Chemical and Biological Defense
CBIAC Newsletter
Information Analysis Center

Winter 2001 Volume 2 Number 1

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Development of the Biocide Casualty Care System

By LTC Keith Vesely, Director, Medical Biological Defense Research Program, MRMC;
Gerald Dietz, Chemical Engineer, SBCCOM; Lynnette Blaney, Principal Research Scientist, Battelle Memorial Institute

In support of warfighter needs, the U.S. Army Medical Research and Materiel Command (MRMC) and the U.S. Army Soldier and Biological Chemical Command (SBCCOM) sponsored research to provide protection for wounded/contaminated soldiers as they are being transported from the battlefield for care at front line medical locations. Under CBIAC TAT 197, the Casualty Care System (CCS) was developed through the cooperative effort of three industrial partners - Battelle, Triosyn® Corp., and GENTEX - to provide the prototype shown in Figure 1. The CCS is one of several development efforts such as water purification and decontamination being pursued as part of the Biocide Program, initiated in 1997.

The CCS provides medical personnel access to the enclosed casualty while protecting both the staff and other patients from contaminants, such as chemical or biological agents. The CCS is designed to keep contaminants from transferring into or out of the system. This protection is provided by the permeable material matrix comprising the soft-walled enclosure and the filter/blower unit which controls the airflow. The active materials used are impregnated with reactive or adsorptive particulates that possess inherent protective properties against biological or chemical warfare agents.

The CCS as a unit can be used for the following applications:

(1) as a safeguard when transporting casualties through unknown or potentially contaminated areas,

(2) as a protective enclosure to administer patient care in theater,

(3) as a shelter for evacuating patients out of "hot" zones,

(4) as a safeguard for medical personnel and emergency responders, and

(5) as an isolator for contaminated/infectious patients minimizing cross exposure and contamination of hospital or medical personnel.

The core material of the CCS has three distinct functional layers; a chemical protective layer, a biological protective layer and a filter material, as shown in Figure 2. The biological protective material is a fabric laminated with the reactive biocidal resin, Triosyn®. Triosyn® resin is a special application polymer. It incorporates a complex iodine molecule that releases I_2 which reacts with the microorganism creating the demand to destroy it. The chemical protective material (GENTEX CD2610) is a carbon laminate designed to meet JSLIST standards. The third layer is a unique charged melt blown filter material that is electrostatically charged and traps aerosolized particulates.

Figure 1. **CCS Prototype.**

Chemical swatch tests were performed to confirm that the laminated carbon layer performs as intended when used in the multiple layers that comprise the CCS core material. Under the test conditions described in the Aerosol Vapor Liquid Assessment Group (AVLAG) Liquid Agent Contamination/ Vapor Permeation test method (TOP 8-2-501), there was no agent breakthrough of GD (Soman) or HD (Sulfur Mustard) after 48 hours of testing.

Swatch testing was also conducted to assess the protection provided from biological threats. These tests showed that the average physical collection efficiency of the prototype swatches was greater than 99.99% at the tested face velocity. This means that greater than 99.99% of the organisms were prevented from passing though the material when challenged with aerosols of a viral simulant. The tests have also shown that the swatches exhibit self-decontamination properties. An average of greater than 98.0% of the collected simulant was decontaminated within approximately 15 minutes.

A system level aerosol test was conducted on the CCS prototype in the positive flow (clean patient) mode to evaluate system integrity.

See **"Biocide CCS"**
Continued on page 3

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Edgewood Chemical Biological Center
ATTN: AMSSB-RRT-OM (Joe Williams E3330)
5183 Blackhawk Road
Aberdeen Proving Ground, MD 21010-5424

U.S Government agencies and private industry under contract to the U.S. Government can contact the CBIAC for information products and services. CBIAC services also extend to all state and local governments and the first responder community – local emergency planners, firefighters, medics and law enforcement personnel.

The CBIAC is located in Building E3330, Aberdeen Proving Ground - Edgewood Area, Maryland 21010. For further information or assistance, visit or contact the CBIAC.

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The ***CBIAC Newsletter,*** a quarterly publication of the CBIAC, is a public release, unlimited distribution forum for chemical and biological defense information. It is distributed in hardcopy format and posted in Portable Document Format (PDF) on the **CBIAC Homepage**.

The CBIAC welcomes unsolicited articles on topics that fall within its mission scope. All articles submitted for publication consideration must be cleared for public release prior to submission. The CBIAC reserves the right to reject or edit submissions. For each issue, articles must be received by the following dates: Winter (First Quarter) - November 1st; Spring (Second Quarter) - February 1st; Summer (Third Quarter) - May 1st; Fall (Fourth Quarter) - August 1st.

All paid advertisements are subject to the review and approval of the CBIAC COTR prior to publication. The appearance of an advertisement in the ***CBIAC Newsletter*** does not constitute endorsement by the DoD or the CBIAC.

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"Biocide CCS"

Continued from page 1

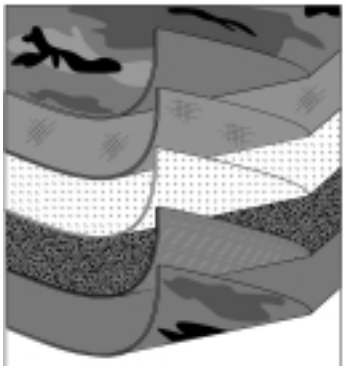

Figure 2. **CCS Material Matrix.**

The CCS exceeded the military requirements for masks when challenged with a viral simulant and spore aerosols. When challenged with fluorescein-tagged silica powder aerosols, there was no visible deposition of silica inside the system.

Components of the CCS are shown in Figure 3. The CCS has a personal blower that provides filtered air directly to the M-40 mask worn by the patient within the CCS. A system filter/blower controls airflow through the CCS to reduce heat stress and maximize patient comfort. An adapter enables this blower to either provide a constant flow of filtered air into the system or steadily remove air from inside the CCS and filter it before exhausting to the environment. This flexibility allows the CCS to be used for a clean casualty in a contaminated environment or with a contaminated casualty in a clean environment.

Six glove ports are incorporated into the CCS to provide medical personnel access to a patient. An equipment pass-through allows medicines and instruments up to the size of a standard surgical pack to be passed to the patient without compromising the system's integrity. Critical gases or fluids, such as oxygen or blood can be administered through the end-panel of the CCS by utilizing the sterile medical interface.

The system includes restraints to reduce patient movement during transport and to protect from injury due to episodes of seizures. Colored buckles and webbing straps prevent difficulty in differentiating between the mating buckles and straps. In addition, these restraints lie upon a light colored internal material for contrast. The CCS interfaces with standard military litter systems.

