

February 2016

# CBRNE

# NEWSLETTER TERRORISM

E-Journal for CBRNE & CT First Responders



## PART I



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February 2016

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## Editorial

Brig Gen (ret'd) Ioannis Galatas, MD, MA, MC

*Editor-in-Chief*  
CBRNE-Terrorism Newsletter



*Dear Colleagues,*

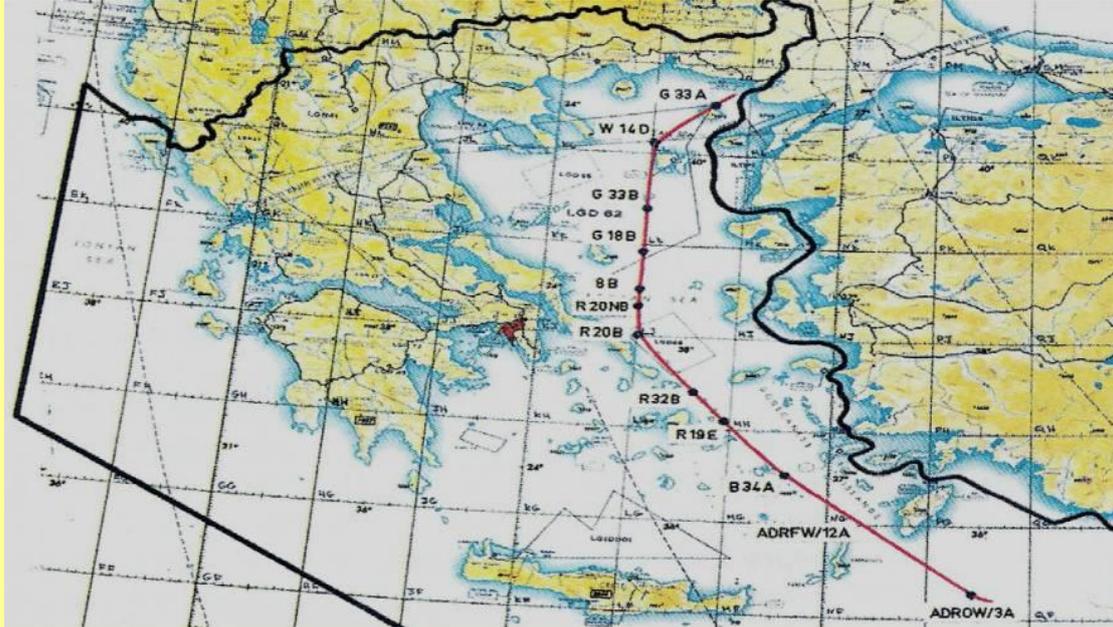
February 2016 – the second month of 2016: a copy & paste of previous months regarding human interactions, respect of life and unspoken ambitions planet-wide...

Key remarks noted:

- Difficulties in human age determination – especially when crimes are committed from illegal immigrants (rapes, murders, sexual harrashments (e.g. just under Eiffel Tower or Carnival days)
- A 10 years old boy was raped by an immigrant in a Vienna pool. Police played the duck not to upset sleeping Austrians.
- Gradual spread of Zika virus in Latin America – few cases in other parts of the word as well. Will Zika threaten 2016 Olympic Games in Brazil?
- Five months left for Rio2016 – still not a single word on health/medical/hospitals CBRNe preparedness!
- British Admiral warned on possible future (?) cruise ships terrorism in Medeterrhanean Sea – as always we will deal with this threat just after the first incident will be recorded. Why spending money for “exotic” threats when we can pay double in the aftermath of an “unexpected” attack?
- There has been some time with no airplane hijacking. Should we worry about this?
- Barrage of bomb threats to multiple schools in the UK, France and Australia
- Turkey asks additional 2 bil euro to counter immigration flow towards Europe or else...
- Head of European Eurosceptics: “Shoot the illegal immigrants!” – thanks God we still have geniouses in our continent!
- Sweden will send 80,000 immigrants back to their home; Finland will follow with 20,000
- At first two jihadists were arrested on the Northern Greece city of Alexandroupolis; one more in the same area with an RV full of ammo – all heading to Syria via Turkey to meet their species
- Angry citizens attacked junior immigrant gangs that occupied Stockholm’s Central Railway Station – mainstream media wrote citizens were racists and left-right nationalists...
- Brexit pool: 42% YES; 38% NO – what will happen to poor Europe without the islanders?
- 177,000 Swedish passports were lost!
- Greek Army will construct/support immigrants “hot spots” – new duties for enlisted personnel! Perhaps this is the “progress” we are waiting for. I hope they also provide “very fast Internet” (top immigrants’ request – not like German hot spots) and “prope” food (famous “Greek souvlaki” has not chance to become global!)
- In 2016 – and so far – more than 62,000 refugees and illegal immigrants entered Greece. We do not use the word “illegal” anymore; instead they are “irregular” immigrants (that happened to illegally transpassed Greek borders)
- European security authorities keep on arresting people trying to travel to Syria and join jihad – let them go, but do not let them come back! Nations will save money and personnel dedicated to wathc them while in their countries.



- NATO fleet will patrol in the Aegean Sea (Greece) in an effort to stop immigration tsunami. LOL! “Operation Sophia” was named after the name given to a little girl born on board a little boat transferring refugees from Turkey to Greece! (Sophia in Greek means “wisdom”). In the meantime



between 16 and 19 of February 2016, more than 13,000 immigrants reached Greek territories... The tiny Greek Island of Kastelorizo was “invaded” by refugees: 250 citizens vs. 900 refugees! Turkey is not playing by the book and only interested to patrol in half the Greek Aegean Sea – or is it all the Aegean Sea?

- FYROM closed its borders for non Iraqi/Syrian refugees. As a result remaining illegal immigrants were trapped to Greece! But we had a deal not to close borders – well who give a S for agreements! Austria is gradually becoming an enemy supporting all immigrants-related action against Greece. Why?
- EUROPOL warns that 3,000-5,000 jihadists returned to Europe mixed with refugees! German newspaper Bild am Sonntag warns that 150,000 illegal immigrants from Libya are preparing to move to Europe following the Balkan route via Greece – strange: why not via Italy?
- Russia and US agreed on a Syria truce and elections planned for April 13<sup>th</sup> – but many did not like this effort for peace...
- Pauline Cafferkey, the British nurse who contracted Ebola in West Africa in 2014, is being transferred to the specialist unit at the Royal Free hospital in London for the third time since her return to the UK. Cafferkey, 39, who is said to be in a stable condition, was initially admitted to Glasgow’s Queen Elizabeth University hospital and on Tuesday afternoon an RAF aircraft landed at Glasgow airport to transport her to London. The reappearance of the Ebola virus in Cafferkey’s brain causing meningitis in October was described as unprecedented. Jonathan Ball, a professor of molecular virology at the University of Nottingham, said it was the first case he knew of where Ebola had been associated with life-threatening complications so many months after an initial recovery.
- In Greece thousands of farmers and white collars (not the bad ones; the good ones) are massively demonstrating against current suffocating situation in the country. So what? The good (first time) left government will sign what is best for them without them! This is democracy stupid! But the overall situation resembles a volcano about to explode – as Ernesto Che Guevara quoted “if you tremble with indignation at every injustice then you are a comrade of mine.” Coming months will reveal how the volcano will behave.
- A new problem arose due to farmers’ blockade of national roads: Buses carrying illegal immigrants and refugees to Oidomeni cross border (with FYROM) are not allowed to go through and this will bring classes between the two parties – and they won’t be nice!



Certain readers commented that my comments are a bit bitter or out of line. Perhaps they are right although I try to be as polite as possible. To be honest, I get pissed when articles published in open sources think that we are either stupid or live in another planet. Objectivity is becoming a rear quality and covert propaganda is growing fast. I am still confident that first responders in the field and not behind desks and closed doors still have the ability to connect the dots and use their brains to make their own estimates about how things are both in front and behind lines.

In this issue of the Newsletter a “Special Collection” dedicated to “Cruise Terrorism” has been included. Just in order to remind our reading audience that it happened in the past and it can happen again!

Until next month – take care First Responders!

*The Editor-in-Chief*



## Bach says Rio games will counter terror, scandals

Source: <http://sports.yahoo.com/news/bach-says-rio-games-counter-terror-scandals-175544058--oly.html>

Jan 25 – Six months before the start of the Rio Olympics, IOC president Thomas Bach believes the summer games will be the perfect antidote to recent terror attacks and corruption scandals.



"The Olympic Games is the only event that brings together the entire world under one roof without any discrimination," Bach told German magazine Kicker, in an edition due to appear on Monday.

"Sport is the only real area of human life where there truly is equal rights for all."

After the recent terror attacks and corruption scandals, in football and athletics, Bach says sport demonstrates a unity rarely seen in economics, culture or science and "I don't even want to talk about politics", he added.

The 62-year-old German president of the International Olympics Committee says the Olympics movement has stolen a march in Brazil, compared to the World Cup finals of 2014, which were also hosted by the South American nation.

The football tournament's organizing committee was criticized for a lack of sustainability after building expensive stadiums and airports especially for the tournament.

"We see that those responsible and the Brazilian population has realized the Olympics are part of the solution, not the problem," said Bach.

"In football, we talk about stadiums and airports, with the Olympics we provide housing for thousands of people."

Despite organizers of the Rio Olympics having faced immense economic problems, Bach remains confident the 2016 Games will be a success, when they start on August 5.

"We all know that the political and economic circumstances in Brazil are very, very difficult and the country is in deep crisis," said Bach.

"But the construction work is largely complete and we are confident of experiencing an outstanding Olympic Games."

Bach criticized former IAAF president Lamine Diack, who stood down as world athletics boss in August before being charged with corruption by French judges, accused of making millions from bribes during his 15-year tenure.

But Bach was unclear whether or not Russian athletes will be able to compete in Rio.

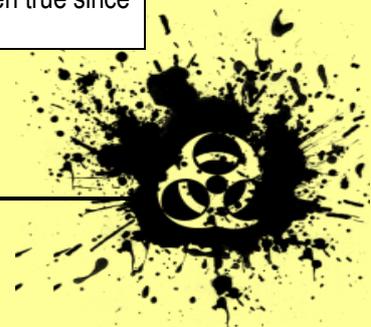
Russia was banned indefinitely from international competition by the IAAF in November after an independent WADA commission found evidence of "state-sponsored" doping in the country.

"There is zero tolerance, which means everyone involved, be they athletes, coaches, doctors or officials, must be punished," said Bach.

"At the same time, clean athletes must be protected.

"The IAAF now has to see what progress has been made and whether or not the suspension may be lifted."

**EDITOR'S COMMENT:** Just five months before the Games and their only concerns are if the stadiums will be ready and how to deal with the doping issue. Not a word about security and of course no word about the immense problems Brazilian hospitals are facing in their daily functions. I do not expect comments on CBRN preparedness. For them this threat is at the bottom of the list and the military is the only state responder having capabilities to provide some assistance. The inherent belief that "it will not happen to them" is all over the place and let us all hope that they will be proven true since luck often favors those who are not prepared.



## How dangerous people get their guns

By Philip Cook

Source: <http://www.homelandsecuritynewswire.com/dr20160125-how-dangerous-people-get-their-guns>

Jan 25 – The San Bernardino massacre is unique in several respects, but it does bring into focus an important issue with broad relevance: how do dangerous people obtain guns, and what should the police and courts be doing to make those transactions more difficult?

The shooters — Syed Rizwan Farook and Tashfeen Malik — utilized several guns in their attack on Farook's coworkers during a holiday party in November that killed 14 and injured 22. In addition to two pistols, this husband-wife team had two military-style rifles that were purchased by a friend and neighbor, Enrique Marquez Jr.

It appears that Farook relied on Marquez because he doubted that he could pass the background check that gun dealers are required to conduct on all buyers. Marquez has now been charged with several crimes, including making a "straw purchase" — that is, he swore to the dealer that he was buying the guns for his own use, but in fact he was acting on behalf of Farook.

How does this terrorist attack relate to the more routine gun violence that afflicts many American neighborhoods? Criminal assaults with guns kill thirty Americans every day, and injure another 170.

The guns carried and misused by youths, gang members, and active criminals are more likely than not obtained by transactions that violate federal or state law.

Unlike in the case of Enrique Marquez, it is rare for the people who provide these guns to the eventual shooters to face any legal consequences.

**How can this illicit market be policed more effectively?**

### Undocumented and unregulated transactions

When asked where and how they acquired their most recent firearm, about 60 percent of a cross-section of American gun owners reported buying it from a gun store, where the clerk would have conducted a background check and documented the transfer in a permanent record required by federal law. (The other 40 percent received it as a gift or acquired it in a private transaction that in most cases was legal.)

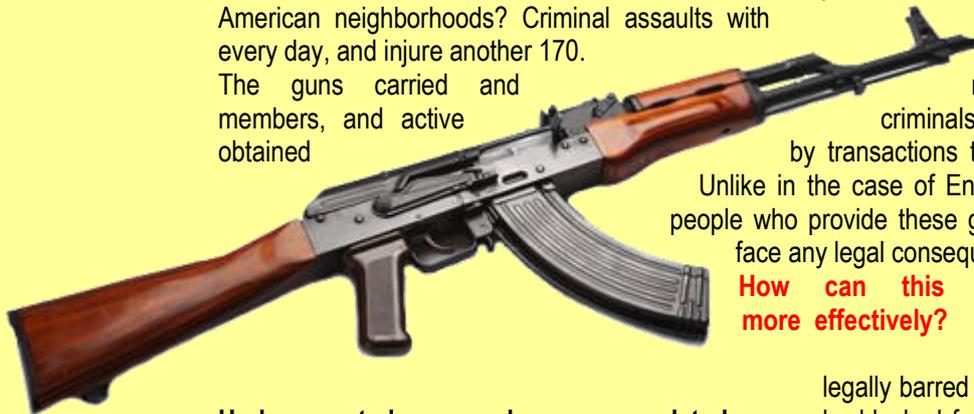
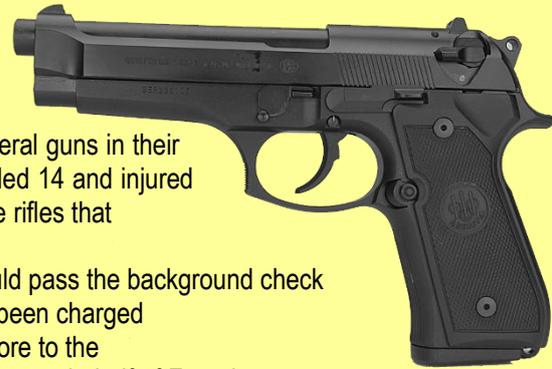
But while a majority of owners obtain their guns in transactions that are documented and for the most part legal, the same is not true for criminals.

A transaction can be illegal for several reasons, but of particular interest are transactions that involve disqualified individuals — those banned from purchase or possession due to criminal record, age, adjudicated mental illness, illegal alien status or some other reason. Convicted felons, teenagers and other people who are

legally barred from possession would ordinarily be blocked from purchasing a gun from a gun store, because they would fail the background check or lack the permit or license required by some states.

Anyone providing the gun in such transactions would be culpable if they had reason to know that the buyer was disqualified, if they were acting as a straw purchaser or if they violated state regulations pertaining to such private transactions.

The importance of the informal (undocumented) market in supplying criminals is suggested by the results of inmate surveys and data gleaned from guns confiscated by the police. **A national survey of inmates of state prisons found that just 10 percent of youthful (age 18-40) male respondents who admitted to having a gun at the time of their arrest had obtained it from a gun store.** The other 90 percent obtained them through a variety of off-the-book means: for example, as gifts or sharing



arrangements with fellow gang members.

**Similarly, an ongoing study of how Chicago gang members get their guns has found that only a trivial percentage obtained them by direct purchase from a store.** To the extent that gun dealers are implicated in supplying dangerous people, it is more so by accommodating straw purchasers and traffickers than in selling directly to customers they know to be disqualified.

### The supply chain of guns to crime

While criminals typically do not buy their guns at a store, all but a tiny fraction of the guns in circulation in the United States are first sold at retail by a gun dealer — including the guns that eventually end up in the hands of criminals.

That first retail sale was most likely legal, in that the clerk followed federal and state requirements for documentation, a background check and record-keeping. While there are scofflaw dealers who sometimes make under-the-counter deals, that is by no means the norm.

**If a gun ends up in criminal use, it is usually after several more transactions. The average age of guns taken from Chicago gangs is over eleven years.**

The gun at that point has been diverted from legal commerce. In this respect, the supply chain for guns is similar to the supply chain for other products that have a large legal market but are subject to diversion.

In the case of guns, diversion from licit possession and exchange can occur in a variety of ways: theft, purchase at a gun show by an interstate trafficker, private sales where no questions are asked, straw purchases by girlfriends and so forth.

What appears to be true is that there are few big operators in this domain. **The typical trafficker or underground broker is not making a living that way, but rather just making a few dollars on the side.** The supply chain for guns used in crime bears little relationship to the supply chain for heroin or cocaine and is much more akin to the supply chain for cigarettes and beer that are diverted to underage teenagers.

There have been few attempts to estimate the scope or scale of the underground market, in

part because it is not at all clear what types of transactions should be included in that market. But for the sake of having some order-of-magnitude estimate, suppose we just focus on the number of transactions each year that supply the guns actually used in robbery or assault.

**There are about 500,000 violent crimes committed with a gun each year.** If the average number of times that an offender commits a robbery or assault with a particular gun is twice, then (assuming patterns of criminal gun use remain constant) the total number of transactions of concern is 250,000 per year.

Actually no one knows the average number of times a specific gun is used by an offender who uses it at least once. If it is more than twice, then there are even fewer relevant transactions.

**That compares with total sales volume by licensed dealers, which is upwards of twenty million per year.**

### All in the family

**So how do gang members, violent criminals, underage youths, and other dangerous people get their guns?**

A consistent answer emerges from the inmate surveys and from ethnographic studies. Whether guns that end up being used in crime are purchased, swapped, borrowed, shared, or stolen, **the most likely source is someone known to the offender, an acquaintance or family member.** That Farook's friend and neighbor was the source of two of his guns is quite typical, despite the unique circumstances otherwise.

Also important are "street" sources, such as gang members and drug dealers, which may also entail a prior relationship. Thus, social networks are playing an important role in facilitating transactions, and an individual (such as a gang member) who tends to hang out with people who have guns will find it relatively easy to obtain one.

Effective policing of the underground gun market could help to separate guns from everyday violent crime. Currently it is rare for those who provide guns to offenders to face any legal consequences, and



changing that situation will require additional resources directed to a proactive enforcement directed at penetrating the social networks of gun offenders.

Needless to say, that effort is not cheap or easy and requires that both the police and the courts have the necessary authority and give this sort of gun enforcement high priority.

It appears that the extraordinarily intense investigation of the San Bernardino shootings has succeeded in identifying the individual in Farook's social network who provided him with the assault weapons. The fact that Enrique Marquez is likely to pay a price may help discourage such perverse neighborliness in the future.

*Philip Cook is Professor of Public Policy Studies, Duke University.*

## Greece to be expelled from Schengen free travel zone agreement

Source: <http://www.homelandsecuritynewswire.com/dr20160125-greece-to-be-expelled-from-schengen-free-travel-zone-agreement>



Jan 25 – Greece is likely to be expelled or suspended from the Schengen free movement zone as European leaders appear to have concluded that the Greek government does not have to will, or the ability, to control the country's borders. EU have been pressuring Greece for months to stem the flow of refugees from Turkey into Greece – and from Greece to other EU countries – but to no avail.

*Al Jazeera* reports that **Belgium, Austria, and Sweden** earlier today (Monday) issued a last-call to Greece to regain control over the country's borders. Their call came hours before EU interior ministers meet in Amsterdam for an emergency session aiming to find ways to save Schengen system from collapsing.

The measures being discussed this afternoon include plans significantly to bolster EU security forces on Greece's border with Macedonia. The Greek government has

adamantly objected to the move, saying it would create a "cemetery of souls" on the Greek side of the border.

Another idea being discussed is allowing countries greater freedom to re-impose border controls within the Schengen area by extending emergency border controls, which are allowed by the agreement, from six months to two year. Germany, Austria, Belgium, Sweden, and Denmark are backing the proposal.

"If we cannot protect the external EU border, the Greek-Turkish border, then the Schengen external border will move towards central Europe," said Johanna Mikl-Leitner, Austria's interior minister.

"It is a myth that the Greek-Turkish border cannot be protected. The Greek navy has enough capacities to secure this border. It is one of the biggest navies in Europe," she added.

The wave of refugees coming into Europe – more than one million in 2015 – has forced seven Schengen states, including Germany, to re-impose emergency border checks which are described as "temporary," but which are not going to be lifted any time soon.

## Greek debt is the key to the refugee crisis

By Gideon Rachman

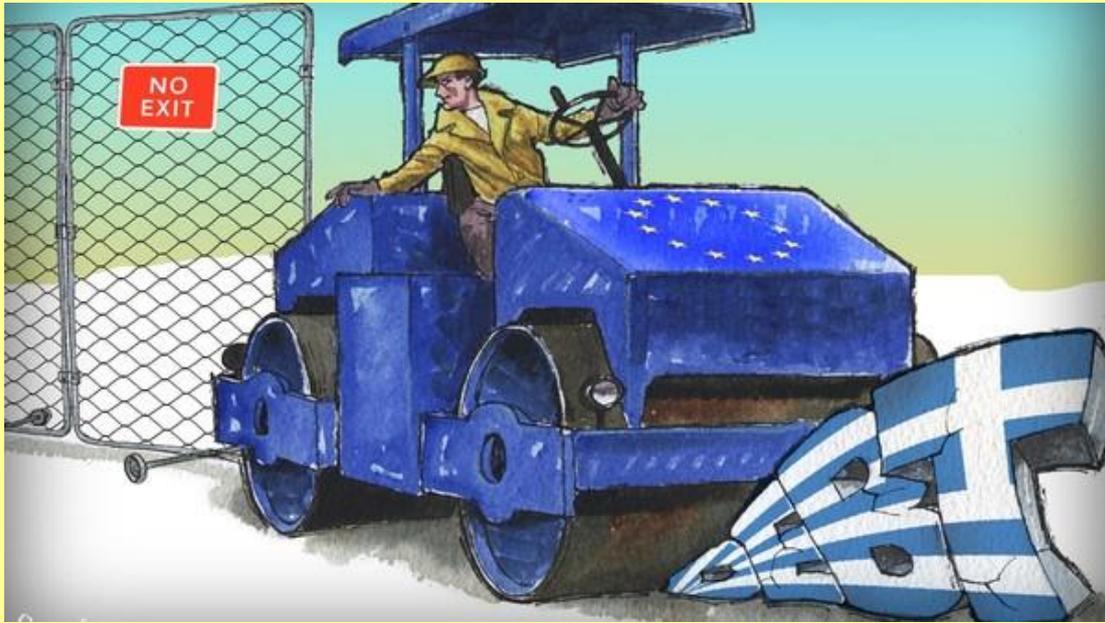
Source: <http://www.ft.com/intl/cms/s/0/afefff32-c347-11e5-808f-8231cd71622e.html#axzz3yLb2tgg3>

The EU has faced two major crises over the past six months — one involving the euro, the other involving refugees. By coincidence, the same two countries are at the center of both problems — Greece and Germany. Last summer, Germany almost forced Greece out of the euro, rather than agree to the EU lending further billions to the Greek government.



Now, Germany is reeling under the impact of the arrival of more than 1m would-be refugees, most of whom have entered the EU through Greece.

It is time to think creatively about how these two problems could be linked into a diplomatic package that helps to fix them both. The broad outlines of the deal would be simple. Greece agrees to seal its northern border with EU help, stopping the flow of migrants into northern Europe. In return, Germany agrees to a massive write-down of Greek debt, as well as immediate financial aid to cope with the current crisis. Refugees arriving in Greece are then housed in EU-run camps on Greek islands in the expectation that they will return to Syria (or wherever else they are fleeing) once peace is restored.



This plan sounds far-fetched. But parts of it could already be emerging, by trial and error. EU officials are known to be considering “ring-fencing” Greece by blocking the border between Greece and Macedonia, which is the main route north. According to a report in the Financial Times, this plan is “believed to have support in Berlin”. Action could come quite soon. Last week, Mark Rutte, the Dutch prime minister, said that the EU has to get control of the refugee problem “in the next six to eight weeks”, adding: “We can’t cope with the numbers any longer.”

On first consideration, any notion of bottling up refugees in Greece sounds chilling. Managed badly, that could strand hundreds of thousands of desperate migrants in a country of 11m people, which is



struggling with 25 per cent unemployment and a national debt approaching 180 per cent of gross domestic product.

European interior ministers discuss plan for joint police forces along Macedonian-Greece border

#### [Slovakia – refugees’ march](#)

But Greece’s crippling debts could actually be the key to the problem. The government

of Alexis Tsipras, the prime minister, has repeatedly insisted that Greece’s debts are crushing the economy. Germany, which is the largest single lender to Greece, has repeatedly insisted that German loans to Athens must eventually be repaid. But the refugee crisis has given German taxpayers a more urgent problem to think about than the relatively abstract question of when Greece will pay back its debts.



If the Greeks were seen to be doing the Germans a massive favor by stemming the flow of refugees, it would become much easier for Angela Merkel, the German chancellor, to make the case for debt relief for Greece to her voters. And once the Germans moved, the rest of Greece's creditors could be expected to fall in line. The deal could also be very attractive for Greece. It would get permanent relief from unpayable debts, in return for a temporary role as the EU's main reception center for refugees. The EU could also take on the burden of funding and running the refugee centers on Greek soil, which could provide protection and education for children and an opportunity to work for adults.

Some will object that it would be immoral or illegal for Europe to change the current system of asylum. But that system is on the point of breakdown, anyway, and is fueling the rise of political extremists inside the EU. Most Europeans feel compassion for refugees in fear of their lives but are also worried about uncontrolled mass immigration from the Middle East.

So it is critical to break the connection between the offer of temporary protection from warfare and the offer of permanent immigration into the EU. Once that connection is severed, European public opinion will be reassured. And while people in danger would continue to be protected inside Europe, closing the route to Germany would weaken the pull-factor for economic migrants.

A model that Europeans could think about are the camps set up for millions of displaced people in Europe after the Second World War. These provided shelter and helped families reunite. Many displaced people were eventually resettled in third countries because European borders had shifted. But the preferred option was always that refugees would return to their home countries.

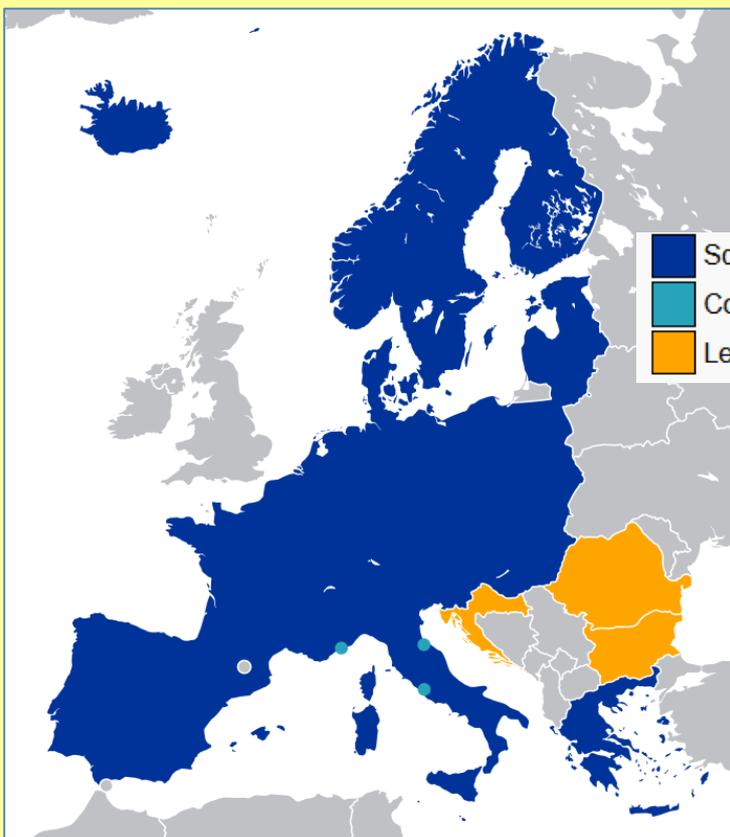
The situation in the modern Middle East — dire as it is — is actually less disordered than that of postwar Europe, which makes it more realistic to expect that Syrians, Iraqis and others could eventually return home. The task of rebuilding Syria, after the war, will also be immensely easier if the Syrian middle-class has not, in the meantime, dissolved into the EU. Indeed the eventual repatriation of Syrian refugees would be crucial to giving the country a future.

Of course there is a danger that the war will drag on and on, and that “temporary” refugee centers would become permanent — as has happened with Palestinian refugee camps. But if, in a couple of years'

time, there is still little prospect of Syrians returning home, the status of those living in EU refugee camps could be rethought. At least that reassessment would be carried out in an orderly and thoughtful way, rather than in the current atmosphere of chaos.

I am sure that a serious examination of a debt-for-refugees deal between Greece and Germany would

throw up all sorts of practical, moral and legal problems. But I have yet to hear a better idea.



#### Schengen Area

The Schengen Area is the area comprising 26 European countries that have abolished passport and any other type of border control at their common borders, also referred to as internal borders. It mostly functions as a single country for international travel purposes, with a common visa policy. The Area is named after the Schengen Agreement. Countries in the Schengen Area have eliminated border controls with the other Schengen members and strengthened border controls with non-Schengen states.



**Twenty-two of the twenty-eight European Union (EU) member states participate in the Schengen Area.** Of the six EU members that do not form part of the Schengen Area, four – Bulgaria, Croatia, Cyprus and Romania – are legally obliged and wish to join the area, while the other two – Ireland and the United Kingdom – maintain opt-outs. All four European Free Trade Association (EFTA) member states – Iceland, Liechtenstein, Norway and Switzerland – have signed the Schengen Agreement, even though they are outside the EU. In addition, three European microstates – Monaco, San Marino and the Vatican City – can be considered as *de facto* within the Schengen Area, as they do not have border controls with the Schengen countries that surround them; but they have not officially signed documents that make them part of Schengen. Some national laws have the text "countries against which border control is not performed based on the Schengen Agreement and the 562/2006 EU regulation", which then includes the microstates and other non-EU areas with open borders.

**The Schengen Area currently has a population of over 400 million people and an area of 4,312,099 square kilometers.**

**EDITOR'S COMMENT:** It has become a "fashion" EU countries to threaten Greece that it will be expelled from Schengen Area for non-protecting EU borders and thus allowing the immigration tsunami to flood Europe. It is also a "fashion" for Greek government to continue trying to prove that it is not an elephant. Until now nobody has proposed concrete measures that should be applied by Greece in order to counter the problem that is mainly supported by Turkey that facilitates the immigrants' inflow for its own reasons (money from EU and politics). **So let us exit the Schengen Area and see what will happen.** First of all Greece will automatically become a "non-attractive" state for immigrants. Nobody



will pay Turkish traffickers for transportation to Greek islands if he knows that they cannot travel to Europe since Greek authorities will not be able to issue the "golden visa" enabling them to cross EU borders towards their final destination (i.e. Germany or Scandinavia). Therefore they will seek new corridors of entry like neighboring Bulgaria or Italy. Second, refolement of immigrants (forbidden by current Schengen treaty) will be available and Greek Navy

and Coast Guard can pull them back to Turkish national waters and forbid entrance to Greek territory. Third, detention centers will re-open both in the islands and mainland to host immigrants for 18 months and then expelled from the country. Forth, there will be no reason for common Greek-Turkish naval patrols in the Aegean Sea (that is highly promoted by Berlin and Brussels) threatening Greek sovereignty (that is for decades and almost on daily basis violated by Turkish Air Force and Turkish Navy). Finally, what will be the problem for Greece? Well we will need a passport to enter EU. Big deal!

**Since criticism is easy, here is a proposal that might solve the problem:** Greece will admit that it is incompetent to provide solutions and will officially ask

HABERLER.COM

Son Dakika Ana Sayfa Manşetler Ekonomi Fi

### Türkiye'yi Bekleyen Büyük Risk: 8 Milyon Sığınmacı

27 Ocak 2016 Çarşamba 07:37

AFAD Başkanı, "Suriye'de 7.5-8 milyon evinden edilmiş insan var. Bunlar aynı zamanda ülkesini terk edebilecek potansiyel sığınmacı" diyerek Türkiye'ye uyarıda bulundu.



Türkiye'yi Bekleyen Büyük Risk: 8 Milyon Sığınmacı

Germany, Austria, Finland, Denmark, Norway, Sweden, Slovakia and Hungary to send a high official to be the Minister of Immigration for Greece. Greece will also be obliged to follow his solutions to the point and by all means. We exported brains worldwide for so many years and now it is time to import a single brain from our own Europe! Of course there is a more simple solution by saying "stop the BS and mind your own business!" But I have to admit that currently we have a lower anatomical deficiency not permitting such imaginary actions... Greece is too hard to die no matter what and how hard our allies are trying.

**UPDATE:** x

## German refugee camps are so awful that refugees are trying to get passports to return home

Source: <http://uk.businessinsider.com/conditions-in-german-refugee-camps-are-so-bad-that-iraqi-refugees-are-returning-home-2016-1>



REUTERS/Fabrizio Bensch People waiting to enter the compound outside the Berlin Office of Health and Social Affairs for their registration process in Berlin on December 9.

The conditions in German refugee shelters are so bad that some refugees would rather return to the homes they fled than stay where they are.

"They gather people in horrible camps with no space to sleep, bathe, or relax. There is no hope here in Germany," Heval Aram, an Iraqi asylum seeker in Germany, told Euronews.

Aram had travelled for 12 days with his family to come to Germany.

"I hope nobody will leave their home to come here," he said. Others complain that the asylum

process is too slow. "I am not allowed to bring my family, and I haven't received a permit to stay yet. I can't work, I can't move around freely," Mohammed Mohsen, who has been seeking asylum for over five months, told Deutsche Welle. "You can't open the doors to refugees and then not see the process through," Mohsen said.

Hamid Maheed, a booking agent at Iraqi Airways, told Deutsche Welle that since October he had helped about 50 refugees return



to Iraq every week, with that pace doubling in January.

Over 1 million people sought asylum in Germany last year. Many refugees have seen waiting periods jump from weeks to months, with thousands of people cramming into emergency shelters.

New arrivals may spend all the money they have to make the trip to Germany, only to give up on trying to build a new life in Europe. The price of food relative to the amount of money they get from the state and slow asylum procedures were named by other Iraqis as reasons for returning home, according to Euronews.

Other people have come to the conclusion that the culture in Germany is too different from theirs back home and that they won't be able to adapt.



It has been said that the sin of ingratitude is more serious than the sin of revenge. With revenge, we return evil for evil, but with ingratitude, we return evil for good.

— W. Eugene Hansen —

Abdullah Alsoaan, a 51-year-old Syrian, told The Wall Street Journal that he came to Germany to be treated for diabetes and that he was waiting for a new passport to return home. After seeing teenagers kiss in public, he realized he could not raise his daughters there. "The problem isn't with the Germans or Germany, people are very nice," Alsoaan told The Journal. "But they have their way of living their lives and we have ours."

The Iraqi embassy in Germany has in the past four months issued almost 1,500 passports for people who want to go home, DW reports. The passports are "single use" and allow recipients to fly only to Iraq. Some asylum seekers had lost their passports on their way to Europe. Others discarded them to pretend they were Syrians, as asylum requests from Syrians are often prioritized.

Some of the asylum seekers sold their last jewelry items to afford a ticket to return home. Alla Hadrous, who owns a gold shop and runs a travel agency, told Euronews that a lot of people had already left: "I don't have the exact figure, but it's a lot. Some have had to sell their valuables ... in order to buy a ticket back to Erbil or Baghdad."

In Finland, the situation is similar. Finnish officials said last week that almost 70% of Iraqi

asylum seekers whose applications were processed last year abandoned their claim and returned home, AFP reports. According to Finnish immigration services, from about 3,700 Iraqi asylum seeker claims the country processed, almost 2,600 were expired, which means the applicants had disappeared or cancelled their requests. Juha Simila, from the Finnish Immigration Service, told AFP that many applicants did not expect the processing time, which increased in 2015 as the country received almost 10 times as many asylum requests as it received in the previous year, to take so long.

## Swedish police warn Stockholm's main train station is now overrun by migrant teen gangs 'stealing and groping girls'

Source: <http://www.dailymail.co.uk/news/article-3415477/Swedish-police-warn-Stockholm-s-main-police-station-overrun-migrant-teen-gangs-stealing-groping-girls.html>

Jan 25 – **Swedish police warns that Stockholm's main train station has become unsafe after being 'taken over' by dozens of Moroccan street children.**

The all-male migrant teen gangs are spreading terror in the centre of the Swedish capital, stealing, groping girls and assaulting security guards, according to Stockholm police.

Members of the gangs, some as young as nine, roam central Stockholm day and night, refusing help provided by the Swedish authorities.



Sweden has seen a dramatic increase in the number of Moroccan under-18s who apply for asylum without a parent or guardian in the past four years, with many later running away from the housing provided to live on the streets in the capital.

**Stockholm police estimate that at least 200 Moroccan street children move in the area around the main train station in the center of the capital, sleeping rough, and living off criminal activity.**



'These guys are a huge problem for us. They steal stuff everywhere and assault security guards at the central station,' one police officer told SVT.

'They grope girls between their legs, and slap them in the face when they protest. All police officers are aware of this.'

'I would never let my children go to the central station. No officer would.'

The issue of the Moroccan teen gangs first made headlines last year, and the situation has since escalated with Stockholm police demanding authorities to take action.

Desperate officers have started arresting the teens for public drunkenness in order to get them off the streets for a few hours, with the policeman adding

that they are 'on our knees'.

