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Food & Function

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Inside cover
See María Eva González-Trujano, Marcos Soto-Hernández *et al.*, pp. 4773–4784.

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Olive oil intake and cardiovascular disease, cancer, and all-cause mortality: a systematic review and dose–response meta-analysis of prospective cohort studies

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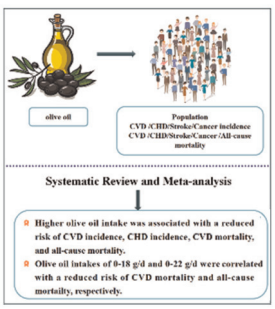
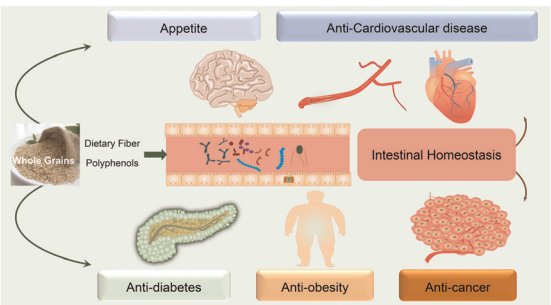


4682

Dietary fiber and polyphenols from whole grains: effects on the gut and health improvements

Xun Wei,* Jianhui Wang, Yaxuan Wang, Yilin Zhao, Yan Long, Bin Tan, Qing X. Li, Zhenying Dong* and Xiangyuan Wan*



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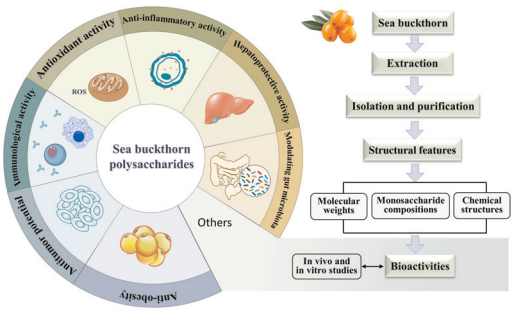
REVIEWS

4703

Medicinal and edible polysaccharides from ancient plants: extraction, isolation, purification, structure, biological activity and market trends of sea buckthorn polysaccharides

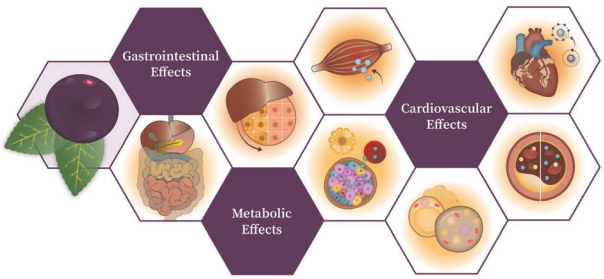
Xinmei Xu, Xianfeng Liu, Shufu Yu, Ting Wang, Rui Li, Yi Zhang* and Yue Liu*



4724

Physiologic effects of the maqui berry (*Aristotelia chilensis*): a focus on metabolic homeostasis

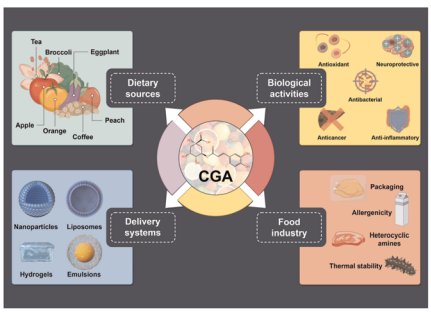
Alexandre Martchenko, Alexandra Papaelias and Steffen-Sebastian Bolz*



4741

Unleashing the power of chlorogenic acid: exploring its potential in nutrition delivery and the food industry

Shumeng Hu, Runan Zhao, Xuesong Chi, Tao Chen, Yangjing Li, Yu Xu, Beiwei Zhu* and Jiangning Hu*



