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Sumanasinghe BGSM
PG Scholar, Dravyaguna
department, I.P.G.T. & R.A.,
GAU, Jamnagar-361008,
Gujarat, India.

Nishteswar K
Prof & HOD of Dravyaguna
department, I.P.G.T. & R.A.,
GAU, Jamnagar-361008,
Gujarat, India.

Unnikrishnan Vidhya
Ph.D Scholar, Dravyaguna
department, I.P.G.T. & R.A.,
GAU, Jamnagar-361008,
Gujarat, India.

Correspondence
Sumanasinghe BGSM
MD Scholar, Department of
Dravyaguna, I.P.G.T & R.A.,
Gujarat Ayurved University,
Jamnagar-361008, Gujarat,
India.

Aphrodisiac activity of vrishya drugs delineated by Bhavamisra: A review

Sumanasinghe BGSM, Nishteswar K, Unnikrishnan Vidhya

Abstract

Aphrodisiacs are the substances which are used to increase libido and to promote the fertility. *Bhavprakash Samhita* one of the *Laghutrayi* mentioned *vrishya* and *sukrala* drugs useful in the management of male infertility and erectile dysfunction. Certain *vrishya* and *sukrala* drugs such as *gokshura*, *kapikachhu*, *shatavari*, *ashwagandha* etc. are mentioned in *Bhavprakashasamhita* have provided scientific evidence for their aphrodisiac activity.

Keywords: Aphrodisiac, *Bhavprakashasamhita*, *Vrishya*, *Shukrala*, *Laghutrayi*

1. Introduction

Infertility is a worldwide medical and social problem affecting more than 10-15 % married couple. WHO estimates that there are 60-80 million infertile couples worldwide [1]. Research during the past two decades has an unfolded focus on impotence, premature ejaculation and male infertility. Although the use of allopathic medicines have shown significant improvement in treating sexual disorders, but they are not devoid of side effects. These include irregularities of the rhythm of the heart, suicidal tendencies, mental disorders and tremors. Aphrodisiacs are the substances which are used to increase sexual activity and help in promoting fertility. Sexual feelings are an inevitable part of life. The basic and fundamental purpose of sex and sexuality is the "continuation of progeny" and the survival of human race [2]. The use of synthetic aphrodisiacs results in the dilatation of blood vessels in other parts of the body causing headache and fainting. Thus, there is growing need to look for aphrodisiacs more from natural remedies or herbal in origin as opposed to synthetic compounds which are known to cause severe unwanted side effects [3]. *Charaka* advocates to use *vrishya* drugs regularly for possessing pleasure, wealth and fame and it helps in begetting male progeny which is the resort of those qualities. He further quotes that potency (libido or *shakti*) is based on exhilaration which again depends on the strength of body and mind [4]. *Vajikarana* (Aphrodisiac) helps to potentiate a man to traffic into women like a horse and drugs which are sweet in taste, unctuous, *bala* (strength) promoting, vitalize and exhilarating the mind are utilized for increasing libido [5].

Vajikarana tantra is one of the eight branches of Ayurveda which is meant for providing affluence, purity, increase and secretion in case of little, defective, deficient, and dried semen respectively and also for producing exhilaration. According to *chakrapani* drugs possessing *vrishya* karma act both as aphrodisiac and spermatopoietic medicine. *Bhavprakashasamhita* one of the *Laghutrayi* mentioned *vrishya* and *sukrala* (increases semen) drugs in the *nighantu* portion and *vajikarana* chapter of treatise [6].

2. Results & Discussion

Bhavamisra mentioned in total 124 drugs and cooked food preparations (*Kritannavarga*) in the *nighantu* portion of the treatise. He mentioned 45 herbal drugs possessing *vishwakarma* in the four chapters namely *Haritakyadi*, *Guduchyadi*, *Karpooradi* and *Vatadivarga*. Other drugs include 5 in *pushpavarga*, 13 in *phalavarga*, 5 in *dhatvadivarga*, 3 in *shakavarga*, 9 in *dhanyavarga*, 9 in *masmsavarga*, 8 in *dugdha varga*, 4 in *dadhivarga*, 2 in *ghritavarga*, 3 in *tailavarga*, 6 in *madhuvarga* and 12 food preparations in *kritannavarga*.

