

**WFIRM**

Wake Forest Institute for  
Regenerative Medicine



REGENERATIVE  
MEDICINE  
FOUNDATION

# **2025 Regenerative Medicine Essentials Course**

**June 10-12, 2025  
Winston-Salem, NC**

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# With Special Thanks and Recognition

## **Organizing Committee**

Anthony Atala, MD  
*RME 2025 Course Director,*  
Director, WFIRM

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*RME 2025 Course Co-Director*  
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## **WFIRM Lab Tours**

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## Transportation

Complimentary transportation is provided by ABC Door2Door between Wake Forest Biotech Place, and Winston Salem Downtown Marriott. On June 11, a shuttle will provide transportation between Biotech Place and WFIRM for optional Lab Tours. The shuttle schedule is as follows:

Monday, June 9th - Public Day  
9:00 am to 11:00 am  
3:30 pm to 4:30 pm

Tuesday, June 10th  
7:00 am to 9:00 am  
5:30 pm to 7:00 pm

Wednesday, June 11th  
7:15 am to 9:00 am  
3:15 pm to 5:30 pm (Lab Tours)  
3:15 pm to 5:30 pm

Thursday, June 12th  
7:30 am to 9:00 am  
3:30 pm to 5:00 pm

## Mobile App

The RME Course has a mobile application utilizing the Yapp platform. The app contains the agenda, speaker information and much more. Visit <https://my.yapp.us/> on your mobile device to be directed to download.

## Internet Access

Connect to IQGuest and accept terms.

## We're Social!



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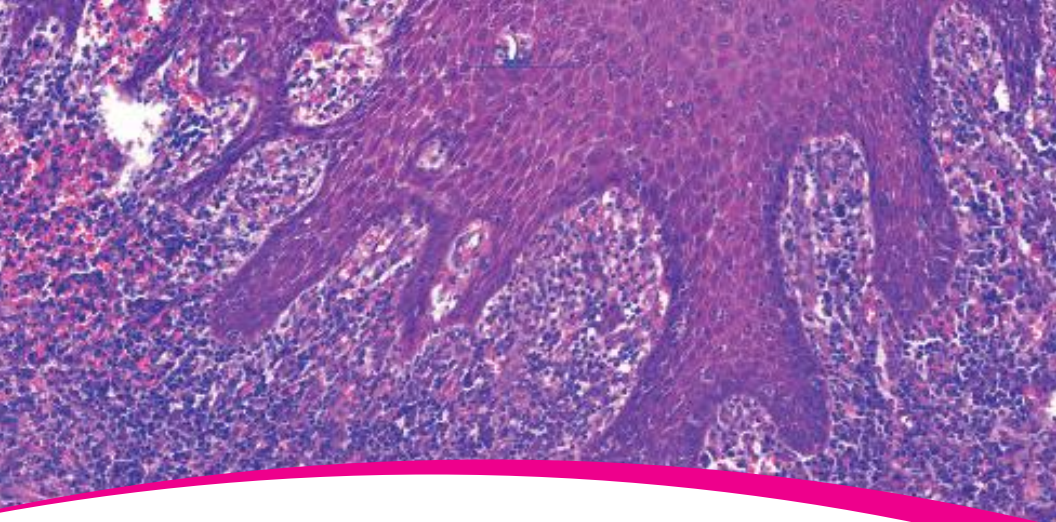
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The floor plan of the 1st floor of the University of Birmingham Library includes the following areas:

- AUDITORIUM**: Located on the left side, featuring tiered seating and a stage.
- CAFE**: Located on the left side, adjacent to the Auditorium.
- Study Rooms**: A large central area with numerous numbered study rooms (150-159) and a large open area with blue seating.
- Restrooms**: Located on the right side, labeled **WOMEN** and **MEN**.
- STUDY SKILL**: A yellow highlighted area on the right side, adjacent to the restrooms.
- Other Areas**: Includes a **W** (Work) area, a **M** (Meeting) area, and a **W** (Waiting) area.



