

# Arthritis & Rheumatism

An Official Journal of the American College of Rheumatology  
www.arthritisrheum.org and www.interscience.wiley.com

VOLUME 54

FEBRUARY 2006

NO. 2

## Special Articles

- Editorial: Evil Humors Take Their Toll as Innate Immunity Makes Gouty Joints TREM-ble  
*Ru Liu-Bryan and Robert Terkeltaub* ..... 383
- Editorial: Are Bone Morphogenetic Proteins Effective Inducers of Cartilage Repair? Ex Vivo  
Transduction of Muscle-Derived Stem Cells  
*Mary B. Goldring* ..... 387
- Editorial: Potential Antiinflammatory and Immunomodulatory Effects of Statins in Rheumatologic  
Therapy  
*Claire Arnaud and François Mach* ..... 390
- Review: Statins as Antiinflammatory and Immunomodulatory Agents: A Future in Rheumatologic  
Therapy?  
*Aryeh M. Abeles and Michael H. Pillinger* ..... 393
- Review: The Type I Interferon System in Systemic Lupus Erythematosus  
*Lars Rönnblom, Maija-Leena Eloranta, and Gunnar V. Alm* ..... 408
- Special Article: The American College of Rheumatology Response Criteria for Proliferative and  
Membranous Renal Disease in Systemic Lupus Erythematosus Clinical Trials  
*Renal Disease Subcommittee of the American College of Rheumatology Ad Hoc Committee on Systemic  
Lupus Erythematosus Response Criteria* ..... 421

## Cartilage Biology

- Cartilage Repair Using Bone Morphogenetic Protein 4 and Muscle-Derived Stem Cells  
*Ryosuke Kuroda, Arvydas Usas, Seiji Kubo, Karin Corsi, Hairong Peng, Tim Rose, James Cummins,  
Freddie H. Fu, and Johnny Huard* ..... 433
- The Accumulation of Intracellular ITEGE and DIPEN Neopeptides in Bovine Articular Chondrocytes Is  
Mediated by CD44 Internalization of Hyaluronan  
*Jennifer J. Embry Flory, Amanda J. Fosang, and Warren Knudson* ..... 443

## Gout

- Induction of Triggering Receptor Expressed on Myeloid Cells 1 in Murine Resident Peritoneal  
Macrophages by Monosodium Urate Monohydrate Crystals  
*Yosuke Murakami, Tohru Akahoshi, Izumi Hayashi, Hirahito Endo, Shinichi Kawai, Matsuhisa Inoue,  
Hiromi Kondo, and Hidero Kitasato* ..... 455

## Experimental/Inflammatory Arthritis

- Activation of p38 MAPK Is a Key Step in Tumor Necrosis Factor–Mediated Inflammatory Bone  
Destruction  
*Jochen Zwerina, Silvia Hayer, Kurt Redlich, Klaus Bobacz, Giorgos Kollias, Josef S. Smolen, and  
Georg Schett* ..... 463
- CD28-Dependent Differentiation Into the Effector/Memory Phenotype Is Essential for Induction of  
Arthritis in Interleukin-1 Receptor Antagonist–Deficient Mice  
*Motoko Kotani, Kazuya Hirata, Shuhei Ogawa, Katsuyoshi Habiro, Yasuo Ishida, Seiichi Tanuma,  
Reiko Horai, Yoichiro Iwakura, Hidehiro Kishimoto, and Ryo Abe* ..... 473
- The Impact of Glycosylation on HLA–DR1–Restricted T Cell Recognition of Type II Collagen in a  
Mouse Model  
*Alexei von Delwig, Daniel M. Altmann, John D. Isaacs, Clifford V. Harding, Rikard Holmdahl,  
Norman McKie, and John H. Robinson* ..... 482
- Prevention of Spontaneous Arthritis by Inhibiting Homeostatic Expansion of Autoreactive CD4+ T Cells  
in the K/BxN Mouse Model  
*Eunkyeong Jang, Hong Ro Kim, Sin Hye Cho, Doo-Jin Paik, Jung Mogg Kim, Sang-Koo Lee, and  
Jeehee Youn* ..... 492
- Early Cytokine Profiles in the Joint Define Pathogen Clearance and Severity of Arthritis in  
*Chlamydia*-Induced Arthritis in Rats  
*Robert D. Inman and Basil Chiu* ..... 499

