

Food & Function

rsc.li/food-function

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 2042-650X CODEN FFOUAI 15(19) 9583–10202 (2024)



Cover

See Xiaofeng Li,
Guanglei Zhao et al.,
pp. 9734–9749.

Image reproduced
by permission of
Xiaofeng Li from
Food Funct.,
2024, **15**, 9734.



Inside cover

See Ziren Su,
Jianhui Xie et al.,
pp. 9750–9765.

Image reproduced
by permission of
Jianhui Xie from
Food Funct.,
2024, **15**, 9750.

EDITORIAL

9597

Defining the intersection between food and human health – an updated scope for *Food & Function*

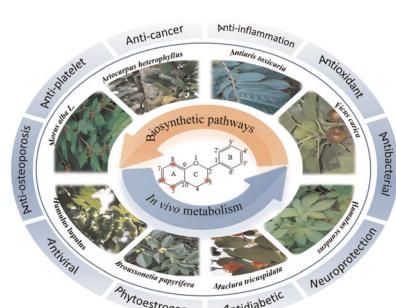


REVIEWS

9598

Chemistry, bioactivities, structure–activity relationship, biosynthesis and metabolism of prenylated flavonoids in Moraceae plants

Ning Li, Wenjing Lu,* Hui Ren and Zhiyong Chen*



EES Solar

**Exceptional research on solar
energy and photovoltaics**

Part of the EES family

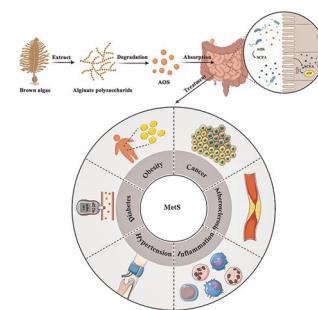
**Join
in** | Publish with us
rsc.li/EESSolar

REVIEWS

9632

The therapeutic effect and possible mechanisms of alginate oligosaccharide on metabolic syndrome by regulating gut microbiota

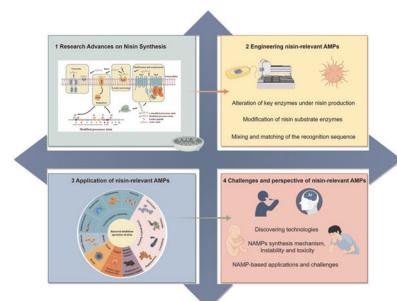
Jingyi Wang, Zixuan Zhang, Tong Dai, Ziheng Zhang, Qingfeng Zhang, Jingtong Yao, Lijing Wang,* Ningning He* and Shangyong Li*



9662

Nisin-relevant antimicrobial peptides: synthesis strategies and applications

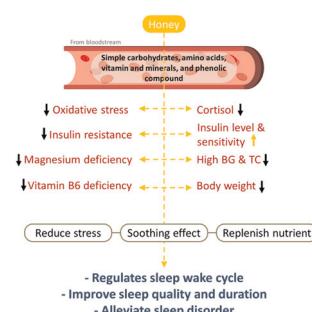
Lin Yuan, Shengbo Wu, Kairen Tian, Shengli Wang, Hao Wu* and Jianjun Qiao*



9678

Exploring honey's potential as a functional food for natural sleep aid

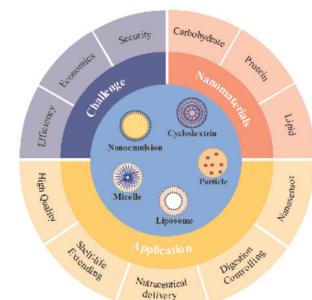
Muhammad Faiz Zulkifli, Mohammad Asyraf Adhwa Masimen, P. M. Ridzuan and Wan Iryani Wan Ismail*



9690

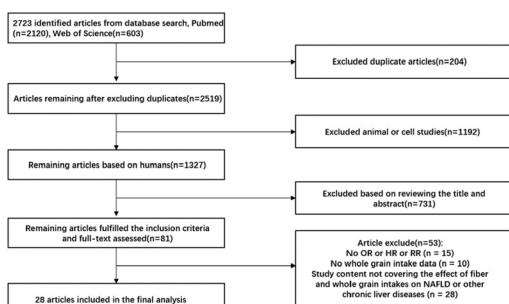
Food nanotechnology: opportunities and challenges

