

Food & Function

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Cover

See Yi Wu, Wei Wang *et al.*,
pp. 9024–9036.

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Inside cover

See Chenhui Zhu *et al.*,
pp. 9037–9052.

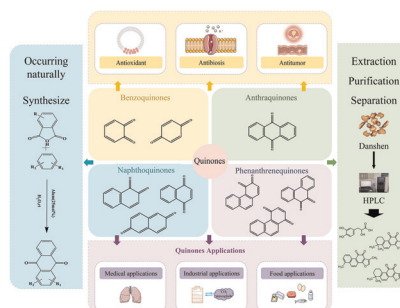
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REVIEWS

8973

Recent research on the physicochemical properties and biological activities of quinones and their practical applications: a comprehensive review

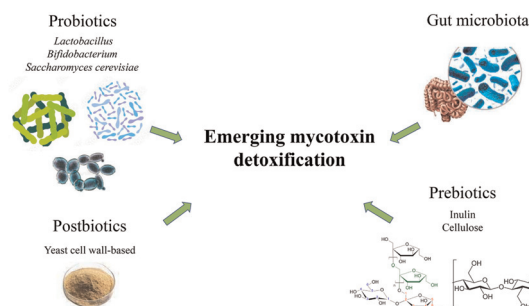
Mingyu Dong, Xiaozhi Ming, Tianyu Xiang, Nianjie Feng,*
Mengyun Zhang, Xurui Ye, Yi He, Mengzhou Zhou* and
Qian Wu*



8998

Emerging mycotoxins and preventive strategies related to gut microbiota changes: probiotics, prebiotics, and postbiotics – a systematic review

Álvaro Lázaro, Pilar Vila-Donat* and Lara Manyes



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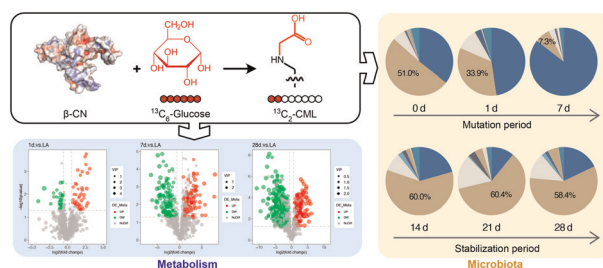
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9024

Unveiling the dynamic processes of dietary advanced glycation end-products (dAGEs) in absorption, accumulation, and gut microbiota metabolism

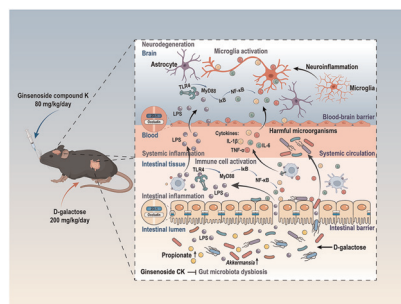
Yi Wu,* Yuqi Yang, Yanhong Zhong, Yongtai Wu, Zhenhui Zhang, Zichen Yan, Bingxin Liu and Wei Wang*



9037

Ginsenoside compound K alleviates D-galactose-induced mild cognitive impairment by modulating gut microbiota-mediated short-chain fatty acid metabolism

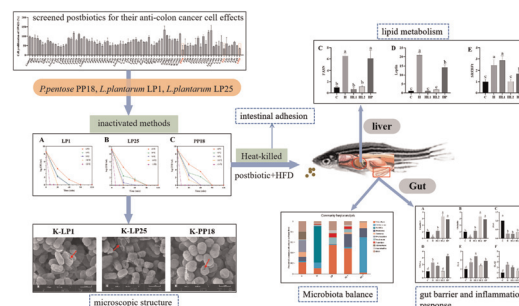
Xiaojun Yan, Xue Bai, Rongzhan Fu, Zhiguang Duan, Wen Zeng and Chenhui Zhu*



9053

Comparison of the effects of three sourdough postbiotics on high-fat diet-induced intestinal damage

