Newspaper Clips
May 9, 2014

Indian Express ND 09/05/2014 P-12

Caste on campus

IIT Bombay begins a preliminary survey of caste bias. This must lead to deeper introspection and change

A SURVEY of first-year students at IIT Bombay which found that 56 per cent of those belonging to the SCs, STs and OBCs feel the presence of subtle discrimination and extra academic pressure, has followed on the heels of a recent analysis of IIT-JEE results showing that the test is tilted towards those from urban, high-income backgrounds. This is the first time an IIT has tried to examine internal social bias. It's about time more institutions began to pay attention to these dysfunctions.

The fact that caste is a cause of trauma is undeniable. There have been instances of bright, promising Dalit and Adivasi students being driven to depression and suicide in India's best educational institutions, including the IITs, IISc and AIIMS. Entering these portals of technical education is seen as the ultimate measure of intellectual merit and a guarantee of professional success. It is no secret that many in the IIT faculty and student pool have appealed for it to remain unsullied by reservations, and suggested that the burden of having come in with the aid of a quota would make it more difficult to meet exacting academic standards. In this argument, the definition of meritorious and deserving takes place at the point of the test alone, oblivious to the ways in which educational capital reproduces itself, the way intellectual endeavours have been tacitly "reserved" for upper castes for so long. For a Dalit or tribal student, apart from schooling disadvantages, often families are not able to provide books, minimal assistance or even the leisure that better-off students take for granted. They fight ferocious odds to get past the entrance test, to join a system they believe in. And once in, quota students commonly face jokes, stigmatisation, assault, discrimination from faculty and insensitivity from the administration.

Higher educational institutions can redeem themselves only by first confronting what happens. In 2006, the Centre set up a committee under S.K. Thorat to study complaints at AIIMS. It recommended many steps, including transparency in grading, equal opportunity cells and punishment for instances of caste discrimination. Nothing came of those recommendations. But these exemplars of technical education, held up as the great dream by so many Indians, must examine the ways they carry on social biases and fail to be fully inclusive. That involves confronting caste.

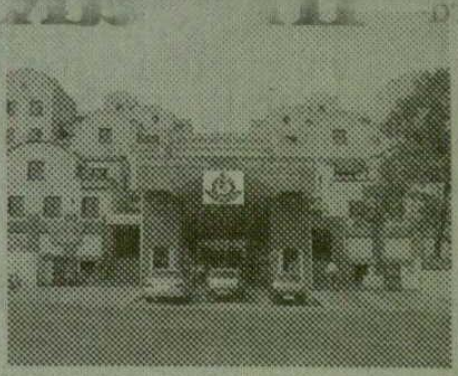
Asian Age, ND 09/05/2014 P-4

PROBE INTO HARASSMENT OF IIT STUDENTS

AGE CORRESPONDENT
BHUBANESWAR, MAY 8

The seven-member probe panel constituted by the Indian Institute of Technology (IIT)-Bhubaneswar, has begun its investigation into the allegation of sexual harassment levelled by two MTech girl students against a professor of the institute.

The IIT-B authorities have already asked the accused professor to go on an indefinite leave till the inquiry process is over.



The seven member committee probing the allegations has five women members, sources in the IIT-B said.

Reports said two girl students of MTech second year had lodged a complaint with the Institute's director on April 27 against the accused professor for sexually harassing them for the last few months. They had also alleged in their complaint that the professor used to call them frequently to his chamber.

"We have formed a committee on Monday to conduct an inquiry after we received formal complaints.

Dainik Bhasker, ND 09/05/2014 P-11

यूएस में सबसे ज्यादा भारतीय फैकल्टी आईआईटी, मद्रास और कानपुर के

अमेरिका की टॉप यूनिवर्सिटीज़ में कंप्यूटर साइंस के प्रोफेसर सबसे ज्यादा मद्रास और कानपुर आईआईटी के हैं। ब्राउन यूनिवर्सिटी के एक ताजा सर्वे के अनुसार सबसे ज्यादा फैकल्टी देने वाले टॉप-10 अंडरग्रेजुएट संस्थानों में आईआईटी, मद्रास पांचवें और आईआईटी, कानपुर नौवें स्थान पर है। आईआईटी, मुंबई को 12वां स्थान मिला है। मद्रास, कानपुर, मुंबई, दिल्ली और खड़गपुर आईआईटी के छात्र रहे 122 फैकल्टी अभी अमेरिकी यूनिवर्सिटीज़ में मौजूद हैं। सबसे ज्यादा फैकल्टी देने वाले संस्थानों में मैसाचुसेट्स इंस्टीट्यूट ऑफ टेक्नोलॉजी पहले स्थान पर है। आईआईटी संस्थानों का नंबर उसके बाद आता है। सर्वे का एक रोचक तथ्य यह है कि आईआईटी से बैचलर डिग्री कोर्स करने वाले इन फैकल्टीज़ में से किसी ने भी भारत से डॉक्टरेट की डिग्री नहीं ली।

Hindustan Times, ND 09/05/2014
P-11

HC MAY TAKE UP TODAY JEE(MAIN) RE-EXAM PLEA

HT Correspondent
letters@hindustantimes.com

NEW DELHI: A PIL, filed in the Delhi high court challenging the conduct of the engineering entrance examination — JEE(Main) and JEE(advanced) — and seeking a re-examination of JEE(Main), may come up for hearing on Friday.

"Yes, there is a petition in which several questions have been raised on the exam. It can come for hearing on Friday," a CBSE official said.

The PIL filed by Pushpanjali Das is seeking a direction to the CBSE and 16 IITs to "re-conduct JEE (Main), 2014 within a week's time and not on multiple days."

"The JEE (Main), is on multiple days and the question paper has to be different and the result happens to be of varying difficulty. Thus in a particular year some students face difficult question papers and some face relatively easy question papers and there is very clear possibility that an average student may get an easier question paper on a particular day and score more marks than a deserving student."

