

Chemical and Biological News

NATIONAL AND INTERNATIONAL DEVELOPMENTS

Chinese Researcher claims first gene edited baby

A researcher from China claims that he was able to deliver world's first genetically edited babies --- Twin girls born in November 26, 2018, whose DNA was altered with a powerful tool capable of rewriting the very blueprint of life. This is a first of its kind case where the genes were manipulated in embryos that were then used to produce babies. Correcting the genes of an embryo alters DNA in every cell, including the eggs or sperm, of a resulting person who had no say in the matter, and those changes will be passed on to the next generation. That impedes the principle that participants in clinical research must give their informed consent. This is important because editing with Crispr technology is experimental in humans and entails risks. The technique works by making cuts in DNA that may lead to unknown effects.

Many scientists have questioned the decision to allow alteration of only one of the embryos to be used in a pregnancy attempt. Although the other (unaltered) unborn child, really has almost nothing to be gained in terms of protection against HIV and yet exposing that child to all the unknown safety risks signifies that the only motive was testing editing than avoiding the disease altogether. It was also unclear whether participants fully understood the purpose and potential risks and benefits of the programme. Although these actions have sparked a high profile debate about the ethical implications of such work on the contrary the Chinese researcher

believes that success of this project would help many lives in the foreseeable future.

<https://www.bloomberg.com/news/articles/2018-11-28/brave-new-world-of-editing-human-dna-starts-in-china-quicktake>

<https://www.apnews.com/4997bb7aa36c45449b488e19ac83e86d>

Needle laced strawberries Spark fear in Australia

The strawberry industry, worth 116 million USD in Australia, was rocked this September following nearly 200 complaints of sewing needle found in strawberries and other fruits. Numerous notable supermarkets retracted the fruit as consumers abandoned purchasing strawberries. Thus, forcing some farmers to dump fruit amid warnings of widespread bankruptcies.

On 12 November 2018, a woman named My Ut Trinh was charged with seven cases of contamination. The investigation reports state that the woman was a former supervisor at a Queensland strawberry farm and was seeking revenge over a workplace grievance. Trinh will remain behind bars until her next hearing. She faces up to 10 years in jail if convicted. Almost 230 incidents were reported nationwide affecting 68 strawberry brands.

Although this case affected the strawberry market in a big way it has also led to harsher penalties being rushed through federal parliament for those caught tempering with food. The Queensland Police Service coordinated a national investigative response with multiple government, law enforcement

and intelligence agencies before the Caboolture woman's arrest.

<https://www.abc.net.au/news/2018-11-12/strawberry-needle-contamination-woman-to-face-court/10486770>

<https://www.theguardian.com/australia-news/2018/nov/11/strawberry-needle-contamination-queensland-police-arrest-50-year-old-woman>

Crop Programme or a Covert Biological Weapons Programme

A group of scientists have been raising alarm regarding a DARPA (Defense Advanced Research Projects Agency) research programme called "Insect Allies" as the project has the potential to create Biological weapons. The project envisages to improve agriculture by genetically modifying crops on the field using insects. Generally, crops are genetically modified inside a lab to protect them from diseases, herbicides or other such threats. However, the DARPA project is envisaged to find out if genetic modification could be done on the field itself by the insects. The insects would distribute new genes to the crops by delivering a virus engineered to edit the genome of the plants using CRISPR technology. Thus, the fear of such technology falling into wrong hands that could easily unleash havoc.

<https://www.wgbh.org/news/science-and-technology/2018/10/29/critics-warn-crop-program-could-lead-to-biological-weapons>

<http://www.thedrive.com/the-war-zone/24078/darpas-virus-carrying-bugs-arent-officially-weapons-but-it-sure-sounds-like-they-could-be>

Syrian Governments Neglect Paving the Way for Biological Warfare?

Syrian governments neglect towards public health infrastructure and the failure to provide basic amenities like clean water, sanitation, waste disposal, infection control and vaccination are actually ticking bombs. Withholding of these basic amenities may seem a deliberate act of biological warfare. In the long run, such delinquency may have adverse outcomes like breakout of severe diseases or of epidemics. Assad's major aim has been to weaken the population in the areas where his government is opposed. Thus, targeting these amenities seems as a simple strategy to achieve his objective. Many incidents of arrest of engineers and maintenance staff and also reports of failure to pay the basic salary of these people has put a full stop on water treatment and sanitation facilities. Thus, giving weightage to the skepticism that maybe it is Assad government's deliberate move.

