# INFECTION CONTROLAND

# HOSPITAL EPIDEMIOLOGY

Volume 11, Number 9 • September 1990

**CLINICAL PHARMACOLOGY OF** 

Small Round Structured Viruses: An Important Infection Control Problem? Philip C. Johnson, MD	457	ANTIBIOTICS Aztreonam Allan R. Tunkel, MD, PhD; W. Michael Scheld, MD	480
ORIGINAL ARTICLES			
An Outbreak of Acute Gastroenteritis Caused by a Small Round Structured Virus in a Geriatri Convalescent Facility George A. Gellert, MDCM, MPH, MPA;		TOPICS IN CLINICAL MICROBIOLOGY Strongyloides stercoralis Deborah J. Zygmunt, MD	49
Stephen H. Waterman, MD, MPH; Donald Ewert, MPH; Lyndon Oshiro, MD; Marjorie P. Giles, MA; Stephen S. Monroe, PhD; Leo Gorelkin, MD; Roger I. Glass, MD		LETTERS TO THE EDITOR  Medical Congress in Africa  Giuliana Gialdroni, MD; Carlo Grassi, MD	45 <sup>-</sup>
Adoption of Guidelines for Universal Precautions and Body Substance Isolation in Canadian Acute-Care Hospitals	465	Mupirocin Ointment Indications Ian Hudson, MBBS, MRCP	452
David Birnbaum, MPH; Michael Schulzer, MD, PhD; Richard G. Mathias, MD; Michael Kelly, MD, PhD; Anthony W. Chow, MD		BOOK REVIEW Safety Guide for Health Care Institutions (Fourth edition) Linda F. Chaff Reviewed by David W. Drummond, PhD, CIH	498
Influenza Outbreaks in Nursing Homes: How	473	Neviewed by David W. Didillillolld, 1 110, 0111	
Effective is Influenza Vaccine in the Institutionalized Elderly?  Matthew L. Cartter, MD; Philip O. Renzullo, MPH; Steven D. Helgerson, MD; Stanley M. Martin, MS; James F. Jekel, MD		SHEA NEWSLETTER	499
Frequent Acquisition of Multiple Strains of	479		

The Official Journal of The Society of Hospital Epidemiologists of America

Steven M. Opal, MD; Kenneth H. Mayer, MD; Marjorie J. Stenberg, MS; Julia E. Blazek, PhD; Dennis J. Mikolich, MD; David L. Dickensheets, MD;

Lisa W. Lyhte, BS; Ronald R. Trudel, MS;

James M. Musser, MD, PhD

Methicillin-Resistant *Staphylococcus aureus* by Healthcare Workers in an Endemic Hospital

**EDITORIAL** 

**Environment** 

# From SmithKline Biologicals

# Engerix B

Hepatitis B Vaccine (Recombinant)

Choice of dosing regimens

Alternate 0,1,2 month dosing regimen for certain populations\*

20 mcg recombinant dose

Helps to ensure immune response in adult patients of all ages

	Engerix-B®	Recombivax HB®†
Adult dose (mcg)	20	10
Standard dosing regimen (0, 1 and 6 months)	1	✓
Alternate 0, 1, 2 month dosing regimen for certain populations*	1	
Published efficacy data: Neonates born of infected mothers'	1	1
VACTRAC <sup>™</sup> -computer software for vaccination tracking and compliance	1	
Bar-coded, unit-dose vials	<b>✓</b>	
Lowest cost per dose <sup>2</sup>	· /	

<sup>\*</sup>For those recently exposed to the virus (including needlestick exposure), certain travelers to high-risk areas and neonates born of infected mothers. When prolonged maintenance of protective antibody titers is desired, a booster dose at month 12 is recommended.

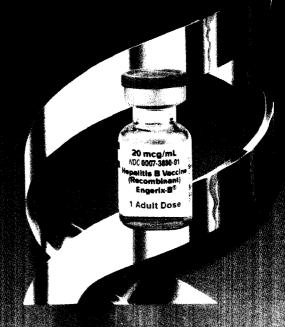
# **Lowest Cost Per Dose**

Extensively tested and well tolerated\*

State-of-the-art recombinant technology
14 million doses distributed in over 87 countries<sup>3</sup>

Switch to Engerix-B<sup>\*</sup>

Can be used to complete a course of vaccination initiated with another hepatitis B vaccine<sup>3,4</sup>



thepatitis 8 Vaccine (Recombinant), MSD.
‡Please see brief summary of prescribing information on adjacent page for a complete listing of adverse reactions contraindications, warnings and precautions.

