

## Empower innovation. Expand capabilities.

Learn how to increase the signal-to-noise ratio and gain flexibility in panel design with the 320-nm laser on the ID7000™ Spectral Cell Analyzer.



SONY

[Download Tech Note](#)

ID7000™ Spectral Cell Analyzer



132 (2)

*J Immunol* 1984; 132:556-1057; ;

<http://www.jimmunol.org/content/132/2.citation>

This information is current as of January 22, 2022.

### Why *The JI*? [Submit online.](#)

- **Rapid Reviews! 30 days\*** from submission to initial decision
- **No Triage!** Every submission reviewed by practicing scientists
- **Fast Publication!** 4 weeks from acceptance to publication

*\*average*

**Subscription** Information about subscribing to *The Journal of Immunology* is online at: <http://jimmunol.org/subscription>

**Permissions** Submit copyright permission requests at: <http://www.aai.org/About/Publications/JI/copyright.html>

**Email Alerts** Receive free email-alerts when new articles cite this article. Sign up at: <http://jimmunol.org/alerts>

*The Journal of Immunology* is published twice each month by  
The American Association of Immunologists, Inc.,  
1451 Rockville Pike, Suite 650, Rockville, MD 20852  
All rights reserved.  
Print ISSN: 0022-1767 Online ISSN: 1550-6606.



# Contents

## COMMUNICATIONS

- |  |     |   |
|--|-----|---|
| I. Nowowiejski-Wieder, T. M. Aune, C. W. Pierce, and D. R. Webb                    | 556 | Cellfree Translation of the Lymphokine Soluble Immune Response Suppressor (SIRS) and Characterization of Its mRNA   |
| J. K. Gutowski, J. Innes, M. E. Weksler, and S. Cohen                              | 559 | Induction of DNA Synthesis in Isolated Nuclei by Cytoplasmic Factors. II. Normal Generation of Cytoplasmic Stimulatory Factors by Lymphocytes from Aged Humans with Depressed Proliferative Responses |
| R. D. Granstein, A. Lowy, and M. I. Greene   | 563 | Epidermal Antigen-Presenting Cells in Activation of Suppression: Identification of a New Functional Type of Ultraviolet Radiation-Resistant Epidermal Cell  |
| S. Romagnani, R. Biagiotti, M. G. Giudizi, F. Almerigogna, A. Alessi, and M. Ricci | 566 | Protein A and Enterotoxin A: Two Distinct Staphylococcus Mitogens for Human T Lymphocytes   |
| A. El-Hag and R. A. Clark  | 569 | Intact Natural Killer Activity in Chronic Granulomatous Disease: Evidence against an Oxygen-Dependent Cytotoxic Mechanism   |
| P. Katz, A. M. Zaytoun, J. H. Lee, Jr., and A. S. Fauci                            | 571 | <i>In Vivo</i> Epstein Barr Virus-Induced Augmentation of Natural Killer Cell Activity in the Chédiak-Higashi Syndrome  |
| H. Maeda and R. Hirata   | 574 | Molecular Identifications of HLA-DR4, Homozygous B Cell Lines   |

