SCIENTIFIC EVALUATION FOR AN AUXILIARY MEDICAL DRUG

PROBEBY ANGI

drops

The request for a SCIENTIFIC EVALUATION for the auxiliary medical drug “PROBABY ANGI” drops-was submitted by the company “APIMELL”, Ohrid, Republic of Macedonia.

Based on the decision of the Scientific Board at the department of preclinical and clinical pharmacology and toxicology at the Medical Faculty in Skopje, I have been assigned to provide a SCIENTIFIC EVALUATION for the auxiliary medical drug “PROBABY ANGI” drops.

After examining the submitted documentation as well as other relevant information I propose to the Scientific Board at the Institute to accept the following text as a SCIENTIFIC EVALUATION for the auxiliary medical drug “PROBABY ANGI” drops.
1.0 DESCRIPTION AND CONTENTS

Description: drops

Contents:

100ml solution contains:
- 5 g Propolis dry matter
- essential oils of:
  - Salviae off. (Sage) 0.1 g
  - Menthae piperitae (Mentha/Mint) 0.3 g
  - Foeniculi vulgare (Fennel) 0.6 g
  - Anisi 0.1 g
  - Menthol (Menthol) 0.1 g
- Propylene glycol diluted ad 100 ml

2.0 GENERAL INFORMATION ABOUT THE DRUG

“PROBEBY ANGI” drops, is an auxiliary medical drug whose function is to alleviate the symptoms of acute and chronic inflammatory processes of the mouth, throat and the esophagus, canker sores, herpes simplex infections, influenza and revalestent conditions, inflammatory processes of the gums and painful abrasions of the mouth.

Probeby angi is a combination of propolis and essential oils which carry a number of pharmacological properties. The components of Probeby angi possess bactericidal properties against large number of bacteria (mainly Gram-positive), antiviral properties against (herpes simplex and A2 influenza) as well as anesthetic and antioxidant properties.

Salviae folium (salvia officinalis-Sage)

Sage (salvia officinalis) is a 30-40 cm tall perennial bush with a pleasant scent. The leaves of the plant (Salviae folium) are picked and used in its second year of growth. The leaves are then dried in a cool place with good air circulation or in a driery at 35°C.

The drug is composed of 1.5-2.5% essential oil, up to 5% of tannins, a bitter principle called picrosalvine (carnesol) diterpentine compound, flavonoids, resin etc.

The Essential oil (Aetheroleum Salviae) is a clear or yellow-green liquid, with a specific scent and aromatic and bitter flavour. In its composition the oil has 50% alpha and beta thujone, about 15% cineol camphor, salvene, borneol etc.

Foeniculi vulgare (fennel, Mill)

The fennel is a parrennial plant which can grow up to 1.5 meters. While its origins lay on the coast of the Mediterranean, this plant is widely grown in many European countries as well as other parts of the world. The fruit of the fennel (Foeniculi fructus) has a pleasant scent and aromatic and somewhat spicy taste. The drug from fennel includes 2-6% essential oil, liquid oil 10-20%, protein 16-20%, carbohydrates 4-6% etc.

The essential oil (Aetheroleum Foeniculi) is extracted by destilation of squished ripe fennel fruit. It is a clear, colorless or yellow liquid, with a pleasant scent and a bitter-sweet taste. The main
component of this oil – anethol (60-89%) consists light doses of: anis-aldehyde, anis-acetone, anisic acid, fenhon, foeniculin, pinene, camfen, limonene.

*Aetheroleum Menthae piperitae (essential oil of mentha/mint)*

Domestic mynt (Mentha piperita folia) is a perennial, branched plant with a pleasant characteristic scent, which can grow from 40-60 in height. Leaves are handpicked from the plant when it’s in bloom. The leaves are then dried in a cool place with good air circulation or in a driery at 35 C. Domestic mint contains: 1-3% essential oil, tanines, about 5% flavonoids, bitter substances, ferulic and chlorogenic henna etc.
The main component of the essential oil (Aetheroleum Menthae piperitae) is menthol (monocyclic monoterpentic alcohol) which is found in concentrations of 50-68%. 45% of the Menthol is free and 4-12% is esterified with ethanoic acid, isovaleric and other acids. It also contains ketone-mentone 7-10%, metafuran, therpenes and therpenh derivatives: limonene, cineole etc.

