
ETHNOBOTANICAL STUDY OF MEDICINAL PLANTS USED BY THE JAH HUT PEOPLES IN MALAYSIA

K. W. LIN

ABSTRACT

CONTEXT: An ethnobotanical study was carried out among the Jah Hut people who live in the central part of peninsular Malaysia. MATERIALS AND METHODS: The information on the medicinal plants was obtained from interview with a traditional medicinal man. The traditional uses and remedies were documented. The literature searches were carried out for the evaluation on the current status of investigations on these plants. RESULTS: In this study, we present 16 species of plants, which are commonly used among the Jah Hut people to cure some common diseases. DISCUSSIONS: This study is important to preserve the knowledge of medicinal plants used by Jah Hut people. The surveys of phytopharmacological literatures of these plants have great pharmacological and ethnobotanical significance.

KEY WORDS: Ethnobotany, herbs, Jah Hut, Malaysia, medicinal plants

The area of ethnobotanical study is located in Pahang state, the central part of peninsular Malaysia. This study was carried out amongst small ethnic group of ‘Orang Asli’ (aboriginal peoples), Jah Hut, who live in Kampung Keboi (‘Kampung’ means village), within the tropical forest in Jerantut district. The climate is equatorial with an average temperature of 23-32°C. The annual rainfall is between 1525 and 3050 mm/year. These climate conditions allow the growth of diverse plants with economical value and many of which are therapeutically important. There are about 1300 medicinal plant products registered by the Ministry of Health of Malaysia and are available in market.[1]

There are approximately 4000 Jah Hut peoples distributed over 11 villages, which extend along the west bank of Pahang River from Jerantut in the north to Termeloh in the south. They speak the Jah Hut language, which is affiliated to the Mon-Khmer branch of Austroasiatic family. It does assimilate with many Malay words. In Jah Hut language, ‘Jah’ means ‘people’ and ‘Hut’ means ‘no’, however they cannot explain the meaning of these combined words. Kampung Keboi is one of the smallest Jah Hut settlements and has about 100 inhabitants. Jah Hut people live in Malay style houses, which stand on stilts. Their main agricultural activities include rubber tapping, growing rice, and rearing domestic fowls, such as chicken. The wood carving activities are practiced among the Jah Hut. This is not the only source of income, but also an extension

Lviv National Medical University, Lviv, Ukraine

Correspondence:
K. W. Lin, Lviv National Medical University, 69 Pekarska Street, 79010 Lviv, Ukraine. E-mail: lin_kahwai@yahoo.com
of their traditional ideological framework based on their religious beliefs. Although they live in forests, they are not completely isolated, their economical dealing with neighboring people exist since a few 100 years ago.\[3\]

The traditional herbal knowledge is passed from generation to generation in the verbal form by traditional medicinal man or 'bomoh'. In recent years, folk medicine is no more an attraction to the younger generation, they are more dependent on western medicine. They are unable to recognize the herbs and possess very little knowledge on traditional herbal remedies. Nowadays many young people migrate to urban areas for education and job opportunities. As a consequence, only the elder people possess the knowledge of herbs and it is estimated only a handful of people are able to use the traditional remedy to treat illness. Thus, the traditional knowledge is rapidly eroding. In addition, there is a lack of ethnobotanical survey carried out in these areas. For these reasons, the documentation of the traditional uses of indigenous plants are important to preserve their knowledge. The purpose of this study is to investigate the traditional uses and remedies of various indigenous plants, which are commonly used among the Jah Hut people.

**MATERIALS AND METHODS**

All verbal information on the medicinal plants were obtained through an interview with a traditional medicinal man. This was done by Rev. Anthony Naden, a priest of a Catholic Church, who devoted his life in the service of the aboriginal people. The local name, parts of plants used, ailments treated, preparations and mode of uses were recorded. The collected specimens were identified at the species level in the Herbarium of Forest Research Institute Malaysia under supervision of Dr. E. Soepadmo. The voucher specimens were dried, labeled and stored. The search of recent scientific phytopharmacological literatures were carried out in order to obtain the information on the current status of investigations of these plants.

**RESULTS**

In this study, 16 species of plants were documented. The information obtained includes the botanical name, local name, parts of the plant used, traditional uses, preparations and modes of uses. The data recorded in Table 1 are arranged in alphabetical order according to botanical names.

