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➤ 前沿资讯

1. Green tea compound helps siRNA slip inside cells (绿茶化合物有助于siRNA在细胞内滑动)

简介: 饮用绿茶与健康益处有关,从心血管疾病预防到减肥。尽管许多这些说法仍需在临床上进行验证,但绿茶中的抗氧化剂表没食子儿茶素没食子酸酯(EGCG)似乎对细胞和动物都有益处。现在,科研人员发现EGCG的一个惊人的用途:将治疗性RNAs潜入细胞。他们在ACS Central Science报告了他们的结果。小干扰RNA(siRNAs)具有很大的治疗潜力,因为它们可以降低疾病相关基因的表达。然而,将siRNAs移入可以完成其工作的细胞中一直是一项挑战。该研究团队首先将EGCG和siRNA组合成了纳米粒子,这些siRNA自组装成带负电的核心。然后,研究人员用一个小的带正电荷的聚合物组成的壳体涂覆了这个核。这些纳米粒子有效地抑制了培养细胞中几种靶基因的表达,表明这些粒子可以穿过细胞膜。接下来,研究人员使用靶向促炎酶的siRNA在小鼠肠道损伤模型中测试纳米颗粒。纳米颗粒改善了诸如体重减轻、结肠缩短和肠道炎症等症状。研究人员表示,除了siRNA的基因沉默效应外,EGCG还可以通过其抗氧化和抗炎特性促进纳米粒子的有效性。

来源: EurekAlert 网站

发布日期: 2018-09-19

全文链接: <http://agri.ckcest.cn/ass/e2352c7d-0683-4124-829e-d2f4fb86195b.pdf>

2. Tea industry should benchmark itself: Commerce secretary (欧盟商务部长提出茶业应该以自身为基准)

简介: Union Commerce secretary Anup Wadhawan on Thursday said the tea industry should benchmark itself against best practices so that it can compete in the international market against countries like Sri Lanka. "There are fundamental challenges on the production side as productivity was falling. The gardens are no more viable as they used to be. The industry needs to benchmark itself against the best practices to raise production and compete in the international market against countries like Sri Lanka", he said. The initiatives should come from the industry side for branding and marketing of tea and also for value addition.

来源: The Economic Times 网站

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全文链接: <http://agri.ckcest.cn/ass/5ab3328b-1b1a-4ddb-b016-ad269caa09e4.pdf>

➤ 学术文献

1. Nanochemoprevention by encapsulation of (-)-epigallocatechin -3-gallate with bioactive peptides/chitosan nanoparticles for enhancement of its bioavailability (利用生物活性肽/壳聚糖纳米颗粒包封EGCG来增强其生物利用度的纳米化学预防)

简介: Nanochemoprevention by oral consumption was developed by the encapsulation of

(-)-epigallocatechin-3-gallate (EGCG) with nanoparticles that were electrostatically assembled from bioactive caseinophosphopeptides and chitosan, which was highly biocompatible and able to enhance the bioavailability of EGCG.

来源: Chemical Communications 期刊

发布日期:2012-01-23

全文链接:<http://agri.ckcest.cn/ass/0bdb54ec-659e-41ee-8ea3-389833eb58d1.pdf>

2. Excipient foods: designing food matrices that improve the oral bioavailability of pharmaceuticals and nutraceuticals (辅料食品: 提高药品和营养品的口服生物利用度的食品基质设计)

简介: The oral bioavailability of many lipophilic bioactive agents (pharmaceuticals and nutraceuticals) is limited due to various physicochemical and physiological processes: poor release from food or drug matrices; low solubility in gastrointestinal fluids; metabolism or chemical transformation within the gastrointestinal tract; low epithelium cell permeability. The bioavailability of these agents can be improved by specifically designing food matrices that control their release, solubilization, transport, metabolism, and absorption within the gastrointestinal tract. This article discusses the impact of food composition and structure on oral bioavailability, and how this knowledge can be used to design excipient foods for improving the oral bioavailability of lipophilic bioactives. Excipient foods contain ingredients or structures that may have no bioactivity themselves, but that are able to promote the bioactivity of co-ingested bioactives. These bioactives may be lipophilic drugs in pharmaceutical preparations (such as capsules, pills, or syrups) or nutraceuticals present within food matrices (such as natural or processed foods and beverages).

来源: Food & Function 期刊

发布日期:2014-04-24

全文链接:<http://agri.ckcest.cn/ass/54a8acaa-971e-4827-9bce-621a7749ba19.pdf>

3. Polyphenols regulating microRNAs and inflammation biomarkers in obesity (多酚调节肥胖症的microRNA和炎症生物标志物)

简介: Obesity is among the most prevalent health problems worldwide. Obesity is a complex disease that is generally accompanied by insulin resistance, increases in oxidative stress and inflammation biomarkers and, potentially, miRNA dysregulation. Polyphenols may act on obesity and its metabolic consequences. Circulating microRNAs have been studied as potential biomarkers for inflammatory and metabolic diseases, and their use may improve the diagnostic tools available today and the ability to diagnose specific diseases. Data regarding the relationship among the consumption of polyphenols from food sources, microRNA expression and inflammation biomarkers related to obesity is scarce, and most data available describing this relationship is found in cancer studies. This review focuses on the polyphenols that modulate the metabolism and/or inflammation related to obesity to understand the extent to which miRNA expression can be modulated by dietary interventions.

来源: Nutrition 期刊

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全文链接:<http://agri.ckcest.cn/ass/56d390a6-5c0e-46aa-86d2-ee949696042a.pdf>

4. The mechanistic insight of polyphenols in calcium oxalate urolithiasis mitigation (多酚类物质对草酸钙尿石症的缓解机理)

简介: About 12% of world population is affected by different forms of urolithiasis of which the recurrence rate in female is 47-60% and in male is 70-80%. Standard therapeutic agents (allopurinol, citrate, cystone and thiazide diuretics) are used to prevent and treat urolithiasis but these are not universally-effective due to common kidney stone relapse and other side effects. Surgical treatment causes long-term renal damage, hypertension and stone recurrence. Polyphenols, the plant-derived bioactive molecules, have showed protection against cancers, cardiovascular diseases, diabetes, osteoporosis and neurodegenerative diseases, among a number of other ailments. The role of these phytochemicals in urolithiasis management is emerging. Hence, the present review discusses peer-reviewed published literature till date on this aspect and highlights that polyphenols could effectively inhibit the formation of calcium oxalate urinary stones (most common renal stone), correlating with their antioxidant, anti-inflammatory, diuretic and angiotensin-converting enzyme (ACE) inhibition. Further, we have proposed the prospects and challenges in developing the plant polyphenols into drugs against kidney stone prevention. This review might be a stepping stone for further investigation into the clinical implications of the polyphenols in urolithiasis remediation.

来源: Biomedicine & Pharmacotherapy 期刊

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全文链接:<http://agri.ckcest.cn/ass/f0430a28-c188-4c3a-97d6-bcbcd049375b.pdf>