

Supplementary Materials

Resveratrol and 2-Ethyl-6-Methyl-3-Hydroxypiridine N-Acetyl Cysteinate as Protecting Agents upon the Stress Exposure

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Table S1. Influence of the AHH conditions and RSV on the relative percentage of C₁₈ FA in the membranes of the mouse-liver mitochondria ¹

FA	Control ²	Control and RSV ³	AHH ⁴	AHH and RSV ⁵
18:2 ω 6	13.50 \pm 0.15	14.00 \pm 0.02	12.71 \pm 0.10	14.35 \pm 0.10
18:1 ω 9	11.00 \pm 0.50	9.00 \pm 0.12	9.50 \pm 0.13	9.55 \pm 0.95
18:1 ω 7	2.90 \pm 0.04	2.80 \pm 0.03	2.13 \pm 0.30	2.60 \pm 0.10
18:0	16.75 \pm 1.30	16.00 \pm 0.04	15.98 \pm 1.00	16.85 \pm 1.65
20:4 ω 6	20.30 \pm 1.00	20.10 \pm 0.50	20.93 \pm 0.76	20.15 \pm 1.35
20:3 ω 6	1.90 \pm 0.02	1.80 \pm 0.03	1.56 \pm 0.03	2.05 \pm 0.55
20:5 ω 3	0.50 \pm 0.01	0.45 \pm 0.03	0.20 \pm 0.04	0.55 \pm 0.15
20:0	9.60 \pm 0.02	9.22 \pm 0.01	13.00 \pm 0.40	10.00 \pm 0.05
22:6 ω 3	9.60 \pm 0.01	10.00 \pm 0.50	13.01 \pm 2.04	10.00 \pm 0.50
22:4 ω 6	0.55 \pm 0.20	0.50 \pm 0.15	0.40 \pm 0.10	0.50 \pm 0.01
22:5 ω 3	0.60 \pm 0.01	0.56 \pm 0.12	0.43 \pm 0.11	0.60 \pm 0.01

¹ Arbitrary units

² The control group (5-day injection of double-distilled water to mice in volumes corresponding to the injected volumes of RSV samples)

³ The control group upon the RSV administration

⁴ The group subjected to the AHH-induced stress

⁵ The group subjected to the AHH-induced stress upon the RSV administration

Table S2. Influence of the AHH conditions and NAC-3-HP on the relative percentage of C₁₈ FA in the membranes of the mouse-liver mitochondria ¹

FA	Control ²	Control and NAC-3-HP ³	AHH ⁴	AHH and NAC-3-HP ⁵
18:2 ω 6	13.50 \pm 0.15	13.60 \pm 0.03	12.70 \pm 0.10	17.20 \pm 0.04
18:1 ω 9	11.00 \pm 0.50	11.90 \pm 0.15	9.0 \pm 0.13	11.40 \pm 0.82
18:1 ω 7	2.90 \pm 0.04	2.70 \pm 0.02	2.10 \pm 0.40	2.80 \pm 0.30
18:0	16.75 \pm 1.30	15.00 \pm 0.05	15.98 \pm 1.00	15.00 \pm 0.65
20:4 ω 6	20.30 \pm 0.01	19.25 \pm 0.01	20.93 \pm 0.76	20.26 \pm 0.04
20:3 ω 6	9.60 \pm 0.01	9.20 \pm 0.01	7.85 \pm 0.03	10.55 \pm 0.02
20:5 ω 3	0.50 \pm 0.01	0.52 \pm 0.03	0.34 \pm 0.02	0.58 \pm 0.03
20:0	9.60 \pm 0.02	8.05 \pm 0.03	13.00 \pm 0.40	9.40 \pm 0.02
22:6 ω 3	9.80 \pm 0.05	9.40 \pm 0.03	10.00 \pm 0.40	9.64 \pm 1.80
22:4 ω 6	0.40 \pm 0.01	0.36 \pm 0.01	0.23 \pm 0.18	0.45 \pm 0.30
22:5 ω 3	0.43 \pm 0.11	0.40 \pm 0.20	0.35 \pm 0.05	0.41 \pm 0.05

¹ Arbitrary units

² The control group (5-day injection of double-distilled water to mice in volumes corresponding to the injected volumes of NAC-3-HP samples)

³ The control group upon the NAC-3-HP administration

⁴ The group subjected to the AHH-induced stress

⁵ The group subjected to the AHH-induced stress upon the NAC-3-HP administration

Table S3. Protective activity of RSV upon the stress exposure ¹

Impact	Measured parameters	Control ²	RSV ³
Modeling of ascent to a height of 11.5 thousand m (<i>hypobaric hypoxia</i>)	Lifetime (min) % of survivors	4.0 \pm 1.1 20 %	7.8 \pm 1.1 30 %
Injection of sodium azide 20 mg/kg (<i>cytotoxic hypoxia</i>)	Lifetime (min) % of survivors	3.2 \pm 0.8 0 %	7.4 \pm 1.0 15 %
Injection of sodium nitrite 250 mg/kg (<i>hemic hypoxia</i>)	Lifetime (min) % of survivors	15.1 \pm 1.5 0 %	30.5 \pm 320 16%

¹ 10 replicates per experiment

² The control group (mice exposed to various types of hypoxia and not receiving RSV)

³ 2 \times 10⁻⁶ mol/kg

Table S4. Protective activity of NAC-3-HP upon the stress exposure ¹

Impact	Measured parameters	Control ²	NAC-3-HP ³
Injection of sodium azide 20 mg/kg (<i>cytotoxic hypoxia</i>)	Lifetime (min) % of survivors	3.3 ± 0.9 0%	5.2 ± 1.2 40%
Injection of sodium nitrite 250 mg/kg (<i>hemic hypoxia</i>)	Lifetime (min) % of survivors	18.5 ± 2.1 0%	35.7 ± 4.4 15%
Ethanol injection 8 g / kg (<i>acute alcohol poisoning</i>)	Lifetime (min) % of survivors	35.4 ± 6.1 0%	137.4 ± 31.1 12%

¹ 10 replicates per experiment² The control group(mice exposed to cytotoxic or hemic hypoxia, or acute alcohol poisoning and not receiving NAC-3-HP)³ 10⁻⁶ mol/kg