**Table S2**. miRNAs regulated by bioactive compounds

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Compo**  **und** | **In vitro/ vivo** | **Dose** | **Cell type/animal type** | **Tecnique** | **miRNA** | **Fold chance (up/down)** | **Targets** | **Ref** |
| Quercetin | In vitro | 50 µm/mL | MCF-7 and MDA-MB-231 | qPCR | miR-146a | 1.75 | EGFR | 1 |
| In vitro | 20 mg /L | CCD-18Co | qPCR | miR-146a | 2 | n.d. | 2 |
| In vitro | 300-mM | PDA | qPCR | Let-7a | 2 | K-RAS | 4 |
| *in vitro* | NA | PDA | qPCR | miR-200b-3p | 2 | n.d. | 5 |
| *in vitro* | 50 μM | PDA | qPCR | miR-200b-3p | 2.5 | n.d. | 6 |
| miR-200a-3p | 2 | n.d. |
| let-7c | 2 | Numbl |
| miR-103a-3p | 0.8 | n.d. |
| miR-125b-5p | 0.6 | n.d. |
| miR-1202 | 0.2 | n.d. |
| *in vitro* | 10 | Caco-2 | microarray | miR-17-3p | Log1.5 | FPN | 7 |
| *in vitro* | 100 μM | A549 | qPCR | miR-16 | 1.4 | claudin-2 | 8 |
| *in vitro* | 50 μM | HSC-6 and SCC-9 | qPCR | miR-16 | 3.4 | HOXA10 | 9 |
| *in vitro* | 5 μM | 143B cell | qPCR | miR-217 | 1.5 | KRAS | 10 |
| *in vitro* | 100 μM | MIA PaCa-2 | qPCR | miR-142-3p | 8 | heat shock protein 70 | 11 |
| *in vitro* | 50 & 100μM | SKOV-3 and A2780 | qPCR | miR-145 a | 1.5-3.5 | n.d. | 12 |
| *In vivo* | equivalent 30 mg/day (human) | C57B6/J mice livers | microarray | miR-291b-5p | Log3.9 | n.d. | 13 |
| mmu-miR-296-5p | Log 1.79 |
| mmu-miR-30c-1\* | Log -2.21 |
| mmu-miR-467b\* | Log -2.61 |
| mmu-miR-374\* | Log -1.93 |
| *In vitro* | 10 µM | MCF-7 | qPCR | miR-21 | 0.6 | Maspin, PTEN | 14 |
| *In vitro* | 0.5 µM | BEAS-2B | qPCR | miR -21 | 0.5 | PDCD4 | 15 |
| *In vivo* | 100-ppm | Male Wistar rats liver | qPCR | miR -21 | -3 | GGH | 16 |
| miR -205 | -3 |
| miR -301a | -3 |
| miR -216a | -4 |
| miR -33 | -4 |
| miR -206 | -4 |
| miR -503 | -4 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  | miR -298 | -5 |  |  |
| miR -342-3p | -5 |
| miR -1 | -6 |
| miR -505 | -7 |
| miR -133b | -8 |
| miR -125b-3p | -9 |
| *In vivo* | 30mg/kg/day | Male Wistar rats liver | qPCR | miR -21 | -10 | n.d. | 17 |
| miR -122 | 10 |
| *In vitro* | 10 μmol/ | RAW 264.7 | qPCR | miR -155 | 0.5 | n.d. | 18 |
| *In vitro* | 15 μmol/ | Tca8113 and SAS cells | qPCR | miR-22 | 4 | WNT1 | 19 |
| *In vitro* | 20 μmol/ | VK2/E6E7 | qPCR | miR-503-5p | 2 | CCND1 | 20 |
| miR-1283 | 2.5 |
| miR-3202 | 2.5 |
| miR-3714 | 1.5 |
| miR-6867-5p | 2 |
| miR-503-5p | 3 |
| miR-546 | 3 |
| *In vitro* | 40 μmol/ | H9c2 | qPCR | miR-199a | 1.8 | sirt1 | 21 |
| *In vivo* | quercetin-rich food intake | Adenocarcinoma | microarray | hsa-miR-502 | 1.124 | n.d. | 22 |
| hsa-miR-564 | 0.89 |
| hsa-miR-124a | 0.85 |
| hsa-miR-125a | 1.5 |
| Squamous Cell Carcinoma | hsa-miR-510 | 0.87 |
| hsa-miR-605 | 0.43 |
| hsa-miR-155 | 1.4 |
| hsa-miR-373 | 0.91 |
| hsa-miR-453 | 0.9 |
| hsa-miR-502 | 0.8 |
| hsa-miR-18b | 1.48 |
| hsa-miR-183 | 0.68 |
| hsa-miR-573 | 0.87 |
| hsa-miR-524\* | 0.85 |
| hsa-miR-612 | 1.07 |
| hsa-miR-363\* | 1.22 |
| *In vitro* | 31.25μM | HepG2 | qPCR | miR-34a | 1.5 | SIRT1 | 23 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *In vivo* | 2mg/g diet | ♀ C57BL/6J mice livers | qPCR | miR-125b | 1.4 | IL6 | 24 |
| *In vivo* | miR-122 | 1.6 |
| *In vivo* | 12.5 µm | C57BL/6 mice. BMDC | qPCR | miR-369-3p | 1.5 | C/EBP-β, TNF-α, IL6 | 25 |
| *In vitro* | 25ug/ml | Huh-7 | qPCR | miR-1275 | 10 | IGF2BP | 26 |
| *In vitro* | 2.5 µm | BMSCs | qPCR | miR-206 | 0.5 | Cx43 | 27 |
| *In vitro* | 40 μM | WI-38 cells | qPCR | miR-221 | 0.6 | IL-6 and TNF-a | 28 |
| *In vitro* | 25 µM | HepG2 cell lines | qPCR | miR-15a | 1.5 | n.d. | 29 |
| miR-16 |
| miR-34a |
| *In vitro* | 1μM Arc +  10μM Q (48h) | Androgen-dependent LAPC-4 and LNCaP prostate cancer cells | qPCR | miR-21 | 0.4 | n.d. | 30 |
| miR-19b | 0.6 |
| miR-148a | 0.6 |
| *In vitro* | 60 μg/ml  (24 h) | Human clear cell renal carcinoma 786-O cells | qPCR | miR-27a | 0.4 |  | 31 |
| *In vitro* | 60 μg/ml | Hormone-independent PC3  prostate cancer epithelial cell line | qPCR | miR-21 | 0.1 | PDCD4 | 32 |
| *In vivo* |  | Uterus samples from BALB/c mice | qPCR | miR34a | 0.7 |  | 33 |
| *In vivo* | ICR mice (15month-old & 3-month-old) | 0.08% Quercetin (80 mg quercetin in 100 g food) | qPCR | miR-219 | 4 | p -Tau | 34 |
| miR-15a | 3 |
| miR-132 | 1.5 |
| *In vivo* | 25 mg/kg | Adult male Wistar rats (n=40), weighing 200–230g | qPCR | miR-9 | -2.14 | n.d. | 35 |
| miR146a | -1.1 |
| *In vitro* | 10 μM | Bovine Granulosa Cell Culture | qPCR | miR-153 | 0.7 | Nrf2 | 36 |
| miR-28 | 0.7 |
| miR-708 | 0.6 |
