



CHEMISTRY 4000

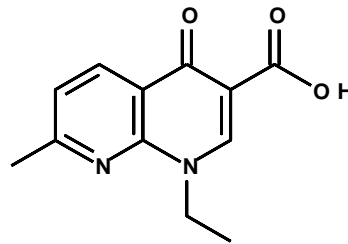
Problem Set #9: Ciprofloxacin (aka Cipro[®])

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Ciprofloxacin (aka Cipro[®])

- Ciprofloxacin (aka Cipro[®]) is an antibiotic in the quinolone family. The earliest quinolone antibiotics had fairly simple structures and low bioavailabilities. An example is shown below:



- In the 1980s, fluorinated quinolone antibiotics were found to have longer half-lives and be more amenable oral dosage. They are also more potent and active against a wider range of bacteria. Cipro[®] is one of these “second generation” quinolone antibiotics.
 - “Cipro (ciprofloxacin hydrochloride) is an antibiotic used to treat bacterial infections in many different parts of the body. It does not work for viral infections (for example, the common cold). Cipro is approved for the inhaled form of anthrax after an individual has been exposed.”¹

¹ <http://www.fda.gov/Drugs/EmergencyPreparedness/BioterrorismandDrugPreparedness/ucm130709.htm>

Ciprofloxacin (aka Cipro[®])

- The structure of ciprofloxacin is:

