



## Aphrodisiac Food Ingredients from the Twelve Thai Ancient Formulary Books of Police Captain Bhiam Bunyachot

Vadhana Jayathavaj<sup>a\*</sup> & Ubol Chuensumran<sup>b</sup>

<sup>a</sup> Thai Traditional Medicine Program, Pathumthani University, Pathumthani 10200, Thailand

<sup>b</sup> Department of Food Processing Technology, School of Culinary Arts, Suan Dusit University, Bangkok 10700, Thailand

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### Abstract

An aphrodisiac is defined as any food or drug that arouses the sexual instinct, induces venereal desire and increases pleasure and performance. There are many commercial advertisements related to herbal supplements that claim to have an aphrodisiac property. But the claims almost always come from the long-standing belief or traditional wisdom (Chinese or Ayurveda) with no scientific support. To support “food is medicine”, the aphrodisiac herbs from Thai ancient drugs were explored from private formulary books. The properties of aphrodisiac formulas in the formulary texts were classified into four groups as follows: 1) anti-aging, 2) physical strength and power, 3) healthy sex, and 4) relief from erectile dysfunction. The herbs that appears in Thai foods in everyday life with claimed medication results from the formulary textbooks were identified. They were 49 food ingredients from 143 herbs presented in 62 aphrodisiac formulas. The herbs with herbal aphrodisiac groups (1 and 2 and 3 and 4) were ranked by the number of times they appeared thusly; Pepper, Galingale (Finger root), Ginger, Long pepper, and Nutmeg. The paper correlates the herbal foods traditionally used aphrodisiacs with recent scientific validation for the management of sexual health.

### Introduction

Sexual health, physical health, mental health, and overall well-being are all positively associated with sexual satisfaction, sexual self-esteem, and sexual pleasure (Anderson, 2013). Sexual well-being is presented as part of “Subjective Well-Being (SWB)”, SWB concerns peoples’ self-reported assessment of their own well-being (Hicks, 2011; ONS, 2010). The nationally representative panel survey of community-

dwelling men and women aged 50 years and older in England (Steptoe et al., 2013) of which the 7,079 (67%) completing and returning the paper-based Sexual Relationships and Activities Questionnaire (SRA-Q), men and women who reported either infrequent/no sexual activity, or were sexually active but reported sexual problems, generally had lower SWB than those individuals identified in Class 1 (Class 1 consists of those with frequent levels of sexual desire, intercourse, and other partnered sexual activity, a low frequency of

masturbation, and no problems with erectile function or reaching orgasm). Poorer SWB in men was more strongly associated with sexual function difficulties, whereas in women desire and frequency of partnered activities appeared more important in relation to SWB (Lee et al., 2016).

An aphrodisiac is defined as any food or drug that arouses the sexual instinct, induces venereal desire and increases pleasure and performance. To overcome sexual dysfunction, the seeking of the aphrodisiac substances from plants, animals or minerals since time immemorial to serve the passion of man (Yakubu et al., 2005). A lot of natural substances have historically been known as aphrodisiacs in Africa and Europe, like yohimbine and the mandrake plant, as well as ground rhinoceros horn in the Chinese culture and “Spanish fly” which is actually toxic (Ang et al., 1997; Evans, 1969). Even in today's culture, there are certain foods that are used as aphrodisiacs, including strawberries and raw oysters. Chocolate, coffee, and honey are also believed to have aphrodisiac potential. Although these natural items are claimed as aphrodisiacs, there is no or little scientific confirmation supporting those assertions (Kotta et al., 2013).

