



EDITORIALS

- 1535** **Is it time to move beyond the “O” in early COPD?**
David M. Mannino and Barry J. Make
- 1538** **Response to pulmonary rehabilitation: toward personalised programmes?**
Nicolino Ambrosino and Enrico M. Clini
- 1541** **Foxp³⁺ cells are running the show in patients with surgically-resected nonsmall cell lung cancer**
Nathalie Chaput and Aurelien Marabelle
- 1544** **In the name of ventilator-associated pneumonia prevention: lung microbiota blown away by colistin!**
Saad Nseir and Ignacio Martin-Loeches
- 1548** **Circulating free DNA, new dynamic marker in nonsmall cell lung cancer patients?**
Jordi Remon, Julie Gorham, Benjamin Besse and Jean-Paul Sculier
- 1551** **Risk stratification of pulmonary embolism: clinical evaluation, biomarkers or both?**
Guy Meyer, Benjamin Planquette and Olivier Sanchez
- 1554** **Measuring the breathless brain: is real life too noisy?**
Andrew Binks
- 1557** **Ataxia Telangiectasia (A-T): why should the ERS care?**
Jayesh M. Bhatt, Andrew Bush, Marjo van Gerven, Andreea Nissenkorn, Michael Renke, Lian Yarlett, Malcolm Taylor, Thomy Tonia, Adilia Warris, Stefan Zielen, Shairbanu Zinna and Peter J.F.M. Merkus

IN MEMORIAM

- 1561** **Remembering Philippe Leuenberger**
Ursula Ackermann-Liebrich, Nicole Probst-Hensch and Thierry Rochat, on behalf of the national and international SAPALDIA team; and Jean William Fitting and Laurent Nicod, on behalf of the University Hospital of Lausanne

PERSPECTIVES



- 1563** **Management of latent *Mycobacterium tuberculosis* infection: WHO guidelines for low tuberculosis burden countries**
Haileyesus Getahun, Alberto Matteelli, Ibrahim Abubakar, Mohamed Abdel Aziz, Annabel Baddeley, Draurio Barreira, Saskia Den Boon, Susana Marta Borroto Gutierrez, Judith Bruchfeld, Erlina Burhan, Solange Cavalcante, Rolando Cedillos, Richard Chaisson, Cynthia Bin-Eng Chee, Lucy Chesire, Elizabeth Corbett, Masoud Dara, Justin Denholm, Gerard de Vries, Dennis Falzon, Nathan Ford, Margaret Gale-Rowe, Chris Gilpin, Enrico Girardi, Un-Yeong Go, Darshini Govindasamy, Alison D. Grant, Malgorzata Grzemska, Ross Harris, C. Robert Horsburgh Jr, Asker Ismayilov, Ernesto Jaramillo, Sandra Kik, Katharina Kranzer, Christian Lienhardt, Philip LoBue, Knut Lönnroth, Guy Marks, Dick Menzies, Giovanni Battista Migliori, Davide Mosca, Ya Diut Mukadi, Alwyn Mwinga, Lisa Nelson, Nobuyuki Nishikiori, Anouk Oordt-Speets, Molebogeng Xheedha Rangaka, Andreas Reis, Lisa Rotz, Andreas Sandgren, Monica Sañé Schepisi, Holger J. Schünemann, Surender Kumar Sharma, Giovanni Sotgiu, Helen R. Stagg, Timothy R. Sterling, Tamara Tayeb, Mukund Uplekar, Marieke J. van der Werf, Wim Vandevelde, Femke van Kessel, Anna van't Hoog, Jay K. Varma, Natalia Vezhnina, Constantia Voniatis, Marije Vonk Noordegraaf-Schouten, Diana Weil, Karin Weyer, Robert John Wilkinson, Takashi Yoshiyama, Jean Pierre Zellweger and Mario Raviglione
- 1577** **Health impacts of anthropogenic biomass burning in the developed world**
Torben Sigsgaard, Bertil Forsberg, Isabella Annesi-Maesano, Anders Blomberg, Anette Bølling, Christoffer Boman, Jakob Bønløkke, Michael Brauer, Nigel Bruce, Marie-Eve Héroux, Maija-Riitta Hirvonen, Frank Kelly, Nino Künzli, Bo Lundbäck, Hanns Moshhammer, Curtis Noonan, Joachim Pagels, Gerd Sallsten, Jean-Paul Sculier and Bert Brunekreef

