

metabolomics

NCT Number		Title	Authors	Description	Identifier	Dates
1	pubmed:36126340	NMR-Based Metabolomic Imprinting Elucidates Macrophage Polarization of THP-1 Cell Lines Stimulated by Zinc Oxide Nanoparticles	Vani Mishra Gurudayal Prajapati Vikas Baranwal Rohit Kumar Mishra	Zinc oxide (ZnO) nanoparticles (NPs) have been widely used in industry, cosmetics, drugs, bioimaging, and drug delivery. ZnO NPs have been found to interact and interfere with cellular physiology via macrophages, thereby resulting in macrophage polarization. The functional reprogramming of the cells is synchronized through cellular metabolic adaptations. The current study, therefore, aims to establish crosstalk between ZnO-NP-induced metabolic alterations and macrophage polarization in...	pmid:36126340 doi:10.1021/acsabm.2c00603	Tue, 20 Sep 2022 06:00:00 -0400
2	pubmed:36126379	Modulatory role of gut microbiota in cholesterol and glucose metabolism: Potential implications for atherosclerotic cardiovascular disease Atherosclerosis	Johann Roessler David M Leistner Ulf Landmesser Arash Haghikia	Accumulating evidence suggests an important role of gut microbiota in physiological processes of host metabolism as well as cardiometabolic disease. Recent advances in metagenomic and metabolomic research have led to discoveries of novel pathways in which intestinal microbial metabolism of dietary nutrients is linked to metabolic profiles and cardiovascular disease risk. A number of metaorganismal circuits have been identified by microbiota transplantation studies and experimental models using...	pmid:36126379 doi:10.1016/j.atherosclerosis.2022.08.018	Tue, 20 Sep 2022 06:00:00 -0400
3	pubmed:36126455	Integrated transcriptomics and metabolomics analysis reveals that C3 and C5 are vital targets of DuZhi Wan in protecting against cerebral ischemic injury	Jing-Yi Hou Guang-Zhao Cao Liang-Liang Tian Rui Zhou Yi Zhang He Xu Hong-Wei Wu Li-Fang Wang Hong-Jun Yang Jing-Jing Zhang	CONCLUSION: C3 and C5 play important roles in the neuroprotective and antineuroinflammatory effects of DZW in protecting against cerebral I/R. This study provides novel insights into the neuroprotective effects of DZW and its clinical application.	pmid:36126455 doi:10.1016/j.biopha.2022.113703	Tue, 20 Sep 2022 06:00:00 -0400
4	pubmed:36126529	The evolving role of the Caenorhabditis elegans model as a tool to advance studies in nutrition and health	Bipasha Chakravarty	This review highlights the scope and relevance for using the nematode Caenorhabditis elegans for advancing human nutrition and health studies. This is in the context of changing global priorities by offering a simple tool to investigate the nutritional problems facing the world today. Existing research presented here shows the advantages of using C elegans to evaluate human eating behavior, obesity, and the molecular basis of nutrition and gustation. C elegans has been used to understand diet...	pmid:36126529 doi:10.1016/j.nutres.2022.05.006	Tue, 20 Sep 2022 06:00:00 -0400
5	pubmed:36126574	Impact of axenic and mixed starter cultures on metabolomic and sensory profiles of ripened Italian salami	Gabriele Rocchetti Annalisa Rebecchi Constanza Maria Lopez Michele Dallolio Giuliano Dallolio Marco Trevisan Luigi Lucini	In this work, the synergistic/antagonistic impact of glucose and mixed starter cultures, namely Latilactobacillus sakei, Pediococcus pentosaceus, and Staphylococcus xylosus, was evaluated in Italian salami in terms of metabolomics and sensory profiles. As expected, Salami manufactured with 0.5 % glucose exhibited a substantial pH drop, showing values close to 5 at 12 days of ripening. Metabolomics revealed 1841 metabolites, mainly belonging to amino acids, peptides, glycerolipids, and nucleic...	pmid:36126574 doi:10.1016/j.foodchem.2022.134182	Tue, 20 Sep 2022 06:00:00 -0400

