

## Newspaper Clips

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P-18

# Experts 'create' synthetic proteins that sustain life

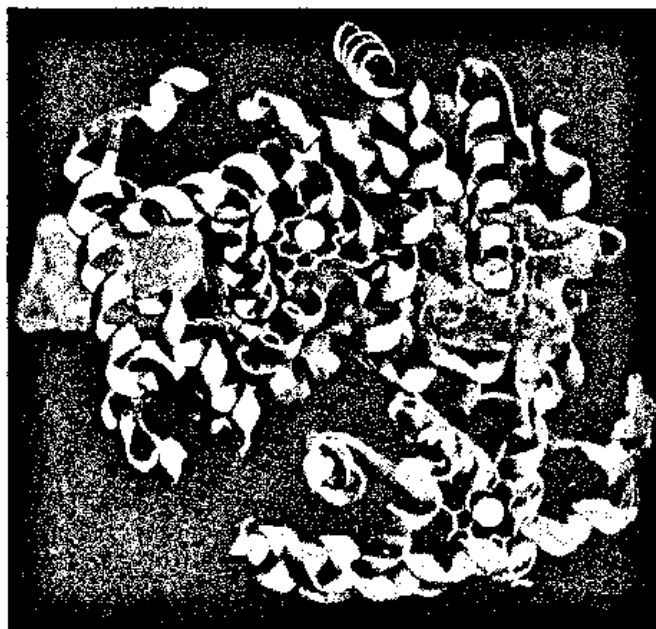
**Washington:** In what could help "build" new biological systems in the future, scientists claim to have created for the first time artificial proteins that enable the growth of living cells.

Princeton researchers have made a variety of proteins from amino acid sequences not found in nature. Those proteins have shown the ability to function nearly as well as natural proteins in living cells in the lab. "What we've here are molecular machines that function quite well within a living organism even though they were designed from scratch and expressed from artificial genes.

"This tells us that the molecular parts kit for life need not be limited to parts — genes and proteins — that already exist in nature," said Michael Hecht, who led the research. He added, "Our work suggests that the construction of artificial genomes capable of sustaining cell life may be within reach."

Nearly all previous work in synthetic biology has focused on reorganising parts drawn from natural organisms. In contrast, the results described by the team show that biological functions can be provided by macromolecules that were not borrowed from nature, but designed in the laboratory, says Hecht.

To achieve this, they created genetic sequences never seen in nature and produced completely synthetic proteins that were not mod-



**A NEW FRONTIER:** The work suggests that the construction of artificial genomes capable of sustaining life may be within reach

eled on living examples. They then inserted them into living bacteria, many of which thrived with their synthetic molecular machines.

For synthetic biology as a field, the ability to create components of life like proteins in the lab from a completely artificial genome is a big step, and one that ostensibly brings the field closer to fabricating life. AGENCIES

# India's global image is driven by private initiative

## SWAMINOMICS

SWAMINATHAN S ANKLESARIA AIYAR



What's India's position in the world as we enter a new decade? In 1990, India was seen as a bottomless pit for foreign aid, holding world records in starvation and poverty. India tried to project itself as a Third World leader, but at international conferences other developing countries saw India mainly as an expert drafter of documents, not an economic or political role model. Many other developing countries outpaced India.

How things have changed in the last 20 years! India is now called a potential economic superpower, political counterweight to China, and probable permanent member of the UN Security Council.

Recently, foreign secretary Nirupama Rao delivered the Harsh Mahindra lecture at Harvard on "India's Global Position". She provided a grand tour of India's foreign policy, and detailed relations with the US, China, and all regions. She covered much ground — terrorism, the Doha round, energy, climate change and much else. Her lecture was overwhelmingly about government policies and achievements.

I would have given a totally different lecture, emphasizing the role of corporations and individual Indians. These have altered India's global position beyond recognition, not the government.

During the Cold War, despite thorny governmental relations with the US, corporate and individual relations boomed. The US became India's

largest trading partner. No Indian migrated to the USSR, but a million migrated to the US, and lakhs more flooded western universities. Once the Cold War ended and economic reform began, these private initiatives spearheaded the transformation of India's global impact.

Cynics might call this the privatization of India's foreign policy, but that would be inaccurate. Private initiatives have been a parallel stream, not an auctioning of official foreign policy. But certainly, India's global impact is now driven mainly by private initiatives. Diplomacy buttresses these private initiatives, but now plays a supporting rather than leading role.

