

Special Issue

Drug Repurposing: Emerging Approaches to Drug Discovery

Message from the Guest Editor

Drug repurposing, a methodology for identifying new therapeutic uses for existing drugs, has proven to be a highly efficient and effective strategy, saving time and cost as opposed to the lengthy, expensive road of traditional drug discovery. Over the last few decades, drug repurposing has helped mitigate failures in drug discovery. For example, the drug Sunitinib approved for use in kidney cancer was successful in treating a rare form of leukemia, opening wider avenues for the role of drug repurposing. The COVID-19 pandemic has further rekindled the development of new indications for old drugs by embracing drug repurposing through the lens of a systems and network medicine approach. This approach involves looking at perturbations of a drug to a network of genes rather than a drug docked to a single protein. In addition, artificial intelligence and machine learning approaches are playing a pivotal role in accelerating drug discovery by identifying repurposed leads based on big data sources. The focus of this Special Issue is to feature articles that apply drug repurposing to unravel new breakthroughs in drug discovery.

Guest Editor

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The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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