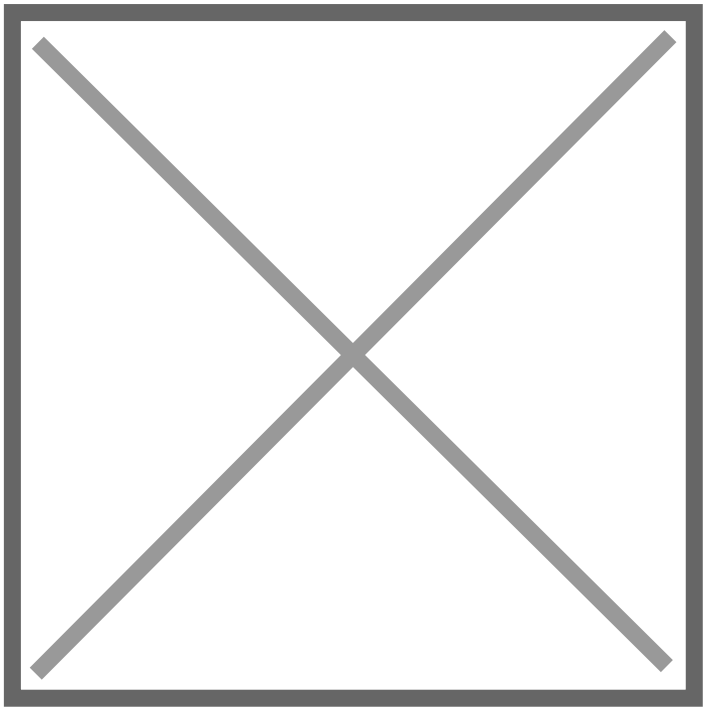
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Aging Will Be Controlled by 2030

14 June 2007 | News



Aging Will Be Controlled by 2030

Experts at BIO point out that aging will be controlled by 2030 and the cost of making products will become faster and less expensive.

The final keynote session at BIO International Convention was on "A Hopeful Future: Gaining the Edge with Biotechnology." The session moderated by BIO chief Greenwood featured a high power panel of Robert S Langer of the Massachusetts Institute of Technology (MIT), Craig C Mello, of the University of Massachusetts Medical School, author Virginia Postrel and Dr Phillip A Sharp of MIT. The panelists discussed their visions of the biotechnology industry over the next 10 to 20 years. They concluded that in the future the drug discovery will become faster and less expensive than what it is today. Clinical testing prior to commercialization, however, is likely to remain expensive.

Sharp advised that the United States has no monopoly on biotech. "There is science in Europe, Asia and elsewhere. I see US having increasing competition. Biotech is something we have to keep competing at," he said.

Mello and Postrel agreed that the cost of not treating disease has to be examined, perhaps as closely as the costs of treatment are examined today. Drug development costs, they said, should be viewed relative to the economic benefit of a healthy society.

Here are some of the responses by the panel to a few important questions posed by Greenwood.

Has biotech arrived?

We are there. We are seeing the introduction of the first type of drugs. A decade ago, we did not know the role of RNAi. Now one is seeing nanotechnology used for newer applications. Bioindustrial applications are gaining momentum. Biotechnology is a fabulous and heartwarming industry. We need to treat the sick, feed people, and create alternative energy. Our heart and soul are the fragile start ups. Our success will depend on holding each other by strong ethics and through innovations. It is a social obligation to the society. But the society in return should live up to the contract. Both parties need to work hand in hand and in a balanced way. We have to step up our efforts to meet the challenges. One should remember that the future is uneven and distributed.

Any predications on health care in 2030?

We can control ageing. The newest breakthrough is in controlling ageing. David Sinclair's team at Harvard Medical School is focused on finding small molecules and genes that can delay or prevent diseases caused by aging. His lab is one of the few in

the world that studies a variety of different organisms--baker's yeast, nematode worms, fruit flies and mice--to understand aging. In 1997, Sinclair's research at MIT identified the discovery of the cause of aging in yeast, a first for any species. In May 2003, Sinclair's laboratory reported the discovery of a conserved "master regulatory gene" for aging in yeast that was published in the journal Nature.

Toilets will be monitoring metabolites combined with genomics. As our knowledge of the human genome increases several genes with variants which affect drug metabolism will be found.

Gene therapy, somatic cell therapy, and tissue engineering are expected to have a major impact on public health. The idea would be to create new skin, bladder, pancreas, and so on.

Human genetics is going to be very fantastic.

Will the cost of making products reduce?

Every disease has a cost to it. And the any technology that is developed will focus on reducing the cost of treatment. One of the reasons that God made engineers is to reduce cost. We have to innovate. That is why RNAi is such a good development. Costs will decrease and bring benefit to the society. We need to focus on collaborative work and see the cost from a holistic system.

How do you see the biotech being developed globally?

We (USA) do not have a monopoly of any aspect of biotech and bioscience. We are leading but we have to be competing. The reverse brain drain is happening in China. Mexico is training more engineers than the US. This is a major challenge in the US.

What are some of the things that people do not know?

The studies of the brain are increasing. The info on 3D interaction of DNA-RNA-protein. This info can be generated from one generation to the next.