Exponent®
Engineering & Scientific Consulting

Morgan Ashcraft, Ph.D.

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Professional Profile

Dr. Morgan Ashcraft specializes in scientific research and analyses related to interactions between implantable medical devices and their environments. She has expertise in products featuring blood-contacting surfaces and antimicrobial materials. Her training ranges from synthesis and fabrication to in-depth material characterization to biological assessments. Dr. Ashcraft also has extensive knowledge of nanoparticle drug-delivery systems, pharmaceutical formulation testing, and antibiotic adjuvants/potentiators. Her scientific and research work has centered around translational technology to optimize patient outcomes and quality of life.

Prior to joining Exponent, Morgan earned her Ph.D. in Pharmaceutical and Biomedical Sciences at the University of Georgia. Her dissertation focused on multifunctional surfaces and therapies for reduced medical device-associated complications. She worked with a broad range of established, medical-grade materials and devices as well as ground-breaking, exploratory constructs and formulations. Concurrently, she pursued a certificate in International Biomedical Regulatory Sciences, which affords her knowledge and understanding of the regulatory processes for pharmaceuticals and medical devices.

Academic Credentials & Professional Honors

Ph.D., Pharmacy, University of Georgia, 2022

B.S., Chemistry, Cleveland State University, 2017

Stewart Award, University of Georgia, 2022

Summer Research Grant, University of Georgia, 2021

Innovative and Interdisciplinary Research Grant, University of Georgia, 2020

National Science Foundation Graduate Research Fellowship, 2019-2022

Junior Student of the Year Award, University of Georgia, 2019

Women in Pharma Scholarship, International Society of Pharmaceutical Engineers, 2018

Outstanding Student in Analytical Chemistry, Cleveland State University, 2015-2016

Academic Appointments

Teaching Assistant, Pharmaceutical Sciences, UGA, 2018-2019

Publications

Estes Bright, L., Garren, M., Ashcraft, M., Kumar, A., Husain, H., Brisbois, E., Handa, H. Dual Action Nitric Oxide and Fluoride Ion-Releasing Hydrogels for Combatting Periodontal Disease. ACS Applied Materials and Interfaces 2022; 14, 19, 21916–21930.

Ashcraft, M., Douglass, M., Garren, M., Mondal, A., Estes, L., Wu, Y., Handa, H. Nitric Oxide-Releasing Lock Solution for the Prevention of Catheter-Related Infection and Thrombosis. ACS Applied Bio Materials 2022; 5, 4, 1519–1527.

Douglass, M., Hopkins, S., Chug, M., Kim, G., Garren, M., Ashcraft, M., Nguyen, D., Tayag, N., Handa, H., Brisbois, E.Reduction in Foreign Body Response and Improved Antimicrobial Efficacy via Silicone-Oil-Infused Nitric-Oxide-Releasing Medical Grade Cannulas. ACS Applied Materials and Interfaces 2021; 13, 44, 52425–52434.

Devine, R., Douglass, M., Ashcraft, M., Tayag, N., Handa, H. Development of Novel Amphotericin B-Immobilized NO-Releasing Platform for the Prevention of Broad-Spectrum Infections and Thrombosis. ACS Applied Materials & Interfaces 2021; 13, 17, 19613–19624.

Ashcraft, M., Douglass, M., Chen, Y., Handa, H. Combination Strategies for Antithrombotic Biomaterials: An Emerging Trend Towards Hemocompatibility. Biomaterials Science 2021; 9, 2413-2423.

Garren, M., Ashcraft, M., Qian, Y., Douglass, M., Brisbois, E., Handa, H. Nitric Oxide and Viral Infection: Recent Developments in Antiviral Therapies and Platforms. Applied Materials Today 2021; 22, 100887.

Liu, Z., Simchick, G., Qiao, J., Ashcraft, M., Cui, S., Nagy, T., Zhao, Q., Xiong, M. ROS-Triggered Dissociation of a Polyrotaxane-based Nanochelator for the Safe Restoration of Normal Systemic and Hepatic Iron Levels. ACS Nano 2020; 15, 1, 419-433.

Zhao, A., Zheng, Q., Orahoske, C., Idippily, N., Ashcraft, M., Quamine, A., Su, B. Synthesis and biological evaluation of anti-cancer agents that selectively inhibit Her2 over-expressed breast cancer cell growth via down- regulation of Her2 protein. Bioorganic & Medicinal Chemistry Letters 2018; 28 4, 727–731.

Idippily, N., Zheng, Q., Gan, C., Quamine, A., Ashcraft, M., Zhong, B., Su, B. Copalic acid analogs down-regulate androgen receptor and inhibit small chaperone protein. Bioorganic & Medicinal Chemistry Letters 2017; 27, 11, 2292–2295.

Additional Education & Training

Graduate Certificate in International Biomedical Regulatory Sciences, University of Georgia, 2021