metabolomics

	NCT Number	Title	Authors	Description	Identifier	Dates
1	pubmed:36060969	Effect of metformin versus metformin plus liraglutide on gonadal and metabolic profiles in overweight patients with polycystic ovary syndrome	Chuan Xing Han Zhao Jiaqi Zhang Bing He	CONCLUSIONS: In overweight patients with PCOS, both MET monotherapy and MET plus LIRA therapy improved glucose metabolism and relieved insulin resistance (IR). Additionally, MET plus LIRA therapy was more effective than MET monotherapy in improving reproductive abnormalities and hyperandrogenemia, potentially by modulating the hypothalamic-pituitary-ovarian axis.	pmid:36060969 pmc:PMC9428699 doi:10.3389/fendo.2022.945609	Mon, 05 Sep 2022 06:00:00 -0400
2	pubmed:36060983	Serum lipidomics profiles reveal potential lipid markers for prediabetes and type 2 diabetes in patients from multiple communities	Qiuhui Xuan Chunxiu Hu Yinan Zhang Qingqing Wang Xinjie Zhao Xinyu Liu Congrong Wang Weiping Jia Guowang Xu	CONCLUSIONS: Our findings improve insights into the lipid metabolic complexity and interindividual variations among subtypes of PreDM and T2DM, beyond the well-known differences in dyslipidemia in clinic.	pmid:36060983 pmc:PMC9434798 doi:10.3389/fendo.2022.966823	Mon, 05 Sep 2022 06:00:00 -0400
3	pubmed:36064450	ADSCs stimulated by VEGF-C alleviate intestinal inflammation via dual mechanisms of enhancing lymphatic drainage by a VEGF-C/VEGFR-3-dependent mechanism and inhibiting the NF-B pathway by the secretome	Lei Zhang Chen Ye Peng Li Chuanding Li Weigang Shu Yujie Zhao Xiaolei Wang	CONCLUSION: VEGF-C-stimulated ADSCs improve chronic intestinal inflammation by promoting lymphatic drainage and enhancing paracrine signalling via activation of VEGF-C/VEGFR-3-mediated signalling and inhibition of the NF-B pathway. Our study may provide a new insight into optimizing ADSCs treatment and investigating potential mechanisms in CD.	pmid:36064450 pmc:PMC9442958 doi:10.1186/s13287-022-03132-3	Mon, 05 Sep 2022 06:00:00 -0400
4	pubmed:36064963	Guest Edited Collection: Epigenetics within the tumor microenvironment	Aamir Ahmad	The tumor microenvironment (TME) comprises of components that exist within the immediate vicinity of tumor cells, including fibroblasts, immune cells, the extracellular matrix, and more. Significant advances have been made in recent years in our understanding of the components of TME and their mutual interactions. Part of the focus of this research has been on epigenetic events, which are increasingly being recognized for their importance in gene regulation and cancer progression. The Collection...	pmid:36064963 pmc:PMC9445032 doi:10.1038/s41598-022-19042-6	Tue, 06 Sep 2022 06:00:00 -0400
5	pubmed:36070681	Methionine metabolism controls the B cell EBV epigenome and viral latency	Rui Guo Jin Hua Liang Yuchen Zhang Michael Lutchenkov Zhixuan Li Yin Wang Vicenta Trujillo-Alonso Rishi Puri Lisa Giulino-Roth Benjamin E Gewurz	Epstein-Barr virus (EBV) subverts host epigenetic pathways to switch between viral latency programs, colonize the B cell compartment, and reactivate. Within memory B cells, the reservoir for lifelong infection, EBV genomic DNA and histone methylation marks restrict gene expression. But this epigenetic strategy also enables EBV-infected tumors, including Burkitt lymphomas, to evade immune detection. Little is known about host cell metabolic pathways that support EBV epigenome landscapes. We...	pmid:36070681 doi:10.1016/j.cmet.2022.08.008	Wed, 07 Sep 2022 06:00:00 -0400