Thai Traditional Medicine Theory (TTM), starting from King Narai the Great's Medicinal Textbook (1917), the core theory is the equilibrium of the four elements through body elements, seasons of the year, age, time period in a day, and habitat; the tastes of drugs and the 82 drug formulas were presented without how to formulate them. Until Ratanakosin Kingdom, the Bhsart Songkroh Medicinal Book has the scriptures specific to the disease symptoms with the drug formulas to solve those symptoms, also without how to formulate them (Thai Language Institute, 2000). The properties of each part of the herb was also first established in King RAMA II period by His Royal Highness Prince Wongsā Dhiraj Snid (1808-1871 AD), without any biochemical laboratory, but from his experience and investigations (Auttakaweeajak, 1919; Suntravej, 1932). The periodic table was first established by the Russian chemist Mendeleev in 1869 (Royal Society of Chemistry, 2020). In ancient Thai medicine, there are many official medicinal texts which are not directly mentioned about improving sexual health. The private Thai herbal formulary collections are more straightforward in that they claim the formula's property in improving sexual activities.

Police Captain Bhiām Bunyachot (Pol. Capt.

Bhiām) was born in Nakhon Si Thammarat, studied astrology since he was a child. He was also known Thai drugs from his home that selling herbs starting from 10 years old. He had an experienced in healing his own hemorrhoids, two eye blindness, and prong feet sweating until normal. At 14 years old, he experienced conjunctivitis and went blind, the Muslim tradition from Narathiwat suggested the medicine should consist of one handful of the gourd leaf (“Bai Tam Lung” in Thai), one handful of the orange banyan treetop (“Tsai Som” in Thai), pound together filling a banana leaf bowl (krathong) exposed to the dew for one night, wrapped with white cloth and squeezed with water added if there was not enough liquid, and mixed with the python bile in the amount of 3 heads of matches, and used as eye drops 1-5 times a day. Within 3 weeks his eyes were reported to be normal again (Bunyachot, 1972). After he was ordained he moved to Bangkok. He operated a drug store in 1937 but was forced out of business because of his political activities. From borrowing and copying many herbal drug formulas, he decided to publish them between 1971 to 1982 (Bunyachot, 1982), they were 12 books with total 4,682 pages (The number of pages per book are average 390.16, minimum 312, and maximum 455). Pol. Capt. Bhiām's formulary texts have the highest number of formulas among the formula collections.

In these 12 books, there are many Thai ancient herbal drug formulas, their medicinal properties cover a broad range of diseases in Thai life, including aphrodisiac activities for anti-aging, more strength, more powerful sex, and recovery from erectile dysfunction. They are many “Iron flagpole” formulas that claimed penile erection activity (stand up like iron flagpole). Flagpole is implied the male sex organ. The word “Iron flagpole” (“Soa Thong Lhek” in Thai) came from the story that many people asked Pol. Capt. Bhiām which items they should offer to make merit and they will always have a powerful sex organ. By that time, Siamrath Newspaper answered that it should be “Iron flagpole” (Bunyachot, 1971b).

To support “food is medicine”, the aphrodisiac herbs presented in Thai ancient drugs of which recorded in the formulary books were explored. Each formula was analyzed with the aphrodisiac criteria and the herbs in that formula were classified by their claimed medical results. The herbs that appears in Thai foods in everyday life with claimed medication results from the formulary textbooks were identified.

## Data sources

The twelve Thai ancient formulary books of Pol. Capt. Bhiam during 1971 to 1982 were the sources of input data (Bunyachot, 1971a, 1971b, n.d.a, n.d.b, 1975, n.d.c, n.d.d, 1979, n.d.e, n.d.f, 1982). The herbal drug formula was included in data processing when the formula mentioned about their properties, claims, and stories related to the 4 aphrodisiac properties; Group 1: anti-aging; become younger-looking, glowing skin, good looking, and more youthful appearance, Group 2: more strength, more power, Group 3: good sex, power and performance, and Group 4: relief from erectile dysfunction. Apart from Group 1, the rest 3 groups are the sexual health formula for men were included. An aphrodisiac drug formula composed of one or many herbs, each herb presented in the formula should contribute their aphrodisiac properties to the formula.