| *In vitro* | 50 mg/kg | Mouse mesangial cells (MMCs) from ♂ C57BL/KsJ type 2 diabetic db/db mice and heterozygote age-matched db/m mice | qPCR | miR-21 | 1.5 | MMP-9 | 37 |
| *In vivo* |  | Liver tissues ♂ C57BL/6J mice | qPCR | miR-33 | 0.1 | n.d. | 38 |
|  | miR-122 | 0.3 |
| *In vitro* | 10 to 100 Μm | Human osteoblast-like cells (MG63) | qPCR | pre-mir-15b | 4 | Smurf1 | 39 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *In vivo* | 30 mg/kg  (daily, for 3 weeks) | Lungs from ♂ Wistar rats weighting 220–280 g (8–10 weeks of age) | qPCR | miR-204 | 4 | HIF1α and NFATc2 | 40 |
| *In vitro* | up to 2mg/ml | Brain cancer stem cells  (BCSCs) and GBM cell line  (U87MG) | qPCR | miR-30d-5p | -2.4 | n.d. | 41 |
| miR-335-5p | 5.6 |
| In vivo | 6.25, 12.5, or  25 µM | PC-12 cells derived from a transplantable rat | qPCR | miR-97 | -1 | n.d. | 42 |
| miR-298 | -0.5 |
| miR-2218 | -1 |
| miR-1502 | -1 |
| miR-345 | -0.5 |
| *In vitro* |  | HK-2 | qPCR | miR-124 | 2 | NF-κB | 43 |
| *In vitro* | 50 μM (24 h) | Adult retinal pigment epithelial cell line (ARPE)-19 cells | qPCR | miR-29b | 1.1 | PTEN/AKT; NF-κB | 44 |
| *In vitro* | 1, 5, 10, 20, and 40 ng/mL (24, 36 and  48 h) | HBL-52 meningioma cells | qPCR | miR-197 | up  (0.2/0.3/0.  5) | IGFBP5 | 45 |
| *In vivo* | 50 mg/kg  orally (daily, during 20 w) | Blood from adult male Wistar rats | qPCR | miR-21 | 0.5 |  | 46 |
| *In vitro* | 10, 50, 100,  200, or 400  mM | Human oral keratinocytes (HOKs), treated with lipopolysaccharide (LPS) | qPCR | miR-22 | 0.4 | PI3K/AKT; JAK1/STAT3 | 47 |
| In vivo & In vitro | 100 µM | Peritoneal cells from C57Bl/6, C57Bl/6 GFP and NOD/SCID  mice from 6 to 8 w | qPCR | miR-15a | 3 | n.d. | 48 |
| miR-16 | 3 |
| *In vitro* | 10-30 μM | Fibroblast-like synoviocyte of rheumatoid arthritis | qPCR | miR-146a | 1.5/2/2.5 | GATA6 | 49 |
| *In vivo* | 25 mg/kg | ♂ Wistar rats STZ-induced diabetes | qPCR | miR-27a | 0.3 | Nrf2, SOD1, and CAT | 50 |
| *In vivo* | 25 mg/kg/day | ♂ Wistar rats | qPCR | miR-101 | 0.5/15 | n.d. | 51 |
| *In vitro* | 5,10,20 μg/mL | Human adenocarcinoma cells HT29 | qPCR | miR-27a | 0.4 | n.d. | 52 |
| *In vivo* | 0.05% Que | ♂ C57BL/6J mice diet-induced obesity prone | qPCR | miR-383 | 1.5 | n.d. | 53 |
| *In vivo* | miR146b | 53 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Kaempferol | In vitro | 20 mg /L | CCD-18Co | qPCR | miR-146a | 2 | n.d. | 2 |
| In vitro | 50 µM | bovine neutrophil | qPCR | miR-146a | 0.7 | IL1B, IL6, CXCL8, TLR4 | 3 |
| *MIR24-2* | 0.7 |
| *MIR181C* | 0.8 |
| *In vitro* | 2.5 μM | H9c2 | qPCR | miR-15b | 0.6 | Bcl-2, TLR4 | 54 |
| *In vitro* | 100 μM | HAEC | qPCR | miR-26a-5p | 2 | TLR4 | 55 |
| *In vitro* | 50 μM | HepG2 | qPCR | miR-21 | 0.5 | PTEN | 56 |
| *In vitro* | 20 μM | A549 | qPCR | miR-340 | 1.8 | PTEN | 57 |
| *In vitro* | 40 μM | ATDC5 | qPCR | miR-146a | 0.4 | PI3K/AKT/mTOR | 58 |
| *In vitro* | 20 μM | HAECs | qPCR | miR-203 | 1.8 | MyD88, TLR4 | 59 |
| *In vivo* | Daily 2 mg/kg Fla-CN, 5 mg/kg Fla-CN or 15 mg/kg  Fla-CN | Liver and epididymis adipose tissue from male C57BL/6 mice  (4 weeks old) | qPCR | miR-27 | 2.3 | SREBP-1c / C/EBP α | 60 |
| *In vivo/In vitro* | 33 μM ASG  for 2 days | Human HepG2, HCC cells, Huh-7 HCC cells, HL-7702 untransformed hepatocytes, and murine H22 ascitic hepatoma cells/Livers and xenograft tumors from male Kunming mice and athymic nude mice (6-w) | qPCR | miR-125b | 3 | HK2 | 61 |
| *In vitro* | 1, 4 y 8 µM  (1/4 days) | Mouse 3T3-L1 cells | qPCR | miR-27a | 1.1 | PPARγ, C/EBPα | 62 |
| miR-27b | 0.8 |
| *In vitro* | 50 µM | HCT116 | qPCR | miR-339-5p | 7.5 | PKM | 63 |
| DLD1 | miR-339-5p | 2 |
| HCT116 | miR-330-5p | 4.5 |
| DLD1 | miR-330-5p | 1.75 |
| HCT116 | miR-590-3p | 1.7 |
| DLD1 | miR-590-3p | 2.5 |
| *In vitro* | 10 µM | Rat heart-derived cardiac myoblast H9c2 cardiomyocytes | qPCR | miR-21 | 4 | Notch/PTEN/Akt | 64 |
| *In vitro* | 1 µM | Colon cancer cell line (RKO) | qPCR | miR-31 | 0.5 | n.d. | 65 |
| miR-92a | 0.4 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *In vitro* | 50 µM | Human primary pulmonary artery smooth muscle cells (PASMCs) | qPCR | miR-21 | 1.5 | Endogenous DOCK 4, 5, and 7 | 66 |
| *In vitro* | 5µg/ml | Mouse pre-osteoblast cell line MC3T3-E1 cells | qPCR | miR-101 | 2.5 | Wnt/β-catenin | 67 |
| **Flavonol glycosides** | *In vitro* | 10 μM | Mouse HSCs | qPCR | miR-875-5p | 1.5 | GLI1 | 68 |
| *In vitro* | 3μmol/L | HCC | qPCR | miR-34a | 3 | Notch-1, Survivin | 69 |
| *In vitro* | 100 μM | Murine HL-1 | qPCR | miR-125b-1-3p | 0.6 | JunD | 70 |
