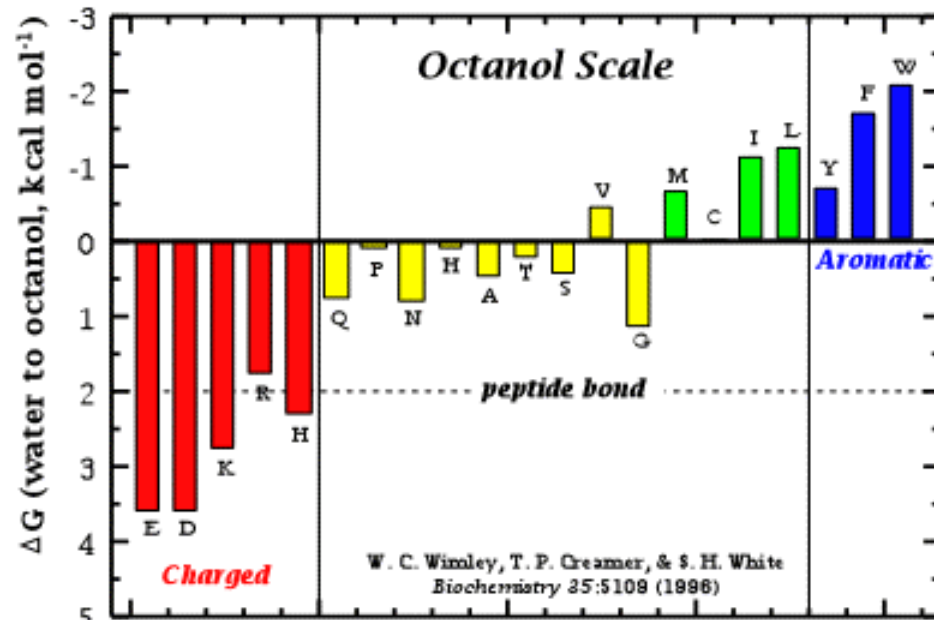
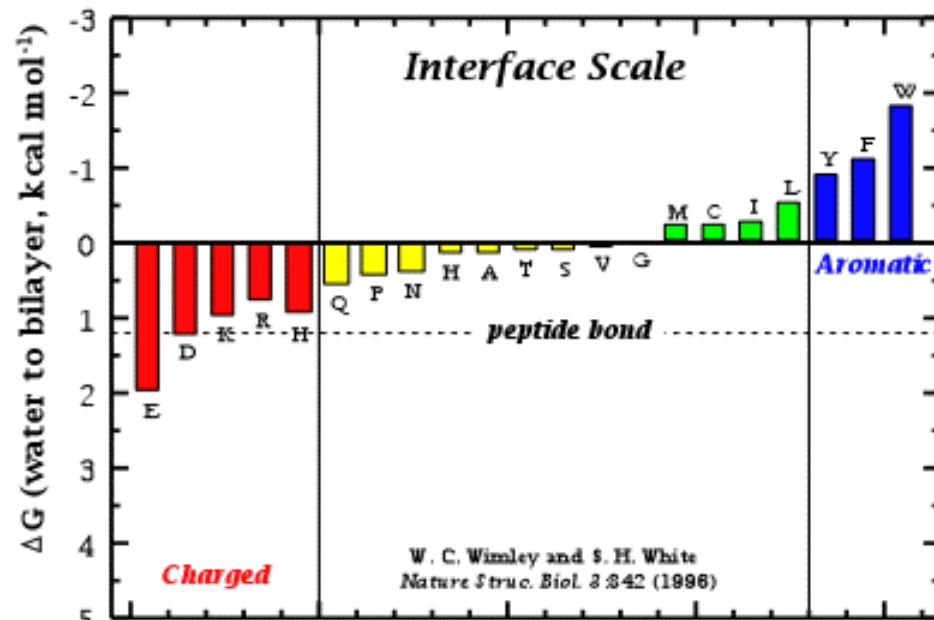


Hydrophobicity Scale

Composed of experimentally determined transfer free energies for each amino acid.

