INFECTION CONTROL & HOSPITAL EPIDEMIOLOGY

VOLUME 27, NUMBER 2

FEBRUARY 2006

EDITORIAL

111 Methicillin-Resistant Staphylococcus aureus Control: We Didn't Start the Fire, but It's Time to Put It Out • Carlene A. Muto, MD, MS

ORIGINAL ARTICLES

- What Proportion of Hospital Patients Colonized With Methicillin-Resistant Staphylococcus aureus Are Identified by Clinical Microbiological Cultures? Cassandra D. Salgado, MD, MS; Barry M. Farr, MD, MSc
- Impact of an Aggressive Infection Control Strategy on Endemic Staphylococcus aureus Infection in Liver Transplant Recipients Nina Singh, MD; Cheryl Squier, BSN, CIC; Cheryl Wannstedt, RN, BSN, CCT; Lois Keyes, RN, BSN, CCT; Marilyn M. Wagener, MPH; Thomas V. Cacciarelli, MD
- 127 A Study of the Relationship Between Environmental Contamination with Methicillin-Resistant

 Staphylococcus aureus (MRSA) and Patients' Acquisition of MRSA Katherine J. Hardy, PhD, MSc, BSc;

 Beryl A. Oppenheim, MBBCh, FRCPath; Savita Gossain, BSc, MBBS, MRCPath; Fang Gao, MB, BS, FRCA, MPhil;

 Peter M. Hawkey, BSc, DSc, MBBS, MD, FRCPath
- Clinical and Laboratory Features of Community-Associated Methicillin-Resistant Staphylococcus aureus:

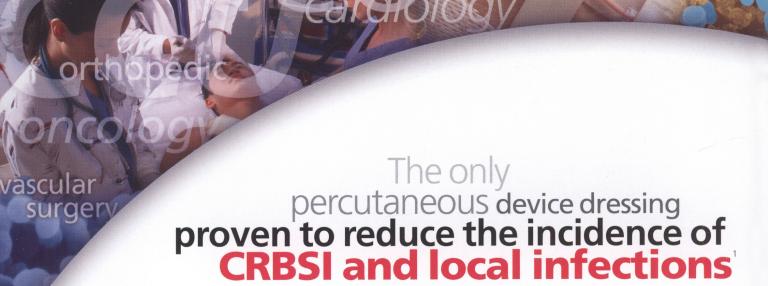
 Is It Really New? Leonard B. Johnson, MD; Sajjad Saeed, MD; Joan Pawlak, BS; Odette Manzor, MS;

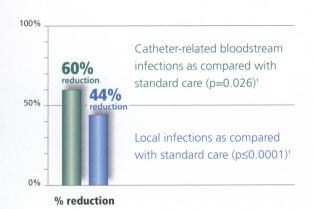
 Louis D. Saravolatz, MD
- Management of Outbreaks of Methicillin-Resistant Staphylococcus aureus Infection in the Neonatal Intensive Care Unit: A Consensus Statement Susan I. Gerber, MD; Roderick C. Jones, MPH; Mary V. Scott; Joel S. Price, MS; Mark S. Dworkin, MD, MPHTM; Mala B. Filippell, RN, BSN, CIC; Terri Rearick, RN, BS, CIC; Stacy L. Pur, RN, BSN; James B. McAuley, MD, MPH; Mary Alice Lavin, RN, MJ, CIC; Sharon F. Welbel, MD; Sylvia Garcia-Houchins, CIC; Judith L. Bova, BS; Stephen G. Weber, MD, MSc; Paul M. Arnow, MD; Janet A. Englund, MD; Patrick J. Gavin, MD; Adrienne G. Fisher, MT; Richard B. Thomson, PhD; Thomas Vescio, MD; Teresa Chou, MPH; Daniel C. Johnson, MD; Mary Beth Fry, BS, CIC; Anne H. Molloy, MSN, CIC; Laura Bardowski, RN; Gary A. Noskin, MD
- Methicillin-Resistant Staphylococcus aureus in German Intensive Care Units During 2000-2003:
 Data from Project SARI (Surveillance of Antimicrobial Use and Antimicrobial Resistance in Intensive
 Care Units) Elisabeth Meyer, MD; Frank Schwab; Petra Gastmeier, MD; Daniel Jonas, MD; Henning Rueden, MD;
 Franz D. Daschner, MD
- 155 Evaluation of an Intervention Designed to Decrease the Rate of Nosocomial Methicillin-Resistant

