Supporting Information

Relative quantitation of neuropeptides at multiple developmental stages of the American lobster using *N, N*-dimethyl leucine isobaric tandem mass tags

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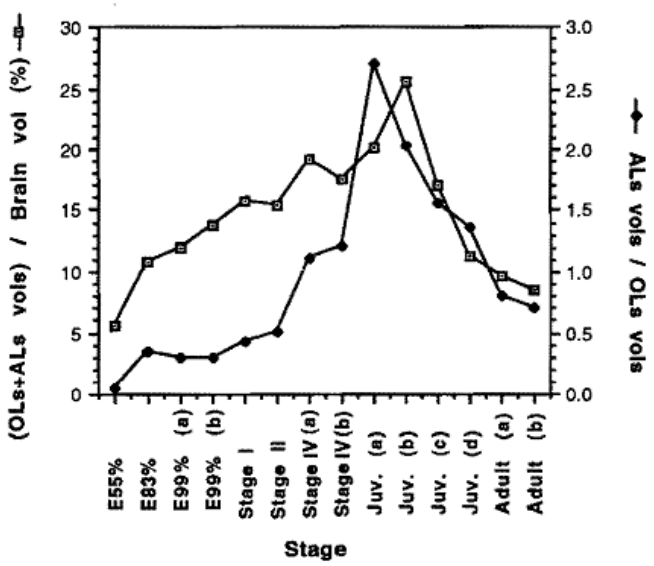
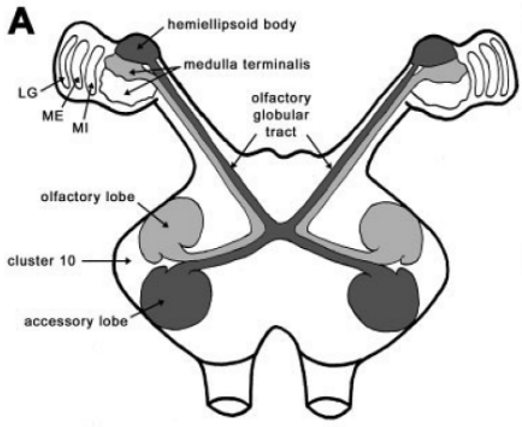
Figure S1
Supplementary Scheme 1
Supplementary Table 1



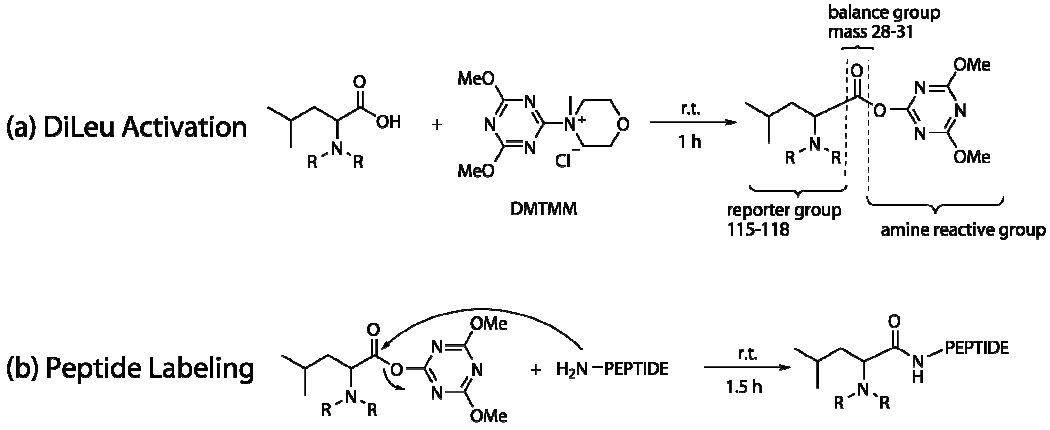
Supplementary Figure S1a



Supplementary Figure S1b

Figure S1. (a): Percentage of brain volume occupied by the olfactory (OL) and accessory (AL) lobes and ratio of the OLs and ALs volumes at different developmental stages in *Homarus americanus (1)*; (b) morphology of the brain of freshwater crayfish (*2*).

Supplementary Scheme 1: DiLeu structures and labeling reactions.



Supplementary Table 1. Summary of neuropeptide quantitation and statistical analysis results.

Peptide Family	*m/z*	Sequence	Embryo		Larvae		Juvenile		Adult	
			Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation	Mean	P value
Tachykinin	934.49	APSGFLGMRamide	0.00100	0.00031	0.00574	0.00097	0.16968	0.04350	1	1.66E-35
	950.49	APSGFLGM(O)Ramide	0.00099	0.00035	0.00572	0.00045	0.18008	0.05341	1	8.93E-32
	964.5	TPSGFLGMRamide	0.00104	0.00040	0.00642	0.00145	0.17690	0.07118	1	1.28E-25
	980.5	TPSGFLGM(O)Ramide	0.00118	0.00031	0.00654	0.00172	0.19276	0.07721	1	1.46E-27
	992.5	APSGFLGMRG	0.00510	0.00156	0.01825	0.00701	0.24052	0.06052	1	7.50E-30
SIFamide	1423.78	VYRKPPFNGSIFamide	0.00098	0.00020	0.00522	0.00308	0.47657	0.05523	1	8.78E-28
FMRFamide	1023.55	GDRNFLRFamide	0.00402	0.00163	0.01108	0.00130	0.14995	0.05313	1	6.14E-33
	1208.63	DQNRNFLRFamide	0.00408	0.00185	0.00954	0.00370	0.17945	0.13109	1	4.60E-20
	1275.72	DTSTPALRLRFamide	0.00418	0.00093	0.00632	0.00141	0.13258	0.01101	1	2.52E-34
	1288.68	QDLDHVFLRFamide	0.00619	0.00135	0.01206	0.00196	0.15596	0.04220	1	1.57E-33
	1289.64	GYSDRNYLRFamide	0.00393	0.00071	0.00963	0.00181	0.18171	0.03948	1	1.34E-25
	1337.67	FSHDRNFLRFamide	0.00392	0.00110	0.00767	0.00171	0.14776	0.04585	1	3.20E-26
Orcokinin	1502.69	NFDEIDRSGFGFV	0.00349	0.00076	0.00566	0.00229	0.09090	0.01917	1	3.06E-42
	1517.69	NFDEIDRSGFGFN	0.00489	0.00148	0.00662	0.00410	0.13061	0.09439	1	1.30E-25
	1540.68	NFDEIDRSGFGFH	0.00385	0.00079	0.00726	0.00265	0.15822	0.05434	1	2.49E-23
Orcokinin related	1213.53	FDAFTTGFGHN	0.00358	0.00108	0.00642	0.00046	0.08940	0.01097	1	8.20E-43
	1280.66	VYGPRDIANLY	0.00480	0.00130	0.00777	0.00222	0.12734	0.01547	1	2.71E-44
Other	1084.62	HI/LASLYKPR	0.00707	0.00431	0.01446	0.00354	0.66213	0.19281	1	1.13E-18

1. Helluy, S. M., Ruchhoeft, M. L., and Beltz, B. S. (1995) Development of the olfactory and accessory lobes in the American lobster: an allometric analysis and its implications for the deutocerebral structure of decapods, *J Comp Neurol 357*, 433-445.
2. Sullivan, J. M., and Beltz, B. S. (2005) Integration and segregation of inputs to higher-order neuropils of the crayfish brain, *J Comp Neurol 481*, 118-126.