

Indian professor wins \$4 million award for breast cancer research

EXPRESS NEWS SERVICE

New York

DR SHILADITYA SENGUPTA, an assistant professor of medicine at the Harvard-MIT division of Health Sciences and Technology, has been named one of the three winners of the Era of Hope Scholar Award, 2006. Given by the breast cancer research program of the Department of Defense, the award entitling him to \$4.1 million.

"This is a great honor and an opportunity to look at breast cancer management in an innovative manner. It's not just about the dividing cancer cells but also blood vessels which supply the growing tumor and the matrix surrounding it," said Sengupta.

His recent work brought together cancer biology, pharmacology and engineering to create an anti-cancer drug delivery device dubbed the Nanocell. The technology has the potential to eliminate the systemic toxicity caused by chemotherapy by directing drugs to act only where they are needed. Sengupta's concept is being commercialized by Tempo Pharmaceuticals, which is a MIT start-up.

The award will help Sengupta further the efforts of his institute to improve medical diagnostics and therapeutics.

The Era of Hope Scholar Award recognizes talented, early-career scientists who have demonstrated that they are the best in their field through creativity, vision, and productivity. "We can now bring in chemists, molecular biologists, mathematicians, computational biologists, pathologists and breast cancer oncologists to essentially integrate medicine with engineering and come up with



Shiladitya Sengupta

His recent work brought together cancer biology, pharmacology and engineering to create an anti-cancer drug delivery device dubbed the Nanocell. The technology has the potential to eliminate the systemic toxicity caused by chemotherapy

novel nanotechnology-based therapies that are more effective but with less side effects," Sengupta said.

His laboratory is currently harnessing nanoscale and microscale technologies for regenerative medicine and for developing novel therapeutics for complex diseases.

It has been learnt that Sengupta and his

team are collaborating with a physicist to model how blood is supplied to a tumor. When they accomplish this, they may be able to target the tumor while sparing other parts of the body, or deliver larger quantities of drugs using concepts from nanotechnology.

The Harvard professor said his department is planning to collaborate with Indian institutes such as the All India Institute of Medical Sciences (AIIMS) in New Delhi, National Institute of Chemical Biology in Pune and the Indian Institute of Technology in Kanpur.

He said that his department was planning to collaborate with Indian institutes such as the All India Institute of Medical Sciences in New Delhi, National Institute of Chemical Biology in Pune and the Indian Institute of Technology in Kanpur.

Shiladitya graduated from AIIMS and did a postgraduate course in pharmacology there. He got his PhD from Trinity College, Cambridge, as a Nehru scholar in 2002.

He then moved to the Massachusetts Institute of Technology, where he completed a fellowship in biological engineering before joining the Harvard Medical School and MIT as assistant professor of medicine and health sciences and technology. In 2002, he married Shivani Agarwal, who now works as a lecturer in computer science at MIT.

He has also won many other prestigious awards including the Shakuntala Amir Chand Prize from the Indian Council for Medical Research, Amanda Stavely Prize in the Cambridge University and the Young Investigator award from the American Society for Pharmacology and Experimental Therapeutics.

Illegal Mexican immigrants may get benefits

EXPRESS NEWS SERVICE

New York

THE BUSH administration has reached an agreement with Mexico regarding social security benefits that will allow illegal aliens to be granted amnesty in the future to claim credit for the time they have worked illegally, reported *The Washington Times*.

The agreement was reportedly reached in 2004 but never released publicly because it hasn't been submitted to Congress. While this may come as good news to illegal Mexican immigrants and indeed, illegal immigrant as a whole, the TREA Senior Citizens League, a Social Security advocacy group, said it confirms the group's worst fears.

The document is a jumble of definitions and legal language, but a spokesman for the group was quoted as saying that what is important is what is not in the text: It does nothing to prevent undocumented aliens who later get legal status from receiving benefits for the time they worked illegally. This comes at a time when the Social Security system's finances are about to be put under great strain by the retirement of baby boomers.

"If you open up the trust fund to people who have been working in the country illegally for many years, then that bankruptcy date can only come sooner," said spokesman Brad Phillips.

But Mark Lassiter, a spokesman for the Social Security Administration, said the agreement doesn't change US law. The law states that those who do not have authorization to work will not get benefits under a totalization agreement.

Broadband makes movie debut with thriller *Carma*

The independent film will be marketed through the new concept of Viral Broadcasting, where it will be spread virally on free videosites like youtube.com and social networks like friendster.com. This, producers believe, will lower distribution costs substantially

SAM RAO

Mountain View, Calif.

THE LAST DAY of 2006 heralded the entry of broadband into filmmaking and movie distribution.

Carma, an 81-minute independent film, became the first movie to be released exclusively on the Internet via streaming DVD-quality pay per view.

A brain child of filmmaker Ray Arthur Wang, the movie is an awardwinning supernatural thriller. The name is a play on Hindu concept of *Karma* - conveying the idea that (your) action can come back and haunt you.

The name is spelled differently to indicate a macabre combination of car and Ma. In the film, protagonist Norm Burns (Peter Kiszka) murders his mother (Ma) and stuffs her in various parts of his car. Hence, the name *Carma*.

"The film *Carma* has been compared to the works of Alfred Hitchcock, Quentin Tarantino, and David Lynch," said executive producer Anand Chandrasekhar, a friend of director Wang.

The movie also features the voice of Academy Award-nominated actress Karen Black (*Five Easy Pieces*, *Easy Rider*, *The Great Gatsby*) and a cast of "real people" including a real life ex-convict Peter Kiszka, who served time at the infamous San Quentin prison in California.

Unlike the demise of many independent or "Indie" movies, which end up straight to DVD on shelves of retailers everywhere, the

A still from the film *Carma* and (right) a poster of the the 81-minute film made by Ray Arthur Wang.

moviemakers have embraced the DVD viewing route of the completely digitally shot low budget movie. Viewers can download it for \$4.99. The movie is being marketed with a revolutionary concept of film distribution and marketing termed Viral Broadcasting. With this concept, CARMA is spread "virally" on leading free video sites like youtube, Google Video and Revver and social networks like MySpace and Friendster offering these sites (as well as anyone with a page on these sites). The film will earn revenue each time it is viewed from a site.

A privately held new company Fast Movie TV has provided the technology enabling full-

screen, DVD quality videos to be distributed globally on the Internet. Fast Movie TV overcomes the high cost of converting a feature film for DVD quality Internet distribution and enables the film to stream instantaneously as it is watched, so downloads are not required.

The release of *Carma on the Net* was made possible by amazon.com, DivX and Level 3 Communications who joined hands for the venture. Full-screen, broadcast-quality video and sound is transmitted directly to consumers on ordinary home DSL and cable lines and the technology allows users to pause, skip back and forward or exit and return later to

finish viewing the movie.

Carma represents the first step in completely digital filmmaking — the film was made from start to finish entirely on a Macintosh notebook computer, from writing to cinematography, editing and production. Distribution is being done via FastTrack.tv and the new concept of "viral marketing".

This can lower the distribution costs to almost zero, making it possible for more young filmmakers to showcase their work," pointed out Chandrasekhar. "With *Carma*, we have managed to achieve total democratization in the process of filmmaking and distribution," he added.

