



**QUESTIONS AND ANSWERS ON THE WITHDRAWAL OF THE MARKETING
APPLICATION
for
GARENOXACIN MESYLATE**

International non-proprietary name (INN): *garenoxacin mesylate*

On 25 July 2007, Schering-Plough Europe officially notified the Committee for Medicinal Products for Human Use (CHMP) that it wishes to withdraw its application for a marketing authorisation for Garenoxacin mesylate 400 mg and 600 mg film-coated tablets and 2 mg/ml solution for infusion, for the treatment of bacterial infections.

What is Garenoxacin mesylate?

Garenoxacin mesylate is a medicine that was to be available as tablets (400 mg and 600 mg) and as a solution for infusion (drip into a vein).

What was Garenoxacin mesylate expected to be used for?

Garenoxacin mesylate was expected to be used to treat adults with the following infections:

- acute bacterial exacerbation (flare-up) of chronic bronchitis (long-lasting inflammation of the airways in the lungs),
- acute bacterial sinusitis (short-lived infection of the sinuses, air-filled passageways in the bones around the nose and eyes),
- community-acquired pneumonia (an infection of the lungs that is caught outside of hospital),
- infections of the skin and the tissue just below the skin, including foot infections in patients with diabetes,
- complicated intra-abdominal infections, including infections after surgery and acute infections of the pelvis.

Garenoxacin mesylate was only to be used when these infections were known to be caused by bacteria that are susceptible to the medicine.

How is Garenoxacin mesylate expected to work?

Garenoxacin mesylate is an antibiotic that belongs to the 'quinolone' class. It works by blocking the action of enzymes that are necessary for the bacteria to make DNA. By blocking these enzymes, garenoxacin mesylate prevents certain types of bacteria from growing and multiplying. This may help to treat some types of bacterial infections.

What documentation did the company present to support its application to the CHMP?

The effects of Garenoxacin mesylate were first tested in experimental models before being studied in humans.

Garenoxacin mesylate was examined in 19 studies involving a total of over 7,000 patients with the types of bacterial infection that the medicine was expected to be used to treat. The design of some of these studies, which were carried out a few years ago, was not aligned with the latest recommendations for the study of new antibiotics.

In almost all studies, it was compared with other antibiotics (clarithromycin, co-amoxiclav, amoxicillin, levofloxacin, ceftriaxone, erythromycin, azithromycin, piptazobactam or metronidazole). In all studies, the main measure of effectiveness was the proportion of patients whose infection had been cured, at least five days after the end of treatment, although time at which the effectiveness was assessed depended on the type of infection being treated.

How far into the evaluation was the application when it was withdrawn?

The application was at day 180 when the company withdrew. After the CHMP had assessed the responses from the company to a list of questions, there were still some unresolved issues outstanding. Prior to this withdrawal, the company had already withdrawn its application for some indications, as well as for the solution for infusion.

The CHMP normally takes up to 210 days to evaluate a new application. Based on the review of the initial documentation, the CHMP prepares a list of questions at day 120, which is sent to the company. Once the company has supplied responses to the questions, the CHMP reviews them and may, before giving an opinion, ask any remaining questions at day 180. Following the CHMP's opinion, it usually takes around 2 months for the European Commission to grant a licence.

What was the recommendation of the CHMP at that time?

Based on the review of the data and the company's response to the CHMP list of questions, at the time of the withdrawal, the CHMP had some concerns and was of the provisional opinion that Garenoxacin mesylate could not have been approved for the treatment of bacterial infections.

What were the main concerns of the CHMP?

The CHMP was concerned that there was not enough evidence to demonstrate the medicine's effectiveness in treating some of the infections that it was expected to be used for. Furthermore, the CHMP had concerns over the side effects of Garenoxacin mesylate, particularly a risk of low blood pressure. It was also unclear whether the medicine had an effect on the control of glucose (sugar) levels in the body.

Therefore, at the time of the withdrawal, the CHMP's view was that a benefit of Garenoxacin mesylate had not been sufficiently demonstrated and any benefits did not outweigh the identified risks.

What were the reasons given by the company to withdraw the application?

The letter from the company notifying the EMEA of the withdrawal of the application is available [here](#).

What are the consequences of the withdrawal for patients undergoing clinical trials with Garenoxacin mesylate?

The company informed the CHMP that no further patients are being enrolled into clinical trials with Garenoxacin mesylate, and that there are no consequences for patients already included in these trials. If you are in a clinical trial and need more information about your treatment, contact the doctor who is giving it to you.