 Staphylococcus aureus Infection by Encouraging Decreased Fluoroquinolone Use •

 Karl J. Madaras-Kelly, PharmD; Richard E. Remington, MS; Pamela G. Lewis, BSN, MS; Dennis L. Stevens, MD, PhD
- 170 The Role of Institutional Epidemiologic Weight in Guiding Infection Surveillance and Control in Community and Hospital Populations David M. Hartley, PhD; Jon P. Furuno, PhD; Marc O. Wright, MS, MT (ASCP); David L. Smith, PhD; Eli N. Perencevich, MD, MS
- Nurses and Occupational Exposures to Bloodborne Viruses in Poland Maria Gańczak, MD;
 Marta Milona, RN, MA; Zbigniew Szych, PhD

CONTENTS CONTINUED INSIDE





BIOPATCH Dressing is specifically designed to inhibit bacterial growth around all percutaneous devices, including catheters and orthopedic pins.

Powerful protection... Powerful proof.

- BIOPATCH Dressing provides protection against a broad spectrum of bacteria including resistant strains MRSA and VRE, as well as Candida albicans.
- In a controlled, randomized trial, use of BIOPATCH Dressing resulted in a reduction in the incidence of CRBSI and local infections as compared with standard care.¹



B.E.S.T. Practice means BIOPATCH Every Single Time.

For additional information or technical support, call **1-877-384-4266** or visit our website at **www.biopatch.com**.

- † Not for use on premature infants, patients with known sensitivity to CHG. Safety and effectiveness in children under 16 years of age has not been established.
- 1. Maki DG, Mermel L, Genthner D, Hua S, Chiacchierini RP. An evaluation of BIOPATCH Antimicrobial Dressing compared to routine standard of care in the prevention of catheter-related bloodstream infection. Johnson & Johnson Wound Management, a division of ETHICON, INC. 2005. Data on file.



P.O. Box 151, Somerville, NJ 08876-0151

*Trademark ©ETHICON, INC. 2006

INFECTION CONTROL & HOSPITAL EPIDE MIOLOGY

VOLUME 27, NUMBER 2

FEBRUARY 2006

CONTENTS CONTINUED FROM COVER

CONCISE COMMUNICATIONS

- Evaluation of a Strategy of Screening Multiple Anatomical Sites for Methicillin-Resistant Staphylococcus aureus at Admission to a Teaching Hospital Matthieu Eveillard, PharmD, MPH; Arnaud de Lassence, MD; Evelyne Lancien, BSc; Guilène Barnaud, PharmD, PhD; Jean-Damien Ricard, MD, PhD; Marie-Laure Joly-Guillou, MD, PhD
- 185 Reduction in Incidence of Nosocomial Methicillin-Resistant Staphylococcus aureus (MRSA) Infection in an Intensive Care Unit: Role of Treatment With Mupirocin Ointment and Chlorhexidine Baths for Nasal Carriers of MRSA Ana Maria Sandri, MD; Micheline Gisele Dalarosa; Luciana Ruschel de Alcântara; Laura da Silva Elias; Alexandre Prehn Zavascki, MD, PhD
- Biofilm Formation by and Accessory Gene Regulator Typing of Methicillin-Resistant Staphylococcus aureus Strains Recovered From Patients With Nosocomial Infections Kunihiro Manago, MD;

 Junichiro Nishi, MD; Naoko Wakimoto, MSc; Hiroaki Miyanohara, MT; Jav Sarantuya, MD; Koichi Tokuda, MD;