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Exhibitors



## 2025 Distinguished Speakers



**Angeli Akey MD, FACP**

Founding Director, North Florida Integrative Medicine



**Graca Almeida-Porada MD, PhD**

Professor, Wake Forest Institute for Regenerative Medicine



**Guillermo Ameer ScD**

Professor of Biomedical Engineering, Professor of Surgery, Daniel Hale Williams Professor, Northwestern University; Director, Center for Advanced Regenerative Engineering



**Anthony Atala MD**

Director, Wake Forest Institute for Regenerative Medicine; Professor, Department of Urology, Atrium Wake Forest Baptist Health



**Cesar V. Borlongan**

Professor, Department of Neurosurgery and Brain Repair, USF Morsani College of Medicine



**Jennifer Byrne**

Founder and CEO, Javara



**Tracy Criswell PhD**

Associate Professor, Wake Forest Institute for Regenerative Medicine



**Paul Dalton PhD**

Associate Professor, Department of Bioengineering, Bradshaw and Holzapfel Research Professor in Transformational Science and Mathematics, University of Oregon



**Carrie DiMarzio**

CEO, BioMedInnovations, LLC - BMI



**Jennifer Elisseeff PhD**

Professor of Ophthalmology, Professor of Biomedical Engineering, Professor and Interim Head, Department of Chemical and Biomolecular Engineering, Professor of Materials Science & Engineering, Professor of Chemical & Biomolecular Engineering, Johns Hopkins School of Medicine



**Vijay Gorantla MD, PhD**

Professor, Wake Forest Institute for Regenerative Medicine



**Michael Hiles MSEE, PhD**

Former Senior Vice President and CSO, Cook Biotech



**Joshua Hunsberger PhD**

Chief Technology Officer, RegenMed Development Organization (ReMDO); Executive Director, Regenerative Medicine Manufacturing Society (RMMS)



**Jelena Janjic PhD**

Associate Professor, Pharmaceuticals; Founder/Co-Director, Chronic Pain Research Consortium, Duquesne University



**Kobi Koffler PhD**

CEO/Founder, Auxilium Biotechnologies



**Grace Lim PhD**

Professor, Wake Forest Institute for Regenerative Medicine





**David Mack PhD**

Associate professor in the Department of Rehabilitation Medicine and Bioengineering, UW Medicine



**Frank Marini PhD**

Professor, Wake Forest Institute for Regenerative Medicine



**Davide Marotta PhD**

Program Director, In Space Biomanufacturing, ISSN



**Zubin Master PhD**

Associate Professor, Department of Social Science and Health Policy, Wake Forest University School of Medicine



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Talent Acquisition Consultant, Baylor Genetics



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Internal Medicine Physician



**Anthony Oro MD, PhD**

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**Paul Papali PhD**

Sr. Director, Engineering, ProKidney



**Christopher Porada PhD**

Professor, Wake Forest Institute for Regenerative Medicine



**Mahendra S. Rao MD, PhD**

Consultant, Regenerative Medicine



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Forsyth Technical Community College



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Director, Process Development of Cell and Gene Therapy, Charles River Laboratories



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Assistant Professor, Wake Forest Institute for Regenerative Medicine



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In-Space Manufacturing Lead, NSF PTRME;  
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**Jasmine Cox Wade**

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Center at Gaston College



**Nicole Wagner PhD**

President and CEO, LambdaVision



**Mark Walters MD**

Jordan Family Director, Blood & Marrow Transplant Program, BCH-Oak; Chief, Hematology Division; Professor, Pediatrics/Hematology; University of California



**Yadong Wang PhD**

McAdam Family Foundation Professor, Heart Assist Technology, Cornell University



**Victoria Weis PhD**

Assistant Professor, Wake Forest Institute for Regenerative Medicine



**Pamela Yelick PhD**

Professor, Department of Orthodontics; Director, Division of craniofacial and Molecular Genetics; Director, Genetics Program, Tufts Graduate School of Biomedical Sciences



**James Yoo MD, PhD**

Professor, Wake Forest Institute for Regenerative Medicine

# DAY 1

# JUNE 10

7:15am-4:00pm Registration open, continental breakfast provided

## WELCOME AND OPENING

8:15-8:25am Welcome & Introduction  
**Joan Schanck MPA**

8:25-9:10am Keynote Address  
**Anthony Atala MD**

## SESSION 1: PLURIPOTENT STEM CELLS & PROGENITORS

9:10-9:30am Regenerative Medicine: Then and Now  
**Mahendra Rao PhD**

9:30-9:50am Using Stem Cell-Derived 3D Engineered  
Cardiac and Skeletal Muscle Tissues for  
Disease Modeling and Drug Discovery  
**David Mack PhD**

9:50-10:10am The Use of Stem and Progenitor Cells in  
Prenatal Therapies  
**Graca Almeida-Porada MD, PhD**