Zhiyu Yan, Songyi Lin, Fanghan Li, Jiaxin Qiang and Simin Zhang*



REVIEWS

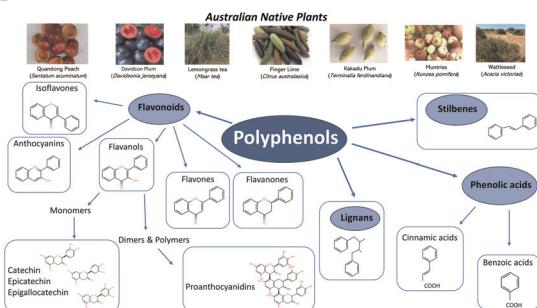
9707



Effect of whole grain and fiber consumption on chronic liver diseases: a systematic review and meta-analysis

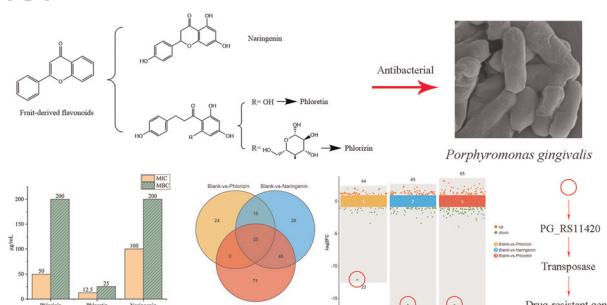
Yanni Zhang, Jing Sui,* Ying Xu, Ling Pan, Hui Xia and Guiju Sun

9718



PAPERS

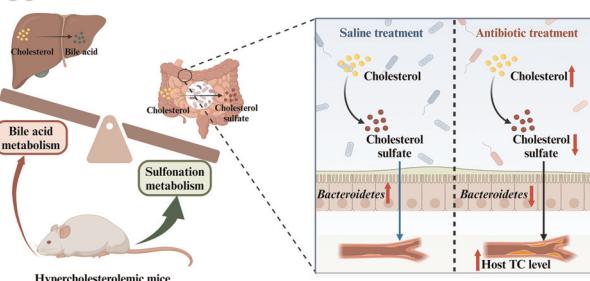
9734



The phytochemical composition and unexplored potential of Australian native plants for application in physical activity-related muscle recovery and inflammation: a literature review

Brittany Harriden, Kathryn Speer, Domenico Sergi, Chris I. R. Gill, Jelena Popović-Djordjević, Andrew McKune and Nenad Naumovski*

9750



Sulfonation metabolism in the gut microbiota is the main metabolic pathway of cholesterol in hypercholesterolemic mice

Guangtao Yan, Zehui Qin, Aitong Liu, Ziwei Huang, Xinhong Wang, Shanli Zhang, Xiaolin Xie, Xiaoqi Huang, Jiannan Chen, Yucui Li, Qingfeng Xie, Yuhong Liu, Ziren Su* and Jianhui Xie*

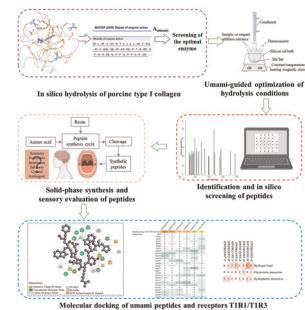


PAPERS

9766

High-throughput discovery of umami peptides from pork bone and elucidation of their molecular mechanism for umami taste perception

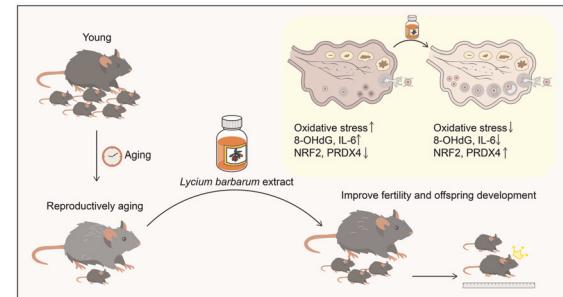
Yuxiang Gu, Yajie Niu, Jingcheng Zhang, Baoguo Sun, Zunying Liu, Xiangzhao Mao and Yuyu Zhang*



