

<b>Editorial</b>	3013	APS celebrates the 90th anniversary of SIMM Jia Li
<b>Review Article</b>	3015	Antitumor pharmacological research in the era of personalized medicine Min Huang, Mei-yu Geng, Jian Ding
	3021	Structure genomics of SARS-CoV-2 and its Omicron variant: drug design templates for COVID-19 Can-rong Wu, Wan-chao Yin, Yi Jiang, H. Eric Xu
	3034	MC1R and melanin-based molecular probes for theranostic of melanoma and beyond Hui Shi, Zhen Cheng
	3045	Nanosized drug delivery systems modulate the immunosuppressive microenvironment to improve cancer immunotherapy Wen-lu Yan, Tian-qun Lang, Wen-hui Yuan, Qi Yin, Ya-ping Li
	3055	Artemisinin derivative SM934 in the treatment of autoimmune and inflammatory diseases: therapeutic effects and molecular mechanisms Xiao Tong, Li Chen, Shi-jun He, Jian-ping Zuo
	3062	Chemistry and bioactivity of secondary metabolites from South China Sea marine fauna and flora: recent research advances and perspective Jiao Liu, Yu-cheng Gu, Ming-zhi Su, Yue-wei Guo
	3080	Multi-compound and drug-combination pharmacokinetic research on Chinese herbal medicines Chuan Li, Wei-wei Jia, Jun-ling Yang, Chen Cheng, Olajide E. Olaleye
	3096	Mass spectrometry imaging: new eyes on natural products for drug research and development Jin-jun Hou, Zi-jia Zhang, Wen-yong Wu, Qing-qing He, Teng-qian Zhang, Ya-wen Liu, Zhao-jun Wang, Lei Gao, Hua-li Long, Min Lei, Wan-ying Wu, De-an Guo
	3112	Proteomic characterization of post-translational modifications in drug discovery Lin-hui Zhai, Kai-feng Chen, Bing-bing Hao, Min-jia Tan

- Article** 3130 Safety, tolerability, and pharmacokinetics of VV116, an oral nucleoside analog against SARS-CoV-2, in Chinese healthy subjects **Open**  
Hong-jie Qian, Yu Wang, Meng-qi Zhang, Yuan-chao Xie, Qing-qing Wu, Li-yu Liang, Ye Cao, Hua-qing Duan, Guang-hui Tian, Juan Ma, Zhuo-bing Zhang, Ning Li, Jing-ying Jia, Jing Zhang, Haji Akber Aisa, Jing-shan Shen, Chen Yu, Hua-liang Jiang, Wen-hong Zhang, Zhen Wang, Gang-yi Liu
- 3139 SCN8A epileptic encephalopathy mutations display a gain-of-function phenotype and divergent sensitivity to antiepileptic drugs  
Qian-bei Guo, Li Zhan, Hai-yan Xu, Zhao-bing Gao, Yue-ming Zheng

EXECUTIVE EDITOR FOR THIS ISSUE XU, Jia (Shanghai)

## ACTA PHARMACOLOGICA SINICA (Monthly)

2022 December; Volume 43 Number 12

(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) or [aps@sibs.ac.cn](mailto:aps@sibs.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 © 2022 Shanghai Institute of Materia Medica, Chinese Academy of Sciences and Chinese Pharmacological Society

《中国药理学报》编辑部出版  
国内统一连续出版物号  
CN 31-1347/R

国内外公开发行  
国内邮发代号 4-295  
国内每期 160.00 元

ISSN 1671-4083

