

## **Newspaper Clips** **March 29-30, 2017**

### **March 30**

#### **Ericsson and IIT Delhi set up centre to research and explore 5G in India**

<http://telecom.economictimes.indiatimes.com/news/ericsson-and-iit-delhi-set-up-centre-to-research-and-explore-5g-in-india/57913763>

*Ericsson and the Indian Institute of Technology Delhi (IIT Delhi) have signed a memorandum of understanding to jointly roll out a '5G for India' program.*

Telecom equipment maker Ericsson and the Indian Institute of Technology Delhi (IIT Delhi) have signed a memorandum of understanding to jointly roll out a '5G for India' program.

The Swedish company Ericsson will set up a Center of Excellence with a 5G test bed and incubation center at IIT Delhi where IIT Delhi will be conducting research and development to explore the new mobile technologies.

The first series of the test will begin in the second half of 2017. Commercial availability of 5G is slated for 2020 globally.

"IIT Delhi has been committed to developing the latest technologies in close collaboration with industry. We are glad to be hosting the Ericsson Center of Excellence and Incubation Center, providing a big leap forward for 5G technologies ecosystem development in the country," said Ramgopal Rao, Director of IIT Delhi.

"Our core strength of academic excellence will provide a perfect partnership platform with Ericsson and contribute to India's Digital vision," added Rao.

"The 5G for India program is a major step towards understanding the power of 5G technology and how it can help aid Digital India initiatives, including the development of smart cities. The program will focus on delivering research, innovation and industrial pilots that use next-generation 5G networks as an enabler," said Paolo Colella, Head of Region India at Ericsson.

"It will help initiate cross-industry research collaborations focused on the integration of ICT in industry processes, as well as products and services," added Colella.

The program has been conceptualized to fast-track realization of Digital India initiatives and aid application development for Indian start-ups and industries.

#### **Exclusive: Emflux raises funding to build India's first electric sports bike**

<https://www.vccircle.com/exclusive-emflux-motors-raises-seed-funding-to-build-indias-first-electric-sports-bike/>

Bangalore-based Emflux Motors Pvt. Ltd has raised an undisclosed amount in angel funding from a group of investors to make what it touts as India's first electric sports bike, a top executive told VCCircle.

The investors include IIT Delhi alumnus and cryptocurrency expert Meher Roy; investment bankers Nikhil Arora, Meet Kanodia and Krit Sankalp; Nitish Singh, CFO of on-demand urban transport aggregator Jugnoo, and serial entrepreneur Risabh Gupta.

The company will use the funds to develop a high-performance electric motorcycle that will go into sales towards the end of next year, said Varun Mittal, CEO and co-founder of Emflux Motors.

The sports bike can reach 100 kmph in under 3.5 seconds and attain a top speed of 170 kmph. It also offers a commuting range of 200 km, Mittal claimed. "Its lithium ion battery would take less than 36 minutes to charge 80% from a DC fast charger," he said.

Emflux was founded by Mittal, an IIT Delhi alumnus, and Ankit Khatri, a graduate of Indus Business Academy. Mittal was chief growth officer at Jugnoo and worked with ecommerce firm Jumia in the past while Khatri worked with Jugnoo and CyberMedia previously.



The company is developing the whole drivetrain technology and all the key components in house including motor and motor controller (Mosfet-based technology), battery pack, battery management system, charger circuit, electric vehicle supply equipment, chassis, swingarm, suspension, and transmission in addition to styling including body panels and lighting.

The firm is currently giving the final touches to its first prototype, which it plans to showcase at Delhi Auto Expo 2018.

The bike, which is priced at Rs 5 lakh, will hit the market from October 2018. Only 199 units of the first model—a limited edition offering—will be produced. Emflux plans to begin work on the designs of the second model from October next year. The second model will be a less-expensive electric motorcycle in the naked bike category, but with similar performance specs. The company plans to launch two variants of the second model—one at Rs 3 lakh in the 150 km range and another Rs 3.5 lakh model in the 220 km range.

Apart from the charging plug installed at the user's premises, the company plans to install different charging points across cities.

The country has seen the emergence of a number of electric motorcycle developers over the last few years. While most of them look to target mass market, Emflux chose to go the premium way in terms of performance and cost.

Ather Energy, which is working on India's first smart electric scooter, prices its first model S340 at around Rs 1 lakh while T6X, the first model from Tork Motorcycles, is priced at around Rs 1.25 lakh.

"Yes, we are on the high end among electric bikes in India. It's a limited production; so it shouldn't be a problem. Nowadays people are buying performance bikes a lot. We are confident that we will have a market. Moreover, our ambitions are not limited to the Indian market," Mittal said.

In one of the significant developments in the electric-vehicle segment in India, Hero MotoCorp Ltd, the country's largest two-wheeler maker, invested Rs 205 crore (\$30.5 million) in Ather Energy in October last year. With the investment, Hero

MotoCorp owns a 26-30% stake in Bengaluru-based Ather Energy, which had previously raised funding from Flipkart founders Sachin Bansal and Binny Bansal and US hedge fund titan Tiger Global.

In April, electric bike startup Tork raised angel funding from a group of investors led by Bhavish Aggarwal and Ankit Bhati, co-founders of cab aggregator Ola.

In May 2016, electric bike company Ampere Vehicles Pvt. Ltd raised funding from Infosys co-founder and former CEO Kris Gopalakrishnan and Venk Krishnan, CEO of NuWare. The duo—along with Vineet Agarwal, managing director at Transport Corporation of India, and former Wipro executive Sudip Nandy—invested \$1.2 million in Ampere last year. The company also got the backing of Ratan Tata in July 2015.

