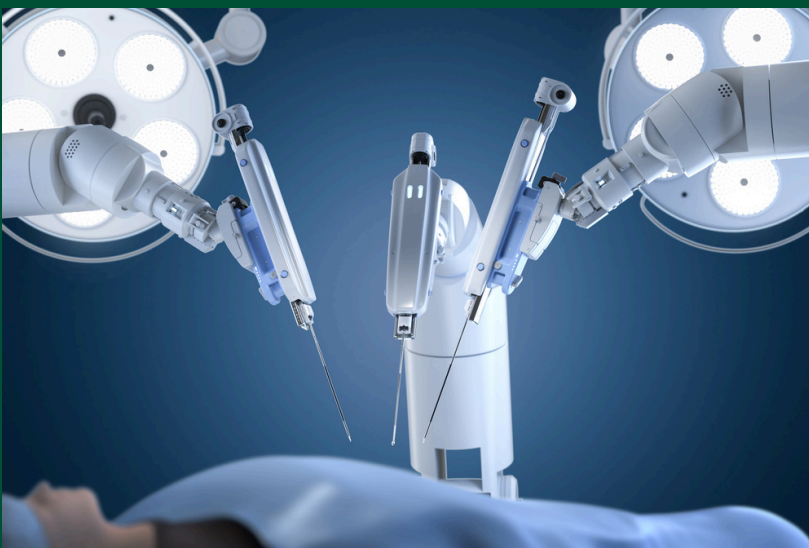




The 2024 Biomedical Sciences Symposium



September 9, 2024

The UNC Charlotte Dubois Center - Uptown Charlotte, NC

Schedule At-A-Glance: Monday, September 9, 2024

Time	Topic	Location
8:00 AM	Registration and Coffee	Atrium
8:45 - 9:00 AM	Welcome and Opening Remarks	Main Auditorium
9:00 – 9:30 AM	The Biomedical Landscape in 2024 – Charlotte and North Carolina	Main Auditorium
9:30 – 10:15 AM	AI and Biomedical Engineering and Sciences at UNC Charlotte- Making an impact in the charlotte region and beyond as a top tier research institution	Main Auditorium
<i>10:15 - 10:45 AM</i>	<i>Break</i>	
10:45 – 11:30 AM	Research and Innovation Update at Advocate Health	Main Auditorium
11:30 – 12:15 PM	Artificial Intelligence Applications and Implications in Biomedical Sciences	Main Auditorium
<i>12:15 – 1:00 PM</i>	<i>Lunch</i>	
1:00 – 3:15 PM	Afternoon Breakout Sessions	See Agenda for Room
3:30 – 3:50 PM	Lightning Presentations – UNC Charlotte Centers	Atrium
3:50 – 5:00 PM	Poster Competition and Reception	Atrium, 2 nd Floor

Detailed Schedule: Monday, September 9, 2024

Time	Topic
8:00 AM	Registration and Coffee
8:45 - 9:00 AM	Welcome and Opening Remarks Dr. Deborah (Deb) Thomas, Associate Vice Chancellor for Research
9:00 - 9:30 AM	The Biomedical Landscape in 2024 Doug Edgeton, CEO of NC Biotech
9:30 - 10:15 AM	AI and Biomedical Engineering and Sciences at UNC Charlotte - Making an Impact in The Charlotte Region and Beyond as a Top Tier Research Institution Dr. Deborah (Deb) Thomas, Associate Vice Chancellor for Research- & moderator Dr. Bojan Cukic, Dean, College of Computing and Informatics, UNC Charlotte Dr. Bernadette Donovan-Merkert, Dean of the College of Sciences, UNC Charlotte Dr. Shanti Kulkarni, Associate Dean of Research, UNC Charlotte Dr. Robert Keynton, Dean of the College of Engineering, UNC Charlotte
10:15 - 10:45 AM	<i>Break</i>
10:45 - 11:30 AM	Research and Innovation Update at Advocate Health Dr. Anthony Atala, Director Wake Forest Institute for Regenerative Medicine Dr. Jai Patel, VP of Research, Atrium Levine Cancer Center
11:30 - 12:15 PM	Artificial Intelligence Applications and Implications in Biomedical Sciences Dr. Steve Kearney, Chief Medical Officer, SAS
12:15 - 1:00 PM	<i>Lunch</i>
1:00 - 3:15 PM	Afternoon Breakout Sessions (Individual Schedules Below)

Afternoon Breakout Sessions

Time: 1:00 PM – 3:00 PM

Session Name: Manufacturing and Regulations

Location: Main Auditorium – 2nd Floor

Room Leader: Jeff Woolard

Time	Topic
1:00 – 1:15 PM	Renaud Warin - BioCytics Chief Science Officer Towards a new age for the benefit of cancer patients: development of autologous, re-invigorated cancer cell therapies manufactured at the Point of Care
1:15 – 1:30 PM	Denis Jacob Machado, Reyhaneh Nouri - UNC Charlotte Bioinformatics Unveiling the modulators of mutable collagenous tissue in the brittle star <i>Ophiomastix wendtii</i>: an RNA-Seq analysis
1:30 – 1:45 PM	Adit Mehta - Wake Forest Institute for Regenerative Medicine Development of a Universal Bioreactor Platform for Regenerative Medicine Applications
1:45 – 2:00 PM	Nichollette Allred - Wake Forest School of Medicine A Machine Learning Approach to Estimate Insulin Resistance from Untargeted Metabolomics Data
2:00 – 2:15 PM	<i>Break</i>
2:15 – 2:30 PM	Brent Dixon - BioCytics Chief Technology Officer The BioCytics Human Applications Laboratory “HAL” Clinical Diagnostics and Research Laboratory, GMP Manufacturing and Biobanking Facility. Focusing on the needs of individualized medicine for IND studies of cellular therapies.
2:30 – 2:45 PM	William Garvin and Caroline Warren - Buchanan, Ingersoll & Rooney PC What FDA is Saying, What Companies are Doing: AI and Cybersecurity Regulatory Overview
2:45 – 3:00 PM	Susan Trammell - UNC Charlotte College of Science Light-Assisted Drying (LAD) to Prepare Biologics for Room Temperature Storage

