Correlation between amino acid and codon number Vertebrates, Ciliate Nuclear Dasycladacean Nuclear Hexamita Nuclear 1e8 pearsonr w/ Stop: 0.79 Proteome data p-value w/ Stop: 1.8e-05 Genetic code pearsonr w/o Stop: 0.77 p-value w/o Stop: 6.0e-05 -10.4 -13.7 0.0 -30.2

Amino acid (plus Stop)

4.0

3.5

3.0

2.5

2.0

1.5

1.0

0.5

0.0

W

Summed amino acid number