## CELLULAR IMMUNOLOGY

- |  |     |   |
|--|-----|---|
| N. Shinohara and M. Kojima   | 578 | Mouse Alloantibodies Capable of Blocking Cytotoxic T Cell Function. V. The Majority of I Region-Specific CTL Are Lyt-2 <sup>+</sup> but Are Relatively Resistant to Anti-Lyt-2 Blocking |
| K. Shortman, A. Wilson, and R. Scollay   | 584 | Loss of Specificity in Cytolytic T Lymphocyte Clones Obtained by Limit Dilution Culture of Ly2 <sup>+</sup> T Cells   |
| B. Bonavida, L. T. Lebow, and T. P. Bradley  | 594 | Mechanism of Cell-Mediated Cytotoxicity at the Single Cell Level. VI. Direct Assessment of the Cytotoxic Potential of Human Peripheral Blood Non-Lytic Effector-Target Cell Conjugates  |
| H. Brill, Th. W. van den Akker, B. D. Molendijk-Lok, A. T. J. Bianchi, and R. Benner             | 599 | Influence of 2'-Deoxyguanosine upon the Development of DTH Effector T Cells Suppressor T Cells <i>In Vivo</i>   |
| H. R. MacDonald and R. K. Lees   | 605 | Frequency and Specificity of Precursors of Interleukin 2-Producing Cells in Nude Mice   |
| J. A. Brieva, S. Targan, and R. H. Stevens   | 611 | NK and T Cell Subsets Regulate Antibody Production by Human <i>In Vivo</i> Antigen-Induced Lymphoblastoid B Cells   |
| C. D. Wood and G. Möller   | 616 | Influence of RU 41.740, a Glycoprotein Extract from <i>Klebsiella pneumoniae</i> , on the Murine Immune System. I. T-Independent Polyclonal B Cell Activation                           |
| G. C. Tsokos, M. Berger, and J. E. Balow   | 622 | Modulation of Human B Cell Immunoglobulin Secretion by the C3b Component of Complement  |
| N. E. Phillips and D. C. Parker  | 627 | Cross-Linking of B Lymphocyte Fc $\gamma$ Receptors and Membrane Immunoglobulin Inhibits Anti-Immunoglobulin-Induced Blastogenesis  |
| C. F. Scott, Jr., M. Tsurufuji, C. Y. Lu, R. Finberg, and M-S Sy                                 | 633 | Comparison of Antigen-Specific T Cell Responses in Autoimmune MRL/Mp-1pr/1pr and MRL/Mp-+/+ Mice  |
| A. Lowy, P. M. Flood, A. Tomimaga, J. A. Drebin, J. Dambrauskas, R. K. Gershon, and M. I. Greene | 640 | Analysis of Hapten-Specific T Suppressor Factors: Genetic Restriction of TsF1 Activity Analyzed with Synthetic Hybrid Suppressor Molecules  |

Continued on page 4

Continued from page 3

- N. K. Damle, N. Mahagheghpour, and E. G. Engleman 644 Soluble Antigen-Primed Inducer T Cells Activate Antigen-Specific Suppressor T Cells in the Absence of Antigen-Pulsed Accessory Cells: Phenotypic Definition of Suppressor-Inducer and Suppressor-Effector Cells
- M. L. Wood, R. Gottschalk, and A. P. Monaco 651 Comparison of Immune Responsiveness in Mice after Single or Multiple Donor-Specific Transfusions
- Y. Weinstein, S. Ran, and S. Segal 656 Sex-Associated Differences in the Regulation of Immune Responses Controlled by the MHC of the Mouse
- C. A. Janeway, Jr., P. J. Conrad, E. A. Lerner, J. Babich, P. Wettstein, and D. B. Murphy 662 Monoclonal Antibodies Specific for Ia Glycoproteins Raised by Immunization with Activated T Cells: Possible Role of T Cellbound Ia Antigens as Targets of Immunoregulatory T Cells
- H-G Rammensee, A. Juretic, Z. A. Nagy, and J. Klein 668 Class I Restricted Interaction between Suppressor and Cytolytic Cells in the Response to Minor Histocompatibility Antigens
- C. M. Astle and D. E. Harrison 673 Effects of Marrow Donor and Recipient Age on Immune Responses

---

#### CLINICAL IMMUNOLOGY • IMMUNOPATHOLOGY

---

- R. R. Quinones, R. J. Youle, J. H. Kersey, E. D. Zanjani, S. M. Azemove, C. C. B. Soderling, T. W. LeBien, P. C. L. Beverley, D. M. Neville, Jr., and D. A. Valleria 678 Anti-T Cell Monoclonal Antibodies Conjugated to Ricin as Potential Reagents for Human GVHD Prophylaxis: Effect on the Generation of Cytotoxic T Cells in both Peripheral Blood and Bone Marrow
- E. A. Weaver, H. E. Rudloff, R. M. Goldblum, C. P. Davis, and A. S. Goldman 684 Secretion of Immunoglobulin A by Human Milk Leukocytes Initiated by Surface Membrane Stimuli
- A. J. Treves, Z. Fuks, R. Voss, T. Tal, V. Barak, A. M. Konijn, R. Kaplan, and R. Laskov 690 Establishment of Cell Lines from Somatic Cell Hybrids between Human Monocytes and Mouse Myeloma Cells
- L. F. Fries, W. W. Mullins, K. R. Cho, P. H. Plotz, and M. M. Frank 695 Monocyte Receptors for the Fc Portion of IgG Are Increased in Systemic Lupus Erythematosus
- S. Izui, K. Masuda, and H. Yoshida 701 Acute SLE in F1 Hybrids between SB/Le and NZW Mice: Prominently Enhanced Formation of gp70 Immune Complexes by a Y Chromosome-Associated Factor from SB/Le Mice
- D. T. Golan and Y. Borel 705 Increased Photosensitivity to Near-Ultraviolet Light in Murine SLE
- P. W. Berman and S. F. Heine-  
mann 711 Antigenic Modulation of Junctional Acetylcholine Receptor Is not Sufficient to Account for the Development of Myasthenia Gravis in Receptor Immunized Mice
- R. L. Boyd, G. Oberhuber, K. Hála, and G. Wick 718 Obese Strain (OS) Chickens with Spontaneous Autoimmune Thyroiditis Have a Deficiency in Thymic Nurse Cells
- J. D. Prickett, D. E. Trentham, and D. R. Robinson 725 Dietary Fish Oil Augments the Induction of Arthritis in Rats Immunized with Type II Collagen
- J. R. Plum, M. De Smedt, L. J. M. Sabbe, and J. E. De Roose 730 LDH Analysis of Human Thymocytes and Thymocyte Subsets
- L. Rogozinski, A. Bass, E. Glickman, M. A. Talle, G. Goldstein, J. Wang, L. Chess, and Y. Thomas 735 The T4 Surface Antigen Is Involved in the Induction of Helper Function
- L. T. Clement, M. K. Dagg, and G. L. Gartland 740 Small, Resting B Cells Can Be Induced to Proliferate by Direct Signals from Activated Helper T Cells
- R. P. Kimberly, J. E. Salmon, J. B. Bussel, M. K. Crow, and M. W. Hilgartner 745 Modulation of Mononuclear Phagocyte Function by Intravenous  $\gamma$ -Globulin

