

Food & Function

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IN THIS ISSUE

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Cover

See Weifang Zheng, Yu Zhang *et al.*, pp. 2597–2606.

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Inside cover

See B. Kalska-Szostko *et al.*, pp. 2544–2567.

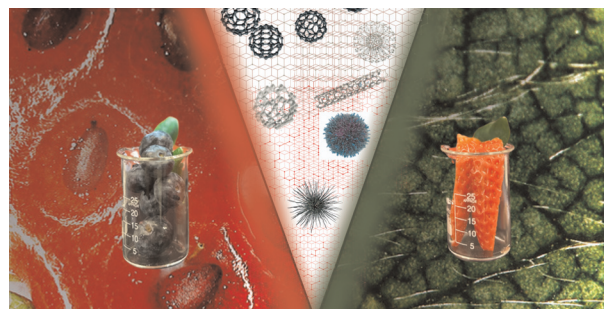
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REVIEWS

2544

Nanoparticle applications in food – a review

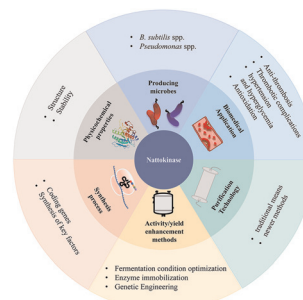
A. Wasilewska, M. Bielicka, U. Klekotka and B. Kalska-Szostko*



2568

Microbial nattokinase: from synthesis to potential application

Yanan Sheng, Jiani Yang, Changyuan Wang, Xindi Sun and Lei Yan*



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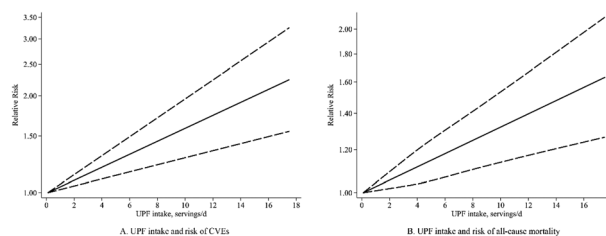


REVIEWS

2586

Dose–response meta-analysis of ultra-processed food with the risk of cardiovascular events and all-cause mortality: evidence from prospective cohort studies

Lijun Yuan, Huifang Hu, Tianze Li, Jinli Zhang, Yifei Feng, Xingjin Yang, Yang Li, Yuying Wu, Xi Li, Hao Huang, Fulan Hu, Chuanqi Chen, Ming Zhang, Yang Zhao and Dongsheng Hu*

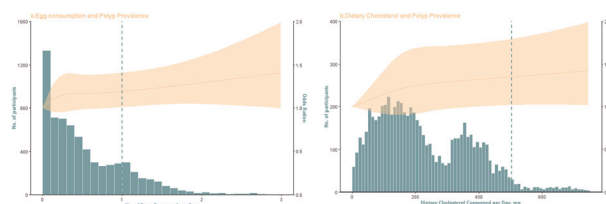


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Association of egg consumption with colorectal polyp prevalence: findings from the Lanxi Pre-Colorectal Cancer Cohort (LP3C) in China

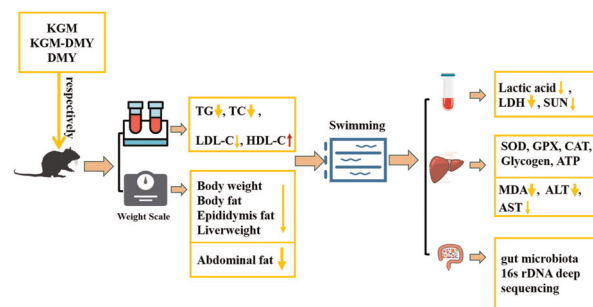
Jia Shen, Yin Li, Meihui Xu, Fei Wu, Yanjie Jiang, Xiaohui Liu, Yang Ao, Qianru Lin, Pan Zhuang, Jingjing Jiao, Weifang Zheng* and Yu Zhang*