<https://foreignpolicy.com/2018/10/24/bashar-al-assad-is-waging-biological-war-by-neglect/>

Khashoggi's report on Saudi use of chemical weapons in Yemen could have led to his death

Jamal Kashoggi, a Saudi journalist and editor-in-chief of Al-Arab news channel, was murdered on 2 October 2018 at the Saudi consulate in Turkish city of Istanbul under questionable circumstances. Though many reasons have been traced back to his death, one such account claims that his death was related to the report he was preparing regarding the use Chemical Weapons during Riyadh's devastating military campaign in Yemen. Jamal Khashoggi who had been a staunch critique of the Saudi led intervention in neighbouring Yemen, that

has left almost 10,000 people dead since 2015 and sparked what UN has labelled as the "world's worst humanitarian crisis," was said to be collecting documentary evidence to substantiate his argument.

<https://english.almanar.com.lb/610480>

<https://www.alaraby.co.uk/english/news/2018/10/29/khashoggi-murdered-over-report-on-saudi-chemical-warfare-secrets>

<https://www.presstv.com/Detail/2018/10/28/578383/Khashoggi-chemical-weapons-yemen>

Russia Claims US running secret bio weapons lab in Georgia

*Robert Burn and Angela Charlton
October 05, 2018*

Russia claims that the US has been running a secret biological weapons lab in Georgia. Thus, posing a direct threat to Russia's national security. These allegations came pouring in just after, Russia's intelligence agency was named and shamed of being responsible for multiple cyber attacks including the one attempted on OPCW. Russian Defense Minister Maj Gen Igor Kirillov claimed the documents released by former Georgian State Security Minister Igor Giorgadze showed the facility (Center for Public Health Research) was fully backed by the U.S, while the Georgian ownership it has on paper was a mere camouflage.

The allegation by Russia were based largely on materials about the U.S. funded project as provided by Richard G. Lugar, Center for Public Health Research in Tbilisi, Georgia. However, the Pentagon's spokesperson, Eric Pahon, claimed otherwise and said the lab, a joint human and veterinary public health facility, was owned and operated by the Georgian National Center for Disease Control and Public Health (NCDC), not the United

States. "The mission of the Lugar Center is to contribute to protection of citizens from biological threats, promote public and animal health through infectious disease detection, epidemiological surveillance, and research for the benefit of Georgia, the Caucasus region and the global community."

https://www.nzherald.co.nz/world/news/article.cfm?c_id=2&objectid=12137233

OPCW Growing Concerns over Cyber Security

October 04, 2018

The elevating level of crimes in the cyber realm are a source of concern for international organisations. With the attempted cyber attacks on the OPCW Headquarters' network and information system, OPCW has issued a statement on ensuring and exercising due diligence in protecting networks. Additionally, the Director-General has informed OPCW Member States about these activities and the OPCW Technical Secretariat has undertaken measures to mitigate them.

<https://www.opcw.org/media-centre/news/2018/10/opcw-spokespersons-statement-cyber-security>

New US Sanctions on Russia over Chemical Weapons

November 08, 2018

Lately, US has been imposing a series of sanction on Russia, on the pretext that the later has been working against the likes of International Community. The latest sanctions of United States' on Russia is over Moscow's alleged involvement in the poisoning of former Russian intelligence officer Sergei Skripal and his daughter Yulia in the British city of Salisbury which came into effect on August 27. The State

department of US debates that Russia is in breach of the 1991 Chemical and Biological Weapons Control and Warfare Elimination Act.

Washington prohibited the supply of electronic devices and other dual-use products to Russia, but with a number of exceptions. Also, in 90 days' time the US authorities will take a call on another set of sanctions against Russia depending on whether it complies with a number of conditions set to it.

The second set of restrictions includes the curtailing the bilateral diplomatic relations or a total stop, a de-facto full ban on any US exports to Russia (except food) and Russian imports to US (including oil and oil products), prevention planes of any Russian government-controlled air carrier to land on American soil, and also barring loans for Moscow in the framework of international financial organizations.

Russia condemned this act of US by stating, "For the United States, this [statements on sanctions] has become a usual approach. Unfortunately, it shows not power, but weakness, just inability to solve real issues facing the US and real issues with the US participation on the international arena. This is distracting attention from real impotence to take steps on those issues, which are really on the agenda. Naturally, it's impossible to frighten Russia by any ultimatums."

