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See Isabel Mafra *et al.*, pp. 493–502.

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Inside cover
See Lingjun Ma, Junfu Ji *et al.*, pp. 503–515.

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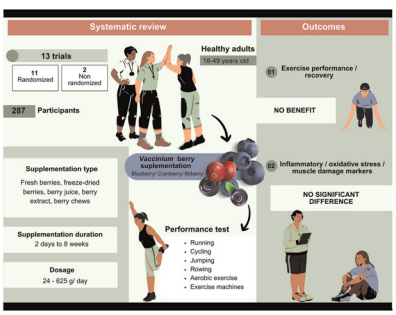
Effects of *Vaccinium* berries (blueberries, cranberries and bilberries) on oxidative stress, inflammation, exercise performance, and recovery – a systematic review

Arnold Prieto Martínez, Michelle Coutiño Diaz, Lizette Anaya Romero, Ali Ali Redha,* Reza Zare, Sthefano Ventura Hernandez, Konstantinos Prokopidis and Tom Clifford



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Irene Andressa,* Glauce Kelly Silva do Nascimento, Tatiane Monteiro dos Santos, Rosane da Silva Rodrigues, Daniela de Oliveira Teotônio, Luz María Paucar-Menacho, Vivian Machado Benassi and Marcio Schmiele

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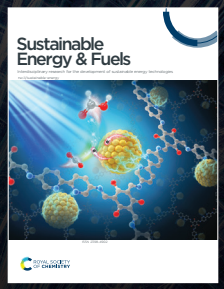

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REVIEWS

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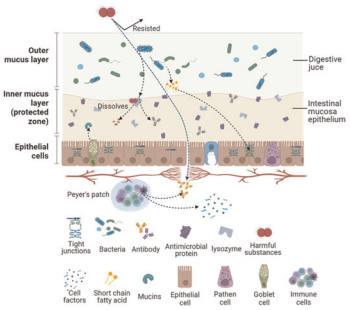
A critical review on intestinal mucosal barrier protection effects of dietary polysaccharides

Weiqi Yan, Jinhai Luo, Zhiling Yu and Baojun Xu*



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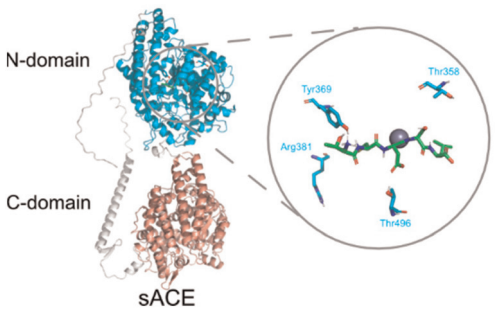
Exploiting *Locusta migratoria* as a source of bioactive peptides with anti-fibrosis properties using an *in silico* approach

Carla S. S. Teixeira, Rita Biltes, Caterina Villa, Sérgio F. Sousa, Joana Costa, Isabel M. P. L. V. O. Ferreira and Isabel Mafra*



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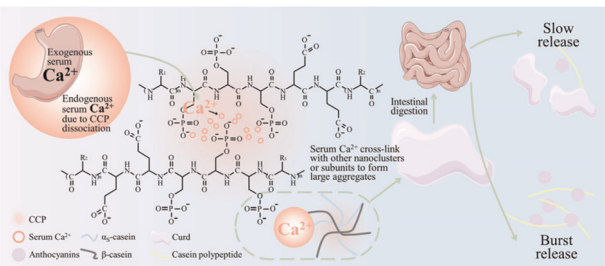
The aggregation of casein micelles induced by Ca^{2+} during *in vitro* digestion: effects on the release of loaded anthocyanins

Jinbo Ren, Minjie Liao, Kaixin Li, Fang Chen, Xiaosong Hu, Lingjun Ma* and Junfu Ji*



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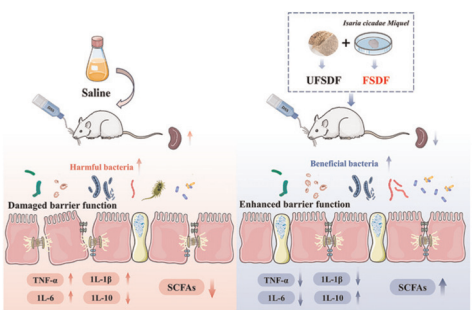
Soluble dietary fibers from solid-state fermentation of wheat bran by the fungus *Cordyceps cicadae* and their effects on colitis mice

Hua Wang, Menglin Li, Furong Jiao, Wenxiu Ge, Rui Liu,* Zijian Zhi,* Tao Wu, Wenjie Sui and Min Zhang