The petitioner has pleaded for a direction declaring the results of the JEE (Main) 2014 conducted by CBSE as null and void with immediate effect. More than 12 lakh students had appeared for JEE(main) this year.

IIT-Kharagpur Team Wins $1 Million at Rice Business Contest

The BetaGlide team from IIT-Kharagpur failed to win first place, but won the largest investment — $1 million investment from Houston, Texas-based Mercury Fund — in the Rice Business Plan Competition. (ShauLin Hom photo)

- *United States*

Disappointment for the BetaGlide team from the Indian Institute of Technology at Kharagpur at not making the finals of the Rice Business Plan Competition in Houston, Texas, quickly turned to elation April 12, when they found out that they would receive the biggest cash prize given at the contest.

BetaGlide, which makes a mobile application tool, was presented a re-endorsed check (see photo above) for $1 million from Houston-based venture capital firm Mercury Capital, which independently ranks teams and chooses a top team.

The 14-year-old competition awarded a record $2.9 million in cash and prizes to winners among the 42 competing teams.

“BetaGlide is in a space we watch really closely, mobile application development," Aziz Gilani, fund director at Mercury Fund, told the Houston Chronicle. The $1 million investment was the largest ever awarded to a single team.

The first place winner of the competition was Medical Adhesive Revolution of RWTH Aachen University, Germany, which won $407,500 and will receive an added $100,000 if it agrees to open its headquarters in Houston. The team is developing a biodegradable surgical adhesive that seals wounds in the human body in seconds.

According to BetaGlide’s profile on CrunchBase, the co-founders of BetaGlide are Amritanshu Anand and Anshul Singhle.

Read more at http://www.indiawest.com/news/18784-iit-kharagpur-team-wins-1-million-at-rice-business-contest.html#k6mEZCgVk06uVoO6.99

Stupid Decision

WEDNESDAY, MAY 07, 2014
www.hindustantimes.com

PU to pay faculty for getting research paper published

Surender Sharma
Surender.sharma@hindustantimes.com

CHANDIGARH: Panjab University will now sanction funds to teachers to get their research papers published in reputed journals.

Panjab University dean research Lalit Kumar Bansal said that the varsity has decided to sanction ₹10,000 annually to faculty members to help get their research published in reputed national and international journals.

The scheme would be open to all humanities as well as science faculty members.

"Many reputed journals charge a hefty sum to publish research papers. The idea is to provide aid to those who wish to publish their papers," said Bansal, adding that the decision would help promote quality research in the university.

Teachers must submit their proposal to the chairperson of their department, who would further submit it to dean research for scrutiny, after which the amount would be released.

PROMOTING RESEARCH

- University will disburse ₹10,000 annually for publishing research papers in reputed national or international journals.
- The funds will be given only for publications with an impact factor of 3+ or journals publishing research papers for at least twenty years.
- For the publication of research papers in emerging fields, research papers will have to be cleared by a panel of three internal experts of the department concerned.

In order to ensure that grants are given to only good research papers, the university has laid down three conditions.

"Funds would be given to the teachers applying for publication of article in a journal with an impact factor of 3+ or either a journal publishing research papers for at least twenty years," Bansal said. The conditions would apply to both national as well as international publications.

For publishing papers in emerging fields, the paper will have to be cleared by a panel of three experts formed by the department concerned with the field.

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>
> LALIT KUMAR BANSAL, dean research, PU

Business Standard ND 09/05/2014 P-14

India has 54 of world's largest, most powerful public companies

Chinese firms bag top three spots on *Forbes'* annual list

PRESS TRUST OF INDIA
New York, 8 May

Mukesh Ambani-led Reliance Industries Ltd (RIL) leads the pack of 54 Indian companies on *Forbes'* annual list of the world's 2000 largest and most powerful public companies, with Chinese companies occupying the top three slots. The Global 2000 is a comprehensive list of the world's largest, most powerful public companies, as measured by revenues, profits, assets and market value.

China is home to the world's top three biggest public companies and five of the top 10. The US retains its dominance with the most at 564. Japan trails, with 225.

India has 54 of the world's biggest companies. RIL is ranked 135, with a market value of $50.9 billion and $72.8 billion in sales as of May.

GLOBAL TOP 5

Rank	Company	Country
1	ICBC	China
2	China Construction Bank	China
3	Agricultural Bank of China	China
4	JPMorgan Chase	US
5	Berkshire Hathaway	US

It is trailed by State Bank of India, 155, with a $23.6 billion market value. The other Indian companies are Oil and Natural Gas Corporation (176), ICICI Bank (304), Tata Motors (332), Indian Oil (416), HDFC Bank (422), Coal India (428), Larsen & Toubro (500), Tata Consultancy Services (543), Bharti Airtel (625), Axis Bank (630), Infosys (727), Bank of Baroda (801), Mahindra & Mahindra (803), ITC (830), Wipro (849), Bharat Heavy Electricals (873), GAIL India (955), Tata Steel (983) and Power Grid Corporation of India (1,011).

Also making to the list are Bharat Petroleum (1,045), HCL Technologies (1,153), Hindustan Petroleum (1,211), Adani Enterprises (1,233), Kotak Mahindra Bank (1,255), Sun Pharmaceutical Industries (1,294), Steel Authority of India (1,329), Bajaj Auto (1,499), Hero Motocorp (1,912), Jindal Steel & Power (1,955), Grasim Industries (1,981) and JSW Steel (1,990).

This year's companies are from 62 countries, up from 46 in the inaugural 2003 rankings. They had revenues of $38 trillion and profits of $3 trillion, with assets worth $161 trillion and a market value of $44 trillion.

