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药学学报

第58卷 第4期
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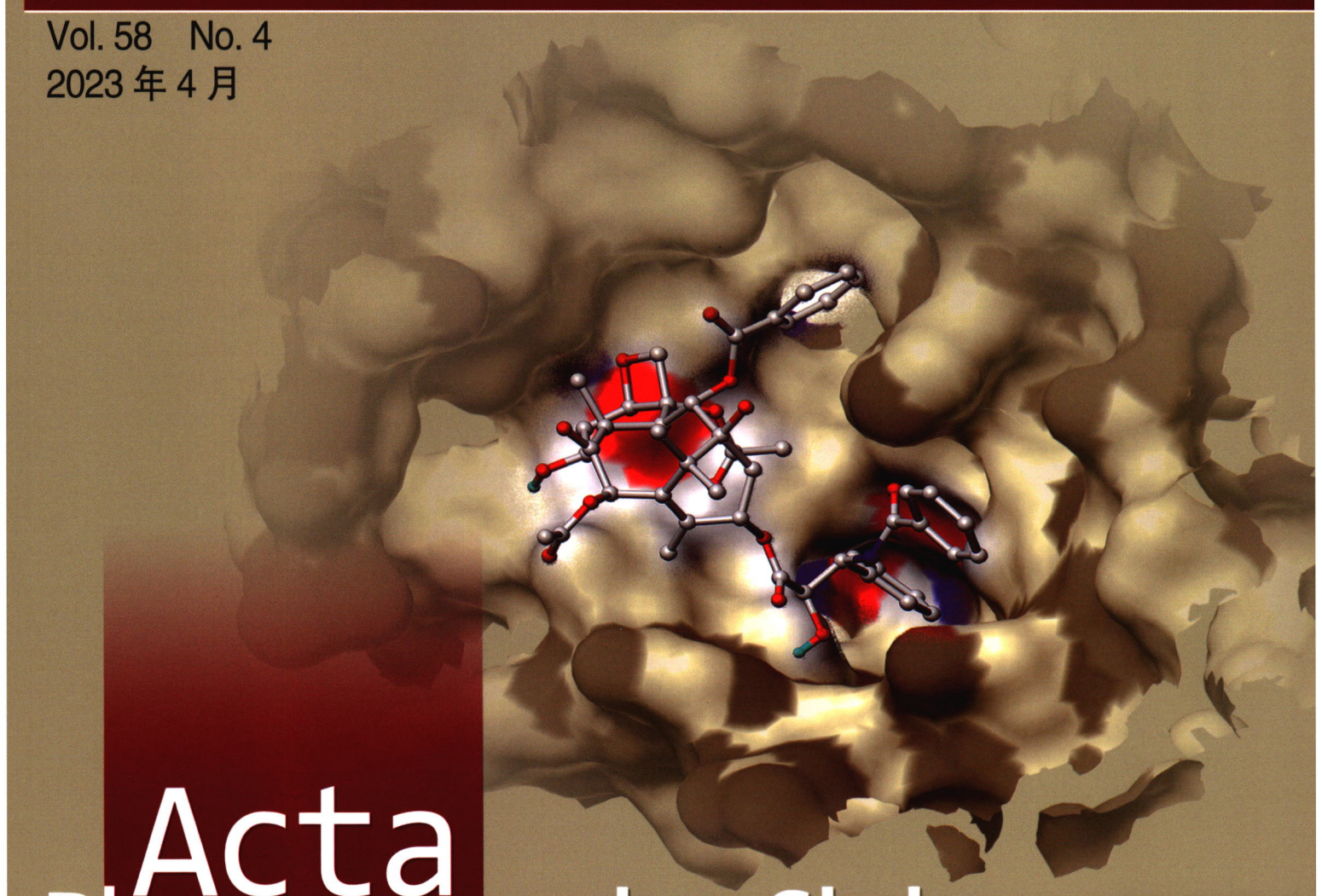

Acta Pharmaceutica Sinica

专题报道

崔丽莉，张 勇
上市核酸药物及其脂质纳米递送载体研究进展

黄芳华，王庆利等
《纳米药物非临床安全性评价研究技术指导原则》解读

中国药学会
中国医学科学院药物研究所

药 学 学 报

第 58 卷　第 4 期　2023 年 4 月

图 文 摘 要

专题报道：纳米药物药代动力学研究

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«纳米药物非临床安全性评价研究技术指导原则»解读

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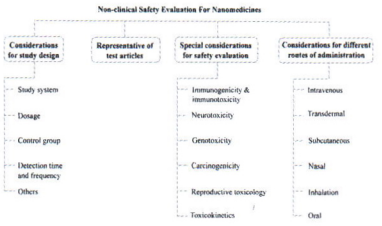

