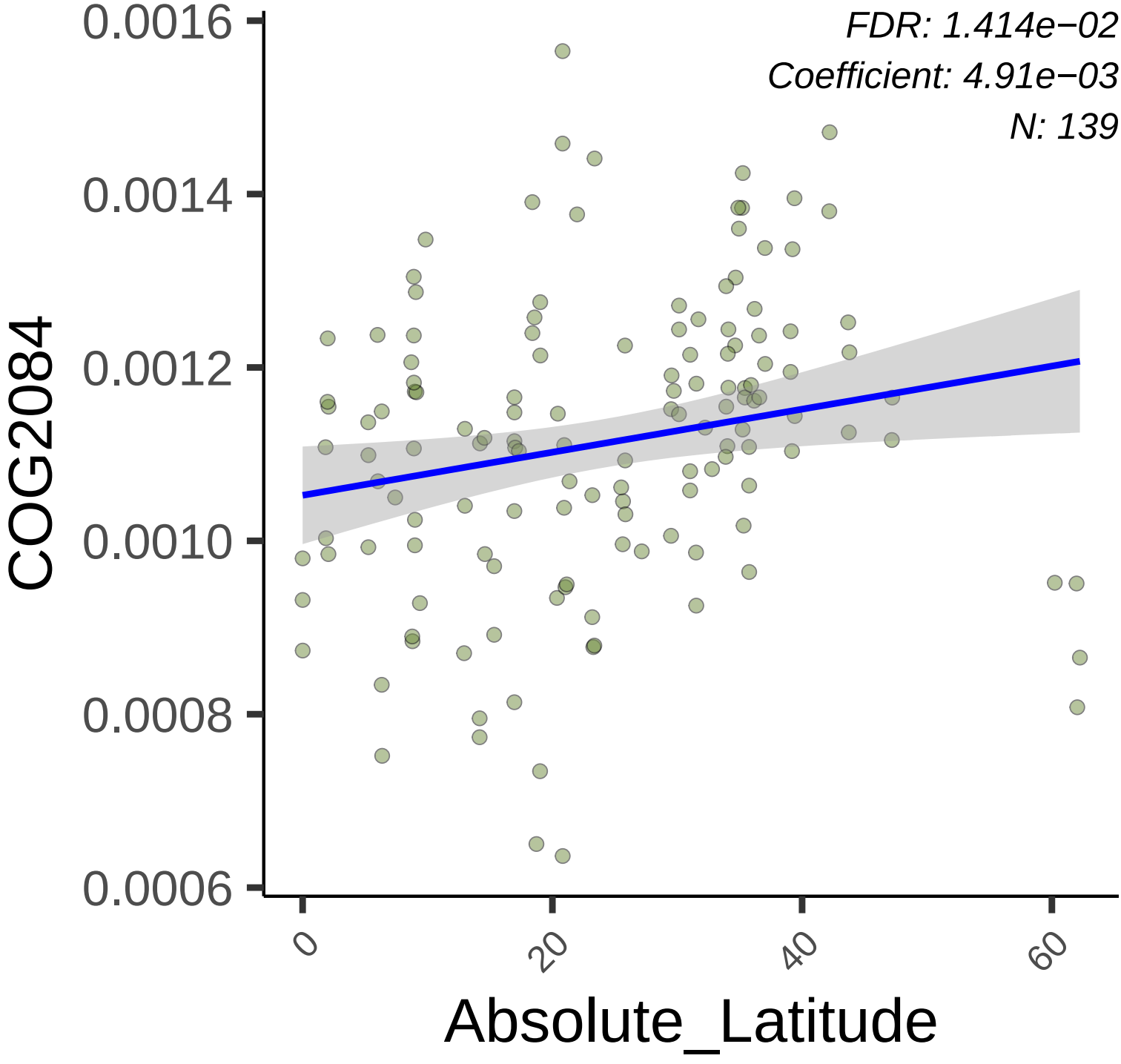

FDR: 1.374e−02
Coefficient: −1.59e−02
N: 139
5e−04
4e−04
3e−04
2e−04
1e−04
COG0296
0
20
40
60
Absolute_Latitude

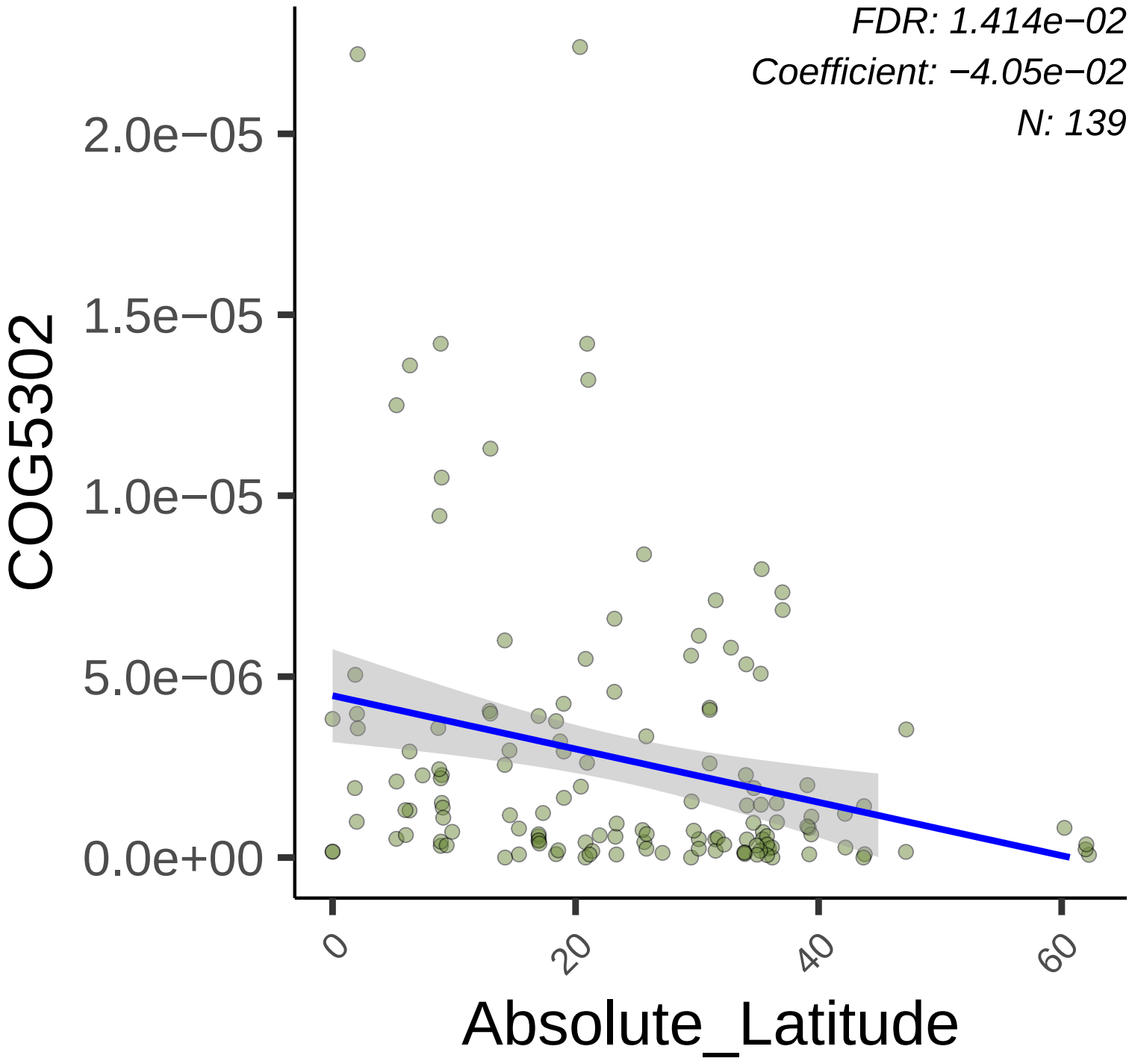

FDR: 1.377e−02
Coefficient: −3.94e−02
N: 139
COG2916
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

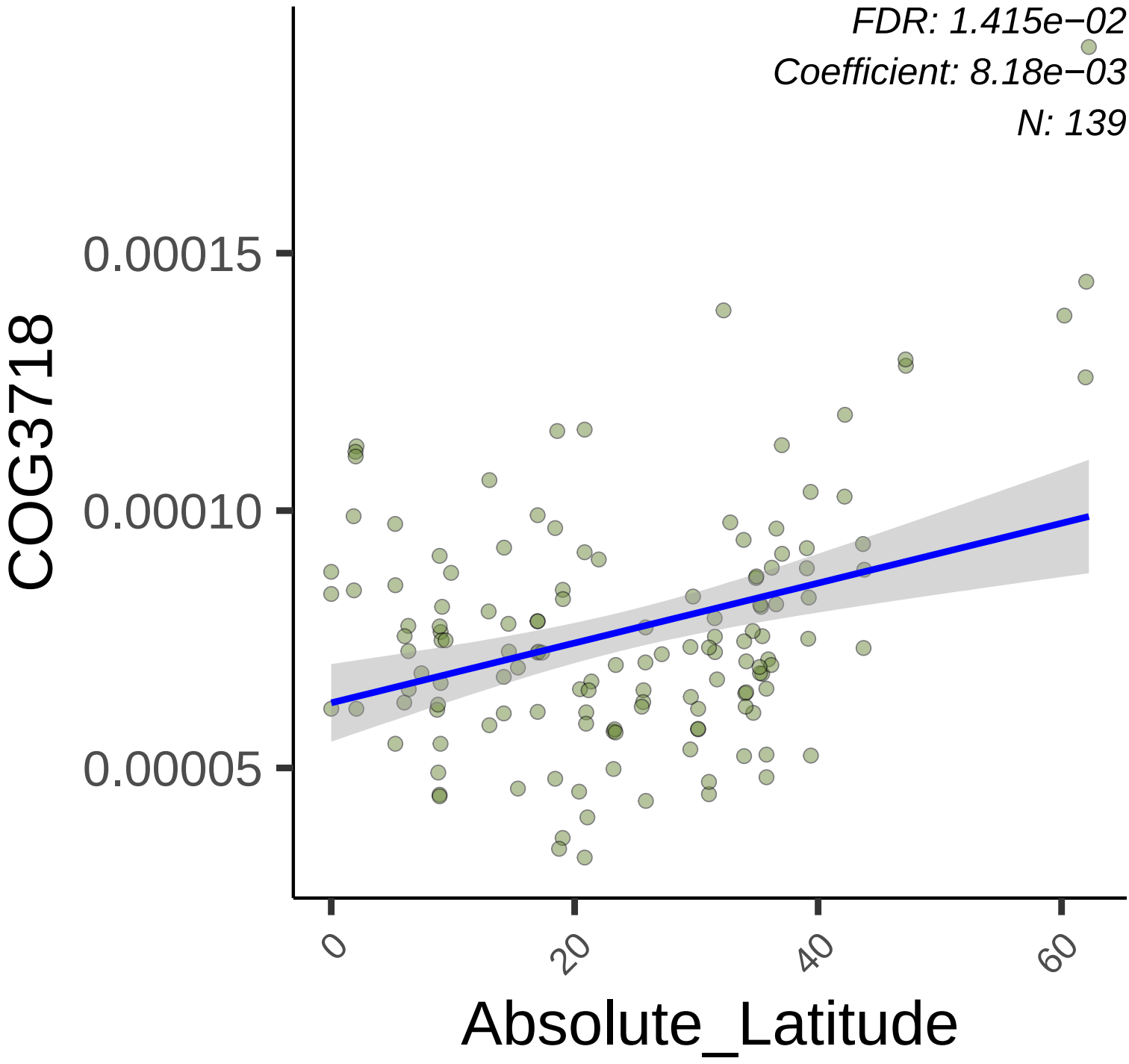

FDR: 1.380e−02
Coefficient: −1.68e−02
N: 139
4e−04
3e−04
2e−04
1e−04
0e+00
COG0378
0
20
40
60
Absolute_Latitude

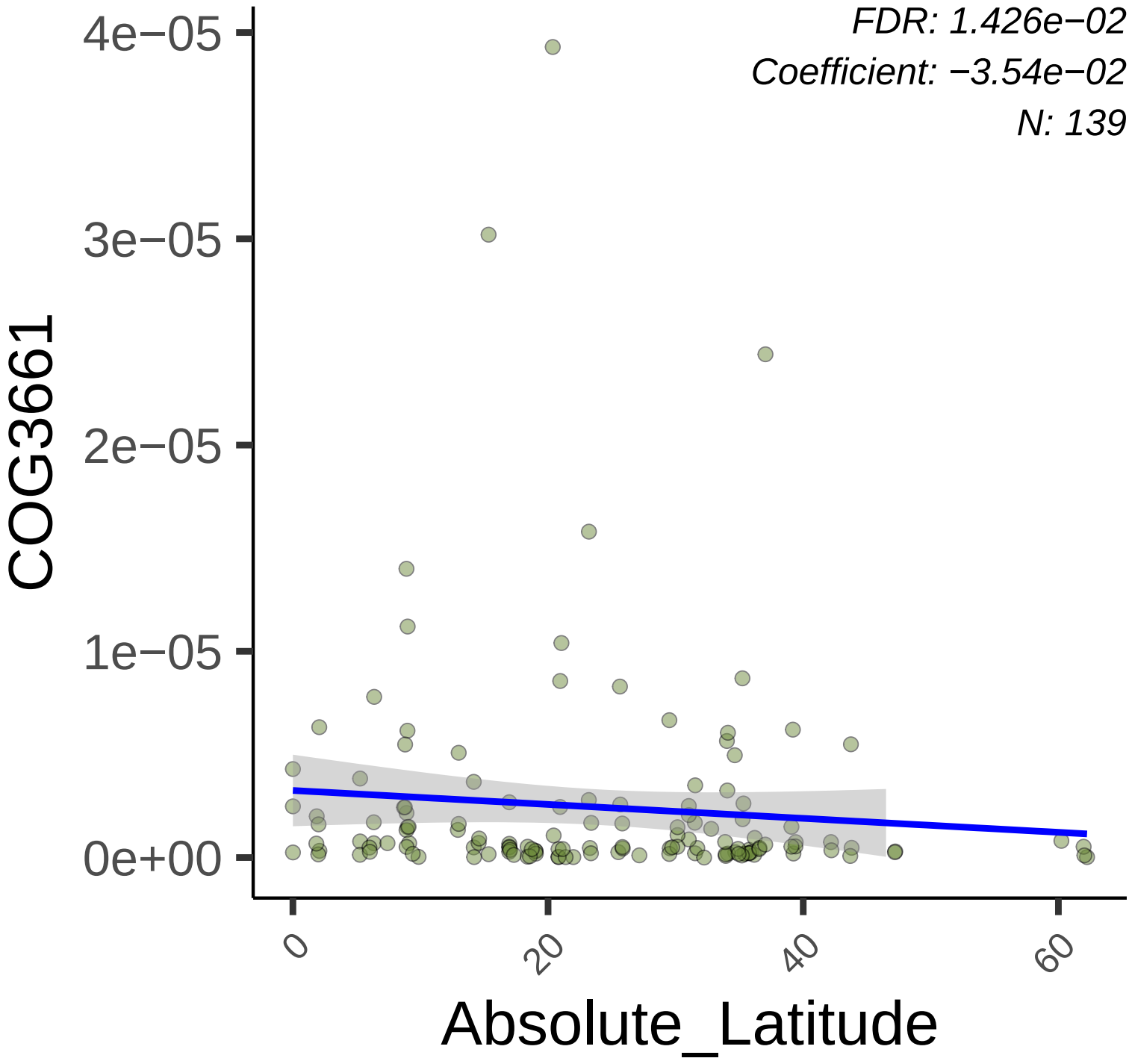

FDR: 1.398e−02
Coefficient: −3.60e−02
N: 139
COG3429
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

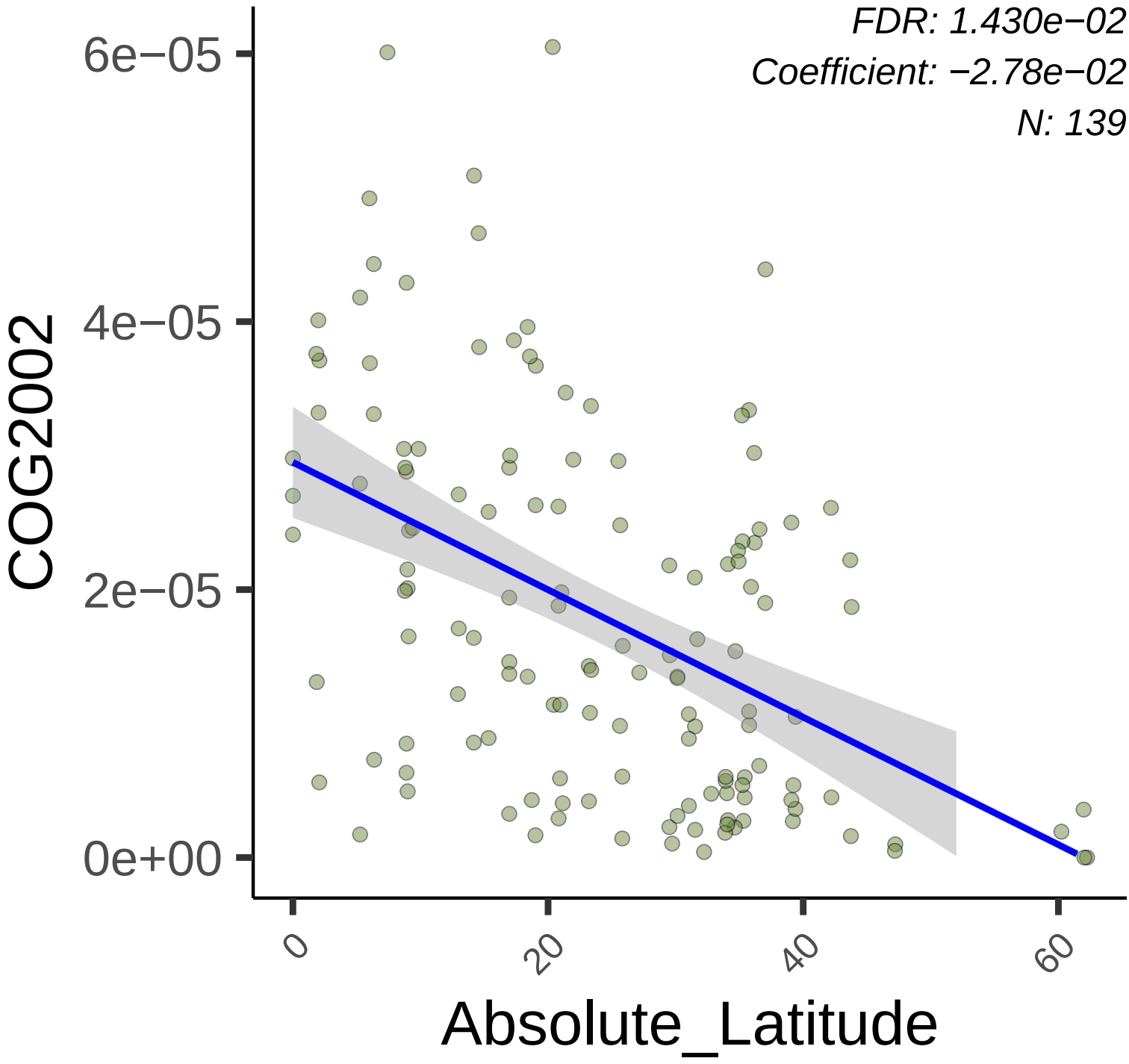

FDR: 1.400e−02
Coefficient: 1.40e−02
N: 139
COG2195
0.00020
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

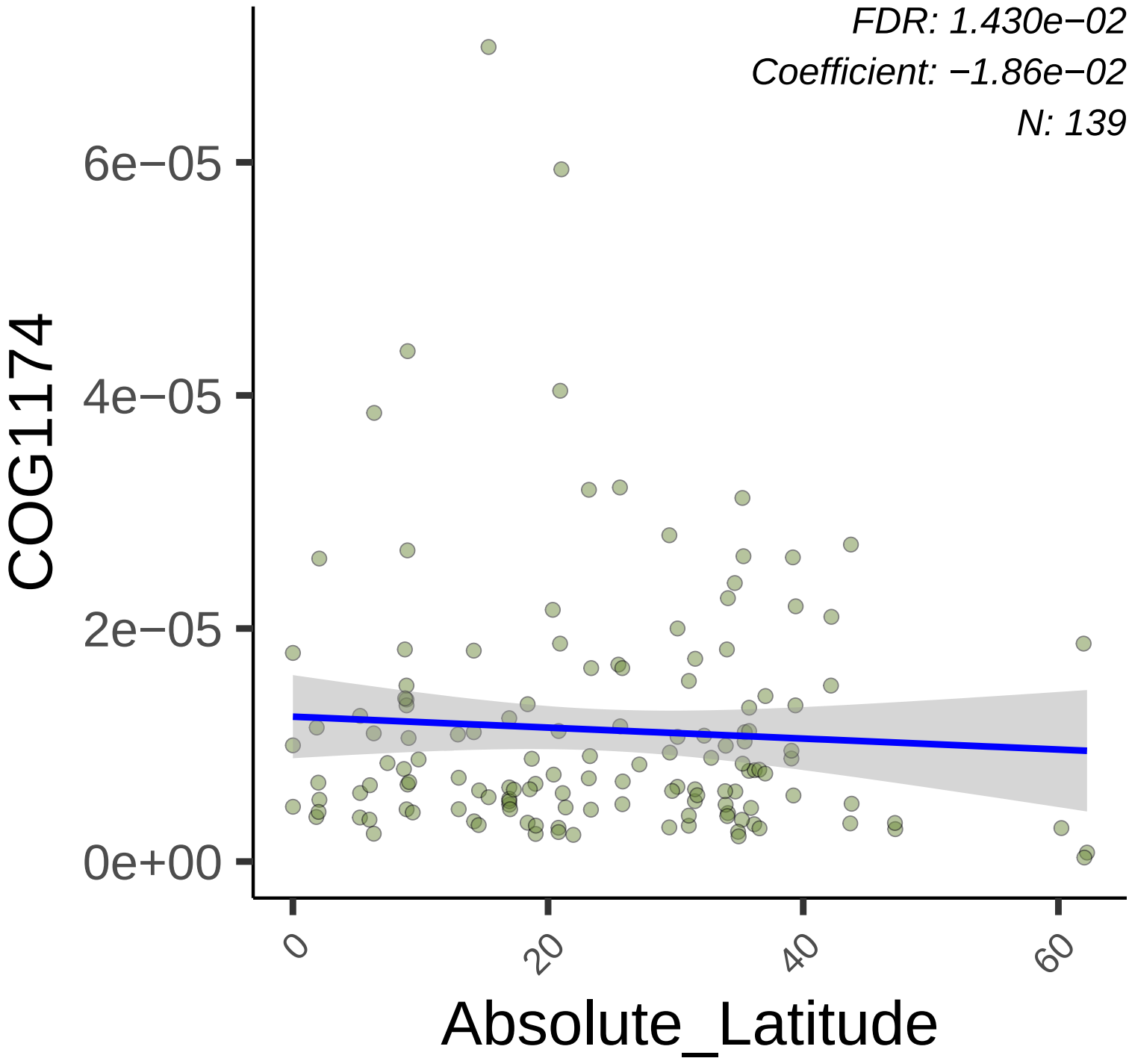

FDR: 1.414e−02
Coefficient: 4.91e−03
N: 139
0.0016
0.0014
0.0012
0.0010
0.0008
0.0006
COG2084
0
20
40
60
Absolute_Latitude

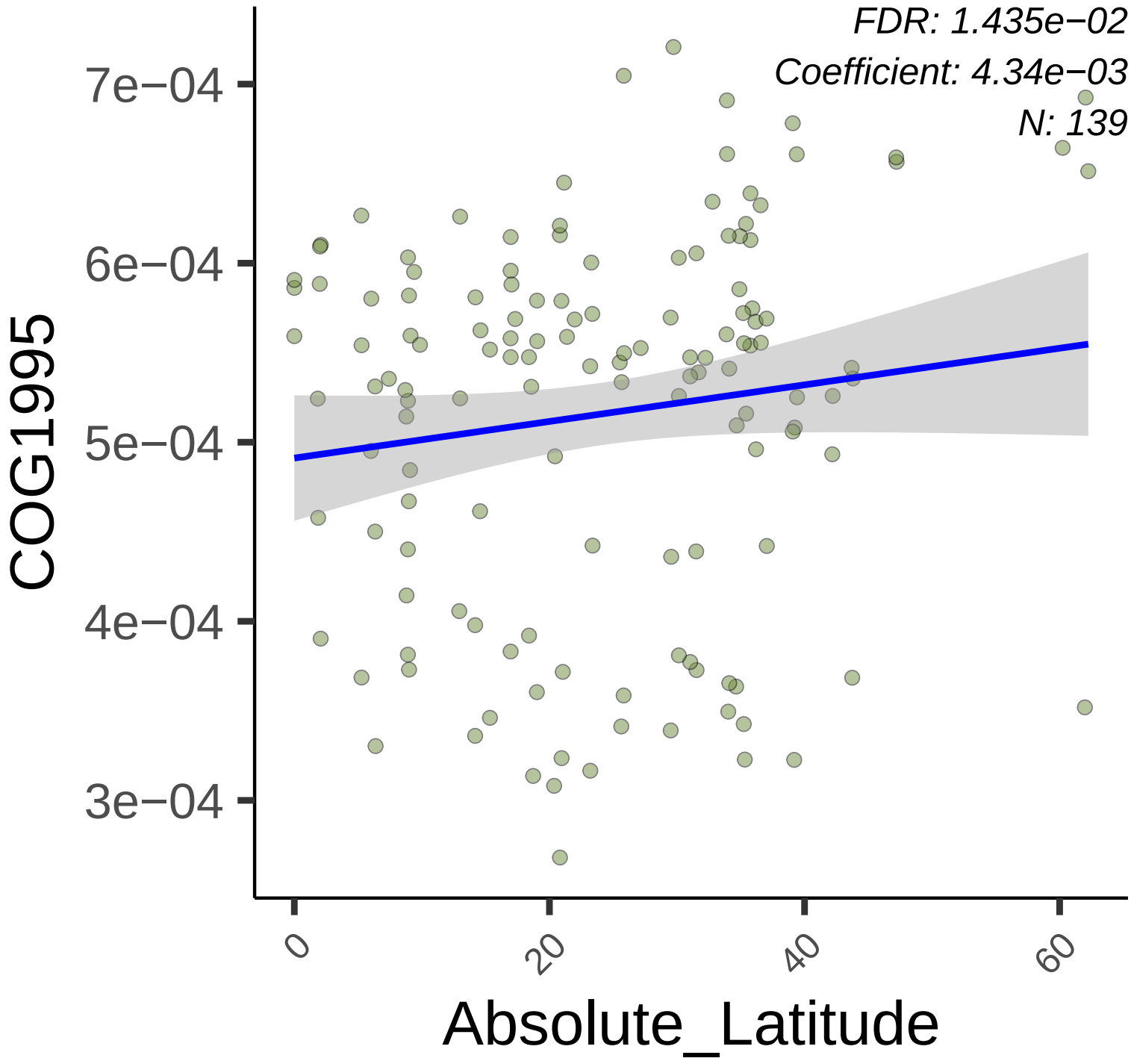

FDR: 1.414e−02
Coefficient: −4.05e−02
N: 139
COG5302
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

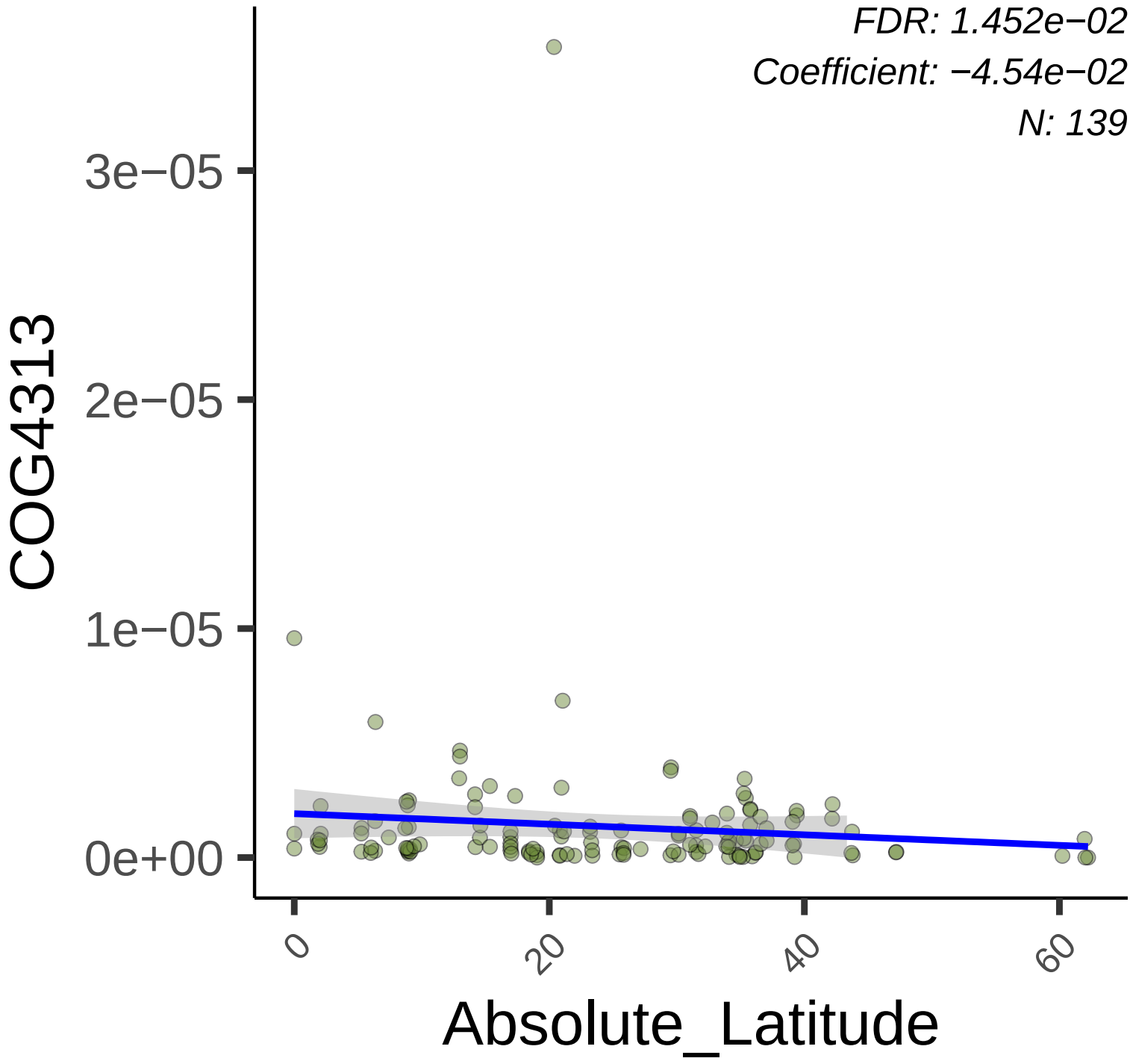

FDR: 1.415e−02
Coefficient: 8.18e−03
N: 139
COG3718
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

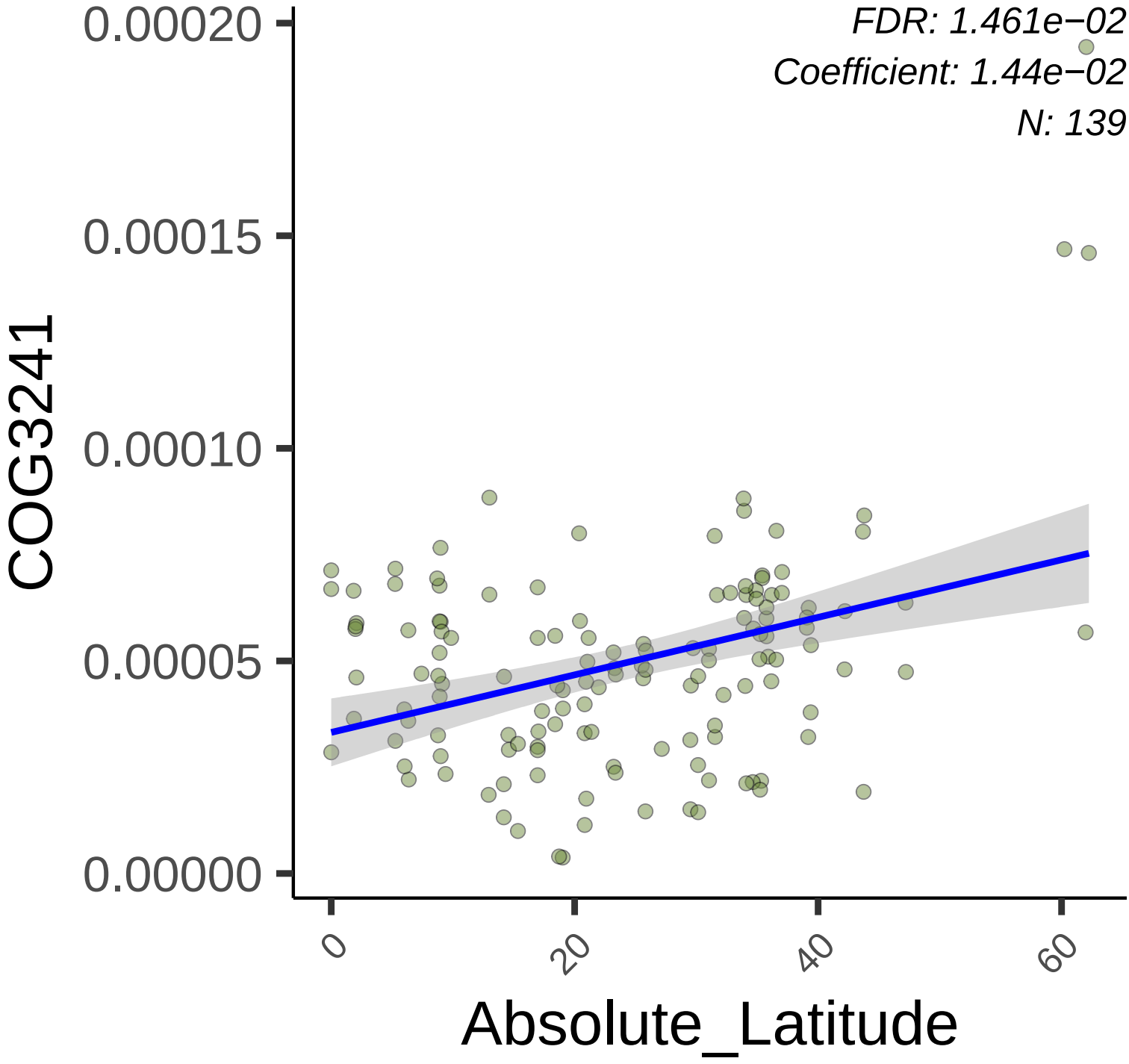

FDR: 1.426e−02
Coefficient: −3.54e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG3661
0
20
40
60
Absolute_Latitude

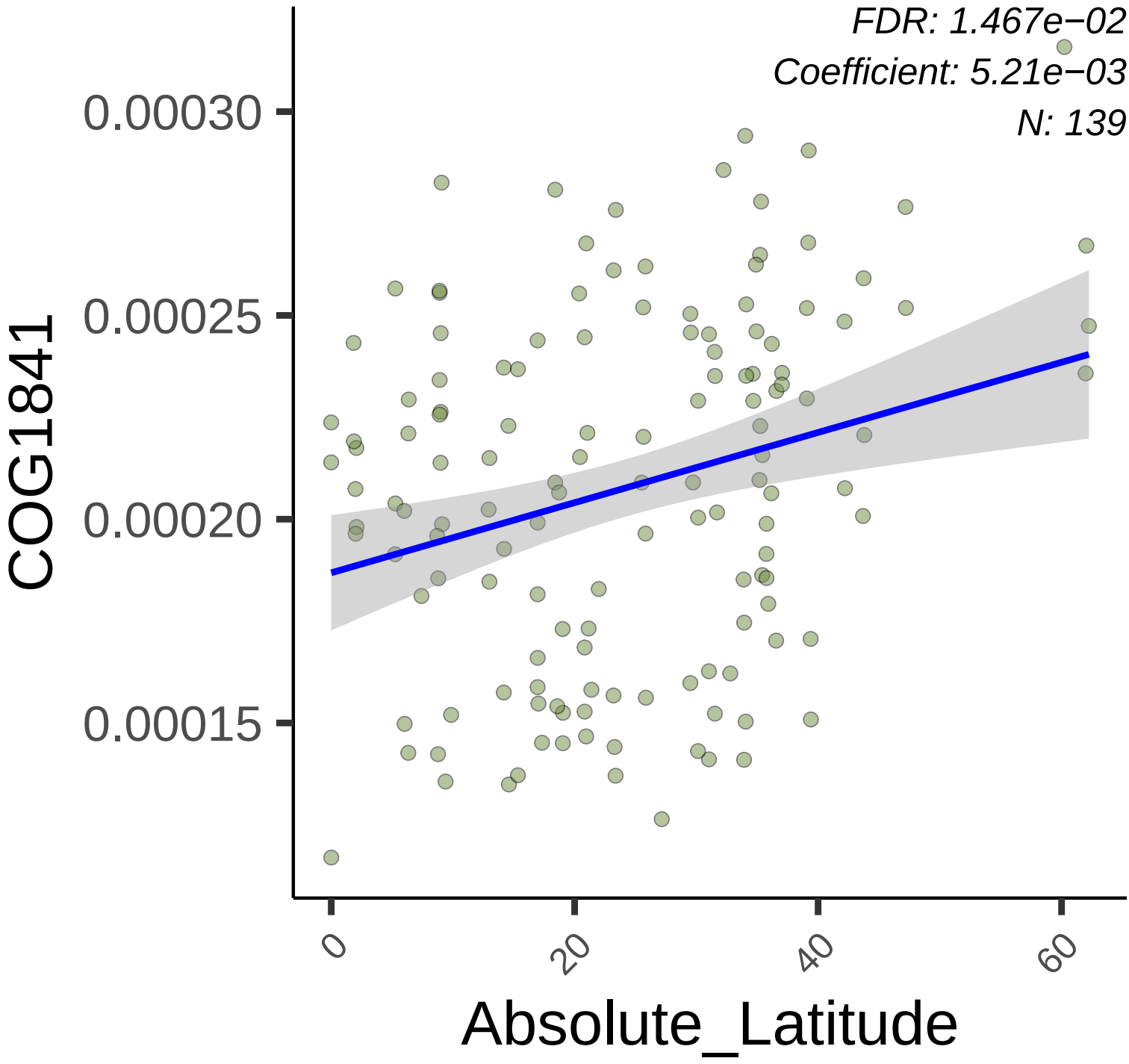

FDR: 1.430e−02
Coefficient: −2.78e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG2002
0
20
40
60
Absolute_Latitude

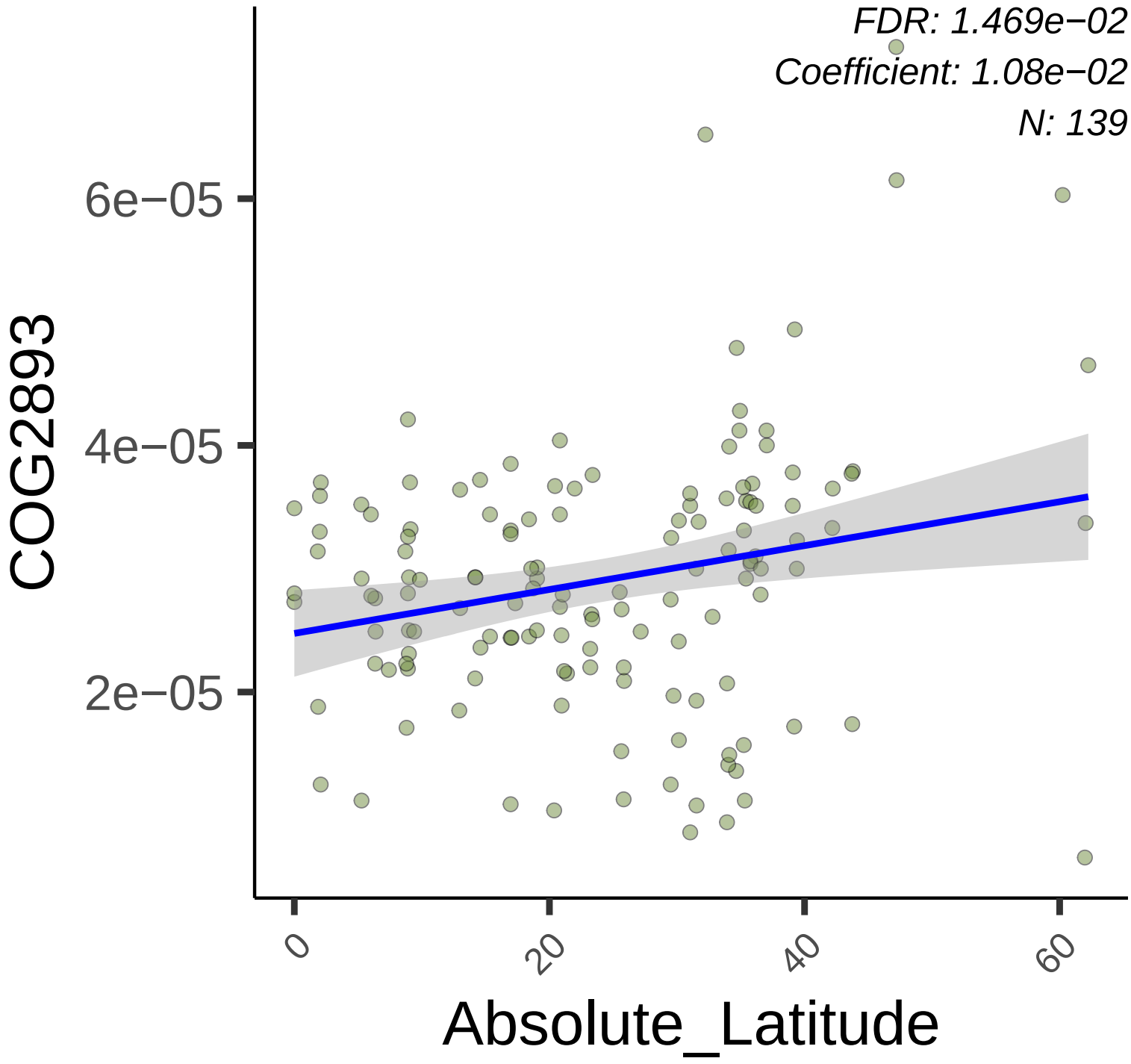

FDR: 1.430e−02
Coefficient: −1.86e−02
N: 139
COG1174
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

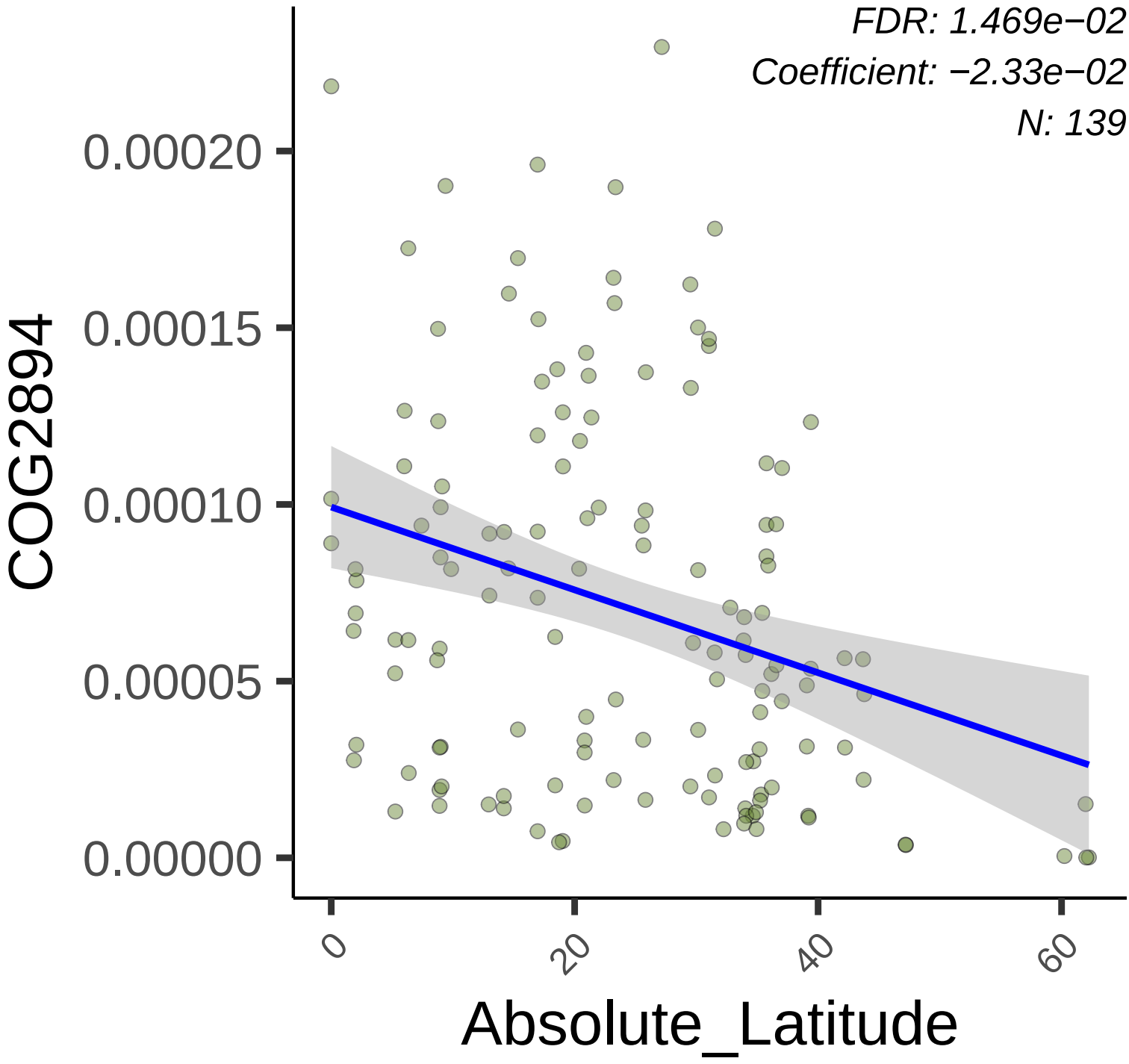

FDR: 1.435e−02
Coefficient: 4.34e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG1995
0
20
40
60
Absolute_Latitude

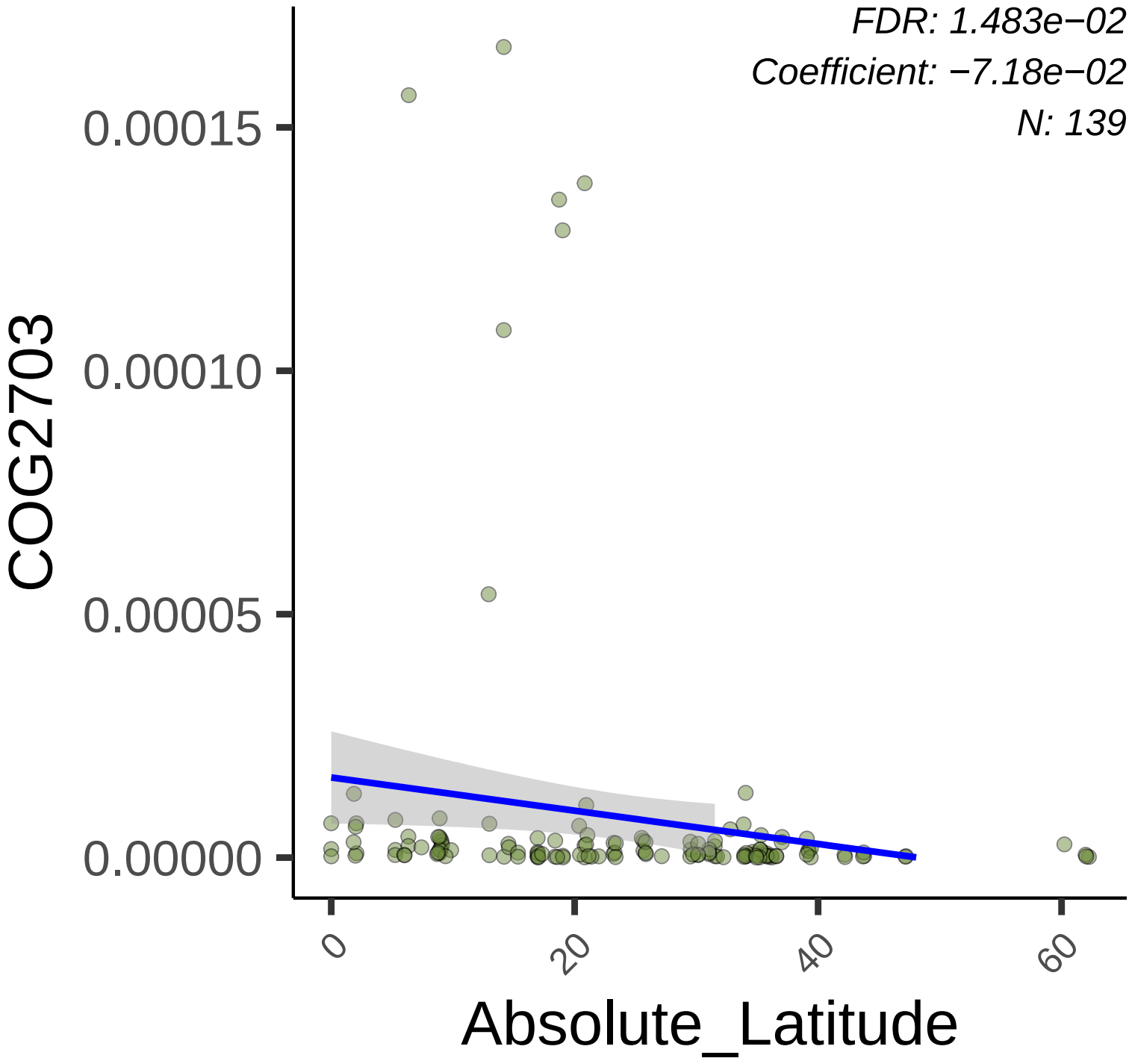

FDR: 1.452e−02
Coefficient: −4.54e−02
N: 139
COG4313
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

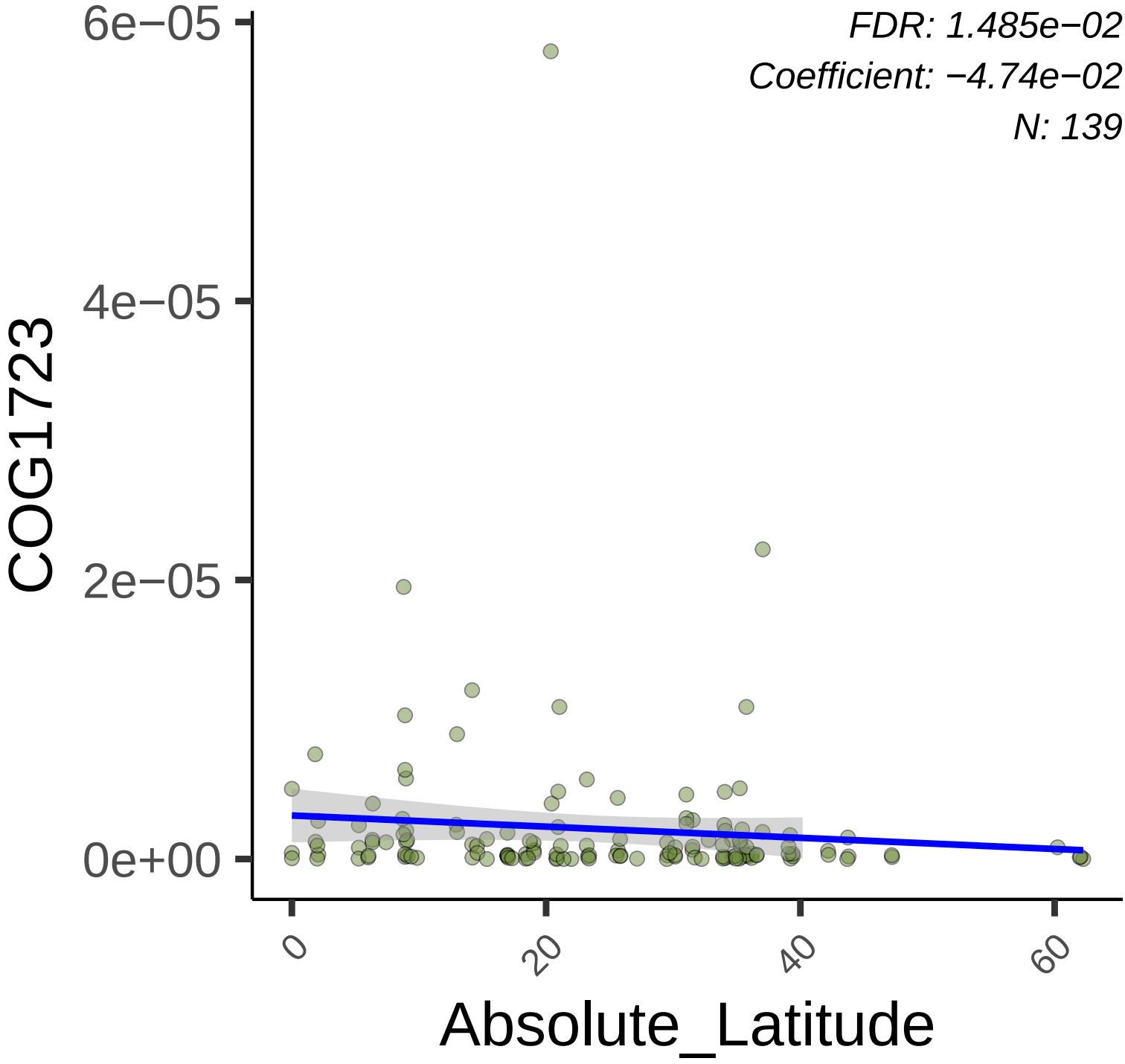

FDR: 1.461e−02
Coefficient: 1.44e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG3241
0
20
40
60
Absolute_Latitude

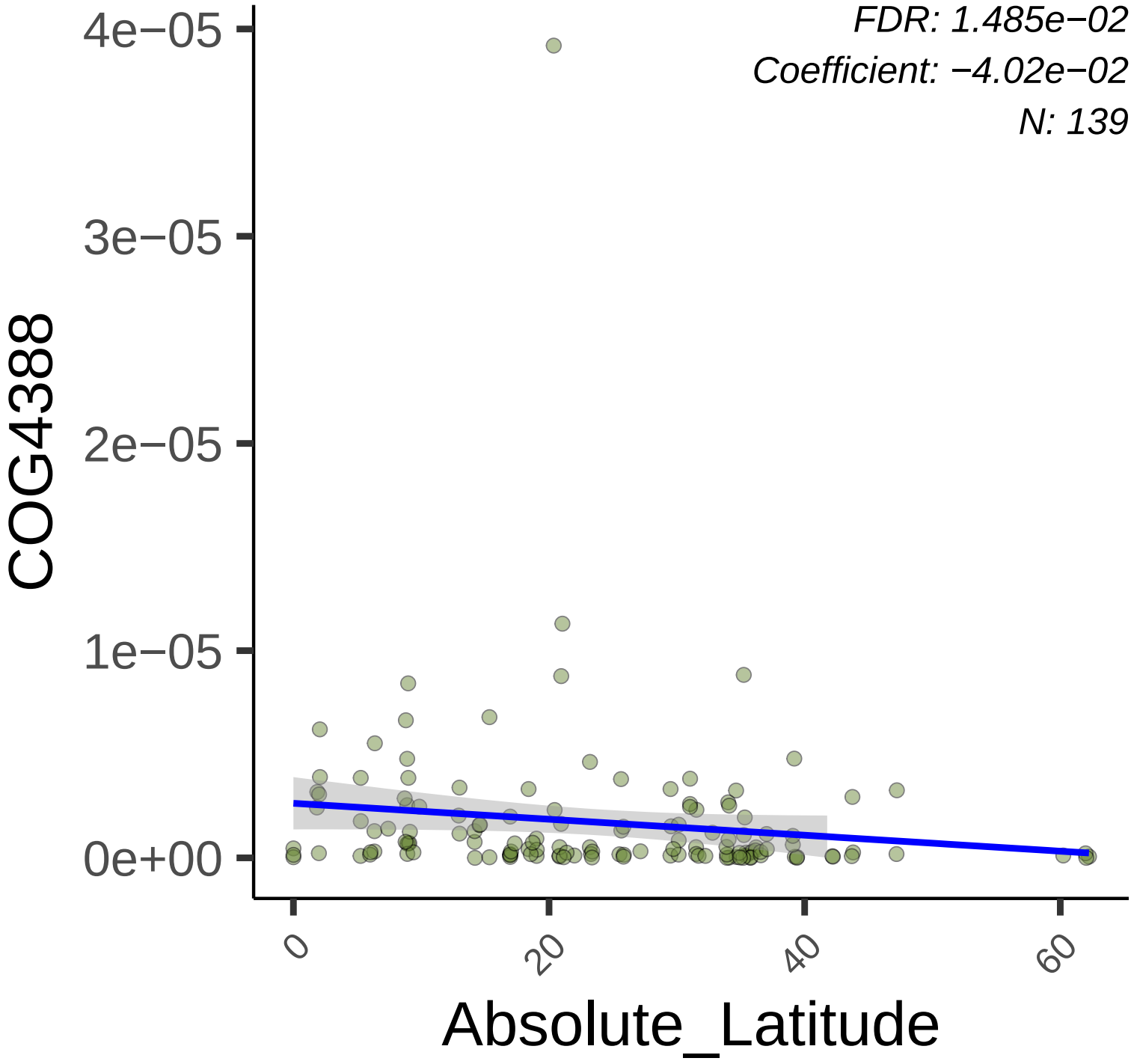

FDR: 1.467e−02
Coefficient: 5.21e−03
N: 139
0.00030
0.00025
0.00020
0.00015
COG1841
0
20
40
60
Absolute_Latitude

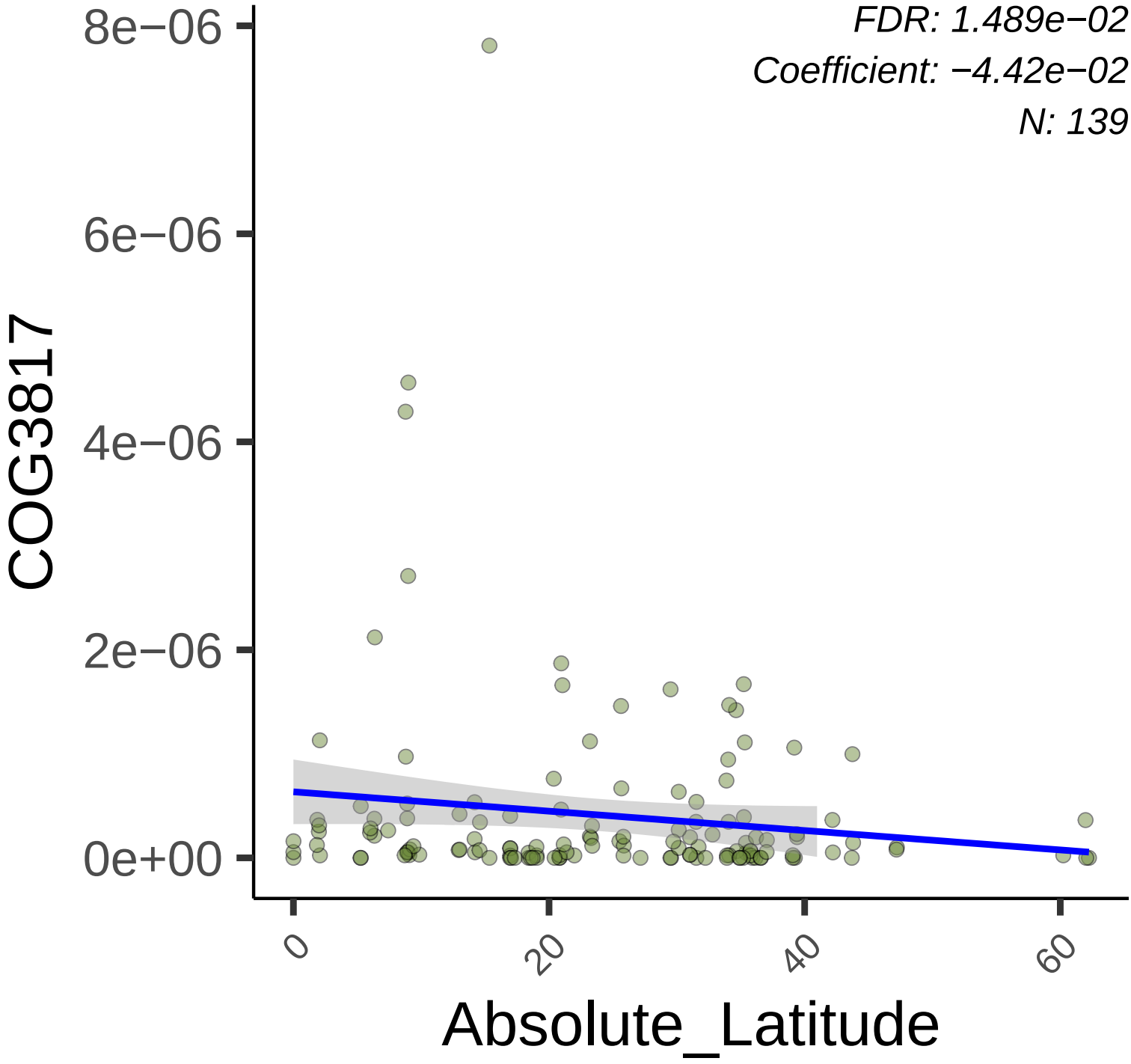

FDR: 1.469e−02
Coefficient: 1.08e−02
N: 139
COG2893
6e−05
4e−05
2e−05
0
20
40
60
Absolute_Latitude

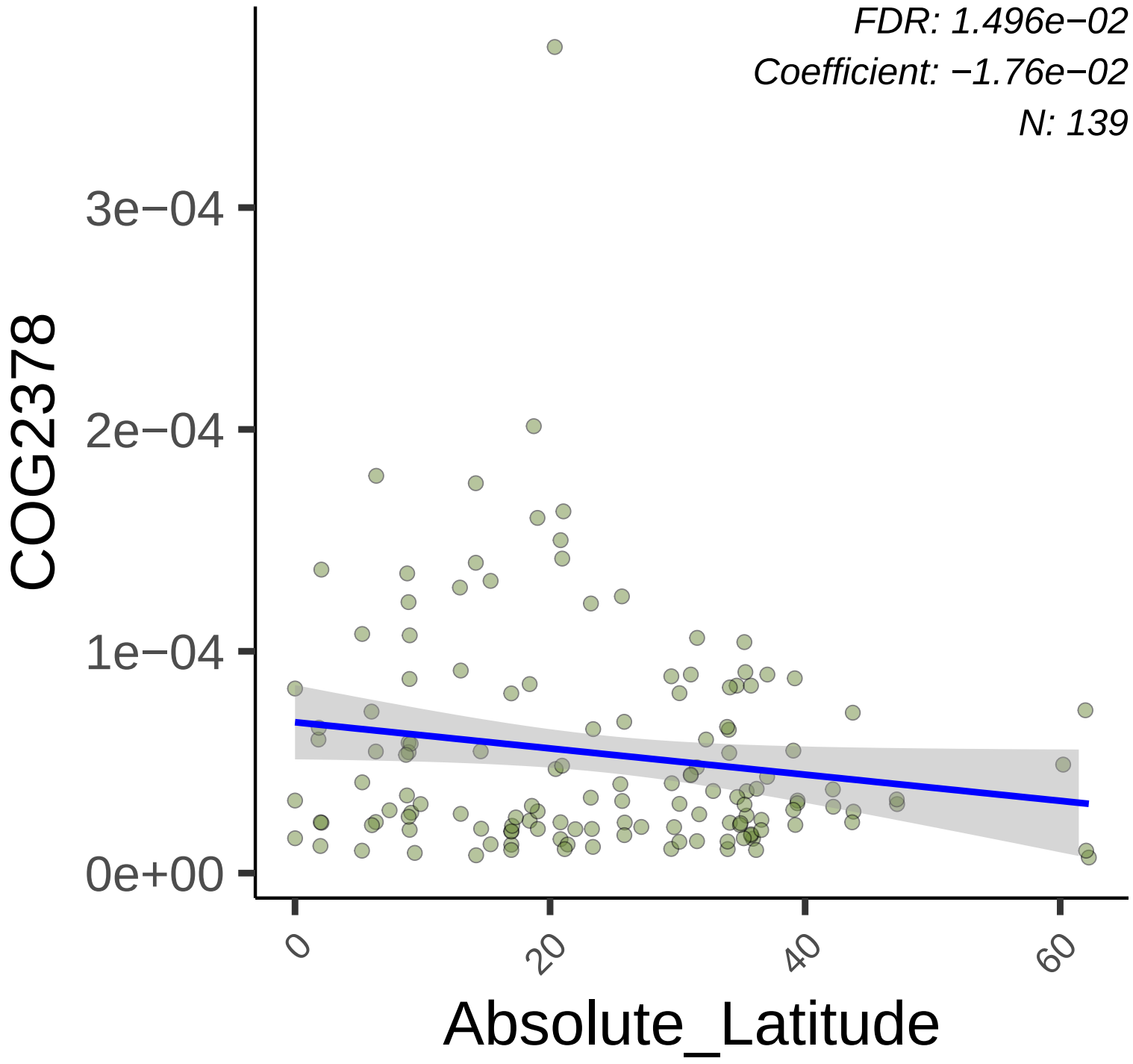

FDR: 1.469e−02
Coefficient: −2.33e−02
N: 139
COG2894
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

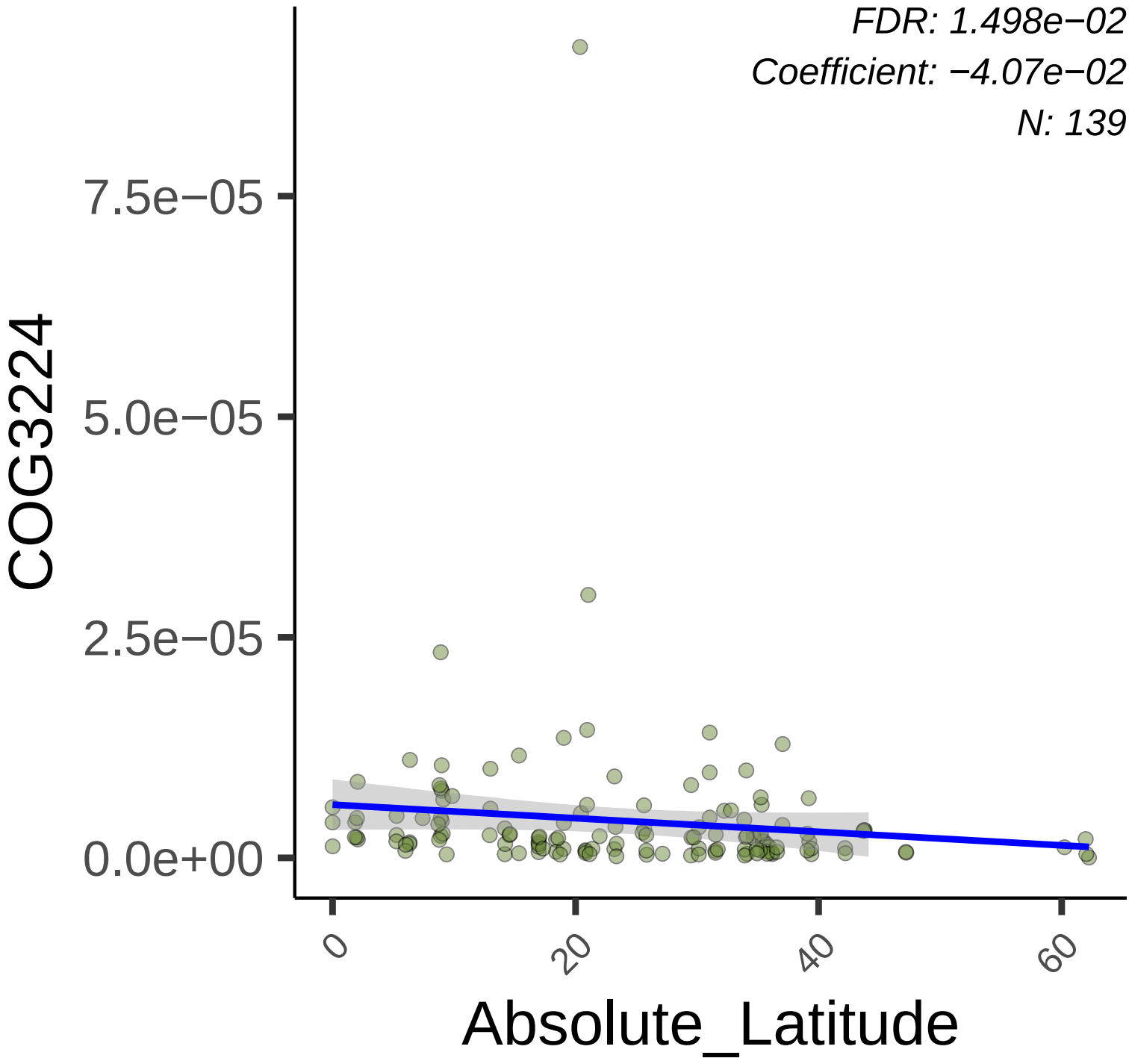

FDR: 1.483e−02
Coefficient: −7.18e−02
N: 139
COG2703
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

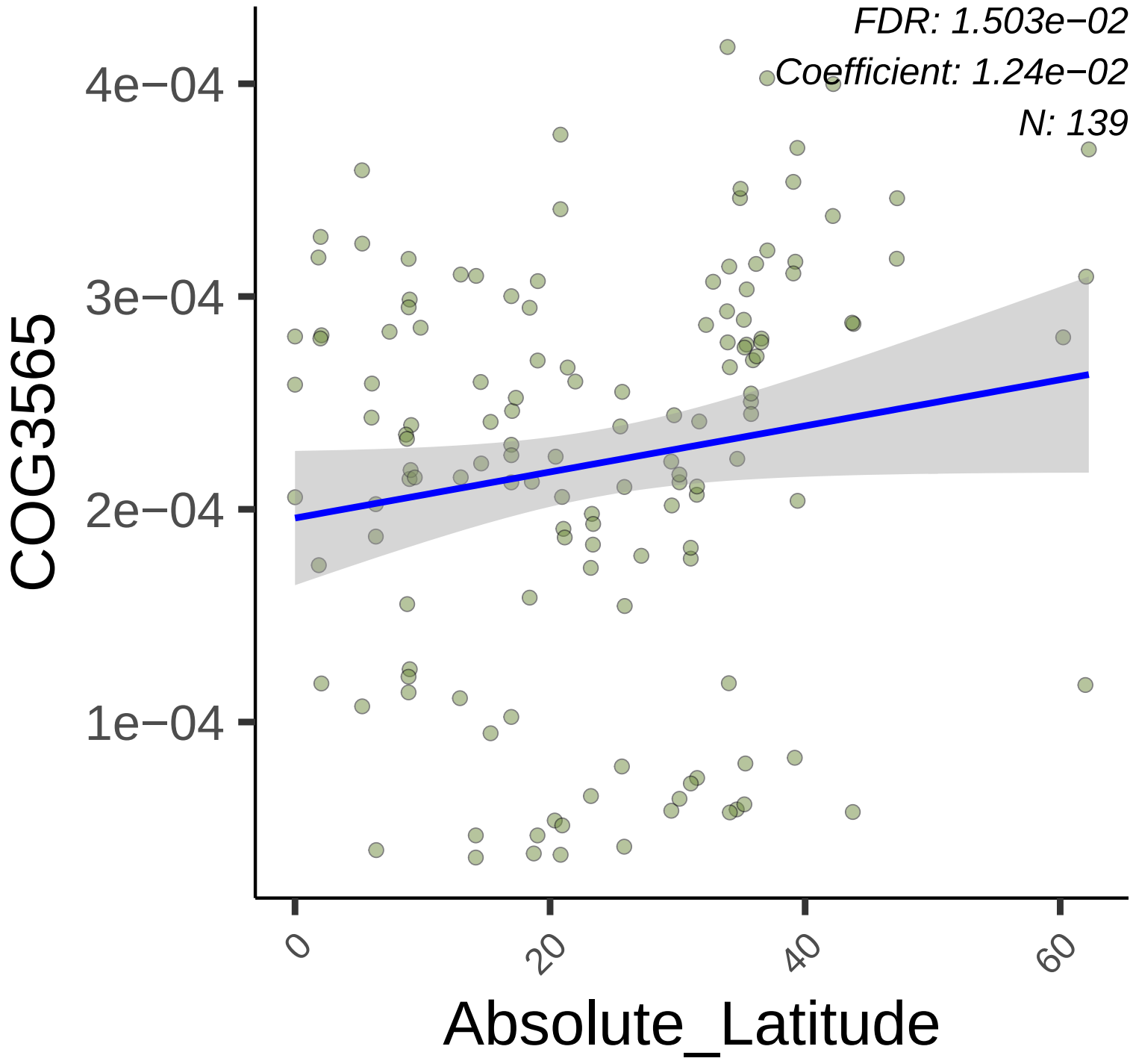

FDR: 1.485e−02
Coefficient: −4.74e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG1723
0
20
40
60
Absolute_Latitude

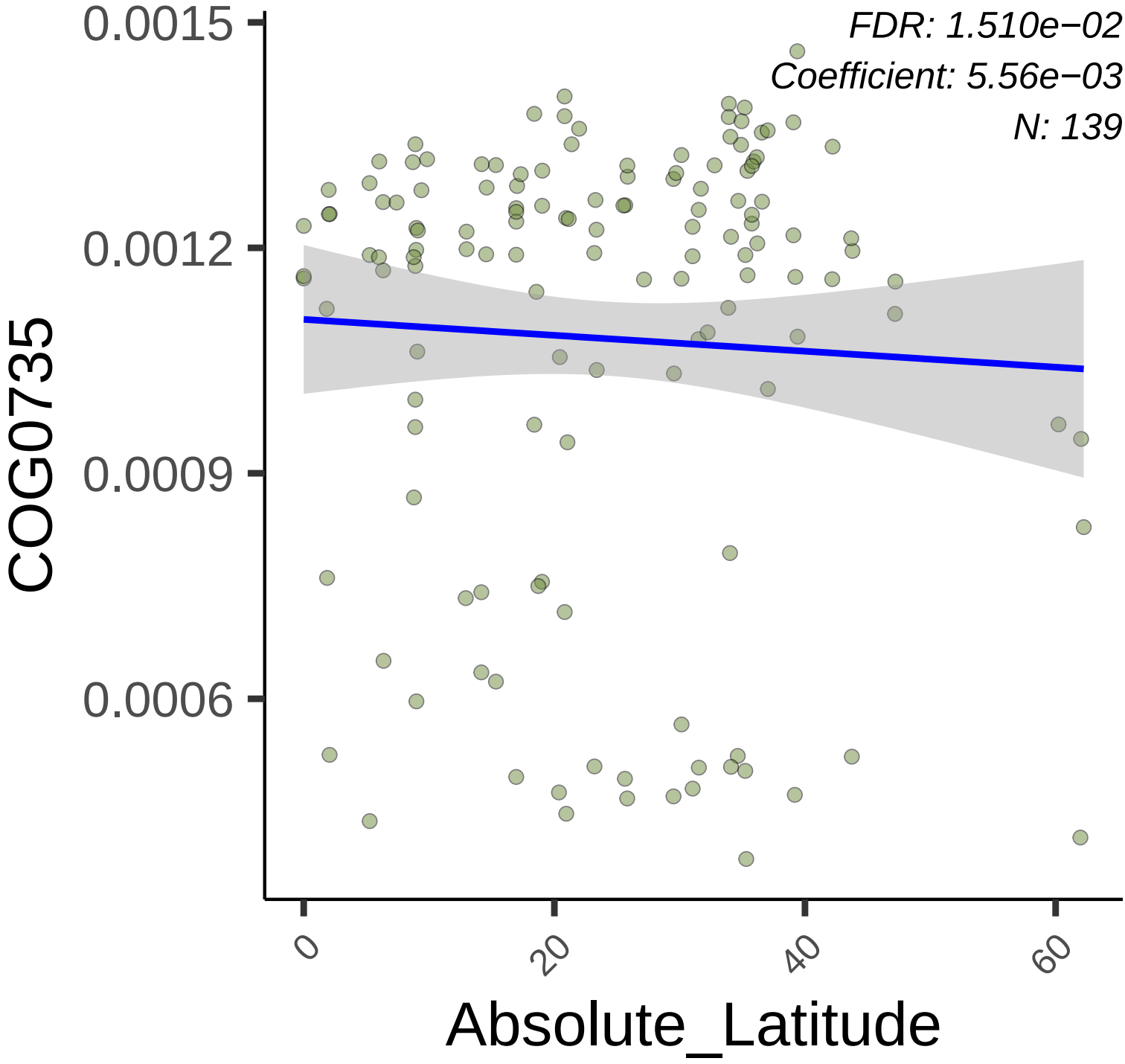

FDR: 1.485e−02
Coefficient: −4.02e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG4388
0
20
40
60
Absolute_Latitude

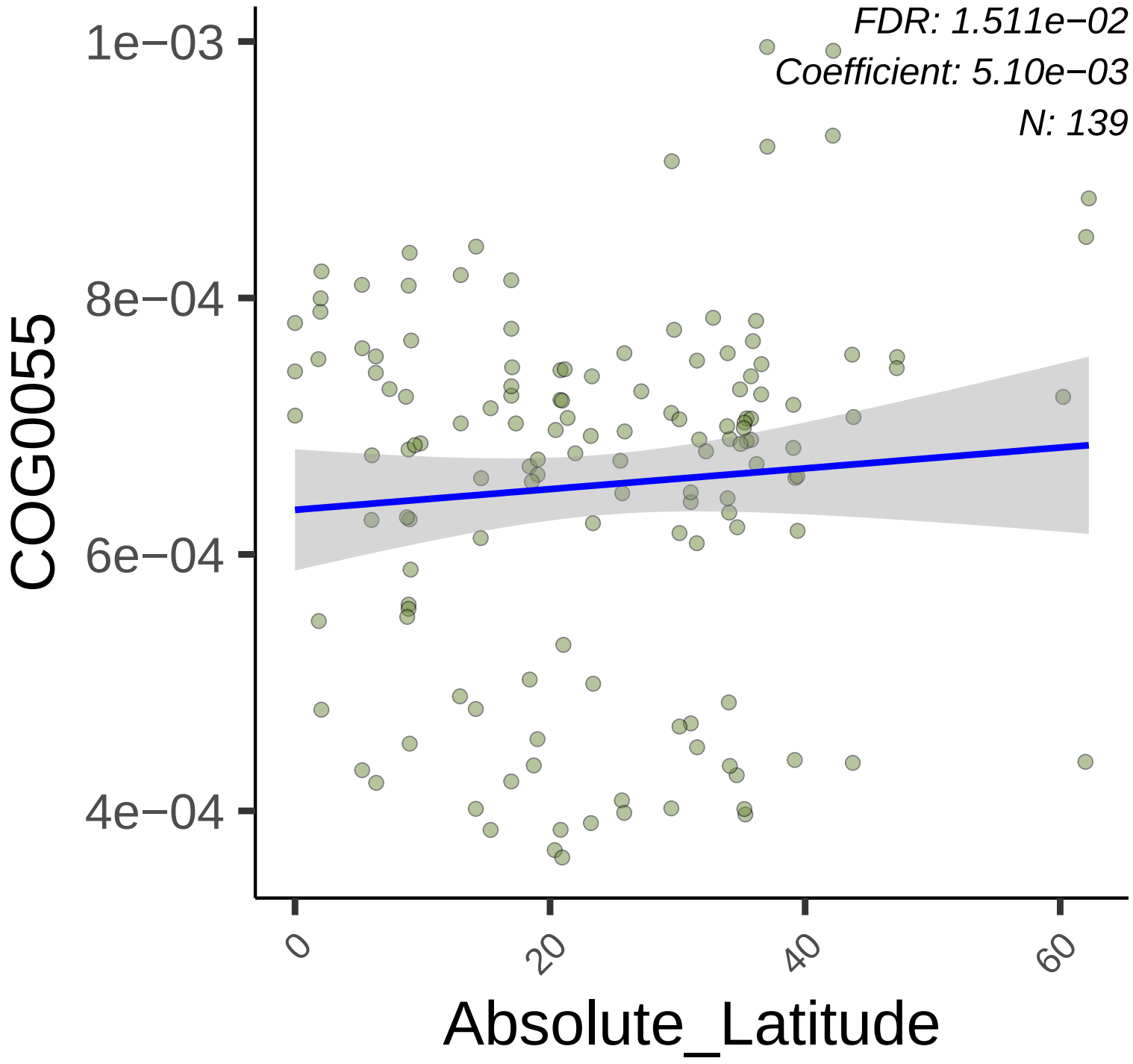

FDR: 1.489e−02
Coefficient: −4.42e−02
N: 139
8e−06
6e−06
4e−06
2e−06
0e+00
COG3817
0
20
40
60
Absolute_Latitude

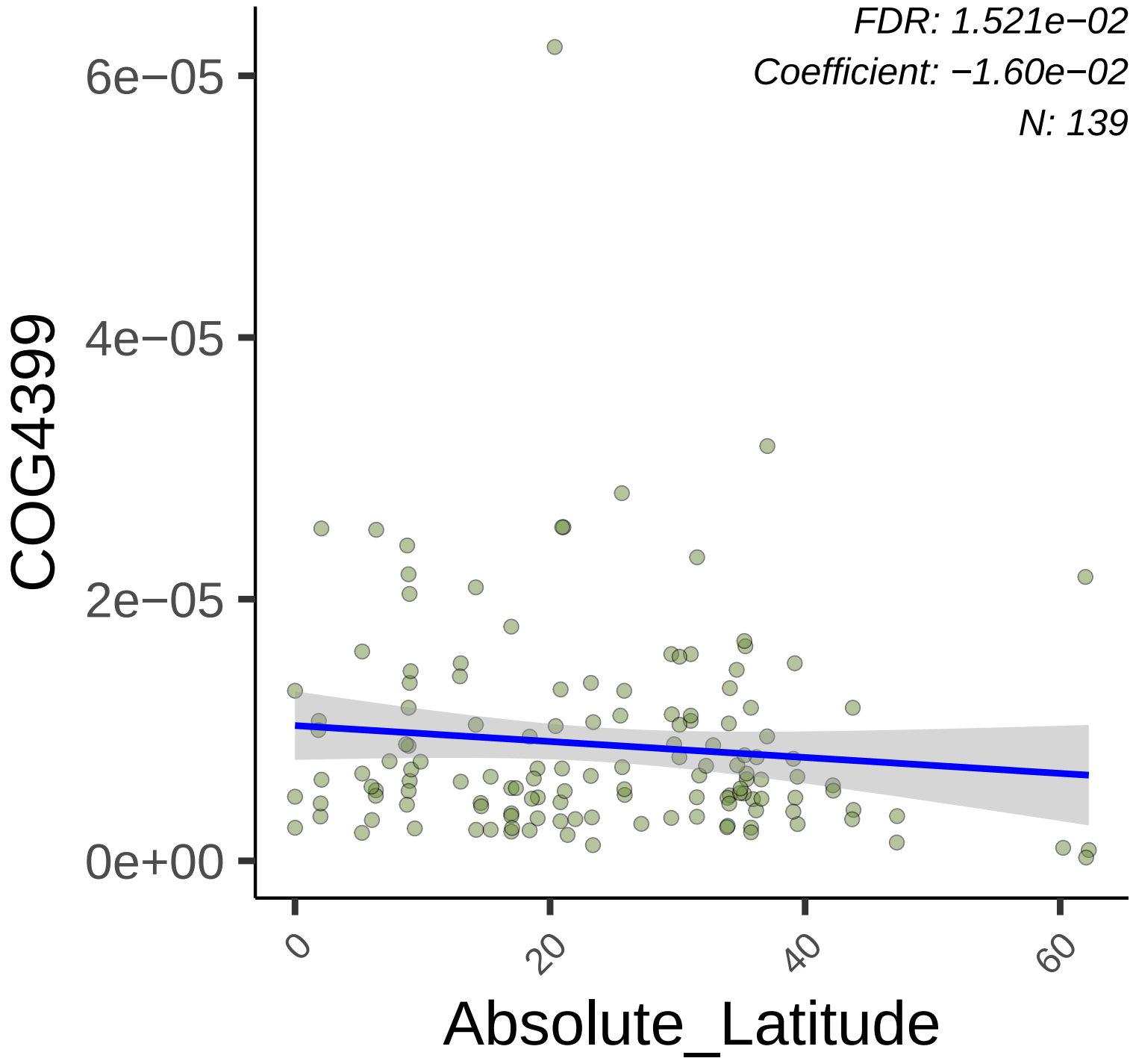

FDR: 1.496e−02
Coefficient: −1.76e−02
N: 139
COG2378
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

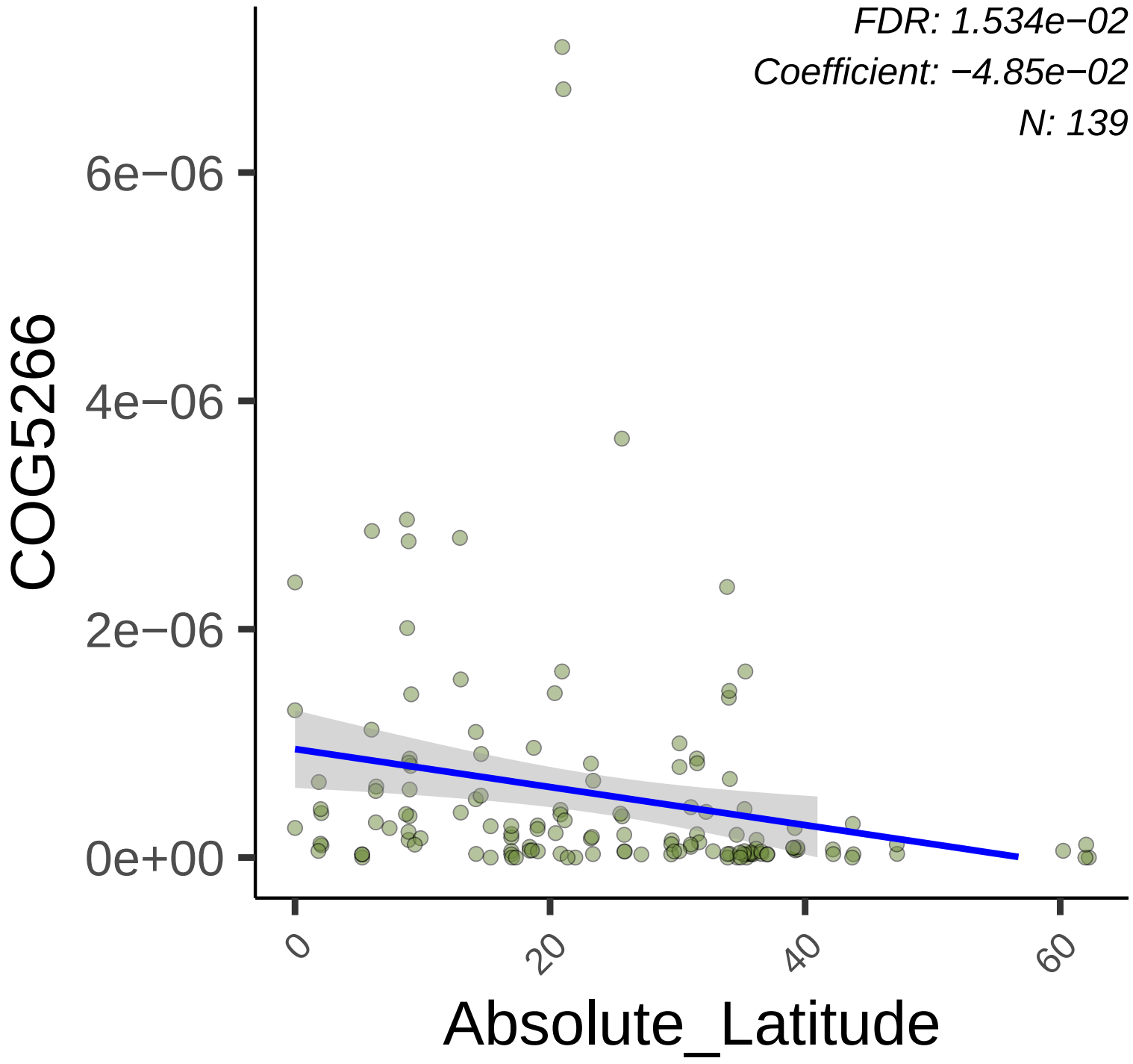

FDR: 1.498e−02
Coefficient: −4.07e−02
N: 139
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG3224
0
20
40
60
Absolute_Latitude

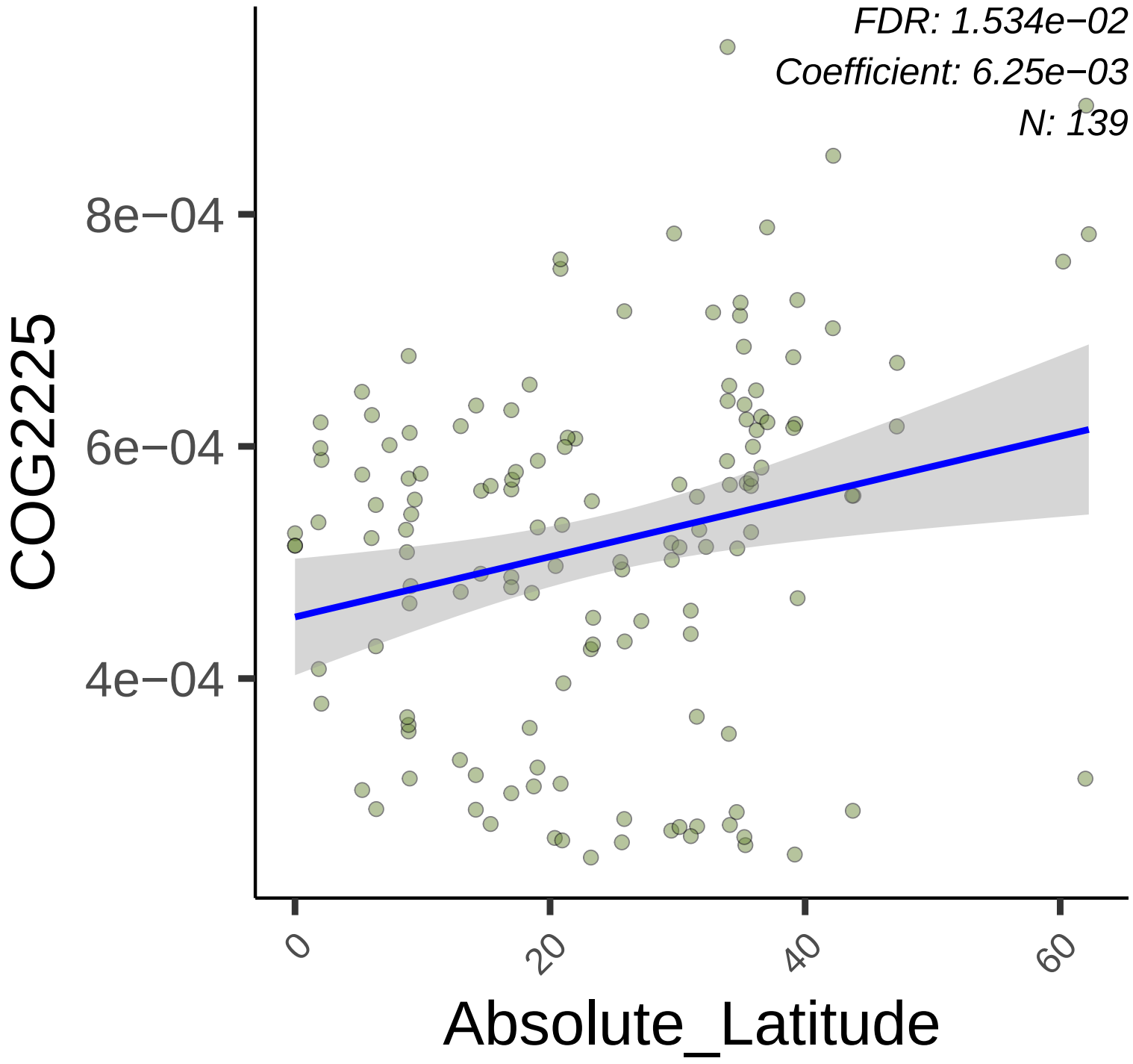

FDR: 1.503e−02
Coefficient: 1.24e−02
N: 139
4e−04
3e−04
2e−04
1e−04
COG3565
0
20
40
60
Absolute_Latitude

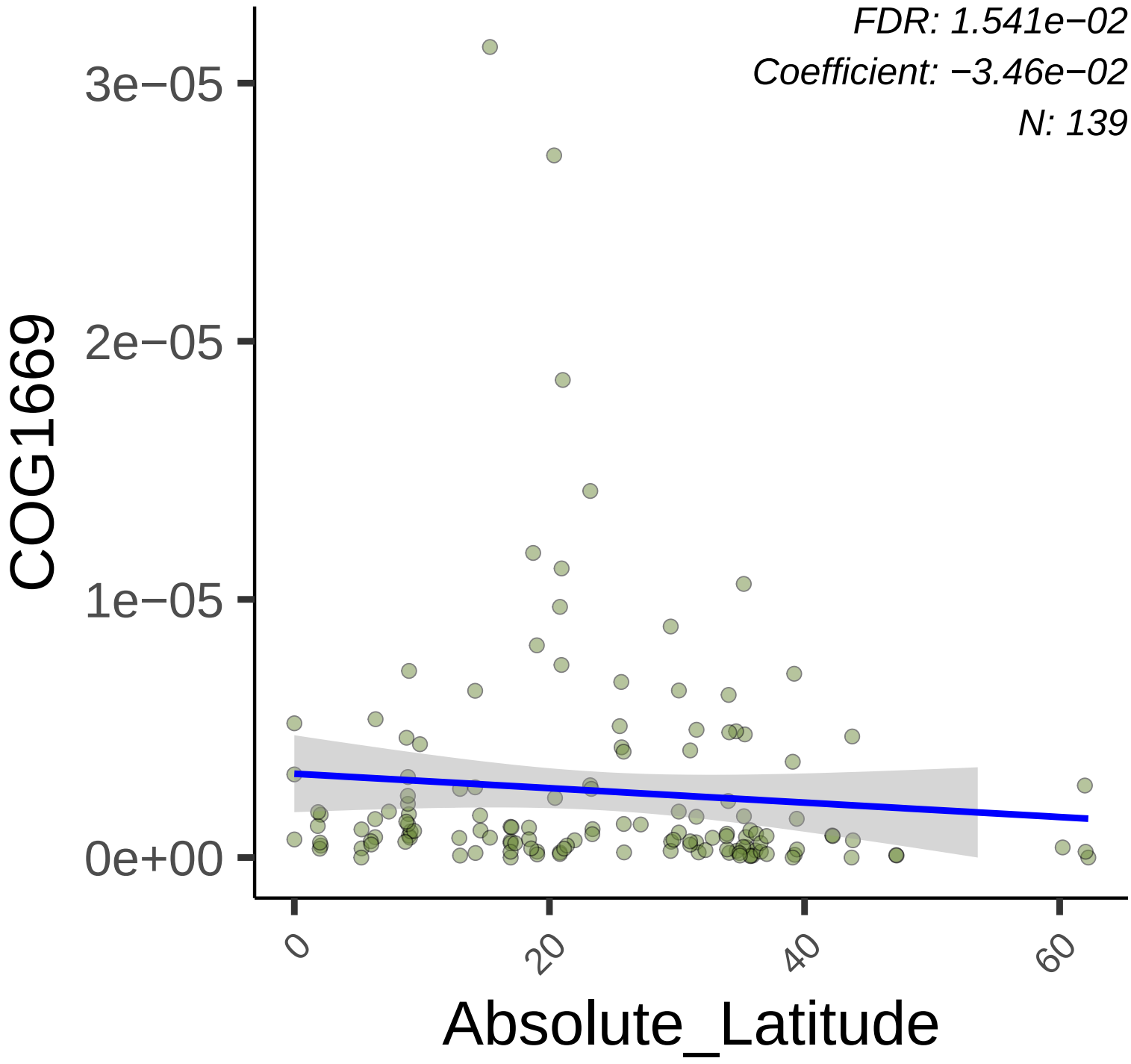

FDR: 1.510e−02
Coefficient: 5.56e−03
N: 139
0.0015
0.0012
0.0009
0.0006
COG0735
0
20
40
60
Absolute_Latitude

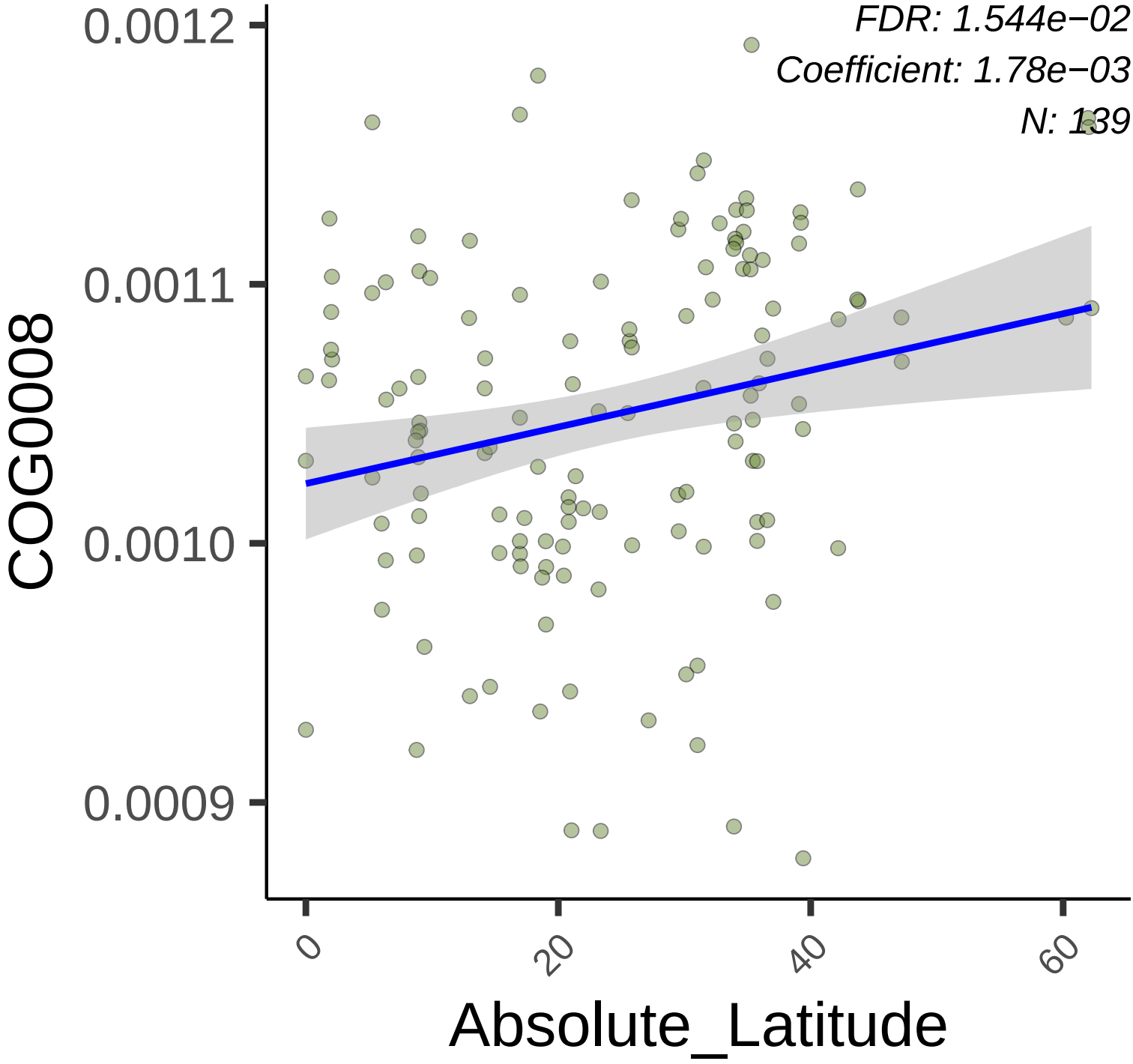

FDR: 1.511e−02
Coefficient: 5.10e−03
N: 139
1e−03
8e−04
6e−04
4e−04
COG0055
0
20
40
60
Absolute_Latitude

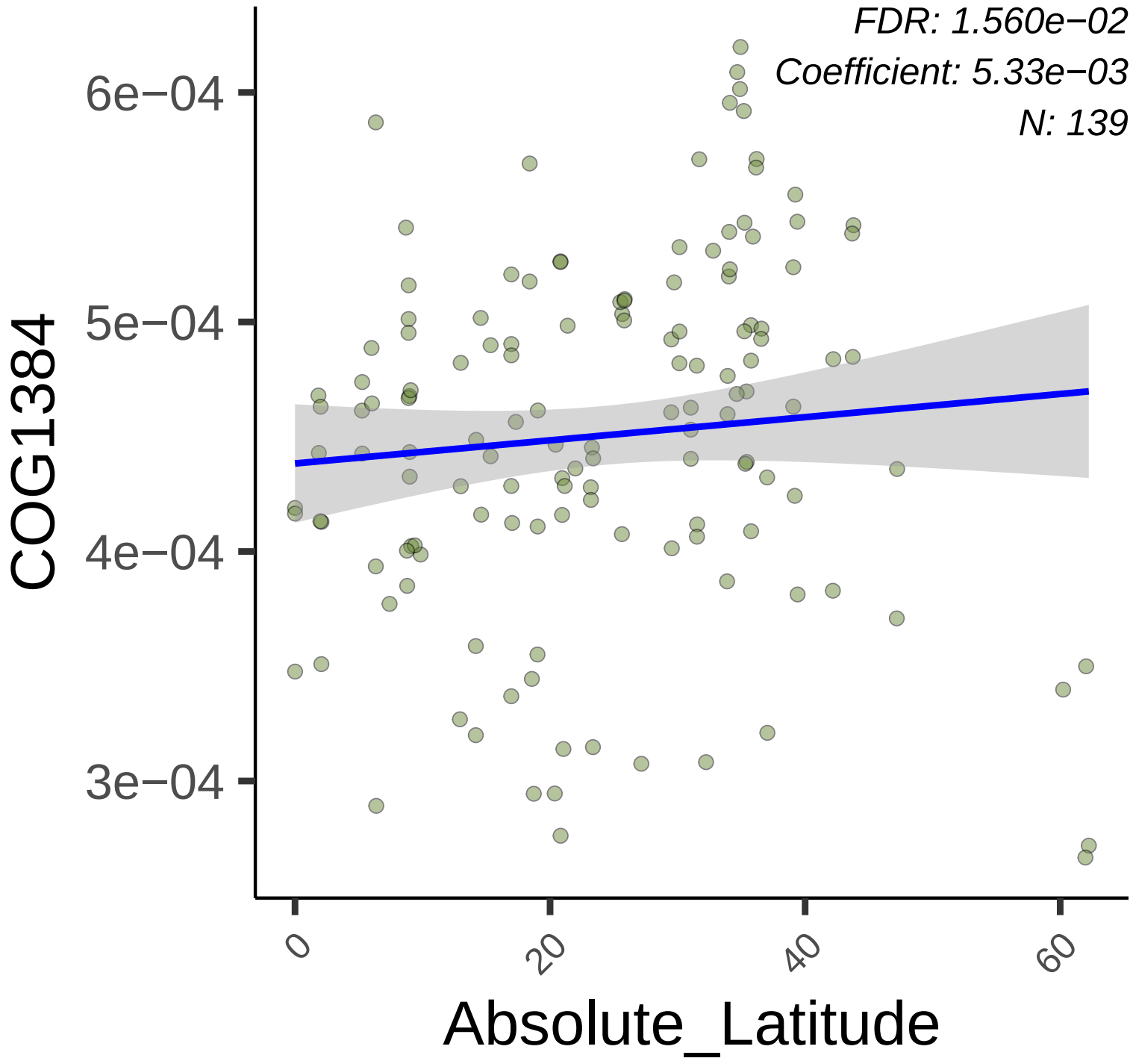

FDR: 1.521e−02
Coefficient: −1.60e−02
N: 139
COG4399
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

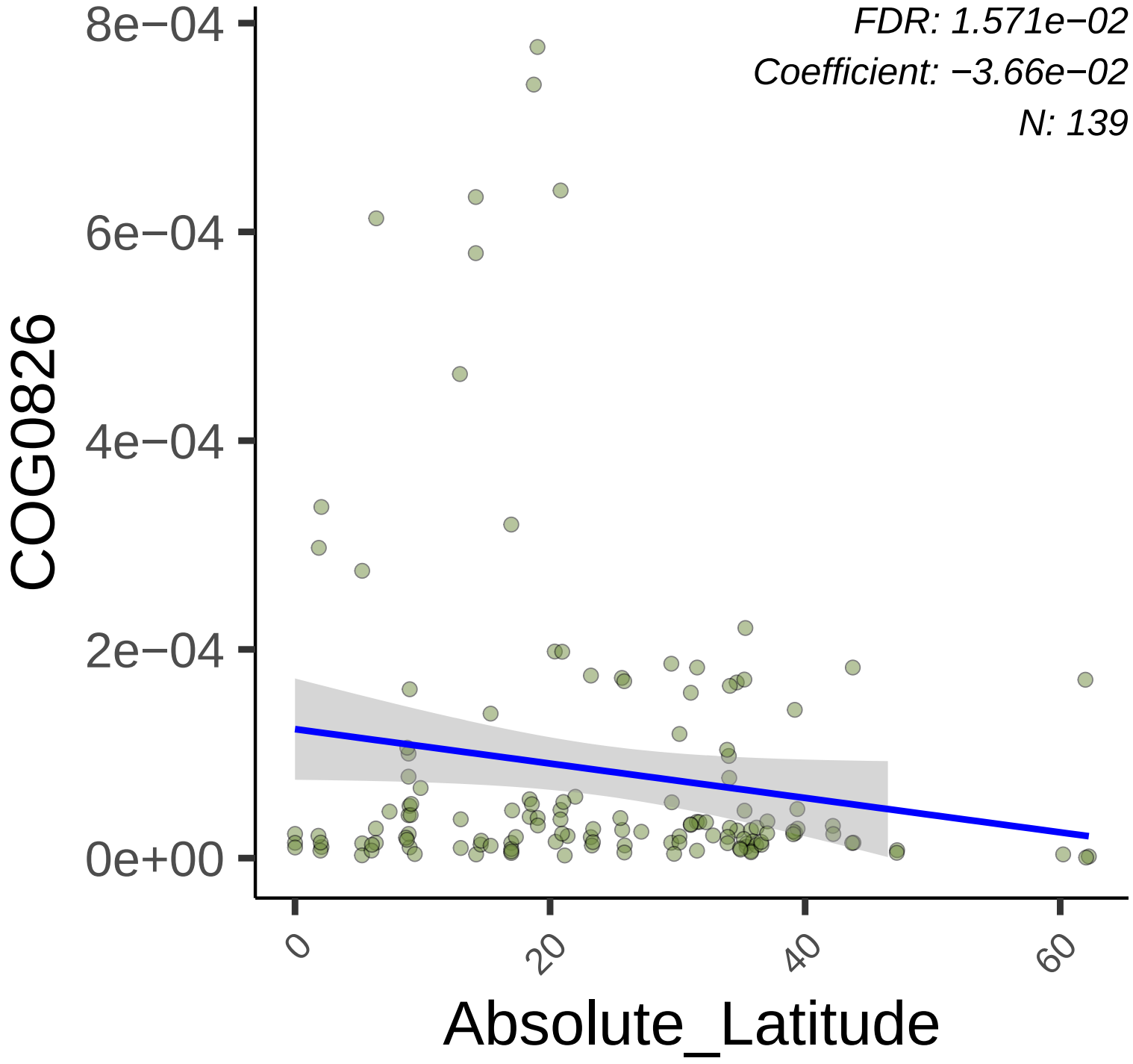

FDR: 1.534e−02
Coefficient: −4.85e−02
N: 139
COG5266
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

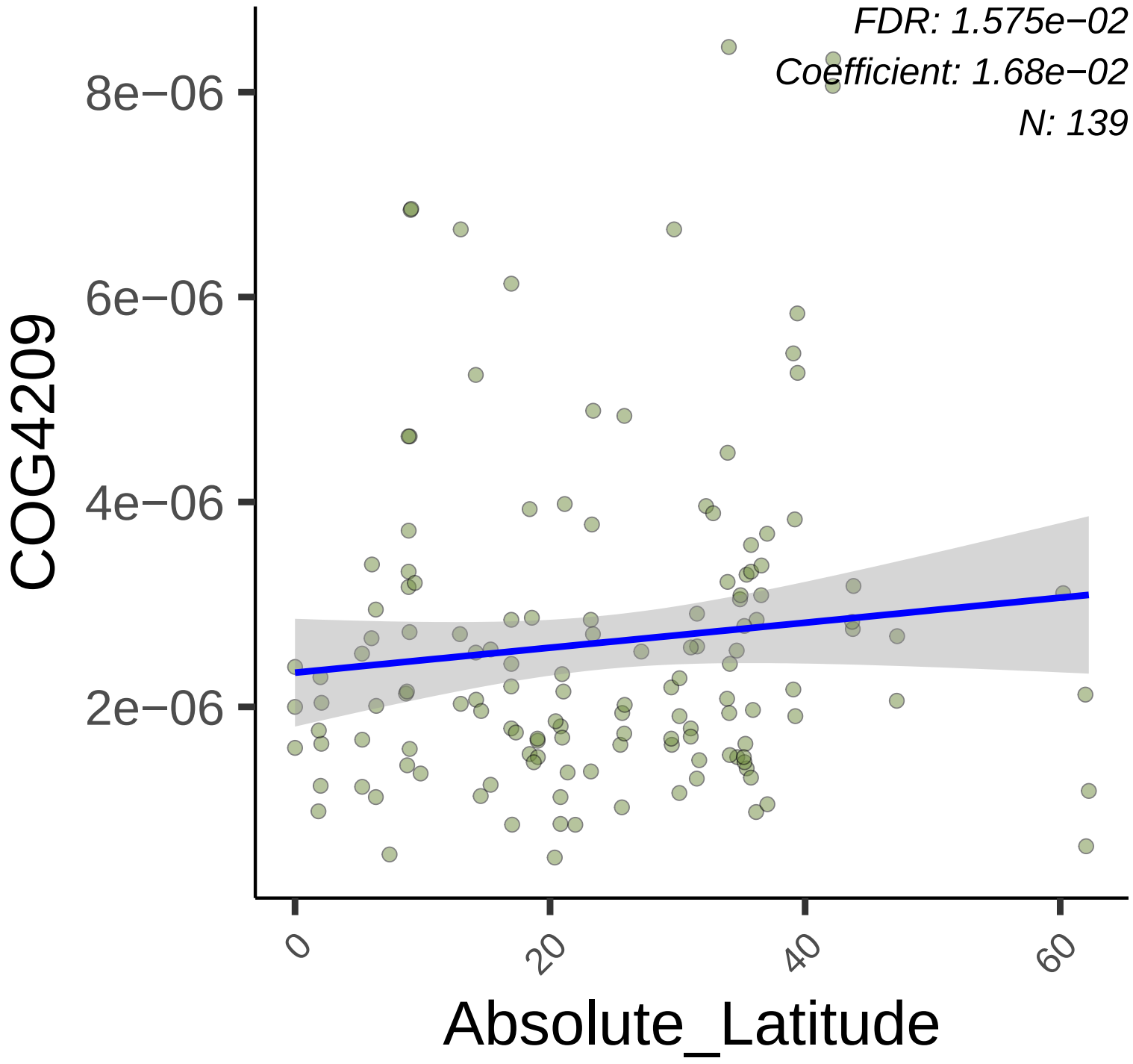

FDR: 1.534e−02
Coefficient: 6.25e−03
N: 139
8e−04
6e−04
4e−04
COG2225
0
20
40
60
Absolute_Latitude

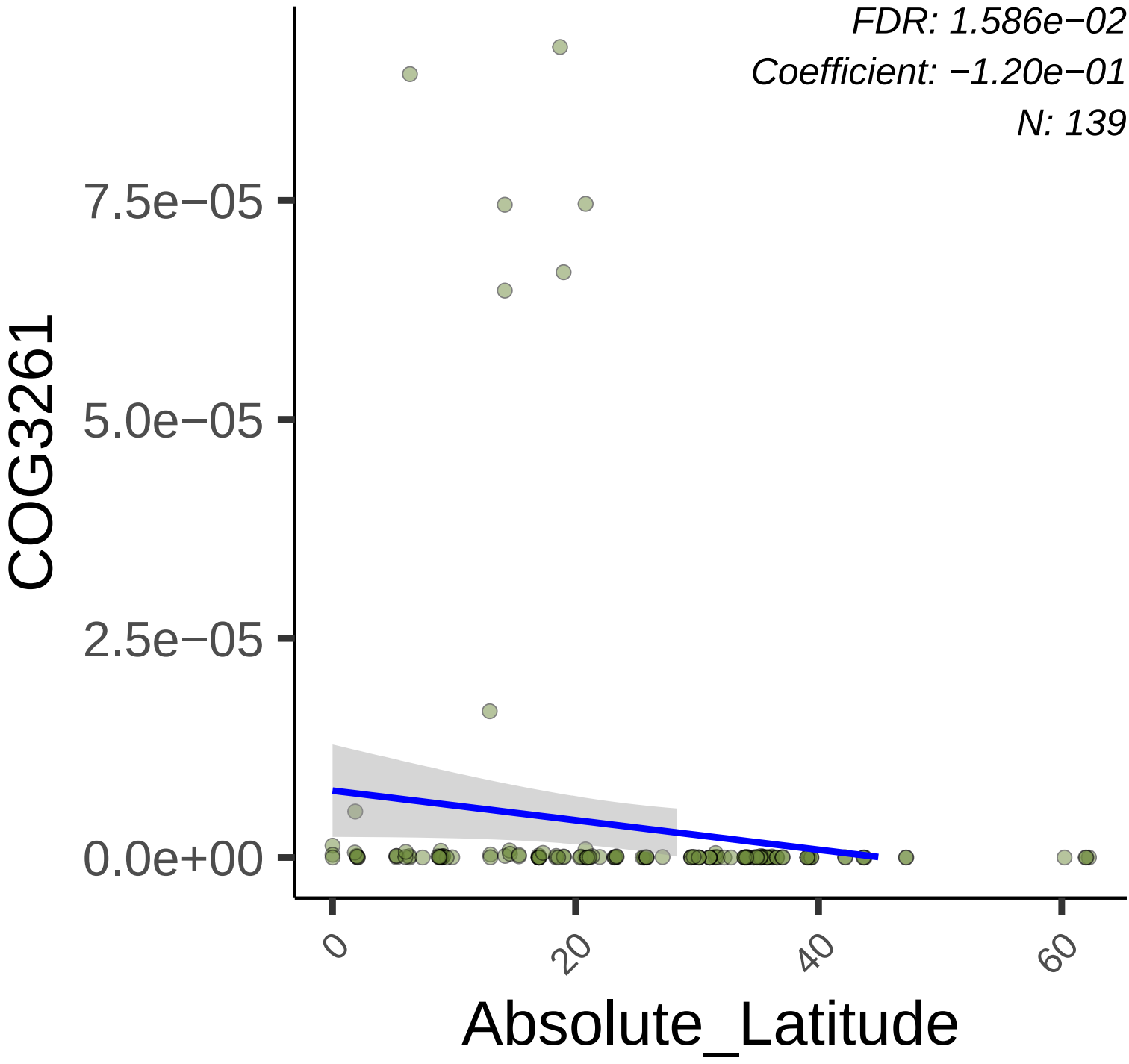

FDR: 1.541e−02
Coefficient: −3.46e−02
N: 139
COG1669
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

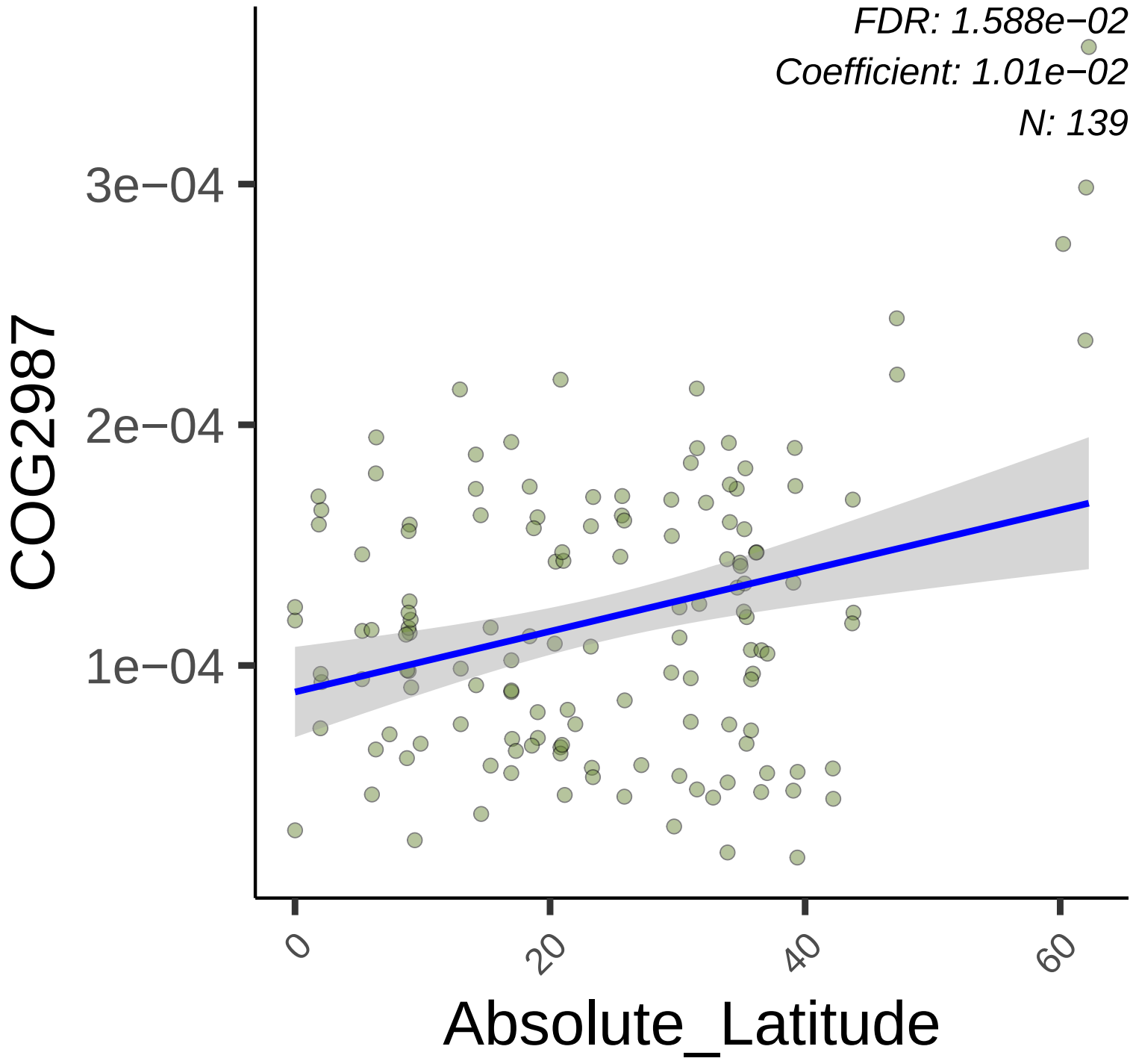

FDR: 1.544e−02
Coefficient: 1.78e−03
N: 139
0.0012
0.0011
0.0010
0.0009
COG0008
0
20
40
60
Absolute_Latitude

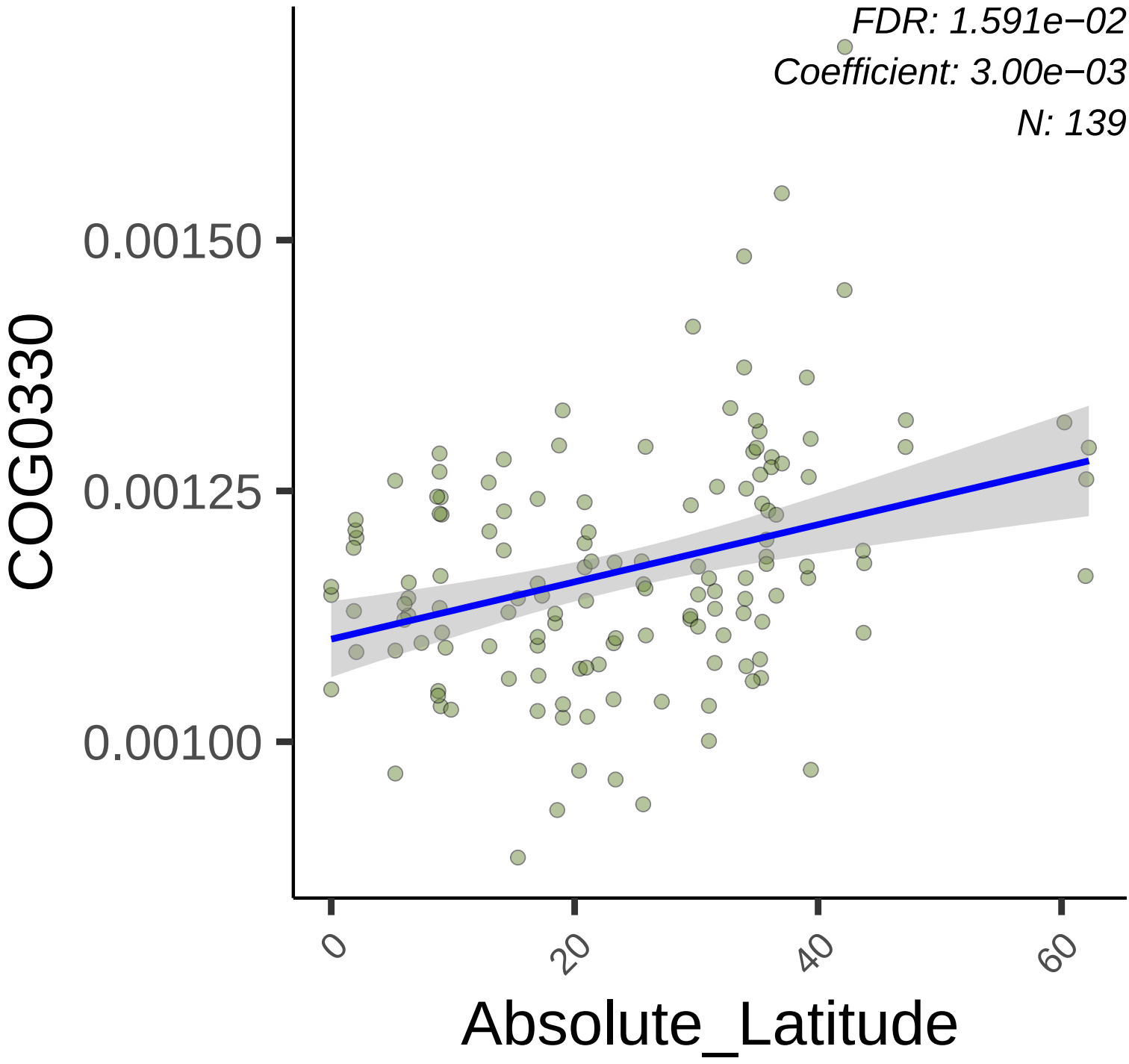

FDR: 1.560e−02
Coefficient: 5.33e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG1384
0
20
40
60
Absolute_Latitude

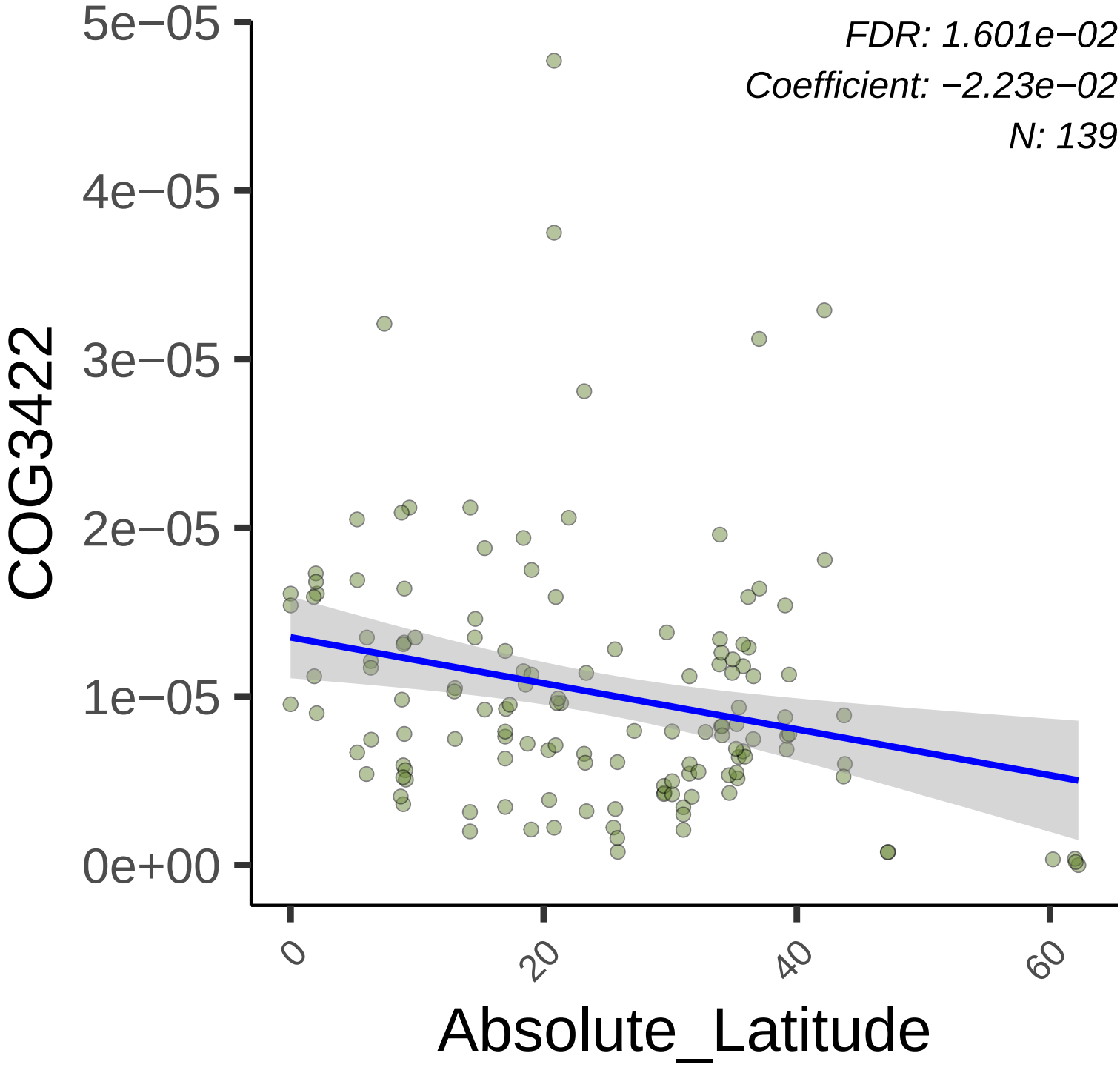

FDR: 1.571e−02
Coefficient: −3.66e−02
N: 139
8e−04
6e−04
4e−04
2e−04
0e+00
COG0826
0
20
40
60
Absolute_Latitude

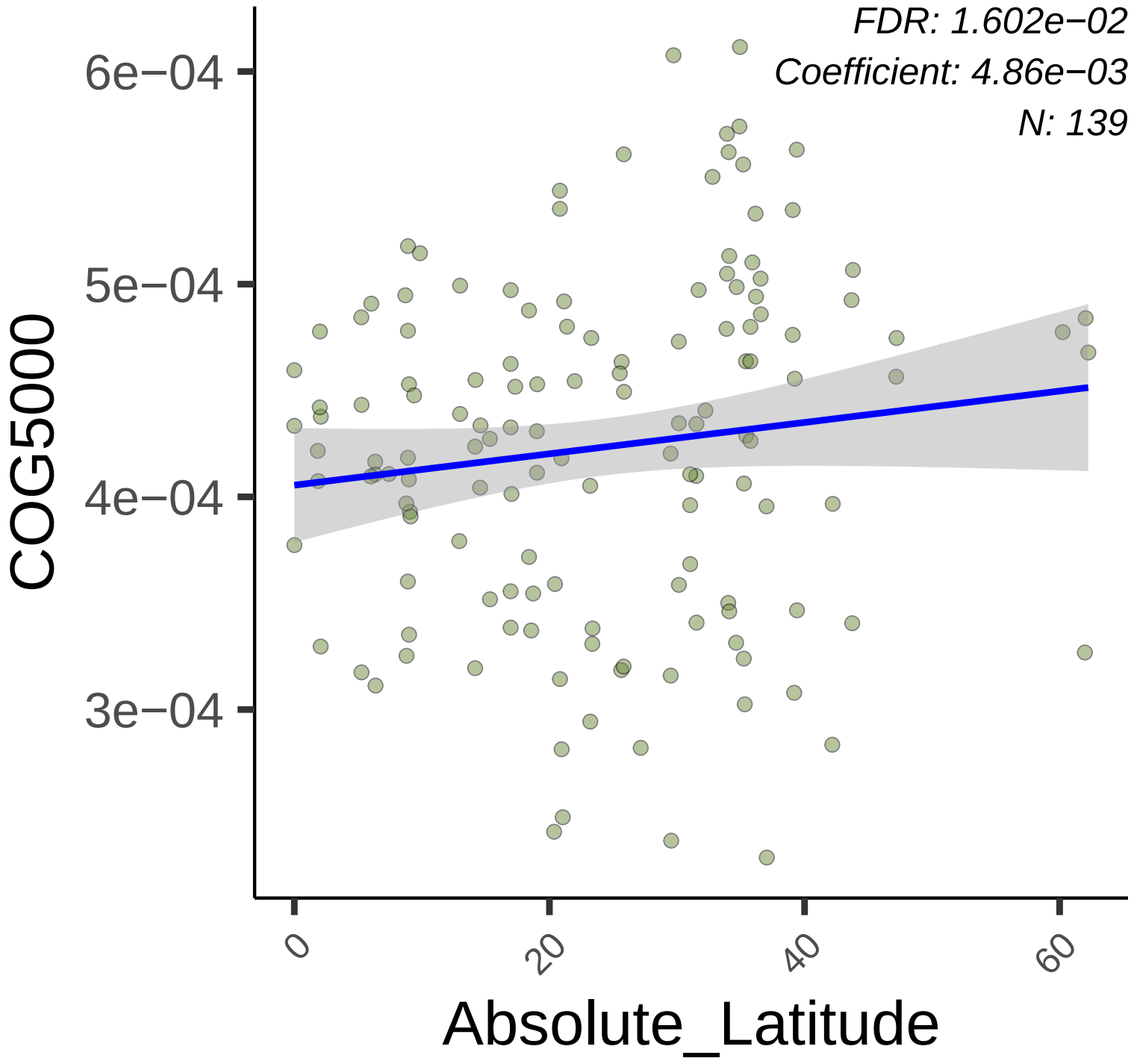

FDR: 1.575e−02
Coefficient: 1.68e−02
N: 139
8e−06
6e−06
4e−06
2e−06
COG4209
0
20
40
60
Absolute_Latitude

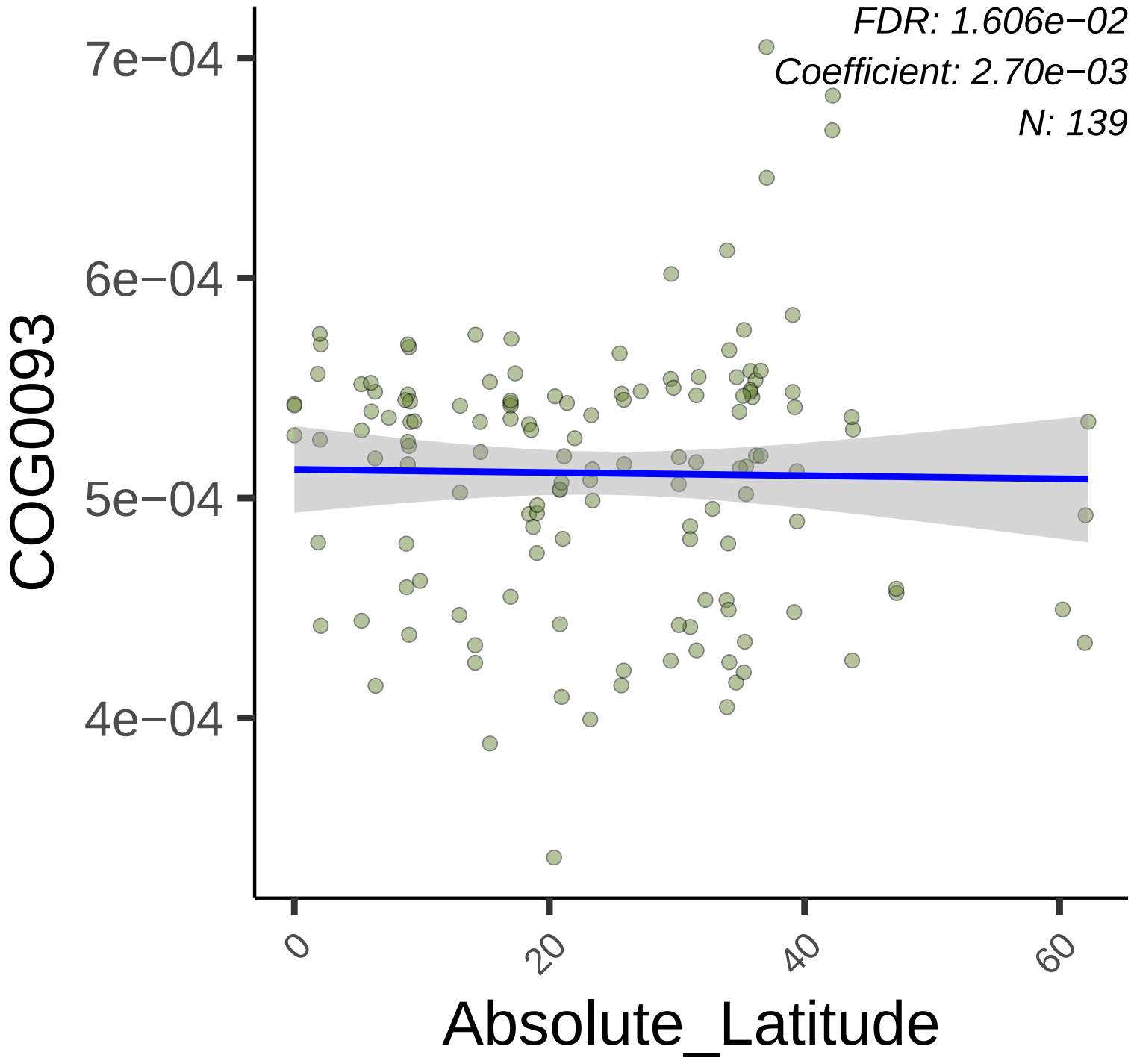

FDR: 1.586e−02
Coefficient: −1.20e−01
N: 139
COG3261
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

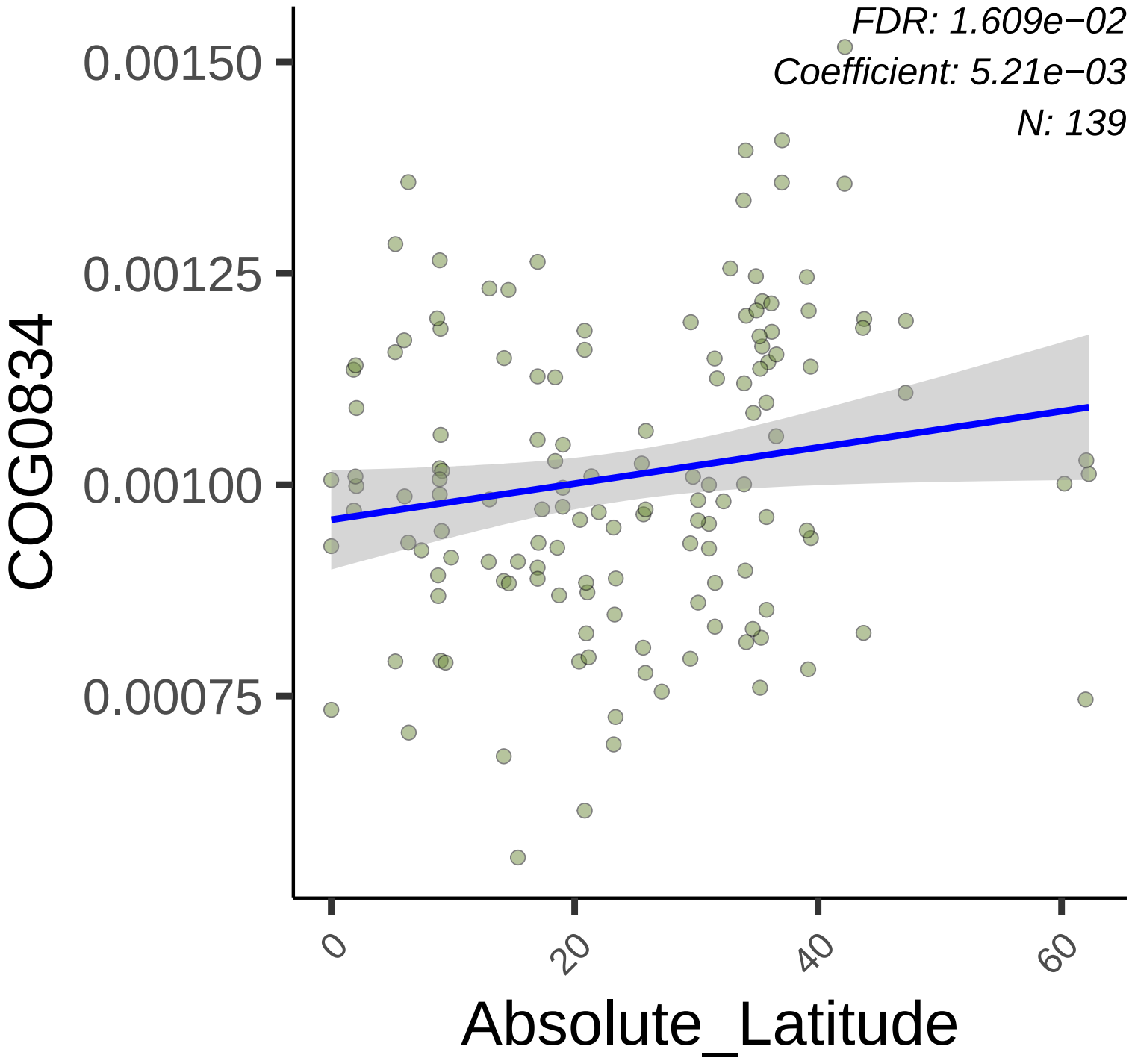

FDR: 1.588e−02
Coefficient: 1.01e−02
N: 139
3e−04
2e−04
1e−04
COG2987
0
20
40
60
Absolute_Latitude

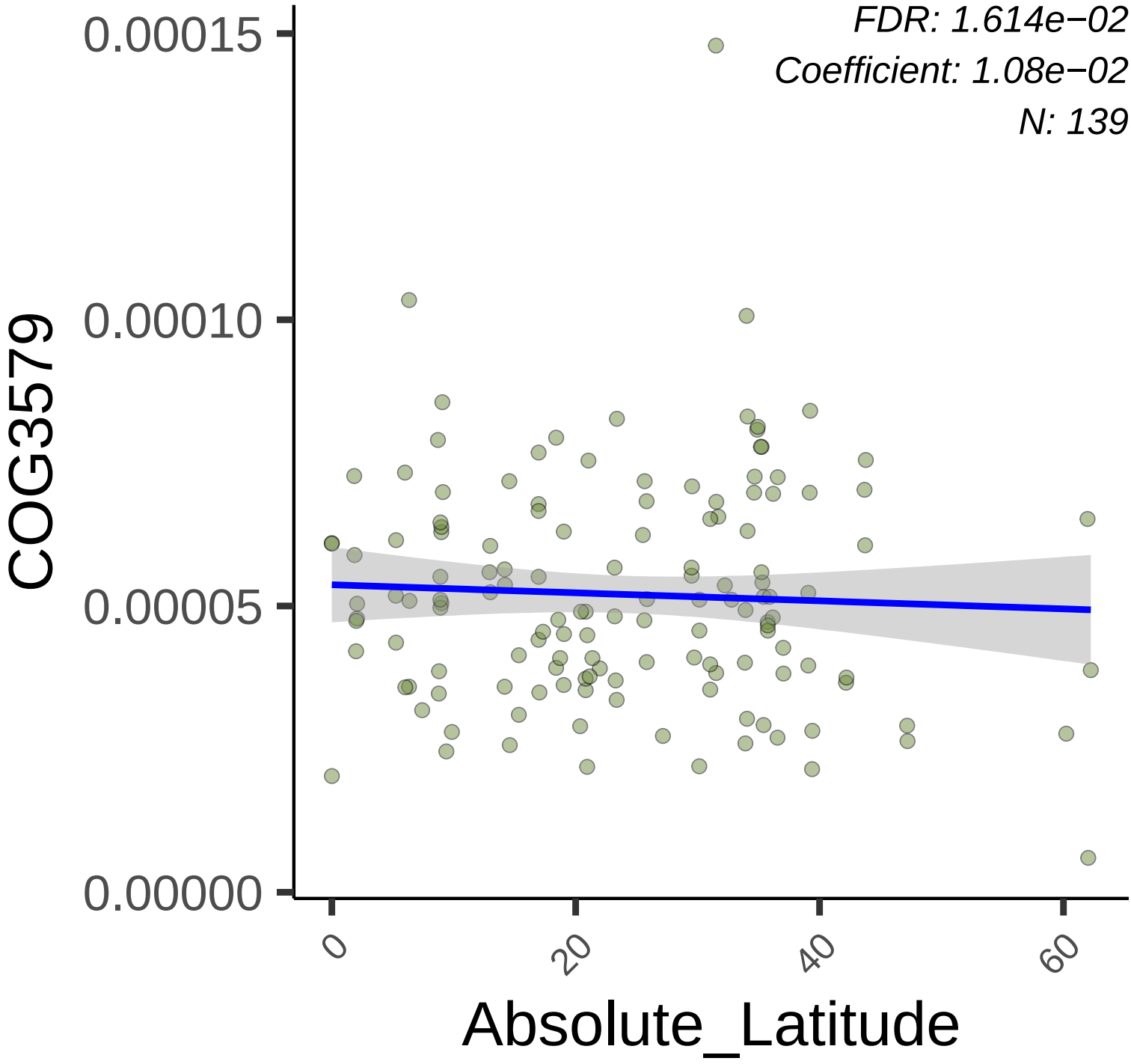

FDR: 1.591e−02
Coefficient: 3.00e−03
N: 139
0.00150
0.00125
0.00100
COG0330
0
20
40
60
Absolute_Latitude

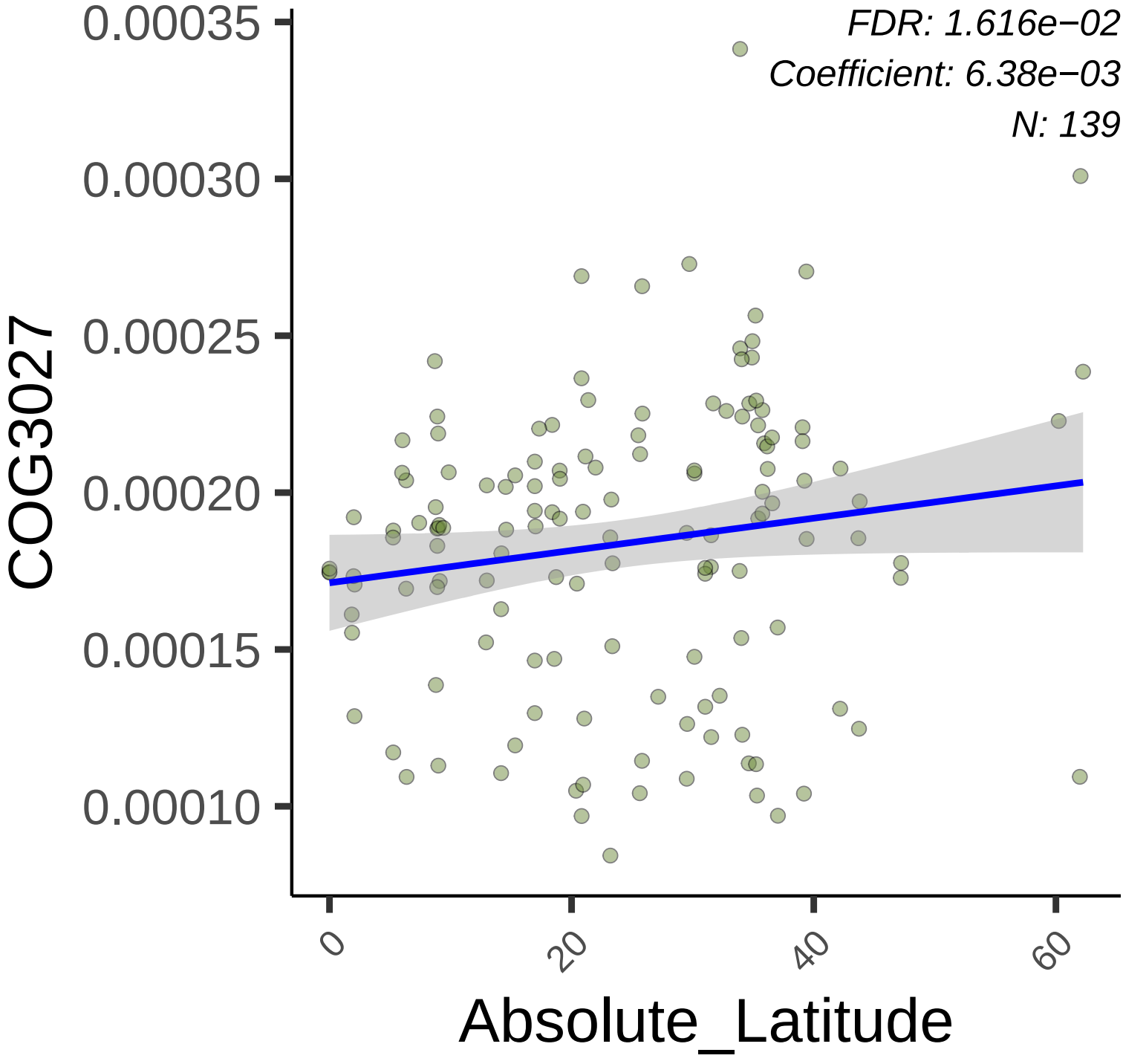

FDR: 1.601e−02
Coefficient: −2.23e−02
N: 139
COG3422
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

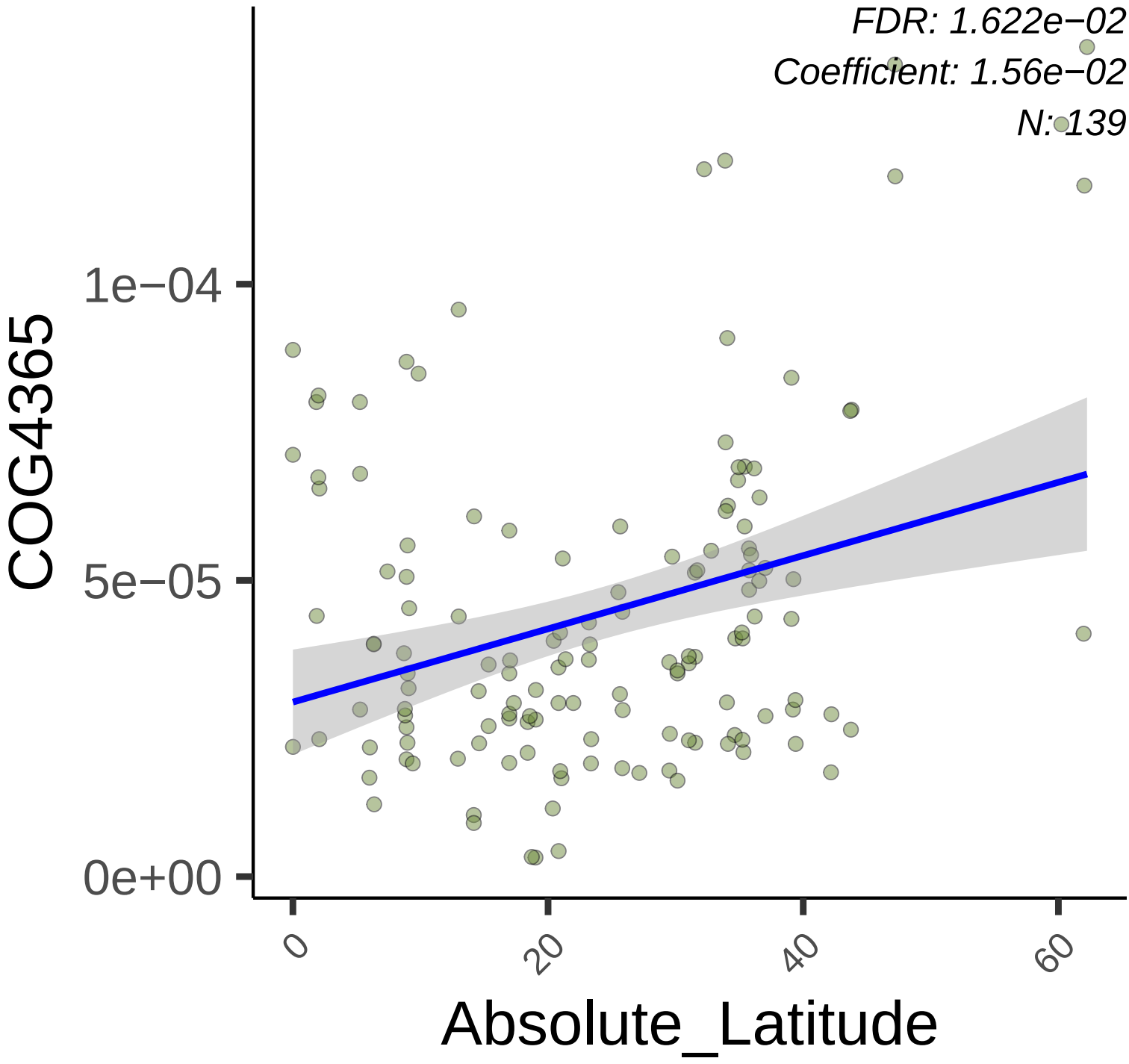

FDR: 1.602e−02
Coefficient: 4.86e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG5000
0
20
40
60
Absolute_Latitude

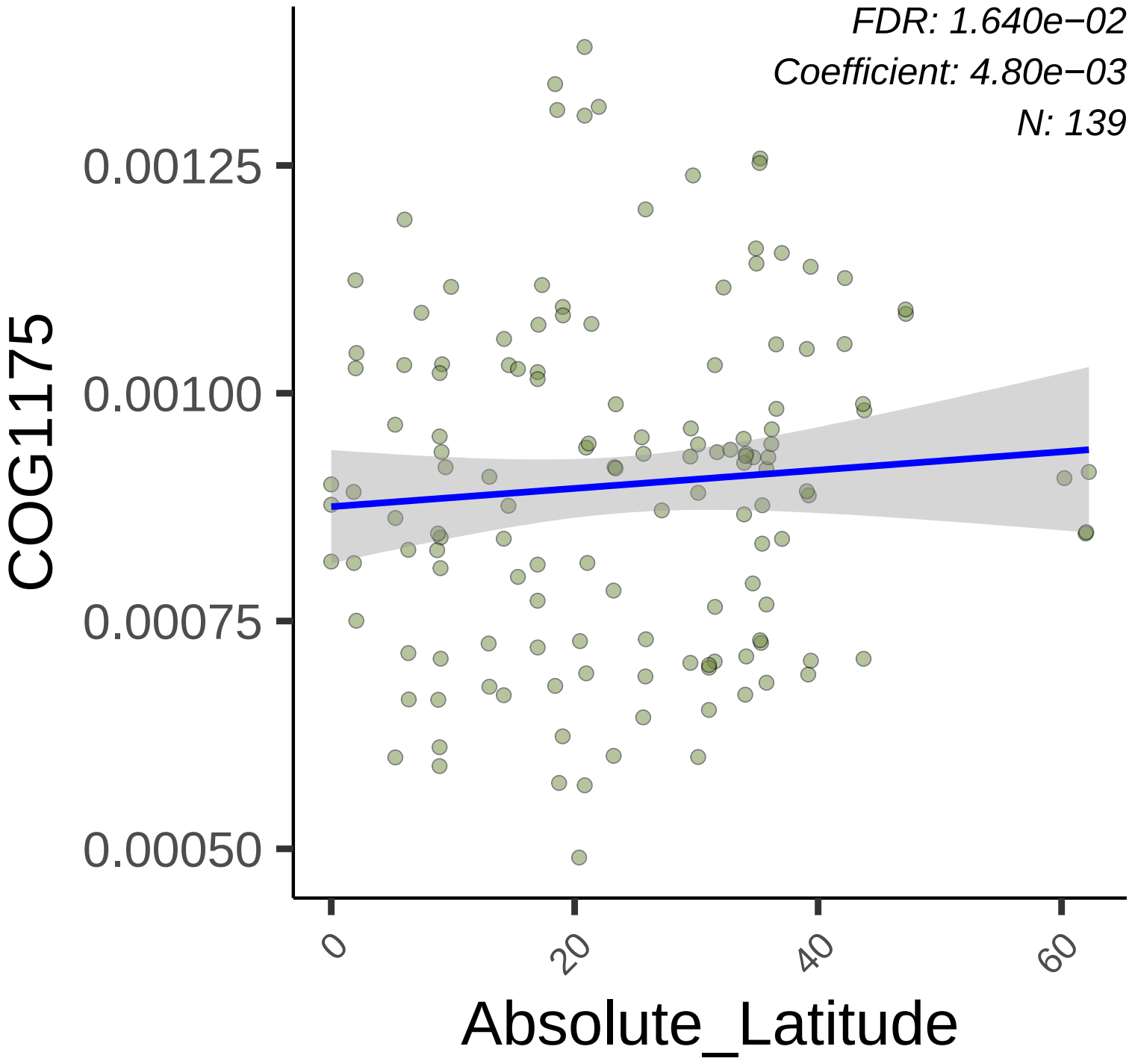

FDR: 1.606e−02
Coefficient: 2.70e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0093
0
20
40
60
Absolute_Latitude

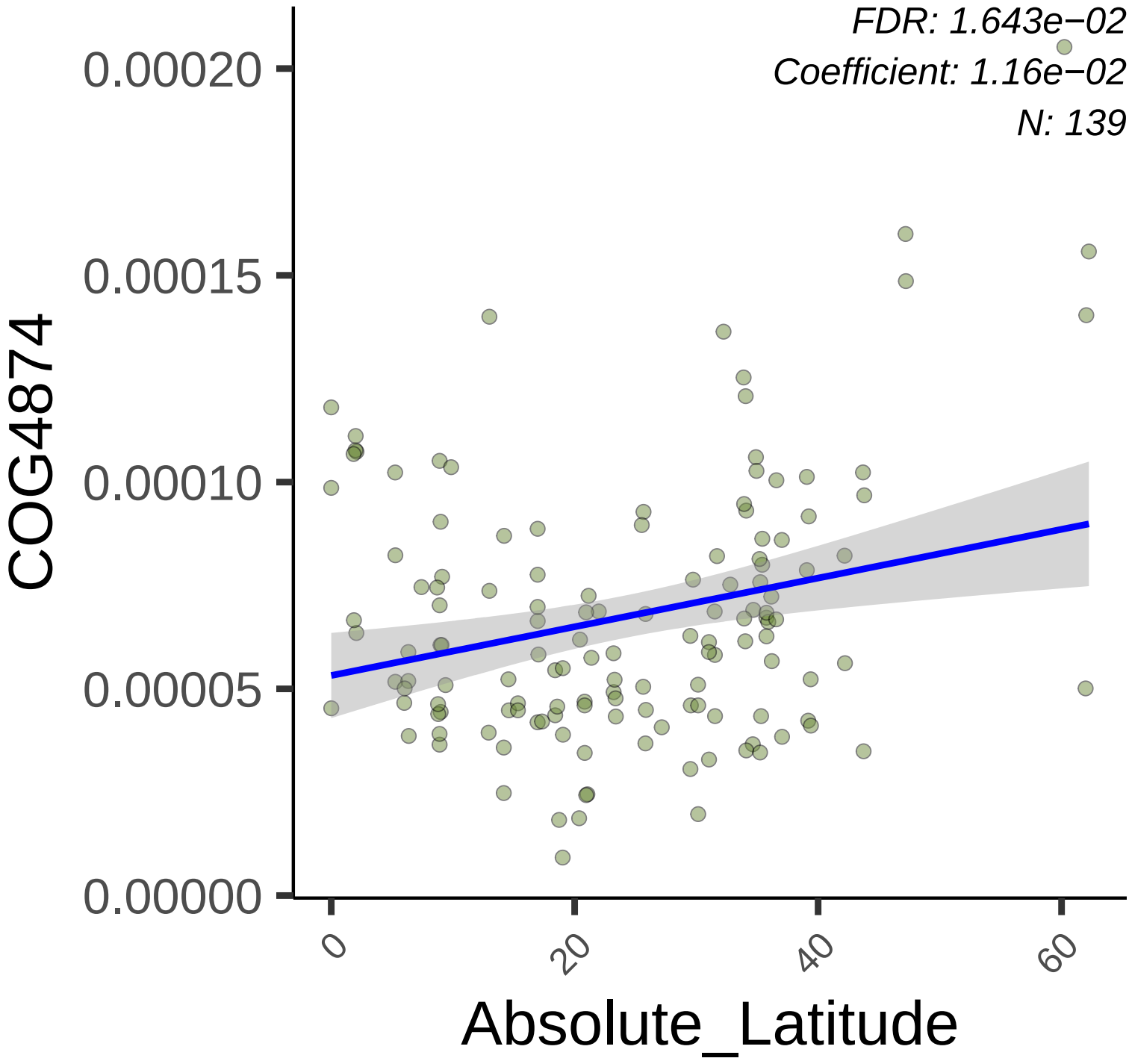

FDR: 1.609e−02
Coefficient: 5.21e−03
N: 139
0.00150
0.00125
0.00100
0.00075
COG0834
0
20
40
60
Absolute_Latitude

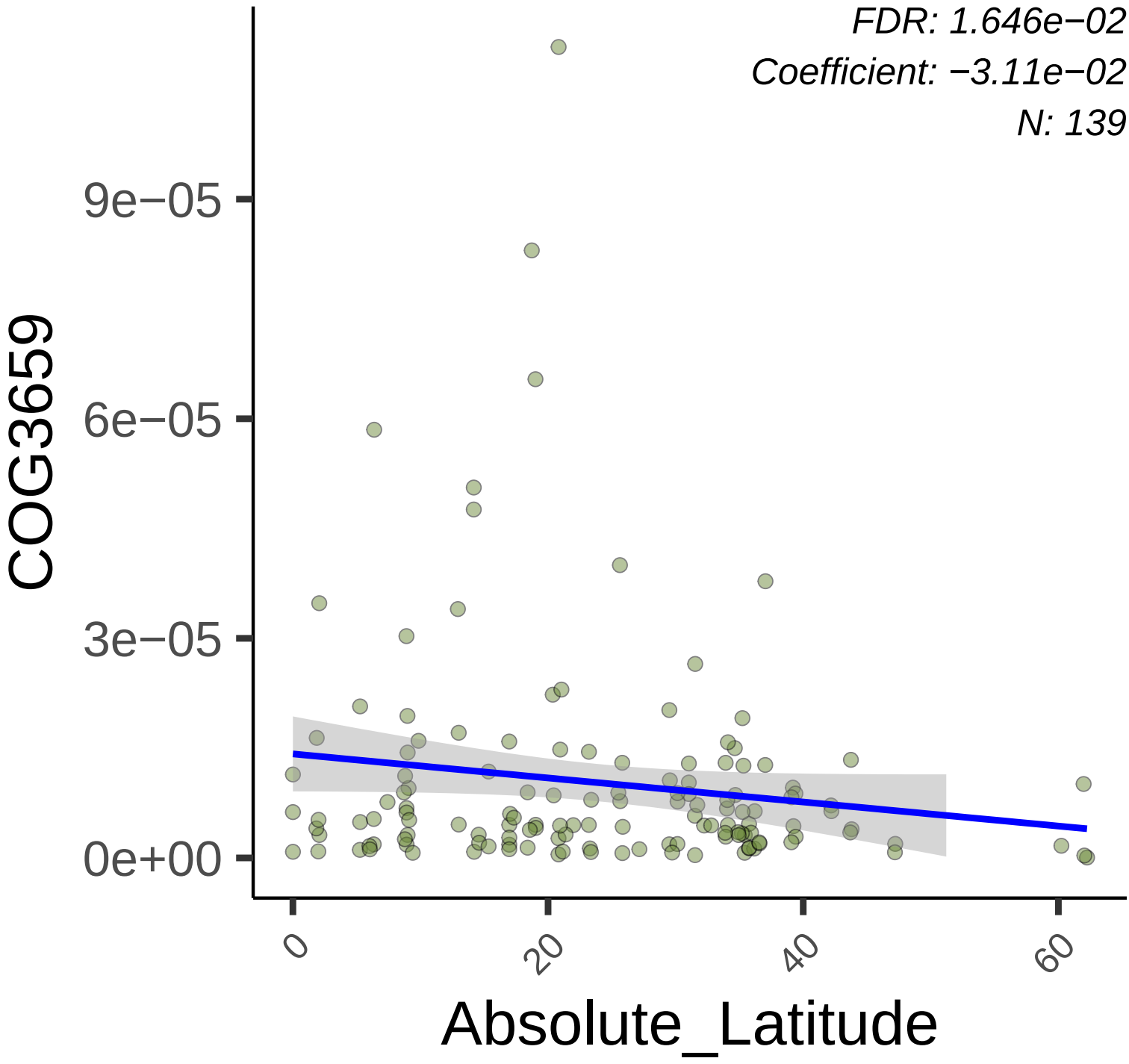

FDR: 1.614e−02
Coefficient: 1.08e−02
N: 139
0.00015
0.00010
0.00005
0.00000
COG3579
0
20
40
60
Absolute_Latitude

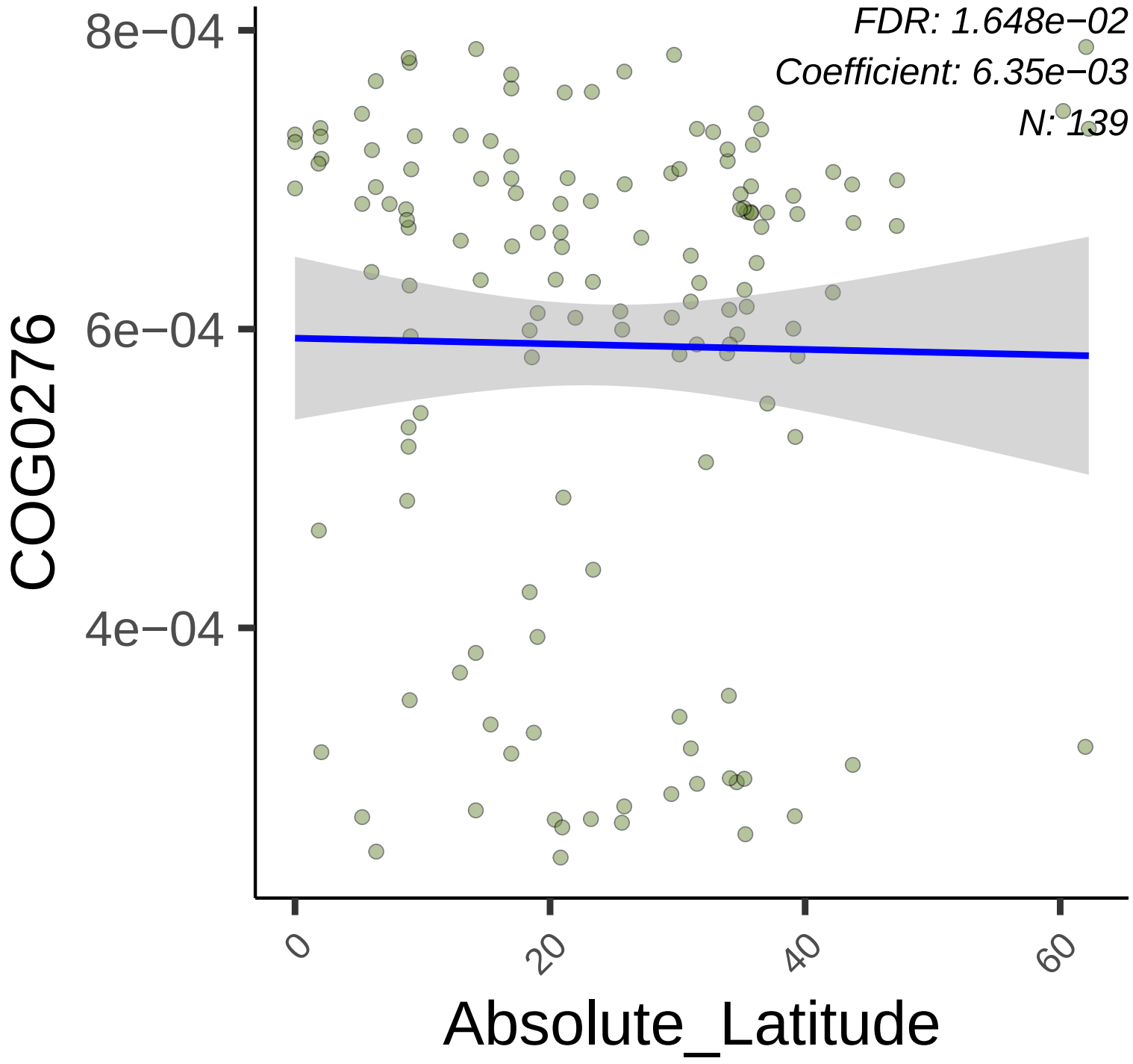

FDR: 1.616e−02
Coefficient: 6.38e−03
N: 139
0.00035
0.00030
0.00025
0.00020
0.00015
0.00010
COG3027
0
20
40
60
Absolute_Latitude

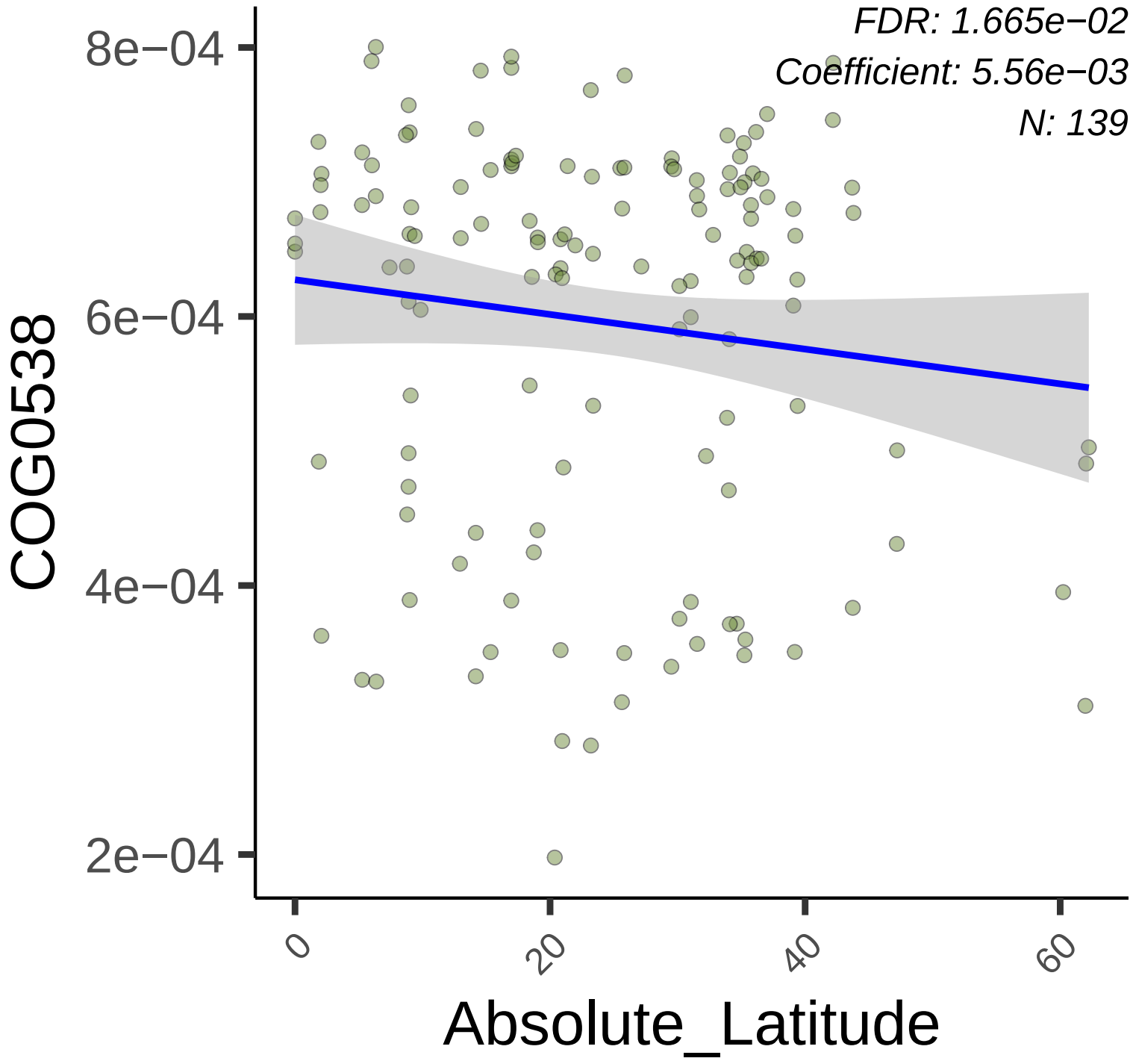

FDR: 1.622e−02
Coefficient: 1.56e−02
N: 139
COG4365
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

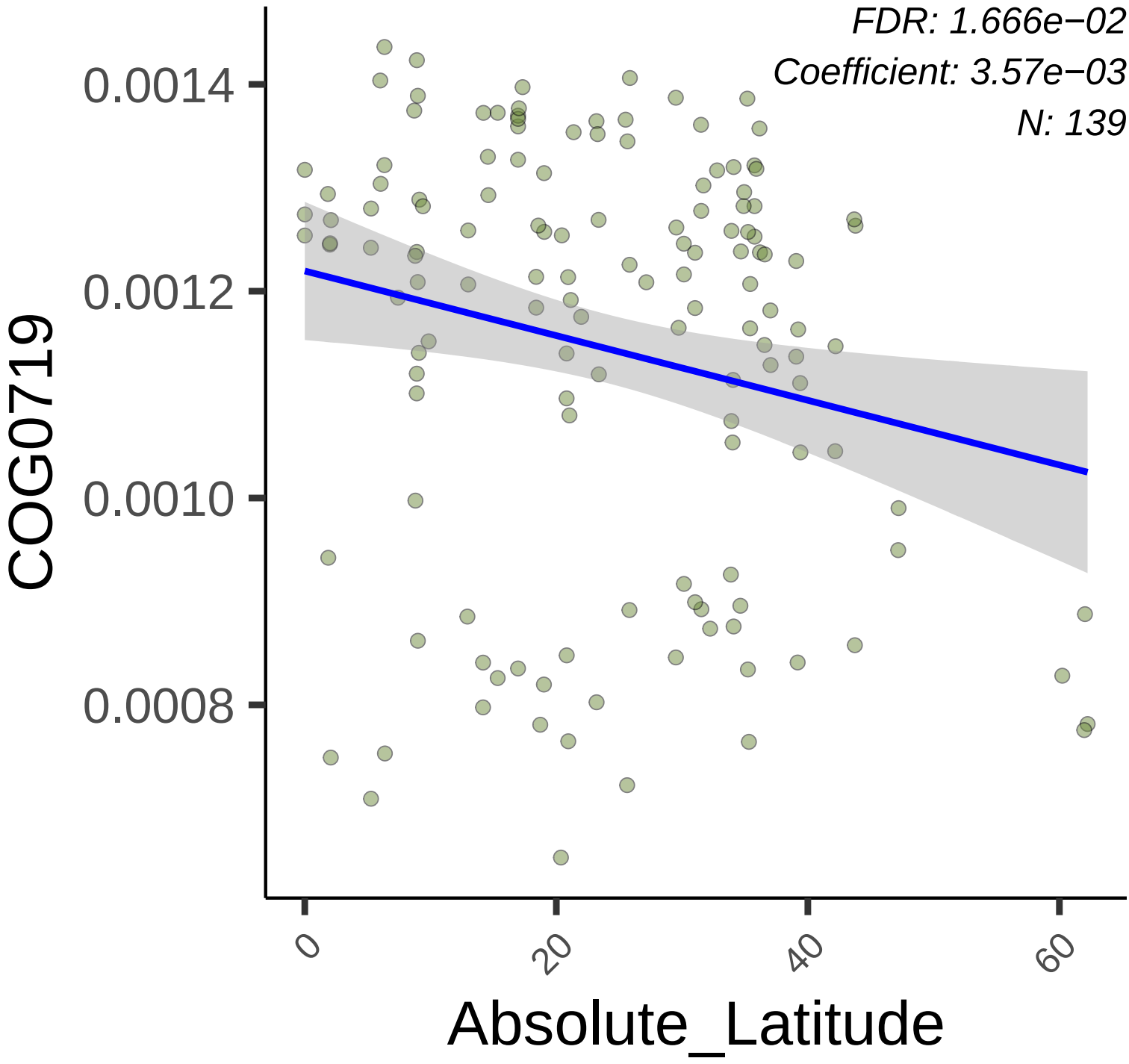

FDR: 1.640e−02
Coefficient: 4.80e−03
N: 139
0.00125
0.00100
0.00075
0.00050
COG1175
0
20
40
60
Absolute_Latitude

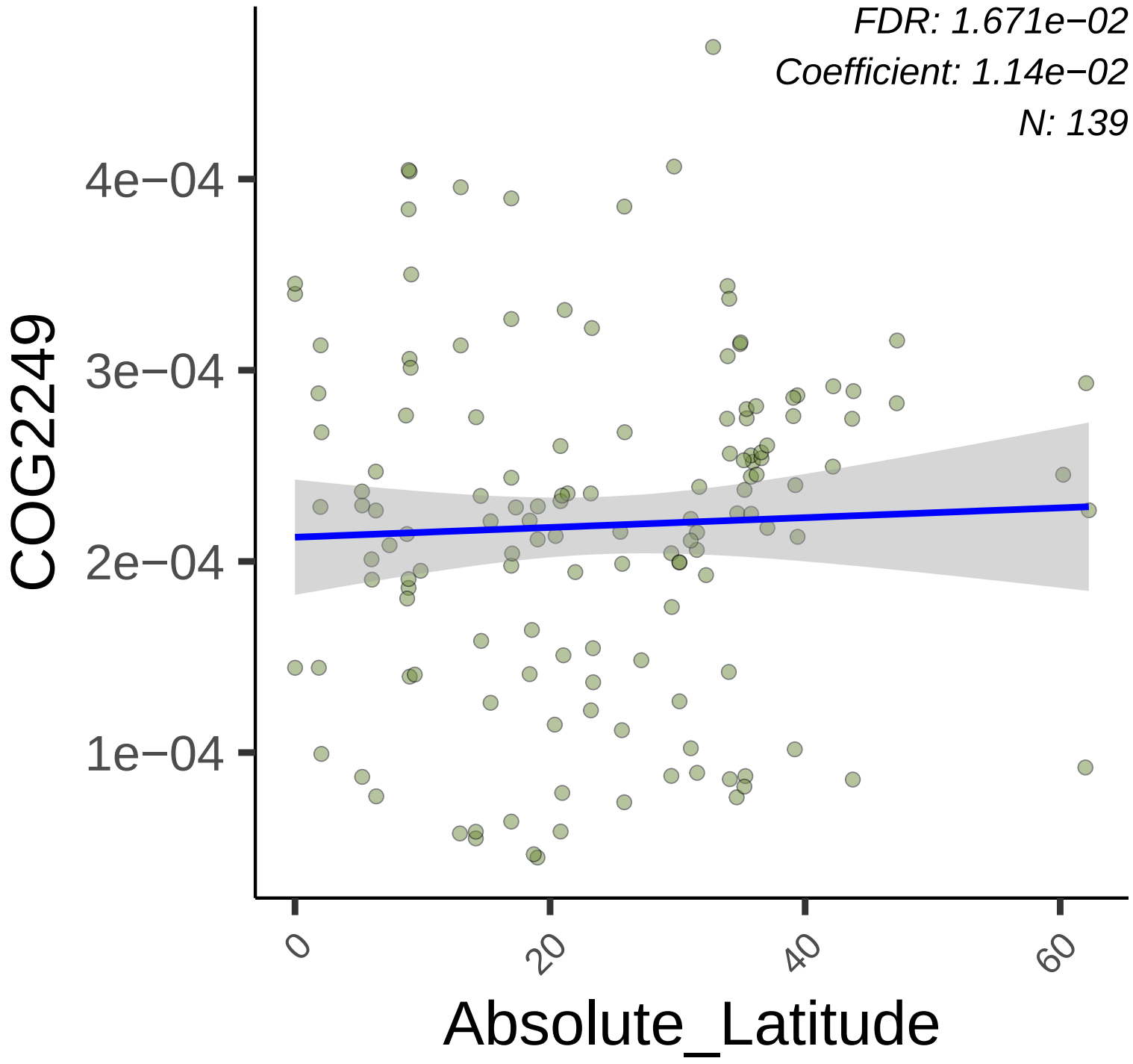

FDR: 1.643e−02
Coefficient: 1.16e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG4874
0
20
40
60
Absolute_Latitude

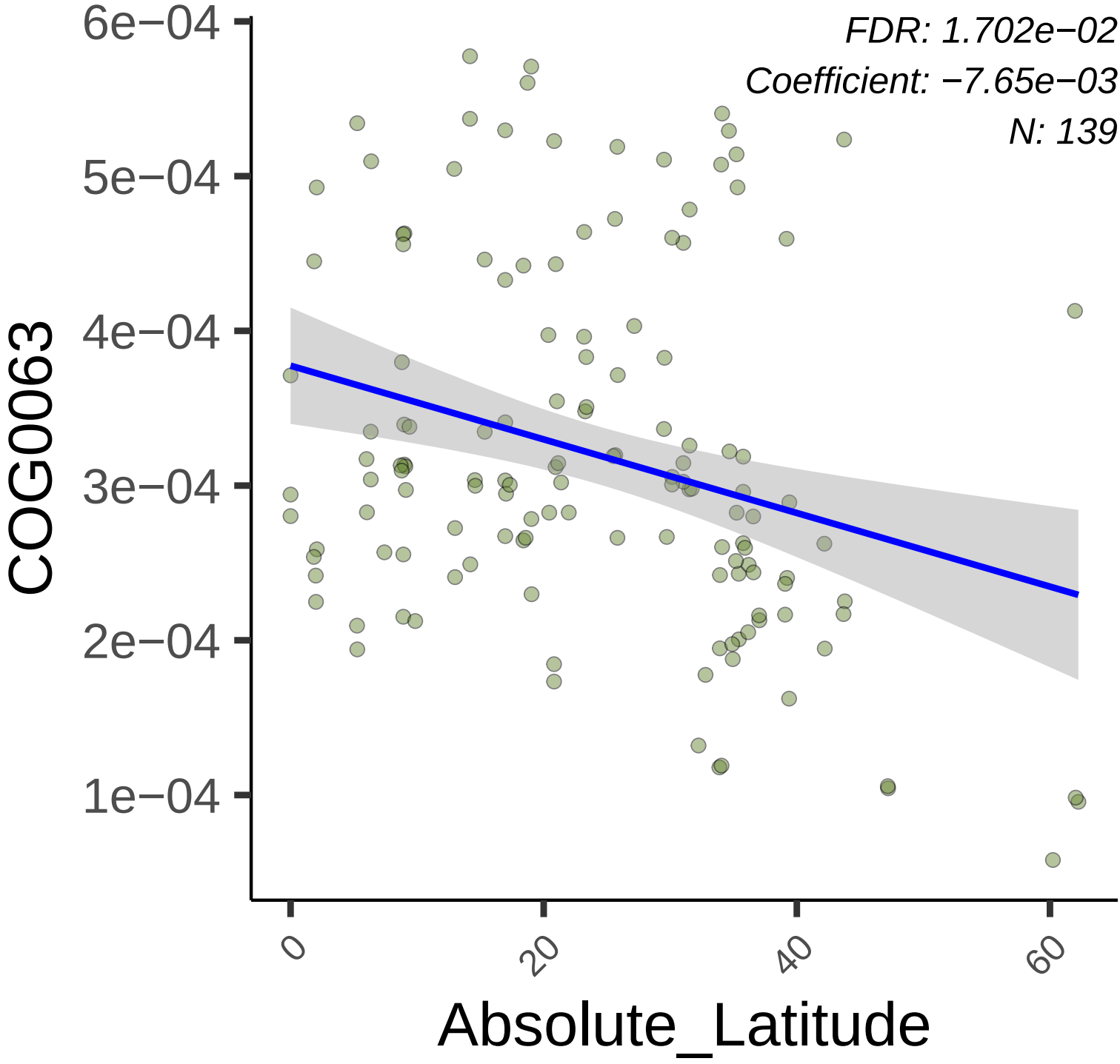

FDR: 1.646e−02
Coefficient: −3.11e−02
N: 139
COG3659
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