ORIGINAL ARTICLES

COPD and smoking

- 1589** **Risk of COPD with obstruction in active smokers with normal spirometry and reduced diffusion capacity**
Ben-Gary Harvey, Yael Strulovici-Barel, Robert J. Kaner, Abraham Sanders, Thomas L. Vincent, Jason G. Mezey and Ronald G. Crystal

COPD

- 1598** **The minimal important difference for the St George's Respiratory Questionnaire in patients with severe COPD**
Jorrit B.A. Welling, Jorine E. Hartman, Nick H.T. Ten Hacken, Karin Klooster and Dirk-Jan Slebos
- 1605** **Increased respiratory symptoms in COPD patients living in the vicinity of livestock farms**
Floor Borlée, C. Joris Yzermans, Christel E. van Dijk, Dick Heederik and Lidwien A.M. Smit
- 1615** **Exertional dyspnoea and cortical oxygenation in patients with COPD**
Yuji Higashimoto, Noritsugu Honda, Toshiyuki Yamagata, Akiko Sano, Osamu Nishiyama, Hiroyuki Sano, Takashi Iwanaga, Hiroaki Kume, Yasutaka Chiba, Kanji Fukuda and Yuji Tohda

ORIGINAL ARTICLES (CONTINUED)

- 1625** **Differential response to pulmonary rehabilitation in COPD: multidimensional profiling**
Martijn A. Spruit, Ingrid M.L. Augustin, Lowie E. Vanfleteren, Daisy J.A. Janssen, Svetlana Gaffron, Herman-Jan Pennings, Frank Smeenk, Willem Pieters, Jan J.A.M. van den Bergh, Arent-Jan Michels, Miriam T.J. Groenen, Erica P.A. Rutten, Emiel F.M. Wouters and Frits M.E. Franssen on behalf of the CIRO+ Rehabilitation Network
- Asthma**
- 1636** **Activated protein C inhibits neutrophil migration in allergic asthma: a randomised trial**
J. Daan de Boer, Marieke Berger, Christof J. Majoor, Liesbeth M. Kager, Joost C.M. Meijers, Sanne Terpstra, Rienk Nieuwland, Anita N. Boing, René Lutter, Diana Wouters, Gerard J. van Mierlo, Sacha S. Zeerleder, Elisabeth H. Bel, Cornelis van't Veer, Alex F. de Vos, Jaring S. van der Zee and Tom van der Poll
- Bronchiectasis and lung structure and function**
- 1645** **The reproducibility and responsiveness of the lung clearance index in bronchiectasis**
Lizzie Grillo, Samantha Irving, David M. Hansell, Arjun Nair, Bertrand Annan, Simon Ward, Diana Bitton, Eleanor Main, Jane Davies, Andrew Bush, Robert Wilson and Michael R. Loebinger
- Paediatric pneumology**
- 1654** **Longitudinal assessment of airway responsiveness from 1 month to 18 years in the PIAF birth cohort**
Desmond W. Cox, Dave Mullane, Guicheng C. Zhang, Steve W. Turner, Catherine M. Hayden, Jack Goldblatt, Lou I. Landau and Peter N. Le Souëf
- Paediatric pneumology and epidemiology**
- 1662** **Lung function in children in relation to ethnicity, physique and socioeconomic factors**
Sooky Lum, Vassiliki Bountziouka, Samatha Sonnappa, Angie Wade, Tim J. Cole, Seeromanie Harding, Jonathan C.K. Wells, Chris Griffiths, Philip Treleaven, Rachel Bonner, Jane Kirkby, Simon Lee, Emma Raywood, Sarah Legg, Dave Sears, Philippa Cottam, Colin Feyerabend and Janet Stocks
- Cystic fibrosis**
- 1672** **Impact of lung disease on respiratory impedance in young children with cystic fibrosis**
Kathryn A. Ramsey, Sarath C. Ranganathan, Catherine L. Gangell, Lidija Turkovic, Judy Park, Billy Skoric, Stephen M. Stick, Peter D. Sly and Graham L. Hall, on behalf of AREST CF
- 1680** **Progressive ventilation inhomogeneity in infants with cystic fibrosis after pulmonary infection**
Shannon J. Simpson, Sarath Ranganathan, Judy Park, Lidija Turkovic, Roy M. Robins-Browne, Billy Skoric, Kathryn A. Ramsey, Tim Rosenow, Georgia L. Banton, Luke Berry, Stephen M. Stick and Graham L. Hall, on behalf of AREST CF