Computer modeling was used to reduce the development time for the CCS. Simulations of several prototype versions were developed in order to optimize the many features required on the CCS. As a result, only one developmental prototype had to be constructed prior to having a system ready for initial user evaluation.

The CCS has been undergoing technical and operational assessments as part of the Restoration of Operations (RestOps) Joint Chemical Field Trials (JCFT) at Dugway Proving Ground, Utah and Brooks Air Force Base, Texas. The JCFT is the technical test bed to evaluate technologies/devices for possible inclusion in the Advanced Concept Technology Demonstration (ACTD).

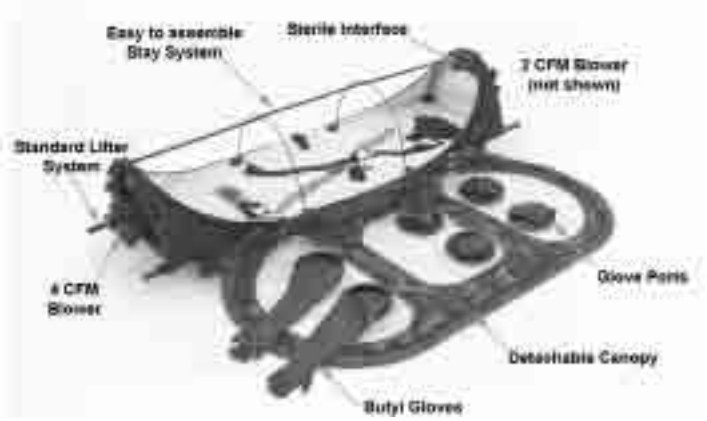

Figure 3. **Components of the CCS.**

The Biocide program has produced a novel prototype to protect wounded/contaminated soldiers as they are being transported from the battlefield for care at front line medical locations. The uses of the CCS and its applications extend beyond the military and are applicable to medical and other civilian needs.

Additional information is available by contacting
Lynnette Blaney
Tel: (614)-424-4504
Email: blaney@battelle.org
or by visiting the following websites:
www.triosyncorp.com or
http://www.gentexcorp.com/Features-PressReleases/ccs.htm

Highlight your CBD Program or Project in the *CBIAC Newsletter*!

Do you have an article on your CB Defense (CBD) program or project that you would like to submit for publication consideration in the ***CBIAC Newsletter***? If so, we would like to hear from you!

The CBIAC is the focal point for CBD information. Our newsletter is mailed to over 2000 qualified requestors each quarter. An electronic version of each issue is posted and archived on the **CBIAC Home Page.**

The ***CBIAC Newsletter*** is distributed internationally as a public release document, therefore all articles must be cleared for public release prior to submission to the CBIAC. Since each issue must pass through the established review and approval process, the CBIAC reserves the right to reject submissions.

MS Word files are acceptable. Articles should be ~800 to 1200 words along with graphic(s). Include author by-lines as you want them to appear and one or more POCs with telephone or email addresses to be included at the end of the article. Graphics can be provided electronically in tif, gif, jpeg, eps or in hardcopy format. Please submit electronic graphics as separate files rather than imbedded images. Quarterly due dates are listed on page 2.

Contact Dr. Jim King or Mary Jo Waters if you have any questions.

CBD CONTRACT AWARDS

By Mary F. Tracy

CBR Agent M34A1 Sampling Kit
Trutech Inc.
680 Elton Ave.
Riverhead, NY 11901-2555
$2,492,604 (Requirements Contract with an estimated five year contract value)
August 31, 2000
By U.S. Army Tank-automotive and Armaments Command, Detroit, MI

Combinatorial Discovery and Optimization of Botulinum Toxin Inhibitors
Hawaii Biotechnology Group Inc.
99-193 Aiea Heights Drive, Suite 236
Aiea, HA 96701
$793,963. September 1, 2000
By U.S. Army Medical Research Acquisition Activity, Fort Detrick, Frederick, MD

Skin Exposure Reduction Paste Against Chemical Warfare Agents
McKesson Bioservices
14665 Rothgeb Dr.
Rockville, MD 20850
$518,716. September 5, 2000
By U.S. Army Medical Research Acquisition Activity, Fort Detrick, Frederick, MD

Development and Production of Leishman Skin Test
Allermed laboratories Inc.
San Diego, CA
$963,000 (Increment as part of $6,024,625). September 8, 2000
By U.S. Army Medical Research Acquisition Activity, Fort Detrick, Frederick, MD

Yellow Fever Vaccine
Aventis Pasteur Inc.
Discovery Drive
Stillwater, PA 18370
$3,249,440. September 14, 2000
By Defense Support Personnel Center, Philadelphia, PA

Development and Production of Smallpox Vaccine
BioReliance Corporation
Rockville, MD
and
OraVax (Subsidiary of Peptide Therapeutics, United Kingdom)
38 Sydney Street
Cambridge, MA 02139
$343,000,000. September 20, 2000
By U.S. Centers for Disease Control, Atlanta, GA

Malaria Vaccine Production and Support Services
Science Applications International Corporation
10206 Campus Point Drive
San Diego, CA 92121
$43,795,868. September 22, 2000
By National Institutes of Health, Bethesda, MD and National Institute of Allergy and Infectious Diseases, Bethesda, MD

Chemical Protective Coats and Trousers
Creative Apparel Associates
Belmont, ME
$20,406,359. September 22, 2000
By Defense Supply Center, Philadelphia, PA

Proton Pump Inhibitors
AstraZeneca L.P.
Wilmington, DE
$34,100,400. September 22, 2000
By Defense Supply Center, Philadelphia, PA

Low Level Chemical Toxicity: Relevance to Chemical Agent Defense
Wright State University
3640 Colonel Glenn Highway
Dayton, OH 45435-0001
$1,410,319. September 27, 2000
By U.S. Army Medical Research Acquisition Activity, Fort Detrick, Frederick, MD

Research and Development in the Areas of Materials and Processes Systems Support Engineering for Composites, Adhesives and Bonded Repair, Elastomers and Sealants, Low Observable Maintainability, and Other Nonmetallic Aerospace Materials
University of Dayton Research Institute
Dayton, OH
$9,900,000. September 28, 2000
By Air Force Research Laboratory, Wright Patterson AFB, OH

Chemical Weapons Demilitarization
Raytheon Demilitarization Co.
Philadelphia, PA
$13,795,499. September 28, 2000
by U.S. Army Operations Support Command (Provisional), Rock Island, IL

Engineering and Technical Support, Safety and Health Support, Program Integration and Remedial Action Contractor Support Associated with the Formerly Utilized Sites Remedial Action Program
Science Applications International Corporation
San Diego, CA
$160,000 (Part of $6,809,415 increment).
September 29, 2000
By U. S. Army Corps of Engineers, St. Louis, MO

Biological Warfare Defense Research
Informed Diagnostics, Inc.
1050 E. Duane Ave., Suite I
Sunnyvale, CA 94085
$486,907 ($2,486,901 with options).
September 29, 2000
By SPAWARSYSCEN, Charleston, SC

Chemical Warfare/Counterterrorism Protective Suits (Continued Production and Fielding of the Self-contained Toxic Environment Protective Suit [STEPO])
GEOMET Technologies, Inc.
Rockville, MD
$2,500,000 (Total Contract Funding is now $34,000,000). October 17, 2000
By U.S. Army Materiel Command, Alexandria, VA

Development of a Drug for Treating or Preventing Human Disease Caused by Poxviruses Due to Deliberate Release or Emergence of New Pathogens from Nature
SIGA Technologies, Inc.
New York, NY
and
Oregon State University
Corvallis, OR
$600,000. October 17, 2000
By Department of Health and Human Services (DHHS).