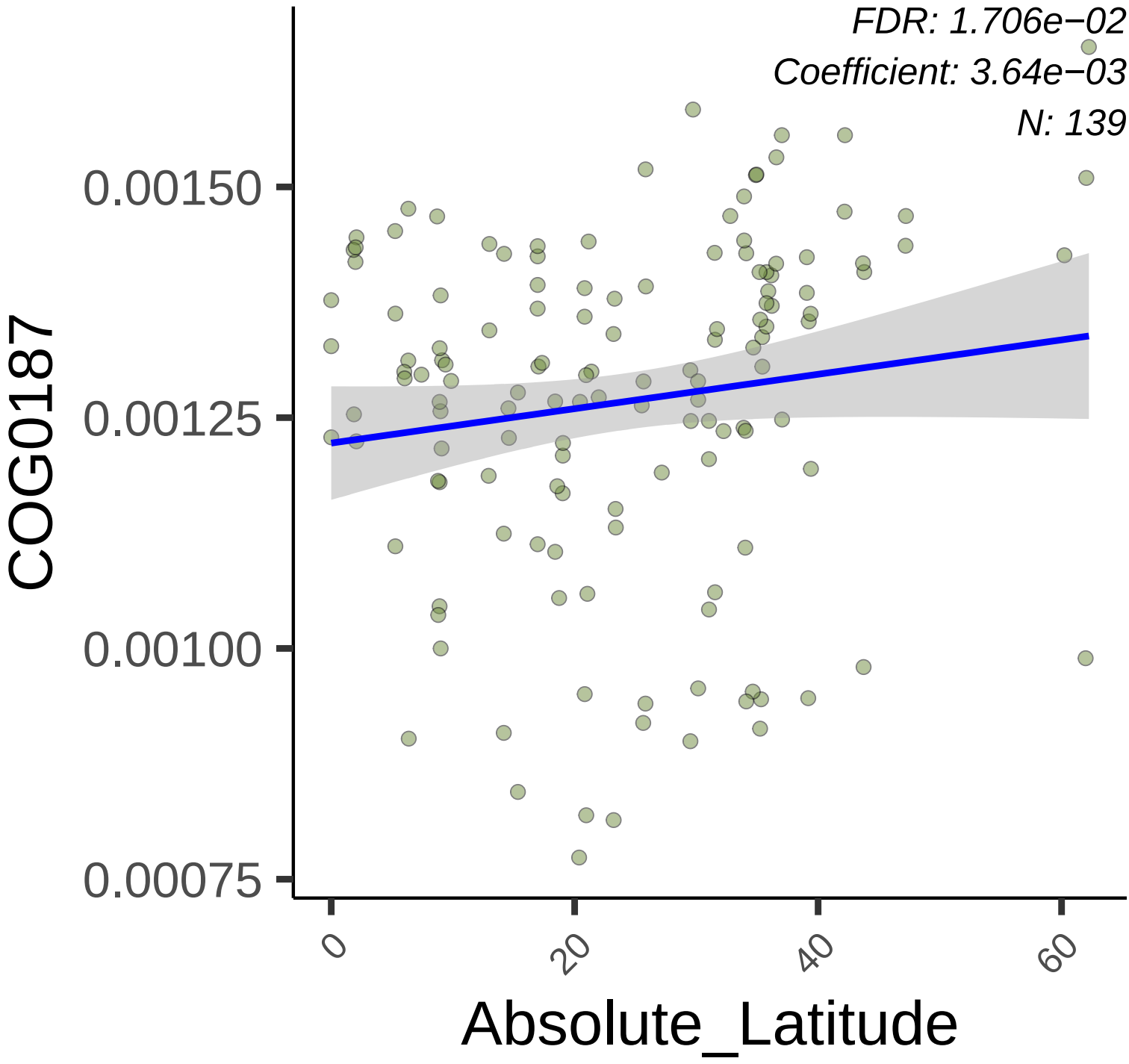

FDR: 1.648e−02
Coefficient: 6.35e−03
N: 139
8e−04
6e−04
4e−04
COG0276
0
20
40
60
Absolute_Latitude

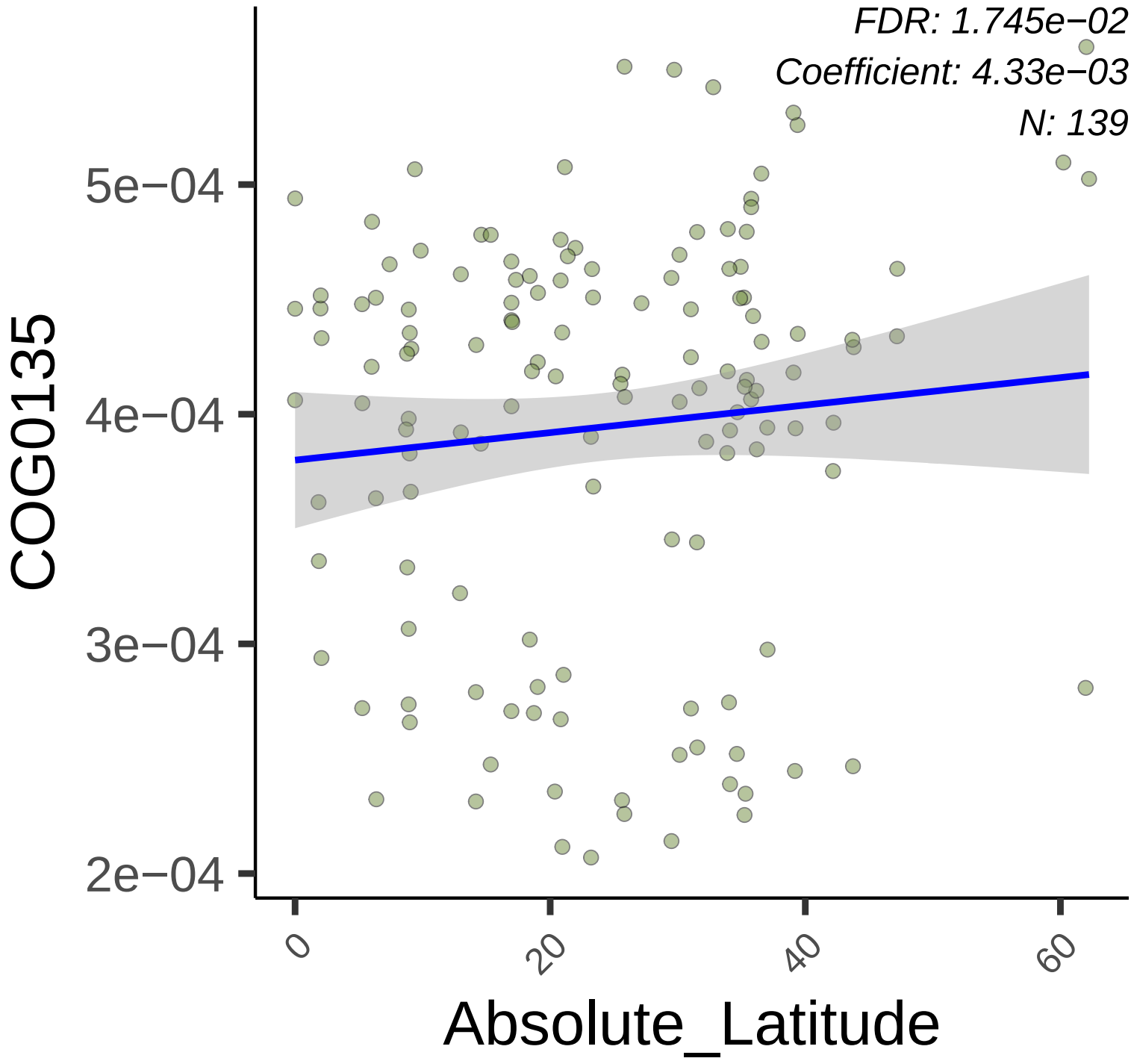

FDR: 1.665e−02
Coefficient: 5.56e−03
N: 139
8e−04
6e−04
4e−04
2e−04
COG0538
0
20
40
60
Absolute_Latitude

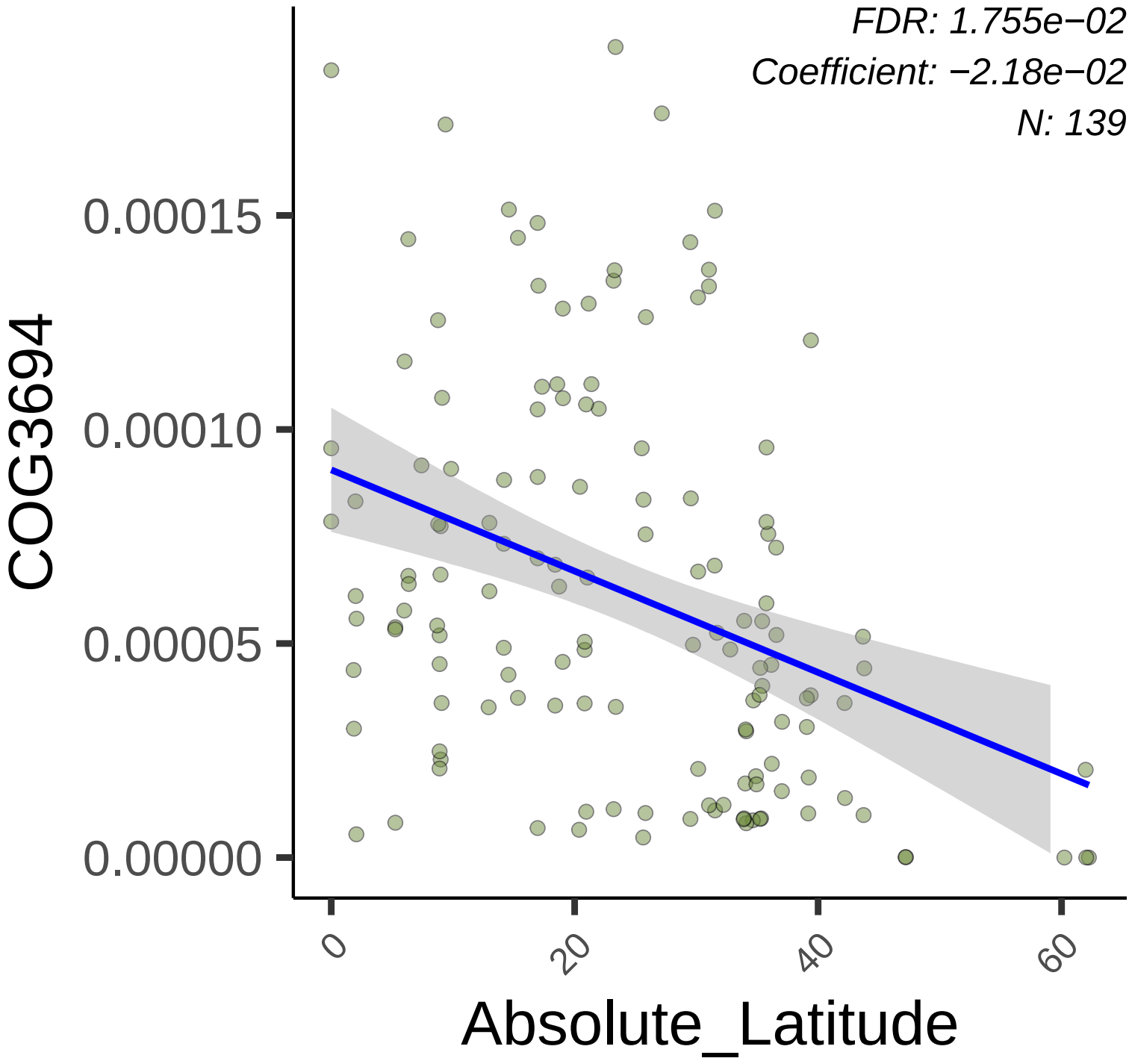

FDR: 1.666e−02
Coefficient: 3.57e−03
N: 139
0.0014
0.0012
0.0010
0.0008
COG0719
0
20
40
60
Absolute_Latitude

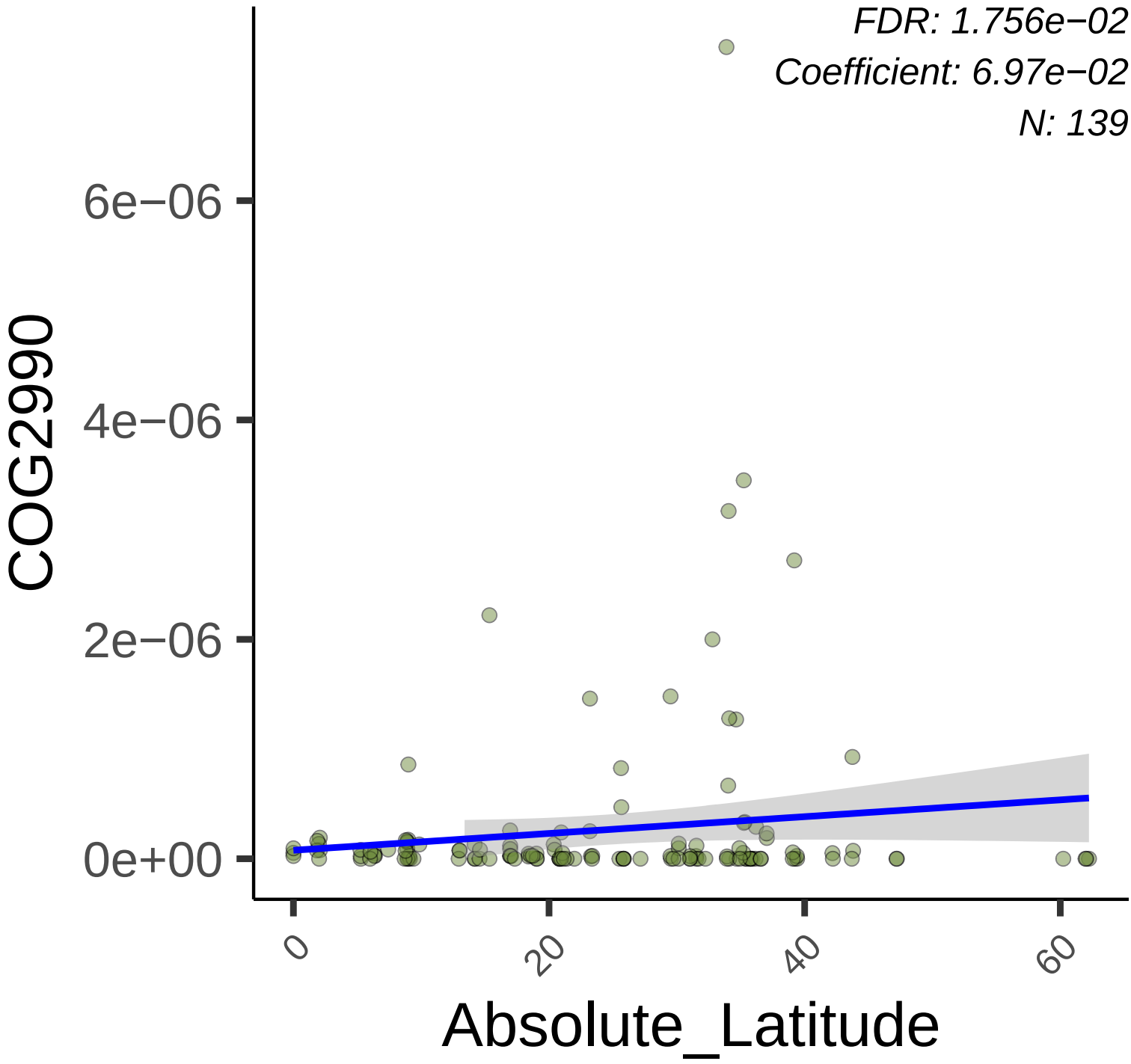

FDR: 1.671e−02
Coefficient: 1.14e−02
N: 139
COG2249
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

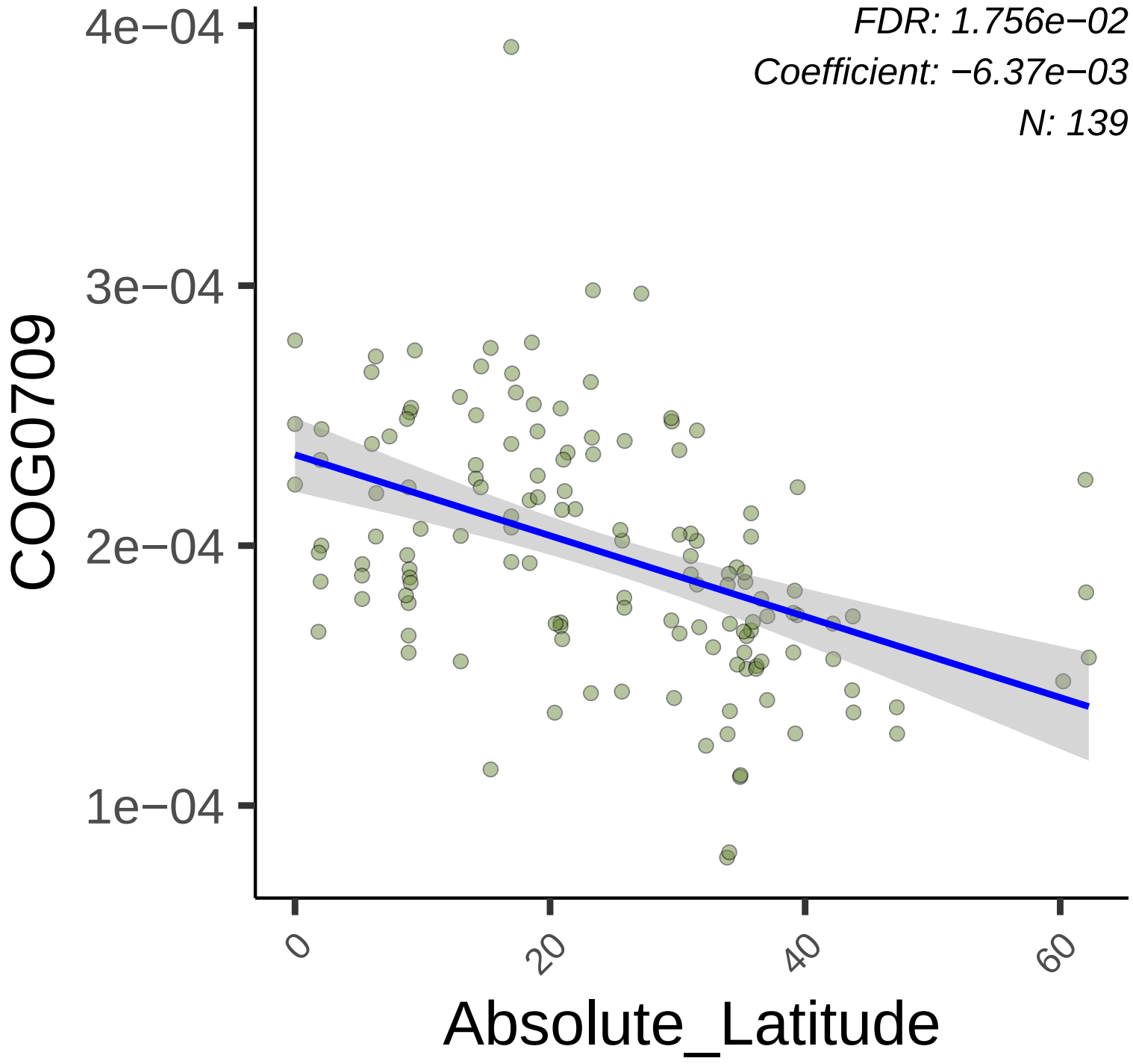

FDR: 1.702e−02
Coefficient: −7.65e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
1e−04
COG0063
0
20
40
60
Absolute_Latitude

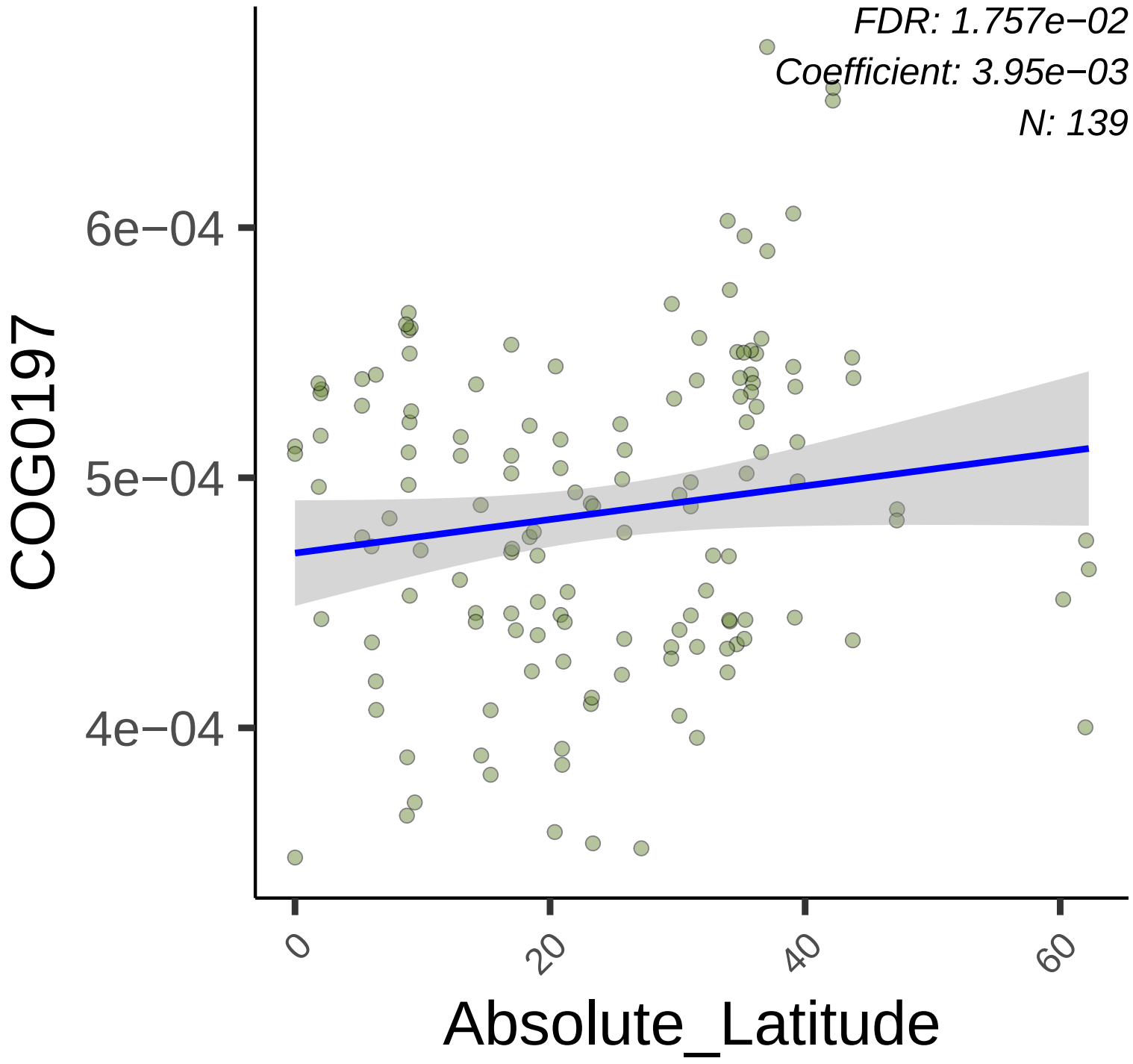

FDR: 1.706e−02
Coefficient: 3.64e−03
N: 139
0.00150
0.00125
0.00100
0.00075
COG0187
0
20
40
60
Absolute_Latitude

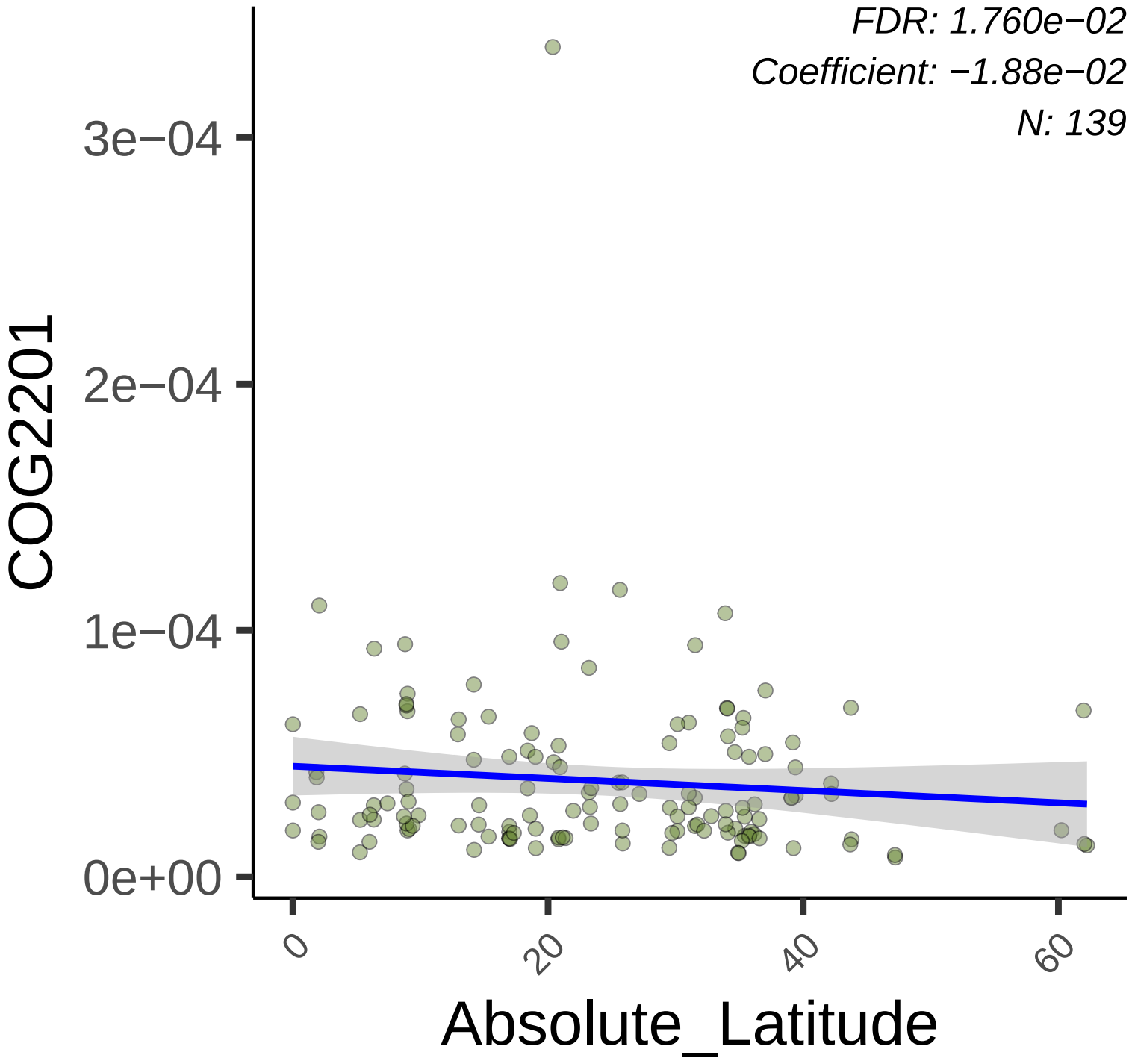

FDR: 1.745e−02
Coefficient: 4.33e−03
N: 139
5e−04
4e−04
3e−04
2e−04
COG0135
0
20
40
60
Absolute_Latitude

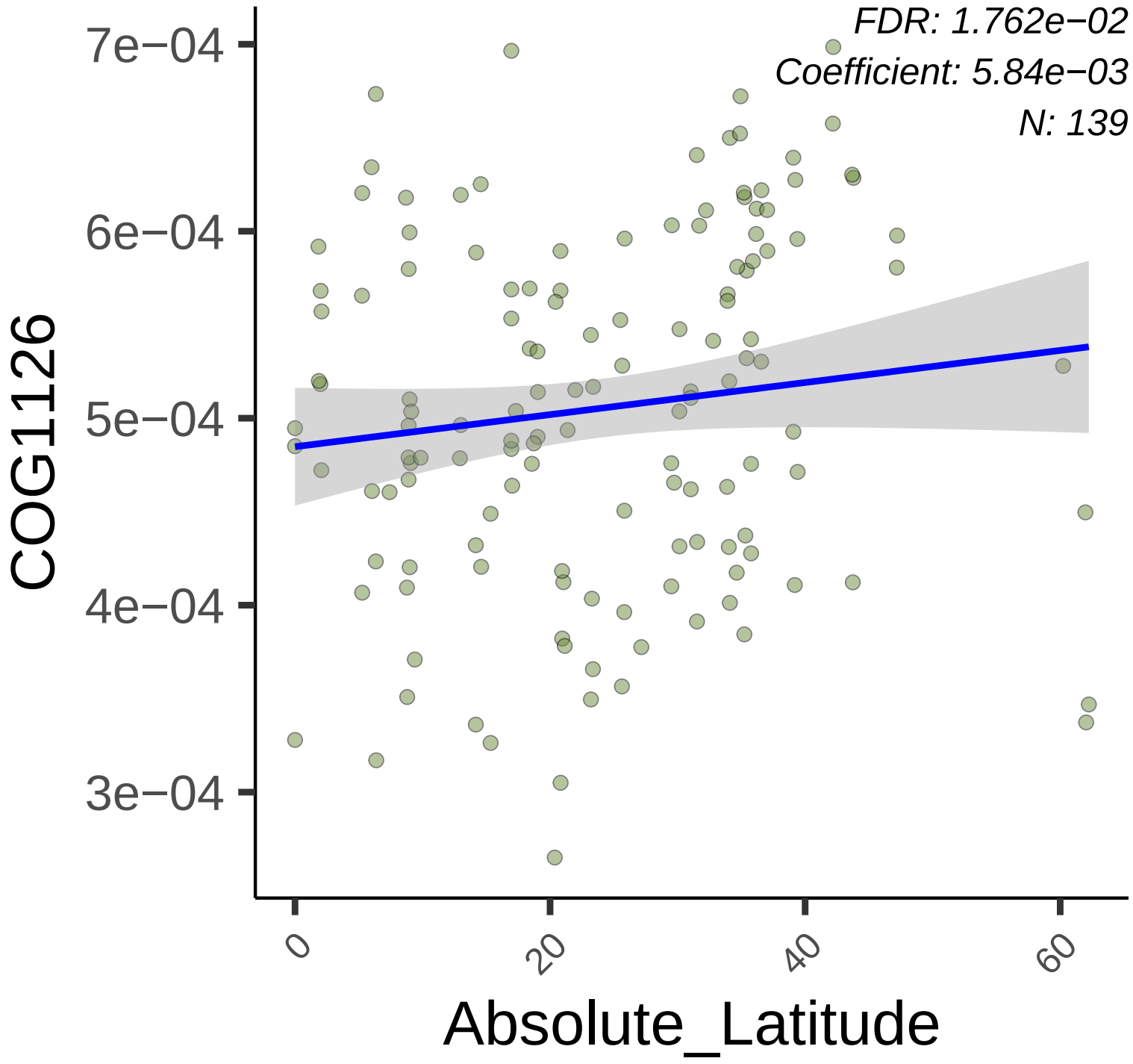

FDR: 1.755e−02
Coefficient: −2.18e−02
N: 139
COG3694
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

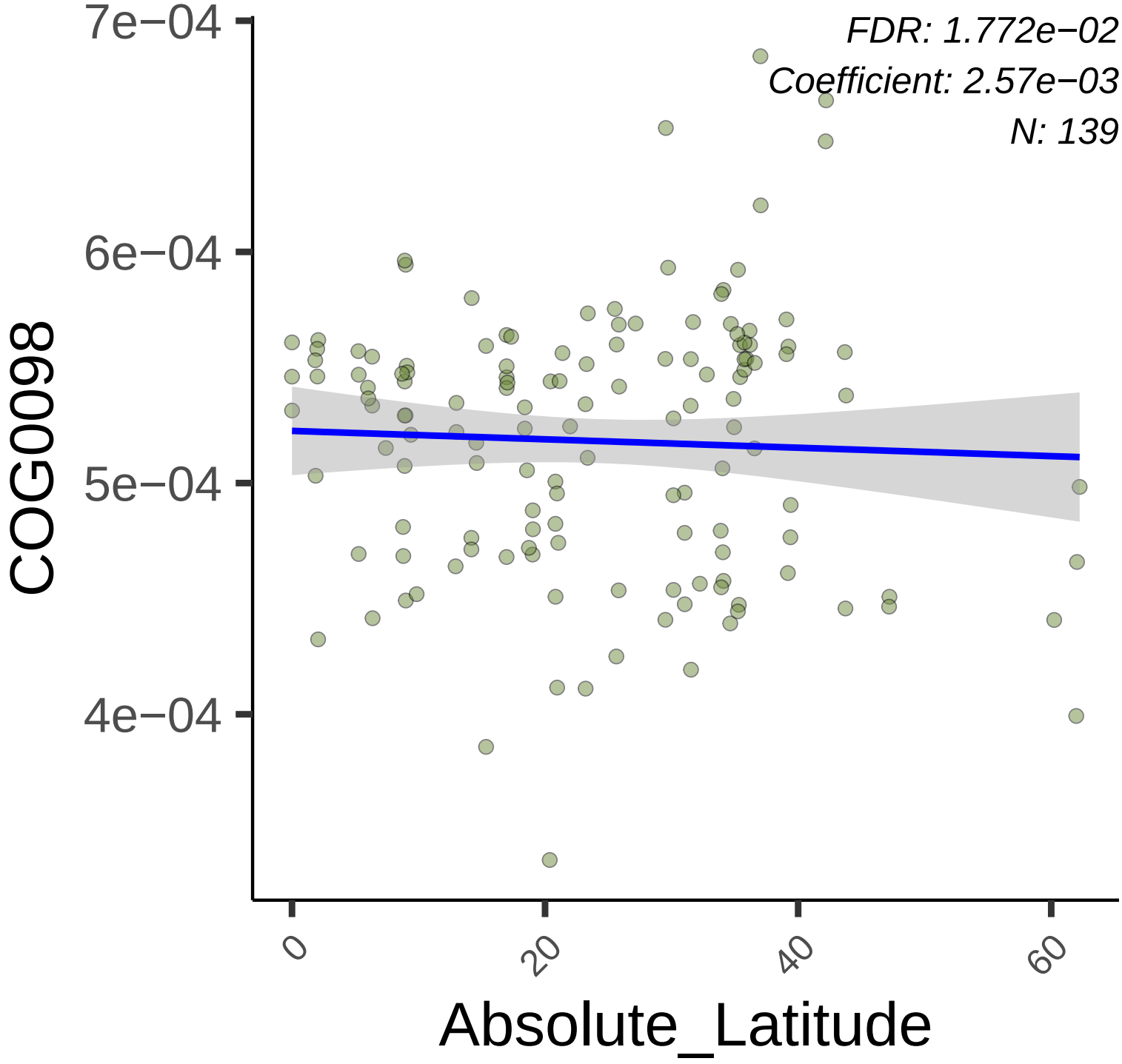

FDR: 1.756e−02
Coefficient: 6.97e−02
N: 139
COG2990
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

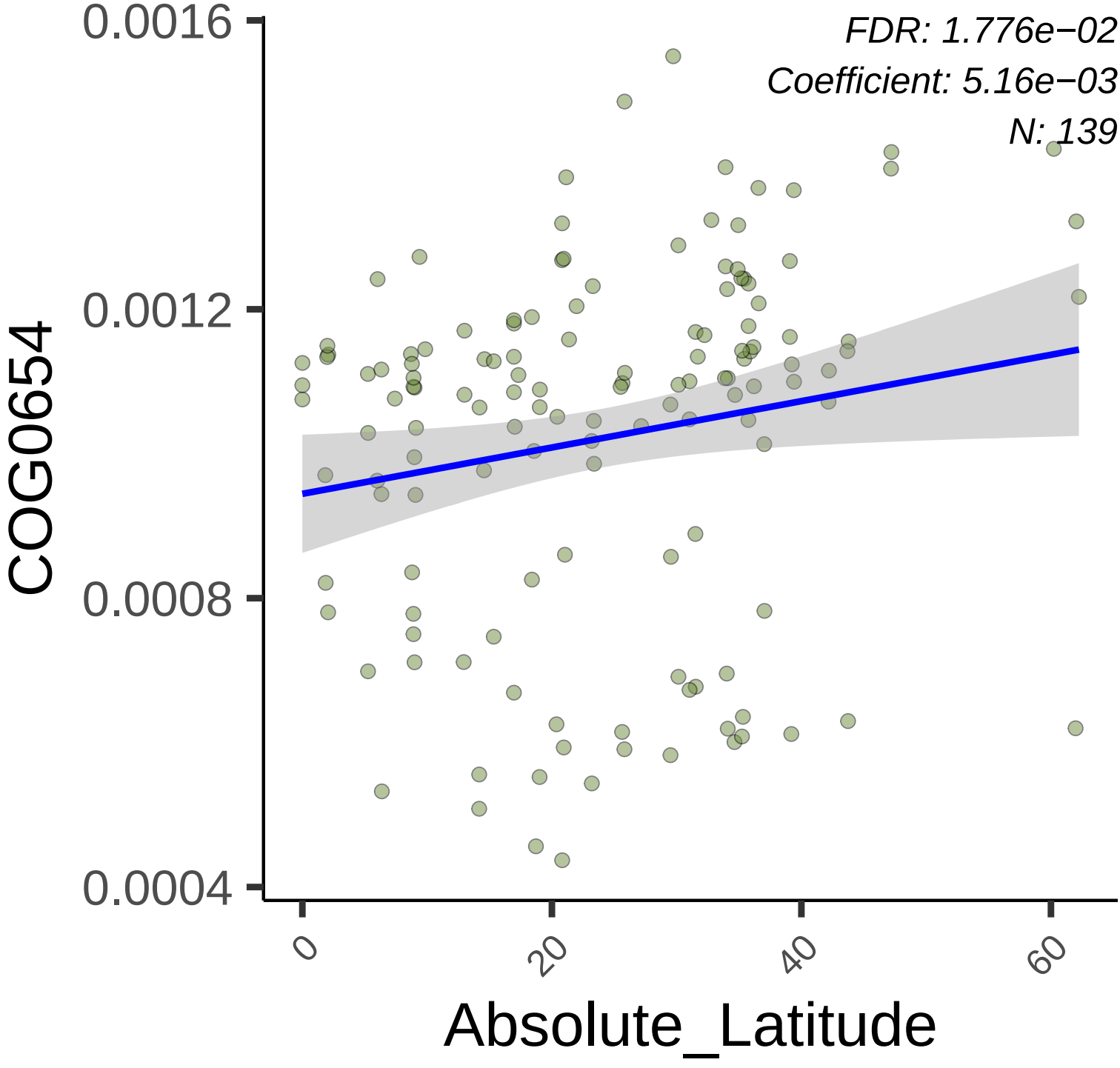

FDR: 1.756e−02
Coefficient: −6.37e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG0709
0
20
40
60
Absolute_Latitude

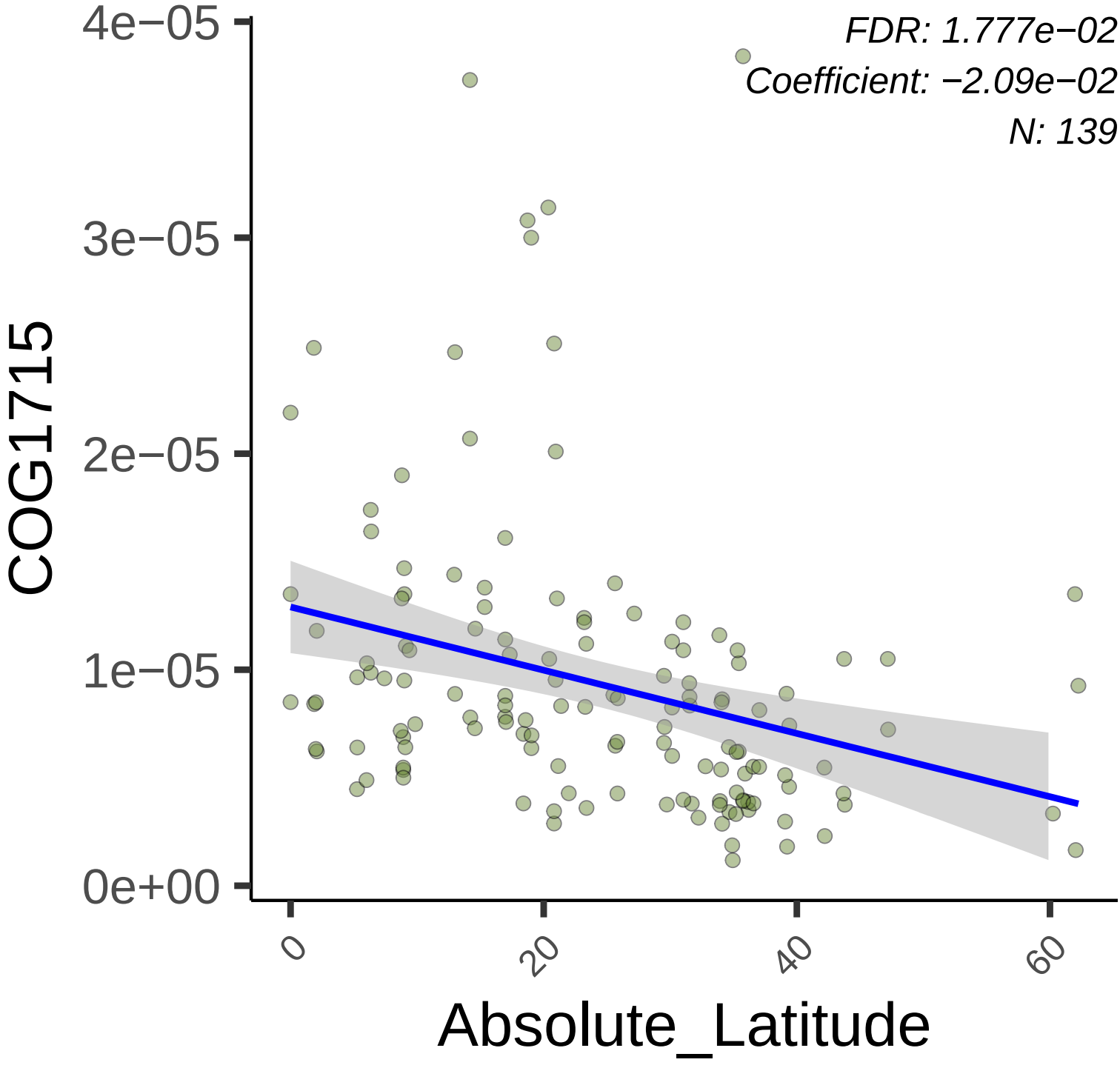

FDR: 1.757e−02
Coefficient: 3.95e−03
N: 139
6e−04
5e−04
4e−04
COG0197
0
20
40
60
Absolute_Latitude

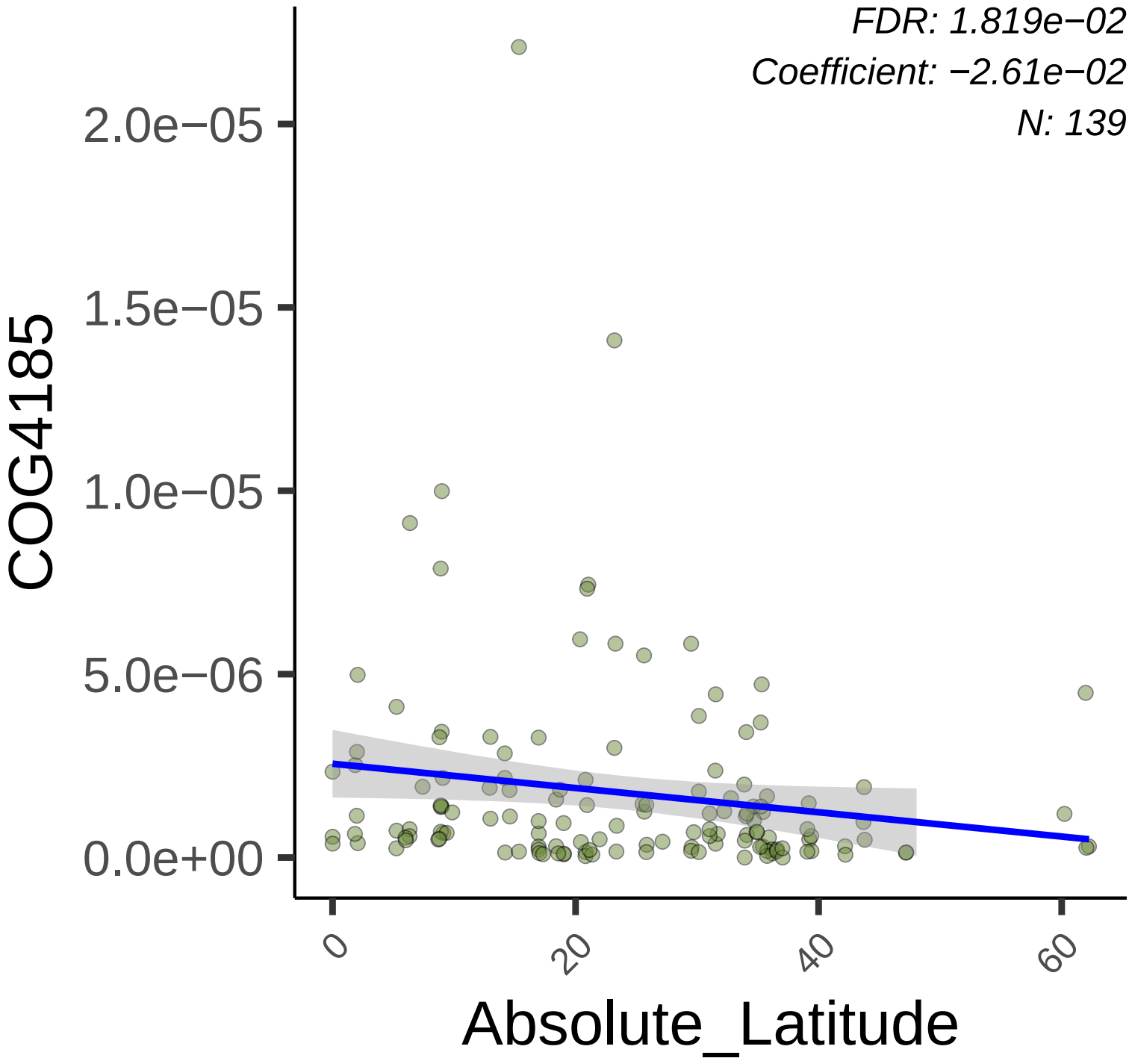

FDR: 1.760e−02
Coefficient: −1.88e−02
N: 139
COG2201
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

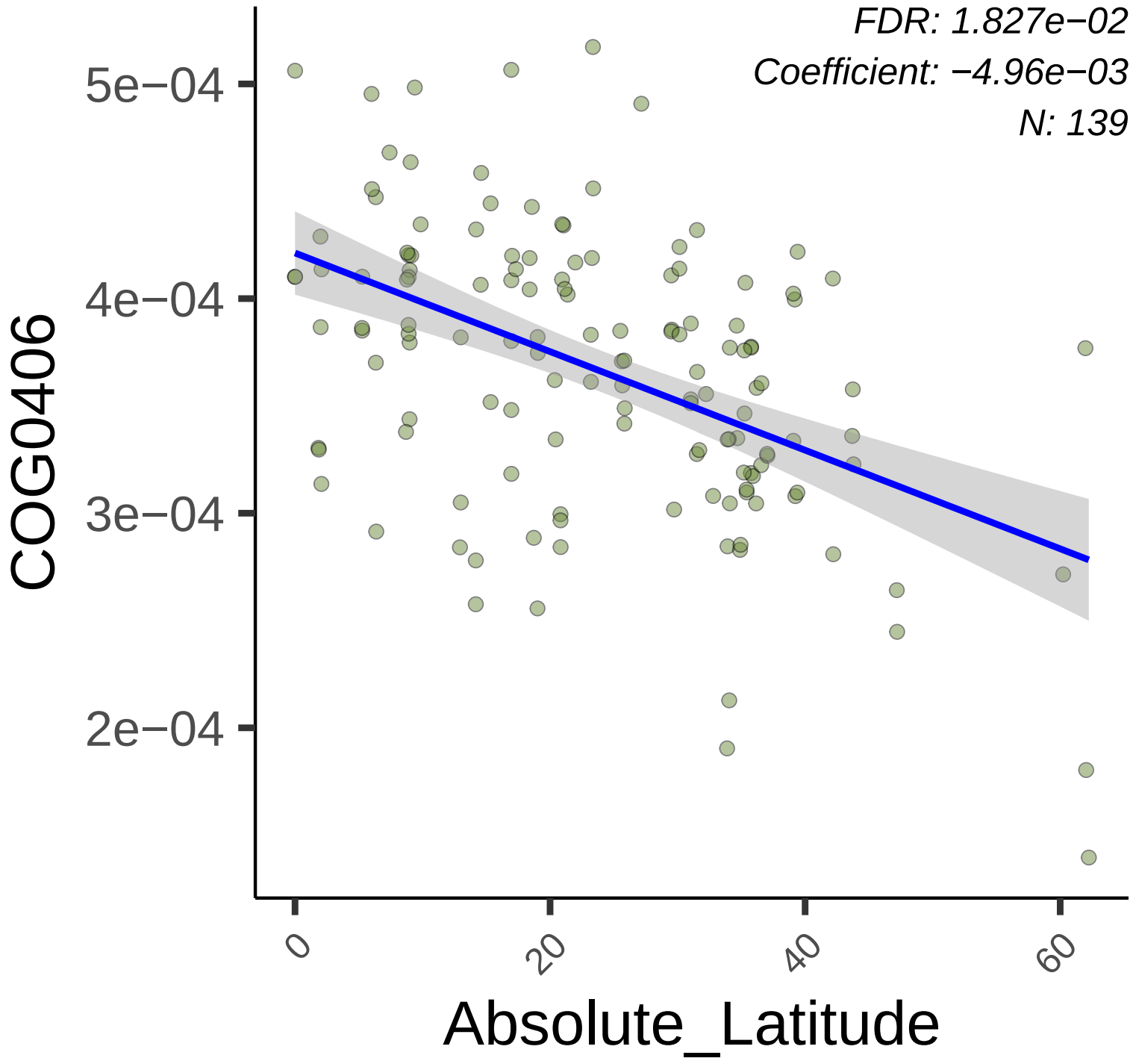

FDR: 1.762e−02
Coefficient: 5.84e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG1126
0
20
40
60
Absolute_Latitude

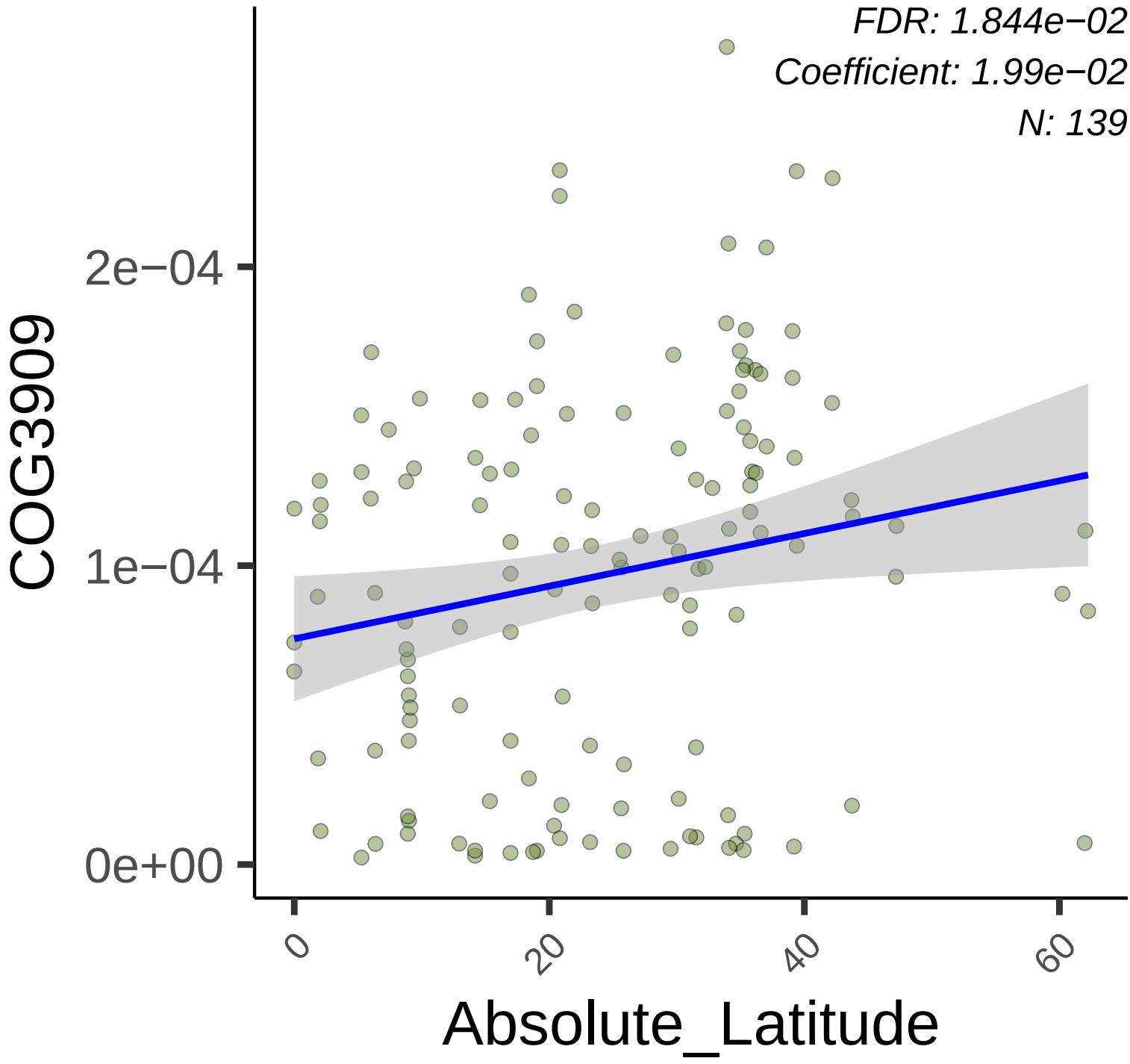

FDR: 1.772e−02
Coefficient: 2.57e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0098
0
20
40
60
Absolute_Latitude

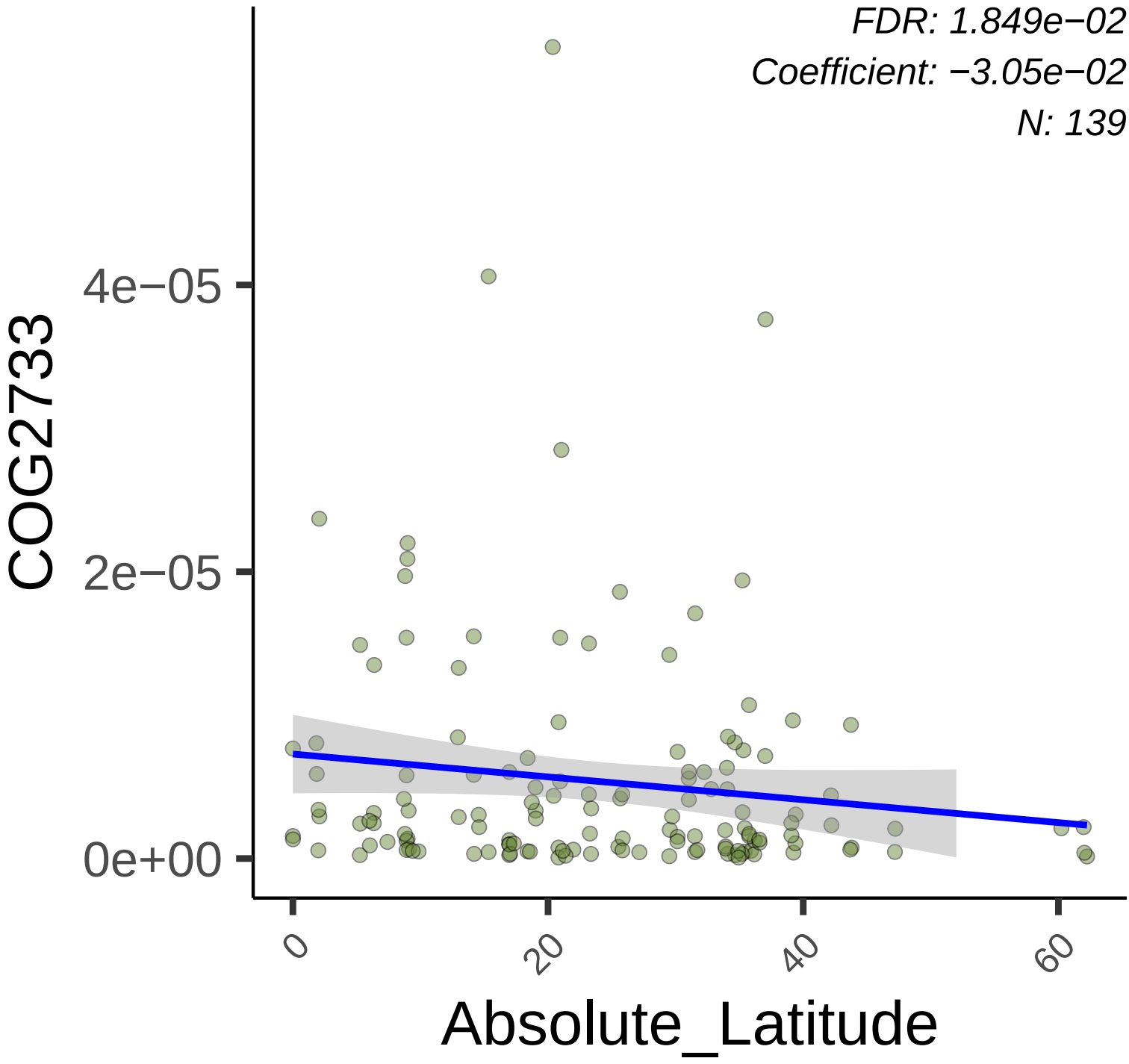

FDR: 1.776e−02
Coefficient: 5.16e−03
N: 139
0.0016
0.0012
0.0008
0.0004
COG0654
0
20
40
60
Absolute_Latitude

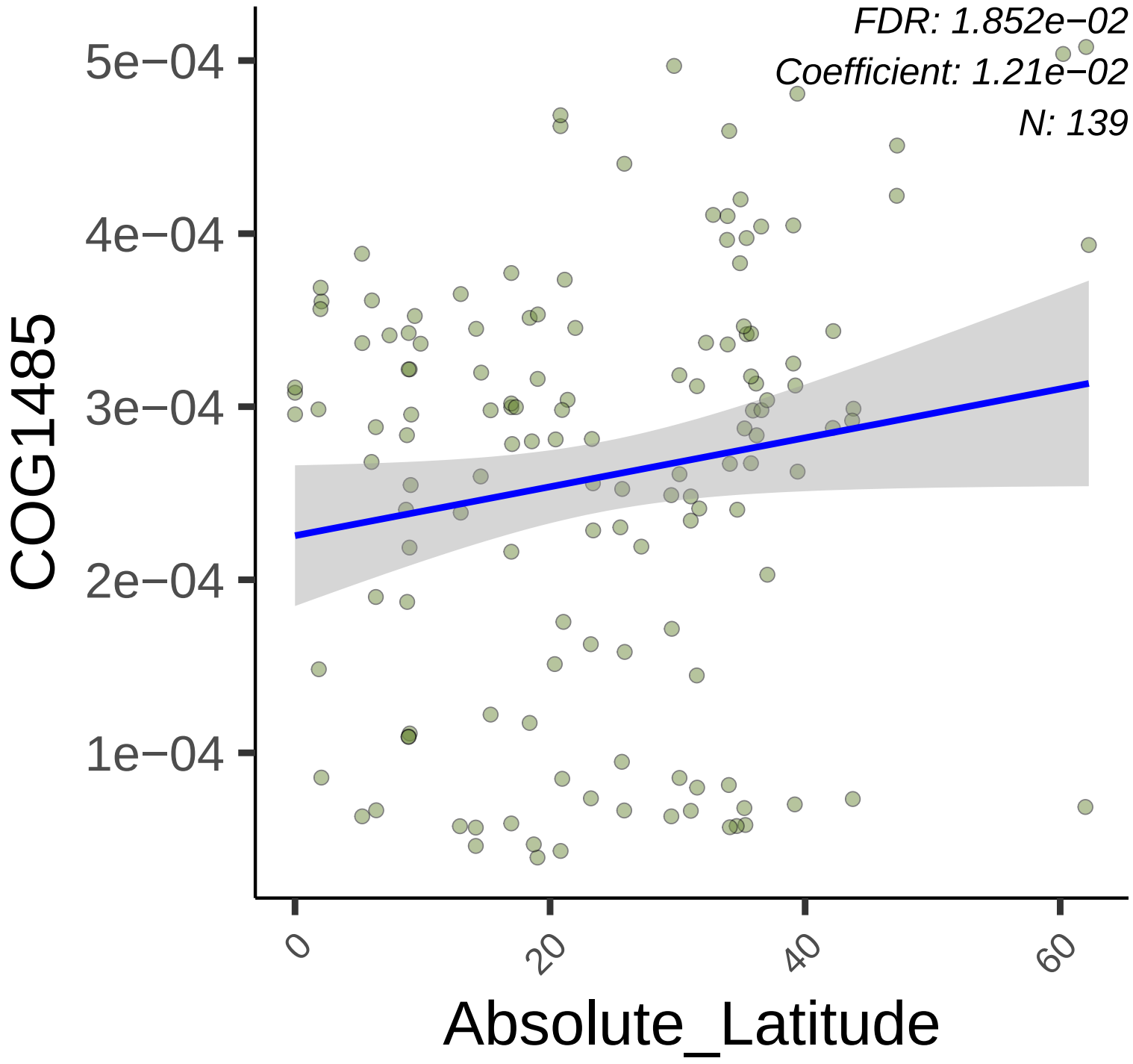

FDR: 1.777e−02
Coefficient: −2.09e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG1715
0
20
40
60
Absolute_Latitude

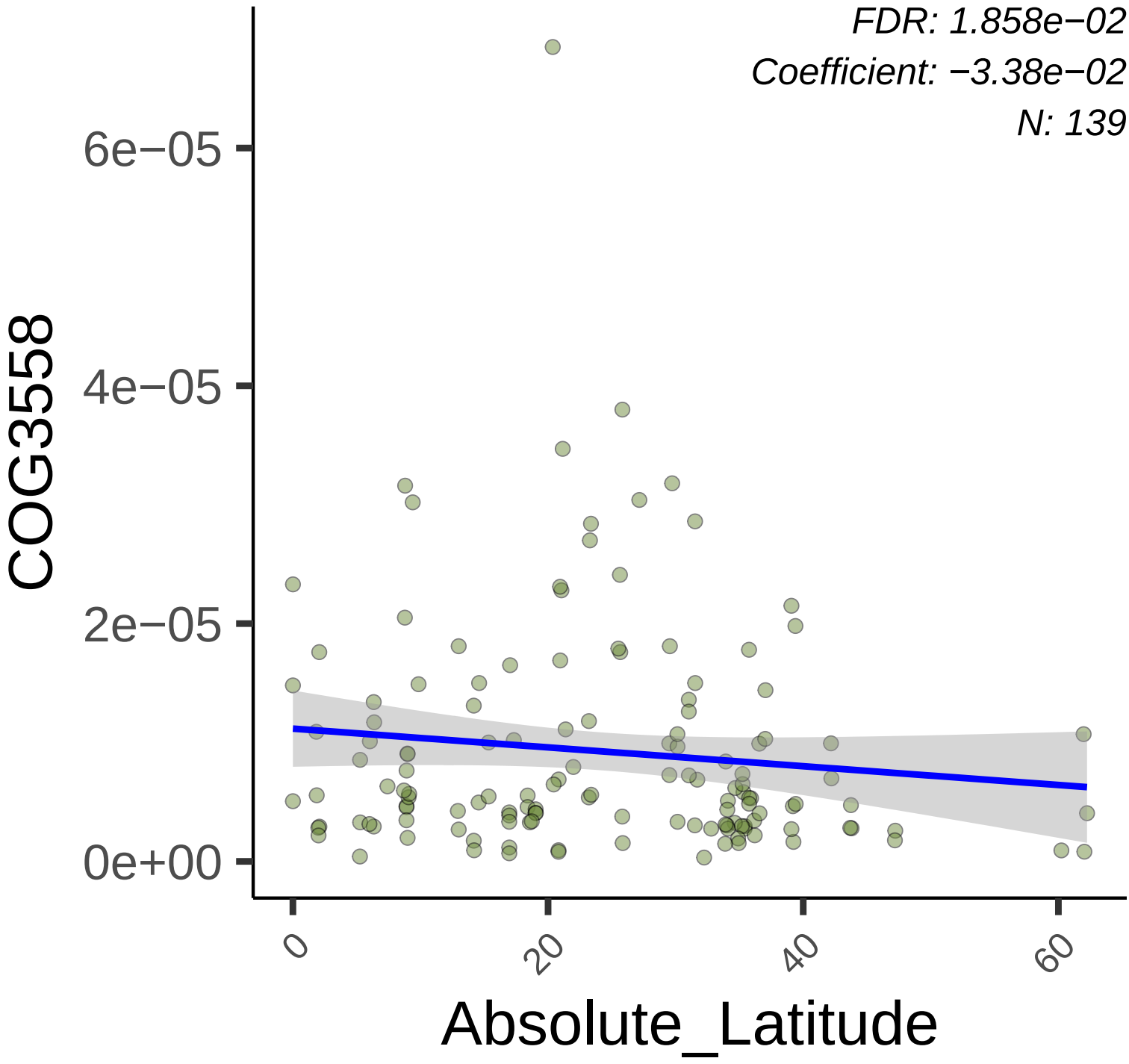

FDR: 1.819e−02
Coefficient: −2.61e−02
N: 139
COG4185
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

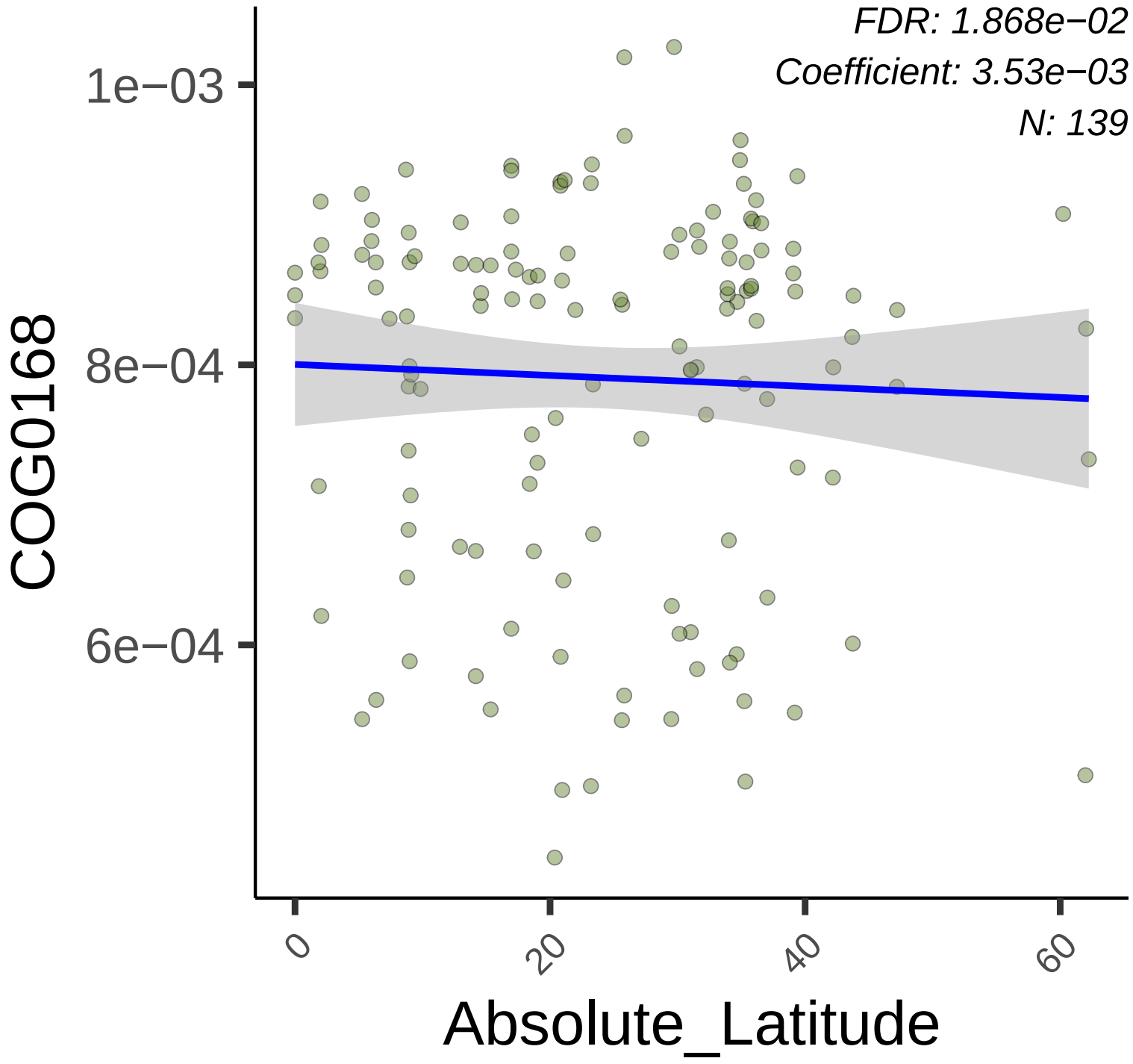

FDR: 1.827e−02
Coefficient: −4.96e−03
N: 139
5e−04
4e−04
3e−04
2e−04
COG0406
0
20
40
60
Absolute_Latitude

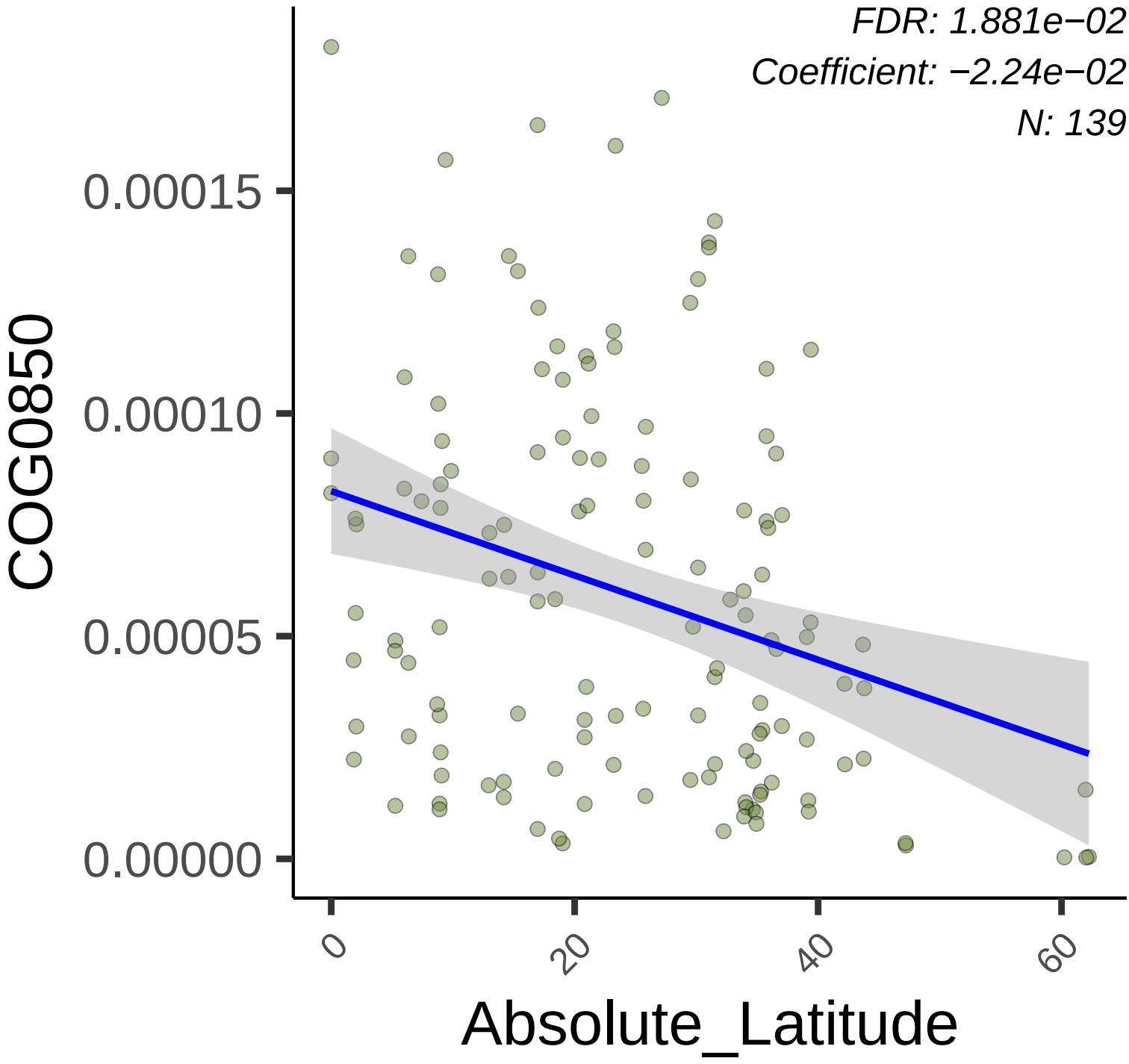

FDR: 1.844e−02
Coefficient: 1.99e−02
N: 139
COG3909
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

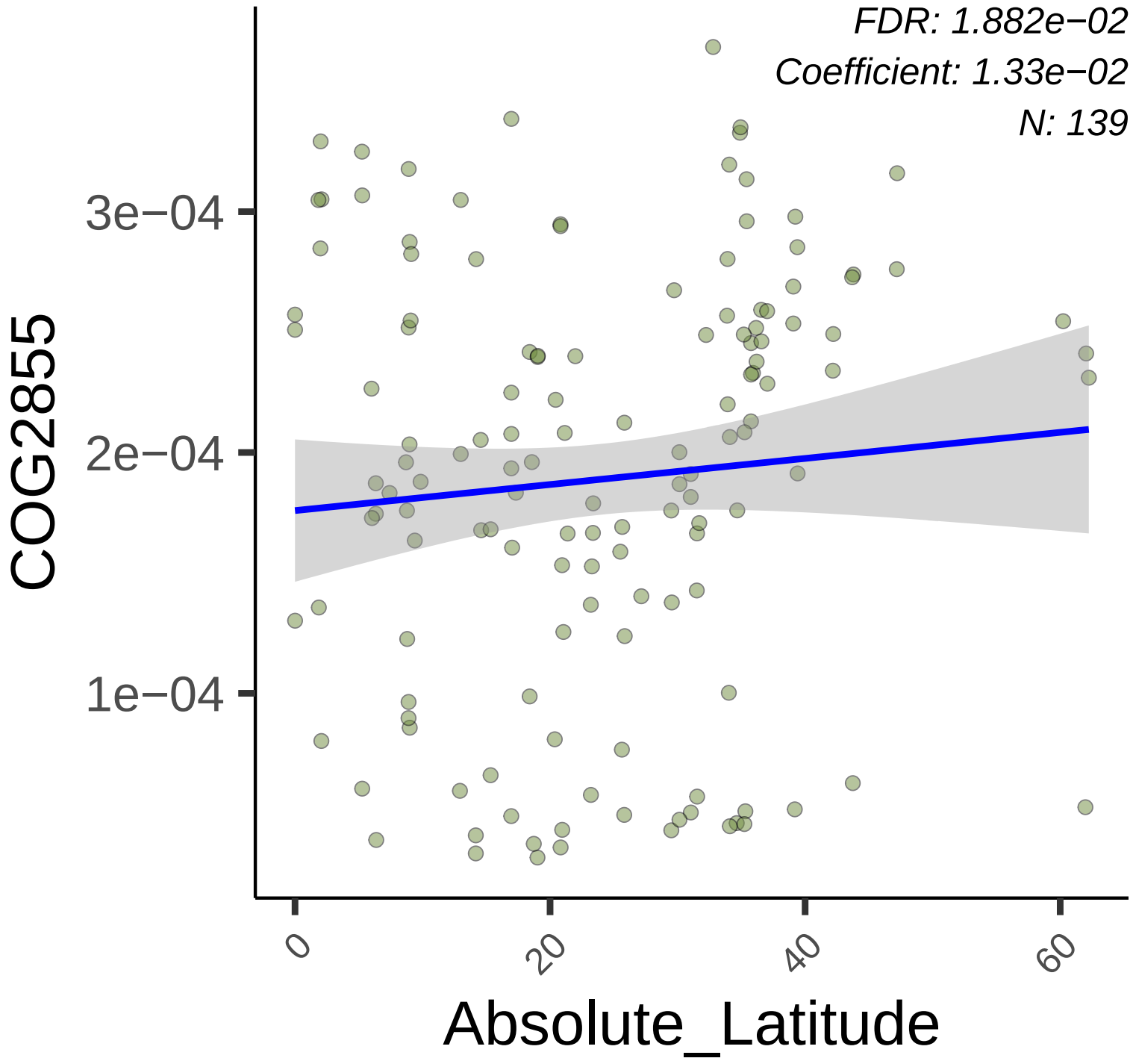

FDR: 1.849e−02
Coefficient: −3.05e−02
N: 139
COG2733
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

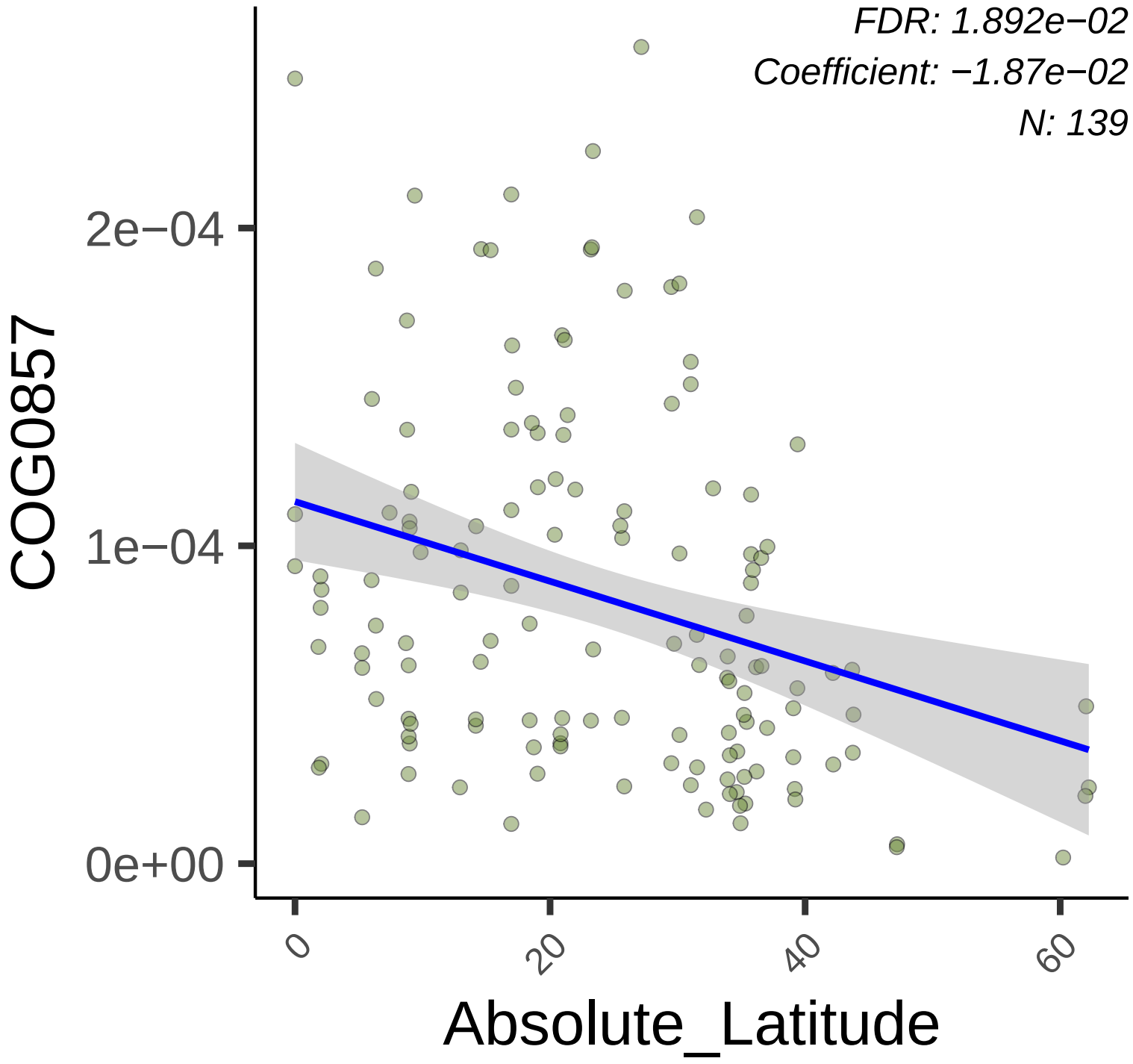

FDR: 1.852e−02
Coefficient: 1.21e−02
N: 139
5e−04
4e−04
3e−04
2e−04
1e−04
COG1485
0
20
40
60
Absolute_Latitude

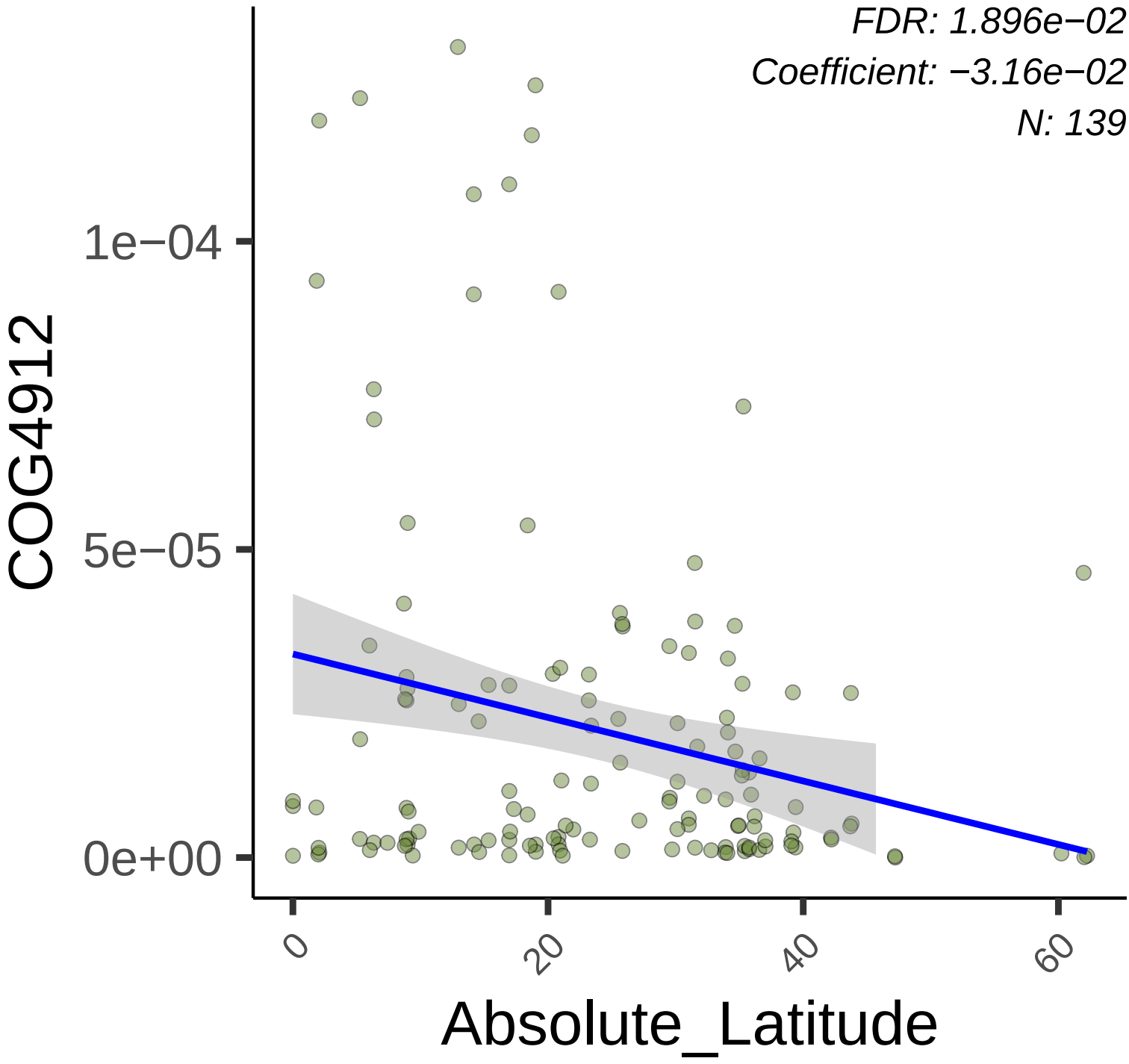

FDR: 1.858e−02
Coefficient: −3.38e−02
N: 139
COG3558
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

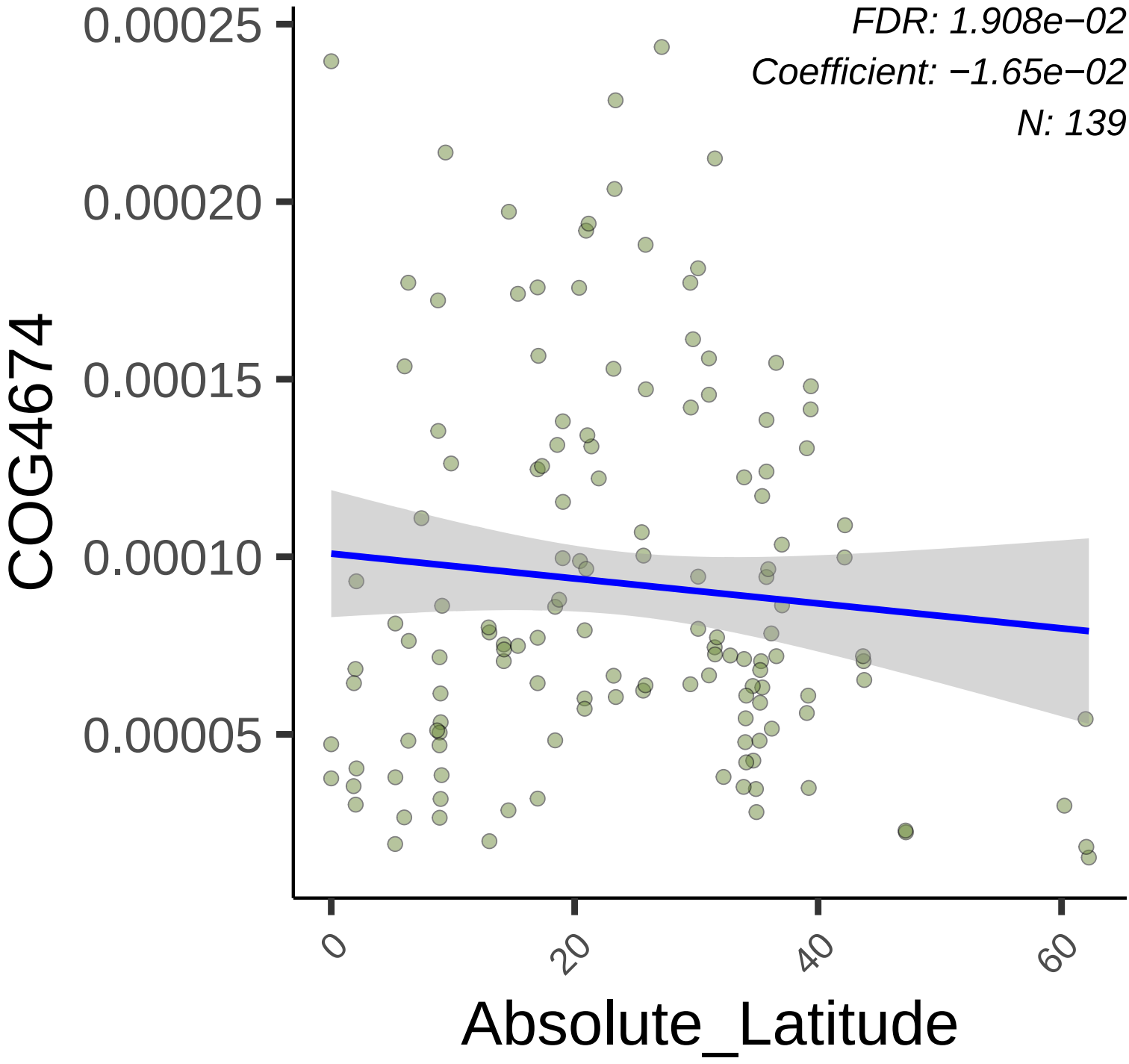

FDR: 1.868e−02
Coefficient: 3.53e−03
N: 139
1e−03
8e−04
6e−04
COG0168
0
20
40
60
Absolute_Latitude

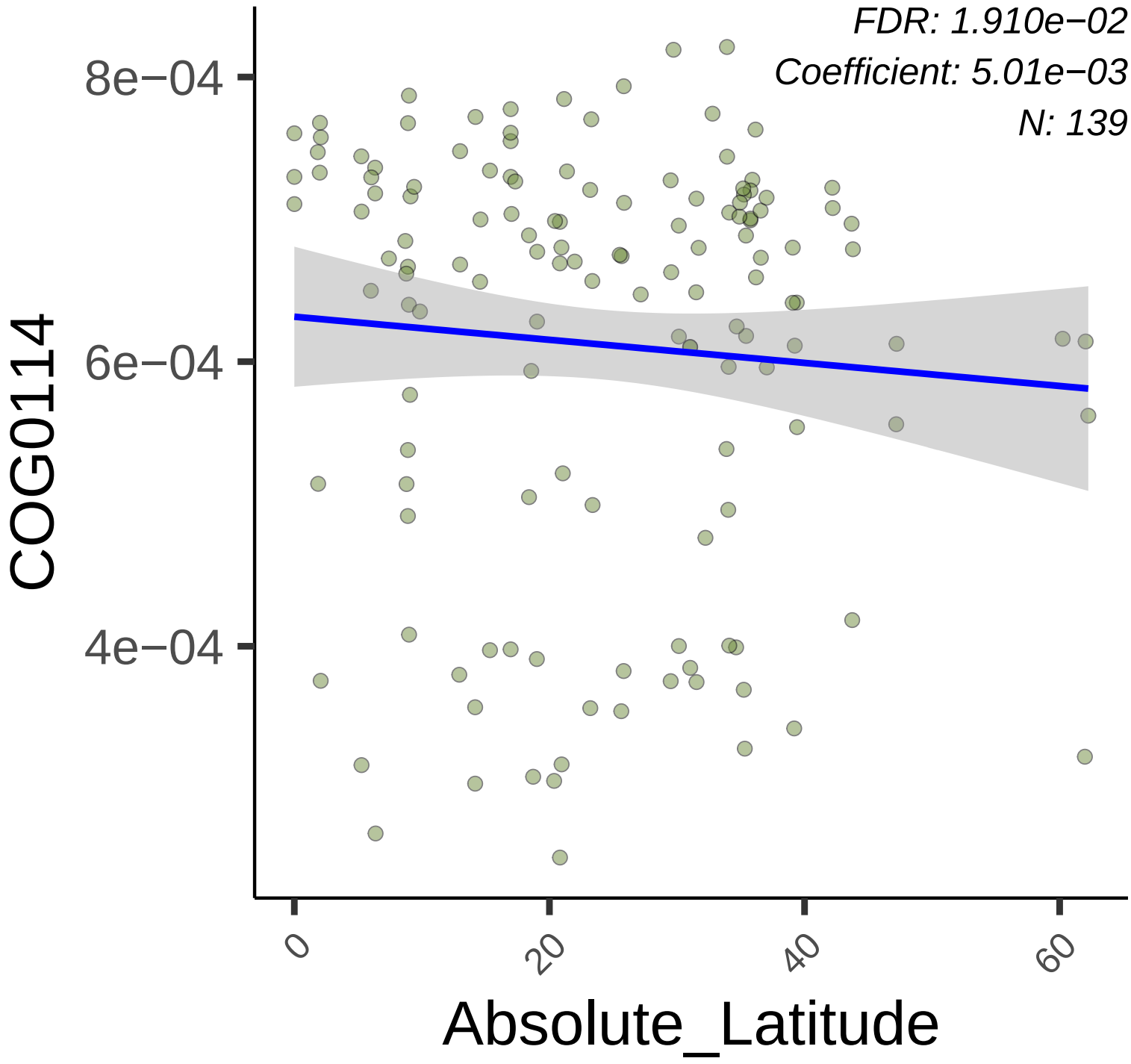

FDR: 1.881e−02
Coefficient: −2.24e−02
N: 139
COG0850
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

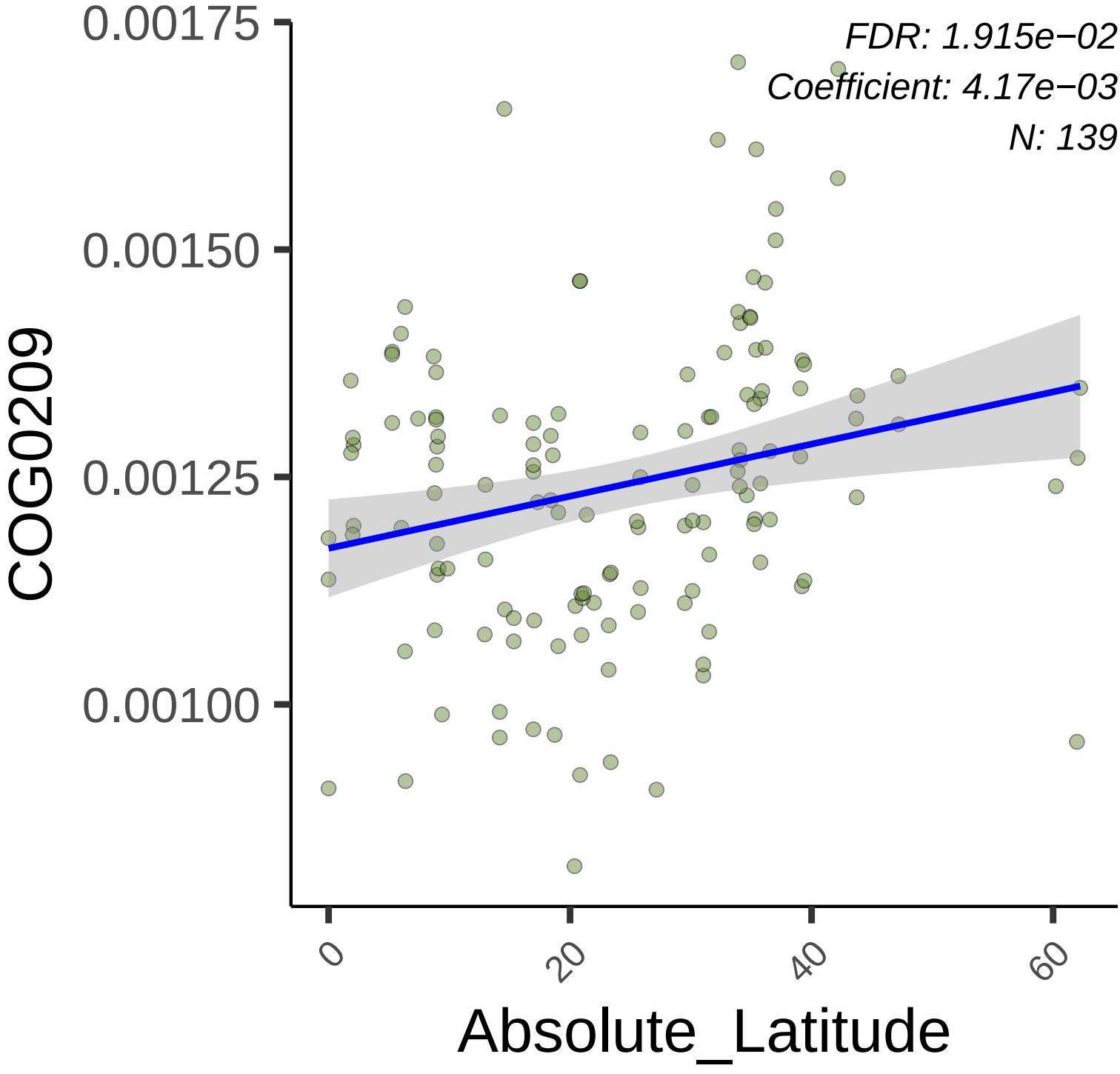

FDR: 1.882e−02
Coefficient: 1.33e−02
N: 139
COG2855
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

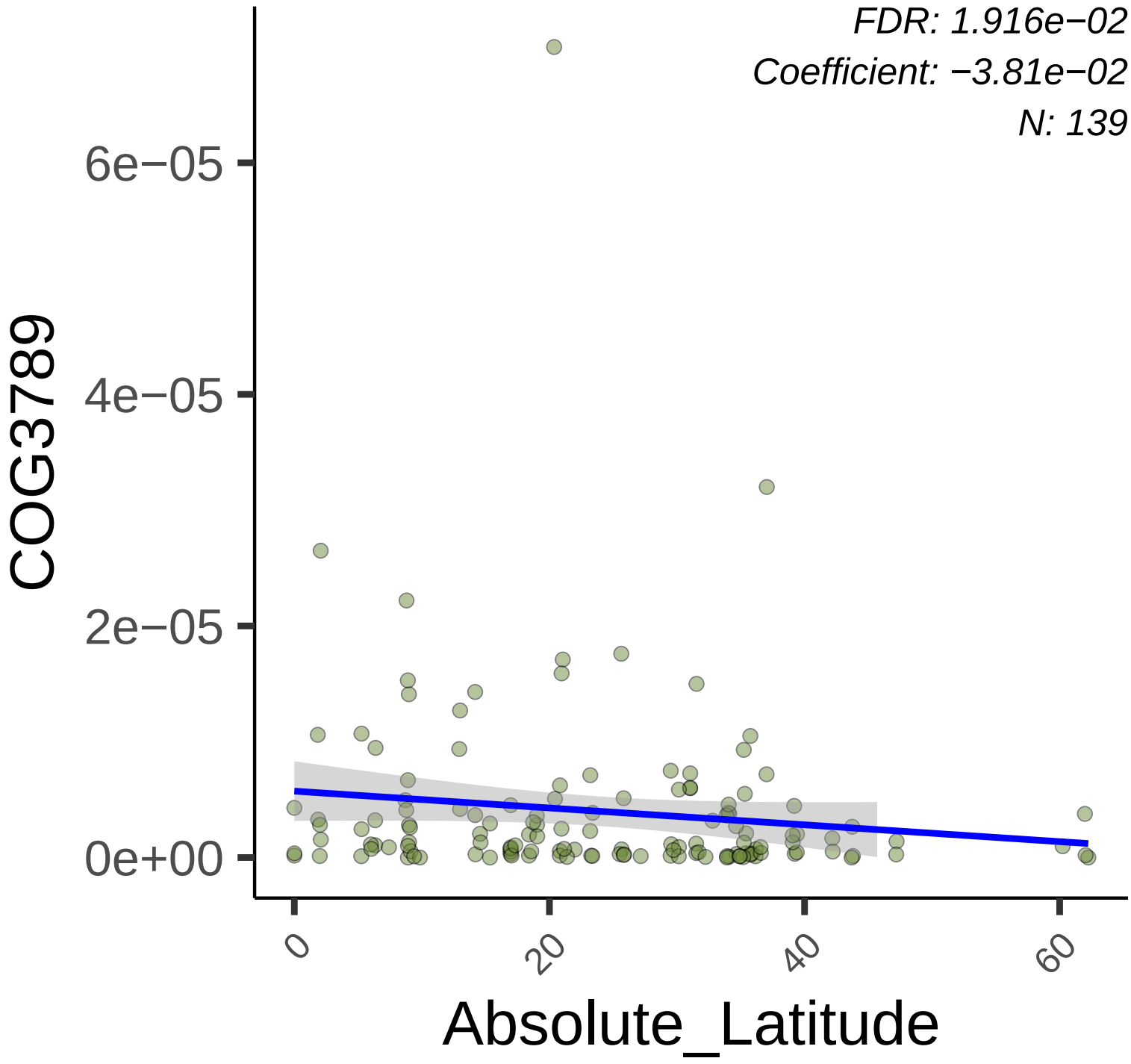

FDR: 1.892e−02
Coefficient: −1.87e−02
N: 139
COG0857
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

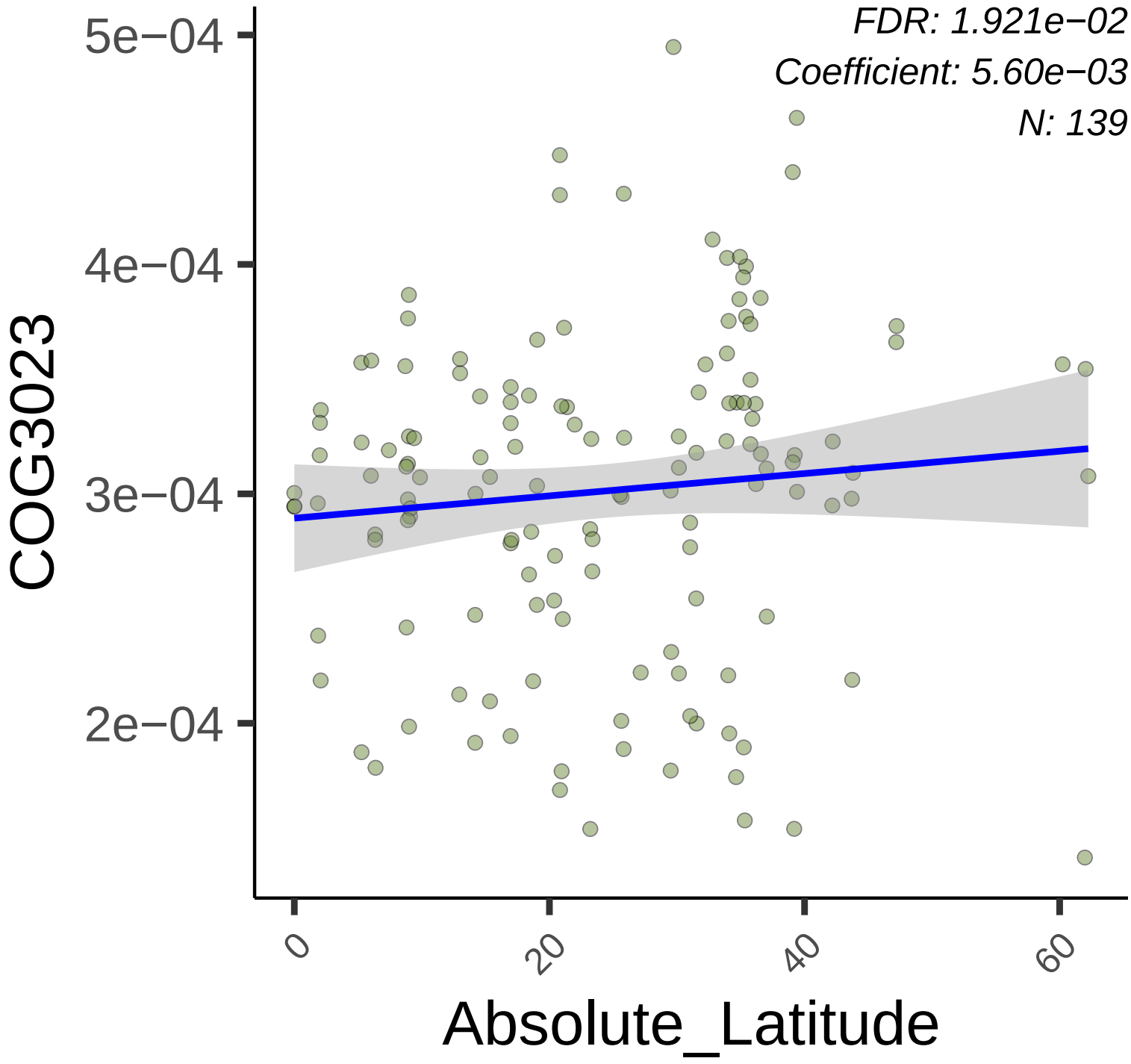

FDR: 1.896e−02
Coefficient: −3.16e−02
N: 139
COG4912
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

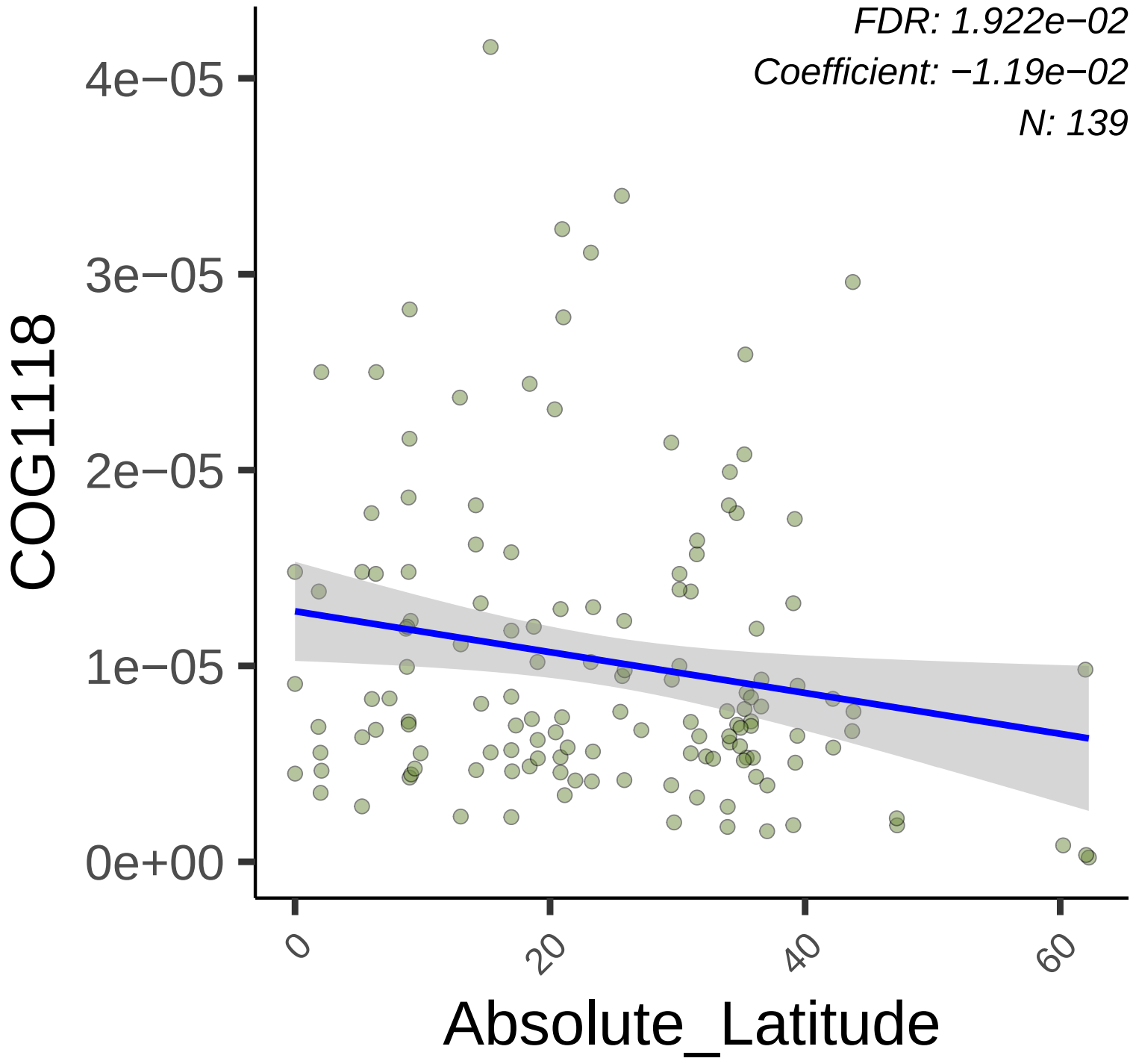

FDR: 1.908e−02
Coefficient: −1.65e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG4674
0
20
40
60
Absolute_Latitude

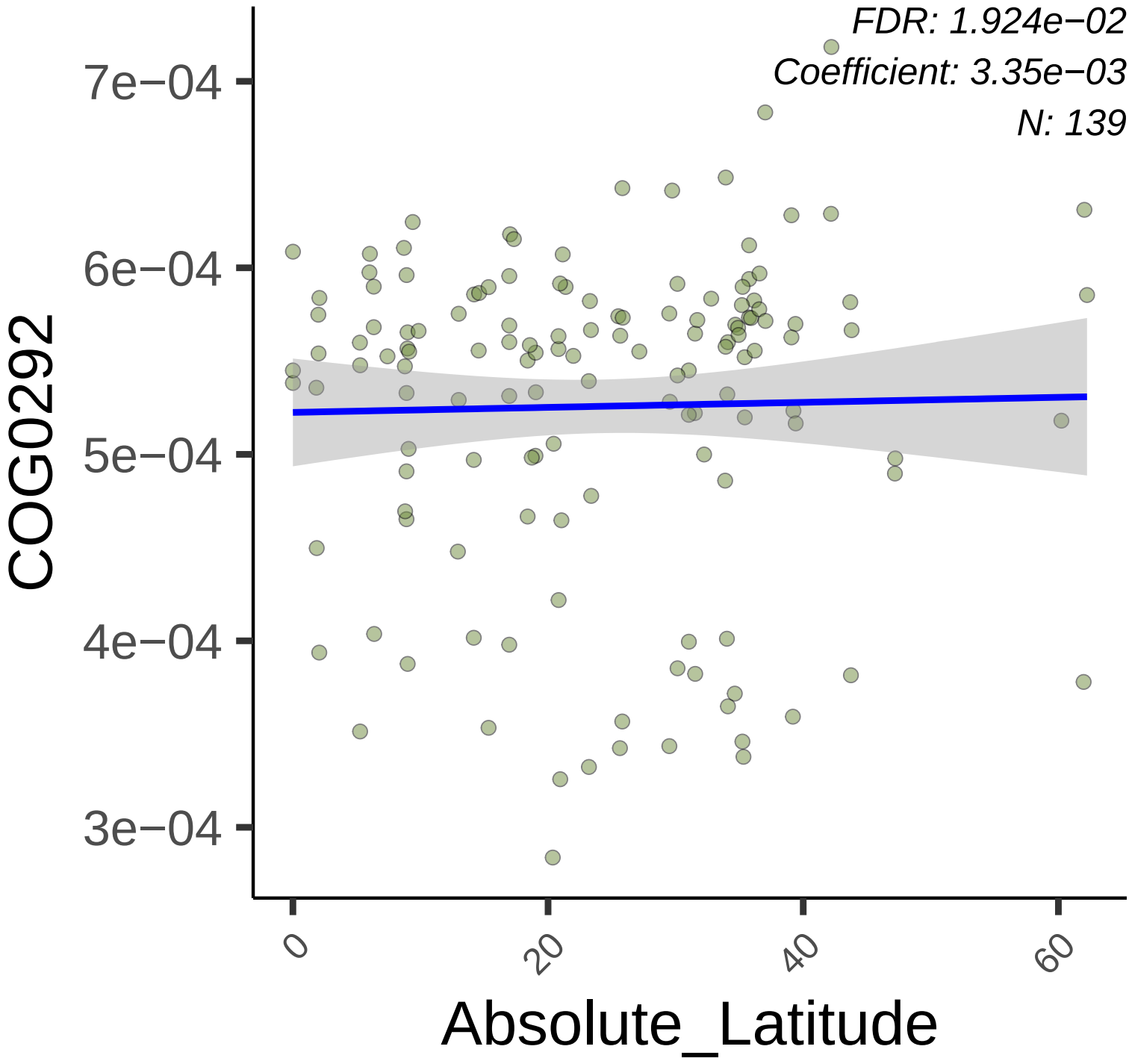

FDR: 1.910e−02
Coefficient: 5.01e−03
N: 139
8e−04
6e−04
4e−04
COG0114
0
20
40
60
Absolute_Latitude

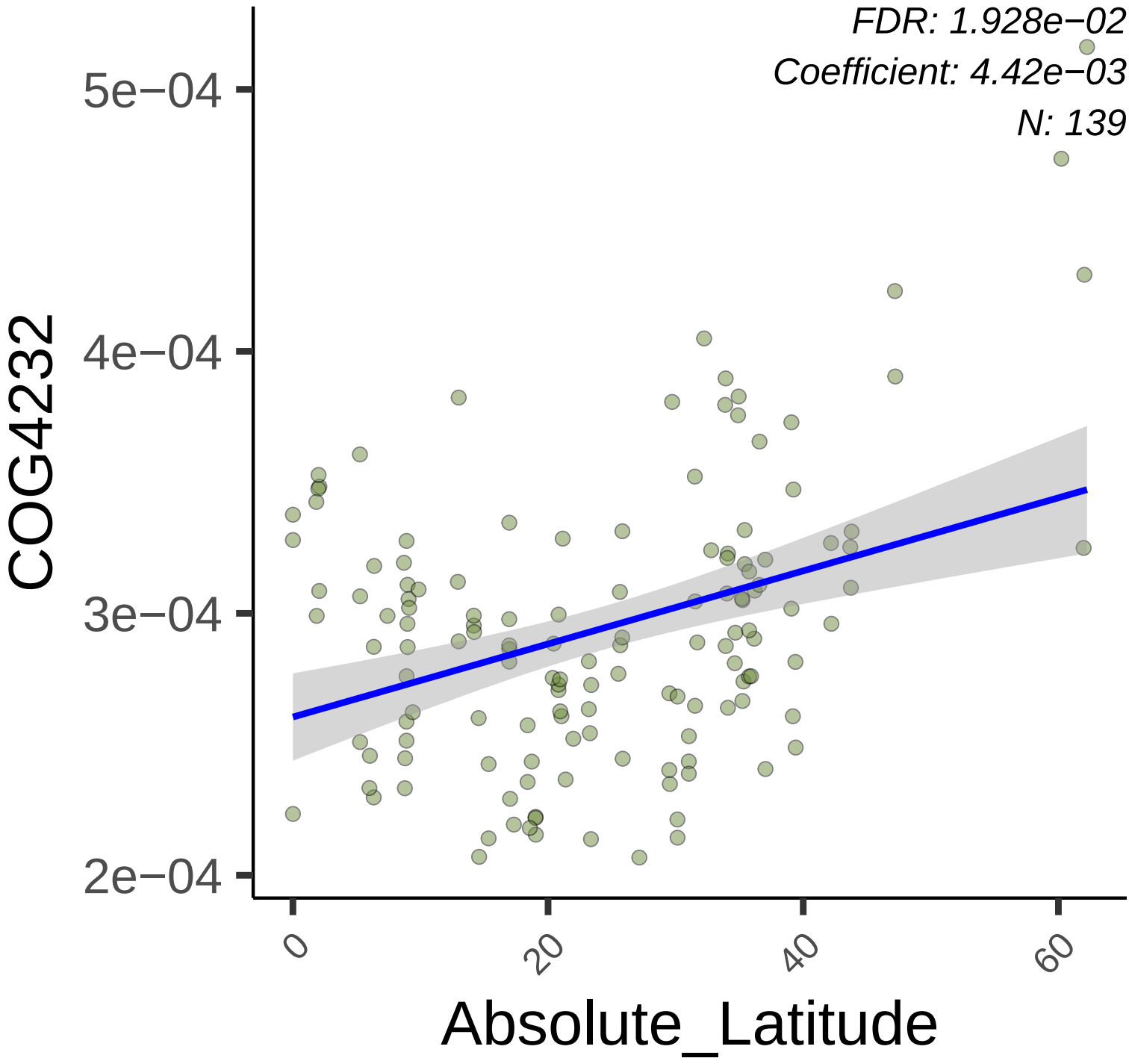

FDR: 1.915e−02
Coefficient: 4.17e−03
N: 139
0.00175
0.00150
0.00125
0.00100
COG0209
0
20
40
60
Absolute_Latitude

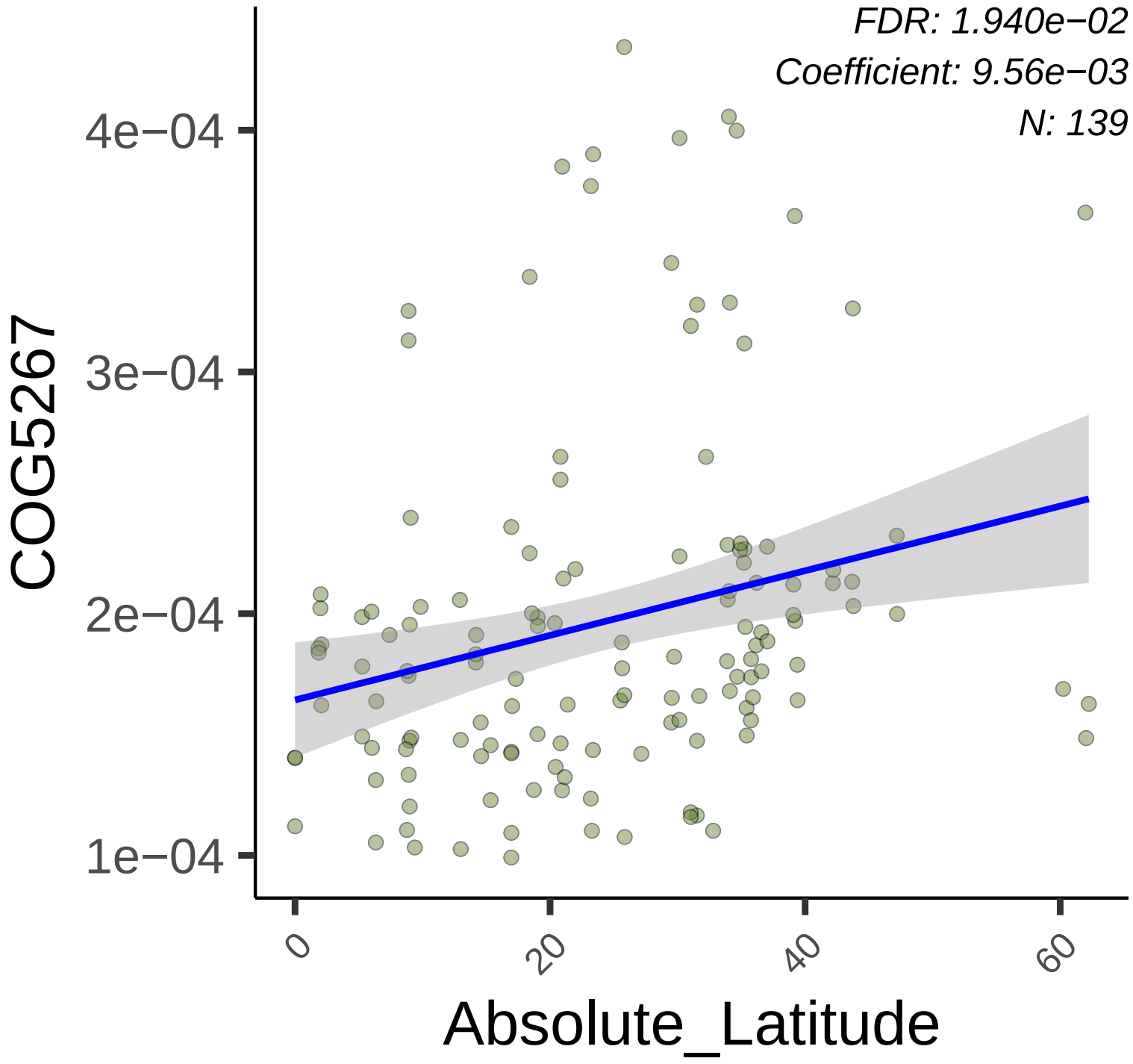

FDR: 1.916e−02
Coefficient: −3.81e−02
N: 139
COG3789
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

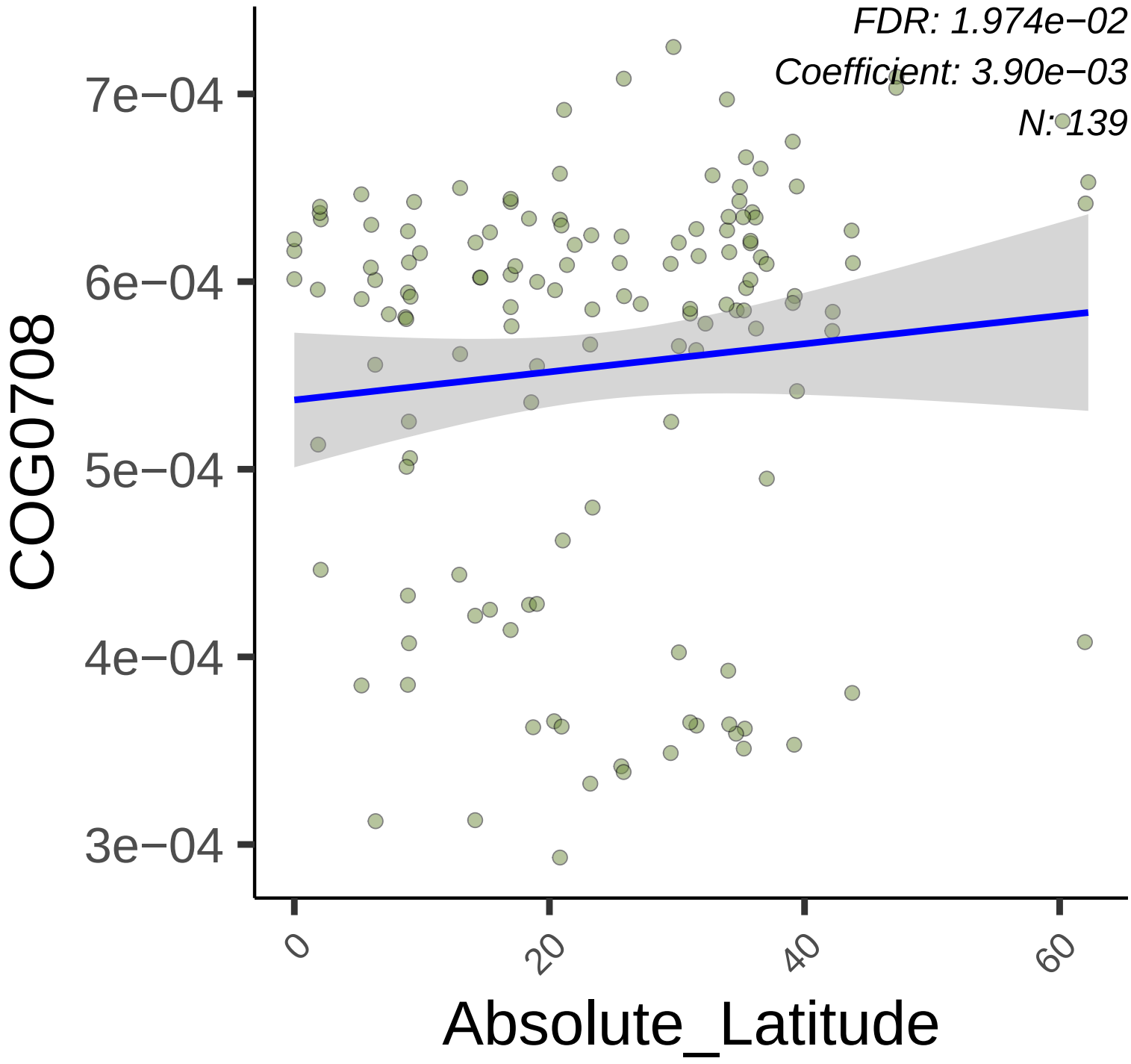

FDR: 1.921e−02
Coefficient: 5.60e−03
N: 139
5e−04
4e−04
3e−04
2e−04
COG3023
0
20
40
60
Absolute_Latitude

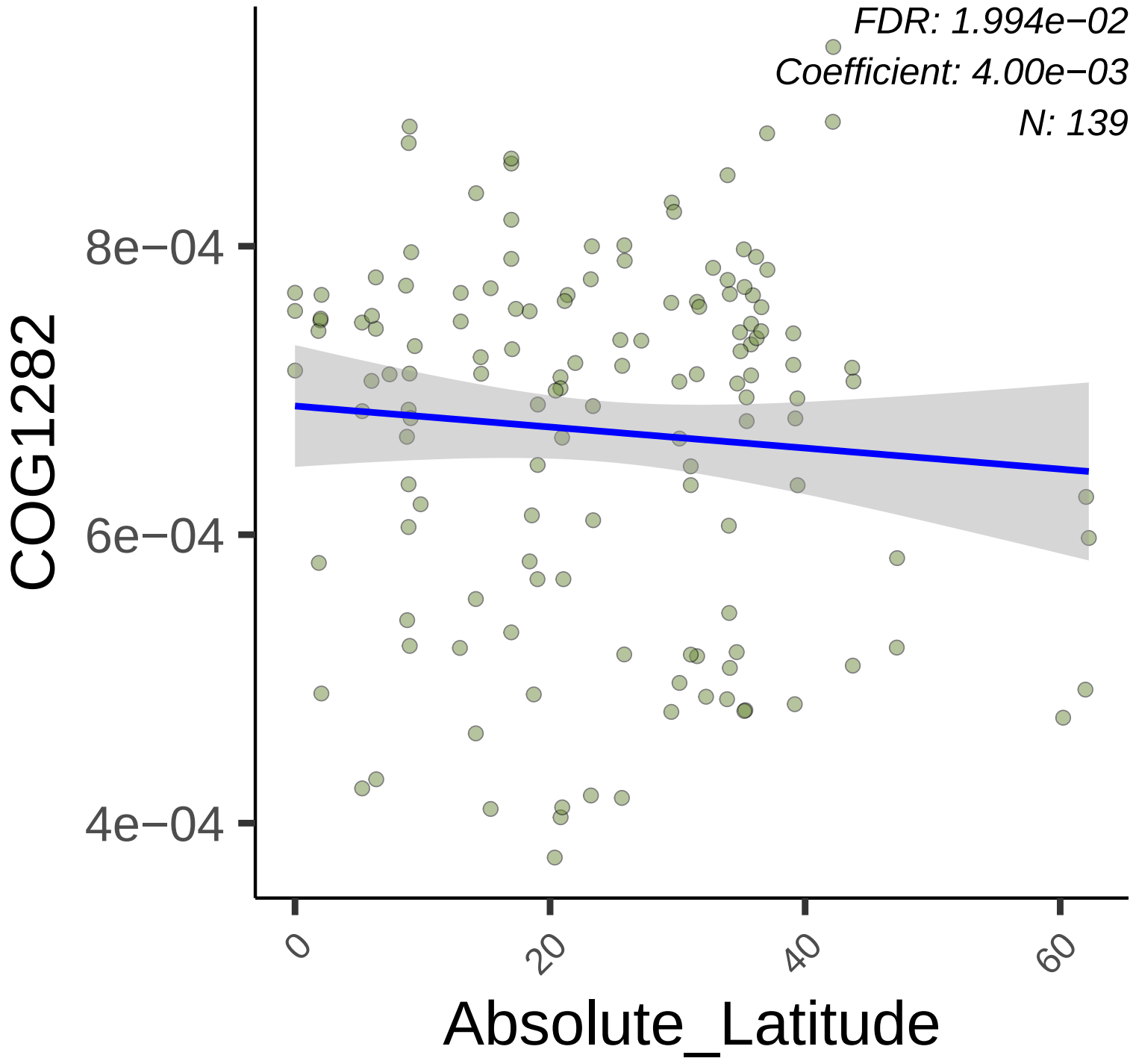

FDR: 1.922e−02
Coefficient: −1.19e−02
N: 139
COG1118
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

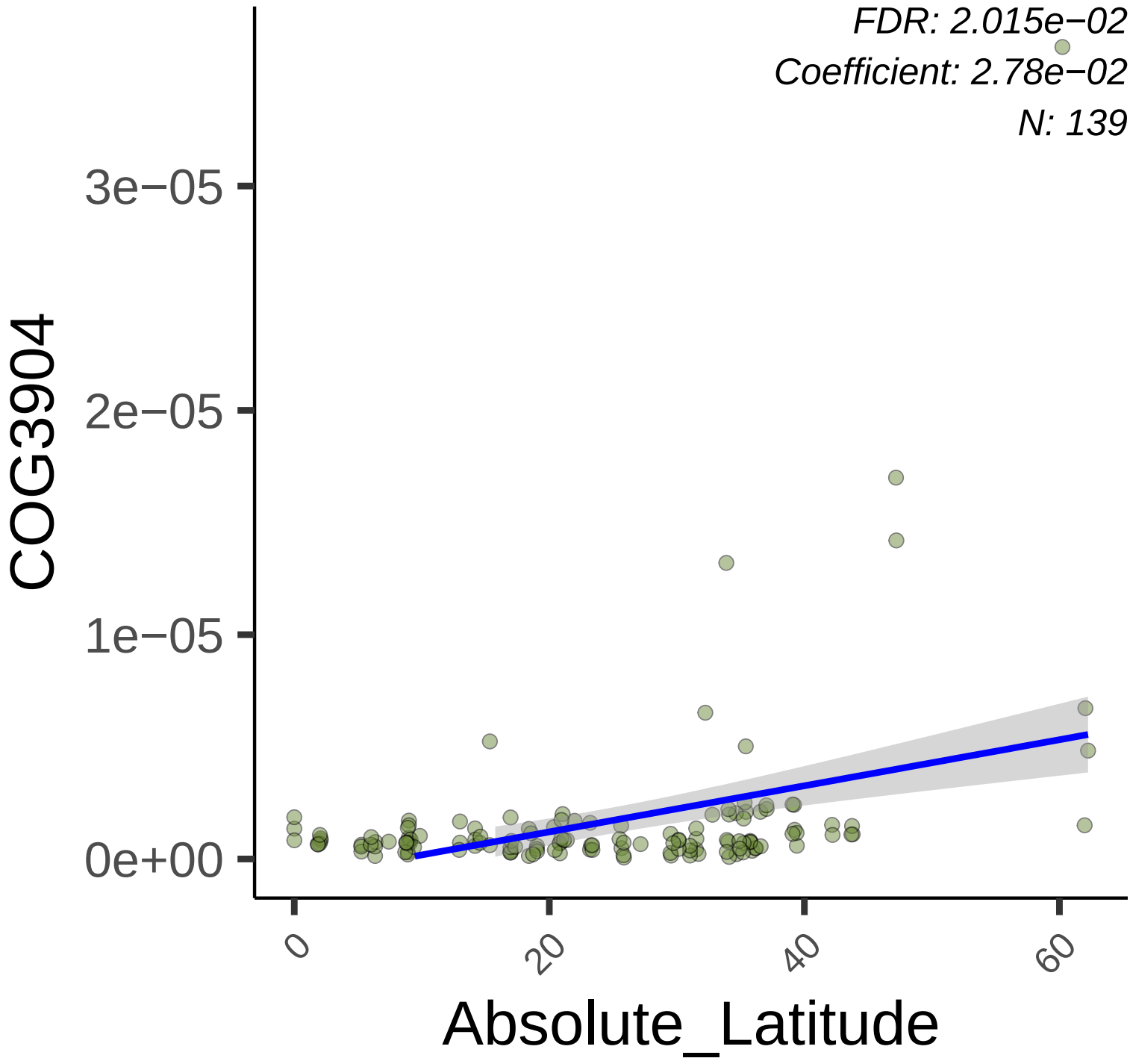

FDR: 1.924e−02
Coefficient: 3.35e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG0292
0
20
40
60
Absolute_Latitude

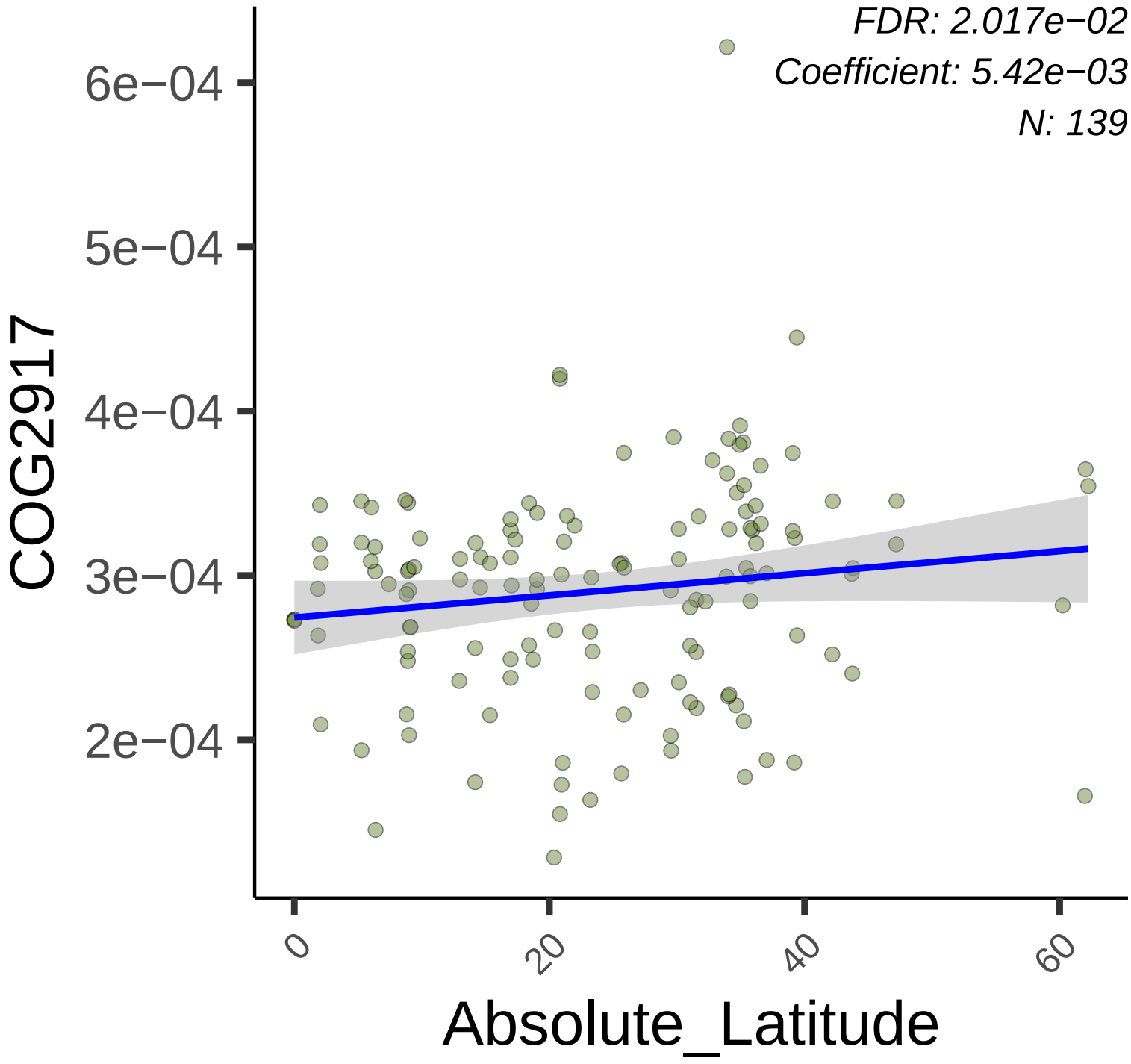

FDR: 1.928e−02
Coefficient: 4.42e−03
N: 139
5e−04
4e−04
3e−04
2e−04
COG4232
0
20
40
60
Absolute_Latitude

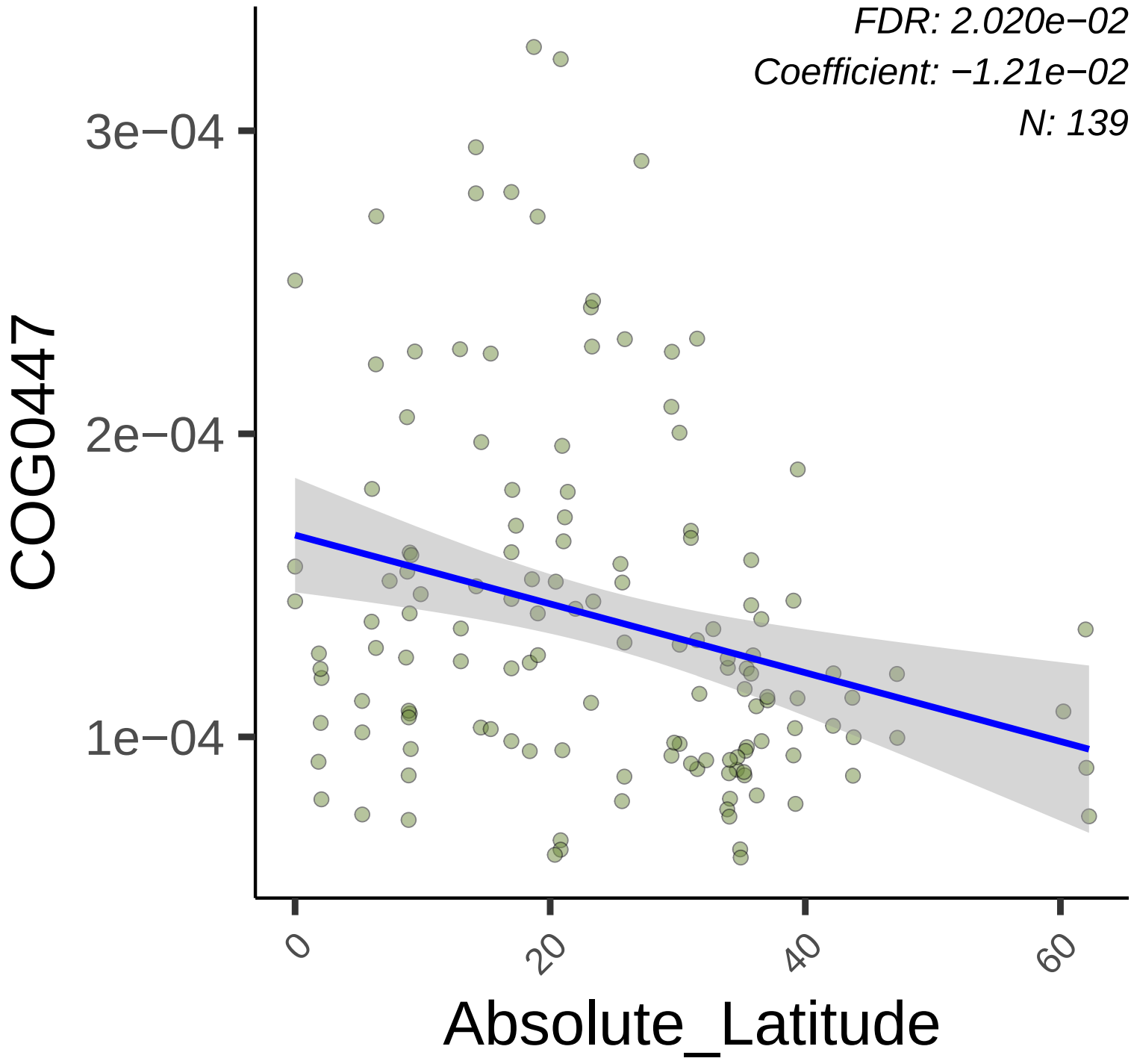

FDR: 1.940e−02
Coefficient: 9.56e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG5267
0
20
40
60
Absolute_Latitude

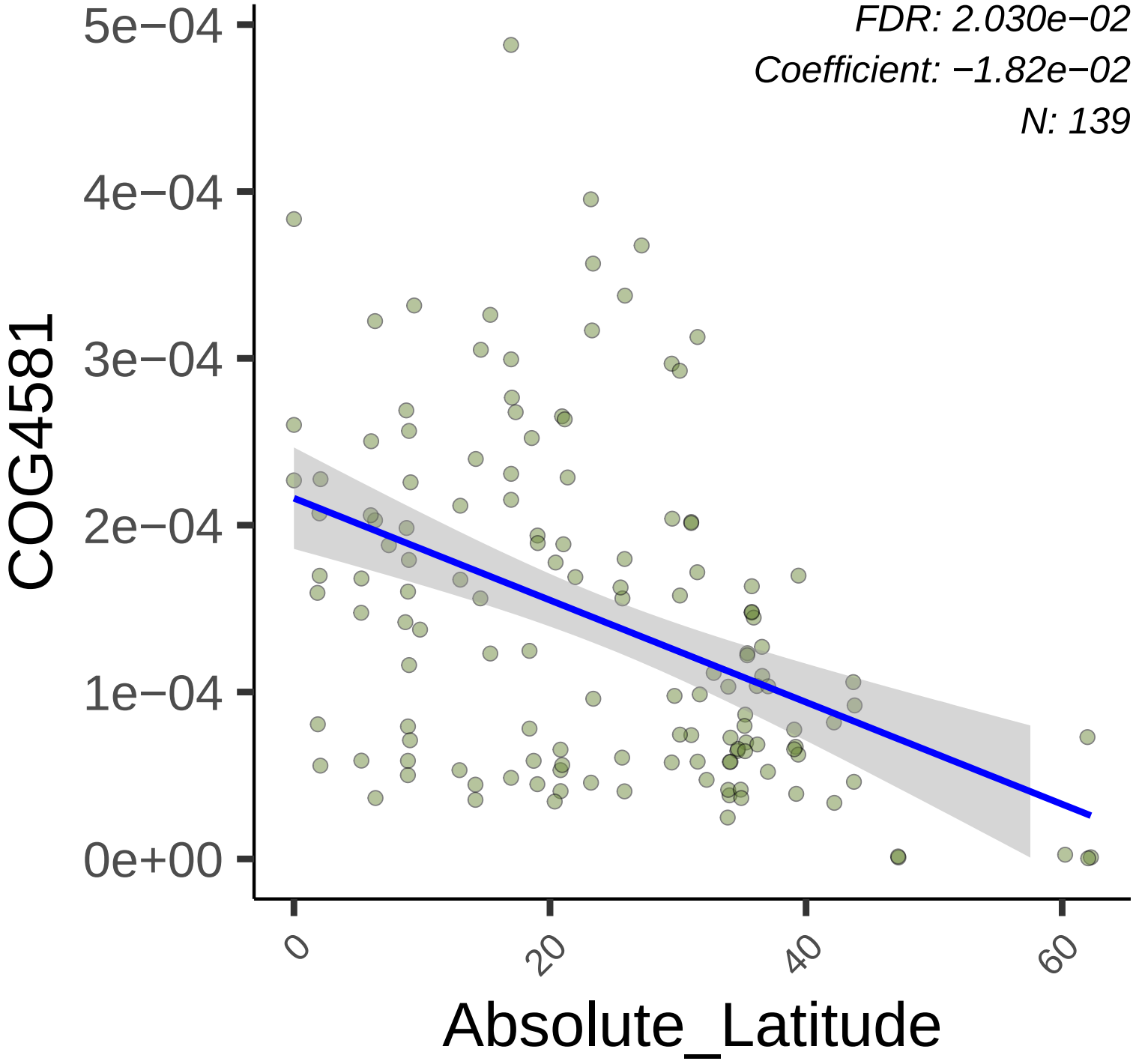

FDR: 1.974e−02
Coefficient: 3.90e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG0708
0
20
40
60
Absolute_Latitude

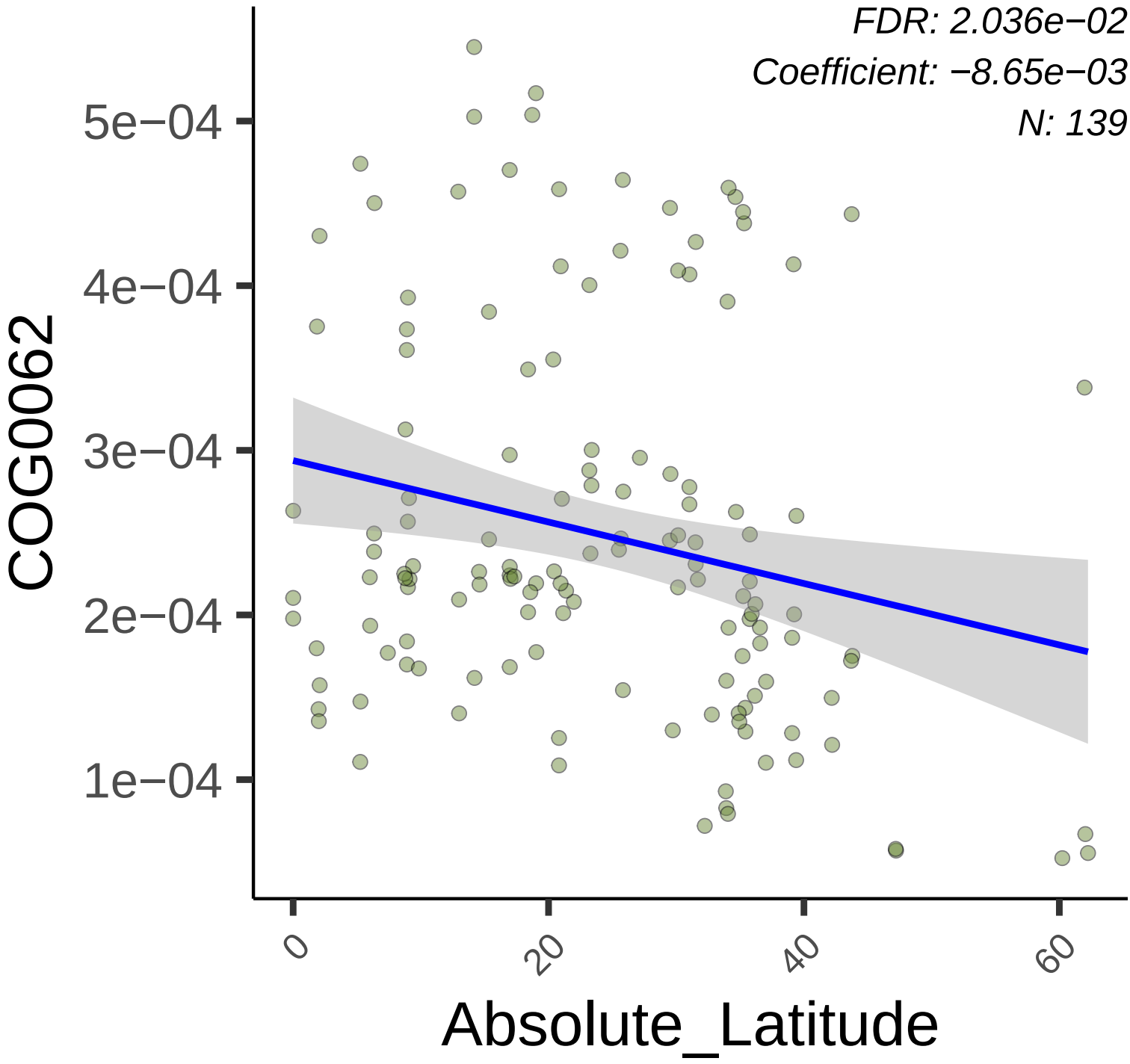

FDR: 1.994e−02
Coefficient: 4.00e−03
N: 139
COG1282
8e−04
6e−04
4e−04
0
20
40
60
Absolute_Latitude

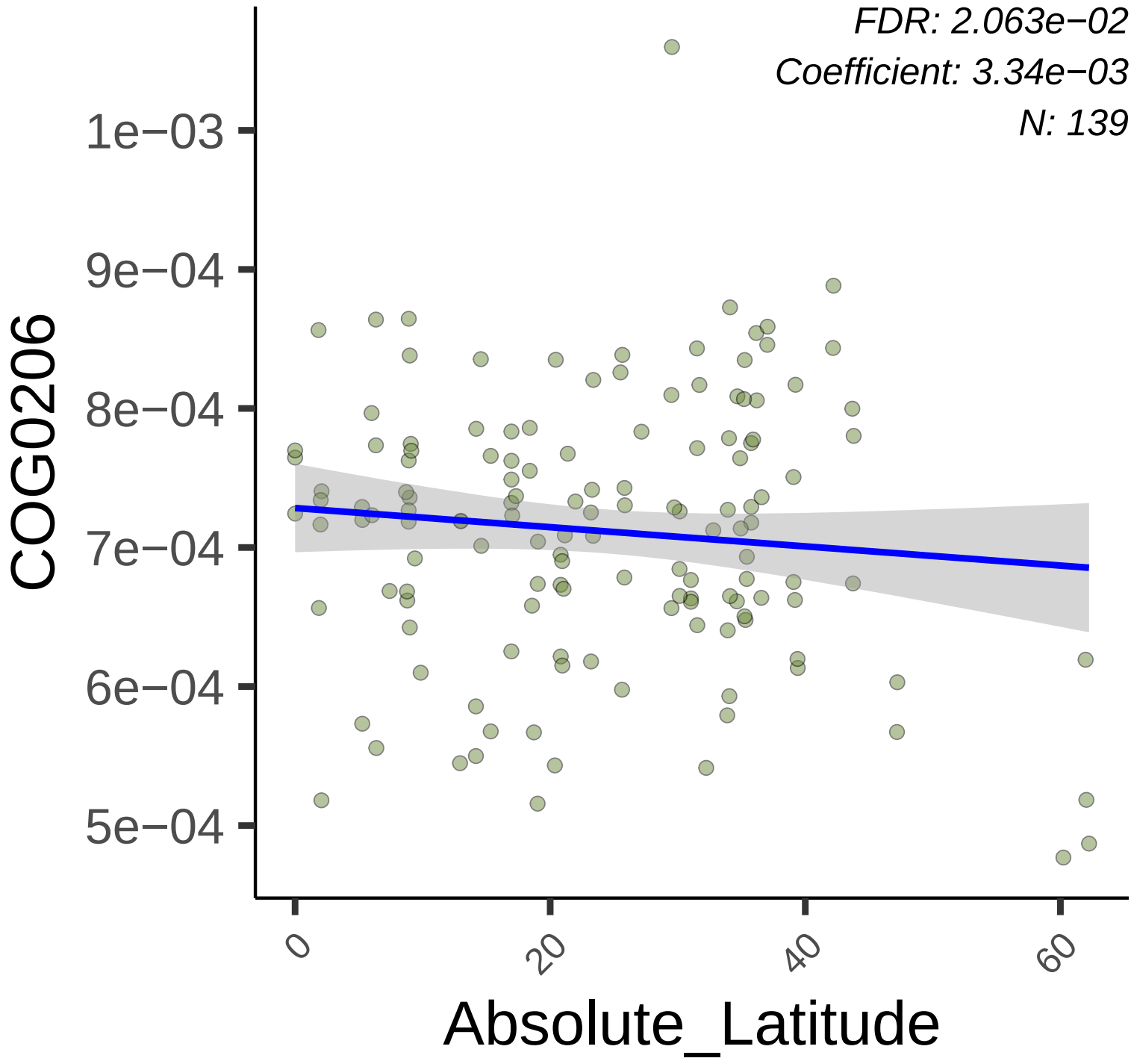

FDR: 2.015e−02
Coefficient: 2.78e−02
N: 139
COG3904
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

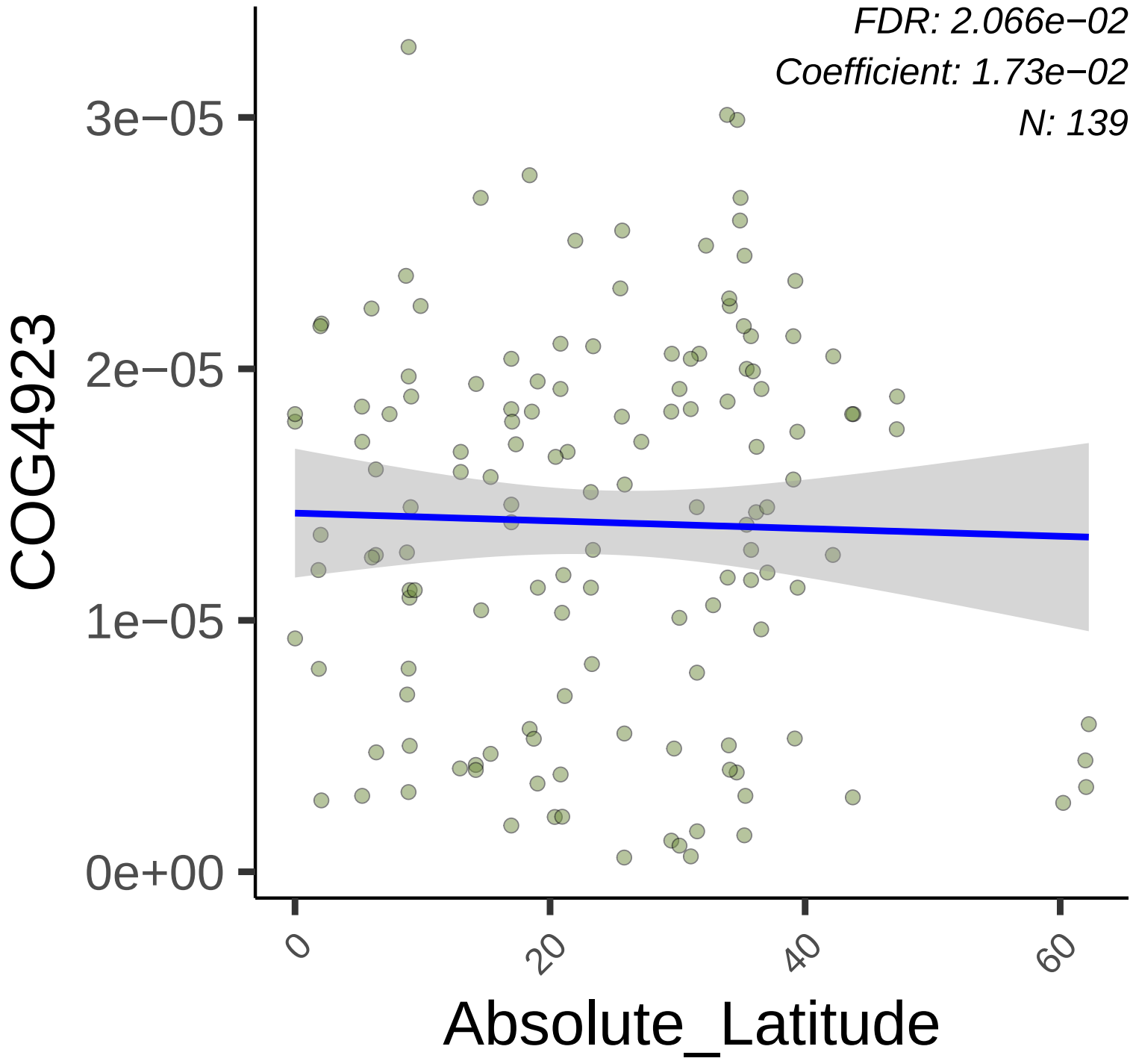

FDR: 2.017e−02
Coefficient: 5.42e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
COG2917
0
20
40
60
Absolute_Latitude

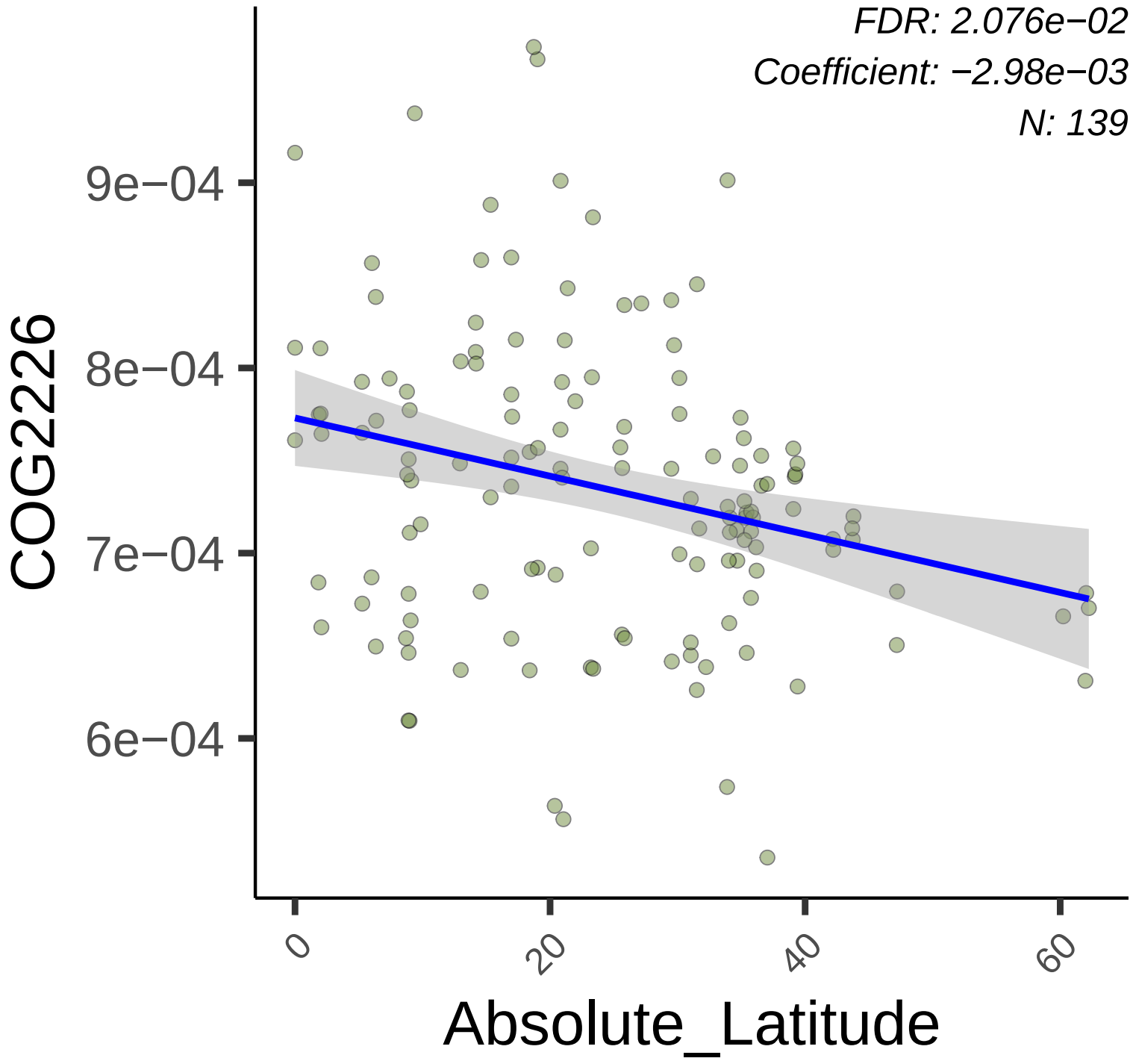

FDR: 2.020e−02
Coefficient: −1.21e−02
N: 139
3e−04
2e−04
1e−04
COG0447
0
20
40
60
Absolute_Latitude

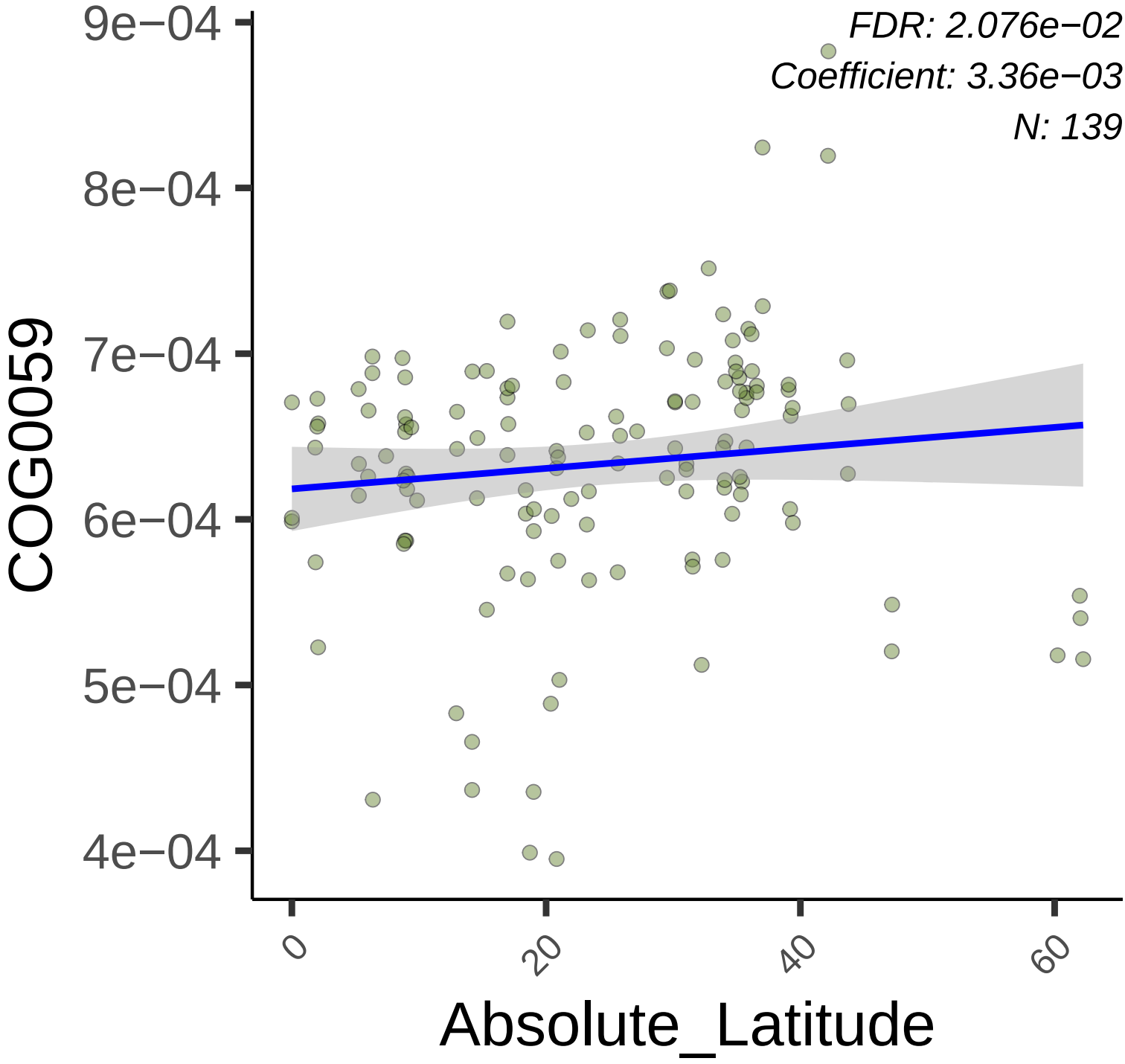

FDR: 2.030e−02
Coefficient: −1.82e−02
N: 139
5e−04
4e−04
3e−04
2e−04
1e−04
0e+00
COG4581
0
20
40
60
Absolute_Latitude

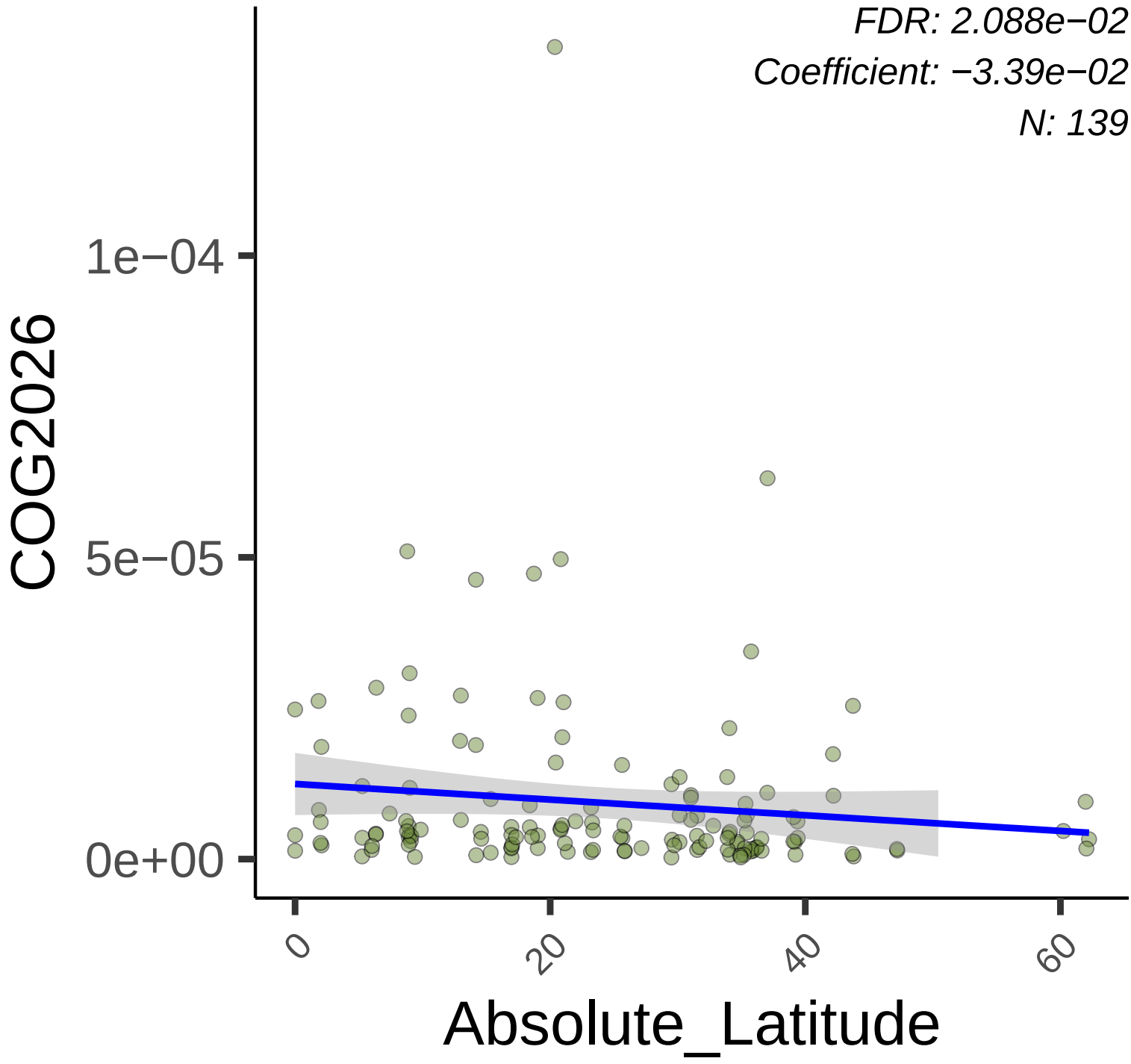

FDR: 2.036e−02
Coefficient: −8.65e−03
N: 139
5e−04
4e−04
3e−04
2e−04
1e−04
COG0062
0
20
40
60
Absolute_Latitude

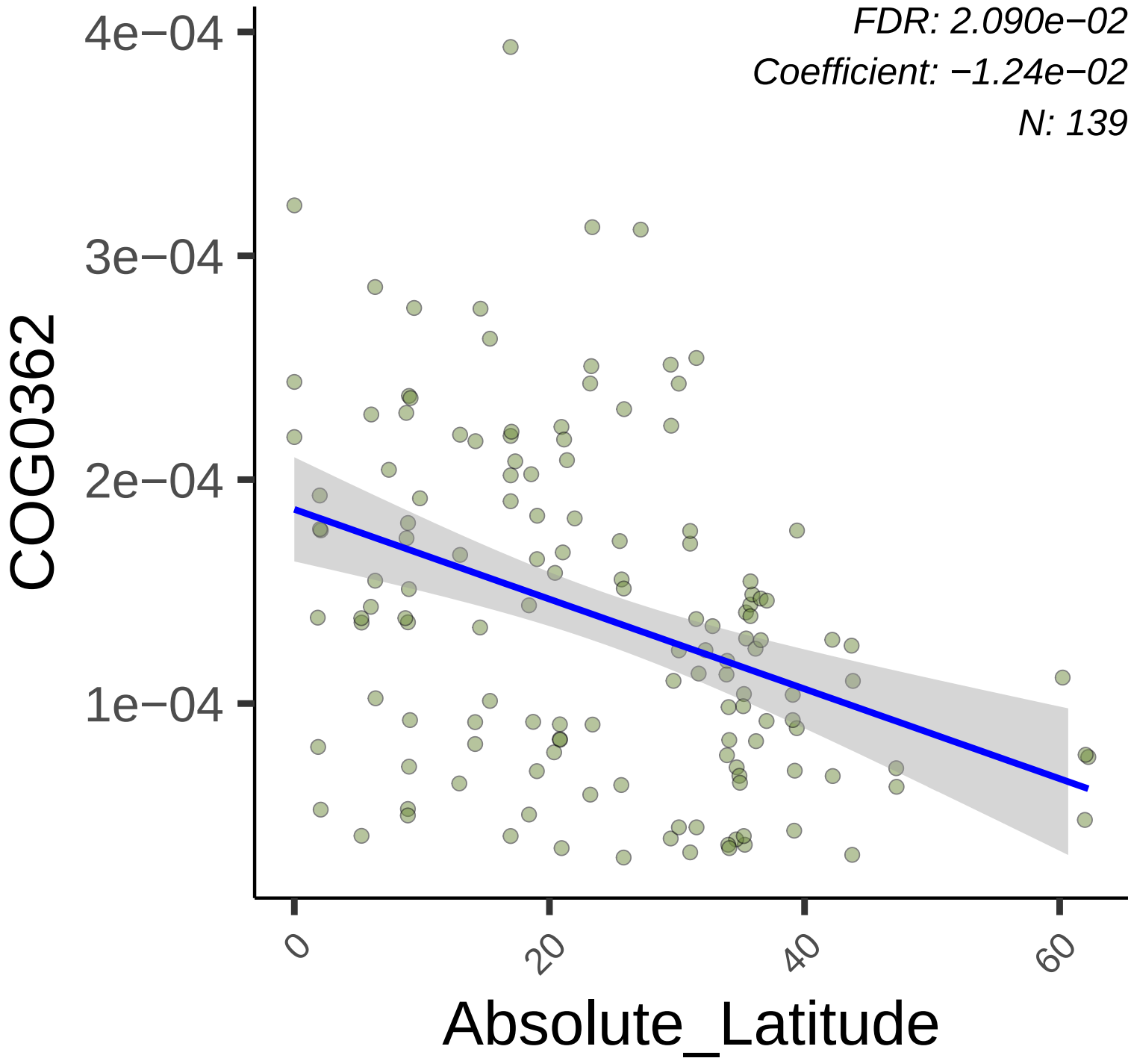

FDR: 2.063e−02
Coefficient: 3.34e−03
N: 139
1e−03
9e−04
8e−04
7e−04
6e−04
5e−04
COG0206
0
20
40
60
Absolute_Latitude

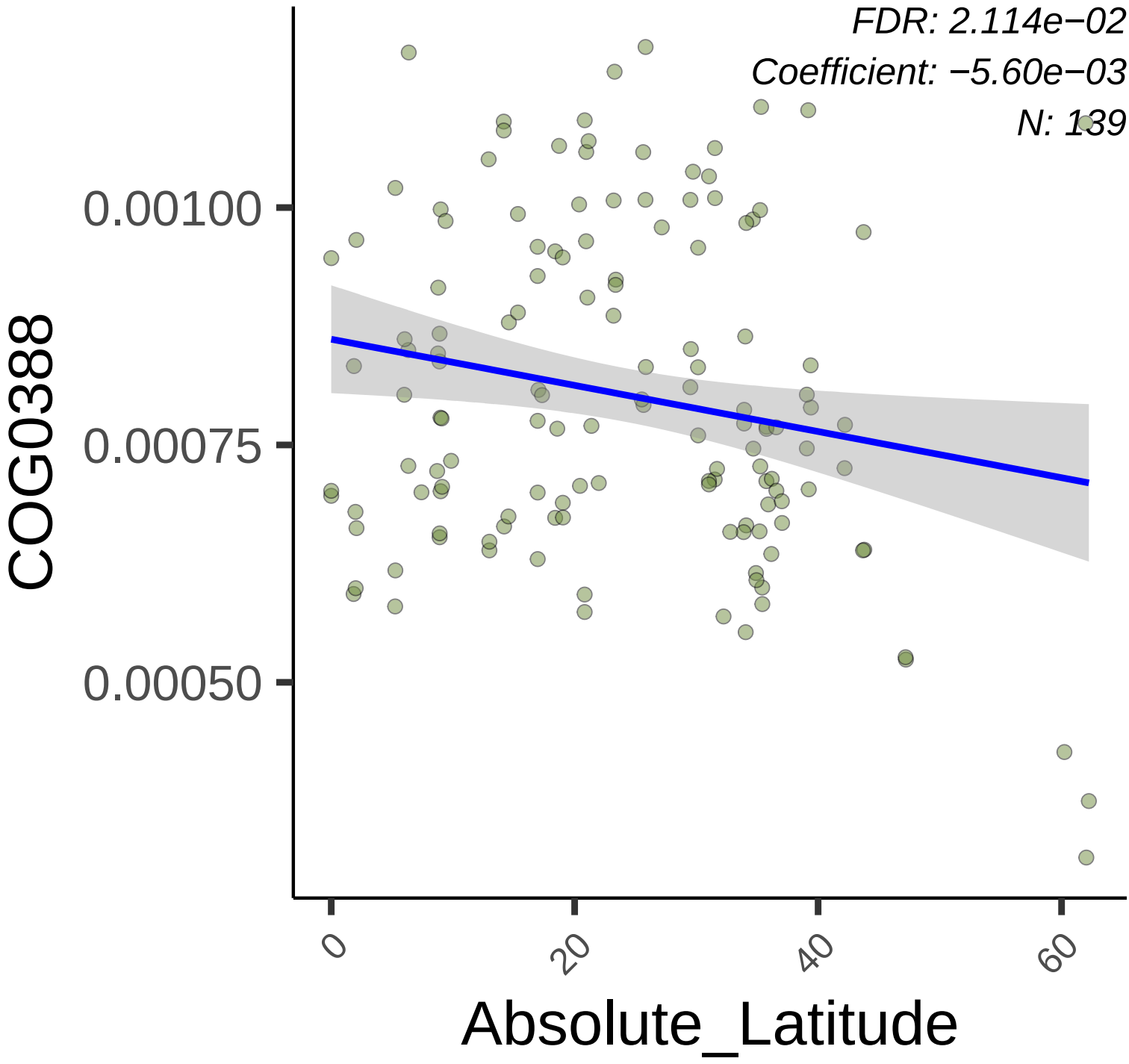

FDR: 2.066e−02
Coefficient: 1.73e−02
N: 139
3e−05
2e−05
1e−05
0e+00
COG4923
0
20
40
60
Absolute_Latitude

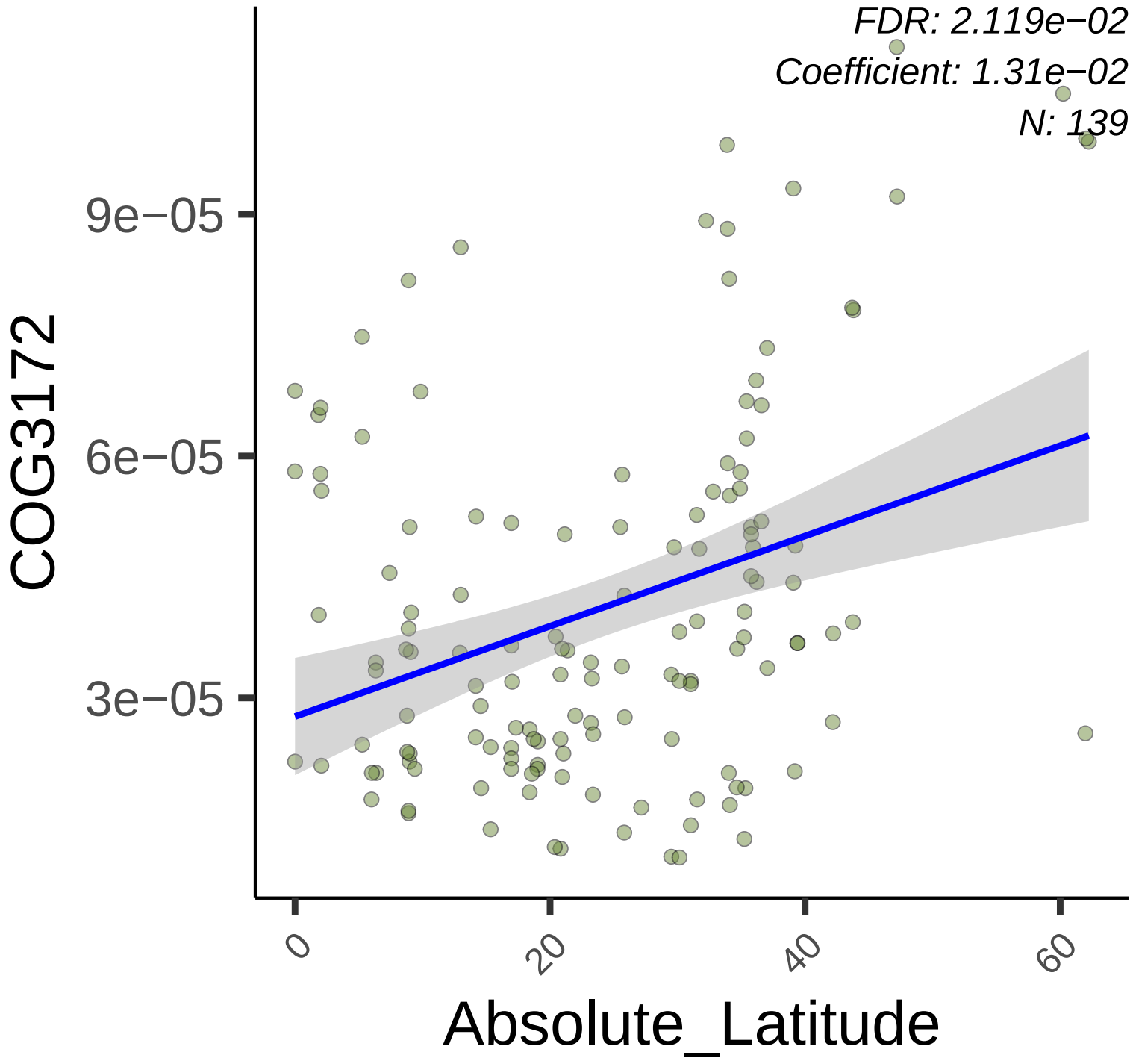

FDR: 2.076e−02
Coefficient: −2.98e−03
N: 139
COG2226
9e−04
8e−04
7e−04
6e−04
0
20
40
60
Absolute_Latitude

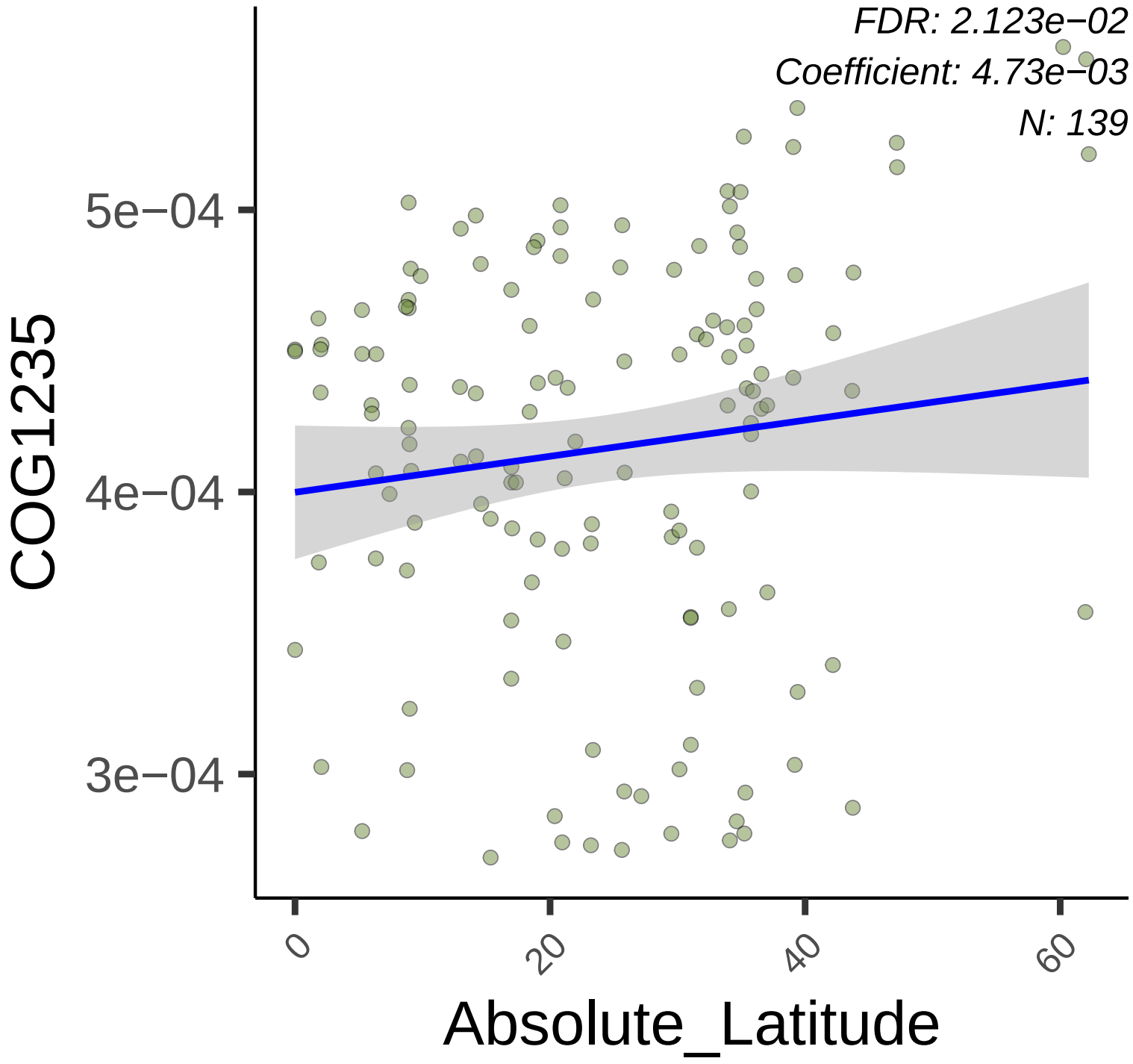

FDR: 2.076e−02
Coefficient: 3.36e−03
N: 139
9e−04
8e−04
7e−04
6e−04
5e−04
4e−04
COG0059
0
20
40
60
Absolute_Latitude