| *In vitro* | 50µmol/L | Human renal proximal tubule (HK-2 | qPCR | miR-499a-5p | 1.5 | NRIP1 | 71 |
| *In vitro* | 0.6 µg/mL | mouse blastocysts from SPF Kunming mice, 6 wk old, purchased from Laboratory Animals Center of Beijing, China | qPCR | miR-21 | 2 | Caspase-3, PTEN, Bcl-2 | 72 |
| *In vitro* | First, 0–64 μg/mL (24, 48, 72h). Then, 3 μg/mL (48 h) | Human lung adenocarcinoma  A549 cell | miRNA-  seq/qPCR | miR-146a-3p | 2 | TSGs / Ogs | 73 |
| miR-4792 | 6.5 | FOXC1 |
| miR-569 | 5 | n.d. |
| miR-200a-3p | 2 | SPAG9 |
| miR-200b-3p | 2 | TIMP4 |
| miR-3923 | -7.5 | n.d. |
| miR-584-5p | -3.5 | n.d. |
| miR-4484 | -3.75 | EIF4E |
| **Hyperoside** | *In vitro* | 100µm | MMC | qPCR | miR-21 | -1.6 | MMP-9 | 74 |
| *In vitro* | 50μmol/l | H9C2 | qPCR | miR-138 | 3 | MLK3,Lcn2 | 75 |
| *In vitro* | 50μmol/ L | HK-2 | qPCR | miR-499–5p | 0.7 | NRIP1 | 76 |
| **Proanthocyanidins** | *In vitro* | 25μg m l−1 | macrophages | qPCR | mir-9 | 1.6 | ACAT1 | 77 |
| *In vitro* | 25 mg/L | FAO cells | qPCR | miR-122 | -3 | FAS | 78 |
| *In vitro* | 25 mg/L | FAO cells | qPCR | miR-33 | -6 | Abac1 | 78 |
| *In vitro* | 30μg/ml | A549、1198和H1299 | qPCR | miR-19a | -8 | MIR17HG | 79 |
| *In vitro* | 30μg/ml | A549、1198和H1299 | qPCR | miR-19b | -10 | MIR17HG | 79 |
| emodin | *In vitro* | 40μm | HPDE6c7 | qPCR | miR-1271 | 3.5 | Twist1 | 80 |
| *In vivo* | 20 μM | L6成肌细胞 | qPCR | miR-20b | 3 | Smad7 | 81 |
| *In vitro* | 40µM | PASMCs | qPCR | miR-244-5p | 3 | DEGS1 | 82 |
| *In vitro* | 10μM | PC-12 | qPCR | miR-9 | 2 | cyclinD1 | 83 |
| *In vitro* | 20µM | A2780 | qPCR | miR-199a | 8 | FOXD3 | 84 |
| *In vitro* | 40μM | MCF-10AT | qPCR | miR-15a | -2 | Bcl-2 | 85 |
| miR-16-1 |
| *In vitro* | 5 mM t o 2 0 mM | H9c2 cells | qPCR | MiR138 | 2.4 | MLK3 | 86 |
| *In vitro* | 100 μM | Cardiomyocytes and mices | qPCR | MiR133 | 1.3 | caspase-3 | 87 |
| *In vitro* | 100 µl | MDA-MB-231、MDA-MB-435和184A1  cells | qPCR | MiR34a | 1 | Bcl-2和Bmi-1 | 88 |
|  | In vitro | 5μL | IEC-6 cells | qPCR | miR-218-5p | 1.4 | Rock1 | 89 |
| Morin hydrate | *In vitro* | 50μM | CD133 melanoma cells | qPCR | miR-216a | 5 | Wnt3A | 90 |
| *In vitro* | 50μM | The lung cancer cell line A549 | qPCR | miR-135b | -4 | CCNG2 | 91 |
| *In vitro* | 50µM | HepG2 | qPCR | miR-29a | -7 | PI3K和IRS2 | 92 |
| *In vitro* | 50μmol/ L | Human CML cell lines | qPCR | miR-188-5p | -3 | pTEN | 93 |
| resveratrol | *In vitro* | 6.25 μmol/L | HepG2和Huh7 | qPCR | miR-186-5p | 0.5 | Twist1 | 94 |
| *In vitro* | 0.1 μmol/l | Murine 3T3-L1 pre-adipocyte | qPCR | miR-23a-3p | 0.8 | Wnt/β-catenin | 95 |
| *In vitro* | 50 μ M | CFs | qPCR | miR-17 | -2 | Smad7、TGF-β 1 | 96 |
| miR-34a | -0.8 |
| miR-181a | -1 |
| *In vitro* | 50 μ M | Min6 | qPCR | miR-126 | 2.2 | KLF2 | 97 |
| *In vitro* | 50 μ M | PSCs | qPCR | miR-21 | -1 | PTEN | 98 |
| *In vitro* | 10 μ M | BMMSCs | qPCR | miR-146a | 0.6 | FOXO、β-catenin | 99 |
| *In vitro* | 1lmol/L | HEI-OC1 | qPCR | miR-455-5p | 1 | PTEN，PI3K-Akt | 100 |
| *In vivo* | 100 mg/kg | Female mice | qPCR | miR-31 | -6.8 | foxP3 | 101 |
| *In vitro* | 10μg/ml | HK2 | qPCR | miR-205 | -0.4 | MALAT1 | 102 |
|  | *In vitro* | 80μM | A375 and  SK-MEL-28 melanoma cells | qPCR | miR-492 | 2.5 | CD147 | 103 |
|  | *In vitro* | 30μM | ATDC5 | qPCR | miR-146b | 2.1 | Bcl-2 | 104 |
| *In*  *vivo/In*  *vitro* | 100mg / kg | C57BL/6J mice | qPCR | mmu-miR-363-3p | 1.8 | PI3K-Akt | 105 |
| *In vitro* | 40μM | HaCaT | qPCR | miR-17 | 2.8 | Bcl-2，Bax，caspase-3/9 | 106 |
| *In vitro* | 100µM | SKOV-3 and  OV-90 cells | qPCR | miR-34a | 5 | Bcl-2 | 107 |
| rutin | *In vitro* | 5 μM | H9C2 cells | qPCR | miR-22-5p | 1.5 | Rap1a | 108 |
| syringic acid | *In vitro* | 600 μM | Rat Schwann cells (RSC96) | qPCR | miR-451-5p | -5 | Celf2 | 109 |
| *In vitro* | 150μM | HaCaT cells | qPCR | miR-21 | 0.7 | Sm150ad7 | 110 |
| vanillic acid | *In vitro* | 20nmol/L | HepG2 cells | qPCR | miR-212 | -0.2 | DUSP9 | 111 |
| ferulic acid | *In vitro* | 100µl | 56 male albino Wistar rats | qPCR | miR-21 | -2 | TGFβ1/Smad 3 | 112 |
| qPCR | miR-30 | 1.8 |
| qPCR | miR-200 | 2.2 |
| *In vitro* | 0.5 μg/ml | PC12 cells/ SD rats | qPCR | miR-9 | -1.2 | HIBD | 113 |
| gallic acid | *In vitro* | 25µl | SW1353 cells | qPCR | hsa-miR-518b | 1.5 | SW1353 | 114 |
| *In vitro* | 10nM | Human colon CCD-18Co myofibroblastic and  HT-29 adenocarcinoma cell lines | qPCR | miR-126 | 1.7 | PI3K | 115 |
| protocatechuic acid | *In vitro* | 10 μM | AML-12 cells | qPCR | miR-219a-5p | 1.6 | p66shc3 | 116 |

