

Supplementary Material

Comparison of Fatty Acid Contents and MMP-1 Inhibitory Effects of the Two Antarctic Fish, *Notothenia rossii* and *Champscephalus gunnari*

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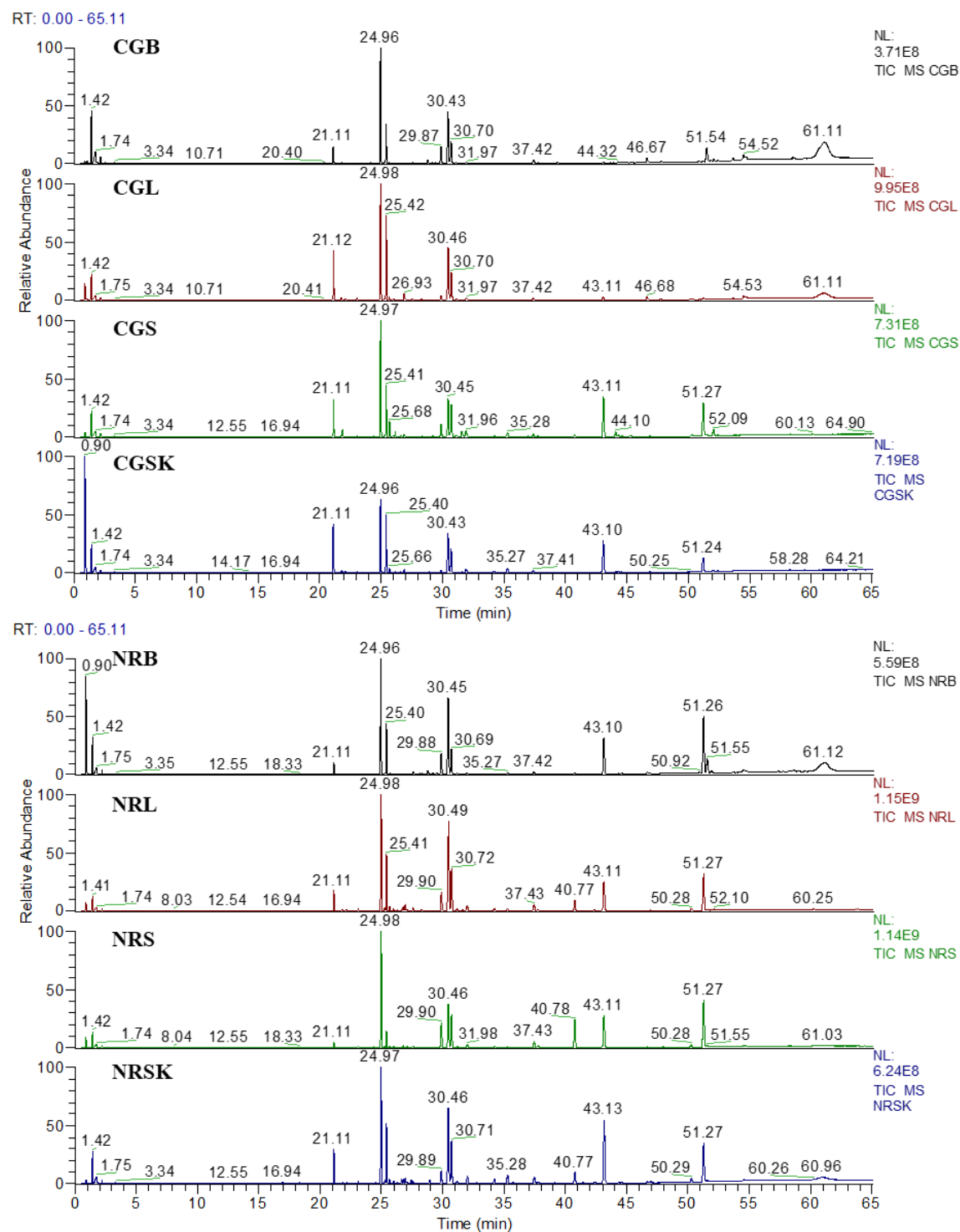


Figure S1. GC-MS chromatograms of extracts of different organs of *C. gunnari* (CG) and

