What is new for an old Molecule? Systematic Review and Recommendations on the use of Resveratrol

Ole Vang, Nihal Ahmad, Clifton A. Baile, Joseph A. Baur, Karen Brown et al.

Supporting information:

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| **Table S2:** Effect of resveratrol on coronary heart disease models in experimental animals |
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| **Species / Strain** | **Model** | **Resveratrol dose** | **Duration** | **Effect** | **References** |
| Hypertension |
| Wistar-Kyoto rats (WKY) and spontaneously hypertensive rat (SHR) | Spontaneously hypertensive rat | 2.5 mg Resv/ kg bw/ day | 10 weeks | SHR: Vascular compliance ↓; wall component stiffness →WKY: Vascular compliance ↑; wall component stiffness ↓ SHR: Elevated blood pressure → | [1] |
| Wistar-Kyoto rats and spontaneously hypertensive rat (SHR) | Spontaneously hypertensive rat | 2.5 mg Resv/ kg bw/ day | 10 weeks | SHR: Increased systolic blood pressure →Development of concentric hypertrophy ↓ Systolic and diastolic dysfunction ↓ | [2] |
| Hypertensive transgenic rats, controls: normotensive Sprague – Dawley | Rats transgenic with human renin and angiotensinogen genes | 800 mg Resv /kg bw/ day by gavages | 4 weeks | Survival rate of dTGR ↑Blood pressure ↓Cardiac hypertrophy ↓ | [3] |
| Male Wistar rats | 25 mg DOCA every 4th day to uninephrectomized rats | 1 mg Resv/ kg byoral gavages, starting 4 days before surgery until end of experiment | 4 weeks  | Increased systolic blood pressure ↓ Left ventricular wet weight ↓Left ventricular wall thickness ↓Diastolic stiffness ↓Cardiac contractility ↑Prolonged action potential ↓ | [4] |
| Male Sprague-Dawley rats | A single injection ofMCT (50 mg/kg, sc)  | 10 and 30 mg Resv/ kg bw, ig, twice daily | 21 days | Survival rate after MCT injection ↑ Right ventricular (RV) wall thickness ↓RV systolic pressure ↓Pulmonary arterial acceleration time ↑RV hypertrophy ↓ | [5] |
| Male Sprague-Dawley rats | MCT (60 mg/kg sc) | Resv (25 mg/kg per day, po, from day 1 post MCTin the drinking water | 14 / 21 days | RV systolic pressure ↓and pulmonary arterial remodeling ↓normalization of vessel morphology | [6] |
| Female Sprague-Dawley | High-fat diet (42% fat) | 20 mg/kg bw/day Resv | 8 weeks | Increased blood pressure ↓ | [7] |
| Lean /Obese Zucker rats |  | 10 mg Resv/kg / day orally by gavages | 8 weeks | Obese: Systolic blood pressure ↓Lean: Systolic blood pressure → | [8] |
| Sprague Dawley rats | Fed fructose (60%) -enriched food | 2.1 mg Resv/ kg bw/ day by gavages | 6 weeks | Fructose induced hypertension → | [9] |
| Male Sprague Dawley rats | Fructose (10% in drinking water) | 10 mg Resv/ kg bw/ day by gavages  | 45 days | Fructose induced stolic blood pressure ↓Cardiac hypertrophy ↓ | [10] |
| C57/B6 mice | 490 ng Ang II/ min/ kg, ip | Resv in water at 0.1 mg/ml (~10 mg / kg bw/ day) | 2 / 4 weeks | Ang II induced blood pressure ↓  | [11] |
| Heart failure / myocardial infarction / cardiac arrest |
| Male Sprague–Dawleyrats | Myocardial infarction (MI) operated | 5 mg/kg bw/day po | 4 weeks, starting 1 week before MI | MI-induced ventricular tachycardia ↓MI induced ventricular fibrillation ↓ Myocardial infarct size ↓ Mortality ↓ | [12] |
