Aims & Scope:

The first documented scientific report about a biofilm was written in 1683 by Antoni van Leeuwenhoek in the Royal Society of London. Since then, the definition of biofilm has evolved to a community of adherent cells surrounded by an exopolysaccharide matrix, with properties distinct from the planktonic cells. The most common environments colonized by biofilms are aquatic locations, artificial structures, biomaterials, and mammalian tissues. Biofilms may be composed of a single-species population or a multiple-species community, but, in both cases, they provide ecologic advantages such as protection from the environment, nutrient availability, metabolic cooperation, and acquisition of new traits. Most probably because of these, biofilms are extremely difficult to eradicate and are a source of many recalcitrant infections. The National Institutes of Health indicate that pathogenic biofilms are responsible, directly or indirectly, for over 80% of all microbial infections (e.g. oral mucositis by Candida albicans and Cystic fibrosis colonisation by Pseudomonas aeruginosa).

As such, biofilms are highly relevant to public health and to promote and to disseminate studies and knowledge is crucial. Furthermore, considering the increasing number of microbial species with drug resistance associated to biofilms, the identification of efficient alternative therapies to the current antimicrobial agents is very important. Many approaches are presently being pursued, including the development of novel drugs, the exploitation of the antimicrobial properties of plant derivatives as essential oils, honey, biocomposites, nanotechnology, the use of bacteriophages or even new agents with new targets and new sources. These novel alternatives will be presented and discussed in the different proposed articles.

Keywords: Biofilms infections, chronic wounds, Gardeneralla vaginallis biofilms infections, fight oral Candidiasis,
Schedule: April 2018