



# *The Journal of* **Immunology**

VOLUME 193, NUMBER 7 • OCTOBER 1, 2014 • WWW.JIMMUNOL.ORG

## IN THIS ISSUE

- 3179 **C5a Complements Th17 Cells in SLE** *See article p. 3288*  
**GATA Be a T Cell** *See article p. 3470*  
**Chasing HIV out** *See article p. 3577*  
**Th2 Cells Trump Trematodes** *See article p. 3590*  
**Basophils Inflamm ILC2s in Skin** *See article p. 3717*  
**Cis-Elements Wrangle V $\kappa$  Ab Genes** *See article p. 3746*  
**Soluble IL-6R Fires up Fibrosis** *See article p. 3755*

## LETTERS TO THE EDITOR

- 3181 Comment on “Differentiation of IL-17–Producing Effector and Regulatory Human T Cells from Lineage-Committed Naive Precursors”  
*Maha Ayyoub and Danila Valmori*

## PILLARS OF IMMUNOLOGY

- 3183 Macrophage Activation as an Effector Mechanism for Cell-Mediated Immunity  
*Vincent C. Tam and Alan Aderem*
- 3185 Pillars Article: Cellular Resistance to Infection. *J. Exp. Med.* 1962. 116: 381–406  
*G. B. Mackaness*
- 3222 Pillars Article: The Immunological Basis of Acquired Cellular Resistance. *J. Exp. Med.* 1964. 120: 105–120  
*G. B. Mackaness*

## BRIEF REVIEWS

- 3239 Helminth Infections Decrease Host Susceptibility to Immune-Mediated Diseases  
*Joel V. Weinstock and David E. Elliott*

On the cover: This image shows  $\alpha$ -smooth muscle actin staining (pink) of myofibroblasts together with nuclear staining of phosphorylated STAT-3 (brown) in a lung section from a patient with idiopathic pulmonary fibrosis. Le and colleagues demonstrate that IL-6 *trans* signaling activates this pathway and plays a role in pulmonary fibrosis. Le, T.-T. T., H. Karmoury-Quintana, E. Melicoff, T.-T. T. Le, T. Weng, N.-Y. Chen, M. Pedroza, Y. Zhou, J. Davies, K. Philip, J. Molina, F. Luo, A. T. George, L. J. Garcia-Morales, R. R. Bunge, B. A. Bruckner, M. Loebe, H. Seethamraju, S. K. Agarwal, and M. R. Blackburn. 2014. Blockade of IL-6 *trans* signaling attenuates pulmonary fibrosis. *J. Immunol.* 193: 3755–3768.

*The Journal of Immunology* (ISSN 0022-1767) is published twice each month by The American Association of Immunologists, Inc., 9650 Rockville Pike, Bethesda, MD 20814-3994, Phone: 301-634-7197, Fax: 301-634-7829. Subscription terms: New subscriptions and renewals begin January 1 and expire one year later (see <http://www.jimmunol.org/subscriptions> for prices and details). A special rate is available to members of The American Association of Immunologists, Inc. (see <http://www.aai.org/membership>). The American Association of Immunologists, Inc., is not responsible for undeliverable issues. Replacement issues can be obtained, if available, at the regular price of single issues (see [http://www.jimmunol.org/pdf/single\\_issue\\_purchase.pdf](http://www.jimmunol.org/pdf/single_issue_purchase.pdf)). Reprints of individual articles are available only from authors. Periodicals postage paid at Bethesda, MD 20814-3994, and at additional mailing offices. Country of origin U.S.A. Printed on acid-free recyclable paper. Postmaster: Send address changes 60 days in advance to *The Journal of Immunology*, Subscription Department, 9650 Rockville Pike, Bethesda, MD 20814-3994. Copyright © 2014 by The American Association of Immunologists, Inc.