India is most famous for computer software and BPO. This instills fear in US workers and analysts, and has inspired a TV series "Outsourced." A new word, "Bangalored" has entered the dictionary.

Indian industrial houses have become global giants through acquisitions. Lakshmi Niwas Mittal is the world's biggest steel producer. Tata Steel took over Corus, six times its size. Tata Motors acquired and turned round Jaguar Land Rover, reviving world famous brands that had languished under Ford and BMW earlier. Birla has taken over Novelis to become a global name in aluminum.

Tata's Nano has made India world famous in autos. But Bajaj, in collaboration with Renault-Nissan, is planning a rival. The R&D for this has been entrusted to Bajaj, not Renault-Nissan, overturning traditional North-South technological relations.

Virtually all Fortune 500 companies of the US have set up shop in India—they cannot afford not to be here. IBM and Accenture have more employees in India than in the US.

After decades of minimal relations, Indian companies are now making a big impact in Latin America and Africa. The software majors have major operations in several Latin American countries, and so have pharma and truck producers. Jindal Steel is building Bolivia's first steel plant.

An even bigger change is evident in Africa. Bharti Airtel is now providing telecom in 15 African countries after taking over Zain's operations. Essar has acquired refineries in Kenya. Many Indian companies have piled into Mozambique to exploit coal deposits newly discovered there. Zambia's Konkola mine, the biggest in Africa, was once sold to a multinational Anglo-American firm, which failed to revive it. Then Sterlite acquired the mine and turned it around.

Economist Arvind Subramanian says India holds the world record in outward foreign

investment as a proportion of GDP. Never before has a low-income country made such an impact globally.

Indian individuals have also become globally prominent. One lakh Indians now study in the US, its largest contingent of foreign students. The US now has three million people of Indian origin, three of whom have won Nobel Prizes. Indians account for nearly a quarter of all start-ups in Silicon Valley. Hundreds of Indians occupy top positions in academia (Jagdish Bhagwati, Amartya Sen), corporations (Vikram Pandit, Indra Nooyi), media (Fareed Zakaria) and Wall Street. Two Americans of Indian origin, Bobby Jindal and Nikki Haley, have become state governors, and Jindal could be a future US president.

The government has played a supporting role in these private initiatives. India's economic rise has translated into political clout, and explains why the US decided to waive the nuclear rules for India and back its bid for Security Council membership.

However, India's global image remains dismal in relation to social indicators and corruption. These are mainly government failures, though corporate crooks have also gained through crony capitalism. India's image here needs transformation in the coming decade.

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Times of India ND 09/01/2011 p-20

# 'Turn off the spotlight please, I'm just a scientist'

The 2009 Nobel Prize for Chemistry may have turned him into a celebrity in India, but Venkatraman Ramakrishnan remains interested only in pure science rather than the sub-atomic particles of skit-fish fame in the 21st century. The microbiologist, who loves Carnatic music, insists young people must be entranced by science for the sake of science, rather than the febrile glitter of the Nobel Prize. Born in Cuddalore, Tamil Nadu, Ramakrishnan's parents were scientists. In a January 2010 lecture at the Indian Institute of Science, he revealed that he had tried—and failed—to enter the Indian Institute of Technology and the Christian Medical College, Vellore. In Chennai to attend last week's Indian Science Congress, the scientist from Cambridge University in the UK told Pushpa Narayanan that science does not need the celebrity factor to shine. Excerpts:

You've been sounding exasperated about the reception you got at the Indian Science Congress. Why?

■ During my lecture at the Indian Science Con-

gress, I spoke about several things. I did not see any of those comments reported in the media. Instead, what was reported was what I told students after the session. Students wanted to take pictures with me and get autographs. I told them I was not a film star. Being attracted to a scientist is the wrong way to be attracted to science. Almost all papers published it. My lecture was ignored.

But you knew that Indians would continue to regard you as a celebrity. Why then did you agree to attend this event?

■ I love India. Media and mobbing can't stop me from coming here. But if this bothers me, I would ensure I keep my visits secret. The last time I came to the Indian Institute of Science, no one knew about it. It was a scientific meeting. There were no formalities. The director introduced me for just two minutes, and I went on to deliver my lecture. I think this is the best way to hold scientific sessions. No glitter, no glamour. You have been getting this attention ever

since you were awarded the Nobel. Only a very few people attended your lectures (in India) before then. Do you think Indians appreciate science for what it is? Or are they shallow in believing that a western prize makes someone, somehow better?