Joint Biological Point Detection Systems
Technical Products Group Inc. (Intellitec)
Deland, FL
$13,267,553. October 18, 2000
By U.S. Army Test & Evaluation Command, Aberdeen Proving Ground, MD

Recombinant DNA
Novo Nordisk Pharmaceuticals, Inc.
Princeton, NJ
$73,031,525. October 23, 2000
By Defense Supply Center, Philadelphia, PA

Attention Members of the Chemical and Biological Defense Community!

The CBIAC is establishing an email address list to provide the CBD community with timely announcements and pertinent information from the CBIAC. We are also screening our CBIAC Newsletter mailing list database for incomplete entries and outdated organization names, office symbols, locations, etc.

If you are eligible for CBIAC services, and would like to be included on our electronic mailing list and/or continue to receive the CBIAC Newsletter in hardcopy format (electronic copies are posted on our web site), please send us the following information via email (cbiac@battelle.org) or fax (410-676-9703).

Include on email list ? yes no

Receive *CBIAC Newsletter* ? yes no

NAME: _____

OFFICE SYMBOL: _____

ORGANIZATION: _____

MAILING ADDRESS: _____

CITY: _____

STATE: _____ **ZIP CODE:** _____

COUNTRY: _____

TELEPHONE NUMBER: _____

FAX NUMBER: _____

EMAIL ADDRESS: _____

This form is also available on our web site for your convenience.
Thank you for helping us to better serve you!

CBD IN THE NEWS

By Mary F. Tracy

Military buys smallpox vaccine
Hedgpeth, Dana
http://www7.mercurycenter.com/premium/scitech/docs/smallpox05.htm
September 5, 2000
BioReliance Corp. has signed on to manufacture a smallpox vaccine for the U.S. military. The company is scheduled to produce about 300,000 doses of the smallpox vaccine starting at the end of the year. The smallpox vaccination is only one part of a 10-year program to make new, more efficient and safer vaccines for the military.

First Responders' Environmental Liability due to Mass Decontamination Runoff
The Beacon (National Domestic Preparedness Office Newsletter)
September 2000
Recently, the Team Leader of the Chemical Weapons Improved Response Program (CWIRP), U.S. Army Soldier and Biological Chemical Command (SBCCOM) sent a letter to the Evironmental Protection Agency (EPA) raising issues of liability of first responders during a weapons of mass destruction (WMD) incident. Specifically, the question asked was, "Can emergency responders undertake necessary emergency actions in order to save lives in dire situations without fear of environmental liability even when such emergency actions have unavoidable adverse environmental impacts? This question and its nuances are discussed in this informative article.

Chemical Industry Garments Adapted for First-Responders
National Defense
September 2000
Researchers are looking at protective garments designed for industrial-chemical workers with an eye for their use by local first responders in situations that involve hazardous-material spills or terrorist attacks with nuclear, biological chemical (NBC) or conventional weapons. As a part of the first line of defense in a nuclear, biological, chemical (NBC) incident, protective garments are employed. To help first-responders select the appropriate level of personal protection, the Environmental Protection Agency (EPA) and the Occupational Safety and Health Administration (OSHA), have issued a multi-level criteria for the protection of emergency workers and citizens involved in a NBC incident. The levels of protection start with Level A (as the highest level dealing with respiratory, eye, and skin irritants), through Levels B, C, and D. The U.S. Army has designated the self-contained toxic environment protective outfit (STEPO) as a Level A suit. The STEPO protects against chemical and biological agents, missile and rocket fuel, petroleum products, and a wide assortment of other industrial chemicals. An Army spokesman stated that there are no plans to move STEPO out to civilian rescuers. In order to fill this void, Dupont is producing an encapsulating suit that is currently being used by civilian first-responders using the protective material called Tychem with suits costing as much as $700. Coveralls and hooded coveralls made from Tyvek cost considerably less. To address cost issues, protective clothing made with Tyvek will more than likely be used in a WMD event.

MRICD recognized as Army R&D Organization of the Year
APG News
September 14, 2000
On September 11, in ceremonies at the Pentagon, the U.S. Army Medical Research Institute of Chemical Defense (USAMRICD) was named the 2000 Army Research Organization of the Year in the small laboratory category. Col. James A. Romano, Jr. commander of USAMRICD, accepted the award presented by Mr. Paul J. Hoeper, assistant secretary of the Army for Acquisition, Logistics, and Technology. Col. Romano, reminded those in attendance of the mission of the laboratory which has been to 1.) study the pharmacological action of chemical warfare agents (CWA), 2.) develop the best possible medical countermeasures to these CWA, and 3) disseminate this information throughout the Medical Department. Several of the institute's research accomplishments highlighted during the award ceremony are noted in the article. USAMRICD was also recognized for excellence related to training in the medical management of chemical casualties and its support to U.S. agencies that oversee counterterrorism preparedness.

It's Another Bad Day for Terrorists; No Explosives, Drugs or Chemical Agents Go Undefeated
http://www.usnewswire.com/topnews/Current_Releases/0915-107.html
September 15, 2000
Barringer Technologies Inc., has introduced a walkthrough portal, called the Sentinel, which will provide enhanced security at airports, government buildings, and other high security sites. The Sentinel can non-invasively screen people for trace amounts of explosives, drugs, or chemical agents. Barringer's IONSCAN, currently in use for trace explosive and narcotic detection, and the new Sentinel utilize Ion Mobility Spectrometry (IMS) to perform real time chemical analysis and identifies a target substance. Sandia National Laboratories developed the sample preconcentrator collection technology used in the Sentinel, which is licensed exclusively to Barringer.

Tiny sampling device promises big results for detection and analysis of chemicals
http://www.eurakalert.org/releases/snl-tsd082900.html
September 29, 2000
The Department of Energy's Sandia National Laboratories has developed a super miniaturized version of a traditional preconcentrator which can be used to collect sample gases for analysis. The device is two millimeters by two millimeters. The small size will allow chemical testing using hand-held instruments, eliminating the need to send samples to a large laboratory.

