

KSG: NEWSPAPER CRUX

31ST OCTOBER 2022

Researchers have discovered that certain hardy bacteria could survive in the hostile Martian conditions for millions of years, by testing the ability of a selection of 'extremophile' microbes — which can live in harsh environments — to survive in cold, radioactive conditions similar to those on Mars. The team found that, when dried and frozen, the *Deinococcus radiodurans* microbe could survive under the surface of Mars for 280 million years.

Outbreaks of a highly pathogenic strain of avian influenza are leaving a path of destruction across Europe and North America, on a scale that has not been previously seen. Domestic bird culls once kept the virus in check, but sustained circulation in wild birds has become the norm since the early 2000s. Over the past year, transmission in wild birds has ramped up dramatically. It is possible that mutations have enabled the virus to infect more bird species than previous strains.

A study sheds further light on the risk of developing a very rare blood-clotting condition known as thrombosis with thrombocytopenia syndrome (TTS) after COVID-19 vaccination with AstraZeneca. Based on health data from five European countries and the United States, it shows a small increased risk of TTS after the first dose. The researchers stress that this syndrome is very rare, but the observed risks should be considered when planning further immunisation campaigns.

Previous studies have shown that fragments of ancient viral DNA — called endogenous retroviruses — in the genomes of mice, chickens, cats and sheep provide immunity against modern viruses that originate outside the body by blocking them from entering host cells. Now a study (Science) conducted with human cells in culture in the lab has found that the antiviral effect of endogenous retroviruses likely also exists for humans.

The work reveals the possibility of a genome defence system that has not been characterised, but could be quite extensive. Endogenous retroviruses account for about 8% of the human genome. Retroviruses introduce their RNA into a host cell, which is converted to DNA and integrated into the host's genome. The cell then makes more virus.

CLIMATE FINANCE DELIVERY PLAN PROGRESS REPORT: ADVANCING THE TEN COLLECTIVE ACTIONS

1. The Progress Report on Climate Finance Delivery Plan is published by Canada and Germany. In 2021, they co-led the process of developing a Climate Finance Delivery Plan and gave 10 collective actions for developed countries to deliver on climate finance.

2. According to the United Nations Framework Convention on Climate Change (UNFCCC), climate finance is local, national or transnational funding from public, private and alternative sources that seeks to support climate change mitigation and adaptation actions.

3. To facilitate the provision of climate finance, the UN Convention established a financial mechanism to provide financial resources to developing country Parties. The financial mechanism also serves the Kyoto Protocol and the Paris Agreement.

4. **Main funds of climate finance Green Climate Fund (GCF), set up by the UNFCCC in 2010 to help developing countries reduce their GHG emissions and adapt to the impact of climate change. Least Developed Countries Fund (LDCF) to support least developed by the United Nations** to tackle their high vulnerability to climate change and implement their national adaptation plans. UN-REDD Programme to reduce the emissions caused by deforestation and forest degradation in developing countries.

TARGET IS TO DOUBLE CRUDE STEEL OUTPUT IN 10 YEARS: PM

1. India has set a target to double the crude steel production capacity from 154 million tonnes per annum now to 300 million tonnes per annum in the next 9 to 10 years. Steel is the world's most important engineering and construction material commonly used in buildings and infrastructure; Automobiles; Equipments; Railways; Shipping; Defence; Space etc.

2. In India, the steel industry has strong forward and backward linkages leading to an output multiplier effect of nearly 1.4X on GDP and employment multiplier effect of 6.8X. Government Initiatives to Promote Steel Production National Steel Policy (NSP) of 2017 to create a technologically advanced and globally competitive steel industry that promotes economic growth.

3. Production-linked Incentive (PLI) Scheme for Specialty Steel to increase production of value added steel. Steel scrap policy - To ensure adequate availability of scrap for steel manufacturers which will reduce imports and improve competitiveness of the Indian steel sector.