ASmith ( line Reschem 1990)

## Engerix-B®

Hepatitis **B** Vaccine (Recombinant)

See complete prescribing information  ${\bf In}$  SK&F literature  ${\bf or}$  PDR. The following is a brief summary.

INDICATIONS AND USAGE: 'Engerix-B' is indicated for immunization against infection caused by all known subtypes of hepablis B wrus. Immunization is recommended in persons of all ages, especially those who are, or will be, at increased risk of exposure to hepatitis B wrus

CONTRAINDICATIONS: Hypersensitivity to yeast Of any other component Of the vaccine is a contraindication for use of the vaccine.

**WARNINGS:** Do n o towe additional injections to patients experiencing hypersensitivity alter an 'Engerix-B' injection (See CONTRAINDICATIONS )

Hepatitis B has a long incubation period Hepatitis B vaccination may not prevent hepatitis B infection in individuals who had an unrecognized hepatitis B infection at the time of vaccine administration Additionally it may not prevent infection in individuals who do not achieve protective antibody fiters.

PRECAUTIONS: General: As with any perculaneous vaccme, keep epinephrine available for use in case of anaphylaxis or anaphylactoid reaction.

As with any vaccme, delay administration, if possible. In persons with any febrile illness or active infection

Pregnancy: Pregnancy Calegory C Animal reproduction studies have not been conducted with Engerix B' It's also not known whether 'Engerix' B' can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity Give 'Engerix' B' to a pregnant woman only if clearly needed.

Nursing Mothers: It is not known whether 'Engerix'' B' is excreted in human milk Because many drugs are excreted in human milk, use caution when giving 'Engerix' B' to a nursing woman

Pediatric Uu: 'Engerix-8' has been shown to be well tolerated and highly immunogenicin infants and children of att ages. Newborns also respond welt, maternally transferred antibodies do not interfere with the active immune response to the vaccime

ADVERSE REACTIONS: 'Engerix B' is generally well tolerated During clinical studies involving over 10 000 individuals distributed over all age groups, no senous adverse reactions attributable to vaccine administration we reported As with any vaccine, however, d is possible that expanded Commercial use of the vaccine could reveal rare adverse reactions not observed in clinical studies.

Ten double bind studies involving 2,252 subjects showed no significant difference in the frequency of severity of adverse experiences between Engerix 8' and plasma-derived vaccines. In 36 clinical studies a total of 13,495 doses of Engerix 8' were administered to 5,071 healthy adults and children who were initially seronegative for hepatitis B markers, and healthy enchates All subjects were monitored for 4 days post-administration. Frequency of adverse expenences tended to decrease with successive doses of Engerix 8' Using a symptom checklist,' the most frequently reported adverse reactions wereinjections the soreness (22%), and fatigue "(14%) Other reactions are listed below

incidence 1% to 10% of injections: Induration; erythema; swelling; fever (>37  $5\,^{\circ}\text{C}$ ); headache', dizziness."

\*Parent or guardian completed torms for children and neonates Neonatal checklist did not include headache, fatigue or dizziness

Incidence < 14% of Injections: Pain; pruritus; ecchymosis; sweating; malaise, chills; weakness; flushing; tingling; hypotension; influenza-like symptoms; upper respiratory tracti illnesses; nausea; anorexia; abdominal pain/cramps, vomiting; constipation; diarrhea; lymphadenopathy; pain/slittness in arm, shoulder of neck, artihalgia; myalgia; back pain; rash, urticaria; petechiae; erythema; somnolence, insomnia; irritability; agitation

Additional adverse experiences have been reported with the commercial use of Engerix 8 outside the United States. Those listed below are to serve as alerting information to physicians. Anaphytaxis, erythema multiforme including Stevens-Johnson syndrome; angioedema; arthritis; tachycardia/papitansons, bronchospasm including asthma-like symptoms, abnormal liver function tests: milgraine, syncope; paresis, neuropathy including hypoesthesia, paresthesia, Gullain-Barré syndrome and Bell's patsy, transverse myelitis; thrombocytopenia, eczema; purpura; herpes zoster, vertigo; conjunctivitis; identifications.