10:10-10:30am Discussion Panel  
**Moderator: Joshua Maxwell PhD**

Break

## OPEN EXHIBIT HALL AND NETWORKING

## SESSION 2: BIOMATERIALS

10:45-11:05am Scaffolds in Tissue Engineering and  
Regenerative Medicine  
**Paul Dalton PhD**

11:05-11:25am Soft Matter for Tissue Engineering  
**Yadong Wang PhD**

11:25-11:45am Immunologic Considerations in  
Biomaterial Design and Application  
**Kaitlyn Sadtler PhD**



**DAY 1**

**JUNE 10**

**SESSION 2: BIOMATERIALS**

11:45am-12:05pm Precision Biomaterials: Controlling  
Delivery for Tissue Regeneration  
**Grace Lim PhD**

12:05-12:25pm Discussion Panel  
**Moderator: TBD**

————— **Lunch (Room 155)** —————

**OPEN EXHIBIT HALL AND NETWORKING**

————— **Concurrent Young Scientist Perspectives Session** —————

12:30-1:30pm Career Perspectives Session: RM Research  
Careers led by WFIRM Graduate Student  
Organization

**SESSION 3: ENABLING TECHNOLOGIES**

1:30-1:50pm Scaling Cell Production and 3D  
Bioprinting Towards Whole Organ  
Manufacturing  
**Mark Skylar-Scott PhD**

1:50-2:10pm Visualizing Repair: Imaging Technologies  
Driving Regenerative Medicine  
**Frank Marini PhD**

2:10-2:30pm Gene Therapy and Gene Editing: the  
Promise of a Lifelong Cure  
**Christopher Porada PhD**

2:30-2:50pm Biomaterials Systems for Neural  
Regenerative Medicine  
**Sarah Stabehfeldt PhD**

2:50-3:10pm Human Lung Organ Tissue Equivalents  
for Disease Modeling and Drug  
Discovery  
**Sean Murphy PhD**

DAY 1

JUNE 10

3:10-3:25pm

Discussion Panel  
Moderator: Sean Murphy PhD

Break

SESSION 4: CELL THERAPIES

3:40-4:00pm

Cell Therapy: A Stroke of Luck  
Cesar Borlongan PhD

4:00-4:20pm

Cell Therapy For Cardiac Repair  
Josh Maxwell PhD

4:20-4:40pm

Programmable CRISPR-corrected  
Pluripotent Cell Derived Tissue  
Replacement Therapies  
Anthony Oro PhD

4:40-5:00pm

Placental Stem Cell Based Therapy  
for Necrotizing Enterocolitis in the  
Premature Infant  
Victoria Weis PhD

5:00-5:15pm

Discussion Panel  
Moderator: Victoria Weis PhD

5:15-6:15pm

OPENING RECEPTION & NETWORKING, EXHIBIT HALL OPEN

DAY 2

7:15am-4:00pm

Registration open, continental breakfast provided

SESSION 5: TISSUE ENGINEERED MEDICAL PRODUCTS

8:15-8:30am

Welcome & Day 2 Overview  
Joan Schanck

8:30-8:50am

Considerations for Developing Tissue  
Engineered Medical Products  
James Yoo MD, PhD

DAY 2

JUNE 11

SESSION 5: TISSUE ENGINEERED MEDICAL PRODUCTS

- 8:50-9:10am

How We Built From Scratch Our Commercial Organization to Launch Humacyte’s First Product  
**BJ Scheessele PhD**
- 9:10-9:30am

Animal Models and Strategies for Craniomacillofacial Defect Repair  
**Pam Yelick PhD**
- 9:30-9:50am

Early Decisions Have Big Impact on the Development Journey for TEMPs  
**Michael Hiles PhD**
- 9:50-10:10am

Panel Discussion  
**Moderator: James Yoo MD, PhD**

Break

OPEN EXHIBIT HALL AND NETWORKING

SESSION 6: REGULATORY, PROCESS DEVELOPMENT & MANUFACTURING

- 10:30-10:45am

Perspectives on FDA Activities in Oversight of Regenerative Medicine  
**Steve Bauer PhD**
- 10:45-11:00am

Meeting The Challenges of Late-Stage Regulatory Requirements for Cellular Therapies  
**Stephen Sawyer PhD**
- 11:00-11:20am

Endpoints for Genomic Therapy Trials in Hemoglobin Disorders  
**Mark Walters PhD**
- 11:20-11:40am

