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

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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 by  oral 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 of  MCT (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 MCT  in 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–Dawley  rats | 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 to  create 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 days  for 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, 2x10-5  mg 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 ischemia  Enhanced 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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