Background

On March 04, 2018 former Russian intelligence officer and convicted British spy Sergei Skripal and his daughter Yulia were allegedly poisoned with a nerve agent, according to British investigators. Later on, London stated that this nerve agent had been developed in Russia and blamed the country for being behind the incident (based on the assumption).

Moscow refuted all accusations, saying that neither the former Soviet Union, nor Russia had any programmes for developing this agent. Specialists from the British chemical laboratory in Porton Down were unable to identify the agent's point of origin that was used in the poisoning of the Skripals.

<http://tass.com/politics/1029832>

DISARMAMENT

OPCW Director-General Provides Vision for Addressing Disarmament and Non-Proliferation Challenges at Asser Institute Training

October 01, 2018

The Director-General of the OPCW, Ambassador Fernando Arias, delivered the keynote address at the opening of the Asser Institute's Ninth Annual Training Programme on Disarmament and Non-Proliferation of Weapons of Mass Destruction (WMD), which is jointly organised with the OPCW and takes place in The Hague.

The training course, that took place from 1-5 October 2018, provided clear insights into the legal, scientific, diplomatic and geo-political issues relating to chemical weapons and other WMDs in the contemporary world.

In his keynote speech, Ambassador Arias reminded the attendees that: "Disarmament and non-proliferation are not simple issues that lend themselves to simple solutions. They require specialised knowledge and training in a variety of cross-cutting areas, both technical and non-technical in nature."

After describing the various challenges to the global norm against chemical weapons, the Director-General encouraged the future policy makers, implementers, and influencers to use this training to acquire a comprehensive overview of the different perspectives on WMD disarmament, and to

become "better contributors to multilateral action".

"For disarmament to be a success, we need leaders and innovators prepared to think outside the box in order to put weapons of mass destruction back into theirs," emphasised the Director-General.

Throughout the week, the participants acquired knowledge from leading WMD experts, including those from the OPCW who provided insights into the Organisation's achievements and challenges in the implementation of the Chemical Weapons Convention, the OPCW inspection and verification regime, the role of science in bio-chemical disarmament, and the growing threat of chemical terrorism.

Background

The T.M.C Asser Institute and the OPCW launched the Programme on Disarmament and Non-Proliferation of WMDs in 2010.

The programme has established itself as a highly regarded educational resource for advanced graduate students and early- to mid-career professionals with interests in WMD diplomacy and treaty implementation. The WMD training programme continually evolves and addresses cross-cutting aspects in high-level panels and interactive elements such as a debate and simulation exercises.

<https://www.opcw.org/media-centre/news/2018/10/opcw-director-general-provides-vision-addressing-disarmament-and-non>

OPCW Issues Fact-Finding Mission Reports on Chemical Weapons Use Allegations in Douma, Syria in 2018 and in Al-Hamadaniya and Karm Al-Tarrab in 2016

July 06, 2018

The Fact-Finding Mission (FFM) of the OPCW, issued an interim report on the

FFM's investigation to date regarding the allegations of chemical weapons use in Douma, Syria on April 07, 2018.

The FFM's activities in Douma included on-site visits to collect environmental samples, interviews with witnesses, data collection. In a neighbouring country, the FFM team gathered or received biological and environmental samples, and conducted witness interviews. The OPCW lab analysis show that no organophosphorous nerve agents or their degradation products were detected in the environmental samples or in the plasma samples taken from alleged casualties. Along with explosive residues, various chlorinated organic chemicals were found in samples from two sites, for which there is full chain of custody. Work by the team to establish the significance of these results is on-going. The FFM team will continue its work to draw final conclusions.

The Fact-Finding Mission also issued a report on 2 July 2018 addressing allegations of chemical weapons use in Al-Hamadaniya, Syria on 30 October 2016, and Karm al-Tarrab, Syria on 13 November 2016. On the basis of the information received and analysed, the prevailing narrative of the interviews, and the results of the laboratory analyses, the FFM cannot confidently determine whether or not a specific chemical was used as a weapon in the incidents that took place in the neighbourhood of Al-Hamadaniyah and in the area of Karm al-Tarrab. The FFM noted that the persons affected in the reported incidents may, in some instances, have been exposed to some type of non-persistent, irritating substance.

The FFM's reports on the allegations of chemical weapons use in Douma, Al-Hamadaniya, and Karm Al-Tarrab have been shared with States Parties to the Chemical Weapons Convention. The reports

were also transmitted to the UN Security Council through the UN Secretary-General.