9779

Lycium barbarum berry extract improves female fertility against aging-related oxidative stress in the ovary

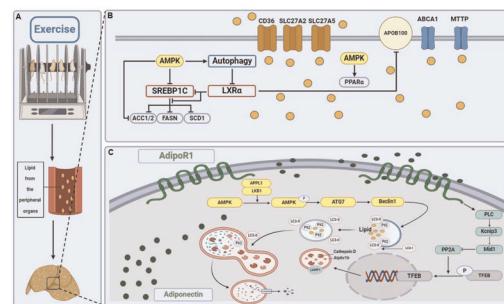
Chenyu Jiang, Ziyu Chen, Haoming Xiong, Xiao Yang, Weilin Liao, Geer Chen, Chen Huang, Guoyuan Zhu, Haijie Yu* and Lijuan Ma*



9796

Exercise-promoted adiponectin secretion activates autolysosomes to protect the liver of ApoE^{-/-} mice from a high-fat diet

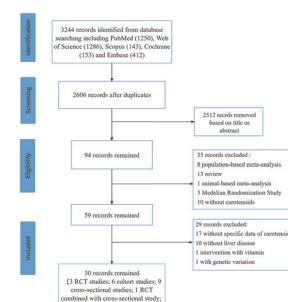
Weijia Wu, Ye Jian, Shunling Yuan, Xuan Li, Yingzhe Tang, Fanqi Zeng, Wenjing Liu, Zhe Zhao, Yirong Wang, Yiyang Wang and Wenfeng Liu*



9813

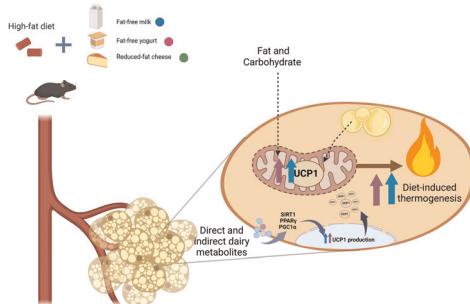
A systematic review of dietary and circulating carotenoids and liver disease

Bihuan Hu, Jing Sui, Ying Wang, Lihua Li, Daochen Gong, Zixuan Zhu, Wang Liao, Guiju Sun and Hui Xia*



PAPERS

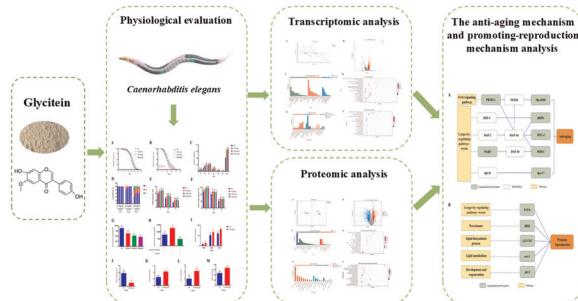
9833



Differential effects of milk, yogurt, and cheese on energy homeostasis and brown adipose tissue phenotype in high-fat diet-induced obese mice

Emad Yuzbashian, Dineli N. Fernando, Siegfried Ussar and Catherine B. Chan*

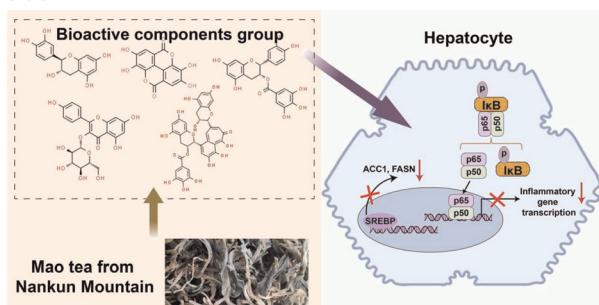
9849



Physiological evaluation and transcriptomic and proteomic analyses to reveal the anti-aging and reproduction-promoting mechanisms of glycine in *Caenorhabditis elegans*

Jianping Lei, Longbifei Cao, Yifeng Li, Qixin Kan, Lixin Yang, Weijie Dai, Guo Liu, Jiangyan Fu, Yunjiao Chen, Qingrong Huang, Chi-Tang Ho, Yong Cao* and Linfeng Wen*

