

INTERNATIONAL SECURITY UPDATE
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1. [Defense Department Leaders Release Holiday Messages](#) (12-22-2014)

By Claudette Roulo
DoD News, Defense Media Activity

WASHINGTON, Dec. 22, 2014 – Defense Department leaders and their spouses have released a series of holiday videos to thank troops and their families for their sacrifices.

“This month, as you gather with family and friends, Lilibet and I want to wish all of you a very Merry Christmas and happy holidays,” Defense Secretary Chuck Hagel said.

“For many of our nation’s military families, the holidays are a joyous time, a time to reunite. But for families who are apart, this time of year is especially hard, and it’s a reminder that our troops aren’t the only ones who serve and sacrifice. Their families do too,” Lilibet Hagel said.

Chairman, Service Leaders Add Their Messages

Army Gen. Martin E. Dempsey, the chairman of the Joint Chiefs of Staff, was joined by his wife, Deanie, and their eight grandchildren in singing “Jingle Bells” for their video message.

“We couldn’t be any prouder of you, and for those of you that won’t be with your families this holiday season, we want you to know that you’re in our thoughts and prayers every single day,” Deanie Dempsey said.

The secretaries of the Army, Navy and Air Force, the sergeant major of the Army, the Air Force chief of staff and the Army vice chief of staff also released their own holiday messages.

To see the leaders’ holiday messages, go to:

https://www.youtube.com/playlist?list=PLhBDPNIKEaZt27puzze1SyKC-rpwQpY_q

“Please know that you have the highest respect and gratitude of all Americans -- especially those of you who are away from your families this holiday season,” Hagel said.

“This is a special time of year for everybody and we know how special it is for you, even though you won’t be -- many of you -- with your families,” the defense secretary said in a second holiday message directed especially at troops deployed around the world.

2. 3 U.S. Cabinet Members: New Cuba Policy Looks Forward, Not Back (12-21-2014)

The following op-ed by Secretary of State John Kerry, Commerce Secretary Penny Pritzker and Treasury Secretary Jacob Lew appeared in the Miami Herald on December 20.

President Obama's New Cuba Policy Looks Forward, Not Back

By John Kerry, Penny Pritzker and Jacob Lew

President Obama’s decision to begin normalizing relations with Cuba will advance United States’ interests and those of the Cuban people. The 11 million people of this island nation have waited far too long — over half a century — to fulfill their democratic aspirations and build closer ties with the rest of the world in the 21st century. Our new U.S. policy on Cuba reflects the reality that past policies — although well-intentioned — no longer suit today’s situation. The president’s announcement reflects a historic turning of the page on enmities born of a different era and toward a brighter and more promising future.

Early in his administration, the president took steps to ease restrictions on Cuban-American visits and remittances that opened new pathways for family reunification — and later expanded this to include religious, academic and cultural exchanges for all Americans. Last week’s decision builds boldly on those initial measures and will increase communications, commerce and travel between our two countries. The State Department will lead discussions to restore regular diplomatic relations with Cuba for the first time since 1961 and re-establish an embassy in Havana. In our bilateral discussions, the United States will seek to advance cooperation on issues of mutual interest, including counter-narcotics, migration, combating trafficking-in-persons, the Ebola crisis and shared environmental challenges.

The president has made clear that a critical focus of these actions will include continued strong support for improved human-rights conditions and democratic reforms in Cuba. The promotion of democracy supports universal human rights by empowering civil society and supporting the freedom of individuals to exercise their freedoms of speech and assembly. For these reasons, we welcome Cuba’s decision to release more than 50 political prisoners, expand Internet access for Cuba’s citizens and allow better human-rights monitoring by the International Red Cross and

United Nations. Our firm support for progress in these areas will be unwavering, and we will continue to implement programs to promote positive change in Cuba.

As Albert Einstein said long ago, it's just not rational to continue doing the same thing in the expectation of obtaining a different result. Since U.S.-Cuban relations were frozen, the world has been transformed; the Cold War ended a quarter century ago. Over time the U.S. effort to isolate Cuba began to have the reverse effect of isolating the United States especially in the Western Hemisphere. Meanwhile, Cuban leaders used our stance as a source of propaganda, to justify policies that have no place in the 21st century. It has been an open secret that the relationship has been in a rut that benefits no one on either side. The time has come to cease looking backward and to begin to move forward in the interests of both freedom-loving Cubans and the United States.

