

# समाचार पत्रों से चयित अंश Newspapers Clippings

दैनिक सामयिक अभिज्ञता सेवा

**A Daily Current Awareness Service**



रक्षा विज्ञान पुस्तकालय  
Defence Science Library  
रक्षा वैज्ञानिक सूचना एवं प्रलेखन केन्द्र  
Defence Scientific Information & Documentation Centre  
मेटकॉफ हाऊस, दिल्ली 110054  
Metcalf House, Delhi-110054

## Anti-sub warfare corvette commissioned

The country's second indigenous stealth anti-submarine warfare corvette INS Kadmat was commissioned on Thursday in another milestone for the Navy in self-reliance and giving a boost to the ambitious "Make in India" campaign. Chief of Naval Staff Admiral R.K. Dhowan said the Indian Navy will in future build all types of ships including those designed for warfare indigenously in line with Prime Minister Narendra Modi's "Make in India" initiative. The corvette, which is equipped to fight in nuclear, biological and chemical (NBC) warfare conditions, was indigenously designed by the Navy's in-house organisation, Directorate of Naval Design and constructed by Garden Reach Shipbuilders and Engineers Limited, Kolkata at Naval Dockyard here. It is named after one of the large islands amongst the Lakshadweep group of islands. About 90 per cent of the ship is indigenous, Admiral Dhowan said. "Commissioning of Kadmat is a another milestone in self-reliance of Indian Navy," Admiral Dhowan said addressing a gathering after the commissioning ceremony. "Now Indian Navy is builders navy not buyers Navy." The Indian Navy has planned, in another 15 years, to strengthen science and technology and build warships indigenously in association with the Defence Research Development Organisation and public sector shipyards and private companies, he said. Speaking to mediapersons, he said Kadmat will take part in international fleet review scheduled here from February 4-8. "Commissioning of Kadmat will add a new dimension to the ASW capability of the Indian Navy and in particular, the Eastern Fleet. The multifarious missions that can be undertaken by the ship truly reflect the enhanced multi-dimensional capability of the Indian Navy," Admiral Dhowan said.

