

## Tentative Outline

Special Thematic Issue for the journal Anti-Infective Agents (AIA)

### Medicinal/Pharmaceutical chemistry and engineering of anti-infective agents

Guest Editor: Niranjan Koirala, University of Macau, China

- **Scope of the Thematic Issue:**

There has been an extensive research on plants and microorganisms and their extracts for their use as an alternative and functional medicine. Plants and microorganisms found on nature produce the secondary metabolites (SM) during their stress conditions, and these are essential for their survival (immunity). SM are compounds other than primary metabolites and are not required for the plant and microorganisms for metabolic functions. SM are composed of phenolic compounds, aromatic compounds, flavonoids, anthraquinones, terpenoids, alkaloids, antibiotics, quinolines etc. to name a few selected important ones. These SM have found to be beneficial to humans and animals as they have demonstrated an array of pharmacological benefits like antibiotics (against bacterial infections), antiviral agents (against viral infections), antimycobacterial agents (against mycobacterial infections), antifungal agents (against fungal infections), and antiparasitic agents (against parasitic infections).

In this context, it's important that research on plants and microorganisms specially Actinomycetes having anti-infective activities be accelerated. The new discoveries may help us to combat on the present issues on antimicrobial resistance, along with many other diseases. Furthermore, it is also important that the existing anti-infective drugs be modified for better biological activities using pharmaceutical engineering techniques. The modifications can be methylation, glycosylation, hydroxylation, sulphonation, etc.

This thematic/special issue welcomes articles describing the current advances of research on anti-infective agents but not limited to research and reviews articles presenting the research on anti-infective agents dealing with pharmaceutical engineering to derivatize the compounds for better anti-infective activities. The process of anti-infective agents' generation and engineering can be any branch of chemistry/microbiology/biotechnology including but not limited to natural products chemistry, organic chemistry, synthetic chemistry, pharmaceutical chemistry and microbial biotechnology.

**Keywords:** antibiotics, antiviral agents, antimycobacterial agents, antifungal agents, antiparasitic agents, medicinal chemistry, synthetic chemistry, pharmaceutical engineering.

#### Sub-topics:

The sub-topics to be covered within the issue should be provided:

- Pharmaceutical/Medicinal chemistry
- Pharmaceutical engineering
- Anti-infective compounds
- Secondary metabolites
- Synthetic chemistry
- Natural products
- Drugs discovery
- Actinomycetes
- Antibiotics
- Screening

#### **Tentative titles of the articles and list of contributors:**

Tentative titles of the articles and list of contributors with their names, designations, addresses and email addresses should be provided.

#### **Oxovanadium (IV) Complexes with Schiff Base Ligands: Synthesis, Characterization and Antimicrobial Studies**

Corresponding author: Dr. Motilal Sharma

Professor, Central department of Chemistry, Tribhuvan University, Nepal

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#### **Green synthesis of silver nano-particles from scallion leaf and banana stem extract and its anti-microbial activity**

Corresponding author: Dr. Palanichamy V

Asst Prof, School of bioscience and biotechnology, Vit University Vellore, India

#### **Effect of mixing Moringa (*Moringa olifera*) leaves and its pods on nutritional, phytochemical and sensorial properties.**

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#### **Novel *Streptomyces* sp. reported in 2018: A meta-analysis**

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### **Schedule:**

- ✧ Manuscript submission deadline: 20 June 2021
- ✧ Peer Review Due: 25 July 2021
- ✧ Revision Due: 15 August 2021
- ✧ Announcement of acceptance by the Guest Editors: 30 October 2021
- ✧ Final manuscripts due: 1 January 2022

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