



Honorary Editors-in-Chief

Shao-Zhen Qian, *China*
Jie-Ping Wu, *China*

Deputy Editor-in-Chief

David J Handelsman, *Australia*

Akihiko Okuyama, *Japan*

Ji-Chuan Zhu, *China*

Science Editors

Dan-Qing Ren, *China*
Hui Zhang, *China*

Editor-in-Chief

Yi-Fei Wang, *China*

Associate Editors-in-Chief

Sujoy K Guha, *India*

Je Jong Kim, *Korea*

Editorial Director

Qin-Zhu Zheng, *China*

Executive Editor for this issue

Dan-Qing Ren, *China*

REGIONAL COORDINATORS

Asia

Premendu P Mathur, *India*

Australia

De-Yi Liu, *Australia*

Africa

Ralf Henkel, *South Africa*

Europe

Louis Gooren, *The Netherlands*

North America

Chawnshang Chang, *USA*

ADVISORY BOARD

Chairmen

David de Kretser, *Australia*
Yong-Lian Zhang, *China*

Members

Dimitri A Adamopoulos, *Greece*
Gordon Baker, *Australia*
Arnold M Belker, *USA*
Hector Chemes, *Argentina*
Trevor G Cooper, *Germany*
Rune Eliasson, *Sweden*
Aleksander Giwercman, *Sweden*

J Anton Grootegoed, *Netherlands*

Zhi-Ping Gu, *China*

Ying-Lu Guo, *China*

Wayne JG Hellstrom, *USA*

Barry Hinton, *USA*

Ilpo Huhtaniemi, *Finland*

Yu Jiang, *China*

Niels Jorgensen, *Denmark*

F-M Köhn, *Germany*

Iwan Lewis-Jones, *UK*

Bruno Lunenfeld, *Israel*

Soon Chye Ng, *Singapore*

Marie-Claire Orgebin-Crist, *USA*

Wolf-Bernhard Schill, *Germany*

Roger Short, *Australia*

Ronald S Swerdloff, *USA*

Fred C W Wu, *UK*

She-Pu Xue, *China*

EDITORIAL BOARD

P Ganesan Adaikan, *Singapore*

FX Arif Adimoelja, *Indonesia*

Ashok Agarwal, *USA*

R John Aitken, *Australia*

Anna-Maria Andersson, *Denmark*

Susan H Benoff, *USA*

Joseph C Cappelleri, *USA*

Wai-Yee Chan, *USA*

Junichi Fujii, *Japan*

Robert Howard Getzenberg, *USA*

David John Grignon, *USA*

Sidney Ray Grimes, *USA*

Yi-Qun Gu, *China*

Gerhard Haidl, *Germany*

Aucky Hinting, *Indonesia*

Russell Campbell Jones, *Australia*

Sae Chul Kim, *Korea*

Dolores J Lamb, *USA*

Will M Lee, *Hongkong, China*

Ching-Shwun Lin, *USA*

Alvin Y Liu, *USA*

Peter Yiwen Liu, *Australia*

Yi-Xun Liu, *China*

Tom Futai Lue, *USA*

Kamal Zaki Mahmoud, *Egypt*

William J Moorman, *USA*

Toshiaki Noce, *Japan*

Jae-Seung Paick, *Korea*

Gedalia Paz, *Israel*

Gail S Prins, *USA*

Brian Peter Setchell, *Australia*

Jia-Hao Sha, *China*

David Sokal, *USA*

Guang-Huan Sun, *Taiwan, China*

Qing-Yuan Sun, *China*

M Ismail M Tambi, *Malaysia*

Hui Meng Tan, *Malaysia*

Goh Hng Hang Victor, *USA*

Guo-Min Wang, *China*

Yi-Xin Wang, *China*

Patrick YD Wong, *Hongkong, China*

Shu-Jie Xia, *China*

Hong Xiao, *China*

Chen Xu, *China*

Yuan-Chang Yan, *China*

Zheng-Wei Yang, *China*

Ching-Hei Yeung, *Germany*

CORRESPONDING EDITORS BOARD

Salman Azhar, *USA*
Elias Castanas, *Greece*
Adel Hassan Elbeheiry, *Egypt*
Paolo Emiliozzi, *Italy*
Tibet Erdogru, *Turkey*
Jiao-Ti Huang, *USA*
Yu-Feng Huang, *China*
Zheng Li, *China*
Hui Jiang, *China*
Young Chan Kim, *Korea*
Shahriar Koochekpour, *USA*
Sang Kon Lee, *Korea*
Somboon Leungwattanakij, *Thailand*
N K Lohiya, *India*
Nian-Qing Lu, *China*
Okabe Masaru, *Japan*
Moiria Kathleen O' Bryan, *Australia*
Steven M Schrader, *USA*
Zhou-Jun Shen, *China*
Teruaki Iwamoto, *Japan*
Run Wang, *USA*
Zhong-Cheng Xin, *China*
Yuan-Cheng Xu, *China*
Bo Yang, *China*

Sponsored by the Shanghai Institute of Materia Medica (SIMM), Chinese Academy of Sciences and Shanghai Jiao Tong University (SJTU).

Granted by Publishing Foundation of Chinese Academy of Sciences, and National Natural Science Foundation of China (NSFC).

Supervised by Chinese Academy of Sciences.

Published jointly by the Editorial Office, Asian Journal of Andrology and Nature Publishing Group.

Printed by Shanghai Tu-Yu Printing House, 28 Lane 23 Yin-Gao Road, Shanghai 200439, China.

Edited by the Editorial Office, Asian Journal of Andrology, 294 Taiyuan Rd, Shanghai 200031, China. E-mail: aja@sibs.ac.cn; Tel: +86-21-5492-2824; Fax: +86-21-5492-2825.

Disclaimer The Publisher, Society and Editors cannot be held responsible for errors or any consequences arising from the use of information contained in this journal; the views and opinions expressed do not necessarily reflect those of the Publisher, Society and Editors, neither does the publication of advertisements constitute any endorsement by the Publisher, Society and Editors of the products advertised.

Copyright © 2009 Asian Journal of Andrology, SIMM and SJTU.

ISSN 1008-682X EISSN 1745-7262 CN 31-1795/R

All rights of reproduction are reserved in respect of all papers, articles, illustrations, etc., published in this journal in all countries of the world. All material published in this journal is protected by copyright, which covers exclusive rights to reproduce and distribute the material. No material published in this journal may be reproduced or stored on microfilm or in electronic, optical or magnetic form without the written authorization of the publisher.

Authorization to photocopy material for internal or personal use, or internal or personal use of specific clients, is granted by Nature Publishing Group, to libraries and others registered with the Copyright Clearance Center (CCC) Transaction Reporting Service, provided the relevant copyright fee is paid directly to CCC, 222 Rosewood Drive, Danvers, MA 01923, USA. Identification Code for AJA: 1008-682X/09.

Apart from any fair dealing for the purposes of research and private study, or criticism or review, as permitted under the Copyright, Designs and Patent Act 1988, this publication may be reproduced, stored or transmitted, in any form or by any means, only with the prior permission in writing of the publishers, or in the case of reprographic reproduction, in accordance with the terms of the licenses issued by the Copyright Licensing Agency.



Supported by SPFCAS