

# **The Hindu**

## **States**

### **IISc scientists report miniproteins that can fight COVID-19 (Page no. 5) (GS Paper 3, Science and Technology)**

The scientists at Indian Institute of Science (IISc) have reported a new class of artificial peptides or miniproteins (molecules), which they hope will fight COVID-19 by rendering viruses inactive.

While blocking the entry of certain viruses into the cells, they will also clump the virus particles together to reduce the infection levels.

While the trials on hamsters have shown good results, the researchers are planning to bring out antiviral drugs that can hopefully fight COVID-19 and also test for applications in the field of oncology further.

Typically, a drug molecule binds to one protein and in most cases, they stay attached for some time, and then dissociate. These miniproteins which are helical, hairpin-shaped peptides, are each capable of pairing up with another of its kind, forming what is known as a dimer.

These bundles have two identical faces bound by high affinity. It is extremely difficult to denature them and when they bind to the target, they also dimerise these targets. This allows one to develop a completely new mechanism of the drugs.

## **Science and Technology**

### **Monkeypox virus mutates at a higher rate (Page no. 10) (GS Paper 3, Science and Technology)**

According to World Health Organization (WHO), as of June 1, 2022 over 550 lab-confirmed monkeypox cases have been reported from 30 countries.

These countries are predominantly in Europe and North America, which are not endemic for monkeypox virus.

With 190 cases as on May 30, the outbreak in the U.K. is the largest so far, with Spain (132 cases) and Portugal (132 cases) being the other countries with a large number of monkeypox cases.

The WHO once again stressed that the large number of cases detected in more than two dozen countries within a short time interval suggests that there “may have been undetected transmission for some time”.

The cases have predominantly been reported among men who have sex with men presenting with symptoms at sexual health clinics.

The two rave parties in Belgium and Portugal have turned out to be super-spreader events. In a statement released on May 31, 2022 the European Union underlined the link between these parties and cases.

However, cases have been reported in people with no epidemiological link to the rave parties, travel history to countries in Africa or even contact with other people with infection.

### **India's role in global health diplomacy is at stake (Page no. 10) (GS Paper 3, Science and Technology)**

Without India, a discussion on monopolies and how they impact the availability, supply, and access of medicines, vaccines, and other essential medical products rarely happens.

The country — a key manufacturer and actor in global supply chains — plays a pivotal role in international negotiations at the World Health Assembly and the World Trade Organization.

India did this early in the pandemic. Government boldly endorsed a “public interest” standard — by submitting to the World Trade Organisation (WTO) with South Africa a waiver of monopolies based on a combination of patents, control over clinical trial data, and trade secrets on vaccines, therapeutics, and diagnostics to open up manufacturing of much-needed tests, treatments, and preventive tools in the COVID-19 pandemic across the world.

This proposal is known as the ‘Waiver’. It called for specific provisions of the agreement on trade-related aspects of intellectual property rights (TRIPS) to be waived temporarily by WTO members.

## **FAQ**

### **Why are FPIs dumping Indian stocks? (Page no. 11) (GS Paper 3, Indian Economy)**

Foreign portfolio investors (FPIs) have been on a selling spree in India. May figures of about ₹44,000 crore formed the highest monthly quantum of sell-off since March 2020 when India announced a nationwide lockdown.

Last month was also the eighth on the trot that FPIs had sold net of their assets — i.e., sold more than they had purchased.

Their selling actions have triggered a significant decline in benchmark indices resulting in a drop in market capitalisation of companies.

Foreign portfolio investors are those that invest funds in markets outside of their home turf. Their investments typically include equities, bonds and mutual funds.

They are generally not active shareholders and do not exert any control over the companies whose shares they hold.

The passive nature of their investment also allows them to enter or exit a stock at will and with ease.

Promise of attractive returns on the back of economic growth draws investors including FPIs into a country's markets. For example, as per data from the National Securities Depositories Ltd. (NSDL), FPIs brought in about ₹3,682 crore in 2002. This grew to ₹1.79 lakh crore in 2010.

This correlates with the concurrent expansion of economic output in that period, despite the 2008 global financial crisis which saw FPI sell-offs in that time-frame in the country. The year 2017 saw FPI inflows exceed ₹2 lakh crore.

Likewise, FPIs withdrew ₹1.18 lakh crore in March 2020 alone — the month when India announced a nationwide lockdown, triggering concerns around economic growth. In tandem, benchmark stock index Sensex fell from 42,270 in February 2020 to 25,630 in March 2020.

### **Are fears of stagflation impacting markets? (Page no 11)**

#### **(GS Paper 3, Indian Economy)**

Most economists typically focus on the three key macroeconomic gauges to assess the health of an economy.

Economic output measured by gross domestic product, the level of unemployment and thirdly inflation or the pace at which the prices of goods and services are rising in the economy.

The challenge for policymakers, especially central banks, is to ensure optimum conditions whereby output grows at a healthy pace, helping businesses in the economy to create jobs at a steady pace and thus keeping unemployment low, and most crucially having all of this happen in an atmosphere when prices remain relatively stable.

However, in the real world, more often than not, high economic growth invariably spurs faster inflation, which is why many central banks have a specific mandate of ensuring that the pace of price gains does not exceed a specified target level or range.

The most difficult and messy problem for policymakers is when inflation runs high even as economic output either stagnates or, worse, shrinks.

The slowdown in economic activity, in turn, leads businesses to shed jobs and the resultant situation is termed as 'stagflation'.

## **Profile**

### **The cartel and its allies that keep oil on the boil (Page 12)**

#### **(GS Paper 3, Energy)**

OPEC Plus countries, an alliance between the Organization of the Petroleum Exporting Countries and other major oil producers, are in the limelight as global oil prices soared above \$120 a barrel last week as supplies failed to keep up with rising demand.

The price of oil is expected to remain elevated for some time to come after the European Union decided last week to cut down oil imports from Russia by 90% by the end of this year and block European insurers from selling cover to tankers carrying Russian oil.

The move is expected to worsen the present oil supply crunch as non-Russian oil producers may not be able to compensate for the lost Russian supplies and meet the EU's demand for oil within a short span of time.

Under pressure from major oil importers, OPEC Plus last week agreed to raise production by 6,48,000 barrels a day in July and August, a jump of about 50% over the monthly increase set last year under a deal.

OPEC Plus countries, which control more than 50% of the world's crude supplies, had joined hands to cut down oil production by 10 million barrels a day in 2020.

The decision was taken amid falling oil prices as demand for oil fell drastically due to COVID-19 lockdowns across the world.

It is feared that as the global economy gets back on its feet, the failure of OPEC Plus countries to increase output quickly enough to pre-pandemic levels could cause oil prices to stay high.

## **Sports**

### **Swiatek brushes aside Gauff, clinches second title at Roland-Garros (Page no. 14)**

Iga Swiatek cruised to her second French Open title by dominating teenager Coco Gauff in the final, as the World No. 1 claimed her 35th successive victory.

The 21-year-old Pole stormed to a 6-1, 6-3 win in only 68 minutes, equaling Venus Williams' record for the longest winning run by a woman in the 21st century.

Swiatek celebrated her sixth straight title this year in the players' box.