---

#### IMMUNOCHEMISTRY

---

- S. K. Dower, K. Ozato, and D. M. Segal 751 The Interaction of Monoclonal Antibodies with MHC Class I Antigens on Mouse Spleen Cells. I. Analysis of the Mechanism of Binding
- P. J. Martin, J. A. Ledbetter, E. A. Clark, P. G. Beatty, and J. A. Hansen 759 Epitope Mapping of the Human Surface Suppressor/Cytotoxic T Cell Molecule Tp32
- F. Takei 766 A Novel Differentiation Antigen on Proliferating Murine Thymocytes Identified by a Rat Monoclonal Antibody

Continued on page 5

Continued from page 4

J. A. Markenson and H. W. Snyder, Jr.	772	Reactivity of Antisera to Endogenous Primate Retrovirus with a Human T Cell Membrane Protein: Recognition of a Nonviral Glycoprotein by Antibodies Directed only against Carbohydrate Components
T. A. Brown, M. W. Russell, and J. Mestecky	780	Elimination of Intestinally Absorbed Antigen into the Bile by IgA
P. Basta and D. E. Briles	783	The Mouse Heavy Chain Variable Region Marker, J606-GAC, Is not Restricted to Particular B Cell Isotypes or Subsets
A. M. Stall and M. R. Loken	787	Allotypic Specificities of Murine IgD and IgM Recognized by Monoclonal Antibodies
D. H. Conrad and L. H. Peterson	796	The Murine Lymphocyte Receptor for IgE. I. Isolation and Characterization of the Murine B Cell Fc <sub>1</sub> Receptor and Comparison with Fc <sub>2</sub> Receptors from Rat and Human
H-P. Heinz, R. Burger, M. D. Golan, and M. Loos	804	Activation of the First Component of Complement, C1, by a Monoclonal Antibody Recognizing the C Chain of C1q
M. A. Niemann, J. F. Kearney, and J. E. Volanakis	809	The Use of Monoclonal Antibodies as Probes of the Three-Dimensional Structure of Human Complement Factor D

---

### CYTOKINES • MEDIATORS • REGULATORY MOLECULES

---

B. A. Blazar, M. Strome, and R. Schooley	816	Interferon and Natural Killing of Human Lymphoma Cell Lines after Induction of the Epstein Barr Viral Cycle by Superinfection
S. S. Fairchild, K. Shannon, E. Kwan, and R. L. Mishell	821	T Cell-Derived Glucocorticoid Response-Modifying Factor (GRMF): A Unique Lymphokine Made by Normal T Lymphocytes and a T Cell Hybridoma
D. N. Sauder, N. L. Mounessa, S. I. Katz, C. A. Dinarello, and J. I. Gallin	828	Chemotactic Cytokines: The Role of Leukocytic Pyrogen and Epidermal Cell Thymocyte-Activating Factor in Neutrophil Chemotaxis
M. A. Norcross, R. T. Smith, and S. Shimizu	833	Regulation of TCGF Production in T Cells. II. Early Membrane Events after Anti-Thy-1 Binding by the TCGF-Producing T Lymphoma EL-4-G-12
M. E. Andrew, V. L. Braciale, and T. J. Braciale	839	Regulation of Interleukin 2 Receptor Expression on Murine Cytotoxic T Lymphocyte Clones
C. L. Sidman and J. D. Marshall	845	B Cell Maturation Factor: Effects on Various Cell Populations