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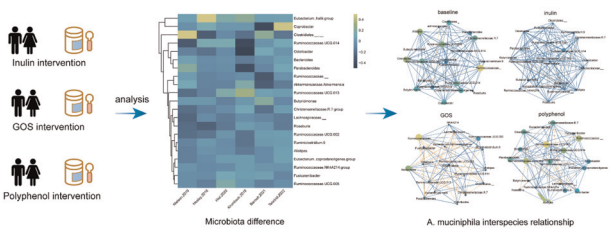
Effect of inulin, galacto-oligosaccharides, and polyphenols on the gut microbiota, with a focus on *Akkermansia muciniphila*

Ruocen Tian, Leilei Yu, Fengwei Tian, Jianxin Zhao, Wei Chen and Qixiao Zhai*



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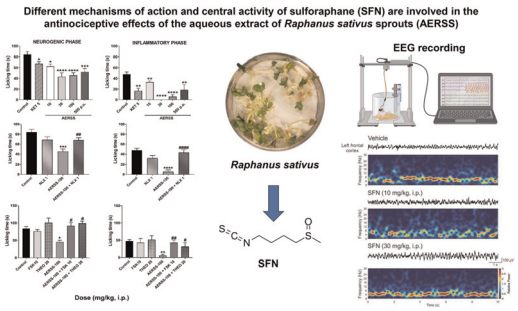
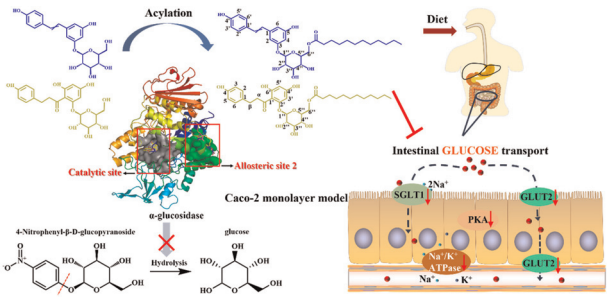


Antinociceptive effects of *Raphanus sativus* sprouts involve the opioid and 5-HT$_{1A}$ serotonin receptors, cAMP/cGMP pathways, and the central activity of sulforaphane

Laura Yunuen Hernández-Sánchez, María Eva González-Trujano,* Diego A. Moreno, David Martínez-Vargas, Heike Vibrans, Alberto Hernandez-Leon, Alejandro Dorazco-González, Francisco Pellicer and Marcos Soto-Hernández*

4785



Inhibition of α-glucosidase activity and intestinal glucose transport to assess the *in vivo* anti-hyperglycemic potential of dodecyl-acylated phlorizin and polydatin derivatives

Zhengming Xu, Kseniya Hileuskaya, Aliaksandr Kraskouski, Yujiao Yang, Zhe Huang and Zhengang Zhao*

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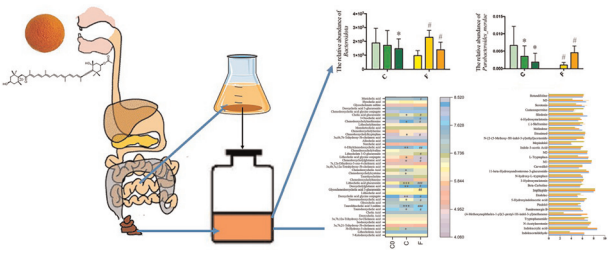
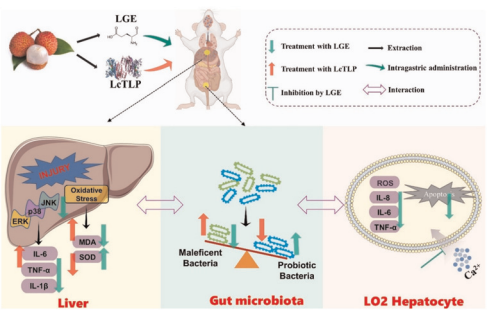


Fucoxanthin restructures the gut microbiota and metabolic functions of non-obese individuals in an *in vitro* fermentation model

Bingbing Guo, Weihao Zhang, Yonghui Zhou, Jingyi Zhang, Chengchu Zeng, Peipei Sun and Bin Liu*

