

## Review Article

- 1533 Transcriptional regulation and post-translational modifications in the glycolytic pathway for targeted cancer therapy  
Xuan Ni, Cheng-piao Lu, Guo-qiang Xu and Jing-jing Ma
- 1556 Frizzled receptors (FZDs) in Wnt signaling: potential therapeutic targets for human cancers  
Hui-yu Liu, Xiao-jiao Sun, Si-yu Xiu, Xiang-yu Zhang, Zhi-qi Wang, Yan-lun Gu, Chu-xiao Yi, Jun-yan Liu, Yu-song Dai, Xia Yuan, Hua-peng Liao, Zhen-ming Liu, Xiao-cong Pang and Tian-cheng Li
- 1571 Liver receptor homolog-1: structures, related diseases, and drug discovery  
Tong Wu, Zhi-fang Lu, Hao-nan Yu, Xi-shan Wu, Yang Liu and Yong Xu

## Articles Neuropharmacology

- 1582 The classical D1 dopamine receptor antagonist SCH23390 is a functional sigma-1 receptor allosteric modulator  
Gu-fang Zhang, Kai-lian Zhu, Qi Li, Yue Zhang, John L. Waddington, Xiang-dong Du and Xue-chu Zhen
- 1591 Prebiotic diet normalizes aberrant immune and behavioral phenotypes in a mouse model of autism spectrum disorder *Open*  
Naika Prince, Lucia N Peralta Marzal, Anastasia Markidi, Sabbir Ahmed, Youri Adolfs, R Jeroen Pasterkamp, Himanshu Kumar, Guus Roeselers, Johan Garssen, Aletta D Kraneveld and Paula Perez-Pardo

## Cardiovascular Pharmacology

- 1604 Empagliflozin and liraglutide ameliorate HFpEF in mice via augmenting the Erbb4 signaling pathway  
Xia-yun Ni, Xiao-jun Feng, Zhi-hua Wang, Yang Zhang, Peter J. Little, Yang Cao, Suo-wen Xu, Li-qin Tang and Jian-ping Weng
- 1618 Endothelial deubiquitinase YOD1 mediates Ang II-induced vascular endothelial-mesenchymal transition and remodeling by regulating  $\beta$ -catenin  
Wan-te Lin, Yu-cheng Jiang, Yi-lin Mei, Yang-hao Chen, Zhao-zheng Zheng, Xue Han, Gao-jun Wu, Wei-jian Huang, Bo-zhi Ye and Guang Liang

## Inflammation and Immunopharmacology

- 1632 Ripretinib inhibits HIV-1 transcription through modulation of PI3K-AKT-mTOR  
Jin-feng Cai, Jia-sheng Zhou, Zhuo-yue Meng, Zi-qi Wu, Jia-cong Zhao, Hai-xiang Peng, Xin-yu Liang, Jun-jian Chen, Pei-pei Wang and Kai Deng

## Pulmonary, Gastrointestinal, Hepatic, and Renal Pharmacology

- 1644 Exosomes derived from induced cardiopulmonary progenitor cells alleviate acute lung injury in mice  
Luo-xing Xia, Ying-ying Xiao, Wen-jing Jiang, Xiang-yu Yang, Hua Tao, Safur Rehman Mandukhail, Jian-feng Qin, Qian-rong Pan, Yu-guang Zhu, Li-xin Zhao, Li-juan Huang, Zhan Li and Xi-yong Yu
- 1660 Neutrophil extracellular traps promote acetaminophen-induced acute liver injury in mice via AIM2  
Fan-le Zeng, Yuan Zhang, Zhong-hao Wang, Hui Zhang, Xue-teng Meng, Yi-qin Wu, Zhen-zhen Qian, Yu-hao Ding, Jun Li, Tao-tao Ma and Cheng Huang
- 1673 Cpd-A1 alleviates acute kidney injury by inhibiting ferroptosis  
Ying Chen, Ming-fei Wu, Man-man Xie, Yang Lu, Chao Li, Shuai-shuai Xie, Wen-xian Ma, Ming-lu Ji, Rui Hou, Ze-hui Dong, Ruo-bing He, Meng-meng Zhang, Hao Lu, Li Gao, Jia-gen Wen, Juan Jin, Xiao-wu Dong, Jin-xin Che and Xiao-ming Meng