**The gangs are made up of orphans who have grown up on the streets of Casablanca and Tanger in Morocco, where authorities estimate there are around 800,000 homeless 'street children'.**

They have all applied for asylum in Sweden as unaccompanied minors after travelling through Spain and Germany, a journey which may have taken them years.

But their troubled backgrounds have made them distrusting and wary of adults, and more than one in five have run away from migrant housing and foster families after applying to stay in Sweden.

Swedish migration authorities first reported an increase in Moroccan unaccompanied minors applying for asylum in 2012, when 145 arrived, a number which more than doubled in 2013.

**Out of the 505 Moroccan children who applied for asylum in Sweden without any parent or guardian, 20 per cent ran away from provided group housing or foster families, disappearing off the radar.**

In 2014 the number had increased to 381 children, out of which nearly one third have run away, according to the Swedish Migration society.

In the first quarter of 2015, 146 unaccompanied Moroccan minors applied for asylum in Sweden - 32 have since run away and are unaccounted for.

Yesterday, the Swedish government announced talks with Moroccan authorities to acknowledge that the child street gangs are a 'mutual problem'.

Interior Minister Anders Ygeman said yesterday that Sweden is working on sending the children back to their home country. 'We are in agreement that this is a joint problem for us



© AFP/Getty Images



to solve, and that we both need to find ways of identifying these people and achieve repatriation,' Mr Ygeman said following a meeting with Moroccan representatives.

## 177 hospitals destroyed in Syria: aid group

Source: <https://www.dailystar.com.lb/News/Middle-East/2016/Jan-27/334273-177-hospitals-destroyed-in-syria-aid-group.ashx>



**A Syrian aid group Wednesday denounced the incessant bombing of medical facilities in the war-ravaged country, where 177 hospitals have been destroyed and nearly 700 health workers killed.**

"Since 2012, health infrastructure has been continuously targeted by bombings," said Oubaida al-Mufti, president of the Union of Rescue and Medical Care (UOSSM).

The UOSSM organizes doctors from the Syrian diaspora and works in areas

controlled by the armed opposition to President Bashar Assad, supporting local health workers on the frontline.

Between August 2012 and December 2015, 330 medical sites, including 177 hospitals, were destroyed by armed attacks, Mufti told a conference in Paris.



Al Kindi Hospital in Aleppo

"Just in 2015, we counted 112 targeted attacks," he added. "During the same period, 697 doctors, pharmacists, dentists, nurses and other health personnel lost their lives in these targeted attacks." He said 29 hospitals had been destroyed since Russia began airstrikes in support of Assad's regime in September.

The bombings have made the situation in these zones "unbearable, unlivable," Mufti said, adding that there would be "disastrous consequences" as health workers were abandoning the region in droves.

"These attacks are committed in total violation of humanitarian law and international conventions," he said.



Since September, the bombings have become more intense and precise, added Monzer Khalil, a doctor from Idlib in northwest Syria.

"While before the hospitals were generally not very affected, they are now entirely destroyed by these attacks," he told the conference.

The Syrian war has killed almost 250,000 people.

The Syrian Observatory for Human Rights has said more than a thousand civilians have died in Russian bombing raids. Moscow denies the use of indiscriminate bombing and claims it is targeting ISIS.

## Journalist blames feminism after beta males wear SKIRTS to protest instead of protecting women from Muslim rapists

Source:[http://www.therebel.media/danish\\_journalist\\_blames\\_feminism\\_after\\_sissified\\_men\\_wear\\_skirts\\_to\\_protest\\_instead\\_of\\_protecting\\_women\\_from\\_muslim\\_rapists](http://www.therebel.media/danish_journalist_blames_feminism_after_sissified_men_wear_skirts_to_protest_instead_of_protecting_women_from_muslim_rapists)



Jan 27 – After a series of reports that women were sexually assaulted by Muslim refugees, Dutch men took to the streets to protest...wearing skirts. Of all things. Skirts. It's downright laughable.



Danish journalist Iben Thranholm told RT that these **feminized beta males will not be able to protect women.** Thranholm **blamed feminism for the problem.**

**"Since the 1960s, modern mothers have raised their sons to be women, soaking them in feminine values like accepting responsibility for household chores, being caring, understanding and attentive, and bend to every wish of the woman. This has produced a generation of soft, insecure men, who are out of touch with their masculine nature, identity and strength,"** she said.

"Instead of a single-minded focus on imposing liberal feminist values on Muslim males, it might well be much more beneficial for Europeans to consider if the feminist war on masculinity might be the underlying cause of the weakness of European culture—feeble and defenseless as it is—against the culture of immigrants and refugees. The irony is that the vacuum feminism has created means that women become victims of an aggressive male culture," she added.

The interviewer argues that Angela Merkel is a strong leader, but is quickly dismissed. Thranholm brings up how there wasn't men to protect the women.



"The people from those countries only respect strong men. They don't respect women," she says.

**EDITOR'S COMMENT:** This is a parameter that I haven't think about so far. Recalling my youth summer experiences – almost four decades ago – I realized that this is a phenomenon magnified over time and now is the sad reality (especially for central and northern European countries' men). In modern times, guided (?) gender confusion resulted in human mutations. Now we have men, women, men who would love to be women, women who would love to be men, bisexual, asexual, transsexual and anything in between, marriages of same sex partners, directives requesting changing "father" and "mother" with "parent 1" and "parent 2" along with restrictions of wearing crosses or having an opinion about certain ethical, religious and tradition issues. In the Muslim world things are much more concrete: a man is everything while a woman is just a birth vessel or almost nothing or nothing at all. In current clash of civilizations this is another field of juxtaposition and I am afraid that we are losing solemnly!

## One in nine children globally live in conflict zones: UNICEF

Source: <http://www.dnaindia.com/world/report-one-in-nine-children-globally-live-in-conflict-zones-unicef-2170706>



**Some 250 million children - one in nine children worldwide - live in countries affected by violent conflicts, UNICEF lamented on Wednesday, saying it needed nearly \$3.0 billion in 2016 to help the most vulnerable of them.**

"The number of children trapped in humanitarian crisis around the world is both staggering and sobering," the UN children's agency said. UNICEF said it would need a full \$2.8 billion in 2016 to help millions of children in humanitarian emergencies around the world

The agency said its annual appeal had doubled in just three years as conflicts as well as extreme weather force growing numbers of children from their homes and expose millions more to severe food shortages, violence, disease, abuse and threats to their education.



"Around one in nine of the world's children is now living in conflict zones," the UN agency said in a statement.

This is a devastating number. **In 2015, children living in such areas "were twice as likely to die from mostly preventable causes before they reached the age of five as those in other countries,"** it said. UNICEF said the money it was asking for in 2016 would allow it to reach 76 million people - 43 million of them children - across 63 countries.

By far the biggest chunk of that amount - **nearly \$1.2 billion - is needed for aid in war-ravaged Syria and to help the millions of Syrian refugees in neighboring countries,** it said. More than 260,000 people have been killed in nearly five years of brutal conflict in Syria, while more than four million people have fled as refugees and some 13.5 million people remaining in the country are in desperate need of humanitarian aid.

UNICEF meanwhile said a full quarter of the aid it wanted to deliver globally was linked to educating children in emergency situations, stressing that it wanted to nearly double the number of children it helps to access education in crisis zones from 4.9 million in 2015 to 8.2 million in 2016. **"Education is a life-saving intervention in emergencies,"** UNICEF representative Sikander Khan told reporters in Geneva. It's been shown, he said, that "if a child doesn't go to school for five years, you have lost a generation." This does not bode well for Syria, where one in four schools have been destroyed and more than two million children are out of school.

## Oregon standoff: FBI sets up checkpoints around refuge after confrontation turns deadly

Source <http://www.financialexpress.com/article/world-news/oregon-standoff-fbi-sets-up-checkpoints-around-refuge-after-confrontation-turns-deadly/203062/>

Jan 27 – **Oregon standoff: US and state officials in Oregon on Wednesday set up**



**checkpoints around Malheur National Wildlife Refuge, where an armed group pledged to prolong its standoff with the government a day after one protester was killed and eight others were arrested.**

Authorities said the new security involves a series of checkpoints along key routes into and out of the refuge, and was made out of an "abundance of caution" to protect the public and law enforcement. Only ranchers who own property in the area will be allowed in and

anyone coming out of the refuge will have to show identity and have their vehicle searched.

The month-long occupation of the wildlife reserve over federal control of large tracts of the country turned violent on Tuesday after officers stopped a car carrying protest leader Ammon Bundy and others near the refuge. Activists said Robert LaVoy Finicum, a rancher who acted as a spokesman for the occupiers, was killed. There were no details on what set off the shooting. The Federal Bureau of Investigation said authorities would hold a news conference on Wednesday at 9:30 a.m. PST (1730 GMT) in Burns, a town near the refuge.

Amid concerns that Finicum's killing could escalate violence, the militia groups Pacific Patriots Network, Oathkeepers and the Idaho III% said in a joint statement they were issuing an immediate "stand by" order.

"During this time, cooler heads must prevail," the statement said. "We do not wish to inflame the current situation and will engage in open dialogue until all of the facts have been gathered."



Anti-militia sentiment also lit up social media, making #OregonStandoff among the top trending hashtags.

One of the remaining occupiers at the reserve, Jason Patrick, told Reuters by phone they would stay until the “redress of grievances.”

“I’ve heard ‘peaceful resolution’ for weeks now and now there’s a cowboy who is my friend who is dead – so prepare for the peaceful resolution,” Patrick said.

The Malheur takeover, which started Jan. 2, was a flare-up in the so-called Sagebrush Rebellion, a decades-old conflict over federal



control of millions of acres in the West.

Protesters say they are defending the Constitution. Bundy’s father, Cliven, was a key figure in a 2014 armed standoff over unpaid grazing fees in Nevada.

Federal officials said Tuesday they had probable cause to arrest Finicum, who told NBC News earlier this month that he would rather die than be detained.

In an interview on Monday with the Oregonian newspaper, Finicum said federal authorities had increased manpower around the refuge and stepped up their airplane and drone

surveillance. There also was a change of attitude, he said.

“We used to could walk up to them and talk with the FBI agents in a friendly manner ... but the tenor has changed,” Finicum said. “They have become more hardened. When they step out of their vehicles now they’re stepping out with their rifles and they’re not willing to engage in just friendly dialogue ...

“Whether this is just saber rattling to intimidate or whether they actually mean it, we don’t know ... They do not want to let go of this. They do not intend on losing here. And we do not intend

on giving it back to them.”

Patrick, who is still in the refuge, likened Finicum’s death to that of Tamir Rice, an unarmed 12-year-old black youth fatally shot by Cleveland police outside a recreation center in 2014. The officers were not charged.

“The government can kill who they want for whatever reason they want with impunity,” Patrick said.

He was asked how the occupiers would respond to authorities entering the refuge but did not indicate a clear plan.

“I don’t know what to tell you but if somebody saying ‘peaceful resolution’ comes in and points guns at me ...,” Patrick said before trailing off.

Many Twitter users expressed satisfaction about the arrests. David Plotnik (@davidkippy) tweeted: “Finally, the #Bundy militia get what they deserve. They cannot set a good example for all the radical #republicans out there. #democrats.”

## The 50 most violent cities in the world are revealed, with 21 of them in Brazil... but Venezuela's capital Caracas is named the most deadly – 2015

Source: <http://www.dailymail.co.uk/news/article-3419140/The-50-violent-cities-world-revealed-21-Brazil.html#ixzz3yY5Q5I9z>

- Latin America is home to 41 of the 50 most dangerous cities in the world
- Caracas in Venezuela is now the most violent, according to homicide rate
- Took the top spot from San Pedro Sula, in Honduras, now in second place



- Drug trafficking, gang wars, political instability and corruption are blamed
- U.S. cities St Louis, Baltimore, Detroit and New Orleans are also named

#### THE 50 MOST DANGEROUS CITIES IN THE WORLD - BY HOMICIDES PER 100,000 INHABITANTS IN 2015

1. Caracas, Venezuela – 119.87	26. Belem, Brazil – 45.83
2. San Pedro Sula, Honduras – 111.03	27. Feira de Santana, Brazil – 45.5
3. San Salvador, El Salvador – 108.54	28. Detroit, Michigan, U.S. – 43.89
4. Acapulco, Mexico – 104.73	29. Goiania, Brazil – 43.38
5. Maturin, Venezuela – 86.45	30. Teresina, Brazil – 42.64
6. Distrito Central, Honduras – 73.51	31. Vitoria, Brazil – 41.99
7. Valencia, Venezuela – 72.31	32. New Orleans, Louisiana, U.S. – 41.44
8. Palmira, Colombia – 70.88	33. Kingston, Jamaica – 41.14
9. Cape Town, South Africa – 65.53	34. Gran Barcelona, Venezuela – 40.08
10. Cali, Colombia – 64.27	35. Tijuana, Mexico – 39.09
11. Ciudad Guayana, Venezuela – 62.33	36. Vitoria da Conquista, Brazil – 38.46
12. Fortaleza, Brazil – 60.77	37. Recife, Brazil – 38.12
13. Natal, Brazil – 60.66	38. Aracaju, Brazil – 37.7
14. Salvador, Brazil – 60.63	39. Campos dos Goytacazes, Brazil – 36.16
15. St Louis, Missouri, U.S. – 59.23	40. Campina Grande, Brazil – 36.04
16. Joao Pessoa, Brazil – 58.40	41. Durban, South Africa – 35.93
17. Culiacan, Mexico – 56.09	42. Nelson Mandela Bay, South Africa – 35.85
18. Maceio, Brazil – 55.63	43. Porto Alegre, Brazil – 34.73
19. Baltimore, Maryland, U.S. – 54.98	44. Curitiba, Brazil – 34.71
20. Barquisimeto, Venezuela – 54.96	45. Pereira, Colombia – 32.58
21. Sao Luis, Brazil – 53.05	46. Victoria, Mexico – 30.50
22. Cuiaba, Brazil – 48.52	47. Johannesburg, South Africa – 30.31
23. Manaus, Brazil – 47.87	48. Macapa, Brazil – 30.25
24. Cumana, Venezuela – 47.77	49. Maracaibo, Venezuela – 28.85
25. Guatemala City, Guatemala – 47.17	50. Obregon, Mexico – 28.29

## Sweden to hire planes to return 80,000 migrants

Source <http://www.thelocal.se/20160128/sweden-to-hire-planes-to-send-back-80000-migrants>

Jan 27 – Interior minister Anders Ygeman told Sweden's *Dagens Industri* newspaper that he believed that at least 60,000, and possibly as many as 80,000 of the 163,000 who sought asylum in Sweden last year would have their applications rejected, meaning they will be returned either to their home countries or to the European country responsible under EU rules.

**"The first step will be to go with voluntary return, and to create the best conditions for that,"** Ygeman said. **"But if that doesn't work, we will need to have returns backed up by force."**

"I think we will have to see more chartered planes, particularly in the EU-region."

He said that the Swedish government hoped to strike deals with other EU countries — in particular Germany — over coordinating flights to return asylum seekers.

It is also seeking return agreements with countries such as Afghanistan and Morocco.

The Swedish government sees "a significant risk" that large numbers of rejected asylum seekers will attempt to stay without papers, and intends to hire 1,000 additional border police, and deter businesses from employ those who have had their applications refused.

"There need to be severe consequences for those companies which use illegal labor. If there's a well-developed illegal labor market, that will make the incentive to stay in Sweden stronger," Ygeman said.



Patrik Engström, head of Sweden's border police, told *Dagens Industri* that his officers would from now on be working "much more intensively" on returning rejected applicants.

"We need to work much more closely with the Migration Agency. It's at the point where people are passed over from the Agency to the police where many disappear. By the time they hear the decision on their claim, police personnel need to already be in place."

Immigration lawyer Terfa Nisébini criticised Ygeman's plan, saying that by giving an estimate that roughly half of applications would be rejected, telling *Expressen* newspaper that it risked influencing the way the Swedish Migration Agency assesses cases.

**EDITOR'S COMMENT:** 80,000 immigrants = approx. 270 airplanes/flights! Seriously???

## 17-year-old girl faces fine for using pepper spray on sex attacker

Source: <http://www.independent.co.uk/news/world/europe/17-year-old-girl-faces-fine-for-using-pepper-spray-on-sex-attacker-a6836531.html>

Jan 27 – A 17-year-old girl from Denmark could be fined because she used pepper spray to defend herself against a man who allegedly attacked her.



The girl said that the man, who spoke English, forced her to the ground and tried to remove her trousers on a street in the center of Sonderborg on the night of 20 January, according to police.

She then managed to spray the alleged attacker before he ran off.

But the 17-year-old, who reported the attack the following day, could now be handed a fine because carrying pepper spray is illegal in Denmark under the country's arms law.

Police spokesperson Helle Lundberg said the incident was being investigated as a case of attempted rape and that the police were still trying to locate the alleged attacker.

"According to Danish law, it is illegal to be in possession of pepper spray," she told *The Independent*, adding that it fell under the same category as being in possession of knives and firearms.

Ms Lundberg said she did not know yet if the fine would be imposed, adding that only a court could decide to drop it if it deemed the girl had acted in self-defense.

**The fine could be anywhere between one and 5,000 Danish kroner (~670€), she said.**



## Five European countries face removal from Visa Waiver program

Source: <http://www.homelandsecuritynewswire.com/dr20160129-five-european-countries-face-removal-from-visa-waiver-program>

Jan 29 – **DHS has told five countries – France, Belgium, Germany, Italy, and Greece – which they have until Monday, 1 February, to fix a security flaw – DHS described it as a “crucial loopholes”— in their passport stems.** If they fail to do so, they will be removed from the Visa Waiver program, *Politico* reports.

The move will affect millions of European citizens.

DHS has issued the ultimatum as American security officials have become increasingly concerned at the proliferation of fake passports which terrorists may use.

**The Visa Waiver program allows citizens of thirty-eight countries to enter the United States for ninety days – for tourism or business – without a visa.**

Following the 13 November terrorist attacks in Paris, the White House said it would more thoroughly examine the security aspects of the program, with the panel doing the review reporting directly to President Obama. In announcing the examination, the White House said that some states participating in the program are “deficient in key areas of cooperation” [read: security cooperation with the United States] and that, as a result, they face having their access to the Visa Waiver program revoked.

“At this time, no determination has been made on changing the status of any current visa waiver program partner country,” said S. Y. Lee, a DHS spokesman.

The *Telegraph* reports that one of the issues the review is looking at is incorporating biometric checks into the program to increase security.

**European security agencies say that know of more than thirty-four million lost or stolen European travel documents, but the true number is likely to be far higher.**

Greece, regarded as the weakest link in the European security system, has admitted that 5 to 7 percent of its passports could have been produced with the help of forged



identity paperwork. Greece is already facing an expulsion from the Schengen free-travel zone because of its porous borders and lackadaisical approach to security.

The *Telegraph* notes that this latest development is an indication of the ripple effect of the European migration crisis. Earlier this week, the newspaper disclosed that British intelligence agencies have become increasingly concerned about the possibility of efforts by ISIS to smuggle terrorists into Europe in the guise of refugees.

**The intelligence agencies say that fake Syrian or Iraqi passports are now so sophisticated that it is almost impossible to distinguish between genuine refugees and terror suspects.**

A senior British intelligence official told the *Telegraph*: “Islamic State is skillfully exploiting the migrant crisis to smuggle terror cells from Syria into major European countries such as the U.K. Jihadists travel to Raqqa to meet up with commanders, where they receive training and new passports.

“They then make their way back to Europe posing as migrants with new identities, making it virtually impossible for security officials to



detect potential terrorists among those fleeing persecution.”

**ISIS has gained control of thousands of blank Syrian passports, as well as printing machines, during its takeover of government buildings. Fake Syrian passports are also easily available in**

**Turkey for those attempting to travel to Greece.**

“Daesh [ISIS] has managed to seize passports in Iraq, Syria and Libya and to set up a true industry of fake passports,” Bernard Cazeneuve, the French interior minister, said this week.

## Angela Merkel Says Refugees Must Return Home Once War Over

Source: <http://m.ndtv.com/world-news/angela-merkel-says-refugees-must-return-home-once-war-over-1271793?pfom=home-wapextra3>

Jan 30 - **German Chancellor Angela Merkel on Saturday tried to placate the increasingly vocal critics of her open-door policy for refugees, insisting that asylum seekers from Syria and Iraq would go home once the conflicts there had ended.**

Merkel, despite appearing increasingly isolated over her policy, has resisted pressure from some conservatives to cap the influx of refugees, or to close Germany's borders. A record 1.1 million migrants arrived in Germany last year.

But growing concern about the country's ability to cope and worries about crime and security after assaults on women are weighing on support for Merkel's Christian Democratic Union (CDU) party and its Bavarian sister party, the Christian Social Union (CSU).

Merkel said that despite efforts to integrate refugees and help them, it was important to stress that they had only been given permission to stay for a limited period of time.

**"We need ... to say to people that this is a temporary residential status and we expect that once there is peace in Syria again, once IS has been defeated in Iraq, that you go back to your home country with the knowledge that you have gained,"** she said at a meeting of CDU members in the state of Mecklenburg-Western Pomerania.

**She said 70 percent of refugees that fled to Germany from the war in the former Yugoslavia in the 1990s had returned to their home countries.**

Her remarks come after Horst Seehofer, leader of the CSU, threatened to take her government to court if his demand to stem the flow of asylum seekers was not met.

Support for the right-wing Alternative for Germany (AfD) has edged up into double digits. Its leader said in an interview published on Saturday that border guards should shoot at refugees to prevent them from illegally entering the country if need be.

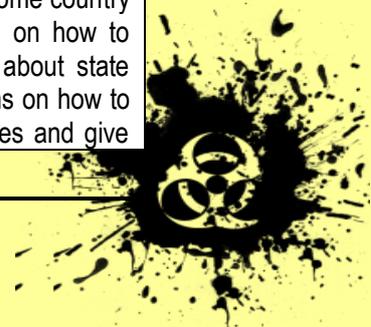
Merkel has tried to convince other European countries to take in quotas of refugees, pushed for reception centers to be built on Europe's external borders, and led an EU campaign to try to convince Turkey to keep refugees from entering the bloc.

But progress has been slow.

**Germany wants to limit migration from North Africa by declaring Morocco, Algeria and Tunisia "safe countries", which would end their citizens' chance of being granted asylum.**

Merkel said she had spoken to Morocco's king and that Morocco had said it was prepared to take back people from that country.

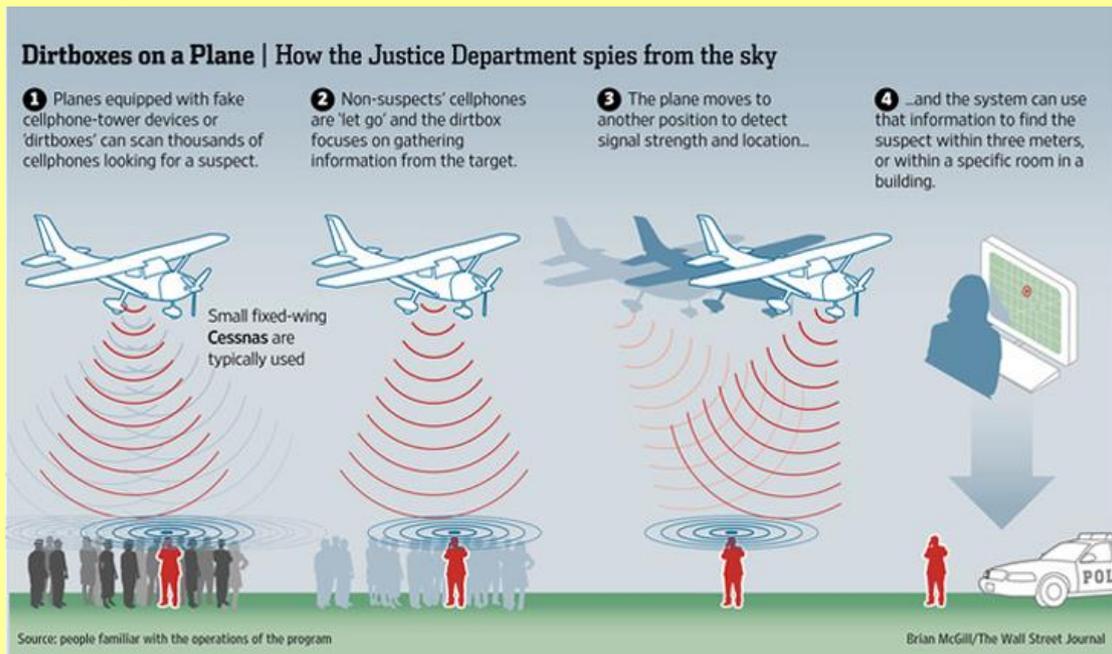
**EDITOR'S COMMENTS:** Mixing politics with humanitarianism is an ugly thing to do. The triple experiment (cheap labor hands – demographics boost – multiculturalism) failed dearly and Chancellor knows that well but do not want to openly admit since she is living in her own (?) imaginary world. The comparison of Yugoslavs with current M. East immigrants is ill-fated. Different people; different religion; different culture; different post-war reality. And then there is this thing "... go back to your home country with the knowledge you have gained". What knowledge? Apart from knowledge gained on how to survive Turkish traffickers and not dying in Aegean Sea what else? I have read only about state programs on sexual behavior and introduction to Western culture. No real training programs on how to do things like learning a profession or similar. Or even separate scientists among refugees and give



them an opportunity to be incorporated in a host nation activities. After the war ends, Syria would be a ruined nation – its basic critical infrastructure has been entirely destroyed and it will take years to be able to stand up and operate as a nation. At that time (years) will Germans ask people to leave everything behind in order to return and start over again? (LOL) As a conclusion, Europe needs to find a concrete solution to the problem and implement it as soon as possible. If current situation continues then the fate of Europe is unknown. Or already known?

## How Far Can Authorities Take Civil Surveillance?

Source: <http://i-hls.com/2016/01/68061/>



Jan 29 – We've written before about government tracking of citizens' mobile phone through devices such as the Stingray. The Anaheim, California Police

The Anaheim Police Department has owned the Dirtbox (DRTBOX) since at least 2009, and the Stingray since 2011, according to documents obtained by the American Civil Liberties Union of Northern California.

"This cell phone spying program—which potentially affects the privacy of everyone from Orange County's 3 million residents to the 16



Department has revealed that it has taken this a step further. The Department uses surveillance devices called **Dirtboxes** (right photo) which are essentially plane mounted Stingrays, and regularly flies them over the Southern California city. Anaheim is home to Disneyland and hosts millions of tourists each year.



million people who visit Disneyland every year—shows



the dangers of allowing law enforcement to secretly acquire surveillance technology,” wrote Matt Cagle, technology and civil liberties policy attorney for ACLU-NC.

Four years after purchasing the Dirtbox in 2009, the Police Department upgraded to a newer model, presumably capable of intercepting the more modern LTE mobile technology.

**Stingrays, Dirtboxes, and other similar devices, work by impersonating mobile phone towers. Nearby mobile devices connect to them, in the process revealing unique ID numbers and locations. They emit a far stronger signal than regular towers to**

**ensure devices connect to them, and can cause service disruptions in the process.**

The devices are generally setup to allow the transmission of calls to emergency services on to regular towers. However, we can only speculate as to how many emergency calls to non-emergency numbers were intercepted and blocked by these devices.

These devices of course have legitimate uses in terms of investigations into crimes and for terror prevention.

Mass service disruptions and unwarranted, warrantless surveillance, however, needs to have a strong checks and balances system behind it.

## Dutch Police Training Eagles to Take Down Drones

Source: <http://spectrum.ieee.org/automaton/robotics/aerial-robots/dutch-police-training-eagles-to-take-down-drones>



Feb 01 – No matter [how many regulations the FAA puts in place](#), drones are cheap enough now that frequent misuse is becoming the norm. There’s no good way of dealing with a dangerous drone: you can jam its radios to force it to autoland, or maybe [try using an even bigger drone to capture it inside a giant net](#). In either of these cases, however, you run the risk of having the drone go completely out of control, which is even more dangerous. Or, you can be like the Dutch National Police, and train eagles to take down drones for you.

The video, as you probably noticed, is in Dutch, but here’s what I’ve been able to piece together: the Dutch police (like police everywhere) know that drones are going to become even more of a problem than they already are, so they’ve been testing ways of dealing with a drone in an emergency, like if a drone is preventing an air ambulance from landing. The police are looking into electronic solutions, but also physical ones, including both nets and trained eagles.



The Dutch police have partnered with Guard From Above, a raptor training company based in Denmark, to determine whether eagles could be used as intelligent, adaptive anti-drone weapon systems. The eagles are specially trained to identify and capture drones, although from the way most birds of prey react to drones, my guess is that not a lot of training was necessary. After snatching the drone out of the sky, the eagles instinctively find a safe area away from people to land and try take a couple confused bites out of their mechanical prey before their handlers can reward them with something a little less plastic-y. The advantage here is that with the eagles, you don't have to worry about the drone taking off out of control or falling on people, since the birds are very good at mid-air intercepts as well as bringing the drone to the ground without endangering anyone.

While the eagles are (unsurprisingly) very competent at taking out something the size of a DJI Phantom, for larger drones, the safety of the bird seems like it should be a concern: my guess is that large carbon fiber props could do damage to a bird's legs or toes, and at least here in the United States, that's [very very illegal](#). The video apparently mentions something about designing a protection system for the birds, which is good. Even so, I doubt that using attack eagles as drone interceptors will ever turn out to be a practical solution, but since I got to write an article about using attack eagles as drone interceptors (!), as far as I'm concerned, it's been totally worth it.

According to the Dutch Police, these tests should last a few months, at which point they'll decide whether using the eagles in this way is an effective and appropriate means of preventing unwanted drone use.

## Just how old do you think these migrant 'children' are?

Source: <http://www.dailymail.co.uk/news/article-3422000/Just-old-think-migrant-children-Alarming-pictures-shed-light-growing-scandal-amid-asylum-crisis.html>

Jan 29 – Examine the three 'children' in these pictures. One is of Ahmad Farid, who claimed he was 16 but appears at least 18 or more in

dwarfing schoolboys and girls as they join him for a run.



[Claimed to be 14: Saad Alsaud is reported to have been the fastest 14-year-old in Sweden, dwarfing boys and girls in a running event](#)

He looks old enough to be the father of the children he is jogging with.

The other shows a Somali named Youssaf Khaliif Nuur who claims he is 15 though he is 6ft tall and, according to one unconfirmed source, shaves his beard and moustache.

He appeared in a Swedish court yesterday accused of stabbing a

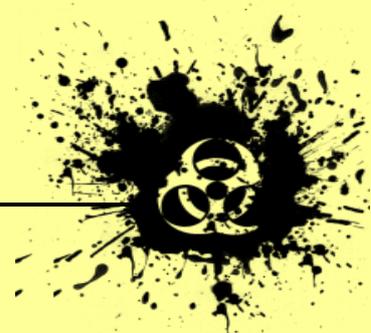
woman to death at a young migrants' hostel on Monday.

The extraordinary pictures of the two men, one Afghani and the other from Iraq, were published in the Swedish press to show how enthusiastically this politically

the snap in which he is laughing as he's given a fluffy toy polar bear at a refugee reception center.

Ahmad appears to have hair on his chin, and his powerful physique can be seen under his shirt.

The second is of Saad Alsaud, reported to have been the fastest 14-year-old in Sweden,



correct nation welcomes in orphaned young migrants.

But in the years that followed, the word has spread across Europe about how easy it is to be accepted as a child migrant in Sweden.

Now, the country has become overwhelmed with 'unaccompanied minors' in what critics suspect is a huge fraud.



Claimed to be 15: Youssaf Khaliif Nuur who claims he is 15 though he is 6ft tall and, according to one unconfirmed source, shaves his beard and moustache

Of course, it is hard not to have sympathy for children or young teenagers who find themselves alone among the great migrant trek across Europe. But it is another matter for those who are older to tell cynical lies in order to take advantage of an ultra-liberal system.

Child migrants, unlike adult arrivals, are fast-tracked through the asylum process, and receive immediate housing and cash hand-outs of £160 a month.

Three-quarters win permission to settle, at which point they can bring in relatives from their home countries.

Under Swedish human rights rules, migrants are not physically vetted so their age cannot be accurately assessed (even by measuring the size of their wrists or whether they have wisdom teeth), because such procedures are deemed intrusive, unfair and unreliable.



Claimed to be 16: Ahmad Farid, who claimed he was 16 but appears at least 18 or more in the snap in which he is laughing as he's given a fluffy toy polar bear at a refugee reception centre

The growing scandal over bogus 'child' migrants was highlighted this week with the murder of 22-year-old aid worker Alexandra Mezher at a Swedish refugee hostel for children in Gothenburg, where her mother says residents lie about their age to get preferential asylum treatment.

She was stabbed after trying to break up a fight between two youths.

Youssaf Khaliif Nuur has been charged with her killing. When he arrived in court this week, the Somali was said to tower over his translator.

For her part, psychology graduate Miss Mezher had warned her mother that she was caring for 'big powerful guys' aged up to 24, in a shelter designed for children aged 14 to 17.

The Swedish experience would seem to lend support to the stance of David Cameron this week, who has rejected calls to throw open Britain's doors to migrant children arriving alone in Europe.

The Prime Minister has promised to 'resettle' genuine orphans from Middle East refugee camps and some stranded in Greece and Italy. Kent County Council, being closest to the Channel, already receives vast numbers of child migrants, many smuggled by traffickers into the UK from the squalid French coast camps at Calais and Dunkirk.



Last year, as the migration crisis blew up, the numbers of children arriving in the Garden of England surged. By September, it was responsible for 720 under-18s, three times as many as the same time a year earlier, and now Kent has appealed to other councils for housing help.

The scale of the crisis over how to treat both migrant children, and those who claim they are children, was revealed last autumn in Sweden when more than 8,000 — mainly from Syria, Afghanistan, Somalia and Iraq — arrived in one week: 1,716 said they were under 18 and thus 'unaccompanied minors'.

**Killed: Miss Mezher (left and right), 22, described as an 'angel' by her mother (left), was fatally stabbed in the back and thigh at the asylum centre for young, unaccompanied migrants in Molndal, Sweden, on Monday morning**

In the 12 months to the end of last year, the total of so-called minors had reached 33,250, many speaking only a smattering of English and almost none with a word of Swedish.

One social commentator named Merit Wager — an author and columnist on one of Sweden's daily newspapers — claimed on her online blog in November that administrators at the immigration service had been ordered to 'accept the claim that an applicant is a child if he does not look as if he is over 40'.

And in a leaked interview to a respected Right-leaning Scandinavian newspaper, Dispatch International, a supervisor in a migrants' hostel had this to say: 'Many of us are under state orders to keep quiet if we think someone is lying on their asylum application. But, the supervisors here talk to each other about the fact that many of the "children" are in fact adults.'

The crisis has escalated because migrants arriving in Europe throw away their identity papers so they can avoid EU rules which say that if their asylum claim fails they must be returned to the country where they first registered in the EU.

This leaves the politically correct Swedes having to accept the word of 'child migrants', because they cannot prove their age claims one way or the other.



Struggling to find beds for the new arrivals, the mayor of Vimmerby, in south-east Sweden, promised to house them in spare rooms in old people's homes.

This policy, announced last October, was hurriedly reversed ten days ago. Mayor Tomas Peterson said it had been discovered the migrants were not children at all, but 'men in their late teens'.

They had, the mayor said, caused 'serious incidents' by abusing the old people, throwing furniture and computers out of windows, playing loud music late at night, and showing no respect for the elderly.

A year ago, Swedish television reported that an Afghan claiming to be aged 15 had beaten and threatened staff and other residents at a home for young migrants.

He choked a 14-year-old, pushing his face into a bowl of ice cream and tried to molest female migrants at the same home, scaring some so much that they ran away.



He, of course, is apparently the same age as the Somalian accused of stabbing a woman to death in a migrant hostel this week.

The spate of disturbing incidents has forced Swedish politicians to think again about age testing, although no decision is expected for six months.

Over in neighboring Norway, a more robust system of checking migrants' ages is now in place.

**Dental examinations — which are reliable indicators of the biological maturity of growing children — revealed nine out of ten**

**'underage' migrants were lying, and turned out to be older than 18.**

Meanwhile, the ace sprinter Saad Alsaud is happily settled in the southern Swedish city of Kristianstad.

On his Facebook page, he boasts of his sporting triumphs and gives his birth date as June 1996 — meaning that he is now, apparently, 19 and would have been around 14 when that picture was taken.

But in overwhelmed Sweden, there is no way of proving, one way or the other, if he is telling the truth.

**EDITOR'S COMMENT:** I was always wondering about this identity issue. After sudden incidents like an earthquake or an explosion there is no time to get your personal documents and most probably houses and building are completely destroyed. In that case one might temporarily be without an ID and this why state archives are for – to get a new one. Despite different ID systems there are some obligatory papers that each person need to have to prove own ID. It has become a habit immigrants to state that they have no documents at all. Furthermore they can state any country of origin depending on the language spoken and skin color. Since modern related applied (dental/wrist x-rays) and experimental forensics (e.g. DNA biomarkers; DNA methylation in saliva sample; T cells' DNA) or controversial techniques (e.g. palmistry) are not applicable in massive inflow of people, other methods should be employed for the initial classification of incomers. Entry nations should make widely public that “no papers, no entry!” – this is the cheaper solution that might discourage those intended to mix with immigrants for their own reasons.