Another player is YO Bykes, run by Mumbai-listed firm Electrotherm.

Mahindra Group has a US-based venture called Genze that is involved in the manufacturing of electric two-wheelers. The venture is separate from Mahindra Two Wheelers. Mahindra Group also sells electric cars through Mahindra Reva Electric Vehicles.

## **March 29**

### **Depressed IIT-Delhi student attempts suicide**

<http://timesofindia.indiatimes.com/city/delhi/depressed-iit-delhi-student-attempts-suicide/articleshow/57890353.cms>

A first year IIT-Delhi Engineering Physics student attempted suicide by jumping from the terrace of his hostel on Wednesday morning, police said.

Nineteen-year-old Nitish Kumar Purthick, who hails from Ranchi, was admitted to AIIMS trauma centre in a critical condition. He has received fractures in the legs among other injuries.

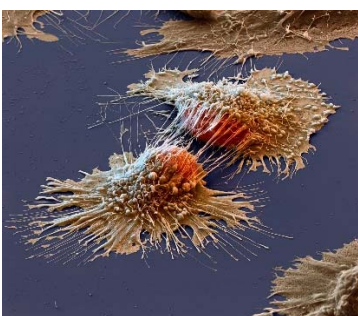
According to Nitish's roommate, he was depressed since couple of days and did not want to study engineering.

Nitish jumped from the fourth floor of Vindhyanchal hostel around 4am.

"According to Nitish's roommate, he seemed very depressed and acting differently... the roommate went to call the security guards and before he could return, Nitish went to the terrace and jumped," Chinmoy Biswal, Additional Deputy Commissioner of Police, told IANS.

### **IIT Bombay found a way to block cancer**

<http://www.caravanalive.com/india/iit-bombay-found-a-way-to-block-cancer-17524.html>



IIT Bombay's researchers have discovered a pathway that is the reason for the progress of cancer metastasis, meaning spread of cancer cells from its origin site to new areas of the body. Medically, the findings are with potential in controlling metastasis and thus reduce deaths due to cancer.

Findings of the study were published in *Oncotarget*, a reputed journal in medical science, specialized in cancer research. Surgical removal of primary tumours has long been used as treatment for localised tumours, but treating cancer metastasis remains a big challenge. "Cancer stem cells are one cause of cancer metastasis. However, there is no study done so far to examine the impact of biophysical properties of cancer stem cells in cancer metastasis," says Dr Rahul Purwar, Assistant Professor at Department of Biosciences & Bioengineering at IIT Bombay.

Contractile dynamics of a tumour cell represents one of the most important biophysical properties and is closely associated with cell spreading and cell adhesion properties of tumour cell. Increased cell contractility in breast cancer can initiate the escape of cancerous cells from their primary sites to distant organs that is called metastasis.

Dr Purwar's investigating teams as well as earlier researchers have discovered a close relationship between cell contractility, i.e., ability of cells to contract and invasiveness in breast cancer cells, ovarian cancer cells and melanoma cells. Increased contractility is correlated with increased migration of cells which helps in metastasis.

The head of the research team, Dr Purwar explains that with this study, we identified a special pathway which CSCs use to invade the extracellular matrix and metastasize to other organs. Surprisingly, we observed that blockade of this pathway by pharmaceutical drugs completely abolished the invasion of CSCs as well as other tumour cells. Thus, targeting this distinct pathway may lead to the development of robust and long term remission of cancer metastasis.

This breakthrough provides the first evidence of targeting biophysical properties of cancer stem cells for controlling metastatic cancer. Further works too are required to translate the findings before it goes for clinical use.

### **Indian Army inks pact with IIT-M to enhance critical technology areas in armed forces**

<http://news.webindia123.com/news/Articles/India/20170328/3082036.html>

The Indian Army has signed a Memorandum of Understanding (MoU) with the Indian Institute of Technology-Madras (IIT-M) to identify and enhance the critical technological areas in the armed forces. The objective of the MoU, signed by IIT-M Director Prof Bhaskar Ramamurthi and Deputy Chief of Army Staff (P and S) Lt Gen Subrata Saha at the IIT Madras campus here, was to facilitate prestigious institutions like IITs achieve a better understanding of the critical technology requirements of the Indian Army through seamless interaction between the IIT-M faculty and the Army officers. They would identify areas that require Research and Development and student projects. Such projects would be initiated jointly by both the IIT-M and the Army. "There are also plans to commercialize Intellectual Property Rights (IPR) achieved through this collaboration", according to a IIT-M release today. Speaking on the occasion, Prof Bhaskar Ramamurthi said "the IIT-M faculty will work closely with the Indian Army to identify areas where the Institute can contribute positively to enhancing the capabilities." The MoU also envisaged the Army sponsoring four officers for Doctoral programs, besides a five-day Technology Development Program for 15 officers on a biannual basis. Both the parties would also organize lectures to share their respective knowledge and experience, effectively linking IIT-M research community to the Indian Army as a resource to solve problems that require research and experimentation, the release said. Observing that the Indian Army would gain immensely with this collaboration, Lt Gen Subrata Saha said the Indian Army will post a liaison officer at the IIT-M campus to coordinate this collaborative effort, the progress of which would be monitored by Dr Ravindra Gettu, Professor, Department of Civil Engineering. Specific projects would be taken up as a result of this collaboration on research topics of mutual interest, the release said.