Newspaper Clips
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Foreign Faculty Members under GIAN Programme for IITs, IIMs and IISc

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http://www.jagranjosh.com/articles/foreign-faculty-members-under-gian-programme-for-iits-iims-and-iisc-1441023058-1

Under the Global Initiative of Academic Networks (GIAN) programme, some of the major higher education academic institutes like IIMs, IITs and IISc would get foreign faculty members for this academic year. The national coordinator for collaborating with institutes like IITs, IIMs, IISc, and NITs under GIAN has been selected to be IIT-Kharagpur.

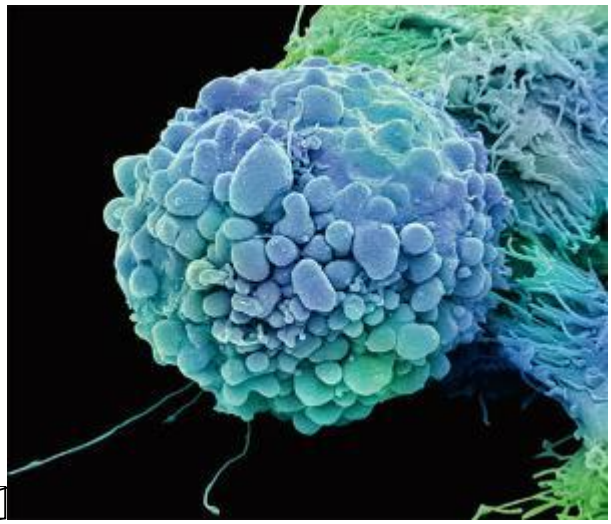
According to the Director of IIT Kharagpur, Professor P P Chakrabarti they have planned 500 such courses by foreign teachers for the academic year 2015-16. For this purpose there has been outlay of about Rs. 35 crore. There would be faculty members joining in as distinguished, adjunct, visiting faculty or professor of practice for various institutes. There would be other faculty members would come by to deliver short or semester long courses in these institutes. Such courses would be for credit and would be made available by the host institution for participation from other institutions.

Through ISWT (International Summer Winter Term), flagship programme of IIT Kharagpur, international experts would be able to teach in India. There would be a concerned motivations among them to work on problems related to India and would help developing the quality of course material and niche areas. The foreign faculty members could use both video and print medium to cater to a large number of students and teachers together in order to solve the problems in the niche areas of study. There would be new pedagogic methods would also also get developed and documented through this programme and topics of national and international interest would be given priority.

GIAN implementation committee Chairman Vinay Sheel Oberoi, who is also the Secretary of Department of Higher Education under the Union Ministry of Human Resources Development, would implement the programme in the various institutes. This would further create possibilities of future collaborations in research and development with the international faculty and students of international institutes of repute.

IISc finds way to bust brain cancer

http://www.bangaloremirror.com/bangalore/others/IISc-finds-way-to-bust-brain-cancer/articleshow/48749771.cms



A multi-institute research led by the Indian Institute of Science (IISc) has opened the gates to finding a permanent cure for the deadliest brain cancer, called glioblastoma multiforme (or GBM). The researchers have found that GBMs use a hitherto-unknown war strategy of 'befriending' anti-tumour cells, called microglial cells, in the vicinity of the rapidly growing tumour. The microglial cells are the brain's immunity response to growing GBM tumours.

The researchers led by Prof Kumaravel Somasundaram of Department of Microbiology and Cell Biology at IISc found that GBMs produced high amounts of a protein called Macrophage Colony Stimulating Factor (MCSF). The MCSF is responsible for rapid growth of blood vessels in the tumour. The blood vessels help the tumour grow and spread rapidly. But the molecules in the MCSF also do something more destructive: As the microglial cells converge on the tumour to stem its growth, the MCSF molecules counter them and subvert their task of restricting the tumour's growth. The MCSF then forces the microglial cells to secrete another protein called Insulin-like Growth Factor-Binding Protein 1 (IGFBP1), which renders its own creator - the microglial cells - tumour-friendly by betraying its loyalty to the brain.
This is because the IGFBP1 directly contributes to the formation of new blood vessels, thus boosting the capabilities of the MCSF, the main villain of the piece. This further speeds up the growth and spread of the deadly brain tumours, or GBMs.
"Our findings show that IGFBP1 can be the potential alternate candidate for developing a targeted therapy for GBM" explains Mamatha B N, the first author of the paper, published in the Journal of Biological Sciences. No research in the world has yet highlighted this aspect of fighting these deadly brain tumours.
Mamatha uses the word 'alternate' because of this: Aiming to restrict tumour growth, many forms of current therapeutic practices for malignant tumours also include drugs inhibiting formation of new blood cells that boost tumours. Most drugs of this category target VEGF (Vascular Endothelial Growth Factor), a protein that aids formation of blood cells. In the case of GBMs, however, clinical trials with the US Food & Drugs Administration (FDA) approved anti-VEGF drug (Bevacizumab) have been a dismal failure.
This research - jointly conducted by IISc, Bengaluru-based National Institute of Mental Health and Neuro Sciences (NIMHANS), Sri Satya Sai Institute of Higher Medical Sciences, and Institute for Functional Genomics (INSERM, University of Montpellier in France) - has turned the spotlight on that one protein, IGFBP1, secreted by the microglial cells that have turned pro-tumour due to the action of the MCSF molecules. Prof Somasundaram said the aggressiveness of this tumour is also attributed to the high relapse rates among patients.