It is worth to note that some of these plants have already been studied experimentally, i.e., *Eurycoma longifolia*, *Hedyotis capitellata*, *Melastoma malabathricum*, *Morinda citrifolia*, *Lycopodiella cernua* and *Vernonia cinerea*. The pharmacological activities reported in recent literatures are recorded in Table 2.

**DISCUSSIONS**

*Eurycoma longifolia* are extensively studied in some institutions in Malaysia and the herbal preparations are available in the market.\[3-12\] It is a popular herb used by many local races of Malaysia and mainly used as aphrodisiac, anti-pyretic and anti-malarial remedy.\[39\] Not surprisingly, Jah Hut people often use it as an aphrodisiac remedy. This observation agrees with various pharmacological studies in which *Eurycoma longifolia* has anti-hyperglycemic, anti-malarial, anti-proliferative, anti-chistosomal, analgesic and aphrodisiac activities are found in both *in vivo* and *in vitro* studies.\[35-37\]

Jah Hut people often use *M. citrifolia* to treat boils by topical application of leaves or fruits. This coincides with pharmacological validation, since boils (impetigo, folliculitis, furuncles, or carbuncles) are often caused by *Staphylococcus aureus; M. citrifolia* possess anti-bacterial properties to counter it.\[30\]

### Table 1: Remedies of plant used by Jah Hut peoples

<table>
<thead>
<tr>
<th>Sr. no</th>
<th>Botanical name (L.)</th>
<th>Local names</th>
<th>Parts used</th>
<th>Traditional uses</th>
<th>Preparations</th>
<th>Modes of uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A. angustifolia (L.) Miq. (Apocynaceae)</td>
<td>Ludoh</td>
<td>Leaves</td>
<td>Headache</td>
<td>Crushed</td>
<td>External application (two to three times daily)</td>
</tr>
<tr>
<td>2</td>
<td>Coptosapelta tomentosa (L.) (Blume) Valeton ex K. Heyne (Rubiacae)</td>
<td>Salah</td>
<td>Roots</td>
<td>Parasitic worm infections</td>
<td>Decoction</td>
<td>Oral (one glass two to three times daily)</td>
</tr>
<tr>
<td>3</td>
<td>Eurycoma longifolia (L.) Jack (Simaroubaceae)</td>
<td>Tongkat Ali</td>
<td>Roots</td>
<td>Virility</td>
<td>Decoction</td>
<td>Oral (two teaspoons daily)</td>
</tr>
<tr>
<td>4</td>
<td>Hedyotis capitellata (L.) Wall. ex G. Don (Rubiacae)</td>
<td>Bubut</td>
<td>Roots</td>
<td>Urinary problems</td>
<td>Decoction</td>
<td>Oral (two to three times daily)</td>
</tr>
<tr>
<td>5</td>
<td>H. populneaus (L.) (Geisl.)</td>
<td>Remaya</td>
<td>Leaves</td>
<td>Headache</td>
<td>Decoction</td>
<td>External application (two to four times daily)</td>
</tr>
<tr>
<td>6</td>
<td>Lycopodiella cernua (L.) Pic. Serm. (Lycopodiaceae)</td>
<td>Paku</td>
<td>Leaves</td>
<td>Vertigo</td>
<td>Crushed with charcoal</td>
<td>External application on face (two to three times daily)</td>
</tr>
<tr>
<td>7</td>
<td>Lygodium flexuosum (L.) Sw. (Schizaaeaceae)</td>
<td>Ribu</td>
<td>Leaves</td>
<td>Measles</td>
<td>Crushed with rice</td>
<td>External application (two to four times daily)</td>
</tr>
<tr>
<td>8</td>
<td>Melastoma malabathricum (L.) (Melastomataceae)</td>
<td>Senuduk</td>
<td>Roots</td>
<td>Diarrhea</td>
<td>Decoction</td>
<td>Oral (one glass two to three times daily)</td>
</tr>
<tr>
<td>9</td>
<td>Maranta arundinacea (L.) (Marantaceae)</td>
<td>Ketap</td>
<td>Roots</td>
<td>Burning feeling in stomach after delivery</td>
<td>Decoction</td>
<td>Oral (one glass two to three times daily)</td>
</tr>
<tr>
<td>10</td>
<td>Morinda citrifolia (L.) (Rubiaceae)</td>
<td>Mengkudu</td>
<td>Leaves, fruits</td>
<td>Boils on head</td>
<td>Decoction (leaves, fruits) crushed (fruits)</td>
<td>External application (two to three times daily)</td>
</tr>
<tr>
<td>11</td>
<td>P. minima (L.) (Solanaeaceae)</td>
<td>Lepung</td>
<td>Leaves, roots</td>
<td>Pain below naval</td>
<td>Decoction</td>
<td>Oral (one glass four to five times daily)</td>
</tr>
<tr>
<td>12</td>
<td>Pseudostemthrum crenulum (L.) (Lindl.) Radik. (Acanthaceae)</td>
<td>Seemelet</td>
<td>Leaves</td>
<td>Boil on body</td>
<td>Decoction</td>
<td>External application (two to four times daily)</td>
</tr>
<tr>
<td>13</td>
<td>P. piloseboides (L.) M.G. Price (Polypodiaceae)</td>
<td>Titik</td>
<td>Leaves</td>
<td>Pain on body</td>
<td>Crushed/ decoction</td>
<td>For crust, external application/or decoction, oral (one glass two to three times daily)</td>
</tr>
<tr>
<td>14</td>
<td>Smilax lanceifolia (L.) Dunnon (Smilacaceae)</td>
<td>Noon</td>
<td>Leaves</td>
<td>Pricking pain</td>
<td>Crushed</td>
<td>External application</td>
</tr>
<tr>
<td>15</td>
<td>Smilax myosotiflora (L.) (Smilacaceae)</td>
<td>Ubi Jaga</td>
<td>Bulbs</td>
<td>Viritility, back pain</td>
<td>Decoction</td>
<td>Oral (one glass two to three times daily)</td>
</tr>
<tr>
<td>16</td>
<td>Vernonia cinerea (L.) [Less. (Compositae)]</td>
<td>Trombe</td>
<td>Leaves, roots</td>
<td>Asthma</td>
<td>Decoction</td>
<td>Oral (one glass two to three times daily)</td>
</tr>
</tbody>
</table>
Table 2: Pharmacological activity of plants reported in literatures