2607

The synergic effects and mechanism of KGM–DMY complex in the prevention of obesity and enhancement of fatigue resistance in mice

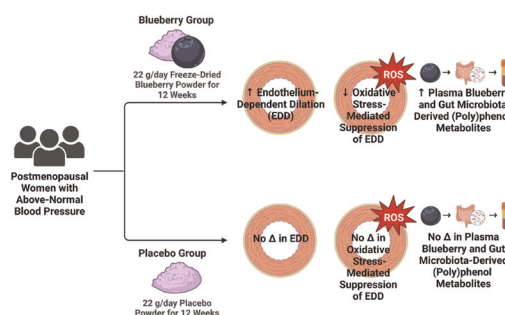
Shulan Ruan, Xuefeng Gao, Bin Li and Jing Tian*



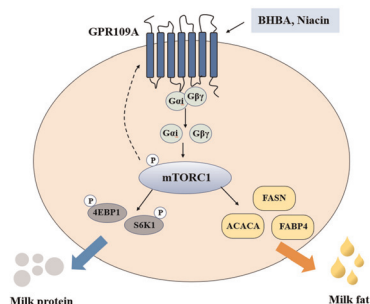
2621

Daily blueberry consumption for 12 weeks improves endothelial function in postmenopausal women with above-normal blood pressure through reductions in oxidative stress: a randomized controlled trial

E. K. Woolf, J. D. Terwoord, N. S. Litwin, A. R. Vazquez, S. Y. Lee, N. Ghanem, K. A. Michell, B. T. Smith, L. E. Grabos, N. B. Ketelhut, N. P. Bachman, M. E. Smith, M. Le Sayec, S. Rao, C. L. Gentile, T. L. Weir, A. Rodriguez-Mateos, D. R. Seals, F. A. Dinunno and S. A. Johnson*



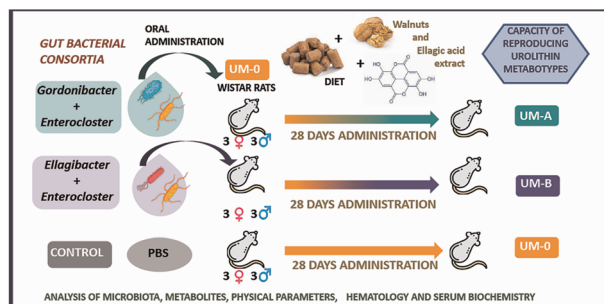
2642



Niacin/ β -hydroxybutyrate regulates milk fat and milk protein synthesis via the GPR109A/ G_i /mTORC1 pathway

Jiaming Chen, Tongbin Lin, Shuchang Zhang, Xianhuai Yue, XingHong Liu, Caichi Wu, Yunyi Liang, Xiangfang Zeng, Man Ren, Fang Chen, Wutai Guan and Shihai Zhang*

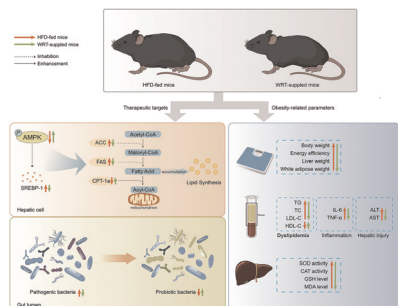
2657



In vivo administration of gut bacterial consortia replicates urolithin metabolotypes A and B in a non-urolithin-producing rat model

Carlos E. Iglesias-Aguirre, Antonio González-Sarrias, Adrián Cortés-Martín, María Romo-Vaquero, Leire Osuna-Galisteo, José Joaquín Cerón, Juan Carlos Espín and María Victoria Selma*