The Future of Military Toxicology
Khan, Akbar S., Dr.; O'Connell, Kevin P., Dr.; Sekowski, Jennifer, Dr.; Valdes, James J., Dr.
Army AL&T
September-October 2000
With the possibility of a U.S. soldier operating in a chemical or biological weapon (CBW) environment or in an area with exposure to toxic industrial compounds (TICs) and toxic industrial materials (TIMs), there is a potential for low level exposure to hazardous chemicals that does not result in immediate injury, but may predispose soldiers to ailments that arise much later and whose origins are difficult to determine. This article discusses cutting-edge approaches to deal with these difficult problems in military toxicology, driven by the latest advances in genetic technology. The article discusses genotoxicology and the Army's unique position to leverage this technology and change the nature of military toxicology.

See **"CBD News"**
Continued on page 14

NEW CBD INFORMATION RESOURCES

By Richard M. Gilman

Documents

Kafafi, Sherif A. and Tsang Wing. **Thermal Decomposition of Phosphorus and Sulphur Compounds.** College Park, MD: University of Maryland Biotechnology Institute, 1999, pp. 24.

"Most industrial chemical processes consist of highly complex sequence of interrelated reactions in which neutral and charged molecular fragments are known to play major roles. These molecular fragments are normally very reactive and are present in small quantities, which are difficult to detect experimentally. Accordingly, in order to postulate a mechanism for a given chemical process, conventional end product analysis aids in the selection of a suitable mechanism(s). Consequently, the improvement of industrial chemical processes is often achieved by semiempirical experimentation. The determination of detailed mechanism would permit the development of rational strategies for removing undesired products and enhancing the yield of desired ones. Chemical warfare agents (CWAs), e.g., G-series and VX nerve agents, are highly electrophilic organophosphonate derivatives, some-of-which are known inhibitors of acetylcholinesterase (1). Because of the relative ease of preparation of CWAs, effective decontamination procedures need also to be developed. The most direct way of destroying a CWA is through incineration (2-8), which can totally decompose their toxic and hazardous products. This process requires a detailed understanding of the high temperature decomposition kinetics of the CWA of interest. However, for such highly toxic chemicals, this information is not available! The lack of understanding is not surprising since even at the present time there are serious uncertainties regarding the detailed high temperature chemistry of CWAs. In addition, CWAs and/or some of their decomposition products may act as inhibitors or promoters of the combustion (3). Since combustion is a manifestation of exothermic chemical change, obviously, some consideration of what occurs at the molecular level must be the first step towards developing any degree of understanding." (authors' abstract)

Includes numerous illustrations, tables and an index.

CB-167863
AD-364773
University of Maryland Biotechnology Institute
Rockville, MD 20850

Looney, Brian B. and Ronald W. Falta. Vadose Zone Science and Technology Solutions. Columbus, OH: Battelle Press, 2000, Vols. 1 and 2, pp. 1540.

"Vadose Zone Science and Technology Solutions is a new, comprehensive reference on characterizing and modeling vadose zone systems and the behavior and cleanup of vadose zone contamination. Developed under the direction of the U.S. Department of Energy, Office of Science and Technology, this book documents the state of the art in vadose science in a practical and, most importantly, useful manner. The book presents technical and scientific issues (knowns and unknowns), challenges, and practical strategies. Throughout the book, and on its companion CD, over 130 case studies illustrate the scientific issues in a direct and compelling manner." (publisher's catalog)

Includes numerous illustrations, tables and an index.

CB-124218 (Vol. 1)
CB-124219 (Vol. 2)
ISBN 1-57477-085-3
Battelle Press
505 King Avenue
Columbus, Ohio 43201-2693
Phone: 1-800-451-3543 or 614-424-6393
Fax: 614-424-3819

Murray, Maj. Daniel S. **Chemical and Biological Defense of Ports of Debarkation: What Actions are Being Taken Now?** Ft. Leavenworth, KS: U.S. Army Command and General Staff College, 1999, pp. 151.

"Operation Desert Shield displayed to the world what the U.S. and allied coalition forces could do given six months to flow combat power into ports unopposed. Recent studies commissioned by the Joint Staff concluded that the U.S. military will not have that luxury in the future. This conclusion compels the U.S. to reevaluate its airport and seaport of debarkation (APOD, SPOD) chemical and biological (CB) defense and consequence management strategy. Military analysts believe that a CB strike on the PODs will not rule out U.S. victory as long as the U.S. is willing to endure a prolonged conflict with significant casualties. This study explains the process needed to avoid paying this unnecessary price. An enemy CB attack on a POD during force projection presents a complex situation that demands significant advance preparation. The CB threat comes in many forms and the threat analysis process must be modified to identify each one. Only then can vulnerabilities be accurately assessed and mitigated. The current battlefield vulnerability analysis process, if applied to PODs, would result in a grossly inaccurate effect analysis. Defending against and recovering from a CB attack in the PODs are paramount for the preservation of U.S. strategy and the lives of U.S. service personnel."
(author's abstract)

Includes numerous illustrations, tables, a list of acronyms and a bibliography. Dissertation is 151 pages in length.

CB-168260
AD- A367788
Army Command and General Staff College
Fort Leavenworth, KS 66027

Shawver, Daniel M., Annette L. Sobel and Sharon A. Stansfield. **BioSimMer: A Virtual Reality Simulator for Training First Responders in a BW Scenario.** Albuquerque, NM and Livermore, CA: Sandia National Laboratories, 1998, pp. 6.

See **"Information Resources"**
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CALENDAR OF EVENTS

The CBIAC highlights conferences, symposia, meetings, exhibitions and workshops of interest to the CBD community both on our website and in every issue of our newsletter. If you would like to have a CBD-related event posted on the CBIAC Calendar of Events, submit the pertinent information via email to cbiac@battelle.org. Due to space limitations, the CBIAC will accept submissions on a first-come, first-served basis and reserves the right to reject submissions. For a more extensive list of events, visit our website at http://www.cbiac.apgea.army.mil/.

