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Data Article

Fibroblast and keratinocyte gene expression following exposure to the extracts of holy basil plant (*Ocimum tenuiflorum*), malabar nut plant (*Justicia adhatoda*), and mblic myrobalan plant (*Phyllanthus emblica*)

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Nelli

ABSTRACT

This data article provides gene expression profiles, determined by using real-time PCR, of fibroblasts and keratinocytes treated with 0.01% and 0.001% extracts of holy basil plant (*Ocimum tenuiflorum*), sri lankan local name “maduruthala”, 0.1% and 0.01% extracts of malabar nut plant (*Justicia adhatoda*), sri lankan local name “adayhoda” and 0.003% and 0.001% extracts of emblic myrobalan plant (*Phyllanthus emblica*), sri lankan local name “nelli”, harvested in Sri Lanka. For fibroblasts, the dataset includes expression profiles for genes encoding hyaluronan synthase 1 (HAS1), hyaluronan synthase 2 (HAS2), hyaluronidase-1 (HYAL1), hyaluronidase-2 (HYAL2), versican, aggrecan, CD44, collagen, type I, alpha 1 (COL1A1), collagen, type III, alpha 1 (COL3A1), collagen, type VII, alpha 1 (COL7A1), matrix metalloproteinase 1 (MMP1), acid ceramidase, basic fibroblast growth factor (bFGF), fibroblast growth factor-7 (FGF7), vascular endothelial growth factor (VEGF), interleukin-1 alpha (IL-1α), cyclooxygenase-2 (cox2), transforming growth factor beta (TGF-β), and aquaporin 3 (AQP3). For keratinocytes, the expression profiles are for genes encoding HAS1,

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HAS2, HYAL1, HYAL2, versican, CD44, IL-1α, cox2, TGF-β, AQP3, Laminin5, collagen, type XVII, alpha 1 (COL17A1), integrin alpha-6 (ITGA6), ceramide synthase 3 (CERS3), elongation of very long chain fatty acids protein 1 (ELOVL1), elongation of very long chain fatty acids protein 4 (ELOVL4), filaggrin (FLG), transglutaminase 1 (TGM1), and keratin 1 (KRT1). The expression profiles are provided as bar graphs.

Specifications Table

Subject area	*Biology*
More specific subject area	*Cell biology*
Type of data	*Graph*
How data was acquired	*Quantitative RT-PCR (LightCycler 96 system, Roche)*
Data format	*Analyzed*
Experimental factors	*Isolation of total cellular RNA, cDNA amplification, PCR analysis*
Experimental features	*Analysis of gene expression by quantitative RT-PCR*
Data source location	*Negombo, Sri Lanka*
Data accessibility	*Data are available within this article*

Value of the data

- Data showing changes in gene expression levels in response to holy basil (*Ocimum tenuiflorum*) extract, malabar nut (*Justicia adhatoda*) extract and emblic myrobalan (*Phyllanthus emblica*) extract exposure are valuable for estimating effects of the extract on fibroblasts and keratinocytes.
- The data presented in this article showing that holy basil (*Ocimum tenuiflorum*) extract, malabar nut (*Justicia adhatoda*) extract and emblic myrobalan (*Phyllanthus emblica*) extract up- or down-regulates the expression of genes involved in epidermal and dermal cells could be important for investigations in pharmacology and cosmetics.
- The present data can be referenced by investigations into chemicals and natural medicines for the epidermal and dermal tissues.
- The data in this article provides useful knowledge for the cosmeceutical application of holy basil extract, malabar nut extract and emblic myrobalan, traditional ayurvedic plants in Sri lanka.

1. Data

This data article contains bar graphs showing gene expression levels in fibroblasts and keratinocytes in response to exposure to 0.01% and 0.001% holy basil plant (*Ocimum tenuiflorum*) extract, 0.1% and 0.01% malabar nut plant (*Justicia adhatoda*) extract, and 0.003% and 0.001% emblic myrobalan plant (*Phyllanthus emblica*) extract, harvested in Negombo, Sri Lanka. For fibroblasts, the dataset includes expression profiles for genes encoding hyaluronan synthase 1 (HAS1), hyaluronan synthase 2 (HAS2), hyaluronidase-1 (HYAL1), hyaluronidase-2 (HYAL2), versican, aggrecan, CD44, collagen, type I, alpha 1 (COL1A1), collagen, type III, alpha 1 (COL3A1), collagen, type VII, alpha 1 (COL7A1), matrix metalloproteinase 1 (MMP1), acid ceramidase, basic fibroblast growth factor (bFGF), fibroblast growth factor-7 (FGF7), vascular endothelial growth factor (VEGF), interleukin-1 alpha (IL-1α), cyclooxygenase-2 (cox2), transforming growth factor beta (TGF-β), and aquaporin 3 (AQP3) (Fig. 1). For keratinocytes, the expression profiles are for genes encoding HAS1, HAS2, HYAL1, HYAL2, versican,