Special Issue

Advanced In Silico, In Vitro, and In Vivo Methods for Pulmonary Healthcare and Occupational Exposure Risk Assessment

Message from the Guest Editors

This Special Issue (SI) on “Advanced In Silico, In Vitro and In Vivo Methods for Pulmonary Healthcare and Occupational Exposure Risk Assessment”, is dedicated to advancing our understanding of multiscale lung aerosol dynamics through cutting-edge synergistic methods. Studies highlighting the clinical translation of multiscale aerosol dynamics, aiding in drug delivery optimization, inhalation therapy advancements, personalized treatment strategies, exposure risk assessments and preventions associated with environmental pollutants, occupational hazards, and aerosol-based diseases are all considered relevant to this SI. Topics of interest include, but are not limited to:

- In Silico Methods

To Health Endpoints; Advanced Air–Mucus–Particle Flow Dynamics; Artificial Intelligence (AI) Integration

- In Vitro Methods

More Physiologically Realistic 3D Airway Case Models; Microfluidic Lung-on-a-Chip Models:

- In Vivo Methods

Refined Animal Models for Aerosol Studies; Imaging Techniques for Localized Lung Dosimetry Visualization

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You are invited to contribute a research article or a comprehensive review for consideration and publication in *Bioengineering* (ISSN 2306-5354). *Bioengineering* is published in open access format – research articles, reviews and other contents are released on the Internet immediately after acceptance. The scientific community and the general public have unlimited and free access to the content as soon as it is published. *Bioengineering* provides an advanced forum for the science and technology of bioengineering. We would be pleased to welcome you as one of our authors.

Editor-in-Chief

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