■ Indian scientists have known me for many years now. They have always respected me. I have

## FOR THE RECORD

VENKATRAMAN RAMAKRISHNAN

been speaking about my work on ribosomes (for which he won the Nobel) since early 2000. I have been a foreign member of the Indian National Science Congress since 2008. But for others who never knew me, I am suddenly a celebrity after the Nobel. What I am trying to explain is that there was a good chance I would not have got the Nobel. There are many scientists doing great work. Not all of them win the Nobel. I have to say I was fabulously lucky to be where I am today. It's a

mistake to judge science by Nobel prizes. Students should take up science for the love of the subject.

Is it not an irony that you, a graduate student of physics who switched to postgraduate biology, won the Nobel for chemistry?

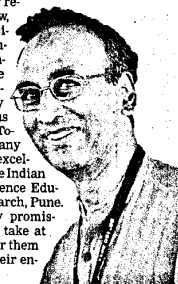
■ No. If you look at the list of Nobel laureates in chemistry, you will see that many are graduates in physics. Science has no watertight compartments. In fact, I can't claim to be an expert microbiologist.

You have said that science should not recognize and does not have national borders. Are you an idealist? Are you a dreamer a la John Lennon whose famous anthem for peace talked about a world without borders?

■ Yes. I am a dreamer. I guess you have to be one to be a scientist.

What do you think are the prospects for science and scientists like you in India? Do you think scientists can flourish in an Indian environment? Could you? Would you?

■ Science in India is now in a transition stage. Earlier, scientists had to wait for a long time to be funded for research. Now, funding for science has improved a lot in India. There are now many excellent labs in my field in various parts of India. Today, there are many institutions of excellence, such as the Indian Institute of Science Education and Research, Pune. They look very promising. But it will take at least a decade for them to succeed in their endeavours.



At least 43 industrial clusters across the country are critically polluted

In and around Bathinda, 136 of 447 water samples were found unfit for consumption

Kanpur's water has four times the safe limit of fluoride, which causes bone deformities

# AIR POISONING OR COULD WE BE POISONING OURSELVES?

On January 1, the National Human Rights Commission asked the Centre to ban Endosulfan, the bug repellent whose use on cashew plantations in Kerala is linked to congenital abnormalities. But this is just one of many horror stories playing themselves out across India. Sunday Times profiles six locations that a government index acknowledges as critically polluted. In each, the locals live with poisoned air, water or food

## ANKLISHWAR (GUJARAT) Toxic Town

Here, it is about working with substances that some allege to be poisonous. A worker in a dye factory reportedly finds his skin peeling off in strips each time he tries to wash off the blue pigment off. He is said to have claimed he was also finding it hard to breathe. Another man who works in a paint factory reportedly complains that his eyes water constantly.

These complaints should come as no surprise here. Ankleshwar topped the 2009 list of India's critically polluted industrial clusters. The list was based on the survey conducted by the Central Pollution Control Board (CPCB).

The companies involved insist there is no truth in the allegation they are simply poisoning the area. And yet, people in Sarangpur, Piraman, Dadhal, Koshimbi, Bhadkoda, Pungam and Amboli villages—which ring Ankleshwar—insist they suffer from the toxic fumes discharged by the town's many chemical factories. The villagers allege the water is polluted too. Is this no more than a shadow boxing contest? Are the villagers, who "allege" and "claim" and "insist" destined to lose out to the companies that "allege" and "claim" and "insist"? In 2004, the Supreme Court ordered a special water supply for these villages because it found the groundwater to be severely polluted. In March 2008, a team led by Dr N J Pawar, Suresh Kumar, and K D Shirke of Pune University's geology department said it had found critical pollution levels in 38 sample wells around Ankleshwar and from the local stream Amlakhadi.

