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Manmohan tells scientists to think big and out of the box

India will soon have Navaratna universities, says Sibal

A Spectrum Reporter

Maintaining the ideas of science and scientific research must always be linked to the betterment of the people of India, the Prime Minister of India, Dr. Manmohan Singh, called on the community to think ahead of the times.

“The time has come for Indian science to once again think big; think out of the box; and think ahead of the times. The time has come for India to produce the Ramans and Ramanujans of the 21st Century,” Dr. Singh said while delivering the Inaugural Address of the 98th

Indian Science Congress at SRM University.

The Prime Minister argued that scientists should develop a code of conduct on the application of their discovery.

“The question is whether scientists should step beyond their discipline



The Prime Minister releasing the Plenary Proceedings of the 98th ISC

and at least guide the social discourse on the use of scientific knowledge. Should they develop a code of conduct that defines within which they will work on the application of their discoveries? Should there be a collegial process for deciding difficult cases? I leave these as questions because the very idea of ethics for science needs further discussion,” Dr. Singh told the over 7000 delegates gathered at the Kattankulathur Campus.

“... it is true that science has made strides even in societies that were neither

modern nor liberal. It is true that products of science have been put to illiberal uses. I sincerely believe we must guard against such tendencies, especially in our own country,” he added.

The Prime Minister praised the role and commitment of Tamil Nadu in the realm of science and research while pointing to the eminent personalities like the first Indian Nobel Laureate Dr C V Raman, Professor S Chandrashekar and one of the greatest mathematicians the late Srinivasa Ramanujan.

“This year, as we usher in the New Year, we also usher in the ‘Decade of Innovation’. There is no better way to do that than to salute the creativity and the genius of our scientists and engineers, our professionals, our workers, our scholars and students, gathered here today,” Dr. Singh said.

“I have always believed that a university is the vital link in the chain of science teaching and research. We must never forget that. Unless we strengthen the base of our educational system, we

can never hope to extend the height of the pyramid of excellence,” the Prime Minister added.

Dr. Singh stressed the need for better higher education in India and claimed that the government is already moving ahead in that direction.

“Our government has paid special attention to the growth of our University system. In the past five years our government has established eight new Indian Institutes of Technology and five

2012-13 to be ‘Year of Science in India’

A Spectrum Reporter

Prime Minister Manmohan Singh announced that he has directed the Ministry of Science and Technology to undertake a national celebration of the birth centenary of Professor S. Chandrashekar, one of the outstanding Indian scientists of the 20th century.

“The year 2012-13 will be the Centenary Year of the Indian Science Congress. I would like the Ministry of Science and Technology to designate 2012-13 as the ‘Year of Science in India’,” he said.

Ratnika Sharma

The Vigyan Jyot or the torch of knowledge completed its second run when it reached the Kattankulathur campus of SRM University on the eve of the Indian Science Congress. The torch started its journey on December 22, 2010 from Sri Venkateswara College in Delhi and travelled through Jaipur, Gwalior, Jhansi, Bhopal, Nagpur, Hyderabad and Bangalore before reaching Chennai. It covered a distance of over 3000 Kms to signify the importance of science and technology in people's daily lives.

The Indian Science Congress Association (ISCA) conceived the idea of Vigyan Jyot last year

during the Kerala meet, where the torch travelled from the North to South of the state, covering a distance of over 1000 Kms. It defines the complete spectrum of science and technology, and presents the various aspects of life through the perspective of science and technology.

"Vigyan Jyot symbolises national integrity as it passed through the 10 major states of the country," said the Chancellor of SRM University, Dr. T. R. Pachamuthu, on the occasion. Dr. K. C Pandey, General President, ISCA, added that it was something truly unique that has spread across the country and congratulated SRM University for being a part of it.

Vigyan Jyot - spreading the light of knowledge



Vigyan Jyot being brought to SRM University

...think big and out of the box...

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Institutes of Science Education and Research to provide high quality education and carry out research in frontier areas of science," he said.

"The growth of our economy, defense of our people and security of our people depends on scientific and technological competence," the Prime Minister added.

The theme of this year's Science Congress is Quality Education and Excellence in Science Research in Indian Universities with as many as six Nobel Laureates - Amartya Sen Venkatraman Ramakrishnan, Ada Yonath, Thomas Steitz, Timothy Hunt and Martin Chalfie - and scores of distinguished Indian scientists from within the country and overseas participating in the five day meeting. And as in the past there is also a Children Science Congress, which is to be inaugurated by Nobel Laureate Ramakrishnan on Tuesday, January 4.

