

International Conference on

# Leukemia and Hematologic Oncology

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## Advances in regenerative medicine

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The objective of this presentation is to discuss the new field of regenerative medicine and how these technologies are applied to provide superior health care. Regenerative medicine focuses on new approaches to autologous repair and/or replacement of cells, tissues and/or organs. It is a broad research area with main focuses on: Cellular therapies, gene therapies and tissue engineering. Also, promise of regenerative medicine will be discussed, including development of regenerative medicine treatments and clinical trials in progress; in addition to challenges of this new field in medicine. Cellular therapies include: Bone marrow transplantation (currently presented), Chondrocyte transplantation (in clinical trials) and pancreatic  $\beta$ -islet transplantation (in clinical trials). Gene therapy is the technique for correcting defective genes responsible for disease development. Tissue engineering is seeding out an appropriate scaffold with suitable growth factors and cytokines. For cell therapy, challenges are directing cells to the proper place, integrating cells with patient's own tissue, overcoming the phenomenon of tissue rejection. Challenges of tissue engineering are to obtain suitable scaffold, to control the spatial distribution of cells, the proper combination of culture conditions/growth factors to allow the construction of a vital vascularized substitute with natural tissue anatomic, mechanical and anti-inflammatory functions.

## Biography

Jehan El Sharnouby has completed her PhD from Tanta University and Post-doctoral studies from Tanta University, Faculty of Medicine. She is the Director of Hematology and Bone Marrow Biopsy Unit. She has published more than 25 papers in reputed journals and has been serving as an Editorial Board Member of reputed journals.

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