जनसत्ता

08 January 2016

### स्वदेशी पनडुब्बी रोधी पोत 'आइएनएस कदमत' नौसेना में शामिल

आइएनएस कदमत पर 13 अधिकारी और 180 नाविक तैनात होंगे। कमांडर महेश चंद्र मुद्रिल इसके पहले कमांडिंग अधिकारी होंगे। पूर्वी नौसैनिक कमान के तहत पूर्वी बेड़े का यह एक अभिन्न हिस्सा होगा। भारतीय नौसेना प्रमुख एडमिरल आरके धवन ने गुरुवार को दूसरे स्वदेशी पनडुब्बी-निरोधक जंगी पोत (एसडब्ल्यू) आइएनएस कदमत का जलावतरण किया। इस मौके पर उन्होंने कहा कि प्रधानमंत्री नरेंद्र मोदी की 'मेक इन इंडिया' पहल की तर्ज पर भारतीय नौसेना भविष्य में सभी प्रकार के पोत देश में ही बनाएगी जिनमें जंगी जहाज भी शामिल हैं। इस पोत का निर्माण मेसर्स गार्डन रीच शिपबिल्डर्स एंड इंजीनियर्स लिमिटेड (जीआरएसई) ने यहां नौसैनिक गोदी में किया है। नौसेना प्रमुख ने कहा कि कदमत का जलावतरण आत्मनिर्भरता की दिशा में भारतीय नौसेना का एक और गौल का पत्थर है। उन्होंने कहा कि अब भारतीय नौसेना खरीदने वाली नौसेना नहीं बल्कि खुद बनाने वाली नौसेना है। धवन ने कहा कि भारतीय नौसेना ने अगले 15 सालों में विज्ञान व प्रौद्योगिकी को मजबूत बनाने और रक्षा अनुसंधान व विकास संगठन (डीआरडीओ) व सार्वजनिक क्षेत्र के शिपयार्डों और निजी कंपनियों के साथ मिलकर देश में ही जंगी जहाज बनाने की योजना बनाई है। पत्रकारों से बातचीत में धवन ने कहा कि कदमत चार से आठ फरवरी तक होने वाले इंटरनेशनल फ्लीट रीव्यू में हिस्सा लेगा। धवन ने कहा कि कदमत के जलावतरण से भारतीय नौसेना, खासकर पूर्वी बेड़े, की पनडुब्बी-निरोधक जंगी क्षमता में एक नया आयाम जुड़ेगा। पोत की ओर से शुरू किए जा सकने वाले विविध मिशन सही मायने में भारतीय नौसेना की बहुआयामी क्षमता में बढ़ोतरी को दर्शाते हैं। उन्होंने कहा कि इस पोत की विशेषता यह है कि इसके उत्पादन को ज्यादा से ज्यादा स्वदेशी बनाया गया है। इस पोत का करीब 90 फीसद हिस्सा स्वदेशी है। इसका डिजाइन नौसेना की आंतरिक संस्था डायरेक्टोरेट ऑफ नेवल डिजाइन ने तैयार किया है, जबकि इसका निर्माण कोलकाता की गार्डन रीच शिपबिल्डर्स एंड इंजीनियर्स लिमिटेड ने किया है। 'शिवालिक श्रेणी, 'कोलकाता' श्रेणी और 'आइएनएस कागोर्ता' के बाद 'कदमत' नवीनतम स्वदेशी पोत है जिसमें किसी अभियान से जुड़ी एक साइरा तस्वीर (कोमन ऑपरेशनल पिक्चर) मुहैया कराने के लिए कई हथियारों और सेंसरों को जोड़ा गया है। इस पोत में कई अत्याधुनिक उपकरण हैं जिनमें रेल-लेस हेल्मो पारगमन प्रणाली और एकीकृत एसडब्ल्यू, हेलीकोप्टर के लिए मोड़ने लायक हेंगर दरवाजा शामिल है। इससे न केवल पोत की हमलावर क्षमता बढ़ती है बल्कि संवेदनशील चीजों का पता लगाने की उसकी सामर्थ्य भी बढ़ती है। धवन ने कहा कि पोत की हथियार और सेंसर प्रणाली खासतौर पर स्वदेशी है और यह इस अहम क्षेत्र में भारत की बढ़ती क्षमता को दर्शाता है। इस पोत में एक अत्याधुनिक 3डी मध्यम रेंज का हवाई...सतह निगरानी राडार लगा है जिसे डीआरडीओ ने विकसित किया है और इसका उत्पादन भारत इलेक्ट्रॉनिक्स ने किया है। आइएनएस कदमत पर 13 अधिकारी और 180 नाविक तैनात होंगे। कमांडर महेश चंद्र मुद्रिल इसके पहले कमांडिंग अधिकारी होंगे। पूर्वी नौसैनिक कमान के तहत पूर्वी बेड़े का यह एक अभिन्न हिस्सा होगा। एक एसडब्ल्यू पोत के रूप में यह अपने पूर्ववर्ती आइएनएस कदमत (पी 78) की विरासत को आगे बढ़ाएगा। आइएनएस कदमत (पी 78) ने 23 दिसंबर 1968 से 30 नवंबर 1992 तक करीब 24 साल नौसेना को अपनी सेवाएं दीं। इससे पहले, धवन ने गार्ड ऑफ ऑनर का निरीक्षण किया, सलामी ली और पोत के फलक (प्लाक) का अनावरण भी किया।