What, specifically, has the president decided to do?

First, he has authorized U.S. officials to expand travel, increase remittances and grow bilateral trade. To facilitate this and ensure proper oversight, the Treasury Department will also make banking easier and allow the use of U.S. debit and credit cards in Cuba. In addition, it will strengthen the monitoring and transparency of financial flows between the United States and Cuba by allowing American financial institutions to open correspondent accounts at Cuban banks. One effect of all of the changes will be to increase the ability of Americans to provide business training and other support for Cuba's nascent private sector, which already includes 500,000 employees. In this regard, the Commerce Department will ease current export limits on a variety of products that would help Cuban small businesses grow such as construction firms, agricultural companies, automobile repair and others.

Second, the president's decision will support new efforts to tear down the digital wall that isolates Cubans. The country has an Internet penetration rate of 5 percent, among the lowest in the world. Prices are high, and services are limited. Under the new policy, we will permit the sale of technology that will begin to unleash the transformative effects of the Internet on the island.

Third, the president has ordered reforms in the application of U.S. sanctions to Cubans in third countries.

Fourth, the president has asked the State Department to review Cuba's designation as a state sponsor of terrorism to ensure that any such designation is guided entirely by the facts and law.

All this is in addition to the start of talks aimed at the restoration of normal diplomatic relations. Next month, Assistant Secretary of State Roberta Jacobson will lead the U.S. delegation to the next round of U.S.-Cuba Migration talks, and the Commerce Department will lead a business delegation to the country in the coming months. In the spring, President Obama will travel to Panama for the 2015 Summit of the Americas, where we are encouraging full participation by representatives of Cuban civil society. Meanwhile, the United States has welcomed home USAID subcontractor Alan Gross, who was wrongfully jailed in Cuba for more than five years, and also an American intelligence agent who had been imprisoned for two decades.

President Obama's announcement last week is forward-looking and emphasizes the value of people-to-people relations, increased commerce, more communications and respectful dialogue. It will enhance our ability to have a positive impact on events inside Cuba and to help improve the lives of the Cuban people. It will put American businesses on a more equal footing. And it will enhance the standing of our own country in the hemisphere and around the world.

3. Obama Orders Trade Ban on Crimea for Russian 'Occupation' (12-20-2014)

By VOA News

This article was originally published on the [Voice of America website](#) on December 19.

Washington — President Barack Obama has imposed a wide-ranging trade ban on the Russian-annexed Crimea Peninsula, with an executive order that bars exports of key U.S. goods and services and blocks Crimean imports.

A White House statement Friday said the order is “intended to provide U.S. clarity to American corporations doing business in the region.” It also said it aimed to demonstrate that Washington “will not accept Russia's occupation” of Crimea.

The ban includes sanctions on 24 individuals and companies identified as contributing to unrest in eastern Ukraine.

The Russian parliament voted in April to annex the region, despite protests from the European Union and Washington.

The U.S. measures follow similar moves made this week by the European Union and Canada.

Obama on Thursday signed into law a bill authorizing additional sanctions against Moscow for its support of the ongoing pro-Russian rebellion in eastern Ukraine. He said the legislation, known as the Ukraine Freedom Support Act, gave his administration additional flexibility to impose new measures against Moscow “if circumstances warranted.”

The law also authorized \$350 million in lethal and nonlethal military aid to Ukraine, including anti-tank weaponry, munitions and surveillance drones.

The Russian Foreign Ministry, in a statement Friday, described Moscow as “deeply disappointed” in the U.S. law, calling it “unacceptable and provocative.”

4. President Signs National Defense Authorization Act (12-19-2014)

DoD News, Defense Media Activity

WASHINGTON, Dec. 19, 2014 – President Barack Obama today signed the annual legislation that keeps the Defense Department running.

The "Carl Levin and Howard P. 'Buck' McKeon National Defense Authorization Act for Fiscal Year 2015," Obama said in a written statement, “will provide vital benefits for military personnel and their families, as well as critical contingency authorities needed to counter the Islamic State of Iraq and the Levant and to respond to emerging needs in the face of evolving terrorist threats and emergent crises worldwide.”