	NCT Number	Title	Authors	Description	Identifier	Dates
6	pubmed:36070700	Insulin and serine metabolism as sex-specific hallmarks of Alzheimer's disease in the human hippocampus	Elisa Maffioli Giulia Murtas Valentina Rabattoni Beatrice Badone Farida Tripodi Filomena Iannuzzi Danilo Licastro Simona Nonnis Anna Maria Rinaldi Zoraide Motta Silvia Sacchi Nadia Canu Gabriella Tedeschi Paola Coccetti Loredano Pollegioni	Healthy aging is an ambitious aspiration for humans, but neurodegenerative disorders, such as Alzheimer's disease (AD), strongly affect quality of life. Using an integrated omics approach, we investigate alterations in the molecular composition of postmortem hippocampus samples of healthy persons and individuals with AD. Profound differences are apparent between control and AD male and female cohorts in terms of up- and downregulated metabolic pathways. A decrease in the insulin response is...	pmid:36070700 doi:10.1016/j.celrep.2022.111271	Wed, 07 Sep 2022 06:00:00 -0400
7	pubmed:36070751	Choroid plexus-CSF-targeted antioxidant therapy protects the brain from toxicity of cancer chemotherapy	Ahram Jang Boryana Petrova Taek-Chin Cheong Miriam E Zawadzki Jill K Jones Andrew J Culhane Frederick B Shipley Roberto Chiarle Eric T Wong Naama Kanarek Maria K Lehtinen	For many cancer patients, chemotherapy produces untreatable life-long neurologic effects termed chemotherapy-related cognitive impairment (CRCI). We discovered that the chemotherapy methotrexate (MTX) adversely affects oxidative metabolism of non-cancerous choroid plexus (ChP) cells and the cerebrospinal fluid (CSF). We used a ChP-targeted adeno-associated viral (AAV) vector approach in mice to augment CSF levels of the secreted antioxidant SOD3. AAV-SOD3 gene therapy increased oxidative defense...	pmid:36070751 doi:10.1016/j.neuron.2022.08.009	Wed, 07 Sep 2022 06:00:00 -0400
8	pubmed:36070824	Orai2 deficiency attenutates experimental colitis by facilitating the colonization of Akkermansia muciniphila	Jing Yan Wei Yu Chang Lu Guoliang Wang Chen Liu Lu Jiang Zizheng Jiang Zhenghao Liang	Orai2 is a component of store-operated Calcium channels (SOCCs) and exerts a pivotal role in immunity. In intestinal macrophages (Ms), Orai2 deficiency influenced linoleic acid (LA)-arachidonic acid (ARA) derivatives by regulating Pla2g6 and Alox5. 16S rRNA sequencing showed that deleting Orai2 facilitated the prevalence of Akkermansia muciniphila, and untargeted metabolomics confirmed the suppressed level of leukotriene A. Moreover, Orai2 deficiency ameliorated the progression of experimental...	pmid:36070824 doi:10.1016/j.ygeno.2022.110479	Wed, 07 Sep 2022 06:00:00 -0400
9	pubmed:36071106	Untargeted ultra-high-resolution mass spectrometry metabolomic profiling of blood serum in bladder cancer	Joanna Nizio Krzysztof Ossoliski Aneta Paza-Altamer Artur Koodziej Anna Ossoliska Tadeusz Ossoliski Tomasz Ruman	Bladder cancer (BC) is a common urological cancer of high mortality and recurrence rates. Currently, cystoscopy is performed as standard examination for the diagnosis and subsequent monitoring for recurrence of the patients. Frequent expensive and invasive procedures may deterrent patients from regular follow-up screening, therefore it is important to look for new non-invasive methods to aid in the detection of recurrent and/or primary BC. In this study, ultra-high-performance liquid...	pmid:36071106 doi:10.1038/s41598-022-19576-9	Wed, 07 Sep 2022 06:00:00 -0400