Whole-Residue Hydrophobicity Scales



Amino Acid Residue

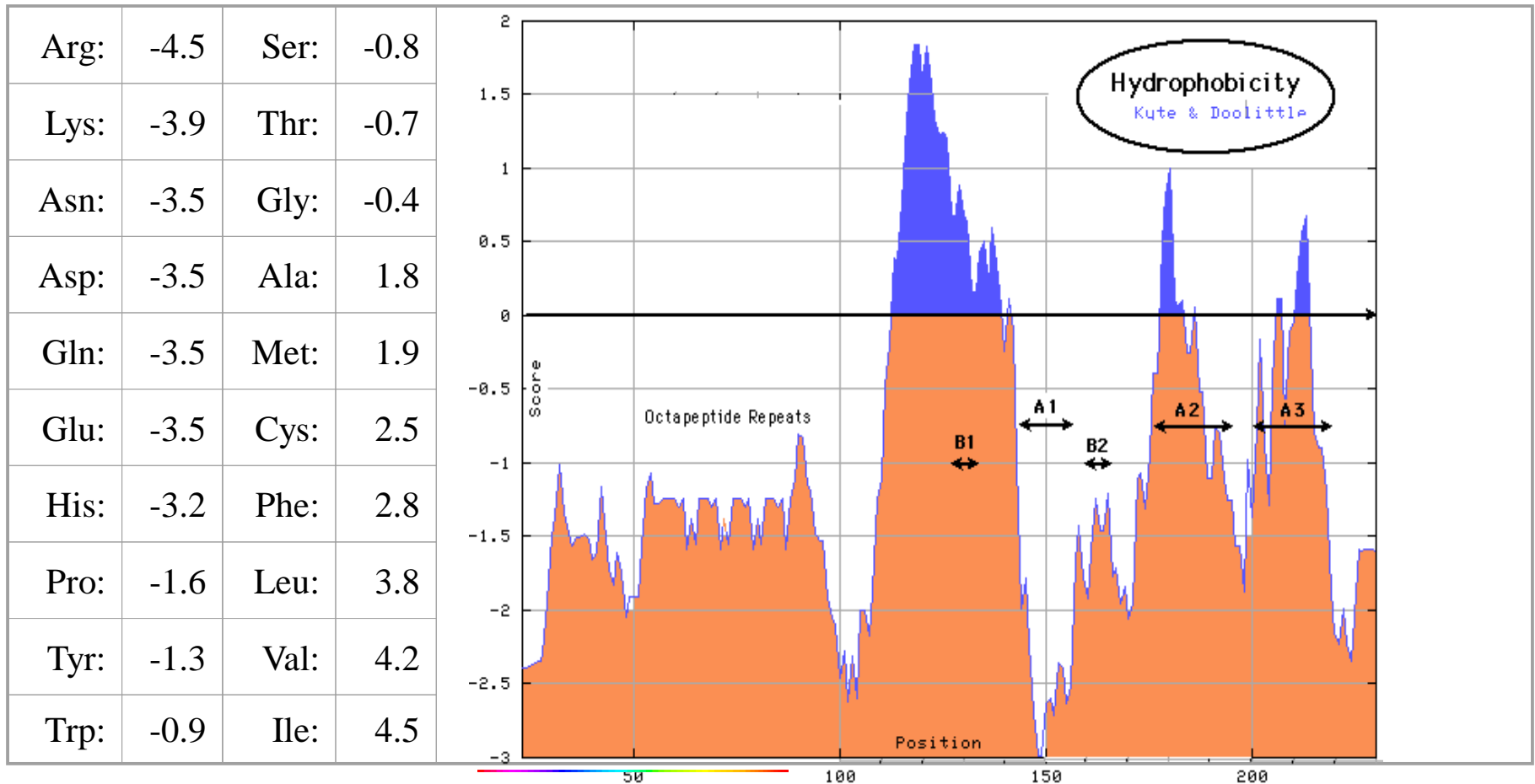
PreExercise Lecture 5

Find the **most hydrophobic** region. Can you *score it*?
(Give it a value for Hydrophobicity?)

