

# 1. Introduction

## 1.1 Proton pump inhibitors

### 1.1.1 General information

Proton pump inhibitors are a class of drugs that irreversibly inhibit proton pump ( $H^+/K^+$  ATPase) function and hence lead to a reduction of the amount of acid produced by the stomach by affecting its lining cells (Hewson EG *et al.*, 1991). They are considered as the most potent gastric acid suppressing agents in clinical use (Wo JM., *et al.*, 1997). As can be seen they were introduced in the late 1980s and allowed clinicians to evaluate the role of gastric acid in several extraesophageal manifestations of gastroesophageal reflux disease, including noncardiac chest pain and tracheopulmonary disease. (Wolfe MM *et al.*, 2000).

Generally speaking, Proton pump inhibitors act through irreversibly blocking the hydrogen /potassium adenosine triphosphate enzyme of the gastric parietal cells (Figure 1). And They are considered a well tolerated drugs and the incidence of adverse effects 1-3% , include : headache, nausea, diarrhoea, rash and constipation.

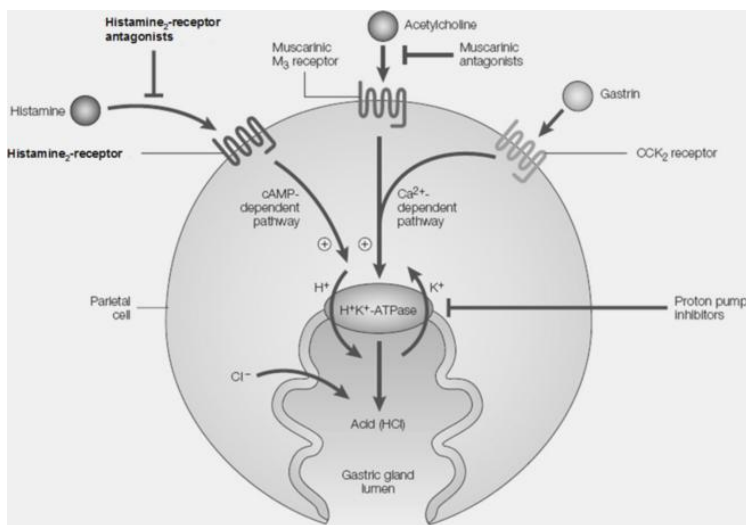


Figure 1 : Mechanism of action of PPIs