► Read also: [http://www.unicef.org/protection/Age\\_Assessment\\_Practices\\_2010.pdf](http://www.unicef.org/protection/Age_Assessment_Practices_2010.pdf)



Pope Francis on Sunday (January 10) marked the Feast of the Baptism of the Lord with a traditional



baptism ceremony at the Sistine Chapel in the Vatican. During the mass and ceremony under the chapel's famed frescos, Francis baptized 26 babies: 13 girls and 13 boys. In his brief unscripted remarks, the pope repeated his advice from previous years, telling mothers to feel free to breast-feed their babies if they cried or were hungry. "My wish is that you will be able to raise these children in faith, and that the greatest heritage they receive from you is faith. And just one piece of advice, when a child

cries because he is hungry, I tell the mothers, if your child is hungry, feel free to feed them here," he said. The pope has used similar words to make mothers feel at ease before. Baptism is the sacrament at which infants or converts are initiated into the Christian faith. Francis poured water on the foreheads of the infants as part of the ritual. The Sistine Chapel, which Michelangelo painted in the 16th century, is the room where cardinals elect



popes in secret conclaves. Francis was elected the first non-European pope in nearly 1,300 years there on March 13, 2013.

### End then I read this:

**Europe has gone mad!!! The sacrament of baptism declared a crime!**

Source: <http://en.cyplive.com/ru/news/evropa-soshla-s-uma-tainstvo-krescheniya-obyavleno-prestupleniem.html>

**Jan 21 – The European Court in March 2016, prohibits baptize infants, because this is a crime! In the Court's practice of the sacrament of baptism is not compatible with the interests of the child, in accordance with Art. 3 Convention on the Rights of the Child, ratified in 25 May 1992.**

## Boy, 10, raped by Iraqi refugee at swimming pool because he had 'sexual emergency'

Source: <http://www.mirror.co.uk/news/world-news/boy-10-raped-iraqi-refugee-7320320>

Jan 06 – A 10-year-old boy was raped by an Iraqi refugee at a swimming pool because he reportedly had a "sexual emergency". The youngster was dragged into the changing rooms by the 20-year-old before he was assaulted.

Following the attack, the Iraqi went back into the swimming pool but was detained after the distraught youngster alerted the lifeguard.

Police arrested the man at the pool. The youngster was taken to hospital was severe injuries.

According to Kronen Zeitung, **the man, who has a wife and children, told police he attacked the boy because of a "sexual emergency"**.

He claimed this as because he had not sex for four month and reportedly said it was "a huge mistake". The rape took place on December 2 at the The Resienbad pool (Vienna, Austria).



### Forensic Science – UK Innovation Database

Source: <https://espkn.org/fsscdb/about/>

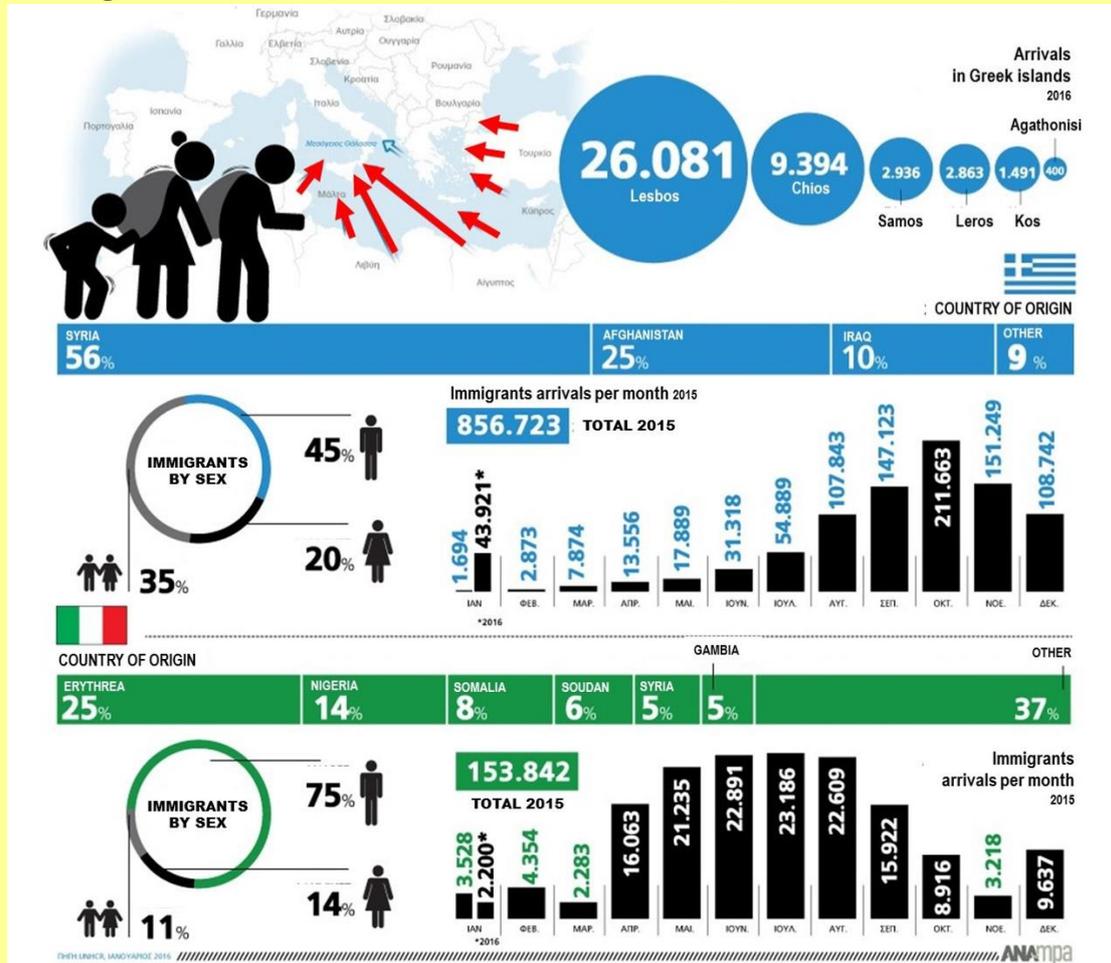
The Forensic Science SIG was founded to ensure that the UK continues to maintain its reputation as a world leader in forensic science innovation. The SIG aims to help stimulate innovative and effective R&D in the UK forensic sciences by bringing together an active community of members from a variety of stakeholder groups within forensic science and from other sectors.

The SIG has produced an online, free, searchable database of forensic science challenges, those who have identified the challenges (contributors) and UK Stakeholder groups, the Forensic Science – UK Innovation Database. This database includes challenges across the forensic disciplines alongside the criminal justice system and intelligence communities, with the purpose of encouraging collaboration to overcome these challenges by bringing together those with potential solutions and those who have identified the challenges. This database also provides information on Stakeholders for potential collaboration to work on these



challenges, or any other specific partnerships that the Stakeholder has indicated an interest in. The challenges have been attributed labels relating to cost and duration, it should be noted that these are estimates and while a challenge may be labelled as having a long duration it might be possible to carry out a feasibility study in a much shorter time period.

## Immigrant flows towards Greece and Italy (2015-2016)



## Shocking numbers that sum up Syrian Civil War

Source: <http://www.news.com.au/world/middle-east/shocking-numbers-that-sum-up-syrian-civil-war/news-story/0361e487c319253b7703d7cc881cb2c8>

Jan 09 – It represents the greatest humanitarian challenge of our time. Five years of intense fighting has plunged a once vibrant country into darkness.

The destruction and despair wrought by the Syrian Civil War has caused a “systematic” obliteration of infrastructure and population. Such is the backward direction of the country, that from 2010 to 2015, the average life expectancy fell by a staggering 20 years.

Just five years ago the life expectancy of a child born in Syria was 75.9 years, but that

number has since fallen to an estimated 55.7 years. In contrast, the average life expectancy in Australia is 82.2 years.

A complete death toll in the war is impossible to pin down, but estimates from aid organizations and the United Nations put the number at more than 270,000 people — thousands more than the number killed in the atomic bombings of Hiroshima and Nagasaki combined.



According to aid organization Mercy Corps, “half the country’s pre-war population — more than 11 million people — have been killed or forced to flee their homes”.

The UN estimates close to four million Syrians have fled the country — a trend that has fueled

households struggle to meet the basic food needs to sustain bare life,” the report said.

Of the millions displaced and suffering, Syria’s children are bearing the brunt of the crisis and have been dubbed the country’s “lost generation”.



An estimated four million Syrian children are out of school or any formal education at the moment, adding to the disastrous long term effects of the conflict.

Smoke rises over Saif Al Dawla district, in Aleppo, Syria. (AP Photo/Manu Brabo, File)

an incredibly difficult European refugee crisis that has dominated global headlines.

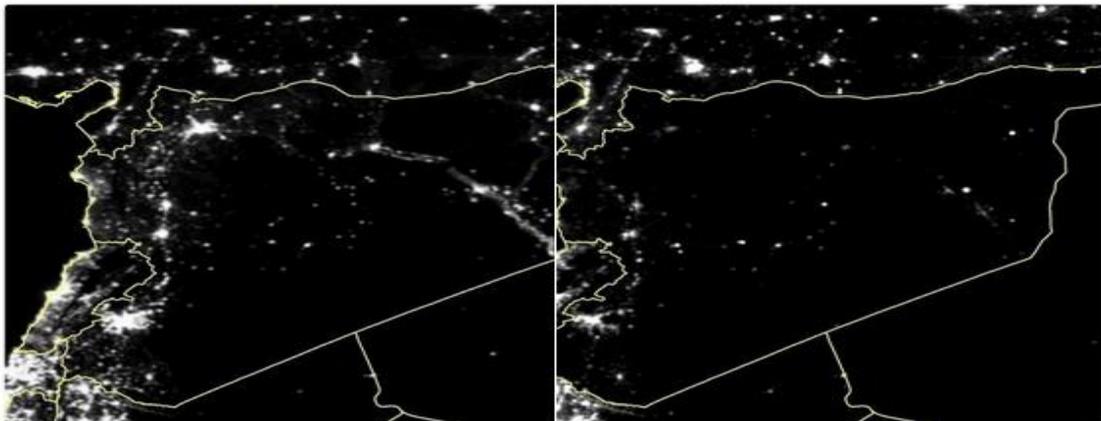
A further seven million Syrians are believed to be internally displaced due to the fighting, and those left behind face almost impossible circumstances.

A shocking 80 per cent of Syrians are now deemed to be living in poverty. More than three million have lost their jobs since fighting broke

“The scale of the crisis for children is growing all the time, which is why there are now such fears that Syria is losing a whole generation of its youth,” said Peter Salama, regional director of the UN’s Children’s Fund.

**A majority of the country live half their lives under a blanket of darkness as the damage accumulated in the war has caused 83 per cent of the country’s electricity to be cut.**

**IMAGE: Syria from space at night, 2011 (left) and 2015 (right).**



out in 2010, according to a 2015 UN-backed report.

Unemployment has surged from 14.9 per cent in 2011 to 57.7 per cent at the end of 2014.

“Thirty per cent of the population have descended into abject poverty where

An image taken from space at night shows how the lights have slowly faded from the night sky over Syria.

The images above were taken by a team of researchers from Wuhan University in China from satellites 800km above the earth.



“These satellite images help us understand the suffering and fear experienced by ordinary Syrians as their country is destroyed around them,” said Dr Xi Li, the lead researcher on the project, in a statement.

While the emotional toll of the ongoing civil war is impossible to define, the financial cost is so far projected to have surpassed \$US200 billion in damage and lost revenue.

“With the economic and structural losses and the destruction of oil resources, agriculture, industry, trade, infrastructure and the displacement of millions of people, the total

losses suffered by Syria easily exceeds 200 billion dollars,” the head of the Syrian Economic Task Force, Osama Kadi, said last year.

Homs, the third largest city in Syria, has been reduced to rubble and today shows a faint flicker of the life it once held. Drone footage circulated online last week shows the devastation suffered by the city and led prominent Middle East commentator, Maaajid Nawaz, to comment: “Are we fighting to control cities of rubble?”

### THE NUMBERS

- More than 270,000 killed
- Life expectancy reduced by 20 years
- Four million Syrians are external refugees
- Nearly seven million are displaced inside the country
  - Four out of five Syrians live in poverty
- Unemployment has risen to nearly 60 per cent
- Four million children are missing out on formal schooling
- More than 80 per cent of country’s electricity has been cut
- More than \$US200 billion in damage and lost revenue
  - Thirteen million in need of assistance
- Largest current refugee crisis in the world

## NATO fleet deployed in Aegean Sea to stop refugees coming from Turkey

Source: <http://www.homelandsecuritynewswire.com/dr20160211-nato-fleet-deployed-in-aegean-sea-to-stop-refugees-coming-from-turkey>

Feb 11 – **NATO has deployed its fleet to the Aegean Sea in an effort to end the flow of refugees crossing from Turkey in order to enter the EU zone.**

The deployment, announced yesterday, will involve warships, rather than coast guard boats, meet refugee boats outside Greece’s territorial waters. NATO secretary-general, Jens Stoltenberg, said naval action would be taken “without delay.”

The BBC reports that the deployment follows a declaration by Greece that Turkey is a “safe third country” – meaning that Greece, aided by NATO ships, can now legally turn back boats carrying asylum-seekers since they no longer face risks in Turkey. The declaration also allows Greece to deport those asylum-seekers who have arrived across the Mediterranean – and do so without a lengthy and involved legal process.

In a Wednesday press conference, Stoltenberg insisted the deployment of NATO’s Standing Maritime Group 2 was “not about stopping or pushing back refugee boats.”

**The NATO fleet includes warships from several NATO countries, and is now under German command.** The fleet “will be tasked to conduct reconnaissance, monitoring and surveillance of the illegal crossings in the Aegean Sea in cooperation with relevant authorities,” Stoltenberg said.

U.S. Secretary of Defense Ash Carter said: “There is now a criminal syndicate that is exploiting these poor people and this is an organized smuggling operation.





"Targeting that is the way that the greatest effect can be had ... That is the principal intent of this."

NATO has also announced it was stepping up its counterterror efforts on the border between Turkey and Syria.

Stoltenberg said that following a request from the United States, NATO would "step up" its efforts in the international coalition against ISIS.

"We have just agreed that NATO will provide support to assist with the refugee and migrant crisis," Stoltenberg said. "The goal is to participate in the international efforts to stem the illegal trafficking and illegal migration in the Aegean."

**EDITOR'S COMMENT:** NATO fleet to counter a human tsunami! Under German command! Do you really believe that this is the main objective? How they are going to do that? How warships will stop the small boats fleet carrying human souls on daily basis? Are they going to sink them? How they are going to intercept them in very narrow waters between Greek islands and Turkish coastline? And what can NATO fleet do more that both Greek and Turkish Navy cannot? It is more than obvious that the main issue is the control of Russian Nave in the Aegean Sea; a touch of future Kurdistan; a touch of oil barrier for S Arabia towards Turkey/Europe and as always to support their out of control friend consuming EU money. Simple as that!



## The Road to Rio

Source: <http://www.trtworld.com/americas/the-road-to-rio-40889>

Feb 04 – TRT World visits Olympic host city Rio de Janeiro ahead of Games

**"I dont swim here anymore. Unless I have to - if someone falls in the water I'll of course jump to save the person... but that's the only way you'll see me in this water"**

Serginho is a fisherman born and raised in Rio de Janeiro. He is disappointed at local authorities who he says have "not kept their promise."

That "promise" was made back in 2009 when Rio was awarded the Olympic Games and its authorities said they would clean Guanabara Bay of all the sewage and garbage that have been thrown into it - uninterrupted - for the past 400 years.

Many people in Rio share Serginho's opinion and have very little hope that things will change. Ever.





Rubbish piled up at Marina da Gloria [TRTWorld]

According to biologists, the pollution in Rio's waters is a result of a lack of urban planning. "The way the city was built - informally and spontaneously - has transformed rivers, lakes - and ultimately the bay - in a gigantic toilet

"Lagoons are dead. Entire ecosystems are disappearing."

But there was a project to try and revert that.

Biologist Mario Moscatelli - the source of the above quotes - was part of a team that worked with the government to develop a plan presented to the International Olympic Committee.

A plan to clean the water.

But he says the measures have not been implemented. And he knows why:

"It's big business. Water companies charge for sewage treatment that they don't provide. So they are making money without delivering the service - which is lucrative. Albeit, dishonest."

Moscatelli told TRT World the scheme is common knowledge in Brazil. And that authorities have never tried fixing it. **Only 40 percent of Rio's sewage is treated.**

"We're talking about Brazil's second largest city - which lives a XVII century reality when it comes to sanitation. It's embarrassing," Moscatelli said.

Olympic medalist Lars Grael told us he and his brother Torben Grael - also a medallist - have tried dissuading the 2016 Rio Committee from hosting sailing, open water swimming, and triathlon races in Guanabara Bay:

"We could have done it in Buzios, a world renowned track. But the 2016 Rio Committee planned the event in such a way that all races would be within a certain perimeter." In other words, convenience was chosen over safety.

During test events last year athletes reported the water had caused some people to come down with illnesses.

**German sailor Erik Heil said he needed treatment after competing in Rio. He plans to wear a plastic cover over his suit in August.**

And the American rowing team reported 13 athletes presented stomach problems after coming into contact with the water in Rio.



We have requested an interview with Rio's environment agency Inea - which works as a monitoring body and is supposed to be conducting the tests provided to the IOC and the World Health Organization. They promised to get back to us. We are still waiting.

Rio de Janeiro's mayor, Eduardo Paes, agreed to talk briefly - before a meeting. He says he is not a specialist and that he trusts the WHO, which is acting as a consultant for the IOC and has come out saying that water, within the field of play, meets the necessary standards.

But Paes has not spoken about why the work to clean the bay has not been carried out in the last 7 years.



The only independent tests were requested by the Associated Press and revealed the water is highly contaminated - even far from the shore. [TRTWorld]

There are concerns over how athletes will feel after competing in Rio in August.

But the real danger is what locals are exposed to on a daily basis. And the fact that people have somewhat accepted that water in Rio will never be clean again.

"If they haven't done it now - with the whole world watching - they will never get it done," Moscatelli said.

## **Diesel the police dog WAS shot dead by her own side during Paris terror attacks**

Source: <http://www.dailymail.co.uk/news/article-3446511/Confirmed-Diesel-hero-police-dog-Paris-attacks-shot-dead-wounded-innocent-neighbours-reckless-shooting.html>

Feb 14 – **A 'heroine' police dog who died in a high-profile Paris terrorist raid was blasted to death by officers who were meant to be on her side, it was confirmed emerged today.**

**They not only killed Diesel, a seven-year-old Belgian Shepherd, but wounded innocent neighbors and threatened at least five other policemen with their reckless shooting.**

Their shields and body armor were all hit by round upon round of Brenneke bullets – ones widely used by Special Forces – during the attack on a house in the suburb of Saint-Denis in November.





widely honored for its professionalism during the attack. Diesel was due to receive a posthumous Dickin medal – Britain's animal equivalent of the Victoria Cross.

'Diesel was killed by Brennekes' said Jean-Michel Fauvergue, who commanded the operation by the RAID, which stands for Research, Assistance, Intervention, and Deterrence.

His force uses Brennekes slugs – Special Forces ammunition produced by the German company Brenneke GmbH.

Commander Fauvergue has admitted that 'saturation fire' was used to kill Abdelhamid Abaaoud, the 26-year-old leader of the Paris terrorists, and fellow killer Chakib Akrouh, 25. But Abaaoud's female cousin, Hasna Ait Boulahcen, also 26, was also riddled with bullets and died in the attack as she tried to give herself up. Her surviving family has since launched proceedings against the Raid for murder, while at least two neighbors hit by bullets are consulting lawyers. Both are from ethnic minority backgrounds, but had absolutely nothing to do with the terrorists. Five RAID officers also reported friendly fire penetrations to their equipment in the storm of Brenneke bullets that hit the property in the early hours of November 18.

Diesel, who was due to retire after a distinguished career, was specially trained to enter dangerous areas so as to bite enemies.

**Now the RAID are trying to work out why she was sent into a house which they were pouring live fire into.** A spokesman for the Paris prosecutor said there would be no formal inquest into Diesel's death, nor any kind of autopsy on the animal.

**Forensic examination has established that up to 5,000 rounds of police ammunition was used during the Saint-Denis raid, while the terrorists fired around 11 bullets back.**



It led to the deaths of at least two terrorists who had taken part in the attacks on Paris that month in which 130 people were killed.

But those inside the house only had one automatic pistol between them, and were in no position to fight back with any kind of effectiveness.

The revelations are a huge embarrassment for the elite RAID police group, which had been

## **Desperate Sweden is forced to hire luxury cruise liner with theatre, gym and swimming pool to house 2,000 refugees at a cost of £65,000 A DAY**

Source: <http://www.dailymail.co.uk/news/article-3451321/All-aboard-HMS-freelander-2-000-refugees-live-luxury-giant-cruise-liner-theatre-gym-swimming-pool-cost-65-000-DAY-Swedish-government-insists-need-encouragement-get.html>

Feb 17 – Thousands of migrants are being given rooms aboard a luxury ocean liner which comes complete with a theatre and swimming pool because Sweden can no longer cope with the numbers arriving at its borders every week, it has been revealed.

Sweden's Migration Board is renting the Ocean Gala - once the world's largest cruise liner where holidaymakers pay £2,500 for a two-week break - for at least the next year at the



eye-watering cost of of £65,000 a day. When the giant cruise ship is full it will provide bed and board for 1,790 migrants - about the number arriving in the country every single day



at the height of the crisis.

#### STOMACH FLU AND REALITY TV: THE OCEAN GALA'S HIGH PROFILE PAST

This is certainly not the first time the Ocean Gala has hit the headlines.

The Island Escape, then owned by Royal Caribbean, was the star of a 2002 documentary, which lifted the lid on life on a cruise ship sailing for Palma Majorca with 1,500 party-loving customers.

It was far from a success, with plumbing troubles and inappropriate advances - as well as Rik Waller - keeping viewers hooked.

In its latter years, it was plagued by problems with stomach bugs.

During its 13 years as the Island Escape, legal firm Irwin Mitchell pursued it on six different occasions, representing more than 300 people who fell in on board between 2009 and 2012.

**Some even went as far to describe it as the 'cruise from hell'.**

A spokesman said: 'Having a theatre sounds really nice. Those who are going to stay at the ship will probably have to do that for quite a bit of time while their applications are being processed. So they need every encouragement they can get.'

However, at that cost they will not enjoy the same luxuries afforded those who paid as much as £2,500 for a two-week cruise during the ships previous incarnation as the Island Escape, then owned by Thomson Cruises.

The 768 cabins on the 623-foot ship, which range from smartly turned out but snug doubles, to expansive suites with private dining areas and balconies, was then a haven for those in search of entertainment, sunbathing and sightseeing.

But those who make it their home in the next year will not be treated to all the extras holidaymakers who floated around the Med were used to enjoying, including a casino, outdoor pool and even a beauty salon.

In fact, if the Swedish Migration Board is successful in finding a spot in the northern port of Härnösand, where temperatures are currently firmly below freezing.

Willis Åberg, head of housing issues at the Swedish Migration Board, boasted that the organisation was 'thinking outside the box'.

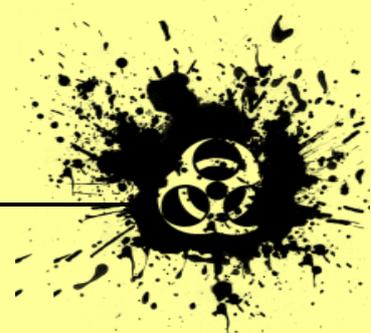
'Those who are going to stay in the boat will of course be a bit cramped in the cabins, so it is really important that we arrange for them to have large common areas outside,' he told MailOnline.



'But having a theatre sounds really nice. Those who are going to stay at the ship will probably have to do that for quite a bit of time while their applications are being processed. So they need every encouragement they can get.'

Mr Åberg revealed the Migration Board, which has been open about its struggles to house the refugees arriving in Sweden, even setting up tents in the middle of winter, came up with the idea of the floating asylum centre a number of years ago - but had never had cause to use it, before now.

'We came up with it ourselves,' he told MailOnline.



'We are trying to think outside the box to solve this situation. We had this idea already in the 1990s when we had a huge influx of



immigrants coming from the war in the Balkans, but it was never implemented then.

'But we took up the idea again last year when we saw that the situation was going to be hard with immigrants coming by the thousand every day.

Kjell Tandberg, managing partner of Florida-based US Shipmanagers, which now own the Ocean Gala, told MailOnline: 'The swimming pool will be closed off, we will have decking on the top of it.

'The casino has already been removed, but there will now be some offices on board for organising, and the lounges will be education and common areas.

'The restaurants are still there. The people on board will have three meals a day, but whether there is going to be one or all three, I don't know.'

It is also not the first time US Shipmanagers has rented one of their vessels to a large group for a lengthy period of time - and Mr Tandberg was confident the Ocean Gala, while not a 'luxury' liner, would have another incarnation as a cruise ship.

But for now, it is the 'perfect vessel' for the Migration Boards needs, he added.

'It is well suited for the purpose of long term stays,' he said. 'It was originally built as a car ferry, and has large rooms.

'I think it will be a step up for many families that have been living in cramped quarters.'

However, the deal may still fall through as the ship now needs to find somewhere to stay for the next 12 months.

Already, an application to berth the Ocean Gala at Härnösand, 260 miles north of Stockholm, has encountered opposition.

[Allehanda](#) reports the local council felt the proposition was 'not appropriate' for the area.

**EDITOR'S COMMENT:** A good solution for the company. A good solution for the immigrants. A good solution for the Swedes. A good solution for Europe?

## Poland – wSieci Journal

(on immigration tsunami) – February 18, 2016





Floyd Joy Mayweather, Jr.  
American retired professional  
boxer

**LIFE IS A BITCH...**

Rescuing Syrian refugees  
In a Greek island



## Turkish fighter jets violate Greek airspace

Source: (Iran) <http://www.presstv.ir/Detail/2016/02/16/450554/turkey-jets-greek-airspace>

Feb 16 – Turkish military planes have violated Greece's airspace over the Aegean islands multiple times, Greek media reports say.

**Six Turkish fighter jets and a navy transport plane carried out over 20 airspace violations in the vicinity of eastern and central Aegean islands**, the state-run Athens News Agency reported on Monday.



According to the report, two of the war planes were armed and twice engaged in mock dogfights with Greek planes that had scrambled to intercept them.

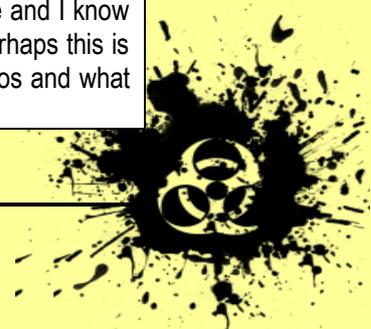
Greece and Turkey, both NATO members, are engaged in a centuries-old dispute over territorial and airspace ownership in the Aegean. In 1996, the two countries almost came to war over a cluster of uninhabited islets in the region.

The violation occurred as NATO prepares to launch naval patrols in the waters separating both countries in an attempt to ward off human smuggling vessels ferrying large numbers of refugees and asylum seekers into Europe.

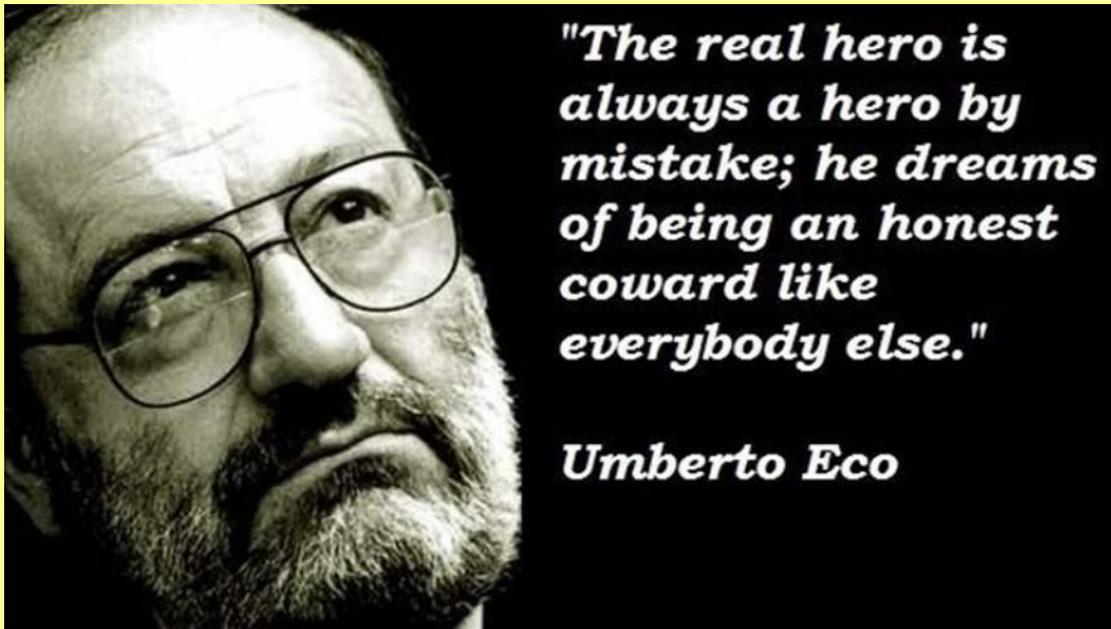
**Athens has in the past voiced fears that Ankara could exploit the refugee crisis to bolster its military presence in the Aegean.**

In 2015, over a million asylum seekers gained access to European shores via the Aegean, while many more perished during the perilous voyage.

**EDITOR'S COMMENT:** Well this is a one-day incident! It happens almost every day – all year around. It is interesting that the article comes from an Iranian official site. It is funny how geostrategy changes according to national interests and alliances – temporary, future or ongoing. It is sad there is no solid Greek strategy over time instead of a feather on the wind! Many years ago, I asked an M East pilot: "What would you do if a X fighter jet enters Y's air space?" First he looked at me and I know he was thinking: "Are you stupid?"; then he replied: "First intercept; then shoot it down!" Perhaps this is the only solution to trans-country bullying. I am sure that you have seen related bullying videos and what happens when the "weak" victim strikes back and bits "mighty" bully down.



## Umberto Eco (1932 – 19 Feb 2016)



*"Social media gives legions of idiots the right to speak when they once only spoke at a bar after a glass of wine, without harming the community. Then they were quickly silenced, but now they have the same right to speak as a Nobel Prize winner. It's the invasion of the idiots."*

## World's Best Military Flashlight!

Source: <http://tacticalmilitaryflashlight.com/>

- 5 Modes**
  - High
  - Medium
  - Low
  - SOS
  - Strobe
- Telescoping Focus**
  - X 1
  - X 250
  - X 500
  - X 1000
  - X 2000
- Aircraft Grade Aluminum**
- Ultra Light & Ultra Tough**
- 100,000 Hours Lamp Life**
- Beveled Edge For Self Defense**
- Cree XM-L T6 Bulb**

Do you frequently suffer from "Dim Flashlight" disorder?

You know that awkward feeling a person gets, every time they turn on an old flashlight – only to discover its foggy bulb can barely light all the way to the bathroom — let alone down a dark hallway or country in case of an emergency. Truth be told, most people have the tendency to overlook the importance of owning a much superior flashlight for their home, car, boat, or their workplace, that is why you need to get **G700 Tactical Flashlight**.

Ask any police officer, fireman, military man, hunter or survivalist – and all of them will explain to you how critical it is for them to have a flashlight beforehand at



all times. In fact too many, not just any flashlight will do, you'll find many of them armed with the best – the ones deemed to have much superior quality and are highly advanced. Those other typical kinds, with clunky plastic halogen flashlights that require either type C or D batteries to function normally are practically useless. They break easily, very dim, and quite heavy.

On the bright side, recent advancements in lighting technology mainstream have taken flashlights growing trends seriously and up a higher notch! Ideally, Compact LEDs have led to much smaller flashlights that relay more light, while using a fraction of the energy of which their old-fashioned, ordinary counterparts use. Although before you dash to a Home Depot to buy any kind of old LED flashlight, first you need to be aware of the new tactical flashlight dubbed the G700, which uses the most advanced military technology and is currently available to the public.



Originally made of highly efficient and, most likely, nearly indestructible Machined Aircraft Aluminum, the G700 is highly effective and runs on 3 AAA batteries and is capable of lighting to safety with a remarkable **700 blinding lumens of light**. It also features a brilliant cool Zoom feature, an SOS function mode' to signal for any alerts, together with a strobe function mode' which produces a massive frequency that mitigates a threat within milliseconds!

In fact, a popularly known Navy Seal after testing this superior flashlight for the first time says "It's the #1 Tool everyone should own as it could turnout being a lifesaver during a natural disaster....literary!"

**EDITOR'S COMMENT:** G700 is gaining popularity as a defensive measure against intruders and offenders!



## The epic journey of a **refugee cat** to find its family – video

Source: <http://www.theguardian.com/world/video/2016/feb/19/refugee-family-who-fled-iraq-are-reunited-with-cat-video>



**Kunkush the cat** was a beloved member of a family who became refugees when they fled Iraq for the safety of Europe. Travelling through Greece, family and cat became separated. Kunkush was found in the Greek Island of Lesbos and fostered in Berlin, where an international online search was co-ordinated in the hope of reuniting him with his family. Finally Kunkush (or Zeus as he was called in Greece) met his family in Norway!

IRAQ  
GREECE  
GERMANY  
NORWAY





## The HAZMAT Guys Nation

Source: <http://www.thehazmatguys.com/>



## Enhancing Counter Terrorism Efforts with Handheld Raman Chemical Threat Detection Systems

Interview with Eric Roy, Product Manager at Rigaku Analytical Devices

**CBRNE-T NSL: What do you consider to be the main challenges facing the industry and how is Rigaku helping to address them?**

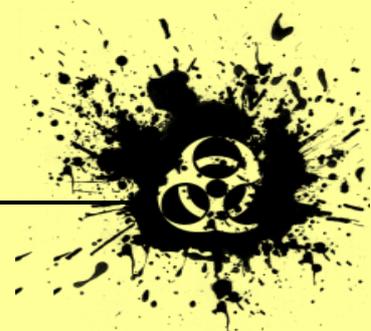


As commercial explosives become increasingly difficult to obtain by terrorists, homemade explosives (HMEs) typically produced in makeshift labs and chemical warfare agent (CWA) attacks are becoming more common and more difficult to detect for those responsible for threat mitigation. Therefore, a singular field-portable analytical device that provides rapid, accurate and reliable identification of the largest number of suspected and unknown substances is paramount to effective counter-terrorism efforts.



In the eyes of many end users, handheld Raman based chemical detection systems are the ideal tool for analyzing hazardous samples in the field. However, users of first generation devices have experienced and continue to experience problems when attempting to measure off-white and colored substances due to heavy sample-induced fluorescence interference issues.

Because of fluorescence issues associated with devices utilizing 532 or 785 nm laser excitation sources, analysis can be limited to identification of non-fluorescent pure white powders and clear liquids. While many high purity pharmaceutical or laboratory-grade compounds exist as white powders and clear liquids, most operationally relevant threats commonly encountered in clandestine laboratories or in urban environments are colored by impurities from crude synthetic processes, low grade precursors, or from intentional pigments and dyes such as those found in household products (e.g. fuel oil, antifreeze).



**CBRNE-TERRORISM NEWSLETTER – February 2016**

At Rigaku Analytical Devices, we are committed to providing analytical solutions that overcome analytical limitations by delivering detection of the largest number of substances from a field-portable and handheld device, so that those who must face and respond to evolving threats are properly equipped to do so. Our **Progeny™ ResQ™ 1064nm handheld Raman** is at the forefront of analytical



proficiency and incorporates practical features that actually expand threat mitigation teams' efforts in protecting the public from these threats, easily, quickly, and as safely as possible.



**CBRNE-T NSL: Please provide an overview of how Progeny ResQ was developed and its main capabilities.**

Rigaku Analytical Devices is the first to successfully design and build a high-performance handheld device using 1064nm compatible hardware which passes all the rigorous operating standards set by the US military. By incorporating a laboratory-quality technique into a rugged, handheld platform, we successfully developed a purpose-built device for counter-terrorism activity.

The positive feedback received from the industry, including being named as one of the top 100 most innovative products of 2015 in the Analytical/Test category by R&D Magazine confirms that Progeny ResQ 1064nm handheld Raman analyzer accomplished our development goals and more.

The 1064nm advantage means that Progeny ResQ can identify and detect a wider range of unknown and suspected substances at-scene or downrange and with little or no sample preparation. The detection capabilities include colored substances and positive substance identification through colored glass and plastic packaging – which are the characteristics common in real world threats that limit utilization of past generation handheld Raman analyzers for this application. This easy-to-use device is MIL-810G & IP-68 certified rugged to endure harsh and unpredictable environments while obtaining results in about 10 seconds with the push of a button.

When we designed Progeny ResQ, we considered how we could make it as easy as possible to use in the field. The device has an extended battery life, a large easily readable display and operates at the touch of a button, making it easy

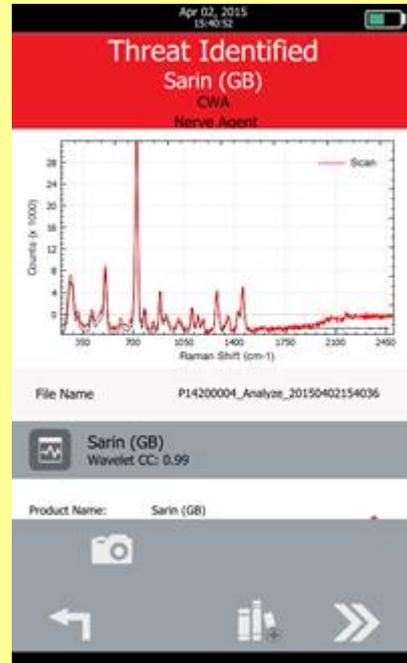


to use while wearing Level A and M3-type protective suits and gloves. It is also equipped with a measurement delay timer for users to pre-set the appropriate time needed to safely analyze a suspicious threat.

Through our discussions and evaluations with key industry leaders, evaluators, decision makers, and end-users we have become aware of additional practical capabilities to extend the utility of Progeny ResQ. These features were incorporated into the unit about 6 months after it was introduced.

