

# Ishiba dissolves Japan's lower house; may hold polls on 27th

TOKYO, Oct 9 (AP)

PRIME Minister Shigeru Ishiba dissolved Japan's lower house of Parliament on Wednesday to set up an October 27 early election and seek the voters' mandate for his 9-day-old Government.

Ishiba took office last week as Fumio Kishida resigned after three years leading the governing Liberal Democratic Party as it was dogged by corruption scandals.

With the early election, Ishiba is seeking to secure his governing party a house majority while he is still fresh and before the congratulatory

mood fades. The move has been criticised as prioritising an election rather than policies and for allowing little debate. But Japan's Opposition has remained too fractured to push the governing party out of power.

Ishiba announced his plans for an election even before he won the party leadership vote and became Prime Minister. His Cabinet planned later on Wednesday to formally announce the election date and the start of campaigning next Tuesday.

Ishiba and his Cabinet will

stay in office until they win the election and are reappointed.

The Speaker of the House, Fukushima Nukaga, announced the dissolution of the lower, more powerful of the two parliamentary chambers at a plenary session. All 465 lawmakers stood up, chanted "banzai" and rushed out of the Assembly room.

Official campaigning begins next Tuesday.

"We will act fairly and squarely in order to win the people's endorsement for the current administration," Ishiba told reporters.



# Chemistry Nobel awarded to trio for work with proteins

## Demis Hassabis And John Jumper's AI Model Predicts Structure Of Proteins; David Baker Used Software To Invent New Protein

Claire Moses, Cade Metz and  
Teddy Rosenbluth

The Nobel Prize in chemistry was awarded Wednesday to three scientists for discoveries that show the potential of advanced technology, including artificial intelligence, to predict the shape of proteins, life's chemical tools, and to invent new ones.

### Who are the winners?

The laureates are: Demis Hassabis and John Jumper of Google DeepMind, who used AI to predict the structure of millions of proteins; and David Baker at the University of Washington, who used computer software to invent a new protein.

### Why they won the prize?

The impact of the work of this year's laureates is "truly huge," Johan Aqvist, a member of the Nobel Committee for Chemistry, said on Wednesday. "In order to understand how proteins work, you need to know what they look like, and that's what this year's laureates have done."

Wednesday's prize was also the second this week to involve AI, highlighting the technology's growing significance in scientific research.

Hassabis and Jumper, the committee said, have used their AI model, AlphaFold2, to calculate the structure of all human proteins. The researchers "also predicted the structure of virtually all the 200 million proteins that researchers have so far discovered when mapping Earth's organisms," the committee said.

Hassabis and Jumper were part of a team at Google DeepMind, the company's central AI lab, that developed a technology called AlphaFold. This AI technology can rapidly and reliably predict the physical shape of proteins and enzymes — the microscopic mechanisms that drive the behaviour of viruses, bacteria, the human body and all other living things.

Biochemists have used the technology to speed the discovery of medicines, and it could also lead to new biological tools such as enzymes that efficiently break down plastic bottles and convert them into materials that are easily reused and recycled.

Proteins begin as strings of chemical compounds, before



WINNERS: (From L) David Baker, 62; John Jumper, 39; Demis Hassabis, 48

twisting and folding into three-dimensional shapes that define what they can and cannot do. Before the arrival of AlphaFold, scientists would spend months or even decades trying to pinpoint the precise shape of individual proteins. AlphaFold could do the job in a few hours or even a few minutes.

Baker "opened up a completely new world of protein structures that we had never seen before," Aqvist said.

In 2003, the committee pointed out, Baker "succeeded in designing a new protein that was unlike any other protein," which it said was "something that can only be described as an extraordinary development." His research group, the

**Hassabis and Jumper's AI model, AlphaFold2, is used by biochemists to speed the discovery of medicines. Baker's proteins have been the basis of potential medical treatments, such as an antiviral nasal spray for Covid-19**

committee said, "has produced one imaginative protein creation after another, including proteins that can be used as pharmaceuticals, vaccines, nanomaterials and tiny sensors."