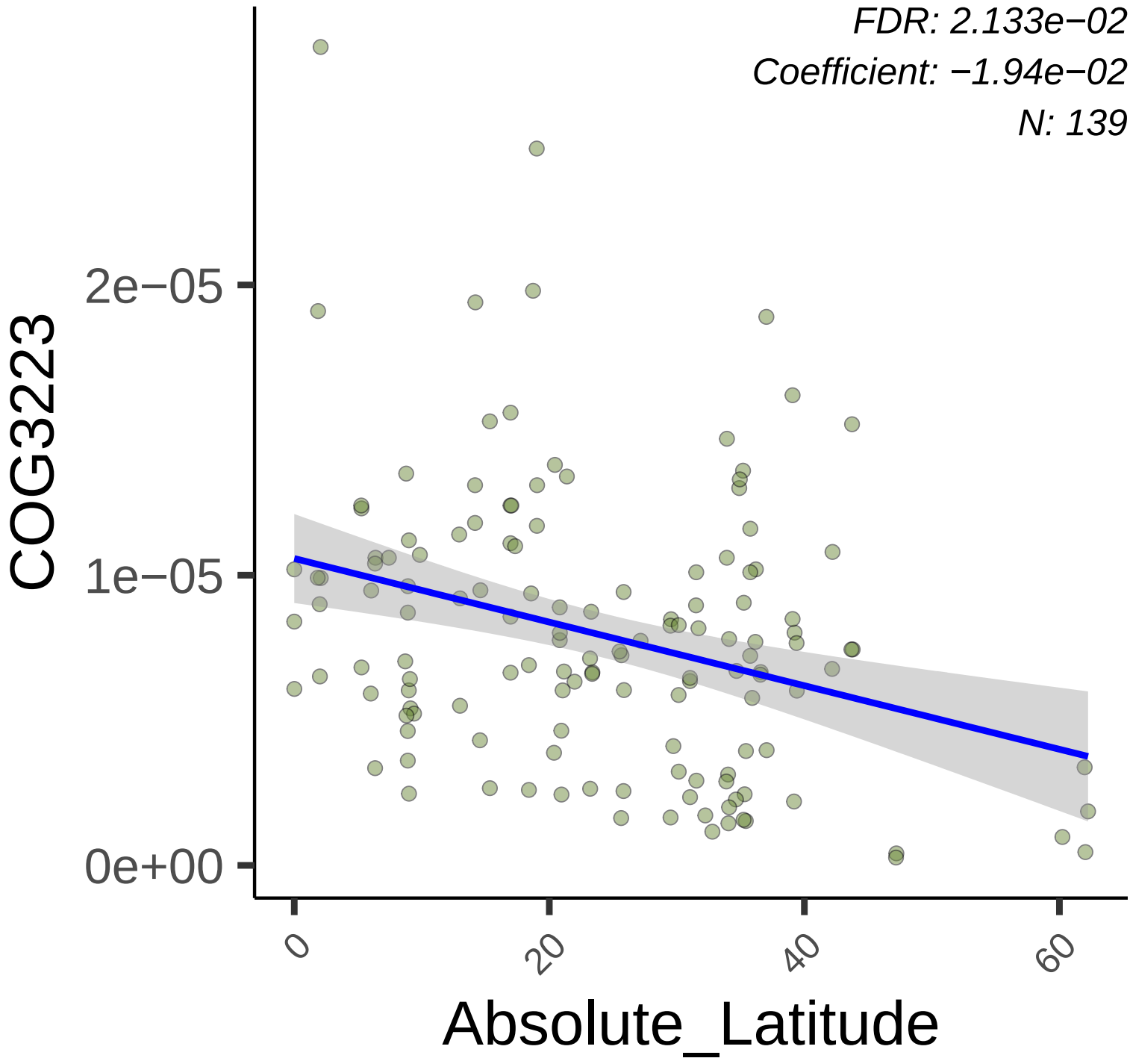

FDR: 2.088e−02
Coefficient: −3.39e−02
N: 139
COG2026
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

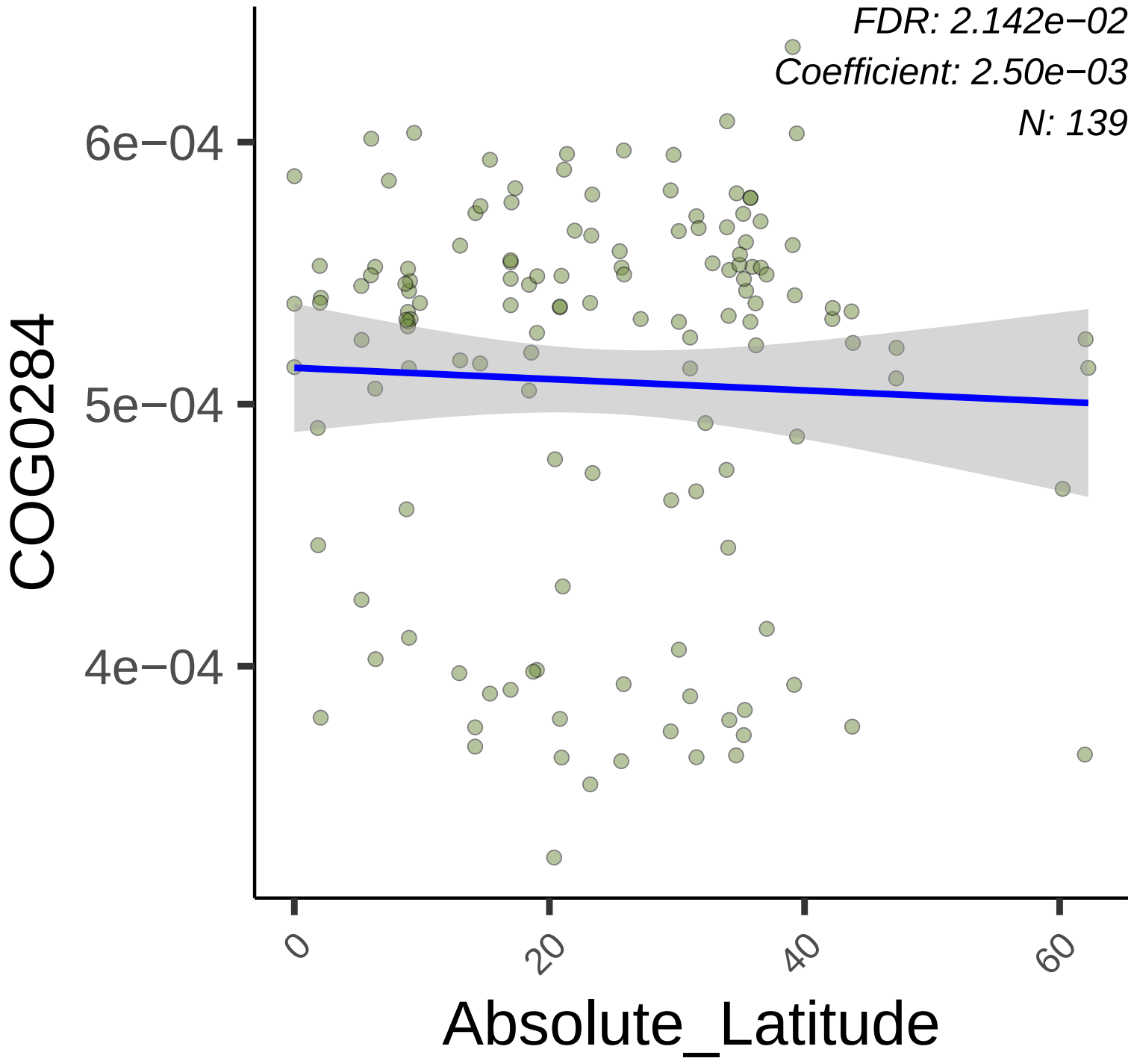

FDR: 2.090e−02
Coefficient: −1.24e−02
N: 139
4e−04
3e−04
2e−04
1e−04
COG0362
0
20
40
60
Absolute_Latitude

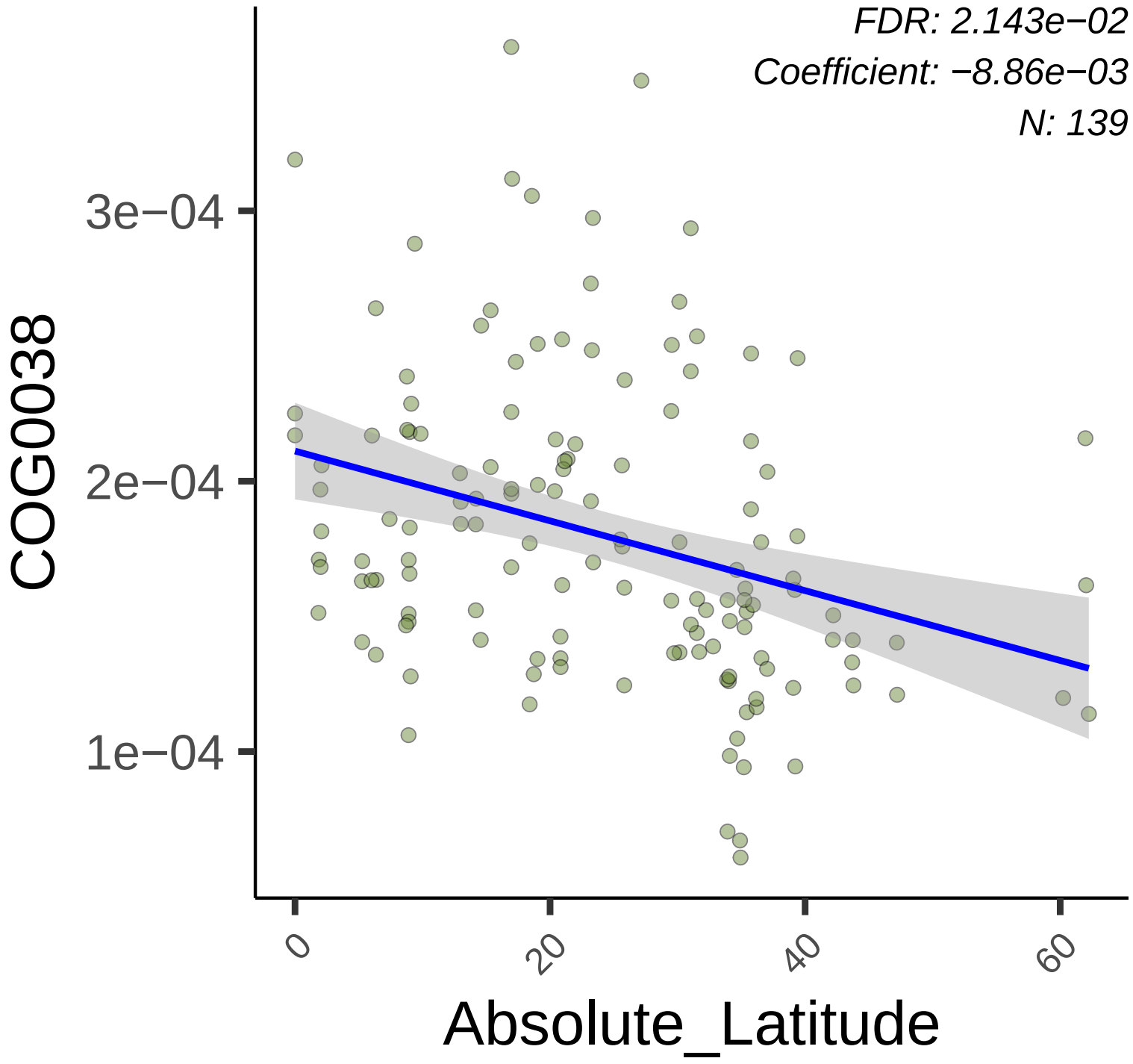

FDR: 2.114e−02
Coefficient: −5.60e−03
N: 139
0.00100
0.00075
0.00050
COG0388
0
20
40
60
Absolute_Latitude

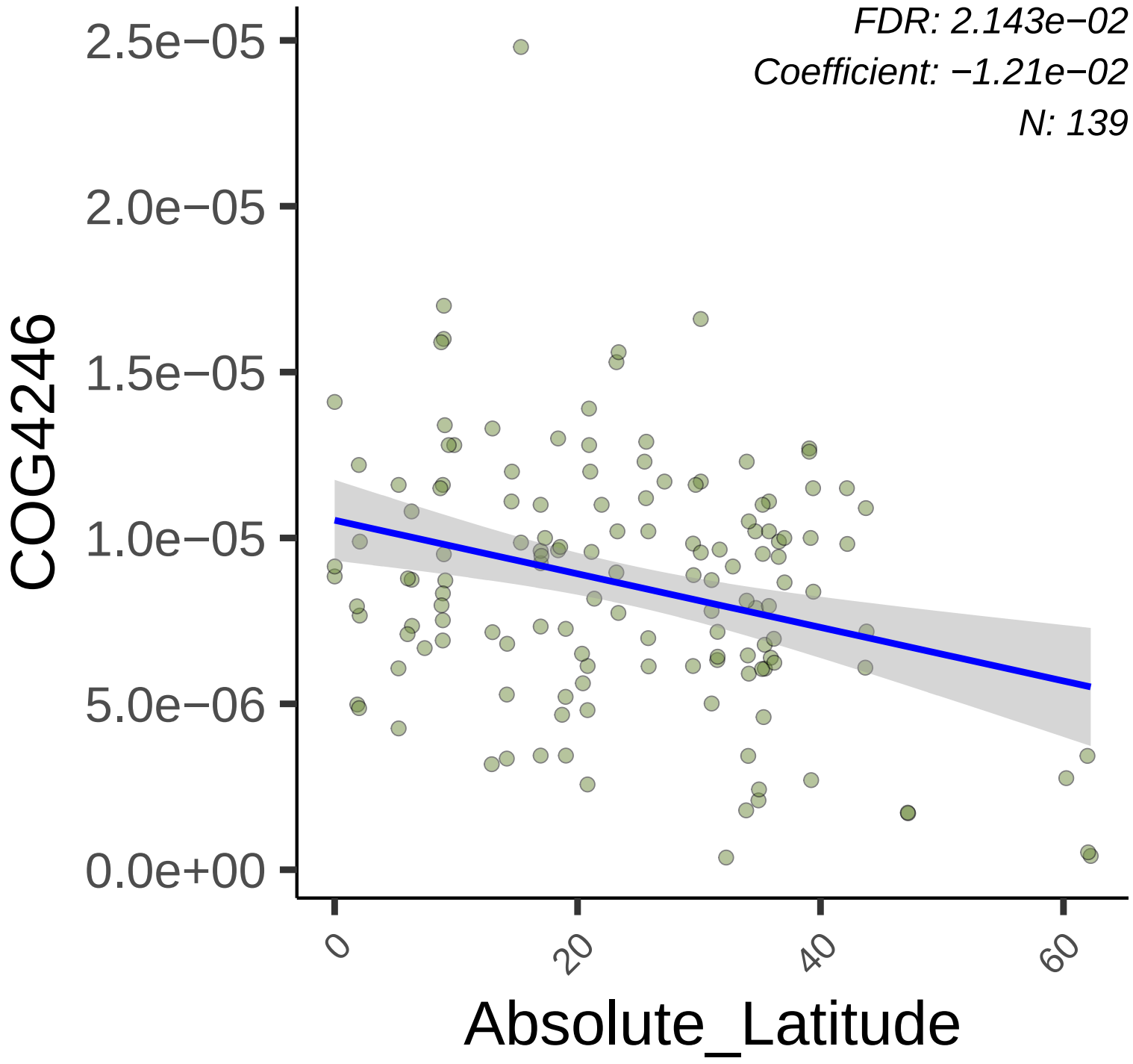

FDR: 2.119e−02
Coefficient: 1.31e−02
N: 139
COG3172
9e−05
6e−05
3e−05
0
20
40
60
Absolute_Latitude

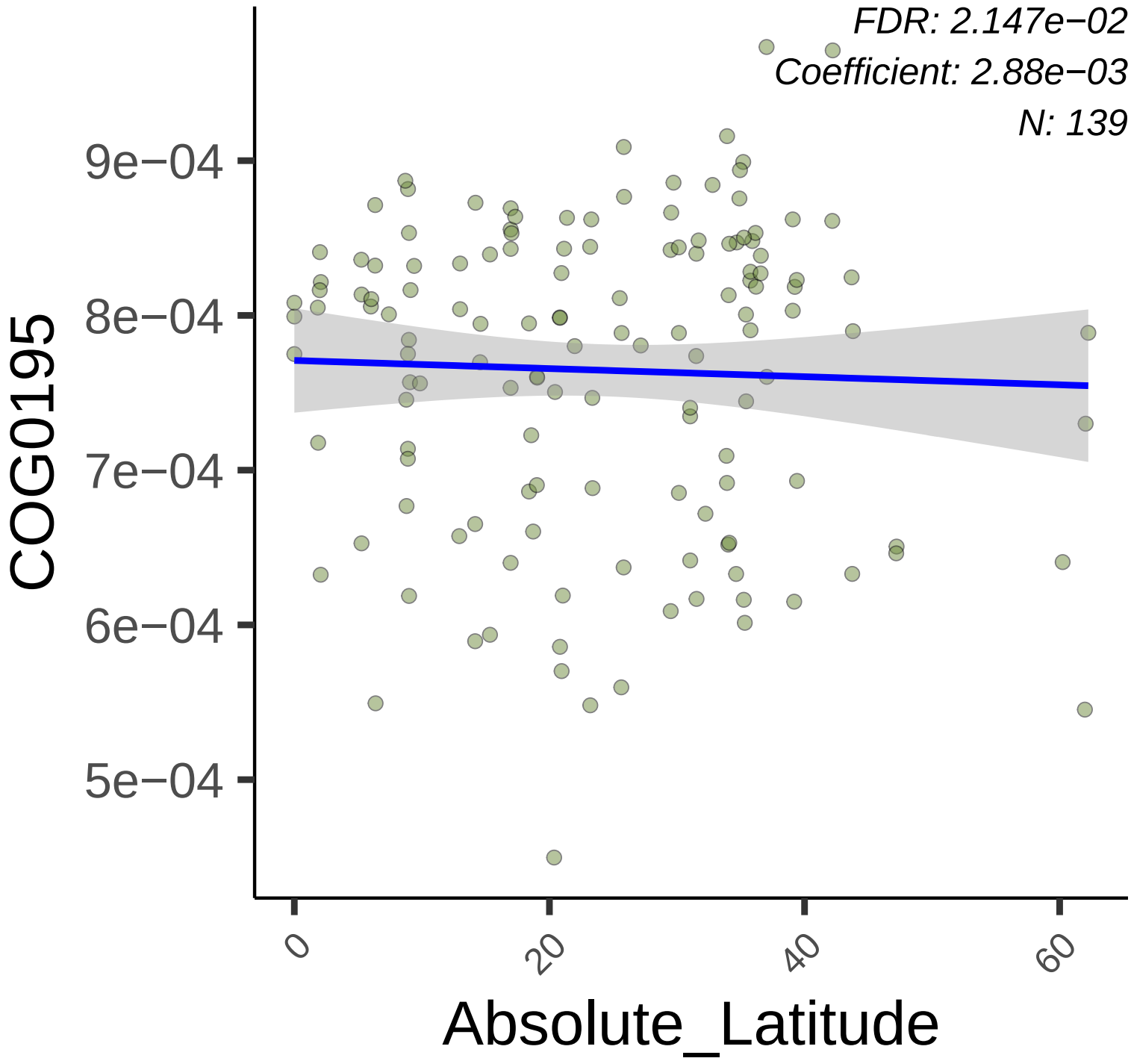

FDR: 2.123e−02
Coefficient: 4.73e−03
N: 139
5e−04
4e−04
3e−04
COG1235
0
20
40
60
Absolute_Latitude

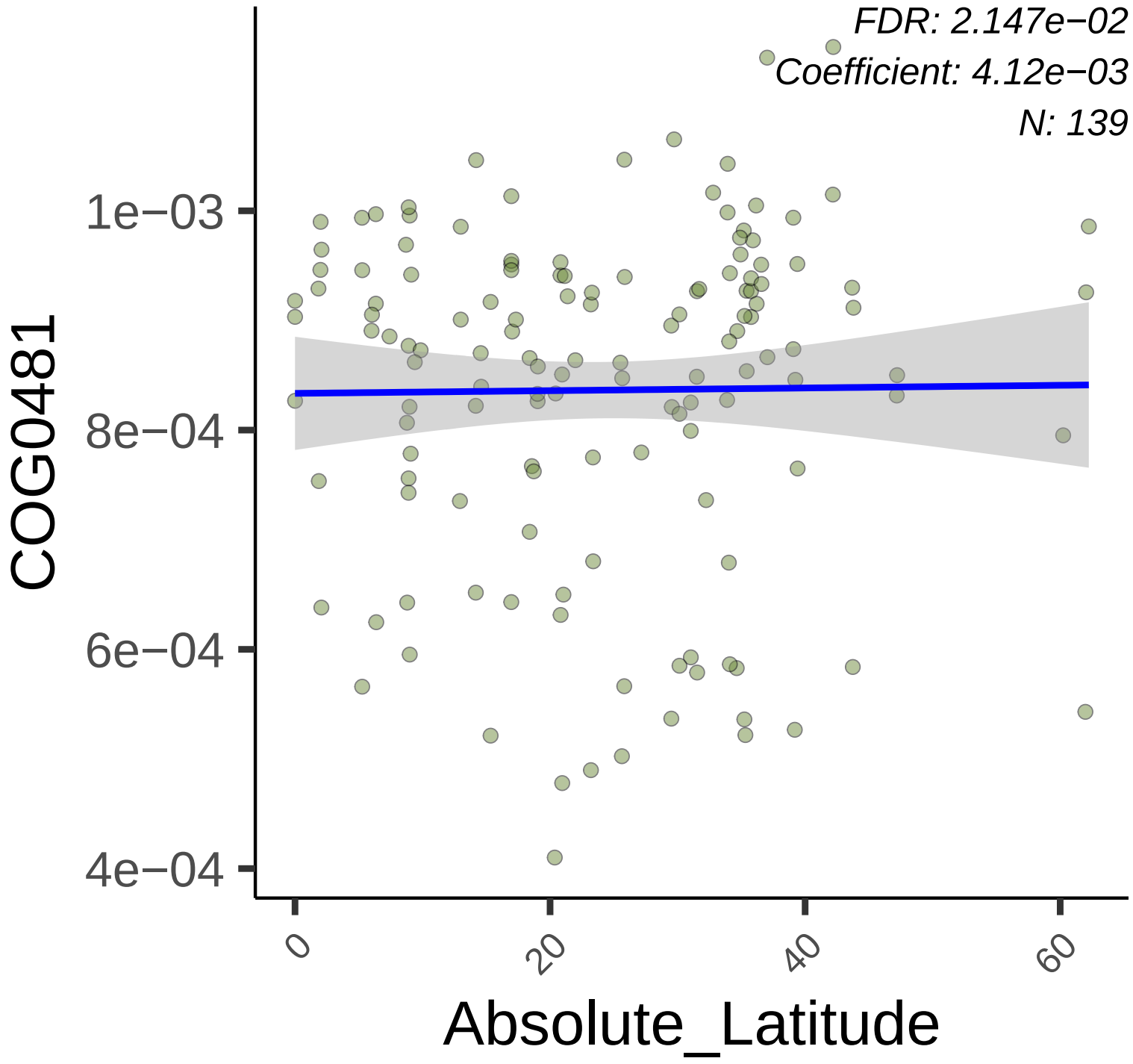

FDR: 2.133e−02
Coefficient: −1.94e−02
N: 139
COG3223
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

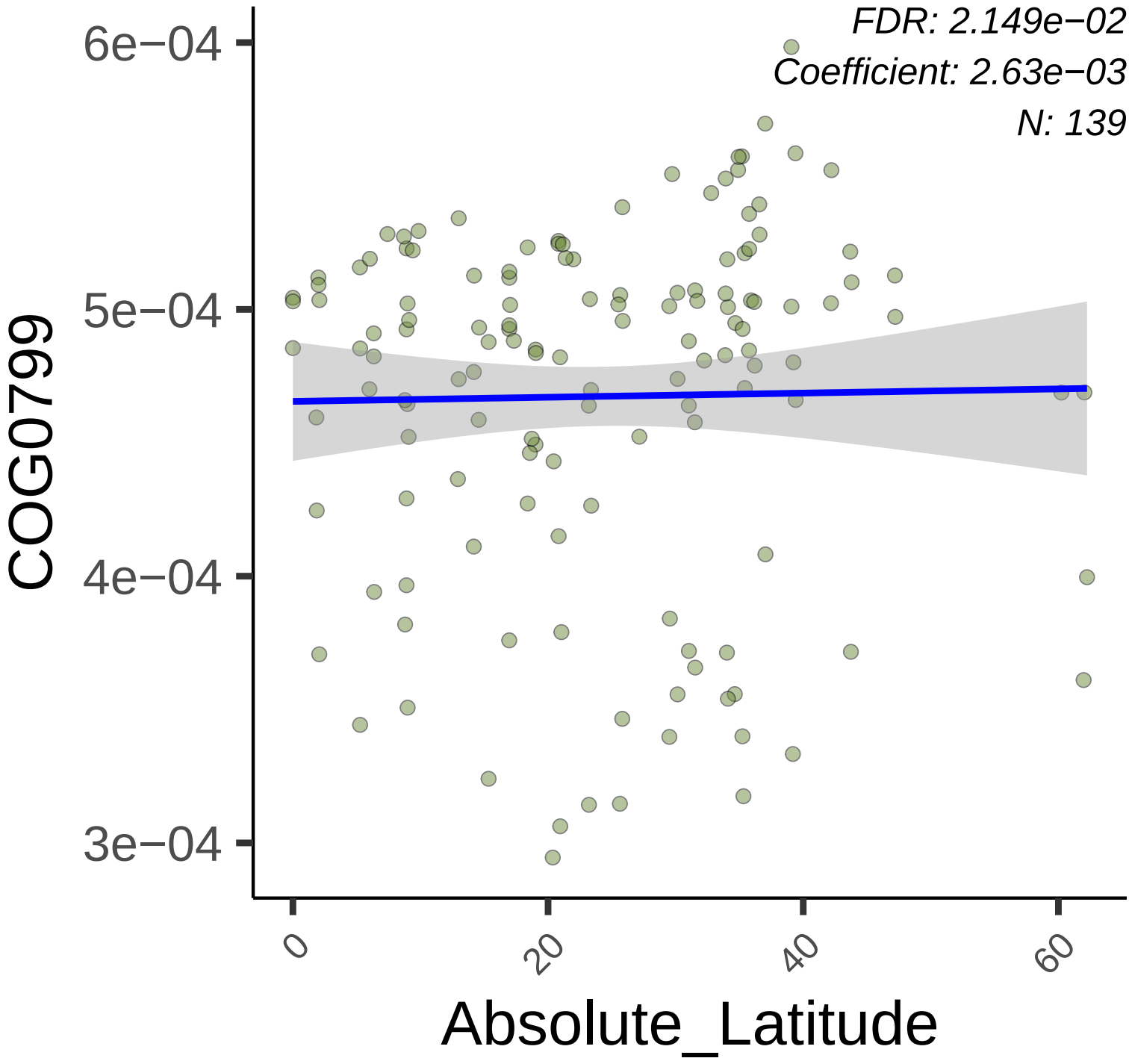

FDR: 2.142e−02
Coefficient: 2.50e−03
N: 139
6e−04
5e−04
4e−04
COG0284
0
20
40
60
Absolute_Latitude

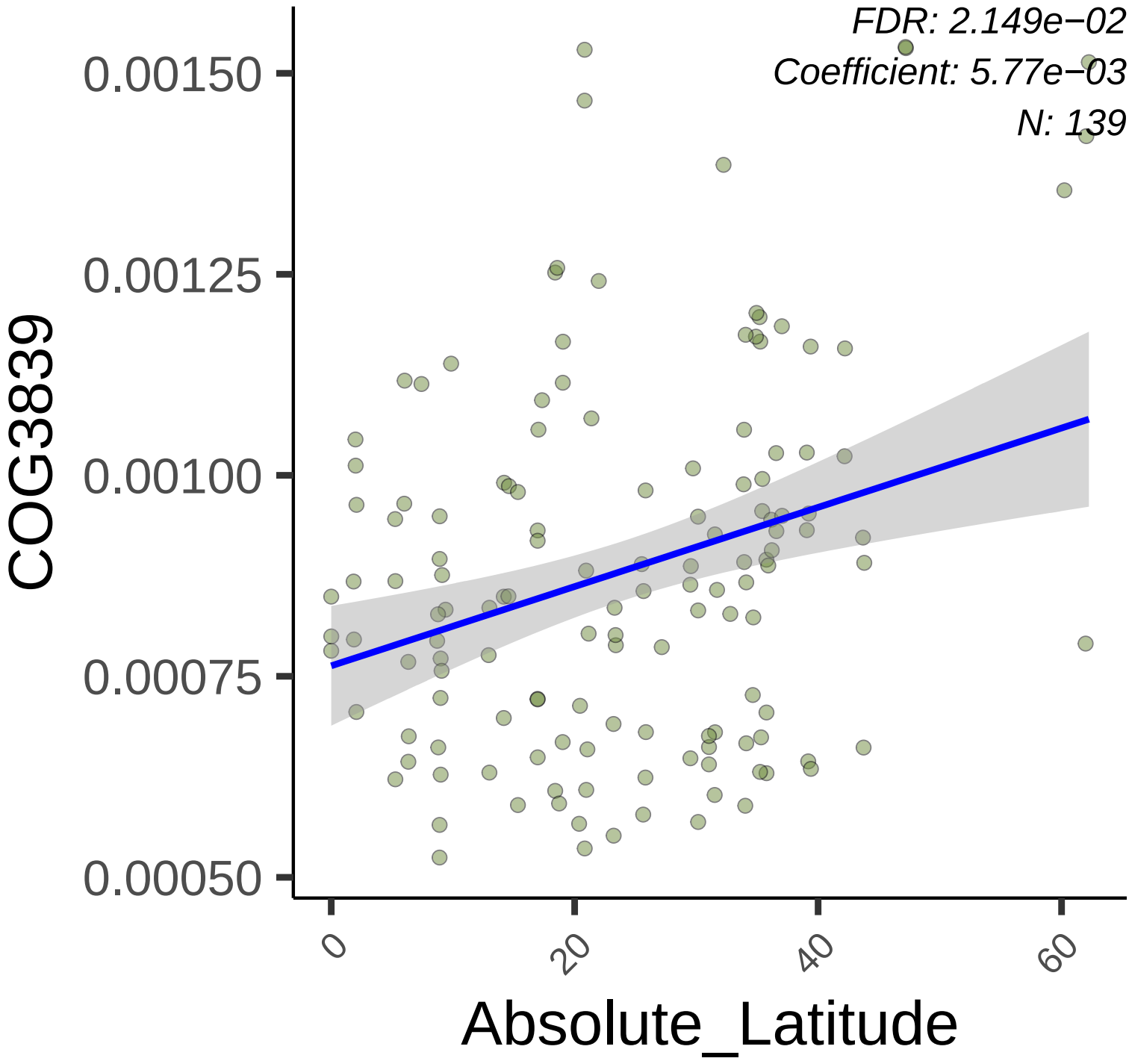

FDR: 2.143e−02
Coefficient: −8.86e−03
N: 139
3e−04
2e−04
1e−04
COG0038
0
20
40
60
Absolute_Latitude

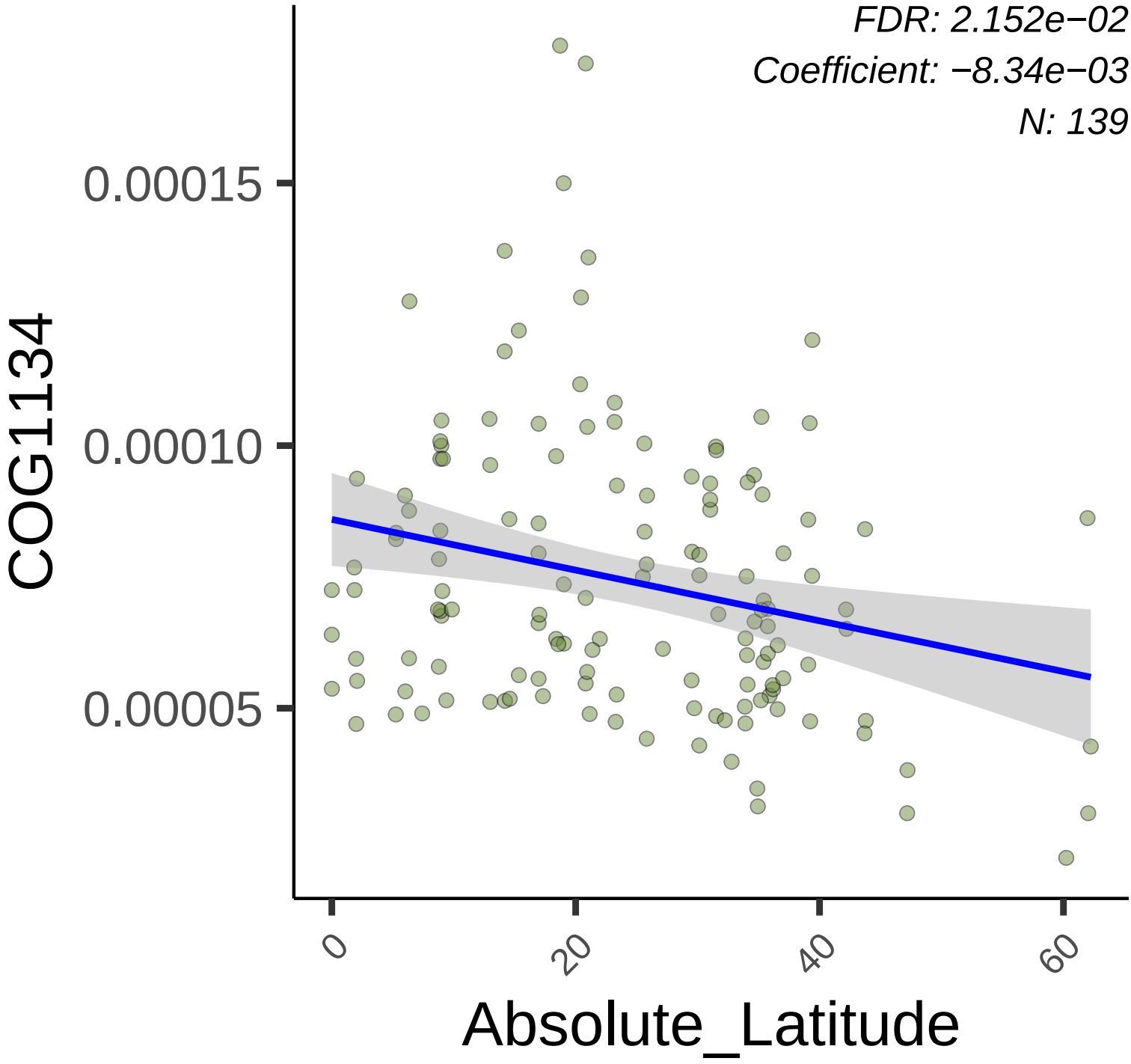

FDR: 2.143e−02
Coefficient: −1.21e−02
N: 139
2.5e−05
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG4246
0
20
40
60
Absolute_Latitude

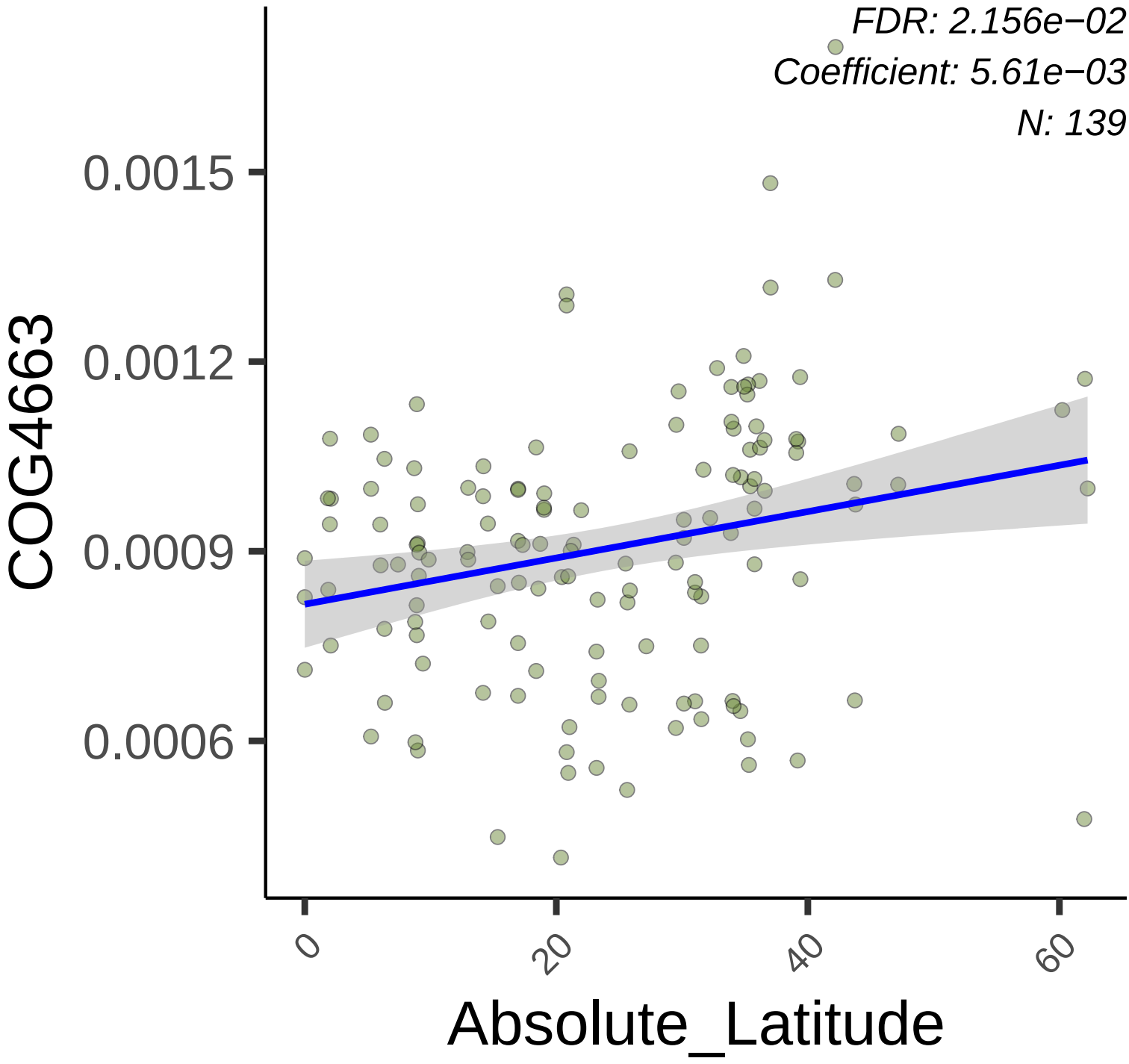

FDR: 2.147e−02
Coefficient: 2.88e−03
N: 139
9e−04
8e−04
7e−04
6e−04
5e−04
COG0195
0
20
40
60
Absolute_Latitude

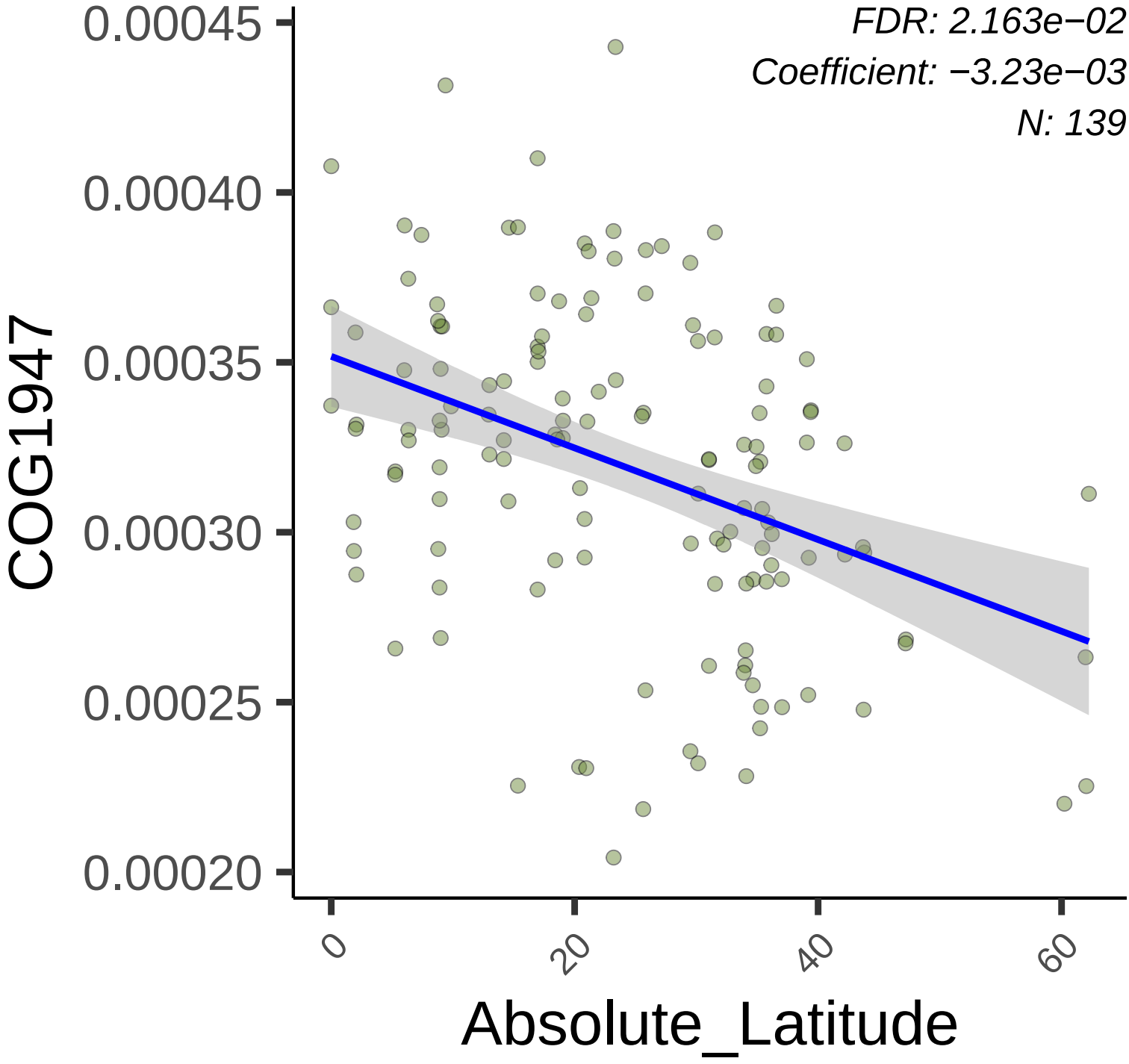

FDR: 2.147e−02
Coefficient: 4.12e−03
N: 139
1e−03
8e−04
6e−04
4e−04
COG0481
0
20
40
60
Absolute_Latitude

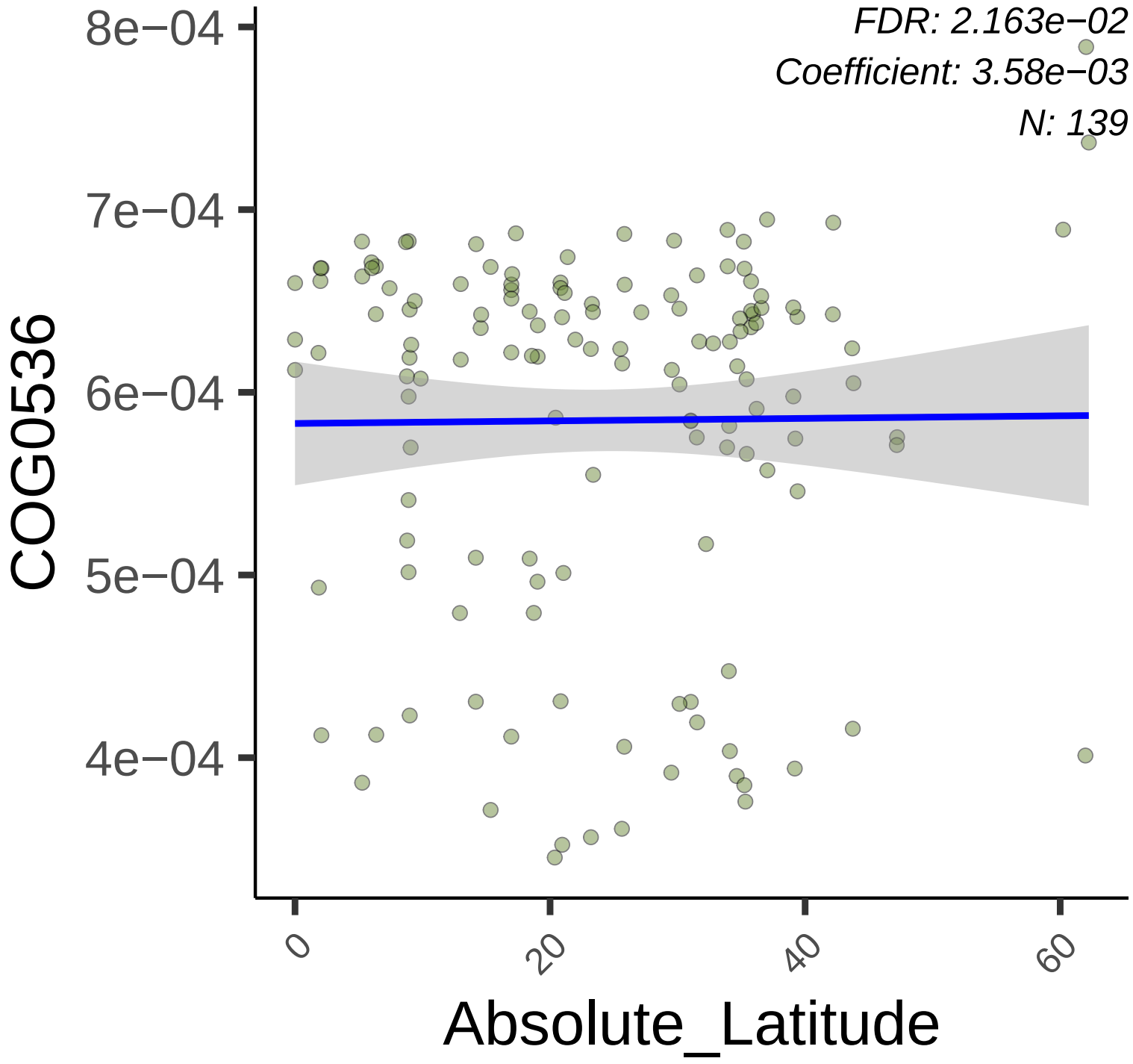

FDR: 2.149e−02
Coefficient: 2.63e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0799
0
20
40
60
Absolute_Latitude

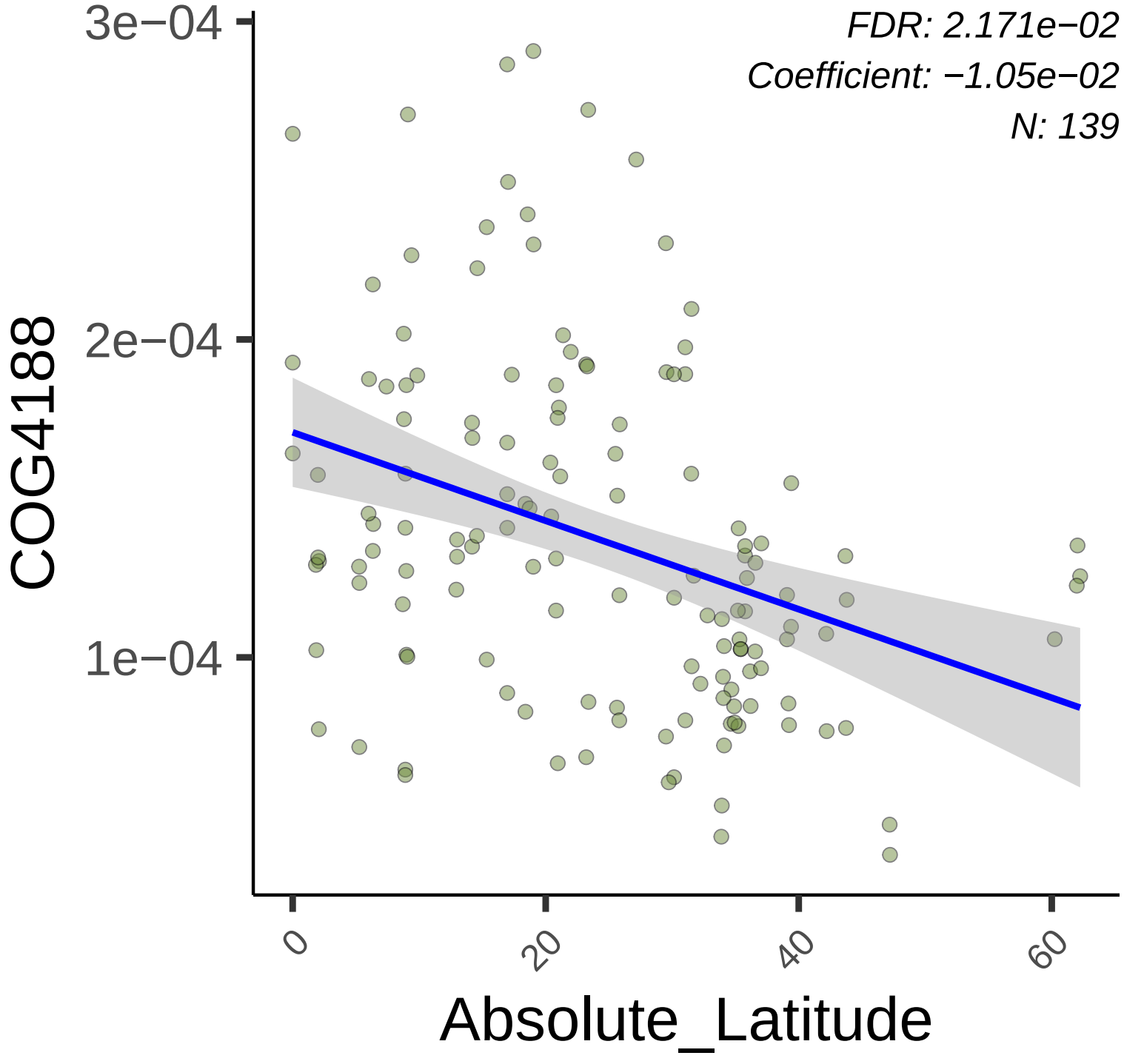

FDR: 2.149e−02
Coefficient: 5.77e−03
N: 139
0.00150
0.00125
0.00100
0.00075
0.00050
COG3839
0
20
40
60
Absolute_Latitude

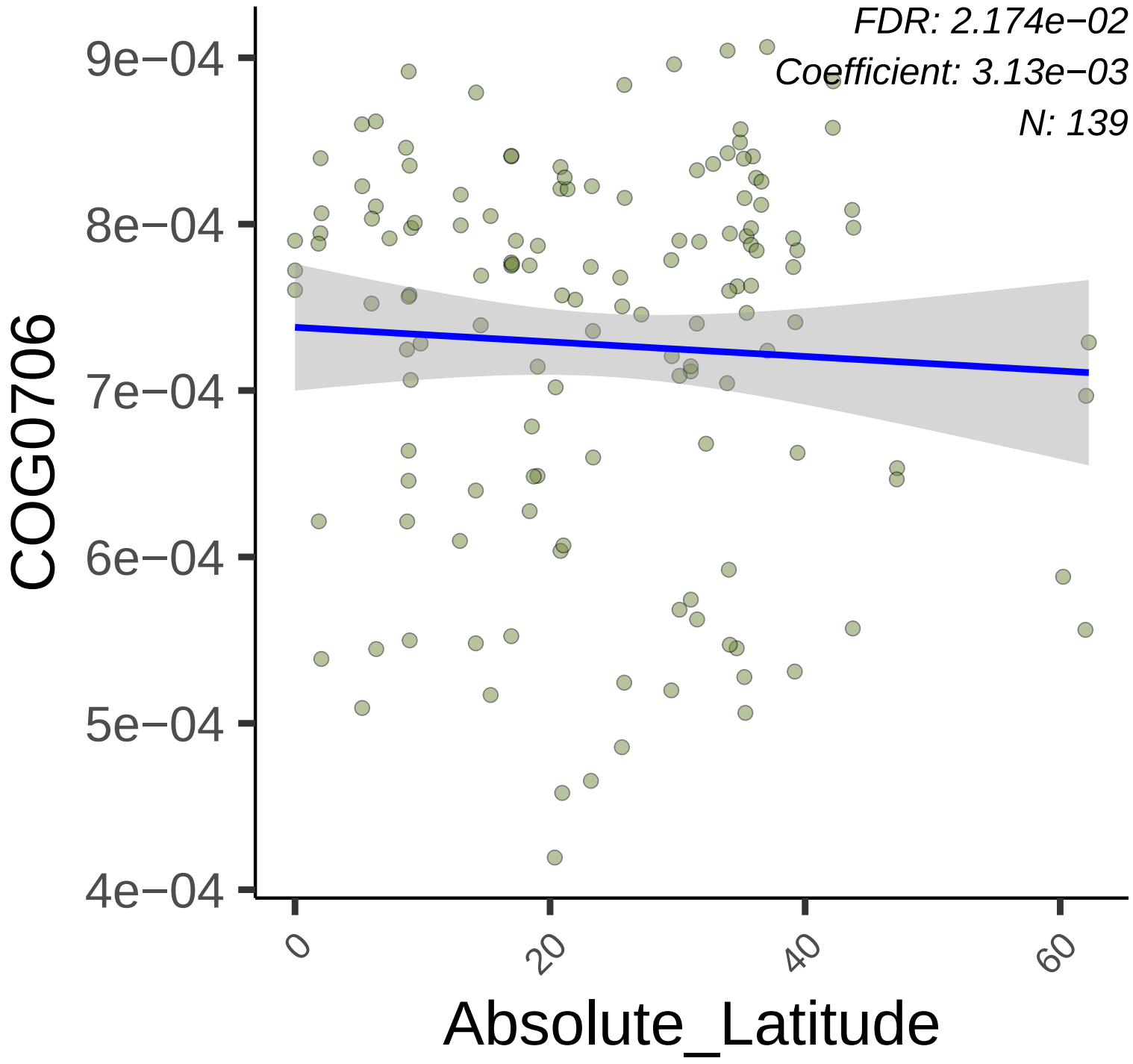

FDR: 2.152e−02
Coefficient: −8.34e−03
N: 139
0.00015
0.00010
0.00005
COG1134
0
20
40
60
Absolute_Latitude

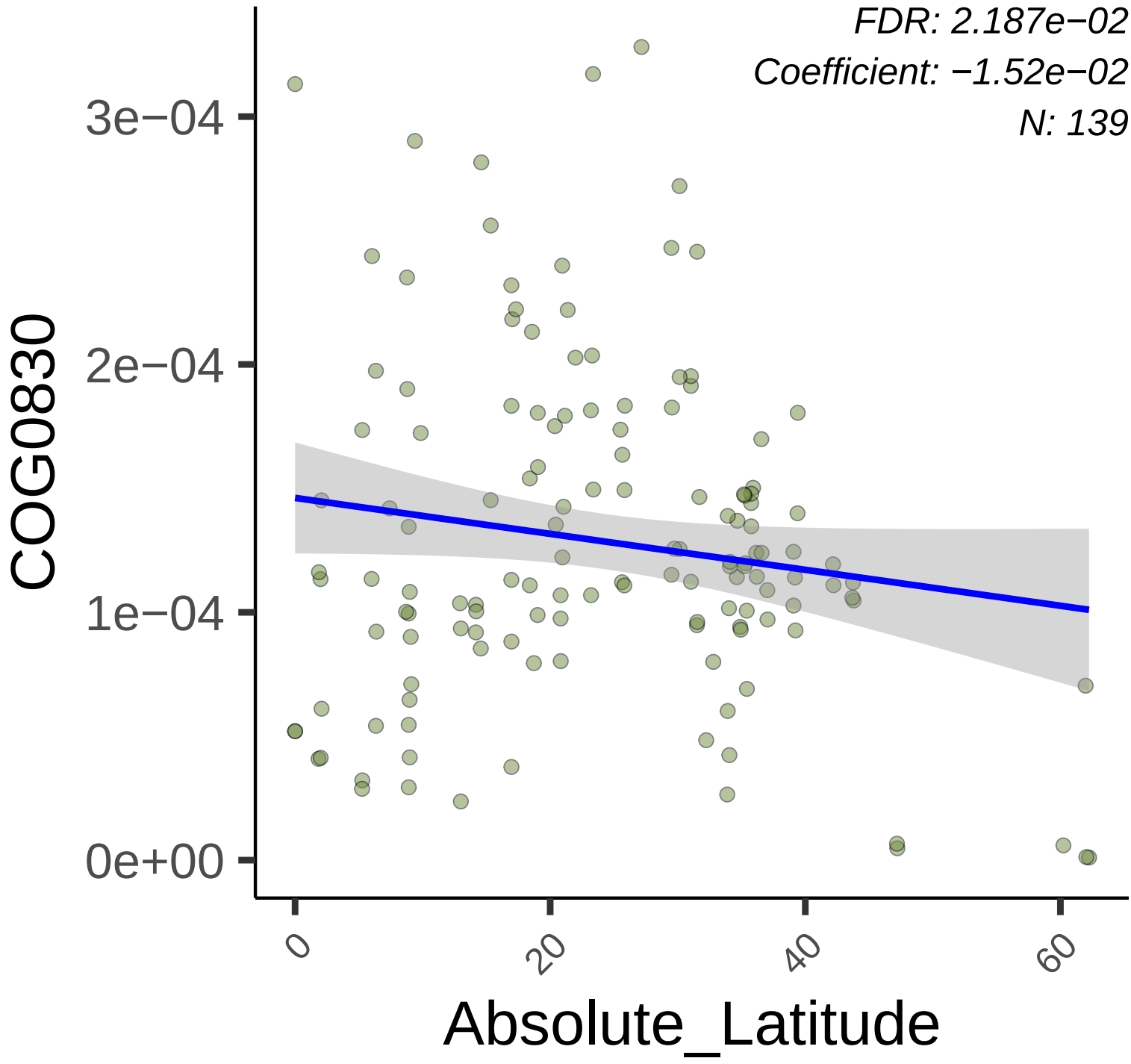

FDR: 2.156e−02
Coefficient: 5.61e−03
N: 139
0.0015
0.0012
0.0009
0.0006
COG4663
0
20
40
60
Absolute_Latitude

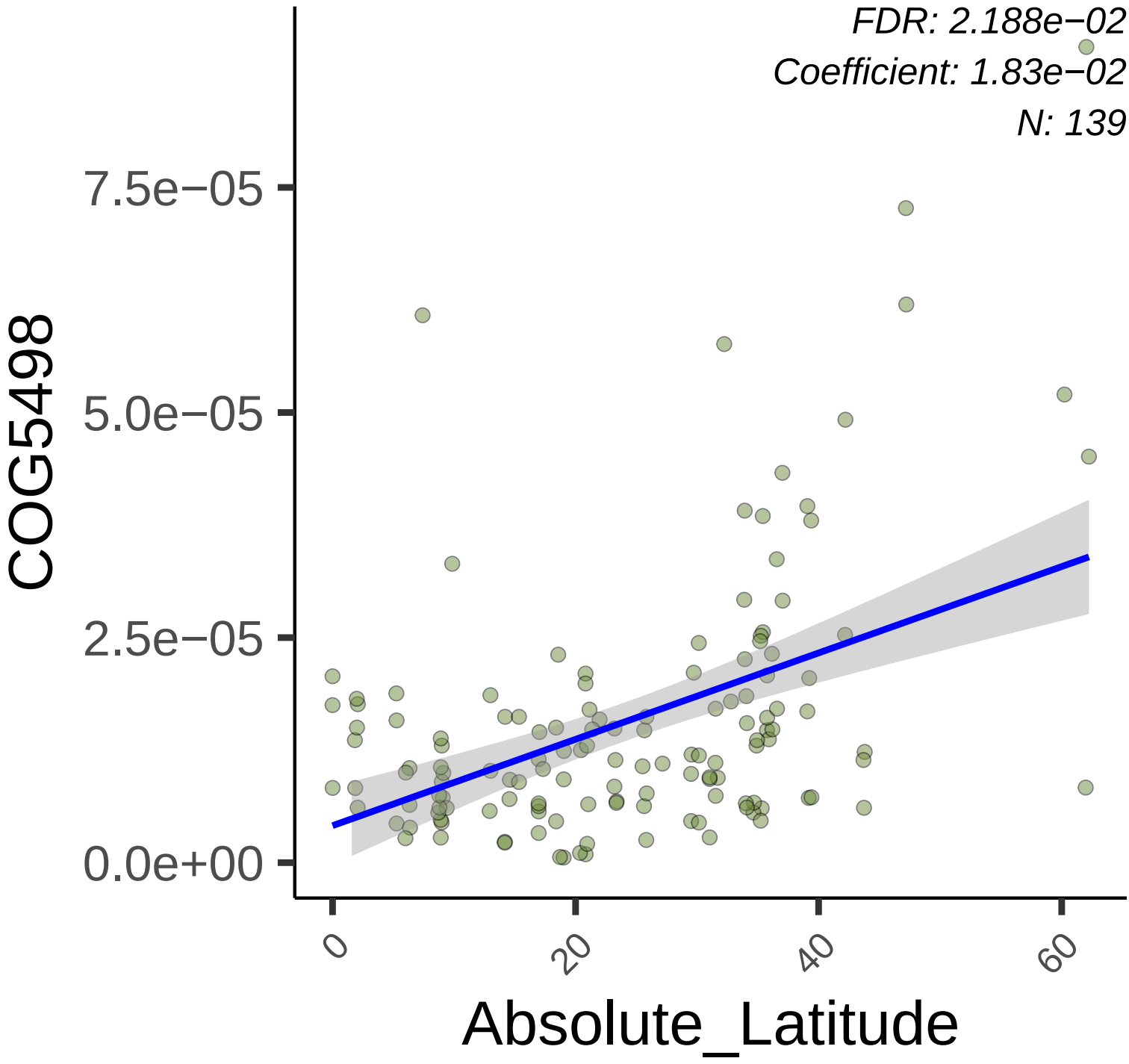

FDR: 2.163e−02
Coefficient: −3.23e−03
N: 139
0.00045
0.00040
0.00035
0.00030
0.00025
0.00020
COG1947
0
20
40
60
Absolute_Latitude

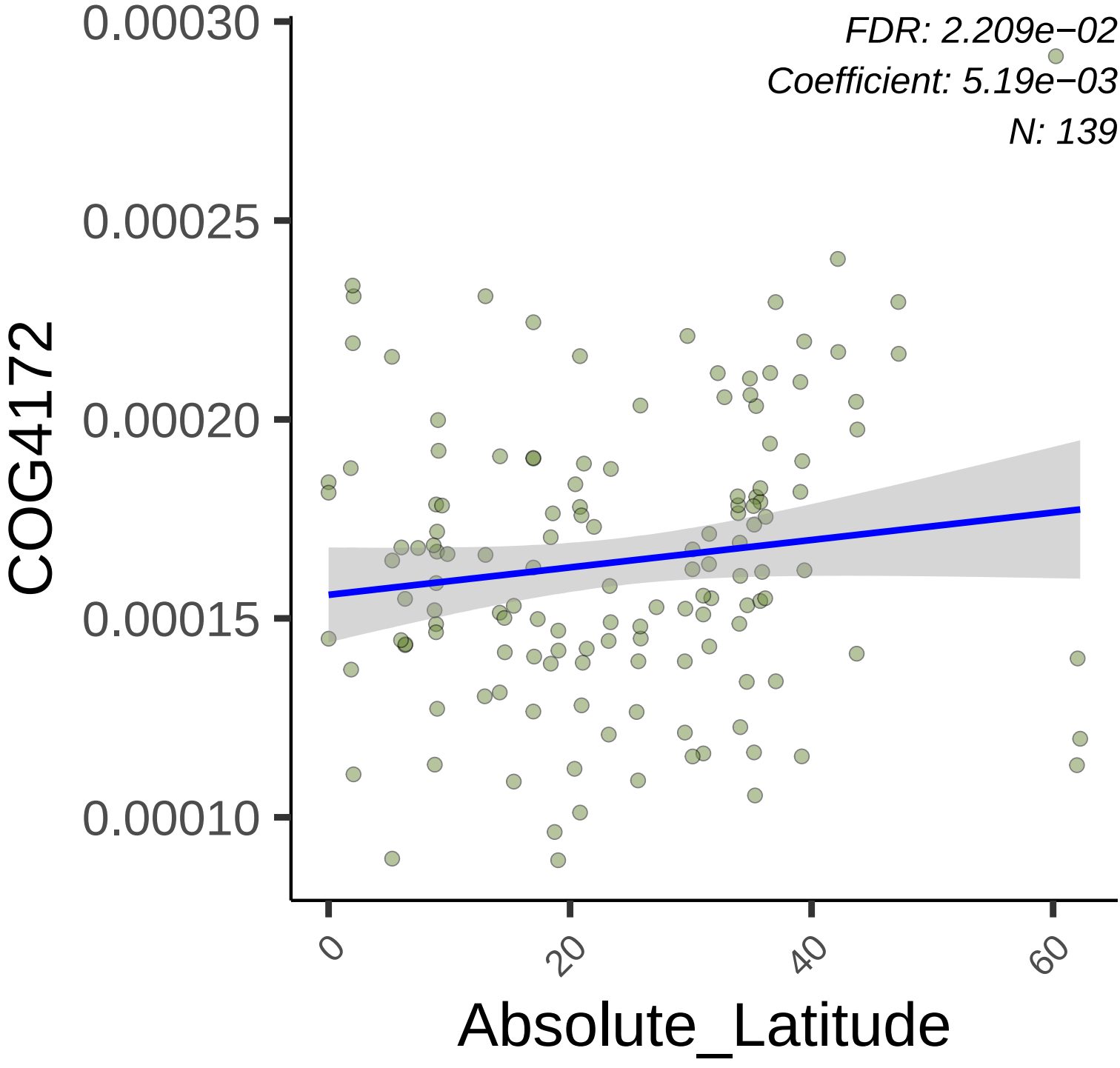

FDR: 2.163e−02
Coefficient: 3.58e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
COG0536
0
20
40
60
Absolute_Latitude

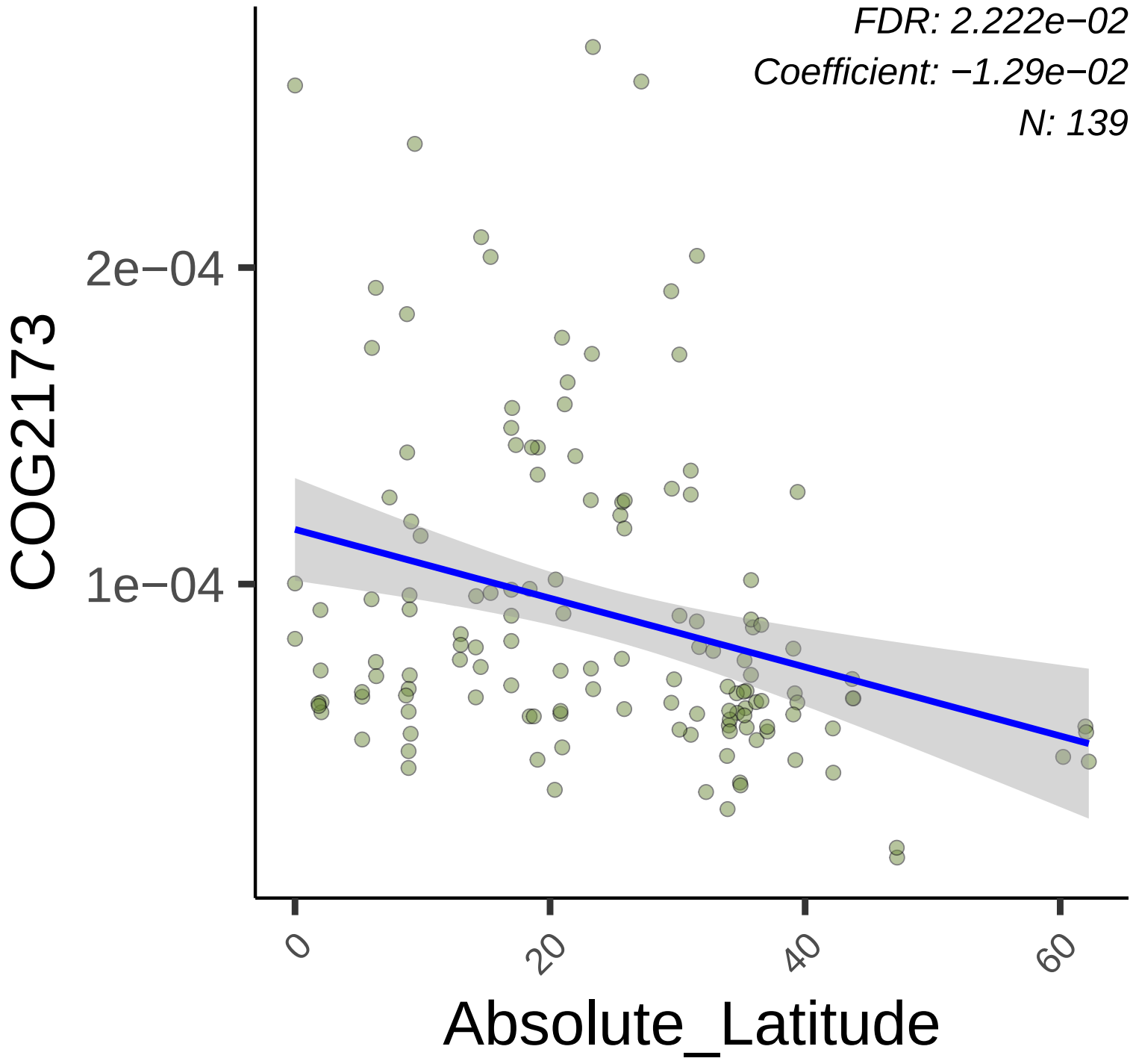

FDR: 2.171e−02
Coefficient: −1.05e−02
N: 139
3e−04
2e−04
1e−04
COG4188
0
20
40
60
Absolute_Latitude

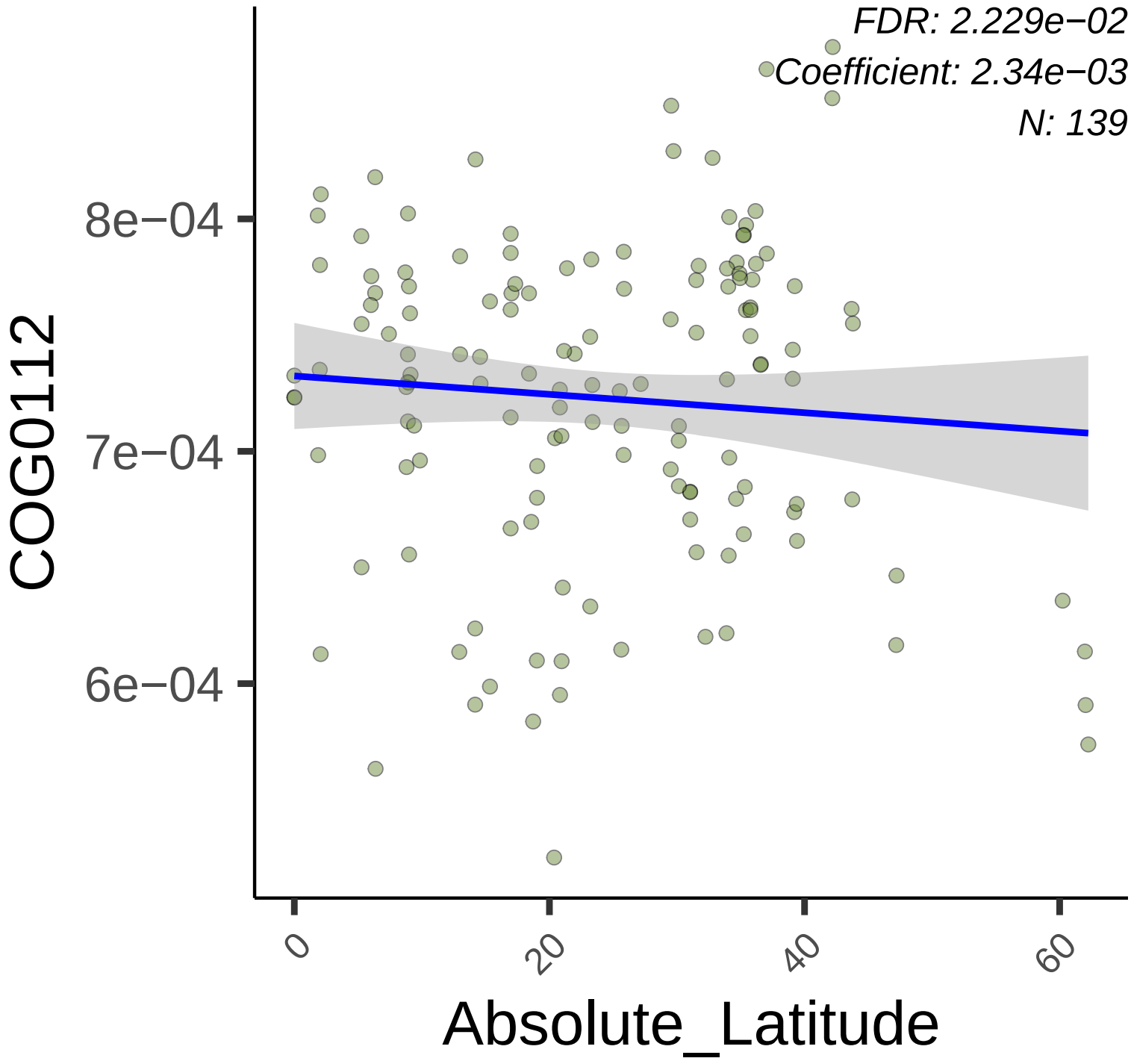

FDR: 2.174e−02
Coefficient: 3.13e−03
N: 139
9e−04
8e−04
7e−04
6e−04
5e−04
4e−04
COG0706
0
20
40
60
Absolute_Latitude

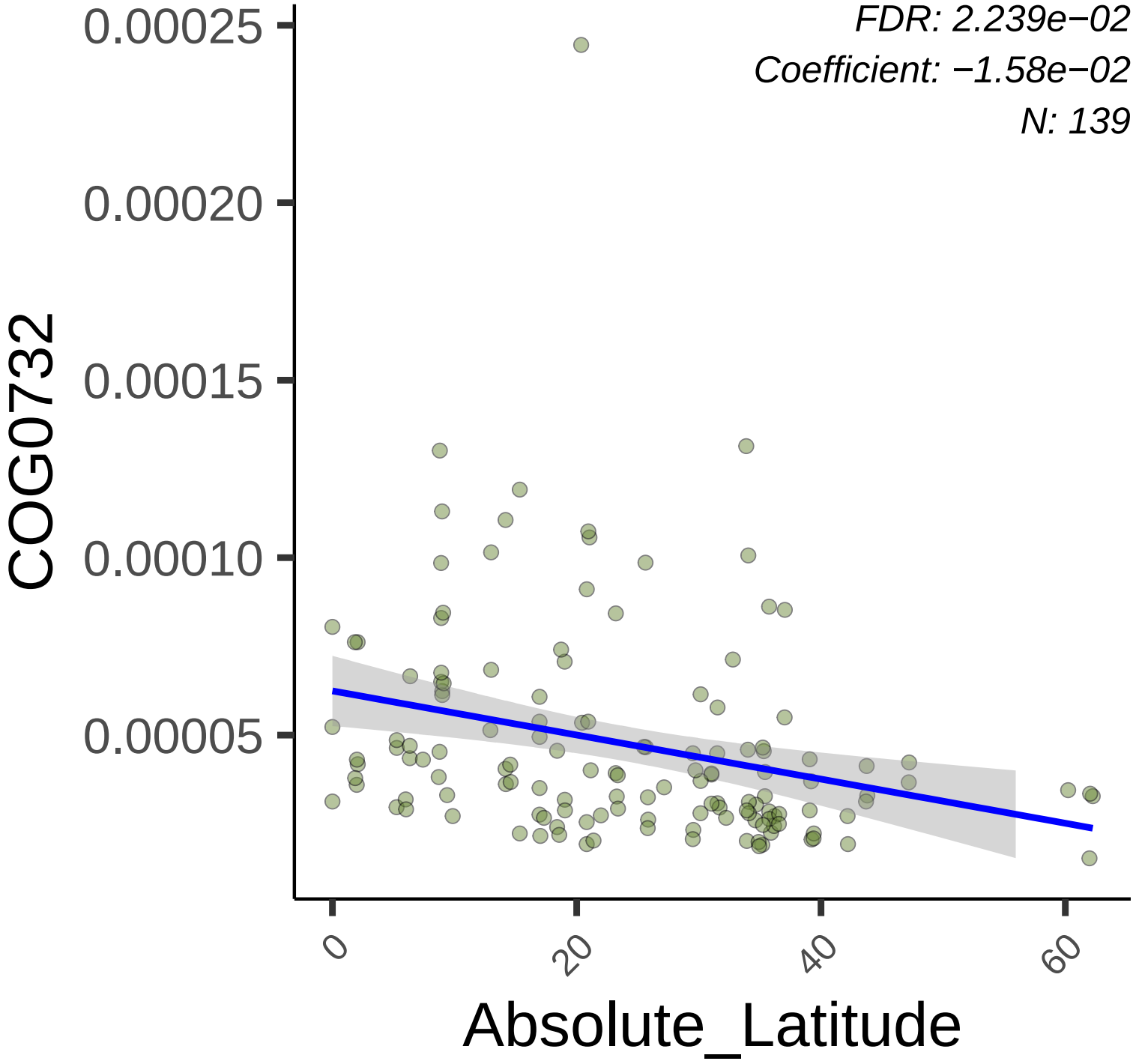

FDR: 2.187e−02
Coefficient: −1.52e−02
N: 139
COG0830
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

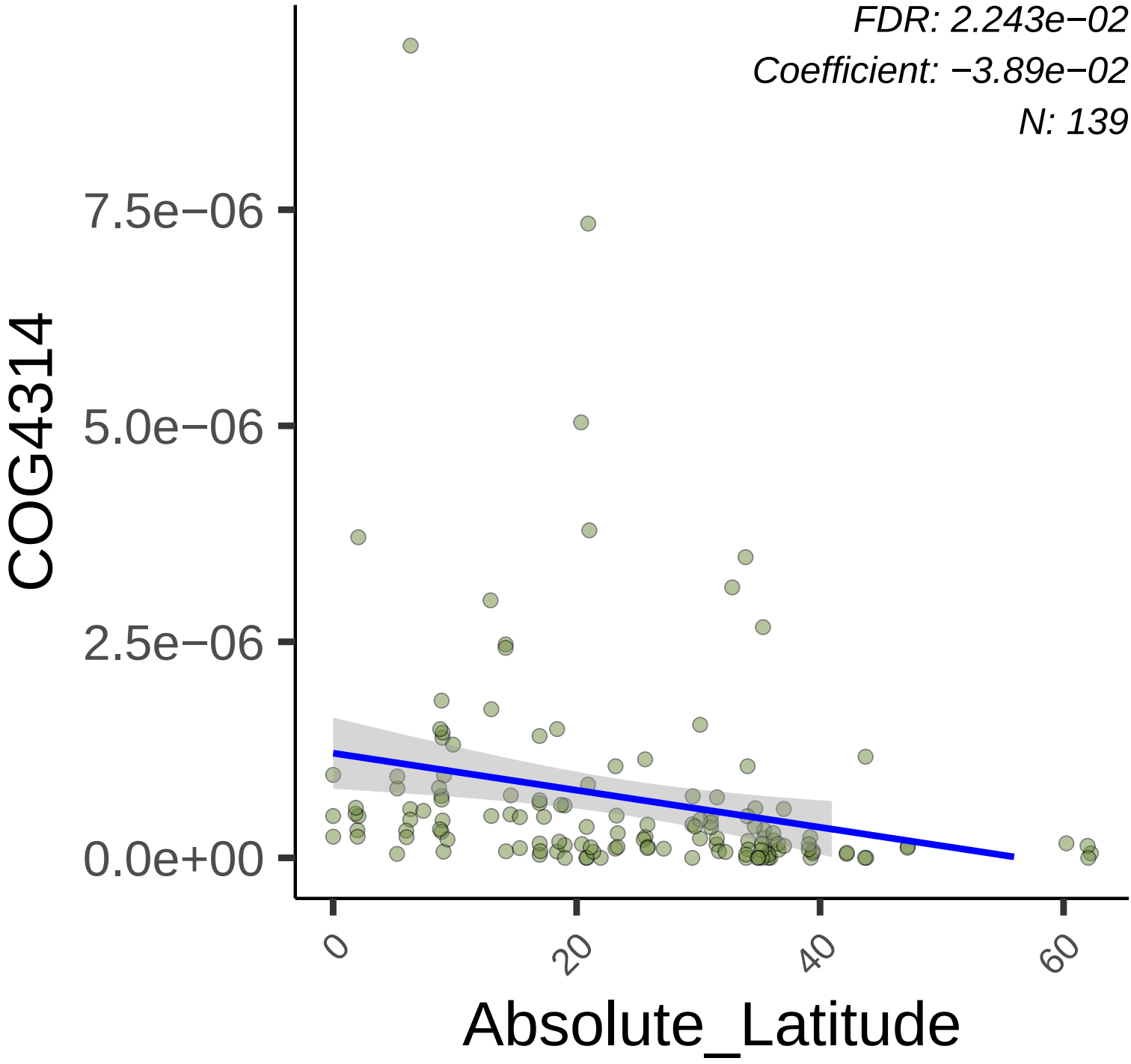

FDR: 2.188e−02
Coefficient: 1.83e−02
N: 139
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG5498
0
20
40
60
Absolute_Latitude

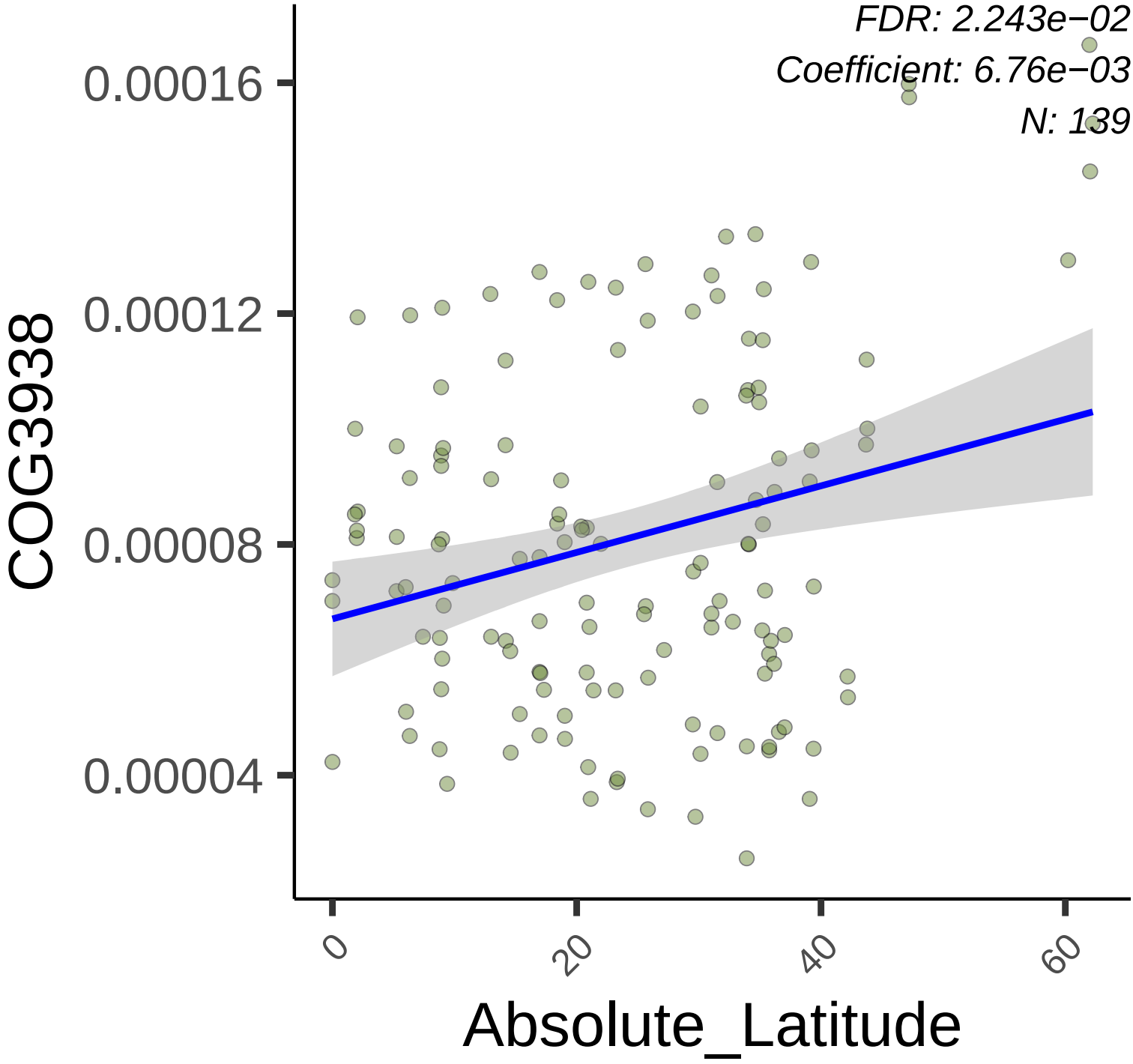

FDR: 2.209e−02
Coefficient: 5.19e−03
N: 139
0.00030
0.00025
0.00020
0.00015
0.00010
COG4172
0
20
40
60
Absolute_Latitude

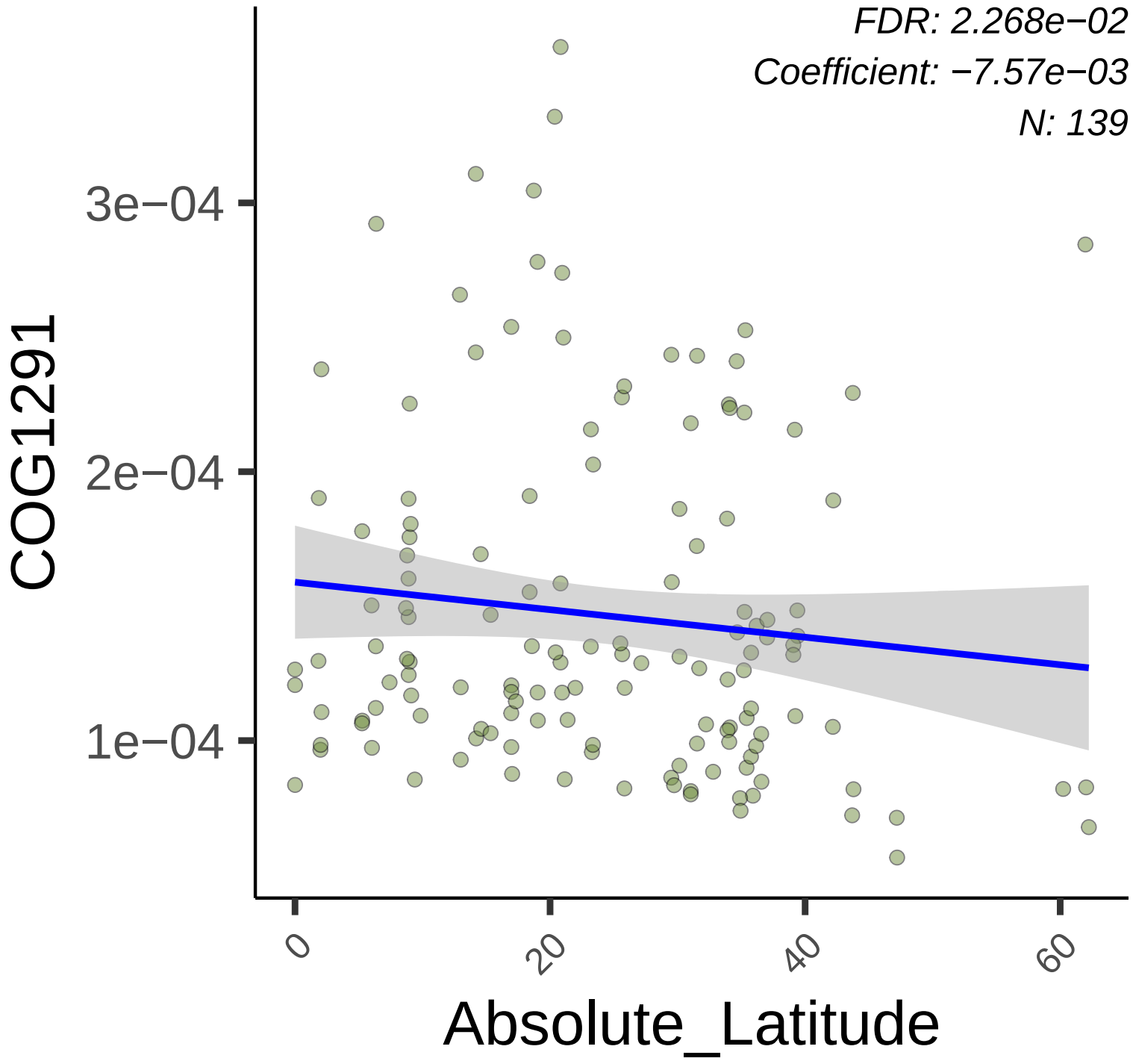

FDR: 2.222e−02
Coefficient: −1.29e−02
N: 139
COG2173
2e−04
1e−04
0
20
40
60
Absolute_Latitude

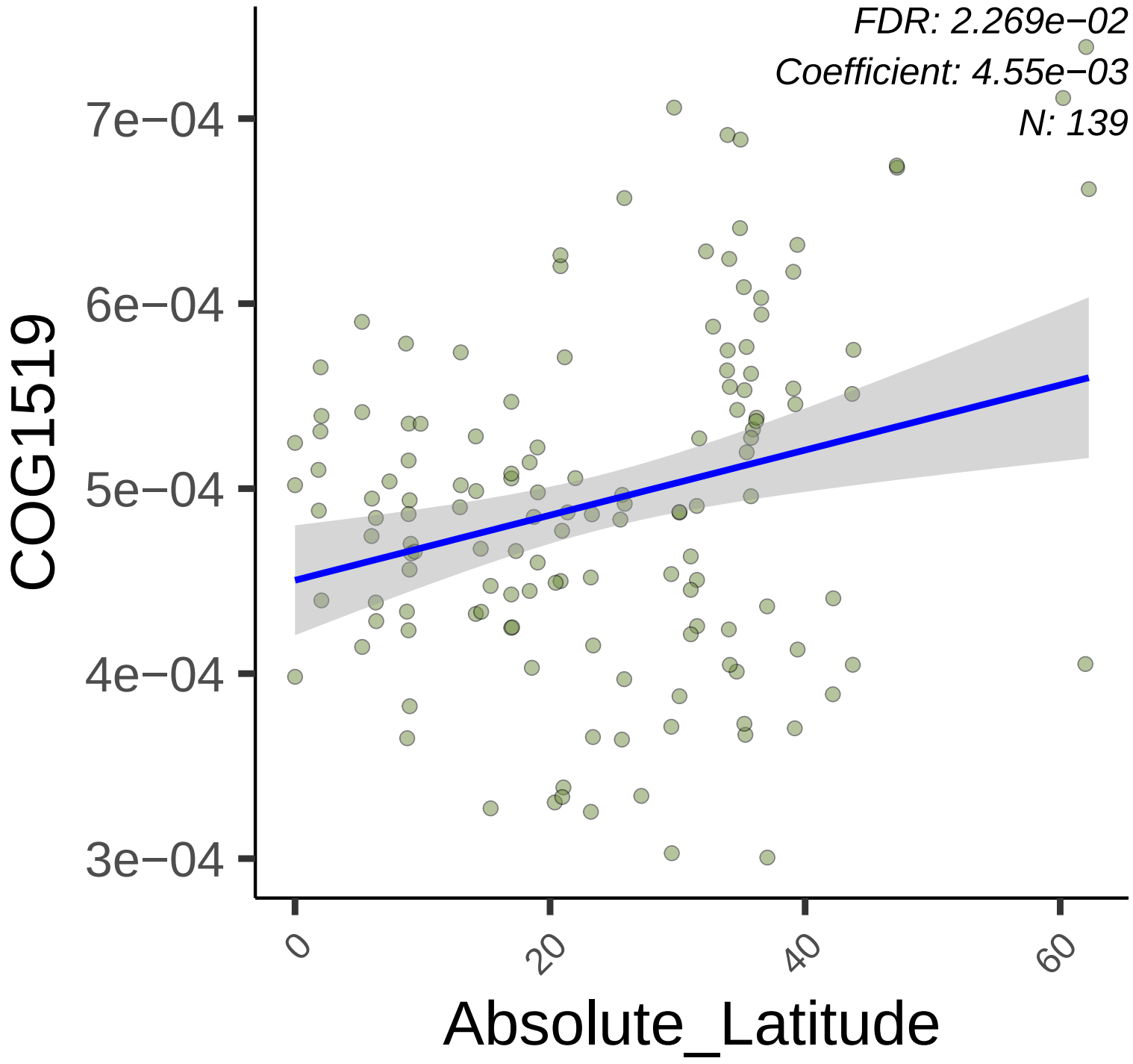

FDR: 2.229e−02
Coefficient: 2.34e−03
N: 139
8e−04
7e−04
6e−04
COG0112
0
20
40
60
Absolute_Latitude

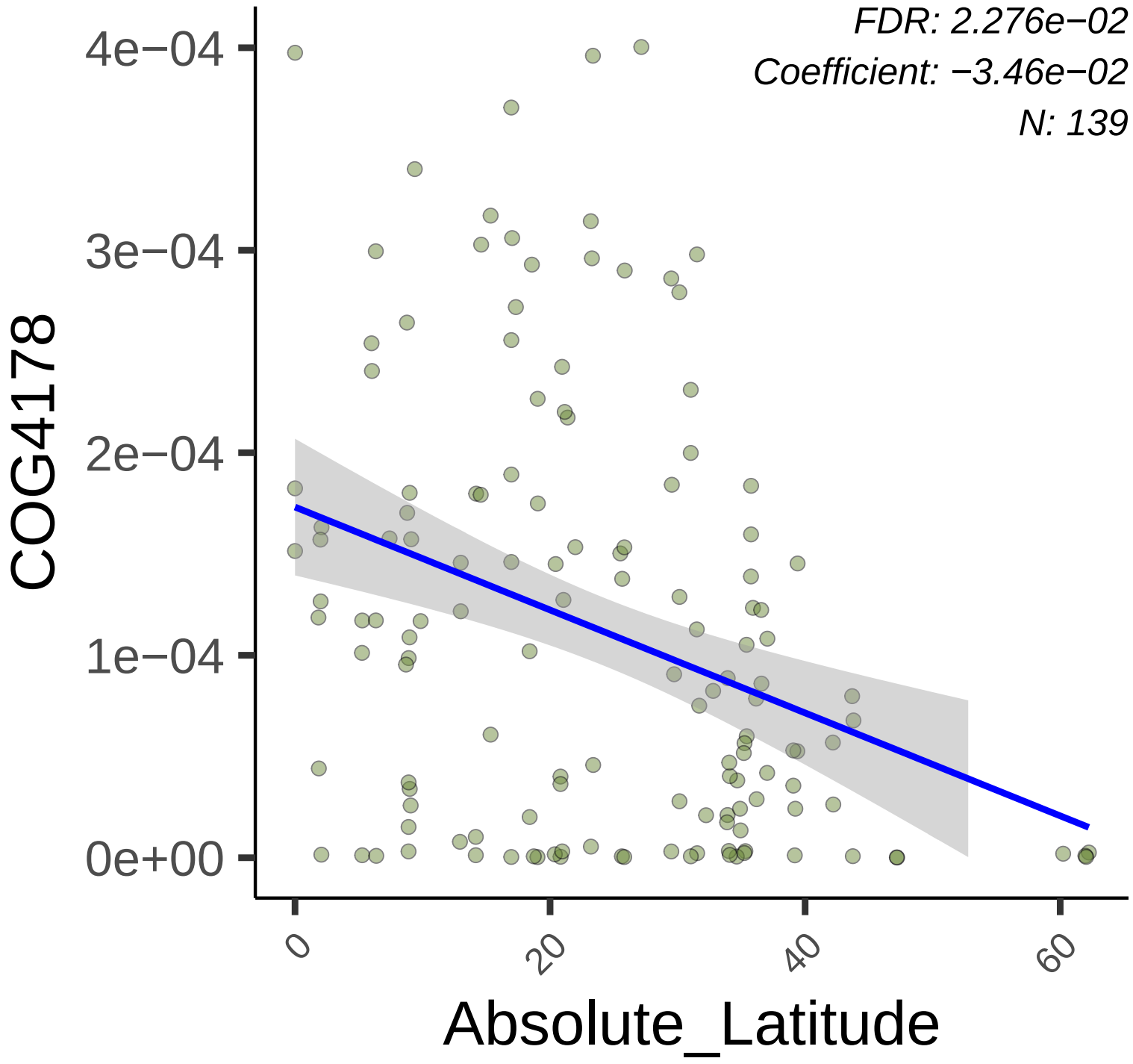

FDR: 2.239e−02
Coefficient: −1.58e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG0732
0
20
40
60
Absolute_Latitude

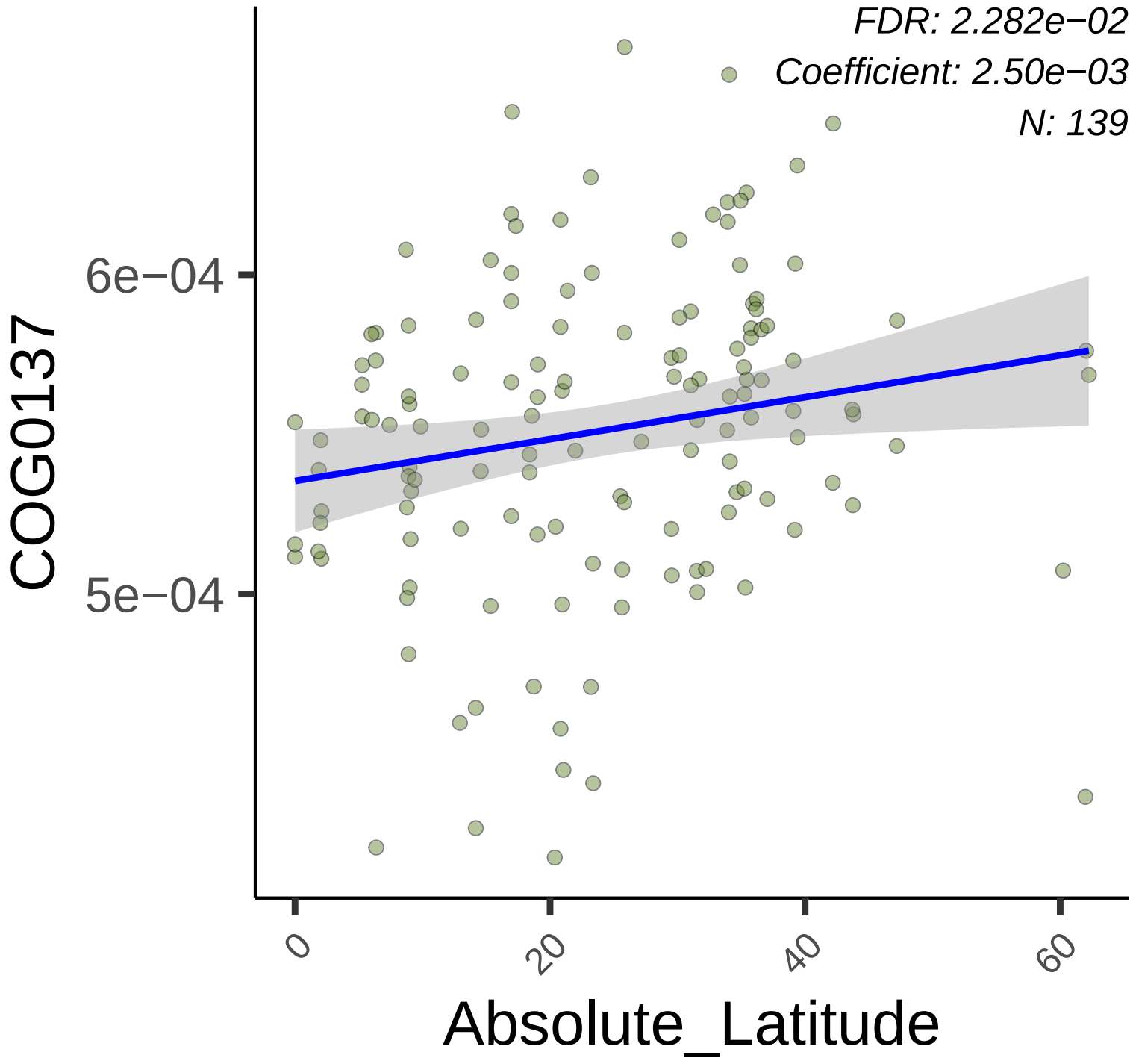

FDR: 2.243e−02
Coefficient: −3.89e−02
N: 139
COG4314
7.5e−06
5.0e−06
2.5e−06
0.0e+00
0
20
40
60
Absolute_Latitude

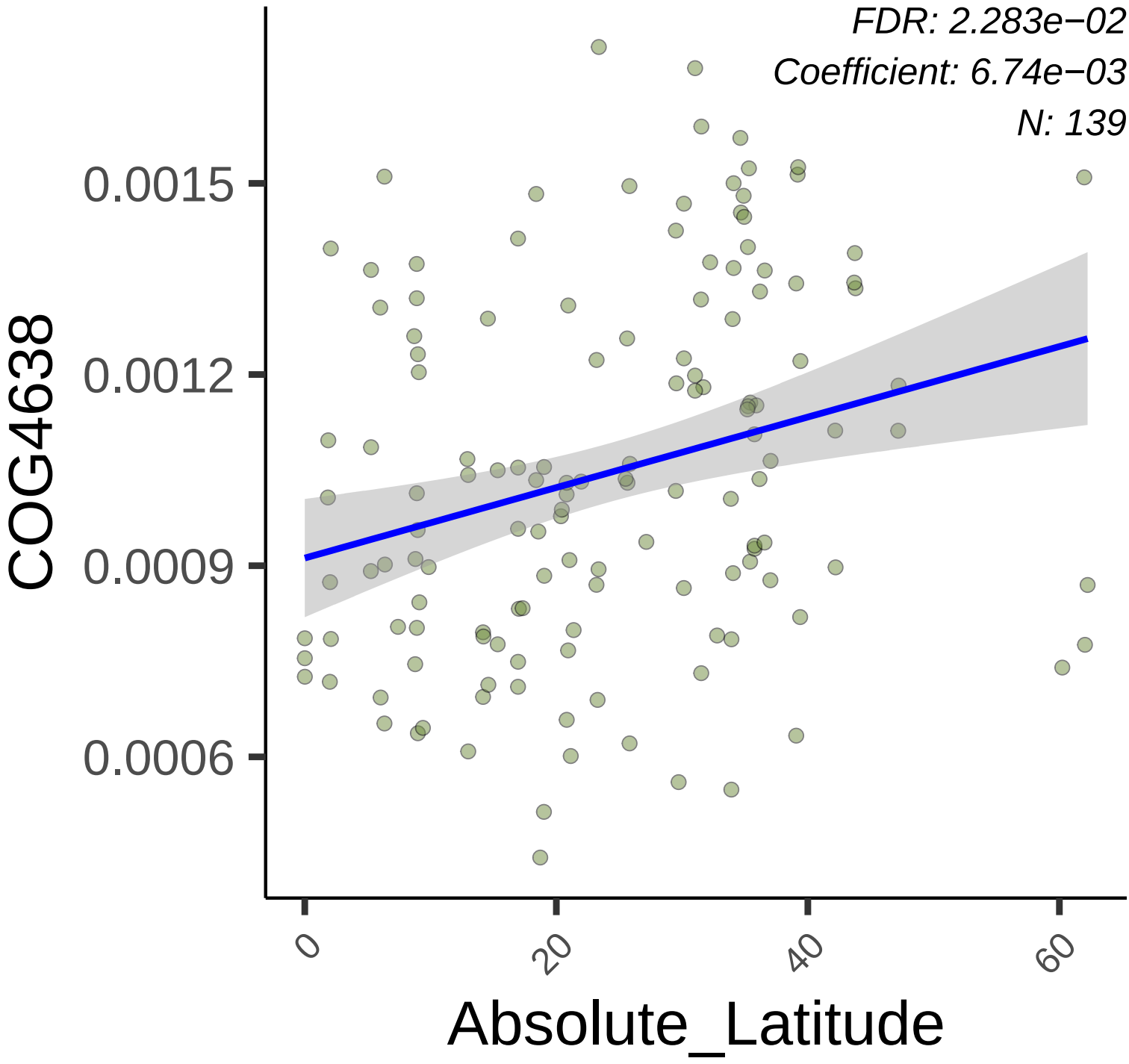

FDR: 2.243e−02
Coefficient: 6.76e−03
N: 139
0.00016
0.00012
0.00008
0.00004
COG3938
0
20
40
60
Absolute_Latitude

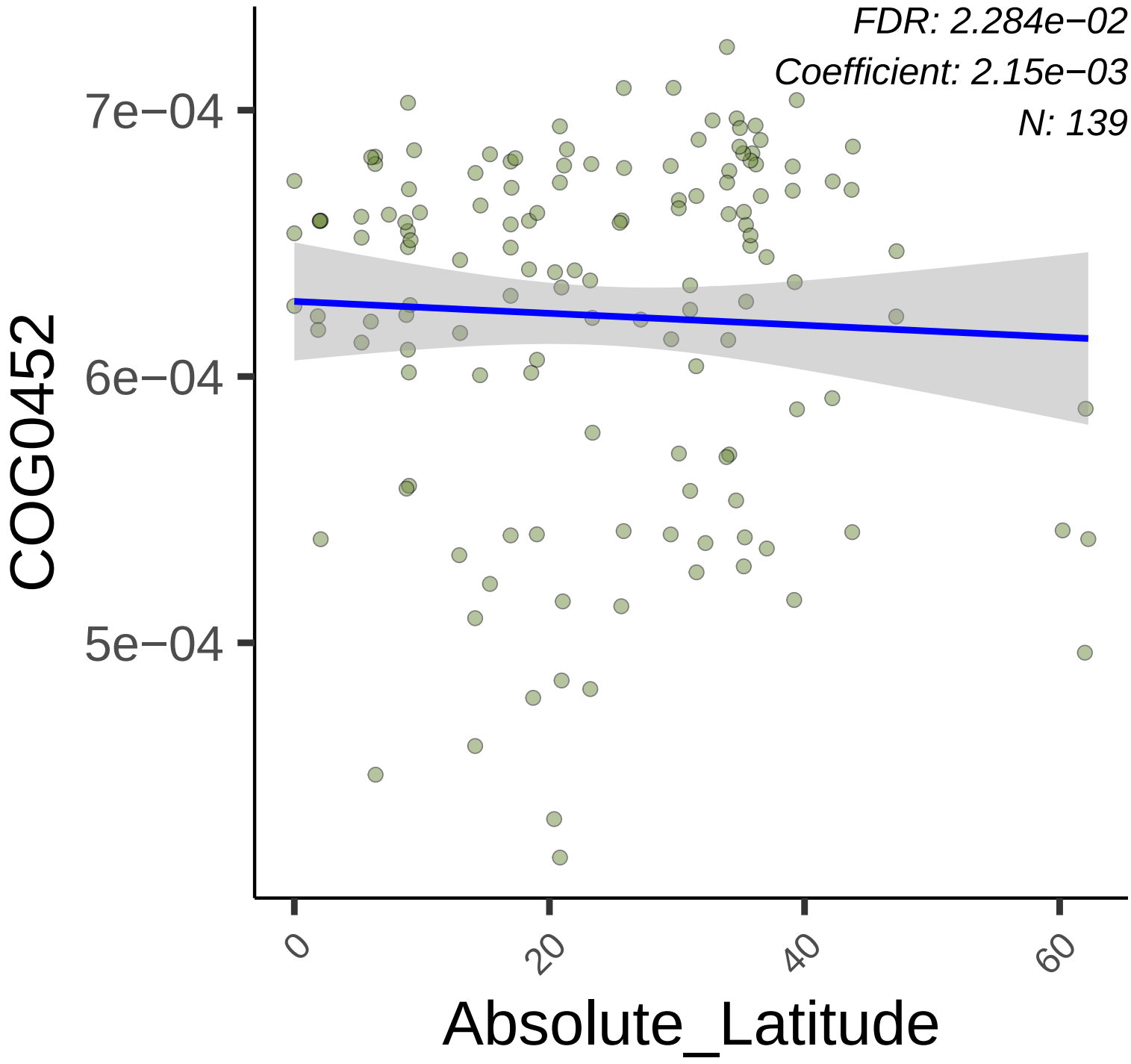

FDR: 2.268e−02
Coefficient: −7.57e−03
N: 139
3e−04
2e−04
1e−04
COG1291
0
20
40
60
Absolute_Latitude

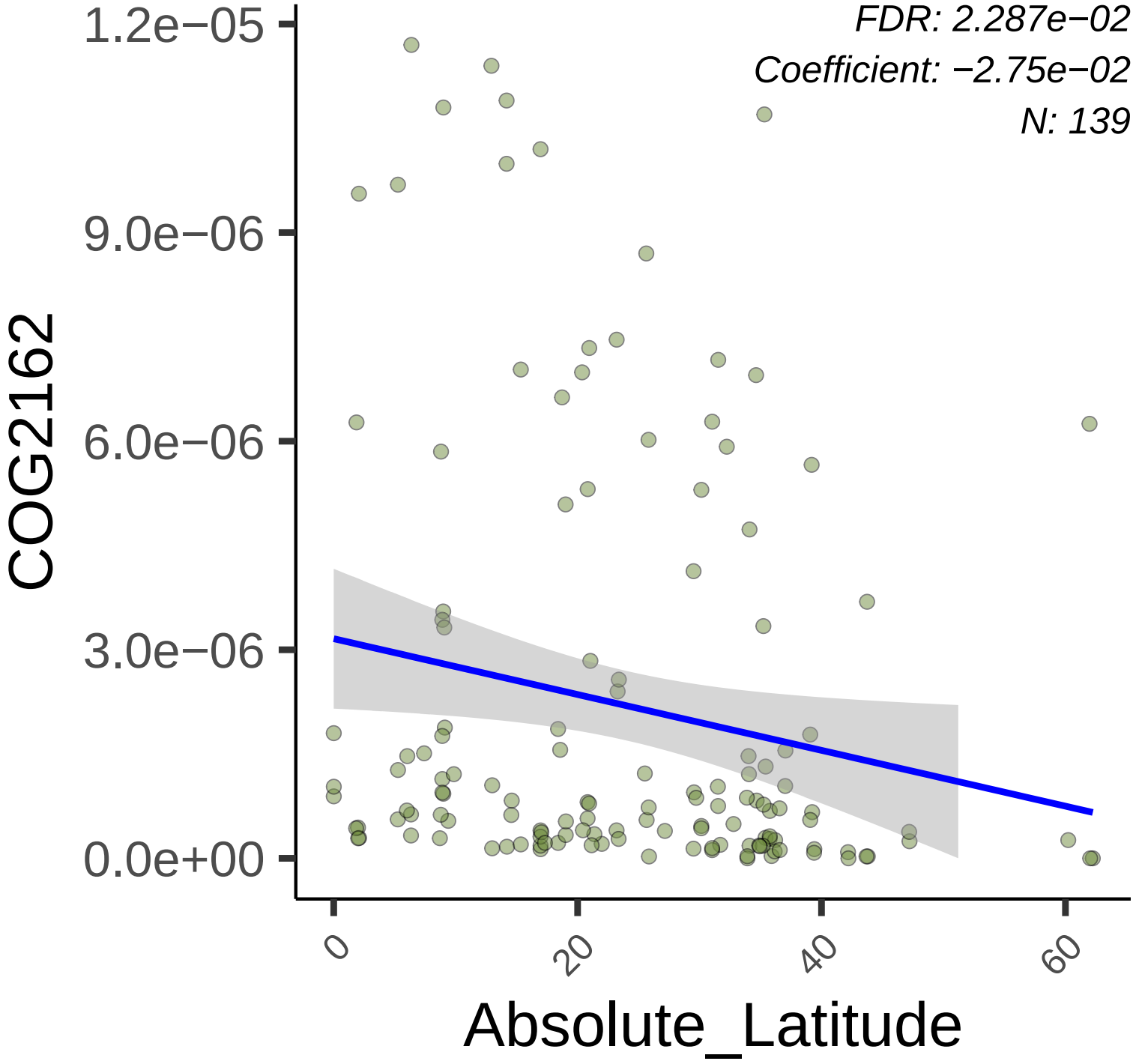

FDR: 2.269e−02
Coefficient: 4.55e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG1519
0
20
40
60
Absolute_Latitude

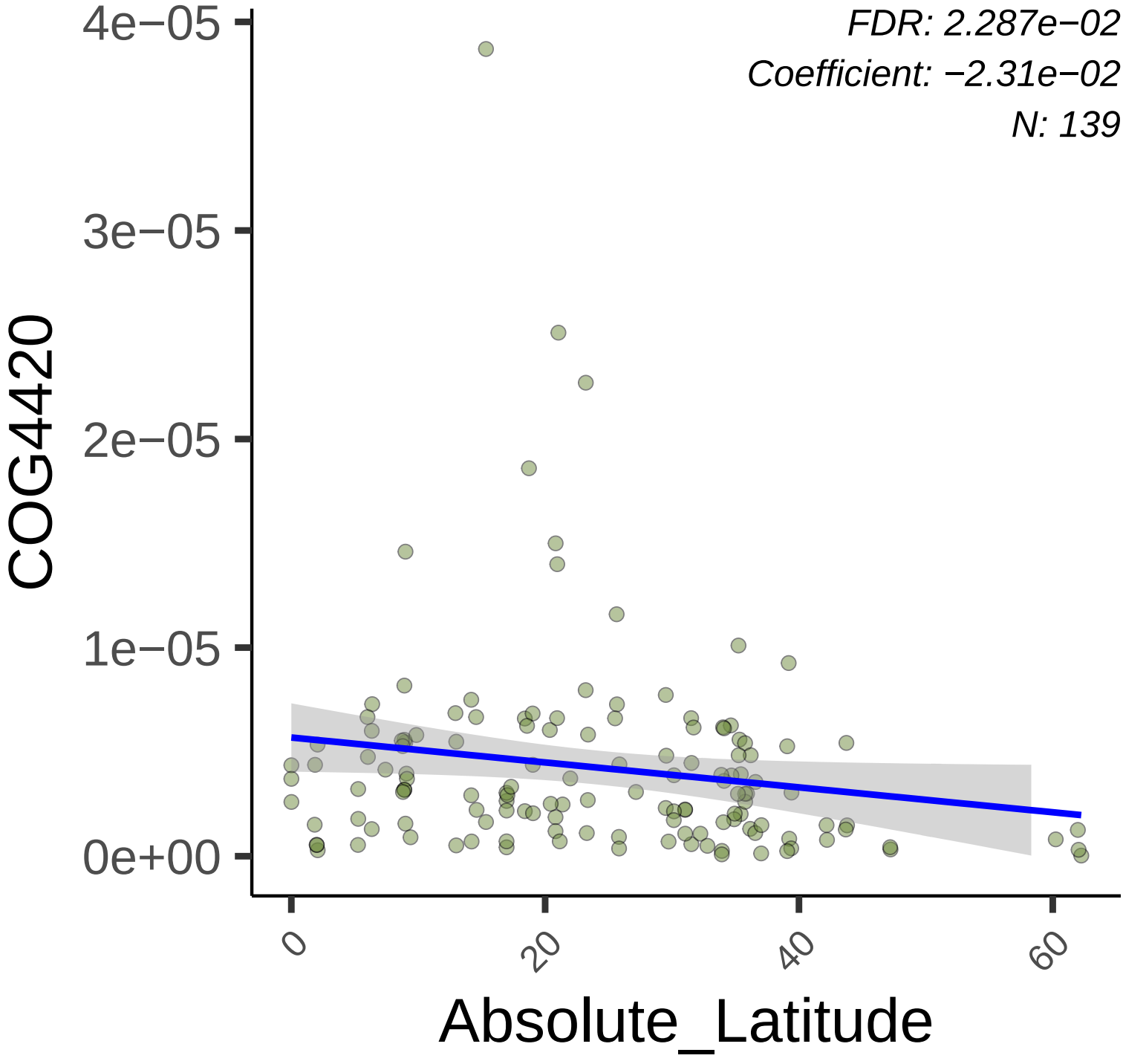

FDR: 2.276e−02
Coefficient: −3.46e−02
N: 139
4e−04
3e−04
2e−04
1e−04
0e+00
COG4178
0
20
40
60
Absolute_Latitude

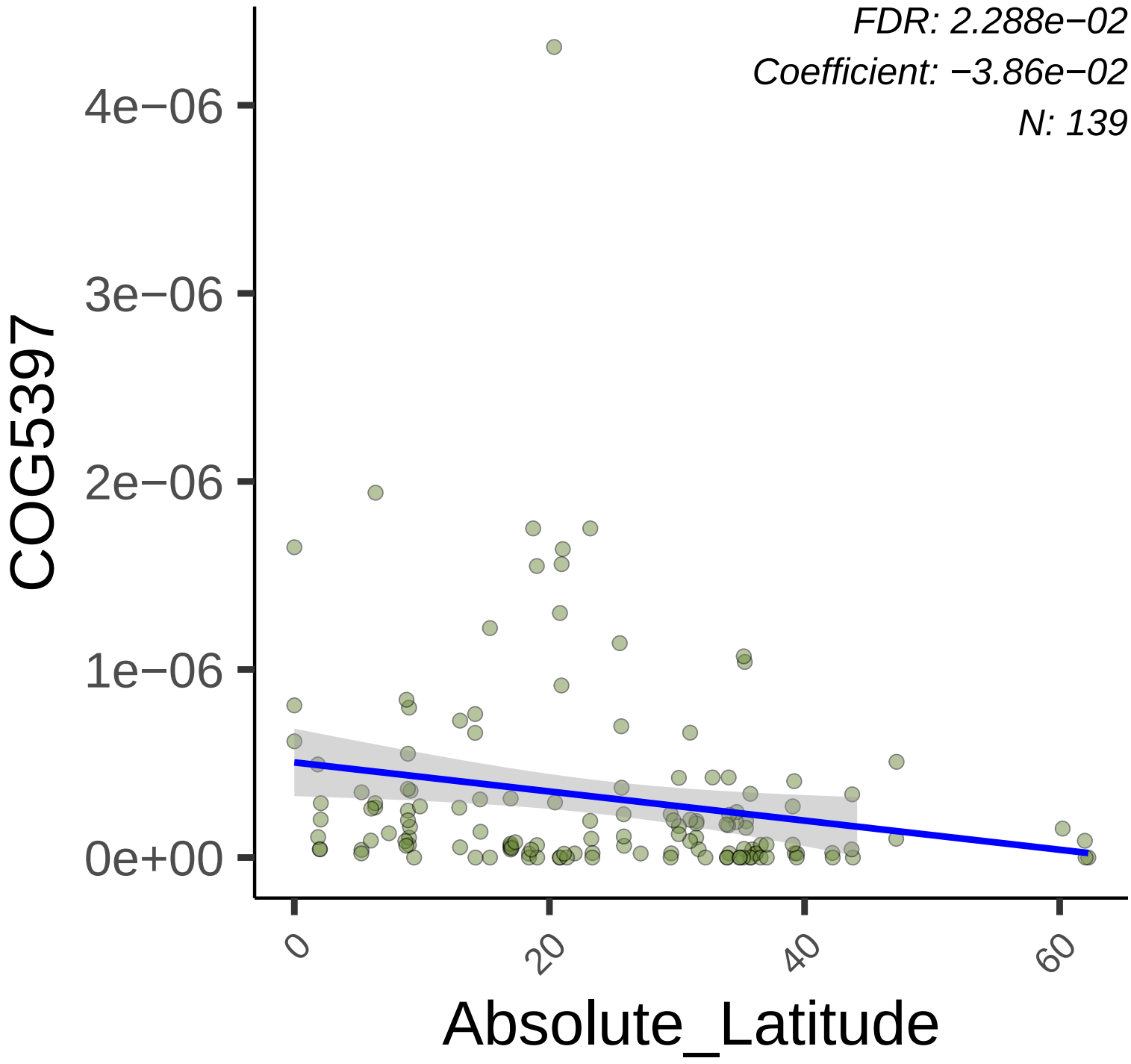

FDR: 2.282e−02
Coefficient: 2.50e−03
N: 139
6e−04
5e−04
COG0137
0
20
40
60
Absolute_Latitude

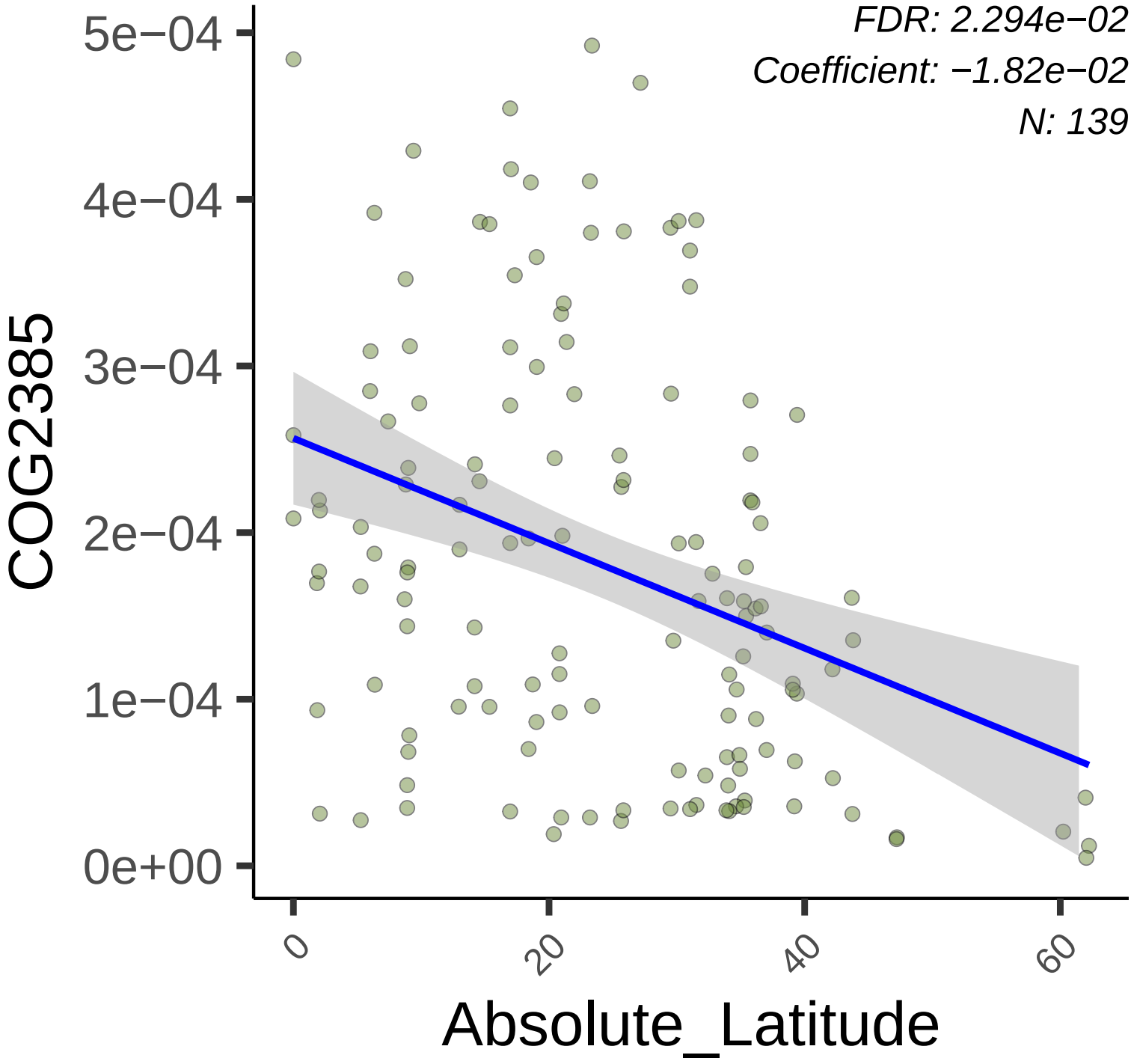

FDR: 2.283e−02
Coefficient: 6.74e−03
N: 139
COG4638
0.0015
0.0012
0.0009
0.0006
0
20
40
60
Absolute_Latitude

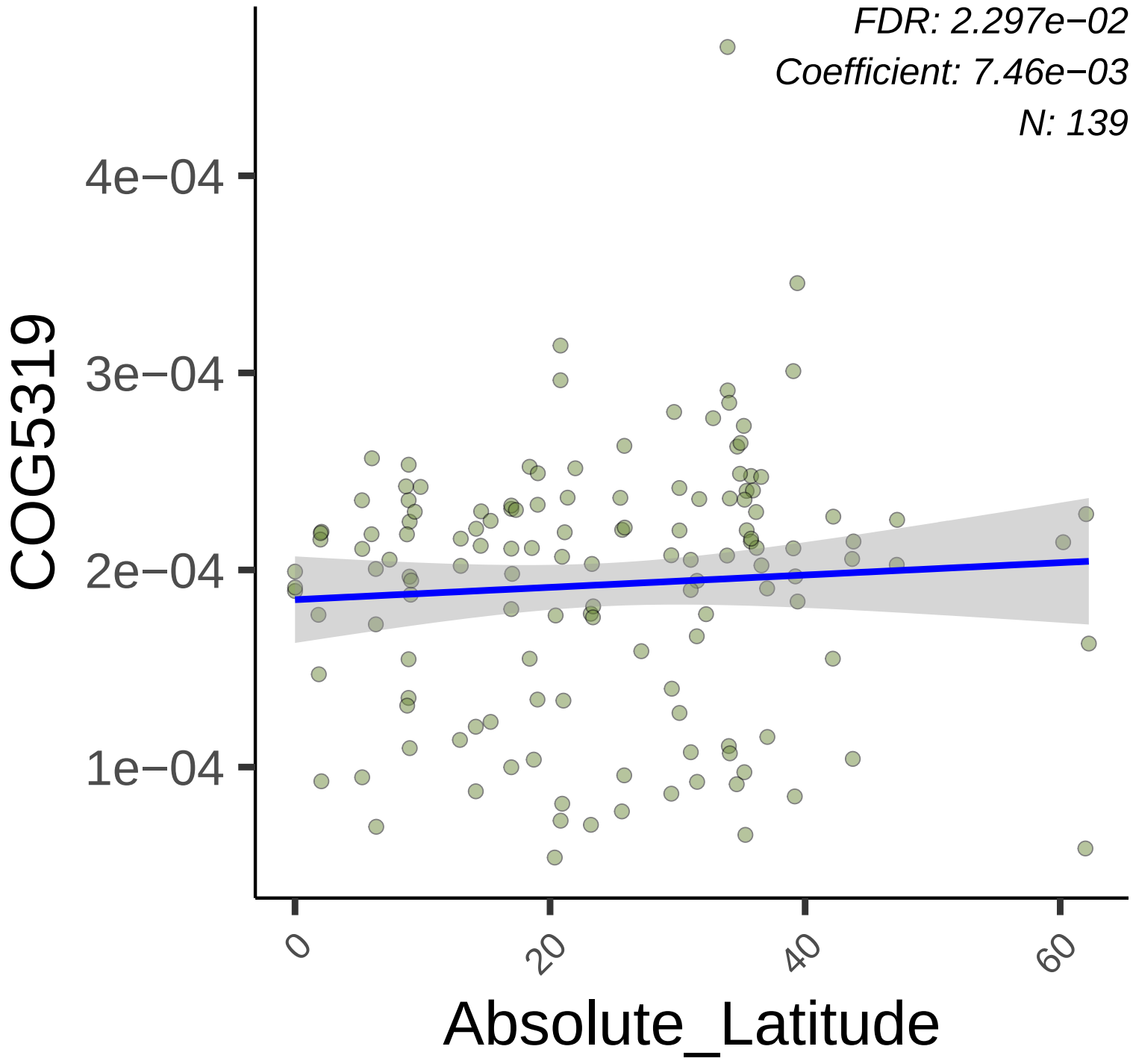

FDR: 2.284e−02
Coefficient: 2.15e−03
N: 139
7e−04
6e−04
5e−04
COG0452
0
20
40
60
Absolute_Latitude

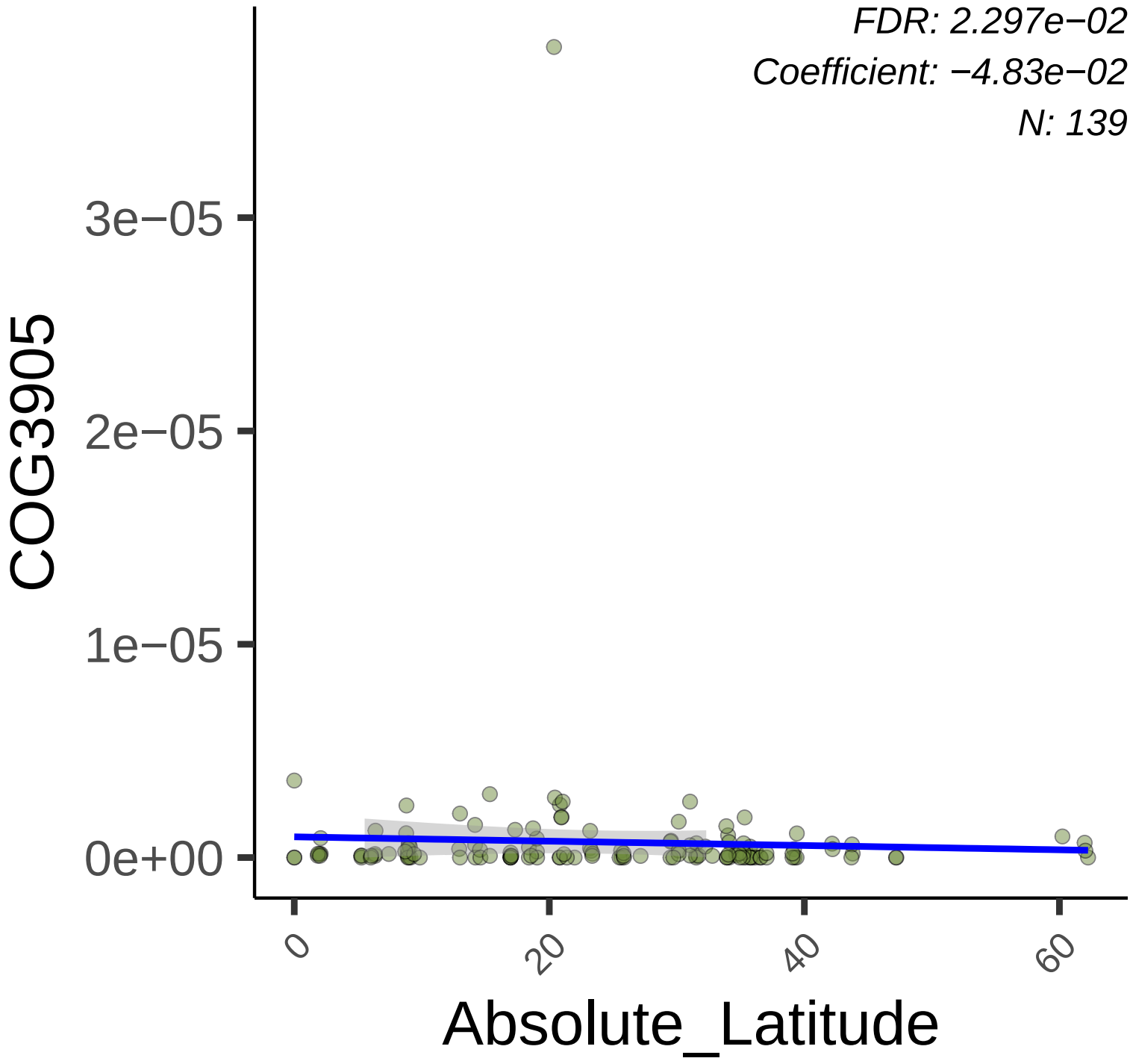

FDR: 2.287e−02
Coefficient: −2.75e−02
N: 139
1.2e−05
9.0e−06
6.0e−06
3.0e−06
0.0e+00
COG2162
0
20
40
60
Absolute_Latitude

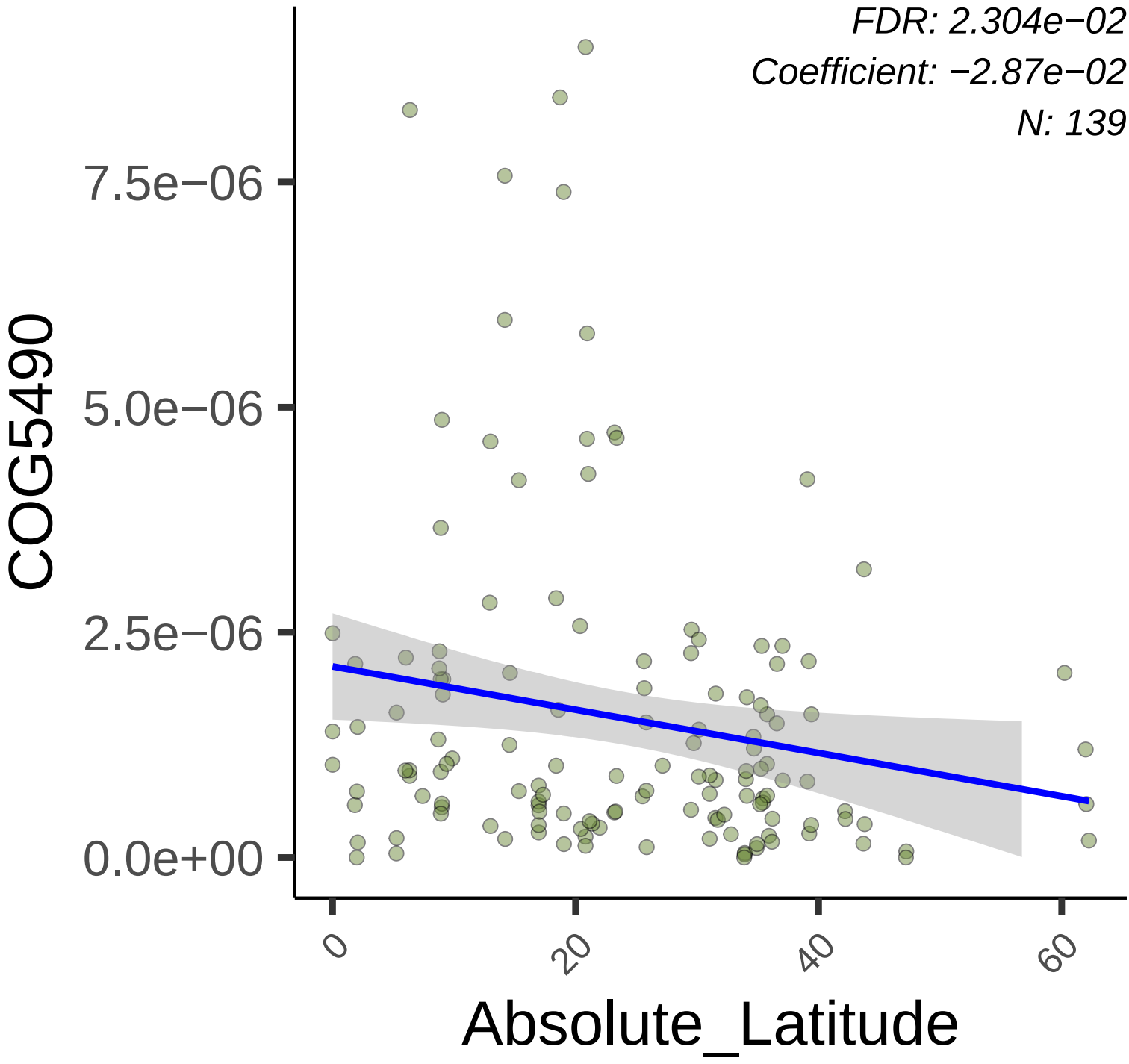

FDR: 2.287e−02
Coefficient: −2.31e−02
N: 139
COG4420
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

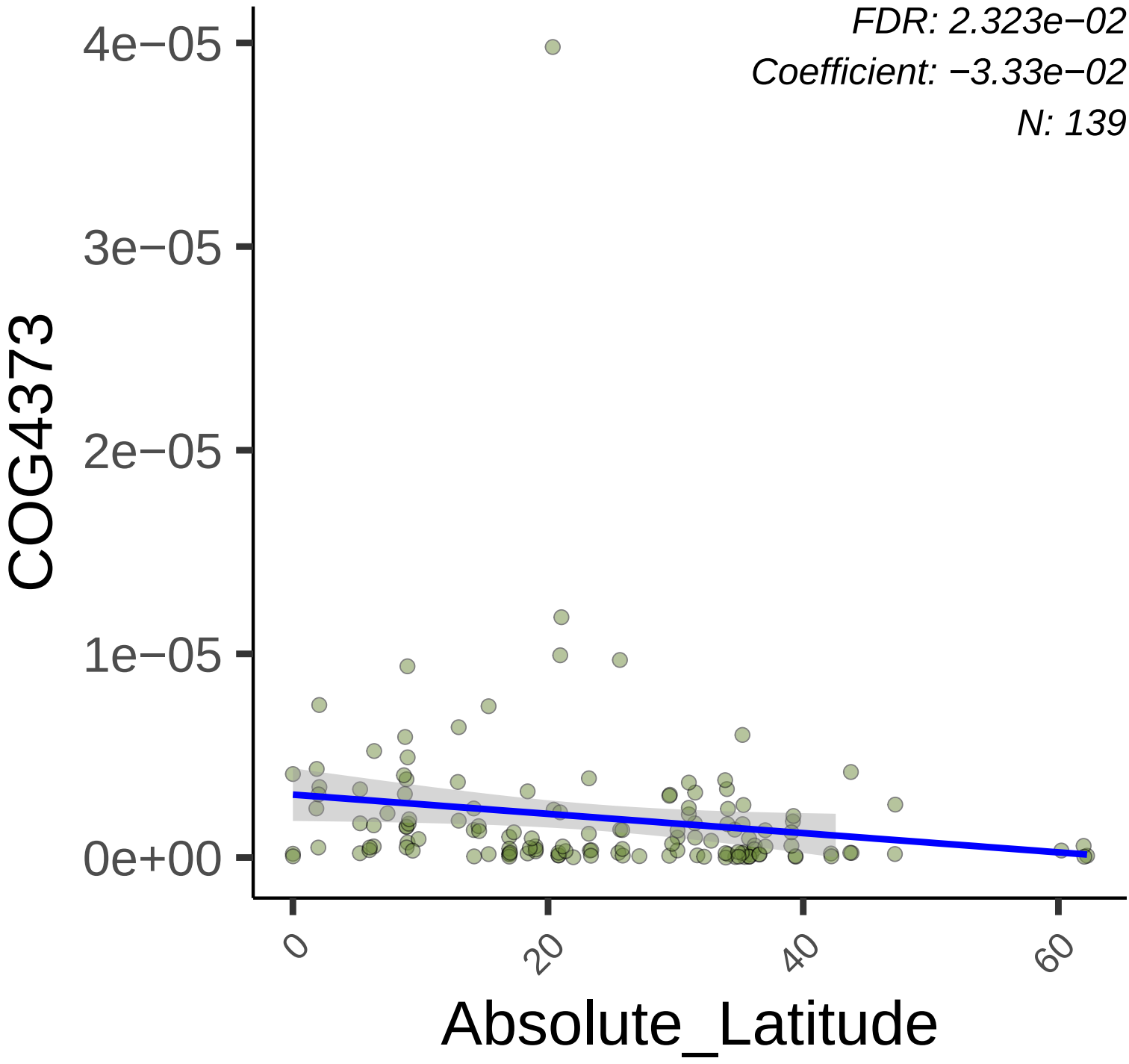

FDR: 2.288e−02
Coefficient: −3.86e−02
N: 139
COG5397
4e−06
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

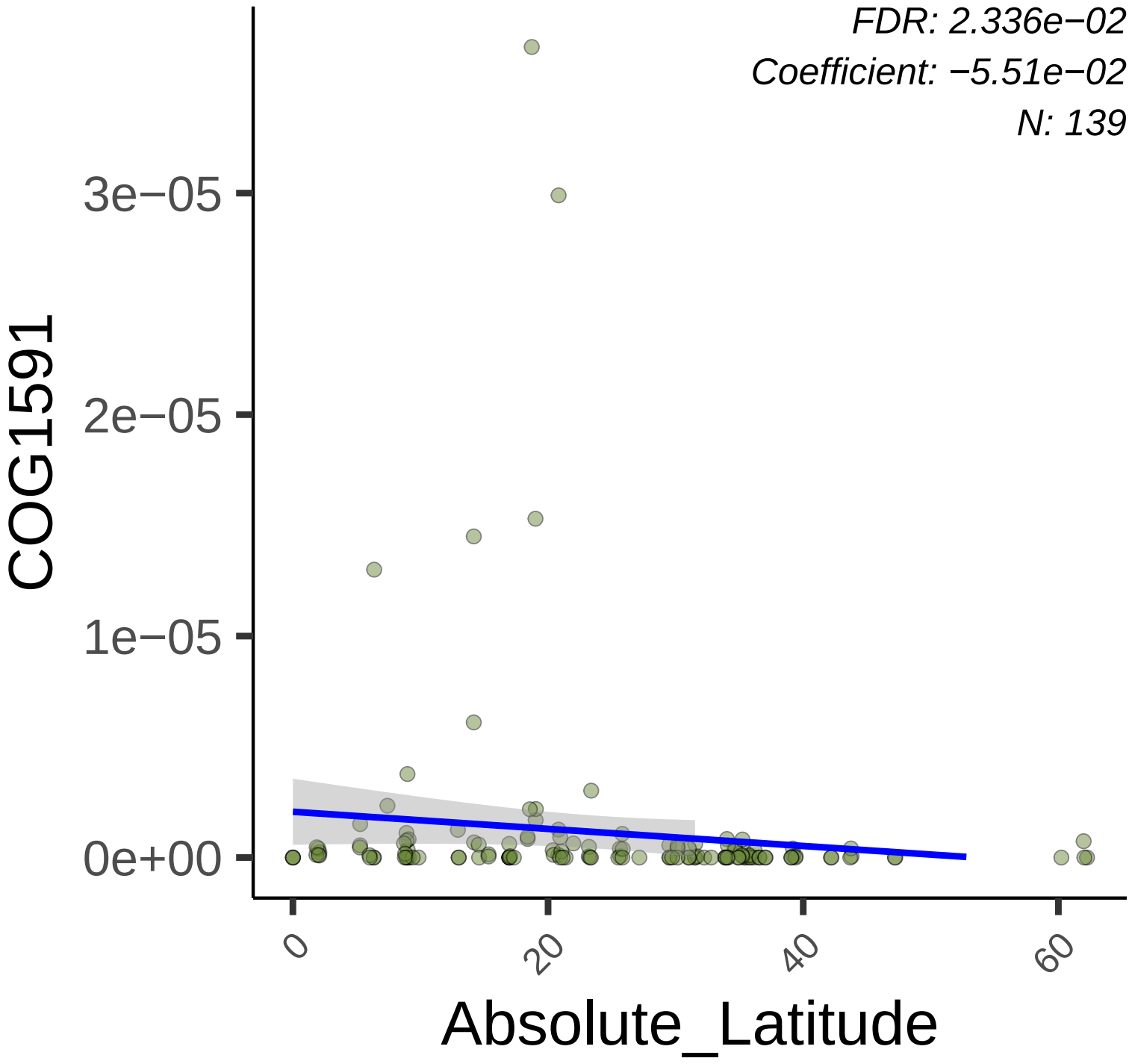

FDR: 2.294e−02
Coefficient: −1.82e−02
N: 139
COG2385
5e−04
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

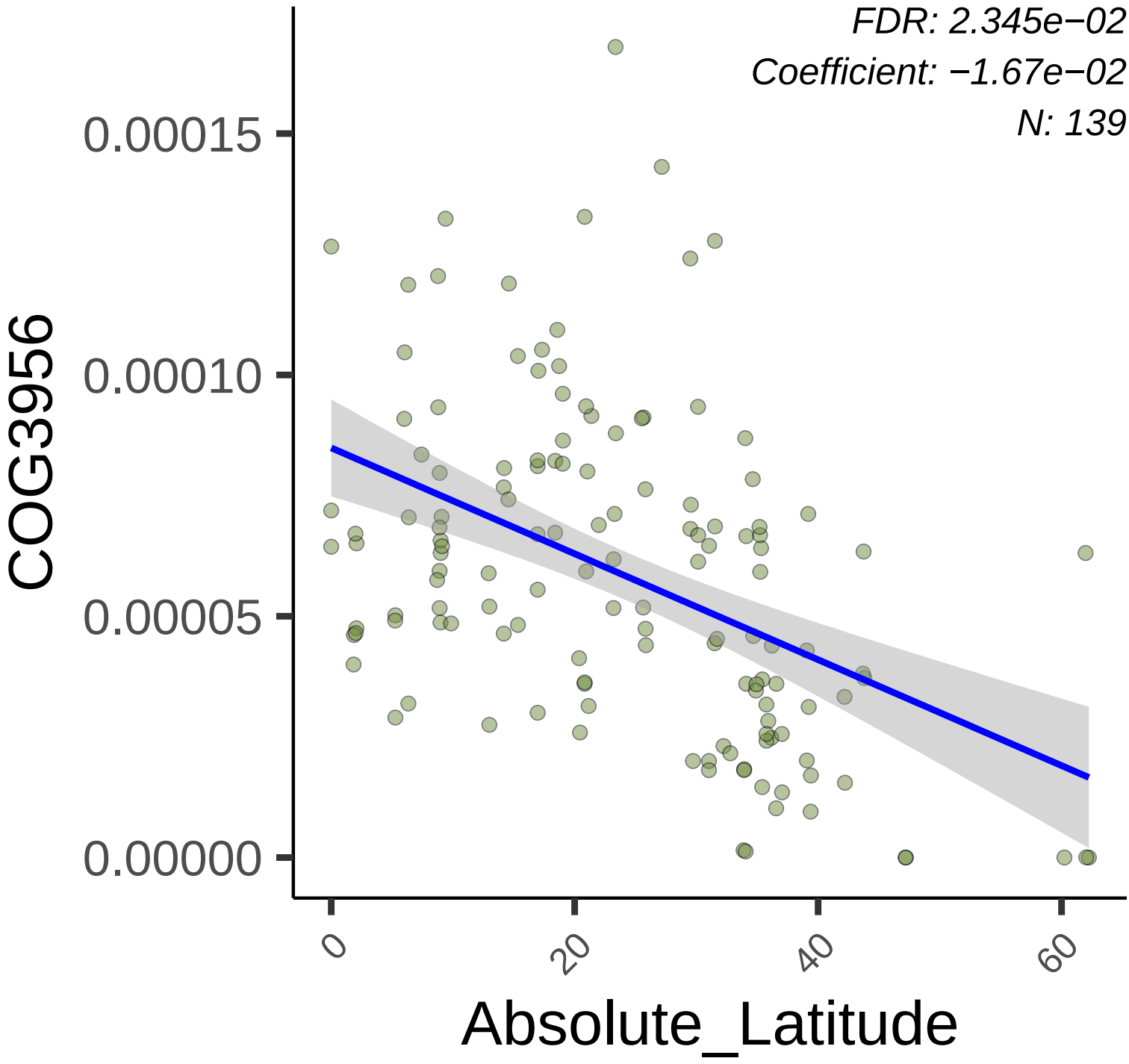

FDR: 2.297e−02
Coefficient: 7.46e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG5319
0
20
40
60
Absolute_Latitude

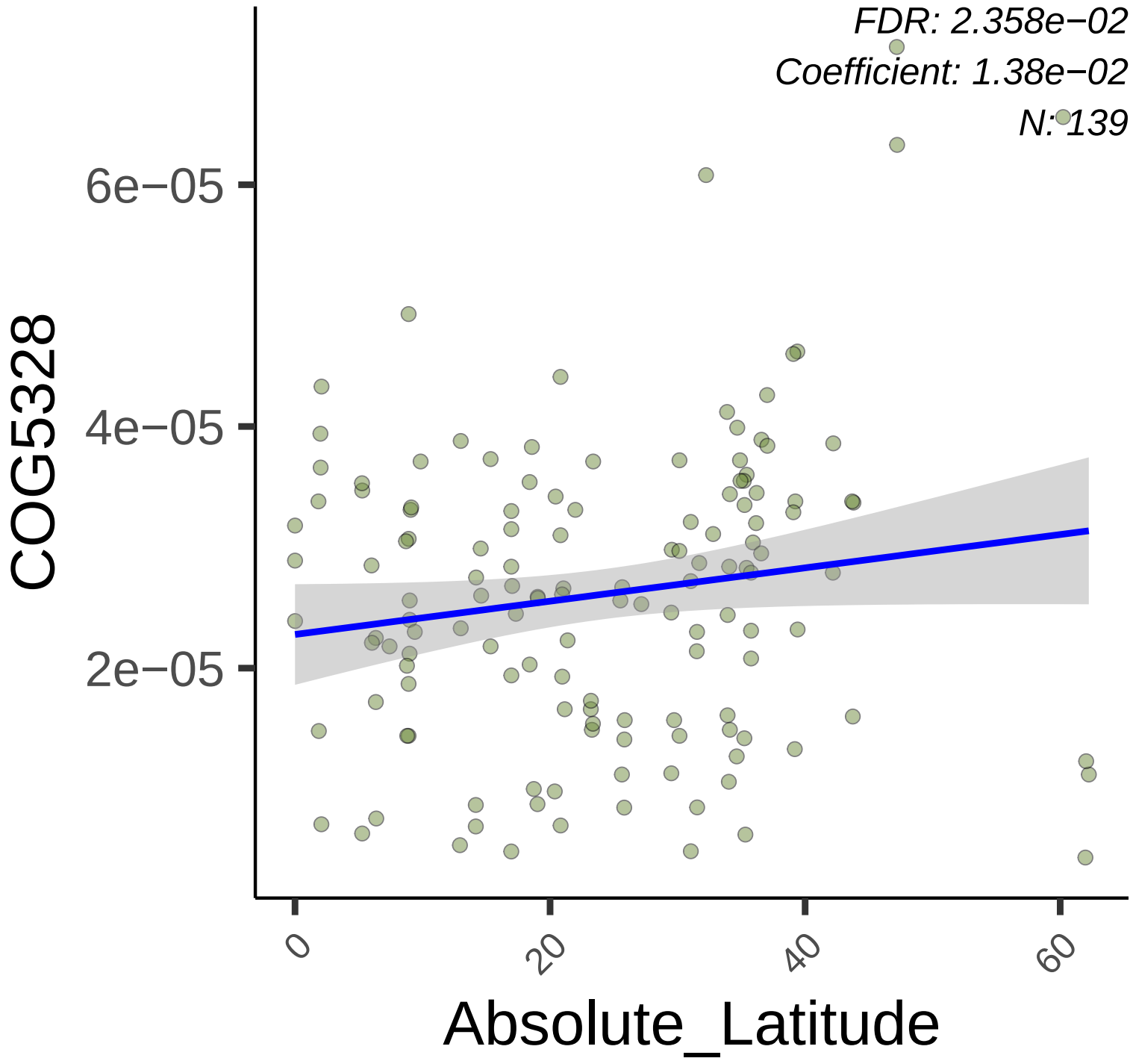

FDR: 2.297e−02
Coefficient: −4.83e−02
N: 139
COG3905
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

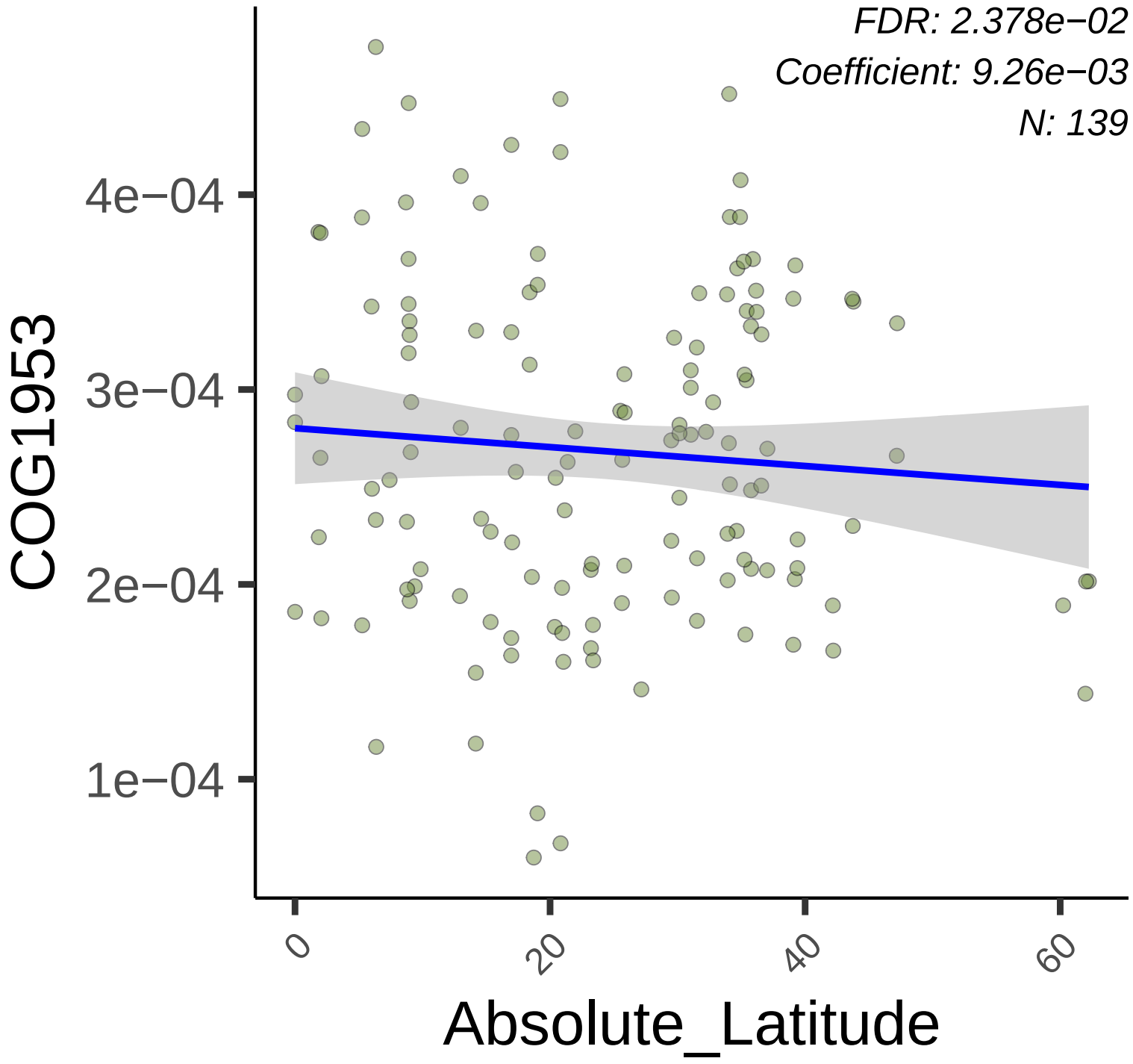

FDR: 2.304e−02
Coefficient: −2.87e−02
N: 139
COG5490
7.5e−06
5.0e−06
2.5e−06
0.0e+00
0
20
40
60
Absolute_Latitude

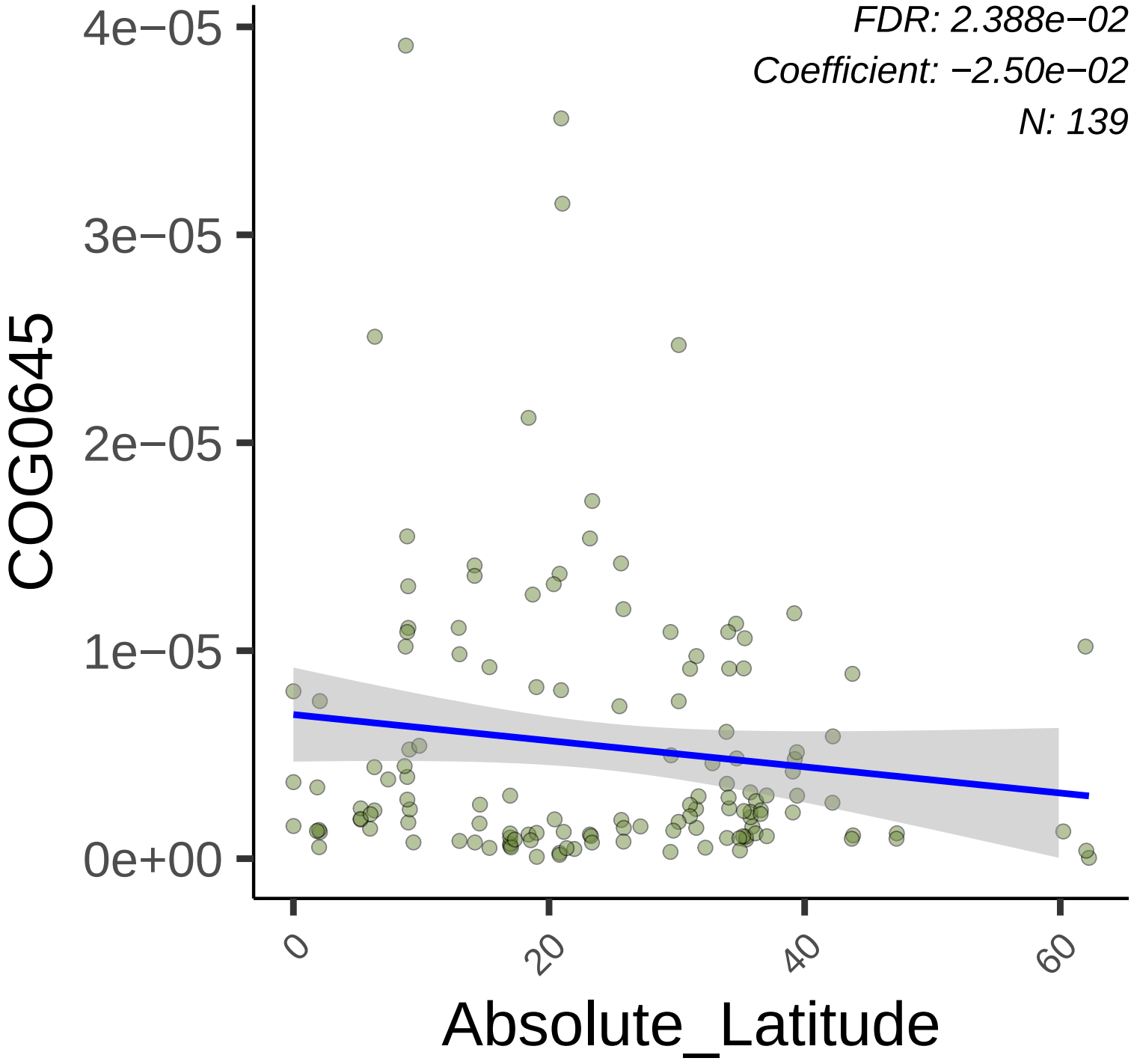

FDR: 2.323e−02
Coefficient: −3.33e−02
N: 139
COG4373
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

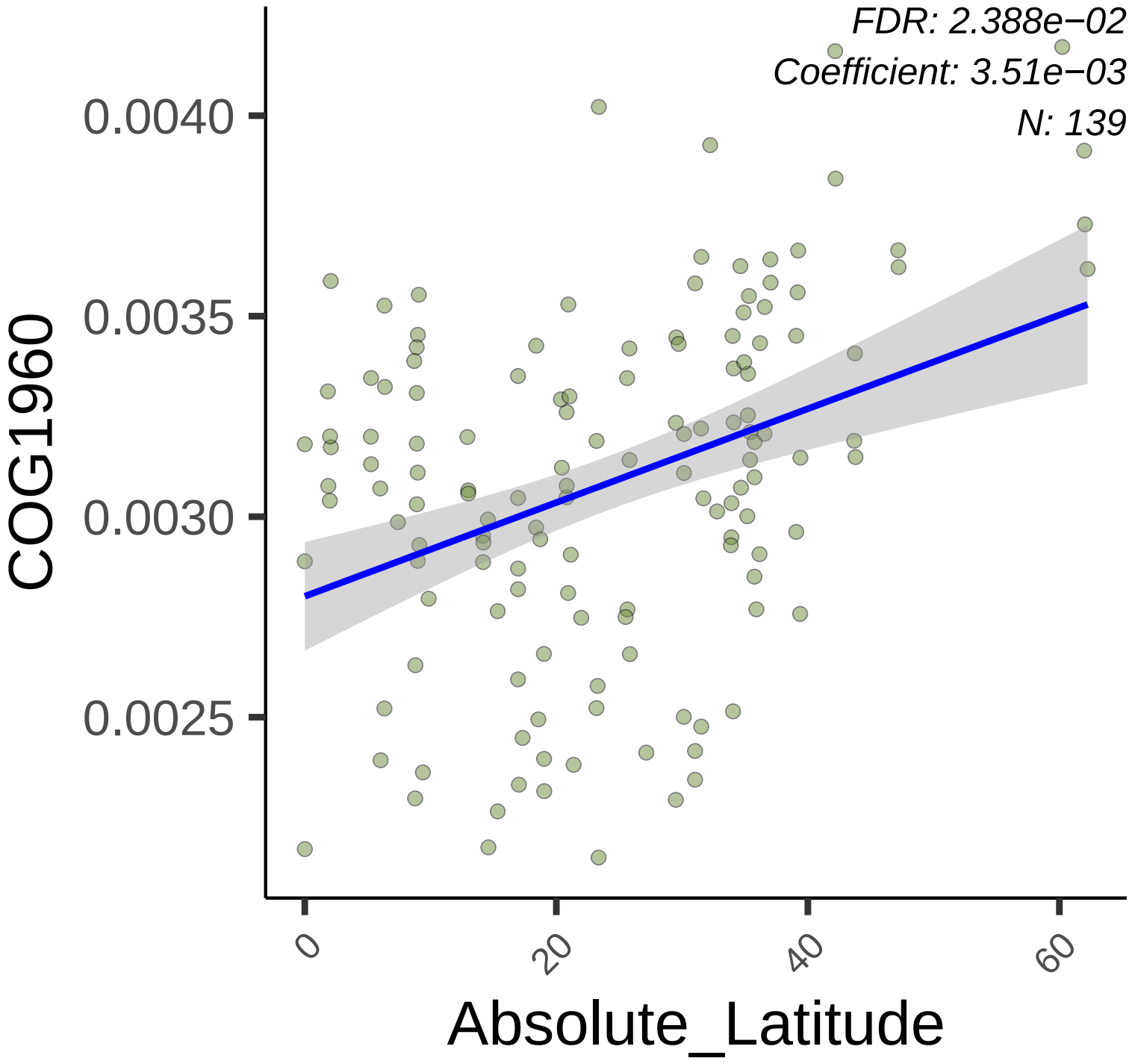

FDR: 2.336e−02
Coefficient: −5.51e−02
N: 139
COG1591
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

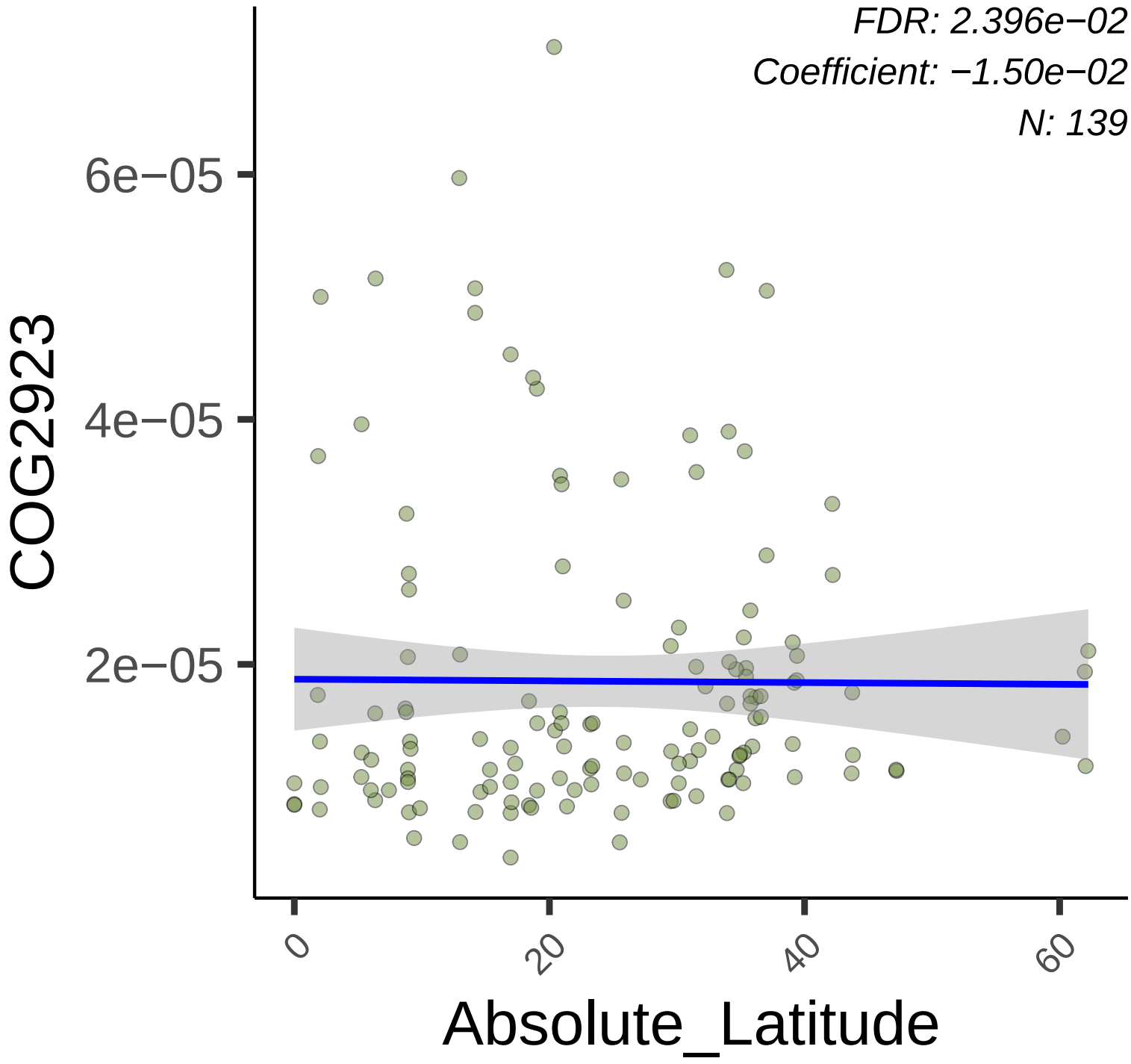

FDR: 2.345e−02
Coefficient: −1.67e−02
N: 139
COG3956
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

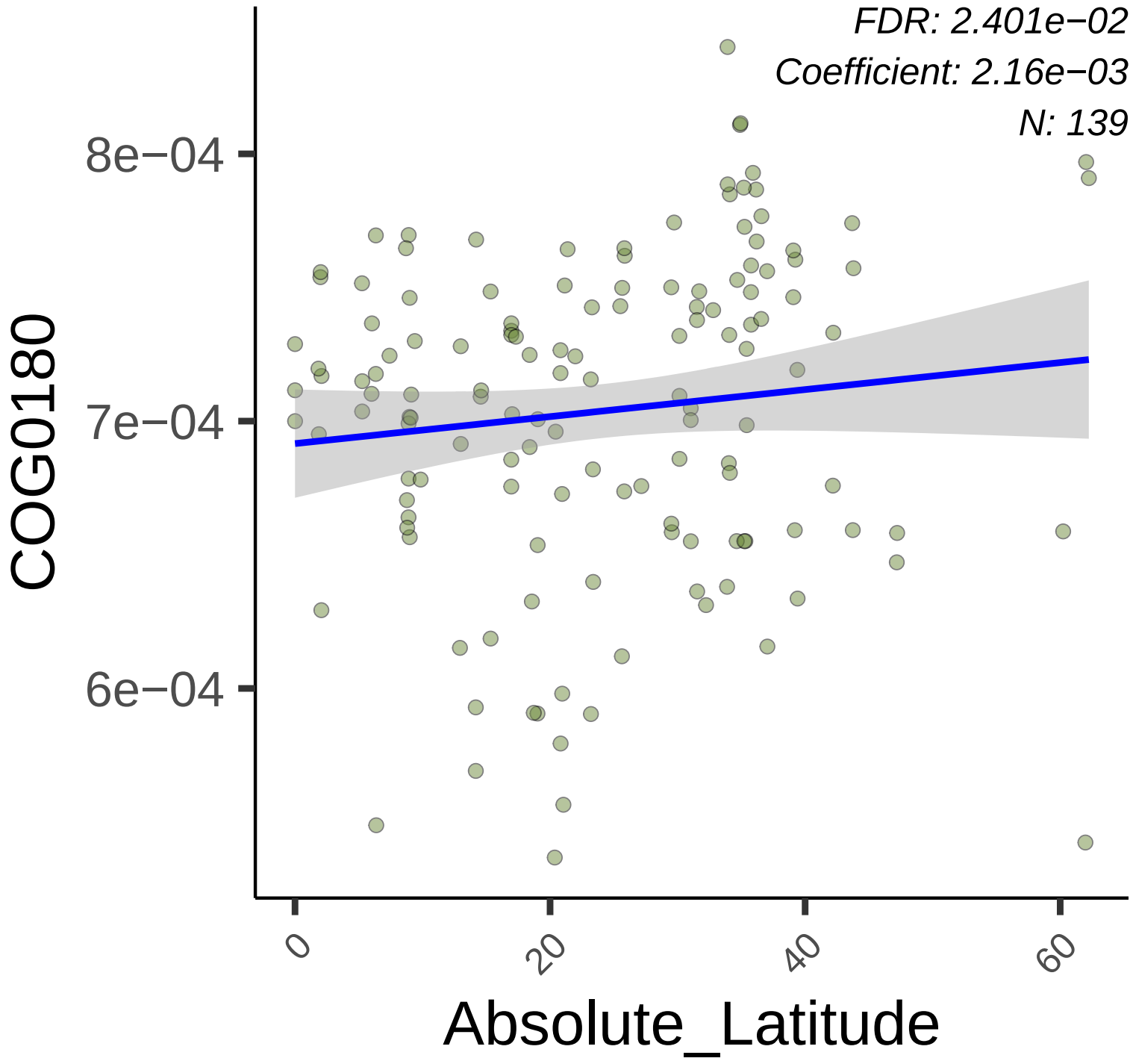

FDR: 2.358e−02
Coefficient: 1.38e−02
N: 139
6e−05
4e−05
2e−05
COG5328
0
20
40
60
Absolute_Latitude

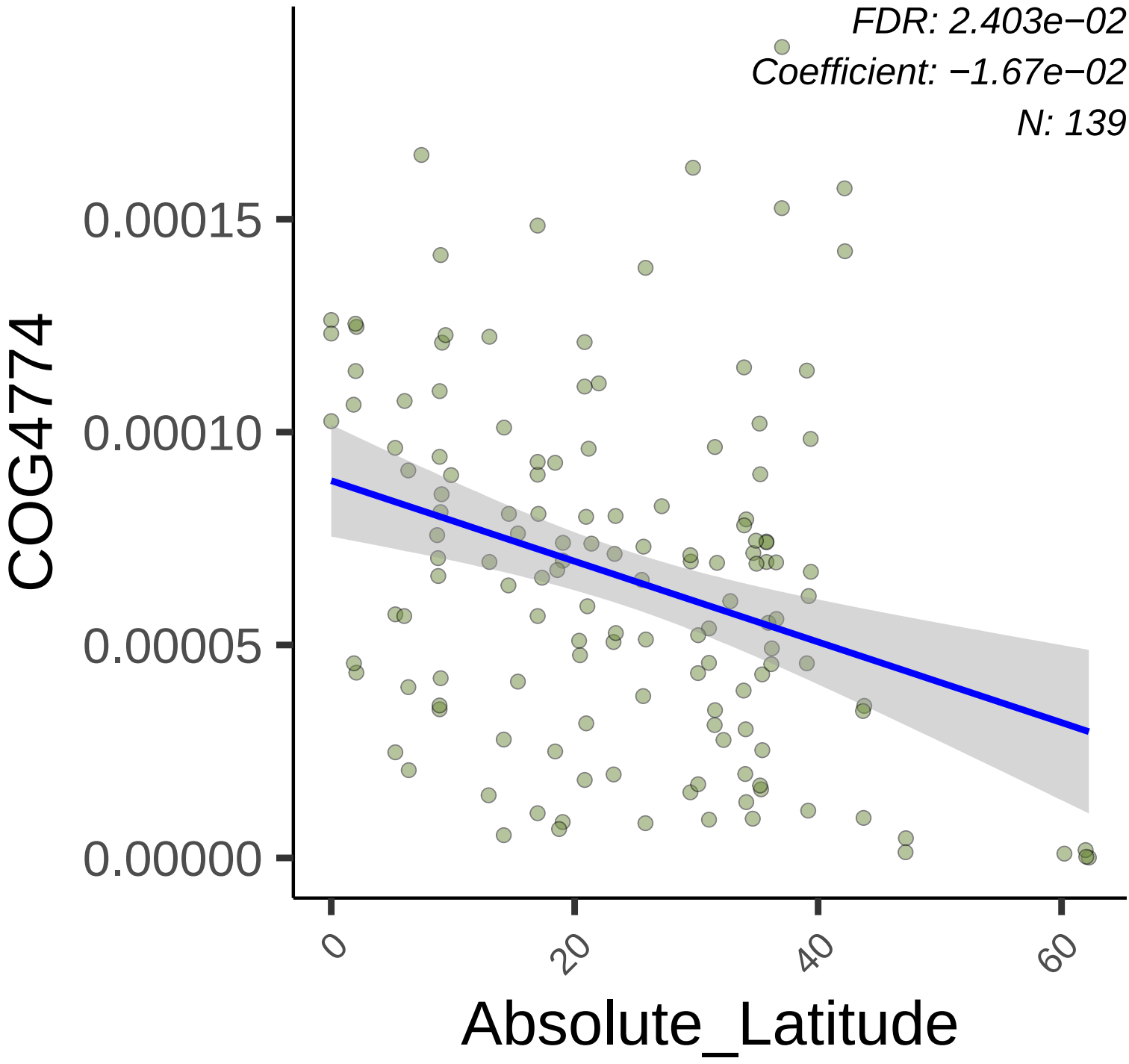

FDR: 2.378e−02
Coefficient: 9.26e−03
N: 139
COG1953
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

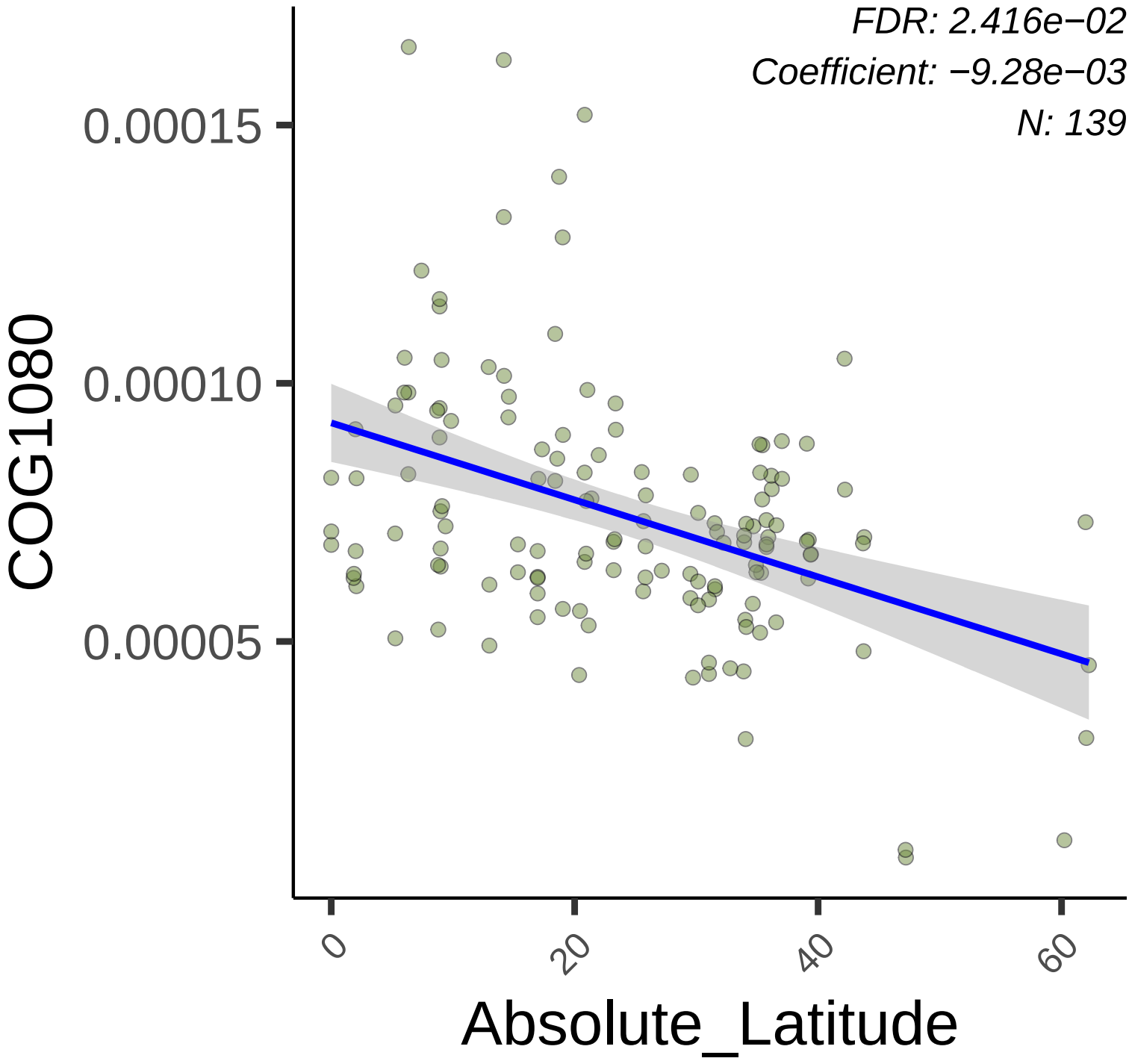

FDR: 2.388e−02
Coefficient: −2.50e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG0645
0
20
40
60
Absolute_Latitude

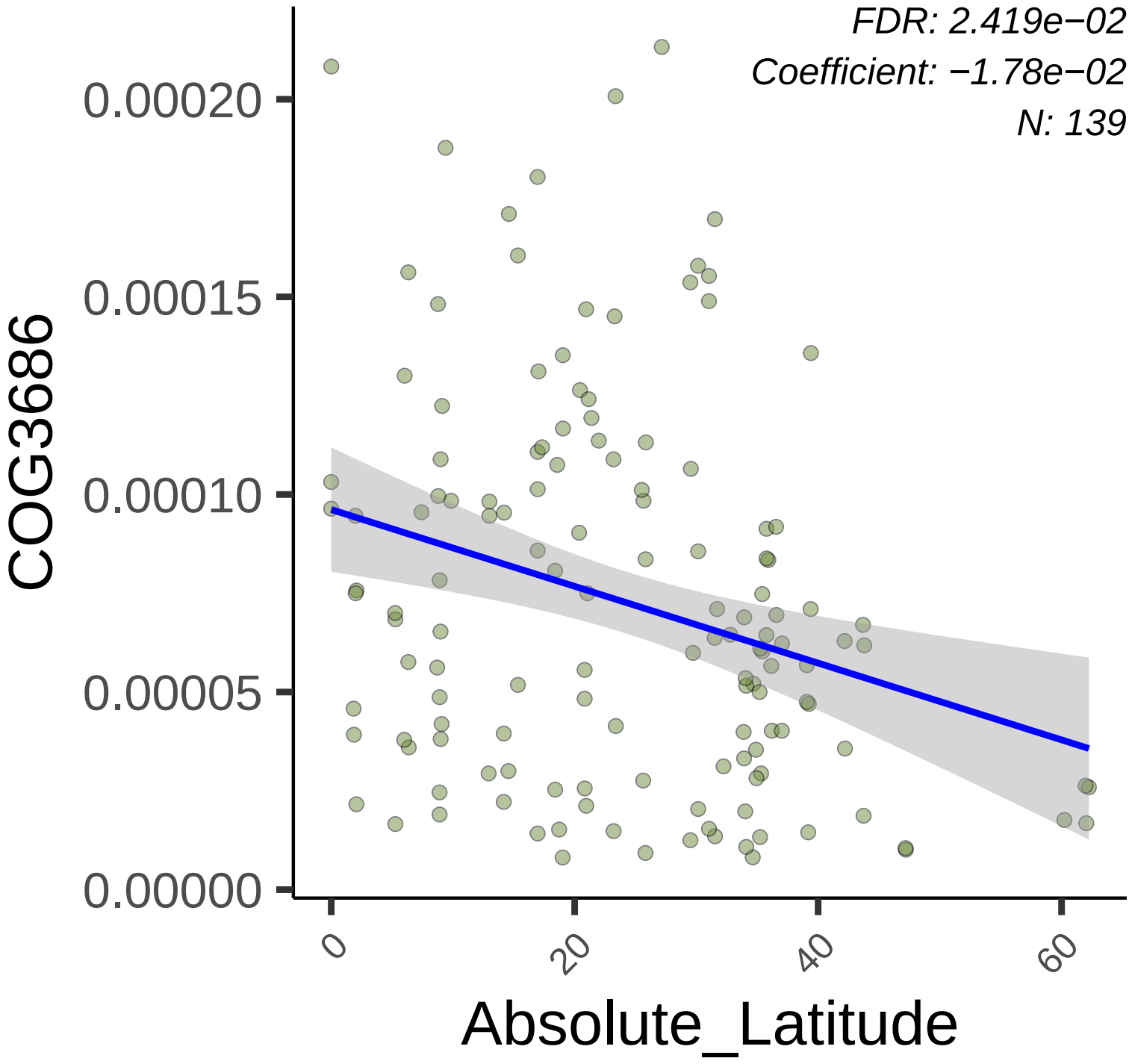

FDR: 2.388e−02
Coefficient: 3.51e−03
N: 139
0.0040
0.0035
0.0030
0.0025
COG1960
0
20
40
60
Absolute_Latitude