Calling for individual excellence in research the Union Minister of Science and Technology and Earth Sciences, Mr. Kapil Sibal, pointed to the 'Decade of Innovation' theme stressed at the last Science Congress and maintained that the government had lived up to it. The quality of scientific research must be "focused", the Union Minister said with a clear accent on quality assurance for higher education. The government has been generous in financial funding, the Minister maintained.



The Prime Minister receiving a memento from Prof. Pandey

India will soon have Navratna universities on the lines of the Ivy League institutions, free of government control and institutions that will get generous financial backing, including access to external funding.

"We are working on the concept of having Navratna universities or an Indian Ivy League. We intend to nurture these select universities, like the public sector Navratnas, by generous financial support, freedom in accessing external funding and total autonomy so as to free them from the shackles of government control," Mr Sibal said in his keynote address to the Science Congress.

On the research front, the government was planning to set up 14 'Innovation Universities'

that will be 'unique institutions' and set benchmarks, in academics and research with special focus on hunger, water, poverty and diseases through cutting edge science and technology.

"At the same time there will be emphasis on liberal arts and social sciences. These Innovation Universities would be innovative in their governance, in their financial structure, in their academic and research structure, in their content and in every other way," Mr Sibal told the Science Congress.

Indian universities and Indian scientists are the most sought after, the Deputy Chief Minister of Tamil Nadu, Mr. M K Stalin, said in his remarks going on to make the point that at this Science Congress it was the 'right time' to take stock of the

status teaching and research at Indian universities.

"We have to substantially increase the resources. We should provide incentives to the private sector to invest more on Research and Development," Mr. Stalin said. The Deputy Chief Minister pointed to a tendency among students to stay off subjects like mathematics and science due to scarcity of employment opportunities.

"We must therefore broad-base career opportunities in private and public R&D, as well as in the university system," he said, adding, there was a need to raise the standard and quality of higher education in India.

In his welcome address, the General President of the Indian Science Congress Association, Prof. K C Pandey called for

private initiatives in the realm of education saying that there was no reason why the private sector should not enter the teaching environment. Prof. Pandey spoke of the importance of teachers stressing that teaching and research are inter-related. In his prepared text, Prof. Pandey argued that urgent steps should be taken to establish /encourage /support non-profit research laboratories at universities and elsewhere. Research laboratories for profit should also be encouraged and be eligible for projects from the governments.

"The prejudice against theory prevails in research laboratories and even universities. It is in the interest of R&D in the country that the prejudice against support of theoretical research should be given up; it should be treated on par with experimental work," he said.

"Eminent scientists should be supported to carry out research of their choice; the field of research may change, based on the opportunities. The quantum and quality of research and not the area, should be the criterion of continued support. Publications should constitute the progress report. The support should be in the form of a block grant without need for detailed budgeting and financial report," he said.

In his closing remarks the Chancellor of SRM University, Dr. T R Pachamuthu recalled the centrality of teaching and research in the educational system.

Ratnika Sharma

The scientific community in India and the Planning Commission at large faces certain key challenges in the area of policy formulation for the holistic development of the nation.

The main objectives of the 12th Plan are for the faster, sustainable and more inclusive growth of India and it must look at these challenges with respect to the changing economic outlook of the country, said Dr Kasturirangan, Member, Planning Commission and former ISRO Chairman, at the plenary session of the 98th Indian Science Congress.

The theme of the session was Science Policy - agenda for next five years.

Statistics have it that at the beginning of the 11th Plan, the economy was valued at \$1 billion. By 2020, it is expected to be \$6 trillion with a per capita income of \$4500. The 12th and 13th Plans are expected to transform India from the 'fate'

Kasturirangan sees challenges to science policies in a changing economy



Dr. Kasturirangan interacting with students.

of a poor economy to a middle level economy.

Against this backdrop how will the scientific community respond to the changing economy and what is its role in the

projected change asked Dr. Kasturirangan. According to the eminent scientist some of the key challenges are enhancing the capacity of growth, managing the environment, innovation, improved access to quality

education and securing energy for the future in India. The science and technology base should be expanded and should be more effective in order to find social relevance of science and this can be achieved by

looking into areas of water, energy and health issues and the effective use of science in the areas along with creating linkages between Indian and global scientific communities Dr. Kasturirangan added.

Over 50 firms showcase their achievements at science expo

Siddhant Bohara

Over 50 organisations drawn from the government and private sectors showcased their scientific achievements and futuristic plans at the Pride of India - Frontiers of Science and Technologies Mega Expo (POI), one of the many facets of the 98th Indian Science Congress being held here at SRM University.

