

DAY 1

JUNE 6



Anthony Atala MD

Director, Wake Forest Institute for Regenerative Medicine



Joan Schanck MPA

Chief Education Program Officer, Wake Forest Institute for Regenerative Medicine



Mahendra Rao MD, PhD

CEO, Implants Therapeutics



Joseph Wu MD, PhD

Director, Stanford Cardiovascular Institute; Professor, Medicine & Radiology, Stanford



Graca Almeida-Porada MD, PhD

Professor, Wake Forest Institute for Regenerative Medicine



Victoria Weis PhD

Instructor, Wake Forest Institute for Regenerative Medicine



David Williams PhD

Professor, Wake Forest Institute for Regenerative Medicine



Buddy Ratner PhD

Professor, Bioengineering and Chemical Engineering, University of Washington



Elizabeth Cosgriff-Hernandez PhD

Professor, Biomedical Engineering; The University of Texas at Austin



Bryan Brown PhD

Associate Professor, Department of Bioengineering, MIRM and CTO, Renerva



Simon Young DDS, MD, PhD

Associate Professor, Director of Research, UTHHealth, School of Dentistry



John Jackson PhD

Associate Professor, Wake Forest Institute for Regenerative Medicine



Rashid Bashir PhD

Professor, Bioengineering; Dean, Grainger College of Engineering, University of Illinois at Urbana-Champaign



John Fisher PhD

Professor; Department Chair, Fischell Department of Bioengineering, University of Maryland



Frank Marini PhD

Professor, Wake Forest Institute for Regenerative Medicine



Christopher Porada PhD

Professor, Wake Forest Institute for Regenerative Medicine



Robert Newman PhD

Associate Professor, Biology, NC A&T University

DAY 1

JUNE 6

WELCOME AND OPENING

8:15—8:25am	Welcome and Introduction	Joan Schanck, MPA
8:25—9:00am	Overview/Plenary: Current Concepts and Changing Trends	Anthony Atala, MD

Break

SESSION 1: PLURIPPOINTS STEM CELLS AND PROGENITORS

9:10—9:30am	Regen-MED 2.0	Mahendra Rao, MD, PhD
9:30—9:50am	IPSCs for Disease Modeling, Drug Discovery, and Precision Medicine	Joseph Wu, MD, PhD
9:50—10:10am	Defining Stem and Progenitor Cell Populations for Prenatal Treatment of Genetic Disorders	Graca Almeida-Porada, MD, PhD
10:10—10:30am	Moderated Panel with Victoria Weis, PhD	

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SESSION 2: BIOMATERIALS

10:40—11:00am	The Plasticity of Biocompatibility	David Williams, PhD
11:00—11:20am	Engineering Biomaterials Surfaces for Biocompatibility and Blood Compatibility	Buddy Ratner, PhD
11:20—11:40am	Polymer Strategies to Enhance Bone Regeneration	Elizabeth Cosgriff-Hernandez, PhD
11:40—11:50am	Break	
11:50am—12:10pm	Immunomodulatory Biomaterials for Pelvic Floor Reconstruction	Bryan Brown, PhD
12:10—12:30pm	Biomaterials for Craniomaxillofacial Bone Regeneration	Simon Young, DDS, MD, PhD
12:30—12:45pm	Moderated Panel with David Williams, PhD	

Break

SESSION 3: ENABLING TECHNOLOGIES

1:30—1:40pm	Enabling Technologies in Regenerative Medicine Overview	John Jackson, PhD
1:40—2:00pm	Nanotechnology for Regenerative Medicine	Rashid Bashir, PhD
2:00—2:20pm	3D Printing Strategies for Engineering Complex Tissues	John P. Fisher, PhD
2:20—2:30pm	Break	
2:30—2:50pm	Imaging and Regenerative Medicine	Frank Marini, PhD
2:50—3:10pm	Gene Therapy: Getting to the Root of the Disease for a Permanent Cure	Christopher Porada, PhD
3:10—3:30pm	An Integrated Microengineered Organ Equivalent-Based Microfluidics System for Real-Time Detection of Signaling Dynamics and Metabolomics Profiles	Robert Newman, PhD
3:30—3:45pm	Moderated Panel with John Jackson, PhD	