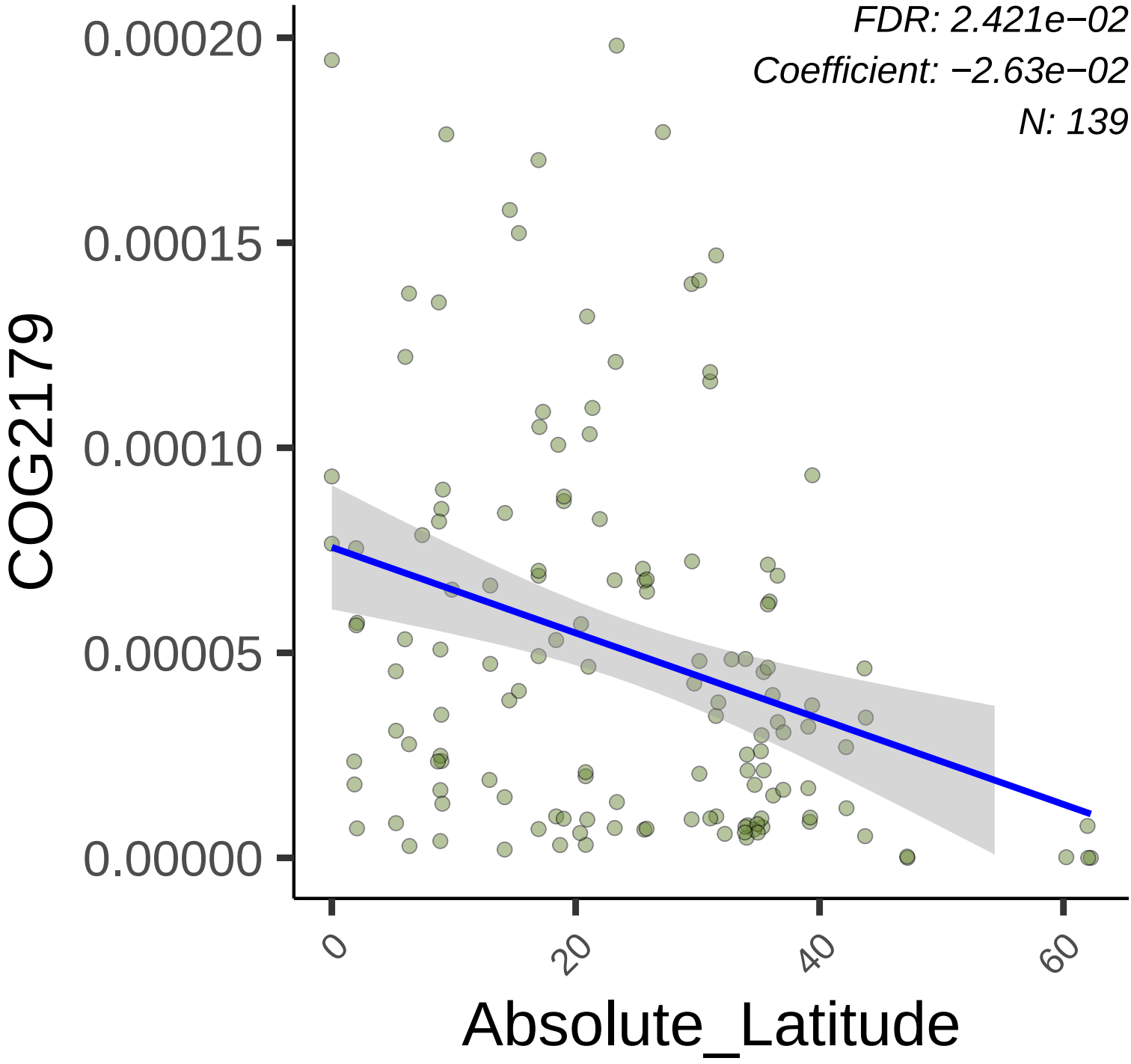

FDR: 2.396e−02
Coefficient: −1.50e−02
N: 139
6e−05
4e−05
2e−05
COG2923
0
20
40
60
Absolute_Latitude

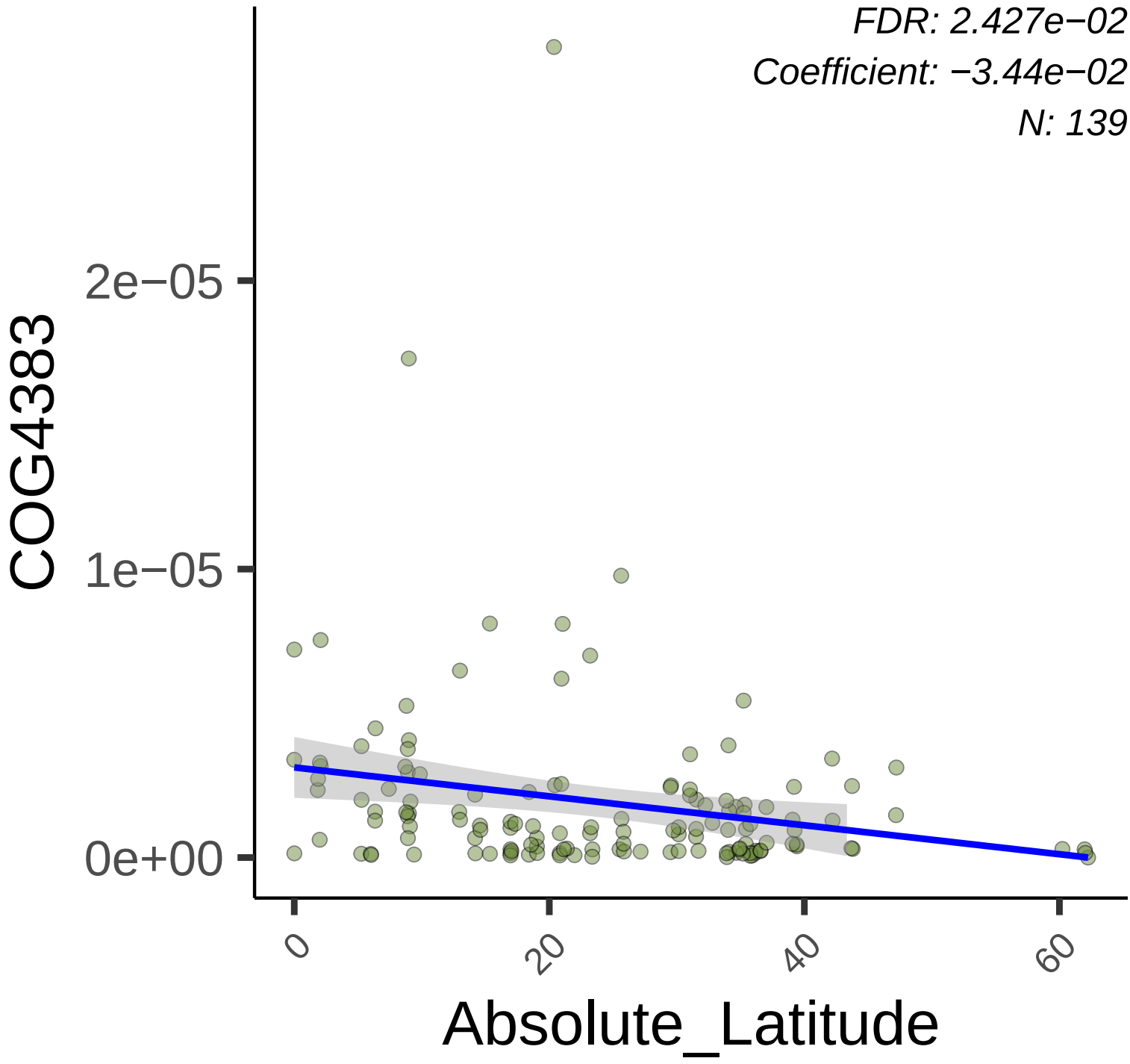

FDR: 2.401e−02
Coefficient: 2.16e−03
N: 139
8e−04
7e−04
6e−04
COG0180
0
20
40
60
Absolute_Latitude

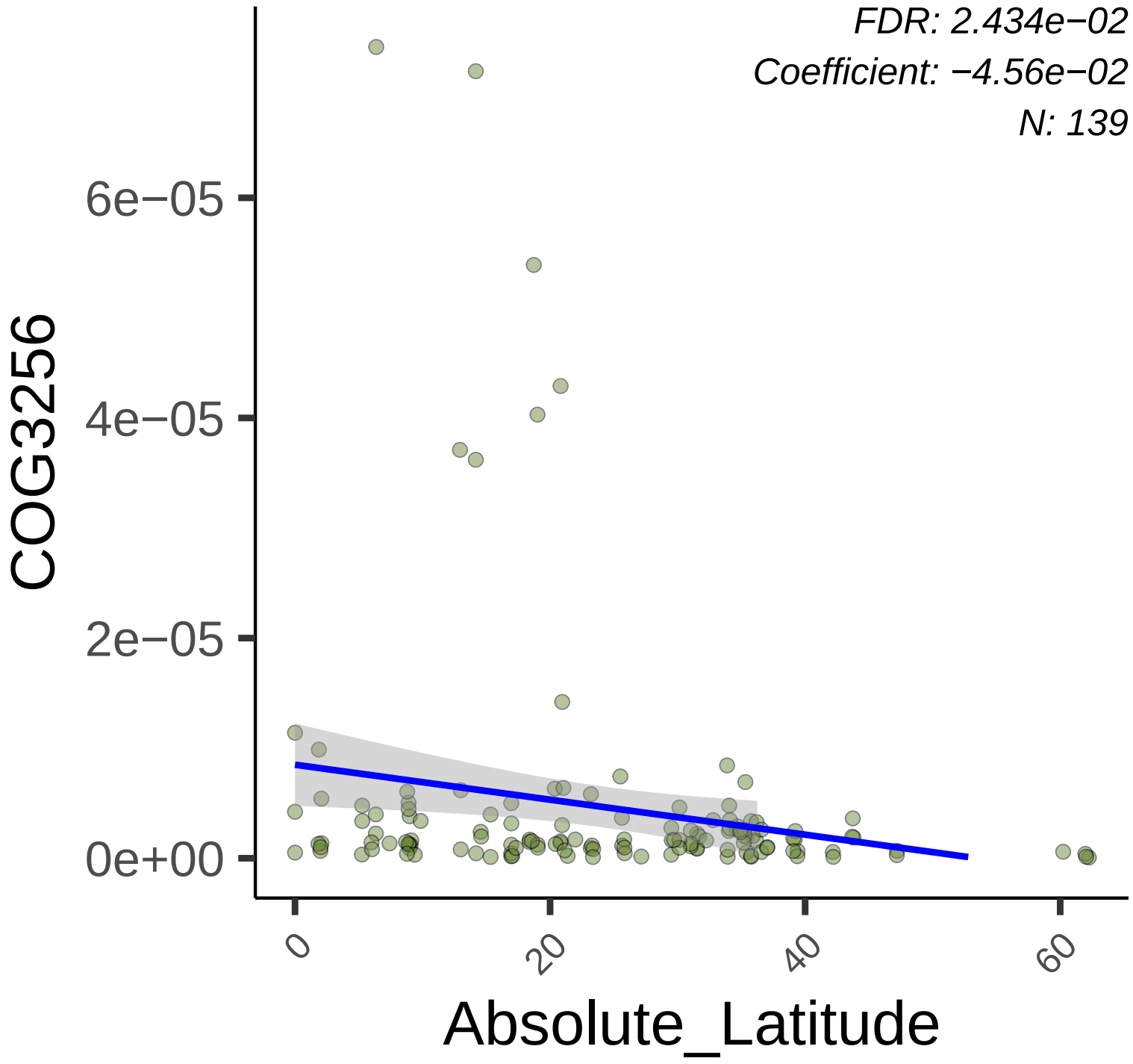

FDR: 2.403e−02
Coefficient: −1.67e−02
N: 139
COG4774
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

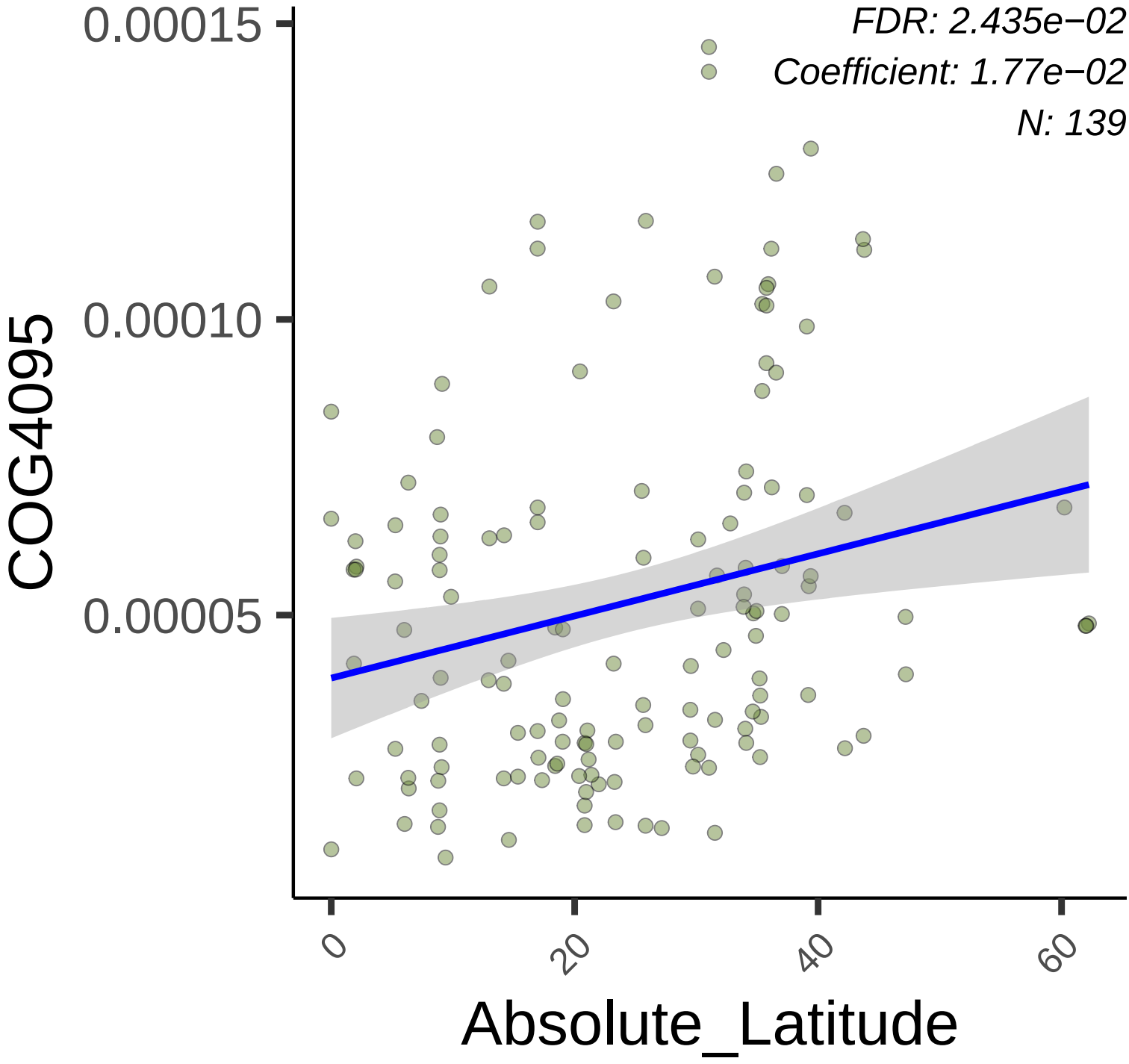

FDR: 2.416e−02
Coefficient: −9.28e−03
N: 139
0.00015
0.00010
0.00005
COG1080
0
20
40
60
Absolute_Latitude

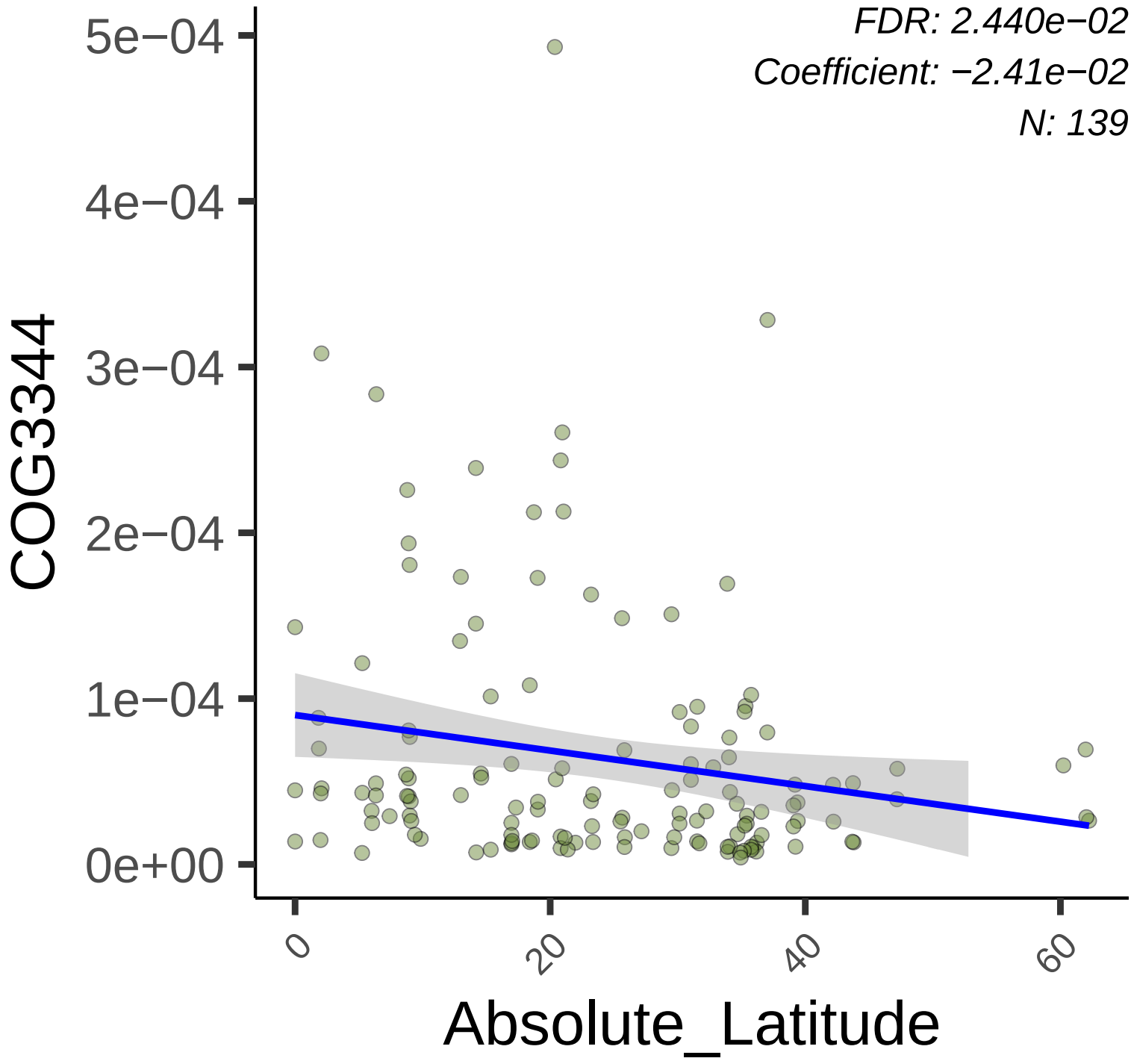

FDR: 2.419e−02
Coefficient: −1.78e−02
N: 139
COG3686
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

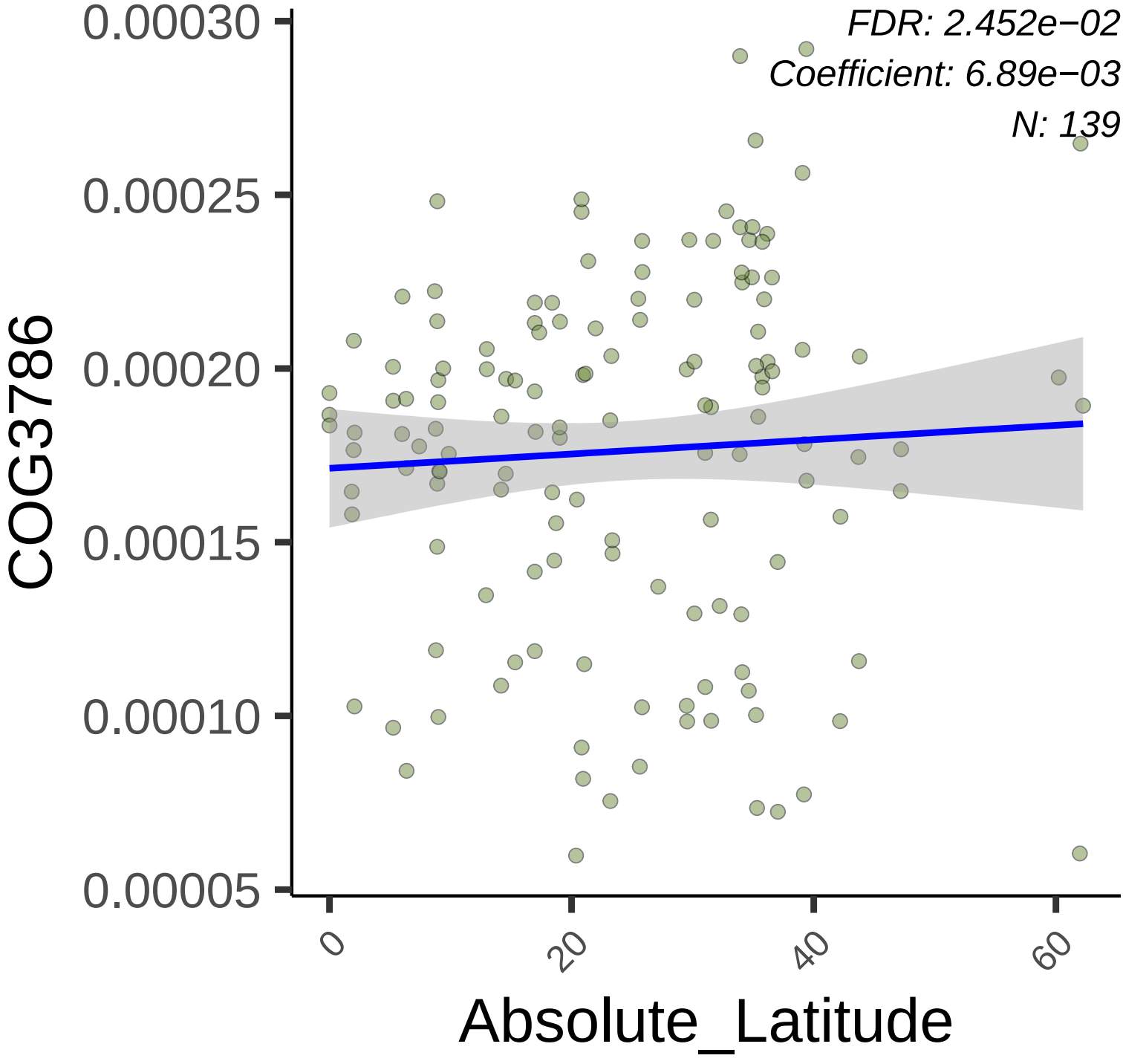

FDR: 2.421e−02
Coefficient: −2.63e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG2179
0
20
40
60
Absolute_Latitude

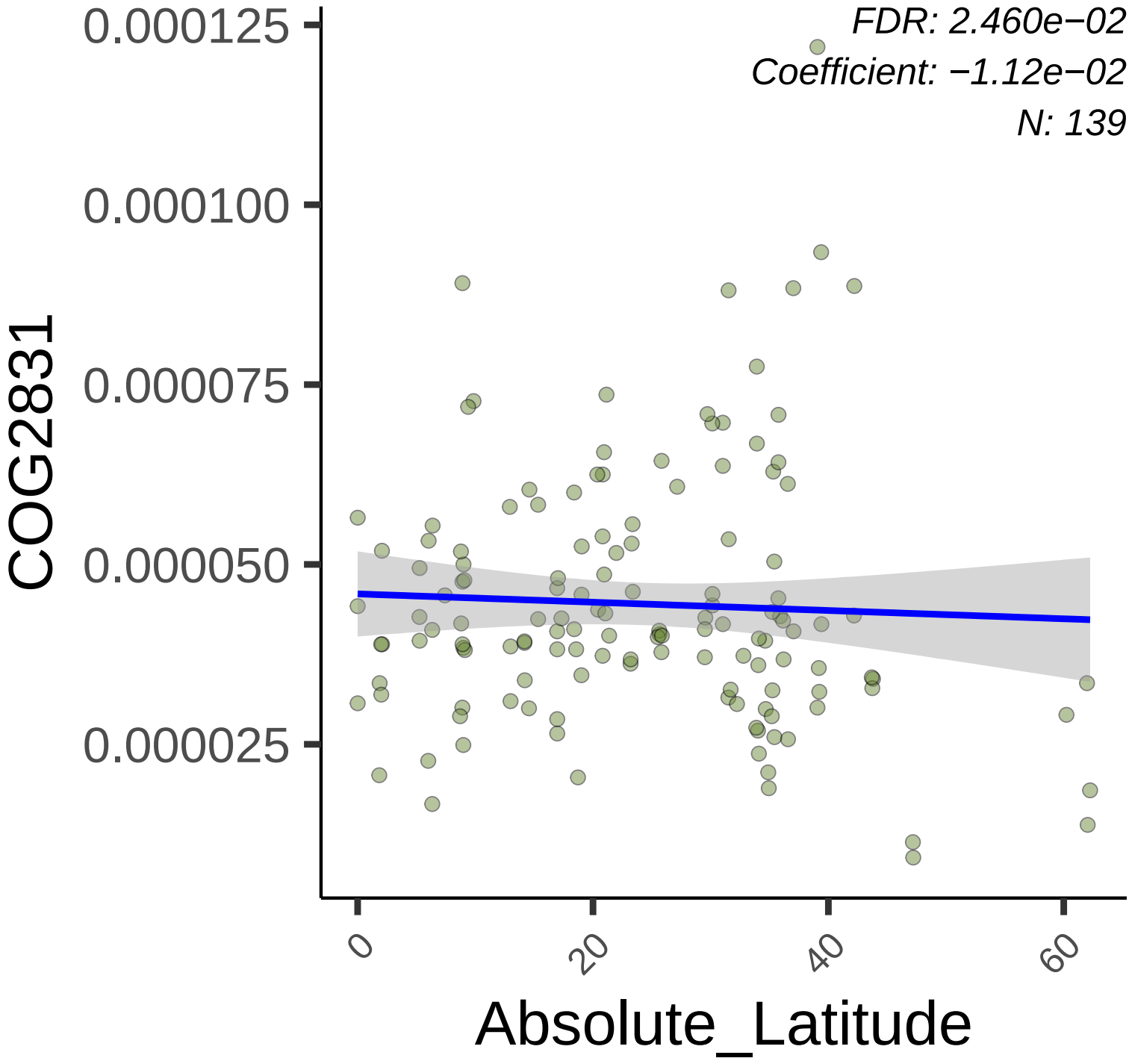

FDR: 2.427e−02
Coefficient: −3.44e−02
N: 139
COG4383
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

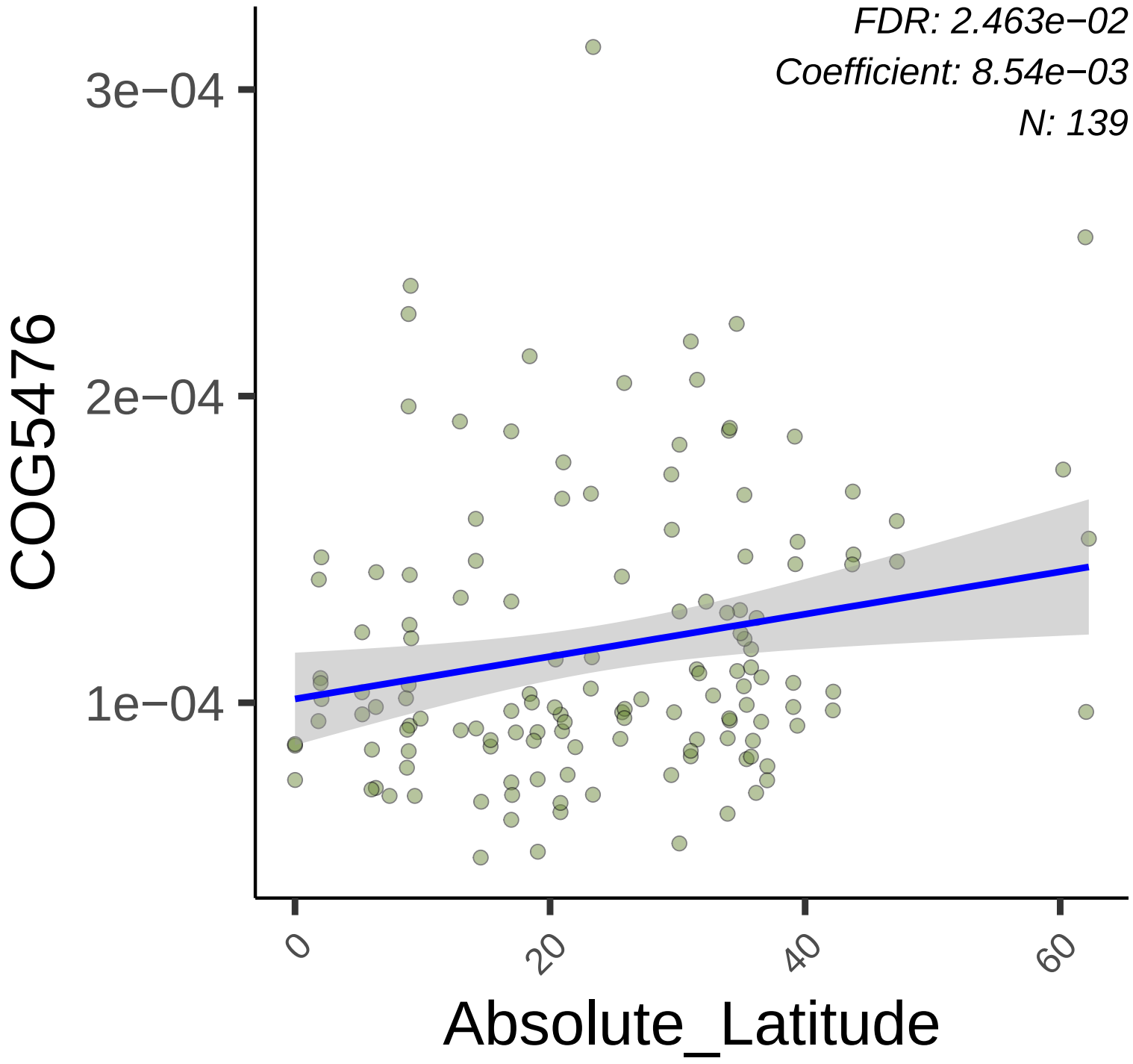

FDR: 2.434e−02
Coefficient: −4.56e−02
N: 139
COG3256
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

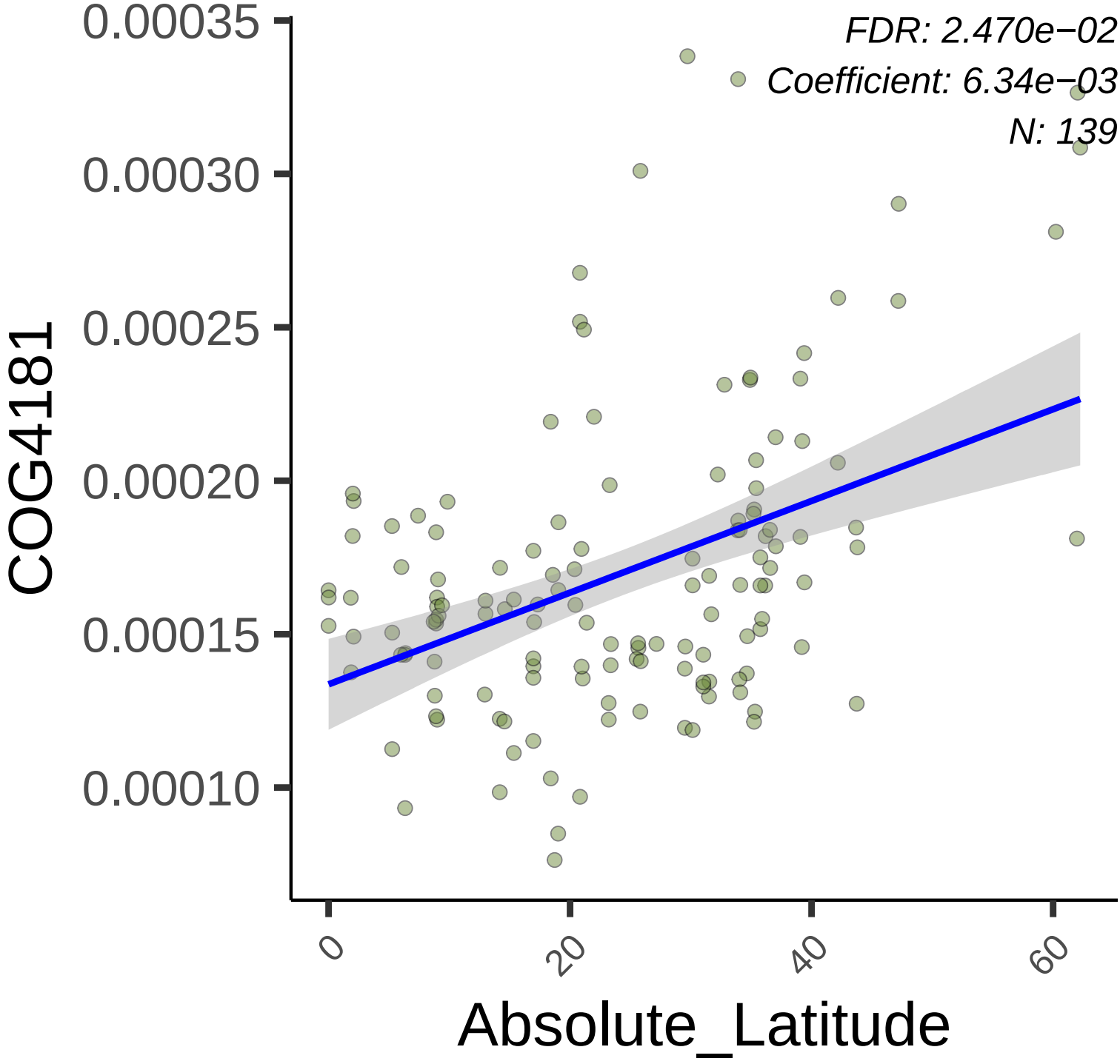

FDR: 2.435e−02
Coefficient: 1.77e−02
N: 139
0.00015
0.00010
0.00005
COG4095
0
20
40
60
Absolute_Latitude

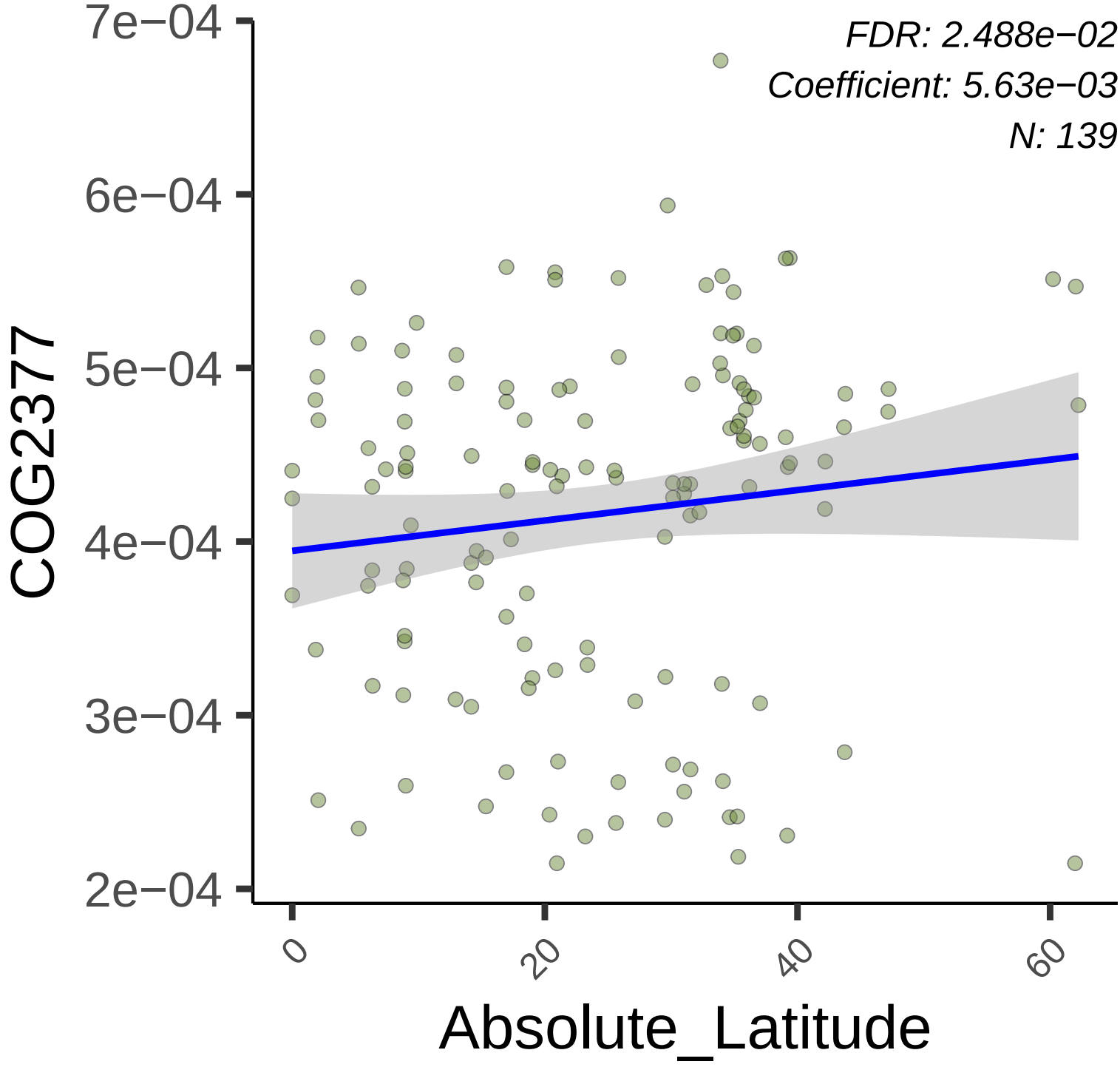

FDR: 2.440e−02
Coefficient: −2.41e−02
N: 139
COG3344
5e−04
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

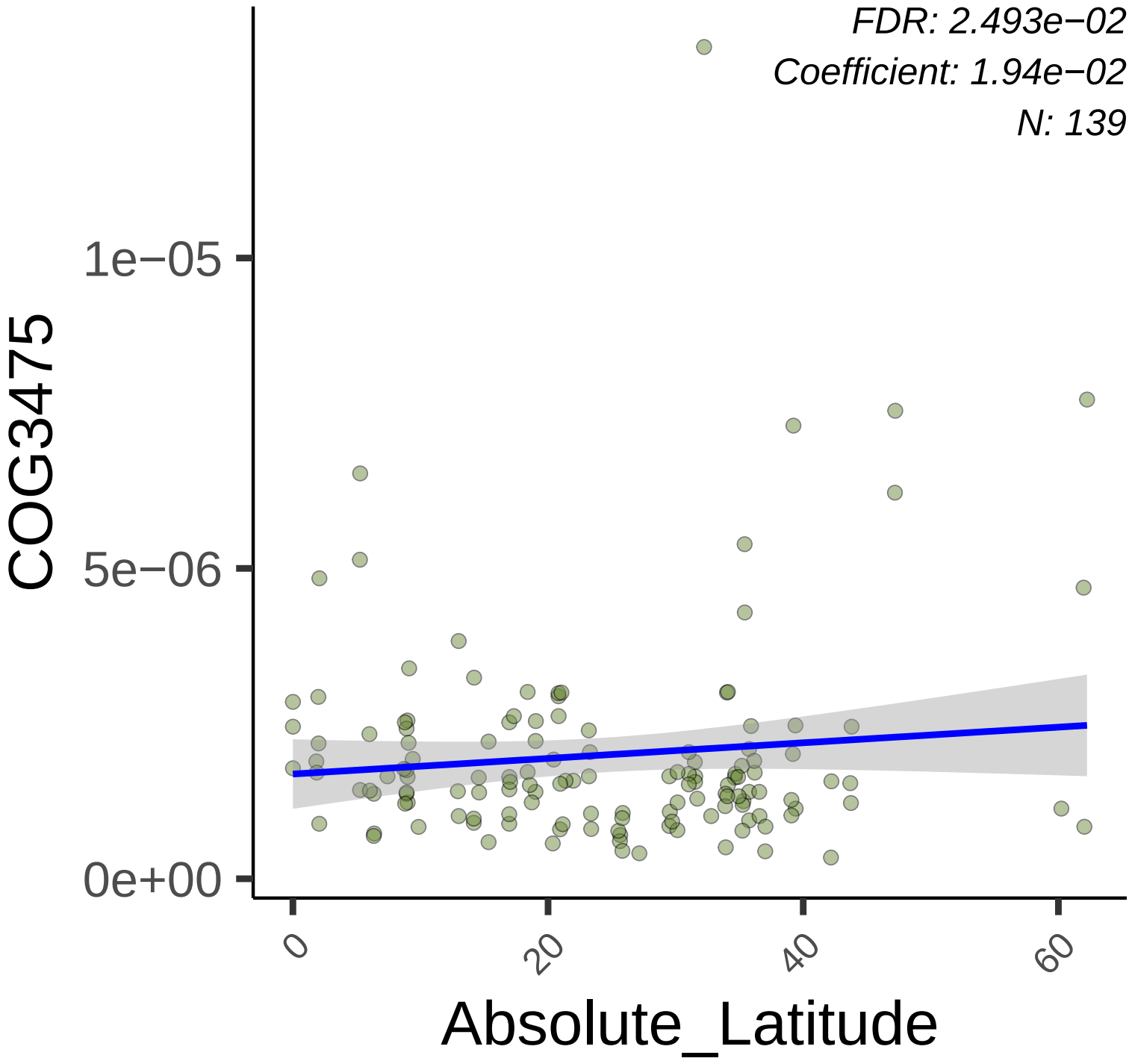

FDR: 2.452e−02
Coefficient: 6.89e−03
N: 139
0.00030
0.00025
0.00020
0.00015
0.00010
0.00005
COG3786
0
20
40
60
Absolute_Latitude

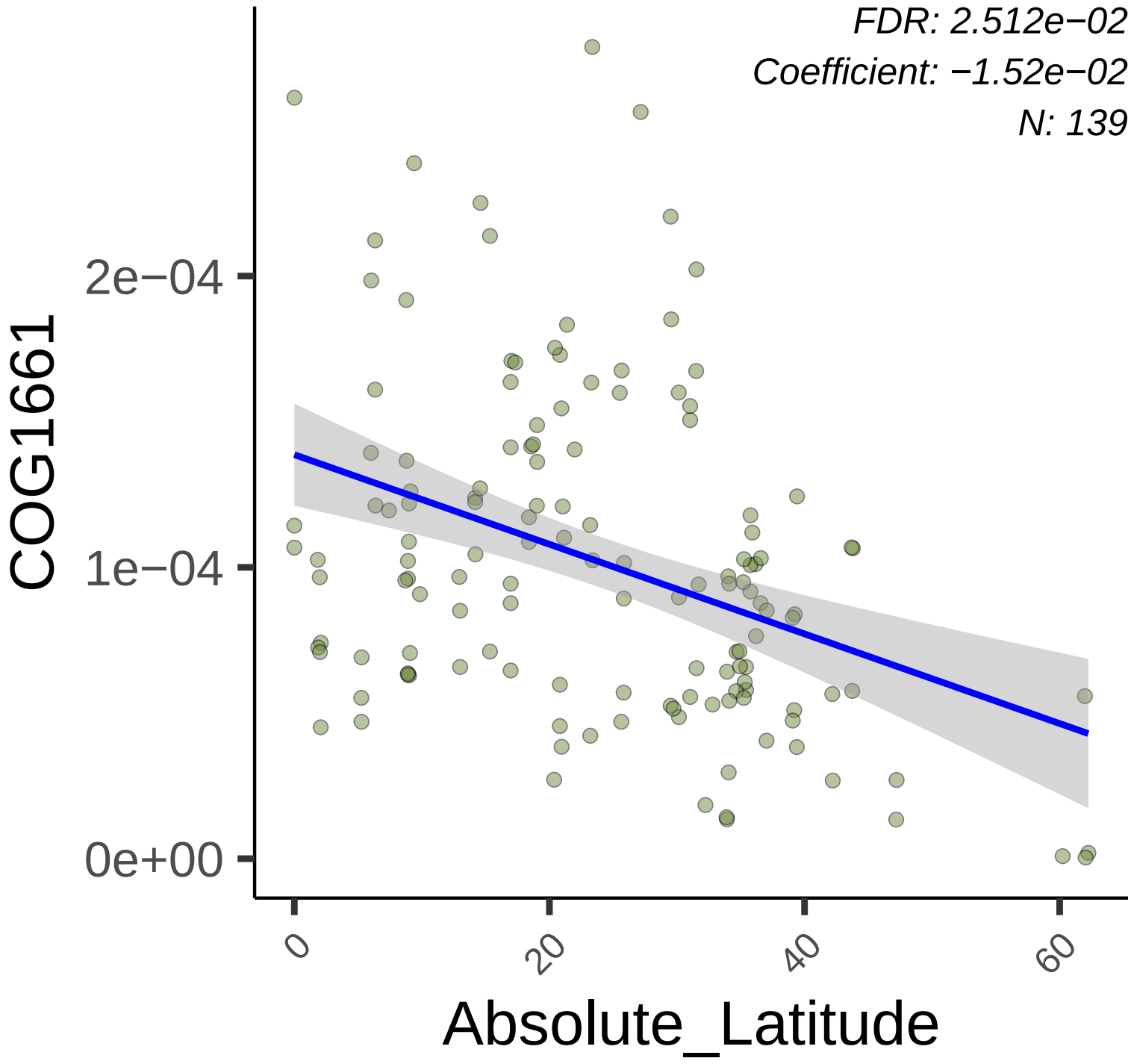

FDR: 2.460e−02
Coefficient: −1.12e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
COG2831
0
20
40
60
Absolute_Latitude

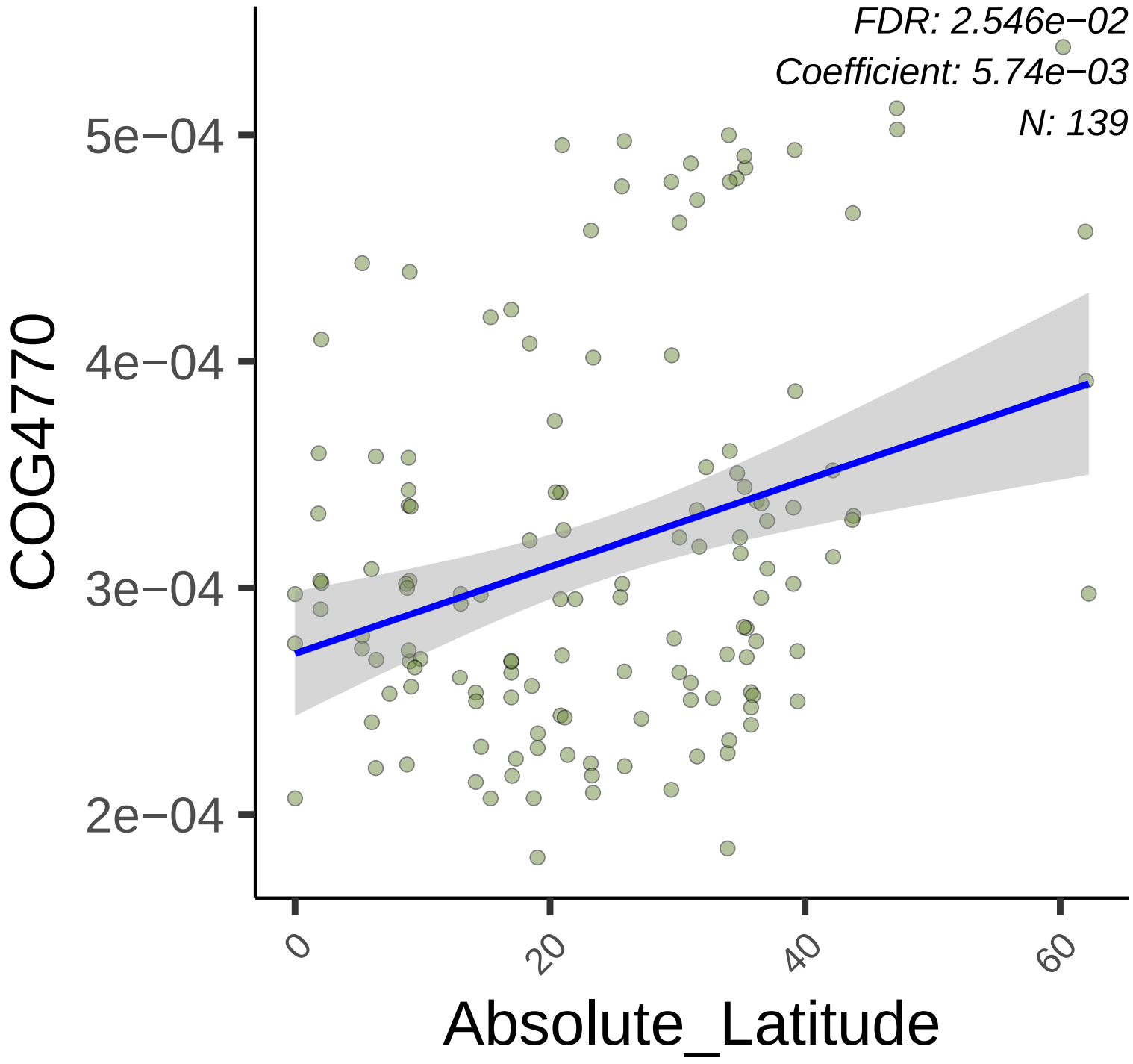

FDR: 2.463e−02
Coefficient: 8.54e−03
N: 139
3e−04
2e−04
1e−04
COG5476
0
20
40
60
Absolute_Latitude

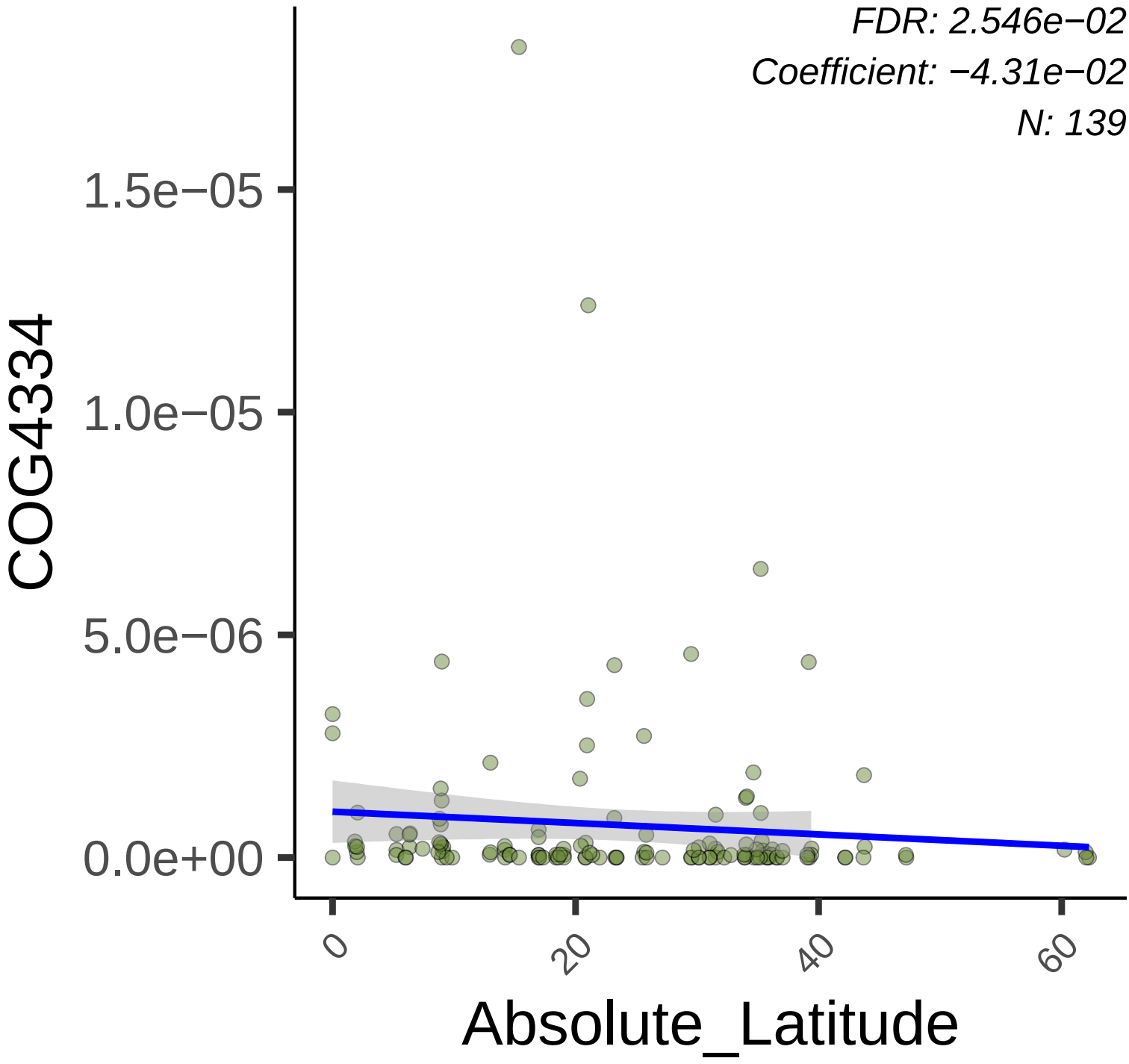

FDR: 2.470e−02
Coefficient: 6.34e−03
N: 139
0.00035
0.00030
0.00025
0.00020
0.00015
0.00010
COG4181
0
20
40
60
Absolute_Latitude

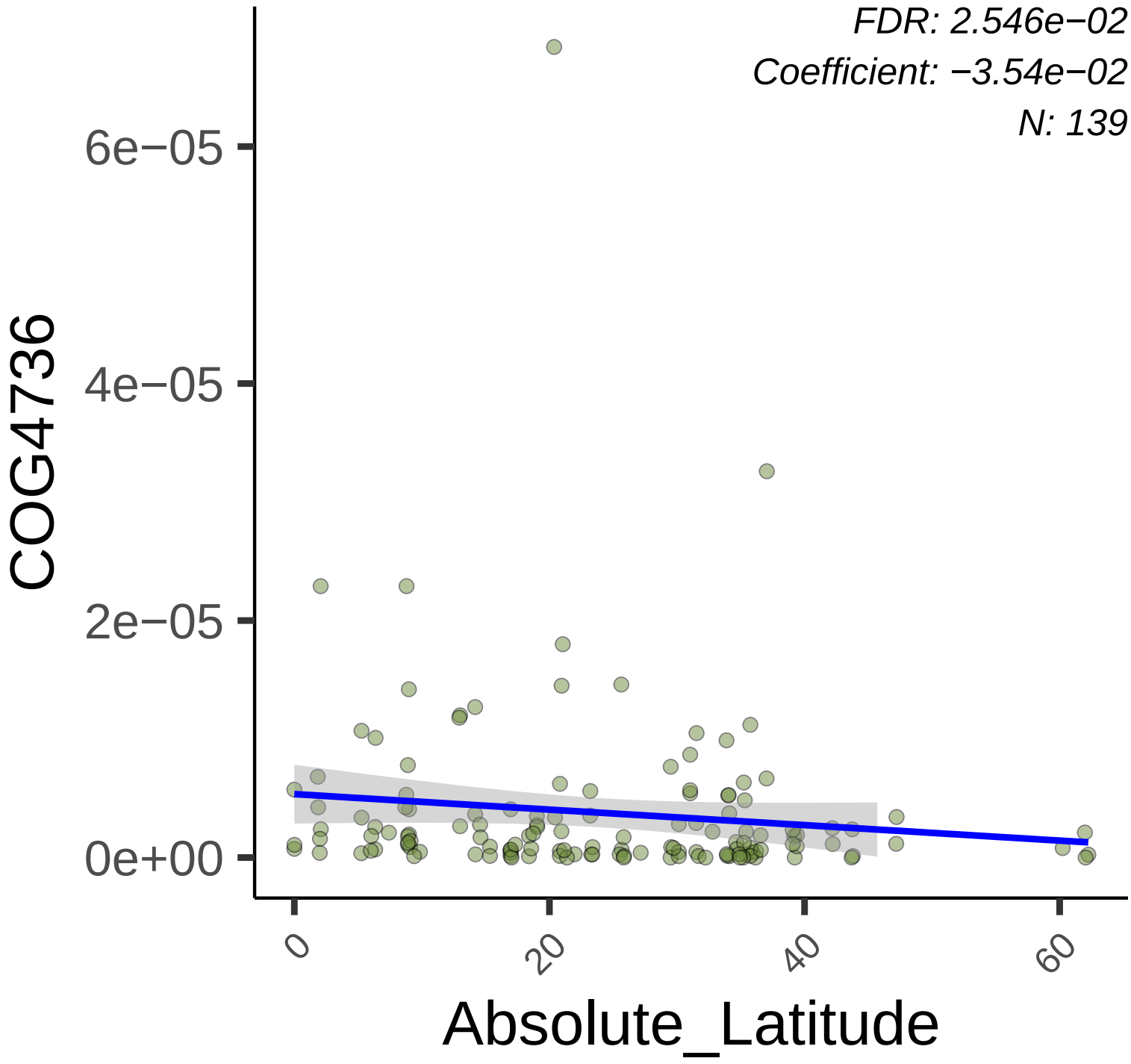

FDR: 2.488e−02
Coefficient: 5.63e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
2e−04
COG2377
0
20
40
60
Absolute_Latitude

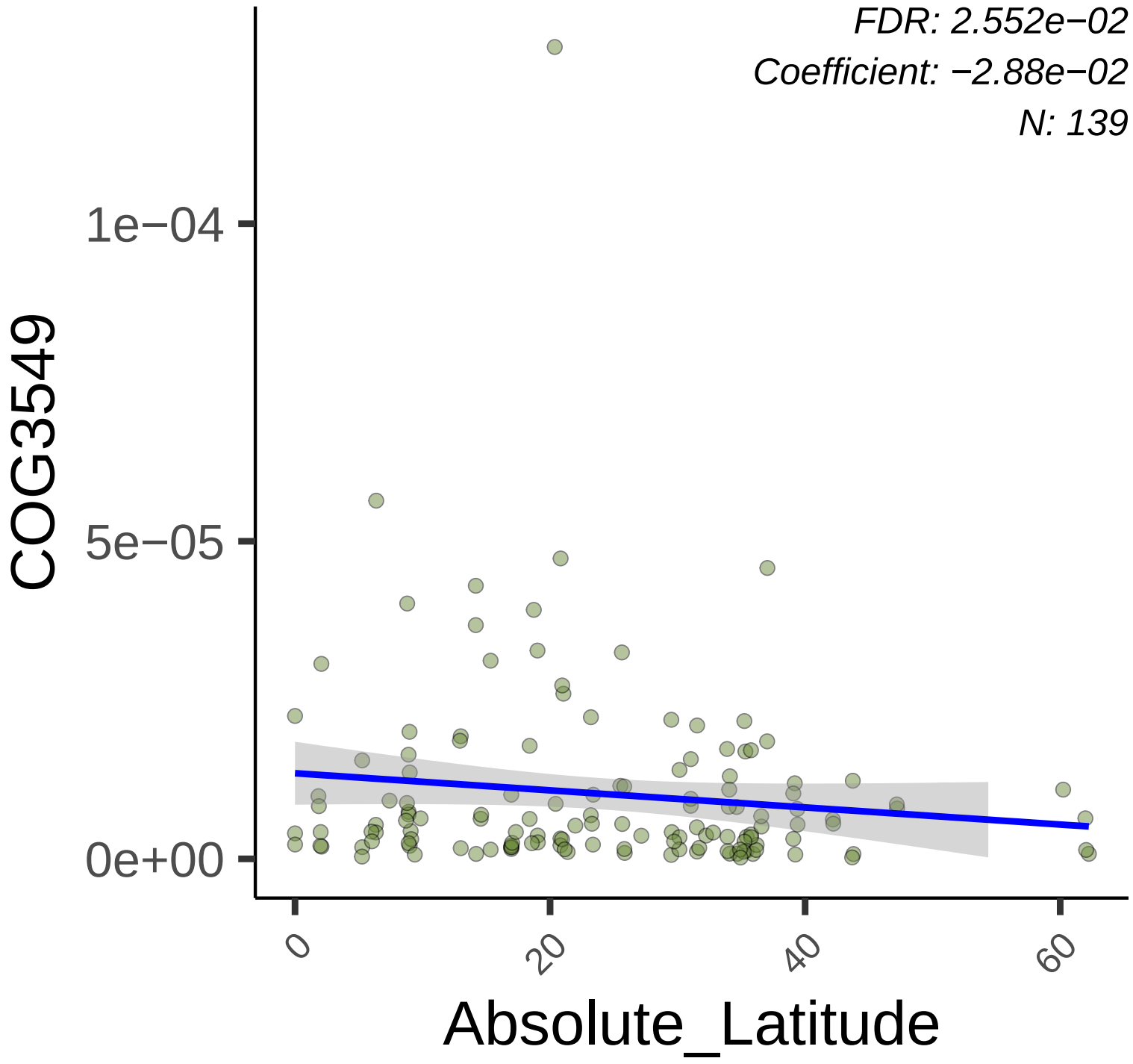

FDR: 2.493e−02
Coefficient: 1.94e−02
N: 139
COG3475
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

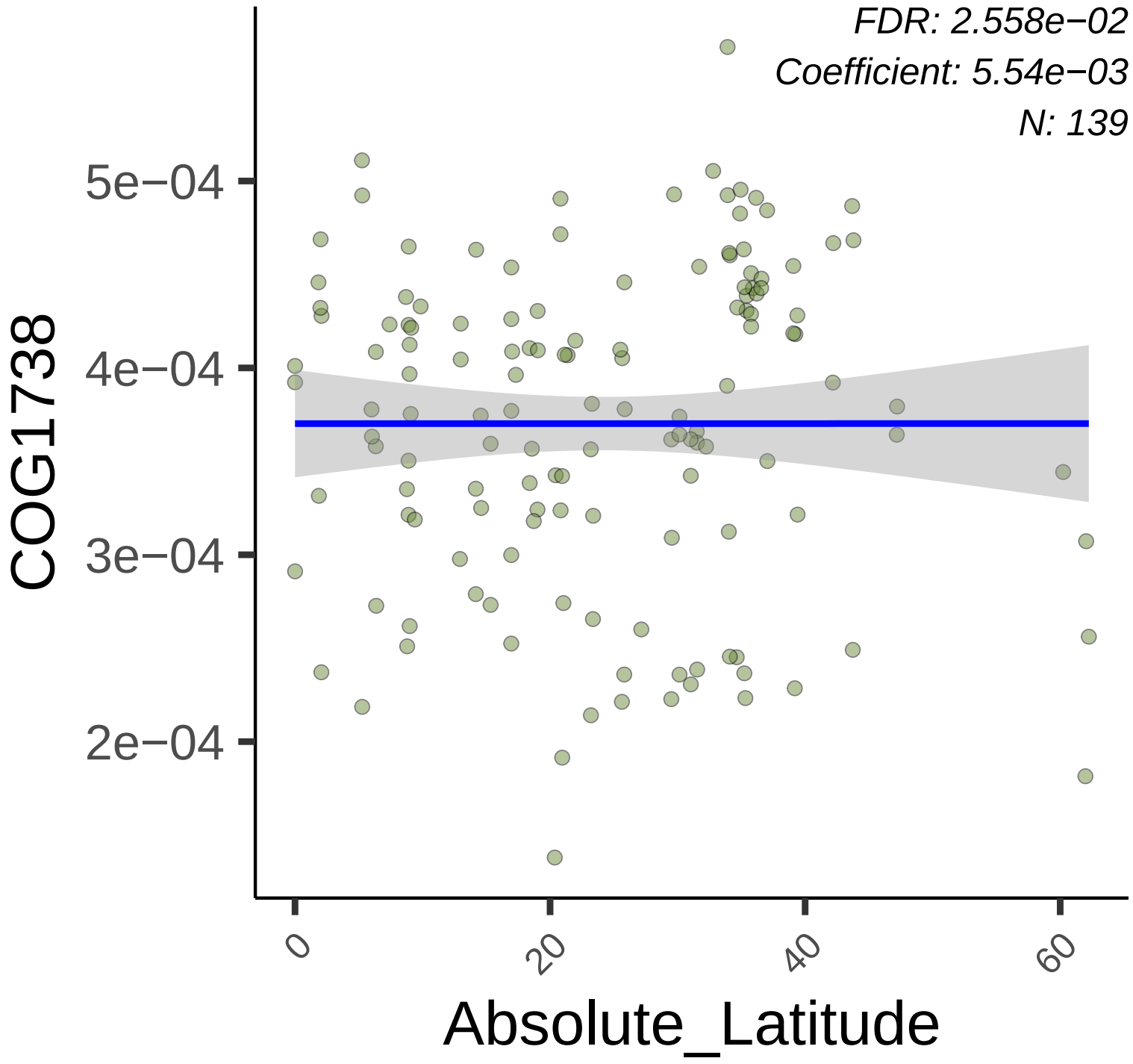

FDR: 2.512e−02
Coefficient: −1.52e−02
N: 139
COG1661
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

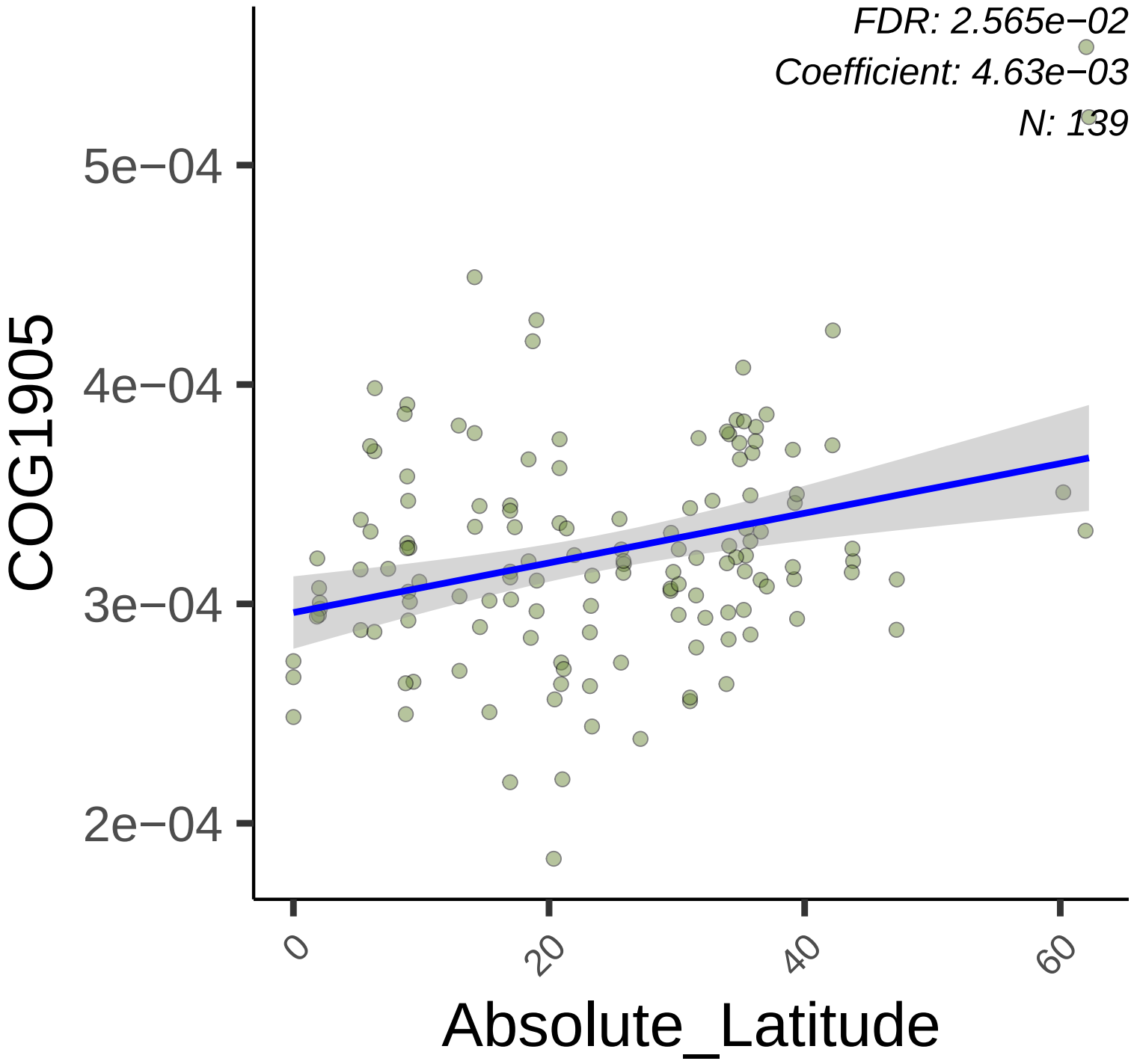

FDR: 2.546e−02
Coefficient: 5.74e−03
N: 139
COG4770
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

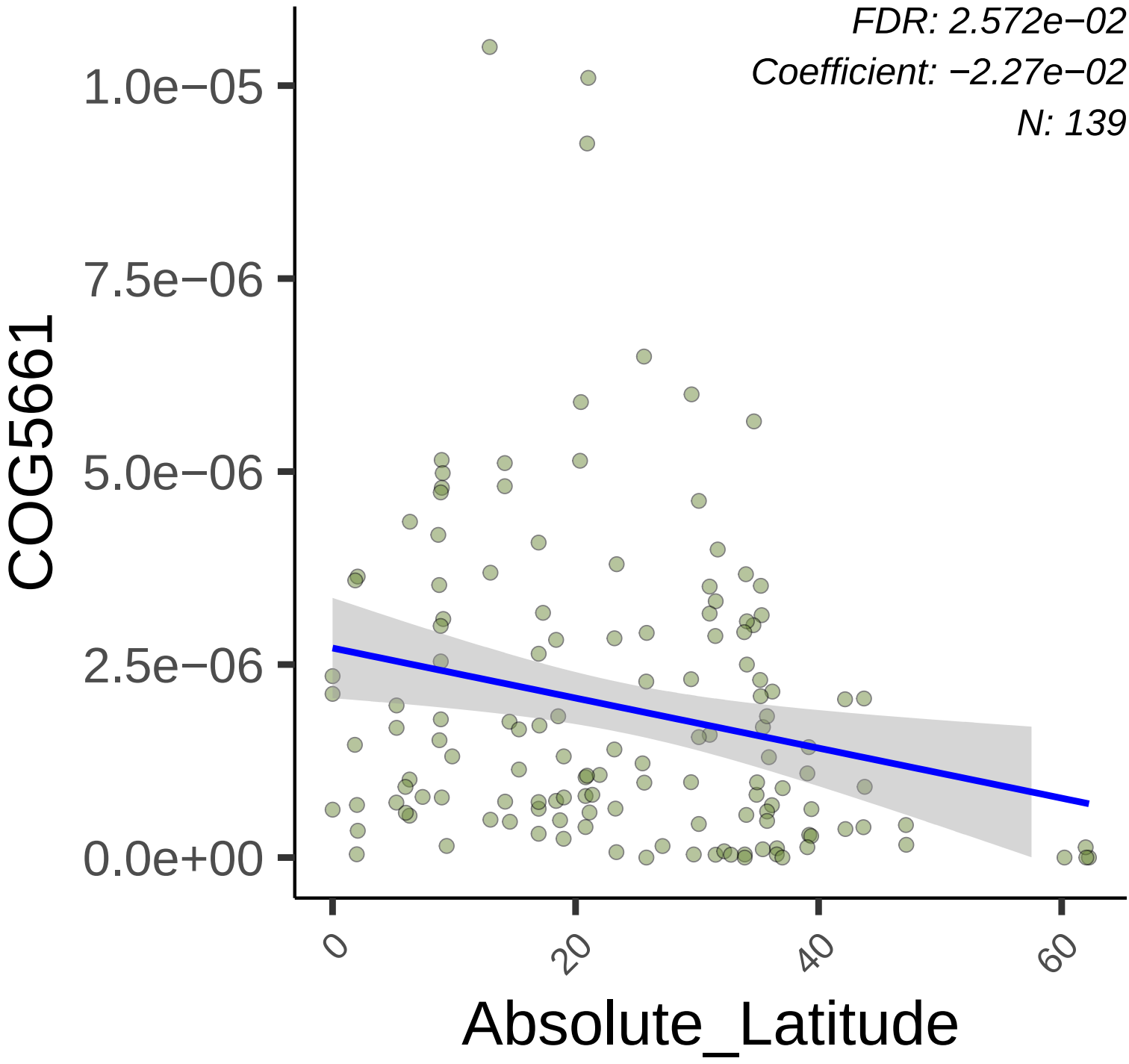

FDR: 2.546e−02
Coefficient: −4.31e−02
N: 139
COG4334
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

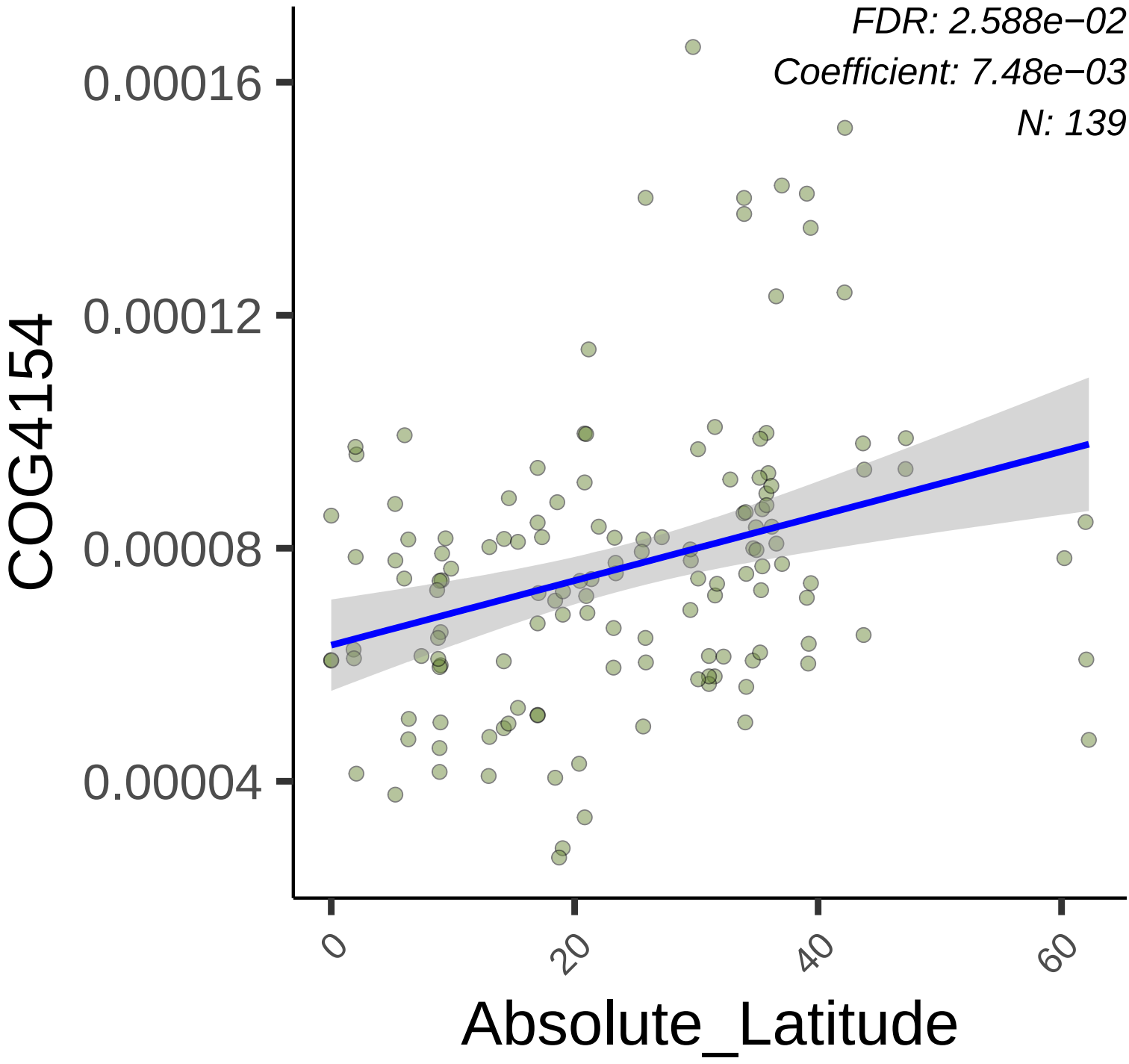

FDR: 2.546e−02
Coefficient: −3.54e−02
N: 139
COG4736
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

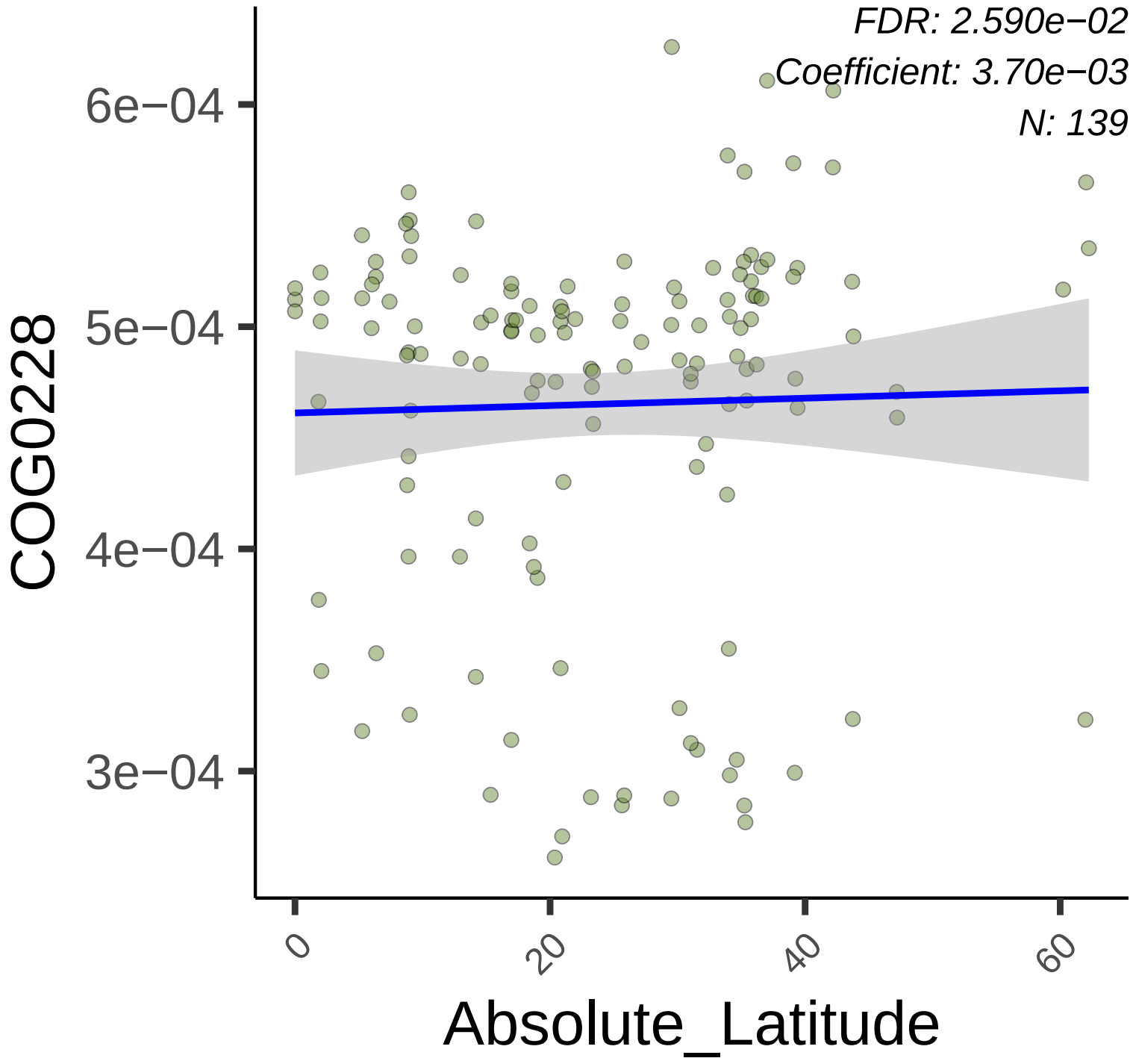

FDR: 2.552e−02
Coefficient: −2.88e−02
N: 139
COG3549
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

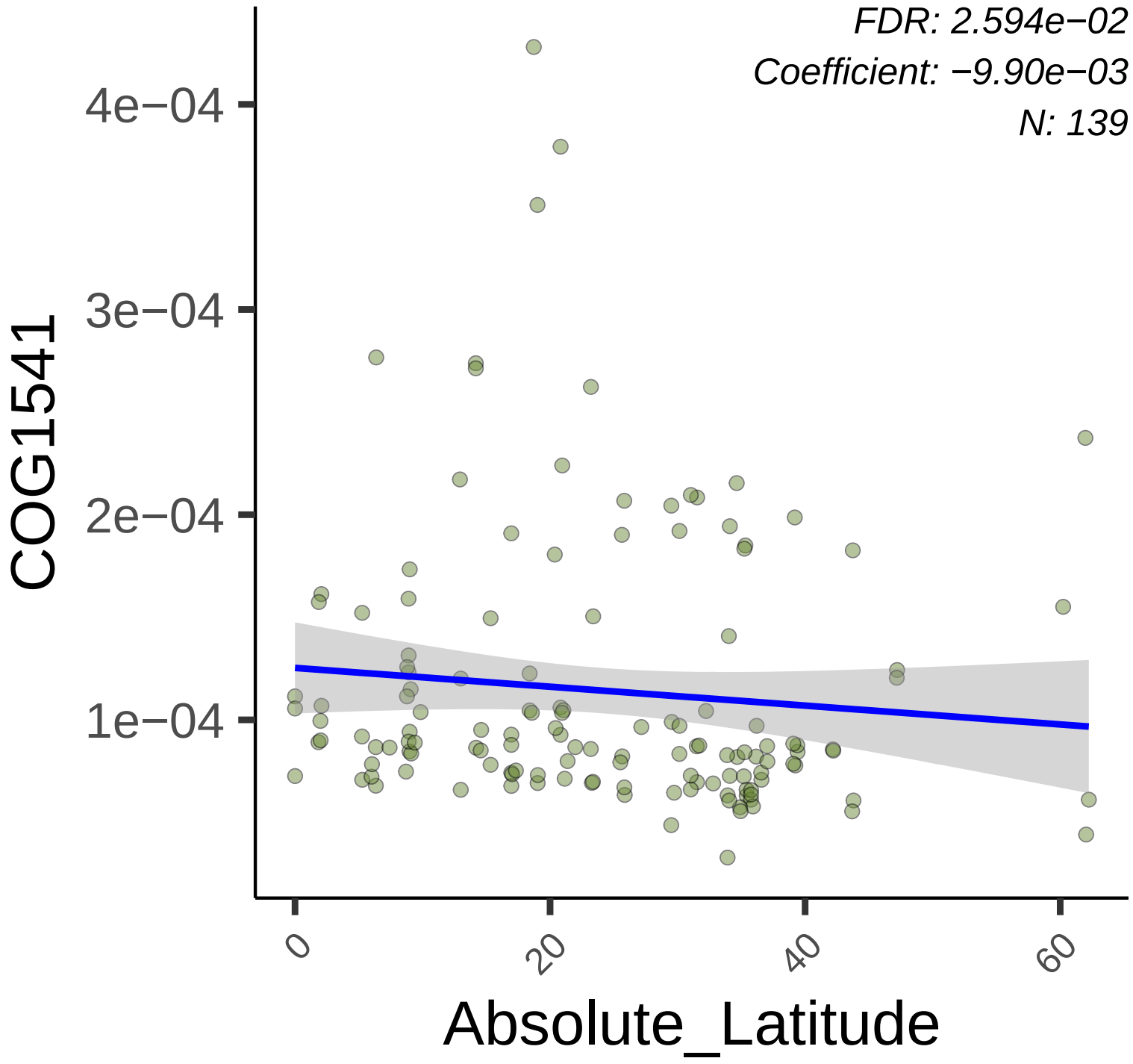

FDR: 2.558e−02
Coefficient: 5.54e−03
N: 139
COG1738
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

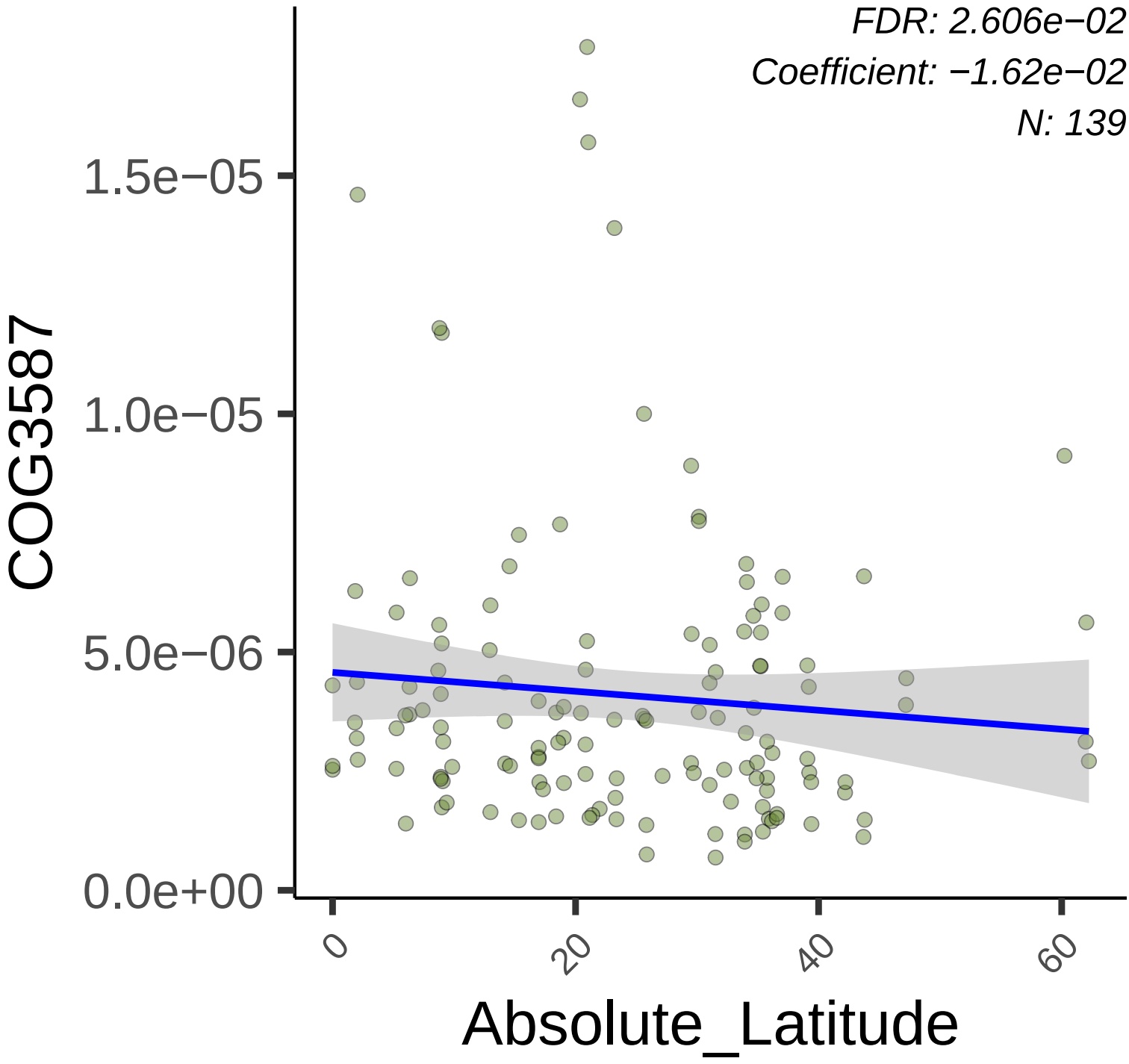

FDR: 2.565e−02
Coefficient: 4.63e−03
N: 139
COG1905
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

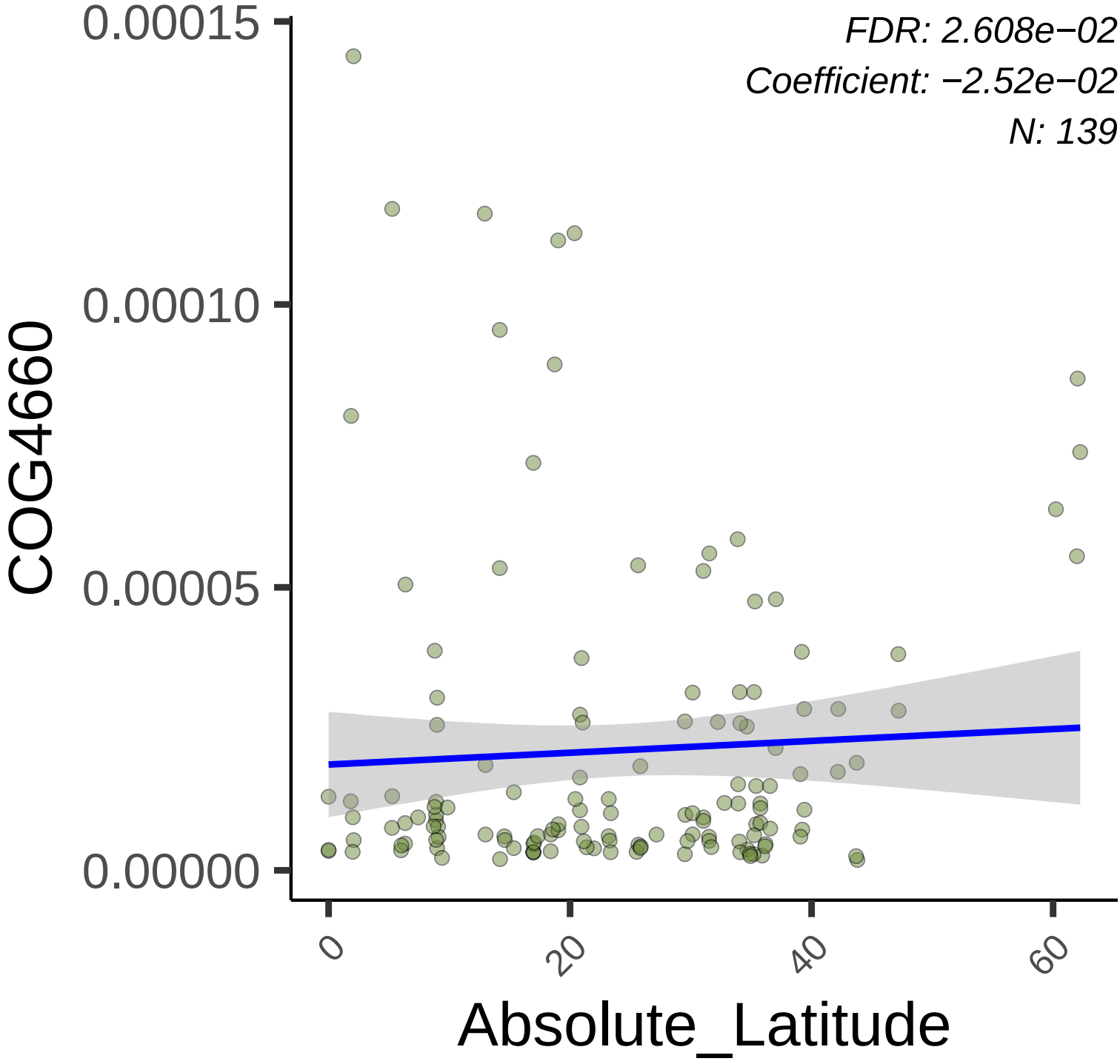

FDR: 2.572e−02
Coefficient: −2.27e−02
N: 139
1.0e−05
7.5e−06
5.0e−06
2.5e−06
0.0e+00
COG5661
0
20
40
60
Absolute_Latitude

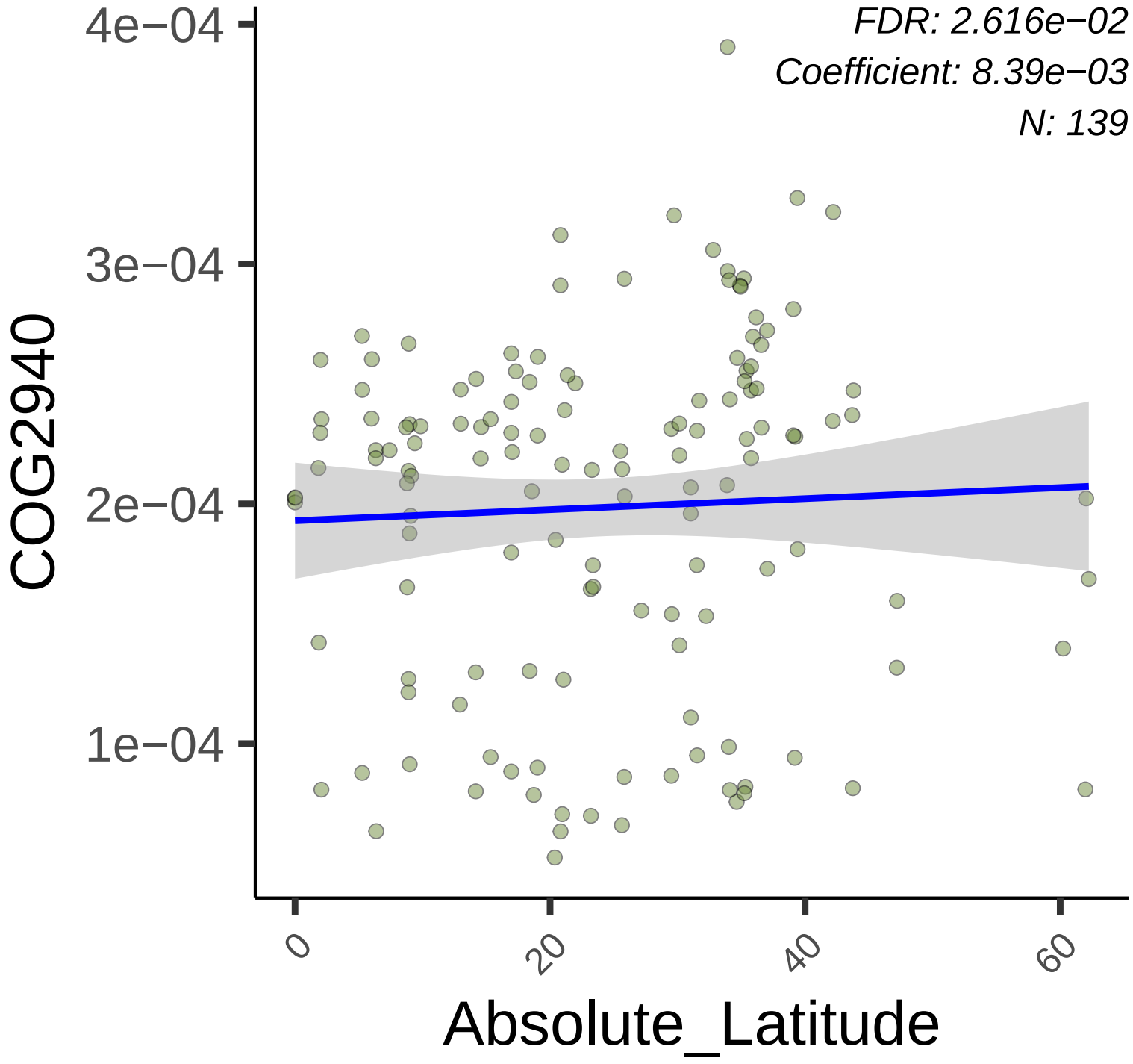

FDR: 2.588e−02
Coefficient: 7.48e−03
N: 139
0.00016
0.00012
0.00008
0.00004
COG4154
0
20
40
60
Absolute_Latitude

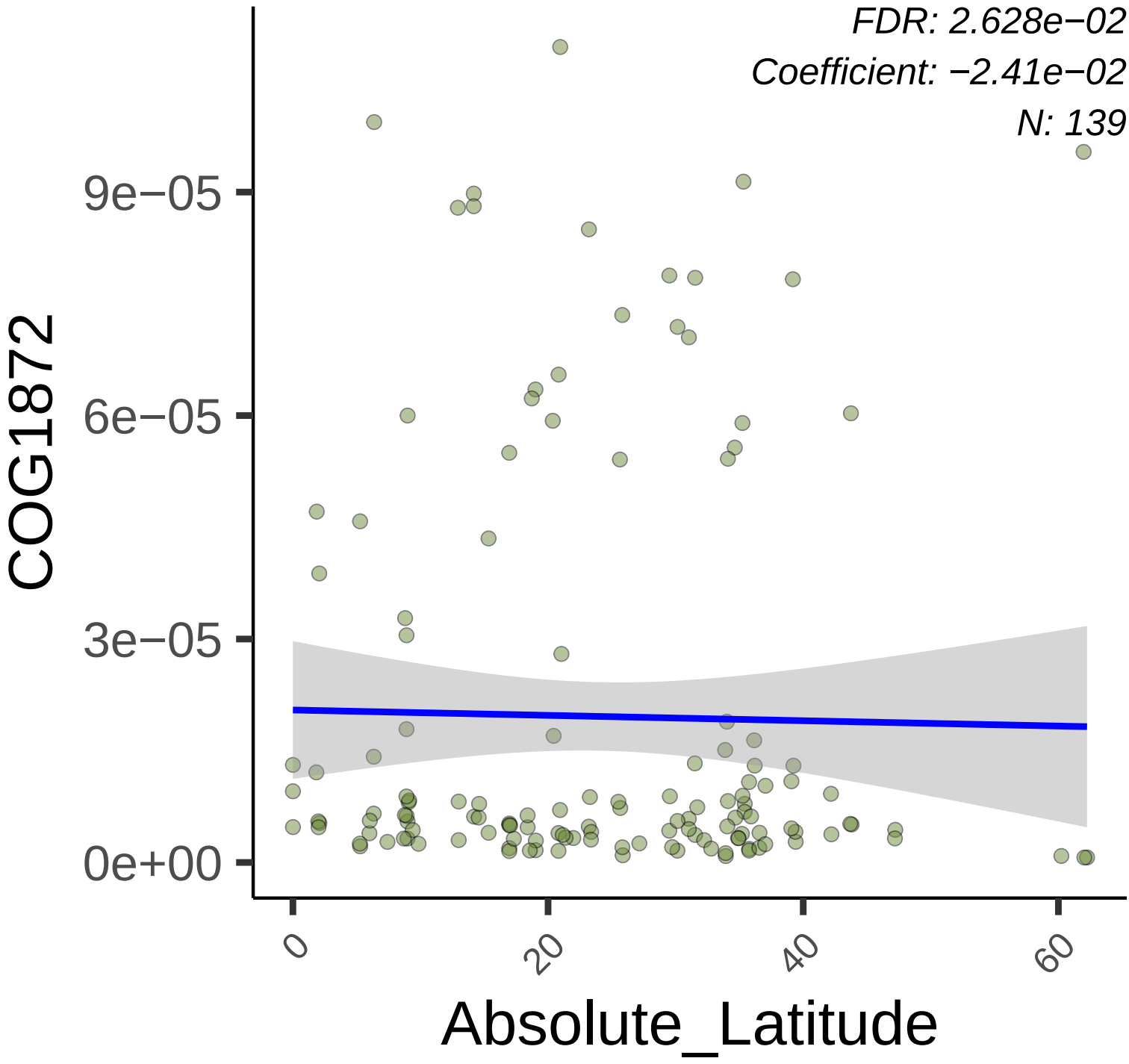

FDR: 2.590e−02
Coefficient: 3.70e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0228
0
20
40
60
Absolute_Latitude

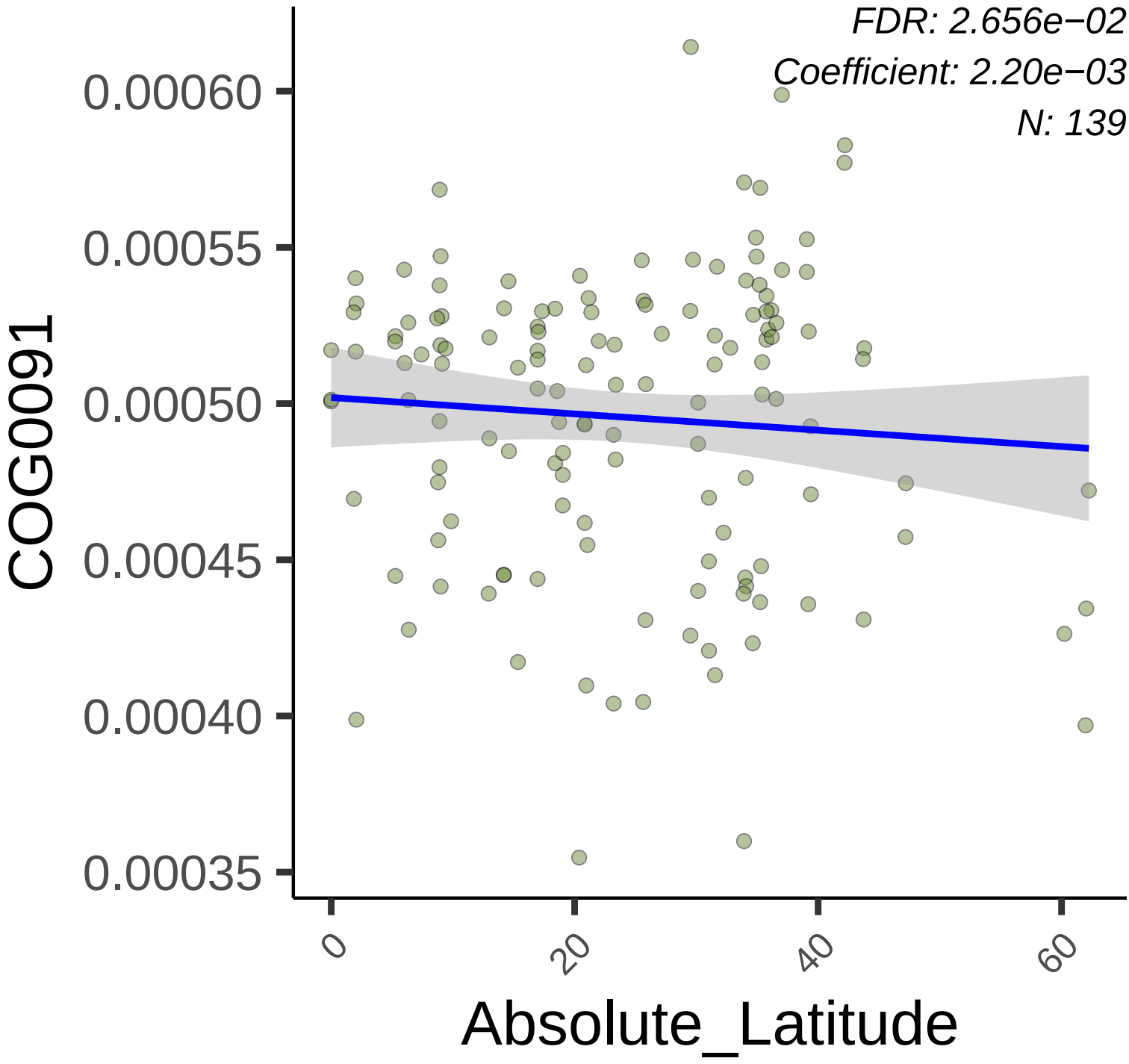

FDR: 2.594e−02
Coefficient: −9.90e−03
N: 139
COG1541
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

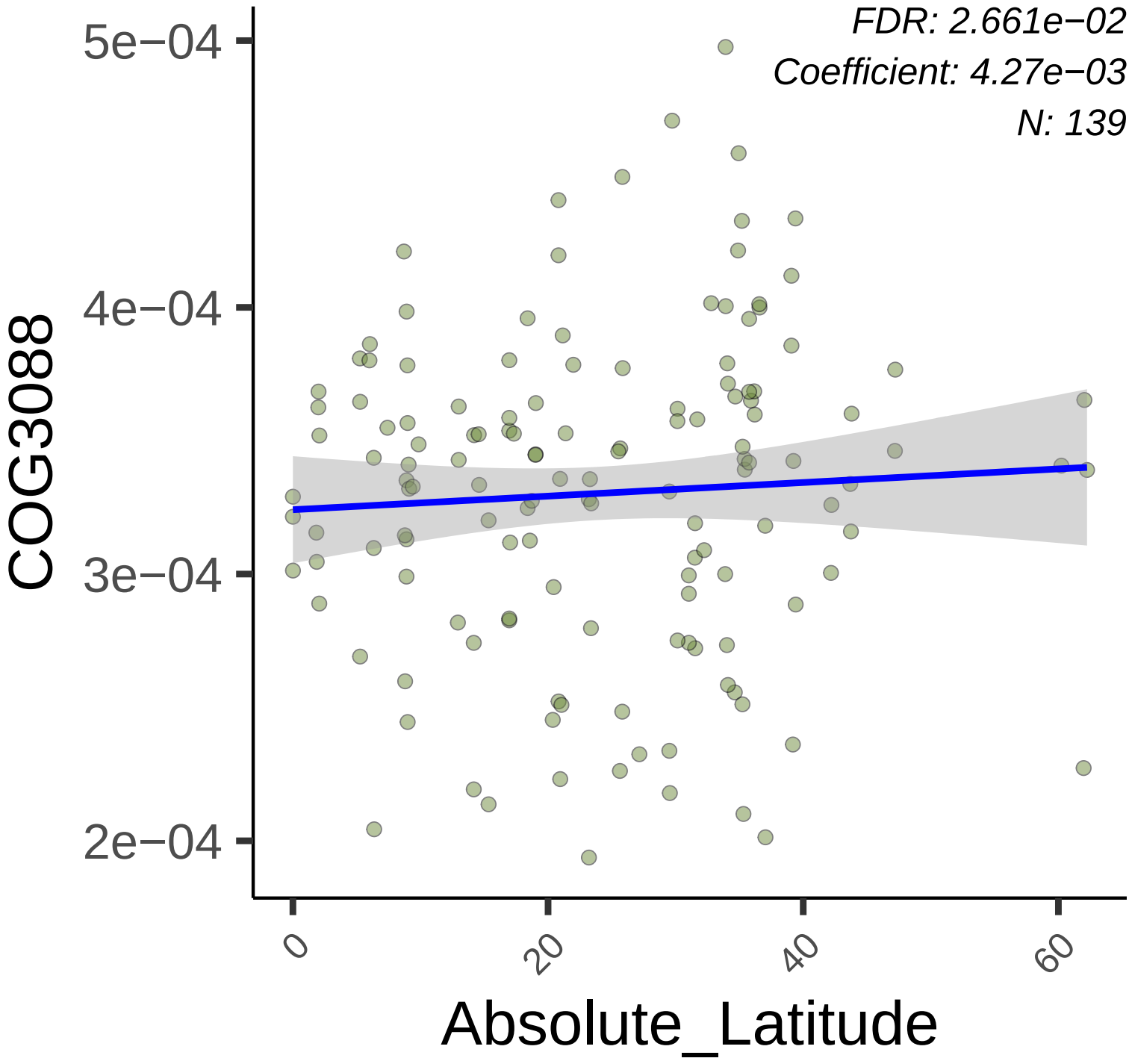

FDR: 2.606e−02
Coefficient: −1.62e−02
N: 139
COG3587
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

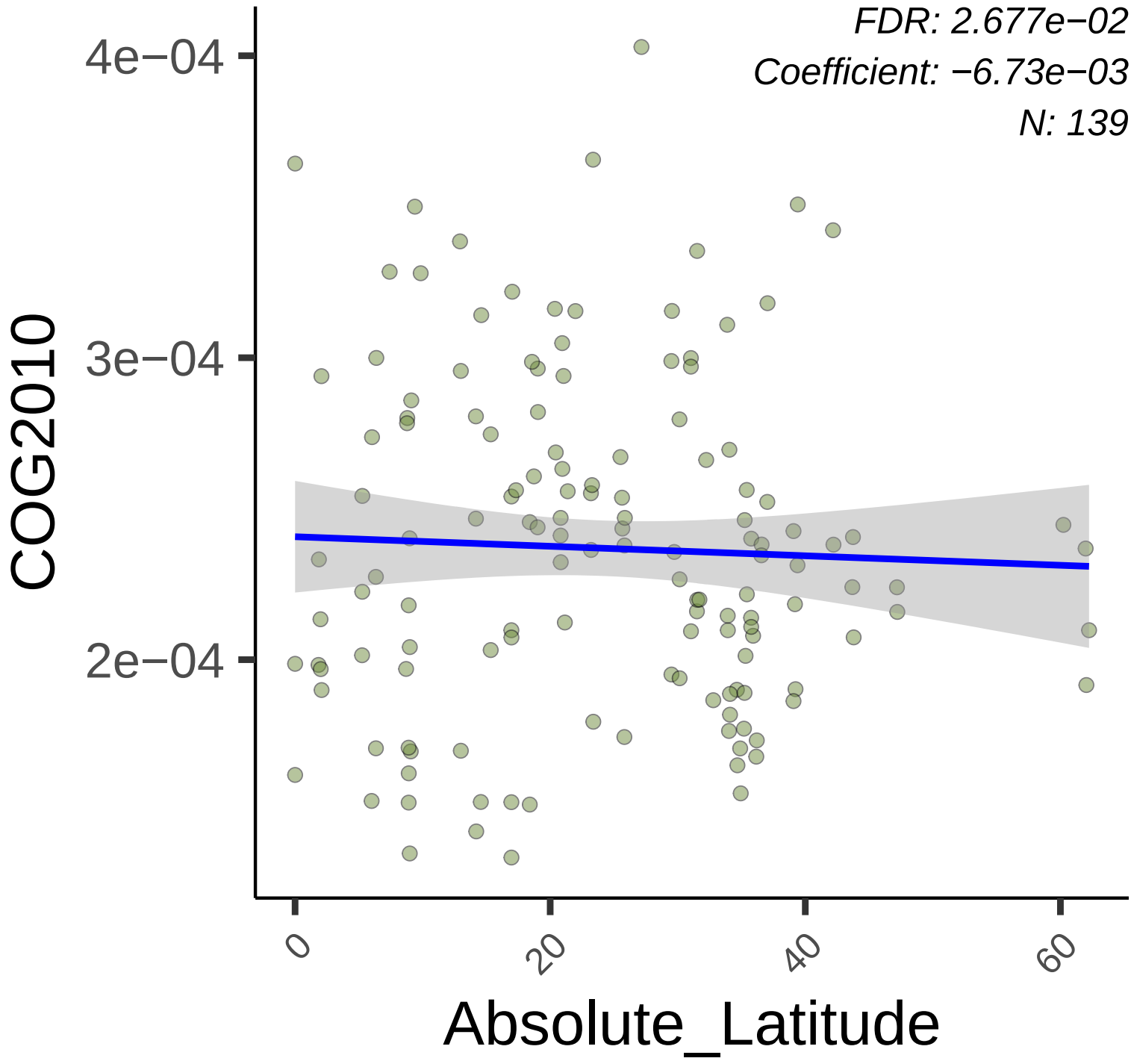

FDR: 2.608e−02
Coefficient: −2.52e−02
N: 139
COG4660
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

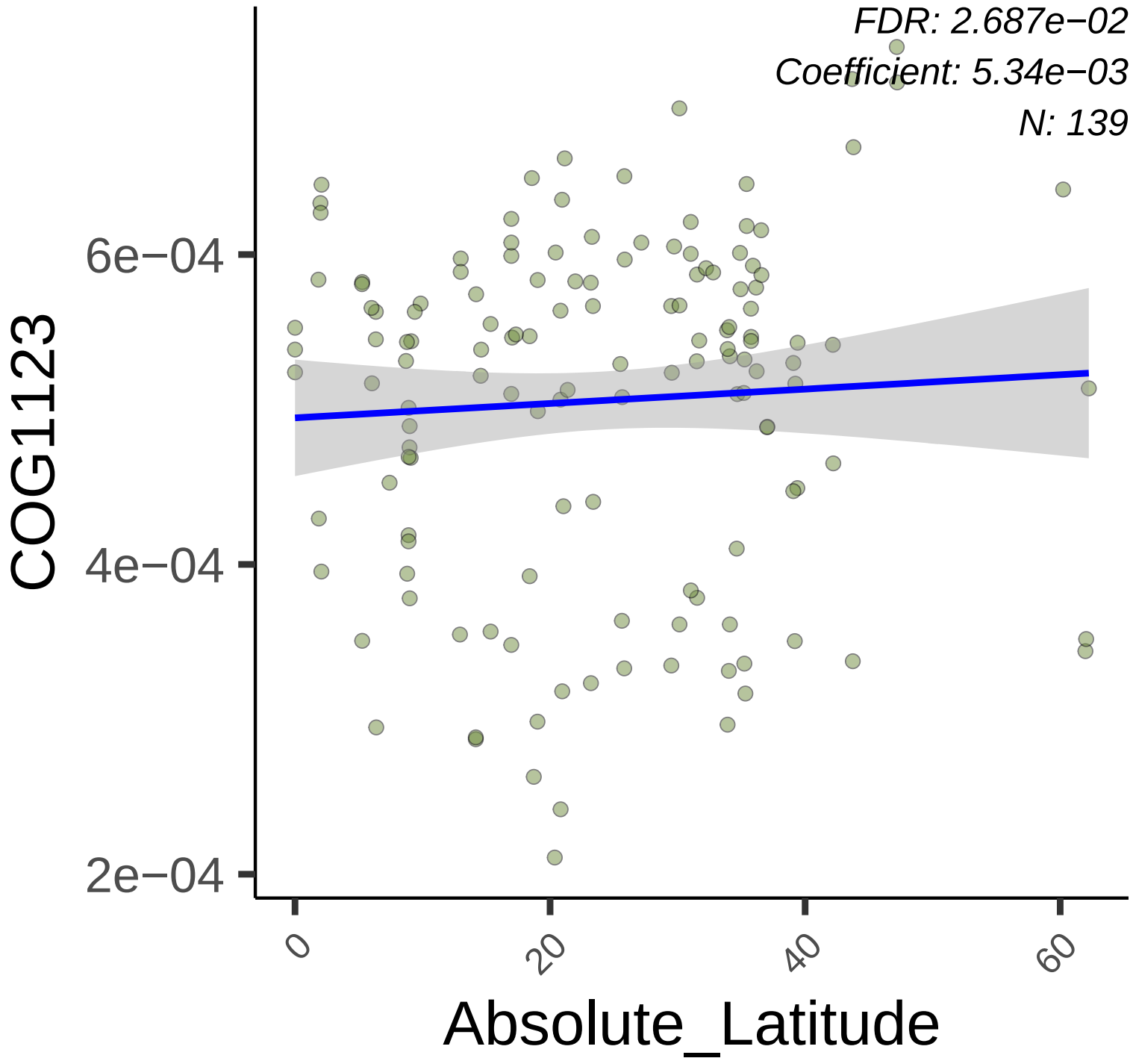

FDR: 2.616e−02
Coefficient: 8.39e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG2940
0
20
40
60
Absolute_Latitude

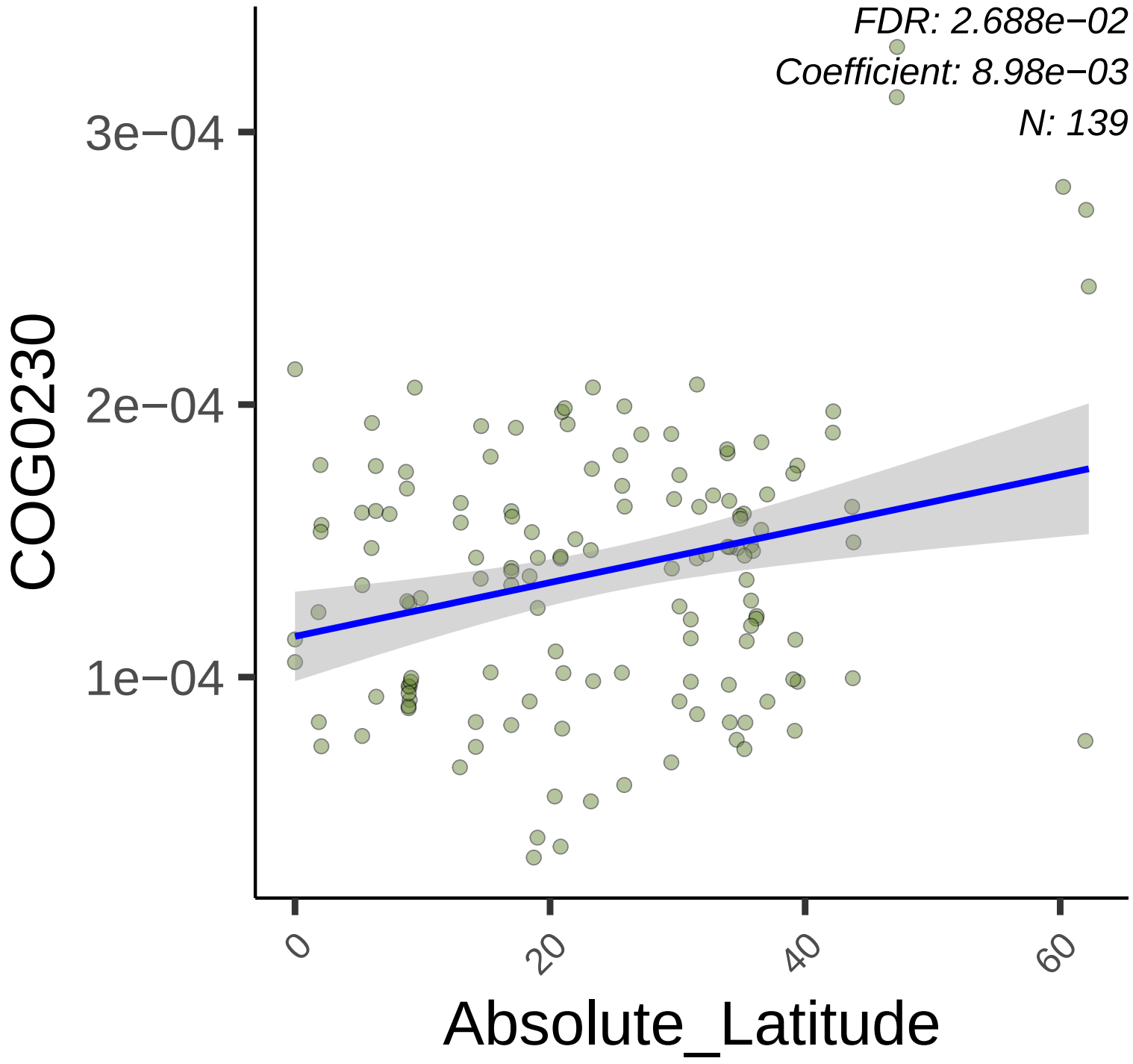

FDR: 2.628e−02
Coefficient: −2.41e−02
N: 139
COG1872
9e−05
6e−05
3e−05
0e+00
0
20
40
60
Absolute_Latitude

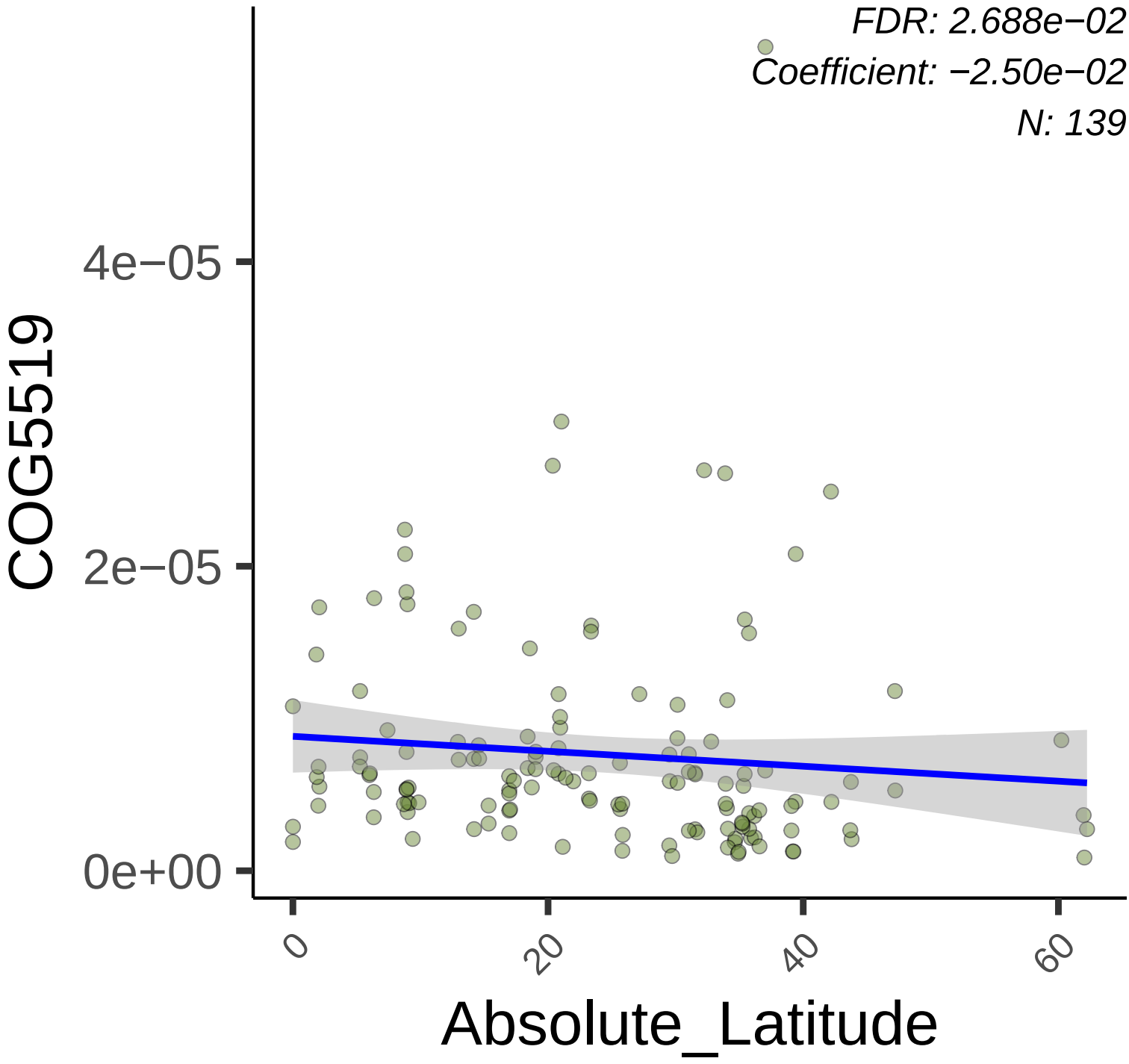

FDR: 2.656e−02
Coefficient: 2.20e−03
N: 139
COG0091
0.00060
0.00055
0.00050
0.00045
0.00040
0.00035
0
20
40
60
Absolute_Latitude

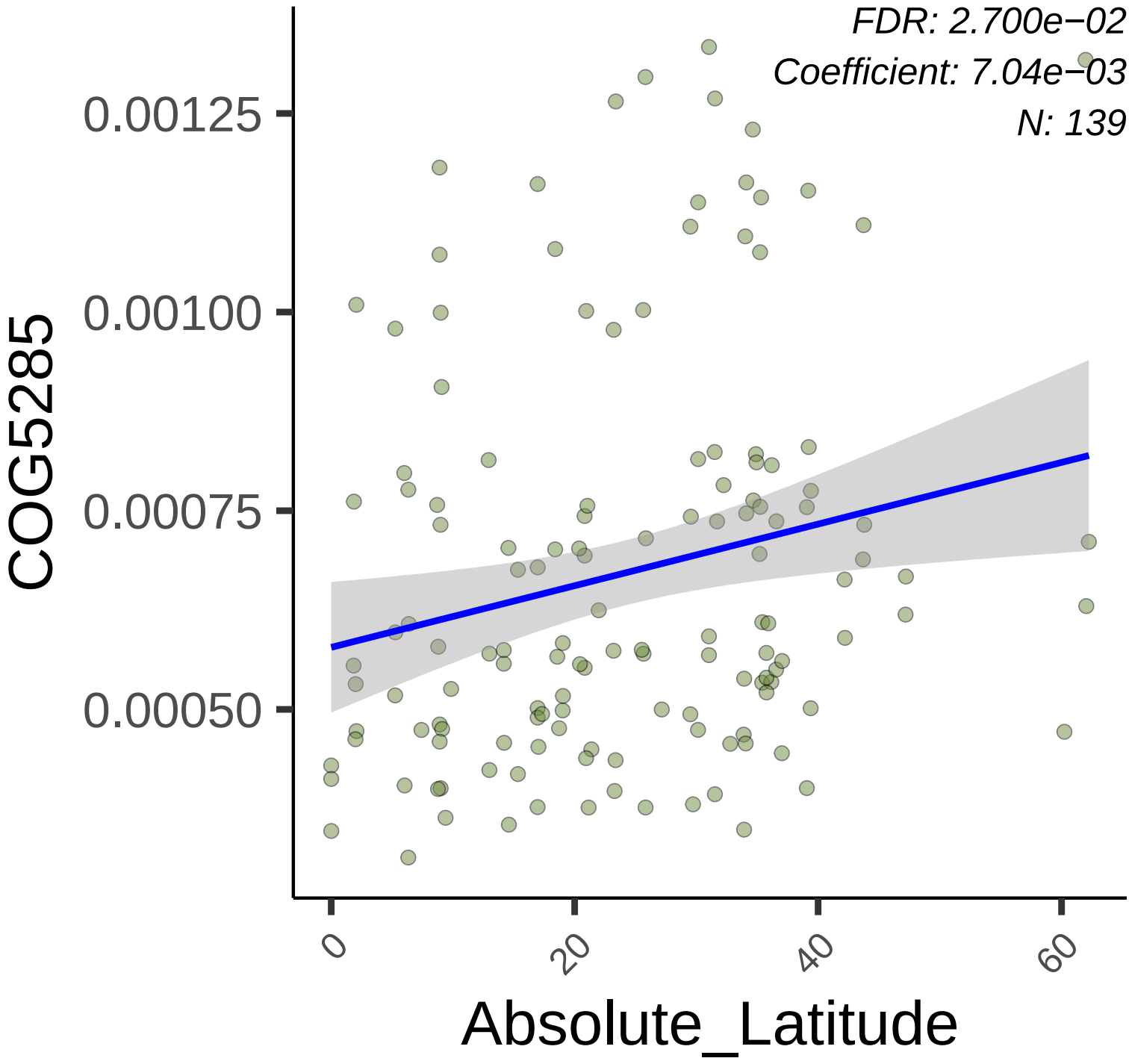

FDR: 2.661e−02
Coefficient: 4.27e−03
N: 139
5e−04
4e−04
3e−04
2e−04
COG3088
0
20
40
60
Absolute_Latitude

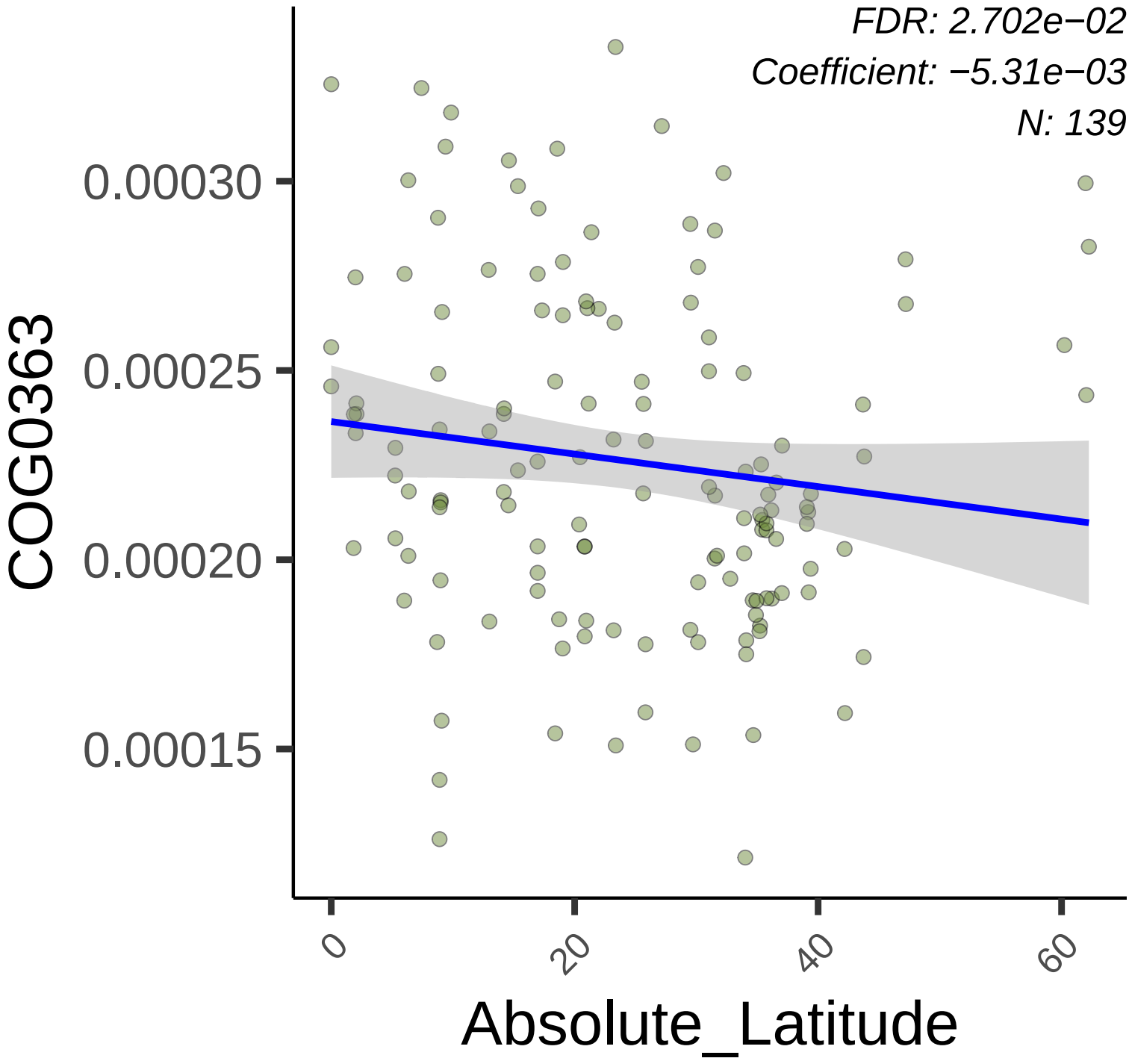

FDR: 2.677e−02
Coefficient: −6.73e−03
N: 139
4e−04
3e−04
2e−04
COG2010
0
20
40
60
Absolute_Latitude

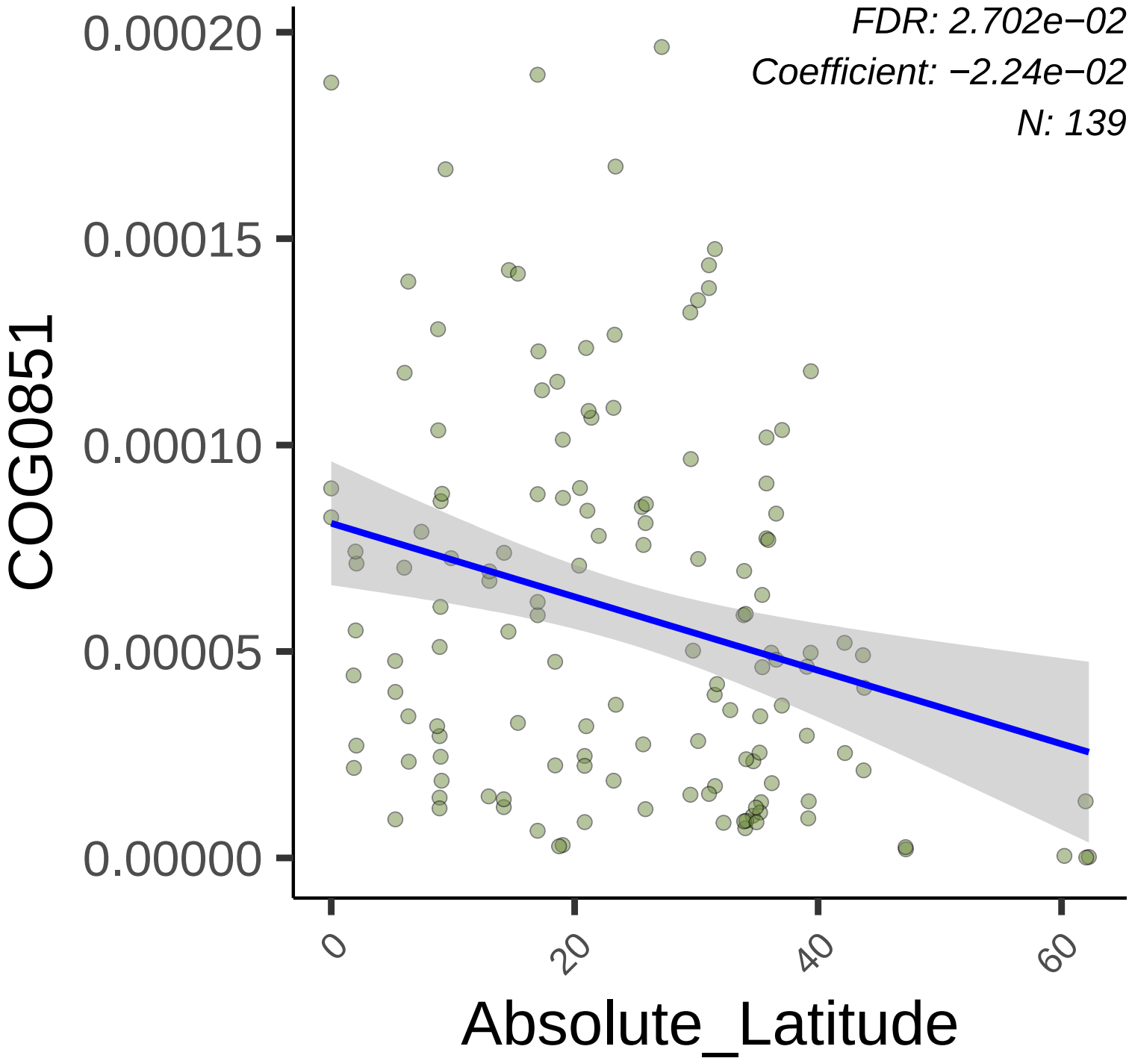

FDR: 2.687e−02
Coefficient: 5.34e−03
N: 139
COG1123
6e−04
4e−04
2e−04
0
20
40
60
Absolute_Latitude

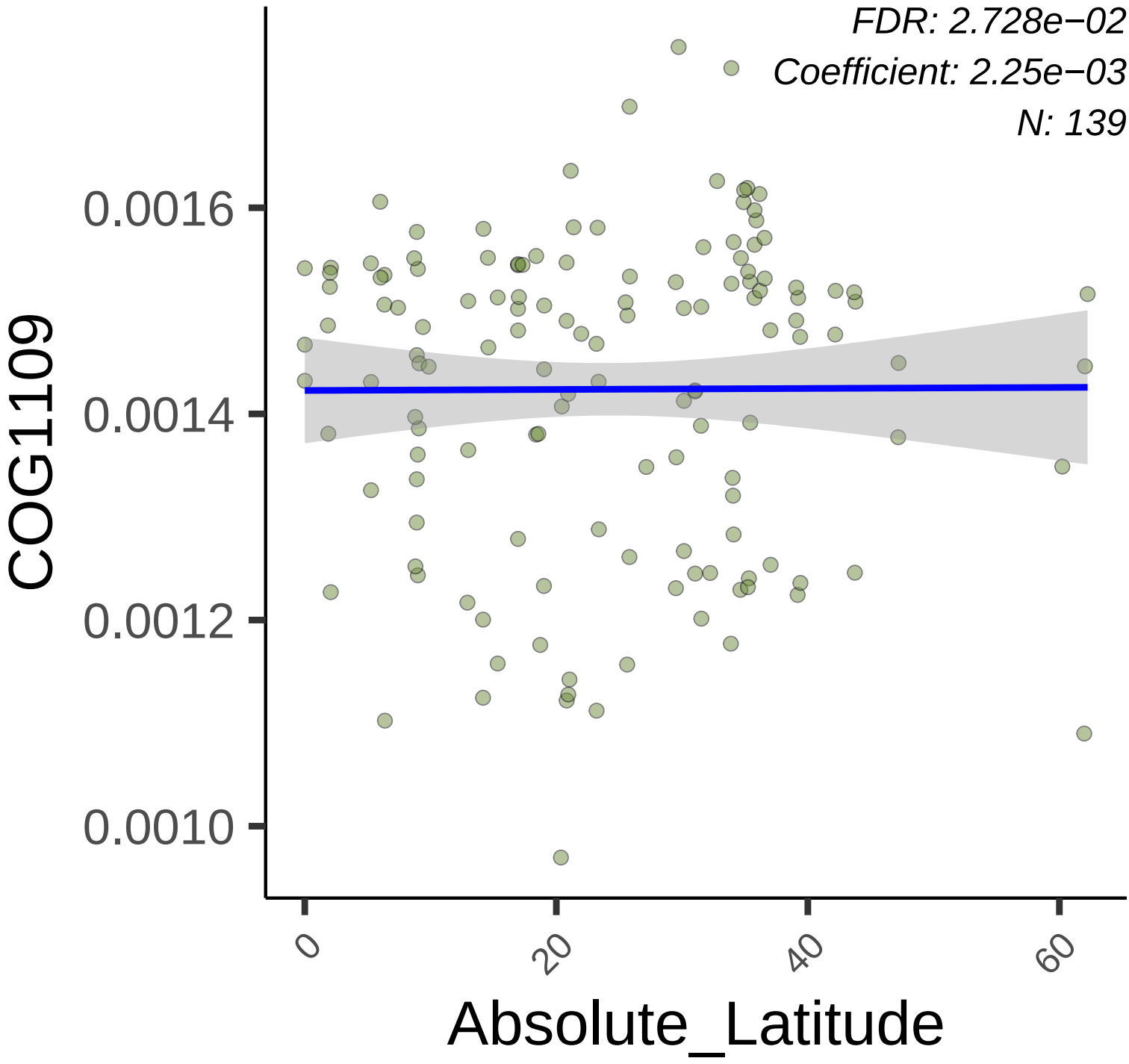

FDR: 2.688e−02
Coefficient: 8.98e−03
N: 139
3e−04
2e−04
1e−04
COG0230
0
20
40
60
Absolute_Latitude

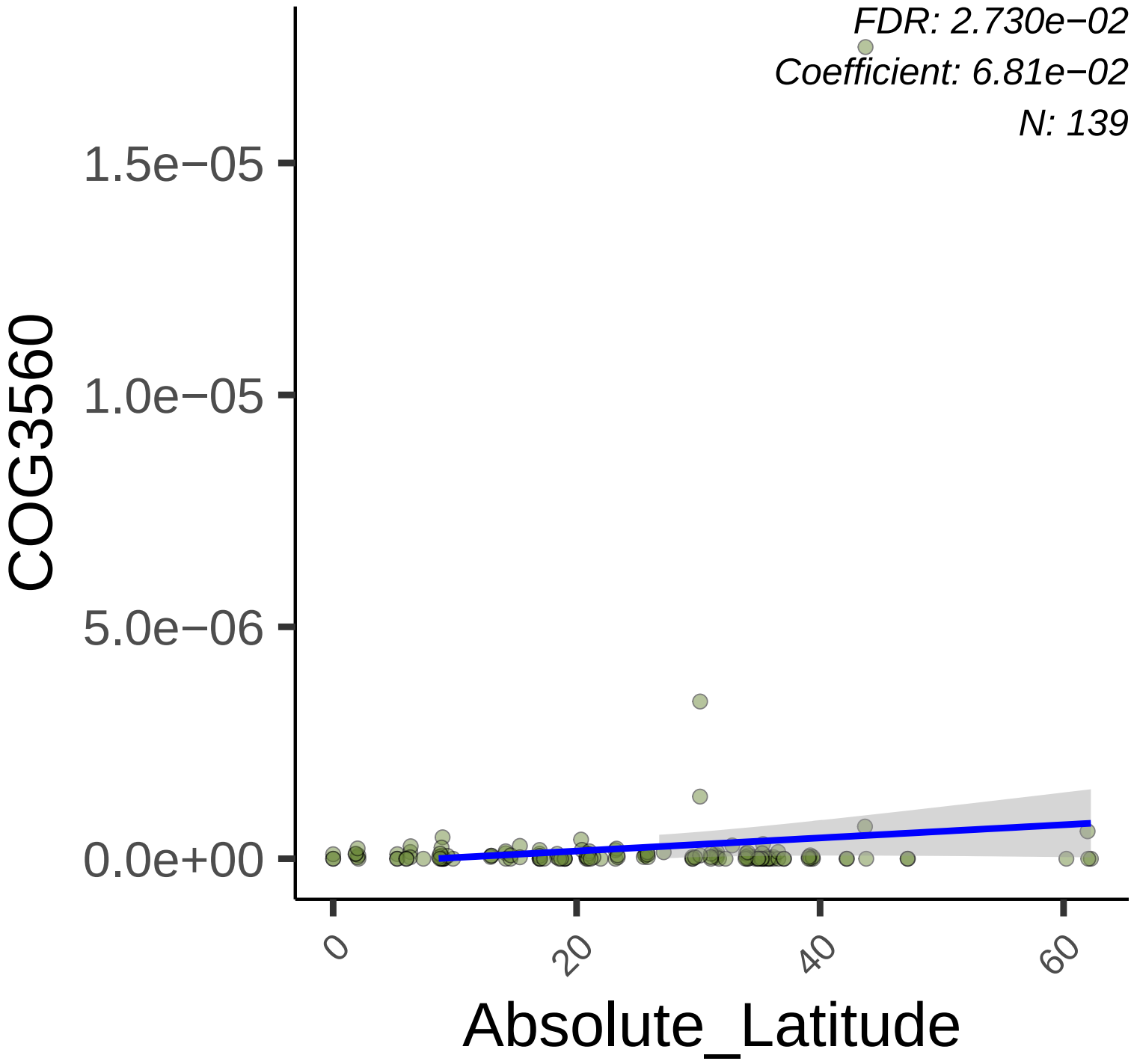

FDR: 2.688e−02
Coefficient: −2.50e−02
N: 139
COG5519
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

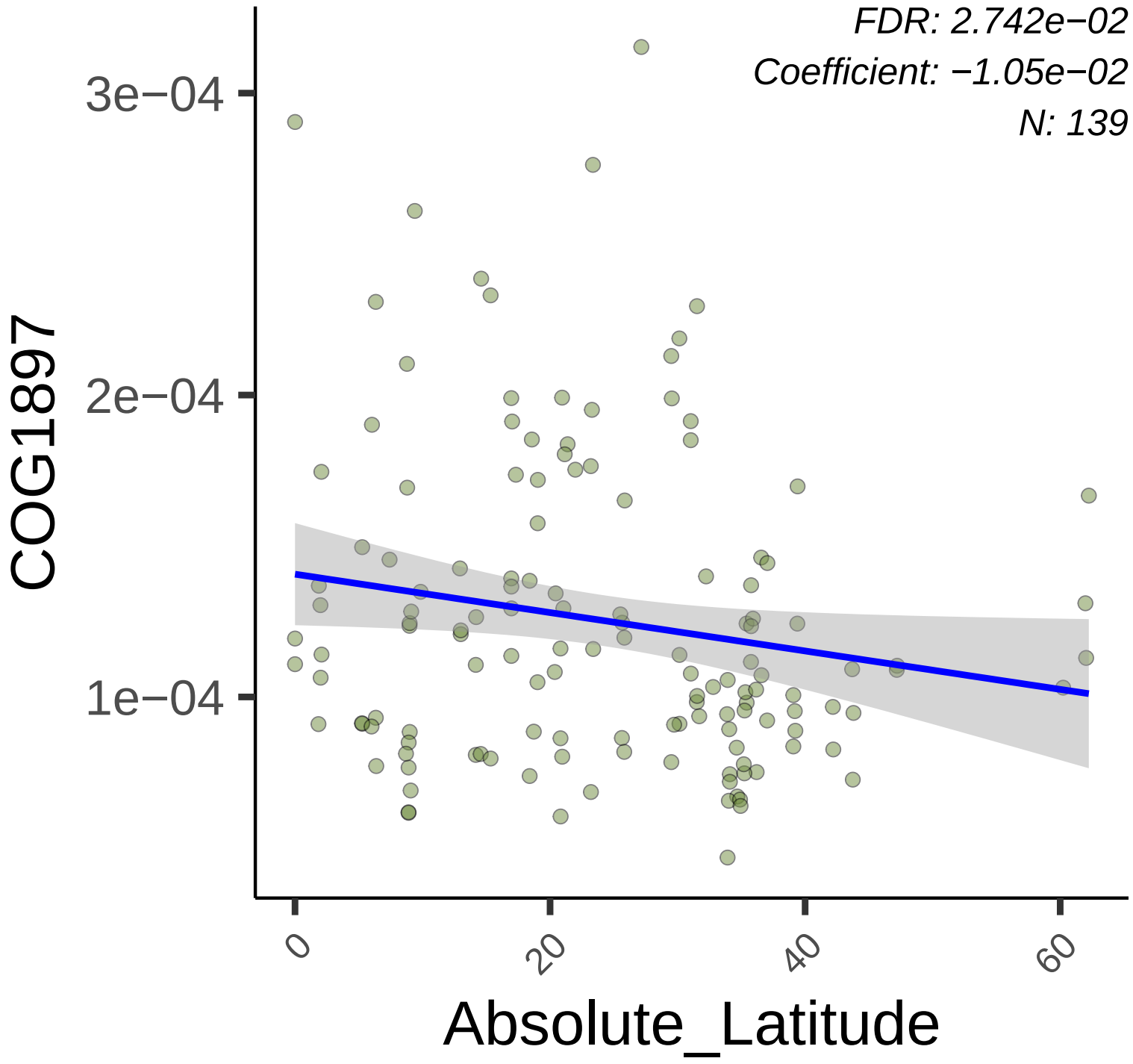

FDR: 2.700e−02
Coefficient: 7.04e−03
N: 139
0.00125
0.00100
0.00075
0.00050
COG5285
0
20
40
60
Absolute_Latitude

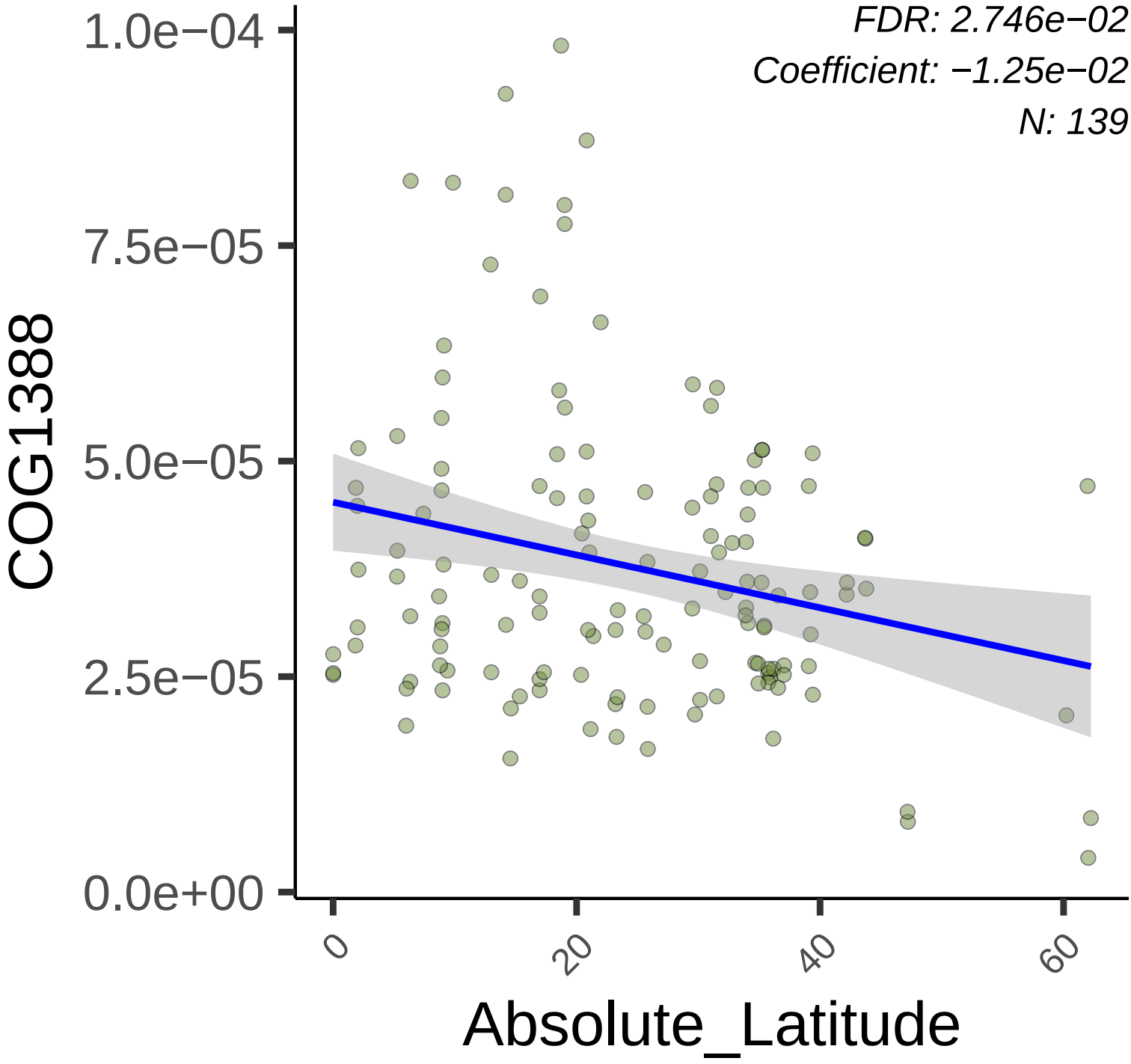

FDR: 2.702e−02
Coefficient: −5.31e−03
N: 139
COG0363
0.00030
0.00025
0.00020
0.00015
0
20
40
60
Absolute_Latitude

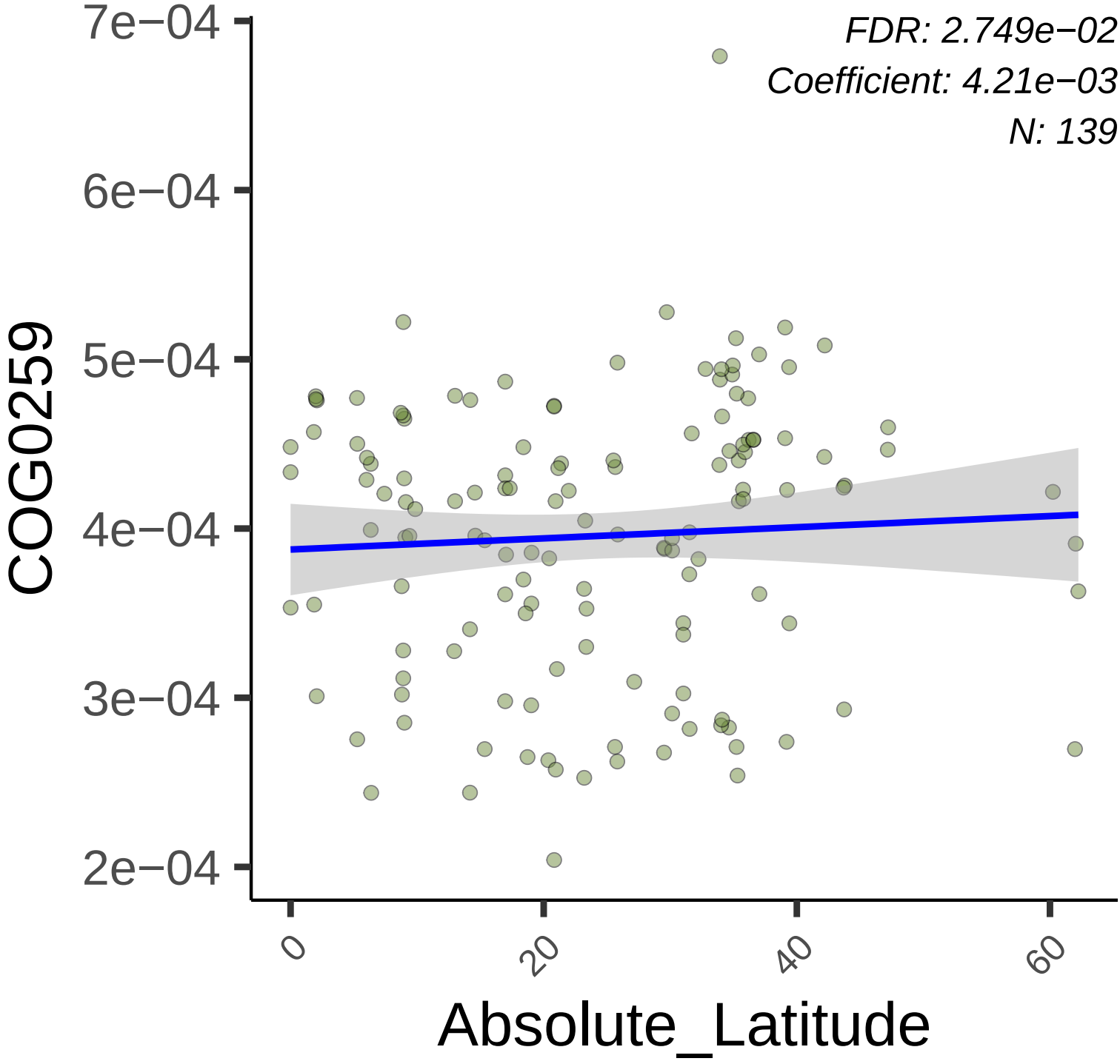

FDR: 2.702e−02
Coefficient: −2.24e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG0851
0
20
40
60
Absolute_Latitude

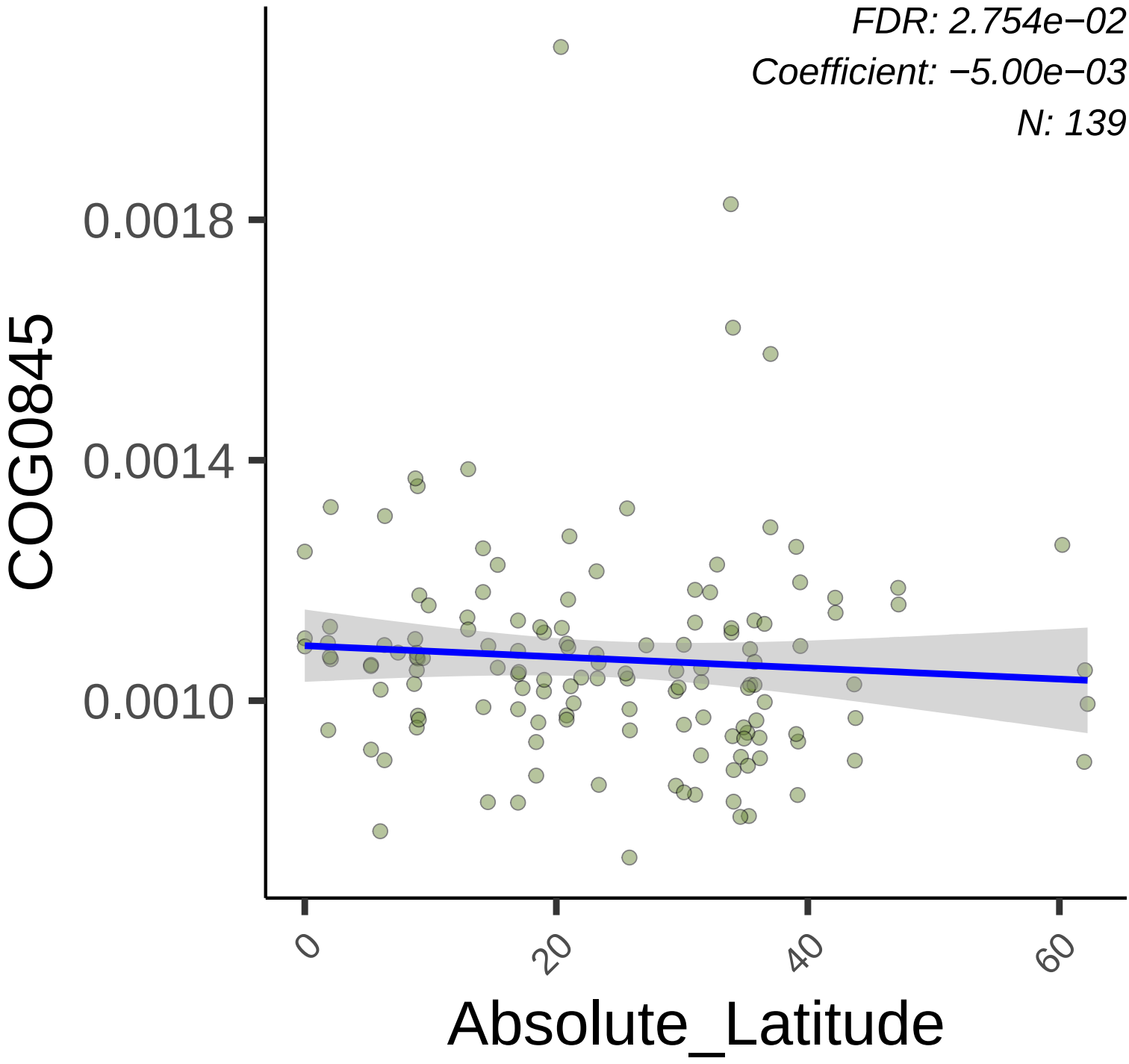

FDR: 2.728e−02
Coefficient: 2.25e−03
N: 139
COG1109
0.0016
0.0014
0.0012
0.0010
0
20
40
60
Absolute_Latitude

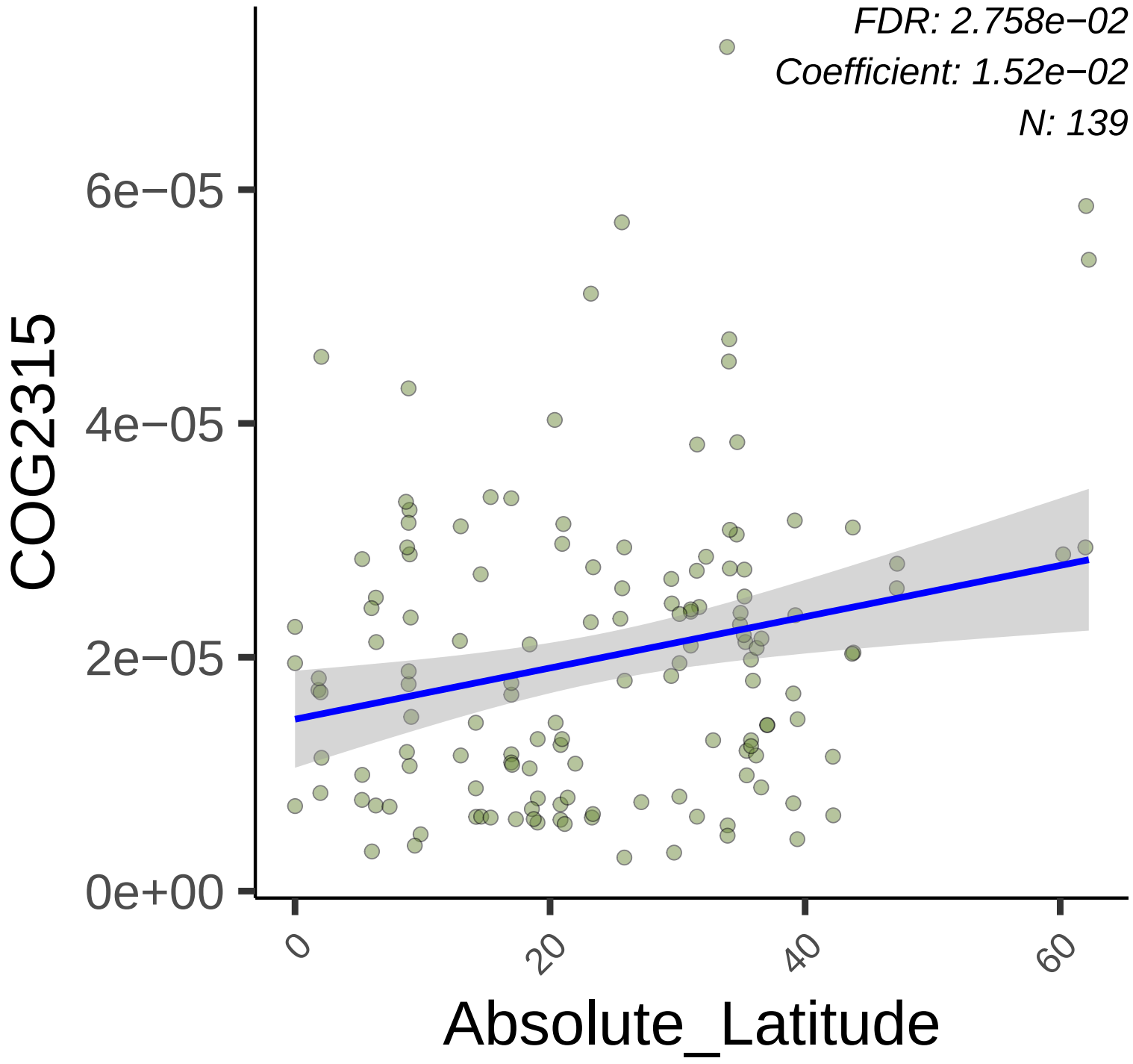

FDR: 2.730e−02
Coefficient: 6.81e−02
N: 139
COG3560
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

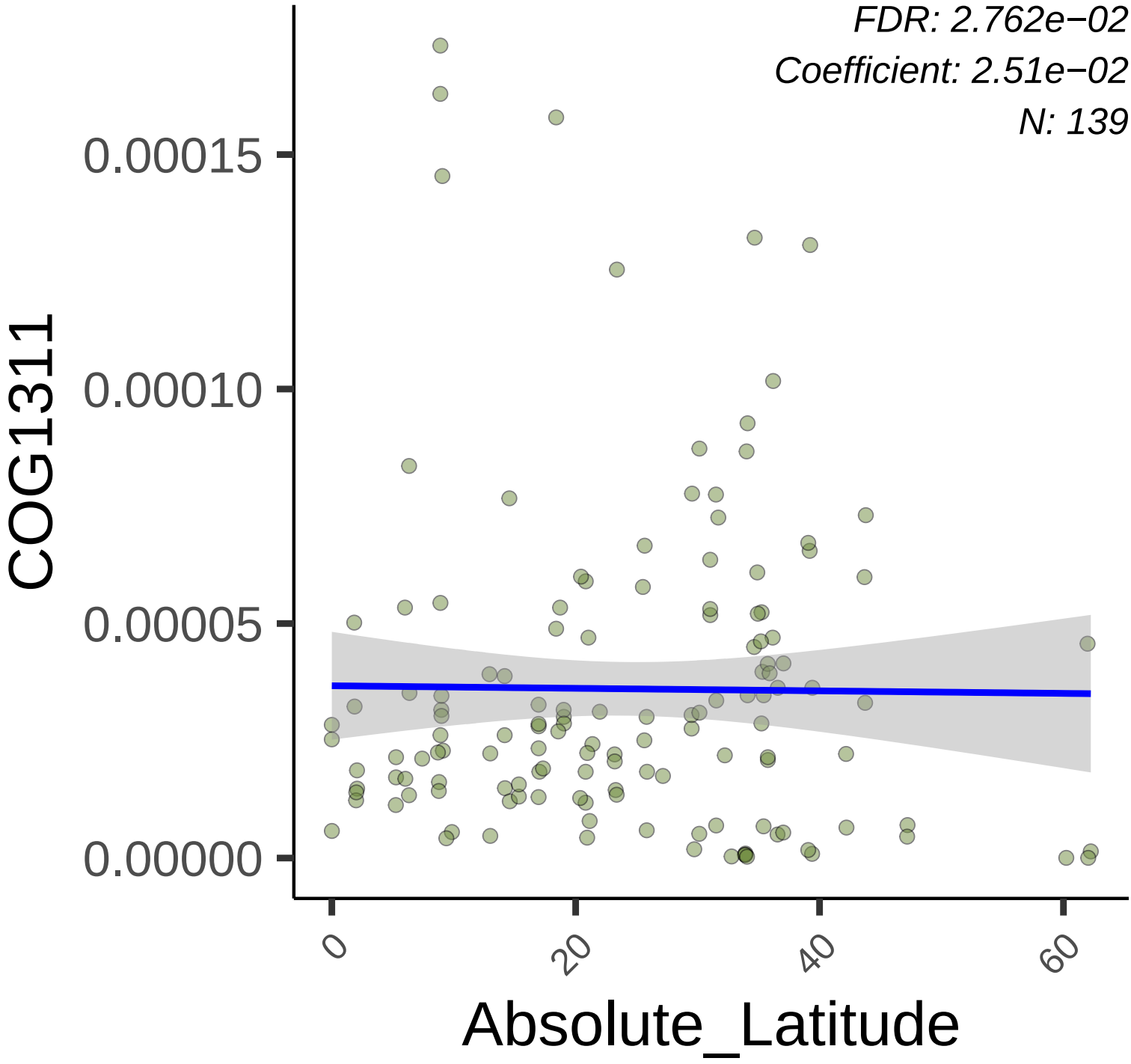

FDR: 2.742e−02
Coefficient: −1.05e−02
N: 139
3e−04
2e−04
1e−04
COG1897
0
20
40
60
Absolute_Latitude

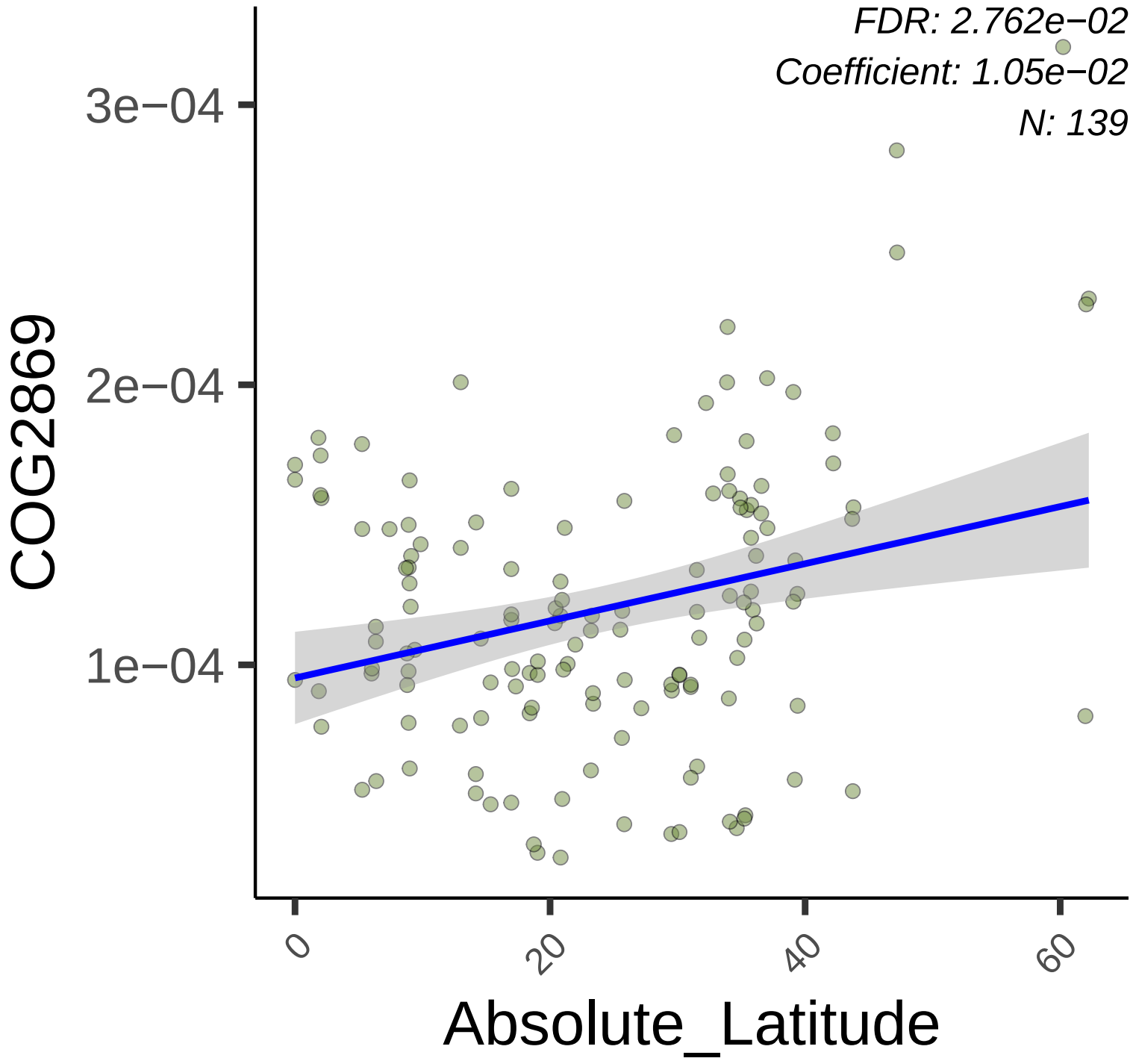

FDR: 2.746e−02
Coefficient: −1.25e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG1388
0
20
40
60
Absolute_Latitude

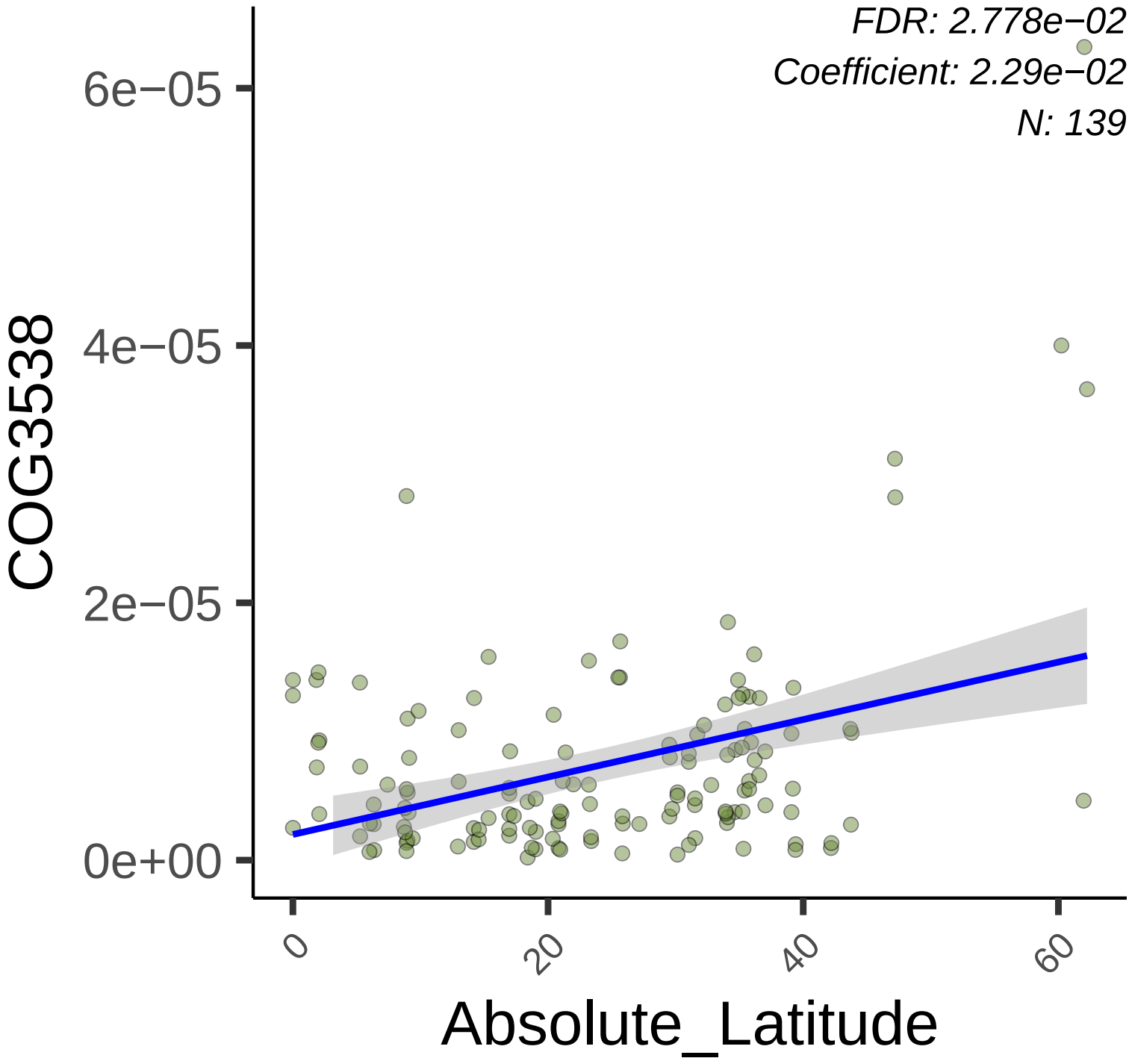

FDR: 2.749e−02
Coefficient: 4.21e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
2e−04
COG0259
0
20
40
60
Absolute_Latitude

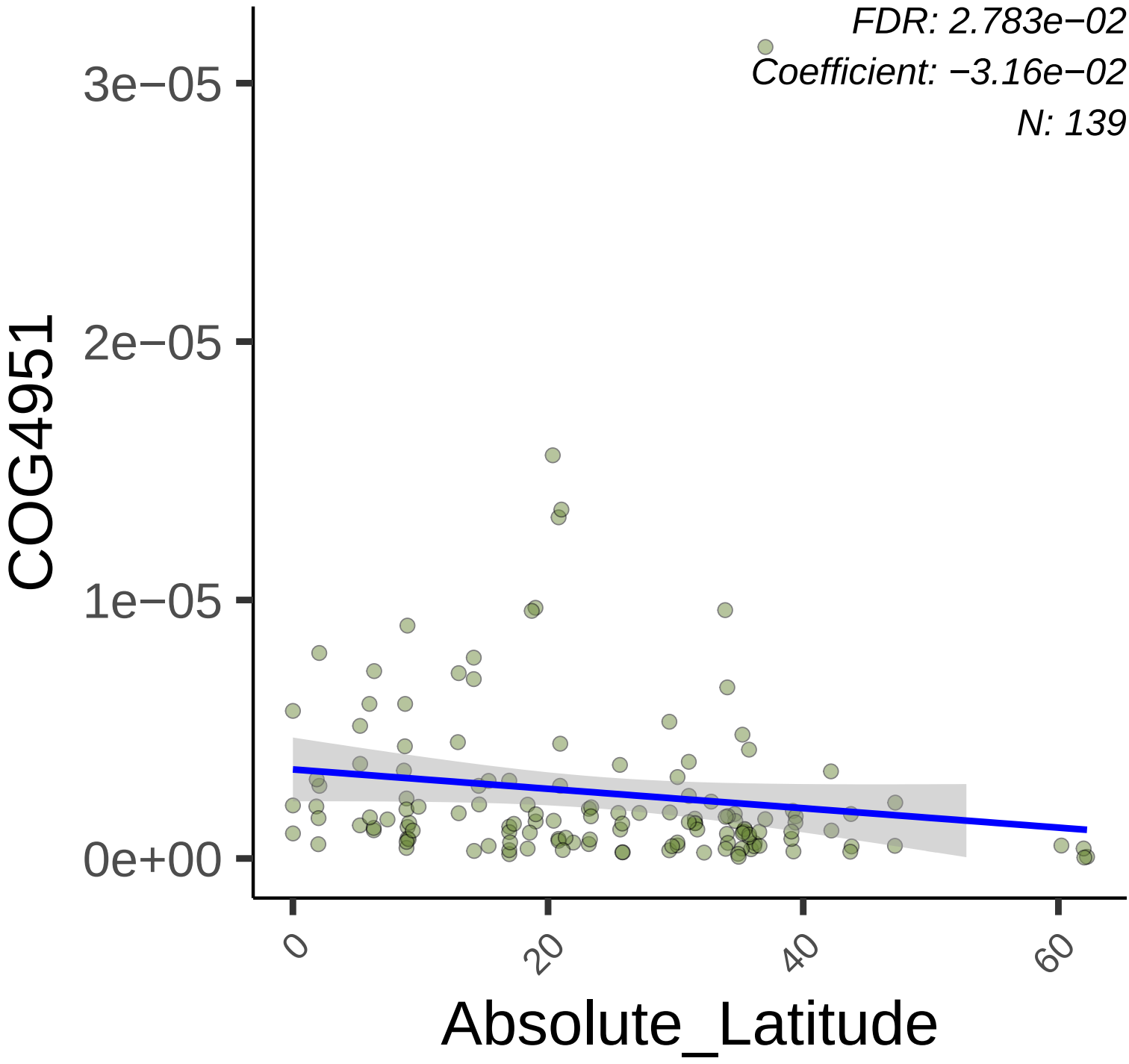

FDR: 2.754e−02
Coefficient: −5.00e−03
N: 139
COG0845
0.0018
0.0014
0.0010
0
20
40
60
Absolute_Latitude

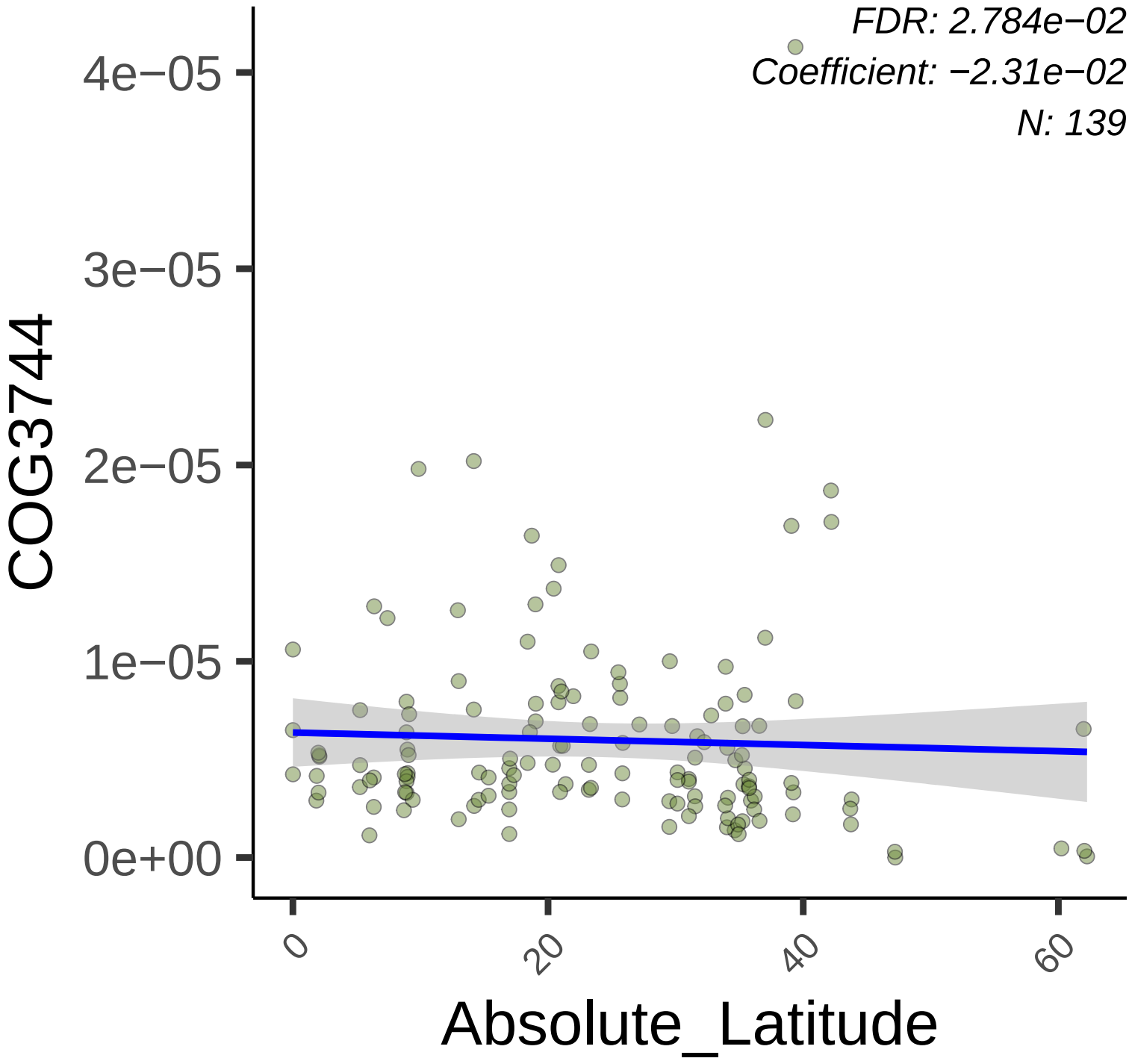

FDR: 2.758e−02
Coefficient: 1.52e−02
N: 139
COG2315
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