In the original official Thai traditional medical texts, the texts has the formulas attach to the disease symptoms, this means that the herbs in that formula have to transfer some properties to the formula claimed properties. The first book of herbal properties had only 166 herbal items, the textbook was written by His Royal Highness Krom Luang Wongsa Dhiraj Snid, and presented in National Library in 1915 (B.E. 2458) (Division of protection and promotion of Thai traditional medicine and indigenous medicine, 2016). There are 1,390 herbs in the 3 Thai drugs compilation books (The school of ancient medicine Wat Pra Chetuphon, 1994; 1978a;1978b), and the tailoring the drug formula from the properties of each herb to match the symptom had a broad guideline (Bureau of Sanatorium and Art of Healing, 1998). In search of the properties of each aphrodisiac herb, this study identified the herb properties from the property of the formulas that the herb was in.

## Data Processing

To perform data processing in deriving the properties of the herb from the formula property of which that herb was in, the data records were organized in two formats; the format of drug formula consisted of the formula identification code, book number, page number, formula name, the number of herbs in a formula and formula properties (Group 1 or Group 2 or Group 3 or group 4), and the format of herb presented in each formula consisted of the formula identification code, herb name, and the property of the formula that the herb was in. The spreadsheet program was used to process both the drug formula data, and the herb data that belong to

each formula, the frequency count, percentage, and basic statistics were used to describe the findings.

Remark: The classification of both drug formulas and herbs was dependent on the data shown in the aphrodisiac delineations from the twelve Thai ancient formulary books that were recorded based on knowledge or texts passed down over generations by Pol. Capt. Bhiam only.

## Foods Ingredients in the aphrodisiac drug formulas

The 62 aphrodisiac drug formulas were founded, and classified into four drug formula aphrodisiac group; Group 1 (Anti-aging), Group 2 (More strength), Group 3 (Healthy sex), and Group 4 (Relief from erectile dysfunction).

Review of the twelve books showed that the aphrodisiac formulas appeared in only seven books, the formulas classified by the book number and the number of herbs in each formula was shown in Table 1. The number of herbs in the formula ranged from 1 to 17, average 6.63, with standard deviation 4.00.

**Table 1** The aphrodisiac formula classified by book number and number of herbs in formula

Book No.	Unit in number of drug formulas															
	Number of herbs in each formula (No duplicated formulas)															
	1	2	3	4	5	6	7	8	9	10	11	12	16	17	Total	
1						1						1			2	
2	1	3	5	4	3	2	1	1	3	1	1	1	2	1	29	
3	1	2	2	1		3	2	1						1	13	
5			1				1		1						3	
8			1			1		1	1		1				5	
10		1			3	1		2	1	1					9	
12				1											1	
<b>Total</b>	<b>2</b>	<b>6</b>	<b>9</b>	<b>5</b>	<b>4</b>	<b>9</b>	<b>6</b>	<b>3</b>	<b>7</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>3</b>	<b>2</b>	<b>62</b>	

There was no criteria or standard related to number of herbs in one formula; for example, the Yahom Intajak has 58 herbs. To make the table compact, the formula group size by the number of herbs was a small 1-5, a medium 6-10, and a large 11-17 (excepted 13-15). The herbs in the small group may have efficacy straight to the formula claimed properties, while the group of herbs is bigger, each herb in the bigger group made less contribution to the properties of the formula or may be added to another support properties. The number of formulas classified by the drug formula aphrodisiac Group 1 (Anti-aging) and Group 2 (More strength) had 6-10 herbs at 50 % each group, Group 3 (Healthy sex) had 1-5, 6-10, and 11-17 herbs at 31 %, 38 %, and 31 %, respectively, and Group 4 (Relief from erectile dysfunction) had 1-5 herbs at 67 %, as shown in Table 2.