NCT Number		Title	Authors	Description	Identifier	Dates
6	pubmed:36126576	Untargeted HPLC-MS-based metabolomics approach to reveal cocoa powder adulterations	Maider Greño Merichel Plaza María Luisa Marina Maria Castro Puyana	Cocoa powder is a highly consumed product all over the world which could be substituted by cheaper raw materials resulting in food fraud. In this work, a non-targeted metabolomics approach based on the use of reversed-phase liquid chromatography coupled to high-resolution mass spectrometry was developed to carry out the characterization of cocoa powder samples adulterated, at two different levels, with carob flour, soy flour, and chicory. The sample preparation protocol and the chromatographic...	pmid:36126576 doi:10.1016/j.foodchem.2022.134209	Tue, 20 Sep 2022 06:00:00 -0400
7	pubmed:36126580	Ongoings in the apple watercore: First evidence from proteomic and metabolomic analysis	Mingyi Yang Qianwei Lin Zisheng Luo Zhaojun Ban Xihong Li Russel J Reiter Shuang Zhang Lei Wang Ze Liang Ming Qi Li Li	The presence of watercored fruit with translucent mesocarp has attracted immense attention due to its unique morphology and taste, however, the metabolic reconstruction between watercored and non-watercored tissues remain elusive. Herein, the combined proteomic and metabolomic approach was carried out to characterize the protein abundance and metabolic profile in watercored apple. Results demonstrated that carbohydrate metabolism was prioritized enriched in watercored apple, including highly...	pmid:36126580 doi:10.1016/j.foodchem.2022.134226	Tue, 20 Sep 2022 06:00:00 -0400
8	pubmed:36126739	Single and joint effects of cadmium and selenium on bioaccumulation, oxidative stress and metabolomic responses in the clam Scrobicularia plana	Chiara Trombini Gema Rodríguez-Moro Sara Ramírez Acosta José Luis Gómez Ariza Julián Blasco Tamara García-Barrera	Selenium (Se) is a vital trace element for many living organisms inclusive of aquatic species. Although the antagonistic action of this element against other pollutants has been previously described for mammals and birds, limited information on the join effects in bivalves is available. To this end, bivalves of the species Scrobicularia plana were exposed to Se and Cd individually and jointly. Digestive glands were analysed to determine dose-dependent effects, the potential influence of Se on Cd...	pmid:36126739 doi:10.1016/j.chemosphere.2022.136474	Tue, 20 Sep 2022 06:00:00 -0400
9	pubmed:36126750	A Metabolomics Study: Could Plasma Metabolites Be A Guide For The Prevention of Tamsulosin Side Effects?	Tugrul Cagri Akman Yucel Kadioglu Onur Senol Beyzagul ErKayman	CONCLUSIONS: Our study provides important information for tamsulosin therapy with high efficacy and low side effects in precision medicine.	pmid:36126750 doi:10.1016/j.pharma.2022.09.004	Tue, 20 Sep 2022 06:00:00 -0400
10	pubmed:36126853	Role of gut microbiota-derived branched-chain amino acids in the pathogenesis of Parkinson's disease: An animal study	Zhenzhen Yan Fan Yang Linlin Sun Jing Yu Lina Sun Yao Si Lifen Yao	Neuroinflammation caused by the disorder of gut microbiota and its metabolites is associated with the pathogenesis of Parkinson's disease (PD). Thus, it is necessary to identify certain molecules derived from gut microbiota to verify whether they could become intervention targets for the treatment of PD. The branched-chain amino acids (BCAAs), as a common dietary supplement, could modulate brain function. Herein, we investigated the longitudinal shifts of microbial community in mice treated with...	pmid:36126853 doi:10.1016/j.bbi.2022.09.009	Tue, 20 Sep 2022 06:00:00 -0400