Time: 1:00 PM – 3:00 PM

Session Name: Infectious Disease & Diagnostics

Location: Lecture Hall - 2nd Floor

Room Leader: Susan Jones

Time	Topic
1:00 – 1:15 PM	M. Brittany Johnson - UNC Charlotte College of Science Cytosolic nucleic acid sensors stimulate protective bone cell responses to <i>Staphylococcus aureus</i>
1:15 – 1:30 PM	Kristen Funk - UNC Charlotte College of Science Compromised CD8+ T cell immunity in the aged brain increases severity of neurotropic coronavirus infection and post-infectious cognitive impairment
1:30 – 1:45 PM	Catalina Gavaria - Wake Forest Institute for Regenerative Medicine Development of a multicellular human skin equivalent for studying skin-tropic viral infections
1:45 – 2:00 PM	Richard Allen White III - UNC Charlotte Bioinformatics Resolving the Biosphere and Immunity in Bats
2:00 – 2:15 PM	<i>Break</i>
2:15 – 2:30 PM	Po Feng Lee - Wake Forest Institute for Regenerative Medicine Multi-functional Pulsatile Bioreactor Module Development for Biomanufacturing Engineered Tubular Tissues
2:30 – 2:45 PM	Amit Mohite - UNC Charlotte Alumni Adjuncts to Nerve Coaptation: A Preclinical to Clinical Approach to Biomaterials
2:45 – 3:00 PM	Farah Deebea - UNC Charlotte College of Engineering Quantitative Ultrasound for Placenta Characterization and Placenta-mediated Disease Detection

Time: 1:00 PM – 3:15 PM

Session Name: Therapeutics and Mechanisms

Location: Fifth Floor - Room 501

Room Leader: Greg Needham

Time	Topic
1:00 – 1:15 PM	Shan Yan - UNC Charlotte College of Science Mechanistic studies of genome integrity and cancer etiology and therapeutics
1:15 – 1:30 PM	Didier Dreau - UNC Charlotte College of Science Chemokine heterodimerization and breast cancer cell migration
1:30 – 1:45 PM	Susan T. Arthur – UNC Charlotte Department of Applied Physiology, Health and Clinical Sciences Skeletal Muscle Force Production in Breast Cancer Treated with CAR T Cell Therapy
1:45 – 2:00 PM	Patricija van Oosten-Hawle – UNC Charlotte College of Science Harnessing Cross-Tissue Stress Signaling to Combat Age-Related Proteotoxicity and Extend Healthspan During Aging
2:00 – 2:15 PM	<i>Break</i>
2:15 – 2:30 PM	Juan Vivero-Escoto- UNC Charlotte College of Science Engineering Multifunctional Mesoporous Silica Nanoparticles for Cancer Treatment
2:30 – 2:45 PM	In Hong Yang – UNC Charlotte College of Engineering Neuroprotective Mechanism for the chemotherapy Induced Peripheral Neuropathy
2:45 – 3:00 PM	Drazen Raucher – University of Mississippi Medical Revolutionizing GBM Treatment: Bioengineered Drug Delivery Systems for Enhanced Efficacy and Reduced Toxicity
3:00 – 3:15 PM	Cody McHale – Biologica In silico design and development of multitarget small molecule inhibitors for the treatment of cancer

Time: 1:00 PM – 3:00 PM

Session Name: Artificial Intelligence & Diagnostics

Location: 5th Floor Room 504

Room Leader: Patrick Boyle

Time	Topic
1:00 – 1:15 PM	Jun-tao Guo - UNC Charlotte Bioinformatics Accurate prediction of nucleic acid binding proteins using protein language model
1:15 – 1:30 PM	Michael Wan - Northeastern University Computer Vision AI for Infant Safety and Developmental Health
1:30 – 1:45 PM	Minhaj Nur Alam - UNC Charlotte College of Computing and Informatics Federated learning and self-supervision in ophthalmic AI
1:45 – 2:00 PM	Yonghong Yan - UNC Charlotte College of Computing and Informatics Upscaling Prostate Cancer MRI Images to Cell-level Resolution Using Self-Supervised Learning
2:00 – 2:15 PM	Break
2:15 – 2:30 PM	Abigail Labella - UNC Charlotte Bioinformatics Decoding evolutionary information in genomes
2:30 – 2:45 PM	Colby Ford – Tuple AI-Based Modeling of Proteins in the Fight Against Infectious Diseases
2:45 – 3:00 PM	Nowlan Freese - UNC Charlotte Bioinformatics Visualizing DNA with the Integrated Genome Browser, free and open source

Time	Topic	Location
3:15 – 3:30 PM	Break	Atrium
3:30 – 3:50 PM	Lightning Presentations – UNC Charlotte Centers	Atrium
3:50 – 5:00 PM	Poster Competition & Reception	1 st & 2 nd Floor

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