

***Helicobacter pylori*: Ancient Human Host but Always New Pathogen. Towards New Therapeutical Approaches**

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Helicobacter pylori (*H. pylori*) is a microaerophilic spiral bacterium that has been associated with the pathogenesis of active and chronic gastritis, peptic ulcer, and gastric carcinoma. In 1994, *H. pylori* was classified as a type one carcinogen, and it appears to be responsible for 5.5% of all cancers worldwide. Antibiotic therapy has been successfully used against *H. pylori* but with increasing drug resistance, failure to eradicate the bacterium both *in vitro* and *in vivo* has been widely reported. Therefore, non-invasive pathogen, an intracellular location of the bacterium both *in vitro* and *in vivo* has been widely reported. Therefore, new drugs should present activity against both the extracellular and intracellular microorganisms. Development of drugs from natural sources is receiving attention because of their potential to delay the onset of resistance and keep the pathogenic strains drug sensitive for longer time. Artemisinin extracted from *Artemisia annua*, has been used in traditional Chinese medicine for over two millennia. Different artemisinin derivatives have been developed. Artemisinin and its derivatives possess antimicrobial, antileishmanial, and antitumor activities. Our study showed that artemisinin derivatives were active against extracellular and the intracellular *H. pylori* suggesting consideration for treatment of *H. pylori* infection. Finally, several clinical extra-gastric diseases, have been reported. For some of these, the pathogenic mechanism is clear. Guidelines suggest that, after *H. pylori* infection determination, the eradication antibiotic therapy is recommended. Of 51 antibiotics in clinical development, less than 10% have chance to be used. So, new therapeutical approaches for the management of *H. pylori* infection are required.

Biography

Francesca Sisto has graduated at the age of 24 years from Catania University (Italy) and postgraduated as Biologist from the same University. In 1996 she is specialized in Clinical Patology from Catania School of Medicine. From 2002 she is Assistant Professor of Microbiology at the Milan School of Medicine (Italy). She has published 48 papers in reputed journals and has been serving as reviewer of different journals.

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