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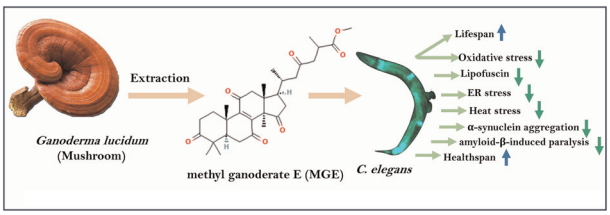

Ganoderma lucidum* methyl ganoderate E extends lifespan and modulates aging-related indicators in *Caenorhabditis elegans

Nkwachukwu Oziamara Okoro, Arome Solomon Odiba, Junjie Han, Patience Ogoamaka Osadebe, Edwin Ogechukwu Omeje, Guiyan Liao, Yichen Liu, Cheng Jin, Wenxia Fang,* Hongwei Liu* and Bin Wang*

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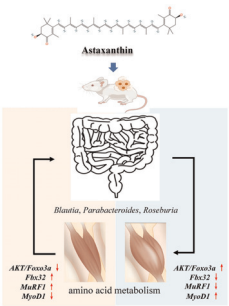

Astaxanthin slows down skeletal muscle atrophy in H22 tumor-bearing mice during sorafenib treatment by modulating the gut microbiota

Pengfei Ren, Han Yue, Qingjuan Tang,* Yuming Wang and Changhu Xue

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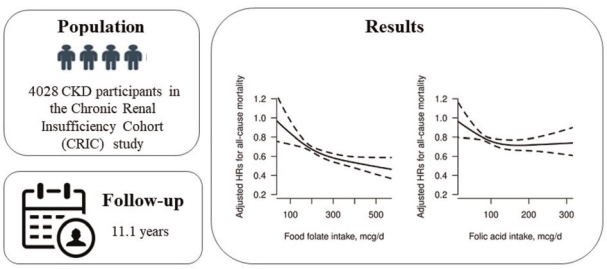

Relationship of dietary intake of food folate and synthetic folic acid intake from fortified foods with all-cause mortality in individuals with chronic kidney disease

Mengyi Liu, Ziliang Ye, Sisi Yang, Yanjun Zhang, Yuanyuan Zhang, Panpan He, Chun Zhou, Fan Fan Hou* and Xianhui Qin*

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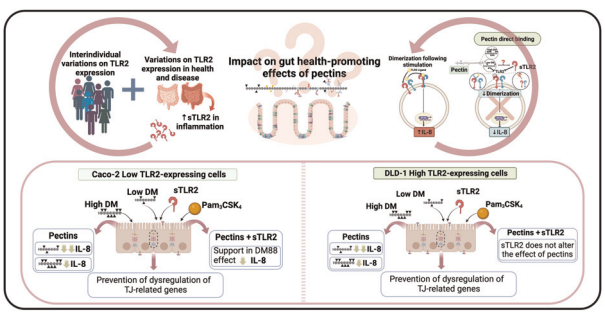

Effects of pectin's degree of methyl esterification on TLR2-mediated IL-8 secretion and tight junction gene expression in intestinal epithelial cells: influence of soluble TLR2

Naschla Gasaly,* Xin Tang, Xiaochen Chen, Sofía Bellalta, Marcela A. Hermoso and Paul de Vos

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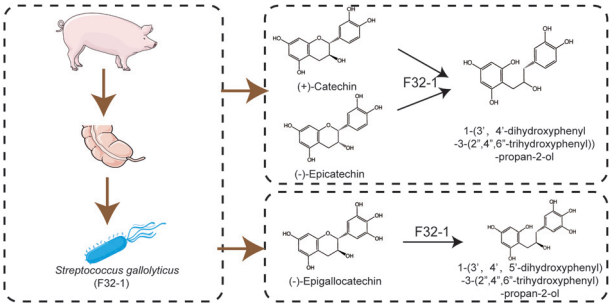
A newly isolated intestinal bacterium involved in the C-ring cleavage of flavan-3-ol monomers and the antioxidant activity of the metabolites

Li Wang, Ruonan Liu, Fangfang Yan, Wanbing Chen, Mo Zhang, Qun Lu, Bijun Huang and Rui Liu*