	NCT Number	Title	Authors	Description	Identifier	Dates
10	pubmed:36071153	Purine nucleoside phosphorylase as a target to treat age-associated lower urinary tract dysfunction	Lori A Birder Edwin K Jackson	The lower urinary tract (LUT), including the bladder, urethra and external striated muscle, becomes dysfunctional with age; consequently, many older individuals suffer from lower urinary tract disorders (LUTDs). By compromising urine storage and voiding, LUTDs degrade quality of life for millions of individuals worldwide. Treatments for LUTDs have been disappointing, frustrating both patients and their physicians; however, emerging evidence suggests that partial inhibition of the enzyme purine...	pmid:36071153 doi:10.1038/s41585-022-00642-w	Wed, 07 Sep 2022 06:00:00 -0400
11	pubmed:36071467	Glutathione metabolism in Cryptocaryon irritans involved in defense against oxidative stress induced by zinc ions	Zhi-Hong Zhong Zhi-Cheng Li Han Li Qing-Kai Guo Chen-Xi Wang Ji-Zhen Cao An-Xing Li	CONCLUSIONS: These results revealed that glutathione metabolism in C. irritans contributes to oxidative stress resistance from zinc ions, and could be a potential drug target for controlling C. irritans infection.	pmid:36071467 doi:10.1186/s13071-022-05390-9	Wed, 07 Sep 2022 06:00:00 -0400
12	pubmed:36071855	Metabolomics profiling reveals berberine-inhibited inflammatory response in human gingival fibroblasts by regulating the LPS-induced apoptosis signaling pathway	Ying Zhang Yanyang Guo Wenjia Wei Zhongxiao Zhang Xiaodong Xu	This article examines berberine's biological effects and molecular mechanisms with an inflammatory response model induced by lipopolysaccharide (LPS) in human gingival fibroblasts (HGFs) using metabolomics. The viability of HGFs was determined using the cell counting kit-8 (CCK8). ELISA was used to measure inflammatory cytokines, including interleukin-6 (IL-6), interleukin-1 (IL-1), and tumor necrosis factor- (TNF-). An investigation of western blots was conducted to investigate the related...	pmid:36071855 pmc:PMC9441553 doi:10.3389/fphar.2022.940224	Thu, 08 Sep 2022 06:00:00 -0400
13	pubmed:36071958	Integrative analysis of gut microbiota and fecal metabolites in metabolic associated fatty liver disease patients	Lidan Yang Yuzhao Dai He He Zhi Liu Shenling Liao Yu Zhang Ga Liao Zhenmei An	CONCLUSION: Microbial sequencing data suggested decreased species richness and diversity and altered -diversity in feces. Metabolomic analysis identified overall changes in fecal and serum metabolites dominated by lipid molecules. And the association analysis with gut microbes provided potentially pivotal gut microbiota-metabolite combinations in MAFLD patients, which might provide new clues for further research on the disease mechanism and the development of new diagnostic markers and...	pmid:36071958 pmc:PMC9441872 doi:10.3389/fmicb.2022.969757	Thu, 08 Sep 2022 06:00:00 -0400
14	pubmed:36071970	Dimethyl phthalate destroys the cell membrane structural integrity of *Pseudomonas fluorescens*	Wenjing Chen Ruxin Guo Zhigang Wang Weihui Xu Yunlong Hu	A Gram-negative bacteria (Pseudomonas fluorescens) was exposed to different concentrations (0, 20, and 40 mg/L) of dimethyl phthalate (DMP) for 8 h, and then Fourier transform infrared spectroscopy (FTIR) analysis, lipopolysaccharide content detection, analysis of fatty acids, calcein release test, proteomics, non-targeted metabolomics, and enzyme activity assays were used to evaluate the toxicological effect of DMP on P. fluorescens. The results showed that DMP exposure caused an increase in...	pmid:36071970 pmc:PMC9441906 doi:10.3389/fmicb.2022.949590	Thu, 08 Sep 2022 06:00:00 -0400