# References Table

1. Tao, S. F.; He, H. F.; Chen, Q., Quercetin inhibits proliferation and invasion acts by upregulating miR-146a in human breast cancer cells. *Molecular and cellular biochemistry* **2015**, *402*, 93-100.
2. Noratto, G. D.; Kim, Y.; Talcott, S. T.; Mertens-Talcott, S. U., Flavonol-rich fractions of yaupon holly leaves (Ilex vomitoria, Aquifoliaceae) induce microRNA-146a and have antiinflammatory and chemopreventive effects in intestinal myofibroblast CCD-18Co cells. *Fitoterapia* **2011**, *82*, 557-69.
3. Chuammitri, P.; Srikok, S.; Saipinta, D.; Boonyayatra, S., The effects of quercetin on microRNA and inflammatory gene expression in lipopolysaccharide-stimulated bovine neutrophils. *Veterinary world* **2017**, *10*, 403-410.
4. Appari, M.; Babu, K. R.; Kaczorowski, A.; Gross, W.; Herr, I., Sulforaphane, quercetin and catechins complement each other in elimination of advanced pancreatic cancer by miRlet-7 induction and K-ras inhibition. *International journal of oncology* **2014**, *45*, 1391-400.
5. Nwaeburu, C. C.; Abukiwan, A.; Zhao, Z.; Herr, I., Quercetin-induced miR-200b-3p regulates the mode of self-renewing divisions in pancreatic cancer. *Molecular cancer* **2017**, *16*, 23.
6. Nwaeburu, C. C.; Bauer, N.; Zhao, Z.; Abukiwan, A.; Gladkich, J.; Benner, A.; Herr, I., Up-regulation of microRNA let-7c by quercetin inhibits pancreatic cancer progression by activation of Numbl. *Oncotarget* **2016**, *7*, 58367-58380.
7. Lesjak, M.; Hoque, R.; Balesaria, S.; Skinner, V.; Debnam, E. S.; Srai, S. K.; Sharp, P. A., Quercetin inhibits intestinal iron absorption and ferroportin transporter expression in vivo and in vitro. *PloS one* **2014**, *9*, e102900.
8. Sonoki, H.; Sato, T.; Endo, S.; Matsunaga, T.; Yamaguchi, M.; Yamazaki, Y.; Sugatani, J.; Ikari, A., Quercetin Decreases Claudin-2 Expression Mediated by Up-Regulation of microRNA miR-16 in Lung Adenocarcinoma A549 Cells. *Nutrients* **2015**, *7*, 4578-92.
9. Zhao, J.; Fang, Z.; Zha, Z.; Sun, Q.; Wang, H.; Sun, M.; Qiao, B., Quercetin inhibits cell viability, migration and invasion by regulating miR-16/HOXA10 axis in oral cancer. *European journal of pharmacology* **2019**, *847*, 11-18.
10. Zhang, X.; Guo, Q.; Chen, J.; Chen, Z., Quercetin Enhances Cisplatin Sensitivity of Human Osteosarcoma Cells by Modulating microRNA-217-KRAS Axis. *Molecules and cells* **2015**, *38*, 638-42.
11. MacKenzie, T. N.; Mujumdar, N.; Banerjee, S.; Sangwan, V.; Sarver, A.; Vickers, S.; Subramanian, S.; Saluja, A. K., Triptolide induces the expression of miR-142-3p: a negative regulator of heat shock protein 70 and pancreatic cancer cell proliferation. *Molecular cancer therapeutics* **2013**, *12*, 1266-75.
12. Zhou, J.; Gong, J.; Ding, C.; Chen, G., Quercetin induces the apoptosis of human ovarian carcinoma cells by upregulating the expression of microRNA-145. *Molecular medicine reports* **2015**, *12*, 3127-31.
13. Milenkovic, D.; Deval, C.; Gouranton, E.; Landrier, J. F.; Scalbert, A.; Morand, C.; Mazur, A., Modulation of miRNA expression by dietary polyphenols in apoE deficient mice: a new mechanism of the action of polyphenols. *PloS one* **2012**, *7*, e29837.
14. Panahi, G., The effects of Quercetin on miRNA-21 expression in MCF-7 cells. *Archives of Medical Laboratory Sciences* **2018**, *3*.
15. Pratheeshkumar, P.; Son, Y. O.; Divya, S. P.; Wang, L.; Turcios, L.; Roy, R. V.; Hitron, J. A.; Kim, D.; Dai, J.; Asha, P.; Zhang, Z.; Shi, X., Quercetin inhibits Cr(VI)-induced malignant cell transformation by targeting miR-21-PDCD4 signaling pathway. *Oncotarget* **2017**, *8*, 52118-52131.
16. Wein, S. A.; Laviano, A.; Wolffram, S., Quercetin induces hepatic γ-glutamyl hydrolase expression in rats by suppressing hepatic microRNA rno-miR-125b-3p. *The Journal of nutritional biochemistry* **2015**, *26*, 1660-3.
17. Nozari, E.; Moradi, A.; Samadi, M., Effect of Atorvastatin, Curcumin, and Quercetin on miR-21 and miR-122 and their correlation with TGFβ1 expression in experimental liver fibrosis. *Life sciences* **2020**, *259*, 118293.
18. Boesch-Saadatmandi, C.; Loboda, A.; Wagner, A. E.; Stachurska, A.; Jozkowicz, A.; Dulak, J.; Döring, F.; Wolffram, S.; Rimbach, G., Effect of quercetin and its metabolites isorhamnetin and quercetin-3-glucuronide on inflammatory gene expression: role of miR155. *The Journal of nutritional biochemistry* **2011**, *22*, 293-9.
19. Zhang, C.; Hao, Y.; Sun, Y.; Liu, P., Quercetin suppresses the tumorigenesis of oral squamous cell carcinoma by regulating microRNA-22/WNT1/β-catenin axis. *Journal of pharmacological sciences* **2019**, *140*, 128-136.
20. Park, S.; Lim, W.; Bazer, F. W.; Whang, K. Y.; Song, G., Quercetin inhibits proliferation of endometriosis regulating cyclin D1 and its target microRNAs in vitro and in vivo. *The Journal of nutritional biochemistry* **2019**, *63*, 87-100.
21. Guo, G.; Gong, L.; Sun, L.; Xu, H., Quercetin supports cell viability and inhibits apoptosis in cardiocytes by down-regulating miR-199a. *Artificial cells, nanomedicine, and biotechnology* **2019**, *47*, 2909-2916.
22. Lam, T. K.; Shao, S.; Zhao, Y.; Marincola, F.; Pesatori, A.; Bertazzi, P. A.; Caporaso, N. E.; Wang, E.; Landi, M. T., Influence of quercetin-rich food intake on microRNA expression in lung cancer tissues. *Cancer epidemiology, biomarkers & prevention : a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology* **2012**, *21*, 2176-84.
23. Lou, G.; Liu, Y.; Wu, S.; Xue, J.; Yang, F.; Fu, H.; Zheng, M.; Chen, Z., The p53/miR34a/SIRT1 Positive Feedback Loop in Quercetin-Induced Apoptosis. *Cellular physiology and biochemistry : international journal of experimental cellular physiology, biochemistry, and pharmacology* **2015**, *35*, 2192-202.
24. Boesch-Saadatmandi, C.; Wagner, A. E.; Wolffram, S.; Rimbach, G., Effect of quercetin on inflammatory gene expression in mice liver in vivo - role of redox factor 1, miRNA-122 and miRNA-125b. *Pharmacological research* **2012**, *65*, 523-30.
25. Galleggiante, V.; De Santis, S.; Liso, M.; Verna, G.; Sommella, E.; Mastronardi, M.; Campiglia, P.; Chieppa, M.; Serino, G., Quercetin-Induced miR-369-3p Suppresses Chronic Inflammatory Response Targeting C/EBP-β. *Molecular nutrition & food research* **2019**, *63*, e1801390.
