Exponent®
Engineering & Scientific Consulting

Aimon Iftikhar, Ph.D.

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Professional Profile

Dr. Iftikhar specializes in characterizing biomaterial-tissue interactions and developing immunomodulatory strategies to enhance the understanding of the tissue specific micro-environment. She has extensive experience in the translational sciences field and in developing clinically relevant research models to highlight the best approach to understanding host-biomaterial interactions.

Dr. Iftikhar's preclinical background in immunology, polymer chemistry, and biomaterial development enables her to better understand the translation into clinical research studies and maintaining clinical standards (IRB, CAP/CLIA, GLP/GCLP, ISO). She has experience managing multi-site clinical research studies as well as authoring and providing technical review on numerous regulatory documents, procedures, and policies to ensure consistency with clinical processes.

Prior to joining Exponent, Dr. Iftikhar was a Clinical Research Scientist at Machaon Diagnostics conducting clinical research studies. Dr. Iftikhar completed her Ph.D. in Biomedical Engineering at the McGowan Institute for Regenerative Medicine at University of Pittsburgh. Her research expertise includes biomolecule eluting polymeric coatings, classification of inflammatory and tissue remodeling responses to biomaterials, characterization of biomaterials for fertility preservation, and using surgical, immunohistochemical and biochemical assay techniques to characterize the complex immune response to implants in women's health.

Academic Credentials & Professional Honors

Ph.D., Bioengineering, University of Pittsburgh, 2020

M.S., Biomedical Engineering, Carnegie Mellon University, 2014

B.S., Biomedical Engineering, University of Connecticut, 2013

National Institutes of Health TL1 Clinical & Translational Science Fellowship 2016 -2019

Society for Biomaterials "STAR" Award 2018

Bridgeside Research Forum "Best Presentation" Award 2018

Licenses and Certifications

Good Clinical Practices (GCP) in Medical Device Clinical Investigations

Prior Experience

Clinical Research Scientist, Machaon Diagnostics, Mar 2021 – Nov 2021

Professional Affiliations

American Association for the Advancement of Science (AAAS)

Society for Biomaterials (SFB)

Tissue Engineering & Regenerative Medicine International Society (TERMIS)

Languages

Urdu

Publications

Hachim D, Iftikhar A, LoPresti ST, Nolfi AL, Rege, R., Skillen C, Umeda, Y., Brown BN. Distinct macrophage populations and phenotypes associated with IL-4 mediated immunomodulation at the host implant surface. Biomaterials Science. 2020.

Hachim, D., Iftikhar, A., LoPresti, ST., Nolfi, AL., Ravichandar, S., Skillen, CD., Brown, BN. “Distinct release strategies are required to modulate macrophage phenotype in young versus aged animals.” J Control Release. 2019. 305:65-74.

Ninh, C., Iftikhar, A., Cramer, M., Bettinger, C. "Diffusion-reaction models of genipin incorporation into fibrin networks." Journal of Materials Chemistry B. 2015. 3(22): 4607-4615.

Presentations

Iftikhar A., Moalli, P., Brown, B. “Development of a Novel Rabbit Surgical Model of Pelvic Reconstruction for the Use of Testing an IL-4 Eluting Coated Polypropylene Mesh.” AiChE 2018. Podium Presentation.

Iftikhar A., Moalli, P., Brown, B. “A Clinically Relevant Rabbit Surgical Model of Pelvic Reconstruction to Evaluate the Immune Response to Novel Surgical Materials.” AUGS PFD Week 2018. Podium Presentation.

Iftikhar A., Moalli, P., Brown, B. “A Clinically Relevant Rabbit Surgical Model of Pelvic Reconstruction to Evaluate the Immune Response to Novel Surgical Materials.” TERMIS World Congress, 2018.

Iftikhar A., Moalli, P., Brown, B. “A Clinically Relevant Rabbit Surgical Model of Pelvic Reconstruction to Evaluate the Immune Response to Novel Surgical Materials.” Bridgeside Research Forum 2018. Podium Presentation.

Iftikhar A., Moalli, P., Brown, B. “A Clinically Relevant Rabbit Surgical Model of Pelvic Reconstruction to Evaluate the Immune Response to Novel Surgical Materials.” Society for Biomaterials 2018. Podium Presentation.

Iftikhar A., Moalli, P., Brown, B. “A Clinically Relevant Rabbit Surgical Model of Pelvic Reconstruction to Evaluate the Immune Response to Novel Surgical Materials.” Regenerative Medicine Workshop 2018. Poster Presentation.

Iftikhar A., Moalli, P., Brown, B. “A Clinically Relevant Rabbit Surgical Model of Pelvic Reconstruction to Evaluate the Immune Response to Novel Surgical Materials.” Translational Science 2018. Poster

Presentation.

Iftikhar A., Moalli, P., Brown, B. “Development of a Clinically Relevant Rabbit Surgical Model for Investigation of the Host Response to Polypropylene Mesh for Pelvic Organ Prolapse.” Bridgeside Research Forum 2017. Podium Presentation.

Iftikhar A., Moalli, P., Brown, B. “Development of a Clinically Relevant Rabbit Surgical Model for Investigation of the Host Response to Polypropylene Mesh for Pelvic Organ Prolapse.” Clinical and Translational Sciences Institute 2017.

Iftikhar A., Knight, K., Carter, C., Moalli, P., Brown, B. “Development of a Clinically Relevant Rabbit Surgical Model for Investigation of the Host Response to Polypropylene Mesh for Pelvic Organ Prolapse.” Translational Sciences 2017. Poster Presentation.

Iftikhar A., Knight, K., Carter, C., Moalli, P., Brown, B. “Development of a Clinically Relevant Rabbit Surgical Model for Investigation of the Host Response to Polypropylene Mesh for Pelvic Organ Prolapse.” Society for Biomaterials 2017. Poster Presentation.

Iftikhar A., Hachim, D., Brown, B. “Layer Up: Drug Eluting Coating Technology for Implantable Devices and Biomaterials.” Tissue Engineering & Regenerative Medicine International Society 2016. Podium Presentation.

Iftikhar, A., Cramer, M., Bettinger, C. “Enzymatic Resistance and Mechanical Stability of Genipin-Crosslinked Films.” Tissue Engineering & Regenerative Medicine International Society 2015. Poster Presentation.

Iftikhar, A., Cramer, M., Bettinger, C. “Enzymatic Resistance and Mechanical Stability of Genipin-Crosslinked Films.” Society for Biomaterials 2015. Poster Presentation.

Project Experience

Dr. Iftikhar has experience with developing and practicing in vivo invasive surgical techniques in preclinical animal models (C57BL/6 Mice, Wistar Rats, New Zealand Rabbits, Rhesus Macaques). She is well-versed in managing clinical research studies including coordinating patient recruitment, study testing, audit schedules and managing deliverables.