本品对«纳米药物非临床安全性评价研究技术指导原则 (试行)»进行全面解读，着重介绍纳米药物非临床安全性评价的关注要点，并结合案例进行阐述。

815

经眼玻璃体给药药物的研究进展及非临床研究的考虑要点

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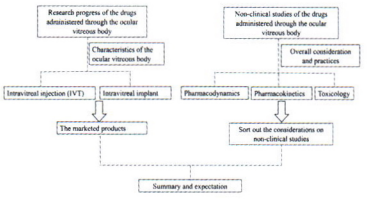


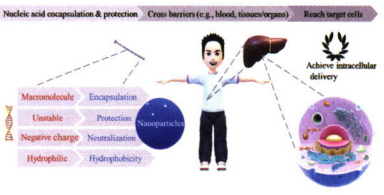
本文结合审评实践和已上市产品的研发案例，总结了经眼玻璃体给药药物的研究进展及其非临床研究评价考虑要点。

826

上市核酸药物及其脂质纳米递送载体研究进展

崔丽莉*，张勇

(吉林大学生命科学学院，吉林 长春 130012)



核酸定制型纳米制剂及其递送屏障。

834

脂质体纳米药物制剂的生物分析方法及药代动力学研究进展

刘一[#]，张煜杰[#]，王梓榆[2]，尤建嵩[2]，尹磊[1*]，史美云[1,2*]

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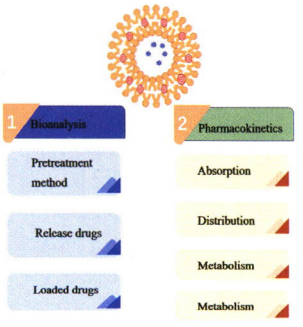


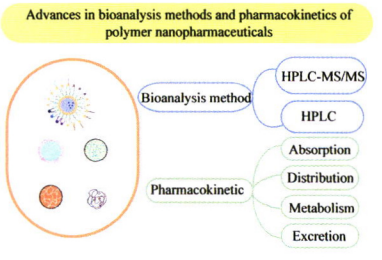
本篇综述介绍了脂质体纳米药物的前处理方法，总结了脂质体纳米药物的分析测定方法及其药代动力学的研究进展，希望能够为脂质体纳米药物制剂的研究开发提供参考。

844

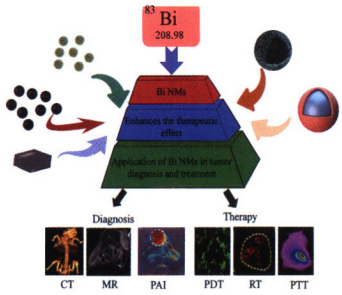
聚合物纳米药物制剂生物分析方法及药动学研究进展

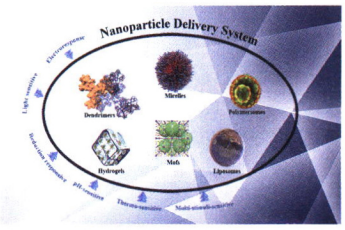
崔雨琪[#]，雷芳彬[#]，张霖茜[2]，尤建嵩[2]，尹磊[1*]，史美云[1,2*]

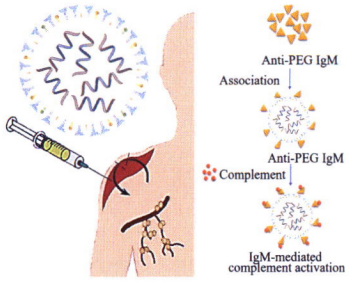
(1. 大连理工大学生命科学与药学学院，辽宁 盘锦 124221；2. 艾美诚信生物制药有限公司，辽宁 大连 116600)



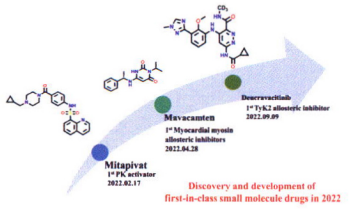
本文简要介绍了聚合物纳米药物制剂常用生物分析方法的特点及适用范围，概述了聚合物纳米药物制剂在体内的药代动力学，希望能够为聚合物纳米药物制剂的药代动力学研究、安全性和有效性评价提供借鉴和参考。



