OMICSCOUP <u>Conference</u> on <u>Conference</u> on <u>Accelerating Scientific Discovery</u> <u>Conference on</u> <u>Conferen</u>

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Human biospecimens and biorepository science in the era of personalized medicine

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Human biospecimens are the foundation of effective translational medical research, including development of new drugs, novel biomarkers and personalized molecular diagnostics. Modern biomedical research requires continuous supply of legally and ethically acquired high quality human biospecimens and associated clinical and molecular data. Various important topics of human tissues research will be discussed:

- Preservation of pre-analytical biospecimen variables, significantly confounding research of the disease biomarkers and development of modern diagnostics. Pre-analytical aspects of human biospecimen procurement: tissue collection specifications, processing materials and methods, storage and shipping procedures, and analyze preparation techniques.
- Collection of biospecimens using standard protocols versus custom protocols and effective use of currently available biorepositories for future studies on the indicated subject.
- Clinical data collection and management. HIPPA Privacy Rules for research specimens.
- Regulatory and legal issues on human tissue procurement for research purposes, including international disparities in regulations on use of human materials for biomedical research.
- The cost of biobanking, available resources, and strategies for creating a self-sustaining biorepository.
- Effective utilization of human biospecimens in modern biomedical research: The Cancer Genome Atlas (NCI, NIH), a modern approach to genomics cancer research.
- Useful resources: ISBER, CAP, AACR, NCI, etc.

Biography

Olga Potapova is a life sciences executive with extensive scientific and project management expertise in translational oncology, diagnostics and laboratory medicine. She worked on development of targeted therapies (SUTENT) and human prenatal diagnostic tests (Cystic Fibrosis); coordinated major international collaboration projects with an emphasis on RTK signal transduction research, human biospecimen procurement, preclinical and early clinical development. Currently, She leads Cureline, a Human Biospecimen CRO providing services for drug discovery, biomarker research and companion diagnostics development. She received multiple AACR/AFLAC awards, NIH and NATO fellowships, and has published multiple scientific papers in peer-reviewed journals. Since 2010, Dr. Potapova has been a Principal Investigator for The Cancer Genome Atlas (TCGA) program. She has advanced degrees in Physics and in Molecular Genetics/Biochemistry.

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