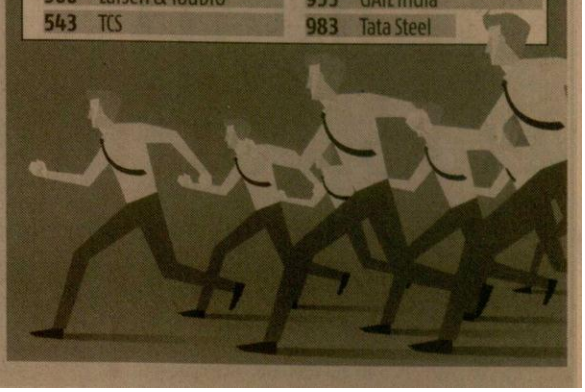
These figures of the 62 countries are higher than a year ago, with the largest growth being in market value (up 13 per cent).

The firms employ 90 million.

SPRINTING... FASTER

Top 20 Indian companies listed on *Forbes'* Global 2000

Rank	Company	Rank	Company
135	Reliance Industries	625	Bharti Airtel
155	State Bank of India	630	Axis Bank
176	ONGC	727	Infosys
304	ICICI Bank	801	Bank of Baroda
332	Tata Motors	803	Mahindra & Mahindra
416	Indian Oil	830	ITC
422	HDFC Bank	849	Wipro
428	Coal India	873	BHEL
500	Larsen & Toubro	955	GAIL India
543	TCS	983	Tata Steel



The Pioneer ND 09/05/2014 P-1

44 Indians shortlisted for one-way trip to Mars!

PTI ■ LONDON

Forty-four Indians, including 17 women, are among 705 aspirants shortlisted for an ambitious private mission to send four people on a planned one-way trip to Mars in 2024 to colonise the red planet.

The number of people remaining in this 'once in many lifetimes opportunity' is now just 705, including 44 Indians. The Indian aspirants come from cities such as New Delhi, Hyderabad, Mumbai, Kolkata, Pune and Thiruvanathapuram

The Netherlands-based non-profit organisation Mars One announced that 353 hopefuls from around the world have been eliminated from the selection programme to become the first human Mars colonists.

The number of people remaining in this "once in many lifetimes opportunity" is now just 705, including 44 Indians of whom 27 are men and 17 are women. The Indian aspirants come from cities such as New Delhi, Hyderabad, Mumbai, Kolkata, Pune and Thiruvanathapuram.

The applicants came from over 140 countries and more than 20,000 Indians had applied for the first round. The remaining candidates will be interviewed by the Mars One selection committee.

"We're incredibly excited to start the next phase of Round 2, where we begin to better understand our candidates who aspire to take such a daring trip. They will have to show their knowledge, intelligence, adaptability and personality," Mars One Chief Medical Officer Norbert Kraft, said.

Continued on Page 4

44 Indians shortlisted for one-way...

From Page 1

In December 2013, Mars One announced the selection of 1,058 candidates, including 62 from India, from the original pool of over 200,000 applicants. Mars One asked them to complete two tasks by March 2014: to provide a medical statement of health from their physician and open their on-line Mars One applicant profile to the public.

The 418 men and 287 women who successfully completed both tasks will be invited for a personal interview. 313 candidates originally come from the Americas, 187 from Europe, 136 from Asia, 41 from Africa, and 28 from Oceania.

The group of candidates that will not continue to the interview round dropped out due to personal reasons and medical reasons. "The withdrawals due to personal reasons were mostly in the age group 40-50. Candidates who had to withdraw from their dream due to medical reasons were mostly in the age group of 20-35," Mars One said.

"What really left an impression with us is the fact that the medical tests turned out to have a major impact on the candidate's lives, as some of them found out that they needed to undergo an operation, were sick and needed medical attention, or even had a malignant form of cancer that otherwise would not have been detected in such an early stage," Kraft said.

After the interview round, the group of candidates will be narrowed down to several international teams consisting of two women and two men. These teams of prospective Mars settlers will be prepared for the mission by participating full time in an extensive training programme.

Training to go to Mars will be their full time job. Whole teams and individuals might be selected out during training when they prove not to be suitable for the mission. Mars One will repeat the selection process regularly to train additional teams to replace eliminated teams and crews of settlers that have successfully left Earth to live on Mars.

Ultimately, six teams of four people will be selected to train from 2015 to 2024, leading up to the final four who will make the historic one-way trip to Mars. ***PTI***

Times of India, ND 09/05/2014 P-19

One-way trip to Mars: 44 Indians are shortlisted

London: Forty-four Indians, including 17 women, are among 705 aspirants shortlisted for an ambitious private mission to send four people on a planned one-way trip to Mars in 2024 to colonise the red planet.

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Times of India, ND 09/05/2014 P-19

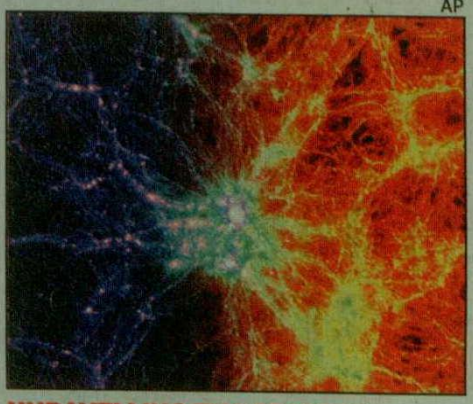
1st realistic virtual universe created

Washington: Move over Matrix, astronomers have created the first realistic virtual simulation of the universe, tracking 13 billion years of cosmic evolution.

The computer simulation enables researchers to understand how galaxies, black holes and other cosmic phenomena evolved. Known as Illustris, it follows the complex development of normal and dark matter over 13 billion years, matching features observed in the real universe. Illustris tracks the development of the universe from 12 million years after the Big Bang up to the present, and identified more than 41,000 galaxies in a simulated space 350 million light years on each side.