#### Enhanced documentation through photographic evidence:

As multiple data streams are used to inform decision making processes, it becomes imperative for detection equipment to properly document the incident. After Progeny ResQ identifies an unknown compound, a secure PDF report is automatically generated that outlines all of the technical parameters that went into the identification, so remote SMEs or Commanders can better advise next steps. As we showed this capability to multiple government stakeholders, we learned that it is extremely valuable to include photographic evidence (particularly of clandestine laboratories or suspicious personnel) in these reports, to provide additional context of the incident. For this reason, Rigaku Analytical Devices integrated a 5.0 MP digital camera into Progeny ResQ. After an identification, an operator can seamlessly and securely attach photographs to the incident report. In doing so, remote Subject Matter Experts (SME) or Officers are able to better understand the potentially complex scene that surrounds the analysis, and lead a more informed response.



**Data Portability for Rapid Attribution:** During evaluations, end-users have described scenarios where correctly identifying the suspect material using current generation equipment was not sufficient to mission goals. They expressed the requirement to rapidly and seamlessly extract the raw data files (as well as summary reports) from the instrument so analysis files can be sent to remote SMEs or officials. The overall goal of analysis is sometimes for a remote SMEs to search external databases for evidence of the substance's origin, using algorithms and data treatments that are too sophisticated to be conducted on a handheld device by a typical end user.



In order to give agencies this capability, Rigaku Analytical Devices built functionality into Progeny ResQ that allows all data to be quickly and securely transferred (either through USB connection or wirelessly) from the device to an external computer or satellite communication system. *Note:* the wireless option was designed so it can be disabled, for agencies that do not want wireless transmission.

#### Library Portability for Maximum Capability Expansion Against New Threats:

Industry leaders have expressed a general frustration with the static nature of the current generation of handheld chemical detectors that are used widespread. One frustration is that the library of compounds found onboard the previous generation of instruments is static, while the threats encountered by the operators is constantly evolving. Often times, an agency



will be aware of a threat, but has to wait for the instrument manufacturer to address it with library updates, which can take a long time or be complicated by security clearance issues. To address this concern, Rigaku developed capabilities onboard Progeny ResQ for instrument fleet administrators to develop custom libraries onboard one instrument, then send the library file to all other instruments in the fleet through email. With this capability, the instrument fleet administrator does not need to involve the instrument manufacturer (unless involvement is desired), and can distribute a solution worldwide in a matter of minutes, not months.

As world threats evolve, Rigaku Analytical Devices will continue to listen to customer needs and will work to incorporate appropriate features into the device which will enhance its operation and functionality.

#### CBRNE-T NSL: What kind of materials can be detected using the device?

Progeny ResQ can distinguish between mixed, “Dirty”, and pure compounds so users can identify a potential threat in a compounded material. With a library of 12,000 common materials and an additional Safety & Security database of over 500 critical compounds including TICs/TIMs, CWAs, explosives precursors and narcotics, Progeny ResQ has increased the range of materials that can be identified using just one device, reducing the number of complementary techniques required. The device’s powerful analytical capabilities and industrial design have been praised by federal and state level representatives who were invited to test it against competitive instruments.

#### CBRNE-T NSL: What technologies are currently available for counter terrorism activity and where does Progeny ResQ fit into the market?

Mobile laboratories are under increasing pressure to deal with high volumes of samples requiring analysis and in the race to combat counter-terrorism activity, waiting days for results to come back from the lab is not an option. Miniaturization has been a key trend in the evolution of detection technologies – taking powerful lab-based technologies and making them suitable for use in the field. However, in some cases these devices still weigh over 35lbs and are not sufficiently rugged enough for harsh environments and have limitations of their own.

As mentioned earlier, existing handheld Raman analysers that utilize a 532 nm or 785 nm excitation laser are not able to cope with the demands of modern counter-terrorism applications. This is where Progeny ResQ excels. With its 1064nm excitation laser and extensive library, the device expands anti-terrorism efforts because it can detect munitions grade chemical weapons, which are more typical of what would be found in the field. This in combination with the ability to perform analysis through packaging, results in the critical ability for threat mitigation teams to quickly and accurately detect a much wider range of materials. The large, customizable, and portable library is a unique feature. It allows users to keep pace with the continually evolving range of chemical and explosive threats. The on-board camera and data transfer features place Progeny ResQ at the forefront of field-portable analytical technology.



#### CBRNE-T NSL: How does the device support counter terrorism efforts?

We are committed to continual collaboration efforts with industry leaders in order to further our product development efforts. Our mission is to provide emergency responders with the tools they need to identify threats in the field



and make life saving decisions without delays or uncertainty. Progeny ResQ's advanced analysis capabilities and practical features expand utilization and provide users with the confidence they need in the fight against terrorism. Progeny ResQ is also backed by Rigaku's global network of sales and service support partners to ensure assistance is available 24-hours, 365 days per year.

### CBRNE-T NSL: What trends do you predict for the future of chemical detection?

With the rapid development of explosive and chemical threats by extremist groups, first responders must be equipped with rugged analytical devices that provide rapid answers, produce no false alarms and are easy to use in the field. The industry must continually advance technology to keep up with these threats. By getting Progeny ResQ into the hands of end users for testing and feedback, we will continue to ensure our solutions are meeting these ever evolving needs.

With its multiple capabilities and ease of use, Progeny ResQ represents a significant step forward in chemical detection innovation. We will continue to develop our products to meet the market needs with the ultimate aim of ensuring public safety and tackling the global terrorism threat.

## 54 package delivery workers hospitalized over chemical leak from package in Turkey

Source: <http://www.hurriyetdailynews.com/54-package-delivery-workers-hospitalized-over-chemical-leak-from-package-in-turkey.aspx?pageID=238&nid=92348&NewsCatID=341>

Dec 10, 2015 – Fifty-four workers for a package delivery company in the northwestern province of



Kocaeli have been hospitalized after suspected poisoning, following a chemical leak from a package.

Workers at a package delivery company in Kocaeli's Başiskele district experienced difficulty in breathing after a package containing sodium benzoate burst open in the factory.

The workplace was evacuated after the chemical spread.

Ambulances were dispatched to the company and the workers were taken to the Derince Education and Research Hospital for treatment. The workers were admitted to the hospital's Chemical Biological Radiological and

Nuclear (CBRN) center, where special measures were taken.

The hospital cleaned the workers of chemical remnants and distributed fresh clothing to affected individuals, while blood samples were taken.

The chief physician at the hospital, Dr Soner Şahin, announced that 40 workers had been discharged, while the treatment of 14 patients is ongoing.

Kocaeli Public Hospitals Union head Şenol Ergüney told state-run Anadolu Agency that there were no serious threats to the affected workers' health.

"They were affected by the evaporation of a chemical substance. Their overall health situation is good, there is nothing dangerous," Ergüney said.

Officials from the provincial directorate for environment and urban planning examined the premises of the delivery company, while a formal investigation has been launched.

**Reports indicate that the package belonged to a chemical company and contained a chemical called "sodium benzoate" – a compound used in preserving food, as an antiseptic, and in the pharmaceutical industry.**



## Weapons of Mass Destruction May Be Slipping Through Canada's Ports

Source: <https://news.vice.com/article/weapons-of-mass-destruction-may-be-slipping-through-canadas-ports>



Feb 02 – **Short-staffing and outdated technology at Canada's borders could be helping groups abroad build weapons of mass destruction.**

The findings of a new audit, tabled Tuesday, found almost a fifth of high-risk exports are not being screened, while gaps in screening could mean exporters are gaming the system.

Things making it onto airplanes and ships could include nuclear materials, chemical and biological agents, and even types of missiles.

Following the audit, the Canada Border Services Agency (CBSA) has promised to draw up plans "to reduce the proportion of targeted high-risk shipments [that are] not examined." The federal government, meanwhile, is evasive about whether border guards will see increased funding.

The agency, which is charged with counter-proliferation of dangerous weapons at the border, works with intelligence agencies to determine which exports should be checked before leaving Canada.

**During the 21-month audit, 29 per cent of shipments deemed high-risk had not complied with the agency's rules. While most of the issues were minor, the CBSA thwarted "several shipments that were cause for national security concern." 17 per**

**cent of these high-risk shipments weren't examined at all.**

It's unclear whether that amounts to scores, hundreds or thousands of unexamined shipments. Officials for the CBSA and the auditor general told VICE News they wouldn't disclose how many exports were deemed high-risk, citing security reasons.

**One of the key reasons such shipments are bypassing screening is that border cops have no automated risk-assessment tool.** Exporters can still make shipments using paper forms, which allow some high-risk shipments to evade scrutiny.

In 2014, around 95 per cent of forms were submitted in an electronic database which records Canada's annual exports "but does not have the capacity to automatically identify declarations that may be high-risk."

That system is set to be replaced next January, which will be the fourth attempt to do so in the past six years.

**But 5 per cent of export declarations — at least 44,000 — were made on paper forms, which the agency does not always check against watch-lists as it does with every electronic record.**

About one-sixth of these paper forms were submitted to a local CBSA office instead of the



shipment's port of exit, meaning they don't always get to the screening officer in time. Whether electronic or paper, such forms are only required two hours before a shipment is loaded onto a flight, and two days before being loading onto a ship.

Of the 17 per cent of high-risk shipments that weren't examined, the CBSA blamed a third of

allowing nefarious exporters to game the system.

"The agency did not conduct any examinations at one large Canada Post centre for processing parcels exported from Canada," notes one example. "We were told that this was due to insufficient staff and a need to focus on examining items entering Canada."



these cases on receiving risk assessments "after the shipments had already left or been loaded on planes and ships."

As a result, frontline border agents are wasting their time assessing shipments that have already been flagged as high-risk by a risk unit, while missing some.

But even when border agents have these risk assessments in hand, shipments are still leaving Canada unchecked due to limited staff, misplacement and carriers ignoring requests to halt shipments, according to the audit.

In a scathing section of Tuesday's report, the audit claims CBSA are so short-staffed that they've been cutting corners.

"Partly as a response to staffing levels, the counter-proliferation targeting unit had reduced the number of shipments that it had been recommending for examination," reads the report.

"At one port of exit, no export control examinations were conducted when the assigned border services officer was on vacation."

Such problems create patterns in which high-risk shipments aren't screened, potentially

The report suggests numerous shortfalls could jeopardize Canada's international obligations, which includes sanctions against North Korea, Russia and Myanmar.

**Auditors estimate that in the last fiscal year, less than 1 per cent of the CBSA's full-time employees were dedicated to export control, though import staff sometimes assist in such tasks.**

The auditor general told reporters he was most concerned by how blatant he found the agency's weak spots, such as accepting a paper form for a flight taking off in another province in two hours.

"It's fairly easy to point out the holes in that system," said Michael Ferguson. "Within that limited budget, they need to have a coherent system towards dealing with exports."

The wide-ranging audit was completed by a team of 10, who monitored CBSA's export controls between April 2013 and December 2014. The audit excluded exports to the United States, which often don't require declarations.

The report criticized monitoring some exports, but found no issue



with how Global Affairs Canada issues permits for companies selling "strategic and military goods."

The CBSA, which responded to the auditor general's recommendations prior to their publication, said it could not respond to a set of questions Tuesday. The agency has pledged to create a plan to tackle unscreened exports, but hasn't said how.

Public safety minister Ralph Goodale wouldn't say whether the agency will get more funding in the spring budget. "We intend that this should be a first-class organization," he told Parliament. "We'll follow the advice of the auditor general."

NDP MP David Christopherson, who chairs the planning and priorities committee, said

Canadians should be concerned about potential repercussions for Canadian exporters.

"We're not meeting our obligations," he said. "I guarantee you there are security agencies around the world that are [...] getting in touch with their border people and starting to ask 'Do we have a problem there?'"

**Outside of counter-proliferation, the report also found that swamped export officers haven't made seizing illegal drugs a priority, in part because they can't legally open small parcels at random.** Meanwhile, 20 per cent of rail-to-sea shipments that were flagged exports flagged as potentially stolen vehicles were not checked.

### 3<sup>rd</sup> International CBRN Symposium

19-21 October 2015; Berlin, Germany

► Reportage provided by Cristanini, Italy

The German Association for Defense Technology hosted, from October 19th to 21st 2015, the 3rd International Symposium about the development of CBRN protective capabilities with an international participation. This three-day event was attended by 625 participants from 53 nations. More numbers? 5,

13, 85: in five Plenaries and 13 panels presented 85 speakers. Furthermore, in an exhibition, 40 companies and organizations presented their products and services. So that it can be stated, in all modesty and without exaggeration, that **the 3rd International Symposium CBRN 2015 was the biggest event of its kind worldwide.**



Decontamination eines Maserati der Firma CRISTANINI

DECONTAMINATION OF A MASERATI  
BY THE COMPANY CRISTANINI

**The big hit of the Symposium: Cristanini CBRN car – member of the super-car fleet of the decon Italian company!**



The symposium was mainly to exchange experiences from practice, research, science and technology of the CBRN protection. The symposium itself was divided into two parts. On Monday, 19th October 2015 a static and dynamic demonstration took place in the Julius-Leber barracks in Berlin.



The NBC defense Command of the Armed Forces presented several qualified CBRN defense capabilities in the fields of decontamination and the NBC reconnaissance; among other things, the armored reconnaissance vehicle Fuchs 1A8 TPz and the light drinking water treatment system and the special NBC defense "Reaktionszug".

In two different Demonstrations, the NBC defense Command of the Armed Forces, presented the operation of a light decontamination facility, the medical service of the Armed Forces and the land-based Wounded Decontamination.

In addition, well-known representatives of industry and other public institutions presents their skills and products in the field of NBC defense and NBC protection. The demo was followed by an Icebreaker, for which two tents have been especially set up in the Julius-Leber-Kaserne.

About 400 guests attended the Icebreaker. It is worth mentioning that after the reception - during an appeal - the corporal Dr. Thiemann Henry Neumann was promoted to Commander, and Captain Mrs. Paeschow, Department 3 / Department bases and training, got congratulations for her birthday.

The symposium itself then was held at the Maritim proArte Hotel on 20 and 21 October. In five plenary sessions (political opening, Chemical Threats, Epidemics, Nuclear and Radiological Threats, the way ahead in Europe) where seniors' and highly skilled experts shared their knowledge and experience with the audience. Colonel Hans-Christian Herrfleisch acted as overall moderator. State Secretary Dr. Katrin Suder opened the event, not without appreciating the German leadership role in the cluster "CBRN protection" of the Framework Nations Concept (FNC).

Panel discussions included the audience. Thirteen panels, based on the elements of NBC defense, turned to the experts. Simultaneously, about forty companies, not only German ones, presented their products.

A poster exhibition with 18 posters informed about the latest developments. It will certainly take some time, all lectures to analyze and implement. Details will be found under [www.cbrn-symposium.com](http://www.cbrn-symposium.com). Overall, the 3th International CBRN Symposium can be called a success.

Oh yes, as already during the 1st Symposium (see BORDEAUXROT NO.1 / 2011) the Former Chief of ABC Defence Company 1st evaluated it as a "Do you remember" - experience.

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available

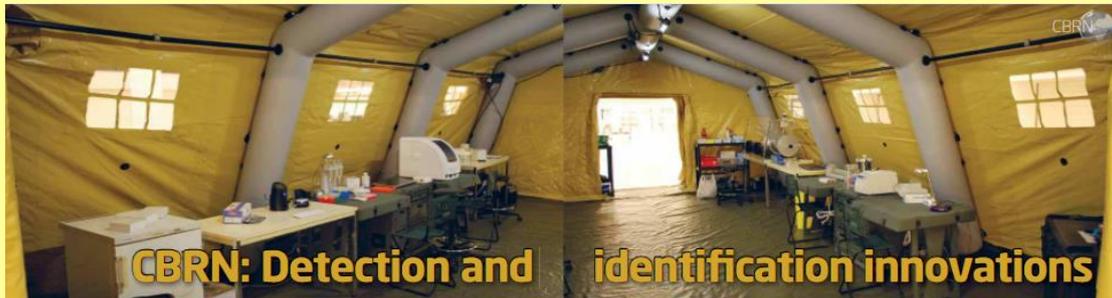
The International Master Courses in "Protection Against CBRNe events" provide theoretical and practical training for first responders, and advisors of decision makers, in the field of Chemical, Biological, Radiological, Nuclear and Explosives safety and security. The courses, that are "NATO selected" and supported by the OPCW (Organisation for the Prohibition of Chemical Weapons) are opened to civilian and military attendees. Students will participate to frontal lessons and practical activities both at the University of Rome Tor Vergata and specialized training centers in Italy and Abroad (The NATO School in Germany, the VVU center in Czech Republic, the Seibersdorf Laboratories in Austria, and the Chernobyl centre in Ukraine)



## CBRN: Detection and identification innovations

By Olga Vybornova (Université catholique de Louvain, CTMA, Senior Researcher)

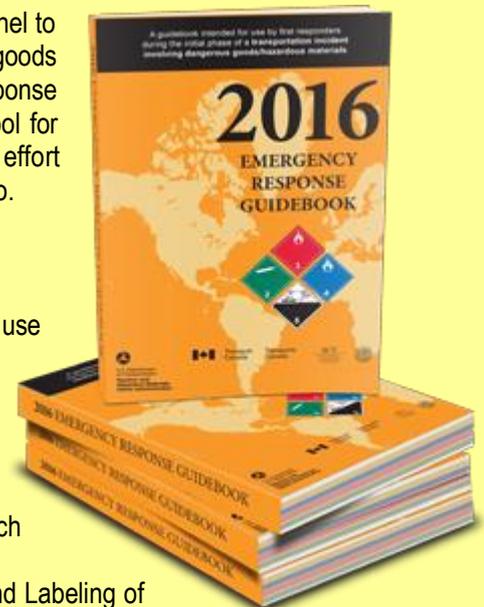
Source: [https://www.academia.edu/21519223/CBRN\\_Detection\\_and\\_identification\\_innovations](https://www.academia.edu/21519223/CBRN_Detection_and_identification_innovations)



## 2016 ERG Emergency Response Guidebook

Source: <http://www.thecompliancecenter.com/publications/erg.htm>

The Emergency Response Guidebook is used by emergency services personnel to provide guidance for initial response to hazardous material and dangerous goods incidents. This publication helps to provide consistent emergency response procedures for hazardous materials in North America, and is an essential tool for preparedness, planning and training. The preparation of this book is a joint effort between the transportation agencies of the United States, Canada, and Mexico. Available in standard (5.5" x 7.5") and pocket (4" x 5.5") size versions.



### Summary of changes to the 2016 ERG

- Replaced written instructions on page 1 with a flow chart to show how to use the 2016 ERG
- Expanded Table of Placards and updated title to Table of Markings, Labels, and Placards and Initial Response Guide to Use on Scene
- Expanded Rail Car Identification Chart and Road Trailer Identification Chart to two pages each
- Updated Table 1 and Table 3 based on new TIH data and reactivity research
- Updated pipeline emergency response information
- Added information about Globally Harmonized System of Classification and Labeling of Chemicals (GHS) markings
- Added all new dangerous goods/hazardous materials listed in UN Recommendations on the Transport of Dangerous Goods to 19th Revised Edition
- Added information on Emergency Response Assistance Plans (ERAP) applicable in Canada

## Worldwide Threat Assessment of the US Intelligence Community

Senate Armed Services Committee

James R. Clapper - *Director of National Intelligence*

February 9, 2016

Source: [http://www.armed-services.senate.gov/imo/media/doc/Clapper\\_02-09-16.pdf](http://www.armed-services.senate.gov/imo/media/doc/Clapper_02-09-16.pdf)

### Chemical Weapons in Syria and Iraq

We assess that Syria has not declared all the elements of its chemical weapons program to the Chemical Weapons Convention (CWC). Despite the creation of a specialized team



and months of work by the Organization for the Prohibition of Chemical Weapons (OPCW) to address gaps and inconsistencies in Syria's declaration, numerous issues remain unresolved. Moreover, we continue to judge that the Syrian regime has used chemicals as a means of warfare since accession to the CWC in 2013. The OPCW Fact-Finding Mission has concluded that chlorine had been used on Syrian opposition forces in multiple incidents in 2014 and 2015. Helicopters—which only the Syrian regime possesses—were used in several of these attacks.

We assess that non-state actors in the region are also using chemicals as a means of warfare. The OPCW investigation into an alleged ISIL attack in Syria in August led it to conclude that at least two people were exposed to sulfur mustard. We continue to track numerous allegations of ISIL's use of chemicals in attacks in Iraq and Syria, suggesting that attacks might be widespread.

► **Read the full report at source's URL.**

## ISIS used mustard gas in Iraq: UN watchdog

Source: <http://www.homelandsecuritynewswire.com/dr20160216-isis-used-mustard-gas-in-iraq-un-watchdog>

Feb 16 – A source at the UN chemical weapons watchdog, the Organization for the Prohibition of Chemical Weapons (OPCW), said that in 2015 ISIS attacked Kurdish forces in Iraq with mustard gas. It was the first documented use of chemical weapons in the country since Saddam Hussein used chemical

disclosed its chemical weapons program, as required by the agreement reached in 2013.

"If Syria has indeed given up its chemical weapons to the international community, it is only the part that has been declared to the OPCW and the declaration was obviously incomplete," one diplomat told Reuters.

Syria agreed to give up its chemical weapons stockpile, and dismantle its chemical weapons production facilities, after 1,200 Sunni civilians were killed by a Syrian army's Sarin nerve gas on a Damascus suburb in August 2013.

Iraq's own chemical arsenal, part of a WMD program the United States pointed to as the reason for the 2003 invasion, had been destroyed

and dismantled in the mid-1990s although U.S. troops did encounter old Saddam-era chemical munitions during the 2003-11 occupation.

Hamish de Bretton-Gordon, a specialist in biological and chemical warfare, told the *Guardian* that ISIS may have developed their own chemical weapons capability.

**"I'm pretty convinced that the mustard IS are using in Iraq is made by them in Mosul,"**

he said, referring to the main city which ISIS has occupied since 2014. "They have all the precursors at hand from the oil



weapons against Kurdish civilians in 1998.

**OPCW sources told the Reuters that laboratory tests had showed that thirty-five Kurdish fighters were sickened by sulphur mustard while battling ISIS in Erbil in August 2015.**

**In October, OPCW concluded that mustard gas was used in 2015 in Syria.**

RT reports that experts were uncertain of how the group might have obtained chemical weapons or whether it had access to more.

Another diplomat said Syria's stockpile was a possible source of the sulphur mustard used in Iraq. This would mean Damascus had not fully



industry and all the experts at hand to do it.”  
Sulphur mustard is a Class 1 chemical agent,  
which means it has very few uses outside

chemical warfare. I was widely used in the First  
World War.

## How Pentagon Geeks & Russian Generals Plotted in Secret to Take Away Assad's WMDs

Source: <http://www.thedailybeast.com/articles/2016/02/20/how-pentagon-geeks-russian-generals-plotted-in-secret-to-take-away-assad-s-wmd.html>

Feb 20 – Every once in a rare while, a cunning plan to stop an evil dictator works. At least for a time. Such is the story of a geeky group of Pentagon scientists, State Department experts, and White House politicians who plotted together with top Russian officials to find and destroy Syria's weapons of mass destruction—more than a year before they got the chance to actually do so.

Getting rid of those weapons had been a top priority for the Obama administration. The president had famously warned that if Syrian dictator Bashar al-Assad dared to use them on his own people, he would have crossed a “red line” that could trigger a U.S. military response.

Syria eventually agreed to relinquish its weapons and sign on to the Chemical Weapons Convention in 2013, and at the time, many attributed Assad's acquiescence to an offhand comment by Secretary of State John Kerry, who said during a press conference that Syria could avoid punitive US strikes if it got rid of its WMD. The Russian foreign minister seized upon Kerry's offer and within days, a deal was struck.

What the public didn't know is that planning between Washington and Moscow had been underway to get rid of Syria's weapons since the fall of 2012, spurred by doomsday scenarios spelled out by top U.S. officials.

The series of secret talks, held in luxurious locations across Europe, led to a meeting of the minds between arch frenemies U.S. and Russia, followed by rapid-fire tinkering worthy of 007's Q to create the means to destroy one of the largest uncontrolled chemical weapons stockpiles in the world.

“We realized we in the U.S. didn't have the capacity to destroy Syria's chemical weapons—that nobody did,” Andrew Weber, then Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs, told The Daily Beast.

Something entirely new had to be built.

The success of the talks to come could have served as a blueprint for future negotiations between the U.S., Russia and other world powers to stop the Syrian civil war meat grinder, except for one thing: it took the threatened use of force against the Syrian regime to convince the Russians to pry those weapons from Assad's hands.

When Assad's troops used the nerve agent sarin against his own people in the Damascus suburb of Ghouta in August 2013, the Obama administration threatened a punitive bombing run against Assad's military—not enough to disarm it, but enough to make a point.

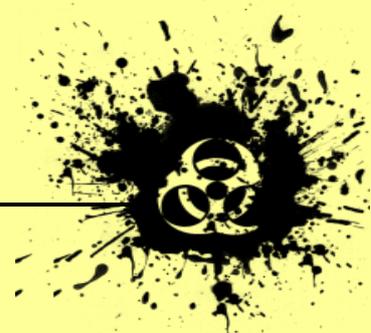
Only then did Russia strong-arm its client state into giving up its WMD crown jewels—likely with the promise to defend Assad in return, which Russia has since done by deploying Russian troops on Syrian soil and unleashing a relentless series of airstrikes on Assad's opponents, including Syrian rebels backed by the U.S.

But for a brief shining moment, the U.S. and Russia had worked together to disarm the regime.

The Obama administration's Syria WMD nightmare kicked off back in 2011, when the country began to fall apart, with province after province giving way to unrest and regime attacks.

Senior administration officials from the White House to the Pentagon mapped out where they thought Syria's WMD stockpiles were located, and they war-gamed the worst possible scenarios, including what would happen if the weapons fell into rebel hands.

“We had break-glass books” for every possible outcome, one senior administration official explained, speaking on condition of anonymity in order to discuss the sensitive negotiations. For instance, who to call and what to say if the rebels approached a chemical



weapons depot, with multiple variables depending on which group and how good U.S. intelligence was about them.

The official described the internal debates: Do you tell the rebels where the WMD is, so they don't bomb it or do you not tell them, in case rebel double agents overhear the information and feed it to terrorist groups, who would then make taking the site a priority?

"You see them stumbling toward a bunker where it was stored," the official said. "Lots of ways things could go bad."

Then-U.S.-Ambassador-to-Syria Robert Ford was the "rebel whisperer," the official said, transmitting these messages to various rebel groups through various unspecified means.

And in the Pentagon, where experts construct imaginatively dark possibilities and how to defend against them, Weber's team and others were coming up with plans to find, secure and destroy the WMD.

The options were grim: if chaos broke out and no one was in charge, how many troops would it take to secure all the suspected WMD sites? The answer: up to 75,000—unacceptable to an administration that didn't want to put a single American boot in harm's way in Syria.

Weber remembers meeting with then deputy secretary of Defense Ash Carter, who was worried the Assad regime would cause a "Chemical Srebrenica" with the WMD, a reference to the 1995 massacre that killed an estimated 7,000 Bosnian Muslims.

"Ash turned to me and said, 'What would you suggest?' I said, 'I think we should work with Russia,'" Weber recalled. "Put it on trucks and drive it to Jordan to destroy it. People in the room looked at me like I had two heads." But Carter nodded and wrote it down in his notebook, Weber said.

That kind of outside-the-box thinking is one of the reasons Weber's real life has ended up retold in celluloid, with the Pentagon's blessing, in the 1997 George Clooney film *The Peacemaker*. The now-retired official said it was based on an operation codenamed Project Sapphire to secure WMD material in Kazakhstan. Weber—a man who cultivates the look of a bookish, baseball-cap wearing college professor rather than a movie star—was also an advisor on the set of HBO's "Homeland" with its WMD-focused plot line last season, after decades spent working with the Russians and others to track and control weapons of mass destruction.

As the Syrian crisis passed its first year, these various doomsday committees coalesced in a White House interagency group that was part group therapy, part apocalypse management.

They knew they would have to be ready to do something, after President Barack Obama served notice on Syria, in August 2012, that using WMD against its own people would constitute that "red line" for the U.S.

One administration official remembers the first fledgling talks between the U.S. and Russia on the fringe of another international meeting in a European capital. There was respect, if not trust, and it built up as they'd worked to prevent mutually assured nuclear destruction.

The first time Weber heard about it was when he took a trip to Moscow with now-retired Sen. Richard Lugar to discuss nuclear issues with the Russians.

The Indiana Republican pushed the idea of a joint U.S.-Russian mission to dismantle the Syrian program. Lugar mentioned his idea to reporters, and it scored a mention [The New York Times](#) and caught Obama's eye. Weber said the president called the senator to ask him if he thought the Russians would be willing to take part. Lugar relayed that the Russians were skeptical, but willing to listen.

The two sides finally started meeting in secret in September 2012, at first to discuss overall U.S.-Russian relations, at the storied President Hotel in Moscow.

"Maybe 7 or 8 of them, 10 or 12 of us," a senior administration official related, describing the high level meeting of Obama National Security Council members and the Russian Security Council, including Russian Deputy Chief of General Staff Colonel-General Aleksandr Postnikov-Streltsov.

The first expert-to-expert meeting was held at the Russian embassy in Helsinki in December 2012, the official said. *The Russian embassy in Washington did not respond Friday to requests for comment.*

"We discussed what we thought we each knew about the size of the arsenal and the technical means of destroying this...if such an opportunity arose," the State Department's Countryman said.



They shared their intelligence showing what each believed was the contents and location of Syria's stockpiles. Their maps didn't match, said the other senior official who was there at the start.

The American map was much more extensive than the Russian one, either because Russia didn't know where the weapons were located or weren't sharing. The Russians agreed to work using the American map.

They came up with something called the "universal matrix," a sci-fi-sounding term that described all the steps one would take to dismantle a chemical weapons program.

They estimated there was 1,300 tons of sarin, mustard agent and VX in Syria, a staggering amount. Pentagon engineers did the math and determined that it could be moved in 200 truckloads—if the Syrians could be convinced to relinquish the material.

Along the way, Pentagon planners tried to figure out how the rebels, the Americans, or some other country or group would destroy the stockpiles if they got their hands on it.

Military engineers studied massive hydrolysis facilities in the U.S. that had been used to dismantle old U.S. mustard agent stockpiles from wars gone by. The agent is now illegal for the U.S. to use since it signed on to the Chemical Weapons Convention.

**And then they figured out how to shrink the facility.** "We invested in a prototype to be mounted inside two shipping containers because we had no idea where it would be used, and we wanted it to be transportable," Weber said.

The first prototype was ready by June 2013, a record turnaround time for the cumbersome Pentagon acquisition process, [which Weber later wrote about](#). The U.S. ordered six more and waited for the high-level meetings to produce a chance to use them.

And then, in August, the Syrian regime took a step across the redline. Assad, his back against the wall because of the then-growing-effectiveness of rebel forces, started using WMD. The attack at Ghouta, which killed an estimated 1,500 people, kicked the Obama administration into action.

The administration was hours away from a strike. But at the last moment, Obama decided to seek Congressional authorization for military action, staving off an attack that was hours away.

Obama's threat was still enough to convince the Russians he was prepared to use force, all three former officials said.

A week later Secretary of State Kerry told reporters in London that Assad still had a way out.

"Sure, he could turn over every single bit of his chemical weapons to the international community in the next week—turn it over, all of it without delay and allow the full and total accounting (of it), but he isn't about to do it and it can't be done," Kerry said.

Russian Foreign Minister Sergey Lavrov reached out, and the two men met in Geneva, and the old band got back together and came up with a plan to truck the WMD out of the country and then water it down using the high-tech trailers designed by the Pentagon. The work would be done on a ship somewhere in the Mediterranean (they kept the location secret to stave off complaints from any nearby countries who didn't want the chemicals in their backyard.).

The U.S. and Russian experts came up with a nine-month deadline to remove and destroy everything—longer than the Americans wanted but shorter than the Russian officials thought possible.

"In retrospect, the nine-month deadline was, "exactly on the borderline of being technically feasible and utterly insane," Countryman said. They did miss it by a few weeks, but were done by early August 2014 with the actual destruction.

**Did they get it all?** Almost certainly not, which is why the Obama administration says they got 100% of the *declared* stockpiles, the current and former officials all said.

But when asked if removing the WMD instead of sending a volley of missiles in to bloody Assad's nose handed him and Russia a victory, they bristle.

"You don't understand what punishment means. We took away their strategic arsenal and destroyed it, under international supervision," the senior administration official said. "That removed Assad's backup plan."

It also removed a strategic threat to ally Israel, the official added, which reportedly stopped handing out gas masks to the public after Assad's weapons were dismantled. The Israeli embassy declined to comment on its gas mask policy.



“A military strike would not have taken out their chemical weapons,” but rather hit other Syrian military targets—anything but the suspected weapons sites, Weber said.

“Dropping bombs on chemical weapons is a stupid idea because it releases toxic weapons into the atmosphere and contaminates entire areas,” and could have accidentally killed thousands, he added.

“If you consider that the quantity used at Ghouta in August of 2013 was less than 1 percent of the Syrian stockpile, and it managed to kill over a thousand people...there is a lot of ways you can calculate that,” Countryman said. “It was the largest uncontrolled chemical weapons stockpile in the world and now it’s essentially gone.”

Russia’s gut-punching march into Ukraine just months later in early 2014 obliterated any Illusions the White House may have had about the chemical talks building a bridge between the two sides.

“It’s disappointing that less than six months later, we had this major exercise in trust destruction,” a senior official said, one that arguably continues until today.

And now that Russia has moved in troops, and sophisticated anti-aircraft batteries into Syria, it’s unlikely the U.S. would ever again threaten the use of force to stop Assad.

But at least neither Assad nor ISIS will have access to kill thousands in a single strike.

## The decontaminant for the Soldier of Tomorrow

Source: [www.cristanini.it/](http://www.cristanini.it/)



From the experience of our SX 34 system for the decontamination of sensitive materials (a system for a thorough decontamination already in use by the specialized CBRN units in the world, Cristanini SpA developed also an individual kit which allows the soldier to act immediately on the sensitive materials of which he is equipped and, in particular:

- Individual weapon (new gen. assault rifles, sniper rifles, etc.)
- Optics (thermal camera, TV camera, magnified sights, night vision goggles)
- Pointers and acquisition systems (laser pointers)

- Communication systems (such as the Individual Pocket Radio IPR)

- CBRNe detection instruments

This kit, which weighs only 0,320 Kg allowing the soldier to decontaminate, in few minutes, individual sensitive equipment at operative level. One kit allows the decontamination of approximately 3m<sup>2</sup> of sensitive surface in safety.

The soldier will use the certified SX 34 product (ref. 958090183 – NATO STOCK NUMBER 6850-15-203-0545) directly on the equipment, obtaining the mechanical removal of the CBRN contamination.



Using the specifically designed accessories included in the kit (synthetic fiber glove tissue and no-scratch brush for optics) it is possible to perform the removal of the CBN agents also in



the most difficult cases because of complex surfaces.

The possibility of performing a quick and efficient decontamination will allow the immediate use of these valuable instruments and to continue the mission.

Moreover, SX 34 has been studied specifically to allow an easy and safe decontamination of all the Individual Protection Equipment (IPEs) wear by the Future Soldier, no matter if they are permeable or impermeable suits, gas masks, breathing apparatus or gloves and overshoes. Such decontamination operation allow to remove timely punctual contamination, in order to extend the life time of the protection

equipment in a contaminated environment and to consent a prompt restart of the mission.

The above described decontamination is also fundamental to avoid any secondary contamination, also known as "cross-contamination", especially during mission where Sampling and Identification of Biological, Chemical and Radiological Agents (SIBCRA) Team are involved.

Scientific tests, made in the VVU facility in Brno, have proven without doubts the great efficacy of the SX 34 as a sorbent for CBRN agents and its capability to desorb the entrapped substance at an extremely gradual rate (limited at the very first minutes) and followed by an almost total absence of spontaneous or secondary disrobement, especially when

compared to products widely used in Immediate Decontamination kits, such as Active Charcoal or Bentonite. Thanks to the metal oxides into its formulation, the SX 34 is by definition an active sorbent, capable to help the degradation of the Chemical or Biological agents where it is applied. Such aspects do not only increase the safety for the operators, especially during the undressing operations, but they also reduce the contamination of the surrounding area.

Lastly, the SX 34 decontamination product has a 10-year lifetime and its formulation is environmentally friendly for the people and for the ambient.

## Police bust ISIS terror cell preparing 'chemical attack' in Morocco

Source: <https://www.rt.com/news/333058-morocco-isis-terror-commando/>

Feb 20 – **Moroccan authorities have dismantled an ISIS terrorist cell, described as "the most dangerous" ever, which was planning attacks potentially involving chemical weapons. Among the arrested was a 16yo who had allegedly been trained to carry out a suicide bombing.**

In a police raid on a "safe house" in El Jadida on Thursday, police arrested a 10-member cell and confiscated a large cache of weapons consisting of automatic machine guns, revolvers, and a rifle that were brought from Libya. An Islamic State (IS, formerly ISIS/ISIL) flag was also reportedly seized in the raid.

Among those detained was one French national and a 16-year old teenager, who received training to carry out a suicide car bomb attack, Director of the Central Bureau of Judicial Investigations (BCIJ), Abdelhak Khiame, said at a press conference on Friday.



"It's far from a terrorist cell, it is a real armed commando," Khiame said. "The 10-member cell was commandos acting based on precise plans designed by IS."



The cell members were active in the cities of Essaouira, Meknès and Sidi Kacem, and Laayoune. The terrorist gang also set up a training camp in Sehb El Harcha.

"These people were trained on site in coordination with Daesh, which provided them with the necessary arms," BCIJ director said, explaining that this signals a change of tactic in the Islamic State which until now trained their cell members inside Syria and Iraq.

