



CONTENTS

VOLUME 39 / NUMBER 3 / MARCH 2012

CHIEF EDITORS

Anh Tuan Dinh-Xuan
Dept of Cardiorespiratory
Medicine,
Cochin Hospital,
University Paris Descartes,
27, rue du faubourg
Saint-Jacques,
75014 Paris,
France
Tel: 33 158412341
Fax: 33 158412345
E-mail: erj.chief-editors@ersnet.org

Vito Brusasco
Dept of Internal Medicine,
Medical School,
University of Genoa,
viale Benedetto XV, 6,
16132 Genoa,
Italy
Tel: 39 0103537690
Fax: 39 0103537690
E-mail: erj.chief-editors@ersnet.org

ASSISTANT TO THE CHIEF EDITORS

Sy Duong-Quy
Tel: 33 158411942 Fax: 33 158412345
E-mail: sy.duong-quy@cch.aphp.fr

PUBLICATIONS OFFICE

Managing Editors: **Elin Reeves** and **Rachel White**
442 Glossop Road, Sheffield,
S10 2PX, UK
Tel: +44 114 267 2860 Fax: +44 114 266 5064
E-mail: elin.reeves@ersj.org.uk/rachel.white@ersj.org.uk

ASSOCIATE EDITORS

N. Ambrosino
Pisa, Italy

I. Annesi-Maesano
Paris, France

J.L. Black
Sydney, Australia

P. Chanaz
Marseille, France

V. Cottin
Lyon, France

L.M. Fabbri
Modena, Italy

R. Farré
Barcelona, Spain

U. Frey
Basel, Switzerland

P. Hiemstra
Leiden, the Netherlands

M.M. Hoeper
Hanover, Germany

M. Humbert
Clamart, France

S. Kawut
Philadelphia, USA

P. Lévy
Grenoble, France

G.B. Migliori
Tradate, Italy

J. Müller-Quernheim
Freiburg, Germany

R. Naeije
Brussels, Belgium

M.I. Polkey
London, UK

G. Raghu
Seattle, USA

M. Saetta
Padova, Italy

J-P. Sculier
Brussels, Belgium

F. Sériès
Quebec City, Canada

P.D. Sly
Brisbane, Australia

J.B. Soriano
Bunyola, Spain

A. Torres
Barcelona, Spain

P.E. Van Schil
Edegem, Belgium

T. Welte
Hanover, Germany

M.A. Woodhead
Manchester, UK

S.G. Zakynthinos
Athens, Greece

ADVISORS

P-Y. Brillet
Bobigny, France
Radiology

A. Kettaneh
Paris, France
Statistics

S. Suissa
Montreal, Canada
Methodology

INTERNATIONAL ADVISORY BOARD

M.G. Belvisi
London, UK

E. Berglund
Gothenburg, Sweden

C. Brambilla
Grenoble, France

P.M.A. Calverley
Liverpool, UK

E. Canalis
Barcelona, Spain

U. Costabel
Essen, Germany

M. Decramer
Leuven, Belgium

R. Djukanovic
Southampton, UK

O. Eickelberg
Munich, Germany

S. Ewig
Bochum, Germany

P.N. Le Souëf
Perth, Australia

C.E. Mapp
Ferrara, Italy

E. Michelakis
Edmonton, Canada

B. Nemery
Leuven, Belgium

P. Palange
Rome, Italy

K.F. Rabe
Kiel, Germany

R. Rodriguez-Roisin
Barcelona, Spain

A.M.W.J. Schols
Maastricht, the Netherlands

N. Siafakas
Heraklion, Greece

A.K. Simonds
London, UK

P.J. Sterk
Amsterdam, the Netherlands

N.S. Zhong
Guangzhou, China

EDITORIALS

- 511 Lung cancer detection by canine scent: will there be a lab in the lab?**
M. McCulloch, K. Turner and M. Broffman
- 513 Should we abandon standard forceps biopsy to diagnose an endobronchial lesion?**
C. Doms
- 515 The RAGE against the storm**
L. Di Candia, R. Saunders and C.E. Brightling
- 518 The new guidelines for management of work-related asthma**
X. Baur and T. Sigsgaard
- 520 Perspectives in medical education: signposts to the future in educating respiratory specialists**
P. Palange, J. Busari, A. Hare, J.H. McKillop, J-L.C. Noël, M.J. Rosen, A.K. Simonds and R. Stevenson
- 525 Ten principles for clean air**
B. Brunekreef, I. Annesi-Maesano, J.G. Ayres, F. Forastiere, B. Forsberg, N. Künzli, J. Pekkanen and T. Sigsgaard