Baker's proteins have been the basis of several potential medical treatments, such as an antiviral nasal spray for Covid-19 and a medication for celiac disease. He has also co-founded 20 biotechnology companies.

### Who are the laureates?

Hassabis was born in London, where his parents ran a toy store. As a teenager, he was the second-highest ranked under-14 chess player in the world and began designing video games professionally before attending college. After completing a computer science degree at the University of Cam-

bridge, he founded his own video game company and then returned to academia for a doctorate in neuroscience. Hassabis, along with a fellow academic and a childhood friend, founded an AI startup that they called DeepMind in 2010. About four years later, Google acquired it for \$650 million.

Jumper was born in the US. After finishing an undergraduate degree at Vanderbilt University and a master's degree at the University of Cambridge, he completed a doctorate in theoretical chemistry at the University of Chicago. He joined DeepMind as a researcher in 2017 after Google had acquired the lab. Alongside Hassabis and others, he soon began work on what became AlphaFold.

Baker, a Seattle native, earned his undergraduate degree from Harvard University in 1984 and later earned a biochemistry doctorate from the University of California, Berkeley in 1989. Currently at the University of Washington, he serves as the head of the Institute for Protein Design and is a professor of biochemistry.

### What did the laureates say about receiving the prize?

When the committee informed the laureates Wednesday, Baker was sleeping. "I answered the phone, and I heard the announcement, and my wife began screaming very loudly so I couldn't really hear very well," he told reporters. He said "he turned down 100 calls" while he was on the phone with the Nobel committee.

Jumper took a video of himself sharing the news with colleague over a video call. They hugged and cheered in little squares on his computer screen. "Glad you guys are all caught up now," he said.

In an interview after the prize was announced, Hassabis said the news hadn't "really sunk in." "I had a whole day of normal work ahead of me but I guess those plans will have to change now." NYT NEWS SERVICE

# GRSE delivers INS Nirdeshak to Navy

KOLKATA, Oct 9 (IANS)

GARDEN Reach Shipbuilders and Engineers (GRSE) Ltd delivered INS Nirdeshak, the second in a series of four Survey Vessels (Large) being built by it, to the Indian Navy on Tuesday.

This is the 110th warship to be delivered by the defence shipyard to Indian maritime forces. INS Nirdeshak was launched by Sarbani Dasgupta, wife of Vice Admiral Biswajit Dasgupta, IN (Retd), the then Flag Officer Commanding-in-Chief, Eastern Naval Command, on May 26, 2022.

This delivery comes 10 months after the first ship of the series, INS Sandhayak, was delivered to the Indian Navy on December 4, 2023. These are the largest survey vessels for the Indian Navy to be built in India.

The Protocol of delivery and acceptance was signed between R K Dash, Director (Finance), GRSE and Commanding Officer of the vessel, Capt Ajay Chauhan, in the presence of Rear Admiral Ravnish Seth, CSO (Tech) Eastern Naval Command, Subrato Ghosh, DIG, ICG (Retd), Director (Personnel) and other Senior officials of GRSE and Indian Navy.

# Israeli defence min says attack on Iran would be 'lethal', 'surprising'

**Gallant Says They Won't Understand What Happened & How It Happened**

Israeli defence minister Yoav Gallant said Wednesday that an Israeli strike on Iran in response to its recent missile attack would be "lethal, precise and surprising." Describing Iran's Oct 1 missile attack as a failure, he said: "Whoever attacks us will be hurt and will pay a price. Our attack will be deadly, precise and above all surprising, they will not understand what happened and how it happened, they will see the results."