## South Korea seeks strategic weapons from United States

South Korea is in talks with the United States to deploy US strategic assets on the Korean peninsula, a South Korean military official said on Thursday, a day after North Korea said it successfully tested a hydrogen nuclear device. The United States and weapons experts voiced doubts the device was as advanced as North Korea claimed, but calls mounted for more sanctions against the isolated state for its rogue nuclear program. The underground explosion angered China, which was not given prior notice although it is North Korea's main ally, pointing to a strain in ties between the neighbours. The test also alarmed Japan and the White House said Prime Minister Shinzo Abe agreed with US President Barack Obama in a telephone call that a firm global response was needed. Obama also spoke to President Park Geun-hye of South Korea to discuss options. A South Korean military official told Reuters the two countries had discussed the deployment of US strategic assets on the divided Korean peninsula, but declined to give further details. After North Korea last tested a nuclear device, in 2013, Washington sent a pair of nuclear-capable B-2 stealth bombers on a sortie over South Korea in a show of force. At the time, North Korea responded by threatening a nuclear strike on the United States. South Korea, technically in a state of war against the North, said it was not considering a nuclear deterrent of its own, despite calls from ruling party leaders. The United States is highly unlikely to restore the tactical nuclear missiles it removed from South Korea in 1991, experts said. The United States is also limited in its military response for fear of provoking an unpredictable regime in Pyongyang, said Anthony Cordesman, a defence policy expert at the Washington-based Centre for Strategic and International Studies think tank. "Any escalation in this region, any over-reaction can easily lead to not only a conflict between South and North Korea, but drag China and the United States and Japan into a confrontation," as well, Cordesman said. Hours after the latest nuclear test on Wednesday, the UN Security Council said it would work immediately on significant new measures against North Korea. Diplomats said that could mean an expansion of sanctions against Pyongyang, although major powers might balk at an all-out economic offensive. In the United States, Republican presidential candidates seized on the test to accuse Obama of running a "feckless" foreign policy that enabled North Korea to bolster its nuclear arms capabilities. US congressional sources said Republican leaders of the US House of Representatives were considering a vote as soon as next week to impose stiffer punishment on foreign companies doing business with Pyongyang. **SURPRISE** - North Korea has a long history of bellicose rhetoric against the United States and its Asian allies without acting on it, but Pyongyang's assertion that it had tested a hydrogen device, much more powerful than an atomic bomb, came as a surprise. North Korea also said it was capable of miniaturising the H-bomb, in theory allowing it to be placed on a missile and potentially posing a new threat to the US West Coast, South Korea and Japan. The US State Department confirmed North Korea had conducted a nuclear test but the Obama administration disputed the hydrogen bomb claim. "The initial analysis is not consistent with the claim the regime has made of a successful hydrogen bomb test," White House spokesman Josh Earnest told reporters. Wednesday's nuclear test took place two days ahead of what is believed to be North Korean leader Kim Jong Un's birthday. North Korea called the device the "H-bomb of justice", but its state news agency also said Pyongyang would act as a responsible nuclear state and would not use its nuclear weapons unless its sovereignty was infringed. The impoverished state boasts of its military might to project strength globally but also plays up the need to defend itself from external threats as a way to maintain control domestically. Hydrogen bombs use a two-step process of fission and fusion that releases substantially more energy than an atomic bomb. However, it will likely take several days to determine more precisely what kind of device Pyongyang set off as a variety of sensors, including "sniffer planes", collect evidence. A US government source said Washington believes North Korea had set off the latest in a series of tests of old-fashioned atomic bombs. The size of the latest explosion was roughly consistent with previous tests and occurred in the same location as earlier tests. The United States had been anticipating a North Korean nuclear test for some time, with intelligence indicating possible preparations such as evidence of new excavations of underground tunnels at the site. Jeff Baden, Obama's former top Asia adviser and now a senior fellow at the Brookings Institution think-tank, said the test could have as much, or possibly more, to do with China as the United States. "China's leadership has concluded that they have to do something to build ties with North Korea, that they have sunk too low - what the North Koreans want to signal is that if we're moving toward normal relations, it's on our terms not yours. "The long term message to the US is we're building a nuclear program because we regard that as the only way we can stand up to you in the Korean peninsula."

## North Korea 'H-Bomb' a test for china

Did North Korea "surprise" china by its so-called hydrogen bomb test? though Beijing's annoyance and participation in the un security council condemnation suggest that it's protégé may have crossed the line, the Stalinist state has been china's willing Catspaw in east Asia for decades. if china is really exasperated with north Korean dictator Kim Jong-Un, it is best placed to get him to mend his ways as it has all the levers that might work, controlling as it does over 80% of the regimes oil supplies. Some accounts say north Korea's food and energy reserves may not add up to a month making it susceptible to china's pressure if Beijing were to get serious about reforming its client state. Yet, china has so far at least refrained from leaning on Pyongyang even as north Korea repeatedly reaffirms its claim to be a global pariah, far more isolated than Iran or Myanmar under the generals. Undeterred, North Korea has demanded its "de facto" nuclear capability entitles it to the same status as us or Russia or any p 5 nation. though comparisons might be inexact, north Korea does for china in east Asia what Pakistan does in south Asia - it helps keep Beijing's neighbours, competitors and adversaries off balance. Just as the threat Pakistan poses to India is seen as useful in keeping a potential rival tied down while increasing Beijing's leverage in border talks, North Korea threatens South Korea, a major us ally, and also Japan. North Korea's aggressive behaviour is a threat to us interests in the pacific and this makes kim a good bargaining chip despite his volatile behavior that often seems to exasperate his sole strategic partner. China was an important reason why UNSC did not act against North Korea's "withdrawal" from npt despite the treaty, by some interpretations, giving the council the right to restrain a nation if such action threatens international security. The six nation talks that include china and us have not made much headway. North Korea may almost certainly have figured in chinese leader xi jinping's extensive discussions with us president barack obama during his us visit last year. if any common thinking did emerge, it will be put to test now. in the meanwhile, North Korea has successfully developed missile capability and, against odds, managed a nuclear programme that can produce bombs, whether hydrogen or not.