<b>Clinical Images</b>	
Dysphagia Is Sometimes Easier to Swallow Than Spinal Surgery <i>R. Rajendram, J. Ehtisham, and R. W. Smith</i> .....	507
<b>Autoinflammatory Syndrome</b>	
PYPAF1 Nonsense Mutation in a Patient With an Unusual Autoinflammatory Syndrome: Role of PYPAF1 in Inflammation <i>I. Jéru, H. Hayrapetyan, P. Duquesnoy, T. Sarkisian, and S. Amselem</i> .....	508
<b>Heritable Disorders of Connective Tissue</b>	
Clinical Study of Hereditary Disorders of Connective Tissues in a Chilean Population: Joint Hypermobility Syndrome and Vascular Ehlers-Danlos Syndrome <i>Jaime F. Bravo and Carlos Wolff</i> .....	515
<b>Osteoarthritis Basic Science Studies</b>	
Association Between a Variation in <i>LRCHI</i> and Knee Osteoarthritis: A Genome-Wide Single-Nucleotide Polymorphism Association Study Using DNA Pooling <i>Tim D. Spector, Richard H. Reneland, Steven Mah, Ana M. Valdes, Deborah J. Hart, Stefan Kammerer, Maria Langdown, Carolyn R. Hoyal, Josephine Atienza, Michael Doherty, Proton Rahman, Matthew R. Nelson, and Andreas Braun</i> .....	524
Reproducible Genetic Associations Between Candidate Genes and Clinical Knee Osteoarthritis in Men and Women <i>Ana M. Valdes, Mark Van Oene, Deborah J. Hart, Gabriela L. Surdulescu, John Loughlin, Michael Doherty, and Tim D. Spector</i> .....	533
Interleukin-1 in Combination With Oncostatin M Up-Regulates Multiple Genes in Chondrocytes: Implications for Cartilage Destruction and Repair <i>H. E. Barksby, W. Hui, I. Wappler, H. H. Peters, J. M. Milner, C. D. Richards, T. E. Cawston, and A. D. Rowan</i> .....	540
<b>Osteoarthritis Clinical Studies</b>	
Validity, Factor Structure, and Clinical Relevance of the AUSCAN Osteoarthritis Hand Index <i>Kelli D. Allen, Joanne M. Jordan, Jordan B. Renner, and Virginia B. Kraus</i> .....	551
<b>Pharmacology</b>	
Acquired Resistance to Chloroquine in Human CEM T Cells Is Mediated by Multidrug Resistance-Associated Protein 1 and Provokes High Levels of Cross-Resistance to Glucocorticoids <i>Ruud Oerlemans, Joost van der Heijden, Joseftien Vink, Ben A. C. Dijkmans, Gertjan J. L. Kaspers, Willem F. Lems, George L. Scheffer, Ilan Ifergan, Rik J. Scheper, Jacqueline Cloos, Yehuda G. Assaraf, and Gerrit Jansen</i> .....	557
<b>Spondylarthropathy</b>	
Inflammatory Back Pain in Ankylosing Spondylitis: A Reassessment of the Clinical History for Application as Classification and Diagnostic Criteria <i>Martin Rudwaleit, Anke Metter, Joachim Listing, Joachim Sieper, and Jürgen Braun</i> .....	569
<b>Rheumatoid Arthritis Basic Science Studies</b>	
Apoptosis of Rheumatoid Synovial Cells by Statins Through the Blocking of Protein Geranylgeranylation: A Potential Therapeutic Approach to Rheumatoid Arthritis <i>Takao Nagashima, Hitoaki Okazaki, Kazuo Yudoh, Hiroaki Matsuno, and Seiji Minota</i> .....	579
PUMA Regulation and Proapoptotic Effects in Fibroblast-like Synoviocytes <i>Hoon-Suk Cha, Sanna Rosengren, David L. Boyle, and Gary S. Firestein</i> .....	587
A New Classification of HLA-DRB1 Alleles Differentiates Predisposing and Protective Alleles for Rheumatoid Arthritis Structural Severity <i>Pierre-Antoine Gourraud, Jean-Frédéric Boyer, Thomas Barnetche, Michel Abbal, Anne Cambon-Thomsen, Alain Cantagrel, and Arnaud Constantin</i> .....	593
<b>Rheumatoid Arthritis Clinical Studies</b>	
The LUNDEX, a New Index of Drug Efficacy in Clinical Practice: Results of a Five-Year Observational Study of Treatment With Infliximab and Etanercept Among Rheumatoid Arthritis Patients in Southern Sweden <i>Lars Erik Kristensen, Tore Saxne, and Pierre Geborek</i> .....	600
Risk Genotypes in Folate-Dependent Enzymes and Their Association With Methotrexate-Related Side Effects in Rheumatoid Arthritis <i>Michael H. Weisman, Daniel E. Furst, Grace S. Park, Joel M. Kremer, Katie M. Smith, Daniel J. Wallace, Jacques R. Caldwell, and Thierry Dervieux</i> .....	607
Reconstitution of Peripheral Blood B Cells After Depletion With Rituximab in Patients With Rheumatoid Arthritis <i>Maria J. Leandro, Geraldine Cambridge, Michael R. Ehrenstein, and Jonathan C. W. Edwards</i> .....	613