	NCT Number	Title	Authors	Description	Identifier	Dates
15	pubmed:36072228	Central carbon metabolism remodeling as a mechanism to develop drug tolerance and drug resistance in *Mycobacterium tuberculosis*	Hyungjin Eoh Rachel Liu Juhyeon Lim Jae Jin Lee Philip Sell	Suboptimal efficacy of the current antibiotic regimens and frequent emergence of antibiotic-resistant Mycobacterium tuberculosis (Mtb), an etiological agent of tuberculosis (TB), render TB the world's deadliest infectious disease before the COVID-19 outbreak. Our outdated TB treatment method is designed to eradicate actively replicating populations of Mtb. Unfortunately, accumulating evidence suggests that a small population of Mtb can survive antimycobacterial pressure of antibiotics by...	pmid:36072228 pmc:PMC9441700 doi:10.3389/fcimb.2022.958240	Thu, 08 Sep 2022 06:00:00 -0400
16	pubmed:36072325	Combined morphological and multi-omics analyses to reveal the developmental mechanism of *Zanthoxylum bungeanum* prickles	Kexing Su Jiaqian Sun Jun Han Tao Zheng Bingyin Sun Shuming Liu	Zanthoxylum bungeanum Maxim. as an important economic forest, its epidermis bears prickles which complicate the harvesting process and increase the labor costs. To explore the developmental mechanism of prickles, three varieties of Zanthoxylum bungeanum (PZB, SZB, GSZB) were selected for morphological and multi-omics analyses. The absorption spectra of prickles and stems were detected using Fourier-transform infrared spectroscopy (FTIR), and they were found different at 1617, 1110, 3319, and...	pmid:36072325 pmc:PMC9441855 doi:10.3389/fpls.2022.950084	Thu, 08 Sep 2022 06:00:00 -0400
17	pubmed:36072328	A high-efficiency trichome collection system by laser capture microdissection	Wei Qin Yongpeng Li Bowen Peng Hang Liu Tiantian Chen Xin Yan Yaojie Zhang Chen Wang Xinghao Yao Xueqing Fu Ling Li Kexuan Tang	Trichomes, which are classified as glandular or non-glandular, are hair-like epidermal structures that are present on aerial parts of most plant species. Glandular secretory trichomes (GSTs) have the capacity to secrete and store specialized metabolites, which are widely used as natural pesticides, food additives, fragrance ingredients or pharmaceuticals. Isolating individual trichomes is an essential way for identifying trichome-specific gene functions and discovering novel metabolites....	pmid:36072328 pmc:PMC9441851 doi:10.3389/fpls.2022.985969	Thu, 08 Sep 2022 06:00:00 -0400
18	pubmed:36072536	Anti-proliferation and apoptosis-inducing effects of dihydroartemisinin on SH-SY5Y cells and metabolomic analysis	De-Lai Xu Kai Fan Hua Zhang Liu-Xing Tang Yang Wang Zhen Xiang Ai-Ming Shi Yu-Chen Qu Cun-Jin Su Jie Pan	CONCLUSIONS: These data suggest that DHA could regulate taurine, linoleic acid, phenylalanine metabolism, and tryptophan metabolism, which are involved in the anti-proliferation effect of DHA in SH-SY5Y cells.	pmid:36072536 pmc:PMC9442203 doi:10.21037/tp-22-331	Thu, 08 Sep 2022 06:00:00 -0400