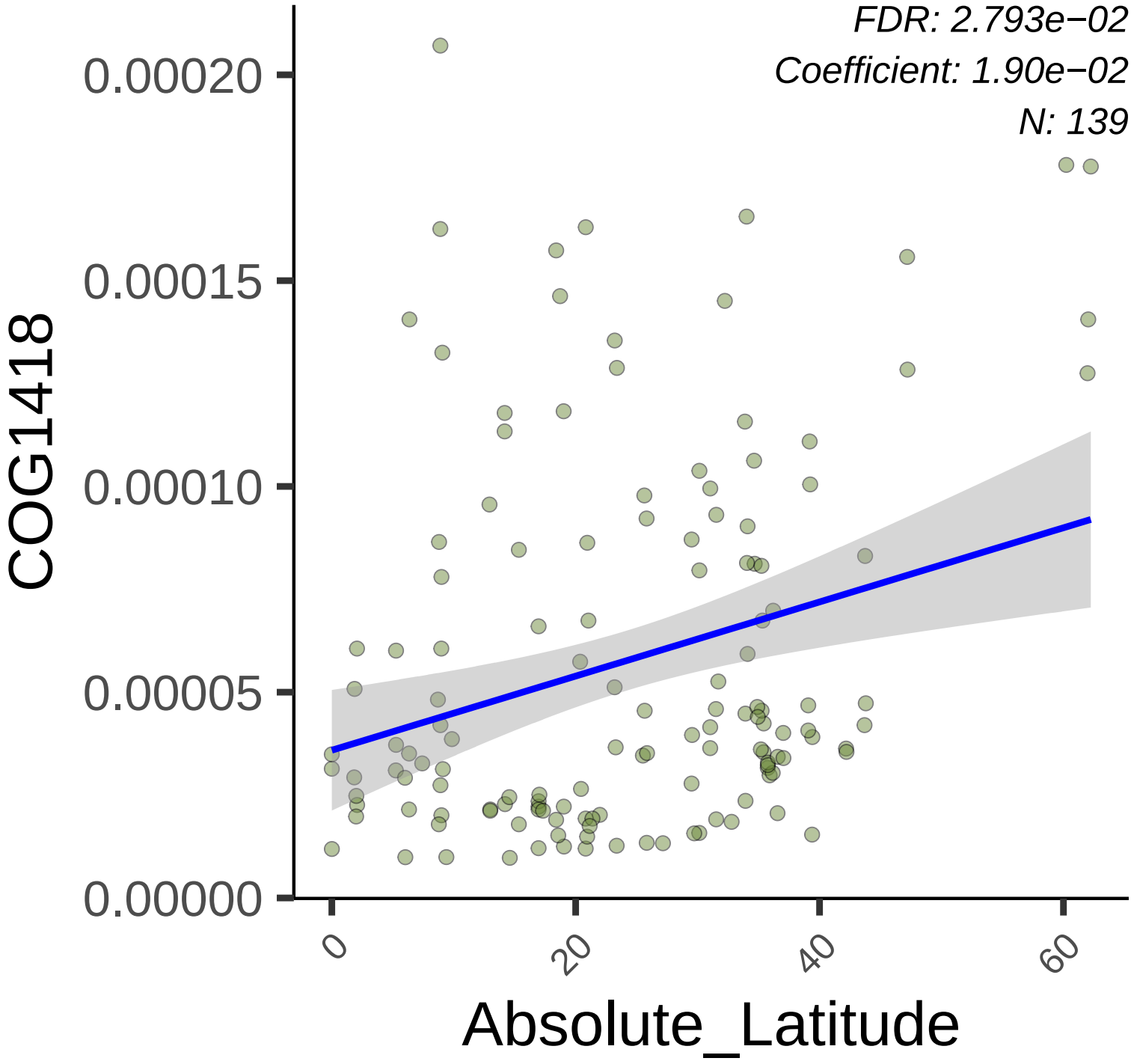

FDR: 2.762e−02
Coefficient: 2.51e−02
N: 139
COG1311
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

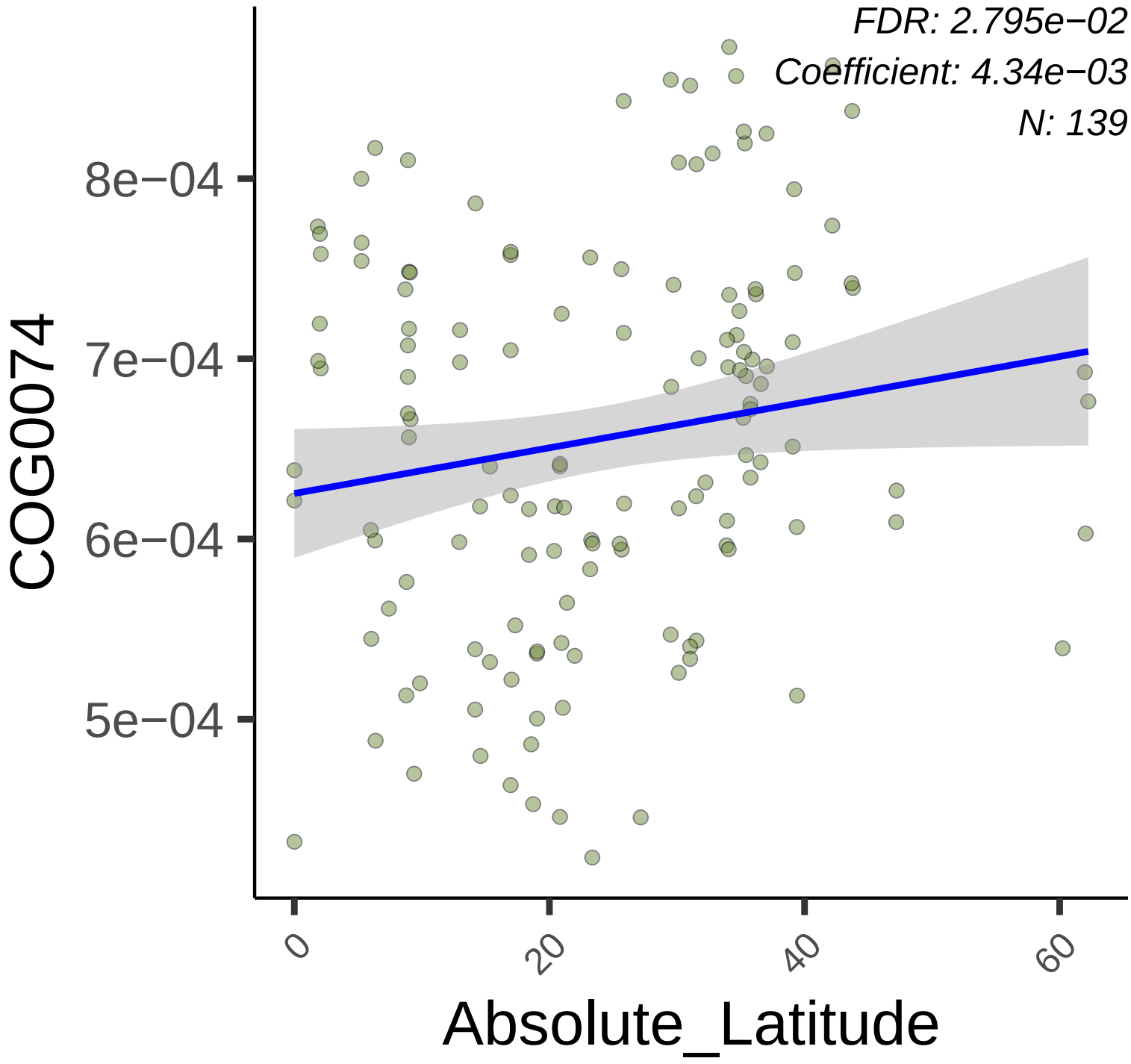

FDR: 2.762e−02
Coefficient: 1.05e−02
N: 139
3e−04
2e−04
1e−04
COG2869
0
20
40
60
Absolute_Latitude

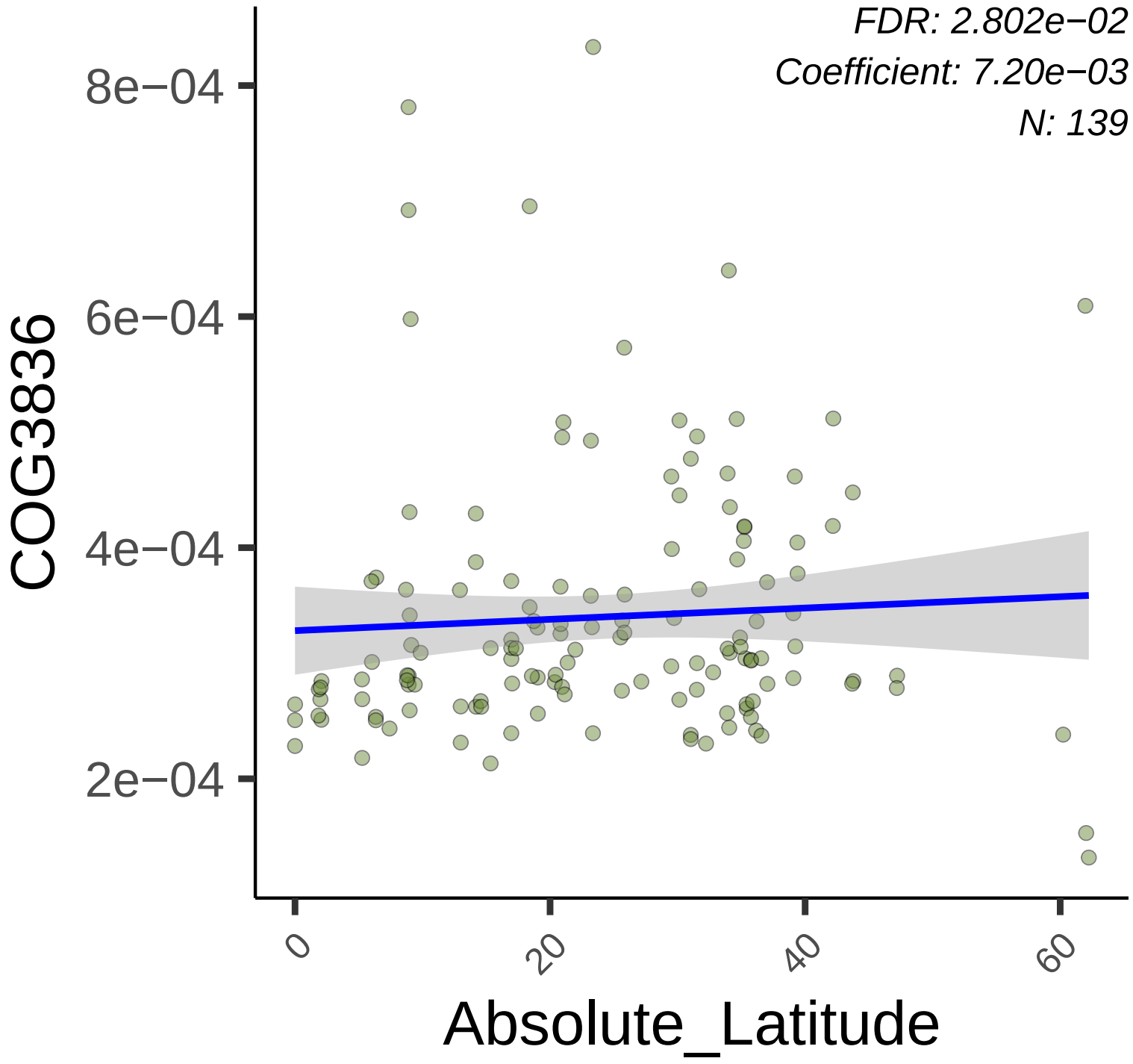

FDR: 2.778e−02
Coefficient: 2.29e−02
N: 139
COG3538
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

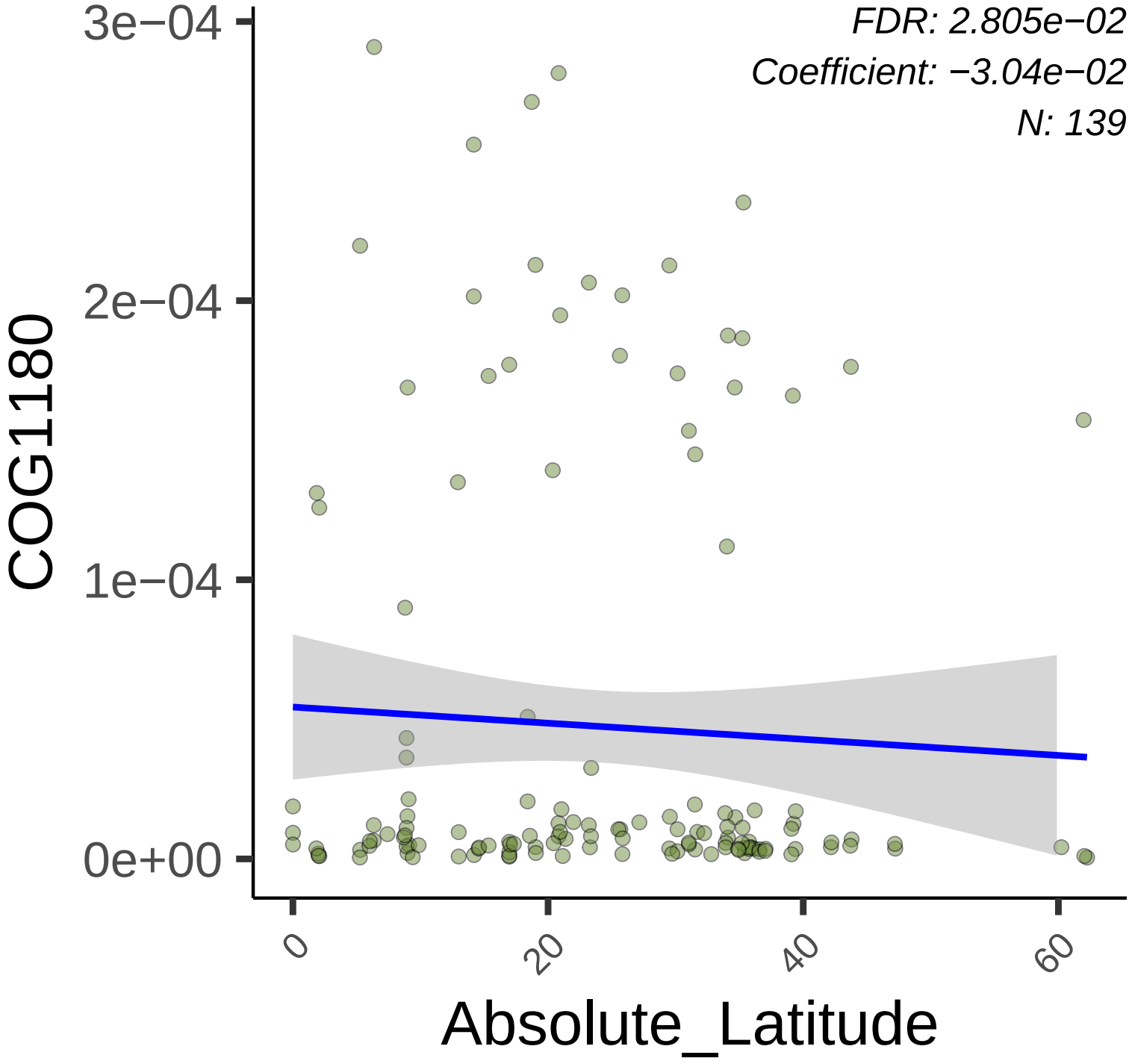

FDR: 2.783e−02
Coefficient: −3.16e−02
N: 139
COG4951
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

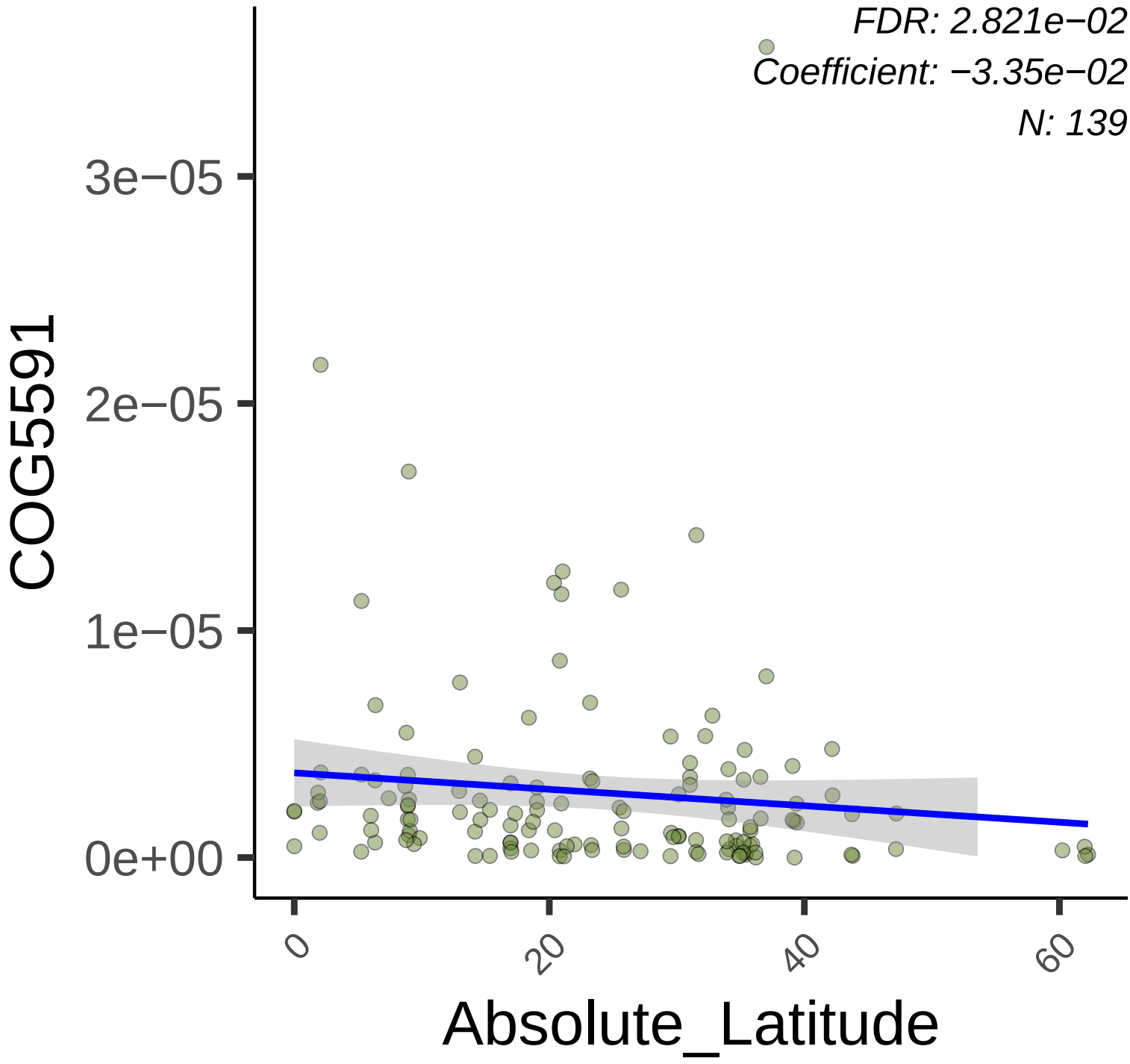

FDR: 2.784e−02
Coefficient: −2.31e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG3744
0
20
40
60
Absolute_Latitude

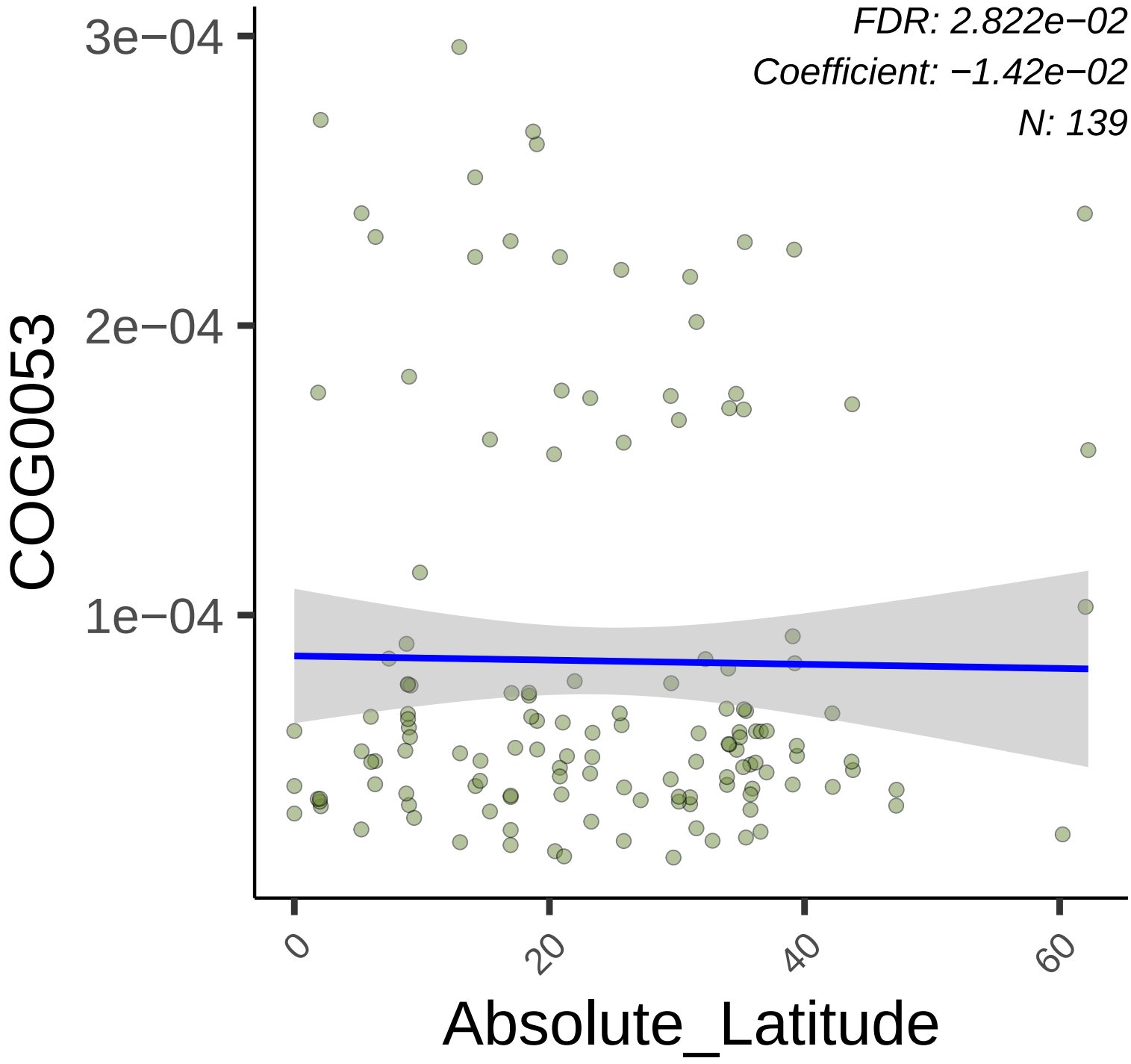

FDR: 2.793e−02
Coefficient: 1.90e−02
N: 139
COG1418
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

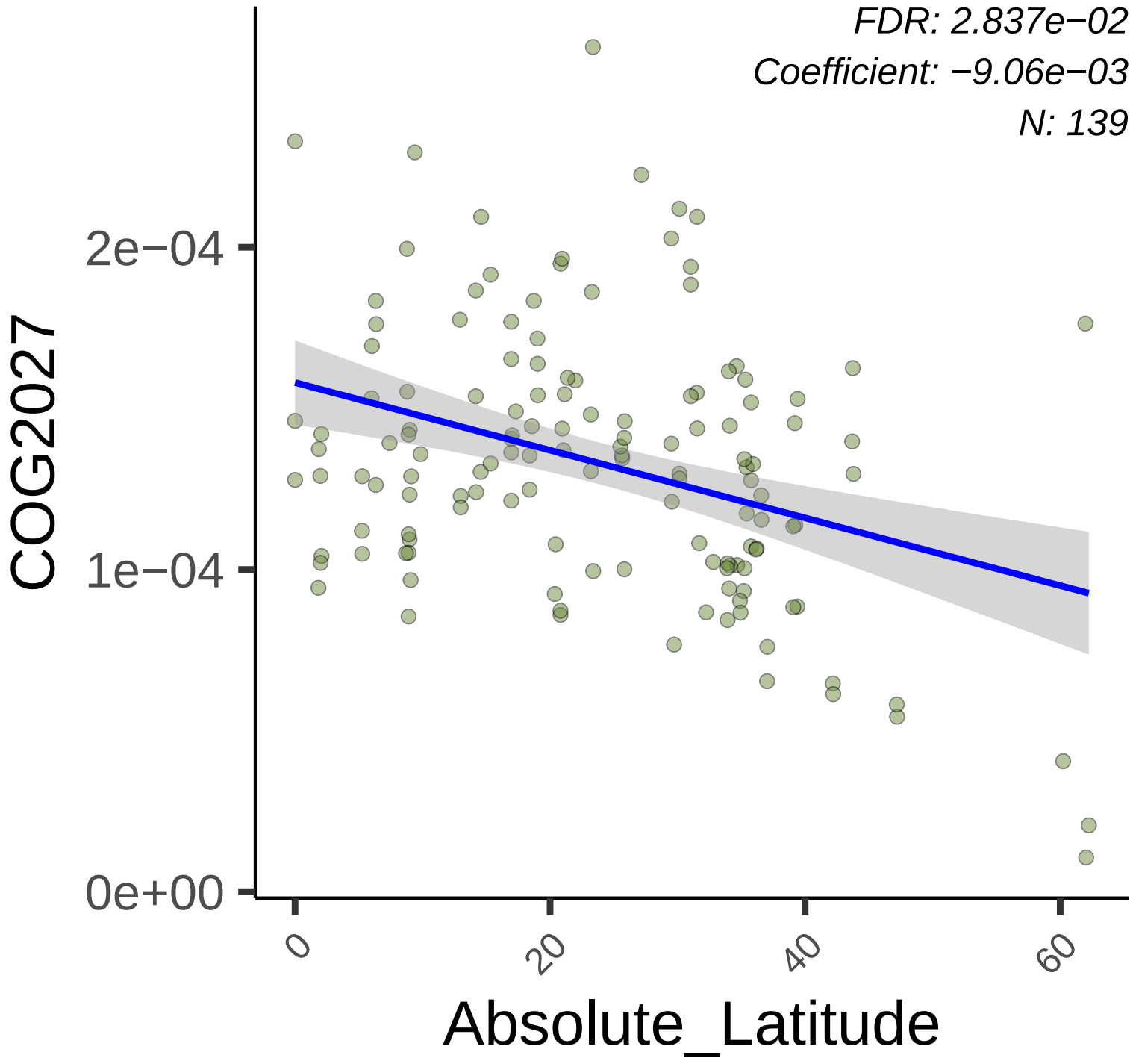

FDR: 2.795e−02
Coefficient: 4.34e−03
N: 139
COG0074
8e−04
7e−04
6e−04
5e−04
0
20
40
60
Absolute_Latitude

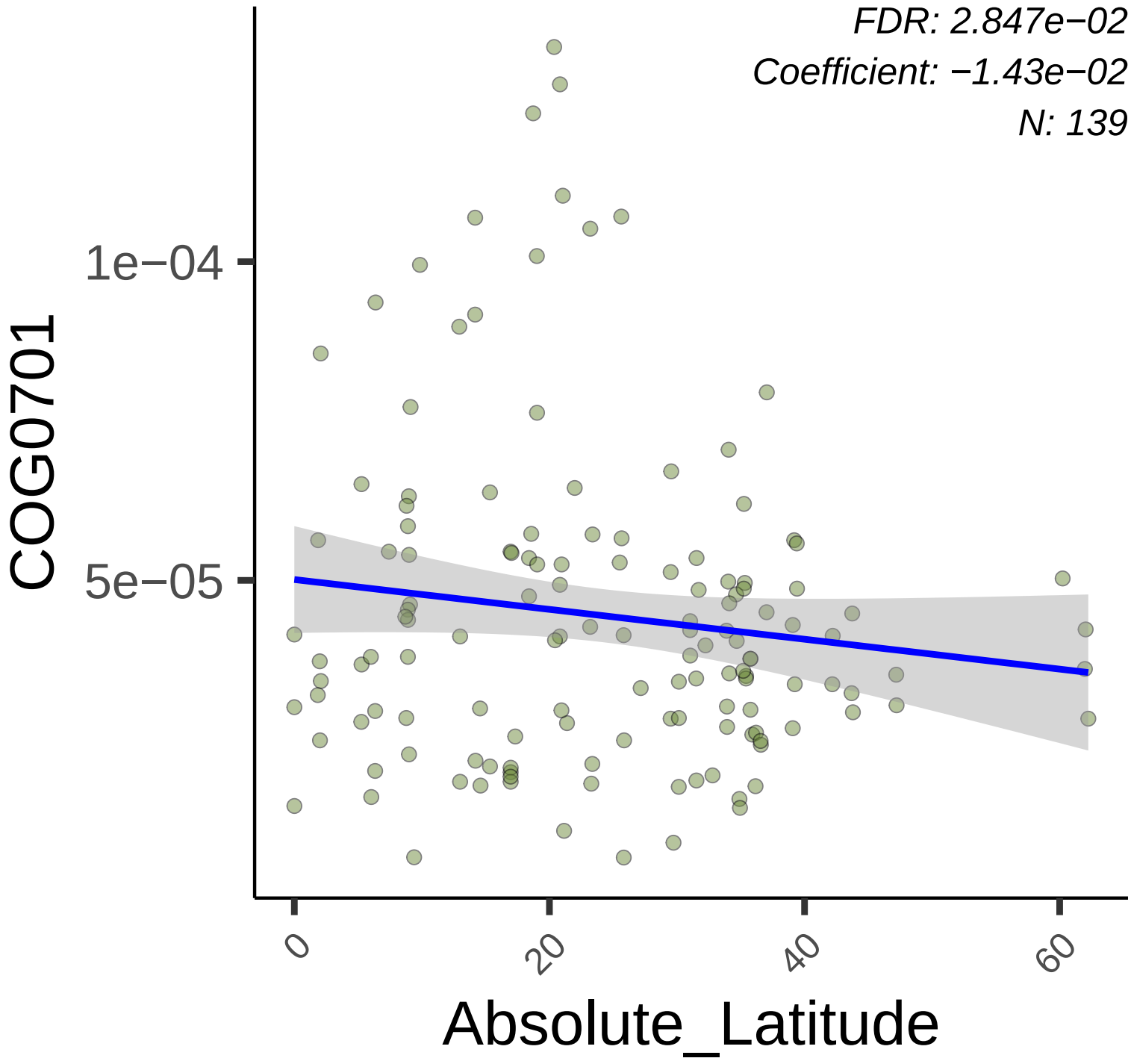

FDR: 2.802e−02
Coefficient: 7.20e−03
N: 139
8e−04
6e−04
4e−04
2e−04
COG3836
0
20
40
60
Absolute_Latitude

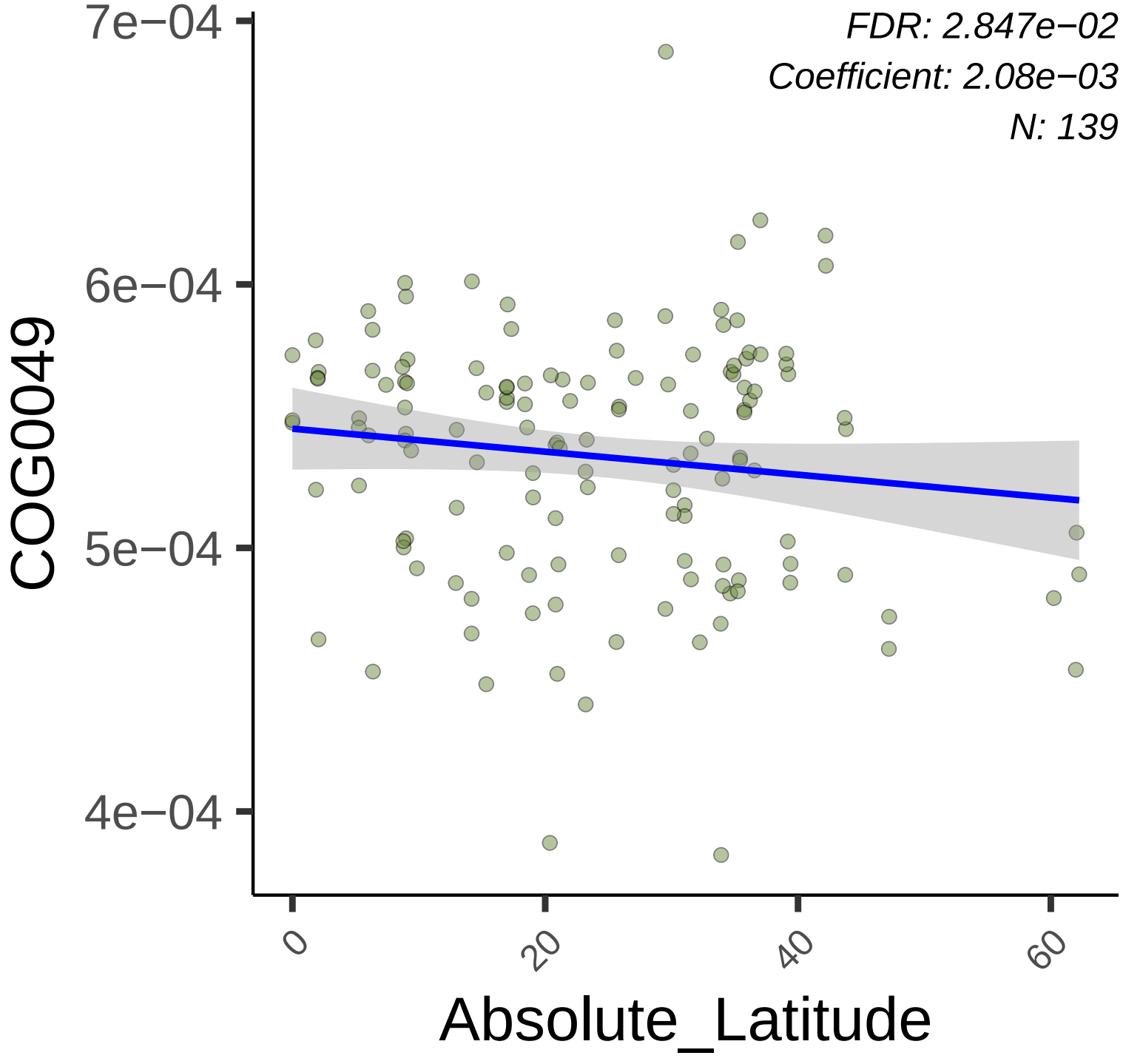

FDR: 2.805e−02
Coefficient: −3.04e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG1180
0
20
40
60
Absolute_Latitude

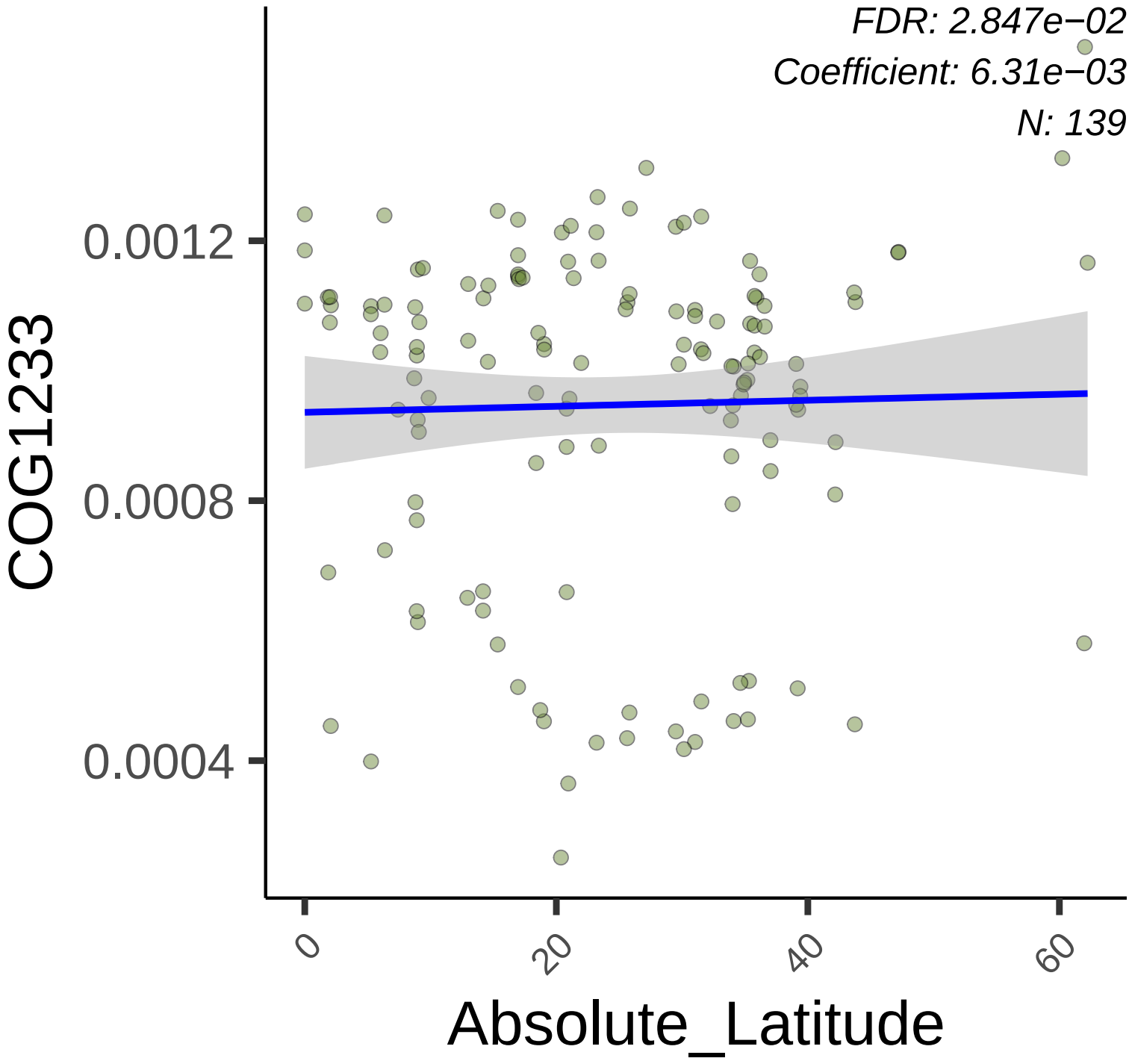

FDR: 2.821e−02
Coefficient: −3.35e−02
N: 139
COG5591
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

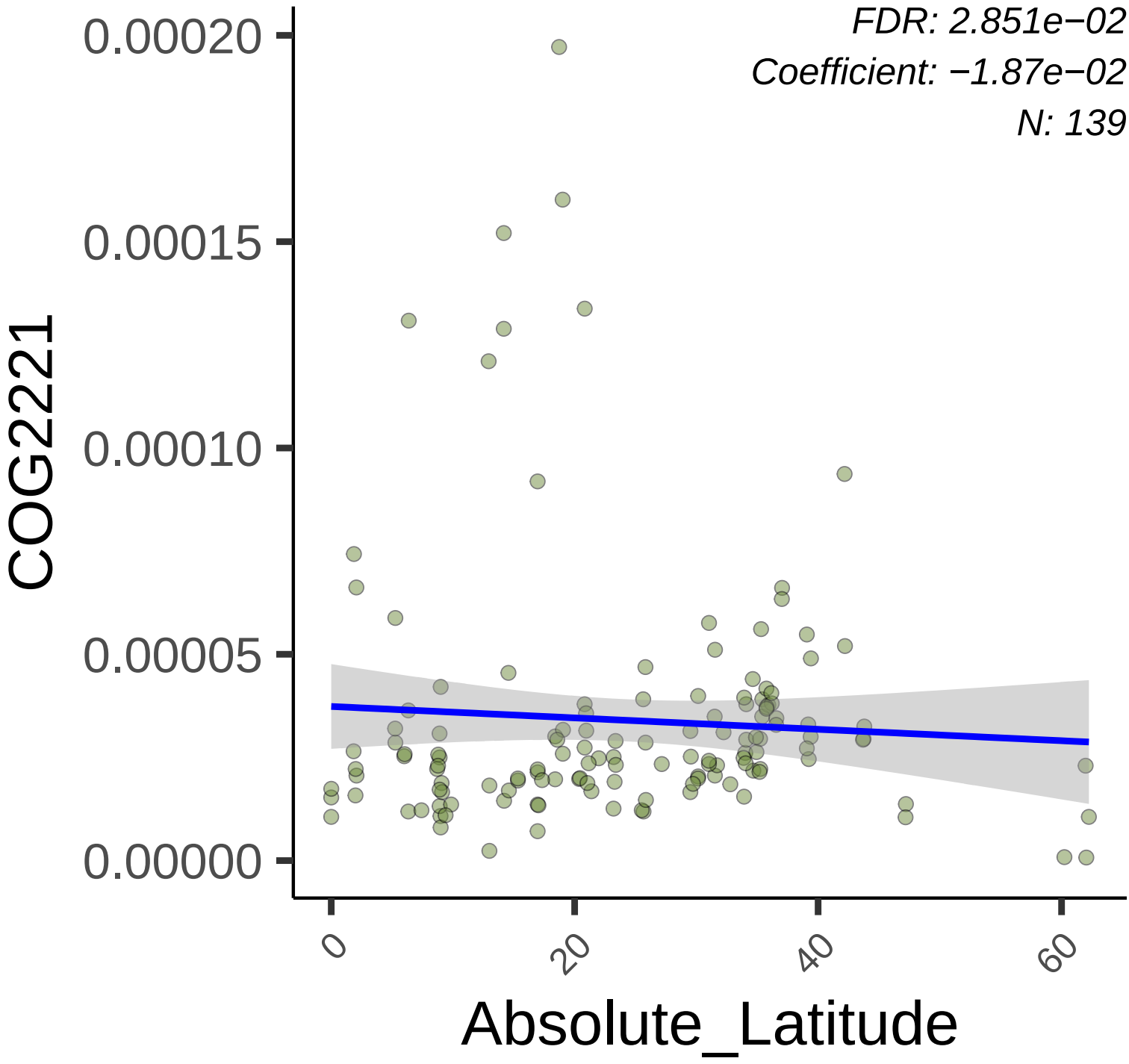

FDR: 2.822e−02
Coefficient: −1.42e−02
N: 139
3e−04
2e−04
1e−04
COG0053
0
20
40
60
Absolute_Latitude

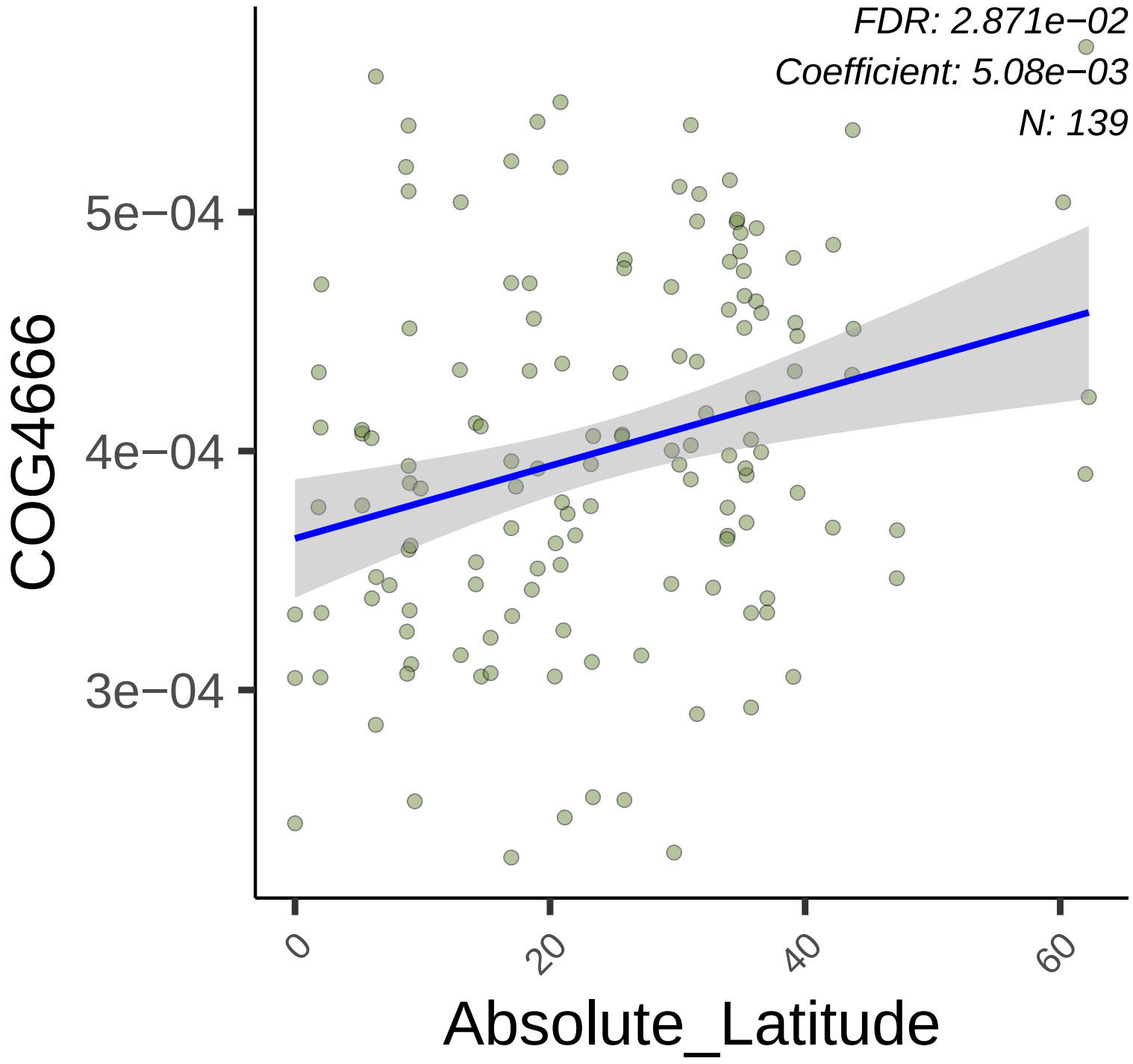

FDR: 2.837e−02
Coefficient: −9.06e−03
N: 139
COG2027
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

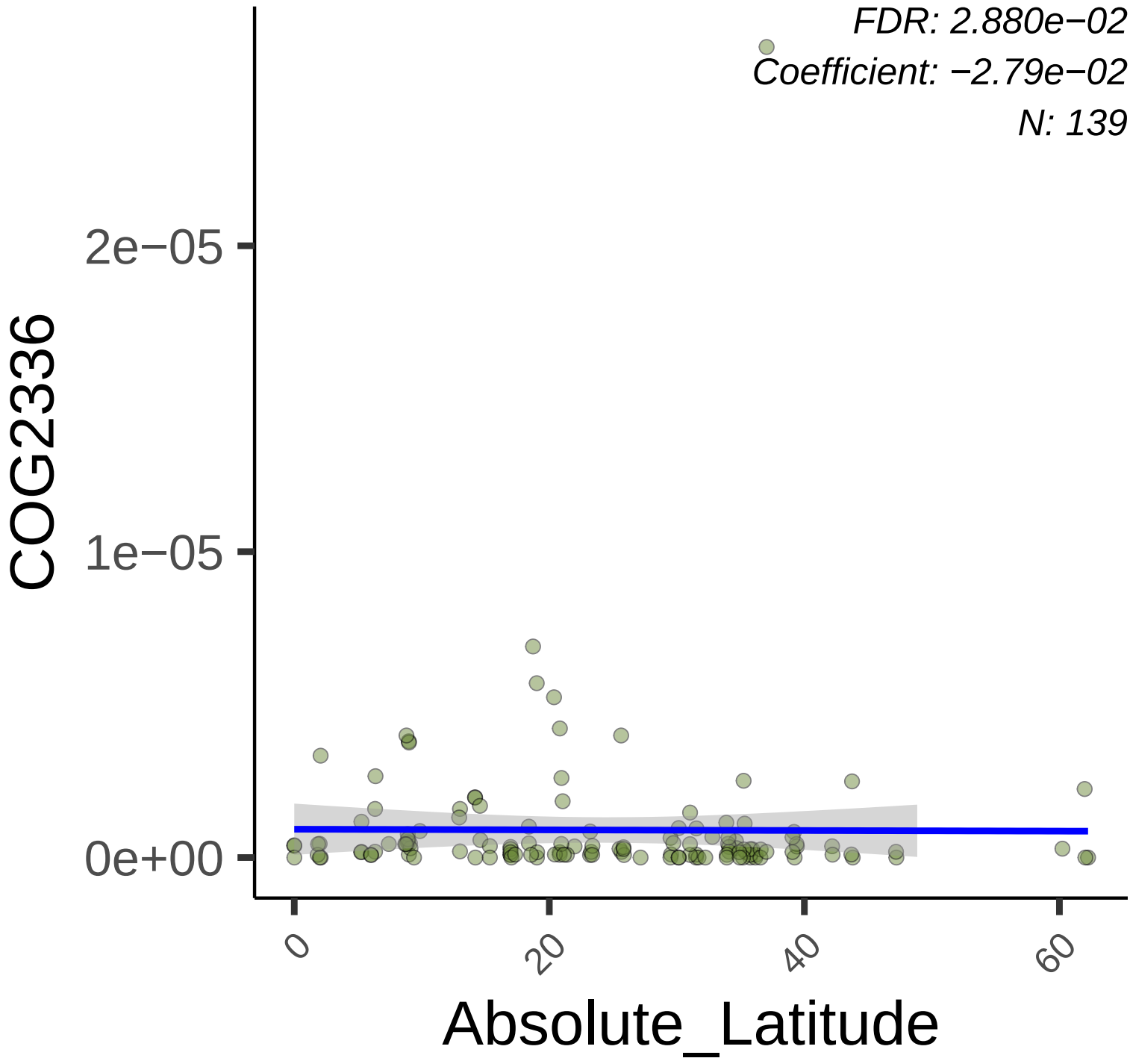

FDR: 2.847e−02
Coefficient: −1.43e−02
N: 139
1e−04
5e−05
COG0701
0
20
40
60
Absolute_Latitude

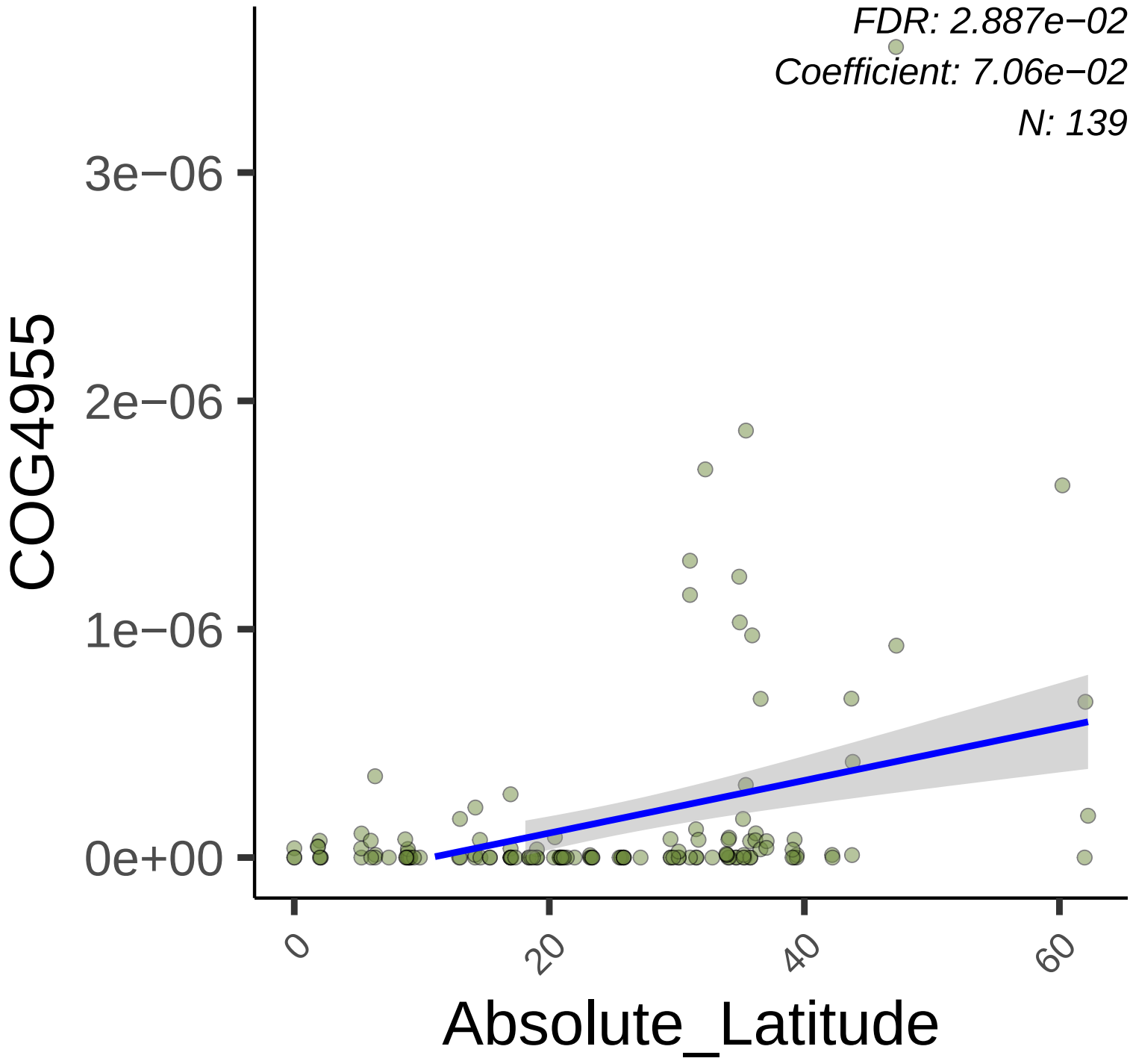

FDR: 2.847e−02
Coefficient: 2.08e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0049
0
20
40
60
Absolute_Latitude

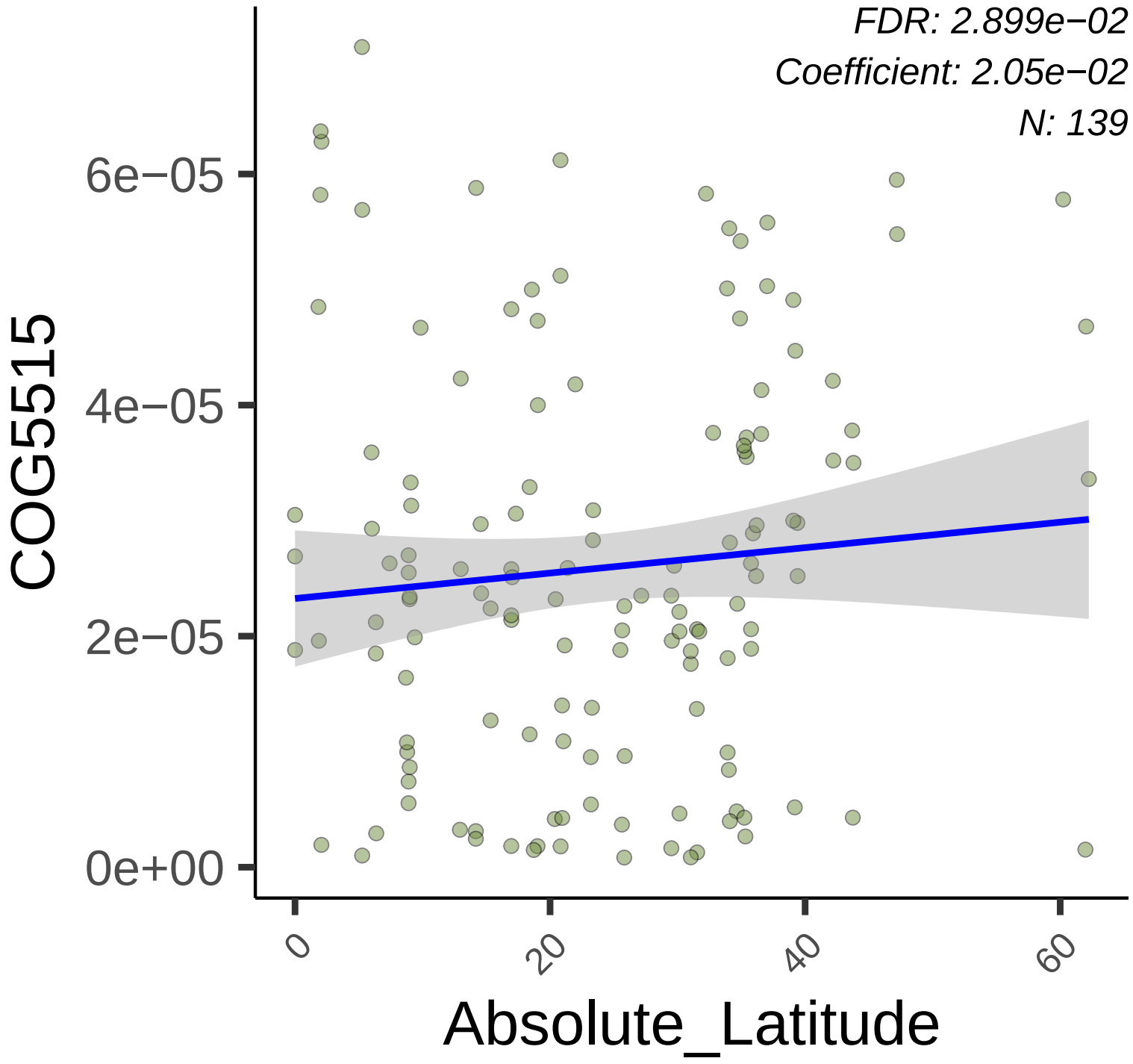

FDR: 2.847e−02
Coefficient: 6.31e−03
N: 139
COG1233
0.0012
0.0008
0.0004
0
20
40
60
Absolute_Latitude

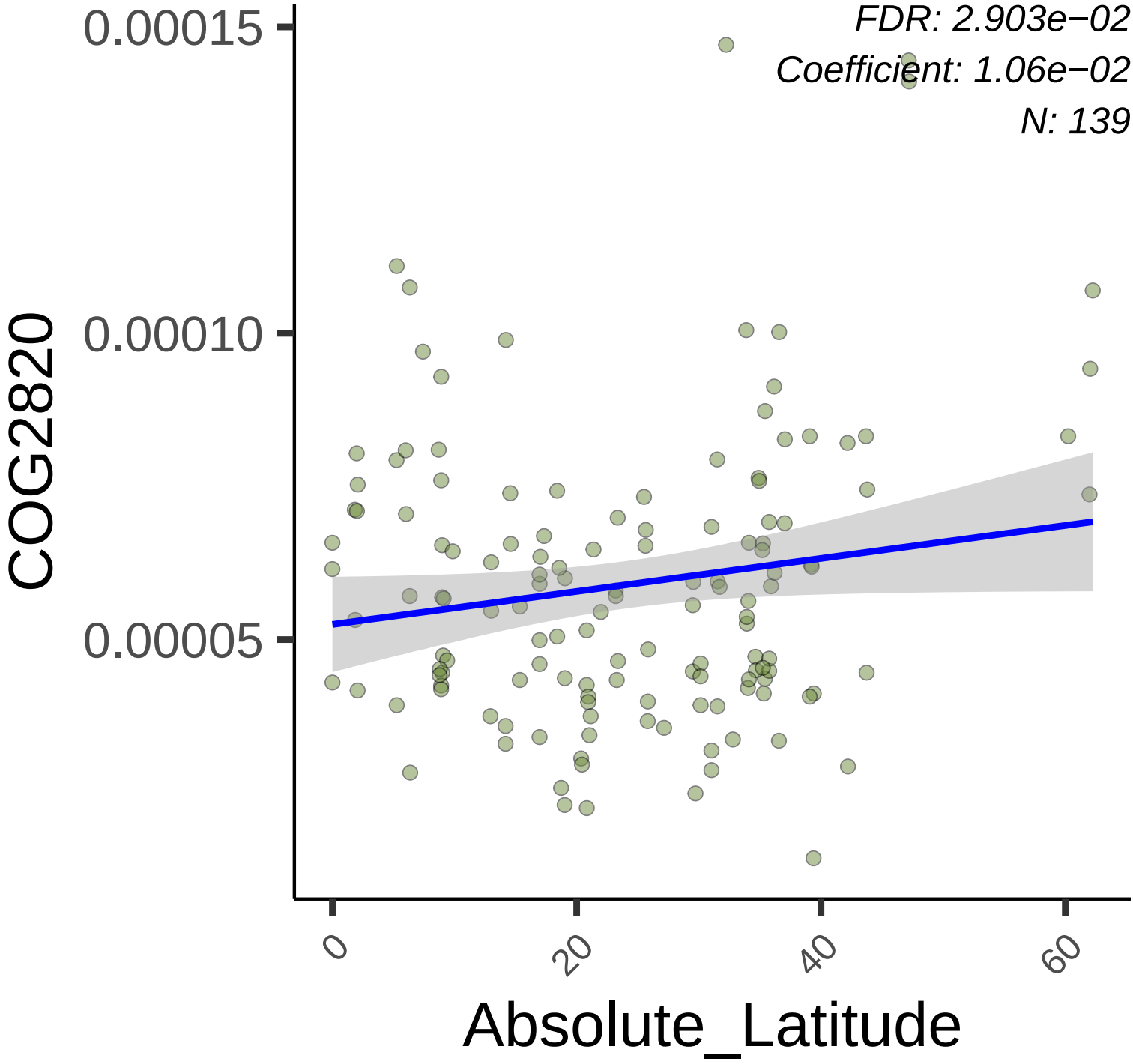

FDR: 2.851e−02
Coefficient: −1.87e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG2221
0
20
40
60
Absolute_Latitude

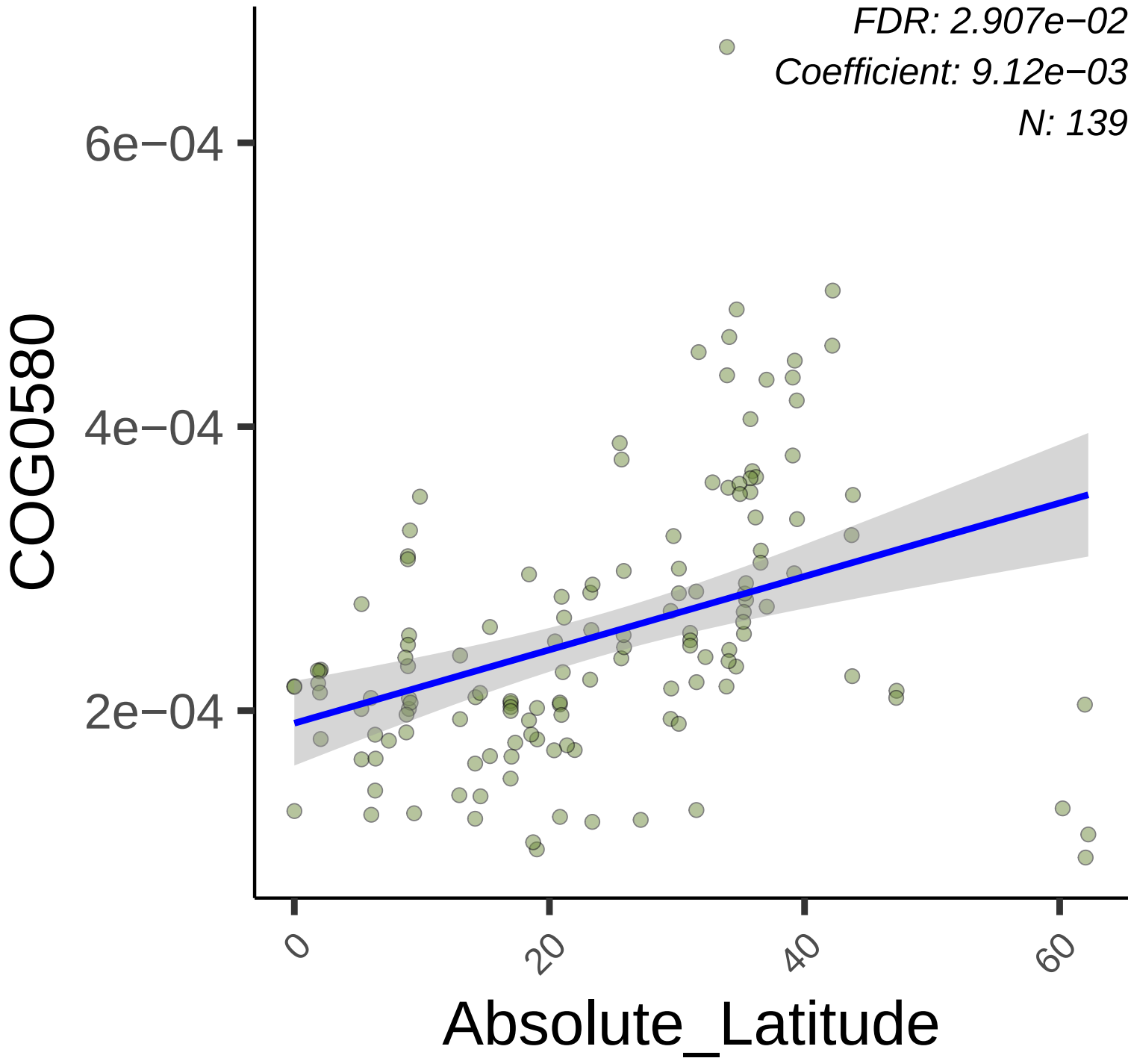

FDR: 2.871e−02
Coefficient: 5.08e−03
N: 139
5e−04
4e−04
3e−04
COG4666
0
20
40
60
Absolute_Latitude

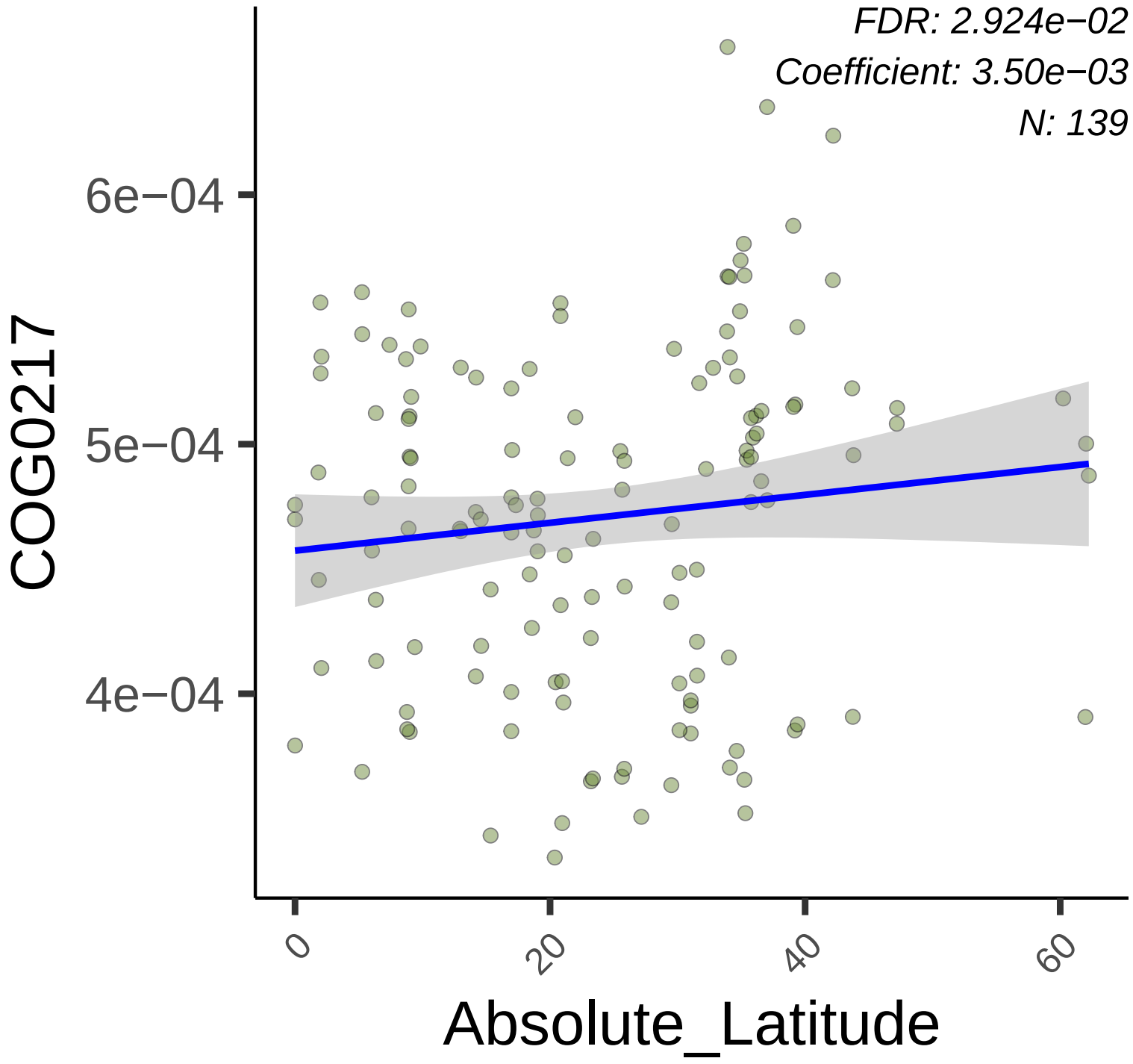

FDR: 2.880e−02
Coefficient: −2.79e−02
N: 139
COG2336
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

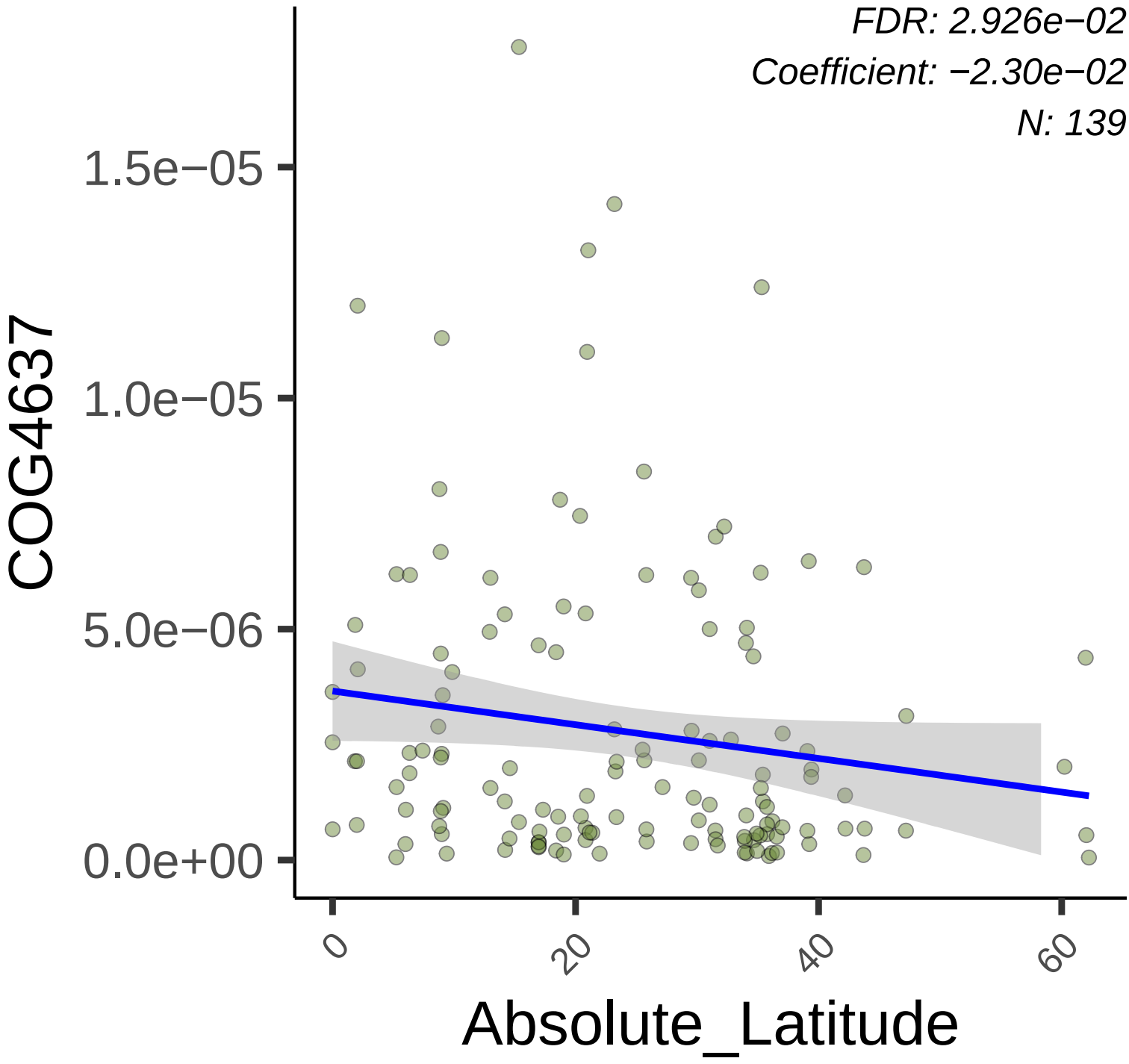

FDR: 2.887e−02
Coefficient: 7.06e−02
N: 139
COG4955
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

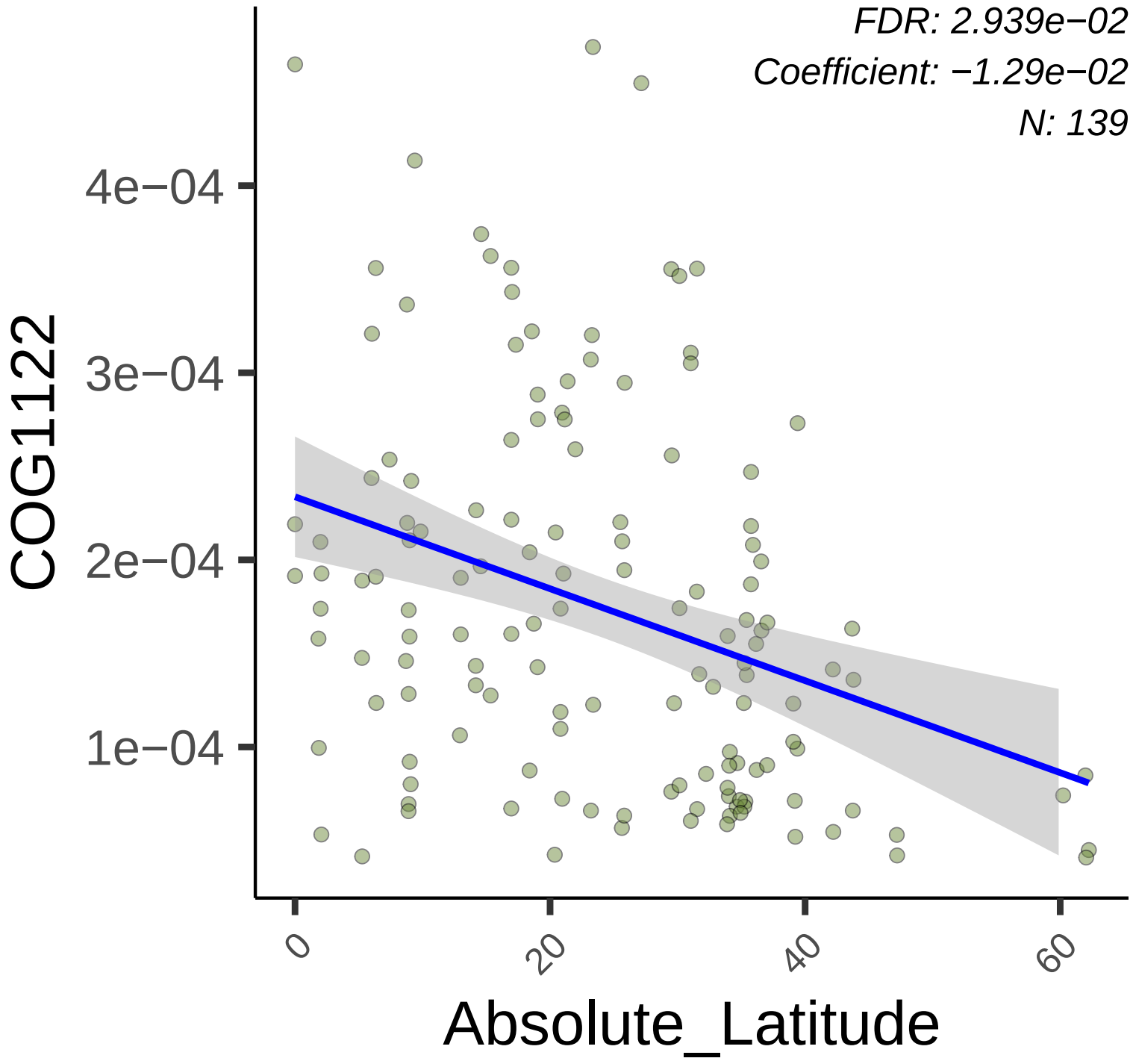

FDR: 2.899e−02
Coefficient: 2.05e−02
N: 139
COG5515
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

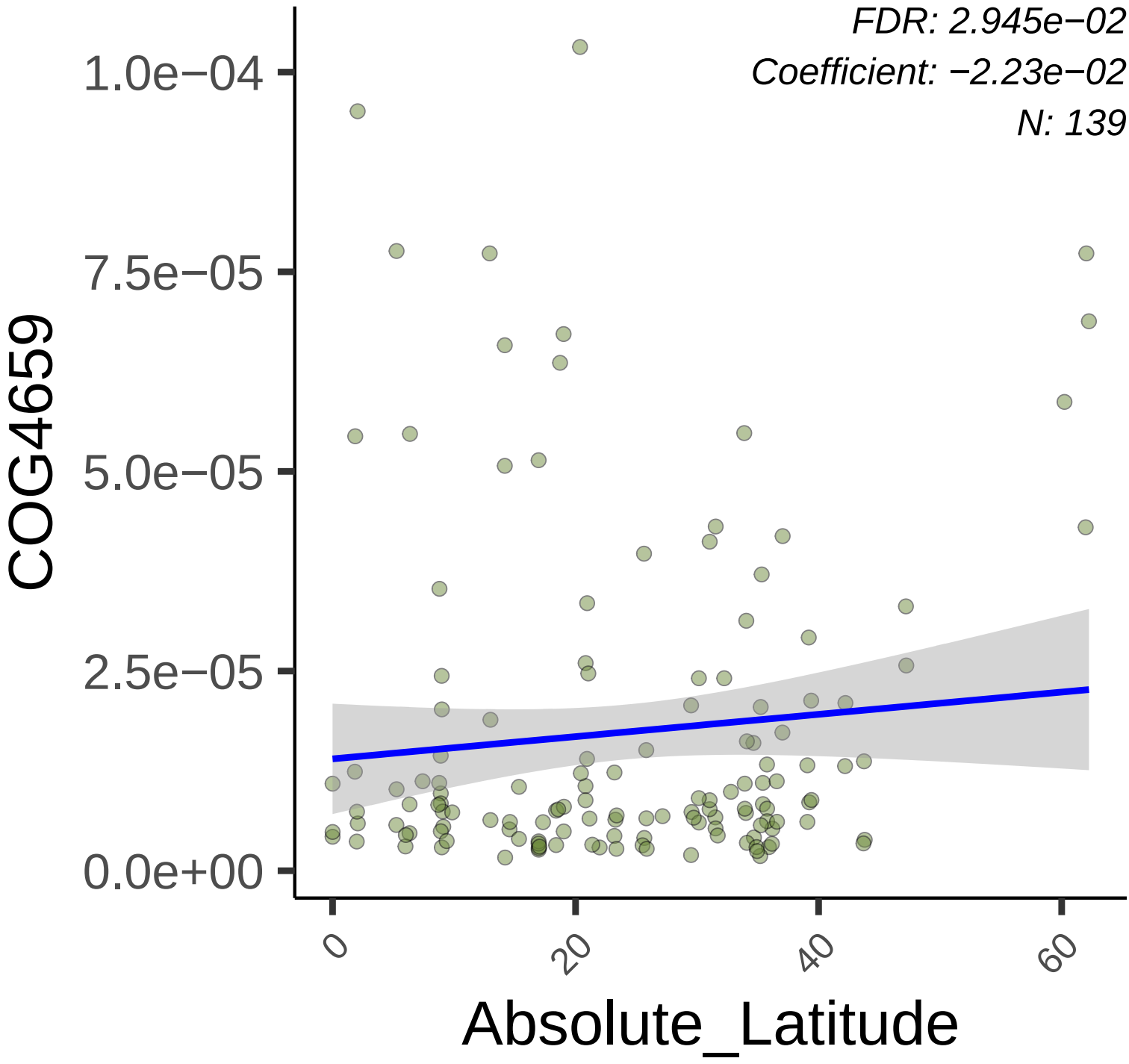

FDR: 2.903e−02
Coefficient: 1.06e−02
N: 139
0.00015
0.00010
0.00005
COG2820
0
20
40
60
Absolute_Latitude

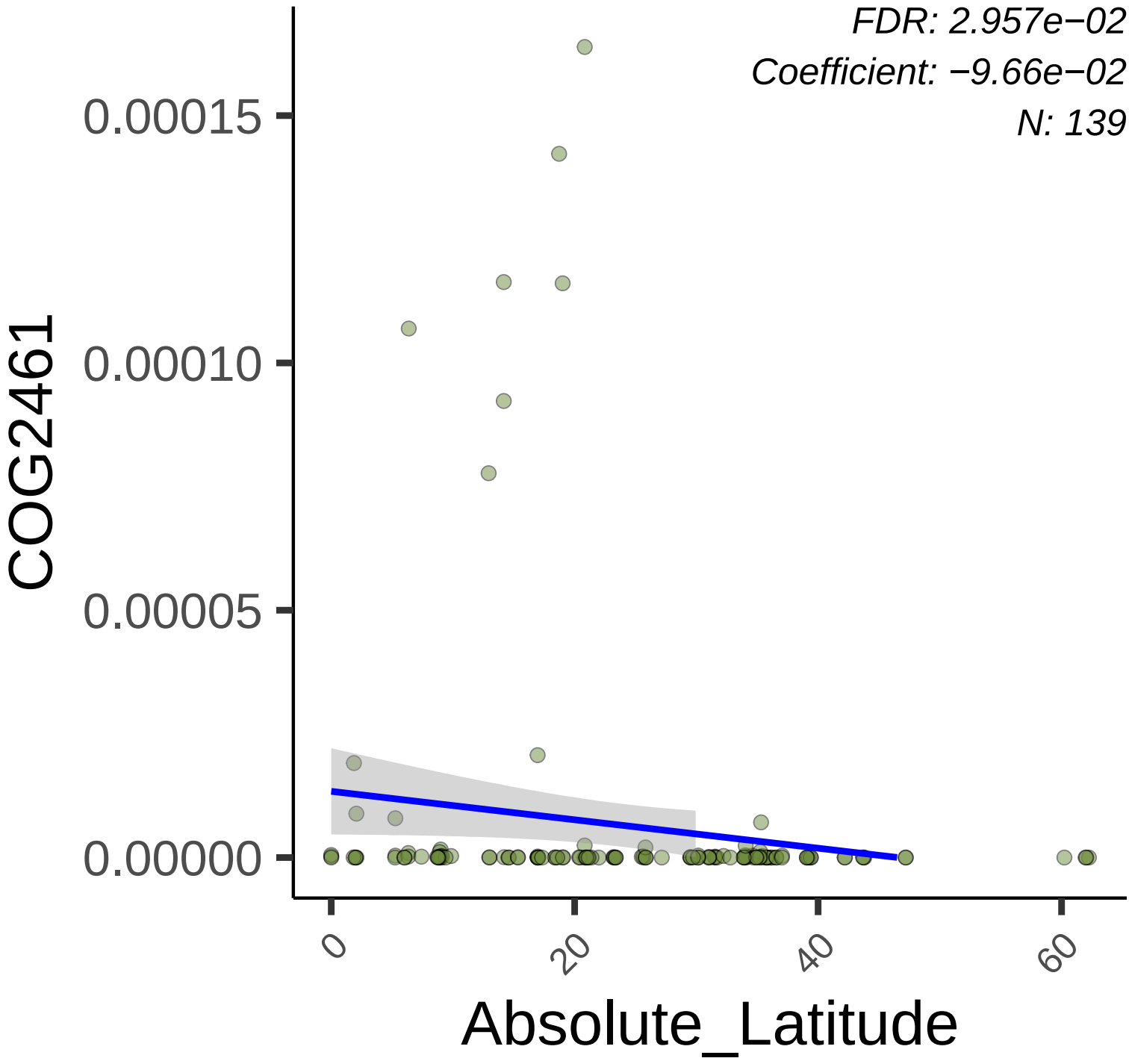

FDR: 2.907e−02
Coefficient: 9.12e−03
N: 139
6e−04
4e−04
2e−04
COG0580
0
20
40
60
Absolute_Latitude

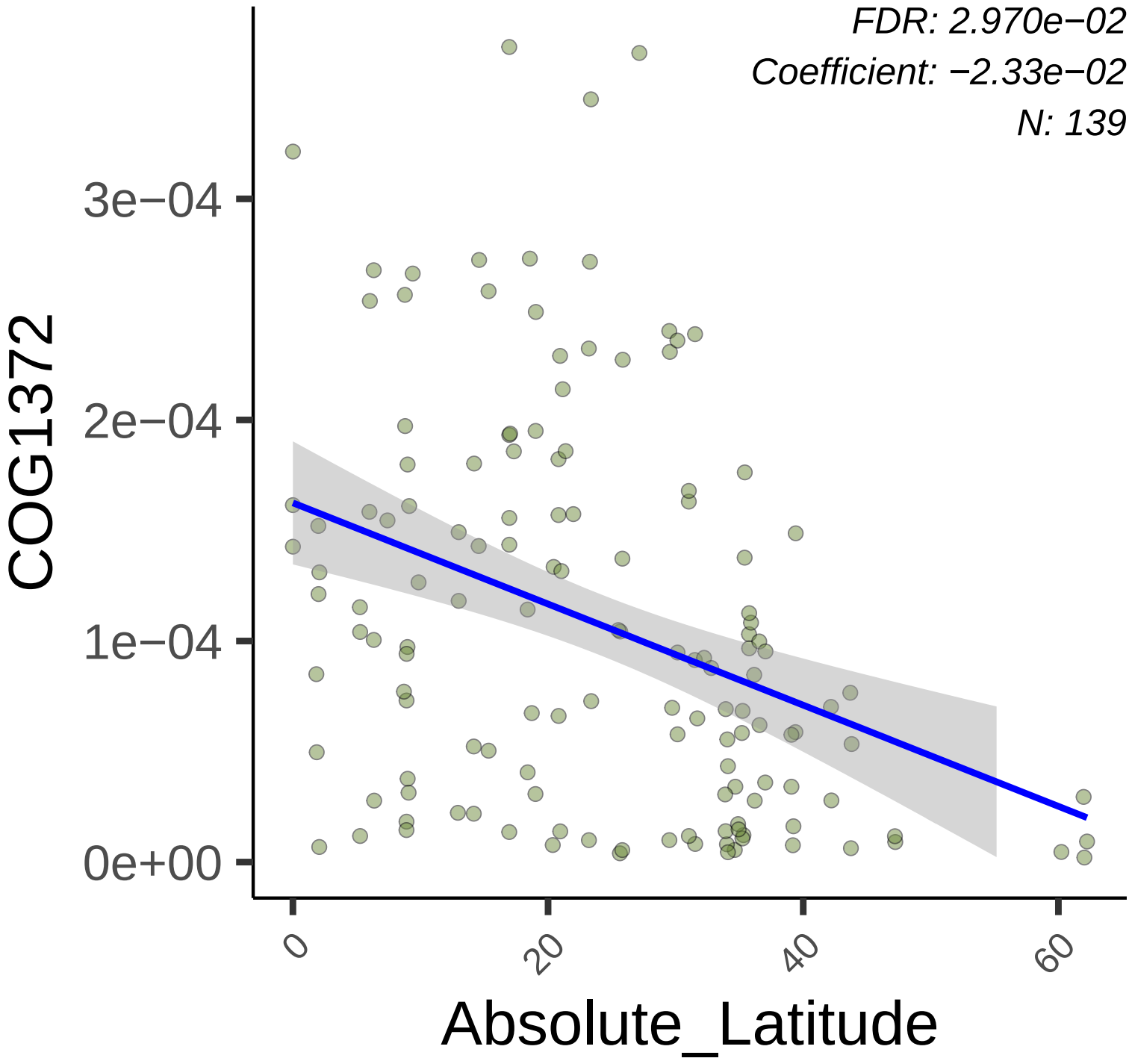

FDR: 2.924e−02
Coefficient: 3.50e−03
N: 139
6e−04
5e−04
4e−04
COG0217
0
20
40
60
Absolute_Latitude

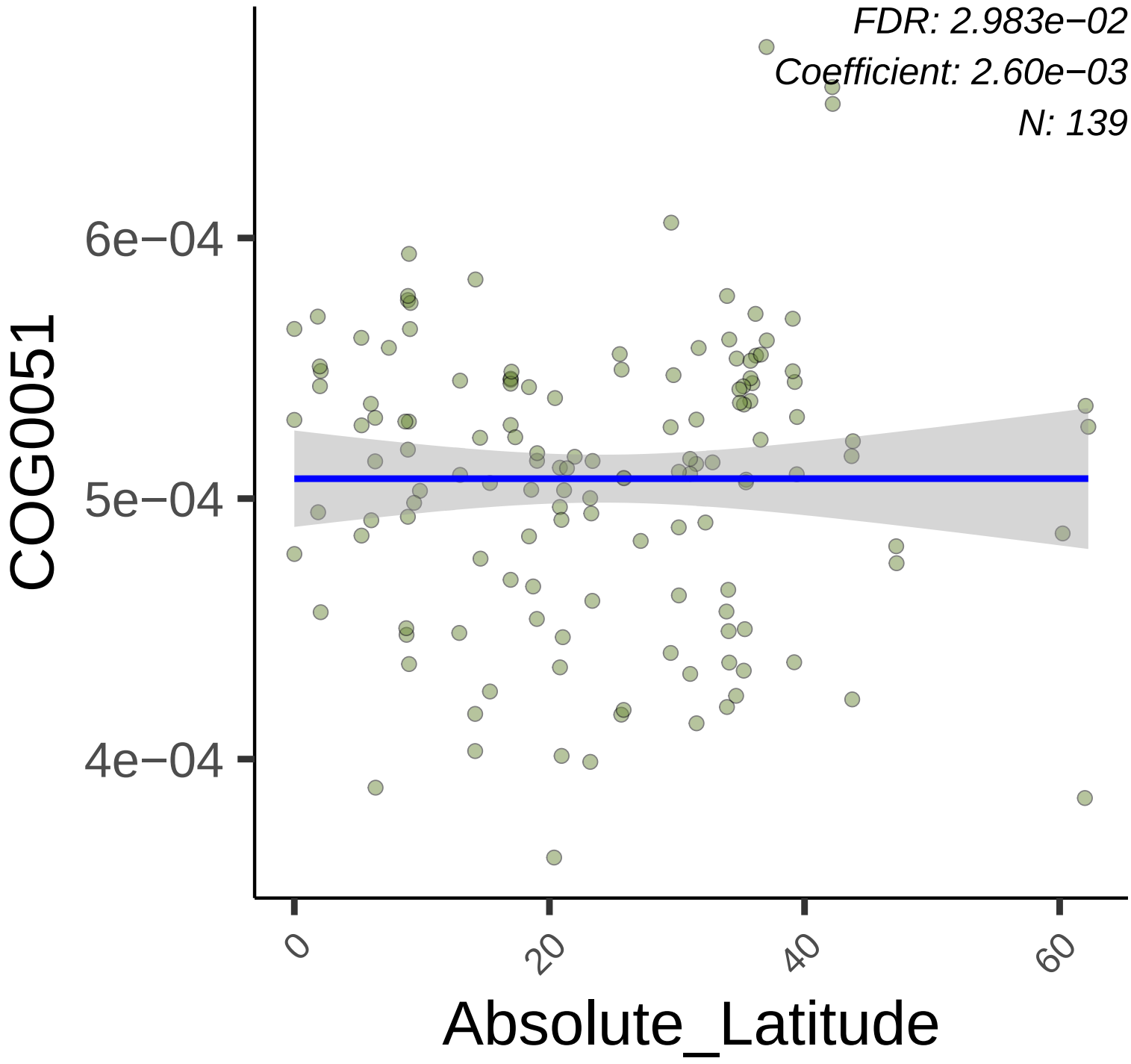

FDR: 2.926e−02
Coefficient: −2.30e−02
N: 139
COG4637
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

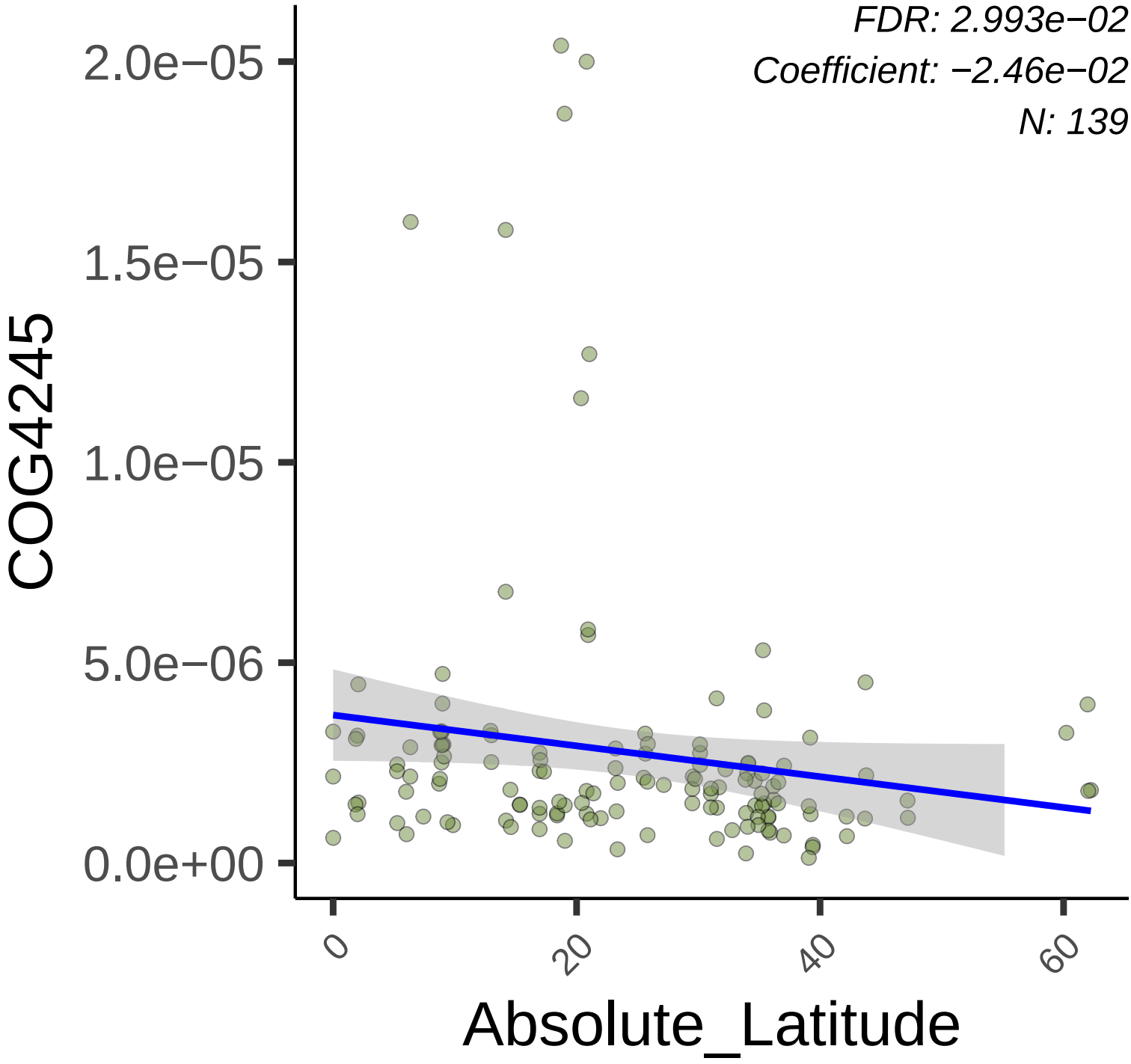

FDR: 2.939e−02
Coefficient: −1.29e−02
N: 139
COG1122
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

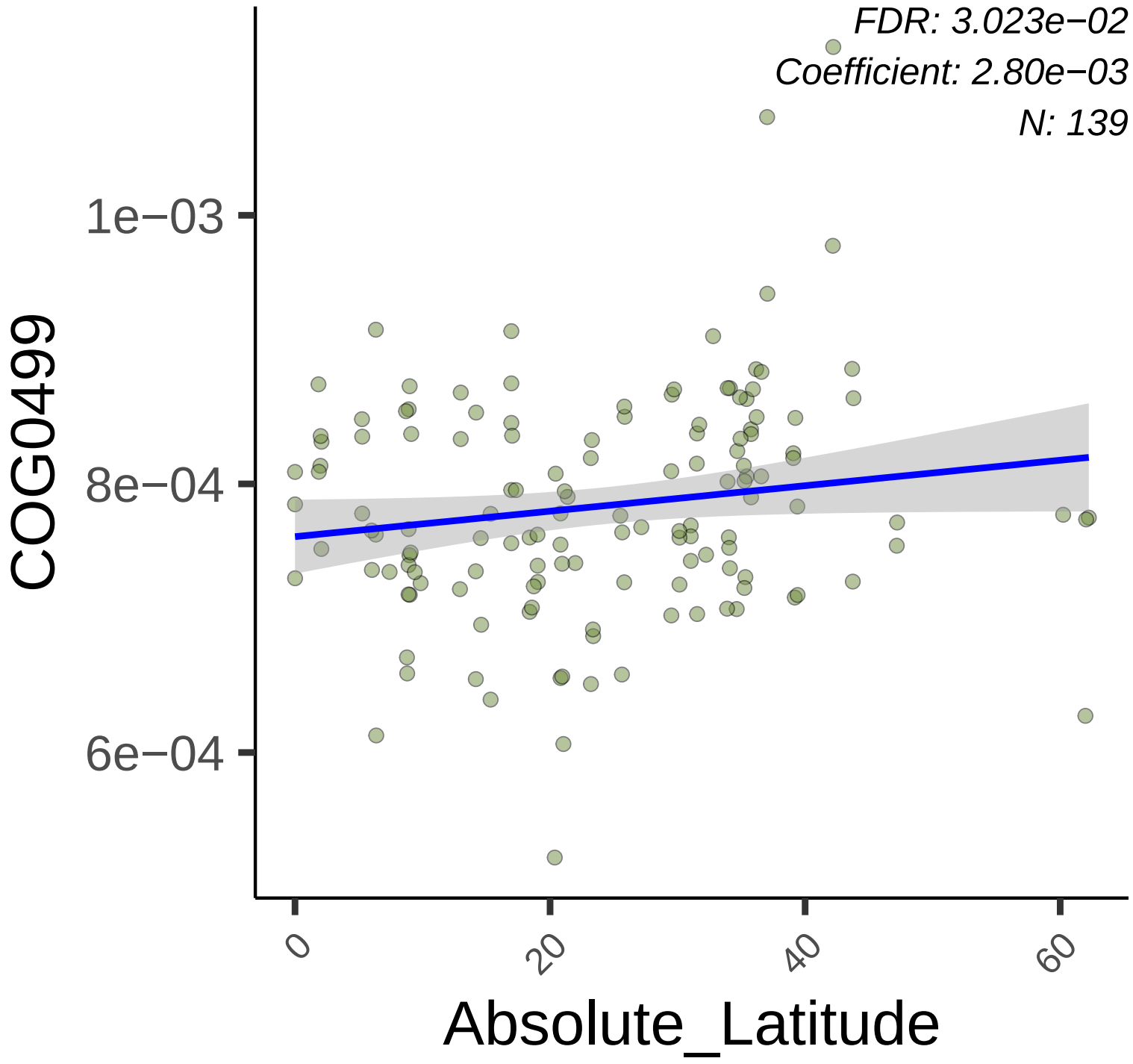

FDR: 2.945e−02
Coefficient: −2.23e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG4659
0
20
40
60
Absolute_Latitude

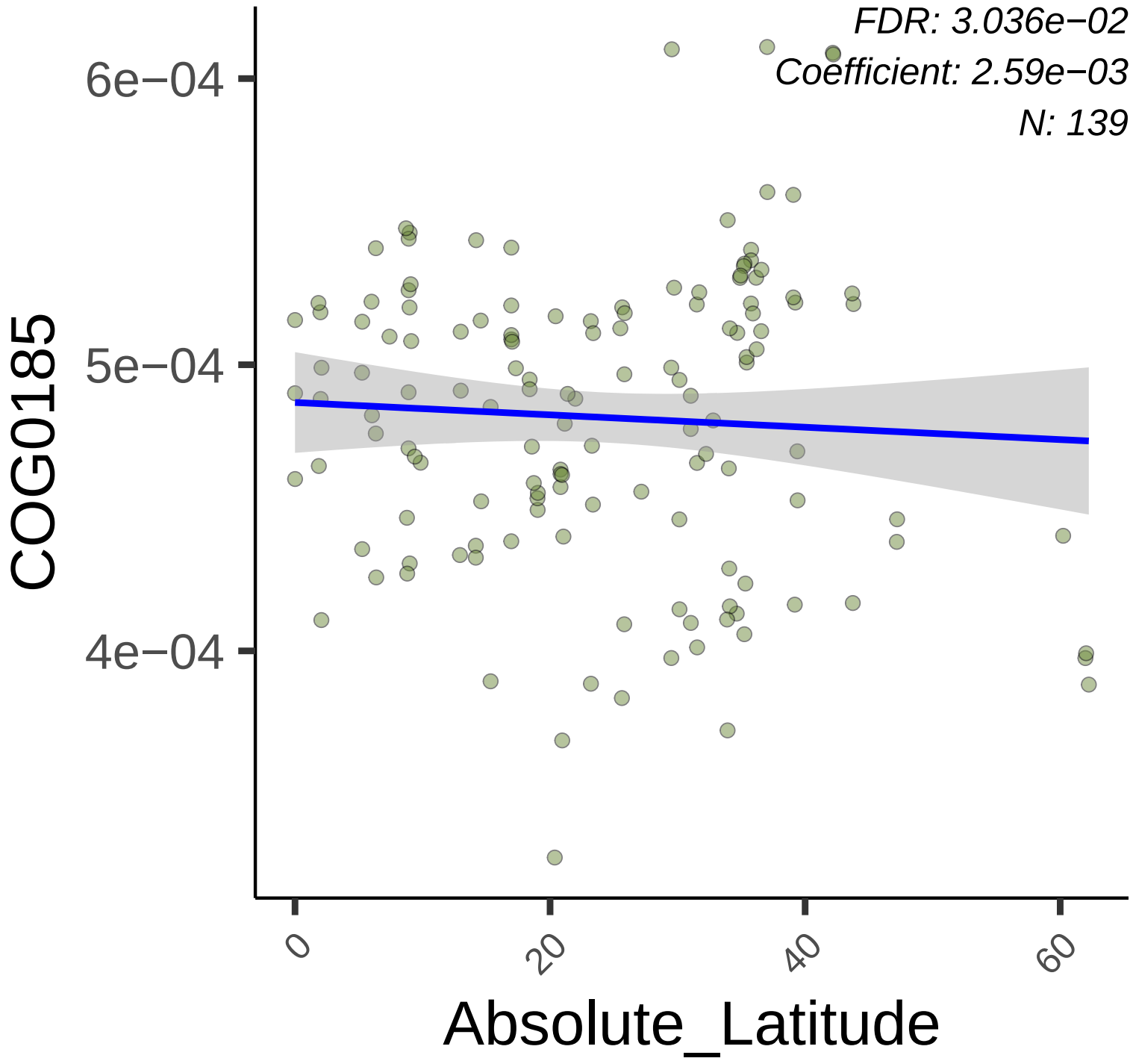

FDR: 2.957e−02
Coefficient: −9.66e−02
N: 139
COG2461
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

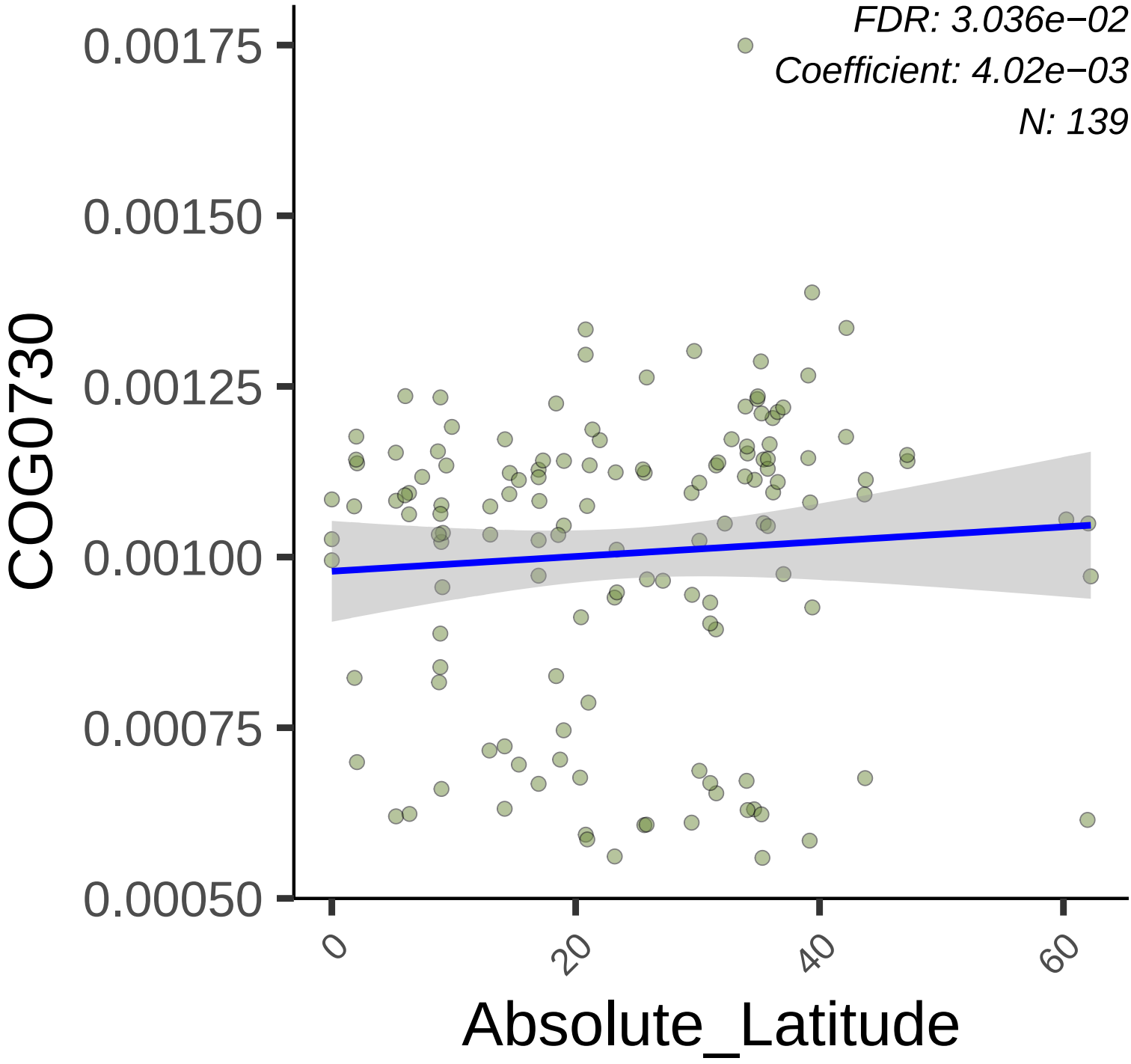

FDR: 2.970e−02
Coefficient: −2.33e−02
N: 139
COG1372
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

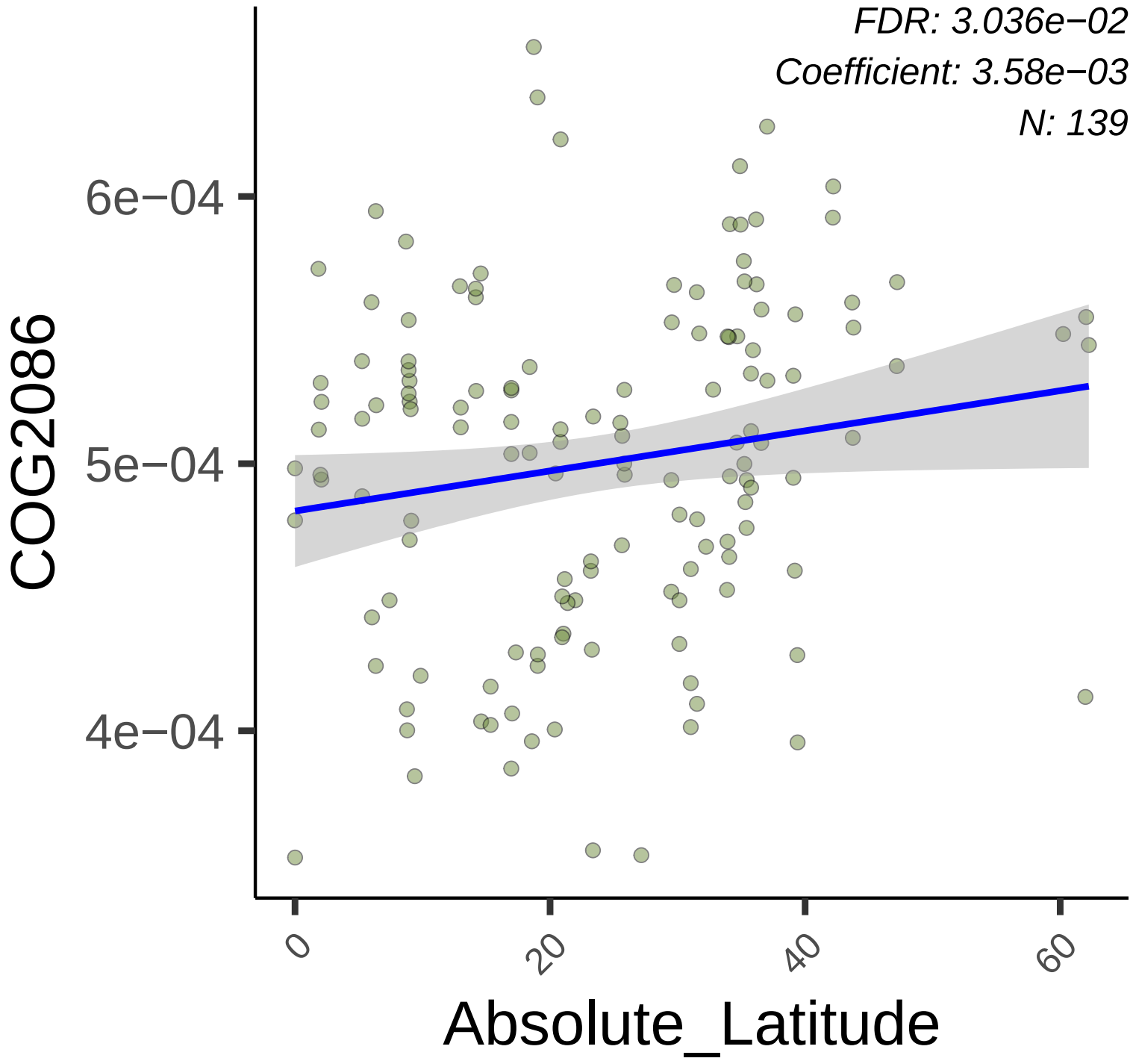

FDR: 2.983e−02
Coefficient: 2.60e−03
N: 139
6e−04
5e−04
4e−04
COG0051
0
20
40
60
Absolute_Latitude

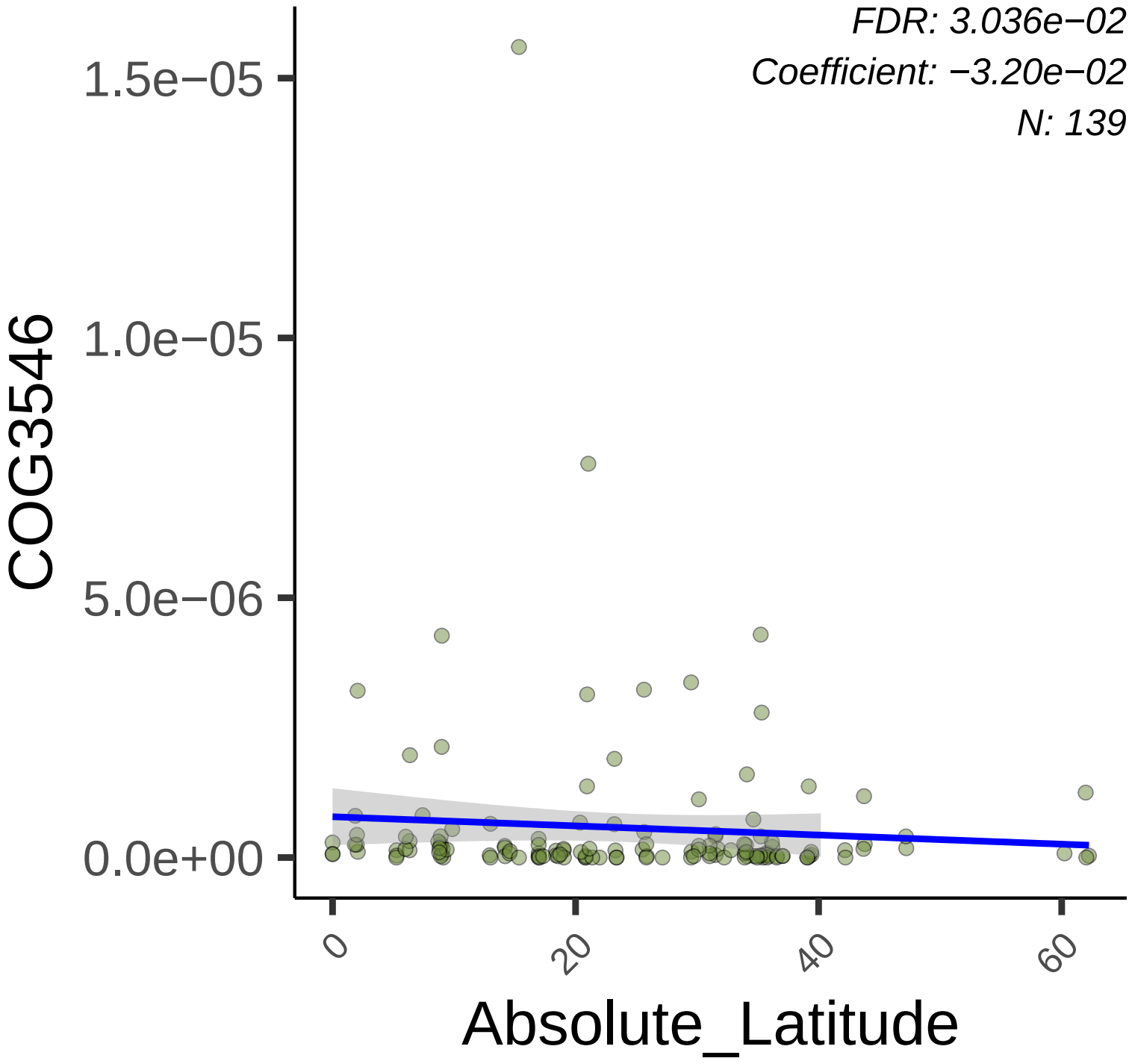

FDR: 2.993e−02
Coefficient: −2.46e−02
N: 139
COG4245
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

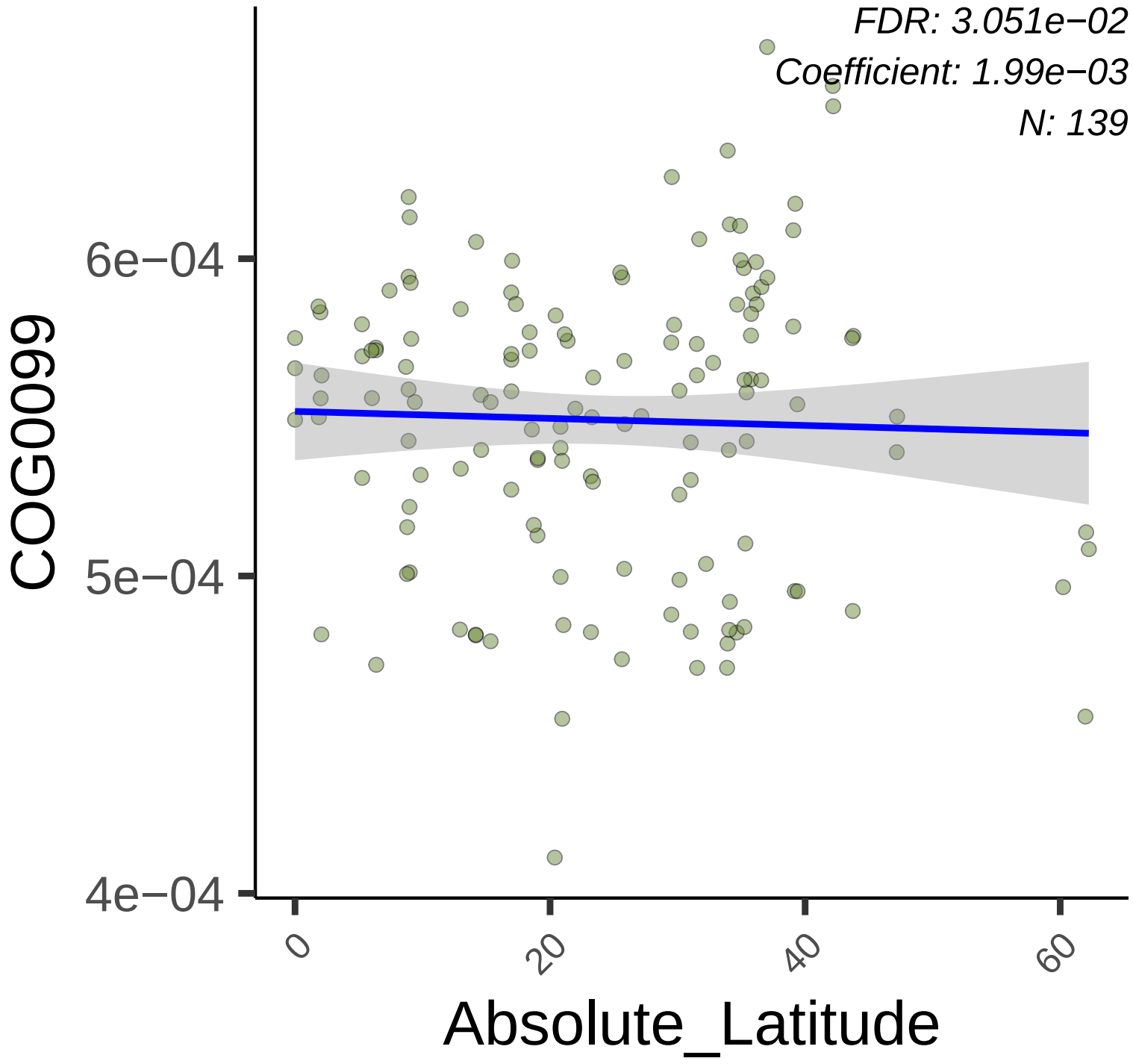

FDR: 3.023e−02
Coefficient: 2.80e−03
N: 139
1e−03
8e−04
6e−04
COG0499
0
20
40
60
Absolute_Latitude

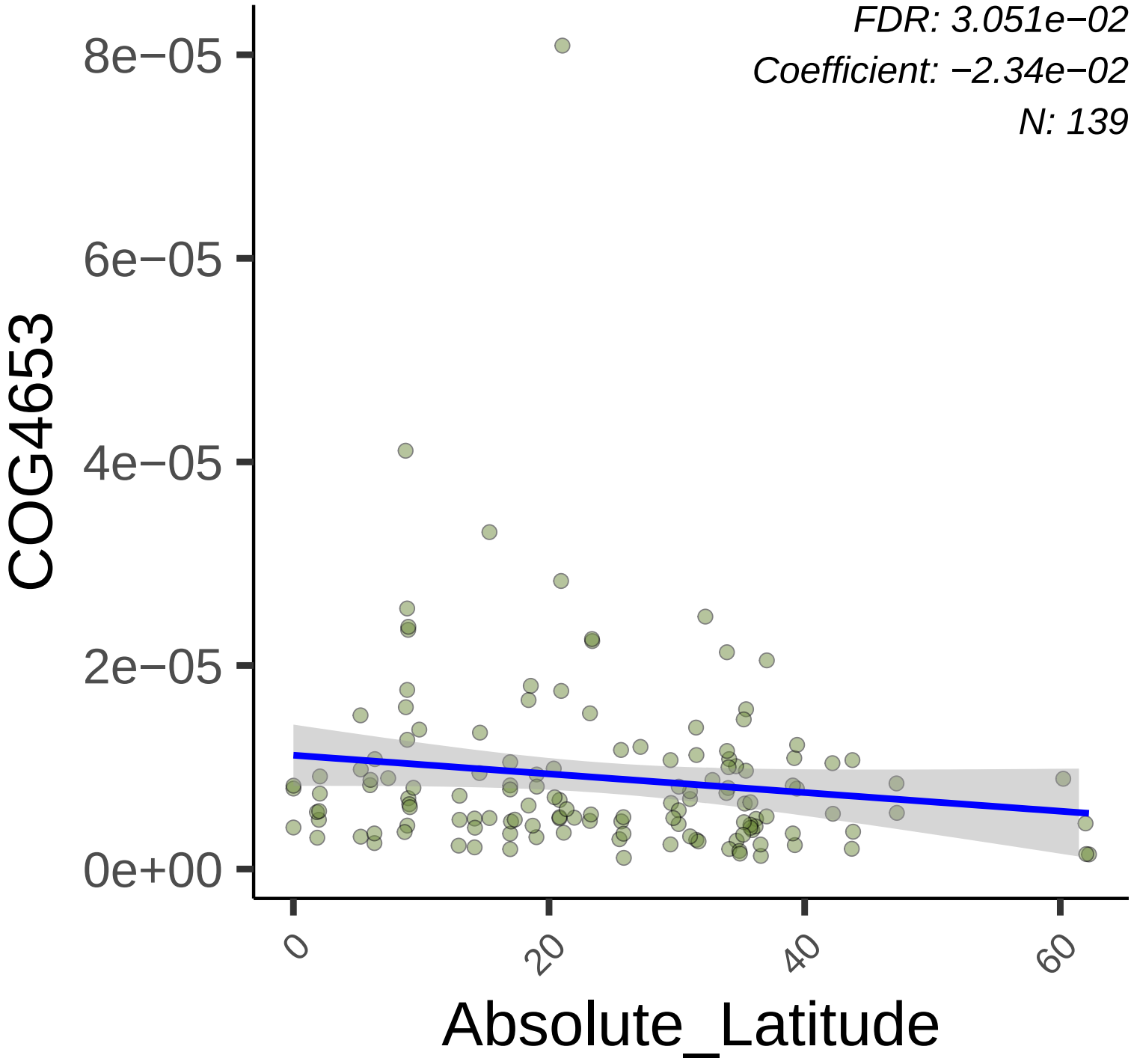

FDR: 3.036e−02
Coefficient: 2.59e−03
N: 139
6e−04
5e−04
4e−04
COG0185
0
20
40
60
Absolute_Latitude

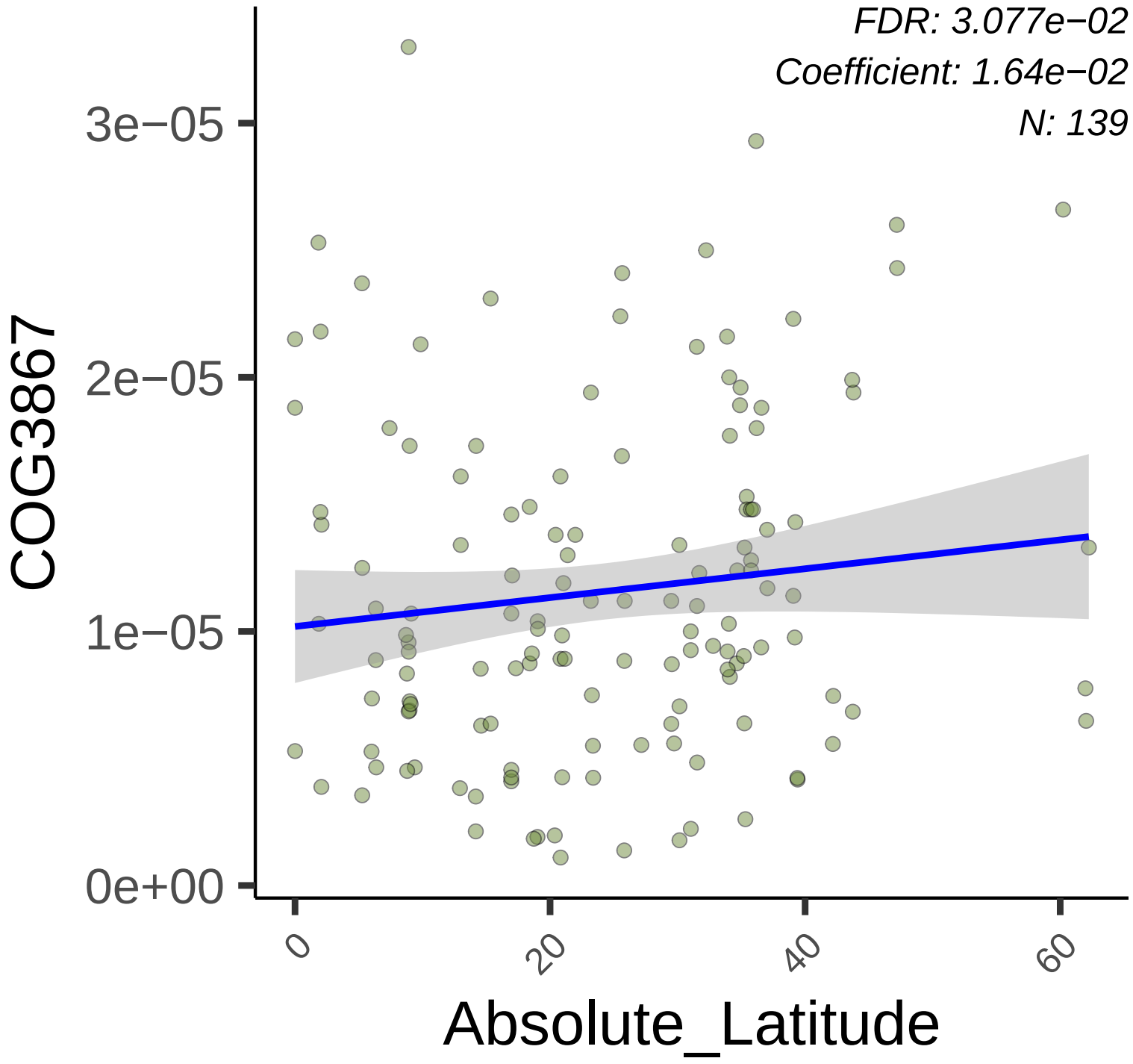

FDR: 3.036e−02
Coefficient: 4.02e−03
N: 139
0.00175
0.00150
0.00125
0.00100
0.00075
0.00050
COG0730
0
20
40
60
Absolute_Latitude

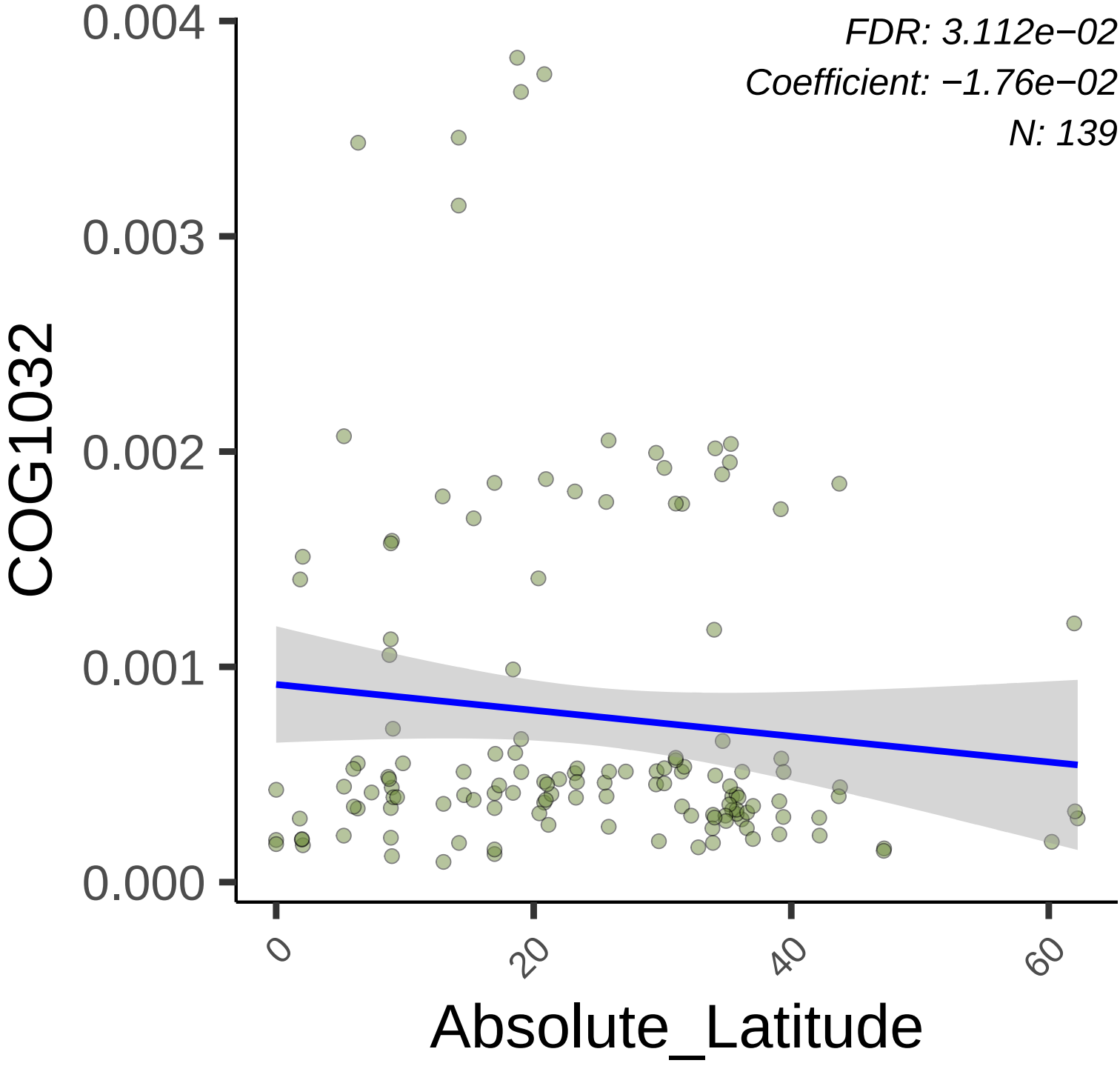

FDR: 3.036e−02
Coefficient: 3.58e−03
N: 139
COG2086
6e−04
5e−04
4e−04
0
20
40
60
Absolute_Latitude

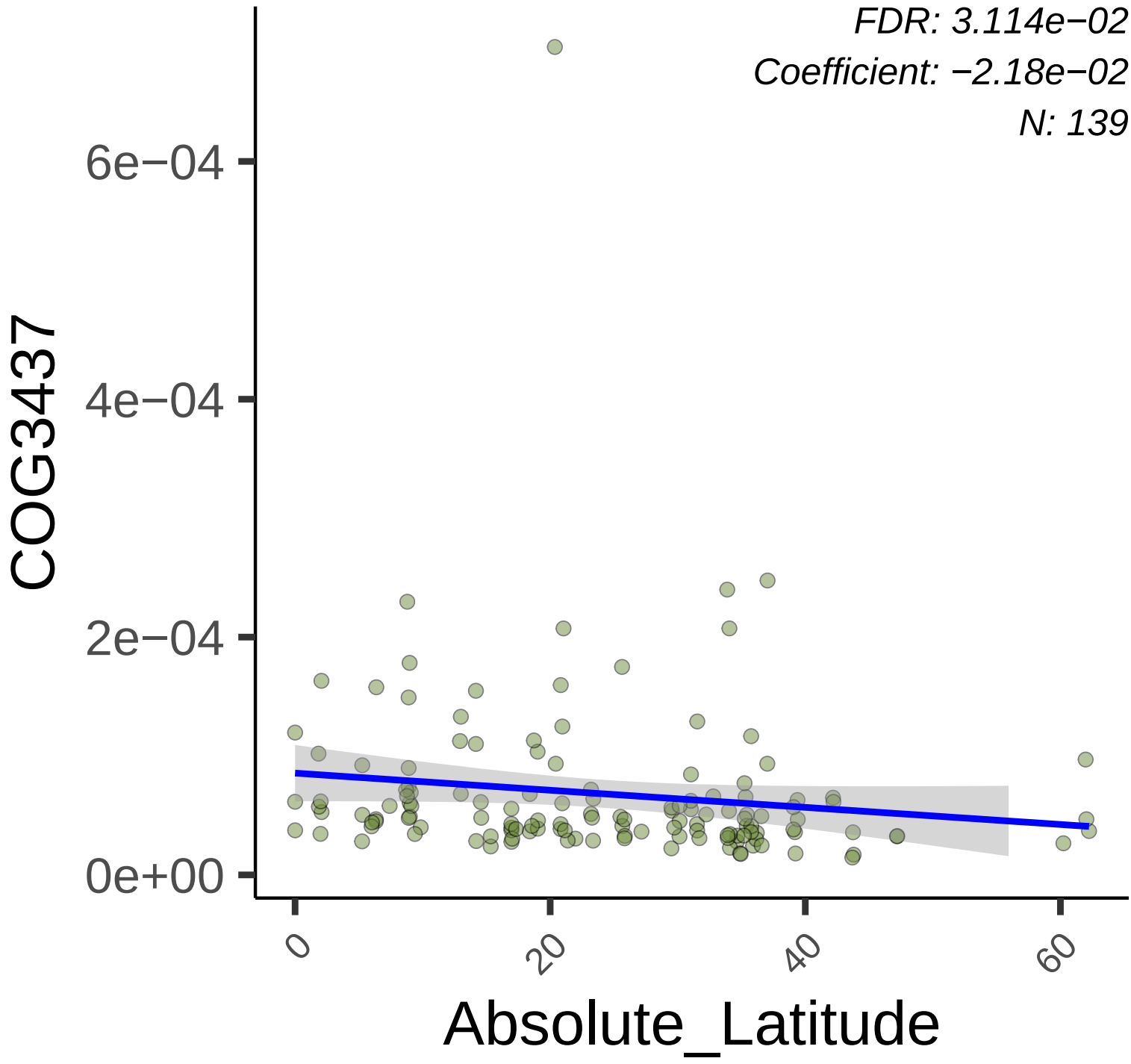

FDR: 3.036e−02
Coefficient: −3.20e−02
N: 139
COG3546
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

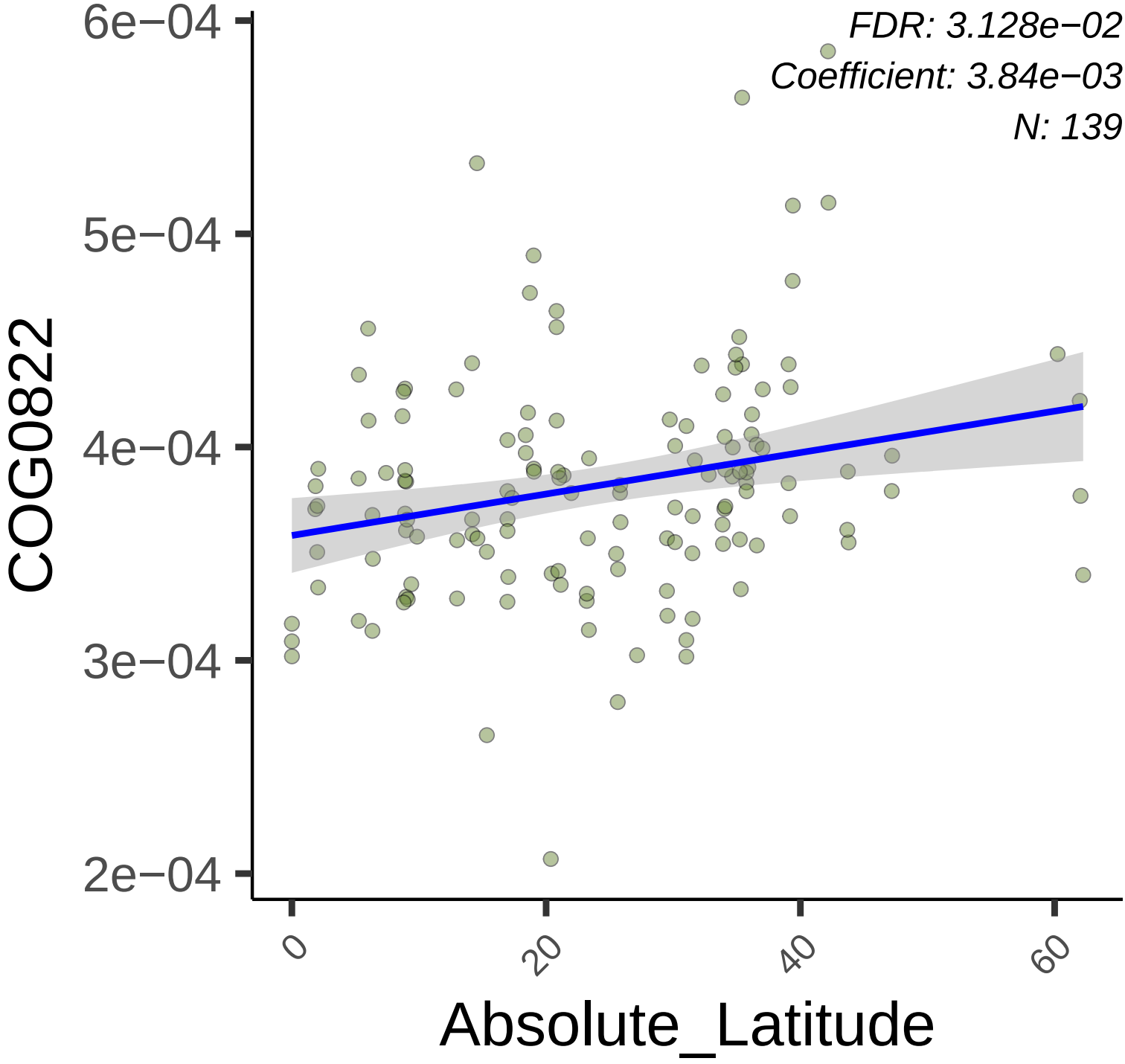

FDR: 3.051e−02
Coefficient: 1.99e−03
N: 139
COG0099
6e−04
5e−04
4e−04
0
20
40
60
Absolute_Latitude

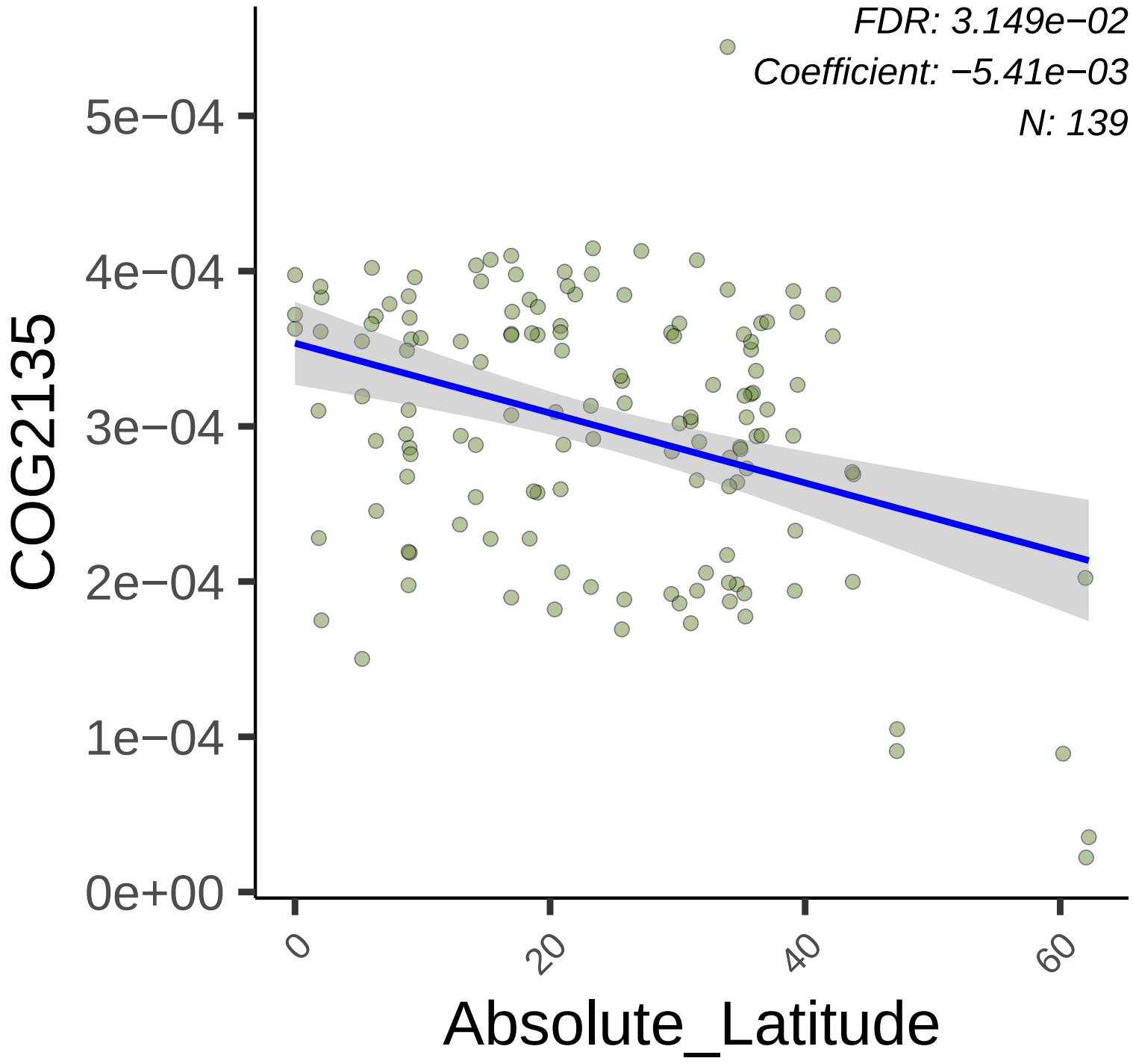

FDR: 3.051e−02
Coefficient: −2.34e−02
N: 139
COG4653
8e−05
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

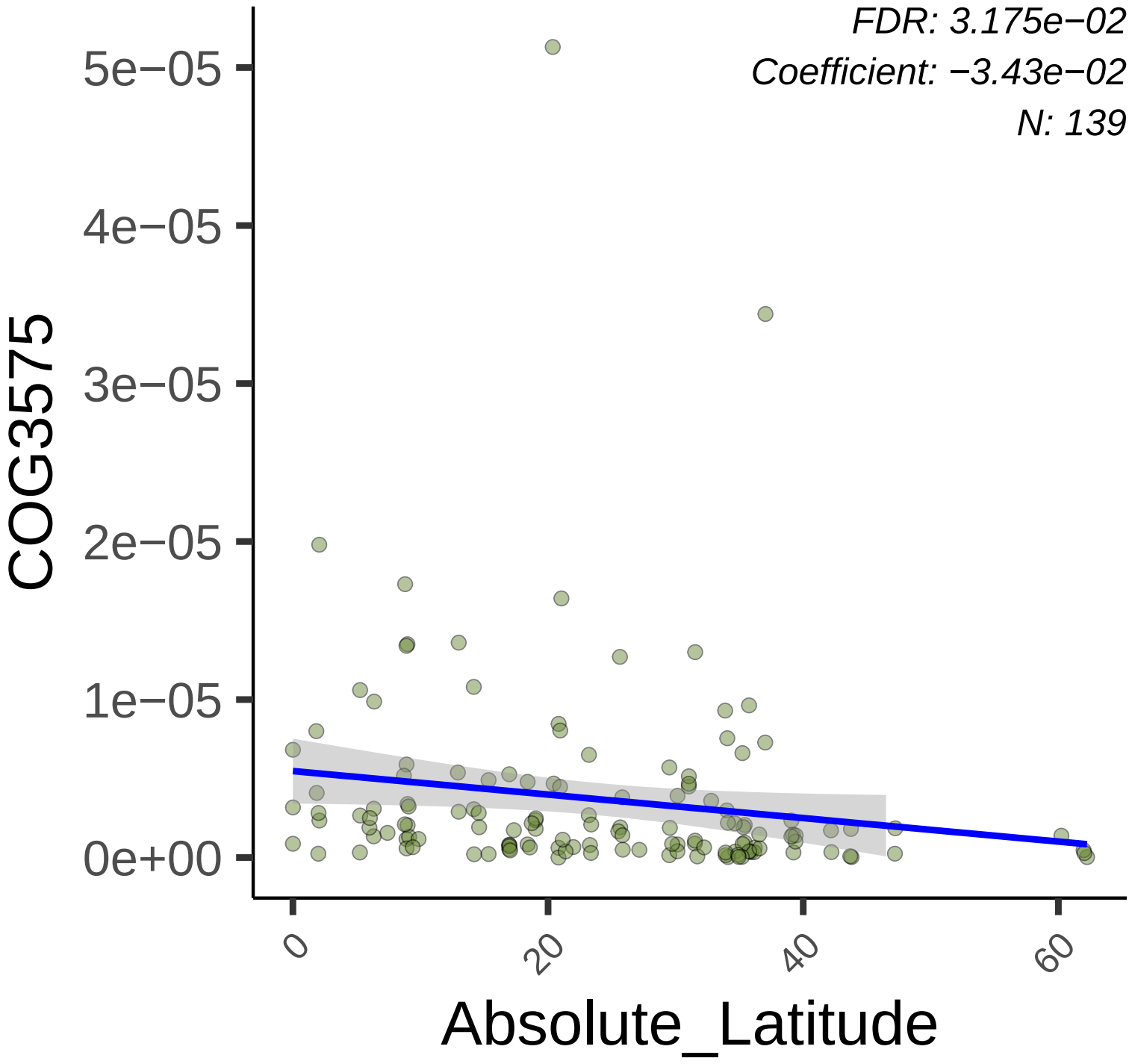

FDR: 3.077e−02
Coefficient: 1.64e−02
N: 139
COG3867
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

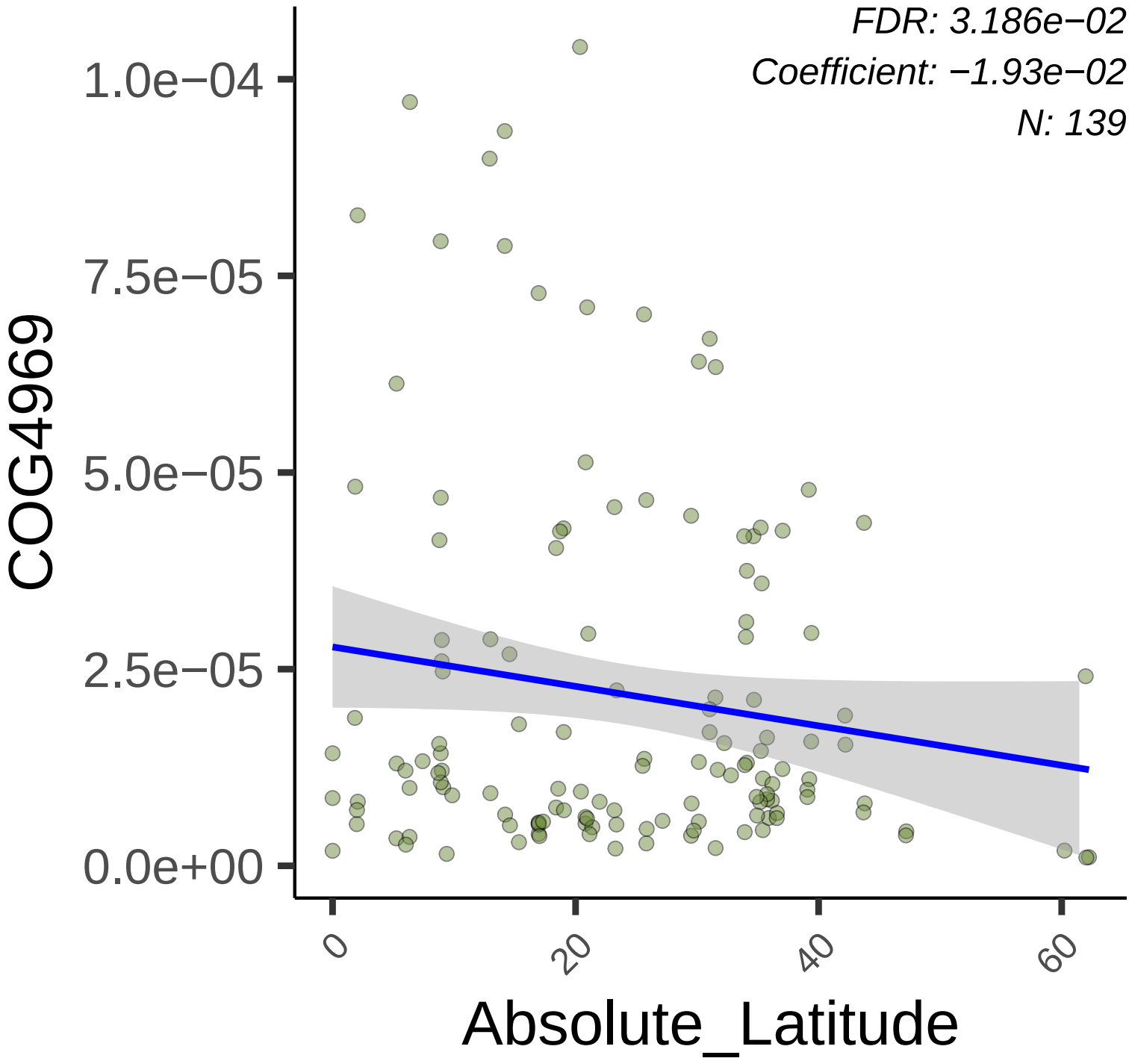

FDR: 3.112e−02
Coefficient: −1.76e−02
N: 139
COG1032
0.004
0.003
0.002
0.001
0.000
0
20
40
60
Absolute_Latitude

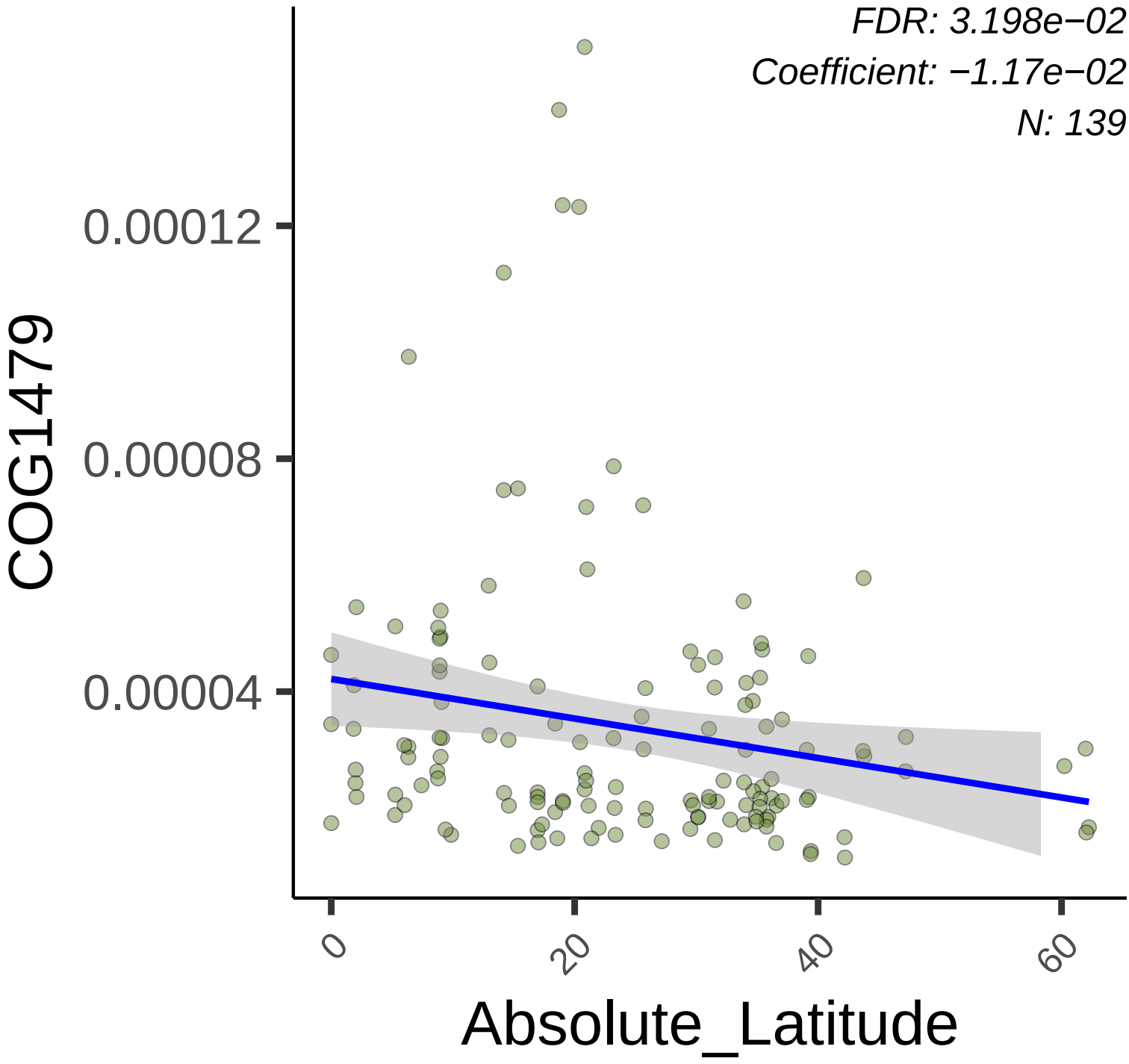

FDR: 3.114e−02
Coefficient: −2.18e−02
N: 139
COG3437
6e−04
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

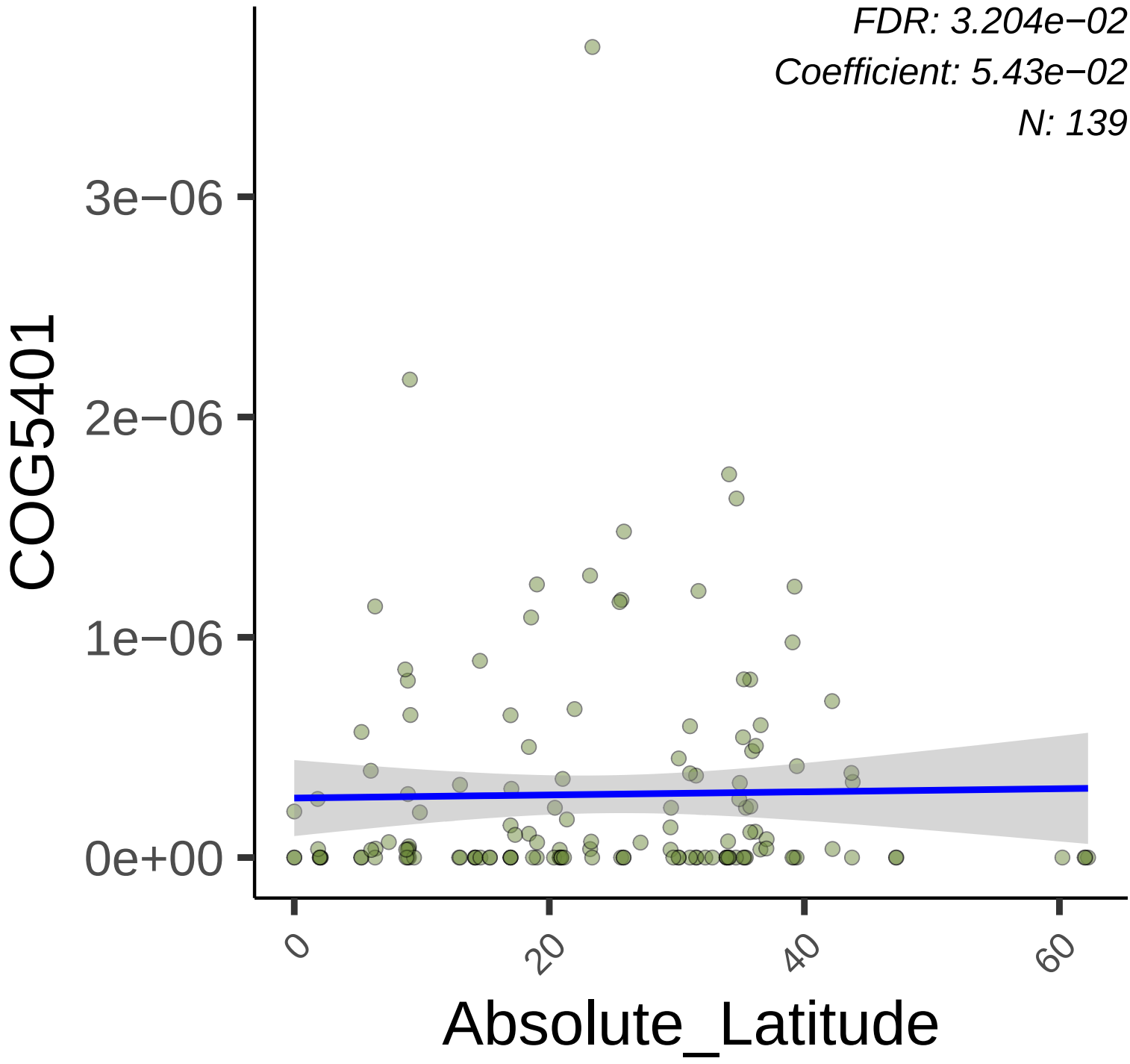

FDR: 3.128e−02
Coefficient: 3.84e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
COG0822
0
20
40
60
Absolute_Latitude

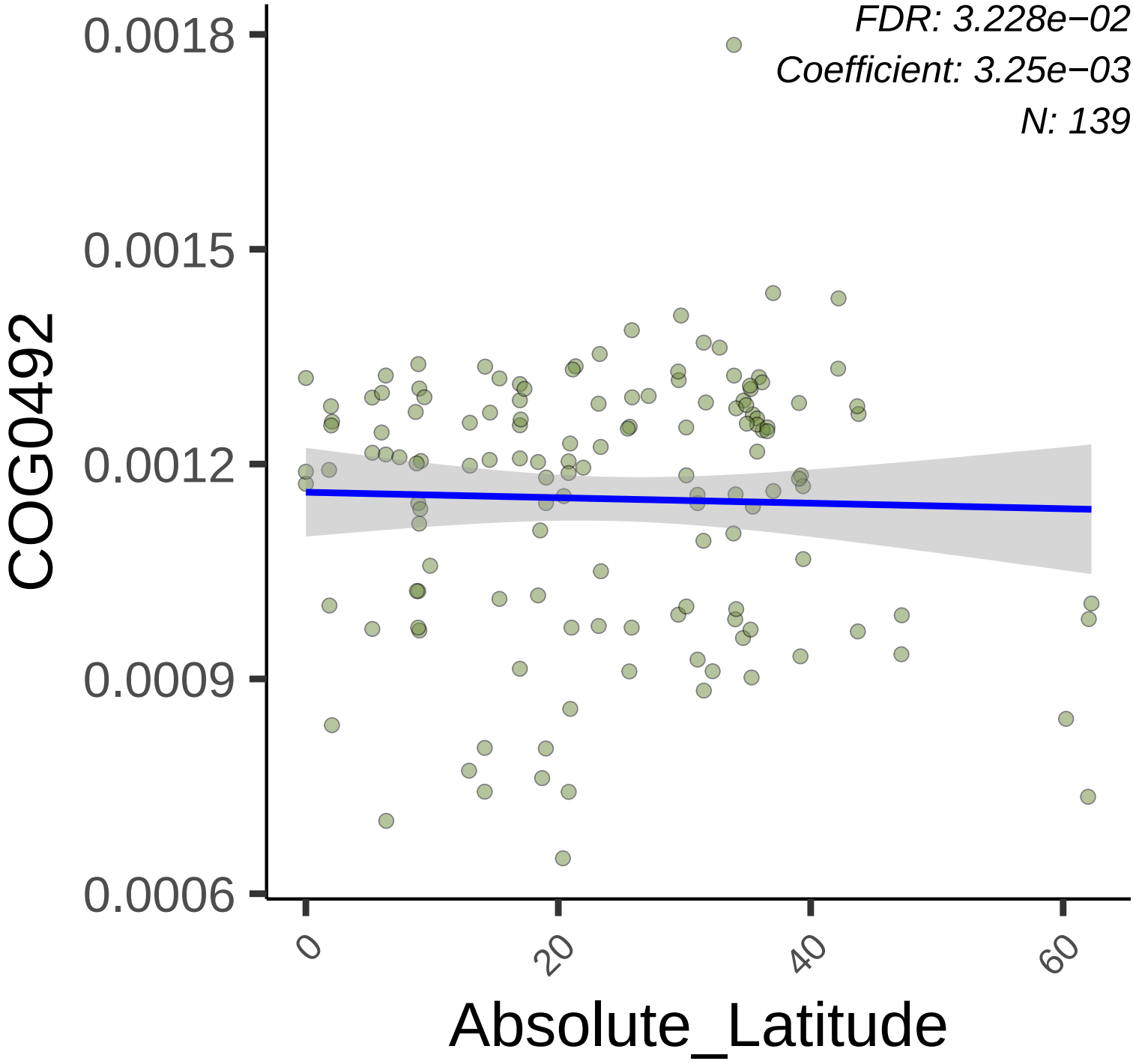

FDR: 3.149e−02
Coefficient: −5.41e−03
N: 139
COG2135
5e−04
4e−04
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

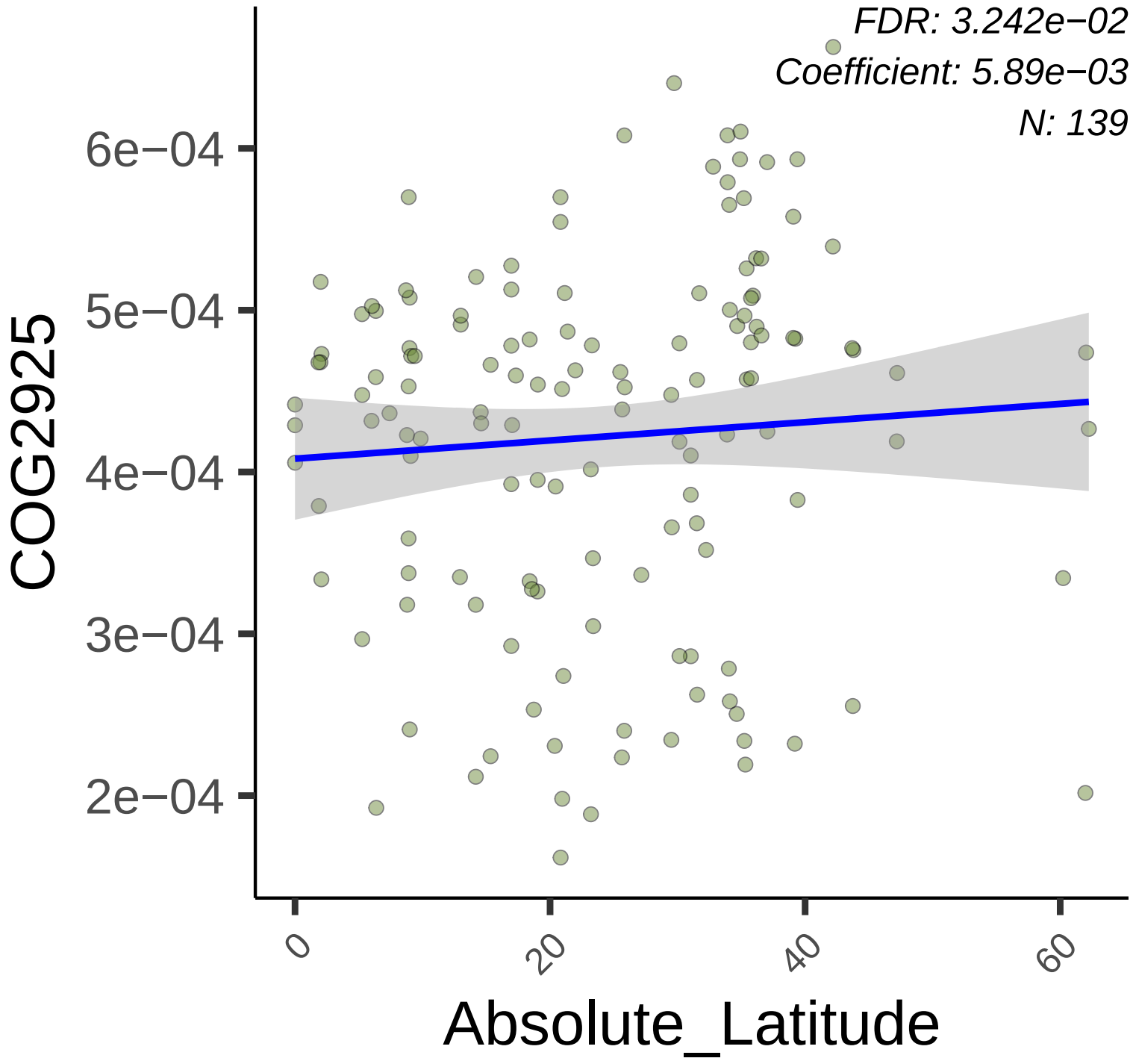

FDR: 3.175e−02
Coefficient: −3.43e−02
N: 139
COG3575
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

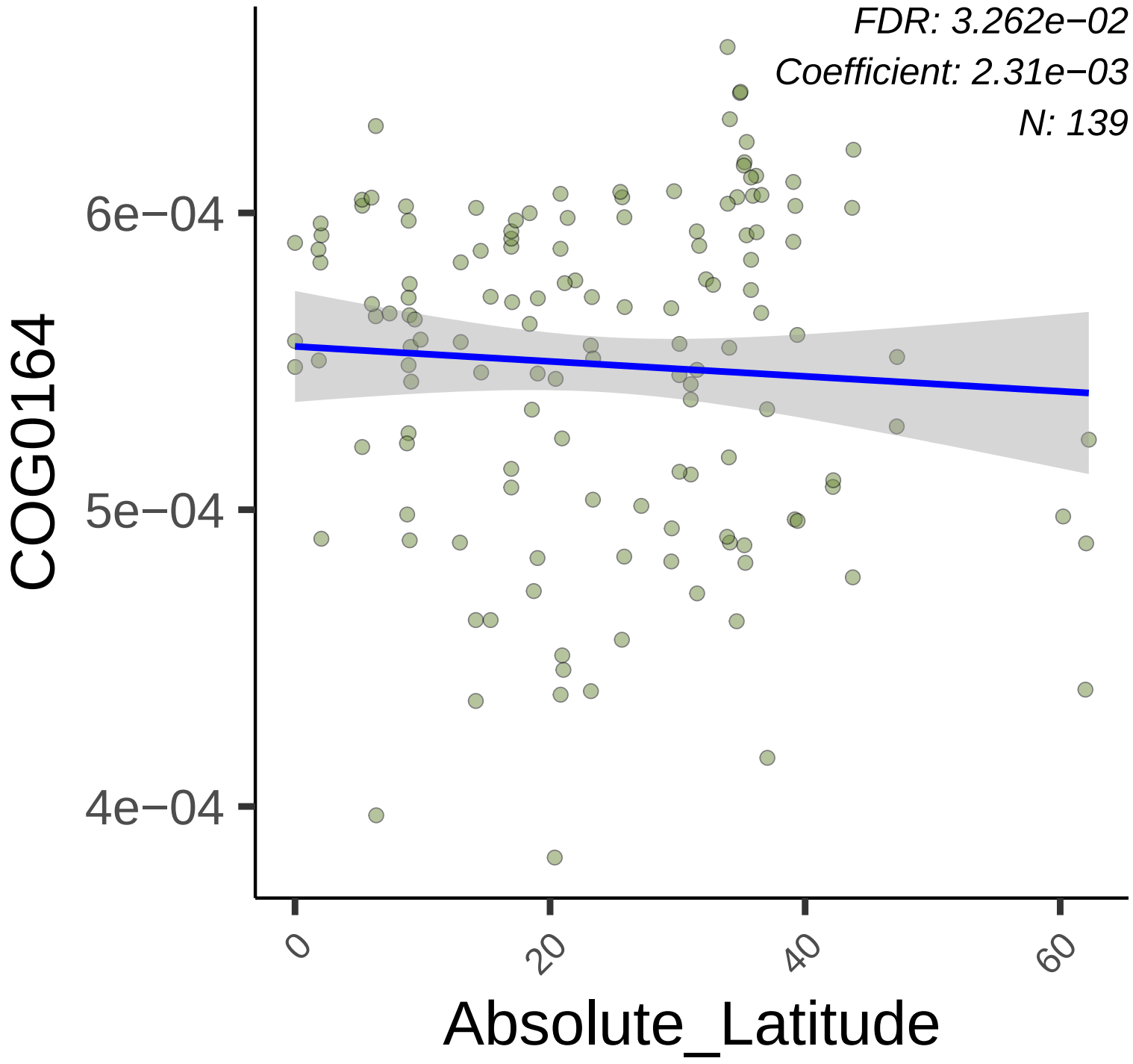

FDR: 3.186e−02
Coefficient: −1.93e−02
N: 139
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
COG4969
0
20
40
60
Absolute_Latitude

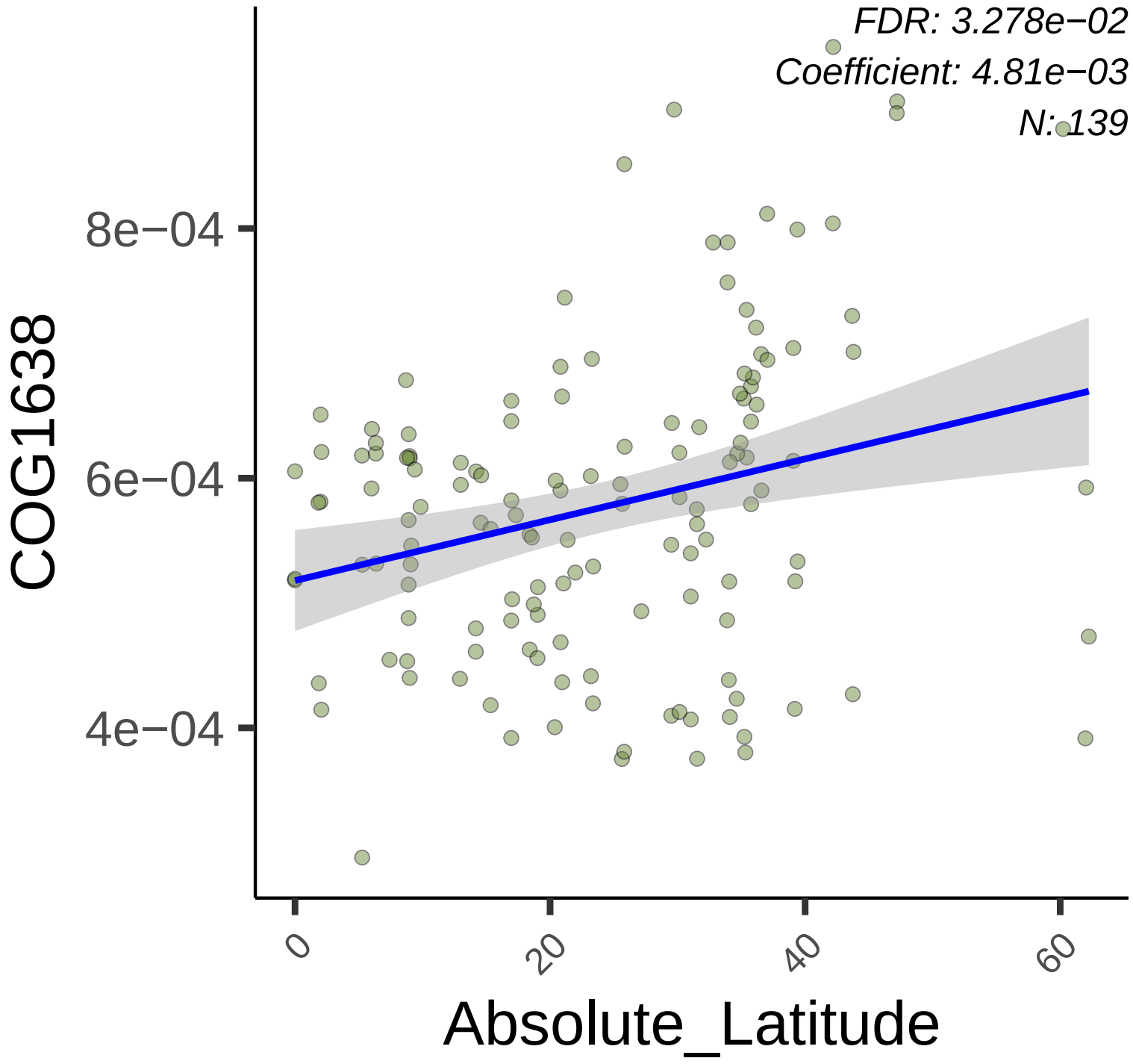

FDR: 3.198e−02
Coefficient: −1.17e−02
N: 139
COG1479
0.00012
0.00008
0.00004
0
20
40
60
Absolute_Latitude

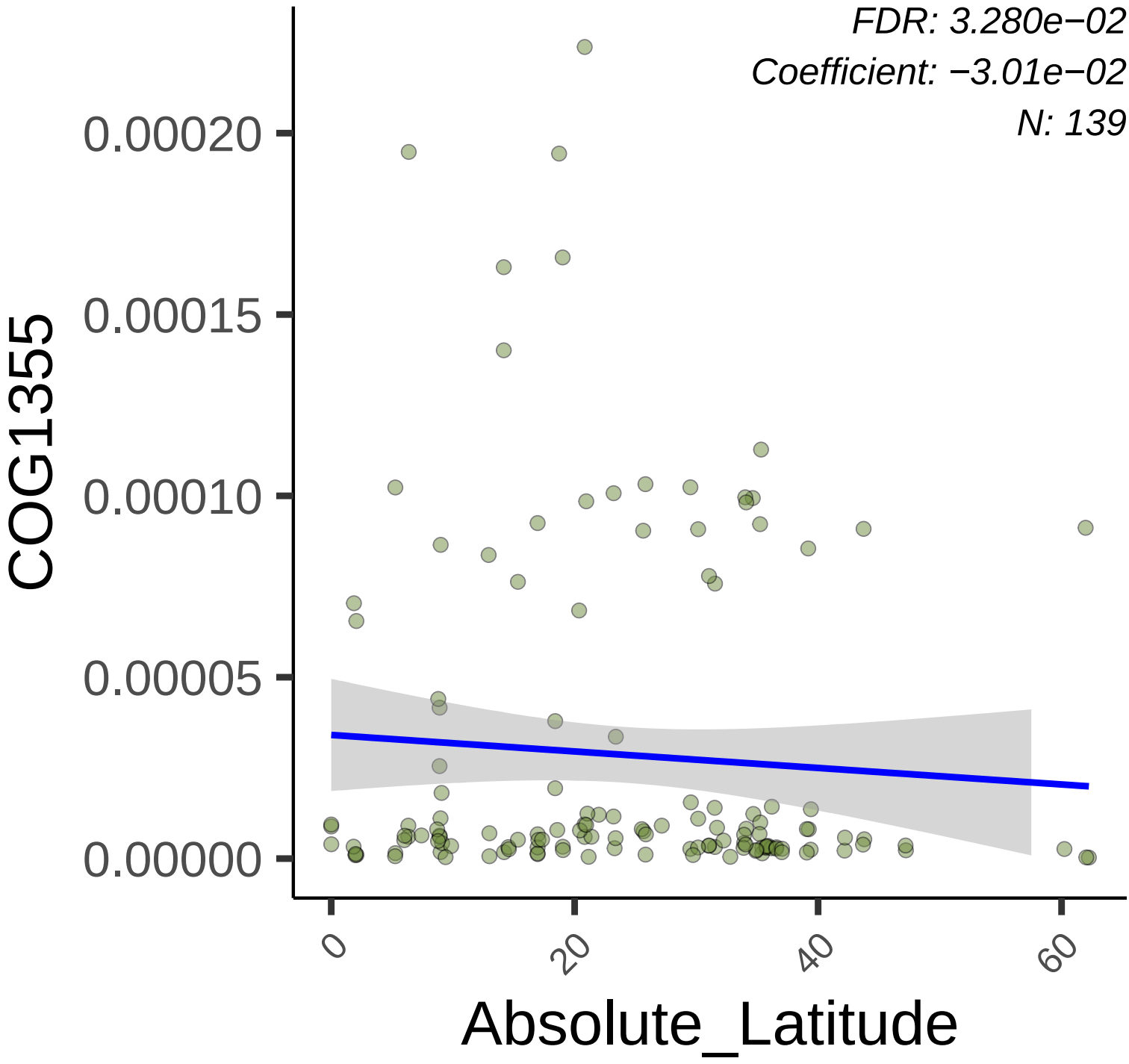

FDR: 3.204e−02
Coefficient: 5.43e−02
N: 139
COG5401
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

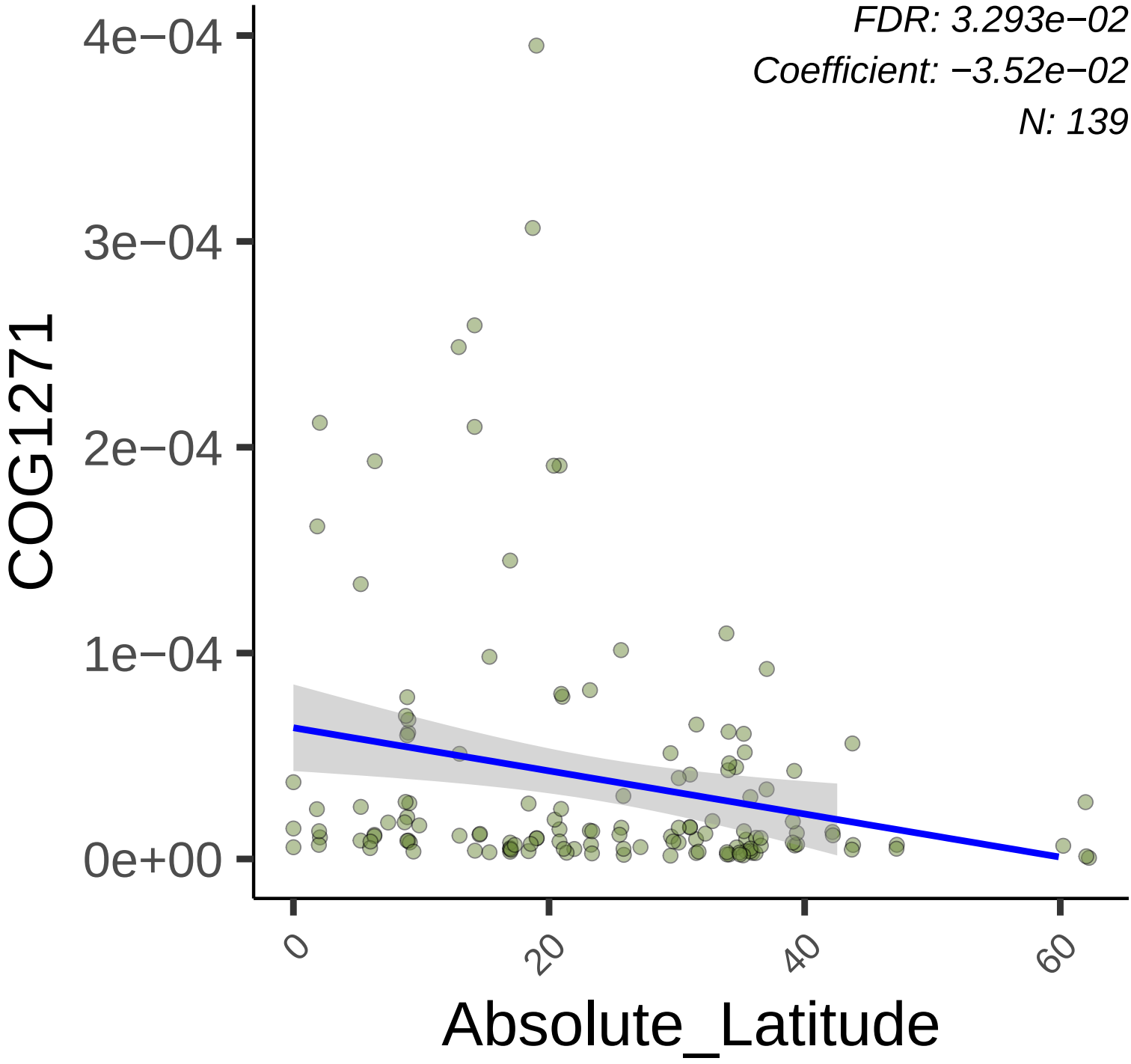

FDR: 3.228e−02
Coefficient: 3.25e−03
N: 139
0.0018
0.0015
0.0012
0.0009
0.0006
COG0492
0
20
40
60
Absolute_Latitude

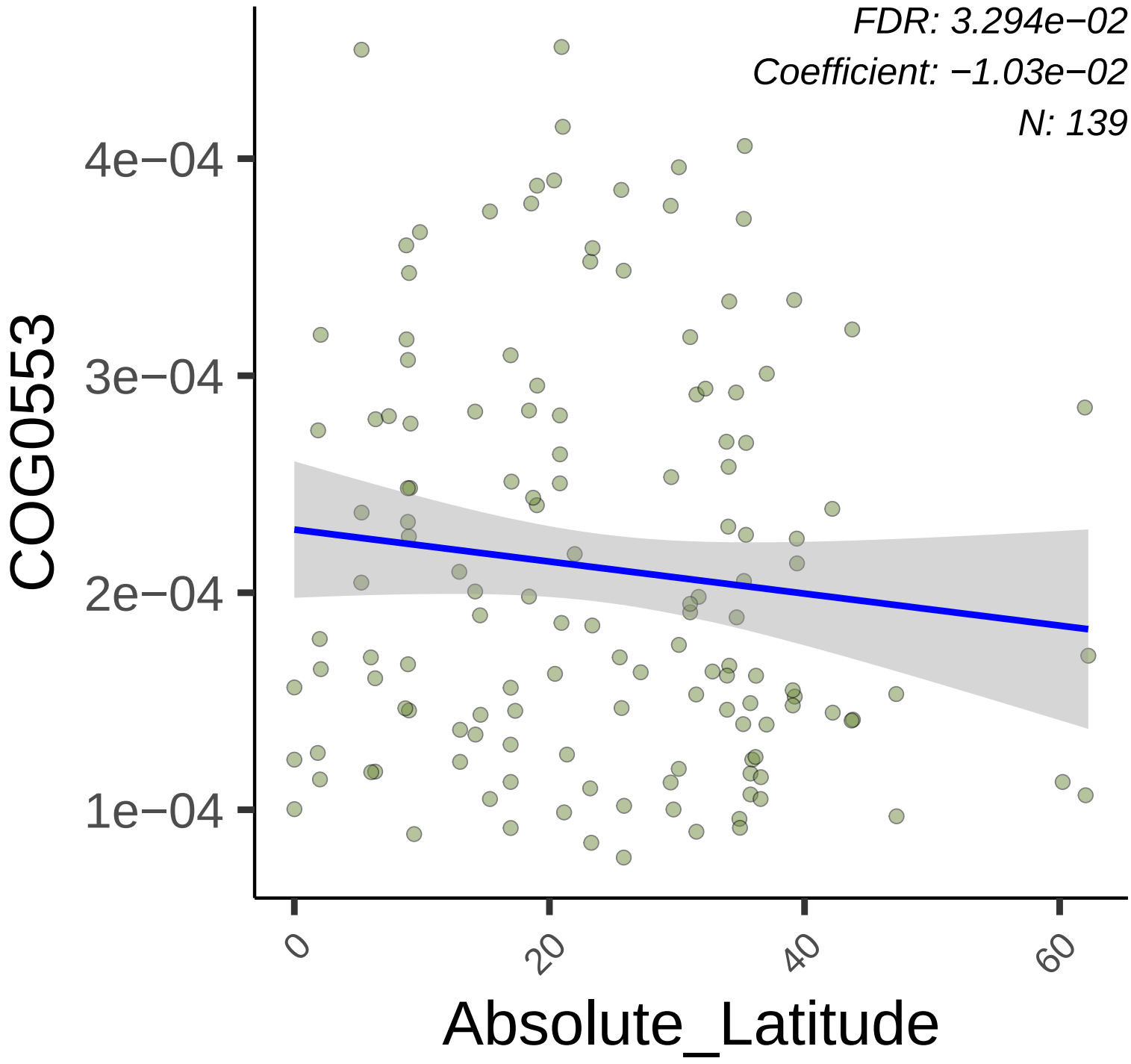

FDR: 3.242e−02
Coefficient: 5.89e−03
N: 139
COG2925
6e−04
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

