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समाचार पत्रों के चयनित अंश
Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

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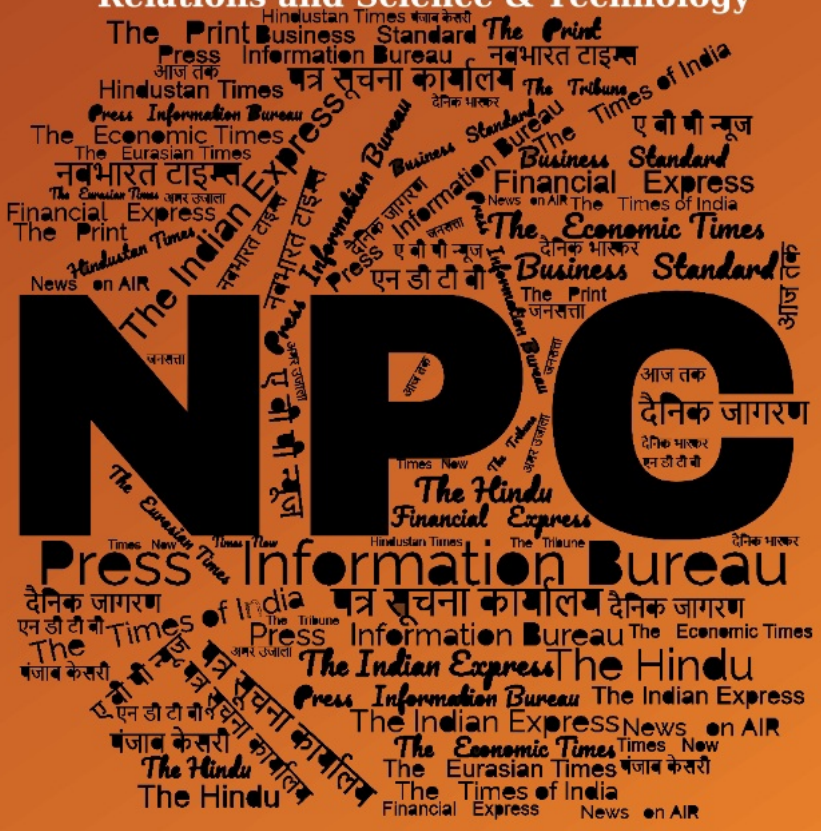

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DRDO News

Wed, 06 Nov 2024

भारतीय सेना को मिल गई स्वदेशी ASMI पिस्टल, दुश्मन पर कहर बनकर टूटेगा

देश की 'आत्मनिर्भर भारत' पहल को बढ़ावा देते हुए, भारतीय सेना ने नॉर्दर्न कमांड में 550 'अस्मि' मशीन पिस्टल शामिल की हैं. इस हथियार को भारतीय सेना के कर्नल प्रसाद बंसोड़ ने रक्षा अनुसंधान एवं विकास संगठन **(DRDO)** के सहयोग से विकसित किया है. इसका निर्माण हैदराबाद की लोकेश मशीन कंपनी कर रही है.

दरअसल भारतीय सेना ने अपने जवानों को और भी हाईटेक बनाने के लिए एक बड़ा कदम उठाया है. सेना ने 550 'अस्मी' मशीन पिस्टल को अपनी नॉर्दर्न कमांड में शामिल कर लिया है. यह पिस्टल पूरी तरह से स्वदेशी है, जो आत्मनिर्भर भारत की दिशा में एक महत्वपूर्ण कदम है.

कॉम्पैक्ट और विश्वसनीय हथियार

'अस्मि' मशीन पिस्टल एक मजबूत, कॉम्पैक्ट और विश्वसनीय हथियार है, जिसे नजदीकी लड़ाई और विशेष अभियानों के लिए डिजाइन किया गया है. इसका अनोखा सेमी-बुलपप डिजाइन पिस्टल और सबमशीन गन दोनों के रूप में सिंगल-हैंड चलाया जा सकता है. इस 100 प्रतिशत मेड-इन-इंडिया हथियार का शामिल होना देश को रक्षा मैन्युफैक्चरिंग में आत्मनिर्भरता की ओर ले जाने के लिए आत्मनिर्भर भारत के प्रति भारतीय सेना की अटूट प्रतिबद्धता को दर्शाता है.

अस्मि पिस्टल की खासियत

आतंकवादियों के खिलाफ ऑपरेशन के लिए इस तरह के छोटे मशीन पिस्टल की बहुत जरूरत होती है. यह 100 मीटर तक सटीक निशाना लगा सकती है. इसकी एक मैगजीन में 33 गोलियां आती है. इसके ऊपर टेलिस्कोप, लेजर बीम, बाइनोक्यूलर आसानी से लगाया जा सकता है, जिससे ऑपरेशन में बड़ी आसानी होती है. खास बात यह है कि इस मशीन पिस्टल के लोडिंग स्विच दोनों तरफ है यानी लेफ्ट हैंडर हो या राइट हैंडर इस पिस्टल को चलाना दोनों के लिए आसान है.

आतंकियों के खिलाफ ऑपरेशन

इसके अलावा पिस्टल की बट को फोल्ड कर सकते हैं, जिससे इसका साइज छोटा बड़ा किया जा सकता है. इसे आसानी से छिपाकर भी ले जाया जा सकता है और एक पिस्टल के तौर पर इस्तेमाल किया जा सकता है. इतना ही नहीं रायफल की तरह इसे कंधे पर टिकाकर फायर भी किया जा सकता है. नॉर्दर्न कमांड में अर्बन एरिया में आतंकियों के खिलाफ ऑपरेशन को अंजाम दिया जाता है उसके लिए ये एक बेस्ट वेपन है.

https://www.tv9hindi.com/india/indian-army-gets-indigenous-asmi-pistol-developed-by-colonel-prasad-bansod-with-drdo-2927715.html

THE ECONOMIC TIMES

Tue, 05 Nov 2024

Army inducts 550 made in India 'Asmi' machine pistols into Northern Command

In a significant boost to the nation's Atmanirbharta initiative, the Indian Army has inducted 550 made-in-India 'Asmi' machine pistols into Northern Command.

The weapon has been made by the Indian Army in collaboration with the **Defence Research and Development Organisation (DRDO).**

ADG PI- Indian Army said in a post on X, "In a significant boost to the nation's #Atmanirbharta initiative #,IndianArmy inducted 550 'Asmi' machine pistols into #NorthernCommand. The weapon which has been developed by Colonel Prasad Bansod of the #IndianArmy, in collaboration with #DRDO is being manufactured indigenously by Lokesh Machine #Hyderabad."

— adgpi (@adgpi)

"The 'Asmi' machine pistol is a robust, compact and reliable weapon designed for close-quarter battles and specialised operations. Its unique semi-bullpup design allows for single-handed operation both as a pistol and submachine gun," read the post.

"This 100% Made-in-India weapon's induction demonstrates the unwavering commitment of #IndianArmy towards #AtmanirbharBharat to propel the Nation towards self-sufficiency in defence manufacturing," they added. Atmanirbhar Bharat Abhiyaan or self-reliant India campaign is the vision of new India envisaged by Prime Minister Narendra Modi. The aim is to make the country and its citizens independent and self-reliant in all senses.

https://economictimes.indiatimes.com/news/defence/army-inducts-550-made-in-india-asmi-machine-pistols-into-northern-command/articleshow/114983818.cms

Defence News

Defence Strategic: National/International

Press Information Bureau
Government of India

Ministry of Defence

Tue, 05 Nov 2024

ADG (Retd) VD Chafekar, formerly of Indian Coast Guard, appointed as Executive Director of ReCAAP ISC, Singapore from April 01, 2025 till March 31, 2028

Additional Director General (Retd) VD Chafekar, formerly of the Indian Coast Guard, has been appointed as the seventh Executive Director of Regional Cooperation Agreement on Combating

Piracy and Armed Robbery against Ships in Asia Information Sharing Centre (ReCAAP ISC) in Singapore. He was appointed as the Executive Director by the Governing Council of ReCAAP ISC for the period from April 01, 2025 till March 31, 2028. His selection underscores India's steadfast commitment to fostering regional maritime security and cooperation, aligning with the vision for a safer & more secure Indo-Pacific region.

Established in 2006, the ReCAAP ISC is the first regional government-to-government agreement to promote and enhance cooperation against piracy and armed robbery at sea in Asia. It has been instrumental in facilitating information sharing, capacity building, and collaborative efforts to address maritime security challenges across the region. As a key contracting party to ReCAAP ISC, India has continually supported and contributed to the organisation’s mission, leveraging its maritime experience and resources to reinforce safety & security in Asian waters.

https://pib.gov.in/PressReleasePage.aspx?PRID=2070983

Press Information Bureau
Government of India

Ministry of Defence

Tue, 05 Nov 2024

Third Edition Of ‘MAHASAGAR’

The third edition of the high-level virtual interaction MAHASAGAR was conducted by the Indian Navy on 05 Nov 24, during which Admiral Dinesh Kumar Tripathi, Chief of the Naval Staff interacted with Heads of Navies/ Maritime Agencies and Senior Leadership from Indian Ocean Region littorals viz., Bangladesh, Comoros, Kenya, Madagascar, Maldives, Mauritius, Mozambique, Seychelles, Sri Lanka and Tanzania.

The interaction’s theme was ‘Training Cooperation to Mitigate Common Maritime Security Challenges in IOR’, which highlights the present and necessary imperatives for Training Corporation towards mitigation of common maritime challenges in the Indian Ocean Region.