The Pune team found high levels of molybdenum, zinc, lead, nickel, cobalt, cadmium and chromium. The highest concentration of molybdenum was 2,780 ppb or parts per billion. The WHO standard is 70 ppb. The effluent treated here and in the neighbouring industrial estate of Panoli remain dangerously toxic. The Central Pollution Control Board sets a standard 100 for chemical oxygen demand of effluent, which simply means that water has an acceptable organic chemical content and quality. But Ankleshwar has a chemical oxygen demand value of 1,156. A sarpanch in one of the affected villages claims "our groundwater is polluted because of the polluted local streams Amlakhadi and Chhaprakhandi. But no one in any of the seven villages raises his voice as the village representatives are harassed and court cases are filed against doctors who dare to speak. People lose jobs here if they complain."

## MALWA REGION (PUNJAB) Cancerous Belt

From "bread basket" to "poison shaft"? Could this really be the state of Punjab today? Well, it is certainly becoming known for high rates of cancer, mental retardation and impotence. Some activists describe this as the consequence of fertilizer and pesticide misuse during the heady days of the green revolution. A study by the NGO Roko Cancer in five states that had districts Mansa, Bathinda, Ferozepur, Faridkot and Muktsar—detected 369 suspected cases of 3,345 malignancies conducted between October 2009 and October 2010. That's an 11% rate. "Excessive use of pesticides and changes in lifestyle are the main reasons for the high incidence of the disease," alleges Isha Bhandari, director of the NGO's India operations. Punjab's curse is equally distributed

## LOOK WHAT YOU'RE INHALING

Chhatkha's air has 6 times the permissible limit of dust, which can cause asthma and bronchitis. Its surface water has 150 times the safety limit of cadmium—which can damage the central nervous system and causes cancer. It has 11 times the limit of lead—which causes kidney damage, miscarriages, infertility, and diminished learning in children. Jodhpur's surface water contains mercury, which can affect the brain, the nervous system, and reproductive systems. If the metal gets into the food chain, it can alter DNA. Manali, a suburb of Chennai, contains 7 times the limit of organochlorine pesticides, which can damage the liver, spleen and may lead to allergies and damage to the central nervous system. Some cause cancer. Navi Mumbai has 5 to 9 times the limit of lead and benzene—which can cause rashes, headaches, vomiting, and cancer in the long run—in the air. Singrauli has 6 times the permissible limit of mercury in its surface water. Howrah has iron, which in high concentrations can damage the liver, spleen and heart, in its groundwater. The Varanasi-Mirzapur region has high concentrations of lead in its air and phenolic compounds, which can cause cancer. In its surface water and groundwater.

## DELHI Capital Truth

When the backflow from the drain mixes with our water supply during the monsoon, then the water we drink smells bad," says septagenarian Ram Gopal of Nehru Vihar. The colony is close to the tail-end of the Najafgarh drain's 61-km trail in the national capital, after which it reaches the Yamuna. The stretch from the drain'sinky black waters is difficult to ignore. Schoolchildren hurry by holding their noses. Ram Gopal says many people are constantly beset by "stomach problems". What he does not

know is that heavy metals have been detected in the drain water and the Najafgarh drain is ranked as one of the Central Pollution Control Board's list of critically polluted industrial clusters in the country. The drain is also the biggest polluter of the mighty river's contamination. There are sewage treatment plants along its path but these seem to have little impact. The drain flows through congested colonies in the west, north-west and north. Why is it so dangerous? Suneel Pandey, senior scientist at The Energy Research Institute (TERI) offers some answers: "The major polluters are domestic untreated sewage. There are some small industries too, operating from homes which discharge effluents into it".

across rural and urban areas. Karamjeet Kaur, 42, is one of seven cancer patients in her Kothbali village in Giddarbaha Mangroet Basti, her local M.L.A. says he has a list of 300 cancer deaths from his constituency alone. "In the 50 villages falling in my constituency, I have attended close to 200 funerals of people who died of cancer," he says. Jhoke Sarkari village in Faridkot district has 10 cancer patients—there have been 15 deaths from cancer in the last five years there. Children as young as 10 are old before their time—their hair is pepper and salt and they are arthritic. None of this is surprising. Punjab's soil and water are heavily polluted. In December 2009, Bathinda health department conducted a survey of drinking water in both rural and urban areas. It found that 136 of 447 water samples were unfit for consumption. Another study, this time by British scientist Reyes Tirado, across 50 villages in Madhya Pradesh and Ludhiana districts last year, showed that 20% of all the samples from wells had nitrate levels above the safe limits set by the WHO. In Ludhiana, the main culprit is the cluster of industrial units and households that discharge chemical and domestic effluents into canals. Surveys of its Rudha mullah have found heavy metals and even uranium in the water. Pesticides have been detected in animal fodder, vegetables, bird, bovine and human milk samples too, indicating that the chemicals have entered the food chain.