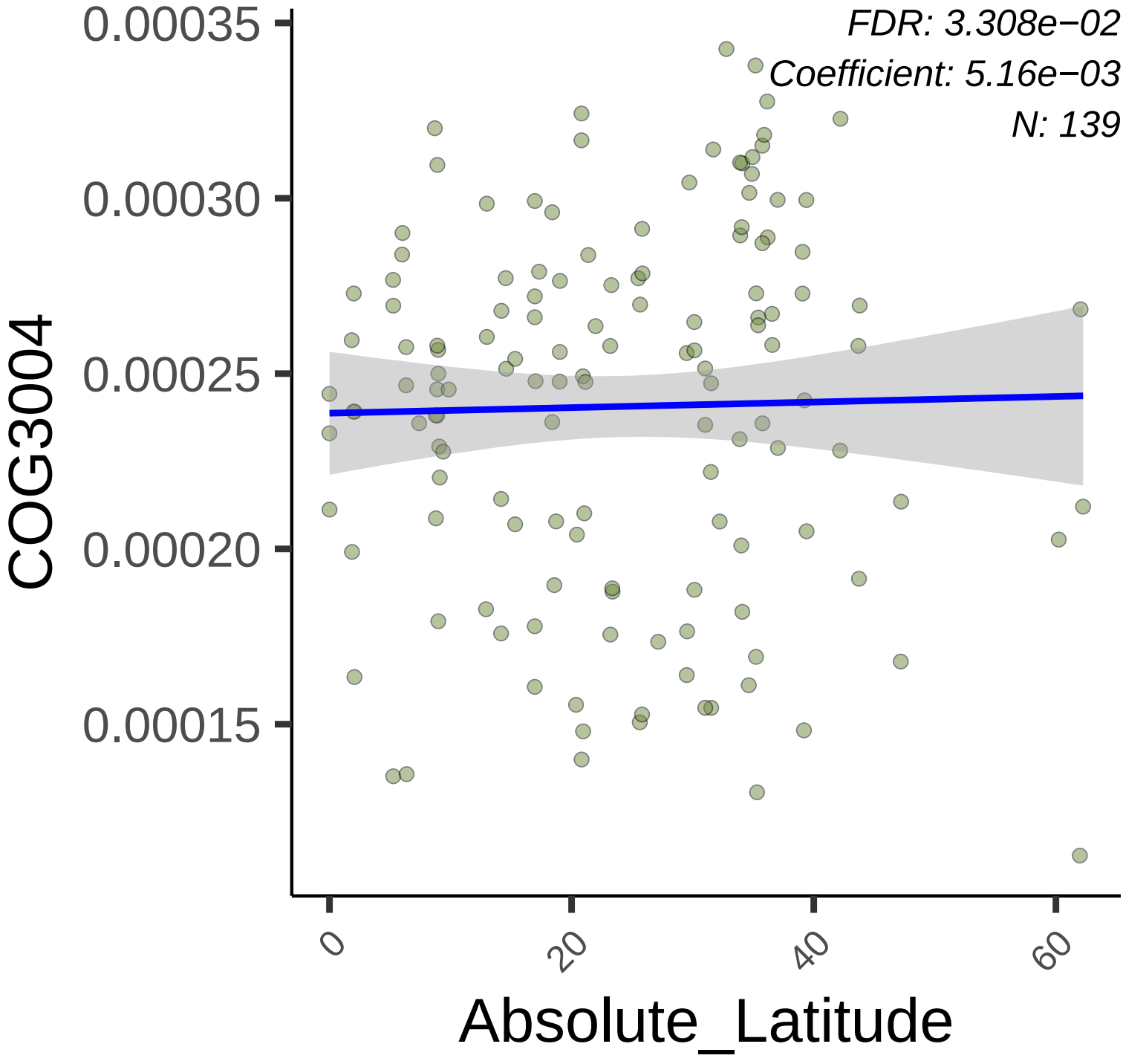

FDR: 3.262e−02
Coefficient: 2.31e−03
N: 139
6e−04
5e−04
4e−04
COG0164
0
20
40
60
Absolute_Latitude

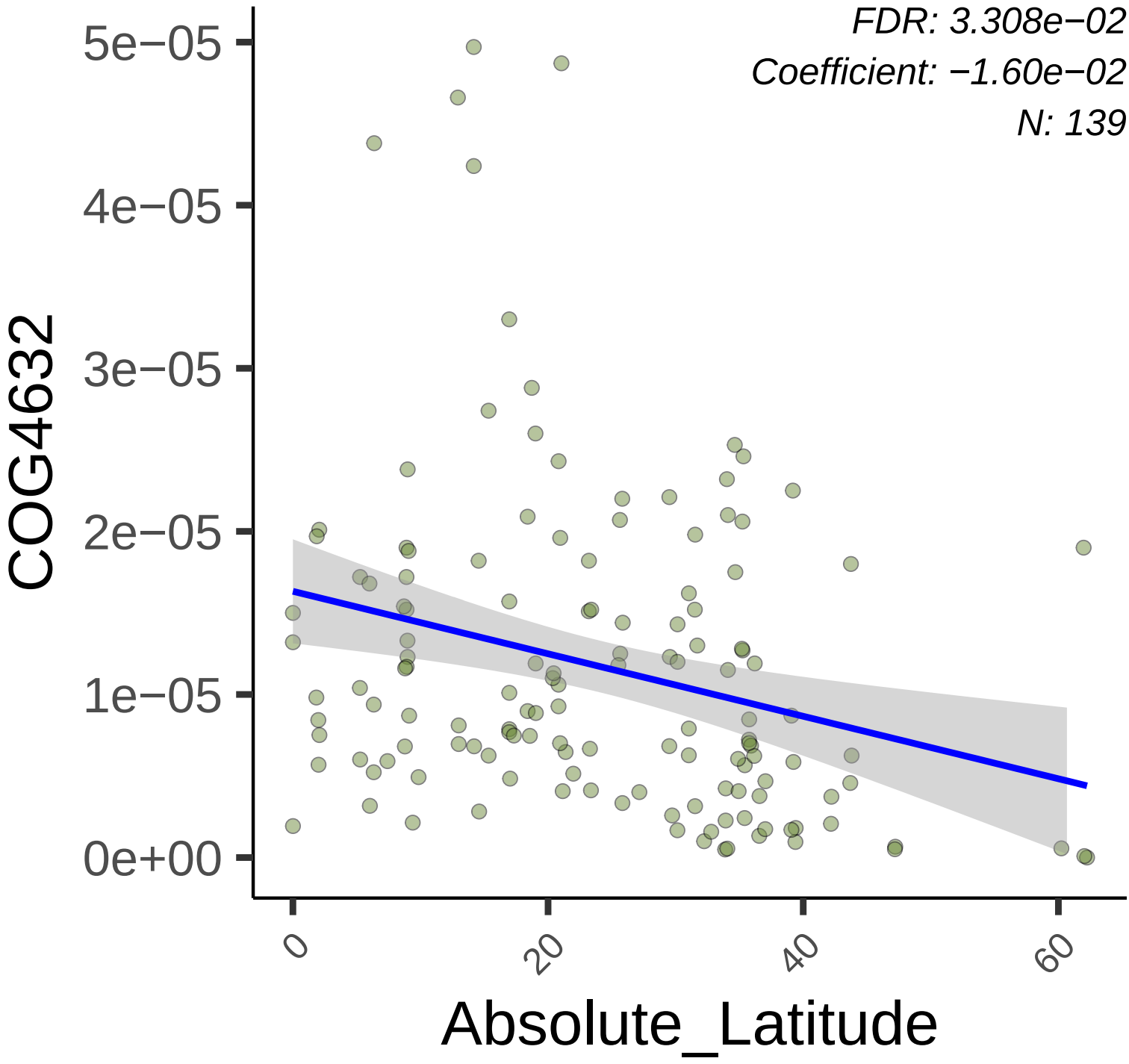

FDR: 3.278e−02
Coefficient: 4.81e−03
N: 139
8e−04
6e−04
4e−04
COG1638
0
20
40
60
Absolute_Latitude

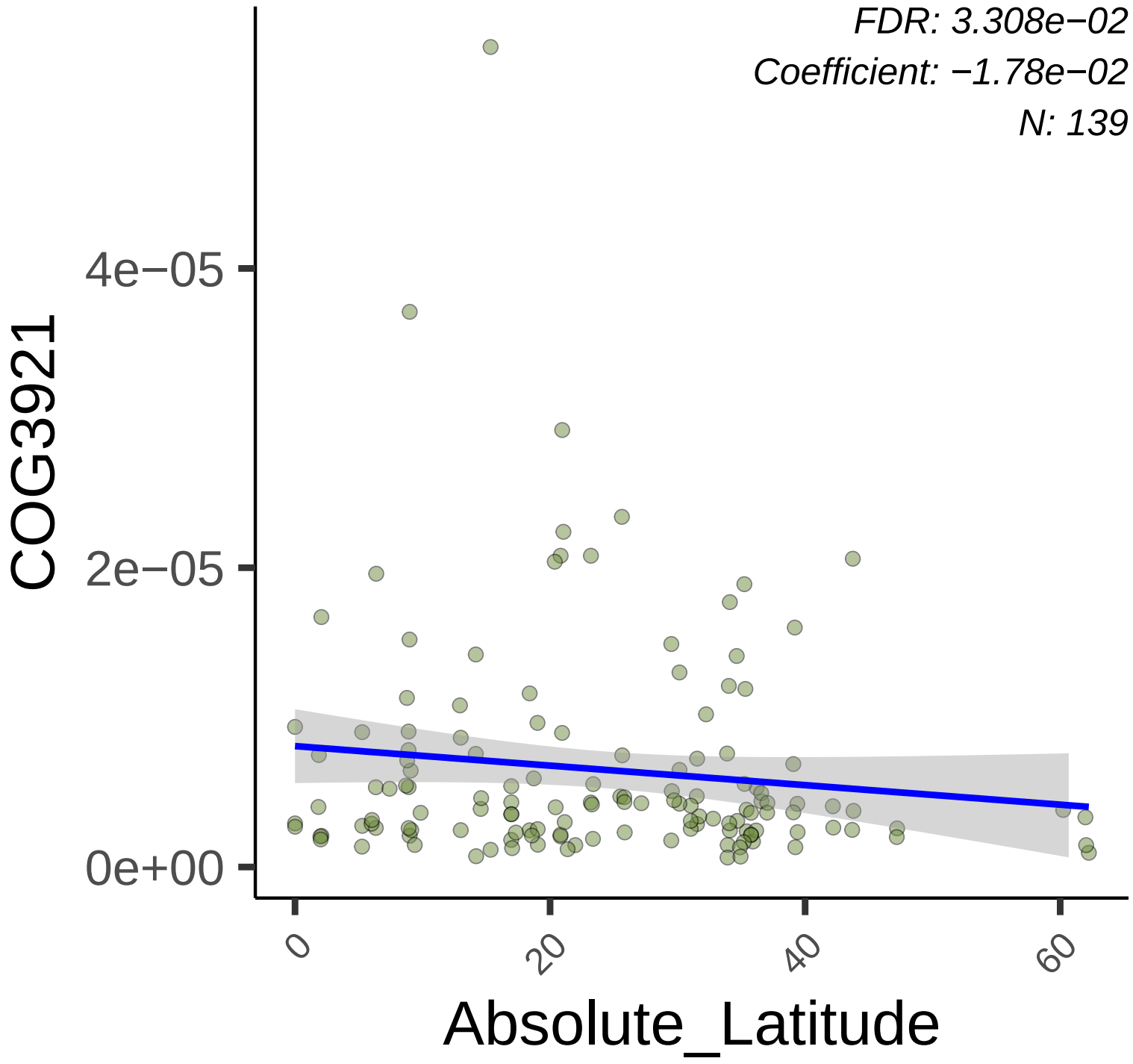

FDR: 3.280e−02
Coefficient: −3.01e−02
N: 139
COG1355
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

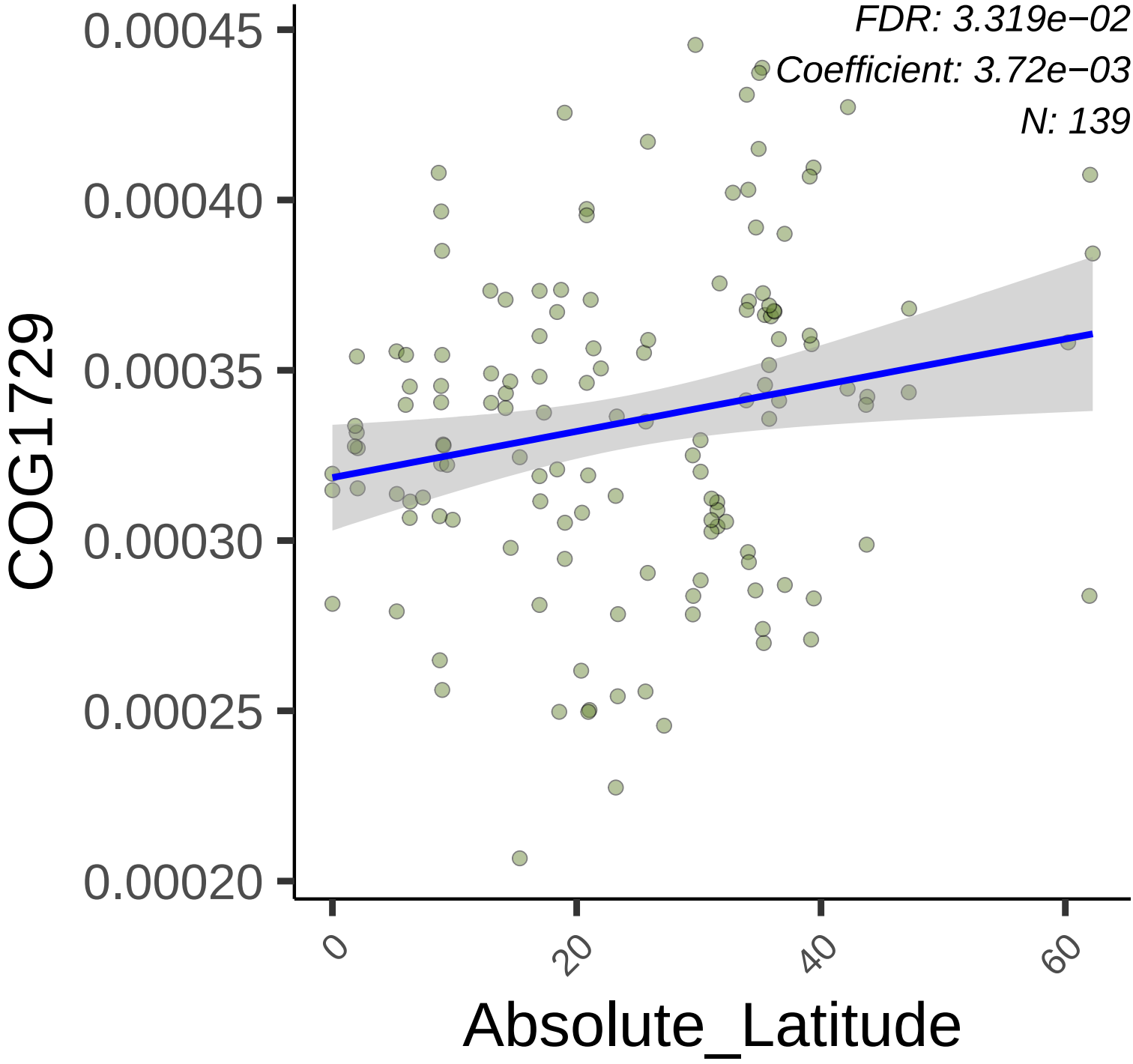

FDR: 3.293e−02
Coefficient: −3.52e−02
N: 139
4e−04
3e−04
2e−04
1e−04
0e+00
COG1271
0
20
40
60
Absolute_Latitude

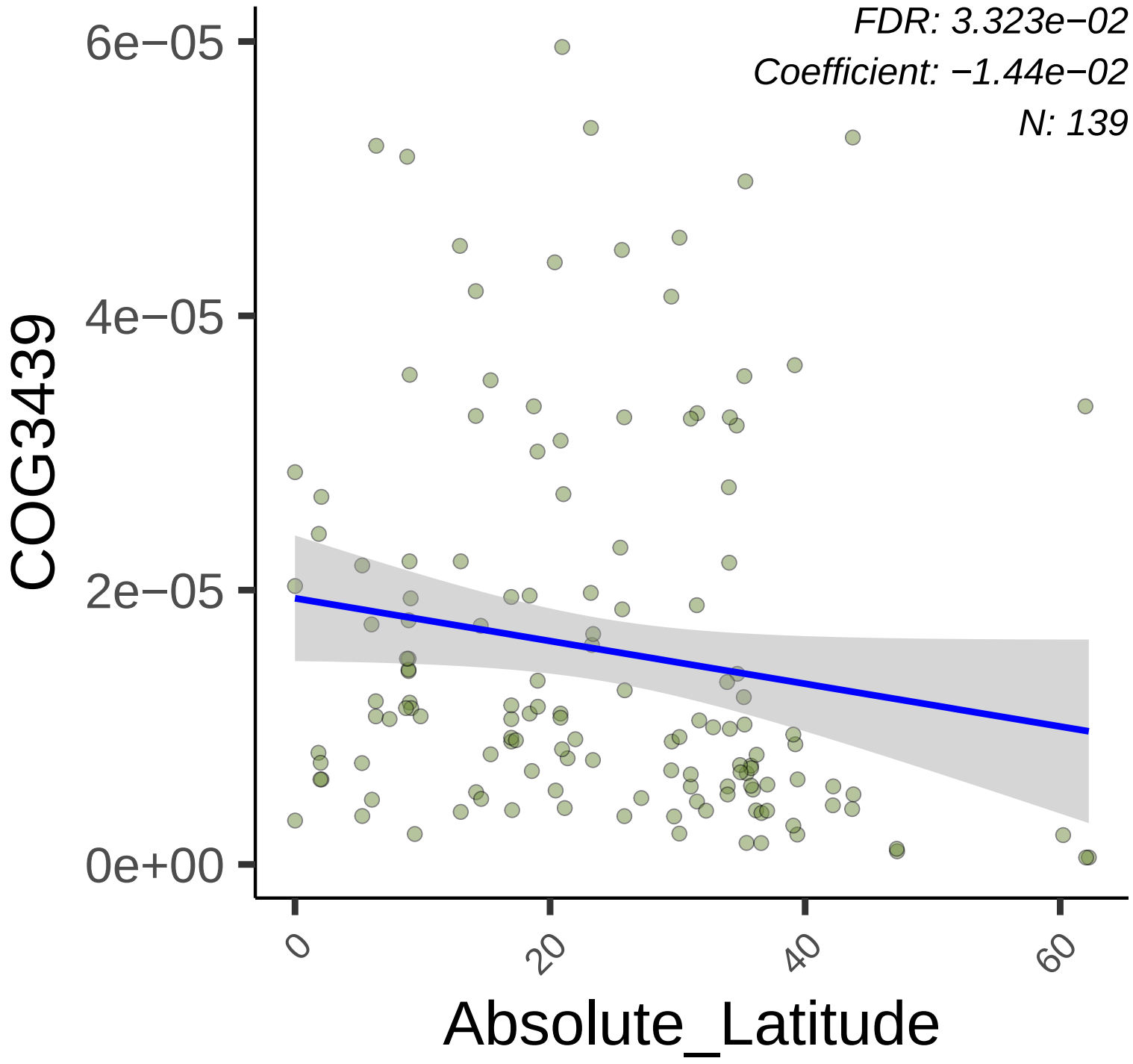

FDR: 3.294e−02
Coefficient: −1.03e−02
N: 139
COG0553
4e−04
3e−04
2e−04
1e−04
0
20
40
60
Absolute_Latitude

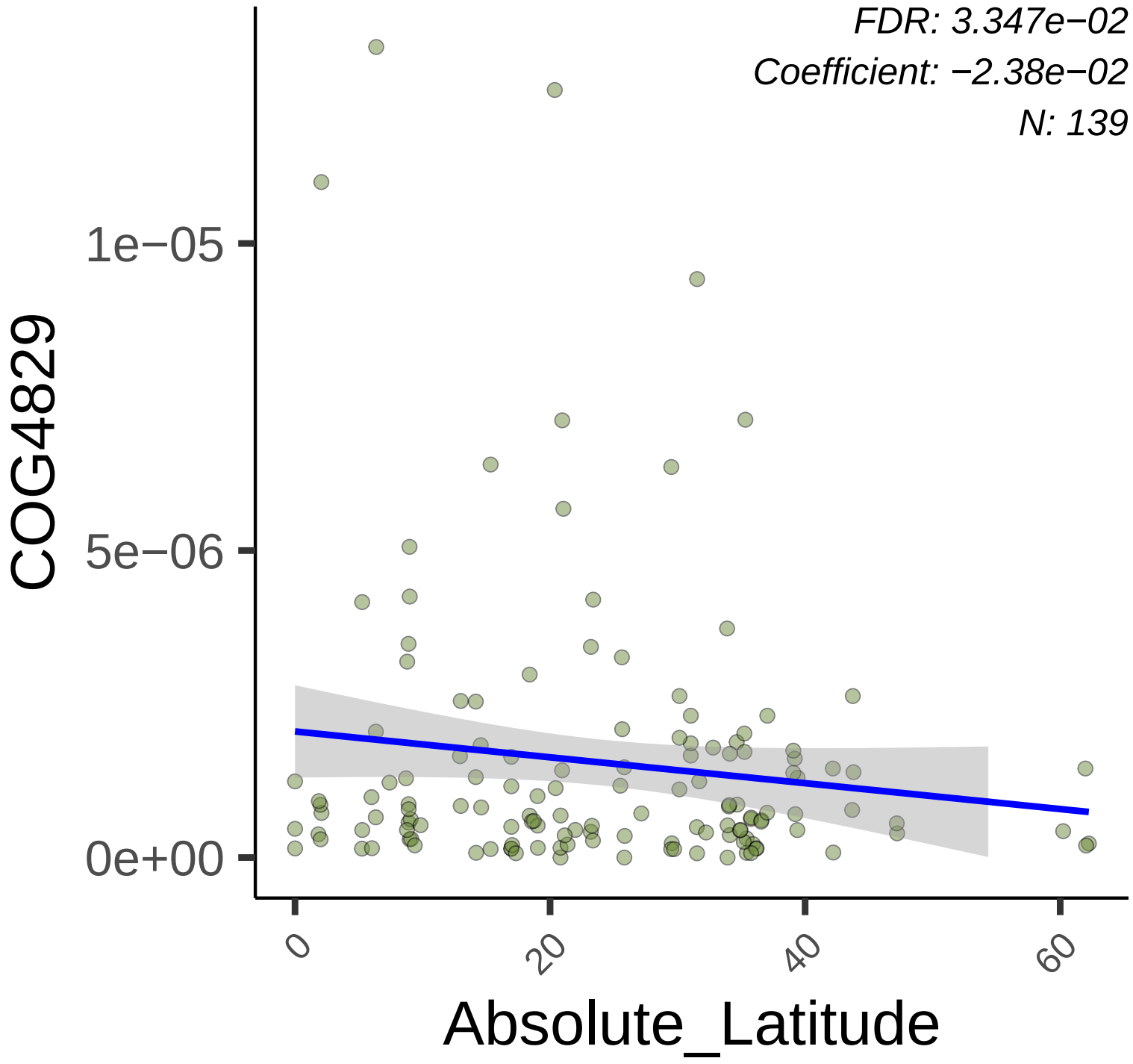

FDR: 3.308e−02
Coefficient: 5.16e−03
N: 139
0.00035
0.00030
0.00025
0.00020
0.00015
COG3004
0
20
40
60
Absolute_Latitude

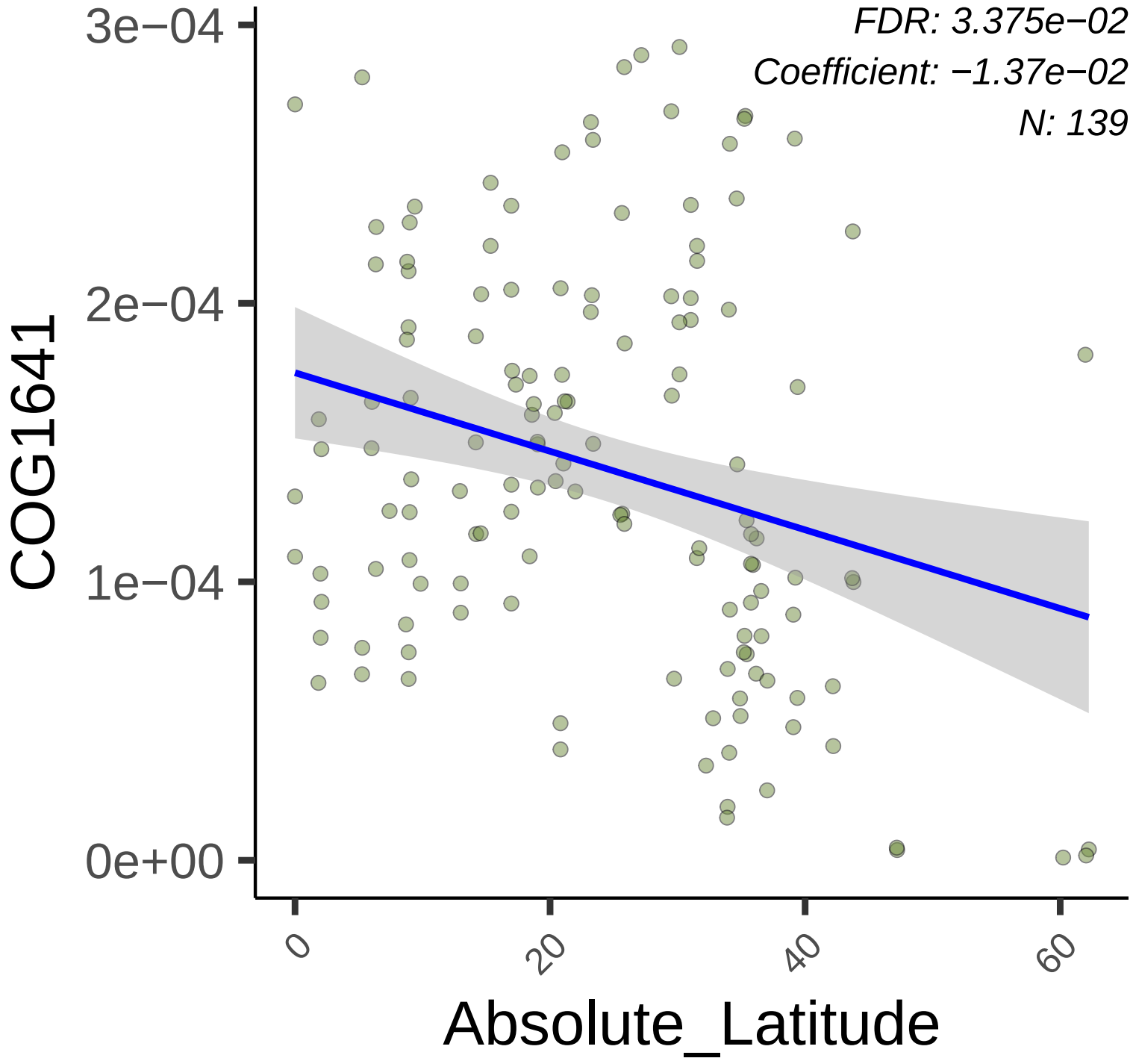

FDR: 3.308e−02
Coefficient: −1.60e−02
N: 139
COG4632
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

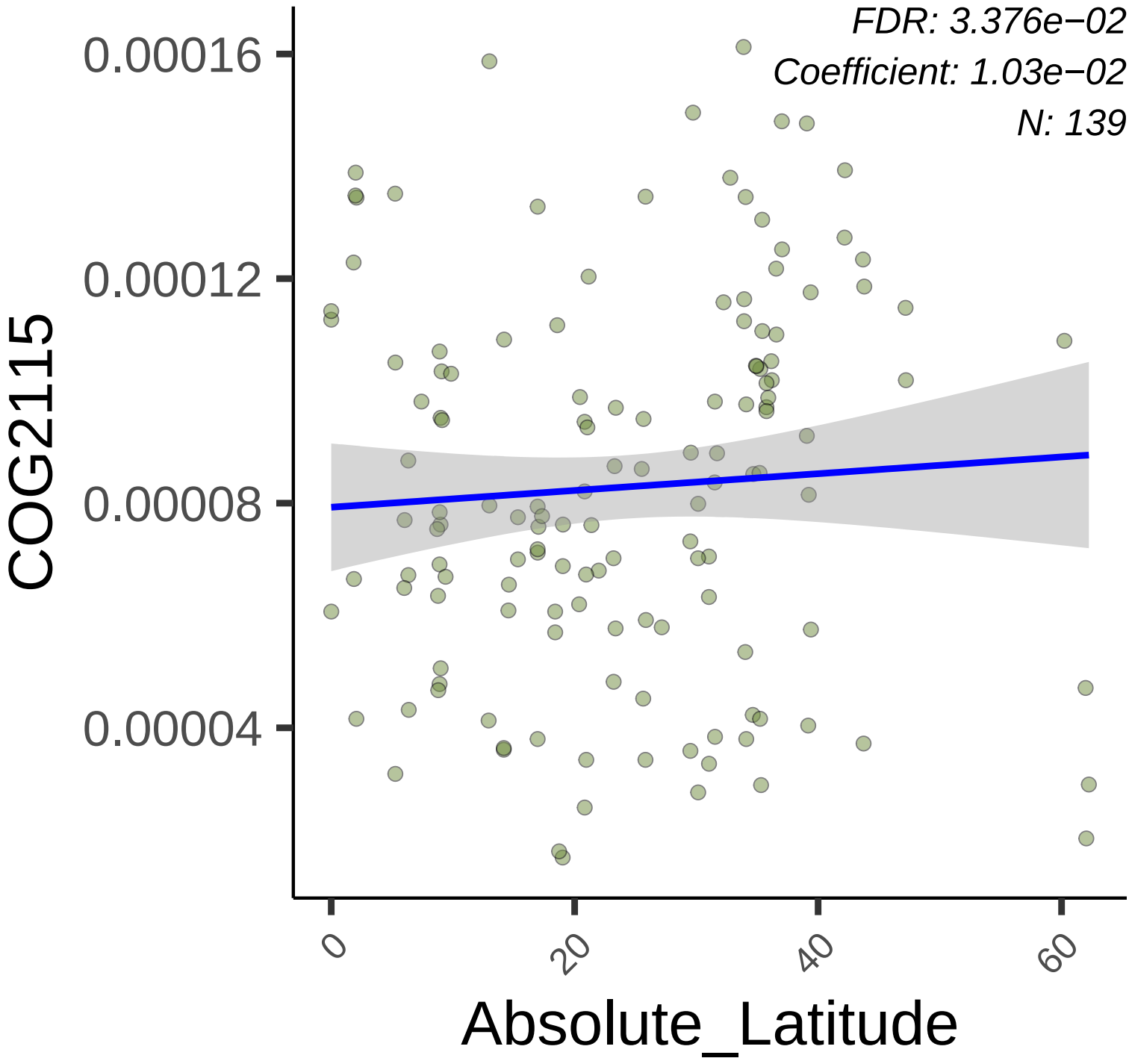

FDR: 3.308e−02
Coefficient: −1.78e−02
N: 139
COG3921
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

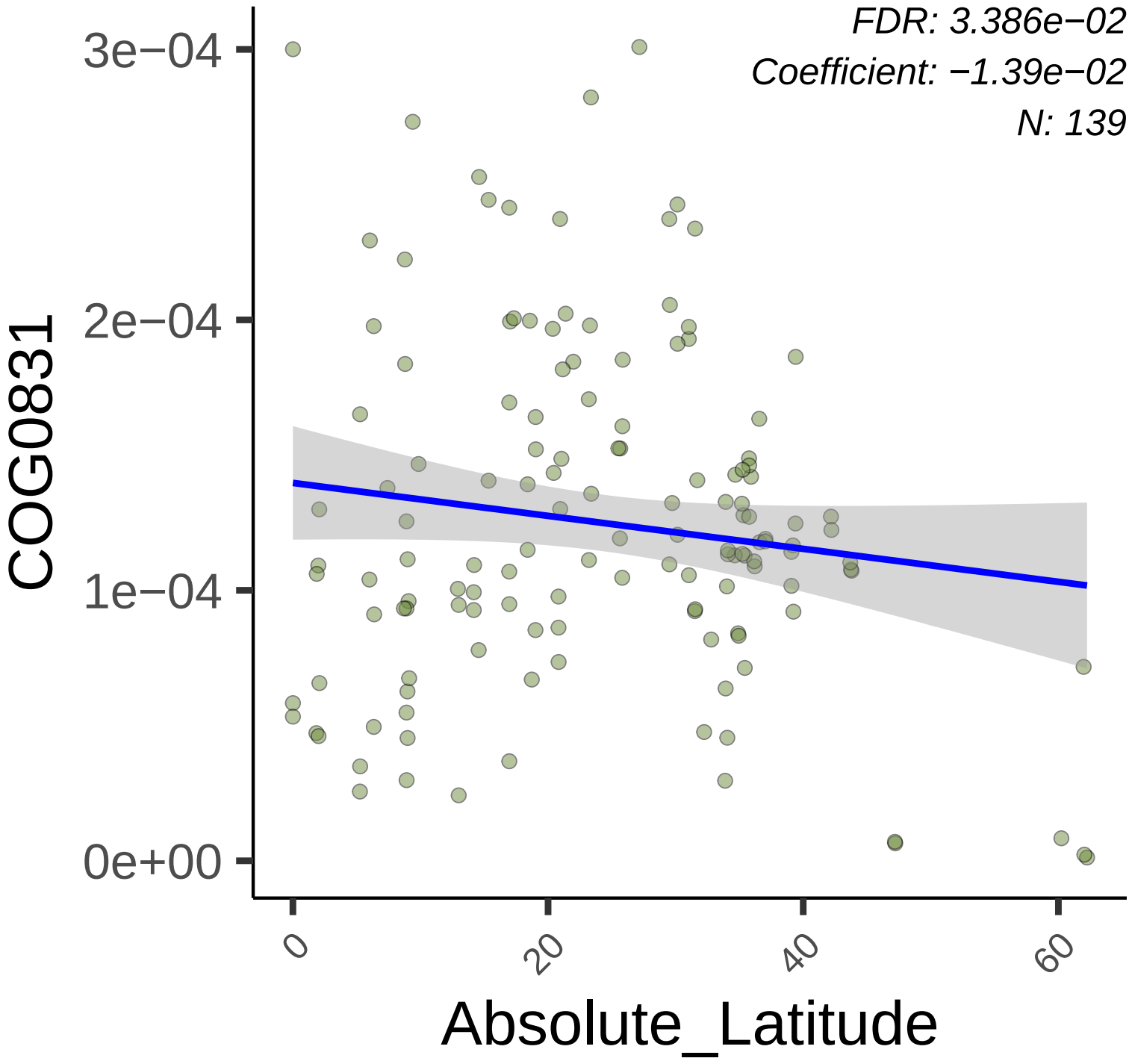

FDR: 3.319e−02
Coefficient: 3.72e−03
N: 139
0.00045
0.00040
0.00035
0.00030
0.00025
0.00020
COG1729
0
20
40
60
Absolute_Latitude

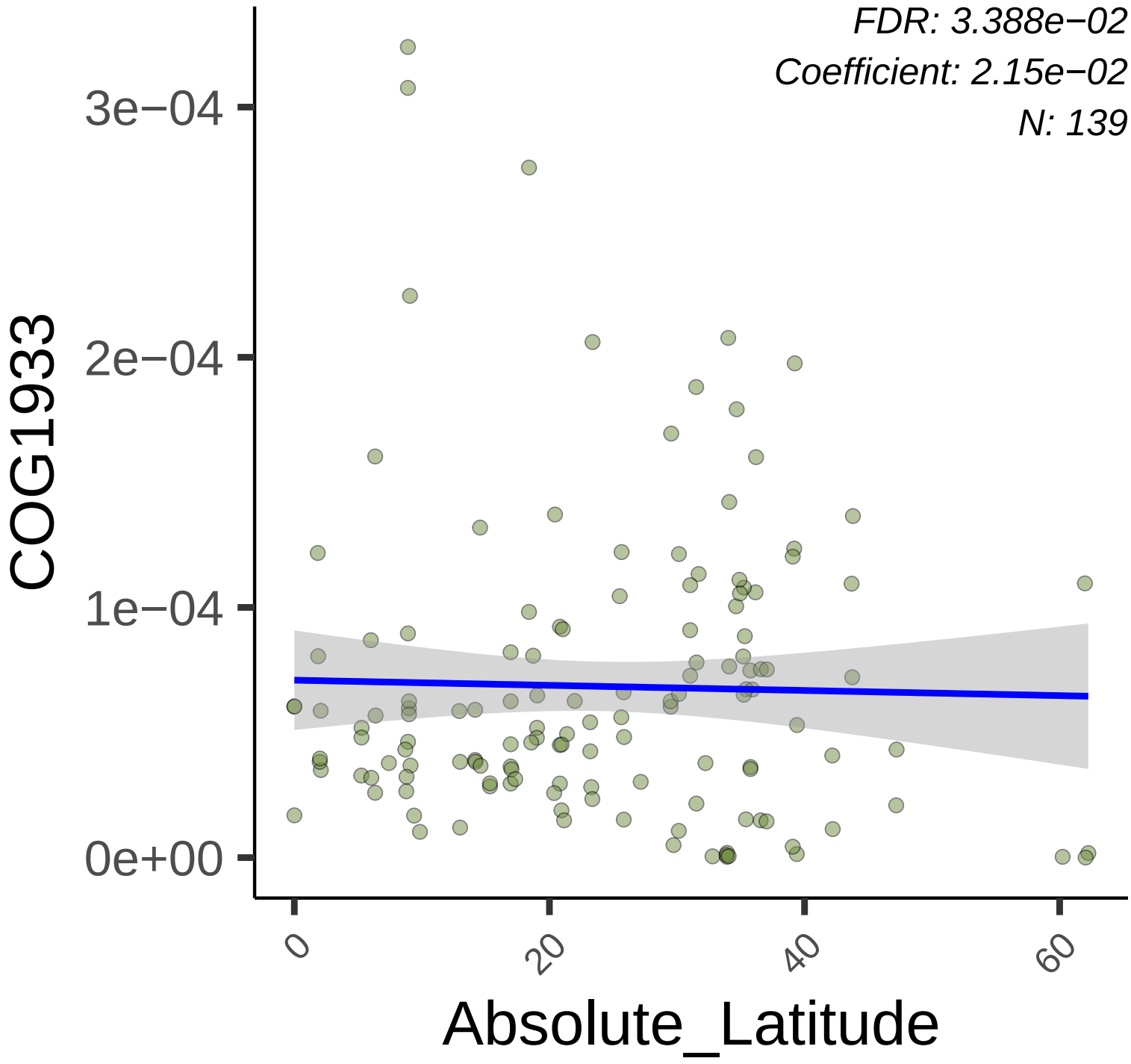

FDR: 3.323e−02
Coefficient: −1.44e−02
N: 139
6e−05
4e−05
2e−05
0e+00
COG3439
0
20
40
60
Absolute_Latitude

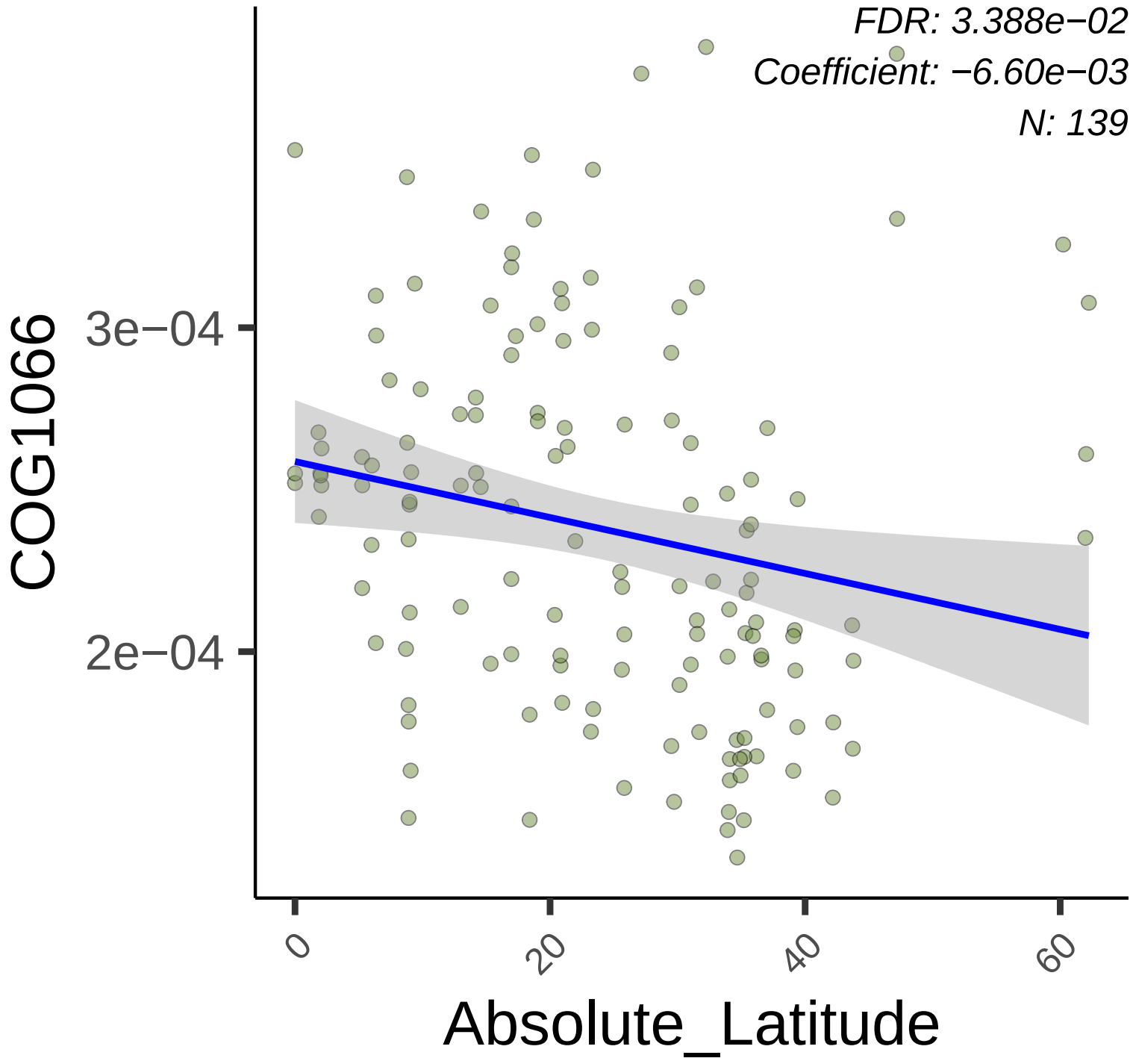

FDR: 3.347e−02
Coefficient: −2.38e−02
N: 139
COG4829
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

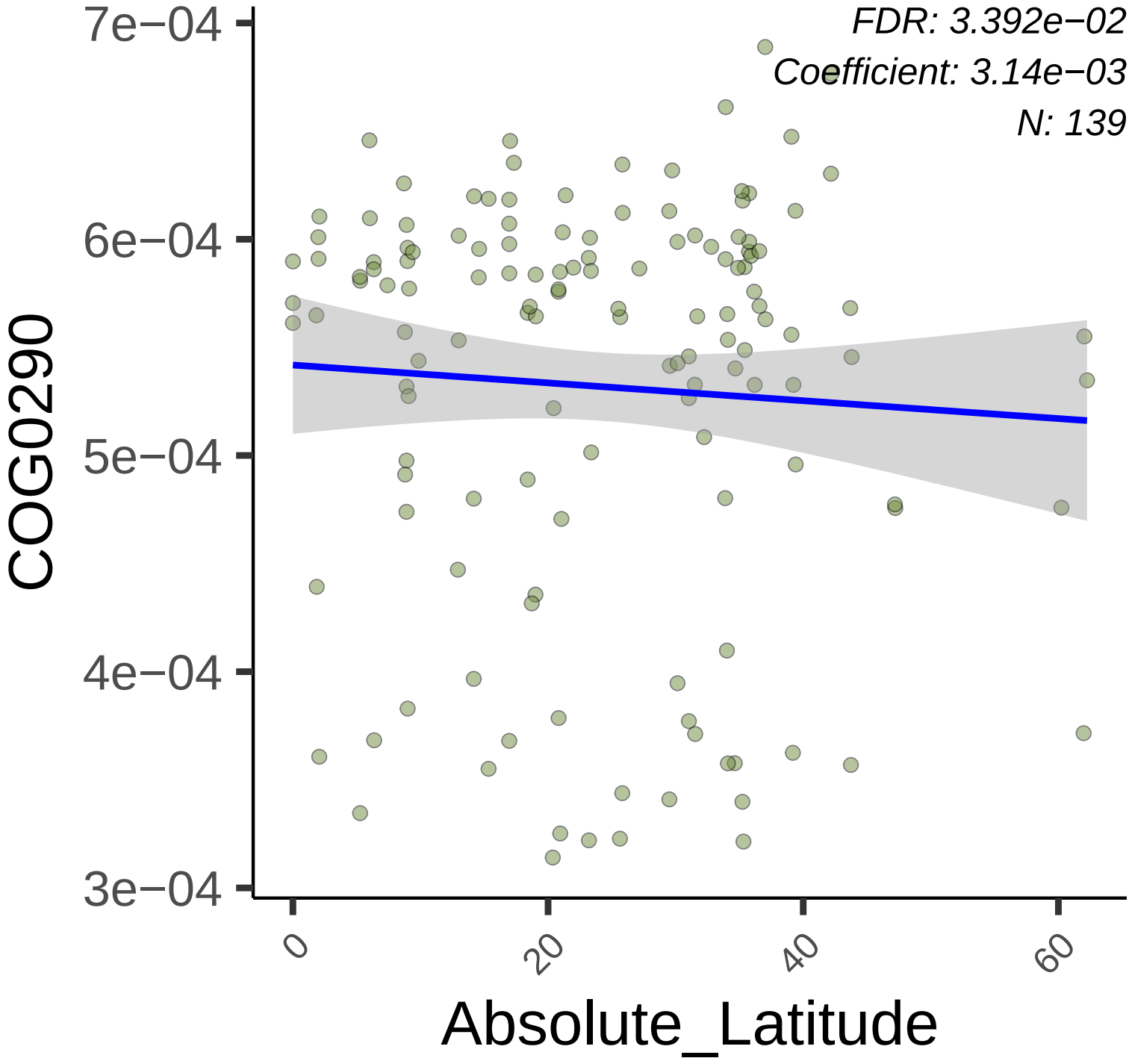

FDR: 3.375e−02
Coefficient: −1.37e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG1641
0
20
40
60
Absolute_Latitude

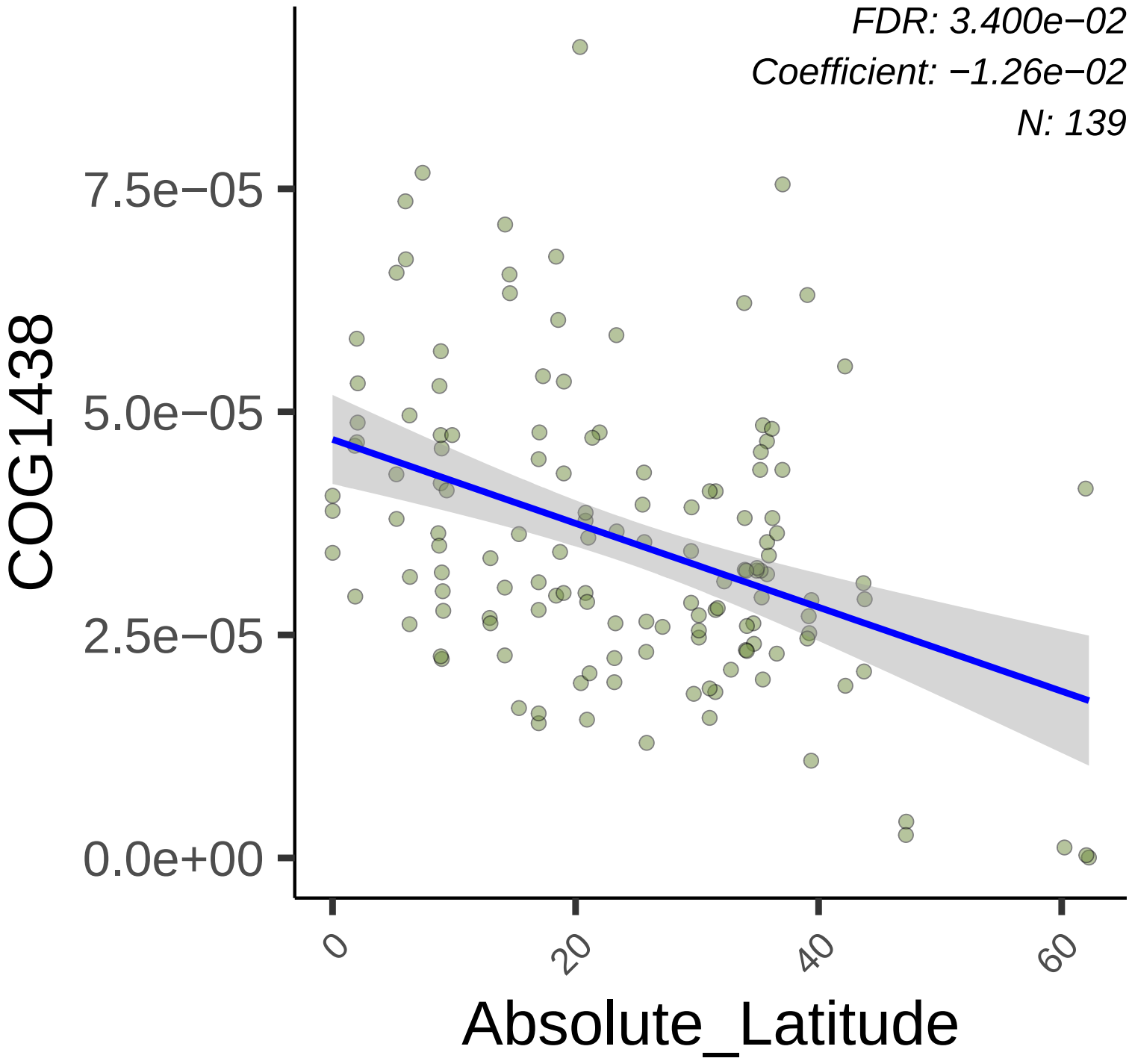

FDR: 3.376e−02
Coefficient: 1.03e−02
N: 139
0.00016
0.00012
0.00008
0.00004
COG2115
0
20
40
60
Absolute_Latitude

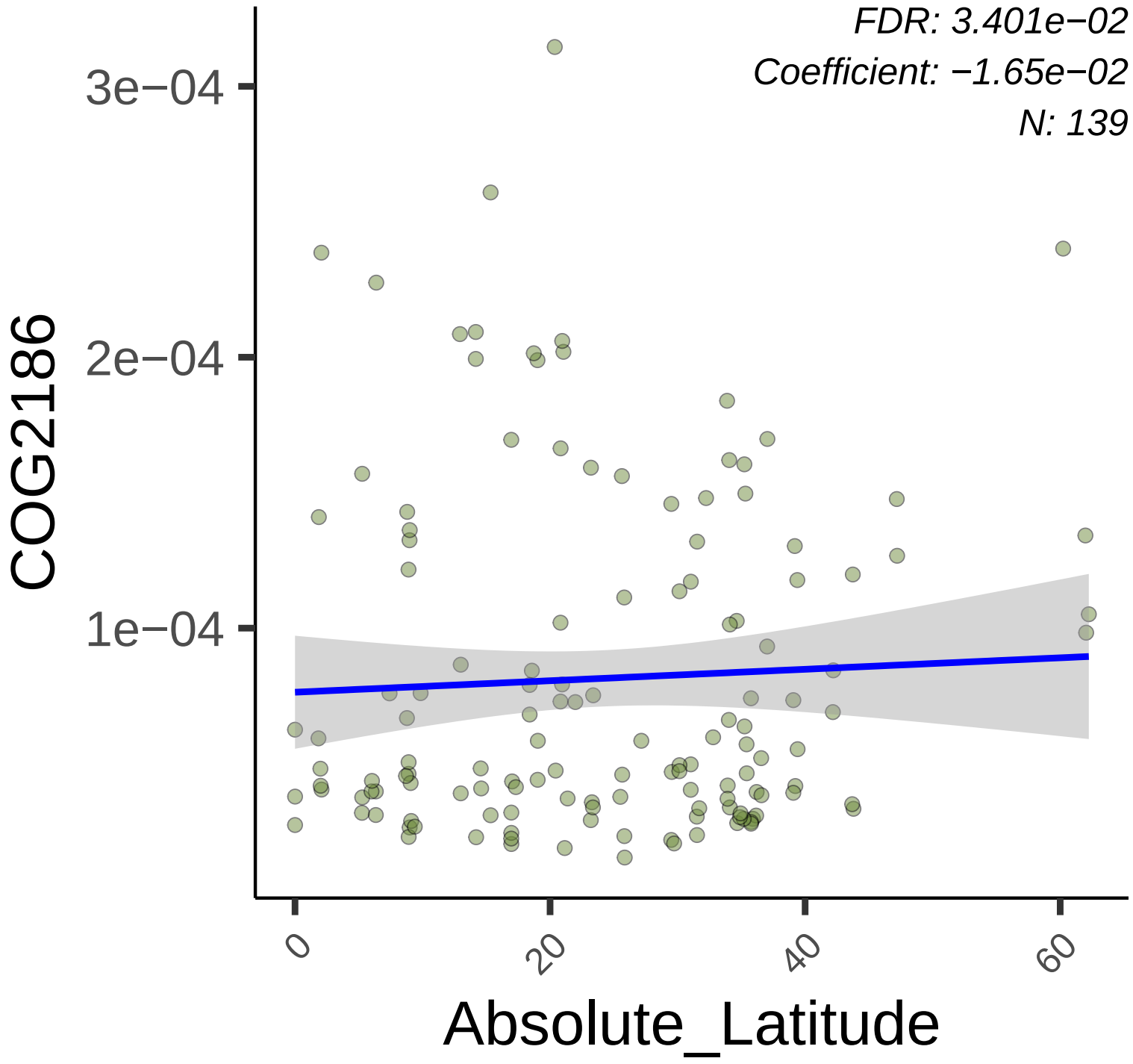

FDR: 3.386e−02
Coefficient: −1.39e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG0831
0
20
40
60
Absolute_Latitude

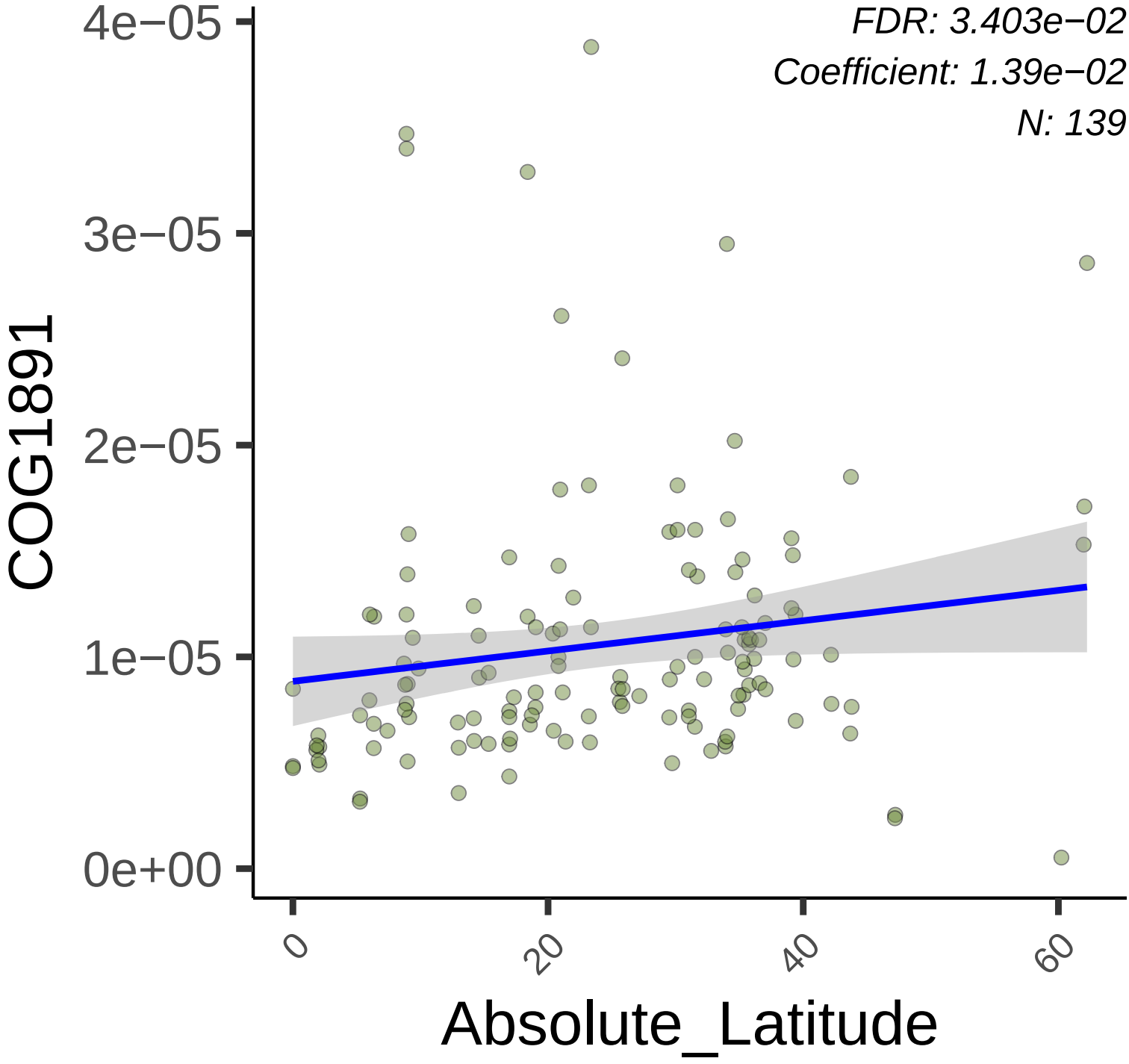

FDR: 3.388e−02
Coefficient: 2.15e−02
N: 139
COG1933
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

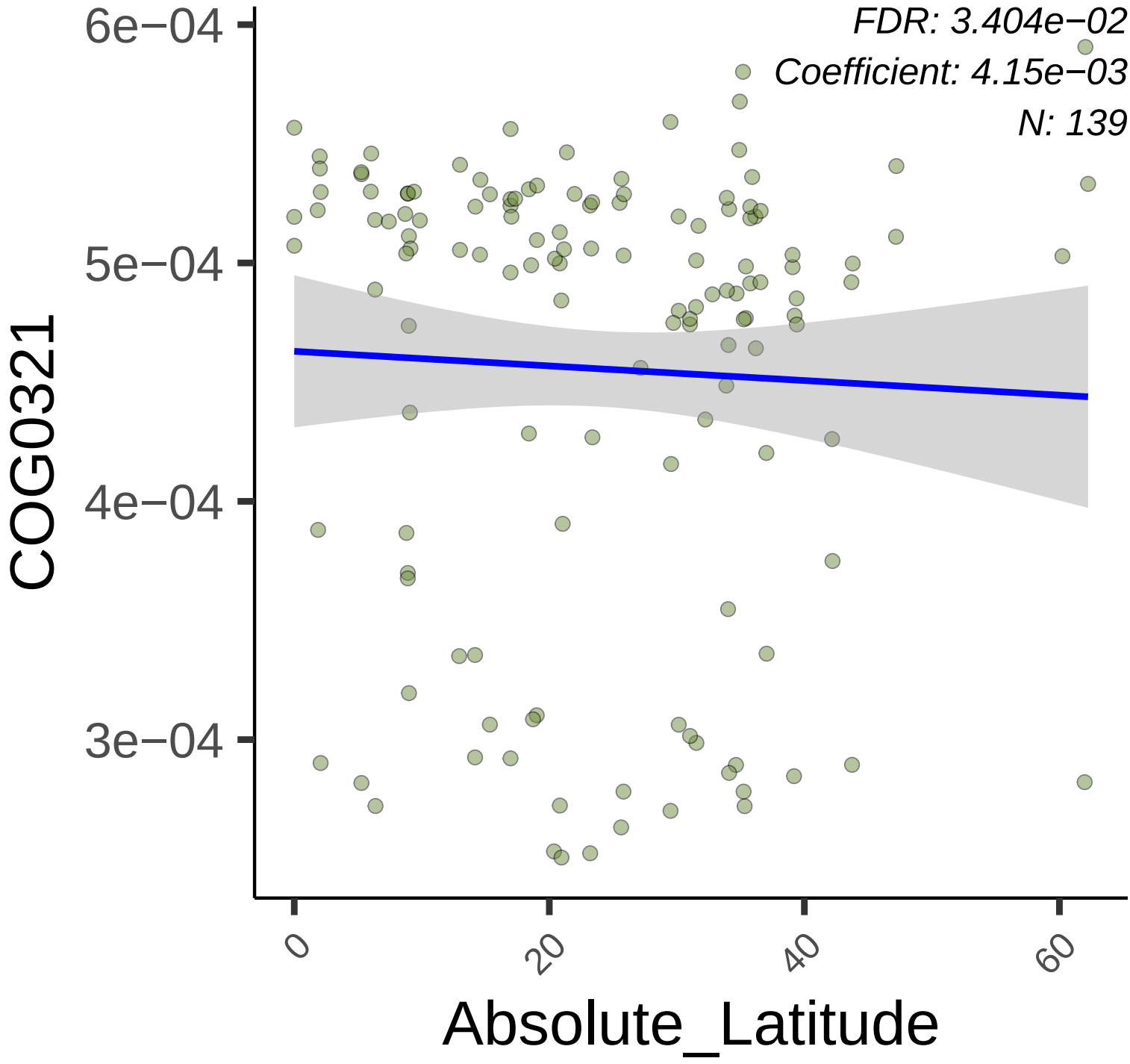

FDR: 3.388e−02
Coefficient: −6.60e−03
N: 139
COG1066
3e−04
2e−04
0
20
40
60
Absolute_Latitude

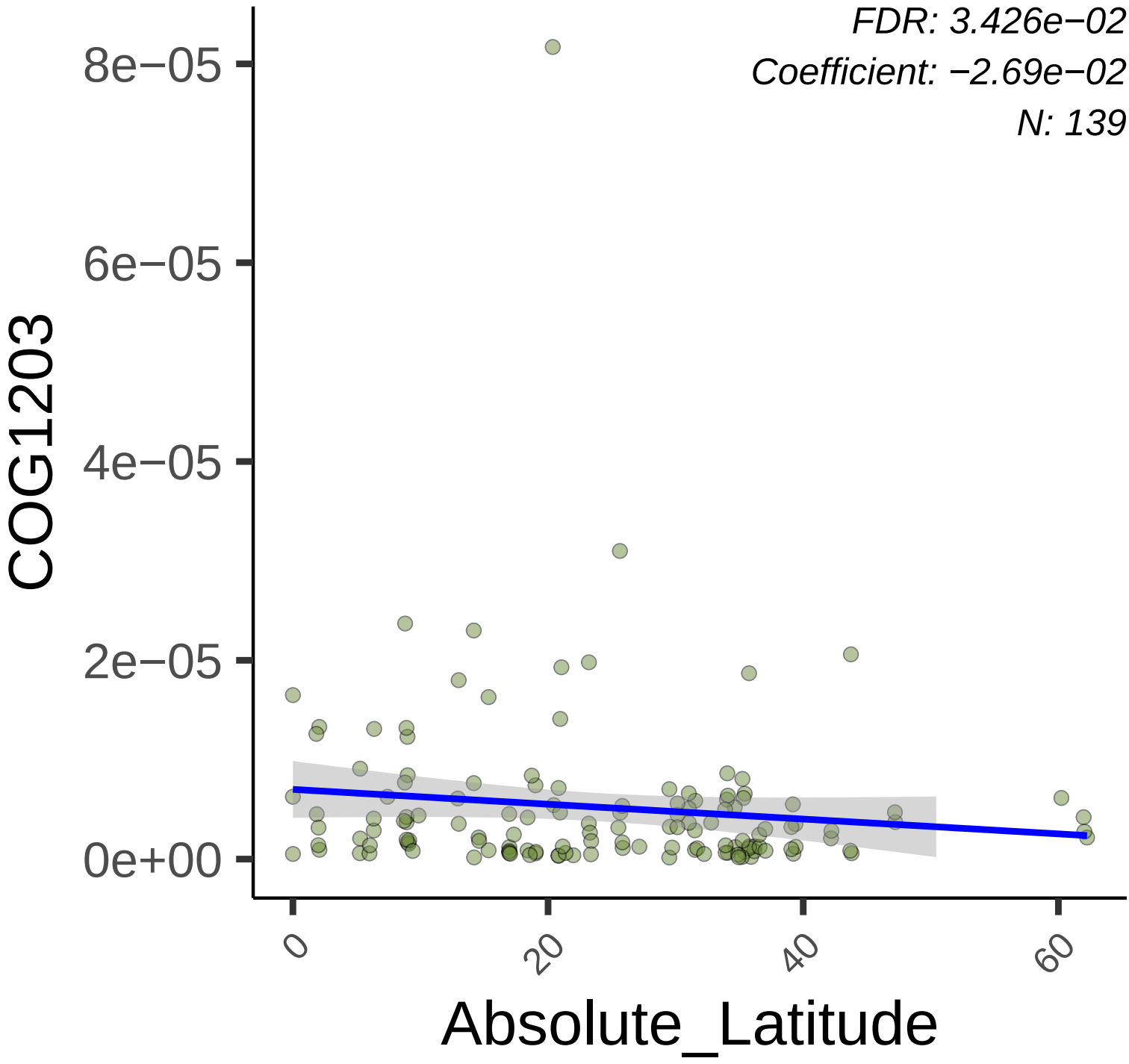

FDR: 3.392e−02
Coefficient: 3.14e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG0290
0
20
40
60
Absolute_Latitude

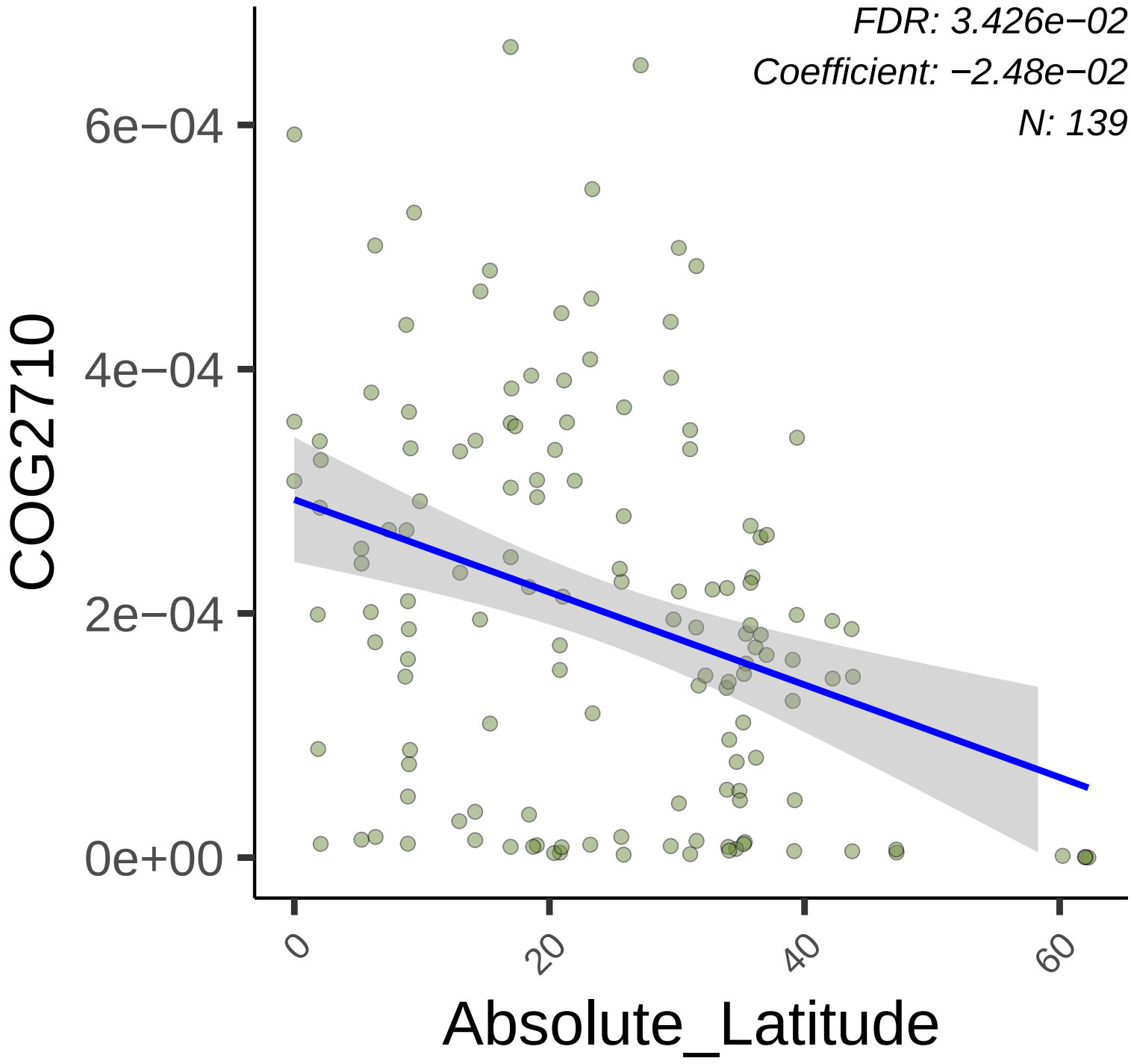

FDR: 3.400e−02
Coefficient: −1.26e−02
N: 139
COG1438
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

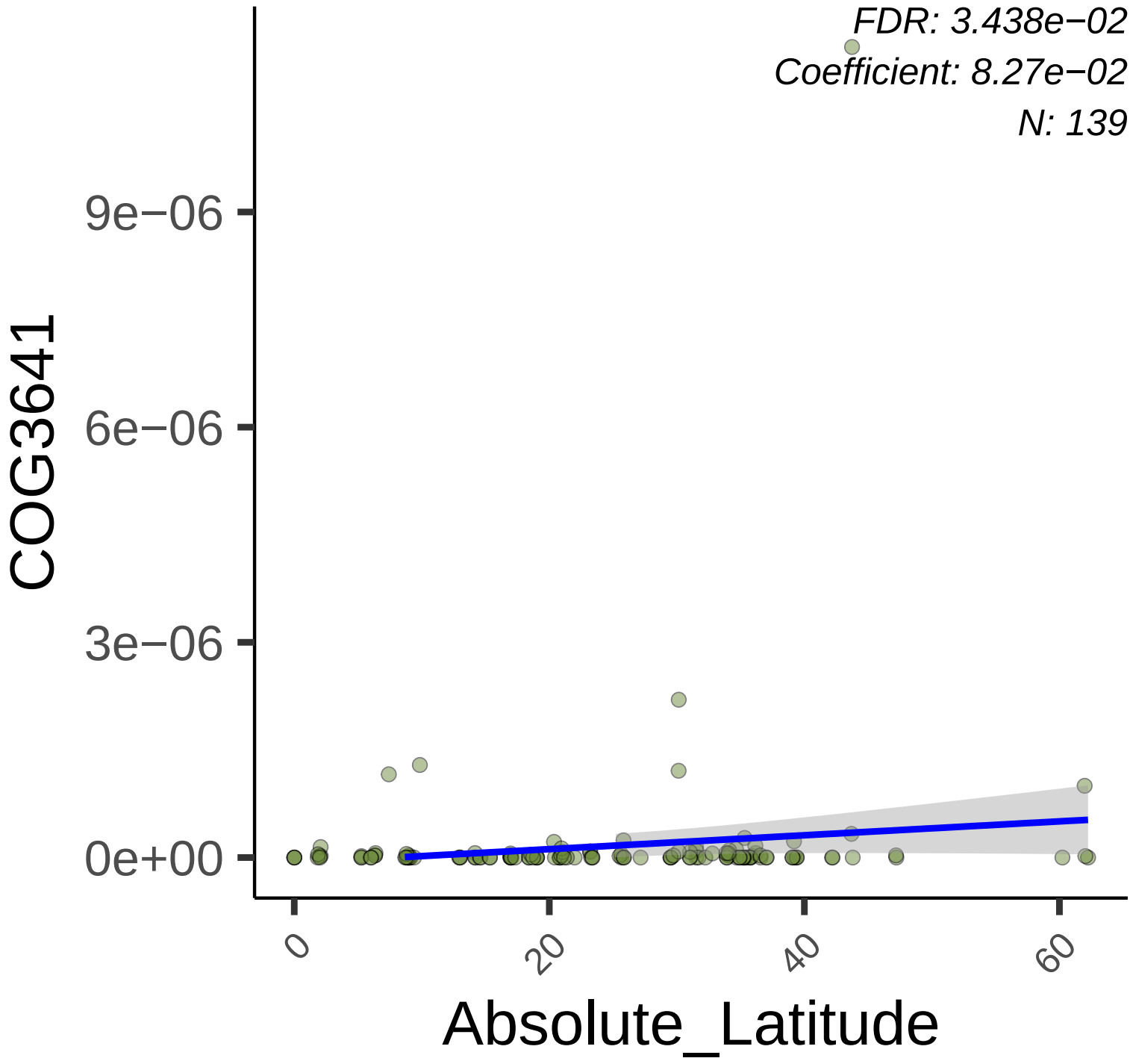

FDR: 3.401e−02
Coefficient: −1.65e−02
N: 139
3e−04
2e−04
1e−04
COG2186
0
20
40
60
Absolute_Latitude

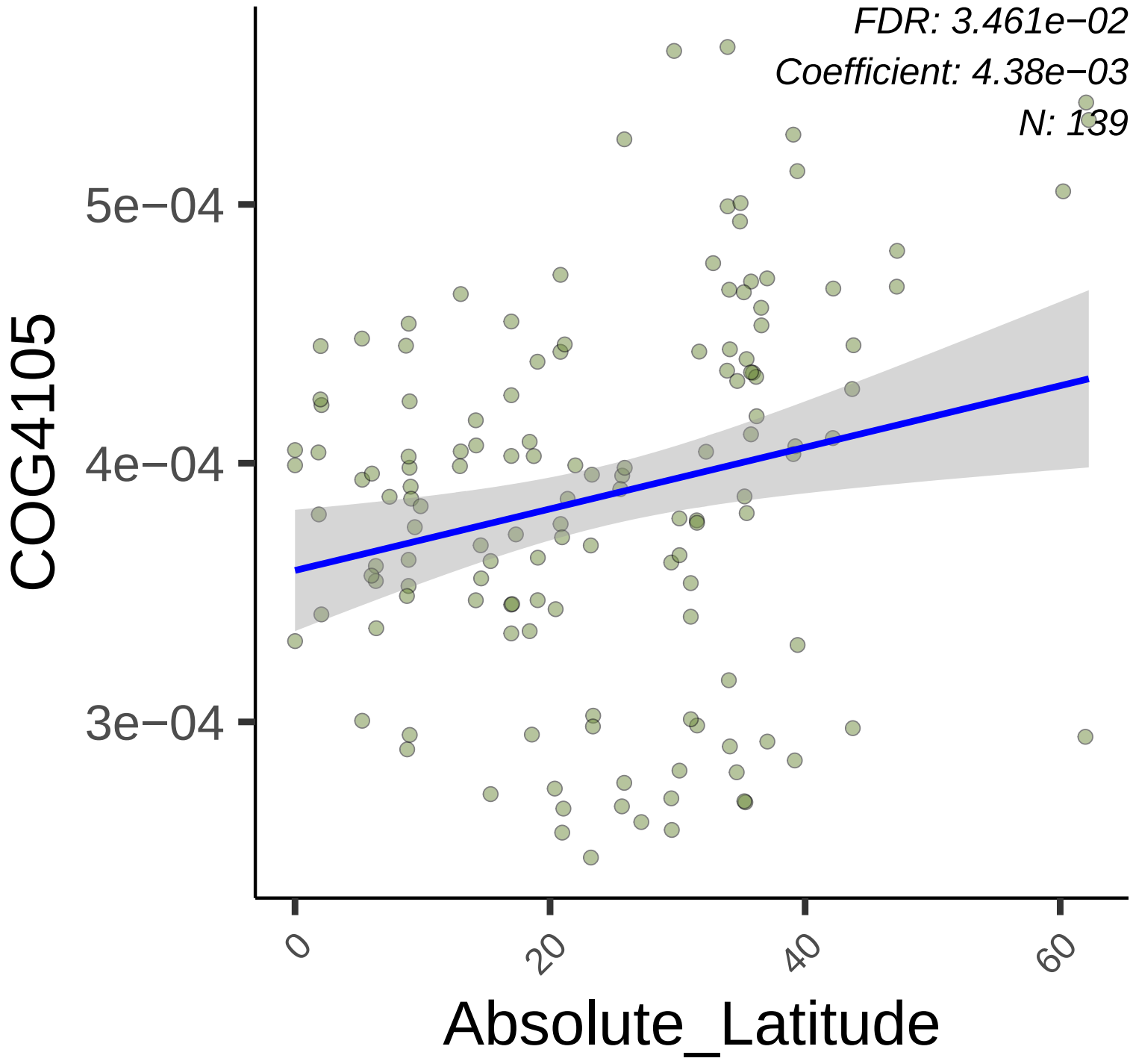

FDR: 3.403e−02
Coefficient: 1.39e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG1891
0
20
40
60
Absolute_Latitude

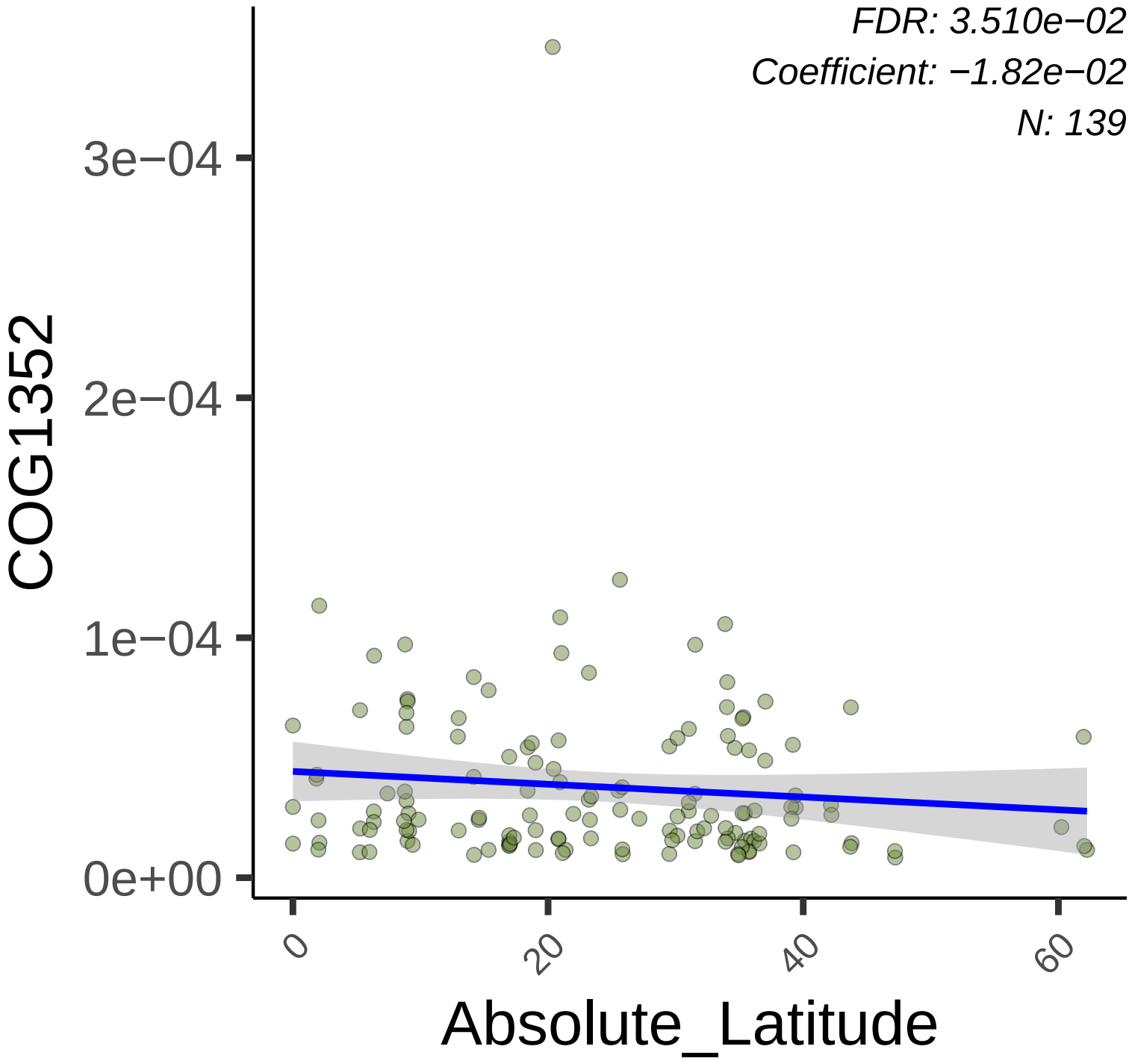

FDR: 3.404e−02
Coefficient: 4.15e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0321
0
20
40
60
Absolute_Latitude

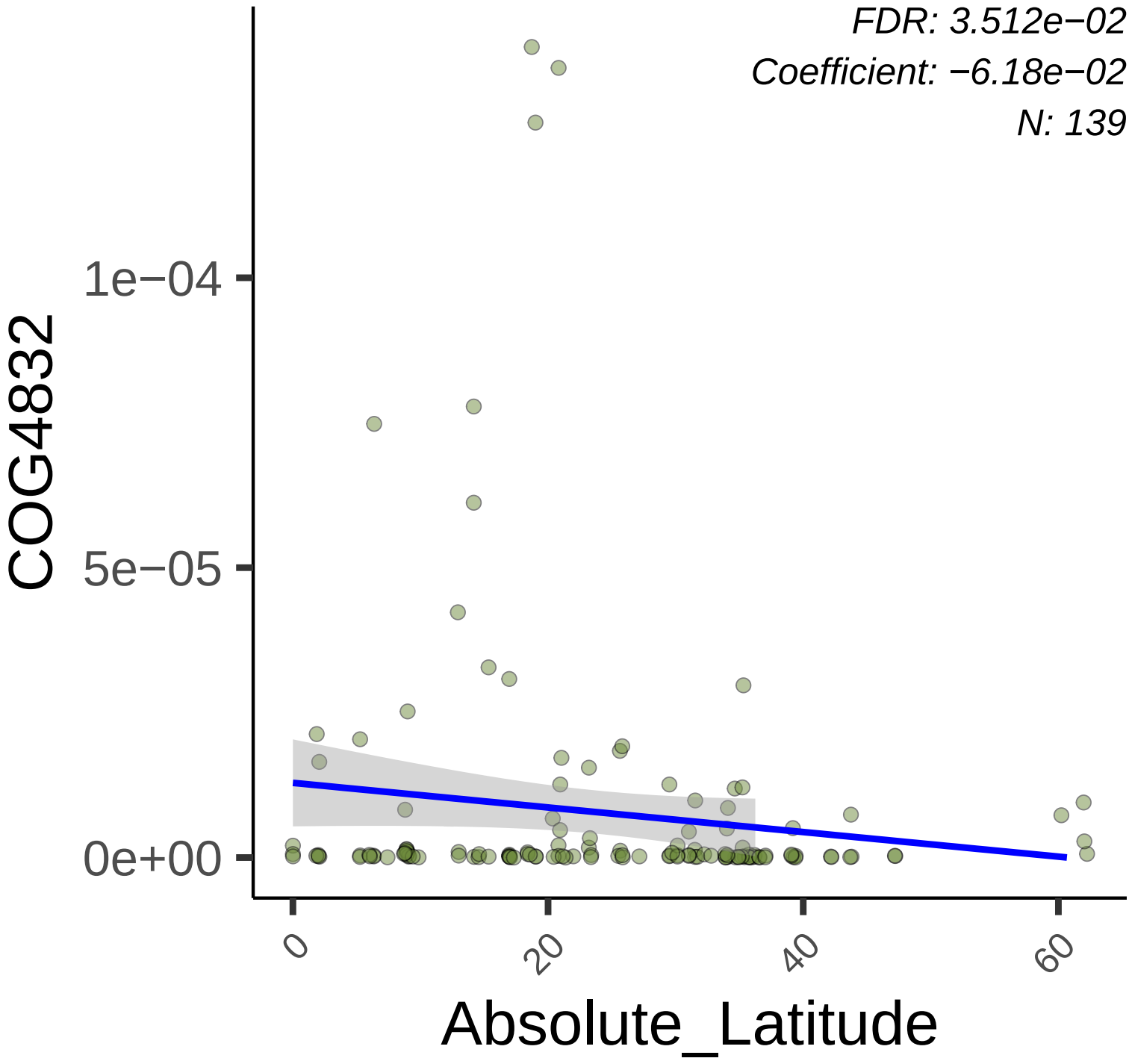

FDR: 3.426e−02
Coefficient: −2.69e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG1203
0
20
40
60
Absolute_Latitude

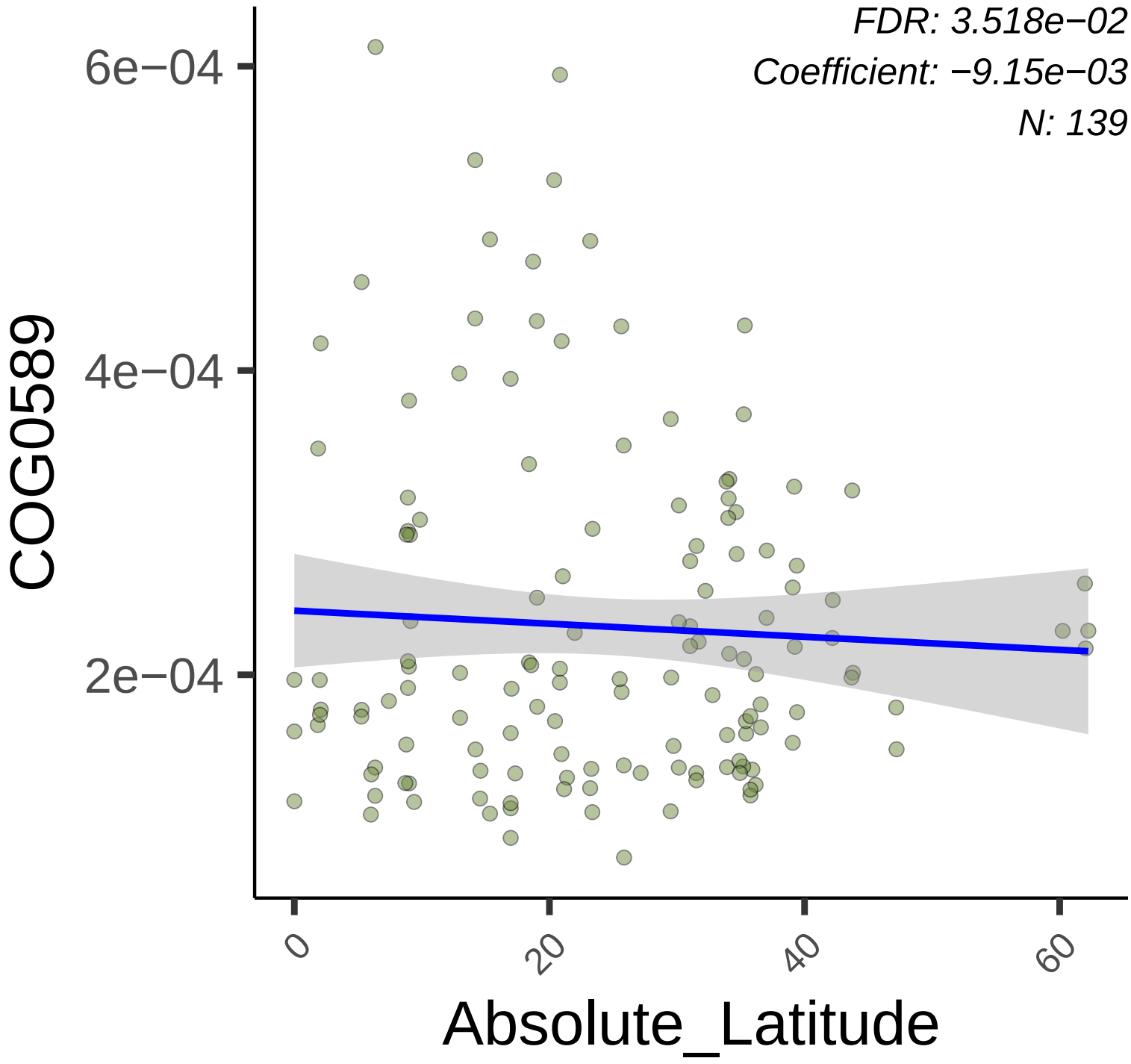

FDR: 3.426e−02
Coefficient: −2.48e−02
N: 139
6e−04
4e−04
2e−04
0e+00
COG2710
0
20
40
60
Absolute_Latitude

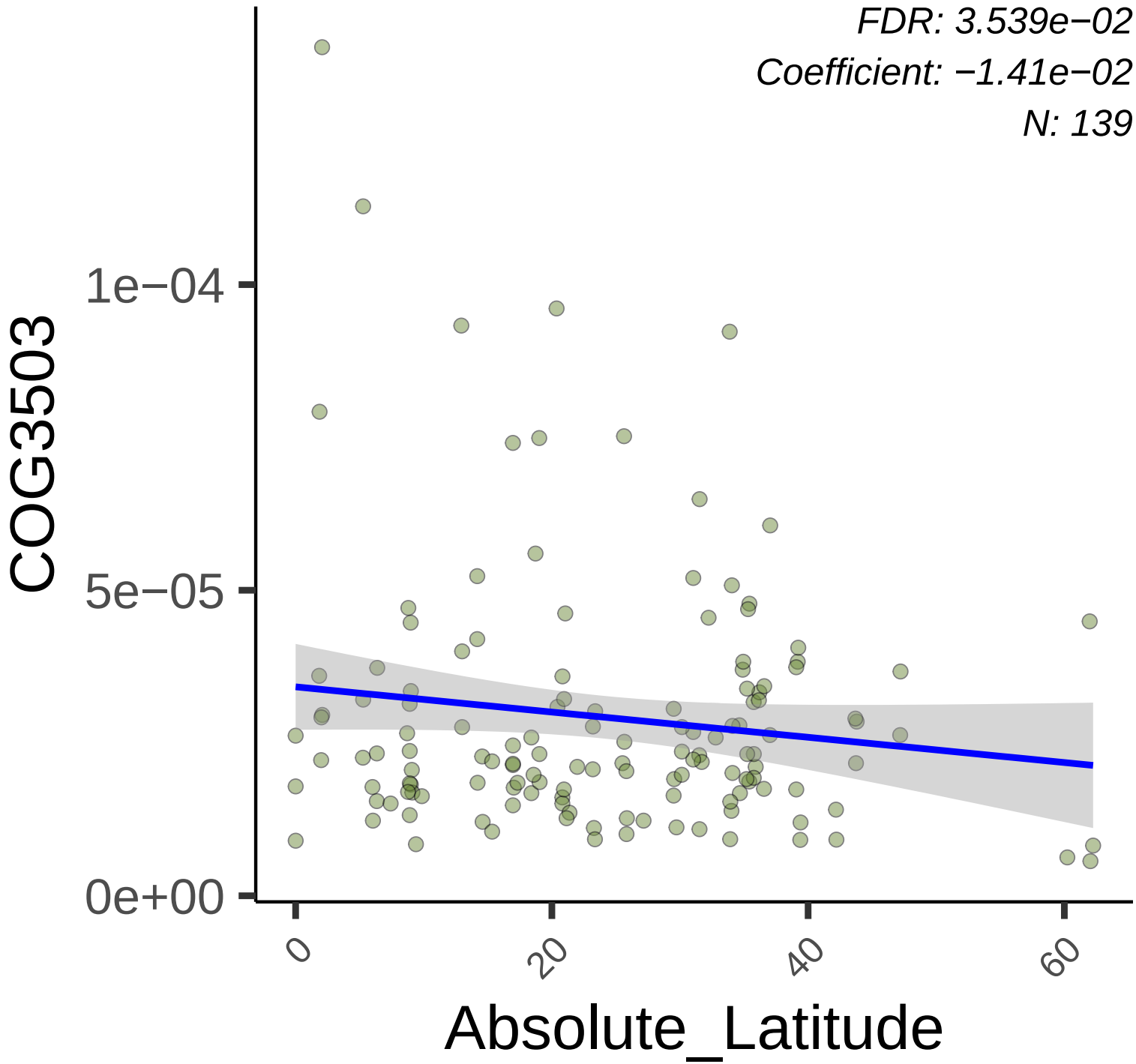

FDR: 3.438e−02
Coefficient: 8.27e−02
N: 139
COG3641
9e−06
6e−06
3e−06
0e+00
0
20
40
60
Absolute_Latitude

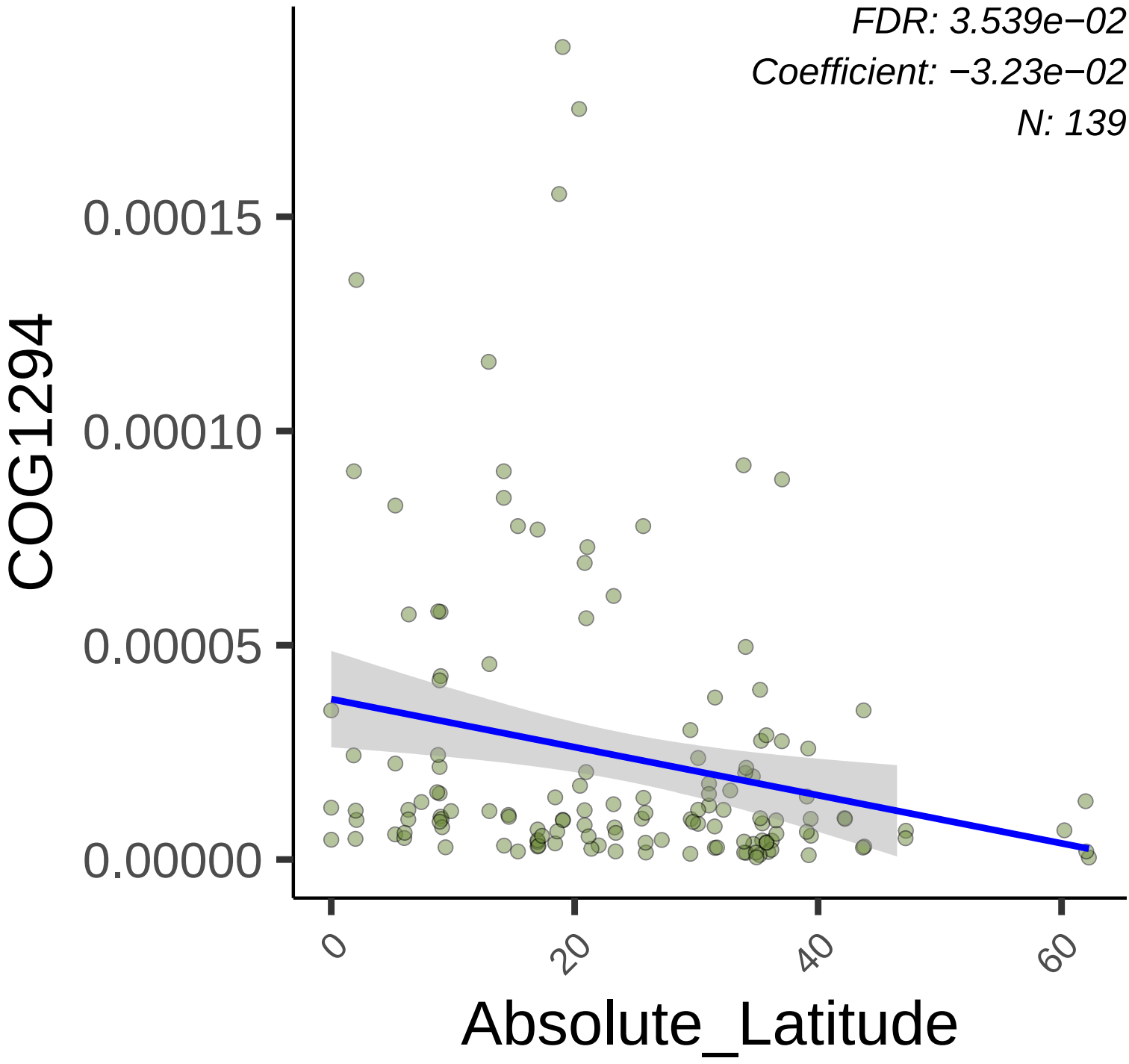

FDR: 3.461e−02
Coefficient: 4.38e−03
N: 139
5e−04
4e−04
3e−04
COG4105
0
20
40
60
Absolute_Latitude

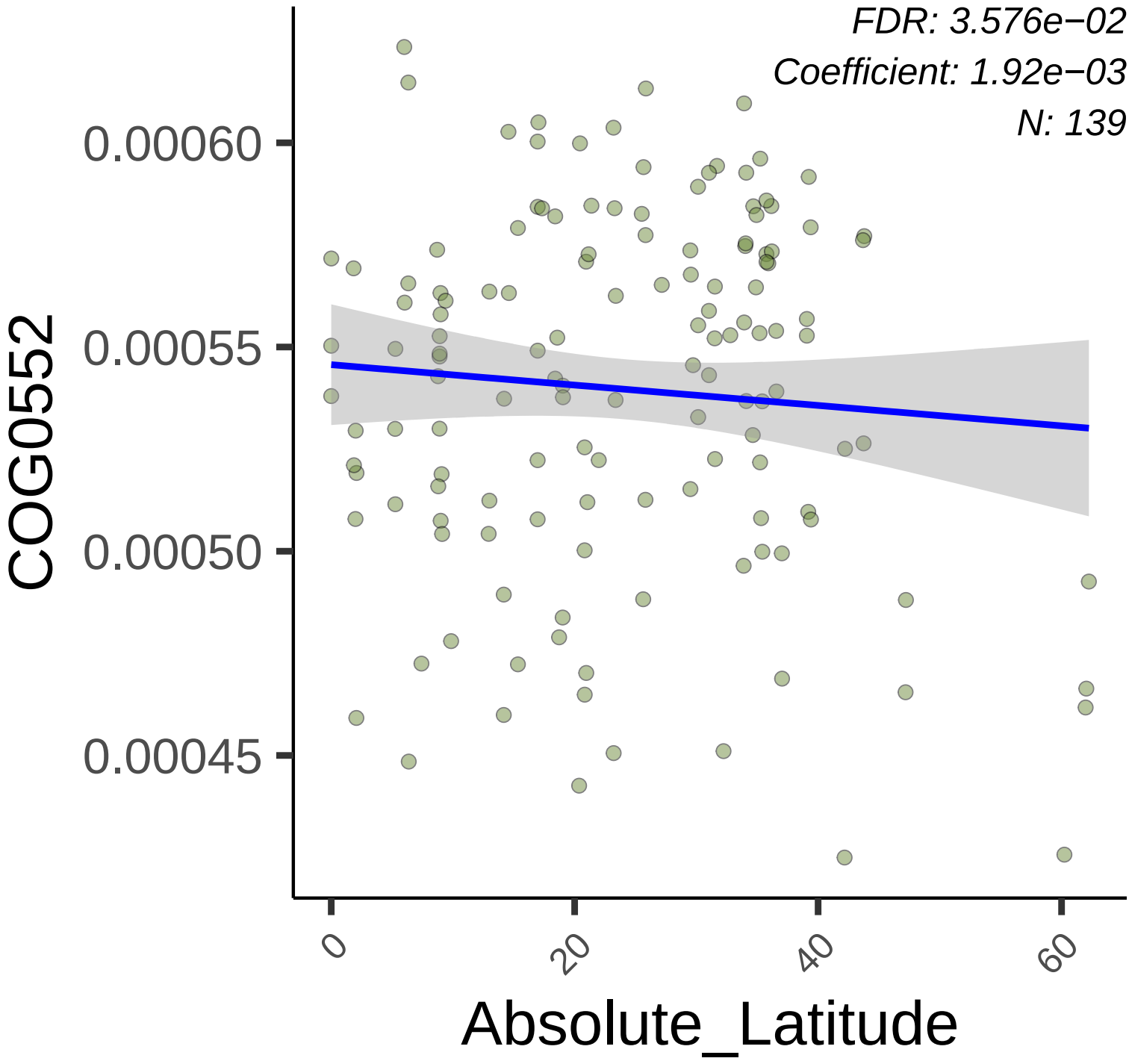

FDR: 3.510e−02
Coefficient: −1.82e−02
N: 139
COG1352
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

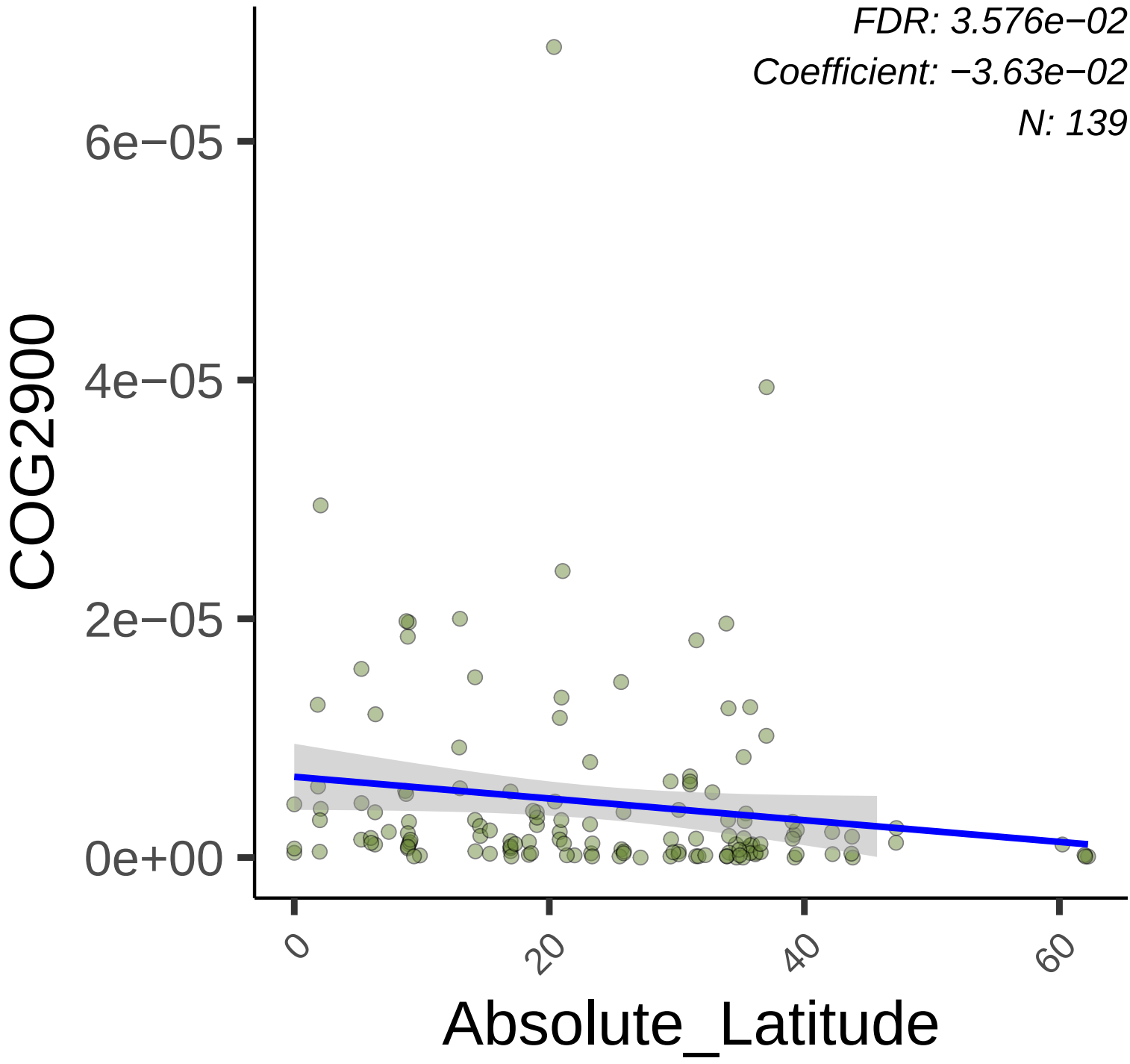

FDR: 3.512e−02
Coefficient: −6.18e−02
N: 139
COG4832
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

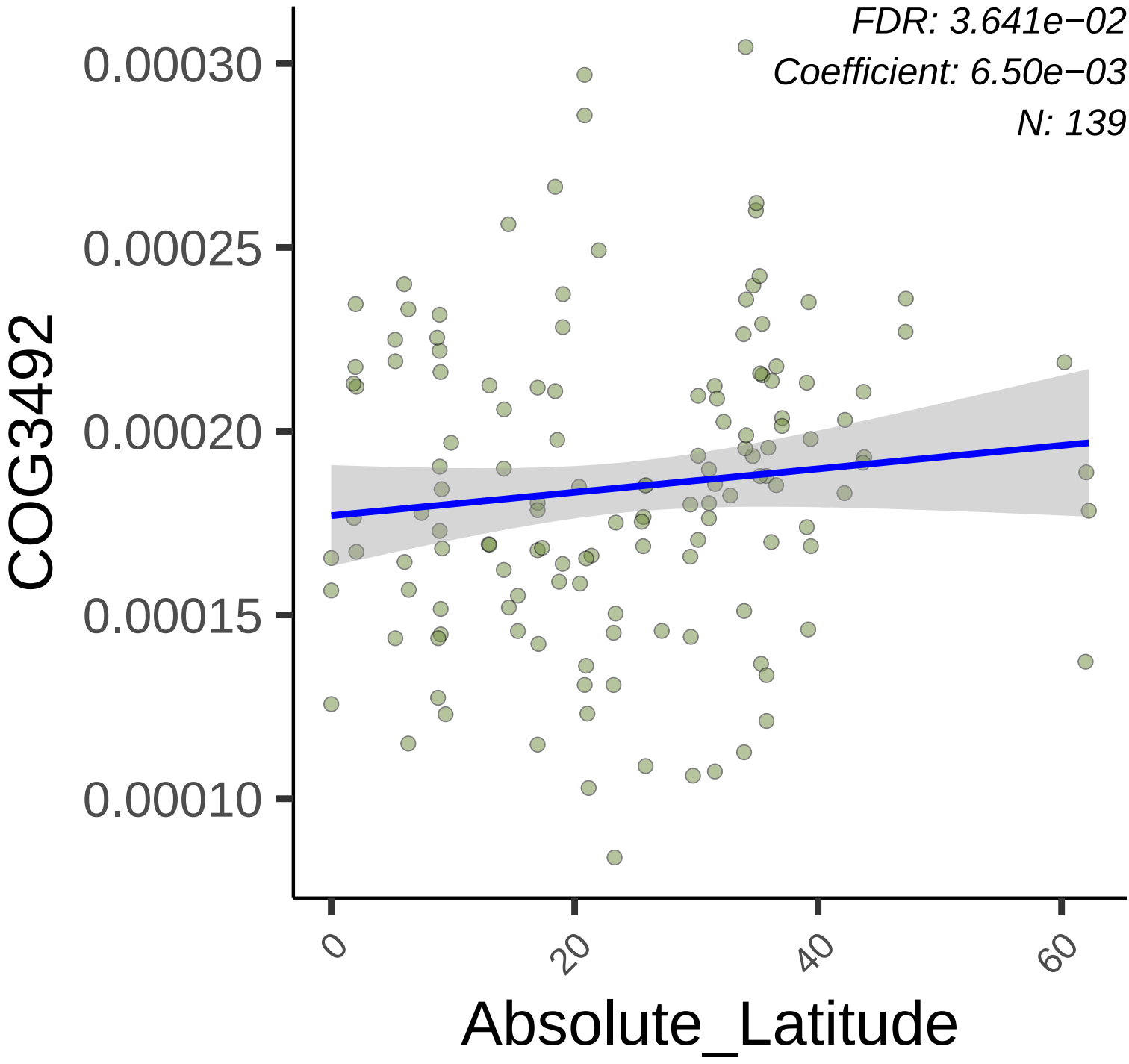

FDR: 3.518e−02
Coefficient: −9.15e−03
N: 139
6e−04
4e−04
2e−04
COG0589
0
20
40
60
Absolute_Latitude

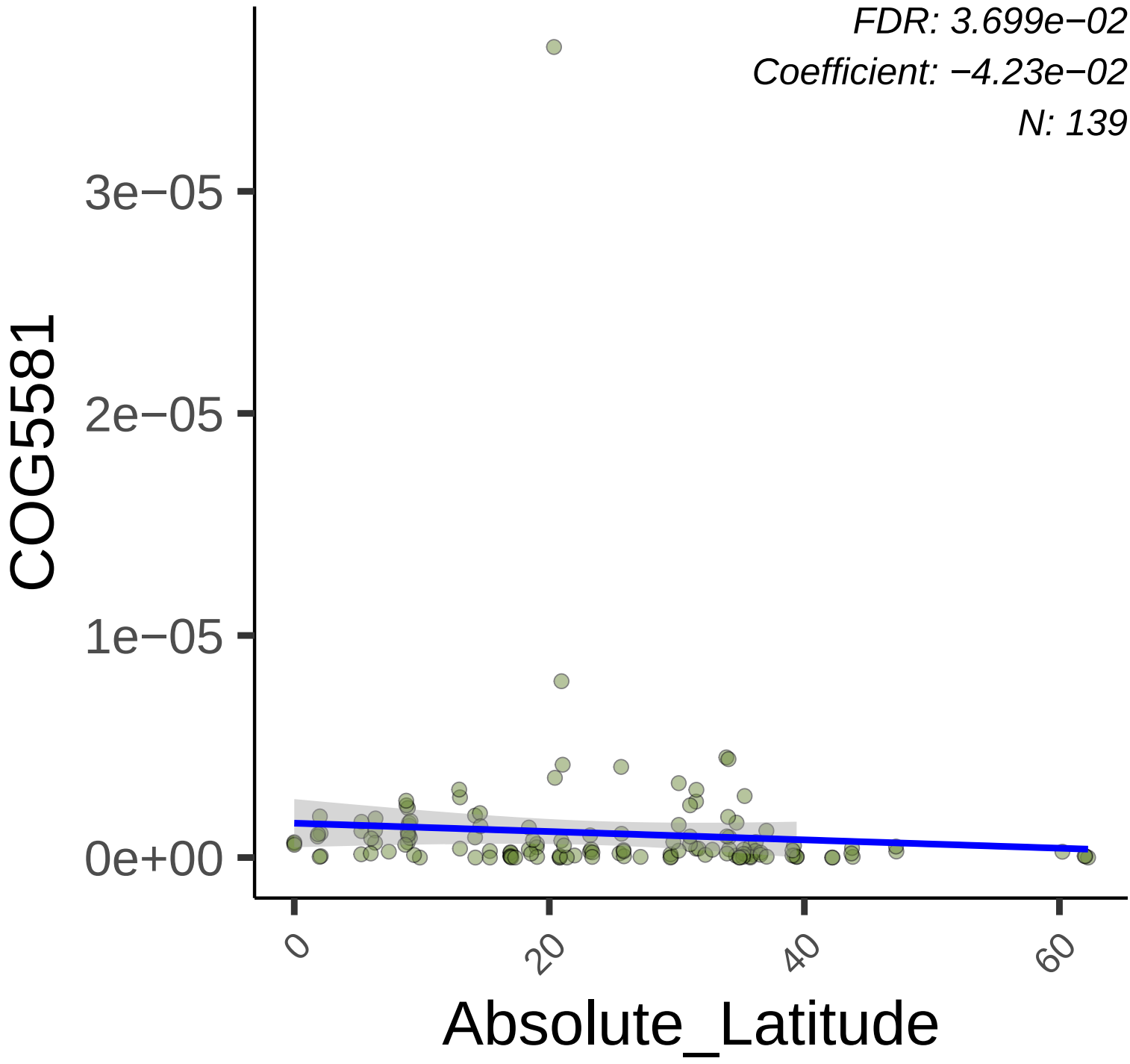

FDR: 3.539e−02
Coefficient: −1.41e−02
N: 139
COG3503
1e−04
5e−05
0e+00
0
20
40
60
Absolute_Latitude

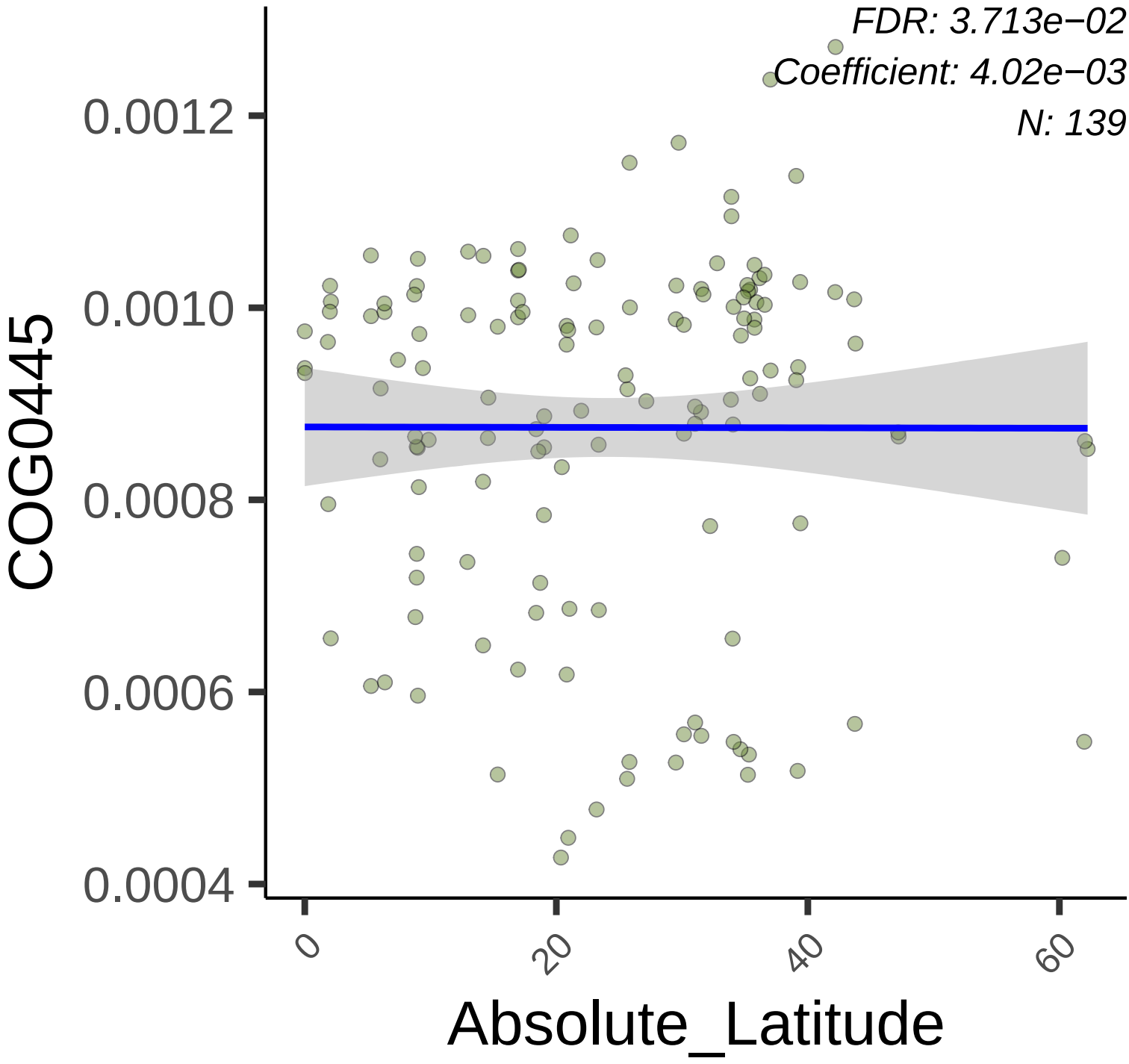

FDR: 3.539e−02
Coefficient: −3.23e−02
N: 139
COG1294
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

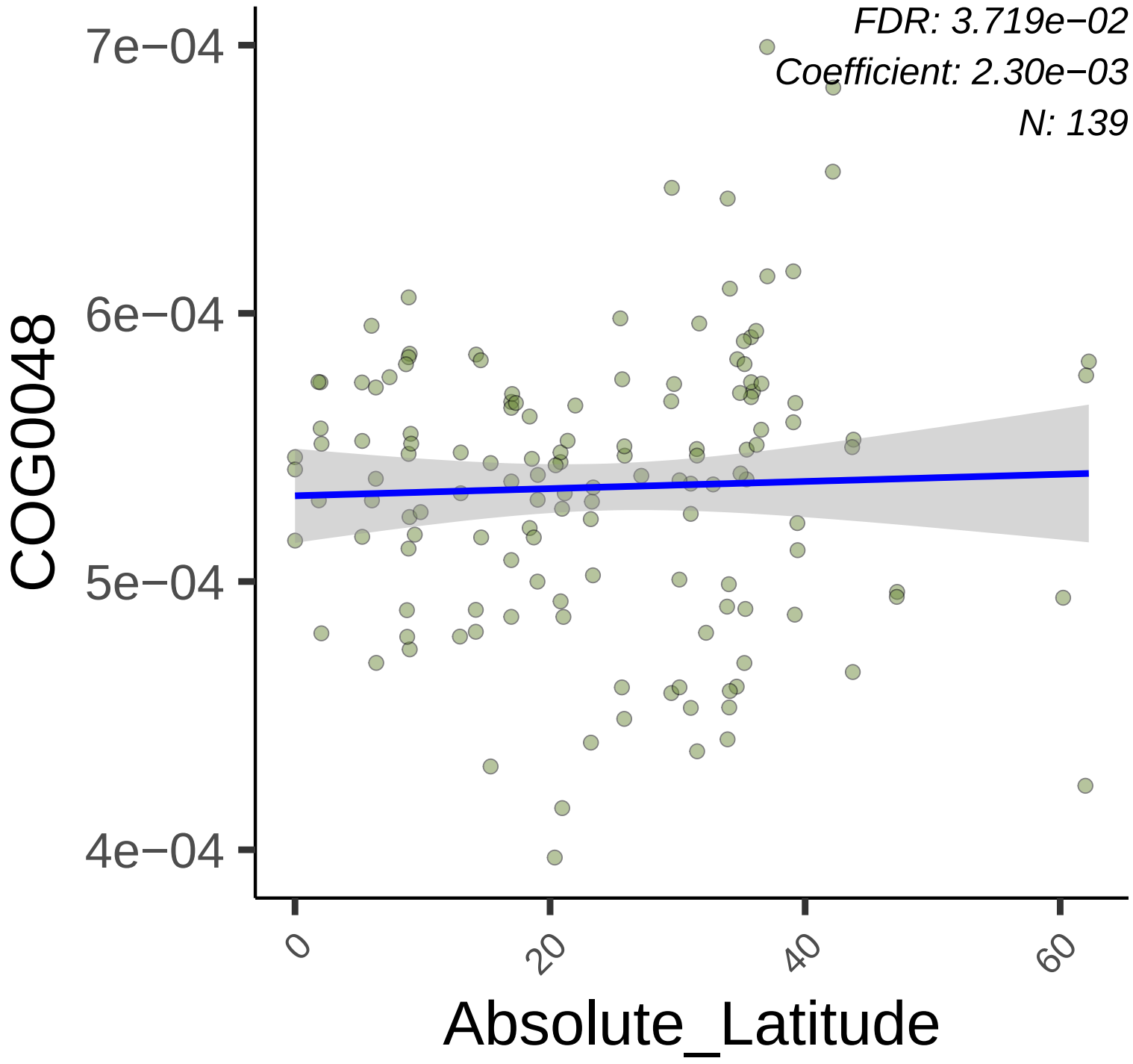

FDR: 3.576e−02
Coefficient: 1.92e−03
N: 139
0.00060
0.00055
0.00050
0.00045
COG0552
0
20
40
60
Absolute_Latitude

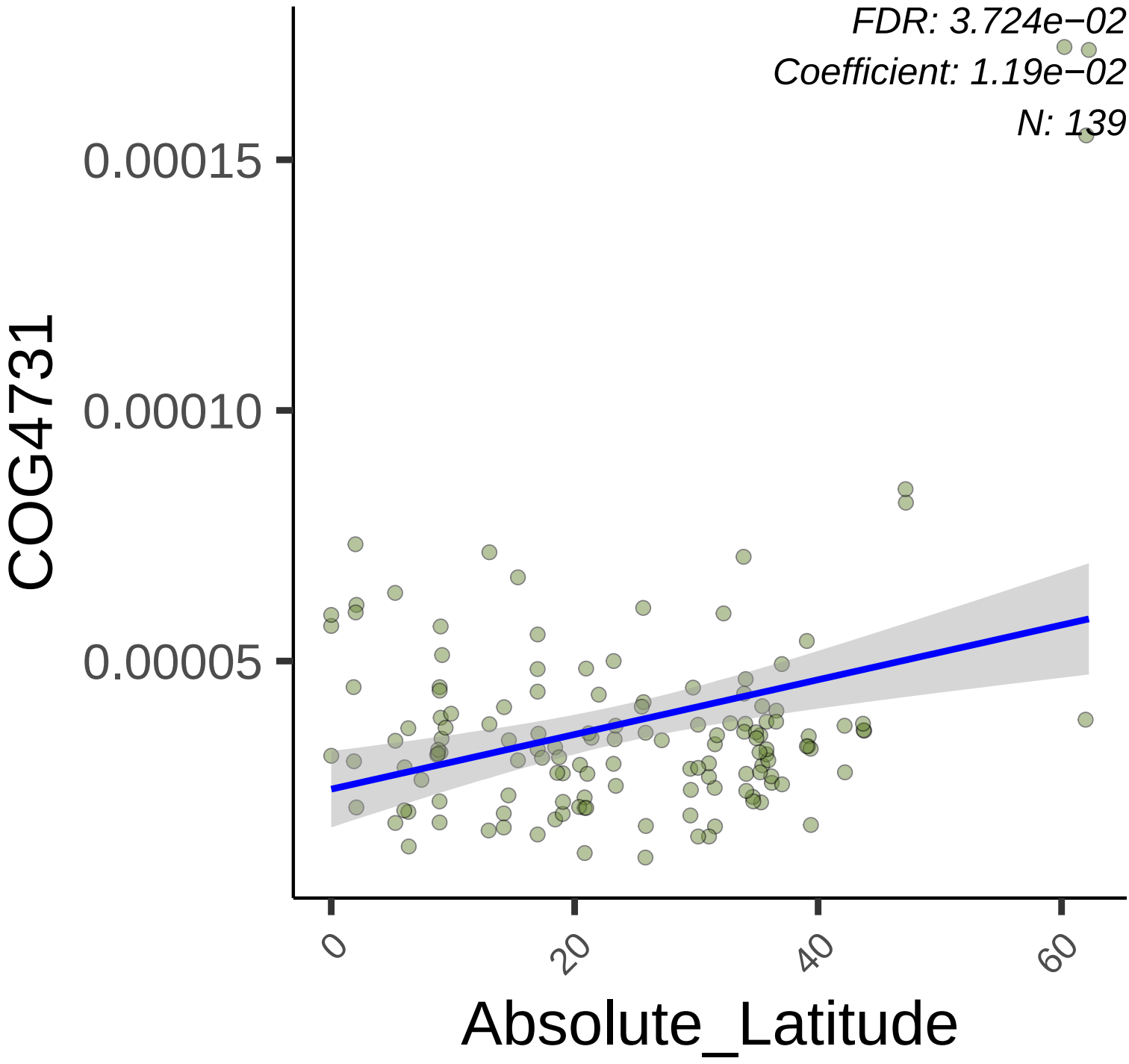

FDR: 3.576e−02
Coefficient: −3.63e−02
N: 139
COG2900
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

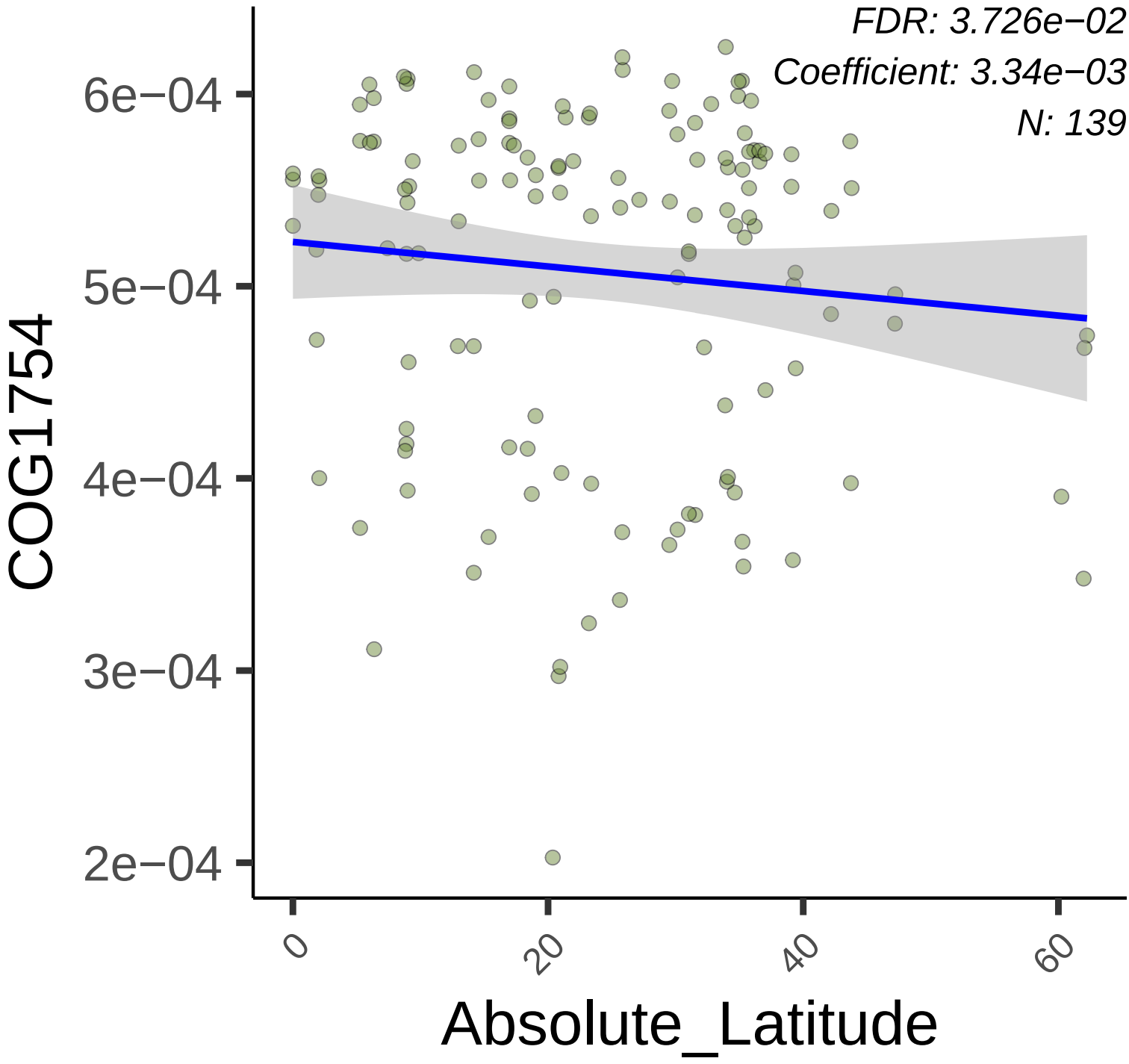

FDR: 3.641e−02
Coefficient: 6.50e−03
N: 139
0.00030
0.00025
0.00020
0.00015
0.00010
COG3492
0
20
40
60
Absolute_Latitude

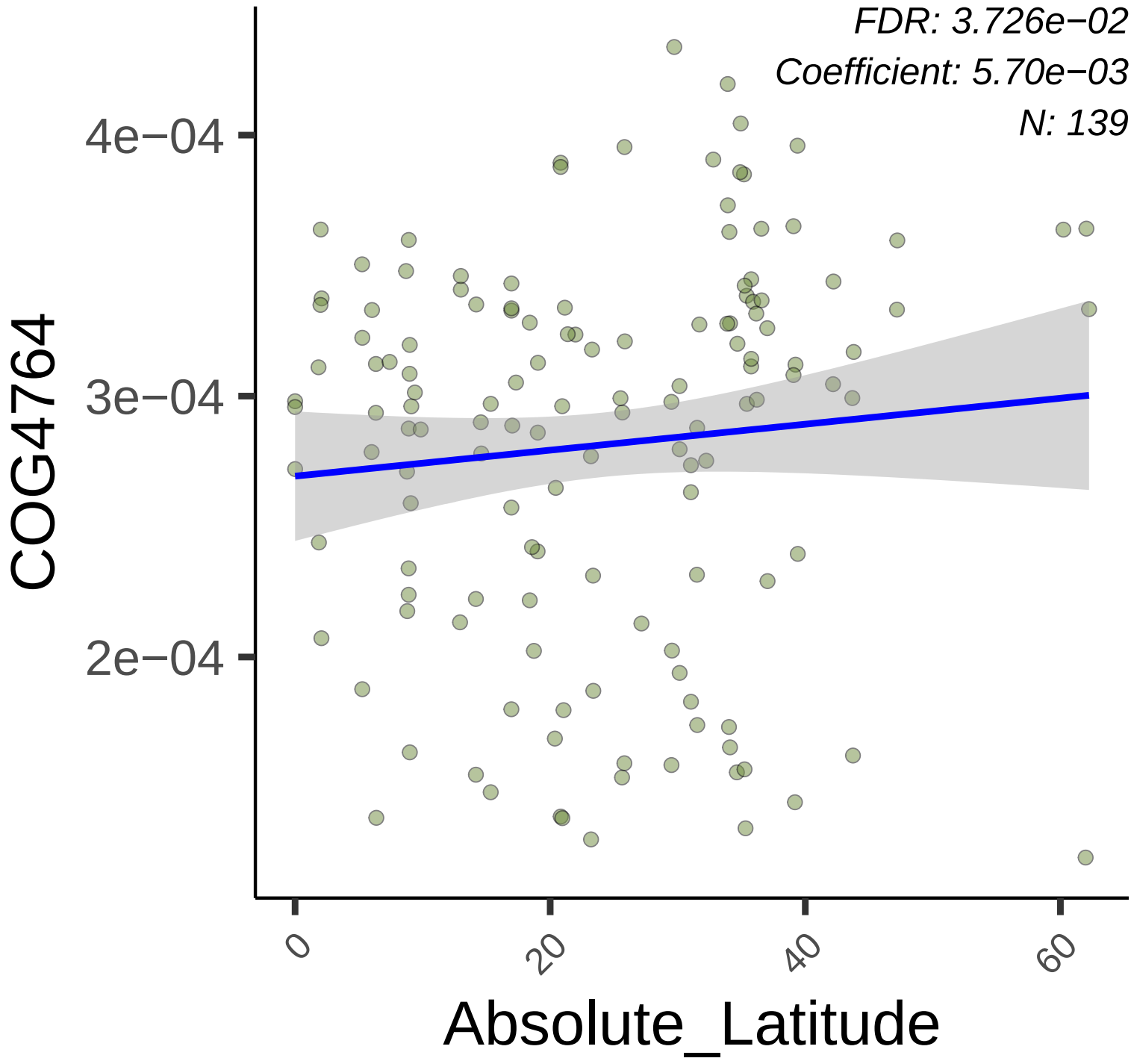

FDR: 3.699e−02
Coefficient: −4.23e−02
N: 139
COG5581
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

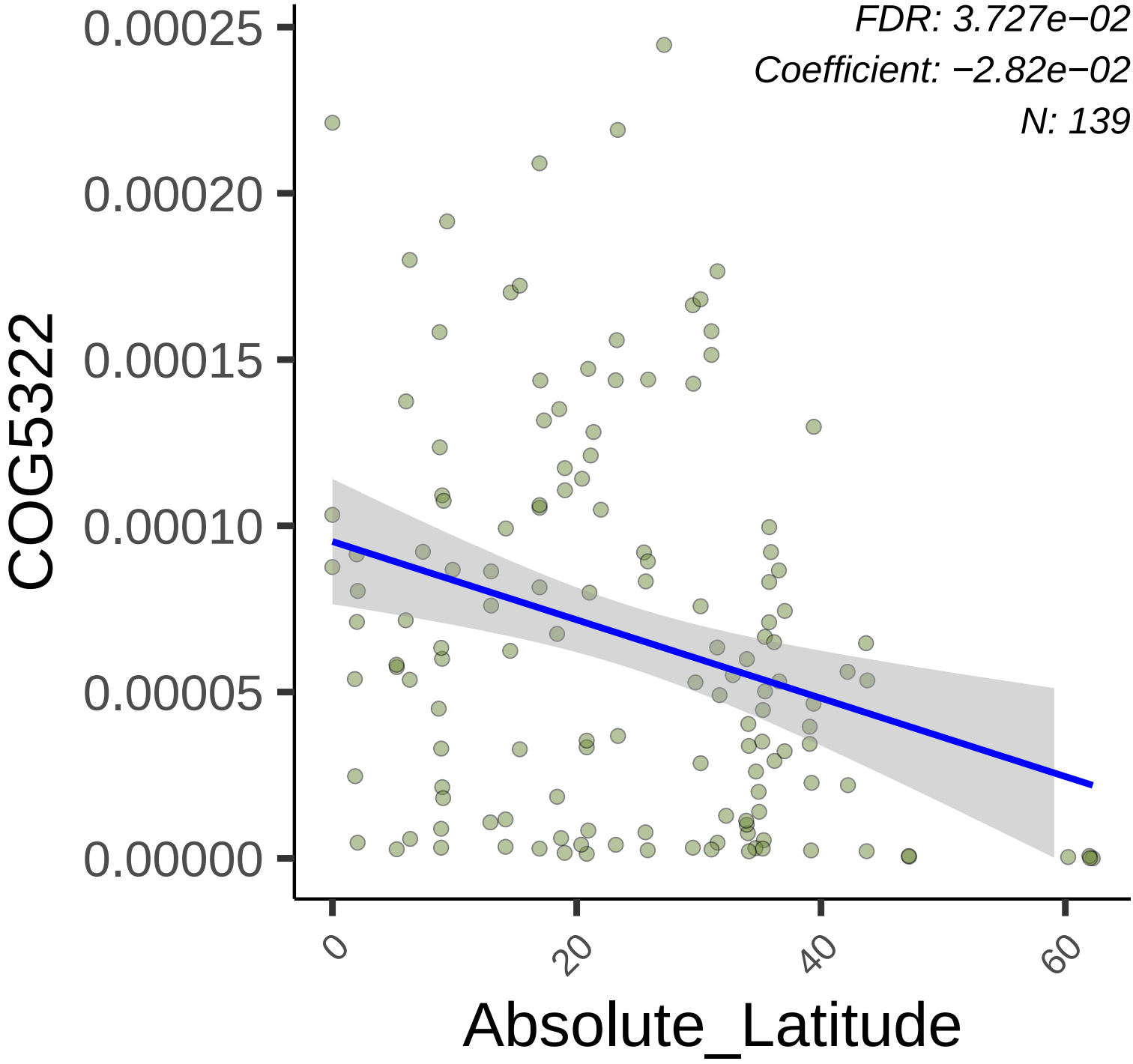

FDR: 3.713e−02
Coefficient: 4.02e−03
N: 139
0.0012
0.0010
0.0008
0.0006
0.0004
COG0445
0
20
40
60
Absolute_Latitude

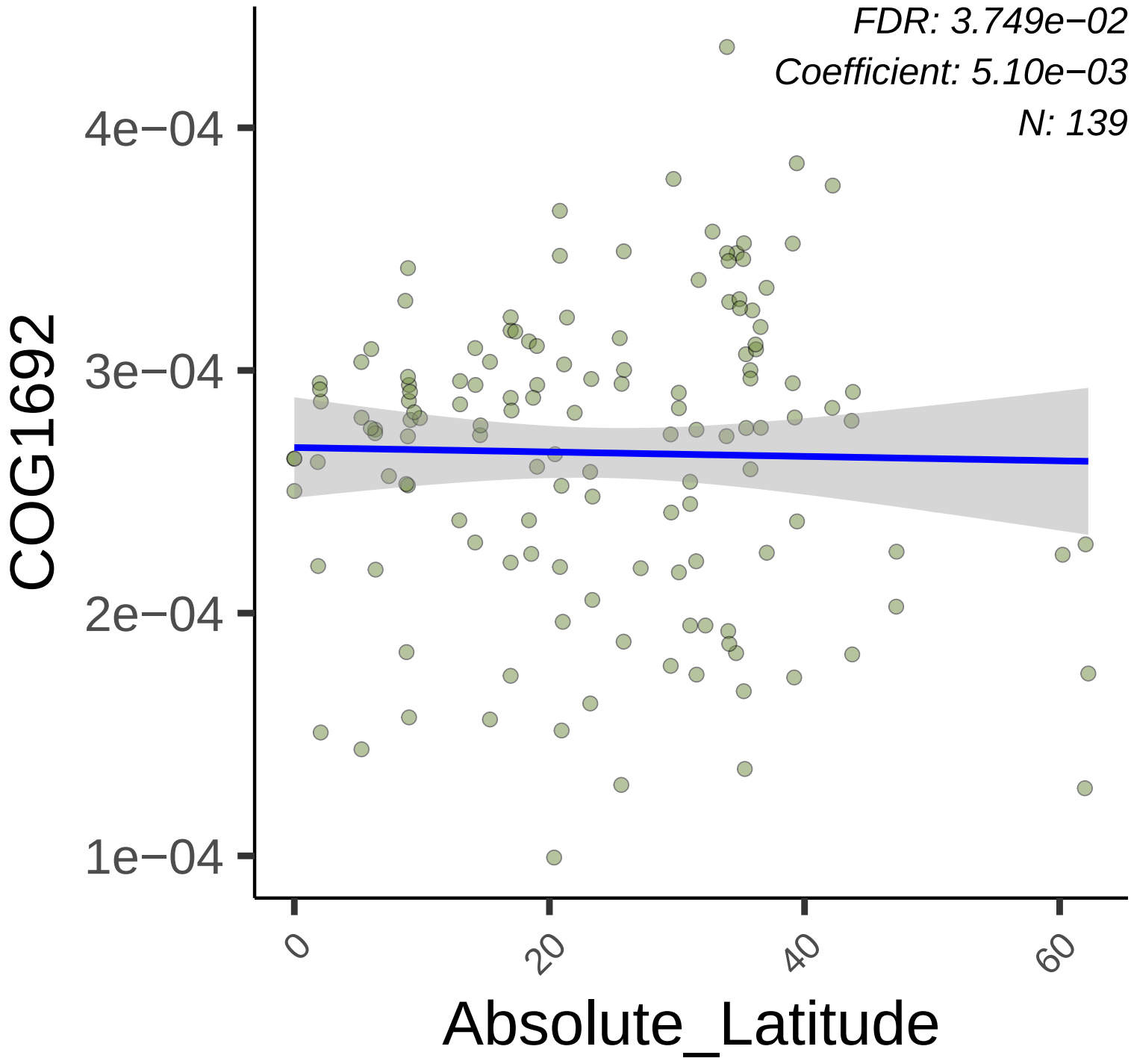

FDR: 3.719e−02
Coefficient: 2.30e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0048
0
20
40
60
Absolute_Latitude

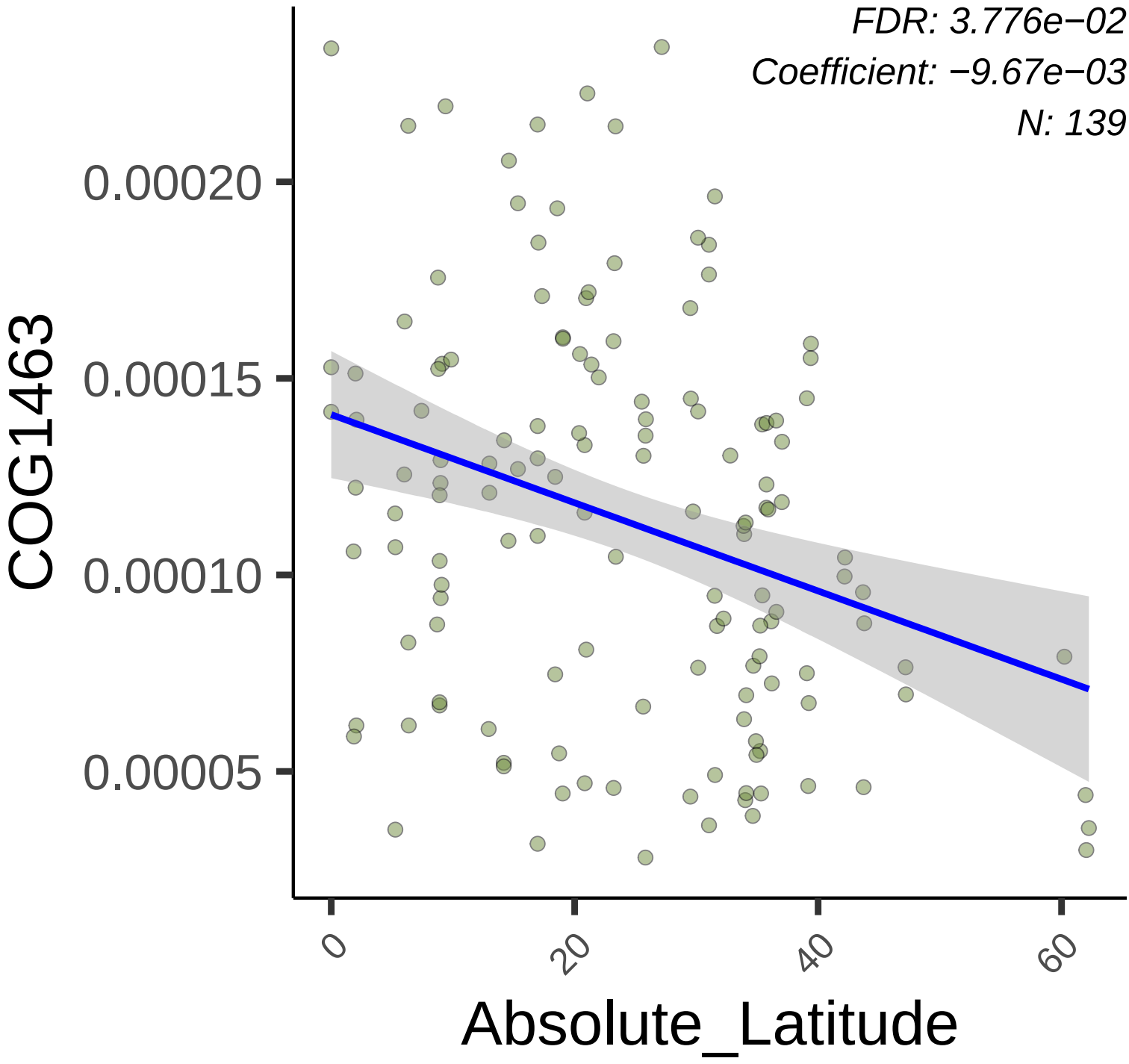

FDR: 3.724e−02
Coefficient: 1.19e−02
N: 139
0.00015
0.00010
0.00005
COG4731
0
20
40
60
Absolute_Latitude

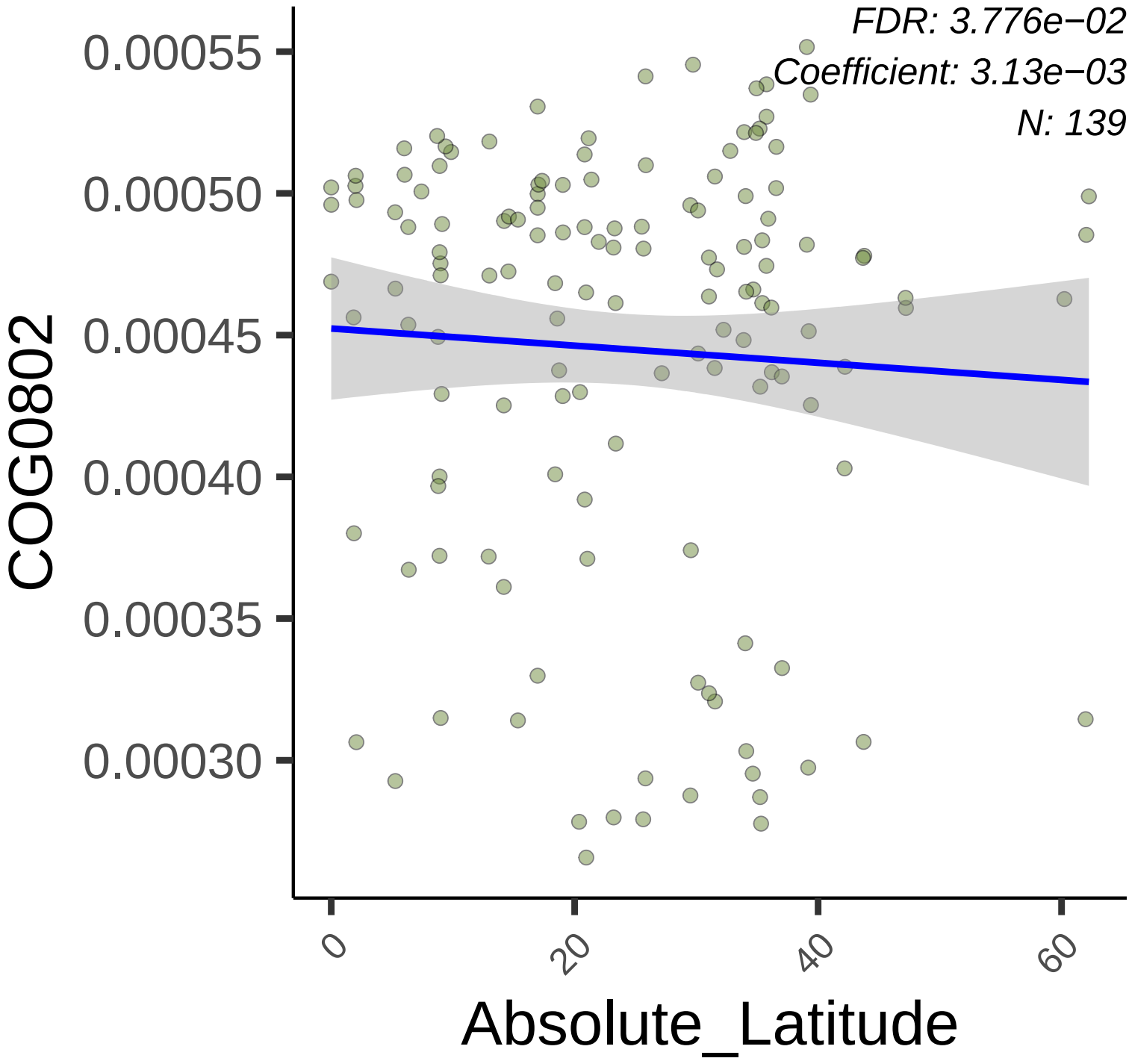

FDR: 3.726e−02
Coefficient: 3.34e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
COG1754
0
20
40
60
Absolute_Latitude

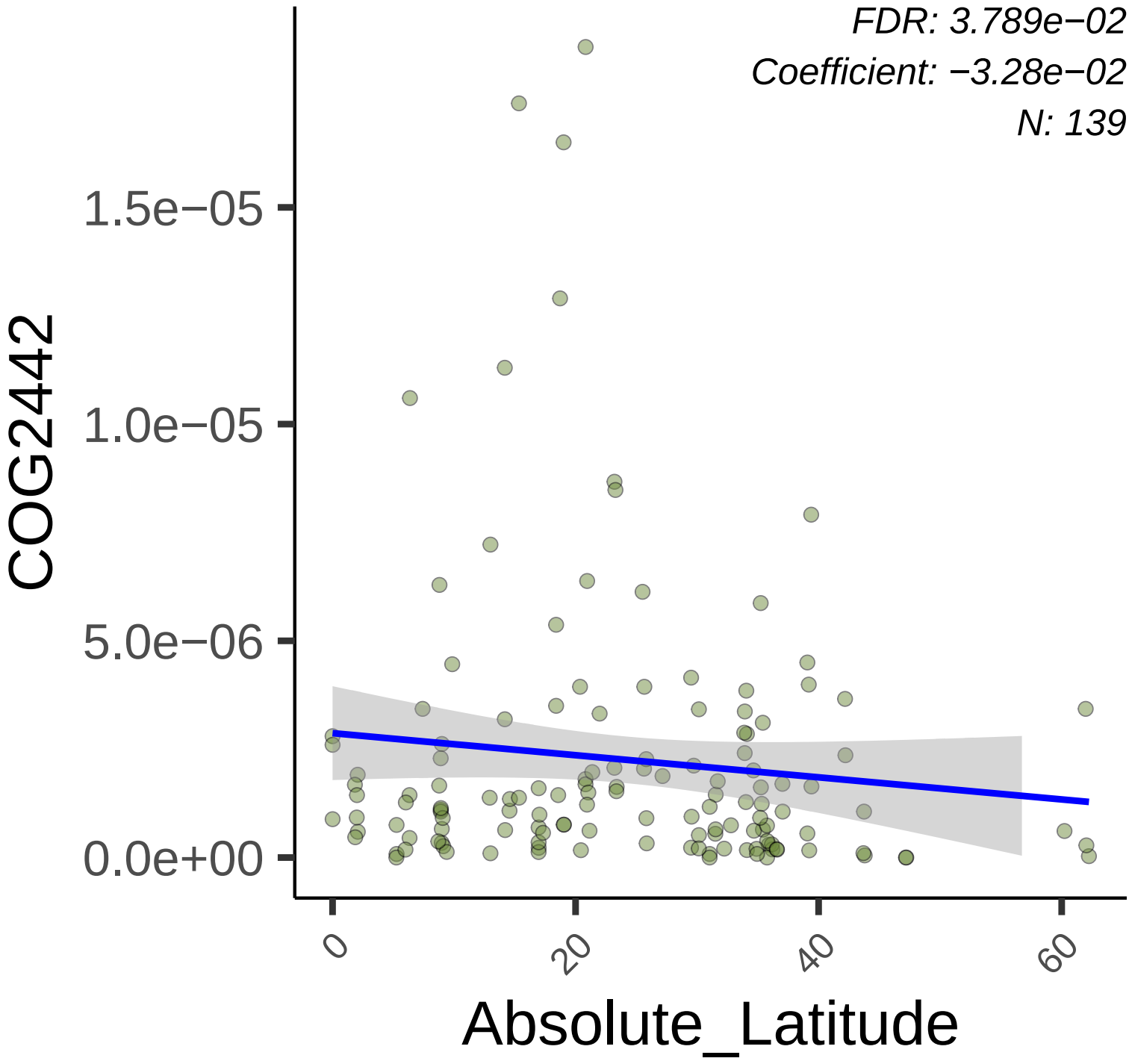

FDR: 3.726e−02
Coefficient: 5.70e−03
N: 139
4e−04
3e−04
2e−04
COG4764
0
20
40
60
Absolute_Latitude

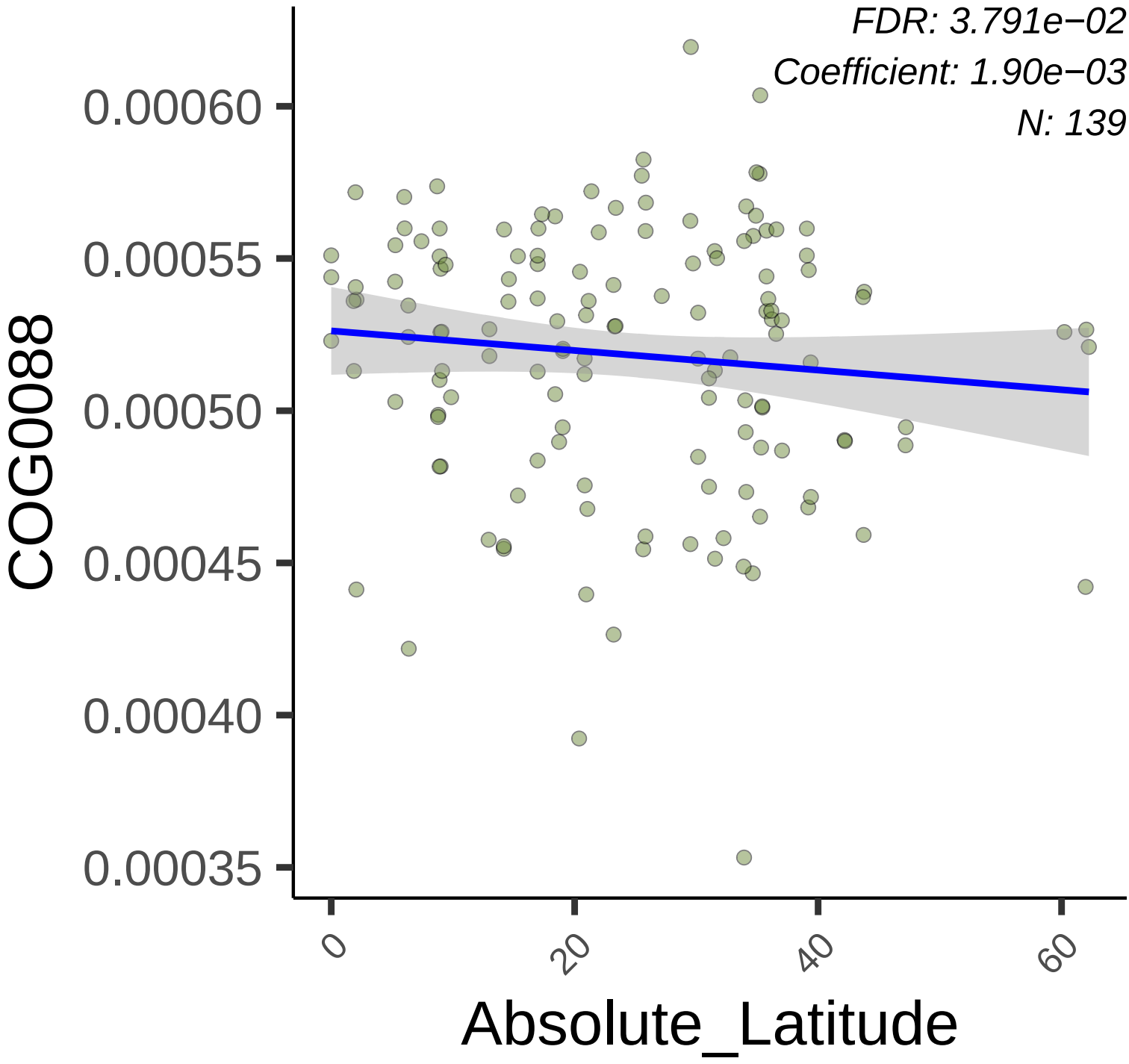

FDR: 3.727e−02
Coefficient: −2.82e−02
N: 139
COG5322
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

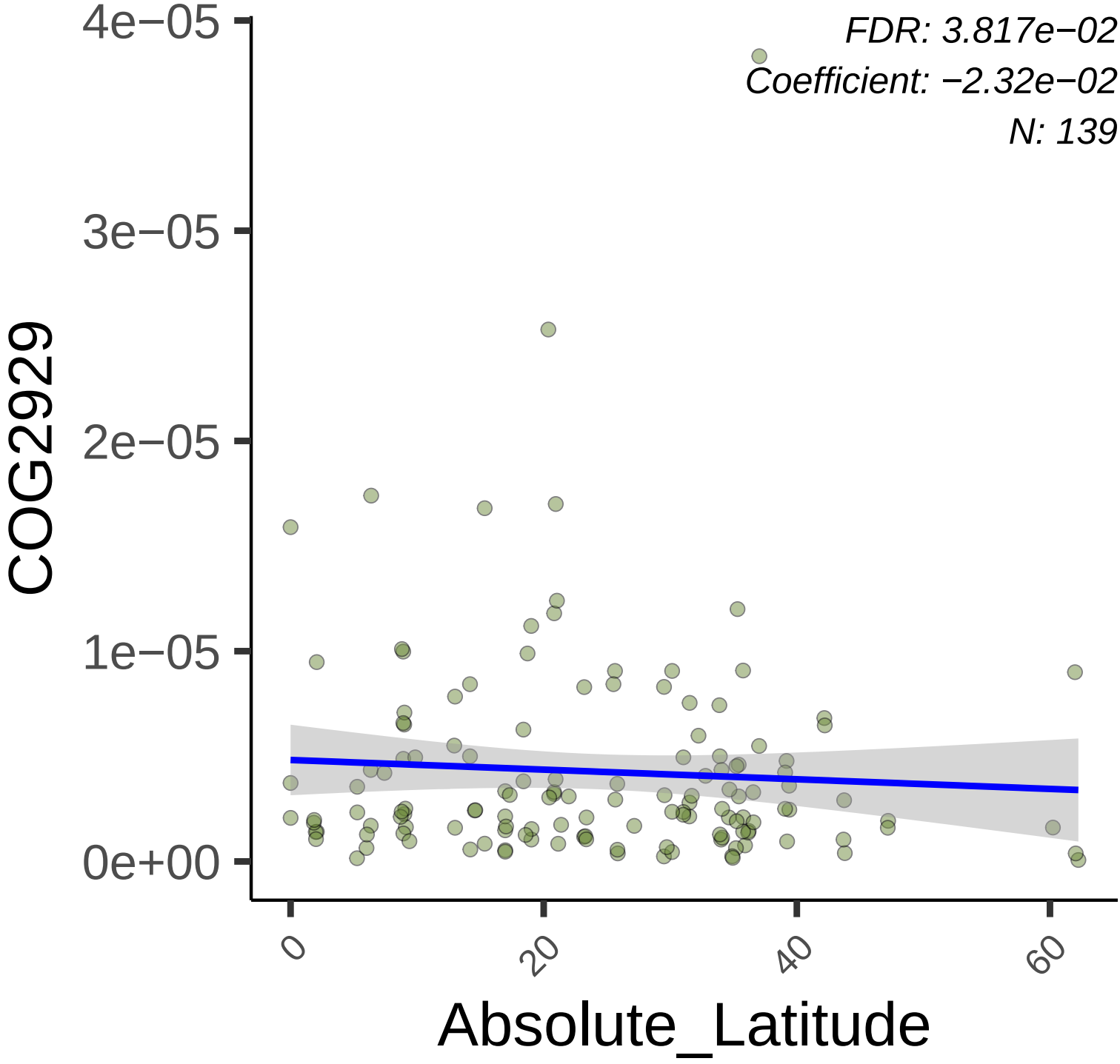

FDR: 3.749e−02
Coefficient: 5.10e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG1692
0
20
40
60
Absolute_Latitude

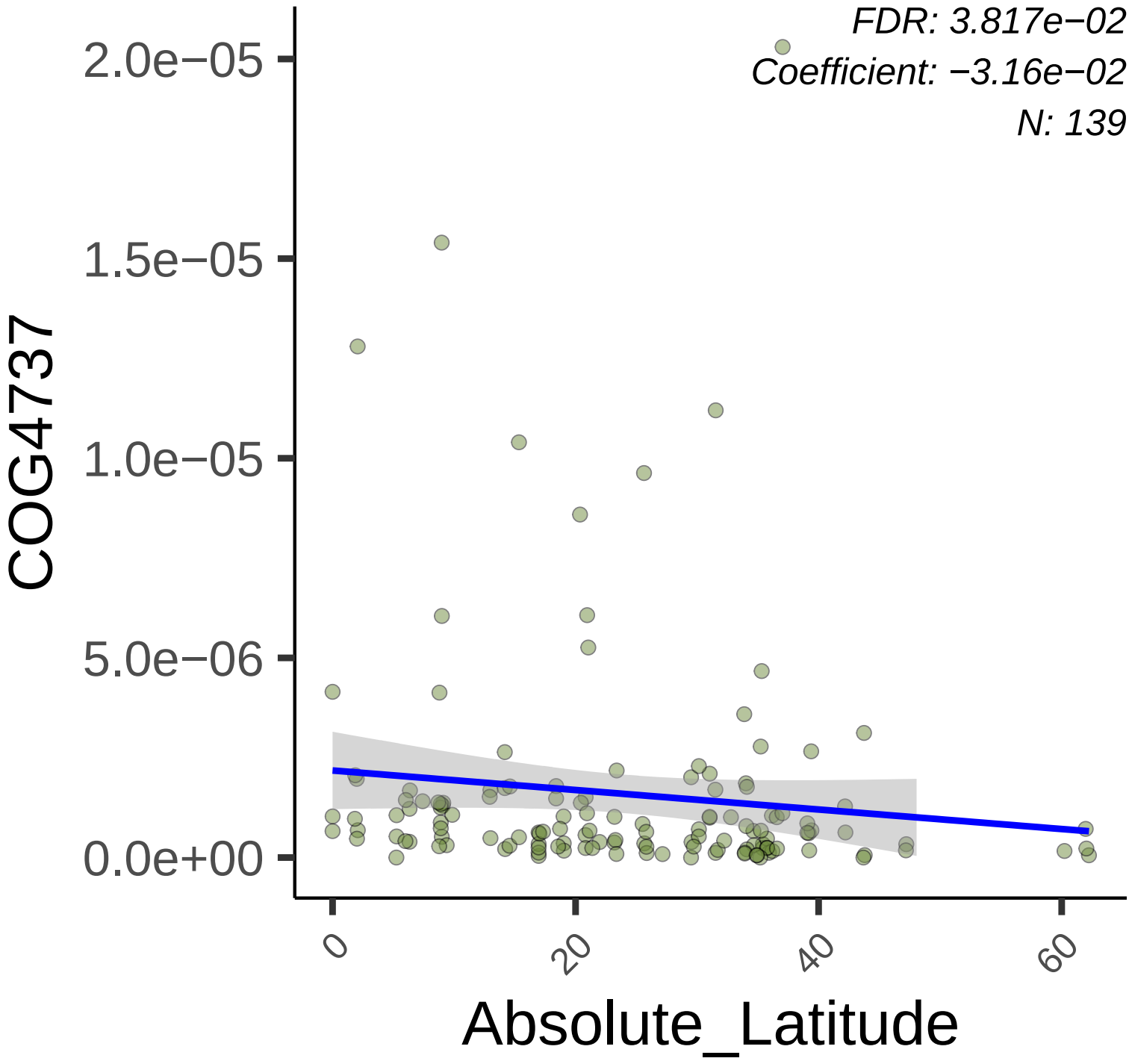

FDR: 3.776e−02
Coefficient: −9.67e−03
N: 139
COG1463
0.00020
0.00015
0.00010
0.00005
0
20
40
60
Absolute_Latitude

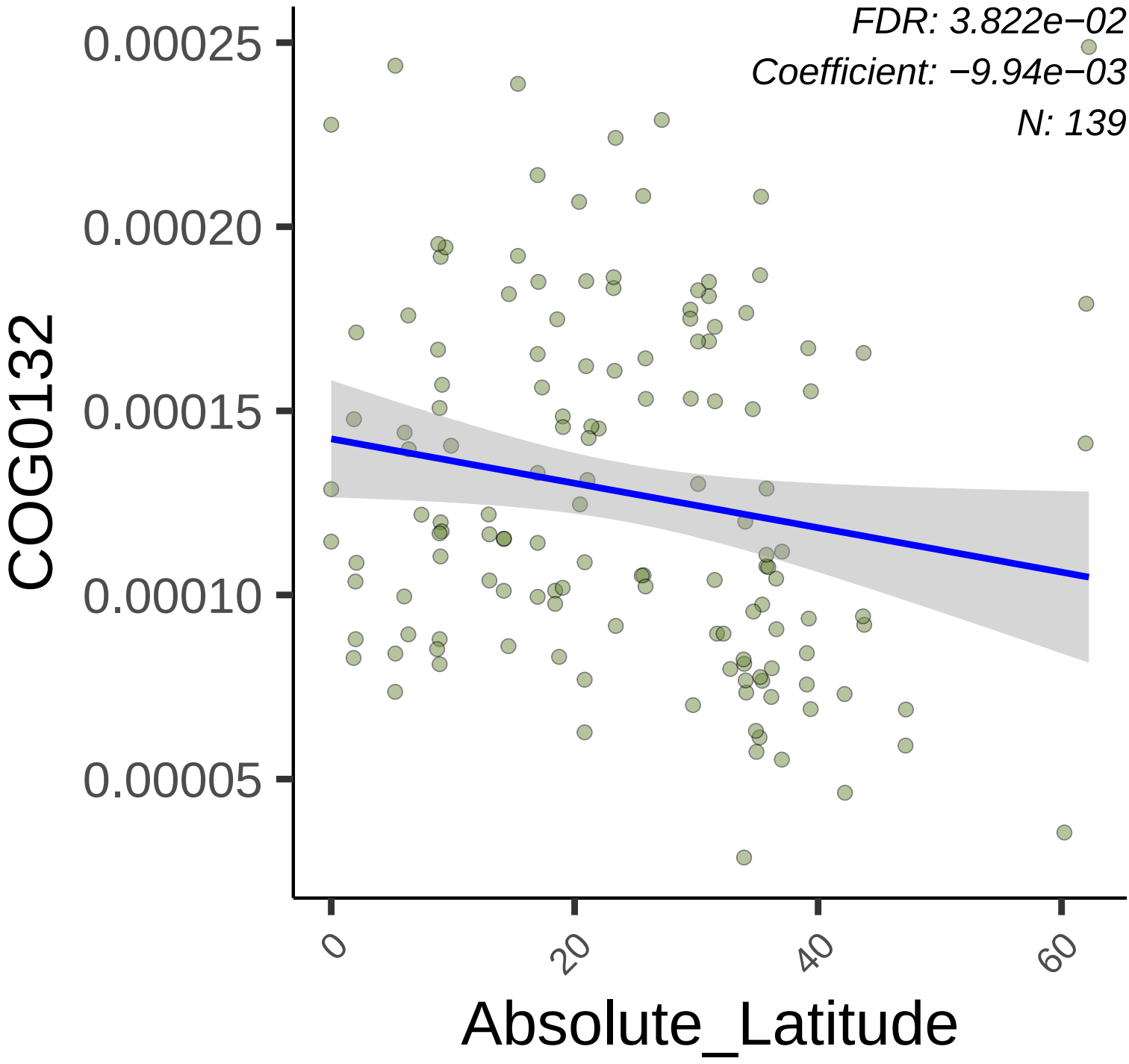

FDR: 3.776e−02
Coefficient: 3.13e−03
N: 139
0.00055
0.00050
0.00045
0.00040
0.00035
0.00030
COG0802
0
20
40
60
Absolute_Latitude

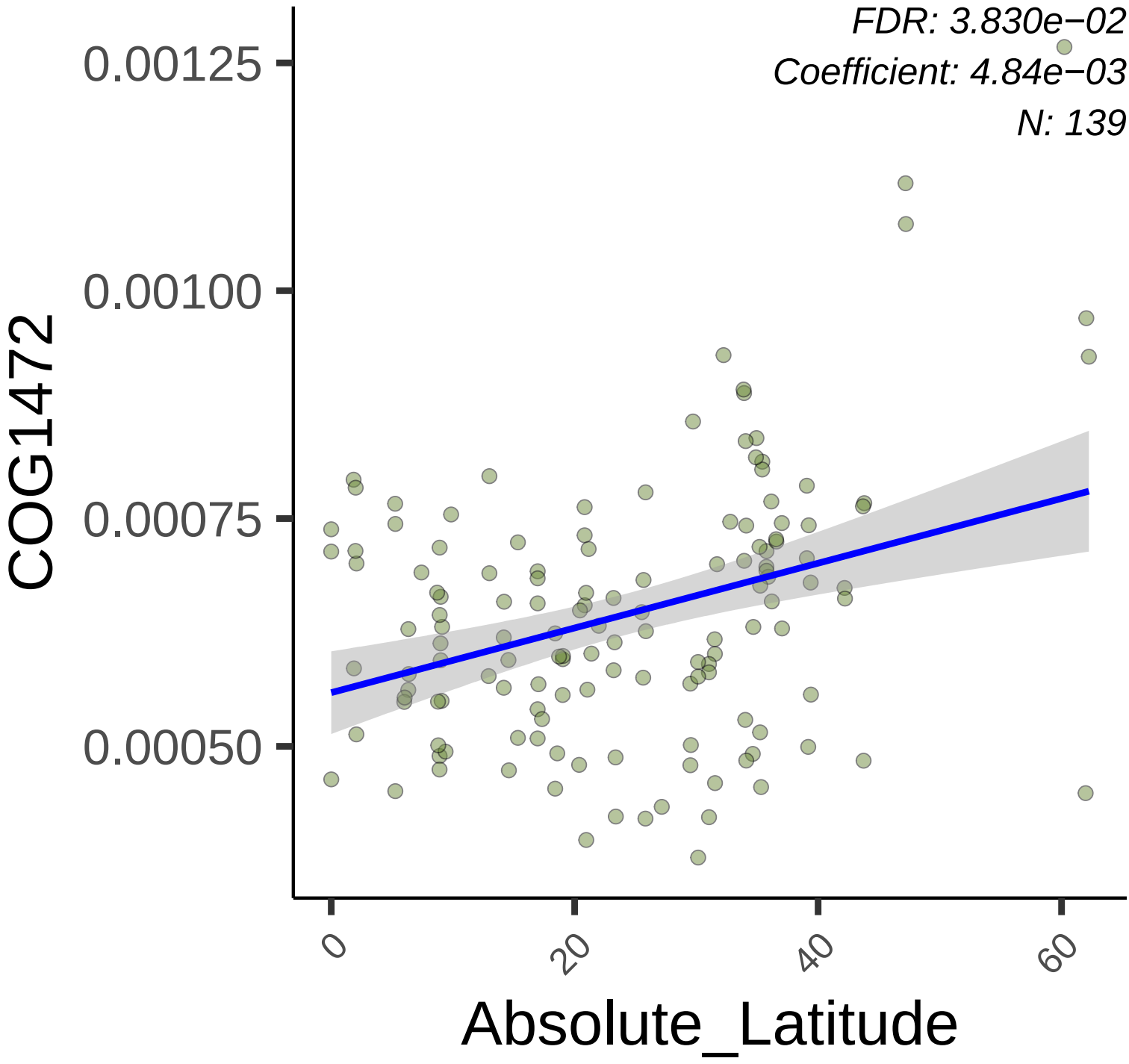

FDR: 3.789e−02
Coefficient: −3.28e−02
N: 139
COG2442
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

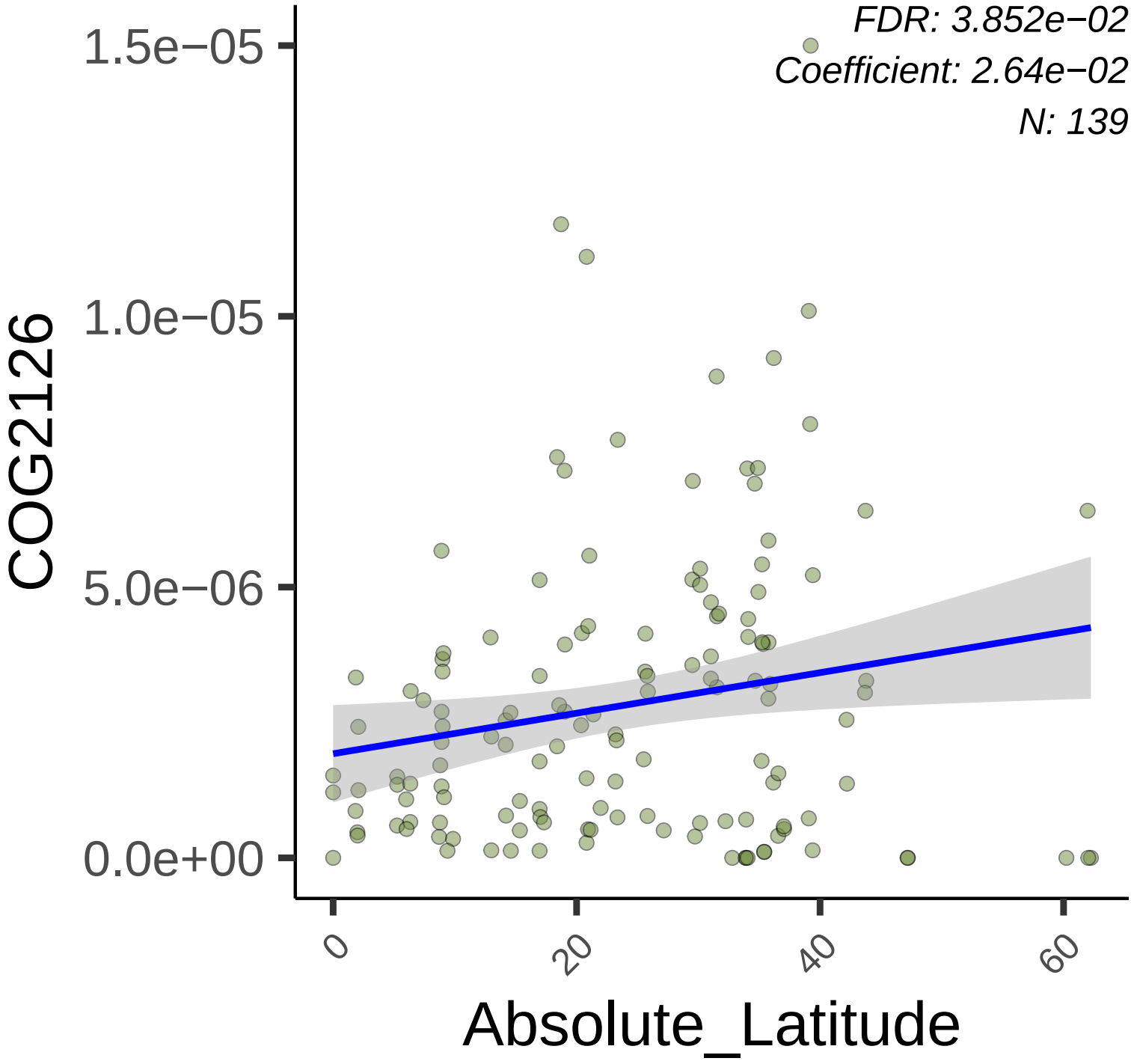

FDR: 3.791e−02
Coefficient: 1.90e−03
N: 139
0.00060
0.00055
0.00050
0.00045
0.00040
0.00035
COG0088
0
20
40
60
Absolute_Latitude

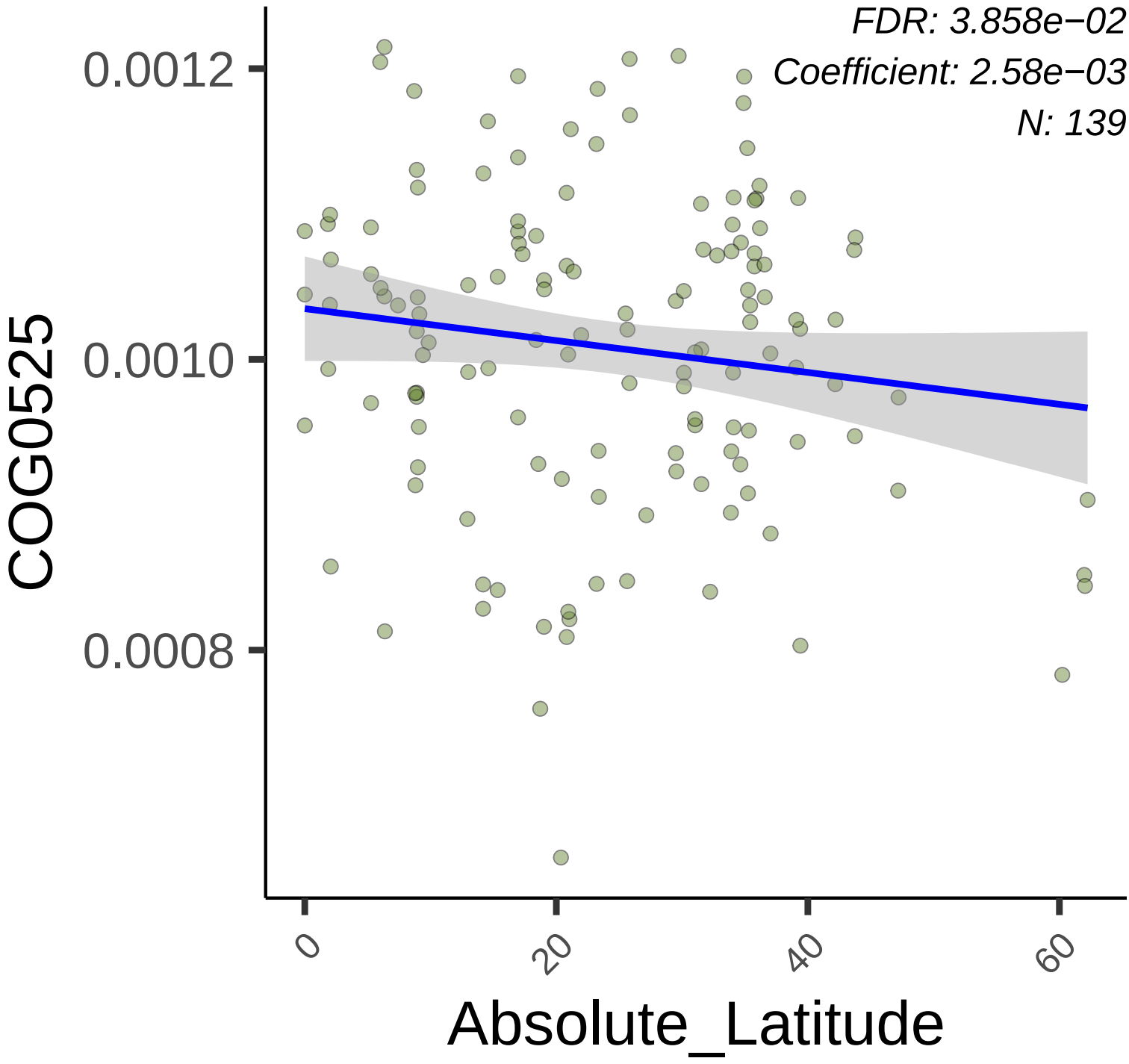

FDR: 3.817e−02
Coefficient: −2.32e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG2929
0
20
40
60
Absolute_Latitude

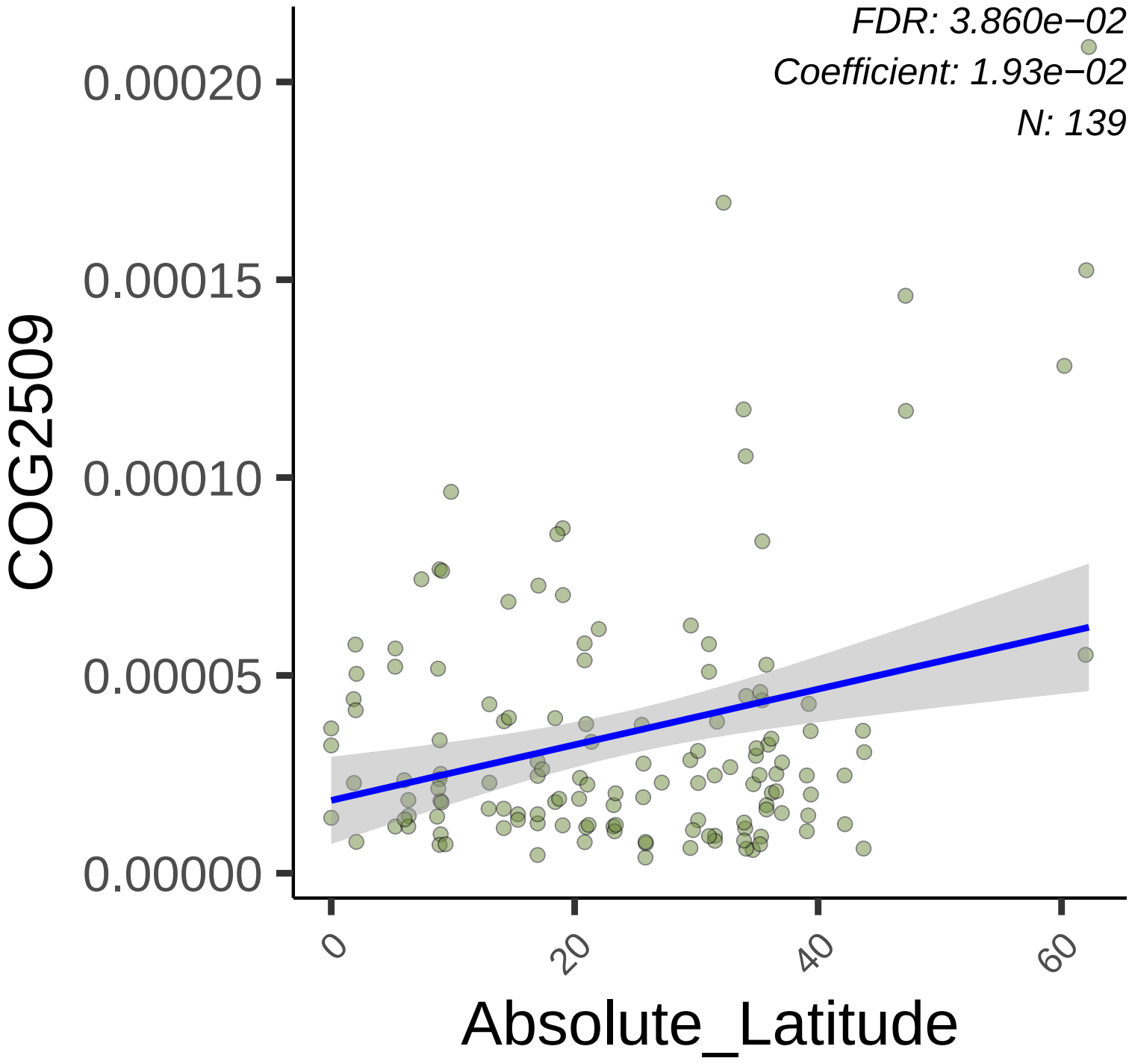

FDR: 3.817e−02
Coefficient: −3.16e−02
N: 139
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG4737
0
20
40
60
Absolute_Latitude