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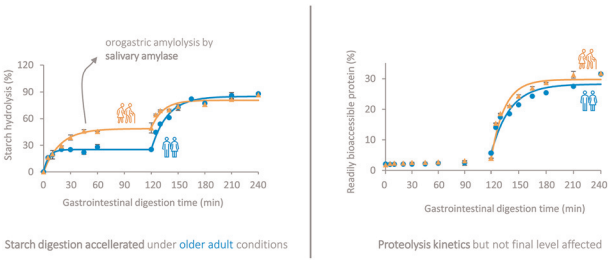
From static to semi-dynamic *in vitro* digestion conditions relevant for the older population: starch and protein digestion of cooked lentils

Dorine Duijsens, Sarah H. E. Verkempinck, Emma Somers, Marc E. G. Hendrickx and Tara Grauwet*



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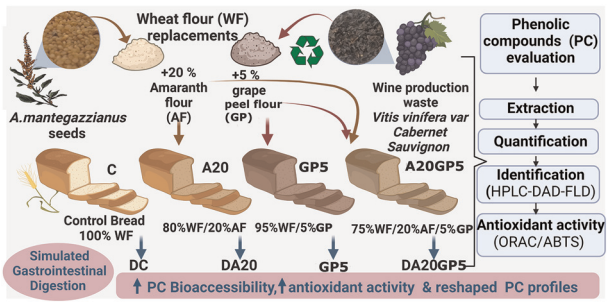
Exploration of grape pomace peels and amaranth flours as functional ingredients in the elaboration of breads: phenolic composition, bioaccessibility, and antioxidant activity

Mariela Rodríguez, Federico Bianchi, Barbara Simonato, Corrado Rizzi, Ariel Fontana and Valeria A. Tironi*



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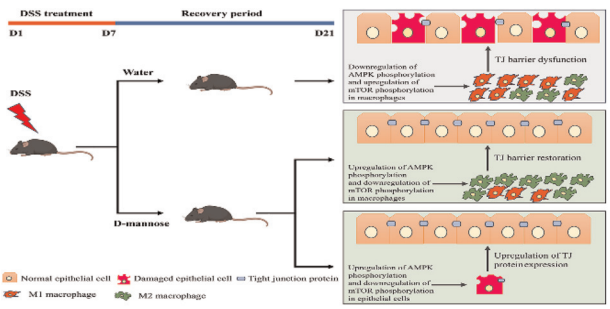
D-Mannose promotes recovery from experimental colitis by inducing AMPK phosphorylation to stimulate epithelial repair

Haojie Zhang, Xue Zhao, Yifei Gao, Yao Shi, Lina Wei, Jingxin Li, Chuanyong Liu* and Xuelian Ma*



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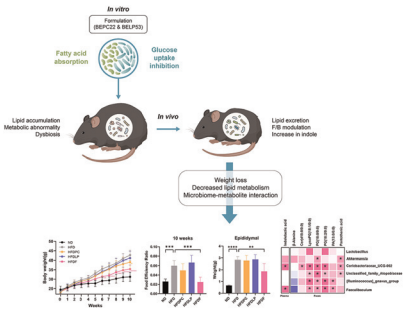

Combination of *Lacticaseibacillus paracasei* BEPC22 and *Lactiplantibacillus plantarum* BELP53 attenuates fat accumulation and alters the metabolome and gut microbiota in mice with high-fat diet-induced obesity

Na-Rae Lee, Tae-Jun Kwon, Eui-Chun Chung, Jaewoong Bae, Song-Hui Soung, Hyun-Ji Tak, Jun-Young Choi, Young-Eun Lee, Nak Won Hwang, Jong Seo Lee, Kum-Joo Shin, Choong Hwan Lee, KilSoo Kim* and Seokjin Kim*

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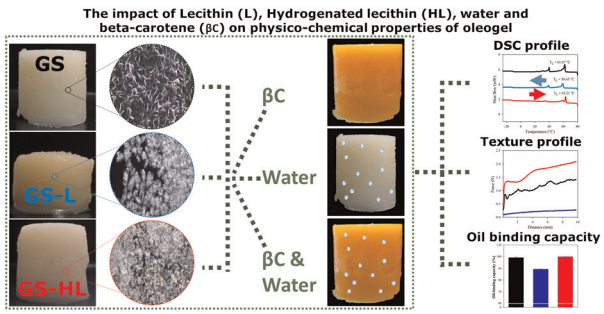

Modulating edible-oleogels physical and functional characteristics by controlling their microstructure

Mohsen Ramezani, Laura Salvia-Trujillo and Olga Martín-Belloso*

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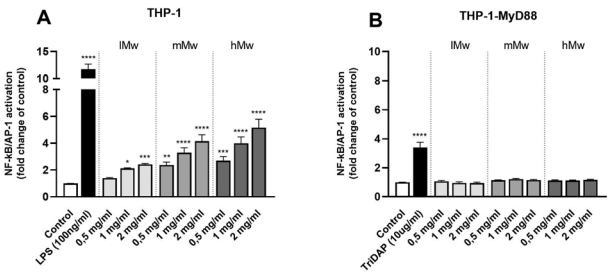