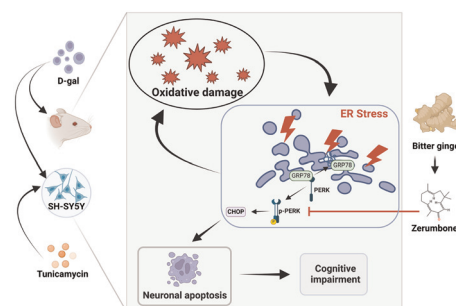
Yujuan Yu, Min Zhou, Faizan Ahmed Sadiq, Pengli Hu, Feng Gao, Juanxia Wang, Aowen Liu, Yue Liu, Haili Wu and Guohua Zhang*



9070

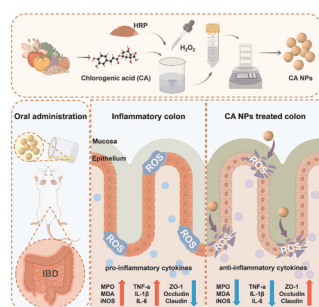
Dietary bitter ginger-derived zerumbone improved memory performance during aging through inhibition of the PERK/CHOP-dependent endoplasmic reticulum stress pathway

Chuan Yang, Meihuan Zhao, Yuanyuan Chen, Juxian Song, Dan Wang, Mi Zou, Jingru Liu, Wen Wen* and Shijun Xu*



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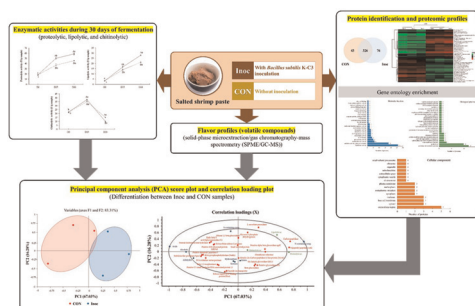
9085



Construction of chlorogenic acid nanoparticles for effective alleviation of ulcerative colitis

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

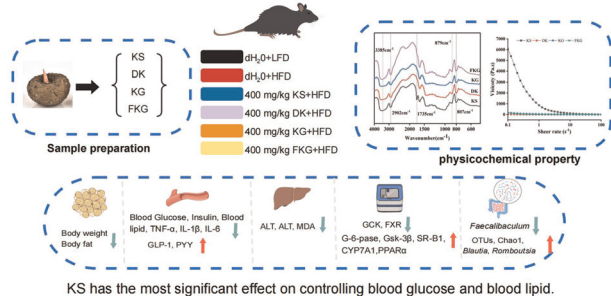
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Proteomic profiles revealed enzymatic activities associated with the flavor formation of salted shrimp paste influenced by *Bacillus subtilis* K-C3 inoculation

Sylvia Indriani, Nattanan Srisakultiew, Sootawat Benjakul, Pakpoom Boonchuen and Jaksuma Pongsetkul*

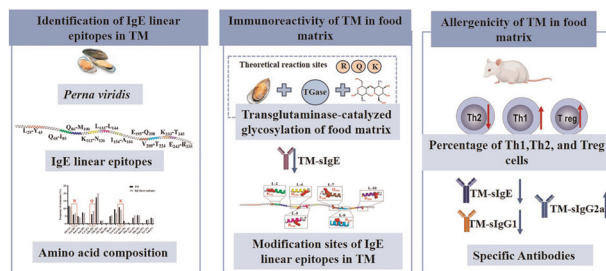
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Effects of konjac glucomannan intake patterns on glucose and lipid metabolism of obese mice induced by a high fat diet

Sijia Zhu, Jiyu Yang, Pengkui Xia, Sha Li, Qi Wang, Kaikai Li, Bin Li and Jing Li*

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Effect of transglutaminase-catalyzed glycosylation on the allergenicity of tropomyosin in the *Perna viridis* food matrix

Dongxiao Li, Xinrong He, Fajie Li, Yang Yang, Meng Liu, Qingmei Liu, Lianzhong Luo, Guixia Chen and Guangming Liu*