26. Shaalan, Y. M.; Handoussa, H.; Youness, R. A.; Assal, R. A.; El-Khatib, A. H.; Linscheid, M. W.; El Tayebi, H. M.; Abdelaziz, A. I., Destabilizing the interplay between miR-1275 and IGF2BPs by Tamarix articulata and quercetin in hepatocellular carcinoma. *Natural product research* **2018**, *32*, 2217-2220.
27. Zhang, Q.; Chang, B.; Zheng, G.; Du, S.; Li, X., Quercetin stimulates osteogenic differentiation of bone marrow stromal cells through miRNA-206/connexin 43 pathway. *American journal of translational research* **2020**, *12*, 2062-2070.
28. Wang, C.; Qu, Z.; Kong, L.; Xu, L.; Zhang, M.; Liu, J.; Yang, Z., Quercetin ameliorates lipopolysaccharide-caused inflammatory damage via down-regulation of miR-221 in WI-38 cells. *Experimental and molecular pathology* **2019**, *108*, 1-8.
29. A methoxylated quercetin glycoside harnesses HCC tumor progression in a TP53/miR15/miR-16 dependent manner. Nat Prod Res. 2020, 34(10): 1475-1480.
30. Arctigenin in combination with quercetin synergistically enhances the antiproliferative effect in prostate cancer cells. Mol Nutr Food Res. 2015, 59(2):250-61.
31. Combination of quercetin and hyperoside has anticancer effects on renal cancer cells through inhibition of oncogenic microRNA-27a. Oncol Rep. 2014, 31(1): 117-124.
32. Combination of quercetin and hyperoside inhibits prostate cancer cell growth and metastasis via regulation of microRNA-21. Mol Med Rep. 2015, 11(2): 1085-1092.
33. Dasatinib plus quercetin prevents uterine age-related dysfunction and fibrosis in mice. Aging (Albany NY). 2020, 12(3): 2711-2722.
34. DietaryAdvancedGlycationEnd Products-InducedCognitive Impairment in Aged ICR Mice: Protective Role of Quercetin. Mol Nutr Food Res. 2020, 64(3): e1901019.
35. Effect of quercetin-conjugated with superparamagnetic iron oxide nanoparticles on learning and memory improvement through targeting microRNAs/ NF-κB pathway. Int J Nanomedicine. 2018, 13:6311-6324.
36. Endogenous and Exogenous Modulation of Nrf2 Mediated Oxidative Stress Response in Bovine Granulosa Cells: Potential Implication for Ovarian Function. Int J Mol Sci. 2019, 20(7): 1635.
37. Hyperoside ameliorates glomerulosclerosis in diabetic nephropathy by down-regulating miR21. Can J Physiol Pharmacol. 2016, 94(12):1249-1256.
38. Lychee pulp phenolics ameliorate hepatic lipid accumulation by reducing miR-33 and miR122 expression in mice fed a high-fat diet. Food Funct. 2017, 8(2):808-815.
39. Mixed-ligand copper(II) complex of quercetin regulate osteogenesis and angiogenesis. Mater Sci Eng C Mater Biol Appl. 2018, 83:187-194.
40. Perillyle alcohol and Quercetin ameliorate monocrotaline-induced pulmonary artery hypertension in rats through PARP1-mediated miR-204 down-regulation and its downstream pathway. BMC Complement Med Ther. 2020, 20(1):218.
41. Propolis Extract Regulate microRNA Expression in Glioblastoma and Brain Cancer Stem Cells. Anticancer Agents Med Chem. 2021, doi: 10.2174/1871520621666210504082528.
42. Protective Effect of Quercetin against H 2 O 2-Induced Oxidative Damage in PC-12 Cells: Comprehensive Analysis of a lncRNA-Associated ceRNA Network. Oxid Med Cell Longev. 2020, 2020:6038919.
43. Quercetin alleviates lipopolysaccharide-induced inflammatory responses by up-regulation miR-124 in human renal tubular epithelial cell line HK-2. Biofactors. 2020, 46(3):402-410.
44. Quercetin attenuates high glucose-induced injury in human retinal pigment epithelial cell line ARPE-19 by up-regulation of miR-29b. J Biochem. 2020, 167(5):495-502.
45. Quercetin induces apoptosis in meningioma cells through the miR-197/IGFBP5 cascade. Environ Toxicol Pharmacol. 2020, 80:103439.
46. Quercetin prevents cadmium chloride-induced hepatic steatosis and fibrosis by downregulating the transcription of miR-21. Biofactors. 2021, 47(3):489-505.
47. Quercetin protects human oral keratinocytes from lipopolysaccharide-induced injury by downregulating microRNA-22. Hum Exp Toxicol. 2020, 39(10):1310-1317.
48. Quercetin shortened survival of radio-resistant B-1 cells in vitro and in vivo by restoring miR15a/16 expression. Oncotarget. 2021, 12(4):355-365.
49. Quercetin suppresses migration and invasion by targeting miR-146a/GATA6 axis in fibroblast-like synoviocytes of rheumatoid arthritis. Immunopharmacol Immunotoxicol. 2020, 42(3):221-227.
50. Quercetin-conjugated superparamagnetic iron oxide nanoparticles (QCSPIONs) increases Nrf2 expression via miR-27a mediation to prevent memory dysfunction in diabetic rats. Sci Rep. 2020, 10(1):15957.
51. Quercetin-Conjugated Superparamagnetic Iron Oxide Nanoparticles Protect AlCl3-Induced Neurotoxicity in a Rat Model of Alzheimer’s Disease via Antioxidant Genes, APP Gene, and miRNA-101. Front Neurosci. 2021, 14:598617.
52. Resveratrol and quercetin in combination have anticancer activity in colon cancer cells and repress oncogenic microRNA-27a. Nutr Cancer. 2013, 65(3):494-504.
53. Role of diets and exercise in ameliorating obesity-related hepatic steatosis: Insights at the microRNA-dependent thyroid hormone synthesis and action. Life Sci. 2020, 242:117182.
54. Li, L.; Shao, Y.; Zheng, H.; Niu, H., Kaempferol Regulates miR-15b/Bcl-2/TLR4 to Alleviate OGD-Induced Injury in H9c2 Cells. *International heart journal* **2020**, *61*, 585-594.
55. Zhong, X.; Zhang, L.; Li, Y.; Li, P.; Li, J.; Cheng, G., Kaempferol alleviates ox-LDLinduced apoptosis by up-regulation of miR-26a-5p via inhibiting TLR4/NF-κB pathway in human endothelial cells. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie 2018, 108, 1783-1789.
56. Zhu, G.; Liu, X.; Li, H.; Yan, Y.; Hong, X.; Lin, Z., Kaempferol inhibits proliferation, migration, and invasion of liver cancer HepG2 cells by down-regulation of microRNA-21. International journal of immunopathology and pharmacology 2018, 32, 2058738418814341.
57. Han, X.; Liu, C. F.; Gao, N.; Zhao, J.; Xu, J., Kaempferol suppresses proliferation but increases apoptosis and autophagy by up-regulating microRNA-340 in human lung cancer cells. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie 2018, 108, 809816.