---

## Nuclear test brings to the fore Pakistan's proliferation record

Top U.S. lawmakers and experts had expressed concern over Pakistan's proliferation history and its nexus with rogue nations like North Korea in helping them acquire nuclear weapons, a month before Pyongyang successfully conducted its first hydrogen bomb test. The issue came up for discussion during a Congressional hearing less than a month ago during a discussion where Congressmen and experts opposed the idea of a civil nuclear deal with Pakistan as they pointed to efforts of Pakistan officials and scientists in the past to share sensitive nuclear technologies with countries like Libya and North Korea. Henry Sokolski, executive director of the Nonproliferation Policy Education Center indicated that Pakistan might still help deliver any type of nuclear weapon capabilities to anyone. Earlier in the week, Sen. Ron Johnson had expressed concern that Saudi Arabia might buy nuclear weapons from Pakistan amidst increase in tension with Iran.



# North Korea: U.S. seeks Chinese leadership

By Varghese K. George

U.S. is also exploring new sanctions and strengthening of existing sanctions against North Korea, with the mandate of the UN Security Council. The U.S. said it considered the latest nuclear explosion carried out by North Korea a matter of U.S. national security, and declared that it would stand steadfast in its alliance commitment to South Korea. North Korea has repeatedly threatened the U.S. and has described the latest nuclear test a response to "U.S. aggression." "We do...we have an alliance commitment with the Republic of Korea that we take very, very seriously. Obviously, nobody wants to see it come to that. But we have a robust military presence there on the peninsula that is, as they say, they're ready tonight if they need to be," State Department Spokesperson John Kirby said, even as the U.S. reached out not only to its Asian partners including Japan, but also to China, seeking to use its influence - waning as it might be - over the Communist North. The White House said initial assessments by U.S. agencies doubted the North Korean claim that the device was a hydrogen bomb. Meanwhile, U.S. Deputy Secretary of State Antony J. Blinken will be heading to Asia next week on a tour that had been planned earlier, but the nuclear tension will top his agenda now. Officials speaking on background said though its influence over the North Korean dictator Kim Jong-un is diminishing, China remains a crucial player that can calm the situation and Secretary of State John Kerry would be talking to Chinese Foreign Minister soon. Kim Jong-un, unlike his father, is not particularly sensitive to Chinese concerns. Mr. Kirby said the U.S. was encouraged by the Chinese response that it "firmly opposed" the North's move. "We would look to and hope for China's leadership going forward with respect to holding the North accountable. ....we would look and hope for China's continued influence in a positive way," Mr. Kirby said. U.S. is also exploring new sanctions and strengthening of existing sanctions against North Korea, with the mandate of the UN Security Council. Then U.S. said it was open to talking to North Korea in the Six Party format, started in 2003 and aborted in 2009, involving China, Japan, South Korea, North Korea, Russia, and the United States. U.S. wants the talks to restart but with a predetermined objective of dismantling the nuclear apparatus of North Korea and also hopes China will take the initiative. North Korea has been unwilling to accept that. U.S. officials ruled out any review of the U.S. position on this. "If they want to return to the table through the Six-Party Talks, the onus is on them to show that they're willing to do that. And they have not shown a willingness to do that yet. But the international community is still willing to go down that road that obviously they aren't," Mr. Kirby said. North Korea under Mr. Kim Jong-un has made attempts to move away from total dependence on China. It improved relations with Russia and even got India to receive its Foreign Minister in 2015 - the first time in 25 years. While the U.S. is seeking Chinese lead in disciplining North Korean adventurism, it also has to signal to its allies in Asia that it would stand up against Chinese manoeuvres in South China Sea. Mr. Kerry spoke to his Vietnamese counterpart on Wednesday on China's test flight landings of civilian aircraft on Fiery Cross Reef in the South China Sea. "They decided to explore how best to improve Vietnam's maritime domain awareness and security capabilities," Mr. Kirby said.

