A HERBAL FORMULATION FOR TREATMENT OF SILENT ESTRUS IN ANIMALS

The present invention provides a herbal formulation for treatment of silent estrus in animals. The present invention also provides a process for the preparation of said herbal formulation. The present invention provides a safe, effective and low cost method for treatment of silent estrus.
A HERBAL FORMULATION FOR TREATMENT OF SILENT ESTRUS IN ANIMALS

Field of the Invention

The present invention relates to a herbal medication for the treatment of silent estrus in animals. The herbal formulation of present invention is prepared from *Teramnus labialis*, *Calotropis gigantea*, *Allium cepa*, *Anethum graveolens* and *Murraya koenigii*.

Background of the Invention:

*Teramnus labialis* belongs to family Fabaceae. It is commonly known as mashparni. It has been reported to be useful in treating rheumatism, tuberculosis, nerve disorders, paralysis and catarrhs. It is used as aphrodisiac, mild sedative, general debility, malnutrition and fatigue.

*Calotropis gigantean* belongs to family Asclepiadaceae. It is commonly called as madar. A poultice of the leaves is applied for rheumatism, filariasis, wounds, glandular swellings, eczema, pigmentation and other skin inflammations. The latex acts as a purgative, used in treating ascites of kapha type and hepatosplenomegaly ascites. The flowers and root bark decoction taken for treating blood impurity, filariasis, syphilis, asthma, cough. The dried and powdered root is chiefly administered for bronchitis, asthma, leprosy, eczema and elephantiasis. The latex is used in treating vertigo, baldness, hair fall, tooth aches, intermittent fevers, rheumatism and paralysis. Leaves are heated in the oil which is applied externally in treating joint pain and swellings. The pungent latex from the leaves and flowers acts as an eye tonic. The whole plant alcoholic extract induces sporicidal and anti-microbial activities, simulates estrogens in the reproductive tract, and acts as anti-fertility.

*Allium cepa* belongs to family liliaceae. It is commonly called as Onion. Onion is a widely used medicinal plant. It is considered to have anthelmintic, antioxidant, antiseptic carmi-
native, diuretic, expectorant and febrifuge properties. Onion is said to help in cases ranging from the common cold to heart disease and diabetes. In traditional medicine, Onion had been used for colds, coughs, flu, bronchitis and toothache. It can also be used as prevention against osteoporosis and in treatment of blisters, boils and topical scars.

*Anethum graveolens* belongs to family Apiceae. It is commonly called as dill. *Anethum* is used as an ingredient in gripe water, given to relieve colic pain in babies and flatulence in young children. The seed is aromatic, carminative, mildly diuretic, galactogogue, stimulant and stomachic. The essential oil in the seed relieves intestinal spasms and griping, helping to settle colic. The carminative volatile oil improves appetite, relieves gas and aids digestion. Chewing the seeds improves bad breath. *Anethum* stimulates milk flow in lactating mothers, and is often given to cattles for this reason. It also cures urinary complaints, piles and mental disorders.

*Murraya koenigii* belongs to family Rutaceae. It is commonly called as Curry plant. The plant is considered a tonic, stomachic and carminative. The root bark is a stimulant, used externally to cure eruptions and venomous bites. The juice of the root is given to relieve renal pains, eaten raw as a cure for diarrhea and dysentery; bruised and applied externally to cure eruptions. It is given as a febrifuge; and for snake bite. This plant is used as a tonic and stomachic (Joseph and Peter, 1985). It is given in diabetes (Kar et al., 1999). It is anthelmintic and given for piles, inflammation, itching, leucoderma and blood disorders (Philip, 1981). The bark is used as an antivenin (Selvanayagam et al., 1994), to treat skin eruptions (Joseph and Peter, 1985), vomiting (Philip, 1981), as a stimulant, to alleviate insect- and poisonous bites (Philip, 1981; Joseph and Peter, 1985). Leaves are used to treat scabies, wounds (Bhandary et al., 1995), hypertension, diabetes (Rajurkar and Pardeshi, 1997), pimples, rashes, itching, constipation, liver disorders, to aid weight loss (Kong et al., 1986) and to retarded growth in children (Singh, 1986). The root is used as a stimulant and given as a treatment for poisonous bites and skin eruptions.
(Joseph and Peter, 1985). The fruit is used as an astringent (Philip, 1981). The seeds are used for treating asthma (Singh, 1986).

Estrus is the periodic state of sexual excitement in the female of most mammals, excluding humans, that immediately precedes ovulation and during which the female is most receptive to mating. At the time of estrus there are behavioral signs and changes in the external genitalia. In cows, these include the passage of very clear mucus, swelling of the lips of the vulva, hoof brush marks on the side of the rump, mounting behavior and restlessness.

In artificial breeding or in hand mating, the need to pick cows which are on heat is of paramount importance. However, this becomes difficult in case of animals which are affected by silent estrous.

Silent estrous is a clinical condition in which although ovulation occurs (as can be detected by palpation or estrogen levels in the blood), however, the behavioral signs are absent.

Cows are judged to have a silent estrous if the following two events occurred before the first observed estrous:

1. detection of a corpus luteum by rectal palpation; and
2. plasma progesterone concentrations were greater than 1ng/ml for 8 or more days before an observed estrous. [Verne LaVoie, D. K. Han, D. B. Foster and E. L. Moody: Suckling Effect of Estrus and Blood Plasma Progesterone in Postpartum Beef Cows; J ANIM SCI 1981, 52:802-812.]