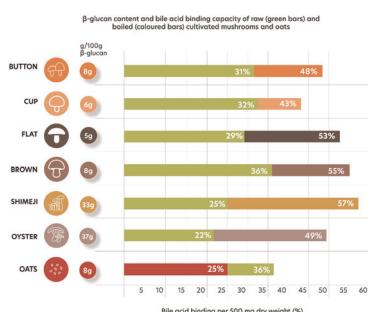
9863



Effects of Mao tea from Nankun Mountain on nonalcoholic fatty liver disease in mice

Weitao Zhang, Lianshun Feng, Peng Li, Aoyi Wang, Chunyan Dai, Yajuan Qi*, Junfeng Lu* and Xiaojun Xu*

9880



β-Glucan content and *in vitro* bile-acid binding capacity of *Agaricus bisporus* and *Pleurotus* spp.

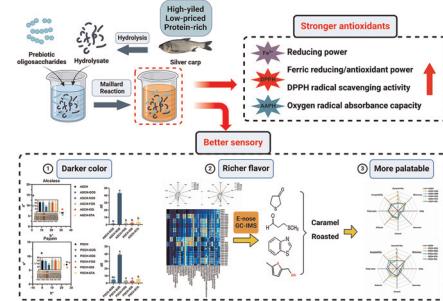
Damien Paul Belobrajdic,* Henri Brook, Genevieve James-Martin and Welma Stonehouse

PAPERS

9888

Sensory improvement and antioxidant enhancement in silver carp hydrolysate using prebiotic oligosaccharides: insights from the Maillard reaction

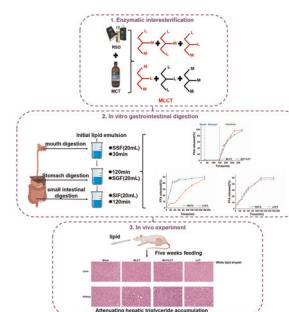
Peipei Dou, Kai Wang, Ning Ding, Yanyan Zheng, Hui Hong, Huigao Liu, Yuqing Tan* and Yongkang Luo*



9903

A novel synthesis method of medium- and long-chain triglyceride lipids from rubber seed oil catalyzed by enzymatic interesterification and its metabolism mechanism

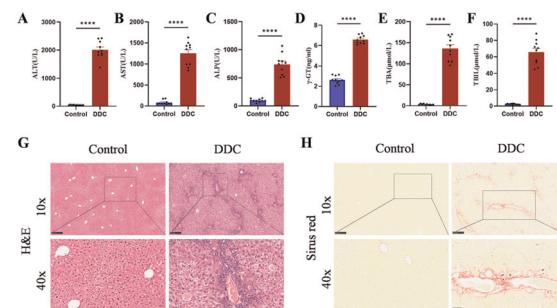
Jiahao Liu, Yinghui Zheng, Renwei Zhang, Yue Yu, Fang Wang, Li Deng* and Kai Wu*



9916

Arachidonic acid enhances hepatocyte bile acid uptake and alleviates cholestatic liver disease by upregulating OATP1 expression

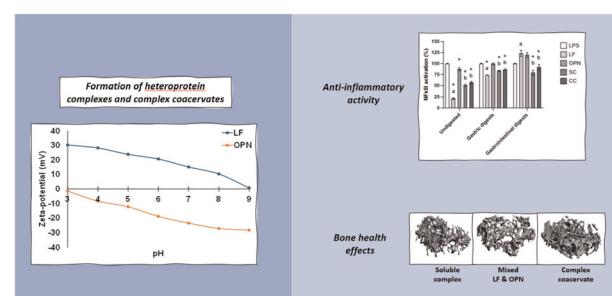
Yanlu Ma, Chen Zou, Yilan Yang, Miao Fang, Yufeng Guan, Jianqi Sun, Yueqiu Gao,* Zhi Shang* and Xin Zhang*