4. Steel Import Monitoring System (SIMS) - This information would be useful to the Indian domestic steel industry in responding to market conditions in a dynamic manner. Top Steel Producers: China, followed by India, Japan, USA and Russia.

WORLD HEALTH ORGANISATION (WHO) HAS RELEASED THE FIRST-EVER FUNGAL PRIORITY PATHOGENS LIST (FPPL)

1. The FPPL which includes 19 fungi categorised as critical, high, and medium priority will help identify fungi which pose the greatest threat to public health. Critical group includes *Cryptococcus neoformans*, *Candida auris*, *Aspergillus fumigatus* and *Candida albicans*.

2. High group includes *Nakaseomyces glabrata* (*Candida glabrata*), *Histoplasma* spp., *eumycetoma* causative agents, *Mucorales*, *Fusarium* spp., *Candida tropicalis* and *Candida parapsilosis*. Medium group are *Scedosporium* spp., *Lomentospora prolificans*, *Coccidioides* spp., *Pichia kudriavzevii* (*Candida krusei*), *Cryptococcus gattii*, *Talaromyces marneffeii*, *Pneumocystis jirovecii* and *Paracoccidioides* spp.

3. **Fungal pathogens are a major threat to public health as: Most fungal pathogens lack rapid, sensitive and affordable diagnostics and only four classes of antifungal medicines (azoles, echinocandins, pyrimidines and polyenes) currently**

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

KSG: NEWSPAPER CRUX

31ST OCTOBER 2022

The rapid and unselective use of traditional antibiotics gives rise to the emergence of drug resistant phenotype in typhoidal and non-typhoidal *Salmonella* serovars, which has increased the difficulties in curing *Salmonella* induced foodborne illnesses (majorly typhoid or paratyphoid fever, gastroenteritis, and diarrhoea) worldwide. *Salmonella typhimurium* ST313, an invasive nontyphoidal *Salmonella* serovar, causes bloodstream infection in the malnourished and immunocompromised population of sub-Saharan Africa. Recent studies have reported the emergence of multidrug resistant (MDR) phenotype in *Salmonella typhimurium* DT104, which causes infection in humans and cattle.

Neural cells derived from patients with bipolar disorder (BD) show a difference in the way they migrate as compared to controls, finds a study. This difference may contribute in a fundamental way to brain tissue repair and assembly. The neural tube Brain development starts early during pregnancy. This starts with a single layer of cells that roll up to form a tube called the neural tube. The brain develops at one end of this neural tube. It is a process that takes up many cell divisions as well as cells migrating through large distances.

DNA tests occupy a grey area in the quest for justice, vacillating between the dangers of slipping into self-incrimination and encroachment on individual privacy and the “eminent need” to unearth the truth. They can be of help as evidence in a criminal case or in proving a claim of marital infidelity or paternity. More and more complainants are seeking DNA tests — a senior official associated with a government laboratory estimates such requests increasing by around 20% each year.

4,102 number of Bru families living in Kanchanpur and Panisagar areas of North Tripura district who have been rehabilitated in new locations under a settlement agreement, according to officials. As per the agreement signed in January 2020, 37,136 Brus of 6,959 families are eligible to get resettled.

₹1,586 crore, the amount withdrawn by foreign portfolio investors from capital markets in October, after withdrawing over ₹7,600 crore last month. With only one trading

available. The incidence and geographic range of fungal diseases are expanding worldwide due to global warming and the increase of international travel and trade.

4. During the COVID-19 pandemic, the reported incidence of invasive fungal infections increased significantly among hospitalized patients. Fungi that cause common infections become increasingly resistant to treatment. Resistance to antifungal medicines is partly driven by inappropriate antifungal use.

MNRE SEEKS COMMENT ON DRAFT NATIONAL REPOWERING POLICY FOR WIND POWER PROJECTS, 2022

1. Ministry of New and Renewable Energy (MNRE) has issued a revised draft repowering policy that lays out conditions for developers to go for repowering of their old wind turbines. Repowering means the upgradation of under-performing wind turbines to make them more efficient and ensure maximum utilisation of the wind potential available in the country.

