

Supplementary information

**Characterizing cytotoxic and estrogenic activity of Arctic char tissue extracts in primary Arctic char hepatocytes**

**Authors:** Karina Petersen, Maria T. Hultman, Jenny Bytingsvik, Mikael Harju, Anita Evenset and Knut Erik Tollefsen

Supplementary Table 1. Biometric data (sex, reproduction stage,  $17\beta$ -estradiol (E2) plasma concentration, length, weight, condition factor and liver somatic index) of the sampled fish from Lake Laksvatn and Lake Ellasjøen at Bjørnøya (Bear Island). Data is presented as average values (median)  $\pm$ st. dev. and range (min-max).

Lake	Sex	n	Reproductive stage <sup>b</sup>	E2 <sup>a</sup> (nmol/L plasma)	Fork length (cm)	Body weight (gram)	Condition factor	Liver somatic index (LSI)	Age (years)
Laksvatn	F	11	Stage 1: n=2 Stage 5-7: n=9	11.3 (10.7) $\pm$ 5.5 (5.7 - 21.6)	47.9 (47.8) $\pm$ 2.7 (42.9 - 51.7)	1 025 (1 068) $\pm$ 107 (808 - 1 114)	0.94 (0.91) $\pm$ 0.09 (0.77 - 1.06)	1.52 (1.56) $\pm$ 0.18 (1.18 - 1.83)	11.6 (12.0) $\pm$ 1.3 (10.0 - 13.0)
Laksvatn	M	11	Mature (n=11)	-	52.4 (51.8) $\pm$ 2.0 (49.7 - 55.0)	1 276 (1 267) $\pm$ 167 (965 - 1 529)	0.89 (0.92) $\pm$ 0.12 (0.65 - 1.02)	0.86 (0.88) $\pm$ 0.06 (0.75 - 0.96)	12.4 (12.0) $\pm$ 1.6 (10.0 - 15.0)
Ellasjøen	F	10	Stage 3: n=1 Stage 5-7: n=9	19.1 (12.9) $\pm$ 17.0 (7.2 - 63.9)	44.1 (44.3) $\pm$ 4.2 (39.0 - 51.0)	873 (882) $\pm$ 266 (545 - 1 418)	0.99 (0.99) $\pm$ 0.09 (0.86 - 1.15)	1.17 (1.01) $\pm$ 0.38 (0.77 - 1.94)	15.1 (15.0) $\pm$ 2.8 (12.0 - 21.0)
Ellasjøen	M	10	Mature (n=9) Immature (n=1)	-	50.9 (52.3) $\pm$ 9.4 (38.4 - 65.0)	1 410 (1 540) $\pm$ 669 (583 - 2 600)	1.01 (1.02) $\pm$ 0.13 (0.80 - 1.25)	0.68 (0.68) $\pm$ 0.15 (0.47 - 0.87)	17.1 (17.5) $\pm$ 4.5 (11.0 - 25.0)

Abbreviations: F – Female; M – Male; a – E2 concentrations are obtained from Bytingsvik et al., (in preparation) and consists of female fish included in the pooled liver extracts. b-Female fish in reproductive stages 1 to 3 are non-spawning fish (will not spawn during the year of sampling), while fish in stages 4, 5 and 6 are spawning fish (will spawn during the year of sampling) (Sømme, 1941)