# THE JOURNAL OF EXPERIMENTAL MEDICINE

Volume 190, No. 2, July 19, 1999

### **Contents**

## **Commentary**

**153** *Richard J. Hodes.* Telomere length, aging, and somatic cell turnover

### **Articles**

- 157 Nathalie Rufer, Tim H. Brümmendorf, Steen Kolvraa, Claus Bischoff, Kaare Christensen, Louis Wadsworth, Michael Schulzer, and Peter M. Lansdorp. Telomere fluorescence measurements in granulocytes and T lymphocyte subsets point to a high turnover of hematopoietic stem cells and memory T cells in early childhood
- **169** Andreas R. Kammer, Sjoerd H. van der Burg, Benno Grabscheid, Isabelle P. Hunziker, Kitty M.C. Kwappenberg, Jürg Reichen, Cornelis J.M. Melief, and Andreas Cerny. Molecular mimicry of human cytochrome P450 by hepatitis C virus at the level of cytotoxic T cell recognition
- 177 Vincent C. Emery, Alethea V. Cope, E. Frances Bowen, Dehila Gor, and Paul D. Griffiths. The dynamics of human cytomegalovirus replication in vivo
- **183** Botond Bánfi, Jacques Schrenzel, Oliver Nüsse, Daniel P. Lew, Erzsébet Ligeti, Karl-Heinz Krause, and Nicholas Demaurex. A novel H<sup>+</sup> conductance in eosinophils: unique characteristics and absence in chronic granulomatous disease
- **195** *Kristen M. Kerksiek, Dirk H. Busch, Ingrid M. Pilip, S. Elise Allen, and Eric G. Pamer.* H2-M3–restricted T cells in bacterial infection: rapid primary but diminished memory responses
- **Zhigang Wang, Francesco M. Marincola, Licia Rivoltini, Giorgio Parmiani, and Soldano Ferrone.** Selective histocompatibility leukocyte antigen (HLA)-A2 loss caused by aberrant premRNA splicing in 624MEL28 melanoma cells
- **217 Jacqueline Kirchner and Michael J. Bevan.** ITM2A is induced during thymocyte selection and T cell activation and causes downregulation of CD8 when overexpressed in CD4<sup>+</sup>CD8<sup>+</sup> double positive thymocytes
- **229 Akiko Iwasaki and Brian Lee Kelsall.** Freshly isolated Peyer's patch, but not spleen, dendritic cells produce interleukin 10 and induce the differentiation of T helper type 2 cells
- **241 Daniel Llull, Rosario Muñoz, Rubens López, and Ernesto García.** A single gene (tts) located outside the cap locus directs the formation of Streptococcus pneumoniae type 37 capsular polysaccharide: type 37 pneumococci are natural, genetically binary strains
- **253** Rakesh K. Srivastava, Carl Y. Sasaki, J. Marie Hardwick, and Dan L. Longo. Bcl-2-mediated drug resistance: inhibition of apoptosis by blocking nuclear factor of activated T lymphocytes (NFAT)-induced fas ligand transcription

Contents continued

Cover picture: MDA-231 breast cancer cells overexpressing Bcl-2 protein fail to respond to paclitaxel exposure (microtubule stabilization) with the expected nuclear translocation of NFAT (nuclear factor of activated T lymphocytes). The figure is a confocal image of the cells, with the nuclei stained red by propidium iodide and the NFAT in the cytoplasm stained green; goat anti-human NFAT was used as primary antibody, and Alexa-488-conjugated donkey anti-goat was used as secondary antibody. In the absence of Bcl-2, paclitaxel exposure results in nuclear translocation of NFAT and the nucleus appears yellow (red plus green). See related article in this issue by Srivastava et al., pp. 253–265.

- **267** *Hiroshi Ochi, W. Mona Hirani, Qian Yuan, Daniel S. Friend, K. Frank Austen, and Joshua A. Boyce.* Thelper cell type 2 cytokine–mediated comitogenic responses and CCR3 expression during differentiation of human mast cells in vitro
- **281** *William W.S. Kim and Gerald Siu.* Subclass-specific nuclear localization of a novel CD4 silencer binding factor

## **Brief Definitive Report**

- 293 Shumpei Niida, Masato Kaku, Hitoshi Amano, Hisahiro Yoshida, Hiroshi Kataoka, Satomi Nishi-kawa, Kazuo Tanne, Norihiko Maeda, Shin-Ichi Nishikawa, and Hiroaki Kodama. Vascular endothelial growth factor can substitute for macrophage colony-stimulating factor in the support of osteoclastic bone resorption
- 299 Correction

The appearance of the code at the bottom of the first page of an article in this journal indicates that the Publisher gives consent for individual copies of that article to be made for personal or internal use. This consent is given on the condition, however, that-for copying beyond the limited quantities permitted under Sections 107 and 108 of the U. S. Copyright Law-the copier pay the stated per copy fee, for this journal \$5.00 per article, through the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, phone: 978-750-8400, a nonprofit organization. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale. The Journal of Experimental Medicine (ISSN 0022-1007) is published semi-monthly for \$490 (postal surcharge for all foreign subscriptions except Canada \$130 net) by The Rockefeller University Press, 1114 First Avenue, New York, NY 10021. Periodical postage paid at New York, NY and additional mailing offices. POST-MASTER: Send address changes to The Journal of Experimental Medicine, Circulation Department, The Rockefeller University Press, 1114 First Avenue, New York, NY 10021.