Ketotifen fumarate is classified as an antihistamine peptide. It is sometimes referred to as Zatidor, Apo-Ketotifen, Novo-Ketotefin, or Alaway. It is a sterile ophthalmic solution that presents itself as a finely crystalline powder. It has a molecular weight of 425.50. The peptide is also readily soluble in water.

Mechanics of Ketotifen Fumarate

According to scientific study that has been conducted on animal test subjects, Ketotifen fumarate contains properties that are related to antihistamines. This means that the peptide has the ability to inhibit the action of histamines, which are organic nitrogen compounds that trigger inflammatory responses as a means to ward off various foreign pathogens. Ketotifen Fumarate also acts as a mast cell stabilizer, which means that it has the capability to control or prevent specific allergic disorders.

In addition to its anti-histaminic abilities, Ketotifen Fumarate acts as a functional leukotriene antagonist. What this means, is that the peptide has the ability to inhibit the fatty compounds produced by the immune system which in turn constricts airways and causes inflammation in asthma and bronchitis. Ketotifen Fumarate acts as a functional phosphodiesterase inhibitor. What this means, is that the peptide has the ability to prohibit one or more of the five subtypes of enzyme phosphodiesterase (that is, PDE), which in turn prevents the inactivation of the intracellular second messengers cyclic adenosine monophosphate (that is, cAMP) and cyclic guanosine monophosphate (that is, cGMP) by the respective subtypes of PDE.

Theoretical Benefits of Ketotifen Fumarate

Scientific research that has been conducted on animal test subjects in relation to Ketotifen Fumarate has determined that the peptide could provide several theoretical benefits.

Some of these theoretical benefits associated with Ketotifen Fumarate include:

- Prevention and treatment of allergic conjunctivitis. Because of Ketotifen Fumarate’s ability to promote anti-histaminic activity coupled with its capability to block or inhibit certain allergic responses, scientific study on animal test subjects have concluded that the peptide can be effective in blocking the onset of allergic conjunctivitis. This condition is marked by the inflammation of the conjunctiva, which is the membrane covering the white part of the eye. Other symptoms of the condition include the production of tears, itching, redness due to vasodilation, and swelling of the conjunctiva. These types of reactions are associated with a host of various triggers, such as pollen, grass, dander, ragweed, and animal hair.
• **Prevention of asthma attacks.** Because Ketotifen Fumarate has the ability to act as a leukotriene antagonist, it can theoretically work to prohibit the fatty compounds that produce constricted airways and inflammation from manifesting within an animal test subject. This in turn would enable for the prevention of the inflammation that causes asthma and bronchitis.

• **Alleviation of the symptoms related to irritable bowel syndrome.** Some of the symptoms that Ketotifen Fumarate can work to alleviate in relation to irritable bowel syndrome include chronic abdominal pain, bloating, discomfort, and alteration of bowel habits.

**Potential Negative Side Effects of Ketotifen Fumarate**

While scientific research that has been conducted on animal test subjects have determined several theoretical benefits in relation to Ketotifen Fumarate, there have also been a few potential negative side effects that have been associated with the peptide.

Some of more serious potential negative side effects relating to Ketotifen Fumarate include:

• Excessive redness of eyes

• Excessive drainage of eyes

• Swelling of eyelids

• Swelling of tongue

• Swelling of throat

• Difficulty breathing

• Severe dizziness

• Eye infections

• Eye pain

• Changes in vision

• Severe itching in the eyes

Some of the less serious potential negative side effects relating to Ketotifen Fumarate include:

• Mild burning in eyes
• Mild stinging in eyes

• Eye irritation

• Dryness of the eyes

• Increased sensitivity to light

• Drowsiness

• Weight gain

• Dry mouth

• Increased irritability

• Increased instances of nosebleeds

Other scientific studies based on laboratory rat subjects indicated that the administration of the peptide reduced the rate of copulation and fertility index amongst the subjects.

**For Scientific Use Only**

While there have been several scientific studies that has been conducted on animal test subjects in order to determine Ketotifen Fumarate’s range of operational mechanics, theoretical benefits, and negative side effects, it should be noted that any and all findings that are associated with the peptide are still considered to be the product of current laboratory research. Because Ketotifen Fumarate is currently in the research phase, any study or usage relating to the mechanics, operations, benefits, and side effects of the peptide should solely be contained to the restrictions of a strictly controlled environment such as a medical research facility or a laboratory.