**Description**

**A COMPOSITION FOR THE ANTI-INFLAMMATORY AND ANALGESIC TREATMENT**

**Technical Field**

The invention relates to a composition formed for anti-inflammatory and analgesic treatment and to the use of said composition.

**State of the Art**

Analgesics are the most widely used medicaments of the present day. That they have only a low extent of side effects is the most significant reason why the analgesics are the primary medicaments that are most extensively used. Analgesics are available in almost every house. Analgesics are not always used in line with the actual requirement of the patient and the people unnecessarily request that the physicians include such drugs in the prescriptions. When not prescribed by a physician, they are purchased over-the-counter from the pharmacy just for the sake of keeping them available in the house. The analgesics are used without the recommendation of a physician for the cases of headache and joint pain. One of the most frequently made mistakes is the use of an analgesic prescribed by the physician for the treatment of another pain without consulting the physician. When one experiences headache, it may not be appropriate to use an analgesic prescribed by the physician for the joint pains. The reason is that the different active agents within the analgesics lead to different outcomes. The unnecessary or inappropriate analgesic use may lead to side effects in the liver and kidney patients. Analgesics increase the blood pressure and the heart rate. As a result, the unnecessary or inappropriate use of analgesics is very harmful for the patients with cardiac, vascular and cardiac rhythm problems.

Also today, analgesic, or simply painkiller, is the name given to any kind of medication used to relieve the pain and cause analgesia. It is derived from the Greek words an- (without) and -algia (pain). Analgesic drugs act upon the peripheral and central nervous system. One of the oldest and most studied problems in history is to relieve the pain by the use of medicaments. The medicaments that act upon the central nervous system and are used to relieve the pain are generally referred to as analgesics. Since the oldest civilizations, the human being has used the agents obtained from the plants in order to relieve the pain. Opium is among the most widely used natural painkillers. Opium is a latex that exudates as a result of knife-scratching of the immature seed pods of opium poppy ([papaver somniferum](http://tr.wikipedia.org/w/index.php?title=Papaver_somniferum&action=edit&redlink=1)) and dries and solidifies on the pod under the influence of the sun. Around 23 types of alkaloids are present in the raw opium. Alkaloids generally have a heterocyclic structure and exhibit physiological action. The anesthetic action of the opium stems from the alkaloids it contains. These are generally called the opium alkaloids. Alkaloids are named based on the plant from which they are obtained (opium alkaloids, chinchona alkaloids, etc.) or their chemical structure (phenanthrene class of alkaloids, etc.). Opium alkaloids are divided into two according to their chemical structure:

1. Phenanthrene class: [Morphin](http://tr.wikipedia.org/wiki/Morfin)e, C[odein](http://tr.wikipedia.org/wiki/Kodein)e, [Thebain](http://tr.wikipedia.org/wiki/Tebain)e, [Fentanyl](http://tr.wikipedia.org/w/index.php?title=Fentanyl&action=edit&redlink=1)
2. Isoquinoline class: [Papaverin](http://tr.wikipedia.org/wiki/Papaverin)e, [Narcein](http://tr.wikipedia.org/wiki/Narsein)e, [Narcotin](http://tr.wikipedia.org/wiki/Narkotin)e, C[otarnin](http://tr.wikipedia.org/w/index.php?title=Kotarnin&action=edit&redlink=1)e

Analgesics have many different kinds including [paracetamol](http://tr.wikipedia.org/wiki/Parasetamol), anesthetic drugs (such as morphine), synthetic drugs with anesthetic effect (such as [tramadol](http://tr.wikipedia.org/w/index.php?title=Tramadol&action=edit&redlink=1)), [NSAID](http://tr.wikipedia.org/wiki/NSAID)s (non-steroidal anti-inflammatory drugs). Some drug groups employed for the treatment of the neuropathic pain syndromes are not included in the analgesics. [Anticonvulsants](http://tr.wikipedia.org/w/index.php?title=Antikonv%C3%BClzan&action=edit&redlink=1) and tricyclic antidepressants may be given as examples of such drugs.

According to the state of the art, the medicaments employed in order to suppress the chronic and acute inflammations and pains resulting from various diseases and traumas serve their function by way of suppressing the expression of cox-2 and pge-2. Since the drugs using this mode of action, which is principally an effective method, do not simultaneously stimulate the production of cox-1 and pge-1, the selective cox-2 and pge-2 suppressor components have side effects such as possible insulin resistance, stomach tissue damage, internal bleeding.