**Khiame added that authorities also recovered toxic biological and chemical substances that could be used to make the explosives.** Six jars seized in the raid contained an agricultural fertilizer with high sulfur content.

"This material allows to make homemade explosives of fearsome power," Ahmed Rami from the BCIJ told Huffington Post Morocco. "Once heated to a high temperature, this material releases toxic gas that leads to certain death."

**Another three jars contained an orange color mix which "when stored in an anaerobic environment creates tetanus toxin, which once contracted, attacks the central nervous system and causes death,"** a member of the service risk management at BCIJ explained to HuffPost.

BCIJ claims to have dismantled 152 militant cells since 2002, including 31 since 2013 that were linked to armed terrorist groups fighting in Syria and Iraq.

## Chemical Weapons Don't Need Importing

By Jan Glarum

Source: <http://www.abetteremergency.com/blog/2016/02/chemical-weapons-dont-need-importing/>



Feb 20 – CIA Director John Brennan has warned that the Daesh may attempt to sell and move chemical weapons they have developed into Western countries. My comment is why bother moving them in when most of them are readily available locally?

It's accurate to say that sulfur mustard has no commercial value but it has been made in industry by accident and killed. Old munitions are occasionally unearthed or dredged up from the sea causing exposures to the



unaware. Mustard is a vesicant and also a known carcinogen.

The chart below offers readers a quick reference guide which could be printed off and posted and/or

CHEMICAL DIAGNOSIS GUIDELINES						
In Order of Decreasing Toxicity →						
	NERVE AGENT	CYANIDE	AMMONIA	PHOSGENE	CHLORINE	RIOT CONTROL
Pupils	Pin Point	Normal	Severe Pain	Irritation	Irritation	Irritation, tears
Secretions	Copious	Few	Few	Sputum (later)	Sputum	Rhinorrhea
Twitching	Muscles/skin	None	None	None	None	None
Convulsions	Possible	Possible	None	None	None	None
GI Effects	Nausea, vomiting	Nausea	Nausea, vomiting	None	None	None
Dyspnea	Mild to Severe, apnea	Hyperventilation, apnea	Cough, pain, wheezing	Dry cough, pulmonary edema (late)	Cough, wheezing	Cough, wheezing

Exposure to nerve agent can be diagnosed by looking for: DUMBELS: Diarrhea, Urination, Miosis, Bronchoconstriction/bronchorrhea, Emesis, Lacrimation, Salivation

carried at all times. It would be wise to invest in some education to go along with the guide.

I'm not real concerned about a Daesh-wannabe carrying out a successful chemical attack. I do think everyone should be aware of is the daily threat from these chemicals. For example:

- **Nerve Agents** – Organophosphate poison can be found in most any big box store and garden center.
- **Cyanide** – It could be found with your local jeweler, industry setting or as a byproduct of incomplete combustion in most every structure fire (an average of 357,000 home structure fires per year in the United States).
- **Ammonia** – Found in agriculture settings as a fertilizer, refrigeration systems and a cleaner around the home. It also can be used in the illicit production of methamphetamine.
- **Phosgene** – Used in the manufacturing industry and also a byproduct of combustion in structure fires when plastics, synthetics and foams burn.
- **Chlorine** – Commonly used in water treatment, either commercial systems or home pools. Also a household oops of mixing ammonia and bleach products when cleaning.
- **Riot Control Agents** – Used by most security and law enforcement agencies as part of their force continuum in trying to control a situation. Also available to the general public for self-protection. Not a great hazard unless someone has a preexisting upper respiratory disease.



## Deadly virus leaked from US laboratory in Donbass - DPR Army and Intelligence

Source: <https://dninews.com/article/deadly-virus-leaked-us-laboratory-donbass-dpr-army-and-intelligence>

Jan 22 – **More than 20 Ukrainian soldiers have died and over 200 soldiers are hospitalized in a short period of time because of new and deadly virus, which is immune to all medicines.** Donetsk



People's Republic intelligence has reported that **Californian Flu** is leaked from the same place where research of this virus has been carried out. The laboratory is located near the city of Kharkov and its base for US military experts. Information from threatening epidemic is announced by Vice-Commander of Donetsk Army, Eduard Basurin.

Leak of deadly virus in Ukrainian side was published first time on 12.1.2016:

"According to the medical personnel of the AFU units (Ukrainian troops) there were recorded mass diseases among the Ukrainian military personnel in the field. Physicians recorded the high fever which cannot be subdued by any medicines, and in two days there comes the fatal outcome. Thus far from the virus there have died more than twenty servicemen, what is carefully shielded by the commandment of the AFU from the publicity", said Basurin in daily MoD situation report.

Outbreak of deadly virus continues and Friday 22.1.2016 Vice-Commander told new information from epidemic:

"We keep registering new facts of growing the epidemics of acute respiratory infections among the Ukrainian military. Just since the beginning of this week more than 200 Ukrainian military have been taken to civil and military hospitals of Kharkov and Dnepropetrovsk. It is important to repeat that the DPR intelligence previously reported the research being carried out in a

unknown virus as a result of which the infected get



private laboratory in the locality Shelkostantsiya, 30 km away from the city of Kharkov, and involving US military experts. According to our information, it is there where the deadly Californian flu strain leaked from," Basurin said.

### Antiviral Resistance

Source: <http://www.cdc.gov/flu/weekly/>

Testing of influenza A(H1N1)pdm09, A(H3N2), and influenza B virus isolates for resistance to neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir) is performed at CDC using a functional assay. Additional A(H1N1)pdm09 and A(H3N2) clinical samples are tested for mutations of the virus known to confer oseltamivir resistance. The data summarized below combine the results of both testing methods. These samples are routinely obtained for surveillance purposes rather than for diagnostic testing of patients suspected to be



infected with antiviral-resistant virus. High levels of resistance to the adamantanes (amantadine and rimantadine) persist among A(H1N1)pdm09 and A(H3N2) viruses (the adamantanes are not effective against influenza B viruses). The majority of recently circulating influenza viruses are susceptible to the neuraminidase inhibitor antiviral medications, oseltamivir, zanamivir, and peramivir; however, rare sporadic instances of oseltamivir-resistant and peramivir-resistant influenza A (H1N1)pdm09 and oseltamivir-resistant influenza A (H3N2) viruses have been detected worldwide. Antiviral treatment as early as possible is recommended for patients with confirmed or suspected influenza who have severe, complicated, or progressive illness; who require hospitalization; or who are at high risk for serious influenza-related complications.

► **Additional information** on recommendations for treatment and chemoprophylaxis of influenza virus infection with antiviral agents is available at <http://www.cdc.gov/flu/antivirals/index.htm>.



## Zika virus

Zika virus (ZIKV) is a member of the *Flaviviridae* virus family and the *Flavivirus* genus.

In humans, it causes a mild illness known as Zika fever, Zika, or Zika disease, which since the 1950s has been known to occur within a narrow equatorial belt from Africa to Asia. In 2014, the virus spread eastward across the Pacific Ocean to French Polynesia, then to Easter Island and in 2015 to Central America, the Caribbean, and South America, where the Zika outbreak has reached pandemic levels. Zika virus is related to dengue, yellow fever, Japanese encephalitis and West Nile viruses, all of which are arthropod-borne flaviviruses. The illness is similar to a mild form of dengue fever, is treated by rest, and cannot be prevented



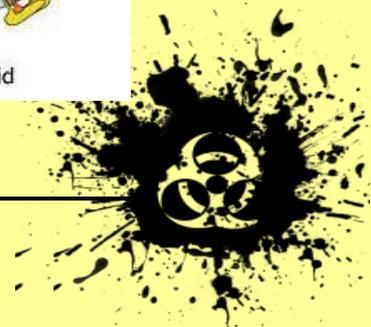
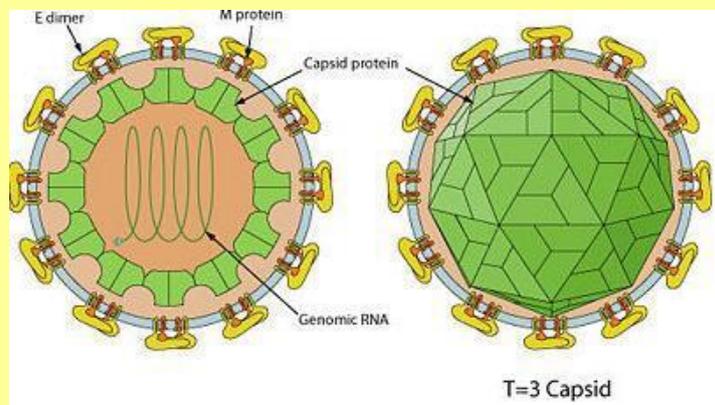
by drugs or vaccines. A link between Zika fever and microcephaly in newborns of infected mothers is now thought possible. In January 2016, the U.S. Centers for Disease Control and Prevention (CDC) issued travel guidance on affected countries, including the use of enhanced precautions and considering postponing travel, and guidelines for pregnant women. Other governments or health agencies soon issued similar travel warnings, while Colombia, Ecuador, El Salvador, and Jamaica advised women to postpone getting pregnant until more is known about the risks.

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### Virology

Along with other viruses in this family, Zika virus is enveloped and icosahedral with a non-segmented, single-stranded, positive-sense RNA genome. It is most closely related to the Spondweni virus and is one of the two viruses in the Spondweni virus clade.

The virus was first isolated in 1947 from a rhesus macaque in the Zika Forest of Uganda and in 1968 was isolated for the first time from humans in Nigeria.



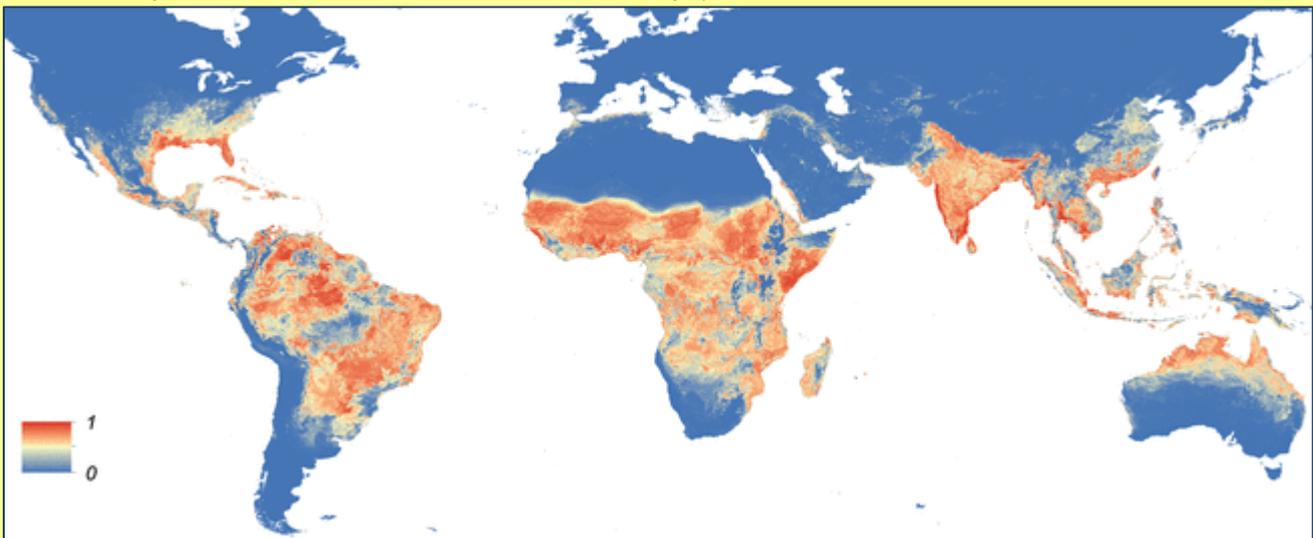
From 1951 through 1981, evidence of human infection was reported from other African countries such as the Central African Republic, Egypt, Gabon, Sierra Leone, Tanzania, and Uganda, as well as in parts of Asia including India, Indonesia, Malaysia, the Philippines, Thailand, and Vietnam.

The pathogenesis of the virus is hypothesized to start with an infection of dendritic cells near the site of inoculation, followed by a spread to lymph nodes and the bloodstream. Flaviviruses generally replicate in the cytoplasm, but Zika virus antigens have been found in infected cell nuclei.

There are two lineages of Zika virus, the African lineage and the Asian lineage. Phylogenetic studies indicate that the virus spreading in the Americas is most closely related to French Polynesian strains. Complete genome sequences of Zika viruses have been published. Recent preliminary findings from sequences in the public domain uncovered a possible change in NS1 codon usage that may increase viral replication rate in humans.

### Transmission

Zika virus is transmitted by daytime-active mosquitoes and has been isolated from a number of species in the genus *Aedes*, such as *A. aegypti*, and arboreal mosquitoes such as *A. africanus*, *A. apicoargenteus*, *A. furcifer*, *A. hensilli*, *A. luteocephalus*, and *A. vitattus*. Studies show that the extrinsic incubation period in mosquitoes is about 10 days. The vertebrate hosts of the virus are primarily monkeys and humans. Before the current pandemic, which began in 2007, Zika virus "rarely caused recognized 'spillover' infections in humans, even in highly enzootic areas".



Global *Aedes aegypti* predicted distribution. The map depicts the probability of occurrence (blue=none, red=highest occurrence).

The potential societal risk of Zika virus can be delimited by the distribution of the mosquito species that transmit it (its vectors). The global distribution of the most cited carrier of Zika virus, *A. aegypti*, is expanding due to global trade and travel. *A. aegypti* distribution is now the most extensive ever recorded – across all continents including North America and even the European periphery.

Recent news reports have drawn attention to the spread of Zika in Latin America and the Caribbean. The countries and territories that have been identified by the Pan American Health Organization (PAHO) as having experienced "local Zika virus transmission" are Barbados, Bolivia, Brazil, Colombia, the Dominican Republic, Ecuador, El Salvador, French Guiana, Guatemala, Guadeloupe, Guyana, Haiti, Honduras, Martinique, Mexico, Panama, Paraguay, Puerto Rico, Saint Martin, Suriname, and Venezuela.

In 2009 Brian Foy, a biologist from the Arthropod-borne and Infectious Diseases Laboratory at Colorado State University, sexually transmitted Zika virus to his wife. He visited Senegal to study mosquitoes and was bitten on a number of occasions. A few days after returning to the United States, he fell ill with Zika, but not before having had



unprotected intercourse with his wife. She subsequently showed symptoms of Zika infection with extreme sensitivity to light. Foy is the first person known to have passed on an insect-borne virus to another human by sexual contact.

In 2015, Zika virus RNA was detected in the amniotic fluid of two fetuses, indicating that it had crossed the placenta and could cause fetal infection. On 20 January 2016, scientists from the state of Paraná, Brazil, detected genetic material of Zika virus in the placenta of a woman who had undergone an abortion due to the fetus's microcephaly, which confirmed that the virus is able to pass the placenta.

### Clinical

**Common symptoms of infection with the virus include mild headaches, maculopapular rash, fever, malaise, pink eye, and joint pains.**



The first well-documented case of Zika virus was described in 1964; it began with a mild headache, and progressed to a maculopapular rash, fever, and back pain. Within two days, the rash started fading, and within three days, the fever resolved and only the rash remained. Thus far, Zika fever has been a relatively mild disease of limited scope, with only one in five persons developing symptoms, with no fatalities, but its true potential as a viral agent of disease is unknown.

As of 2016, no vaccine or preventive drug is available.



**Symptoms can be treated** with paracetamol (acetaminophen), while aspirin and other nonsteroidal anti-inflammatory drugs should be used only when dengue has been ruled out to reduce the risk of bleeding.

In a French Polynesian epidemic, 73 cases of Guillain–Barré syndrome and other neurologic conditions occurred in a population of 270,000, which may be complications of Zika virus. In December 2015, the European Centre for Disease Prevention and Control issued a comprehensive update on the possible association of Zika virus with congenital microcephaly and this syndrome.



### Microcephaly

**Data suggest that newborns of mothers who had a Zika virus infection during the first trimester of pregnancy are at an increased risk for microcephaly.** Since December 2015, it had been suspected that a transplacental infection of the fetus may lead to microcephaly and brain damage.

**The Brazilian Ministry of Health has since confirmed the relation between the Zika virus and microcephaly.**



## History

In 1947 scientists researching yellow fever placed a rhesus macaque in a cage in the Zika Forest (*zika* meaning "overgrown" in the Luganda language), near the East African Virus Research Institute in Entebbe, Uganda. The monkey developed a fever, and researchers isolated from its serum a transmissible agent that was first described as Zika virus in 1952. It was subsequently isolated from a human in Nigeria in 1954. From its discovery until 2007, confirmed cases of Zika virus infection from Africa and Southeast Asia were rare.

In April 2007, the first outbreak outside of Africa and Asia occurred on the island of Yap in the Federated States of Micronesia, characterized by rash, conjunctivitis, and arthralgia, which was initially thought to be dengue, Chikungunya, or Ross River disease. However, serum samples from patients in the acute phase of illness contained RNA of Zika virus. There were 49 confirmed cases, 59 unconfirmed cases, no hospitalizations, and no deaths. More recently, epidemics have occurred in Polynesia, Easter Island, the Cook Islands, and New Caledonia.

Since April 2015, a large, ongoing outbreak of Zika virus that began in Brazil has spread too much of South and Central America, and the Caribbean. In January 2016, the CDC issued a level 2 travel alert for people traveling to regions and certain countries where Zika virus transmission is ongoing. The agency also suggested that women thinking about becoming pregnant should consult with their physicians before traveling. Governments or health agencies of the United Kingdom, Ireland, New Zealand, Canada, and the European Union soon issued similar travel warnings. In Colombia, Minister of Health and Social Protection Alejandro Gaviria Uribe recommended to avoid pregnancy for eight months, while the countries of Ecuador, El Salvador, and Jamaica have issued similar warnings.

**Plans were announced by the authorities in Rio de Janeiro, Brazil, to try to prevent the spread of the Zika virus during the 2016 Summer Olympic Games in that city.**

According to the CDC, Brazilian health authorities reported more than 3,500 microcephaly cases between October 2015 and January 2016. Some of the affected infants have had a severe type of microcephaly and some have died. The full spectrum of outcomes that might be associated with infection during pregnancy and the factors that might increase risk to the fetus are not yet fully understood. More studies are planned to learn more about the risks of Zika virus infection during pregnancy. In the worst affected region of Brazil approximately 1% of newborns are suspected of microcephaly.

Countries and territories with reported confirmed cases of Zika virus infection (autochthonous transmission), 2014-2015



## World Health Organization foresees outbreak of mosquito-borne virus throughout the Americas, prompting travel warnings

Source: <http://www.aljazeera.com/news/2016/01/zika-virus-spread-americas-160125140747987.html>

**Jan 26 – The Zika virus - suspected of causing brain damage in babies in Brazil - is likely to spread to all countries in the Americas except for Canada and Chile, the World Health Organization has said.**

Margaret Chan, the WHO director-general, told the organization's executive board on Monday that she had asked Carissa Etienne, head of the WHO in the Americas, to brief the board later this week on the WHO's response to the outbreak.



"The [WHO] regional directors and I are determined to change the way we respond to outbreaks and emergencies," Dr. Chan said.

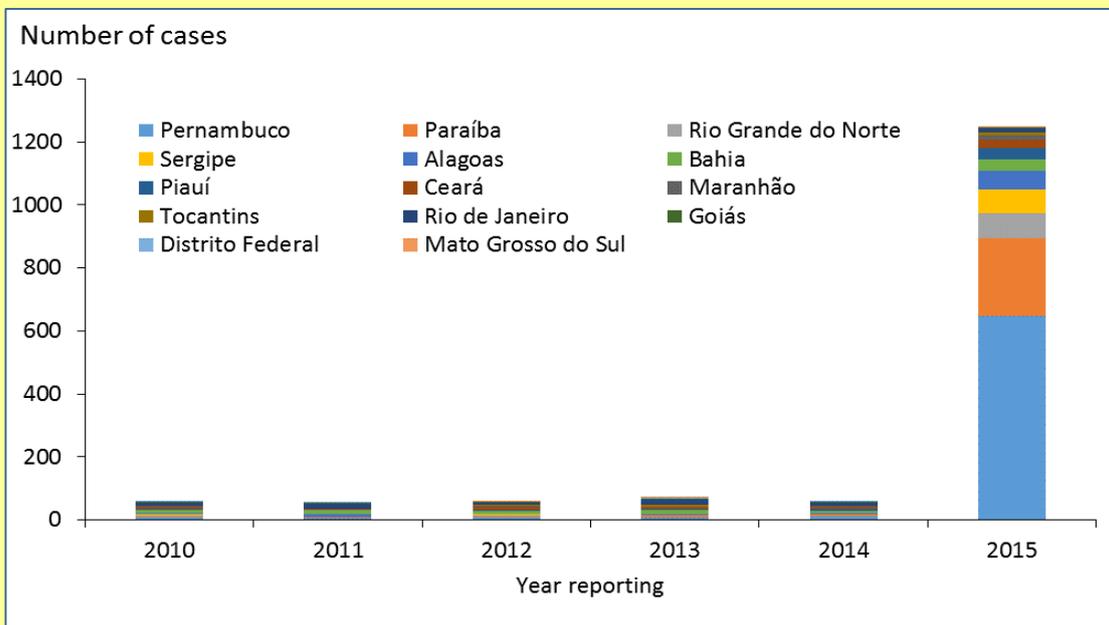
"The complexity of humanitarian emergencies underscores the need for transformational changes in our response capacity," she said.

Brazil's Health Ministry in November said that it suspected the mosquito-borne Zika virus was linked to a fetal deformation known as microcephaly, in which infants are born with smaller-than-usual brains. The WHO has described circumstantial evidence of the link as "suggestive and extremely worrisome". Brazil has reported 3,893 suspected cases of microcephaly, the WHO said last Friday, over 30 times more than had been reported in any year since 2010.

WHO advised pregnant women planning to travel to areas where Zika is circulating to consult a healthcare provider before travelling and on return.

The disease's rapid spread, to 21 countries and territories of the region since May 2015, is due to a lack of immunity among the population and the prevalence of the *Aedes aegypti* mosquito that carries the virus, the WHO said in a statement.

Evidence about other transmission routes is limited.



"Zika has been isolated in human semen, and one case of possible person-to-person sexual transmission has been described. However, more evidence is needed to confirm whether sexual contact is a means of Zika transmission," it said.

There is currently no evidence of Zika being transmitted to babies through breast milk, the WHO said.

## Brazil "badly losing" battle against Zika virus: Health minister

Source: <http://www.homelandsecuritynewswire.com/dr20160126-brazil-badly-losing-battle-against-zika-virus-health-minister>

Jan 26 – Marcelo Castro, Brazil's health minister, said Brazil is "badly losing" the battle against the *Aedes aegypti* mosquito which spreads the Zika virus. The virus has been linked to birth defects.

O *Globo* newspaper reports that Castro said that **nearly 220,000 members of Brazil's armed forces would go door-to-door as part**

**of the mosquito eradication campaign. The newspaper also quoted Castro to say that the government would distribute mosquito repellent to some 400,000 pregnant women who receive cash-transfer benefits.**

**Medical experts note that the *Aedes aegypti* mosquito also**



**spreads dengue, chikungunya, and yellow fever.**

“The mosquito has been here in Brazil for three decades, and we are badly losing the battle against the mosquito,” the *Folha de S Paulo* newspaper quoted Castro as saying at a meeting of a Zika crisis group meeting in the capital, Brasília.

The BBC reports that worry about the relentless spread of Zika has gripped the hemisphere, with warning about Zika now being issued in the United States.

Physicians and researchers suspect there is a link between Zika virus and microcephaly, a rare birth defect which sees babies born with unusually small heads. The defect can cause lasting developmental problems.

**Nearly 4,000 suspected cases of microcephaly have been reported in Brazil since October, compared with fewer than 150 cases in the country in all of 2014.**

The Centers for Disease Control and Prevention (CDC) has advised pregnant women not to travel to Brazil and twenty-one other countries and territories with Zika outbreaks.

**The Zika outbreak, and most of the microcephaly cases, have been concentrated in the northeastern areas of Brazil** – areas which are poorer and underdeveloped relative to the rest of the country. Many cases, however, were also reported in the more prosperous southeast, where Brazil’s two largest cities, São Paulo and Rio de Janeiro, are located.

**The authorities in Brazil are worried that the Carnival events, scheduled for next month, and the Olympic Games, due to be held in August, may both serve to cause an even more rapid spread of the virus.**



## Zika Virus: Two Cases Suggest It Could Be Spread Through Sex

Source: [http://www.nytimes.com/2016/01/26/health/two-cases-suggest-zika-virus-could-be-spread-through-sex.html?smid=tw-share&\\_r=0](http://www.nytimes.com/2016/01/26/health/two-cases-suggest-zika-virus-could-be-spread-through-sex.html?smid=tw-share&_r=0)

Jan 25 – **Zika virus has already been linked to brain damage in babies and paralysis in adults. Now scientists are facing another ominous possibility: that on rare occasions, the virus might be transmitted through sex.**

The evidence is very slim; only a couple of cases have been described in medical literature. But a few experts feel the prospect is disturbing enough that federal health officials should inform all travelers, not just pregnant women, of the potential danger.

Officials at the Centers for Disease Control and Prevention, however, say the evidence is insufficient to warrant such a warning. While the two instances suggest a “theoretical risk” of sexual transmission, they note the primary vector is clearly mosquitoes.

Dr. Márcio Nehab, a pediatrician and infectious disease specialist at Fiocruz, a research institute in Rio de Janeiro, said that much more research was needed to be done to definitively prove that Zika can be transmitted during sex.

“At the moment we need to be more concerned with the mosquito, the vector known for transmitting the virus,” Dr. Nehab said in an

information bulletin about Zika geared toward women and children.

The mosquito-borne Zika virus, linked to brain damage of infants in Brazil, is likely to spread to most of the countries in the Americas, the World Health Organization announced on Monday.

**At the moment, experts know of just one case in the medical literature of live Zika virus being detected in a man’s semen.**

The man was an unidentified 44-year-old Tahitian man, exposed during an outbreak of Zika virus in French Polynesia in 2013. French scientists helping to investigate found high levels of the virus in semen samples taken from the patient, even after it disappeared from his blood.

It was unclear how long the virus had persisted in his body: He had had two episodes of fever that might have been caused by the Zika virus, one shortly before he was tested and another about two months earlier. The virus was also found in his urine.

A more unusual episode — the first clue that Zika could be



sexually transmitted — occurred in 2008.

Brian D. Foy, a biologist specializing in insect-borne diseases at Colorado State University, was in rural Senegal with a graduate student, Kevin C. Kobylinski, collecting mosquitoes for a malaria study. Both were bitten many times.

About a week after they flew back to Colorado, Dr. Foy and Mr. Kobylinski each fell ill with rashes, fatigue and headaches, symptoms typical of several mosquito-borne illnesses.

A few days later, Dr. Foy's wife — Joy L. Chilson Foy, a nurse and mother of four — showed similar symptoms, slowly developing a rash worse than that of either man, along with greater headache pain and bloodshot eyes.



From left: Kevin Kobylinski, Massamba Sylla and Brian Foy in Senegal in 2008 with equipment for aspirating mosquitoes. Dr. Foy became sick with Zika after returning to his home in Colorado, and most likely transmitted the virus to his wife sexually.

All three eventually recovered. Late in his illness, however, Dr. Foy had genital pain and what appeared to be blood in his semen.

Blood was drawn from all three patients and tested for the usual West African suspects: malaria, dengue and yellow fever. All were negative.

Their infection remained a mystery until a year later, when Mr. Kobylinski, back in Senegal, met another scientist who suggested it could be Zika virus. The blood samples — which Dr. Foy had frozen — tested positive. That left the question of how Mrs. Foy had been infected.

She had not left northern Colorado, which has none of the mosquitoes that transmit Zika. And it seemed unlikely that she and her husband had been bitten by the same mosquito: The virus needs more than four days to move from the insect's gut to its salivary glands.

Neither had passed the disease to their children, so even close family contact seemed noninfectious. The most likely explanation, the couple realized, was that they had had sex shortly after Dr. Foy's return, before he fell ill.

Dr. Foy [wrote about his experience](#) in 2011 in the journal *Emerging Infectious Diseases*.

In an interview, Dr. Foy said he had been trying to get research money to study the phenomenon, but there have been obstacles: Until the last few weeks, there has been little interest in the obscure virus.

And Zika virus is hard to study, because it does not infect mice, rats or most other lab animals. It does infect monkeys, but that research is difficult, expensive and controversial. Colorado State does not have a monkey research colony, Dr. Foy said.

Dr. William Schaffner, chief of preventive medicine at Vanderbilt University Medical School, said it was imperative that research on possible sexual transmission of

Zika be done in Brazil or another Latin American country experiencing an outbreak.

Two suspect cases “are not really enough to warrant a large public health recommendation from the C.D.C.,” he said. “But it’s provocative, so someone else could recommend it. And it certainly should be studied.”

Testing men for the virus in their semen should be easy, he added. After that, researchers should look for couples like the Foyes, in which one partner had been in a mosquito-infested area and the other had been in a mosquito-free one.

“If I was a man and I got Zika symptoms, I’d wait a couple of months before having unprotected sex,” said Scott Weaver, director of the Institute for Human Infections and Immunity at the University of Texas Medical Branch in



Galveston and an expert on the virus. “If my wife was of childbearing age, I’d want to use protection, certainly for a few weeks.”

A spokeswoman for Brazil’s Health Ministry said studies about how Zika can be contracted need to be evaluated more closely. “These analyses need to be accompanied by scientific work so the Health Ministry can provide the population with safe advice about transmission of the virus,” the statement said.

On Monday, the Pan American Health Organization warned that Zika virus is likely to

spread to every country in the Americas except Canada and Chile.

In the United States, C.D.C. experts have said they expect the disease to follow the same pattern as dengue: limited outbreaks in hot, wet regions including Florida and other states along the Gulf Coast and Hawaii, where the yellow fever mosquito, *Aedes aegypti*, is common. They hope that aggressive mosquito control will contain the infection.



**EDITOR’S COMMENT:** One of the things that concerns me is this: It is well known that mega sports events such as Olympic Games are always accompanied by high concentration of prostitutes in the Olympic cities and venues. Since Brazil is the most affected country in Latin America and the big inflow of international spectators for Rio2016 (in just a few months) the possibility of spreading the disease might be immense.

## Why the United States is so vulnerable to the alarming spread of Zika virus

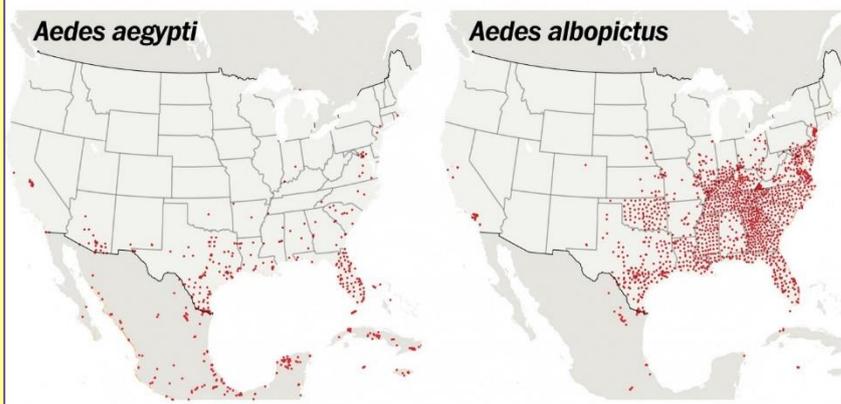
Source: [https://www.washingtonpost.com/national/health-science/why-the-united-states-is-vulnerable-to-spread-of-zika-virus/2016/01/26/a8c6a9b4-c440-11e5-8965-0607e0e265ce\\_story.html](https://www.washingtonpost.com/national/health-science/why-the-united-states-is-vulnerable-to-spread-of-zika-virus/2016/01/26/a8c6a9b4-c440-11e5-8965-0607e0e265ce_story.html)

Jan 27 – **With the Zika virus now circulating in two dozen countries and territories across the Americas, the mosquito-borne pathogen seems destined to reach the United States and likely sooner rather than later.**

### The mosquitoes behind the Zika virus

*Aedes aegypti* is considered the most important vector for Zika virus transmission to humans, but *Aedes albopictus* has been identified as a potential vector as well.

- Known occurrences of *Aedes aegypti* and *Aedes albopictus* from 1960 to 2014.\*



\* Maps depict presence rather than abundance; Occurrence includes adults, pupae, larvae or eggs.

Source: Kraemer, M. U. G. et al. The global compendium of *Aedes aegypti* and *Aedes albopictus* occurrence  
LARIS KARKLIS/THE WASHINGTON POST

What is far less certain, say public health and infectious disease experts, is Zika’s potential reach and impact here. The South is seen as vulnerable because of its warm, humid climate and pockets of poverty where more people live without air-conditioning or proper window screens. Plus, the region is already home to mosquitoes that can transmit the virus.

Some models estimate as many as 200 million people live in areas that might be conducive to the spread of Zika during summer months — including the East and



**West coasts and much of the Midwest.** That makes for a huge target as researchers scramble to determine exactly how the virus manifests itself in the human body, who is particularly at risk, and why. Their urgency comes amid reports from Brazil, the epicenter of Zika, of thousands of newborns with a rare condition involving brain damage. Doctors there have also seen a surge in another rare syndrome, Guillain-Barré, which can lead to paralysis. With both, a link to Zika is suspected.

Already, Brazil, Colombia, El Salvador and Jamaica have urged women to postpone pregnancy. The Centers for Disease Control and Prevention has an ever-expanding advisory urging U.S. women who are pregnant to avoid traveling to those 24 countries and territories in the Caribbean and Central and South America that have local transmission.

President Obama received a briefing Tuesday about the situation from his health and national security teams, including Health and Human Services Secretary Sylvia Mathews Burwell, CDC Director Thomas Frieden and Anthony Fauci, director of the National Institute of Allergy and Infectious Diseases.

On Thursday, the World Health Organization is scheduled to hold a briefing in Geneva. Director-general Margaret Chan has warned that the disease's spread is "explosive." She has described the circumstantial evidence connecting Zika to cases of microcephaly, in which a baby's head and brain are abnormally small, as "extremely worrisome."

So far, experts are divided about what lies ahead for the United States. More than a dozen cases have been confirmed to date, including two announced Tuesday by state health officials in Arkansas and Virginia. In each, the person was believed to have been infected while out of the country.

Fauci is downplaying the potential for a significant eruption of Zika here. He notes that dengue and chikungunya, diseases transmitted by the same kinds of mosquitoes, are widespread in Latin America. But their foothold in the United States has been controlled, with only small clusters of cases.

"It is unlikely that we will have a major outbreak of Zika in this country," Fauci said.

Yet Peter Hotez, dean of the National School of Tropical Medicine at Baylor College of Medicine, has fears. He recalls spending much of 2014 insisting that the Ebola outbreak would not become a significant problem in the United States. But he gives no such assurance now.



"I think we're in for real trouble in the United States," he said, considering how swiftly Zika can spread. He focuses on conditions throughout the Gulf Coast, where stagnant water sources — in uncollected garbage, discarded tires, untended bird baths — can be ideal breeding grounds for mosquitoes much of the year.

"You've got to assume the worst-case scenario," Hotez said.



*Aedes albopictus*, the Asian tiger mosquito, which can transmit the virus, is present from Florida to Connecticut and as far west as Illinois, said Laura Harrington, chair of Cornell University's entomology department. It bites people as well as animals. A second species, *Aedes aegypti*, the yellow-fever mosquito, has a more limited geographic footprint and only bites people. But it is the primary "vector" for Zika's transmission.

Taken together, "there are many parts of the United States that are vulnerable because of where the mosquito populations are," Harrington said.

The experts acknowledge that projections are hampered by a limited knowledge about the disease. It takes 10 to 11 days for a mosquito to become fully infected and able to pass on the virus, according to Nikos Vasilakis, an arbovirologist at University of Texas Medical Branch in Galveston, where researchers are working in collaboration with scientists at Yale's School of Public Health in Brazil. They don't yet know what the risk is for pregnant women who are bitten by an infected mosquito and contract the virus, much less what the risk is for their fetus.

The CDC has issued guidelines for both pregnant women and newborns. For example, it recommends testing for the virus when babies have microcephaly and their mothers traveled to or lived in Zika-virus regions while pregnant. On Tuesday, agency officials held a televised briefing with clinicians nationwide to go over guidelines as part of increased vigilance and public education.

In the Brazilian cases, most of the exposure to Zika appears to have been during the first trimester of pregnancy. But CDC officials have said there is also evidence that a fetus can be in danger into the second trimester.

There is no drug to treat Zika or a vaccine to prevent it, although Fauci said researchers are working on the latter. Common symptoms of infection are fever, rash, joint pain and red, itchy eyes. Symptoms are usually mild and last several days to a week.

One of the biggest problems in researching the possible link between Zika and cases of birth defects has to do with the widespread presence of dengue disease in the countries with high Zika infection, said Lyle Petersen,

director of CDC's vector-borne disease division. Humans produce antibodies in response to both viruses, but current tests cannot differentiate between them.

"In people with previous dengue exposure, there's no test to be able to sort that out," Petersen explained.

Past outbreaks of Zika occurred among small populations in the Pacific islands, and uncommon kinds of birth defects were not noticed right away. After Brazil began reporting increased prevalence of microcephaly last October, authorities in French Polynesia went back and analyzed their 2013-2014 Zika outbreak involving more than 30,000 people. They found an increase in microcephaly cases and of Guillain-Barré syndrome.

Brazil has said it wants to expand an experiment using genetically modified mosquitoes produced by a British company called Oxitec. The company says they can be effective at controlling pest populations: Altered male mosquitoes are released into the wild to mate with females. The offspring never reach adulthood, blocking the next generation from carrying diseases such as dengue, chikungunya and Zika virus.