Exopolysaccharide β-(2,6)-levan-type fructans have a molecular-weight-dependent modulatory effect on Toll-like receptor signalling

Renate Akkerman,* Marjolein M. P. Oerlemans, Michela Ferrari, Cynthia Fernández-Lainez, Bart J. de Haan, Marijke M. Faas, Marthe T. C. Walvoort and Paul de Vos

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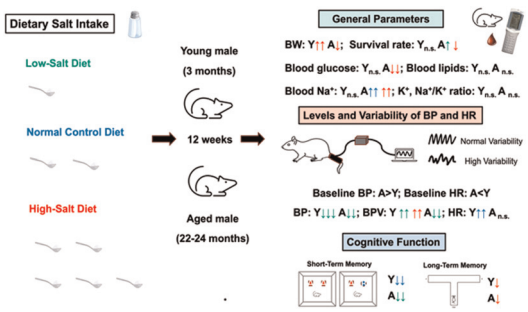

Age differences in the impact of dietary salt on metabolism, blood pressure and cognitive function in male rats

Fen Sun,* Jin-Yang Zhang, Lu-Ping Zhao, Qi Jin, Chao Jin, Qiu-Xiang Wang, Jun-Tao Xu and Meng-Jia Yin

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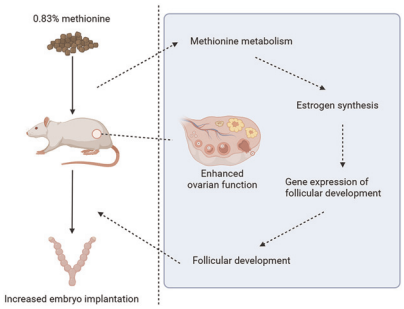
Dietary methionine supplementation during the estrous cycle improves follicular development and estrogen synthesis in rats

Guangxin Yang, Siyu Li, Shuang Cai, Junyan Zhou, Qianhong Ye, Shihai Zhang, Fang Chen, Fenglai Wang* and Xiangfang Zeng*



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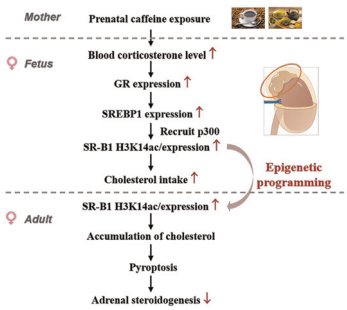
The high-expression programming of SR-B1 mediates adrenal dysfunction in female offspring induced by prenatal caffeine exposure and its cholesterol accumulation mechanism

Xuan Xia, Yawen Chen, Hui Qu, Jiangang Cao and Hui Wang*



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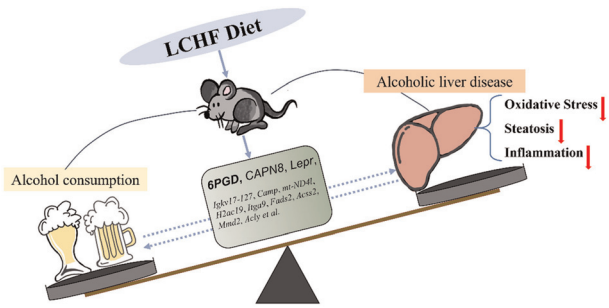
Preventive effect of low-carbohydrate high-fat dietary pattern on liver disease caused by alcohol consumption *via* a 6pgd-involved mechanism in mice

Jiannan Qiu, Fan Dong, Hui Zhuge, Qiang Han, Jiaomei Li, Rui Guo, Xiaobing Dou, Jiayu Li and Songtao Li*



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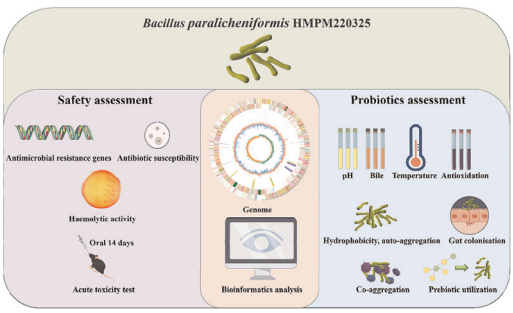
Molecular identification and safety assessment of the potential probiotic strain *Bacillus paralicheniformis* HMPM220325 isolated from artisanal fruit dairy products