9928

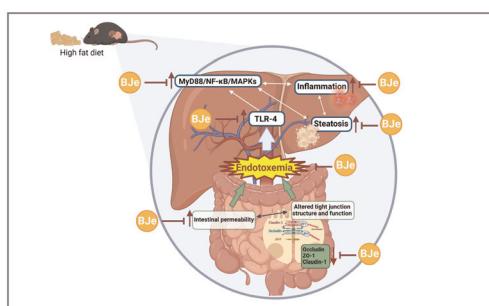
The impact of complexation or complex coacervation of lactoferrin and osteopontin on simulated infant gastrointestinal digestion, intestinal inflammation, and *in vivo* bone development

David A. Goulding,* Nicolas Bonnet, Marie-Noëlle Horcajada, Michael Baruchet, Flavien Bermont, Jonas Hauser, Simone Macrì, Edoardo Pisa, Chiara Nembrini, Karine Vidal, Nora M. O'Brien, James A. O'Mahony and Jonathan O'Regan



PAPERS

9941

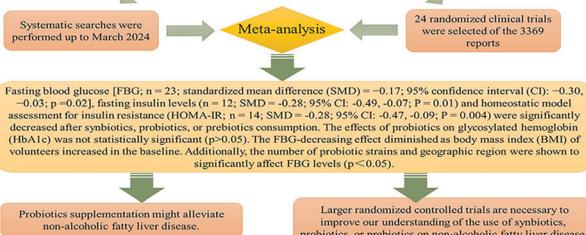


A flavonoid-rich extract of bergamot juice improves high-fat diet-induced intestinal permeability and associated hepatic damage in mice

Giovanni E. Lombardo, Michele Navarra* and Eleonora Cremonini*

9954

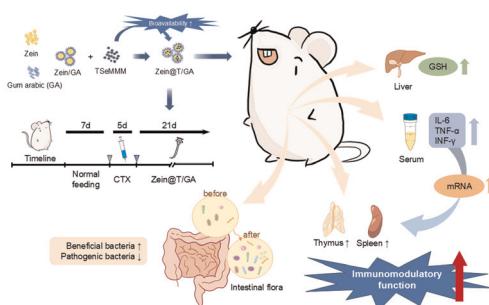
Do synbiotics, probiotics, or prebiotics supplementation affect fasting blood glucose in patients with non-alcoholic fatty liver disease?



Meta-analysis of randomized controlled trials of the effects of synbiotics, probiotics, or prebiotics in controlling glucose homeostasis in non-alcoholic fatty liver disease patients

Siqi Ding, Qing Hong, Yuanyue Yao, Minwen Gu, Jie Cui, Wenhui Li, Jian Zhang, Chengcheng Zhang, Jinchi Jiang* and Yonghong Hu

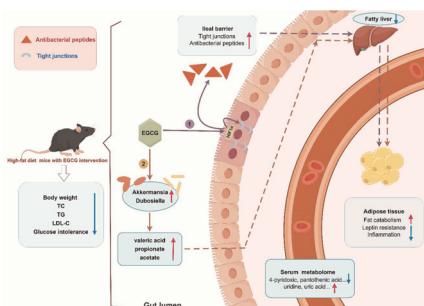
9972



Zein and gum arabic nanoparticles: potential enhancers of immunomodulatory functional activity of selenium-containing peptides

Wenqian Tang, Xieqi Luo, Fengjiao Fan, Xinyang Sun, Xiaoyi Jiang, Peng Li, Jian Ding, Qinlu Lin, Siming Zhao, Yunhui Cheng and Yong Fang*

9983



Stabilization of hypoxia-inducible factor 1 α and regulation of specific gut microbes by EGCG contribute to the alleviation of ileal barrier disorder and obesity

Hui Ma,* Yuanyifei Wang, Jiayu Wei, Xiaochi Wang, Hui Yang and Shuo Wang*

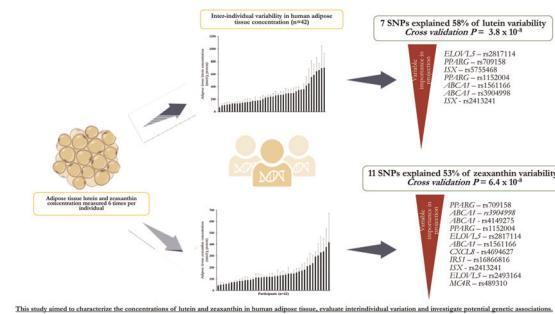


PAPERS

9995

Characterization of the interindividual variability of lutein and zeaxanthin concentrations in the adipose tissue of healthy male adults and identification of combinations of genetic variants associated with it