MAHASAGAR which stands for vast ocean in Hindi, is the Indian Navy’s flagship outreach for high-level virtual interaction between Maritime Heads for Active Security And Growth for All in the Region. The initiative, started by the Indian Navy, is conducted bi-annually and has garnered wide acceptance among the participating nations ever since its inception in 2023.

During the current edition, the principals candidly dwelled on the imperatives of quality training and opportunities for training collaboration between IOR littorals towards developing requisite capacities and skilled manpower to tackle Common Maritime Security Challenges in the IOR.

https://pib.gov.in/PressReleasePage.aspx?PRID=2070981

Press Information Bureau
Government of India

Ministry of Defence

Tue, 05 Nov 2024

Keel Laying Of First And Second Ngopv (YARD 3037 & 3038)

Keel Laying ceremony of Yard 3037 and 3038, the 1st & 2nd Next Generation Offshore Patrol Vessels (NGOPV) (ex-GRSE) was held at M/s Garden Reach Shipbuilders & Engineers Ltd, Kolkata on 05 Nov 24. The ceremony was presided by the Hon'ble Governor of West Bengal Dr. CV Ananda Bose with senior officials from Indian Navy and M/s GRSE in attendance.

The contracts for indigenous design and construction of 11 NGOPVs were concluded in Mar 23 between MoD and M/s GSL, Goa for seven ships and M/s GRSE, Kolkata for four ships.

The NGOPVs with an approximate tonnage of 3000T are envisaged for Coastal Defence & Surveillance, Search & Rescue operations, Protection of Offshore Assets and Anti-Piracy missions. The Keel Laying of the vessels is yet another significant milestone in Indian Navy's pursuit towards indigenous shipbuilding in consonance with the nation's vision of 'Aatmanirbhar Bharat' and 'Make in India'.

https://pib.gov.in/PressReleasePage.aspx?PRID=2070934

THE ECONOMIC TIMES

Wed, 06 Nov 2024

India, US hold 21st Military Cooperation meeting in Delhi to strengthen defence cooperation

The 21st edition of India-US Military Cooperation Group (MCG) meeting commenced in New Delhi on Wednesday.

The meeting was Co-chaired from the Indian side by Lt Gen JP Mathew, Chief of Integrated Defence Staff (CISC) and Lt Gen Joshua M Rudd, Deputy Commander (USINDOPACOM),. The discussions in the meeting focused on new initiatives under the ambit of existing bilateral defence cooperation mechanisms, a social media post from HQ IDS said.

"Opportunities for strengthening the ongoing India-US defence engagements and continued interoperability to address mutual security concerns towards maintaining peace & stability in the Indo-Pacific were key deliberations.," the post further reads.

As per a government release, the India-US MCG is a forum established to progress defence cooperation between the countries through regular talks at the strategic and operational levels between Headquarters, Integrated Defence Staff and the US Indo-Pacific Command.

Earlier on Monday, The 15th edition of Exercise Vajra Prahar kicks off at the Orchid Combat Training Centre in Idaho, US. This exercise focuses on enhancing interoperability and sharing best practices between the Special Forces of both nations, marking a significant milestone in military cooperation between the Indian and US armies.

Taking to social media platform X, the ADG PI said that during the ceremony, military contingents introduced themselves and shared cultural insights, fostering friendship and mutual respect. The atmosphere was further enriched by the celebration of Deepawali, with the Indian contingent exchanging sweets with their US counterparts.

"The opening ceremony of the 15th edition of Exercise Vajra Prahar 2024 was held at the Orchid Combat Training Centre in Idaho, USA. Contingents introduced themselves, shared cultural insights and were briefed about the conduct of the exercise. In the spirit of Deepawali, the Indian contingent exchanged sweets with the US contingent to celebrate the festival together. Vajra Prahar aims to enhance military cooperation, and interoperability and share the best practices between the Special Forces of the Indian Army and the US Army," the ADG PI said on X.

https://economictimes.indiatimes.com/news/defence/india-us-hold-21st-military-cooperation-meeting-in-delhi-to-strengthen-defence-cooperation/articleshow/115000093.cms

THE ECONOMIC TIMES

Tue, 05 Nov 2024

Drone warfare major disruptor in present-day battlefield: Eastern Army commander

Maintaining that drone warfare has proved to be a major disruptor on the present-day battlefield, Eastern Army Commander Lt General R C Tiwari on Tuesday said that the Indian Army is looking at augmenting its units and formations with potent state-of-the-art drones.

Delivering the opening address at the two-day expo 'East Tech 2024' here, he urged the defence industry partners of the armed forces to provide robust drones that can operate in high altitudes and challenging environments where the soldiers are deployed.

Stating that drone warfare has proved to be a major disruptor on the presentRepresentative Image day battlefield, he said, "We are looking at augmenting our units and formations with potent state-of-the-art drones."

"Equally important and in light of increasingly potent capabilities available in this domain with militaries the world over in general and our neighbourhood in particular, having an effective

counter-drone system is of utmost importance," Lt General Tiwari, General Officer Commanding-in-Chief, Eastern Command, said.

Lt Gen R C Srikanth, Chief of Staff, Eastern Command, later told reporters that the defence industry and the armed forces are now developing various counter-drone technologies and these are being inducted to carry out operations against the drones in various manifestations.

"Drones have become a major threat in terms of technology... both the armed forces and the industry are fully geared up and are conscious of the fact that we need to develop counter-measures," he said.

He said that some of these are already being inducted and some others will be inducted in due course of time. Lt General Tiwari said that cutting-edge technology to improve survivability of troops and resources is the way forward.

"Given the high humidity across the eastern region, moisture-proof storage conditions, especially for ammunition in forward areas is something that we expect the Indian defence industry to take on and come up with positive solutions," he said.

He said that over 140 defence industries were participating in the two-day defence expo 'East Tech 2024' here, displaying their capabilities in various fields of defence manufacturing.

He urged West Bengal minister Arup Biswas, who was present at the inauguration, to ensure that more manufacturers from the state, which claims to have the highest number of MSMEs in the country, participate in defence production.

"We also have to take cognisance of new threats and challenges that are emerging with each passing day and hence look towards the defence industry to provide us with the required battlefield equalisers," Lt Gen Tiwari said.

Tiwari said that the Eastern Command, the largest operational command of the Indian Army, has significant requirements for procuring defence-related equipment and technological solutions.

"Our wars have to be fought with our weapons and equipment," he said, stressing the need for self-reliance in defence production.

https://economictimes.indiatimes.com/news/defence/drone-warfare-major-disruptor-in-present-day-battlefield-eastern-army-commander/articleshow/114984143.cms

THE ECONOMIC TIMES

Tue, 05 Nov 2024

Pakistan, China conclude air forces' exercise 'Indus Shield-Chinese'

Air Forces of Pakistan and China on Tuesday concluded an exercise aimed at validating interoperability between the two countries in the face of "contemporary air combat challenges."

Indus Shield-Chinese, a bilateral module of Exercise Indus Shield 2024, was conducted separately between Chinese and Pakistan air forces at an operational air base of Pakistan Air Force, according to an official statement from Rawalpindi.

The exercise witnessed participation from People's Liberation Army Air Force of China with its personnel and high-tech equipment. The equipment comprised AESA Radar and Long Range BVR Equipped J-16 & J-10C fighter aircraft, Lethal HQ-22 Surface to Air Defence system, Potent Airborne Electronic Warfare YTG-9 Platform, alongside KJ-500 Airborne Early Warning system.

The Chinese personnel and equipment were pitched against Pakistan Air Force's J-10C and JF-17 Block-III fighter jets, simulating contemporary aerial combat scenarios.

"The successful execution of such a large-scale exercise demonstrates Pakistan Air Force's joint operational readiness among allied nations while addressing contemporary security challenges," the statement said.

Aimed at validating interoperability between China and Pakistan in the face of contemporary air combat challenges and by simulating various military tactics in near realistic multi domain operations training environment, Indus Shield-Chinese has maximised the warfighting potential of both the participating air forces, the statement added.

Pakistan and China have close defence cooperation and their armed forces regularly join hands to conduct exercises and other defence related activities.

https://economictimes.indiatimes.com/news/defence/pakistan-china-conclude-air-forces-exercise-indus-shield-chinese/articleshow/114987022.cms

FINANCIAL EXPRESS
Read to Lead

Tue, 05 Nov 2024

India Gears Up for Battle-Ready Integrated Groups Along Its Borders

In a strategic push to modernize and enhance border defense, the Indian Army has advanced plans for the creation of Integrated Battle Groups (IBGs) — agile, highly responsive units designed to counter threats from both China and Pakistan. Recently, the Army submitted a draft Government Sanction Letter (GSL) seeking official approval for the establishment of these IBGs, marking a critical step toward transforming India’s military capabilities in contested regions.

Why Integrated Battle Groups?

The concept of IBGs represents a significant shift in India’s military strategy. Unlike traditional army units that operate independently — often scattered across multiple locations — IBGs are compact, self-sufficient units that integrate infantry, armour, artillery, and aviation resources under

a single command. This unified structure allows for faster mobilization and more cohesive operations, enabling the Indian Army to respond swiftly to any border skirmishes or escalations.

China's rapid reorganization of its military along the Indian border, particularly through the Western Theatre Command and Combined Armed Brigades (CABs), has influenced India's decision to develop IBGs. China's Western Theatre Command is an integrated force that combines air and ground units, increasing the speed and effectiveness of response capabilities in sensitive areas. As China's military continues to evolve and consolidate its units, the need for India to develop an agile, rapid-response capability has become more pressing.