Xiao Liang, Nini Dai, Fan Yang, Haimei Zhu, Guanghui Zhang and Yongzhong Wang*



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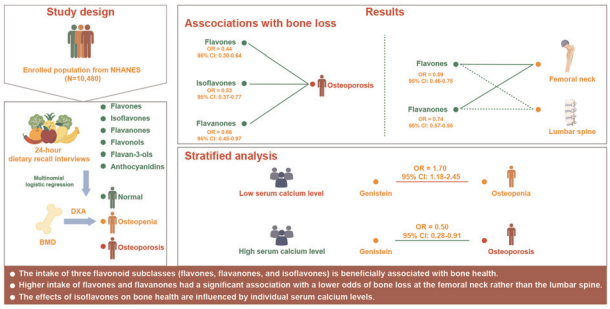

Intake of dietary flavonoids in relation to bone loss among U.S. adults: a promising strategy for improving bone health

Yi Zheng, Jiacheng Wang, Kelin Xu* and Xingdong Chen*

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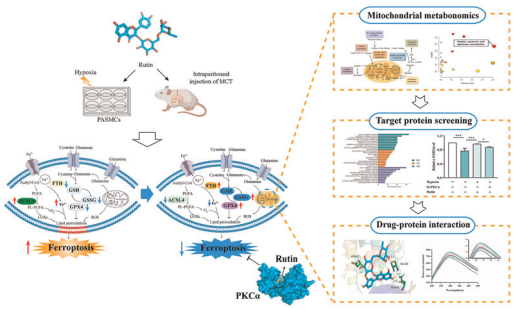

Characterization of PKCα-rutin interactions and their application as a treatment strategy for pulmonary arterial hypertension by inhibiting ferroptosis

Haixia Che, Jie Yi, Xiaoting Zhao, Hong Yu, Xianyao Wang, Rui Zhang, Xin Li, Jia Fu and Qian Li*

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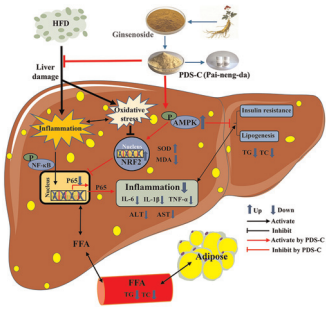

Hepatoprotective efficacy and interventional mechanism of the panaxadiol saponin component in high-fat diet-induced NAFLD mice

Ai Mi, Qinxue Hu, Ying Liu, Yanna Zhao, Fenglin Shen, Jinjian Lan, Keren Lv, Bolin Wang, Ruilan Gao* and Xiaoling Yu*

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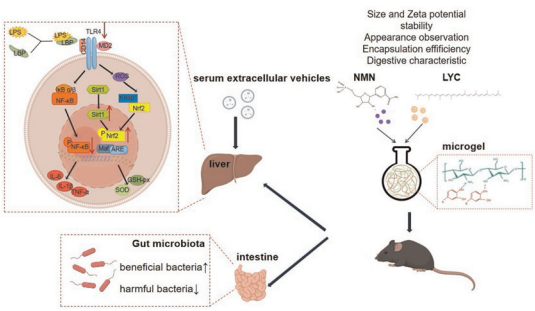

Preparation of microgels loaded with lycopene/NMN and their protective mechanism against acute liver injury

Jian Ge,* Luting Ye, Min Cheng, Weijia Xu, Zhaowen Chen and Feng Guan

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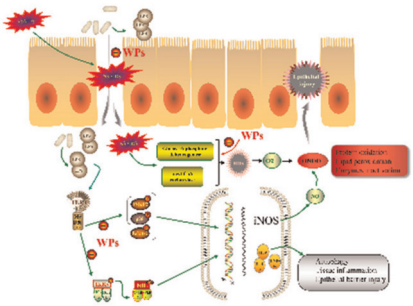
Wheat peptides inhibit the activation of MAPK and NF-κB inflammatory pathways and maintain epithelial barrier integrity in NSAID-induced intestinal epithelial injury

Zhiyuan Feng, Ying Wei, Zhuoran Zhang, Mingliang Li, Ruizeng Gu, Lu Lu, Wenying Liu* and Huimin Qin*



