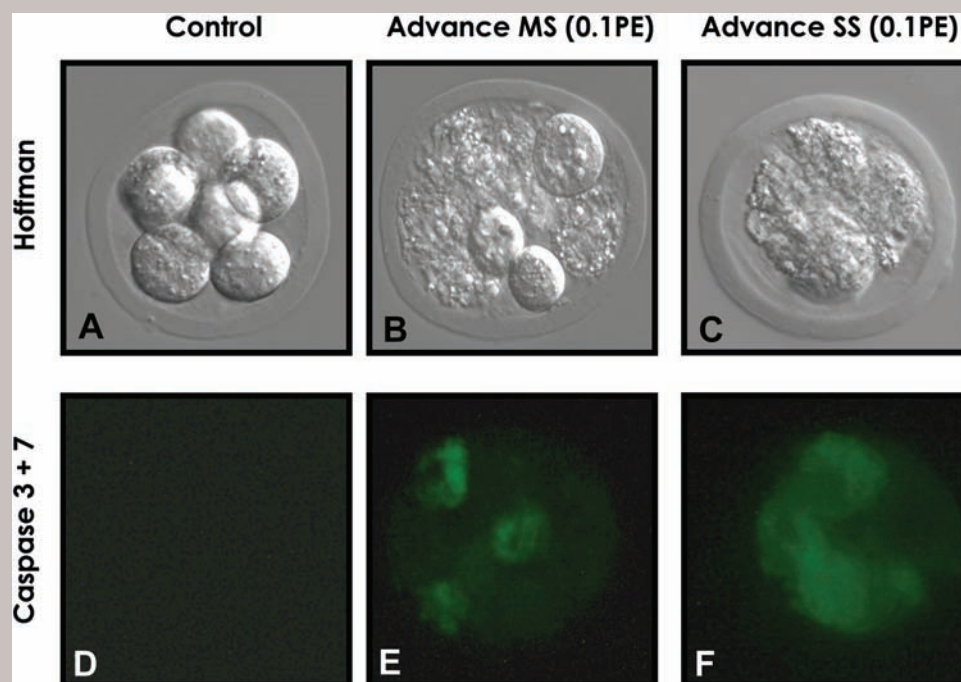


human reproduction

Volume 24, number 2 February 2009

www.humrep.oxfordjournals.org

human reproduction

Editor-in-Chief
A. Van Steirteghem

Deputy Editors
P.G. Crosignani
J.L.H. Evers

Associate Editors

A.N. Anderson, *Denmark*
W.M. Ankum, *Netherlands*
O. Basso, *USA*
F.J. Broekmans, *Netherlands*
W. Buckett, *Canada*
R.-C. Chian, *Canada*
C.M.H. Combelles, *USA*
T.G. Cooper, *Germany*
P. De Boer, *Netherlands*
F.H. de Jong, *Netherlands*
P. De Sutter, *Belgium*
D. Dewailly, *France*
R.J. Edelman, *UK*
E. Fragouli, *UK*
J.A. Garcia Velasco, *Spain*

C. Gargett, *Australia*
K. Gemzell-Danielsson, *Sweden*
J. Gromoll, *Germany*
L.J. Guilbert, *Canada*
D.J. Handelsman, *Australia*
M. Hedger, *Australia*
B. Huppertz, *Austria*
D.S. Irvine, *UK*
P.M.W. Janssens, *Netherlands*
J. Johnson, *USA*
H. Kantenich, *Germany*
E.M. Kolibianakis, *Greece*
G.T. Kovacs, *Australia*
J.J. Kurinczuk, *UK*
S.M. Laird, *UK*

J. Land, *Netherlands*
K. Lundin, *Sweden*
N.S. Macklon, *Netherlands*
L.C. Morin-Papunen, *Finland*
M. Munro, *USA*
L.M. Nelson, *USA*
D. Nogueira, *France*
L. Rienzi, *Italy*
D. Royere, *France*
D. Sakkas, *USA*
J.-P. Siffroi, *France*
A. Van Langendonck, *Belgium*
C.A. Venetis, *Greece*
S. Viville, *France*
F. Vom Saal, *USA*
E.V. Younglai, *Canada*

