

**Wednesday, February 12, 2014**  
**ACUTE AND DEGENERATIVE TISSUE RISKS**  
**3:00 p.m. Expo Hall A3**

**Chairs: Ann Kennedy**  
**Ian McNiece**

- 3:00 p.m. Kennedy A. R. Weissman D. Mick R. Diffenderfer E. S. Lin L. Sanzari J. K. Romero-Weaver A. L. Krigsfeld G. S. Wan X. S. Cengel K.  
[Acute Effects of Solar Particle Event Radiation](#) [#3086]  
 The NSBRI Center of Acute Radiation Research (CARR) is focused on the evaluation of adverse biological effects from solar particle event (SPE) radiation and countermeasures for those effects.
- 3:15 p.m. Hu S. Blakely W. F.  
[HEMODOSE: A set of Multi-Parameter Biodosimetry Tools](#) [#3145]  
 HEMODOSE tools can rapidly and accurately estimate absorbed dose based on various blood cell counts after acute radiation exposure, and can be a rapid point-of-care diagnostic or centralized high-throughput assay system in a large scale radiological/nuclear disaster scenario.
- 3:30 p.m. Sasi S. P. Lee J-Y. Mehrzad R. Morgan J. P. Gee H. Song J. Rahimi L. Enderling H. Walsh K. X. Carrozza J. P. Jr Yan X. Goukassian D. A.  
[Diverse Sequence and Fractionation of 1H Versus a Single <sup>56</sup>Fe-IR Induces Dramatically Different Biological Responses in the Heart](#) [#3069]  
 Mix ion regimens have divergent biological responses based on the sequence/ fractionation of <sup>1</sup>H vs. a single <sup>56</sup>Fe. <sup>56</sup>Fe/<sup>1</sup>H+<sup>1</sup>H+<sup>1</sup>H-IR had significant negative effects on the heart in the aging model, whereas <sup>1</sup>H+<sup>1</sup>H+<sup>1</sup>H/<sup>56</sup>Fe-IR presented significant CV risk for cardiac recovery in the heart attack model.
- 3:45 p.m. Babitz S. K. Dunaway C. W. Steele C. Kucik D. F.  
[Radiation-Induced Adhesiveness of Aortic Endothelium is IL-8 Dependent](#) [#3144]  
 Radiation increases risk of atherosclerosis, but the mechanism is largely unknown. We showed previously that both x-rays and <sup>56</sup>Fe increase atherosclerosis in apo-E mice, and that this correlates with increased aortic adhesiveness. Here we show that IL-8 is an important component of the mechanism.
- 4:00 p.m. McNiece I.  
*The Effects of Space Radiation on Stem Cells and Vascular and Cardiac Disease*
- 4:15 p.m. Shirazi-Fard Y. Alwood J. S. Schreurs A. S. Shahnazari M. Tran L. H. Ghosh P. Stabley J. N. Turner N. D. Delp M. D. Limoli C. L. Globus R. K.  
[Deleterious Effects of Simulated Spaceflight on Bone and Microvasculature in Adult Mice](#) [#3193]  
 Long-term spaceflight leads to extensive changes in the musculoskeletal system attributable, in part, to unloading during microgravity exposure. We tested to see if simulated weightlessness in adult mice adversely affects skeletal responses in bone and microvasculature to simulated space radiation.