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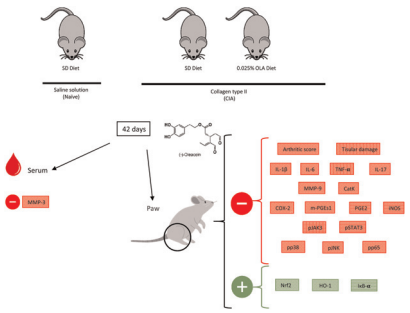
Dietary oleacein, a secoiridoid from extra virgin olive oil, prevents collagen-induced arthritis in mice

María Ángeles Rosillo,* Isabel Villegas, Victoria Vázquez-Román, José María Fernández-Santos, Juan Ortega-Vidal, Sofía Salido, María Luisa González-Rodríguez and Catalina Alarcón-de-la-Lastra



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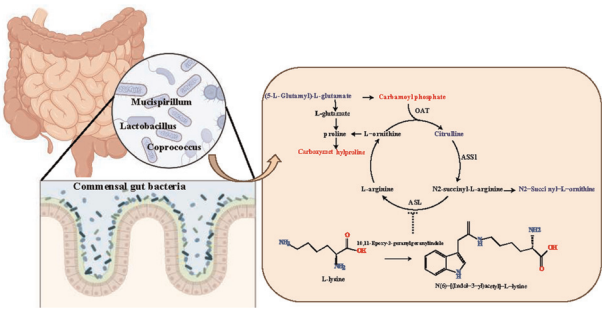
Integrated gut microbiome and metabolome analysis reveals the inhibition effect of *Lactobacillus plantarum* CBT against colorectal cancer

Yan-Yan Chen, Fei Fei, Ling-Ling Ding, Shi-Yuan Wen, Cai-Fang Ren and Ai-Hua Gong*



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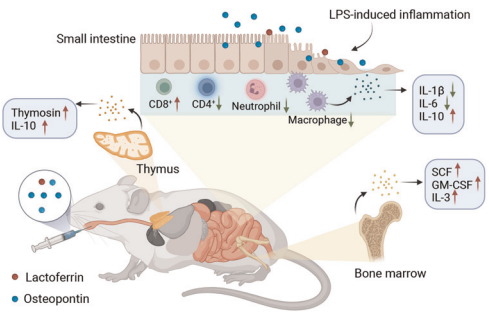
Immunoregulation of bovine lactoferrin together with osteopontin promotes immune system development and maturation

Chuangang Li, Yao Lu, Jian Wang, Biao Liu, Ignatius Man-Yau Szeto, Wen Zhang, Ran Bi, Sufang Duan, Rui Quan, Xuemin Wang, Yixuan Li, Wei Xiong, Jiazeng Sun and Yanan Sun*



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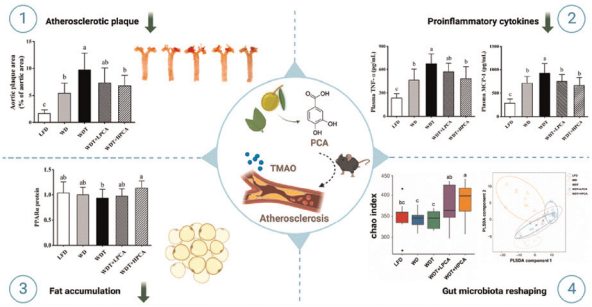

Protocatechuic acid alleviates TMAO-aggravated atherosclerosis *via* mitigating inflammation, regulating lipid metabolism, and reshaping gut microbiota

Huafang Ding, Jianhui Liu, Zixing Chen, Shouhe Huang, Chi Yan, Erika Kwek, Zouyan He, Hanyue Zhu and Zhen-Yu Chen*

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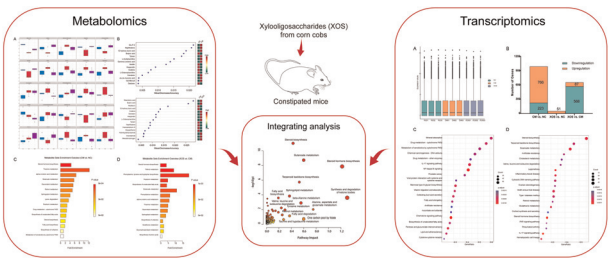

Integrated metabolomics and transcriptomics revealed the anti-constipation mechanisms of xylooligosaccharides from corn cobs

Hong Song, Rui Guo, Xianbao Sun, Yuxing Kou, Xuan Ma, Yinan Chen, Lihua Song and Yan Wu*

