metabolomics

	NCT Number	Title	Authors	Description	Identifier	Dates
1	pubmed:36112688	Brain lipidomics: From functional landscape to clinical significance	Jong Hyuk Yoon Youngsuk Seo Yeon Suk Jo Seulah Lee Eunji Cho Amaury Cazenave-Gassiot Yong-Seung Shin Myeong Hee Moon Hyun Joo An Markus R Wenk Pann-Ghill Suh	Lipids are crucial components of cellular function owing to their role in membrane formation, intercellular signaling, energy storage, and homeostasis maintenance. In the brain, lipid dysregulations have been associated with the etiology and progression of neurodegeneration and other neurological pathologies. Hence, brain lipids are emerging as important potential targets for the early diagnosis and prognosis of neurological diseases. This review aims to highlight the significance and usefulness...	pmid:36112688 doi:10.1126/sciadv.adc9317	Fri, 16 Sep 2022 06:00:00 -0400
2	pubmed:36122763	Changes in circulating bile acid subtypes in response to weight-loss diets are associated with improvements in glycemic status and insulin resistance: The POUNDS Lost trial	Yoriko Heianza Xuan Wang Jennifer Rood Clary B Clish George A Bray Frank M Sacks Lu Qi	CONCLUSIONS: Weight-loss diet-induced changes in distinct subtypes of circulating BAs were associated with improved glucose metabolism and insulin sensitivity in adults with overweight or obesity. Dietary fat intake may modify the associations of changes in BA metabolism with glucose metabolism.	pmid:36122763 doi:10.1016/j.metabol.2022.155312	Mon, 19 Sep 2022 06:00:00 -0400
3	pubmed:36122814	Dissection of Transcriptome and Metabolome Insights into the Isoquinoline Alkaloid Biosynthesis during stem development in Phellodendron amurense (Rupr.)	Xiang Li Kewei Cai Zuoyi Fan Jingyuan Wang Lianfu Wang Qi Wang Lixing Wang Xiaona Pei Xiyang Zhao	Phellodendron amurense (Rupr.) is a well-known medicinal plant with high medicinal value, and its various tissues are enriched in various active pharmaceutical ingredients. Isoquinoline alkaloids are the primary medicinal component of P. amurense and have multiple effects, such as anti-inflammation, antihypertension, and antitumor effects. However, the potential regulatory mechanism of isoquinoline alkaloid biosynthesis during stem development in P. amurense is still poorly understood. In the...	pmid:36122814 doi:10.1016/j.plantsci.2022.111461	Mon, 19 Sep 2022 06:00:00 -0400

	NCT Number	Title	Authors	Description	Identifier	Dates
4	pubmed:36123428	Implementing precision medicine in a regionally organized healthcare system in Sweden	Thoas Fioretos Valtteri Wirta Lucia Cavelier Eva Berglund Mikaela Friedman Michael Akhras Johan Botling Hans Ehrencrona Lars Engstrand Gisela Helenius Therese Fagerqvist David Gisselsson Sofia Gruvberger-Saal Ulf Gyllensten Markus Heidenblad Kina Höglund Bo Jacobsson Maria Johansson Åsa Johansson Maria Johansson Soller Maréne Landström Pär Larsson Lars-Åke Levin Anna Lindstrand Lovisa Lovmar Anna Lyander Malin Melin Ann Nordgren Gunnel Nordmark Paula Mölling Lars Palmqvist Richard Palmqvist Dirk Repsilber Per Sikora Bianca Stenmark Peter Söderkvist Henrik Stranneheim Tobias Strid Craig E Wheelock Mia Wadelius Anna Wedell Anders Edsjö Richard Rosenquist	No abstract	pmid:36123428 doi:10.1038/s41591-022-01963-4	Mon, 19 Sep 2022 06:00:00 -0400
5	pubmed:36123741	Integrated multi-omics analysis and microbial recombinant protein system reveal hydroxylation and glycosylation involving nevadensin biosynthesis in Lysionotus pauciflorus	Tianze Wu Li Xiang Ranran Gao Lan Wu Gang Deng Wenting Wang Yongping Zhang Bo Wang Liang Shen Shilin Chen Xia Liu Qinggang Yin	CONCLUSIONS: Metabolomic and full-length transcriptomic association analysis unveiled the accumulation mode and biosynthetic pathway of the secondary metabolites in the karst-adapted plant L. pauciflorus. Moreover, functional identification of two LpCYP82D members and one LpUGT in microbe reconstructed the pathway of nevadensin biosynthesis.	pmid:36123741 doi:10.1186/s12934-022-01921-2	Mon, 19 Sep 2022 06:00:00 -0400