2001 MEETINGS

March 6-8, 2001
2001 Scientific Conference on Chemical & Biological Defense Research
Marriott's Hunt Valley Inn
Hunt Valley, Maryland
POC: Diana McQuestion (Science and Technology Corporation)
Tel: (757) 766-5831
Fax: (757) 865-8721
Email: mcquestion@stcnet.com
URL: http://www.cbdefense.org

March 10-16, 2001
In-House Medical Management of Chemical and Biological Casualties (MCBC)
#6H-F26
USAMRICD, Aberdeen Proving Ground, Maryland and
USAMRIID, Fort Detrick, Maryland
(Advance registration required)
POC: Chemical Casualty Care Division, USAMRICD
Tel: (410) 436-2230
DSN: 584-2230
Fax: (410) 436-3086
Fax DSN: 584 -3086
Email: roger.baxter@amedd.army.mil
URL: http://ccc.apgea.army.mil

March 26-29, 2001
U.S. Army Ground Vehicle Survivability Symposium
(#154)
Naval Postgraduate School
Monterey, California
POC: Frank Bajowski
Tel: (703) 247-9467
Fax: (703) 522-1885
Email: fbajowski@ndia.org
URL: http://www.ndia.org

March 31-April 1, 2001
Army Homeland Defense Conference
Atlantis Hotel
Reno, Nevada
POC: Major Tim Baker
Tel: (253) 967-3861
Email: bakert@lewis.army.mil

April 3-6, 2001
CB Defense Technology Area Review and Assessment (TARA)
Edgewood Conference Center
Aberdeen Proving Ground, Maryland
POC: Dr. Joe Corriveau
Tel: (703) 695-5486
Email: CORRIVJL@acq.osd.mil

April 22-24, 2001
National Disaster Medical System Conference 2001
Adams Mark Hotel
Dallas. Texas
POC: USPHS Office of Emergency Preparedness/National Disaster Medical System
Tel: (301) 443-1167 or (800) USA-NDMS
Fax: (301) 443-5146 or (800) USA-KWIK
URL:http://www.oep.dhhs.gov/NDMS_Conference/ndms_conference.html

April 22-27, 2001
CBMTS-Industry II: First World Congress on Chemical and Biological Terrorism
Dubrovnik, Croatia
POC: ASA/ Richard Price or Barbara Price
Tel: (207) 829-6376
Fax: (207) 829-3040
Email: asa@ime.net or asa@maine.rr.com
URL: http://www.asanltr.com/
POC: Lt. Col. Zvonko Orehovec
Tel: 385-1-455-1513
385-1-371-8308
Fax: 385-1-461-3300
Email: cbmts_hr@zvonimir.morh.tel.hr
zbikarlo@zvonimir.morh.hr

April 23-26, 2001
27th Environmental Symposium & Exhibition: "A New Era for Federal Environmental Leadership, Management and Technology"
(Event # 144E-3140)
Austin Convention Center
Austin, Texas
POC: Kira Migliore (Exhibits)
Tel: (703) 247-2590
Fax: (703) 522-1885
Email: kmigliore@ndia.org
URL: http://www.ndia.org

May 5-11, 2001
In-House Medical Management of Chemical and Biological Casualties (MCBC)
#6H-F26
(*See March 10-16, 2001*)

May 8-10, 2001
Force Protection Equipment Demonstration III (FPED III)
(pre-registration required)
Quantico Marine Corps Base
Quantico, Virginia
URL: http://www.monmouth.army.mil/smc/pmpse

May 13-18, 2001
Enzyme 2001: International Symposium on Applications of Enzymes in Chemical and Biological Defense
Sheraton World Resort
Orlando, Florida
POC: Nicole Funk
Tel: (410) 612-8239
Fax: (410) 612-9968
Email: funk_nicole@bah.com

May 14-16, 2001
NATO Human Factors and Medicine(HFM) Panel Symposium: "Operational Medical Issues in Chemical and Biological Defense"
Lisbon, Portugal
POC: John V. Wade, D.V.M., Ph.D.
Tel: (703) 413-7817
Email: wadej@battelle.org

May 22-24, 2001
SBCCOM Warrior Systems APBI and Exhibition: Technology Leveraging for Public Safety
Reno, Nevada
(#1960)
POC: Ann Saliski
Tel: (703) 247-2577
Fax: (703) 522-1885
Email: asaliski@ndia.org

May 22-24, 2001
CWD2001: The International CW Demil Conference
Nagaragawa International Convention Center
Gifu City, Japan
POC: DERA
URL: http://www.dera.gov.uk/cwd2001/chemical_weapons_demilitarisation_conference.htm

June 4-7, 2001
The Sixth International In Situ and On-Site Bioremediation Symposium
Sheraton Harbor Island
San Diego, California
POC: The Conference Group
Tel: 800-783-6338
(614) 424-5461
Fax: (614) 424-5747
Email: conferencegroup@compuserve.com
URL: http://www.battelle.org/environment/er/biosymp/biosymp.html

June 4-8, 2001
Field Management of Chemical and Biological Casualties (FCBC)
#6H-F27
USAMRICD, Aberdeen Proving Ground, Maryland
(Advance registration required)
POC: Chemical Casualty Care Division, USAMRICD
Tel: (410) 436-2230
DSN: 584-2230
Fax: (410) 436-3086
Fax DSN: 584 -3086
Email: roger.baxter@amedd.army.mil
URL: http://ccc.apgea.army.mil

June 12-14, 2001
69th MORSS
US Naval Academy
Annapolis, Maryland
POC: MORSS
Tel: (703) 751-7290
Fax: (703) 751-8171
Email: morsoffice@aol.com
URL: http://www.mors.org/

June 15-19, 2001
International Symposium on Protection against Chemical and Biological Warfare Agents
Stockholm City Conference Centre
Norra Latin, Stockholm, Sweden
POC: Kurt Persson (scientific programme)
Tel: +46-90-106 773
Email: persson@ume.foa.se
POC: Asa Lundvall (exhibition)
Tel: +46-90-106 727
Email: lundvall@ume.foa.se
POC: Marianne Olofsson (registration)
Tel: +46-90-106 602
Email: molofsson@ume.foa.se
URL: http://www.cbwsymp.foa.se/

July 9-13, 2001
2001 World Wide Chemical Conference and Warfighters Conference
Ft. Leonard Wood, MO
No further information at this time.

July 24-26, 2001
The 2001 DOE Chemical and Biological Nonproliferation Program (CBNP) Summer Meeting
Crystal City Marriott
Arlington, VA
POC: Rick Kingman
Tel: (703) 535-8725 x106
Email: kingmanr@defensegp.com
URL: http://www.nn.doe.gov/cbnp

September 15-21, 2001
In-House Medical Management of Chemical and Biological Casualties (MCBC)
#6H-F26
(*See March 10-16, 2001*)

October 1-5, 2001
23rd Annual Nuclear Monitoring Research Review
Snow King Hotel
Jackson Hole, Wyoming
POC: Scott Evans
Email: EVANSS@DynCorp.com
URL: http://dtranet/index.html

October 20-26, 2001
In-House Medical Management of Chemical and Biological Casualties (MCBC)
#6H-F26
(*See March 10-16, 2001*)

2002 MEETINGS

March 9-15, 2002
In-House Medical Management of Chemical and Biological Casualties (MCBC)
#6H-F26
(*See March 10-16, 2001*)

