

## Oral Presentations

### **Group 1A - Central Prairie Ballroom, 3:30-4:15PM**

#### **ELECTRONIC, MAGNETIC, AND STRUCTURAL PROPERTIES OF NIFEMNAL**

*Salimatou Diallo, University of Northern Iowa*

#### **THE IMPACT OF APOE E4 AND TOMM40 MUTATIONS ON MITOCHONDRIAL HEALTH AND THE PROGRESSION OF ALZHEIMER'S DISEASE (AD)**

*Emily Pederson, Iowa State University  
Makayla Dove, Iowa State University; Mckenzie Sanden, Iowa State University; Auriel Willette, Rutgers University*

#### **ANALYZING EVOLUTIONARY MUTATION RATES IN POLYOMAVIRIDAE**

*Seren Castellano, University of Iowa  
Andrew Kitchen, University of Iowa*

### **Group 1B - South Prairie Ballroom, 3:30-4:15PM**

#### **ESTABLISHING A PROTOCOL TO CREATE A CULTURALLY APPROPRIATE COOKBOOK FOR BLACK ADULTS**

*Zakiya Jenkins, Iowa State University*

#### **BEAVER DAM ANALOGUE CONSERVATION PRACTICE EFFECTS ON SEDIMENT TRANSPORT, DEPOSITION, & RESTORING NATURAL CHANNEL CHARACTERISTICS IN THE MIDWEST AGROECOSYSTEM REGION**

*Karina Gonzalez, Des Moines Area Community College  
Dr. David Webber, Iowa State University; Dr. Sunday Tim, Iowa State University; Dr. Steven Mickelson, Iowa State University; Dr. Andrew Craig, Iowa State University; Dr. Keith Schilling, University of Iowa*

#### **MECHANICAL PROPERTIES OF 3D PRINTED POROUS POLYMER STRUCTURES**

*Jenesis Perez, Iowa State University  
Carmen Juarez, Des Moines Area Community College;  
Rebecca Patush, Iowa State University; Ashleigh Ballard, Iowa State University; Alina Kirillova, Iowa State University*

## Poster Presentations

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#### **DESIGN AND DEVELOPMENT OF A HIGH-RESOLUTION 3D PRINTER WITH IMPROVED ADAPTABILITY**

*Mariam Nawar, Kirkwood Community College  
Rion J. Wendland, University of Iowa*

#### **A 3-DIMENSIONAL MAGNETIC RESONANCE IMAGING PIPELINE TO VISUALIZE THE HUMAN VOCAL TRACT DURING PHONATION**

*Jacques Bugumba, University of Iowa  
Subin Erattakulangara, University of Iowa; David Meyer, Shenandoah University; Sajan Goud Lingala, University of Iowa*

#### **TYPE BASED ANALYSIS ON HACKAGE DATABASE**

*Michael O'Connor, Grinnell College  
Hhat-Hong Doan, Grinnell College; Samuel Larsen, Grinnell College*

#### **CHARACTERIZING PILZ DOMAIN PROTEIN INTERACTIONS WITH TYPE IV PILI EFFECTORS IN BIASED TWITCHING MOTILITY IN PSEUDOMONAS AERUGINOSA**

*Devin Hendrix, Nebraska Wesleyan University  
Nicholas Hammons, University of Iowa*

#### **MECHANICAL PROPERTIES OF 3D PRINTED POROUS POLYMER STRUCTURES**

*Carmen (Juarez) Martinez, Des Moines Area Community College  
Jenesis Perez, Iowa State University; Rebecca Patush, Iowa State University; Ashleigh Ballard, Iowa State University;  
Alina Kirillova, Iowa State University*

#### **SELF-STABILIZING NODE CAPACITATED OVERLAY NETWORKS**

*Winfred Afeaneku, University of Northern Iowa  
Andrew Berns, University of Northern Iowa; Sara Leisinger, University of Northern Iowa*

#### **MOLECULAR MECHANISM OF SAP30, A NOVEL ONCOGENE IN NEUROBLASTOMA (NB)**

*Luisa Orantes-Quevedo, Nebraska Wesleyan University  
Dr. Anup Pathania, University of Nebraska Medical Center; Dr. Kishore Challagundla, University of Nebraska Medical Center;  
Emma McManus, University of Nebraska-Lincoln*

#### **BEAVER DAM ANALOGUE CONSERVATION PRACTICE EFFECTS ON SEDIMENT TRANSPORT, DEPOSITION, & RESTORING NATURAL CHANNEL CHARACTERISTICS IN THE MIDWEST AGROECOSYSTEM REGION**