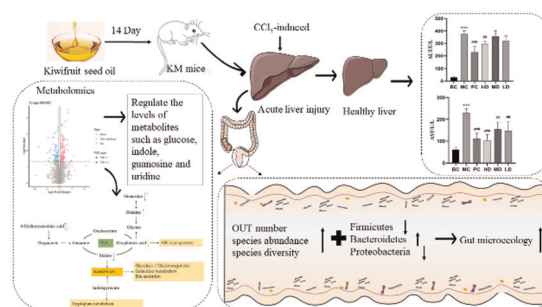


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Analysis of the liver–gut axis including metabolomics and intestinal flora to determine the protective effects of kiwifruit seed oil on CCl₄-induced acute liver injury

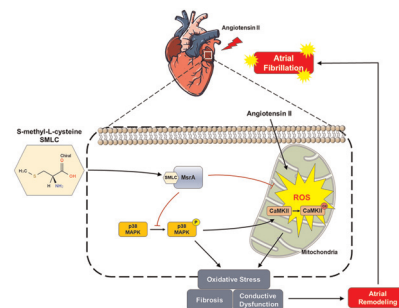
Xuting Hao, Wenjing Guo, Fangfang Li, Lili Cui* and Wenyi Kang*



9165

S-Methyl-L-cysteine targeting MsrA attenuates Ang II-induced oxidative stress and atrial remodeling via the p38 MAPK signaling pathway

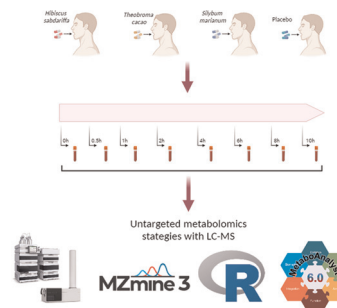
Beibei Xu, Yinli Xu, Wenpu Ren, Shan Meng, Tao Hong, Zijun Cao, Xiong Xiao, Xiaodong Guo, Liming Yu, Jikai Zhao* and Huishan Wang*



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An untargeted metabolomics approach applied to the study of the bioavailability and metabolism of three different bioactive plant extracts in human blood samples

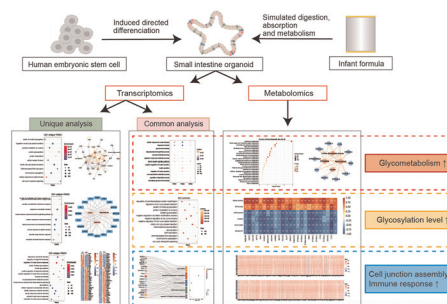
María del Carmen Villegas-Aguilar,*
María de la Luz Cádiz Gurrea, María Herranz-López,
Enrique Barrajón-Catalán, David Arráez-Román,
Álvaro Fernández-Ochoa* and
Antonio Segura-Carretero



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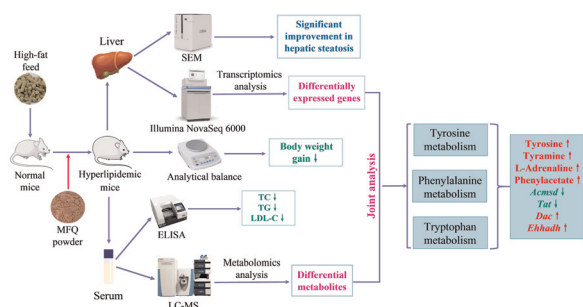
Using integrated transcriptomics and metabolomics to explore the effects of infant formula on the growth and development of small intestinal organoids

Xianli Wang, Yuxin Jing, Chengdong Zheng,
Chenxuan Huang, Haiyang Yao, Zimo Guo, Yilun Wu,
Zening Wang, Zhengyang Wu, Ruihong Ge, Wei Cheng,
Yuanyuan Yan, Shilong Jiang, Jianguo Sun, Jingquan Li,
Qinggang Xie,* Xiaoguang Li* and Hui Wang*