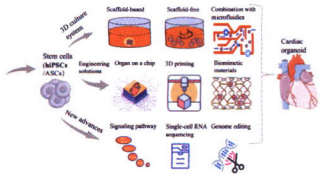


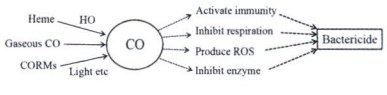


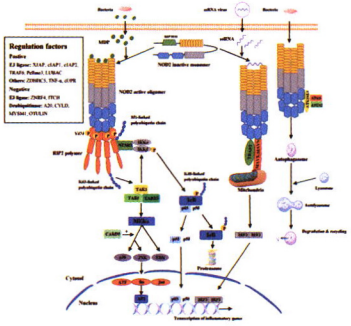
专家论坛

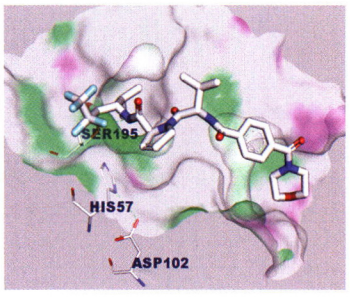


综述

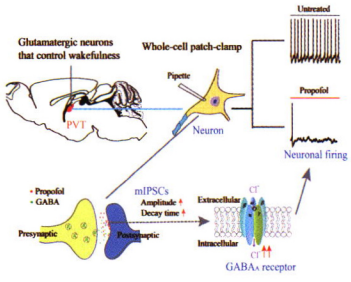


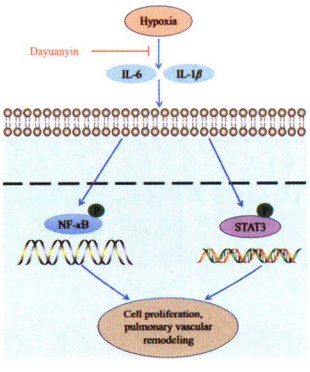


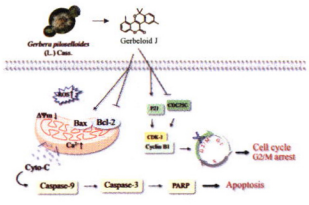




研究论文







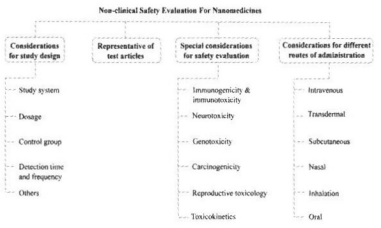
新药发现与研究实例简析

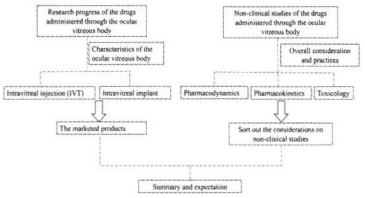
ACTA PHARMACEUTICA SINICA

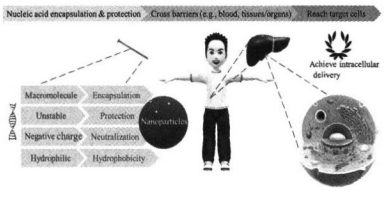
Volume 58 Number 4 2023 April

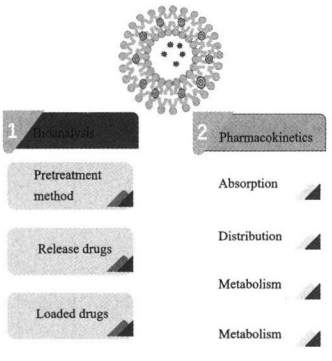
Graphical Abstracts

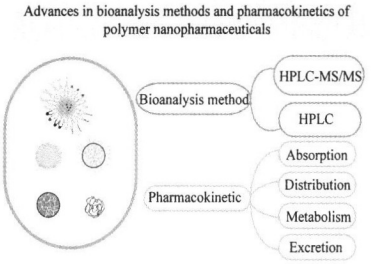
Special Reports: Study on Pharmacokinetics of Nanomedicine