Initial Focus on the Eastern Sector: The 17th Mountain Corps

To enhance India's defensive posture in high-altitude regions, the Army has chosen the 17th Mountain Corps in Panagarh as the first unit to be transformed into IBGs. The plan involves reorganizing this Mountain Corps into five distinct IBGs, each one configured to operate in mountainous terrain where speed and coordination are critical. If approved, this restructured force will become the Army's frontline defence along the eastern sector, particularly in regions close to the Line of Actual Control (LAC) with China.

Following the formation of IBGs within the 17th Mountain Corps, the Army intends to transition other units, including the 9th Corps in the Middle Sector, into IBGs as well. These Corps will eventually comprise multiple IBGs, with the goal of creating specialized units equipped to defend against incursions in both the eastern and western theatres. The draft plan proposes an initial rollout of two IBGs in the 9th Corps, with potential for expansion as the model is refined.

Streamlined Command and Faster Mobilization

At the core of the IBG concept is the principle of unified command. Each IBG will operate under the direct leadership of a two-star general, bypassing the layers of command that typically exist between Corps, Divisions, and Brigades. This streamlined approach aims to cut down on delays in command, enabling faster decision-making and response times during critical moments.

In combat scenarios, the IBGs will act like rapid-response units, deployed closer to the border and ready to engage without delay. Each IBG will consist of approximately 5,500 to 6,000 soldiers, along with armored vehicles, artillery, and helicopters. This reorganization eliminates the need for different combat arms — such as infantry, artillery, and tanks — to assemble from separate locations, as they'll already be integrated within the IBG framework. This approach minimizes the time needed to prepare for combat, ensuring the Army can respond with speed and precision.

Specialized Battle Groups for Varied Terrain

India's border regions encompass a wide range of challenging terrains, from the deserts of Rajasthan to the icy heights of Ladakh. Recognizing this, the IBGs are designed to be modular and adaptable to the geographical demands of their deployment zones. For instance, units positioned in mountainous areas like the Eastern Sector will emphasize high-altitude warfare capabilities, while IBGs stationed in desert regions will focus on mechanized mobility.

The flexibility of the IBG structure is one of its key strengths. It allows for tailored deployment strategies, with each group's composition adjusted to best suit its environment and mission. Unlike

traditional structures, which may require additional support and logistics to be brought in, each IBG will be largely self-contained and self-sufficient, ready to operate independently in remote or hostile conditions.

Learning from China's Combined Armed Brigades

China's reorganization of its forces into Combined Armed Brigades (CABs) provides an insightful benchmark for India's IBG strategy. In recent years, China has converted several divisions in the Xinjiang Military District into CABs, equipping them with diverse capabilities, from reconnaissance and artillery to air defence and support units. These brigades, operating under the Western Theatre Command, are highly mobile and capable of rapid deployment.

China's CAB model underscores the importance of integrated forces in modern warfare, where operational speed and inter-unit coordination can define the outcome of conflicts. For India, developing IBGs is a strategic counterbalance to China's buildup. Indian IBGs will be similarly flexible, able to launch coordinated operations with support from mechanized units, artillery, and air assets under a unified command.

Government Approval and Next Steps

As the Indian Army awaits the green light from the Ministry of Defence, preparations for IBG implementation continue. If the Government Sanction Letter is approved, the Army aims to have the IBGs operational by 2025. The approval will allow the Army to accelerate its restructuring efforts, positioning IBGs along both the Chinese and Pakistani borders in a phased rollout.

https://www.financialexpress.com/business/defence-india-gears-up-for-battle-ready-integrated-groups-along-its-borders-3656711/

The Tribune

Wed, 06 Nov 2024

Talks on restoring patrols at Depsang hit roadblock

The military talks between India and China to work out the modalities of patrols have reached a deadlock over the "extent and routes of patrolling" at Depsang along the Line of Actual Control (LAC) in eastern Ladakh.

Sources said the Chinese military negotiators, tasked with working out the "patrolling arrangements", had been "dragging their feet" on coordinating the schedule of Indian Army patrols at points patrolled in the pre-April 2020 period. The Chinese side has also expressed reservations over the extent of patrolling.

The brigade commander-level officers of either side have been tasked with working out the modalities after "patrolling arrangements" for reopening of patrolling routes at Depsang and Demchok were announced on October 21 by Foreign Secretary Vikram Misri.

The two sides are negotiating the modalities of patrols at patrolling points (PPs) 10, 11, 11-A, 12 and 13 on the eastern edge of Depsang.

The sources said the Chinese side had raised two issues. Firstly, it had reservations about the Indian Army going full extent on the PPs 10 and 11 routes. Secondly, it had reservations about the extent (distance) of patrol on PPs 11A, 12 and 13.

Last evening, the Indian Army had stated that it had successfully conducted a patrol to one of the points at Depsang. Yesterday's patrol was to one of the latter three routes, the sources said, but did not specify which one. Patrolling is being coordinated in a manner that troops of both sides inform each other before a patrol party is launched. The coordination is part of the measures to prevent a face-off.

The LAC — the de facto border between the two neighbours — is undemarcated on the ground. Claims of India and China overlap at several places. All patrolling points east of Depsang are in areas were the claims overlap. India sticks to the claim line of 1959, while China goes by its own claim line of 1962.

PPs 10 and 11 both culminate at separate mountain tops that overlook the new G695 highway made by China in Aksai Chin. In other areas — PPs 11-A, 12 and 13 — the extent of patrols is being questioned by Beijing. The extent and route of patrolling — referred to in military terms as "limit of patrolling" — have been decided by the China Study Group (CSG).

The CSG was set up in 1975 and is now headed by National Security Adviser Ajit Doval. It is an advisory body and guides the government on policies related to China. The last time an Indian patrol went east of "bottleneck" was in January 2020.

The Depsang plateau is militarily crucial for both sides. East of it lies the Aksai Chin — the north-western edge of Ladakh illegally occupied by China since the 1950s. After the modalities were decided at the brigade commander level, the first patrol was conducted at Demchok last week.

The "patrolling arrangements" do not mention resumption of patrolling at other contentious spots in eastern Ladakh where disengagement has been done. These are Gogra, Hot Springs, Pangong Tso and Galwan.

https://www.tribuneindia.com/news/india/the-tribune-exclusive-talks-on-restoring-patrols-at-depsang-hit-roadblock/

Business Standard

Tue, 05 Nov 2024

Pakistan army's most powerful post just got more power. Here's how

Pakistani government on Monday extended the Pakistan Army chief's tenure from three to five years through an amendment to the Pakistan Army Act of 1952, with the government rushing the

particular Bill and others through both Houses of Parliament by a majority vote amid intense protests from the Opposition, Pakistani publication The Express Tribune reported on Tuesday.

The amendment to the Army Act also removed the retirement age limit for a four-star general, reportedly enabling the top military official to serve past the age of 64.

Under the amended Army Act, neither retirement age nor service limitations will apply to Pakistan's chief of army staff (COAS) during his period of appointment, reappointment and/or extension. According to the amendment, the COAS "shall continue to serve as a General in the Pakistan Army".

Previously, the Army Act had capped the COAS' appointment, reappointment, or extension to a maximum age of 64. Now, not only has this limit been reportedly abolished, but the phrase "and/or" has been added between reappointment and extension, creating the possibility of an extended tenure.

Identical amendments have reportedly been applied to the laws governing the navy and air force, too. The revision of the Pakistan Army chief's tenure is perceived as an attempt by the ruling Pakistan Muslim League-Nawaz (PML-N)-led coalition to reduce speculation over whether the current military chief would receive an extension or a new chief would be appointed every three years.

General Asim Munir is the current Chief of Army Staff of the Pakistani Army since November 2022. Speaking to a Pakistani TV channel, Rana Sanaullah, Special Assistant to the Prime Minister on Political Affairs, reportedly explained that considerable time was often spent each time the matter of extending or appointing a new services chief arose.

The chiefs typically only had two years to serve actively since the third year was often spent in lobbying efforts, he remarked. "I think it's a wise effort," he added. "The term for some constitutional offices is five years, so it was considered reasonable to align the tenures of the services chiefs to five years as well."

Reflecting on past precedents, Sanaullah noted that former army chiefs had held power for almost a decade, with the pattern of three-year terms being prolonged by three-year extensions becoming almost standard. "So, in a way, it's actually a one-year reduction rather than an increase," he quipped.

Speaking to Pakistani reporters at Parliament House, the country's Defence Minister, Khawaja Asif, defended the Bill's passage, explaining that it was no surprise as the government had thoroughly prepared before tabling the Bills.

Asif reportedly stated that the government's key ally, the Pakistan Peoples Party Parliamentarians (PPPP), had been fully involved in the decision.

According to The Express Tribune report, the Statement of Objects and Reasons explained that these amendments aim to bring uniformity across the laws governing the Pakistani army, navy, and air force by setting the maximum tenure for the COAS, naval, and air chiefs, along with additional amendments to align the laws.

The report noted that while the government pushed the Bills through both Houses of Parliament with a majority vote on Monday evening, despite intense protests from the Opposition, the latter still did not take steps to refer the Bills to the relevant committees.

After the National Assembly session, Pakistan Tehreek-e-Insaf (PTI) Chairman Barrister Gohar Ali Khan, when asked if PTI opposed the army chief's extension, reportedly replied that he wasn't even aware of which Bill was tabled in the House.

Also on Monday, Pakistan's Parliament passed amendments to the Supreme Court (Practice and Procedure) Act, 2023, and the Supreme Court (Number of Judges) Act of 1997. It also passed the Islamabad High Court (Amendment) Bill, 2024, increasing the number of its judges from nine to 12.