4818



Litchi pulp-derived gamma-aminobutyric acid (GABA) extract counteracts liver inflammation induced by litchi thaumatin-like protein

Yao Wang, Dongwei Wang, Kai Wang, Shaoquan Weng, Rongbo Zheng, Xuwei Liu, Lei Zhao, Chuyuan Li* and Zhuoyan Hu*

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PAPERS

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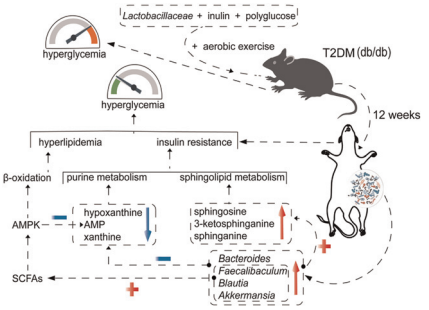
The synergism of *Lactobacillaceae*, inulin, polyglucose, and aerobic exercise ameliorates hyperglycemia by modulating the gut microbiota community and the metabolic profiles in db/db mice

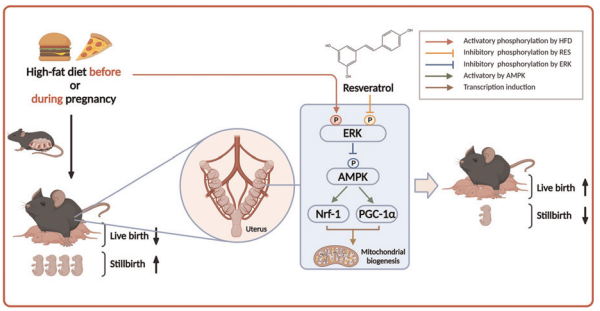
Peifan Li, Tong Tong, Xinyu Shao, Yan Han, Michael Zhang, Yongli Li, Xue Lv, Hao Li* and Zuming Li*



4852

The role of uterus mitochondrial function in high-fat diet-related adverse pregnancy outcomes and protection by resveratrol

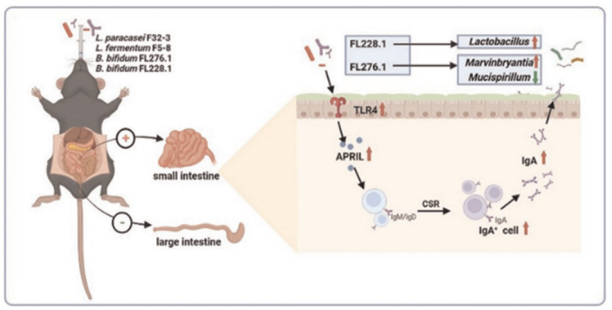
Xizi Yang, Ruizhi Hu, Liping Yao, Wentao Zhang, Mingkun Shi, Jiatai Gong, Xupeng Yuan, Yanli Li, Jiahao Yan, Ying Wang, Qianjin Zhang, Ziyu He, De-Xing Hou, Zhiyong Fan, Hongfu Zhang, Liang Chen, Xi He, Jianhua He* and Shusong Wu*



4862

Probiotics induce intestinal IgA secretion in weanling mice potentially through promoting intestinal APRIL expression and modulating the gut microbiota composition

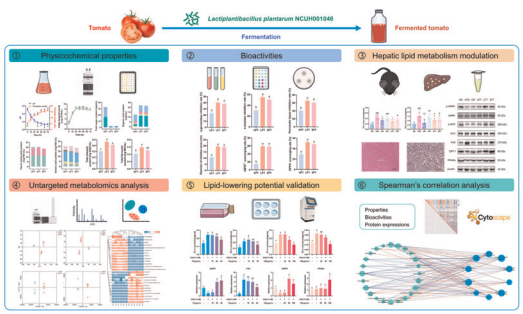
Maozhen Zhao, Xi Liang, Yang Meng, Haiyan Lu, Kai Lin, Pimin Gong, Tongjie Liu, Huaxi Yi, Jiancun Pan, Yongjiu Zhang, Zhe Zhang* and Lanwei Zhang*