Table 1: Vrishya drugs mentioned in *Bhavprakashasamhita- Nighantu portion*

S. No	Name of herb	Botanical name	Reported research activity
1.	Ajamoda*	<i>Apium graveolens</i> Linn.	-
2.	Alarka	<i>Calotropis procera</i> (Ait) Ait. F	-
3.	Amalaki*	<i>Phyllanthus emblica</i> Linn.	-
4.	Arka	<i>Calotropis gigantea</i> (Linn.) R.Br.	-
5.	Asthisamharaka	<i>Cissus quadrangularis</i> Linn.	-
6.	Bhadramunja	<i>Saccharum munja</i> Roxb.	-
7.	Bhallataka	<i>Semecarpus anacardium</i> Linn. F	Chloroform extract of seeds 150 mg/Kg and 300 mg/Kg; p.o- Sexual function improving effect. - Significantly increase the mating behavior of male wistar mice [7].
8.	Dugdhika	<i>Euphorbia hirta</i> Linn.	-
9.	Eraka	<i>Typha elephantina</i> Roxb.	-
10.	Gambari*	<i>Gmelina arborea</i> Roxb.	-
11.	Gandhaprasarini	<i>Paederia foetida</i> non Linn.	Ethanol extract of leaves 50, 100 and 200 mg/kg body weight - Sexual behavior, spermatogenesis and serum testosterone level - Significantly increased both mount and intromission frequency [8].
12.	Gokshura*	<i>Tribulus terrestris</i> Linn.	Extract of Seeds - Sexual behavior and intracavernous pressure. - Sexual behaviour parameters as evidenced by increase in MF and IF; decrease in ML, IL and PEI. These results were statistically significant [9, 10].
13.	Guggulu*	<i>Commiphora mukul</i> (Hook. ex Stocks) Engl.	-
14.	Gunja	<i>Abrus precatorius</i> Linn.	Ethanol seed extract, 20 and 60 mg/kg - Antifertility activity – Highly significant decrease in daily sperm production and highly significant increase in DNA damage was observed [11].
15.	Kapikachhu*	<i>Mucuna pruriens</i> (Linn.) DC.	Ethanol extracts of seeds 150 mg/kg, 200 mg/kg, 250 mg/kg - Analyze the mating behavior - Significantly increased the mounting frequency, intromission frequency and ejaculation latency, and decreased the mounting latency, intromission latency, post-ejaculatory interval and inter-intromission interval. The potency test significantly increased erections, quick flips, long flips and total reflex [12].
16.	Karpura*	<i>Cinnamomum camphora</i> (Linn.) Nees et Eberm.	Crystalline ketone, 50 mg/kg with olive oil - Sexual behavior. - No significant difference in MF or IF from control and experimental groups. However, at the 50 mg/kg dose, camphor reduced the ML and IL relative to that of control rats [13].
17.	Khakhashtila*	<i>Papaver somniferum</i> Linn.	-
18.	Kokilaksha	<i>Asteracantha longifolia</i> (Linn.) Nees.	Ethanol extract of seed, 100, 150 and 200 mg/kg - Changes in body and organ weight, sexual behaviour, histo-architecture and fructose levels of seminal vesicles. - Markedly affected sexual behaviour of the animals, as reflected by the reduction of ML, increase in MF and enhanced attractability towards females. A significant increase in the sperm count as well as fructose levels of seminal vesicles was noted [14].
19.	Krishnajiraka*	<i>Carum carvi</i> Linn.	-
20.	Kumari	<i>Aloe barbadensis</i> Mill.	-
21.	Lashuna	<i>Allium sativum</i> Linn.	Alcoholic extract of bulb, 0.57, 1.13 and 2.25 ml/kg, p.o. – Aphrodisiac activity - Increased sexual behaviour in dose dependent manner [15].
22.	Latakasturi*	<i>Hibiscus abelmoschus</i> Linn.	-
23.	Mahameda	U.I.	-
24.	Mamsarohini	<i>Soymida febrifuga</i> (Roxb.) Juss	-
25.	Meda	U.I.	-
26.	Mocharasa	<i>Salmalia malabarica</i> (DC) Schott et Endl.	-
27.	Mushalikhanda*	<i>Asparagus adscendens</i> Roxb.	Root extract, 200 and 300mg/kg - Anabolic, reproductive, and sexual behavioral activities - Mounting/intromission frequency, ejaculation latency, and penile erections showed a significant increase [16].
28.	Palaasha	<i>Butea frondosa</i> Keen. Ex. Roxb.	Methanol extract of bark 100 mg/kg - Sexual behavior- Increased sexual behavior of young and aged rats [17].
29.	Patalagarudi	<i>Cocculus hirsutus</i> (Linn.) Diels	Petroleum ether, chloroform and alcohol extract of aerial parts (stem and leaf) 25 mg/100 g body weight- Aphrodisiac activity- Displayed more frequent and vigorous anogenital sniffing and mounting as compared to untreated animals. The increased spermatogenesis in extract treated groups was confirmed [18].
30.	Pippali*	<i>Piper longum</i> Linn.	-
31.	Prishnapami	<i>Uraria picta</i> Desv.	-
32.	Putranjiva	<i>Putranjiva roxburghii</i> Wall.	-
33.	Rakta Chandana*	<i>Pterocarpus santalinus</i> Linn. F	-
34.	Ruddhi	U.I.	-
35.	Saindhava lavana*	(Rock salt)	-
36.	Shankapushpi	<i>Convolvulus pluricaulis</i> Chois.	-