<table>
<thead>
<tr>
<th>Plants</th>
<th>Pharmacological activity reported in literatures</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Eurycoma longifolia</td>
<td>Anti-hyperglycemic, anti-malarial, anti-proliferative, anti-schistosomai, anxiolytic, aphrodisiac</td>
<td>3-17</td>
</tr>
<tr>
<td>2. Hedychium capistratum</td>
<td>Anti-bacterial</td>
<td>18</td>
</tr>
<tr>
<td>3. Lycodendron cernua</td>
<td>Anti-bacterial, anti-fungal</td>
<td>18, 19</td>
</tr>
<tr>
<td>4. Melastoma malabathricum</td>
<td>Anti-bacterial, anti-nociceptive, anti-proliferative, anti-viral</td>
<td>18, 20, 21</td>
</tr>
<tr>
<td>6. Vernonia cinerea</td>
<td>Analgesic, anti-bacterial, anti-inflammatory, anti-pyretic</td>
<td>33-38</td>
</tr>
</tbody>
</table>

Jah Hut people often use V. cinerea to relieve asthma. Asthma is reversible airway obstruction associated with mucosal inflammation caused by mast cells and basophils degranulation resulting in the release of inflammatory mediator. Recent studies revealed the anti-inflammatory activities of V. cinerea,\(^{24,39}\) therefore it is reasonable to use it in relieving asthma.

Other plants, which were not documented in phytopharmacological literatures and of interest may be exploited so that the underlying mechanisms in different diseases of treatment by pharmacological methods can be done. This approach has great significance in discovery novel pharmacological agents in various treatments of diseases.

ACKNOWLEDGMENTS

The author thanks Rev. Anthony Naden for his help in obtaining information; Dr. E. Soepadmo for plants identification; Dr. Stan Moore for his comments on this article.

REFERENCES

2. Couillard MA. Tradition in tension: carving in a Jah Hut community. School of Comparative Social Sciences, University Sciences of Malaysia Press; 1980.


