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COVID Kavach Elisa

- National Institute of Virology (NIV) at Pune has developed and validated the indigenous IgG ELISA test "COVID KAVACH ELISA" for antibody detection for COVID-19.
- The robust indigenous IgG ELISA test for antibody will play a critical role in surveillance of proportion of population exposed to SARS-CoV-2 Coronavirus infection.
- The test kit has the advantage of testing 90 samples together in a single run of 2.5 hours, so that healthcare professionals can proceed quickly with necessary next steps.
- This kit was validated at two sites in Mumbai and has high sensitivity and accuracy .
- The ELISA-based testing is easily possible even at district level.
- Developed in a month's time, the testing kit would help to study the presence of anti-SARS-CoV-2 IgG antibodies in the Indian population.
- It is cost-effective, sensitive, rapid, and a large number of samples can be tested at any level of clinical setting, public health centers and hospitals.
- There are also minimal bio-safety and bio-security requirements for the test as compared to the real-time RT-PCR test.

Click here to know more about RT-PCR test

ELISA Test

- The enzyme-linked immunosorbent assay (ELISA) is a commonly used analytical biochemistry assay, first described by Engvall and Perlmann in 1971.
- ELISA has been used as a diagnostic tool in medicine, plant pathology, and biotechnology, as well as a quality control check in various industries.
- In the simplest form of an ELISA, antigens from the sample are attached to a surface.
- Then, a matching antibody is applied over the surface so it can bind to the antigen.

- This antibody is linked to an enzyme, and in the final step, a substance containing the enzyme's substrate is added.
- The subsequent reaction produces a detectable signal, most commonly a color change.
- Because the ELISA can be performed to evaluate either the presence of antigen or the presence of antibody in a sample, it is a useful tool for determining serum antibody concentrations such as with the HIV test or West Nile virus.
- It has also found applications in the food industry in detecting potential food allergens, such as milk, peanuts, walnuts, almonds, and eggs and as serological blood test for coeliac disease.
- ELISA test is also used to detect various kind of diseases, such as dengue, malaria, Chagas disease, Johne's disease, and others such as

1. Detection of Mycobacterium antibodies in tuberculosis
2. Detection of rotavirus in feces
3. Detection of hepatitis B markers in serum
4. Detection of hepatitis C markers in serum
5. Detection of enterotoxin of E. coli in feces
6. Detection of HIV antibodies in blood samples

National Institute of Virology

- The National Institute of Virology, Pune is an Indian virology research institute, and one of the translational science cells part of Indian Council of Medical Research (ICMR).
- It was previously known as 'Virus Research Center', came into existence in 1952 under the joint auspices of the ICMR and the Rockefeller Foundation, as a part of the global programme of investigations on the arthropod-borne group of viruses.
- It has been designated as a WHO H5 reference laboratory for SE Asia region.
- In view of its expanded scope and activities, the VRC was re-designated as the National Institute of Virology (NIV) in 1978.
- The NIV is identified today as the WHO Collaborating Center for arboviruses reference and hemorrhagic fever reference and research.
- NIV is also the National Monitoring Centre for Influenza, Japanese encephalitis, Rota, Measles, Hepatitis and Coronavirus.
- The NIV's competent scientific team successfully isolated the SARS-CoV-2 virus from laboratory confirmed patients in India.
- This in turn has paved the way for development of indigenous diagnostics for SARS-CoV-2.

Sohari Khovar Painting

- Recently, Jharkhand's Sohrai Khovar painting and Telangana's Telia Rumal have been given the Geographical Indication (GI) tag.
- The Sohrai Khovar painting is a traditional and ritualistic mural art.
- A mural is any piece of artwork painted or applied directly on a wall, ceiling or other permanent surfaces.
- It is being practiced by local tribal women during local harvest and marriage seasons using local, naturally available soils of different colors in the area of Hazaribagh district of Jharkhand.
- Style features a profusion of lines, dots, animal figures and plants, often representing religious iconography i.e.visual image and symbols.
- It has been painted on the walls of important public places in Jharkhand, such as the Birsa Munda Airport in Ranchi.