April 28-May 3, 2002
CBMTS IV
AC-Laboratory, Spiez
Spiez, Switzerland
POC: ASA
Tel: (207) 829-6376
Fax: (207) 829-3040
Email: asa@maine.rr.com
URL: http://www.asanltr.com

May 4-10, 2002
In-House Medical Management of Chemical and Biological Casualties (MCBC)
#6H-F26
(*See March 10-16, 2001*)

May 20-23, 2002
The Third International Conference on Remediation of Chlorinated and Recalcitrant Compounds
Doubletree and Marriott Hotels
Monterey Conference Center
Monterey, California
POC: The Conference Group
Tel: 800-783-6338
(614) 424-5461
Fax: (614) 424-5747
Email: conferencegroup@compuserve.com
URL: http://www.battelle.org/environmnet/er/chlorcon/chlorcon.html

September 7-13, 2002
In-House Medical Management of Chemical and Biological Casualties (MCBC)
#6H-F26
(*See March 10-16, 2001*)

CBIAC POLICY FOR INQUIRY AND REFERRAL SERVICES

The CBIAC often receives questions regarding the criteria used to determine eligibility for our Inquiry and Referral Services. Here are the general guidelines for CBIAC Inquiry and Referral Services.

Introduction

The CBIAC responds to questions from U.S. Department of Defense (DoD), other U.S. Government Agencies, DoD and Federal contractors, and state and local government agencies that fall within the technical scope of the CBIAC. In responding to an inquiry, the CBIAC staff has access to analytical support, equipment and facilities, technical area experts, and extensive research resources. Inquiries handled by the CBIAC fall into four basic categories:

- **Technical Inquiries:** Requests that require a review and analysis of technical information obtained through standard search efforts fall into this category. Qualified technical personnel analyze the technical information, consult with subject area experts and provide a summary of the results with references and search information.

- **Referral Inquiries:** If the CBIAC does not have direct access to the requested information, we will provide a point of contact, address, and/or phone number and fax number of an alternative information source. The CBIAC maintains a database that contains listings of agencies, subject area experts, other IAC resources, and other pertinent referral information.

- **Bibliographic Inquiries:** Clients requesting literature searches and summaries receive a list of bibliographic citations to documents, including abstracts (if available), a summary of the search results and identification of the most relevant information. Comments and excerpts from pertinent documents may also be included.

- **General Information Inquiries:** Users needing information about the various products and services offered by the CBIAC may contact us for one of our free information packages.

Cost

Inquiry responses requiring less than eight technical labor-hours will be provided free of charge. Responses requiring more than eight technical labor-hours or repeated closely related responses to individual users that total more than eight technical hours will be handled on a cost-recovery basis through a subscription to CBIAC services. Cost estimates will be provided at the time the inquiry is placed. Any efforts sponsored by a Federal agency requiring over 80 hours of technical labor may be better handled as Technical Area Task (TAT). See our web site pages on Technical Area Tasks for additional information.

Eligibility

Requests are accepted from U.S. Government agencies, their contractors, and local government agencies. The general public is encouraged to browse our web site for information and to take advantage of the links provided to related sites. However, due to the large volume of inquiries we receive from government agencies and their contractors, we regret that we will be unable to process requests for information from the general public.

Requesters are encouraged to include their full organization name, organization address, Federal Express address (if different), telephone number, fax number and email address. Providing complete information will prevent a delay in the response.

Contractor requests for information are linked to specific contractual efforts. Contractors and sub-contractors must provide the prime contract number, the name of the government agency sponsoring the contract, and a Defense Logistics Information Service (DLIS) U.S./Canada Joint Certification number (required to receive export-controlled technical data). A separate certification number is required for each mailing address of a contractor organization. Information on obtaining this certification can be found at the following web site: http://www.dlis.dla.mil/ccal/ccal_faq.htm.

For DoD reporting purposes, requesters are encouraged to provide the CBIAC information regarding any major DoD programs, Defense Technical Objective/Defense Technical Area Programs, or ACAT categories that are supported by each request.

Payment Methods

Military Interdepartmental Purchase Requests (MIPRs), credit cards (VISA, Master Card, American Express), purchase orders (U.S. Government agencies only), cash or checks/money orders are accepted for payment.

Response Time

Generally, responses will be prepared within 10 working days of receiving the inquiry. Inquiries will be handled on a first come-first served basis. If your need is urgent, please let us know, and we will make every effort to meet your requirements. Responses will be provided by electronic mail, express mail, or facsimile for time sensitive requests. We handle an inquiry as efficiently as possible.

Placing an Inquiry

The CBIAC staff is available to answer questions from 8:00 a.m. to 4:00 p.m., ET. The CBIAC is located in Room 150, Building E3330, Aberdeen Proving Ground-Edgewood Area, Maryland 21010.

Inquiries are accepted via facsimile, telephone, electronic mail, regular mail, or walk-in visit to the CBIAC. For your ease and convenience, an inquiry can be submitted using the interactive *Inquiry Request Form* on our web site.

For additional information, contact: Dr. James King, Deputy Director (kingj@battelle.org) or Ms. Jeanne Rosser, Inquiry and Referral Services Manager (rosserj@battelle.org).

INQUIRIES

By Judith A. Hermann

Q: Where can I find information about development schedules for CB defense technologies, technical objectives for CB defense, and projections for the mid-term and far-term capabilities of various defense programs?

A: Two good resources on the Internet that address these issues are discussed below:

- The U.S. Medical Research and Materiel Command (MRMC) website at http://mrmc-www.army/mil/ contains information on the CB Defense Program emphasizing detection (chemical detectors and biological detectors), protection (individual and collective), decontamination, and modeling and simulation. Both remote early warning and point detection technologies are being pursued for chemical and biological detectors. The site includes a Roadmap for CB Defense which covers FY 97-FY08. Similar information is available for Smoke/ Obscurants and for Target Defeat Capabilities (TDC). The pertinent URLs are:

  Relationship to Operational Capabilities
  http://mrmc-www.army.mil/mrmc_library/astmp/original/c3/p3k2.htm

  Modernization Strategy
  http://mrmc-www.army.mil/mrmc_library/astmp/original/c3/p3k3.htm

  Roadmap for NBC Systems
  http://mrmc-www.army.mil/mrmc_library/astmp/original/c3/p3k4.htm

- The entire 1998 Army Science and Technology Master Plan, ASTMP '98, can be found at http://www.sarda.army.mil/ sard-zt/ASTMP98/astmp98.htm. Sections addressing technical objectives and projections and development schedules for CB technologies include:

  Volume I, Chapter III. Technology Transition, Section K: Nuclear, Biological, and Chemical

  1. Introduction
  2. Modernization Strategy
  3. Roadmaps for CB Defenses and Smoke Obscurants
  4. Relationship to Modernization Plan Annexes

  Volume I, Chapter IV*: Technology Development, Section E: Chemical and Biological Defense

  1. Scope
  2. Rationale
  3. Technology Subareas
  4. Roadmap of Technology Objectives
  5. Linkages to Future Operational Capabilities

*This chapter contains information on Detection, Protection, Decontamination, and Modeling and Simulation. The Roadmap for Technical Objectives for Chemical and Biological Defense contains projections up through the FY05-13 term.