37.	Shatavari*	<i>Asparagus racemosus</i> Willd.	Hydro-alcoholic and aqueous extract of root 200 mg/Kg, 400 mg/Kg - Aphrodisiac activity - Significant aphrodisiac activity on male wistar albino rats as evidenced by an increase in number of mounts and mating performance ^[19] .
38.	Shuklajiraka*	<i>Cuminum cyminum</i> Linn.	-
39.	Shunthi*	<i>Zingiber officinale</i> Roscoe	-
40.	Silhaka*	<i>Liquidambar orientalis</i> Miller.	-
41.	Sphrikka	<i>Anisomeles malabarica</i> R.Br.	-
42.	Tuni	<i>Cedrela toona</i> Roxb.	-
43.	Vamsa Rochna *	<i>Bambusa arundinacea</i> Willd.	-
44.	Vridhdadaru*	<i>Argyrea nervosa</i> (Burm.f.) Boj.	Alcohol extract of root, flower, leaves (200 mg/kg; p.o, single dose) - Aphrodisiac activity as evidenced by an increase in mounting behavior - The root- or flower-treated male mice also exhibited a remarkable increase in mating performance ^[20] .
45.	Vridhhi	U.I	-

*Drugs are mentioned in *Vajikarana* chapter also.

Bhavamisra also mentioned 21 *sukarala* drugs in the *nighantu* part.

