Stem Cell Therapy for Cardiovascular Disease

answering basic questions regarding cell behavior.

1. Molecular imaging is a valid tool to monitor stem cell survival, proliferation, and migration (this thesis).

2. Adult stem cells do not survive the ischemic environment of the infarcted heart (this thesis).

3. Adult stem cells do not ameliorate long-term cardiac function following myocardial infarction in mice (this thesis).

4. Stromal cells from adipose tissue resemble mesenchymal stem cells from the bone marrow regarding in vitro as well as in vivo behavior (this thesis).

5. Bone marrow mononuclear cells do not preferentially home to ischemic environments in a murine model of peripheral artery disease (this thesis).

6. Undifferentiated embryonic stem cells can differentiate into cardiac lineages in vivo, while bone marrow mononuclear cells do not (this thesis).

7. Undifferentiated embryonic stem cells can be tumorigenic, which can be a challenge when using embryonic stem cell-derived cellular therapy in a clinical setting (this thesis).

8. Micro-CT offers superior insight in murine cardiac anatomy and geometry compared to echocardiography and pressure-volume loop analysis (this thesis).

9. Even with more than 40 years of research on pluripotent stem cells, it is still not possible to write a simple paragraph describing why some cells can differentiate to all other cell types but others cannot. (Thomson JA, Genes Dev. 2008 Aug 1;22(15):1987-97)

10. Regardless of the vascular condition and the control treatment, pool-side Rehab therapy in Las Vegas will likely provide significant better outcomes in terms of quality of life.

11. “If Arnie wins, we win.” (John Hackmann)