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CAREER PERSPECTIVES I

4:00—5:15pm	<i>Beyond Academia and Big Pharma: Career Opportunities Outside the Role of Primary Investigator</i> with Breanna Deutsch, Jana Stoudemire, Peter Marks, and Jeanne Loring	Leaders: Damian Hutchins, Jao Ruiz Lucio de Lima Parra, Dariya Lizanet, Tim Dobroski, Bradford Kuhlman, Nicholas Edenhoffer, Tracy Criswell
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DAY 2

JUNE 7



Sean Murphy PhD

Assistant Professor,
Wake Forest Institute
for Regenerative
Medicine



Shahin Rafii MD

Professor Chief and
Director, Ansary Stem Cell
Institute, Weill Cornell
Medicine Graduate School
of Medical Sciences



Farshid Guilak MD

Professor and Co-
Director, Washington
University Center of
Regenerative Medicine



Matthew Porteus MD, PhD

Professor, Definitive
and Curative Medicine,
Institute of Stem Cell
Biology and Regenerative
Medicine, Stanford



James Yoo MD, PhD

Professor, Wake
Forest Institute
for Regenerative
Medicine



Karen Christman PhD

Professor, Department
of Bioengineering,
Sanford Consortium
for Regenerative
Medicine



Molly Shoichet PhD

Professor and
Chair, Chemical
Engineering,
Donnelly Centre,
University of Toronto



Pamela Yelick PhD

Professor and Director,
Craniofacial and
Molecular Genetics,
Tufts Graduate School of
Biomedical Sciences



Gail Naughton PhD

Founder, Histogen, Inc.



Peter Marks MD, PhD

Director, Center for
Biologics Evaluation
and Research, FDA



Wilson Bryan MD

Director, Office of
Tissues and Adv
Therapies, Center for
Biologics Evaluation
and Research (CBER)



Sheng Lin-Gibson PhD

Chief, Biosystems and
Biomaterials Division,
National Institute
of Standards and
Technology



Amrita Sahu PhD

Scientific Coordinator,
AR3T, University of
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Spencer Szczesny PhD

Assistant Professor,
Biomedical
Engineering,
Pennsylvania State
University



**Marian
Hettiaratchi PhD**

Assistant Professor,
Bioengineering,
University of Oregon



Franklin West PhD

Associate Professor,
Regenerative
Bioscience Center,
University of Georgia




Eda Yildirim-Ayan PhD

Associate Professor,
Department of
Bioengineering,
University of Toledo

DAY 2

JUNE 7

SESSION 4: CELL THERAPIES

8:15—8:35am	Wound Healing Applications of Perinatal Stem Cells and Tissues	Sean Murphy, PhD
8:35—8:55am	HSC's for Inherited Blood Disorders	Shahin Rafii, PhD
8:55—9:15am	Metacells: Re-engineering Living Cells as Therapeutic Delivery Systems	Farshid Guilak, PhD
9:15—9:35am	Genome Editing of Stem Cells	Matthew Porteus, PhD
9:35—9:40am	Break Sponsored By  PHASE HOLOGRAPHIC IMAGING	
9:40—10:00am	Moderated Panel with Sean Murphy, PhD	

Break

SESSION 5: TISSUE ENGINEERING MEDICAL PRODUCTS

10:10—10:30am	Considerations for Developing TEMPs	James Yoo, MD, PhD
10:30—10:50am	Injectible Biomaterials for Translational Regenerative Engineering	Karen Christman, PhD
10:50—11:10am	Overcoming Blindness with Regenerative Medicine	Molly Shoichet, PhD
11:10—11:20am	Break	
11:20—11:40am	New Animal Models and Strategies for Craniomaxillofacial Defect Repair	Pamela Yelick, PhD
11:40am—12:00pm	From Concept to Market: The Path, Pitfalls and Progress	Gail Naughton, PhD
12:00—12:20pm	Moderated Panel with James Yoo, MD, PhD	