The full text of the White House statement follows:

Today I have signed into law H.R. 3979, the "Carl Levin and Howard P. 'Buck' McKeon National Defense Authorization Act for Fiscal Year 2015." I have signed this annual defense authorization legislation because it will provide vital benefits for military personnel and their families, as well as

critical contingency authorities needed to counter the Islamic State of Iraq and the Levant and to respond to emerging needs in the face of evolving terrorist threats and emergent crises worldwide.

Earlier this month, the Department of Defense transferred the last remaining third-country nationals held in U.S. custody in Afghanistan, ending U.S. detention operations in Afghanistan. Yet halfway around the world, the detention facility at Guantanamo Bay, Cuba, remains open for the 13th consecutive year, costing the American people hundreds of millions of dollars each year and undermining America's standing in the world. As I have said many times, the continued operation of this detention facility weakens our national security by draining resources, damaging our relationships with key allies and partners, and emboldening violent extremists. Closing the detention facility is a national imperative.

I have repeatedly called upon the Congress to work with my Administration to close the detention facility at Guantanamo once and for all. Individuals from across the political spectrum have recognized that the facility should be closed. But instead of removing unwarranted and burdensome restrictions that curtail the executive branch's options for managing the detainee population, this bill continues them. Section 1032 renews the bar against using appropriated funds to construct or modify any facility in the United States, its territories, or possessions to house any Guantanamo detainee in the custody or under the control of the Department of Defense unless authorized by the Congress. Section 1033 likewise renews the bar against using appropriated funds to transfer Guantanamo detainees into the United States for any purpose. The Consolidated and Further Continuing Appropriations Act, 2015, contains similar provisions as well as those relating to existing restrictions on the transfer of detainees abroad. I have consistently opposed these restrictions and will continue to work with the Congress to remove them. More than 80 percent of detainees at one time held at the detention facility have now been transferred. The executive branch must have the flexibility, with regard to those detainees who remain, to determine when and where to prosecute them, based on the facts and circumstances of each case and our national security interests, and when and where to transfer them consistent with our national security and our humane treatment policy. Under certain circumstances, the provisions concerning detainee transfers in both bills would violate constitutional separation of powers principles. In the event that the restrictions on the transfer of detainees operate in a manner that violates constitutional separation of powers principles, my Administration will implement them in a manner that avoids the constitutional conflict.

Related Articles:

[Hagel Welcomes Defense Authorization Act, Calls for 'More Predictable Budgets'](#)

5. Hagel Authorizes Up to 1,300 Additional Troops to Deploy to Iraq (12-19-2014)

By Air Force Tech. Sgt. Jake Richmond
DoD News, Defense Media Activity

WASHINGTON, Dec. 19, 2014 – Up to 1,300 more U.S. troops, including approximately 1,000 soldiers from the Army's 82nd Airborne Division, will begin to deploy to Iraq in late January, Pentagon Press Secretary Navy Rear Adm. John Kirby said today.

“Their mission will be to train, advise and assist Iraqi security forces,” Kirby told reporters at a Pentagon briefing. “This deployment is part of the additional 1,500 troops that the president authorized in November.”

The roughly 300 troops who are deploying in the same timeframe as the 82nd Airborne group will be from multiple services, the admiral said. Their contributions will be in “largely enabler capabilities,” Kirby added.

Changes in Location, Not Mission

“What makes this deployment different is simply the geography,” Kirby explained. The advising teams will operate in the Anbar area and north of Baghdad, he said.

Kirby added, “But they're still going to be on a base and advising and assisting at the same higher headquarters level, like the 12 teams that are already there are doing.”

While the American troops will be interacting directly with Iraqi troops, the admiral emphasized that those interactions will be occurring in a training environment and not out in the field.

The overall mission is still designed around training 12 Iraqi brigades, including nine from the Iraqi security force and three from the Peshmerga, Kirby said.

Role of Airstrikes

While the training mission is ongoing, the U.S. military continues to conduct airstrikes at an appropriate pace and with an appropriate sense of precision and urgency, Kirby said.

“It's twofold,” he said. “It's to go after them where we know we can and we should, but also to support Iraqi security forces on the ground.”