ERS TASK FORCE REPORT

- 529 Guidelines for the management of work-related asthma**
X. Baur, T. Sigsgaard, T.B. Aasen, P.S. Burge, D. Heederik, P. Henneberger, P. Maestrelli, J. Rooyackers, V. Schlünssen, O. Vandenplas and D. Wilken on behalf of the ERS Task Force on the Management of Work-related Asthma

ORIGINAL ARTICLES

- Environmental lung disease**
- 546 NiO and Co₃O₄ nanoparticles induce lung DTH-like responses and alveolar lipoproteinosis**
W-S. Cho, R. Duffin, M. Bradley, I.L. Megson, W. MacNee, S.E.M. Howie and K. Donaldson
- Genetics of asthma and COPD**
- 558 β_2 -adrenergic receptor polymorphisms, asthma and COPD: two large population-based studies**
M. Thomsen, B.G. Nordestgaard, A.A. Sethi, A. Tybjaerg-Hansen and M. Dahl
- Asthma and allergy**
- 567 Exhaled nitric oxide and the risk of wheezing in infancy: the Generation R Study**
C. Gabriele, V.W. Jaddoe, E. van Mastrigt, L.R. Arends, A. Hofman, H.A. Moll and J.C. de Jongste
- 573 Respiratory health and endotoxin: associations and modification by CD14/-260 genotype**
I. Bakolis, G. Doekes, J. Heinrich, J.P. Zock, D. Heederik, M. Kogevinas, S. Guerra, D. Norbäck, A. Ramasamy, A. Nevalainen, C. Svanes, C.M. Chen, G. Verlato, M. Olivieri, F. Castro-Giner and D. Jarvis on behalf of the Indoor Group of the ECRHS and the Work Package 10 group of HITEA

ORIGINAL ARTICLES (CONT.)

- 582 Lack of involvement of type 7 phosphodiesterase in an experimental model of asthma**
E. Chevalier, V. Lagente, M. Dupont, H. Fargeau, X. Palazzi, V. Richard, M. Dassaud, M. Fric, M. Coupe, C. Carré, S. Leduc, P. Bernardelli, F. Vergne, P. Berna and C.P. Bertrand

Pulmonary hypertension

- 589 The prognostic impact of follow-up assessments in patients with idiopathic pulmonary arterial hypertension**
N. Nickel, H. Golpon, M. Greer, L. Knudsen, K. Olsson, V. Westerkamp, T. Welte and M.M. Hoeper

Genetics of pulmonary hypertension

- 597 Molecular genetics and clinical features of Chinese idiopathic and heritable pulmonary arterial hypertension patients**
D. Liu, Q-Q. Liu, M. Eyries, W-H. Wu, P. Yuan, R. Zhang, F. Soubrier and Z-C. Jing

Genetics of severe pneumonia

- 604 Genetic variants associated with severe pneumonia in A/H1N1 influenza infection**
J. Zúñiga, I. Buendía-Roldán, Y. Zhao, L. Jiménez, D. Torres, J. Romo, G. Ramírez, A. Cruz, G. Vargas-Alarcon, C-C. Sheu, F. Chen, L. Su, A.M. Tager, A. Pardo, M. Selman and D.C. Christiani

Pneumonia

- 611 Treatment failure in pneumonia: impact of antibiotic treatment and cost analysis**
S.R. Ott, B.M. Hauptmeier, C. Ernen, P.M. Lepper, E. Nüesch, M.W. Pletz, J. Hecht, T. Welte and T.T. Bauer

Tuberculosis

- 619 TB and MDR/XDR-TB in European Union and European Economic Area countries: managed or mismanaged?**
G.B. Migliori, G. Sotgiu, L. D'Ambrosio, R. Centis, C. Lange, G. Bothamley, D.M. Cirillo, S. De Lorenzo, G. Guenther, K. Kliiman, R. Muetterlein, V. Spinu, M. Villar, J.P. Zellweger, A. Sandgren, E. Huitric and D. Manissero

