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**Biography:** In 2003, I earned my Ph.D. in Chemical Engineering from Hanyang University in Seoul, Korea, after which I pursued a postdoctoral fellowship at Harvard Medical School and Children's Hospital Boston (2003-2004), as well as at WFIRM (2004-2006), where I have been a dedicated faculty member ever since. I am also cross-appointed to the Virginia Tech-WFU Biomedical Engineering and Science.

**Synopsis of Area of Interest:** Design and development of biomaterials systems; 3D integrated tissue-organ printing (ITOP) system for bioengineering complex, composite tissues, and organs; bio-adhesion and bio-integration between biomaterials and cell/tissue; drug/protein delivery system; bioconjugation and polymer synthesis; bioreactor system for preconditioning; *in vitro* microphysiological system; NIR fluorescence-based noninvasive monitoring system.

**Selected Publications from over 160 Journals:**

- Kang H-W, **Lee SJ**, Ko IK, Kengla C, Yoo JJ, and Atala A, A 3D bioprinting system to produce human-scale tissue constructs with structural integrity, *Nat Biotechnol*, 2016;34(3):312-9.
- Lee JM, Yeon YK, Kim SH, Lee YJ, Seo YB, Sultan T, Chao J, Yoon S-I, **Lee SJ**, Yoo JJ, and Park CH, Precisely printable and biocompatible silk fibroin bio-ink for digital light processing 3D printing, *Nat Comm*. 2018;9:1620.
- Moroni L, Burdick JA, Highley C, **Lee SJ**, Morimoto Y, Takeuchi S, and Yoo JJ, Biofabrication of 3D tissue models and regenerative medicine, *Nat Rev Mater*. 2018;3:21-37.
- Kim JH, Kim I, Seol Y-J, Ko IK, Yoo JJ, Atala A, **Lee SJ**, Neural cell integration with 3D bioprinted skeletal muscle tissue constructs for restoration of muscle function, *Nat Commun*, 2020;11:1025
- Lee SC, Gillispie G, Prim P, and **Lee SJ**, Physical and chemical factors influencing the printability of hydrogel-based extrusion bioinks, *Chem Rev*, 2020;120:10834-10886.
- Lee H, Kim WJ, Lee JU, Yoo JJ, Atala A, Kim GH, **Lee SJ**, Self-aligned myofibers in 3D bioprinted extracellular matrix-based construct accelerate skeletal muscle function restoration, *Appl Phys Rev*, 2021; 8:021405.

**Motivation Statement:** My profound interest in regenerative medicine stems from its translational potential. Although my formal education centered on polymer sciences and chemical engineering, I recognized the importance of broadening my expertise and gaining interdisciplinary knowledge to conduct effective research in this field. As of now, my primary research focus lies in the development of a 3D bioprinting strategy capable of producing intricate, multi-cellular living tissue constructs. To achieve this, my team has made significant strides in developing various biomaterial formulations known as bioinks, which create the tissue-specific biological microenvironment necessary for successful cell delivery within 3D tissue structures.

Throughout my career, I have contributed to prominent, peer-reviewed international journals in regenerative medicine, such as Nature Biotechnology, Nature Communications, Biofabrication, among others. My body of work comprises over 160 peer-reviewed journal articles, 38 book chapters, and 15 patents or patent applications, reflecting the interdisciplinary quality of my scholarship. Moreover, I have taken on the role of lead editor for two books, namely "In Situ Tissue Regeneration: Host Cell Recruitment and Biomaterial Design" (Elsevier, 2016) and "Organ Tissue Engineering" (Springer Nature, 2021), both featuring contributions from distinguished scholars across the globe.

Mentoring and nurturing young scientists have been integral to my career, having supervised and guided over 180 trainees from various career levels, including graduate and undergraduate students, postdoctoral fellows, visiting scholars, and research trainees. My commitment to fostering the growth and success of young scientists continues to be a priority, and I actively seek opportunities to enhance my mentoring skills.

I am profoundly honored to receive a nomination for continued service as a member of the board of directors for the International Society for Biofabrication (ISBF). My association with ISBF began during my tenure as the Program Chair at the 2016 Biofabrication Conference in Winston-Salem, NC, USA. Recognizing the rapid advancements in the field of biofabrication, I am committed to working collaboratively with ISBF leadership to pursue strategic goals and contribute to the advancement of the profession. This includes fostering partnerships with industry and scientific societies, engaging with divisions and local sections, and supporting emerging leaders to strengthen the field and provide enriching opportunities for our members.

As a board member, my dedication lies in ensuring the continued growth and vitality of ISBF while providing valuable professional opportunities to our esteemed members. I wholeheartedly embrace this responsibility and am eager to contribute my expertise toward the fulfillment of these goals.