Kirby mentioned a “big spike” in airstrikes against the Islamic State in Iraq and the Levant over the last week.

“That was to help prepare the Peshmerga for the operations that they conducted around Mount Sinjar, which, while they're still ongoing, have proven to be promising, so far,” he said.

“It's not just a matter of more or less,” the admiral added. “It's got to be appropriate to the threat and to the operations on the ground.”

Related Sites:

[Special Report: Operation Inherent Resolve - Targeted Operations Against ISIL Terrorists](#)

6. Coalition Will Defeat ISIL, Task Force Commander Says (12-18-2014)

By Army Sgt. 1st Class Tyrone C. Marshall Jr.
DoD News, Defense Media Activity

WASHINGTON, Dec. 18, 2014 – The strength of the 40-plus nation coalition fighting the Islamic State of Iraq and the Levant ultimately will defeat the terrorist group, the commander of Combined Joint Task Force Operation Inherent Resolve said here today.

Army Lt. Gen. James L. Terry provided an operational update to Pentagon reporters.

“The fact that we have so many nations united in this mission, I think, is really significant,” he said. “Various countries will contribute national capabilities on different timelines. The strength of this team is in our common purpose, and what unites us is a strong resolve to combat this threat.”

Three Foundational Priorities

The general described the combined joint task force's three foundational priorities.

"First, we will contribute to build and maintain the coalition," he said. The task force provides an organizing framework to synchronize and integrate capabilities and amplify the efforts of 40-plus nations, which provides strategic advantage, Terry explained.

"Second," he said, "as a coalition, we will relentlessly pursue Daesh in order to degrade and destroy its capabilities and defeat their efforts." Daesh is a name for the terrorist organization that's based on an Arabic acronym and is the preferred term among Arab nations in the coalition.

As of today, 1,361 airstrikes have been conducted, and two nights ago, 53 precision strikes supported Iraqi security force operations around Sinjar and Zumar, resulting in those forces regaining about 100 square kilometers of ground, Terry said.

"Combined efforts like these," he added, "are having a significant effect on Daesh's ability to command and control, to resupply, and to conduct maneuvering."

The coalition will continue to be persistent in striking the terrorists at every possible opportunity, Terry said, while working to deny them safe haven and sanctuary. This, he added, will be done through precision strikes and by enabling partners to expand their footprint and influence and to remove the opportunities for the terrorists to manipulate youth, harm citizens, deny basic services and recruit fighters.

The key, Terry said, is assisting the Iraqi government in improving the country's security forces, which he said are regaining their confidence and proving more capable every day. Iraqi forces have retaken many critical areas, such as Mosul Dam, Haditha, Rabiya and Zumar, he noted.

The final priority, the general said, is the coalition enabling regional partners as part of a broader diplomatic, intelligence, military and economic effort.

"Iraqi security forces must be a capable force -- one that can restore Iraq's sovereign borders, retake territory from Daesh and secure the Iraqi people," Terry said. "An offensively minded and trained security force, backed by an inclusive government of Iraq, is the key to future stability."

Additional U.S., Coalition Troops

Terry said an additional authorization for 1,500 U.S. personnel has been approved, and that they will serve in noncombat roles supporting additional advise-and-assist requirements and the effort to build partner capacity.

"In addition, we anticipate coalition contributions that should produce at least an additional 1,500 personnel in these efforts," he said.

"We're seeing initial successes in this fight," Terry said, adding that the terrorists have been halted in transitioning to the defense and are attempting to hold what they currently have. This, he said, may result in some local counterattacks.

The challenges that lie ahead will require patience, Terry said.

“The government of Iraq understands the great threat they face, and they are resolved to defeat it,” he told reporters. “The combined joint task force represents ... a new chapter of what I assess will be a successful campaign to bring the coalition’s power to bear and, ultimately, lead to the defeat of Daesh.”

Biographies:

[Army Lt. Gen. James L. Terry](#)

Related Sites:

[Special Report: Operation Inherent Resolve - Targeted Operations Against ISIL Terrorists Transcript](#)

7. U.S. Stands with Pakistanis, Afghans Against Taliban (12-18-2014)

By Jim Garamone
DOD News

This article originally appeared on the Defense Department website on December 16.