Oxitec says that trials involving its mosquitoes in Brazil, Panama and the Cayman Islands "resulted in a greater than 90 percent suppression" of the *Aedes aegypti* population. This month, the company announced that the city of Piracicaba, Brazil, would expand its effort to eradicate disease-carrying mosquitoes.

But it's unlikely that genetically engineered mosquitoes will be buzzing around the United States anytime soon.

Beth Ranson, a spokeswoman for the Florida Keys Mosquito Control District, which has partnered with Oxitec for a proposed trial, said that before any altered bugs could be released there, the Food and Drug Administration must complete an environment assessment. Its findings must then be opened to public comment. Once finalized, a local board would need to approve the trial — over the expected opposition of some residents.

In Harris County, Texas, which includes Houston, mosquito control director Mustapha Debboun said that if local



transmission of Zika occurred, workers armed with hand-held equipment would likely begin "target spraying" small areas where mosquitoes breed.

"We all have to do something. This darn virus is spreading fast," he said. "We don't want it to get established in the United States."

## Antibodies may provide 'silver bullet' for Ebola viruses

Source: <http://www.medicalnewstoday.com/releases/305470.php?tw>

Jan 22 – **There may be a "silver bullet" for Ebola, a family of hemorrhagic viruses, one of which has killed more than 11,000 people in West Africa in the past two years.**

Researchers at Vanderbilt University Medical Center and the University of Texas Medical Branch in Galveston (UTMB) reported in the journal *Cell* that they have isolated human monoclonal antibodies from Ebola survivors which can neutralize multiple species of the virus.

"We thought we would need five different sets of vaccines or five different (drugs)," said James Crowe Jr., M.D., the Ann Scott Carrell Professor and director of the Vanderbilt Vaccine Center, who led Vanderbilt's end of the research.

"This work suggests there are common elements across different groups of Ebola viruses," Crowe said. "Maybe we can come up with one therapeutic or one vaccine that would solve all of them."

**"In this study, a remarkably diverse array of virus-specific antibodies was isolated, which appeared to bind to various parts of the envelope protein of the virus,"** said UTMB professor Alexander Bukreyev, Ph.D., corresponding author of the paper with Crowe who led the UTMB team.

**"Some of the antibodies neutralized not only Ebola Bundibugyo virus, but also Ebola Sudan virus and Ebola Zaire virus, similar to that which caused the recent outbreak in West Africa,"** Bukreyev said.

Ebola virus disease is spread by contact with contaminated body fluids, including blood and semen. It can cause massive bleeding. The death rate is about 50 percent.

The World Health Organization has reported 24 Ebola outbreaks since 1976, the largest of which is thought to have begun in Guinea in

December 2013. Of the 28,600 people who had been infected as of this month, 40 percent have died.

Several experimental Ebola vaccines and monoclonal antibody therapies currently are in development.



**Monoclonal antibodies are generated by clones of a type of white blood cell that have been fused to myeloma (cancer) cells to form fast-growing "hybridomas." Like heat-seeking missiles, they seek out and destroy their targets, in this case, the Ebola virus.**

Unlike vaccines, antibody treatments are meant to provide short-term protection to health care workers and others at risk of exposure. They also could be used as antiviral drugs to treat patients who are already infected with Ebola virus.

**Last week, researchers at Albert Einstein College of Medicine in New York reported that "bispecific" monoclonal antibodies they engineered to recognize two species of Ebola virus provided a high degree of protection in mice exposed to two Ebola viral species.**

In the current study, Vanderbilt researchers led by graduate student Andrew Flyak, the paper's first author, used a high-efficiency method they developed to quickly isolate and generate large quantities of monoclonal human antibodies from the blood of survivors of a 2007 outbreak in Uganda who were infected by the Bundibugyo ebolavirus.

Components of the study, which require work with live viruses, were performed by Bukreyev's team at the Galveston National Laboratory at UTMB, which has biosafety



facilities capable of handling Ebolaviruses safely.

In addition to neutralizing multiple Ebolavirus species, one of the antibodies also protected guinea pigs from a lethal challenge of virus.

Previous therapeutics used re-engineered mouse antibodies. "This work points the way to

using fully human antibodies as the next generation of antibody therapeutics," Crowe said.

"From the human antibody work ... and the vaccine work that's being done, it's clear we can find a protective strategy for Ebola," he said. "That's a big step forward."

## Online 'recipes' for bird flu virus add to bioterrorism threat

By Raina MacIntyre

Source: <http://www.theage.com.au/comment/online-recipes-for-contagious-diseases-means-australias-bioterrorism-threat-is-real-20151208-gli97v.html#ixzz3tryjZmFH>

Dec 09, 2015 – Despite continuing global efforts to contain avian influenza, or bird flu, the means of engineering this potentially deadly H5N1 virus to render it transmissible to humans is freely available on the internet. So too are similar instructions for engineering a virus like the "Spanish flu", which killed some 50 million people in the pandemic of 1918-19.

The digital floodgates opened in 2011 when a peak US regulatory watchdog came down in favour of scientists seeking to publishing their work engineering the H5N1 virus. The decision to uphold such "scientific freedom" was and remains, highly contentious among the global scientific community. Its implications, however, are readily available as online "recipes" for potentially dangerous viruses, which add a new risk to the already considerable challenges of maintaining global biosecurity in the 21st century. For all the recent advances in biomedical science, drugs, vaccines and technology, this is a challenge we remain ill-equipped to meet.

As long as micro-organisms can mutate and change, life on earth will always be vulnerable to epidemics. Whether they are deliberately, accidentally or naturally seeded, contagious diseases can race around the world in a matter of days or weeks causing immense personal, social and economic harm. H5N1 bird flu first "jumped" from poultry to humans in Hong Kong in 1997 and outbreaks since in Asia, Europe, Africa, North America and most recently in Egypt, have resulted in millions of poultry infections, over 800 human cases and many deaths.

The catastrophic West Africa Ebola outbreak last year merely reinforces the need for well-coordinated global response systems. This

most severe of all viral hemorrhagic fevers appeared in March 2014 for the first time in West Africa, but the alarm was not sounded by the World Health Organization until mid-August – despite a known 90 per cent fatality rate and severely weakened healthcare systems in the war-torn African regions first hit. As the authoritative British medical journal *The Lancet* recently concluded, Ebola exposed our "dangerously fragile global system for outbreak response.

The shortcomings of global efforts to contain Ebola, at a cost of at least 11,000 lives, have been raked over by many investigating agencies since. Various compounding factors have been blamed, not least of which was poor co-ordination and collaboration and, at times, even conflict among the many agencies and stakeholders deployed to help. This doesn't just mean frontline health workers. It can also take armies, lawyers, police, managers, transport and logistics experts, to name just a few, to contain an epidemic. In effect, our global system failed to alert us to act urgently, and did not effectively enable us to work together when we did respond.

We must be better prepared for the next crisis. Unstoppable globalized trade, a "just in time" economy, mass people movements and rapid urbanization – plus the effectiveness of aircraft as vectors for disease – mean we are all interconnected. With global warming, the range of natural disease vectors like mosquitoes is expanding. More frequent extreme weather events will inevitably leave affected communities vulnerable to outbreaks of disease on the back of natural disasters. We must also



now factor in the darker threat of bioterrorism. In Australia, we have just taken the first step towards building a new collaborative global approach. A new [UNSW-led National Health and Medical Research Centre of Research Excellence for Integrated Systems for Epidemic Response \(ISER\)](#) is the first center of its type in the world, and our mission is just as unique. We will bring together Australian and international leaders in field epidemiology and epidemic response, military experts, international law and risk science experts and government

and non-government agencies to ensure the many vital aspects of epidemic control are both effectively coordinated – and supported by the best research – long before they come together in the field.

With Australia's terrorism threat level currently at "probable" and easy access to online "recipes" for contagious diseases, bioterrorism is a real threat. Every step we take now to work together more effectively across disciplines and across borders helps build our common defenses against the many risks posed by contagious diseases.

*Raina MacIntyre is Professor of Infectious Disease Epidemiology at UNSW and the director of the National Health and Medical Research Centre of Research Excellence for Integrated Systems for Epidemic Response.*

## The eight most dangerous diseases ranking published by WHO

Source: <http://www.blitzquotidiano.it/cronaca-mondo/classifica-otto-malattie-piu-pericolose-ebola-sars-2343373/>

According to the World Health Organization (WHO), the current **eight most dangerous diseases in the world** are Ebola, the Congo Hemorrhagic Fever, the Marburg and Nipah virus, the Lassa and the Rift Valley fever, as well as MERS and SARS. A **second list** of diseases considered less dangerous, but still relevant as global threat, included Chikungunya, the Severe Fever with Thrombocytopenia Syndrome (SFTS) and the Zika virus. Results achieved during the Geneva meeting represent the first step towards the preparation of a plan to control future outbreaks.

## Italy – Suspected powder triggers alarms in different locations along the peninsula.

Sources: <http://www.frontierarieti.com/wordpress/minacce-e-polvere-sospetta-per-lad-cotral-vincenzo-surace>  
<http://www.cronachemaceratesi.it/2015/12/18/polvere-blu-sulle-vetrine-dei-negozi-commercianti-lancia-lallarme/746559/>  
<http://www.tarantobuonasera.it/taranto-news/cronaca/403955/news.aspx>

Dec 2015 – Traces of a suspected powder have been found whether at the Juvenile Court of Taranto, at a commercial activity and at the regional public transport company Cotral Spa. The firefighters NBCR Unit has intervened in all the circumstances in order to make the site safe and remove the suspicious powder to allow further laboratory analysis.

## Brazil approves to market new Dengue vaccine

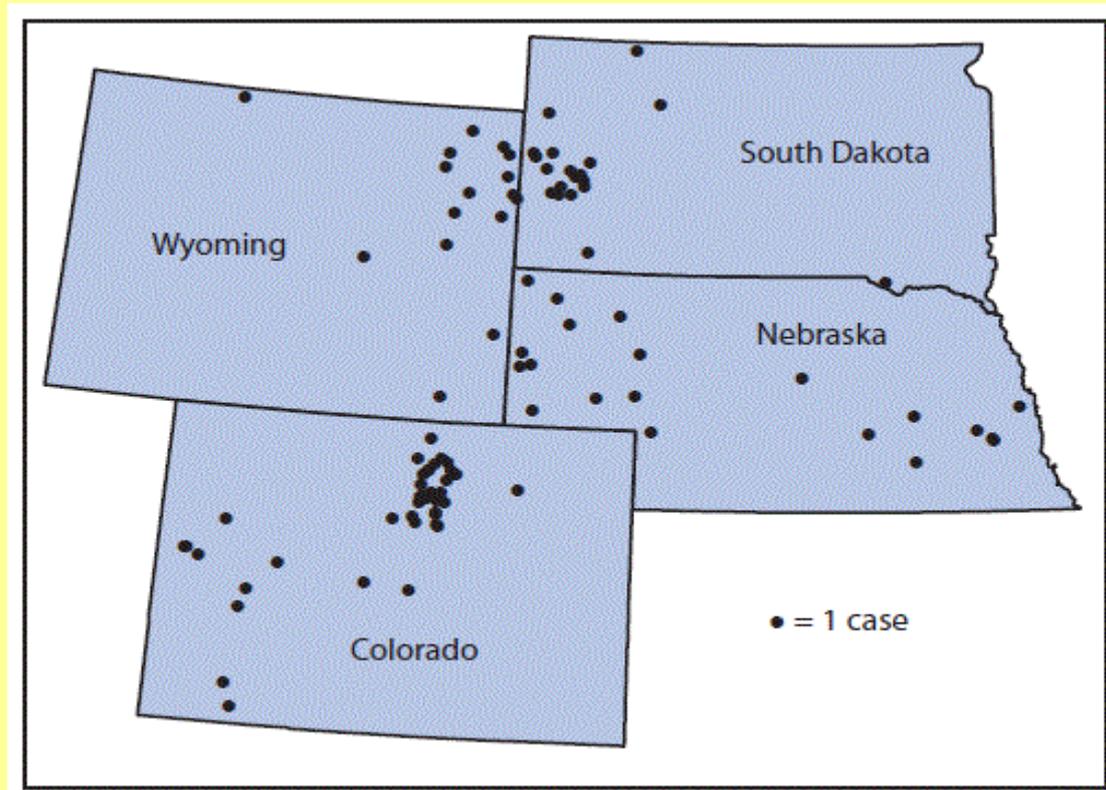
Source: [http://www.wsj.com/articles/brazil-approves-sanofis-dengue-vaccine-1451314445?mod=rss\\_Health](http://www.wsj.com/articles/brazil-approves-sanofis-dengue-vaccine-1451314445?mod=rss_Health)

Dec 28 – According to the vaccine division of France's Sanofi SA, Brazilian authorities gave approval to market its Dengue fever vaccine, following an escalation of cases across the whole nation. **Following Mexico and Philippines, Brazil is the third nation to approve Sanofi's vaccine.** Latin American country has seen 1.5 million cases this year through Nov. 14, 2015.



## Increase in Human Cases of Tularemia

Source: [http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6447a4.htm?s\\_cid=mm6447a4\\_w](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6447a4.htm?s_cid=mm6447a4_w)



Dec 04, 2015 – A total of 100 tularemia cases were reported from January to the end of September 2015 among residents of Colorado, Nebraska, South Dakota, and Wyoming. This represents a substantial increase in the annual mean number of cases reported in each state between 2004 and 2014. Concerning the cause for the increases in tularemia cases, possible explanations might be related to increased rainfall promoting vegetation growth, pathogen survival, and increased rodent and rabbit populations.

## New Weapon to Fight Zika: The Mosquito

Source: <http://www.nytimes.com/2016/01/31/business/new-weapon-to-fight-zika-the-mosquito.html>

Jan 30 – Every weekday at 7 a.m., a van drives slowly through the southeastern Brazilian city of Piracicaba carrying a precious cargo — mosquitoes. More than 100,000 of them are dumped from plastic containers out the van's window, and they fly off to find mates.

But these are not ordinary mosquitoes. They have been genetically engineered to pass a lethal gene to their offspring, which die before they can reach adulthood. In small tests, this approach has lowered mosquito populations by 80 percent or more.

The biotech bugs could become one of the newest weapons in the perennial battle

between humans and mosquitoes, which kill hundreds of thousands of people a year by transmitting malaria, dengue fever and other devastating diseases and have been called the deadliest animal in the world.

“When it comes to killing humans, no other animal even comes close,” Bill Gates, whose foundation fights disease globally, has written. The battle has abruptly become more pressing by what the World Health Organization has called the “explosive” spread of the mosquito-borne Zika virus through Brazil and other parts of Latin



America. Experts say that new methods are needed because the standard practices — using insecticides and removing the standing water where mosquitoes breed — have not proved sufficient.

“After 30 years of this kind of fight, we had more than two million cases of dengue last year in Brazil,” said Dr. Artur Timerman, an infectious disease expert in São Paulo. “New approaches are critically necessary.”

But the new efforts have yet to be proved, and it would take some years to scale them up to a meaningful level. An alternative to mosquito control, a vaccine against Zika, is not expected to be available soon.

So for now, experts say, the best modes of prevention are to intensify use of the older methods of mosquito control and to lower the risk of being bitten using repellents and by wearing long sleeves.

Women are being advised to not get pregnant and to avoid infested areas if pregnant, since the virus is strongly suspected of causing babies to be born with abnormally small heads and damaged brains.

One old method that is not getting serious attention would be to use DDT, a powerful pesticide that is banned in many countries because of the ecological damage documented in the 1962 book “Silent Spring.” Still, it is being mentioned a bit, and some experts defend its use for disease control.

“That concern about DDT has to be reconsidered in the public health context,” said Dr. Lyle R. Petersen, director of the division of vector-borne diseases at the Centers for Disease Control and Prevention. He said the damage to fish and wildlife stemmed from widespread outdoor use of DDT in agriculture, not the use of small amounts on walls inside homes to kill mosquitoes.

Other experts say the old methods can work if applied diligently.

“We’ve had great success using old methods for the last 50, 60 years,” said Dr. Peter J. Hotez, dean of the National School of Tropical Medicine at the Baylor College of Medicine. “We just need to be very aggressive and exercise political will.”

A determined American doctor named Fred L. Soper eradicated a [malaria](#)-carrying mosquito in Brazil in the 1930s, even before the widespread use of DDT. And dengue-carrying mosquitoes were eradicated in 18 Latin American countries from 1947 to 1962, Dr. Hotez said.

But Dr. Soper was a fanatic, making sure every house was thoroughly inspected and all standing water removed. In Brazil, he was backed by the government, which made it a crime to deny entry to an inspector. According to a [profile of him in The New Yorker](#), Dr. Soper used to say that mosquito eradication was impossible in a democracy.

Such an autocratic approach might not be feasible in today’s societies. Moreover, Latin American cities have grown tremendously since then, said Carlos Brisola Marcondes, a medical entomologist at the Federal University of Santa Catarina in Brazil.

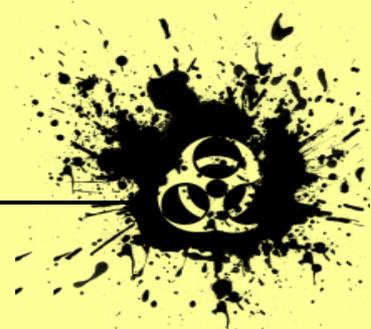
“The situation is much worse than it was in the past,” he said.

The main mosquito that transmits Zika virus — and also dengue, chikungunya and yellow fever — is *Aedes aegypti*, a particularly wily foe.

It prefers urban areas and bites mainly people, making it very efficient at spreading disease. It bites in the day, so bed nets, a common way to protect people against the night-biting malaria mosquitoes, have little effect. It breeds in small containers of water, such as flower pots, cans and tires that collect rainwater.

“I’ve seen *Aedes aegypti* merrily breeding in discarded soda caps,” said Joseph M. Conlon, technical adviser to the American Mosquito Control Association.

*Aedes aegypti* is found in the southern part of the United States, so public health authorities say there will be some local transmission of Zika in this country, though it will be far less serious than in Latin America. Dr. Petersen of the C.D.C. said he envisioned “almost a SWAT team approach” in which resources would be rapidly deployed to areas of local transmission to control mosquitoes using conventional methods.





Oxitec is releasing genetically modified male mosquitoes into Piracicaba, Brazil, to fight diseases like dengue and Zika. Credit Cristiano Burmester for The New York Times

The genetically engineered *Aedes aegypti* mosquitoes were developed by Oxitec, a British company, to fight dengue, but would also work to curtail the spread of Zika.

Since last April, the mosquitoes have been released in one neighborhood of Piracicaba populated by about 5,000 people. By the end of 2015, there was a reduction in wild mosquito larvae — as opposed to larvae inheriting the lethal gene — of 82 percent, the company said. Oxitec and the city said this month that they would extend the project for another year and expand it to cover an area of up to 60,000 people. Oxitec is building a new factory to rear enough mosquitoes to cover an area with 300,000 people.

The company, which was acquired last year by the American biotechnology firm **Intrexon**, calls its creation the “friendly *Aedes aegypti*” and notes that it releases only male mosquitoes, which do not bite. It says its solution is ecologically friendly because only the one species is targeted, whereas chemical spraying can affect many types of organisms. But critics worry about the long-term effects of releasing genetically modified organisms.

Oxitec has run into public opposition to a proposed test in the Florida Keys.

A Brazilian commission that oversees genetically engineered organisms declared the Oxitec mosquitoes safe to release into the environment in 2014. But Oxitec still does not have a license from Brazil’s health regulators that would allow it to actively market its approach to Brazilian cities.

Still, said Hadyn Parry, the company’s chief executive, with the outbreak of Zika, “We’ve had a huge amount more interest from different municipalities.”

Another approach, being tested in one Rio de Janeiro neighborhood, is to infect the mosquitoes with *Wolbachia*, a bacterium that does not infect them naturally. Once infected, the mosquitoes do not pick up and transmit viruses as easily.

The bacteria can be passed to the next generation through eggs, so they spread through the mosquito population.

“The beauty of it is it is a sustainable method — once you put it out it sustains itself in the environment and gives ongoing protection,” said Scott O’Neill, dean of science at Monash University in Australia. He is the leader of Eliminate Dengue, a *Wolbachia* project



supported by the Bill & Melinda Gates Foundation and others.

Tests are now underway in Indonesia and Vietnam to see if the technique can reduce the number of people getting dengue fever.

Dr. Paulo Gadelha, president of the Oswaldo Cruz Foundation, a scientific institute under the Brazilian Ministry of Health, said initial results in his country were good and there were plans to try it on a larger scale, in Niterói, a municipality across Guanabara Bay from Rio.

“We are planning to scale this up,” he said. “The mayor has already agreed.”

A new and even more powerful tool may be gene drives, which are genetic mechanisms that rapidly propagate a trait through a wild population. Just in the last few months, scientists have made gene drives that work in mosquitoes in the laboratory.

Anthony A. James, a professor at the University of California, Irvine, said it would be straightforward to use a gene drive to spread something like a sterility trait through the *Aedes aegypti* population to kill them off.

“We have all the blueprints and have demonstrated proofs of principle,” he said. “It’s just public will to do this.”

The public might not be ready to deploy gene drives outside the laboratory because once a new trait is let loose to spread through the population, it would be difficult to reverse it if something went wrong.

**Dr. Petersen of the CDC said of all the new approaches, “We don’t know about the efficacy of any of them on a wide enough scale.” He added, “For now, we’ve got to deal with what we have.”**

## Information Management Supporting Deployment of a Light Fieldable Laboratory: A Case for Ebola Crisis

By Olga Vybornova, Nicolas Dubois, Roland Gueubel and Jean-Luc Gala

Center for Applied Molecular Technologies, Institut de Recherche Expérimentale et Clinique, Université Catholique de Louvain, Belgium

*Universal Journal of Management* 4(1): 16-28, 2016

Source: [https://www.academia.edu/21455614/Information\\_Management\\_Supporting\\_Deployment\\_of\\_a\\_Light\\_Fieldable\\_Laboratory\\_A\\_Case\\_for\\_Ebola\\_Crisis](https://www.academia.edu/21455614/Information_Management_Supporting_Deployment_of_a_Light_Fieldable_Laboratory_A_Case_for_Ebola_Crisis)

Improved information collection, interpretation and processing are vitally important for optimized crisis response. A comprehensive information management (IM) system using ontology-based approach is aimed to handle heterogeneous information and to model the operational domain knowledge associated



with the deployment of a light fieldable laboratory (LFL) during the recent Ebola crisis in Guinea. This LFL mission was part of the B-LiFE (Biological Light Fieldable Laboratory for Emergencies) project which integrates analytical and space-based technologies. LFL can be considered as a toolbox where all operational functions and related tools are incorporated into a single information space. An ontology can therefore be applied to facilitate the preparation and management of next LFL missions. The aim is to provide technical compatibility of information shared between tools and to align terminology and definitions while complying with guidelines, best practices and procedures. Accordingly, the LFL domain becomes a formalized and



structured modeling of LFL concepts, procedures and functions which, in turn, helps distinguishing functions which are necessary for the mission from those which are incompatible according to a given mission or scenario. Such consistent logical modelling allows then to efficiently plan and configure any LFL mission by selecting and activating in due time, among all available functions and tools, those which are strictly mandatory.

► Read the full paper at source's URL.

## Most vaccine-related posts on Pinterest are anti-vaccine: Study

Source: <http://www.homelandsecuritynewswire.com/dr20160202-most-vaccinerelated-posts-on-pinterest-are-antivaccine-study>

Feb 02 – **About 75 percent of the vaccine-related posts on Pinterest are negative toward vaccination, according to research published in *Vaccine*.** The authors of the study, from Virginia Commonwealth University, are calling for better communication about vaccination.

In a response to the paper, also published in *Vaccine*, researchers from Drexel University Dornsife School of Public Health say it is time to take more concrete action: scientists need to

platforms, such as Pinterest and Instagram. Although they are still slightly behind social media giants like Facebook (with 1.4 billion users), the visual platforms are growing quickly; **Pinterest now has around 74 million users.** What is more, visuals are playing an increasingly important role on platforms like Facebook and Twitter.

Despite this, relatively little is known about what people are saying about big issues like vaccination on visual platforms. Jeanine Guidry, lead author of the Pinterest study and Ph.D. student at Virginia Commonwealth University, explained: "With the academic publishing process being slow compared to the speed of social media, we tend to be a few years behind when platforms become popular." Guidry is an avid Pinterest user, so decided to search for topics she was interested in, like vaccines and depression. She found there were subgroups of people talking about vaccines. "To my surprise, there are a lot of health discussions happening under the radar," she commented.

Guidry and her colleagues collected 800 "pins" — messages people have posted on Pinterest — and analyzed them to determine whether they are pro- or anti-vaccination. The sample was collected manually, as there is not yet a code to help collect pins using a hashtag or keyword.

The results revealed that 75 percent of all vaccine-related pins were negative. **Messages ranged from simple posts questioning the safety of vaccines to more radical claims that vaccines are being created to kill people.** Twenty percent of the posts talked about conspiracy theories, such as pharmaceutical companies out to make money at



speaking out more effectively in favor of vaccines, and institutions need to support and encourage advocacy.

Elsevier reports that people are communicating more and more on visual social media



the expense of children and governments trying to harm children for the purposes of population control.

“These are real fears that people have — from a public health perspective, we need to talk to people about their fears,” said Guidry. “But first we need to know what’s happening. Up to this point we didn’t even know these conversations were taking place on Pinterest.”

The results show a significant shift from earlier studies: in the mid-2000s, analyses of content on MySpace and YouTube revealed that vaccine-related posts were negative just 25 percent of the time.

According to Dr. Neal Goldstein and his colleagues, who responded to the study with a letter published in *Vaccine*, the ongoing calls for better communication about vaccines are not having the desired effect.

“This isn’t a new topic — it’s been going on for some time now,” said Dr. Goldstein from Drexel University Dornsife School of Public Health. “It’s worthwhile to make the statement we need to do more, but we’re doing quite a bit; maybe people can’t hear the message because they’re being bombarded with scientific data. The

question is how do we do better? How do we become better advocates for science in the public?”

According to Dr. Goldstein, it is a systemic issue in which institutions play a vital role. Most public health programs do not provide training on how to be an effective public health advocate or how to communicate well with a lay audience. Scientists are trained to write papers, present at conferences and get grants; the academic structure incentivizes that rather than advocacy. When institutions evaluate researchers for tenure or promotion, they favor publications rather than science-based advocacy in the press. This, says Dr. Goldstein, needs to change:

“Some groups, such as parent-led advocacy groups and science writers who publish in the popular press, as well as a few notable physicians, are doing a great job of speaking out in favor of vaccines. But there’s not much going on in the pure research community — that’s what we want to change. For that to happen, institutions need to change their approach to advocacy too.”

— Read more in Jeanine P. D. Guidry et al., “On pins and needles: How vaccines are portrayed on Pinterest,” *Vaccine* 33, no. 39 (September 2015): 5051-56 (doi: 10.1016/j.vaccine.2015.08.064); and Neal D. Goldstein et al., “Is this thing on? Getting the public to listen to the pro-vaccine message,” *Vaccine* (in press, 13 January 2016) (doi: 10.1016/j.vaccine.2015.12.070)



## WHO calls Zika virus “Public Health Emergency of International Concern”

Source: <http://www.homelandsecuritynewswire.com/dr20160202-who-calls-zika-virus-public-health-emergency-of-international-concern>

Feb 02 – **The World Health Organization (WHO) convened an Emergency Committee, in accordance with the International Health Regulations, to gather advice on the severity of the health threat associated with the continuing spread of Zika virus disease in Latin America and the Caribbean.**

WHO says that in assessing the level of threat, the eighteen experts and advisers looked in particular at the strong association between infection with the Zika virus and a rise in detected cases of congenital malformations and neurological complications.

**The experts agreed that a causal relationship between Zika infection during pregnancy and microcephaly is strongly suspected, though not yet scientifically proven.** All agreed on the urgent need to coordinate international efforts to investigate and understand this relationship better.

The experts also considered patterns of recent spread and the broad geographical distribution of mosquito species that can transmit the virus.



**WHO notes that the lack of vaccines and rapid and reliable diagnostic tests, and the absence of population immunity in newly affected countries were cited as further causes for concern.**

After a review of the evidence, the Committee advised that the recent cluster of microcephaly cases and other neurological disorders reported in Brazil, following a similar cluster in French Polynesia in 2014, constitutes an “extraordinary event” and a public health threat to other parts of the world.

In their view, a coordinated international response is needed to minimize the threat in affected countries and reduce the risk of further international spread.

Members of the Committee agreed that the situation meets the conditions for a Public Health Emergency of International Concern.

Accordingly, WHO declared that the recent cluster of microcephaly cases and other neurological disorders reported in Brazil, following a similar cluster in French Polynesia in 2014, constitutes a Public Health Emergency of International Concern.

A coordinated international response is needed to improve surveillance, the detection of infections, congenital malformations, and neurological complications, to intensify the control of mosquito populations, and to expedite the development of diagnostic tests and vaccines to protect people at risk, especially during pregnancy.

**“The Committee found no public health justification for restrictions on travel or trade to prevent the spread of Zika virus,”** WHO said. “At present, the most important protective measures are the control of mosquito populations and the prevention of mosquito bites in at-risk individuals, especially pregnant women.”



## **Zika Infection Transmitted by Sex Reported in Texas**

Source: [http://www.nytimes.com/2016/02/03/health/zika-sex-transmission-texas.html?\\_r=0](http://www.nytimes.com/2016/02/03/health/zika-sex-transmission-texas.html?_r=0)

Feb 02 – **A case of Zika virus infection transmitted by sex, rather than mosquito bite, was discovered in Texas on Tuesday, a development sure to complicate plans to contain a global epidemic.**

The Dallas County Health and Human Services Department reported that a patient with the Zika virus was infected after having sex with someone who had returned from Venezuela, where Zika is circulating.

After the report, the Centers for Disease Control and Prevention changed its advice to Americans visiting regions in which the Zika virus is spreading.

Men having sex after traveling to these areas should consider wearing condoms, officials said, although they did not indicate for how long this would be necessary. Pregnant women should avoid contact with semen from men recently exposed to the virus, federal officials also said. The agency plans to issue further guidelines soon.

**Infection of pregnant women with the Zika virus has been linked to birth defects in their infants. But the infection is not usually life-threatening for others, and produces symptoms only in 20 percent of patients.**

But sexual transmission, experts said, adds a new level of difficulty to detecting and preventing Zika outbreaks, which may require not just mosquito control but also safe-sex education. Health officials now face the prospect of stopping an infection that is usually silent and for which there are no widely available tests; it may be transmissible sexually, yet there may be no sign until a child is born.

“This opens up a whole new range of prevention issues,” said Dr. William Schaffner, chief of preventive medicine at Vanderbilt University Medical School.

Still, he cautioned that sexual transmission is probably rare compared with the viral spread by mosquitoes, taking place in more than 20 countries and territories in Latin America and the Caribbean.

“Mosquito transmission is the highway, whereas sexual transmission is the byway,” Dr. Schaffner said. “Sexual transmission cannot account for this sudden and widespread transmission of this virus.”

Scientists have suspected for several years that Zika could be transmitted sexually. In 2008, a malaria specialist who caught the



Zika virus while gathering mosquitoes in Africa passed the infection to his wife shortly after his return to Northern Colorado.

Because his wife had not left the state and there were no mosquitoes in the region capable of carrying Zika — and because the couple did not infect any of their four children — experts concluded the only logical explanation was transmission through sex.

Last year, French scientists described finding viable Zika virus in the semen of a 44-year-old Tahitian man who had recovered from an infection during a 2013 outbreak in French Polynesia.

The investigators could not determine how long the virus had persisted because he had had more than one episode of fever that year that might have been related to the Zika virus.

The C.D.C. confirmed the Zika infections in Dallas. Health officials in Dallas said that the person infected during sex had not left the United States, and that there was no documented transmission of the virus by mosquitoes within the city.

The returnee from Venezuela had visible symptoms of Zika infection, a spokeswoman for the county said, but she did not describe exactly what they were.

The health department did not describe the gender of each partner. The only two previously known cases suggesting that sexual transmission was possible involved men with visible blood in their semen, and scientists theorized that the virus had infected their testes or prostates.

In its statement on the Texas case, the C.D.C. noted that there was “no risk to a developing fetus,” presumably implying that neither partner was pregnant.

Although Zika virus infection causes relatively mild symptoms in adults, scientists suspect it is behind a surge in cases of devastating birth defects, including microcephaly, in Brazil.

Until Tuesday, the C.D.C. had posted only a brief acknowledgment on its website that sexual transmission had “been reported.” There had been no mention of the possibility on its advisory pages for travelers, nor did it advise the use of condoms.

**By contrast, British health authorities suggested last week that couples delay efforts to conceive for one month if either**

**partner had just returned from a country where Zika was spreading. Public Health England suggested that all men use condoms for at least 28 days after returning, and that men with Zika symptoms, including fever, rash, red eyes or joint pain, avoid having unprotected sex for six months.**

Like the C.D.C., British health officials had previously advised pregnant women to avoid travel to affected countries.

In the United States, the possibility of sexual transmission “has really hit a nerve in the corporate community,” said Dr. David O. Freedman, an epidemiologist at the University of Alabama at Birmingham who is sometimes called on to advise businesses about medical issues in travel.

Business travelers to Latin America and the Caribbean now must worry about passing it to their partners, he said: “There’s a lot of concern out there, but just no data to address it.”

The Texas case “is going to raise a lot more concern,” said Scott Weaver, director of the Institute for Human Infections and Immunity at the University of Texas Medical Branch in Galveston and an expert on the virus.

He said it would be important to identify other factors that were red flags for transmission through sex. For example, the men in the cases in Colorado and French Polynesia both had blood in their semen.

Dr. Anthony S. Fauci, director of the National Institute of Allergy and Infectious Diseases, said it was important to **determine whether the virus survived in semen longer than it does in the blood, from which it usually disappears after a week or two as the victim recovers.**

“We have no idea right now how long Zika is present in the semen,” Dr. Fauci said. “We need to find that out, and we need to find that out pretty quickly.”

After nearly 40 years of studying the Ebola virus, doctors learned for the first time just last year that it could survive in semen for weeks or months and infect women through sex.

The prospect of transmission from men who never had symptoms could pitch clinicians into uncharted waters.



“If this can occur in the complete absence of signs or symptoms, then it’s going to be very tough to get a handle on how high the risk is,” Dr. Weaver said.

Experts in mosquito-borne diseases expect some local transmission of the Zika virus through mosquitoes in Florida and along the Gulf Coast once the weather warms up. How far it spreads will depend on how aggressive mosquito control is.

Dr. Kristy Murray, an infectious disease specialist at Texas Children’s Hospital, said there had been seven confirmed Zika cases in Houston, where she is based, all in travelers back from Zika-infested areas.

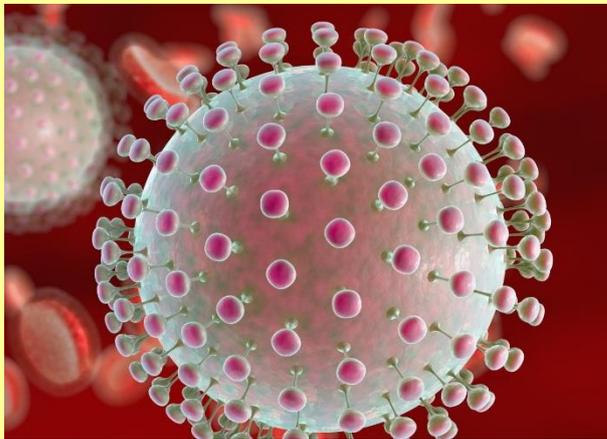
Local health authorities are girding for battle against mosquitoes when it gets warmer. “It will be really interesting to see what happens this summer,” Dr. Murray said.

## Who Owns the Zika Virus?

By Guillaume Kress

Source: <http://www.globalresearch.ca/who-owns-the-zika-virus/5505323>

Feb 03 – The World Health Organization (WHO) declared the Zika virus a global health emergency on Monday (February 1) without providing much detail on the disease. So here are some facts until we



receive more information:

[This sexually-transmitted virus](#) has been around for 69 years and is marketed by two companies: LGC Standards (headquartered in the UK) and ATCC (headquartered in the US).

The [LGC Group](#) is:

*“...the UK’s designated National Measurement Institute for chemical and bioanalytical measurements and an international leader in the laboratory services, measurement standards, reference materials, genomics and proficiency testing marketplaces.”*

One of its branches, [LGC Standards](#), is:

*“...a leading global producer and distributor of reference materials and proficiency testing schemes. Headquartered in Teddington, Middlesex, UK, LGC Standards has a network of dedicated sales offices extending across 20 countries in 5 continents and more than 30 years’ experience in the distribution of reference materials. These high quality products and services are essential for accurate analytical measurement and quality control, ensuring sound decisions are made based on reliable data. We have an unparalleled breadth of ISO Guide 34 accredited reference material production in facilities at 4 sites across the UK, the US and Germany.”*

LGC Standards entered into a partnership with [ATCC](#), of which the latter is:

*“...the premier global biological materials resource and standards organization whose mission focuses on the acquisition, authentication, production, preservation, development, and distribution of standard reference microorganisms, cell lines, and other materials. While maintaining traditional collection materials, ATCC develops high quality products, standards, and services to support scientific research and breakthroughs that improve the health of global populations.”*

This [“ATCC-LGC Partnership”](#) is designed to facilitate:

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*culture items supported by our local office network delivering the highest levels of customer service and technical support.”*

**And who owns the patent on the virus? The Rockefeller Foundation!**

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## Zika virus (ATCC® VR-84™)

Classification: **Flaviviridae, Flavivirus** / Product Format: freeze-dried

GENERAL INFORMATION CHARACTERISTICS CULTURE METHOD SPECIFICATIONS HISTORY DOCUMENTATION SHARE EMAIL PRINT

Name of Depositor	J. Casals, Rockefeller Foundation
Source	Blood from experimental forest sentinel rhesus monkey, Uganda, 1947
Year of Origin	1947
References	Dick GW. Trans. R. Soc. Trop. Med. Hyg. 46: 509, 1952.