Over the past two decades, researchers have been attempting to build accurate computer simulations of the development of the universe using computer programmes. AGENCIES

AP



UNRAVELLING THE SECRETS

Economic Times ND 09/05/2014 P-19

It gives rise to hope for new antibiotics, and fear of strange organisms running amok

Scientists Create Life With Alien DNA

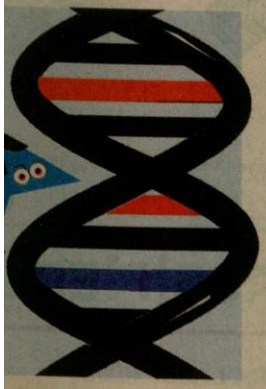
ANDREW POLLACK

Scientists reported Wednesday that they had taken a significant step toward altering the fundamental alphabet of life — creating for the first time an organism with DNA containing artificial genetic code.

The accomplishment might eventually lead to organisms that can make medicines or industrial products that cells with only the natural genetic code cannot. The scientists behind the work at the Scripps Research Institute in the US have already formed a company to try to use the technique to develop new antibiotics and vaccines, though a lot more work needs to be done before this is practical.

The work also gives some support to the concept that life can exist elsewhere in the universe using genetics different from those on Earth.

"This is the first time that you have had a living cell manage an alien genetic alphabet," said Steven A Benner, a researcher in the field at the Foundation for Applied Molecular Evolution in Florida, who was not involved in the new work.



But the research, published online by the journal *Nature*, is bound to raise safety concerns and questions about whether humans are playing God. The new paper could intensify calls for greater regulation of the budding field known as synthetic biology, which involves the creation of biological systems intended for specific purposes.

"The arrival of this unprecedented 'alien' life form could in time have far-reaching ethical, legal and regulatory implications," Jim Thomas of the ETC Group, a Canadian advocacy organisation, said in an email. "While synthetic biologists invent new ways to monkey with the fundamentals of life, governments haven't even been able to cobble together the basics of oversight, assessment or regulation for this surging field."

Despite the great diversity of life on Earth, all species, from simple bacteria to human beings, use the same genetic code. It consists of four chemical units in DNA, sometimes called nucleotides or bases, that are usually represented by the letters A, C, G and T. The sequence of these chemical units determines what proteins the cell makes. Those proteins in turn do most of the work in cells and are required for the structure, function and regulation of tissues and organs.

The Scripps researchers chemically created two new nucleotides, which they called X and Y. They inserted an X-Y pair into the common bacterium E coli. The bacteria were able to reproduce normally, though a bit more slowly than usual, replicating the X and Y along with the natural nucleotides.

In effect, the bacteria have a genetic code of six letters rather than four, perhaps allowing them to make novel proteins that could function in a completely different way from those created naturally.

"If you have a language that has a certain number of letters, you want to add letters so you can write more words and tell more stories," said Floyd E Romesberg, a chemist at Scripps who led the work.

Romesberg dismissed concern that novel organisms would run amok and cause harm, saying the technique was safe because the synthetic nucleotides were fed to the bacteria. Should the bacteria escape into the environment or enter someone's body, they would not be able to obtain the synthetic material and would either die or revert to using only natural DNA.

"This could never infect something," he said. That is one reason the company he co-founded, Synthorx, is looking at using the technique to grow viruses or bacteria to be used as live vaccines. Once in the bloodstream, they would conceivably induce an immune response but not be able to reproduce. One possible use of an expanded genetic alphabet is to allow cells to make new types of proteins.

Combinations of three nucleotides in DNA specify particular amino acids which are strung together to make proteins. With rare exceptions, living things use only 20 amino acids.

But there are many amino acids that could possibly be used in proteins, potentially adding new functions. Ambrx, a San Diego company, is incorporating novel amino acids into certain proteins that are used as drugs in an effort to make the drugs more potent in killing tumours or make treatments last longer in the bloodstream.

The bacteria described in the *Nature* article each contained only a single X-Y pair. It is not yet known whether a cell would function if it contained many such pairs. It is also not clear how long the bacteria would survive and retain the foreign code. The article mentions growing them for only about 24 replications over 15 hours.

Besides any possible practical applications, the research into the field, which is sometimes called xenobiology, could shed light on why living things evolved to have four nucleotides. It could be that four is the most efficient number, in which case organisms with expanded genetic codes might not function very well. The New York Times

Times of India, ND 09/05/2014 P-4

DU colleges allowed to relax cutoffs for girls

Manash Pratim Gohain | TNN

New Delhi: In line with its inclusive policy announced ahead of undergraduate admissions, Delhi University has decided that girl students will continue to avail relaxation in cutoffs.

Every year, along with cutoffs, colleges would set some additional eligibility criteria which include relaxation in cutoff to girl aspirants in select colleges and courses. Last year, 18 colleges offered relaxation in cutoffs of 1-5% across courses.

This year, the university has restricted colleges from issuing additional eligibility criteria and instead made them uniform. But colleges will be allowed to continue with this particular additional eligibility criterion in order to continue with its policy of inclusiveness and women's empowerment.

However, it will let colleges decide if they want to provide any relaxation to girl students in certain courses. The colleges must write to the dean of students' welfare for approval.

"As a matter of policy the university will allow the colleges to give relaxation to girl students so that a good number of girls join the university. Colleges can write to the university seeking approval of this criterion. There is no point of issuing a uniform guideline on this as it will not serve any purpose. For example, girls from Walled City who want to pursue higher studies in a neighbourhood college will not be benefited if the university decides on a uniform 2% relaxation across colleges. Instead it is better to allow Zakir Husain College to offer 3% relaxation or whatever it deems fit so that girls can get admission. There is no point in making all college relax cutoff for girls as there will be colleges which get more girl students," said joint dean, dean of students' welfare and media coordinator, DU, Malay Neerav.