19	pubmed:36072867	Investigation of the protective mechanism of leonurine against acute myocardial ischemia by an integrated metabolomics and network pharmacology strategy	Weiwei Rong Jiejia Li Lifeng Wang Shanshan Luo Tulu Liang Xunjia Qian Xiaodan Zhang Qinbei Zhou Yizhun Zhu Qing Zhu	CONCLUSION: This is the first study of its kind to reveal the underlying mechanism of leonurine against acute myocardial ischemia through a strategy combining metabolomics and network pharmacology, which provides a valuable reference for the research on its future application.	pmid:36072867 pmc:PMC9441747 doi:10.3389/fcvm.2022.969553	Thu, 08 Sep 2022 06:00:00 -0400

	NCT Number	Title	Authors	Description	Identifier	Dates
20	pubmed:36072900	Combined Transcriptomic and Metabolomic Analysis of Women with Polycystic Ovary Syndrome	Ye Tian-Min Lin Suxia Ding Shufang Cao Dandan Luo Long-Dan Yeung William Shu Biu	CONCLUSION: Collectively, these results demonstrate the potential pathogenesis of PCOS, and follicular fluid exosomal miRNAs may be efficient targets for the diagnosis and treatment of PCOS in long-term clinical studies.	pmid:36072900 pmc:PMC9441417 doi:10.1155/2022/4000424	Thu, 08 Sep 2022 06:00:00 -0400
21	pubmed:36073497	Antimicrobial Volatiles emitted by Members of the Nest Microbiome of Social Spiders	Alexander Lammers Seven Nazipi Hans Zweers Trine Bilde Andreas Schramm Paolina Garbeva Michael Lalk	Microbes produce and respond to a range of structurally and functionally diverse volatiles. Many microbial volatiles have antimicrobial properties. Since volatiles can diffuse through complex three-dimensional systems like spider nests they are promising pathogen protection for social arthropods. Here, we analyzed the volatilomes of five nest microbiome members of the Namibian, social spider Stegodyphus dumicola, namely the bacteria Massilia sp. IC2-278, Massilia sp. IC2-477, Sphingomonas sp....	pmid:36073497 doi:10.1093/femsle/fnac088	Thu, 08 Sep 2022 06:00:00 -0400
22	pubmed:36073519	Integrative analysis of metabolite GWAS illuminates the molecular basis of pleiotropy and genetic correlation	Courtney J Smith Nasa Sinnott-Armstrong Anna Cichoska Heli Julkunen Eric B Fauman Peter Würtz Jonathan K Pritchard	Pleiotropy and genetic correlation are widespread features in GWAS, but they are often difficult to interpret at the molecular level. Here, we perform GWAS of 16 metabolites clustered at the intersection of amino acid catabolism, glycolysis, and ketone body metabolism in a subset of UK Biobank. We utilize the well-documented biochemistry jointly impacting these metabolites to analyze pleiotropic effects in the context of their pathways. Among the 213 lead GWAS hits, we find a strong enrichment...	pmid:36073519 doi:10.7554/eLife.79348	Thu, 08 Sep 2022 06:00:00 -0400
23	pubmed:36073540	Phosphorylation Status of B beta Subunit Acts as a Switch to Regulate the Function of Phosphatase PP2A in Ethylene-mediated Root Growth Inhibition	Zhengyao Shao Bo Zhao Prashanth Kotla Jackson G Burns Jaclyn Tran Meiyu Ke Xu Chen Karen S Browning Hong Qiao	The various combinations and regulations of different subunits of phosphatase PP2A holoenzymes underlie their functional complexity and importance. However, molecular mechanisms governing the assembly of PP2A complex in response to external or internal signals remain largely unknown, especially in Arabidopsis thaliana. We found that phosphorylation status of B of PP2A acts as a switch to regulate the activity of PP2A. In the absence of ethylene, phosphorylated B leads to an inactivation of...	pmid:36073540 doi:10.1111/nph.18467	Thu, 08 Sep 2022 06:00:00 -0400