Telia Rumal Handloom

- Telia Rumal cloth involves intricate handmade work with cotton loom displaying a variety of designs and motifs in three particular colors such as red, black and white.
- It is an art of Ikat tradition using natural vegetable dyes.
- Ikkat is a dyeing technique used to pattern textiles.
- Telia Rumal can only be created using the traditional handloom process and not by any other mechanical means as otherwise, the very quality of the Rumal would be lost.
- Telia Rumals were worn as a veil by princesses at the erstwhile court of the Nizam of Hyderabad, and as a turban cloth by Arabs in the Middle East.

- In Earlier times the fabric was exported to Persian Gulf, Middle East, Aden, East Africa, Singapore and Burma.



Geographical Indication Status

- GI is an indication used to identify goods having special characteristics originating from a definite geographical territory.
- The Geographical Indications of Goods (Registration and Protection) Act, 1999 seeks to provide for the registration and better protection of geographical indications relating to goods in India.
- The Act is administered by the Controller General of Patents, Designs and Trademarks- who is the Registrar of Geographical Indications.
- The Geographical Indications Registry is located at Chennai.
- The registration of a geographical indication is valid for a period of 10 years.
- It can be renewed from time to time for a further period of 10 years each.
- It is also a part of the World Trade Organization’s Trade-Related Aspects of Intellectual Property Rights (TRIPS).

WHO

- World Health Organization (WHO) is a specialized agency of the United Nations responsible for international public health.
- The WHO Constitution, which establishes the agency's governing structure and principles, states its main objective as ensuring "the attainment by all peoples of the highest possible level of health.
- It is headquartered in Geneva, Switzerland, with six semi-autonomous regional offices and 150 field offices worldwide.
- The WHO was established in 7 April 1948, which is commemorated as World

Health Day.

- The WHO's broad mandate includes advocating for universal healthcare, monitoring public health risks, coordinating responses to health emergencies, and promoting human health and well being.
- It provides technical assistance to countries, sets international health standards and guidelines, and collects data on global health issues through the World Health Survey.
- Its flagship publication, the World Health Report, provides expert assessments of global health topics and health statistics on all nations.
- The WHO also serves as a forum for summits and discussions on health issues.
- The WHA, composed of representatives from all 194 member states, serves as the agency's supreme decision-making body.
- It also elects and advises an Executive Board made up of 34 health specialists.
- The WHA convenes annually and is responsible for selecting the Director-General, setting goals and priorities, and approving the WHO's budget and activities.
- The current Director-General is Tedros Adhanom, former Health Minister and Foreign Minister of Ethiopia, who began his five-year term on 1 July 2017.
- India is set to take over the Chair of the Executive Board of the World Health Organization after its annual meeting later this month.
- India will take over the leadership role in the WHO at a time the world is riven by the coronavirus pandemic and is angry at China’s incompetence or worse.

Etalin Hydropower Project

- Etalin Hydropower Project is based on the river Dibang, it is also known as Dibang Valley project.
- Dibang is a tributary of the Brahmaputra river which flows through the states of Arunachal Pradesh and Assam.
- It envisages construction of two dams over the tributaries of Dibang: Dir and Tangon.
- The Project falls under the “richest bio-geographical province of the Himalayan zone” and would be located at the junction of the Palaearctic, Indo-Chinese and Indo-Malayan bio-geographic regions.
- The Project is in accordance with the Government’s push to establish prior user rights on rivers that originate in China and an effort to fast-track projects in the north-east.
- It is expected to be one of the biggest hydropower projects in India in terms

of installed capacity.
- A total of 18 villages consisting of 285 families are expected to be affected by the proposed project.
- It would entail felling 2,80,677 trees and threatens the existence of globally-endangered mammal species.

- The Forest Advisory Committee, the apex body of the Environment Ministry tasked with deciding whether forest land can be diverted for industrial projects, recently it has once again deferred its decision on a controversial hydropower project in Arunachal Pradesh.
- According to the decision the 3097 MW Etalin Hydropower project, in the State's Dibang Valley, has been delayed for over six years.
- This is because it required diverting 1165 hectares of forest in a region of rich biodiversity.