Speaking about the process, dean, DSW, J M Khurana said, "The colleges need to write to the university and the respective cutoff relaxation percentages for girls will subsequently approved. These will then be issued along with the cutoffs."

The university is also planning to restrict colleges from issuing an individual set of criteria on admitting gap year students. Earlier, students used to face a lot of hardship due to nonexistent uniform criteria. However, according to university officials, a uniform guideline will be issued which will help students who took a gap year apply for admission.

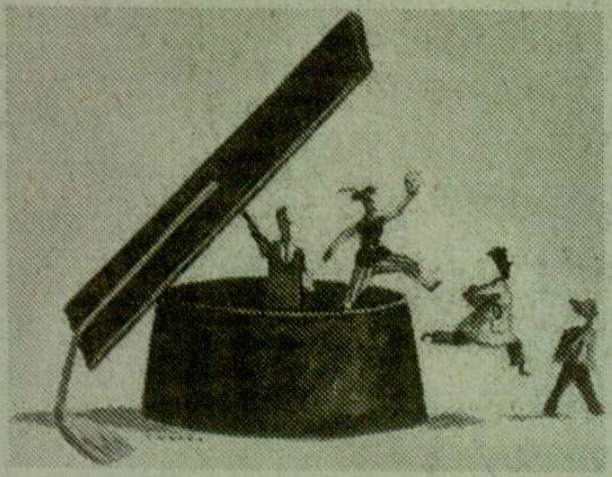
Rajasthan Patrika, ND 09/05/2014 P-10

अमरीका ने भारतीय विद्यार्थियों के लिए खोले दरवाजे

28 मई को एक हजार से ज्यादा का इंटरव्यू

अहमदाबाद

ahmedabad@patrika.com



मुंबई स्थित अमरीकी महावाणिज्य दूतावास ने अमरीका में शिक्षा प्राप्त करने के लिए भारतीय विद्यार्थियों के लिए दरवाजे खोले हैं। स्टूडेंट वीजा दिवस पर 28 मई को दूतावास एक हजार से ज्यादा एफ1 स्टूडेंट वीजा आवेदकों का इंटरव्यू लेगा। महावाणिज्य दूतावास के स्टाफ व अमरीका-भारत एजुकेशनल फाउंडेशन इस दौरान विद्यार्थियों की मदद करेगा और अमरीका में शिक्षा पर पूरी जानकारी देगा। अमरीकी महावाणिज्यदूत पीटर हास के अनुसार फिलहाल अमरीका में एक लाख से ज्यादा भारतीय विद्यार्थी उच्च शिक्षा ग्रहण कर रहे है। अमरीका में पढ़ रहे विदेशी विद्यार्थियों में भारत का स्थान चीन के बाद दूसरा है। गत वर्ष अक्टूबर से मुंबई, नई दिल्ली, कोलकाता, चेन्नई व हैदराबाद के अमरीका महावाणिज्यदूत कार्यालय से एफ1 वीजा प्राप्त करने वाले विद्यार्थियों की संख्या में रिकॉर्ड वृद्धि हुई है। यह संख्या गत वर्ष से 40 फीसदी ज्यादा है।

Times of India, ND 09/05/2014 P-10

Experts create living organism with 'alien' DNA

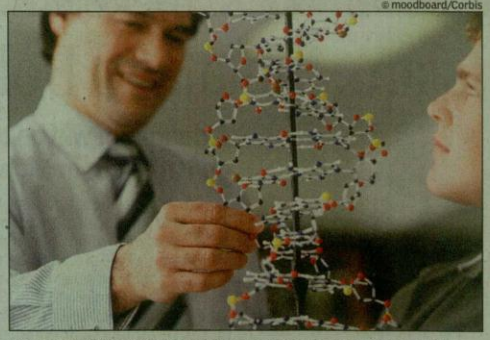
Bacterium E Coli Gets An Expanded Artificial Genetic Code Of 6 Letters, Instead Of 4

Andrew Pollack

Scientists reported on Wednesday that they had taken a significant step toward altering the fundamental alphabet of life — creating an organism with an expanded artificial genetic code in its DNA.

The accomplishment might eventually lead to organisms that can make medicines or industrial products that cells with only the natural genetic code cannot.

The scientists behind the work at the Scripps Research Institute have already formed a company to try to use the technique to develop new antibiotics, vaccines and other products, though a lot more work needs to be done before this is practical.



© moodboard/Corbis

The accomplishment might lead to organisms that can make medicines or industrial products that cells with only the natural genetic code cannot

The work also gives some support to the concept that life can exist elsewhere in the universe using genetics different from those on Earth. "This is the first time that you have had a living cell manage an alien genetic alphabet," said Steven A Benner, a researcher in the field at the Foundation for Applied Molecular Evolution in Gainesville, Florida, who was not involved in the new work. But the research, published online by the journal Nature, is bound to raise safety concerns and questions about whether humans are playing God.

The new paper could intensify calls for greater regulation of the budding field known as synthetic biology, which involves the creation of biological systems intended for specific purposes.

"The arrival of this unprecedented 'alien' life form could in time have far-reaching ethical, legal and regulatory implications," Jim Thomas of the ETC Group, a Canadian advocacy organization, said in an email.

"While synthetic biologists invent new ways to monkey with the fundamentals of life, governments haven't even been able to cobble together the basics of oversight, assessment or regulation for this surging field."

Despite the great diversity of life on Earth, all species, from simple bacteria to human beings, use the same genetic code. It consists of four chemical units in DNA, sometimes called nucleotides or bases, that are usually represented by the letters A, C, G and T. The sequence of these chemical units determines what proteins the cell makes. Those proteins in turn do most of the work in cells and are required for the structure, function and regulation of the body's tissues and organs. The Scripps researchers chemically created two new nucleotides, which they called X and Y. They inserted an X-Y pair into the common bacterium E coli. The bacteria were able to reproduce normally, though a bit slowly, replicating the X and Y along with the natural nucleotides. In effect, the bacteria have a genetic code of six letters rather than four, perhaps allowing them to make novel proteins that could function in a completely different way from those created naturally.

