measured in plasma after oral administration. Therefore a High performance liquid chromatography (HPLC) method was developed and validated to detect cinnamic acid in plasma matrix. HPLC machine with UV-detector was used to identify and quantify cinnamic acid in plasma. Linearity, precision, bias, repeatability and lower limit of detection were determined for method validation. Powdered Cinnamon 5g was administered orally to 5 healthy volunteers and blood samples were taken at the baseline, 5, 15, 30 min, 1, 3, 6 and 24 hours to determine plasma cinnamic acid levels.

Results: The retention time of cinnamic acid was 16 minutes at 254 nm. Concentrations of cinnamic acid between 0.5 µmol/L to 200.0 µmol/L in plasma matrix showed a linear response. The precision, bias, and repeatability of the method were 7.73%, 4.20%, 5.63% respectively. The lower limit of detection is 1.11 µmol/L. The sample was stable for up to five days at 4oC. The recovery of the method was 95%- 125%. The maximum plasma concentration (Cmax) of cinnamic acid was 1.59 to 4.47 µmol/L and the time taken to reach that concentration (Tmax) was 15 minutes. Benzoic acid which was also a potential metabolite was not detected in blood after oral administration of cinnamon. There were few unidentified metabolites in plasma which were not quantified.

Conclusions: A sensitive, specific HPLC method was developed to detect cinnamic acid, which is suitable for pharmacokinetic studies of cinnamon in humans. Cmax and Tmax of cinnamic acid were determined in human plasma for the first time.

Keywords: Cinnamon, plasma cinnamic acid, human pharmacokinetics, HPLC method

PP - 007

Production of cookies using sweet potato starch (*Ipomoea batatas*), rice flour and sunflower seed oil and determination of the scavenging activity of sweet potato cookies

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Introduction and objectives: The study was conducted to investigate the potential of incorporating Sweet potato (*Ipomoea batatas*) starch as the main ingredient with rice flour and sunflower seed oil as other ingredients, in the development of nutritional cookie and its scavenging activity. Sweet potato contains carbohydrates, proteins, vitamins, minerals, and antioxidant properties. Sunflower seed oil is a high nutritional oil, which is extracted from sunflower seeds and it contains vitamin E and Omega 6 that promote skin health. The study also focused on the investigation of nutritional content and the calorie value of the cookie.

Methods: DPPH (2,2-diphenyl-1-picryl-hydrazyl-hydrate) Assay was conducted to determine the scavenging activity of the cookie. The method was based on the scavenging of DPPH by antioxidants, which upon a reduction reaction decolorizes the DPPH methanol solution. The assay measures the reducing ability of antioxidants toward the DPPH radical. Tests were conducted in triplicates to increase the accuracy of the results. It was further subjected to proximate analysis.

Results: The inhibition rate of the sweet potato cookie was gradually increased with the concentration and the IC50 value of the Sweet potato cookie was 5.174 µ/ml. The lower IC50 value means high scavenging activity. Therefore, Sweet potato cookie has higher scavenging activity (5.174 µ/ml) compared to Ascorbic Acid (16.04+3.14 µ/ml). It was revealed in the proximate analysis that there was 0.91% total ash, 0.85% water-soluble ash, 0.90% acid-soluble ash, 1.1% protein, 0.86% crude fiber, 38.1% fat and 57.28% carbohydrate by mass in the developed cookie.

Conclusions: According to the results, the cookie contains antioxidant agents which important to health.

Keywords: DPPH radicals, IC50 value, proximate analysis.

PP - 008

The effects of meditation on human telomere lengths in healthy individuals: A research protocol for a systematic review

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Introduction and objectives: Studies have reported that meditation aids in reducing the shortening in human telomere lengths (TL), thus delaying the cellular aging process. However, no systematic reviews have been conducted to evaluate this effect using existing research. To address this, we plan to conduct a systematic review to investigate the effects of meditation on human TL in healthy individuals. This protocol describes the methodology to be adopted for conducting the review.

