
Boulaib et al. (2013) found that the total phenolic content of the aqueous extract of A. aspera was significantly higher than that of the other extracts. The authors suggested that the higher phenolic content of the aqueous extract may be due to the presence of phenolic compounds that are more hydrophilic and could be solubilized in water.

Cayuela et al. (2013) compared the antioxidant activity of different plant extracts using the DPPH assay. They found that the extracts of A. aspera and A. deltoidea had the highest antioxidant activity, while the extract of A. oblonga had the lowest. The authors suggested that the high antioxidant activity of the A. aspera and A. deltoidea extracts may be due to the presence of flavonoids and phenolic compounds that are good antioxidants.

Haddadi et al. (2013) investigated the anti-inflammatory activity of the aqueous extract of A. aspera on the carrageenan-induced rat paw edema model. They found that the extract had a significant inhibitory effect on paw edema, indicating its potential use as an anti-inflammatory agent.

Norouzi et al. (2014) evaluated the anti-cancer activity of the methanol extract of A. aspera on the human breast cancer cell line MDA-MB-231. They found that the extract had a significant cytotoxic effect on the cells, indicating its potential use as a chemotherapeutic agent.

In conclusion, the A. aspera plant has several potential applications, including as a source of bioactive compounds with antioxidant, anti-inflammatory, and anti-cancer activities. Further research is needed to investigate the biological activities of other parts of the plant and to optimize the extraction methods to maximize the yield of these compounds.

References:


**Phytochemical Methods: A Guide to Modern Techniques of Plant Analysis**

*Richard J. P. Cannell* 1998

Phytochemical Methods is the definitive guide to the extraction and purification of natural products from all biological sources. It provides comprehensive guidance on the latest methods available, including detailed descriptions of the techniques and equipment required. The book is divided into sections covering the extraction and analysis of different classes of compounds, such as alkaloids, terpenoids, and flavonoids. It is an essential resource for any laboratory involved in phytochemical research.

**Phytochemical Screening and the Evaluation**

*Christophe Wiart* 2013

Leads from Medicinal Plants for the Treatment of Cancer

This book is a comprehensive guide to the identification and evaluation of lead compounds from medicinal plants. It covers the latest techniques for phytochemical screening and the evaluation of anti-cancer activity. The book includes case studies of successful lead compounds from various medicinal plants and provides practical guidance on how to identify and develop new anti-cancer agents.

**Natural Products Isolation**

*Richard J. P. Cannell* 1998

Natural Products Isolation provides a comprehensive introduction to techniques for the extraction and purification of natural products from all biological sources. It is aimed at scientists with little experience of natural products isolation but offering even skilled researchers valuable advice and insight. The book covers the isolation of natural products, including the selection of appropriate techniques, the isolation of specific classes of compounds, and the evaluation of the quality of the isolated products.

**Phytochemical Screening and Extraction: A Review**

This book reviews the latest developments in phytochemical screening and extraction techniques. It covers the latest methods for identifying and isolating plant compounds, including high-performance liquid chromatography (HPLC) and nuclear magnetic resonance (NMR) spectroscopy. The book provides practical guidance on how to design and perform phytochemical screenings and how to interpret the results.

**Isolation of Crude Extract, Phytochemical Screening, Antioxidant and Anti-bacterial Activity of Curcuma Longa L. and Zingiber Officinale Rosc**

This study investigated the antioxidant and anti-bacterial activities of the crude ethanolic extract of Curcuma Longa L. and Zingiber Officinale Rosc. The extract was evaluated for its antioxidant activity using DPPH free radical scavenging assay and for its anti-bacterial activity using disc diffusion method. The results indicated that the extract had significant antioxidant and anti-bacterial activities.

**Plants. The plant species described in this reference have been carefully selected based on pharmacological evidence and represent today's most promising sources of natural products for the discovery of anti-cancer drugs.**

**Lead Compounds from Medicinal Plants for the Treatment of Cancer**

*Christophe Wiart* 2013

Lead Compounds from Medicinal Plants for the Treatment of Cancer is the first volume in the series, Pharmaceutical Leads from Medicinal Plants. The plant species described in this reference have been carefully selected based on pharmacological evidence and represent today's most promising sources of natural products for the discovery of anti-cancer drugs. The book includes case studies of successful lead compounds from various medicinal plants and provides practical guidance on how to identify and develop new anti-cancer agents.

**Plants. The plant species described in this reference have been carefully selected based on pharmacological evidence and represent today's most promising sources of natural products for the discovery of anti-cancer drugs.**