TREATMENT FOR GBMS

SURGERY Tumors may be surgically removed by the open-skull procedure called craniotomy. When a patient presents

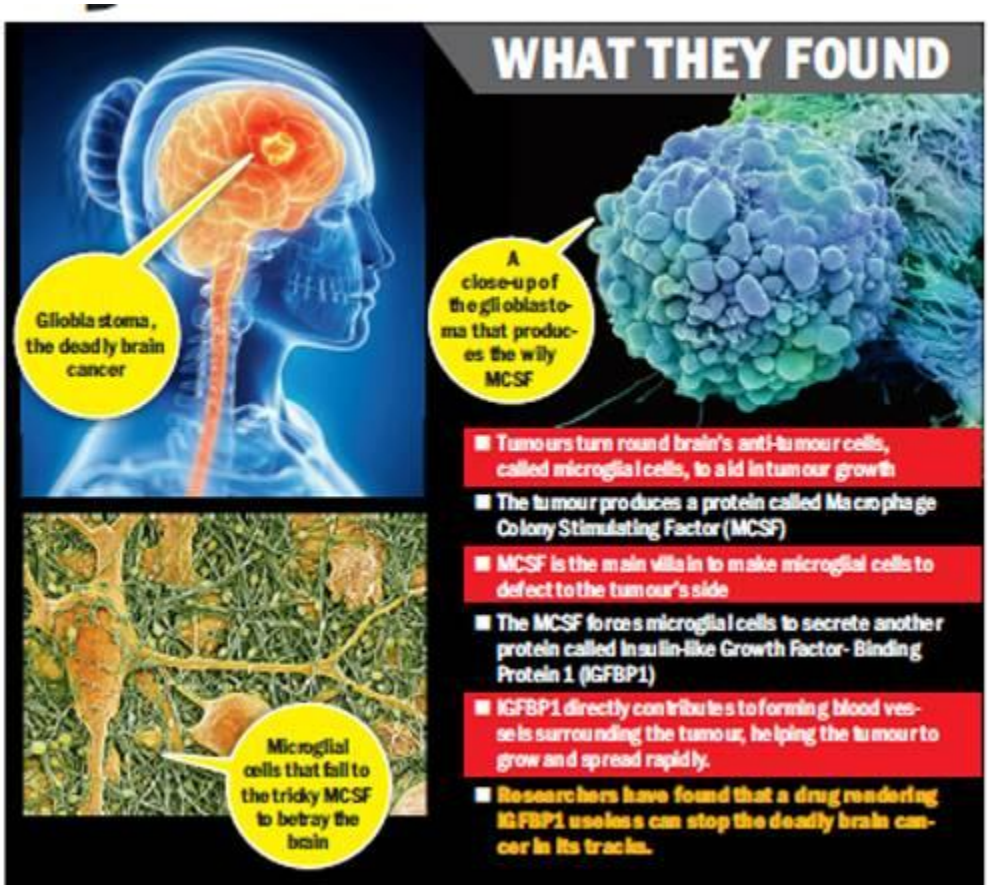
with symptoms that are either life-threatening or significantly affect the quality of life, a craniotomy is usually the first treatment offered.

ULTRASONIC Instead of using a scalpel to remove a brain tumor, ultrasonic aspiration are also used. Ultrasonic waves fragment the tumour before the fragments are removed by suction. Mostly done when tumour is in an inaccessible part of the brain.

RADIOSURGERY Stereotactic radiosurgery is a one-session non-invasive treatment performed by a neurosurgeon. The most common type of neurosurgical radiosurgery is performed with the Gamma Knife instrument, which NIMHANS too has.

