

**Table S10. Performance of three class peptide activity predictor measured in five-fold cross-validation on the peptide activity subsets of the full training datasets at a threshold of 0.5**

	Long					Short				
	Num	Spec	Sen	MCC	FPR	Num	Spec	Sen	MCC	FPR
Antimicrobial	797	79.1	68.9	0.67	5	916	65.4	53.7	0.53	5.0
Peptide Hormone	2186	88.6	93.3	0.77	17.3	2790	90.1	93.7	0.72	24.1
Toxin/Venom	728	86.9	85	0.83	3.2	866	79.2	76.0	0.73	3.7
All	3711	Q	86.4	GC	0.76	4572	Q	85.4	GC	0.66

The number of peptides per class (Num), Specificity (Spec), Sensitivity (Sens), Matthews Correlation Coefficient (MCC) and False Positive Rate (FPR) measured for the three peptide activity classes. Accuracy ( $Q$ ) and Generalised Correlation (GC) are measured over all peptides. See the Materials and Methods section for definitions.