Editor Emeritus
D.H. Barlow

Managing Editor
A.C. Williams (Human Reproduction)

Managing Editor
H.K. Beard (ESHRE Journals)

Editorial Secretary: M.E. Gill

Editorial Office
ESHRE Journals, 5 Mill Yard, Childerley, Cambs, CB23 8BA
Tel: +44 (0)1954 212404; Fax: +44 (0)1954 212359; E-mail: editorial@humanreproduction.co.uk

OXFORD
UNIVERSITY PRESS

Published for the
European Society of Human Reproduction and Embryology
by Oxford University Press,
Oxford, UK



The cover of *Human Reproduction* shows smoke treatment-induced apoptosis in mouse preimplantation embryos. The top row shows Hoffman contrast images of 3-day old embryos incubated in control medium (A), 0.1 puff equivalents (PE) of Advance main-stream smoke solution (B) and 0.1 PE of Advance side-stream smoke solution (C). The bottom row shows the same embryos viewed under fluorescence to visualise activated caspases 3 and 7. For further details see Lin *et al.* pp. 386–397.

SUBSCRIPTIONS

A subscription to *Human Reproduction* comprises twelve issues. All prices include postage, and for subscribers outside the UK delivery is by Standard Air. Airmail rates are available on request. *Human Reproduction Advance Access* contains papers that have been finalized, but have not yet been included within an issue.

Annual Subscription Rate (Volume 24, twelve issues, 2009)

Institutional

Print edition and site-wide online access: £879/\$1758/€1319

Print edition only: £835/\$1670/€1253

Site-wide online access only: £809/\$1618/€1214

Personal

Print edition £382/\$764/€573

Please note: US\$ rate applies to US and Rest of World, except UK (£) and Europe (Euros)

There may be other subscription rates available, for a complete listing (including membership rates) please visit www.humrep.oxfordjournals.org/subinfo.

ESHRE members

Application forms for ESHRE membership can be obtained from ESHRE Central Office, Meerstraat 60, 1852 Grimbergen (Beigem), Belgium.

Tel: +32-(0)2-269 09 69; Fax: +32-(0)2-269 56 00,

E-mail: bruno.vandeneede@eshre.com. Webaddress: <http://www.eshre.com>

Please note that the ESHRE subscription rate is only available to ESHRE members.

Full prepayment, in the correct currency, is required for all orders. Orders are regarded as firm and payments are not refundable. Subscriptions are accepted and entered on a complete volume basis. Claims cannot be considered more than FOUR months after publication or date of order, whichever is later. All subscriptions in Canada are subject to GST. Subscriptions in the EU may be subject to European VAT. If registered, please supply details to avoid unnecessary charges. For subscriptions that include online versions, a proportion of the subscription price may be subject to UK VAT. Personal rate subscriptions are only available if payment is made by personal cheque or credit card and delivery is to a private address.

The current year and two previous years' issues are available from Oxford University Press. Previous volumes can be obtained from the Periodicals Service Company, 11 Main Street, Germantown, NY 12526, USA. E-mail: psc@periodicals.com. Tel: +1 (518) 537 4700. Fax: +1 (518) 537 5899.

For further information, please contact: Journals Customer Service Department, Oxford University Press, Great Clarendon Street, Oxford OX2 6DP, UK. E-mail: jnls.cust.serv@oupjournals.org. Tel (and answerphone outside normal working hours): +44 (0) 1865 353907. Fax: +44 (0) 1865 353485. **In the US, please contact:** Journals Customer Service Department, Oxford University Press, 2001 Evans Road, Cary, NC 27513, USA. E-mail: jnlorders@oupjournals.org. Tel (and answerphone outside normal working hours): 800 852 7323 (toll-free in USA/Canada). Fax: 919 677 1714.