58. Jiang, R.; Hao, P.; Yu, G.; Liu, C.; Yu, C.; Huang, Y.; Wang, Y., Kaempferol protects chondrogenic ATDC5 cells against inflammatory injury triggered by lipopolysaccharide through down-regulating miR-146a. International immunopharmacology 2019, 69, 373-381.
59. Cui, S.; Tang, J.; Wang, S.; Li, L., Kaempferol protects lipopolysaccharide-induced inflammatory injury in human aortic endothelial cells (HAECs) by regulation of miR-203. Biomedicine & pharmacotherapy = Biomedecine & pharmacotherapie 2019, 115, 108888.
60. Flavonoid-enriched extract from Hippophae rhamnoides seed reduces high fat diet induced obesity, hypertriglyceridemia, and hepatic triglyceride accumulation in C57BL/6 mice. Pharm Biol. 2017. 55, 1207-1214.
61. Astragalin Reduces Hexokinase 2 through Increasing miR-125b to Inhibit the Proliferation of Hepatocellular Carcinoma Cells in Vitro and in Vivo. J Agric Food Chem. 2017. 65(29):59615972.
62. Flavonoid derivative (Fla-CN) inhibited adipocyte differentiation viaactivating AMPK and up-regulating microRNA-27 in 3T3-L1 cells. European Journal of pharmacology. 2017. 797, 4552.
63. Kaempferol Reverses Aerobic Glycolysis via miR-339-5p-Mediated PKM Alternative Splicing in Colon Cancer Cells. J. Agric. Food Chem. 2021, 69, 10, 3060–3068
64. MiR-21 mediates the protection of kaempferol against hypoxia/reoxygenation-induced cardiomyocyte injury via promoting Notch1/ PTEN/AKT signaling pathway. PLoS One. 2020, 15(11):e0241007.
65. Inhibition of miR31 and miR92a as Oncological Biomarkers in RKO Colon Cancer Cells Treated with Kaempferol-3-O-Glycoside Isolated from Black Bean. J Med Food. 2020, 23(1):5055.
66. Kaempferol inhibits vascular smooth muscle cell migration by modulating BMP-mediated miR-21 expression. Mol Cell Biochem. 2015, 407(1-2):143-149.
67. Kaempferol promotes proliferation, migration and differentiation of MC3T3-E1 cells via upregulation of microRNA-101. Artif Cells Nanomed Biotechnol. 2019, 47(1):1050-1056.
68. Ye, L.; Yu, Y.; Zhao, Y., Icariin-induced miR-875-5p attenuates epithelial-mesenchymal transition by targeting hedgehog signaling in liver fibrosis. Journal of gastroenterology and hepatology 2020, 35, 482-491.
69. Jia, H.; Yang, Q.; Wang, T.; Cao, Y.; Jiang, Q. Y.; Ma, H. D.; Sun, H. W.; Hou, M. X.; Yang, Y. P.; Feng, F., Rhamnetin induces sensitization of hepatocellular carcinoma cells to a small molecular kinase inhibitor or chemotherapeutic agents. Biochimica et biophysica acta 2016, 1860, 1417-30.
70. Li, Q.; Qin, M.; Li, T.; Gu, Z.; Tan, Q.; Huang, P.; Ren, L., Rutin protects against pirarubicin-induced cardiotoxicity by adjusting microRNA-125b-1-3p-mediated JunD signaling pathway. Molecular and cellular biochemistry 2020, 466, 139-148.
71. Hyperoside Protects HK-2 Cells Against High Glucose-Induced Apoptosis and Inflammation via the miR-499a-5p/NRIP1 Pathway. Pathol. Oncol. Res., 2021. https://doi.org/10.3389/pore.2021.629829
72. Relationships Between Icariin and Anti-Apoptotic miRNA-21 in Mouse Blastocyst Development In vitro. Journal of Integrative Agriculture. 2013. 12, 663-669.
73. Analysis of change in microrna expression profiles of lung cancer A549 cells treated with Radix tetrastigma hemsleyani flavonoids. Onco Targets Ther. 2018. 11, 4283-4300.
74. Le Z , He S , Fan Y , et al. Hyperoside ameliorates glomerulosclerosis in diabetic nephropathy by downregulating miR-21[J]. Canadian Journal of Physiology & Pharmacology, 2016, 94(12):1.
75. He, Yin, Wu, et al. Hyperoside protects cardiomyocytes against hypoxiainduced injury via upregulation of microRNA138[J]. Molecular Medicine Reports, 2021.
76. Zhou J , Zhang S , Sun X , et al. Hyperoside Protects HK-2 Cells Against High Glucose-Induced Apoptosis and Inflammation via the miR-499a-5p/NRIP1 Pathway[J]. Pathology & Oncology Research, 2021, 27:629829.
77. Shao D , Di Y , Lian Z , et al. Grape seed proanthocyanidins suppressed macrophage foam cell formation by miRNA-9 via targeting ACAT1 in THP-1 cells[J]. Food & Function, 2020, 11(2):1258-1269.
78. Baselga-Escudero L , Cinta Bladé, Ribas-Latre A , et al. Grape seed proanthocyanidins repress the hepatic lipid regulators miR-33 and miR-122 in rats[J]. Molecular Nutrition & Food Research, 2012, 56(11):1636-1646.
79. Mao J T , Xue B , Smoake J , et al. MicroRNA-19a/b mediates grape seed procyanidin extract-induced anti-neoplastic effects against lung cancer[J]. Journal of Nutritional Biochemistry, 2016, 34:118-125.
80. Nan L , Wang C , Peng Z , et al. Emodin inhibits pancreatic cancer EMT and invasion by upregulating microRNA1271[J]. Molecular Medicine Reports, 2018, 18.
81. Xiao D , Hu Y , Fu Y , et al. Emodin improves glucose metabolism by targeting microRNA-20b in insulin-resistant skeletal muscle[J]. Phytomedicine, 2018, 59.
82. Yi L, Liu J, Deng M, Zuo H, Li M. Emodin inhibits viability, proliferation and promotes apoptosis of hypoxic human pulmonary artery smooth muscle cells via targeting miR-244-5p/DEGS1 axis. BMC Pulm Med. 2021 Jul 31;21(1):252. doi: 10.1186/s12890-021-01616-1. PMID: 34332565; PMCID: PMC8325255.
83. Fan L, Zhang H, Li X, Yang G, Ru J, Liu T. Emodin protects hyperglycemia-induced injury in PC-12 cells by up-regulation of miR-9. Mol Cell Endocrinol. 2018 Oct 15;474:194-200. doi: 10.1016/j.mce.2018.03.009. Epub 2018 Mar 23. PMID: 29577942.
84. Song K , Teng L , Chen Y , et al. Emodin inhibits TGF-β2 by activating the FOXD3/miR199a axis in ovarian cancer cells in vitro[J]. Oncology Reports, 2018, 39(5).
85. Jiang X , Liu Y , Zhang G , et al. Aloe-Emodin Induces Breast Tumor Cell Apoptosis through Upregulation of miR-15a/miR-16-1 That Suppresses BCL2[J]. Evidence-based Complementary and Alternative Medicine, 2020, 2020(11):1-10.
86. Zhang X, Qin Q, Dai H, Cai S, Zhou C, Guan J. Emodin protects H9c2 cells from hypoxia-induced injury by up-regulating miR-138 expression. Braz J Med Biol Res. 2019 Feb 25;52(3):e7994. doi: 10.1590/1414-431X20187994. PMID: 30810622; PMCID: PMC6393853.
87. Yu Y, Liu H, Yang D, He F, Yuan Y, Guo J, Hu J, Yu J, Yan X, Wang S, Du Z. Aloe-emodin attenuates myocardial infarction and apoptosis via up-regulating miR-133 expression. Pharmacol Res. 2019 Aug;146:104315. doi: 10.1016/j.phrs.2019.104315. Epub 2019 Jun 14. PMID: 31207343.

