

AWARDS

First Annual NCIRD Honor Awards Ceremony

NCIRD hosted its first annual Honor Awards Ceremony on August 11, 2010. DBD staff were recognized in the following categories: Excellence in Laboratory Research – 2009 H1N1 NCIRD Inter-divisional Laboratory Serology Team; Excellence in Program Delivery – American Recovery and Reinvestment Act 317 Initiative; Excellence in Public Health Protection – 2009 Mumps Outbreak Response Team; Public Health Impact Award – NCIRD 2009 H1N1 Influenza Diagnostic Team; Excellence in Setting Long-Range Public Health Goals – Healthy People 2020 Team; Translation of Data into Policy – Group B Streptococcal Disease Prevention Team; Building Bridges – Collaborative Success – The CDC Respiratory Disease Outbreak Working Group; and Response to 2009 H1N1 Influenza Pandemic – Response Staff.

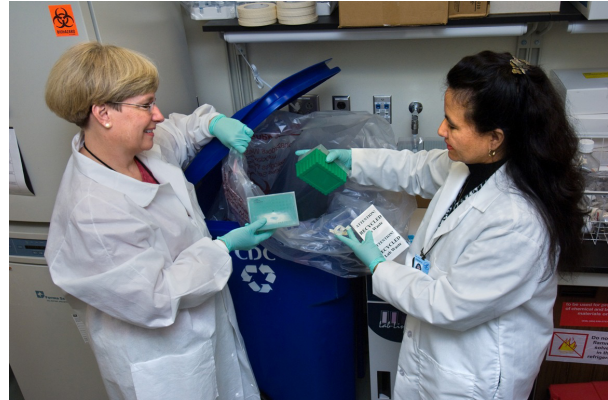


Photo courtesy of Greg Knobloch, CDC, Connects 7/31/2008. Microbiologists Sandy Martin, MT (Left) and Sandra Steiner, PhD shown preparing plastics for the CDC laboratory-recycling program, were among the six finalists for the HHSInnovates award. Both attended the HHSInnovates ceremony hosted by HHS Secretary Sebelius in Washington, DC.

HHSInnovates Finalist

Reducing CDC's Carbon Footprint through Recycling: The CDC Office of Health and Safety, the Laboratory Support Branch, and the labs are contributing to the agency's goal of reducing solid waste output by 50% by the end of FY2013 as mandated by E.O. 13514. Recycling program labs are moving CDC towards being a healthier and more environmentally responsible agency – diverting nearly 13,772 pounds of solid waste from land fields in 18 months. DBD houses three of the 10 CDC labs in the recycling program. In 2009, the program was awarded the CDC “Go Green, Get Healthy” Sustainability Award.

Gates Foundation Awards Grant: Aetiology of Neonatal Infections in South Asia (ANISA) Study Stephanie Schrag (RDB) will be the Co-PI on a recently funded Gates Foundation study with Samir Saha from Dhaka Shishu Hospital, Bangladesh as the PI. Taking place in three countries in South Asia (Bangladesh, India and Pakistan) that account for more than a third of all neonatal deaths, the study will improve neonatal survival in the region and beyond by describing aetiology of community acquired young infant infections, antibiotic sensitivity of bacterial pathogens, and risk factors for infection. Joining Stephanie on the study from DBD will be Barry Fields, Jonas Winchell, Maureen Diaz, Lesley McGee and Elizabeth Zell. Staff from DVD and the DFBMD laboratory will be involved in the study. Slated to start in January 2011 and conclude in 2014, the \$11 million study includes external partners from Johns Hopkins University, Aga Khan University in Pakistan, the Shivgarh field site in India, the International Centre for Diarrhoeal Disease Research in Bangladesh, the University of Toronto, and the World Health Organization.

2010 Statistical Science Awards Ceremony for CDC/ATSDR

Elizabeth Zell was awarded an Honorable Mention in the Theoretical Paper Category for the article she coauthored with Donald Rubin from Harvard University, “Dealing with Noncompliance and Missing Outcomes in a Randomized Trial Using Bayesian Technology: Prevention of Perinatal Sepsis Clinical Trial, Soweto, South Africa,” published in *Statistical Methodology*.