**Table 2** The aphrodisiac formula classified by number of herbs in formula and their properties

Number of herbs in the formula	Drug Formula Aphrodisiac Groups				Total
	Group 1 (Anti-aging)	Group 2 (More strength)	Group 3 (Healthy sex)	Group 4 (Relief from erectile dysfunction)	
1 - 5	11	2	5	8	26
6 - 10	14	3	6	4	27
11 - 17	3	1	5	0	9
Total	28	6	16	12	62
Percent	45%	10%	26%	19%	100%
1 - 5	39%	33%	31%	67%	42%
6 - 10	50%	50%	38%	33%	44%
11 - 17	11%	17%	31%	0%	15%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

The 143 herbs were presented in 62 aphrodisiac formulas, and the number of herbs classified by the combination of the drug formula aphrodisiac group (the herbal aphrodisiac group code) was shown in Table 3. The 49 of 143 plants from the formulary texts are in our everyday Thai food culture. Eight herbs had properties that cover the four aphrodisiac groups (Group 1 and Group 2 and Group 3 and Group 4 or Group Code 1234) and the top 5 of them by the number of formulas they appeared, were spicy food ingredients; they were Pepper, Galingale (Finger root), Ginger, Long pepper, and Nutmeg, as shown in Table 4.

The plant data base websites from of Plant Genetic Conservation Project Office (n.d.), the Botanical Garden Organization (2011) and Faculty of Pharmaceutical Sciences, Ubon Ratchathani University (2010) were studied to find the scientific name of the 49 plants in Table 4.

**Table 3** The herbs in aphrodisiac drug formulas classified by the herbal aphrodisiac group code and the number of herbs use as food

The herbal aphrodisiac group code	Description	Total number of herbs [a]	Percent	The number of herbs use as food [b]	Percent [b/a]
1	Anti-aging	35	24%	14	40%
2	More strength	1	1%		
3	Healthy sex	28	20%	13	46%
4	Relive from erectile dysfunction	19	13%	4	21%
12	1 and 2	3	2%	2	67%
13	1 and 3	13	9%	5	38%
14	1 and 4	1	1%		
23	2 and 3	5	3%	1	20%
34	3 and 4	13	9%	1	8%
123	1 and 2 and 3	12	8%	2	17%
124	1 and 2 and 4	1	1%		
134	1 and 3 and 4	2	1%	2	100%
234	2 and 3 and 4	2	1%		
1234	1 and 2 and 3 and 4	8	6%	5	63%
<b>Total</b>		<b>143</b>	<b>100%</b>	<b>49</b>	<b>34%</b>

The academic articles on the top five herbs from Pol. Cap. Bhiam's formulary books are as follows; (1) Pepper or Black pepper (*Piper nigrum* L.) have testosterone 5 $\alpha$ -reductase inhibitory effects due to its capability to catalyze the conversion of testosterone (Hirata et al., 2007). The fruit extract of black pepper potentially affects sexual drive in male mice, observing 4 groups of male mice that were given pellets with and without black pepper extract. Male mice fed on aqueous as well as ethanol extract of black pepper significantly showed a shorter courtship latency ( $p < 0.05$ ) (Sutyarso & Rosa, 2015); (2) Galingale or Fingerroot (*Boesenbergia rotunda* L.) is a daily food ingredient and traditional medicinal plant in Southeast Asia and Indo-China. It has been shown to possess anti-allergic, antibacterial, anticancer, anti-inflammatory, antioxidant, antiulcer activities and wound healing. Its phytochemical components include alkaloids, essential oils, flavonoids, and phenolics, and also rich in boesenbergin, krachazin, panduratin, and pinostrobin, all of which has been reported its remedial properties including aphrodisiac property (Ongwispaiboon & Jiraungkoorskul, 2017); (3) Ginger (*Zingiber officinale* Rosc. red clone) has the oleoresin compound that reported to function as an aphrodisiac. It is traditionally used to solve problems related to sexual dysfunction. (Anandita et al., 2012); (4) Long pepper or Pippali (*Piper longum* L.) is a rejuvenating herb with a warming, stimulating and kapha reducing action in Indian Ayurveda. Its oily nature prevents it from drying making it suitable for vata and its pleasant post digestive effect makes it more calming to pitta than other hot spices and herbs. It aids blood flow to the reproductive tissues when taken in combination with Ashwagandha (Chauhan et al., 2014; Dass, 2007). Pippali is one portion among 8 herbs in the Phala Ghrita (PG) which reported to be useful in improving fertility. Virechana (therapeutic purgation) is largely indicated for cases having a semen abnormality (shukra dushti). Administration of PG after performing virechana provided statistically highly significant improvement on various seminal parameters related to male infertility including oligozoospermia (Varsakiya et al., 2019); and (5) Nutmeg (*Myristica fragrans* Houtt.) has been mentioned in Unani medicine to be of value in the management of male sexual disorders. The extracts (50 % ethanolic) of nutmeg and clove enhanced the sexual behavior of male mice (Tajuddin et al., 2003).