## Ground Battles In Lebanon

Hezbollah militants, meanwhile, fought ground battles with Israeli forces in southern Lebanon on Wednesday and lobbied more rockets at northern Israeli towns. Israel's emergency services said two people were killed when a Hezbollah strike hit the northern city of Kiryat Shmona. Hezbollah said its fighters had pushed back advancing Israeli forces in clashes along the length of the border, including in a village where Israeli troops had been filmed hoisting an Israeli flag.

## 1/4th of Lebanon Under Alert

A quarter of Lebanon's territory — mostly the southern areas abutting Israel, but also parts of the Hezbollah-dominated Bekaa Valley and along the Syrian border — is now under Israeli military evacuation wa-



Activists on Wednesday briefly pasted a photo of a bloodied mother and child in Gaza over Picasso's 1901 work 'Motherhood' at a London gallery, calling for an arms embargo on Israel. The National Gallery said two people had been arrested and that no damage had been carried out. A social media video posted by the group showed one protester shouting 'Free, free Palestine' as he was frogmarched out of the room and detained by security

rnings, according to the UN human rights commissioner. The Israeli military repeated its directive to residents of southern Lebanon to move north, saying that its forces were continuing "to attack Hezbollah sites".

## Iran Foreign Minister In Saudi As Gallant Postpones US Trip

As the fighting continued, Iran's foreign minister Abbas Araghchi was in Saudi Arabia as part of a diplomatic tour aimed at preventing further military escalation in the region. But a much anticipated meeting Wednesday between Gallant, and US defence minister Lloyd Austin was postponed amid tensions between the countries' leaders. Saudi Arabia and Iran have a long history of bitter rivalry but reached a new accord in March 2023.

## Israel Strike in Damascus

Two Israeli officials confirmed that Israel had struck near the Iranian embassy in Syria's capital. The strike in Damascus was an attempt to assassinate a high-ranking Hezbollah official involved in weapons smuggling, according to the two Israeli officials. Israel fired three missiles from the area of the Golan Heights, targeting a residential building, Syria's defence ministry said. The building was in the Mezzeh district of Damascus, a highly fortified neighbourhood that houses embassies and security structures. The ministry's statement said 7 people had been killed. It was not clear if the targeted official was among the dead, but the Iranian embassy said no Iranian citizens had been killed or wounded in the strikes. AGENCIES

**Biden & Netanyahu speak for first time in months**

David E Sanger

For the first time in two months, US Prez Biden and Israel PM Benjamin Netanyahu spoke on Wednesday in a phone conversation that was expected to focus on Israel's plans to retaliate against Iran for a missile attack. But it also carried the weight of the worst relationship between the US and Israel in years.

The conversation on a secure line, which also included V-P Kamala Harris, began shortly after 10.30am, the Israeli news media reported. The White House confirmed the conversation had taken place and promised a description of it soon.

Recent history, though, suggests that Biden's advisers were unlikely to offer details of the conversation, particularly on whether Netanyahu would comply with Biden's demand to avoid striking Iran's nuclear sites and energy facilities.

The call came at a moment when US national security officials believe West Asia is on a knife's edge. They have told Biden that after the missile attack by Iran on Oct 1, Iran's leader, Ayatollah Ali Khamenei, is not looking to enter a broader war.

But US officials believe that if Israel reacts to the strikes by going after Iran's most sensitive sites, the result could be an uncontrolled escalation. That is why Biden has been so public

in his warnings to Netanyahu. Yet time after time in the past year, the Israeli PM has largely ignored the American president, betting that Biden did not have the political latitude to cut off arms or aid to Jerusalem.

White House officials, worried after they were blindsided by a series of Israeli attacks on Hezbollah in Lebanon, demanded the conversation on Wednesday and insisted that it take place before Israel conducted a counterattack. Defence secretary Lloyd Austin was reported to be "angry beyond words," one administration official said, because the absence of clear advance notice about the attacks in Lebanon put the lives of Americans in West Asia at risk.

