

. Andrologia. 2013 May 26. doi: 10.1111/and.12115. [Epub ahead of print]

Evaluation of 5 α -reductase inhibitory activity of certain herbs useful as antiandrogens.

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Abstract

This study demonstrates 5 α -reductase inhibitory activity of certain herbs useful in the management of androgenic disorders. Ganoderma lucidum (Curtis) P. Karst (GL), Urtica dioica Linn. (UD), Caesalpinia bonducella Fleming. (CB), Tribulus terrestris Linn. (TT), Pedalium murex Linn. (PM), Sphaeranthus indicus Linn. (SI), Cuscuta reflexa Roxb. (CR), Citrullus colocynthis Schrad. (CC), Benincasa hispida Cogn. (BH), Phyllanthus niruri Linn. (PN) and Echinops echinatus Linn. (EE) were included in the study. Petroleum ether, ethanol and aqueous extracts of these herbs were tested for their 5 α -reductase inhibitory activity against the standard 5 α -reductase inhibitor, finasteride. A biochemical method to determine the activity of 5 α -reductase was used to evaluate the inhibition of different extracts to the enzyme. The optical density (OD) value of each sample was measured continuously with ultraviolet spectrophotometer for the reason that the substrate NADPH has a specific absorbance at 340 nm. As the enzyme 5 α -reductase uses NADPH as a substrate, so in the presence of 5 α -reductase inhibitor, the NADPH concentration will increase with the function of time. This method thus implicates the activity of 5 α -reductase. The method proved to be extremely useful to screen the herbs for their 5 α -reductase inhibitory potential. GL, UD, BH, SI and CR came out to be promising candidates for further exploring their antiandrogenic properties.

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PMID: 23710567 [PubMed - as supplied by publisher]

[Related citations](#)

2. Nutr Cancer. 2013;65 Suppl 1:88-97. doi: 10.1080/01635581.2013.785008.

Anticancer Activity of Phyllanthus emblica Linn. (Indian Gooseberry): Inhibition of Transcription Factor AP-1 and HPV Gene Expression in Cervical Cancer Cells.

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Abstract

Plant products of *Phyllanthus emblica* Linn. are traditionally consumed for its immense nutritive and medicinal values. However, the molecular mechanism(s) by which it exerts its effects is less understood. In this study, we investigated mechanism of action of *P. emblica* fruit extract (PE) by studying its effect on activator protein-1 (AP-1) activity and human papillomavirus (HPV) transcription that are essential for tumorigenicity of cervical cancer cells. PE resulted in a dose- and time-dependent inhibition of DNA binding activity of constitutively active AP-1 in both HPV16-positive (SiHa) and HPV18-positive (HeLa) cervical cancer cells. PE-induced AP-1 inhibition was found mediated through downregulation of constituent AP-1 proteins, c-Jun, JunB, JunD, and c-Fos; however, the kinetics of their inhibition varied in both the cell types. Inhibition of AP-1 by PE was accompanied by suppression of viral transcription that resulted in growth inhibition of cervical cancer cells. Growth inhibitory activity of PE was primarily manifested through induction of apoptotic cell death. These results suggest that *P. emblica* exhibits its anticancer activities through inhibition of AP-1 and targets transcription of viral oncogenes responsible for development and progression of cervical cancer thus indicating its possible utility for treatment of HPV-induced cervical cancers.

PMID: 23682787 [PubMed - in process]

[Related citations](#)



3. Evid Based Complement Alternat Med. 2013;2013:609581. doi: 10.1155/2013/609581. Epub 2013 Apr 16.

[Phyllanthus Suppresses Prostate Cancer Cell, PC-3, Proliferation and Induces Apoptosis through Multiple Signalling Pathways \(MAPKs, PI3K/Akt, NFκB, and Hypoxia\).](#)