Mr. Manish Kumar Pandey, Senior Manager of MM Activ Communications, which co-hosted the expo along with SRM University, said that the expo is based on Scientific Research and Technology with the different organisations drawn from various sectors such as Agriculture, Medicine, Defence, Space Research, Electronics and Automobile Engineering.

The main attraction of the expo was the Hall of Pride. Mr. Ajay Jhankar, Creative Director of the Pride and Prestigious Group, said, "The Hall of Pride features those scientists who excelled from their native state." For example, this year Srinivasa Ramaujan, has been featured for his excellence and bringing



glory to India and Tamil Nadu.

Indian Space Research Organisation (ISRO) demonstrating its research work in satellites, the Defence Research and Development Organisation (DRDO) boasting its main

battle tank Arjun were the other highlights of the expo. The Council of Scientific and Industrial Research and the Department of Food Processing, Council of Medical Research are also participating in the expo.

What they said...

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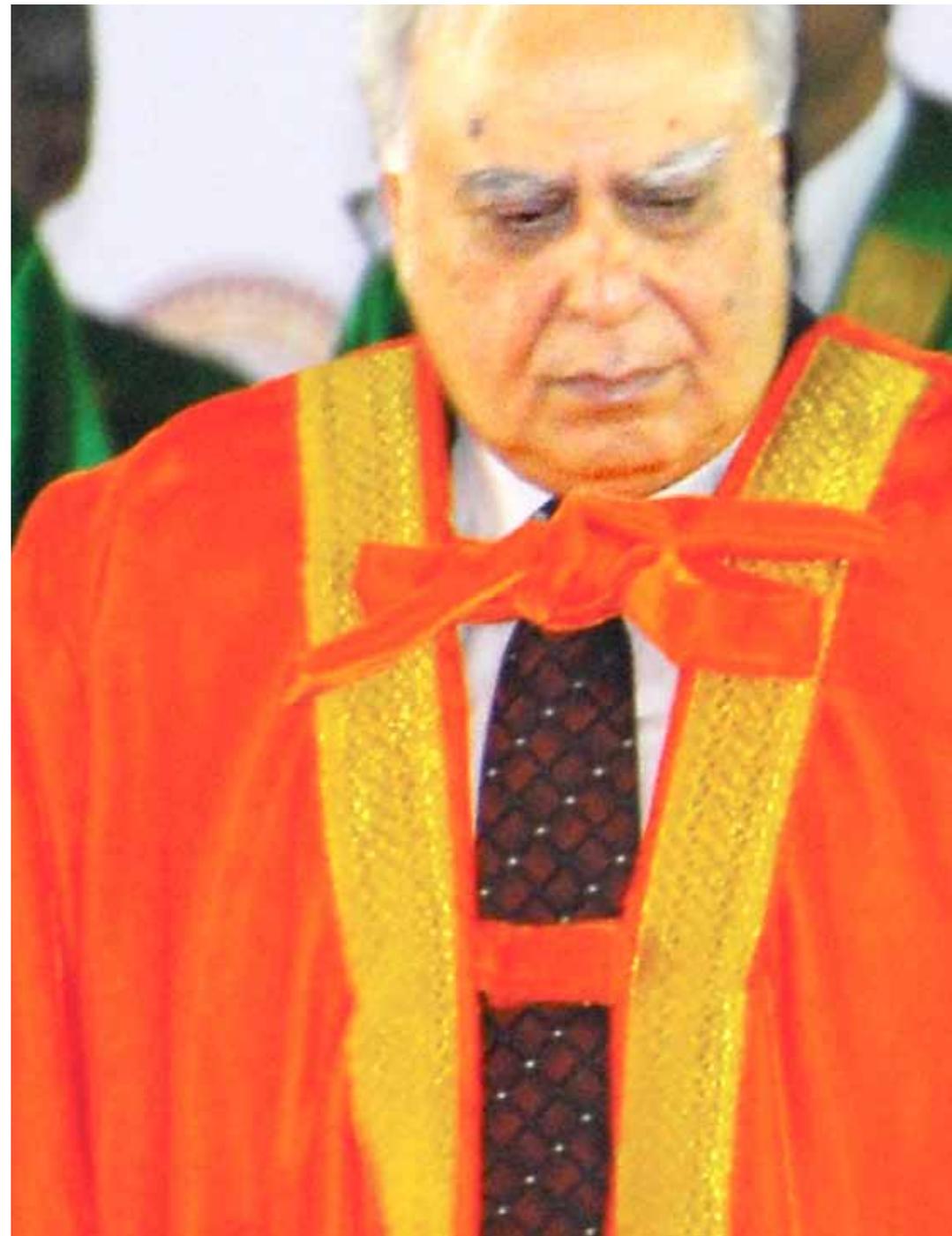
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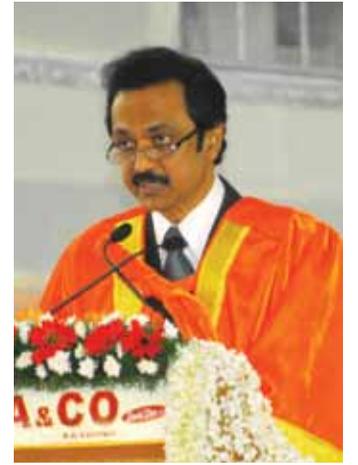
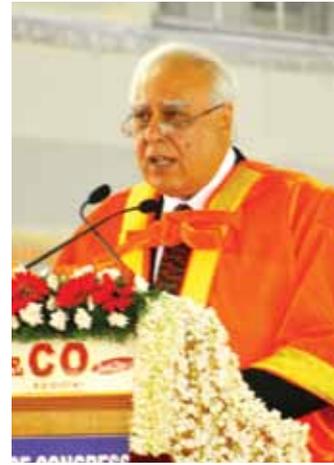
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MEET THE NOBEL LAUREATES