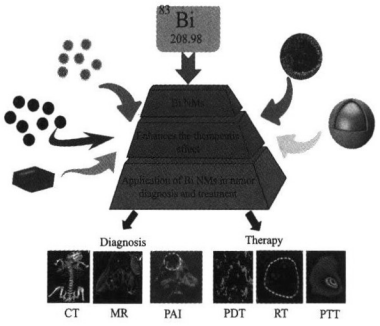


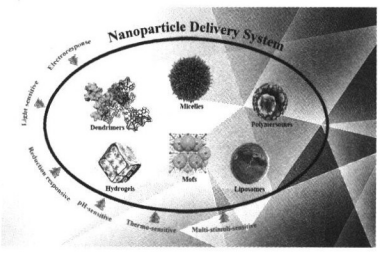


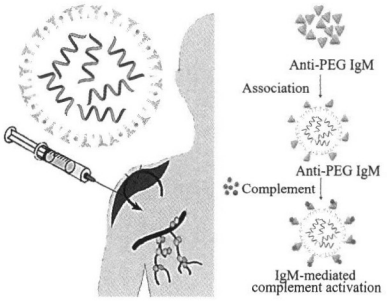




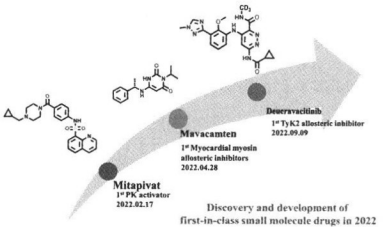




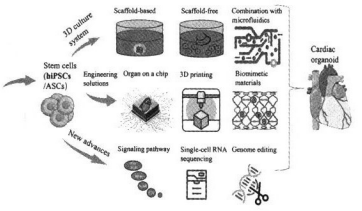




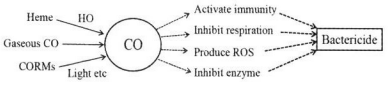
Professionals Forum



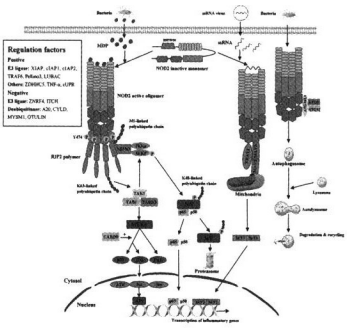
Reviews



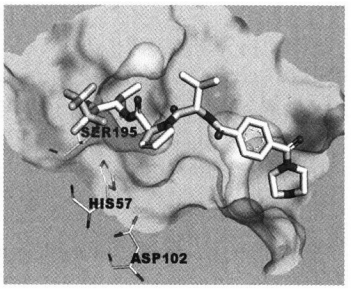
Heart organoid, formed by the self-updating and specific differentiation of stem cells during the *in vitro* culture, is a miniature with the structure and function similar to human heart, and becomes an important technical means for drug discovery and other medical research.



Carbon monoxide (CO) has bactericidal effect by activating body immunity, inhibiting bacterial respiration and enzyme activities, and generating oxidative pressure. Gaseous CO and CO releasing molecules (CORMs) are anticipated to be used as therapeutic drugs for infectious diseases.

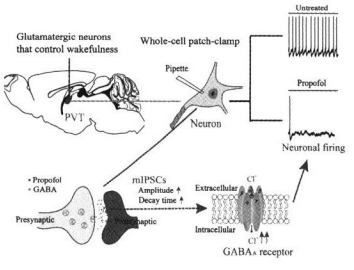


This review presents the recent progress of NOD2 receptor-mediated signal transduction pathways and its regulation mechanisms, the relationship between NOD2 and AIDs, and the inhibitors of NOD2 pathway.

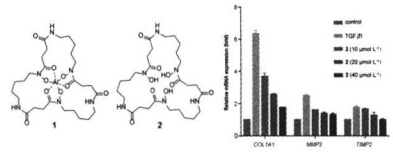


The biological functions of human neutrophil elastase (hNE) and the current progress of inhibitor development against hNE.

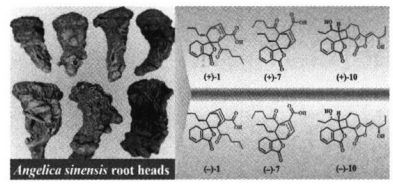
Original Articles



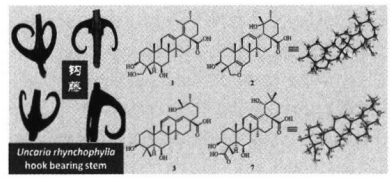
How the paraventricular thalamus (PVT) contributes to propofol anesthesia remains unknown. Using whole-cell patch-clamp recordings in acute brain slices of adult mice, the present study found that propofol inhibited PVT glutamatergic neurons in a concentration-dependent and reversible manner by potentiating postsynaptic $GABA_A$ receptors, suggesting a potential role of the PVT in propofol anesthesia.