 Mayumi Iwashita, MD; Kimie Yamamoto, MD; Masao Yoshinaga, MD; Ikuro Maruyama, MD; Yoshifumi Kawano, MD
- The Role of Gowns in Preventing Nosocomial Transmission of Methicillin-Resistant Staphylococcus aureus (MRSA): Gown Use in MRSA Control J. Grant, MDCM, FRCPC; L. Ramman-Haddad, BScN, CIC; N. Dendukuri, PhD; M. D. Libman, MDCM, FRCPC
- 195 Chest Tube-Related Empyema Due to Methicillin-Resistant Staphylococcus aureus: Could the Chest Tube
 Be Coated With Antiseptics? Harrys A. Torres, MD; Hend A. Hanna, MD; Linda Graviss, MT; Gassan Chaiban, BS;
 Ray Hachem, MD; Roy F. Chemaly, MD; Essam Girgawy, MD; Issam I. Raad, MD
- **Oxacillin-Resistant and Multidrug-Resistant** *Staphylococcus aureus* in Lima, Peru C. Seas, MD; K. Hernandez, MD; R. Ramos, MD; E. Bazan, MD; I. Rodriguez, MD; A. Torres, MD; C. Zamudio, MD; E. Gotuzzo, MD
- **Epidemiological Analysis of Methicillin-Resistant** *Staphylococcus aureus* **Isolates From Adult Patients With Cystic Fibrosis •** T. J. Kidd, B Appl Sc; C. Coulter, MBBS, FRACP, FRCPA; S. C. Bell, MBBS, MD, FRACP
- Methicillin-Resistant Staphylococcus aureus in Canadian Aboriginal People •

 Marianna Ofner-Agostini, BScN, RN; Andrew E. Simor, MD; Michael Mulvey, PhD; Elizabeth Bryce, MD; Mark Loeb, MD; Allison McGeer, MD; Alex Kiss, PhD; Shirley Paton, RN, MN; Canadian Nosocomial Infection Surveillance Program, Health Canada
- Prevalence of and Risk Factors for Carriage of Panton-Valentine Leukocidin-Positive Methicillin-Resistant Staphylococcus aureus Among Residents and Staff of a German Nursing Home •

 Ulla Raab, PhD, MPH; Dagmar Kahlau, MD; Florian Wagenlehner, MD; Udo Reischl, PhD; Vera Ehrenstein, MPH; Norbert Lehn, MD; Christiane Höller, MD; Hans-Jörg Linde, MD
- 212 Molecular Epidemiology of Staphylococcus aureus Colonization in 2 Long-Term Care Facilities Lona Mody, MD; Erica Flannery, BS; Andrew Bielaczyc, BS; Suzanne F. Bradley, MD
- Posttraumatic Stress Disorder After Occupational HIV Exposure: Two Cases and a Literature Review Michael G. Worthington, MD; John J. Ross, MD; Ellen K. Bergeron, MSN

LETTER TO THE EDITOR

- Low Rates of Nasal Colonization With Methicillin-Resistant Staphylococcus aureus Among Staff
 Members of an Italian Hospital Angelo Pan, MD; Silvia Lorenzotti, MD; Lucio Ferrari, PhD; Luisa Granata, RN;
 Liana Signorini, MD; Giuseppe Carnevale, MD
- 221 Information for Authors

An Official Publication of the Society for Healthcare Epidemiology of America

EDITOR

William R. Jarvis, MD • Hilton Head, SC

DEPUTY EDITOR

David P. Calfee, MD, MS • New York, NY

ASSISTANT EDITOR

Preeti N. Malani, MD, MSJ • Ann Arbor, MI

SENIOR ASSOCIATE EDITORS

C. Glen Mayhall, MD • Galveston, TX Gina Pugliese, RN, MS • Chicago, IL William Schaffner, MD • Nashville, TN

ASSOCIATE EDITORS

Donald A. Goldmann, MD • Boston, MA Didier Pittet, MD, MS • Geneva, Switzerland Andreas Widmer, MD, MS • Basel, Switzerland

SECTION EDITORS

Beyond Infection Control: The New Hospital Epidemiology

Wing Hong Seto, MD • Hong Kong

Disinfection and Sterilization

William A. Rutala, PhD, MPH • Chapel Hill, NC

From the Laboratory

Marcus Zervos, MD • Royal Oak, MI

Infections in Immunocompromised Patients Kent Sepkowitz, MD • New York, NY

Information Management

John A. Sellick, DO • Amherst, NY

Issues in Surgery

James T. Lee, MD, PhD • St. Paul, MN

Medical News

Gina Pugliese, RN, MS • Chicago, IL Martin S. Favero, PhD • Irvine, CA

Practical Healthcare Epidemiology

Loreen A. Herwaldt, MD • Iowa City, IA

Statistics for Hospital Epidemiology

David Birnbaum, PhD, MPH • Sidney, British Columbia

Topics in Long-Term Care

Philip W. Smith, MD • Omaha, NE

Topics in Occupational Medicine

David Weber, MD, MPH • Chapel Hill, NC

MANAGING EDITOR

Gordon Rudy, PhD, ELS • Chicago, IL

EDITORIAL ADVISORY BOARD

J. Wesley Alexander, MD • Cincinnati, OH Miriam Alter, PhD, MD • Atlanta, GA Hilary Babcock, MD • St. Louis, MO Elise M. Beltrami, MD, MPH • Decatur, GA Richard E. Besser, MD • Atlanta, GA Marc J. M. Bonten, MD, PhD • Utrecht,