## KANPUR (UTTAR PRADESH) Water Woes

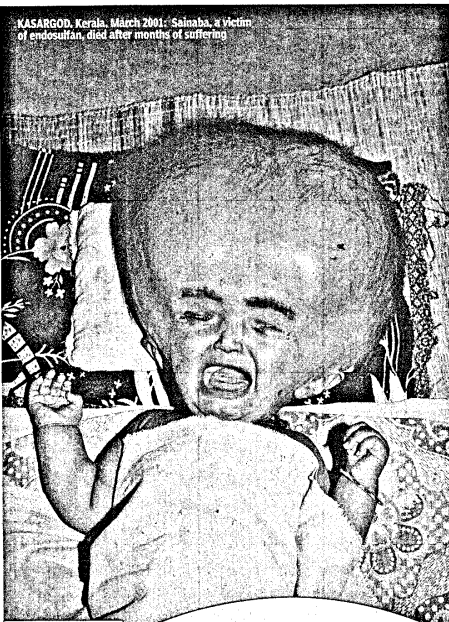
There is a commonality of suffering in Ghonghi, Rautapur, Makoor ka Majra and Nasar da Gama Nagar near Agra, Sahni, Rupnikheda Jagatkheda, Magarwa, Dayalkheda and Satra, all of which are in Unnao district. It's just near Kanpur. And all these villages share a dreadful tragedy—on average, at least one member of every family has a bone deformity. It's caused by the fluoride discharged by the tanneries, as discussed in the area. Many of the villagers find it difficult even to stand up straight. Gajji, 18, has twisted limbs and a fatalistic bent of mind. "They (the officials) have only given assurances in the form of aid. Despite a number of surveys and studies by the experts and officials in the past, none has come up with a proper remedy," he says. Orthopedic surgeon Dr AS Prasad says regular consumption of fluoride-contaminated water can affect both nerves and bones. "It makes the movement of limbs extremely difficult."

Safe drinking water is hard to find here—most sources of water are polluted. A survey conducted by the Uttar Pradesh unit of the Indian Red Cross Society found the fluoride content in the region's water was 8%, four times above the permissible limit. Villager Shiv Kumar Verma describes how hard it is to find safe water: "We go far-fung villages to fetch water as the water available here not suitable for preparing meals. We bring water daily from nearby villages for our daily chores."

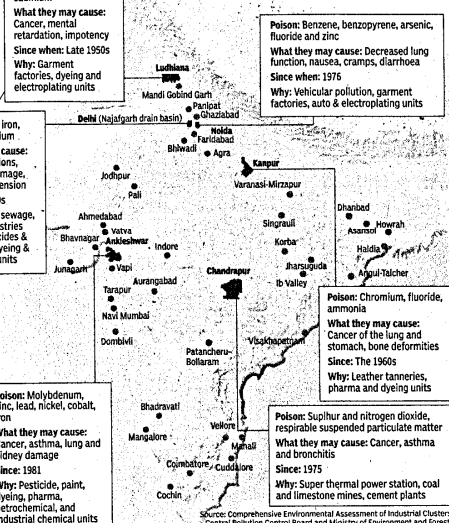
Verma says it's particularly "painful" that nobody wants to marry our children". Kuldip Sengar is the local M.L.A. and admits the "contaminated water is also destroying crops and affecting cattle". He says there's really no way out except for the factories—the tanneries, textiles, pharmaceutical and dyeing units—to stop discharging effluents into the Ganga.

Delhi does not have large industrial plants but it does have multiple small, household units that manufacture insecticides and caustic soda and are engaged in dyeing, electroplating, etc. These units are located close to the drain and discharge effluents into it. Unsurprisingly, studies have found that the drain has high levels of fluoride, nitrate, iron and chromium. Why does this matter, other than as an unsightly and smelly feature? Pandey says that "the high level of biological oxygen pollution can lead to infections". Experts say they're all but sure chemicals have entered the food chain. The drain's treated waters are being used for irrigation and aquaculture and the resulting crops can contain heavy metals. "The uptake of chemicals from contaminated soil and water is much more in some vegetables like spinach, carrots and radish," says Ravi Agarwal, director of Toxin Link, Delhi. "You cannot do anything about it—50% of the contamination stays inside the vegetable no matter how many times it's washed."