Methods: A search will be made for articles published in English from January 2000 to September 2019 in PubMed, Google Scholar, and Scopus using the terms "telomere", "telomerase", "meditation", "healthy individuals". Two reviewers will independently screen all titles and abstracts to determine eligibility. Randomized controlled-trials (RCT) and case-control studies (CCS) that recruited healthy participants in which the intervention groups in RCT and meditators in CCS had practiced various meditation techniques will be selected. The comparison factors will be the pre-and post-meditation differences in TL in RCT and TL of meditators and controls in CCS. Two independent reviewers will extract data from selected studies using a pre-designed data collection form and quality of the included studies will be assessed. Studies will be categorized into three classes of bias: low, moderate and high risk. The following outcome measures will be reviewed: pre-and post-meditation differences in TL in RCT, and TL of meditators and controls in CCS. This protocol conforms to the Preferred Reporting Items for Systematic reviews and Meta-Analysis (PRISMA) guidelines. It has been submitted to the International Prospective Register of systematic reviews for registration.

Results: The results will provide evidence on the effects of meditation on human TL.

Conclusions: This is the first systematic review to evaluate the effects of meditation on human TL in healthy individuals. This review will evaluate whether meditation has any effects or not on human TL.

Keywords: Healthy population, meditation, systematic review, telomere lengths

PP - 009

Production of a sauce enriched with celery seeds (*Apium graveolens*) comprising antioxidant properties

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Introduction and objectives: Celery (*Apium graveolens*) is a medicinal plant in the family Apiaceae that has nutritional value and health benefits. Previous studies have shown that celery seeds contain antioxidant compounds to remove free radicals from the human body. The current study was carried out with the objective of developing a sauce product enriched with celery seeds and to check the antioxidant properties.

Methods: The sauce was formulated by using soya milk, celery seeds powder and jack fruit seed flour as an alternative base for the sauce. Proximate analysis was carried out according to SLS standard (260:2008). DPPH free radical assay was carried out to check the antioxidant properties of the sauce product. This was done with the methanol extracted sauce sample. Spectrophotometric assay was done with 99% methanol as the control. Absorbance of each of the incubated solutions was determined at 517 nm and IC50 value was calculated from the curve.

Results: The results revealed a 9.1% protein, 0.3% crude fibre, 0.54% fat and 1.0% total ash by mass. Crude protein, total fat and ash content are compatible with standard values given in specification by Sri Lankan Standard Institution (SLS). According to the results obtained, the methanolic extract of sauce showed a higher antioxidant activity because the sauce showed lower IC50 value of 20.17 µg/ml than the standard ascorbic acid IC50 value which is 21.23 µg/ml. Analysis of microbial parameters (aerobic total plate count, yeast and mould count) resulted in counts which compares with SLS standards and shelf life attributes for three weeks suggesting the product as shelf stable for three weeks without using preservatives.

Conclusions: Therefore, the product can be further developed into a commercial food product.

Keywords: Antioxidant properties, *Apium graveolens*, DPPH free radical assay, IC50 value, Spectrophotometric assay

PP - 010

Study of *Monochoria vaginalis* with reference to its identification, medicinal value, distribution and conservation

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Introduction and objectives: *Monochoria vaginalis* (Diya habarala) Pond weed of family Pontederiaceae is native to Sri Lanka and many other Asian countries. This is used as

a medicine to treat numerous ail
present this has been included in
its natural habitat. This study w
medicinal value, distribution,
conservation methods.

Methods: Data gathered from
studies using questionnaires d
general public were utilized in t

Results: *Monochoria vaginalis*
found in marshy areas. This is a
system of medicine for wound
the integumentary system of
wounds, and skin malignancies
property of this plant which he
is used as a vegetable in some
use of non-selective weedicid
reasons for this plant being
including Diya habarala had be
drug preparation. Plants cultiv

Conclusions: *Monochoria*
medicine. Increasing the awa
such as micropropagation ca
for the future.

Keywords: *Monochoria*
malignancies, conservation

PP - 011

Practices and attitud
remedies for diabetes

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Introduction and obje
home remedy for diabetes
has highlighted the requi
assess the practices and at
to identify the factors that

Methods: A cross section
diagnosed with diabetes
Sri Lanka. Data was colle
using SPSS software. Chi

Results: Approximately
for diabetes mellitus. The
(80.6%), Kamaranka (A
11.8% of them have ex
gained their knowledge
consumed herbs along w
forgot to take the pre
Moreover, 74.7% of pa
14.5% believed that he
income level being lo
(p=0.004) were signifi

Conclusions: This stu
self-medication with h
to evidence based inf
relationship which ha
biochemical researches
and awareness progra

Keywords: Self-me