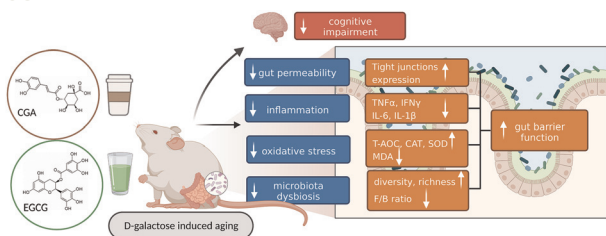
2668



Oolong tea of different years protects high-fat diet-fed mice against obesity by regulating lipid metabolism and modulating the gut microbiota

Wen-wen Fang, Kuo-fei Wang, Fang Zhou, Jie Ou-yang, Zi-ying Zhang, Chang-wei Liu, Hong-zhe Zeng, Jian-an Huang* and Zhong-hua Liu*

2684



Chlorogenic acid combined with epigallocatechin-3-gallate mitigates D-galactose-induced gut aging in mice

Ran Wei, Zhucheng Su* and Gerardo G. Mackenzie*



Walnut polyphenols and the active metabolite urolithin A improve oxidative damage in SH-SY5Y cells by up-regulating PKA/CREB/BDNF signaling

The diagram illustrates the gut microbiome bioconversion of walnut polyphenols into urolithins and their effects on neuroinflammation and neurodegeneration. On the left, a box labeled "walnut polyphenols" contains an image of walnuts. An arrow points from this box to a central illustration of the human gut. Below the gut is a circular inset showing a cross-section of the gut wall with various bacteria, labeled "Gut microbiome bioconversion". An arrow points from the gut to a box labeled "urolithins" which contains the chemical structure of urolithins (a triphenylmethane derivative) and the text "urolithin A (R₁:H; R₂:H; R₃:OH)". An arrow points from the urolithins box to a brain icon. To the right of the brain is a large box containing a list of effects: "Neuroinflammation ↓", "Oxidative stress ↓", "Mitochondrial dysfunctions ↓", "Neurogenesis/Neurotrophs ↑", and "Neurodegenerative/Neurological disease ↓". A red arrow points from the brain to this box, and a dashed red arrow points from the box back to the brain.

Identification of a secondary Q-marker in high-quality ecotypes of *Carthamus tinctorius* L. and exploration of the target preference

In vitro digestion and colonic fermentation of phenolic compounds and their bioaccessibility from raw and roasted nut kernels

The diagram illustrates the workflow for the analysis of fecal samples, starting from sample collection and digestion, followed by fermentation and analysis.

Oral Phase: Salivary α -amylase, Simulated oral fluids (SOF). This phase is part of *In vitro* Digestion.

Gastric Phase: Porcine pepsin, Simulated gastric fluids (SGF). This phase is also part of *In vitro* Digestion.

Small Intestine Phase: Pancreatic, Bile salt, Simulated intestinal fluids (SIF). This phase is also part of *In vitro* Digestion.

Colonic Fermentation Phase: Basal media, Pig fecal slurry. This phase is part of Colonic Fermentation.

The process involves *In vitro* Digestion and Colonic Fermentation, leading to the analysis of Phenolic and Antibiotic ability Estimation (TPC, TFC, DPPH, FRAP) and Phenolic Compounds Analysis (HPLC-PDA). The final step is SCFAs Analysis (GC-MS).

The protection of luteolin against diabetic cardiomyopathy in rats is related to reversing JNK-suppressed autophagy

Luteolin

Oc1ccc(Oc2cc(O)c3cc(O)c(O)c3o2)cc1

i.g. for 4 weeks

Diabetes

STZ (i.p.)