Table 2: *Shukrala* drugs mentioned in *Bhavprakashasamhita- Nighantu portion*

S. No	Name of Herb	Botanical name	Reported research activity.
1.	Ashwagandha	<i>Withania somnifera</i> (Linn.) Dunal	Hydroalcoholic extract of dried roots, 100, 200 and 300mg/kg/day, p.o. - Sexual activity in tubal ligated female rats- Results showed increase in sexual behaviours, hormonal level and normal histology of genital organs of female rats ^[21] .
2.	Darusita	<i>Cinnamomum zeylanicum</i> Bl.	-
3.	Jalapippali	<i>Lippia nodiflora</i> Mich.	-
4.	Jivaka	U.I	-
5.	Kakaoli	U.I	-
6.	Kshirakakoli	U.I	-
7.	Kushta	<i>Saussurea lappa</i> (Decne.) Sch.- Bip.	-
8.	Mashaparni	<i>Teramnus labialis</i> (Linn.f.) Spreng.	-
9.	Mudgaparni	<i>Phaseolus trilobus</i> Ait. non Linn.	-
10.	Prapaundarika	U.I	-
11.	Riddhi	U.I	-
12.	Shariva	<i>Hemidesmus indicus</i> (Linn.) R.Br. ex Shult	-
13.	Shobhanjana	<i>Moringa oleifera</i> Lamk.	-
14.	Silhaka	<i>Liquidambar orientalis</i> Miller.	-
15.	Sthauneyaka	U.I	-
16.	Varahikhanda	<i>Dioscorea bulbifera</i> Linn.	-
17.	Vidari Kanda	<i>Pueraria tuberosa</i> (Roxb. ex Willd.) DC.	Ethanol extract, 50, 100, 150 mg/Kg - Sexual behavior and androgenic activity - A dose-dependent increase in sexual behaviors was evidenced in the animals of extract treated groups ^[22] .
18.	Vridhdadaru	<i>Argyrea nervosa</i> (Burm.f.) Boj.	^[18]
19.	Vridhhi	U.I	-
20.	Rishabaka	U.I	-
21.	Yashtimadhu	<i>Glycyrrhiza glabra</i> Linn.	Aqueous extract of roots & rhizomes, (150mg/kg & 300mg/kg body wt/day - Aphrodisiac activity - Extract reduced significantly ML & IL. The extract also increased significantly MF & IF ^[23] .

U.I- Unidentified

Bhavamisra mentioned 4 *avrishya* drugs namely, *Dhanyaka*, *Shobhanjanabija*, *Bhustrina* and *yavanala* in the *nighantu* part.

Table 3: *Avrishya* drugs mentioned in *Bhavprakashasamhita*

S. No	Name of herb	Botanical Name	Experimental study
1.	Dhanyaka	<i>Coriandrum sativum</i> Linn.	Aqueous extract of seeds, 250 and 500 mg/kg- Antifertility activity- Produced a dose-dependent significant anti-implantation effect, but failed to produce complete infertility ^[24] .
2.	Shobhanjanabija	<i>Moringa oleifera</i> Lamk.	Seeds extract, 1000, 2000 and 5000 mg/kg daily for 7 days - Aphrodisiac activity- Significantly increased the Mounting Frequency, Intromission Frequency and Ejaculation latency with reduction in Mounting Latency, Intromission Latency and Post Ejaculatory Interval. It also significantly increased the libido and sperm count in experimental animal ^[25] .
3.	Bhustruna	<i>Cymbopogon citratus</i> (DC) Stapf	-
4.	Yavanala	<i>Sorghum vulgare</i> (Linn.) Pers	-

In the above table the drugs reduce the libido (*Avrishya*) are documented as mentioned by *Bhavamisra*. While treating the erectile dysfunction and dyspareunia, the physician has to take care to avoid these drugs in their prescription and proper instructions should be given not to incorporate them in their

routine diet.

Bhavamisra mentioned in total 90 drugs in the *vajikarana* chapter of the treatise of which 20 are mentioned in the *nighantu* portion as *vrishya*. The details of the remaining 70 drugs are furnished in the table below.

Table 4: Drugs mentioned in *Vajikarana* chapter of *Bhavprakashasamhita*.

