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 S5:** Effect of resveratrol on inflammatory markers |
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| **Animal** | **Inducer** | **Resveratrol dose** | **Duration** | **Effect** | **References** |
| Male Wistar rats | Colonic anastomosis | 0.5 mg Resv/ kg, po | 7 d before operation | Plasma IL-6: 3 d after anastomosis: ↑0 , 5 or 7 d after: →Tissue NF-κB: 3 and 5 d: ↓ 0, 7 d → | [1] |
| Male Wistar rats | Chronic colonic injury was induced by intra colonic instillation of TNBS | 10 mg Resv/ kg bw/ day, po, staring 24 h after TNBS treatment | 2 weeks | Microscopic damage: Resv↓TNFα: TNBS↑, TNBS+Resv↓NF-κBp65: TNBS↑, TNBS+Resv↓Cox-2: TNBS↑, TNBS+Resv↓PGE2: TNBS↑, TNBS+Resv↑↑PGD2: TNBS↑, TNBS+Resv→ | [2] |
| Male Fischer F344 rats | Colitis induced by 5% DSS  | 1 mg Resv/ kg bw/ day | 25 days | DSS-induced inﬁltration of inﬂammatory cells ↓DSS induced PGE2 level ↓  | [3] |
| Male Wistar rats | 20 mg DMH /kg bw, once a week for 15 weeks | 8 mg Resv/ kg bw/ day, simultaneously with DMH, after DMH treatment or in the entire period | 15 / 30 weeks | Colon COX-2 expression:DMH↑, DMH+Resv ↓ | [4] |
| Male Sprague-Dawley rats | ip injections of 40 mg DMN/ kg bw causing liver fibrosis | 10 mg Resv/ kg bw/ day | 7 d after DMN treatment | IL-1β: DMN↑, DMN+Resv↓TNFα: DMN↑, DMN+Resv↓iNOS: DMN↑, DMN+Resv↓ | [5] |
| Male Sprague–Dawley rats | Diabetes induced by 55 mg STZ/ kg bw, ip | resveratrol 10 and 20 mg/ kg bw/ day, 6 weeksafter diabetes induction  | 2 weeks | TNFα: STZ↑, STZ+Resv↓IL-6: STZ↑, STZ+Resv↓NF-κBp65: STZ↑, STZ+Resv↓ | [6] |
| Male Wistar rats | Diabetes was induced 50 mg STZ/ kg bw | 5 mg Resv/ kg bw/ day | 30 days | In plasma and liver:TNFα: STZ↑, STZ+Resv↓IL-1β: STZ ↑, STZ+Resv↓IL-6: STZ↑, STZ+Resv↓ | [7] |
| Wistar rats | 20 mg MCT/ kg bw, ip | 10 mg Resv/ kg bw/day, po | 5 days | Plasma TNFα: MCT↑, MCT+Resv↓ | [8] |
| Sprague-Dawley rats | MCT induced hypertension | 25 mg Resv/ kg bw/ day, po, from day 1 post MCT |  | mRNA expression of IL-6: MCT↑, MCT+Resv↓IL-1: MCT↑, MCT+Resv↓TNFα: MCT↑, MCT+Resv↓PDGFα: MCT↑, MCT+Resv↓PDGFβ: MCT↑, MCT+Resv↓TGFβ: MCT↑, MCT+Resv→MCP-1: MCT↑,MCT+Resv↓ | [9] |
| Lean / Obese Zucker rats |  | 10 mg Resv/ kg bw/ day, po | 8 weeks | TNFα: OBS↑, OBS+Resv↓ | [10] |
| Male Wistar rats | Exposed to cigarette smoke (CS) for 1 week | 25 mg Resv/ kg bw/ day in drinking water | 2 days pre-treatment | IL-1: CS↑, CS+Resv↓IL-6: CS↑, CS+Resv↓ICAM1: CS↑, CS+Resv↓iNOS: CS↑, CS+Resv↓TNFα: CS↑, CS+Resv→ | [11] |
