The antioxidant components have been identified in some pine species. Antioxidant properties of proanthocyanidins reduce free radicals induced by DNA fragmentation and lipid peroxidation and also proanthocyanidines could curb lipid peroxidation. In this study, we analyzed different parts of Pinus eldarica (bark, seed and needle) and assessed their antioxidant contents. The HPLC method (UV detector, C18 reverse phase column, 4.6 mm × 25 cm, and water/H3PO4/methanol/acetonitril as eluant) was employed. **Eluant** was selected for this plant and E. coli. The qualitative and quantitative polyphenolic content of the infusions of the commercial peppermint tea (*Mentha x piperita L.*) samples (n = 27) from different countries was studied using HPLC-UV-MS/MS analysis. Overall, 22 polyphenols were identified in the peppermint infusions. The major polyphenols were eugenol, 12-hydroxyjasmonate sulphate, luteolin-0-rutinoside and rosmarinic acid. The total polyphenolic content varied largely among the 27 peppermint tea infusions, found in a range of 10.0–218.0 mg/ml. In order to determine the content of samples by finding chemothystematic markers, essential oil composition of the samples was determined by GC. Of the analysed peppermint tea samples, 24 met the standards set by Ph. Eur. 7th Ed., whereas the analyses indicated that three samples may contain *Mentha spicata*, a species different from that claimed on the package. The effects of seven peppermint tea extracts against a respiratory tract pathogen *Chlamydia pneumoniae* were investigated in vitro. All the teas prepared from the selected commercial peppermint products inhibited chlamydial growth, inhibitions ranging from 20.7 to 69.5% at the extraction concentration of 250 μg/ml. The effect on the inclusion counts at the second passage of infection was studied, showing an inhibitory effect on the infectious progeny production ranging from 7.8 to 78.1%. In most cases, the antimicrobial activity was a characteristic of the peppermint teas having high contents of luteolin and apigenin glycosides. This study supports the consumption of peppermint tea to potentially elicit beneficial health effects on acute respiratory tract infections.

**K: Quality control methods for medicinal plants, extracts and isolated natural products**

**PK1**

**Evaluation of the in vivo antimalarial potentials of the leaf and fruit of Uvaria chamae P. Beauv. (Annonaceae)**

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Ethnomedicinally, the leaves and fruits of *Uvaria chamae* P. Beauv. (Annonaceae) are used in traditional preparations for febrile illness. Therefore, their antimalarial activities were evaluated with a view to justifying this ethnomedical use. The root has been scientifically proven to have antimalarial activity [1]. Methanolic extracts of the dried leaves and fresh fruits administered at 100–800 mg/kg on *Plasmodium berghei*-infected mice were evaluated using the four-day (chemosuppressive) and curative (Rane’s) antimalarial test models; distilled water and amodiaquine (10 mg/kg) were negative and positive controls, respectively. At 800 mg/kg, leaf and fruit extracts gave chemosuppression of 42 and 28% (four-day test) and parasite clearance of 36.3 and 46.5% on day 5 (curative test), respectively while the positive control-treated groups were 72.8% and 98%. The mean survival times were comparable (p > 0.05) to the amodiaquine-treated group in both leaf- (P = 0.83) and fruit- (P = 0.30) treated mice in the chemosuppressive test but significantly lower for the leaf- (P = 0.016) and fruit- treated group (24 days) in the curative test. No toxic effects were observed at the doses used. The leaf and fruit extracts showed better chemosuppressive and curative antimalarial activity, respectively thus justifying their folkloric uses. References: [1] Okonkwa, J.E. Ira, B.N. and Udolpho, A.E. (2006). The in vivo antimalarial activities of *Uvaria chamae* and *Hippocratea Africana* Annals of Tropical Medicine & Parasitology 100(7) 585–590.