Q: What medical response is recommended to fight infection after exposure of the civilian population to aerosolized Bacillus anthracis following a bioterrorist attack?

Penicillin and doxycycline are both FDA approved to treat anthrax but they are not specifically indicated for inhalational anthrax (post-exposure). On August 31, 2000, the U.S. Food and Drug Administration approved the use of Cipro® (ciproflaxin) for post-exposure inhalational anthrax under its accelerated approval regulations. The action followed unanimous recommendation for approval by the FDA's Anti-Infective Drug Products Advisory Committee on July 28, 2000 and was in accordance with recommendations by The Working Group on Civilian Biodefense, the U.S. Army, and the Centers for Disease Control and Prevention.

This is the first time any antimicrobial drug application has been submitted to the FDA specifically for an indication resulting from the intentional use of a biological agent. Cipro® is therefore the first government-approved drug for fighting infection from the deadly biological agent anthrax in the wake of a future bioterrorist attack.

The US government does keep a stockpile of medications and other supplies on hand to distribute in the event of a biological attack but the official approval of Cipro® as an anti-anthrax agent will make it easier for agencies to stockpile and ship the drug in times of emergency.

REFERENCES:

U.S. approves antibiotic to fight anthrax, September 1, 2000, http://www.cnn.com/2000/HEALTH/09/01/health.anthrax.reut/index.html

FDA TALK PAPER: APPROVAL OF CIPRO® FOR USE AFTER EXPOSURE TO INHALATIONAL ANTHRAX
http://www.fda.gov/bbs/topics/ANSWERS/ANS01030.html

FDA Approves Ciprofloxacin for Victims of Anthrax Inhalation
http://www.bayerpharma-na.com/company/co0240.asp

FDA endorses Anthrax-fighting antibiotic
http://www.cnn.com/2000/HEALTH/07/28/health.anthrax.reut/

CBIAC BASIC PRODUCTS LIST: JANUARY 2001

Code	Description	Price	Classification
CR-95-01	A Critical Review of Nuclear, Biological and Chemical Contamination Survivability (NBCCS)	$20.00	Unlimited; Unclassified
CR-95-02	A Critical Review of Sources of Spectral Data for Militarily Significant Compounds	$20.00	Unlimited; Unclassified
CR-96-03	Critical Review of Sources of Chemical and Physical Properties Data for Militarily Significant Compounds	$60.00	Unlimited; Unclassified
CR-98-04	Critical Review of Non-Lethal Grenade Technologies and Lethality Evaluation Criteria	$25.00	Unlimited; Unclassified
CR-98-05	Critical Review of Surface Sampling Technologies for Volatilizing Liquid	$25.00	Unlimited; Unclassified
CR-98-06	The Emergency Responder's Ability to Detect Chemical Agent, Critical Review/Technology Assessment	$15.00	U.S. Government Agencies, their Contractors, and Emergency Responders
CR-98-07	Critical Review on the Y2K Millenium Bug: A Chemical and Biological Defense Community Perspective	$15.00	Unlimited; Unclassified
CR-98-08	Demilitarization Technologies for Biological and Toxin Weapons	$25.00	U.S. Government Agencies ONLY
CR-99-09	Determination of Optimum Sorbent Material for Collection and Air Desorption of Chemical Warfare Agents	$20.00	Unlimited; Unclassified
CR-99-10	Wide Area Decontamination: CB Decontamination Technologies Equipment and Project	$60.00	Unlimited; Unclassified
CR-00-01	Smoke M&S Newsletter Compilation	$75.00	U.S. Government Agencies and their M&S Contractors; Unclassified
DB-97-01	Physiological and Psychological Effects of the Nuclear, Biological, and Chemical Environment and Sustained Operations on Systems in Combat (P2NBC2) Database	$60.00	U.S. Department of Defense and their Contractors
DBK-95-01	Chemical Defense Materials Databook	$10.00	U.S. Department of Defense and their Contractors
DBK-99-02	Susceptibility of Aircraft Materials to Chemical Warfare Agents (Reprint)	$125.00	U.S. Government Agencies and their Contractors
HB-92-01	Worldwide NBC Mask Handbook	$75.00	Unlimited; Unclassified
HB-95-02	Worldwide Chemical Detection Equipment Handbook	$150.00	Unlimited; Unclassified
HB-99-03	CB Terminology Handbook	$75.00	Unlimited; Unclassified
HBS-98-03	Mask & Detection Handbooks (Set of 2)	$200.00	Unlimited; Unclassified

Code	Description	Price	Classification
PR-95-02	Proceedings of the CB Medical Treatment Symposium: An Exploration of Present Capabilities and Future Requirements for Chemical and Biological Medical Treatment	$49.00	Unlimited; Unclassified
SIMKIT-96-01	Chemical Warfare Agent Simulation Training Kit	$150.00	Unlimited; Unclassified
SOAR-95-02	State-of-the-Art Report on Biodetection Technologies	$60.00	U.S. Department of Defense and their Contractors; EXPORT CONTROLLED
SOAR-97-03	An Overview of U.S. Chemical and Biological Defensive Equipment	$95.00	Unlimited; Unclassified
SOAR-98-04	State-of-the-Art Report on the Australia Group Chemicals	$75.00	Unlimited; Unclassified
SOAR-98-05	Assessment of Chemical Detection Equipment for HAZMAT Responders	$75.00	U.S. Government Agencies, their Contractors, and Emergency Responders
SOAR-98-06	CBR-D Computer Aided Instruction (CD-ROM)	$125.00	U.S. Government Agencies and their Contractors; EXPORT CONTROLLED
SOAR-98-07	Disaster Preparedness Operation Specialist (DPO) Computer Aided (CD-ROM)	$125.00	U.S. Government Agencies and their Contractors; EXPORT CONTROLLED
SOAR-98-08	CINC NBC Information Tool (CD-ROM)	$95.00	U.S. Government Agencies ONLY
SOAR-98-09	State-of-the-Art Report on the Technical Approach Options for Indoor Air Modeling	$75.00	Unlimited; Unclassified
SOAR-99-10	Tactical NBC Information Tool (CD-ROM)	$95.00	U.S. Government Agencies ONLY
SOAR-99-11	Disaster Preparedness Operation Specialist Curricular Materials (CD-ROM)	$75.00	U.S. Government Agencies and their Contractors; EXPORT CONTROLLED
SOAR-99-12	CBR-D Curricular Materials (CD-ROM)	$75.00	U.S. Government Agencies and their Contractors; EXPORT CONTROLLED
SOAR-00-01	Medical NBC Battlebook	$5.00	Unlimited; Unclassified

Product descriptions and an Interactive Product Request Form can be found on our website at http://www.cbiac.apgea.army.mil/ !