Pakistan's Acting President, Syed Yousuf Raza Gilani, signed the amendment Bills passed by both Houses of Parliament late in the night, thereby enacting them as laws.

https://www.business-standard.com/external-affairs-defence-security/news/pakistan-army-s-most-powerful-post-just-got-more-power-here-s-how-124110500829_1.html

ANI
South Asia's Leading Multimedia News Agency

Wed, 06 Nov 2024

Strengthening ties: India and Guyana discuss defence cooperation

In a meeting on November 5, Brigadier Omar Khan of the Guyana Defence Forces called on General Anil Chauhan, Chief of Defence Staff of India, according to the Headquarters Integrated Defence Staff (HQ IDS).

The discussions focused on enhancing bilateral defence cooperation, regional stability, maritime security, and fostering mutual understanding.General Chauhan extended India's support for conducting military training in Guyana and highlighted the country's growing indigenous defence manufacturing capabilities under the "Make in India" and "Make for the World" initiatives.

In a post on X, HQ IDS shared, "Brigadier Omar Khan, CDS Guyana leads an empowered delegation on a five-day visit to India. He will also be interacting with the Service Chiefs and Defence Secretary. The delegation will visit major Defence Public Sector Undertakings DPSUs and important Defence Manufacturing hubs at various locations across the country."

The dialogue between Indian and Guyanese defence leaders reflects a commitment to not only strengthen military ties but also ensure regional stability in an increasingly complex global security environment.

The collaboration aims to address shared security concerns, emphasising the importance of a coordinated approach in the face of emerging threats.Diplomatic relations between India and

Guyana have been robust since 1965, marked by a series of high-level engagements. The establishment of the Indian Commission in Georgetown laid the groundwork for further cooperation, transitioning into a full-fledged High Commission in 1968 after Guyana's independence.

The Fourth Session of the India-Guyana Joint Commission took place in May 2008, followed by the Fifth Session in April 2023, co-chaired by India's External Affairs Minister S Jaishankar and Guyana's Minister of Foreign Affairs Hugh Hilton Todd.

Eight Joint Working Groups have been formed to enhance cooperation in diverse sectors, including agriculture, health, defence, and technology innovation. This foundation has fostered a strong partnership that continues to evolve through bilateral visits and collaborative initiatives, strengthening the bonds between the two nations.

https://www.aninews.in/news/world/others/strengthening-ties-india-and-guyana-discuss-defence-cooperation20241106013009/

ThePrint

Tue, 05 Nov 2024

As IDF unveils robotic combat task force, Israeli maker says open to working with India

Israel last month deployed in southern Lebanon what is said was the world's first robotic combat task force. Based on Human-Machine Integration (HMI) formation, it performs complex, high-risk operations up to the battalion and even brigade levels.

Using this technology, Israel Defense Forces (IDF) were able to carry out fully robotic combat missions, drastically reducing the risk to Israeli troops. From clearing paths, bridging, to countering IEDs, these missions typically pose high risks but were completed from planning to execution using robotics, while enhancing situational awareness.

Using unmanned systems alongside manned ones in combat is seen as a transformation in warfare.

Boaz Levy, president and CEO of Israel Aerospace Industries (IAI), which has developed the technology, said the company had secured two projects from Israel's defence establishment: 'Carmel' and 'Standoff-In' (SOI). Robotic solutions developed by IAI are now in operational use along Israel's borders and various combat zones in the ongoing war.

Levy said the advanced systems are designed to support missions of manoeuvring forces in various stages of combat, performing advanced tasks such as opening routes for troop advancement, provision of logistical assistance, gathering intelligence information, and the ability to close detection/attack loops using humane remotely-controlled weapons systems.

Speaking to ThePrint, executive vice president of IAI's northern American affairs Amir Geva said the project was still in development phase and Phase-1 has been completed.

But unlike other countries, Israel tests the systems in real time situations and keeps tweaking based on the feedback.

Geva said the autonomous combat system worked brilliantly and the company is open to jointly working with partner countries like India.

"The technology is platform agnostic. The same technology can be used for any platform. The key is the system that has been developed," he said.

Interestingly, the IAI also last month unveiled Teaser—an ACLOS (automatic command to line-of-sight) tactical affordable infantry weapon system. It was hailed as the first guided missile in the world using external optical guidance without a homing sensor.

The Teaser missile seeks to revolutionise infantry attacks by providing precise, simple, reliable and cost-effective solutions for the modern battlefield. It can attack ground targets, light structures, lightly armoured vehicles, low-altitude aerial vehicles and moving targets.

The system employs a missile without a homing sensor and instead uses an external guidance system (Teaser-SIGHT) to guide the missile automatically to the target. It can also connect to external sensors for better reliability, versatility and survivability.

It has two modes of operation: shoulder-launched (with sight attached to canister) and remote launched. When shoulder-launched, the entire system is carried by a single soldier.

https://theprint.in/defence/as-idf-unveils-robotic-combat-task-force-israeli-maker-says-open-to-working-with-india/2341591/

The EurAsian Times

Tue, 05 Nov 2024

A Tale Of Two MiG-29s: One Lobs Deadly GBU-39 Bombs On Russia While Another Goes Down In India

In an uncanny coincidence, two videos of the Soviet-origin MiG-29 Fulcrum combat aircraft emerged on social media on November 4. One video shows the MiG-29 moments before its tragic crash in India, whereas the other features a Ukrainian Fulcrum in action and lobbing lethal US bombs on Russian targets.

A MiG-29 Fulcrum of the Indian Air Force (IAF) crashed in an empty field in Agra, India, on November 4. The aircraft reportedly took off from Adampur in Punjab for a routine training flight. However, it encountered a "system malfunction" while flying over Agra.

“A MiG-29 aircraft of the IAF crashed near Agra during a routine training sortie… after encountering a system malfunction. The pilot maneuvered the aircraft to ensure no damage to life or property on the ground before ejecting safely. The IAF has ordered an inquiry to ascertain the cause of the accident,” the Air Force said in a statement.

A video of the aircraft hurtling down in a flat-spin emerged on social media site X and has since gone viral. A flat spin is a dangerous flight condition that occurs when an aircraft enters an uncontrolled spinning motion. The airplane has no forward speed in this spin mode, making it perilous as the pilot cannot use the controls to prevent the aircraft from stalling.

Shortly after this video went viral, another set of photos and videos showed the aircraft burning on a field and plumes of black smoke emanating from it. One of the videos doing the rounds on X shows the pilots landing safely on the ground with a parachute after ejection.

This is the second crash involving an Indian MiG-29 Fulcrum since September this year. On September 2, an IAF MiG-29 fighter crashed in Rajasthan’s Barmer while conducting a night training mission. At the time, the IAF said a “technical snag” was responsible for the crash. The pilots had managed to eject safely, and there were no ground casualties or damage.

Before this, a MiG-29 crashed close to Jalandhar in Punjab in May 2020. The pilot, fortunately, ejected to safety after the aircraft became unresponsive and crashed shortly—bursting into flames. Notably, India was the first export customer of the MiG-29 outside the Warsaw Pact when it ordered the fighter jet in 1984. The first batch of MiG-29 was inducted into service in 1987, and these fighter jets have since been the mainstay of the IAF.

In fact, the aircraft was extensively used during the 1999 Kargil War to provide fighter escort for Mirage 2000s tasked with dropping laser-guided bombs on enemy targets in Kashmir.

The aircraft has received several upgrades over the years, including modern radars, turbofan engines, subsystems, and avionics. In August 2024, the Indian Ministry of Defense (MoD) released a Request for Proposal (RFP) to modify 24 MiG-29s and incorporate 180-kilometre range HSLD Mk 2 bombs and missiles.

This upgrade will include the aircraft’s required software and extra hardware, including bomb racks on external hard points. The enhancements are meant to keep the aircraft on top of its game amid lingering threats across India’s northern and western borders.

The crash incidents do not bode well for the IAF, which is already staring at a rapidly shrinking squadron strength. The loss of existing aircraft would cause more dismay as the IAF struggles to induct cutting-edge fighter jets on order, such as the indigenously produced LCA Tejas MK1A.

While the MiG-29 went down in flames in India, causing a somber mood across the nation, the Ukrainian MiG-29 lifted spirits in the embattled country as it was seen lobbing lethal bombs on Russian targets in a recently published video.

Mig-29 Fulcrums Bombarding Russia

In an incredible display of military might, a breathtaking video of a Ukrainian MiG-29 dropping GBU-39 bombs—precision-guided weapons made in the United States—has gone viral on social

media. The video was published by a popular Open Source Intelligence (OSINT) and war-tracking account called 'OSINTtechnical.'

The video may be the first demonstration of the MiG-29's capability to drop multiple GBU-39 bombs in a single aerial strike. "What appears to be the first publicly released video of a Ukrainian GBU-39 launch, and confirms that Ukrainian MiGs can send a number downrange at once," the account wrote.

According to reports floating on social media, the aircraft was on a close air support mission in Orikhiv Axis in Eastern Ukraine when it was filmed dropping the bombs. These bombs allegedly targeted Russia's infantry concentrations and arms depots. Some pro-Ukrainian military bloggers stated that the attack comes ahead of a fresh offensive here.

According to the US Air Force (USAF), "The GBU-39B Small Diameter Bomb, or SDB, is an extended range all-weather, day or night 250-pound class, guided munition. The SDB relies on the Global Positioning System to navigate to the target. Additionally, its small size allows increased aircraft load to achieve multiple kills per sortie and inherently reduces the probability of collateral damage."