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6	pubmed:36124630	Distinct chemical resistance-inducing stimuli induce common transcriptional, metabolic and nematode community signatures in rice root and rhizosphere	Willem Desmedt Enoch Narh Kudjordjie Satish Namdeo Chavan Sandrien Desmet Mogens Nicolaisen Bartel Vanholme Mette Vestergård Tina Kyndt	Induced resistance (IR), a phenotypic state induced by an exogenous stimulus and characterized by enhanced resistance to future (a)biotic challenge, is an important component of plant immunity. Numerous IR-inducing stimuli have been described in various plant species, but relatively little is known about 'core' systemic responses shared by these distinct IR stimuli and the effects of IR on plant-associated microbiota. In this study, we foliarly applied four distinct IR stimuli (-aminobutyric...	pmid:36124630 doi:10.1093/jxb/erac375	Tue, 20 Sep 2022 06:00:00 -0400
7	pubmed:36124769	Association Between Human Blood Metabolome and the Risk of Psychiatric Disorders	Yiming Jia Li Hui Lulu Sun Daoxia Guo Mengyao Shi Kaixin Zhang Pinni Yang Yu Wang Fanghua Liu Ouxi Shen Zhengbao Zhu	CONCLUSIONS: This MR study identified five established and three novel mediators for psychiatric disorders. N-acetylornithine, glycine, 3-Hydroxybutyrate, and butyrylcarnitine might be promising targets against psychiatric disorders with no predicted adverse side effects.	pmid:36124769 doi:10.1093/schbul/sbac130	Tue, 20 Sep 2022 06:00:00 -0400
8	pubmed:36124784	DrDimont: explainable drug response prediction from differential analysis of multi-omics networks	Pauline Hiort Julian Hugo Justus Zeinert Nataniel Müller Spoorthi Kashyap Jagath C Rajapakse Francisco Azuaje Bernhard Y Renard Katharina Baum	MOTIVATION: While it has been well established that drugs affect and help patients differently, personalized drug response predictions remain challenging. Solutions based on single omics measurements have been proposed, and networks provide means to incorporate molecular interactions into reasoning. However, how to integrate the wealth of information contained in multiple omics layers still poses a complex problem.	pmid:36124784 doi:10.1093/bioinformatics/btac477	Tue, 20 Sep 2022 06:00:00 -0400
9	pubmed:36124834	Comparative analysis of tangential flow filtration and ultracentrifugation, both combined with subsequent size exclusion chromatography, for the isolation of small extracellular vesicles	Kekoolani S Visan Richard J Lobb Sunyoung Ham Luize G Lima Carlos Palma Chai Pei Zhi Edna Li-Ying Wu Harsha Gowda Keshava K Datta Gunter Hartel Carlos Salomon Andreas Möller	Small extracellular vesicles (sEVs) provide major promise for advances in cancer diagnostics, prognostics, and therapeutics, ascribed to their distinctive cargo reflective of pathophysiological status, active involvement in intercellular communication, as well as their ubiquity and stability in bodily fluids. As a result, the field of sEV research has expanded exponentially. Nevertheless, there is a lack of standardisation in methods for sEV isolation from cells grown in serum-containing media....	pmid:36124834 doi:10.1002/jev2.12266	Tue, 20 Sep 2022 06:00:00 -0400
10	pubmed:36124945	Serum Metabolome Alterations in Patients with Early Nonalcoholic Fatty Liver Disease	Xuemei Wang Benchen Rao Haiyu Wang Chao Liu Zhigang Ren Zujiang Yu	CONCLUSIONS: These results advance our understanding about the composition and biological functions of serum metabolites of early NAFLD. In addition, Serum metabolic markers can serve as an efficient diagnostic tool for the early-stage NAFLD.	pmid:36124945 doi:10.1042/BSR20220319	Tue, 20 Sep 2022 06:00:00 -0400

