Agneta Simionescu
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A. Professional Preparation

INSTITUTION	LOCATION	MAJOR/AREA OF STUDY	DEGREE	YEAR
Clemson University	Clemson, SC	Bioengineering	Post-doc	2003-2007
Romanian Academy of Science	Bucharest, Romania	Biochemistry/Cell Biology	PhD	2001
University of Bucharest	Bucharest, Romania	Biochemistry	BS	1981

B. Appointments

Appointments

2023- Professor, Bioengineering Department, Clemson University
2015- Graduate Program Coordinator, Bioengineering Department, Clemson University
2018-2023 Associate Professor, Bioengineering Department, Clemson University
2012-2018 Assistant Professor, Bioengineering, Clemson University
2007-2012 Research Assistant Professor, Bioengineering, Clemson University

Honors

2018-2023 PI, NIH R01 award "Vascular Tissue Engineering in Diabetes"
2014-2019 PI, Target Project, NIH P20 COBRE award "Diabetic-Resistant Vascular Grafts"
2014-2019 PI, AHA AIREA Award "Mitral valve tissue engineering"
2010-2013 PI, NIH R21 award "Cardiovascular Tissue Engineering in Diabetes"
2010-2014 C0-PI, NIH R01award "Tissue engineering aortic heart valves"

C. Products

1. S Marsh, M Raudat, B Lefeber, LB Herndon, H Herbert, L McCallum, A Simionescu**.** "Dynamic bioreactor model to mimic early cardiac fibrosis in diabetes." *Journal of Mechanics in Medicine and Biology,* 2021, 21(6):2150047.
2. I Movileanu, M Harpa, H Al Hussein, L Harceaga, A Chertes, H Al Hussein, G Lutter, T Puehler, T Preda, C Sircuta, O Cotoi, D Nistor, A Man, B Cordos, R Deac, H Suciu, K Brinzaniuc, M Casco, L Sierad, M Bruce, D Simionescu, A Simionescu. "Pre-clinical Testing of Living Tissue Engineered Heart Valves for Pediatric Patients, Challenges and Opportunities". *Frontiers in Cardiovascular Medicine*, section Heart Valve Disease. 2021, Vol. 8, article 707892.
3. J Dhulekar, A Simionescu. "Challenges in vascular tissue engineering for diabetic patients". *Acta Biomaterialia*. 2018, 70 (Apr):25-34.

4. C Deborde, D Simionescu, J Liao, L Sierad, C Wright, A Simionescu. "Stabilized collagen and elastin-based scaffolds for mitral valve tissue engineering". *Tissue Engineering, Part A.* 2016, 22(21-22): 1241-1251.
5. J Chow, D Simionescu, A Carter, A Simionescu. "Immunomodulatory effects of autologous adipose tissue-derived stem cells on vascular scaffold remodeling in diabetes". *Tissue Engineering and Regenerative Medicine.* 2016,13:701-712.

Other Significant Products, Whether or Not Related to the Proposed Project

1. US Patent Issued US10660754B2 "Self-adjusting tissue holder", L Sierad, R Pascal III, C Deborde, D Simionescu, A Simion**escu**, 2020
2. US Patent #10,022,225, "Self-adjusting tissue holder". 2018, with L. Sierad, R. Pascal, C deBorde, D Simionescu
3. US Patent #9,283,241 (issued in 2016): "Treatment to Render Implants Resistant to Diabetes". A Simionescu, D Simionescu, J Chow. Licensed to Annoviant, LLC.
4. Invited speaker: ISACB Atlanta Sept 17-18, 2021, "Tissue Engineered Vascular Graft in Diabetes".
5. Mentor: Graduated 11 PhD and 17 MS students, supervised 3 post-dos, trained over 50 undergraduate students in research

Citations

Google Scholar: 74 papers and patents, 1767 citations, h-index 22
PubMed: 32 papers without patents, 575 citations, h-index 11

D. Synergistic Activities

1. *Tissue engineering Course* prepared in 2009: BIOE 4480 and BIOE L 4480 (3 credits)
2. *Biology for Engineers Course* prepared in 2009: BIOE 4010 (1 credit)
3. *Translational Cellular Therapy and Regenerative Medicine Course* prepared in 2016: BIOE 8730 (3 credits)
4. *Diabetic science and emerging technologies course in 2022: BIOE 8390 (3 credits)*
5. *Grant reviewer: NIH BTSS 2020 – 2024, NIDDK (ad hoc 2014-), AHA (2016 -), Welcome Trust Grants for Research Career Development Fellowship (2016)*

E. Sponsored Research

1. "Vascular Tissue Engineering in Diabetes" **National Institute of Health RO1 Award** $1,384,000/4 years. **Role: PI** July 2018 – July 2023.
2. "Mitral valve tissue engineering". **American Heart Association (AHA) AIREA Award.** $144,000 / 2 years. **Role: PI.** July 2017- July 2019.
3. "Diabetic-Resistant Vascular Grafts"; NIH **COBRE Grant P20.** "SC BIOCRAFT". $500,000/5 years. **Role: PI for Target Project #5.** 2014-2019.
4. "Cardiovascular Tissue Engineering in Diabetes", **NIH R21 grant. Role: PI**. $400,000. 04/01/2010-12/31/2013.

5. “Tissue engineering aortic heart valves; scaffolds and cells”. **NIH RO1 grant. Role: Co-PI,** $290,000, 03/01/2010-02/28/2014.
6. ” Elastin-derived scaffolds for tissue engineered small diameter vascular grafts”. **NIH FIRCA grant. Role: Co-PI,** $30,000, 04/01/2011-03/30/2014.
7. “Stem cell differentiation and cardiovascular tissue engineering in diabetes”, NIH **COBRE P20; Role: Target Project PI.** $200,000; 06/01/2012-05/31/2014.
8. "Efficacy of rotator cuff regeneration using scaffolds and stem cells”**; Co-PI. The Hawkins Foundation of the Carolinas**. $10,000. 1/12/2011 – 4/30/2013.
9. “Bioactive scaffolds for vascular surgery” **NIH R21 grant; Co-PI**: $50,000. 1/15/2007-12/31/2009