Treatment of Early Seropositive Rheumatoid Arthritis: Doxycycline Plus Methotrexate Versus Methotrexate Alone <i>James R. O'Dell, Jennifer R. Elliott, Jack A. Mallek, Ted R. Mikuls, Cynthia A. Weaver, Scott Glickstein, Kent M. Blakely, Raymond Hausch, and Rob D. Leff</i> .....	621
Treatment for Rheumatoid Arthritis and the Risk of Hospitalization for Pneumonia: Associations With Prednisone, Disease-Modifying Antirheumatic Drugs, and Anti-Tumor Necrosis Factor Therapy <i>Frederick Wolfe, Liron Caplan, and Kaleb Michaud</i> .....	628
Morphologic and Quantitative Assessment of CD20+ B Cell Infiltrates in Rheumatoid Arthritis-Associated Nonspecific Interstitial Pneumonia and Usual Interstitial Pneumonia <i>Sarah R. Atkins, Carl Turesson, Jeffery L. Myers, Henry D. Tazelaar, Jay H. Ryu, Eric L. Matteson, and Tim Bongartz</i> .....	635
Incidence of Noncardiac Vascular Disease in Rheumatoid Arthritis and Relationship to Extraarticular Disease Manifestations <i>Kimberly P. Liang, Kelly V. Liang, Eric L. Matteson, Robyn L. McClelland, Teresa J. H. Christianson, and Carl Turesson</i> .....	642
<b>Systemic Sclerosis</b>	
Signaling Pathways Regulating Intercellular Adhesion Molecule 1 Expression by Endothelin 1: Comparison With Interleukin-1 $\beta$ in Normal and Scleroderma Dermal Fibroblasts <i>Charlotte E. Waters, Xu Shi-Wen, Chris P. Denton, David J. Abraham, and Jeremy D. Pearson</i> .....	649
<b>Systemic Lupus Erythematosus</b>	
A Murine Model of Mixed Connective Tissue Disease Induced With U1 Small Nuclear RNP Autoantigen <i>Eric L. Greidinger, YunJuan Zang, Kimberly Jaimes, Scott Hogenmiller, Mehdi Nassiri, Pablo Bejarano, Glen N. Barber, and Robert W. Hoffman</i> .....	661
Platelet C4d Is Highly Specific for Systemic Lupus Erythematosus <i>Jeannine S. Navratil, Susan Manzi, Amy H. Kao, Shanthi Krishnaswami, Chau-Ching Liu, Margie J. Ruffing, Penny S. Shaw, Abbey C. Nilson, Emily R. Dryden, Jeffrey J. Johnson, and Joseph M. Ahearn</i> .....	670
<b>Concise Communications</b>	
Association of IgG anti-NR2 Glutamate Receptor Antibodies in Cerebrospinal Fluid With Neuropsychiatric Systemic Lupus Erythematosus <i>Taku Yoshio, Koichi Onda, Hiroyuki Nara, and Seiji Minota</i> .....	675
Adalimumab Reduces Spinal Symptoms in Active Ankylosing Spondylitis: Clinical and Magnetic Resonance Imaging Results of a Fifty-Two-Week Open-Label Trial <i>Hiltrun Haibel, Martin Rudwaleit, Henning C. Brandt, Zarho Grozdanovic, Joachim Listing, Hartmut Kupper, Jürgen Braun, and Joachim Sieper</i> .....	678
<b>Letters</b>	
How Psychological Stress via Hormones and Nerve Fibers May Exacerbate Rheumatoid Arthritis: Comment on the Review by Straub et al <i>J. P. Persijn</i> .....	682
Reply <i>Rainer H. Straub, Johannes W. J. Bijlsma, and Maurizio Cutolo</i> .....	682
The Randomized Clinical Trial of Doxycycline in Knee Osteoarthritis: Comment on the Editorial by Dieppe <i>Kenneth D. Brandt and Steven A. Mazzuca</i> .....	684
<b>ACR Announcements</b> .....	A??

**Cover image:** The figure on the cover (from Zwerina et al, page 468) shows toluidine blue staining, indicating preservation of cartilage proteoglycan, in a section from a human tumor necrosis factor-transgenic mouse treated with a p38 MAPK inhibitor. Unstained cartilage indicates proteoglycan loss.