**Tentative Outline**

**Special Issue for Current Organic Chemistry**

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# TITLE: Anti-Infective Drug Discovery Based on Diversified Plant Natural Compounds

**Aims & Scope:**

Infectious diseases, which are caused by invasion of foreign microbes such as viruses, bacteria, fungi and parasites have casted a considerable burden on individuals and health care. They account for nearly a quarter of the estimated 50 million deaths worldwide in the recent years. Today's fast global interaction has greatly increased the incidence and the risk of sharing microbial agents among the densely populated world. The emergence of the growing antimicrobial resistance and the other unrecognized microbial disease agents has also become serious concern and problem that threaten the public health and the achievement of the modern medicine. Thus, it is urgent need to discover novel chemical agents to fight against the infectious diseases.

Plants have been used for the treatment of human diseases for thousand years, and a significant number of modern drugs have been derived from them. Plant natural products are structurally diversified, and many of them have been reported to exhibit antimicrobial activity, demonstrating that plants are excellent sources for discovery of novel antimicrobial compounds. To increase the knowledge and understanding of the plant natural compounds that have played significant role in discovery of novel antimicrobial agents, we have invited the researchers to contribute the review articles in the fields of antimicrobial plant natural products. These researchers have submitted a total of 14 different topics, which are related to drug discovery aspects of anti-infectious diseases from plants. The pathogenic microorganisms proposed in these topics include viruses such as human immunodeficiency virus (HIV), bacteria such as tuberculosis (TB), fungi such as tinea pedis and parasites such as malaria.

**Subtopics:**

- Antimalarial activity of plant metabolites
- Plant natural products with anti-biofilm activity
- Antifungal plant natural products against the pathogenic fungi causing athlete's foot disease
- Antiviral activity and molecular targets of plant natural products against avian influenza
- Plant phenolic compounds as potential lead compounds for antiviral drug discovery
- Antibacterial drug discovery based on natural sources
- Monoazanaphthalene alkaloids against neglected diseases
- Screening and characterization of antimicrobial plant components by planar chromatography coupled with bioassay, spectroscopy and spectrometry
- The long and winding road to convert an antimicrobial compound obtained from natural sources in an antimicrobial drug. An overview from a medicinal chemistry point of view
- Plant natural agents as perspective solution of bacterial resistance
- The anti-influenza effects of small molecules of natural products by inducing antiviral cytokines

- Natural molecules with anti-HIV bioactivities from medicinal plants
- Antiviral and antibacterial triterpenes discovered from plants
- Alkaloids involved in the biosynthesis of suanguinarine: a review on the structure types, distribution and anti-infection activities

**Approximate Schedule:**

- Manuscript Submission Deadline: 02/28/16
- Peer Review Due: 05/31/2016
- Revision Due: 07/31/2016
- Notification of Acceptance by the Guest Editor: 08/31/2016
- Final Manuscript Due: 09/30/2016