



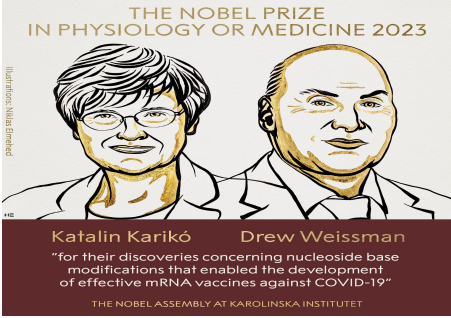
3 October 2023

National and International News

Note: 1st and 2nd October National and International Current Affairs Articles or Topics will be distributed across upcoming Addapedia (03 Oct 2023 to 07 Oct 2023) files in a gradual manner.



“Happy Studying.”

- Adda247 Team

<p><b>Medicine Nobel 2023</b></p> 	<p><b>Context</b></p> <p>The <b>2023 Nobel Prize in Physiology or Medicine</b> has been awarded to Hungarian biochemist <b>Katalin Karikó</b> and American physician-scientist <b>Drew Weissman</b>.</p> <p><b>Key points</b></p> <ul style="list-style-type: none"> <li>• They had been feted for “discoveries concerning nucleoside base modification that enabled the <b>development of effective mRNA vaccines</b> against COVID-19”.</li> <li>• Medicine Nobel is awarded annually by the <b>Swedish Karolinska Institute</b></li> <li>• mRNA stands for <b>messenger RNA</b></li> <li>• Messenger is so called because <b>it carries instructions from the DNA to a cell’s cytoplasm</b>, where those messages are ‘read’ to produce various proteins.</li> </ul>
<p><b>mRNA Vaccines</b></p>	<p><b>About mRNA Vaccine</b></p> <ul style="list-style-type: none"> <li>• The vaccine was first demonstrated in 1994</li> <li>• <b>They are also called as messenger RNA</b></li> <li>• mRNA vaccines work by <b>introducing a piece of mRNA directly into the cell</b></li> <li>• By using this mRNA, cells can produce the viral protein.</li> <li>• As part of a normal immune response, the immune system recognizes that the protein is foreign and <b>produces specialized proteins called antibodies</b>.</li> <li>• Once produced, <b>antibodies remain in the body, even after the body has rid itself of the pathogen</b>, so that the immune system can quickly respond if exposed again.</li> </ul>



## Daily Current Affairs Encyclopedia

	<p><b>Limitation - they need to be stored at extremely low temperatures</b> as they get destroyed when exposed to the outside environment.</p>
<p><b>Astra BVR Missile</b></p> 	<p><b>Context</b> The Indian Air Force (IAF) has placed two contracts with Bharat Dynamics Ltd. (BDL) for the indigenous Astra Beyond Visual Range (BVR) Missile.</p> <p><b>About ASTRA missile</b></p> <ul style="list-style-type: none"> <li>● It is an <b>indigenous</b> Beyond Visual Range (BVR) <b>air-to-air missile</b>.</li> <li>● It is to engage and destroy highly maneuvering <b>supersonic aerial targets</b>.</li> <li>● It is designed and developed by <b>Defence Research and Development Laboratory (DRDL)</b>, Research Centre Imarat (RCI) and other laboratories of DRDO.</li> <li>● The indigenous Astra BVR firing from home grown Tejas fighters is a major step towards '<b>Aatmanirbhar Bharat</b>'.</li> </ul>
<p><b>LCA Tejas Fighter Aircraft</b></p>	<p><b>About Aircraft</b></p> <ul style="list-style-type: none"> <li>● It is the lightest, smallest and tailless <b>multi-role supersonic fighter aircraft</b> in its class.</li> <li>● This aircraft is designed to carry a range of <b>air-to-air, air-to-surface</b>.</li> <li>● It is a precision-guided weapon.</li> <li>● It has the <b>air-to-air refueling capability</b>.</li> <li>● The maximum payload capacity of Tejas is <b>4000 kg</b>.</li> <li>● Speed: <b>Mach 1.8</b>.</li> </ul>
<p><b>Nobel Prizes</b></p> 	<p><b>About Prize</b></p> <ul style="list-style-type: none"> <li>● The Nobel Prizes were created by <b>Alfred Nobel</b>, a 19th-century businessman and chemist from Sweden.</li> <li>● It is awarded to those who have done the best work for fraternity between nations.</li> <li>● The prizes are given in <b>physics, chemistry, literature, peace</b> and <b>medicine</b>.</li> <li>● The first Nobel Prizes were presented in <b>1901</b>, five years after his death.</li> <li>● In 1968, a sixth prize was created, for <b>economics</b>, by Sweden's central bank.</li> <li>● To date, 60 women have won Nobel Prizes, including 25 in the scientific categories.</li> </ul> <p><b>Did you know?</b></p>



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- Only four women have won the Nobel Prize in physics and just two have won the economics prize.

**MGNREGA Scheme****Context**

The **MGNREGA card holders from West Bengal** are protesting in New Delhi for withholding MGNREGA funds.

**About MGNREGA**

- It is an act passed in 2005 that guarantees the "**right to work**" to rural citizens of India.
- It was introduced through the act of **Mahatma Gandhi National Rural Employment Guarantee Act 2005**.
- It works under the **ministry of Rural development**
- **Aim of the scheme is to provide employment for unskilled workers.**
- Under this, the government assures a **minimum of 100 days of unskilled manual work** to an adult member of an eligible rural household.
- The main objective of the MGNREGA is to provide employment to rural citizens and improve their economic conditions.
- It is a **Centrally-Sponsored Scheme** i.e. the scheme is jointly funded by the Central government and the State governments.

**Indian cities in world's top 10 nations with slowest traffic****Context**

Bhiwandi in Maharashtra, Kolkata, and Bihar's Arrah are among the **top 10 slowest cities** in the world, according to a study conducted by the National Bureau of Economic Research (NBER).

**About NBER**

- The **National Bureau of Economic Research (NBER)** is a **private, non-profit, non-partisan research organization**.
- Its aim is to promote a greater understanding of how the economy works.
- It disseminates **economic research** among public policymakers, business professionals, and the academic community.

**WHO approves use of malaria vaccine with adjuvant tech****Context**

Recently The **R21/Matrix-M malaria vaccine** was recommended for use by the **World Health Organization (WHO)**

**About R21/Matrix-M**



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Did you know?

Ghana became the first African country which approved the vaccine.

- It was developed by the **University of Oxford** and the **Serum Institute of India**,
- It is the first vaccine to achieve more than **75% effectiveness**. (The goal set by the World Health Organisation).
- It has been approved for use in children aged 5-36 months, the age group at the highest risk of death from malaria.
- Matrix-M, a **saponin-based adjuvant** developed by Novavax, is used in the vaccine to stimulate a stronger and longer-lasting immune response.
- Antigen presentation in regional lymph nodes is improved by the Matrix-M adjuvant, which also encourages the entrance of antigen-presenting cells at the injection site.

WHO record on Cholera

Context

According to the World Health Organization (WHO)'s weekly epidemiological record, certain key findings were noted about Cholera

Key findings

- World reported twice as many cholera cases in 2022 as in 2021
- Most cholera cases continue to be reported from Africa and Asia, with Europe accounting for a few "imported cases"
- Between 2021 and 2022, Africa reported 29% fewer cases and 52% fewer deaths.

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