Write this down:

D E R K P Y L V A W M K R

KYTE-DOOLITTLE Hydrophobicity Values for mature chimp prion protein



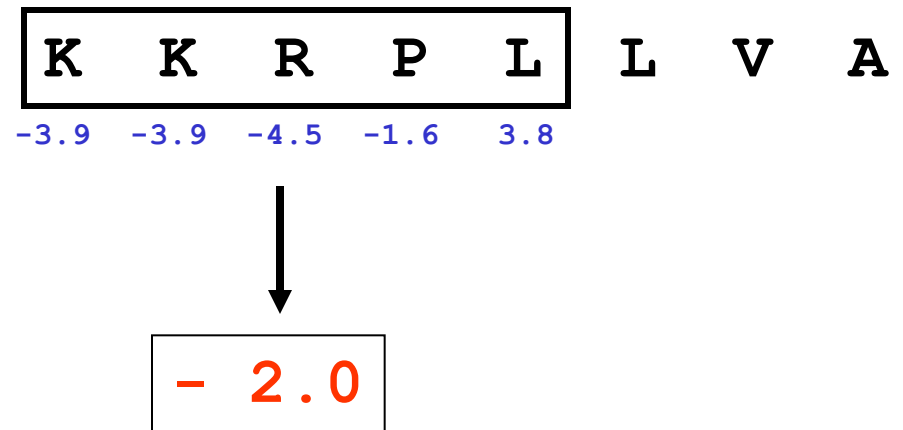
Calculate the AVERAGE hydrophobicity over a “window”

Calculate Hydrophobicity

	h_i		h_i
Arg, R:	-4.5	Ser, S:	-0.8
Lys, K:	-3.9	Thr, T:	-0.7
Asn, N:	-3.5	Gly, G:	-0.4
Asp, D:	-3.5	Ala, A:	1.8
Gln, Q:	-3.5	Met, M:	1.9
Glu, E:	-3.5	Cys, C:	2.5
His, H:	-3.2	Phe, F:	2.8
Pro, P:	-1.6	Leu, L:	3.8
Tyr, Y:	-1.3	Val, V:	4.2
Trp, W:	-0.9	Ile, I:	4.5

Window Size = 5

$$\frac{1}{N} \sum_{i=0}^N h_i$$

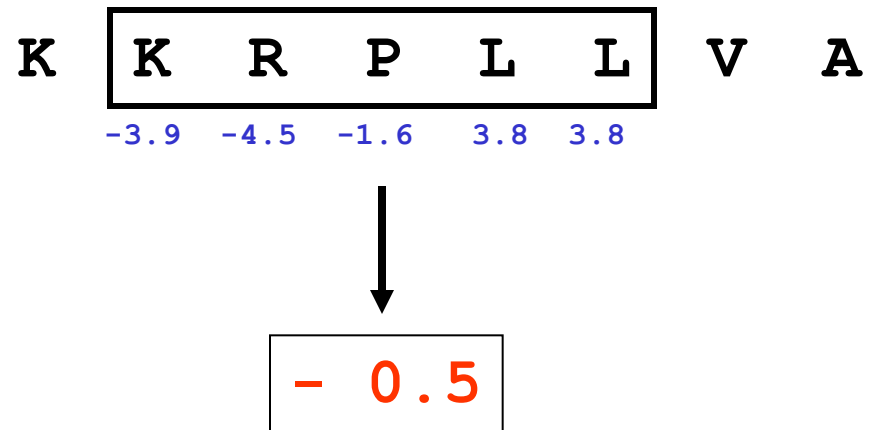


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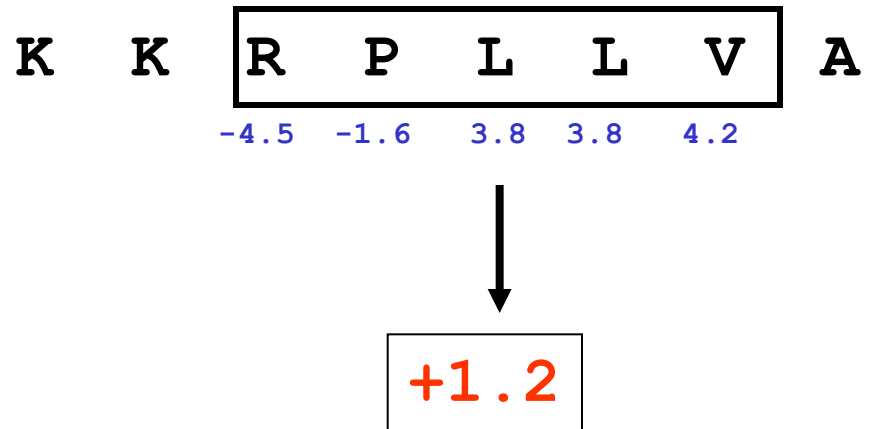


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K K R

P L L V A



?

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P L L V A



2.4