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# 网络靶标:中药方剂网络药理学研究的一个切入点

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中文摘要:目前中药研究的一个重点和难点问题是理解中药方剂复杂化学体系与病证复杂生物系统的相互作用。作者通过多年研究,从网络药理学、系统生物学角度对该问题提出"网络靶标"这一新的概念与方法。网络靶标概念指的是将病证生物分子网络当作靶标,由此设计和预测最佳的药物干预方式。网络靶标方法旨在将病证、方药映射于生物分子网络,然后在网络上对病证与方药的关系进行机制性的计算、分析与预测,以期发现药效物质及其作用机制,阐释方剂配伍规律与方证关联,并进行组方用药的理性设计。该文概述作者课题组在网络靶标方法及其在中药方剂中的应用进展,希望能为中药方剂的网络药理学研究提供参考。

中文关键词:网络靶标 中医药 方剂 网络药理学 系统生物学

## Network target: a starting point for traditional Chinese medicine network pharmacology

**Abstract:**Understanding the interactions between numerous chemical compounds of herbs or herbal formulae and complex biological systems related with diseases or traditional Chinese medicine (TCM) syndromes is one of great dilemmas in current studies on TCM. To address such a difficult issue, we propose a novel concept and methodology of "Network Target" based on our previous works and from the perspective of network pharmacology as well as systems biology. The network target treats a disease-specific biomolecular network as a target to help design and predict the best possible treatments. Focused on mapping disease phenotypes and herbal compounds into biomolecular networks and then calculating, analyzing and predicting the mechanism of their mutual interactions, the network target approaches will facilitate discovery of effective compounds and their combinations, elucidation of mechanistic relationships between herbal formulae and diseases or TCM syndromes, and development of rational drug designs for TCM. In this paper, our recent progresses on the methodology of Network Target and its applications in herbal medicine are reviewed to provide reference for the coming TCM network pharmacology.

**keywords:**network target traditional Chinese medicine herbal formulae network pharmacology systems biology

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