JNK/c-Jun/miR-221 ↓

Autophagy ↑

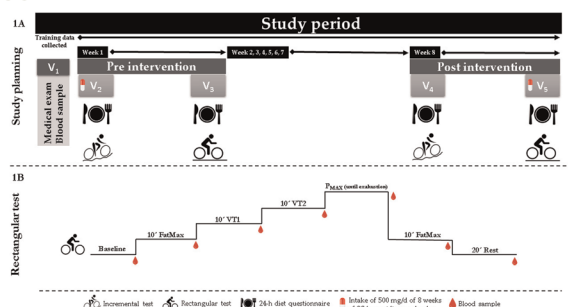
Myocardial hypertrophy and fibrosis ↓

Cardiac function ↑

Diabetic cardiomyopathy

PAPERS

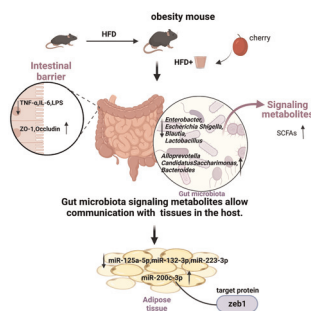
2750



8 weeks of 2S-hesperidin prevents a decrease in pO_2 at submaximal intensity in amateur cyclists in off-season: randomized controlled trial

Francisco Javier Martínez-Noguera,* Pedro E. Alcaraz, Jorge Carlos-Vivas and Cristian Marín-Pagán

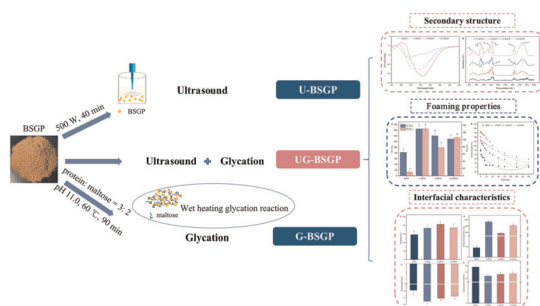
2768



Cherry juice alleviates high-fat diet-induced obesity in C57BL/6J mice by resolving gut microbiota dysbiosis and regulating microRNA

Zhen Wang, Hongxu Liu, Guoku Song, Jingzhu Gao, Xiaodong Xia and Ningbo Qin*

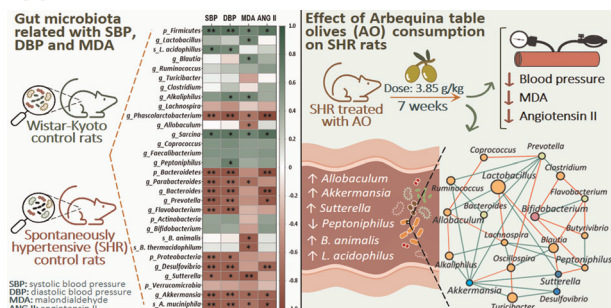
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Enhancing the foaming properties of brewer's spent grain protein by ultrasound treatment and glycation reaction

Qing Li, Wanying Li, Li Li, Xuyan Zong, Teodora Emilia Coldea, Huirong Yang* and Haifeng Zhao*

2793



Dietary intake of table olives exerts antihypertensive effects in association with changes in gut microbiota in spontaneously hypertensive rats

Aldo Gómez-Contreras, Talia Franco-Ávila, Lluís Miró,* M. Emilia Juan, Miquel Moretó and Joana M. Planas*

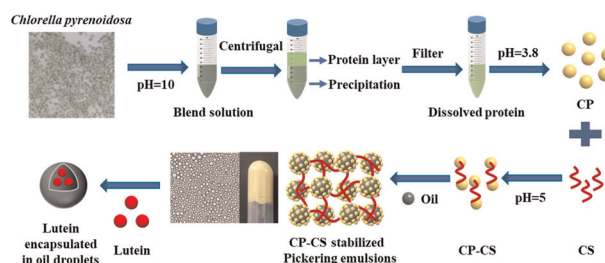


PAPERS

2807

Pickering emulsions stabilized by *Chlorella pyrenoidosa* protein–chitosan complex for lutein encapsulation

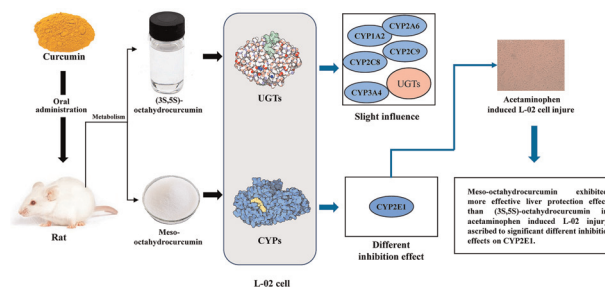
Jialu Ni, Kuiyou Wang, Deyang Yu and Mingqian Tan*