The lack of communication between the US and Israel, two countries that have described themselves as the closest of allies since Israel's creation in 1948, reflected the deeper breach in the relationship. Biden has been widely reported over the past year to have emerged from conversations with Netanyahu uttering a string of epithets about the Israeli PM.

For his part, Netanyahu believes Biden's constant efforts to reach a ceasefire in Gaza, and more recently in Lebanon, would have squandered Israel's best chance in decades to deal major blows to Hamas and Hezbollah, according to US officials. NYT NEWS SERVICE

...LITTLE COUPLE' AFTER A GUEST ON... INTERVIEW GOES...

ANNE HATHAWAY INTERVIEW GOES...

# Govt clears project to build 2 N-subs, deal to buy 31 Predator drones

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**New Delhi:** Govt on Wednesday cleared the mega indigenous project to build two nuclear-powered attack submarines as well as the deal to acquire 31 weaponised MQ-9B Predator drones from the US, collectively worth around Rs 68,000 crore, as part of the long-term plan to counter China's aggressive and expansionist tactics in the region, sources told **TOI**.

The PM-led cabinet committee on security approved the long-pending Rs 40,000 crore 'Project-77' to build two nuclear-powered attack submarines (called SSNs in naval parlance), which will be armed with conventional missiles, torpedoes & other weapons, at the ship-building centre at Visakhapatnam, sources said.

## OTHER DECISIONS

- **Cabinet okays construction of 2,280km of roads in border areas of Rajasthan & Punjab** with investment of ₹4,406cr. Project aims at improving connectivity in these areas and with NH network
- **Govt okays ₹17,082cr for continuation of supply of fortified rice** under various govt welfare schemes, including Pradhan Mantri Garib Kalyan Anna Yojana, for the next four years

The CCS also gave the green light to Rs 28,000 crore (\$3.3 billion) acquisition of 31 MQ-9B drones — 15 'Sea Guardians' earmarked for the Navy and 8 'Sky Guardians' each for the Army and IAF

► **Hellfire missiles, P 25**

# Asia's largest imaging telescope MACE inaugurated in Ladakh

MUMBAI, Oct 8 (PTI)

THE Major Atmospheric Cherenkov Experiment (MACE) observatory, the largest imaging Cherenkov telescope in Asia built by the Bhabha Atomic Research Centre (BARC), has been inaugurated at Hanle in Ladakh, giving a boost to scientific research.

Located at an altitude of 4,300 metres, it is also the highest of its kind telescope in the world, a statement said.

The telescope, inaugurated by Ajit Kumar Mohanty, secretary, Department of Atomic Energy (DAE), four days ago has been indigenously-built by Mumbai-based BARC with support from Electronics Corporation of India Ltd (ECIL) and other Indian industry partners. The inauguration of MACE observatory was a part of the platinum jubilee year celebrations of the DAE.

"MACE observatory was inaugurated by Dr Ajit Kumar Mohanty, DAE secretary and chairman of the Atomic Energy Commission, at Hanle, Ladakh," the statement said.



# INDIA LOSES A RATAN

## The Visionary Who Took India Inc Global And The Tatas From A \$4Bn To An Over \$100Bn Group Passes Away At 86

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**Mumbai:** Ratan Naval Tata, whose long stewardship saw the Tata Group transform into a global powerhouse, passed away at Breach Candy Hospital around 11pm on Wednesday. The 86-year-old was admitted for dehydration issues on Monday.

Tata's passing marks the end of an extraordinary corporate journey, one that not only reshaped the Tata Group but also set new benchmarks for Indian industry on the global stage. Under his stewardship, the group's revenue surged from \$4 billion in

