Mesenchymal Stem Cell Biology

Cell Therapy
- Evaluating MSCs from altered states
  - MSCs from patients with chronic disease
  - Autologous vs allogeneic cell therapy
- Treatment of neural and autoimmune disease
  - Identifying the ideal source of MSC
  - Defining the ideal timing of therapy

Tissue Engineering
- Wound healing using MSCs and bioactive glass
  - Mechanism to increase angiogenesis
  - Changes in extracellular matrix secretion
- 3D bioprinting
  - Novel method to 3D print stem cells

MSCs grown under standard culture condition (A), with bioactive glass (B), and in an angiogenesis model (C). A novel method to 3D print stem cells (D-F).

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- stem cells, MSCs, cell therapy, tissue engineering, biomedical engineering

Recognitions/Significant achievements