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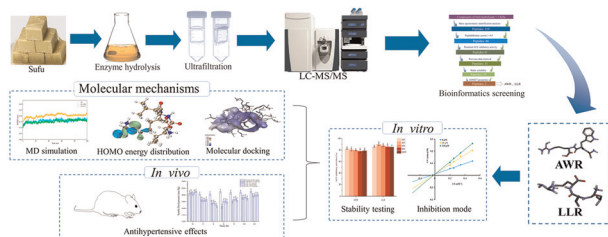
9210



Monascus-fermented quinoa alleviates hyperlipidemia in mice by regulating the amino acid metabolism pathway

Zhiwei Huang,* Lichen Chen, Lishi Xiao, Yanfang Ye, Wenlan Mo, Zhenghuai Zheng and Xiangyou Li

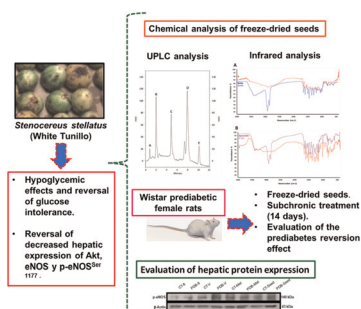
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Characterization, mechanisms, structure–activity relationships, and antihypertensive effects of ACE inhibitory peptides: rapid screening from sufu hydrolysate

Jianfei Li, Haohan Hu, Feng Chen, Chenying Yang, Wanzhou Yang, Yuexin Pan, Xiaodong Yu and Qiye He*

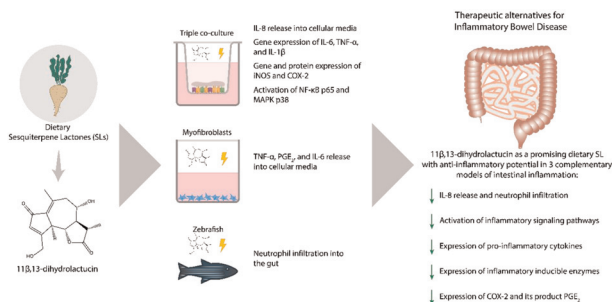
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Chemical analysis of freeze-dried seeds of *Stenocereus stellatus* (white tunillo) components and evaluation of their effect on prediabetes reversion in an experimental model in female Wistar rats

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Unveiling the anti-inflammatory potential of 11β,13-dihydrolactucin for application in inflammatory bowel disease management

Melanie S. Matos, María Ángeles Ávila-Gálvez, Antonio González-Sarrias, Nuno-Valério Silva, Carolina Lage Crespo, António Jacinto, Ana Teresa Serra, Ana A. Matias and Cláudia Nunes dos Santos*

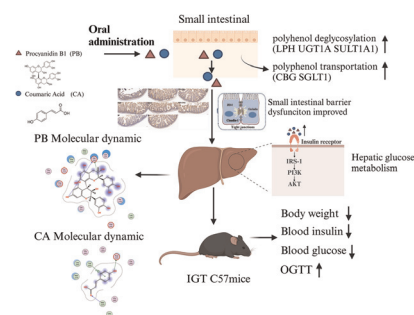


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Procyanidin B1 and *p*-coumaric acid from whole highland barley ameliorated HFD-induced impaired glucose tolerance *via* small intestinal barrier and hepatic glucose metabolism

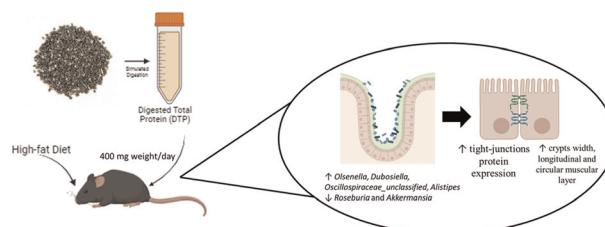
Zehua Liu,* Yijie Yang, Yi Xu, Zhaowan Zhang, Ruoxin Tang, Jianshen Liu, Hongxin Jiang and Renyong Zhao



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Effect of digested chia seed protein on the gut microbiota and colon morphology of mice fed a high-saturated-fat diet