Zika virus  
ATCC® VR-84™  
freeze-dried

€599.00

Qty:

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Source: [http://www.lgcstandards-atcc.org/products/all/VR-84.aspx?geo\\_country=es#history](http://www.lgcstandards-atcc.org/products/all/VR-84.aspx?geo_country=es#history)

Why has the issue of patent ownership of the Zika virus not been the object of media coverage? Lest we forget the words of David Rockefeller in an address to a Trilateral Commission meeting in June of 1991:

“We are grateful to the Washington Post, the New York Times, Time Magazine and other great

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Zika virus (ATCC® VR-84™)	€599.00	<input type="text" value="1"/>	€599.00	N/A	delete

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publications whose directors have attended our meetings and respected their promises of discretion for almost 40 years. ... It would have been impossible for us to develop our plan for the world if we had been subjected to the lights of publicity during those years. But, the world is more sophisticated and prepared to march towards a world government. The supernational sovereignty of an intellectual elite and world bankers is surely preferable to the national auto-determination practiced in past centuries.”

Is the ownership of the Zika Virus by the Rockefeller Foundation part of that agenda of “supernational sovereignty [dominated] by an intellectual elite and world bankers...”?



Of significance, the Zika virus is a commodity which can be purchased online from the ATCC-LGC for 599 euros, with royalties accruing to the Rockefeller Foundation.



## Authorities Seek to Protect Blood Supply from Zika Virus

Source: <http://www.emergencymgmt.com/health/Authorities-seek-to-protect-blood-supply-from-Zika-virus.html>

Feb 03 – Public health officials are considering steps to protect the blood supply from contamination with Zika virus, including barring patients who have traveled to affected areas from donating blood for up to 28 days.

Discussions of blood donations and other questions swirling around Zika took on new urgency Monday as the World Health Organization declared the virus and its complications a public health emergency. Dr. Margaret Chan, the organization's director general, said the cluster of Zika-linked birth defects, known as microcephaly, "constitute an extraordinary event and a public health threat to other parts of the world."

Chan called for an international response to minimize the threat in infected countries and reduce the risk of international spread. In addition to highlighting the seriousness of the problem, the emergency declaration can trigger action and funding from governments and nonprofits around the world, the *New York Times* reported. It elevates the WHO to the position of global coordinator and gives its decisions the force of international law.

While U.S. authorities have confirmed more than 30 cases of Zika brought by travelers returning from Latin America, no locally transmitted cases have been confirmed. Harris County and Houston health officials have reported seven confirmed cases.

The American Association of Blood Banks on Monday opted against a donation ban but recommended that collection facilities urge donors who traveled to Latin America during the past 28 days to self-defer. Travelers who choose to donate, the group said, should call the donation center if they develop two or more Zika symptoms — fever, rash, joint pain or red, itchy eyes — within 14 days.

**No blood donor screening tests for Zika, chikungunya or dengue viruses are licensed for use in the U.S., although blood is routinely screened for West Nile virus.**

### 'Entirely for safety'

Dr. Susan Rossmann, chief medical officer for the Gulf Coast Regional Blood Center in Houston, said work was underway to implement a self-deferral strategy at 16 local collection sites. Within a few days, the centers will provide donors who traveled to affected areas an information sheet describing the issue and asking them not to donate until they've been back in the U.S. for a month.

"We are doing this entirely for safety," Rossmann said. "We don't know what kind of an impact it will have on the blood supply."

A nationwide survey of more than 50,000 blood donors conducted by AABB in the winter of 2015 found that 2.25 percent of those who qualified to donate had traveled to Latin America within the previous 28 days. No data was available for Houston-area blood banks, which may have a higher rate given the large Hispanic populations and ease of transportation to Latin America.

"A lot of people traditionally go south for spring break; now whether they will do that this year if there is felt to be some risk ... I don't know," Rossmann said.

The American Red Cross is considering whether to implement a similar strategy for its collection facilities.

"The risk of transmission through blood donation continues to be extremely low in the continental U.S.," said Dr. Susan Stramer, Red Cross vice president of scientific affairs.

The lack of a screening test is particularly problematic because many people with Zika have no symptoms, said Dr. Kristy Murray, an epidemiologist at Baylor College of Medicine and Texas Children's Hospital.

According to the Centers for Disease Control and Prevention, about 80 percent of those infected with Zika won't have symptoms. Murray said the same type of tests used for West Nile could be developed for Zika, but it will take time to complete the



development and obtain Food and Drug Administration approval.

### Risk not entirely clear

For the time being, international travel history provides an easy way to identify those at greater risk. If the virus starts circulating in the U.S., that task will become much harder.

"If we have local transmission," Murray said, "we'll have to screen like we do for West Nile." While several dengue virus infections through blood transfusion have been documented, it's unclear how much of a risk Zika poses. Brazilian officials are investigating a probable case of Zika infection through transfusion in March. According to a report in the *Folha de Sao Paulo* newspaper, the blood donor became symptomatic three days after donating.

Even in the absence of a ban, at least some potential donors at risk of carrying Zika virus

would be eliminated by current protocols. Those traveling to areas where malaria is circulating are deferred from donating for two years, and facilities turn away those with a fever. But Rossmann said many of the areas where Zika is prevalent no longer harbor malaria.

**The blood bank association said technologies that use ultraviolet screening have been shown to be effective in preventing viruses from multiplying in donated platelets and plasma.**

Concord, Calif.-based Cerus Corp. has contracts with more than a dozen blood collection agencies to use its system that can block replication of viruses, bacteria and parasites in the blood. That system was approved by the FDA in 2014 to target dengue and chikungunya. A study published last month in the journal *Transfusion* showed the system could also work against Zika.



## Zika found in saliva, urine in Brazil

Source: <http://www.reuters.com/article/us-health-zika-idUSKCN0VD2QF>

Jan 05 – **Authorities in Brazil said on Friday Zika has been detected in patients' saliva and urine, adding to the concern over the spread of the virus, while U.S. officials offered new guidance on sex for people returning from Zika-hit regions.**

Zika, linked to thousands of birth defects in Brazil, is primarily transmitted through mosquito bites, but word surfaced this week of infections through sex and blood transfusions, and news of the presence of the virus in the saliva and urine of two patients prompted new worries.

The possibility of infection via body fluids could complicate efforts to contain the outbreak.

In fact, the president of the Brazilian federal biomedical research institution that made the announcement urged pregnant women not to kiss strangers during the country's free-wheeling Carnival celebrations.

The U.S. Centers for Disease Control and Prevention recommended more stringent measures for monitoring pregnant women for Zika and for preventing sexual transmission of the virus.

"I wish we knew more about Zika today," CDC Director Tom Frieden told reporters.

**The CDC said men with a pregnant partner who live in or have traveled to an area of active Zika transmission should use condoms during sex with their partner or abstain from sex for the duration of the pregnancy.**

"The science is not clear on how long the risk should be avoided," the CDC said.

Zika has spread rapidly through the Americas, prompting the World Health Organization to declare an international public health emergency due to its link to microcephaly, a condition in which infants are born with abnormally small heads and can suffer developmental problems.

There is no vaccine or treatment for Zika.



## Consumer Reports Shares Mosquito Repellent Ratings for Zika Virus Prevention

Source: <http://consumerist.com/2016/02/05/consumer-reports-shares-mosquito-repellent-ratings-for-zika-virus-prevention/>

Feb 05 – Even if you've only been half paying attention to the news, you've heard something about the Zika virus, even if it's only that a bunch of people have changed their travel plans, governments are advising couples to delay trying to conceive children, and someone had to rename a car. It's spread mainly by mosquitoes and that's something that our product-testing cousins down the hall at Consumer Reports can help with. They test mosquito repellents, and have released their ratings to non-subscribers.

### ConsumerReports INSECT REPELLENT RATINGS

Recommended

● Excellent ● Very Good ○ Good ● Fair ● Poor

	Brand	Price	Ratings and Test results							
			Overall score	Active ingredients	Effectiveness Aedes Mosquitoes (hrs.)	Effectiveness Culex Mosquitoes (hrs.)	Effectiveness Deer Ticks (hrs.)	Type	Cost per oz. (\$)	Resists damage to materials
<input checked="" type="checkbox"/>	<b>Sawyer</b> Fisherman's Formula Picaridin	<b>\$8.25</b>	96	Picaridin 20%	8.0	8.0	8.5	Pump spray	2.06	○
<input checked="" type="checkbox"/>	<b>Repel</b> Lemon Eucalyptus	<b>\$7.00</b>	87	Oil of lemon eucalyptus 30% [Approximately 65% p-menthane-3,8-diol]	7.0	8.0	7.3	Pump spray	1.75	●
<input checked="" type="checkbox"/>	<b>Repel</b> Scented Family	<b>\$7.50</b>	82	Deet 15%	5.0	8.0	8.5	Aerosol spray	1.15	○
<input checked="" type="checkbox"/>	<b>Natrapel</b> 8 Hour	<b>\$8.00</b>	81	Picaridin 20%	7.8	8.0	6.0	Aerosol spray	1.33	○
<input checked="" type="checkbox"/>	<b>Off!</b> Deepwoods VIII	<b>\$7.00</b>	74	Deet 25%	8.0	8.0	4.9	Aerosol spray	1.75	○
	<b>Coleman</b> SkinSmart	<b>\$8.00</b>	69	3-[N-butyl-acetyl]-amino propionic acid ethyl ester IR3535 20%	3.1	6.0	8.2	Aerosol spray	1.33	○
	<b>Cutter</b> Skinsations	<b>\$4.50</b>	33	Deet 7%	1.3	2.9	6.0	Pump spray	0.75	○
	<b>Cutter</b> Natural	<b>\$5.50</b>	29	Geraniol 5%, soybean oil 2%, sodium lauryl sulfate 0.4%, potassium sorbate 0.1%.	0.9	0.6	7.9	Pump spray	0.92	●

What they found was that the most effective repellents had high proportions of picaridin or Deet, with one brand based on oil of lemon eucalyptus, Repel Lemon Eucalyptus, scoring well in their tests. [Recommended brands include Repel, Sawyer, Off! Deepwoods, and Natrapel.](#)



## New Lyme-disease-causing bacteria species discovered

### Press Release

CDC – For Immediate Release: Monday, February 8, 2016

Source: <http://www.cdc.gov/media/releases/2016/p0208-lyme-disease.html>

**The Centers for Disease Control and Prevention, in collaboration with Mayo Clinic and health officials from Minnesota, Wisconsin, and North Dakota, report the discovery of a new species of bacteria (*Borrelia mayonii*) that causes Lyme disease in people. Until now, *Borrelia burgdorferi* was the only species believed to cause Lyme disease in North America.**



Scientists at the Mayo Clinic in Rochester, Minnesota, first suspected the possibility of new bacteria after lab tests from six people with suspected Lyme disease produced unusual results, according to the findings published today in *Lancet Infectious Diseases*. Additional genetic testing at the Mayo Clinic and CDC found that the bacteria, provisionally named *Borrelia mayonii*, is closely related to *B. burgdorferi*.

“This discovery adds another important piece of information to the complex picture of tick-borne diseases in the United States,” said Dr. Jeannine Petersen, microbiologist at the Centers for Disease Control and Prevention.

### So far, new Lyme species found only in upper Midwest

Limited information from the first six patients suggests that illness caused by *B. mayonii* is similar to that caused by *B. burgdorferi*, but with a few possible differences. Like *B. burgdorferi*, *B. mayonii* causes fever, headache, rash, and neck pain in the early stages of infection (days after exposure)

and arthritis in later stages of infection (weeks after exposure). Unlike *B. burgdorferi*, however, *B. mayonii* is associated with nausea and vomiting, diffuse rashes (rather than a single so-called “bull’s-eye” rash), and a higher concentration of bacteria in the blood.

The researchers believe that, like *B. burgdorferi*, *B. mayonii* is transmitted to humans by the bite of an infected blacklegged (or “deer”) tick. *B. mayonii* has been identified in blacklegged ticks collected in at least two counties in northwestern Wisconsin. The likely exposure sites for the patients described in *Lancet Infectious Diseases* are in north central Minnesota and western Wisconsin. It is highly likely, however, that infected ticks are found throughout both states.

The newly recognized species was discovered when six of approximately 9,000 samples drawn from residents of Minnesota, Wisconsin, and North Dakota with suspected Lyme disease between 2012 and 2014 were found to contain bacteria that were genetically distinct from *B. burgdorferi*. Scientists analyzed the DNA sequences of these bacteria and found that they belonged to a previously unrecognized *Borrelia* species. Blood from two of the patients was also tested by culture at CDC, whereby the organism is grown in the laboratory.

**To date, the evidence suggests that the distribution of *B. mayonii* is limited to the upper Midwestern United States.** The new species was not identified in any of the approximately 25,000 blood samples from residents of 43 other states with suspected tick-borne disease taken during the same period, including states in the Northeast and Mid-Atlantic region where Lyme disease is common.

### Current tests, treatments should work for new Lyme strain

Results from the cases described in this report suggest that patients infected with *B. mayonii* will test positive for Lyme disease with currently available Food and Drug Administration-cleared Lyme disease tests. Specific identification of the organism can be made by using polymerase chain reaction assays (PCR), which detects the DNA of the



Lyme disease bacteria. In some instances, *B. mayonii* bacteria may also be seen on a blood smear. The patients described in this report were treated successfully with antibiotics commonly used to treat Lyme disease caused by *B. burgdorferi*. CDC recommends that health care providers who treat people infected with *B. mayonii* follow the antibiotic regimen described by the Infectious Diseases Society of America.

CDC is working closely with state health departments in Minnesota, North Dakota, and Wisconsin to better understand *B. mayonii* and to plan future investigations, including better descriptions about the clinical aspects of the illness and the geographic extent of the infected ticks.

To further support advances in the detection and discovery of tick-borne diseases, CDC in 2015 funded a partnership with the Minnesota Department of Health, Mayo Clinic, Tennessee Department of Health, and Vanderbilt University to collect over a 3-year period up to 30,000 clinical specimens from patients with suspected tick-borne illness. CDC will use advanced molecular detection methods, including metagenomics screening and whole genome sequencing, to test the specimens for other bacteria that cause tick-borne illness.

"CDC is investing in advanced technology to bring study of tick-borne infections into a new era," said Ben Beard, Ph.D., chief of CDC's Bacterial Diseases Branch. "Coupling technology with teamwork between federal, state, and private entities will help improve early and accurate diagnosis of tick-borne diseases."

**To reduce the risk of tick bites and tick-borne diseases, CDC recommends that people:**

- Avoid wooded and brushy areas with high grass and leaf litter;
- Use insect repellent when outdoors;
- Use products that contain permethrin on clothing;
- Bathe or shower as soon as possible after coming indoors to wash off and more easily find ticks;
- Conduct a full-body tick check after spending time outdoors; and
- Examine gear and pets, as ticks can come into the home on these and later attach to people.

▶ To view the article online: [http://www.thelancet.com/journals/laninf/article/PIIS1473-3099\(15\)00464-8/fulltext](http://www.thelancet.com/journals/laninf/article/PIIS1473-3099(15)00464-8/fulltext)

## Spotlight on Syria's biological weapons

By Gunnar Jeremias, Mirko Himmel, Tomisha Bino & Jakob Hersch

*Research Group for Biological Arms Control, Center for Science and Peace Research, University of Hamburg, Germany*

Source: <http://www.armscontrolwonk.com/archive/1201010/guest-post-spotlight-on-syrias-biological-weapons/>

Feb 08 – When talking about Syria's bioweapon arsenal... Wait a minute. What? Wasn't it all chemical? Indeed, more than two years after the chemical attacks on Ghouta in 2013, the subsequent entering of Syria into the Chemical Weapons Convention (CWC), and more than a year after the destruction of Syria's Sarin nerve agent stockpiles and its precursors under multilateral and multi-media supervision, chemical weapons are still an issue in Syria. Chlorine filled barrel bombs released from helicopters are frequently used as weapons of terror most probably by the Assad regime, and ISIS forces seem to have used mustard munitions.[1] This sad record is too large already, but it seems as if more entries have to be added: Not only are the doubts that Syria might not have declared its complete CW program expressed quite openly by many official sources – there are even hints that point to the presence of biological weapons in Syria, too. There was almost no reaction from the general public or the epistemic community when on 14 Jul 2014 Syria declared its ricin program. A declaration that included the existence of production facilities and stockpiles of purified ricin. Quite a number of documents by the UNSC and OPCW that have been made public touch upon this issue. However, the initial declaration was not made public.



## CBRNE-TERRORISM NEWSLETTER – February 2016

Date	Doc no., relevant page	Summary
14 July 2014		"Al-Maliha" ricin production facility declared as a result of the work of the Declaration Assessment Team. No related document found in open sources.
12 September 2014	EC-77/P/NAT.2	Syria's detailed plan for the destruction of the "Al-Maliha" ricin production facility.
27 October 2014	S/2014/767	(b) On 12 September 2014, the Syrian Arab Republic submitted a detailed plan for the destruction of the "Al-Maliha" ricin production facility (EC- 77/P/NAT.2, dated 12 September 2014) that was declared on 14 July 2014 as a result of the work of the Declaration Assessment Team. The plan was noted by the Council at its Seventy-Seventh Session (paragraph 6.12 of EC- 77/4, dated 10 October 2014).
19 November 2014	EC-M-46/3	Item 4.: The Council considered and adopted a decision on the combined plan for the destruction and verification of the "Al-Maliha" ricin production facility in the Syrian Arab Republic (EC-M-46/DEC.1, dated 19 November 2014), in the context of a Note by the Director-General on the same subject (EC-M-46/DG.2, dated 27 October 2014).
19 November 2014	EC-M-6/DEC.1	"Decision: Combined plan for the destruction and verification of the "Al-Maliha" Ricin production facility in the Syrian Arab Republic" - Initiating a verification inspection: Recalling that the Secretariat has not completed an initial inspection of the "Al-Maliha" ricin production facility as required by paragraphs 43 to 47 of Part V of the Verification Annex; Hereby: Requests the Secretariat to carry out the initial inspection required by Part V of the Verification Annex prior to implementation of any portion of the detailed plan for destruction (EC-77/P/NAT.2); and Agrees to the detailed plan for destruction (EC-77/P/NAT.2) and the proposed measures for verification (Annex to EC-M-46/DG.2), which together constitute the combined plan for the destruction and verification of the "Al-Maliha" ricin production facility.
28 November 2014	S/2014/853	(b) As reported previously, on 12 September 2014, the <b>Syrian Arab Republic had submitted a detailed plan for the destruction of the "Al-Maliha" ricin production facility</b> (EC-77/P/NAT.2, dated 12 September 2014) that was declared on 14 July 2014 as a result of the work of the Declaration Assessment Team. At its Forty-Sixth Meeting, the Council considered and adopted a decision on the combined plan for the destruction and verification of the facility (EC-M-46/DEC.1, dated 19 November 2014), in the context of a Note by the Director - General on the same subject (EC-M-46/DG.2, dated 27 October 2014)
After that	No document	No mentioning of Al-Maliha or Ricin in any of the subsequent documents (such as the reports on progress in the Elimination of the Syrian Chemical Weapons Program that comes roughly once a month)

There have been allegations of a Syrian bioweapons program for a long time now, although no details of a program have ever reached the public domain (not to mention information about the size and the level of sophistication (summarized in Cordesman, 2008) [2]. The first official notification that hinted towards a B-dimension in Syria's armed forces was the statement of the former spokesman of the Syrian foreign ministry, Jihad Makdissi, made on 23 July 2012 that "No chemical or biological weapons will ever be used [...] during the crisis in Syria no matter what the developments in Syria. All of these weapons are in storage and under security and the direct supervision of the Syrian military and will never be used unless Syria faces external aggression." [3] While at that time one could still believe that Makdissi was mixing up biological and chemical weapons as it happens all the time the official Syrian declaration about the ricin program clearly changed things.

In the investigation of this case the first question that pops up clearly is: Why ricin? Ricin is a potent biotoxin that can be isolated from the shell of castor beans and that can be lethal if, for example, ingested or inhaled. It is known in the public literature that in the past some states (e.g. the UK and the US) attempted to weaponize ricin for large scale attacks. Although these experiments date back to the 1940s there is still not much reason to believe that anytime anywhere in the world the problem of effective dissemination was solved. Hence, many experts think of ricin as a weapon of terror rather than a weapon of mass destruction. With the publicly available information, it is difficult at the moment to make any claims about the intention of the Syrian ricin program. Everything from assassination purposes via a proof-of-concept for successfully established methods to weaponize biological toxins to the contribution to the Syrian arsenal of unconventional weapons of deterrence are possible options.

Either way, the use of ricin as a weapon is strictly prohibited by both the CWC and the Biological and Toxins Weapons Convention (BWC). That the issue is dealt with under the



CWC does by no means allow the conclusion that it should not be discussed as a bioweapon in the BWC context as well. Syria is a signatory state of the BWC since 1972, but has yet to ratify the treaty. However, it is possible to advance the view that also signatories of a treaty should not act in way that obviously violates its central obligations, and the production of ricin for non-peaceful purposes (e.g. in amounts that cannot be explained with medical dedications) would mark such a breach.

So, what do we know? Despite the frequent reporting by OPCW and UNSC from mid-2014 onwards, the public part of the story ends in November 2014 with quite a cliff-hanger: As a follow-up to the initial declaration on June 2014 a plan for destruction of the production facility was set up in September 2014 (EC- 77/P/NAT.2). Quite surprisingly for an external observer, it was only recognized in November that the site(s) of the program would be worth prior verification inspection (EC-M-6/DEC.1). Eventually the plan for destruction was decided along with the instruction that an OPCW team of experts should gather on the ground information to learn what exactly would have to be destroyed in the course of the disarmament activities (S/2014/853). And while one really gets excited about the progress of this story, since November 2014 there has only been a deafening silence on the issue. None of the monthly OPCW progress reports, nor any other public document mentioned the issue again. Even if it is somewhat likely that progress is hampered by the security situation on the ground, we would expect at least a notification that the process is delayed for good reasons. So:

### What has happened to the ricin program?

Anything else? Apart from the state of the program, there are, however, some more interesting issues that have been hinted to in the documents, which deserve some attention and which can be investigated further by the use of open source information. With astonishing openness OPCW speaks in the documents cited above of the “Al-Maliha ricin production facility” as the site where the program (at least in part) was located. Hence, the first and most driving question is: where exactly might this facility be located? Al-Maliha is an eastern suburb of Damascus. Given that the production facility is not underground (which is a possibility, though), there are basically three sites that can be considered. First, there is a military site.



Coordinates: [33°29'33.21''N](#); [36°21'46.96''E](#). Image taken on 8/15/2014.



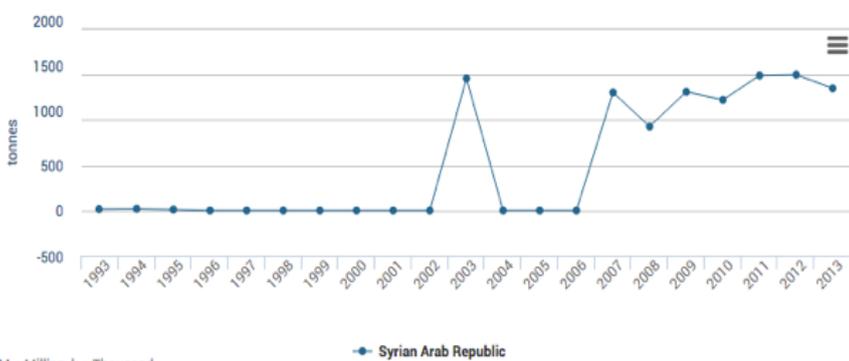
Which, according to tags found in Wikimapia, is dedicated to the production of military garments.[4] Everybody can write comments and notes in Wikimapia, and we have trouble believing that Syrian uniforms really have to be protected with the kind of security perimeters that can be observed on the satellite imagery. But whatever they really do in that complex, the configuration of the buildings has nothing in common with biotechnological sites and/or pharmaceutical facilities in Syria and elsewhere in the world. Based on this gut feeling, we would say: This is not the site. The second candidate, a rubber factory, seems to be exactly what it is said to be.



Coordinates: 33°29'46.71''N; 36°22'41.39''E. Image taken on 5/5/2011.

Although such company obviously must have some experience in the refinement of natural products, there are no reasons to believe that they do anything other than producing rubber. The neighboring facility is Tameco ("The Arab Medical Company"). And we would bet our bottom dollars that this is the "Al-Maliha ricin production facility". Not only because this government owned factory is probably

Production of commodity in selected country 1993 - 2013



experienced in the handling of powders with sweeping effects, a further indicator is that construction work on the Tameco grounds was carried out at the same time when Syria started new agricultural activities: FAO reports that the production of castor beans in Syria in 2003 raised from a level just over zero to some 1.300 tons per year. It remained at this level even after the civil war began – in the years 2004-2006 there was

possibly no reporting (in general there is not much to say against castor beans – their oil is used for many applications in industry and for cosmetics). [5]



Coordinates: 33°29'49.11"N; 36°22'20.09"E.  
Images taken on 03/30/2000 (left) and 12/24/2003 (right).



Today, after the Tameco facility has changed hands several times during the war, not much of the facility is left – it is literally bombed to ashes (image from 8/15/2014).

There is some footage available that shows some of the interior of the facility, before the destruction advanced to the actual level: the packages would most likely not contain ricin, so we won't worry about that, but maybe some expert in bioprocess engineering could identify the equipment visible in the footage? [6] But of course all this does not tell us if the Assad regime was able to remove equipment required for ricin production to some other place before the bombardment – and we don't know how much purified ricin really was produced and where it was (or still is) stored? Using open source information we were also not yet able to find the fields where the Castor trees were grown. It really bothers us that there still might be ricin stockpiles stored somewhere in Syria in such an unstable situation.

These are just the questions that pop up in regard to the ricin program. But history showed that countries that have decided to produce ricin for non-peaceful purposes (which, to stress that once again, is not yet verified for Syria!) have in many cases also developed a bioweapons program that was based on the (mis-)use of pathogens (mostly bacteria and viruses), too (e.g. Iraq). Are there any hints that the same happened in Syria? Indeed, the analysis of open source information at least allows for identifying some qualified questions in this regard, too. But that is another topic – possibly to be discussed here in the near future (if you Wonks would like to read more about it).

### References

- [1] <http://www.theguardian.com/world/2015/nov/06/un-watchdog-confirms-mustard-gas-attack-in-syria>
- [2] [http://csis.org/files/media/isis/pubs/080602\\_syrianwmd.pdf](http://csis.org/files/media/isis/pubs/080602_syrianwmd.pdf)
- [3] <http://www.theweek.co.uk/middle-east/syria-uprising/48124/syria-chemical-weapons-warning-threat-or-reassurance>



[4] <http://wikimapia.org/#lang=de&lat=33.492676&lon=36.361423&z=19&m=b&show=/7008662/ar/%D9%85%D9%84%D8%A7%D8%A8%D8%B3-%D8%AD%D9%83%D9%88%D9%85%D9%8A%D8%A9&search=damascus>

[5] <http://faostat.fao.org/site/567/desktopdefault.aspx#ancor>

[6] <https://www.youtube.com/watch?v=BIQknSo5l7g>; <https://www.youtube.com/watch?v=CEHI0PpVT1w>

## Unexpected and Rapid Spread of Zika Virus in The Americas - Implications for Public Health Preparedness for Mass Gatherings at the 2016 Brazil Olympic Games

By Eskild Petersen, Mary E. Wilson, Sok Touch et al.

*Intern J Infectious Dis*

Source: <http://www.ijidonline.com/article/S1201-9712%2816%2900021-7/fulltext>

### Highlights

- We discuss the global spread of the Zika virus (ZIKV) since its first discovery in 1947 in Uganda to the current outbreak in the Americas which has been declared a 'Global emergency' by the World Health Organization.
- We highlight that ZIKV and other arboviruses may pose a threat to the attendees of the 2016 Rio De Janeiro Olympic and Paralympic games and to residents of Brazil.
- We review clinical features and highlight the need for more accurate and rapid screening tests for ZIKV
- We discuss the recent possible linkage of microcephaly in babies exposed to ZIKV *in utero*, and highlight knowledge gaps in the epidemiology and pathogenesis of ZIKV.
- We review the public health implications of the current ZIKV outbreak and highlight the need for enhanced preparedness and proactive surveillance for all infectious diseases before, during and after the 2016 Olympic games.
- We stress that there is no specific treatment available or preventive vaccines and that the emergence of ZIKV soon after the Ebola outbreak, is yet another wake up call for the urgent need for a coordinated global response for prevention and spread of infectious diseases with epidemic potential at mass gatherings events



### Summary

Mass gatherings at major international sporting events put millions of international travelers and local host-country residents at risk of acquiring infectious diseases, including locally endemic infectious diseases. The mosquito-borne Zika virus (ZIKV) has recently aroused global attention due to its rapid spread since its first detection in May 2015 in Brazil to 22 other countries and other territories in the Americas. The ZIKV outbreak in Brazil, has also been associated with a significant rise in the number of babies born with microcephaly and neurological disorders, and has been declared a 'Global Emergency' by the World Health Organization. This explosive spread of ZIKV in Brazil poses challenges for public health preparedness and surveillance for the Olympics and Paralympics which are due to be held in Rio De Janeiro in August, 2016. We review the epidemiology and clinical features of the current ZIKV outbreak in Brazil, highlight knowledge gaps, and review the public health implications of the current ZIKV outbreak in the Americas. We highlight the urgent need for



a coordinated collaborative response for prevention and spread of infectious diseases with epidemic potential at mass gatherings events.

► Read the full text at source's URL.

## Zika's long, strange trip into the limelight

Source: <http://www.sciencemag.org/news/2016/02/zika-s-long-strange-trip-limelight>

Feb 08 – On 18 April 1947, a rhesus monkey that researchers identified as 766 ran a fever of 39.7°C, about 2°C higher than normal. The monkey was part of a study hunting for yellow fever virus and was living in a cage on a platform built into the tree canopy in the 1.5-kilometer-long Zika Forest, which runs adjacent



to an arm of Lake Victoria in Uganda. Three days later, the investigators took a blood sample from Rhesus 766 and injected it into the brains of Swiss albino mice. The mice “showed signs of sickness” after 10 days, and the researchers harvested their brains, from which they isolated a “filterable transmissible agent.”

Come January of the following year, the same researchers trapped mosquitoes from these canopy platforms and took their bounty back to the lab, hoping to isolate yellow fever virus. Others had shown that one of these species they caught, *Aedes africanus*, shuttled the yellow fever virus, so the investigators put 86 of the insects in a refrigerator to “render them inactive” and then ground them up in a blood-saline solution, which they again injected into the brains of mice. The animals “appeared inactive” after 7 days, and tests showed they harbored the same transmissible agent that had sickened Rhesus 766.

The researchers called their “hitherto unrecorded virus” Zika.

For nearly 7 decades, the Zika virus would remain a virological curiosity, receiving little more attention than other obscure members of the Flaviviridae family that are transmitted by mosquitoes, such as Spondweni, Wesselsbron, and Ntaya. But now that it appears as though Zika might be causing serious harm to babies in Brazil, the World Health Organization has deemed it a “public health emergency of international concern.” It’s fast earning the reputation of the scariest virus on the planet. And the recent explosive spread of Zika around Latin America and the Caribbean serves notice, yet again, that remote places are no longer as remote as they used to be—so expect ever more exotic pathogens lurking

in nature to become commonplace.

The Uganda Virus Research Institute in Entebbe, located 11 kilometers northeast of the Zika Forest, just after the end of World War II carried out the meticulous work that isolated the pathogen du jour. The researchers included a Scottish virologist, George Dick of the National Institute for Medical Research in London, and two former members of the Rockefeller Foundation in New York City, Stuart Kitchen and Alexander Haddow. They waited until September 1952 to publish their findings, which appeared in back-to-back papers in the *Transactions of the Royal Society of Tropical Medicine and Hygiene*. In addition to experiments with more rhesus monkeys and mice, their exhaustive studies put the Zika virus into grivet and red tail monkeys, cotton rats, guinea pigs, and rabbits. The virus caused damage to neurons only in mice. Six of 99 humans they tested in four different Ugandan locales had antibodies to their



new bug, but none showed evidence of disease.

As one of the two papers drily concluded: “The absence of the recognition of a disease in humans caused by Zika virus does not necessarily mean that the disease is either rare or unimportant.”

The same journal would publish 10 of the 24 total Zika studies that appeared in the scientific literature over the next 30 years, including a 1954 paper that attempted to link the virus to an epidemic of jaundice in Nigeria. The data in this study by esteemed virologist Francis Macnamara were sketchy and the correlations weak, save for the detail that 50 of 84 people tested had antibodies against the strange agent—the first clue that it was widespread. Mice also became ill when injected with Zika-antibody-positive serum taken from one 10-year-old girl who had a temperature of 38.2°C and a headache. But she did not have jaundice.

Confused by the results, medical researcher William Bearcroft decided to take matters into his own hands—literally. As he reported in September 1956, a 34-year-old European male who had been living in Nigeria for 4.5 months—that would be Bearcroft himself—injected into his arm a suspension of Zika-infected mouse brain used in the 1954 study. Eighty-two hours later, Bearcroft had a headache and a slight temperature.

Curious about the route of viral transmission, on the 5th day after the injection—by which time his symptoms had disappeared—Bearcroft put a batch of female *A. aegypti* mosquitoes on his left forearm, and 95 of them became engorged with his blood. He did this two more times over the next few days and then put some of the mosquitoes on baby mice and ground up others, injecting them into the rodents. Nothing happened.

Bearcroft suggested that his symptoms resembled those seen in the 10-year-old girl. “Whilst no conclusions can be drawn from an experience limited to two cases, it should be noted that in those which represent the only proved examples of the human disease no evidence of jaundice appeared,” he wrote.

Nothing more appeared in the literature about Zika virus infections of humans until 1964 when David Simpson, a student of Zika co-discoverer

George Dick, reported that those first two cases likely were not Zika but its close relative, Spondweni. What’s more, Simpson, who was working in the same Entebbe lab that discovered the virus, claimed that he had evidence of the first actual human case: a 28-year-old European male—yes, David Simpson—who had been in Uganda for 2.5 months when he became ill while working with Zika strains isolated from mosquitoes.

Simpson’s symptoms were distinct from the others in one key way: he had a “diffuse pink maculopapular rash which covered the face, neck, trunk and upper arms” and that eventually spread to all four limbs, the palms of the hands, and the soles of the feet. It did not itch, he reported, but the rash lasted for 5 days. He described the disease as “mild,” and noted that there was no “crippling bone pain” as occurred with three other mosquito-borne viruses: dengue, chikungunya, and o’nyong-nyong.

When Simpson inoculated mice with his blood, they became sick and some died. He passaged blood from these mice into the brains of other mice, harvested that “material” and tested antibodies against Zika and 11 related viruses—including Spondweni—to see which stuck. He had Zika, no question. “If this was a typical infection with Zika virus it is not surprising that under normal circumstances the virus is not isolated frequently from man,” he wrote.

Nearly a decade would pass before another report of a human Zika infection appeared and, once again, it was a lab worker, this time in Mozambique with Portugal’s Institute of Hygiene and Tropical Medicine. In the 1973 paper, published in the German journal *Archiv für die gesamte Virusforschung (Archive for the Entire Virus Research)*, C.M.V. Martins described his symptoms as fever with some pain in joints, but no rash. He recovered completely after 1 week.

According to Martins and co-authors, scientists had by then isolated 312 “arboviruses”—meaning spread by arthropods like mosquitoes and ticks—82 of which caused human infections, yet all but 39 were rarely observed diseases. “Thus, the knowledge of the pathogenic potential of about half



of the arboviruses capable of causing symptomatic disease in humans has been acquired mainly from the study of laboratory infection,” they concluded. In other words, you needed lab accidents to understand disease.

Loads of countries began reporting evidence of Zika antibodies in humans and wild monkeys in the 1970s and 80s, but documented cases of people with disease remained scarce, with scattered reports of human Zika virus infections trickling in from Nigeria and Indonesia. Then nothing until 2007, when physicians on Yap Island in the Federated Republic of Micronesia noticed an outbreak of a disease that resembled mild cases of dengue but was distinct, in part because people had a rash. A report of this outbreak in 2009 for the first time earned Zika a slot in a high-profile publication, [The New England Journal of Medicine](#). As the authors noted, “No outbreaks and only 14 cases of human Zika virus disease have been previously documented.”

The paper documented 49 confirmed and 59 probable Zika cases.

But household surveys of 557 people found Zika antibodies in 74% of the islanders. The researchers estimated that some 5000 people had been infected, and that 900 of them had illness “attributable to Zika.” No one was hospitalized, and no one died. No mosquitoes, surprisingly, were found with the virus.

Odd case reports soon followed. Two U.S. scientists diagnosed in Colorado were apparently infected in Senegal, and one of them infected his wife, presumably through sex, when he returned home; they only thought to test for Zika because of a chance meeting with a grandson of Alexander Haddow, one of the researchers who discovered the virus. A

U.S. Navy research station in Cambodia detected a case in a 3-year-old boy. A 52-year-old woman in Australia was diagnosed after returning home from a holiday in Indonesia. Then in 2013, an outbreak walloped French Polynesia, with 333 confirmed cases and an estimated 19,000 suspected others. For the first time, the disease was associated with serious symptoms: mainly neurological disorders, including Guillain-Barré syndrome, which sometimes causes a temporary paralysis, and, in rare instances, is deadly. Two babies also were infected in utero or during delivery, but neither had lasting health problems.

Cases of traveler-associated Zika began to mount: A Norwegian who vacationed in Tahiti, a Canadian who went to Thailand, Japanese tourists who visited Bora Bora, an Australian who explored the Cook Islands, a German who returned from Malaysian Borneo.