- 3248 Putting J Chain Back on the Map: How Might Its Expression Define Plasma Cell Development?  
*Caitlin D. Castro and Martin F. Flajnik*

## CUTTING EDGE

- 3257 Cutting Edge: The UNC93B1 Tyrosine-Based Motif Regulates Trafficking and TLR Responses via Separate Mechanisms  
*Karin Pelka, Kshiti Phulphagar, Jana Zimmermann, Rainer Stahl, Jonathan L. Schmid-Burgk, Tobias Schmidt, Jan-Hendrik Spille, Larisa I. Labzin, Sudhir Agrawal, Ekambar R. Kandimalla, Jean-Laurent Casanova, Veit Hornung, Ann Marshak-Rothstein, Stefan Höning, and Eicke Latz*
- 3262 Cutting Edge: CD8<sup>+</sup> Recent Thymic Emigrants Exhibit Increased Responses to Low-Affinity Ligands and Improved Access to Peripheral Sites of Inflammation  
*Amy M. Berkley and Pamela J. Fink*

## ANTIGEN RECOGNITION AND RESPONSES

- 3267 Bispecificity for Myelin and Neuronal Self-Antigens Is a Common Feature of CD4 T Cells in C57BL/6 Mice  
*Liliana E. Lucca, Sabine Desbois, Abdulraouf Ramadan, Avraham Ben-Nun, Miriam Eisenstein, Nadège Carrié, Jean-Charles Guéry, Alessandro Sette, Phuong Nguyen, Terrence L. Geiger, Lennart T. Mars, and Roland S. Liblau*

## AUTOIMMUNITY

- 3278 Inhibition of TYK2 and JAK1 Ameliorates Imiquimod-Induced Psoriasis-like Dermatitis by Inhibiting IL-22 and the IL-23/IL-17 Axis  
*Melissa G. Works, Fangfang Yin, Catherine C. Yin, Ying Yiu, Kenneth Shew, Thanh-Thuy Tran, Naboko Dunlap, Jennifer Lam, Tim Mitchell, John Reader, Paul L. Stein, and Annalisa D'Andrea*
- 3288 Complement Component C5a Permits the Coexistence of Pathogenic Th17 Cells and Type I IFN in Lupus  
*Sudesh Pawaria, Kritika Ramani, Kelly Maers, Youhua Liu, Lawrence P. Kane, Marc C. Levesque, and Partha S. Biswas*
- 3296 The Cross-Priming Capacity and Direct Presentation Potential of an Autoantigen Are Separable and Inversely Related Properties  
*Jinguo Wang, Roopa Hebbandi Nanjundappa, Afshin Shameli, Xavier Clemente-Casares, Jun Yamanouchi, John F. Elliott, Robyn Slattery, Pau Serra, and Pere Santamaria*
- 3308 Fungal  $\beta$ -Glucan, a Dectin-1 Ligand, Promotes Protection from Type 1 Diabetes by Inducing Regulatory Innate Immune Response  
*Subba Karumuthil-Meethil, Radhika Gudi, Benjamin M. Johnson, Nicolas Perez, and Chenthamarakshan Vasu*

## CLINICAL AND HUMAN IMMUNOLOGY

- 3322 IL-21 Is a Central Memory T Cell-Associated Cytokine That Inhibits the Generation of Pathogenic Th1/17 Effector Cells  
*Ilko Kastirr, Stefano Maglie, Moira Paroni, Johanna Sophie Alfen, Giulia Nizzoli, Elisa Sugliano, Maria-Cristina Crosti, Monica Moro, Bodo Steckel, Svenja Steinfeldler, Katharina Stölzel, Chiara Romagnani, Fiorenzo Botti, Flavio Caprioli, Massimiliano Pagani, Sergio Abbrignani, and Jens Geginat*
- 3332 Identification of Immunogenic Antigens from *Aspergillus fumigatus* by Direct Multiparameter Characterization of Specific Conventional and Regulatory CD4<sup>+</sup> T Cells  
*Petra Bachler, Olaf Kniemeyer, Janka Teuschbein, Marcel Thön, Martin Vödisch, Dirk Wartenberg, Daniel H. Scharf, Nora Koester-Eiserfunke, Mark Schütte, Stefan Dübel, Mario Assenmacher, Axel A. Brakhage, and Alexander Schefföld*
- 3344 Notch Signaling at Later Stages of NK Cell Development Enhances KIR Expression and Functional Maturation  
*Martin Felices, Dave E. M. Ankarlo, Todd R. Lenvik, Heather H. Nelson, Bruce R. Blazar, Michael R. Verneris, and Jeffrey S. Miller*
- 3355 Monocyte-Induced Development of Th17 Cells and the Release of S100 Proteins Are Involved in the Pathogenesis of Graft-versus-Host Disease  
*Katharina Reinhardt, Dirk Foell, Thomas Vogl, Markus Mezger, Helmut Wittkowski, Falko Feud, Birgit Federmann, Christian Gille, Tobias Feuchtinger, Peter Lang, Rupert Handgretinger, Wolfgang Andreas Bethge, and Ursula Holzer*