Polential Adverse Experiences In addition, certain other adverse experiences not observed with Engerix B have been reported with Heptavax 8\*† and/or Recombivax 188\*† a Those listed below are to serve as alerting information to physicians Optic neuritis

HOW SUPPLIED: 20mcg/mL in Single-Dose Vials in packages of 1, 10 and

NDC **0007-3860-01** (package of 1) NOC **0007-3860-11** (package of 10) NDC **0007-3860-16** (package of 25)

10 mcg/0 5 mL in Single-Dose Vials in packages of 1 vial.

NOC 0007 3859-01(package of 1)

† plasma-derived, Hepatitis B Vaccine, MSD ‡ yeast-derived, Hepatitis B Vaccine, MSD.

Manulactured by SmithKline Biologicals, Rixensart, Belgium Distributed by Smith Kline SFrench Laboratories Division of SmithKline Beckman Corp. Philadelphia, PA 19101

Date of issuance Aug. 1989

BRS-EB L6

 $\label{lem:enger} \textbf{Engerix-B} \ \textbf{is a registered} \ \textbf{trademark} \ \textbf{of} \ \textbf{SmithKlineBeecham}$ 

#### Reference

1. Poovorawan Y. Sanpavat S. Pogepunlert W. et al: Protective efficacy of a recombinant DNA hepatitis B vaccine in neonates of HBe antigen-positive mothers. *JAMA* 1989; 261(22):3278–3281.

2. Based on Medi-Span Hospital Formulary Pricing Guide. December 1989. 3. Data on file, SK&F. 4. Bush L, Moonsammy G. Boscia I: Evaluation of initiating a hepatitis B vaccination schedule with one vaccine and completing it with another. *Hepatology* 1989;10:689.

# HATS OFF TO FIRST **CLASS** SERVICE

At SLACK Incorporated we believe our subscribers are first class people. That's why we do everything possible to publish first class journals. And, that's why we maintain a TOLL-FREE CUSTOMER SERVICE HOTLINE. For the first class customer service you deserve, call:

I-800-2.57-8290
Talk to a SLACK Customer
Service Representative about:

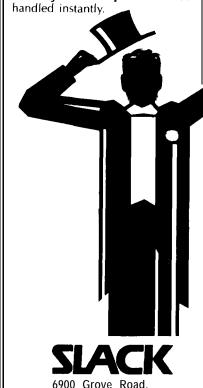
Subscriptions. Subscribing by phone is quick and easy; it only takes a minute and Visa and Mastercard are accepted.

Renewals. Early subscription renewal helps avoid possible interruotions in service.

Change of Address. Please notify us four weeks in advance to assure prompt delivery to your new address.

Questions or Problems.

Delivery problems or questions about your subscriptions can be



Thorofare, NJ 08086

# INFECTION CONTROL

# AND HOSPITAL EPIDEMIOLOGY

EDITORIAL	Small Bound Structured Viruses: An Important Infection Control 4  Problem?  Philip C. Johnson, MD						
ORIGINAL ARTICLES	An Outbreak of Acute Gastroenteritis Caused by a Small Round Structured Virus in a Geriatric Convalescent Facility George A. Gellert, MDCM, MPH, MPA, Stephen H. Waterman, MD, MPH; Donald Ewert, MPH; Lyndon Oshiro, MD; Marjorie P Giles, MA; Stephen S. Monroe, PhD; Leo Gorelkin, MD; Roger I. Glass, MD						
	Adoption of Guidelines for Substance Isolation in Car David Birnbaum, MPH; Mi Richard G. Mathias, MD; M Anthony W. Chow, MD	nadian Acute chael Schulze	e <b>-Care Hospitals</b> r, MD, PhD;	465			
	Vaccine in the Institutiona Matthew L. Cartter, MD; P	<b>lizeď Elderly</b> hilip O. Renz		473			
	Julia E. Blazek, PhD; Denr	<b>lealthcare V</b> eth H. Mayer nis J. Mikolich ; Lisa W. Lyh	Workers in an Endemic , MD; Marjorie J. Stenberg, MS;	479			
SPECIAL SECTIONS	Clinical Pharmacology of Antibiotics Aztreonam Allan R. Tunkel, MD, PhD; W. Michael Scheld, MD						
	<b>Topics in Clinical Microbio</b> <b>Strongyloides stercoralis</b> Deborah J. Zygmunt, MD	ology		495			
DEPARTMENTS	Information for Authors	450	SHEA Newsletter	499			
	Letters to the Editor	451	<b>Calendar of Events</b>	502			
	<b>Book Review</b>	498	Classified Marketplace	503			