The Netherlands John M. Boyce, MD • New Haven, CT Christian Brun-Buisson, MD • Creteil, France John P. Burke, MD • Salt Lake City, UT Yehuda Carmeli, MD, MPH • Tel Aviv, Israel Carol Chenoweth, MD • Ann Arbor, MI Sara E. Cosgrove, MD, MS • Baltimore, MD Donald E. Craven, MD • Burlington, MA Burke A. Cunha, MD • Mineola, NY Erika D'Agata, MD, MPH • Boston, MA Franz Daschner, MD • Freiburg, Germany Patch Dellinger, MD • Seattle, WA Charles E. Edmiston, Jr., PhD • Milwaukee, WI Theodore C. Eickhoff, MD • Denver, CO Jean Yves Fagon, MD, MPH • Paris, France Mark Farrington, MA, FRCPath • Cambridge, UK Victoria J. Fraser, MD • St. Louis, MO Richard A. Garibaldi, MD • Farmington, CT Petra Gastmeier, MD • Hanover, Germany Dale N. Gerding, MD • Hines, IL Stephan Harbarth, MD, MS • Geneva, Switzerland Anthony D. Harris, MD, MPH • Baltimore, MD David K. Henderson, MD • Bethesda, MD Peter N. R. Heseltine, MD • San Juan, CA

Karen Hoffmann, RN, CIC, MS • Chapel Hill, NC Janine Jagger, MPH, PhD • Charlottesville, VA John A. Jernigan, MD, MS • Atlanta, GA Jacob L. Kool, MD, PhD • Fort Collins, CO Ebbing Lautenbach, MD, MPH • Philadelphia, PA Allison McGeer, MD • Toronto, Ontario John E. McGowan, Jr., MD • Atlanta, GA Leonard A. Mermel, DO, ScM • Providence, RI Robert R. Muder, MD • Pittsburgh, PA Carlene A. Muto, MD, MS • Pittsburgh, PA Joseph M. Mylotte, MD, CIC • Buffalo, NY Lindsay Nicolle, MD • Winnepeg, Manitoba Juhani Ojajärvi, MD • Helsinki, Finland Michael T. Osterholm, PhD, MPH • Minneapolis, MN David L. Paterson, MBBS, FRACP • Pittsburgh, PA Jan Evans Patterson, MD • San Antonio, TX Sindy M. Paul, MD • Yardley, PA David A. Pegues, MD • Los Angeles, CA Michael A. Pfaller, MD • Iowa City, IA Samuel Ponce de Leon, MD, MSc • Mexico City Isaam Raad, MD • Houston, TX Jordi Rello, MD, PhD • Tarragona, Spain Manfred L. Rotter, MD, DipBact • Vienna, Austria Henning Rüden, MD • Berlin, Germany Lisa Saiman, MD, MPH • New York, NY Syed A. Sattar, PhD • Ottawa, Ontario William E. Scheckler, MD • Madison, WI Lynne M. Sehulster, PhD • Atlanta, GA Andrew E. Simor, MD • Toronto, Ontario Denis W. Spelman, MD • Prahan, Victoria, Australia Susan Springthorpe, MSc • Ottawa, Ontario Jeffrey R. Starke, MD • Houston, TX Janet E. Stout, PhD • Pittsburgh, PA Michael L. Tapper, MD • New York, NY Clyde Thornsberry, PhD • Franklin, TN Jerome Tokars, MD, PhD • Atlanta, GA Timothy R. Townsend, MD • Baltimore, MD Antoni Trilla, MD, PhD • Barcelona, Spain Robert A. Weinstein, MD • Chicago, IL Sergio B. Wey, MD • São Paulo, Brazil

Infection Control and Hospital Epidemiology (ISSN 0899-823X) is published monthly by the University of Chicago Press, 1427 East 60th St., Chicago, IL 60637-2954 (http://www.journals.uchicago.edu/ICHE/). The editorial offices are in Chicago, Illinois.