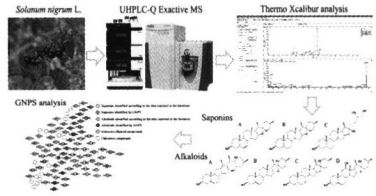
A new siderophore chelate aluminioxamine E (**1**) was identified from the co-cultures of marine-derived *Streptomyces* sp. IMB18-531 and *Cladosporium* sp. IMB19-099. Desferrioxamine E (**2**) showed inhibitory activities against the expression of the liver fibrosis related genes *COL1A1*, *MMP2*, and *TIMP2*.



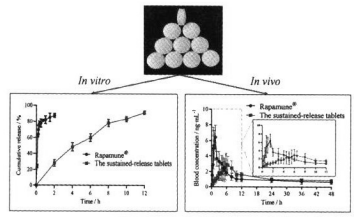
Ten pairs dimeric phthalide racemates [(+)-/(−)-**1**-(+)-/(−)-**10**] were isolated and chiral separated from an aqueous extract of the *Angelica sinensis* root head (Guitou). Their structures including absolute configurations were elucidated and determination of their relative configurations were discussed.



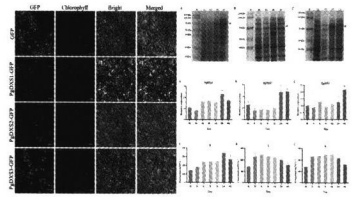
Eight minor triterpenoid acids (**1**–**8**) were isolated from an aqueous decoction of *Uncaria rhynchophylla*, named successively uncarinic acids Q-X, while the structures of **2** and **7** were confirmed by single crystal X-ray diffraction.



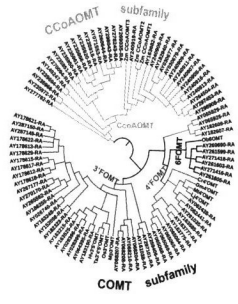
In this study, the material composition of the leaves of *Solanum nigrum* L. was rapidly analyzed based on UHPLC-Q Exactive MS and molecular network technology. Results: A total of 157 compounds were identified, of which 35 compounds were first reported in *S. nigrum* L., including 6 alkaloids, 20 saponins, and 9 flavonoids.



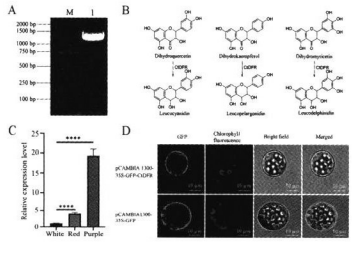
The experimental results indicated that sirolimus self-microemulsion-mesoporous silicon sustained-release tablets which used the commercial sirolimus tablets as references released slowly *in vitro* and *in vivo* and was expected to alleviate the toxicity of the drug, providing a reference for the solubilization of other insoluble drugs and the research and development of sustained-release preparations.



In this study, the *DXS* gene of *Platycodon grandiflorum* was successfully cloned and its prokaryotic expression and subcellular localization were studied. The gene expression level and the changes of gene expression and enzyme activity after methyl jasmonate (MeJA) treatment were detected.



This paper carried out the whole genome mining and identification of flavonoid *O*-methyltransferase (*FOMT*) genes in *Artemisia argyi* and performed phylogenetic, chromosomal localization, gene sequence characterization, subcellular localization prediction, protein structure, gene structure analysis, and expression pattern analysis, which provided a theoretical basis for further research on the function of FOMTs and the biosynthesis of methylated flavonoids in *Artemisia argyi*.



A new *CtDFR* gene was isolated from *Cistanche tubulosa* (Schenk) Wight. *CtDFR* was highly expressed in red and purple flowers, and low expressed in white flowers. The CtDFR protein could reduce dihydrokaempferol, dihydroquercetin, dihydromyricetin to leucopelargonidin, leucocyanidin, leucodelphinidin and was mainly localized in the cytoplasm.

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