- Sleep and pulmonary vascular disease**
- 1691** **High D-dimer levels after stopping anticoagulants in pulmonary embolism with sleep apnoea**
Angela García Suquia, Alberto Alonso-Fernández, Mónica de la Peña, David Romero, Javier Piérola, Miguel Carrera, Antonia Barceló, Joan B. Soriano, Meritxell Arque, Carmen Fernández-Capitán, Alicia Lorenzo and Francisco García-Río
- Pulmonary vascular disease**
- 1701** **Risk stratification of normotensive pulmonary embolism: prognostic impact of copeptin**
Kristian Hellenkamp, Johanna Schwung, Heidi Rossmann, Anja Kaeberich, Rolf Wachter, Gerd Hasenfuß, Stavros Konstantinides and Mareike Lankeit
- 1711** **Incident and prevalent cohorts with pulmonary arterial hypertension: insight from SERAPHIN**
Gérald Simonneau, Richard N. Channick, Marion Delcroix, Nazzareno Galiè, Hossein-Ardeschir Ghofrani, Pavel Jansa, Franck-Olivier Le Brun, Sanjay Mehta, Loïc Perchenet, Tomás Pulido, B.K.S. Sastry, Olivier Sitbon, Rogério Souza, Adam Torbicki and Lewis J. Rubin
- 1721** **Occupational exposure to organic solvents: a risk factor for pulmonary veno-occlusive disease**
David Montani, Edmund M. Lau, Alexis Descatha, Xavier Jaïs, Laurent Savale, Pascal Andujar, Lynda Bensefa-Colas, Barbara Girerd, Inès Zendah, Jerome Le Pavec, Andrei Seferian, Frédéric Perros, Peter Dorfmueller, Elie Fadel, Florent Soubrier, Olivier Sitbon, Gérald Simonneau and Marc Humbert
- Respiratory infections**
- 1732** **Nebulised colistin for ventilator-associated pneumonia prevention**
Marios Karvouniaris, Demosthenes Makris, Paris Zygoulis, Apostolos Triantaris, Stelios Xitsas, Konstantinos Mantzaris, Efthimia Petinaki and Epaminondas Zakyntinos
- Interstitial and orphan lung disease**
- 1740** **CC-chemokine ligand 2 inhibition in idiopathic pulmonary fibrosis: a phase 2 trial of carlumab**
Ganesh Raghu, Fernando J. Martinez, Kevin K. Brown, Ulrich Costabel, Vincent Cottin, Athol U. Wells, Lisa Lancaster, Kevin F. Gibson, Tarik Haddad, Prasheen Agarwal, Michael Mack, Bidisha Dasgupta, Ivo P. Nnane, Susan K. Flavin and Elliot S. Barnathan
- Lung cancer**
- 1751** **Primary tumour standardised uptake value is prognostic in nonsmall cell lung cancer: a multivariate pooled analysis of individual data**
Marianne Paesmans, Camilo Garcia, Ching-Yee Oliver Wong, Edward F. Patz Jr, Ritsuko Komaki, Susanne Eschmann, Ramaswamy Govindan, Johan Vansteenkiste, Anne-Pascale Meert, Wouter K. de Jong, Nasser Khaled Altorki, Kotaro Higashi, Angela Van Baardwijk, Gerben R. Borst, Lieveke Ameye, Jean-Jacques Lafitte, Thierry Berghmans, Patrick Flamen, Ramon Rami-Porta and Jean-Paul Sculier



ORIGINAL ARTICLES (CONTINUED)

- 1762** **Tumour islet Foxp3⁺ T-cell infiltration predicts poor outcome in nonsmall cell lung cancer**
Dermot S. O'Callaghan, Elton Rexhepaj, Kathy Gately, Linda Coate, David Delaney, Dearbhaile M. O'Donnell, Elaine Kay, Finbarr O'Connell, William M. Gallagher and Kenneth J. O'Byrne
- 1773** **Circulating free DNA concentration is an independent prognostic biomarker in lung cancer**
Claire Tissot, Anne-Claire Toffart, Stéphanie Villar, Pierre-Jean Souquet, Patrick Merle, Denis Moro-Sibilot, Maurice Pérol, Jiri Zavadil, Christian Brambilla, Magali Olivier and Sébastien Couraud

REVIEW

- 1781** **Impact of HIV infection and smoking on lung immunity and related disorders**
Theresa M. Rossouw, Ronald Anderson and Charles Feldman

BACK TO BASICS

- 1796** **Novel concepts in airway inflammation and remodelling in asthma**
Sejal Saglani and Clare M. Lloyd