NCT Number		Title	Authors	Description	Identifier	Dates
11	pubmed:36127066	Toxicity effects of chlorantraniliprole in zebrafish (Danio rerio) involving in liver function and metabolic phenotype	Zhiyuan Meng Jiajia Cui Li Liu Chunmei Yang Xin Bao Jianjun Wang Xiaojun Chen	Chlorantraniliprole (CAP), a representative bisamide insecticide, is widely used in rice fields around the world, posing potential toxicity risks to aquatic organisms. In this study, we examined the effects of exposure to CAP on growth and metabolic phenotype of zebrafish (Danio rerio) and oxidative stress and apoptosis in the liver of zebrafish (Danio rerio). First, we identified that CAP had a low bioaccumulation in zebrafish. Subsequently, growth phenotype analysis revealed that CAP could...	pmid:36127066 doi:10.1016/j.pestbp.2022.105194	Tue, 20 Sep 2022 06:00:00 -0400
12	pubmed:36127262	Epigenetic regulation of inflammation: The metabolomics connection	Suvasmita Rath Yousef M Hawsawi Faisal Alzahrani Mohammad Imran Khan	Epigenetic factors are considered the regulator of complex machinery behind inflammatory disorders and significantly contributed to the expression of inflammation-associated genes. Epigenetic modifications modulate variation in the expression pattern of target genes without affecting the DNA sequence. The current knowledge of epigenetic research focused on their role in the pathogenesis of various inflammatory diseases that causes morbidity and mortality worldwide. Inflammatory diseases are...	pmid:36127262 doi:10.1016/j.semcd.2022.09.008	Tue, 20 Sep 2022 06:00:00 -0400
13	pubmed:36127291	PFKFB4 facilitates palbociclib resistance in oestrogen receptor-positive breast cancer by enhancing stemness	Sijie Wang Yuncheng Bei Qiang Tian Jian He Rui Wang Qiuping Wang Luchen Sun Jiangqiong Ke Congying Xie Pingping Shen	CONCLUSIONS: These findings not only demonstrated the novel mechanism underlying which ER^(+) BC cells resisted to palbociclib, but also provided a possible therapeutic strategy in the intervention of ER^(+) BC to overcome drug resistance.	pmid:36127291 doi:10.1111/cpr.13337	Tue, 20 Sep 2022 06:00:00 -0400
14	pubmed:36127550	Serum metabolite differences detected by HILIC UHPLC-Q-TOF MS in systemic sclerosis	Chen Sun Huimin Zhu Yun Wang Yichen Han Dongdong Zhang Xi Cao Mihribangvl Alip Min Nie Xue Xu Liangjing Lv Xuebing Feng Lingyun Sun Dandan Wang	CONCLUSION: These findings suggested that metabolic profiles and pathways differed between SSc patients and healthy people, potentially providing new targets for SSc-directed therapeutics and diagnostics. Key Points • Metabolic profiles and pathways differed between SSc patients and healthy people. • The levels of trans-dehydroandrosterone are substantially lower in lcSSc than in dcSSc, potentially providing new targets for SSc patients with skin involvement. • L-glutamine could be used as a...	pmid:36127550 doi:10.1007/s10067-022-06372-z	Tue, 20 Sep 2022 06:00:00 -0400
