

## Supplementary Tables 1-2

Dataset	Chains non-redundant	Single nts	Nts in Pair	Nts in Triplet	Nts in 4-tuple	Nts in 5-tuple	% Nts with a neighbor
Protein-RNA AND-set	288	188	674	39	16	5	80%
Protein-RNA OR-set	95	26	312	27	8	0	93%

**Table S1: Frequencies of extruded nucleotides.** The table presents the statistics of extruded consecutive nucleotides (nts) observed in the two dataset of protein-RNA complexes. Column 2 details the number of considered interacting protein-RNA chains. Columns 3-7 present the frequencies of different numbers of consecutive, extruded, protein interacting nucleotides that are not involved in RNA base pairing. Specifically, column 3 presents the number of single extruded nucleotides that are not part of an extruded pair. Column 4 presents the number of pairs that are not part of a triplet, column 5 presents the number of triplets that are not part of quadruplet, etc. The last column presents the percentage of protein interacting extruded nucleotides that have at least one RNA strand neighbor that interacts with the protein via its ring as well.

Pair	% $\pi$ -stacked in protein-RNA AND-set	P-value in AND-set	$\pi$ -stacked in protein-RNA OR-set	P-value in OR-set	% $\pi$ -stacked in all RNA	P-value
AA	36.21	0.34	50.00	0.18	50.22	0.00
AC	65.5	0	75	0.003	48.1	0.002
AG	45.00	0.18	75.00	0.02	49.55	0.00
AU	24.00	0.89	28.57	0.75	28.87	0.91
CA	16.67	1.00	26.67	0.82	31.67	0.78
CC	46.67	0.08	42.11	0.29	44.93	0.04
CG	41.67	0.36	33.33	0.67	33.96	0.58
CU	44.44	0.34	42.86	0.44	27.27	0.89
GA	27.27	0.80	12.50	0.97	22.73	1.00
GC	50.00	0.14	60.00	0.22	40.74	0.20
GG	37.50	0.53	25.00	0.81	51.61	0.00
GU	16.67	0.97	10.00	0.99	23.86	0.99
IC	0.00	1.00	0.00	1.00	0.00	1.00
UA	16.67	0.97	14.29	0.95	17.20	1.00
UC	42.11	0.27	40.00	0.46	24.36	0.99
UG	41.67	0.36	20.00	0.88	30.30	0.80
UU	11.36	1.00	5.00	1.00	19.88	1.00

**Table S2: Sequence specificity of  $\pi$ -stacked nucleotides.** The table presents the frequencies of consecutive nucleotide  $\pi$ -stacking for each type of dinucleotide pairs. The first column indicates the nucleotide identities. For each type of pair, column 2-3 present the percentages of  $\pi$ -stacked pairs and the hyper geometric p-value of the statistics significance in the protein-RNA AND-set dataset. Columns 4-5 and 6-7 provide the same details for the protein-RNA OR-set and all RNA datasets respectively.