



Genomic Medicine and The New Age Drug Discovery

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Abstract

Abstract: The conventional drug discovery starts with identifying a small molecule and then looking for a target and ligand etc and finally identifying the disease it might treat. This technique of "single molecule single target" drug discovery technique is unable to bring the desired number of new drugs to the market. Moreover, this technique is unable to bridge the wide gap between drugs and treatable diseases. This is causing the untreated diseases, orphan diseases, and rare diseases list becoming longer and longer. The completion of the Human genome has changed all these. It is now possible to understand the molecular property of a disease. The Data Sciences and Big-data driven genomics that starts with disease is able to slowly unlock the mystery of cause and effect relationship of disease progression including cancer. This science is showing tremendous promise in discovering drug with multiple-targets. The techniques of patient stratification through genetic tests and genomic medicine have already produced exciting results -- quite a few new drugs for cancer and orphan diseases have already been approved by FDA in record time that have its root in genomic sciences. This also opens up a new untapped market of drug repurposing. This talk titled "Genomic Medicine and The New Age Drug Discovery" by Dr Asoke K Talukder will unleash the science and the technology of Genomic Medicine, Precision Medicine, and the New Paradigm of Drug Discovery of "disease to target". The talk will also show how the New Age drug discovery is more effective, less expensive, and better.

Biography of Speaker: Dr. Asoke K Talukder is an author, professor, and entrepreneur. He did M.Sc in Biophysics and Ph.D in Computer Science. He innovated technologies for companies like Fujitsu-ICIM, Microsoft, Oracle, Informix, Digital, Hewlett Packard, Sequoia, Northern Telecom, NEC, Cellnext, etc. He was the DaimlerChrysler Chair Professor at IIT Bangalore and Adjunct Professor, NIT Warangal. He authored many books, book chapters, and peer-reviewed papers. Two of his books are translated in Chinese. He co-founded InterpretOmics that is recipient of 2015 Karnataka Govt Bio-Excellence award. InterpretOmics is a Big-data genomics company engaged in Genomics, and Systems Biology. InterpretOmics is providing products and solutions to leading genetics labs and pharmaceutical companies around the globe. Asoke is recipient of many international awards including All India Radio/Doordarshan award, ICL Excellence Award, IBM Solutions Excellence Award, Simagine GSMWorld Award etc. Asoke has been listed in "Who's Who in the World", "Who's Who in Science and Engineering", and "Outstanding Scientists of 21st Century".