Editorial Office

Communications should be addressed to the Editor, Infection Control and Hospital Epidemiology, 1427 E. 60th St. Chicago, IL 60637-2954; (e-mail: iche@press.uchicago.edu; telephone: [773] 702-2448, fax: [773] 753-4247). Contributors should consult the Information for Authors, which is available at the ICHE Web site.

Advertising

Publication of an advertisement in *Infection Control and Hospital Epidemiology* does not imply endorsement of its claims by the Society for Healthcare Epidemiology of America, by the Editor, or by the University of Chicago. Correspondence regarding advertising should be addressed to the business office in Chicago (see above).

Permissions

The copyright code on the first page of an article in this journal indicates the copyright owner's consent that copies of the article may be made only for personal or internal use or for the personal or internal use of specific clients and provided that the copier pays the stated per-copy fee through the Copyright Clearance Center (CCC), 222 Rosewood Dr., Danvers, MA 01923. To request permission for other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale, please write to the Permissions Department, University of Chicago Press, 1427 East 60th St., Chicago, IL 60637-2954. For articles in the public domain, permission to reprint should be obtained from the author.

Subscriptions

Subscription orders and correspondence should be addressed to the University of Chicago Press, P.O. Box 37005, Chicago, IL 60637-2954. Checks should be made out to the University of Chicago Press. All orders must be in US currency. Telephone: (8:00 A.M.—5:00 P.M. Central Standard Time, Monday—Friday) US and Canada toll free, (877) 705-1878; Rest of World, (773) 753-3347. Fax: US and Canada toll free, (877) 705-1879; Rest of World, (773) F33-0811. E-mail: subscriptions@press.uchicago.edu; Web site: http://www.journals.uchicago.edu.

Subscription rates (1 year) for Infection Control and Hospital Epidemiology (ICHE):

	Foreign With		
	Domestic	Air Freight	Canadian
Institutions	350.00	399.00	389.50
Individuals	150.00	199.00	175.50
Fellows	55.00	104.00	73.85

Note: All rates in US dollars. All new subscriptions will begin with the January issue. All rates include postage. Canadian rates include 7% GST. *ICHE* single copies: institutions, \$30.00: individuals, \$14.00. Japanese subscription agent: Kinokuniya Company Ltd.

Postmaster: Send address changes to Infection Control and Hospital Epidemiology, University of Chicago Press, P.O. Box 37005, Chicago, IL 60637-2954.

Periodicals postage paid at Chicago, Illinois, and at an additional mailing office.

Published by the University of Chicago Press, Chicago, IL. © 2006 by The Society for Healthcare Epidemiology of America. All rights reserved. This publication is printed on acid-free paper.















You can't argue with the facts.

Using the 3M[™] Clip, Prep, Drape system can help improve patient outcomes.

Fact #1: Treating Healthcare Associated Infections (HAI) costs more than preventing them.

The Center for Disease Control (CDC) reports that for each case of HAI, hospitals spend an average of \$1,779 treating it.

Fact #2: Clipping is far superior to shaving.

Clinical evidence proves that as a method of pre-op body hair removal, clipping hair with surgical clippers is far superior to shaving! Shaving produces cuts, nicks and microscopic epidermal injury which provide a prime site for bacterial infection.



3M[™] Surgical Clippers



Fact #3: One-third of all Healthcare Associated Infections can be prevented.²

3MTM Surgical Clippers, 3MTM DuraPrepTM Surgical Solution and 3MTM IobanTM Antimicrobial Incise Drapes are all proven to control skin bacteria. And with a strong correlation between bacterial colonization and surgical site infection; controlling skin bacteria becomes of paramount importance.

Fact #4: Skin preps that go on fast and kill fast save you time and money.

The AORN, CDC and APIC recommend preoperative skin preps that are fast-acting, broad spectrum and provide residual action. In addition, 3M DuraPrep Surgical Solution provides another important difference – it requires less time to apply than traditional scrub and paint. That means with today's high operating costs, less prep

That means with todays high operating costs, less preptime is money saved.