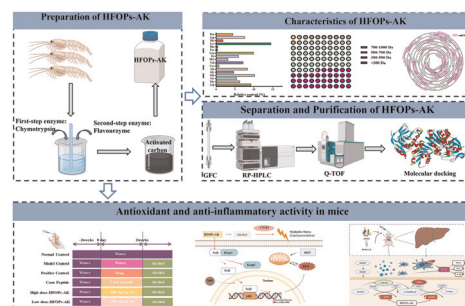
Mariana Grancieri, Vinícius Parzanini, Brilhante de São José, Renata Celi Lopes Toledo, Thaísa Agrizzi Verediano, Cintia Sant'Ana, Haira Guedes Lúcio, Elvira Gonzalez de Mejia and Hércia Stampini Duarte Martino*



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Typical structural characteristics and hepatoprotective effects of novel high Fischer ratio oligopeptides from Antarctic krill on acute alcoholic liver injury

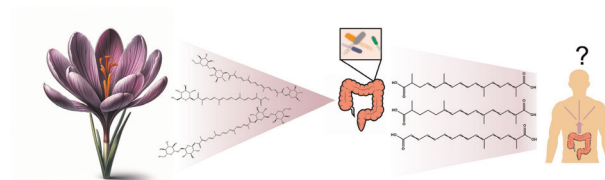
Yan Sun, Huiru Shen, Chaozhong Fan, Cili Wang, Yan Fan, Li Hao, Qiaoji Tian and Hu Hou*



9315

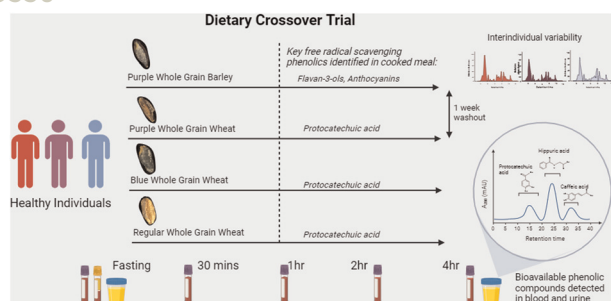
New findings in the metabolism of the saffron apocarotenoids, crocins and crocetin, by the human gut microbiota

Carlos Javier García, David Beltrán, María Dolores Frutos-Lisón, María Teresa García-Conesa, Francisco A. Tomás-Barberán* and Rocío García-Villalba*



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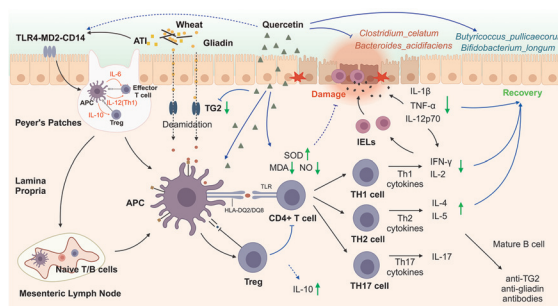
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The bioavailability of polyphenols following acute consumption of pigmented barley and wheat

Borkwei Ed Nignpense, Nidhish Francis, Christopher Blanchard and Abishek Santhakumar*

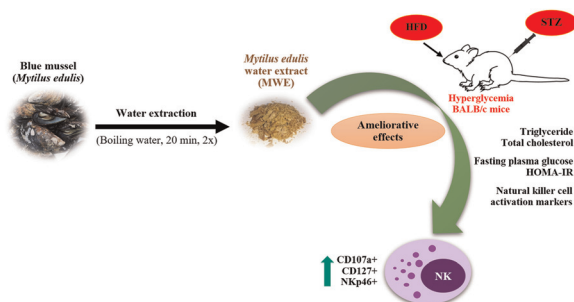
9343



Quercetin ameliorates celiac-related intestinal inflammation caused by wheat gluten through modulating oxidative stress, Th1/Th2/Treg balance, and intestinal microflora structure

Tian Yu, Yiting Xie, Zhongliang Wang, Jingjing Li, Yunpeng Shen, Juanli Yuan, Jinyan Gao, Md. Fakruddin, Yong Wu* and Hongbing Chen

