

**A01** | *AgTech & Food*

***Deep-sea microorganisms as source of biotechnological innovation***

Costantino Vetriani (Lead Poster Presenter)

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**A02** | *AgTech & Food*

***Improved Oysters for Aquaculture***

Ximing Guo (Lead Poster Presenter)

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**A03** | *AgTech & Food*

***Natural Arthropod Repellents: Biting Back with a New, Higher Yielding Catnip Cultivar***

Anna Snyder (Lead Poster Presenter)

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**A04** | *AgTech & Food*

***Integrating Traditional Breeding Techniques with Modern Genetic Tools to Develop New Disease-Resistant Basils***

Jim Simon (Lead Poster Presenter)

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**A05** | *AgTech & Food*

***Introducing two new Rutgers leafy green amaranth varieties meeting cultural preferences while optimizing leafy green yield and nutrient density.***

Tori Rosen (Lead Poster Presenter)

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**A06** | *AgTech & Food*

***Science-in-Action Video Storytelling to Increase Public Trust in Science***

Dena Seidel (Lead Poster Presenter)

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**A07** | *AgTech & Food*

***Investigation of hemp extract for cardiometabolic improvement in postmenopause***

Hayley Palmer (Lead Poster Presenter)

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**A08** | *AgTech & Food*

***Functional Foods and Metabolic Health***

Diana Roopchand (Lead Poster Presenter)

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**A09** | *AgTech & Food*

***Characterization of fermented pulse-based dairy alternatives and evaluation of their potential to support metabolic health***

Jeffrey Douyere (Lead Poster Presenter)

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**A10** | *AgTech & Food*

***Agoraponic Farms***

Raadha Garg (Lead Poster Presenter)

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**A11** | *AgTech & Food*

***Considering Urea as a Functional Component of Human Milk and Infant Formula Design***

Liisa Veerus (Lead Poster Presenter)

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**A12** | *AgTech & Food*

***Assessing Agronomic and Economic Effects of Varying Nitrogen Split Application Timings in Corn***

Ramandeep Kumar Sharma (Lead Poster Presenter)

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**A13** | *AgTech & Food*

***Influence of Soil pH Gradient on Annual Bluegrass Putting Green***

Emmanuel Nwachukwu (Lead Poster Presenter)

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**L01** | *Life Sciences & Health*

***A myeloid Trisomy 21-associated gene variant is protective from Alzheimer's Disease***

Peng Jiang (Lead Poster Presenter)

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**L02** | *Life Sciences & Health*

***PD-1-mediated T cell dysfunction drives age-dependent susceptibility to La Crosse virus encephalitis in mice***

Reem Alatrash (Lead Poster Presenter)

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**L03** | *Life Sciences & Health*

***Gut Microbiota-Derived Phospholipids Regulate Intestinal Immunometabolism and Counteract Antibiotic Disruption***

Xuesong Zhang (Lead Poster Presenter)

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**L04** | *Life Sciences & Health*

***Design, synthesis and optimization of inhibitors targeting the P-stalk binding pocket of ricin***

Lina El-Sharkawy (Lead Poster Presenter)

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**L05** | *Life Sciences & Health*

***Arylmyxopyronins: novel, first-in-class, oral treatments for drug-susceptible, drug resistant, and multi-drug-resistant bacterial infections***

Richard Ebright (Lead Poster Presenter)

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**L06** | *Life Sciences & Health*

***Design of a SARS-CoV-2 papain-like protease inhibitor with antiviral efficacy in a mouse model***

Bin Tan (Lead Poster Presenter)

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**L07** | *Life Sciences & Health*

***Identifying antisense oligonucleotides for targeted inhibition of insulin receptor isoform A***

Christopher Galifi (Lead Poster Presenter)

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**L08** | *Life Sciences & Health*

***Rewiring Recovery: Human Cellularized Nerve Regeneration Grafts***

Andrew Boreland (Lead Poster Presenter)

