







Special Issue Reprint

# **Network Pharmacology of Natural Products**

www.mdpi.com/books/reprint/11025

Edited by Alexander George Panossian

ISBN 978-3-7258-4204-9 (Hardback) ISBN 978-3-7258-4203-2 (PDF)



Drug development strategies assumed that a single-target mechanism of action is the best approach for obtaining target-specific therapeutics. This model aims to treat specific conditions and is associated with fewer adverse events. However, many drugs and natural compounds interact with multiple receptors, resulting in polyvalent pharmacological and pleiotropic therapeutic activities through multitarget interactions. This development, in turn, has shifted the paradigm from a "one-target, one-drug" mode to a "network-target, multiple-component therapeutics" mode.

Developing techniques for monitoring the expression of genes, proteins, and metabolites in their entirety in cells, tissues, and organs formed the basis for the new field of systems biology. The essence of network pharmacology is to evaluate how a study drug interacts with therapeutic targets, their associated signaling pathways involved in biological and physiological processes, and the functions linked to diseases, ultimately aiming to achieve a beneficial therapeutic effect.

Network pharmacology, a relatively new discipline, has emerged recently and is rapidly developing. In 2024 alone, approximately 9000 publications on network pharmacology from around the world were cited and indexed in the PubMed database.





MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



#### **Open Access**

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



#### **Author Focus**

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



### **High Quality & Rapid Publication**

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



## **High Visibility**

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



## **Print on Demand and Multiple Formats**

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.

MDPI AG Grosspeteranlage 5 4052 Basel Switzerland Tel: +41 61 683 77 34 www.mdpi.com/books books@mdpi.com

