

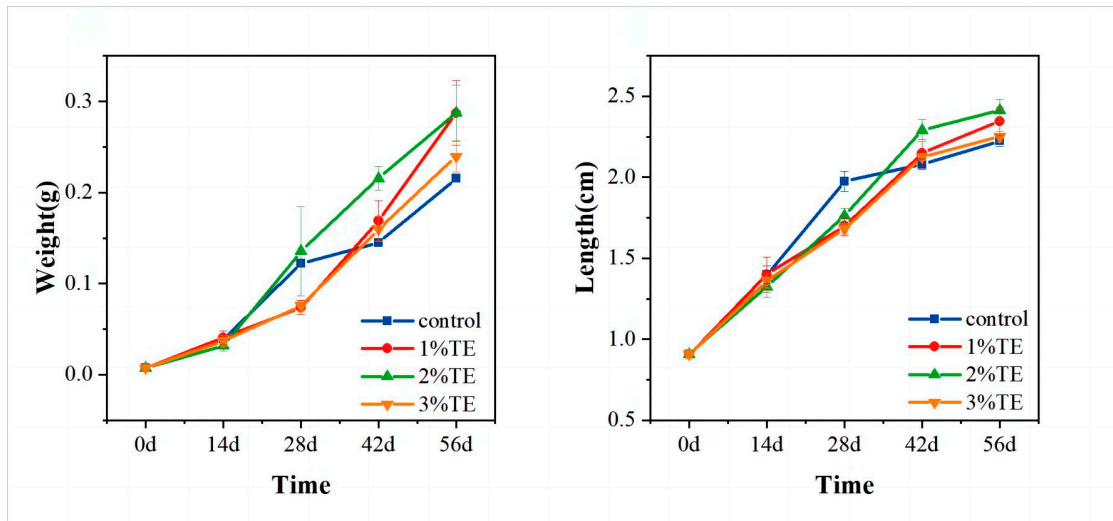
**Table S1 *Aurantiochytrium* Extract Main Ingredients**

Major fatty acids	Content
Methyl tetradecanoate	2.34%
Pentadecanoic acid, methyl ester	2.44%
Hexadecanoic acid, methyl ester	30.21%
Methyl4, 7, 10, 13, 16-docosapentaenoate	9.07%
4, 7, 10, 13, 16, 19-docosahexaenoic acid, methylester	50.19%