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**L09** | *Life Sciences & Health*

***Development and validation of multi-domain PCR primer technology for ultra-sensitive detection and real-time monitoring of rare driver alterations in liquid biopsies***

Diana Vargas-Gold (Lead Poster Presenter)

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**L10** | *Life Sciences & Health*

***From Bench to Bedside: A Resistance Blocking Antifungal Peptide Platform***

Robert Tancer (Lead Poster Presenter)

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**L11** | *Life Sciences & Health*

***Developing a New CRISPR Prime Editing Technology and Its Application for Cystic Fibrosis***

Chi Su (Lead Poster Presenter)

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**L12** | *Life Sciences & Health*

***Development of a potent Cryptococcus vaccine against fungal infections***

Yu Zhang (Lead Poster Presenter)

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**L13** | *Life Sciences & Health*

***A Next-Generation, Mechanism-Driven Therapeutic Platform for Idiopathic Pulmonary Fibrosis and Fibrotic Lung Disease***

Debra Laskin (Lead Poster Presenter)

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**L14** | *Life Sciences & Health*

***Targeted Nanoparticles Disrupt the Pathological Convergence of Amyloidosis and Neuroinflammation in Alzheimer's***

Hoda Gebril (Lead Poster Presenter)

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**L15** | *Life Sciences & Health*

***Intraoral Electrotherapy Medical Device for Treating Peri-Implantitis***

Li Xie (Lead Poster Presenter)

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**L16** | *Life Sciences & Health*

***Development of novel mGluR5 agonists to facilitate remyelination***

Hiroko Nobuta (Lead Poster Presenter)

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**L17** | *Life Sciences & Health*

***A female reproductive system-on-chip to advance women's reproductive health***

Shuo Xiao (Lead Poster Presenter)

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**L18** | *Life Sciences & Health*

***Applications of Polyelectrolyte Complex (PEC) Films to Wound Healing***

Francois Berthiaume (Lead Poster Presenter)

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**L19** | *Life Sciences & Health*

***Medicinal Ice Popsicle for Pediatric Cancer Related Oral Mucositis***

Robert Daly (Lead Poster Presenter)

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**L20** | *Life Sciences & Health*

***The IGF/IGFBP5 Signaling Pathway Mediates 9-cis Retinoic Acid-Induced Lymphangiogenesis in Secondary Lymphedema***

Justin Park (Lead Poster Presenter)

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**L21** | *Life Sciences & Health*

***Enhancer-AAVs for gene delivery to specific motor neuron subtypes***

Yijia Chen (Lead Poster Presenter)

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**L22** | *Life Sciences & Health*

***Novel imaging assay for detecting early dopaminergic decline in Parkinson's disease***

Pingyue Pan (Lead Poster Presenter)

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**L23** | *Life Sciences & Health*

***MetaFrame: An Autonomous Scaffold Platform for Stabilizing Cellular Microenvironments in Vitro***

Hadis Gharacheh (Lead Poster Presenter)

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**L24** | *Life Sciences & Health*

***Retinal Regulation of Locus Coeruleus: A Chemogenetic Approach to Treat Neurodegenerative Disorders***

Sarah Delcourte (Lead Poster Presenter)

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**L25** | *Life Sciences & Health*

***Clearance of Huntingtin Aggregates by Induced Proximity Screening***

Rahul Saxena (Lead Poster Presenter)

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**L26** | *Life Sciences & Health*

***Re-activation of Mutant p53 by Induced Protein Proximity Screening***

Dominick Spera (Lead Poster Presenter)

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**L27** | *Life Sciences & Health*

***A Scalable Immune Cell Platform to Advance Cancer Therapy Research***

Mukta Asnani (Lead Poster Presenter)

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**L28** | *Life Sciences & Health*

***Single-Cell Multiomic Dissection of Fibroblast Heterogeneity and Its Association with Immunotherapy Resistance in Metastatic Melanoma***