- 626 The impact and cost-effectiveness of strategies to detect drug-resistant tuberculosis**
O. Oxlade, D. Falzon and D. Menzies

Critical care and lung injury

- 635 Intermittent recruitment with high-frequency oscillation/tracheal gas insufflation in acute respiratory distress syndrome**
S.D. Mentzelopoulos, S. Malachias, E. Zintzaras, S. Kokkoris, E. Zakynthinos, D. Makris, E. Magira, V. Markaki, C. Roussos and S.G. Zakynthinos

- 648 Dexamethasone in patients with acute lung injury from acute monocytic leukaemia**
É. Azoulay, E. Canet, E. Raffoux, E. Lengliné, V. Lemiale, F. Vincent, A. de Labarthe, A. Seguin, N. Boissel, H. Dombret and B. Schlemmer

- 654 The effect of spontaneous breathing on systemic interleukin-6 during ventilator weaning**
J. Sellarés, H. Loureiro, M. Ferrer, R. Amaro, R. Farré and A. Torres

Interstitial lung disease

- 661 Significance of connective tissue disease features in idiopathic interstitial pneumonia**
T.J. Corte, S.J. Copley, S.R. Desai, C.J. Zappala, D.M. Hansell, A.G. Nicholson, T.V. Colby, E. Renzoni, T.M. Maher and A.U. Wells

Lung cancer

- 669 Canine scent detection in the diagnosis of lung cancer: revisiting a puzzling phenomenon**
R. Ehmann, E. Boedeker, U. Friedrich, J. Sagert, J. Dippon, G. Friedel and T. Walles

Press
release

EUROPEAN RESPIRATORY *journal*

AIMS & SCOPE

The European Respiratory Journal (ERJ), the official Journal of the European Respiratory Society, publishes, in the English language, clinical and experimental work dealing with all aspects of respiratory medicine. In addition to original material, the *ERJ* prints Editorials and Reviews, as well as Letters and Correspondence.

This Journal is abstracted/indexed in: Ad Referendum, ADONIS, Biological Abstracts/BIOSIS, Chemical Abstracts, Current Contents: Life Sciences, Current Contents: Clinical Medicine, Elsevier BIOBASE/Current Awareness in Biological Sciences, EMBASE/Excerpta Medica, Index Medicus/MEDLINE, Medical Documentation Service, Research Alert, Science Citation Index, SciSearch, SIIC Data Base and CABI Global Health.

SUBSCRIPTIONS

ERJ is published monthly by the European Respiratory Society (ERS). Twelve issues are published annually in two volumes of six issues each. The volumes for 2012 are Volumes 39 and 40.

Subscription rates for institutions (Volumes 39 & 40, 2012): £673.00 online only, £794.00 print and online; US\$1,278.00 online only, US\$1,508.00 print and online in North America. Subscription rates include air economy postage. Subscriptions are payable in advance.

Subscribers within the European Union must provide their VAT (Value Added Tax) number or add VAT to the subscription rate at the rate prevailing in their own country.

Subscriptions are managed on behalf of the ERS by: *Maney Publishing, Suite 1C, Joseph's Well, Hanover Walk, Leeds LS3 1AB, UK (fax: +44 (0)113 386 8178; E-mail: subscriptions@maney.co.uk) or: Maney Publishing North America, 875 Massachusetts Avenue, 7th Floor, Cambridge, MA 02139, USA (tel: (toll-free) +1 (0)866 297 5154; fax: +1 (0)617 354 6875; E-mail: maney@maneyusa.com).* All orders, payments, and claims for missing issues should be sent to Maney Publishing or to any subscription agent.

ONLINE ACCESS

All subscribers have online access to the full text of each issue as part of their subscription. The online version is available to members via www.ersnet.org. Institutional subscribers can access online through HighWire at www.erj.ersjournals.com

Members of the ERS receive the *ERJ* as part of their membership.

INSTRUCTIONS TO AUTHORS

Before submitting an article to the *ERJ*, please read and carefully follow the instructions to authors, which are available at www.erj.ersjournals.com

All manuscripts must be submitted electronically using the online submission system at <http://mc.manuscriptcentral.com/erj>

If you experience problems, please contact the **Submission Helpline direct on +44 (0) 114 2672864** or **contact Gill Archer (gill.archer@ersj.org.uk)** the manuscript central coordinator.