| Sprague–Dawley rats | 6-OHDA injected into the right striatum | 10, 20 and 40 mg Resv/ kg was given orally | 10 weeks | Cox-2 expression in the substantia: nigra: 6-OHDA↑, 6-OHDA+Resv↓ | [12] |
| Male Wistar CRL: Wi (Han) rats | Steatosis (ST) by a high carbohydrate-fat free modified diet 4 days per week, and fasted for the remaining 3 days (4 weeks) | 10 mg Resv, po (~ 44 mg/ kg bw/ day) | 4 weeks | TNFα: ST↑, ST+Resv↓ | [13] |
| Male Wistar rats | Idiopathic pulmonary ﬁbrosis induced a single dose of 5mg BLE/ kg | 10 mg Resv/ kg bw/ day | 2 weeks | TNFα: BLE↑, BLE+Resv↓ IL-1β: BLE ↑, BLE +Resv↓ IL-6: BLE ↑, BLE+Resv↓ TGFβ: BLE ↑, BLE+Resv↓ | [14] |
| Male Swiss rats | Bile duct ligation (BDL) | 10 mg Resv/ kg, ip, once a day  | 28 days | IL-1β: BDL↑, BDL+Resv↓IL-6: BDL↑, BDL+Resv↓TNFα: BDL↑, BDL+Resv↓ | [15] |
| Male and female C57BL/6 mice | Water containing 1% DSS | Resv in diet at 75 to 300 ppm (~ 12 to 48 mg/ kg bw/ day) | 62 days | T cells expressing TNFα: DSS↑, DSS+Resv↓IFNγ: DSS↑, DSS+Resv↓ | [16] |
| Female Swiss mice | Ehrlich ascites carcinoma cells from a spontaneous mammary cancer (EAC) | 20 or 40 mg Resv/ kg bw/ day, ip | 20 days | CRP: EAC↑, EAC+Resv↓ (20 & 40 mg)TNFα: EAC ↑, EAC +Resv↓ (20 & 40 mg) | [17] |
| C57BL/6J mice | Colitis was induced for the last 8 days by 1% DSS in drinking water | 2.1 mg Resv/ kg bw/ day | 29 days | TNFα: DSS→, DSS+Resv→IL-1β: DSS→, DSS+Resv→IL-6: DSS ↑, DSS +Resv↓IL-10: DSS ↑, DSS+Resv↓IL-3: DSS ↑, DSS+Resv↑sTNF RI, p55 subunit: DSS ↑, DSS +Resv↓ | [18] |
| Female C57BL/6 mice | 3% DSS in the drinking water for 5 days | Resveratrol in diet at 20 mg/kg (~ 3 mg/ kg bw/ day) | 26 days | TNFα: DSS↑, DSS+Resv↓IL-1β: DSS↑, DSS+Resv↓IL-10: DSS↓, DSS+Resv↑PGES-1: DSS↑, DSS+Resv↓COX2: DSS↑, DSS+Resv↓iNOS: DSS↑, DSS+Resv↓ | [19] |
| Female C57BL/6 mice | Drinking water containing 3% DSS | 10, 50, or 100 mg Resv/ kg bw/ day, po | 14 days | TNFα: DSS↑, DSS+ Resv ↓IL-1β: DSS↑, DSS+ Resv ↓IL-6: DSS↓, DSS+ Resv ↑IFNγ: DSS↑, DSS+ Resv ↓COX2: DSS↑, DSS+ Resv ↓iNOS: DSS↑, DSS+ Resv ↓ | [20] |
| Male BALB/c mice | Ulcerative colitis induced by 5% DSS in drinking water for 7 days | 30 or 60 mg Resv/ kg bw/ day | 14 days | TNF-α: DSS↑, DSS+ Resv ↓ IL-8: DSS↑, DSS+ Resv ↓IFN-γ: DSS↑, DSS+ Resv ↓ p22phox: DSS↑, DSS+Resv↓gp91phox DSS↑, DSS+Resv↓ | [21] |
