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Genomic approaches in modern biotechnology: From discovery, translation to implementation

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The biotechnology industry has quickly entered an era when fast evolving genome technologies, historical precision medicine initiatives and disruptive bioinformatics techniques synergistically start to provide pivotal and strategic support for new drug and diagnostics development. Unprecedented amount of data is being generated to help discover and develop new generations of medications. Using real-world examples, this talk covers several of the most important bioinformatic considerations in this strategy, which include: How do we efficiently manage the massive amount of data at different levels of precision to ensure a seamless data flow? How do we annotate and present these data to make it more comprehensible and deliverable? How do we design and execute the new clinical trials more efficiently and improve the success rate? Where are we and where are we going in this new precision medicine era?

Biography

David Dongliang Ge is the CEO and President of Apostle Inc., in Sunnyvale, CA, focusing on novel bioinformatics-enabled nanotechnologies for cancer early detection. Previously, he was the President of BioSciKin Co. and Simcere Diagnostics Co., China focusing on the licensing and sales of diagnostic technologies. Between 2011 and 2016, he was the Director of Bioinformatics at Gilead Sciences, where he founded and provided leadership to the bioinformatics group and provided the strategic input to related infrastructure and process. He and his group led the phylogenomic analytical support for the critical regulatory approval of Sovaldi, a world-leading anti-HCV drug. In 2014 and 2015, he was invited to be a Member of the US National Human Genome Research Institute Special Emphasis Panel. Prior to Gilead, he was appointed as Assistant Professor of Biostatistics and Bioinformatics and Assistant Professor in Medicine at Duke University School of Medicine. He has received his PhD in Biostatistics and Genetic Epidemiology from Peking Union Medical College and Chinese Academy of Medical Sciences in 2004. He has authored or co-authored over 70 peer-reviewed articles.

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