All *ERJ* business matters should be addressed to: Kay Sharpe, European Respiratory Society Publications Office, 442 Glossop Road, Sheffield, S10 2PX, UK. Fax: +44 (0) 114 266 5064. E-mail: admin@ersj.org.uk

EUROPEAN RESPIRATORY *journal*

REVIEWERS

A full list of reviewers is available online at
www.erj.ersjournals.com

EDITORIAL TEAM

Fiona Marks
Elin Reeves
Alyson Adam
Rachel White
Matthew Broadhead
Neil Bullen
David Sadler

Catherine Pumphrey
Jonathan Hansen
Victoria Morton
Claire Turner
Lee Dodd
Sarah Hill

Past Chief Editors: J-C. Yernault†, E. Berglund, Gothenburg, Sweden; P. Vermeire†, U. Costabel, Essen, Germany; M. Decramer, Leuven, Belgium; P.J. Sterk and K.F. Rabe, Amsterdam, the Netherlands and Kiel, Germany.

ENVIRONMENTAL STATEMENT

The publisher ensures that the text paper and cover board used have met acceptable environmental accreditation standards.

For all enquiries concerning advertising or marketing please e-mail marketing@ersj.org.uk

All permission requests should be sent via the ERS website at <http://ersjournals.com/site/misc/permissions.xhtml>

Reprint and translation enquiries should be sent to admin@ersj.org.uk

© 2012 ERS. Authorisation to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted for libraries and other users registered with the Copyright Clearance Center (CCC). Please go to www.copyright.com or phone USA (978) 750 8400. UK customers should go to www.cla.co.uk. All other rights, including microfilm, electronic and/or copying reserved.

European Respiratory Journal USPS#023-615 is published monthly for \$268.00 periodicals postage paid at Folcroft, PA. POSTMASTER: Please send address changes to La Poste, P.O. Box 202, Folcroft, PA, 19032. Typesetting by H. Charlesworth & Co. Ltd. Printed in UK by Latimer Trend & Co. Ltd.

"The advertiser shall be liable for the content of any of its advertisements published according to its instructions. The advertiser shall indemnify and hold harmless the European Respiratory Society against and from any and all claims, damages, liabilities, costs and expenses whatsoever, including reasonable counsel fees, arising from the content of any of its advertisements."

ORIGINAL ARTICLES (CONT.)

677 RNA is favourable for analysing EGFR mutations in malignant pleural effusion of lung cancer
T-H. Tsai, K-Y. Su, S-G. Wu, Y-L. Chang, S-C. Luo, I-S. Jan, C-J. Yu, S-L. Yu, J-Y. Shih and P-C. Yang

685 Cryobiopsy increases the diagnostic yield of endobronchial biopsy: a multicentre trial
J. Hetzel, R. Eberhardt, F.J.F. Herth, C. Petermann, G. Reichle, L. Freitag, I. Dobbertin, K.J. Franke, F. Stanzel, T. Beyer, P. Möller, P. Fritz, G. Ott, P.A. Schnabel, H. Kastendieck, W. Lang, A.T. Morresi-Hauf, M.N. Szyrach, R. Mucbe, P.L. Shah, A. Babiak and M. Hetzel

Lung transplantation

691 Anti-reflux surgery in lung transplant recipients: outcomes and effects on quality of life
A.G.N. Robertson, A. Krishnan, C. Ward, J.P. Pearson, T. Small, P.A. Corris, J.H. Dark, D. Karat, J. Shenfine and S.M. Griffin

Lung cell biology

698 Expression of muscarinic receptors by human macrophages
A. Koarai, S.L. Traves, P.S. Fenwick, S.M. Brown, K.K. Chana, R.E.K. Russell, A.G. Nicholson, P.J. Barnes and L.E. Donnelly

CME article 705 Cigarette smoke inhibits lung fibroblast proliferation by translational mechanisms
N. Miglino, M. Roth, D. Lardinois, C. Sadowski, M. Tamm and P. Borger

712 RSV infection modulates IL-15 production and MICA levels in respiratory epithelial cells
M.T. Zdrengeha, A.G. Telcian, V. Laza-Stanca, C.M. Bellettato, M.R. Edwards, A. Nikonova, M.R. Khaitov, N. Azimi, V. Groh, P. Mallia, S.L. Johnston and L.A. Stanciu

