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Personalized cancer therapeutics: Updates on drug developments and characterization of biosimilars

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Cancer biomarkers are relevant for identifying patients who are likely to benefit from a given treatment (right drug for the right patient). This approach is utilized in cancer drug development as well as in measuring patient's response to therapy. Targeted therapies are designed to interfere with molecular targets with a goal of more precision and fewer side effects. These molecular pathways are broadly classified as either 1) monoclonal antibodies that target transmembrane receptors or extracellular growth factors or 2) small molecules that penetrate cell membrane and block and interfere with the enzymatic activity of target proteins. Emerging cancer therapeutics, which act on specific molecular targets, their mutations, and their role in tumor progression are presented: 1) PI3K, CDK, and PARP inhibitors and 2) PD-1 (programmed death receptor binding). Some aspects of development, characterization, and regulation of biosimilars as implemented by the FDA and EMEA are also presented.

Biography

Salah M Blaih has been involved in teaching, research and authoring in pharmacy and chemistry for more than 25 years. He was elected to the USP's Council of Expert's Committee on Gastrointestinal, Renal, and Endocrine and is a world-wide invited speaker on quality of medicines/compendia standards, pharmacogenomics, and medication safety. He is a Fellow of The Royal Society of Chemistry, a two-time president of The American Chemical Society-Penn Ohio Section, and a board-certified pharmacist with biographical entries in Who's Who in the World and Who's Who in America.

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