## Microsoft launches Surface Pro 4 in India

Software giant Microsoft India on Thursday launched Surface Pro 4 -- its most awaited slim and light Windows 10-based tablet-cum-laptop with pixel sense technology. "Surface Pro 4 is designed to reinvent personal computing. It is a highly prolific and versatile device that will push the limits of performance and productivity in the most elegant way," Bhaskar Pramanik, chairman of Microsoft India, said at the launch. The Surface Pro 4 tablet can transform into a full-fledged laptop within seconds with the addition of a type cover. Surface Pro 4 is designed to run full Microsoft Office (sold separately) and bring the best of Windows 10 to life, including Windows Hello, Surface Pen, Microsoft Edge and Cortana. "Equipped with all the features of a fully powered laptop, Surface Pro 4 is a perfect choice for people who place a premium on portability yet require more productivity and performance out of their devices," Pramanik added. The 8.4 mm thin and 786 grams weighed device has an A4 sheet-size stunning 12.3-inch PixelSense display and is loaded with Windows 10 Pro. The display features 267 pixels per inch and 1300:1 contrast ratio, supports 100 percent sRGB colour, and has 5 million pixels. The different variants of Surface Pro 4 are powered by the 6th generation Intel Core m, Core i5 and Core i7 processors, enabling everyone from students, professionals to creators to do more on the go. Available in black and blue colours, the type covers takes Surface Pro 4 from tablet to laptop in an instant and features a redesigned mechanical keyboard with optimal key spacing for fast, fluid and quieter typing. The type cover has to be purchased separately for Rs.12,490. Unlike its predecessor Surface Pro 3, the redesigned Surface Pen that packs 1,024 levels of pressure sensitivity is included in the box. It can be purchased separately for Rs.5,990. The Surface pen lets a user write, draw and mark documents with precision ink on one end and an eraser on the other. One click and it opens a blank OneNote document while a click and hold activates the personal digital assistant Cortana. The device comes with a high-definition 5-megapixel front-facing camera and take 8-megapixel autofocus rear camera. A fully charged Surface Pro 4 gives up to nine hours of uninterrupted work. Microsoft has tied up with a variety of industries from different businesses, including computer software company Adobe. "Adobe and Microsoft have been collaborating to bring the full power of Adobe Creative Cloud to a mobile experience, optimised for pen and touch," Umang Bedi, MD, Adobe South Asia, said in a statement. "In our recent update to Creative Cloud, Adobe delivered Touch workspaces to InDesign CC and Illustrator CC, pioneering new ways of interacting with essential design apps and these workspaces were designed specifically for Windows tablets, including Microsoft Surface Pro," Bedi added. Following a unique 'Omni-Channel' strategy, Microsoft is selling the Surface Pro 4 through e-commerce website Amazon.in. It has also tied up with HCL for authorised distribution of the device. Microsoft India is also ranging Surface Pro 3 (128 GB, i3) variant in the country. While Surface Pro 3 with i3 processor, 4GB RAM and 128GB solid-state drive (SSD) is available for Rs.73,990, the basic model of Surface Pro 4 in consumer channel category with i5 processor, 4GB RAM and 128GB SSD is available for Rs.89,990. The i5 processor, 8 GB RAM and 256 GB SSD Surface Pro 4 variant is available for Rs.1,20,990 and i7 processor, 8 GB RAM and 256 GB SSD device at Rs.1,44,990. Microsoft also launched the device for commercial channel with more high-end features and hardware. The pre-booking of Surface Pro 4 began on Thursday via Amazon.in and the delivery of the device will begin from January 14.

