

**BIO-COMPRESIÓN**  
A collection of Biological Research Papers



DEPARTMENT OF BIOTECHNOLOGY  
EMEA College of Arts and Science  
Kondotti, Kerala, India, Pin. 6763638  
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Chief Editor  
Mashoor K

Editors

Ruba Badarudheen  
Shilly Das A  
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## Preliminary Antimicrobial and Phytochemical Screening of *Camellia Sinensis* L and *Piper Nigrum* Leaf Extracts

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### Abstract

In the present study, leaves of *Camellia sinensis* L and *Piper nigrum* L were extracted using two different solvents i.e. methanol and water. The efficacy of these extracts was tested against various bacterial strains through agar well-diffusion method. The antibacterial activity was evaluated using five clinical bacterial strains. The methanolic extracts of leaves of *Camellia sinensis* and *Piper nigrum* L were subjected to qualitative phytochemical screening for the identification of various classes of active chemical constituents such as phenols, flavonoids, saponins, terpenoids, glycosides and alkaloids. According to the findings of the present study, methanolic extracts exhibited significant antimicrobial activity when compared to aqueous extracts. Both *Camellia sinensis* L and *Piper nigrum* L leaf extracts exhibited broad spectrum antibacterial effect. This study provides scientific understanding to further explore other pharmacological properties of these plants.

### Introduction

Antibiotic resistance among pathogens has been spreading at an alarming rate during the last few decades. The success story of chemotherapy lies in the constant search for new drugs which are able to counter the challenge created by resistant strains<sup>1</sup>. In this situation, research worldwide is being conducted to find new drugs which could be used in the treatments of the infections caused by the drug resistant strains. Along with these efforts, researchers also focus on medicinal plants for finding novel antimicrobial agents because natural products are believed to have lesser side effects than synthetic drugs. Several distinct plant derived drugs are being used currently in different parts of the world. The WHO