



Editor

Tore K Kvien

Associate Editors

Francis Berenbaum
Hans Bijlsma
David Pisetsky
Dimitrios Boumpas
Gerd Burmester
Mary Crow
Iain McInnes

Editorial office

Annals of the Rheumatic Diseases
BMJ Publishing Group Ltd
BMA House
Tavistock Square
London WC1H 9JR, UK
T: +44 (0)20 7383 6250
F: +44 (0)20 7383 6668
E: ard@bmj.com
Twitter: @ARD_BMJ
ISSN: 0003-4967 (print)
ISSN: 1468-2060 (online)
Impact Factor: 10.377

Disclaimer: ARD is owned and published by BMJ Publishing Group Ltd (a wholly owned subsidiary of the British Medical Association) and the European League Against Rheumatism. The owners grant editorial freedom to the Editor of ARD. ARD follows guidelines on editorial independence produced by the World Association of Medical Editors and the code on good publication practice of the Committee on Publication Ethics.

ARD is intended for medical professionals and is provided without warranty, express or implied. Statements in the journal are the responsibility of their authors and advertisers and not authors' institutions the BMJ Publishing Group, the European League Against Rheumatism or the BMA unless otherwise specified or determined by law. Acceptance of advertising does not imply endorsement.

To the fullest extent permitted by law, the BMJ Publishing Group shall not be liable for any loss, injury or damage resulting from the use of ARD or any information in it whether based on contract, tort, or otherwise. Readers are advised to verify any information they choose to rely on.

Copyright: © 2016 BMJ Publishing Group and European League Against Rheumatism. 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 permission

ARD is published by BMJ Publishing Group Ltd typeset by Techem and printed in the UK on acid-free paper.

Annals of the Rheumatic Diseases (ISSN No: 0003-4967) is published monthly by BMJ Publishing Group and distributed in the USA by Air Business Ltd. Periodicals postage paid at Jamaica NY 11431
POSTMASTER: send address changes to *Annals of the Rheumatic Diseases*, Air Business Ltd, c/o Worldnet Shipping Inc., 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA.



Receive regular table of contents by email.
Register using this QR code.

Editorial

- 637** Bone loss, pain and inflammation: three faces of ACPA in RA pathogenesis
J Sokolove, D Pisetsky

Viewpoint

- 640** Treating to target in psoriatic arthritis: how to implement in clinical practice
L C Coates, P S Hellmell

Recommendation

- 644** EULAR recommendations for the management of familial Mediterranean fever
S Ozen, E Demirkaya, B Erer, A Livneh, E Ben-Chetrit, G Giancane, H Ozdogan, I Abu, M Gattorno, P N Hawkins, S Yuce, T Kallinich, Y Bilginer, D Kastner, L Carmona

Clinical and epidemiological research

- 652** Genome-wide association study of clinically defined gout identifies multiple risk loci and its association with clinical subtypes
H Matsuo, K Yamamoto, H Nakaoka, A Nakayama, M Sakiyama, T Chiba, A Takahashi, T Nakamura, H Nakashima, Y Takada, I Danjoh, S Shimizu, J Abe, Y Kawamura, S Terashige, H Ogata, S Tatsukawa, G Yin, R Okada, E Morita, M Naito, A Tokumasu, H Onoue, K Iwaya, T Ito, T Takada, K Inoue, Y Kato, Y Nakamura, Y Sakurai, H Suzuki, Y Kanai, T Hosoya, N Hamajima, I Inoue, M Kubo, K Ichida, H Ooyama, T Shimizu, N Shinomiya

- 660** Analysis of periarticular bone changes in patients with cutaneous psoriasis without associated psoriatic arthritis
D Simon, F Faustini, A Kleyer, J Haschke, M Englbrecht, S Kraus, A J Hueber, R Kocjan, M Sticherling, G Schett, J Reich
- 667** What are the effects of medication adherence interventions in rheumatic diseases: a systematic review
J S Galo, P Mehat, S K Rai, A Avina-Zubieta, M A De Vera
- 674** Prediction of cardiovascular risk in rheumatoid arthritis: performance of original and adapted SCORE algorithms
E E A Arts, C D Popa, A A Den Broeder, R Donders, A Sandoo, T Toms, S Rollefstad, E Iledahl, A G Semb, G D Kitas, P L C M Van Riel, J Fransen