Background

In response to persistent allegations of chemical weapon attacks in Syria, the OPCW Fact-Finding Mission (FFM) was set up in 2014 with an on-going mandate "to establish facts surrounding allegations of the use of toxic chemicals, reportedly chlorine, for hostile purposes in the Syrian Arab Republic".

The FFM's mandate is to determine whether chemical weapons or toxic chemicals as weapons have been used in Syria. It does not include identifying who is responsible for alleged attacks. Attribution was part of the mandate of the OPCW-UN Joint Investigative Mechanism, set up by the UN Security Council, which expired in November 2017.

The FFM has previously confirmed with a "high degree of confidence" the use of chlorine, sulfur mustard, and sarin as weapons.

The FFM is required to study available information relating to allegations of use of chemical weapons in Syria, including information provided by the Syrian Arab Republic and others. The FFM employs investigative methods to determine if chemical weapons have been used. It interviews witnesses and obtains environmental and bio-medical samples and physical evidence for analysis.

<https://www.opcw.org/media-centre/news/2018/07/opcw-issues-fact-finding-mission-reports-chemical-weapons-use-allegations>

INTERNATIONAL COOPERATION

Legal Framework on Countering Chemical Terrorism by Sahel and West Africa States

October 29, 2018

Chemical terrorism has been a prevailing source of concern across the international community. In this context, the National Authority representatives from The Hague, Netherlands came together with security and legal experts from the Sahel and West Africa in order to strengthen their capacities to address chemical terrorism in a workshop on "the role of implementing legislation of the Chemical Weapons Convention" in addressing the threats posed by the non-state actors misusing chemicals constitutes pose a serious threat to the peace and security of Africa.

In the opening remark, Mr Gabriel Aduda, Permanent Secretary, Political and Economic Affairs Office and Chairman of the National Authority on the Chemical and Biological Weapons Convention, highlighted the risk of Non-state actors misusing chemical weapons and hence posing a serious threat to the peace and Security of Africa. The OPCW Technical Secretariat gave an overview of its activities linked to countering chemical terrorism, discussed the contribution of Article VI of the CWC in preventing the possible hostile use of toxic chemicals, and outlined the national legal provisions that effectively address the threat of chemical terrorism.

The participants stressed the importance of the OPCW's role in raising awareness as well as providing technical assistance in drafting legislation, customs procedures, developing

emergency preparedness and response plans, and laboratory analysis.

<https://www.opcw.org/media-centre/news/2018/10/sahel-and-west-africa-states-formulate-legal-approaches-counterering>

OPCW Director-General Addresses International Council of Chemical Associations

October 29, 2018

The Director-General of the OPCW, H.E. Mr. Fernando Arias, addressed the annual meeting of the Board of Directors of the International Council of Chemical Associations (ICCA) about the importance of cooperation between and chemical industry for attaining the goals of the Chemical Weapons Convention. In the meeting, which took place in Amsterdam on 26 October 2018, the Director-General expressed: "Cooperation between us is vital for the fulfilment of the promise of the Convention - a world free of chemical weapons." He also highlighted challenges facing the OPCW like the "re-emergence of chemical weapons." He underscored, "The re-emergence of chemical weapons is a collective threat that can only be dealt with through collective action". The ICCA Board members expressed their continuing commitment to work together for the use of chemistry to the benefit of humankind.

<https://www.opcw.org/media-centre/news/2018/10/opcw-director-general-addresses-international-council-chemical>

OPCW Assists Guinea and Chad in Formulating Plans to Implement Chemical Weapons Convention

August 07, 2018

Guinea and Chad have taken steps towards the full implementation of the Chemical Weapons Convention (CWC) by developing their national legislations, during the 19th edition of Internship Programme for Legal Drafters and National Authority Representatives, held in The Hague from 6 - 10 August, 2018.

The Programme is directed at enhancing the understanding of the goal of the OPCW, and assisting relevant OPCW Member States in drafting national implementing legislation. This year's agenda covers a range of topics, including legal requirements under the CWC, legal issues related to national implementation, initial and annual declarations to the OPCW, and the role of national implementing legislation in preventing chemical terrorism.

Background

Since its launch in 2012, the Internship Programme has benefited 37 States Parties to the CWC. Among these, Cape Verde, Grenada, Panama, Paraguay, Uganda and Lao People's Democratic Republic have successfully enacted national legislation, while others are at various stages of the adoption process.

<https://www.opcw.org/media-centre/news/2018/08/opcw-assists-guinea-and-chad-formulating-plans-implement-chemical-weapons>