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Data Article

Effect of traditional plants in Sri Lanka on skin fibroblast cell number

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ABSTRACT

This article describes the effects of extracts of several plants collected in Sri Lanka on the cell number of human skin fibroblasts. This study especially focuses on the plants traditionally used in indigenous systems of medicine in Sri Lanka, such as Ayurveda, as described below (English name, "local name in Sri Lanka," scientific name). Bougainvillea plant, "bougainvilla," *Bougainvillea grabla* (Nature's Beauty Creations Ltd., 2014) [1], purple fruited pea egg-plant, "welthibbatu," *Solanum trilobatum* (Nature's Beauty Creations Ltd., 2014) [2], country borage plant, "kapparawalliya," *Plectranthus amboinicus* (Nature's Beauty Creations Ltd., 2014) [3], malabar nut plant, "adhatoda," *Justicia adhatoda* (Nature's Beauty Creations Ltd., 2014) [4], long pepper plant, "thippili," *Piper longum* (Nature's Beauty Creations Ltd., 2014) [5], holy basil plant, "maduruthala," *Ocimum tenuiflorum* (Nature's Beauty Creations Ltd., 2014) [6], air plant, "akkapana," *Kalanchoe pinnata* (Nature's Beauty Creations Ltd., 2014) [7], plumed cockscomb plant, "kiri-henda," *Celosia argentea* (Nature's Beauty Creations Ltd., 2014) [8], neem plant, "kohomba," *Azadirachta indica* (Nature's Beauty Creations Ltd., 2014) [9], emblic myrobalan plant, "nelli," *Phyllanthus emblica* (Nature's Beauty Creations Ltd., 2014) [10]. Human skin

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fibroblast cells were treated with various concentration of plant extracts (0–3.0%), and the cell viability of cells were detected using calcein assay. The cell viability profiles are provided as line graphs.

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Specifications Table

Subject area	Biology
More specific subject area	Cell biology
Type of data	Graph
How data was acquired	Fluorescent microscope (SpectraMax [®] i3x, MOLECULAR DEVICES)
Data format	Analyzed
Experimental factors	Treatment of fibroblast cells with various concentrations of plant extracts
Experimental features	Analysis of cell number by calcein assay
Data source location	Negombo, Sri Lanka
Data accessibility	Data are available within this article

Value of the data

- Data represent changes in fibroblast cell numbers after exposure to several plant extracts.
- These data indicate that several plant extracts regulate fibroblast cell numbers in the dermis, and could be further investigated as pharmacologic and cosmetic agents.
- This article investigates natural agents for the treatment of diseases of dermal tissues.

1. Data

This data article contains line graphs showing the effects of extracts of several plants harvested in Negombo, Sri Lanka, on the cell number of human skin fibroblasts. Cells were treated with various concentrations (0–3.0%) of each plant extracts for 24 h, and percent cell viability was calculated relative to that of untreated controls. Data represent the mean \pm SE values from triplicate independent experiments (* $P < 0.05$, ** $P < 0.001$ and *** $P < 0.001$ vs. control).

2. Experimental design, materials and methods

All plants were collected from a medicinal garden at the Institute of Traditional Plants in Sri Lanka (Negombo, Sri Lanka). Each plants were cleaned with water, dried under shade conditions for 3-days, and cutted in pieces with scissors. Each plant extract were extracted with specific solvents at room temperature for 24 h as described below (plant name, part, solvent(ratio)). The extract were filtered through a filter paper and 0.22 μm filter [11].

Bougainvillea plant, "bougainvilla," *Bougainvillea grabla* [1,12], flower, 70% EtOH(7.5 times(w/w)); purple fruited pea eggplant,"welthibbatu," *Solanum trilobatum* [2,13], shoot, 70% EtOH(4.0 times(w/w)); country borage plant, "kapparawalliya," *Plectranthus amboinicus* [3,14], leaf,70% EtOH(3.0 times (w/w)); malabar nut plant, "adhatoda," *Justicia adhatoda* [4,15], leaf, 70%(5.0 times(w/w)) EtOH; long pepper plant,"thippili," *Piper longum* [5,16], leaf, 70% EtOH(7.5 times(w/w)); holy basil plant, "maduruthala," *Ocimum tenuiflorum* [6,17], shoot, 70% EtOH(3.0 times(w/w)); air plant, "akkapana," *Kalanchoe pinnata* [7,18], leaf, 70% EtOH(2.0 times(w/w)); plumed cockscomb plant, "kiri-henda," *Celosia argentea* [8,19], shoot, 70% EtOH(2.5 times(w/w)); neem plant,"kohomba," *Azadirachta indica*

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