N. rossii (NR); B=brain, L=liver, S=stomach, SK=skin

Table S1. Summary of GC-MS data

Retention Time (min)	Observed Fatty Acid Methyl Esters (<i>m/z</i>)	Observed Fragmentation Patterns (<i>m/z</i>)	Elemental Composition	Identification
21.1	242.23	74, 87, 143, 199	C ₁₄ H ₂₈ O ₂	Tetradecanoic acid
24.9	270.24	74, 87, 143, 227	C ₁₆ H ₃₂ O ₂	Palmitic acid
25.4	268.25	55, 69, 74, 83, 96, 110, 152, 194, 236	C ₁₆ H ₃₀ O ₂	9-Hexadecenoic acid
29.8	298.30	74, 87, 143, 199, 255, 298	C ₁₈ H ₃₆ O ₂	Stearic acid
30.4	296.26	55, 69, 83, 97, 98, 114, 180, 222, 264	C ₁₈ H ₃₄ O ₂	Oleic acid
31.9	294.31	67, 81, 95, 96, 97, 123, 150, 222, 264	C ₁₈ H ₃₂ O ₂	7,10-Octadecadienoic acid
35.2	-	79, 91, 93, 105, 119, 133, 161, 175, 189, 221	C ₁₈ H ₂₈ O ₂	Stearidonic acid (6,8,12,15-Octadecatetraenoic acid)
37.4	324.34	55, 69, 83, 97, 98, 111, 123, 208, 250, 292	C ₂₀ H ₃₈ O ₂	11-Eicosenoic acid
40.7	-	79, 91, 93, 105, 119, 133, 150, 175, 203, 217, 247	C ₂₀ H ₃₂ O ₂	Arachidonic acid
43.1	-	79, 91, 93, 119, 133, 147, 161, 201, 215, 247	C ₂₀ H ₃₀ O ₂	5,8,11,14,17-Eicosapentaenoic acid
50.2	-	79, 91, 93, 105, 119, 131, 145, 175, 208, 225, 274	C ₂₂ H ₃₄ O ₂	7,10,13,16,19-Docosapentaenoic acid
51.2	-	79, 91, 105, 119, 131, 145, 159, 173, 241	C ₂₂ H ₃₂ O ₂	4,7,10,13,16,19-Docosahexaenoic acid
54.5	-	55, 69, 83, 97, 98, 111, 133, 151, 180, 222, 264	C ₁₈ H ₃₄ O ₂	(Z)11-Octadecenoic acid

61.1	386.37	105, 145, 213, 275, 301, 368	$C_{27}H_{46}O$	Cholesterol
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Table S2. Detailed FA composition (%) of different organs of *N. rossii* and *C. gunnari*

										PUFA									
		SFA			MUFA								n-3		n-6	n-3			
		14:0	16:0	18:0	16:1	18:1	20:1	24:1	26:1	16:2	16:4	18:2	18:3	18:4	20:4	20:5 (EPA)	22:5	22:6 (DHA)	Chol
NR	Brain	1.31	13.8	4.93	6.71	23.38	0.77							0.48	0.64	9.75		21.98	16.25
	Liver	2.48	19.74	4.88	9.11	36.19	1.72					1.29	0.5	0.58	2.87	8.45	0.74	11.54	
	Stomach	0.71	19.63	8.17	3.3	23.95	2.64					1.06			9.79	11.28	0.85	18.63	
	Skin	3.6	13.96	2.79	9.14	25.88	1.74			0.57	0.74	1.85	0.97	1.96	2.83	16.19	1.13	10.74	5.89
CG	Brain	2.67	17.15	6.13	6.55	22.07	1.25	4.58	0.56										39.04
	Liver	8.32	24.61	1.55	16.9	30.46	0.8					0.95				1.34			15.07
	Stomach	6.54	21.25	3.65	9.46	22.47	1.01					2.15		1.36	0.81	15.85	0.56	14.89	
	Skin	10.04	18.75	1.17	13.58	27.5	1.13					1.93		2.24		15.62		8.04	

NR = *N. rossii*; CG = *C. gunnari*; Chol = cholesterol