Hermes Creative & National Health Information Awards

The Get Smart campaign video “Snort. Sniffle. Sneeze. No Antibiotics Please!” won the 2010 Platinum Hermes Creative Award. MVPDB’s “Have You Heard (about Meningococcal Disease)?” received the Gold Award. Hermes Creative Awards is an international competition for creative professionals involved in the concept, writing and design of traditional materials and programs, and emerging technologies. The Get Smart campaign video also won a National Health Information Merit Award. The National Health Information Awards program is designed to establish a seal of quality for consumer health information.

FEATURED PUBLICATIONS

Burton DC, Flannery B, Bennett NM, et al. **Socioeconomic and racial/ethnic disparities in bacteremic pneumonia incidence in U.S. adults.** Am J Public Health. 2010;100:1904-11.

CDC. **Updated recommendations for prevention of invasive pneumococcal disease among adults using a 23-valent pneumococcal polysaccharide vaccine (PPSV23).** MMWR. 2010;59:1102-06.

Feikin DR, Jagero G, Aura B, et al. **High rate of pneumococcal bacteremia in a prospective cohort of older children and adults in an area of high HIV prevalence in rural western Kenya.** BMC Infect Dis. 2010;10:186-94.

Hajjeh RA, Privor-Dumm L, Edmond K, et al. **Supporting new vaccine introduction decisions: Lessons learned from the Hib Initiative experience.** Vaccine. 2010; Epub ahead of print.

Ojo LR, O'Loughlin RE, Cohen AL, et al. **Global use of *Haemophilus influenzae* type b conjugate vaccine.** Vaccine. 2010; Epub ahead of print.

Pilishvili T, Zell ER, Farley MM, et al. **Risk factors for invasive pneumococcal disease in children in the era of conjugate vaccine use.** Pediatrics. 2010;126:e9-17.

Wei SC, Tatti K, Cushing K, et al. **Effectiveness of adolescent and adult tetanus, reduced-dose diphtheria, and acellular pertussis vaccine (Tdap) against pertussis.** Clin Infect Dis. 2010;51:315-21.

Wright JG, Quinn CP, Shadomy S, Messonnier N. **Use of anthrax vaccine in the United States: Recommendations of the Advisory Committee on Immunization Practices (ACIP), 2009.** MMWR. 2010;59:1-30.

DBD BULLETIN

regards from
Rana...

Dear colleagues,

It has been a hot and busy summer for all of us at DBD! On the U.S. front, many of our staff have been providing extensive support for the California Department of Public Health (CDPH) to control the largest pertussis epidemic that the state has experienced in the last 55 years. DBD has provided technical support to CDPH and worked with communications staff at the division and center to mount an impressive campaign to increase awareness about the disease and educate the public about the need for vaccination. On the global front, our activities have escalated. Our staff will be involved in the first study of its kind to assess etiologies of neonatal sepsis, a major cause of neonatal death in developing countries. This will be crucial to develop better prevention strategies and improve child survival. Get Smart staff have also expanded their reach to support global efforts to decrease inappropriate use of antibiotics.

In addition, in each issue of this bulletin, we choose to highlight one of our special activities: this issue features our immunology laboratories, which have a distinguished legacy of significant contributions to almost all bacterial vaccines currently available. One such vaccine that this group helped develop is MenAfriVac™, which was just prequalified this summer, bringing with it the promise to eliminate meningococcal meningitis epidemics, a scourge that has plagued the African continent for many decades. As we get ready for an even busier fall season, I would like to thank you all for your tireless contributions, and ask to gather our energy to assist with the introduction of meningococcal and pneumococcal vaccines in the many countries across the world that have eagerly waited for them.

Rana

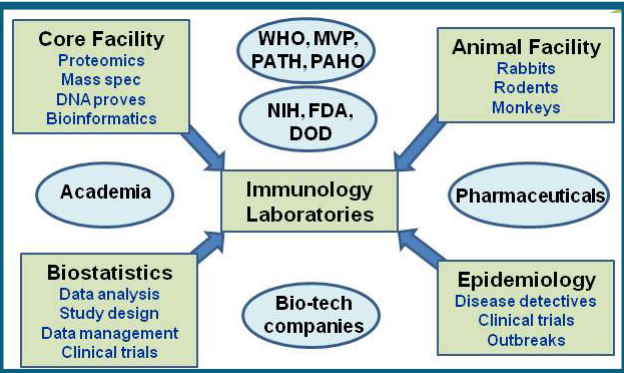


Image: DBD Immunology Laboratories' collaborators

The DBD Immunology Laboratories: From Clifton Road to Africa

CDC's Division of Bacterial Diseases (DBD) Immunology Laboratories integrate laboratory, epidemiologic, and statistical approaches to enhance the diagnosis and surveillance of agents causing respiratory, meningococcal and other priority bacterial infections nationally and globally. The laboratories work to develop, evaluate, implement and improve serologic, immunologic, and molecular biologic methods, techniques and strategies. Partnerships are essential to the laboratories' work, which has impact around the globe. For example:

Focusing on vaccine clinical trials for priority bacterial agents, in collaboration with Atlanta's Emory University Vaccine and Treatment Evaluation Unit, staff are developing correlates of protection that are standardized and validated for application to the evaluation of new and developing vaccines, new diagnostic reagents and methods. Activities include work with hybridomas (cells artificially created by fusion of activated lymphocytes with neoplastic cells) and developing immunizing agents that will be evaluated in animal models to study immunologic mechanisms in disease processes.

An FDA collaboration focuses on assigning immunologic response values to a new standard reference serum used in evaluation and licensure of pneumococcal vaccines worldwide. It will replace the nearly depleted current reference serum. The laboratories are also involved in a project to develop correlates of protection for evaluation of vaccines against pertussis.

Implementing New and Underutilized Vaccines (NUVI) Meeting

Rana Hajjeh, Steve Hadler, Tom Clark and Adam Cohen attended the WHO sponsored Montreux, Switzerland NUVI meeting (June 22-25, 2010) to review the progress and challenges of implementing introduction of new and underutilized vaccines with immunization partners and representatives from regions with low and middle income countries. The meeting focused on progress in introducing pneumococcal conjugate (PCV) and rotavirus vaccines, GAVI financing of new vaccines, new vaccine implementation issues, adapting cold chain and logistics, and integrated approaches to diarrhea and pneumonia control. At this meeting WHO announced prequalification of the new meningococcal A conjugate vaccine (MenAfriVac™) and WHO AFRO presented plans to launch vaccine campaigns in Burkina Faso, Mali and Niger this fall. DBD staff met with staff from regional offices and discussed issues related to introduction of pneumococcal and meningococcal vaccines in the Meningitis Belt. Rana and Adam participated in a retreat prior to the NUVI meeting during which regional immunization officers discussed their specific vaccine introduction issues and relevant updates were presented. *(Please see the DBD Bulletin story "From Clifton Road to Africa" and "Vaccine News – MenAfriVac™" for more on DBD's work on the meningococcal A conjugate vaccine).*

ISSUE

06

SUMMER
& FALL
2010

this issue

Immunology Laboratories P.1

NUVI Meeting P.1

“Get Smart” Goes Global P.2

Communications & Epi-AIDS P.2

Pertussis In California P.3

Meetings, Publications & Awards P.4

As a World Health Organization (WHO) Collaborating Center for Research and Reagents for Human Immunoglobulin Subclasses, the laboratories support global access to vaccines by providing reference materials, standardized protocols, and hands-on training to fellows and guest researchers. The laboratories provide consultation to government agencies, domestic and international collaborators, WHO reference laboratories, vaccine manufacturers, academic institutions and the Pan American Health Organization.

The immunology laboratories are a key partner in the Gates Foundation funded Meningitis Vaccine Project (along with PATH, WHO, the Health Protection Agency and the National Institute for Biological Standards and Control) that helped bring the new low-cost meningococcal A conjugate vaccine (MenAfriVac™) through clinical development to public health availability. DBD's scientists served as one of two international laboratories charged with conducting the immunogenicity studies under a quality management system for the vaccine's regulatory approval. Chief of the DBD Immunology Laboratories, Dr. George Carlone, says, “Our tests on serum from nearly 5,000 study participants aided development of this new vaccine — we are all proud to be a part of this global collaboration that has the potential to save thousands of young children in sub-Saharan Africa.” DBD has worked closely with WHO AFRO and health authorities in Burkina Faso over the past few years on data collection and evaluation and will assist in the country's first national campaign for MenAfriVac™ introduction this fall.