*Karina Gonzalez, Des Moines Area Community College  
Dr. David Webber, Iowa State University; Dr. Sunday Tim, Iowa State University; Dr. Steven Mickelson, Iowa State University;  
Dr. Andrew Craig, Iowa State University; Dr. Keith Schilling, University of Iowa*

## Poster Presentations Continued

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### **ELECTRONIC, MAGNETIC, AND STRUCTURAL PROPERTIES OF NIFEMNAL**

*Salimatou Diallo, University of Northern Iowa*

### **NICOTINIC ACETYLCHOLINE RECEPTOR MUTANTS AND THEIR BEHAVIOR IN THE PRESENCE OF ALLOSTERIC MODULATORS**

*Isabella (Izzy) Bonham, Grinnell College*

### **STUDIES OF CONFORMATIONAL CHANGES IN MTHFR WITH ADDITION OF UREA USING HDX LC-MS**

*Camryn Gonzales, Grinnell College*

### **PERFORMANCE ANALYSIS OF PARALLAX PING))) ULTRASONIC DISTANCE SENSOR ON THE IROBOT CREATE2- CYBOT**

*Makenzie Salsbery, Iowa State University*

*Dr. Diane Rover, Iowa State University; Dr. Phillip H. Jones, Iowa State University*

### **MECHANICAL PROPERTIES OF 3D PRINTED POROUS POLYMER STRUCTURES**

*Jenesis Perez, Iowa State University*

*Carmen Juarez, Des Moines Area Community College; Rebecca Patush, Iowa State University;*

*Ashleigh Ballard, Iowa State University; Alina Kirillova, Iowa State University*

### **LIG SENSORS AND SUPERCAPACITORS**

*Gabriel Winandar, Iowa State University*

*Gustavo Milião, Iowa State University; Raquel Rainier, Iowa State University; Dr. Cicero Pola, Iowa State University;*

*Dr. Carmen Gomes, Iowa State University*

### **CHARACTERIZATION OF CHLAMYDIA TRACHOMATIS TYPE III SECRETED EFFECTOR PROTEIN CT584**

*Quinn Eldridge, University of Iowa*

*Brianna Steiert, University of Iowa; Xavier Tijerina, University of Iowa; Paige N. McCaslin, University of Iowa; Parker Smith,*

*University of Iowa; Brian Imai, University of Illinois Urbana-Champaign; Justine Arrington, University of Illinois Urbana-*

*Champaign; Peter M. Yau, University of Illinois Urbana-Champaign; Mary M. Weber University of Iowa*

### **THE IMPACT OF APOE E4 AND TOMM40 MUTATIONS ON MITOCHONDRIAL HEALTH AND THE PROGRESSION OF ALZHEIMER'S DISEASE (AD)**

*Emily Pederson, Iowa State University*

*Makayla Dove, Iowa State University; Mckenzie Sanden, Iowa State University; Auriel Willette, Rutgers University*

### **ANALYZING EVOLUTIONARY MUTATION RATES IN POLYOMAVIRIDAE**

*Seren Castellano, University of Iowa*

*Andrew Kitchen, University of Iowa*

### **POLYMER-BASED GENE/DRUG DELIVERY NANOPLATFORMS FOR PANCREATIC CANCER**

*Mia Lopez, Wartburg College*

*Susheel Nethi, Iowa State University*

### **BEAVER DAM ANALOGUE CONSERVATION MANAGEMENT EFFECTS ON SEDIMENT TRANSPORT, DEPOSITION, & IMPROVING COMPATIBILITY WITH FARMING PRACTICES IN THE MIDWEST AGROECOSYSTEM REGION**

*Heritier Diakanua, Iowa State University*

### **THE ESSENTIAL INGREDIENTS FOR A COOKBOOK FOR BLACK ADULTS**

*Zakiya Jenkins, Iowa State University*

### **DISCOVERY, ISOLATION, PURIFICATION, AND CHARACTERIZATION OF BACTERIOPHAGES: "FOURTHEBIT" AND "DONJULIOBLANCO"**

*Montserrat Rodriguez Guerrero, Nebraska Wesleyan University*

*Lucille Petersen, Nebraska Wesleyan University*

### **INFECTION DYNAMICS OF DISEASE ASSOCIATED S. SUIIS (DASS) AT FARROWING**

*Waad Abdella, University of Iowa*