*Anisi fructus (essential oil of anis)*

Anis is a 20-60 cm tall plant, with characteristic small, white leaves. It possess very pleasant, strong, aromatic adour of anetol.
Anis contains: 1,5-4 % essential oil, around 10 % fatty oil, 20% proteins and sugar.

*Propolis*

Propolis is a natural bee product. It is a sappy, yellow-green to dark red substance. By methods of destilation and various solvents it had been determined that propolis contains up to 30% bee wax, about 20% mechanic subcompounds, 40-60% sapp and balsam, 5-10% tannins, pollen etc. However, from a chemical aspect these compounds remain undetermined and it has been proven that the primary components of propolis are the flavonoids which make up to 25% of the propolis composition.
The following flavonoids are found in propolis: chrizine, galanine, tectochrizine, acacetin, quercetin and many others.
Other then flavonoids, propolis contains significant quantities of minerals, esthers of saturated fatty acids,saturated fatty alcohols, 10-15% CarboHydrates, free fatty acids, vitamins etc.

**3.0 PHARMACODYNAMICS AND MECHANISMS OF ACTION**

“PROBABY ANGI” drops in it’s composition contain propolis and essential oils well recognized in literature and scientific medicine as compounds which can alleviate the acute inflammatory processes of the mouth, throat and esophagus and ease coughing.
Sage represents one of the oldest plants used in medicine. It is used in the composition of a large number of drugs which are used to wash the mouth and throat in cases of inflammation, due to it’s harmlessness and properties of strengthening the mucosa (due to the action of tannins) and it’s antiseptic properties (due to the action of the essential oil). Due to it’s spasmylotic and anti-inflammatory properties, sage has a positive effect against inflammatory disease of the stomach, intestines, liver, bladder, and the urinary pathways. Sage also helps in patients with diabetes mellitus due to it’s hypoglycaemic properties.
Up until the discovery of antibiotics, sage was used centuries as a tea against sweating in patients with tuberculosis because it can reduce the excretion of sweat glands. The drug is also widely used as a spice for grilling meat in the United States because it improves the smell and taste of meat. Caution should be practised, especially when the essential oil is used because it contains thujone which is a toxic compound.

The main component of the essential oil of mint (Aetheroleum Menthae piperitae) is menthol. Menthol, when applied on the skin and mucus causes a scent of coldness, followed by an easy anaesthetic activity and a pleasant refreshing scent. When used in light concentrations, menthol can inhibit the transport of calcium ions from the thermo-receptors. The sense of coldness is caused because Menthol evaporates easily. It has an antiflogistic action. It stimulates the nerve ends of the skin and mucosa. Menthol also has spasmolytic action on the smooth muscle of the intestines; it decreases the transmission of the extra-cellular calcium in the cells. When applied orally, menthol acts as a holagogue and holeretic. Due to its refreshing scent and flavour, it is often used for improving the flavour of other oral preparates. In addition, the domesticated mint (Menthae piperitae) has a wide usage both in scientific and home medicine. Mint is a well known spice which has been used for a long time and is quite popular nowadays. The infusion mint (Mint tea) acts as carminative, stomachic, spasmyloytic and a light sedative. It is also used as holagogum and antidiaricium due to the presence of tannins in its composition. Due to its spasmyloytic properties the tea made of mint leaves is a recognized and well appreciated medicament against inflammatory diseases in the stomach and intestines (gastritis, gastroduodenitis, cholitis, peptic ulcerations), flatulence and diarrhea. Besides that, Mentha piperita stimulates the function of the liver by increasing the production of bladder juice and its flow through the bladder canals; it can also aid in the dissolution of bladder stones. This action occurs probably due the presence of menthol and flavonoids. The relaxing properties of mint are also well known; it aids in decreasing and relieve of nervous tension and neurosis. Other than the infusion, the essential oil is used for preparing galenic preparations such as: Aqua, Spiritus, Pastilli, Etosaccharum etc.

The essential oil is also added to toothpaste, mouthwash, as an aromatic, deodorant and disinfectant. It is also used as supplement in various pharmaceutical preparations as well as scent corrector.