- 681** Digital ulcers predict a worse disease course in patients with systemic sclerosis
C Mihai, R Landewé, D van der Heijde, U A Walker, P I Constantin, A M Gherge, R Ionescu, S Rednic, Y Allanore, J Avouac, L Czirjak, E Hachulla, G Riemekasten, F Cozzi, P Airò, M Cutolo, U Mueller-Ladner, M Matucci-Cerinic

- 687** The effect of tofacitinib on pneumococcal and influenza vaccine responses in rheumatoid arthritis
K L Winthrop, J Silverfield, A Racowicz, J Neal, E B Lee, P Hrycaj, J Gomez-Reino, K Soma, C Mebus, B Wilkinson, J Hodge, H Fan, T Wang, C O Bingham III

- 696** Disease specificity of autoantibodies to cytosolic 5'-nucleotidase 1A in sporadic inclusion body myositis versus known autoimmune diseases
M K Herbert, J Stammen-Vogelzangs, M M Verbeek, A Rietveld, I E Lundberg, H Chinoy, J A Lamb, R G Cooper, M Roberts, U A Badrising, J L De Bleecker, P M Machado, M G Hanna, L Plesitova, J Vencovsky, B G van Engelen, G J M Pruijt

- 702** Increasing synovitis and bone marrow lesions are associated with incident joint tenderness in hand osteoarthritis
I K Haugen, B S Christensen, P Bayesen, S Sesseng, D van der Heijde, T K Kvien

- 709** Impact of baseline anti-cyclic citrullinated peptide-2 antibody concentration on efficacy outcomes following treatment with subcutaneous abatacept or adalimumab: 2-year results from the AMPLE trial
J Sokolove, M Schiff, R Fleischmann, M E Weinblatt, S E Connolly, A Johnsen, J Zhu, M A Maldonado, S Patel, W H Robinson

- 715** In wealthier countries, patients perceive worse impact of the disease although they have lower objectively assessed disease activity: results from the cross-sectional COMORA study
P Putrik, S Ramiro, M Hifjager, A P Keszei, I Hmamouchi, M Dougados, L Gossec, A Boonen

Basic and translational research

- 721** Identification of a novel chemokine-dependent molecular mechanism underlying rheumatoid arthritis-associated autoantibody-mediated bone loss
A Krishnamurthy, V Joshua, A H Hensvold, T Jin, M Sun, N Vivar, A J Ytterberg, M Engström, C Fernandes-Cerqueira, K Amara, M Magnusson, G Wigerblad, J Kato, J M Jiménez-Andrade, K Tyson, S Rapecki, K Lundberg, S-B Catrina, P-J Jakobsson, C Svensson, V Malmström, L Klareskog, H Wähämaa, A I Catrina

- 730** Autoantibodies to citrullinated proteins induce joint pain independent of inflammation via a chemokine-dependent mechanism
G Wigerblad, D B Bas, C Fernandes-Cerqueira, A Krishnamurthy, K S Nandakumar, K Rogoz, J Kato, K Sandor, J Su, J M Jiménez-Andrade, A Fimm, A B Farinotti, K Amara, K Lundberg, R Holmdahl, P-J Jakobsson, V Malmström, A I Catrina, L Klareskog, C J Svensson

- 739** Glucocorticoid-induced leucine zipper (GILZ) inhibits B cell activation in systemic lupus erythematosus
S A Jones, A E J Toh, D Odobasic, M-A V Oudin, Q Cheng, J P W Lee, S J White, B E Russ, S Infantino, A Light, D M Tarlinton, J Harris, E F Morand

MORE CONTENTS ►

This article has been chosen by the Editor to be of special interest or importance and is freely available online.

This article has been made freely available online under the BMJ Journals Open Access scheme. See <http://ard.bmj.com/site/about/guidelines.xhtml#open>

COPE

Member since 2008
JMD0008

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

<http://publicationethics.org/>

equator network

recycle
When you have finished with this please recycle it

The online version of this article contains multiple choice questions hosted on BMJ Learning.