Even the herbs with aphrodisiac properties are in the everyday food table, but the more consuming with

**Table 4** The aphrodisiac food ingredients and the drug formula aphrodisiac group

The herbal aphrodisiac group code	Common name	Scientific name	Unit in number of drug formulas					
			Drug formula aphrodisiac group					
			Group 1	Group 2	Group 3	Group 4	Total	
1234	Pepper	<i>Piper nigrum</i> L.	19	4	12	2	37	
	Galingale (Finger root)	<i>Boesenbergia rotunda</i> (L.) Mansf.	12	1	11	1	25	
	Ginger	<i>Zingiber officinale</i> Roscoe	7	2	5	1	15	
	Long pepper	<i>Piper retrofractum</i> Vahl	7	1	2	2	12	
	Nutmeg	<i>Myristica fragrans</i> Houtt.	4	1	4	1	10	
134	Salt	Sodium chloride	3		2	1	6	
	Wild betal, Leaf bush	<i>Piper sarmentosum</i> Roxb.	3		2	1	6	
123	Caraway seed	<i>Cuminum cyminum</i> L.	1	1	1		3	
	Blood leaf	<i>Iresine herbstii</i> Hook.	1	1	1		3	
34	Bottle gourd	<i>Lagenaria siceraria</i> (Molina.) Standl.			1	1	2	
23	Hen's egg ( <i>not a plant</i> )	<i>Gallus domesticus</i>		1	1		2	
13	Garlic	<i>Allium sativum</i> L.	4		1		5	
	Shampoo ginger, Wild ginger	<i>Zingiber zerumbet</i> (L.) Smith.	3		2		5	
	Cardamom	<i>Wurfbainia testacea</i> (Ridl.) Skornick. & A. D. Poulsen	2		1		3	
	Honey	<i>Apis mellifera</i> L.	1		2		3	
	Cultivated banana	<i>Musa sapientum</i> L.	1		1		2	
12	Leech lime	<i>Citrus hystrix</i> DC.	2	1			3	
	Cobra (snake)	<i>Naja Kaouthia</i>	1	1			2	
4	Lemongrass	<i>Cymbopogon citratus</i> Stapf.				1	1	
	Ma khuea chae khrua	<i>Securidaca inappendiculata</i> Hassk.				1	1	
	Coconut	<i>Cocos nucifera</i> L. var. <i>nucifera</i>				1	1	
	Rattan	<i>Calamus caesius</i> Blume				1	1	
3	Bael fruit, riped	<i>Aegle marmelos</i> (L.) Correa ex Roxb.			2		2	
	Cow milk	<i>Bos primigenius</i>			2		2	
	Ginseng	<i>Panax ginseng</i> C.A.Mey.			1		1	
	Korean Ginseng	<i>Panax ginseng</i> C.A.Mey.			1		1	
	Water Chestnut	<i>Trapa bicornis</i> Osbeck.			1		1	
	Paddy Rice	<i>Oryza sativa</i> L. var. <i>indica</i>			1		1	
	Red cotton tree	<i>Bombax ceiba</i> L.			1		1	
	Winged Bean	<i>Psophocarpus tetragonolobus</i> (L.) DC.			1		1	
	Water lily	<i>Nymphaea nouchali</i> Burm.f.			1		1	
	Lotus	<i>Nymphaea lotus</i> L. var. <i>pubescens</i> Hook.f. & Th.			1		1	
	Tamarind	<i>Tamarindus indica</i> L.			1		1	
	Cinnamon	<i>Cinnamomum</i> spp.			1		1	
	Butter ( <i>not a plant</i> )	made from cow's milk			1		1	
	1	Cock roach berry (Dutch egg plant or India night shade)	<i>Solanum aculeatissimum</i> Jacq.	3				3
			<i>Solanum trilobatum</i> L.	3				3
Bush tomato (Engl.) Indian night shade (Engl.), Poison berry (Engl.)		<i>Solanum indicum</i> L.	3				3	
Indian Mulberry		<i>Morinda citrifolia</i> L.	3				3	
Clove		<i>Syzygium aromaticum</i> (L.) Merr. & L.M.Perry	2				2	
Licorice		<i>Glycyrrhiza glabra</i> L.	2				2	
Galangal		<i>Alpinia galanga</i> (L.) Willd.	1				1	
Black glutinous rice		<i>Oryza sativa</i> var. <i>glutinosa</i>	1				1	
Safflower		<i>Carthamus tinctorius</i> L.	1				1	
Gotu kola		<i>Centella asiatica</i> Urban.	1				1	
Fang		<i>Caesalpinia sappan</i> L.	1				1	
Indian Gooseberr		<i>Phyllanthus emblica</i> L.	1				1	
Lime		<i>Citrus aurantifolia</i> (Christm.) Swingle.	1				1	
Bitter orange		<i>Citrus medica</i> L.	1				1	