| Control: heterozygote m-Leprdb mice  | type 2 diabetes: homozygous Leprdb mice | 20 mg Resv/ kg bw/ day po | 4 weeks | TNF-α: Leprdb-/-↑, Leprdb-/-+Resv ↓ | [22] |
| C57/B6 mice | Angiotensin II (Ang II) | Resv in drinking water at 0.1 mg/ml (~10 mg Resv/ kg bw/ day | 4 weeks | IL-6: Ang II↑, Ang II+Resv↓ | [23] |
| Female BALB/c mice | Asthma sensitization plus challenge with ovalbumin (OVA) | 30 mg Resv/ kg bw, po | 32 days | Recruitment of leukocytes in lung tissue: OVA↑, OVA+Resv↓IL-4: OVA↑, OVA+Resv↓IL-5: OVA↑, OVA+Resv↓ | [24] |
| BALB-c mice of either sex | 100 mg Naphthalene (NAP)/ kg bw/ day, ip for 30 days | 10 mg Resv/ kg bw/ day, po | 30 days | TNFα: NAP↑, NAP+Resv↓IL-1β: NAP↑, NAP+Resv↓IL-6: NAP↓, NAP+Resv↑ | [25] |
| BALB/c mice | Injected L1210 cells, ip | 12.5, 25, 50 mg Resv/ kg /day, ig  | 3 weeks | IL-6: L1210↑, L1210+Resv↓ | [26] |
| Apolipoprotein E KO mice |  | P183/1-mixture: 27% Resv, 1.37 % caffeic acid and 8.35% cathechin | 8 weeks | In vascular wall:MCP-1↓; MIPα↓, MIPβ↓, IL6↓; IL10→ | [27] |
| Male Laka mice | Diabetes induced by 200 mg STZ/ kg | 20 mg Resv/ kg bw/ day,po | 4 weeks | TNFα: STZ↑, STZ+Resv↓, Insulin+ STZ+Resv↓↓ | [28] |
| C57BL/6 mice | EAE: sc immunization with 100 µl of 20 or 150 mg myelin oligoden-drocyte glycoprotein | 100 mg Resv/ kg bw/ day, po | 32 days | EAE+Resv relative to EAE: IL12p40↓, IL13↓, IL17↑, G-CSF↑, MIP1a↓, MCP-1↓, RANTES↓ | [29] |
| Female SKH-1 hairless mice | UVB irradiation | 25 mol Resv in 200 µl ace-tone per mouse |  | ODC: UVB↑, UVB+Resv↓COX: UVB↑, UVB+Resv↓ | [30] |
| Balb/C mice | Injected mouse hepatocellular carcinomacells H22On day 11, 0.1 mg LPS/ kg, ip; the mice were killed 90 min later | ip injection with Resv: 500, 1000 or 1500 mg/ kg bw/ day | 10 days | TNFα: LPS↑, LPS+Resv→ | [31] |
| 6-OHDA: 6-hydroxydopamine; ANG II: Angiotensin II; BDL: Bile duct ligation; BLE: bleomycin; COX: Cyclooxygenase; CS: the cigarette smoke; DMN: Dimethylnitrosamine; DSS: dextran sulfate sodium; EAC: Ehrlich ascites carcinoma; EAE: Experimental autoimmune encephalomyelitis; iNOS: inducible Nitrogenoxide Synthase; LPS: Lipopolysacharide; MCT: Monocrotaline; MTX: Methotrexate; NAP: Naphthalene; OBS: Obesity; ODC: Ornithine decarboxylase; OVA: ovalbumin; ST: Steatosis; STZ: Streptozotocin; TNBS: trinitrobenzenesulphonic acid; UVB: Ultraviolet radiation Big: intra gastrically; iv: intravenous; ip: intraperitoneally; po: per oral;Effect are indicated by ↓: reduction; ↑: enhancement; →: no effect. |

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