

Functional oncogenomics based cancer biomarker discovery

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Cancer is a complex multifaceted disease with dysregulated signaling networks caused by genetic, genomic and epigenetic alterations in the cell. Recent advances in our understanding about the molecular mechanisms of cancer, in conjunction with the rapid development of powerful genomic technologies have resulted in explosive information about the human cancer genome. The wealth of new information has led to speculation that the cancer drug discovery would be more predictive and productive. However, the biopharmaceutical industry has yet to see the expected fruition in drug discovery in oncology. Majority of the anticancer drug candidates fail due to lack of efficacy. To improve productivity and maximize probability of success in cancer drug discovery, rationalized, systemic and rigorous identification and validation of biomarkers predictive of patient's response to targeted agents are crucial. The breakthroughs in oncogenomics including genome-wide association studies, along with in depth biological research provide unprecedented possibilities for designing new therapeutic agents for cancer. Cancer biomarker focused studies are important in the discovery and development of personalized medicines. Both promises and challenges will be discussed in this presentation.

Biography

Yuxun Wang is currently the Executive Director and Head of Cancer Biology at HD Biosciences. He has a blend of experiences in both academia and biopharmaceutical industry in the US. Previously, he was Associate Director at Metamark Genetics, assistant professor at University of South Carolina and senior scientist at Merck Research Laboratory. His research has focused on translational oncology, cancer drug and predictive biomarker discovery. He has over 24 research publications and patent, numerous conference presentations and invited talks. He has received a number of awards recognizing his research and service in both academia and industry.

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