4874

Probiotic-fermented tomato with hepatic lipid metabolism modulation effects: analysis of physicochemical properties, bioactivities, and potential bioactive compounds

Benliang Wei, Wendi Zheng, Zhen Peng, Muyan Xiao, Tao Huang, Mingyong Xie and Tao Xiong*



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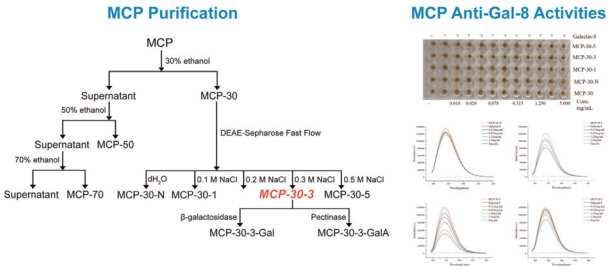

Breaking barriers: How modified citrus pectin inhibits galectin-8

Ming Shuai, Yiqing Li, Fanqi Guan, Guixia Fu, Chengxin Sun, Qianqian Ren, Li Wang and Tao Zhang*

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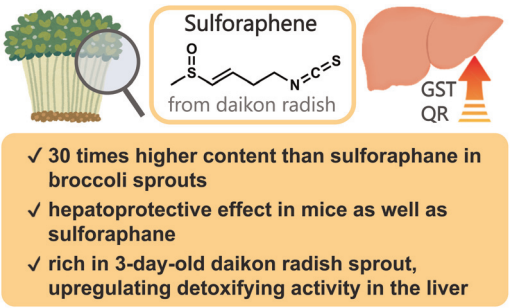
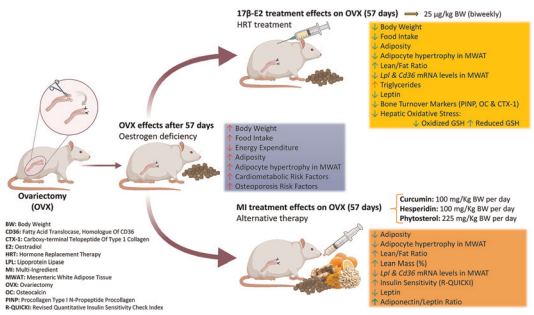


Comparative analysis of isothiocyanates in eight cruciferous vegetables and evaluation of the hepatoprotective effects of 4-(methylsulfinyl)-3-butenyl isothiocyanate (sulforaphene) from daikon radish (*Raphanus sativus* L.) sprouts

Yusuke Yamaguchi, Mikio Sugiki, Motomi Shimizu, Kazuki Ogawa and Hitomi Kumagai*

4905



Combined supplementation with hesperidin, phytosterols and curcumin decreases adiposity and improves metabolic health in ovariectomized rats

Julio Baudin, Julia Hernandez-Baixauli, Sergio Quesada-Vázquez, Francisca Mulero, Francesc Puiggròs, Lluís Arola* and Antoni Caimari*

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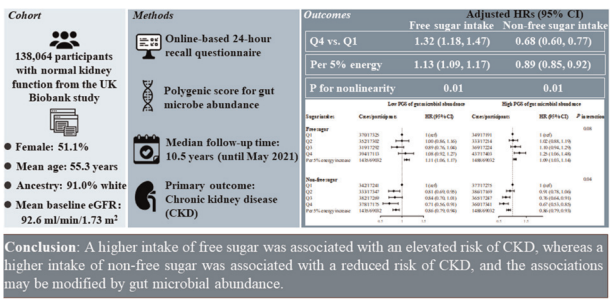

Sugar types, genetic predictors of the gut microbiome, and the risk of chronic kidney disease: a prospective cohort study

Gang Zheng, Yixiao Zhang, Fengrong Ou, Qing Chang, Chao Ji, Honghao Yang, Liangkai Chen, Yang Xia* and Yuhong Zhao*