Dinoprost tromethamine is a widely used dairy prostaglandin for the treatment of silent estrus in dairy cattle via parenteral route. Intravaginal devices impregnated with progesterone are also used for the treatment of silent estrus in cows. However, these are invasive and expensive methods of treatment of silent estrus. Therefore, there is a need to develop non-invasive, cost effective and safer methods of treatment of silent estrus.
The present invention provides a solution to this problem by providing a herbal formulation for the treatment of silent estrus.

**Objects of the Invention**

The main object of the present invention is to provide a herbal formulation for the treatment of silent estrus in animals.

Another object of present invention is to provide an effective and low cost method for treatment of silent estrus.

Yet another object of the present invention is to provide a herbal formulation which leads to the exhibition of explicit estrus signs in animals affected by silent estrus.

Yet another object of the present invention is to provide relief to animals affected by silent estrus without any side effects.

**Summary**

Accordingly, present invention provides a herbal formulation for the treatment of silent estrus, comprising 25 to 85 % by wt. leaves of *Teramnus labialis*, 10 to 20 % by wt. leaves of *Calotropis gigantean*, 5 to 15 % by wt. leaves of *Allium cepa*, 10 to 20 % by wt. leaves of *Anethum graveolens* and 2 to 8 % by wt. leaves of *Murraya koenigii*.

**Detailed description of the Invention**

The herbal formulation of present invention is prepared from *Teramnus labialis*, *Calotropis gigantean*, *Allium cepa*, *Anethum graveolens* and *Murraya koenigii*.

In an embodiment present invention provides a herbal formulation for the treatment of silent estrus, comprising 25 to 85 % by wt. leaves of *Teramnus labialis*, 10 to 20 % by wt. leaves of *Calotropis gigantean*, 5 to 15 % by wt. leaves of *Allium cepa*, 10 to 20 % by wt. leaves of *Anethum graveolens* and 2 to 8 % by wt. leaves of *Murraya koenigii*. 
In another embodiment present invention provides a process for the preparation of the herbal formulation, the process comprising the steps of:

(i) Washing the leaves of *Teramnus labialis*, *Calotropis gigantean*, *Allium cepa*, *Anethum graveolens* and *Murraya koenigii*.

(ii) Sieving the washed leaves obtained in step (i);

(iii) Grinding the sieved leaves obtained in step (ii) to obtain the final formulation.

In still another embodiment the herbal formulation is in a form of paste.

In yet another embodiment the route of administration is oral route.

In another embodiment the herbal formulation can be used in preparation of a medicament.

The composition exhibits remarkable efficacy in treating silent estrus in animals. The herbal formulation was arrived first time by the inventor, in treatment of silent estrus.

This formulation is easy to prepare and cost effective.

In order to fully illustrate the invention, following examples are set forth. It is to be understood that the examples are only by way of illustration and are not intended as an undue limitation on the broad scope of the invention as set forth in the appended claims.

**Examples**

**Example 1:**

Leaves of *Teramnus labialis* 55 % by wt., *Calotropis gigantean* 15 % by wt., *Allium cepa* 10 % by wt., *Anethum graveolens* 15 % by wt., and *Murraya koenigii* 5 % by wt. are taken.

They are washed and sieved. The leaves were grinded to make paste by any conventional technique. The prepared paste is used further for treating the silent estrus. 300 g of medication was administered per day to the affected animal.

**Experimental results for medication of Example 1**

Six cross bred cattle were selected that were not observed estrus by 60 days after calving.
The experimental animals were examined rectally and found the tonicity in the uterus as well as active ovary. The medication were fed to these animals and observed for estrus signs. Four animals had shown explicit estrus signs like clear mucus discharge, mounting behavior, restlessness indicating efficacy of the formulation. The results indicate at least 66% success rate.

**Example 2:**

Leaves of *Teramnus labialis* are taken. Leaves are washed and sieved. The leaves were grinded to make paste by any conventional technique. The paste is used further for treating the silent estrus. 200 g of medication was administered.

**Experimental results for medication of Example 2**

Eight indigenous cattle were observed for their estrus behavior over a period of six cross bred cattle were selected that were not observed estrus by 60 days after calving. The experimental animals were examined rectally and found the tonicity in the uterus as well as active ovary. The medication were fed to these animals and observed for estrus signs. Three animals had shown explicit estrus signs like clear mucus discharge, mounting behavior, restlessness indicating efficacy of the formulation. It was found 50% success rate.

**Advantages of the Invention**

1. The herbal composition used in present invention provides relief to animals without any side effect.
2. The present invention provides an effective and low cost method for treatment of silent estrus.
175 **We Claim:**

1. A herbal formulation for the treatment of silent estrus, comprising 25 to 85 % by wt. leaves of *Teramnus labialis*, 10 to 20 % by wt. leaves of *Calotropis gigantean*, 5 to 15 % by wt. leaves of *Allium cepa*, 10 to 20 % by wt. leaves of *Anethum graveolens* and 2 to 8 % by wt. leaves of *Murraya koenigii*.

2. A process for the preparation of the herbal formulation as claimed in claim 1, the process comprising the steps of:
   (i) Washing the leaves of *Teramnus labialis*, *Calotropis gigantean*, *Allium cepa*, *Anethum graveolens* and *Murraya koenigii*.
   (ii) Sieving the washed leaves obtained in step (i);
   (iii) Grinding the sieved leaves obtained in step (ii) to obtain the final formulation.

3. The herbal formulation as claimed in any of the preceding claims, wherein formulation is in a form of paste.

4. The herbal formulation as claimed in any of the preceding claims, wherein the route of administration is oral route.

5. The herbal formulation as claimed in any of the preceding claim, as and when used in preparation of a medicament.