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## Director of Galveston National Laboratory presents facts about deadly Ebola virus to BAHEP's Health Care Committee

The World Health Organization announced on Aug. 8, 2014, that the Ebola epidemic in West Africa constituted a public health emergency of international concern. WHO has reported a near doubling of Ebola cases in Liberia, and an estimate from Columbia University projects 30,000 cases by mid-October if conditions in the country deteriorate.

Due to the global implications of the epidemic, it's important for everyone to be informed about the Ebola virus. For that reason, the Health Care Committee of the Bay Area Houston Economic Partnership invited James LeDuc, Ph.D., to speak at its August meeting. He is an expert in public health, particularly infectious diseases caused by viruses. Dr. LeDuc is currently a professor in the School of Medicine and director of the Galveston National Laboratory (GNL) at the University of Texas Medical Branch in Galveston. In addition to the GNL, UTMB is also home to the first full-size BSL-4 (biosafety level) lab located on a university campus in the United States.

### What is Ebola?

Dr. LeDuc went into considerable detail during his PowerPoint presentation. He explained that Ebola is one of the most deadly viruses on earth. It was named for the Ebola River in the Democratic Republic of the Congo where the first outbreak occurred in 1976.

This infectious disease is marked by fever and severe internal bleeding. Ebola has a long incubation period of 8-21 days. Early symptoms include fever, muscle weakness, sore throat and headaches. Currently, it can only be transmitted through contact with blood or body fluids from an infected person.

### Where did it originate?

It is believed that fruit bats living in tropical African forests are natural hosts of the virus. Humans become infected from the blood, organs or bodily fluids of infected wild animals such as chimps, bats, antelope,

and porcupines that are found ill or dead in the rainforest.

Once in the population,



**James LeDuc, Ph.D.**  
Director  
Galveston National Laboratory

the virus is transmitted through close contact with the individual, burial ceremonies, or items saturated with blood.

### Current outbreak is historic

The current outbreak in West Africa is of historic proportions. As of mid August, 55 percent of people contracting the virus have died, although it is safe to say that any statistic regarding the virus changes daily.

Multiple countries are now involved, and the virus has spread to large population centers, including capital cities, making contact tracing and isolation more difficult. The West African health care infrastructure was already delicate, and the Ebola epidemic has had a devastating impact.

### Ebola: Who is at Risk?

According to Dr. LeDuc, anyone who comes in con-

tact with an infected person is at risk. Health care workers, family members, ambulance drivers, and burial team members are especially vulnerable.

There are many complicating factors that make containment of the virus difficult. As mentioned previously, health systems in West Africa are already fragile. There is a lack of staff, money and resources and a high number of transmissions among staff, as well, due to inexperience dealing with Ebola outbreaks.

Cultural issues also play a major role. There is misinformation about transmission.

Many loved ones are cared for at home. Traditional burial practices put families in direct contact with the virus.

### WHO Emergency Committee makes recommendations

The international community is working non-stop toward a cure for Ebola and other deadly viruses. Until one is found, the WHO Emergency Committee has made several recommendations. The recommendations are

many, and they, along with more detailed information about the current state of the Ebola epidemic, can be found on the WHO website at <http://www.who.int/csr/disease/ebola/en/>.

Dr. LeDuc noted the importance of engaging local, religious, traditional leaders and healers to help with stopping the spread of the virus. There must also be a strong supply pipeline established to deliver PPE (personal protective equipment) for health care workers, lab techs, cleaning staff, and burial personnel.

### CDC is on the ground

The Centers for Disease Control & Prevention have team members on the ground in West Africa who are tracing contacts, training local workers, analyzing outbreak information, setting up labs and training diagnostic technicians, and educating people about Ebola. They are also working with airport and border personnel in the areas of logistics, communications, management and support.

### GNL is involved

Through a 2014 Geisbert \$26 million Center Award, the GNL has three core projects that are researching Broad Spectrum Therapeutics Against

Filoviruses such as Ebola and Marburg. Learn more about the GNL at <http://www.utmb.edu/gnl/>.

Dr. LeDuc closed his presentation saying that hundreds of people are working on funded projects to learn more about the pathology of infectious diseases and to develop diagnostics, therapeutics and vaccines. Collaborations are being carried out with dozens of universities both nationally and inter-

nationally. The GNL is working in conjunction with biocontainment labs around the world.

It has become abundantly clear that a virus born in the tropical African forests has deadly implications for the entire planet. An immense undertaking involving education, funded research and international support for those countries embroiled in the epidemic is required to contain Ebola and hopefully, soon, to find a cure.

## Muniz speaks on worldwide depth and breadth of cyber security threat

Spear phishing, ransomware, botnets, certified ethical hackers. These are just a few of the many terms used in cyber warfare that Sergio (Checo) Muniz explained to members of Bay Area Houston Economic Partnership during the organization's September general membership meeting held at Lakewood Yacht Club.