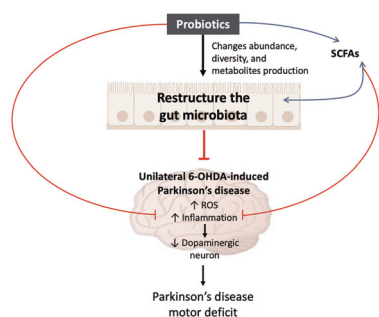
9357



Blue mussel (*Mytilus edulis*) water extract ameliorates intestinal immune response in high-fat diet-streptozotocin-induced diabetic mice

Sabri Sudirman, Yi-Yuh Hwang, Chia-Hung Su, Ting-Yu Lu, Hsiang-Ping Kuo, Deng-Fwu Hwang and Zwe-Ling Kong*

9368



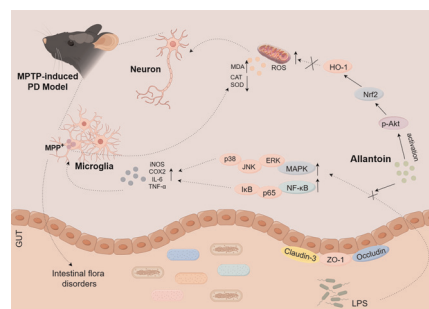
Supplementation with *Bifidobacterium animalis* subsp. *lactis* MH-022 for remission of motor impairments in a 6-OHDA-induced Parkinson's disease rat model by reducing inflammation, reshaping the gut microbiome, and fostering specific microbial taxa

Shu-Ping Tsao, Tu-Hsueh Yeh, Ya-Tin Lin, Chun-Hsu Pan, Yuan-Kun Lee, Chieh-Hsi Wu* and Hui-Yu Huang*



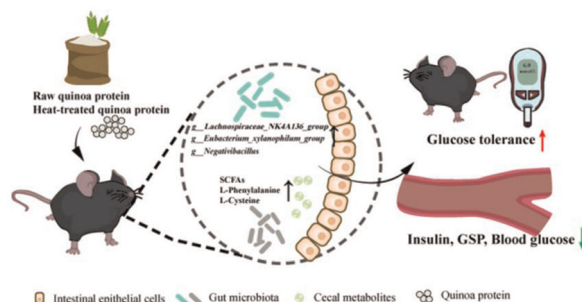
Shuo Yang, Xiaojia Sun, Dianfeng Liu, Yiming Zhang,
Xiyu Gao, Jiangmei He, Mingchi Cui, Shoupeng Fu* and
Dewei He*

Shuo Yang, Xiaojia Sun, Dianfeng Liu, Yiming Zhang,
Xiyu Gao, Jiangmei He, Mingchi Cui, Shoupeng Fu* and
Dewei He*



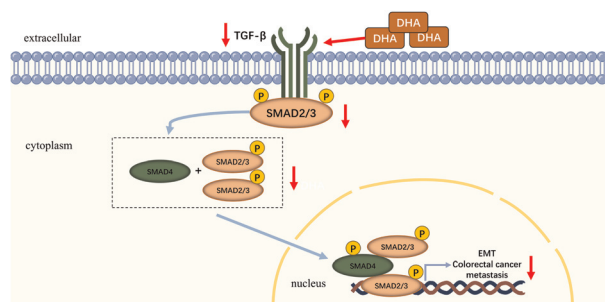
Raw and heat-treated quinoa protein protects against glucose metabolism disorders in high-fat diet (HFD)-induced mice by reshaping gut microbiota and fecal metabolic profiles

Zijian Dai, Han Wang, Qun Shen, Yichen Hu and
Yong Xue*



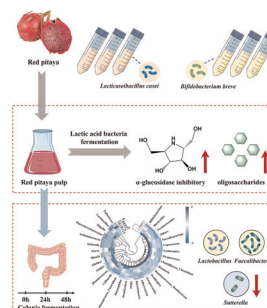
Docosahexaenoic acid inhibits the invasion and migration of colorectal cancer by reversing EMT through the TGF- β 1/Smad signaling pathway