"If you have a language that has a certain letters, you want to add letters so you can write more words and tell more stories," said Floyd E Romesberg, a chemist at Scripps who led the work. NYT NEWS SERVICE

Business Line, ND 09/05/2014 P-22

BREAKTHROUGH

Now, synthetic organisms can pass on DNA

Life forms carrying beefed-up DNA code could be designed to create new drugs

IAN SAMPLE

The first living organism to carry and pass down to future generations an expanded genetic code has been created by American scientists, paving the way for a host of new life forms whose cells carry synthetic DNA that looks nothing like the normal genetic code of natural organisms.

The new radicals

The work challenges the dogma that the molecules of life making DNA are special. Organisms that carry the beefed-up DNA code could be designed to churn out new drugs that otherwise could not be made. "This has very important implications," said Floyd Romesberg, whose team created the organism at the Scripps Research Institute in La Jolla, California.

X and Y mark the spot

From the moment life gained a foothold on Earth the diversity of organisms has been written in a DNA code of four letters.

The new study moves life beyond G, T, C and A, the molecules or bases that pair up in the DNA helix, and introduces two new letters of life: X and Y.

In living organisms, G, T, C and A come together to form

two base pairs, G-C and T-A. The extra synthetic DNA forms a third base pair, X-Y. These base pairs are used to make genes, which cells use as templates for making proteins.

Romesberg found when the modified bacteria divided they passed on the natural DNA. But they also replicated the synthetic code and passed that on to the next generation. That generation of bugs did the same.

"What we have now, for the first time, is an organism that stably harbours a third base pair, and it is utterly different to the natural ones," Romesberg said. Says Martin Fussenegger, a synthetic biologist at ETH Zurich, "DNA replication is the cream of the crop of evolution which operates the same way in all living systems."

The synthetic code could be used to build biological circuits in cells which do not interfere with the natural biological function; scientists could make cells which use the DNA to manufacture proteins not known to exist in nature. The development could lead to a vast range of protein-based drugs.

THE GUARDIAN

Economic Times ND 09/05/2014 P-8

'SHIKSHU' ENGAGES STUDENTS OF B-SCHOOL WITH ALUMNI MENTORS

IIM-B Mentoring Initiative to be on a Bigger Platform

RICA BHATTACHARYYA
MUMBAI

Last October, Vijaydeep Nadkarni and Abhilash Patri, students from executive post graduate programme (EPGP), class of 2013-14 from IIM Bangalore (IIM-B), got a first-hand experience of a typical day in the office of Bhargav Dasgupta, MD and CEO, ICICI Lombard. Both Nadkarni and Patri were part of a mentoring initiative "Shikshu" piloted by the premier business school in 2013, which engaged 14 of its EPGP students with seven of its illustrious alumni mentors.

"Our day with Dasgupta helped us understand and appreciate what it takes to be an effective business leader in a top-notch organisation," says Nadkarni and Patri. Come September, prompted by response from students and the enthusiasm of the alumni-mentors, the institute will launch Shikshu on a bigger scale, targeting the entire EPGP Class of 2014-15 with a batch size of 58.

The programme will run during late September and early October once the students return from their international immersion. Among the alumni mentors will be people like Bhargav Dasgupta, MD and CEO, ICICI Lombard; Himanshu Kapania, MD, Idea Cellular; Hitesh Oberoi, MD and CEO, Info Edge (India), which owns Naukri.com; Atul Shinghal, CEO, Probe Equity Research; Amit Sharma, vice-president and general manager operations at IBM, among others. Typically, two students will be assigned to one alumni-mentor. There are likely to be 18-20 mentors.

"Shikshu, which means 'apprentice' in Sanskrit, gives EPGP students the rare opportunity of experiencing first-hand how a CEO's office works... It is unique because it ensures that EPGP student and IIMB alumni participants are matched based on commonalities in their personal and professional profiles," says Professor G Shainesh, chairperson, EPGP, IIM-B.

The engagement initiative will have several of IIM-B's alumni, who work at the top echelons of various reputed organisations, mentor the EPGP students, who spend a day at the offices of the alumni, attend meetings and interact with the senior most executives at these offices. It will connect EPGP students, for one full day, with alumni mentors who are willing to provide advice on career exploration, navigating the EPGP programme landscape, and how to bridge the gap from student life to work life. After the mentoring is done the mentors will remain in touch with the students to set expectations.

IIM-B's mentoring initiative connects its EPGP students for one full day with alumni mentors who teach them about their office work

"From the alumni-mentor's perspective, mentoring an EPGP student is a valuable way to stay connected with the IIM-B community while making a difference to a new generation of students... Mentors reap many rewards including personal satisfaction and fulfillment, professional and personal rejuvenation, enhanced creativity, and improved interpersonal communication and leadership skills," says Shainesh.

The engagement initiative will use job-specific situations as the practice fields and rehearsal halls for learning complex skills. "The student has an opportunity to talk with his or her mentor, develop work scenarios that are effective and productive, and seek feedback about improving his or her skills and knowledge," says Shainesh.

rica.bhattacharyya@timesgroup.com

Times of India, ND 09/05/2014
P-19

Soon, cheap portable chip for instant blood tests

Washington: Scientists are developing a portable, credit-card-sized chip that can be used to run instant blood tests to detect anything from HIV to diabetes.

These labs-on-a-chip would not only be quick —results are available in minutes - but also inexpensive and portable, researchers said. They could be used miles from the nearest medical clinic to test HIV, diabetes etc. they said. But as powerful as they may be, they could be far better, said Shiyan Hu, an associate professor of electrical and computer engineering at Michigan Technological University.