The first published report of “autochthonous” cases in Brazil—meaning they were not imported—appeared in [June 2015](#). Eight patients, who all were infected a few months before and were deemed to have a “dengue-like illness,” had confirmed cases. “Although most of the patients had mild illness, clinicians and public health officials should be aware of the risk of expansion of this new emerging virus, especially given the naïve immunological status of the Brazilian population,” the authors cautioned, noting the neurological complications seen in French Polynesia.

A few months later, Brazilian clinicians started reporting an unusually high number of babies born with small heads, a telltale sign of microcephaly.

The rest is history.

## Top U.S. Intelligence Official Calls Gene Editing a WMD Threat

By Antonio Regalado

Source: <https://www.technologyreview.com/s/600774/top-us-intelligence-official-calls-gene-editing-a-wmd-threat/>

Feb 09 – **Genome editing is a weapon of mass destruction.**

That’s according to James Clapper, U.S. director of national intelligence, who on Tuesday, in the [annual worldwide threat](#)

[assessment report](#) of the U.S. intelligence community, added gene editing to a list of threats posed by “weapons of mass destruction and proliferation.”



Gene editing refers to several novel ways to alter the DNA inside living cells. The most popular method, CRISPR, has been revolutionizing scientific research, leading to



novel animals and crops, and is likely to power a new generation of gene treatments for serious diseases (see [“Everything You Need to Know about CRISPR’s Monster Year”](#)).

It is gene editing’s relative ease of use that worries the U.S. intelligence community, according to the assessment. “Given the broad distribution, low cost, and accelerated pace of development of this dual-use technology, its deliberate or unintentional misuse might lead to far-reaching economic and national security implications,” the report said.

The choice by the U.S. spy chief to call out gene editing as a potential weapon of mass destruction, or WMD, surprised some experts. It was the only biotechnology appearing in a tally of six more conventional threats, like North Korea’s suspected nuclear detonation on January 6, Syria’s undeclared chemical weapons, and new Russian cruise missiles that might violate an international treaty.

The report is an unclassified version of the “collective insights” of the Central Intelligence Agency, the National Security Agency, and half a dozen other U.S. spy and fact-gathering operations.

Although the report doesn’t mention CRISPR by name, Clapper clearly had the newest and the most versatile of the gene-editing systems in mind. The CRISPR technique’s low cost and relative ease of use—the basic ingredients can be bought online for \$60—seems to have spooked intelligence agencies.

“Research in genome editing conducted by countries with different regulatory or ethical standards than those of Western countries probably increases the risk of the creation of potentially harmful biological agents or products,” the report said.

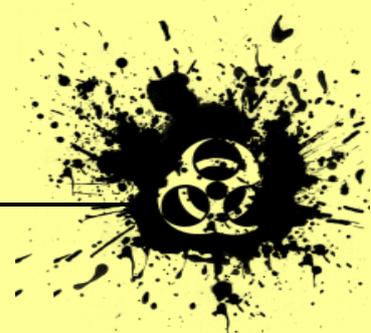
The concern is that biotechnology is a “dual use” technology—meaning normal scientific developments could also be harnessed as weapons. The report noted that new discoveries “move easily in the globalized economy, as do personnel with the scientific expertise to design and use them.”

Clapper didn’t lay out any particular bioweapons scenarios, but scientists have previously speculated about whether CRISPR could be used to make “killer mosquitoes,” plagues that wipe out staple crops, or even a virus that snips at people’s DNA.

“Biotechnology, more than any other domain, has great potential for human good, but also has the possibility to be misused,” says Daniel Gerstein, a senior policy analyst at RAND and a former undersecretary at the Department of Homeland Defense. “We are worried about people developing some sort of pathogen with robust capabilities, but we are also concerned about the chance of misutilization. We could have an accident occur with gene editing that is catastrophic, since the genome is the very essence of life.”

Piers Millet, an expert on bioweapons at the Woodrow Wilson Center in Washington, D.C., says Clapper’s singling out of gene editing on the WMD list was “a surprise,” since making a bioweapon—say, an extra-virulent form of anthrax—still requires mastery of a “wide raft of technologies.”

Development of bioweapons is banned by the Biological and Toxin Weapons Convention, a Cold War-era treaty that outlawed biological warfare programs. The U.S., China, Russia, and 172 other countries have signed it. Millet says that experts who met in Warsaw last September to



discuss the treaty felt a threat from terrorist groups was still remote, given the complexity of producing a bioweapon. Millet says the group concluded that “for the foreseeable future, such applications are only within the grasp of states.”

The intelligence assessment drew specific attention to the possibility of using CRISPR [to edit the DNA of human embryos](#) to produce genetic changes in the next generation of people—for example, to remove disease risks. It noted that fast advances in genome editing in

2015 compelled “groups of high-profile U.S. and European biologists to question unregulated editing of the human germ line (cells that are relevant for reproduction), which might create inheritable genetic changes.”

So far, [the debate over changing the next generation's genes](#) has been mostly an ethical question, and the report didn't say how such a development would be considered a WMD, although it's possible to imagine a virus designed to kill or injure people by altering their genomes.

*Antonio Regalado is the senior editor for biomedicine for MIT Technology Review. Before joining MIT Technology Review in July 2011, he lived in São Paulo, Brazil, where he wrote about science, technology, and politics in Latin America for Science and other publications. From 2000 to 2009, he was the science reporter at the Wall Street Journal and later a foreign correspondent.*

## Ebola: Mapping the outbreak

Source: <http://www.bbc.com/news/world-africa-28755033>

The Ebola outbreak in West Africa was first reported in March 2014, and rapidly became the deadliest occurrence of the disease since its discovery in 1976.

In fact, the epidemic killed five times more than all other known Ebola outbreaks combined.

More than 21 months on from the first confirmed case recorded on 23 March 2014, 11,315 people have been reported as having died from the disease in six countries; Liberia, Guinea, Sierra Leone, Nigeria, the US and Mali.

The total number of reported cases is about 28,637.

But on 13 January, 2016, the World Health Organization declared the last of the countries affected, Liberia, to be Ebola-free. The World Health Organization (WHO) admits the figures are underestimates, given the difficulty collecting the data.

There needs to be 42 days without any new cases for a country to be declared Ebola-free. The outbreaks in Nigeria and Senegal were declared officially

over by the WHO in October 2014. Sierra Leone and Guinea both had much larger outbreaks and it took a little longer. Sierra Leone was declared Ebola-free on 7 November 2015, Guinea followed in December.

Liberia has been the worst-hit, with more than 4,800 dead and 10,672 becoming infected. The WHO said that at the peak of transmission, during August and September 2014, Liberia was reporting between 300 and 400 new cases every week.

### Ebola deaths

Figures up to 13 January 2016

**11,315**

Deaths - probable, confirmed and suspected  
(Includes one in the US and six in Mali)

**4,809** Liberia

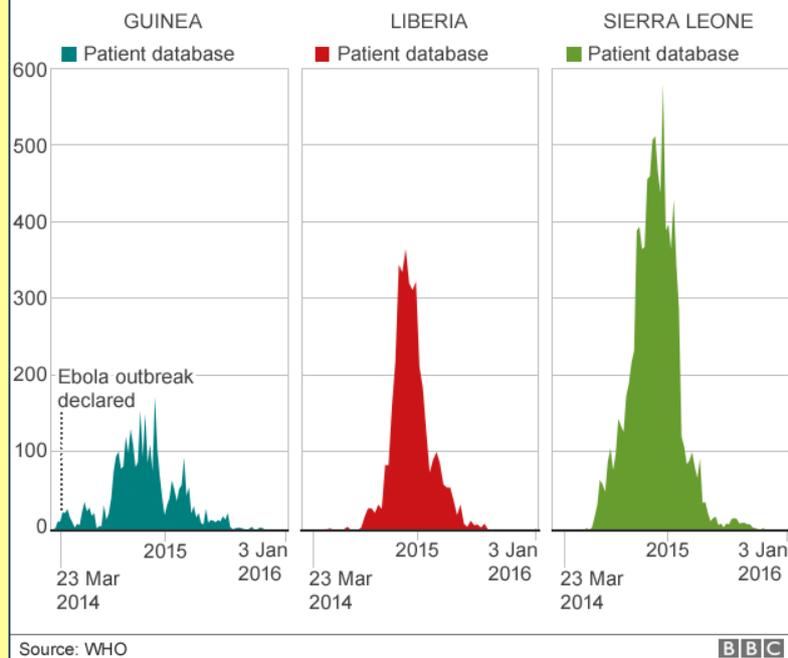
**3,955** Sierra Leone

**2,536** Guinea

**8** Nigeria

Source: WHO

### Weekly reported Ebola cases



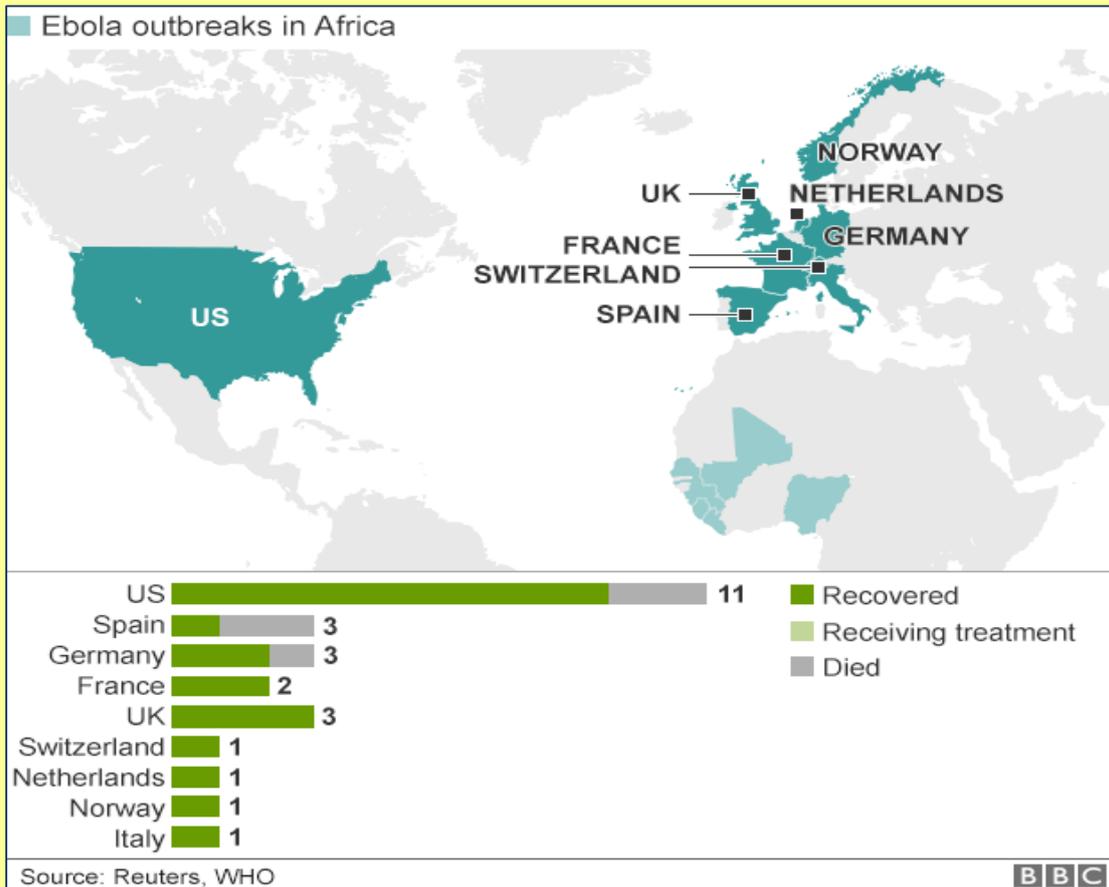
Source: WHO

BBC



**CBRNE-TERRORISM NEWSLETTER – February 2016**

The epidemic seemed to abate and the outbreak in Liberia was declared over on 9 May 2015 - only to re-emerge seven weeks later when a 17-year-old man died from the disease and more cases were reported. The same happened in September, which is why the latest declaration of Liberia being Ebola-free, while welcome, should be treated with caution, say correspondents. The WHO has warned that West Africa may see flare-ups of the virus.

**Ebola outside West Africa**

\*In all but three cases the patient was infected with Ebola while in West Africa. Infection outside Africa has been restricted to health workers in Madrid and in Dallas. DR Congo also reported a separate outbreak of an unrelated strain of Ebola.

The first case of the deadly virus diagnosed on US soil was announced on 1 October. Thomas Eric Duncan, 42, who contracted the virus in Liberia before travelling to the US, died on 8 October. He had not displayed symptoms of the disease until 24 September, five days after his arrival. Other people with whom he came into contact are being monitored for symptoms.

Two medical workers in Dallas, Texas, who treated Duncan tested positive for Ebola since his death but have both recovered. The second death on US soil was surgeon Martin Salia, from Sierra Leone. He was flown back to the United States in November and treated for Ebola at a hospital in Nebraska. But Dr Salia, who had US residency and was married to an American, died a short time later.

Spanish nurse Teresa Romero was the first person to contract the virus outside West Africa. She was part of a team of about 30 staff at the Carlos III hospital in Madrid looking after two missionaries who returned from Liberia and Sierra Leone after becoming infected.

Germany, Norway, France, Italy, Switzerland and the UK have all treated patients who contracted the virus in West Africa.



## Effects on HIV and Ebola

Source: <http://www.medicalnewstoday.com/releases/306009.php?tw>

Feb 03 – **Scientists at the Helmholtz Zentrum München discover that extracts of the medicinal plant *Cistus incanus* (Ci)**



**prevent human immunodeficiency viruses from infecting cells. Active antiviral ingredients in the extracts inhibit docking of viral proteins to cells. Antiviral activity of *Cistus* extracts also targets Ebola- and Marburg viruses.** The results were published in *Scientific Reports*\*

Virus infections are among the ten leading causes of death worldwide and represent a major global health challenge. Their control requires the continuous development of new and potent antiviral drugs/therapeutic options. Despite the availability of numerous drugs for chronic treatment of HIV/AIDS, new drugs are needed to prevent the emergence of drug resistant viral variants. Furthermore, new antiviral drugs are required for rapid treatment of acute infections by viruses like Marburg and Ebola viruses during acute viral outbreaks. A recent study by the team of Professor Ruth Brack-Werner and Dr. Stephanie Rebensburg from the Institute for Virology (VIRO) of the Helmholtz Zentrum München demonstrates that extracts of the medicinal plant attack HIV and Ebola virus particles and prevent them from multiplying in cultured cells.

### **HIV: broad activity, no resistance**

The Brack-Werner team found potent activity of Ci extracts acted against a broad spectrum of clinical HIV-1 and HIV-2 isolates. This also included a virus isolate resistant against most

available drugs. "Antiviral ingredients of Ci extracts target viral envelope proteins on infectious particles and prevent them from contacting host cells", Brack-Werner explains. No resistant viruses were detected during long-term treatment (24 weeks) with Ci extract, indicating that Ci extract attacks viruses without causing resistance. The Brack-Werner study suggests that commercial herbal extracts from plants like *Cistus incanus*\*or other plants like *Pelargonium sidoides*\*\* are promising material for the development of scientifically validated antiviral phytotherapeutics. "Since antiviral activity of Ci extracts differs from all clinically approved drugs, Ci-derived products could be an important complementation to current established drug regimens", says Brack-Werner.

### **Antiviral activity of *Cistus* extracts also targets Ebola and Marburg proteins in virus particles**

Ci extracts not only blocked different HIV isolates, but also virus particles carrying Marburg and Ebola viral envelope proteins. Analysis of the antiviral components of the extract revealed the presence of multiple antiviral ingredients that may act in combination. These results firmly establish broad antiviral activity of Ci extracts against various major human viral pathogens, including previously reported activity against influenza viruses.

### **Potential applications of Ci extract for global control of lethal virus infections**

Further development of these plant extracts may advance global treatment and control of virus infections in various ways. Thus these plant extracts may be useful starting material for the development of potent herbal agents against selected virus infections. Another application could be their development into crèmes or gels (i.e. microbicides) that prevent transmission of viruses like HIV during sexual intercourse. Finally, these plant extracts represent promising collections of natural



antiviral agents for the discovery of new antiviral molecules. Future work in the Brack-Werner lab will focus on investigating the antiviral potential of these

plant-derived products for applications in humans and detailed analysis of their active antiviral ingredients.

## Lab in a suitcase for real-time Ebola surveillance

Source: <http://www.medicalnewstoday.com/releases/306083.php?tw>

Feb 04 – A genomic surveillance system that can be packed into a suitcase and transported to the field to provide on-site Ebola virus genome sequencing, generating results within 24 hours of collecting samples, is reported in a study published in *Nature*. The paper describes the successful use of the system to conduct real-time surveillance of the recent West African epidemic in Guinea.



### MinION device

It is estimated that the Makona strain of the Ebola virus - responsible for the recent West African outbreak, which led to over 11,000 deaths - contains 16-27 mutations in each copy of its genome. Genome sequencing can be used to track this evolution and is increasingly sought after for outbreak surveillance as it can be used to inform decisions on virus control measures, so long as

the results are generated quickly enough. However, genome surveillance during the West Africa epidemic has been sporadic owing to a lack of local sequencing capacity and difficulties with transporting samples to remote sequencing facilities.

Nicholas Loman and colleagues created a genomic surveillance system that uses a DNA sequencing instrument that weighs less than 100 grams, can be transported in standard airline luggage and plugs into the USB



port of a laptop. The authors used the system to sequence and analyses 142 Ebola virus samples collected from March to October 2015. They find they can generate results in less than 24 hours, with the sequencing process taking less than an hour. The authors conclude that this shows real-time genomic surveillance is possible in resource-limited settings and can be established rapidly to monitor outbreaks.



## Why is Dallas, TX Ground Zero for Infectious Diseases like Zika?

By Seema Yasmin

Source: <http://www.emergencymgmt.com/disaster/Why-is-Dallas-ground-zero-for-infectious-diseases-like-Zika.html>



Feb 08 – The first case of Ebola diagnosed in the United States was in Dallas. The biggest outbreak of West Nile virus in the country was in Dallas. And now one of the first cases of sexually transmitted Zika virus has been reported. In Dallas.

### Why is the bull's-eye on Dallas?

City leaders boast of attracting businesses and people from all over the world. Dallas is well-connected and has a booming economy, a growing population and one of the busiest airports on the planet.

It seems multiple microbes got that memo. What makes Dallas appealing to people also attracts diseases.

Even when Texas isn't first, it's biggest. New York City may have had the first U.S. case of West Nile, but Dallas had the biggest epidemic ever in the country. In 2012, nearly 2,000 people in the Dallas area contracted the virus, accounting for nearly half of West Nile cases in the U.S. that year.

"Our successes are grand and our tragedies are big, too," said W.F. Strong, professor of communication and culture at the University of Texas at Brownsville and a self-proclaimed Texologist.

The roots of this grandeur go back to when Texas was coming of age, said Strong, and

that mentality persists today in places such as Dallas/Fort Worth International Airport. "They built that airport as big as they could," he said. "A larger-than-life kind of self-absorbed identity is part of the Texas mystique."

Every day, the airport launches and lands approximately 9,000 travelers to and from countries with outbreaks of the Zika virus. With close to 300 flights each week to Mexico alone, experts are right when they say the area is well-connected.

"It's an easy place to get to, and that's why business is growing," said Mayor Mike Rawlings. "That's the good news and the bad news."

### Poverty rate

If business is on the rise in Dallas, so is poverty. The fastest-growing group in Dallas between 2000 and 2012 was people living in poverty, and the city has the highest rate of childhood poverty among cities with 1 million or more residents. Poverty is linked to the spread of infectious diseases, especially those transmitted by mosquitoes. During outbreaks of West Nile virus, researchers found poorer parts of cities to be more heavily infested with mosquitoes.



Temperatures might be on the rise, too. A study released last year by the Risky Business Project, a nonpartisan research project, predicts that the number of days when the temperature will exceed 95 degrees Fahrenheit in Texas will more than double over the next three decades.

Scientists look at factors such as temperature, poverty and ease of travel when they predict the spread of infectious diseases. In his lab at Georgia State University, Gerardo Chowell, associate professor in the school of public health, is building a mathematical model to predict how the Zika virus will spread through Latin America, the Caribbean and Dallas.

Chowell is looking to dengue fever and chikungunya for clues about where the Zika virus will travel next. All three infections are spread by the *Aedes aegypti* mosquito, which can be found in North Texas. Chowell predicts small local outbreaks of the Zika virus in Texas and Florida based on what's been seen with dengue fever.

In 2005 and 2013, dengue caused outbreaks in Texas among people who hadn't left the country.

"Zika is a similar situation to dengue. We'll probably see small outbreaks of Zika in Texas," said Chowell. "The populations in Dallas are from everywhere, you have the mosquito and you're well-connected to many parts of the world."

News that a person in Dallas was infected with the Zika virus through sex makes Chowell's job harder. Until the Dallas case was reported, there was only one other known case of Zika being transmitted through sex. Most experts, including Chowell, still believe that the main culprit in the current outbreak is the mosquito and not unprotected sex.

But why was this sexually transmitted case discovered in Dallas where there are a handful of Zika cases instead of Brazil or Colombia where there are thousands? The question isn't "Why Dallas?" The answer is because Dallas, said Dallas County Judge Clay Jenkins.

He argues that if Zika was spreading through sex in smaller towns with fewer resources, the link to sex may never have been detected.

"It would be very rare that in a rural setting the local health department would have had the capability to do the epidemiological detective work to find the mode of transmission," Jenkins said.

### Long history

Zika isn't the first mosquito-borne infection to make its mark on Texas. The University of Texas at Brownsville sits on what used to be Fort Brown, one of the oldest Army forts on the border and the launching point for the Mexican-American war.

Strong said he's reminded of the state's long, infectious past every time he's on the campus. "When this was a fort in the 1800s, this was the sickest fort in the U.S. Army," he said. Back then, hundreds of soldiers died from malaria and Yellow Fever. An astute physician, Dr. William Gorgas, figured out that mosquitoes were spreading these diseases.

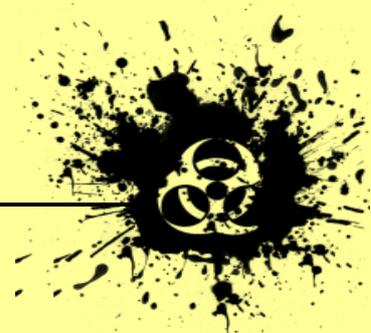
Gorgas was so successful at protecting the health of Texas troops by draining standing water that he was sent to the Panama Canal to implement the same public health measures.

"He turned out to be the savior of the Panama Canal when they couldn't complete it because the workers were too sick," said Strong. A building on the university campus and a world-famous — at least among doctors — infectious disease program in Peru are named for Gorgas.

Innovation against mosquitoes and the diseases they spread continues to take place in the state. At Tarrant County Health, public information officer Kelly Hanes said the arrival of these diseases might be a good thing. It keeps the area at the forefront of the discussion on how to manage public health emergencies. And for Hanes and his colleagues, they offer job security.

"Think about it. If you lived somewhere where novel diseases weren't happening, you might be the first budget item that the city or the state decides to cut. 'Oh we don't need 20 epidemiologists, we just need 12.' And then you're gone. But here, everybody is like 'We need more epidemiologists. We need more!'" he said.

*Dr. Seema Yasmin, a physician and former CDC epidemiologist, is a professor at the University of Texas at Dallas.*



## More on Zika virus (Brazil)

A collection of articles kindly provided by experienced Brazilian Leila Macedo, PhD em Microbiologia e Imunologia; Presidente da Associação Nacional de Biossegurança- ANBio. ([www.anbio.org.br](http://www.anbio.org.br))

[https://www.linkedin.com/pulse/zika-dengue-yellow-fever-west-nile-viral-encephalitis-david-bruce?\\_mSplash=1](https://www.linkedin.com/pulse/zika-dengue-yellow-fever-west-nile-viral-encephalitis-david-bruce?_mSplash=1)

[5/2 2:26 PM] Leila Macedo:

<http://g1.globo.com/bemestar/noticia/2016/02/fiocruz-detecta-virus-zika-com-potencial-de-infeccao-em-saliva-e-urina.html>

[7/2 7:29 PM] Leila Macedo:

<http://www.nytimes.com/2016/02/07/health/zika-virus-brazil-how-it-spread-explained.html>

[8/2 8:25 AM] Leila Macedo:

<http://blogs.discovermagazine.com/science-sushi/2016/01/31/genetically-modified-mosquitoes-didnt-start-zika-ourbreak/#.Vrhs0MvJ1Fs>

[10/2 2:11 PM] Leila Macedo:

<https://www.nexojournal.com.br/expresso/2016/02/07/O-zika-v%C3%ADrus- tamb%C3%A9m-provoca-uma-epidemia-de-desinforma%C3%A7%C3%A3o>

[10/2 4:36 PM] Leila Macedo: Today's report in MMWR

describes evidence of a link of Zika virus infection with microcephaly and fetal demise. Laboratory results indicate direct invasion of the fetal tissue by Zika virus. Read more: [http://www.cdc.gov/mmwr/volumes/65/wr/mm6506e1er.htm?s\\_cid=mm6506e1er.htm\\_w](http://www.cdc.gov/mmwr/volumes/65/wr/mm6506e1er.htm?s_cid=mm6506e1er.htm_w)

[11/2 2:26 PM] Leila Macedo: <http://saude.estadao.com.br/noticias/geral,novos-estudos-confirmam-elo-entre-zika-e-microcefalia,10000015776>

[11/2 2:55 PM] Leila Macedo: <http://www.nytimes.com/2016/02/07/health/zika-virus-brazil-how-it-spread-explained.html>

[11/2 2:57 PM] Leila Macedo: [https://www.elsevier.com/connect/zika-virus-resource-center?utm\\_source=FB&utm\\_medium=ad&utm\\_campaign=Zika&sf20636878=1](https://www.elsevier.com/connect/zika-virus-resource-center?utm_source=FB&utm_medium=ad&utm_campaign=Zika&sf20636878=1)

[11/2 3:01 PM] Leila Macedo: [https://www.mendeley.com/groups/8233231/zika-virus-research-group/?utm\\_medium=blog&utm\\_source=connect&utm\\_campaign=Zika\\_Virus](https://www.mendeley.com/groups/8233231/zika-virus-research-group/?utm_medium=blog&utm_source=connect&utm_campaign=Zika_Virus)

[11/2 3:06 PM] Leila Macedo: <http://m.oglobo.globo.com/brasil/atraso-na-entrega-de-kits-para-exames-de-dengue- chega-cinco-meses-18648764>

[11/2 3:09 PM] Leila Macedo: <http://m.oglobo.globo.com/brasil/o-que-voce-precisa-saber-sobre-zika-18559300>

[11/2 3:10 PM] Leila Macedo: <http://www.saude.rj.gov.br/imprensa-noticias/30643-boletim-epidemiologico-casos-de-microcefalia-e-gestantes-com-sindrome-exantematica-03-02.html?highlight=WyJ6aWthIl0%3D>

[11/2 3:14 PM] Leila Macedo: <http://www.saude.rj.gov.br/imprensa-noticias/30638-panorama-de-funcionamento-das-unidades-estaduais-de-saude-03-3.html>

[11/2 3:19 PM] Leila Macedo: <http://www.saude.rj.gov.br/imprensa-noticias/30619-secretaria-de-estado-de-saude-volta-aos-blocos-de-carnaval-para-alertar-a-populacao-sobre-a-importancia-do-combate-ao-mosquito-aedes-aegypti-2.html>

[11/2 4:24 PM] Leila Macedo:

[http://www.bbc.com/portuguese/videos\\_e\\_fotos/2016/02/160203\\_mosquito\\_trangenico\\_rp](http://www.bbc.com/portuguese/videos_e_fotos/2016/02/160203_mosquito_trangenico_rp)

[11/2 4:48 PM] Leila Macedo: <http://portalsaude.saude.gov.br/index.php/situacao-epidemiologica-dados-dengue>

1- MMWR, February 10, 2016 / 65(06);1–2

2- CDC, <http://www.cdc.gov/zika/transmission/index.html>

3- World Health Organization <http://who.int/mediacentre/news/statements/2016/emergency-committee-zika/en/>

4- Governo do Estado do Rio de Janeiro, Secretaria de Estado de Saúde, <http://www.saude.rj.gov.br/imprensa-noticias/30638-panorama-de-funcionamento-das-unidades-estaduais-de-saude-03-3.html>

## COUNTRIES WITH CONFIRMED ZIKA CASES



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[http://www.mprj.mp.br/documents/112957/6015661/MPRJ\\_ajuiza\\_acao\\_para\\_sanar\\_deficiencias\\_do\\_Hospital\\_So\\_uza\\_Aguiar.pdf](http://www.mprj.mp.br/documents/112957/6015661/MPRJ_ajuiza_acao_para_sanar_deficiencias_do_Hospital_So_uza_Aguiar.pdf)

6- <http://g1.globo.com/rio-de-janeiro/noticia/2015/12/veja-lista-de-unidades-de-saude-com-problemas-no-atendimento-no-rj.html>7- <http://noticias.r7.com/rio-de-janeiro/balanco-geral-rj/videos/rj-problemas-em-hospitais-publicos-continuam-no-reveillon-31122015>8- <http://agenciabrasil.ebc.com.br/geral/noticia/2015-12/pelo-menos-24-unidades-de-saude-estao-em-situacao-muito-grave-no-rio-de>

## **New study highlights effectiveness of a herpesvirus cytomegalovirus-based vaccine against Ebola virus**

Source: <http://www.medicalnewstoday.com/releases/306604.php?tw>

Feb 15 – As the latest in a series of studies, researchers at Plymouth University, National Institutes of Health and University of California, Riverside, have shown the ability of a vaccine vector based on a common herpesvirus called cytomegalovirus (CMV) expressing Ebola virus glycoprotein (GP), to provide protection against Ebola virus in the experimental rhesus macaque, non-human primate (NHP) model. Demonstration of protection in the NHP model is regarded as a critical step before translation of Ebola virus vaccines into humans and other great apes.

The study is published in the online journal from Nature publishing, *Scientific Reports*.

In addition to establishing the potential for CMV-based vaccines against Ebola virus, these results are exciting from the potential insight they give into the mechanism of protection. Herpesvirus-based vaccines can theoretically be made to produce their targeted protein (in this case, Ebola virus GP) at different times following vaccination. The current CMV vaccine was designed to make the Ebola virus GP at later times. This resulted in the surprising production of high levels of antibodies against Ebola virus with no detectable Ebola-specific T cells. This immunological shift towards antibodies has never been seen before for such primate herpesvirus-based vaccines, where responses are always associated with large T cell responses and poor to no antibodies.

"This finding was complete serendipity," says Dr Michael Jarvis who is leading the project at Plymouth University. "Although we will definitely need to explore this finding further, it suggests that we may be able to bias immunity towards either antibodies or T cells based on the time of target antigen production. This is exciting not just for Ebola, but for vaccination against other infectious as well as non-infectious diseases".

A largely untold story is the devastating effect Ebola virus is having on wild great ape populations in Africa. Although the present study administered the vaccine by direct inoculation, a CMV-based vaccine that can spread from animal to animal may be one approach to protect such inaccessible wild animal populations that are not amenable to vaccination by conventional approaches. The current study is a step forward, not only for conventional Ebola virus vaccines for use in humans, but also in the development of such 'self-disseminating vaccines' to target Ebola in great apes, and other emerging infectious diseases in their wild animal host before they fully establish themselves in humans.

## **WHO Calls for \$56 Million to Fight Zika Virus**

Source: <http://www.voanews.com/content/who-calls-for-56-million-dollars-to-fight-zika-virus-/3194441.html>

Feb 17 – The World Health Organization says it will need some \$56 million to implement its strategic response designed to contain the Zika virus, which has been linked to birth defects in newborns.

The WHO said Wednesday that its strategy focuses on mobilizing and coordinating partners, experts, and resources to help countries enhance surveillance of the Zika virus and disorders that could be linked to it.



WHO says it has tapped an emergency contingency fund to pay for Zika response until it collects the necessary funds, which will be distributed among the World Health Organization and other international partners in the fight against the virus.

## Ebola crisis provides framework for how to respond to outbreaks like Zika virus

Source: <http://www.homelandsecuritynewswire.com/dr20160219-ebola-crisis-provides-framework-for-how-to-respond-to-outbreaks-like-zika-virus>

Feb 19 – As world leaders’ grapple with containing the Zika virus, the Ebola epidemic in West Africa provides valuable lessons for how to respond to other infectious disease epidemics, according to a policy report published by researchers at Princeton University and the Wellcome Trust.

Rebuilding local health care infrastructures, improving capacity to respond more quickly to outbreaks and considering multiple perspectives across disciplines during decision-making processes are among the key recommendations the authors propose.

The report, published in *Science*, states the World Health Organization (WHO) must again become the respected global health body with a clear mandate to provide global health leadership. This can only be made possible with binding commitments from the international community alongside an ability and willingness of WHO to lead, the researchers conclude.

Princeton U says that the report is based on a recent international conference organized by Princeton — Modern Plagues: Lessons Learned from the Ebola Crisis, held in Dublin in November 2015 as the third Princeton-Fung Global Forum. The report was written by conference participants Janet Currie and Bryan Grenfell, both based at Princeton’s Woodrow Wilson School of Public and International Affairs, and Jeremy Farrar, director of the Wellcome Trust. Currie is the Henry Putnam Professor of Economics and Public Affairs and chair of the Department of Economics, and Grenfell is the Kathryn Briger and Sarah Fenton Professor of Ecology and Evolutionary Biology and Public Affairs.

“We hope that the Ebola crisis will provide the impetus to change the ways in which we prepare for and respond to epidemics,

especially as new threats like Zika virus continue to emerge,” the researchers wrote.

**The researchers’ recommendations are as follows:**

- **Strengthen local health care.** During the Ebola epidemic, workers on the ground bore the brunt of the outbreak. More than 800 health care workers were infected, and 500 workers died. Therefore, strengthening and rebuilding these local health care infrastructures is the key to containing future outbreaks. This can be done by building trust within the health care system as well as political structures.
- **Improve international response.** The first cases of Ebola were confirmed in March 2014, and yet the WHO did not declare it a public health emergency until August 2014. The WHO must be able to respond more quickly and with greater impacts. Two ways to achieve this improved response are to set up a dedicated Center for Health Emergency Preparedness and Response, and to coordinate research during the time between epidemics as well as during outbreaks.
- **Consider multiple perspectives.** The Ebola crisis shows that social structures, living environments and human behavior all influence the course of an epidemic. Therefore, moving beyond disciplinary silos is essential. One example that illustrates this importance involves the development of safe, effective and deployable vaccines. A recent Ebola vaccine in Guinea has been successful, but it could have been deployed earlier. Developing an international cooperative to support the development and licensing of vaccines is an urgent priority.
- **Act synergistically.** History shows that the best results



occur when international bodies work in collaboration with local governments and health systems with a shared agenda in mind. Providing basic health services at a community level is the key to establishing trust, improving surveillance and creating capacity to mount a rapid response.

Princeton notes that the Princeton-Fung Global Forum is a series of meetings that Princeton University hosts with the help of a gift from William Fung, a Princeton alumnus and former

trustee, and group chairman of Li & Fung. The Princeton-Fung Global Forums bring together colleagues from around the world to share views from a wide range of disciplinary and professional perspectives.

The first Princeton-Fung Global Forum, The Future of the City, took place in Shanghai in 2013. The second forum on The Future of Higher Education was held in Paris in 2014. The next forum is scheduled for spring 2017 in Berlin and will focus on cyber technology.

— Read more in Janet Currie et al., “Beyond Ebola,” *Science* 351, no. 6275 (19 Feb 2016): 815-16.



## Colistin in animals - a low resistance selection risk in Europe

Source: <http://www.thelancet.com/journals/laninf/article/PIIS1473-3099%2815%2900424-7/abstract>

Jan 14 – In November 2015, *Liu et al.* reported the finding of a transferable plasmid-mediated colistin resistance gene, *mcr-1*, in *Escherichia coli* isolates from animals, food and patients in China which is a paradigm shift in our understanding of colistin resistance. In Denmark, *mcr-1*, was detected in an *Escherichia coli* isolate from a Danish patient with septicemia and in five *E. coli* isolates from imported chicken meat out of 3,000 isolated strains tested. In the UK, the *mcr-1* gene was detected by a bioinformatics approach in 15 out of 24,000 isolates between 2014 and 2015: highlighting that similar low-incidence observations of resistance will be reported in other parts of Europe.

**Colistin use in Europe is restricted in veterinary medicine to oral use for the treatment of enteric diseases for up to 7 days, and is not allowed for prophylaxis.** The doses approved are relatively high, from 75,000 to 100,000 IU/kg body weight per day, which is expected to reduce selection pressure for resistance. In comparison, other parts of the world (including China) use colistin preventively or as a growth promoter at doses equivalent to approximately 1/4th to 1/10th of those used in Europe. A high percentage of resistant strains (>30%) had already been reported in China in pigs with diarrhoea. These were then reported to be potentially related to suboptimal dosages

Oral use of colistin undergoes virtually no systemic absorption. High concentrations are reached in the gastro-intestinal tract and feces reach steady-state levels of ca. 60 µg/g in pigs. Pharmacokinetic/pharmacodynamic modelling<sup>6</sup> showed that local (gut) bactericidal activity against bacterial strains with an MIC of 1 µg/ml will be obtained with oral doses of 2,804 IU/kg bw/day whereas bacterial eradication would be obtained at 11,679 IU/kg bw. These results show that at therapeutic doses bactericidal activity, and bacterial eradication even of mutants with MICs greater than 8µg/ml is likely to be obtained.

**In conclusion, the use of colistin in animals is a low risk for resistance selection in Europe, therefore caution should be exercised and consideration given to the conditions under which *mcr-1*-bearing bacteria appeared outside.**