In Japan, please contact: Journals Customer Services, Oxford University Press, 4-5-10-8F Shiba, Minato-ku, Tokyo 108-8386, Japan. Tel: +81 3 5444 5858, Fax: +81 3 3454 2929, E-mail: custserv.jp@oxfordjournals.org.

Methods of payment. (i) Cheque (payable to Oxford University Press, to Oxford University Press, Cashiers Office, Great Clarendon Street, Oxford OX2 6DP, UK) in GB£ Sterling (drawn on a UK bank), US\$ Dollars (drawn on a US bank), or EU€ Euros. (ii) Bank transfer to Barclays Bank Plc, Oxford Group Office, Oxford (bank sort code 20-65-18) (UK), overseas only Swift code BARC GB 22 (GB£ Sterling to account no. 70299332, IBAN GB89BARC20651870299332; US\$ Dollars to account no. 66014600, IBAN GB27BARC20651866014600; EU€ Euros to account no. 78923655, IBAN GB16BARC20651878923655). (iii) Credit card (Mastercard, Visa, Switch or American Express).

Human Reproduction is published monthly (ISSN 0268-1161) by Oxford University Press, Oxford, UK. Annual subscription price is £879/\$1758/€1319. *Human Reproduction* is distributed by Mercury International, 365 Blair Road, Avenel, NJ 07001, USA. Periodicals postage paid at Rahway, NJ and at additional entry points.

US Postmaster: send address changes to *Human Reproduction*, c/o Mercury International, 365 Blair Road, Avenel, NJ 07001, USA.

Instructions to Authors

For instructions on how to submit papers to *Human Reproduction*, please refer to the Journal website at: <http://www.humrep.oxfordjournals.org>.

Supplements, reprints and corporate sales

For requests from industry and companies regarding supplements, bulk article reprints, sponsored subscriptions, translation opportunities for previously published material, and corporate online opportunities, please email special.sales@oxfordjournals.org, fax +44 (0) 1865 353774 or visit www.oxfordjournals.org/sales.

Permissions

For information on how to request permissions to reproduce article/information from this journal, please visit www.oxfordjournals.org/permissions.

Advertising

Advertising, inserts and artwork enquiries should be addressed to Advertising and Special Sales, Oxford Journals, Oxford University Press, Great Clarendon Street, Oxford, OX2 6DP, UK. Tel: +44 (0) 1865 354767; Fax: +44 (0) 1865 353774; E-mail: jnlsadvertising@oxfordjournals.org.

Material Disclaimer

The opinions expressed in *Human Reproduction* are those of the authors and contributors, and do not necessarily reflect those of the European Society of Human Reproduction and Embryology, the editors, the editorial board, Oxford University Press or the organization to which the authors are affiliated.

Drug Disclaimer

The mention of trade names, commercial products or organizations, and the inclusion of advertisements in the journals does not imply endorsement by the European Society of Human Reproduction and Embryology, the editors, the editorial board, Oxford University Press or the organization to which the authors are affiliated. The editors and publishers have taken all reasonable precautions to verify drug names and doses, the results of experimental work and clinical findings published in the journal. The ultimate responsibility for the use and dosage of drugs mentioned in the Journal and in interpretation of published material lies with the medical practitioner, and the editors and publishers cannot accept liability for damages arising from any errors or omissions in the journal. Please inform the editors of any errors.

© European Society of Human Reproduction and Embryology 2009

All rights reserved; no part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without prior written permission of the Publishers, or a licence permitting restricted copying issued in the UK by the Copyright Licensing Agency Ltd, 90 Tottenham Court Road, London W1P 9HE, or in the USA by the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923. For those in the USA or Canada not registered with CCC, articles can be obtained by fax in 48 hours by calling: WISE for Medicine™ 1-800-667-WISE.

Typeset by the Techset Composition Pvt. Ltd., Salisbury, UK.
Printed by C.O.S. Printers Pte Ltd, Singapore, on acid-free paper.