Muniz is president of CyFor Technologies LLC, a BAHEP member and San Antonio, Texas, firm to which he brings over 29 years of leadership experience. Muniz provides subject matter expertise in various areas including cyber, information operations, operations security, critical infrastructure, and intelligence requirements for government and private sector organizations.

He established the Air Force's first Information Warfare Aggressor Squadron and pioneered use of cyber Red Teams to train network defenders and validate IT security capabilities within the Air

Force domain.

Muniz said that although cyber is a new technology, its principles are timeless, and it affects every facet of society.



**Sergio (Checo) Muniz**  
President  
CyFor Technologies LLC

The personal computer has become incredibly valuable, bringing with it great benefits and even greater dependencies. Dependencies create vulnerabilities, he explained, which can be exploited through cyber crime, espionage, cyber terrorism and cyber war.

Muniz stated that intelligence services of foreign governments are relentless, well funded and will not give up. They invest millions of dollars and reap billions in return.

Further down on the scale is cyber crime, which is relatively low risk dealing with monetary and intellectual theft where thousands of dollars are invested to steal millions.

Muniz spoke of computers that have been infected with CryptoLocker, a form of ransomware. Victims' files are encrypted and held "hostage" until a ransom is paid. Approximately \$30 million in ransom payments were paid between September and December 2013. Critical infrastructure, non-government organizations and economic targets (banks, stock exchanges) are also at risk.

Muniz stated that every business should have a game plan as to how it will recover if attacked. He said that the threats are real. They are dangerous, and they may already be present.

Muniz explained that risks must be managed by balancing the risk with available resources. Risk management needs to be part of a company's strategic decision making process as well as part of its investment strategy. He closed by saying that the cyber war can be won, but there is no easy panacea to do so. Threats are never static. The adversary adapts. "Winning" requires constant attention.



**Ebola virus—one of the most deadly viruses on earth**

## Renowned business speaker and 'rock star' joins BAHEP

Book author, renowned business speaker, and a rock star in her own right, Dayna Steele, CEO of Steele Media Services, has joined the Bay Area Houston Economic Partnership.

For almost 20 years, Steele was the First Lady of Houston Rock Radio. On the air, on stage and backstage, KLOL's Dayna Steele rubbed shoulders with and interviewed legions of rock icons. She had a legion of followers, as well, called "Steeleworkers," who made her one of the city's most recognizable media personalities.

BAHEP President Bob Mitchell stated, "We are honored and excited to welcome Dayna Steele as one of our newest members. She has an incredible background which has provided invaluable insight into people and business. Dayna's website featuring a daily success tip reflects this, and we anticipate getting to know her better and working together."

On joining BAHEP, Steele said, "Bay Area Houston has been very good to me - providing me with a 'wonder husband,' a

stellar education for three sons, and 20+ years of the most amazing friends, contacts, and experiences. I look forward to paying that forward with the community through this great organization."

Honored by Billboard Magazine as Local Radio Personality of the Year in 1996, Steele was also in-



**Dayna Steele**  
Steele Media Services

cluded in Talkers Magazine's 100 Most Important Radio Talk Show Hosts and was inducted into the rock radio Hall of Fame.

Readers' Digest Magazine has called her "one of the 35 people who inspire us." Today, Steele is a leading authority on business and success trends including social media, networking and customer service. She consults with Fortune 500 companies and is a popular keynote speaker for companies and universities.

Steele is the author of the 101 Ways to Rock Your World book series, as well.

### Steele working on fifth in a series of books

In 2008 Steele released her first book, "Rock to the Top: What I Learned about Success from the World's Greatest Rock Stars," a combination of memoirs and motivational advice that she learned during her long career. In July 2012, she published her second book, "101 Ways to Rock Your

World: Everyday Activities for Success Every Day." Later that year she created [www.yourdailySUCCESStip.com](http://www.yourdailySUCCESStip.com), a concise, motiva-

tional email designed to help her database of readers jump start their day. The email is based on the success tips from her second book and includes contributions from readers and colleagues.

In late 2013, Steele released her third book, "On the Golf Course: 101 Ways to Rock Your World," based on success in business, life and on the golf course. Her newest book, "Welcome to College: 101 Ways to Rock your World," came out in July 2014, and she's currently working on her next book, "I'm With the Band: Network Your Way into Anything, Anywhere, Anytime."

Steele resides in Seabrook, Texas, and has been married to Dr. Charles Justiz, a corporate aviation safety consultant and author, since 1992. They have three sons.

Sign up for Steele's daily tip at [www.yourdailySUCCESStip.com](http://www.yourdailySUCCESStip.com).

For more information on her presentations and books, go to Steele's website, [www.daynasteele.com](http://www.daynasteele.com), or call 281.738.3254.

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