The health risks of these poisons include neurological damage in children, allergic asthma, hypertension etc. "Chromiun, which is a class I carcinogen," says Dr T.K. Joshi, director of the Centre for Occupational and Environmental Health, Delhi. He fears that "the drinking water is not tested completely for all chemicals. People also throw pharmaceuticals into the water and these are difficult to remove. In the US, water is tested for 600 chemicals. I don't think that's done here."



## ON THE EDGE



## CHANDRAPUR (MAHARASHTRA) Dust To Dust

Parvati Chaudhary from Nakoda village lives just about a hundred metres from the local cement factory. Two weeks ago, her 50-year-old husband died of chronic respiratory distress. She alleges that "he suffered from asthma for over six years due to exposure to the dust from the plant." Chaudhary is party to a public interest litigation filed by her neighbour Samuel Sundar against the cement company for pollution caused by its new unit. Chandrapur goes into a brand new decade hacking and coughing from the effects of the past. It claims to suffer from many chronic ailments. The sharp-eyed—and what big business calls the troublemakers—say it's because the town is in the red-hot region. It is home to Maharashtra's only super thermal power station, coal and limestone mines and sponge iron and cement plants. Its air is so polluted with a thick smog routinely reduces visibility to just a few feet every morning and evening. The factories say they're not to blame. It's the townfolk themselves—every winter, almost every home burns coal in an open angath or local burner.

The smoke from the domestic coal burners may be a factor. But what of harmful gases such as sulphur dioxide and nitrogen dioxide, emitted from industrial units. Till now, there's no reliable data on groundwater. But experts say that fluoride from the limestone mines is affecting the water quality. Dr Mahesh Gulwade and Dr Ashok Wassilkar, joint secretaries of the state-level and local chapters respectively of the Indian Medical Association, claim that at least 10% of their patients now suffer from respiratory diseases such as asthma, upper and lower respiratory tract infection, bronchitis, pneumonia, intestinal diseases, skin and eye diseases and even lung cancer.

Paediatrician Dr Gopal Mundhada is president of the Chandrapur Bachao Sangharsh Samiti and points to the most obvious indicator of severe water pollution: fish are dying in the Wardha and Erai rivers near the city. "Industries (70% in all) either do not run effluent treatment plants and the electrostatic precipitators or run them only for a few hours to save on electricity bills. They dump effluents in the river. The Pollution Control Board does nothing beyond seizing their bank guarantees, ranging between Rs 1 and Rs 10 lakh, which is peanuts looking at their turnover worth many crores," he says. Environmentalist Bandu Dhore recalls how "even NASA has warned of the possibility of acid rain in Chandrapur district due to rising pollution levels. But the government is still allowing new industries."

Suresh Chopra, an environmental activist and president of Green Planet Society points to a 2006 study conducted by the state government, which revealed that 10% of 23,000 screened persons suffered from respiratory disease. The break-up was as follows:

- 20% asthma
  - 20% bronchitis
  - 17% tuberculosis
  - 19% acute respiratory distress.
- There has been no comprehensive follow-up study ever since. Chopra got hold of the information using the Right To Information Act. But he is not triumphant, just downcast. "Things won't change until the local and regional leadership takes the issue seriously," he warns gloomily.

## NOIDA (NCR) Effluent City

Our wards are full of people with respiratory problems, and cancer cases are on the rise," says a doctor with a government hospital here. He asks not to be named. If he's right, it's not hard to find the culprit. Noida's air is known to have benzene and alarming levels of benzopyrene, both from vehicular emissions. Both benzene and benzopyrene are known carcinogens. Even so, no study so far reveals any discernible impact on the general health of those who live and work here. Should Noida be given a clean bill of health then? Not at all, says Professor Arvind K Nema of IIT Delhi, who helped develop the methodology used to calculate the Comprehensive Environmental Response Index that ranks Noida as the 12th most polluted industrial cluster in India.

Nema says it could be one of two things: "Either the data is faulty, or the effects of the toxins have not yet begun to show up in people."