Washington — The United States condemns the deadly Taliban attack on a Pakistani school and remains committed to bringing stability to the Afghanistan-Pakistan region, U.S. Navy Rear Admiral John Kirby said December 16, emphasizing that the end of the NATO combat mission does not mean an end to U.S. involvement in the region.

The attack on the school in Peshawar is the latest manifestation of the savagery of the Taliban, Kirby said, noting that Pakistan remains a front-line state in the battle against terrorism and extremists and has suffered major casualties in the struggle against the Taliban. While U.S.-Pakistani relations have been rocky at times over the past decade, both countries share the fight, the admiral said, and today’s terrorist attack will not change that.

“I think we have certainly made it clear to Pakistan that we’re willing to help in the wake of this attack should they want or need any,” the admiral said. “There’s been no request for U.S. assistance. But we’ve certainly made it obvious that we’re willing to assist in any way we can.”

The attack on the school killed more than 140 children and teachers.

Across the border in Afghanistan the mission will change, Kirby said, but American and partner nations will continue their commitment to Afghan stability.

With Afghan forces now in charge of security, reporters asked Kirby whether they would be able to defend against an attack like the one in Pakistan. “The Afghan national security forces are very capable,” Kirby said. “They are already leading security operations in their country, and for all intents and purposes, are ... conducting all the combat missions inside Afghanistan.”

Afghan forces secured both national elections this year, and while there has been an upsurge in violence in Kabul, Afghan forces have handled the situations well, he noted. Officials expected the recent spate of Taliban attacks inside the capital as the NATO mission transitions. Kirby said the attacks are a Taliban tactic to “divert attention from the fact that real progress has been made and that Afghanistan is a more safe and secure environment than it was even just six months ago.”

Afghanistan is still a dangerous place, the admiral said, but no one is walking away from it.

Related Transcripts:

[Department of Defense Press Briefing by Rear Adm. Kirby in the Pentagon Briefing Room](#)

8. Obama Charts New Course on Cuba Policy (12-17-2014)

Washington — “We will end an outdated approach that ... has failed to advance our interests,” President Obama said in a televised address December 17 announcing a major shift in U.S. relations with Cuba.

The United States is taking historic steps to chart a new course in relations with Cuba and to further engage and empower the Cuban people, the president said, because decades of U.S. isolation from Cuba have failed to promote development of a democratic, prosperous, stable Cuba.

“Through these changes, we intend to create more opportunities for the American and Cuban people, and begin a new chapter among the nations of the Americas,” Obama said.

Measures announced December 17 to promote change in Cuba that is consistent with U.S. support for the Cuban people include re-establishing diplomatic relations with Cuba and eventually opening an embassy in Havana.

The announcement came in the wake of the release of Alan Gross, an American imprisoned in Cuba for five years, and a U.S. intelligence agent who was imprisoned in Cuba for more than 15 years.

The United States plans to adjust regulations issued by the departments of Commerce and Treasury, particularly those affecting travel and remittances. The United States also will facilitate expanded travel under the 12 categories of travel to Cuba already authorized by U.S. law and plans to raise limits on remittances to Cuba from \$500 to \$2,000 per quarter (except to certain officials of the government or the Communist Party).

In addition, the United States intends to authorize expanded commercial sales and exports from the United States of certain goods and services. The United States also will allow American citizens to import additional goods from Cuba, and will facilitate authorized trade and financial transactions between the United States and Cuba.

New efforts to increase Cubans’ access to communications and their ability to communicate freely, especially via telephone and Internet, will be a U.S. priority, the president said.

The United States plans to update the application of Cuba sanctions in other countries by allowing U.S.-owned or -controlled entities in third countries to provide services to, and engage in financial transactions with, Cuban individuals in third countries.

The United States will also pursue discussions with the Cuban and Mexican governments on unresolved issue of maritime boundaries in the Gulf of Mexico.

Other steps include initiating a review of Cuba’s designation by the State Department as a state sponsor of terrorism and addressing Cuba’s participation in the 2015 Summit of the Americas in Panama.

The United States maintains an unwavering commitment to democracy, human rights and civil society in Cuba, Obama said.