Generally, a lab-on-a-chip (LOC) can run no more than a test or two because the chips are designed manually, said Hu. If the LOC were made using computer-aided design, you could run dozens of tests with a single drop of blood.

"In a short time, you could test many conditions. This really would be an entire lab on a chip," he said. AGENCIES

Times of India, ND 09/05/2014 P-14

The IIT-groomed babu who said 'no' to Modi

TIMES NEWS NETWORK

Lucknow: Varanasi district magistrate Pranjal Yadav, the man in the eye of a storm for having denied Narendra Modi permission to hold a rally in Benia Bagh on grounds of security, earned both bouquets and brickbats for his decision on Thursday.

While BJP demanded his resignation, with senior leader Arun Jaitley calling him a "delinquent officer", Aam Aadmi Party convener Arvind Kejriwal called him a "good official," and chief election commissioner V S Sampath stood by him by refusing to transfer him.

Pranjal Yadav

Born in 1980, Pranjal, an IIT graduate and 2006 batch IAS officer, was Azamgarh district magistrate before he was transferred to Varanasi in 2013. He is known in the region for having removed encroachments and widened roads and is said to be working on a new master plan for Varanasi. He undertook the ambitious work of river profiling to protect the Ganga's historic ghats and also won praise for having helped Netaji Subhash Chandra Bose's aide Nizamuddin get the status of a freedom fighter, which the 107-year-old had been denied for long.

The controversy over the Benia Bagh rally was not his first brush with BJP. Earlier, in December 2013, when Modi wanted to first address a rally and then visit the Sankat Mochan and Vishwanath temples, he got BJP to change the schedule for security reasons, thus ensuring that Modi first visited the temples and then addressed a rally, an IPS officer said.

Pranjal has been accused by BJP of being a close relative of SP national president Mulayam Singh Yadav. But SP leader Ram Gopal Yadav denied the charge, saying, "Not every Yadav is a relative of Mulayam Singh."

Pranjal was said to be in the good books of Mayawati when she was CM.

Times of India, ND 09/05/2014 P-14

First media centre at DU to open today

TIMES NEWS NETWORK

New Delhi: Delhi University will get its first media centre this admission season. Till now, there were no facilities or point for collection of information for journalists in the campus during admissions.

The new centre will be located in the conference centre, North Campus, near the office of the dean of students' welfare and will be open to journalists from Friday. The university has appointed a new joint dean of students' welfare, Malay Neerav, who has been entrusted with the additional charge of a media coordinator.

Neerav said journalists will get admission-related briefings on a regular basis during the course of admission. "The briefings will be more frequent once the sale and receipt of centralized admission forms starts. This will also be the single point for information collection".

Statesman ND, 09.05.2014, P-3

Safdarjung Hospital to have Delhi's first skin bank

SWIMMI SHRIVASTAVA
swimmi.shrivastava@thestateman.net
New Delhi, 8 May

The Capital will have its first skin bank at Safdarjung Hospital in a year's time. It will also be a cadaver bank as well as tissue culture bank with state-of-the art equipment, some of which is being imported.

"Yes we have already started work on building it within the premises of our hospital and it will be completed within one year. Director General of Health Services (DGHS) gave the nod for the project. This is going to be very helpful in treatments of complicated burns and organ failure cases," said Dr BD Athani, medical superintendent of Safdarjung Hospital.

The new skin bank building is being built right behind the Sports Injury centre. It will be a high-tech building fully equipped with the latest machinery important for refrigeration and maintenance of human organs and skin.

Safdarjung Hospital is known for its burns department. It will be the second hospital to have an organ donation cadaver bank after All India Institute of Medical Sciences. This will provide respite to many patients who lose their skin or organs due to some ailment or accident. The project is being fully funded by the Union Health Ministry.

The nation's first skin bank in LTM Medical College & Hospital, Mumbai, was started in 2000 and has the capability of harvesting cadaveric skin grafts. Freezing of skin has been tried earlier and the necessary pre-requisites include treatment of skin with glycerol or dimethyl sulphoxide (DMSO). Short-term storage in liquid nutrient medium is clinically desirable for a certain length of time. Hence, refrigeration using nutrient media becomes essential to maintain its viability.

Earlier, many burn centres organised frozen skin banks based on liquid nitrogen as the refrigerating medium. Such systems are expensive and require careful handling, regular control and after filling. Maintenance problems are minimal, and the running cost is very low. Skin allografts have been found viable after up to 2 years of storage. In India, about 5 to 7 million burn cases occur every year and a great number of them can be salvaged if provided with a wound cover in time. The use of skin allografts is desirable in the treatment of patients with large wounds due to thermal injury.