## Science congress high on talks, low on inventions

Mysuru: last year, a delegate claimed Indians invented the airplane centuries ago. This year, the science and technology ministry's think tank talked of Indians building a flying car in two decades. As the 103rd Indian science congress drew to a close with three politicians as chief guests, what seemed that India continues to embrace sloganeering while giving science the short shrift. The five-day science congress seemed like it was set in a museum - several talks and papers talked up dated findings and technologies which, in a sense, reflected the state of science and discovery in the country. the conference depended on its 150-odd foreign delegates - out of more than 15,000 delegates - to provide insight into ongoing research. many of them also repeated earlier presentations. the exhibition did not have too many novel technologies or products with origins in India. The upside of the event was that students and teachers got a chance to hear lectures by Nobel laureates such as John Gurdon and Dan Shechtman as well as Indian-origin mathematician and Fields medal winner Manjul Bhargava who got mobbed after his session. "one of the greatest goals is to encourage and inspire young people. Because how often do young people of that local area get to interact with scientists from across the country - or the globe? thousands of students [got to hear] a Nobel prize winner speak about their work... for me personally, i got to talk to thousands of students. to get the reaction that i did, that makes it worthwhile. and when people come afterwards and say, 'after hearing you, i want to be a mathematician' - just hearing three or four people say that makes the whole trip meaningful," bhargava told toi. But over the five days, a number of scientists emphasised the fact that the country needs to invent in India and not just make in India to truly join the world's leaders. "It is discovery and inventions that lead to products that can be made," said American particle physicist and string theorist David Gross, who shared the 2004 physics Nobel with two others. "India will never be able to invent anything, if things do not change. the way you perform, act, teach and conduct yourselves must change. the bureaucratic, rigid system must go," he said. French physicist Serge Haroche, who was jointly awarded the 2012 Nobel prize for physics, echoed this thought when he said, "there must be local critical thinking that invokes curiosity so that discoveries and inventions are aimed at solving problems at hand with priority." Their statements do have data to back them: according to the World Intellectual Property Organisation, "domestic and foreign patents filed per 1 million population in India is at 17 compared to 4,451 in South Korea, 3,716 in Japan and 541 in China." India, home to more than 700 universities, produces fewer researchers than Kenya and Chile. according to Scopus, the world's largest citation database on scientific literature, India produces only four researchers for 10,000 working population, while Kenya and Chile produce six and seven respectively. Brazil has 14 researchers per 10,000 people, and China has 18. UK and US are at the top of the ladder, both of which have 79 researchers, and the second place is occupied by Russia with 58 researchers. At the opening session Bharat Ratna CNR Rao pointed out this very problem when he said, "Bengaluru is the IT capital where young people are earning very good money, but they are not interested in... intellectual exploration. We have created a generation of young people whose ambition is to make money. This has to change... scholarship, education, science should be important. Some kind of a social transformation has to happen." Hence, it's imperative that organizers make a greater effort to cut out sessions such as the one where a bureaucrat blew a conch and claimed it cures psychosomatic illnesses, and instead focus on science.

## You can soon charge your phone by walking

A new device has potential to harvest energy from natural motion to charge your phone while you walk. The system developed by researchers at MIT uses mechanical energy to produce voltage, requiring just small amounts of bending to create an electrical output. Its size and inherent flexibility could one day prove useful in wearable technology and other flexible electronics. The researchers say a system of this kind could be produced inexpensively on a large scale, according to MIT News. The bendable device is electrochemical, and works similarly to a battery or fuel cell. A layer of porous polymer soaked with liquid electrolyte is sandwiched between lithium alloys, which work as electrodes. A small bend will apply pressure to the layers, squeezing lithium ions through the polymer to create a counteracting voltage and an electrical current, which can be used to power a device. If a tiny weight were attached to one end of the system, the metal would bend with the movements of everyday activities, like walking. So far, the first generation model can operate with up to 15 percent efficiency, but the researchers say the conversion of mechanical to electrical energy will allow the device to work at optimal performance. 'It is not limited by the second law of thermodynamics,' MIT professor Ju Li, told MIT news. 'So in principle, [the efficiency] could be 100 percent.'

---

**The Pioneer**

**08 January 2016**

## India to set up labs for marine biology soon

Taking a cue from developed countries, India too has plans afoot to set up a slew of laboratories for studying marine biology in coastal States and islands of Andaman & Nicobar and Lakshdweep, with a major one in the southern Peninsular region of the country. K Vijay Raghvan, Secretary of Department of Biotechnology, which is under the aegis of the Union Ministry of Science & Technology, said work of setting up these laboratories will start soon. "There will be laboratories studying marine biology in coastal States with a major one in the southern Peninsula, which will be based on a hub-and-spoke model. We will also set up laboratories in Lakshadweep and Andaman & Nicobar Islands," he added. "These laboratories will specifically study the marine biology. We will also coordinate with other laboratories working in this field," he said. The US and Europe has several such research laboratories. Marine biology opens a new gamut of opportunities as it gives access to research in marine biology and its possible usage for betterment of people in the country which is endowed with an over 7,500 km-long coast line. Incidentally, there are other laboratories under different Departments/ Ministries researching on several aspects of oceanography. For instance the National Institute of Oceanography in Goa and National Institute of Oceanography Technology, Tamil Nadu have been actively involved in several aspects of marine research. "What we need to do is scale up our research in marine biology and collaborate more with other laboratories to understand marine biology Marine biology," the Secretary said.