2. Out of a total 41.66 GW installed wind energy capacity in the country, more than 25 GW of wind turbines need repowering, as per the estimate made by the National Institute of Wind Energy (NIWE).

3. Objective: Optimum utilisation of wind energy resources by maximising energy yield per sq km of the project area and utilising the latest onshore wind turbine technologies.

Key highlights Wind Repowering Committee will be appointed by the MNRE for monitoring and advisory. Indian Renewable Energy Development Agency will provide an additional interest rate rebate of 0.25% above the interest rate available to the new wind projects.

4. Wind energy offers a promising market as Hydro-energy has many ecological and funding issues whereas solar projects are affected by increasing cost of imports of solar components.

PARLIAMENTARY STANDING COMMITTEE ON INFORMATION AND TECHNOLOGY RAISES CONCERNS OVER DRAFT INDIAN TELECOMMUNICATION BILL, 2022

1. Key issues highlighted The definition of ‘telecommunication services’ under the Bill is wider than the TRAI Act which raise the question of whether TRAI will regulate these additional services. Definition under the Bill includes services such as broadcasting services, machine-to-machine communication, internal-based communication services, and AI communication services.

2. Definition of Over The Top (OTT) communication apps was not very clear. Possible health hazards when a large number of telecom towers for 5G and other services are coming up. Bill gives the administration overarching powers under the garb of national security but without adequate oversight mechanism.

3. The draft Indian Telecommunication Bill, 2022 aims to restructure the legal and regulatory framework for the telecommunications sector by repealing the three outdated legislation: Indian Telegraph Act enacted in 1885. The Indian Wireless Telegraphy Act enacted in 1933 The Telegraph Wires (Unlawful) Possession Act in 1950 The Bill caters to the longstanding demand of telecom companies to regulate Over-The-Top (‘OTT’) platforms.

4. OTT platforms, such as WhatsApp, provide competing services such as calling and messaging services without any of the costs associated with maintenance of the network infrastructure.

CENTRE NOTIFIES INFORMATION TECHNOLOGY (INTERMEDIARY GUIDELINES AND DIGITAL MEDIA ETHICS CODE) AMENDMENT RULES, 2022

1. IT Rules 2021 has been released under section 87 of IT Act, 2000 for Social-Media, Digital Media and OTT platforms. Key provisions Grievance Appellate Committees (GAC): The Central Government shall establish one or more Grievance Appellate Committees (GAC) within three months. Each GAC will consist of a chairperson and two whole time members appointed by the Central government. The GAC will hear appeals by social media users against decisions of grievance officers appointed by the

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

KSG: NEWSPAPER CRUX

31ST OCTOBER 2022

session left, there is a slowdown in the pace of equity selling this month. More than ₹6,000 crore was invested in the last four trading sessions.

Chilling details of the killings of two women in Kerala have sparked a debate about the prevalence and power of superstitious beliefs in society. As per the 2021 report of the National Crime Records Bureau (NCRB), six deaths were linked to human sacrifices, while witchcraft was the motive for 68 killings in the country. In the absence of a nationwide legislation, a few States have enacted laws to counter witchcraft and protect women from deadly 'witch hunting'.

intermediary.

2. Dispute Resolution Mechanism: Online dispute resolution mechanism, i.e. digital mode of the entire appeal process, from filing of appeal to the decision. Obligations for intermediary: Intermediaries can develop and implement "appropriate safeguards" to prevent misuse of the grievance redressal mechanism.

3. Time bound: The companies will be required to acknowledge complaints from users within 24 hours and resolve them within 15 days or 72 hours in case of an information takedown request. Concerns with IT rules Excessive government control. Can act as an effective tool to curb government criticism and dissent. Additional responsibilities on grievance officers.