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PAPERS

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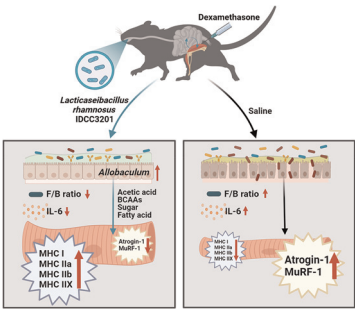
Dietary supplementation with *Lacticaseibacillus rhamnosus* IDCC3201 alleviates sarcopenia by modulating the gut microbiota and metabolites in dexamethasone-induced models

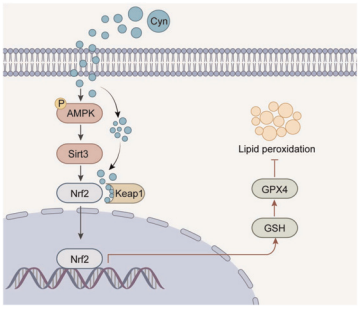
Minkyoung Kang, Minji Kang, Jiseon Yoo, Juyeon Lee, Sujeong Lee, Bohyun Yun, Minho Song, Jun-Mo Kim, Hyung Wook Kim, Jungwoo Yang, Younghoon Kim* and Sangnam Oh*



4954

Cynarin alleviates acetaminophen-induced acute liver injury through the activation of Keap1/Nrf2-mediated lipid peroxidation defense *via* the AMPK/SIRT3 signaling pathway

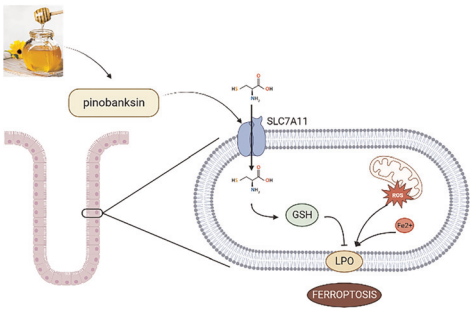
Luying Zhao, Xiangting Zhang, Zhuofeng Chen, Yuning Lai, Jun Xu, Ruoru Zhou, Peipei Ma, Weimin Cai, Yuan Zeng, Xiao Wu, Huiya Ying* and Fujun Yu*



4970

Pinobanksin ameliorated DSS-induced acute colitis mainly through modulation of SLC7A11/glutathione-mediated intestinal epithelial ferroptosis

Hailian Bi, Shibin Guo, Yan Wang, Zhijie Liu, Guokai Wu, Xiaokui Huo,* Li Guo, Huishu Guo and Yongjian Xiong*



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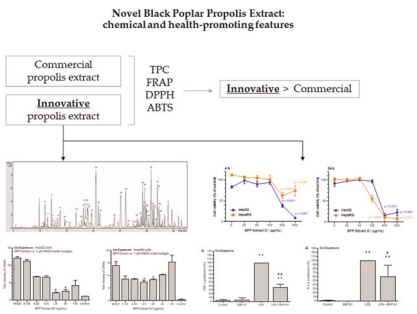
A novel black poplar propolis extract with promising health-promoting properties: focus on its chemical composition, antioxidant, anti-inflammatory, and anti-genotoxic activities

Mattia Acito, Ina Varfaj, Virginia Brighenti, Emine Ceren Cengiz, Tommaso Rondini, Cristina Fatigoni, Carla Russo, Donatella Pietrella, Federica Pellati, Desirée Bartolini, Roccaldo Sardella, Massimo Moretti* and Milena Villarini*



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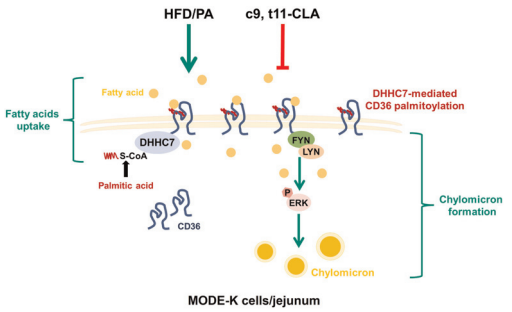
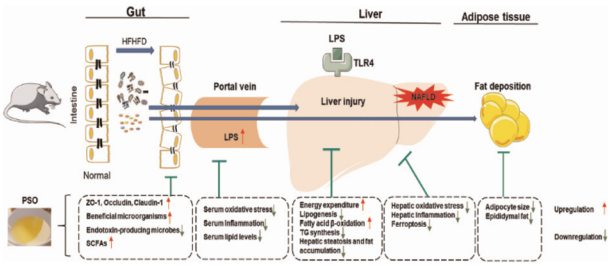