---

**The Asian Age**

**08 January 2016**

## A vaccine may reduce new HIV infections

Adding a vaccine could significantly reduce new HIV infections and AIDS-related deaths, a new study focused on low and middle-income countries across Africa and Asia that are home to a vast majority of the world's people living with HIV/AIDS, has revealed. According to the study published in Plos One, a 70-percent-effective AIDS vaccine with a strong uptake could reduce new annual HIV infections in LMICs by 44 per cent in its first 10 years and 65 per cent in 25 years, ultimately averting tens of millions of infections and saving millions of lives. The study also demonstrates that an AIDS vaccine would be impactful and cost-effective across a wide range of product characteristics. "Higher efficacy, longer-lasting protection, fewer doses, lower vaccine costs and a more effective rollout will increase both health impact and cost-effectiveness," it said. "This study reaffirms how a safe vaccine could be instrumental in reducing the number of new infections and save millions of lives. This would significantly reduce the treatment costs and even reduce total response costs over time," said Dr Rajat Goyal, India country director at International AIDS Vaccine Initiative. He added, "It is clear that we must continue to expedite development of an effective HIV vaccine alongside critical efforts to accelerate and sustain broad and equitable access to effective antiretroviral therapy and new approaches for pre-exposure prophylaxis." According to the figures from the National Aids Control Organisation, India has around 21.17 lakh people living with HIV/AIDS, the third highest number in the world. Out of this 40.5 per cent of the total HIV infections are among women. "Adding a vaccine to a comprehensive HIV/AIDS response will hasten the end of the global epidemic and ensure that it won't rebound," said Ms Mitchell Warren, executive director, AVAC. "A safe, effective and affordable AIDS vaccine is an essential complement to the existing treatment and prevention options, and this study highlights why accelerated investments are needed for both implementation of what we have and the development of what we still need.



## Powerful new drug for children's cancer identified

Washington, Jan 7, 2016, (PTI): A powerful new drug with "unparalleled" strength against deadly forms of a childhood cancer that resist treatment has been identified by researchers. Building on previous experiences in treating some refractory subtypes of neuroblastoma with the anticancer drug crizotinib, researchers from The Children's Hospital of Philadelphia (CHOP) have devised new treatments for stubbornly deadly forms of the childhood cancer neuroblastoma. Usually appearing as a solid tumour in the chest or abdomen, neuroblastoma accounts for a disproportionate share of cancer deaths in children, despite many recent improvements in therapy. Neuroblastoma is particularly complex, with a bewildering variety of types and subtypes caused by separate and interacting gene mutations. "Our preclinical results provide a strong rationale for fast-tracking this drug into clinical trials in children with neuroblastoma," said Yael P Mosse, an oncologist at CHOP. The researchers studied how mutations in the anaplastic lymphoma kinase (ALK) gene cause types of neuroblastoma, stemming from their original 2008 discovery of the gene's role in most cases of rare, inherited neuroblastoma. Subsequent research showed that abnormal ALK changes drive approximately 14 per cent of high-risk forms of neuroblastoma. The researchers repurposed crizotinib, an ALK inhibitor, in clinical trials of children with neuroblastoma. In children with neuroblastoma, different mutations within the ALK gene respond differently to crizotinib. One particular mutation, labelled F1174L, resisted crizotinib, so the researchers sought a new-generation, more effective ALK inhibitor. They



tested numerous next-generation ALK inhibitors, and their data allowed them to pursue for further investigation an agent called PF-06463922, currently being tested in a phase clinical trial of an ALK-driven subtype of lung cancer in adults. That agent binds more tightly than crizotinib to the signalling kinases that drive cancer. In the current study, PF-06463922 was more powerful than crizotinib in both neuroblastoma tumour cell cultures and in animal models - mice with implanted neuroblastoma tumours derived directly from human patients. The researchers showed that PF-06463922 showed more profound inhibition of ALK than crizotinib, and at far lower concentrations. The tumours in the animals showed rapid, complete and sustained regression. "The responses we saw in animals were unprecedented in models of ALK-driven neuroblastoma, and bolsters the case for clinical development of this agent for treating children with this subtype of neuroblastoma," said Mosse. "The drug had very broad potency against a range of ALK mutations, so this could become the ALK inhibitor that is prioritised for frontline therapy in patients with ALK-driven neuroblastoma," she added. The findings were published in the journal Cancer Discovery.

## Five supersize stars found in other galaxies

Kissimmee, Florida: Scientists have discovered five supersize stars in other galaxies on a par with the monstrous stellar system in our own Milky Way. Eta Carinae is the brightest and most massive star system within 10,000 light-years of us. The binary system is located in the southern constellation of Carina, a ship's keel, and outshines our own sun by 5 million times. At the American Astronomical Society's annual meeting Wednesday, Rubab Khan, a researcher at Nasa's Goddard Space Center in Maryland, reported on the discovery of five "Eta twins." The Hubble Space Telescope and Nasa's Spitzer Space Telescope helped identify them. Khan says the discovery will shed light on the evolution of these stellar heavyweights. Eta Carinae erupted in the 1800s, hurling stellar material into space.