The United States will continue to press Cuba on issues related to democracy and human rights, the president stated. "But I believe that we can do more to support the Cuban people and promote our values through engagement."

The U.S. Congress funds democracy programming in Cuba to provide humanitarian assistance and promote human rights and fundamental freedoms. The United States also supports the free flow of information in places where it is restricted and censored. The new U.S. Congress, which convenes in January, will need to address legislation that affects the U.S.-Cuban relationship.

The Obama administration will continue to implement U.S. programs aimed at promoting positive change in Cuba and will encourage reforms in its high-level engagement with Cuban officials, Obama said.

The United States encourages all nations and organizations engaged in diplomatic dialogue with the Cuban government to take every opportunity both publicly and privately to support increased respect for human rights and fundamental freedoms in Cuba.

In advance of the announcement, Obama spoke by telephone with Cuban President Raul Castro. It was the first conversation between U.S. and Cuban leaders in more than five decades.

At the same time as Obama made his announcement, Castro was making a similar address to the Cuban people. According to news reports, it triggered the pealing of church bells all over Cuba.

The shift in U.S. policy toward Cuba "comes at a moment of renewed leadership in the Americas," Obama said. "This April, we are prepared to have Cuba join the other nations of the hemisphere at the Summit of the Americas."

The United States "will insist that civil society join us so that citizens, not just leaders, are shaping our future," Obama said, calling on his fellow leaders in the Americas "to give meaning to the commitment to democracy and human rights at the heart of the Inter-American Charter.

"Let us leave behind the legacy of both colonization and communism, the tyranny of drug cartels, dictators and sham elections. A future of greater peace, security and democratic development is possible if we work together — not to maintain power, not to secure vested interest, but instead to advance the dreams of our citizens."

9. Army Scientist Uses Diagnostic Tools to Track Viruses (12-17-2014)

By Cheryl Pellerin
DoD News, Defense Media Activity

FORT DETRICK, Md., Dec. 17, 2014 – An Army virologist using diagnostic tools found traces of Ebola virus in patient samples in West Africa -- a region thought to be untouched by the disease -- seven years before the largest, deadliest Ebola outbreak took the world by surprise in Guinea, Liberia and Sierra Leone.

The traces he found were antibodies, made by the body's immune system and very specific to each invader, like Ebola virus, that enters the bloodstream, blood plasma, blood serum and other body fluids.

Dr. Randal J. Schoepp is chief of the Applied Diagnostics Department in the Diagnostic Systems Division at the U.S. Army Medical Research Institute of Infectious Diseases, or USAMRIID, here.

He recently returned from Liberia and Sierra Leone, where he spent twelve weeks helping to set up an Ebola testing lab and training local personnel to run Ebola diagnostic tests on clinical samples. Schoepp is part of a USAMRIID team that has been in West Africa since March.

Building Host-country Capacity

“My interest has always been arthropod-borne diseases -- in other words, mosquito-borne and tick-borne viruses, and hemorrhagic fever viruses,” Schoepp said during a recent DoD News interview at USAMRIID.

In 2006, Schoepp was working in Sierra Leone at the Kenema Government Hospital in Eastern Province, helping a collaboration of USAMRIID and Tulane University scientists who were there to develop and refine Lassa fever diagnostic tests and build host-country diagnostic capacity.

Lassa is a hemorrhagic fever illness that occurs in West Africa and is hyperendemic in Sierra Leone, Liberia and Guinea, meaning its incidence is high and continuing. The number of West African Lassa virus infections is 100,000 to 300,000 a year with about 5,000 deaths, according to the Centers for Disease Control and Prevention.

“One reason I was interested in Sierra Leone is because, for those of us who work with hemorrhagic fevers ... this is the only place you can study them because you know they’re going to show up and you know where they’re going to be,” the virologist said.

At the Sierra Leone study site, Schoepp and his colleagues were testing their diagnostics and working to build diagnostic capacity for the country.

Detecting the Virus

The scientists were testing samples of blood plasma and blood serum using immunodiagnostics, or diagnostic tests that “use antibodies to detect the actual virus or virus products, or antibodies that result from infections with those viruses,” Schoepp explained.

On the other side of the diagnostics house, the virologist said, is testing by polymerase chain reaction technology to look for genomic material.

