BIOENGINEERING

Educating Thinkers, Leaders, and Entrepreneurs

CLEMSON UNIVERSITY
Clemson University

- Since 1889
- Land-Grant Public University of SC
- >20,000 students (undergraduates and graduates)
- 5 Colleges
  - College of Engineering & Science (~8,000 students)
    - Department of Bioengineering
      - BS, MS, PhD, Meng
      - MD/PhD, DMD/PhD
Drs. Hall and Hulbert met at the 1969 1st International Biomaterials Symposium (IBS), Clemson. The first set of Awards (Clemson Awards) was given at the 2nd, 3rd, 4th IBS, Clemson in 1973. A group of pioneers met in San Antonio to discuss the formation of the Society for Biomaterials (SFB) in 1974. SFB Articles of Incorporation and Bylaws were drafted at the 6th IBS, Clemson in 1975. SFB was chartered in San Antonio, TX in 1975. The 1st SFB/7th IBS was held in Clemson in 1978. Clemson Bioengineering celebrates the 50th anniversary of the establishment of the society in 1963-2013. Dr. Hall's sketch of the SFB logo is shown. Clemson Bioengineering and Biomaterials.
Education/Training

- BS, MS, PhD Bioengineering, and Meng
- BS concentration in biomaterials and bioelectrical engineering
- Undergraduate Research-Creative Inquiry, Mentored Research, Senior Honors, Study Abroad
- 5 year BS/MS dual degree program
- Medical Device Recycling and Reprocessing Certificate
- MS in Bioengineering/MBA in Entrepreneurship and Innovation (CUBEInC Enterprising Studio)

Research

- Advanced biomaterial design, fabrication, and testing
- Tissue engineering and regenerative medicine
  - Cardiovascular, neural, orthopaedic
- Nanotechnology for drug delivery, targeting, and imaging
- Image-guided surgery
- Optical imaging and biophotonics
- Research Centers-SCBioCRAFT and IBioE

Economic Development

- SCBIO; Upstate SC Alliance
- Stryker (SC Med TransTech Program)
- CUBEInC Biomedical Corporate Collaboration
- Intellectual property development and faculty-driven start-ups
- Design and Entrepreneurship Network (DEN)
SC-Bioengineering Center of Regeneration and Formation of Tissues (SC-BioCRAFT)

Mission: to find better treatments for human diseases by fostering interdisciplinary collaborations among researchers and enhancing interdependent intellectual capital and resources within the State of South Carolina.

**Project I** — Developing Luminescent Strain Sensors to Evaluate and Monitor Osteoinductive Therapies
Target investigator: Dr. Jeff Anker, Associate Professor of Chemistry, Clemson University

**Project II** — Targeted Nano-therapeutics for Neural Regeneration
Target Investigator: Dr. Jeong Soo Lee, Assistant Professor Bioengineering, Clemson University

**Project III** — Polymer Microarrays for Stem Cell Cardiac Differentiation
Target Investigator: Ying Mei, Ph.D., Assistant Professor of Bioengineering, Clemson University MUSC Campus

**Project IV** — Diabetes Resistant Vascular Graft Remodeling
Target investigator: Dr. Agneta Simionescu, Assistant Professor Bioengineering, Clemson University

**Project V** — Role of DCHS1 in Mitral Valve Development
Dr. Russell (Chip) Norris, Assistant Professor, MUSC
Go Tigers and Thank you!