Yi-Ling Jiang, Xue Li, Ya-Wen Tan, Yu-Jing Fang,
Kai-Yan Liu, Yi-Fan Wang, Ting Ma, Qing-Jian Ou and
Cai-Xia Zhang*



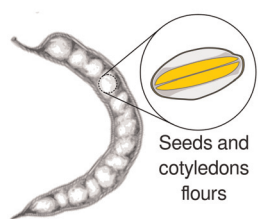
***Lactacaseibacillus casei*- and *Bifidobacterium breve*-fermented red pitaya promotes beneficial microbial proliferation in the colon**

Li Cao, Mengxi Wan, Zhixing Xian, Yongqiang Zhou,
Lihong Dong, Fei Huang* and Dongxiao Su*



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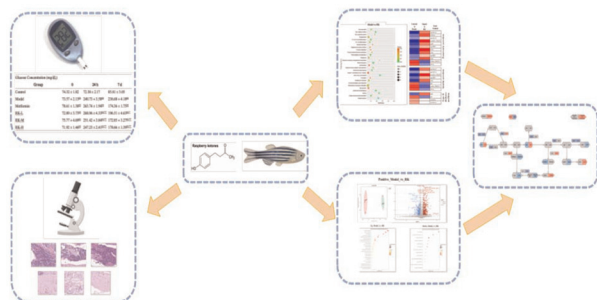
Neltuma nigra (Griseb.)
(ex-*Prosopis nigra*)

- * Macronutrients
- * Phytochemicals
- * Biological activities
 - * antioxidant
 - * inhibition of carbohydrate metabolism enzymes
- * Technofunctional properties

***Neltuma nigra* cotyledon and seed flour: nutritional, phytochemical, and techno-functional characterization and nutraceutical potential of polyphenolic enriched extract**

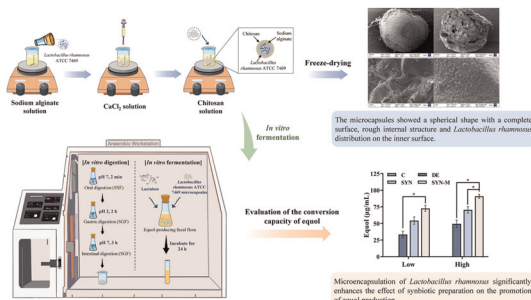
Florencia Cattaneo, Ivana Fabiola Rodríguez, Iris Catiana Zampini, Alberto Burgos-Edwards, Guillermo Schmeda-Hirschmann and María Inés Isla*

9457

**Study on the signaling pathways involved in the anti-hyperglycemic effect of raspberry ketone on zebrafish using integrative transcriptome and metabolome analyses**

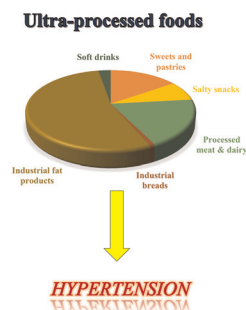
Xinliang Zhu,* Dengcai Zhang, Yong Wang, Chuangxin Wang, Xiaoxiao Liu and Yicong Niu*

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**Preparation of a *Lactobacillus rhamnosus* ATCC 7469 microencapsulated-lactulose synbiotic and its effect on equol production**

Xiaoying Wang, Yuhao Ma, Yingqing Liu, Jiuyan Zhang, Weiliang Jiang, Xiang Fang and Li Wang*

9488

**Consumption of ultra-processed foods and the incidence of hypertension: a cohort study**

Mahdieh Golzarand,* Nazanin Moslehi, Parvin Mirmiran* and Fereidoun Azizi



Predicting structure-targeted food bioactive compounds for middle-aged and elderly Asians with myocardial infarction: insights from genetic variations and bioinformatics-integrated deep learning analysis

Predicting Food-Derived Bioactive Compounds Against Myocardial Infarction

The pipeline consists of the following steps:

