



## Natural Compounds with Antimicrobial and Immunomodulatory Activity

Guest Editors:

**Dr. Giovanna Donnarumma**

Dipartimento di Medicina  
Sperimentale, Università degli  
Studi della Campania "Luigi  
Vanvitelli", Naples, Italy

**Dr. Alessandra Fusco**

Department of Experimental  
Medicine, University of Campania  
"Luigi Vanvitelli", Naples, Italy

Deadline for manuscript  
submissions:

**closed (31 January 2022)**

### Message from the Guest Editors

Dear Colleagues,

It is well known that natural products with potential for use in human therapy or prophylaxis have been the major source of novel antibiotics. Their extraction from various sources (e.g., being plant-, animal- or microbe-derived), is one of the most dynamically growing research trends. On the other hand, the increasing frequency of antibiotic-resistant infections pushes studies in this direction. The antimicrobial activity of these natural compounds is not exclusively due to the ability to inhibit microbial growth but also the power to stimulate the innate immune system toward improving host defense mechanisms. In fact, some natural products could reverse the resistance of bacteria to antibiotics, making the target bacteria susceptible to these drugs again. In addition, they can also exhibit potent synergism against drug-resistant bacteria when used in combination with various types of antibiotics.

For this Special Issue, we encourage authors to disseminate innovative studies on natural products with antimicrobial properties and to introduce interesting perspectives on their potential therapeutic use.

Prof. Dr. Giovanna Donnarumma  
Dr. Alessandra Fusco  
*Guest Editors*





an Open Access Journal by MDPI

## Editor-in-Chief

**Prof. Dr. Giulio Nicola Cerullo**  
Dipartimento di Fisica,  
Politecnico di Milano, Piazza L.  
da Vinci 32, 20133 Milano, Italy

## Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal *Applied Sciences* has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), Ei Compindex, Inspec, Embase, CAPlus / SciFinder, and other databases.

**Journal Rank:** JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

## Contact Us

---

*Applied Sciences* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/applsci](http://mdpi.com/journal/applsci)  
[applsci@mdpi.com](mailto:applsci@mdpi.com)  
[X@Applsci](https://twitter.com/Applsci)