Beyond its ongoing research, the immunology laboratories operate and maintain a quality management system to support vaccine clinical trials and therapeutics evaluation. The laboratories' strong infrastructure enables CDC to provide sound scientific results and stand at the forefront of public health efforts to protect the world's health.

2010 MEETINGS

Summary of highlights from the 7th International Symposium on Pneumococci and Pneumococcal Diseases available: www.path.org/vaccineresources/details.php?i=1010.

Staff from DBD presented at the July 2010 International Conference on Emerging Infectious Diseases in Atlanta. Rana Hajjeh was the co-chair of the scientific program committee and Gina Mootrey was a member of the committee.

RDB Branch Chief Cyndy Whitney participated in CDC's “Strategies for Improving Global Child Survival” Public Health Grand Rounds on July 15, 2010. View and obtain CE credits: www.cdc.gov/about/grand-rounds.

MVPDB presented and participated at the 17th International Pathogenic *Neisseria* Conference (IPNC 2010) held in Banff, Alberta, Canada from September 11-16. Visit: www.ipnc2010.com.

MVPDB presented and participated in the Ninth International *Bordetella* Symposium in Baltimore, MD from September 30 - October 3, 2010. Visit: www.med-school.umaryland.edu/bordetella/.

“Get Smart” Campaign Goes Global

Antimicrobial resistance has been called one of the world’s most pressing public health problems – in part because it knows no borders. Travel and trade can transport resistant bacteria globally. Deaths from acute respiratory infections, diarrheal diseases, measles, AIDS, malaria and tuberculosis account for more than 85% of the mortality from infection worldwide and development of resistance to antimicrobials is a threat for treating almost all of these diseases. Staff in the Respiratory Diseases Branch (RDB) collaborate with policymakers, scientists and communicators around the world to develop and implement specific interventions that support the right way to use antibiotics for upper respiratory infections to cut down on antibiotic use that can lead to resistance.

In Damanhour, Egypt, Lauri Hicks, Medical Director for the Get Smart: Know When Antibiotics Work campaign, and Dr. Adel Mansour with the International Emerging Infections Program (IEIP), are working with local health officials on an antibiotic prescribing and usage study initiated by the U.S. Naval Medical Research Unit (NAMRU). The USAID funded project involves local health care providers, pharmacists and patients. Get Smart campaign experience will be used to guide development and testing of antibiotic use educational materials appropriate for Egypt.

Study investigators hope to find out if the campaign, which has successfully contributed to reducing inappropriate antibiotic use in the U.S., can help other nations achieve similar results.

The Get Smart campaign focuses on educating health care providers and the public that antibiotics should not be prescribed for most upper respiratory infections, like colds and most sore throats, which are caused by viruses. The campaign has been credited with contributing to

a 20% decline in prescribing for these conditions in the U.S.

About the same time Dr. Hicks was meeting with colleagues in Egypt, EIS Officer George Nelson (RDB) joined a 100-year-old pharmacist in the living quarters of his storefront pharmacy halfway around the world in Santa Rosa, Guatemala. Against a backdrop of medicine bottles and posters, the pharmacist described the problems with antibiotic use in his community and talked about customers who asked him to provide antibiotics even though they had no prescription. Unpublished data show that in Guatemala, one quarter of patients hospitalized for respiratory disease report having taken an antibiotic for their illness, and most say they get the drugs from a health facility or pharmacy. The Ministry of Public Health and Social Assistance in Guatemala has a strong interest in ensuring antibiotic use and is partnering with CDC to conduct a study on antibiotic prescribing and dispensing in select areas of Guatemala.



Photo: Courtesy of ECDC. “Take care of your health – Do not abuse antibiotics” Educational Billboard in Malta, during 2009 EU Antibiotic Awareness Campaign coordinated by ECDC

In the fall of 2009, when President Obama signed the U.S.–EU Joint Declaration and Annexes establishing a transatlantic task force on urgent



Photo: NAMRU/IEIP staff in Cairo, Egypt. Left to right: Kinnerly Patel, Maha Talaat, Lauri Hicks (CDC Medical Director for Get Smart), Sharon Daves, and Erica Dueger

antimicrobial resistance issues, CDC’s Get Smart campaign was busy collaborating with the European Centre for Disease Prevention and Control (ECDC) to plan the first joint transatlantic appropriate antibiotic use observance on November 18, 2010. For this observance, more than 30 countries in the European Union will promote appropriate use of antibiotics in hospitals and conduct public education activities. In the U.S., the Get Smart campaign will support a full week of community awareness activities in collaboration with its national public and private partners.

