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2018年11月12日

▶ 前沿资讯

1. Weather and Weary Labor in Kenya Impact Tea Performance (肯尼亚天气和疲惫劳动力影响茶业表现)

简介：2018年肯尼亚茶产业的表现参差不齐，因为年初降雨的影响推动了产量和出口量的增加，但拉低了国家和茶农的收入，部分原因是供过于求。肯尼亚政府已经确定了四个关键的发展支柱，以推动该国的经济蓝图，被称为2030愿景。这些措施包括为茶叶等主要出口产品确定新的市场。这些商品仍主要出口到巴基斯坦、英国、荷兰、阿富汗、伊朗、苏丹、阿拉伯联合酋长国、也门和埃及。尤其更重要的是，肯尼亚正在通过积极开展关于茶饮料的健康益处的宣传活动来推动国内茶叶消费。这导致2017年肯尼亚茶叶摄入量增加至3720万公斤，高于2016年的2740万公斤。全国的茶农抱怨工作时间越长但收入越少。由于2018年前两个月的干旱天气降低了茶叶产量，而且自今年2月份茶叶价格达到2.98美元/公斤以来，每公斤茶叶的拍卖价格一直持续下跌。在肯尼亚，员工鼓动提高工资的工业行动导致生产量减少，从而降低了种植园生产商的营业额。

来源：World Tea News 网站

发布日期：2018-10-01

全文链接：<http://agri.ckcest.cn/ass/01d2a0fb-f73b-44fd-82df-0931e5a6b8e6.pdf>

2. European Joint Venture Will Invigorate Turkish Tea Exports (欧洲合资企业将振兴土耳其茶叶出口)

简介：Tea in Turkey is marked by a vibrant culture, limited industry and weak identity. These may all be invigorated by the joint venture announced at the end of September between the Dutch-based Jacobs Douwe Egberts (JDE) and OfÇay, one of Turkey's leading tea producers. The two will mesh operations under one organizational umbrella. OfÇay was formed in 1984, when the tea monopoly in Turkey ended. The dominant player remains state-owned. This is Çaykur, with around 60 percent of the market. The third main brand is Bogus. Almost all the tea produced is black, though in recent years there have been innovations in green and even white tea.

来源：World Tea News 网站

发布日期：2018-10-08

全文链接：<http://agri.ckcest.cn/ass/dec9ee9-697e-48ea-b484-70f56da8ad0a.pdf>

▶ 学术文献

1. Healthy properties of green and white teas: an update (绿茶和白茶健康特性的研究进展)

简介：Green tea has been consumed for centuries in Japan, China and Morocco. White tea, which is considered a variety of green tea, is mostly consumed in China and is very appreciated for its flavor. Currently the consumption of both types of tea has been extended to the western countries even as a functional ingredient. A group of polyphenols called catechins stands out among their bioactive components, the most abundant being the (-) epigallocatechin gallate, with high

antioxidant power. Teas also contain other phenolic compounds such as gallic, caffeic, chlorogenic or cinnamic acids, quercetin and proanthocyanidols, caffeine, theophylline, L-theanine and minerals such as fluorine, manganese or chromium. Investigations have mainly been focused on their antioxidant potential and their implication in the prevention and treatment of degenerative diseases. Several studies have evaluated their role in cardiovascular diseases, body weight control, bone mass increase, protection against neurodegenerative diseases and improvement of type 2 diabetes, among other pathologies. The main points of controversy are the design and interpretation of epidemiological and human intervention studies and the lack of information on catechins availability, metabolism and biotransformation. This review compiles and analyzes the latest peer-reviewed papers published from 2002 up to February 2017, including systematic reviews and meta-analyses.

来源: Food & Function 期刊

发布日期:2017-08-01

全文链接:<http://agri.ckcest.cn/ass/3ed5affa-6712-418a-8b92-0e540d53dd8f.pdf>

2. Green Tea Catechin Is an Alternative Immune Checkpoint Inhibitor that Inhibits PD-L1 Expression and Lung Tumor Growth (绿茶儿茶素是一种抑制PD-L1表达和肺肿瘤生长的替代免疫检查点抑制剂)