---

### IMMUNOPHARMACOLOGY

---

B. S. van Asbeck, J. J. M. Marx, A. Struyvenberg, J. H. van Kats, and J. Verhoef	851	Effect of Iron (III) in the Presence of Various Ligands on the Phagocytic and Metabolic Activity of Human Polymorphonuclear Leukocytes
C. Kiyotaki, J. Peisach, and B. R Bloom	857	Oxygen Metabolism in Cloned Macrophage Cell Lines: Glucose Dependence of Superoxide Production, Metabolic and Spectral Analysis
R. G. Sitrin, H. B. Kaltreider, and M. E. Goldyne	867	Prostaglandin E Is Required for the Augmentation of Procoagulant Activity of LPS-Stimulated Rabbit Alveolar Macrophages
M. P. Madaio, S. Hodder, R. S. Schwartz, and B. D. Stollar	872	Responsiveness of Autoimmune and Normal Mice to Nucleic Acid Antigens

---

### MICROBIAL IMMUNOLOGY

---

M. Steinitz, S. Tamir, and A. Goldfarb	877	Human Anti-Pneumococci Antibody Produced by an Epstein Barr Virus (EBV)-Immortalized Cell Line
E. Conway de Macario, H. König, A. J. L. Macario, and O. Kandler	883	Six Antigenic Determinants in the Surface Layer of the Archae-bacterium <i>Methanococcus vannielii</i> Revealed by Monoclonal Antibodies
J-L Stach, P. Gros, A. Forget, and E. Skamene	888	Phenotypic Expression of Genetically-Controlled Natural Resistance to <i>Mycobacterium bovis</i> (BCG)
D. L. Hoover, M. Berger, C. A. Nacy, W. T. Hockmeyer, and M. S. Meltzer	893	Killing of <i>Leishmania tropica</i> Amastigotes by Factors in Normal Human Serum
D. S. Silberstein and D. D. Desjardis	898	Antigens from <i>Trichinella spiralis</i> that Induce a Protective Response in the Mouse

Continued on page 6



Continued from page 5

F. Kierszenbaum and G. Sonnenfeld	905	$\beta$ -Interferon Inhibits Cell Infection by <i>Trypanosoma cruzi</i>
M. R. Hollingdale, E. H. Nardin, S. Tharavanij, A. L. Schwartz, and R. S. Nussen-zweig	909	Inhibition of Entry of <i>Plasmodium falciparum</i> and <i>P. vivax</i> Sporozoites into Cultured Cells: An <i>In Vitro</i> Assay of Protective Antibodies
R. W. Braun, H. K. Teute, H. Kirchner, and K. Munk	914	Replication of Herpes Simplex Virus in Human T Lymphocytes: Characterization of the Viral Target Cell
D. L. Peterson, D. A. Paul, J. Lam, I. I. E. Tribby, and D. T. Achord	920	Antigenic Structure of Hepatitis B Surface Antigen: Identification of the "d" Subtype Determinant by Chemical Modification and Use of Monoclonal Antibodies
R. Yarchoan and D. L. Nelson	928	Specificity of <i>In Vitro</i> Anti-Influenza Virus Antibody Production by Human Lymphocytes: Analysis of Original Antigenic Sin by Limiting Dilution Cultures

---

#### TUMOR IMMUNOLOGY

---

F. Colotta, G. Peri, A. Villa, and A. Mantovani	936	Rapid Killing of Actinomycin D-Treated Tumor Cells by Human Mononuclear Cells. I. Effectors Belong to the Monocyte-Macrophage Lineage
E. F. Rosloniec, M. H. Kuhn, C. A. Genyca, A. H. Reed, J. J. Jennings, A. G. Giraldo, K. W. Beisel, and S. P. Lerman	945	Aggressiveness of SJL/J Lymphomas Correlates with Absence of H-2Ds Antigens
K. A. O'Connell and L. R. Gooding	953	Cloned Cytotoxic T Lymphocytes Recognize Cells Expressing Discrete Fragments of the SV40 Tumor Antigen

---

#### MOLECULAR GENETICS

---

F. Levine and D. Pious	959	Revertants from the HLA Class II Regulatory Mutant 6.a.6: Implications for the Regulation of Ia Gene Expression
S. J. Smith-Gill, C. R. Mainhart, T. B. Lavoie, S. Rudikoff, and M. Potter	963	V <sub>L</sub> -V <sub>H</sub> Expression by Monoclonal Antibodies Recognizing Avian Lysozyme