The ideas and opinions expressed by contributing authors do not necessarily reflect those of the editors or publisher.

Publisher: Infection Control and Hospital Epidemiology (ISSN-0899-823X) is published monthly by SLACK Incorporated, 6900 Grove Road. Thorofare, New Jersey 08086. Telephone (609) 848-1000

Copyright 1990: All rights reserved No part of this publication may be reproduced without written permission from the publisher.

Subscriptions: Requests should be addressed to the publisher (except Japan) In Japan, contact Woodbell Incorporated, 4-Z-11, Kitakasai, Edogawaku Tokyo 134. Japan Subscription rates in the US and possessions: Individual One year—\$60 00; Two years—\$95.00; Three years—\$150 00 Institutional One year-\$70 00; Two years—\$110 00 Three years—\$150 00, Canada \$18 00 additional each year all other countries \$30 00 additional each year Single copies of current issues may be obtained for \$8 00. United States and possessions; \$16 00 all other countries.

Reprints: All requests to reprint or use material published herein should be addressed to Lester J Robeson, SLACK Incorporated 6900 Grove Road, Thorofare NJ 08086 For reprint orders and prices, contact Fran Micaletti at (609) 848-1000 Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by SLACK Incorporated, provided that the base fee of \$1 00 per copy plus \$.15 per page is paid directly to Copyright Clearance Center, 27 Congress Street, Salem, MA 01970 This consent does not extend to other kinds of copyring, such as for general distribution, resale, advertising and promotional purposes, or for creating new collective works

Change of address: Notice should be sent to the publisher six weeks in advance of effective date. Include old and new addresses with zip codes The publisher cannot accept responsibility for undelivered copies Second-class postage is pad at Thorofare, New Jersey 08086. and additional entry points **Postmaster:** Send address changes to SLACK Incorporated, 6900 Grove Road, Thorofare, NJ 08086

As of Volume 1, Number 1, INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY is listed in Index Medicus, Current Contents—Clinical Practice, Hospital Literature Index, Cumulative Index to Nursing and Allied Health Literature, and Nursing Abstracts.

#### **EDITORIAL OFFICES**

Vanderbilt University School of Medicine A-1131 Medical Center North Nashville, TN 37232-2637 (615) 343-1095; (615) 343-1882 (FAX)