**Essential oil of fennel fruit**: Fennel fruit is one of the best supplements for women who are anemic or women who are breastfeeding because it can increase the production of milk. Due to the presence of anethol, the fennel fruit has antiseptic properties. It is used in preparing of foment which are ten placed on the inflamed or swollen breasts. In traditional medicine the tea prepared from fennel fruit is very well known and has been in conditions of bad digestion, strengthening the stomach, digestive tract cramps, bad cough and chest pain. Almost all teas and medicaments used against meteorism and similar obstacles in the digestive tract, as well as medicaments used in easing coughing contain fennel fruit. Other than that, fennel fruit has laxative properties as well as antirheumatic properties (when used as a supplement in antirheumatic massage preparations). Due to its pleasant scent and taste fennel fruit is often used as a corrector both in the pharmaceutical industry as well as the kitchen.
**Essential oil of anisi:** Its application is very often like ecpectorans, karminativ, spasmytic, galaktogog and like corrector of adour and taste of very unpleasant drugs. It stimulates a secretion of bladder juice and saliva. Action of essential oil on the neuromuscle system, explains its successful properties against cholics and gastralgie.

Propolis has bacteriostatic, bactericidal, and fungicidal properties. The antimicrobial substances in propolis are thermostable. Gram-positive bacteria are more sensitive to propolis in comparison with Gram-negative bacteria. This properties of propolis are mainly due to the action of flavonoids. The propolis flavonoid, acacetine, decreases inflammation and increases resistance of the capillary wall. Propolis is used in treatment of various diseases in dentistry, otorhinolaryngology, gastroenterology and diseases of the skin. Propolis has antibacterial, antiseptic, as well as anesthetic and trophic-granular effect which decreases pain and stimulates healing of the wounds.

**4.0 BENEFITS OF USAGE**

“PROBEBY ANGI” drops, is an auxiliary medical drug whose function is to alleviate the symptoms of acute and chronic inflammatory processes of the mouth, throat and the esophagus, canker sores, herpes simplex infections, influenza and revalescent conditions, inflammatory processes of the gums and painful abrasions of the mouth.

**5.0 DOSAGE AND USAGE INSTRUCTIONS**

Infants up to 12 months up till 30 drops a day, separated in 3-4 doses before feeding or by applying to the gums and the mucus in the mouth cavity.

**6.0 PRECAUTIONARY MEASURES AND WARNINGS**

“PROBAY ANGI” drops are not to be taken by patients sensitive to any of the ingredients of the drug.

**7.0 PACKING**

**Probaby angi drops:** 10 ml solution in a bottle

**8.0 STORAGE**

To be kept in a dry place on a temperature up to 25C.
TO BE KEPT AT A PLACE WHICH IS NOT ACCESSIBLE TO CHILDREN.

**9.0 DATE OF EXPIRY**

3 (three) years after date of production.
Not to be used passed the date of expiry!!
10.0 CONCLUSION

“PROBEBY ANGI” drops, is an auxiliary medical drug whose function is to alleviate the symptoms of acute and chronic inflammatory processes of the mouth, throat and the oesophagus, canker sores, herpes simplex infections, influenza and revalestent conditions, inflammatory processes of the gums and painful abrasions of the mouth.

“PROBABY ANGI” drops in it's composition contain propolis and essential oils well recognized in literature and scientific medicine as compounds which can alleviate the acute inflammatory processes of the mouth, throat and oesophagus and ease coughing. Based on the literature data about the properties and actions of the essential oils which are present in the combination of “PROBABY ANGI” drops, it can be expected that the drug, or it’s components possess the properties which have been attributed by the producer.

Based on everything which has been presented in this SCIENTIFIC STUDY, I conclude that “PROBABY ANGI” drops – a product made by “APIMELL”, Ohrid, Republic of Macedonia, satisfying auxiliary medical drug conditions in lieu of its composition and properties, and as such it can be registered in the Republic of Macedonia as an auxiliary medical drug.

The Scientific Study was concluded by
Prof. Dr. Stojmir Petrov
The Scientific Board at the Institute of Preclinical and Clinical Pharmacology and Toxicology, at the meeting held on 18.04.2001 reviewed and approved the scientific evaluation for the auxiliary medical drug “PROBABY ANGI” drops – a product of the company “APIMELL”, Ohrid, Republic of Macedonia.

Director
Prof. Dr. Stojmir Petrov