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Abstract

Phyllanthus is a traditional medicinal plant that has been found to have antihepatitis, antibacterial, and anticancer properties. The present studies were to investigate the in vitro molecular mechanisms of anticancer effects of *Phyllanthus* (*P. amarus*, *P. niruri*, *P. urinaria*, and *P. watsonii*) plant extracts in human prostate adenocarcinoma. The cancer ten-pathway reporter array was performed and revealed that the expression of six pathway reporters were significantly decreased (Wnt, NFκB, Myc/Max, hypoxia, MAPK/ERK, and MAPK/JNK) in PC-3 cells after treatment with *Phyllanthus* extracts. Western blot was conducted and identified several signalling molecules that were affected in the signalling pathways including pan-Ras, c-Raf, RSK, Elk1, c-Jun, JNK1/2, p38 MAPK, c-myc, DSH, β-catenin, Akt, HIF-1α, GSK3β, NFκB p50 and p52, Bcl-

2, Bax, and VEGF, in treated PC-3 cells. A proteomics-based approach, 2D gel electrophoresis, was performed, and mass spectrometry (MS/MS) results revealed that there were 72 differentially expressed proteins identified in treated PC-3 cells and were involved in tumour cell adhesion, apoptosis, glycogenesis and glycolysis, metastasis, angiogenesis, and protein synthesis and energy metabolism. Overall, these findings suggest that *Phyllanthus* can interfere with multiple signalling cascades involved in tumorigenesis and be used as a potential therapeutic candidate for treatment of cancer.

PMCID: PMC3652183 **Free PMC Article**

PMID: 23690850 [PubMed - in process]

[Related citations](#)



4. J Asian Nat Prod Res. 2013 May 16. [Epub ahead of print]

[Two new acetylated flavonoid glycosides from *Phyllanthus urinaria*.](#)

[Wu C](#), [Wei CS](#), [Yu SF](#), [Liu BL](#), [Li YL](#), [Ye WC](#), [Tong GD](#), [Zhou GX](#).

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Abstract

Two new acetylated flavonoid glycosides, quercetin 3-O- α -l-(2,4-di-O-acetyl) rhamnopyranoside-7-O- α -l-rhamnopyranoside (1) and quercetin 3-O- α -l-(3,4-di-O-acetyl) rhamnopyranoside-7-O- α -l-rhamnopyranoside (2), together with two known compounds, quercetin (3) and quercetin 3-O- α -l-rhamnopyranoside (4), were isolated from the ethanol extract of *Phyllanthus urinaria*. The structures of the new compounds were determined on the basis of extensive spectroscopic data including IR, HR-ESI-MS, 1D NMR, and 2D NMR.

PMID: 23679135 [PubMed - as supplied by publisher]

[Related citations](#)



5. Evid Based Complement Alternat Med. 2013;2013:687197. doi: 10.1155/2013/687197. Epub 2013 Apr 7.

[Why urban citizens in developing countries use traditional medicines: the case of](#)

suriname.

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Abstract

The use of traditional medicines (TMs) among urban populations in developing countries and factors underlying people's decision to use TMs are poorly documented. We interviewed 270 adults in Paramaribo, Suriname, using a stratified random household sample, semistructured questionnaires, and multivariate analysis. Respondents mentioned 144 medicinal plant species, most frequently *Gossypium barbadense*, *Phyllanthus amarus*, and *Quassia amara*. 66% had used TMs in the previous year, especially people who suffered from cold, fever, hypertension, headache, uterus, and urinary tract problems. At least 22% combined herbs with prescription medicine. The strongest explanatory variables were health status, (transfer of) plant knowledge, and health status combined with plant knowledge. Other predictive variables included religion, marital status, attitude of medical personnel, religious opinion on TMs, and number of children per household. Age, gender, nationality, rural background, education, employment, income, insurance, and opinion of government or doctors had no influence. People's main motivation to use TMs was their familiarity with herbs. Given the frequent use of self-collected, home-prepared herbal medicine and the fact that illness and traditional knowledge predict plant use rather than poverty or a limited access to modern health care, the potential risks and benefits of TMs should be put prominently on the national public health agenda.

PMCID: PMC3638607 **Free PMC Article**

PMID: 23653663 [PubMed]

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