



Therapeutic Drug Monitoring: Pharmacodynamics and Pharmacokinetics of Antibiotics in Clinical Care Settings

Guest Editor:

Prof. Dr. Toshimi Kimura

Department of Pharmacy,
Juntendo University Hospital,
Tokyo 113-0033, Japan

Deadline for manuscript
submissions:

30 June 2024

Message from the Guest Editor

The incomplete attainment of recommended antibiotics PK/PD parameters are associated with the emergence of antimicrobial-resistant bacteria. Blood concentration monitoring of antibiotics and appropriate dosing regimen can help improving clinical outcomes, reducing adverse drug reactions and spread of antimicrobial resistance. Recently, TDM strategy directed towards personalized medicine and Model-informed precision dosing (MIPD) of antibiotics is rapidly evolving TDM fields. Near future MIPD comprised PBPK model will be more advanced therapy options that support the treatment of patients with complicated backgrounds.

In this Special Issue, we aim to publish clinical evidence on optimization of a dosage regimen by TDM and the concept of MIPD as below:

- Therapeutic index of blood or tissue concentration of any antibiotics based on efficacy and toxicity in human
- Improvement of clinical outcome or antimicrobial resistance by TDM interventions
- Systematic reviews/meta-analysis within TDM/MIPD fields
- Population PK and PD of antibiotics in special populations such as pediatrics
- Applied to antibiotics treatment based on mechanism-based PK and PD in human





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Editor-in-Chief

Prof. Dr. Nicholas Dixon

School of Chemistry and
Molecular Bioscience, University
of Wollongong, Wollongong, NSW
2522, Australia

Message from the Editor-in-Chief

There are very few fields that attract as much attention as scientific endeavor related to antibiotic discovery, use and preservation. The public, patients, scientists, clinicians, policy-makers, NGOs, governments, and supra-governmental organizations are all focusing intensively on it: all are concerned that we use our existing agents more effectively, and develop and evaluate new interventions in time to face emerging challenges for the benefit of present and future generations. We need every discipline to contribute and collaborate: molecular, microbiological, clinical, epidemiological, geographic, economic, social scientific and policy disciplines are all key. *Antibiotics* is a nimble, inclusive and rigorous indexed journal as an enabling platform for all who can contribute to solving the greatest broad concerns of the modern world.

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Antibiotics Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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