## **Supplemental information**

### Inonotus obliquus upregulates muscle regeneration and augments function

### through muscle oxidative metabolism

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# Table S1. Characterization of the specific metabolites of IO1 by UPLC-Q-TOF-HRMS.

lon mode	Identified compounds	Retention time (min)	Formula	Theoretical ( <i>m/z</i> )	Experimental ( <i>m/z</i> )	Adducts / Deproto nated one	Δ (ppm)
Positive- ion mode	10-oxo- <i>cis</i> -12- octadecenoic acid	8.606	C <sub>18</sub> H <sub>32</sub> O <sub>3</sub>	319.2249	319.2245	[M+Na]⁺	2.29
	di-n-butyl sebacate <sup>a</sup>	7.401	C <sub>18</sub> H <sub>34</sub> O <sub>4</sub>	337.2355	337.2350	[M+Na]⁺	0.15
	1-monopalmitin <sup>a</sup>	9.598	$C_{19}H_{38}O_4$	353.2268	353.2663	[M+Na]+	0.41
	10-oxo- <i>trans</i> -8-decenoic acid	5.536	C <sub>10</sub> H <sub>16</sub> O <sub>3</sub>	207.0997	207.0974	[M+Na]+	-1.06
Negative- ion mode	methyl 3- methoxypropanoate <sup>a</sup>	1.218	$C_5H_{10}O_3$	117.0552	117.0559	[M-H] <sup>-</sup>	0.78
	12-hydroxyoctadecanoic acid <sup>a</sup>	9.692	$C_{18}H_{36}O_3$	299.2586	299.2593	[M-H] <sup>-</sup>	-0.13

<sup>a</sup> Confirmed by comparison to authentic standards.

# **Supplemental information**

Figure S1. Promyogenic effects on C2C12 cells in the presence of higher concentration of IO.





Figure S2. Cell viability of C2C12 cells in the presence of high concentration of IO for 1 day.



**Figure S3.** UPLC Q-TOF MS analyses conducted on IO1 and IO2. The total ion chromatograms (TICs) in positive-ion mode (A) and negative-ion mode (B) of IO1 and IO2 are displayed.



**Figure S4.** The effects of four selected compounds on the expression of genes involved in proliferation (A) and differentiation (B) using qRT-PCR analysis. The data were normalized using 18s RNA and were further normalized to the expression level of vehicle.