RADIOTHERAPY Radiotherapy is a treatment usually directed by a radiation oncologist using one of many types of linear accelerators machines. Radiotherapy is not a one-session treatment like radiosurgery.

CHEMOTHERAPY Chemotherapy uses drugs to kill abnormal cells; however, it also affects normal cells. Each year new chemotherapy drugs and combinations of drugs are used in research to find the best drugs to treat malignant brain tumors. The blood-brain barrier to the brain protects the brain from receiving toxic materials and therefore may make efforts with chemotherapy less favorable. (Source: International Radio Surgery Association)



WHAT ARE GLIOBLASTOMAS?

Glioblastoma (GBM) is a grade IV brain cancer. And in cancers, grade IV is as high as it gets. In other words, GBM is an extremely aggressive tumour with low survival expectancy - not more than 2 years.

WHY ARE THEY DANGEROUS?

GBM tumours have numerous blood vessels within them. These fuel the tumour's increasing demand for energy and other substances. New blood vessels are rapidly formed from existing ones. Using the new blood vessels, the cancer grows more vigorously and sometimes even spreads to other parts of the brain, making therapy and ensuing recovery more difficult.

WHAT THEY FOUND

* Tumours turn round brain's anti-tumour cells, called microglial cells, to aid in tumour growth * The tumour produces a protein called Macrophage Colony Stimulating Factor (MCSF) * MCSF is the main villain to make microglial cells to defect to the tumour's side * The MCSF forces microglial cells to secrete another protein called Insulin-like Growth Factor-Binding Protein 1 (IGFBP1) * IGFBP1 directly contributes to forming blood vessels surrounding the tumour, helping the tumour to grow and spread rapidly. * Researchers have found that a drug rendering IGFBP1 useless can stop the deadly brain cancer in its tracks.

Smriti Irani Inaugurates Academic Session at IIM-Bodh Gaya

http://www.ndtv.com/india-news/smriti-irani-inaugurates-academic-session-at-iim-bodh-gaya-1212844

Patna: Union Human Resource Development Minister Smriti Irani today formally inaugurated the academic session of Indian Institute of Management (IIM) in Bodh Gaya in Bihar, officials said.

She also inaugurated the IIM-Bodh Gaya's transit campus at Magadh University's (MU) directorate of distance education (DDE) building, education department official R.K. Mahajan said.

According to officials, the university has given around 20,000 sq ft of space spread over two floors of the DDE building for the IIM's temporary campus. The second and the third floors would be used as administrative and academic blocks, respectively.

"The university has also allotted 90 rooms in its hostel block to accommodate first-batch students of IIM-Bodh Gaya.

IIM-Calcutta is the mentor institution for IIM-Bodh Gaya for a year.

The union minister also laid the foundation stone of seven buildings of the Central University of South Bihar (CUSB) campus at Panchanpur near Gaya town, about 100 km from here.

The CUSB campus is coming up on 300 acres of land.

IIT Hyderabad model to make ECGs available in remote areas

http://indiatoday.intoday.in/story/iit-hyderabad-model-to-make-ecgs-available-in-remote-areas/1/462137.html

A team of four IIT-H professors **have proposed a two-tier-cardiology framework in which electrocardiogram (ECG) records can be transmitted even when available resources such as power and bandwidth are limited.**

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Researchers at IIT- Hyderabad (IIT-H) have come up with a cost and time effective method of treating cardiovascular diseases (CVDs) in remote areas where tertiary care units are not available.

A team of four IIT-H professors have proposed a two-tier-cardiology framework in which electrocardiogram (ECG) records can be transmitted even when available resources such as power and bandwidth are limited.

"A major chunk of the population lives in rural or semi-urban areas where healthcare facilities are inefficient and inadequate. To address this issue, we used compressed sampling ECG signals, applied mathematics and allied fields like machine learning," S. Jana, one of the team-members, told IANS.

"We have successfully designed practical compressive classifiers that require only a fraction of the usual number of ECG measurements for analysis, classification and reconstruction," he added.

The team, also comprising C.S. Sastry, B.S. Chandra, and T. Roopak, believes that ECGs play a critical role in timely diagnosis and treatment, and the slightest delay in conducting and communicating the results could prove fatal for patients in need of immediate medical attention.

"The proposed solution will not only reduce the need to transport the patient to a diagnostic centre but will also be time- and cost-effective," Jana added.

The team also believes that the proposed new paradigm will bring even the remotest communities under the ambit of integrated healthcare services.

"Although the algorithm accuracy check has been done, the system will take at least six months to be functional on the ground," Jana said.

Cardiovascular diseases (CVDs), which have been the leading cause of death the world over, are also a major health issue in rural and urban India.