88.Bai J, Wu J, Tang R, Sun C, Ji J, Yin Z, Ma G, Yang W. Emodin, a natural anthraquinone, suppresses liver cancer in vitro and in vivo by regulating VEGFR2 and miR-34a. Invest New Drugs. 2020 Apr;38(2):229-245. doi: 10.1007/s10637-019-00777-5. Epub 2019 Apr 11. PMID: 30976957.

89.Tan Y, Zhang W, Wu HY, Xia J, Zhang HB, Liu MW, Qian CY. Effects of emodin on intestinal mucosal barrier by the upregulation of miR-218a-5p expression in rats with acute necrotizing pancreatitis. Int J Immunopathol Pharmacol. 2020 Jan-Dec;34:2058738420941765. doi: 10.1177/2058738420941765. PMID: 32664763; PMCID: PMC7364802.

90.Hu, J., Guo, X., & Yang, L. (2018). Morin inhibits proliferation and self-renewal of CD133(+) melanoma cells by upregulating miR-216a. J Pharmacol Sci, 136(3), 114-120. doi:10.1016/j.jphs.2018.02.003

91.Yao, D., Cui, H., Zhou, S., & Guo, L. (2017). Morin inhibited lung cancer cells viability, growth, and migration by suppressing miR-135b and inducing its target CCNG2. Tumour Biol, 39(10), 1010428317712443. doi:10.1177/1010428317712443.

92.Razavi, T., Kouhsari, S. M., & Abnous, K. (2019). Morin Exerts Anti-Diabetic Effects in Human HepG2 Cells Via Down-Regulation of miR-29a. Exp Clin Endocrinol Diabetes, 127(9), 615-622. doi:10.1055/a-0650-4082.

93.Nie, Z. Y., Yang, L., Liu, X. J., Yang, Z., Yang, G. S., Zhou, J., . . . Luo, J. M. (2019). Morin Inhibits Proliferation and Induces Apoptosis by Modulating the miR-188-5p/PTEN/AKT Regulatory Pathway in CML Cells. Mol Cancer Ther, 18(12), 2296-2307. doi:10.1158/1535-7163.Mct-19-0051.

94.Song F, Zhang Y, Pan Z, Zhang Q, Lu X, Huang P. Resveratrol inhibits the migration, invasion and epithelial-mesenchymal transition in liver cancer cells through up- miR-186-5p expression. Zhejiang Da Xue Xue Bao Yi Xue Ban. 2021 Oct 25;50(5):582-590. English. doi: 10.3724/zdxbyxb-2021-0197. PMID: 34986537; PMCID: PMC8732253.

95.Zheng T, Chen H. Resveratrol ameliorates the glucose uptake and lipid metabolism in gestational diabetes mellitus mice and insulin-resistant adipocytes via miR-23a-3p/NOV axis. Mol Immunol. 2021 Sep;137:163-173. doi: 10.1016/j.molimm.2021.06.011. Epub 2021 Jul 10. PMID: 34256324.

96.Zhang Y, Lu Y, Ong'achwa MJ, Ge L, Qian Y, Chen L, Hu X, Li F, Wei H, Zhang C, Li C, Wang Z. Resveratrol Inhibits the TGF-β1-Induced Proliferation of Cardiac Fibroblasts and Collagen Secretion by Downregulating miR-17 in Rat. Biomed Res Int. 2018 Dec 17;2018:8730593. doi: 10.1155/2018/8730593. PMID: 30648109; PMCID: PMC6311767.

97.Xin Y, Zhang H, Jia Z, Ding X, Sun Y, Wang Q, Xu T. Resveratrol improves uric acid-induced pancreatic β-cells injury and dysfunction through regulation of miR-126. Biomed Pharmacother. 2018 Jun;102:1120-1126. doi: 10.1016/j.biopha.2018.03.172. Epub 2018 Apr 5. PMID: 29710530.

98.Yan B, Cheng L, Jiang Z, Chen K, Zhou C, Sun L, Cao J, Qian W, Li J, Shan T, Lei J, Ma Q, Ma J. Resveratrol Inhibits ROS-Promoted Activation and Glycolysis of Pancreatic Stellate Cells via Suppression of miR-21. Oxid Med Cell Longev. 2018 Apr 26;2018:1346958. doi: 10.1155/2018/1346958. PMID: 29854071; PMCID: PMC5944235.

99.Nan K, Pei JP, Fan LH, Zhang YK, Zhang X, Liu K, Shi ZB, Dang XQ, Wang KZ. Resveratrol prevents steroid-induced osteonecrosis of the femoral head via miR-146a modulation. Ann N Y Acad Sci. 2021 Nov;1503(1):23-37. doi: 10.1111/nyas.14555. Epub 2021 Jan 17. PMID: 33454992.