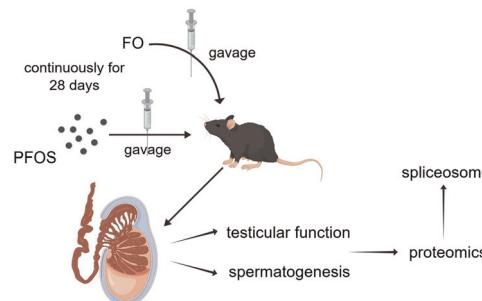
Mark Pretzel Zumaraga, Charles Desmarchelier, Beatrice Gleize, Marion Nowicki, Djaffar Ould-Ali and Patrick Borel*



10007

Flaxseed oil attenuates PFOS-induced testicular damage by regulating RNA alternative splicing

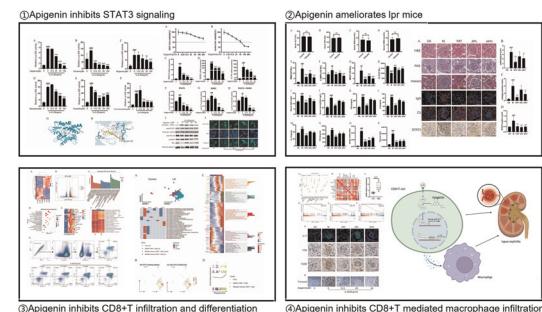
Jingyi Ren, Jiarui Liu, Jinshi Zuo, Zhenao Zhang, Dan Huang, Xuanyi Liu, Miaomiao Lu, Yadong Zhang, Yang Su and Yuxia Ma*



10020

Apigenin ameliorates lupus nephritis by inhibiting STAT3 signaling in CD8⁺ T cells

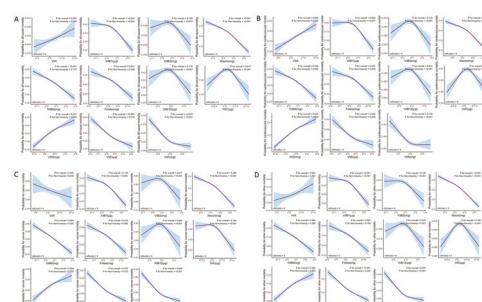
Jingqun Liu, Nianzhi Wang, Zhenyu Wu, Yihong Gan, Jinjun Ji, Zixuan Huang, Yu Du, Chengping Wen, Fengyuan Tian,* Yongsheng Fan* and Li Xu*



10037

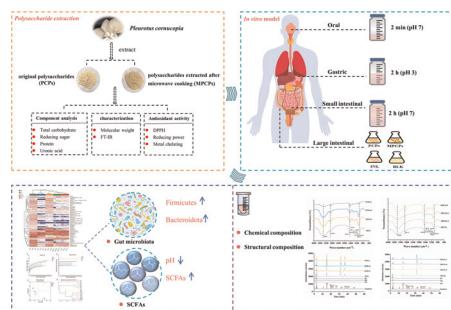
Comprehensive assessment on the association of dietary vitamins with all-cause and cardiovascular mortality among individuals with prediabetes: evidence from NHANES 1999–2018

Wenxuan Ren, Yang Li, Cihang Lu, Siying Liu, Ying Shao and Xiaoguang Shi*



PAPERS

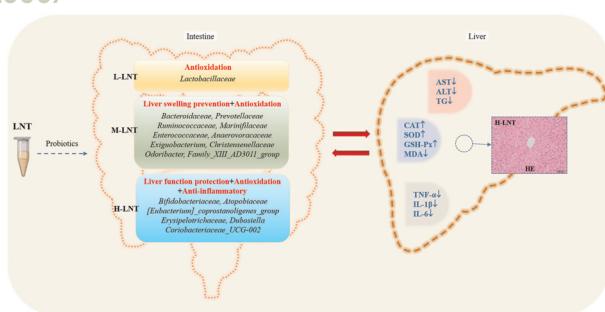
10051



***In vitro* simulated digestion and fermentation behaviors of polysaccharides from *Pleurotus cornucopiae* and their impact on the gut microbiota**