Conjugated linoleic acid (CLA) reduces intestinal fatty acid uptake and chylomicron formation in HFD-fed mice associated with the inhibition of DHHC7-mediated CD36 palmitoylation and the downstream ERK pathway

Fenglin Zhang, Yiming Fu, Junfeng Wang, Limin Lang, Shuyi Liang, Shilei Zhang, Lina Wang, Ping Gao, Gang Shu, Canjun Zhu, Ruifan Wu, Qingyan Jiang and Songbo Wang*

5012



Punicic acid ameliorates obesity-related hyperlipidemia and fatty liver in mice *via* regulation of intestinal flora and lipopolysaccharide-related signaling pathways

Liping Chen, Yifan Lei, Changxin Lu, Dingyang Liu, Wenyu Ma, Hengqian Lu and Yongzhong Wang*

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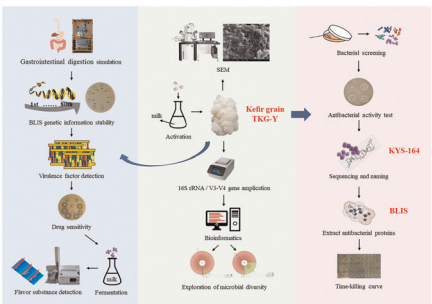

The composition of Tibetan kefir grain TKG-Y and the antibacterial potential and milk fermentation ability of *S. warneri* KYS-164 screened from TKG-Y

Xing Guo, Yining He, Yifan Cheng, Jingyimei Liang, Pandi Xu, Wenwen He, Jiayin Che, Jiexing Men, Yahong Yuan and Tianli Yue*

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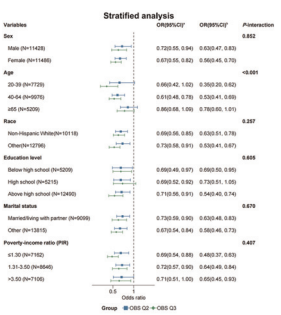

The association between oxidative balance score and frailty in adults across a wide age spectrum: NHANES 2007–2018

Yan Liu, Yu Han, Yuqi Gao, Nan Yao, Yuxiang Wang, Fengdan Wang, Zibo Wu, Yibo Dong, Sizhe Wang and Bo Li*

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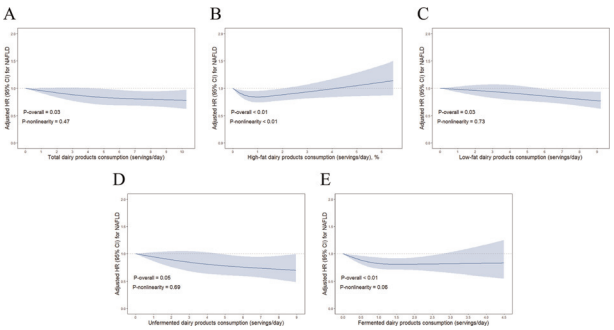
Intake of the different types of dairy products, genetic predisposition, and the risks of nonalcoholic fatty liver disease and cirrhosis: a prospective cohort study

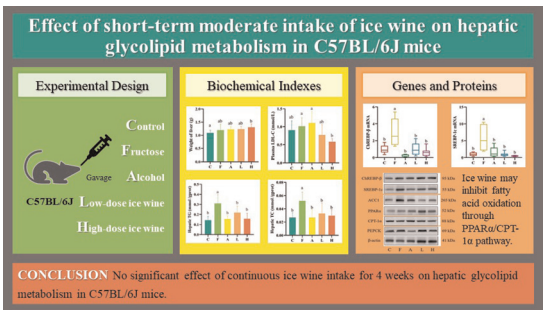
Hanzhang Wu, Shiwen Li, Liangkai Chen, Yang Xia* and Xiao Tan*