The visual confirmation of the bombs being lobbed by the Fulcrum comes after several unverified reports published over the last few months, alleging that the aircraft was dropping multiple GBU-39 bombs. The EurAsian Times, however, could not independently establish the veracity of these claims.

The development comes months after the first clear images of a MiG-29 Fulcrum armed with a GBU-39 Small Diameter Bomb (SDB) emerged on the internet. At the time, the aircraft was seen carrying three to four GBU-39 SDBs under a pair of underwing BRU-61 carriages.

According to reports, substantial logistical preparations have been made since the beginning of 2023 to modify the GBU-39 for use with Ukrainian aircraft, specifically the MiG-29. The approach required significant pilot training and other modifications to ensure successful deployment.

It was only in May 2024 that the Ukrainian military first revealed that it had started using air-launched SDBs. These bombs have given Ukraine a significant new means of accurately hitting targets at standoff ranges of up to about 46 miles or about 74 kilometers.

The bomb can be targeted and released against one or more targets. The aircrew loads SDB target coordinates into the weapon before releasing it, either in the air or on the ground. When released, the weapon uses GPS/INS to self-navigate to the intended impact point. Additionally, the bombs can also penetrate semi-hardened static targets, and Ukraine's partners in NATO have large stockpiles of the weapons at their disposal.

The Ukrainian Air Force has yet to comment on the video or the use of GBU-39 at the time of writing this report. The development has, nonetheless, caused jubilation among the Ukrainian netizens and bloggers at a time when the Russians are fiercely advancing further inside the Ukrainian territory.

https://www.eurasiantimes.com/a-tale-of-two-mig-29s/

The EurAsian Times

Tue, 05 Nov 2024

J-35A: China's 2nd Stealth Fighter Ready For Official Unveiling At Zhuhai Airshow; PLA Catching-Up With USA?

The Chinese People's Liberation Army (PLA) Air Force has officially unveiled its latest stealth fighter jet, the J-35A, and announced plans for its debut at Airshow China 2024. The Airshow China 2024 is scheduled to be held from November 12 to 17 in Zhuhai, South China's Guangdong Province.

A photo released on November 5 during an Air Force press conference provided the first look at this advanced aircraft, a key addition to China's expanding air capabilities. Chinese state-run Global Times reported that the PLA's announcement of the J-35A suggests the aircraft is now operational and meets the Air Force's standards for technical performance, safety, and reliability.

The J-35A's anticipated debut signals a major step forward in China's military aviation sector, positioning it as a strong player in stealth technology and multi-role combat capabilities.

This announcement comes shortly after an image of the J-35A's tail surfaced online on November 4, stirring considerable speculation within military circles. The photo showed the tail marked with the number "75," likely to commemorate the PLA Air Force's 75th anniversary. Originally shared by the Chinese People's Liberation Army (PLA) News Media Center on the popular Chinese social media platform Weibo, the image quickly gained traction when military aviation researcher @RupprechtDeino reposted it on X (formerly known as Twitter).

Accompanying the image, the China Bugle, the official media account of the PLA's News Media Center, teased the public with a post titled "Super spoilers! Is the J-35 officially announced?"

This intrigued the audience, as it suggested that this was an official image of the eagerly awaited aircraft. It also hinted at a reveal at the upcoming Airshow China 2024, stating, "Do not rush. We will see you in Zhuhai in 3+5 days."

With the release of a new image on November 5, it has been confirmed that the PLAAF's land-based variant is now designated as the J-35A, while the carrier-borne version with wing-folding capability will likely be referred to as the J-35. The carrier-based J-35 fighter aircraft has already been in the news following its recent tests aboard the People's Liberation Army Navy (PLAN) Type 001 aircraft carrier, Liaoning.

Notably, this would be China's second fifth-generation stealth fighter jet after the Chengdu J-20. Until now, the US is the only country in the world that boasts two fifth-generation stealth fighter jets: the Lockheed Martin F-22 Raptor and F-35 Lightning II.

This year, the People's Republic of China is celebrating the 75th anniversary of its founding, and November 11 marks the 75th anniversary of the establishment of the PLA Air Force. The number

“75” on the tail thus honors the PLA Air Force’s 75-year history, which began on November 11, 1949.

China’s J-35 Fighter Aircraft

China’s J-35 stealth fighter is under development to serve both the People’s Liberation Army Navy Air Force (PLANAF) and the People’s Liberation Army Air Force (PLAAF), aimed at expanding China’s aerial capabilities across its military branches. However, detailed insights into the aircraft’s full capabilities are scarce.

Chinese media sources, citing experts, regularly suggest that the J-35 could rival the US Lockheed Martin F-35 Lightning II in performance, indicating an ambition to achieve parity with top-tier Western stealth fighters.

The J-35A differs in design from China’s first stealth fighter, the J-20. The J-20, featuring a canard wing configuration, is a heavyweight fighter designed primarily for air superiority missions, comparable to the US F-22. In contrast, the J-35A is a medium-sized fighter with a tailplane wing configuration similar to the US F-35. It is also equipped with surface attack capabilities.

A Chinese military expert commented on the newly released image of the J-35A, stating, “In my opinion, the J-35 is the world’s most stealthy fighter jet and is fully capable of rivaling and suppressing its opponents.”

Reports regarding the J-35 first appeared in June 2020, describing it as a more advanced and “production-ready” iteration of the earlier FC-31 model. These reports noted design enhancements, including smoother contours, a larger radome to accommodate an improved radar system, and better-aligned control surfaces to minimize the aircraft’s radar signature.

The carrier-capable variant of the J-35, derived from the FC-31, made its inaugural flight on October 29, 2021. This model has a wing-fold mechanism, an essential feature for operation from aircraft carriers. Initially, it was believed that the J-35 was being engineered for deployment on the Type 003 Fujian, China’s third aircraft carrier, which will be Beijing’s first aircraft carrier to utilize an electromagnetic catapult launch system.

However, the fighter jet has recently undergone testing on China’s first aircraft carrier, Liaoning. The Liaoning and China’s second aircraft carrier, the Shandong, employs ski-jump ramps for launching aircraft, primarily operating the J-15 fighter. The introduction of the J-35 indicates its potential deployment on these carriers despite the inherent limitations of ski-jump launches compared to catapult-assisted systems.

On September 18, Chinese state media confirmed that the J-35 successfully took off and landed on the aircraft carrier Liaoning. That announcement marked the first official acknowledgment of its operational capabilities aboard a carrier.

The prototypes of the FC-31/J-35 are believed to be equipped with RD-93 engines, but there are ongoing efforts to develop an improved WS-13E engine, which is expected to provide around 22,000 pounds of thrust.

This new engine is projected to eventually replace the RD-93 in the FC-31, enhancing the aircraft’s performance and operational capabilities. Moreover, the FC-31 is designed to support a payload

capacity of 18,000 pounds. Internally, it can accommodate munitions weighing up to 4,400 pounds, allowing for a variety of weapon systems to be housed within the airframe.

Externally, the aircraft features six hard points that can carry an additional 13,000 pounds of armament, further extending its strike capabilities. While specific details about the production and total quantity of the J-31 stealth fighter remain difficult to ascertain, the ongoing development of a carrier-launched variant holds the promise of significantly strengthening China's naval aviation capabilities.

Currently, the Chinese military grapples with a considerable gap in capabilities compared to the US Navy, which fields advanced aircraft such as the carrier-launched F-35C and the F-35B used by the Marine Corps. These platforms offer unmatched versatility and lethality, allowing for superior air dominance in maritime operations. In contrast, China's existing naval aviation assets are still in the process of transitioning to a more modern fleet.

International Interest in China's Stealth Fighter

There is increasing foreign interest in a land-based version of the FC-31, which is also known as the export variant. Early this year, the Chief of the Pakistan Air Force announced plans to acquire an undisclosed number of FC-31 fighters, indicating a strong market potential for this platform.

In August, EurAsian Times reported that pilots from the Pakistan Air Force (PAF) have started training on the Chinese FC-31 Gyrfalcon fighter aircraft. The demand for medium-weight combat aircraft featuring stealth capabilities or significant signature reduction appears to be thriving. The South Korean KF-21 Boramae and the Turkish TF Kaan are leading examples of a transformative shift in military aviation.

As nations strive to enhance their air power, many are moving away from older fourth-generation fighter jets, opting instead for more advanced models that provide exceptional performance and state-of-the-art technology. These next-generation aircraft are designed with stealth features that allow for greater operational effectiveness in contested environments.

FC-31 is particularly relevant for nations unable to procure the F-35 or those seeking to circumvent the stringent export restrictions that often accompany it. Should China succeed in providing an enhanced version of the FC-31 at a significantly lower price point than its rivals, it could potentially attract interest from a broader range of customers beyond the Pakistan Air Force.

This competitive pricing strategy may open doors to various nations looking for capable, cost-effective alternatives in the medium-weight stealth fighter market. Potential customers for the FC-31 may also emerge in the Middle East. In February, China showcased a prototype model at the World Defence Show in Saudi Arabia.

During the event, a Chinese official mentioned that while the aircraft is not yet operational within the PLA Air Force, it is anticipated to enter service soon. According to media reports, Egypt is also interested in the acquisition of Chinese stealth jets.

https://www.eurasiantimes.com/j-35a-chinas-2nd-stealth-fighter-ready-for/

The EurAsian Times

Tue, 05 Nov 2024

China's Own "THAAD & S-400": After J-35A, Beijing To Unveil HQ-19 Air Defense System At Zhuhai Air Show

As global attention remains hinged on the Chinese fifth-generation J-35A stealth fighter jet, Beijing will debut another major military platform at the upcoming Zhuhai Air Show—the HQ-19 anti-ballistic missile defense system, rumored to be the Chinese alternative to the US Terminal High Altitude Air Defense (THAAD) system.