Chunping Jiang, Hongyu Li, Junqi Li, Guangying Zou, Cheng Li, Zhengfeng Fang, Bin Hu, Wenjuan Wu, Xiaolin Li, Zhen Zeng, Qingying Luo* and Yuntao Liu*

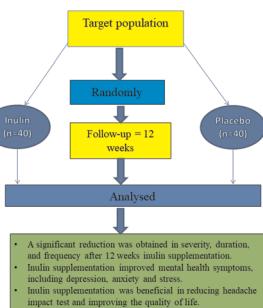
10067



The dose-dependent mechanism behind the protective effect of lentinan against acute alcoholic liver injury via proliferating intestinal probiotics

Fangjia Zhao, Min Li, Mingyue Luo, Meng Zhang, Yahong Yuan, Haili Niu* and Tianli Yue*

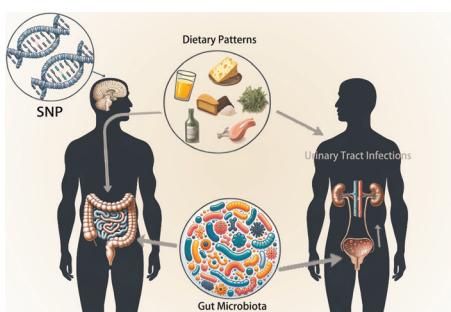
10088



A randomized, double-blind, placebo-controlled parallel trial to test the effect of inulin supplementation on migraine headache characteristics, quality of life and mental health symptoms in women with migraine

Mahdi Vajdi, Fariborz Khorvash and Gholamreza Askari*

10099



Dietary influences on urinary tract infections: unraveling the gut microbiota connection

Yifan Du, Xiuyuan Sui, Yang Bai, Zhiyuan Shi, Bin Liu, Zeyuan Zheng, Zhengying Zhang, Yue Zhao, Jiqing Wang, Qian Zhang, Yuanhang Zhu, Qing Liu, Mingshan Wang, Huimin Sun* and Chen Shao*

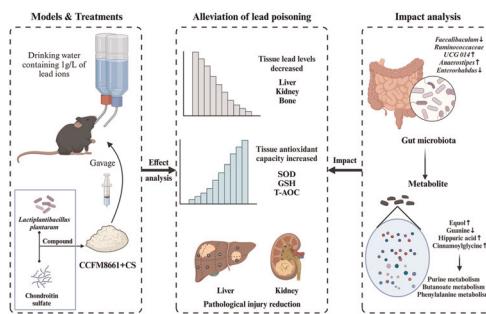


PAPERS

10110

Lead toxicity mitigation effect of a *Lactiplantibacillus plantarum*–chondroitin sulfate complex revealed by microbiome and metabolomic analyses

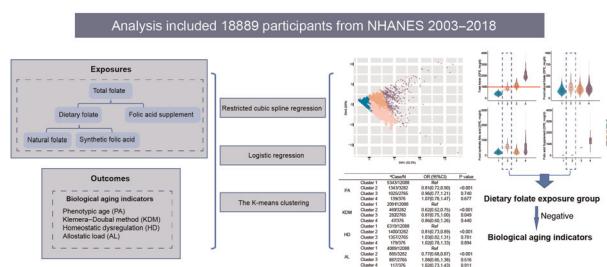
Feng Chen, Jiani Pan, Leilei Yu,* Chuan Zhang, Jianxin Zhao, Fengwei Tian, Qixiao Zhai and Wei Chen



10121

Relationship of dietary natural folate and synthetic folic acid co-exposure patterns with biological aging: findings from NHANES 2003–2018

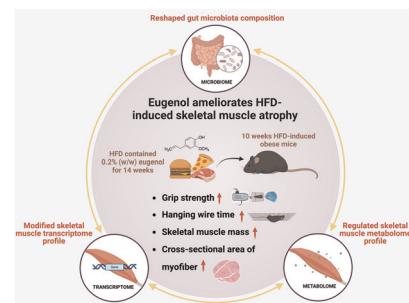
Jia Zhang, Xuan-Yang Wang, Shuo Yang, Xun Xie, Si-Jia Pan, Xiao-Qing Xu and Ying Li*



