سامية محمد مصطفى

شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

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شبكة المعلومات الجامعية

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التوثيق الإلكتروني والميكروفيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات

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بالرسالة صفحات لم ترد بالأصل

Formulation and Stability of Gatifloxacin

Thesis presented by

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For the Degree of Doctor of Philosophy
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(**Pharmaceutics**)

Under the Supervision of

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2006

بسم الله الرحمن الرحيم

*رب أوزعني أن أشكر نعمتك التي أنعمت علي

و على والدي و أن أعمل صالحا ترضاه

و أدخلني برحمتك في عبادك الصالحين*

(النمل :١٩)

APPROVAL SHEET

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Quinolone antibiotics are widely prescribed drugs because of their safety, good tolerance and broad antibacterial spectrum with less resistance. Fluoroquinolones are bacteriostatic at low concentrations and bactericidal at high concentrations. They are quite stable in both oral and parenteral dosage forms. These compounds are sensitive to strong light and should be protected from light for long-term storage to prevent loss of activity.

The classification of the fluoroquinolones is somewhat informal and nonstandardized. Gatifloxacin is an 8-methoxy fluoroquinolone antibacterial agent. The most distinct difference between gatifloxacins' structure and those of other fluoroquinolones is the 8-methoxy group. It is believed that this group decreases the likelihood of high level resistance. The lack of halogenation at position 8 indicates that gatifloxacin, like ciprofloxacin and levofloxacin, may decrease patients risk of developing phototoxicity.

Gatifloxacin is given by mouth, or by intravenous infusion as a 2 mg per ml solution over 60 minutes, for the treatment of susceptible infections, including respiratory and urinary tract infections. The usual adult dose is 400 mg once daily. Eye drops are available in some countries as 0.3% preserved solution.

The aim of work in this thesis was to overcome the problem of poor flowability of gatifloxacin in order to formulate it as compressed tablets with lower production costs, compatible excipients, no coating