The anti-ballistic missile defense system will be on static display at the upcoming Zhuhai Air Show, which will run from November 12 to 17. The state-owned Chinese publication Global Times reported that it will be accompanied by the new J-35A stealth aircraft and a new-type armed reconnaissance drone.

The images of the HQ-19 appeared on social media site X (formerly Twitter) on November 5, with several dedicated PLA watchers and experts declaring that the HQ-19 would be the biggest highlight of the Zhuhai Air Show.

A popular PLA watcher, Rick Joe, wrote on X: "If this thing is indeed HQ-19 and the ABM system that's been rumored for many years (one of many ABM systems), shown at Zhuhai, I'd rank this above J-35A in terms of significance."

In addition to the images of the HQ-19 launcher posted on X, a picture of an HQ-19 sign has also surfaced. The placard read: "The HO-19 is a new-generation surface-to-air missile independently developed by China which is mainly deployed to intercept ballistic missiles invading the region. It has the characteristics of large combat-protection coverage, strong penetration, and countermeasure capabilities. HQ-19 is the cadre equipment air-defense and anti-missile operations in China."

According to reports, the HQ-19 was first tested in 2021 and has likely entered service. This system is presumably designed for the exoatmospheric interception of ballistic missiles and will operate as the mid-tier of the Chinese Ballistic Missile Defense (BMD) layered system, according to a host of speculations.

While the details of the system remain classified, the range of HQ-19 is speculated to be between 1,000 to 3,000 kilometers. This has led military analysts to position the HQ-19 as an alternative to the US THAAD, which can acquire and track targets up to 3,000 kilometers away when in its forward-based mode. As per speculation, the HQ-19 likely uses the "hit-to-kill" technology, which is typical for US interceptor missiles. The EurAsian Times understands that these are all mere speculations due to the paucity of details. Chinese military programs typically remain shrouded in secrecy.

A PLA watcher, Hurin, predicted, “HQ-19 is The Biggest highlight of Zhuhai so far, along with J-35A. Nations will literally beg for such ADS, but whether they offer it remains to be seen.”

Earlier, the US Defense Department’s annual assessments of China’s military capabilities for 2020 and 2021 noted that China is building its homegrown CH-AB-X-02 (HQ-19) surface-to-air missile (SAM) system, which will probably be able to defend against ballistic missiles without giving further details.

Later, some Pentagon sources said that the HQ-19 is likely to be a mid-course interceptor. The mid-course phase of the missile is sandwiched between the boost and terminal phases and is considered to be the most challenging for interception. Since the mid-course phase lasts the longest of the three stages of a missile’s flight, the defending side can shoot multiple interceptors against the incoming missile.

However, the exo-atmospheric conditions in space and the speeds involved in mid-course intercepts are difficult to master, as previously explained in a detailed EurAsian Times article that can be read here. On two occasions—June 2022 and April 2023—China announced that it had successfully tested a mid-course ground-based missile interceptor, which piqued the interest of observers.

On both occasions, there were speculations that it could be the HQ-19. However, none of them could be verified. Eurasian Times understands that China is working on multi-anti-ballistic missile defense systems to bolster its defenses and prepare for potential combat with the United States. With the latest HQ-19 system set to debut at the Zhuhai Air Show next week, more details are expected to emerge shortly.

China’s Upcoming Zhuhai Air Show

The Zhuhai Airshow China 2024 is scheduled from November 12 to 17 in Zhuhai, South China’s Guangdong Province. This will be the fifteenth edition of the Chinese Air Show, which coincides with the 75th anniversary celebrations of the PLA Air Force. This Air Show 2024 will be a special event for a host of reasons, including the debut of China’s latest stealth aircraft—the J-35A. With the official commissioning of this aircraft, China will become only the second country in the world to operate two different fifth-generation stealth fighter jets.

In an official announcement, the PLAAF said that it will bring 36 different types of equipment for aerial flight demonstrations and ground static displays, flaunting the development of its equipment in a thorough and up-close manner. According to the PLA Air Force, 26 aircraft of seven different classes, including the J-20 stealth fighter jet, J-16 multirole fighter jet, and YU-20A tanker aircraft, would perform in flight alongside the Bayi and Red Falcon aerobatic teams.

Additionally, the service announced that the Y-20 transport aircraft’s cargo compartment would be accessible for viewing, and bookings would be made through a lottery system. Notably, 1,022 companies from 49 countries are expected to participate in the event. Moreover, ahead of the air show, the Russian Su-57 fifth-generation stealth aircraft and an An-124 large transport aircraft arrived in China, further driving the excitement.

As the biggest biennial air show in the country, the event draws massive crowds of spectators who witness the impressive display of China’s military and commercial aircraft. In September this year,

Lieutenant General Yu Qingjiang, the Vice Commander of the PLA Air Force, said the PLAAF would showcase its capabilities in air combat, air strikes, unmanned and counter-unmanned warfare, strategic delivery and airdropping, early warning, and air defense using new equipment publicly displayed for the first time.

https://www.eurasiantimes.com/china-unveils-its-thaad-challenger-hq-19/

Science & Technology News

Press Information Bureau
Government of India

Ministry of Science & Technology

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India to Launch European Union's Solar Observatory Satellite Proba-3, in December, announces Dr. Jitendra Singh

EU Sees India as a 'Natural Partner' in Space Exploration and Security: EU Ambassador

3rd India Space Conclave Highlights India's Rising Role in Global Space Collaboration

Union Minister Dr Jitendra Singh announced here today that India is set to launch the European Union's Proba-3 Space Satellite by in the first week of December, marking another milestone in its burgeoning role as a global space leader disclosing this while speaking at the 3rd Indian Space Conclave, Dr Jitendra Singh said, this underscores the deepening partnership between India and the EU in space research and exploration. This mission, aimed at observing the Sun, signifies both nations' commitment to advancing scientific knowledge while reinforcing the reputation of the Indian Space Research Organisation (ISRO) as a trusted partner in international space missions. The Proba-3 satellite, which arrived this morning at pòłSriharikota, is aimed at observing the Sun and reflects a new level of equal collaboration between India and other major space powers.

The Proba-3 satellite will be India's third such launch for the EU, with previous missions supporting the Proba-1 and Proba-2 satellites. However, this mission is unique in its focus on solar observation. Dr. Jitendra Singh explained that Proba-3 will provide valuable insights into solar corona dynamics, adding to ISRO's portfolio of ambitious scientific ventures, which recently included the groundbreaking Chandrayaan-3 lunar mission. "India and Europe are together

reaching out to the Sun," said Dr. Jitendra Singh, highlighting the symbolism and science of this mission.

In his address, Dr. Jitendra Singh credited Prime Minister Narendra Modi's forward-thinking policy changes with the rapid transformation of India's space sector. The 2020 reforms opened doors for private participation and international collaborations, which Dr. Jitendra Singh said "unlocked" India's space potential. Previously, the space sector was limited by strict governmental controls and secrecy, but the liberalized approach has led to exponential growth, with India now boasting over 300 space startups contributing to an array of domestic and global projects. This growth is a testament to the nation's increasing technological capability and its capacity to support world-class research.

Dr. Jitendra Singh pointed out that the policy shift is not just about exploration; it's about leveraging space technology to enhance infrastructure and everyday life across India. Today, satellites play a role in urban planning, agriculture, and even groundwater monitoring under India's flagship "Jal Shakti" water conservation program. As a result, sectors previously untouched by space technology, such as transportation and rural development, are reaping the benefits of these advancements.

The Conclave also provided a platform for recognizing India's startup ecosystem in space technology. "Only a few years ago, we had just a handful of space-focused startups," Dr. Jitendra Singh remarked. "Today, there are over 300, fuelling an entire industry and creating jobs across the country." This surge in startups has not only curbed the historic brain drain but has also attracted Indian talent back from abroad, particularly from agencies like NASA, which previously drew many of India's brightest space scientists.

In his address, EU Ambassador to India and Bhutan, Mr. Herve Delphin, emphasized the significance of the Indo-European partnership in space, describing India as a "cost-effective, dynamic space power of the first order." Commending India's achievements, including the recent success of the Chandrayaan-3 mission, Mr. Delphin stated that the European Union views India as a natural ally in the realm of space exploration and innovation. He highlighted that both the EU and India are consolidating their roles as influential space powers, sharing a mutual interest in the peaceful use of space and a commitment to tackling pressing global issues, such as climate change and cyber security, through space-based solutions.

Ambassador Delphin also outlined the EU's ambition to further strengthen this collaboration, proposing joint initiatives in Earth observation, training, and space security, areas where both regions have complementary strengths. He pointed to existing partnerships, like India's collaboration with the EU's Copernicus Earth observation program, as a foundation for deeper integration. With plans underway to expand cooperation in space security, Mr. Delphin expressed optimism for advancing space governance and responsible practices on a global scale, adding that the upcoming 2025 EU-India Summit in Delhi will serve as a pivotal opportunity to build upon this shared vision.