S. No	Name of Herb	Botanical Name	Experimental study
1.	Agnimantha	<i>Clerodendrum phlomidis</i> Linn.f.	-
2.	Aguru	<i>Aquilaria agallocha</i> Roxb.	-
3.	Akarakarabha	<i>Anacyclus pyrethrum</i> (Linn.) Link	Aqueous extract of roots, 50 and 100 mg/kg - Sexual behavior, spermatogenesis, and sperm count- Improvement in sexual behavior of male rats was characterized by increased mount and intromission frequency and reduced mount and intromission latency ^[26] .
4.	Apamarga	<i>Achyranthes aspera</i> Linn.	-
5.	Aragvadha	<i>Cassia fistula</i> Linn.	-
6.	Ashwagandha*	<i>Withania somnifera</i> (Linn.) Dunal	[19]
7.	Bala	<i>Sida cordifolia</i> Linn.	-
8.	Bhadramusta	<i>Cyperus scariosus</i> R.Br.	-
9.	Bilva	<i>Aegle marmelos</i> (Linn.) Corr.	-
10.	Brihat Ela	<i>Amomum subulatum</i> Roxb.	-
11.	Brihati	<i>Solanum indicum</i> non Linn.	-
12.	Chitraka	<i>Plumbago zeylanica</i> Linn.	-
13.	Danti	<i>Baliospermum montanum</i> (Willd.) Muell.-Arg.	-
14.	Daruharidra	<i>Berberis aristata</i> Roxb. ex DC.	-
15.	Devadaru	<i>Cedrus deodara</i> (Roxb. ex D. Don) G. Don	-
16.	Dhanyaka	<i>Coriandrum sativum</i> Linn.	[22]
17.	Dhataki	<i>Woodfordia fruticosa</i> (Linn.) Kurz	-
18.	Dhatturbija	<i>Datura metel</i> Linn.	-
19.	Ela	<i>Elettaria cardamomum</i> (Linn.) Maton	-
20.	Gajapippali	<i>Piper chaba</i> Hunter.	-
21.	Guduchi	<i>Tinospora cordifolia</i> (Willd.) Miers ex Hook. f. et Th.	Hydro-alcoholic and aqueous extracts of stem 200 mg/Kg, 400 mg/Kg - Aphrodisiac activity- Significant aphrodisiac activity on male wistar albino rats as evidenced by an increase in number of mounts and mating performance ^[27] .
22.	Haritaki	<i>Terminalia chebula</i> Retz.	-
23.	Jatamamsi	<i>Nardostachys jatamansi</i> DC.	-
24.	Jatiphala	<i>Myristica fragrans</i> Houutt.	50% ethanolic extract of dried kernal - Sexual function improving effect - Stimulate the mounting behaviour of male mice, and also to significantly increase their mating performance ^[28] .
25.	Kankola	<i>Piper cubeba</i> Linn. f.	-
26.	Kantakari	<i>Solanum surattense</i> Burm. f.	-
27.	Kapitta	<i>Feronia elephantum</i> Correa.	-
28.	Kuberaksha	<i>Caesalpinia bonduc</i> (Linn.) Roxb.	-
29.	Kumkuma	<i>Crocus sativus</i> Linn.	Extract of Saffron stigma - Aphrodisiac activity –Crocic, at all doses, and the extract, especially at doses 160 and 320 mg/kg body wt., increased MF, IF and EF behaviors and reduced EL, IL and ML parameters ^[29] .
30.	Laksha	<i>Coccus lacca</i>	-
31.	Lavanga	<i>Syzygium aromaticum</i> (Linn.) Merril et Perry	Hexane extract of flower buds, 15, 30 and 60 mg/kg, p.o. - Effect on testicular function - Lower dose (15 mg) of the extract increased the activities of Delta(5) 3 beta-HSD and 17 beta-HSD, and serum level of testosterone ^[30] .
32.	Lodra	<i>Symplocos racemose</i> Roxb.	-
33.	Manjishta	<i>Rubia cordifolia</i> Linn.	-
34.	Maricha	<i>Piper nigrum</i> Linn.	-
35.	Mayaphala	<i>Quercus infectoria</i> Olivier	-
36.	Methika	<i>Trigonella foenum graecum</i> Linn.	-
37.	Misi	<i>Foeniculum vulgare</i> Miller	-
38.	Mura	U.I	-
39.	Musta	<i>Cyperus rotundus</i> Linn.	-
40.	Nagabala	<i>Grewia hirsute</i> Vahl	-
41.	Nagakesara	<i>Mesua ferrea</i> Linn.	-
42.	Nisha	<i>Curcuma longa</i> Linn.	-
43.	Patala	<i>Stereospermum suaveolens</i> DC.	-
44.	Pathanga	<i>Caesalpinia sappan</i> Linn.	-
45.	Patra	<i>Cinnamomum tamala</i> Nees et Eberm	-
46.	Pippalimula	<i>Piper longum</i> Linn.	-
47.	Prishnaparni	<i>Uraria picta</i> Desv.	-
48.	Priyangu	<i>Callicarpa macrophylla</i> Vahl	-
49.	Punarnava	<i>Boerhaavia diffusa</i> Linn.	-
50.	Raala	<i>Shorea robusta</i> Gaertn. f.	-