The government hospital doctor adds a caveat—the link between air quality and lung problems cannot be established without proper studies. That gap may soon be filled. By the middle of the year, the Indian Institute of Toxicology Research in Lucknow is likely to release the results of its three-year study of the contamination of air and groundwater around Noida's SEZ area. It looked for local evidence of respiratory problems and persistent health issues such as a recurring fever, renal failure and skin problems. Experts point out that much of Noida's population lives in close proximity to its industrial areas. Its pollution control measures have been found wanting anyway. Squadron Leader (retd) P.H. Khorana, who is president of Phase II Industries Association, has written many letters to the Noida office of the Uttar Pradesh Pollution Control Board (UPPCB) about alleged dumping of waste by a factory in the Phase II industrial area. He alleges that the Board "has done little up to now".

But Paras Nath, the Board's regional officer, clarifies that "the factory's effluent treatment plant (ETP) was not working properly. The factory was served a notice and the plant will be fixed soon."

But what of a larger, integrated action plan to tackle the industrial pollution issue, says it's on its way and "will include regular collection and analysis of effluent samples, upgradation of ETPs that are not functioning properly, upgradation of Noida's air monitoring units, and beginning the supply of CNG—to part down fossil fuel use—to industrial, vehicle and domestic uses."

Written by Saira Kaur  
Reported by Paul John in Ankleshwar  
Shekhla Shrivastava in Chandrapur, Suneel Pandey in Bathinda, Vaidyoswari Venkat in Ludhiana, Kanpur Kaur in Delhi, Paiz Rahman Siddiqui in Kasargod and Parvati Nandini in Noida

Times of India B'lore 08.01.11 p-7

# Gulbarga all set to house IIT campus

Mathang Seshagiri | TNN

Bangalore: Karnataka might have missed the IIT bus, but an IIT is logging into the state.

After rejecting Karnataka's demand for an Indian Institute of Technology, the Centre has invited the IP-savvy state to house an Indian Institute of Information Technology (IIIT). Lapping up the offer, the state government has decided to set up the top IT institute in Gulbarga.

The proposed institute in Gulbarga will be among the 20 new IIITs that are being established in private-partnership model by the human resource development ministry. The Centre will fund 50% of the cost and the rest will be split between the state government and the industry. All the new IIITs, along with the existing ones in Gwalior, Allahabad, Jabalpur and Kancheepuram, will get the same status as IITs.

Chitradurga would have been a better place, but as the second campus of the Indian Institute of Science has come up there, we felt that Gulbarga would be ideal

— V S Acharya

## IDEAL CHOICE

"We have decided to accept the Centre's offer to set up an IIIT in Karnataka. The chief minister will write to the human resource development ministry on our decision to house it in Gulbarga and gift 50 acres of land. Chitradurga would have been a better place, but as the second campus of the Indian Institute of Science has come up there, we felt that Gul-

barga would be ideal. Gulbarga already has a central university and a state university and there is right ecosystem there for such institutes," higher education minister V S Acharya told TOI.

The HRD ministry has readied a draft IIIT bill, 2010 giving the new IT institutes the status of institutions of national importance. Like in the case of IITs, there will be an IIIT council, headed by the HRD minister, which will be the top body governing the affairs of the institutes.

In the statement of objects and reasons of the draft Bill, the ministry has stated that besides high-level research and technology development in IT, the proposed IIITs would also focus on applied research and education in selected domain areas.

toiblrreporter@timesgroup.com

# IIIT-B to spread wings to Kolar

Mathang Seshagiri | TNN

Bangalore: The country's oldest IT institute set up in private-public partnership mode — the International Institute of Information Technology-Bangalore (IIIT-B) — is all set to grow beyond the IT capital.

As part of its expansion plans, the IIIT-B will set up a fully residential, state-of-the-art campus spread across 100 acres in Mulbagal taluk, Kolar. Apart from research, the 12-year-old institute is likely to introduce undergraduate programmes at the new campus.

## BEYOND BANGALORE

### BTECH ON THE CARDS

The governing body of the institute headed by Infosys chief mentor N R Narayana Murthy has urged the academic senate to consider rolling out BTEch programmes. To be designed on the lines of North American tech schools, the BTEch programme will lead to MTEch, and then a PhD. Currently, IIIT-B is only a graduate school offering MTEch, MS by Research and PhD programmes.

"Introducing undergraduate programmes bring in a lot of energy to



the campus. Students will stay longer (four years) and can be moulded better to meet industry requirements," an institute official said.

