

Parr Upper mode					
Individual	Section number	Left		Right	
		Ventral	Dorsal	Ventral	Dorsal
N°1	33/72	94	61	92	73
	39/72	80	60	89	61
	Σ	174	121	181	134
N°2	30/60	113	68	102	66
	33/60	114	57	99	69
	Σ	227	125	201	135
N°3	27/72	109	67	106	76
	35/72	141	65	148	83
	Σ	250	132	254	159
P-value		4.32E-02		3.82E-02	

Smolt					
Individual	Section number	Left		Right	
		Ventral	Dorsal	Ventral	Dorsal
N°1	32/70	90	48	104	55
	35/70	86	61	90	54
	Σ	176	109	194	109
N°2	37/72	100	68	95	75
	43/72	100	62	92	67
	Σ	200	130	187	142
N°3	32/60	83	51	94	50
	40/60	84	50	87	60
	Σ	167	101	181	110
P-value		3.15E-04		2.93E-02	

**Supplementary Table 3. Comparison of nuclei densities between dorsal and ventral habenula territories in Atlantic salmon upper parr (upper panel) and smolt (lower panel).** For each smoltification status, the number of nuclei observed within a 3700 µm<sup>2</sup> area of Yo-Pro1 stained sections was counted (see examples of the areas taken into account in Supplementary Figure 1L. Countings were performed for 3 specimens (column 1), and on 2 sections selected in the medial part of the left and right habenulae (section numbers in column 2) per specimen. A paired Student t-test was conducted, taking the sum of counted nuclei for each territory (left, third and fourth columns; right, fifth and sixth columns), with the following null hypothesis "absence of significant difference in the number of nuclei counted in ventral versus dorsal territories". In each case, p-values (<5E-02) support the hypothesis that nuclei densities are higher in ventral territories than in dorsal ones.