Mikaela Lijo (Lead Poster Presenter)

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**L29** | *Life Sciences & Health*

***Catalytic Molecular Sensor for Detecting Viral Nucleic Acids***

Nishat Jahan (Lead Poster Presenter)

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**L30** | *Life Sciences & Health*

***Switchable Nucleic Acids Nanoparticles for Enhancing Cell Uptake and Drug Delivery***

Qiaochu Zhang (Lead Poster Presenter)

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**L31** | *Life Sciences & Health*

***Systems and methods for improved identification of microbiomes through genomic sequencing***

Subhajyoti De (Lead Poster Presenter)

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**L32** | *Life Sciences & Health*

***Non-invasive, ultra-sensitive detection of cancer biomarkers in cell-free RNA using ROCBD***

Subhajyoti De (Lead Poster Presenter)

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**L33** | *Life Sciences & Health*

***Development of a Streamlined RT-RPA and CRISPR-CAS12A Workflow for Non-invasive Early Cancer Detection Using CFRNA Biomarkers***

Pratyush Venkatesh (Lead Poster Presenter)

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**P01** | *Physical Sciences & Engineering*

***Dual-Mode Optical Navigation for Continuous Ureter Tracking: Preclinical Phantom Validation Under Simulated OR Conditions***

Hussam Shwaib (Lead Poster Presenter)

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**P02** | *Physical Sciences & Engineering*

***Agrivoltaics Innovation at Rutgers***

Shawn Sorrels (Lead Poster Presenter)

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**P03** | *Physical Sciences & Engineering*

***Electrocautery Pen For Pediatric Surgery***

Joseph Barone (Lead Poster Presenter)

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**P04** | *Physical Sciences & Engineering*

***MeniscoFix, a Novel Meniscal Replacement Device***

Michael Dunn (Lead Poster Presenter)

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**P05** | *Physical Sciences & Engineering*

***Novel Passive Sampler to Assess Personal Exposures to Airborne Biological Agents***

Gediminas Mainelis (Lead Poster Presenter)

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**P06** | *Physical Sciences & Engineering*

***Generating Treasure from Trash: Enzymatic Deconstruction of Invasive Algae for Downstream Bioproduct and Biostimulant Applications***

Rebecca Garcia (Lead Poster Presenter)

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**P07** | *Physical Sciences & Engineering*

***Superhydrophobic collection devices facilitate metaviromic analyses of mosquito excreta and identification of new and emerging viruses.***

Dana Price (Lead Poster Presenter)

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**P08** | *Physical Sciences & Engineering*

***Plasma-Assisted Surface Nitridation of Proton Intercalatable WO<sub>3</sub> for Efficient Electrocatalytic Ammonia Synthesis***

Zhiyuan Zhang (Lead Poster Presenter)

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**P09** | *Physical Sciences & Engineering*

***Electrocatalytic Reduction of Dioxygen by a Cobalt-Redox-Active Ligand Complex***

Sewwandi Kuruppu (Lead Poster Presenter)

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**P10** | *Physical Sciences & Engineering*

***Comparative direct fluorescence CRP assay performance in various matrices***

Pegah Jamali (Lead Poster Presenter)

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**P11** | *Physical Sciences & Engineering*

***Structural origins of high MoO<sub>3</sub> solubility in peraluminous borosilicate glasses***

Nedgine Joseph (Lead Poster Presenter)

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**P12** | *Physical Sciences & Engineering*

***Rethinking Glass Durability: The Hidden Role of Higher-Coordinated Aluminum in the dissolution kinetics and mechanism of borosilicate glasses***

Ann Mary Jose (Lead Poster Presenter)

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**P13** | *Physical Sciences & Engineering*

***Designing cermet waste forms for immobilizing advanced reactor waste streams***

Rajan Saini (Lead Poster Presenter)

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**P14** | *Physical Sciences & Engineering*

