

Electronic Supplementary Material (ESI) for Food & Function.

Fig. S1. Identification of differentially expressed proteins (DEPs) in human mesenchymal stem cells treated with WiKim39 and WiKim0124 fermented vegetable juices using antibody array. (a) Array map used in the panel, (b) human antibody array panel used in this study ([Raw image files](#)). The signal intensity of the arrays was analyzed using a densitometer. The relative fold change of proteins was calculated after normalization to the positive control (n = 2). 4-1BB, tumor necrosis factor receptor superfamily; ACE-2, Angiotensin-converting enzyme 2; Acrp30, adiponectin; Adipsin, complement factor D; AgRP, agouti related neuropeptide; Ang-2, angiopoietin 2; Angiopoietin-1, angiopoietin 1; ANGPTL4, angiopoietin like 4; CRP, C-reactive protein; ENA-78, C-X-C motif chemokine ligand 5; Fas, fatty acid synthase; FGF-6, fibroblast growth factor 6; Growth hormone, growth hormone; HCC-4, C-C motif chemokine ligand 16; IFN- γ , interferon gamma; IGFBP-1, insulin-like growth factor-binding protein-1; IGFBP-2, insulin-like growth factor binding protein 2; IGFBP-3, insulin-like growth factor binding protein 3; IGF-1, insulin-like growth factor 1; IGF-1R, insulin-like growth factor-I receptor; IGF-1 SR, interleukin 1 receptor-like 4; IL-1 sR1, interleukin 1 soluble receptor 1; IL-10, interleukin 10; IL-11, interleukin 11; IL-12, interleukin 12; IL-1 α , interleukin 1 alpha; IL-1 β , interleukin 1 beta; IL-6, interleukin 6; IL-6 sR, interleukin 6 soluble receptor; IL-8, interleukin 8; Insulin, insulin; IP-10, C-X-C motif chemokine ligand 10; Leptin R, Leptin receptor; Leptin, leptin; LIF, leukemia inhibitory factor; Lymphotactin, lymphotactin; MCP-1, monocyte chemoattractant protein-1; MCP-3, monocyte chemoattractant protein-3; MCSF, macrophage colony-stimulating factor; MIF, macrophage migration inhibitory factor; MIF-1 β , macrophage migration inhibitory factor 1 beta; MSP α , macrophage stimulating protein alpha; OPG, osteoprotegerin; OSM, oncostatin M; PAI-1,

plasminogen activator inhibitor-1; PARC, pulmonary and activation-regulated chemokine; PDGF-AA, platelet-derived growth factor; PDGF-AB, platelet-derived growth factor; PDGF-BB, platelet-derived growth factor; RANTES, regulated upon activation, normal T cell expressed and presumably secreted; Resistin, resistin; Serum amyloid A, serum amyloid A; SDF-1, stromal cell-derived factor 1; sTNF-R1, soluble tumor necrosis factor receptor type 1; sTNF-R2, soluble tumor necrosis factor receptor 2; TGF- β , transforming growth factor beta 1; TIMP1, tissue inhibitor matrix metalloproteinase 1; TIMP2, tissue inhibitor matrix metalloproteinase 2; TNF- α , tumor necrosis factor alpha; VEGF-A, vascular endothelial growth factor A; XEDAR, X-linked ectodermal dysplasia receptor.

Fig. S2. Effects of WiKim39 and WiKim0124 fermented vegetable juice administration in high-fat diet-induced obese mice. Plasma AST (aspartate aminotransferase), plasma ALT alanine aminotransferase), plasma ALP (alkaline phosphatase), plasma FFA (free fatty acids), hepatic triglycerides (TG), hepatic total cholesterol (TCHO) were measured. Different letters denote significant differences ($p < 0.05$, ANOVA, Tukey's HSD). Values are expressed as the mean \pm SD.

Fig. S3. Effect of LAB and LAB fermented VJ on cell viability (a, c) and adipogenic differentiation (b, d). * $p < 0.05$ indicates statistically significant differences between NOR and experimental groups, and # $p < 0.05$ indicates statistically significant differences between CON and experimental groups. Values are expressed as the mean \pm SD ($n = 3$).

Supplementary Table S1. Quantitative reverse transcription-PCR primers used in this study.

		Primer sequence (5'→3')	Reference
C/EBP α	Forward	TGGACAAGAACAGCAACGAGTAC	38
	Reverse	GCAGTTGCCCATGGCCTTGAC	
PPAR γ	Forward	AGGCCGAGAAGGAGAAGCTGTTG	39
	Reverse	TGGCCACCTCTTTGCTGTGCTC	
SREBP-1c	Forward	GGCATGAAACCTGAAGTGGT	40
	Reverse	TGCAGGTCAGACACAGGAAG	
FAS	Forward	GGGACACTCCACACCAGAGT	41
	Reverse	TAGACGTCAGCAGGTCGATG	
FABP4	Forward	AAATCACCGCAGACGACA	41
	Reverse	CACATTCCACCACCAGCT	
ATGL	Forward	AACACCAGCATCCAGTTCAA	-
	Reverse	GGTTCAGTAGGCCATTCCTC	
HSL	Forward	ACCGAGACAGGCCTCAGTGTG	-
	Reverse	GAATCGGCCACCGGTAAAGAG	
β -actin	Forward	AGCCATGTACGTAGCCATCC	-
	Reverse	TTAAGCCATGCTCTGCAATG	

Reference

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