24	pubmed:36073631	Blood-Based Fingerprint of Cardiorespiratory Fitness and Long-Term Health Outcomes in Young Adulthood	Ravi V Shah Patricia Miller Laura A Colangelo Ariel Chernofsky Nicholas E Houstis Rajeev Malhotra Raghava S Velagaleti David R Jacobs Kelley Pettee Gabriel Jared P Reis Donald M Lloyd-Jones Clary B Clish Martin G Larson Ramachandran S Vasan Venkatesh L Murthy Gregory D Lewis Matthew Nayor	Background Cardiorespiratory fitness is a powerful predictor of health outcomes that is currently underused in primary prevention, especially in young adults. We sought to develop a blood-based biomarker of cardiorespiratory fitness that is easily translatable across populations. Methods and Results Maximal effort cardiopulmonary exercise testing for quantification of cardiorespiratory fitness (by peak oxygen uptake) and profiling of >200 metabolites at rest were performed in the FHS (Framingham...	pmid:36073631 doi:10.1161/JAHA.122.026670	Thu, 08 Sep 2022 06:00:00 -0400

	NCT Number	Title	Authors	Description	Identifier	Dates
25	pubmed:36073658	Integrated metabolomics and network pharmacology to reveal the mechanisms of Guizhi-Fuling treatment for myocardial ischemia	Yan Ye Bailu Duan Zhenxiang Zhou Lintao Han Fang Huang Jingjing Li Qiong Wang Xiangfa Zeng Xiaoming Yu	Myocardial ischemia is a cardio-physiological condition caused by a decrease in blood perfusion to the heart, resulting in reduced oxygen supply and abnormal myocardial energy metabolism. Guizhi-Fuling (GZFL) is effective in treating Myocardial ischemia. However, its mechanism of action remains unclear and requires further exploration. we hope to reveal the mechanisms of GZFL treating Myocardial ischemia by integrating metabolomics and network pharmacology. In this study, myocardial metabolomic...	pmid:36073658 doi:10.1002/cbdv.202200386	Thu, 08 Sep 2022 06:00:00 -0400
26	pubmed:36073800	The Combined Escherichia coli Nissle 1917 and Tryptophan Treatment Modulates Immune and Metabolome Responses to Human Rotavirus Infection in a Human Infant Fecal Microbiota-Transplanted Malnourished Gnotobiotic Pig Model	Husheem Michael Vishal Srivastava Loic Deblais Joshua O Amimo Juliet Chepngeno Linda J Saif Gireesh Rajashekara Anastasia N Vlasova	Human rotavirus (HRV) is a major cause of childhood diarrhea in developing countries where widespread malnutrition contributes to the decreased oral vaccine efficacy and increased prevalence of other enteric infections, which are major concerns for global health. Neonatal gnotobiotic (Gn) piglets closely resemble human infants in their anatomy, physiology, and outbred status, providing a unique model to investigate malnutrition, supplementations, and HRV infection. To understand the molecular...	pmid:36073800 doi:10.1128/msphere.00270-22	Thu, 08 Sep 2022 06:00:00 -0400
27	pubmed:36074093	Comparative Metabolomics Reveals a Bifunctional Antibacterial Conjugate from Combined-Culture of *Streptomyces hygroscopicus* HOK021 and *Tsukamurella pulmonis* TP-B0596	Shumpei Asamizu Abrory Agus Cahya Pramana Sung-Jin Kawai Yoshichika Arakawa Hiroyasu Onaka	To investigate the potential for secondary metabolite biosynthesis by Streptomyces species, we employed a coculture method to discover natural bioactive products and identified specific antibacterial activity from a combined-culture of Streptomyces hygroscopicus HOK021 and Tsukamurella pulmonis TP-B0596. Molecular networking using ultrahigh performance liquid chromatography-quadrupole time-of-flight tandem mass spectrometry (UPLC-QTOF-MS/MS) data revealed a specific clade of metabolites in this...	pmid:36074093 doi:10.1021/acschembio.2c00585	Thu, 08 Sep 2022 06:00:00 -0400