WFIRM 2024 Program Scholars Projects at a Glance

Session Category Topics:
SC: Stem cells, cells, cell therapy; **O:** Organoids; **DS:** Drug Screening; **ET:** Enabling Technologies; **GT:** Gene Therapy; **TE:** Tissue Engineering

1 Andrew Carey Biomedical Engineering University of Virginia	*COMPARING SMOOTH MUSCLE CELL ORIENTATION ON ALIGNED VS. UNALIGNED MICROFIBER ELECTROSPUN SCAFFOLDS*	*TE/ET*
2 Logan Longacre Biomedical Engineering University of Oklahoma	*GOBLET CELL DYNAMICS IN THE DEVELOPING INTESTINE IN NECROTIZING ENTEROCOLITIS*	*SC*
3 Vijay Radhakrishnan Biomedical Sciences University of Texas Rio Grande University	*IN-VITRO ANALYSIS OF 3D PRINTED RENAL CONSTRUCTS*	*TE*
4 Oscar Gonzalez Biology Seattle University	*DIFFERENTIATION OF URINE-DERIVED STEM CELLS TO DEVELOP A PATIENT-SPECIFIC UROTHELIUM MODEL FOR IC/BPS*	*SC*
5 Mallory Pitts Computer Science Wake Forest University	*MOLECULAR CHARACTERIZATION OF URINE-DERIVED STEM CELLS FOR DEVELOPMENT OF A PATIENT-SPECIFIC UROTHELIUM MODEL TO STUDY INTERSTITIAL CYSTITIS*	*SC*
6 Jadyn Bothe Neuroscience Illinois Wesleyan University	*ADVANCING PRE-CLINICAL THERAPEUTIC EVALUATIONS FOR URINARY DYSFUNCTION: ADAPTING VOID SPOT ASSAY FOR USE IN RATS*	*DS/ET*
7 Alana Anderson Biology University of Texas at Austin	*USING HUMAN ORGANOIDS TO UNLOCK THE SECRETS OF TORPOR/HIBERNATION TO PROTECT ASTRONAUTS*	*O*
8 Carlos Villalobos Biochemistry Loyola University New Orleans	*VISUALIZATION OF LIFE IN NANO ICE*	*ET*
9 Roma Desai Biomedical Engineering The Johns Hopkins University	*OPTIMIZING THE PHYSIOLOGY AND TRANSDUCTION EFFICIENCY OF LIVER ORGAN-TISSUE EQUIVALENTS TO STUDY AAV GENE THERAPY RELATED TOXICITY*	*O/GT*
10 Daniel Ormsbee Mechanical Engineering and Molecular Biology Cedarville University	*USE OF FLASK BIOREACTOR FOR URINE STEM CELL CULTURES AND EXTRACELLULAR VESICLE PRODUCTION FOR THE TREATMENT OF CHRONIC KIDNEY DISEASE*	*SC/ET*
11 Matthew Spong (switched order) Mechanical Engineering North Carolina State University	*USE OF FLASK HOLLOW FIBER BIOREACTOR FOR URINE STEM CELL CULTURES AND EXTRACELLULAR VESICLE PRODUCTION FOR THE TREATMENT OF CHRONIC KIDNEY DISEASE*	*SC/ET*
12 McKenzie Paul Biochemistry Miami University	*THE EFFECTS OF BACKGROUND ON DENT DISEASE PHENOTYPE IN MICE AND GENE THERAPY AS TREATMENT*	*GT*
13 Shaelyn Walker Biology / Pre-Med Duquesne University	*HUMAN URINE-DERIVED STEM CELLS ENGINEERED TO EXPRESS PIGMENT EPITHELIUM-DERIVED FACTOR FOR RENAL FIBROSIS TREATMENT*	*SC*
14 Samantha McNabb Bioengineering Clemson University	*BIOPRINTING A VASCULARIZED MULTI-CELL TYPE CARDIAC PATCH FOR MYOCARDIAL INFARCTION TREATMENT*	*TE/ET/SC*

15 Megan Parsons Biomedical Engineering Purdue University	*MODELING MYOCARDIAL INFARCTION AND ISCHEMIA REPERFUSION INJURY USING HUMAN CARDIAC SPHEROIDS*	*O/SC*
16 Adedayo Adekanle Chemical Engineering North Carolina A&T State University	*UNIVERSAL MEDIA DEVELOPMENT USING SYNTHETIC GROWTH FACTORS*	*DS/ET*
17 Cooper Bay Biochemistry Boston College	*DEVELOPMENT OF NEURONAL TARGETING LIPID NANOPARTICLES TO DELIVER MRNA AND PROTEIN CARGOS TO THE NEUROMUSCULAR JUNCTION*	*DS/ET*
18 Molly Dreher Psychology: Neuroscience Saint Mary's College of California	*IMMUNE-DIRECTED DIFFERENTIATION OF NEURAL PROGENITOR CELLS FROM STEM CELLS*	*SC*
19 Xiyue (Coco) Zhang Biomedical Engineering University of Virginia	*OPTIMIZATION OF DEFINED STEM CELL-DERIVED GROWTH FACTORS MIMETIC PEPTIDES FOR WOUND CARE TREATMENT*	*SC/ET/DS*
20 MacAulay Faircloth Mechanical Engineering Grove City College	*INDUCING PROINFLAMMATORY RESPONSE IN PEDIATRIC PDOS FROM ASD PATIENTS FOLLOWING BACTERIAL COMPONENT EXPOSURE*	*SC/DS/ET*
21 Daniela Danilova Biology – Quantitative Track; Statistics The University of NC at Chapel Hill	*DECIPHERING DOSE-TOXICITY RELATIONSHIPS FOR AMMONIA GAS EXPOSURE ON AIRWAY ORGAN-TISSUE EQUIVALENT MODELS*	*O/DS*
22 Claire Sznewajs Biology University of San Diego	*IN-VITRO GRAFT REJECTION MODELING OF ORGAN TRANSPLANTATION USING IMMUNE FLOW CHIP SYSTEMS*	*O*
23 Kathleen McGovern Integrative Biology University of Illinois	*APPLICATION OF TUMOR EXTRA CELLULAR VESICLES FOR TARGETED DRUG DELIVERY*	*O/DS*
24 Chancen Law Biomedical Engineering; Computer Science Harvard University	*THE DEVELOPMENT OF A NOVEL BIOREACTOR SYSTEM FOR THE MATURATION OF TISSUE ENGINEERED BLADDER SCAFFOLDS*	*TE/ET*
25 Shamaya Ellis Bioengineering North Carolina A&T State University	*COMPARING THE EFFECTS OF DEFINED KERATINOCYTE MEDIA AND TRADITIONAL KERATINOCYTE MEDIA ON THE GROWTH OF VAGINAL EPITHELIAL CELLS*	*TE/SC*
26 Victoria Cubina-Lopez Biomedical Engineering and Mathematics Dartmouth College	*ESTABLISHMENT OF THE FULL STRATIFIED PIGMENTED EPIDERMIS IN THE BIOPRINTED SKIN MODEL*	*TE/ET*