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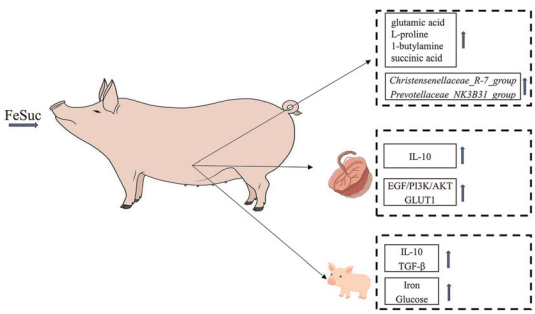
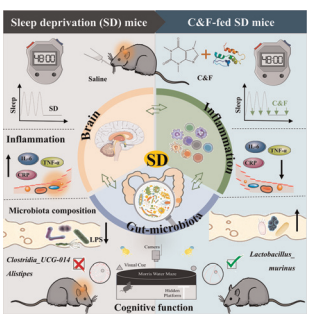


Ferrous–sucrose complex supplementation regulates maternal plasma metabolism and the fecal microbiota composition and improves neonatal immunity and placental glucose transportation by activating the EGF/PI3K/AKT signaling pathways in sows

Zhenglin Dong, Hongwei Liu, Dan Wan, Xin Wu* and Yulong Yin*

917



A combined effect of fish-originated collagen peptides and caffeine on the cognitive function of sleep-deprived mice

Hongkang Zhu, Shuang Bai, Wen Ma, He Qian* and Peng Du*

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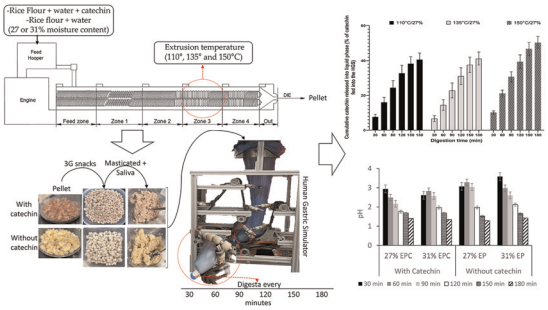
930

Understanding the physical breakdown and catechin bioaccessibility of third generation extruded snacks enriched with catechin using the human gastric simulator

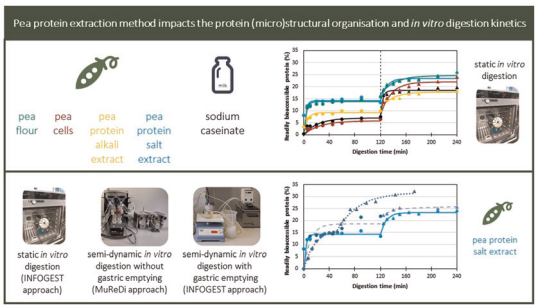
Yadira Zambrano, Gail M. Bornhorst* and Pedro Bouchon*



953

Pea protein extraction method impacts the protein (micro)structural organisation and *in vitro* digestion kinetics

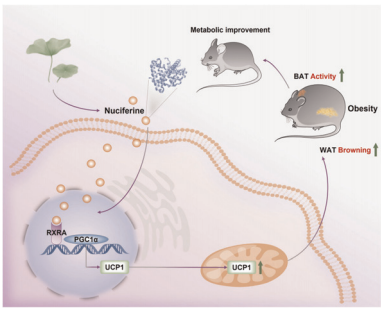
Sarah H. E. Verkempinck,* Dorine Duijsens, Ankita Mukherjee and Peter J. Wilde



967

Nuciferine prevents obesity by activating brown adipose tissue

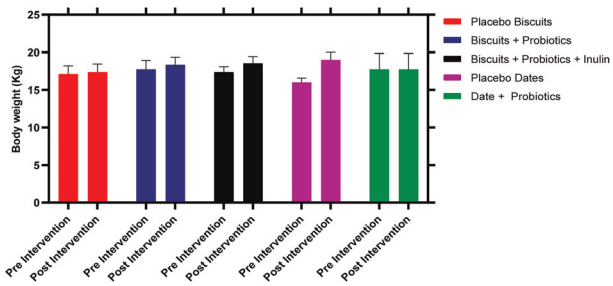
Chunlong Yan, Yang Zhan, Shouli Yuan, Yujing Cao, Yi Chen, Meng Dong, Hanlin Zhang, Li Chen, Rui Jiang, Wenjun Liu,* Wanzhu Jin* and Yuanyuan Huang*



977

Dietary intervention with edible film-coated multistrain probiotic Lacticaseibacilli in nondairy food matrices significantly increased the recovery of fecal viable Lacticaseibacilli and improved the performance of several colonic biomarkers among slightly malnourished preschool children

Mosab Gad,* Amr S. Elbahnasawy, Asmaa A. Ramadan, Gamal Abdel Naser Yamamah and Laila Hussein*