Email: iche@mcmail.vanderbilt.edu

Michael D. Decker, MD, MPH

### MANAGING EDITOR

Susan Cantrell

#### STATISTICAL EDITOR

Beverly G. Mellen, PhD

#### SENIOR ASSOCIATE EDITORS

C. Glen Mayhall, MD Gina Pugliese, RN, MS William Schaffner, MD

### ASSOCIATE EDITORS

Donald A. Goldmann, MD Didier Pittet, MD, MS

Andreas Widmer, MD, MS

## **SECTION EDITORS**

**Beyond Infection Control:** The New Hospital Epidemiology

## Bryan P. Simmons, MD

Stephen B. Kritchevsky, PhD Memphis, Tennessee Wing Hong Seto, MD

Hong Kong

## **Disinfection and Sterilization**

William A. Rutala, PhD, MPH Chapel Hill, North Carolina

# Emerging Infectious Diseases Larry J. Strausbaugh, MD

Portland, Oregon Robert W. Pinner, MD

Atlanta, Georgia

### From the Laboratory

Marcus Zervos, MD Royal Oak, Michigan

Fred C. Tenover. PhD

# Atlanta, Georgia Information Management

John A. Sellick, DO Buffalo, New York

# The International Perspective

Mary D. Nettleman, MD, MS

Richmond, Virginia

## **Issues in Surgery**

James T. Lee, MD, PhD

St. Paul, Minnesota

## **Medical News**

Gina Pugliese, RN, MS

Chicago, Illinois

Martin S. Favero, PhD

Irvine, California

## **Practical Healthcare Epidemiology**

Loreen A. Herwaldt, MD

Iowa City, Iowa

## **SHEA News**

Murray D. Batt, MD

Clarksburg, West Virginia

#### **Statistics for Hospital Epidemiology** David Birnbaum, PhD, MPH

Sidney, British Columbia, Canada

**Topics in Long-Term Care** Philip W. Smith, MD

Omaha, Nebraska

## **Topics in Occupational Medicine**

David Weber, MD, MPH Chapel Hill, North Carolina

# INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY®

#### **EDITORIAL ADVISORY BOARD**

Jacques F. Acar, MD

J. Wesley Alexander, MD

Cincinnati, Ohio

Paris, France

Paul Arnow, MD

Chicago, Illinois Birmingham, United Kingdom

Graham A.J. Ayliffe, MD Neil L. Barg, MD

Yakima, Washington Atlanta, Georgia

Elizabeth Ann Bolyard, RN, MPH, CIC

John M. Boyce, MD Providence, Rhode Island

Professor Dr. Ilja Braveny Charles Bryan, MD Munich, Federal Republic of Germany Columbia, South Carolina

Christian Brun-Buisson, MD

Creteil, France Boston, Massachusetts

Donald E. Craven, MD Sue Crow, MSN, RN, CIC

Shreveport, Louisiana Freiburg, Federal Republic of Germany

Franz Daschner, MD Leigh G. Donowitz, MD

Charlottesville, Virginia

Charles E. Edmiston, Jr., PhD Theodore C. Eickhoff, MD Milwaukee, Wisconsin Denver, Colorado

Bruce Farber, MD

Manhasset, New York

Victoria J. Fraser, MD

St. Louis, Missouri

Peter C. Fuchs, MD, PhD Richard A. Garibaldi, MD Black Butte, Oregon Farmington, Connecticut

