

# 3<sup>rd</sup> International Conference and Exhibition on **Biowaivers, Biologics & Biosimilars**

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## Emerging trends in biosimilars and biologics

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Keeping in view the heterogeneity of tumors, there is a need to develop new class of drugs which can distinguish cancer cells from non-cancer cells. Most current oncology treatments seek to kill cancer cells directly whereas immuno-oncology drugs unleash the body's own ability to recognize and destroy cancer cells, which medical researchers say could have broader reach. We believe a combination of immuno-oncology agents represents the best chance for patients to achieve long-term survival. The scope for developing monoclonal antibodies has long been recognized, as antibodies are proteins used by the body's immune system to block the path of foreign, potentially damaging invaders. Using this principle monoclonals has flooded the patent offices. And there are around 30 antibody-based drugs on the market in the United States - including blockbuster cancer therapies such as Avastin and Rituxan, both from Roche Holding AG. They are all produced from mammalian cells, often from hamsters, that are cultivated in large stainless steel vats. The production technology appears to be costly and differs from one company to another, and here there has to be an element of caution. However there is a promise in these Biosimilars as some studies have shown that pembrolizumab—a new monoclonal shrinks tumors in about a third of patients with late-stage melanoma, a disease that kills around 10,000 Americans each year. It is anticipated that if FDA approves this drug it will make a big difference to the patients who will have a chance of a durable, long-lasting response. The more successful biologics in the market are Herceptin for Breast cancer and bevacizumab and cetuximab for lung cancer. In general Biosimilars and biologics have proven useful in the treatment of hematologic malignancies like leukemia and lymphoma and they are being developed against solid tumors. All promising Biosimilars and biologics are in various phases of clinical trials and others in the pipeline, but we first need to understand its mechanism of action and its suitability as monotherapy, since in oncology, combinations typically provide superior benefit as we know that cancer is not a single disease.

## Biography

Kaiser Jamil has over 20 years' experience in the field of cancer biology and Biomarkers for various cancers and has authored over 200 publications and is an inventor of several patents. She discovered the polymorphic nature of several genes which interfere in cancer therapeutics. In 2008, she received the Modern Medicare Award for her discoveries in Pharmacogenomics, and all this information is being used for molecular diagnosis of breast cancer, head and neck cancer and leukemia by various diagnostic companies. She is fully accomplished scientist with a nerve to serve the Society and was the first woman to be the President of OWSD (Organization of Women Scientist in the Developing World- formerly TWOWS).

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