



## Keynote Symposium

### KS-01

Regenerative Medicine: Current Concepts and Changing Trends. ANTHONY ATALA. Wake Forest Institute for Regenerative Medicine, Wake Forest School of Medicine, Medical Center Boulevard, Winston-Salem NC 27157-1079. Email: aatala@wakehealth.edu

Patients with diseased or injured organs may be treated with transplanted tissues. There is a severe shortage of donor organs and tissues which is worsening yearly due to the aging population. Regenerative medicine and tissue engineering apply the principles of cell transplantation, material sciences, and bioengineering to construct biological substitutes that may restore and maintain normal function in diseased and injured tissues. Stem cells may offer a potentially limitless source of cells, and 3D bioprinting applications are being utilized for potential therapies and body-on-a-chip technologies for drug discovery and

personalized medicine. Recent advances that have occurred in regenerative medicine will be reviewed. Applications of these new technologies that may offer novel therapies for patients with tissue injury and organ failure will be described.



A. Atala