AGORA

Research letters

- 1805** **Bronchiectasis in Germany: a population-based estimation of disease prevalence**
Felix C. Ringshausen, Andrés de Roux, Roland Diel, David Hohmann, Tobias Welte and Jessica Rademacher
- 1808** **Efficiency of mechanical activation of inspiratory muscles in COPD using sample entropy**
Leonardo Sarlabous, Abel Torres, José A. Fiz, Joaquim Gea, Juana M. Martínez-Llorens and Raimon Jané
- 1811** **Poor standardisation of plethysmographic specific airways resistance measurement despite widespread use**
Paul D. Robinson, Janet Stocks, Francois Marchal, Kim G. Nielsen, Bruce R. Thompson, Waldemar Tomalak and Jane Kirkby
- 1814** **Multiple breath washouts in children can be shortened without compromising quality**
Fatima Ahmad, Samantha Irving, Eric Alton, Jane C. Davies, Kenneth Macleod, Mark Rosenthal, Clare Saunders, Andrew Bush, Sejal Saglani and Louise Fleming
- 1816** **Use of chest radiography in the 22 highest tuberculosis burden countries**
Tripti Pande, Madhukar Pai, Faiz Ahmad Khan and Claudia M. Denking
-  **1820** **Bile acid aspiration in people with cystic fibrosis before and after lung transplantation**
Malcolm Brodlie, Ali Aseeri, Jim L. Lordan, Andrew G.N. Robertson, Michael C. McKean, Paul A. Corris, S. Michael Griffin, Nigel J. Manning, Jeffrey P. Pearson and Christopher Ward
- 1823** **Chronic pulmonary disease with *Mycobacterium abscessus* complex is a biofilm infection**
Tavs Qvist, Steffen Eickhardt, Kasper N. Kragh, Claus B. Andersen, Martin Iversen, Niels Høiby and Thomas Bjarnsholt
- 1826** **Cost-effectiveness of incorporating bedaquiline into a treatment regimen for MDR/XDR-TB in Germany**
Lara J. Wolfson, Judith Gibbert, Daniel Wirth and Roland Diel
- 1829** **Comparison of the association with sleep apnoea of obesity versus insulin resistance**
Alice Liu, Danit Ariel, Cindy Lamendola, Sun H. Kim, Fahim Abbasi, James Cardell, Vanessa Tomasso, Hafasa Mojaddidi, Kaylene Grove, Clete A. Kushida and Gerald M. Reaven
- 1832** **Spontaneous pneumothorax can be associated with *TGFBR2* mutation**
Joseph E. Chambers, Lucy E. Dalton, Deepak N. Subramanian, Bibek Gooptu, Anu Balan, Soo-Mi Park, Simon Holden and Stefan J. Marciniak

Correspondence

- 1836** **Numbers needed to treat to prevent tuberculosis**
Martina Sester, Reinout van Crevel, Frank van Leth and Christoph Lange; Alberto Matteelli, Knut Lönnroth, Haileyesus Getahun, Dennis Falzon, Giovanni Battista Migliori and Mario Raviglione
- 1840** **Accelerating tuberculosis elimination in low-incidence settings: the role of genomics**
Jennifer L. Guthrie and Jennifer L. Gardy; Giovanni Sotgiu, Daniela M. Cirillo, Paolo Miotto, Rosella Centis and Giovanni Battista Migliori
- 1843** **Linezolid in drug-resistant tuberculosis: haste makes waste**
Sourin Bhuniya, Prasanta Raghav Mohapatra, Manoj Kumar Panigrahi, Priyadarshini Behera and Gourhari Pradhan; Jennifer Hughes, Petros Isaakidis, Aristomo Andries, Homa Mansoor, Vivian Cox, Graeme Meintjes and Helen Cox
- 1846** **Mediastinoscopy after negative endoscopic mediastinal nodal staging: can it be omitted?**
Wilson W.L. Li, Erik F.M. van der Heijden and Ad F.T.M. Verhagen; Jouke T. Annema, Paul De Leyn, Paul Clementsen, Mette Siemsen and Peter Vilmann;
- 1849** **Pulmonary arterial hypertension in patients treated with interferon**
Maura Prella, Patrick Yerly, Laurent P. Nicod and John-David Aubert; Laurent Savale, Marie-Camille Chaumais, Olivier Sitbon and Marc Humbert

1854 AUTHOR CORRECTIONS

1855 ERRATUM