51.	Renuka	<i>Vitex agnus castus</i> Linn.	-
52.	Rohitaka	<i>Tecoma undulata</i> Seem.	-
53.	Sarala	<i>Pinus longifolia</i> Roxb.	-
54.	Shaileya	<i>Parmelia perlata</i> Aeh.	-
55.	Shalaparni	<i>Desmodium gangaticum</i> Linn. DC.	-
56.	Shalmalibija	<i>Salmalia malabarica</i> (DC.) Schott et Endl.	-
57.	Shringi	<i>Pistacia integerrima</i> Stewart ex Brandis	-
58.	ShvetaChandana	<i>Santalum album</i> Linn.	-
59.	Shyonaka	<i>Oroxylum indicum</i> (Linn.) Vent.	-
60.	Sikthaka	U.I	-
61.	Tagara	<i>Valeriana wallichii</i> DC.	-
62.	Talisapatra	<i>Abies webbiana</i> Lindl.	-
63.	Darusita*	<i>Cinnamomum zeylanicum</i> Bl.	-
64.	Valaka	<i>Pavonia odorata</i> Willd.	-
65.	Vibhitaka	<i>Terminalia bellerica</i> (Breyn ex Gaertn.) Roxb.	-
66.	Vidanga	<i>Embelia ribes</i> Burm.f	-
67.	Vidarikanda*	<i>Pueraria tuberosa</i> (Roxb. ex Willd.) DC.	[19]
68.	Virana	<i>Vetiveria zizanioides</i> (Linn.) Nash	-
69.	Yashtimadhu*	<i>Glycyrrhiza Glabra</i> Linn.	[20]
70.	Yavanika	<i>Trachyspermum ammi</i> (Linn.) Sprague ex Turrill	-

*Drugs are mentioned as *shukrala* also.

Table 5: *Vrishya* formulations mentioned in *Bhavprakash Samhita*

S. No	Formulation	Chapter	Reference
1.	Shivapalapindi	Amlapittadhikara	18-19, P-226
2.	Narikelakhanda	Amlapittadhikara	23-26, P-226-27
3.	Brihatnarikalakhanda	Amlapittadhikara	27-35, P-227
4.	Kalyanakaguda	Grahanirogadhikara	60-64, P-154
5.	Vidarighrita	Mutraghatadhikara	47-58, P-466-67
6.	Sukumarakumarakarasyana	Mutrakricchadhikara	49-56, P-459
7.	Eladigitika	Rajayakshmadikara	64-67, P-238
8.	Amritaprashavaleha	Rajayakshmadikara	72-77, P-239
9.	Brihatkushmandavaleha	Raktapittadhikara	58-71, P-219-20
10.	Khandakadyaleha	Raktapittadhikara	75-89, P-221-22
11.	Mahasugandhitaila	Sthauliyadhikara	61-68, P-509-10
12.	Loharasayana	Sthauliyadhikara	32-43, P-506-07
13.	(Makshika, parade, loha, pathya etc.)	Vajikaranadhikara	20, P-827
14.	(Guduchisatva, abhraka, lodra, ela etc.)	Vajikaranadhikara	21, P-827
15.	Makareshtarasala	Vajikaranadhikara	23-24, P-828
16.	Gokshuradimodaka	Vajikaranadhikara	24-28, P-828
17.	Madanamanjarivati	Vajikaranadhikara	29-30, P-829
18.	Rativallabhamodaka	Vajikaranadhikara	32-38, P-829-30
19.	Kameshvaramodaka	Vajikaranadhikara	39, P-831
20.	Amrapakalehya	Vajikaranadhikara	41-48, P-931-32
21.	(Gokshura, goat milk, honey)	Vajikaranadhikara	49, P-832
22.	Mahachandanaditalia	Vajikaranadhikara	50-59, P-832-33
23.	Madhupakvahratikilehya	Vajikaranadhikara	60-70, P-833-34
24.	Vanarivati	Vajikaranadhikara	71-75, P-834
25.	Akarakarabhadvivati	Vajikaranadhikara	76-78, p-835
26.	Maha Narayana taila	Vatavyadhiadhikara	291-326, P-351-353