**Table S2 Primers Used for Detection of DEGs**

Gene	Primer name	Primer sequence (5' -3' )	Purpose	Accession No.
<i>acsl2</i>	<i>acsl2</i> -F	GGACAGAGGGAGGAAGTGCG	RT-qPCR	ENSDARG00000078399
	<i>acsl2</i> -R	TGACCGAGGAGGTGTGGAG	RT-qPCR	
<i>apoc2</i>	<i>apoc2</i> -F	CCCTGAAATCCTACTATGACC	RT-qPCR	ENSDARG00000092155
	<i>apoc2</i> -R	TGAAGACAAGAGTTCCGCACT	RT-qPCR	
<i>apoeb</i>	<i>apoeb</i> -F	AAACGCCTGAACAAGGACAC	RT-qPCR	ENSDARG00000040295
	<i>apoeb</i> -R	TGCGTAGGTTCTCGGCTGTC	RT-qPCR	
<i>blocls3</i>	<i>blocls3</i> -F	TCCCTGCGTCATTATCCTCC	RT-qPCR	ENSDARG00000097344
	<i>blocls3</i> -R	GCATCTGCTGTTGGCTTTCA	RT-qPCR	
<i>cel.1</i>	<i>cel.1</i> -F	TCTCGTATTCCTGTCTTCCCTCT	RT-qPCR	ENSDARG00000017490
	<i>cel.1</i> -R	ACCTTGGA CTGCCTTTGTTAG	RT-qPCR	
<i>cel.2</i>	<i>cel.2</i> -F	CAGGGAAAGAGTCATAGTGTGG	RT-qPCR	ENSDARG00000029822
	<i>cel.2</i> -R	ATCCGTTTGAAGGAGATTGAGC	RT-qPCR	
<i>fabp4a</i>	<i>fabp4a</i> -F	GGGCTGATCTGCATGAAGTCT	RT-qPCR	ENSDARG00000017299
	<i>fabp4a</i> -R	AGTTTGCCGTTCTCGATAGTC	RT-qPCR	
<i>gck</i>	<i>gck</i> -F	GAAGGCTCCGAGGTTGGTGATT	RT-qPCR	ENSDARG00000068006
	<i>gck</i> -R	CGGTCATGGCATCTTCAGGGAT	RT-qPCR	
<i>lox</i>	<i>lox</i> -F	AGGCTGGACTCGCTTGTTATT	RT-qPCR	ENSDARG00000016789
	<i>lox</i> -R	CCGTCTGAAAGGATTGTGGG	RT-qPCR	
<i>pllp</i>	<i>pllp</i> -F	TGAGTCTTCATCAGCGGTTAC	RT-qPCR	ENSDARG00000062756
	<i>pllp</i> -R	AGCCCAAATAGGCAAAGTAGC	RT-qPCR	
<i>sqlea</i>	<i>sqlea</i> -F	CTGCCCTCGCTGAGCCTAAT	RT-qPCR	ENSDARG00000079946
	<i>sqlea</i> -R	CGAACCTCCTTGAGCATCCC	RT-qPCR	
<i>tnfrsf1b</i>	<i>tnfrsf1b</i> -F	ACCGAATGTGAAGGTAGTGC	RT-qPCR	ENSDARG00000070165
	<i>tnfrsf1b</i> -R	TCCCTTGTCGTTTGTCGT	RT-qPCR	
<i>vtg1</i>	<i>vtg1</i> -F	CAGCTTGTTTTGGACAGGGC	RT-qPCR	ENSDARG00000078429
	<i>vtg1</i> -R	GATGAGAGCCACTGAAGGCT	RT-qPCR	
<i>vtg2</i>	<i>vtg2</i> -F	TTGAAACTACGGGAAATCTTG	RT-qPCR	ENSDARG00000103451
	<i>vtg2</i> -R	GCTACTGGTACTGTTGCTGGT	RT-qPCR	
<i>vtg3</i>	<i>vtg3</i> -F	GCCACTTGAGTTACCGCTACA	RT-qPCR	ENSDARG00000016448
	<i>vtg3</i> -R	AGTCCATCTGCACGGATACCA	RT-qPCR	
<i>vtg7</i>	<i>vtg7</i> -F	TTGAGCAAACGCAGAAACAGAA	RT-qPCR	ENSDARG00000092419

	<i>vtg</i> 7-R	AGTAAGCAGCGAGTTGGTAGCC	RT-qPCR	
<i>inhbb</i>	<i>inhbb</i> -F	CAGTTTTGCCGAATCAGATGATGTA	RT-qPCR	ENSDARG00000040777
	<i>Inhbb</i> -R	TAGGAGTGCACCCTCACTGT	RT-qPCR	
<i>egf</i>	<i>egf</i> -F	AGCCACTCCAGAGGTCTATGT	RT-qPCR	ENSDARG00000052739
	<i>egf</i> -R	CAACAGCCAGGCTACAACCA	RT-qPCR	
<i>igf3</i>	<i>igf3</i> -F	GCCAAACGCCTTCAGATAAT	RT-qPCR	ENSDARG00000058058
	<i>igf3</i> -R	CTACAATGCCTTTCCACGA	RT-qPCR	
<i>esr1</i>	<i>esr1</i> -F	ACTCTCACCCATGTACCCTAAGG	RT-qPCR	ENSDARG00000004111
	<i>esr1</i> -R	CGGGTAGTATCCCACTGAAGC	RT-qPCR	
<i>fgf24</i>	<i>fgf24</i> -F	CTGTTCTGCCGTCAAGGTCA	RT-qPCR	ENSDARG00000037677
	<i>fgf24</i> -R	CCATCGTCTCCATTGGCGTTA	RT-qPCR	
<i>β-actin</i>	<i>β-actin</i> -F	GGCATCACACCTTCTACAA	Reference	
			gene	NM_131031.2
	<i>β-actin</i> -R	CAGAGTCCATCACAATACCA	Reference	
			gene	



**Figure S1 Variation in body weight and length in zebrafish**