Skin Prepping Cost ⁴	DuraPrep Solution	Traditional 5-10 minute lodophor scrub and paint
Time to Prepare Patient	3.5 minutes	9.7 minutes
Total Cost	\$93.36	\$248.91

3MTM DuraPrepTM Surgical Solution

Fact #5: Using the right incise drapes makes a clinical difference.

Even with the most careful and rigorous disinfection, bacteria remaining on the skin or regrowth during surgery can still contaminate the surgical site.

3M Ioban incise drapes help to eliminate this problem because they provide continuous antimicrobial activity and a sterile barrier.



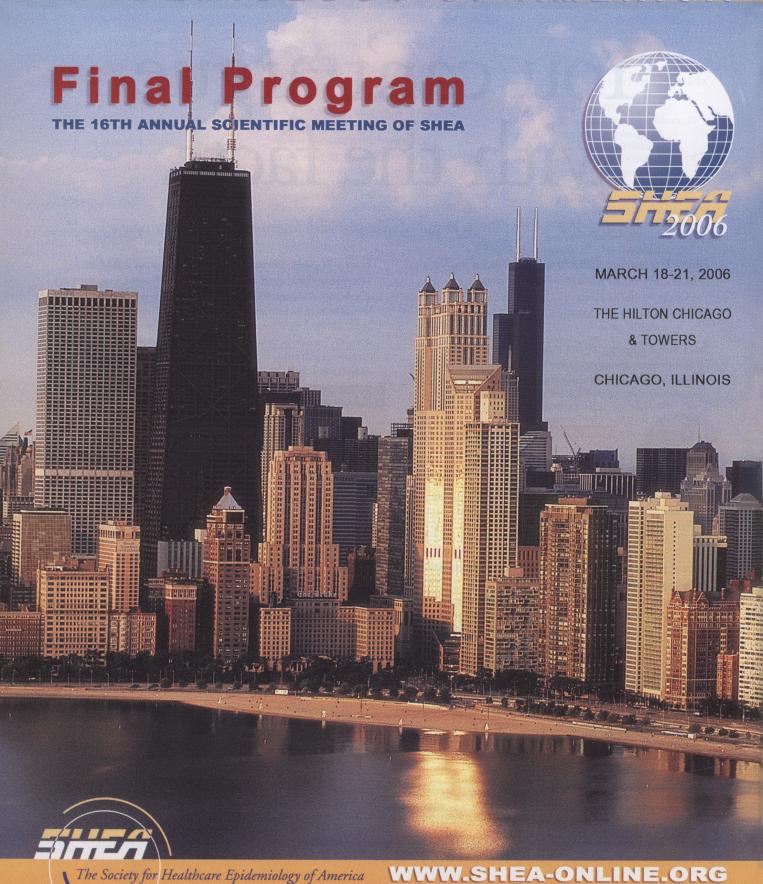
3M™ Ioban™ Antimicrobial Incise Drapes



For more information, call the 3M Health Care Customer Helpline at 1-800-228-3957. 3M Infection Prevention Solutions. A vital step in Infection Prevention.

'Alexander, J.W., Fischer, J.E., Boyajian, M., et al: The influence of hair-removal methods on wound infections. Archives of Surgery 1983: 118:347-352, ³Jarvis, W.R. 1996. Selected aspects of the socioeconomic impact of nosocomial infections: morbidity, mortality, cost and prevention. Infection Control and Hospital Epidemiology. 17:552-557. ³Garibaldi, R.A., Cushing, D. and Lerer, T. 1991. Risk factors for postoperative infection. American Journal of Medicine. 1991. (Suppl 3B): 158S-163S. 'Jacobson, Cassie, Osmon, Douglas R., Hanssen, Arlen, et al: Prevention of Wound Contamination Using DuraPrep™ Solution plus toloni™ 2 Drapse. Clinical Orthopaedics and Related Research. Oct. 2005: Vol. 439. *Dewan, P.A., Van Ru, A.M., Robinson, R.G., et al: The use of iodophor-impregnated plastic incise drape in abdominal surgery – a controlled clinical trial. Aust. Nz. J. Surg 1987: 57:859-863.

THE SOCIETY FOR HEALTHCARE EPIDEMIOLOGY OF AMERICA



https://doi.org/10.1017/50899823X00194425 Published online by Cambridge University Press