5063

Effect of short-term moderate intake of ice wine on hepatic glycolipid metabolism in C57BL/6J mice

Xinyuan Ma, Yang Liu, Fuliang Han,* Tiantian Cheng, Kaixian Wang and Yiwen Xu



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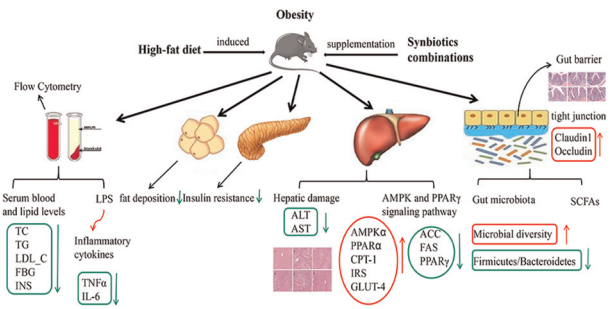
Effect of L-arabinose and lactulose combined with *Lactobacillus plantarum* on obesity induced by a high-fat diet in mice

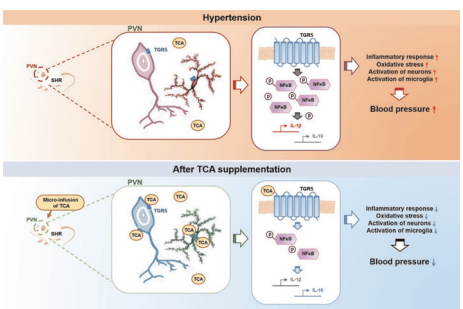
Qiong Wang,* Jialu Xiong, Yalun He, Juncheng He, Miaomiao Cai, Zexian Luo, Tongcun Zhang* and Xiang Zhou*



5088

Taurocholic acid ameliorates hypertension through the activation of TGR5 in the hypothalamic paraventricular nucleus

Ying Li, Ya-Nan Gao, Ying-Bao Zhu, Wen-Fang Lu, Jia-Yue Yu, Yuan-Yuan Dong, Meng-Yue Xu, Bo Peng, Jun-Zhe Wu, Qing Su, Juan Bai, Xiao-Lian Shi, Yu-Ming Kang, Hong-Bao Li and Meng-Lu Xu*



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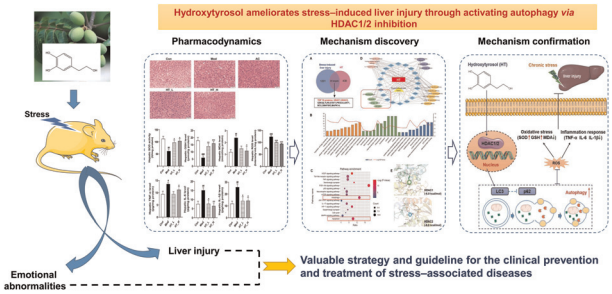
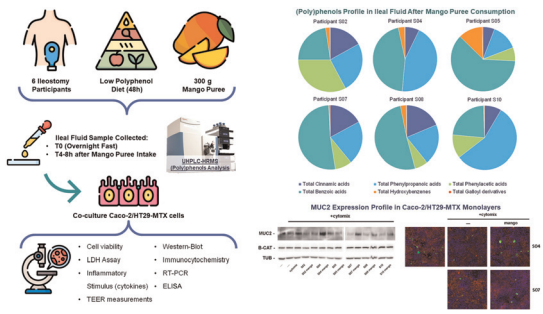


Hydroxytyrosol ameliorates stress-induced liver injury through activating autophagy *via* HDAC1/2 inhibition

Li Fan, Lijuan Zhao, Yangbo Zhu, Lin Li, Xueping Yang, Ping Ma, Jian Liu, Qingwei Zhao and Xiaobo Li*