In addition to the collaborations in Egypt, Guatemala, and with ECDC, Lauri Hicks was invited by the governments of France, the Czech Republic and Canada to share her expertise in implementing campaigns for appropriate antibiotic use. Antimicrobial use and resistance were a featured discussion topic during the CDC-hosted International Conference on Emerging Infectious Diseases (ICEID) in Atlanta July 11-14.

To learn more about CDC work in antimicrobial resistance and Get Smart About Antibiotics Week 2010, visit www.cdc.gov/getsmart.

MVPDB Responding To Pertussis In California

The last U.S. pertussis peak was in 2005, when approximately 25,000 cases were reported nationally, including roughly 3,000 cases and 8 deaths in infants younger than 3 months of age in California. On June 17, 2010, the California Department of Public Health (CDPH) declared a pertussis epidemic. An increase had been first noted in late March among patients admitted to a children’s hospital in the state’s Central Valley region. By September 28, more than 4,400 pertussis cases had been reported and 9 infants, all younger than than 3 months of age, had died. This is the most cases reported in 55 years and the highest incidence in 48 years. MVPDB conducted Epi-Aids in the Central Valley region and at the CDPH in Richmond.

To prevent transmission of pertussis to vulnerable infants, those too young to be vaccinated, CDPH is raising community awareness by distributing educational materials and providing clinical guidance. Free tetanus, diphtheria, and acellular pertussis (Tdap) vaccine doses are being made available to birthing hospitals and local health departments to support postpartum vaccination of mothers and close contacts of newborns. American Recovery and Reinvestment Act funding enabled CDPH to implement free Tdap postpartum programs for hospitals, offer free Tdap vaccine to local health jurisdictions and develop community vaccination campaigns.

DBD is providing ongoing technical expertise and support to CDPH. DBD educational materials are being widely distributed, many of which focus on the “cocooning” strategy to help protect young infants by improving Tdap vaccination coverage. Through the division’s collaborative activities within NCIRD, CDC’s key messages about pertussis and pertussis-containing vaccines are widely used by partners and featured in national media coverage.

Outreach strategies, such as communication with partners through the Childhood Immunizations Partner Call, presentations on a Clinician Outreach Communication Activity (COCA) call, and the Immunization Update Webinar for clinicians, supported multi-channel message dissemination. Partners have posted the CDC pertussis link on their websites. Updated information and new products, such as the NCIRD pertussis flyer and Health-e-Cards, are regularly posted on www.cdc.gov/pertussis.

MVPDB staff also continue to work with traditional and

internet based media with assistance from NCIRD’s Health Communication Science Office and CDC’s press office. Examples of proactive media include: a Medscape video on Tdap recommendations with Stacey Martin viewed by more than 30,000 people; a WebMD interview with Tom Clark; syndication of the CDC Spanish language pertussis web



Photo: MVPDB’s Stacey Martin participates in a local media interview after the LA ethnic media round table

feature on the Todobebe.com website; and a text4baby phone text message on pertussis prevention to 3,561 CA subscribers and more than 54,000 national subscribers. National media engagement ranges from the LA Times and Sacramento Bee to the New York Times, CNN and ABC News. In August, Stacey Martin presented at ethnic media round tables hosted by CDPH and CDC in LA and San Francisco; and Tom Clark, Tami Skoff, Fátima Coronado, Jennifer Liang and CDPH’s Gilberto Chavez were interviewed during a 37-station satellite radio media tour targeting CA, SC, OH, MI and upstate NY—all areas showing increased pertussis activity. More than 2.4 million impressions (media exposures) can be tracked to these media activities.

It is too early to determine if 2010 will be a peak incidence year nationally, because even though there have been increased pertussis activity and outbreaks in several states, some states are reporting less activity than at this time in 2009. DBD will continue to provide technical assistance to health departments and partners in response to pertussis activity and outbreaks and work proactively with media and health information providers to ensure that appropriate pertussis prevention messages reach a wide variety of audiences and key informants.

Vaccine News

Edward Jenner Society
The new Edward Jenner Society (aka “The Jenner Society”) will be a professional “home” for academic vaccinologists. Currently, there is no single academic or learned society dedicated solely to the interests of academic vaccinology at the international level: edwardjennersociety.org.