- 3366 CD39 and CD161 Modulate Th17 Responses in Crohn's Disease  
*Aiping Bai, Alan Moss, Efi Kokkotou, Anny Usheva, Xiaofeng Sun, Adam Cheifetz, Yi Zheng, Maria Serena Longhi, Wenda Gao, Yan Wu, and Simon C. Robson*

## IMMUNE REGULATION

- 3378 Endothelial Microparticles Interact with and Support the Proliferation of T Cells  
*Julie Wheway, Sharissa L. Latham, Valery Combes, and Georges E. R. Grau*
- 3388 TGF- $\beta$ -Induced CD4<sup>+</sup>Foxp3<sup>+</sup> T Cells Attenuate Acute Graft-versus-Host Disease by Suppressing Expansion and Killing of Effector CD8<sup>+</sup> Cells  
*Jian Gu, Ling Lu, Maogen Chen, Lili Xu, Qin Lan, Qiang Li, Zhongmin Liu, Guihua Chen, Ping Wang, Xuebao Wang, David Brand, Nancy Olsen, and Song Guo Zheng*
- 3398 TLR9 Transcriptional Regulation in Response to Double-Stranded DNA Viruses  
*Claudia Zannetti, Peggy Parroche, Marine Panaye, Guillaume Roblot, Henri Gruffat, Evelyne Manet, Anne Laure Debaud, Joel Plumas, Nelly Vey, Christophe Caux, Nathalie Bendriss-Vermare, and Uzma Ayesha Hasan*
- 3409 Contribution of TCR Signaling Strength to CD8<sup>+</sup> T Cell Peripheral Tolerance Mechanisms  
*Trevor R. F. Smith, Gregory Verdeil, Kristi Marquardt, and Linda A. Sherman*
- 3417 Immunoregulation of Dendritic Cells by the Receptor T cell Ig and Mucin Protein-3 via Bruton's Tyrosine Kinase and c-Src  
*Neeraj Maurya, Ravindra Gujar, Mamta Gupta, Vinod Yadav, Saurabh Verma, and Pradip Sen*
- 3426 Systemic C3 Modulates CD8<sup>+</sup> T Cell Contraction after *Listeria monocytogenes* Infection  
*Yulong Tan, Yongsheng Li, Xiaolan Fu, Fei Yang, Ping Zheng, Jue Zhang, Bo Guo, and Yuzhang Wu*
- 3436 Adenosine Deaminase Acting on RNA 1 Limits RIG-I RNA Detection and Suppresses IFN Production Responding to Viral and Endogenous RNAs  
*Shengyong Yang, Peng Deng, Zhaowei Zhu, Jianzhong Zhu, Guoliang Wang, Liyong Zhang, Alex F. Chen, Tony Wang, Saumendra N. Sarkar, Timothy R. Billiar, and Qingde Wang*

## IMMUNE SYSTEM DEVELOPMENT

- 3446 The Survival and Differentiation of Pro-B and Pre-B Cells in the Bone Marrow Is Dependent on IL-7R $\alpha$  Tyr<sup>449</sup>  
*Daniel T. Patton, Adam W. Plumb, and Ninan Abraham*
- 3456 The Effects of 1,25-Dihydroxyvitamin D<sub>3</sub> on In Vitro Human NK Cell Development from Hematopoietic Stem Cells  
*Matthew A. Weeres, Kim Robien, Yong-Oon Ahn, Marie-Luise Neulen, Rachel Bergerson, Jeffery S. Miller, and Michael R. Verneris*
- 3463 Transcriptional Characterization of the T Cell Population within the Salmonid Interbranchial Lymphoid Tissue  
*Ida Bergva Aas, Lars Austbø, Melanie König, Mohasina Syed, Knut Falk, Ivar Hordvik, and Erling O. Koppang*
- 3470 GATA-3 Dose-Dependent Checkpoints in Early T Cell Commitment  
*Deirdre D. Scripture-Adams, Sagar S. Damle, Long Li, Koorosh J. Elibu, Shuyang Qin, Alexandra M. Arias, Robert R. Butler, III, Ameya Champhekar, Jingli A. Zhang, and Ellen V. Rothenberg*
- 3492 CD4<sup>+</sup> T Cells and CD40 Participate in Selection and Homeostasis of Peripheral B Cells  
*Marc A. Schwartz, Nikita S. Kolhatkar, Chris Thouvenel, Socheath Khim, and David J. Rawlings*