Break Sponsored By

SESSION 6: REGULATORY, PROCESS DEVELOPMENT & MANUFACTURING

1:15—1:45pm	Future Directions in Cell and Gene Therapy	Peter Marks, MD, PhD
1:45—2:10pm	Regenerative Medicine Advanced Therapy (RMAT) Designation	Wilson Bryan, MD
2:10—2:30pm	Standards to Support Product Development, Manufacturing and Testing	Sheng Lin-Gibson, PhD
2:30—2:45pm	Moderated Panel with Beth E. Roxland, JD, M.Bioethics	

Break

SESSION 7: AR3T

3:00—3:10pm	Regenerative Rehabilitation: An Introduction	Amrita Sahu, PhD
3:10—3:30pm	Explant Model for Studying Tendon Degeneration and (Hopefully) Regeneration	Spencer Szczesny, PhD
3:30—3:50pm	Development of Multifunctional Biomaterials for Musculoskeletal Tissue Repair	Marian Hettiaratchi, PhD
3:50—4:10pm	Neural Stem Cell Function in a Motor Cortex TBI	Franklin West, PhD
4:10—4:20pm	Mechanome-Guided Regenerative Rehabilitation	Eda Yildirim-Ayan, PhD
4:20—4:35pm	Moderated Panel with Amrita Sahu, PhD	

Break

CAREER PERSPECTIVES II

4:45—6:00pm	<i>International Careers in Regenerative Medicine: Legal, Regulatory, and Ethical Perspectives on the World-Wide Job Market</i> with David Williams, Kacey Marra, Steve Lynum, Preveen Ramamoorthy	Leaders: Damian Hutchins, Jao Ruiz Lucio de Lima Parra, Dariya Lizanet, Tim Dobroski, Bradford Kuhlman, Nicholas Edenhoffer, Tracey Criswell
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DAY 3

JUNE 8



Nancy King JD

Co-Director, Center for Bioethics, Health and Society, Wake Forest University



Abba Creasey PhD

Vice President, Therapeutics Development, CIRM



Jan Nolte PhD

Stem Cell Program Director, UC Davis School of Medicine; Director, Institute for Regenerative Cures



Kacey Marra PhD

Professor, Bioengineering; Vice Chair of Research, University of Pittsburgh



Tracy Criswell PhD

Associate Professor, Wake Forest Institute for Regenerative Medicine



Milica Radisic PhD

Professor, Research Chair, Cardiovascular Tissue Engineering, University of Toronto



