Prelim Bits 12-10-2022 | UPSC Daily Current Affairs

VINCOV-19

The University of Hyderabad, CSIR-Centre for Cellular & Molecular Biology (CCMB) and the VINS Bioproducts Limited have successfully completed the phase 2 clinical trials of 'VINCOV-19'.

- 'VINCOV-19' is a viral antigen that has touted to be the country's first antidote and a cure against SARS-CoV-2 virus.
- This medicine contains **Equine polyclonal antibodies** (EpAbs) against the COVID-19 virus.
- It comprises highly purified F(ab')2 antibody fragments that have a high neutralising capacity against the SARS-CoV-2 virus.
- Since neutralising antibodies could block the internalisation of SARS-CoV-2 to lung cells, their passive administration should render maximal clinical benefits if they are applied at the early stages of the disease.

Types of Antibodies

- Animal bodies create proteins called antibodies to fight infections.
- **Monoclonal antibodies** are artificial antibodies that mimic the activity of our immune system.
- They are produced in the laboratory using identical immune cells that are clones of a specific parent cell.
- They are produced through a process of extraction of antibodies from blood or serum, and then by cloning them.
- These are highly purified and concentrated forms of antibodies that are now actively used in Covid-19 treatment.
- In contrast, **polyclonal antibodies** are made using different immune cells.
- They will have an affinity for the same antigen but different parts (epitopes) of the antigen molecule to which an antibody attaches itself.

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UN World Geospatial Information Congress

The Second UN Global Geospatial Information Management (UN-GGIM) convened the UN World Geospatial Information Congress (UNWGIC) 2022.

- The UNWGIC 2022 was organised by the United Nations Department of Economic and Social Affairs.
- It was hosted by the Department of Science & Technology, Ministry of Science and Technology of the Government of India.
- The theme of UNWGIC 2022 is 'Geo-Enabling the Global Village: No one It be left behind'.
- The UNWGIC 2022 reflects on the importance of integrated geospatial information infrastructure and knowledge services to support the implementation and monitoring of sustainable development goals.
- It will also mirror the well-being of society, address environmental and climate challenges, embrace digital transformation and technological development, and catalyze a vibrant economy.
- It focuses on building a community for human data and geography against the three pillars of sustainable development for a shared future, leaving no one behind within an inclusive and equitable global society.
- **Purpose** - It aims to provide high-quality and trustworthy geospatial data to support global and national policy agendas.
- It also stresses international cooperation and coordination in the development of human data linked to geography.

Geospatial Technology

- Geospatial technology can be used to create intelligent maps and models which help to collect geographically referenced data.
- Decisions based on the value and importance of resources, most of which are limited, can become easy through geospatial technology.
- Intelligent maps and models can be created using geospatial technology.
- It can be used to reveal spatial patterns hidden in large amounts of data that are complex to access collectively through mapping.

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RBI on Unhedged Foreign Currency Exposure

The Reserve Bank of India has tweaked some of its guidelines for banks to manage their Unhedged Foreign Currency Exposure (UFCE).

> *The RBI said that the unhedged foreign currency exposure of any entity is an area of concern for both the individual entity and the entire financial system.*

- The RBI's new instructions shall come into force from January 1, 2023.

- The RBI has said that the banks would be required to assess the unhedged foreign currency exposures of all counterparties to whom they have an exposure in any currency, going ahead.
- Also, the banks will have to ascertain the foreign currency exposure (FCE) of all entities at least annually, the RBI said.
- If the potential loss from an entity's UFCE is more than 75%, banks would need to provide for a 25 percentage point increase in total risk weight, over and above the applicable risk weight to that entity.
- This is because the exposures falling in same bucket will have equal increase in their riskiness irrespective of the original risk weight applicable.
- **Significance** - The RBI's move will **prevent or reduce losses to the banks** from UFCE of the entities due to increased volatility in the forex markets.

- The entities which do not hedge their foreign currency exposure can incur significant losses during a period of heightened volatility in foreign exchange rates.
- These losses may reduce their capacity to service the loans taken from the banking system and increase their probability of default thereby affecting the health of the banking system, the RBI said.

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Preventing Ocular Trauma

The National Human Rights Commission (NHRC) recently issued an advisory to the Union and State Governments to prevent and minimise the impact of ocular trauma.

- **Ocular Trauma** is a broad term used to describe a physical or chemical wound to the eye or eye socket.
- The major contributors of eye injury are
    1. Road accidents (34%),
    2. Sports (29%) and
    3. Occupations (21%).

Ocular Trauma causes about 5% of irreversible or permanent blindness but eye injury is a preventable cause of blindness.

- **Advisory** - The NHRC issued the advisory to ensure appropriate standardized treatment and rehabilitation of victims of ocular trauma.
- The Advisory has focused on five keys areas for action
    1. Creation of a Database on Ocular Trauma,
    2. Prevention and Minimization of Ocular Trauma,
    3. Treatment of Ocular Trauma,
    4. Development of Integrated ophthalmic trauma units and
    5. Rehabilitation of Victims of Ocular Trauma.
- **Suggestions in the Advisory -** To identify the industries having high potential of ocular trauma and other industrial accidents.

- Make it mandatory for such units with 50 workers or more to have accident cover of ₹15 lakh for each worker.
- Set up an online portal to record details of each case of ocular trauma.
- Examine the existing laws for mandatory use of eye safety gear worn by workers involved in hazardous activities.
- Impose ban on sale of fire-crackers that have the potential to cause eye trauma.
- Impose ban on sale of bows, arrows, pellet guns and toys that have sharp edges.
- Make it mandatory that all chemicals for domestic use should be packed in safe containers marked with caution symbols.
- Introduce technology to reduction in ocular trauma cases due to road accidents.
- Set-up integrated ophthalmic trauma care units across the entire country.

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Global Lighthouse Network

The World Economic Forum announced the addition of 11 factories and industrial sites, including three from India, to its Global Lighthouse Network.

> *Fourth Industrial Revolution technologies are artificial intelligence, 3D-printing and big data analytics.*

- The Global Lighthouse Network (GLN) was pioneered by the **World Economic Forum** in 2018.
- The need for the Global Lighthouse Network was identified under the Forum's Platform for Shaping the Future of Advanced Manufacturing and Value Chains.
- The GLN is a **community of manufacturers** that are applying Fourth Industrial Revolution (4IR) technologies to increase efficiency and productivity, along with environmental stewardship.
- The GLN is a platform to develop, replicate and scale innovations, creating opportunities for cross-company learning and collaboration.
- It sets new benchmarks for the global manufacturing community.
- Under this network, so far, 103 manufacturing Lighthouses have been identified from different industry sectors, including 6 Sustainability Lighthouses.
- **Lighthouses** - They are industries which use Industry 4.0 or 4IR technologies to transform factories, value chains and business models, for compelling financial and operational returns.
- The 3 recently added Lighthouses from India are
    1. Cipla - Indore facility,
    2. Dr Reddy's Laboratories - Hyderabad facility and
    3. The Mondelez – Sri City facility.
- **Sustainability Lighthouse** - This is an additional designation given to the lighthouse members who have an outstanding environmental footprint reductions.
- Unilever's Dapada facility in India is a 'Sustainabilty Lighthouse'.

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