## Chemotherapy

- 1686 Inhibition of USP7 enhances CD8<sup>+</sup> T cell activity in liver cancer by suppressing PRDM1-mediated FGL1 upregulation  
Lin-lin Sun, Li-na Zhao, Jiao Sun, Hong-feng Yuan, Yu-fei Wang, Chun-yu Hou, Pan Lv, Hui-hui Zhang, Guang Yang, Ning-ning Zhang, Xiao-dong Zhang and Wei Lu
- 1701 Novel STAT3 oligonucleotide compounds suppress tumor growth and overcome the acquired resistance to sorafenib in hepatocellular carcinoma  
Qi-yi Zhang, Wen Ding, Jian-shan Mo, Shu-min Ou-yang, Zi-you Lin, Ke-ren Peng, Guo-pin Liu, Jin-jian Lu, Pei-bin Yue, Jin-ping Lei, Yan-dong Wang and Xiao-lei Zhang

- 1715 Baicalein triggers ferroptosis in colorectal cancer cells via blocking the JAK2/STAT3/GPX4 axis  
Jian-qin Lai, Le-le Zhao, Chao Hong, Qiu-ming Zou, Jin-xuan Su, Si-jia Li, Xiao-feng Zhou, Zi-sheng Li, Bo Deng, Jie Cao and Qi Qi
- 1727 A novel bispecific antibody drug conjugate targeting HER2 and HER3 with potent therapeutic efficacy against breast cancer  
Hui-fang Zong, Xi Li, Lei Han, Lei Wang, Jun-jun Liu, Ya-li Yue, Jie Chen, Yong Ke, Hua Jiang, Yue-qing Xie, Bao-hong Zhang and Jian-wei Zhu
- 1740 Tumor-targeted PROTAC prodrug nanoplatform enables precise protein degradation and combination cancer therapy  
Zhi-feng Zou, Lei Yang, Hui-jun Nie, Jing Gao, Shu-min Lei, Yi Lai, Fan Zhang, Ernst Wagner, Hai-jun Yu, Xiao-hua Chen and Zhi-ai Xu
- 1752 PBPK-PD model for predicting morphine pharmacokinetics, CNS effects and naloxone antagonism in humans  
Rui-jing Mu, Tian-lei Liu, Xiao-dong Liu and Li Liu

## Absorption, Distribution, Metabolism, and Excretion

## Cover

Reduction-activatable PROTAC prodrug nanoparticles for tumor-targeted protein degradation and anticancer therapy. The reduction-activatable PROTAC prodrug nanoparticles (NPs) were engineered by self-assembly of the PROTAC-conjugated amphiphilic diblock copolymer and further functionalized with a CRGDK ligand. The resulting PROTAC prodrug NPs can specifically target tumor cells and be efficiently internalized by recognizing neuropilin-1 (NRP-1), which is overexpressed on the surface of tumor cells. Remarkably, the PROTAC prodrug NPs efficiently degraded the protein targets BRD4 and CDK9 for inhibiting tumor growth in an mouse model of MDA-MB-231 triple-negative breast cancer. More importantly, the PROTAC prodrug NP can serve as a platform for co-delivering chemotherapeutic agents (e.g., doxorubicin, DOX) to perform combinatory cancer therapy. See the article in pages 1740–1751.

EXECUTIVE EDITOR FOR THIS ISSUE XU, Jia (Shanghai)

## ACTA PHARMACOLOGICA SINICA (Monthly)

2024 August; Volume 45 Number 8

(Founded in September, 1980)

### Sponsored by

Chinese Pharmacological Society  
Shanghai Institute of Materia Medica, Chinese Academy of Sciences

### Supervised by

China Association for Science and Technology

### Editor-in-chief

DING, Jian

### Edited by

Editorial Board of Acta Pharmacologica Sinica  
294 Tai-yuan Road, Shanghai 200031, China  
[Http://www.chinaphar.com](http://www.chinaphar.com)  
E-mail [aps@simm.ac.cn](mailto:aps@simm.ac.cn)  
Phn 86-21-5492-2821, 5492-2822; Fax 86-21-5492-2823

### Published jointly by

Editorial Office of Acta Pharmacologica Sinica  
Springer Nature

### Publication date

5th every month

### Printed by

Shanghai Shengtong Times Printing Co Ltd  
568 Guang-ye Road, Shanghai 201506, China

Copyright © 2024 Shanghai Institute of Materia Medica, Chinese Academy of Sciences and Chinese Pharmacological Society