简介: The anticancer activity of immune checkpoint inhibitors is attracting attention in various clinical sites. Since green tea catechin has cancer-preventive activity in humans, whether green tea catechin supports the role of immune checkpoint inhibitors was studied. We here report that (-)-epigallocatechin gallate (EGCG) inhibited programmed cell death ligand 1 (PD-L1) expression in non-small-cell lung cancer cells, induced by both interferon (IFN) - and epidermal growth factor (EGF). The mRNA and protein levels of IFN--induced PD-L1 were reduced 40-80% after pretreatment with EGCG and green tea extract (GTE) in A549 cells, via inhibition of JAK2/STAT1 signaling. Similarly, EGF-induced PD-L1 expression was reduced about 37-50% in EGCG-pretreated Lu99 cells through inhibition of EGF receptor/Akt signaling. Furthermore, 0.3% GTE in drinking water reduced the average number of tumors per mouse from 4.1 ± 0.5 to 2.6 ± 0.4 and the percentage of PD-L1 positive cells from 9.6% to 2.9%, a decrease of 70%, in lung tumors of A/J mice given a single intraperitoneal injection of 4-(methylnitrosamino)-1-(3-pyridyl)-1-butanone (NNK). In co-culture experiments using F10-OVA melanoma cells and tumor-specific CD3+ T cells, EGCG reduced *PD-L1* mRNA expression about 30% in F10-OVA cells and restored *interleukin-2* mRNA expression in tumor-specific CD3+ T cells. The results show that green tea catechin is an immune checkpoint inhibitor.

来源: Molecules 期刊

发布日期:2018-08-20

全文链接:<http://agri.ckcest.cn/ass/7b861628-0530-4ca3-8be9-f5c03e9e4015.pdf>

3. Enzyme-free fluorescence sensing of catechins in green tea using bifunctional graphene quantum dots (利用双功能石墨烯量子点检测绿

茶中儿茶素的无酶荧光传感)

简介: The fluorescent graphene quantum dots (GQDs) provide an amusing nanoplatform, which integrates unique optical properties of quantum dots and prominent electronic properties of carbon materials. However, rational design of dual functional GQDs has been rarely explored. In this study, we constructed an enzyme-free fluorescent sensing method for catechins in green tea, using bifunctional GQDs, which were employed as the peroxidase-like catalyst and a fluorescence probe. In the presence of dissolved oxygen, GQDs with intrinsic peroxidase-like catalytic activity could catalyze the oxidation of catechins, and the oxidation product could efficiently quench GQDs' fluorescence. Based on this finding, an enzyme-free fluorescent nanoplatform was proposed for the sensing of catechins, and the detection limit of 5.0 nM was found. The integration between the excellent fluorescence performance of GQDs and their high catalytic activity made this sensor a simple and sensitive device for the detection of catechins.

来源: Analytical Methods 期刊

发布日期: 2017-06-21

全文链接: <http://agri.ckcest.cn/ass/cfeabdf9-3bb8-41ee-af15-4d324db9147a.pdf>

4. A Theoretical Basis for a Biopharmaceutic Drug Classification: The Correlation of *in Vitro* Drug Product Dissolution and *in Vivo* Bioavailability (生物制药药物分类的理论基础: 体外药物溶出度与体内生物利用度的相关性)

简介: This analysis uses a transport model and human permeability results for estimating *in vivo* drug absorption to illustrate the primary importance of solubility and permeability on drug absorption. The fundamental parameters which define oral drug absorption in humans resulting from this analysis are discussed and used as a basis for this classification scheme. These Biopharmaceutic Drug Classes are defined as: Case 1. High solubility-high permeability drugs, Case 2. Low solubility-high permeability drugs, Case 3. High solubility-low permeability drugs, and Case 4. Low solubility-low permeability drugs. Based on this classification scheme, suggestions are made for setting standards for *in vitro* drug dissolution testing methodology which will correlate with the *in vivo* process. This methodology must be based on the physiological and physical chemical properties controlling drug absorption. This analysis points out conditions under which no *in vitro-in vivo* correlation may be expected e.g. rapidly dissolving low permeability drugs. Furthermore, it is suggested for example that for very rapidly dissolving high solubility drugs, e.g. 85% dissolution in less than 15 minutes, a simple one point dissolution test, is all that may be needed to insure bioavailability. For slowly dissolving drugs a dissolution profile is required with multiple time points in systems which would include low pH, physiological pH, and surfactants and the *in vitro* conditions should mimic the *in vivo* processes. This classification scheme provides a basis for establishing *in vitro-in vivo* correlations and for estimating the absorption of drugs based on the fundamental dissolution and permeability properties of physiologic importance.

来源: Pharmaceutical Research 期刊

发布日期: 1995-03-20

全文链接: <http://agri.ckcest.cn/ass/ed19f7c1-2b45-49eb-9990-da4c6f17b0c8.pdf>