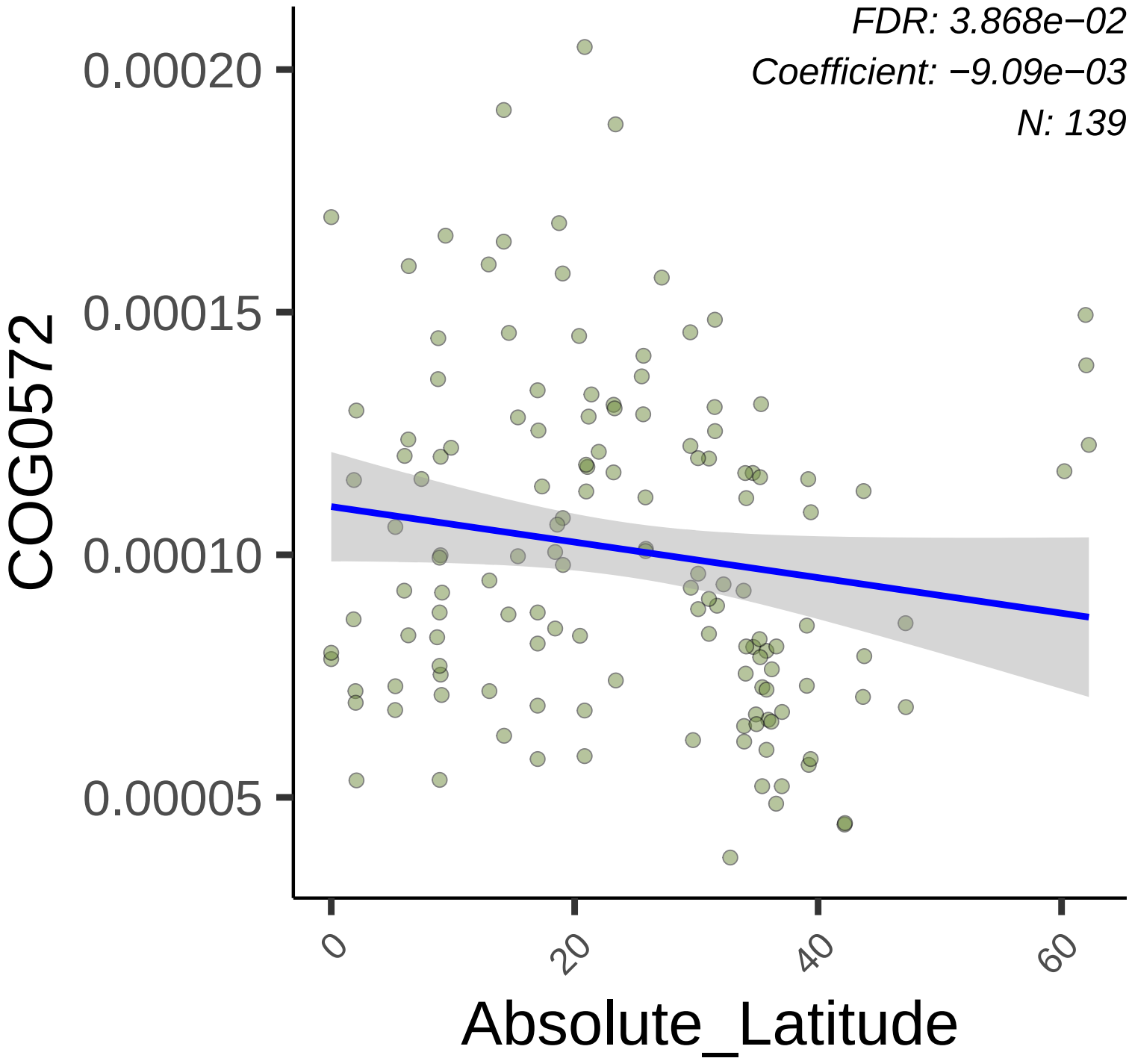

FDR: 3.822e−02
Coefficient: −9.94e−03
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG0132
0
20
40
60
Absolute_Latitude

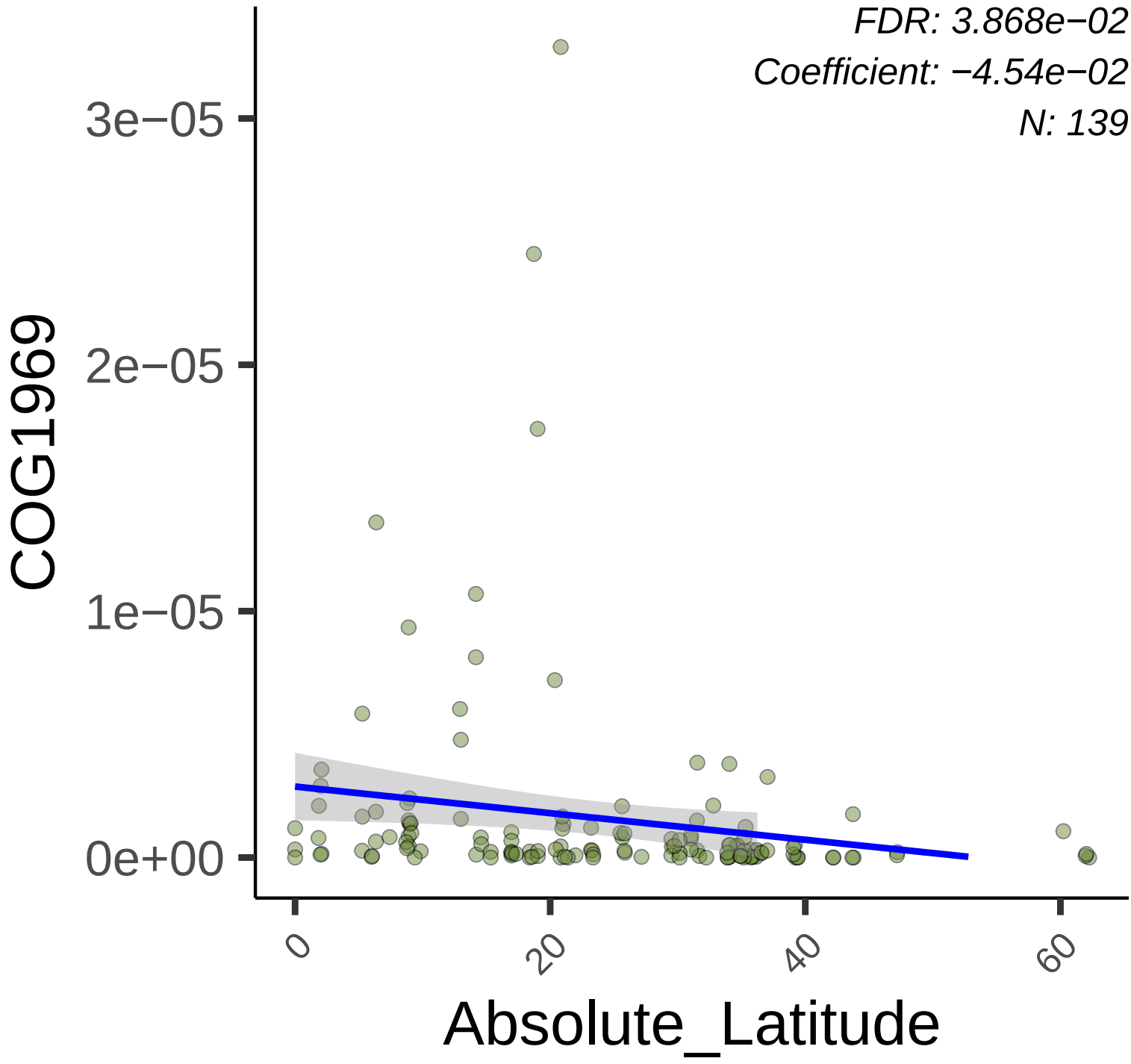

FDR: 3.830e−02
Coefficient: 4.84e−03
N: 139
0.00125
0.00100
0.00075
0.00050
COG1472
0
20
40
60
Absolute_Latitude

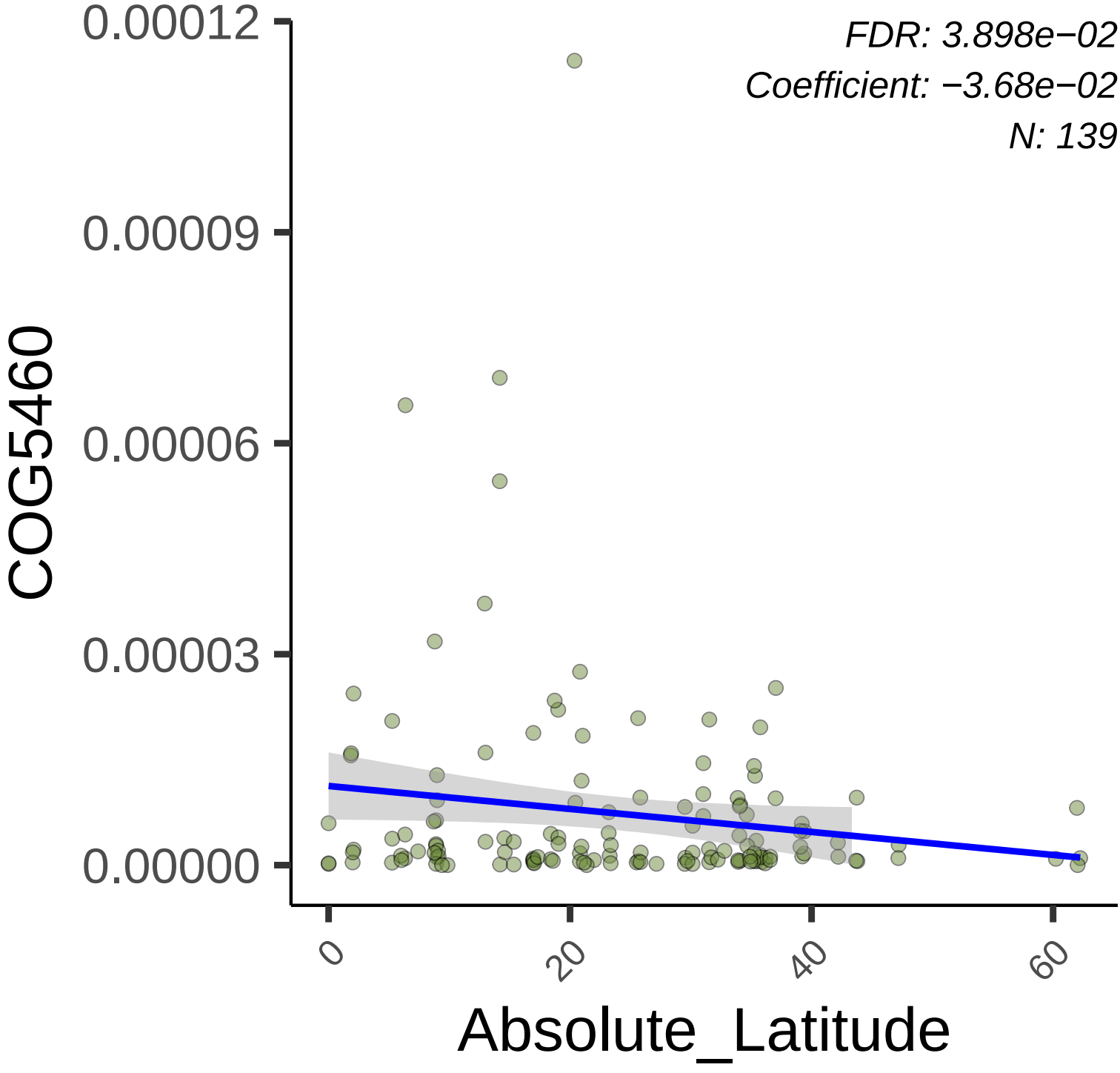

FDR: 3.852e−02
Coefficient: 2.64e−02
N: 139
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG2126
0
20
40
60
Absolute_Latitude

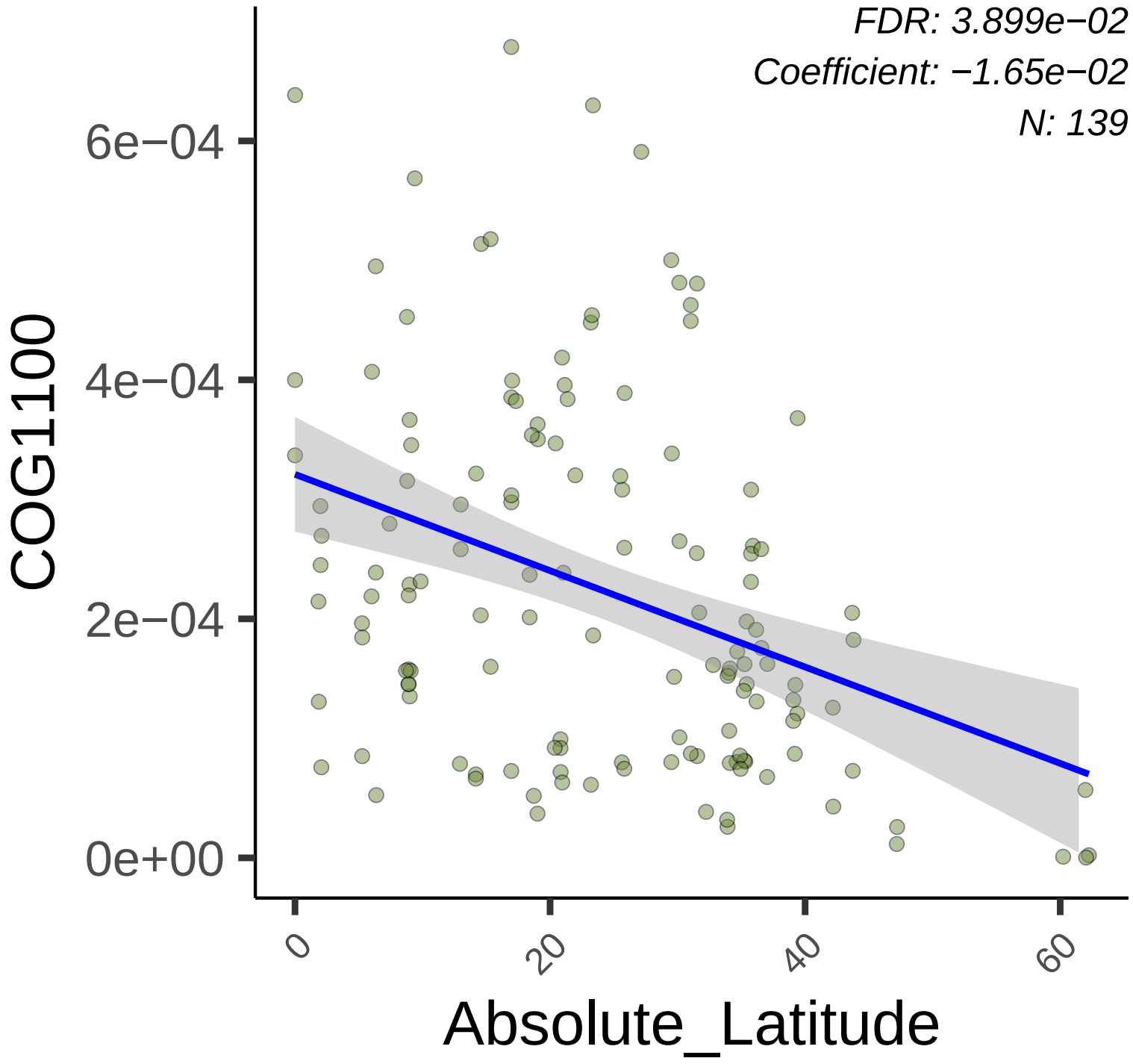

FDR: 3.858e−02
Coefficient: 2.58e−03
N: 139
0.0012
0.0010
0.0008
COG0525
0
20
40
60
Absolute_Latitude

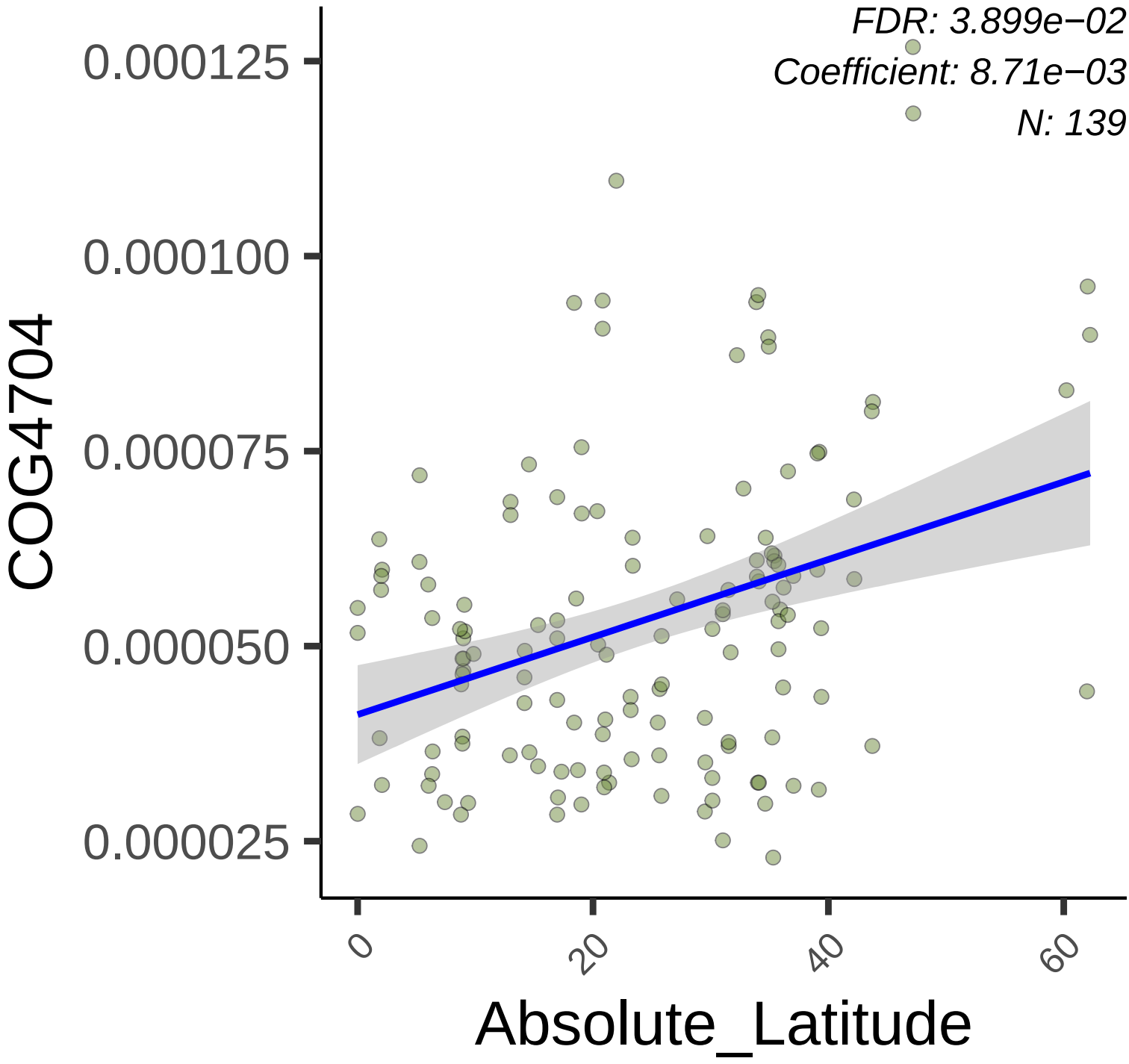

FDR: 3.860e−02
Coefficient: 1.93e−02
N: 139
0.00020
0.00015
0.00010
0.00005
0.00000
COG2509
0
20
40
60
Absolute_Latitude

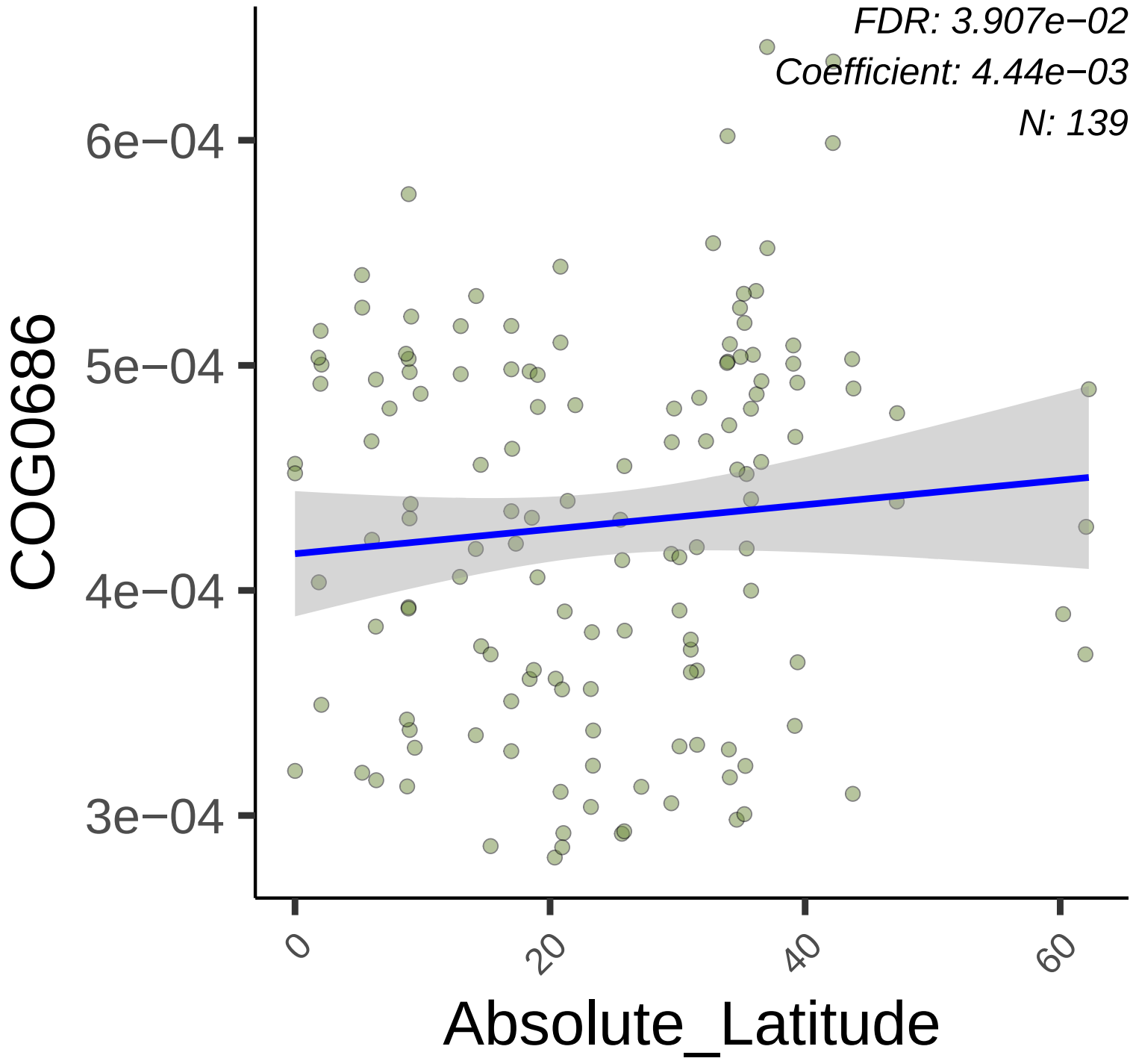

FDR: 3.868e−02
Coefficient: −9.09e−03
N: 139
0.00020
0.00015
0.00010
0.00005
COG0572
0
20
40
60
Absolute_Latitude

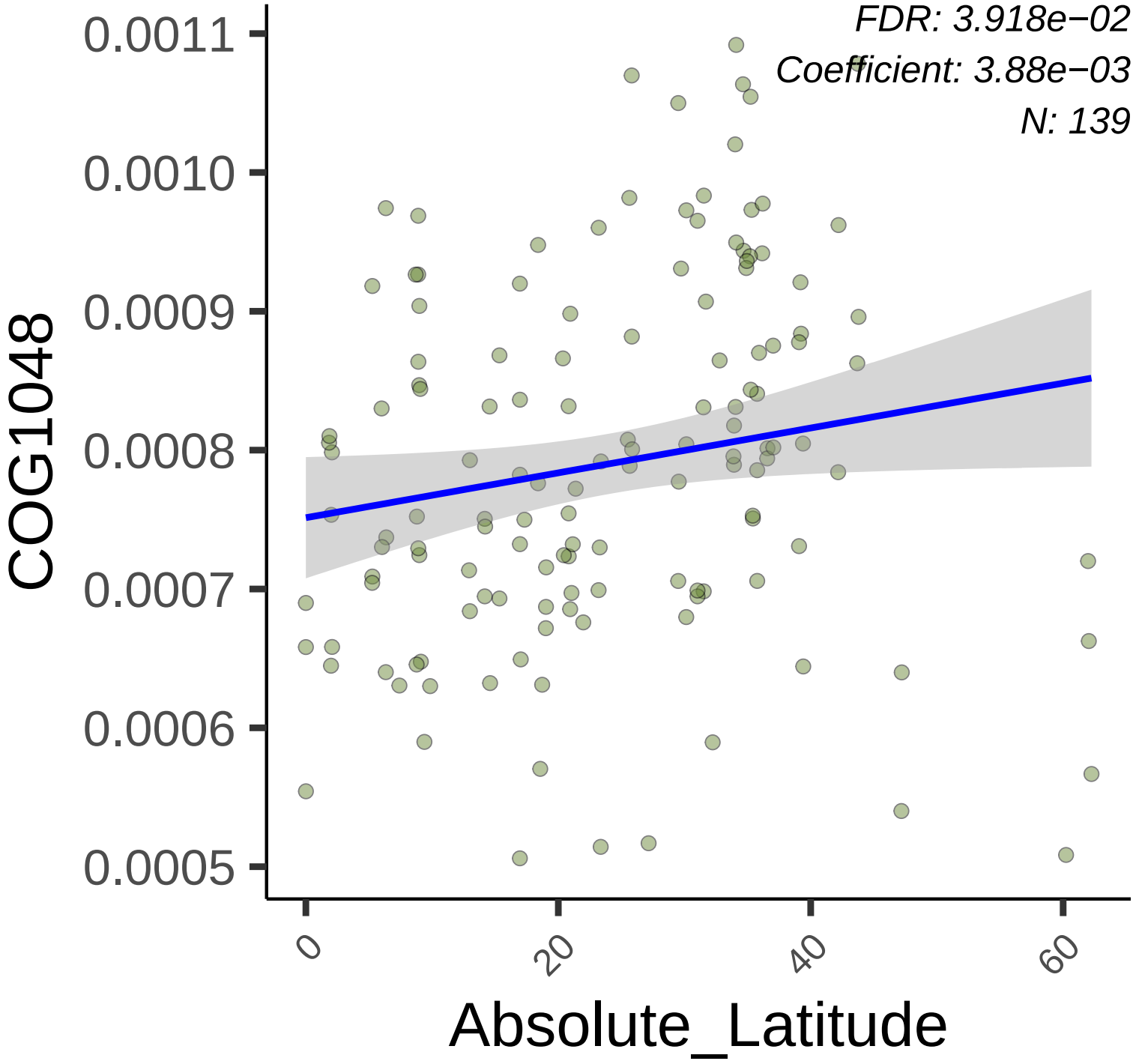

FDR: 3.868e−02
Coefficient: −4.54e−02
N: 139
COG1969
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

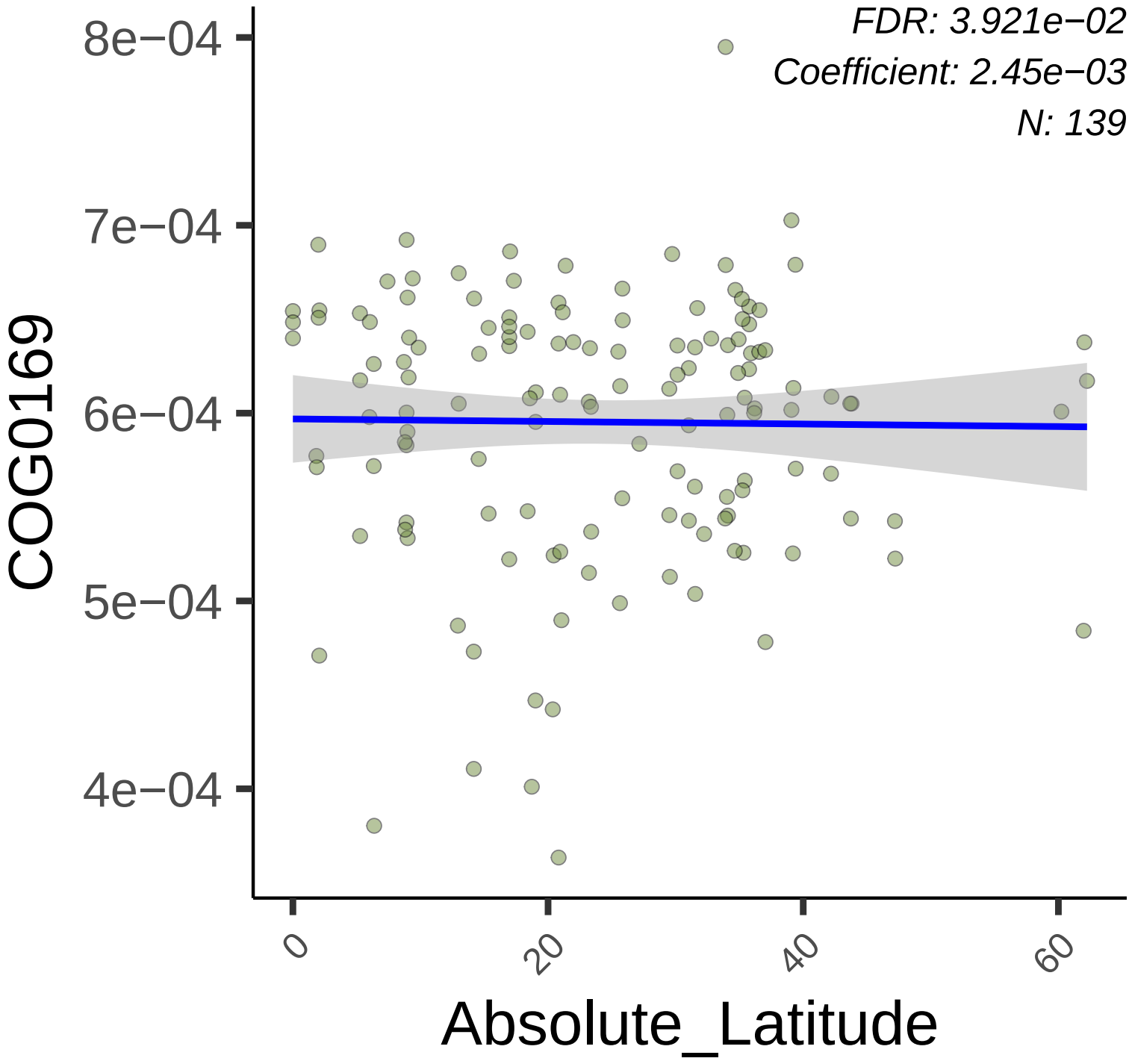

FDR: 3.898e−02
Coefficient: −3.68e−02
N: 139
0.00012
0.00009
0.00006
0.00003
0.00000
COG5460
0
20
40
60
Absolute_Latitude

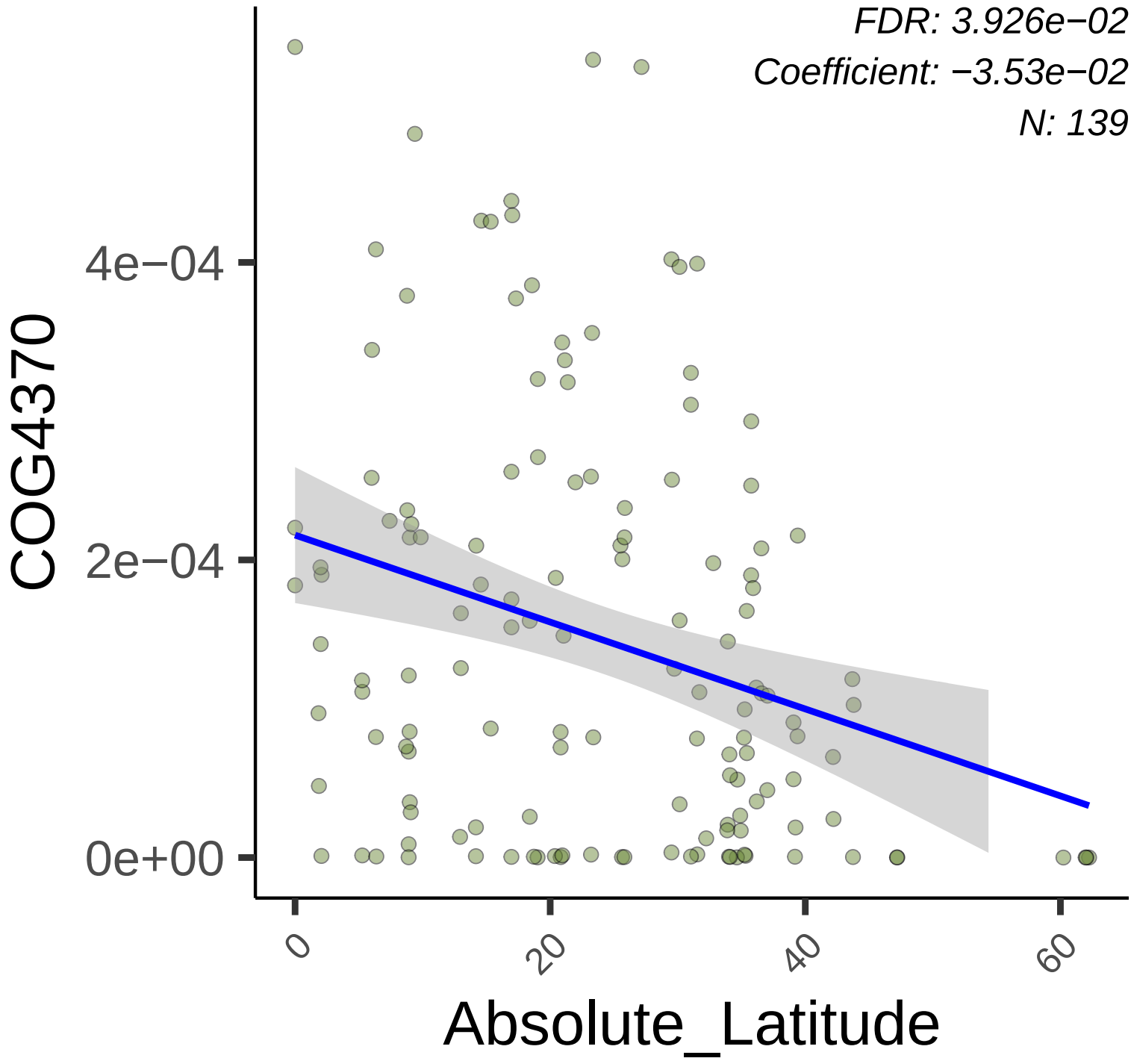

FDR: 3.899e−02
Coefficient: −1.65e−02
N: 139
COG1100
6e−04
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

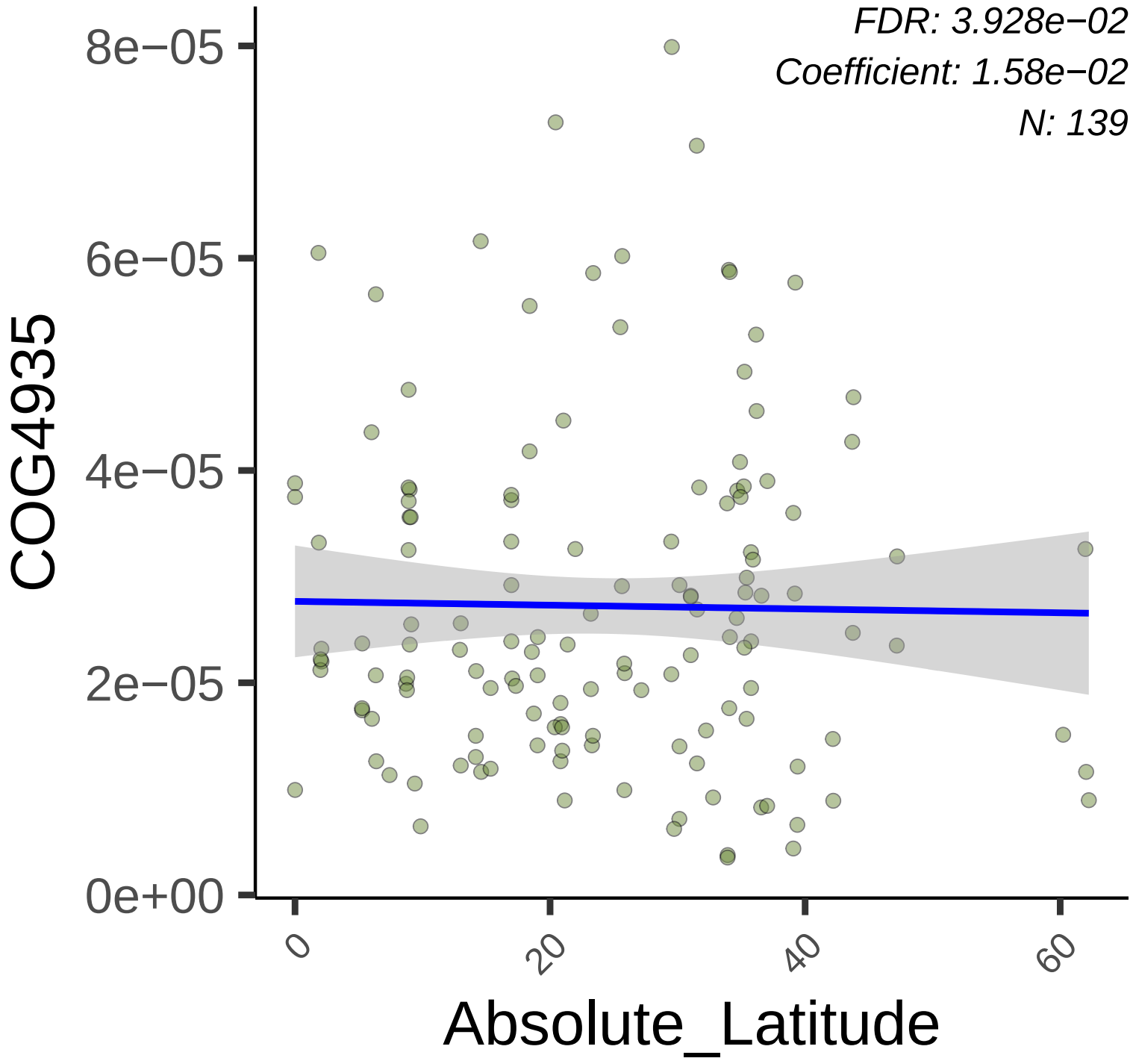

FDR: 3.899e−02
Coefficient: 8.71e−03
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
COG4704
0
20
40
60
Absolute_Latitude

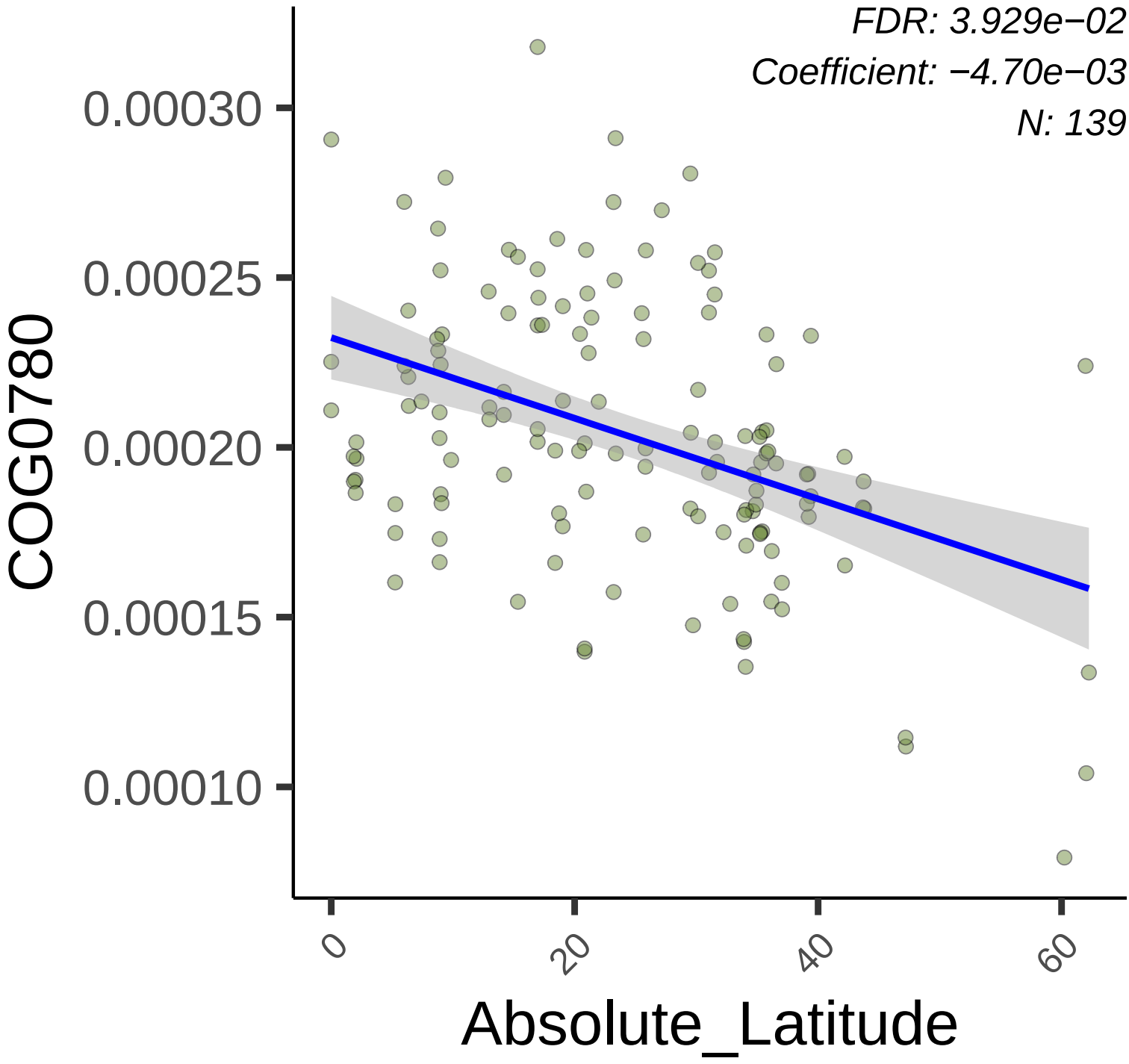

FDR: 3.907e−02
Coefficient: 4.44e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG0686
0
20
40
60
Absolute_Latitude

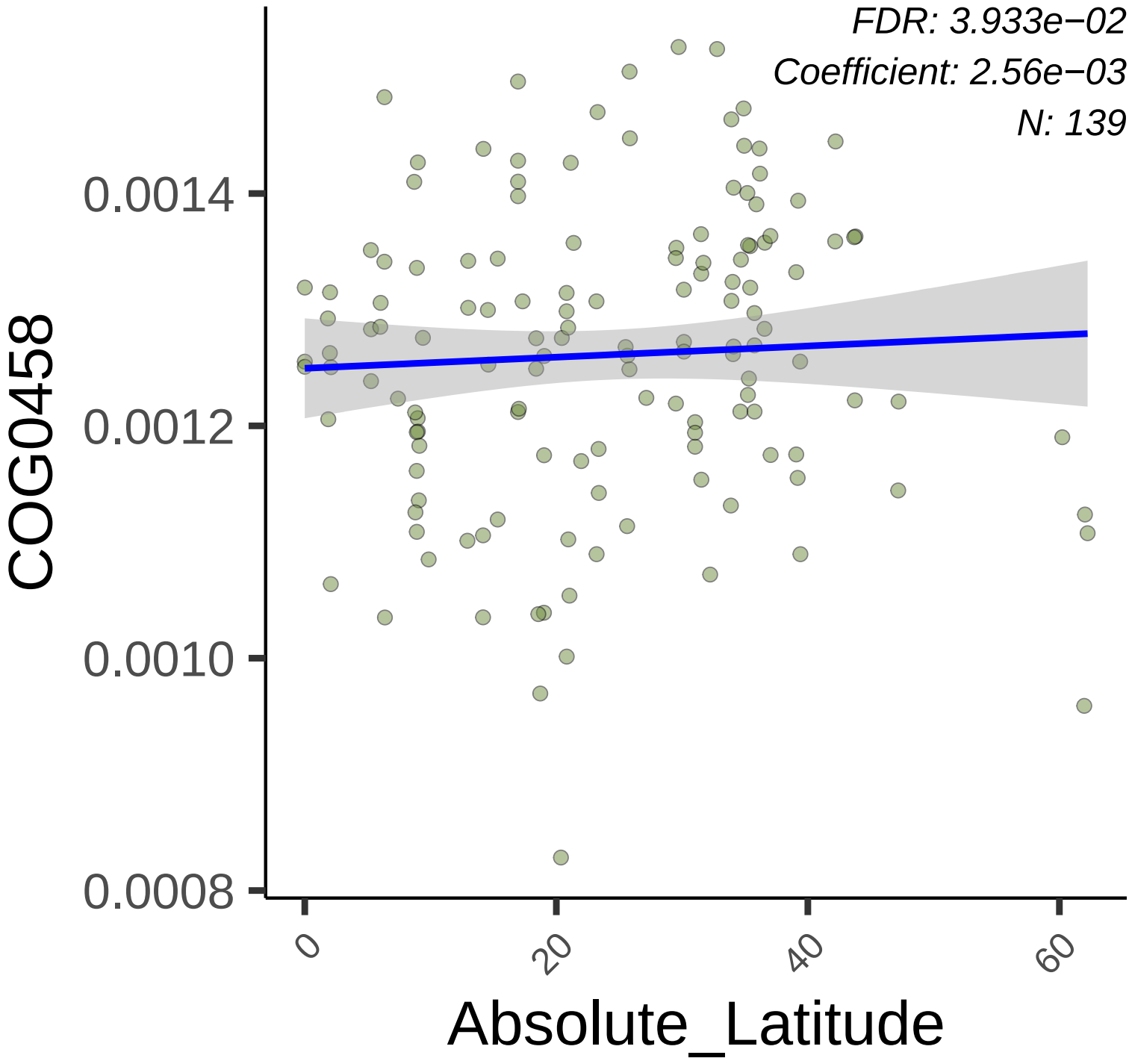

FDR: 3.918e−02
Coefficient: 3.88e−03
N: 139
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
0.0005
COG1048
0
20
40
60
Absolute_Latitude

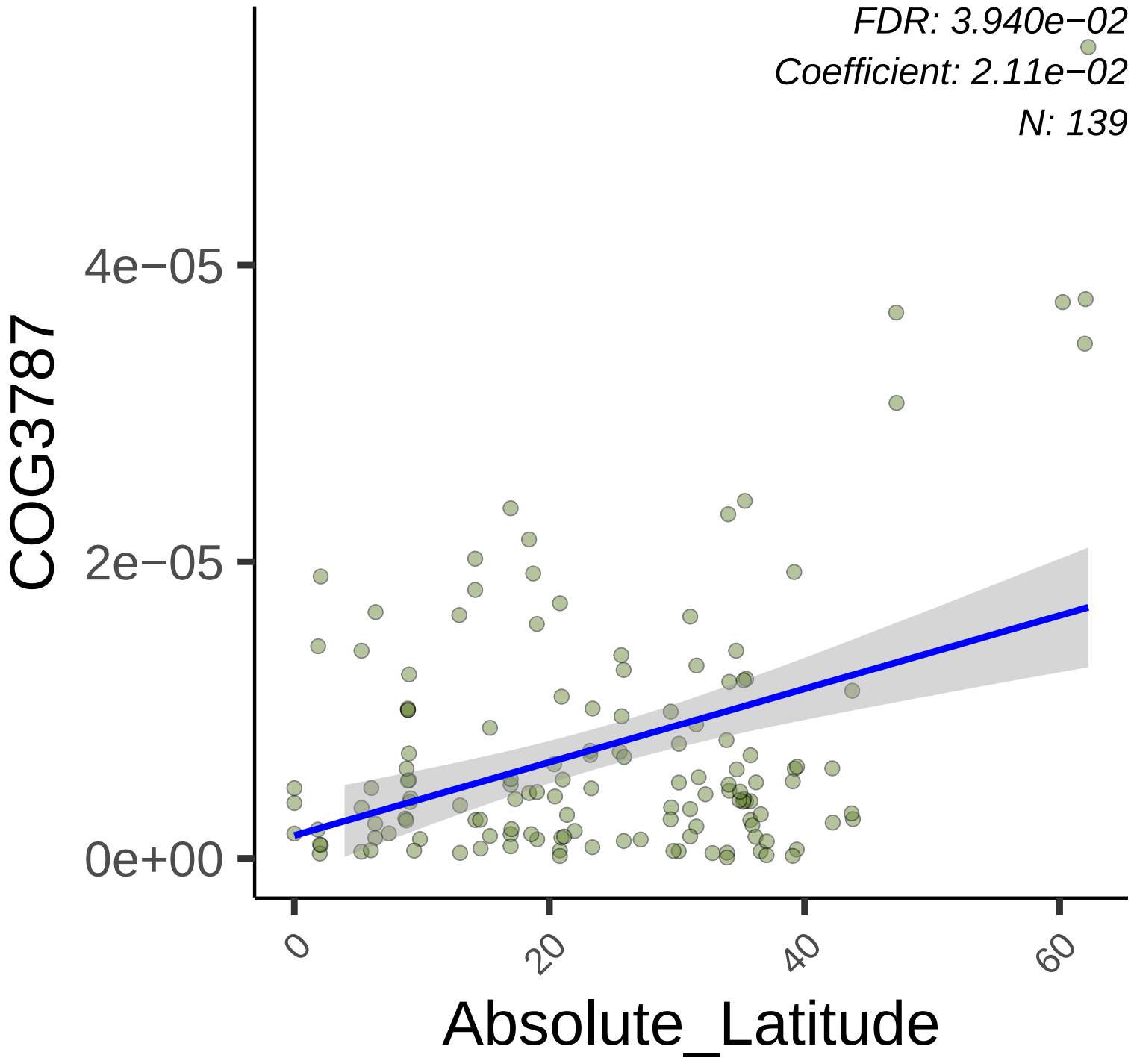

FDR: 3.921e−02
Coefficient: 2.45e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
COG0169
0
20
40
60
Absolute_Latitude

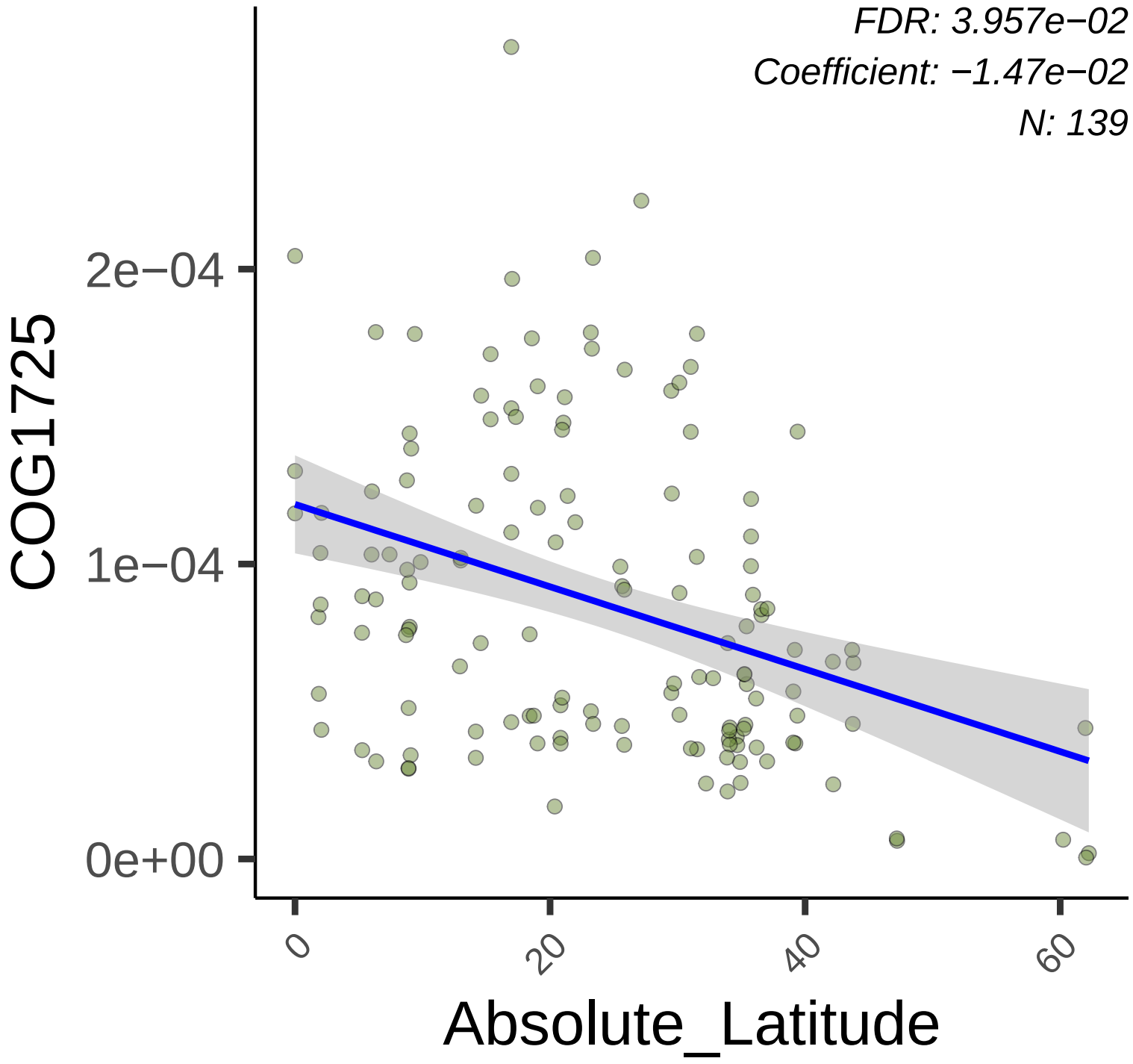

FDR: 3.926e−02
Coefficient: −3.53e−02
N: 139
COG4370
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

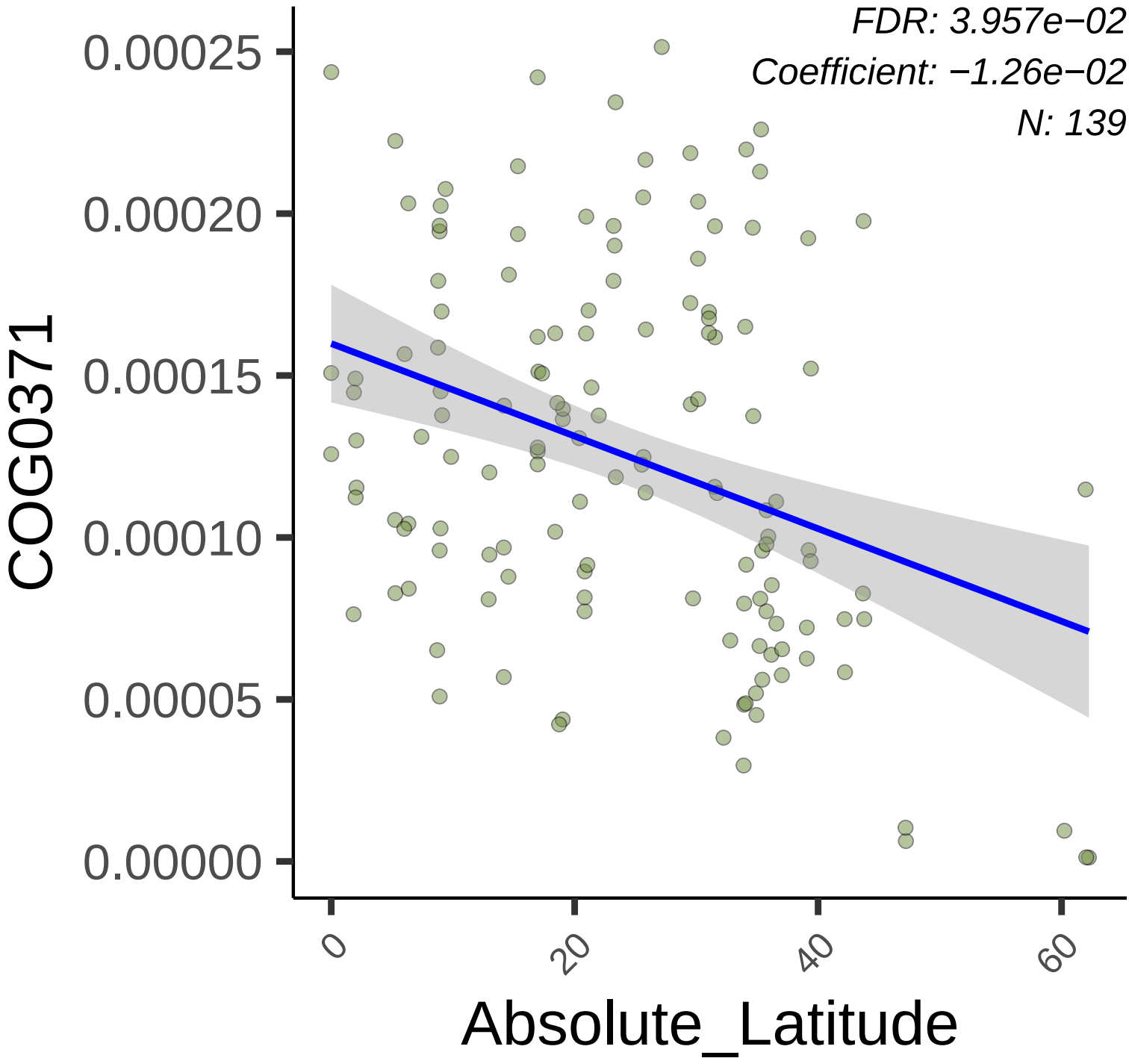

FDR: 3.928e−02
Coefficient: 1.58e−02
N: 139
8e−05
6e−05
4e−05
2e−05
0e+00
COG4935
0
20
40
60
Absolute_Latitude

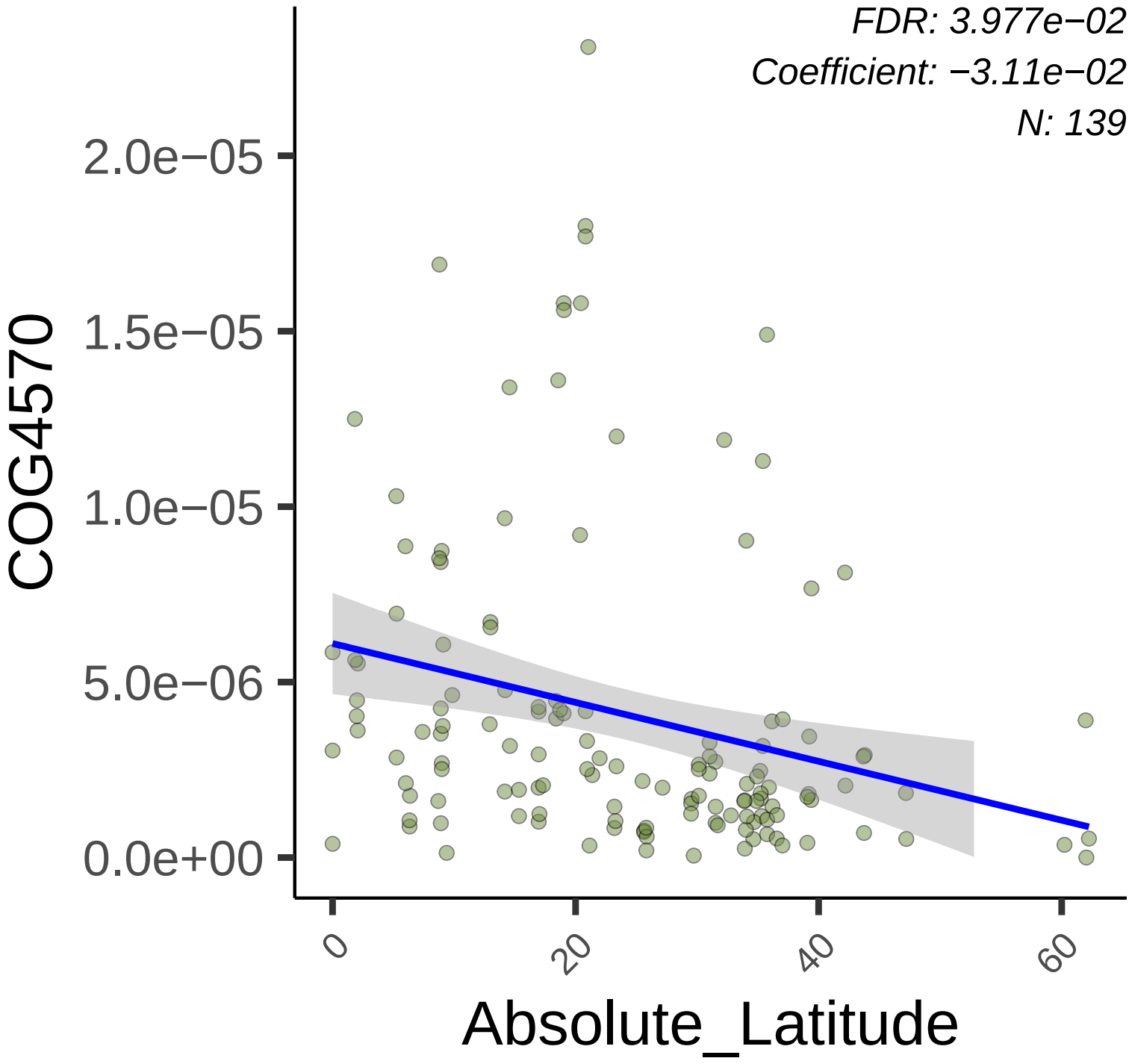

FDR: 3.929e−02
Coefficient: −4.70e−03
N: 139
0.00030
0.00025
0.00020
0.00015
0.00010
COG0780
0
20
40
60
Absolute_Latitude

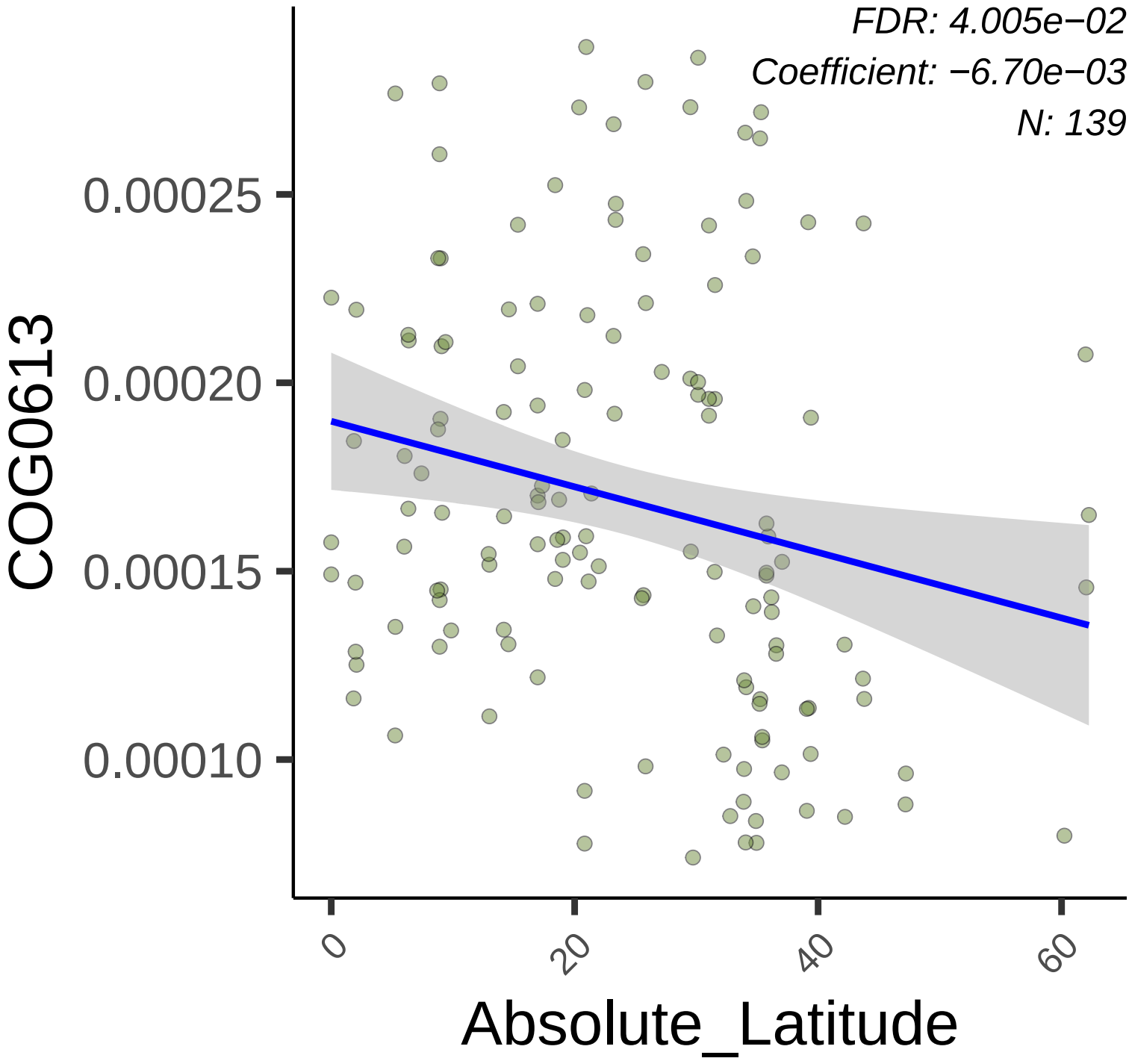

FDR: 3.933e−02
Coefficient: 2.56e−03
N: 139
COG0458
0.0014
0.0012
0.0010
0.0008
0
20
40
60
Absolute_Latitude

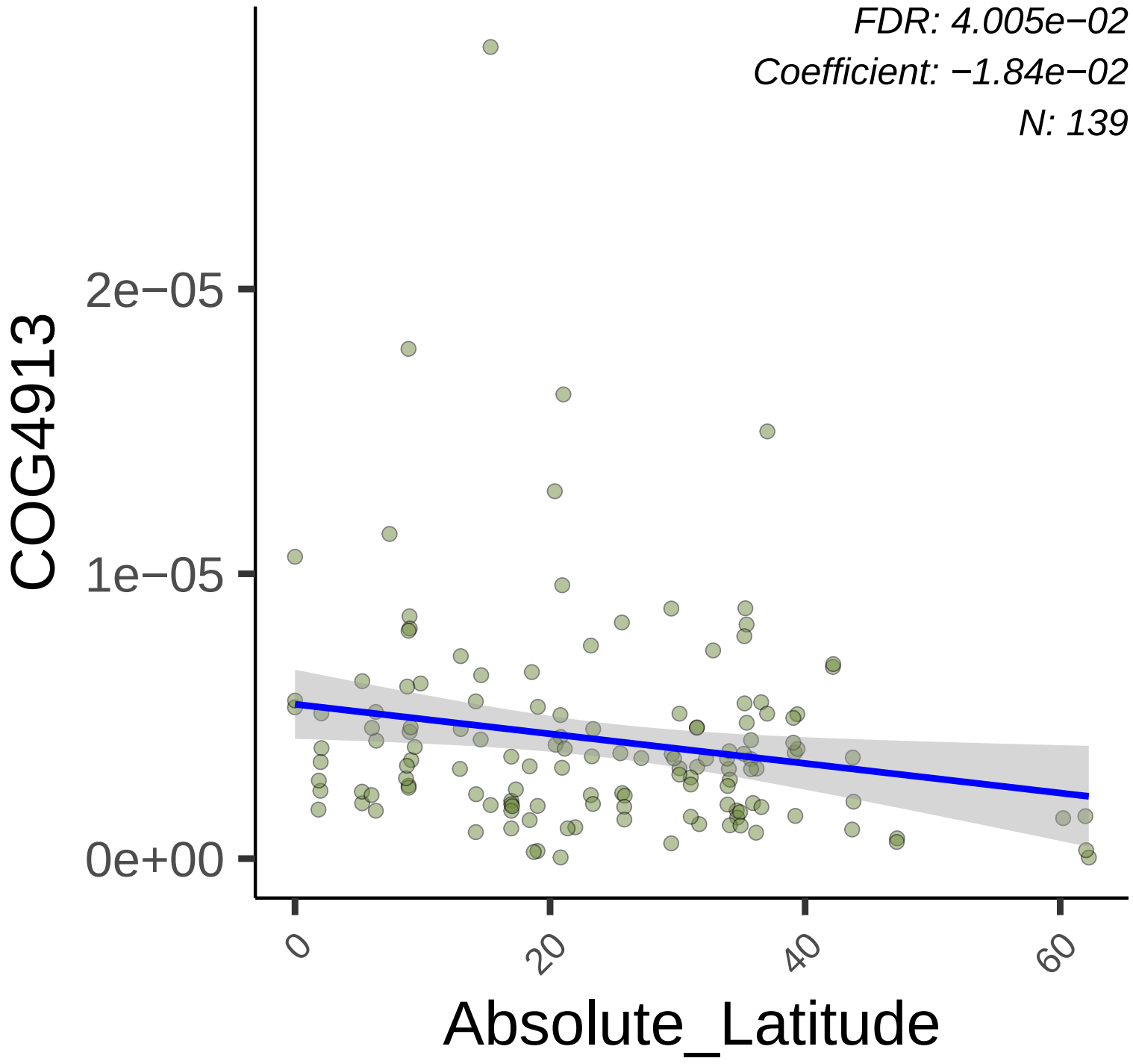

FDR: 3.940e−02
Coefficient: 2.11e−02
N: 139
COG3787
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

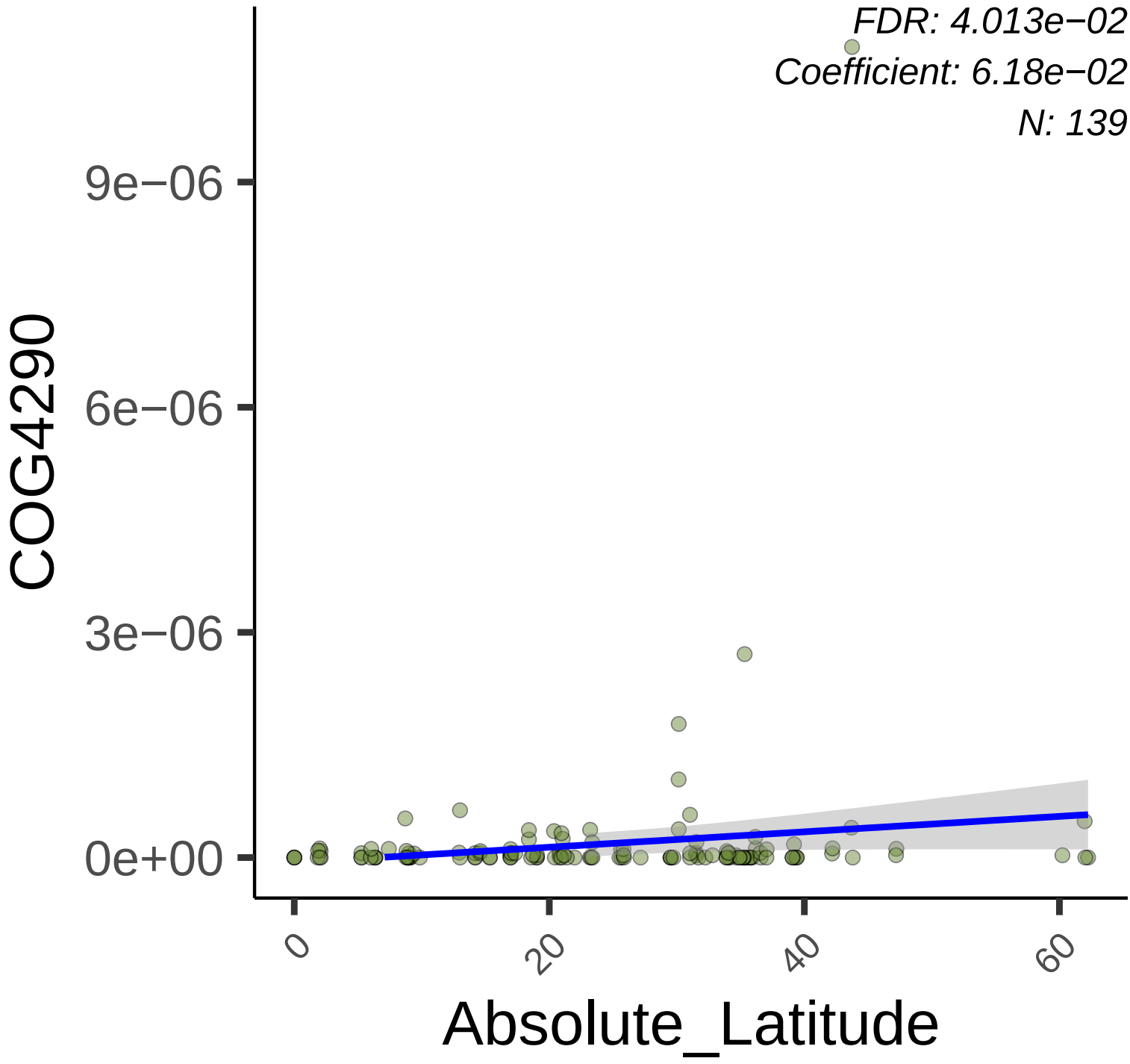

FDR: 3.957e−02
Coefficient: −1.47e−02
N: 139
COG1725
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

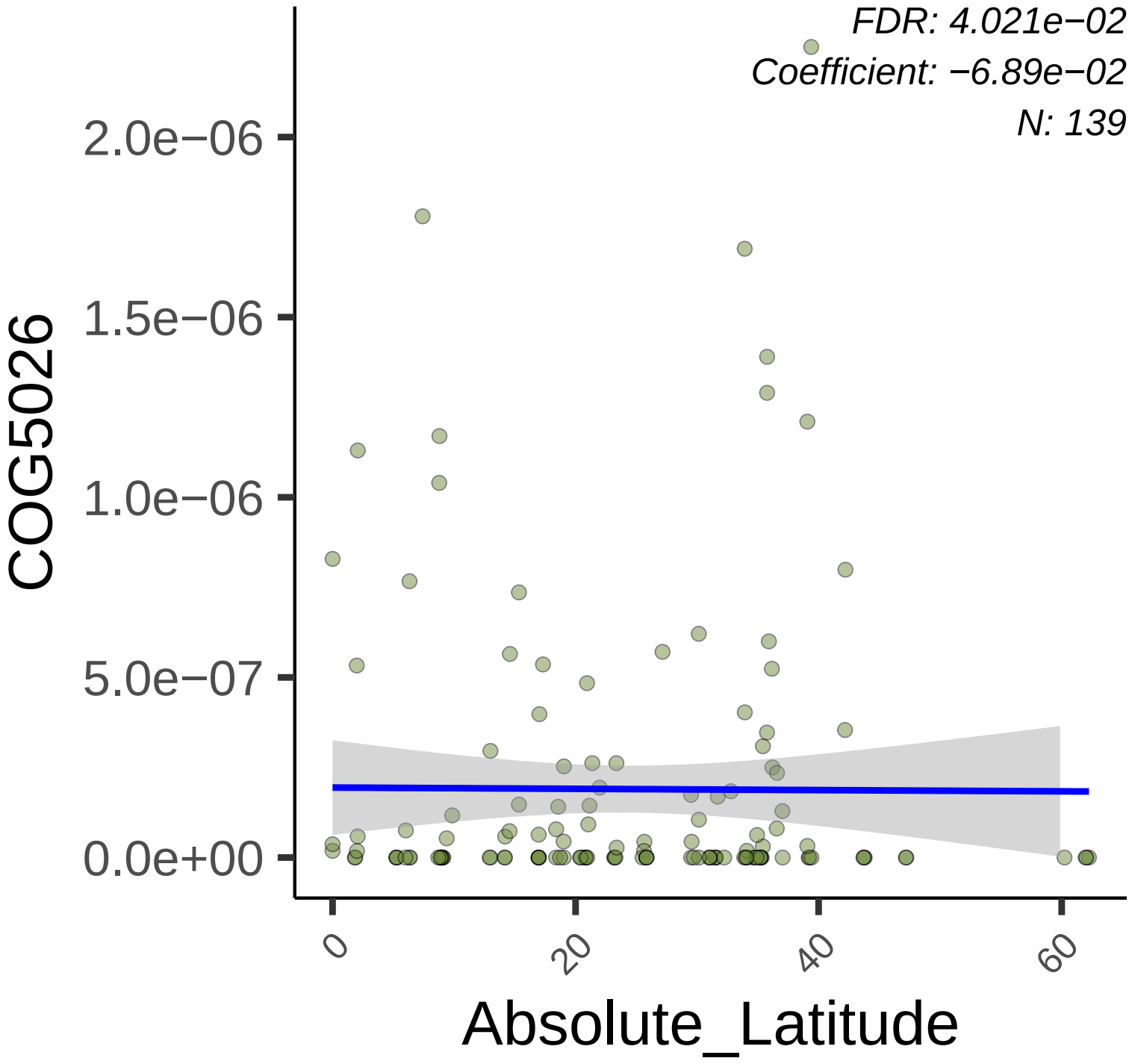

FDR: 3.957e−02
Coefficient: −1.26e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
COG0371
0
20
40
60
Absolute_Latitude

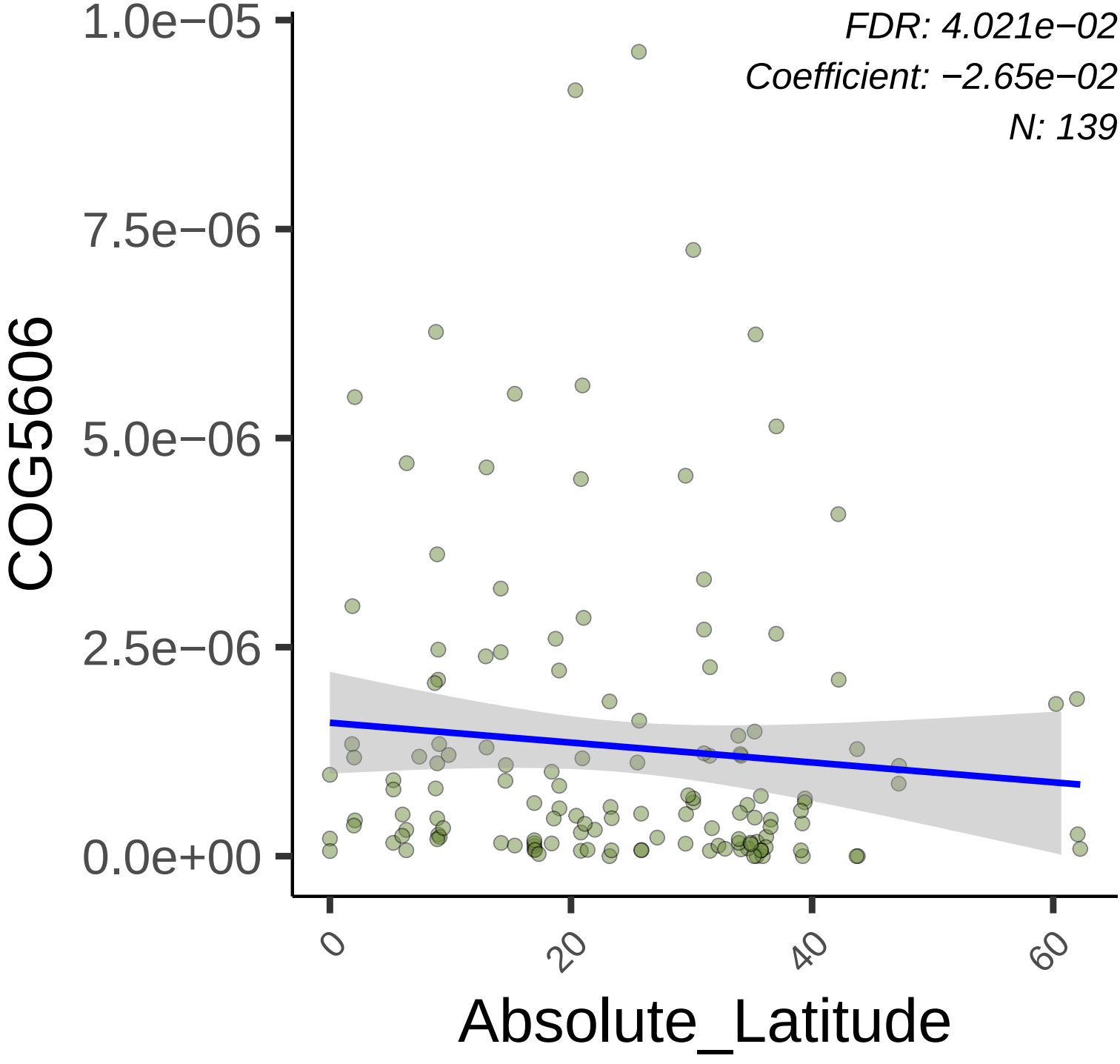

FDR: 3.977e−02
Coefficient: −3.11e−02
N: 139
COG4570
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

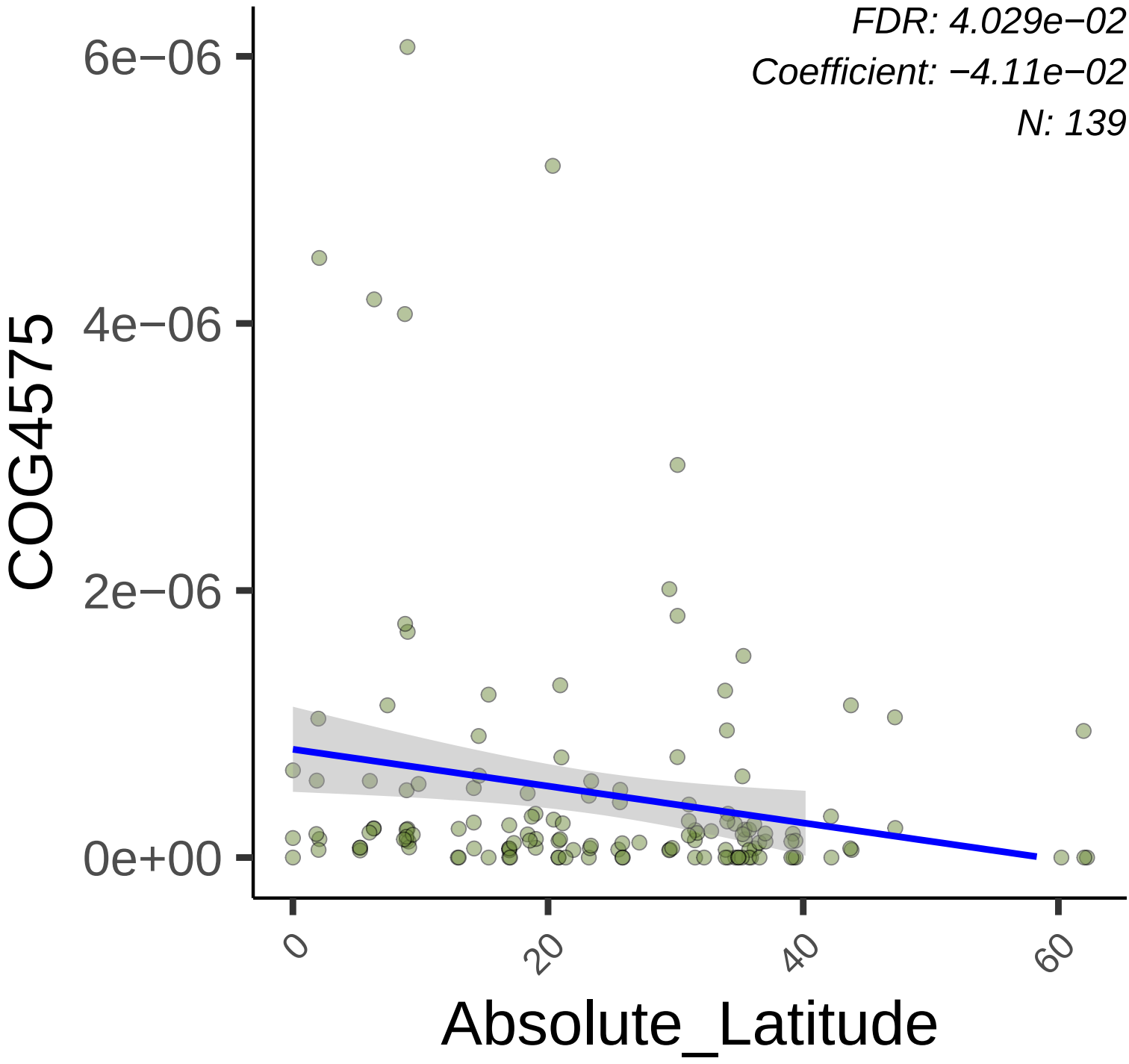

FDR: 4.005e−02
Coefficient: −6.70e−03
N: 139
COG0613
0.00025
0.00020
0.00015
0.00010
0
20
40
60
Absolute_Latitude

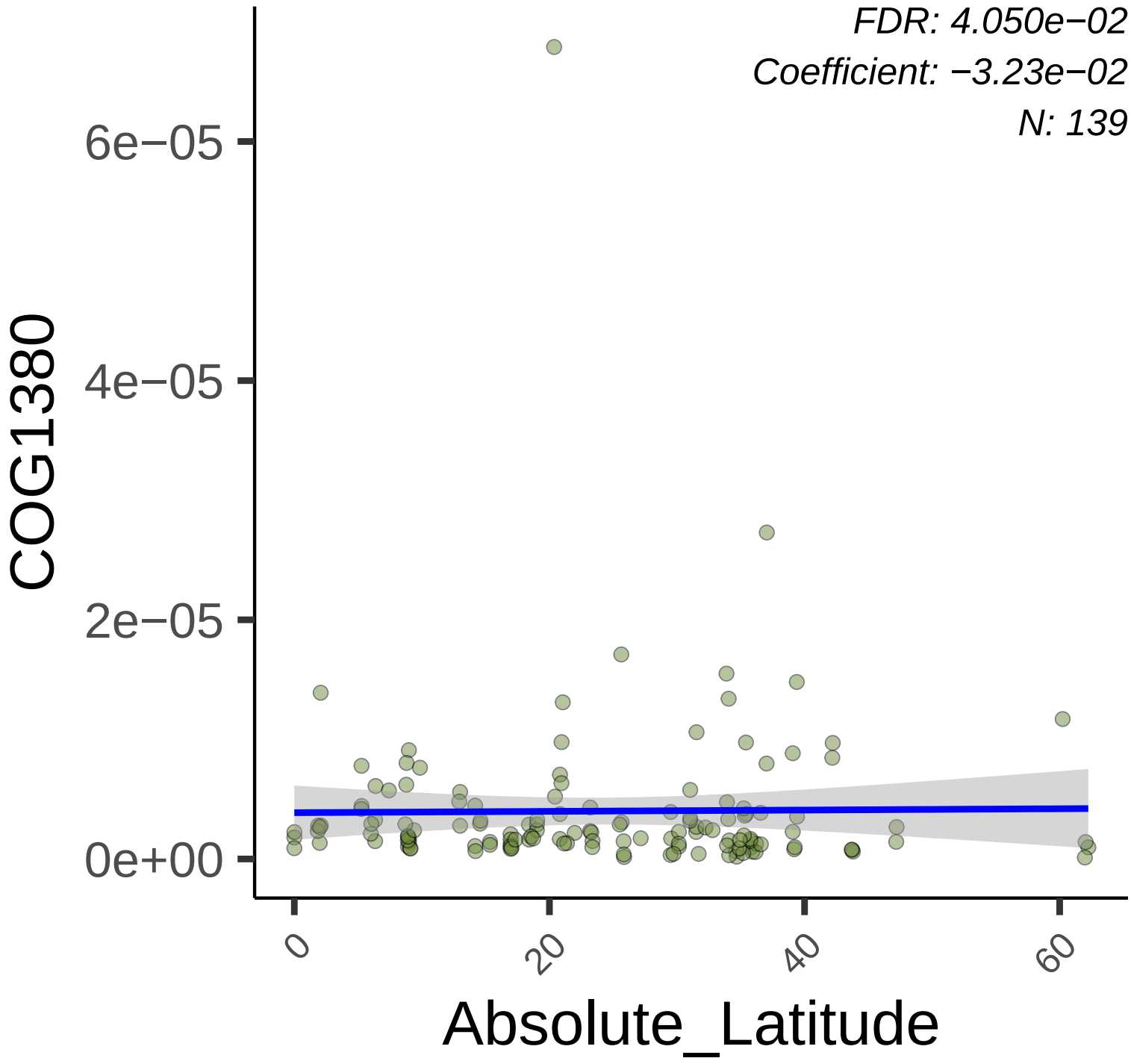

FDR: 4.005e−02
Coefficient: −1.84e−02
N: 139
COG4913
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

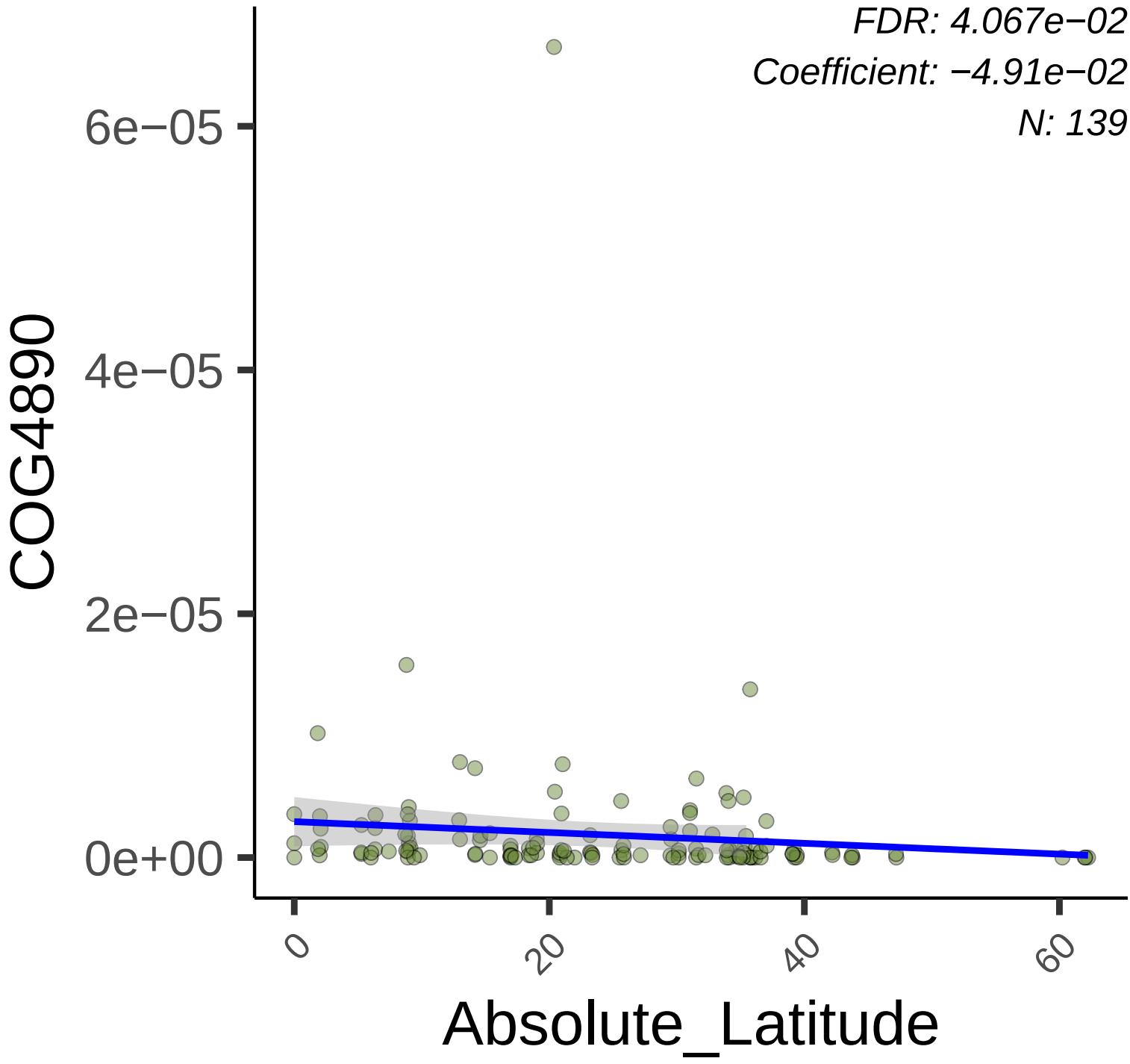

FDR: 4.013e−02
Coefficient: 6.18e−02
N: 139
COG4290
9e−06
6e−06
3e−06
0e+00
0
20
40
60
Absolute_Latitude

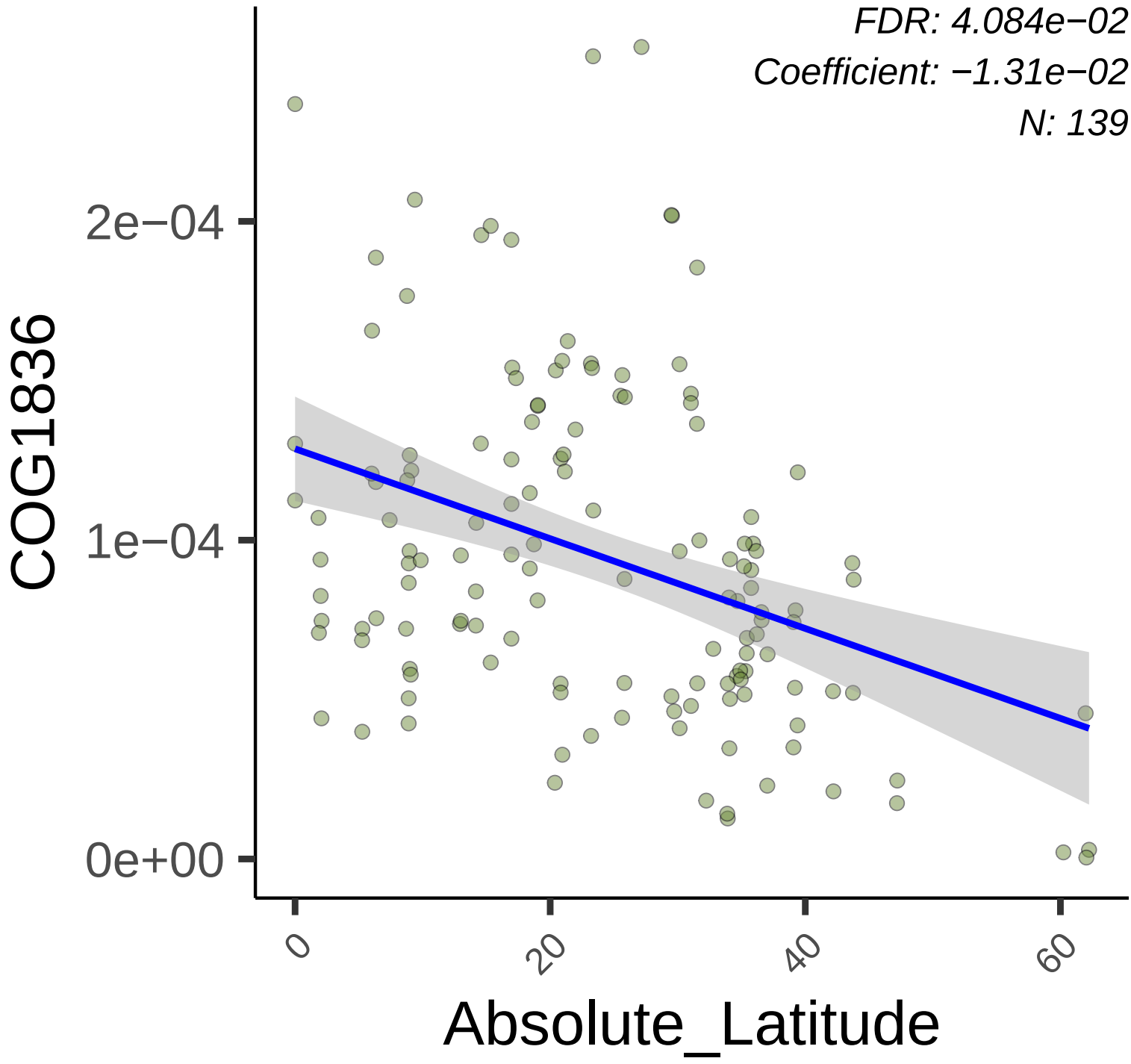

FDR: 4.021e−02
Coefficient: −6.89e−02
N: 139
COG5026
2.0e−06
1.5e−06
1.0e−06
5.0e−07
0.0e+00
0
20
40
60
Absolute_Latitude

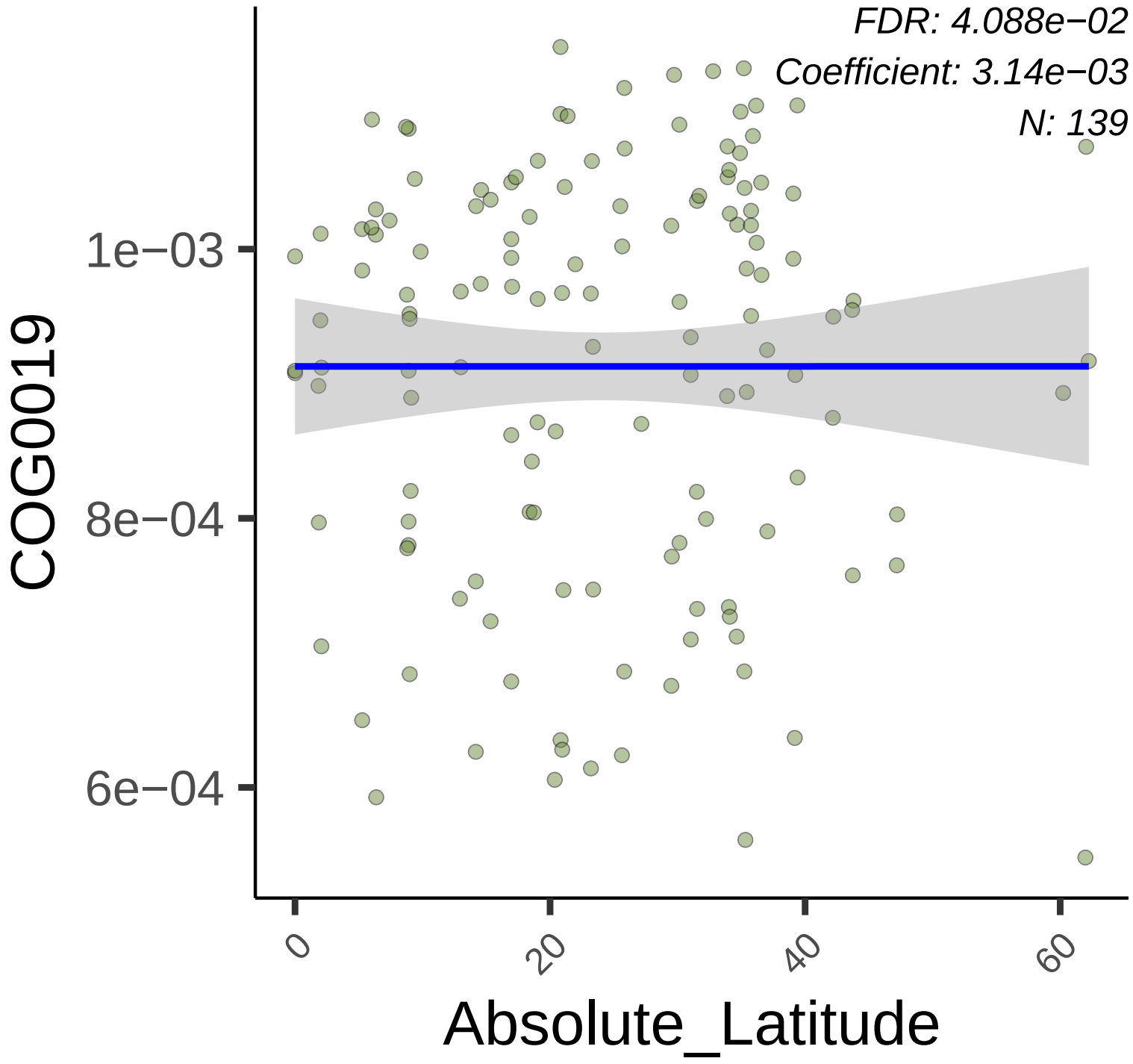

FDR: 4.021e−02
Coefficient: −2.65e−02
N: 139
1.0e−05
7.5e−06
5.0e−06
2.5e−06
0.0e+00
COG5606
0
20
40
60
Absolute_Latitude

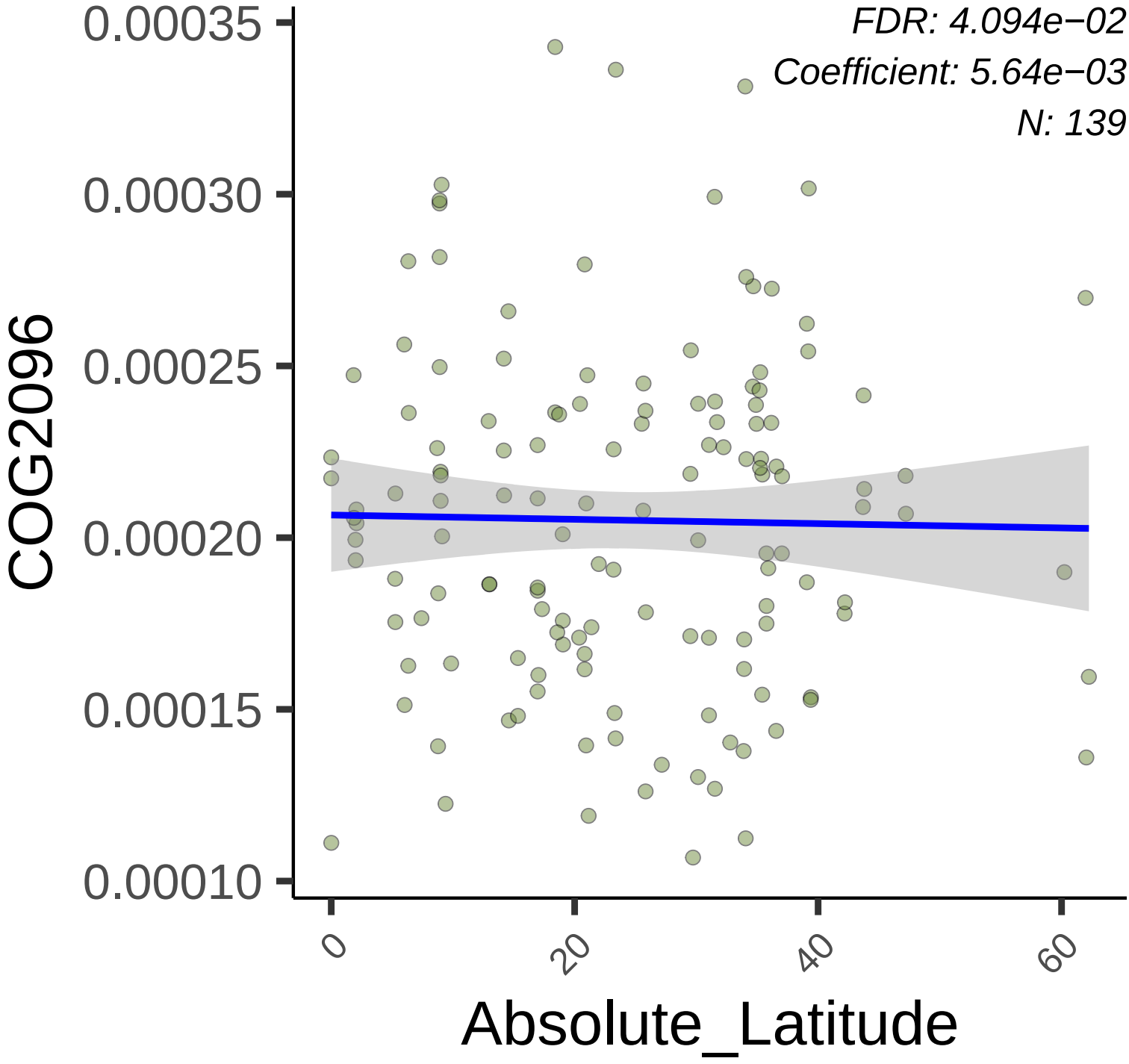

FDR: 4.029e−02
Coefficient: −4.11e−02
N: 139
6e−06
4e−06
2e−06
0e+00
COG4575
0
20
40
60
Absolute_Latitude

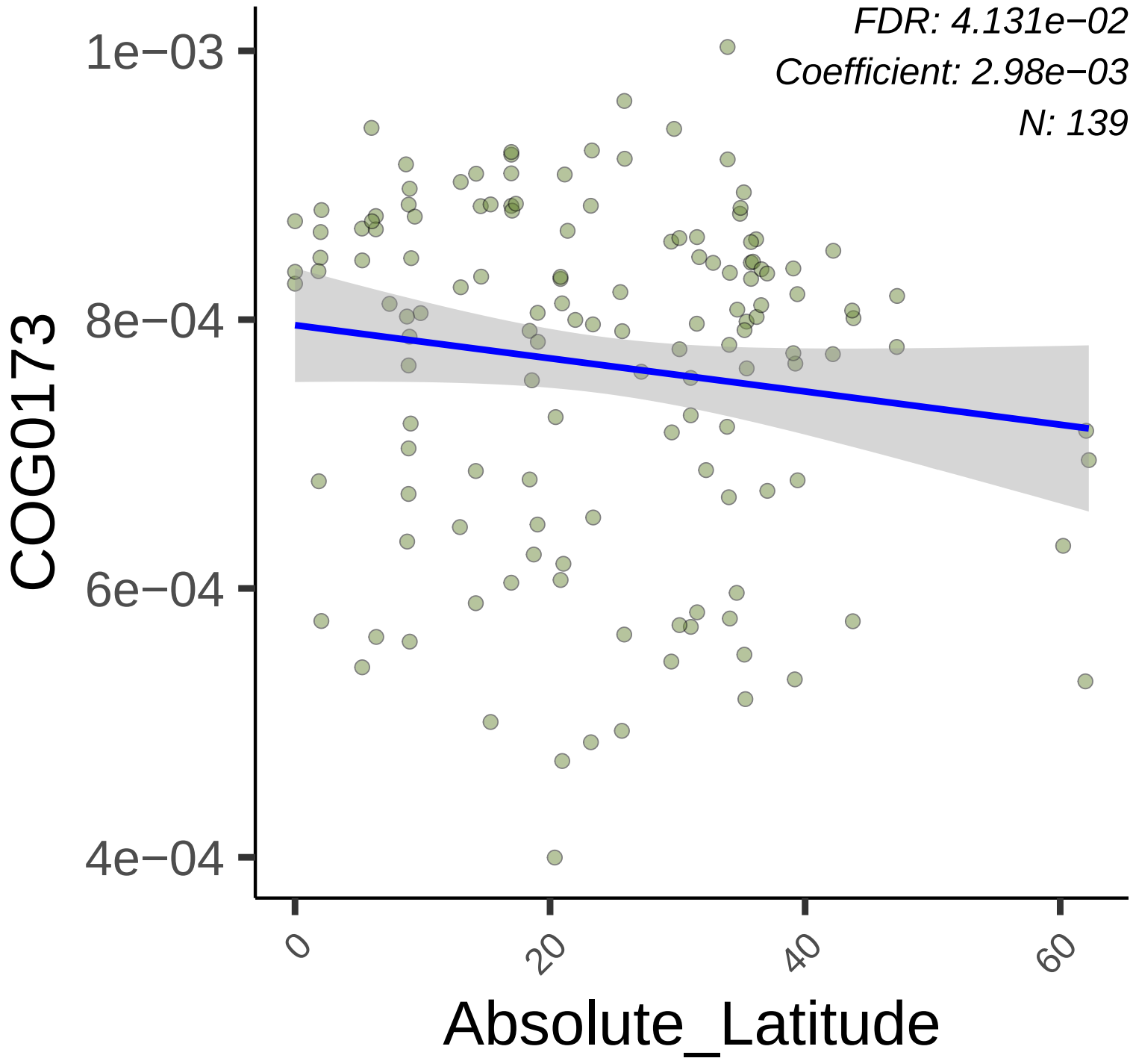

FDR: 4.050e−02
Coefficient: −3.23e−02
N: 139
COG1380
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

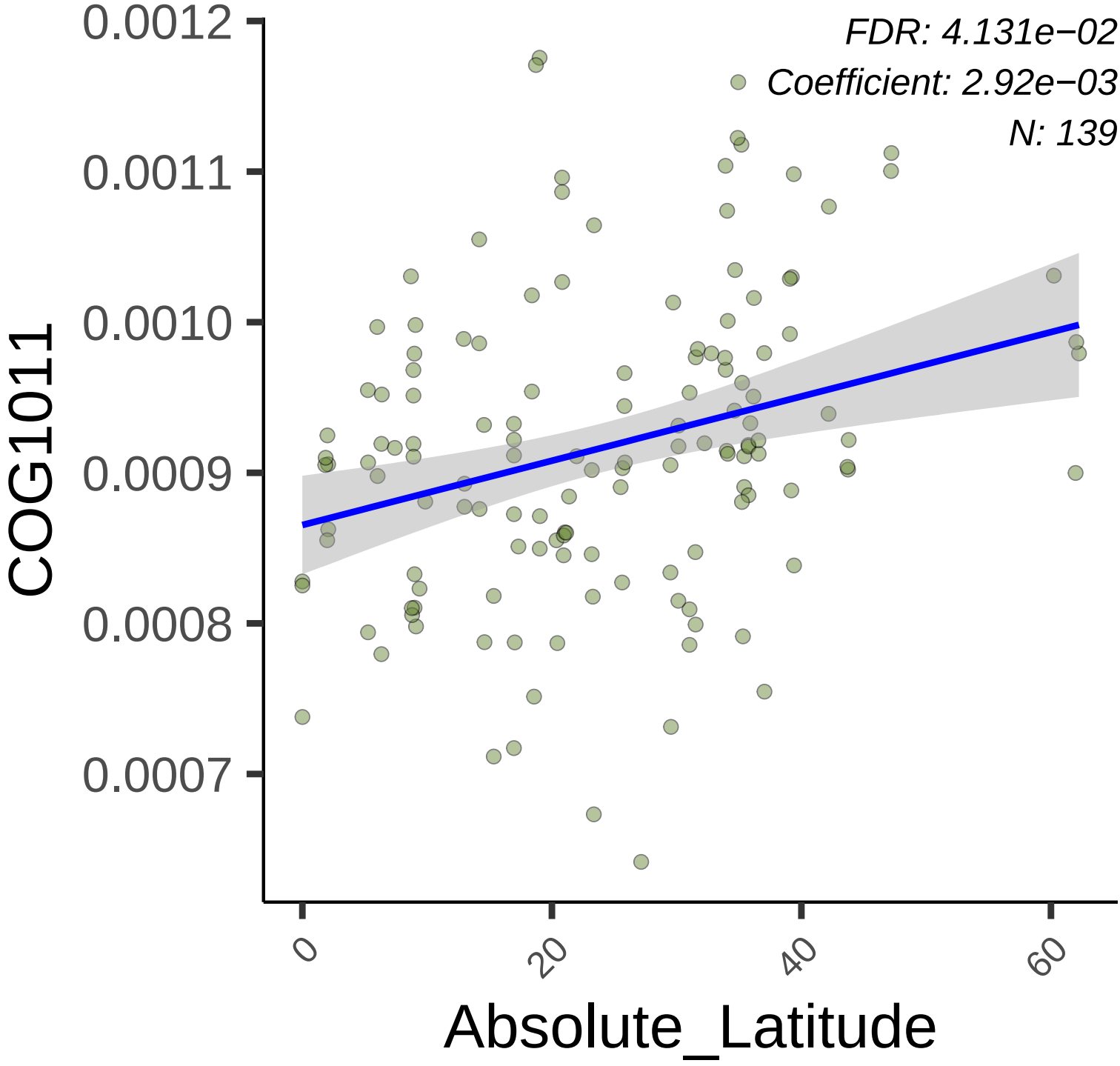

FDR: 4.067e−02
Coefficient: −4.91e−02
N: 139
COG4890
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

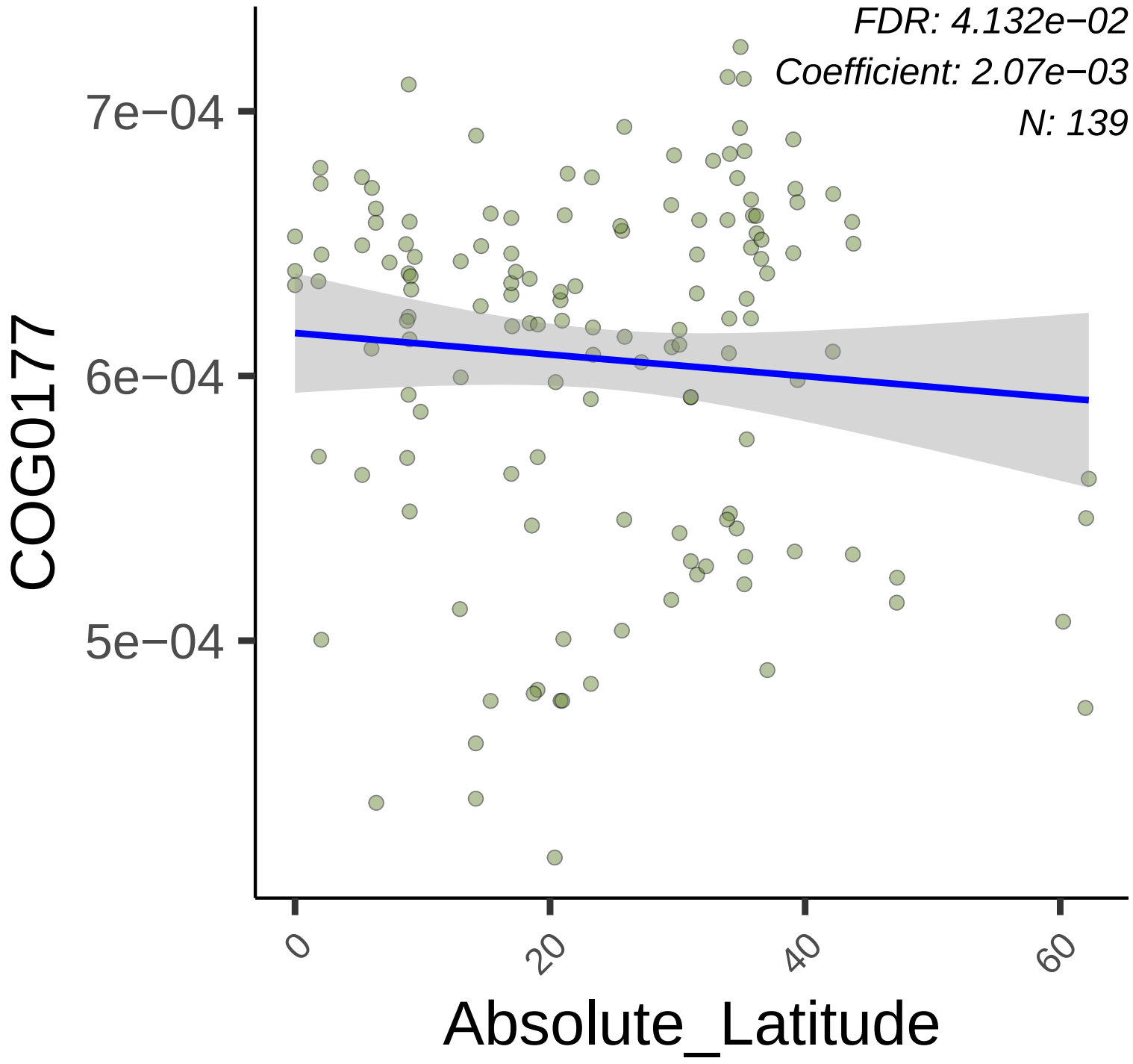

FDR: 4.084e−02
Coefficient: −1.31e−02
N: 139
COG1836
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

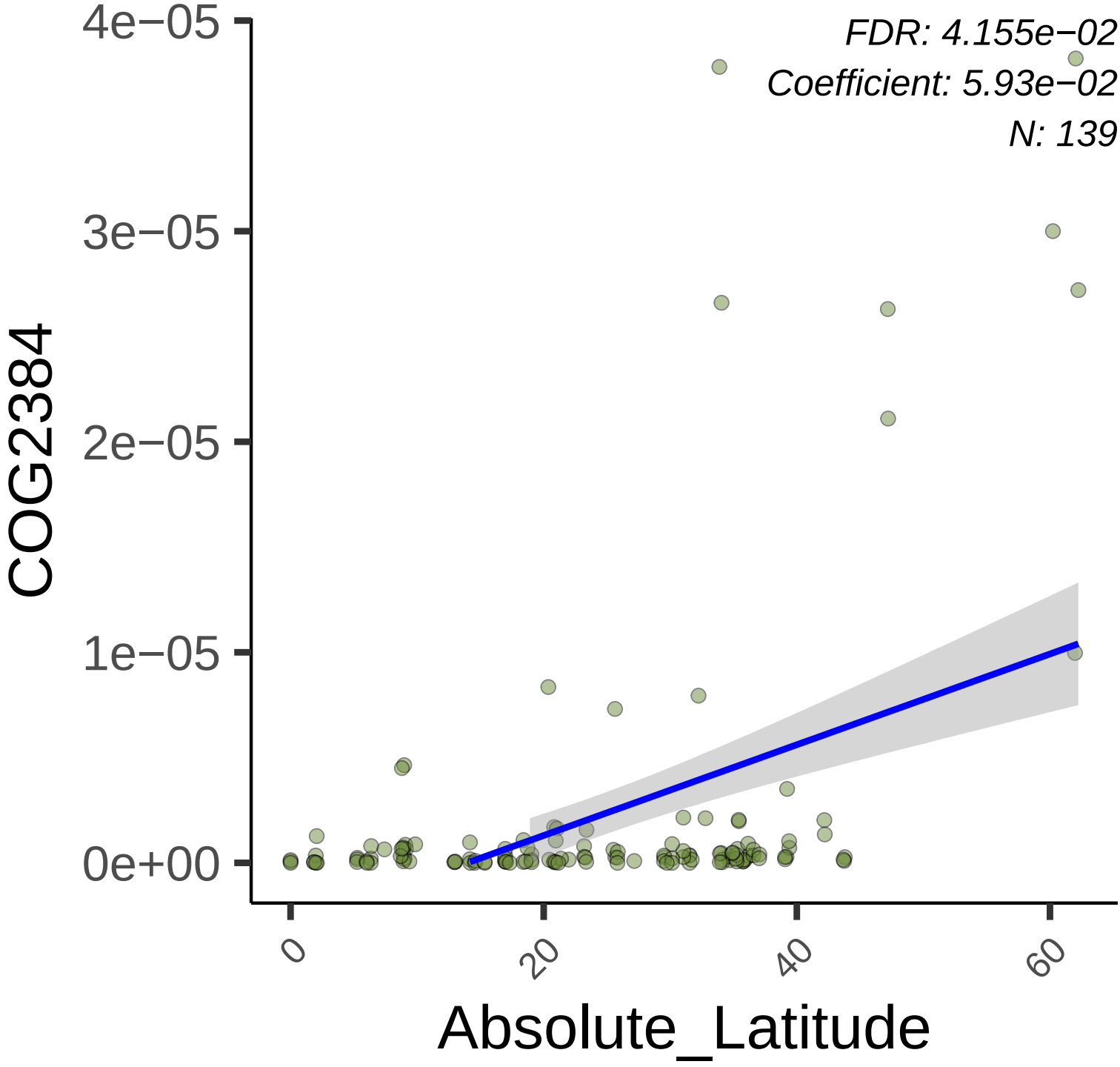

FDR: 4.088e−02
Coefficient: 3.14e−03
N: 139
1e−03
8e−04
6e−04
COG0019
0
20
40
60
Absolute_Latitude

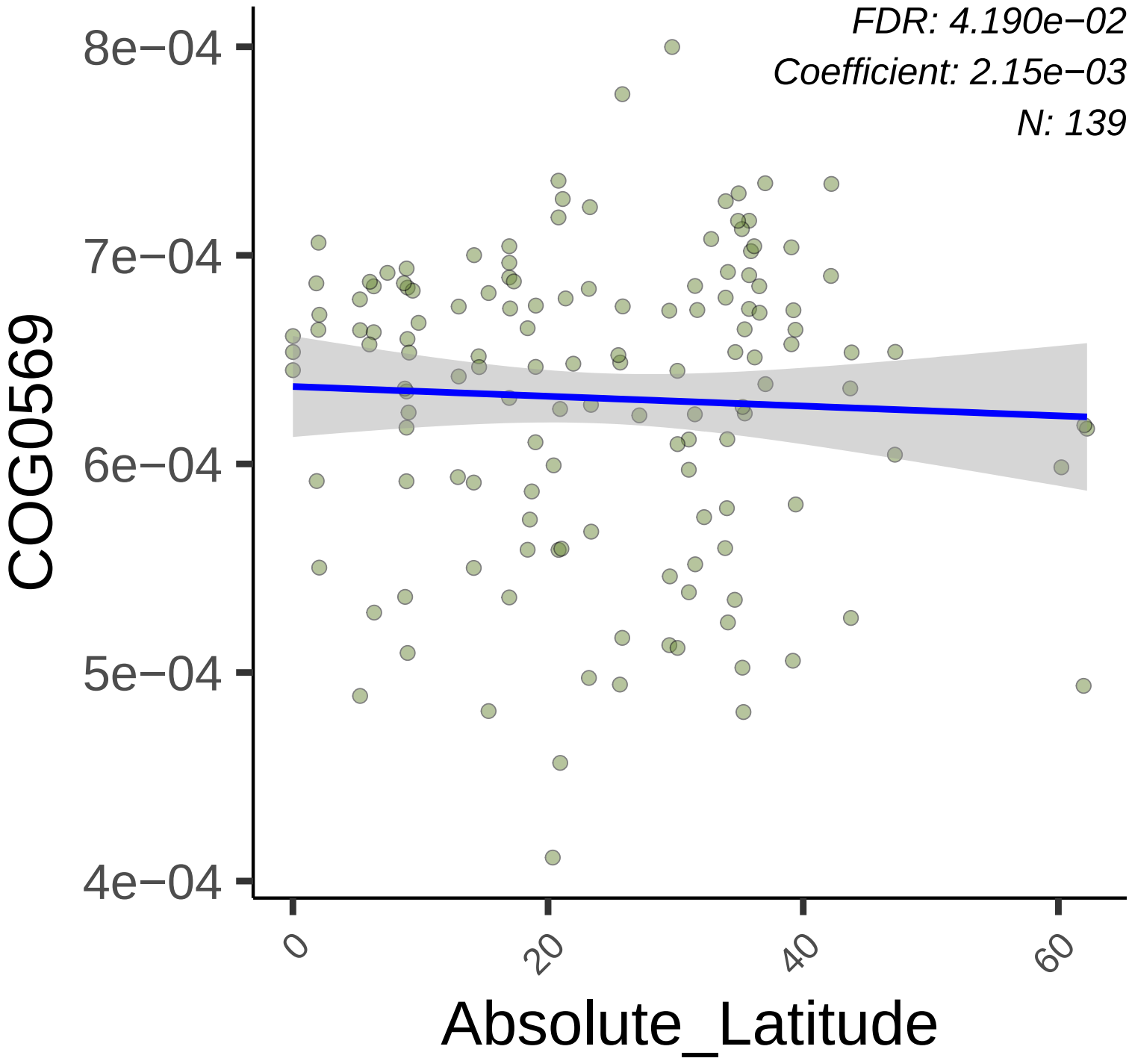

FDR: 4.094e−02
Coefficient: 5.64e−03
N: 139
0.00035
0.00030
0.00025
0.00020
0.00015
0.00010
COG2096
0
20
40
60
Absolute_Latitude

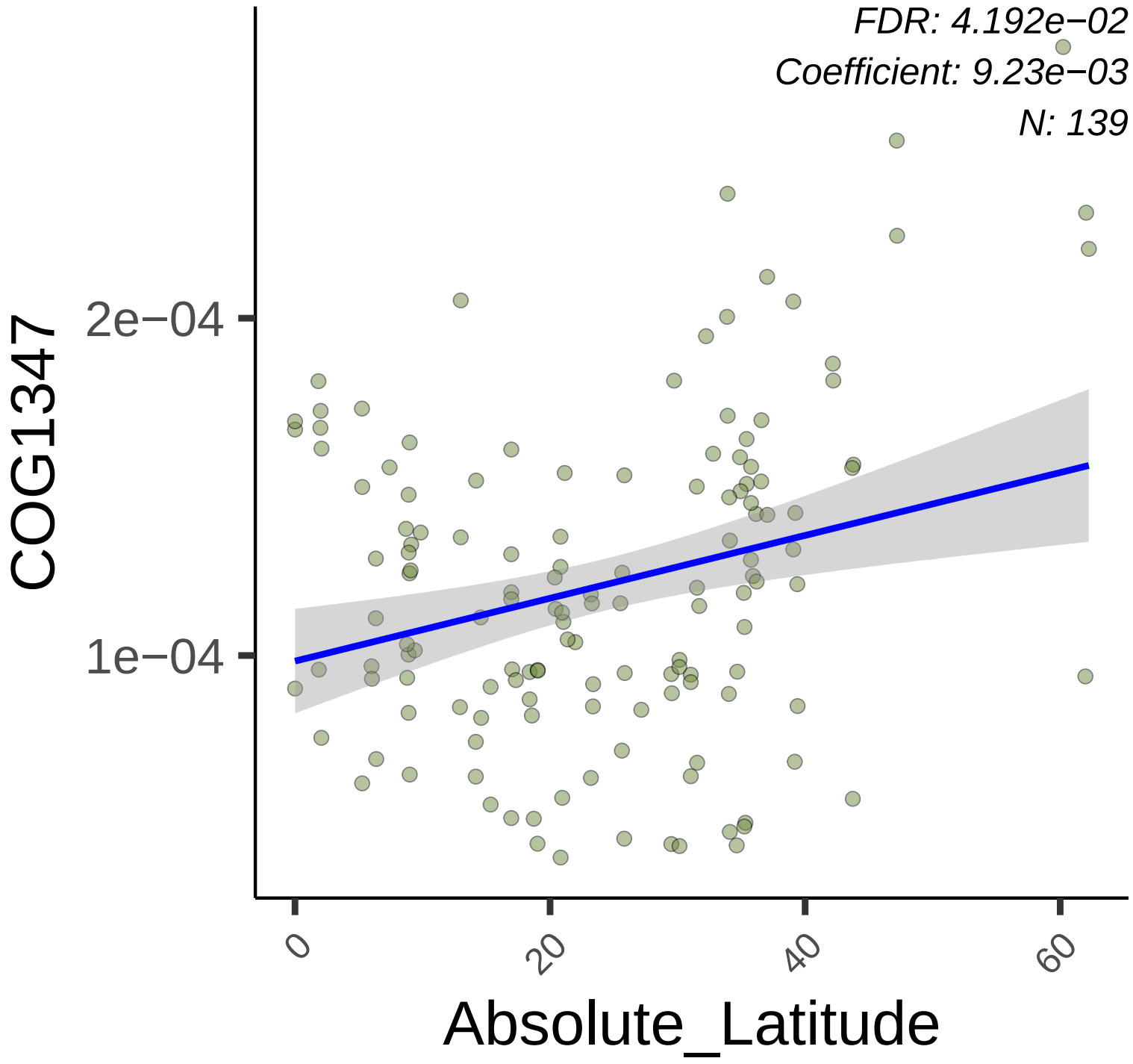

FDR: 4.131e−02
Coefficient: 2.98e−03
N: 139
1e−03
8e−04
6e−04
4e−04
COG0173
0
20
40
60
Absolute_Latitude

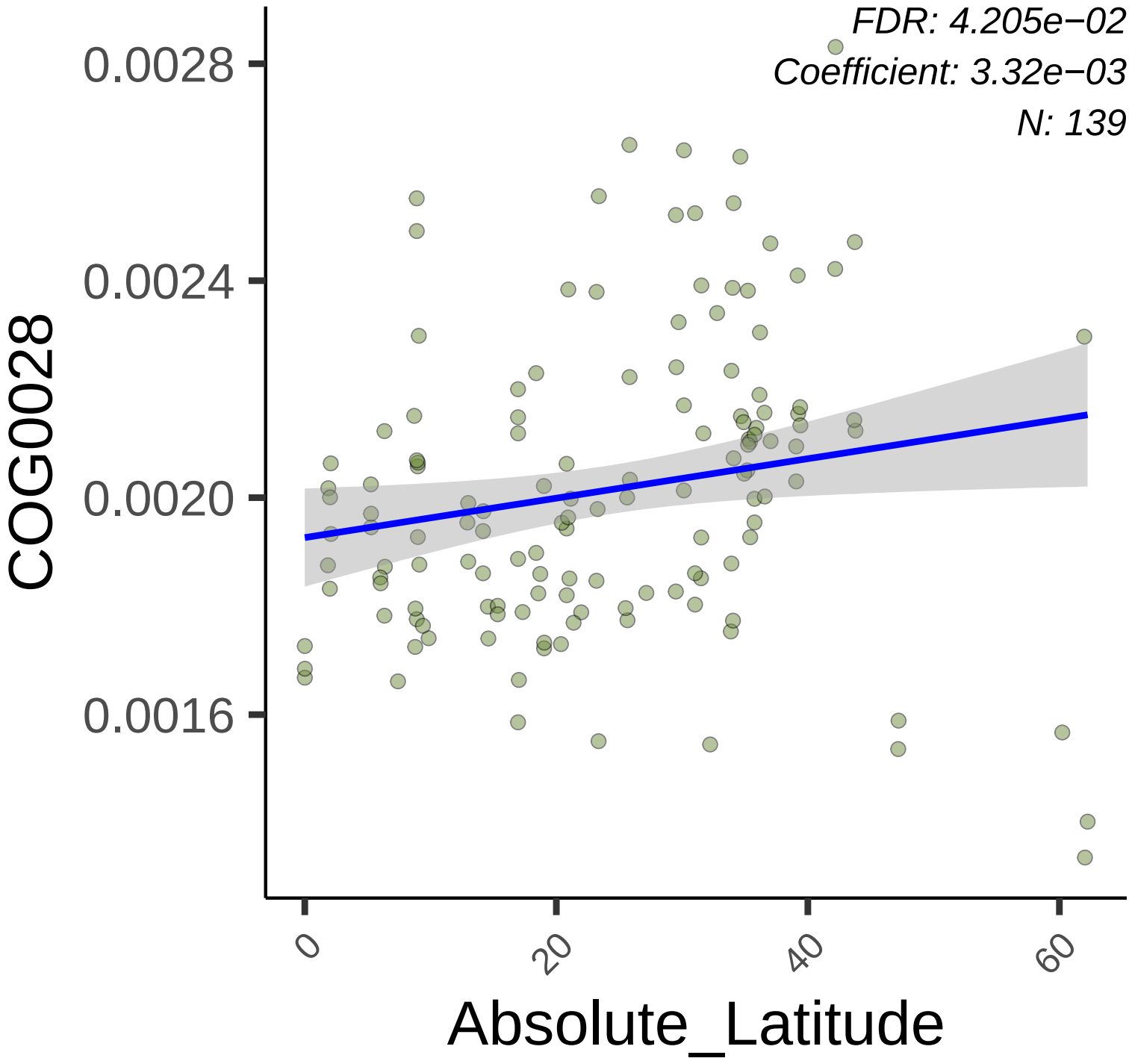

FDR: 4.131e−02
Coefficient: 2.92e−03
N: 139
0.0012
0.0011
0.0010
0.0009
0.0008
0.0007
COG1011
0
20
40
60
Absolute_Latitude

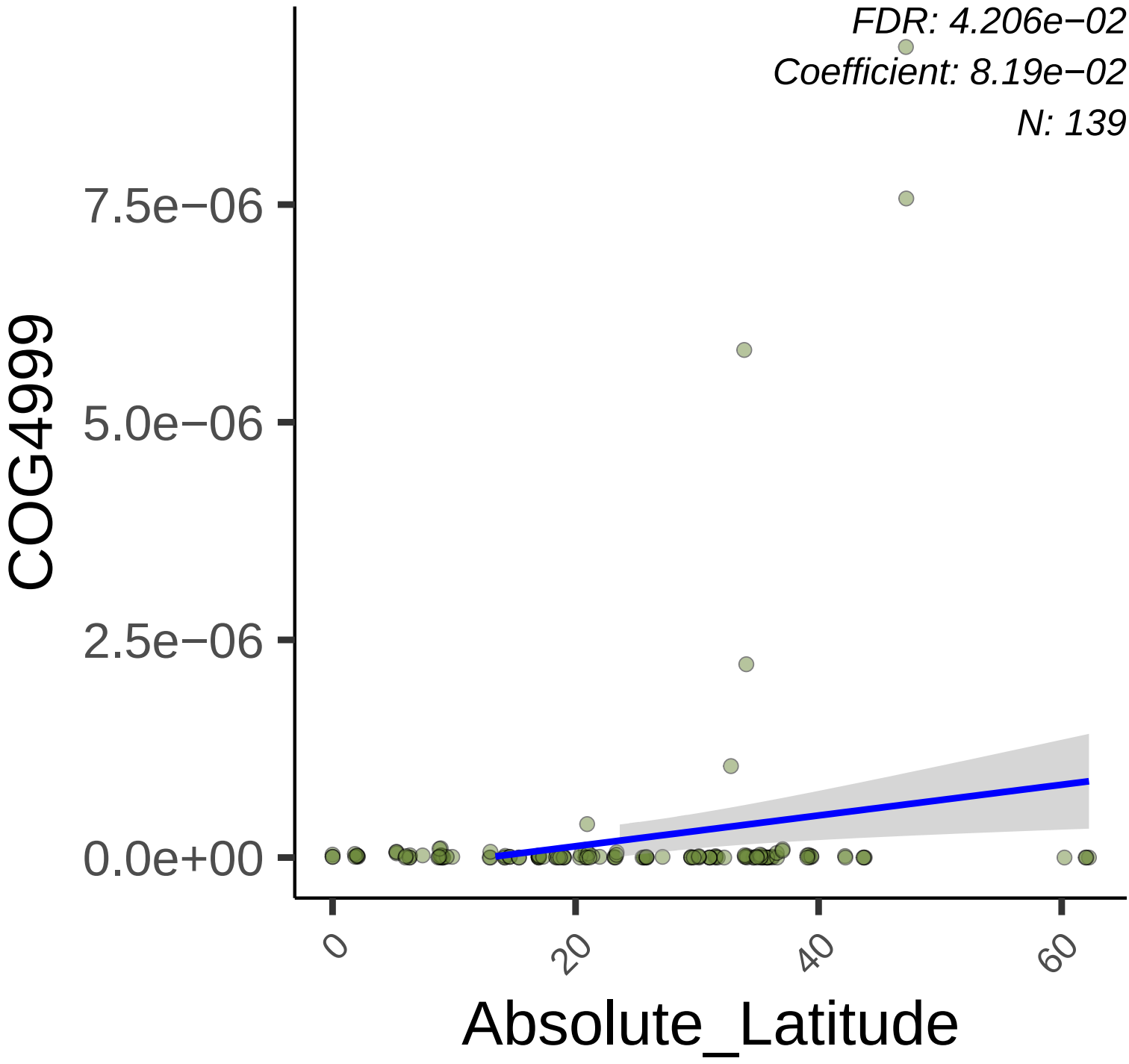

FDR: 4.132e−02
Coefficient: 2.07e−03
N: 139
7e−04
6e−04
5e−04
COG0177
0
20
40
60
Absolute_Latitude

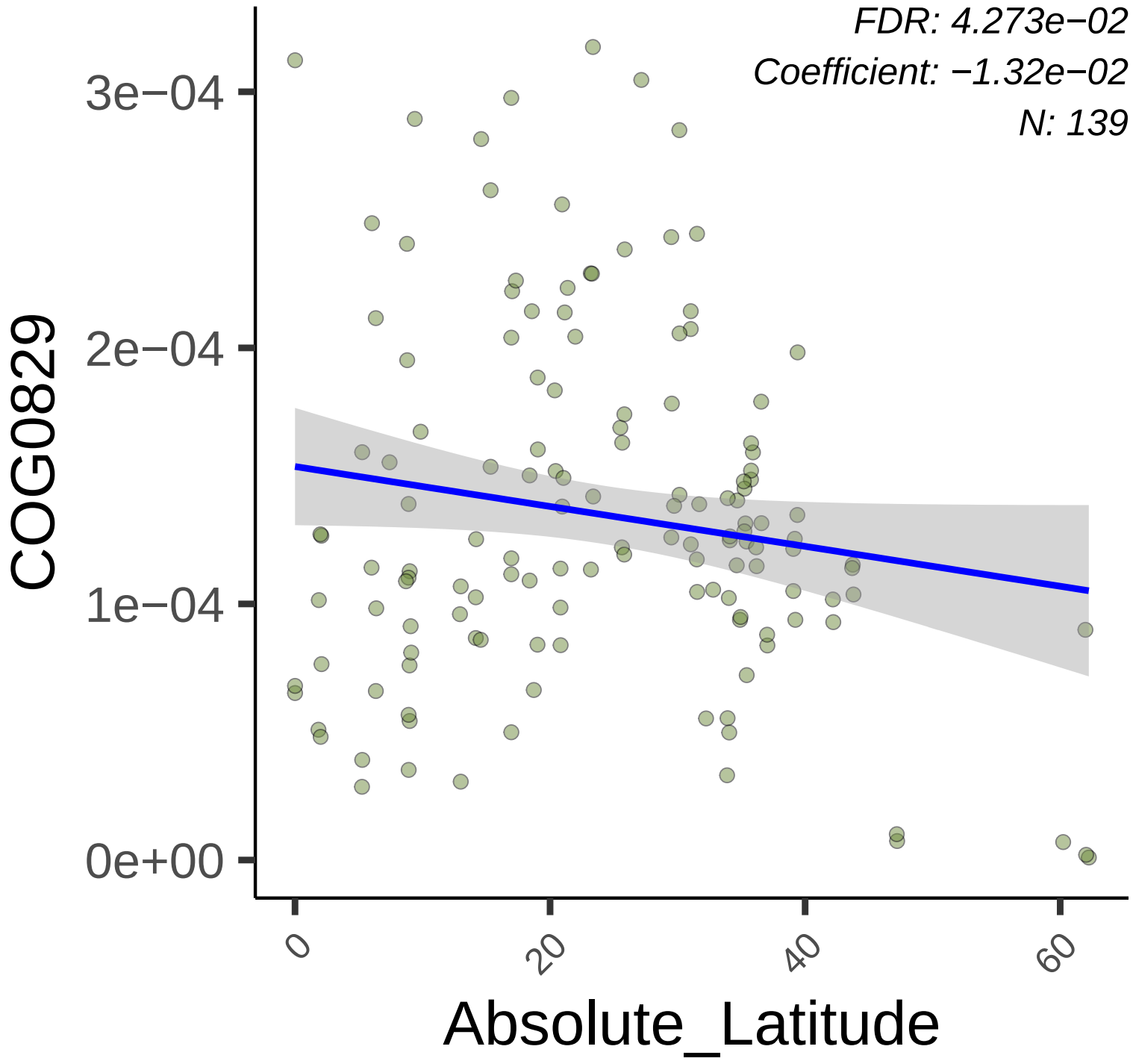

FDR: 4.155e−02
Coefficient: 5.93e−02
N: 139
4e−05
3e−05
2e−05
1e−05
0e+00
COG2384
0
20
40
60
Absolute_Latitude

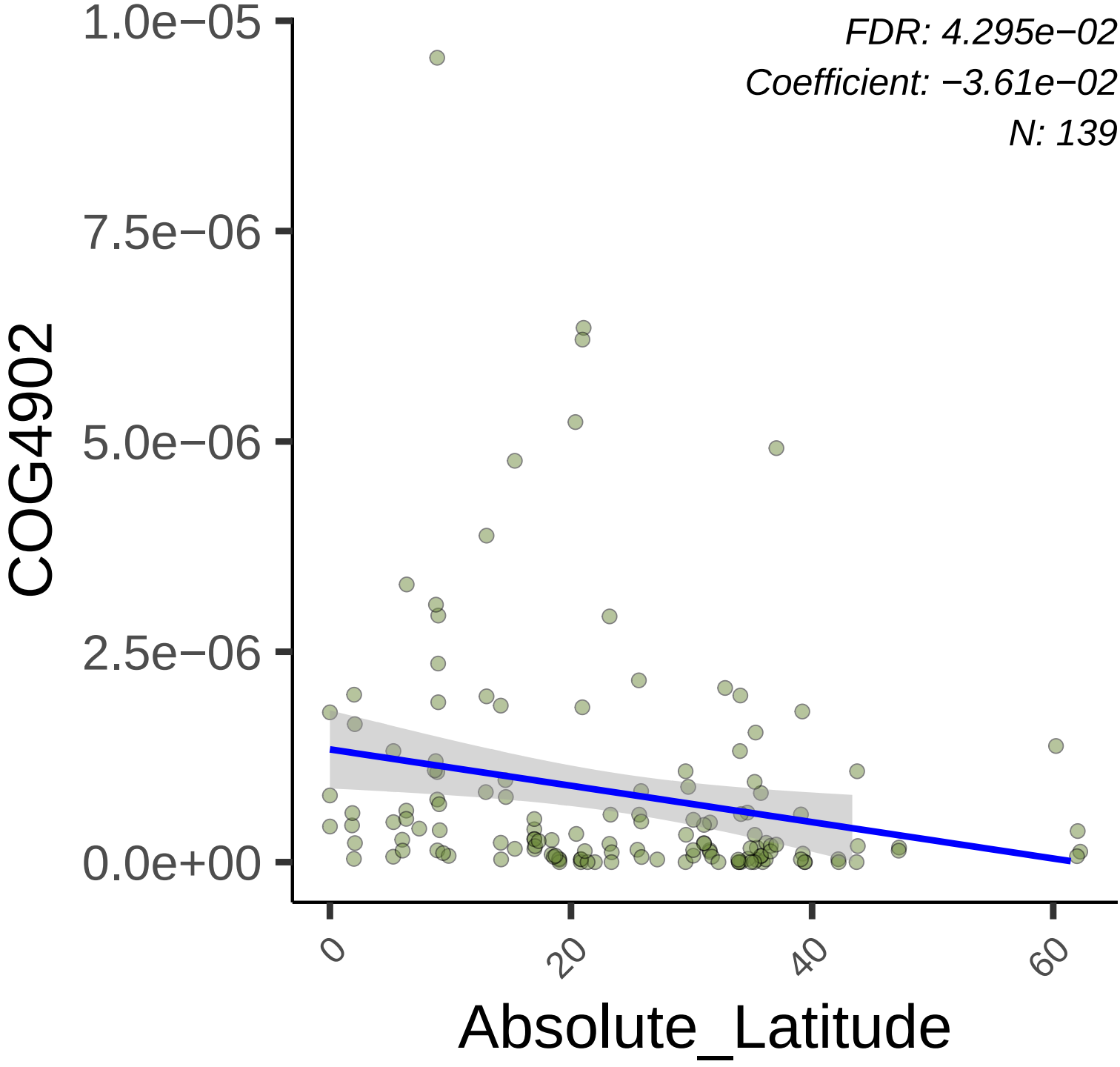

FDR: 4.190e−02
Coefficient: 2.15e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
COG0569
0
20
40
60
Absolute_Latitude

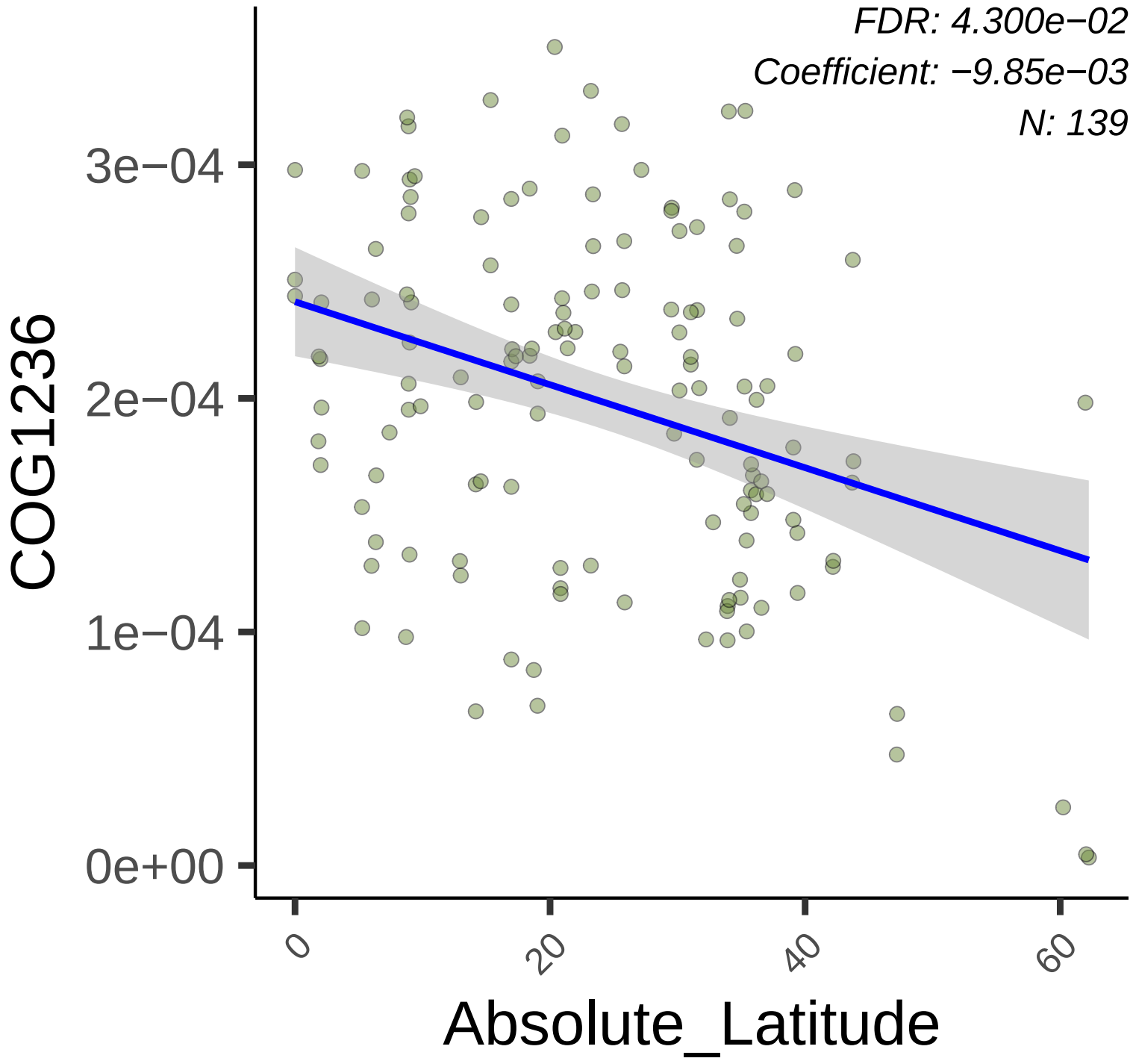

FDR: 4.192e−02
Coefficient: 9.23e−03
N: 139
COG1347
2e−04
1e−04
0
20
40
60
Absolute_Latitude

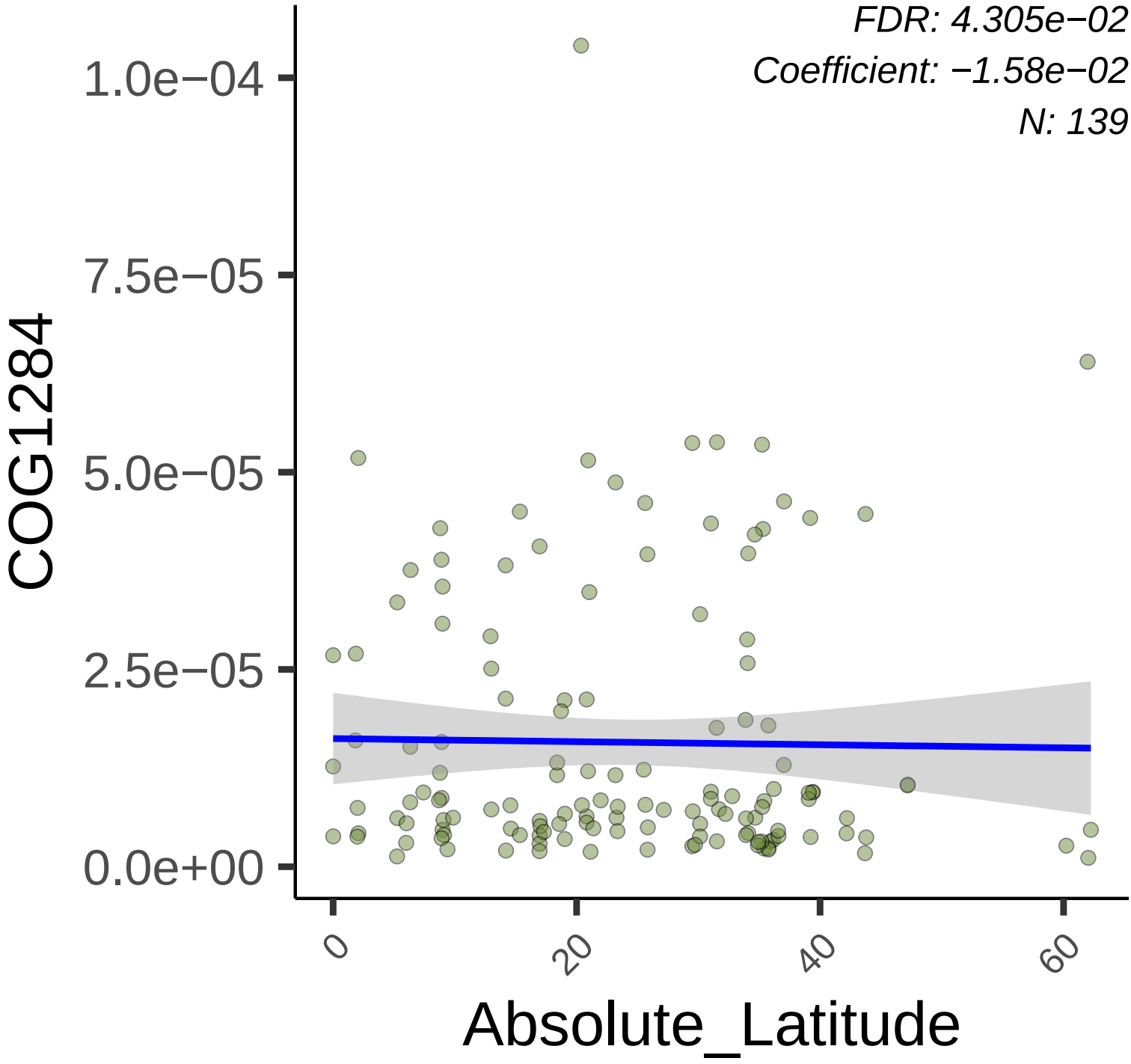

FDR: 4.205e−02
Coefficient: 3.32e−03
N: 139
0.0028
0.0024
0.0020
0.0016
COG0028
0
20
40
60
Absolute_Latitude

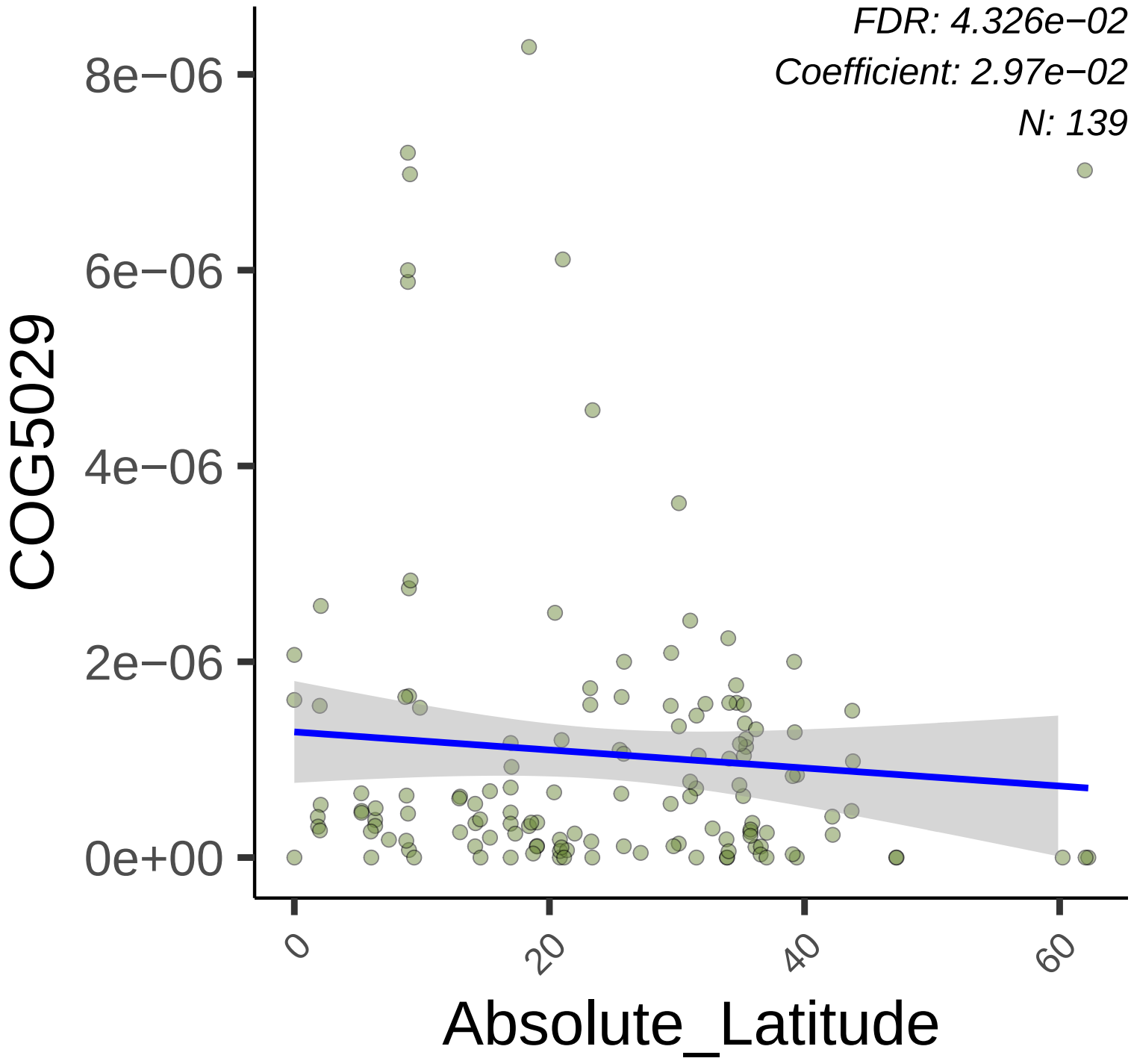

FDR: 4.206e−02
Coefficient: 8.19e−02
N: 139
COG4999
7.5e−06
5.0e−06
2.5e−06
0.0e+00
0
20
40
60
Absolute_Latitude

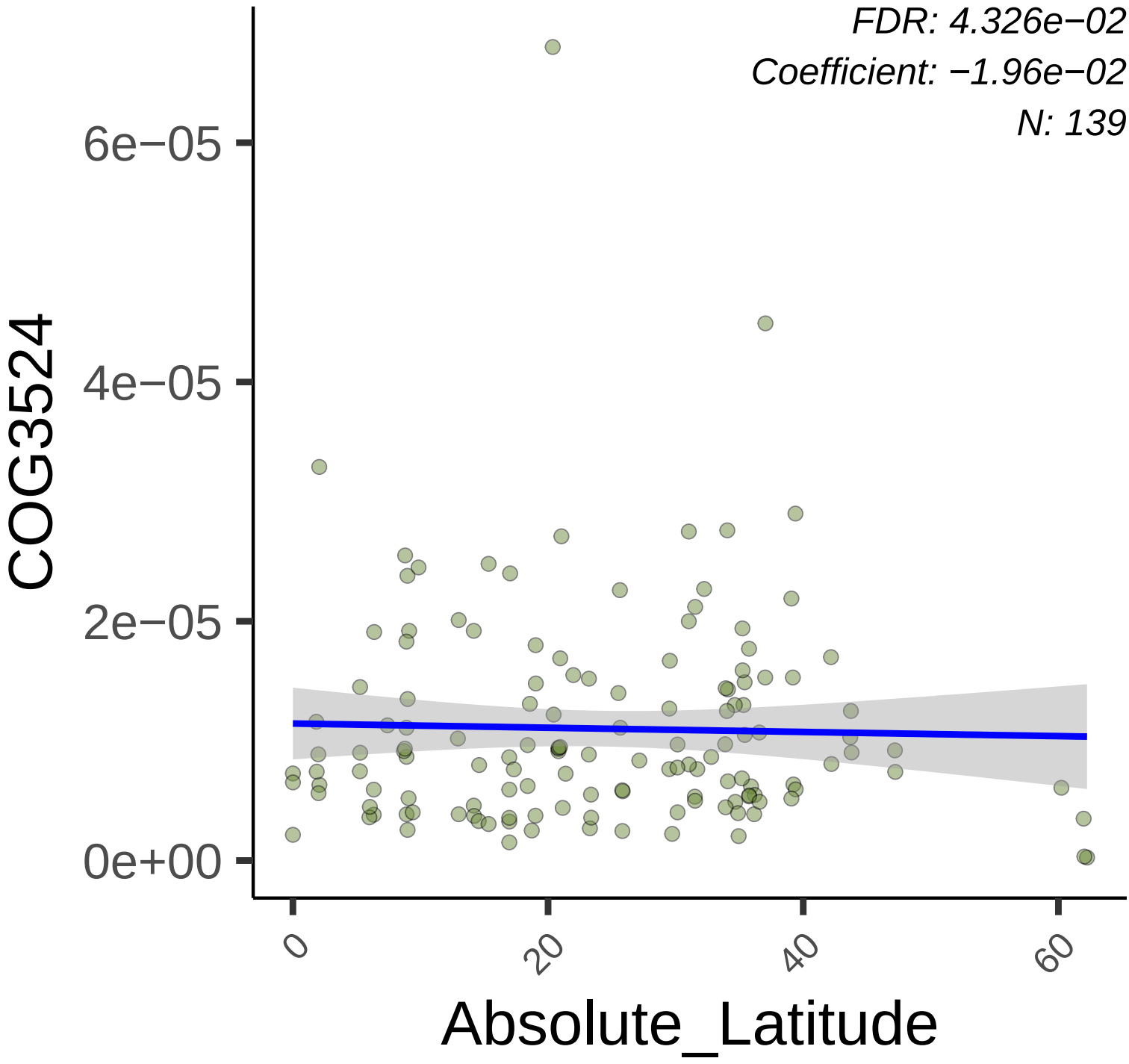

FDR: 4.273e−02
Coefficient: −1.32e−02
N: 139
COG0829
3e−04
2e−04
1e−04
0e+00
0
20
40
60
Absolute_Latitude

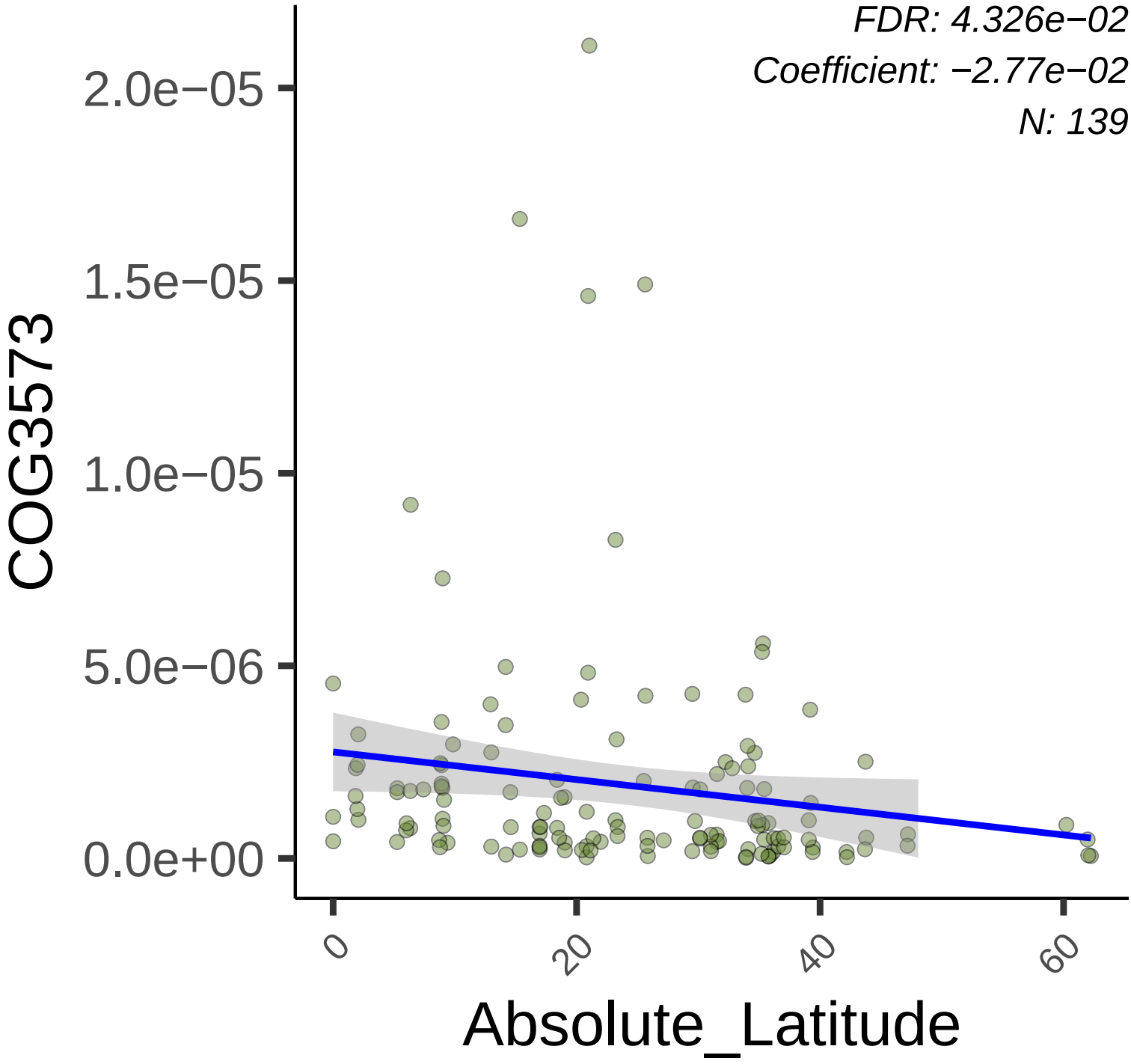

FDR: 4.295e−02
Coefficient: −3.61e−02
N: 139
1.0e−05
7.5e−06
5.0e−06
2.5e−06
0.0e+00
COG4902
0
20
40
60
Absolute_Latitude

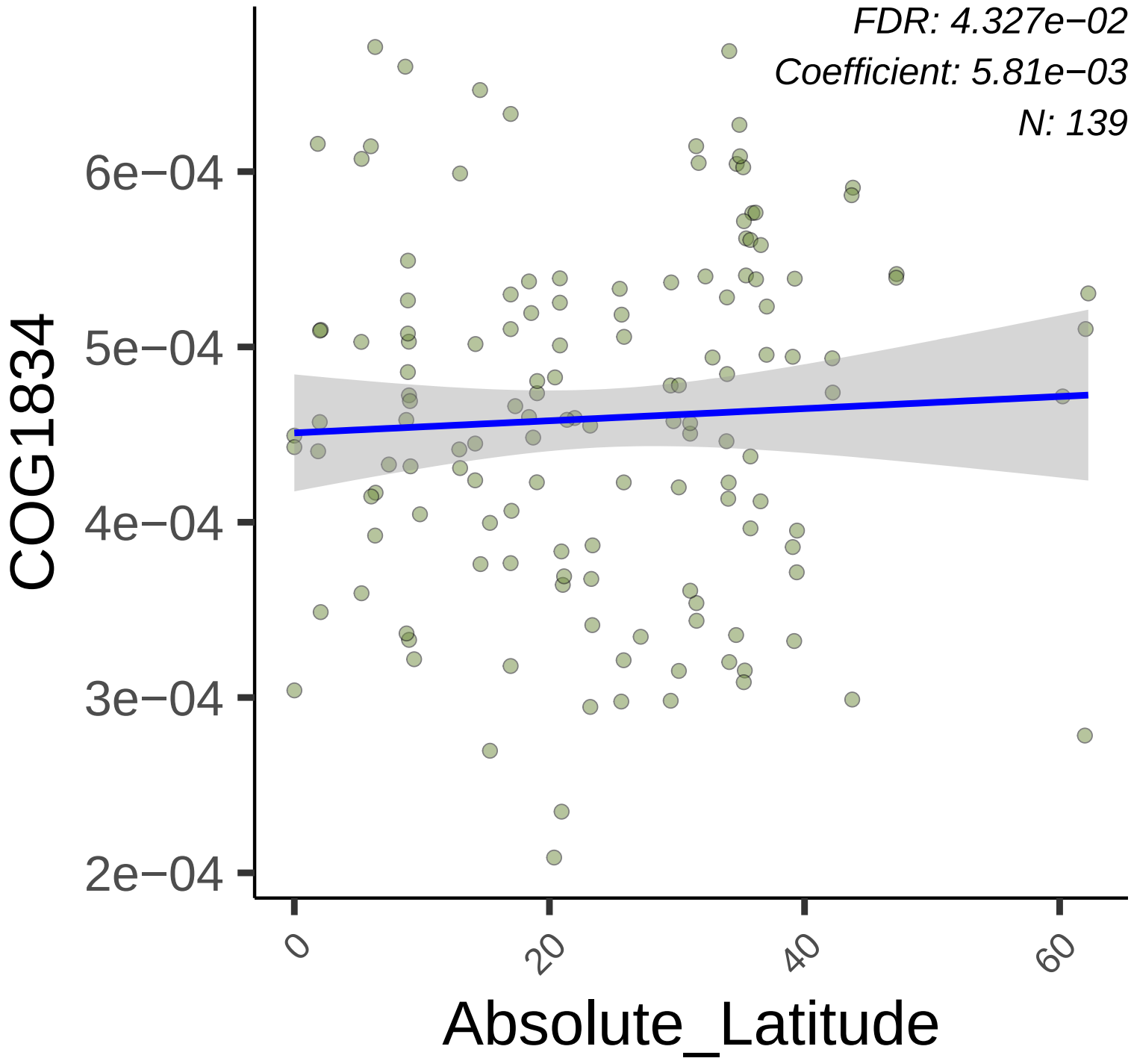

FDR: 4.300e−02
Coefficient: −9.85e−03
N: 139
3e−04
2e−04
1e−04
0e+00
COG1236
0
20
40
60
Absolute_Latitude

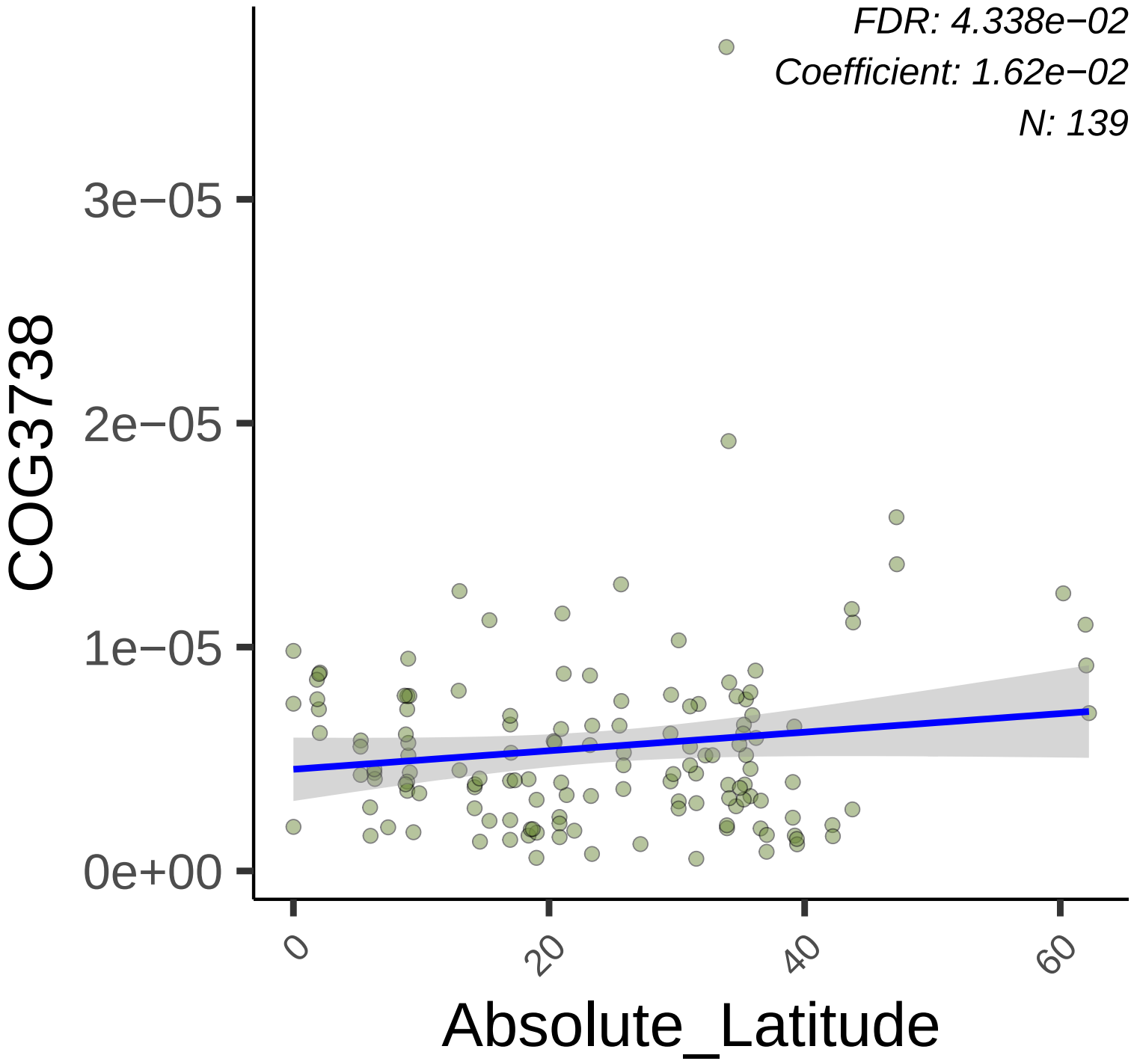

FDR: 4.305e−02
Coefficient: −1.58e−02
N: 139
COG1284
1.0e−04
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

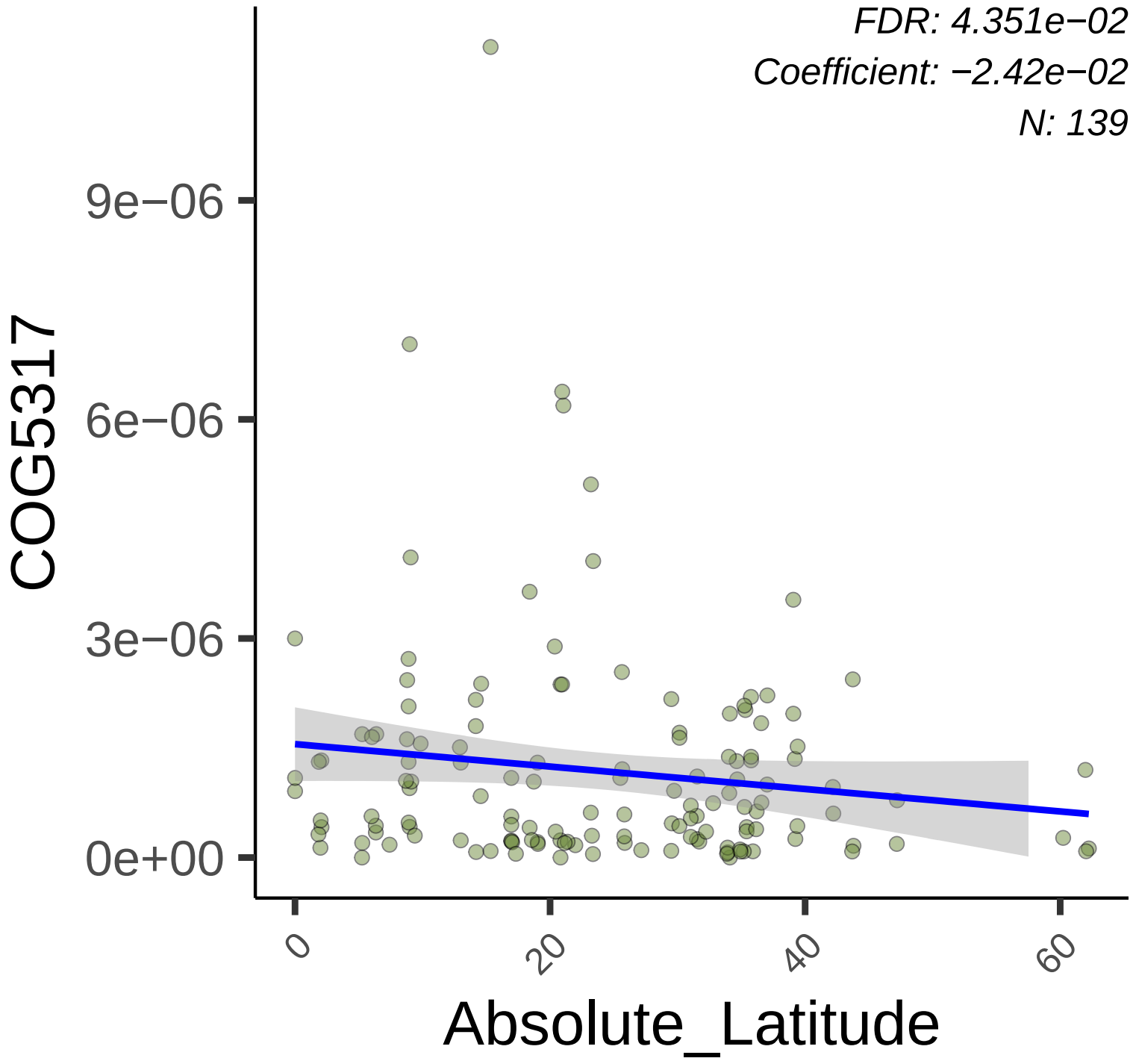

FDR: 4.326e−02
Coefficient: 2.97e−02
N: 139
8e−06
6e−06
4e−06
2e−06
0e+00
COG5029
0
20
40
60
Absolute_Latitude

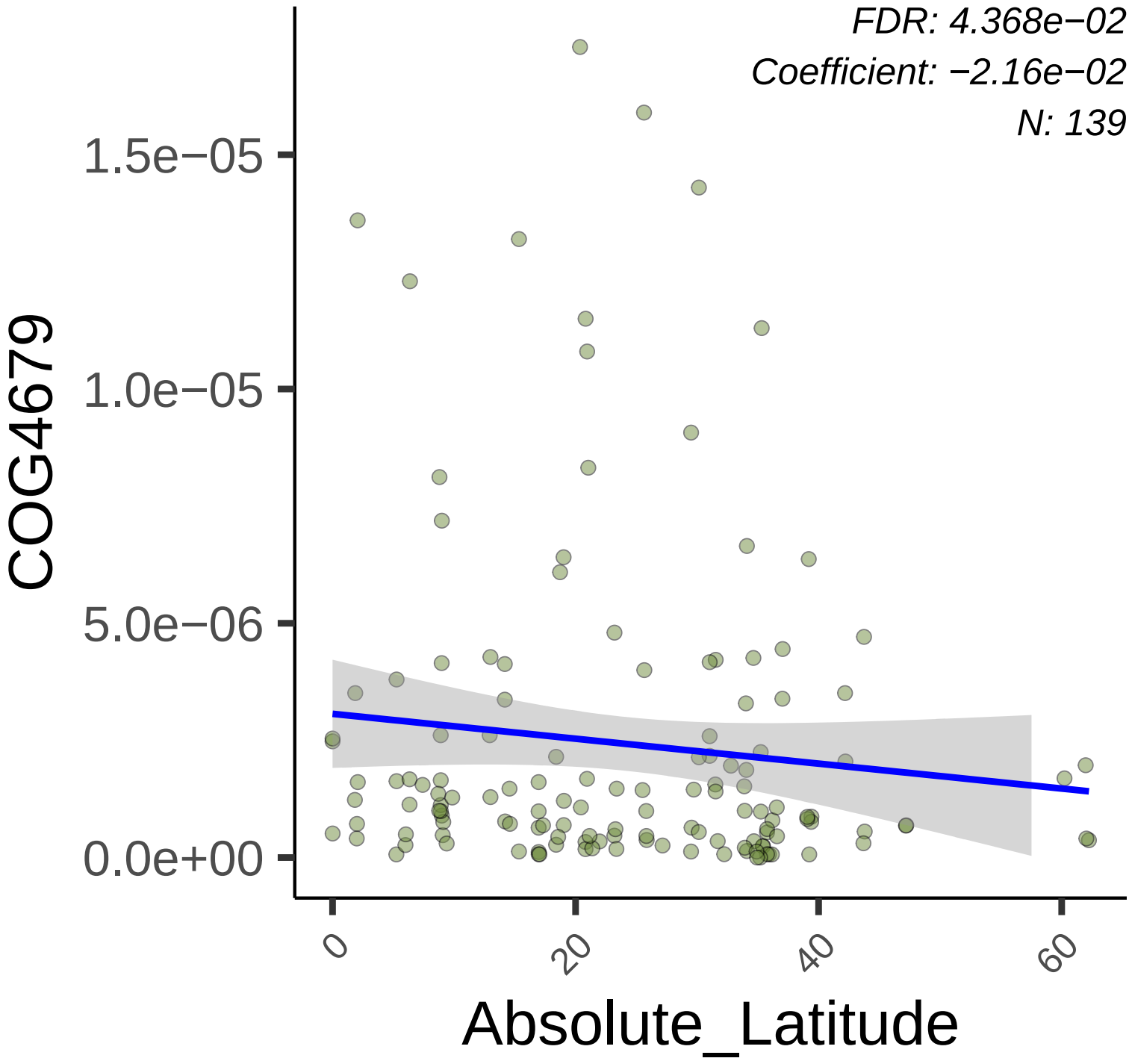

FDR: 4.326e−02
Coefficient: −1.96e−02
N: 139
COG3524
6e−05
4e−05
2e−05
0e+00
0
20
40
60
Absolute_Latitude

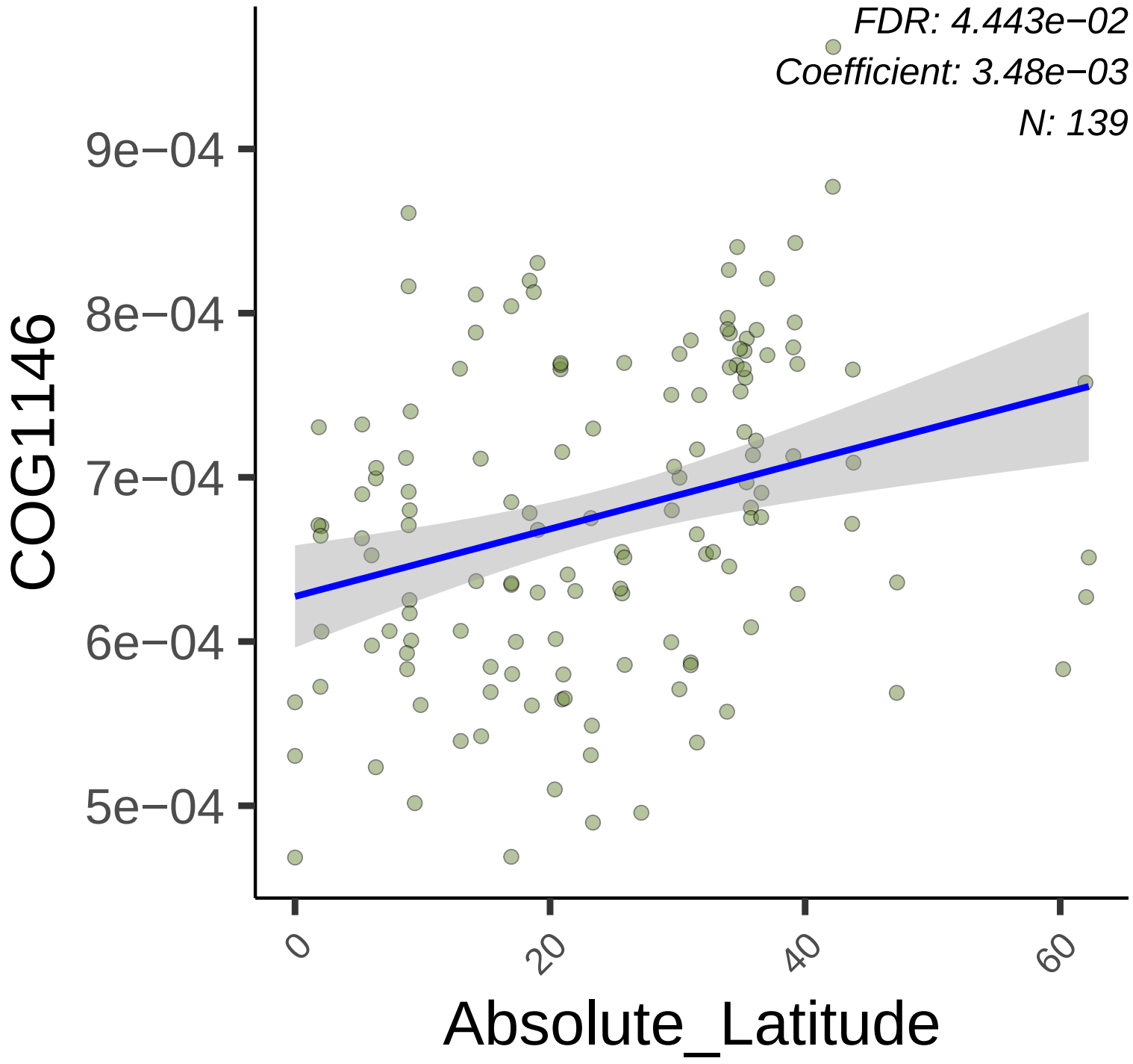

FDR: 4.326e−02
Coefficient: −2.77e−02
N: 139
COG3573
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