10136

Dietary eugenol ameliorates long-term high-fat diet-induced skeletal muscle atrophy: mechanistic insights from integrated multi-omics

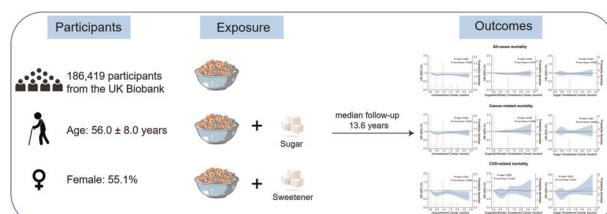
Mengjie Li, Jingya Guo, Yige Qin, Yujie Lao, Seong-Gook Kang, Kunlun Huang and Tao Tong*



10151

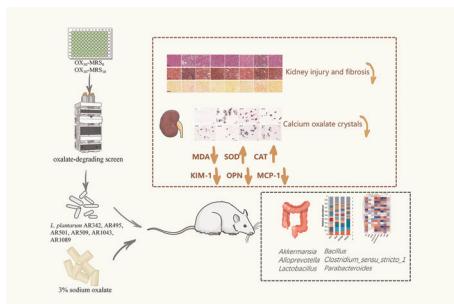
Association of unsweetened and sweetened cereal consumption with all-cause and cause-specific mortality: a large prospective population-based cohort study

Lei Zhang, Chunhui Ma, Hao Huang, Dapeng Li, Ding Zhang, Tianqi Wu, Minjie Chu* and Fulan Hu*



PAPERS

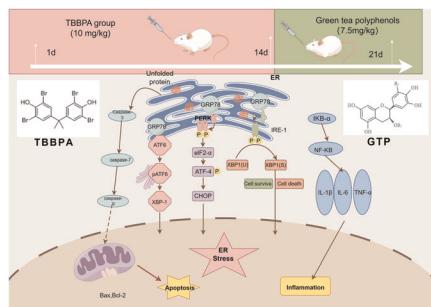
10163



Screening of oxalate-degrading probiotics and preventive effect of *Lactiplantibacillus plantarum* AR1089 on kidney stones

Mingyue Xu, Yugang Qin, Yongjun Xia, Guangqiang Wang, Zhiqiang Xiong, Xin Song and Lianzhong Ai*

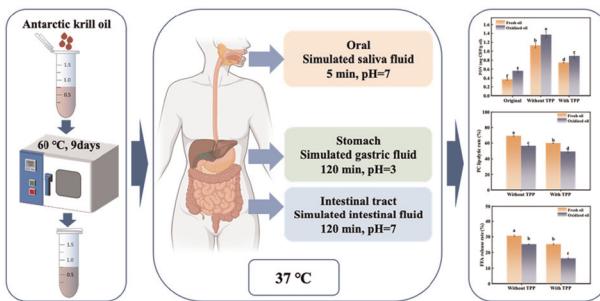
10179



Green tea polyphenols alleviate TBBPA-induced gastric inflammation and apoptosis by modulating the ROS-PERK/IRE-1/ATF6 pathway in mouse models

Jie Yang, Yuan Geng, Bing Zhao, Tianjing Liu, Ji-long Luo* and Xue-jiao Gao*

10190



Influence of lipid oxidation on the digestive efficiency of Antarctic krill oil: insights from a simulated gastrointestinal digestion model

Ruiying Wang, Xin Sun, Guimei Dong, Chao Guo, Fawen Yin, Huilin Liu, Liang Song and Dayong Zhou*

CORRECTION

10200

Correction: Physiological evaluation and transcriptomic and proteomic analyses to reveal the anti-aging and reproduction-promoting mechanisms of glycitein in *Caenorhabditis elegans*

Jianping Lei, Longbipei Cao, Yifeng Li, Qixin Kan, Lixin Yang, Weijie Dai, Guo Liu, Jiangyan Fu, Yunjiao Chen, Qingrong Huang, Chi-Tang Ho, Yong Cao* and Linfeng Wen*