According to the state of the art, the invention no. TR2003/00368 relates to sulfamoylheteroaryl pyrazole compounds as the anti-inflammatory/analgesic agents. TR2003/01448 relates to acetylene derivatives as the anti-inflammatory/analgesic agents.

As a result, the presence of the need for a composition for the anti-inflammatory and analgesic treatment and the inadequacy of the existing solutions have made it necessary to perform an improvement in the relevant art.

**Object of the Invention**

In order to eliminate the disadvantages of the state of the art, an object of the invention is to provide that the selective cox-2 and pge-2 suppressor components do not have side effects such as possible insulin resistance, stomach tissue damage, inner bleeding.

Another object of the invention is to simultaneously stimulate the production of cox-1 and pge-1.

Another object of the invention is to provide an ability to protect the kidneys.

Another object of the invention is to prevent the vessel thinning and the loss of bone density.

Another object of the invention is to provide an increase owing to the increased cAMP, which is a result of the ability to suppress PDE4.

Another object of the invention is to prevent the anti-inflammatory and analgesic side effects.

In order to achieve the aforesaid advantages, the invention is a composition for the anti-inflammatory and analgesic treatment, said composition being obtained by the components selected from the group comprising 3,7-bis(2-hydroxyethyl)icaritin and 2,7-bis(2-hydroxyethyl)icaritin that are used individually or in combinations.

The structural and characteristic features and all the advantages of the invention will become more clearly understood from the detailed description provided below and therefore, the evaluation must be made taking this detailed description into consideration.

**Detailed Description of the Invention**

According to the invention, 3,7-bis(2-hydroxyethyl)icaritin, which is a flavonol glycoside derivative contained by the plant family epimedium in trace amounts, features the ability to effectively suppress cox-2 and pge-2. Said suppression does not take place via a direct reversal of these two proinflammatory enzymes as in the case with currently available pge-2 and cox-2 antagonists.

Said ingredient achieves the expression of cox-1 and pge-1 by an increase provided owing to the increased cAMP, which is a result of its ability to suppress PDE4. Accordingly, it is free of all the above-listed side effects of the currently available anti-inflammatory and analgesic drugs.

The increase in the expression of pge-1 provides 3,7-bis(2-hydroxyethyl)icaritin with the hepatoprotective and kidney-protective property. The increase in the expression of pge-1 encourages the insulin release and the insulin sensitivity of the muscle cells.

The increase in pge-1 prevents the thinning of vessels and the loss of bone density, which could be caused by long term cox-2 and pge-2 suppressor agents (as they do not simultaneously increase pge-1).

The composition according to the invention contains 3,7-bis(2-hydroxyethyl)icaritin and 2,7-bis(2-hydroxyethyl)icaritin.

Said formulation is obtained by a mixture of the aforesaid components according to the following ratios by weight:

1-99% 3,7-bis(2-hydroxyethyl)icaritin

99-1% 2,7-bis(2-hydroxyethyl)icaritin

The composition is obtained from the aforesaid components selected from the aforesaid group and used according to the mentioned weight ratio ranges individually or in combinations.

Said invention also encompasses the use of said composition for the anti-inflammatory and analgesic treatment and the manufacture thereof for this purpose.

**CLAIMS**

1. A composition for the anti-inflammatory and analgesic treatment, said composition being obtained by the components selected from the group comprising 3,7-bis(2-hydroxyethyl)icaritin and 2,7-bis(2-hydroxyethyl)icaritin that are used individually or in combinations.
2. A composition according to Claim 1 characterized in that it comprises 1-99% by weight 3,7-bis(2-hydroxyethyl)icaritin.
3. A composition according to Claim 1 characterized in that it comprises 99-1% by weight 2,7-bis(2-hydroxyethyl)icaritin.
4. Use of the components according to Claims 1 to 3 obtained individually or in combinations from the group consisting of 3,7-bis(2-hydroxyethyl)icaritin and 2,7-bis(2-hydroxyethyl)icaritin for the manufacture of a composition for the anti-inflammatory and analgesic treatment.

**ABSTRACT**

**A COMPOSITION FOR THE ANTI-INFLAMMATORY AND ANALGESIC TREATMENT**

The invention relates to a composition formed for anti-inflammatory and analgesic treatment and to the use of said composition.

No figure.