## IMMUNOGENETICS

- 3503 The Mouse *Idd2* Locus Is Linked to the Proportion of Immunoregulatory Double-Negative T Cells, a Trait Associated with Autoimmune Diabetes Resistance  
*Roxanne Collin, Véronique Dugas, Adam-Nicolas Pelletier, Geneviève Chabot-Roy, and Sylvie Lesage*

## IMMUNOTHERAPY AND VACCINES

- 3513 Characterization of Cross-Protection by Genetically Modified Live-Attenuated *Leishmania donovani* Parasites against *Leishmania mexicana*  
*Ranadhir Dey, Gayathri Natarajan, Parna Bhattacharya, Hannah Cummings, Pradeep K. Dagur, César Terrazas, Angamuthu Selvapandiyan, John P. McCoy, Jr., Robert Duncan, Abhay R. Satoskar, and Hira L. Nakhasi*
- 3528 Circulating CXCR5<sup>+</sup>PD-1<sup>+</sup> Response Predicts Influenza Vaccine Antibody Responses in Young Adults but not Elderly Adults  
*Ramin Sedaghat Herati, Morgan A. Reuter, Douglas V. Dolfi, Kathleen D. Mansfield, Htin Aung, Osama Z. Badwan, Raj K. Kurupati, Senthil Kannan, Hildegund Ertl, Kenneth E. Schmader, Michael R. Betts, David H. Canaday, and E. John Wherry*

## INFECTIOUS DISEASE AND HOST RESPONSE

- 3538 HIV-1 and HIV-2 Differentially Mature Plasmacytoid Dendritic Cells into IFN-Producing Cells or APCs  
*Caroline M. Royle, David R. Graham, Simone Sharma, Dietmar Fuchs, and Adriano Boasso*
- 3549 CXCL1 Contributes to Host Defense in Polymicrobial Sepsis via Modulating T Cell and Neutrophil Functions  
*Liliang Jin, Sanjay Batra, David Nobubiro Douda, Nades Palaniyar, and Samithamby Jeyaseelan*
- 3559 Axl Receptor Blockade Protects from Invasive Pulmonary Aspergillosis in Mice  
*Takehiko Shibata, David M. Habel, Ana Lucia Coelho, and Cory M. Hogaboam*
- 3566 *Helicobacter pylori*-Induced IL-1 $\beta$  Secretion in Innate Immune Cells Is Regulated by the NLRP3 Inflammasome and Requires the Cag Pathogenicity Island  
*Raphaella P. Semper, Raquel Mejías-Luque, Christina Groß, Florian Anderl, Anne Müller, Michael Vieth, Dirk H. Busch, Clarissa Prazeres da Costa, Jürgen Ruland, Olaf Groß, and Markus Gerhard*
- 3577 Provirus Activation Plus CD59 Blockage Triggers Antibody-Dependent Complement-Mediated Lysis of Latently HIV-1-Infected Cells  
*Jie Lan, Kai Yang, Daniel Byrd, Ningjie Hu, Tohti Amet, Nicole Shepherd, Mona Desai, Jimin Gao, Samir Gupta, Yongtao Sun, and Qigui Yu*
- 3590 T Cell-Derived IL-4/IL-13 Protects Mice against Fatal *Schistosoma mansoni* Infection Independently of Basophils  
*Christian Schwartz, Katharina Oeser, Clarissa Prazeres da Costa, Laura E. Layland, and David Voehringer*
- 3600 Type I IFN Induces IL-10 Production in an IL-27-Independent Manner and Blocks Responsiveness to IFN- $\gamma$  for Production of IL-12 and Bacterial Killing in *Mycobacterium tuberculosis*-Infected Macrophages  
*Finlay W. McNab, John Ewbank, Ashleigh Howes, Lucia Moreira-Teixeira, Anna Martirosyan, Nico Ghilardi, Margarida Saraiva, and Anne O'Garra*
- 3613 C5a and Bradykinin Receptor Cross-Talk Regulates Innate and Adaptive Immunity in *Trypanosoma cruzi* Infection  
*Veronica Schmitz, Larissa Nogueira Almeida, Erik Svensjö, Ana Carolina Monteiro, Jörg Köhl, and Julio Scharfstein*
- 3624 Latent Infection with Cytomegalovirus Is Associated with Poor Memory CD4 Responses to Influenza A Core Proteins in the Elderly  
*Evelyna Derhovanessian, Andrea B. Maier, Karin Hähnel, Janet E. McElhaney, Eline P. Slagboom, and Graham Pawelec*
- 3632 Pegylated Bisacycloxypropylcysteine, a Diacylated Lipopeptide Ligand of TLR6, Plays a Host-Protective Role against Experimental *Leishmania major* Infection  
*Surya Prakash Pandey, Himanshu Singh Chandel, Sunit Srivastava, Sathishkumar Selvaraj, Mukesh Kumar Jha, Divanshu Shukla, Thomas Ebensen, Carlos A. Guzman, and Bhaskar Saha*
- 3644 SHP-1 Plays a Crucial Role in CD40 Signaling Reciprocity  
*Tabish Hasan Khan, Neetu Srivastava, Ankiita Srivastava, Archana Sareen, Ram K. Mathur, Ajit G. Chande, Krishnasasthy V. Musti, Somenath Roy, Robin Mukhopadhyaya, and Bhaskar Saha*