The Mother Teresa of Economics

Dr. Amartya Kumar Sen, Indian Economist, Nobel Prize winner, is known as “The Mother Teresa of Economics” for his work on famine, human development theory, welfare economics, the underlying mechanisms of poverty, gender inequality and political liberalism. He was born on November 3, 1933 at Shantiniketan, West Bengal. He received his initial education at Shantiniketan. Before moving to Trinity

College, Cambridge, he studied at the school system of Visva-Bharati University and Presidency College, Kolkatta, where he earned B.A. in 1953. At Trinity College, he received B.A. in 1956 and then Ph.D. in 1959. He was also allowed four years to immerse himself in philosophical issues during his stay at Trinity Colleges.

He has taught economics at Jadavpur University, Calcutta, (1956-58). He was a Fellow of Trinity College, Cambridge (1957-63), Professor of Economics, Delhi School of Economics, University of Delhi (1963-71), Professor of Economics, London School of Economic, University of London (1971-77), Professor of Economics, Oxford University

and

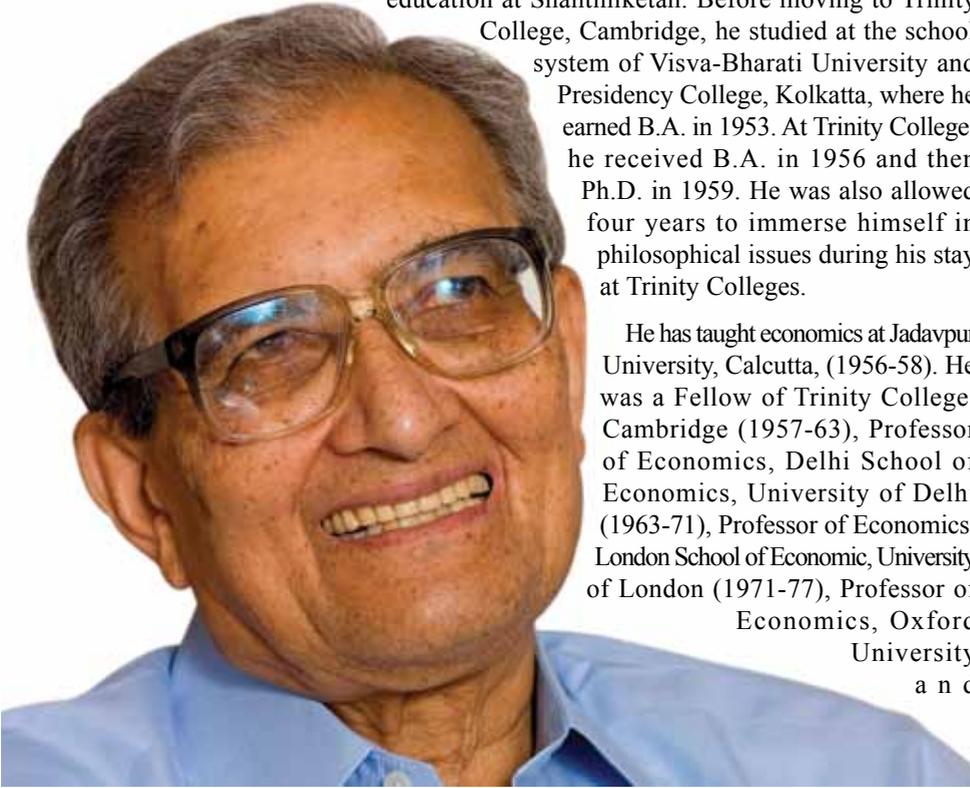
Fellow of Nuffield College (1977-80). And then he was the Drummond Professor of Political Economy and a Fellow of All Souls College, Oxford (1980-88), Senior Fellow, Harvard Society of Fellows, Harvard University (1989-98).