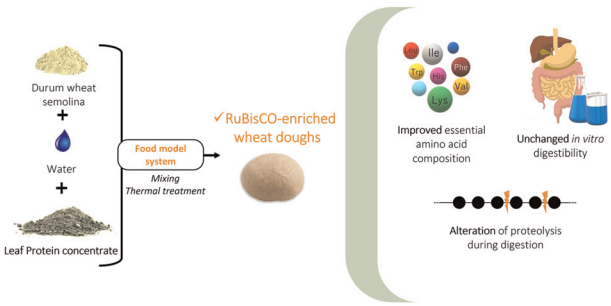
5118



Colon-available mango (poly)phenols exhibit mitigating effects on the intestinal barrier function in human intestinal cell monolayers under inflammatory conditions

Gema Pereira-Caro,* Salud Cáceres-Jiménez, Alicia Moreno-Ortega, Sara Dobani, Kirsty Pourshahidi, Chris I. R. Gill, Pedro Mena, Daniele Del Rio, José Manuel Moreno-Rojas, Giuseppe Taurino, Ovidio Bussolati, Tahani M. Almutairi, Alan Crozier and Massimiliano G. Bianchi*

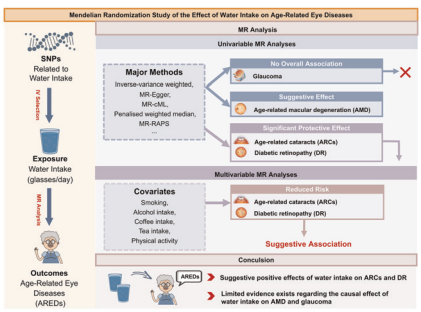
5132



In vitro protein digestibility of RuBisCO-enriched wheat dough: a comparative study with pea and gluten proteins

Maude Ducrocq, Adeline Boire, Claire Bourlieu-Lacanal, Cécile Barron, Agnieszka Nawrocka, Marie-Hélène Morel, Marc Anton and Valérie Micard*

5147



The protective role of water intake in age-related eye diseases: insights from a Mendelian randomization study

Yuze Mi, Qinnan Zhu, Xinni Zheng and Minghui Wan*

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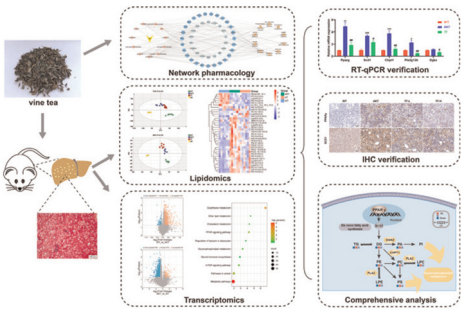
PAPERS

5158

Integration of network pharmacology, lipidomics, and transcriptomics analysis to reveal the mechanisms underlying the amelioration of AKT-induced nonalcoholic fatty liver disease by total flavonoids in vine tea

Siyu Du, Xin Chen, Rumeng Ren, Li Li, Baohui Zhang, Qi Wang, Yan Meng, Zhenpeng Qiu, Guihong Wang,* Guohua Zheng* and Junjie Hu*



CORRECTIONS

5175

Correction: Nutrikinetics and urinary excretion of phenolic compounds after a 16-week supplementation with a flavanone-rich ingredient

Jananee Muralidharan, Cindy Romain, Letizia Bresciani, Pedro Mena, Donato Angelino, Daniele Del Rio, Linda H. Chung, Pedro E. Alcaraz and Julien Cases*

5176

Correction: Therapeutic effects of a walnut-derived peptide on NLRP3 inflammasome activation, synaptic plasticity, and cognitive dysfunction in T2DM mice

Yanru Li, Qiao Dang, Yue Shen, Linxin Guo, Chunlei Liu, Dan Wu, Li Fang, Yue Leng* and Weihong Min*

5178

Correction: Pickering emulsions stabilized with a spirulina protein–chitosan complex for astaxanthin delivery

Ronggang Liu, Yu Li, Chengfu Zhou and Mingqian Tan*