- Identify candidate compounds**
 - By GWAS: A genomic plot showing association signals across chromosomes 1-22.
 - Search for interaction compounds: Utilizes databases including ChEMBL, PubChem, ChEMBL-Drug, ChEMBL-ZINC, BindingDB, and STITCH.
- Selected genes**
 - Genes: AOCN, CBX2, GDC, DNMT1, DOK1, LNK1, RFXB, PFKFB3, RPTOR, RNF131, and RNF145.
 - Interactome protein-protein interaction: A network diagram showing interactions between the selected genes.
- Predicted bioactive compounds**
 - Compounds: Ginsenoside RH4, F4, C, Rb1, A2, and B2, Eleutheroside M, 7-hydroxy-2methylsaffron, 3,4,5-trihydroxy-3,6-dimethoxyflavone, and methylephedrine, cayocetin, and ephedrine.
- Molecular dynamics**
 - Visualizations: Three panels showing molecular dynamics simulations of a protein-ligand complex, including a 3D surface representation, a 2D contact map, and a 3D stick representation.
- Food sources**
 - Images: Three images showing food sources: a bowl of red berries, a bunch of purple grapes, and a pile of green leafy vegetables.

Supporting Tools and Processes:

- Data processing** (blue box)
- Cluster refinement** (blue box)
- Data cleaning** (blue box)
- Generate fingerprint** (blue box)
- Model training and bioactivity prediction** (blue box)
- datacamp (BioDeepNet)** (orange box)

Effectiveness and safety of steamed ginger extract on mild osteoarthritis: a randomized, double-blind, placebo-controlled clinical trial

Effect of heat-treated flaxseed lignan macromolecules on the interfacial properties and physicochemical stability of α -linolenic acid-enriched O/W emulsions

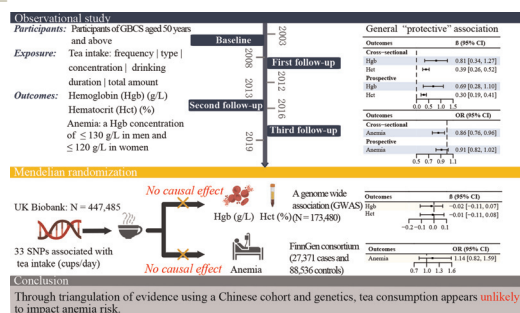
[illegible]

Blueberry extract attenuates DSS-induced inflammatory bowel disease in mice through inhibiting ER stress-mediated colonic apoptosis in mice

The diagram illustrates the signaling pathway of anthocyanins in blueberry cells. Anthocyanins (represented by blueberries) activate DSS (Diosgenin Sulfotransferase) and inhibit the ER stress pathway. DSS promotes apoptosis (represented by a blue star) and inhibits the ER stress pathway. The ER stress pathway involves PERK, eIF2α, ATF4, and CHOP, leading to apoptosis. Mitochondria and Caspase-3 are also involved in the apoptosis process.

PAPERS

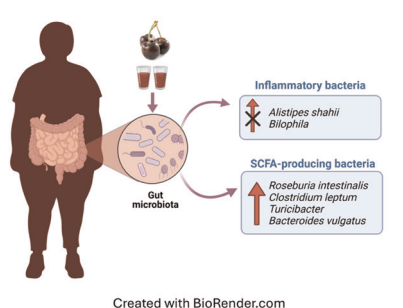
9552



Does tea intake increase the risk of anemia? Evidence from a large prospective cohort and Mendelian randomization study

Rui Hang Zhang, Wei Sen Zhang,* Chao Qiang Jiang, Feng Zhu, Ya Li Jin, Shiu Lun Au Yeung, Tai Hing Lam, Lin Xu* and Jiao Wang*

9563



Effect of dark sweet cherry (*Prunus avium*) supplementation on the fecal microbiota, metabolic endotoxemia, and intestinal permeability in obese subjects: a single-blind randomized trial

Shirley Arbizu, Susanne U. Mertens-Talcott, Stephen Talcott and Giuliana D. Noratto*

CORRECTION

9579

Correction: Oral aged garlic (*Allium sativum*) alleviates ulcerative colitis in mice by improving gut homeostasis

Deping Han, Xuke Guan, Fengxia Zhu, Qing Yang and Dingding Su*