He was Master of Trinity College, Cambridge from 1998 to 2004.

He received the Nobel Prize in Economics for his work in welfare economics (1998), the Bharat Ratna (1999). He was offered honorary citizenship of Bangladesh in 1999. He received the Leontief Prize (2000), the Eisenhower Medal (2000) for Leadership and Service, USA, the International Humanist Award (2002) from the International Humanist and Ethical Union. He was awarded an honorary degree from the University of Tokyo (2002). He was conferred the Lifetime Achievement Award by the Indian Chamber of Commerce (2003) and Lifetime Achievement Award by UNESCAP. His books have been translated into more than 30 languages. He is a trustee of Economists for Peace and Security. He has received over 80 honorary Doctorates. In 2010, Time magazine listed him among the 100 most influential persons in the world.

He was best known for his work on the causes of famine, which led to the development of practical solutions for preventing or limiting the effects of real or perceived shortages of food. Sen’s work in the field of development economics has had considerable influence in the formulation of the Human Development Report, published by the United Nations Development Programme. This annual publication that ranks countries on a variety of economic and social indicators owes much to the contributions by him among other social choice theorists in the area of economic measurement of poverty and inequality.

He has published nearly 375 research publications/Articles in the refereed journals. He is currently Professor of Thomas W. Lamont University and Professor of Economics and Philosophy at Harvard University. He is also a fellow of Trinity College at the University of Cambridge.



Dr. Martin Chalfie was born on January 23, 1947 in Chicago IL. He earned undergraduate at Harvard University in Biochemistry and served as teacher at Hamden Hall Country Day school, Hamden, CT in 1970-71. In the summer of 1971, his research at the laboratory of Jose Zadunaisky at Yale University resulted in his first publication. With revived confidence, he returned to Harvard University for graduate studies and received his doctorate in Physiology under Robert Perlman in 1977. He taught at Laboratory of Molecular Biology, Cambridge, England in 1977-82.

In 1982, Chalfie joined the faculty of Columbia University, New York in the Department of Biological Sciences, where he performed his Nobel-winning work, aided by his wife and colleague Tulle Hazelrigg. He performed post-doctoral research on *C.elegans* at the Laboratory of Molecular Biology in Cambridge, England, with (2002 laureates) Sydney Brenner and John Sulston and published a paper in 1985 on The Neural circuit for Touch Sensitivity in *C.elegans*. He joined the faculty of Columbia University in the Department of Biological Sciences and continued to study *C.elegans* touch mutants.

In 1998, he wrote a book titled Green Fluorescent Protein: Properties Applications and Protocols in association with Steven Kain. He received award from National Academy of Sciences in 2004 and in 2008, he received Nobel Prize for Chemistry with Osamu Shimomura and Roger Y Tsien “for the discovery and development of the green fluorescent protein, GFP”.

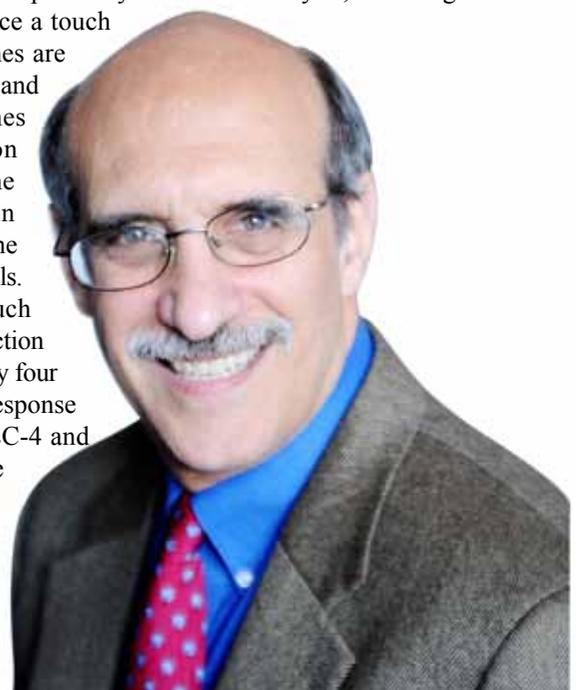
His work has focused on the study of a set of six neurons that are the sensory receptors for gentle touch. He also investigated aspects of nerve cell development and function. He also works on neuronal degeneration, micro tubule structure