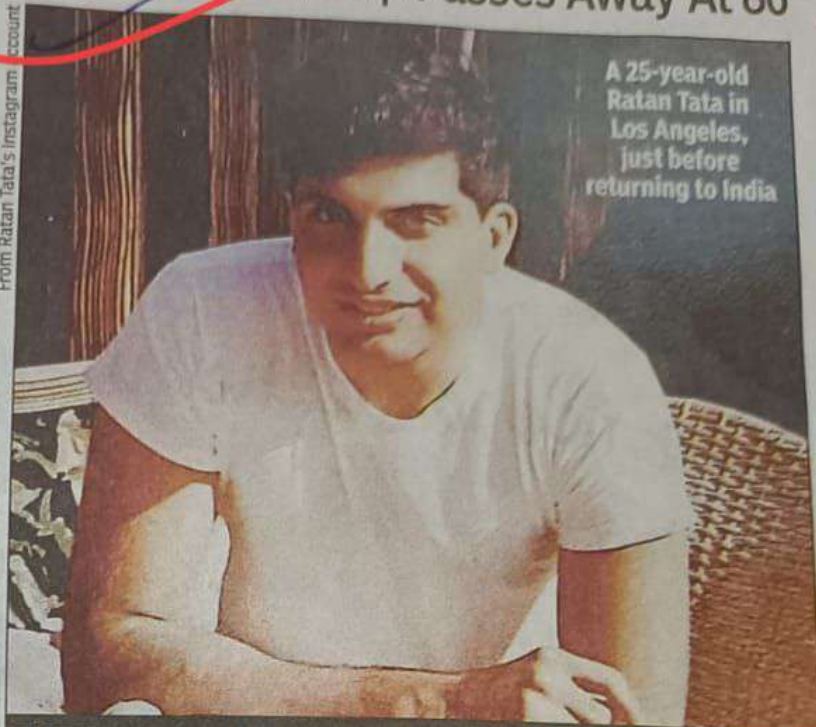
### TOI TRIBUTE

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1991 to over \$100 billion by 2012, when he retired, making it the first Indian conglomerate to achieve such a milestone.

Born to Sooni and Naval Tata during British rule in Mumbai (then Bombay), Ratan Tata grew up in Tata Palace — now the India HQ of Deutsche Bank — in Fort. A teetotaler and a non-smoker, he was a bachelor who came close to marrying thrice but remained single throughout his life. He is survived by two brothers, Jimmy and Noel, and their families, along with his stepmother, Simone Tata.

Educated at three prestigious institutions including *Campion School and Cathedral and John Connon School in South Mumbai, and Bishop Cotton in Shimla, Tata shared classrooms with several notable figures like music maestro Zubin Mehta and business magnates Ashok Birla and Rahul Bajaj, Duke owner Vinshaw Pandole and Cipla's Yusuf Hamied.*



A 25-year-old Ratan Tata in Los Angeles, just before returning to India

RATAN NAVAL TATA | Dec 28, 1937 — Oct 9, 2024

### PM: Visionary leader, compassionate soul

PM Modi said he was "extremely pained" by Tata's death. "Ratan Tata Ji was a visionary business leader, a compassionate soul and an extraordinary human being. He provided stable leadership to one of India's oldest and most prestigious business houses. At the same time, his contribution went far beyond the boardroom..." he posted on X.

He went on to get a Bachelor of Architecture degree from Cornell University, initially starting as an engineering student at his father's insistence. He shifted to architecture after two years and briefly worked with Jones and Emmons in Los Angeles, turning down a job offer from IBM. In 1962, he joined as an assistant in Tata Industries, rising to the top after 29 years to beco-

### His work will touch generations: Chandra

For the Tata Group, Mr Tata was more than a chairperson. To me, he was a mentor, guide and friend," Tata Sons chairman N Chandrasekaran said. "Tata Group under his stewardship expanded its global footprint while always remaining true to its moral compass... From education to healthcare, his initiatives have left a deep mark that will benefit generations to come."

me Tata Sons chairman.

His tenure was marked by a concerted effort to remove the old guard of satraps and to position Tata Sons as the nerve centre for strategic direction across the group. It also saw Tata Sons tighten its grip over group companies, requiring them to pay royalties for using the Tata brand.

► Shunned limelight, P 22