748 Premature senescence of T-cell subsets in axial spondyloarthritis



OPEN ACCESS

J Fessler, A Raicht, R Husic, A Fijjan, C Dufiner, W Schwinger, C DeJaco, M Schirmer

755 Soluble uric acid primes TLR-induced proinflammatory cytokine production by human primary cells via inhibition of IL-1Ra

T O Crisan, M C P Cleophas, M Oosting, H Lemmers, H Toenhake-Dijkstra, M G Netea, T L Jansen, L A B Joosten

763 Expression of chemokines CXCL4 and CXCL7 by synovial macrophages defines an early stage of rheumatoid arthritis



OPEN ACCESS

L Yeo, N Adlard, M Biehl, M Juarez, T Smallie, M Snow, C D Buckley, K Raza, A Filer, D Scheel-Toellner

772 Private rare deletions in *SEC16A* and *MAMDC4* may represent novel pathogenic variants in familial axial spondyloarthritis



OPEN ACCESS

D D O'Rielly, M Uddin, D Codner, M Hayley, J Zhou, L Pena-Castillo, A A Mostafa, S M M Hasan, W Liu, N Haroon, R Inman, P Rahman

780 Germline variation of TNFAIP3 in primary Sjögren's syndrome-associated lymphoma

G Nocturne, J Tarn, S Boudaoud, J Locke, C Miceli-Richard, E Hachulla, J-J Dubost, S Bowman, J-E Gottenberg, L A Criswell, C J Lessard, K L Sivits, R Carapito, S Bahram, R Seror, W-F Ng, X Mariette

Letters

784 Low omega-3 fatty acid levels associate with frequent gout attacks: a case control study

A Abhishek, A M Valdes, M Doherty

785 Risk of multiple sclerosis during tumour necrosis factor inhibitor treatment for arthritis: a population-based study from DANBIO and the Danish Multiple Sclerosis Registry

L Dreyer, M Magyari, B Laursen, R Cordtz, F Sellebjerg, H Locht

Electronic pages

Correspondence

e13 Paying attention to the safety and efficacy of fish oil in treatment of knee osteoarthritis

S-G Gao, C Zeng, J Wei, Y-L Wang, G-H Lei

e14 Evaluation of the association between anticarbamylated protein antibodies and the longitudinal course of functional ability in rheumatoid arthritis

S Ajeganova, B Svensson, T W J Huizinga, A H M van der Helm-van Mil, H W van Steenbergen

e15 Response to: 'Evaluation of the association between anticarbamylated protein antibodies and longitudinal course of functional ability in rheumatoid arthritis' by Ajeganova *et al*

J H Humphreys, D P M Symmons, S M M Verstappen

e16 A relationship between extracapsular involvement and response to steroid treatment in polymyalgia rheumatica: too soon to conclude?

L Yang, H Zhou, H Tang, A M Lee, H X Bai

e17 Response to: 'A relationship between extracapsular involvement and response to steroid treatment in polymyalgia rheumatica: too soon to conclude?' by Yang *et al*

S L Mackie, D G McGonagle

e18 Does the co-existence of acute anterior uveitis and chronic back pain prompt primary care physicians to consider a diagnosis of axial spondyloarthritis?

A Maxwell, M Yates, P Everden, K Gaffney

e19 Improving recognition of spondyloarthropathy in primary care: an unmet need

M Haroon, O FitzGerald

e20 Allopurinol-induced severe cutaneous adverse reactions

C Campochiaro

e21 Allopurinol dose relative to renal function and risk of hypersensitivity reactions

R Day, S-I Hung, W-H Chung

e22 Is painful knee an independent predictor of mortality in middle-aged women?

S-G Gao, C Zeng, Yi-lin Xiong, J Wei, G-H Lei

e23 Response to: 'Painful knee but not hand osteoarthritis is an independent predictor of mortality over 23 years follow-up of a population-based cohort of middle-aged women' by Gao *et al*

S Kluzek, M T Sanchez-Santos, K M Leyland, A Judge, J Newton, N K Arden