Last year, chief minister BS Yeddyurappa had written to human resources development minister Kapil Sibal asking for a special Rs100-crore grant to expand IIIT-B. Sibal, in turn, asked the state government to check whether IIIT-B, being a deemed-to-be-university, was eligible for central assistance under section 12 (B)

of the University Grants Commission Act. The commission, at its meeting in September 2010, decided to make deemed universities eligible to receive financial assistance subject to availability of funds.

### JOINING THE GROUP

IIIT-B joins a growing number of top institutes in Bangalore expanding to neighbouring districts and states. The 101-year-old IISc has set up its second campus in Chitradurga and

## INFO HUB

The International Institute of Information Technology at Bangalore established in 1999 is funded by the government and the IT industry. Although it was originally called Indian Institute of Information Technology, it underwent a name change when it was granted the deemed-to-be- varsity status in 2005

has given in-principle approval to expand to Andhra Pradesh. IIIT-B, which is jointly funded by the state government and the IT industry, functions out of an eight-acre campus in Electronic City, opposite the Infosys Technologies headquarters.

Recently, the institute set up a finishing school in Hubli where final-year BE students and unemployed engineers in small batches undergo short-term courses to be industry-ready.

Danik Bhaskar ND 09/01/2011 p-5

## भारत में सुपरबग बैक्टीरिया की खोज करने वाले वैज्ञानिक की पहल

# सुपरबग से 'नई दिल्ली' हटाने की कवायद

प्रदीप सुरीन . नई दिल्ली

नई दिल्ली सुपरबग (एनडीएम-1) नाम से पूरी दुनिया में हलचल मचाने वाले बैक्टीरिया से 'नई दिल्ली' शब्द हटाने की कवायद शुरू हो गई है। देश में पहली बार इस बैक्टीरिया की खोज करने वाले चेन्नई के वैज्ञानिक डॉ. अब्दुल गफूर का कहना है कि बैक्टीरिया को किसी स्थान का नाम देना एक काल्पनिक अभिव्यक्ति है और इससे किसी स्थान विशेष पर संदेह नहीं किया जा सकता।

डॉ. गफूर ने चेन्नई से भेजे अपने एक बयान में जोर देकर कहा है कि 'सुपरबग बैक्टीरिया' के नाम से 'नई दिल्ली' का नाम हटाया जाना चाहिए। इससे किसी स्थान के नाम



पर लग रहे कलंक को धोया जा सकेगा। नई दिल्ली का नाम हटाने से पूरी दुनिया के मेडिकल समुदाय को इस बैक्टीरिया से लड़ने में बेहतर

तालमेल मिल सकेगा। आखिरकार विज्ञान मानवता की मदद के लिए है। उनका सुझाव है कि बैक्टीरिया का नाम नई दिल्ली के बजाए 'न्यू डेराइव' या 'न्यू डिफाइन' हो सकता है।

उल्लेखनीय है कि ब्रिटेन की मेडिकल पत्रिका 'लैन्सेट' में नई दिल्ली सुपरबग बैक्टीरिया के खुलासे के बाद पूरी दुनिया में हलचल मच गई थी। सुपरबग में नई दिल्ली का नाम इस्तेमाल होने के बाद से ही अंतरराष्ट्रीय मेडिकल समुदाय विशेषकर ब्रिटेन ने अपने नागरिकों को भारत जाकर इलाज नहीं कराने की चेतावनी देनी शुरू कर दी थी। सुपरबग में नई दिल्ली का नाम आने के बाद से ही विपक्षी राजनैतिक

पार्टियों ने संसद में जमकर हंगामा भी किया था।

उधर स्वास्थ्य मंत्रालय ने भी सुपरबग बैक्टीरिया में भारत का नाम खराब होने से काफी बेचैनी देखने को मिली है। दो महीने पहले ड्रग कंट्रोलर जनरल ऑफ इंडिया (डीसीजीआई) ने सुपरबग रिपोर्ट तैयार करने में शामिल सभी वैज्ञानिकों को खत लिख कर इस शोध की जानकारी मांगी थी। हालांकि अभी तक सभी वैज्ञानिकों ने डीसीजीआई को अपने शोध की जानकारी उपलब्ध नहीं कराई है। इंडियन काउंसिल ऑफ मेडिकल रिसर्च (आईसीएमआर) भी सुपरबग पर अलग से जांच कर रही है।