Jana Stoudemire PhD

Commercial Innovation Strategy Lead, Axiom Space



Aletta Schnitzler PhD

Chief Scientific Officer, TurtleTree Labs



B.J. Scheessele

Chief Commercial Officer, Humacyte



Shay Soker PhD

Professor, Wake Forest Institute for Regenerative Medicine



Gary Green EdD

Chief Workforce Development Officer, ReMDO



Joshua Hunsberger PhD

Chief Technology Officer, ReMDO; Executive Director, RMMS



Randy Yerden

CEO, BioSpherix Medical



Peter Egelberg PhD

CEO and Founder, Phase Holographic Imaging



Nabaruna Karmakar PhD

Sr. Operations Research, SAS Institute



Jane Scott

Head of Global Engagement and Growth, Oracle for Startups



Mark Owens

President and CEO, Greater Winston-Salem



Jason Kaplan

Associate Vice President, Innovation Quarter



Carrie DiMarzio

CEO, BioMedInnovations



Heather Bara PhD

Director, Research & Bioanalytics, MIMEDX



Joan Schanck MPA

Chief Education Program Officer, Wake Forest Institute for Regenerative Medicine



Russ Read

Executive Director, National Center for the Biotechnology Workforce



Terry Howerton

Biotechnology Instructor, Atkins Academic & Technology High School



Manju Bhat PhD

Associate Professor and Associate Dean, Winston-Salem State University

DAY 3

JUNE 8

SESSION 8: CLINICAL TRIALS AND BIOETHICS

8:15—8:30am	Bioethics and Regenerative Medicine: Fundamentals for the Future	Nancy King, JD
8:30—8:50am	Advancing the Regenerative Medicine Ecosystem in California and Worldwide	Abla Creasey, PhD
8:50—9:10am	Cell & Gene Therapy Clinical Trials	Jan Nolte, PhD
9:10—9:40am	Clinical Translation of a Tissue-Engineered Nerve Guide	Kacey Marra, PhD
9:40—9:45am	Break	
9:45—10:05am	Moderated Panel with Tracy Criswell, PhD	

Break

SESSION 9: COMMERCIALIZATION

10:15—10:35am	Advances in Organ on-a-Chip Engineering	Milia Radisic, PhD
10:35—10:55am	Commercializing Products for Emerging Markets on Earth and in Space	Jana Stoudemire, PhD
10:55—11:15am	Moving Toward Commercialization: Product and Process Development Considerations	Aletta Schnitzler, PhD
11:15—11:35am	Commercializing our HAV	B.J. Scheessele
11:35—11:40am	Break	
11:40am—12:00pm	Moderated Panel with Shay Soker, PhD	

Break Sponsored By

SESSION 10: REG MED NEXUS FOR ECONOMIC DEVELOPMENT

12:45—1:00pm	Building a Cytocentric Testing Facility	Randy Yerden
1:00—1:15pm	Advanced Quality Control for Regenerative Medicine	Peter Egelberg, PhD
1:15—1:30pm	Data-Driven Optimization of Biomanufacturing Processes	Nabaruna Karmakar, PhD
1:35—2:05pm	Moderated Panel - Meet Our Test Bed Companies - with Joshua Hunsberger, PhD	

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SESSION 11: REG MED NEXUS FOR ECONOMIC DEVELOPMENT

RegeneratOR Innovation Accelerator**Co-Chairs: Gary Green and Joshua Hunsberger**

2:15—2:25pm	Oracle for Startups: Supporting Innovation in Healthtech	Jane Scott
2:25—2:35pm	Greater Winston Salem, Inc. Supporting Innovation	Mark Owens
2:35—2:45pm	Planning for a RegenMed Hub: Short and Long-Term Approaches	Jason Kaplan

RegeneratOR Innovation Accelerator Companies**Co-Chairs: Gary Green and Joshua Hunsberger**

2:45—3:00pm	BioMedInnovations: Breaking Barriers in Organ and Tissue Preservation	Carrie DiMarzio
3:00—3:15pm	Accelerating MIMEDX R&D to Expand the Reach of Placental Biologics	Heather Bara, PhD
3:15—3:30pm	Axiom Space - Developing the Commercial Space Economy	Jana Stoudemire, PhD

Break

SESSION 12: REG MED NEXUS FOR WORKFORCE DEVELOPMENT

Co-Chairs: Gary Green and Joan Schanck

3:40—3:50pm	WFIRM's Training Ecosystem - Past, Present and Future Gaps	Joan Schanck, MPA
3:50—4:00pm	Addressing the Gap - Gap 1: Skilled Technicians for Biomanufacturing	Gary Green, EdD
4:00—4:30pm	NSF ATE Panel: Russ Read, Terry Howerton, Manju Bhat, PhD	
4:30—4:45pm	Addressing the Gap - Gap 2: New WFIRM Masters in Science Degree for Translational Biotechnology	Tracy Criswell, PhD
4:45—5:00pm	Employers' Perspectives Round Table Discussion	TBD