15	pubmed:36127725	Nut consumption is associated with a shift of the NMR lipoprotein subfraction profile to a less atherogenic pattern among older individuals at high CVD risk	Jesús F García-Gavilán Margery A Connelly Nancy Babio Christos S Matzoros Emilio Ros Jordi Salas-Salvadó	CONCLUSIONS: In older individuals at high cardiovascular risk, increasing nut consumption was associated with a shift of the NMR lipoprotein subfraction profile to a less atherogenic pattern, as well as lower circulating concentrations of BCAA and decreased insulin resistance. These results provide novel mechanistic insight into the cardiovascular benefit of nut consumption. Trial registration ISRCTN35739639; registration date: 05/10/2005; recruitment start date 01/10/2003.	pmid:36127725 doi:10.1186/s12933-022-01624-3	Tue, 20 Sep 2022 06:00:00 -0400

NCT Number		Title	Authors	Description	Identifier	Dates
16	pubmed:36127726	Metabolomic changes related to airway inflammation, asthma pathogenesis and systemic activity following inhaled fluticasone furoate/vilanterol: a randomized controlled trial	Peter Daley-Yates Brian Keppler Amanda Baines George Bardsley James Fingleton	CONCLUSIONS: Despite the prolonged airway anti-inflammatory action of FF/VI, this was accompanied by only subtle systemic metabolomic and lipidomic changes. Trial registration Prospectively registered on ClinicalTrials.gov registry number NCT02712047.	pmid:36127726 doi:10.1186/s12931-022-02164-w	Tue, 20 Sep 2022 06:00:00 -0400
17	pubmed:36127743	Incorporating kernelized multi-omics data improves the accuracy of genomic prediction	Mang Liang Bingxing An Tianpeng Chang Tianyu Deng Lili Du Keanning Li Sheng Cao Yueying Du Lingyang Xu Lupei Zhang Xue Gao Junya Li Huijiang Gao	CONCLUSIONS: We concluded that the inclusion of transcriptome data in GS had the potential to improve accuracy. Moreover, wmssBLUP is accepted to be a promising alternative for the present situation in which plenty of individuals are genotyped when fewer are transcribed.	pmid:36127743 doi:10.1186/s40104-022-00756-6	Tue, 20 Sep 2022 06:00:00 -0400
18	pubmed:36127825	Not just a gut feeling: a deep exploration of functional bacterial metabolites that can modulate host health	Andrew Gold Jiangjiang Zhu	Bacteria have been known to reside in the human gut for roughly two centuries, but their modulatory effects on host health status are still not fully characterized. The gut microbiota is known to interact with dietary components and nutrients, producing functional metabolites that may alter host metabolic processes. The majority of thoroughly researched and understood gut microbial metabolites fall into two categories: short-chain fatty acids (SCFAs) and bacterial derivatives of dietary...	pmid:36127825 doi:10.1080/19490976.2022.2125734	Wed, 21 Sep 2022 06:00:00 -0400
19	pubmed:36127846	Enhanced flavour profiles through radicicol induced genomic variation in the lager yeasts, Saccharomyces pastorianus	Roberto de la Cerda Garcia-Caro Georgia Thompson Penghan Zhang Karsten Hokamp Fiona Roche Silvia Carlin Urska Vrhovsek Ursula Bond	The yeasts, Saccharomyces pastorianus, are hybrids of Saccharomyces cerevisiae and Saccharomyces eubayanus and have acquired traits from the combined parental genomes such as ability to ferment a range of sugars at low temperatures and to produce aromatic flavour compounds, allowing for the production of lager beers with crisp, clean flavours. The polyploid strains are sterile and have reached an evolutionary bottleneck for genetic variation. Here we describe an accelerated evolution approach to...	pmid:36127846 doi:10.1002/yea.3815	Wed, 21 Sep 2022 06:00:00 -0400