2822

Stereoisomers of octahydrocurcumin, the hydrogenated metabolites of curcumin, display stereoselective activity on the CYP2E1 enzyme in L-02 cells

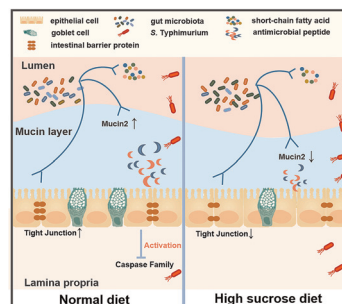
Dandan Luo, Yinsi Lin, Jiannan Chen, Xiaoqi Huang, Youliang Xie, Yuhong Liu, Suiqin Ni, Ziren Su, Yucui Li* and Zhenbiao Zhang*



2836

A high-sucrose diet causes microbiota composition shift and promotes the susceptibility of mice to *Salmonella Typhimurium* infection

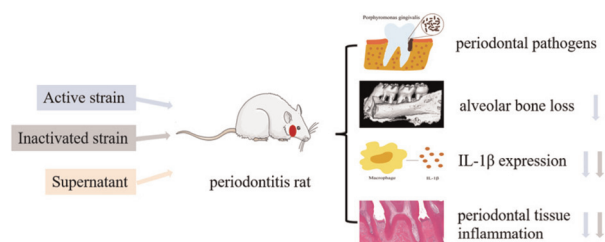
Jiaxiu Liu, Huanhuan Liu, Yue Teng, Ningbo Qin, Xiaomeng Ren and Xiaodong Xia*



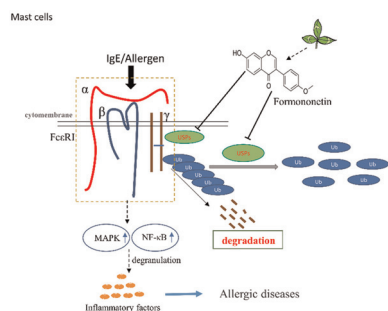
2847

Evaluation of heat-inactivated *Limosilactobacillus fermentum* CCFM1139 and its supernatant for the relief of experimental periodontitis in rats

Yuhan Ye, Xianyin Xu, Bingyong Mao, Xin Tang, Shumao Cui, Jianxin Zhao and Qiuxiang Zhang*



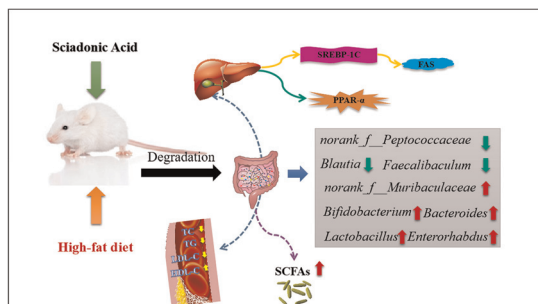
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Natural isoflavone formononetin inhibits IgE-mediated mast cell activation and allergic inflammation by increasing IgE receptor degradation

Zi-Wen Zhou, Kunmei Ji, Xue-Yan Zhu, Xin-Ying Wu, Ruo-Tong Lin, Chu-Chu Xie, Ze-Lang Cai and Jia-Jie Chen*

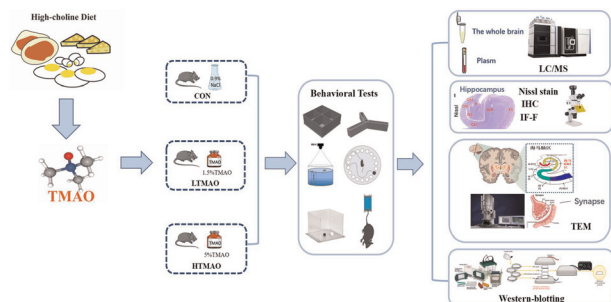
2870



Sciadonic acid attenuates high-fat diet-induced obesity in mice with alterations in the gut microbiota