Updated Anthrax Vaccine Recommendations

These recommendations from ACIP update the previous recommendations for anthrax vaccine adsorbed (AVA). Substantial changes to these recommendations include: 1) reducing the number of doses required to complete the pre-event and preexposure primary series from 6 doses to 5 doses, 2) recommending intramuscular rather than subcutaneous AVA administration for preexposure use, 3) recommending AVA as a component of post exposure prophylaxis in pregnant women exposed to aerosolized *Bacillus anthracis* spores, 4) providing guidance regarding preexposure vaccination of emergency and other responder organizations under the direction of an occupational health program, and 5) recommending 60 days of antimicrobial prophylaxis in conjunction with 3 doses of AVA for optimal protection of previously unvaccinated persons after exposure to aerosolized *B. anthracis* spores. MMWR 2010;59(RR-06); 1-30.

MenAfriVac™

In the worst epidemic years, over 200,000 cases of meningococcal meningitis can occur in the African meningitis belt. A new life saving meningococcal A conjugate vaccine (MenAfriVac™) is being made available in Africa for the first time since its licensure in early 2010. Priced at just US\$ 0.40 per dose, MenAfriVac™ is expected to prevent 123,000 deaths over the next ten years across the meningitis belt. Immunizations are already underway in Burkina Faso, Mali, and Niger. Through 2011, it is expected that over 30 million people will be vaccinated with the breakthrough vaccine. Ultimately, over 250 million people will receive the vaccine.

Epi-AIDS & Investigations

Legionellosis outbreak associated with an Air National Guard Base, Michigan – Aug 2010

Statewide epidemic of pertussis - Vaccine program evaluation, California – July 2010

Legionnaires’ disease associated with travel to a hotel, Mississippi – July 2010

Community outbreak of pertussis in the Central Valley of California – May 2010

Welcome New EIS Officers

RDB: Tarayn Fairlie and Katherine Fleming-Dutra
MVPDB: Sara Tartof and Andrew Terranella

COMMUNICATIONS

New conjunctivitis website launched June 2010 at www.cdc.gov/conjunctivitis

New pertussis website launched August 2010 at www.cdc.gov/pertussis

Web features posted recently to CDC’s homepage: GBS, pertussis, conjunctivitis, meningitis

DBD-specific expert video commentaries on Medscape include:

- Pertussis – Recognition and Treatment (Tom Clark)
- Meningococcal Disease – Prevention, Diagnosis, and Management (Henry Wu)
- Pneumococcal Disease in Children – New Immunization Recommendations (Matt Moore)
- With Pertussis on the Rise, Who Needs a Tdap Vaccination? (Stacey Martin)

View commentaries at medscape.com/partners/cdc/public/cdc-commentary. Watch a video about appropriate antibiotic use communication tips with Lauri Hicks to be released on November 8th and one about new Group B Strep guidelines later in the year.

World Pneumonia Photo Exhibition at CDC starting November 8th

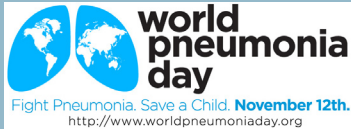
The second annual World Pneumonia Day is November 12th. The premiere showing of the Photoshare World Pneumonia Photo Exhibition was held September 20th at the New York Times Center during the United Nations Summit on the Millennium Development Goals. The exhibition is a collaboration between Photoshare and the International Vaccine Access Center (IVAC) at the Johns Hopkins Bloomberg School of Public Health, in partnership with the Global Coalition against Child Pneumonia with sponsorship provided by Nikon. The personal images and stories captured in the exhibition come from every corner of the world. NCIRD, along with other CDC programs, will host the exhibition at the CDC Public Health Library and Information Center during November. An opening reception will take place at noon on November 8th.

Save the Date!

World Pneumonia Day

November 12, 2010

www.worldpneumoniaday.org



Get Smart About Antibiotics Week

November 15-21, 2010

www.cdc.gov/getsmart



Photo: MVPDB’s Fabien Diomandé and Ryan Novak walk railroad tracks in rural Burkina Faso in sub-Saharan Africa to reach a local vaccination site and deliver the new life saving meningococcal A conjugate vaccine (MenAfriVac™)