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11	pubmed:36124971	Individual participant data meta-analysis of metabolomics on sustained knee pain in primary osteoarthritis patients	Christie A Costello Jason S Rockel Ming Liu Rajiv Gandhi Anthony V Perruccio Y Raja Rampersaud Nizar N Mahomed Proton Rahman Edward W Randell Andrew Furey Mohit Kapoor Guangju Zhai	CONCLUSIONS: Though further investigations are needed, our results provide potential predictive biomarkers and drug targets that could serve as a marker for poor response and be modified pre-operatively to improve knee pain and surgical response to TKA.	pmid:36124971 doi:10.1093/rheumatology/keac545	Tue, 20 Sep 2022 06:00:00 -0400
12	pubmed:36125104	Discovery of potential hypoglycemic metabolites in Cassiae Semen by coupling UHPLC-QTOF-MS/MS combined plant metabolomics and spectrum-effect relationship analyses	Fei Yang Yanfang Zou Chenyue Li Jiaxu Li Yaping Zang Xin Peng Juan Wang E-Hu Liu Shengqiang Tong Chu Chu	Cassiae Semen (CS) is consumed as fried tea or medicinal food in Asian areas. Its two commercial forms, namely raw and fried CS, exert different clinical applications, in which fried CS is commonly applied as a functional tea for losing weight. To prevent confusion in the use of the two forms of CS, a comprehensive strategy by combining plant metabolomics and spectrum-effect relationship analyses was developed for the fast and efficient discrimination of raw and fried CS, and further for the...	pmid:36125104 doi:10.1039/d2fo00562j	Tue, 20 Sep 2022 06:00:00 -0400
13	pubmed:36125254	Bloodstain Metabolite Markers: Discovery and Validation for Estimating Age of Bloodstain within 7 Days	You-Rim Lee Seungyeon Lee Sohyen Kwon Jiyeong Lee Hee-Gyoo Kang	Metabolomic research using analytical chemistry methods has been carried out in a wide range of research fields. However, research combining forensic science and metabolomics is rare. Determining the age of bloodstains could provide key information regarding when a crime was committed. Currently, validated methods for estimating the age of bloodstains are unavailable. Metabolites are intermediate and final products of chemical reactions. Therefore, they are less likely to be degraded than other...	pmid:36125254 doi:10.1021/acs.analchem.2c01903	Tue, 20 Sep 2022 06:00:00 -0400
14	pubmed:36125563	Effects of acute intravenous lipopolysaccharide administration on the plasma lipidome and metabolome in lactating Holstein cows experiencing hyperlipidemia	Awais Javaid Feiran Wang Erin A Horst M Elena Diaz-Rubio Lin F Wang Lance H Baumgard Joseph W McFadden	CONCLUSION: Acute intravenous LPS administration decreased circulating LPC concentrations, modified ceramide and glycerophospholipid concentrations, and influenced intermediary metabolism in dairy cows experiencing hyperlipidemia.	pmid:36125563 doi:10.1007/s11306-022-01928-1	Tue, 20 Sep 2022 06:00:00 -0400
15	pubmed:36125751	Progress and Challenges in Archaeal Molecular Biology	Finn Werner	Archaea are a key feature of the terran biosphere. Since their early characterization in the 1970s, we have learned much about the fascinating organism, most recently by applying genome-, transcriptome-, proteome-, and metabolome-scale methods. This chapter describes seminal contributions that elaborate on the study of archaeal biology at the systems level.	pmid:36125751 doi:10.1007/978-1-0716-2445-6_12	Tue, 20 Sep 2022 06:00:00 -0400

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16	pubmed:36125787	Precision Nutrition: Recent advances in obesity	V Saroja Voruganti	Precision Nutrition is an emerging area of nutrition research that focuses on understanding metabolic variability within and between individuals, and helps develop customized dietary plans and interventions to maintain optimum individual health. It encompasses nutritional genomics (gene-nutrient interactions), epigenetics, microbiome, and environmental factors. Obesity is a complex disease that is affected by genetic and environmental factors, and thus a relevant target of precision...	pmid:36125787 doi:10.1152/physiol.00014.2022	Tue, 20 Sep 2022 06:00:00 -0400
17	pubmed:36126044	Metabolic reconstitution of germ-free mice by a gnotobiotic microbiota varies over the circadian cycle	Daniel Hoces Jiayi Lan Wenfei Sun Tobias Geiser Melanie L Stäubli Elisa Cappio Barazzone Markus Arnoldini Tenagne D Challa Manuel Klug Alexandra Kellenberger Sven Nowok Erica Faccin Andrew J Macpherson Bärbel Stecher Shinichi Sunagawa Renato Zenobi Wolf-Dietrich Hardt Christian Wolfrum Emma Slack	The capacity of the intestinal microbiota to degrade otherwise indigestible diet components is known to greatly improve the recovery of energy from food. This has led to the hypothesis that increased digestive efficiency may underlie the contribution of the microbiota to obesity. OligoMM12-colonized gnotobiotic mice have a consistently higher fat mass than germ-free (GF) or fully colonized counterparts. We therefore investigated their food intake, digestion efficiency, energy expenditure, and...	pmid:36126044 doi:10.1371/journal.pbio.3001743	Tue, 20 Sep 2022 06:00:00 -0400
18	pubmed:36126080	Metabolomics analysis identifies glutamic acid and cystine imbalances in COVID-19 patients without comorbid conditions. Implications on redox homeostasis and COVID-19 pathophysiology	José C Páez-Franco José L Maravillas-Montero Nancy R Mejía-Domínguez Jiram Torres-Ruiz Karla M Tamez-Torres Alfredo Pérez-Fragoso Juan Manuel Germán-Acacio Alfredo Ponce-de-León Diana Gómez-Martín Alfredo Ulloa-Aguirre	It is well known that the presence of comorbidities and age-related health issues may hide biochemical and metabolic features triggered by SARS-CoV-2 infection and other diseases associated to hypoxia, as they are by themselves chronic inflammatory conditions that may potentially disturb metabolic homeostasis and thereby negatively impact on COVID-19 progression. To unveil the metabolic abnormalities inherent to hypoxemia caused by COVID-19, we here applied gas chromatography coupled to mass...	pmid:36126080 doi:10.1371/journal.pone.0274910	Tue, 20 Sep 2022 06:00:00 -0400