**Luai Huleihel - Ph.D. PMP**

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**SUMMARY**

Director of Research & Development, at Smith and Nephew, with close to ten years of experience in the field of regenerative medicine, tissue engineering, immunology, pulmonary, and more specifically, extracellular matrix technologies. I have led, managed, and/or supported the following R&D activities: Preclinical studies, new product development feasibility research, prototyping, test method development & validation, design control activities, professional education events, intellectual property and technology assessment, and spearheaded innovation initiatives and pipeline to promote new trade secrets & patents. Throughout these efforts, my team and I have consistently met predetermined company objectives and goals. Additionally, I have a track record of authoring over 25 peer-reviewed scientific publications over the last ten years.

**EDUCATION**

* Postdoctoral Associate - McGowan Institute for Regenerative Medicine (UPitt, PA) - 2016
* Ph.D. - Stem Cell and Molecular Biology, Ben-Gurion University, Israel & Yale University, CT - 2014
* MSc - Stem Cell and Molecular Biology, Ben-Gurion University, Israel & UPitt, PA - 2010
* BSc - Biological and Biomedical Sciences, Ben-Gurion University, Israel - 2008

**PROFESSIONAL EXPERIENCE**

**Smith and Nephew - Regenerative Medicine/Medical Device Company. 2021 to present**

**\*ACell Inc./ Integra LifeSciences - Regenerative Medicine/Medical Device Company. 2016 to 2021.**

**Role: Director of Research & Development (Current) – Smith and Nephew Role: Advanced Research Manager (2016-2021) – Integra LifeSciences/ACell Inc.**

Demonstrated ability to manage complex projects, lead and participate in high performing teams, interact with vendors and partners, and provide technical and project expertise in new business development (i.e., wound management and surgical soft tissue repair applications).

• Led a team of research scientists, research associates, and interns to meet company objectives and timelines

• Managed and worked on projects with both academic research labs and preclinical contractors

• Developed and implemented a robust intellectual property and new technology pipeline

• Established and managed R&D’s intellectual property program

• Collaborated with patent attorneys to pursue and file new patent applications

• Executed intellectual property and technology assessment analyses to evaluate new business development initiatives (i.e., licensing, M&A, etc.)

• Served as a technical resource for external study requests and new business development opportunities.

• Presented several research projects in conferences and supported their publications in peer-reviewed journals

• Wrote and implemented strategic project plans to develop and enhance technology platforms

• Executed feasibility studies to design new prototypes

• Developed new experimental methodology and models to evaluate and support new and existing products

• Designed and executed studies to support marketing and regulatory product messaging

• Supported educational events to health care providers, as well as sales and marketing teams, to discuss the scientific principles of the company core technology

**Role: Principal Scientist (2016-2019)**

• Led a team of research scientists, research associates, and interns to meet company objectives and timelines

• Managed and worked on projects with both academic research labs, and preclinical contractors

• Presented several research projects in conferences and supported their publications in peer-reviewed journals

• Wrote and implemented strategic project plans to develop and enhance technology platforms

• Executed feasibility studies to design new prototypes

• Developed new experimental methodologies and models to evaluate and support new and existing products

• Designed and validated methods for testing critical design attributes of new and existing products

• Supported the design and execution of comprehensive new urinary bladder matrix derived devices and platforms

• Drafted and designed new experimental protocols to increase the company core technology know-how

• Designed and executed studies to support marketing and regulatory product messaging

• Supported educational events to health care providers, as well as sales and marketing teams, to discuss the scientific principles of the company core technology

• Successfully completed training and obtained Project Management Professional (PMP) certificate

**McGowan Institute for Regenerative Medicine, University of Pittsburgh. 2014 – 2016**

**Role: Postdoctoral Associate**

Investigated the molecular mechanisms of ECM-induced constructive remodeling, specifically examining the role of miRNAs, exosomes and matrix-bound vesicles involvement in the remodeling response and the effect on macrophage activation. Additionally, I have investigated the direct effect of ECM on macrophage activation with the extended goal of identifying molecular targets to bias activation.

• Led various multidisciplinary projects in the field of regenerative medicine, immunology, tissue engineering, and extracellular matrix technologies.

• Trained and managed a team of graduate students, undergraduate students, and interns

• Investigated and published multiple studies, scientific reviews, and patents

• Managed and executed industry-sponsored research studies (preclinical) and summarized the results to a final report

**University of Pittsburgh School of Medicine. 2010-2013 & Yale University School of Medicine. 2013-2014**

**Role: Postgraduate Associate / PhD Candidate, Graduate Student Researcher**

Ph.D. dissertation title: MicroRNAs Change the Mesenchymal Phenotype of Human Lung Fibroblasts.

Responsible for multiple research projects involving the role of miRNA and stem cells in idiopathic pulmonary fibrosis (IPF)

• Led various multidisciplinary projects during the completion of Ph.D. in molecular biology and stem cells

• Collaborated cross-functionally with other principal investigators, physicians, and researchers

• Investigated and published multiple studies in the field of pulmonary fibrosis, miRNAs, and stem cells

• Trained and managed undergraduate students and interns

**PUBLICATIONS**

Authored and co-authored over 25 peer-reviewed scientific publications. Notable first author publications:

1. Let-7d microRNA affects mesenchymal phenotypic properties of lung fibroblasts. 2014 American Journal of Physiology - Lung Cellular and Molecular Physiology
2. Aging mesenchymal stem cells fail to protect because of impaired migration and anti-inflammatory response. 2014. American Journal of Respiratory and Critical Care Medicine
3. Matrix-bound nanovesicles within ECM bioscaffolds. 2016. Science Advances AAAS
4. Matrix-Bound Nanovesicles Recapitulate Extracellular Matrix Effects on Macrophage Phenotype. 2017.Tissue Engineering Part A
5. Macrophage phenotype in response to ECM bioscaffolds. 2017. Seminars in Immunology

Full list of publications: <https://pubmed.ncbi.nlm.nih.gov/?term=%22huleihel%2C%20luai%22>

**PATENTS**

An inventor of seven patents:

1. Matrix bound nanovesicles and their use (2016) - patent pending
2. Implantable Pouch structures and methods of making thereof (2020) - patent pending
3. Medical graft devices and methods of making (2020) - patent pending
4. Urinary bladder matrix sheet devices with improved mechanical properties and method of making (2020) - patent pending
5. Hydrated particulate urinary bladder matrix processed via cryomill demonstrated adhesive properties – Device (2021) - patent pending
6. Hydrated particulate urinary bladder matrix processed via cryomill demonstrated adhesive properties – Method (2021) - patent pending
7. Multi-composite tissue graft composition (2021) - patent pending

**AWARDS AND GRANTS**

Received ten awards throughout undergraduate school, graduate school, postdoctoral training (academia) and professional positions (private sector). Notable awards:

1. Spotlight on Culture - Outstanding Performance as a Project Team Member - ACell Inc (2020)
2. SPRIG Scholar's Pilot Project – Grant award to investigate “The Role of Matrix-Bound Nanovesicles from Old and Young ECM Scaffolds upon Macrophage Activation” - University of Pittsburgh and UPMC (2016)
3. Post-doctoral training grant for outstanding candidates - Israel Council for Higher Education (2014)
4. Bio-medical outstanding PhD research award -Ben Gurion University, Israel (2013)

**REFERENCE** - I would be happy to provide references upon request.