Martin focuses on green fluorescent protein

and function, and channel structure and function. These studies facilitates the development of new experimental methods 1) Green Fluorescent Protein and reconstituted GFP as gene and protein markers, 2) Two component system (recCaspase) to selectively kill particular cells, 3) Method to generate temperature-sensitive strains for virtually any *C. elegans* gene.

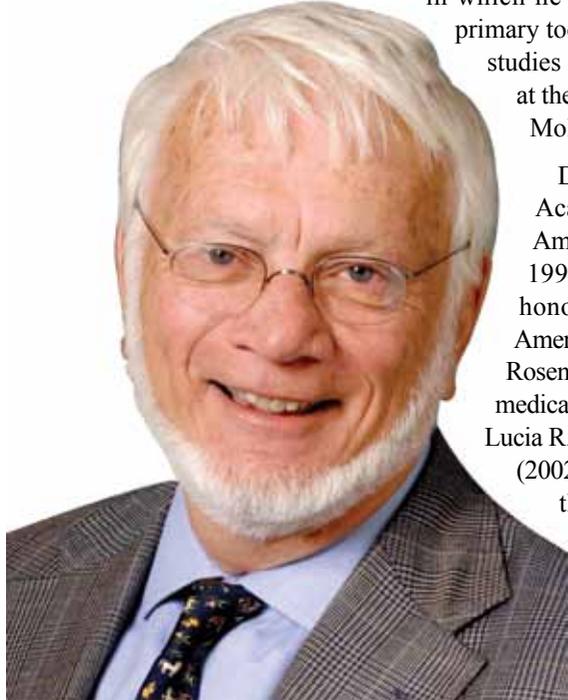
He initially approached touch cell development by mutational analysis, obtaining more than 450 mutations (in 17 genes) that produce a touch insensitive phenotype. These touch genes are needed for the generation, specification, and function of the cells. Many of the genes that regulate touch cell differentiation are transcription factors. In addition, he has identified seven other genes that in combination with these genes specify the number and differentiation of the touch cells. Twelve touch genes are needed for touch cell function. He has identified a transduction channel complex with proteins encoded by four of these genes that underlie the touch response in these cells. Two of the proteins, MEC-4 and MEC-10, form the pore of the channel; the other two proteins, MEC-2 and MEC-6 are associated with the pore-forming proteins and are essential for channel activity.

He has published 114 papers/articles in reputed journals. From 1982, He is a professor in Columbia University.



Thomas trying to understand molecular structure

Dr. Thomas Arthur Steitz was awarded the 2009 Nobel Prize in Chemistry along with Ramakrishnan and Ada Yonath for studies of the structure and function of the ribosome. He received his B.A. in Chemistry from Lawrence College in Appleton, Wisconsin, in 1962. He then pursued his Ph.D. studies at Harvard University in the laboratory of William Lipscomb, receiving his degree in Biochemistry and Molecular Biology in 1966. Dr. Steitz's doctoral studies on the crystal structure of carboxypeptidase A initiated his career in structural biochemistry in which he has used X-ray crystallography as his primary tool. He subsequently pursued postdoctoral studies of alpha-chymotrypsin with David Blow at the Medical Research Council Laboratory of Molecular Biology in Cambridge, England.



Dr. Steitz has been a member of the National Academy of Sciences and a member of the American Academy of Arts and Sciences since 1990. He has received numerous academic honors, including the Pfizer Prize from the American Chemical Society (1980), the Lewis S. Rosenstiel Award for distinguished work in basic medical sciences (2001), the Lawrence University Lucia R. Briggs Distinguished Achievement Award (2002), the Frank H. Westheimer Medal (2004), the Keio Medical Science Prize (2006), as well as the prestigious Gairdner Foundation International Award (2007)

His research focuses on using protein and nucleic acid X-ray crystallography to establish the structural basis of enzyme

mechanisms and of protein-nucleic acid interactions in the cell. His structural work on the ribosome and other enzymes involved in DNA replication, translation and transcription have provided insight into the pathways involved in information transfer and genome stability in the cell. The Steitz labs work on antibiotics that target the large ribosomal subunit may also help to provide the basis for design of new antibiotics effective against antibiotic resistant microorganisms. He has published extensively in top journals such as Nature, Cell and Science.