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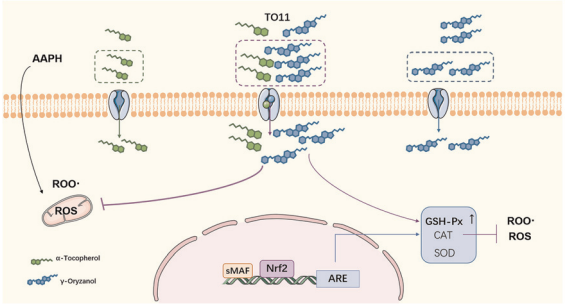
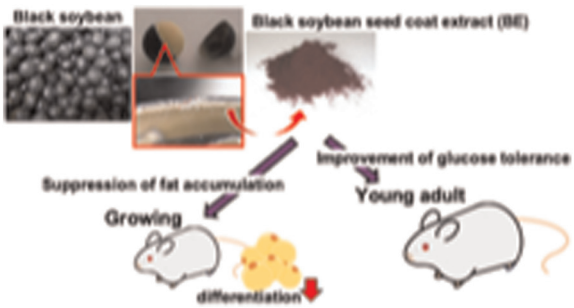


Antioxidant interaction between α-tocopherol and γ-oryzanol in HepG2 cells

Zhu Zhu, Ying Xu, Yiwen Guo, Ruijie Liu,* Ming Chang and Xingguo Wang

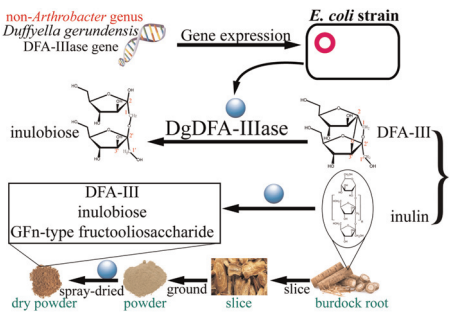
1004



Black soybean seed coat polyphenols have different effects on glucose and lipid metabolism in growing and young adult mice

Toshiki Nishijima, Yoko Yamashita and Hitoshi Ashida*

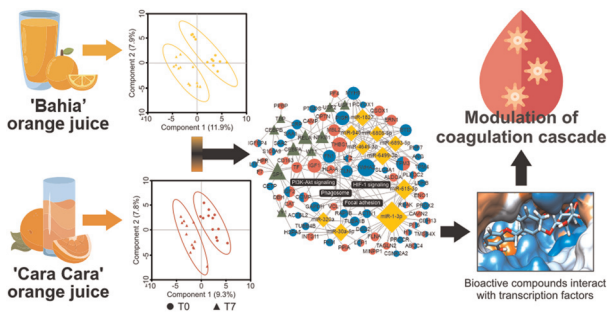
1021



Innovative application of a novel di-D-fructofuranose 1,2′:2,3′-dianhydride hydrolase (DFA-IIIase) from *Duffyella gerundensis* A4 to burdock root to improve nutrition

Shuhuai Yu,* Zhenlong Wang, Qiting Li, Tong Wang and Wei Zhao

1031



Plasma proteome profiling reveals molecular mechanisms underlying the effects of daily consumption of 'Bahia' and 'Cara Cara' orange juices

Eric de Castro Tobaruela,* Elisa Brasili, Laila Zeraik, Dragan Milenkovic, Neuza Mariko Aymoto Hassimotto and Franco Maria Lajolo

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CORRECTIONS

1050

Correction: Association between low-sodium salt intervention and long-term blood pressure changes is modified by ENaC genetic variation: a gene–diet interaction analysis in a randomized controlled trial

Hao Sun, Ying Zhou, Shuyi Jiang, Dan Zhao, Huamin Li, Yue Lu, Bing Ma* and Bo Zhou*

1051

Correction: *Lactobacillus plantarum* and *Bifidobacterium bifidum* alleviate dry eye in mice with exorbital lacrimal gland excision by modulating gut inflammation and microbiota

Soo-won Yun, Young-Hoo Son, Dong-Yun Lee, Yoon-Jung Shin, Myung Joo Han* and Dong-Hyun Kim*

1052

Correction: *Gardenia jasminoides J. Ellis* extract alleviated white matter damage through promoting the differentiation of oligodendrocyte precursor cells *via* suppressing neuroinflammation

Caixia Zang, Hui Liu, Cheng Ju, Fangyu Yuan, Jingwen Ning, Meiyu Shang, Xiuqi Bao, Yang Yu, Xinsheng Yao and Dan Zhang*

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