Bhavamisra mentioned in total 124 drugs and cooked food preparations in the *nighantu* portion of the treatise. He mentioned 45 herbs in *nighantu* part and 90 herbs in the *vajikarana* chapter of the treatise. 20 drugs were found common in the *nighantu* part and *vajikarana* chapter. Among the 45 drugs 12 drugs namely *bhallataka*, *gandhaprasarini*, *gokshura*, *kapikacchu*, *karpura*, *kokilaksha*, *lashuna*, *mushalikhanda*, *palaasha*, *patalagarudi*, *shatavari* and *vriddhadaru* are experimentally proven for their aphrodisiac and sexual function improving activity (Table 1). Among the 70 drugs mentioned in *vajikarana* chapter 8 drugs namely *akarakarabha*, *ashwagandha*, *guduchi*, *jatiphala*, *kumkuma*, *lavanga*, *vidarikanda* and *yashtimadhu* are scientifically validated for their aphrodisiac activity. *Bhavamisra* mentioned

Gunja as *vrishya* but recent scientific studies proved the antifertility effect of *gunja* in experimental animals. *Gokshura* has been included in maximum number of formulations (6) in the *vajikarana* chapter, followed by *sunthi* and *shuklaajiraka* (5). *Amalaki*, *kapikacchu*, *pippali* are also repeatedly used in various formulations. *Bhavamisra* mentioned 21 *sukrala* drugs of which four drugs namely, *ashwagandha*, *vidarikand*, *vriddhadaru* and *yashtimadhu* are experimentally proven for aphrodisiac activity. Out of the 4 *avrishya* drugs mentioned by *Bhavamisra*, *Moringa oleifera* (*sobhanjanabija*) seed extract has shown aphrodisiac activity in experimental animals contrary to the observations recorded in the treatise. Even though *Bhavamisra* mentioned *dhanyaka* as *avrishya* in the *nighantu* portion, he included *dhanyaka* in some of the

formulations like *Rativallabhamodaka*, *Amrapaakalehya*, *Madhupakvaharitamodaka* and *Kameshwar modak* in *vajikarana* chapter. It is assumed that *Dhanyaka* administered may act as *vrishya*, but in combination with other drugs may help to restore the function of *Jatharagni* and *Dhatvagnis* (the substances useful in digestion and metabolism of drugs) *Bhavamisra* has mentioned in total 26 *vrishya* formulations in the *samhita* portion of *Bhavprakashasamhita*. Among these, 13 *vrishya* formulations are mentioned in *vajikarana* chapter. Out of this, three formulations are herbomineral preparations. *Amrapakalehya* which contains large amount of mango juice, is also mentioned as *vrishya*. *Bhavamisra* mentioned the use of *gokshura* with goat milk as *vrishya*, which is the only single drug recipe in the *vajikarana* chapter.

3. Conclusion

Bhavamisra included 45 drugs attributed with aphrodisiac activity and among these 20 drugs *ajamoda*, *amalaki*, *gambhari*, *gokshura*, *guggulu*, *kapikachhu*, *pippali*, *shatavari*, *shunti*, *musalikanda* etc. are incorporated in various *vajikarana* recipes. Twenty one drugs are included in the treatise attributed with *shukrala* (spermatopoeitic) activity. Recent research activities reported significant aphrodisiac (*vrishya*) activity of drugs namely *gokshura*, *kapikachhu*, *shatavari*, *musali khanda*, *bhallataka*, *yasthimadhu*, *guduchi*, *jatiphala* and *shobhanjanabija*.

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