

Bioprospecting Rumphius's *Ambonese Herbal*: Volume I

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Received 10 December 2003; received in revised form 6 July 2004; accepted 18 August 2004

Available online 12 October 2004

Abstract

Collaborating with traditional healers remains a valid method for the identification of potential lead compounds for novel pharmaceuticals. However, the knowledge of these traditional healers is rapidly being lost. Historic herbal texts provide a unique window to identify plants whose specific uses are no longer known. We have identified nine plants in the 17th century *Ambonese Herbal*: Volume I which were documented as having medicinal properties but which have not been examined in the current literature. We demonstrate that by evaluating plant and herb efficacy reports from historic texts, in the context of comprehensive modern databases such as NAPRALERTTM, we can ultimately identify candidate specimens deserving further pharmacological study.

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Keywords: Historic text; Ambon; Rumphius; Indonesia; Ethnobotany; Medicinal; Plants

1. Introduction

Most indigenous societies maintain traditional medicine systems, and even in the United States, 42% of people utilize a form of complementary or alternative medicine (CAM) (Eisenberg et al., 1998) that typically incorporates some aspect of a traditional medicine system. Commonly, such traditional systems support an integration of health care approaches, such as the incorporation of mind–body–spirit healing in traditional Chinese medicine (Yin et al., 1999). These traditional practices often also incorporate plant-based medicines derived from years of trial and error treatment applications (Staughard, 1985). In turn, many plants utilized in traditional medicine systems have yielded lead compounds for pharmaceutical discovery: plant-based pharmaceuticals

represent approximately one-half of the anti-cancer drugs developed since 1960 (Kim and Park, 2002), and have led to over 100 other successful pharmaceuticals (Farnsworth, 1994). Examples of these plant derived compounds include agents, such as etoposide, a semi-synthetic chemotherapeutic agent originally derived from *Podophyllum peltatum* (Vogelzang et al., 1982), and quinine, an agent effective in the treatment of malaria derived from compounds isolated from members of the genus *Cinchona* L. (Waghurka et al., 2003).

The scientific leads for new plant-based pharmaceuticals have typically been generated using either high-throughput screening programs (Hunter, 2001) or ethnobotanical studies (Houghton, 1995). While the major focus for drug discovery has recently shifted to high-throughput screening coupled with computational and molecular modeling (Young et al., 2002), working with traditional healers remains a valid method for the identification of potential compounds for novel pharmaceuticals (Martin and Ernst, 2003; Ram, 2001). However, this important source for potential medicines is threatened, not only because the knowledge of these

Abbreviations: CAM, complementary or alternative medicine; VOC, Dutch East Indies Company; NAPRALERTTM, Natural Products Alert.

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Sean Ekins

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Bioprospecting Rumphiuss Ambonese Herbal College Of Introduction

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