"CBD News"

Continued from page 6

Army Materiel Command Provides a Look at the Future
Vinch, Chuck
http://www.pstripes.com/ed102100h.html
October 21, 2000
At the annual Association of the U.S. Army conference, the Army Materiel Command (AMC) presented the latest technologies and high-tech innovations being touted by the Army. Innovations include a ground sensor smaller than a hockey puck that can be strewn along likely enemy avenues of approach; remote-controlled robotic scouts equipped with cameras and laser range-finders employed either in the air or on the ground; and radars that provide a 3-D image of enemy vehicles trying to hide. One of the show stoppers was the next evolution of the "Land Warrior," the Army's individual soldier system. Identified as the "Future Warrior," the concept uses cutting-edge technology including a sleek spandex bodysuit and a motorcycle-style helmet with a "heads-up" display that uses visual, thermal, acoustic and radar sensors. The system will be able to change color to match the environment; has the capability to be sealed off against chemical and biological threats; and includes an inner layer that can cool or warm. The outfit will be powered for up to six days by the new microturbine engine.

Johnston Atoll facility destroys its last chemical weapon
Burlas, Joe
http://www.dtic.mil/armylink/news/Dec2000/a20001204lastwpn.html
December 1, 2000
On November 29, 2000, the military's longest operating chemical demilitarization facility finished the destruction of more than 13,000 land mines filled with VX. The Johnston Atoll Chemical Agent Disposal System (JACADS) eliminated the last of its stockpiled chemical munitions following a 10-year planned life cycle that included the destruction of more than 400,000 chemical weapons materials. Opening in 1990, JACADS destroyed mines, rockets, artillery and mortar projectiles, and bombs containing blister agent HD and nerve agents GB and VX.

Congress Funds Five More WMD Civil Support Teams
Gilmore, Gerry J.
American Forces Press Service
December 8, 2000
Using funding from the Fiscal 2001 National Defense Authorization Act, the DoD will increase the total number of Weapons of Mass Destruction (WMD) Civil Support Teams from 27 to 32. Formerly called rapid assessment and initial detection teams, the teams are part of the U.S.'s homeland security. The teams specialize in the investigation of chemical, biological or radiological incidents. Each team has 22 full-time reserve component personnel who can quickly deploy to assist local civilian authorities in determining the nature and extent of a WMD attack or incident on the local populace. Formation of the reserve component WMD teams addresses a 21st century national security concern - the possibility of war on U.S. soil.

For additional CBD newsworthy information, visit the following website:

Description of Foreign Comparative Testing (FCT) Projects Selected by OSD for FY 2001 Funding
http://www.defenselink.mil/news/Oct2000/fctlist.html

"Information Resources"

Continued from page 7

"BioSimMer is a prototype virtual reality (VR) system for training first responders to nuclear, biological, and chemical acts of terrorism. The initial application is to medical emergency response and focuses on the training of personnel who might be called upon to provide emergency triage at the scene of an act of terrorism involving both an explosion and the release of a BW biotoxin. The system consists of an immersive, multi-modal user interface and a dynamic casualty model that both changes over time and responds to the actions of the trainee. The system is built upon Sandia's open, distributed VR platform and leverages previous development in VR-based training of battlefield medics responding to conventional injuries (MediSim). The VR platform allows multiple users (displays, trackers, etc.) and multiple, heterogeneous simulation modules to be networked together to create a common, shared virtual environment. A dynamic casualty simulation provides realistic cues to the patient's condition (e. g., blood pressure and pulse change over time as a patient's condition worsens.) The casualty simulation also responds to the actions of the trainee (e. g., a change in the color of a patient's skin may result from a check of the capillary refill rate.) Our current prototype addresses conventional injuries (head trauma and tension pneumothorax), exposure to the biotoxin SEB, and a symptomatic psychological case. Such a scenario is representative of combined injuries anticipated in BW operations." (introductory paragraph)

CB-174982
Sandia National Laboratories
1515 Eubank SE
Albuquerque, NM 87123

DONATING DOCUMENTS, BOOKS AND ELECTRONIC MEDIA TO THE CBIAC COLLECTION

If you have documents, books, video tapes, software products on diskettes or CDs, graphics, etc. that are related to chemical warfare/chemical or biological defense in your working collection, please consider donating them to the CBIAC.

As the repository for CB defense information, documentation of research and technology unique to your area of expertise can be a valuable historical and/or scientific resource to the CB defense community.

The CBIAC accepts donations in hardcopy or electronic format. Electronic files in Portable Document Format (PDF) are preferred. If documents are already posted on a website, the CBIAC can retrieve a copy for inclusion in our database.

Remember the CBIAC as you make job or program transitions, clear file cabinets, retire or relocate. Thanks!

CBIAC USER SURVEY 2001

Please help the CBIAC better serve the CB defense community by completing and returning our annual User Survey! You may fax it to the attention of Mary Jo Waters at 410-676-9703 or use the interactive version available on the CBIAC Homepage at http://www.cbiac.apgea.army.mil/

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Organization: _____

Phone: _____ **E-mail:** _____

SECTION II:

How did you become aware of the CBIAC's products and services? (Check all that apply):

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- ❑ Database Search
- ❑ Display at a Conference
- ❑ Internet Search
- ❑ Promotional Brochure
- ❑ Referral from another IAC
- ❑ Other: _____

If you have used any of the CBIAC products and services listed below, please rate all that are applicable using the following scale:

5=Excellent 4=Very Good 3=Satisfactory 2=Fair 1=Poor

CBIAC Bibliographic Database (BD)	5	4	3	2	1
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Databooks	5	4	3	2	1
Directories	5	4	3	2	1
Handbooks	5	4	3	2	1
Inquiry and Referral Services	5	4	3	2	1
Newsletters	5	4	3	2	1
Proceedings	5	4	3	2	1
State-of-the-Art Reports (SOARs)	5	4	3	2	1
Technical Area Tasks (TATs)	5	4	3	2	1
Training Aids	5	4	3	2	1
Web site (http://www.cbiac.apgea.army.mil)	5	4	3	2	1

Would you prefer CBIAC Basic Products in electronic format? Y N

What CB defense topics would you like to see in future CBIAC products?

_____

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Thank You!

Chemical and Biological Defense

CBIAC

Information Analysis Center

Bringing the CB Defense and Homeland Security communities together

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