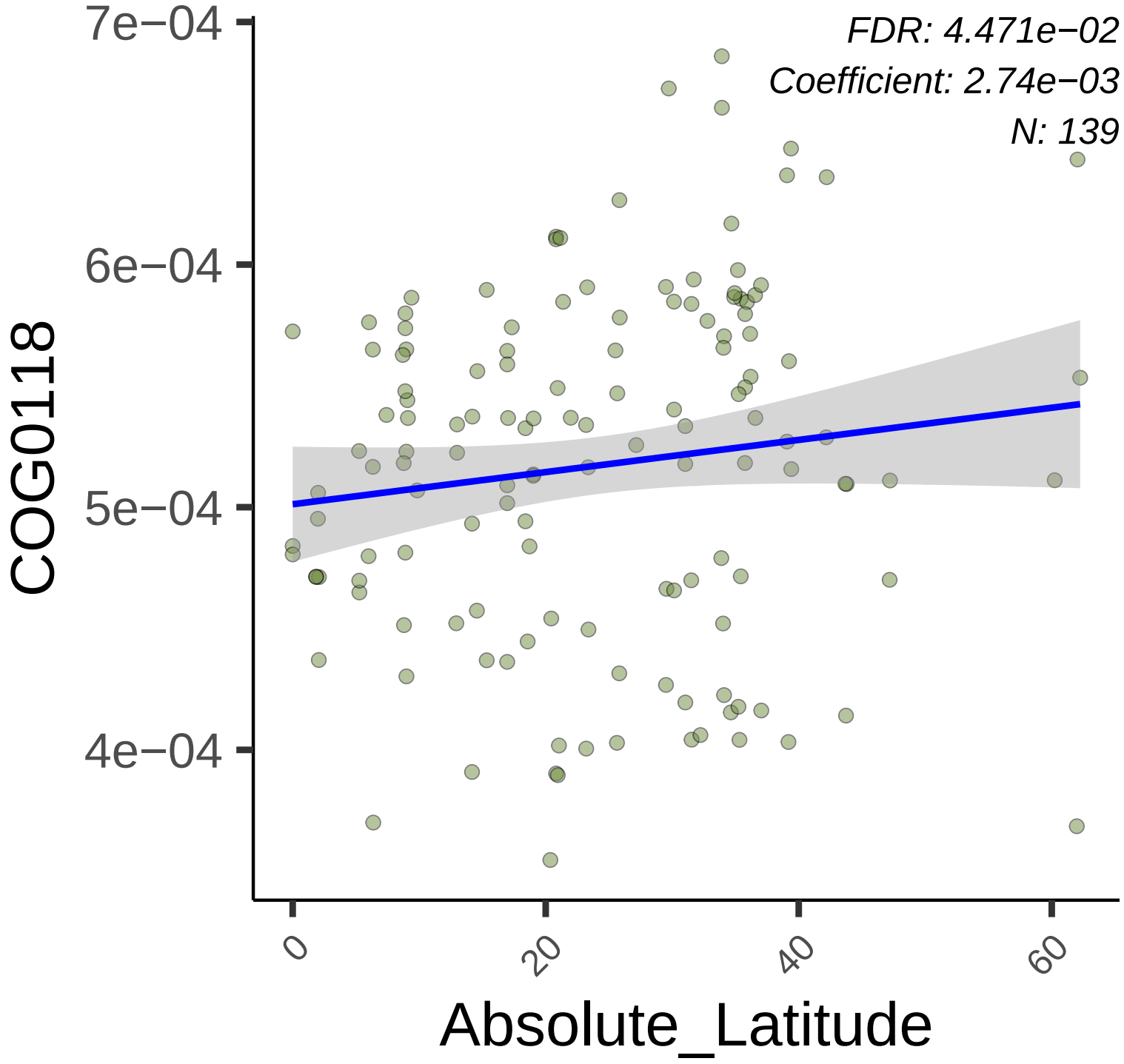

FDR: 4.327e−02
Coefficient: 5.81e−03
N: 139
COG1834
6e−04
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

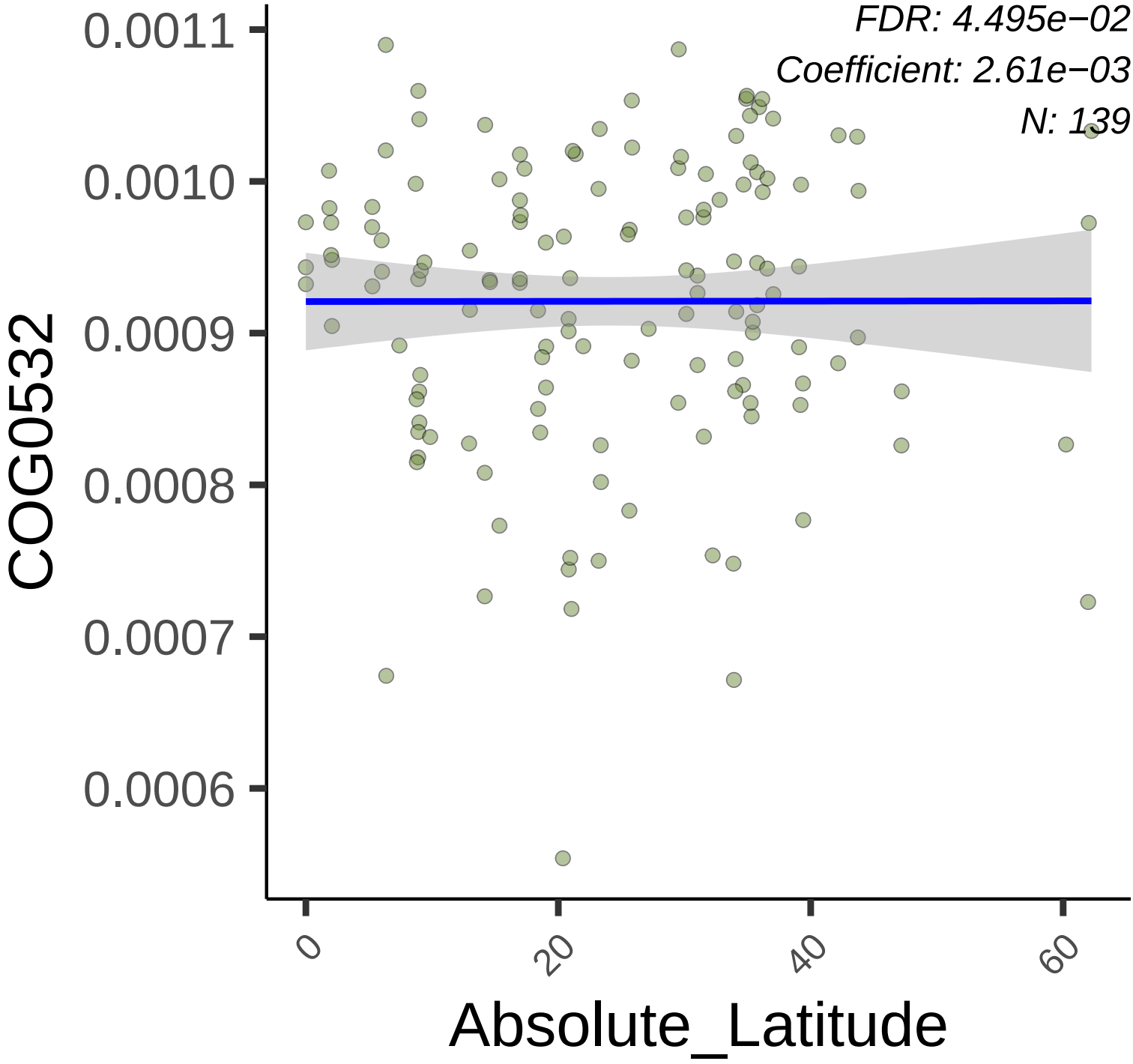

FDR: 4.338e−02
Coefficient: 1.62e−02
N: 139
COG3738
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

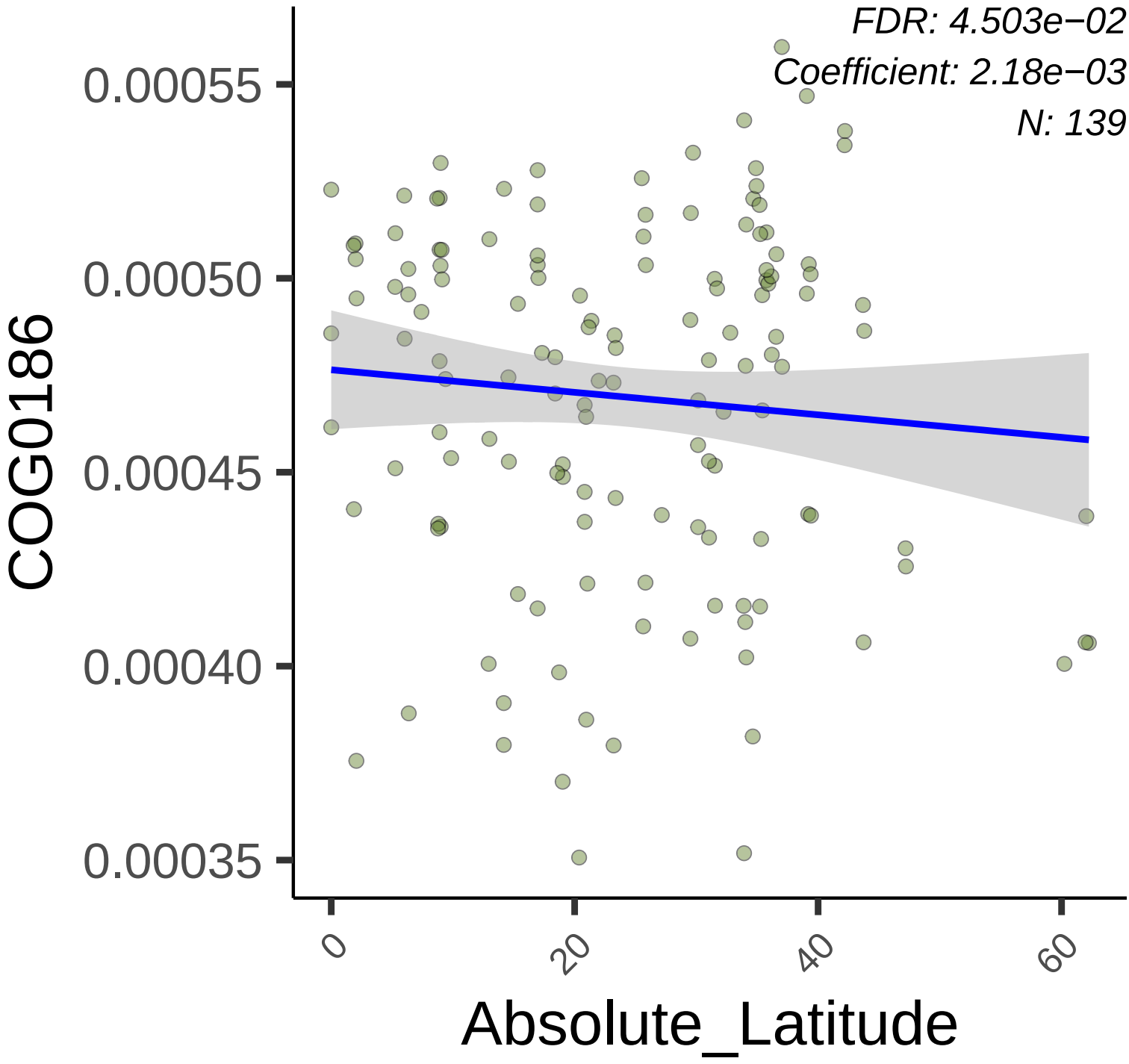

FDR: 4.351e−02
Coefficient: −2.42e−02
N: 139
COG5317
9e−06
6e−06
3e−06
0e+00
0
20
40
60
Absolute_Latitude

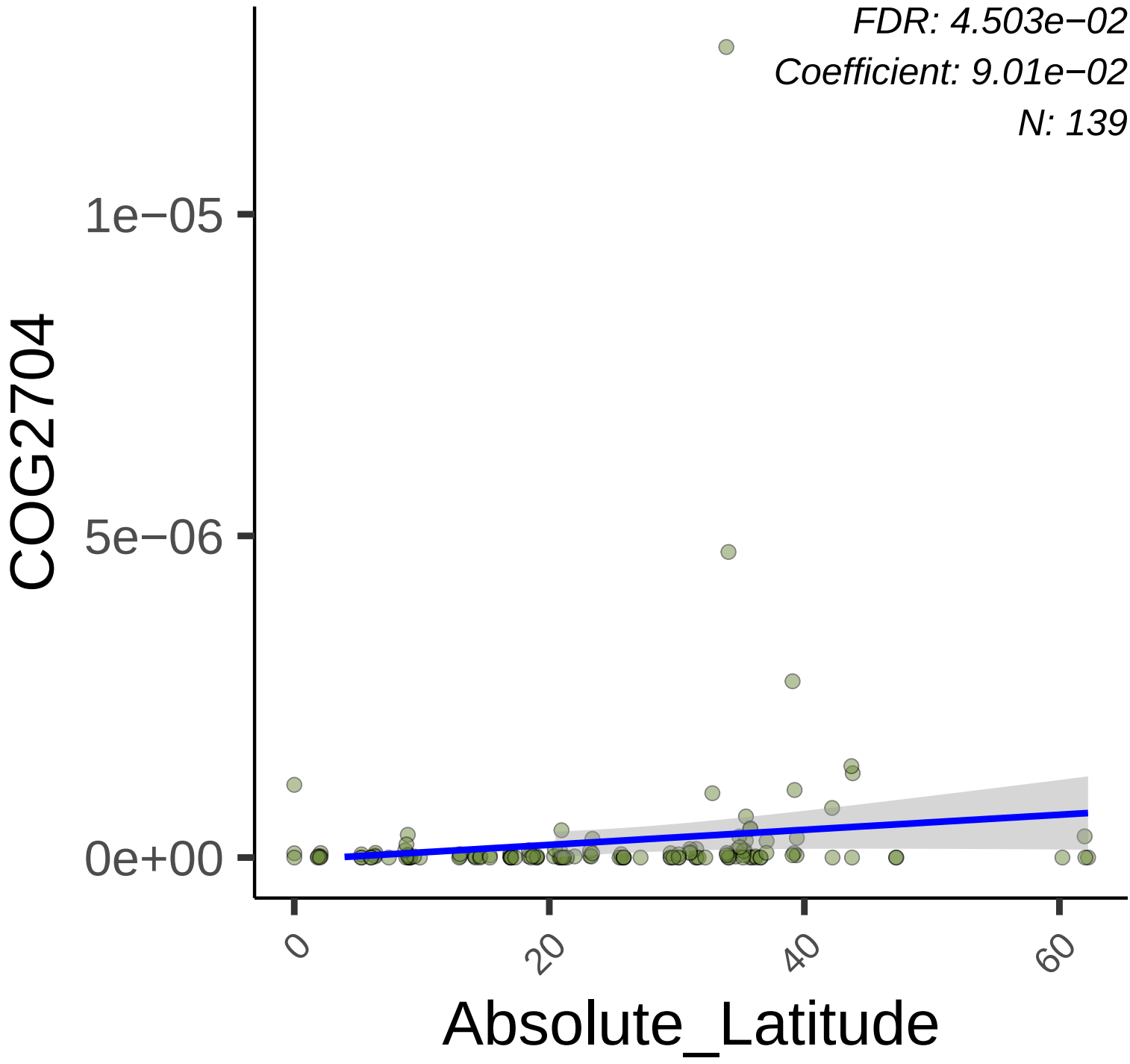

FDR: 4.368e−02
Coefficient: −2.16e−02
N: 139
COG4679
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

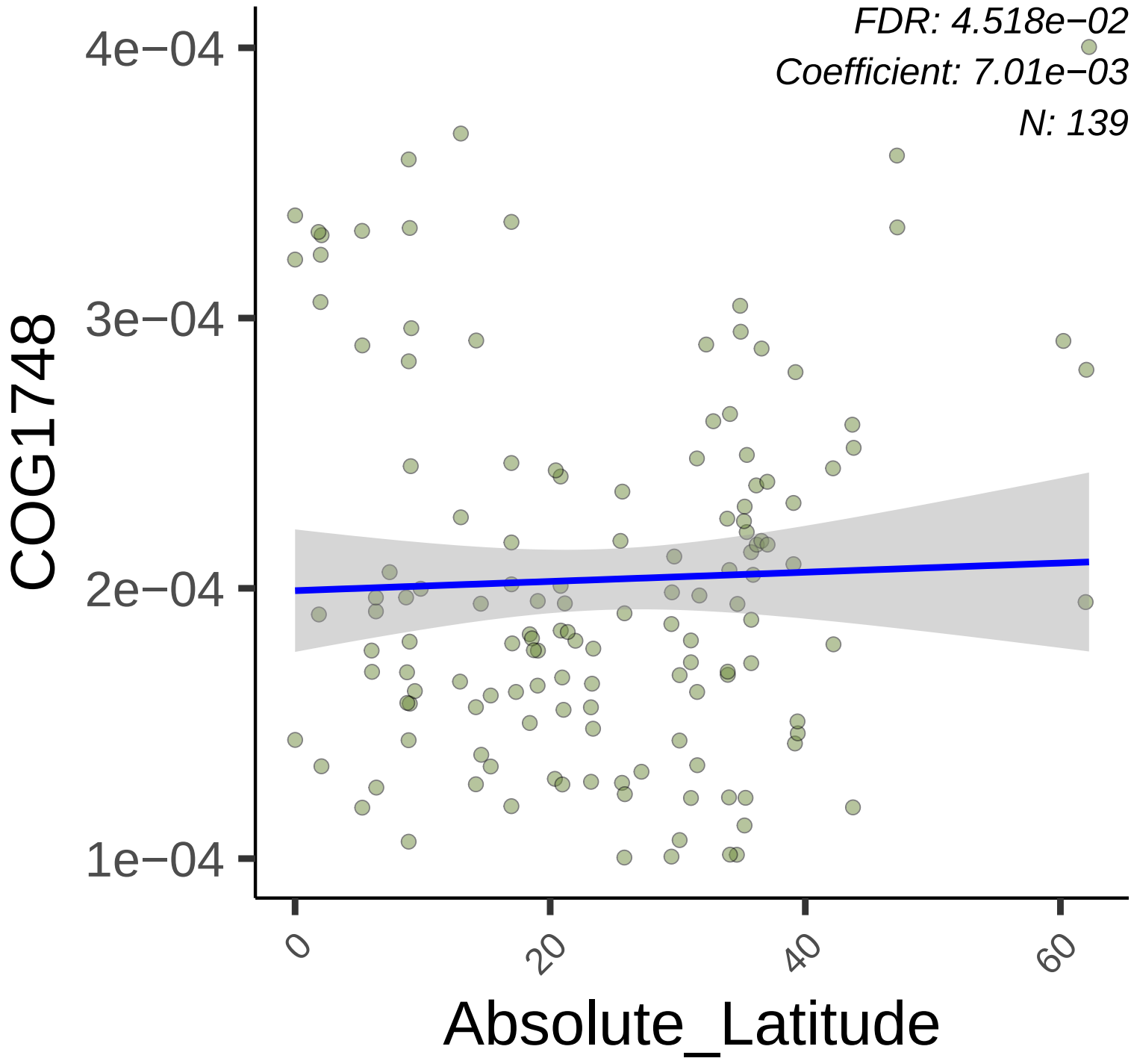

FDR: 4.443e−02
Coefficient: 3.48e−03
N: 139
COG1146
9e−04
8e−04
7e−04
6e−04
5e−04
0
20
40
60
Absolute_Latitude

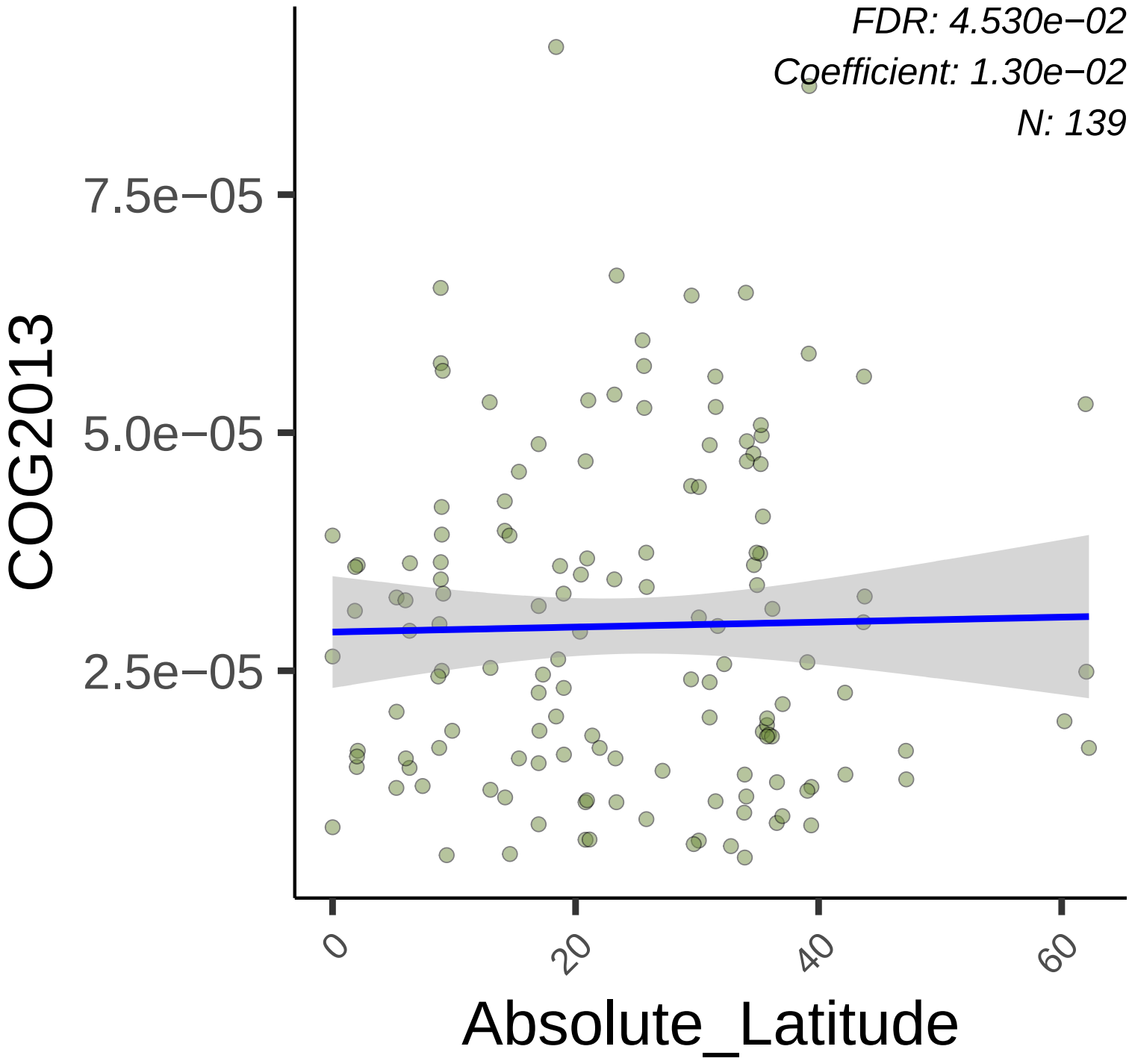

FDR: 4.471e−02
Coefficient: 2.74e−03
N: 139
7e−04
6e−04
5e−04
4e−04
COG0118
0
20
40
60
Absolute_Latitude

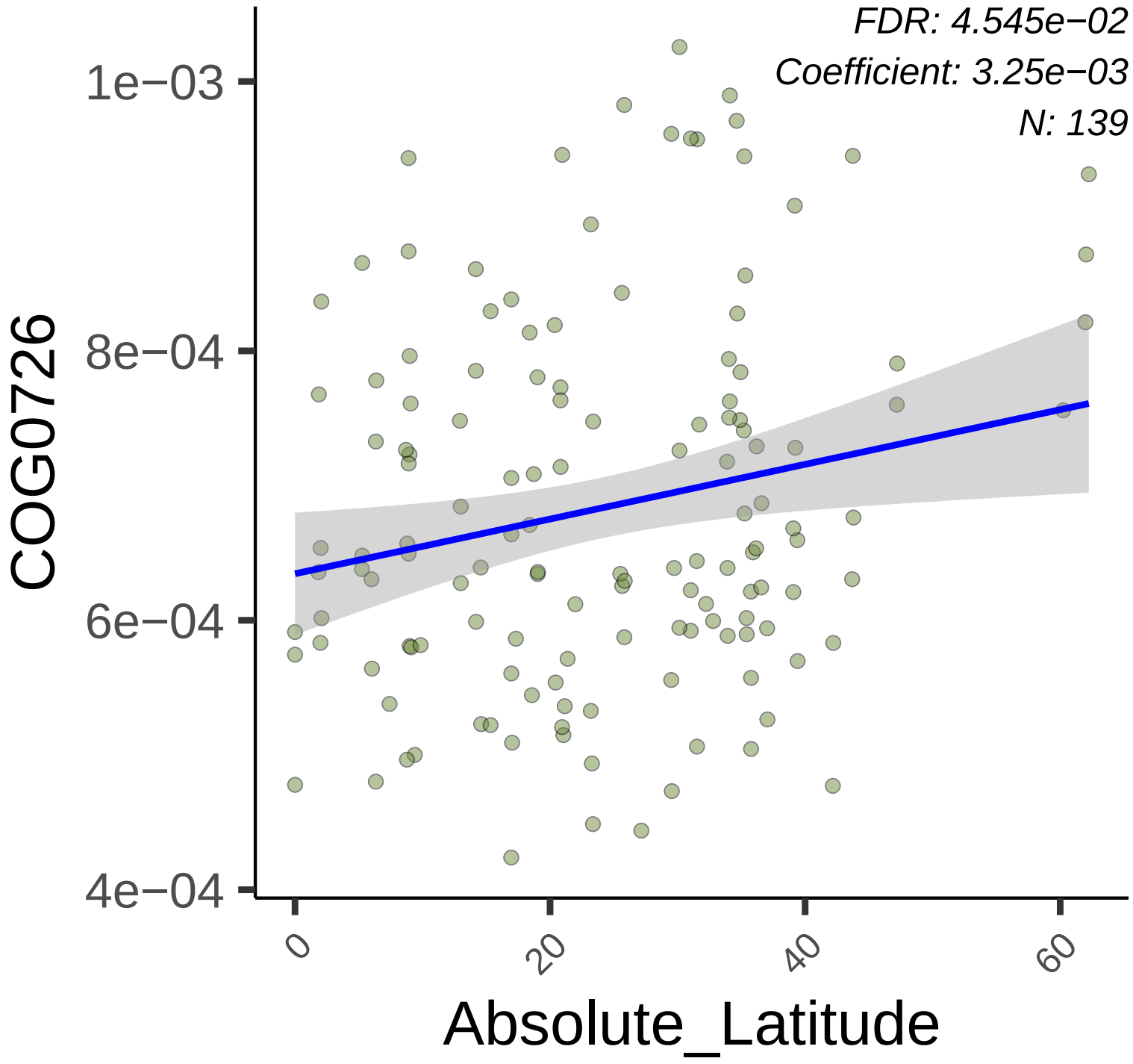

FDR: 4.495e−02
Coefficient: 2.61e−03
N: 139
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
COG0532
0
20
40
60
Absolute_Latitude

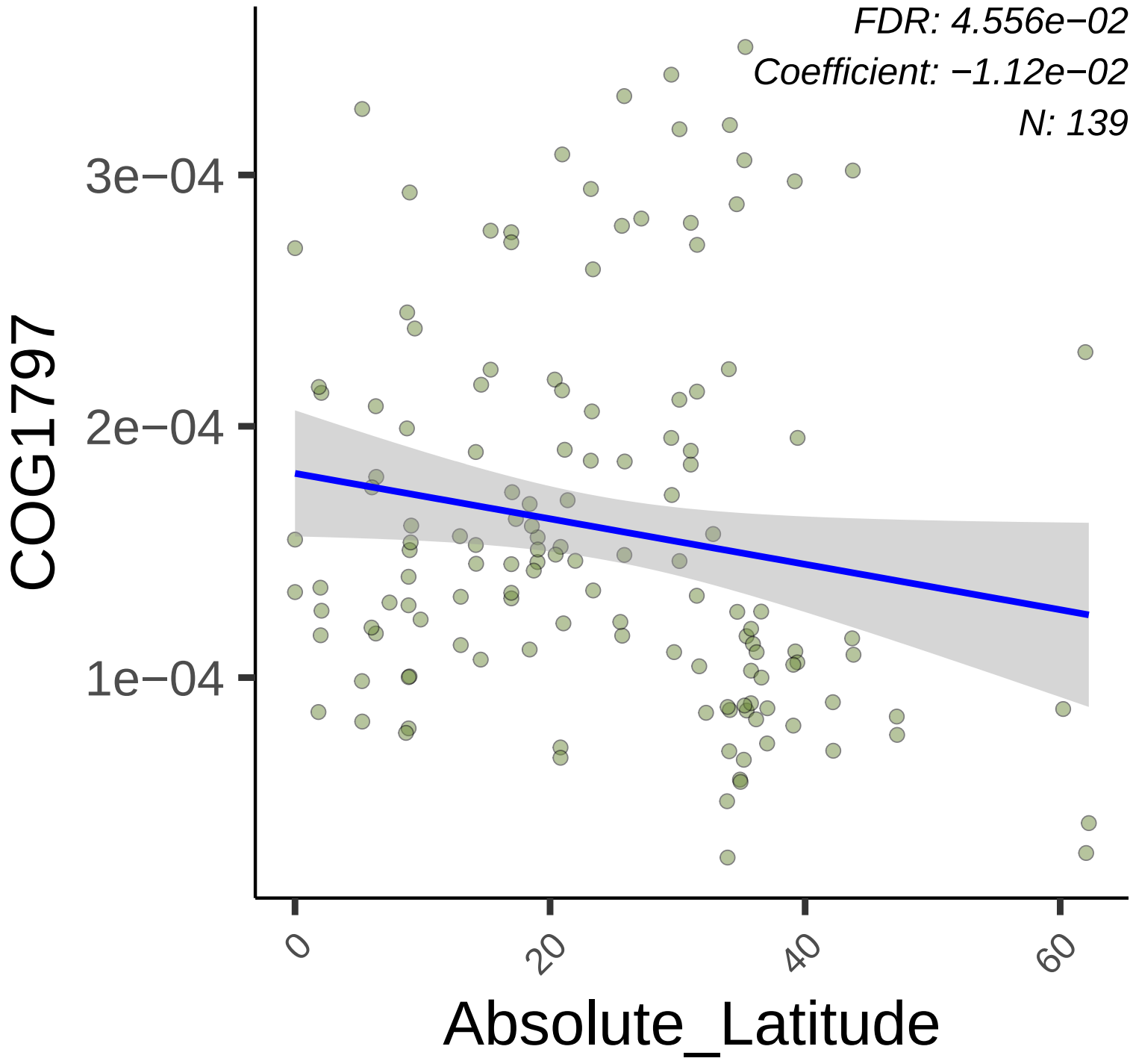

FDR: 4.503e−02
Coefficient: 2.18e−03
N: 139
0.00055
0.00050
0.00045
0.00040
0.00035
COG0186
0
20
40
60
Absolute_Latitude

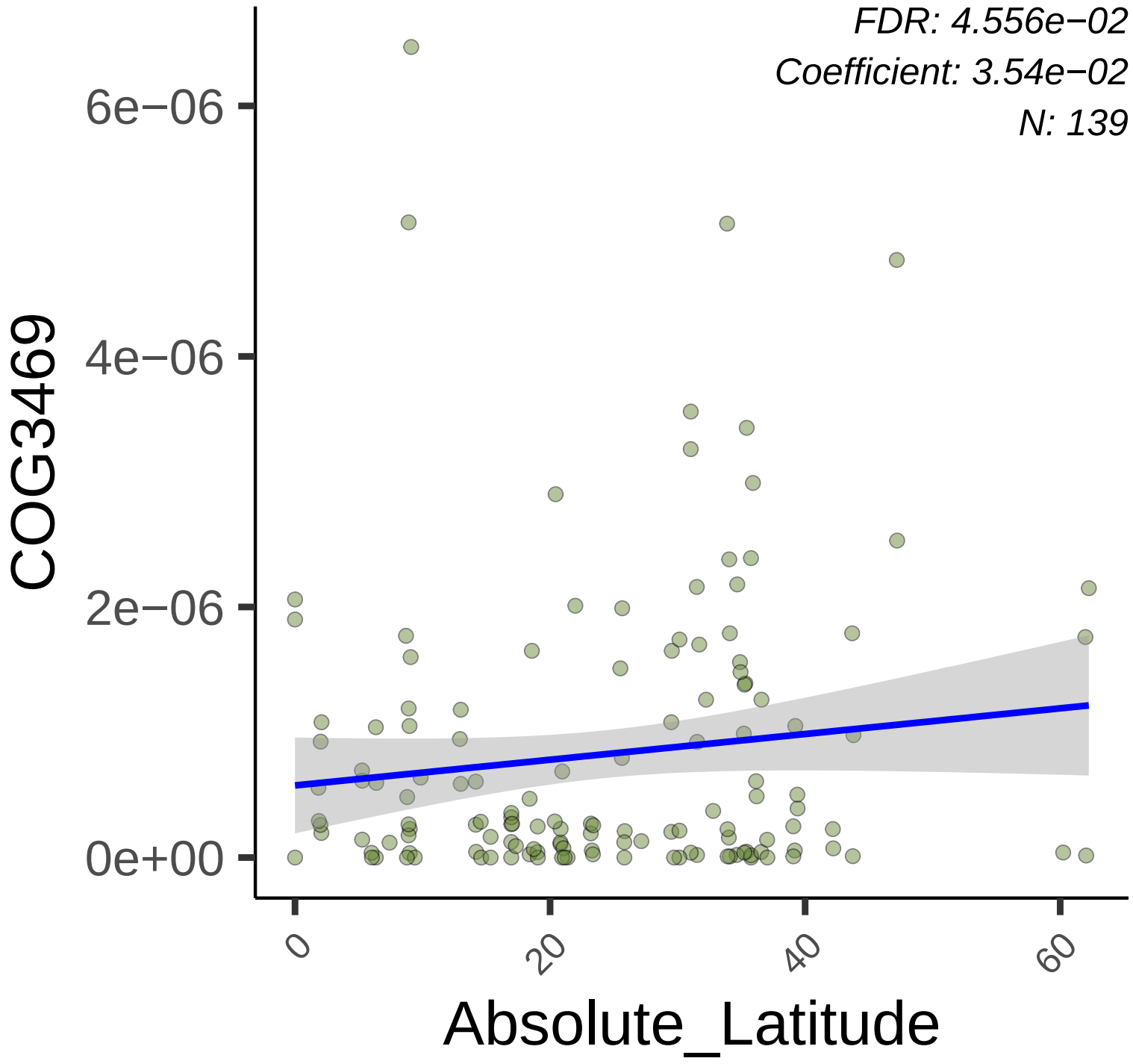

FDR: 4.503e−02
Coefficient: 9.01e−02
N: 139
COG2704
1e−05
5e−06
0e+00
0
20
40
60
Absolute_Latitude

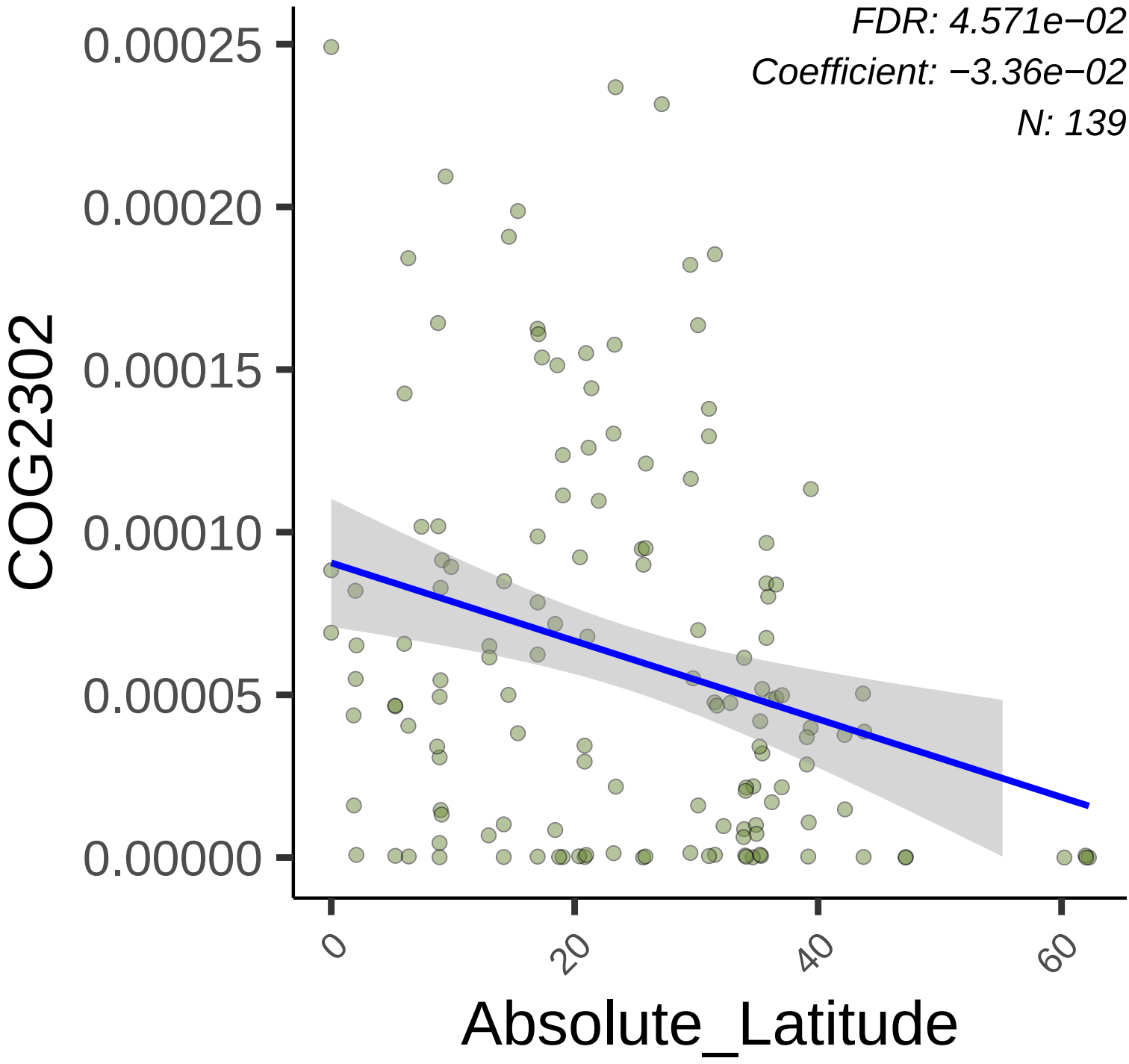

FDR: 4.518e−02
Coefficient: 7.01e−03
N: 139
4e−04
3e−04
2e−04
1e−04
COG1748
0
20
40
60
Absolute_Latitude

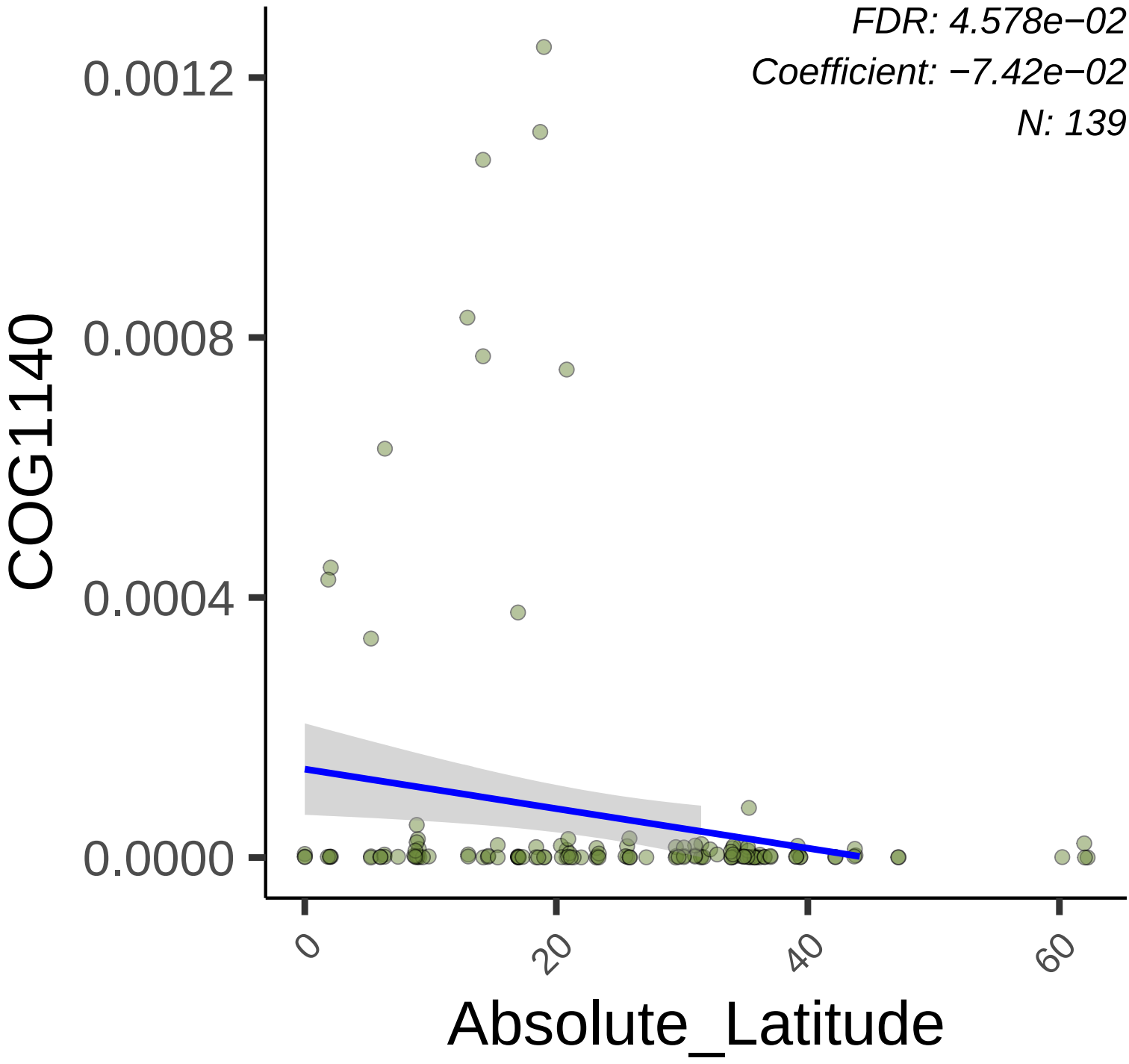

FDR: 4.530e−02
Coefficient: 1.30e−02
N: 139
7.5e−05
5.0e−05
2.5e−05
COG2013
0
20
40
60
Absolute_Latitude

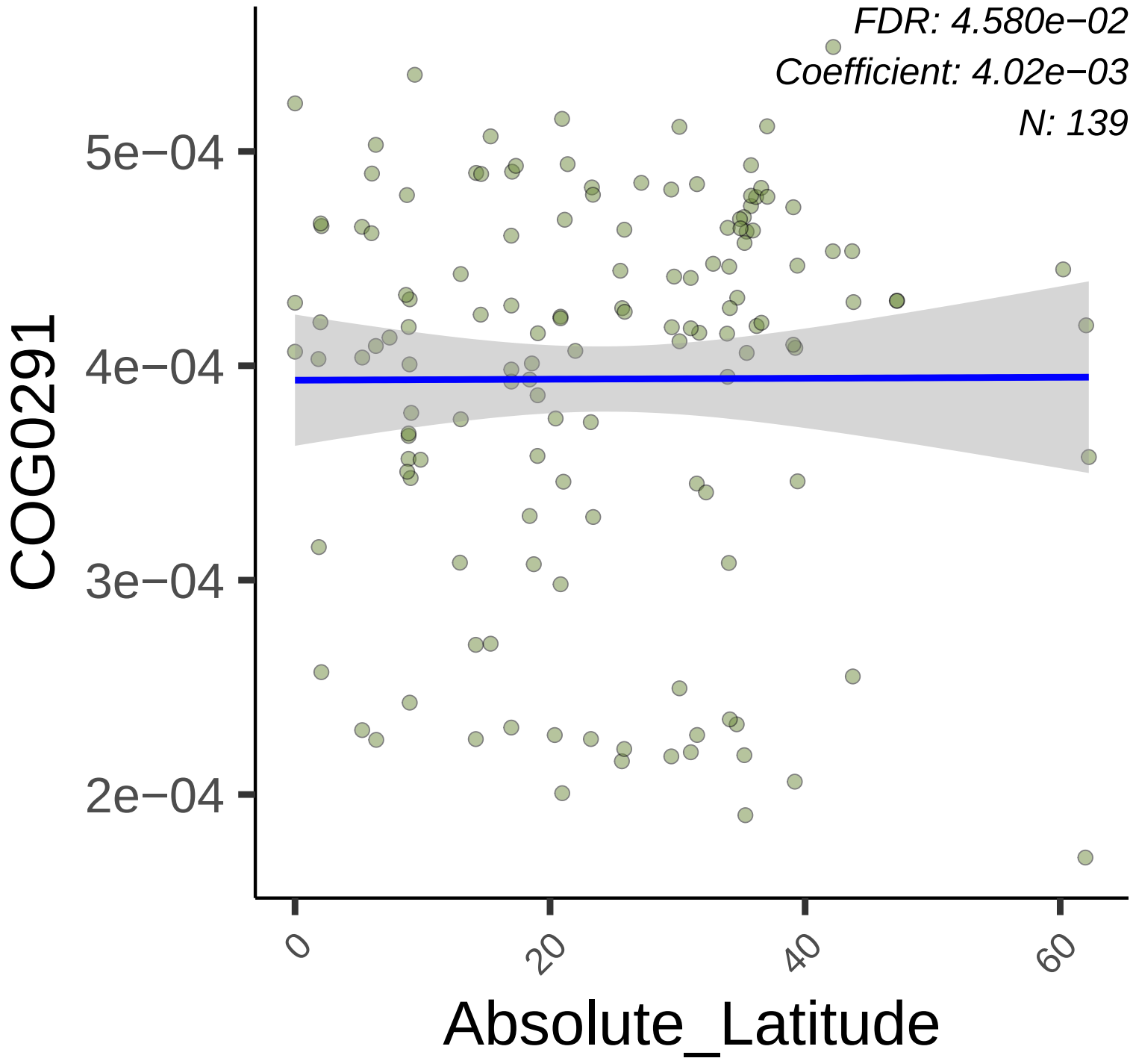

FDR: 4.545e−02
Coefficient: 3.25e−03
N: 139
1e−03
8e−04
6e−04
4e−04
COG0726
0
20
40
60
Absolute_Latitude

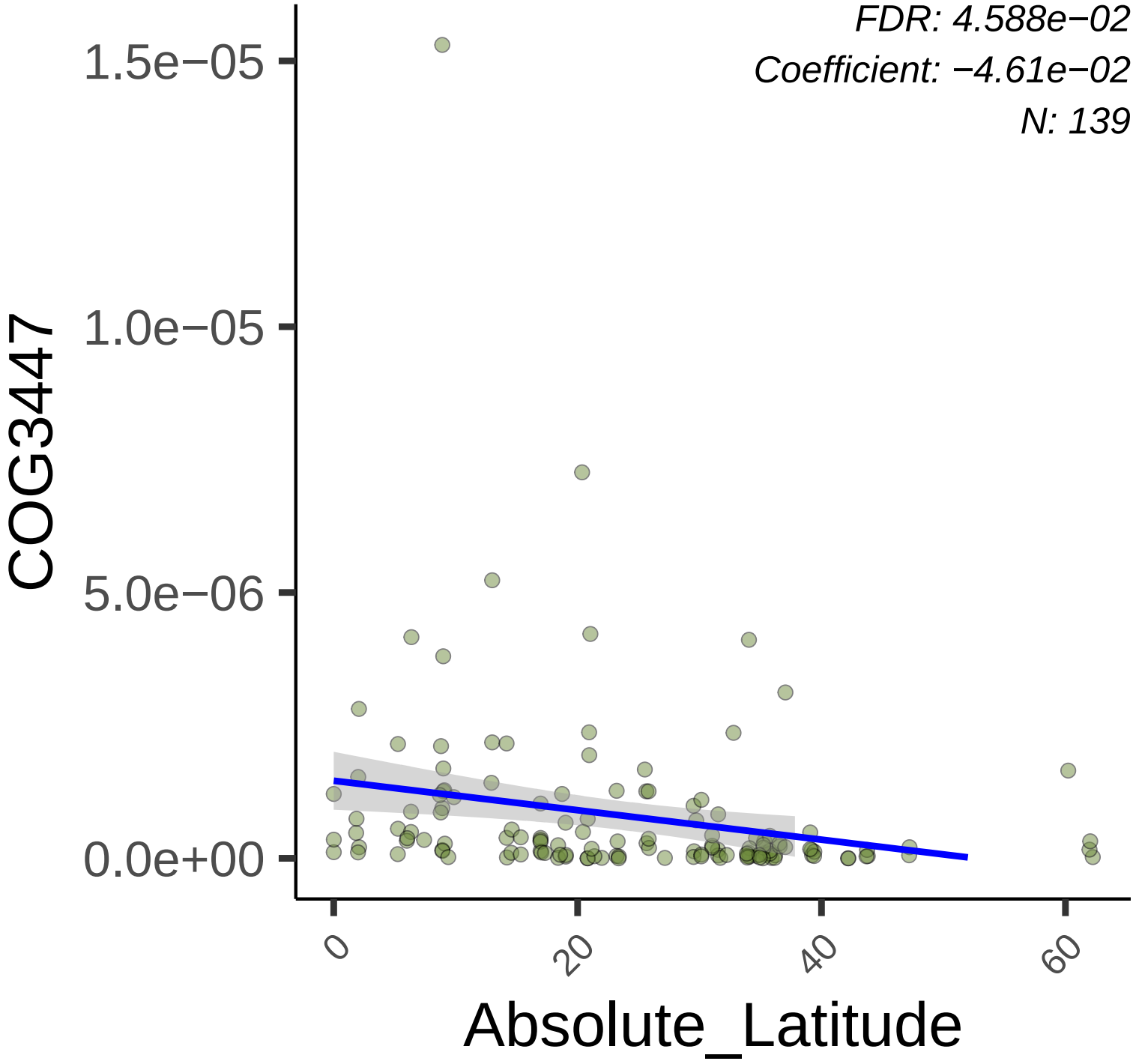

FDR: 4.556e−02
Coefficient: −1.12e−02
N: 139
3e−04
2e−04
1e−04
COG1797
0
20
40
60
Absolute_Latitude

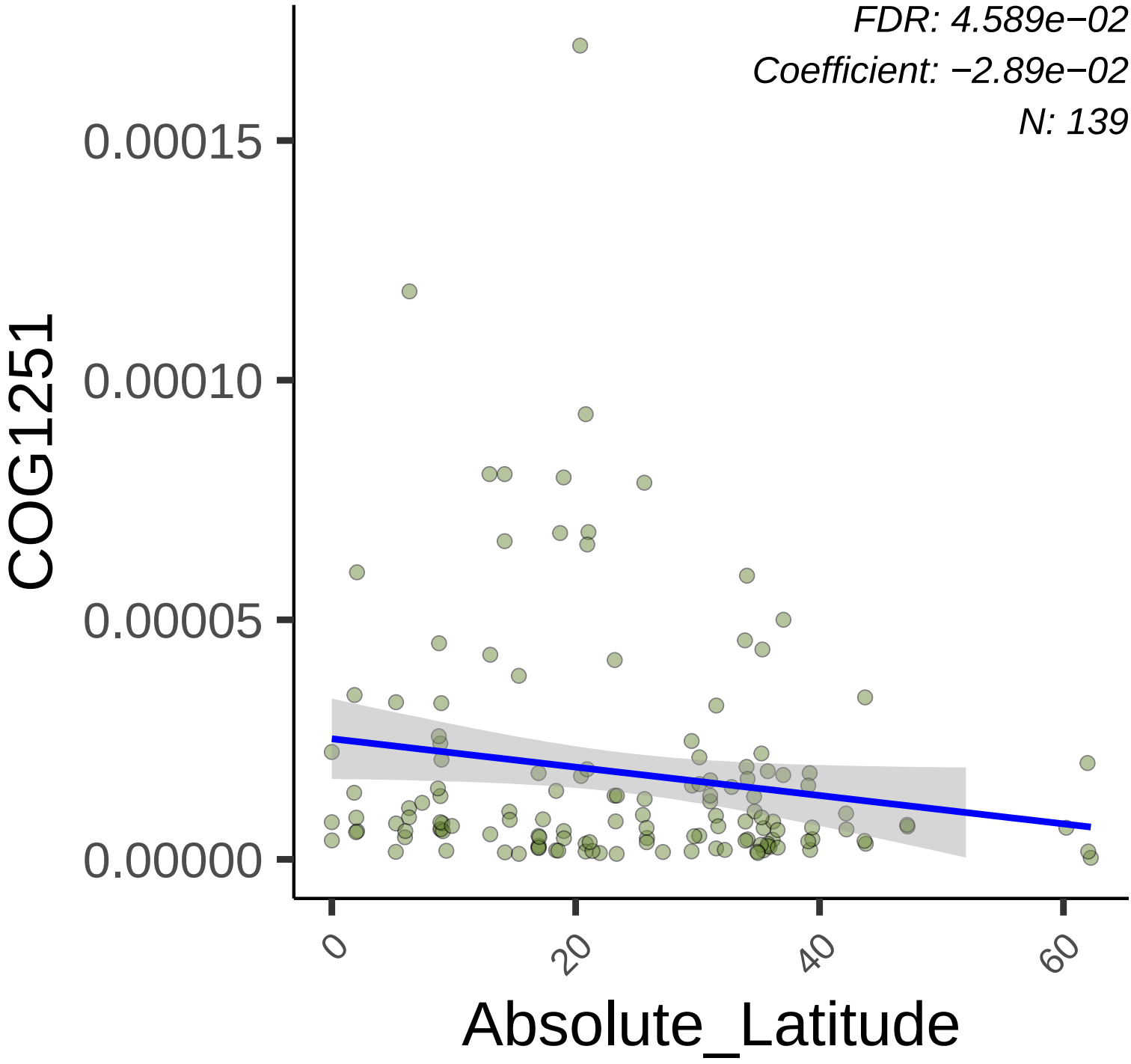

FDR: 4.556e−02
Coefficient: 3.54e−02
N: 139
COG3469
6e−06
4e−06
2e−06
0e+00
0
20
40
60
Absolute_Latitude

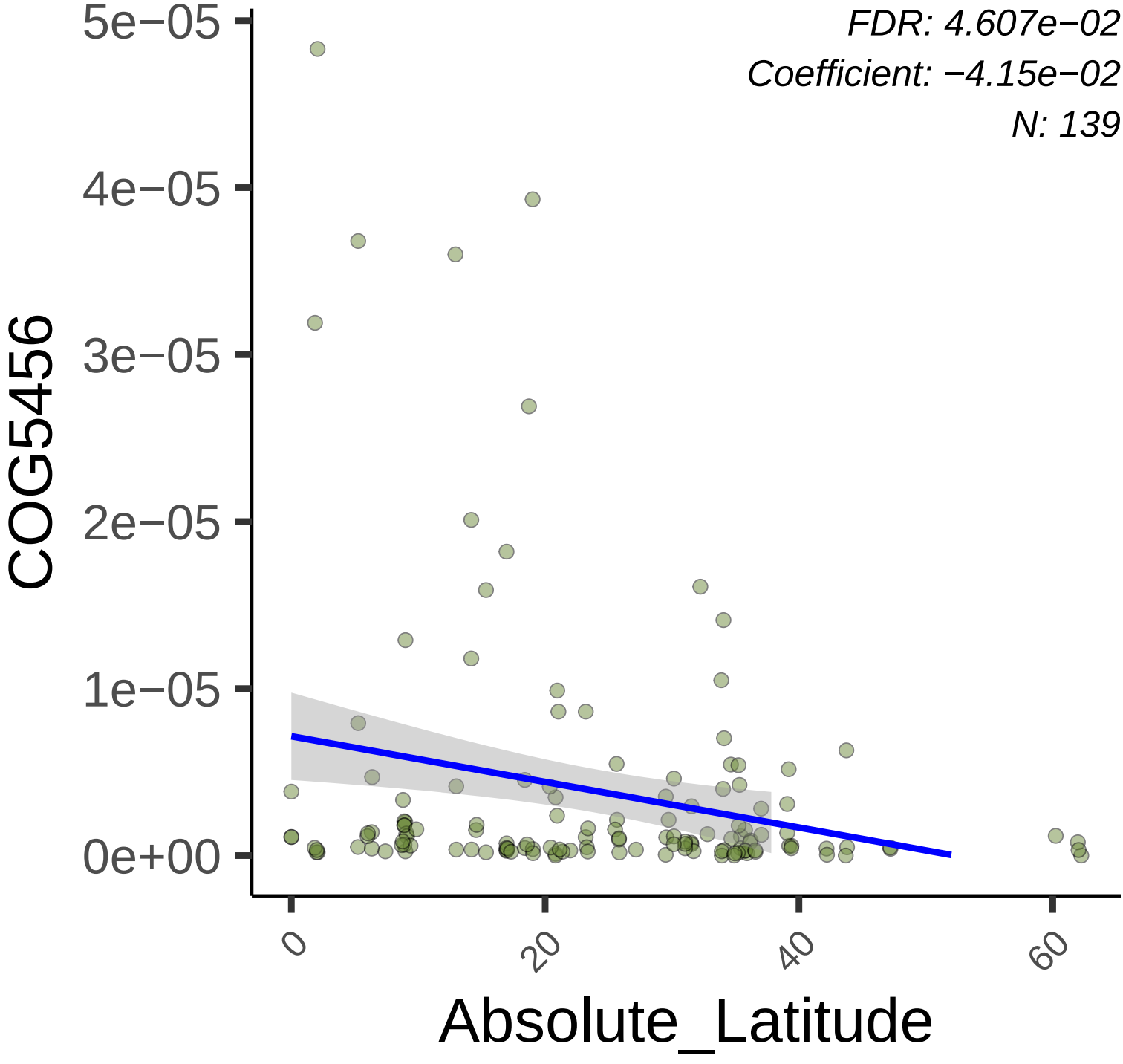

FDR: 4.571e−02
Coefficient: −3.36e−02
N: 139
COG2302
0.00025
0.00020
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

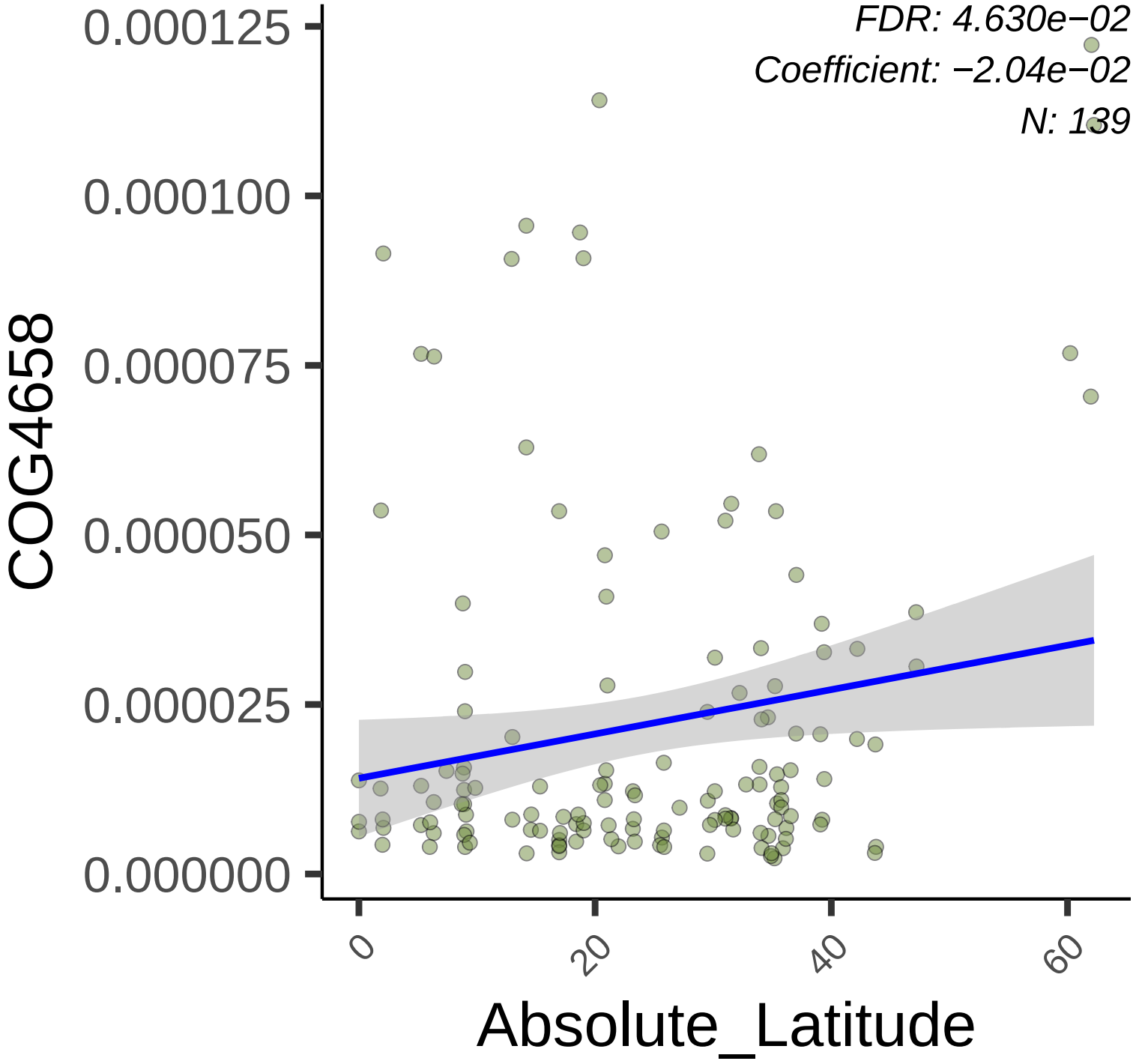

FDR: 4.578e−02
Coefficient: −7.42e−02
N: 139
COG1140
0.0012
0.0008
0.0004
0.0000
0
20
40
60
Absolute_Latitude

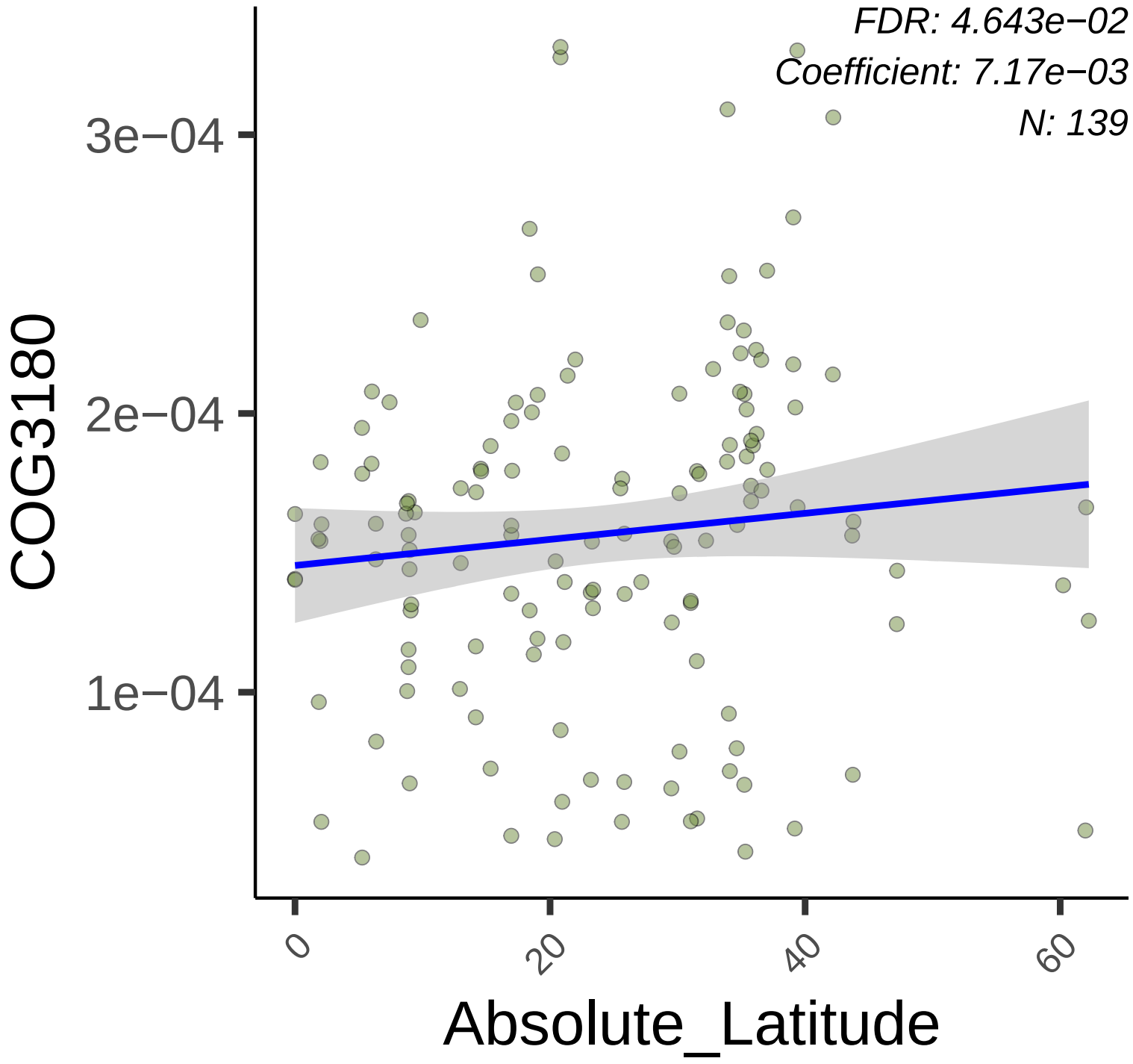

FDR: 4.580e−02
Coefficient: 4.02e−03
N: 139
COG0291
5e−04
4e−04
3e−04
2e−04
0
20
40
60
Absolute_Latitude

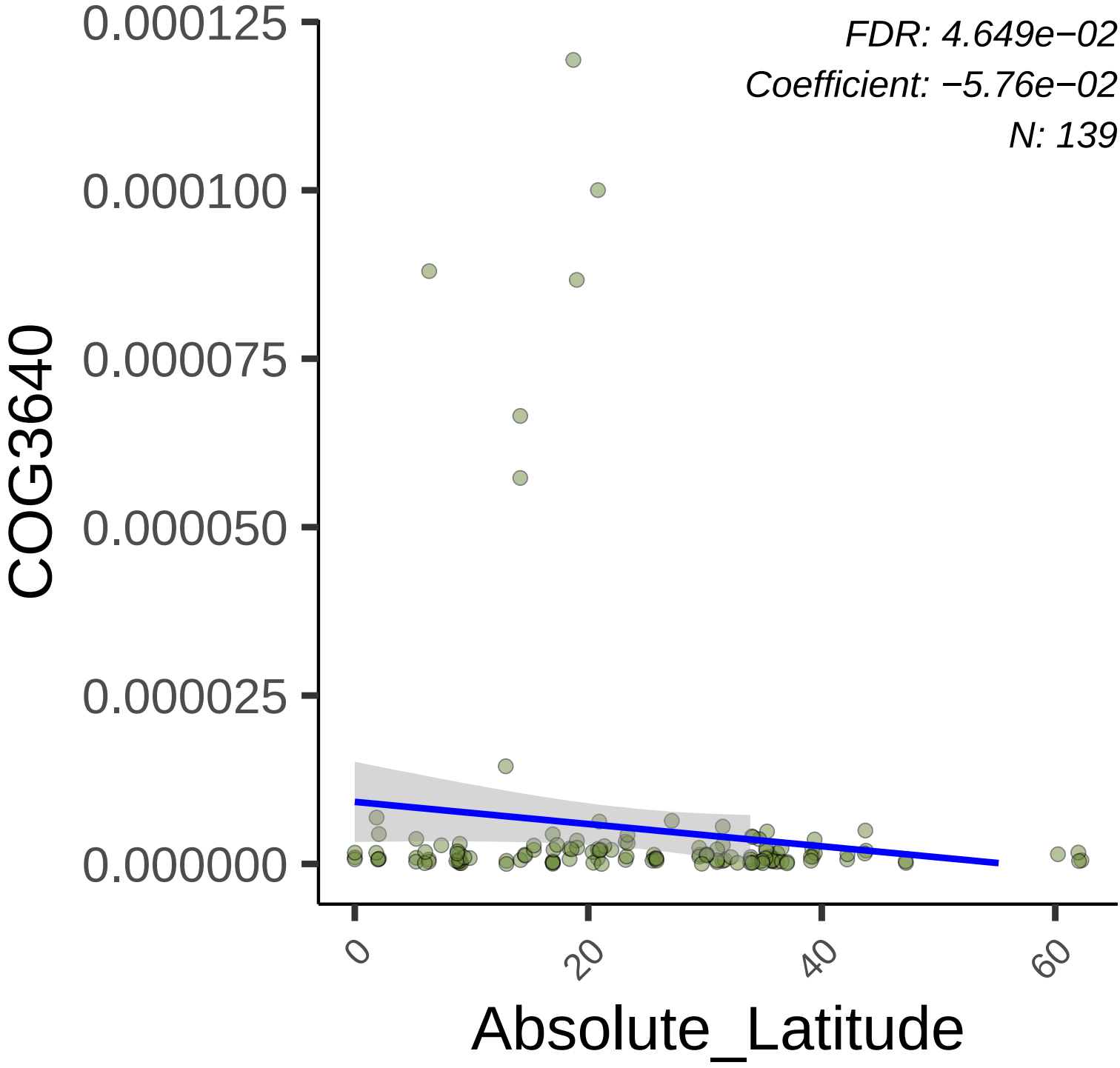

FDR: 4.588e−02
Coefficient: −4.61e−02
N: 139
1.5e−05
1.0e−05
5.0e−06
0.0e+00
COG3447
0
20
40
60
Absolute_Latitude

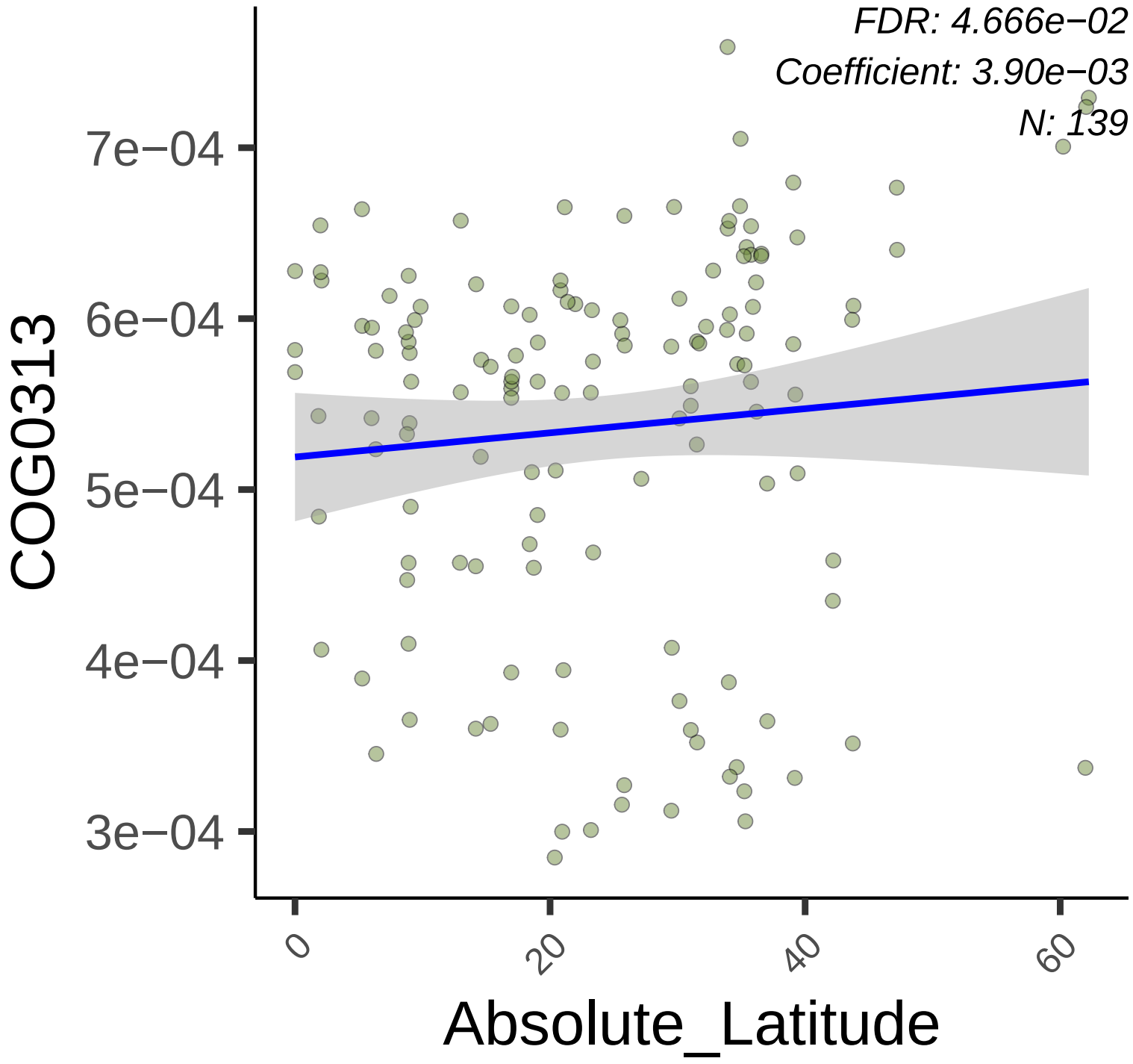

FDR: 4.589e−02
Coefficient: −2.89e−02
N: 139
COG1251
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

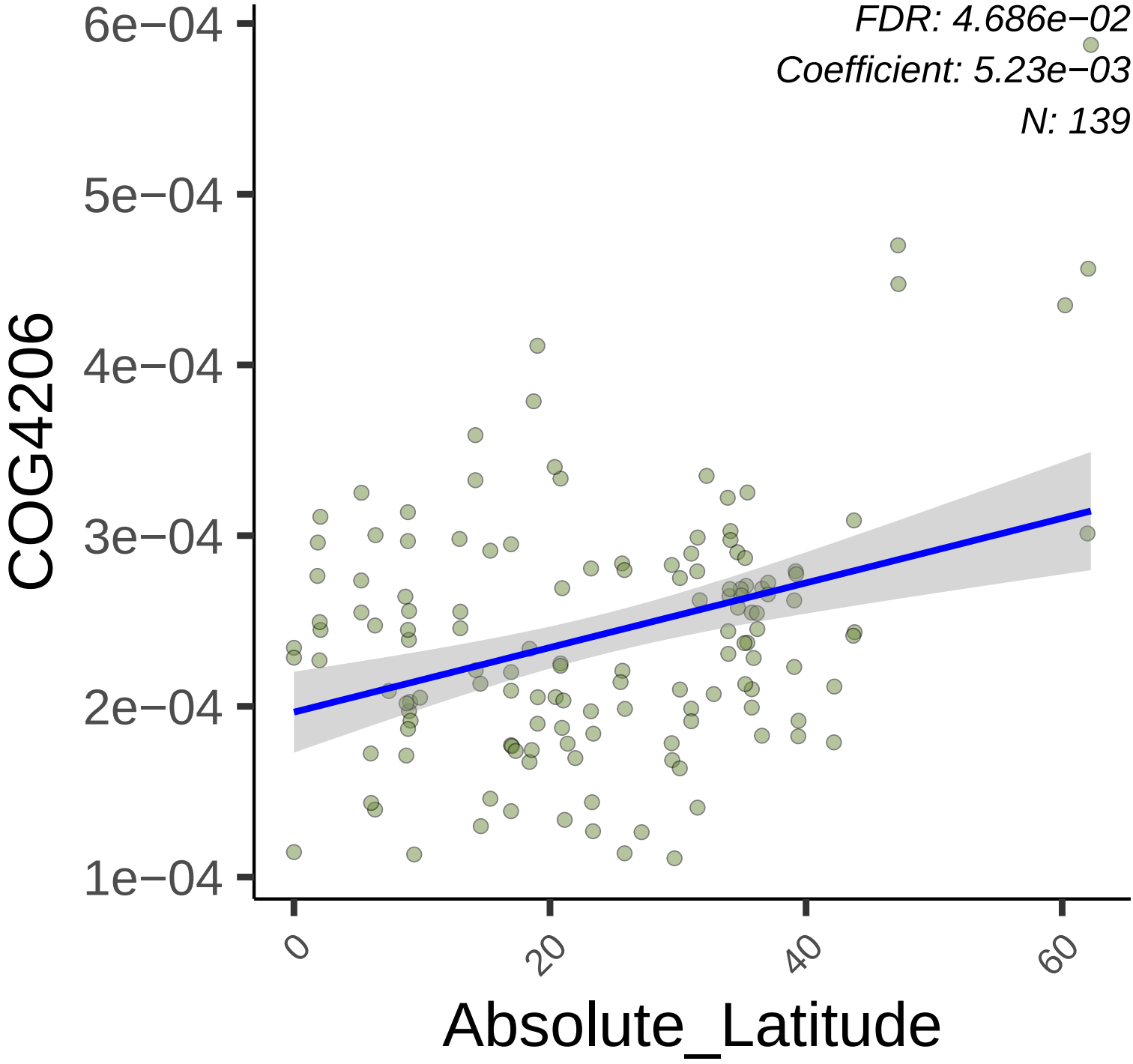

FDR: 4.607e−02
Coefficient: −4.15e−02
N: 139
COG5456
5e−05
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

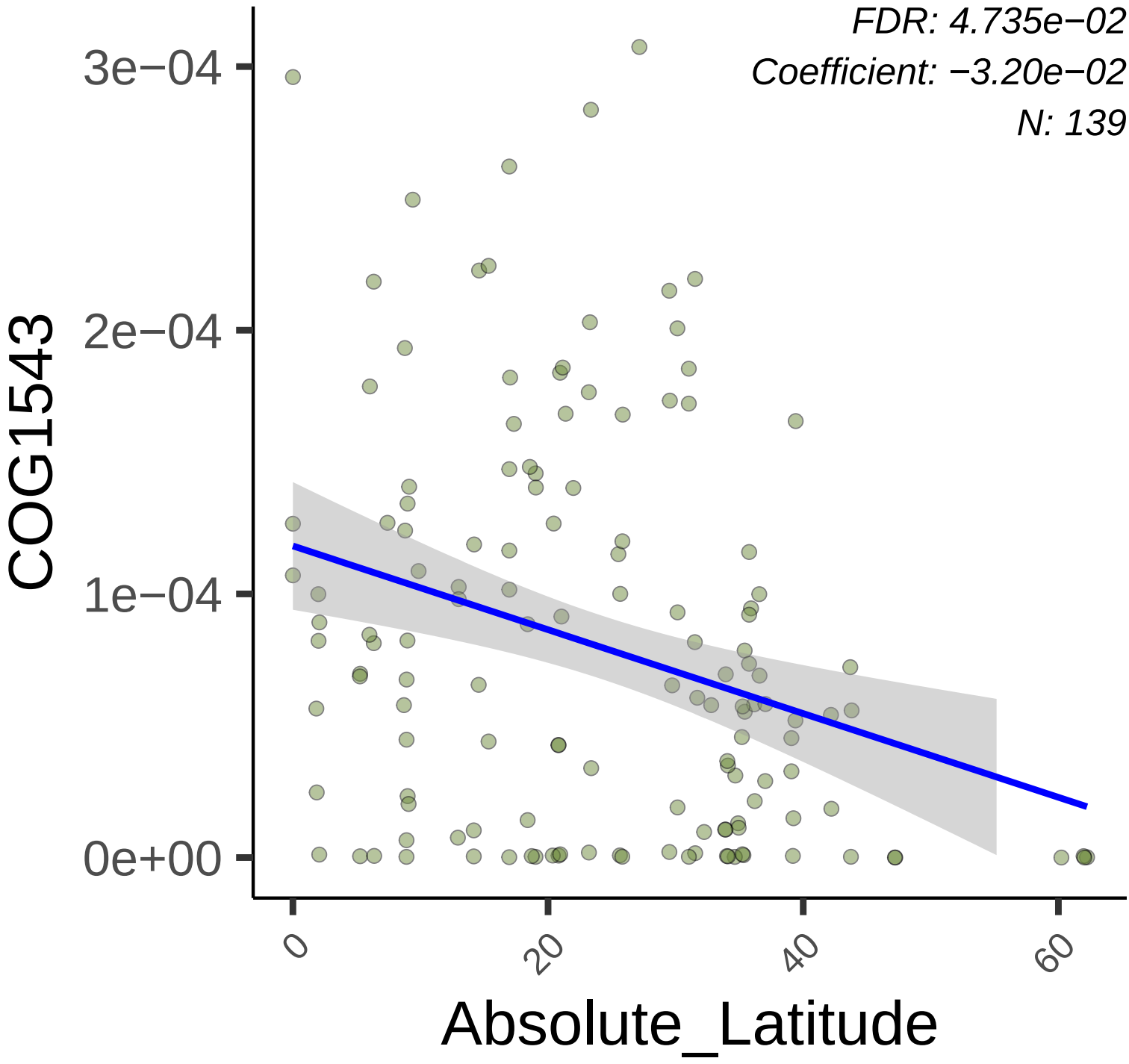

FDR: 4.630e−02
Coefficient: −2.04e−02
N: 139
0.000125
0.000100
0.000075
0.000050
0.000025
0.000000
COG4658
0
20
40
60
Absolute_Latitude

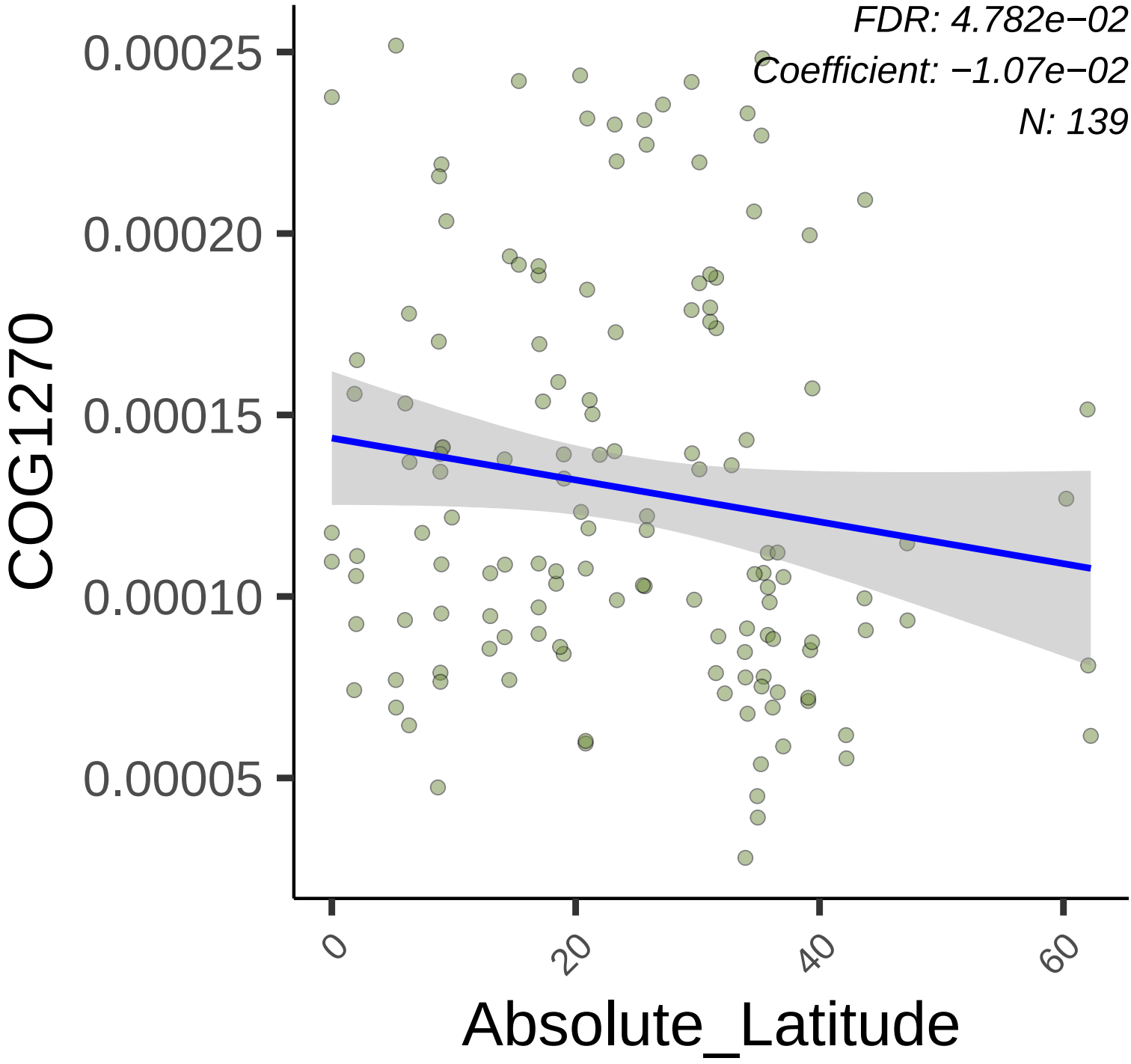

FDR: 4.643e−02
Coefficient: 7.17e−03
N: 139
3e−04
2e−04
1e−04
COG3180
0
20
40
60
Absolute_Latitude

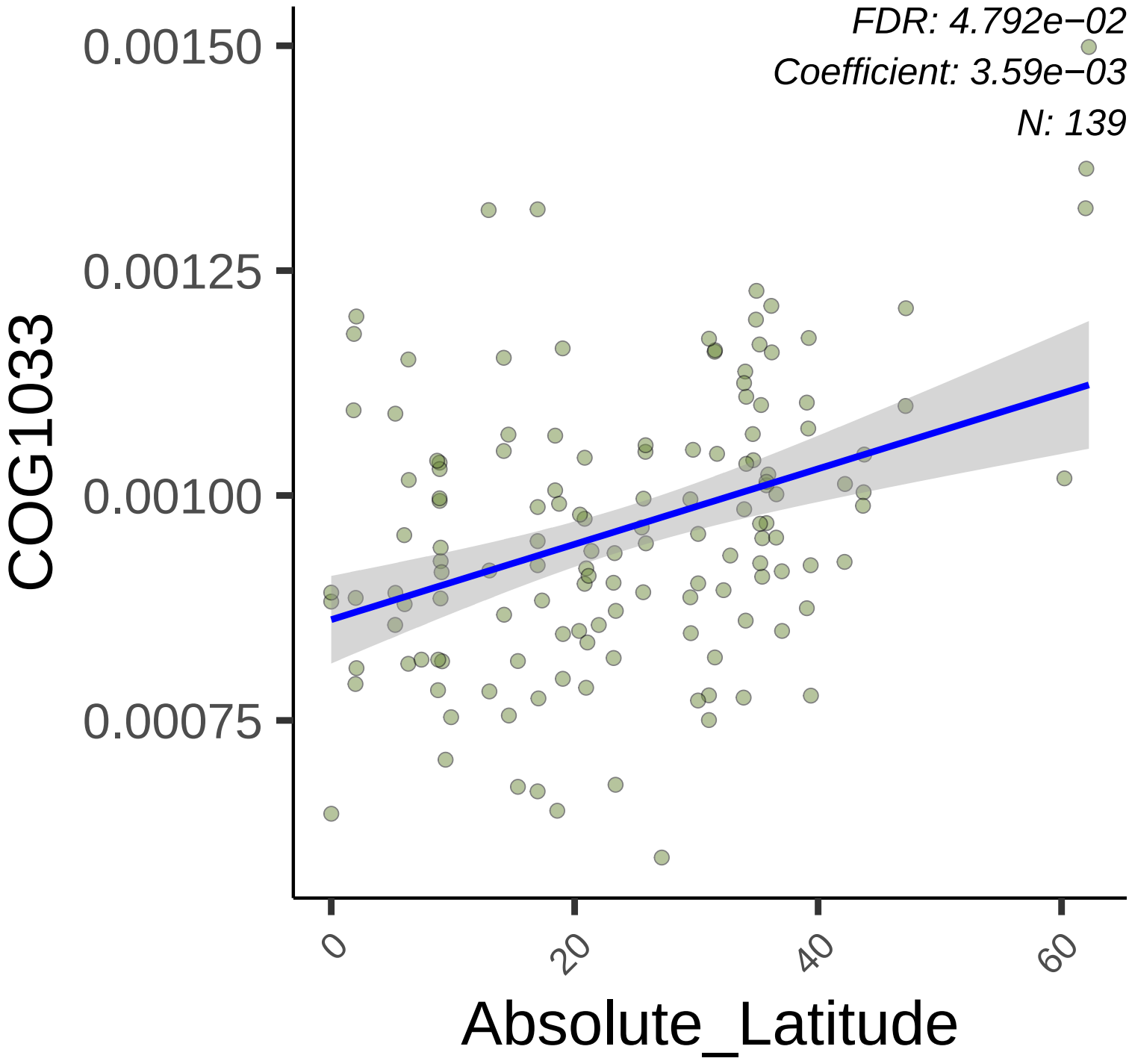

FDR: 4.649e−02
Coefficient: −5.76e−02
N: 139
COG3640
0.000125
0.000100
0.000075
0.000050
0.000025
0.000000
0
20
40
60
Absolute_Latitude

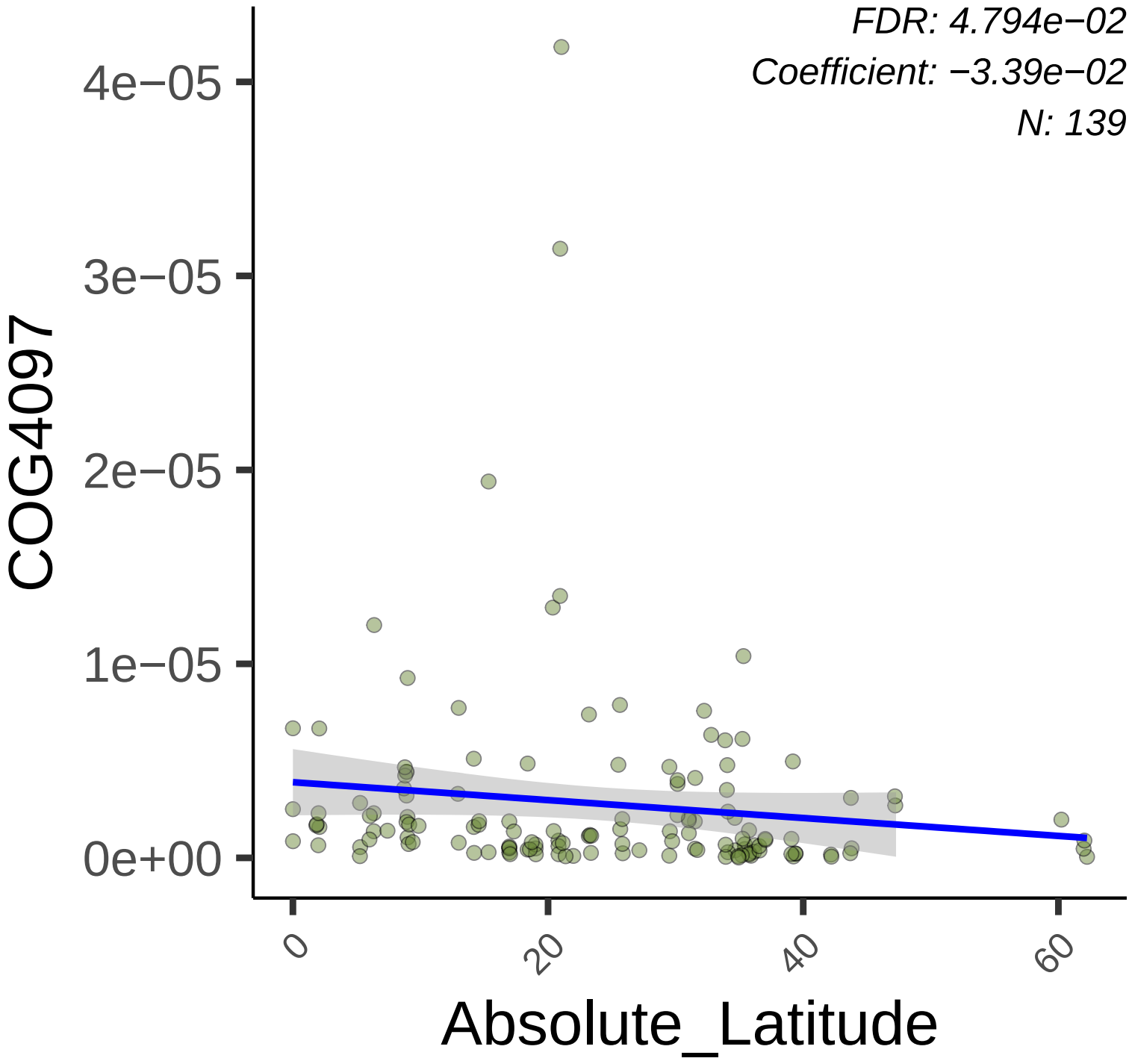

FDR: 4.666e−02
Coefficient: 3.90e−03
N: 139
7e−04
6e−04
5e−04
4e−04
3e−04
COG0313
0
20
40
60
Absolute_Latitude

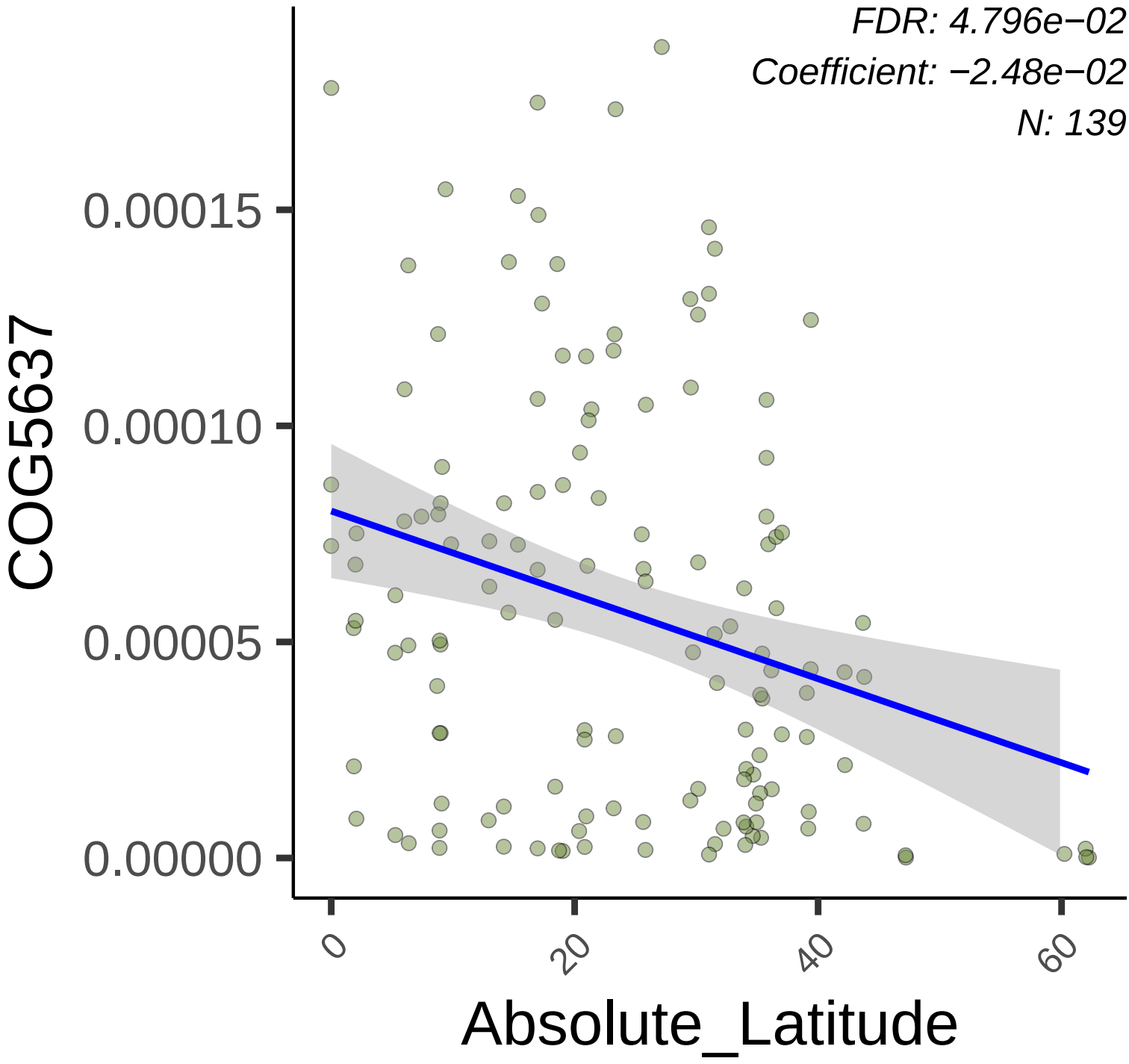

FDR: 4.686e−02
Coefficient: 5.23e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
1e−04
COG4206
0
20
40
60
Absolute_Latitude

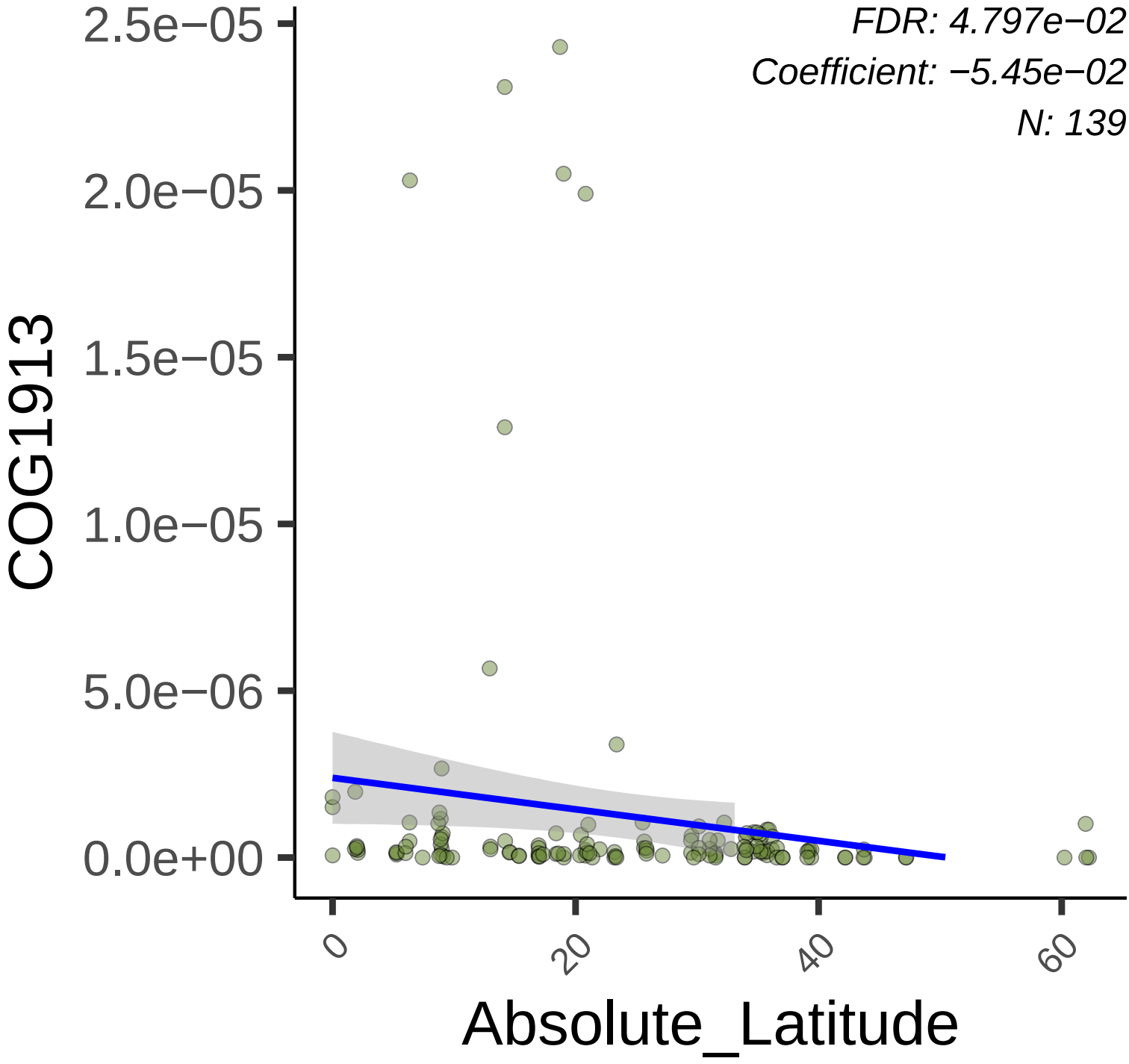

FDR: 4.735e−02
Coefficient: −3.20e−02
N: 139
3e−04
2e−04
1e−04
0e+00
COG1543
0
20
40
60
Absolute_Latitude

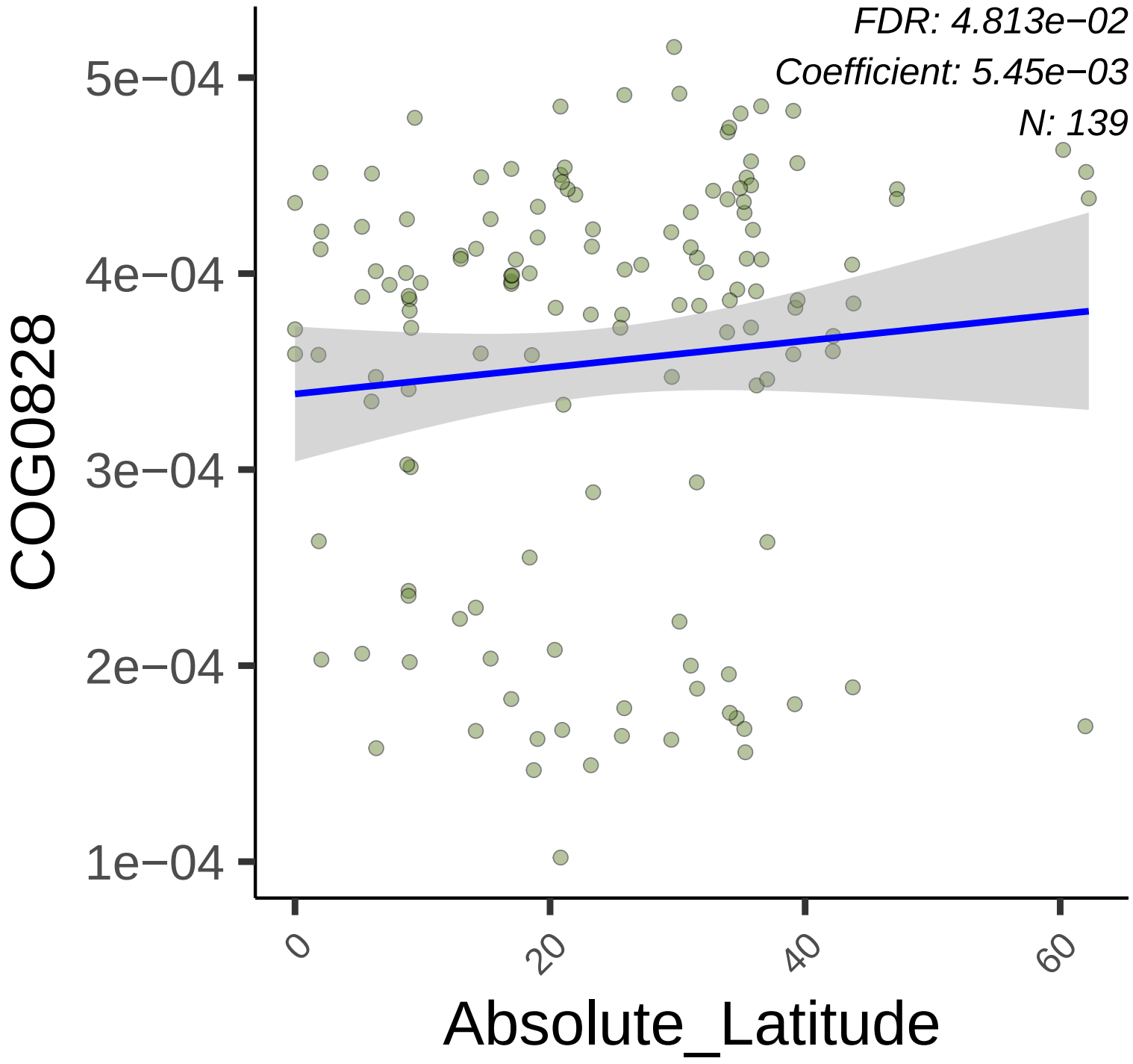

FDR: 4.782e−02
Coefficient: −1.07e−02
N: 139
0.00025
0.00020
0.00015
0.00010
0.00005
COG1270
0
20
40
60
Absolute_Latitude

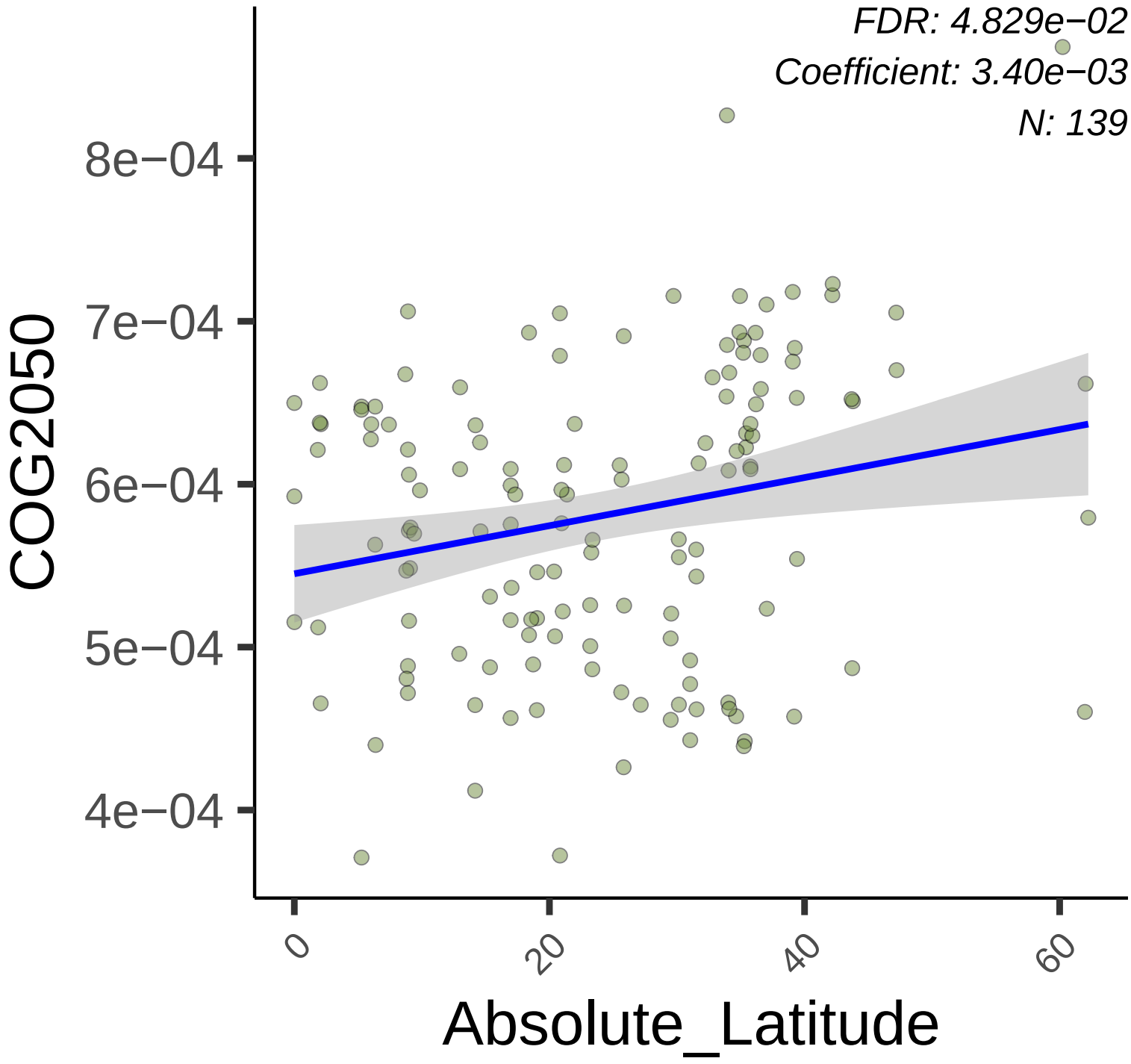

FDR: 4.792e−02
Coefficient: 3.59e−03
N: 139
0.00150
0.00125
0.00100
0.00075
COG1033
0
20
40
60
Absolute_Latitude

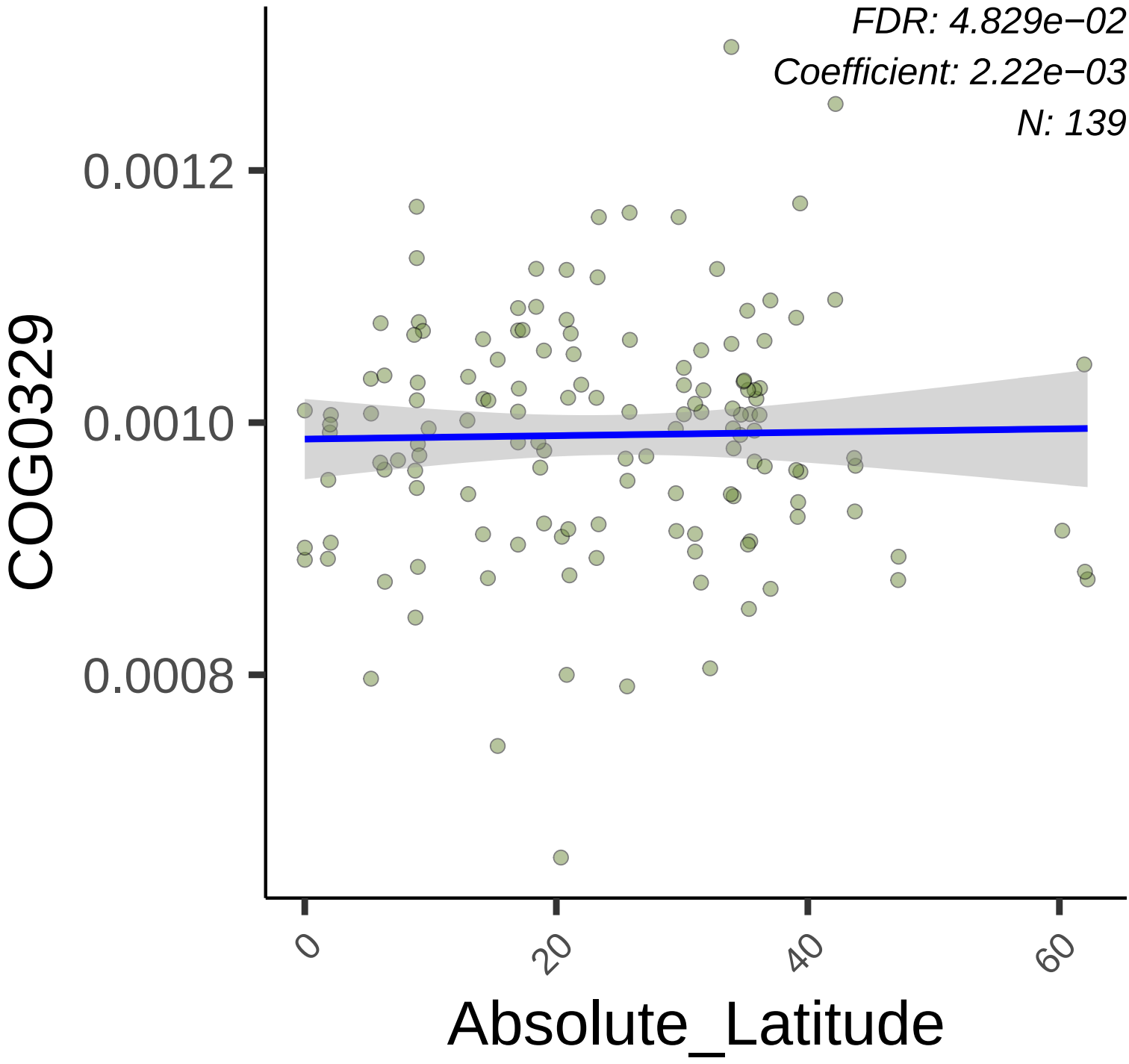

FDR: 4.794e−02
Coefficient: −3.39e−02
N: 139
COG4097
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

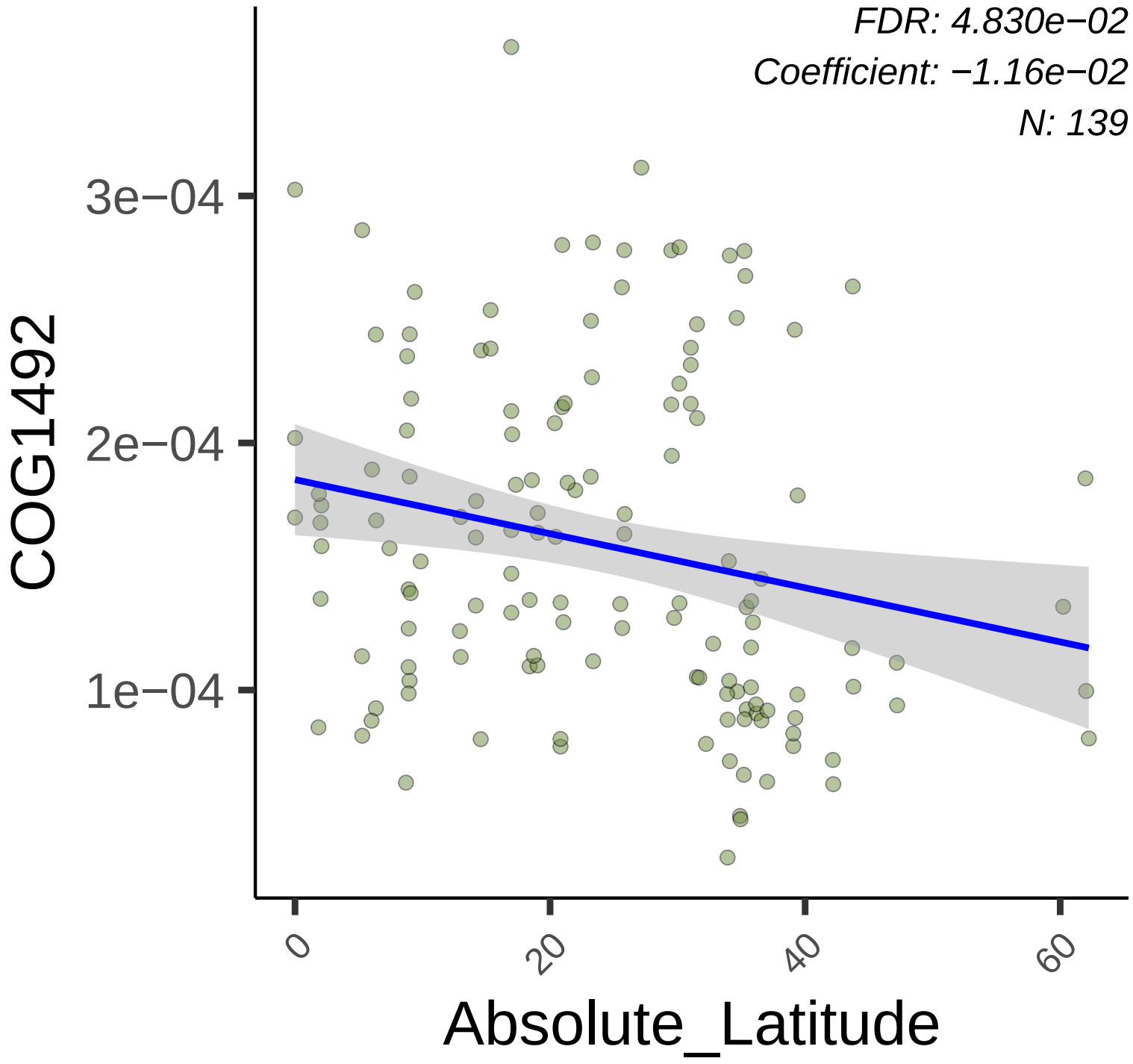

FDR: 4.796e−02
Coefficient: −2.48e−02
N: 139
COG5637
0.00015
0.00010
0.00005
0.00000
0
20
40
60
Absolute_Latitude

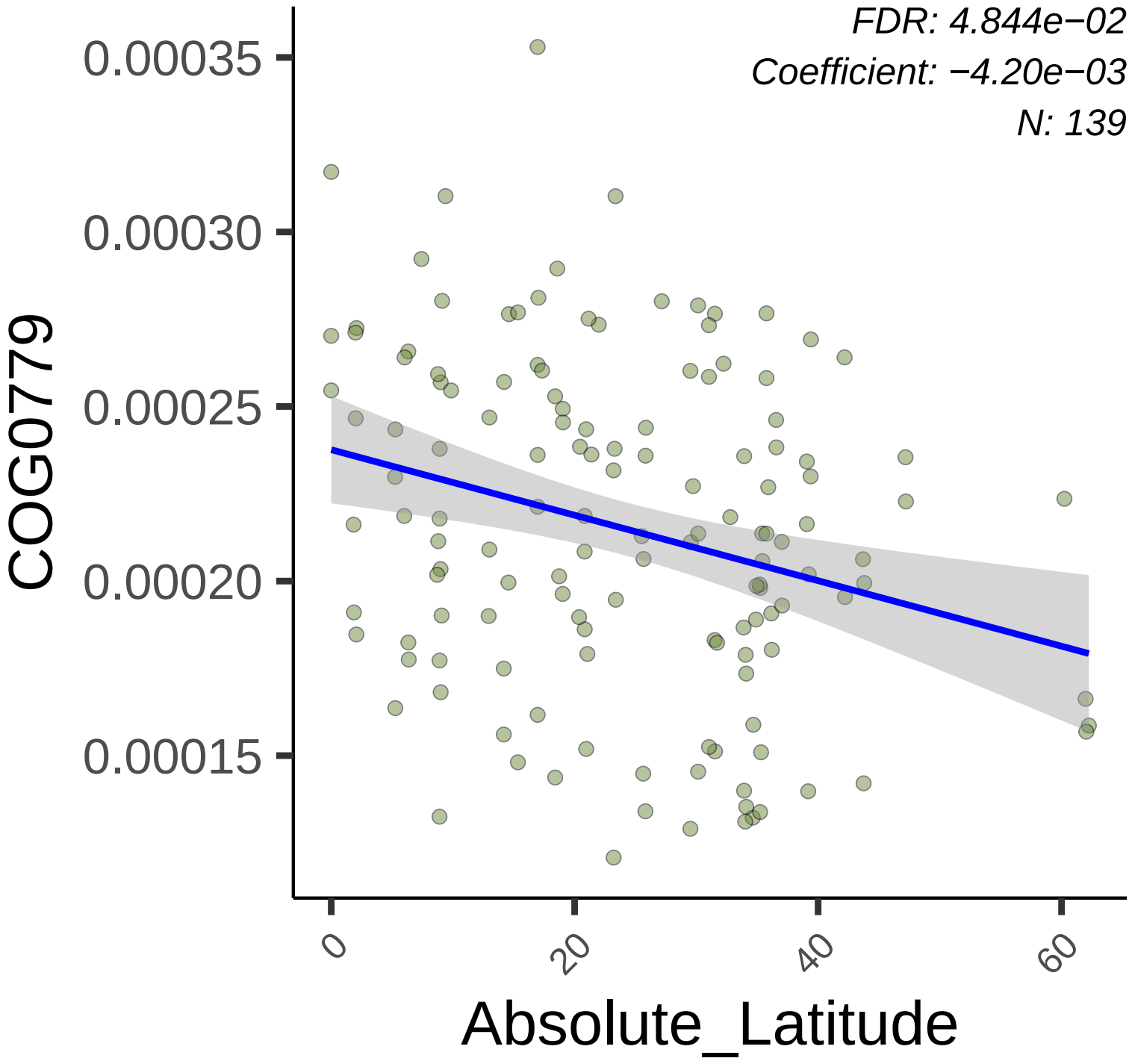

FDR: 4.797e−02
Coefficient: −5.45e−02
N: 139
COG1913
2.5e−05
2.0e−05
1.5e−05
1.0e−05
5.0e−06
0.0e+00
0
20
40
60
Absolute_Latitude

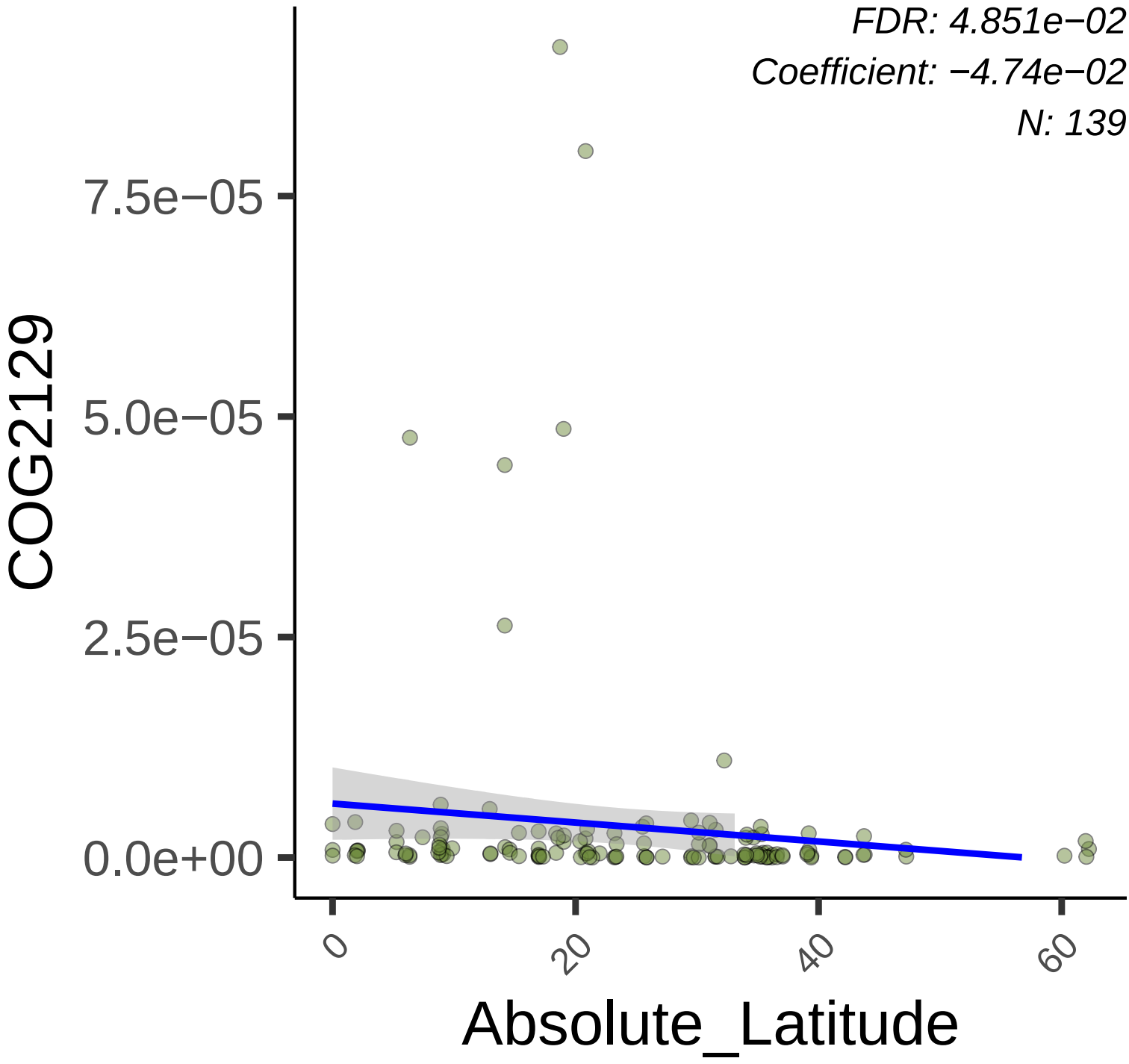

FDR: 4.813e−02
Coefficient: 5.45e−03
N: 139
5e−04
4e−04
3e−04
2e−04
1e−04
COG0828
0
20
40
60
Absolute_Latitude

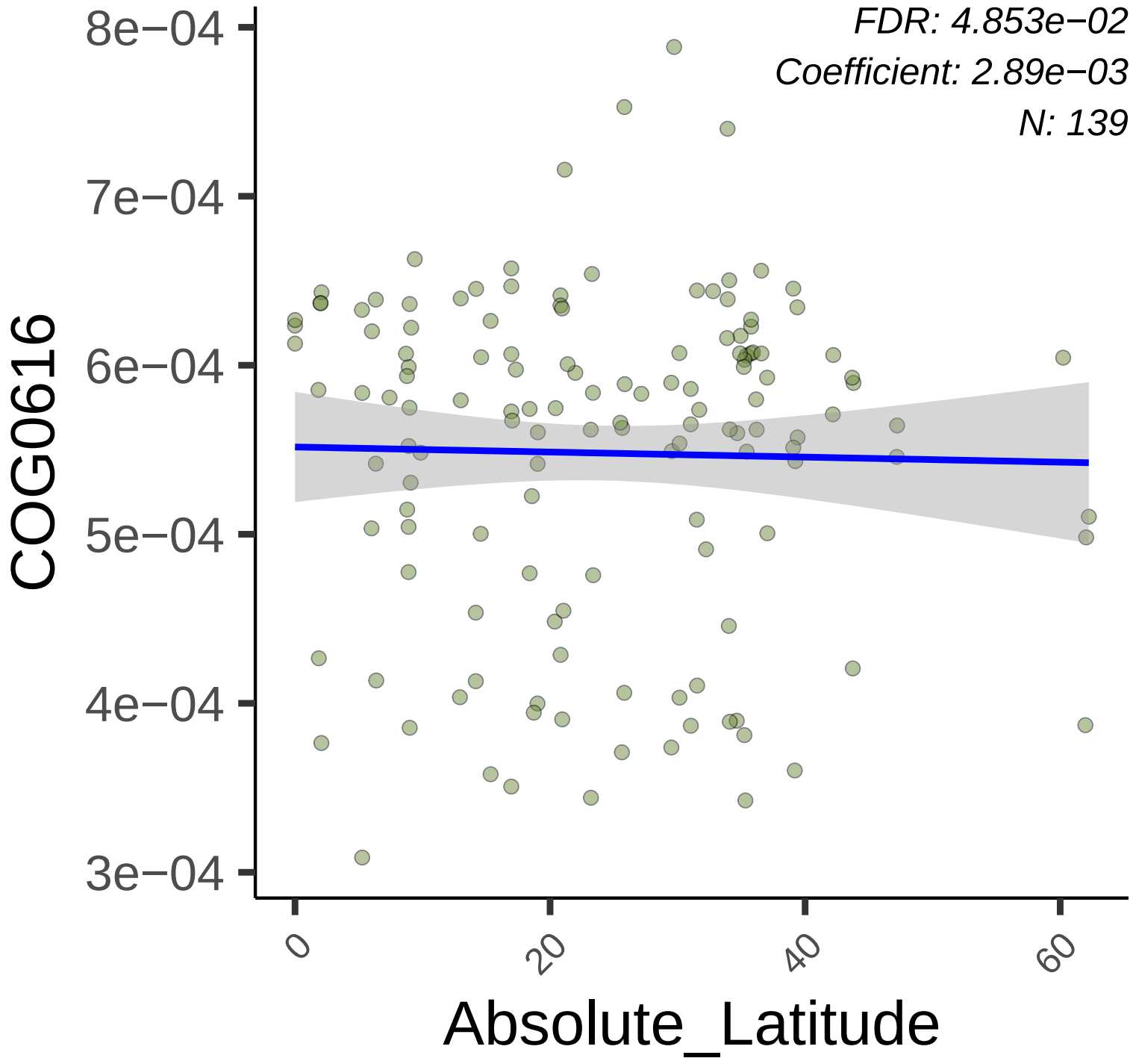

FDR: 4.829e−02
Coefficient: 3.40e−03
N: 139
COG2050
8e−04
7e−04
6e−04
5e−04
4e−04
0
20
40
60
Absolute_Latitude

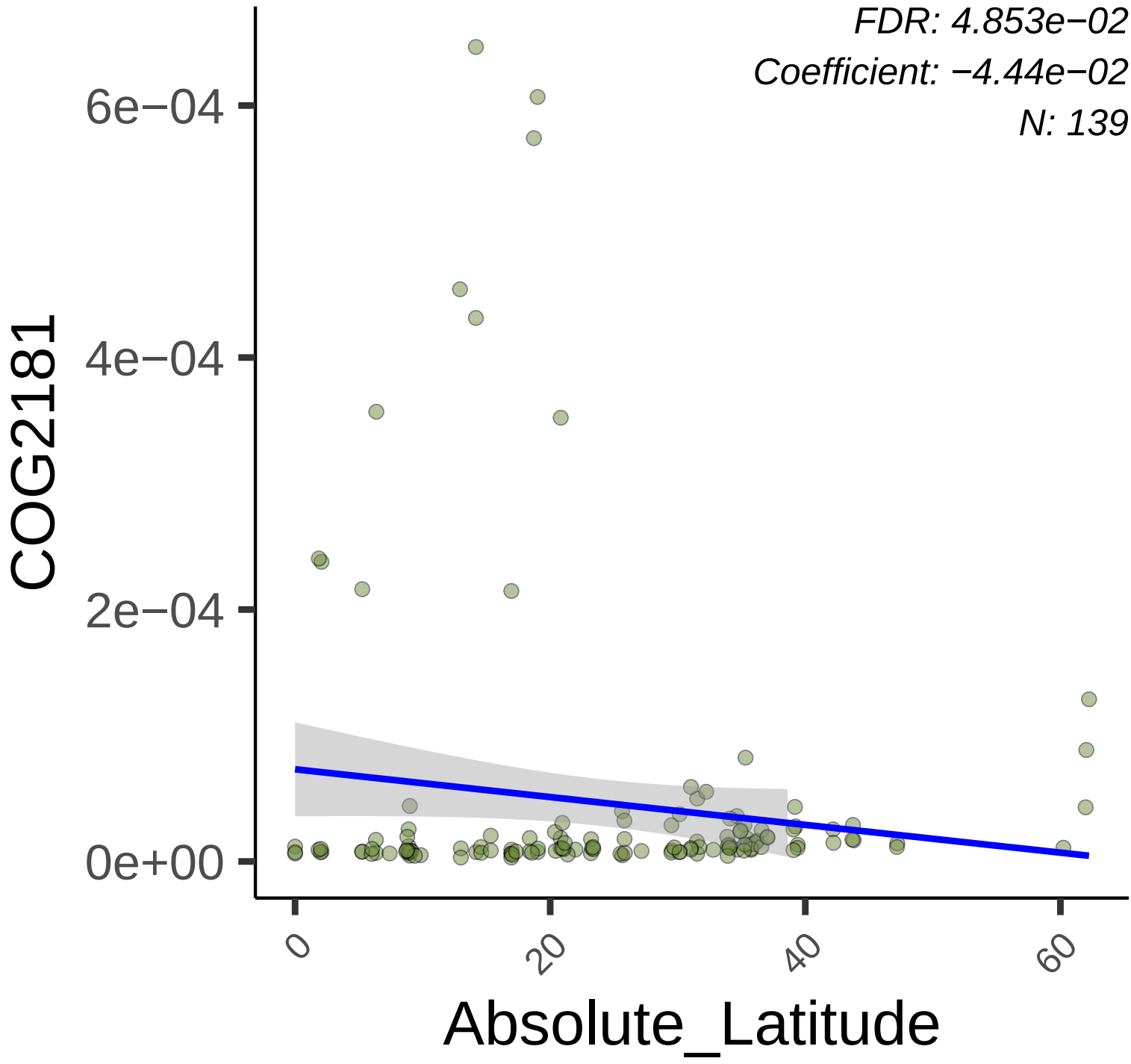

FDR: 4.829e−02
Coefficient: 2.22e−03
N: 139
0.0012
0.0010
0.0008
COG0329
0
20
40
60
Absolute_Latitude

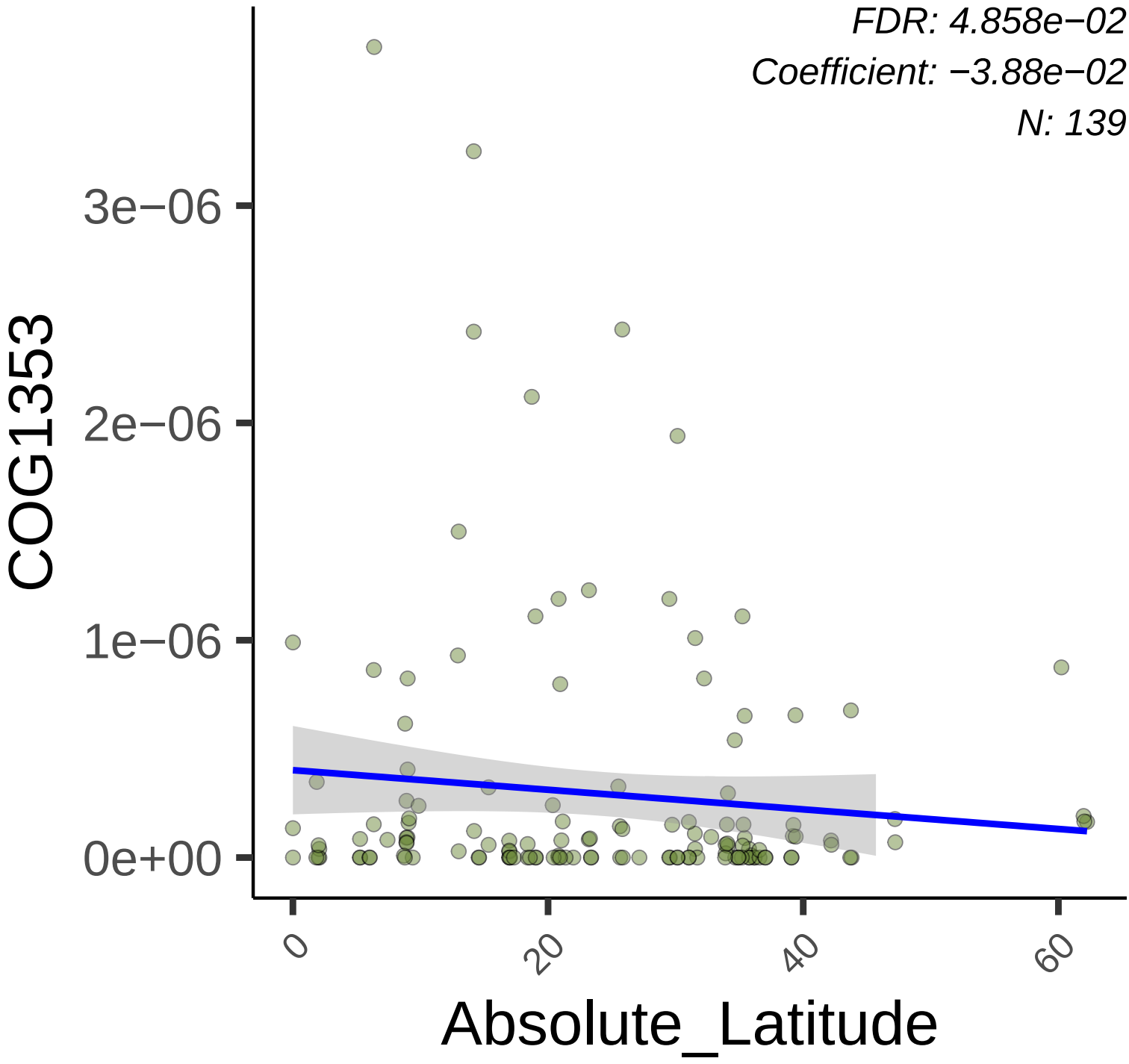

FDR: 4.830e−02
Coefficient: −1.16e−02
N: 139
3e−04
2e−04
1e−04
COG1492
0
20
40
60
Absolute_Latitude

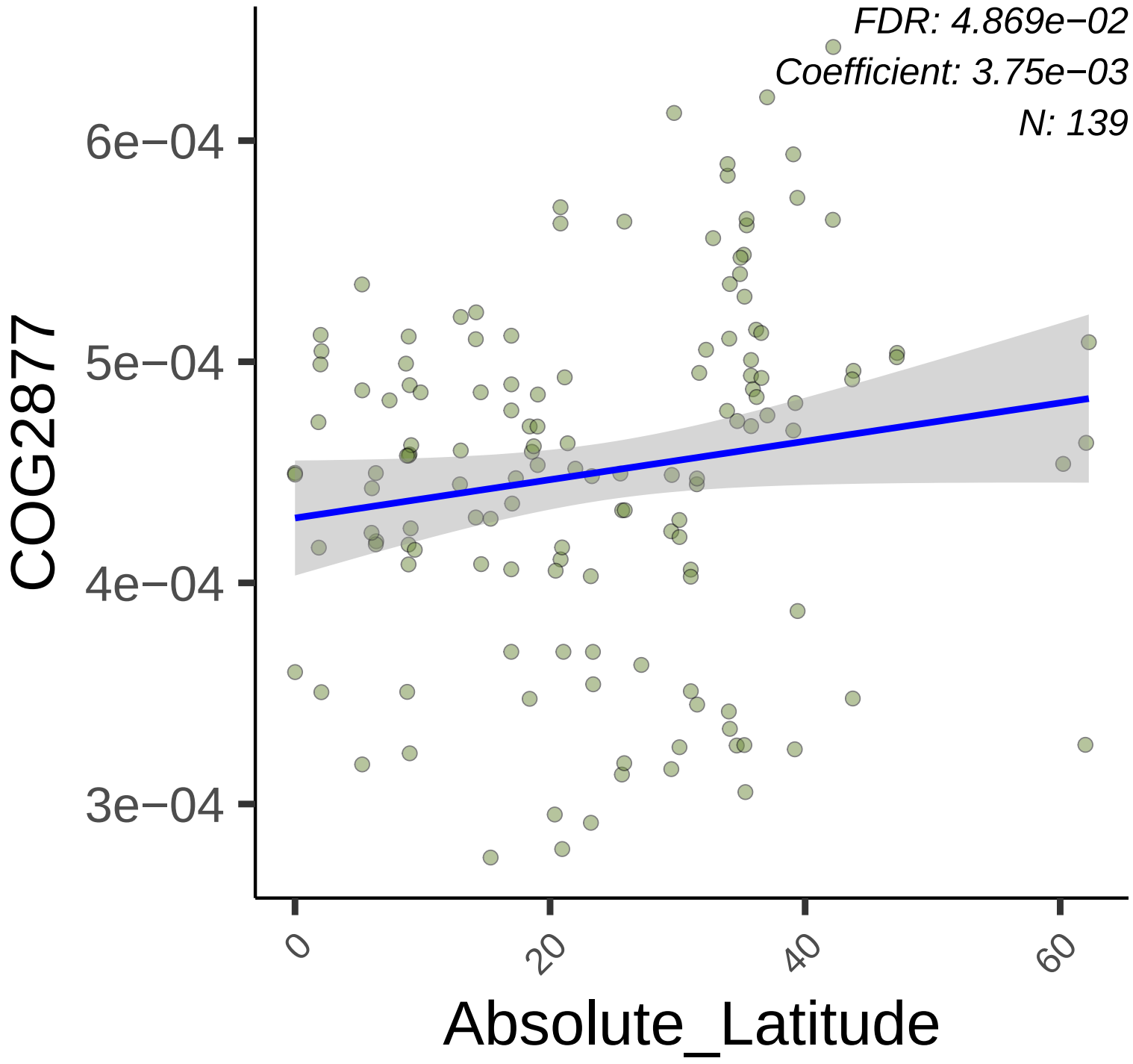

FDR: 4.844e−02
Coefficient: −4.20e−03
N: 139
0.00035
0.00030
0.00025
0.00020
0.00015
COG0779
0
20
40
60
Absolute_Latitude

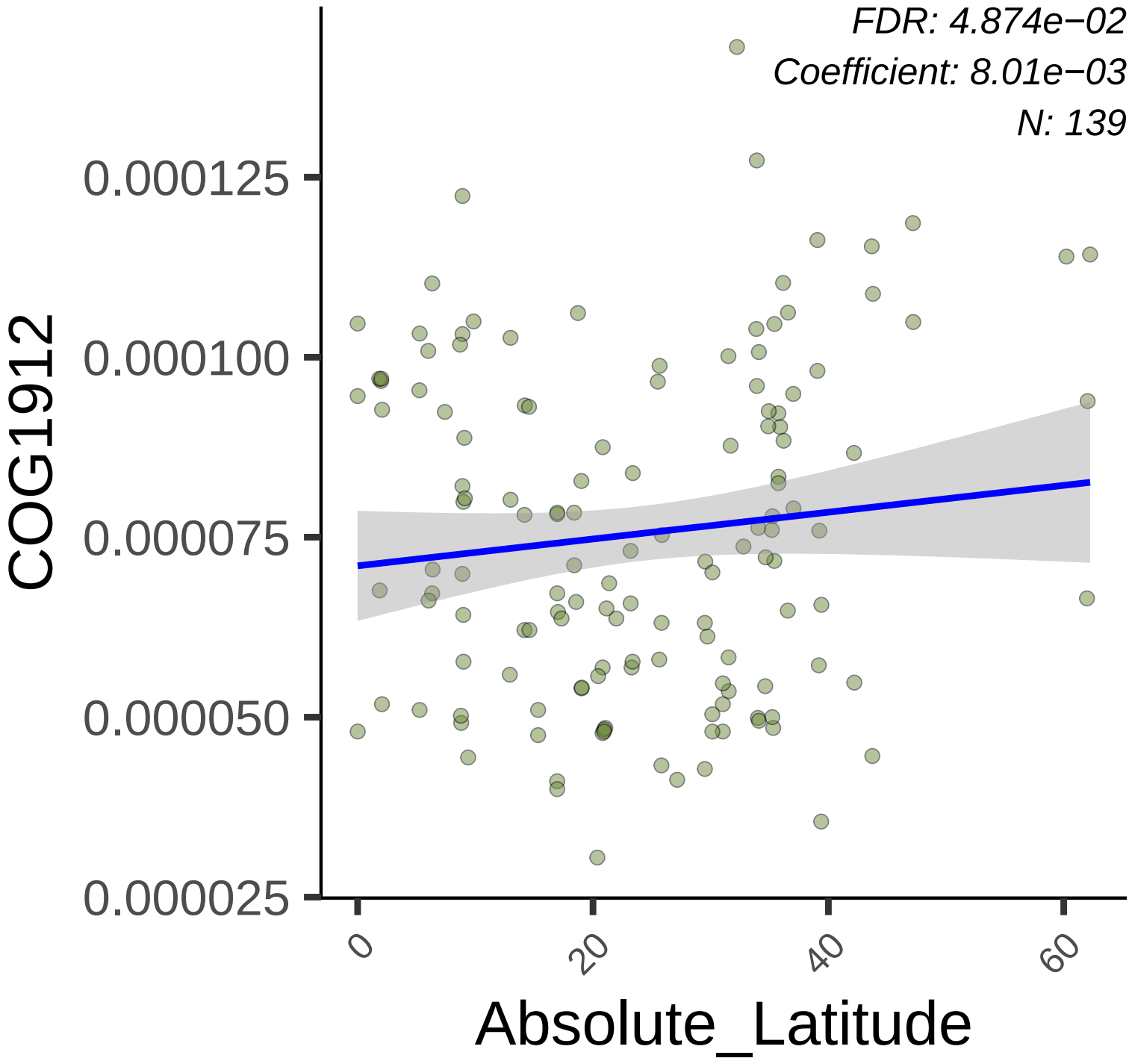

FDR: 4.851e−02
Coefficient: −4.74e−02
N: 139
COG2129
7.5e−05
5.0e−05
2.5e−05
0.0e+00
0
20
40
60
Absolute_Latitude

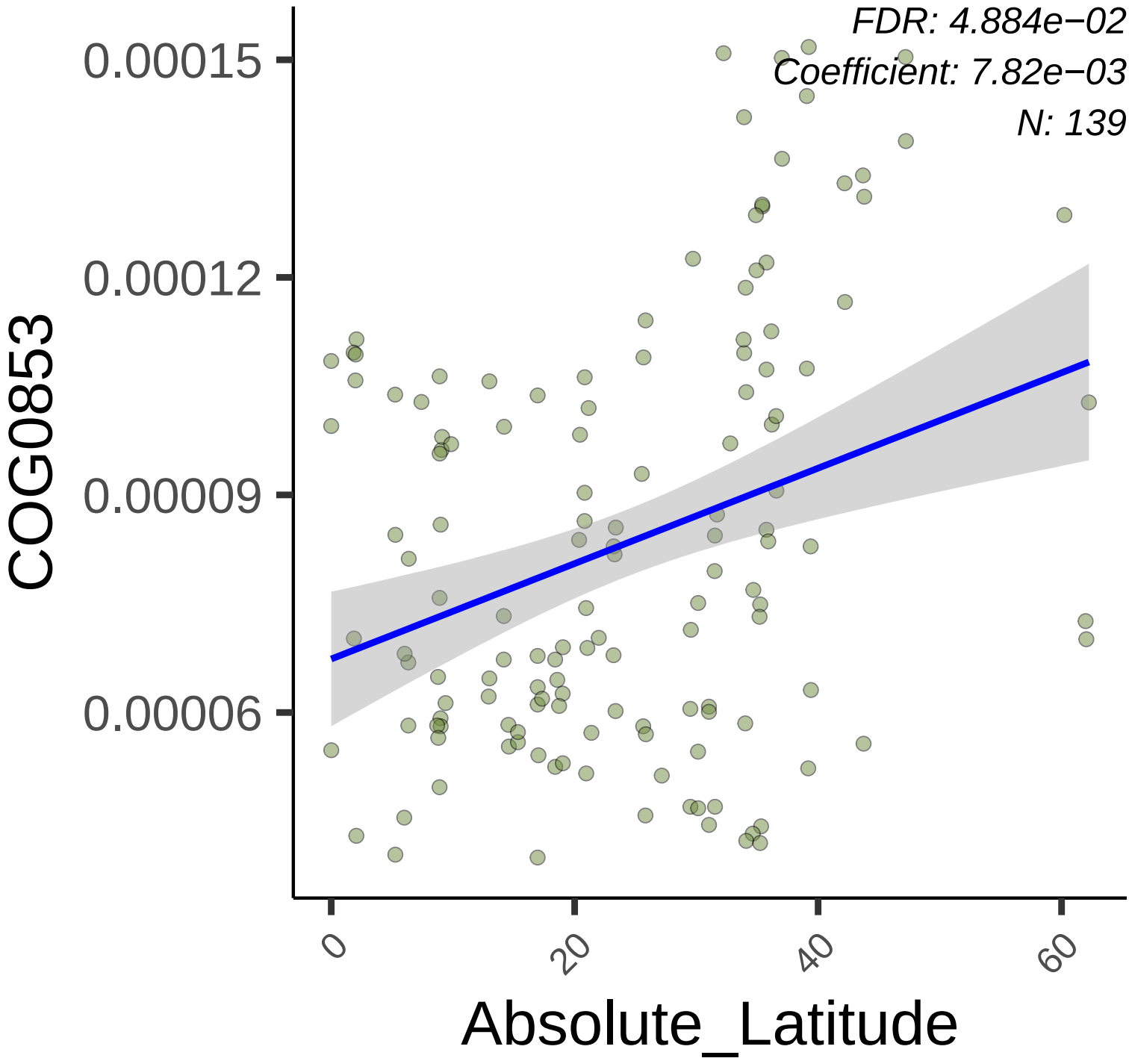

FDR: 4.853e−02
Coefficient: 2.89e−03
N: 139
8e−04
7e−04
6e−04
5e−04
4e−04
3e−04
COG0616
0
20
40
60
Absolute_Latitude

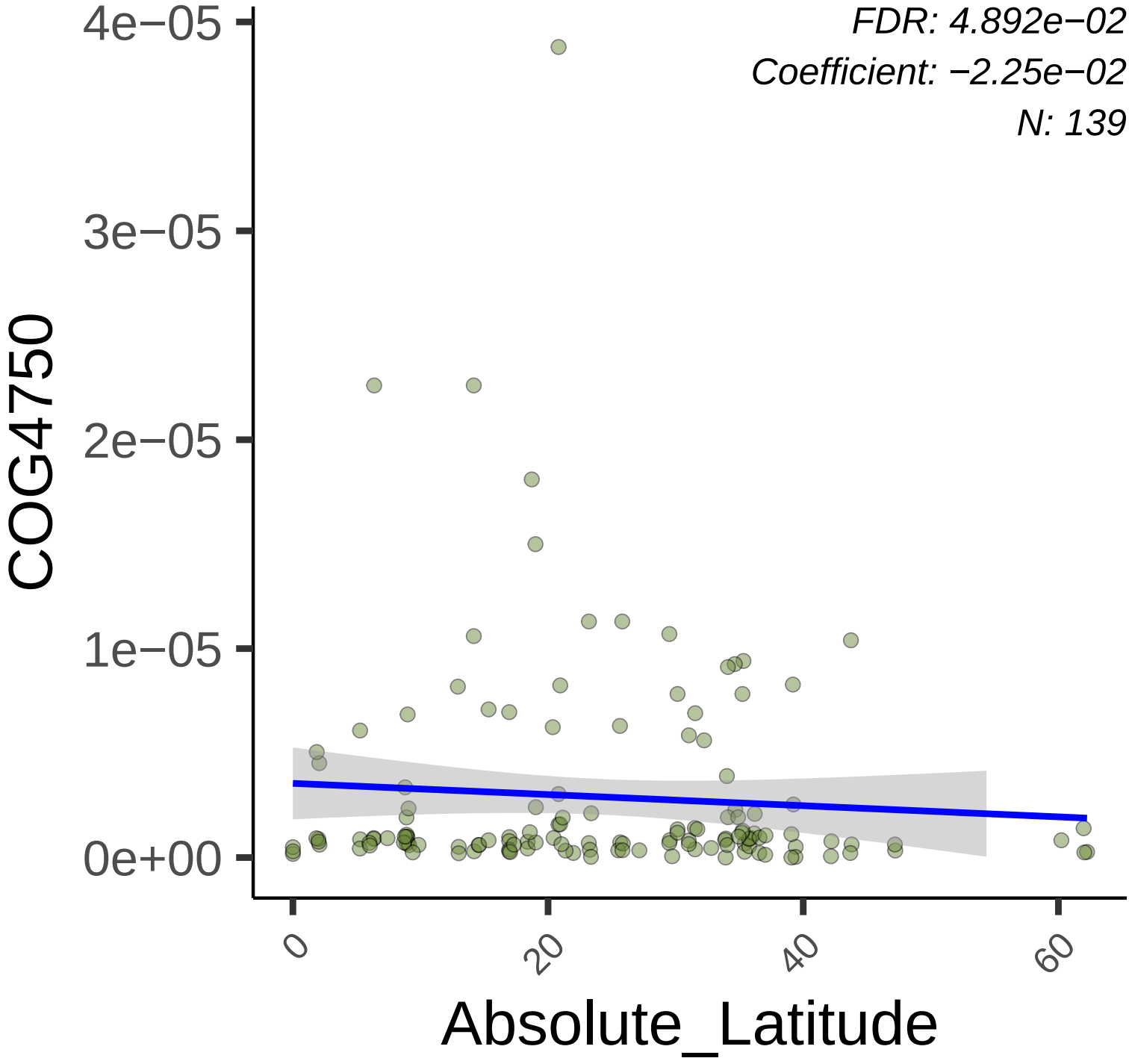

FDR: 4.853e−02
Coefficient: −4.44e−02
N: 139
COG2181
6e−04
4e−04
2e−04
0e+00
0
20
40
60
Absolute_Latitude

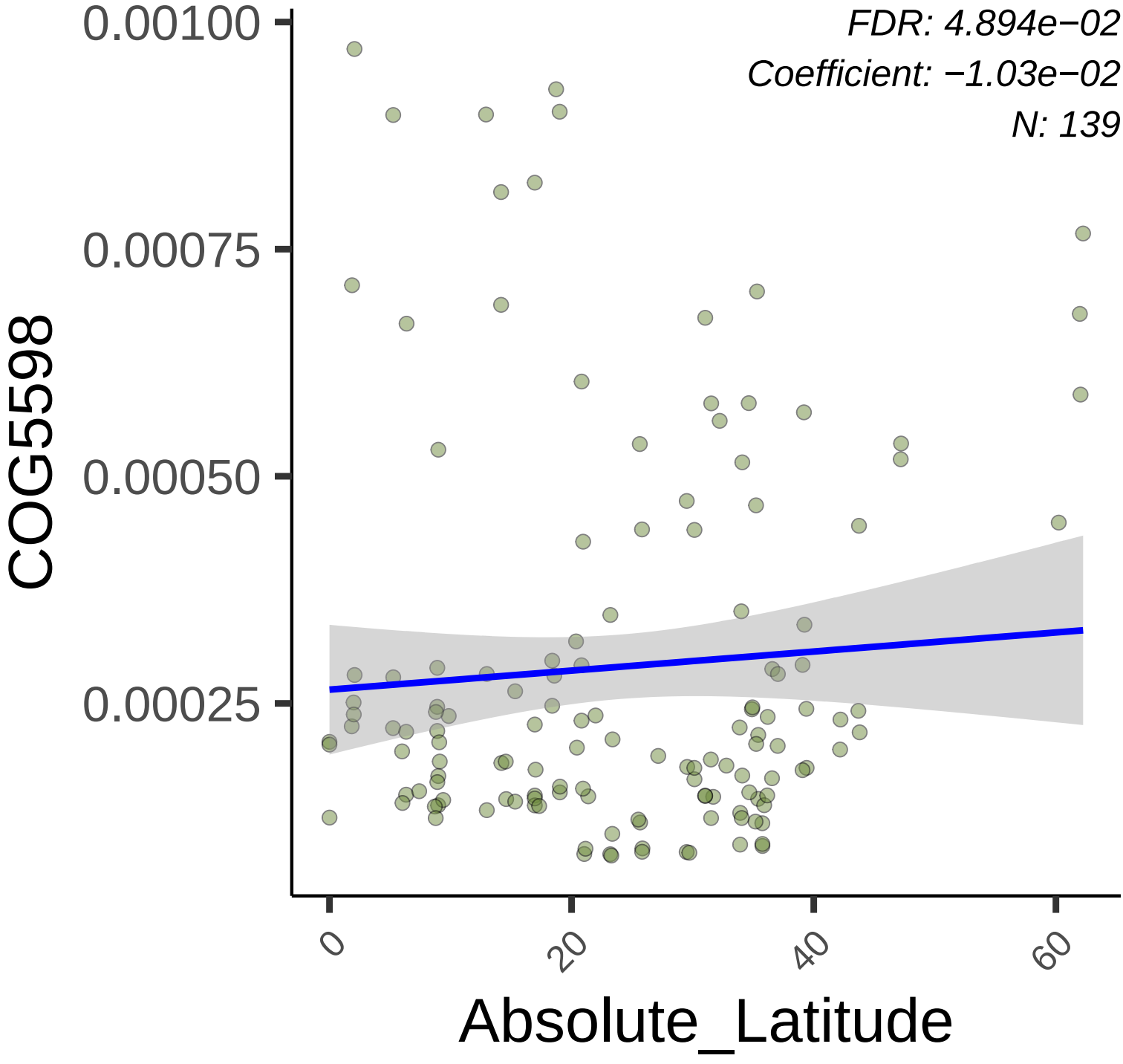

FDR: 4.858e−02
Coefficient: −3.88e−02
N: 139
COG1353
3e−06
2e−06
1e−06
0e+00
0
20
40
60
Absolute_Latitude

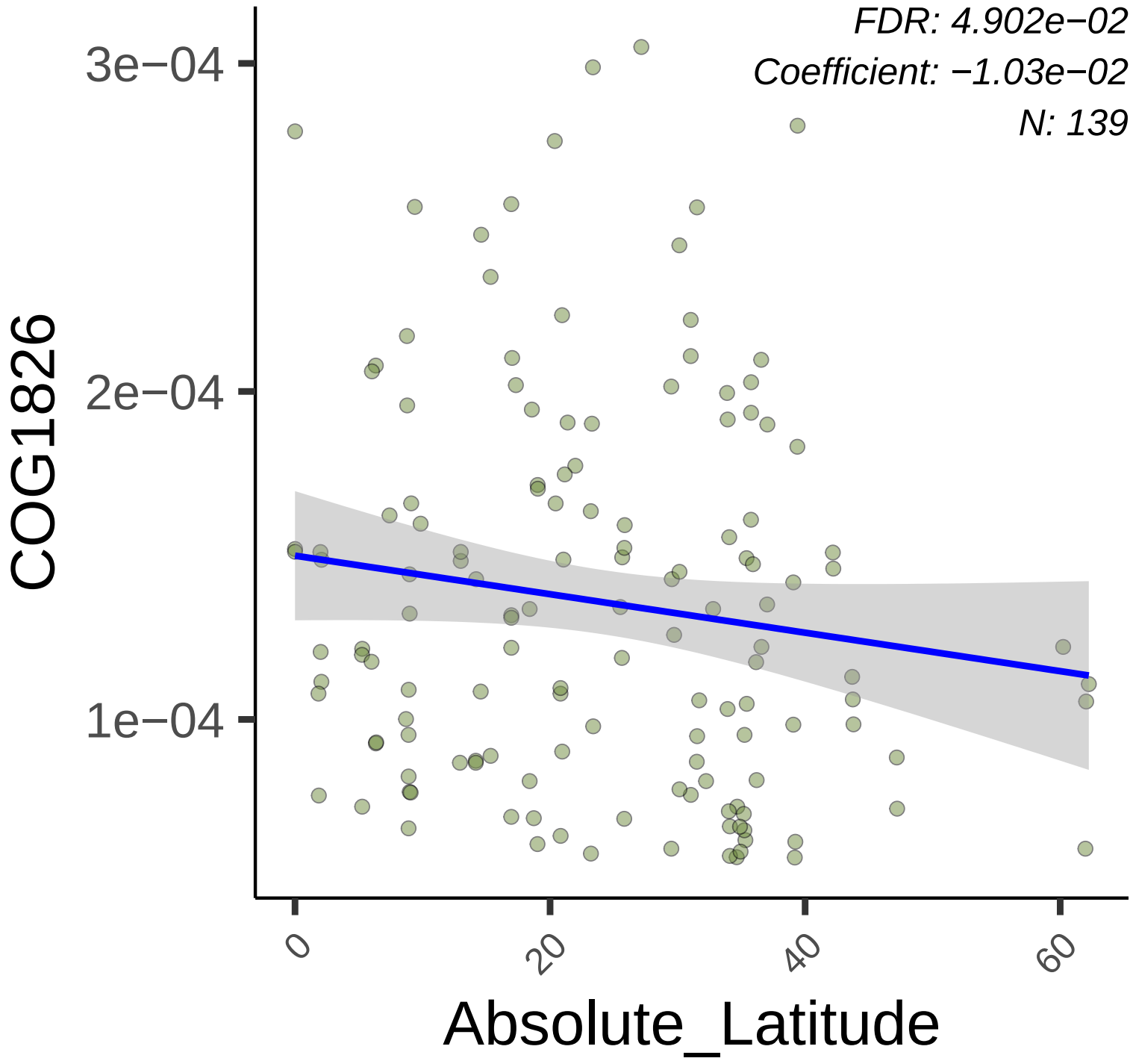

FDR: 4.869e−02
Coefficient: 3.75e−03
N: 139
6e−04
5e−04
4e−04
3e−04
COG2877
0
20
40
60
Absolute_Latitude

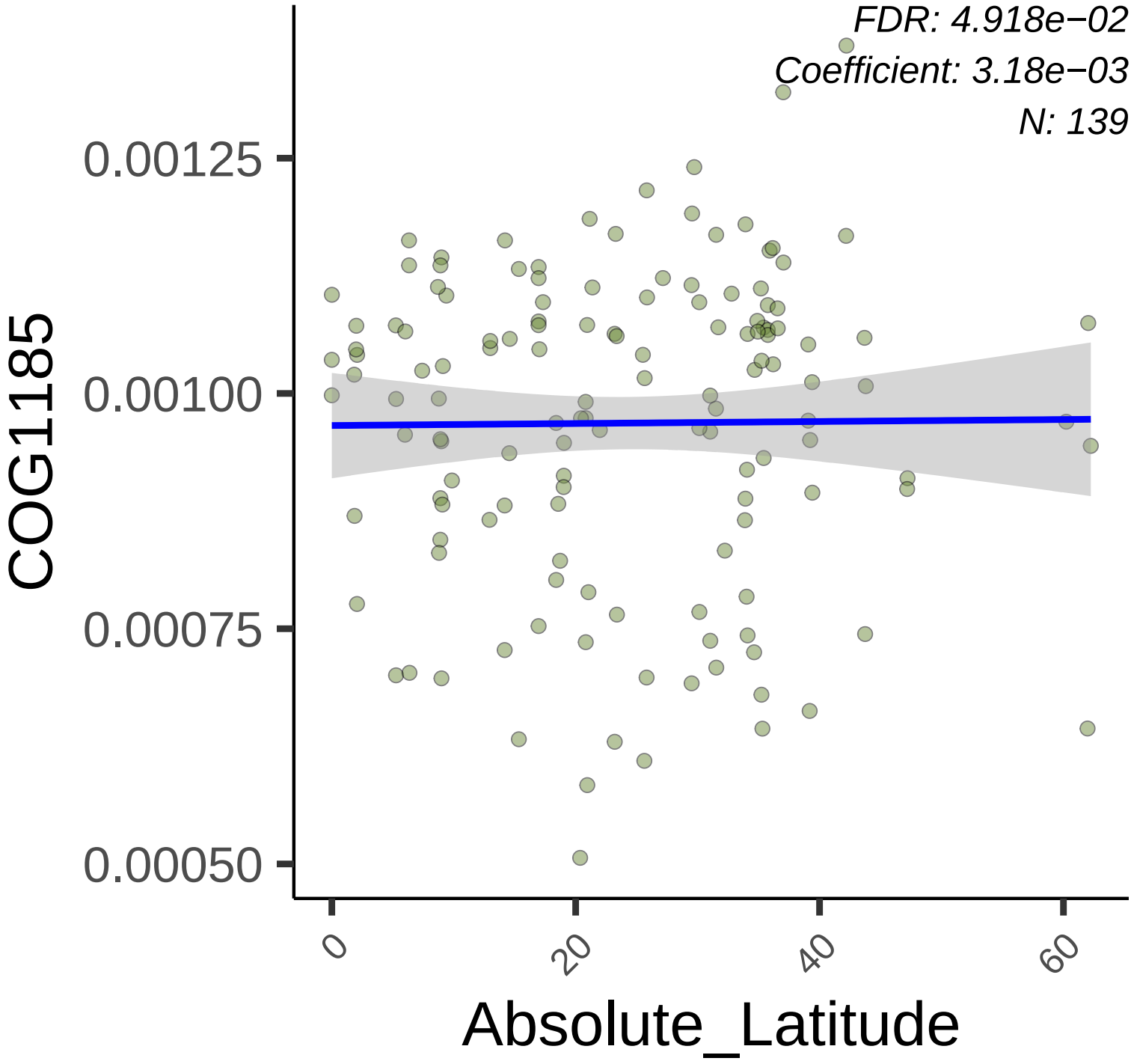

FDR: 4.874e−02
Coefficient: 8.01e−03
N: 139
COG1912
0.000125
0.000100
0.000075
0.000050
0.000025
0
20
40
60
Absolute_Latitude

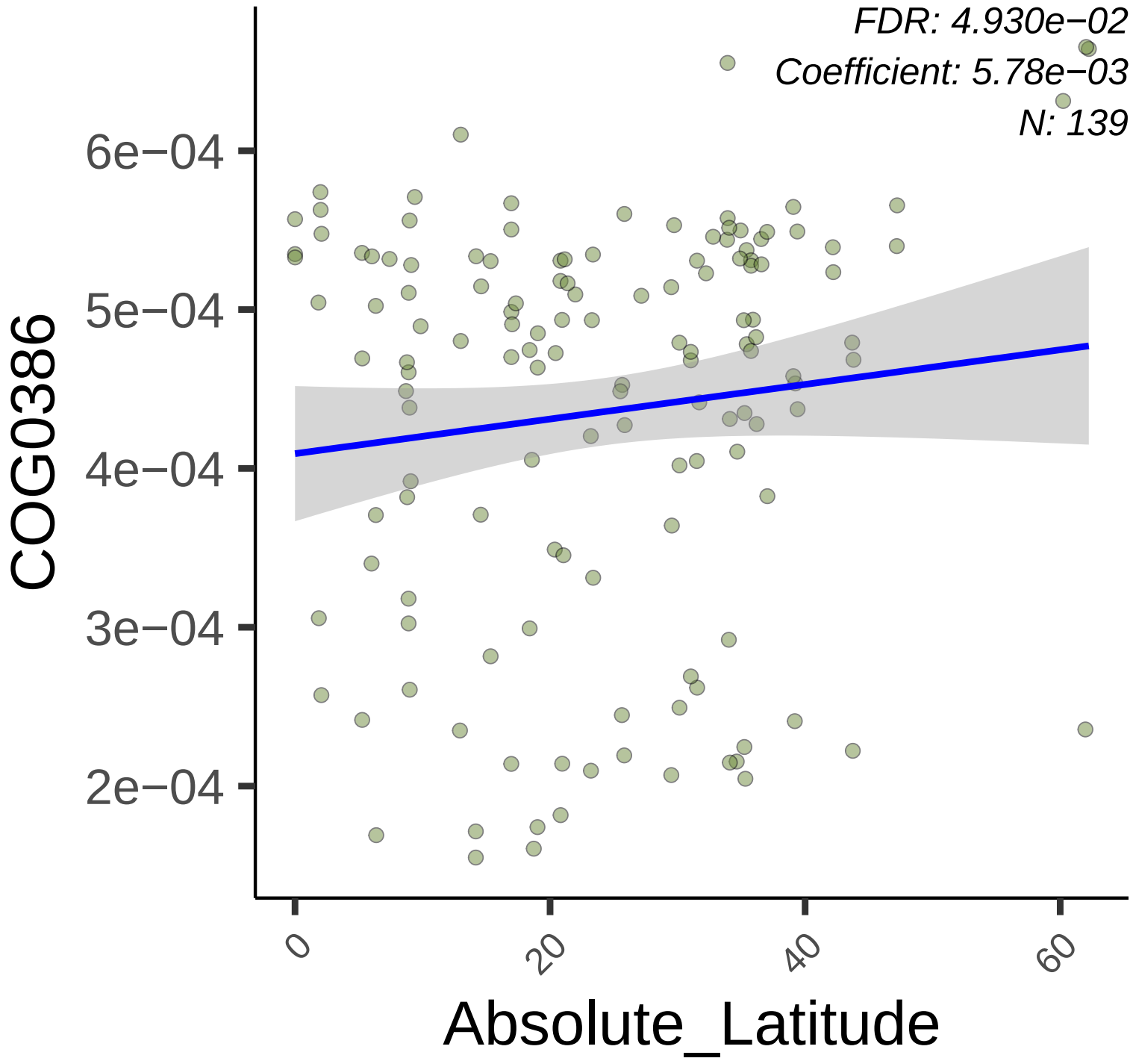

FDR: 4.884e−02
Coefficient: 7.82e−03
N: 139
0.00015
0.00012
0.00009
0.00006
COG0853
0
20
40
60
Absolute_Latitude

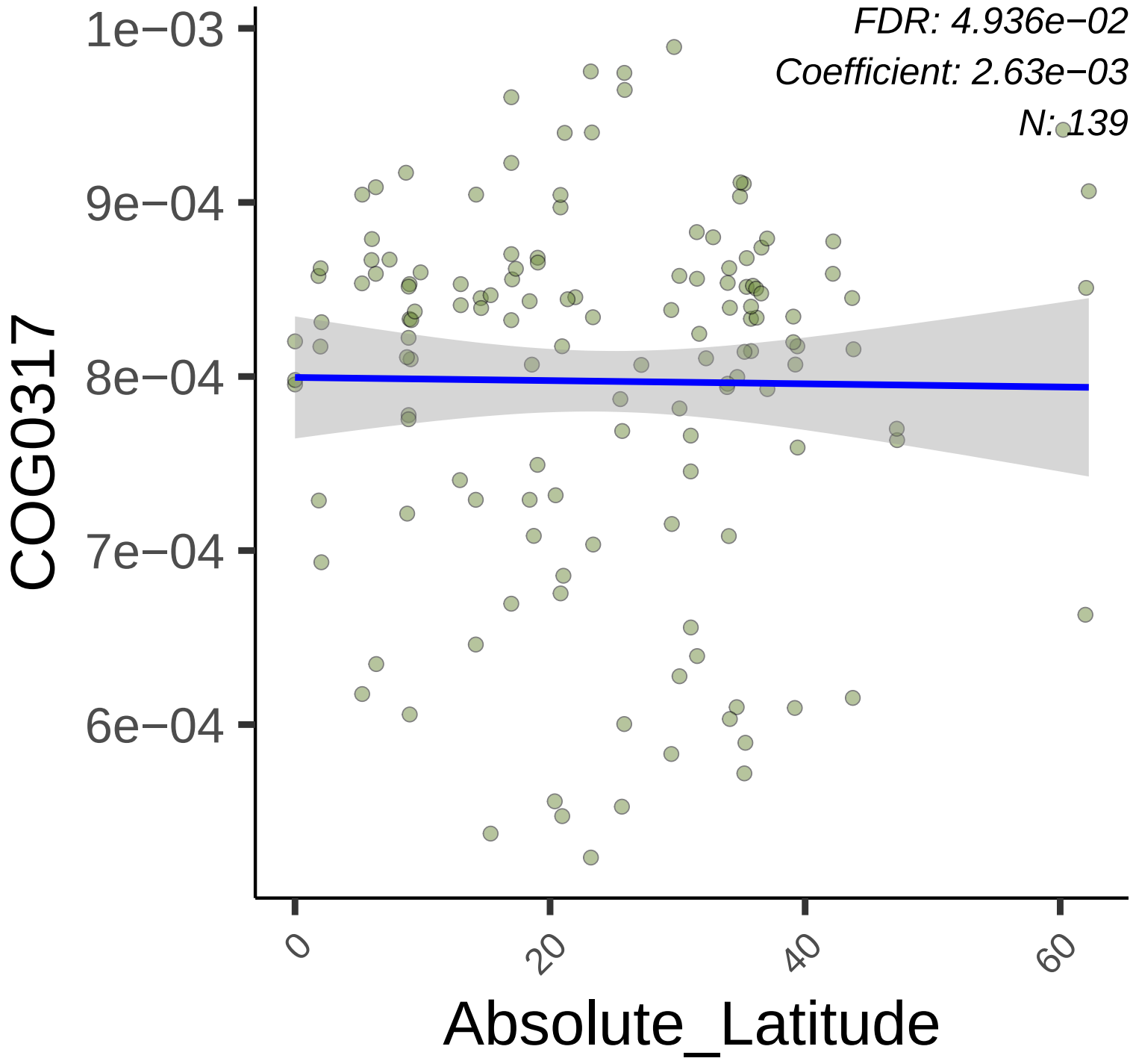

FDR: 4.892e−02
Coefficient: −2.25e−02
N: 139
COG4750
4e−05
3e−05
2e−05
1e−05
0e+00
0
20
40
60
Absolute_Latitude

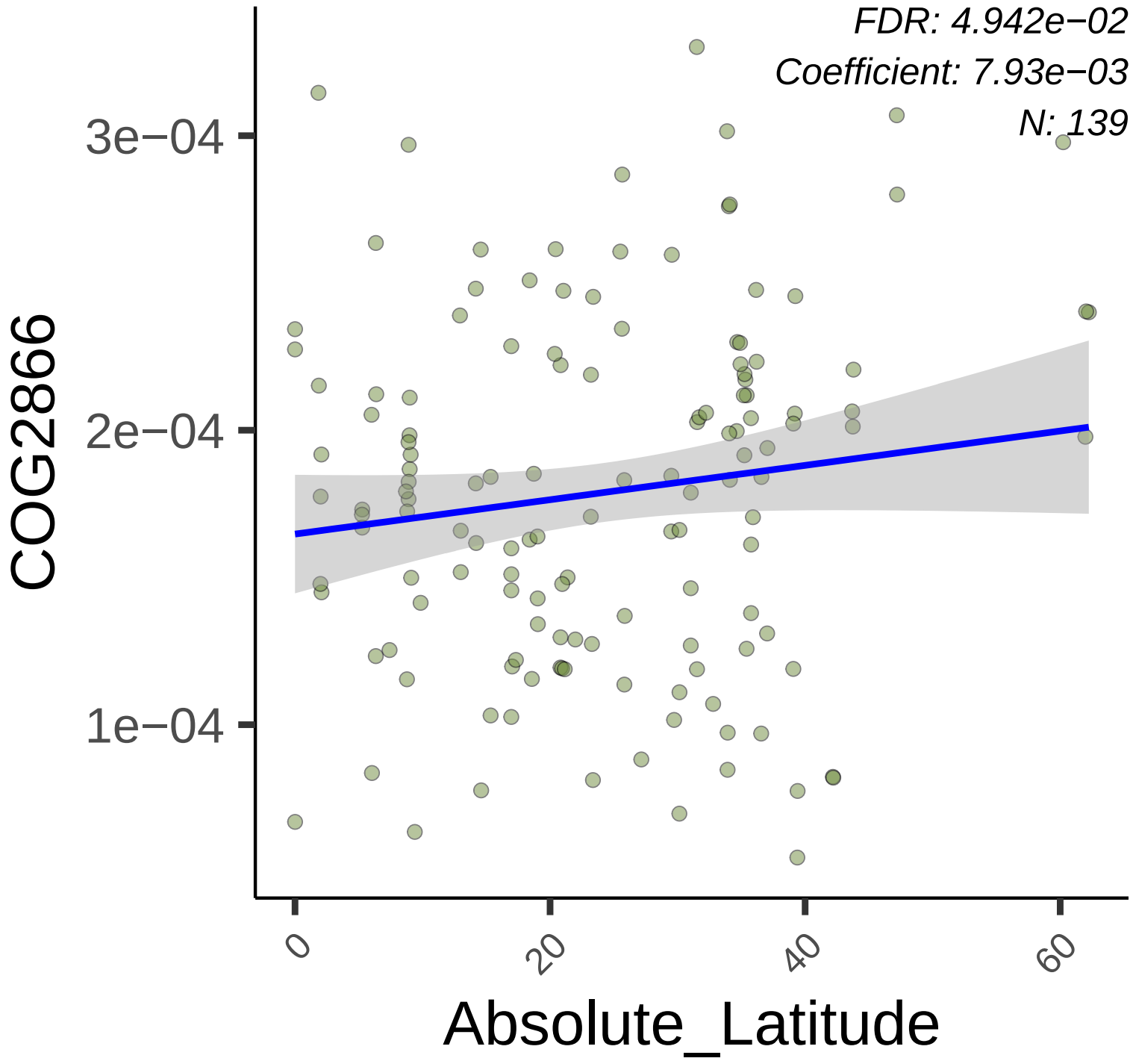

FDR: 4.894e−02
Coefficient: −1.03e−02
N: 139
0.00100
0.00075
0.00050
0.00025
COG5598
0
20
40
60
Absolute_Latitude

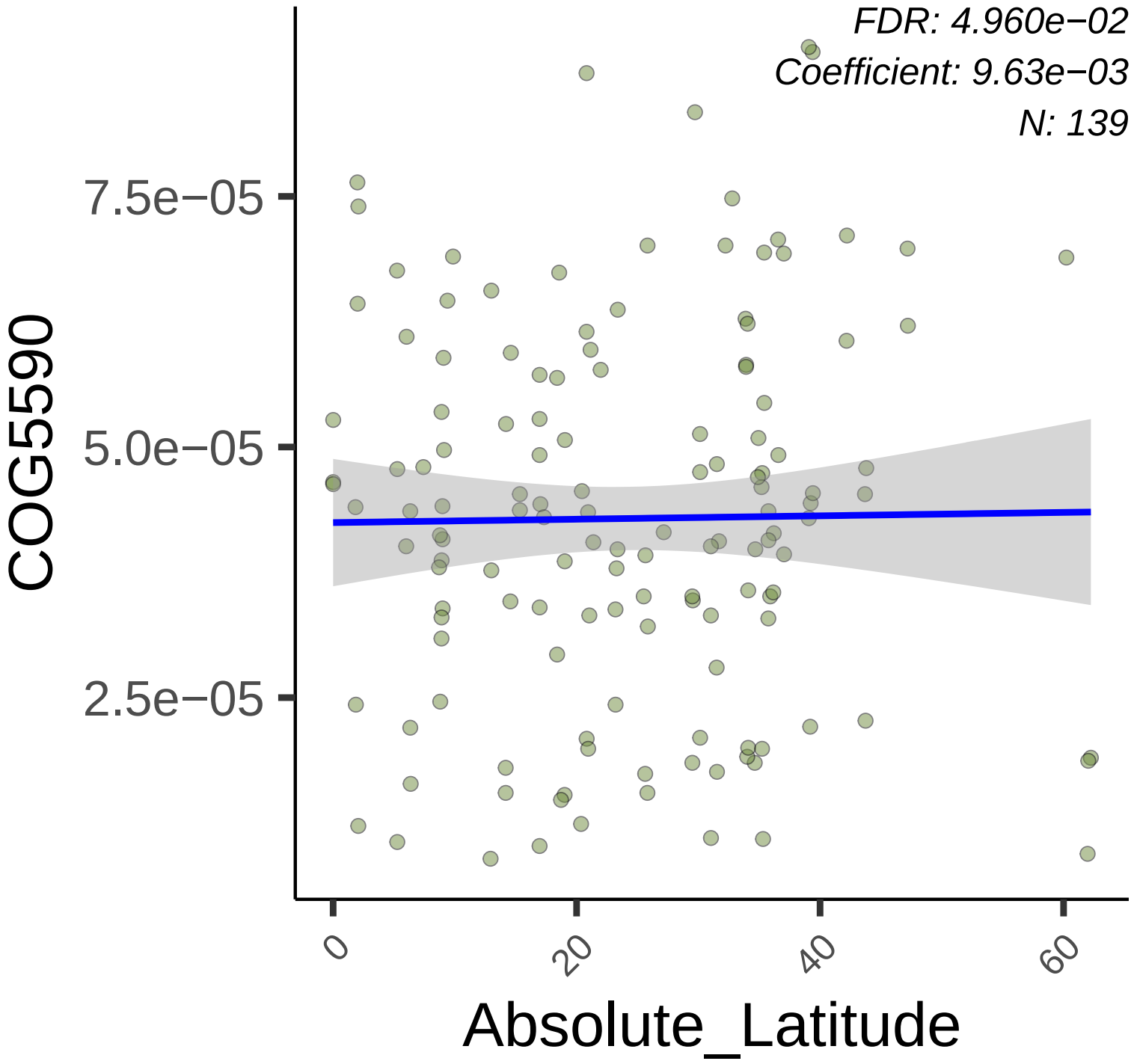

FDR: 4.902e−02
Coefficient: −1.03e−02
N: 139
3e−04
2e−04
1e−04
COG1826
0
20
40
60
Absolute_Latitude


FDR: 4.918e−02
Coefficient: 3.18e−03
N: 139
0.00125
0.00100
0.00075
0.00050
COG1185
0
20
40
60
Absolute_Latitude


FDR: 4.930e−02
Coefficient: 5.78e−03
N: 139
6e−04
5e−04
4e−04
3e−04
2e−04
COG0386
0
20
40
60
Absolute_Latitude


FDR: 4.936e−02
Coefficient: 2.63e−03
N: 139
1e−03
9e−04
8e−04
7e−04
6e−04
COG0317
0
20
40
60
Absolute_Latitude


FDR: 4.942e−02
Coefficient: 7.93e−03
N: 139
3e−04
2e−04
1e−04
COG2866
0
20
40
60
Absolute_Latitude


FDR: 4.960e−02
Coefficient: 9.63e−03
N: 139
7.5e−05
5.0e−05
2.5e−05
COG5590
0
20
40
60
Absolute_Latitude