Velvl Greene, PhD, MPH

Beer Sheva, Israel Atlanta, Georgia

Robert Gaynes, MD David W. Gregory, MD

Nashville, Tennessee

Bethesda, Maryland

David K. Henderson, MD Peter N.R. Heseltine, MD

Los Angeles, California Chapel Hill, North Carolina

Karen Hoffmann, RN, CIC, MS Marguerite McMillan Jackson, RN, PhD

San Diego, California Charlottesville, Virginia

Janine Jagger, MPH, PhD

Atlanta, Georgia

William R. Jarvis, MD Douglas S. Kernodle, MD

Nashville, Tennessee Nashville, Tennessee

Robert H. Latham, MD Lewis B. Lefkowitz, MD

Nashville. Tennessee Taipei, Taiwan

Hsieh-Shong Leu, MD, MSc Jack Levy, MD

Brussels, Belgium Bronx, New York

Victor Lorian, MD Dennis G. Maki, MD

Madison, Wisconsin Munich, Federal Republic of Germany

Professor Dr. Walter Marget William J. Martone, MD

Bethesda, Maryland Toronto, Ontario, Canada Atlanta, Georgia

Brussels, Belgium

Montreal, Quebec, Canada

Minneapolis, Minnesota

San Antonio, Texas

Iowa City, Iowa

Houston, Texas

Vienna, Austria

Jerusalem, Israel

Trenton, New Jersey

Mexico City, Mexico

Madison, Wisconsin New York City, New York

Prahran Victoria, Australia

New York, New York

Brentwood Tennessee Minsk, Republic of Belarus

Allison McGeer, MD

John E. McGowan, Jr., MD

Jonathan L. Meakins, MD, DSc

Raf Mertens, MD

Robert R. Muder, MD

Pittsburgh, Pennsylvania Joseph M. Mylotte, MD, CIC Buffalo, New York

Winnepeg, Manitoba, Canada Helsinki, Finland

Lindsay Nicolle, MD

Juhani Ojajärvi, MD

Michael T. Osterholm, PhD, MPH

Jan Evans Patterson, MD Sindy M. Paul, MD

Michael A. Pfaller, MD

Samuel Ponce de Leon, MD, MSc

Isaam Raad, MD

Manfred L. Rotter, MD, DipBact

Theodore Sacks, MD William E. Scheckler, MD

Kent Sepkowitz, MD

Denis Spelman, MD Michael L. Tapper, MD

Clyde Thornsberry, PhD Professor Leonid P. Titov

Timothy R. Townsend, MD

Antoni Trilla, MD, PhD

Professor Dr. W. Weuffen

Professor Wang Shu-Qun J. John Weems, Jr., MD

Millwood, Virginia Barcelona, Spain Beijing, People's Republic of China

Robert A. Weinstein, MD

Greenville, South Carolina Chicago, Illinois

Sergio B. Wey, MD

São Paulo, Brazil Evanston Illinois

Rebecca Wurtz, MD

SLACK Incorporated 6900 Grove Road Thorofare, New Jersey 08086 (609) 848-1000

Vice President/Group Publisher Richard N. Roash

Publisher John C. Carter

**Editorial Director** Jennifer Kilpatrick

**Production Editor** Shirley P. Strunk, ELS **Assistant Editor** Eileen C. Anderer

Circulation Manager Lester J. Robeson, ČCCP **Production Director** 

Christine Malin

**Production Coordinator** Joanne Patterson

**Publishing Director/ Advertising** Wayne McCourt

Greifswald, Federal Republic of Germany

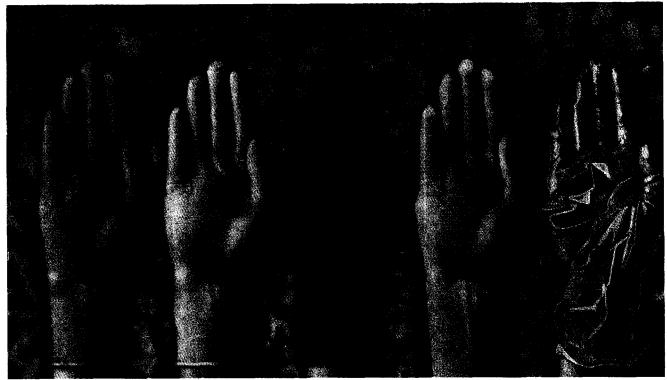
Pharmaceutical Group Sales Director Michael LoPresti

Advertising Sales Representative

Classified/Recruitment Sales Manager

Michele Burch

# Protection is our line.



Artist interpretation of microorganisms

Protection. The key to our superior glove line. At Johnson & Johnson Medical, Inc., we have a reputation that spans more than 20 years — years dedicated to the research and development of quality gloves that provide maximum protection, optimum fit and excellent touch sensitivity.

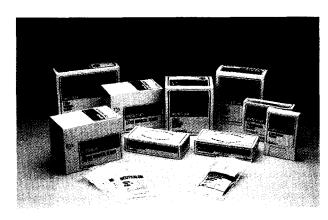
We engineer quality into every aspect of our gloves beginning with 100 percent on-line visual inspection of all latex gloves, and quality standards that far exceed those recommended by the FDA.

Our protective lines include NEUTRALON" Brown Surgical Gloves, MICRO-TOUCH" Latex Surgical Gloves, MICRO-TOUCH" Latex Medical Gloves, DISPOS-A-GLOVE:" Examination Gloves and both the new MAXXUS\* Orthopaedic Surgical Gloves, and the longer cuff MICRO-TOUCH'" XI' Latex Medical Gloves.

Protection and Johnson & Johnson Medical, Inc. — an unbeatable combination.

For more information, contact your Johnson & Johnson Medical, Inc., Medical Specialties Sales Representative or call 1-800-433-5009.

Johnson Johnson MEDICAL INC.



\*TRADEMARK © JJM,INC. 1990