Looking ahead, India's space program has ambitious goals. The upcoming human spaceflight mission, Gaganyaan, and plans for a future lunar landing by 2040 reflect India's determination to be at the forefront of space innovation. The nation is also exploring future missions to establish its

own space station by 2035, which would further assert India's place in the global space landscape. Additionally, with a vision for space tourism by 2040, India's strategy is now as forward-looking as it is inclusive, with plans to engage private companies and international entities at every stage of its space exploration journey.

During the event, Union Minister Dr. Jitendra Singh unveiled SPADE, an innovative product developed by Suhora Technologies, and presented the prestigious ISpA Space Industry Awards. Following the inaugural session, he toured exhibition stalls featuring cutting-edge space products, engaging with dignitaries and showcasing India's advancements in space technology.

In closing, Dr. Jitendra Singh reiterated India's commitment to partnerships like the one with the EU. "As we look to 2047 and envision a Viksit Bharat, the space sector will be a driving force in this transformation, bringing scientific prestige and significant economic returns." The Proba-3 launch not only strengthens Indo-EU relations but also highlights India's capability to lead in space science and technology, reinforcing its image as a collaborative global space player.With this mission, ISRO continues to build upon a legacy of achievements, propelling India towards a future where it is not only a participant in global space endeavours but a leader shaping the course of space exploration and innovation.

The inaugural session also saw participation from key figures in India's space sector, including Jayant Patil, Chairman of the Indian Space Association (ISpA); -S. Somnath, Secretary of the Department of Space and Chairman of ISRO and the Space Commission; and Lt Gen AK Bhatt (Retd), Director General of ISpA, underscoring the collaborative momentum within India's rapidly evolving space ecosystem.

https://pib.gov.in/PressReleasePage.aspx?PRID=2070865

Press Information Bureau
Government of India

Ministry of Science & Technology

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IL-35-Mediated Immunotherapy: A New Treatment for Type I and Autoimmune Diabetes Mellitus

Researchers has discovered a specific protein IL-35 that protects the immune system by lowering particular immune cells that produce inflammatory chemicals, thereby reducing pancreatic cell infiltration, a key contributor in type 1 diabetes and autoimmune diabetes mellitus. This protein presents a novel diabetes treatment option.

The growing global diabetes epidemic that disproportionately affects developing country children and adolescents calls for effective treatment for the disease.

IL-35, a specific protein of IL-12α and IL-27β chains, encoded by the IL12A and EBI3 genes. This finding has piqued scientists' interest, especially considering the Novel type 1 and autoimmune diabetes therapy may depend on IL-35, according to research.

The Institute of Advanced Study in Science and Technology (IASST) in Guwahati, an autonomous institute under the Department of Science & Technology (Government of India), led by Dr. Asis Bala, Associate Professor, Prof. Ashis K. Mukherjee, Director, and Mr. Ratul Chakraborty, Research Scholar, conducted a network pharmacological analysis of IL-35-related genes, gene-disease associations, and a comprehensive experiment review. The network pharmacological analysis identified five disease-interacting genes associated with immune-inflammatory, autoimmune, neoplastic, and endocrine disorders.

IL-35 helps protect against type 1 and autoimmune diabetes. It regulates macrophage activation, T-cell proteins, and regulatory B cells. IL-35 inhibited pancreatic beta cell-attacking immune cells. Additionally, IL-35 lowered particular immune cells that produce inflammatory chemicals, reducing pancreatic cell infiltration, a key contributor in type 1 diabetes and autoimmune diabetes mellitus.

This recent study published in "CYTOKINE" and "World Journal of Diabetes" may help biological researchers investigate this topic. These findings imply that IL-35 protects the immune system, presenting a novel diabetes treatment option. More studies are needed to understand the mechanisms and advance IL-35-based therapeutics into clinical trials.

https://pib.gov.in/PressReleasePage.aspx?PRID=2070862

THE HINDU

Wed, 06 Nov 2024

Rising STEM research demands revitalised education

Higher educational institutions in India face significant challenges. While private engineering colleges, the newer Indian Institutes of Technology (IIT) and universities have expanded access to education over the last few decades, studies show that a vast majority of students graduating from these colleges lack the basic skills that are required by industry.

Research institutes have also voiced concerns about the quality of students who wish to pursue higher studies. While industries and premier research institutions have managed with top students from these colleges, there is a problem now. Across various sectors, there is a struggle to find students who are skilled, and it is alarming that the number of students pursuing higher education has dwindled.

At this rate, institutions, which are already grappling with the issue of faculty shortages, will face even greater challenges in the years ahead. Large sums of money announced for initiatives such as quantum computing, cybersecurity or artificial intelligence could go underutilised in the absence of qualified talent. This widespread problem threatens the socio-economic fabric of the country.

Quality of training is an issue

The root cause lies in the quality of training in teaching institutions. Many faculty members are products of their own institutions and are often pressured to chase papers and patents for their colleges to maintain their rankings, often at the expense of scholarship and pedagogy.

This results in poor-quality graduates, with a domino effect on industry standards, research output, and faculty quality. While upskilling programmes, outreach initiatives, internships and online courses could address the problem to some extent, these efforts are not scalable enough to meet ever-increasing demand for skilled professionals.

This article offers some broad ideas, based on the experiences of the writers, which may be of help. These suggestions call for a rebalancing of current efforts and a more imaginative use of existing resources.

Premier institutes such as the IITs, the Indian Institutes of Information Technology, the National Institutes of Technology, the Indian Institutes of Science Education and Research, the Indian Institute of Science (IISc), and other centrally funded institutions recruit about 5% of India's undergraduate students.

For instance, IIT Bhubaneswar admits fewer than 60 students annually for its computer science programme. In comparison, the private KIIT University admits over 2,000 students a year for the same discipline. Similar comparisons can be made between IIT Madras and private institutions such as SRM and VIT.

This means almost all the students in the pipeline to industries and research institutions come from colleges where 95% of the students study. The proposals in this article aim to strengthen this pipeline and foster greater collaboration between research institutions and teaching institutions. To make the distinctions clear in this article, institutions with large undergraduate programmes will be referred to as "teaching institutions" and those focused on research (such as premier institutes) as "research institutions," even though they engage in both teaching and research.

The ideas in this article are for research institutions, teaching institutions, and the agencies that monitor them — all geared toward improving research, pedagogy, and incentive structures. These proposals echo the objectives of the National Education Policy (NEP) and the Anusandhan National Research Foundation (ANRF).

The first idea is to stop ranking teaching institutions and their faculty members based heavily on research output, such as papers and patents. Given the lack of a robust research environment in many teaching institutions, this emphasis on research output encourages participation in predatory conferences and publications.

India, unfortunately, is a country with a large presence of predatory outlets. As a result, limited resources are diverted from improving pedagogy to producing low-quality research, further degrading student learning outcomes. Ranking teaching institutions separately, based more on their teaching quality, could alleviate some of this pressure.

Change focus

Until the quality of students entering the pipeline improves, faculty at teaching institutions should focus more on pedagogy and less on research. While this may reduce research output in the short term, it will significantly enhance the quality of education and research in the long term. Teaching institutions should lay greater emphasis on faculty development programmes, mentorship, teacher evaluations, and newer courses, online and offline.

Collaborations with research institutions on teaching methods and pedagogy should be strongly encouraged. One way to achieve this is by creating a dedicated teaching track within the academic hierarchy at these institutions, such as ‘teaching assistant, associate and full professor’. Faculty members interested in pursuing research should be encouraged to collaborate with their counterparts in research institutions.

Funding agencies can incentivise and mandate such collaborative projects. The ANRF’s Partnerships for Accelerated Innovation and Research (PAIR) programme already calls for such initiatives. For this idea to succeed, it is important that faculty promotion criteria in teaching institutions are based on pedagogical skills, assessed through appropriate metrics.

This can be incentivised through State and Central government funding to establish centres of excellence in pedagogy, such as centres of excellence in research, and by mandating pedagogical components and inter-institutional collaborations when evaluating grant proposals.

Explore joint agreements

The second idea is for research institutions to establish joint degree agreements with teaching institutions. These agreements should be stronger than one-off workshops or outreach programmes. For instance, top-performing students at teaching institutions could spend their final two years in research institutions, receiving a “hyphenated degree” bearing the insignia of both institutions.

To make this feasible, the curricula at teaching institutions must be aligned with those of research institutions, in content and pedagogy. Faculty from research institutions can engage with their counterparts in teaching institutions through regular workshops, on-site visits, and hands-on training in the best pedagogical practices.

Resources must be allocated to support these partnerships as they will help reverse the decline in the quality of teaching in undergraduate-focused institutions. This initiative can begin with one research institution partnering with one teaching institution for a couple of degree programmes, and expand gradually.

Such joint agreements would yield three major benefits: improved student quality in research institutions, enhanced teaching and curriculum quality in teaching institutions, and revitalisation of the teaching institutions themselves.

Variations of this model already exist on a small scale. For instance, select third-year civil engineering students from NIT Surat spend their final year at IIT Bombay and are automatically admitted to the M.Tech. Programme.

Similar student-transfer programmes exist between community colleges and research-intensive universities in the United States, significantly improving both access and quality. Many Indian

teaching institutions already have agreements with international universities, so there is no reason why such agreements cannot be established in India, and even within the same city. These agreements would not only facilitate student mobility but also promote faculty exchanges between the two types of institutions.

The ideas proposed in this article, which advocate a rebalancing of current efforts, can produce two key outcomes: a much needed refocus on pedagogy that will raise the quality of undergraduate education; and an improvement in research output as a result of less pressure on faculty. These proposals do not require major additional resources, but only a willingness to embrace creative thinking.