“PCR is exquisitely sensitive, very specific. That's a really good thing when you know what's there. When you don't know what's there it can be misleading, because if what's in the area doesn't match exactly, you'll get a false negative,” he said.

“Immunodiagnostics are not nearly as sensitive as PCR, but they have a broad specificity, so you pick up all kinds of genetic variants and related viruses,” Schoepp said, adding that using both kinds of diagnostics at the same time is a perfect system “if you go into an area and you don’t know what’s going on.”

He added, “In this time of molecular, hurry up, fast, fast, fast, immunodiagnosics has fallen out of favor because it's time consuming, laborious and the reagents are difficult to make. But they're very useful, and in certain situations they're vital.”

Diagnosing Lassa in Sierra Leone

As the work continued in Sierra Leone, the scientists found that, of the 500 to 700 samples a year submitted to the Kenema Government Hospital Lassa Diagnostic Lab from Sierra Leone, Liberia and Guinea, only 30 percent to 40 percent were actually Lassa. Schoepp said he got interested in the 60 percent to 70 percent that weren't Lassa.

The aim of his study, he explained, was to find out which other viruses caused serious illnesses in the region and to help medical and technical personnel there learn how to detect the illnesses.

The samples Schoepp looked at already had been screened for Lassa and malaria, and he and his colleagues ended up with about 400 samples, taken from 2006 to 2008, that represented 253 patients, he said.

In these samples he looked for other arthropod-borne viruses -- “dengue, Rift Valley fever, West Nile virus, yellow fever virus, all the ones you would expect to see in Africa,” he said -- as well as hemorrhagic fever viruses such as Crimean Congo hemorrhagic fever, Marburg, Ebola and others.

Looking For Lassa, Finding Ebola

Out of all that, he said, the most significant finding “was that 8.6 percent of the samples had the earliest antibodies to Ebola,” called immunoglobulin M, or IgM, antibodies.

IgM is the first antibody to be made by the body to fight a new infection, Schoepp said, “so if you find IgM antibodies it tells you that you're very close to the original infection.”

Looking further into the Ebola antibodies with the plaque reduction neutralization test, which many scientists consider the “gold standard” for detecting and measuring antibodies that can neutralize many disease-causing viruses, Schoepp saw that most of the Ebola antibodies were against the Zaire strain.

Ebola Zaire is the most virulent of the virus's five strains, Schoepp said, and the one that is now causing the West African outbreak.

In a region supposedly untouched by Ebola except for a single case of the Tai Forest strain reported in Cote d'Ivoire in 1994, Schoepp said, this was big news that at the time could have been unwelcome in the three countries.

Medical Diplomacy

“I spent over a year going back to Sierra Leone, talking to the regional medical officers, talking to the ministry, making them understand that this is what we found,” in a careful process of medical diplomacy, Schoepp said.

Afterward, in August 2013, he submitted a scientific paper about the West African Ebola finding to CDC's Emerging Infectious Diseases journal. After nearly a year and reviews by two sets of scientists, the final reviewer told Schoepp, “I don't believe there is Ebola virus in West Africa.”

A week later, Schoepp said, the West African Ebola outbreak was announced to the world and, after an email from Schoepp to the journal editor, “Undiagnosed Acute Viral Febrile Illnesses, Sierra Leone,” was published in July 2014.

“To me, it means that there is more Ebola out in the world than you would know by past outbreaks or by other evidence,” Schoepp said, discussing the paper’s results. “If you look for it, you have a very good chance of finding it.”

Diagnostics, he added, is the basis of everything.

“We set the stage for others to come in and do their therapeutics, their antivirals, their vaccines,” Schoepp said. “Knowing what's there is one thing, and being able to do something about what's there is another thing. So diagnostics gives the epidemiologists, immunologists and the therapeutic people something to do.”

In a time when globalization spreads diseases farther and faster than ever, Schoepp said, it’s a good time to be a virologist.

“Every time you think everything has happened, severe acute respiratory syndrome pops up or Middle East respiratory syndrome-corona virus pops up or Ebola pops up,” he said, adding that he often describes a virologist as being like a fireman.

“Somebody says ‘fire’ and a fireman runs toward it,” Schoepp said. “Somebody says ‘disease’ and a virologist runs toward it.”

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