## INNATE IMMUNITY AND INFLAMMATION

- 3654 Plasmin Induces In Vivo Monocyte Recruitment through Protease-Activated Receptor-1-, MEK/ERK-, and CCR2-Mediated Signaling  
*Aline A. F. Carmo, Bruno R. C. Costa, Juliana P. Vago, Leonardo C. de Oliveira, Luciana P. Tavares, Camila R. C. Nogueira, Ana Lúzia C. Ribeiro, Cristiana C. Garcia, Alan S. Barbosa, Bruno S. A. F. Brasil, Luci M. Dusse, Lucíola S. Barcelos, Cláudio A. Bonjardim, Mauro M. Teixeira, and Lirlândia P. Sousa*
- 3664 Differential Control of Mincle-Dependent Cord Factor Recognition and Macrophage Responses by the Transcription Factors C/EBP $\beta$  and HIF1 $\alpha$   
*Hanne Schoenen, Alexandra Huber, Nada Sonda, Stephanie Zimmermann, Jonathan Jantsch, Bernd Lepenies, Vincenzo Bronte, and Roland Lang*
- 3676 The E3 Ubiquitin Ligase Tripartite Motif 33 Is Essential for Cytosolic RNA-Induced NLRP3 Inflammasome Activation  
*Leiyun Weng, Hiroki Mitoma, Coline Tricot, Musheng Bao, Ying Liu, Zhiqiang Zhang, and Yong-Jun Liu*
- 3683 Crucial Role of Macrophage Selenoproteins in Experimental Colitis  
*Naveen Kaushal, Avinash K. Kudva, Andrew D. Patterson, Christopher Chiaro, Mary J. Kennett, Dhimant Desai, Shantu Amin, Bradley A. Carlson, Margherita T. Cantorna, and K. Sandeep Prabhu*
- 3693 Macrophage Migration Inhibitory Factor Triggers Chemotaxis of CD74<sup>+</sup>CXCR2<sup>+</sup> NKT Cells in Chemically Induced IFN- $\gamma$ -Mediated Skin Inflammation  
*Chia-Yuan Hsieh, Chia-Ling Chen, Yee-Shin Lin, Trai-Ming Yeh, Tsung-Ting Tsai, Ming-Yuan Hong, and Chiou-Feng Lin*
- 3704 Microbe-Specific Unconventional T Cells Induce Human Neutrophil Differentiation into Antigen Cross-Presenting Cells  
*Martin S. Davey, Matt P. Morgan, Anna Rita Liuzzi, Christopher J. Tyler, Mohd Wajid A. Khan, Tamas Szakmany, Judith E. Hall, Bernhard Moser, and Matthias Eberl*
- 3717 Basophils Promote Innate Lymphoid Cell Responses in Inflamed Skin  
*Brian S. Kim, Kelvin Wang, Mark C. Siracusa, Steven A. Saenz, Jonathan R. Brestoff, Laurel A. Monticelli, Mario Noti, Elia D. Tait Wojno, Thomas C. Fung, Masato Kubo, and David Artis*
- 3726 Negative Self-Regulation of TLR9 Signaling by Its N-Terminal Proteolytic Cleavage Product  
*Sungwook Lee, Dongju Kang, Eun A. Ra, Taeyun A. Lee, Hidde L. Ploegh, and Boyoun Park*
- 3736 TLR-Mediated Inflammatory Responses to *Streptococcus pneumoniae* Are Highly Dependent on Surface Expression of Bacterial Lipoproteins  
*Gillian Tomlinson, Suneeta Chimalapati, Tracey Pollard, Thabo Lapp, Jonathan Cohen, Emilie Camberlein, Sian Stafford, Jimstan Periselneris, Christine Aldridge, Waldemar Vollmer, Capucine Picard, Jean-Laurent Casanova, Mahdad Noursadeghi, and Jeremy Brown*