| Sprague–Dawley rats | MI operated | 0.1 or 1 mg Resv/ kg bw/ day, one daily ip injection | 4 weeks  | Myocardial infarct size ↓Fractional shortening of the left ventricle ↑Ameliorated left ventricular dilatation Left ventricular end-diastolic pressure ↓ | [13] |
| Male Sprague-Dawley rats | MI operated  | 17 mg/ kg bw/ day | 3 months | Myocardial infarct size →MI-induced left-ventricular →Left-atrial dilatation →Reduction in left-ventricular fractional shortening → | [14] |
| Male Sprague-Dawley rats | MI operated | 10 mg Resv/ kg bw/ day | 1 week | Left ventricular function ↑ | [15] |
| Sprague-Dawley rats | Aortocaval shunt tocreate volume overload and Abdominal aortic banding surgeries to create pressure overload | 2.5 mg Resv/ kg bw/ day- 2 d post surgery-14 d post surgery | for 26 daysfor 14 days | The development of abnormalities in cardiac structure and function ↓ | [16] |
| Sprague–Dawley rats | A single intravenous injection of STZ (65 mg/kg) for 2 weeks | 0.1 or 1 mg Resv/ kg + insulin once a day | 5 days | Acute myocardial ischemia/reperfusion ↓  | [17] |
| Zucker obese rats | 10% glucose solution ad libitum | 5 mg Resv/ kg bw/ day  | 2 weeks | Incidence of ventricular fibrillation ↓Myocardial infarct size↓ | [18] |
| Sprague Dawley rats | 65 mg STZ/kg bw/ day | 2.5 mg Resv/ kg bw/ day | 15 days | myocardial infarct size ↓ | [19] |
| Ischemia heart disease |
| Sprague-Dawley rats | 2% cholesterol diet for 8 weeks. ischemia / reperfusion | 20mg Resv/ kg bw/ day | 2 weeks | Left ventricular functional recovery ↑Capillary density ↑ | [20] |
| Male Sprague–Dawley rats | Middle cerebral artery (MCA) occlusions | 2x10-3, 2x10-4, 1x10-4, 2x10-5mg Resv/ kg bw | 4 hr | Infarct area ↓ | [21] |
| Yorkshire swine | Hypercholesterolemic diet (HCC) | 100 mg Resv/ kg bw/ day, po | 7 weeks | Total cholesterol↓HCC reduced inferolateralfunction ↑ Tissue blood flow during stress ↑ | [22] |
| Stroke |
| Male Wistar rats | Focal ischemia by MCA occlusion intraluminal thread | resveratrol 20 mg/kg bw ip | 21 days | Resv prevented motor impairment after focal cerebral ischemiaEnhanced locomotion and neurological score by resveratrol | [23] |
| Serum lipids |
| Male Wistar rats | Diabetes-induced by single ip injection of 60 mg/ kg STZ – 1 week | po dosage of 10 mg Resv/ kg bw/ day | 4 weeks / 8 weeks | Serum triglycerides (4 & 8 weeks) ↓HDL-cholesterol (4 & 8 weeks) ↑LDL-cholesterol (4 & 8 weeks) ↓ | [24] |
| Apolipoprotein E KO mice |  | P183/1-mixture: 27% Resv, 1.37 % caffeic acid and 8.35% cathechin | 8 weeks | Morphometric analysis: atherosclerosis ↓ | [25] |
| Ang II: Angiotensin II; DOCA: Deoxycorticosterone acetate; HCC: Hypercholesterolemic diet; MCT: monocrotalin; MCA: middle cerebral artery; MI: Myocardial infarction; RV: Right ventricular; SHR: spontaneously hypertensive rat; STZ: Streptozotocin;Bw: body weight; ig: intragastrically; ip: intraperitoneally; po: per oral; Effect are indicated by ↓: reduction; ↑: enhancement; →: no effect. |

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