20	pubmed:36128230	Ferroptosis promotes sonodynamic therapy: a platinum(ii)-indocyanine sonosensitizer	Yidan Lai Nong Lu Ai Ouyang Qianling Zhang Pingyu Zhang	Sonodynamic therapy (SDT) has unique advantages in deep tumour ablation due to its deep penetration depth, showing great preclinical and clinical potential. Herein, a platinum(ii)-cyanine complex has been designed to investigate its potential as a SDT anticancer agent. It generates singlet oxygen (¹ O(2)) under ultrasound (US) irradiation or light irradiation, and exhibits US-cytotoxicity in breast cancer 4T1 cells but with negligible dark-cytotoxicity. Mechanistic investigations reveal that...	pmid:36128230 pmc:PMC9430585 doi:10.1039/d2sc02597c	Wed, 21 Sep 2022 06:00:00 -0400

NCT Number		Title	Authors	Description	Identifier	Dates
21	pubmed:36128535	Compound green tea (CGT) regulates lipid metabolism in high-fat diet induced mice	Caibi Zhou Liuhong Hu Ren Mu Xin Mei Xingli Wu Chuanming Wang Xiaolu Zhou	This work aims to study the effect of compound green tea (CGT) on liver lipid metabolism in mice based on metabolomics of liquid chromatography-mass spectrometry (LC-MS), and preliminarily identify potential biomarkers and pathways of action by using a metabonomic network database to explore the lipid-lowering effect of CGT. In this study, forty mice were randomly divided into four groups: compound tea treatment group (DH), high-fat model control group (NK), normal control group (CK) and...	pmid:36128535 pmc:PMC9412714 doi:10.1039/d2ra02831j	Wed, 21 Sep 2022 06:00:00 -0400
22	pubmed:36128871	Systemic metabolic alteration dependent on the thyroid-liver axis in early PD	Kengo Miyamoto Shinji Saiki Hirotaka Matsumoto Ayami Suzuki Yuri Yamashita Tatou Iseki Shin-Ichi Ueno Kenta Shiina Tetsushi Kataura Koji Kamagata Yoko Imamichi Yukiko Sasazawa Motoki Fujimaki Wado Akamatsu Nobutaka Hattori	OBJECTIVE: Parkinson's disease (PD) is a common neurodegenerative disease characterized by initial involvement of the olfactory bulb/amygdala or autonomic nerves followed by nigral degeneration. Although autonomic innervation strictly regulates multiorgan systems including endocrine functions, circulation, and digestion, how dysautonomia in PD affects systemic metabolism has not been identified. In this study, we tried to estimate the pathogenic linkage of PD by nuclear medicine techniques,...	pmid:36128871 doi:10.1002/ana.26510	Wed, 21 Sep 2022 06:00:00 -0400
23	pubmed:36128872	A HST1-like gene controlled tiller angle through regulating endogenous auxin in common wheat	Lei Zhao Yueting Zheng Ying Wang Shasha Wang Tongzhu Wang Canguan Wang Yue Chen Kunpu Zhang Ning Zhang Zhongdong Dong Feng Chen	Tiller angle is one of the most important agronomic traits and one key factor for wheat ideal plant architecture, which can both increase photosynthetic efficiency and greatly enhance grain yield. Here, a deacetylase HST1-like (TaHST1L) gene controlling wheat tiller angle was identified by the combination of a genome-wide association study (GWAS) and bulked segregant analysis (BSA). Ethyl methane sulfonate (EMS)-mutagenized tetraploid wheat lines with the premature stop codon of TaHST1L...	pmid:36128872 doi:10.1111/pbi.13930	Wed, 21 Sep 2022 06:00:00 -0400
24	pubmed:36129729	Mixtures of mycotoxins, phytoestrogens and pesticides co-occurring in wet spent brewery grains (BSG) intended for dairy cattle feeding in Austria	Felipe Penagos-Tabares Michael Sulyok Veronika Nagl Johannes Faas Rudolf Krska Ratchaneewan Khiaosa-Ard Qendrim Zebeli	Spent brewery grains (BSG) are the main by-product of beer production and are incorporated in rations of food-delivering animals, mainly dairy cows. Like other agricultural commodities, BSG can be contaminated by a broad spectrum of natural and synthetic undesirable substances, which can be hazardous to animal and human health as well as to the environment. The co-occurrence of mycotoxins, phytoestrogens, other fungal and plant secondary metabolites, along with pesticides, was investigated in 21...	pmid:36129729 doi:10.1080/19440049.2022.2121430	Wed, 21 Sep 2022 06:00:00 -0400