Mechanisms of lung disease

721 Soluble RAGE is deficient in neutrophilic asthma and COPD
M.B. Sukkar, L.G. Wood, M. Toozee, J.L. Simpson, V.M. McDonald, P.G. Gibson and P.A.B. Wark

REVIEWS

730 Pulmonary infections in HIV-infected patients: an update in the 21st century
N. Benito, A. Moreno, J.M. Miro and A. Torres

746 Adipose tissue in obesity and obstructive sleep apnoea
M.R. Bonsignore, W.T. McNicholas, J.M. Montserrat and J. Eckel

LETTERS

768 T-cell-based assays on cerebrospinal fluid and PBMCs for rapid diagnosis of TB meningitis in non-HIV patients
K-H. Park, O-H. Cho, E.M. Lee, S-O. Lee, S-H. Choi, Y.S. Kim, J.H. Woo, J.K. Kang, S-A. Lee and S-H. Kim

770 On linezolid efficacy and tolerability
S. De Lorenzo, R. Centis, L. D'Ambrosio, G. Sotgiu and G.B. Migliori

772 Octreotide treatment of idiopathic pulmonary fibrosis: a proof-of-concept study
B. Crestani, J. Chapron, B. Wallaert, E. Bergot, P. Delaval, D. Israel-Biet, J. Lacroinque, I. Monnet, M. Reynaud-Gaubert, A. Tazi, R. Lebtahi, M-P. Debray, M. Brauner, M. Dehoux, Q. Dornic, M. Aubier, F. Mentré and X. Duval

775 Obstructive lung function in sarcoidosis may be missed, especially in older white patients
M. Thillai, L. Potiphar, C. Eberhardt, M. Pareek, R. Dhawan, O.M. Kon, M. Wickremasinghe, A. Wells, D. Mitchell and A. Lalvani

LETTERS (CONT.)

- 777 Reduced GM-CSF autoantibody in improved lung of autoimmune pulmonary alveolar proteinosis**
K. Ohashi, A. Sato, T. Takada, T. Arai, Y. Kasahara, M. Hojo, T. Nei, H. Nakayama, N. Motoi, S. Urano, R. Eda, M. Yokoba, Y. Tsuchihashi, Y. Nasuhara, H. Ishii, M. Ebina, E. Yamaguchi, Y. Inoue, K. Nakata and R. Tazawa
- 780 Deficit of osteoprotegerin release by osteoblasts from a patient with cystic fibrosis**
A. Gimenez-Maitre, C. Le Henaff, C. Norez, C. Guillaume, B. Ravoninjatovo, D. Laurent-Maquin, F. Becq and J. Jacquot
- 782 High frequency of voriconazole-related phototoxicity in cystic fibrosis patients**
S. Rondeau, L. Couderc, S. Dominique, S. Pramil, C. Leguillon, B. Masseline, L. Favennec and C. Marguet

CORRESPONDENCE

- 785 Comment on: Effect of a nicotine-free inhalator as part of a smoking cessation programme**
K. Fagerström; C.N. Meyer; P. Caponnetto, F. Cibella, A. Fisichella and R. Polosa
- 787 Upper age limit for bronchiolitis: 12 months or 6 months?**
M. Korppi, P. Koponen and K. Nuolivirta; F. Midulla and R. Nenna
- 789 Increased lung neutrophil apoptosis and inflammation resolution**
C.G.A. Persson and L. Uller; I. Moret, M.J. Lorenzo, B. Sarria and R. Menendez
- 791 Chest radiotherapy to achieve lung volume reduction**
J.A. Murray and J. Lyons; J.A. Guenette, N. Raghavan, P. O'Meara, C.E. de Metz and D.E. O'Donnell

793 AUTHOR CORRECTIONS

f,k,l,n MEETING CALENDAR

CME Credit Application Form can be found at the back of this issue

EUROPEAN RESPIRATORY *journal*

"The advertiser shall be liable for the content of any of its advertisements published according to its instructions. The advertiser shall indemnify and hold harmless the European Respiratory Society against and from any and all claims, damages, liabilities, costs and expenses whatsoever, including reasonable counsel fees, arising from the content of any of its advertisements."

*ERJ online at www.ersnet.org or
www.erj.ersjournals.com*



This journal is a member of and subscribes to the principles of the Committee on Publication Ethics