Steitz made contributions in determining the atomic structures of carboxypeptidase A and aspartate carbamoyltransferase which was the largest atomic structures resolved at that time. The structure of the large 50S ribosomal subunit, which Steitz later determined in his own lab at Yale University, and for which he was awarded the Nobel Prize. The goal of his research group is described as trying to understand the biological functions of macromolecules in terms of their detailed molecular structure, one molecule at a time.

In 1970, Dr. Steitz was appointed an Assistant Professor of Molecular Biophysics and Biochemistry, Yale University, where he is currently the Sterling Professor of Molecular Biophysics and Biochemistry, Professor of Chemistry and Investigator in the Howard Hughes Medical Institute. He has published 297 papers/articles in reputed journals. His studies on yeast hexokinase with and without bound glucose demonstrated that substrate binding induced a large conformational change, closing the deep cleft in the enzyme.

Venkatraman's ribosome study sheds light on antibiotic function

Dr. Venkatraman Ramakrishnan, the seventh Indian to win the prestigious Nobel Prize, has done pioneering work on ribosome, a cellular machine that makes proteins.

He was born in 1952 at the temple town of Chidambaram in Tamil Nadu, India. He earned his B.Sc. (Physics) from Maharaja Sayajirao University, Baroda in 1971 and Ph.D in Physics from Ohio University, USA. As a Postdoctoral Fellow at Yale University, he worked on a Neutron-scattering map of the small ribosome of E.coli. After his Postdoctoral Fellowship, Ramakrishnan joined as a staff of Brookhaven National Laboratory in USA. There, he began his collaboration with Stephan White to clone the genes for several ribosomal proteins and determine their three dimensional structures.

He was awarded a Guggenheim Fellowship in 1991-92 and elected member of EMBO in 2001. He is elected as a Fellow of Royal Society in 2003 and elected member in National Academy of Sciences, USA in 2004. He received Datta Medal in 2007, Louis-Jeaner medal for Medicine in

2007 and Heatly Medal of the British Biochemical Society in 2008.

He was elected as foreign member in Indian National Science Academy in 2008, a Fellow of Trinity College Cambridge and Rolf-Sammer Professorship at the University of Frankfurt in 2009. He received India's second highest civilian honour, the Padma Vibhushan in 2010. He is a reviewer for most major scientific journals and member of the Scientific Advisory Committee, EMBL during 2002-06. He is a member of Scientific Advisory Board, Rib-X Pharmaceuticals, New Haven.

He was awarded the Nobel Prize for chemistry along with Thomas A.Steitz and Ada Yonath in 2009. He determined the structure and function of the ribosome, the large protein-RNA

complex that synthesizes proteins using genetic instructions encoded in the mRNA template. He determined the complete atomic structure of the 30S subunit and its complexes with several antibiotics, initiation factor IF1, and cognate and near-cognate tRNA anticodon stem-loops complexes with mRNA in the A site.

More recently, He has determined the high resolution structure of the entire ribosome complexes with mRNA and tRNA. These studies have shed light on antibiotic function, and the mechanism of tRNA and mRNA recognition and decoding by the ribosome. The 30S ribosome structure has been used for the study of antibiotics binding. After the determination of ribosome structure, it has been understood that the ribosome is involved in the accuracy of tRNA selection during translation. He is currently trying to understand the interactions of initiation factors with the 40S ribosomal subunit, mRNA and initiator tRNA as well as the conformational changes induced by the binding of these factors and trying to crystallise the more stable complexes in the future. He has published 106 research papers/articles in the journals of repute. He is now senior scientist at MRC Laboratory of Molecular Biology in Cambridge, UK. Current interest of his research is the structure and function of ribosome and the Action of antibiotics on ribosome.



“The Indian Science Congress is a unique galaxy of scientists and technologists,” said Prof. P Sathyanarayanan, Vice Chancellor of SRM University, on the meaning and relevance of the 98th Indian Science Congress as it pertained to the younger generation, the challenges faced by the host institution in organising this mega event and what it means to SRM group of institutions as a whole. Excerpts from his interview to Spectrum:

Question: SRM University is the proud host of the 98th Indian Science Congress. What were some of the challenges that had to be met in hosting this mega event?