NBT May 7

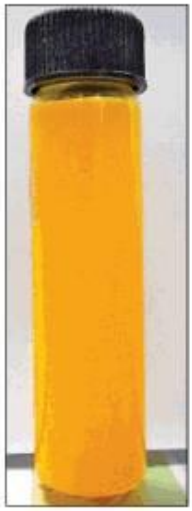
एएमयू ने नैनो तकनीक से कर दिया कमाल

अब मानसिक रोगों को मात देगी हल्दी

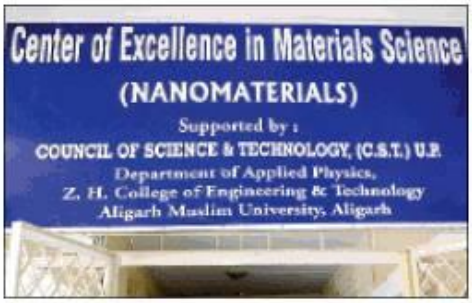
संतोष शर्मा, अलीगढ़

- हल्दी को पानी में बना दिया घुलनशील
- वैज्ञानिकों ने तकनीक का कराया पेटेंट

प्राचीनकाल से ही हल्दी अपने औषधीय गुणों के लिए मशहूर है। लेकिन, घाव भरने, कैंसर से बचाने, एंटीबायोटिक व एंटी-ऑक्सीडेंट होते हुए भी इसका प्रयोग काफी सीमित है। कारण यह कि हल्दी पानी में नहीं घुलती। अलीगढ़ मुस्लिम यूनिवर्सिटी (एएमयू) के वैज्ञानिकों ने नैनो तकनीक के कमाल से हल्दी को घुलनशील बना दिया है। इससे हल्दी केंद्रीय तंत्रिका तंत्र से जुड़ी तमाम मानसिक बीमारियों से निबटने में रामबाण साबित होगी। पानी में घुलने की तकनीक का एएमयू ने पेटेंट भी करा लिया है।



पानी में घुली हल्दी।



बड़े काम की चीज

अदरक परिवार की सदस्य हल्दी में कुरकुमिन (फाइटो मॉलीक्यूल) होता है। यही पीला रंग देता है। कुरकुमिन में चुस्त-दुरुस्त रखने, घाव भरने, कैंसर-रोधी, माइक्रो बैक्टीरिया से निबटने, नेफ्रो-प्रोटेक्टिव जैसे गुण होते हैं। हल्दी ऐसी एंटीबायोटिक है, जो किसी को 12 ग्राम तक खिलाने से हानि नहीं पहुंचाती। भरपूर गुणों के बावजूद इसका व्यापक लाभ नहीं मिल पा रहा है। वजह हल्दी का पानी में घुलनशील न होना है। इससे हल्दी के तमाम पोषक तत्व मल के जरिये शरीर से निकल जाते हैं।

नैनो का कमाल

एएमयू ने इसका तोड़ खोज निकाला है। यहां के सेंटर ऑफ एक्सीलेंस मैटेरियल साइंसेज (नैनो मैटेरियल्स) के प्रिंसिपल कोआर्डिनेटर प्रो. आलिम एच. नकवी, एप्लाइड फिजिक्स के चेयरमैन प्रो. शकील खान, डॉ. एम. वशी खान व डॉ. ब्रजराज सिंह ने नैनो तकनीक के जरिये कुरकुमिन को पानी में घुलनशील बनाने में कामयाबी हासिल की है। टीम ने आर्गेनिक साल्वेंट की मदद से हल्दी से इस मॉलीक्यूल को अलग किया। फिर, नैनो तकनीक से कुरकुमिन को घुलनशील बनाया। इसके कुछ तरीके पहले से हैं, लेकिन बेहद खर्चीले व इतने कठिन हैं कि व्यापक इस्तेमाल नहीं हो पाते। एएमयू ने रसायनों या भारी-भरकम संयंत्रों के बगैर ही यह काम कर दिखाया है। दुष्प्रभाव भी नहीं है।

दिमाग तक दवाएं

शोध टीम का दावा है कि हल्दी को पानी में घुलनशील बना लेने से मस्तिष्क से जुड़ी बीमारियों का कारगर इलाज संभव होगा। प्रकृति ने दिमाग में घुसपैठ रोकने के लिए ब्लड ब्रेन बैरियर (बीबीबी) बना रखा है। यह दवाओं को भी दिमाग तक नहीं पहुंचने देती। घुलनशील हल्दी के नैनो पार्टिकल इस बैरियर को भेद देंगे। घुलनशील हल्दी की उपलब्धता से ट्यूमर, घाव-चोट भरने और एंटी-ऑक्सीडेंट के बतौर इसका व्यापक इस्तेमाल हो सकेगा। वहीं, जेएन मेडिकल कॉलेज के ब्रेन रिसर्च सेंटर और एएमयू के जंतु विज्ञान विभाग में शोध भी शुरू हो चुके हैं।

हल्दी का नैनो स्वरूप तमाम रोगों के इलाज में कारगर साबित होगा। खासकर दिमाग से जुड़ी बीमारियों पर। इसका कोई साइड इफेक्ट भी नहीं है। हमने तकनीक का पेटेंट भी करा लिया है।

– प्रो. आलिम एच. नकवी, प्रिंसिपल कोआर्डिनेटर, एप्लाइड फिजिक्स डिपार्टमेंट।

Rajasthan Patrika, ND 09/05/2014 P-11

चीन ने खोजा बर्ड फ्लू का इलाज!

बीजिंग . चीनी वैज्ञानिकों ने बर्ड फ्लू का इलाज खोजने का दावा किया है। उन्होंने मानव रक्त में उस प्रोटीन को खोज निकाला है जो बर्ड फ्लू के जिम्मेदार वायरस एच7एन9 को खत्म करने में मददगार साबित हो सकता है। नेचर कम्युनिकेशन में छपे लेख में बताया गया है कि एच7एन9 से ग्रसित लोगों में एंग्योटेनिज्म-2 की अधिकता हो जाती है जो उनके गिरते स्वास्थ्य के बारे में सटीक जानकारी देने में मददगार होगी। एंग्योटेनिज्म-2 मानव शरीर में पाया जाने वाला एक प्रोटीन है जो हृदय, किडनी आदि में रक्त संचार और बल्ड प्रेशर को नियत्रिंत करने का काम करता है।

मिली नई दिशा : चाइनीज एकेडमी ऑफ इंजीनियरिंग के शोधकर्ता और एच7एन9 के इलाज पर शोधरत ली लांजुआन ने बताया, एंग्योटेनिज्म - 2 से जुड़ी जानकारी के बाद इसके इलाज पर नई दिशा मिली। एच7एन9 से जुड़ा पहला केस मार्च 2013 में चीन में मिला था। यह शरीर में कई अन्य बीमारियों को जन्म देता है।