100.Liu Y, Wu H, Zhang F, Yang J, He J. Resveratrol upregulates miR-455-5p to antagonize cisplatin ototoxicity via modulating the PTEN-PI3K-AKT axis. Biochem Cell Biol. 2021 Jun;99(3):385-395. doi: 10.1139/bcb-2020-0459. Epub 2021 Jun 2. PMID: 34077275.

101.Alrafas HR, Busbee PB, Nagarkatti M, Nagarkatti PS. Resveratrol Downregulates miR-31 to Promote T Regulatory Cells during Prevention of TNBS-Induced Colitis. Mol Nutr Food Res. 2020 Jan;64(1):e1900633. doi: 10.1002/mnfr.201900633. Epub 2019 Dec 11. PMID: 31730734; PMCID: PMC6940522.

102.Wang B, Wang Y, Xu K, Zeng Z, Xu Z, Yue D, Li T, Luo J, Liu J, Yuan J. Resveratrol alleviates sepsis-induced acute kidney injury by deactivating the lncRNA MALAT1/MiR-205 axis. Cent Eur J Immunol. 2021;46(3):295-304. doi: 10.5114/ceji.2021.109195. Epub 2021 Oct 19. PMID: 34764801; PMCID: PMC8574118.

103.Zhao S, Tang L, Chen W, Su J, Li F, Chen X, Wu L. Resveratrol-induced apoptosis is associated with regulating the miR-492/CD147 pathway in malignant melanoma cells. Naunyn Schmiedebergs Arch Pharmacol. 2021 Apr;394(4):797-807. doi: 10.1007/s00210-020-01981-4. Epub 2020 Oct 3. PMID: 33009925.

104.Jin H, Zhang H, Ma T, Lan H, Feng S, Zhu H, Ji Y. Resveratrol Protects Murine Chondrogenic ATDC5 Cells Against LPS-Induced Inflammatory Injury Through Up-Regulating MiR-146b. Cell Physiol Biochem. 2018;47(3):972-980. doi: 10.1159/000490141. Epub 2018 May 24. PMID: 29843156.

105.Shu L, Zhao H, Huang W, Hou G, Song G, Ma H. Resveratrol Upregulates mmu-miR-363-3p via the PI3K-Akt Pathway to Improve Insulin Resistance Induced by a High-Fat Diet in Mice. Diabetes Metab Syndr Obes. 2020 Feb 14;13:391-403. doi: 10.2147/DMSO.S240956. PMID: 32104036; PMCID: PMC7027849.

106.Wang X, Zhang Y. Resveratrol alleviates LPS-induced injury in human keratinocyte cell line HaCaT by up-regulation of miR-17. Biochem Biophys Res Commun. 2018 Jun 18;501(1):106-112. doi: 10.1016/j.bbrc.2018.04.184. Epub 2018 May 3. PMID: 29704506.

107.Yao S, Gao M, Wang Z, Wang W, Zhan L, Wei B. Upregulation of MicroRNA-34a Sensitizes Ovarian Cancer Cells to Resveratrol by Targeting Bcl-2. Yonsei Med J. 2021 Aug;62(8):691-701. doi: 10.3349/ymj.2021.62.8.691. PMID: 34296546; PMCID: PMC8298871.

108.Qin M, Li Q, Wang Y, Li T, Gu Z, Huang P, Ren L. Rutin treats myocardial damage caused by pirarubicin via regulating miR-22-5p-regulated RAP1/ERK signaling pathway. J Biochem Mol Toxicol. 2021 Jan;35(1):e22615. doi: 10.1002/jbt.22615. Epub 2020 Aug 31. PMID: 32864822.

109.Lin Y, Jiang X, Yin G, Lin H. Syringic acid promotes proliferation and migration of Schwann cells via down-regulating miR-451-5p. Acta Biochim Biophys Sin (Shanghai). 2019 Dec 13;51(12):1198-1207. doi: 10.1093/abbs/gmz118. PMID: 31748779.

110.Arumugam B, Balagangadharan K, Selvamurugan N. Syringic acid, a phenolic acid, promotes osteoblast differentiation by stimulation of Runx2 expression and targeting of Smad7 by miR-21 in mouse mesenchymal stem cells. J Cell Commun Signal. 2018 Sep;12(3):561-573. doi: 10.1007/s12079-018-0449-3. Epub 2018 Jan 19. PMID: 29350343; PMCID: PMC6039342.

111.Zhang JY, Xiao X, Dong Y, Zhou XH. Fermented Barley Extracts with Lactobacillus plantarum dy-1 Rich in Vanillic Acid Modulate Glucose Consumption in Human HepG2 Cells. Biomed Environ Sci. 2018 Sep;31(9):667-676. doi: 10.3967/bes2018.091. PMID: 30369345.

112.Hussein RM, Anwar MM, Farghaly HS, Kandeil MA. Gallic acid and ferulic acid protect the liver from thioacetamide-induced fibrosis in rats via differential expression of miR-21, miR-30 and miR-200 and impact on TGF-β1/Smad3 signaling. Chem Biol Interact. 2020 Jun 1;324:109098. doi: 10.1016/j.cbi.2020.109098. Epub 2020 Apr 9. PMID: 32278740.

113.Yao K, Yang Q, Li Y, Lan T, Yu H, Yu Y. MicroRNA-9 mediated the protective effect of ferulic acid on hypoxic-ischemic brain damage in neonatal rats. PLoS One. 2020 May 29;15(5):e0228825. doi: 10.1371/journal.pone.0228825. PMID: 32470970; PMCID: PMC7259979.

114.Liang W, Li X, Li Y, Li C, Gao B, Gan H, Li S, Shen J, Kang J, Ding S, Lin X, Liao L. Gallic acid induces apoptosis and inhibits cell migration by upregulating miR-518b in SW1353 human chondrosarcoma cells. Int J Oncol. 2014 Jan;44(1):91-8. doi: 10.3892/ijo.2013.2155. Epub 2013 Oct 30. PMID: 24173143.

115.Kim H, Banerjee N, Barnes RC, Pfent CM, Talcott ST, Dashwood RH, Mertens-Talcott SU. Mango polyphenolics reduce inflammation in intestinal colitis-involvement of the miR-126/PI3K/AKT/mTOR axis in vitro and in vivo. Mol Carcinog. 2017 Jan;56(1):197-207. doi: 10.1002/mc.22484. Epub 2016 Apr 6. PMID: 27061150; PMCID: PMC5053910.

116.Fu R, Zhou J, Wang R, Sun R, Feng D, Wang Z, Zhao Y, Lv L, Tian X, Yao J. Protocatechuic Acid-Mediated miR-219a-5p Activation Inhibits the p66shc Oxidant Pathway to Alleviate Alcoholic Liver Injury. Oxid Med Cell Longev. 2019 Jul 24;2019:3527809. doi: 10.1155/2019/3527809. PMID: 31428222; PMCID: PMC6683775.