Introduction on the industry perspective in regenerative medicine
John McNeish and Ruth McKernan, Pfizer Regenerative Medicine

The term “regenerative medicine” represents an enormous range of biology, chemistry and biophysical technologies that harness the restorative properties of living materials, especially human cells, to produce new molecular and cellular medicines, diagnostics, devices and healthcare research tools. The most recent industry wide study on the economic impact of regenerative medicine, completed in 2008, estimated the total market to be between $2-5 billion.\(^1\) 2009 estimates approximate that the global stem cell market\(^1\), one segment of regenerative medicine, will achieve an annual growth of 29.2\%, with resulting sales of $11 billion by 2020.\(^2\) With success, it is projected that regenerative medicine could save the United States $250 billion per year\(^3\) in direct costs associated with certain chronic diseases—late-stage Parkinson’s disease, new cases of spinal cord industry, heart failure, stroke, and insulin-dependent diabetes. This opportunity has resulted in a heightened interest in stem cell based therapeutics from investigators in the academic and biopharmaceutical sectors\(^4\). In 2008, there were over 500 companies involved in cell therapy, with over 100 involved in stem cell therapy.\(^1\) This panel will focus on direct therapeutic application of stem cell based technologies in regenerative medicine. This will include the application of stem cell based platforms for research tools in the drug discovery, autologous and allogenic human adult stem cell medicines, and tissue/cell replacement approaches using pluripotent stem cells.

---

\(^1\) Regenerative Medicine: Industry Briefing, (2009), Commercial Opportunities and Ontario’s Strengths. MaRS Advisory Services.

---

\(^1\) Including blood cord banking and drug development tools