## FinMin examines tax exemption for NPS withdrawals

By Dilasha Seth

The ministry of finance is examining a Budget proposal by the Pension Fund Regulatory and Development Authority (PFRDA) to exempt national pension system (NPS) withdrawals from tax, bringing it at par with the employee provident fund (EPF) scheme to provide a level-playing field. "We have made a proposal to the finance minister ahead of the Budget, where exemption of NPS withdrawals from tax is one of the key recommendations. It will be a game-changer for NPS resulting in a substantial increase in the assets under management with more private subscribers coming on board," said a PFRDA official. The Seventh Pay Commission, headed by A K Mathur, also recommended an exempt-exempt-exempt (EEE) status for NPS, bringing it on a par with the EPF scheme in terms of tax-free withdrawals. Currently, the EPF withdrawals after five years of completion of service are tax exempt, while premature withdrawals before five years attracts tax ranging between 10 per cent and 34.608 per cent, barring exceptions. The EPF enjoys 'EEE' status, while NPS accounts have exempt-exempt-taxed status, where any contributions to the schemes and its earnings are not taxed but amount received on withdrawal is taxed. "There is indeed a case to provide EEE status to NPS, but the matter is still under examination," said a government official. In last year's Budget, the finance minister provided employees the option of choosing between EPS and NPS, and a Cabinet note for amendment of EPF&MP Act, 1952, has been sent to the law ministry for vetting. Of the over Rs 1 lakh crore assets under management of NPS, 90 per cent falls under the central and state government schemes. For the past five years, while the Employees' Provident Fund Organisation has been giving a return of 8.25-9.5 per cent to its subscribers, NPS has given a return of 9.2 per cent and NPS Lite has given a compounded annual growth return of 9.68 per cent. To incentivise Atal Pension Yojana (APY), the pension regulator has also asked for an extension of the co-contribution incentive by the government beyond December 31 to attract subscribers. It also wants to regulate superannuation funds. APY guarantees subscribers a monthly pension of Rs 1,000, Rs 2,000, Rs 3,000, Rs 4,000, or Rs 5,000 in turn for the contribution varying from Rs 42 to Rs 210 per month. The APY scheme got over one million subscribers on board by December. According to the current scheme, the government would co-contribute 50 per cent of the subscriber's contribution or Rs 1,000 per annum, whichever is lower, to each eligible subscriber account for five years to 2019-20, who join the NPS before December 31, 2015 and who are not income taxpayers. Currently, eight pension fund managers manage private-sector funds and only three run by state-owned financial institutions are allowed to manage central and state government funds. SBI Pension Funds, UTI Retirement Solutions, and LIC Pension Fund manage the government corpus. They also manage the private-sector corpus along with ICICI Prudential Pension Fund Management, Kotak Mahindra Pension Fund, HDFC Pension Management, Reliance Capital Pension Fund and the pension fund incorporated by Birla Sun Life Insurance.

---

The Hindu

08 January 2016

## Amitabh Kant to take over as NITI Aayog CEO

The IAS officer has been steering the government's two major campaigns to attract investments and create jobs. The Appointments Committee of the Cabinet chaired by Prime Minister Narendra Modi has appointed Amitabh Kant as the chief executive officer of NITI Aayog. The appointment will take effect after Mr. Kant retires from service in March. A 1980 batch Kerala cadre IAS officer, Mr. Kant is currently serving as the Secretary in the Department of Industrial Policy and Promotion in the Ministry of Commerce and Industry. Last Monday, the Cabinet's Appointments Committee had given Mr. Kant additional charge of the NITI Aayog CEO from January 1, with the extended tenure of the previous CEO Sindhushree Khullar coming to an end on December 31. In a fresh order issued on Thursday evening, the Ministry of Personnel said that the competent authority had approved the appointment of Mr. Kant as CEO, NITI Aayog, after his superannuation. "The terms and conditions of his appointment as CEO, NITI Aayog, will be conveyed in due course," the ministry said. Mr. Kant, who was earlier the CEO of India's largest industrial infrastructure project - the Delhi-Mumbai Industrial Corridor Development Corporation - has been the Industry Secretary since March 2014. He has been steering the government's two major campaigns to attract investments and create jobs - Make In India, which was launched in September 2014, and Start Up India that would be unveiled by Mr. Modi next Saturday. Mr. Kant was said to be in the reckoning for a couple of other post-retirement roles, including the chairperson of the Competition Commission of India, whose current chief, Ashok Chawla, retired on Thursday, and a possible role in the proposed National Industrial Corridor Development Authority.