NIH Clinical Center Perspectives on Regenerative Medicine Manufacturing  
**David Stroncek PhD**
- 11:40am-12:00pm

Myth or Machine? Using AI in Cell Therapy Process Development  
**Alex Sargent PhD**

## DAY 2

JUNE 11

12:00-12:20pm      Space, FDA, and Existing Regulations  
Steve Myers PhD

12:20-12:30pm      Panel Discussion  
Moderator: Stephen Sawyer PhD

————— Lunch (Room 155) —————

### OPEN EXHIBIT HALL AND NETWORKING

————— Concurrent Young Scientist Perspectives Session —————

12:30-1:45pm      Career Perspectives Session: RM Research  
Careers led by WFIRM Graduate Student  
Organization

### SESSION 7: CLINICAL TRIALS AND BIOETHICS

1:45-2:05pm      Regenerative Medicine-Bending The Time  
and Cost Curve of Clinical Trials  
Jennifer Byrne

2:05-2:25pm      Who's Getting an Unproven Stem Cell  
Therapy Outside a Clinical Trial?  
Zubin Master PhD

2:25-2:45pm      Challenges to Initiating Cell Therapy  
Clinical Trials in Developing Countries  
Mahendra Rao PhD

2:45-3:10pm      Oxygenated Perfusates for Cell, Tissue,  
and Organ Preservation - Design, Scale Up,  
Manufacturing and Translational Consideration  
Jelena Janjic PhD and Vijay Gorantla MD, PhD

3:10-3:25pm      Panel Discussion  
Moderator: Zubin Master PhD

————— Optional Lab Tours (signup at registration) —————

## DAY 3

JUNE 12

7:15am-4:00pm      Registration open, continental breakfast provided

PROGRAM AT A GLANCE

SESSION 8: COMMERCIALIZATION

8:20-8:30am	Welcome & Day 3 Overview Joan Schanck
8:30-8:50am	Considerations in the Commercialization of Advanced Tissue Products Michael Hiles PhD
8:50-9:10am	Hard Lessons from Commercializing Neural Microphysiological Systems Michael Moore PhD
9:10-9:30am	Pro-Regenerative Medical Devices for Improved Outcomes: From Bench to Patients Guillermo Ameer PhD
9:30-9:50am	Cartilix, Aegeria Jennifer Ellisseef PhD
9:50-10:10am	Discussion Panel Moderator: TBD
Break	

SESSION 9: DISRUPTIVE TECHNOLOGIES FUELING RM ECOSYSTEMS

10:30-10:45am	Lessons Learned in Building Innovation Ecosystems in Regenerative Medicine Joshua Hunsberger PhD Jana Stoudemire
10:45-11:25am	Virtual Reality: From Connecting Innovation Districts to Workforce Development to Telemedicine Josh Tan PhD      Davide Marotta PhD Gail Nolan      Russ Read Mike Wesowski      Jana Stoudemire Joshua Hunsberger PhD
Break	



DAY 3

JUNE 12

11:40am-12:20pm    AI: From Training Programs to Building  
Digital Twins to Generating IP to Building  
Next Generation Products  
**Russ Read        Carrie DiMarzio**  
**Jim Schmidt PhD**

\_\_\_\_\_ **Lunch** \_\_\_\_\_

**SESSION 10: THE EMERGING COMMERCIAL SPACE ECONOMY & RM**

1:30-2:15pm        Space: The Emerging Commercial Space  
Economy & Regenerative Medicine  
**Pinar Mesci PhD        Mari Anne Snow**  
**Kobi Koffler PhD        David Lotus PhD**  
**Maedeh Mozneb PhD**

\_\_\_\_\_ **Break** \_\_\_\_\_

**SESSION 11: RM EDUCATIONAL AND WORKFORCE DEVELOPMENT**

2:30-2:40pm        WFIRM's Training Ecosystem: Past,  
Present, Future  
**Joan Schanck**

2:40-2:50pm        AAR Training Physicians in Regenology  
**Angeli Akey MD**

2:50-3:00pm        Healthcare Workers and  
Apprenticeships in RM  
**Paul Papali PhD**

3:00-3:10pm        Piedmont Triad Regenerative Medicine  
Engine Workforce Development  
**Russ Read**

3:10-3:20pm        Graduate Education in RM  
**Tracy Criswell PhD**

3:20-3:35pm        Discussion Panel  
**Moderator: TBD**

3:35-3:45pm        Closing Remarks  
**Joan Schanck**

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