Lin Chen, Qihong Jiang, Chenkai Jiang, Hongling Lu, Wenjun Hu, Shaofang Yu, Mingqian Li, Chin Ping Tan, Yongcai Feng, Xingwei Xiang and Guoxin Shen*

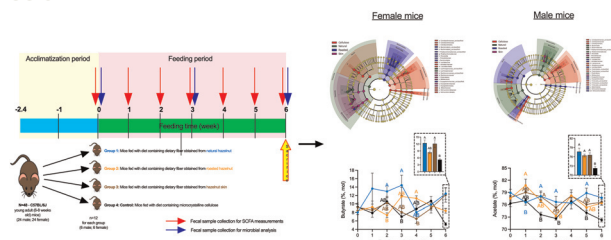
2881



Dietary choline metabolite TMAO impairs cognitive function and induces hippocampal synaptic plasticity declining through the mTOR/P70S6K/4EBP1 pathway

Shihan Zhou, Jing Liu, Yan Sun, Ping Xu, Jin ling Liu, Suping Sun, Boran Zhu* and Haoxin Wu*

2896



Sex-dependent colonic microbiota modulation by hazelnut (*Corylus avellana* L.) dietary fiber

Elanur Daştan, Ömer F. Çelik, Orhan Baş, Zafer Bulut, Stephen R. Lindemann, Mehmet İ. Tugay, Muhammet Değermenci, Beyza Suvarıklı-Alan, Mehmet Nizamlioglu and Yunus E. Tunçil*

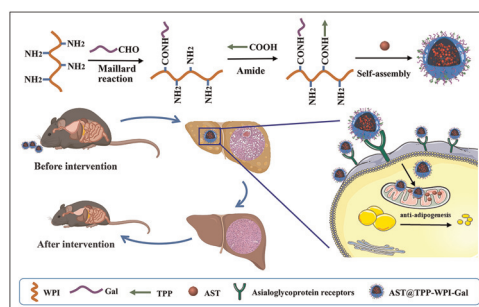


PAPERS

2908

Hepatic parenchymal cell and mitochondrial-targeted astaxanthin nanocarriers for relief of high fat diet-induced nonalcoholic fatty liver disease

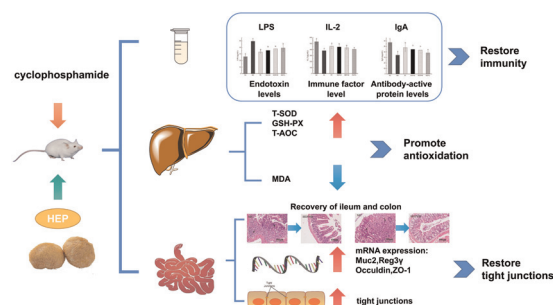
Tongtong Che, Yukun Song,* Wentao Su, Shanghua Xing, Haitao Wang and Mingqian Tan



2921

Ameliorating effects of *Hericium erinaceus* polysaccharides on intestinal barrier injury in immunocompromised mice induced by cyclophosphamide

Baoming Tian, Peiyi Wang, Tianrui Xu, Ming Cai, Rongliang Mao, Liangshui Huang, Peilong Sun* and Kai Yang*



CORRECTIONS

2933

Correction: Visualizing morphological structures of rice grains in precooked products using synchrotron radiation X-ray phase-contrast computed tomography

Hiromi Miki,* Akio Yoneyama and Keiichi Hirano

2934

Correction: Long-term Pu-erh tea consumption improves blue light-induced depression-like behaviors

Sibo Zhao, Shanshan Hu, Kang Sun, Liyong Luo* and Liang Zeng*