more expectations will face over dose or the food and drug interactions (FDI) for the person who take medication regularly. FDI can significantly affect the outcome of patients' health. Certain foods and specific nutrients in foods, may affect the overall bioavailability, pharmacokinetics, pharmacodynamics and therapeutic efficacy of medications. FDI occurs due to extension of drug action or due to interaction between the drug and herbal medicines (HDI) as well as dietary supplements and food products, some HDI also showed their potential to make the drugs ineffective, others posed a dangerous risk of toxicity (Benni et al., 2012; Ladd, 2018). The physicians and pharmacists prescribe drugs cautiously with only suitable food supplement to get maximum benefit for the patients with minimum interactions between different foods and drugs (Bushra et al., 2011). The safety and effectiveness of the ancient aphrodisiac herbal drug formula would be prescribed by the registered Thai traditional medical professions.

## Conclusion

From the twelve Thai ancient formulary books of Pol. Capt. Bhiam during 1971 to 1982, all aphrodisiac properties were selected including (1) anti-aging, become younger, glowing skin and youthful looks, (2) more strength, more power, (3) good sex power and performances and (4) relief from erectile dysfunction. The 49 food ingredients out of 143 herbs from 62 aphrodisiac formulas were food in our everyday life, the 8 herbs had properties that covered all the drug formula aphrodisiac groups (Group 1 and Group 2 and Group 3 and Group 4 or Herbal Aphrodisiac Group Code 1234) and the top 5 of them were spicy food ingredients; they were Pepper, Galingale (Finger root), Ginger, Long pepper and Nutmeg. However, there are many commercial advertisements related to the herbal supplements with aphrodisiac properties by long-standing beliefs or traditional wisdom (Chinese or Ayurveda) with no scientific support. To have more confidence in sexual health activity of the herbs from Pol. Capt. Bhiam's formulary texts, self- observation after consumed will be appropriate to find the right one.

## Acknowledgment

Pol.Capt. Bhiam Bunyachot, who published his collecting efforts - the twelve books of ancient medicine formulas. At this present time, the formulary texts out of

the store of "Kasembunnakij", but some of them are available in the old books for sales in social networks.

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