---

#### KROC FOUNDATION CONFERENCE: Effect of Total Lymphoid Irradiation on Autoimmune Disease and Transplantation Immunity

---

S. Strober	968	Overview: Effect of Total Lymphoid Irradiation on Autoimmune Disease and Transplantation Immunity
M. Weigensberg, S. Morecki, L. Weiss, Z. Fuks, and S. Slavin	971	Suppression of Cell Mediated Immune Responses Following Total Lymphoid Irradiation (TLI) I. Characterization of Suppressor Cells of the Mixed Leukocyte Reaction
A. Tanay and S. Strober	979	Opposite Effects of Total Lymphoid Irradiation on T Cell Dependent and T Cell Independent Antibody Responses
M. Waer, K. K. Ang, E. van der Schueren, and M. Vandeputte	985	Influence of Radiation Field and Fractionation Schedule of Total Lymphoid Irradiation (TLI) on the Induction of Suppressor Cells and Stable Chimerism After Bone Marrow Transplantation in Mice
M. Waer, K. K. Ang, E. van der Schueren, and M. Vandeputte	991	Allogeneic Bone Marrow Transplantation in Mice After Total Lymphoid Irradiation: Influence of Breeding Conditions and Strain of Recipient Mice
M. Moscovitch and S. Slavin	997	Anti-Tumor Effects of Allogeneic Bone Marrow Transplantation in (NZB $\times$ NZW) F <sub>1</sub> Hybrids With Spontaneous Lymphosarcoma
R. P. Lowry, R. D. Clark Forbes, and J. H. Blackburn	1001	Immune Reactivity and Immunosuppressive Intervention (TLI) in Experimental Nephritis I. Immunopathologic Correlates in the Accelerated Autologous Form of Nephrotoxic Serum Nephritis
R. P. Lowry, R. D. Clark Forbes, C. B. Carpenter, K. E. Gurley, and J. P. Merrill	1007	Immune Reactivity and Immunosuppressive Intervention in Experimental Nephritis. II. Effect of TLI on the Course of Two Models of Nephritis in the Inbred Rat

Continued on page 7

Continued from page 6

S. Strober, D. L. Modry, R. T. Hoppe, J. L. Pennock, C. P. Bieber, B. I. Holm, S. W. Jamieson, E. B. Stinson, J. Schroder, H. Suomalainen, and H. S. Kaplan	1013	Induction of Specific Unresponsiveness to Heart Allografts in Mongrel Dogs Treated with Total Lymphoid Irradiation and Anti-Thymocyte Globulin
J. A. Myburgh, J. A. Smit, J. H. Stark, and S. Browde	1019	Total Lymphoid Irradiation in Kidney and Liver Transplantation in the Baboon: Prolonged Graft Survival and Alterations in T Cell Subsets with Low Cumulative Dose Regimens
G. S. Haas, E. Halperin, D. Dos- eratz, R. Lingood, P. S. Rus- sell, R. Colvin, L. Barrett, and A. B. Cosimi	1026	Differential Recovery of Circulating T-Cell Subsets After Nodal Irradiation for Hodgkin's Disease
E. H. Field, E. G. Engleman, C. P. Terrell and S. Strober	1031	Reduced <i>In Vitro</i> Immune Responses of Purified Human Leu-3 (Helper/ Inducer Phenotype) Cells After Total Lymphoid Irradiation
A. Tanay, S. Strober, G. L. Logue and G. Schiffman	1036	Use of Total Lymphoid Irradiation (TLI) in Studies of the T Cell-Dependence of Autoantibody Production in Rheumatoid Arthritis
M. Waer, Y. Vanrenterghem, K. K. Ang, E. van der Schueren, P. Michielsen and M. Vande- putte	1041	Comparison of the Immunosuppression Effect of Fractionated Total Lymph- oid Irradiation (TLI) vs Conventional Immunosuppression (CI) In Renal Cadaveric Allograft Transplantation
B. L. Kotzin, S. Strober, G. S. Kansas, C. P. Terrell and E. G. Engleman	1049	Suppression of Pokeweed Mitogen Stimulated Immunoglobulin Production in Patients with Rheumatoid Arthritis After Treatment with Total Lymph- oid Irradiation
Letters to the Editor	1056	
Announcements	1058	
Erratum	1063	
Author Index	1064	