

9<sup>th</sup> International Conference and Exhibition on

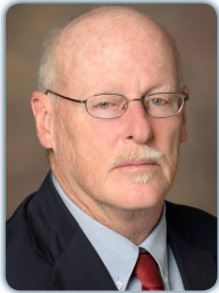
# TISSUE ENGINEERING AND BIOBANKING

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9<sup>th</sup> International Conference and Exhibition on

# TISSUE SCIENCE AND REGENERATIVE MEDICINE

April 23-24, 2018 Las Vegas, USA



## *David T Harris*

*University of Arizona, USA*

### **Biobanking for regenerative medicine**

Regenerative medicine and tissue engineering play significant roles in the treatment of currently intractable conditions such as chronic heart failure, stroke, chronic osteoarthritis, and other maladies. Regenerative medicine and tissue engineering generally depend on the utilization of stem cells to treat patients but may also utilize mature cells that would not normally be considered as stem cells (e.g., skin). Stem cells (like mature cells) may be obtained from many sources in the body including bone marrow, cord blood, cord tissue, adipose tissue, etc. Although stem cells are often used in therapy immediately upon isolation, in many circumstances the stem and progenitor cells will be harvested, processed and banked frozen until a later time. Biobanking is a convenient alternative to same-day therapeutic use, in that it allows for patient recovery (e.g., from liposuction), provides time to identify the best treatment options, and may allow for multiple interventions with additional patient inconvenience or risk. This presentation will address the topic of Biobanking and Regenerative Medicine. Topics to be included are organization of the biobank, types of sample collections and processing, precision medicine and big data, data management, and clinical utilization of banked specimens.

### **Biography**

David T Harris is a graduate of Wake Forest University where he obtained BS in Biology, Mathematics and Psychology. He has earned his Doctorate in Microbiology and Immunology in 1982. In 1989, he has joined the Faculty at the University of Arizona in the Department of Immunology. He has established the first cord blood bank in 1992. He currently serves as the Executive Director of the University of Arizona Biorepository, as well as the Director of Quality at the GMP Laboratory. His research interests include stem cells and regenerative medicine.

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