Recommendations on Dibang valley project by FAC

- In 2015, the FAC had ruled that the Environment Impact Assessment commissioned by the power company had not properly accounted for the environmental impact of the project.
- It recommended that an "internationally credible" institute conduct studies over multiple seasons to record the region's ecological constitution.
- It had also recommended that the National Tiger Conservation Authority be consulted, because tigers had been sighted in the region.
- In 2019, the FAC reviewed the progress of the environment appraisal and said neither of its recommendations had been fully complied with, though a wildlife assessment was done by the Wildlife Institute of India, Dehradun (an autonomous institute funded by the Environment Ministry)

Global Nutrition Report 2020

- Global Nutrition Report is the world's leading independent assessment of the state of global nutrition.
- The Global Nutrition Report was conceived following the first Nutrition for Growth Initiative Summit (N4G) in 2013.
- It is a multi-stakeholder initiative, consisting of a Stakeholder Group, Independent Expert Group and Report Secretariat (WHO or FAO is not involved).
- The first report was published in 2014.
- It acts as a report card on the world's nutrition globally, regionally, and country by country and on efforts to improve it.
- The Global Nutrition Report 2020 stated that India is among 88 countries that are likely to miss global nutrition targets by 2025.

- It also identified the country as one with the highest rates of domestic inequalities in malnutrition.
- The report emphasises on the link between malnutrition and different forms of inequity, such as those based on geographic location, age, gender, ethnicity, education and wealth in all its forms.
- Inequities in food and health systems increase inequalities in nutrition outcomes that in turn can lead to more inequity, perpetuating a vicious cycle.
- Coming at a time the world is battling Covid-19, which has exposed different forms of socio-economic inequities, the report calls for promoting equity to address malnutrition.

Global Nutrition Targets

- In 2012, the World Health Assembly (the decision-making body of the World Health Organization) identified six nutrition targets to be met by 2025.
- These are:

1. Reduce stunting by 40% in children under 5.
2. Reduce the prevalence of anemia by 50% among women in the age group of 19-49 years.
3. Ensure 30% reduction in low-birth weight.
4. Ensure no increase in childhood overweight.
5. Increase the rate of exclusive breastfeeding in the first six months up to at least 50%
6. Reduce and maintain childhood wasting to less than 5%.

- **India's Status on Global Nutrition Targets -** India will miss targets for all four nutritional indicators for which there is data available, i.e.

1. Stunting among under-5 children,
2. Anemia among women of reproductive age,
3. Childhood overweight and
4. Exclusive breastfeeding.
5. Stunting and wasting among children

- **Data -** 37.9% of children under 5 years are stunted and 20.8% are wasted, compared to the Asia average of 22.7% and 9.4% respectively.
- Rate of overweight and obesity continues to rise, affecting almost a fifth of the adults, at 21.6% of women and 17.8% of men.
- Between 2000 and 2016, rates of underweight have decreased from 66.0% to 58.1% for boys and 54.2% to 50.1% in girls.
- However, this is still high compared to the average of 35.6% for boys and 31.8% for girls in Asia.
- **Inequity -** India is identified as among the three worst countries, along with

Nigeria and Indonesia, for steep within-country disparities in stunting, where the levels varied four-fold across communities.

- For example, stunting level in Uttar Pradesh is over 40% and their rate among individuals in the lowest income group is more than double those in the highest income group at 22.0% and 50.7%, respectively.
- In addition, stunting prevalence is 10.1% higher in rural areas compared to urban areas.
- There are nearly double as many obese adult females than there are males (5.1% compared to 2.7%).
- One in two women of reproductive age is anemic.

Malnutrition

- Malnutrition refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients.
- The term malnutrition covers two broad groups of conditions.
- One is 'undernutrition'—which includes stunting (low height for age), wasting (low weight for height), underweight (low weight for age) and micronutrient deficiencies or insufficiencies (a lack of important vitamins and minerals).
- The other is overweight, obesity and diet-related non-communicable diseases (such as heart disease, stroke, diabetes and cancer).
- In April 2016, the United Nations General Assembly adopted a resolution proclaiming the UN Decade of Action on Nutrition from 2016 to 2025.
- The Sustainable Development Goal (SD Goal 2: Zero hunger) aims to end all forms of hunger and malnutrition by 2030, making sure all people – especially children – have access to sufficient and nutritious food all year round.

Source: The Hindu, NDTV

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