## MOLECULAR AND STRUCTURAL IMMUNOLOGY

- 3746 A Major Deletion in the V $\kappa$ -J $\kappa$  Intervening Region Results in Hyperelevated Transcription of Proximal V $\kappa$  Genes and a Severely Restricted Repertoire  
*Yougui Xiang, Sung-Kyun Park, and William T. Garrard*
- 3755 Blockade of IL-6 *Trans* Signaling Attenuates Pulmonary Fibrosis  
*Thanh-Thuy T. Le, Harry Karmouty-Quintana, Ernestina Melicoff, Thanh-Truc T. Le, Tingting Weng, Ning-Yuan Chen, Mesias Pedroza, Yang Zhou, Jonathan Davies, Kemly Philip, Jose Molina, Fayong Luo, Anuh T. George, Luis J. Garcia-Morales, Raquel R. Bunge, Brian A. Bruckner, Matthias Loebe, Harish Seethamraju, Sandeep K. Agarwal, and Michael R. Blackburn*

## MUCOSAL IMMUNOLOGY

- 3769 Protective Actions of Aspirin-Triggered (17R) Resolvin D1 and Its Analogue, 17R-Hydroxy-19-*Para*-Fluorophenoxy-Resolvin D1 Methyl Ester, in C5a-Dependent IgG Immune Complex-Induced Inflammation and Lung Injury  
*Huifang Tang, Yanlan Liu, Chunguang Yan, Nicos A. Petasis, Charles N. Serhan, and Hongwei Gao*

- 3779 STAT3 Activation in Th17 and Th22 Cells Controls IL-22–Mediated Epithelial Host Defense during Infectious Colitis  
*Ingo Backert, Sergei B. Koralov, Stefan Wirtz, Vera Kitowski, Ulrike Billmeier, Eva Martini, Katharina Hofmann, Kai Hildner, Nadine Wittkopf, Katrin Brecht, Maximilian Waldner, Klaus Rajewsky, Markus F. Neurath, Christoph Becker, and Clemens Neufert*

## TRANSPLANTATION

- 3792 IL-33–Induced Hematopoietic Stem and Progenitor Cell Mobilization Depends upon CCR2  
*Juyang Kim, Wonyoung Kim, Hongnga T. Le, U.J. Moon, Vuvi G. Tran, Hyun J. Kim, Soyeon Jung, Quang-Tam Nguyen, Byung-Sam Kim, Jae-Bum Jun, Hong R. Cho, and Byungsuk Kwon*
- 3803 Identification of Activators of ERK5 Transcriptional Activity by High-Throughput Screening and the Role of Endothelial ERK5 in Vasoprotective Effects Induced by Statins and Antimalarial Agents  
*Nhat-Tu Le, Yuichiro Takei, Yuki Izawa-Ishizawa, Kyung-Sun Heo, Hakjoo Lee, Alan V. Smrcka, Benjamin L. Miller, Kyung Ae Ko, Sara Ture, Craig Morrell, Keigi Fujiwara, Masashi Akaike, and Jun-ichi Abe*
- 3816 Novel CD8 T Cell Alloreactivities in CCR5-Deficient Recipients of Class II MHC Disparate Kidney Grafts  
*Daisuke Ishii, Joshua M. Rosenblum, Taiji Nozaki, Austin D. Schenk, Kiyoshi Setoguchi, Charles A. Su, Victoria Gorbacheva, William M. Baldwin, III, Anna Valujskikh, and Robert L. Fairchild*
- 3825 AUTHOR INDEX