Supplemental figure S1

Fig S1. At 18°flies expressing fl-mHTT 120Q are able to survive to late pupa and some are able to eclose and exhibit abdominal clefts as shown above (yellow arrow). Clefting phenotypes are typical of disruptions of the developmentally programmed apoptosis of Larval Epidermal Cells (LEC) (McEwen and Peifer, 2005; Sekyrova et al., 2010). Shown are escaper flies expressing Da>G4; UAS>fl-mHTT(non-targeted) at 18°. Clefting can also be seen in developmentally arrested pupae that do not eclose.

Effect of cell type on subcellular behavior

Effect of peptide composition on subcellular behavior

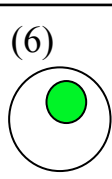
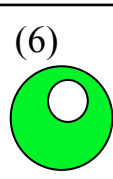
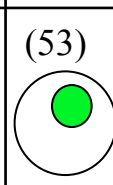
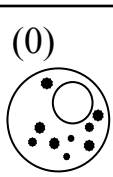
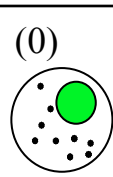
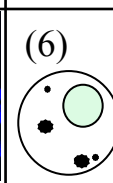
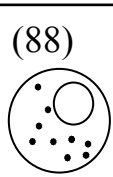
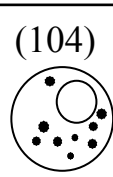
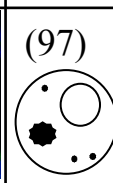
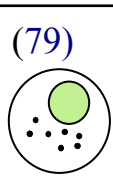
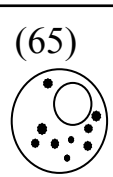
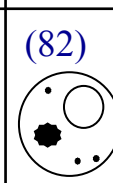
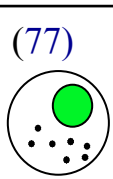
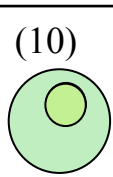
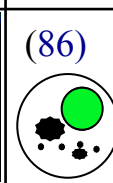
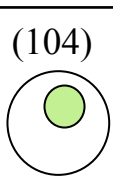
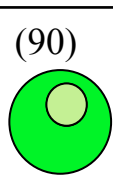
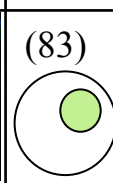
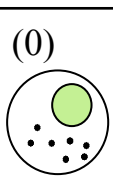
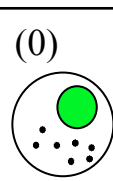
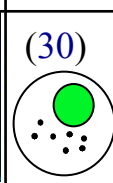
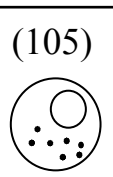
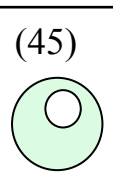
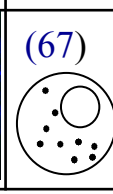
HTT 120Q constructs	Trachea (%eclosion)		Prothoracic gland (%eclosion)		Inka cell (%eclosion)	
fl (0)	(6)		(6)		(53)	
ex1 (0)	(0)		(0)		(6)	
171 (94)	(88)		(104)		(97)	
171HA (26)	(79)		(65)		(82)	
171LUM (0)	(77)		(10)		(86)	
118 (35)	(104)		(90)		(83)	
118HA (0)	(0)		(0)		(30)	
118LUM (36)	(105)		(45)		(67)	

Figure S2. Comparison matrix of the effects of cell type and flanking amino acids on the behavior of expanded polyQ HTT peptides. In the cartoon summaries, green fill indicates the location of diffuse material while black dots indicate the location of aggregated HTT, if any. The large black dots are meant to indicate that some cells have primarily a single very large aggregate, while other cells have multiple aggregates. The numbers in parentheses in the cartoon boxes indicate the % eclosion for that construct expressed in that tissue while the numbers in parentheses in the first column indicate the % eclosion when that construct is expressed ubiquitously. For each tissue, the influence of flanking amino acids is depicted by the different HTT constructs on the Y axis and the effect of the cell type in the form of different tissues tested is depicted on the X axis. Note, for example, how a change in cell type can convert a diffuse nuclear fl protein in trachea into a diffuse cytoplasmic protein in the prothoracic gland or how a change in peptide structure can convert a diffuse cytoplasmic peptide to a nuclear one (*e.g.*, in the PG, fl vs ex1 or 118 vs. 118HA). Scale bars for trachea and prothoracic gland are 10μm while those for INKA cells are 2μm.