While science and engineering have been used as examples, the ideas here are equally applicable to fields such as the arts, humanities, and social sciences. Revitalising the country's teaching institutions is critical to producing a larger, higher-quality talent pool, capable of driving innovative research and scientific discoveries.

https://www.thehindu.com/opinion/lead/rising-stem-research-demands-revitalised-education/article68833729.ece

THE ECONOMIC TIMES

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US-based Axiom Space explores using Indian rockets for space mission

US-based Axiom Space is exploring using Indian launch vehicles to support its international space station mission, a senior executive said on Tuesday. Axiom Space is one of the few companies constructing a private space station, intended to eventually replace the International Space Station (ISS), which the U.S. National Aeronautics and Space Administration (NASA) expects to retire around 2030.

Pearly Pandya, director of Axiom's international government business, said that while contracts had not been signed yet, the startup was in talks with India's space agency, ISRO, and India's private launch companies to explore the best fit for its missions and to diversify its supply chain.

"It could be to transport raw materials as we develop our space station," Pandya said, speaking at an industry event. The company is also in talks with European nations for its supply chain, she added.

The move comes after India and the United States entered into a Space Flight Agreement in August to work alongside Axiom's upcoming mission to the ISS. Earlier this year, India opened its space sector to private players and created a 10 billion rupee ($119 million) venture fund to support space startups.

In September, the ISRO completed the final developmental flight for its Small Satellite Launch Vehicle, and planned to hand its design to private companies.

At present, two Indian companies, Skyroot and Agnikul, are building the country's first privately-built rockets that can carry a payload of up to 300 kg (661 lb) into low Earth orbit. Indian space companies have already seen an influx of funding - $126 million in 2023, which was up 7% from the $118 million raised in 2022 and a 235% increase from the $37.6 million raised in 2021, according to Tracxn data.

But India only has a market share of about 2% in commercial space activities and demand is still largely dependent on global clients, while well-established companies in U.S., Russia and China are formidable rivals.

https://economictimes.indiatimes.com/news/science/nasa-iss-us-based-axiom-space-explores-using-indian-rockets-for-space-mission-in-talks-with-isro-and-space-companies/articleshow/114973093.cms

THE ECONOMIC TIMES

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Big industry needs to take plunge in space sector: ISRO chief Somanath

ISRO chairman S Somanath on Tuesday urged industry houses to invest in the space sector in a big way to build rockets and allied systems for India to emerge as a space power by 2047.

Addressing the Indian Space Conclave here, Somanath voiced concern over the "elusive" investments in the upstream sector of the space industry comprising launch vehicles, hardware and software for ground-based stations, telemetry, tracking and command stations.

He said the share of the Indian space economy in the global market was very low and there was a need to encourage and inspire the next generation of leaders to come into the sector and create a vibrant activity.

India's space economy is pegged at USD 8.4 billion and is projected to grow to USD 45 billion in the next ten years.

Somanath said investments were not forthcoming from big industry houses within the country for the upstream side of the business despite pursuing the matter with them.

"India is not devoid of big (industry) houses having enough capability to invest and create as much as others in the world. But, they need to take the plunge, possibly alone or in a very cooperative mode with others," the ISRO chairman said addressing the conclave organised by the Indian Space Association.

He acknowledged the risks involved in the space sector where a longer time is required to develop complex systems which could prove to be unsuitable as technologies tend to change fast.

"There are industries and start-ups happening, but their ability to scale up to a level, become competitive enough to challenge established players remains to be seen," Somanath said.

"It is here that the role of bigger industrial houses needs to come in. If you want to really scale up this domain, it has to be through a very high level of risk-sharing capability that has to be taken only by bigger industry houses," Somanath said.

He said there was a need to create leading space companies in India, not just service-providing companies.

"Companies who have the capability to conceive, design, manufacture and put up cost competitive products in front of the world," he said.

Last year, ISRO's commercial arm NewSpace India Limited awarded a contract to a consortium of L&T and Hindustan Aeronautics Limited (HAL) to build five Polar Satellite Launch Vehicles. The space agency has also offered to transfer its latest Small Satellite Launch Vehicle (SSLV) to the industry for mass production.

The company or a consortium identified for the transfer of technology for the SSLV can continue to build the rocket at ISRO facilities till it develops its own campus for manufacturing the launch vehicles.

https://economictimes.indiatimes.com/news/science/big-industry-needs-to-take-plunge-in-space-sector-isro-chief-somanath/articleshow/114982516.cms

THE HINDU

Wed, 06 Nov 2024

If tardigrades crowd-sourced their remarkable genes, can humans?

Tardigrades are one of the most resilient as well as enigmatic life forms on the earth. These organisms, also called water bears and moss piglets, are microscopic eight-legged creatures without a backbone.

They inspire awe with their remarkable ability to survive in extreme environments, including areas so very radioactive that they are easily lethal to humans. They can also survive starvation, lack of air and water, and subzero temperatures.

An ancient survivor

Belonging to a phylum of their own (Tardigrada), these remarkable creatures inhabit some of the more extreme ecosystems on the planet, from the frigid expanses of the Arctic and deepsea floors to scorching deserts and even the vacuum of space. Researchers have identified more than 1,300

tardigrade species to date; each species is uniquely adapted to conditions that would be deadly to most other forms of life.

Evolutionarily, the tardigrades are an ancient species. The earliest known fossils date from around 90 million years ago, in the Cretaceous Period. Molecular dating suggests they originated at least 600 million years ago.

When facing hostile environments, tardigrades can enter a state called cryptobiosis, effectively pausing almost all their biological processes and lingering in a state of suspended animation. This peculiar state allows them to tolerate extreme dryness, intense radiation, and freezing.

Tardigrades' ability to survive radiation is due to specialised mechanisms that can shield their genetic material from damage. In fact, they don't just survive otherwise hazardous radiation: they are able to recover and resume normal life.

Lessons of the tardigrade

Their features have rendered tardigrades a subject of intense scientific study. Researchers hope unlocking the secrets of their specialised survival mechanisms will pave the way to advances in human medicine, space exploration, and others. Research has indicated the presence of many mechanisms that help tardigrades, and insights into them are expected to hold great biomedical and industrial value.

For example, researchers have of late been discussing the role of a specific class of proteins: these proteins have flexible bodies and don't have an intrinsic structure. Thus they have been named intrinsically disordered proteins. One subgroup of these is secretory-abundant heat-soluble proteins. Researchers recently attempted to synthesise these proteins in other microbes by cloning the underlying genes and transferring them to the latter.

Their work suggested such a method is capable of enhancing the tolerance of the microbes against desiccation (completely drying up). This work was published in Nature Communications Biology in May. Another paper published last year in the same journal explored molecules called small heat shock proteins and, in a similar approach, demonstrated that they could enhance microbes' ability to survive hot conditions as well as prevent proteins from clumping up when they dry out.

Survival begins in the cell

More recently, researchers from China reported a new tardigrade species, Hypsibius henanensis. Their findings, reported on October 25 in Science, included a chromosome-level genome assembly that revealed many details about the genes that give tardigrades the ability to withstand radiation. They exposed tardigrades to gamma rays at doses around 1,000-times greater than the lethal limit for humans, and tracked which genes were expressed using genomic tools.

The researchers found thousands of genes upregulated when the tardigrades were exposed to extreme radiation. Further analysis suggested that the radiation resistance is likely modulated by genes that can be acquired by horizontal transfer, i.e. from other species in their environment. The researchers also discovered some tardigrade-specific genes, as well as genes similar, yet not identical, to ones in other organisms.

In fact, horizontal gene transfer contributed more than 0.5% of the tardigrades' genes, which is a significant fraction that signals its significance to the tardigrades' survival and evolution. The DODA1 gene is of particular note: tardigrades need it to synthesise betalains, a type of antioxidant pigments that could be protecting the tardigrades' cells against radiation damage. The creatures probably acquired it from a bacterial species.

A second class of genes involved in radiation resistance are unique to the tardigrades themselves. One of them is TRID1, which plays a role in repairing damaged DNA mediated by phase separation. Another is NDUFB8, associated with mitochondrial function.

The researchers identified them to be crucial to the species' ability to survive extreme conditions by (likely) helping maintain the stability of cells and sustaining energy production even under high radiation stress. Effectively, the tardigrades' survival advantages begin at the cellular level.

Applications on the horizon

Tardigrade biology may seem exotic at this time and the research exploring it may seem esoteric. But a lot of biology makes sense in the light of evolution (to adapt the words of Theodosius Dobzhansky), and unlocking the mysteries of the tardigrade may quickly translate to breakthroughs in real-world challenges with far-reaching implications.

Recall that scientists developed CRISPR-Cas9 based on a unique mechanism in a bacteria to repair its DNA. Consider protein stability in tardigrades. We are using biological therapies such as protein vaccines, antibodies, and enzymes to treat a variety of diseases more often. If we can find a way to stabilise the proteins involved in these technologies, we can increase their biological efficacy as well.

As the field of cell therapies continues to grow, researchers are looking for technologies to protect these therapeutic products in harsh conditions they may encounter during storage, transport, and administration.

Tardigrades possess unique adaptations to resist or even sidestep cellular damage, and researchers can learn from them to find ways to stabilise cells in research and biomedicine. Taken together, tardigrades provide a unique blueprint for developing robust biological systems and materials.

Their exceptional survival mechanisms could inspire new strategies in medicine, biotechnology, and beyond, leaving critical therapies and technologies more resilient, effective, and crucially, widely accessible.

https://www.thehindu.com/sci-tech/science/if-tardigrades-crowd-sourced-their-remarkable-genes-can-humans/article68832042.ece

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