NCT Number		Title	Authors	Description	Identifier	Dates
25	pubmed:36129764	Strength in numbers: density-dependent volatile-induced antimicrobial activity by <i>Xanthomonas perforans</i>	Jeannie Klein-Gordon Joy G Cagmat Gerald V Minsavage Laurel E Meke Gary E Vallad Erica M Goss Timmothy J Garrett Jeffrey B Jones	For most of the 20th century, <i>Xanthomonas euvesicatoria</i> (Xe) was the only known bacterium associated with bacterial spot of tomato (BST) in Florida. <i>X. perforans</i> (Xp) quickly replaced Xe mainly because of production of three bacteriocins (BCNs) against Xe; however, Xp outcompeted Xe even when the three known bacteriocins were deleted. Surprisingly, we observed antimicrobial activity against Xe in the BCN triple mutant when the triple mutant was grown in Petri plates containing multiple spots but...	pmid:36129764 doi:10.1094/PHYTO-04-22-0131-R	Wed, 21 Sep 2022 06:00:00 -0400
26	pubmed:36129929	Liquid chromatography coupled to high-resolution mass spectrometry metabolomics: A useful tool for investigating tumor secretome based on a three-dimensional co-culture model	Andrea C Pelosi Anna Maria A P Fernandes Leonardo F Maciel Alex A R Silva Giulia C Mendes Luísa F Bueno Livia Maria F Silva Rafael F Bredariol Maycon G Santana Andreia M Porcari Denise G Priolli	Three-dimensional (3D) cell culture technologies, which more closely mimic the complex microenvironment of tissue, are being increasingly evaluated as a tool for the preclinical screening of clinically promising new molecules, and studying of tissue metabolism. Studies of metabolites released into the extracellular space (secretome) allow understanding the metabolic dynamics of tissues and changes caused by therapeutic interventions. Although quite advanced in the field of proteomics, studies on...	pmid:36129929 doi:10.1371/journal.pone.0274623	Wed, 21 Sep 2022 06:00:00 -0400
27	pubmed:36130031	Limosilactobacillus reuteri DS0384 promotes intestinal epithelial maturation via the postbiotic effect in human intestinal organoids and infant mice	Hana Lee Kwang Bo Jung Ohman Kwon Ye Seul Son Eunho Choi Won Dong Yu Naeun Son Jun Hyoung Jeon Hana Jo Haneol Yang Yeong Rak Son Chan-Seok Yun Hyun-Soo Cho Sang Kyu Kim Dae-Soo Kim Doo-Sang Park Mi-Young Son	Little is known about the modulatory capacity of the microbiota in early intestinal development. We examined various intestinal models that respond to gut microbial metabolites based on human pluripotent stem cell-derived human intestinal organoids (hIOs): physiologically relevant in vitro fetal-like intestine, intestinal stem cell, and intestinal disease models. We found that a newly isolated <i>Limosilactobacillus reuteri</i> strain DS0384 accelerated maturation of the fetal intestine using 3D hIO...	pmid:36130031 doi:10.1080/19490976.2022.2121580	Wed, 21 Sep 2022 06:00:00 -0400
28	pubmed:36130143	Sleep duration, plasma metabolites, and obesity and diabetes: A metabolome-wide association study in US women	Josef Fritz Tianyi Huang Christopher M Depner Oana A Zeleznik Elizabeth M Cespedes Feliciano Wenjun Li Katie L Stone Jo Ann E Manson Clary Clish Tamar Sofer Eva Schernhammer Kathryn Rexrode Susan Redline Kenneth P Wright Céline Vetter	Short and long sleep duration are associated with adverse metabolic outcomes, such as obesity and diabetes. We evaluated cross-sectional differences in metabolite levels between women with self-reported habitual short (pmid:36130143 doi:10.1093/sleep/zsac226	Wed, 21 Sep 2022 06:00:00 -0400