Answer: You have rightly said SRM University is the proud host of the 98th Indian Science Congress. Several faculty members, scientists and researchers from different universities, institutes and laboratories are participating in the Congress and I understand that the number of delegates registered is the largest so far. This Congress has a unique galaxy of scientists and technologists. Thus, the challenges are to

‘Science Congress will spur SRM faculty to do research in frontline areas of S&T’

provide proper venues for the 16 plenary sessions, 14 sectional sessions, Nobel laureates lectures, public lectures, Children Science Congress, Science Communication and other events. Also, it is a challenge to provide food and arrange accommodation and transport facilities on such gigantic scale. This is the first time that over 5,000 delegates are being accommodated in the University’s Kattankulathur campus. My colleagues including the Provost, the Pro-Vice-Chancellor, the Registrar, Directors, Dean’s, Heads of the Departments and faculty members have put in the best possible efforts to meet these challenges.

Q: What in your view are the benefits of this major science convention for the younger generation?

Ans: There are several unique features about this edition of the Congress. Six Nobel Laureates from UK, USA and



Vice Chancellor

Israel are participating and delivering special lectures. I am sure the younger generation will get motivated by these lectures to take up Science and Technology as their career, to dream high and put in more effort to excel. Further, Meet the Nobel Laureates is organised during this Congress, which provides a forum for the college and school students to interact with the experts. Further, Pride of India, the Science Exhibition, is being organised as a part of

the Congress. This again is a very rare opportunity for student and other young delegates. The exhibition will create a burning urge in them to make the country as a world leader in Science & Technology in the years to come. Our efforts through the Children Science Congress, Meet the Nobel Laureates and the 98th Science Congress will supplement and compliment the efforts of the Government of India in attracting the younger generation to Science and Technology, which is the need of the hour.

Q: SRM group of institutions has constantly placed a premium on Research. How do you see the 98th ISC as a catalyst for this?

Ans: I wish to make an emphatic statement that SRM University attaches top priority to research. We believe that research and teaching are intertwined. Realising this fact, the University from its own

resources has funded several pilot projects and some of these projects have resulted in the formulation of major research projects. Our faculty members are carrying out several projects funded by DST, DRDO, ISRO/DOS, BRNS/DAE, AYUSH, DBT, and the Ministry of Public Health and several others funding agencies. Three Schools/Departments are having DST-FIST programmes. Thus, participation of the faculty members of SRM University in the 98th Science Congress and their interaction with the Nobel Laureates, scientists of repute and several others will broaden their horizon and motivate them to carry out research in frontline areas of Science and Technology. This forum will provide a unique and great opportunity for our faculty members to discuss and formulate collaborative research programmes in the foreseeable future.

Chennai - the epitome of culture

Krishnan Ramesh

Chennai, formerly known as Madras, is the capital city of Tamil Nadu state. Located on the Coromandel Coast of the Bay of Bengal, the city had a population of 4.34 million in the 2001 census within the area administered by the Corporation of Chennai and an extended Metropolitan Population of 6.5 million.

It is a city renowned for its

long-standing tradition and rich culture. The Tamil month of Margazhi, December to January, is the best time to experience the maestros of Carnatic Music, one of the oldest genres of music. The city has a vibrant theatre scene and is the centre for Bharatanatyam, a classical dance form.

Of the entire gamut of industrial sectors in the city, the automotive sector is the most prominent. A major chunk of India’s car



manufacturing industry is based in and around the city. Chennai accounts for 60 per cent of the country’s automotive exports and is called The Detroit of Asia.

Weather

Chennai has a tropical climate, specifically a tropical wet and dry climate. The city lies on the thermal equator and is also on the coast, which prevents extreme variation in seasonal temperature. The weather is hot and humid for most of the year with temperatures around 38–42

°C (100–108 °F). The coolest part of the year is January, with temperatures around 18–20 °C (64–68 °F).

Cuisine:

The region has a rich cuisine involving both vegetarian and non vegetarian dishes. Rice and legumes play an important role in Tamil cuisine. The prominent dishes from the city would include idly, dosa, pongal and uthapam. The traditional way of serving food involves using plantain leaves as plates.

Places to visit:

Marina beach - Marina beach is the second longest beach in the world. **Fort St George** - Fort St George is the starting point for the city we know of today. **Kapaleeshwar Temple** - Kapaleeshwar temple is a temple for Lord Shiva, built by Pallava Nayanmars around the 7th century. **Santhome Church** - Named after St. Thomas, one of the 12 Apostles of Jesus Christ, who came to India in A.D.52, martyred in A.D.72 and was buried here in Mylapore.