***Scale-Up of a Hard and Crack-Resistant Glass***

Brian Wang (Lead Poster Presenter)

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**P15** | *Physical Sciences & Engineering*

***Understanding Composition – Structure – Property Relationships in multicomponent silicate glasses***

Anjan Bagchi (Lead Poster Presenter)

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**P16** | *Physical Sciences & Engineering*

***Inducing plasticity in cementitious materials***

Oleksiy Golub (Lead Poster Presenter)

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**P17** | *Physical Sciences & Engineering*

**Wood-like Carbon Sequestering Polymer-Ceramic Composites**

Noemie Denis (Lead Poster Presenter)

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**P18** | *Physical Sciences & Engineering*

**Neodymium Iron Boride-Carbonate-Bonded Ceramic Composite Magnets**

Paul Antonick (Lead Poster Presenter)

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**P19** | *Physical Sciences & Engineering*

**A Novel Mechanical Process for Sustainable Concrete Recycling**

Ranuri Dissanayaka Mudiyansele (Lead Poster Presenter)

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**S01** | *Software & Data/AI*

**Ocean Observing Leadership: RUCOOL's Contributions to Oceanographic Sampling Utilizing Unmanned Vehicles**

David Aragon (Lead Poster Presenter)

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**S02** | *Software & Data/AI*

**Accelerating engineering design with finite-element-based physics informed neural network surrogate models**

Ryan Sills (Lead Poster Presenter)

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**S03** | *Software & Data/AI*

**IntelliGenes**

Zeeshan Ahmed (Lead Poster Presenter)

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**S04** | *Software & Data/AI*

**ResBase: Residential Building Analytics and Simulation for Energy Transition**

Kiran Ghosh (Lead Poster Presenter)

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**S05** | *Software & Data/AI*

**NJ Geothermal Assessment Tool**

Muhammad Yousaf Shahid (Lead Poster Presenter)

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**S06** | *Software & Data/AI*

**Anisotropic Diffusion-based Analog Neural Network Architecture**

Khizar Anjum (Lead Poster Presenter)

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**S07** | *Software & Data/AI*

***Finder, Evaluator, Explainer, Generator (FEEG): A Bloom's Taxonomy-Based Query Classification Framework for LLMs and Generative AI***

Siritha Chidipothu (Lead Poster Presenter)

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**S08** | *Software & Data/AI*

***Measuring Ocean Currents for New Jersey***

Hugh Roarty (Lead Poster Presenter)

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**C01** | *Core Facility*

***Comprehensive Medicinal Chemistry and Synthetic Support: Bridging Academic Research and Drug Discovery***

Jacques Y. Roberge (Lead Poster Presenter)

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**C02** | *Core Facility*

***The Rutgers Health Clinical Trials Office***

Nancy Reilly (Lead Poster Presenter)

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**C03** | *Core Facility*

***In Vivo Research Services***

Derek Adler (Lead Poster Presenter)

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**C04** | *Core Facility*

***Advanced Preclinical Imaging Laboratory (APIL): Ultra-High-Resolution Multimodal Preclinical Imaging and Radiopharmaceutical Development Core***

Sushil Tripathi (Lead Poster Presenter)

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**C05** | *Core Facility*

***Advanced Fluorescence Microscopy Techniques***

Nanci Kane (Lead Poster Presenter)

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**C06** | *Core Facility*

***Validation Studies of an Automated Instrument, Qiagen EZ2 Connect, for Nucleic Acid Extraction***

Adita Sivakumar (Lead Poster Presenter)

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**C07** | *Core Facility*

***Biospecimen Repository and Histopathology Service to Enhance Translational Research***

Xin Yu (Lead Poster Presenter)

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**C08** | *Core Facility*

***Research Services, Activities and Advances at SoE Nanofabrication CORE Facility***

Huazhong (Henry) Wang (Lead Poster Presenter)

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